

2

METEOROLOGICAL  
LOG  
FOR 4 MONTHS

B.A.E.  
05



**Position.** The position is given as accurately as possible for every four hours instead of giving course &c as laid down in the form.

**Current.** Current observations having been made a special feature are recorded in a book by themselves.

**Special observations of a Non Meteorological character:** Zoological Hydrographical, and other subjects being each made a special study of, are recorded in their own books.

**Colour of Sea.** The numbers found under this heading refer to "Code des Couleurs classés d'après la methode Chevreul simplifiée par Paul Klincksiek et Th. Valette.

**Colour.** When colour is mentioned with a number it refers to the above code.

**Temperatures.** When given without a decimal point istto the nearest degree only. If read closely and is an exact degree, it is logged thus: 67.0

**Cloud Velocity.** The following scale is used:-

- |               |            |              |
|---------------|------------|--------------|
| ① Stationary. | ① Slow     | ③ Fast.      |
| ② Very slow   | ② Moderate | ④ Very fast. |

**Cloud density.** Indicated by the suffixes 0, 1, 2, 3 Thus 10<sub>2</sub>; 6<sub>0</sub>

- |                           |
|---------------------------|
| 0. Very light cloud       |
| 1 Light cloud             |
| 2 Moderately heavy cloud. |
| 3 Heavy dark cloud.       |

**Green Flash.** When sun sets on a clear horizon immediately it has disappeared, a tiny patch of brilliant green is sometimes seen where he was. Entries are made of this phenomenon, when observed under this heading.

**Nimbus.** This name has been used for rain clouds even when rain is not falling at the actual moment.

**Rain** is classified as follows;

Drizzle	Heavy
Slight	Very heavy
Moderate	Torrential

The suffix -ly is used when only an approximate direction can be given, for instance in the case of waves or swell at night, light quarterly winds with the ship under weigh, direction of a confused sea &c. Thus:- Nly ... somewhere in the direction of N.

When a suffix is not used it is considered that the exact direction has been obtained.

**Time** 12 hours Past on G.M.T. except where otherwise stated.

Form 131.

## METEOROLOGICAL LOG.

Name of Vessel *Terra Nova* Rys Steam or Sail *auxiliary* Rig *Barge* Gross Register Tonnage

Captain's Name *Lieut. Harry H. Pennell R.N.* Log kept by *Asst Payr. J. R. H. Drake. R.N. (Retd)*  
*assisted by Lieut. H. C. de P. Rennick 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 - { full," from - - - - - 5 to 6 knots.

5 Fresh breeze - { Royals, &c.

6 Strong breeze - { Single-reefed topsails and topgallant sails. { Topgallant sails.

7 Moderate gale - { To which she could just carry in chase, "full and by" - - - - - Double-reefed topsails, jib, &c. { Topsails, jib, &c.

FOR SHIPS RIGGED WITH DOUBLE TOPSAILS.\*

upper topsails and courses.

opsails and courses.

main-top sail and reefed foresail.

ications were made to meet the require-  
double topsails, introduced since Admiral  
time.

Criteria for steamships.

onsideration is required for the speci-  
of the scale for use on board steamships,  
is purpose it is recommended that as  
unity occurs use be made of the equiv-  
given in Col. 2. Thus, when the ship is  
ag in a calm at 15 knots, the wind felt  
exposed position on board will be a  
ate breeze, which, according to the table,  
ween 4 and 5 on the Beaufort scale, and,  
imilar breeze is felt when the ship is  
ag at 15 knots right before the wind, the  
speed of the wind will be 30 knots,  
en 6 and 7 on the Beaufort scale,  
ling to the table of equivalents.

opportunities occur from time to time for  
ring the speed of the wind with the  
of the ship. A hand anemometer may  
played if used judiciously and if proper  
nce be made for the motion of the ship.

n River.

on unimpeded.

caution required.

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.

f 5 )

\* 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; 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."

(14767—24.) Wt. 22539—7196. 500. 11/00. D & S.



Colour. When colour is mentioned with a number it refers to the above code.

Time 12 hours Fast on G.M.T. except where otherwise stated.

(14767-24.) Wt. 22539-7196. 500. 11/09. D & S.



Specimen Sheet of Log.  
 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.		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 39 feet.		Dry Bulb.	Wet Bulb.
Month VII.	True Course.					Distance by Log.	Uncorrected Reading.					Att. Therm.	No. 5237		
Day. Civil Time.		Hour.	Current in last 24 hours		Current in last 24 hours			Various	S. S.W.	4	30.00			62	from sun, rain, and spray.
25	4									True		In Chart Room in good		In the screen	
	8									throughout the		position. Ship's Mercurial given for comparison		which is fixed on the after-side of	
	NOON	{		{						voyage.		each day at noon below the M.O. reading.		the Chart Room well protected	
	4	{		{											
	8									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.			S. 68 W.	61			S.	5				
	4	{		{						S. S.W.	6	29.48 (29.60)	62 (62)	63	60
	8					S. 25 W.	48			S. S.W.	7				
						S. 25 W.	48			S.W.	8	29.52	62	61	60
						S. 25 W.	48			S.W.	8				
						S. 25 W.	48			S.W. by W.	8	29.62	61	60	59
	MIDT.					S. 25 W. S. 28 W.	6 49	19° W.	S. 47° W.	W. S.W.	8	29.72	62		
										W.	8	29.80	61	60	58
27	4					S. 28 W.	51			W.	8	29.89	60		
	8					S. 28 W.	54	19° W.	S. 47° W.	W.	8	29.94	60	59	56
	NOON	45 15 N. 45 7 N.	7 30 W. 8 4 W.			S. 28 W.	60			W. S.W.	6	30.17	65		
	4	{		{						N.W. by W.	6	30.26 (30.40)	65 (64)	65	60
	8					S. 35 W.	53			N.W. by W.	6	30.34	65	64	59
						S. 35 W.	58	20° W.	S. 55° W.	N.W. by W.	4	30.41	63	62	58
	MIDT.					S. 35 W. S. 1 W.	46 13			Calm	0				
										N.E. by N.	3	30.40	63	61	59
28	4					S. 1 W.	60	19° W.	S. 20° W.	N.E.	4				
	8					S. 1 W.	60			N. by E.	5	30.32	62	61	57
	NOON	39 47 N. 39 47 N.	9 32 W. 9 30 W.			S. 1 W. S. 8 E.	5 62			N.N.W.	6	30.29	67	68	62
	4	{		{						N.N.E.	4	30.28 (30.39)	68 (66)	70	64
	8					S. 8 E. S. 7 W. S. 12 E.	16 42 2			N.E.	4	30.24	67	72	67
						S. 12 E.	62			N. by W.	4	30.21	69	70	66
	MIDT.					S. 42 E. S. 71 E.	12 19	17° W.	S. 54° E.	N.W. by W.	3	30.20	68		
										Calm	0	30.20	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.					
	Names.	When Lower Clouds do not move with the Wind, give the Direction they come from in the "Remarks." (For Plates see "Instructions.")	According to Beaufort Notation.	Fog Intensity. 0 to 5.	Waves.		Swell.		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.)		
					Direction from.	Dis- turb- ance. 0 to 10.	Direction from.	Dis- turb- ance. 0 to 10.						
4														
8														
NOON														
4	Cum.-s.	6	cb		—	0	—	0	—		133	Left Tilbury.		
8	Cum.	8	c		—	0	—	0	—		37	Passed Nore L.V.		
											435	Passed Tongue. 6'2. East Goodwin, French coast and distant objects remarkably clear and distinct. Rainy appearance to W. and N.W.		
											1030	Passed Beachy Head.		
MIDT.	Cum.   Nim.	10	or		—	0	—	0	—					
4	Cum.   Nim.	3	bd		S.	3	—	0	57		37	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		80	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		80	Villano Light S. 16° W. Cir.-c. from N.E.		
											1140	Finisterre S. 89° W., 16 miles.		
MIDT.	Cum.	1	bw		W.	3	Confused	4	60			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		1015	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

Terra Nova Rys.

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

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>1911</i>		Observed.	Dead Reckoning.	Observed.	Dead Reckoning.	Each four hours.		Of Compass used for Wind, being Variation and Deviation combined.	Wind. By same Compass as used for Variation and Deviation combined.	Direction. State if true, or subject to Compass Error, or only to Variation.	Force. 0 to 12.	Height of Cistern above Sea. <i>9 1/2</i> feet.		Dry	Wet
Month <i>March</i>						Colour of Sea.	Distance by Log.					Uncorrected Reading.	Att. Therm.	Bulb. No.	Bulb. No.
Day. Civil Time.		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.													
Hour.															
<i>18<sup>th</sup></i>															
4								<i>26</i>		<i>W</i>	<i>4 1/2</i>	<i>29.64</i>	<i>47</i>	<i>41.0</i>	<i>41.0</i>
8										<i>W</i>	<i>1</i>	<i>29.75</i>	<i>50</i>	<i>41.0</i>	<i>41.0</i>
NOON		<i>56 28 16.2 57</i>								<i>W</i>	<i>0 1/2</i>	<i>29.50</i>	<i>51</i>	<i>41.0</i>	<i>41.0</i>
4										<i>W</i>	<i>2</i>	<i>29.40</i>	<i>53</i>	<i>41.0</i>	<i>41.0</i>
8										<i>W</i>	<i>5</i>	<i>29.24</i>	<i>51</i>	<i>41.0</i>	<i>41.0</i>
MIDT.										<i>W</i>	<i>6</i>	<i>29.00</i>	<i>49</i>		
<i>19<sup>th</sup></i>															
4								<i>23</i>		<i>W</i>	<i>7 1/2</i>	<i>28.96</i>	<i>47</i>	<i>41.2</i>	<i>41.2</i>
8										<i>W</i>	<i>6 1/2</i>	<i>28.85</i>	<i>47</i>	<i>41.2</i>	<i>41.2</i>
NOON		<i>57 28 15.9 57</i>								<i>W</i>	<i>6</i>	<i>28.75</i>	<i>47</i>	<i>41.8</i>	<i>41.2</i>
4										<i>W</i>	<i>5 1/2</i>	<i>28.50</i>	<i>46</i>	<i>41.0</i>	<i>41.2</i>
8										<i>W</i>	<i>9 1/2</i>	<i>28.32</i>	<i>42</i>	<i>41.0</i>	<i>41.2</i>
MIDT.										<i>W</i>	<i>8 1/2</i>	<i>28.75</i>	<i>42</i>	<i>38.5</i>	<i>41.0</i>
4															
8															
NOON															
4															
8															
MIDT.															
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8															
NOON															
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12															
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14															
15															
16															

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.		Disturbance.		Time of Remark.	
Upper. Lower.		0 to 5.		0 to 10.		Time of Remark.	
4		10		WSN 4		Wind drifting slowly all watch.	
8		10		SW 6 40.5		Morning. Fog intensity 2 till 7 o'clock then 1.	
NOON		10		SW 6 41.0		8.0 Began to drizzle.	
4		10		SW 6 41.0		9.0 Fog intensity 2-3. Fine drizzle all forenoon. Very long swell.	
8		10		SW 6 41.0		12.30 Drizzle stopped.	
MIDT.		10		SW 6 41.0		3.30 Fog ceased off & sun came out.	
4		10		SW 6 41.0		Sun freshened to 2. 3.45 fog descended again.	
8		10		SW 6 41.0		4.30 Wind freshened to 4.	
MIDT.		10		SW 6 41.0			
4		10		SW 6 41.0		Wind 2 am. Heavy rain squalls. 2-3 Wind eased considerably. Later weather cleared.	
8		10		SW 6 41.0		Wind unsteady in direction and force.	
NOON		10		SW 6 41.0		Morning. - showers of drizzle to rain (moderate) most of watch.	
4		10		SW 6 41.0		8.0 Squalls from 7 to 8.	
8		10		SW 6 41.0		8.30 Sky rapidly cleared of clouds	
MIDT.		10		SW 6 41.0		9.15 Wind eased to 5 mph W.	
4		10		SW 6 41.0		9.30 Wind W by N 4.	
8		10		SW 6 41.0		PM.	
MIDT.		10		SW 6 41.0		4.30 Wind increased to 7-8 squalls face 9.	
4		10		SW 6 41.0		5.0 Wind slowly backing.	
8		10		SW 6 41.0		7.30 Wind W by N 7-8. backed rapidly to WSW. occasional showers of slight rain with big drops.	
NOON		10		SW 6 41.0		1st. occasional squall (heavy).	
4		10		SW 6 41.0		Upper clouds moving rapidly from W by S.	
8		10		SW 6 41.0			
MIDT.		10		SW 6 41.0			

\* 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 "Terra Nova" R.Y.S.

DATE.		Latitude.		Longitude.		Course and Distance.		Total Compass Error.	Ship's Head.	Wind, at the time of observation.	Barometer.* No. 1163	Thermometers.	
Year 1911		Observed.		Observed.		Each four hours.		Of Compass used for Wind, being Variation and Deviation combined.		Direction. State if true, or subject to Compass Error, or only to Variation.	Height of Cistern above Sea. 9 1/2 feet.		Dry Bulb.
Month		Dead Reckoning.		Dead Reckoning.		Distance by Log.		True Course.		Force. 0 to 12.	Uncorrected Reading.	Att. Therm.	
Day, Civil Time.													Wet Bulb.
20 <sup>th</sup>													
4						E 22	West			WNW	28.90	40	35.35
8										WNW	28.90	42	38.0 35.0
NOON		57	16	160	17					WNW	29.00		
4		Current in last hours								WNW	29.05	44	40.5 39.0
8										WNW	29.04		
MIDT.										WNW	29.25	44	39.0 39.0
										WNW	24.24		
										WNW	29.15	45	39.0 36.0
										WNW	29.14		
										WNW	29.21	42	38.0 36.0
4													
8													
NOON													
4		Current in last hours											
8													
MIDT.													
21 <sup>st</sup>													
4						E 24				WNW	29.22	42	39.0 38.0
8										WNW	29.22		39.0
NOON		57	30	159	59					NE	29.13		
4		Current in last hours								NE	28.95	46	39
8										ENE	28.93		
										Walt	28.65	46	45
										NNE	28.63		
8-45											28.60	50	
											28.48		
MIDT.										WSW	28.73	46	37.5
											28.71		
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.

