ADDITIONAL LOG BOOK DATA
1854 to 1899

INTRODUCTION

1, The ship's Deck Log started as a notebook to aid navigation, principally in calculating dead reckoning but evolved to become a formal record of the ship's activities. From its earliest inception the Deck Log included weather observations, an example is at annex B. The Deck Log was kept and filled in every day at sea and in harbour. When completed warship Deck Logs were sent to the Public Record Office Kew, merchant ship Deck Logs were sent to Company Offices.

2. The Meteorological Log came later in the middle of the 19th century when the Metereological Department was established in the Department of Trade under Admiral Fitzroy. Fitzroy had been on the Darwin Expedition in HMS Beagle. The Fitzroy Barometer still found in antique shops, consists of a mercury barometer giving atmospheric pressure, a camphor tube indicating static charge in the atmosphere and an alcohol filled thermometer.

3. Selected merchant ships were provided with a printed Met Log and unlike the Deck Log, the Met Log usually only kept on passage at sea. An example is at annex B.

4. In this period some warships, mostly ships on hydrographic duties also kept Met Logs. Later, in the early twentieth century and onwards larger warships kept Met Logs as well as Deck Logs.

5. There are 6,965 Ship's Meteorological Log Books at Bracknell and 11,089 (Warship) Deck Logs at Kew.

6. Some earlier merchant ship Deck Logs found their way to Bracknell. The oldest log found on the shelves at Bracknell was from the Barque Chatham for a voyage from Liverpool to Jamaica in 1836. This was handwritten on blank pages (see annex C). The first log where entries are recorded in a printed Log is from the Royal Naval Survey Vessel Herald, in August 1845. These printed Logs contained several months observations.

7. Warship Deck Logs stored in the archives at Kew date from early eighteen hundreds. At both Kew and Bracknell there is an abundant amount of weather information recorded from all parts of the world between 1854 and 1899.

MARITIME ACTIVITY 1854 to 1899

8. In Naval warfare the level of naval action was high throughout the western hemisphere in conflicts such as the American Civil War, Franco-Prussian War, Crimean War, South American Wars, Franco-German War, Russo-Turkish War and in the Mediterranean where Naval bombardment was used to steer the direction of political events.

9. This period saw the change from sail to steam, wood to iron and the early development of battleships - Ironclads.

10. UK Merchant vessels traversed trading routes and supported

battle campaigns. The Declaration of Paris after the Crimean campaign had far reaching consequences for Britain, when she abandoned the right to stop neutral ships carrying contraband and accepted that the nationality of a ship covered her cargo.

11. Weather observations throughout this period were meticulously recorded. Annex A shows where the Logs are stored at the archive in Bracknell and annex B shows an example of the clear and precise record remaining some one hundred and fifty years later.

METEOROLOGICAL LOG BOOKS

12. There are 10,687 Met Log Books recorded in the registers for this period but only 6,965 remain on the shelves of the archive at Bracknell, 597 are from warships.

13. The oldest purpose designed and printed Met Log on the shelves at Bracknell is from 1845. In 1870 these Logs changed to a slimmed down version containing just one month's observations. Records from selected merchant ships started on 1st November 1854. The register records receiving 29 Met Logs from different ships in 1854. None of these could be found on the shelves but there is a considerable amount of data from these logs recorded in the Marine Data Bank.

14. Studies were made of one in twenty Logs. Data in the Marine Data Bank for this period showed that only four or five sets of observations are recorded from many of the Logs whereas there are many more observations available from the same Log. Most Logs are flush with information. An example is at annex B.

15. The Data Bank records just over one million observations for this period. There are twice that number not keyed.

16. Weather observations were invariably only recorded with the ship underway on passage. Very few are recorded at anchor. There is clear evidence that readings were written into rough Logs and copied into 'fair' Logs at a convenient time. One or two 'rough' Logs have found their way onto the shelves of the archive.

17. The 'fair' Logs are very neatly written and the same sense of pride and care is likely to have been taken when observing and recording data. Within the accuracy of their instruments the data will have a high degree of accuracy.

18. The observations are often supported by detailed comment and narrative in the remarks column. In one, descriptions of typhoon conditions are reported at length in cuttings from the Hong Kong 'daily' pasted in the Log (see annex D).

19. The majority of the bindings and cover edges are badly frayed. The Logs are very tightly packed with on average one hundred to a section on each shelf. Towards the end of the period some are parcelled in brown paper in batches of 20 to 30.

20. Such unique records deserve more careful stowage and the

system of boxing used at Kew Public Records Office if adopted at Bracknell would ensure easier access and better preservation. Restacking in this manner would require about 30% more shelf space.

21. Voyages in this period were to North America, South Africa, Mediterranean, India and Australia, via Cape Horn or Cape of Good Hope.

DECK LOGS AT KEW

22. There are 11,089 Warship Deck Logs, volume numbers 5,560 to 16,649, filed in ADM3 series. Two registers cover the period. Vessels are recorded in alphabetical order and not by date order as in later periods. Some entries record vessels with only two or three Logs for one ship, others with fifteen to twenty. Deck Logs in this period covered up to one year's voyages.

23. A printed format came into common use just before the start of the period in about 1840. The layout of this first Deck Log covered twelve hour periods as shown in annex E. Later the layout changed to cover a twenty four hour period on one page.

24. This later Deck Log had one hundred and eighty pages. Each page recorded:

A. Course and distance run for the day (24 hours), mid-day Latitude and longitude (Dead Reckoning and Observed), Bearing and Distance at noon (from a fixed point of land).

B. For each hour:
Speed in knots, course steered, Lee Way in points, compass deviation.

C. Also, spaces for every hour, but usually only recorded at the end of each watch:

Wind, wind force, weather, barometer or sympiesometer, thermometer.

25. In later years the Lee Way column disappeared, wet and dry temperatures were recorded and sea temperature was taken and recorded from about 1864.

26. Beaufort wind scale was used and a code to denote the state of the weather. This code continues in use today:

i.e. "q p d l t - very hard squalls, showers of drizzle accompanied by lightening with very heavy thunder."

27. A log requiring more information was brought out for coal burning vessels it recorded in addition:

A. Every 12 hours:

Temperatures of Sea Water, Atmospheric temperature of Fore Stoke Hold, Aft Stoke Hold and Coal Boxes.

B. Every 24 hours:

Expenditure of coal for engines, ship expenditure of oil, tallow and ocham.

28. The majority of the Logs are stoutly bound with one hundred and eighty pages. They were produced by Waterlow & Sons of London Wall, London. It must have been a valued contract and Waterlow hung on to their monopoly throughout this period. Earlier editions are adaptations as the front cover is marked "Accounting Book".

