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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY OBSERVATIONS SUMMARY

DATE: February 3, 1964 Total Minutes: 540 Total Miles _____

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
40	166	4.15	

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
7	1	1		5	1	1		1.4	1	1					

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
1			1			1					

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
6	101	16.6	

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
0			

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
2		1	1	2		1	1	1		1	1				

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
0			

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
4	96		2	65	

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY OBSERVATIONS SUMMARY

DATE: February 4, 1964 Total Minutes: 630 Total Miles _____

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
27	82	3.03	

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
5				5				1							

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
6	1	2	6	1	2	1	1	1			

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
9	26	2.8	

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
0			

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
3		2		3		2		1		1					

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
0			

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
2	50		1	35	

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY OBSERVATIONS SUMMARY

DATE: February 5, 1964 Total Minutes: 630 Total Miles _____

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
14	16	1.14	

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
8		7		9		8		1.12		1.28					

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
3	1	1	3	1	1	1	1	1			

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
0			

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
0			

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
2		2		2		2		1		1					

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
1	1	1	

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
0					

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY OBSERVATIONS SUMMARY

DATE: February 6, 1964 Total Minutes: 630 Total Miles _____

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
32	266	8.3	

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
5		3		13		3		2.6		1					

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
2	1		2	1		1	1				

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
5	227	45.4	

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
0			

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
14	7	6		18	8	9		1.28	1.14	1.5					

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
0			

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
2	220		0	0	

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY OBSERVATIONS SUMMARY

DATE: February 7, 1964 Total Minutes: 630 Total Miles _____

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
13	14	1.07	

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
2		2		2		2		1		1					

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
3	1	1	3	1	1	1	1	1			

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
0			

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
0			

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
7	5	2		8	5	3		1.14	1	1.5					

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
0			

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
0					

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY OBSERVATIONS SUMMARY

DATE: February 8, 1964 Total Minutes: 360 Total Miles _____

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
7	8	1.14	

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
2		1	1	2		1	1	1		1	1				

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
0											

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
2	2	1	

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
0			

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
2	2			3	3			1.5	1.5						

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
0			

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
0					

DATE: Feb. 13, 1964 Total Minutes: 630 Total Miles: _____

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
41	155	3.80	

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
6	3			7	4			1.17	1.33						

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
1	1		1	1		1.00	1.00				

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
28	135	4.83	

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
2	1	1		2	1	1		1.00	1.00	1.00					

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
3	8	2.67	

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/Mi.
4	98		0		

DATE: [3 Feb., 1964 Total Minutes: 520 Total Miles:

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
45	137	3.04	

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
6				9				1.33							

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
1	0	-	1	-	-	1.00	-	-			

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
6	73	12.17	

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
0	0	0	0

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
1	0	1	0	1	0	1	0	1.00	-	1.00	-				

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
0	0	0	0

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/Mi.
3	73		2		

DATE: 4 Feb. 1964 Total Minutes: 635 Total Miles: _____

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
28	82	2.93	

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
6?				6?				1.00							

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
6	1	2	6	1	2	1.00	1.00	1.00			

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
10	65	6.50	

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
-	-	-	-

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
4	-	2	-	4	-	2	-	1.00	-	1.00	-				

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
-	-	-	-

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/Mi.
2	50		1		

DATE: 5 Feb., 1964 Total Minutes: 675 Total Miles: _____

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
14	15	1.07	

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
7	-	5	-	7	-	5	-	1.00	-	1.00	-	-			

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
3	1	1	3	1	1	1.00	1.00	1.00			

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
-	-		

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
-	-		

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
3	1	2	0	3	1	2	0	1.00	1.00	1.00	-				

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
1	1	1.00	

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/Mi.
-	-	-	-	-	-

DATE: 6 Feb. 1964 Total Minutes: 620 Total Miles: _____

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
33	266	8.06	

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
11	-	2	-	18	-	3	-	1.64	-	1.33	-				

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
2	1	-	2	1	-	1.00	1.00	-			

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
5	227	45.40	

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
-	-	-	

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
13	7	6		18	8	9		1.29	1.14	1.33					

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
-	-	-	

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/Mi.
2	220		-	-	-

DATE: Feb. 7, 1964 Total Minutes: 650 Total Miles: _____

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
12	13	1.08	

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
3	-	2	-	3	-	2	-	1.00	-	1.00	-				

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
3	1	1	3	1	1	1.00	1.00	1.00			

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
-	-	-	-

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
-	-	-	-

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
6	5	1	-	7	5	2	-	1.17	1.00	2.00	-				

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
None			

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/Mi.
None					

At sea observations
Mar 4 1964

7:30 Observations begun

0842	2	→ N	Bird sp. At long range. Seen only by member of crew -
0915	2	→ W	Sooty Tern
1001	2	→ N	" "
1015	1	→ E	" "
1113	1	→ N	Storm petrel? sp? Very small, dark, rapid erratic flight low over surface of water -
12.26	1	→ E	Puffinus sp. Prob Wedge-tailed perhaps C I - Flapped occasionally - Dark above + below - No white wing patches like wedge-tailed -
12.35	10	- SW	Sooty + Noddy - At least 5 Sooty
	2	- N	Puffinus sp? Wedge-tailed?
1236	1	- S	Common Noddy
1240	1	- SE	Fregata sp - Very high - 1000 ft plus
1303	1	- E	Hunt's blue petrel - Dim, white-rump, black bill, slope on wing -
1310	1	- S	Puffinus sp wedge? (Not puffin bec too dark above + below)
1345	Flock		— apparently not feeding
		1	Fairy Tern
		8	Puffinus sp? Wedgetail?
		70	Terns - Sooty + Noddy
		6	Fregata sp.

Mar. 4, 1964

1342	1	S	WT Tropicbird - bill light yellowish - white tail, black on back of wings well seen - Came very close to ship
1408	1	N	Puffinus sp? prob. Wedgetail -
1432	1	S	WT TB
1447	1	N	" "
1510	2	N	WT shear
1514	15	E	Puffinus sp (WT - 14 DP 1 LP)
	70	E	Sooty Tern
	1	E	Fairy Tern (Not freely)
1517	1	E	Hideouts of Petrel
1530	1	S	WT
1745	1	SW	~~Storm Petrel~~ Petrel sp (Sp.?)
1752	2	E	Probable Bulwer Petrel. All dark Bulwer's size - short glides
1756	1	SE	WT
1820			secured

Mar. 5, 1977

Obs leave 0730

0809	2	SE	Puffin sp. pale morph
0832	1	W	Bird sp.
0837	1	[illegible]	"
0858	1	[illegible]	Ruddy Turnstone
0907	3	S	WT TB
0910	1	S	WT TB
0935	1	E	Fairy Tern
0937	1	E	RT TB - Tropicbird and seen - Upwinds - pure white
0940	2	E	[illegible] TB sp.
0945	2		Booby sp
	55	NE	Fairy Tern
	10	NE	Shearwater sp -
	10	NE	Noddy Tern
	5	NE	Sooty Tern
0958	1	E	FT
1004	1	S	FT
1005	2	SE	FT
1012	1	E	FT
1016	2	E	FT
1034	1	S	FT
1056	1	SE	FT
1138	1	?	FT
1215	1	N	[illegible] WT TB
1520			School of porpoise seen
1529	2		Tern sp.?
1705	1		Ruddy Turnstone
1725	1	E	Fairy Tern
1735	1	SW	White-T. Tropicbird
1815	[illegible]		Obs. concluded

CK

C/Lich

March 10

Time	#	Species	remarks
1220	1	RFB	———
1222	1	WTFB	Circled ship
1237	1	~~Bird sp~~ WTT-B	" "
1258	1	WTTB	———
1330	1	WT	N
1337	1	WTT-B	on water
1345	1	WTT-B	"
1402	1	WTT-B	NE
1404	1	FT? WTT-B	SE
1405	1	WTT-B	SE
1455	1	W-T-T-B	E
1505	2	FT	NE
1540	1	bird sp- white	NE
18:15		quit	

March 10 - At Sea Obs

9:30 -			Left Pago Pago Bete to
	1		Continue Nicely PP Harbor
	1		Fairy Tern "
9:35	1		BB - E to PPH
			Water very calm - having a wind ripple on its surface - water is like this the sky very low on the water 2-5 feet, with a slow heavy labored flight
9:44	4		Comm Nicely
	1		FT
9:44	1		CN
9:50	1		FT
9:52	1		CN
	2		BB
	1		Shearwater sp.
9:53	1		FT } actively feeding at
	5		CN } surface
9:53	20	(Flock)	CN - Actively feeding -
9:56	1		CN
9:57	1		BB
9:59	1		Sh. sp
	3		CN
10:03	1		FT
10:12	3	NE	Sh. sp.?
	6	NE	CN
	1	NE	BB

March 10

10:15	12	NE	CN
	1	NE	Sh. sp ?
10:20	3		WT
	2		RFB
10:23	8		CN
10:24	1		FT
10:30	3	E	BB
	1	E	Sh. sp ?
10:33	1	W	FT
10:50	1	E	CN
10:45	1	W	WT-TB
10:55	2	E	Brown Booby
10:55	1	E	Fairy Tern
11:05	3	NE	White-T. Tropicbd.
11:05	2	NE	Audubon's Shearwater
11:42	flock		
	6	NE	RFB
	2	NE	FT
	15+	NE	Tern sp ?
11:02	1		WTRB
	2		Sh. sp
11:45	2	W	FT
	1	NE	Sh. sp
11:47	of flock		Blue-chin [illegible]
			NE [illegible]
			[illegible]
	70	RFB	
11:50	1	Bird sp!	W
11:53	1	WTTB	on water
11:57	1	WT	N
12:43	1	RFB	SW

March 11, 1964 At Sea Observations

Ship's course: NE, Wind: N 15-20 mph, Sky: threatening, heavy cumulus-nimbus to North, rain squalls

# Birds	Direction	Time	Species + Activity
—	—	0730	Sea slightly choppy - white caps; clouds 8/10
2	SW	0800	W-T. Shearwater
1	—	0825	Bird species
—	break	0830	Visibility 0 - heavy rain + wind
-	-	0845	Clearing - resumed watch - light poor
2	NE	0900	W-T. Tropicbird - clouds 10/10
2			~~Tropicbird up.~~
1	NE	0905	bird sp - too distant.
1		0925	W-T. Tropicbird
3	NE	0926	Noddy Tern
1	—	0945	Bird species - too distant
1	NE	1043	WTS.
1	E	1044	WTS.
2	E	1059	WTS
1	Circling	1245	RFB im.
1	E	1315	WTS
2	SE	1317	WTS
1	E	1318	WTS
1	N	1324	WTS
3	N	1343	WTS - same as before ?? - keeps following ship.
4	NE	1645	Sooty Tern
2	NE	1645	Fairy Tern
		1808	observations closed

At Sea Observations March 12, 1964

Wind: E 15-20mph. Ships course NNE Clouds: cumulus 2/10

Sea - moderate, small whitecaps

# Birds	Direction	Time	Species + Remarks
—	—	0730	start observations.
2	?	0810	Sooty terns (very far out)
14	N	0812	Sooty terns
1	N	0812	W.T. Shear
1	N	0830	Bulwers petrel
10	W	1210	feeding flock - 10 shearwater sp - prob. W.T.
20	W	1210	feeding flock - Sooty Tern.
2	SW	1250	Fairy Tern
2	NE	1250	Noddy Tern (prob. Hawaiian)
1	NW	13:10	Storm petrel sp? (had white patch at base of tail on upper side of bird but couldn't see it if it continued around) prob. Harcourt's
3	NE	1315	Sooty Tern
2	—	1330	small feeding flock Fairy Tern
5	—	1330	" " " Sooty Tern
		1810	search

at SE Op.

March

~~Feb~~ 13 (Friday 13) course NE wind E
SEA SAME as Feb 12 scattered clouds

—	—	0730	~~E~~ start watch
5	SW	0800	sooty terns
2	SW	0800	Frigate Birds
1	NE	0803	intermediate phase wedgetail
5	NW	0935	Sooty Tern
2	—	1003	Fairy Tern
1	E	1020	Harcourt's Storm Petrel
1	NW	1030	Bulwer's Petrel
1	—	~~1210~~ 1150	Fairy Tern
1	—	1203	Hawaiian Noddy with white patch of feathers about 1 inch by 1½. on the ~~right~~ left wing, about in the middle
1	—	1235	Sooty Tern
	Flock	1305	very large school approx. 200 over school of porpoise
2	E		WT
15±	E		S Tern
~~2~~ 1	E		F Tern

Not actively feeding

A small flock of porpoise 3-5 ft long - May appear to be accompanied by young - one WTS. Kept getting up and sitting down on the water for periods of about two minutes apiece

1		1340	R.T. Tropic Bird
2		1340	sooty tern
2	SW	1354	sooty tern
2	—	1357	sooty tern
1.6	S	1407	sooty tern

.2
155) 41.000

3.79
41) 155
123
320
281
390
369
21

4.83
3
28) 135
112
4
6
230
224
60

at SEA

Sheet 2

Feb 13 March 13

No.	Direction	time	Kinds and remarks.
14	SSW	1425	Sooty Tern - not actively feeding
2	SW	1435	Sooty Tern
2	NE	1445	Sooty Tern
1	W	1455	Sooty Tern
2	N	1505	Sooty Tern
1	NNE	1515	Fregata sp.
4	SW	1540	Sooty Tern
1	SW	1542	Sooty Tern
1	S	1543	Blue-faced Booby - on water
1	—	1544	I. Red-footed Booby - circled ship
4	E	1545	Sooty Tern
1	SW	1605	Sooty Tern
1	SE	1620	Tropicbird sp.
1	SW	1625	Fregata sp. - distant
6	SW	1630	Sooty Tern
1	SW	1632	Sooty Tern
—	NE	1630	Porpoise - about 200 in 2 groups - some small ones observed. Appeared light on underside, brownish on top. When ship approached both groups headed SE.
5	NE	1650	Fregata sp. } not actively feeding
35	NE	1650	Sooty Tern }
1	NE	1653	Gr. Frigatebird chasing wedge-tail
1	NE	1653	Wedge-tail Shearw.
1	SW	1705	Sooty Tern
6	NE	1707	Sooty Tern
1	NE	1735	Sooty Tern (going to Jarvis too)
1	E	1738	Harcourt 10 Storm Petrel
—	—	1800	Closed observations out
1	NE	1810	Blue-faced Booby

DATE FEB. 3 1964

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TYPE TL SKY	AMT OBC. OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100															
0200															
0300															
0400															
0500															
0600															
0700															
0800															
0900															
1000	21°-00'N	158°-05.7'W	CALM	8	1,014.9	76	75	83	CU	5	050/1	79	4	050	180/13
1100	20°-48'N	158°-05.7'W	CALM	8	1,012.9	80	75	83	CU	5	050/1	79	6	050	200/13
1200	20°-39'N	158°-07.5'W	CALM	8	1,012.5	79	78	88	CU	5	050/2	79	6	050	221/13
1300	20°-28'N	158°-15'W	CALM	8	1,010.9	79	78	88	CU	6	050/2	80	6	050	221/13
1400	20°-17'N	158°-37'W	UNCHANGED	10	1012.2	79	78	88	CU	3	055/2	80	5	060	221/13
1500	20°-08'N	158°-33'W	UNCHANGED	10	1011.2	80	79.5	91.5	CU	1	055/1 1/2	80	4	065	221/13
1600	19°-58'N	158°-42'W	INCREASED	10	1011.2	80	79.5	91.5	CU	3	050/2	80	4	065	221/13
1700	19°-53'W	158°-51'W	UNCHANGED	10	1011.3	80	79.5	91.5	CU	3	050/2	80	4	060	221/13
1800	19°-39'W	159°-00'W	UNCHANGED	10	1011.4	80	79.5	91.5	CU	3	050/2	80	4	060	221/13
1900	19°-28'W	159°-09'W	UNCHANGED	5	1011.9	78	77	89	CU	3	050/2	80	4	060	221/13
2000	19°-20'W	159°-21'W	CALM	5	1012.9	79	74	88	CU	3	060/2	80	5	045	223/13
2100	19°-11'W	159°-30'W	CALM	5	1013.2	78	72	87	CU	3	060/2	80	5	045	223/13
2200	19°-02'W	159°-39'W	CALM	5	1013.2	76	72	87	CU	3	060/2	80	4	045	223/13
2300	18°-42'W	159°-48'W	CALM	5	1014.2	76	72	87	CU	3	060/2	80	5	045	223/13
2400	18°-45'N	159°-45'W	CALM	6	1012.5	79	78	91	CU	4	050/2	80	6	045	223/13

REMARKS:

*1800 UNCHANGED 5 1011.2 78 78.5 86.5 CU 3 050/2 78 4 060 221/13

AT 1800 Set all clocks Back 1 Hour TO +11 X ZONE TIME
J. E. Nelleson SM1

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955
12-5-63

715

DATE 4 FEB 1964

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TY. SKY (TYPE)	OPA SKY (AMT OBC.)	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	18°-34'N	160°-05'W	CALM	8	1012.2	79	78	91	Cu	3	050/2	80	4	045	223/13
0200	18°-33'N	160°-15'W	CALM	8	1012.2	79	78	91	Cu	5	050/2	80	4	045	223/13
0300	18°-17'N	160°-21'W	CALM	8	1012	79	78	91	Cu	6	050/2	80	4	045	223/13
0400	18°-04'N	160°-33'W	UNCHANGED	8	1012.2	79	78	91	Cu	7	055/2	80	4	050	223 / 13
0500	17°-58'N	160°-40'W	SEE 0300	8	1012.2	79	78	91	Cu	8	055/2	80	5	050	223 / 13
0600	17°-45'N	160°-48'W	RAIN	10	1012.2	79	78	91	SC	8	055/2	80	7	050	223 / 13
0700	17°-38'N	160°-01'W	CLOUDS DEVELOPING	10	1013.2	80	79	96	Cu	7	045/2	80	9	050	223 / 13
0800	17°-24'N	161°-14'W	UNCHANGED	10	1013.5	81	79	97	Cu	7	045/2	80	7	050	223 / 13
0900	17°-14'N	161°-24'W	CLOUDS DEVELOPING	10	1014.2	85	81	98	Cu	8	045/2	80	7	050	223 / 13
1000	17°-05'N	161°-32'W	CLOUDY	10	1014.2	85	81	97	CU/ST	8	045/2	80	7	050	223/13
1100	16°-45'N	161°-43'W	CLOUDY	10	1013.5	85	80	84	ST/Cu	8	045/2	80	7	050	223/13
1200	16°-58'N	162°-11'W	CLOUDY	10	1012.9	84	81	92	ST/Cu	7	045/3	80	7	050	220/13
1300	16°-45'N	162°-21'W	CLOUDY	10	1012.2	88	80	91	ST/Cu	7	045/3	80	7	050	218/13
1400	16°-39'N	162°-28'W	CLOUDY	10	1011.2	83	80	86	ST/Cu	7	095/3	80	8	100	218/13
1500	16°-38'N	162°-37'W	CLOUDY	10	1011.2	83	80	86	ST/Cu	7	095/3	80	8	100	218/13
1600	16°-19'N	162°-45'W	CLOUDY	12	1011.1	81	80	87	Cu	5	100/3	80	6	120	218/13
1700	16°-08'N	162°-53'W	CLOUDY	12	1011.1	81	74	76	Cu	5	100/3	80	6	110	218/13
1800	16°-58'N	163°-02'W	PT CLOUDY	10	1011.8	80	75	75	Cu	5	100/3	80	6	110	218/13
1900	16°-46'N	163°-08'W	PT CLOUDY	10	1011.8	80	75	75	Cu	5	100/3	80	6	110	218/13
2000	15°-37.5'N	163°-17'W	DIMINISHING CLOUDS	8	1012.2	80	72	75	SC	3	105/3	80	10	115	218 / 13
2100	15°-25'N	163°-26'W	UNCHANGED	8	1012.5	80	72	75	SC	3	105/3	80	10	115	218 / 13
2200	15°-15'N	163°-34'W	UNCHANGED	8	1012.8	80	72	75	SC	3	105/3	80	10	115	218 / 13
2300	15°-05'N	163°-40'W	UNCHANGED	8	1011.9	80	72	75	SC	3	105/3	80	10	115	218 / 13
2400	15°-05'N	163°-49'W	UNCHANGED	5	1011.9	80	72	75	SC	3	105/2	80	10	115	218 / 13