Captain *Leut. W. H. Pennell* from *Antarctic* 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.		According to Beaufort Notation.	Fog Intensity. 0 to 5.	Waves.		Swell.		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.)
	Names.	Prop. of Sky Clouded. 0 to 10.			Direction from.	Disturbance. 0 to 10.	Direction from.	Disturbance. 0 to 10.				
4		cu	5	bcgt	Med	9					Very heavy squalls.	
8	ast	cu	1	bcg	W	8	W	8	38.5			
NOON	acu	cu	5	bcg	W	8	Conf. W 8	8	38.5	2pm	Very heavy squalls, wind & hail.	
4	acu	cu	7	bcg	W	8	Conf. W 8	8	38.8			
8	ast	cu	3	bc	W	4	W 8	8	38.8	8pm	Height of waves 22 feet. Heavy banks of clouds approaching from SW.	
MIDT.		W	10	bcgt	W	4	Conf. W 8	8		9.0	Cloud banks over ship. SW from SW (2)	
4	observed by clouds. Very fine radiating lines of light from Zenith in NW & N (Compass) direction. Colors whitish yellow, but among clouds a very distinct green tinge of 40 C and entirely. Stars showed plainly through it. All three stars of Orion's sword, for instance, being visible.											
8	10.0. Aurora commenced again, but rather faint.											
NOON												
4												
8												
MIDT.												
4		W	10	oc			Conf. W 8			7.40	to 1 am. Brilliant aurora, curtains from N to S horizon through Zenith. Greenish blue generally with occasional dull red. High convective.	
8		W	10	cf	1	3	Conf. W 8	38.5		6.0	Wind dropped rapidly veered to NW 1-2.	
NOON		W	10	cf		4	Conf. W 8	38.5		Heavy	Rain in drizzle most of watch.	
4			10	odf	3	Conf. W 5	Conf. W 7	38.5		11.0	Commenced raining (moderate).	
8			10	odf	2	Conf. W	Conf. W 8			1.0	Rain drizzle most of afternoon.	
MIDT.		W	10	eqr		W 6	W 8			4.0	occasional showers	
4										5.0	Wind N 4	
8										6.0	" N 3	
NOON										7.40	Wind N 2 to 3 + commenced to back.	
4										7.45	Wind jumped round to SSW and increased quickly in strength.	
8										8.45	Force 8-9 occasional showers of heavy driving rain & sleet.	
MIDT.											Remainder of watch heavy squalls of force 9-10. easing off after 11.0 to squalls of 8-9.	

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 "Terra Nova" Rys

DATE.		Latitude.		Longitude.		Course and Distance.	Total Compass Error.	Ship's Head.	Wind, at the time of observation.	Barometer.* No. 1163	Thermometers.	
Year 1911	Month	Observed.	Dead Reckoning.	Observed.	Dead Reckoning.	Each four hours.	Of Compass used for Wind, being Variation and Deviation combined.	Wind Direction. State if true, or subject to Compass Error, or only to Variation.	Force. 0 to 12.	Height of Cistern above Sea 9 1/2 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.				Distance by Log.				Uncorrected Reading.	Att. Therm.	No. No.
22nd	4						E	SW 7	28.82	42	37.0	37.0
	8							WSW 5	28.86	43	35.0	33.0
NOON	1.56 pm	56	5	159	22			WSW 6	28.85			
	4	6.17				404		WSW 7	28.90	46	37.8	35.0
	8	8.25 pm	55	54	159	37		W 6	28.88	47	36.0	35.0
MIDT.		55	39	160	11			WSW 6	28.98	47	37.0	35.0
	4							WSW 4-6	29.07	44	35.0	33.8
	8								29.17			
NOON												
4												
8												
MIDT.												
23rd	4	6.26 am	54	56	160	31		SW 5	29.23	42	37.0	35.0
	8							WSW 4	29.22	43	37.4	
NOON	54	23	160	39				WSW 3	29.24			
	4					404		WSW 5	29.30	47	38.2	37.5
	8							WSW 6	29.28	47	41.0	
MIDT.								W 6	29.33	48	45.0	43.0
	4							WSW 9-6	29.31	50	46.0	45.2
	8								29.31			
NOON												
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 *Leut. H.H. Pennell* from *Antarctic* to *New Zealand*

Clouds.		Weather.		Sea Surface.		Remarks.	
Hour.	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. Direction from. 0 to 10.	Swell. Direction from. 0 to 10.	Temp. by No.	Spec. Grav. by No.
Upper.	Lower.	Prop. of Sky Clouded. 0 to 10.		Also record when Confused.		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	Cu St cu	8	bca	SW 7	SW 8		10 High aurora. Wind eased to b. squalls
8	Cu St cu	8	bca	SW 7	SW 7	38.8	8. Come round moon in high St cu clouds.
NOON	Al cu	6	bca	SW 7	SW 7	38.5	Heavy snow squalls frequent during watch. b. e. twice squall of wind shield.
4	St cu	6	bca	SW 7	SW 7	39.0	8.0 Blue sky with bright cu clouds to S & SE.
8	Cu St cu	6	bca	SW 7	SW 7		Heavy snow squalls frequent. 10.0 Strong wind & hail.
MIDT.	Al St cu	8	bca	SW 7	SW 7		4.0 Very heavy squalls frequent rain, hail, & snow.
4							Deep squalls less frequent. Wind deadning.
9.30							Aurora curtain formation 1 hr. duration. Five low aurora showing 2 distinct arches between South (True) & WSW (True) as in diagram (opp page.) The brightest being of 11° altitude, the upper one fainter and more irregular. Above the clouds (near South) was a patch of auroral light with a distinct reddish tinge, all the remainder being of a greenish tinge. From South perpendicular irregular rays shot up. With frequent passing showers of hail & sleet.
NOON							
4							
8							
MIDT.							
4	St cu	7	bca	SW 5	SW 6		1.30 Snow squall. Auroral curtain in S.
8	Al cu	6	bca	SW 5	SW 6	39.0	3.30 Heavy squall wind & sleet. Auroral arch in (S).
NOON		10	dr	SW 5	SW 5	38.9	10.0 Sky completely clouded over with high St cu & alt St clouds. Wind eased 2-3; W cross swell appearing.
4	Al cu	7	ca	SW 5	SW 6	40.0	Drum. Squalls snow, sleet & rain occasional.
8	St cu	6	ca	SW 6	SW 7	42.8	afternoon. Last shower of sleet at 1.0. Wind increasing gradually during watch & shifted to WSW. at 2.30.
MIDT.	St cu	10	ca	WSW 6	SW 7		4.0. Showers about. 9.30 pm. Wind backed to SW & W. for 8-9 in sharp squalls. With strength of squalls moderating rain 2 1/2 hours
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 Terra Nova R.Y.S.

DATE.		Latitude. S		Longitude. E		Course and Distance.	Total Compass Error.	Ship's Head.	Wind, at the time of observation.	Barometer.* No. 1163	Thermometers.
Year 1911	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, 9 1/2 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.				Distance by Log.					
		Current in last hours									
		mils.									
24 <sup>th</sup>	4					23	WSW	8	W	29.27	49
	8						SW by W	8	WSW	29.23	
	NOON	51	55	162	08		SW by W	7	WSW	29.39	46
	4	5.21 pm					SW	7	WSW	29.61	50
	8	51	25	162	15		SW	6	WSW	29.72	52
	MIDT.						SW	5.6	WSW	29.82	55
25 <sup>th</sup>	4					22	WSW	7	W	29.76	
	8						SW	7	WSW	29.82	58
	NOON	50	10	163	10		W by S	7	WNW	29.78	
	4	7.45 pm				4.05	W by S	7	WNW	29.84	59
	8	49	16	164	11		WSW	7	W	29.82	58
	MIDT.						SW by W	5	WSW	29.76	
26 <sup>th</sup>	4					19	WSW	5	W	29.88	58
	8						WSW	5	WNW	29.78	
	NOON	47	41	166	43	4.05	West	8	WNW	29.84	57
	4						West	6	WNW	29.77	
	8						West	6	WNW	29.82	58
	MIDT.						W by S	5.6	WNW	29.90	60
27 <sup>th</sup>	4					18	West	6	WNW	29.83	
	8						West	6	WNW	29.81	
	NOON	46	50	168	43		West	5	WNW	29.95	59
	4						WSW	4	W	29.87	
	8									29.92	60
	MIDT.									29.89	

\* 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 Hunt H.H. Pennell from Antarctic to New Zealand

Clouds.		Weather.		Sea Surface.				Remarks.					
Hour.	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.	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.)
	Names.		Prop. of Sky Clouded. 0 to 10.			Direction from.	Disturbance. 0 to 10.	Direction from.	Disturbance. 0 to 10.				
	Upper.	Lower.											
	Also record when Confused.												
4	nc scu	9	cp	wsu	6	sw	7					4.46	Trickle. Passing showers of rain & sleet, fairly steady wind with occasional lulls.
8	scu cu	4	bc	sw	7	sw	8	44.6	6.0				Wind backed to SW.
NOON	scu cu	9	c	sw	7	sw	8						
4	scu cu	8	c	sw	8	sw	8	44.1					
8	scu cu	10	c	sw	8	sw	8	44.6					
MIDT.	sc nc	10	gcd	sw	7	sw	7						Wind freshening slightly. 2 hrs
4	scu cu	6	bc	wsu	7	sw	7						drizzle. Barograph rising slightly till 2 am, then falling slightly.
8	high scu	10	c	sw	7	sw	8	52.05					
NOON	sc scu	10	bc	w	7	w	8	52.0					
4	sc scu	10	ocf	w	7	w	8	53.5					
8	scu sc	4	bc	-	7	ws	8	53.8					
MIDT.	scu sc	2	bc	wsu	6	w	8	57.6					
4													
8	scu cu	9	c	wsu	8	sw	8	55.8					
NOON	scu scu	6	bc	wsu	5	ws	6	56.8	6.0				Wind gradually increasing during afternoon
4	scu sc	10	cg	w	6	ws	8	56.6					
8	nc scu	8	csiq	-	6	ws	8		1.0				occasional showers. Wind squally & slightly increasing
MIDT.	nc scu	10	cg	w	6	ws	7						
4	cu scu	8	cg	w	4	w	5						
8	scu cu	6	bc	w	5	w	6	55.0					
NOON	scu cu	-	bc	w	5	sscu	6	56.0					
4	scu sc	-	bc	-	3	-	3	56.5	4.0				off Paterson's Inlet Stewart Island.
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 Tanna Nova R.Y.S.

DATE.		Latitude.		Longitude.		Course and Distance.	Total Compass Error.	Ship's Head.	Wind, at the time of observation.	Barometer.* No. 1163	Thermometers.		
Year 19 11	Month DEC.	Observed.	Dead Reckoning.	Observed.	Dead Reckoning.	Each four hours.	Of Compass used for Wind, being Variation and Deviation combined.	Wind, By same Compass as used for Variation.	Direction, State if true or subject to Compass Error, or only to Variation.	Force. 0 to 12.	Height of Cistern above Sea. 9 1/2 feet.	Dry Bulb. No.	Wet 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.				Distance by Log.					Uncorrected Reading.	Att. Therm.	
15 <sup>th</sup>	4	W.L. time on 15 <sup>th</sup>				180 Meridian			N.T.	16 <sup>th</sup>	and after		
	8	6.0 Proceeded from Lyttelton											
	NOON	48	52	173	12	352	16		NE	3	29.40	64	56.0 53.5
	4	Current in last hours				376			ENE		29.30		
	8								ESE	5	29.35	54	51.5 49.0
									SE	4	29.46	55	50.2 47.5
	MIDT.								SE 5.3	5.3	29.54	52	50.4 46
16 <sup>th</sup>	4								SSW	4	29.59	52	50.4 47
	7.12	45	0	172	18	401			SSW	4	29.57	56	49.5 46.2
	8								SSW		29.50		
	NOON	45	25	172	28				SSW	4	29.68	52	50.1 45.5
	4	Current in last hours				400			SSW	3-4	29.68	60	50.0 46.1
	8								WSW	3	29.68	52	50.0 46.1
	MIDT.								WSW	3	29.68	50	48.0 46.0
17 <sup>th</sup>	4.25	47	0	173	11				WSW	4	29.62	50	48.2 45.8
	8								SE	2	29.63	54	53.5 48.2
	NOON	47	44	173	25	427			ENE	1	29.61	60	50.1 46.3
	4	Current in last hours							ENE	2-3	29.55	56	50.0 45.9
	8								SE	3-4	29.55	50	48.0 44.2
	MIDT.								East	4	29.54	50	47 44
18 <sup>th</sup>	4								SE	5/4	29.57	48	47 44
	8								SE	4	29.55	52	48.0 45.0
	NOON	49	40	171	45	429			SE	3-4	29.58	53	47.4 44.5
	4	Current in last hours							SE	2-3	29.59	60	52.0 48.4
	8								Caln	0	29.59	56	48.1 45.0
	MIDT.								Caln	0	29.59	56	48.0 45.0

\* 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 New Zealand to Antarctic

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.		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 Dredgets. Also note the hour at which the Ship arrives in or leaves Port. (See "Instructions" for further particulars.)
	Names.	Per. of Sky Cup'd Sky 0 to 10.			Direction from.	Disturbance 0 to 10.	Direction from.	Disturbance 0 to 10.					
4												P.M.	
8												1.30 Considerable amount A.S. to W <sup>nd</sup> .	
NOON	a cu	cu	7	c		2 <sup>g</sup>	3	2 <sup>g</sup>	5	58.2		2.0 Wind veered to ESE and increased force 4-5	
4	ast	do.	8	c		2 <sup>g</sup>	4	2 <sup>g</sup>	5	58.8		3.0 Jump in barogram due to moving instrument.	
8	ast	do.	10	c		2 <sup>g</sup>	4	2 <sup>g</sup>	5			6.5 Wind veered to SE. easing slightly.	
MIDT.	st	st	10	c		2 <sup>g</sup>	5	2 <sup>g</sup>	5			10.05 Put clocks on 15 min.	
												10.20 Commenced to rain. (mod)	
												11.0 Wind dying.	
												11.30 Wind increasing rain ceased.	
4		st cu	8	cp		2 <sup>g</sup>	4	2 <sup>g</sup>	6			Midt Wind variable in strength & direction	
8	a	cu	4	bc		2	4	2 <sup>g</sup>	5	49.8		Midt Put clocks on 15 minutes.	
NOON	ci	cu	3	bc		2	4	2 <sup>g</sup>	5	50.1		8.00 Sky covered with fine cirrus. Very little cu on horizon.	
4	ci	cu	2	bc		2	4	2 <sup>g</sup>	6			2.0 Wind inclined to back to S <sup>W</sup> .	
8	ci	cu	3	bc		2	4	2 <sup>g</sup>	5			11.0 Showers of rain about.	
MIDT.	st cu	1	bc			2	4	2 <sup>g</sup>	5	48.7		11.30 Sky completely cleared again.	
4		cu	2	b		2	4	2 <sup>g</sup>	5	48.8		- Several light showers between 1 & 3 am	
8	ci	cu	3	bc		2	4	2 <sup>g</sup>	5	50.2		3.0 Full disc of moon showing (age 26 days)	
NOON		cu	3	bc		2	4	2 <sup>g</sup>	5	52.5		6.45 Two shots of fine rain for 1/2 minute.	
4	cu	cu	6	bc		2	4	2 <sup>g</sup>	5	51.8		7.10 Rainbows, colors in out. Purple, blue, green, yellow, orange red. Green predominating. Small portion are visible	
8	cu	do	8	cp		2	4	2 <sup>g</sup>	5	50.0		9.0 light 8 <sup>th</sup> air.	
MIDT.	do.	do	7	bp		2	4	2 <sup>g</sup>	5			10.0 Rain about on horizon.	
4		cu	4	bc		2	4	2 <sup>g</sup>	5	49.0		5.0 Wind freshening	
8		cu	5	bc		2	4	2 <sup>g</sup>	5	49.4		7.50 Slight shower. Rain about on horizon.	
NOON		cu	9	c		2	4	2 <sup>g</sup>	5	49.8			
4	cu	cu	7	c		2	4	2 <sup>g</sup>	5	50.4			
8	cu	do	7	cp		2	4	2 <sup>g</sup>	5	50.0			
MIDT.		cu	9	cp		2	4	2 <sup>g</sup>	5				
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 *Terra Nova R.Y.S.*