29. In 1884 a reprint gave sea temperature its own column.

30. All entries are clearly and neatly written in black ink.

31. As in other periods there is often only one geographical position recorded each day at noon but up to seven sets of weather observations, one at the end of each watch, 0400, 0800, 1200, 1600, 1800, 2000 and 2359.

32. A single Deck Log covered many months and time at sea is fully documented with weather observations meticulously recorded. Earlier Logs do not describe the instrument used or it's position in the ship but a reprint of the Deck Log in 1875 added this requirement to the front cover. An example is given at annex F.

33. The Deck Logs are stored in boxes on the shelves two to three to a box. A thorough inspection of one Log every twenty revealed one hundred and eighty pages each with up to seven sets of observations taken at 0400, 0800, 1200, 1600, 1800, 2000 and 2359.

34. Not all logs had all one hundred and eighty pages completed. Also unlike the ship's Meteorological Log weather observations in this period continued at anchor and in harbour. Nevertheless with over a thousand observations in most Logs, from 11,089 Logs it is estimated that there are some six million observations of good quality taken at sea from oceans throughout the world that could be added to the Marine Data Base.

35. Random checks with the Marine Data Base show that non of the readings from Warship Deck Logs in this period has been keyed into the Marine Data Base.

36 The 597 warships submitting Met Logs (para 9) simultaneously may have duplicated material. These vessel can be easily identified in the archive registers and left out of any future processing if necessary.

ADDITIONAL OBSERVATIONS AVAILABLE

37. Due to the significant amount of additional material available in this period to add to the Data Base only a broad estimation of the quantity has been made. At a conservative calculation this is as follows:

Meteorological Log Books - 2 million

Warship Deck Logs - 6 million

38. Estimate of global areas covered by the observations in this period:

	Atlantic North	Atlantic South	Med	Indian Ocean North	Indian Ocean South	Pacific North	Pacific South
Met Logs	42%	10%	15%	8%	12%	2%	11%
Deck Logs	40%	12%	15%	6%	13%	2%	12%

39. Several boxes of Log Books could be taken at a time for keying. Because of the clarity of record a manual keying operator would only require a short period of training. This will need to include a simple written decode for some conventions used in the Logs. In the example at annex E for example, wind direction is shown in a cross, i.e. 4 means the wind is from 225 or South West. Each number represents one point of the compass or eleven and a quarter degrees. In the example therefore 4 x 11 1/4 in the 180 - 270 degree sector or 180 + 45 = 225 degrees.

40. The new wing of the Public Records Office is almost completed and this doubles the capacity of their archives. Reorganisation into the extended building starts next month and is programmed to complete at the end of 1996. The entire stock of Warship Deck Logs has been moved from the third floor to the basement of the old block.

41. This new area gives marginally more space but by far the easiest and quickest method of extracting data from these Logs is to remove them in their boxes in batches to a convenient processing site. This would require exceptional approval but in view of the fact that this enormous amount of information is readily available, lying unused and rarely drawn for public use approval is likely to be given.

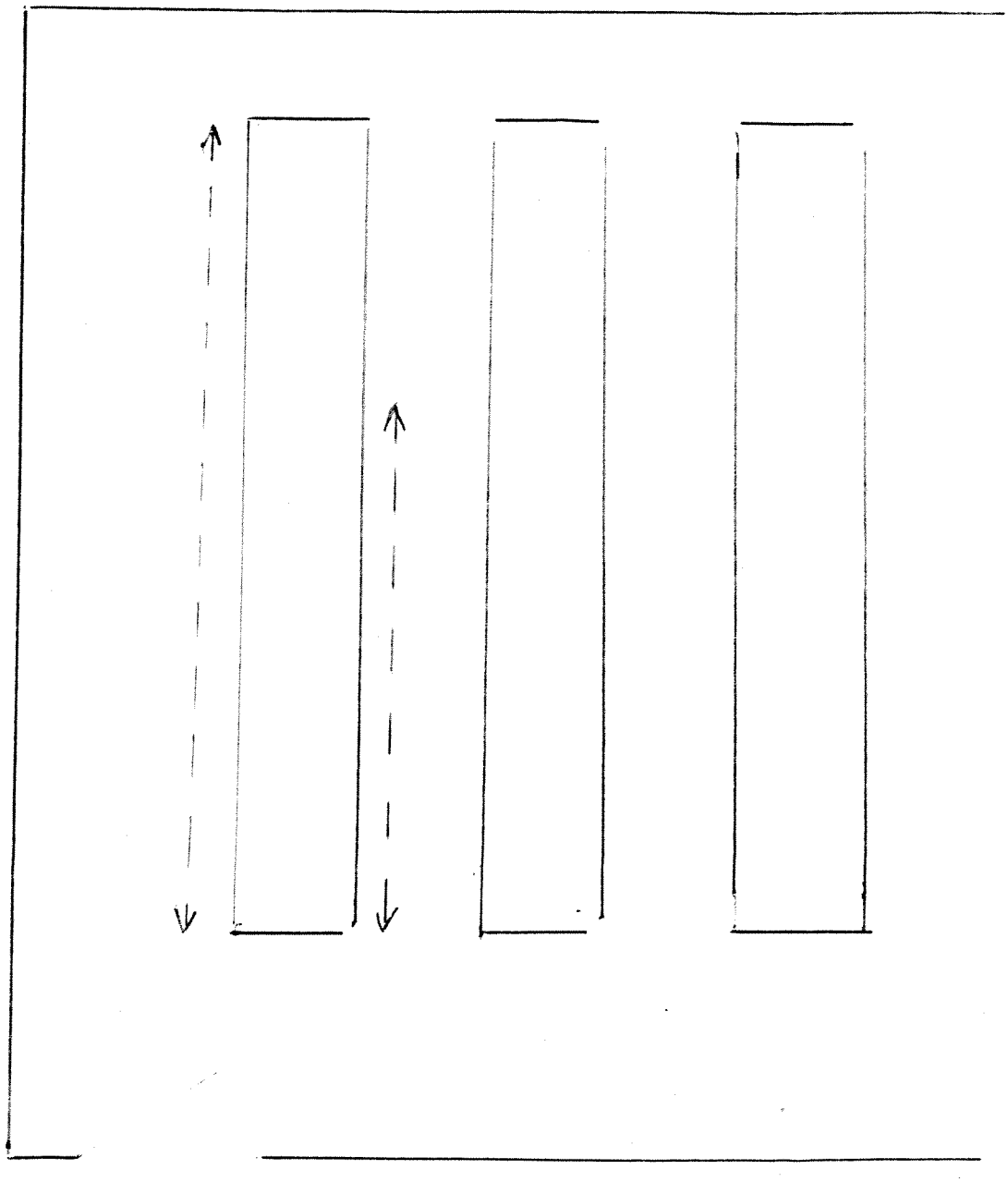
42. Such use to our forecasting organisation would validate the many hours and meticulous care past generations of seafarers took in recording this data.