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955
12-5-63

1265

DATE 5, FEBUARY 64

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY (TYPE)	OPA SKY (AMT 8ths)	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	14°-45'N	163°-58'W	CALM	5	1011.5	80	72	75	SC	5	105/2	80	8	115	218 / 13
0200	14°-25'N	164°-07'W	CALM	5	1010.8	80	72	75	SC	5	105/2	80	8	115	218 / 13
0300	14°-22'N	164°-15'W	CALM	5	1010.2	80	72	75	SC	5	105/2	80	8	115	218 / 13
0400	14°-15'N	164°-23'W	Calm	5	1010.2	80	72	75	SC	5	105/2	80	8	115	218/13
0500	14°-05'N	164°-32'W	Calm	5	1010.5	80	72	75	SC	5	105/2	80	8	090	218/13
0600	13°-45'N	164°-35'W	calm	8	1011.2	80	72	75	SC	5	095/3	80	8	050	218/13
0700	13°-45'N	164°-48'W	calm	10	1011.9	80	72	75	ST/CU	6	095/3	80	7	080	218/13
0800	13°-40'N	164°-56'W	CALM	10	1012.2	82	74	76	SC	6	090/3	80	6	100	220/13
0900	13°-30'N	165°-05'W	CALM	10	1012.2	82	74	76	SC	6	090/3	80	6	100	220/12.5
1000	13°-19'N	165°-13'W	CALM	10	1012.2	83	75	76	SC	6	090/3	80	6	100	220/12.5
1100	13°-10'N	165°-22'W	CALM	10	1011.5	83	76	80	SC	6	090/3	80	6	100	220/12.5
1200	13°-00'N	165°-30'W	UNCHANGED	10	1010.2	83	75	76	CU	5	115/3	80	8	110	220/12.5
1300	12°-45'N	165°-46'W	UNCHANGED	10	1009.5	83	75	76	CU	5	100/3	80	10	105	220/12.5
1400	12°-37.5'N	165°-55'W	CLOUDS DISSIPATING	10	1008.5	83	75	76	CU	4	100/3	80	10	100	220/13
1500	12°-26'N	166°-00'W	UNCHANGED	10	1007.5	80	67	64	CU	4	100/3	80	10	100	220/13
1600	12°-16'N	166°-08'W	UNCHANGED	10	1007.5	79	66	65	CU	4	100/3	83	10	100	220/13
1700	12°-06'N	166°-15'W	UNCHANGED	10	1008.1	79	64	61	CU	4	100/3	83	10	100	220/13
1800	11°-54'N	166°-28'W	UNCHANGED	10	1008.5	79	65	63	CU	4	100/3	83	10	100	220/13
1900	11°-43'N	166°-38'W	CLOUDS DISSIPATING	5	1009.1	78	65	63	CU	4	100/3	83	10	100	220/13
2000	11°-33'N	166°-46'W	unchanged	5	1009.5	78	66	67	CU	7	100/3	83	10	100	220/13
2100	11°-55'N	166°-23'W	unchanged	5	1009.8	78	66	67	CU	7	100/3	83	10	100	220/13
2200	11°-18'N	167°-04'W	unchanged	5	1009.8	78	66	67	CU	7	100/3	83	10	100	220/13
2300	11°-04'N	167°-12'	unchanged	5	1009.1	78	65	71	CU	7	100/3	83	10	100	220/13
2400	10°-53'N	167°-20'W	CALM	8	1009.2	78	65	71	CU	3	095/3	83	8	100	220/13

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955
12-5-63

DATE 6 Feb 1964

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	10-43N	167-28W	CALM	10	1008.5	78	68	71	3	CU	095/3	86	8	100	220/13
0200	10-33N	167-37W	CALM	10	1008.1	78	68	71	3	CU	095/3	83	8	100	220/13
0300	10-23N	167-46W	CALM	10	1007.8	78	68	71	5	CU	095/3	83	8	100	220/13
0400	10-14N	167-54W	UNCHANGED	10	1007.8	78	68	71	4	SC	095/3	83	9	095	220/13.6
0500	10-05N	168-03W	CLOUDS Developing	10	1008.1	79	66.5	67.5	8	AS	095/3	83	9	095	220/13.6
0600	09-55N	168-11W	RAIN	10	1008.5	79	68.5	71.5	8	SC	095/3	83	10	095	220/13.5
0700	09-50N	168-28W	CALM	10	1008.8	79	68.5	71.5	6	CU	095/3	83	10	095	220/13.5
0800	09-36N	168-35W	CALM	10	1009.5	83	76	77	6	CU	095/3	83	10	095	220/13
0900	09-26N	168-39W	CALM	10	1009.8	83	76	77	7	CU	095/3	83	10	095	220/13
1000	09-16N	168-51W	Clouds Developing	10	1009.5	80	77	91	8	CU	095/3	83	10	095	220/13
1100	09-06N	169-01W	CALM	10	1008.8	80	74	83	8	CU	095/3	83	10	095	220/13
1200	08-58N	169-09W	Calm	10	1007.8	83	73	75	6	CU	095/3	83	8	095	220/13
1300	08-47N	169-23W	Calm	10	1007.1	83	73	75	6	CU	095/3	83	8	095	220/13
1400	08-37N	169-32W	Clouds Developing	10	1005.9	80	76	77	8	CU	095/3	83	8	095	220/13
1500	08-28N	169-41W	Calm	10	1005.4	80	73	75	8	CU	095/3	83	8	095	220/13
1600	08-17N	169-49W	CALM	10	1005.4	81	74	79	8	CU	095/3	83	8	100	220/13
1700	08-07N	169-58W	CALM	10	1005.4	81	74	79	8	CU	095/3	83	8	100	220/13
1800	07-56N	170-06W	UNCHANGED	10	1006.1	80	74	83	8	CU	100/3	83	10	105	220/13
1900	07-46N	170-16W	CALM	10	1006.1	80	74	83	8	CU	100/3	83	10	105	220/13
2000	07-37N	170-23W	CALM	8	1007.5	80	74	83	4	SC	100/3	83	10	100	220/13
2100	07-31N	170-28W	CALM	8	1007.8	80	74	83	4	SC	100/3	83	10	100	220/13
2200	07-19N	170-40W	CALM	8	1008.1	80	74	83	4	SC	100/3	83	10	105	220/13
2300	07-08N	170-48W	UNCHANGED	8	1007.8	80	74	83	4	SC	100/3	83	10	105	220/13
2400	06-58N	170-56W	CALM	5	1007.8	80	74	83	4	SC	100/3	83	10	105	220/13

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955
12-5-63

73.6

DATE 7, FEB., 64

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	06°-48'N	171°-04'W	CALM	5	1006.8	80	73	79	4	CU	100/3	83	10	105	220/13
0200	06°-39'N	171°-13'W	CALM	5	1006.1	80	73	79	4	CU	100/3	83	10	105	220/13
0300	06°-29'N	171°-20'W	CALM	5	1006.1	80	73	79	4	CU	100/3	83	10	105	220/13
0400	06°-20'N	171°-30'W	Calm	5	1006.1	81	73	75	4	SC	100/3	83	10	105	220/13
0500	06°-20'N	171°-37'W	Clouds developing	5	1006.7	81	73	75	8	SC	100/3	83	10	105	220/13
0600	06°-04'N	171°-46W	Calm	5	1006.8	80	72	75	6	CU	100/3	83	10	105	220/13
0700	05°-55'N	171°-55W	Calm	5	1007.1	80	72	75	6	CU	100/3	83	10	105	220/13
0800	05°-45'N	172°-03'W	CALM	10	1007.8	81	74	79	6	CU	100/3	83	6	110	220/13
0900	05-35N	172°-12W	CALM	10	1007.8	81	78	91	5	CU	100/3	83	6	110	220/13
1000	05-25N	172°-20W	CALM	10	1007.8	85	80	84	5	CU	100/3	83	6	110	220/13
1100	05-15N	172°-29W	CALM	10	1007.1	84	77	80	5	CU	100/3	83	6	110	220/13
1200	05-04N	172°-37W	CALM	10	1006.3	84	74	83	3	CU	100/3	83	8	105	225/13
1300	04-54N	172°-36W	Clouds Developing	10	1005.8	84	74	83	4	CU	100/3	83	8	105	225/13
1400	04-44N	172°-45W	UNCHANGED	10	1004.7	85	80	84	4	CU	100/3	83	8	100	225/13
1500	04-34N	172-54W	UNCHANGED	10	1004.1	85	80	84	4	CU	100/3	83	8	100	225/13
1600	04°-31'N	173°-03W	CALM	10	1003.4	84	77	80	4	CU	100/2	85	8	100	225/13
1700	04°-22'N	173°-13'W	CALM	10	1003.4	84	77	80	4	CU	100/2	85	8	100	225/13
1800	04°-13'N	173°-22'W	CALM	10	1004.1	84	77	80	4	CU	100/2	85	8	100	225/13
1900	04°-04'N	173°-31'W	CALM	10	1004.3	84	77	80	4	CU	100/2	85	8	100	225/13
2000	03°-01'N	173°-43°N	Calm	5	1004.7	84	79	84	4	CU	025/2	86	5	100	221/13
2100	03°-51'N	173°-51'N	Calm	5	1005.8	83	77	88	4	CU	025/2	86	5	100	221/13
2200	03°-42'N	173°-59W	Calm	5	1005.8	83	77	88	4	CU	025/2	86	5	100	221/13
2300	03°-32'N	174°-08'W	Calm	5	1005.8	84	79	84	4	CU	025/2	86	5	100	221/13
2400	03-22'N	174-44W 16W	CALM	5	1005.8	84	77	80	4	CU	100/2	86	5	050	221/13

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955
12-5-63

286 500

DATE 8 FEB 64

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM%	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	03°-14'N	174°-24'W	CALM	5	1005.8	84	77	80	4	CU	100/2	86	5	075	221/13
0200	03°-04'N	174°-33'W	CALM	5	1005.8	84	77	80	4	CU	100/2	86	5	075	221/13
0300	02°-53'N	174°-41'W	CALM	5	1005.4	82	77	84	4	CU	100/2	86	5	075	221/13
0400	02°-43'N	174°-49'W	CALM	8	1003.7	82	77	84	2	CU	075/2	86	8	070	221/13.5
0500	02°-34'N	174°-58'W	CALM	8	1004.1	83	78	84	3	SC	075/1½	86	8	070	221/13.4
0600	02°-24'N	175°-06'W	CALM	8	1004.4	83	79	88	3	SC	075/1½	86	8	070	221/13.4
0700	02°-09'N	175°-11'W	UNCHANGED	10	1005.4	83	79	88	2	SC	075/1½	86	8	070	221/13.4
0800	02°-01.5'N	175°-18'W	UNCHANGED	10	1005.4	86	79	81	3	SC	075/2	86	10	070	225/13
0900	01°-58'N	175°-40'W	CALM	10	1006.1	88	83	85	3	SC	040/3	86	12	045	225/13
1000	01°-44'N	175°-36'W	CALM	10	1006.1	90	82	78	3	SC	040/3	83	12	045	225/13
1100	01°-35'N	175°-45'W	CALM	10	1005.4	88	83	85	4	SC	040/3	86	12	045	223/13
1200	01°-13'N	176-10'W	Calm	10	1004.7	86	75	88	6	SC	040/3	86	12	045	223/13
1300	01°-04'N	176-20'W	Calm	10	1005.7	85	80	84	6	SC	040/3	86	12	045	223/13
1400			Calm	10	1003.1	85	80	84	6	SC	040/3	86	12	045	223/13
1500			CALM	10	1002.4	85	80	84	6	SC	040/3	86	8	045	LYING
1600	0°-48-02'N	176-38-45'W	CALM	10	1002.4	85	80	84	6	SC	040/3	86	8	045	
1700	0°-47'-40'N	176-38-52'W	CALM	10	1002.4	85	80	84	6	SC	040/3	86	8	045	TO
1800	0-47-53N	176-39-07W	CALM	10	1003.1	88	81	81	6	SC	040/3	86	8	045	
1900	0-47'-18N	176-39-15W	CALM	10	1003.1	84	79	84	6	SC	040/3	86	8	045	SFF
2000	0-47'.18N	176-39'-15W	CALM	5	1004.1	84	77	80	6	SC	040/3	86	8	045	Honolulu
2100	"	"	CALM	5	1004.1	84	77	80	6	SC	040/3	86	8	045	
2200	"	"	CALM	5	1004.1	84	77	80	6	SC	040/3	86	8	045	
2300	"	"	CALM	5	1004.0	83	79	85	6	SC	040/3	86	10	045	ISCand
2400	"	"	CALM	5	1004.1	84	77	80	6	SC	040/3	86	12	045	

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955
12-5-63

DATE 9 Feb 64

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	00°-47-18N	176°-24W	CALM	8	1005.8	84	77	81	4	SC	040/3	90	15	050	355/3
0200	00°-47-00N	176-24W	"	8	1003.4	79	78	84	6	CU-SC	045/3	90	15	050	355/3
0300	00°-47-00N	176-39W	CALM	7	1003.4	79	78	84	3	CU	040/4	90	16	040	160/4
0400	00°-48-30N	176-40W	CALM	7	1002.0	83	78	84	3	CU	040/4	89	16	040	000/3
0500	00-46-0N	176-39.20W	CALM	7	1002.0	83	78	84	3	CU	040/3	89	18	040	170/3
0600	00-48-N	176-40.08W	CALM	7	1002.4	83	78	84	3	CU	040/4	89	16	040	000/3
0700	00-47-30N	176-39.40W	CALM	10	1003.1	83	78	84	4	CU	040/4	89	16	045	070/3
0800	00°-47-30N	176°-39-40W	CALM	10	1002.7	84	77	80	6	CU	040/4	89	14	045	070/4
0900	00°-47-30N	176-39-25W	CALM	10	1004.9	85	77	81	7	CU	040/3	89	14	045	100/4
1000	00°-47-30N	176-39W	CALM	10	1004.7	84	77	80	7	CU	040/4	89	12	045	200/3
1100	00°-47-30N	176°-39W	CALM	10	1004.1	87	79	77	7	CU	040/4	89	12	045	060/4
1200	00°-48N	176°-40W	CALM	8	1004.1	87	78	78	7	CU	040/4	89	15	050	075/3
1300	00°-47-30N	176°-38-30W	"	8	1003.4	85	77	84	7	AC-CU	040/4	89	15	050	325/4
1400	00°-47-30N	176°-38-30°W	"	8	1002.7	86	79	83	8	AC-CU	050/4	89	15	050	310/0
1500	00°-48N	176-40W	"	8	1002.7	80	79	83	8	AC-CU	050/4	89	15	050	LYING TO HOWLAND IS.
1600	00°-48N	176°-40W	"	8	1002.9	84	79	83	8	AC-CU	050/4	89	15	050	" " "
1700	00°-48N	176°-40W	"	8	1002.7	84	79	83	8	AC-CU	050/2	89	10	050	" " "
1800	00°-46N	176°-40W	"	8	1002.7	84	79	83	8	AC/CU	050/2	89	10	050	" " "
1900	00°-47N	176°-40W	"	8	1003.7	83	71	69	8	AC/CU	050/2	89	10	050	" " "
2000	00°-46N	176°-38W	"	5	1004.1	83	71	69	8	AC/CU	050/2	89	10	050	180/4
2100	00°-47N	176°-37W	"	5	1004.1	83	71	69	8	AC/CU	050/2	89	10	050	025/4
2200	00°-47N	176°-40W	"	5	1005.1	84	76	76	8	AC/CU	050/2	89	10	050	180/4
2300	00°-47N	176°-38W	"	5	1005.1	85	77	76	8	AC/CU	050/2	89	10	050	025/4
2400	00°-47N	176°-38W	"	7	1005.1	85	77	76	8	AC-CU	050/3	89	10	050	160/4

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955
12-5-63

001

001/12

DATE 10 Feb 1964

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	00°-46'-45'N	176°-40'W	Calm	8	1005.1	85	77	77	7	AC-CU	050/3	89	10	045	150/4
0200	00°-49'-30'N	176°-40'W	"	8	1003.1	80	79	88	6	AC-CU	045/3	89	8	045	150/4
0300	00°-49'-30'N	176°-40'W	INCREASING	8	1001.7	80	79	88	3	CU	045/4	86	15	045	350/4
0400	00°-48'-30'N	176°-40'-10'W	CALM	8	1001.4	83	76	80	3	CU	045/4	89	10	045	150/4
0500	00°-46'-30'N	176°-39.50'W	CALM	8	1001.4	83	73	73	4	CU	045/4	89	10	045	000/4
0600	00-49.30'N	176-40-25'W	CALM	8	1002.0	83	73	73	4	CU	045/4	89	10	045	150/4
0700	00-46.2'N	176°-39'W	CALM	10	1002.4	83	73	76	6	SC	045/4	89	10	045	000/4
0800	00°-46'N	176°-39'W	CALM	10	1003.1	80	72	75	6	SC	045/3	89	8	045	—
0900	00°-46'N	176°-39'W	CALM	10	1003.1	83	73	73	4	SC	045/2	89	8	045	—
1000	00°-46'N	176°-39'W	CALM	10	1002.1	84	73	69	4	SC	045/2	90	8	045	—
1100	00°-46'N	176°-39'W	CALM	10	1004.1	84	73	69	4	SC	045/2	90	8	045	—
1200	00°-46'N	176°-39'W	CALM	10	1003.7	85	~~73~~ 66	66	6	SC	045/2	90	8	045	—
1300	00°-46'N	176°-39'W	CALM	10	1003.7	84	73	69	6	SC	045/2	90	8	045	—
1400	00°-46'N	176°-39'W	CALM	10	1003.1	87	76	71	6	SC	045/2	90	8	045	—
1500	00°-46'N	176°-39'W	CALM	10	1002.4	85	77	77	6	SC	045/2	90	8	045	—
1600	00°-46'N	176°-35'W	Calm	10	1001.7	84	76	76	6	SC	045/2	90	8	045	160/6
1700	00°-46'N	176°-35'W	Calm	10	1001.7	84	76	76	6	SC	045/2	90	8	045	—
1800	00°-46'N	176°-35'W	calm	10	1002.4	84	76	76	6	SC	045/2		8	045	—
1900	00°-46'N	176°-35'W	Calm	10	1003.1	84	73	65	6	SC	045/2	90	8	045	—
2000	00°-46'N	176°-35'W	"	5	1003.4	83	72	69	6	SC	020/3	90	8	020	—
2100	00°-48'N	176°-37'W	"	5	1005.1	83	72	69	6	SC	020/3	90	10	020	—
2200	00°-49'N	176°-37'W	"	5	1005.7	83	70	66	7	SC	060/3	90	7	060	000/4
2300	00°-48'N	176°-38'W	"	5	1004.7	83	70	66	7	SC	060/3	90	10	060	150/4
2400	00°-48'N	176°-38'W	"	7	1004.7	75	70	66	7	SC	060/3	90	12	060	000/4

REMARKS:

ALL TIMES LOCAL (~~WHISKEY~~ YRAY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955
12-5-63

11 Feb 1964

0100	00°-48'N	176°-38'W	Calm	7	1004.7	74	70	65	7	SC	060/3	90	12	045	000/3
0200	00°-46'N	176°-39.3'W	CALM	8	1003.7	77	74	76	4	CU	050/3	89	12	050	000/3
0300	00°-48'N	176°-39.5'W	CALM	8	1002.7	77	74	76	4	CU	040/3	89	12	040	160/4
0400	00°-46-50'N	176°-39.40'W	CALM	8	1002.2	84	73	74	4	Cu	040/3	90	12	040	000/4
0500	00°-49.0'N	176°-39.5'W	CALM	8	1002	82	74	76	4	Cu	040/3	90	12	040	145/4
0600	00°-47.0'N	176°-39.3'W	CALM	8	1002.2	82	74	76	4	Cu	040/3	90	12	040	350/4
0700	00°-49.5'N	176°-39.6'W	CALM	10	1003.5	83	73	74	5	Cu	040/3	90	12	045	010/4
0800	00°-49.5'N	176°-39.6'W	CALM	10	1003.4	83	73	74	5	CU	040/3	90	10	045	015/4
0900	00°-47.8'N	176°-38.8'W	CALM	10	1004	84	73	69	5	Cu	040/3	90	10	045	LOWING TO
1000	00°-47.8'N	176°-38.8'W	CALM	10	1004.1	85	72	65	5	CU	040/3	90	10	045	020/3
1100	00°-47.5'N	176°-38.3'W	CALM	10	1004.4	87	73	64	5	CU	040/3	90	10	045	040/3
1200	00°-47 N	176°-38'W	CALM	10	1004.4	86	72	63	5	CU	040/3	90	10	045	050/3
1300	00°-48 N	176°-39°.5W	CALM	10	1003.7	84	71	66	5	CU	040/3	90	10	045	—
1400	00°-47-50 N	176°-38'-55W	CALM	10	1003.7	84	71	66	5	CU	040/3	90	10	045	—
1500	00°47-47'N	176-39.05W	CALM	10	1002.4	84	71	66	5	CU	040/3	90	10	045	—
1600	00°47'N	176-38'.5W	calm	10	1001.7	84	71	66	5	CU	040/3	90	10	045	—
1700	00°-47N	176°-38'W	calm	10	1001.7	84	71	66	5	CU	040/3	90	10	045	—
1800	00°-47N	176-39'W	calm	10	1001.7	84	71	66	5	CU	040/3	90	10	045	—
1900	00°-47N	176-39'W	calm	10	1001.7	84	71	66	5	CU	040/3	90	10	045	—
2000	00°-47'N	176-39'W	CALM	5	1004.7	84	71	66	5	CU	040/3	90	10	045	335/3
2100	00°-46'N	176-38.8'W	CALM	5	1004.1	84	71	66	5	CU	040/3	90	10	045	145/3
2200	00°-46'N	176-38.5'W	CALM	5	1005.1	83	72	69	5	CU	040/3	90	10	045	000/4
2300	00°-46'N	176-38.5'W	CALM	5	1005.1	83	72	69	5	CU	040/3	90	10	045	145/4
2400	00°-46 N	176°-38'W	"	7	1005.1	83	72	70	6	CU	040/3	90	14	045	015/4

REMARKS:

ALL TIMES LOCAL (~~MIDSHIP~~ KRAY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

12 FEB 64

0100	00-47'N	176°-39'W	Calm	8	1004.1	76	75	76	6	AC-CU	050/3	90	055	12	160/4
0200	00°-48'N	176°-39.5W	CALM	8	1003.4	76	75	76	6	CU	055/3	90	055	12	000/4
0300	00°-48'N	176°-39.5W	"	8	1003.4	76	75	76	7	CU	055/3	90	055	12	150/4
0400	00°-47.2N	176°-39.5W	"	8	1002.4	82	74	76	7	CU	055/3	90	055	12	350/4
0500	00°-48.5'N	176°-40.2W	"	8	1002.4	82	74	76	7	CU	055/3	90	055	12	140/4
0600	00-47.1N	176°-39.8W	"	8	1003.1	82	74	76	7	CU	055/3	90	055	10	340/4
0700	00-47.2N	176°-39.8W	"	8	1003.1	82	74	76	6	CU	055/3	90	055	6	140/4
0800	00°-47.2N	176 39.8W	"	10	1004.1	84	74	76	6	CU	055/3	90	055	6	—
0900	00°-47.4'N	176°-39.5W	"	10	1004.1	84	74	76	6	CU	055/3	90	055	6	—
1000	00-47.4'N	176°-39.2W	"	12	104.6	85	81	84	6	CU	055/2	90	055	6	—
1100	00°-47.4'N	176°-39.3W	"	10	1005.1	86	72	63	6	CU	055/2	90	055	6	—
1200	00°-47'N	176°-39'W	CALM	10	1005.1	85	72	66	6	CU	055/2	90	055	6	—
1300	00°-47'N	176°-39'W	CALM	10	1005.1	87	72	61	6	SC	055/2	90	055	6	—
1400	00°-47'N	176°-39'W	"	8	1003.7	85	81	84	6	SC	055/2	90	055	8	LYING TO OFF HOWLAND ISLAND.
1500	00°-48'N	176°-38.7'W	"	8	1003.1	81	80	84	8	CU-CB	055/2	90	055	8	" " " " "
1600	00°-48'N	176°-38'W	"	8	1002.4	85	89	68	8	CU-CB	055/2	90	050	6	" " " " "
1700	00°-48'N	176°-38'W	"	8	1002.4	81	73	69	8	CU-CB	055/2	90	055	6	" " " " "
1800	00°-48'N	176°-38'W	"	8	1002.7	84	78	69	8	CU-CB	055/2	90	055	6	" " " " "
1900	00°-48'N	176°-38'W	"	8	1003.7	84	73	69	8	CU/CB	055/2	90	050	6	" " " " "
2000	00°-48'N	176°-38W	"	8	1004.4	84	73	69	8	CU	055/2	90	050	6	040/4
2100	00°-48'N	176°-38W	"	5	1005.1	84	73	69	8	CU	055/2	90	050	8	150/4
2200	00°-47'N	176°-38.4W	"	5	1005.1	85	74	69	8	CU	055/2	90	050	10	350/4
2300	00°-47'N	176°-38.4W	"	5	1005.4	85	74	69	8	CU	055/2	90	050	10	150/4
2400	00°-47'N	176°-38.4W	"		1005.4	85	74	84	8	CU	055/2	90	050	10	150/4

LYING TO OFF HOWLAND ISLAND.