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 19 <i>11</i>	Month <i>Dec.</i>	Observed.	Dead Reckoning.	Observed.	Dead Reckoning.	Each four hours.	Of Compass used for Wind, being Variation and Deviation combined.	Wind, by same Compass as used for Variation.	Force, 0 to 12.	Height of Cistern above Sea <i>9 1/2</i> feet.	Dry Bulb. No.	Wet 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.				Cloud True Course.	Distance by Log.	Direction, State if variable, or subject to Variation.	Force.	Uncorrected Reading.	Att. Therm.	
<i>19th</i>	<i>4</i>					<i>Cloudy</i>		<i>W.N.W.</i>	<i>2</i>			
	<i>8</i>							<i>West</i>	<i>3</i>	<i>29.53</i>	<i>51</i>	<i>47.5 44.0</i>
	<i>NOON</i>	<i>51</i>	<i>48</i>	<i>172</i>	<i>18</i>	<i>429</i>		<i>W.N.W.</i>	<i>2</i>	<i>29.52</i>	<i>49</i>	<i>45.4 43.0</i>
	<i>4</i>	Current in last hours						<i>W</i>		<i>29.48</i>		<i>45.2 43.0</i>
	<i>8</i>							<i>S.W.</i>	<i>2</i>	<i>29.55</i>	<i>50</i>	<i>45.2 43.0</i>
	<i>MIDT.</i>							<i>S.W.</i>	<i>2</i>	<i>29.51</i>		<i>45.2 42.5</i>
	<i>4</i>							<i>S.W.</i>	<i>3.4</i>	<i>29.56</i>	<i>52</i>	<i>44.6 42.0</i>
	<i>8</i>							<i>S.W.</i>	<i>4</i>	<i>29.57</i>	<i>48</i>	<i>44.6 42.0</i>
	<i>MIDT.</i>							<i>S.W.</i>	<i>8</i>	<i>29.53</i>		<i>47.0 45.0</i>
<i>20th</i>	<i>4</i>							<i>S.E.</i>	<i>3</i>	<i>29.65</i>	<i>49</i>	<i>47.4 44.6</i>
	<i>8</i>							<i>East</i>	<i>4</i>	<i>29.73</i>	<i>50</i>	<i>46.5 45.2</i>
	<i>NOON</i>	<i>53</i>	<i>35</i>	<i>173</i>	<i>06</i>	<i>428</i>		<i>E.S.E.</i>	<i>4</i>	<i>29.83</i>	<i>52</i>	<i>47.8 44.8</i>
	<i>4</i>	Current in last hours						<i>E.S.E.</i>	<i>4</i>	<i>29.79</i>		<i>46.2 43.8</i>
	<i>8</i>							<i>E.S.E.</i>	<i>4</i>	<i>29.92</i>	<i>52</i>	<i>46.2 43.8</i>
	<i>MIDT.</i>							<i>E.S.E.</i>	<i>4</i>	<i>29.88</i>		<i>46.2 43.0</i>
<i>21st</i>	<i>4</i>							<i>East</i>	<i>3</i>	<i>30.00</i>	<i>47</i>	<i>45.8 40.2</i>
	<i>8</i>							<i>E.S.E.</i>	<i>4</i>	<i>30.02</i>	<i>47</i>	<i>44.0 41.0</i>
	<i>NOON</i>	<i>55</i>	<i>16</i>	<i>173</i>	<i>02</i>	<i>403</i>		<i>E.S.E.</i>	<i>4</i>	<i>30.04</i>	<i>47</i>	<i>46.2 —</i>
	<i>4</i>	Current in last hours						<i>E.S.E.</i>	<i>3/4</i>	<i>30.05</i>	<i>52</i>	<i>45.0 40.0</i>
	<i>8</i>							<i>E.S.E.</i>	<i>3/4</i>	<i>30.05</i>	<i>53</i>	<i>44.3 40.0</i>
	<i>MIDT.</i>							<i>E.S.E.</i>	<i>3</i>	<i>30.03</i>	<i>48</i>	<i>44.2 39.9</i>
<i>22nd</i>	<i>4</i>							<i>N.E.</i>	<i>2.3</i>	<i>30.02</i>	<i>48</i>	<i>43.6 40.8</i>
	<i>8</i>							<i>N.W.</i>	<i>1</i>	<i>30.02</i>	<i>50</i>	<i>46.5 43.0</i>
	<i>NOON</i>	<i>57</i>	<i>30</i>	<i>174</i>	<i>29</i>			<i>W.N.W.</i>	<i>2/3</i>	<i>30.02</i>	<i>50</i>	<i>45.8 42.8</i>
	<i>4</i>	Current in last hours						<i>W.N.W.</i>	<i>2/3</i>	<i>30.02</i>	<i>50</i>	<i>45.8 42.8</i>
	<i>8</i>							<i>W.N.W.</i>	<i>2/3</i>	<i>30.02</i>	<i>50</i>	<i>45.8 42.8</i>
	<i>MIDT.</i>							<i>W.N.W.</i>	<i>2/3</i>	<i>30.02</i>	<i>50</i>	<i>45.8 42.8</i>

\* 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 *New Zealand* to *Antarctica*

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.	Time of Remark.	
	Names.	Prop. of Sky Clouded. 0 to 10.	Direction from.			Disturbance. 0 to 10.	Direction from.	Disturbance. 0 to 10.						
									Upper.					Lower.
4		St Cu	9	c			W <sup>2</sup>	2	SE	5	49.0		am	
8		Cu St Cu nb	9	cir sp			-	-	SE sky wavy	5 4	49.0		1.40 pm	Moderate rain.
NOON		nb St Cu	10	ocir			-	2	do		48.8		2.0 pm	Wind freshened & changed direction to S by E.
4	a cu ast	St Cu cu nb	9	cpd			-	3	E S wavy	5	48.5		8.10	Wind eased to 3.
8		St Cu nb	10	cdy			S <sup>4</sup>	4	SSW	6	47.9		8.0 to 10.30	Moderate rain.
MIDT.		H Cu St nb	8	cpb			SSE <sup>4</sup>	4	SW	6			10.30	Wind eased & rain ceased.
4	a cu	St Cu	9	c			SE <sup>2</sup>	3	very wavy	6	48.0		1.0	Sky cleared, clouds banking on NE horizon.
8		St Cu nb cu	9	c			-	3	ESE <sup>2</sup>	6	48.2		3.0	Clouded over again from S to E.
NOON	a cu ast	cu St Cu	5	bc			E <sup>2</sup>	4	E by S	6	47.8		7.00 pm	Clear blue sky.
4	-	cu	2	bc			E	4	do	6	47.2		0.30	Heavy St Cu passed over, wind lulling from force 5 to 3.
8	a cu	cu St Cu	6	bc			E	4	do	6	47.0		1.30	Sky cleared wind freshened 3 to 5.
MIDT.	a cu	cu St Cu	9	c			E	4	E	6			8.0	Showers about.
													10.0	Completely clouded over St. Cu clouds. occasional showers (slight) after 10.0.
4		cu St Cu	4	bc			ESE	4	cu <sup>2</sup> E <sup>2</sup>	6	46.8		2.30	Wind shifted 2 pts.
8		cu St Cu	7	c			E	4	E by S	6	46.2		3.30	Sky partially cleared.
NOON	ast	cu St Cu	4	bc			E	3	do	6	47.6		8.20 pm	Sun behind Cu cloud throwing out white rays to about 7 or 8°
4		det cu	2	bc			E	3	do	6	47.8		9.30	Wind NE. 1-2
8		cu det cu	3	bc			E	3	E	6	48.0		7.00	Peculiar foggy look to S + SW.
MIDT.	ci-cu	cu St Cu St	4	bc			NE	3	N by NE	6				
4	a cu	cu St Cu	5	bc			W <sup>2</sup>	2	E <sup>4</sup> + W <sup>2</sup>	5	45.8			Wind shifting gradually.
8	ast a cu	cu St Cu	9	c			-	2	E	6	45.2		6.0	Wind NW. 1.
NOON	do	do	7	c			-	2	E	6	46.5		7.0	Sky covered with a cu clouds.
													10.30	Wind shifted to W by N 2.
4	ast ast a cu	cu St Cu	3	bc			-	2	E	6	46.7		8.0 pm	Heavy bank of clouds to W.
													"	Rain on horizon to E.
8	do	cu St Cu nb	-	bc			-	3	E	6	46.6		"	Clouded over.
MIDT.	a cu	do	7	bc			SSW	3	SSW	5			11.0	Sky clearing, numerous bank to SSW.
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

S. Y. "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 1911		Observed.	Dead Reckoning.	Observed.	Dead Reckoning.	Each four hours.		Of Compass used for Wind, being Variation and Deviation combined.	Wind, Velocity By same Compass as used for Variation.	Direction, State if true, or subject to Compass Error, or only to Variation.	Force, 0 to 12.	Height of Cistern above Sea. 92 feet.		Dry Bulb.	Wet Bulb.
Month Dec.		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.				Colour of Sea.	Distance by Log.					Uncorrected Reading.	Att. Therm.		
Day, Civil Time.	Hour.													and the wet bulb being unattended by salt water.	
23 <sup>rd</sup>	4							17		Variable				41.0	39.0
	8									WSW 5	3/1	30.01	48	41.8	39.4
	NOON	59 06 177 55				between 407.8 408				SW 5	3	30.01	44	42.8	40.8
	4	Current in last hours								SSW	4	30.01	44	42.4	40.6
	8									SSW	4	30.01	48	42.0	39.0
	MIDT.									SSW	1	30.02	49	35.8	34.8
24 <sup>th</sup>	4							17		SE 4 S	2-3	30.01	45	36.2	33.4
	8									S	2-3	30.00	45	34.5	31.4
	NOON	60 39 178 39				403		21		S 4	2-3	29.97	45	36.4	32.1
	4	Current in last hours								S 4	3	29.92	47	36.4	32.8
	8									S 4	4	29.86	39	33.8	31.0
	MIDT.									SSW	4	29.81	39	32.9	29.0
25 <sup>th</sup>	4							21		S 4 W	5/6	29.74	33	32.0	28.5
	8									S 4 W	5	29.63	84	31.5	27.6
	NOON	62 10 175 37				377				S 4 W	5	29.60	84	30.6	28.5
	4	Current in last hours								SSW	6/7	29.54	37	31.5	Sum affected
	8									SSW	7-8	29.50	40	30.4	29.8
	MIDT.									S 4	6-7	29.45	38	30.8	✓
26 <sup>th</sup>	4							21		S 4 W	7-6	29.42	32	30.5	30.0
	8									S 4 E	6	29.39	32	30.2	✓
	NOON	63 31 173 23				404				SSE	5	29.40	37	31.0	31.0
	4	Current in last hours						32		SE 4 E	4	29.50	40	30.5	30.5
	8							38		S 4 E	3-4	29.60	46	30.4	30.4
	MIDT.							30		S 4 E	3	29.64	42	31.2	30.2
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 Rys.

DATE.		Latitude.		Longitude.		Course and Distance.		Total Compass Error.	Ship's Head.	Wind, at the time of observation.		Barometer.* No. 1163		Thermometers.			
Year 19 11	Month Dec <sup>r</sup>	Observed.	Dead Reckoning.	Observed.	Dead Reckoning.	Each four hours.		Of Compass used for Wind, being Variation and Deviation combined.	Wind Direction. State if true, or subject to Compass Error, or only to Variation.	Force, 0 to 12.	Height of Cistern above Sea 9 1/2 feet.		Uncorrected Reading.	Att. Therm.	Dry Bulb.	Wet Bulb.	
						Colour.	Type of Course.				Distance by Log.	No.			No.		
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.																	
Day, Civil Time.	Hour.																
27	4							30	SE	4	29.63	40			30.2	29.0	
	8								do	4.5	29.62	43			29.90	29.9	
	NOON	64	56	175	30			34	ESE	4	29.65	44			30.3	29.0	
	4	Current in last hours		mls.				36	SE	4	29.70	49			29.8	28.9	
	8								do	2	29.78	49			29.8	28.4	
	MIDT.								SE	2.3	29.84	46			26.2	27.4	
28	4							36	SE	3	29.86	45			28.2	-	
	8								do	3.4	29.88	45			30.62	28.2	
	NOON	66	20	177	11				do	4	29.88	49			30.4	27.5	
	4	Current in last hours		mls.					do	3.4	29.86	52			29.9	27.5	
	8								do	4	29.85	49			29.8	27.5	
	MIDT.								SE	2	29.85	42			24.5	23.6	
29	4	20 Stopped by pack						35									
	8								SE	2	29.85	45			26.8	-	
	NOON	66	46	177	48				SE	2	29.85	47			30.4	-	
	4	Current in last hours		mls.					SE	1	29.82	45			29.8	27.5	
	8								SE	1	29.83	48			26.5	25.5	
	MIDT.								SE	1	29.83	48					
	4																
	8																
	NOON																
	4	Current in last hours		mls.													
	8																
	MIDT.																
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.