Martin H Rhodes
17th July 1995

Annex A Location Met Office Archives
B Example Met Log
C Barque Chatham sample page 1836
D Example detailed remarks Met Log
E Example 12 hour Log
F Example instrument details

Annex A

METEOROLOGICAL OFFICE ARCHIVES



← — — → 1854 to 1899

B

Meteorological Log kept on board S.S. "Loipero"

Captain Wm. Lailey from Trinidad to Glasgow

DATE. Day. Civil Time.	Hour.	Latitude. Observed.	Latitude. Dead Reckoning.	Longitude. Observed.	Longitude. Dead Reckoning.	Course and Distance. Each four hours. True Course.	Distance by Log.	Total Compass Error. Of Compass used for Wind, being Variation and Deviation combined. State whether by Az., Amp., or otherwise.	Ship's Head. By same Compass as Wind; and Degrees of Heel to Port or Starboard. (P. or S.)	Wind. Every two hours, *at the time of observation.* Give the times of changes in Direction and Force in the Remark Column. Direction. State if *true*, or subject to Compass Error, or only to Variation.	Force. 0 to 12. See Beaufort Scale, p. 2.	Barometer. No. 153. Height of Cistern above Sea 16 feet. Uncorrected Reading.	Att. Therm.	Thermometers. Dry Bulb. No. 2352	Damp Bulb. No. 2350
21	2 A.M.									S.E/E	1				
	4					N 24 E	32		E.S.E	E.S.E	0	27.399	68	65.2	65.5
	6									E.S.E	1	30 326	65		
	8					N 24 E	33		E.S.E	—	0	27.418	69	67.0	64.0
	10									E.S.E	1	36 300			
	NOON	30.45	30.45	46.42	46.41	N 24 E	32	9½ W	E.S.E	E.S.E	1	27.418	70	65.2	65.3
	2 P.M.	Current in last 24 hours		1 1/2	mls.			Aymuth		E.S.E	1	36 300	71		
	4					N 43 E	32		E.S.E	S.E	1	27.404	70	65.2	65.2
	6									E.S.E	1	30 345	70		
	8					N 43 E	33		E.S.E	E.S.E	1	27.434	68	64.2	64.5
	10									—	0	36 376	69		
	MIDT					N 43 E	33		E.S.E	E.S.E	1	27.428	66	63.5	64.0
22	2 A.M.									S.E	1				
	4					N 43 E	36		E.S.E	S.E	2	27.416	66	63.2	63.2
	6									S.S.E	2	30 334	67		
	8					N 43 E	36		E.S.E	S.E.	3	27.418	70	66.0	66.0
	10									South	1	30 368	68		
	NOON	33.14	33.14	44.00	43.58	N 43 E	34	13½ W	N.E/E	South	3	27.412	74	66.5	66.8
	2 P.M.	Current in last 24 hours			mls.			Aymuth		South	2	30 372	73		
	4					N 46 E	35		N.E/E	S.S.W	2	27.376	71	66.8	66.8
	6									W.S.W	2	30 208	71		
	8					N 46 E	34		N.E/E	W.S.W	2	27.410	69	65.0	65.0
	10									S.S.W	2	36 312	69		
	MIDT					N 46 E	34		N.E/E	S.S.W	3	27.363	67	64.0	64.5
23	2 A.M.									S.S.W	3				
	4					N 46 E	36		N.E/E	W.S.W	3	27.344	67	64.0	64.0
	6									W.S.W	3	30 232	67		
	8					N 46 E	37		N.E/E	S.W/W.S.W	4	27.446	68	66.0	66.0
	10									W.S.W	4	30 245	68		
	NOON	35.41	35.43	40.52	40.58	N 46 E	36	15½ W	N.E/E	W.S.W	4	27.332	70	67.0	67.0
	2 P.M.	Current in last 24 hours			mls.			Aymuth		W.S.W	3	30 250	70		
	4					N 44 E	36		N.E/E	W.S.W	2	27.296	67	65.0	65.2
	6									W.S.W	2	30 164	65		
	8					N 44 E	36		N.E/E	W.S.W	3	27.296	64	64.0	65.0
	10									West	4	30 164	64		
	MIDT					N 44 E	34	18½ W	N.E/E	West	4	27.246	65	62.2	63.0
24	2 A.M.									N.E/E	3				
	4					N 45½ E	34		N.E/E	N.E/E	3	27.294	63	59.0	59.0
	6									E.S.E	2	30 166	63		
	8					N 45½ E	32		N.E/E	East	2	27.292	62	58.0	58.0
	10									East	2	30 166	62		
	NOON	20 Obs.	38.6	20 Obs.	37.49	N 45½ E	32	18½ W	N.E/E	East	2	27.278	62	57.5	57.8
	2 P.M.	Current in last 24 hours		Many Lats	mls.			Aymuth		East	2	30 122	63		
	4					N 45 E	34		N.E/E	S.S.E	2	27.244	61	58.0	58.0
	6									S.S.E	2	30 050	62		
	8					N 45 E	36		N.E/E	S.S.E	2	27.204	62	60.2	60.5
	10									S.W	3	29.992	62		
	MIDT					N 45 E	36		N.E/E	S.W/S	4	27.142	63	62.2	62.0