REMARKS:

ALL TIMES LOCAL (~~WHISKEY~~ XRAY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

S1-MNN-955
12-5-63

13 FEB 64

0100	00°-47'N	176°-40'W	Calm	8	1005.4	77	76	76	2	AC	050/3	90	10	050	000/4
0200	00-47.5'N	176°41'W	"	8	1004.4	77	76	76	3	ACCU	050/2	90	10	050	140/4
0300	00°-47'N	176°-39'W	"	7	1003.4	77	76	76	6	ACCU	050/2	90	10	050	000/4
0400	00-49.7N	176-41.0W	"	7	1003.4	82	74	76	6	CU	050/2	90	10	050	000/4
0500	00-47.3N	176-39.2W	"	7	1003.4	82	74	76	6	CU	050/2	90	10	050	130/4
0600	00-46.0N	176-39.5W	"	7	1003.4	83	73	73	6	CU	050/2	90	10	050	355/4
0700	00-47.9N	176-38.8W	"	7	1003.6	83	73	73	6	CU	050/2	90	10	050	090/4
0800	00-47-6N	176-38.2W	CALM	10	1003.7	84	71	66	6	CU	050/2	90	10	050	—
0900	00-40'N	176-36W	CALM	10	1004.4	85	74	70	6	CU	075/2	90	10	075	166/11
1000	00-31'N	176-34.5W	CALM	10	1004.4	86	76	73	6	CU	075/2	90	10	075	166/11
1100	00°-A'N	176°-30.5W	CALM	10	1005.1	86	76	73	6	CU	060/2	90	10	075	~~160/11~~ 8.8
1200	00°-12'N	176°-29'W	calm	10	1003.1	89	65	77	6	CU	060/2	90	10	075	—
1300	00°-12'N	176°-22'W	calm	10	1003.1	88	76	64	6	CU	060/2	90	10	075	—
1400	00°-12'N	176°-22W	calm	10	1003.1	87	76	67	6	CU	060/2	90	10	075	—
1500	00°-12'N	176°-22W	calm	10	1003.1	92	76	59	6	CU	060/2	90	10	075	050/2.8
1600	00°-12'N	176°-22W	CALM	10	1002.7	92	76	59	6	CU	060/2	90	10	060	050/3
1700	00°-12'N	176°-22'W	Calm	10	1002.4	90	76	59	6	CU	060/2	90	10	060	050/3
1800	00°-12'N	176°-22'W	CALM	10	1003.1	88	76	67	6	CU	060/2	90	10	060	040/3
1900	00°-12'N	176°-22'W	Calm	10	1003.1	88	76	67	6	CU	060/2	90	10	060	046/3
2000	00°-12'N	176°-22'W	CALM	5 ~~10~~	1003.7	84	73	69	6	CU	060/2	90	10	060	025/3
2100	00°-12'N	176°-22'W	CALM	5	1003.7	84	73	69	6	CU	060/2	90	10	060	025/3
2200	00°-12N	176°-22'W	CALM	5	1005.1	83	75	76	6	CU	060/2	90	10	060	170/3
2300	00°-12N	176°-22W	CALM	5	1005.8	84	74	73	6	CU	060/2	90	10	060	100/3
2400	00°-12'N	176°-22W	Calm	8	1005.8	84	74	73	6	CU	060/2	90	10	060	085/3

REMARKS:

ALL TIMES LOCAL (~~WHISKEY~~ XRAY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

S1-MNH-955
12-5-63

14 FEB 64

													D	S	
0100	00°-11'N	176°30'W	CALM	5	1005.8	77	74	84	8	CB-CU	~~CB-CU~~ 040/2	90	040	10	200/4
0200	00°-11.3'N	176°-32'W	"	7	1004.1	76	74	76	6	CB-CU	~~CB-CU~~ 040/2	90	070	10	080/3
0300	00°-12.7'N	176°-31'W	"	7	1003.4	76	74	76	4	AC	060/2	90	070	10	210/3
0400	00°-10.58'N	176°-32'W	"	6	1003.1	82	75	80	4	CB	060/2	90	070	11	070/3
0500	00°-11'N	176°-32'W	"	5	1003.4	83	75	76	7	AC	070/2	90	080	10	180/4
0600	00°-10'N	176°-39'W	"	5	1003.4	83	75	76	6	AC	075/2	90	075	11	030/4
0700	00°-11'N	176°-31'W	"	8	1004.7	83	75	76	6	AC/CU	080/2	90	080	12	090/4
0800	00°-12'N	176°-31'W	CALM	10	1004.7	83	75	76	7	AC/CU	080/2	90	080	12	020/3
0900	00°-12'N	176°-31'W	CALM	10	1005.1	84	74	73	7	AC/CU	080/2	90	080	12	155/3
1000	00°-12'N	176°-31'W	CALM	10	1005.8	84	74	73	7	AC/CU	080/2	90	080	12	155/3
1100	00°-12'N	176°-31'W	CALM	10	1005.8	86	75	70	7	AC/CU	080/2	90	080	12	090/
1200	00°-10'N	176-31W	calm	10	1005.1	86	75	70	7	AC/CU	080/2	90	080	10	—
1300	00°-00'N	176°-25'W	Calm	10	1003.4	88	74	64	7	AC/CU	080/3	90	080	10	147/12
1400	00°-50'S	176-18W	calm	10	1003.1	88	74	64	8	AC/CU	080/3	90	080	10	147/12
1500	00°-40'S	176-13W	Calm	10	1002.7	87	75	67	8	AC/CU	080/3	90	080	10	147/12
1600	00°-40'S	176°-13W	CALM	10	1002.7	89	75	67	7	AC/CU	080/3	90	080	10	147/12
1700	00°-40'S	176°-13W	CALM	10	1003.1	89	75	69	7	AC/CU	080/3	90	080	10	147/12
1800	00°40'S	176°-13W	CALM	10	1003.4	89	76	73	7	AC/CU	080/3	90	080	10	147/12
1900	01-02'S	175-46'W	CALM	10	1003.7	85	77	77	6	CU	080/3	90	080	10	147/12
2000	01-02'S	175-52'W	CALM	8	1003.7	84	74	73	6	CU	080/3	90	080	10	147/12
2100	01°-07'S	~~175~~ 175°-46'W	CALM	8	1003.7	84	74	73	6	CU	080/3	90	080	12	145/12
2200	01°-14'S	175-41'W	CALM	8	1004.4	84	74	73	4	CU	080/3	90	080	12	145/12
2300	01°-23'S	175-35'W	CALM	8	1004.4	84	74	73	4	CU	080/3	90	080	12	145/12
2400	02°-29'S	175-29'W	"	8	1005.1	84	74	73	4	CU	110/3	90	110	14	145/11.7

REMARKS:

ALL TIMES LOCAL (~~WHISKEY~~ XRAY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

S1-NWL-955
12-9-63

15 FEB. 1964

Amount Type
8

TIME	LAT	LONG													
0100	01°-39'S	175°-23'W	CALM	8	1004.4	84	74	73	4	CU	100/3	90	14	105	145/11.7
0200	01°-48'S	175°-18'W	CALM	8	1003.7	84	74	73	3	SC	100/3	90	14	105	145/11.6
0300	01°-56'S	175°-12'W	CALM	7	1003.1	83	74	72	4	SC	095/3	90	12	095	145/11.6
0400	03°-55'S	175°-07'W	Calm	7	1003.1	85	75	73	4	SC	095/3	90	12	095	145/11.6
0500	03°-47'S	175°-02'W	Calm	7	1003.1	85	75	73	4	SC	095/3	90	12	095	145/11.6
0600	03°-40'S	174-55W	Calm	7	1003.4	84	76	76	4	SC	095/3	90	12	095	145/11.6
0700	03-41'S	174-50'W	Calm	7	1003.4	85	73	66	4	SC	095/3	90	12	095	135/11.6
0800	03-53'S	174-51W	CALM	12	1004.1	85	75	73	4	CU	095/3	90	10	095	135/11.5
0900	03-00S	174-48W	CALM	12	1004.7	86	76	73	4	CU	095/3	90	10	095	135/11.5
1000	03-06S	174-35W	CALM	12	1004.7	86	76	73	5	CU	095/3	90	10	095	135/11.5
1100	03-16S	174-28W	CALM	12	1004.7	88	76	67	7	CU	095/3	90	10	095	135/11.5
1200	03-24S	174-20W	CALM	10	1003.7	88	76	67	7	CU	095/3	90	12	095	135/11.5
1300	03-32S	174-13W	CALM	10	1003.7	88	76	67	7	CU	095/3	90	12	095	135/11.5
1400			CALM	10	1003.4	88	76	67	7	SC	095/3	90	12	095	100/11.5
1500			CALM	10	1003.4	86	74	63	7	SC	125/3	90	10	125	165/11
1600			CALM	10	1002.4	86	74	63	7	SC	090/3	90	15	080	065/11.8
1700			Clouds Developing	10	1002.4	86	74	63	7	CU	085/3	90	17	080	065/11.2
1800			CALM	10	1003.4	85	74	69	7	CU	085/3	90	12	080	240/11.2
1900			CALM	10	1003.4	85	74	69	6	CU	085/3	90	12	080	240/9.4
2000			CALM	5	1004.1	85	72	73	6	CU	085/3	90	12	080	100/12
2100			CALM	5	1004.1	85	72	73	6	CU	085/3	90	12	080	094/12
2200			CALM	5	1004.7	85	72	73	6	CU	085/3	90	12	080	094/12
2300			CALM	5	1004.7	85	72	73	6	CU	080/3	90	12	080	000/12
2400			Calm	5	1004.7	85	69	75	6	CU	080/3	90	12	080	000/12

REMARKS:
ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SA-MNW-955
12-7-63

U3U

0100	03-32	174-13	Calm	5	1003.7	84	73	64	6	Cu	080/3	90	10	080	000/12
0200	03°-32'S	174°-09'W	Calm	5	1003.7	86	74	67	6	Cu	080/3	90	10	080	130/12
0300	03°-32'S	174°-09'W	Calm	5	1003.1	86	74	67	6	Cu	080/3	90	10	080	000/12
0400	03°-34.43'S	174-10.5'W	CALM	5	1003.1	84	69	73	7	Cu	080/3	90	10	080	000/~~10~~ 7.6
0500	03°-37.30'S	174-10.56'W	CALM	5	1003.1	84	69	73	7	Cu	080/3	90	10	080	160/ 7.5
0600	03°-36.5'S	174-09.40'W	CALM	6	1003.1	84	69	73	6	Cu	080/3	90	10	080	010/7.5
0700	03°-35.20'S	174-10'W	CALM	10	1003.1	85	69	74	7	Cu	080/3	90	10	080	160/7.5
0800	03°-36'S	174°-8'W	CALM	10	1003.7	85	74	69	7	Cu	080/3	90	10	080	—
0900	03°-36'S	174°-8'W	CALM	10	1004.1	85	74	69	7	Cu	080/3	90	10	080	—
1000	03°-36'S	174°-8'W	CALM	10	1004.1	87	73	63	7	Cu	080/3	90	10	080	—
1100	03°-36'S	174°-8'W	CALM	10	1004.7	86	72	63	7	Cu	080/3	90	10	080	350/ —
1200	03°-36'S	174°-8'W	Calm	10	1004.1	87	73	63	7	Cu	080/3	90	10	080	010/7.5
1300	03°-36'S	174°-8'W	Calm	10	1003.4	87	73	63	7	Cu	080/3	90	10	080	160/7.5
1400	03°-36'S	174°-8'W	Calm	10	1003.1	87	75	67	7	Cu	080/3	90	10	080	010/7.5
1500	03°-36'S	174°-8'W	Calm	10	1002.7	91	76	61	7	Cu	080/3	90	10	080	035/7.5
1600	03°-36'S	174°-8'W	CALM	10	1002.7	86	74	67	7	Cu	080/3	90	10	080	—
1700	03°-36'S	174°-8'W	CALM	10	1002.7	88	76	67	7	Cu	080/3	90	10	080	—
1800	03°-36'S	174°-8'W	CALM	10	1003.1	85	74	69	6	Cu	065/3	90	12	065	—
1900	03°-36'S	174°-8'W	CALM	10	1003.4	85	74	69	7	Cu	065/3	90	12	065	—
2000	03°-35'S	174°-09'W	CALM	10	1004.1	84	76	76	4	Cu	080/3	90	10	080	RUDDER AMIDSHIPS NO TRUE COURSE
2100	03°-36'S	174°-10'W	CALM	8	1004.4	84	76	76	4	Cu	085/3	90	8	085	"
2200	03°-35'S	174°-09'W	CALM	8	1005.1	84	74	73	3	Cu	085/3	90	10	085	"
2300	03°-35'58"S	174°-09'58"W	CALM	8	1005.8	84	73	69	3	Cu	085/3	90	12	085	"
2400	03°-36'S	174-08'W	"	8	1005.8	84	73	69	3	Cu	085/4	90	12	085	Lying to off McKean Is.

REMARKS: XRAY

ALL TIMES LOCAL (~~WHISKEY~~); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

S1-MNV-955
12-5-63

17 FEB 64

0100	03°37'S	174°-12'W	Calm	8	1005.4	84	73	69	CU	4	085/4	90	12	085	LYING TO AT MCKEAN IS.
0200	03°38'S	174°-12'W	"	8	1005.4	83	73	73	AC-CU	4	085/4	90	12	085	" " " " "
0300	03°-36.5'S	174°-10'W	"	8	1004.1	83	73	73	CU	4	085/2	90	12	085	100/7
0400	03-36 S	174°-10W	"	8	1003.1	83	76	76	CU	3	085/2	90	10	085	LYING TO AT MCKEAN ISL.
0500	03-35.6S	174-11.2W	"	8	1003.1	83	76	76	CU	3	085/2	90	10	085	LYING TO AT MCKEAN ISL.
0600	03-35.2'S	174-09.8'W	"	8	1003.1	83	76	76	CU	4	085/2	90	10	085	080/6
0700	03-36.5S	174-10.5W	"	10	1004.1	83	76	76	CU	5	085/2	90	10	085	LYING TO AT MCKEAN ISL.
0800	03-35'46"S	174-09'30"W	"	12	1004.8	83	76	76	AC	7	085/2	90	10	085	NO TRUE COURSE
0900	03-35'30"S	174-08'0"W	"	12	1005.4	85	77	77	AC	8	080/2	90	10	080	NO TRUE COURSE
1000	03-35'S	174-09'W	"	12	1005.7	85	77	77	AC	8	080/2	90	10	080	DRIFTING
1100	03-35'S	174-09'W	"	12	1005.1	85	77	77	AC	8	080/2	90	10	080	"
1200	03°-35'S	174°-09'W	"	12	1004.1	86	78	77	AC	8	080/2	90	10	080	DRIFTING
1300	03°-35'S	174°-09'W	"	12	1003.4	86	78	77	AC	8	080/2	90	8	080	"
1400	03°-35'S	174°-09'W	"	12	1003.4	88	80	77	AC	8	080/2	90	8	080	"
1500	03°-35'S	174°-09'W	"	12	1003.1	88	80	77	AC	8	080/2	90	8	080	"
1600	03°-35'S	174°-09'W	CALM	10	1003.1	89	84	85	AC	8	080/2	90	8	080	DRIFTING
1700	03°-35'S	174°-09'W	CALM	10	1003.4	90	84	81	AC	8	080/2	90	8	080	DRIFTING
1800	03°-36'S	174°-09'W	CALM	10	1003.4	~~[illegible]~~	89	77	CU	8	080/2	90	10	080	078/11.1
1900	03°-35'S	174°-09'W	CALM	8	1003.4	88	76	67	CU	8	080/2	90	10	080	DRIFTING
2000	03-36'S	174-10'W	CALM	7	1004.1	83	76	80	AC	7	080/2	90	10	080	"
2100	03-36'S	174-10'W	CALM	7	1004.7	84	79	84	AC	7	080/2	90	10	080	"
2200	03-36'58"S	174-10'48"W	CALM	7	1005.1	83	76	80	AC	6	085/2	90	8	085	"
2300	03-36'46"S	174-10'38"W	CALM	6	1005.8	83	76	80	SC	4	085/2	90	8	085	"
2400	03°-36'S	174°-09'W	"	6	1005.8	83	71	69	SC	3	085/2	90	6	090	070/6

REMARKS: XRAY

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

S1-LNW-955
12-7-63

18 FEBRUARY 1964

0100	03°-36.5'S	174°-10'W	CALM	7	1005.8	83	71	64	AC-CU	4	070/2	90	5	040	LYING TO OFF MCKEAN ISLAND.
0200	03°-36.5'S	174°-11'W	CALM	7	1004.7	83	80	88	AC	4	050/2	90	5	030	" " " " "
0300	03°-37'S	174-13'W	CALM	7	1004.1	83	80	88	AC	4	050/2	90	8	030	" " " " "
0400	03°-36.2'S	174°-10'W	CALM	7	1004.1	83	80	88	AC	4	050/2	90	8	030	" " " " "
0500	03°-37.8'S	174°-09.8'W	CALM	7	1004.1	88	75	76	AC	4	040/2	90	8	030	" " " " "
0600	03°-37.1'S	174°-10.6'W	CALM	7	1004.1	83	75	76	CU	4	040/2	90	8	030	" " " " "
0700	03°-36.5'S	174°-09.2'W	CALM	10	1004.4	83	75	76	CU	7	040/2	90	6	030	" " " " "
0800	03°-36'13"S	174°09'24"W	CALM	10	1005.4	84	79	84	AC/CU	6	030/2	90	6	020	" " " " "
0900	03°-36.1'S	174°-10.5'W	CALM	8	1005.8	87	79	81	AC-CU	7	030/2	90	6	020	" " " " "
1000	03°-35'45"S	174°-10'15"W	CALM	10	1006.1	89	77	68	AC/CU	7	030/2	90	8	030	" " " " "
1100	03°-35'58"S	174°-10'36"W	CALM	10	1006.1	87	86	92	AC/CB	7	030/2	90	10	030	" " " " "
1200	03°-35'S	174°-10'W	calm	8	1005.4	87	79	77	AC/CB	9	030/2	90	10	030	" " " " "
1300	03°-35'S	174-10'W	calm	8	1004.4	86	79	88	AC/CB	9	030/2	90	8	030	" " " " "
1400	03°-35'S	174°-10'W	calm	8	1003.7	84	76	76	AC/CB	9	030/2	90	8	030	" " " " "
1500	03°-35'S	174°-10'W	calm	8	1003.4	86	77	81	AC/CB	9	030/2	90	8	030	" " " " "
1600	03°-35'S	174°-10'W	CALM	8	1003.4	88	77	71	AC/CB	9	030/2	90	8	030	" " " " "
1700	03°-35'S	174°-10'W	CALM	8	1003.4	83	76	80	AC/CB	9	030/2	90	8	030	" " " " "
1800	03°-35'S	174°-10'W	CALM	10	1003.7	83	76	80	AC/CU	7	030/2	90	8	030	" " " "
1900	03°-35'S	174°-10'W	CALM	8	1004.4	82	75	80	AC/CU	7	030/2	90	7	030	" " " "
2000	03°-35'S	174°-10'W	CALM	8	1004.4	82	79	89	SC	6	030/2	90	8	030	" " " "
2100	03°-35'S	174°10'W	CALM	8	1005.4	87	79	89	SC	6	030/2	90	8	030	" " " "
2200	03°-35'S	174-10'W	CALM	7	1005.8	83	78	84	AC/SC	7	050/2	90	8	050	" " " "
2300	03°-36'S	174-10'W	CALM	6	1005.8	83	78	84	SC/CU	6	055/4	90	14	055	" " " "
2400	03°-36'S	174°-10'W	CALM	7	1005.8	83	78	84	SC/CU	6	055/4	90	14	055	" " " "