Captain H. H. Pennell

from New Zealand to Antarctic

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.	Time of Remark.
	Names.		Prop. of Sky Clouded. 0 to 10.			Direction from.	Disturbance. 0 to 10.	Direction from.	Disturbance. 0 to 10.				
	Upper.	Lower.											
4		Cu St St	10	Cu St oc		SE	4	SE	3	20.8		7.30	Snow (slight) on + off all watch.
8		Acu St	10	oc 25		do	4	do	4	32.8		11.30	occasional very light falls of snow.
NOON	acu	Cu St	5	bc		SE	3	SE	4	33.1		afternoon	sky cleared.
4		Cu St	10	oc 25		SE	8	do	4	31.0		5.30	slight snow at intervals.
8	acu	Cu St	7	c		In pack				30.0		8.0	whole sky covered with acu except to SW; nt + snowstorms.
MIDT.	acu	lt St	7	bc		Pack						10.30	slight swell from SE.
4		St Cu	10	oc		In Pack						2.00	Passing snow squall.
8		St Cu	6	bc		Pack				30.0		7.30	long swell from NW. gentle.
NOON		do	10	oc		do				30.4		8.00	Bright sky to northwards.
4		St Cu	9	oc		do				30.5		8.00	long low swell in pack - direction uncertain.
8		Cu St	9	c		do				29.5		8.00	- do -
MIDT.	alt	St Cu	6	bc		do						8.00	although overcast at noon, most of the forenoon showed blue sky; Cu, St, Cu.
4												4.0	Wind force 5
8												4.0	showing on horizon to S.W.
NOON	acu	Cu	1	b		do				29.8		4.0	Snow on horizon.
4	ali	cu	5	bc		do						1.45	Thin flakes of snow for 5 minutes
8	St alt		5	bc		do						1.45	Heavy snow fall on Eastern Horizon
MIDT.												7.0	Commenced to snow (mod)
4												8.0	Cu St + alt S prop 4.
8												8.0	a little alt St + Cu on horizon.
NOON												4.0	Halo (white) round sun 22 1/2°.
4												8.0	Position of sun halo 22 1/2° diameter
8												8.0	in out edge. dark red, yellow, bluish
MIDT.												8.0	from sun side out. N. side of
4												8.0	sun alt. 9 1/2°. On N side of sun alt
8												8.0	of sun 9 1/2°. length of colour in vertical
NOON												8.0	are 2 1/2°
4												8.0	Similar small columns coloured
8												8.0	portion of a 22 1/2° Halo,
NOON												8.0	only this time to South of Sun
4												8.0	and, much brighter. alt. about
8												8.0	same as sun (which is hidden by
MIDT.												8.0	clouds) + thence similar to
2a	17	18	19a	20	21	20a	21a	22	23	24	25		8 pm observation.

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.



Captain R. L. L. Pennell from Antarctic Report to

DATE.		Latitude.		Longitude.		Course and Distance.		Total Compass Error.	Ship's Head.	Wind, at the time of observation.		Barometer.* No.		Thermometers.		
Year	Month	Observed.	Dead Reckoning.	Observed.	Dead Reckoning.	Each four hours.	Distance by Log.	Of Compass used for Wind, being Variation and Deviation combined.	By same Compass as Wind, except that on anchor.	Direction. State it true, or subject to Compass Error, or only to Variation.	Force. 0 to 12.	Height of Cistern above Sea.	Uncorrected Reading.	Att. Therm.	Dry Bulb. No.	Wet Bulb. No.
1911	Dec															
30th								East		nnw 4		29.75	39		29.0	27.4
	4									nne		29.77				
	8	Stopped in pack all day.								nnw 4		29.71	48		28.3	26.7
	NOON	66	46	177	48					nne		29.72				
	4	Current in last hours			W mls.					nnw 4-5		29.69	48		29.5	28.9
	8									nne		29.69				
	MIDT.									nnw 5-6		29.64	50		30.0	28.4
										nne		29.63				
										nnw 5-6		29.60	48		29.0	
										nne		29.60				
31st										nnw 5		29.50	38			
	4	6.0 Proceeded								nne		29.53				
	8									nnw 5		29.47	41		30.5	
	NOON	66	56	177	43	430				nne		29.49				
	4	Current in last hours			W mls.					nnw 5		29.39	43		31.5	
	8									nne		29.40				
	MIDT.									nnw 4		29.40	41		32.0	31.0
										nne		29.42				
										nnw 4		29.42	44		32.0	31.5
										nne		29.43				
1st Jan										nnw 4		29.39	43			
	4							39		nnw 3		29.33	40		31.0	
	8							42		nne		29.35				
	NOON	68	44	178	55	405		45		nnw 3		29.28	37		30.1	
	4	Current in last hours			E mls.			45		nne		29.31				
	8							48		nnw 3		29.24	35		31.0	30.5
	MIDT.							50		n		29.28				
								52		nnw 1		29.26	47		33.2	31.8
										nne		29.27				
										Caln 0		29.30	46		32.4	31.0
										nne		29.31				
										nnw 2		29.33	49		30.0	28.7
										nnw 2		29.33				

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

[illegible]

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 "Terra Nova"

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. 1163	Thermometers.	
Year 1912	Month Jan.	Observed.	Dead Reckoning.	Observed.	Dead Reckoning.	Each four hours.	Of Compass used for Wind, being Variation and Deviation combined.	Wind. By same Compass as Wind. State if true, or subject to Compass Error, or only to Variation.	Force, 0 to 12.	Height of Cistern above Sea 9 1/2 feet.	Dry Bulb. No.	Wet 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.				Colour of Sky.	Distance by Log.			Uncorrected Reading.	Att. Therm.	
2nd	4							East				8395 8396
	8											8394 8393
NOON		70	02	175	31	404	5.6					
	4	Current in last hours					5.0					
	8											
MIDT.							5.3					
3rd	4						53					
	8						60					
NOON		9.0 off Cape Adare										
	4	Robertson Bay										
	8											
MIDT.												
4th	4						60					
	8											
NOON		Entrance to Robertson Bay										
	4	Current in last hours										
	8											
MIDT.							435	45				
5th	4						45					
	8						47					
NOON		72	19	172	05	440	5.3					
	4	Current in last hours					6.3					
	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 H.H. Pennell from Antarctic Regions 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.		Time of Remark.
	Names.		Direction from.			Disturbance. 0 to 10.	Direction from.	Disturbance. 0 to 10.					
	Upper.	Lower.							Also record when Confused.				
4		St	10	0		ENE	1	SE	4	31.0		23	23 (4) + light snow.
8		no St	10	0.5		ESE	3	SE	4	29.9			
NOON		Hcu cu no	10	0.5		ESE	4	ESE	5	30.1			
4		cu Hcu	10	0.5		ESE	4	ESE	5	30.2		9.0	Long Stria of Ci-St radiating from the West (compass) near horizon + running beyond zenith to about 150 from the East. 10.05. Wind falling light.
8	acu	cu Hcu	5	bc		ESE	3	ESE	11	30.6			
MIDT.	acu a St	Hcu cu	9	c		E <sup>4</sup>	3	E <sup>4</sup> S	4				Clouded over. Sea moderating.
4		cu Hcu	9	c		NE	2	E <sup>4</sup>	2	30.0			
8	ast a cu ci St	cu Hcu	3	bc		SW <sup>4</sup>	2	SW <sup>4</sup>	2	-			
NOON	ast a cu ci St	cu	3	bc						30.6			
4	acu	cu	6	bc						31.0			
8													
MIDT.		Hcu	8	c									
4		Hcu	9	oc						29.3			
8		Hcu	10	oc				Pack		30.0			
NOON	ci ci St ast	Hcu	7	c				Pack					
4								Pack				P.M.	
8	acu	Hcu cu	8	c				Pack		30.1		11.35	Hcu Clouds breaking showing acu above for about 20 min.
MIDT.	acu	Hcu cu	8	c				Pack		30.2			
4	ci	cu Hcu	4	bc						30.8			
8		cu Hcu	10	oc			2	-	2	30.6			
NOON		St cu cu	10	oc			2	-	2	31.0			
4		cu Hcu	10	oc			2	-	2	31.6			
8		cu Hcu	10	c			2	-	3	30.6			
MIDT.													
2a	17	18	19	19a	20	21	20a	21a	22	23	24		25



# Meteorological Log kept on board "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		Observed.	Dead Reckoning.	Observed.	Dead Reckoning.	Each four hours.		Of Compass used for Wind, being Variation and Deviation combined.	By same Compass as Wind. <i>State if true or subject to Compass Error, or only to Variation.</i>	Direction.	Force. 0 to 12.	Height of Cistern above Sea 9 1/2 feet.		Dry Bulb.	Wet Bulb.
Month Jan.		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.				Colour of Sea	Distance by Log.					Uncorrected Reading.	Att. Therm.	No.	No.
Day.	Civil Time.	Hour.													
6.0	4							62		NNW 2		29.56	43	31.5	
8.0										Calm NE		29.59			
8.30										Calm 0		29.54	48		Eng. aff. by bulb
NOON		74	0	171	18	428		60		N <sup>g</sup> air 1		29.55			
		Current in last hours		mls.						ENE		29.53		30.0	28.0
4								92		N <sup>g</sup> air 1		29.50	53		Eng. aff. by bulb
										SE		29.50			
8								90		N <sup>g</sup> air 1		29.49	52	32.0	30.0
										N		29.49			
MIDT.								93		SW <sup>g</sup> NW 1-2		29.44	48	31.0	-
												29.45			
7.0	4							109		SW 3		29.37	44	29.5	28.0
										NNW		29.45			
8								87		SW 2		29.32	45	29.8	27.9
										NW		29.40			
NOON		75	15	168	37	84		84		SW <sup>g</sup> W 2		29.29	48	30.0	28.0
		Current in last hours		mls.								29.38			
4								150		SE <sup>g</sup> WNW 2		29.24	51	30.0	28.0
												29.25			
8								119		SE <sup>g</sup> WSW 2		29.22	55	32.0	30.0
												29.29			
9.0								113		Calm 0		29.29			
MIDT.										Calm 0		29.27	48	26.0	26.0
												29.19			
8.0	4	2.0 Stopped						113		N <sup>g</sup> SSE 1		29.13	42	24.0	22.0
												29.16			
8		Stopped on Pack.						160		SW 1		29.07	41	-	21.8
		8.30 Proceeded								NNE		29.10			
NOON		75	31	166	20	116		116		Ely S 2-3		29.05	47	25.2	24.8
		Current in last hours		mls.						SSW		29.07			
4								120		Ely S 2-3		29.05	49	27.8	25.8
										SSW		29.06			
8		9.0 Secured alongside fast ice						132		Ely N 2		29.02	50	29.9	28.0
										SW		29.03			
MIDT.								approx. 130		N <sup>g</sup> S 3		28.99	48	24.0	
												29.00			
9.0	4	0.40 Proceeded						106		E SSW 3 1/2		28.97	83	26.2	25.0
												29.02			
8		7.40 Stopped						125		ESE <sup>g</sup> 2-3		28.96	82	25.0	
										WSW		29.02			
NOON		75	23	164	39	128		128		ESE 2-3		29.02	45	27.8	27.2
		Current in last hours		mls.						WSW		29.04			
4								114		N <sup>g</sup> SSE 3		29.07	45	27.5	26.9
												29.09			
8								100		N <sup>g</sup> SE 2-3		29.11	47	27.0	26.5
												29.13			
MIDT.		8.20 Proceeded 11.30 Stopped						105		NW 3		29.17	43	26.5	26.2
										ENE		29.20			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16



"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 Jan.	Observed.	Dead Reckoning.	Observed.	Dead Reckoning.	Each four hours.		Of Compass used for Wind, being Variation and Deviation combined.	Kind of Chart 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. 42 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.				Colour of Sea.	Distance by Log.					Uncorrected Reading.	Att. Therm.		
10 <sup>th</sup>	4	250 Proceeded						East		SE	3	29.20	40	26.5	
	8									ESE	2-3	29.24	41	26.5	25.2
NOON		11.0 stopped in pack 76 03 165 55 Current in last hours mls.				315				SE	2	29.27	41	26.5	25.2
	4									NW	2	29.33	45	24.6	23.8
	8									ENE	3	29.35	46	25.0	23.9
										NW	3	29.37	46	25.0	23.9
										SSE	3	29.39	45	24.0	23.6
										S		29.39			
MIDT.															
11 <sup>th</sup>	4														
	8														
NOON		76 02 165 55 Current in last hours mls.								WSW	2-3	29.38	42	23.5	22.6
	4					320				Cal	0	29.39	44	25.3	
	8									SW	8	29.40	47	26.2	24.5
										NNW		29.33			
9.30										WSW	2-3	29.31	47	22.0	22.2
MIDT.		11.0 Proceeded								WSW	1	29.27	49	14.5	19.0
										WSW	1	29.28	39	14.3	
12 <sup>th</sup>	4									WSW	2	29.23	37	24.0	22.0
	8									W	2	29.17	37	22.5	21.4
										WSW	1	29.19	35	26.2	24.8
NOON		76 42 167 12 Current in last hours mls.				310				WSW	2-3	29.09	35	29.9	28.0
	4	3.0 Stopped off Beaufort Is.								WSW	2	29.14	44	28.3	26.2
	8									WSW	2	29.10	51	29.7	28.0
										SSW	2	29.13	48	26.1	25.2
										SSW	2	29.11		22.9	22.4
MIDT.										SSW	2	29.05	43	25.7	23.4
										SSW	2	29.07			
13 <sup>th</sup>	4														
	8														
NOON		76 54 166 39 Current in last hours mls.								SW	1.2	29.05	46	22.6	21.4
	4									SW	2	29.07	46	25.2	26.8
	8									ESE	2	29.10	46	26.1	25.2
										ENE	3-4	29.12	52	22.9	22.4
										ENE	4-5	29.12	48	25.7	23.4
										E		29.16			
MIDT.										ENE	3	29.18	43	25.7	23.4
										ENE		29.15			
										ENE		29.19			
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.