Hour.	Clouds. When *Lower* Clouds do not move with the Wind, give the Direction they come *from* in the Remarks. (For Plates see p. 13 of Instructions.) Lower: Names.	Upper: Names and Direction *from*.	Prop. of Sky Clouded. 0 to 10.	Weather. See Instructions. According to Beaufort Notation. See p. 2.	Sea Surface. Direction *from*. Also Record when Confused, and state when only Swell or Swells.	Disturbance. 0 to 9. See p. 2.	Temp. by No. 2348	Specific Gravity, by No. 953.	Time of Remark.	Remarks. Here give any important Remarks, 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. Also note the hour at which the Ship arrives in or leaves Port. (See Instructions for further Particulars.)
2 A.M.										
4	— —	Cir-C	2	B	E.N.E swell	1	65.5			Leaving N.E trades having only faint airs from E.N.E and E.S.E
6										
8	Cumulus	Cir	3	B.C	E.N.E swell	1	67.0		11.0	Observed two small white birds flying a
10										but as in the we could not distinguis
NOON	Small Cum	Cir	2	B.C.	E.N.E swell	1	68.2	26		the species.
2 P.M.										
4	Small Cum	Cir	4	B	E.N.E swell	1	67.0			No flying fish and very little
6										Sargasso weed seen to day.
8	—	Cir-S	1	B	E.N.E swell	1	67.2			
10										
MIDT	Str.	—	2	B	E.N.E do	1	65.5		Mid	Stratus round the horizon only.
2 A.M.										
4	Cumn		2	B.C	E.N.E do	1	66.0		4.0	Lower clouds moving from East
6									6.0	Set Topsails and Foresail.
8	Small Cum	Cir	3	B	E.N.E swell	1	65.0			
10										
NOON	Small Cum	Cir-S	6	C.B	Westerly swell	1	66.0	26.0		
2 P.M.									3.0	
4	Small Cum	Cir	5	C.B	W.S.W swell	1	65.5			Passed a large piece of wood appar
6										ently a long time in the water it
8	Str.	Cir	5	C.B	W.S.W do	1	65.0			being covered with Barnacles and
10										floating very deep.
MIDT	Cum S.		2	B.C.W.	S.S.W	1	63.8		9.0	Wind backed to S.S.W and grad
										-ually freshened.
2 A.M.										
4	Cum S		4	B.C	W.S.W	2	63.2			
6										
8	Cumn	Cir-C	4	C.	W.S.W Hdy swell	2	65.0			
10										
NOON	Cum S	Cir	5	B.C	W.S.W Hdy swell	1	62.0	27.0		
2 P.M.										
4		Cir-S.	10	C	W.S.W Hdy swell	1	62.0			
6										
8		Cir-S	10	C	W.S.W Hdy swell	2	62.0		5.30	A few light drops of rain
10										
MIDT	Roll Cumn	—	10	C.W.	West Hdy swell	3	61.4		Mid	
2 A.M.									2.0	
4	Roll Cumn	—	10	C.W.	West Hdy swell	2	60.5			Wind gradually hauling round
6										by North to N.E/E.
8	Roll Cumn	—	10	C.M.	N.N.W Hdy swell	3	60.8		8.0	Furled all Square sails.
10										Sighted a common grey Gull
NOON	Cumn	—	10	C.M.	N.E/E do	3	61.0	27.		
2 P.M.									4.0	Set Fore and Aft Canvas.
4	Cumn		10	C.M	N.N.E do	3	60.5			Occasional showers of drizzling
6										rain.
8	Cumn		10	C.M.	N.N.E do	2	60.5		9.0	Wind Veering to S.W. set all
10										Square Sails.
MIDT	Cumn		10	C.M	S.S.W	2	60.8			

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

2a	17	18	19	20	21	22	23	24	25	26

A "Rough Book" is supplied with this Log. It is intended to be carried about to the different instruments, and may be retained by Commanders for future reference. It is ruled for 6 sets of observations daily.

Those who observe more frequently can use 2 divisions for each day. It will be a convenience in copying if the four days on one opening of the Rough Book be copied into a similar opening of the Log.

C

Barque Chatham from Liverpool towards Jamaica

Friday 2nd Decr 1836

Ther.	Bar.	H.	K.	F.	Courses	Winds
60¼	30.33	1	5		S.S.W.	West
60½	30.34	2	5			
		3	5			
61	30.35					
61½	30.33	4	5			
61½	30.38	5	4		N.W.by N.	W.by S.
62	30.36	6	3	4		
62	30.37	7	5		N.W.	N.N.W.
62	30.35	8	5			
63	30.32	9	5		N.W.½W.	
		10	5			
61	30.35	11	5			
60	30.31	12	5			
		1	5		N.W.	
		2	5			
58	30.25	3	4	4	N.W.½N.	
59½	30.17	4	4	4		
60	30.13	5	3	4	N.W.	
61½	30.8	6	3			
		7	3	–		
62	30.4	8	3	–		
62	30.2	9	2	4		
61½	30.3	10	2	4		
61	30.3	11	2	4		
61	30.3	12	2	4		

Commences fresh Breezes cloudy & clear weather — All sail set upon a Wind

At 4 Tacked to the N.W.

At 9 Wind freshening in T. Gt Sls

Midnight strong breezes & hazy Wr Single reefed the T. Sls.

A.M. Wind increasing —

At 4 Double reefed the T. Sls & reefed the M. Sl —

At 8 close reefed the Fore top Sl reefed the F. Sail furled the reefed M. Sl —

Noon strong gales with a heavy sea

No Obs —

Lat. D.R. 49°-49' N Chr. D.R. 10°-47 W D.R 11-8 W

Saturday 3rd Decr

Ther.	Bar.	H.	K.	F.	Courses	Winds
61	30.1	1	3		N.W.by W.	W.by S.
60½	30.1	2	3			
60	30.1	3	3			
60	29.98	4	3			
61½	29.96	5	2		S.W.½S.	
62	30.0	6	2			
61	30.2	7	2			
61½	30.1	8	2			
60½	30.10	9	2		S.S.W.	West
		10	2			
63	30.10	11	2		S.W.by S.	W.by S.
		12	2			
63	30.10	1	2			
62	30.14	2	2			
		3	2			
		4	2			
62	30.16	5	2			
		6	2			
63	30.10	7	2			
62	30.24	8	2			
62	30.24	9	2	4	S.W.by S.	
61½	30.2	10	3			
62	30.26	11	3			
62	30.20	12	3			
61½	30.31					

Strong gales & hazy Wr Wind freshening & moderating at intervals

At 4 Squally with rain wore to the S.W.

At 8 fresh gales & clear Wr

A heavy cross sea — Ship very laborsom

A.M. Do Wr.

At 8 set the reefd M Sail

At 2 reefs out of M.T.Sl. & 3 reefs out of the F.T.Sl.

Noon Moderating a little let reefs out F.T.Sl. & M.T.Sl. set Jib & Spanker

Lat. Obs. 49°-12' N. Chr. {10°-22' / 10-16} W.

Sunday 4th Decr 1836

Ther.	Bar.	H.	K.	F.	Courses	Winds
2	30.27	1	3	4	S.W.by S.	W.by N.
2	30.30	2	3	4		
62	30.29	3	3	4		
62	30.30	4	3	4		
62	30.32	5	3	4	S.S.W.½W.	
64	30.30	6	3	4		
64½	30.32	7	3	4	S.W.by S.	
63	30.33	8	3	4		
62	30.37	9	3			
61	30.36	10	3			
61	30.33	11	3			
62	30.37	12	3			
		1	3			
		2	3			
		3	3			
61½	30.34	4	3			
		5	3			
60	30.38	6	3	4		
60	30.37	7	3	4	S.S.W.	West
61	30.37	8	3	4		
62	30.37	9	3	4	N.by W.½W.	W.½N.
62	30.37	10	3	4		
		11	3	4		
		12	3	4		

The small rising & falling of Bar. agreed with the wind frequently falling & freshening

Fresh gales cloudy Wr — Wind frequently freshening & moderating

Do Winds & weather

At 9 took in the Spanker & Jib —

Midnight fresh gales & clear Wr

At 4 A.M. cloudy wind freshening a little

At 8 — Tacked to the N.N.W.