REMARKS:

ALL TIMES LOCAL (~~WHISKEY~~ XRAY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

19 FEB 1964

TIME	LAT	LONG	WIND DIR	WIND SPD	SLP	DBT	DPT	SST	WEATHER	CLOUDS	WAVES	PERIOD	SWELL	PERIOD	REMARKS
0100	03°-36'S	174°-04'W	CALM	7	1004.7	83	78	84	Sc/Cu	7	050/3	90	050	15	LYING TO OFF MCKEAN IS.
0200	03°-36.5'S	174°-12'W	Calm	7	1004.4	83	78	84	Ac/Sc	7	050/3	90	050	15	" " " " "
0300	03°-36'S	174.12.5'W	CALM	7	1003.7	83	78	84	Ac/Cu	5	050/3	90	050	15	" " " " "
0400	03-35.9S	174.09.4'W	CALM	7	1003.7	84	77	80	Cu	5	050/3	90	050	15	" " " " "
0500	03-35.9S	174-10.3'W	CALM	7	1003.7	84	77	80	Cu	6	050/3	90	050	15	" " " " "
0600	03-36S	174-11.6'W	CALM	8	1004.1	84	77	80	Cu	5	050/3	90	050	12	" " " " "
0700	03-35.9S	174-08.9'W	CALM	10	1004.1	82	77	84	Cu	6	050/3	90	050	12	" " " " "
0800	3°-35.35'S	174-09.6'W	CALM	10	1005.1	84	77	80	Cu	5	060/3	90	10	060	~~230/4.0~~
0900	3°-35'S	174-10'W	CALM	10	1006.1	86	78	77	Cu	4	060/3	90	12	060	070/29.0
1000	3°-35.5'S	174-09'W	CALM	10	1005.8	87	78	77	Ac/Cu	5	060/4	90	14	060	080/38.8
1100	3°-35'S	174-08'W	CALM	10	1005.4	88	83	85	Ac	4	070/4	90	14	070	Lying off McKean's
1200	03°-35'S	174-08'W	"	10	1004.7	88	80	84	Ac	4	070/4	90	15	075	" " "
1300	03°-35'S	174°-08'W	"	10	1004.4	85	80	84	Ac	4	070/4	90	15	075	" " "
1400	03° 35'S	174°-08'W	"	10	1003.7	85	80	84	Ac	4	070/4	90	15	075	" " "
1500	03°-35'S	174°-08'W	"	10	1003.1	84	79	84	Ac	4	070/4	90	15	075	" " "
1600	03°-35'S	174°-08'W	CALM	10	1003.1	84	79	84	Ac	5	075/4	90	12	075	" " "
1700	03°-35'S	174°-08'W	CALM	10	1003.1	84	79	84	Ac	5	075/4	90	12	075	" " "
1800	03°-35'S	174°-08'W	CALM	10	1003.1	85	78	80	Ac	5	075/4	90	12	075	082/
1900	03°-35'S	174°-08'W	CALM	8	1003.1	84	77	80	Ac	5	075/4	90	12	075	
2000	03°-35'S	174-09'W	CALM	8	1004.4	83	78	83	Ac/Cu	4	070/4	90	10	075	Laying off McKean
2100	03°-35'S	174-10'W	CALM	8	1005.1	83	78	83	Ac/Sc	4	070/4	90	10	075	" " "
2200	03°-35'S	174-10'W	CALM	8	1005.1	83	78	83	Cu	3	075/4	90	14	075	090/20.4
2300	03°-35'S	174°-09'W	CALM	8	1005.8	83	78	83	Cu	3	075/4	90	12	075	Laying off McKean Is.
2400	03°-36'S	174-12'W	"	8	1005.8	83	78	83	Cu	3	075/4	90	15	080	" " " "

REMARKS:

ALL TIMES LOCAL (~~WHISKEY~~ XRAY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNW-955
12-5-83

8

20 Feb 64

0100	03°-36'S	174°-09'W	CALM	8	1005.8	83	78	84	cu	3	075/4	90	15	080	LYING TO OFF MUCPAN JS.
0200	03-36.7'S	174°-11'W	"	8	1005.1	83	80	87	sc	3	075/2	90	12	075	" " " " "
0300	03°-36' S	174°-09'W	"	8	1004.4	83	80	88	Acc	3	075/3	90	8	075	" " " " "
0400	03°-35.9S	174°-11.2'W	"	8	1003.7	83	76	80	cu	3	075/3	90	8	075	" " " " "
0560	03-35.7S	174°-09.5W	"	8	1003.7	83	76	80	cu	3	075/3	90	8	075	" " " " "
0600	03-35.1S	174-10W	"	8	1004.4	83	76	80	cu	4	075/3	90	8	075	" " " " "
0700	03-35.5S	174-11.5W	"	10	1005.1	83	76	80	cu	4	075/3	90	8	075	" " " " "
0800	03-36-38S	174-09'-42"W	CALM	10	1005.8	83	76	80	cu	4	080/3	90	10	080	" " " " "
0900	03-36.4S	174-11.6W	CALM	10	1006.5	83	76	80	cu	4	080/3	90	10	080	" " " " "
1000	03-35.9S	174-10.8W	CALM	10	1006.5	86	81	84	cu	4	080/3	90	10	080	" " " " "
1100	03'-35'S	174-08'W	CALM	10	1006.5	87	79	77	cu	3	080/3	90	10	080	" " " " "
1200	03'-35'S	174-08'W	"	10	1008.5	87	80	81	cu	3	080/3	90	10	110	" " " " "
1300	03°-37.5'S	173°-58.56'W	"	10	1008.1	87	80	81	cu	3	080/3	88	10	110	088/10.8
1400	03°-37.5'S	173°-47'W	"	10	1006.8	89	83	81	cu	3	080/3	88	10	110	088/12
1500	03°-37.5'S	173°-38'W	"	10	1006.1	89	83	81	cu	3	080/3	88	10	110	088/12
1600	03-36.5S	173-23W	"	12	1006.8	90	84	81	cu	5	100/3	90	12	110	088/12
1700	03-36.7S	173-11W	"	12	1006.4	88	88	85	cu	5	100/3	90	12	110	088/12
1800	03-35.5S	172-58.5W	"	12	1007.5	88	83	85	cu	5	100/3	90	12	110	088/12
1900	03-35.5S	172-47W	"	10	1008.1	88	83	85	cu	5	100/3	90	12	110	088/12
2000	03°-39.5S	172°-50W	CALM	8	1008.5	84	79	84	cu	5	100/3	90	12	110	085/12
2100	03°-38.5S	172-39.25W	CALM	8	1009.1	84	79	84	cu	5	100/3	90	12	110	085/12
2200	03-37.5S	172-28W	CALM	8	1009.5	84	79	84	cu	5	100/3	90	12	110	085/12
2300	03-36.5S	172-17W	CALM	8	1009.5	84	79	84	cu	5	100/3	90	12	110	085/12
2400	03°-35.9S	172°-06W	CALM	5	1008.8	84	79	84	cu	5	100/3	90	10	110	085/12

REMARKS: XRAY

ALL TIMES LOCAL (~~WHISKEY~~); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

S1-MNV-955
12-9-63

O.S.
DET

21, FEB, 64

TIME	LAT	LONG	WIND DIR	WIND SPD	PRESS	AIR TEMP	DEW PT	SEA TEMP	WEATHER	VIS	WAVES	PERIOD	HEIGHT	SWELL	REMARKS
0100	03° 34.8S	171° 55'W	CALM	5	1008.8	84	79	84	CU	5	045/2	90	10	040	085/12
0200	03° 33.4S	171° 35'W	CALM	5	1008.8	84	79	84	CU	5	045/2	90	10	040	085/12
0300	03° 33'S	171° 28'W	CALM	5	1008.8	84	79	84	CU	5	045/2	90	10	040	170/4
0400	03° 35.5'S	171° 34'W	CALM	5	1008.8	84	77	80	AC	5	030/2	90	12	020	325/7.9
0500	03° 35'S	171° 32'W	CALM	5	1005.1	83	78	84	AC	7	030/2	90	12	030	330/7.5
0600	03° 35'S	171° 33'W	CALM	8	1005.6	83	78	84	AC/CU	7	040/2	90	12	040	145/7.8
0700	03° 35'S	171° 33'W	CALM	8	1006.1	83	78	84	AC/CU	6	030/2	90	12	030	330/9.6
0800	03° 35.0'S	171° 31.5'W	CALM	10	1009.8	83	78	84	AC/CU	6	055/2	90	12	055	DRIFTING OFF BIRNIE
0900	03° 35.3'S	171° 31.4'W	CALM	10	1010.2	83	78	84	CU	6	060/2	90	12	060	" " "
1000	03° 34.8'S	171° 31.8'W	CALM	10	1009.8	85	78	80	CU	5	045/2	90	12	045	STEAMING OFF BIRNIE
1100	03° 35.2'S	171° 32.4'W	CALM	10	1009.8	84	77	80	CU	5	045/2	90	12	045	DRIFTING OFF BIRNIE
1200	03° 35.3'S	171° 32'W	CALM	10	1009.1	84	77	80	CU	5	045/2	90	10	045	" " " "
1300	03° 35'S	171° 32'W	CALM	10	1008.8	84	77	80	CU	5	045/2	90	10	045	" " " "
1400	03° 35'S	171° 32'W	"	8	1008.8	84	77	80	CU	5	045/2	90	10	045	" " " "
1500	03° 35'S	171° 32'W	"	8	1008.8	84	77	80	CU	5	045/2	90	10	045	" " " "
1600	03° 35'S	171° 32'W	Calm	10	1007.1	84	77	80	CU	5	045/2	90	10	045	Drifting off Birnie
1700	03° 35'S	171° 32'W	"	10	1007.1	84	77	80	CU	5	045/2	90	10	045	" " "
1800	03° 35'S	171° 32'W	"	10	1007.8	84	77	80	CU	5	045/2	90	10	045	" " "
1900	03° 35'S	171° 32'W	"	10	1007.8	84	77	80	CU	5	045/2	90	10	045	" " "
2000	03° 35'S	171° 32'W	CALM	8	1009.5	83	76	80	CU	4	045/2	90	12	045	" " "
2100	03° 35'S	171° 32'W	CALM	8	1009.8	83	76	80	CU	4	045/2	90	12	045	" " "
2200	03° 35'S	171° 32'W	CALM	8	1010.2	83	76	80	CU	4	045/2	90	12	045	" " "
2300	03° 35'S	171° 32'W	CALM	8	1010.2	83	76	80	CU	4	045/2	90	12	045	" " "
2400	03° 35'S	171° 32'W	"	8	1010.2	83	76	80	CU	4	045/2	90	12	045	" " "

REMARKS:
ALL TIMES LOCAL (~~WHISKEY~~ XRAY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

22 Feb 64

0100	03°-35'S	171°-33'W	Calm	8	1005.8	82	81	88	Ac-Cu	3	040/2	90	040	15	LYING TO OFF BIRNIE IS
0200	03°-35.5'S	171°-31'W	"	8	1004.7	82	81	88	Ac	6	040/2	90	040	15	" " " " "
0300	03°-36'S	171°-33'W	"	8	1004.7	82	81	88	Ac	6	040/2	90	040	15	" " " " "
0400	03-34.1S	171-36.5W	"	8	1007.5	82	81	88	Ac	6	040/2	90	040	15	" " " " "
0500	03-35.9S	171-32.4W	"	8	1007.5	82	81	88	Ac	6	040/3	90	040	15	" " " " "
0600	03-34.9S	171-33.8W	"	8	1007.5	82	81	88	Ac	6	040/3	90	040	15	" " " " "
0700	03-35.2S	171-35.2W	"	12	1008.1	82	77	84	Cu	6	040/2	90	040	14	" " " " "
0800	03°-35.2'S	171°-35.2'W	CALM	10	1008.8	83	78	84	Cu	6	040/2	90	040	14	" " " " "
0900	03°-35.2'S	171°-35.2'W	CALM	10	1009.5	84	79	84	Cu	6	040/2	90	040	14	" " " " "
1000	03°-35.2'S	171°-35.2'W	CALM	10	1009.1	85	78	80	Cu	6	040/2	90	040	14	" " " " "
1100	03°-35.2'S	171°-35.2'W	CALM	10	1009.1	85	78	80	Cu	6	040/2	90	040	14	" " " " "
1200	03°-35'25	171°-35'2W	CALM	10	1008.1	84	79	84	Cu	6	040/2	90	040	12	" " " " "
1300	03°-35'25	171°-35'2W	CALM	10	100.75	83	79	84	Cu	6	040/2	90	040	12	" " " " "
1400	03°-35'25	171°-35'2W	CALM	10	1006.8	83	79	84	Cu	6	040/2	90	040	12	" " " " "
1500	03°-35'S	171°-35'W	CALM	10	1006.8	83	79	84	Cu	6	040/2	90	12	040	" " " " "
1600	03°-35'S	171°-35'W	"	10	1006.4	86	81	79	Cu	6	060/2	90	~~060~~ 12	060	" " " " "
1700	03°-35'S	171°-35'W	"	10	1006.4	83	73	73	Cu	6	060/2	90	~~060~~ 12	060	" " " " "
1800	03°-35'S	171°-35'W	"	10	1006.4	83	73	73	Cu	6	060/2	90	~~060~~ 12	060	" " " " "
1900	03°-35'S	171°-35'W	"	10	1006.4	83	73	73	Cu	6	060/2	90	~~060~~ 12	060	" " " " "
2000	03°-35'S	171°-35'W	CALM	8	1007.8	83	76	80	Cu	6	060/3	90	12	060	" " " " "
2100	03°-35'S	171°-35W	CALM	8	1008.8	83	76	80	Cu	6	060/3	90	12	060	" " " " "
2200	03°-35'S	171°-35W	CALM	8	1009.5	83	76	80	Cu	6	060/3	90	12	060	" " " " "
2300	03°-35'S	171°-35W	CALM	8	1009.5	83	76	80	Cu	6	060/3	90	12	060	" " " " "
2400	03°-35'S	171°-35W	"	8	1009.5	83	76	80	Cu	6	060/2	90	8	060	" " " " "

REMARKS:
ALL TIMES LOCAL (~~WHISKEY~~ XRAY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-INH-955
12-2-63

23 Feb. 64

0100	03°-35'S	171°-35.5'W	Calm	8	1008.8	83	79	84	AL-CU	6	040/3	90	040	14	LYING TO OFF BIRNIE ISLAND.
0200	03°-35'S	171°-36'W	"	7	1008.8	83	79	84	CU	5	040/3	90	040	14	" " " " "
0300	03°-35'S	171°-36'W	"	7	1008.1	83	79	84	CU	2	045/3	90	045	15	" " " " "
0400	03-35.1S	171-36W	"	7	1007.8	83	79	84	CU	2	045/3	90	045	15	" " " " "
0500	03-35.2S	171-36.5W	"	7	1008.1	83	79	84	CU	3	045/3	90	045	15	" " " " "
0600	03-34.5S	171-35.8W	"	7	1008.8	83	79	84	CU	3	045/3	90	045	15	" " " " "
0700	03-32.1S	171-35.2W	"	10	1009.4	83	79	84	CU	3	095/3	90	090	15	" " " " "
0800	03°-37.5S	171°-19'W	"	10	1009.8	85	80	84	CU	7	095/3	90	090	12	099/12
0900	03°-38.8S	171°-18.5'W	"	10	1010.5	85	80	84	CU	7	095/3	90	090	12	099/12
1000	03°-41'S	170°-49'W	"	10	1010.1	79	80	84	CU	9	095/3	90	090	12	099/12
1100	03°-42'S	170°-39.5'W	"	10	1009.8	85	80	84	CU	8	095/3	90	090	12	099/12
1200	03°-45'S	170°-42.6'W	CALM	10	1009.5	85	78	80	CU	7	090/3	90	090	12	070/12
1300	03°-43'S	170°-43.5'W	CALM	10	1009.1	87	80	81	CU	6	070/3	90	070	15	LYING TO OFF PHOENIX ISL.
1400	03°-43'S	170°-43.5'W	CALM	10	1008.1	87	80	81	CU	6	070/3	90	070	15	" " " " "
1500	03°-43'S	170°-43.5'W	CALM	10	1007.5	84	79	84	CU	5	070/3	90	070	15	" " " " "
1600	03°-43'S	170°-44'W	CALM	10	1004.6	84	77	80	CU	5	075/3	90	075	16	080/
1700	03°-41'S	170°-44'W	CALM	10	1004.6	84	79	84	CU	4	065/3	90	065	16	LYING TO OFF PHOENIX ISL.
1800	03°-41'S	170°-45'W	CALM	10	1005.6	83	79	84	CU	4	065/3	90	065	16	" " " " "
1900	03°-41'S	170°-45'W	CALM	10	1006.1	83	79	84	CU	4	065/3	90	065	16	" " " " "
2000	03°-41'S	170°-45'W	"	10	1010.8	83	79	84	CU	9	065/3	90	065	10	" " " " "
2100	03°-41'S	170°-45'W	"	10	1010.8	83	79	84	CU	9	065/3	90	065	10	" " " " "
2200	03°-41'S	170°-45'W	"	10	1011.5	84	76	83	CU	9	065/3	90	065	10	" " " " "
2300	03°-41'S	170°-45'W	"	10	1011.5	84	76	83	CU	9	065/3	90	065	10	" " " " "
2400	03°-41'S	170°-45'W	"	5	1010.8	84	76	83	CU	9	065/3	90	065	10	" " " " "

REMARKS:
ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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12-2-63

1816 90

24 FEB 64

1015

1017-5

0100	03°41'S	170°-45'W	CALM	5	1010.8	83	78	84	4	CU	065/3	90	10	065	Lying To off Phoenix
0200	03°41'S	170°-45'W	"	5	1010.5	83	78	84	4	CU	065/3	90	10	065	" " " "
0300	03°-41'S	170°-45'W	"	5	1010.2	83	78	84	4	CU	065/3	90	10	065	" " " "
0400	03°-41'S	170°-44'W	CALM	5	1015.0	82	78	88	4	SC	060/3	90	14	060	" " " "
0500	03°-42'S	170°-44'W	CALM	5	1007.1	82	78	88	4	SC	060/3	90	14	060	" " " "
0600	03°-42'S	170°-44'W	CALM	7	1007.1	82	75	80	4	SC	070/3	90	16	065	060
0700	03°-41'S	170°-44'W	CALM	10	1002.5	82	78	88	4	CU	070/3	90	15	070	Lying To off Phoe.
0800	03°-41'S	170°-44'W	CALM	10	1011.2	84	77	80	4	CU	070/3	90	14	070	" " " "
0900	03°-41'S	170°-44'W	CALM	10	1011.2	84	77	80	4	CU	070/3	90	14	070	" " " "
1000	03°-41'S	170°-44'W	CALM	10	1011.8	84	77	80	4	CU	070/3	90	14	070	" " " "
1100	03°-41'S	170°-44'W	CALM	10	1011.9	87	80	81	8	CU	070/3	90	14	070	" " " "
1200	03°-41'S	170°-44'W	"	10	1011.2	86	81	84	8	CU	070/3	90	12	070	" " " "
1300	03°-41'S	170°-44'W	"	10	1010.8	85	80	84	8	CU	070/3	90	12	070	" " " "
1400	03°-41'S	170°-44'W	"	10	1007.1	85	80	84	8	CU	070/3	90	12	070	" " " "
1500	03°-41'S	170°-44'W	"	10	1008.1	85	81	88	8	CU	070/3	90	12	070	" " " "
1600	03°-41'S	170°-44'W	"	10	1008.6	85	81	88	8	CU	070/3	90	12	070	" " " "
1700	03°-41'S	170°-43'W	"	10	1008.6	85	81	88	8	CU	070/3	90	12	070	062 /
1800	03°-41'S	170°-43'	"	10	1006.5	85	81	88	6	SC	065/3	90	14	065	062 / 13.5
1900	03°-41'S	170°-43	"	5	1009.5	85	74	69	6	SC	065/3	90	7	065	Lying To off Phoenix
2000	03°-43'S	170°-44'W	CALM	8	1009.5	83	78	84	4	CU	070/3	90	10	070	" " " "
2100	03°-43'S	170°-45'W	CALM	8	1007.5	83	78	84	4	CU	070/3	90	10	070	" " " "
2200	03°-44'S	170°-44'W	CALM	8	1017.5	83	78	84	4	SC/CU	065/3	90	12	065	060 / 279
2300	03°-44'S	170°-44'W	CALM	8	1017.5	83	78	84	4	SC/CU	065/3	90	12	065	Lying To Phoenix
2400	03°-44'S	170°-44'W	CALM	8	1011.9	83	78	84	5	CU	065/3	90	12	065	" " "