Captain W. H. Pennell

from *Antarctic Regions* 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.  Names. Upper. Lower.		According to Beaufort Notation.	Fog Intensity. 0 to 5.	Waves.		Swell.		Temp. by No. Spec. Grav. by No.	Time of Remark.		
					Direction from.	Disturbance. 0 to 10.	Direction from.	Disturbance. 0 to 10.				
Also record when Confused.												
4		St	9	o		Pack					am 20	Snow ceased. Heavy all time it lasted.
8		Hcu St	10	oc		Pack		30.5				
NOON		Hcu Cu	9	oc		Pack		28.8				
4		Hcu Cu	9	oc		Pack						
8		Hcu Cu	10	oc		Pack						
MIDT.												
4												
8	aCu ast	Cu Hcu St	6	bc		Pack		30.5				
NOON		Cu Hcu Cu	1	b		Pack		-				
4	aCu ast	Cu St	2	bc		Pack		30.2				
8		Cu Hcu	1	b		Pack		30.0				
MIDT.		Cu	1	b		Pack						
4		St	1	b		-	mo	3	31.2			
8	ast	Cu	1	b		St	2	nw	3	30.5		
NOON	ast	Cu	1	b			2	n <sup>s</sup>	3	30.6		
4	-	Cu	1	b		-	2	nw	3	30.8		
8	ast	Cu Hcu	1	b			2	nw	3	32.0		
MIDT.												
4												
8	aCu ast	Cu	1	b			1	w <sup>s</sup>	3	32.0		
NOON		Cu St	3	bc				w <sup>s</sup>	2	31.5		
4		Cu	6	bc		nw	3	nw	3	31.6		
8		Hcu	7	c		Pack			29.0			
MIDT.		Hcu Cu	7	c		Pack			30.2			mid. Wind probably affected by Cape Bird Peninsula.
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

"Terra Nova"

DATE.		Latitude.		Longitude.		Course and Distance.		Total Compass Error.	Ship's Head.	Wind, at the time of observation.	Barometer.* No. 1168	Thermometers.	
Year	1912	Observed.	Dead Reckoning.	Observed.	Dead Reckoning.	Each four hours.	Of Compass used for Wind, being Variation and Deviation combined.	Wind, 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 1/2 feet.	Dry Bulb.	Wet Bulb.
Month	Jan.	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.				Colour	Distance by Log.	Course.	Force.	Uncorrected Reading.	Att. Therm.	No.	No.
Day.	Civil Time.	Hour.			Current in last hours	mls.							
14 <sup>th</sup>	4											23.5	22.8
	8											24.4	22.6
	NOON	77	15	166	0	365	134	NE	2	29.20	41	22.5	21.5
	4						134	NE	2	29.24	41	22.5	21.5
	8						134	NE	2	29.28	50	22.8	21.6
	10 a.m.						134	NE	2	29.29	50	22.8	21.6
	MIDT.						143	NE	2	29.34	50	22.5	21.3
15 <sup>th</sup>	4											24.5	23.8
	8												
	NOON	77	15	166	0	365	143	NE	2	29.39	40	23.0	22.5
	4												
	8												
	MIDT.						163	NE	2	29.43	47	23.0	22.0
16 <sup>th</sup>	4												
	8												
	NOON	77	15	166	0	365	171	NE	2	29.44	47	23.0	22.8
	4						174	NE	2	29.45	46	23.0	22.2
	8						174	NE	2	29.45	46	23.0	22.2
	MIDT.						169	NE	2	29.45	48	23.0	22.2
17 <sup>th</sup>	4												
	8												
	NOON	77	22	165	22	169	169	NE	2	29.38	49	23.0	22.9
	4						169	NE	2	29.37	50	23.0	22.8
	8						169	NE	2	29.38	49	23.0	22.7
	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 N.H. Pennell

from Antarctic Regions to

Clouds.		Weather.		Sea Surface.		Remarks.	
Hour.	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.	Waves.	Swell.	Temp. by No.	Spec. Grav. by No.
Upper.	Lower.	Prop. of Sky Clouded, 0 to 10.	0 to 5.	Direction from.	Disturbance, 0 to 10.	Direction from.	Disturbance, 0 to 10.
4	cu	9	cs			30.5	2.4
8	cu	9	c	Pack		30.3	
NOON	cu	9	c	Pack		30.6	
4	cu	6	bc	Pack			
8	cu	9	cs	Pack			
MIDT.	st	10	vs	Pack			
4	cu	9	c	Pack			
8	cu	6	bc	Pack		30.0	
NOON	cu	9	c	Pack		30.5	
4	cu	9	cf	Pack			
8	cu	10	4scf	Pack			
MIDT.	cu	8	4scf	Pack			
4	st	10	oc				
8	cu	7	c	Pack		31.0	
NOON	cu	5	bc	Pack			
4	cu	3	bc	Pack			
8	cu	2	bc	Pack			
MIDT.	st	2	b4f	Pack			
4	st	10	b4f	Pack			
8	st	10	b4f	Pack			
NOON	st	3	bc	Pack			
4	st	3	bc	Pack			
8	st	9	c	Pack			
MIDT.	st	9	c	Pack			

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

"Terra Nova"

DATE.		Latitude.		Longitude.		Course and Distance.	Total Compass Error.	Ship's Head.	Wind.		Barometer.*	Thermometers.	
Year	Month	Observed.	Dead Reckoning.	Observed.	Dead Reckoning.				at the time of observation.	Force.		Direction.	No.
19	12										No. 1163		
Month Jan.													
Day.	Hour.												
17 <sup>th</sup>	4												
Continued.													
	8												
	NOON												
	4												
	8												
	MIDT.												
18 <sup>th</sup>	4												
	8												
	NOON												
	4												
	8												
	MIDT.												
19 <sup>th</sup>	4												
	8												
	NOON												
	4												
	8												
	MIDT.												
20 <sup>th</sup>	4												
	8												
	NOON												
	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 N.H. Pennell

from Antarctic Regions to

Hour.	Clouds.		Weather.		Sea Surface.				Remarks.	
	Upper.	Lower.	According to Beaufort Notation.	Fog Intensity.	Waves.	Swell.	Temp.	Spec.	Time of Remark.	
4										Continued: were all small & lying at right angles to the direction of the bands.
8										
NOON										
4										
8										
MIDT.										
4	st.	10	0.5		Pack					2.0 slight snow
8	st	10	0.4		Pack					3.5 snow increasing
NOON	st	10	0.4		Pack					forenoon - snow moderate.
4	st	10	0.4		Pack					afternoon snow slight.
8	st	10	0.2		Pack					stop snowing off and on.
MIDT.										
4										
8	st	10	0.5		Pack					
NOON	st	10	0.5		Pack					forenoon. Very slight snow falling.
4	st	10	0.5		Pack					snow slight moderate all day.
8	st	10	0.5		Pack					
MIDT.										
4										
8	st	8	0		Pack					
NOON	st	2	0		Pack					
4	-	1	0		Pack					
8	-	0	0		Pack					8.0 a little Cu on mountains.
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

"Terna Tova"

DATE.		Latitude.		Longitude.		Course and Distance.		Total Compass Error.	Ship's Head.	Wind, at the time of observation.		Barometer.* No. 168		Thermometers.		
Year 1912		Observed.	Dead Reckoning.	Observed.	Dead Reckoning.	Each four hours.		Of Compass used for Wind, being Variation and Deviation combined.	Wind 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 1/2 feet.		Dry Bulb.	Wet Bulb.	
Month Jan.						Colours.	Distance by Log.					Uncorrected Reading.	Att. Therm.	No.	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.				True Course.									
21st		4														
		8						approx 150		W by N	2	29.30	30	17.0	16.5	
NOON			77	05	164	23				ENE		29.37				
			Current in last hours							E by S	1	29.32	40	17.8	16.8	
4								174		WSW		29.36				
										E by S	1	29.31	44	Sum & Engrinto approx		
8								280		W		29.34				
										Calm	0	29.32	47	26.4	25.0	
MIDT.								171				29.34				
										nne	1	29.34	45	18.1		
22nd		4								SSW		29.36				
		8						165		N	3.4	29.40	44	18.4	17.5	
NOON			77	26	165	17	310	171		W by N	5	29.49	39	19.5	18.9	
			Current in last hours							SSE		29.53				
4								160		W by W	5	29.55	44	18.9	17.8	
										SSE		29.58				
8								160		N	5	29.60	44	17.4	16.6	
MIDT.										SSE		29.63				
23rd		4														
		8						approx 150		SE by S	1	29.68	38	26.9	25.0	
NOON			77	13	164	18		144		WNW		29.72				
			Current in last hours							E by S	1	29.71	42	23.4	21.5	
4										SW		29.74				
										SE by S	0.6	29.71	45	22.6	21.4	
8										W		29.73				
										SSW	NNW	1	29.68	37	19.5	17.2
10										SSE	E by S	1	29.73		16.4	15.2
MIDT.										NNW						
										ENE	SSW	1.2	29.65	38	17.0	16.0
24th		4														
		8						144		East by S	SW	1	29.62	32	10.0	
												29.68				
NOON			77	05	164	17				E by S	SW	1	29.61	33	15.2	14.6
			Current in last hours									29.67				
4										nne	S	2	29.62	45	Sum & Engrinto	
								166				29.64				
8										nne	S	2	29.61	49	-do-	
												29.62				
MIDT.										nne	S	2	29.56	48	25.2	-
								305				29.58				
								130		SE	W		29.54	42	21.9	-
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.

Captain H.H. Pennell

from Antarctic Regions to

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 Position of Ice and of Derelicts. Also note the hour at which the Ship arrives in or leaves Port. (See "Instructions" for further particulars.)	
Hour.	Names.	Force.	Direction.	Direction from.	Direction from.	Time of Remark.	
	Upper.						
4							
8							
NOON							
4							
8							
MIDT.							
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

"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 Jan 12	Observed.	Dead Reckoning.	Observed.	Dead Reckoning.	Each four hours.	Of Compass used for Wind, being Variation and Deviation combined.	Wind, State if true, or subject to Compass Error, or only to Variation.	Force, 0 to 12.	Height of Cistern above Sea 95 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.				Color of Sea	Distance by Log.	Direction.	Force.	Uncorrected Reading.	Att. Therm.	
25 <sup>th</sup>	4						approx. 150	East	1	29.54	36	18.5 17.8
	8						174	WSW	2	29.51	38	21.3 20.8
NOON		76	56	164	12			WSW	3	29.51	39	21.5 21.5
4		Current in last hours					127	WSW	3	29.51	45	22.6 22.8
8							173	WSW	3	29.51	45	22.2 22.5
MIDT.							167	WSW	3	29.50	41	25.5 23.5
26 <sup>th</sup>	4						approx. 150	East	2	29.46	35	24.0 22.8
	8						161	WSW	6/7	29.45	36	24.0 22.9
NOON		77	25	165	50		148	WSW	6/7	29.51	43	27.0 26.2
4		3.30 Commenced the current					134	WSW	4/5	29.54	47	24.9 23.8
8							126	WSW	4/5	29.52	45	25.2 24.0
MIDT.							approx. 150	WSW	5.6	29.54	-	
27 <sup>th</sup>	4						approx. 150	WSW	8-6	29.53	40	31.8 31.0
	8						167	WSW	8.9	29.53	42	31.9 30.5
NOON		77	05	164	30		148	WSW	9	29.52	45	33.9 30.2
4		Current in last hours					171	WSW	9	29.56	50	34.5 31.4
8								WSW	5	29.57	48	32.4 27.4
MIDT.							approx. 150	WSW	5.6	29.54	40	25.5 23.5
28 <sup>th</sup>	4						169	WSW	5.4	29.52	38	26.0 25.0
	8						170	WSW	1	29.46	41	26.2
NOON		76	54	164	30		168	WSW	1	29.44	45	31.4 29.5
4		Current in last hours					171	WSW	1	29.42	51	32.4 30.9
8							165	WSW	1	29.41	52	30.8 29.8
MIDT.							approx. 150	WSW	3	29.41	49	25.6 24.0

\* 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 Regions 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.			
	Names.		Direction from.			Disturbance. 0 to 10.	Direction from.	Disturbance. 0 to 10.	Temp. by No.		Spec. Grav. by No.
	Upper.	Lower.									
4		sc	1	bf	1		Smooth.				
8	acu	cu	4	bc					30.0		
NOON		cu	3	bc							
4	cicu	cu	3	bc							
8	acu	cu	2	bc					30.5		
MIDT.	acu	cu	2	bc			Pack				
4	ast		1	b							2a much mixed.
8	acu	sc	6	bc			Pack		30.2		5.0 Wind increased suddenly from force 3 to 6-7
NOON	acu	sc	7	c			Pack				pm
4	acu	sc	5	bc			Pack				8.30 Band of ast & ci st stretching right across heavens from NW to N to SE by S (14d ESE) much same as on 17 <sup>th</sup> .
8	acu	sc	4	bc			Pack				
MIDT.											
4		sc	9	oc							1.30 Wind NW (14d E <sup>6</sup> N) 8
8	acu	sc	6	c			Pack		30.2		2.30 Wind shifted suddenly from N to NE & lulled. NE.
NOON	acu	sc	7	c			Pack				2-4 Wind varying from N to NE & from 8 to 6.
4	acu	sc	5	bc			Pack		30.2		General nature of clouds stratiform. sc cu & ast with some ci st showing but also a little ci cu in places. Prop <sup>n</sup> cloud 8. A mass cloud over Mt Erebus as shown in sketch by Drake.
8	acu	sc	4	bc			Pack				pm 4.0 Wind unsteady in direction.
MIDT.	acu	sc	-	bc							5.0 Wind easing.
											7.0 Wind which had been NW veered to N. (14d NW by W) force 6.
4	ci		1	b							Midt Wind increasing at 11. pm.
8			0	b			Pack		29.5		2.0 to 4.0 Wind steady & lulling slowly
NOON			0	b			Pack				
4		sc	1	b			Pack				
8		sc	1	b			Pack				
MIDT.			0	bm							
2a	17	18	19	19a	20	21	20a	21a	22	23	24
											25



# Meteorological Log kept on board "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		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.	Force, 0 to 12.	Height of Cistern above Sea 92 feet.		Dry Bulb. No.	Wet Bulb. No.
Month Jan 12		Dead Reckoning.		Dead Reckoning.		Color.						Uncorrected Reading.			
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.	East	Sage					
29 <sup>th</sup>		4						171		WNE 4		29.38 39		33.5 22.5	
		8						166		NE 4-5		29.37 87		33.2 22.5	
NOON		{ 76 44 }		{ 164 30 }				174		NNE 4		29.40 43		Sun & Earth affecting.	
4								..		N 2		29.38 41		31.0 26.6	
8								171		WNE 2		29.40 45		30.5 26.0	
MIDT.								approx 150		NE 3-4		29.40 41		24.0 23.0	
30 <sup>th</sup>		4						approx 150		WNE 3		29.40 36		23.3 22.5	
		8						162		WNE 3		29.38 35		24.5 23.0	
NOON		{ 76 41 }		{ 164 26 }				approx 150		WNE 2		29.41 41		23.5 24.4	
4								..		Calm 0		29.42 47		Sun & Earth affecting.	
8								127		SE 2		29.42 47		29.2 23.0	
MIDT.								approx 150		SW 3		29.40 43		28. 26	
31 <sup>st</sup>		4						approx 150		South 4		29.37 36		27.3 25.8	
		8		8-0 at Edge of fast ice				172		South 2-3		29.35 37		25.4 23.6	
NOON		{ 77 32 }		{ 165 38 }				125		South 3		29.36 44		29.8 27.5	
4								approx 150		SW 3		29.34 46		30.0 28.5	
8								131		SW 3		29.35 46		27.5 26.5	
MIDT.								approx 150		SSW 0		29.36 43		27.0 26.2	
2d Jan		4						approx 150		W 2-0		29.44 89		27.2 27.0	
		8						174		W 1		29.46 40		26.4 25.5	
NOON		{ 77 28 }		{ 165 35 }		354		133		SW 2		29.46 42		30.0 28.5	
4								127		SW 3		29.44 43		28.6 26.9	
8								157		SW 3		29.34 42		28.4 27.2	
MIDT.								135		ENE 1-2		29.33 40		26.9 -	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16



# Meteorological Log kept on board

"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	Observed.	Dead Reckoning.	Observed.	Dead Reckoning.	Each four hours.					Dry	Wet
Month	Feb.										Bulb.	Bulb.
Day.	Civil Time.	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.										
Hour.		Colour of Sky.		Distance by Log.		Of Compass used for Wind, being Variation and Deviation combined.	Ship's Head.	Direction.	Force.	Height of Cistern above Sea.	Uncorrected Reading.	Att. Therm.
4						East		North	2-3	29.30	35	
8								SSE	2-3	29.35	37	
NOON		77	24	165	32	330		NE	2	29.34	45	
4								NE	2	29.36	46	
8								SE	2	29.37	45	
10.30								NE	2	29.39	40	
MIDT.								NE	2	29.41	41	
4								North	2-1	29.43	38	
8								NE	1	29.49	39	
NOON								NE	1	29.56	42	
4								SE	1	29.59	42	
8								SE	1	29.68	44	
MIDT.								SE	1	29.71	44	
4								SE	1	29.71	36	
8								NE	2-3	29.77	36	
NOON								NE	2	29.75	40	
4								NE	3	29.73	45	
8								NE	1	29.72	46	
MIDT.								NE	1	29.69	44	
4								East	1-2	29.65	37	
8								NE	1-2	29.62	38	
NOON								NE	1-2	29.63	42	
4								NE	7-8	29.64	42	
8								NE	9	29.68	34	
MIDT.								NE	7-8	29.70	35	

\* 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. L. Pennell from Antarctic to Regions.