Let 2nd reef out of the F. T. Sail

Lat. Indiffit Obs {48°-8 N. / D.R. 48-19 N. Chr. {10° 5 W. / 9-50 W.

D.R. 10°-17 W.

Monday 5th Decr

Ther.	Bar.	H.	K.	F.	Courses	Winds
63	30.35	1	3	4	N.by W.½W.	West
62	30.33	2	4			
61½	30.34	3	4		N.N.W.	
61	30.34	4	4			
		5	4			
60	30.34	6	4		N.W.by N.	
		7	2	4		
61	30.33	8	2	–		
61	30.34	9	2			
60½	30.31	10	2			
61	30.31	11	2			
61	30.31	12	2			
61	30.28	1	2			
		2	2			
60	30.30	3	2			
60	30.27	4	2		N.N.W.½W.	W.by S.
61	30.29	5	2			
61	30.29	6	2			
61½	30.29	7	2			
61	30.30	8	2			
		9	2	4		
61	30.28	10	3	–		
62	30.27	11	3			
62	30.24	12	3	–		

Cloudy weather Wind falling & blowing in frequent heavy gusts Set the Spanker double reefd

At 6 Squally double reefd the T. Sls & reefd the Courses Wind moderating after the Squalls —

Midnight strong gales & cloudy furled the M T Sl —

A.M. fresh gales with misling rain let reefs out of the courses —

Noon wore to the S.S.W.

Lat. Obs. 49°-5 N. Chr. {10-26 W. / 10-11
D.R. 49-7 N.
D.R 11-2 W.

Meteorological Log kept on board H.M. Surveying Vessel "Magpie"

Captain R. Henry Napier from Hong Kong to Harbour

DATE. Year 1880 Month X — Day. Civil Time.	Hour.	Latitude. Observed.	Latitude. Dead Reckoning.	Longitude. Observed.	Longitude. Dead Reckoning.	Course and Distance. Each four hours. True Course.	Course and Distance. Each four hours. Distance by Log.	Total Compass Error. Of Compass used for Wind, being Variation and Deviation combined. State whether by Az., Amp., or otherwise.	Ship's Head. By same Compass as Wind; and Degrees of Heel to Port or Starboard. (P. or S.)	Wind. Every two hours, *at the time of observation.* Give the times of changes in Direction and Force in the Remark Column. Direction. State if *true*, or subject to Compass Error, or only to Variation.	Wind. Force. 0 to 12. See Beaufort Scale, p. 2.	Barometer. No. 325. Height of Cistern above Sea 8 feet. Uncorrected Reading.	Barometer. Att. Therm.	Thermometers. Dry Bulb. No. 109.7	Thermometers. Damp Bulb. No. 104.4
	2 A.M.									S by W	2	29.974	81.7	80.0	74.6
	4									— —	2	946	81.8	81.0	74.0
♀	6									N.E.	2	956	81.0	80.0	73.4
	8									— —	3	988	79.5	78.0	73.9
	10					No	3	Buoy		E by N	5	30.010	80.4	78.7	75.2
	NOON									E by N	6	29.962	80.5	79.4	76.2
	2 P.M.									— —	7	938	78.8	78.5	76.0
	4									— —	6	920	79.5	78.3	76.8
15	6					Hong		Kong		— —	4·6	920	79.5	78.8	76.9
	8									— —	3·5	958	80.1	78.0	75.3
	10									E by S	3·5	974	80.1	78.8	76.1
	MIDT									— —	3·5	974	80.0	79.0	77.0
	2 A.M.									E by S	3·5	29.956	79.8	79.3	77.0
	4									— —	3·5	946	79.6	79.0	76.7
	6									— —	3·4	968	79.5	79.0	77.0
♄	8									East	3·4	30·020	79.7	79.3	76.4
	10									— —	3·4	052	79.5	77.8	75.5
	NOON									— —	3·4	034	79.0	77.0	75.3
	2 P.M.									— —	3	29.998	78.7	76.6	74.9
	4									— —	4	988	79.0	77.2	75.0
16	6					Ho	3	Buoy		— —	3·5	998	78.6	77.8	75.0
	8									— —	3·5	30·030	79.0	77.5	75.1
	10									E by N	3·5	044	80.1	78.0	75.2
	MIDT									— —	3·5	044	79.2	78.0	75.4
	2 A.M.									E by N	3·5	30·032	79.0	78.0	75.0
	4									East	3·5	018	78.7	78.0	76.5
	6									— —	4	040	79.0	78.0	76.2
♁	8									E by N	4	094	79.2	77.6	74.0
	10									— —	3	100	80.3	78.1	73.9
	NOON									— —	4	070	80.0	78.5	76.0
	2 P.M.					Ho	3	Buoy		— —	4	070	80.0	78.5	76.0
	4									E.N.E.	3	030	80.0	78.6	76.0
17	6					Hong		Kong		East	3	036	80.3	78.9	76.3
	8									E by S	2	046	80.0	79.0	75.3
	10									East	3	050	80.0	79.0	76.5
	MIDT					Harbour				N.E by E	3	090	80.0	79.0	75.0
	2 A.M.									E by N	2	082	79.8	78.8	75.0
	4									E by S	3	30·070	79.2	79.0	76.5
	6									East	3	060	79.0	77.9	75.7
	8									E by N	2	072	78.5	77.0	75.3
	10					No	3	Buoy		E.N.E	2	104	79.0	78.7	77.0
	NOON									N.E by E	2	122	82.0	83.3	76.0
	2 P.M.									E by N	3	100	81.6	82.0	73.0
	4									— —	3	060	82.5	81.0	73.5
18	6					Hong		Kong		East	2	052	81.2	81.0	74.1
	8									E by S	2	058	80.0	80.0	74.0
	10									East	2	090	80.0	79.6	75.0
	MIDT					Harbour				E by N	2	108	80.0	79.2	75.0
										E by S	2	108	79.5	78.8	74.3