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-LNW-955
12-5-63

1008.5
1015

25 FEB 64

250345
25 1145

0100	03°-44'S	170°-44'W	CALM	8	1011.5	83	78	84	6	AC/CU	065/2	90	12	065	Lying OFF	PHOENIX
0200	03°-44'S	170°-44'W	CALM	8	1010.5	83	78	84	6	CU	065/2	90	12	065	" "	"
0300	03°-44'S	170°-44'W	CALM	8	1010.2	82	75	80	6	CU	065/2	90	12	065	" "	"
0400	03°-44'S	170°-44'W	CALM	5	1009.8	82	77	84	6	CU	065/2	90	7	065	" "	"
0500	03°-44'S	170°-44'W	CALM	5	1010.2	84	77	80	6	CU	065/2	90	7	065	" "	"
0600	03°-44'S	170°-44'W	CALM	5	1010.2	83	76	80	6	CU	065/2	90	7	065	" "	"
0700	03°-44'S	170°-44'W	"	8	1010.2	83	76	80	6	CU	065/2	90	7	065	" "	"
0800	03°-44'S	170°-44'W	"	8	1010.2	83	76	80	6	CU	065/2	90	7	065	" "	"
0900	03°-44'S	170°-44'W	"	8	1010.5	83	80	92	6	CU	065/2	90	7	065	" "	"
1000	03°-44'S	170°-44'W	"	8	1011.5	83	80	92	6	CU	065/2	90	7	065	" "	"
1100	03°-44'S	170°-44'W	"	8	1010.8	85	78	80	6	CU	065/2	90	7	065	" "	"
1200	03°-43'-48S	170°-45'-58W	CALM	10	1011.0	84	[illegible]	[illegible]	6	AC/CU	065/2	90	10	065	" "	"
1300	03°-43'S	170°-45'W	CALM	10	1015.0	84	79	84	5	CU	065/2	90	10	065	" "	"
1400	03°-43'S	170°-45'W	CALM	10	1014.5	84	81	92	5	AC/CU	065/2	90	10	065	" "	"
1500	03°-43'S	170°-45'W	CALM	10	1013.5	84	79	84	5	AC/CU	065/2	90	10	065	" "	"
1600	03°-43'S	170°-45'W	CALM	10	1008.1	84	79	84	5	CU	065/2	90	12	065	" "	"
1700	03°-43'S	170°-45'W	CALM	10	1008.1	84	79	84	6	CU	065/2	90	12	065	085/—	
1800	03°-43'S	170°-45'W	CALM	10	1009.1	84	79	84	6	CU	065/2	90	12	065	Lying OFF	PHOENIX
1900	03°-43'S	170°-45'W	CALM	8	1009.8	84	79	84	6	CU	065/2	90	12	065	" "	"
2000	03°-44'S	170°-43'W	CALM	10	1010.8	83	76	80	6	CU	065/2	90	10	065	" "	"
2100	03°-44'S	170°-43.1'W	CALM	10	1011.5	83	76	80	6	CU	065/2	90	10	065	" "	"
2200	03°-44'S	170°-43.1'W	CALM	10	1012.2	83	76	80	6	CU	065/2	90	10	065	" "	"
2300	03°-44'S	170°-43.2'W	CALM	10	1012.2	83	76	80	6	CU	065/2	90	10	065	" "	"
2400	03°-44'S	170°-43.2'W	"	10	1012.2	83	76	80	6	CU	065/2	90	10	065	" "	"

REMARKS:
ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

12-MNL-955

1006.0
9.0

9284
4
83

TIME	LAT	LONG	WIND	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	SKY	[illegible]	WIND S	WIND D	[illegible]	[illegible]	COURSE/SPD	
0100	03°-44	170°-42.2	Calm	8	1011.5	83	82	84	Cu	6	065/2	90	10	065		Lying off Phoenix
0200	03°-44	170°-42.2	"	8	1011.5	83	82	86	Cu	6	065/2	90	10	065		" "
0300	03°-44	170°-42.2	"	8	1011.5	83	82	85	Cu	6	065/2	90	10	065		" " "
0400	03°-44'S	170°-42.2W	CALM	8	1009.5	83	76	80	Cu	6	065/2	90	12	065	075/3	
0500	03°-44'S	170°-42.2W	CALM	8	1009.5	83	78	84	Cu	6	065/2	90	12	065		Lying off Phoenix
0600	03°-44'S	170°-42.2W	CALM	8	1009.5	83	78	84	Cu	6	065/2	90	12	065	075/3	
0700	03°-44'S	170°-42.2W	CALM	10	1010.2	83	78	84	Cu	6	065/2	90	12	065		Lying off Phoenix
0800	03°-44'S	170°-44'W	CALM	10	1016.5	84	77	80	AC/Cu	6	030/3	90	12	030		" " "
0900	03°-44'S	170°-44'W	CALM	10	1016.8	85	77	80	AC/Cu	6	030/3	90	12	065		" " "
1000	03°-44'S	170°-43W	CALM	10	1016.0	86	78	80	AC/Cu	6	060/3	90	14	065	078/	
1100	03°-44'S	170°-44'W	CALM	10	1016.2	85	78	80	AC/Cu	7	065/3	90	16	065		Lying to off Phoenix
1200	03-45S	170-43W	CALM	12	1009.5	85	78	80	Cu	7	070/3	90	15	065		" " " "
1300	03-44S	170-43.1W	CALM	12	1008.5	85	78	80	Cu	6	070/3	90	15	070		" " " "
1400	03-44S	170-43.1W	CALM	12	1007.8	85	78	80	Cu	6	070/3	90	15	070		" " " "
1500	03-43.3S	170-43.1W	CALM	12	1007.5	85	78	80	Cu	6	070/3	90	15	070		" " " "
1600	03-43.3S	170-43.1W	CALM	12	1007.5	84	78	80	Cu	6	070/3	90	15	020		" " " "
1700	03-43.5	170-43.1W	Calm	12	1007.5	84	78	80	Cu	6	070/3	90	15	020		" " " "
1800	03-43-	170-43	Calm	12	1007.5	84	78	80	Cu	6	070/3	90	15	020	070°/60 KPHS	
1900	03-43S	170-43	Calm	12		84	78	80	Cu	6	070/3	90	15	020		Lying to off Phoenix
2000	03°-43'S	170-43W	CALM	~~8~~ 12	1009.5	83	79	88	Cu	6	060/2	90	12	060		" " " "
2100	03°-43'S	170°-43W	CALM	8	1010.2	84	77	80	Cu	6	070/3	90	12	070		" " " "
2200	03°-43'S	170°-43W	CALM	8	1010.5	84	77	80	Cu	6	070/3	90	12	070		" " " "
2300	03°-43'S	170°-43W	CALM	8	1010.5	84	77	80	Cu	6	070/3	90	12	070		" " " "
2400	03°-43S	170-43W	CALM	10	1016.1	84	77	80	AC/Cu	6	070/2	90	12	060	070	124.7

REMARKS:
ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

S1-MNW-955
12-5-63

1007.1
9
1016.1

1007.5
9.6
1016

5800

27 FEB. 1964

0100	03°-43's	170°-45'W	CALM	10	1016.0	83	78	83	8	AC/CU	055/3	90	14	050	LYING TO OFF PHOENIX
0200	03°-43's	170°-44'W	CALM	10	1016.0	83	78	83	8	AC/CU	060/3	90	12	060	" " " "
0300	03°-43's	170°-45'W	CALM	10	1016.5	83	78	83	8	AC/CU	060/3	90	14	060	" " " "
0400	03°-43's	170°-45'W	"	10	1010.2	83	79	88	8	AC/CU	060/3	90	14	060	" " " "
0500	03°-43's	170°-45'W	"	10	1009.1	83	79	88	8	AC/CU	060/3	90	14	060	" " " "
0600	03°-43's	170°-45'W	"	10	1009.1	83	79	88	8	AC/CU	060/3	90	14	060	" " " "
0700	03°-43's	170°-45'W	"	10	1009.5	83	78	83	9	AC/CU	060/3	85	14	060	" " " "
0800	03-43's	170-45W	CALM	10	1010.8	83	78	83	9	CU	060/3	85	15	070	" " " "
0900	03-35's	170-45.5'W	CALM	10	1010.8	84	77	80	9	CU	060/3	85	15	070	330 / 11 KTS
1000	03-28's	170-55W	CALM	10	1010.8	84	77	80	9	CU	060/3	85	15	070	330 / 11
1100	03-10's	170-04'W	CALM	10	1010.2	84	77	80	9	CU	060/3	85	15	070	345 / 12
1200	03-9's	17-06W	CALM	10	1009.5	84	77	80	9	CU	060/3	85	15	070	350 / 2/3
1300	03-8's	17-06W	CALM	10	1009.5	84	77	80	9	CU	070/3	90	15	070	LYING TO OFF ENCLEWOOD ~~PHOENIX~~
1400	03-8's	17-06W	CALM	10	1008.8	84	77	80	8	CU	070/3	90	12	070	" " " "
1500	03-8's	17-06W	CALM	10	1008.1	84	77	80	8	CU	070/3	90	12	070	" " " "
1600	03°-8's	171°-06W	CALM	10	1007.5	83	79	88	8 ~~10~~	AC/CU	050/3	90	12	050	" " " "
1700	03°-8's	171°-06'W	CALM	10	1007.5	83	78	84	8 ~~10~~	AC/CU	070/3	90	12	070	" " " "
1800	03°-8's	171°-06'W	CALM	10	1007.5	83	78	84	8	AC/CU	070/3	90	12	070	" " " "
1900	03°-8's	171°-06W	CALM	8	1008.1	83	78	84	8	AC/CU	070/3	90	15	070	" " " "
2000	03°-8's	171°-06'W	"	8	1009.1	83	78	84	8	AC/CU	070/3	90	15	070	" " " "
2100	03°-8's	171°-06'W	"	8	1009.1	83	78	84	8	AC/CU	070/3	90	15	070	" " " "
2200	03°-8's	171°-06'W	"	8	1010.2	83	78	84	8	AC/CU	070/3	90	15	070	" " " "
2300	03°-8's	171°-06'W	"	8	1010.8	83	78	84	8	AC/CU	070/3	90	15	070	" " " "
2400	03°-8's	171°-06W	"	5	1009.5	83	78	84	8	AC/CU	070/3	90	12	070	" " " "

REMARKS:
ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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12-5-63

28 FEB, 64

0100	03°-08'S	171°-06'W	CALM	5	1010.2	83	78	84	ST/CU	8	070/3	90	12	070	Lying TO OFF ENDERBURY
0200	03°-08'S	171°-06'W	CALM	5	1009.5	83	78	84	ST/CU	8	070/3	90	14	070	" " " "
0300	03°-08'S	171°-06'W	CALM	5	1009.1	83	78	84	ST/CU	8	070/2	90	14	070	" " " "
0400	03-08S	171-06W	CALM	6	1008.8	81	77	87	CU	8	070/2	90	14	070	" " " "
0500	03-08S	171-06W	CALM	6	1008.5	81	77	87	CU	8	070/2	90	15	070	" " " "
0600	03-08S	171-06W	CALM	8	1008.8	82	77	84	CU	8	070/2	90	15	070	" " " "
0700	03-08S	171-06W	Calm	9	1008.8	82	78	84	CU	9	070/2	90	15	070	" " " "
0800	03-08S	171-06W	Calm	9	1010.1	84	79	84	CU	9	070/3	90	20	060	" " " "
0900	03-08S	171-06W	Calm	9	1010.1	84	79	84	CU	9	070/3	90	20	060	" " " "
1000	03-08S	171-06W	Calm	9	1010	84	79	84	CU	9	070/4	90	20	060	" " " "
1100	03-08S	171-06W	Calm	9	1010	84	79	84	CU	9	070/4	90	20	060	" " " "
1200	03-08S	171-06W	CALM	10	1009.8	84	79	84	CU	8	060/3	90	20	060	340/— "
1300	03°-08'S	171°-06'W	CALM	10	1008.8	86	79	81	CU	7	060/3	90	15	060	130/—
1400	03°-08'S	171°-06'W	CALM	10	1008.5	85	78	81	CU	7	060/3	90	15	060	350/—
1500	03°-08'S	171°-06'W	CALM	10	1007.8	84	79	84	CU	7	060/3	90	15	060	Lying TO Enderbury
1600	03°-08'S	171°-06'W	CALM	10	1008.5	84	79	84	CU	7	060/3	90	12	060	" " "
1700	03°-08'S	171°-06'W	"	10		84	79	84	CU	7	060/3	90	12	060	" " "
1800	03°-08'S	171°-06'W	"	10		84	79	84	CU	7	060/3	90	12	060	" " "
1900	03°-08'S	171°-06'W	"	10		84	79	84	CU	7	060/3	90	12	060	" " "
2000	03°-08'S	171°-06'W	"	5	1008.5	84	78	84	CU	7	060/3	90	12	060	" " "
2100	03°-08'S	171°-06'W	HIGH wind	5	1009.8	84	78	84	CU/ST	8	040/5	90	15	040	075/3
2200	03°-08'S	171°-06'W	" "	5	1010.2	84	78	84	CU/ST	8	040/5	90	15	040	075/3
2300	03°-08'S	171°-06'W	" "	5	1010.5	84	78	84	CU/ST	8	040/5	90	15	040	030/3
2400	03-08	171-06	WINDY	5	1010.5	84	78	84	CU	8	040/5	90	15	040	230/3

REMARKS:
ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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12-5-63

29 FEB. 1964

0100	03-08S	171-06W	WINDY	6	1009.5	84	78	84	CU	7	040/5	88	15	040	060/3
0200	03-08S	171-06W	WINDY	6	1008.8	84	78	84	CU	6	040/5	88	15	040	060/3
0300	03-08S	171-06W	MODERATE	7	1008.8	83	80	88	CU	6	040/5	88	15	040	065/3
0400	03-08S	171-06W	Moderate	7	1008.8	83	79	88	cu	6	040/5	88	15	040	180/1
0500	03-08S	171-06W	Moderate	8	1008.8	83	79	88	cu	6	040/5	88	15	040	180/1
0600	03-08S	171-06W	Moderate	9	1008.8	83	79	88	cu	5	050/4	88	15	050	000/1
0700	03-08S	171-06W	Moderate	10	1008.8	83	79	88	cu	5	050/4	88	15	050	030/1
0800	03-08S	171-06W	MODERATE	10	1010.5	84	75	73	CU	6	090/5	88	15	095	180/2
0900	03-08S	171-06W	MODERATE	10	1010.8	85	75	73	CU	6	090/5	88	15	095	180/2
1000	03°-08'S	171-06W	MODERATE	10	1010.8	85	75	73	cu	6	090/5	88	15	095	015/2
1100	03°-08'S	171-06W	MODERATE	10	1010.5	85	75	73	Cu	6	085/5	88	15	085	170/2
1200	03°-08'S	171°-06W	"	10	1010.5	87	75	73	cu	6	085/5	88	15	085	125/4
1300	03°08'S	171°-06W	"	10	1010.8	87	75	73	cu	6	085/5	88	15	085	350/3.5
1400	03°-08'S	171°-09'W	"	10	1014.1	84	73	69	cu	3	085/4	88	18	085	020/2.5
1500	03°-08'S	171°-09'W	"	10	1013.8	85	73	69	cu	3	085/4	88	20	085	010/2
1600	03°-08'S	171°-09'W	"	10	1007.8	84	79	84	cu	3	085/4	88	18	085	Drifting off Enderbury
1700	03°-08'S	171°-09'W	"	10	1007.8	84	81	92	cu	3	085/4	88	18	085	070/2.4
1800	03°-08'S	171°-09'W	"	10	1013.8	84	81	92	cu	3	085/4	88	18	085	355/2.5
1900	03°-08'S	171°-09'W	"	10	1013.8	84	81	88	cu	3	085/4	88	18	085	020/2.5
2000	03°-08'S	171°-08W	"	8	1013.8	84	81	88	CU	3	085/4	88	18	085	310/3
2100	03°-08'S	171°-11W	"	8	1008.8	83	75	81	Ac-cu	4	100/4	90	15	100	100/3
2200	03-08	171-11W	"	8	1009.5	83	75	81	Ac-cu	4	100/4	90	15	100	120/3
2300	03-08	171-11W	"	8	1009.5	83	75	81	cu	4	100/4	90	15	100	050/3
2400	03-08	171-11W	"	8	1009.5	83	76	81	cu	4	100/4	90	15	100	180/3

REMARKS:

ALL TIMES LOCAL (~~WHISKEY~~ XRAY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

S1-INW-955
12-5-63

1 MARCH 1964

0100	03-08S	171-06W	moderate	8	1008.5	83	76	83	cu	5	100/2	90	100/15	c-030/1	
0200	03-08S	171-06W	mod	8	1008.1	83	76	83	cu	5	100/2	90	100/15	c-150/1	
0300	03-08S	171-06W	mod	8	1008.1	83	76	83	cu	5	100/2		100/15	c-050/1	
0400	03°-08'S	171-06W	moderate	8	1008.1	83	73	73	cu	5	100/3	90	100/15	060/1	
0500	03°-08'S	171-06'W	moderate	8	1008.1	83	75	76	cu	5	100/3	90	100/15	000/1	
0600	03°-08S	171-06'W	"	8	1008.8	83	75	76	cu	5	100/3	90	100/15	090/1	
0700	03°-08'S	171-06'W	"	10	1010.2	83	75	76	cu	5	100/3	90	100/15	000/1	
0800	03°-08'-15"S	171-06'-08"	MODERATE	10	1015.8	85	75	76	cu	4	090/4	90	18 / 090	150/ 1.0	
0900	03°-08'S	171-06'W	"	10	1016.2	85	75	76	Ac/cu	4	090/4	90	18 / 090	170/ 1.2	
1000	03°-08'S	171-06'W	"	10	1016.5	86	76	77	Ac/cu	4	090/4	90	18 / 090	140/ 4.0	
1100	03°-08'S	171-06'W	"	10	1016.8	86	76	77	Ac/cu	4	090/4	90	18 / 090	015/ 4.0	
1200	03°-08'S	171°-06'W	"	10	1009.1	84	77	80	Ac/cu	4	090/4	90	18 / 090	330/ 2.7	
1300	03°-08'S	171°-06'W	"	10	1008.8	84	77	80	Ac/cu	4	090/4	90	18 / 090	Drift Tins off Enderbury	
1400	03°-08'S	171°-06'W	"	10	1007.8	84	77	80	Ac/cu	3	090/4	90	18 / 090	020/ 2.7	
1500	03°-08'S	171°-06'W	"	10	1006.8	84	77	80	Ac/cu	3	090/4	90	18 / 090	Drift Tin off Enderbury	
1600	03-08S	171-06W	"	10	1006.4	84	77	80	cu	6	090/4	90	15 / 090	"	
1700	03-08S	171-06W	"	10	1006.8	84	77	80	cu	6	090/4	90	15 / 090	350/2	
1800	03-08S	171-06W	"	10	1006.8	84	77	80	cu	6	090/4	90	15 / 090	350/1	
1900	03-08S	171-06W	"	10	1007.5	84	77	80	cu	6	090/4	90	15 / 090	310/2	
2000	03-08S	171 06W	"	9	1007.5	83	78	80	cu	6	090/4	90	15 / 090	030/1	
2100	03-08S	171-06W	"	8	1008.1	83	78	80	cu	6	090/4	90	15 / 090	030/1	
2200	03-08S	171-06W	"	8	1008.8	83	78	80	cu	6	090/4	90	15 / 090	030/1	
2300	03-08S	171-06W	"	8	1008.8	83	78	80	cu	6	090/4	90	15 / 090	020/1	
2400	03-08S	171-06W	"	8	1009.1	83	76	80	cu	5	090/4	90	15 / 090	210/1	

REMARKS:

ALL TIMES LOCAL (~~WHISKEY~~ XRAY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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12-5-63

1006.8
to
1009.8

2 MARCH 64

TIME	LAT	LONG	WIND DIR	WIND SPEED	SEA LEVEL PRESSURE	DRY BULB	WET BULB	DEW POINT	CLOUDS	VIS	WAVES	PERIOD	HEIGHT	SWELL	PERIOD	HEIGHT	REMARKS
0100	03°-08'S	171°-06'W	moderate	8	1008.5	83	75	76	cu	5	090/4	89	15	090	020/1		
0200	03°-08'S	171°-06'W	"	8	1008.1	83	75	76	cu	5	090/4	89	15	090	150/1		
0300	03°-08'S	171°-06'W	"	8	1008.1	83	75	76	cu	5	090/4	89	15	090	000/1		
0400	03°-08'S	171°-06'W	MODERATE	8	1013.8	82	75	80	cu	4	090/4	89	17	090	180/2		
0500	03°-08'S	171°-06'W	"	8	1013.8	82	75	80	cu	4	090/4	80	17	095	010/2.4		
0600	03°-08'S	171°-06'W	"	8	1013.8	82	75	80	sc/cu	4	090/4	90	17	090	180/2.5		
0700	03°-08'S	171°-06'W	"	8	1014.5	83	76	82	sc/cu	4	090/4	90	17	090	LYING TO OFF ENDERBURY ISLS.		
0800	03°-08'S	171°-06'W	"	10	1014.5	84	76	82	cu	4	090/4	90	17	085	305/		
0900	03°-20'S	171°-25'W	"	10	1014.8	84	76	82	cu	4	040/4	90	17	040	305/13.0		
1000	03°-45'S	171°-38'W	"	10	1015.1	84	77	82	cu	4	040/3	90	17	040	290/13.0		
1100	03°-50'S	171°-45'W	"	10	1015.5	84	79	84	cu	4	145/4	90	15	145	LYING TO OFF CANTON ISL.		
1200	02°-52'S	171-49'W	"	10	1008.8	84	79	84	cu	4	145/4	90	15	145	165/2		
1300	02°-51.5'S	171-44.7W	"	12	1008.1	84	77	80	cu	4	090/4	90	12	070	350/2		
1400	02-50.5'S	171-44'W	"	12	1007.1	84	77	80	cu	4	090/4	90	12	070	340/2		
1500	02-50'S	171-44W	"	12	1007.1	84	77	80	cu	4	090/4	90	12	070	LYING TO OFF CANTON ISL.		
1600	02-60'S	171-44W	"	12	1007.1	84	77	80	cu	4	090/4	90	12	070	"		"
1700	02°-50'S	171-44W	"	12	1008.1	84	77	80	cu	4	090/4	90	12	070	"		"
1800	02-05'S	171-44W	"	12	1008.1	84	77	80	cu	4	090/4	90	12	070	"		"
1900	02-05'S	171-44W	"	12	1007.5	84	77	80	cu	4	090/4	90	12	070	"		"
2000	02°50'S	171°-44'W	"	8	1008.5	82	78	88	cu	4	090/3	90	12	090			
2100	02°-50'S	171°-44W	"	8	1008.8	82	78	88	cu	4	090/3	90	12	090	"		"
2200	02°-50'S	171°-44W	"	8	1008.8	82	78	88	cu	4	090/3	90	12	090	"		"
2300	02°-50'S	171°-44W	"	8	1009.1	82	77	84	cu	4	090/3	90	12	090	"		"
2400	02-50'S	171°-44W	"	8	1008.8	82	77	84	sc/cu	5	110/2.5	90	14	110	170/3.9		