Hour.	Clouds.		Weather.		Sea Surface.		Remarks.	
	Upper.	Lower.	Direction.	Force.	Waves.	Swells.	Direction.	Force.
4	acu	cu	6	bc				
8	ast	cu	5	bc				
NOON	acu	cu	4	bc				
4	acu	cu	4	bc				
8								
10.30								
MIDT.								
4	acu	cu	7	bc				
8	acu	cu	7	bc				
NOON	acu	cu	7	bc				
4	acu	cu	4	bc				
8	acu	cu	5	bc				
MIDT.	acu	cu	8	bc				
4	acu	cu	8	c				
8	acu	cu	6	bc				
NOON	ast	cu	5	bc				
4	ast	cu	5	bc				
8	acu	cu	4	bc				
MIDT.	acu	cu	3	bc				
4	acu	cu	5	bc				
8	acu	cu	5	bc				
NOON	acu	cu	4	bc				
4	acu	cu	3	bc				
8	acu	cu	3	bc				
MIDT.	acu	cu	7	bc				

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

"Terra Nova" Rys.

DATE.		Latitude.		Longitude.		Course and Distance.	Total Compass Error.	Ship's Head.	Wind, at the time of observation.	Barometer.* No. 1163	Thermometers.	
Year	1912	Observed.	Dead Reckoning.	Observed.	Dead Reckoning.	Each four hours.					Dry	Wet
Month	Feb 7.	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.				Colour of Sea	Distance by Log.	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 1/2 feet.
Day.	Civil Time.	Hour.									Uncorrected Reading.	Att. Therm.
6 <sup>th</sup>		4						174	NW <sup>4</sup> N	5-6	29.76	26
		8							SE		29.84	26.5
		NOON	Between Cape Rys. & Bird Peninsula.				255		NW <sup>4</sup> N	7	29.82	28
		4	Current in last hours						SE		29.89	22.2
		8							NNW	8	29.87	31
		MIDT.							SE		29.91	20.6
									NNW	7	29.91	20.6
									North	6.5	29.88	45
									SE		29.90	20.6
									NNW	5-6	29.89	45
									SE		29.91	20.6
7 <sup>th</sup>		4						174	North <sup>4</sup>	1-2	29.80	35
		8							North <sup>4</sup>	1-2	29.85	35
		NOON	off Cape Barnes						North <sup>4</sup>	1-2	29.74	31
		4	Current in last hours						SE		29.80	31
		8										
		MIDT.										
8 <sup>th</sup>		4									29.69	37
		8									29.74	
		NOON	off Cape Barnes				approx 150		NW	2-3	29.65	40
		4	Current in last hours						ESE		29.69	25.2
		8							N <sup>4</sup>	1-2	29.55	38
		MIDT.							SE		29.59	19.0
									N <sup>4</sup>	3-4		18.5
9 <sup>th</sup>		4										
		8										
		NOON	off Cape Barnes						No observations			
		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.

Captain N.H. Pennell from Antarctic to Region.

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. 8391.			
	Names.	Prop. of Sky 0 to 100.			Direction from.	Disturbance. 0 to 10.	Direction from.	Disturbance. 0 to 10.				
										Upper.	Lower.	Also record when Confused.
4		Cu Sta Lt	8	cg							am	
8	Alu	Cu Sta	8	bc							2.0	Wind gusty, lulling to force 4 at times.
NOON	Alu	Cu Sta	5	bc							3.0	Wind freshened again slightly
4	Alu	Cu Sta	8	bc							1.00	Wind from NW to North and lulling.
8	Alu	Cu Sta	2	bc							5.0	Wind inclining to increase but gusty. Slight mirage.
MIDT.												
4												
8	Ci	Alu	2	f						295		
NOON	Ci	Alu	6	bc							pm	
4												
8												
MIDT.												
4												
8												
NOON	Alu	Cu Sta	7	c							from	Considerable mirage. Wellbridge Islands
4		Alu	10	oc 35							6pm	Very slight snow started.
8		Alu	10	oc 5							pm	Wind increased to force 3 to 4 & snow a little heavier.
MIDT.												
4												
8												
NOON		Alu	9	oc 0								
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 *by "Terra Nova" R.Y.S.*

DATE.		Latitude.		Longitude.		Course and Distance.	Total Compass Error.	Ship's Head.	Wind, at the time of observation.	Barometer.*	Thermometers.	
Year	19	Observed.	Dead Reckoning.	Observed.	Dead Reckoning.	Each four hours.	Of Compass used for Wind, being Variation and Deviation combined.	Wind by same Compass as Wind.	Direction, State if true, or subject to Compass Error, or only to Variation.	No. 1163	Dry Bulb.	Wet Bulb.
Month	Feb	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.				Distance by Log.			Force, 0 to 12.	Height of Cistern above Sea 9 feet.	No.	No.
Day.	Civil Time.									Uncorrected Reading.	Att. Therm.	
10 <sup>th</sup>	4											
	8											
	NOON	off Cape Barnes										
	4	Current in last hours										
	8											
	MIDT.											
11 <sup>th</sup>	4											
	8											
	NOON	off Cape Barnes										
	4	Current in last hours										
	8	off Cape Barnes										
	MIDT.											
12 <sup>th</sup>	4											
	8											
	NOON	off Cape Evans										
	4	Current in last hours										
	8											
	MIDT.											
13 <sup>th</sup>	4											
	8											
	NOON	off Cape Evans										
	4.30	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.

## Captain *N.H. Pennell* from *Antarctic Region* 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.	Time of Remark.	
						Direction from.	Disturbance 0 to 10.	Direction from.	Disturbance 0 to 10.					
Names.		Prop. of Sky Clouds. (0 to 10.)	Also record when Confused.											
Upper.	Lower.													
4														
8.0	acu	cu str st	9	oc										
NOON	acu	str st	10	oc										
4														
8		str st	10	oc										
MIDT.														
4														
8	acu	str st	9	oc						30.1				
NOON	acu	str st	9	oc						30.2			from Sea in Straits scale 5.	
4	acu	str	7	oc						30.4				
8	cu acu	str cu	4	bc										
MIDT.														
4														
8	acu	cu str st	7	c									am 8.0	mirage slight.
NOON	cu acu	cu str	5	bc										
4														
8	cu ast acu	cu str	6	bc										
MIDT.														
4														
8	ast acu	cu str	2											
NOON	acu ast	cu str	5											
4.30	acu		7											
8	ast acu acu	cu str	6							27.2 (650 mm) 27.2				Considerable mirage all day.
MIDT.	ast acu cu	st str	6											
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

"Terra Nova" R/V

DATE.		Latitude.		Longitude.		Course and Distance.		Total Compass Error.	Ship's Head.	Wind, at the time of observation.	Barometer.* No. 1162		Thermometers.		
Year 1912	Month Feb	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 Bulb.	Wet Bulb.
Day.	Civil Time.	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.				Colour True Course.	Distance by Log.					Uncorrected Reading.	Att. Therm.	No.	No.
14	4							East							
	8						172	SSE	2	NNW		29.72	37	21.5	20.6
	NOON	{ off Cape Evans }						NW	2	SE		29.70	40	22.0	20.2
	4	{ Current in last hours mls. }					150	SSE	4	NW		29.65	42	Eng?	
	8						139	N	3	SE		29.64	46	24.5	24.2
	MIDT.						150	NW		SSE & SSW		29.61	41	24.5	23.0
15	4	3.0 Proceeded for Butler Point										29.55	40	25.0	
	8	8.0 off Butler Point										29.50	39	20.4	19.0
	NOON	{ off Shattered Ice by Bluenose Glacier }					165	NW	1	SSW		29.48	40	23.6	21.4
	4	{ Current in last hours mls. }					169	NNW	3.4	SSE		29.47	41	19.0	14.0
	8	off Inaccessible Island					approx 150	NW	5	ESE		29.49	40	15.9	
	MIDT.							NW	5	ESE		29.49	40	12.8	12.0
16	4						174	NW	6.7	SE		29.50	39	13.8	
	8						169	NW	6.7	SE		29.47	34	14.8	
	NOON	{ off Cape Royds }					172	NW	4	S		29.52	40	21.6	20.8
	4	{ Current in last hours mls. }					125	N	6.7	SE		29.58	40	18.2	17.6
	8						125	N	7	SE		29.57	43	15.1	14.6
	MIDT.						approx 150	N	4-6	SSE		29.60	43	14.0	13.5
17	4											29.60	39	14.0	14.0
	8						169	NW	7	SSE		29.56	33	14.8	
	NOON	{ Entrance to Foul Sound }				354	174	NW	7.8	SSE		29.57	23	16.2	15.8
	4	{ Current in last hours mls. }						NW	7.8	SSE		29.54	26	16.9	16.2
	8							N	5.6	SSE		29.54	24	16.8	
	MIDT.						approx 150	N	5-3	SSE		29.55	20	17.0	
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.

Captain Hunt H.H. Pennell from Antarctic Regions 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.	Time of Remark.
	Names.	Upper.	Lower.			Direction from.	Disturbance. 0 to 10.	Direction from.	Disturbance. 0 to 10.				
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													am
8	alcu	cu	8	0									8.0 Considerable mirage
NOON	alcu	nb cu	9	0045									noon. Snow falling very slight & very slowly.
4	alcu	cu	7	bc									pm
8	ci cu	cu	6	bc									8.0 Wind very variable
MIDT.	ci st	nb cu	7	bc									9.0 Wind N to NE 1-2
													a peculiar SW choppy sea. Young ice forming. A roaring sound as of pack to the SW. but no signs of pack presumably surf on Cape Bird.
4	ci cu	st cu	3	bc									
8	ci cu	st cu	2	bc									
NOON	ci cu	st cu	7	c									
4		nb	10	045									
8		nb	10	045									mid. Snow all the watch.
MIDT.	ast ci	nb	9	053									mid. Thick with fine snow.
4		st	10	0945									am
8		st	10	0945									4.0 Weather clearing
NOON	st cu	st	10	0045									mor. Snow slight. moderate.
4	st cu	st	10	0025									noon. Snow slight to mod.
8	nb	10	0045										afternoon. Snowing at intervals.
MIDT.	ast nb	10	0935		N 4 E	4	NNW	5					1.0 Wind increased.
4		nb	10	0925		NNW	4	nil					4.0
8	st	10	009		NNW	4	NNW	4					3-4. Weather thick with snow.
NOON	st	10	009		NNW	6	NNW	6					mor. Cleared, snow lighter.
4	st	10	009		NNW	6	NNW	6					Occasional very slight snow, limit of visibility 2 miles
8	st	10	009		NNW	6	NNW	6					Occasional slight falls of snow
MIDT.	st	10	009		NNW	6	NNW	6					Intermittent snow all the watch.
2a													11.0 Wind started to ease.

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

"Terra Nova" R/Vs

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	19 <i>12</i>	Observed.	Dead Reckoning.	Observed.	Dead Reckoning.	Each four hours.					Dry Bulb.	Wet Bulb.			
Month	<i>26</i>	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.				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 <i>9</i> feet.	No.	No.			
Day.	Civil Time.	Hour.					Distance by Log.				Uncorrected Reading.	Att. Therm.			
<i>18<sup>th</sup></i>		<i>4</i>													
		<i>8</i>					<i>approx 145</i>								
	NOON		<i>76</i>	<i>37</i>	<i>165</i>	<i>0</i>			<i>Wly W 3</i>	<i>29.47</i>	<i>25</i>	<i>17.1</i>			
	<i>4</i>		<i>Current in last hours 3.30 rounded.</i>						<i>SE 3.4</i>	<i>29.42</i>	<i>26</i>	<i>21.5</i>			
	<i>8</i>						<i>168</i>		<i>SE 2</i>	<i>29.34</i>	<i>34</i>	<i>15.8</i>			
	MIDT.						<i>143</i>		<i>SSE 2</i>	<i>29.27</i>	<i>38</i>	<i>18.0</i>			
							<i>164</i>		<i>W 1-2</i>	<i>29.20</i>	<i>32</i>	<i>20.9</i>			
<i>19<sup>th</sup></i>		<i>4</i>					<i>150</i>		<i>SW 4-5</i>	<i>29.13</i>	<i>28</i>	<i>18.2</i>			
		<i>8</i>					<i>146</i>		<i>SE 4</i>	<i>29.14</i>	<i>33</i>	<i>17.0</i>			
	NOON		<i>75</i>	<i>27</i>	<i>166</i>	<i>49</i>	<i>354</i>		<i>SE 4-5</i>	<i>29.18</i>	<i>36</i>	<i>15.4</i>			
	<i>4</i>		<i>Current in last hours</i>						<i>W 4-5</i>	<i>29.22</i>	<i>37</i>	<i>12.5</i>			
	<i>8</i>						<i>120</i>		<i>SE 6-7</i>	<i>29.21</i>	<i>34</i>	<i>13.4</i>			
	MIDT.						<i>120</i>		<i>SE 8-10</i>	<i>29.19</i>	<i>33</i>	<i>15.2</i>			
<i>20<sup>th</sup></i>		<i>4</i>					<i>approx 128</i>		<i>SE 10</i>	<i>29.22</i>	<i>28</i>	<i>11.8</i>			
		<i>8</i>							<i>SE 9-10</i>	<i>29.25</i>	<i>31</i>	<i>10.5</i>			
	NOON		<i>74</i>	<i>45</i>	<i>166</i>	<i>35</i>			<i>SE 10</i>	<i>29.31</i>	<i>34</i>	<i>Sum &amp; Expo affecting</i>			
	<i>4</i>		<i>Current in last hours</i>						<i>SE 7-8</i>	<i>29.32</i>	<i>32</i>	<i>12.7</i>			
	<i>8</i>								<i>SE 9</i>	<i>29.32</i>	<i>37</i>	<i>13.8</i>			
	MIDT.								<i>SE 8-10</i>	<i>29.37</i>	<i>35</i>	<i>12.4</i>			
<i>21<sup>st</sup></i>		<i>4</i>					<i>138</i>		<i>SE 8-10</i>	<i>29.31</i>	<i>24</i>	<i>11.1</i>			
		<i>8</i>					<i>100</i>		<i>SE 8-9</i>	<i>29.28</i>	<i>17</i>	<i>11.9</i>			
	NOON		<i>75</i>	<i>0</i>	<i>169</i>	<i>10</i>	<i>352</i>		<i>SE 6-7</i>	<i>29.26</i>	<i>16</i>	<i>12.8</i>			
	<i>4</i>		<i>Current in last hours</i>						<i>SE 6</i>	<i>29.22</i>	<i>22</i>	<i>16.0</i>			
	<i>8</i>						<i>98</i>		<i>SE 5</i>	<i>29.22</i>	<i>21</i>	<i>16.5</i>			
	MIDT.								<i>SE 2-3</i>	<i>29.24</i>	<i>30</i>	<i>15.2</i>			
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.