The Eastern and Australian Mail steamship *Brisbane*, Captain Reddell, which left here on the 14th with the Australian mails, *vid* Torres Straits, was compelled by stress of weather to put back to port on the evening of the 15th inst., after having experienced terrific weather and sustaining considerable damage. The after steering gear has been carried away, she has lost six of her boats, everything moveable was swept from her decks, and one of her quartermasters was washed overboard. The passengers landed on the 17th inst., and the ship has gone to the Cosmopolitan Dock for repairs. The following is her report of the storm, kindly furnished by Captain Reddell:—The steamship *Brisbane* left Hongkong at 5.30 p.m. on the 14th inst., accompanied with moderate North-East breeze and cloudy weather. Cleared Ly-ee-moon Pass at 6 p.m. At 10 p.m. wind increased to a gale with a heavy Easterly swell, the ship taking large quantities of water; at 10.30 p.m. a heavy sea was shipped, carrying away two boats; at midnight gale still increasing, kept ship before the wind. One a.m. 15th, blowing furiously, with violent squalls and heavy rain; shipped a succession of seas which swept other three boats and all moveable things on deck overboard; 4 a.m., blowing a hurricane, hove ship to, shipped a heavy sea which carried away the after steering gear; 8 a.m. wind still blowing hurricane force and gradually veering to westward; 10 a.m. starboard lifeboat blown away, barometer rising but no improvement in the weather; 3 p.m. weather abating and hauling southwards; 6.30 p.m. stood away for Hongkong. At midnight wind South-East. 5 a.m. on the 16th, wind E.N.E., moderate gale, heavy sea with constant heavy rain. 1.50 p.m. sighted Single Island and arrived at Hongkong at 5 p.m. Experienced very strong Easterly set. At 8 a.m. on the 15th missed a quartermaster, McIntyre; supposed to have been washed overboard while securing rudder. The lowest reading of the barometer was 29.38.

The following is the report of the American ship *South American*, Captain Knowles, which put back on Sunday in distress:—Sailed from Hongkong on 1st October, and first two days had calm weather; drifted, with strong S.W. current, 90 miles, then took wind fresh from N.E., and stood over to Luzon; worked up with light westerly winds to North end of Luzon. Monday the 11th, commenced with fresh wind from N.E., then strong from E.N.E., and falling bar. Tuesday the 12th the wind was blowing heavy from E. by N.; at 8 a.m. furled upper topsail, and took in jib. Noon, furled the reefed mainsail and foresail. At 4 p.m. took in fore and mizen lower topsails. Barometer down to 29.5-10ths; midnight took in lower main topsail; sea at this time making a clean break over ship fore and aft. Barometer 29 4-10ths, rain and wind blinding; wind at hurrican force. At 3 a.m., on the 13th a tremendous sea running. The ship gave a very heavy lurch on top of a mountainous sea, and the mizen mast, with everything attached, broke off at deck and went over port side; some of the spars striking main yard, carried away main yard, lower main topsail yard, main top-gallant mast, and breaking off main royal yard in slings. All of the braces at main were also carried away, and the yards swung first one side and then the other, at every roll of the ship carrying away all the lifts and twisting the head of mainmast. The wreck was cut away as quickly as possible, which work took about one hour; got ship before the wind; and in nine hours she went 99 miles by patent log under bare poles. The wind then moderated. Barometer still at 29 5-10ths. Set lower fore-top-sail and main top-mast stay-sail, and headed to W.N.W. 14th, light southerly wind and heavy sea from N.E.; made what sail we could, worked all day reeving off rope and securing yards. 15th got an upper main topsail set; wind from S.E., and heavy northerly swell. 16th, wind at S.E. and E.S.E.; latter part of the day came out in heavy squalls from N.E. On the night of the 16th it was blowing strong, and the rain pouring in torrents. On the morning of the 17th still blowing strong from the N.E. by E., and North Lama hove in sight bearing West; kept off and ran into East Lama Channel; got pilot at entrance, and arrived at anchor off Green Island at 12.30.

A "Rough Book" is supplied with this Log. It is intended to be carried about to the different instruments, and may be retained by Commanders for future reference. It is ruled for 6 sets of observations daily.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Hour.	Clouds. When *Lower* Clouds do not move with the Wind, give the Direction they come *from* in the Remarks. (For Plates see p. 13 of Instructions.) Lower: Names.	Clouds. Upper: Names and Direction *from*.	Clouds. From of Sky Cloudless 0 to 10.	Weather. See Instructions. According to Beaufort Notation. See p. 2.	Sea Surface. Direction *from*. Also Record when Confused, and state when only Swell or Swells.	Sea Surface. Disturbance. 0 to 9. See p. 2.	Sea Surface. Temp. by No. A 1098	Sea Surface. Specific Gravity, by No. A 56	Time of Remark.	Remarks. Here give any important Remarks, 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. Also note the hour at which the Ship arrives in or leaves Port. (See Instructions for further Particulars.)
										Max 93 Min 73
2 A.M.										
4										
6									6.00	Apparently running head to North
8									6.15	Rain set in and squalls eased
10									8.00	Rain fallen last 24 hours 0.45 inches
NOON										Max 82.0 Min 76.5
2 P.M.									9.00	Wind steadily increasing
4										Heavy rain
6										rain
8										Three squalls came on gradually at intervals of 15
10									6.00	20 minutes & last 5 & 7 minutes they are accom
MIDT										Max 78.0 Min 76.1
2 A.M.										by heavy rain. 5.00 Rain fall since 4.00 = 3.25
4									9.30	Very heavy rain since 9.00
6										
8									6.00	Squalls less frequent & severe but rain heavier
10									8.00	Rain fall since 8.00 PM yesterday 2.15
NOON										Max 79.0 Min 77.0
2 P.M.										
4										
6									6.00	Squalls not very frequent but accompanied by very heavy rain.
8										Max 79.0 Min 76.1
10										
MIDT									8.00	Rain fall since 8.00 PM 1.15 inches
2 A.M.										
4									12.30	
6									12.30	Squalls ceased and wind commenced to lull
8									6.00	Slight sprinkling of rain occasionally between
10										Max 79.0 Min 77.0
NOON										4 & 6.00.
2 P.M.										
4										
6										
8										
10										
MIDT										
2a	17	18	19	20	21	22	23	24	25	26

The British steamship *Conquest* reports left Haiphong on the 12th instant at 5 a.m.; arrived in Hoihow on the 13th at 1 p.m., and had light Northerly winds and fine weather. Left Hoihow on the 14th at 4 a.m., and had light Northerly winds and very heavy swell from the N.E. At 1 p.m. wind increasing from the N.W., with sea rising rapidly, barometer 29.88. At 8 a.m. on the 15th fresh N.W. gale and heavy sea came to the conclusion that a typhoon was approaching from the N.E.; stood in for Hawchuen, barometer 29.84. At 2.45 p.m. anchored in Namoa Harbour, under Hawchuen. At 8 p.m. wind N., with heavy squalls and rain. At 11 p.m. wind N.N.E., and very heavy squalls; let go second anchor and got up steam, barometer 29.74. At 7 a.m. on the 16th wind veered to N.E. and squalls became terrific with blinding rain. At 1 p.m., this weather still increasing, let go third anchor, barometer 29.68. During the night wind moderated slightly. On the 17th hard N.E. gale and heavy rain, barometer rising. On the 18th at 3 a.m. weighed and stood towards Gangavar Channel; arrived in Hongkong on the 19th instant.