REMARKS:
ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SJ-INW-955
12-9-63

3 MARCH, 1964

0100	02°-48's	171°-45'W	MODERATE	8	1008.5	82	77	84	7	SC/CU	110/3	90	14	110	350/4.3
0200	02°-48's	171°-45'W	RAIN	8	1007.8	80	76	87	8	SC/CB	110/3	90	12	110	350/4.0
0300	02°-48's	171°-45'W	MODERATE	8	1007.5	80	76	87	8	SC/CB	110/3	90	12	110	160/4.2
0400	02°-48's	171°-45'W	"	8	1007.1	82	80	88	8	SC/CB	110/3	90	12	110	350/4.4
0500	02°-48's	171°-45'W	"	8	1007.5	82	80	88	8	SC/CB	110/3	90	12	110	350/4.1
0600	02°-48's	171°-45'W	"	8	1008.1	82	80	88	8	SC/CB	110/3	90	12	110	170/4.3
0700	02°-48's	171°-45'W	"	8	1008.1	82	80	88	8	SC/CU	110/3	90	12	110	350/4.5
0800	02-46.4's	171-45.3'W	"	10	1009.1	83	78	84	7	CU	110/3	90	12	110	150/3
0900	02-49.1's	171-43.8'W	"	10	1009.1	83	78	84	7	CU	110/3	90	12	110	150/3
1000	02-47.1's	171-44.2'W	"	10	1009.5	84	79	84	7	CU	110/3	90	12	110	150/3
1100	02-46.5's	171-45.3W	"	10	1008.8	84	79	84	7	CU	110/3	90	12	110	150/3
1200	02°-46.5's	171°-45.3W	"	10	1008.8	84	79	84	7	CU	110/3	90	12	110	340/3
1300	02°-46.5's	171°-45.3W	"	10	1008.1	84	79	84	7	CU	110/3	90	12	110	170/3
1400	02°-46.8's	171°-45.3W	"	10	1006.1	84	79	84	7	CU	110/3	90	12	110	148/3.2
1500	03°-06's	171°-34'W	"	10	1006.1	84	79	84	7	CU	055/3	90	12	055	055/3
1600	03°-16's	171°-27'W	"	10	1006.1	88	81	81	7	CU	055/3	90	12	055	146/14
1700	03-26.5'W	171°-20'W	"	10	1006.1	89	83	81	7	CU	055/3	8690	12	055	146/14
1800	03°-40's	171-15'W	"	10	1006.1	87	80	81	7	CU	055/3	8690	12	055	146/14
1900	03°-47's	171°-07'W	"	8	1006.8	86	79	81	7	CU	055/3	86	12	055	146/14
2000	04°-04's	171°-09'W	MODERATE	7	1007.5	86	79	81	4	SC	120/4	86	16	120	146/13.6
2100	04°-05's	171°-11'W	"	6	1008.1	86	79	81	4	SC	120/4	86	14	120	146/13.2
2200	04°-38's	170°-48'W	"	6	1008.1	86	79	81	4	SC	105/4	86	16	105	146/13.7
2300	04°-36's	170°-45'W	"	6	1008.1	86	79	81	4	SC	105/5	90	16	105	146/13.5
2400	04°-37's	170-35'W	"	6	1007.5	86	79	81	4	SC	105/5	90	16	105	146/13.

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

S1-MNW-955
12-5-63

4 March 1964

0100	04°-58'S	170°-32'W	Moderate	8	1007.5	85	80	84	SC	4	105/3	86	16	105	180/13
0200	05°-12'S	170°-30'W	"	8	1006.8	85	80	84	SC	4	105/3	86	16	105	180/13
0300	05°-21'S	170°-30'W	"	8	1006.8	85	80	84	SC	4	105/3	86	16	105	180/13
0400	05°-31'S	170°-30'W	"	8	1006.8	85	80	84	CU	4	105/3	86	15	100	180/13
0500	05°-50'S	170°-30'W	"	8	1007.5	85	80	84	CU	5	105/3	86	15	110	180/13
0600	06°-00'S	170°-30'W	"	8	1007.8	85	80	84	CU	5	110/3	86	15	120	180/13
0700	06°-13'S	170°-30'W	"	8	1008.1	85	80	84	CU	5	110/3	86	15	120	180/13
0800			CALM	10	1008.8	86	81	84	CU	4	110/3	86	12	120	175/12
0900	06°-39'S	170°-42'W	"	10	1009.1	89	82	81	CU	4	110/3	86	12	120	175/12
1000	06°-50'S	170°-42'W	"	10	1009.5	89	82	81	CU	4	110/3	86	12	120	175/12
1100	07°-03'S	170°-42'W	"	10	1009.5	89	82	81	CU	4	110/3	86	12	120	175/12
1200	07°-15'S	170-40'W	"	10	1008.5	89	85	88	CU	4	105/3	86	12	105	175/12
1300	07°-41'S	170°-40'W	"	10	1007.5	89	84	85	CU	5	105/3	86	12	105	175/12
1400	07°-37'S	170°-36'W	"	10	1006.8	90	85	85	CU	5	105/3	86	12	105	175/12
1500	07°-48'S	170°-29'W	"	10	1006.4	90	85	85	CU	5	105/3	86	12	105	175/12
1600	08°-00'S	170-32'W	MODERATE	10	1006.4	88	81	81	AS/CU	8	100/4	86	14	100	175/12
1700	08°-08'S	170-28'W	"	10	1006.4	87	82	85	AC/CU	8	100/4	86	14	100	175/12
1800	08°-06'S	170°-19'W	"	10	1006.8	86	82	85	AS/SC	8	100/4	86	14	100	175/12
1900	08°-05'S	170°-05'W	"	10	1007.5	85	82	85	AC/CU	8	100/4	86	14	100	175/12
2000	08°-45'S	170°-41'W	"	10	1008.1	86	82	88	AC/CU	8	100/4	86	14	100	175/12
2100	08°-56'S	170°-38'W	"	8	1008.8	86	82	88	AC/CU	8	100/4	86	14	100	170/12
2200	09°-07'S	170°-37'W	"	8	1008.8	86	82	88	AC/CU	8	100/4	86	14	100	170/12
2300	09°-19'S	170°-35'W	"	8	1008.8	86	82	88	AC/CU	8	100/4	86	14	100	170/12
2400	09-30S	170-32W	"	8	1008.8	86	82	88	ST	8	100/4	86	14	100	170/12

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

5 MARCH 1964

													D	S	
0100	09°-31'S	170°-31'W	CALM	6	1008.8	86	82	88	CU	9	100/4	87	100	12	170°/11 KTS.
0200	09°-53'S	170°-28'W	MODERATE	5	1007.5	86	82	88	CU	9	100/4	87	100	12	170°/11 KTS.
0300	10°-04'S	170°-27'W	MODERATE	6	1007.1	85	80	84	CU	9	100/4	86	100	12	170°/11 KTS.
0400	10°-15'S	170°-24.5'W	"	5	1007.1	85	80	84	CU	9	100/4	86	100	12	170°/11 KTS
0500	10°-25'S	170°-23'W	"	5	1007.8	85	80	84	CU	9	100/4	86	100	12	170°/11 KTS
0600	10°-29'S	170°-16'W	"	5	1008.1	85	80	84	CU	8	100/3	80	100	8	170°/11 KTS
0700	10°-35'S	170°-12'W	"	10	1008.4	85	80	84	CU	8	100/3	82	100	8	170°/11 KTS
0800	10°-50.5'S	170°-12.0'W	"	10	1009.5	88	80	77	CU	7	100/3	86	100	10	180/11 KTS
0900	11°-11'S	170°-27'W	"	10	1009.8	89	81	77	CU	7	090/3	86	090	10	180/11 KTS
1000	11°-13'S	170°-12'W	"	10	1009.8	89	82	81	CU	7	095/3	86	095	10	180/11 KTS
1100	11°-23'S	170°-11'W	"	10	1009.8	89	82	81	CU	7	095/3	86	095	10	180/11 KTS
1200	11°-36'S	170°-12'W	SQUALLS	10	1009.1	87	84	84	AS/CB	8	120/3	86	120	14	180/11.4
1300	11°-39'S	170°-13'W	SQUALLS	10	1008.8	87	84	84	AS/CB	8	120/3	86	120	14	180/11.4
1400	11°-46'S	170°-13'W	MODERATE	10	1008.5	86	84	84	AS/CB	7	120/3	86	120	14	187/11.2
1500	12°-10'S	170°-14'W	"	10	1008.1	89	82	81	AC/CB	6	120/3	86	120	14	187/11.3
1600	12°-20'	170-17	"	10	1008.1	90	82	78	AC/CB	6	120/3	86	120	14	187/11
1700	12°-30'	170-19	"	10	1008.5	90	82	78	AC/CB	6	120/3	86	120	14	187/11
1800	12°-41'	170-20	"	10	1008.8	88	83	85	AC/CB	6	120/3	86	120	14	187/11
1900	12°-54'	170-21	"	10	1010.2	86	82	88	AC/CB	6	120/3	86	120	14	187/11
2000	13°-13'S	170°-23'W	"	10	1010.4	86	82	88	CU	6	120/3	87	120	12	187/12
2100	13°-24'S	170°-24'W	"	10	1010.4	86	82	88	CU	6	120/2	87	120	12	187/12
2200	13°-36'S	170°-26'W	CALM	10	1010.5	85	80	84	CU	6	120/2	87	120	10	187/12
2300	13°-49'S	170°-29'W	CALM	8	1010.5	85	80	84	CU	6	120/2	87	120	10	187/13
2400	13°-49'S	170°-29'W	CALM	5	1010.8	85	80	84	CU	6	120/2	87	120	10	187/13

REMARKS:
ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

S1-LNW-955
12-2-63

1964 B 01870

6 MARCH 64

TIME	LAT	LONG	WIND DIR	WS	AT	DP	WET BULB	SEA LEVEL PR	SKY	VIS	WAVES	WAVE HT	WIND DIR	WIND SPD	WAVE PERIOD
0100	14°-20'S	170° 34	CALM	5	1009.8	85	80	84	Cu	6	120/2	87	10	120	180°/11
0200	14°-22'S	170° 37	CALM	5	1009.8	85	80	84	Cu	6	120/2	87	10	120	280/7
0300	14°-22'S	170°-35'W	"	5	1009.5	85	80	84	Cu	6	120/2	87	10	120	280/7
0400	14°-22'S	170°-35'W	CALM	5	1009.1	85	80	84	Cu	6	120/2	87	8	120	270/7
0500	14°-22'S	170-35'W	CALM	5	1009.5	85	80	84	Cu	6	120/2	87	10	120	090/7
0600	14°-22'S	170-35'W	CALM	7	1009.5	85	80	84	Cu	6	120/2	87	11	120	270/7
0700	14°-22'S	170°-36'W	CALM	10	1010.2	86	79	81	Cu	6	070/2	87	10	070	090/
0800	14°-22'S	170°-36'W	"	10	1010.6	81	79	80	Cu	6	060/2	87	12	060	040/

REMARKS:
ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

S1-MNM-955
12-5-63

10 MARCH-64

1000	14°-30'S	170°-28'W	CALM	10	1012.9	85	85	81	4	CU	045/1	87	10	045	038/	11.4
1100	14°-18'S	170°-30'W	CALM	10	1012.5	83	83	85	4	CB	040/1	87	12	040	038/	12
1200	14°-08'S	170-30'W	"	10	1012.2	85	77	76	5	CB	040/2	87	12	040	038/	13
1300	13°-46'S	170°-06'W	"	10	1011.9	85	80	80	5	CB	040/3	87	12	040	038/	13
1400	13°-36'S	169°-58'W	"	10	1010.5	87	80	81	5	CB	040/3	87	12	040	038/	13
1500	13-26'S	169°-50'W	"	10	1010.5	87	82	84	6	CB	040/3	87	12	040	038/	13
1600	13-40'S	169-38'W	CALM	12	1010.8	90	84	81	4	CU	040/3	87	10	040	038/	13
1700	13-30'S	169-22 W	CALM	12	1010.8	90	84	81	4	CU	040/3	87	10	040	038/	13
1800	13-20S	169-08 W	CALM	10	1010.8	90	84	81	4	CU	040/3	87	10	040	038/	13
1900	13-12 S	168-50 W	CALM	10	1011.5	88	84	80	5	CU	040/2	87	10	040	038/	13
2000	12°-35'S	169°-04'W	CALM	5	1011.5	88	84	80	8	CU	040/2	87	10	040	038/	13
2100	12°-25'S	168°-55'W	CALM	5	1012.9	88	84	80	8	CU	040/2	87	10	040	038/	13
2200	12°-15'S	168°47'W	CALM	5		88	84	80	8	CU	040/2	87	10	040	038/	13
2300	12°-05'S	168°-39'W	CALM	5		88	84	80	8	CU	040/2	86	10	040	038/	13
2400	11-54'S	168°31'W	CALM	5	1013.5	84	79	84	8	CU	040/1	87	10	040	038/	13

REMARKS:
ALL TIMES LOCAL (~~WHISKEY~~ XRAY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

S1-MNM-955
12-5-63

79444

11 MAR 64

0100	11°-43'S	168°-23'W	CALM	5	1013.2	82	77	84	5	Cu	040/1	87	10	040	DRIFTING AT SEA
0200	11°-33'S	168°-15'W	CALM	5	1012.9	82	77	84	5	Cu	040/1	87	10	040	" " "
0300	11°-13'S	168°-07'W	CALM	5	1011.9	82	77	84	5	Cu	040/1	87	10	040	038/13
0400	11°-13'S	167°-58'W	CALM	5	1011.5	84	77	80	4	Sc	045/2	87	12	040	038/13
0500	11°-03'S	167°-50'W	CALM	5	1012.2	82	72	80	5	Sc/Cb	045/2	87	12	045	038/13
0600	10°-54'S	167-40'W	CALM	8	1012.5	82	72	80	8	Ac/Cu	045/1	87	12	045	038/13
0700	10°-54'S	167-35'W	MODERATE	10	1013.5	82	72	80	8	Ac/Cu	045/2	87	14	045	038/13
0800	10°-47'S	167°-38'W	"	10	1014.2	88	76	67	8	Ac/Cu	045/2	87	14	045	038/13
0900	10°-36'S	167°-30'W	"	10	1015.2	78	74	87	9	Ac/Cu	045/2	87	10	045	038/13
1000	10°-26'S	167°-22'W	"	10	1014.9	83	75	76	9	Ac/Cu	045/2	87	12	045	038/13
1100	10°-16'S	167°-14'W	"	10	1013.5	84	76	76	9	Ac/Cu	045/2	87	12	045	038/13
1200	10-03'S	167-10W'	CALM	10	1012.9	84	76	76	8	ST	045/2	87	10	045	038/13
1300	10-13'S	167-02W'	CALM	10	1011.9	87	83	88	8	ST	045/2	87	10	045	036/13
1400	10-03'S	166-54W'	CALM	10	1011.2	87	83	88	8	ST	045/2	87	10	045	036/13
1500	09-51'S	166-47W	CALM	10	1011.2	89	82	81	8	ST	040/2	87	10	040	036/13
1600	09°-40.5'S	166°-39.3'W	CALM	10	1010.5	89	82	81	8	ST	040/2	87	10	040	036/13
1700	09°-30'S	166°-31'W	CALM	10	1010.1	89	82	81	8	ST	040/2	87	10	040	036/13
1800	09°-19.5'S	166°-22.5'W	CALM	10	1011.2	85	78	88	8	ST	040/2	87	10	040	036/13
1900	09°-09.5'S	166°-15'W	CALM	5	1012.2	85	78	88	8	ST	040/2	87	10	040	036/13
2000	09°-02'S	165°-55.5'W	CALM	5	1012.9	85	80	84	8	ST	040/2	87	10	040	026/13
2100	08°-49.5'S	165°-49.5'W	CALM	5	1012.9	85	80	84	8	ST	040/2	87	10	040	026/13
2200	08°-38'S	165°-43.5'W	CALM	5	1013.2	84	79	84	8	ST	040/2	87	10	040	026/13
2300	08°-26'S	165°-38'W	CALM	5	1013.2	84	79	84	8	ST	040/2	87	10	040	026/13
2400	08°-18'S	165°-31'W	MODERATE	5	1012.5	84	79	84	8	ST/Sc	040/2	87	12	040	026/13

REMARKS:
ALL TIMES LOCAL (~~WHISKEY~~ XRAY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNL-955
12-7-63

12 MARCH 1964

0100	08°-00'S	165°-26'W	MODERATE	5	1011.9	84	79	84	8	ST/SC	045/2	87	12	040	026/13
0200	07°-49'S	165°-19'W	"	5	1011.5	84	79	84	8	ST/SC	045/2	87	12	040	026/13
0300	07°-37'S	165°-14'W	"	5	1011.2	84	79	84	7	ST/SC	045/2	87	12	040	026/13
0400	07°-26'S	165°-08'W	"	5	1011.5	84	77	80	6	ST/SC	045/3	87	14	040	026/13
0500	07°-13'S	165°-02'W	"	5	1011.9	84	77	80	6	ST/SC	045/3	87	14	040	026/13
0600	07°-01'S	164°-56'W	"	8	1012.2	83	78	84	8	ST/SC	045/5	87	14	040	026/13
0700	06-59'S	164-53'W	"	10	1012.5	84	77	80	8	ST/CU	045/3	87	14	040	026/13
0800	06-55'S	164-53'W	MODERATE	10	1013.2	85	75	83	7	CU	045/3	87	14	050	034/12.5
0900	06-44'S	164-46W	MODERATE	10	1013.2	85	75	83	7	CU	045/3	87	14	050	034/12.5
1000	06-33'S	164-39W	MODERATE	10	1013.2	85	75	83	7	CU	045/3	87	14	050	034/12.5
1100	06-21'S	164-31W	MODERATE	10	1012.5	86	81	84	7	CU	045/3	87	14	050	034/13
1200	06-04'S	164°-19'W	"	10	1011.5	88	80	77	7	CU	045/3	87	14	050	034/13
1300	05-50'S	164°-11'W	"	10	1010.5	88	80	77	7	CU	045/3	87	14	050	036/13
1400	05-41.5'S	164°-03'W	"	10	1009.5	88	80	77	7	CU	045/3	87	14	050	036/13
1500	05°-31'S	163°-54'W	"	10	1009.1	88	80	77	7	CU	045/3	87	14	050	036/13
1600	05°-21.5'S	163°-47'W	"	10	1009.1	88	81	88	7	CU	045/4	87	14	050	036/13
1700	05°-09'S	163°-39.5'W	"	10	1009.1	87	82	84	7	CU	045/3	87	14	050	036/13
1800	04°-59'S	163°-32'W	"	10	1009.1	84	79	84	7	CU	045/3	87	14	050	036/13
1900	04°-48'S	163°-23.5'W	"	8	1009.5	83	78	84	7	CU	045/3	87	14	050	036/13
2000	04°-26'S	163°-16'W	"	7	1010.5	83	76	80	4	CU	045/3	87	14	045	037/13
2100	04°-29'S	163°-08'W	"	7	1010.8	83	76	80	5	SC	045/3	87	14	045	037/13
2200	04°-16'S	163°-00'W	"	7	1010.8	83	76	80	6	SC/CU	050/3	87	14	045	037/13
2300	04°-06'S	162°-58'W	"	7	1010.8	83	76	80	7	SC/AC	050/3	87	14	050	037/13
2400	03°-53'S	162°-45'	"	7	1010.8	83	76	80	7	SC/AC	050/3	87	14	050	037/13

REMARKS:
ALL TIMES LOCAL (~~WHISKEY~~ XRAY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955
12-5-63

13 March.

0100	03-44'S	162-36'W	Moderate	5	1009.8	83	76	80	6	Ac/cu	050/3	87	14	050	037/13
0200	03-34'S	162-29'W	"	5	1009.5	83	76	80	6	Ac/cu	050/3	87	14	050	037/13
0300	03-23'S	162-21'W	"	5	1009.5	83	76	80	6	Ac/cu	050/3	87	14	050	037/13
0400	03-12'S	162-13'W	MODERATE	5	1009.5	83	76	80	6	Cu	050/3	87	14	050	037/13
0500	03-00'S	162-06'W	"	5	1009.8	83	76	80	5	Cu	050/3	87	14	050	037/13
0600	02-51'S	161-57'W	"	10	1010.5	82	77	84	7	Cu	050/3	87	14	050	037/13
0700	02-42'S	161-47'W	"	10	1011.5	82	77	84	7	Cu	050/3	87	14	050	037/13
0800	02°-30'S	162°-16'W	"	10	1011.9	83	76	80	7	Cu	050/3	87	14	050	047/13
0900	02°-16'S	162°-06.5'W	"	10	1012.2	85	77	76	7	Cu	050/3	87	14	050	047/13
1000	02°-13'S	161°-56.5'W	"	10	1011.9	85	77	76	7	Cu	050/3	87	14	050	047/13
1100	02°-03'S	161°-47'W	"	10	1011.2	85	77	76	7	Cu	050/3	87	14	050	047/13
1200	01°-55'S	161°-37'W	"	10	1010.5	85	71	62	7	Cu	050/3	87	14	050	047/13
1300	01°-47'S	161°-26.5'W	"	10	1009.5	85	71	62	7	Cu	050/3	87	14	050	047/13
1400	01°-39'S	161°-16.5'W	"	10	1008.5	87	72	60	6	Cu	050/3	87	14	050	047/13
1500	01°-30'S	161°-07.5'W	"	10	1008.1	87	72	60	6	Cu	050/3	87	14	050	047/13
1600	01°-20'S	160°-58'W	"	10	1008.5	85	71	63	4	Cu	050/3	87	14	050	047/13
1700	01°-19'S	160°-48'W	"	10	1008.5	85	71	63	4	Cu	050/3	87	14	050	047/13
1800	01°-19'S	160°-46'W	"	10	1009.5	84	71	63	5	Cu	050/3	87	14	050	047/13
1900	00°-54'S	160°-38'W	"	8	1010.2	84	71	63	7	Sc	050/3	87	14	050	065/13
2000	00-46'S	160-42'W	"	8	1010.2	81	78	91	7	Sc	050/3	87	14	050	065/13
2100	00-42'S	160-30'W	"	8	1011.2	81	77	88	7	Sc	050/3	87	14	050	065/13
2200	00-37'S	160-18'W	"	8	1011.5	81	77	88	7	Sc	050/3	87	14	050	065/13
2300	00-25'S	160-05'W	"	8	1011.5	80	74	83	7	Sc	050/3	87	14	050	065/13
2400	00-26'S	160-03'W	"	8	1010.8	80	74	83	7	St	050/3	87	14	050	000/13