Captain W.H. Pennell from Antarctic Regions to

Clouds.		Weather.		Sea Surface.		Remarks.	
Hour.	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.	Spec. Grav. by No.	Time of Remark.
Upper.	Lower.	Prop. of Sky Clouded. 0 to 10.	Direction from.	Direction from.	Direction from.	Direction from.	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 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	St Cu	10	00434f 2				Mid. Snow moderate & fog intensity 2 all night.
8	St Cu	10	00	Pack			Weather improving after 4 hours snow ceased.
NOON	St Cu	10	00434f 3				5.0 West. Mountains appeared.
4	St Cu	10	00				6.0 Sun over all West. coast. 8.0 but brilliant sunshine over W. mts.
8	St Cu	6	00	Pack			Snow continuous, slight to 11.0 then moderate.
MIDT.	St Cu	8	00	NW 2 NW 6			4.00 Sun on W. mts. Mirage. 10.30 Commenced to snow (mod) 11.30 Snow ceased.
4	St Cu	8	00	NW 5			6.0 Wind shifted to South.
8	St Cu	6	00	SE 3 SE 4			4.0 Sun shining over mountains.
NOON	St Cu	9	00	SE 3 SE 4			5.0 Snow, north & south of Ship. Sea flakes occasionally falling on ship.
4	St Cu	10	00	SE 3 SE 4			6.0 Bright sunshine over mountains, softening brilliant yellow sky.
8	St Cu	10	00	SE 3 SE 4			7.0 Wind increased to 7-8 squalls. Wind increasing some very heavy squalls.
MIDT.	St Cu	10	00	SE 3 SE 4			Mid. Snow commenced to fall. 4.0 Heavy blizzard. Thick with very fine snow. Squalls practically continuous.
4	St Cu	10	00	SE 3 SE 4			8.0 Sun shining on mountains a little blue sky exposed showing a Cu & Ci-Cu.
8	St Cu	10	00	SE 3 SE 4			7.50 Wind increased to force 9. (During "Ogo" 6 to 7)
NOON	St Cu	7	00	SE 3 SE 4			11.0 Squalls increasing in strength & rapidity of sequence.
4	St Cu	7	00	SE 3 SE 4			Wind eased at 11 am to 6-7
8	St Cu	5	00	SE 3 SE 4			9.30 Wind S 4 E 4-5 (H. S 37 E) Confused S 4 + S 4 (Fine) Sea.
NOON	St Cu	4	00	SE 3 SE 4			11.30 Wind falling light. Heavy bank of mounds clouds to E.N.E.
4	St Cu	5	00	SE 3 SE 4			
8	St Cu	3	00	SE 3 SE 4			
MIDT.	St Cu	4	00	SE 3 SE 4			

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 S.Y. "Terra Nova" RYS

DATE.		Latitude.		Longitude.		Course and Distance.	Total Compass Error.	Ship's Head.	Wind, at the time of observation.	Barometer.*	Thermometers.	
Year	1912	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.
Month	Feb.	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.					Wet Bulb.
Day, Civil Time.	Hour.											No.
22 <sup>nd</sup>	4						East					83.94
	8.30											83.93
NOON		75° 32'		168° 54'		102						
4		Current in last hours mls.				100						
8						97						
MIDT.						112						
4												
8												
NOON												
4		Current in last hours mls.										
8												
MIDT.												
23 <sup>rd</sup>	4					148						
8						approx. 136						
NOON		75° 43'		164° 20'		110						
4		Current in last hours mls.				110						
8						135						
MIDT.						approx. 135						
24 <sup>th</sup>	4					approx. 135						
8						123						
NOON		75° 45'		164° 15'								
4		Current in last hours mls.				110						
8						119						
MIDT.						122						

\* 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 W.H. Pennell from Antarctic Region 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 Inten- sity. 0 to 5.	Waves.		Swell.		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.)	
	Names.				Direction from.	Dis- turb- ance. 0 to 10.	Direction from.	Dis- turb- ance. 0 to 10.					
	Upper.	Lower.											Also record when Confused.
4	ACu	St	9	C	SE	4	SE				2.0	Sky clouded over from WNW, a big arch of St Cu. Bank of St Cu in SSW.	
8.30		St	10	OC	SE	4	SE	5			8.0	Commenced to snow (slight)	
NOON		Cu											Forenoon. Snow very slight all forenoon. Flakes very small & very few.
4		Cu									2.0	Wind to SW 3-4. Gradually easing all afternoon & last hour veering rapidly.	
8		St	10	OC	SE	4	NE	6					The swell is very short, steep & quick.
		St	10	OC 3sf	3	NE	5	NE	6			4.0	
MIDT.				CC 4 S								5.0	Commenced to snow (heavy)
4													5.0 Wind which had been very variable and light to W <sup>4</sup> E (1st 8175) in a squall. I saw lightning & coming down (heavy) & wind in 8 squalls with it up to force 7. In intervals dropping to force 3. Very unsteady in direction, varying through about 3 points, NE being mean. Snow squalls approaching show quite different colours, more severe being very dark, less severe being whitish. Contrast very marked & nothing to do with blinks.
8													7-8 pm. Snow continuous (slight) Squalls Heavy.
NOON													
4													
8													
MIDT.													
4		St.	10	0								1.0	Snow ceased. Weather clearing
8		Cu										8.0	Fine banks of cumulus cloud extending east to north & sun shining through clouds.
NOON		Cu										noon	Sun shining through clouds
4	ACu	St	10	OC								4.0	Sun shining through upper clouds.
8	ACu	St	10	OC								5.0	Sun shining through clouds. Few patches of blue sky.
MIDT.		St										First	Overcast. slight snow fall.
		St	10	OC 3/4								Mid	Slight swell.
4		St	10	OS								8.00 & noon.	little snow in thermometer.
8		St										noon to 4pm.	Slight snow throughout.
NOON		St										pm	
4		St	10	OC 1/4								8.0	Swell backed in forecastle pack.
8		Cu											
MIDT.		St											First. a distinct WSW swell visible. Wind "puffy" 1/4 hr snow between 11.30 & midn.
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

Readings over zero: Mercury +, below zero - Spirit Thermometer.  
"Terra Nova" R.Y.S.

DATE.		Latitude.		Longitude.		Course and Distance.		Total Compass Error.		Ship's Head.		Wind, at the time of observation.		Barometer.* No. 1163		Thermometers.													
Year 1912		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.		Uncorrected Reading.		Att. Therm.		No. 1163		No. 1163	
Month 26																													
Day, Civil Time.		Hour.																											

\* 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 W.H. Russell.

from Antarctic Regions to

Clouds.		Weather.		Sea Surface.				Remarks.				
Hour.	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.	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.)
	Names.				Direction from.	Disturbance. 0 to 10.	Direction from.	Disturbance. 0 to 10.				
	Upper.	Lower.										
Also record when Confused.												
4		St 10	o3s				Sw 5				06.30 Wind variable, SW 1-3	
8	acu	cu	9	o3s			Sw 5				1.30 Wind to NE. Heavy snow till 3.30. then lighter.	
NOON	acu	cu	5	bef							1.00 Observed "frost smoke" on the water.	
4.30		cu	-	cuf 3							1.00 Frost smoke, is a low lying mist on the sea water caused by the cold air striking the water.	
8		cu	-	cuf 3							1.00 Frost is frost smoke.	
MIDT.											Shipped Spirit Thermometer for below Zero readings.	
4		St	8	cq4f 1							10.30 pm. Gale came to force 3.	
8		nb	10	cq4f 3							4.0 Frost smoke, but much less this watch than before. Wind came to force 5-6 at midnight.	
NOON		nb	10	cq4f 3							8.0 Frost smoke increased. In sky visible.	
4	ast	St	10	cq							4 pm Sun shining through clouds.	
8	ast	St	6	bog							10.30 Wind started easing. A heavy swell setting in from SSW. Young ice forming	
MIDT.	ast	St	6	bog			nm 5	sw 6				
4	ci	St	6	bog			nm 4	sw 5				
8	acu	St	4	b							pm Bops. very squally. In some of the lulls wind almost dropping to calm.	
NOON	ast	St	7	c							7.00 Wind very squally. Lulls between dying to force about 2.	
4		St	9	c							Frost smoke.	
8		St	10	cq							Mid. Young ice forming.	
MIDT.		St	10	cqf 3								
4		St	10	ogm							am 00.30 Heavy squalls & very thick with fine snow.	
8.9		St	10	ogm							3.0 Weather moderating & cleared slightly.	
NOON		St	10	ogf 4							8.00 Frost smoke.	
4		St	10	ogf 1							10.0 Wind shifted NE. for about 20 min.	
8	ast	St	8	c							1.00 Frost smoke very dense.	
MIDT.											4. Frost smoke very slight.	
2a	17	18	19	10a	20	21	20a	21a	22	23	24	25



Meteorological Log kept on board

U.S. "Terra Nova" Rys

DATE.		Latitude.		Longitude.		Course and Distance.		Total Compass Error.	Ship's Head.	Wind, at the time of observation.		Barometer.* No. 1163		Thermometers.	
Year 1912		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.		No. 1163	No. 1521
Month Feb.						Colours True Course.	Distance by Log.					Uncorrected Reading.	Att. Therm.		
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.													
29 <sup>th</sup>		4.30						154		lt NW <sup>4</sup> air	0-1	29.49	26		3.2
		8						127		ESE	2	29.57	25		7.9
NOON			77° 07'	166°	05'			150		lt E <sup>4</sup> air		29.47	28		14.0
		4	Current in last hours mls.							WSW		29.54			
		8						146		WNW	5	29.41	30		18
										E		29.48			
										SW <sup>4</sup>	3	29.33	32		20
										N		29.39			
MIDT.								144		lt Var <sup>16</sup> air		29.29	34		21
and the wet bulb being unattended by salt water.															
Niche pt		4						139		WNW	4-3	29.22	30		22.8
		8						154		ENE	4-5	29.21	37		21.4
NOON			75° 25'	166°	0'			150		ENE	3-4	29.24	36		22.8
		4	Current in last hours mls.							ENE		29.29			
		8						154		SE	3	29.23	42		19.2
								135		WNW		29.26			
										NE	3	29.22	41		15.4
										S		29.25			
MIDT.								148		lt S <sup>4</sup> air		29.20	41		18
are in working order; the dry bulb being free of moisture															
2nd		4						113		SSW	3	29.16	36		15.0
		8.30						124		SSW	5-6	29.13	33		13.0
NOON			75° 25'	166°	0'			110		W		29.19			
		4	Current in last hours mls.							W	5-6	29.12	35		
		8						120		SSW	5	29.09	39		10.7
										W		29.13			
								137		SSW	4-5	29.07	36		11.8
										WNW		29.12			
MIDT.								123		ENE	5-6	28.98	30		18.4
thermometers, the observer should satisfy himself that both															
3rd		4						146		WNW	5-6	29.02	26		16.0
		8						123		NE	5	29.08	27		15.1
NOON			76° 02'	167°	26'			118		SE		29.15			
		4	Current in last hours mls.							NE	4-5	29.18	34		13.8
		8						112		ESE		29.23			
										SSE	2-3	29.16	31		15.8
										W		29.22			
										WNW	5	29.20	37		9.0
										ENE		29.25			
MIDT.								120		Var to ENE	4-5	29.25	32		8.5
Before accepting the readings of the dry and wet bulb															
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.Y.S.

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>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 <i>9</i> feet.		Dry Bulb.	Wet Bulb.
Day.	Civil Time.	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.				Colour True Course.	Distance by Log.					Uncorrected Reading.	Att. Therm.		
<i>4<sup>th</sup></i>	4							<i>East</i>							
	8	<i>6.0 off Cape Evans</i>						<i>138</i>		<i>ENE 4.6</i>		<i>29.25</i>	<i>38</i>		<i>9.3</i>
	NOON	{ <i>off Hut Point</i> }						<i>153</i>		<i>ENE 5</i>		<i>29.13</i>	<i>29</i>		<i>9.8</i>
	4	{ <i>Current in last hours</i> mls. }						<i>164</i>		<i>ENE 5</i>		<i>29.12</i>	<i>30</i>		<i>2.0</i>
	8	<i>Glacier Bay</i>						<i>164</i>		<i>ENE 6</i>		<i>29.09</i>	<i>25</i>		<i>1.2</i>
	MIDT.	<i>10.20 Proceeded</i>						<i>138</i>		<i>ENE 2.3</i>		<i>29.09</i>	<i>26</i>		<i>7.5</i>
<i>5<sup>th</sup></i>	4							<i>157</i>		<i>WNE 5.4</i>		<i>29.08</i>	<i>13</i>		<i>6.0</i>
	8	<i>8.0 off Cape Bird</i>						<i>161</i>		<i>W<sup>4</sup>E 3</i>		<i>29.18</i>	<i>25</i>		<i>10.8</i>
	NOON	{ <i>77 07 166 30</i> }						<i>172</i>		<i>W<sup>4</sup>S 3</i>		<i>29.18</i>	<i>28</i>		<i>8.5</i>
	4	{ <i>Current in last hours</i> mls. }						<i>177</i>		<i>SW 2</i>		<i>29.25</i>	<i>36</i>		<i>6.10</i>
	8.20							<i>146</i>		<i>WSW 4</i>		<i>29.24</i>	<i>36</i>		<i>6.0</i>
	MIDT.							<i>156</i>		<i>W<sup>4</sup>N 2</i>		<i>29.24</i>	<i>36</i>		<i>6.0</i>
<i>6<sup>th</sup></i>	4							<i>approx 130</i>		<i>WNE 4</i>		<i>29.20</i>	<i>28</i>		<i>11.0</i>
	8.00							<i>133</i>		<i>W<sup>4</sup>N 4</i>		<i>29.22</i>	<i>29</i>		<i>12.5</i>
	NOON	{ <i>75 20 166 30</i> }						<i>139</i>		<i>W<sup>4</sup>N 4</i>		<i>29.24</i>	<i>33</i>		<i>13.0</i>
	4	{ <i>Current in last hours</i> mls. }				<i>4.04</i>		<i>131</i>		<i>W<sup>4</sup>N 4</i>		<i>29.25</i>	<i>37</i>		<i>14.2</i>
	8							<i>138</i>		<i>SE by S 4</i>		<i>29.30</i>	<i>35</i>		<i>7.1</i>
	MIDT.							<i>147</i>		<i>SE by S 4.5</i>		<i>29.27</i>	<i>24</i>		<i>4.5</i>
<i>7<sup>th</sup></i>	4							<i>133</i>		<i>ESE 7.8</i>		<i>29.20</i>	<i>20</i>		<i>7.0</i>
	8							<i>121</i>		<i>East 7</i>		<i>29.18</i>	<i>12</i>		<i>5.0</i>
	NOON	{ <i>75 05 168 43</i> }						<i>147</i>		<i>E by E 4.5</i>		<i>29.17</i>	<i>20</i>		<i>5.0</i>
	4	{ <i>Current in last hours</i> mls. }				<i>4.29</i>		<i>145</i>		<i>NE by E 4.5</i>		<i>29.13</i>	<i>27</i>		<i>12.2</i>
	8							<i>139</i>		<i>E by N 4</i>		<i>29.07</i>	<i>31</i>		<i>15.2</i>
	MIDT.							<i>132</i>		<i>E by E 3.4</i>		<i>29.00</i>	<i>29</i>		<i>17.6</i>
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.