REPORT OF THE BRITISH BARQUE "NARDOO."

(Nagasaki Express.)

Left Hongkong Oct. 11th. Passed through Taitama Channel at noon 12th; wind moderate from E. to E.N.E.; 6 a.m. Kyphong Island bore N.W. 37; noon, strong N.E. wind; bar. 30.00, ther. 85. 13th, strong, steady N.E. wind, followed by heavy gales; noon, lat. 20.17 N., long. 116.16 E. 14th, gale increasing; bar. 29.92, ther. 85; 4 p.m., under lower maintopsail; wind, N.E. by N.; ship's head E. by S. to E.S.E.; daylight, wind still increasing; bar. 29.65; saw now severe typhoon was approaching; 9 a.m., bar. suddenly fell from 29.60 to 29.40; clewed up weather side of maintopsail and lashed it round the yard; left the lee side, as it was impossible to do any more, the wind by this time having hauled to N., and was blowing with tremendous force; the sea was one sheet of foam, passing over the ship that at times the fore end could not be seen. 15th, noon, bar. 29, ther. 84; wind hauling N.N.W., howling with fearful noise, ship shaking like a leaf; a lull now took place for 1 h. 30 m., wind hauling N.W., W. and W.S.W., when it now began again with equal, if not greater, force than before,—3 p.m. the bar. varying 2 tenths every squall; 4 p.m. S.S.W., typhoon raging in full force with heavy flashes of lightning; ship labouring heavily all the time; 6 p.m., bar. 29.20, ballast shifted, heaving the ship over on the starboard beam, lee top-gallant rail in the water, which was washed away; got below and trimmed some ballast to right the ship; midnight, wind falling, bar. 29.50 still rising. From this to north end of Formosa, heavy gales from N.E. 14th, 2 p.m., under lower top-sails, bar. 30.20, ther. 70, lat. 31.8 N., long. 127.23 E.; at 5.30 p.m., a tremendous sea broke over the starboard bow, and smashed the whole of the top rails, filled the decks, tore up the pitch along some of the seams on deck for 20 or 30 feet, shifted the ballast over to midships against some shifting boards, giving the ship a list of four streaks; trimmed her up right again, wind lulling away at midnight; from thence to port weather fine.

J. PAUL, *Master.*

Those who observe more frequently can use 2 divisions for each day. It will be a convenience in copying if the four days on one opening of the Rough Book be copied into a similar opening of the Log

LOG of the Ship [illegible], Captain Henry Toynbee from London towards Madras.

H.	K.	F.	Courses steered.	Courses corrected.	Winds.	Force.	Ther. Air.	Ther. Wat.	Bar.	H.	M.	Monday, December 13th 1858
1	5		NE b N	Royals.								Unsteady breeze & cloudy.
2	5											
3	4										P.S.	4. Squally with rain.
4	5										13	5. Set the Port & took in the Starboard
5	4											studding-sails; set all useful sail to
6	4				w+	2	79		29·950	79		the best advantage.
7	5											
8	5											
9	5										15	
10	5	4			w+	4	80	81	29·980	80		Carpenter repairing Bulwarks.
11	6											
12	6	4			w+	4·5	808	812	29·974	81	14	Hands variously employed in the Fore & After Holds.

COURSE AND DISTANCE. By Account.	COURSE AND DISTANCE. By Observation.	LATITUDE. By Account.	LATITUDE. By Observation.	LONGITUDE. By Acct.	LONGITUDE. By Chron.	LONGITUDE. By Lunars.	VARIATION.	BEARING AND DISTANCE AT NOON.
N 40 E. 126 m.	N 41 E. 130 m.	8.. 15 S.	8.. 14 S.	81.. 00 E.	81.. 04 E.		¼ Dr E.	Current N 76 E. 4½ miles.

H.	K.	F.	Courses steered.	Courses corrected.	Winds.	Force.	Ther. Air.	Bar.	H.	M.	
1	6	4	NE b N	Do.							
2	6										
3	7	4									
4	7				5+	5	81	29·902	81		
5	7	4									
6	7									14	
7	6	4									
8	5				9+	4	80	29·990	81		
9	5	4									
10	5										
11	6									14	Midnight. Moderate breeze & fine weather.
12	6	4									

H.	K.	F.	Courses steered.	Courses corrected.	Winds.	Force.	Ther. Air.	Ther. Wat.	Bar.	H.	M.	Tuesday, December 14th 1858
1	6	4	NE.	Royals.								Moderate breeze & fine weather.
2	6											
3	5	4									P.S.	Daylight. Light wind & smooth sea.
4	6											
5	3										14	Carpenter repairing Bulwarks
6	3				6+	1	797		29·994	79		
7	3											Hands variously employed.
8	3											
9	3				4+	2	80·7		30·050	80	12	
10	3											
11	3											
12	3				2+	2	815	84	30·000	81		Noon. Light air & fine weather.

COURSE AND DISTANCE. By Account.	COURSE AND DISTANCE. By Observation.	LATITUDE. By Account.	LATITUDE. By Observation.	LONGITUDE. By Acct.	LONGITUDE. By Chron.	LONGITUDE. By Lunars.	VARIATION.	BEARING AND DISTANCE AT NOON.
N 43 E. 125 m.	N 47 E. 136 m.	6.. 41 S.	6.. 49 S.	82.. 30 E.	82.. 44 E.		½ Dr E.	Current N 81 E. 13½ miles.

H.	K.	F.	Courses steered.	Courses corrected.	Winds.	Force.	Ther. Air.	Bar.	H.	M.	
1	3		NE	Do.							
2	4		NE b N								
3	4				3+	3	813	891	29·966	82	14	Light air & fine weather.
4	3	4										
5	3	2										Set Port Main top-mast stud.sail.
6	2											
7	3											
8	3		NE b E.		5+	2,3	80	822	30·030	815		
9	3										11	
10	2	4										
11	2											Midnight. Light air & fine weather.
12	1											

H.	K.	F.	Courses steered.	Courses corrected.	Winds.	Force.	Ther. Air.	Ther. Wat.	Bar.	H.	M.	Wednesday, December 15th 1858
1	1		N b E.	Royals.								Light variable airs & cloudy weather.
2	1	4										
3	1	4										
4	3										P.S.	
5	3	4									12	Carpenter repairing Bulwarks.
6	4											
7	4	4			9+	2	797		30·025	793		Hands employed painting outside
8	4	4										
9	4											
10	3	4			6+	3	80·7	81·7	30·070	80·3	14	Set starboard Main-top-gallant-
11	3	4										studding-sail.
12	3				4+	2	836	827	30·040	82		Noon. Light airs & fine weather.