REMARKS:

ALL TIMES LOCAL (~~WHISKEY~~ XRAY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNL-955
12-5-83

14 MARCH 1964

0100	00-22'S	160-02'W	CALM	6	1010.5	80	74	83	CU	7	050	87	050	14	020/2		
0200	00-22S	160-02W	CALM	6	1010.2	80	74	83	CU	5	050	87	14	050	160/3	8'	
0300	00-22S	160-02W	CALM	6	1010.2	80	74	83	CU	5	050	87	14	050	175/5	24	
0400	00-22'S	160-02'W	CALM	6	1010.2	80	74	83	CU	5	050	87	14	050	020/5	7	
0500	00°-22'S	160°-02'W	CALM	6	1010.2	80	74	83	CU	5	050	87	12	050	030/5		
0600	00°-22'S	160°-02'W	CALM	7	1010.2	80	74	84	AC	3	050	87	12	050	050/5		
0700	00°-23'S	160°-04'W	CALM	8	1012.2	81	74	84	AC-CU	3	050	87	14	050	230/7		
0800	00°-23'S	160°-02'W	CALM	10	1012.9	81	71	72	AC-CU	5	090/3	87	12	090	DRIFTING OFF JARVIS		
0900	00°-23'S	160°-02'W	CALM	10	1013.2	84	~~72~~ 70	62	AC-CU	5	090/3	87	12	090	"	"	"
1000	00°-23'S	160°-02'W	CALM	10	1012.9	84	70	62	AC-CU	5	100/3	87	10	100	"	"	".
1100	00°-23'S	160°-04'W	CALM	10	1010.5	84	70	62	AC-CU	6	100/2	87	10	100	DRIFTING OFF JARVIS IS.		
1200	00°-22'S	160°-01'W	CALM	10	1011.5	84	70	62	AC/CU	5	075/2	87	10	075	"	"	" "
1300	00°-22'S	160°-02'W	CALM	10	1010.2	81	71	72	CU	6	080/2	87	12	080	080/7.5		
1400	00°-22'S	160°-04'W	CALM	10	1009.9	82	74	76	CU	4	080/2	87	12	080	080/7.5		
1500	00°-22'S	160°-05'W	CALM	10	1009.1	82	74	76	CU	4	080/2	87	10	080	083/7.5		
1600	00°-22'S	160°-05'W	"	10	1008.1	81	68	61	CU	5	080/2	87	10	080	Drifting off Jarvis is		
1700	00°-22'S	160°-05'W	"	10	1006.8	81	68	61	CU	5	080/2	87	10	080	180/3		
1800	00°-22'S	160°-05'W	"	10	1010.8	81	71	72	CU	5	080/2	87	10	080	060/4		
1900	00°-22'S	160°-05'W	"	10	1011.5	81	71	72	CU	5	080/2	87	10	080	180/4		
2000	00-22'S	160-04'W	CALM	8	1011.5	81	71	72	CU	6	080/2	87	10	080	080/3		
2100	00-22'S	160-04'W	CALM	6	1012.2	81	71	72	CU	6	080/2	87	12	080	090/3		
2200	00-22'S	160-04'W	CALM	6	1012.5	81	71	72	CU	6	080/2	87	12	080	060/3		
2300	00-22'S	160-04'W	CALM	6	1012.2	81	71	72	CU	6	080/2	84	12	080	180/3		
2400	0°-22S	160-04W	calm	6	1011.5	81	71	72	CU	6	080/2	84	12	080	040-1/3		

REMARKS:

ALL TIMES LOCAL (~~WHISKEY~~ XRAY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MET-955
12-63

DATE 15 March 1964

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM	TYPE TL SKY	AMT OBC SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SP
0100	00-22S	160-04W	calm	6	1010.8	81	71	72	cu	6	050/2	84	12	080	050/7/3
0200	00-22S	160-04W	calm	6	1010.8	80	71	72	cu	4	050/2	84	10	090	200/1/3
0300	02-22S	160-04W	calm	6	1010.8	80	71	72	cu	4	050/2	84	10	090	050/2/3
0400	00°-22'S	160°-04'W	CALM	6	1010.5	80	70	72	cu	4	080/2	84	10	090	030/3
0500	00°-22'S	160°-04'W	CALM	6	1010.8	80	70	72	cu	5	080/2	84	12	090	045/3
0600	00°-22'S	160°-04'W	CALM	10	1011.5	80	70	72	cu	6	090/2	84	12	090	120/4
0700	00°-22'S	160°-04'W	CALM	10	1012.2	82	71	69	cu	6	090/2	84	12	090	030/3
0800	00°-23'S	160°-03'W	CALM	10	1012.9	83	67	62	sc	5	110/2	84	12	110	Lying to off Jarvis
0900	00°-23'S	160°-03'W	CALM	10	1012.9	82	74	76	cu	5	110/2	84	12	110	190/7.0
1000	00°-23'S	160°-03'W	CALM	10	1012.2	82	74	76	sc	6	110/2	84	12	110	050/7.0
1100	00°-23'S	160°-03'W	CALM	10	1011.9	82	74	76	sc	6	110/2	84	12	110	075/7.0
1200	00°-23'S	160°-03'W	"	10	1010.8	82	72	72	sc	6	110/2	83	12	110	Drifting off Jarvis
1300	00°-23'S	160°-03'W	"	10	1010.2	81	70	62	sc	6	110/2	83	12	110	180/4
1400	00°-23'S	160°-03'W	"	10	1010.2	81	71	66	sc	6	110/2	83	12	110	350/1
1500	00°-23'S	160°-03'W	"	10	1009.1	86	70	60	sc	6	110/2	83	12	110	110/1
1600	00°-23'S	160°-03'W	CALM	10	1009.1	86	70	60	sc	5	110/2	83	12	110	060/3
1700	00°-23'S	160°-03'W	CALM	10	1009.8	86	70	60	sc	6	110/2	83	12	110	060/3
1800	00°-23'S	160°-03'W	CALM	10	1010.2	86	70	60	cu	6	110/2	83	12	110	180/3
1900	00°-23'S	160°-03'W	CALM	8	1011.2	86	70	60	cu	6	110/2	83	12	110	030/3
2000	00-23S	160-03W	calm	8	1011.2	86	70	60	cu	6	110/2	83	12	110	030/3
2100	00-23S	160-03W	calm	8	1012.2	85	70	60	cu	5	110/2	83	12	110	105/3
2200	00-23S	160-03W	calm	8	1012.2	81	70	60	cu	4	110/2	83	12	110	060/1/3
2300	00-23S	160-03W	calm	8	1012.2	81	70	60	cu	4	110/2	83	12	110	050/1/3
2400	00-23S	160-03W	CALM	8	1011.5	80	72	75	cu	4	110/2	83	12	110	030/3

REMARKS: XRAY

ALL TIMES LOCAL (SHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SL-JAN 955
14-JAN 65

42.8 84

16 MARCH 64

0100	00°-23'S	160°-03'W	CALM	8	1010.5	80	72	75	Cu	5	110/2	83	12	110	040/3
0200	00°-23'S	160°-03'W	CALM	8	1010.2	80	72	75	Cu	5	110/2	83	12	110	040/3
0300	00°-23'S	160°-03'W	CALM	8	1010.2	80	72	75	Cu	5	110/2	83	12	110	180/4
0400	00°-22'S	160°-04'W	CALM	8	1010.2	78	69	75	St	4	100/2	83	10	100	020/4.0
0500	00°-22'S	160°-04'W	CALM	8	1010.5	78	69	75	Sc	4	080/2	83	10	080	020/4.0
0600	00°-23'S	160°-04'W	CALM	10	1011.2	79	79	~~69~~	Sc	3	110/2	83	10	110	120/4.0
0700	00°-23'S	160°-04'W	CALM	10	1011.5	82	71	69	Sc	4	110/2	83	10	110	180/4.0
0800	00°-23'S	160°-04'W	"	10	1012.9	80	72	75	Cu	5	100/2	83	10	110	110/3
0900	00°-23'S	160°-04'W	"	10	1012.9	80	72	75	Cu	5	100/2	83	10	110	090/3
1000	00°-23'S	160°-04'W	"	10	1012.2	82	72	72	Sc	5	100/2	83	10	110	Drifting
1100	00°-23'S	160°-04'W	"	10	1011.2	85	75	65	Sc	5	100/2	83	10	110	100/4
1200	00-22S	160-04W	CALM	10	1010.2	85	75	65	Cu	5	100/2	83	10	110	030/3
1300	00-22S	160-04W	CALM	10	1009.5	85	75	65	Cu	6	100/2	83	10	100	030/3
1400	00-22S	160-04W	CALM	10	1009.1	85	75	65	Cu	8	100/2	83	10	100	030/3
1500	00-22S	160-04W	CALM	10	1009.1	85	75	65	Cu	8	100/3	83	10	100	030/3
1600	00-22S	160-04W	Calm	10	1008.8	89	78	65	Cu	7	100/2	83	10	100	040/3
1700	00-22S	160-04W	Calm	10	1009.1	88	76	65	Cu	7	100/2	83	10	100	040/3
1800	00-22S	160-04W	Calm	9	1010.2	83	75	65	Cu	7	100/2	83	10	100	040/3
1900	00-22S	160-04W	Calm	8	1010.8	83	75	65	Cu	7	100/2	83	10	100	100/3
2000	00°-22'S	160°-04'W	CALM	8	1011.2	82	72	72	Cu	7	100/2	83	12	100	080/3
2100	00°-22'S	160°-04'W	Calm	8	1011.9	82	72	72	Cu	7	100/2	83	12	100	080/3
2200	00°-22'S	160°-04'W	Calm	8	1012.2	82	72	72	Cu	7	100/2	83	12	100	080/3
2300	00-22'S	160°-04'W	CALM	8	1012.2	82	71	69	Cu	5	100/2	83	12	100	210/3
2400	00°-22'S	160°-04'W	CALM	7	1011.5	80	72	75	CB/Sc	5	100/2	83	12	100	210/3.0

REMARKS:
ALL TIMES LOCAL (~~ZULU~~ XRAY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

S1-UNW-955
12-2-63

LOTUS EXPLORER

DATE 17 MARCH '64

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM	TYPE CL SKY	AMT OBC SKY	WIND	SEA TEMP	WIND S	WIND D	SHIP COURSE
0100	00°-23'S	160°-04'W	CALM	7	1010.8	79	70	75	8	SC/CB	110	83	12	110	080/3.0
0200	00°-23'S	160°-04'W	CALM	7	1010.5	80	72	75	8	SC/CB	110	83	12	110	080/3.0
0300	00°-23'S	160°04'W	CALM	7	1010.2	80	72	75	8	SC/CB	110	83	12	110	080/3.0
0400	00°-23'S	160°-04'W	"	7	1010.8	80	70	72	8	SC/CB	110/2	83	10	110	210/3
0500	00-23'S	160°-04'W	"	7	1011.5	81	71	72	8	SC/CB	110/2	83	10	110	080/3
0600	00-23'S	160°-04'W	"	10	1011.9	81	71	72	8	SC/CB	110/2	83	10	110	080/3
0700	00°-23'S	160°-04'W	"	10	1012.2	82	71	69	6	SC/CB	110/2	83	10	110	080/6.5
0800	00-23S	160-04W	CALM	10	1012.9	83	72	69	6	CU	110/2	83	10	080	090/6
0900	00-23S	160-04W	CALM	10	1012.9	83	72	69	6	CU	090/2	83	10	080	DRIFTING
1000	00-23S	160-04W	CALM	10	1012.9	83	72	69	5	CU	100/2	83	10	100	190/3
1100	00-23S	160-04W	CALM	10	1011.9	83	72	69	5	CU	100/2	83	10	100	050/3
1200	00-23S	160-04W	Calm	10	1010.8	85	72	69	6	CU	080/1	83	10	080	050/3
1300	00-23S	160-04W	Calm	10	1010.2	85	72	69	6	CU	080/2	83	8	080	090/3
1400	00-23S	160-04W	Calm	10	1009.5	81	72	69	6	CU	080/2	83	8	080	090/3
1500	00-23S	160-04W	Calm	10	1008.8	82	72	69	7	CU	080/2	83	8	080	090/3
1600	00-23'S	160-04W	CALM	10	1008.8	85	72	66	7	CU	100/2	83	12	100	040/3
1700	00-23'S	160-04W	CALM	10	1009.1	86	72	63	7	CU	100/2	83	12	100	070/3
1800	00-23'S	160-04W	CALM	8	1009.8	84	71	66	7	CU	110/2	83	12	110	130/4
1900	00-23'S	160-04W	CALM	8	1010.2	83	70	65	6	CU	110/2	83	12	110	070/3
2000	00°-23'S	160-04W	CALM	8	1010.8	83	70	65	4	SC	110/2	83	12	110	070/3
2100	00°-23'S	160-04'W	CALM	8	1011.2	83	70	65	4	SC/CB	110/2	83	12	110	070/3
2200	00°-23'S	160-04'W	CALM	8	1011.5	82	71	69	4	SC/CU	110/2	83	12	110	070/3
2300	00-23'S	160-04'W	Calm	8	1011.9	82	71	69	4	SC/CU	110/2	83	12	110	250/3.8
2400	00°-23'S	160°-04'W	"	8	1011.5	81	75	83	4	SC/CU	110/2	83	12	110	120/3

All Lines Plus 11 Kraus

DATE 18 March 1961

TIME	LAT	LONG	PRES TEN	VIS	SLP	DRY B	DEW PT	HUM	TYPE TL SKY	AMT CDC SKY	WIND	SEA TEMP	WIND S	WIND D	SHIP COURSE
0100	00°-23'S	160°-04'W	Calm	8	1010.5	80	70	72	cu	5	110/2	83	12	110	100/3
0200	00°-23'S	160°-04'W	"	8	1010.2	80	70	72	cu	5	110/2	83	12	110	100/3
0300	00°-23'S	160°-04'W	"	8	1010.2	75	75	70	cu	5	110/2	83	12	110	180/3
0400	00-23S	160-04W	CALM	8	1010.2	79	69	70	Cu	5	110/2	83	12	110	080/3
0500	00-23S	160-04W	CALM	8	1010.5	80	68	68	Cu	7	110/2	83	12	110	080/3
0600	00-23S	160-04W	CALM	10	1010.8	80	70	72	Cu	6	110/2	83	10	110	040/2
0700	00-23S	160-04W	CALM	10	1010.8	80	70	72	Cu	6	110/2	83	10	110	055/2
0800	00-23S	160-04W	CALM	10	1011.5	80	70	72	Cu	6	110/2	83	10	110	190/2
0900	00-23S	160-4W	calm	10	1011.5	84	74	72	cu	6	040/2	83	10	040	040/2
1000	00-23S	160-4W	Calm	10	1010.5	84	75	72	cu	6	040/2	83	10	040	040/2
1100	00-23S	160-4W	calm	10	1010.5	84	75	72	cu	6	040/2	83	10	040	040/2
1200	00-23'S	160-04W	CALM	10	1009.8	85	71	62	cu	6	070/2	83	10	070	070/2
1300	00-23'S	160-04W	CALM	10	1009.1	85	69	60	cu	6	070/2	83	10	070	070/2
1400	00-23'S	160-04W	CALM	10	1008.8	87	70	58	cu	6	070/2	83	10	070	070/2
1500	00-23'S	160-04W	CALM	10	1008.1	84	68	59	cu	6	090/2	83	10	090	DRIFTING
1600	00-23'S	160-04W	CALM	10	1008.1	84	68	59	cu	3	090/3	83	12	090	140/3.5
1700	00-23'S	160-04W	CALM	10	1008.5	84	68	59	cu	3	090/3	83	12	090	140/3.5
1800	00-23'S	160-04'W	CALM	10	1008.8	84	68	59	cu	6	090/3	83	12	090	030/7.0
1900	00-23'S	160-04'W	CALM	10	1009.5	83	69	65	cu	6	090/3	83	12	090	030/3.0
2000	00°-23'S	160°-04'W	"	8	1009.5	80	70	72	cu	6	090/2	83	12	090	030/3
2100	00°-23'S	160°-04'W	"	8	1010.2	80	70	72	cu	6	090/2	83	12	090	125/3
2200	00°-23'S	160°-04'W	"	8	1010.2	80	70	72	cu	6	090/2	83	12	090	140/3
2300	00°-23'S	160°-04'W	"	8	1010.2	80	70	72	cu	6	090/2	83	12	090	100/3
2400	00-23S	160-04W	CALM	6	1009.1	80	70	72	Cu	6	090/2	83	12	090	100/3

All times +11 Xray.

DATE 19 MARCH 1964

TIME	LAT	LONG	WIND SEA	VIS	SLP	DRY B	DEW PT	HUM.	TYPE TL SKY	AMT OBS SKY	WAVES	SEA TMP	WIND S	WIND D	SHIP COURSE
0100	00°-23'S	160°-04'W	MODERATE	6	1009.1	80	70	72	CU	6	090	83	12	090	050/3
0200	00°-23'S	160°-04'W	MODERATE	6	1008.8	80	70	72	CU	5	090	83	12	090	050/3
0300	00°-23'S	160°-04'W	MODERATE	6	1008.8	80	70	72	CU	4	090	83	12	090	075/3
0400	00-23S	160-04W	Moderate	6	1008.8	79	70	72	CU	4	090	83	10	090	180/3
0500	00-23S	160-04W	Moderate	6	1008.8	79	71	72	CU	4	090	83	10	090	070/06
0600	00-23S	160-04W	Moderate	10	1010.2	81	72	72	CU	4	090	83	10	090	090/06
0700	00-23S	160-04W	Moderate	12	1010.8	81	72	72	CU	4	090	83	10	090	070/06
0800	00-23'S	160-05'W	"	12	1011.2	82	67	62	CU	5	070/2	83	10	070	070/3
0900	00-23'S	160-05W	"	10	1011.2	83	69	62	CU	5	070/2	83	10	070	070/3
1000	00-23'S	160-05W	"	10	1010.8	83	69	62	CU	5	070/2	83	10	070	155/3
1100	00-23'S	160-05W	"	10	1010.2	82	67	62	CU	5	070/2	83	10	070	DRIFTING
1200	00-23'S	160-09'W	"	10	1008.2	82	67	62	CU	5	070/3	83	10	070	070/10.5
1300	00-23'S	159-58'W	"	10	1008.1	84	68	59	CU	4	070/2	83	14	070	049/13.0
1400	00-04'S	159-49'W	"	10	1007.5	85	68	60	CU	4	070/3	83	14	070	049/13.0
1500	01°-56'N	159-47W	"	10	1007.5	85	68	60	CU	4	070/3	83	14	070	048/13.0
1600	00°-11'N	159°-31'W	"	10	1008.1	81	70	68	CU	4	070/3	83	14	070	049/12
1700	00°-15'N	159°-22'W	"	10	1008.1	80	70	72	CU	4	070/3	83	14	070	049/12
1800	00°-27'N	159°-14'W	"	10	1008.8	82	67	65	CU	4	070/3	83	14	070	049/12
1900	00°-34'N	159-04'W	"	7	1008.8	82	67	65	CU	4	070/3	83	14	070	049/12
2000	00-42N	158-55W	CALM	6	1009.1	82	67	65	CU	7	070	83	10	070	049/12
2100	00-49N	158-46W	CALM	6	1009.1	82	67	65	CU	10	070	83	10	070	049/12
2200	00-57N	158-38W	CALM	6	1009.5	82	67	65	CU	9	070	83	10	070	049/12
2300	01-04N	158-29W	CALM	6	1009.8	82	67	65	CU	9	070	83	10	070	049/12
2400	01-12N	158-21'W	CALM	6	1009.1	82	67	65	CU	9	070	83	10	070	049/12