## Captain *Robert. W. Pennell* from *Antarctic Regions* to

Clouds.		Weather.		Sea Surface.		Remarks.	
Hour.	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.	Waves.	Swell.	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.)
Upper.	Lower.	Prop. of Sky Clouded, 0 to 10.	6 to 5.	Direction from.	Direction from.	Temp. by No.	Spec. Grav. by No.
4		0	by				Am 2.4 full moon 10° high true north.
8							6.10 29.227
NOON		0	b				4.30 Calm.
4		0	b				6.0 Wind WSW (Head East) force 3.
8		cu	7	cf	3		pm 4 a very little detached Cu in sky.
MIDT.	ast	cu	6	bcm	3		8.00 smoke over sea.
4	ast	cu	7	bcm	3		8.00 smoke + mirage.
8							Mid. a good bright smoke sun visible just before sunset. Quick appearance over mid horizon due to fire effect.
4	ast	cu	7	bcm	3		am 5.0 Wind eased to force 1.2.
8	ast	cu	2	b			6.0 Wind SSW <sup>4</sup> light airs (H <sup>4</sup> SSW)
NOON	ast	cu	8	c			pm 7.45 commenced to snow.
4		cu	8	c			8.15 snow slight.
8.20		cu	10	CS			Mid. Fine snow falling 3 hrs of watch. Weather cleared 11 pm.
MIDT.	ast	cu	6	CSm	3		
4		st	8	CS			pm 02.30. Very light snow.
8.00		st	10	CS			3.4 light snow.
NOON		st	10	OCUS			Mid. Wind between NW + WSW. (H <sup>4</sup> S <sup>4</sup> ) + varying in force from 0 to 4.
4		st	10	OCUS			Mid. Sun occasionally shining through clouds.
8		st	9	OCUS			5.30 Wind to ESE. (H <sup>4</sup> WSW) force 4.
MIDT.	ast	st	7	bcm			8 pm. Smoke sun 22.5° off of sun. alt. of sun 3°. Vertical light from sun to horizon + upwards.
4		st	8	oc			8.50. Similar smoke sun appeared in sight of sun, as well as in left with vertical ray (white) above sun, continuing until after sunset over nearly clear horizon. No green flash.
8		st	10	oc			11 am upper half 22.5° halo showing faintly with two smoke suns same altitude as sun. Also tangential arc of 46° circle vertically over the sun.
NOON	ast	st	7	c			pm 11.0 Corona round moon.
4	ast	st	7	c2sf			Very slight snow-fall.
8	ast	st	8	c			
MIDT.	ast	st	7	cms			

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

"Terra Nova" *Rys*

DATE.		Latitude.		Longitude.		Course and Distance.		Total Compass Error.	Ship's Head.	Wind, at the time of observation.		Barometer.* No. 1163		Thermometers	
Year 1912		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.		No. 2295	No. 1521
Month June		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.				Colours True Course. Sea	Distance by Log.					Uncorrected Reading.	Att. Therm.		
Day, Civil Time.	Hour.														
8 <sup>th</sup>	4							125		WS	2	28.96	30		16.0
	8							118		NlyE	4	28.97	27		18.8
	NOON	73	32	174	12	428		112		NlyE	4	29.00	29	209	
	4	Current in last hours				mls.		108		NlyE	4	29.04	33	21.4	
	8							105		WS	4	29.07	34	21.8	
	MIDT.									WS	4.5	29.09	32	22.6	
9 <sup>th</sup>	4							97		WS	4	29.07	30	22.2	
	8							90		NlyW	4	29.08	27	23.4	
	NOON	71	32	173	21	430		88		SE	5-6	29.13	35	23.6	
	4	Current in last hours				mls.	429	89		SE	5	29.17	35	23.6	
	8									ESE	3	29.20	40	24.0	
	MIDT.									ENE	2	29.19	41	25.1	
10 <sup>th</sup>	4							81		SSW	4-5	29.13	34	24.0	
	8							80		SSW	5	29.12	32	25.8	
	NOON	70	28	174	39	430		78		SSW	5-6	29.11	35	27.4	
	4	Current in last hours				mls.		77		SW	6	29.12	41	27.2	
	8							76		SSW	5	29.11	44	27.6	
	MIDT.							66		WS	3-5	29.09	44	29.6	1.0
11 <sup>th</sup>	4							51		NW	4	29.01	38	28.6	
	8							50		NW	5	28.87	37	29.6	
	NOON	69	46	177	19	428		28		NNE	5	28.77	41	29.8	
	4	Current in last hours				mls.	429	47		WSW	3	28.73	44	30.5	
	8							73		SW	3	28.94	47	29.5	
	MIDT.							75		SW	3	28.99	47	30.8	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16



# Meteorological Log kept on board

"Terra Nova" R. A. F.

DATE.		Latitude.		Longitude.		Course and Distance.	Total Compass Error.	Ship's Head.	Wind, at the time of observation.	Barometer.* No. 1163	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.	Force. 0 to 12.	Height of Cistern above Sea 9 feet.
Month March		Dead Reckoning.		Dead Reckoning.		Colour True Course.	Distance by Log.				
Day. Civil Time.		Hour.		Hour.							
12 <sup>th</sup>		4									
		8									
NOON		69 23		177 52		430					
4											
8											
MIDT.											
13 <sup>th</sup>		4									
		8									
NOON		68 40		172 12							
4											
8											
MIDT.											
14 <sup>th</sup>		4									
		8									
NOON		68 53		172 55							
4											
8											
MIDT.											
		4									
		8									
NOON											
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 H. H. Pennell.

from Antarctic Regions to

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.		Time of Remark.	
Upper. Lower.		0 to 5.		Direction from. Disturbance. 0 to 10.		by No. by No.	
				Also record when Confused.			
4		9		S 3 W 7		Mid. Light snow showers.	
8		10		S 3 W 7		pm. Wet snow & sleet (mod) all watch.	
NOON		10		S 3 W 7		5.0 Wind WNW (N. S 50W) 5	
4		10		NNW 5		Squ. Snow & sleet continuous	
8		10		NW 6		First Snow turned into rain (mod).	
MIDT.		10		NW 6			
4		10		NW 6		Mid. Rain (moderate)	
8		10		NW 6		10.30 Wind W (N. S 40W) force 9 having backed quickly during last half hour.	
NOON		10		NW 6		Squ. Waves over 25 feet by measurement	
4		10		NW 6		7.0 Read out of barograph. (Qu. 201)	
8		10		NW 6		1.40 Aurora.	
MIDT.		10		NW 6		First Wind easing but very puffy.	
4		9		NW 4		Wind lulled & shifted slowly.	
8		10		NW 5		4.45 Snow (mod)	
NOON		10		NW 4		Forenoon. A rising S.E. swell appeared early in watch and increasing.	
4		10		NW 4		4.0 Confused swell. Largest being from S.E. direction.	
8		10		NW 4		8.0 E. swell the greatest.	
MIDT.		10		NW 4		8.30 Sky clearing.	
4		10		NW 4		10.0 G. air force 1. Prop. cloud 2.	
8		10		NW 4		10.0 Aurora curtain. Centre N 5 (true)	
MIDT.		10		NW 4		Band 2° to 3° broad stretching through	
4		10		NW 4		through about 120° of arc & parallel to the horizon. Between the band of auroral	
8		10		NW 4		light & the horizon was much darker than remainder of sky. (i.e. Dark segment)	
NOON		10		NW 4		stars showing here proved it not to be cloud. Colour white tinged with grey, though the	
4		10		NW 4		brighter spots were yellowish white. West of the curtain had a brilliant equal	
8		10		NW 4		to about a 3rd mag. star, in a few spots it came up to that of a 1st mag.	
MIDT.		10		NW 4		a few stars radiated out towards the zenith to 10° or 15° of arc at times but not enough to alter the general appearance of a long narrow sinuous band.	
4		10		NW 4		10.30. Fading away.	

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

"Terra Nova Rys"

DATE.		Latitude.		Longitude.		Course and Distance.	Total Compass Error.	Ship's Head.	Wind, at the time of observation.	Barometer.* No. 1163	Thermometers.
Year	1912	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.
Month	July	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.				Color True Course.	Distance by Log.				
Day, Civil Time.	Hour.										
15 <sup>th</sup>	4					64	WNW	4	29.28	39	3.5
	8					60	WNW	4	29.27	39	29.8
	NOON	68	03	169	45	430	WNW	5	29.26	39	30.6
	4	Current in last hours				63	WNW	5-6	29.21	45	32.3
	8						WNW	5	29.18	46	32.1
	MIDT.					60	WNW	4	29.15	47	31.8
16 <sup>th</sup>	4					62	WNW	4	29.02	43	31.5
	8					62	WNW	2	28.85	41	31.8
	NOON	66	44	164	48	325	SW	2	28.95	46	30.8
	4	Current in last hours					SW	1	28.92	47	30.0
	8.30						WNW	3	28.84	44	30.0
	MIDT.					51	WNW	5-6	28.67	34	30.8
17 <sup>th</sup>	4					50	WNW	4	28.60	34	31.0
	8						SW	3	28.60	39	31.5
	NOON	66	33	161	37	400	SW	3	28.63	40	28.8
	4	Current in last hours					SW	3	28.66	42	29.5
	8						WNW	3	28.69	45	
	MIDT.					45	WNW	3-4	28.75	45	31.0
18 <sup>th</sup>	4					45	SE	3-4	28.87	43	32.0
	8						SE	2	28.98	41	30.8
	NOON	64	03	160	12		SE	0-1	29.09	45	33.0
	4	Current in last hours				453	WNW	1-2	29.13	48	32.0
	8					35	WNW	2	29.13	46	31.6
	MIDT.					28	WNW	3-2	29.03	42	31.5

\* 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 N.H. Pennell from Antarctic Region to Antarctic to New Zealand

Clouds.		Weather.		Sea Surface.		Remarks.	
Hour.	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.	Waves.	Swells.		
Upper.	Lower.	Prop. of Sky Clouded.	0 to 5.	Direction from.	Direction from.	Temp. by No.	Spec. Grav. by No.
4	St 10	0.1	W 3	Conf.	-		3-4 Slight rain.
8	St 10	0.4 f	4	-	3 WNW 6	30.8	7.00 Fog intensity 1-2 till 7.0. Then 3-4. Sun shining thru fog.
NOON	St 10	0.4 f	3	-	4 WNW 6	30.9	8.00 Rain on rifting.
4	St 10	0.2	-	4 WNW 6	30.5		4.00 Snow causing rime to fall from sails and rifting.
8	St 10	0.0 f	2	WNW 4	WNW 6		6.00 Fog intensity 1-2.
MIDT.	St 10	0.0 SS					8.30 Sleet (slight) commenced.
							11.30 Wind veering.
							First passing showers of sleet changing to snow. Phosphorescence in water.
4	W 10	0.4 S					Mid. Snow mod. all watch.
8	St 10	2 f	4	4 W 5	29.9		2.0 Wind gradually veered till WNW at 2.0 am.
NOON	St 10	4 f	4	-	4 W 5	30.3	8.00 Fog very wet.
4	St 10	4 f	4-5	-	3 W 5	30.8	9.00 Clearing overhead blue sky showing.
8.30	St 10	0.2	-	2 W 4	-		10.00 Fog torn. Colours out in - Reddish white, Bluish tinge. alt 21° alt sun 18° Breadth of arc 4° to 5°.
MIDT.	St 10	0.0 SS					Two inside arc but fog appearing whiter inside. Temperature 32.
							First snow and sleet from 9.00 on.
4	St 10	0.4 S	W 4	-	-		0.00 to 4.00 Continuous snow (slight to mod.)
8	St 10	0.4 S	-	2 W 4	30.6		Drop in temperature of sea water probably caused by the vicinity of ten icebergs.
NOON	St 10	0.4 S	-	2 W 4	29.2		Sun shining through clouds most of forenoon. Small patch of blue sky.
4	St 10	0.2	-	2 WNW 4	30.1		4.00 Slight streak of blue sky to NW.
8	St 10	0.2	-	2 WNW 4	30.0		10.00 Wind shifted to ESE.
MIDT.	St 10	0.2	-	2 WNW 4	30.0		Slight wet snow falling for three hours.
4	St 7	0.4 S	2	W 3	-	5	8.00 Ice drawing water.
8	St 8	0.2	-	3 WNW 6	32.5		9.30 Temperature of sea water 32.3, a quick increase on yesterday's observations.
NOON	St 8	0.2	-	3 WNW 6	32.2		4.00 Very heavy snow.
4	St 10	0.2	-	3 WNW 6	32.2		First Aurora between clouds.
8	St 10	0.2	-	3 WNW 6	32.4		10.00 Drizzling sleet commenced.
MIDT.	St 10	0.2	-	3 WNW 6	32.4		11.00 do do stopped.

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.		Uncorrected Reading.	Att. Therm.	Dry Bulb. No.	Wet 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.				True Course.	Distance by Log.										
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.