COURSE AND DISTANCE. By Account.	COURSE AND DISTANCE. By Observation.	LATITUDE. By Account.	LATITUDE. By Observation.	LONGITUDE. By Acct.	LONGITUDE. By Chron.	LONGITUDE. By Lunars.	VARIATION.	BEARING AND DISTANCE AT NOON.
N 29 E. 72 m.	N 32 E. 61½ m.	5.. 35 S.	5.. 49 S.	83.. 12 E.	83.. 17 E.		½ Dr	Current. S 19 E. 15 miles.

H.	K.	F.	Courses steered.	Courses corrected.	Winds.	Force.	Ther. Air.	Bar.	H.	M.	
1	3		N b E.								
2	3	4									
3	4										
4	4				5+	3	83	828	29·988	83	
5	4										
6	3	4									
7	4										
8	3	4			6+	3	815	826	30·065	822	
9	3										
10	3										
11	2	4									
12	3										Midnight. Light airs & fine weather.

H.	K.	F.	Courses steered.	Courses corrected.	Winds.	Force.	Ther. Air.	Ther. Wat.	Bar.	H.	M.	Thursday, December 16th 1858
1	3		N½W.	Royals.								Light air & fine weather continued.
2	2	4	N b E.									
3	2											
4	1										P.S.	4. Almost calm.
5	1	4									15	
6	0				⊕	0	868		30·020	80·2		Shifted the Life-boat to the starboard
7	0	4										& the Cutter to the Port-Davits.
8	1											
9	1	4										
10	2	4			w+	2	83	81·4	30·072	81·2		Hands employed painting the stern,
11	2											
12	3	4										forecastle &c.
	3				w+	2	84·2	82·2	30·034	82·6		Carpenter repairing Bulwarks.

COURSE AND DISTANCE. By Account.	COURSE AND DISTANCE. By Observation.	LATITUDE. By Account.	LATITUDE. By Observation.	LONGITUDE. By Acct.	LONGITUDE. By Chron.	LONGITUDE. By Lunars.	VARIATION.	BEARING AND DISTANCE AT NOON.
N 16 E. 69 m.	N 27 E. 75 m.	4.. 48 S.	4.. 42 S.	83.. 34 E.	83.. 51 E.			Current. N 70 E. 18 miles.

H.	K.	F.	Courses steered.	Courses corrected.	Winds.	Force.	Ther. Air.	Bar.	H.	M.	
1	2		N b E.								
2	3	4									
3	3				4+	3	83	837	29·992	84	
4	3	4									
5	3	4									
6	3										P.S.
7	4										14
8	3	4			4+	3	81·7	821	30·056	82	
9	3										
10	2	4									
11	1	4									11½
12	2										Light airs & fine weather.

Entered at Stationers' Hall.——London:—Printed for and Sold by CHARLES WILSON (late NORIE & WILSON), Publisher of Charts and Nautical Works to the Admiralty; H. M. Hon. Board of Excise, the Honourable East India Company, and Corporation of the Trinity House; at his Navigation Warehouse and Naval Academy, 157, Leadenhall Street, near the Royal Exchange:

Establishment of Ship's Company

- Officers 18
- Petty Officers 38
- Seamen, [illegible] 96
- Boys 13
- Marines 65
- Engine-room establishment 54

ARMAMENT, Including Boat and Machine Guns.

Where Mounted.	Nature and Number.
4. 25 Ton. RLR. in Batt. On Top of Battery	4. 25 Ton RLR; 6 for 24 [illegible]; 1" Nordenfelt [illegible]; 9 pdr RLR; 7 .. .. 1 ..

TORPEDO EQUIPMENT.

Particulars of.
4. 14 in Torpedo Tubes

BAROMETER.

Mercurial or Aneroid: Mercurial

Name of Maker and number: Adie A 548

Height of cistern above sea: 24 feet

Thermometers for Air Temperature.

Position in Ship: Port Side of Wheel house

Whether in screen: Yes

Maker and No. Casella 1820 From (Date) 29 July /93 To 19 Sept /93

" 1821 " " "

"

"

N B.—The thermometer attached to barometer should never be used for air temperatures.

Thermometers for Sea Temperature.

Maker and No. Casella 1822 From (Date) 29 July To 19 Sept /93

"

"

"

N.B.—When new instruments are brought into use, the date of change is to be given.

G & S [2969] 1000 4/87

...ater, 5 ...visions { Aft. Forward

...ater, 3 ...visions { Aft. 21 ft 9 in Forward 21 ft 6 in

...f Water ...towed, ...tepped { Aft. Forward

...asts in .... } Fore Main Mizen

...im

REMARKS

...to the Sailing or other Qualities of the Ship and how the Ballast is Stowed.

20 tons pig iron. Stowed in after part of ship Abaft H. Bulkhead.

Deviation of Standard Compass.

When Swung 2 Aug 1893 Where at Malta

In Latitude 35 53 N Longitude 14.31 Variation 9.20 W

By whom Staff Commander T. Hawkins Smith

Position of Stand. Compass from Taffrail in feet 101 ft 3 in

" " from Funnel in feet 51. 10

Note.—Whenever, during a Ship's Commission, a fresh Log Book is opened, the deviation table last obtained should be entered here; later tables to be entered following.

Ship's Head by Stand. Comp.	Deviation of Stand. Comp.	Correct Magnetic Course.	Ship's Head by Stand. Comp.	Deviation of Stand. Comp.	Correct Magnetic Course.
North	0	North	S	0	South
N by E	0	N by E	S by W	0	S by W
N N E	0	NNE	S S W	0	SSW
N E by N	0	NE by N	S W by S	0	SW by S
N E	0	NE	S W	0.30 E	SW
N E by E	0.10 E	NE by E	S W by W	0.30 E	SW by W
E N E	0.10 "	ENE	W S W	0.10 E	WSW
E by N	0.10 "	E by N	W by S	0.10 E	W by S
E	0	East	W	0.10 E	West
E by S	0.10 E	E by S	W by N	0.10 W	W by N
E S E	0.10 E	ESE	W N W	0.20 W	WNW
S E by E	0	SE by E	N W by W	0	NW by W
S E	0	SE	N W	0	NW
S E by S	0	SE by S	N W by N	0	NW by N
S S E	0	SSE	N N W	0	NNW
S by E	0	S by E	N by W	0	N by W

C. Johnstone Captain

Francis J Bass Navigating Officer.

[illegible signature] Executive Officer.

Geo. H Porter Carpenter.