DATE 20 MARCH 1969

TIME	LAT	LONG	PRES TEN	VIS	SLP	DRY B	DEW PT	HUM	TYPE CL SKY	AMT OBC SKY	WIND	SEA TEMP	WIND SPEED	SHIP COURSE
0100	SET	ALL	CLOCKS	AHEAD	ONE	HOUR	TO	CONFORM	WITH	+10W	TIME	ZONE.		
0200	01°-20	158°-12	CLEAR	5	1008.5	80	68	68	Cu	9	080	83	10	070	049/12
0300	01°-27	158°-04	CLEAR	5	1008.5	80	66	68	Cu	9	080	83	10	070	049/12
0400	01°-35	157°-45	CALM	5	1008.5	80	68	68	Cu	9	080/2	83	10	070	049/12
0500	01°-43	157°-40	CALM	5	1008.5	81	71	72	Cu	9	080/2	83	10	070	049/12
0600	01°-50	157°-37	Cloudy	5	1008.8	73	69	86	ST/Cu	9	080/2	83	10	070	049/12
0700	01°-50'N	157°-35'	Cloudy	8	1010.2	78	69	75	ST/Cu	9	100/2	83	10	100	090/12
0800	01-55'N	157-54'W	Overcast	8	1010.2	78	69	75	ST/CB	9	080/2	83	12	080	090/12.4
0900	01°-55'N	157-54'W	Overcast	3	1010.8	78	69	75	ST/CB	9	080/2	83	10	080	065/12.0
1000	01°-55'N	157°-54'W	Calm	4		79	69	75	ST	8	080/2	83	14	080	anchored Ama, ISC.
1100	01°-55'N	157°-54'W	calm	7		79	69	75	ST	8	"	83	14	080	"
*1200	01°-55'N	157°-54'W	calm	7		85	69	76	ST	8	"	83	14	080	"
1300	01°-55'N	157°-54'W	calm	7		87	69	74	ST	8	"		14	080	"
1400	01°-55'N	157°-54'W	"	7		87	69	74	ST	8	"		14	080	"
1500	01°-55'N	157°-54'W	"	7		86	69	73	ST	8	"		14	080	"
1600	01°-55'N	157°-54'W	"	7		29	69	73	ST	8	"		14	080	"
1700	01°-55'N	157°-54'W	"	7		85	69	73	ST	8	"		14	080	"
1800	01°-55'N	157°-54'W	"	7		83	69	73	ST-CB	8	"		14	080	"
1900	01°-55'N	157°-54'W	"	7		83	69	73	ST-CB	8	"		14	080	"
2000	01°-55'N	157°-54'W	"	7		83	69	73	ST-CB	8	"		14		"
2100	01°-55'N	157°-54'W	"	7		83	69	73	ST-CB	8	"		14		"
2200	01°-55'N	157°-54'W	"	7		83	67	73	ST-CB	8	"		14		"
2300	01°-55'N	157°-54'W	"	7		83	67	73	ST-CB	8	"		14		"
2400	01°-55'N	157°-54'W	"	7		83	67	73	ST-CB	8	"		14		"

* Set Clock ahead 1 Hour To +10 Victor Zone time
Departed for HARBOR

DATE 25 MARCH 64

TIME	LAT	LONG	PRES SEA	VIS	SLP	DRY B	DEW PT	HUM	TYPE TL SKY	AMT CLOC SKY	CLOUDS	SEA TMP	WIND S	WIND D	SHIP COURSE
0100															
0200															
0300															
0400															
0500															
0600															
0700															
0800															
0900															
1000															
1100															
1200															
1300															
1400															
1500															
1600															
1700															
1800															
1900															
2000															
2100															
2200															
2300	02°02'N	157°30'W	CALM	7	1012.2	80	67	64	Cu	4	130/2	81	8	130	317 / 13 KTS
2400			CALM	7	1012.2	80	67	64	14/ST	4	315/2	81	8	315	317 / 13 KTS

115 1000

319 13

DATE 26 March '64

TIME	LAT	LONG	DEG SEA	VIS	SLP	DRY B	DEW PT	HUM	TYPE CL	AMT CLD	SKY	DIRN	SEA TEMP	WIND S	WIND D	SHIP COURSE
0100	02-24'N	157-52'W	Calm	7	1011.5	80	67	64	4	AC/ST		315	81	8	315	317/13
0200	02-32'N	158-00'W	Calm	8	1010.8	80	67	64	3	AC/CU		310	82	7	310	317/13
0300	02-49'N	158-10'W	Calm	8	1009.8	79	66	63	3	SC		310	82	7	310	317/13
0400	02°-51'N	158°-15'W	"	8	1009.8	79	72	79	3	SC		310	82	7	310	317/13
0500	03°-02'N	158-28'W	"	8	1008.8	80	72	75	3	SC		310	82	7	310	317/13
0600	03°-12'W	158°-38'W	"	8	1008.8	80	72	75	3	SC		310	82	7	310	317/13
0700	03°-23'W	158°-48'W	"	8	1009.5	80	72	75	3	SC		310	82	7	310	317/13
0800	03°-33.5'W	159°-07'W	"	10	1010.2	81	69	69	3	SC		310	83	7	310	317/13
0900	03-35.9'W	159-07'W	"	10	1011.2	83	69	62	3	SC		310	83	7	310	320/13
1000	03-57'N	159-31	Calm	10	1011.9	83	69	62	3	CU		075	82	8	075	350/7
1100	03-57'N	159-21'W	Calm	10	1011.5	83	69	62	4	CU		135	82	10	135	Lying to off Fanning Is.
1200	03-57'N	159-21'W	Calm	10	1011.2	83	69	62	4	CU			—	—	—	—
1300																
1400																
1500																
1600																
1700																
1800																
1900																
2000																
2100																
2200																
2300																
2400																

Lying to off Fanning Is.

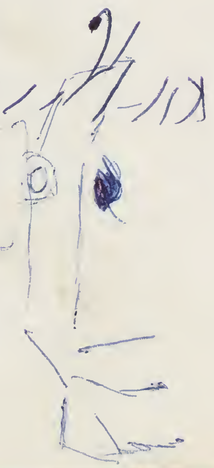
Donald Ray Lewis
CDR USCG

DATE 28 Mar 64

TIME	LAT	LONG	PRES SEA	VIS	SLP	DRY B	DEW PT	TEMP	TYPE TL SKY	AMT OBS SKY	WINDS	SEA TEMP	WIND S	WIND D	SHIP COURSE
0100	03°-57'N	159°-21'W	Calm	7	1008.1	80	70	72	Cu/ST	6	100/3	82	8	100	000/7
0200	03°-57'N	159°-21'W	Calm	7	1008.8	80	70	72	Cu/ST	3	100/3	82	8	100	300/7
0300	03°-57'N	159°-21'W	Calm	7	1008.5	81	71	72	Cu/ST	7	170/3	82	8	170	180/7
0400	03-55'N	159-13'W	CALM	7	1008.1	81	71	72	Cu/AC	7	100/2	82	12	100	060/7
0500	03-56'N	159-19'W	CALM	7	1007.8	81	71	72	ST/Cu	7	100/2	82	12	100	145/7
0600	03-55'N	159-19'W	CALM	7	1008.5	81	70	71	ST/Cu	6	100/2	82	12	100	330/7
0700	03-55'N	159-11'W	CALM	10	1009.1	81	71	72	ST/Sc	6	100/2	82	12	100	150/7
0800															
0900															
1000															
1100															
1200															
1300															
1400															
1500															
1600															
1700															
1800															
1900															
2000	03°-51'N	159°-23'W	CALM	8	1008.8	80	74	83	ST/Cu	9	190/2	84	10	190	DRIFTING
2100	03°-10'N	159°-	CALM	8	1008.8	80	74	83	ST/Cu	9	190/2	84	10	190	270/4
2200	03°-02'N	159°-	Calm	8	1009.5	82	74	76	ST/Cu	9	220/2	84	10	220	312/12 KTS
2300	04-08N	159-47W	CALM	7	1009.8	82	74	76	ST/Cu	9	220/2	84	10	220	312/12 KTS
2400			CALM	>	1008.8	82	74	76	ST/Cu	9	220/2	84	10	220	312/12 KTS

DATE 29 MARCH 64

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM	TYPE TL SKY	AMT OBS SKY	WIND	SEA TEMP	WIND S	WIND D	SHIP COURSE
0100	04°-22'N	159°-08'W	CLEAR	7	1009.8	83	74	76	ST/CU	8	210	83	8	210	312/12
0200	04°-30'N	160°-09'W	CLEAR	7	1008.8	83	74	76	ST/CU	8	210	83	8	210	312/12
0300	04°-39'N	160°-17'W	CLEAR		1008.5	83	74	76	ST/CU	8	210	83	8	210	280/12
0400	04°-39'N	160°-17'W	"	7	1008.5	82	77	84	ST/CU	8	210	83	8	210	270/8
0500	04°-35'N	160°-17'W	"	7	1008.5	80	73	79	ST/CU	8	210	83	8	210	120/8
0600	04°-35'N	160°-17'W	Rain	7	1008.5	79	70	79	ST/CU	8	210	83	8	210	120/8
0700	04°-35'N	160°-17'W	Rain	7	1008.5	79	70	79	ST/CU	8	210	83	8	210	300/8
0800	04°-26'N	160°-22'W	Rain	5	1009.3	79	70	79	ST/CB	9	210	83	8	210	060/7.9
0900	04°-42'N	160°-26'W	RAIN	5	1011.2	77	70	82	ST/CB	10	040	82	6	040	300/7.8
1000	04°-42'N	160°-26'W	OVC	5	1011.5	77	70	82	ST/CB	10	040	82	6	040	LYING TO OFF WASHINGTON ISLAND
1100	04°-42'N	160°-26'W	OVC	5	1011.5	80	73	75	ST	10	900	82	6	900	LYING TO OFF WASHINGTON ISLAND
1200	04°-43'N	160°-26'W	OVC	5	1010.5	83	73	72	ST/CU	10	200/3		5	200	LYING TO OFF WASHINGTON ISLAND
1300	04°-43'N	160°-26'W	OVC	8	1010.2	80	74	83	ST/CU	10	200/3		5	200	" " "
1400	04°-43'N	160°-26'W	OVC	5	1009.1	82	75	80	ST/CU	10	200/3		12	200	" " "
1500	04°-43'N	160°-26'W	OVC	5	1008.5	84	76	76	ST/CU	10	150/3		12	150	" " "
1600	04°-43'N	160°-26'W	OVC	5	1009.5	83	76	76	ST/CU	10	150/3	83	12	150	" " "
1700	04°-43'N	160°-26'W	OVC	5	1009.5	83	73	76	ST/CU	10	150/3	83	12	150	" " "
1800	04°-43'N	160°-26'W	OVC	5	1008.5	83	73	76	ST/CU	10	150/3	83	12	150	090/4
1900	04°-43'N	160°-20'W	OVC	5	1009.8	88	71	58	ST/CU	10	150/3	83	10	150	000/4
2000	04°-43'N	160°-20'W	OVC	5	1009.8	88	71	58	ST/CU	10	150/3	83	10	150	" " "
2100	04°-43'N	160°-20'W	OVC	5	1011.5	88	71	58	ST/CU	10	150/3	83	10	150	" " "
2200	04°-43'N	160°-02'W	OVC	5	1011.5	88	71	58	ST/CU	10	150/3	83	10	150	" " "
2300	04°-43'N	160°-02'W	R	5	1011.8	88	71	58	ST/CU	10	150/3	83	10	150	" " "
2400	04°-43'N	160°-02'W	OVC	4		77	71		ST/CU	10	150/3	83	10	150	350/4



DATE 30 MARCH 1964

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM	TYPE TL SKY	AMT CLOUD SKY	WAVES	SEA TEMP	WIND SPD	WIND DIR	SHIP COURSE	RPM
0100	04°43'W	160°02'W	R	2		76	70		CU/ST	10	150/3	83	12	170	260°T/4	34.0
0200	04°43'W	160°02'W	R	2		77	71		CU/ST	10	160/3	83	8	170	100°T/4	30.0
0300	04°43'W	160°02'W	R	1		78	72		CU/ST	10	160/3	83	8	170	300°/4	30.0
0400	04°43'N	160°02'W	R	1		78	71		CU/ST	10	070/3	83	8	070	270°T	30.1
0500	04°43'N	160°02'W	R	1		75	71		CU/ST	10	070/3	83	8	070	010°T	31.8
0600	04°43'N	160°02'W	R	1		75	71		ST	10	070/3	83	15	070	100°T	30.0
0700	04°43'N	160°02'W	R	1		77	73		ST	10	070/3	83	15	070	100°T	30.4
0800	04-43 N	160-02W	R	2	1012.5	77	70	82	ST	10	070/4	83	12	070	000/4	
0900	[illegible]	[illegible]	R	5	1012.9	79	71	81	ST	10	[illegible]	83	12	070	[illegible]	
1000	[illegible]	[illegible]	OVC	7	1013.2	81	73	76	ST	10	[illegible]	83	12	070		
1100	04°43'N	160°02'W	BKN	7	1013.2	81	73	74	ST	10	070/4	83	12	070	" "	" "
1200	04°42.2N	160°26.2W	OVC	7	1012.2	80	70	72	ST/cu	9	140/4	83	12	140	230/4	
1300	04°-42.2N	160°-26.2W	OVC	8	1011.9	80	70	72	ST/cu	9	140/4	83	12	140	260/4	
1400	04°-42.2N	160°-26.2W	OVC	8	1010.5	82	72	72	ST/cu	9	140/4	83	12	140	090/5	
1500	04°-42.2N	160°-26.2W	OVC	7	1010.2	80	72	75	ST/cu	9	140/4	83	12	140	070/3	
1600	04-42 N	160°-25W	MOD	8	1010.8	80	72	75	ST/cu	9	140	83	12	120	260/7	
1700	04°-42'N	160°-25W	"	8	1010.5	80	72	75	ST/cu	10	140	83	12	120	260/7	
1800	04-42'N	160-25W	MOD	8	1010.9	80	72	75	ST/cu	9	120	83	12	120	260/7.0	
1900	04°-42'N	160-25W	"	8	1011.2	82	75	80	ST/cu	9	120	83	12	120	090/7	
2000	04-42'N	160-25W	MODERATE	5	1011.9	81	76	84	ST/se	8	120	83	12	120	090/7	
2100	04-42'N	160-25W	"	5	1011.5	80	74	83	ST/se	8	120	83	14	120	090/	4.6
2200	04-42'N	160-25W	"	5	1012.2	79	73	83	ST/se	8	140	83	16	140	290/	4.2
2300	04-42'N	160-25W	"	7	1012.9	79	73	83	ST/se	8	140	83	16	140	100/	4.0
2400	04-42N	160-25W	"	7	1013.2	79	73	83	ST	8	140	83	15	140	100/	4.0

DATE 31 MARCH 1964

31.5 83.

TIME	LAT	LONG	PRES TEN	VIS	SLP	DRY B	DEW PT	1267 HUM	TYPE TL SKY	ATT OBC SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE °T
0100	04-42N	160-25W	MODERATE	6	1011.5	79	73	83	CU	6	140/4	83	15	140	290/4
0200	04-42N	160-25W	MODERATE	6	1010.6	79	73	83	CU	6	140/4	83	15	140	290/4
0300	04-42N	160-25W	MODERATE	6	1010.2	79	73	83	CU	6	140/4	83	15	140	310/4
0400	04-42N	160-25W	MODERATE	6	1010.5	82	75	80	AC/CI	3	140/4	83	12	140	130/7.4
0500	04-42N	160-25W	MODERATE	6	1010.8	82	75	80	SC/AC	7	100/4	83	16	100	100/4
0600	04-42N	160-25W	MODERATE	6	1011.5	82	75	80	SC	9	110/4	83	15	110	270/4
0700	04-42N	160-25W	MODERATE	10	1012.2	81	76	83.5%	ST/CU	9	110/4	83	10	110	330/4
0800	04-42N	160-25W	MODERATE	10	1012.5	81	76	83.5	ST/CU	9	150/2	83	5	100	200/4 ~~35.5~~
0900	04-42N	160-25W	MODERATE	10	1012.8	84	79	84	ST/CU	7	110/3	83	4	100	140/4
1000	04-42N	160-25W	MODERATE	10	1013.8	86	81	84	ST/CU	7	110/3	83	3	100	100°/4 KNTS
1100	04-42N	160-25W	MODERATE	10	1013.8	84	79	84	ST/CU	6	150/3	83	4	130	—
1200	04-46N	160-30W	MODERATE	10	1013.2	84	79	84	CU	6	140/3	83	6	130	305/11.2
1300	04-55N	160-41W	CALM	10	1012.2	84	79	84	CU	6	140/3	83	6	130	305/12
1400	05-01N	160-52W	CALM	10	1011.2	84	80	88	CU	6	140/3	83	6	130	305/12
1500	05-09N	161-02W	CALM	10	1010.5	84	80	88	CU	6	140/3	83	6	130	305/12
1600	05°-17.5'N	161°-13.5'W	CALM	10	1010.2	84	79	84	CU	7	140/3	83	8	130	305/12
1700	05°-24'N	161°-24'W	CALM	10	1010.2	84	79	84	CU	7	140/3	83	8	130	305/12
1800	05°-31.5'N	161°-33.5'W	CALM	10	1010.5	83	78	84	CU	7	140/3	84 ~~83~~	8	130	305/12
1900	05°-40'N	161°-45'W	CALM	8	1010.8	84	79	84	CU	7	140/3	84	10	130	305/12
2000	05°-52'N	161°-58'W	"	8	1011.9	82	77	84	CU	7	140/3	84	10	130	305/12
2100	05°-52'N	161°-58'W	"	8	1011.9	82	77	84	CU	7	140/3	84	10	130	060/7
2200	05°-52'N	161°-58'W	"	8	1012.2	80	77	91	CU	7	140/3	84	10	130	270/5
2300	05°-52'N	161°-58'W	"	8	1012.9	80	74	83	CU	7	140/3	84	10	130	270/5
2400	05-59N	161-58W	"	7	1013.5	81	75	80	AS/CU	8	070/1½	84	8	070	080/4

DATE 1 APRIL

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM	TYPE TL SKY	AMT CLOUD SKY	WINDS	AIR TMP	WIND S	WIND D	SHIP COURSE
0100	05-58N	162-02	OVC	7	1011.9	81	74	79	ST/CU	8	070	84	8	070	090/4.2
0200	05-58N	162-02	RAIN	5	1011.5	76	72	87	AS/ST	9	070	84	10	070	270/4.0
0300	05-58N	162-04	RAIN	5	1011.2	76	72	87	AS/AC	9	070	84	10	070	280/4.0
0400	05°-58'N	162°-04'W	RAIN	5	1011.2	76	72	87	ST/CU	9	060	84	12	060	270/4 KTS.
0500	05°-58'N	162°-04'W	RAIN	5	1011.2	76	72	87	ST/CU	9	060	84	12	060	090/4 KTS.
0600	05°-58'N	162°-04'W	RAIN	5	1011.8	76	72	87	ST/CU	9	060	84	12	060	100/4 KTS.
0700	05°-58'N	162° 04'W	RAIN	5	1011.5	76	72	87	ST/CU	9	060	84	12	060	260/4 KTS.
0800	05°-58 N	162° 04 W	OVC	5	1012.5	82	77	84%	ST/CU	10	060	84	15	100	200/11.2
0900															
1000															
1100															
1200															
1300															
1400															
1500															
1600															
1700															
1800															
1900															
2000															
2100															
2200															
2300															
2400															

DATE 4 April 1964 ENROUTE PEARL HARBOR HAWAII

TIME	LAT	LONG	PRES SEA	VIS	SLP	DRY B	DEW PT	HUM	TYPE TL SKY	AMT OBS SKY	DIRECTION	SEA TEMP	WIND S	WIND D	SHIP COURSE
0100															
0200															
0300															
0400															
0500															
0600															
0700															
0800															
0900	05°-55'N	162-10'W	CALM	10	1011.9	81	74	79	Cu	6	060/2	83	8	060	015/13
1000	06-08'N	162-02'W	CALM	10	1012.2	81	74	79	Cu	6	060/3	83	8	060	015/13
1100	06-31'N	161-59'W	CALM	10	1011.9	84	79	84	Cu	6	060/3	83	10	060	015/13
1200	06°-38'N	162°-00'W	CALM	10	1011.2	84	79	84	Cu	6	060/3	83	10	060	015/13
1300	06°-50'N	161°-57'W	CALM	10	1010.5	85	78	80	Cu	6	060/3	83	10	060	015/13
1400	07°-56'N	161°-53'W	CALM	10	1010.5	85	78	80	Cu	6	060/3	83	10	060	015/13
1500	07°-43'N	161°-49'W	CALM	10	1009.5	84	79	84	Cu	6	060/3	83	10	060	015/13
1600	07°-30'N	161°-47'W	CALM	10	1009.1	82	78	88	Cu	6	020/5	84	15	020	015/13
1700	07°-18'N	161°-43'W	RAIN	8	1009.1	81	77	87	Cu	9	020/4	84	20	020	015/13
1800	07°-07'N	161°-40'W	ROUGH SEAS	8	1009.1	81	77	87	Cu	9	020/4	84	25	020	015/13
1900	06°-44'N	161°-36'W	"	8	1011.2	80	73	79	Cu	9	020/4	83	18	020	015/13
2000	06°-16'N	161°-33'W	"	8	1011.2	80	73	79	Cu	9	020/4	83	15	020	017/13
2100	08°-19'N	161°-31.5'W	"	8	1011.2	80	73	79	Cu	9	020/4	83	15	020	017/13
2200	08°-31'N	161°-27'W	"	8	1011.2	80	73	79	Cu	9	020/4	83	15	020	017/13
2300	08°43'N	161°25'W	"	8	1011.2	80	73	79	Cu	9	020/4	83	15	020	017/13
2400	08-54'N	161-19'W	MODERATE	5	1009.9	80	73	79	ST/SC	9	020/5	82	20	020	017/13

DATE 5 APRIL '64

TIME	LAT	LONG	PRES TEN	VIS	SLP	DRY B	DEW PT	HUM	TYPE TL SKY	AMT OBC SKY	WINDS	SEA TEMP	WIND S	WIND D	SHIP COURSE	
0100	09-07N	161-16W	MODERATE	5	1012.2	80	73	79	ST/SC	9	020	81	20	020	017	13.4
0200	09-19N	161-12W	MODERATE	5	1011.5	80	73	79	ST/SC	8	030	81	20	030	017	13.4
0300	09-31.5N	161-09W	MODERATE	7	1010.8	80	73	79	ST/SC	8	030	81	18	030	017	13.3
0400	09-43N	161-05W	MODERATE	7	1010.8	80	73	79	ST	8	030	81	18	030	017	13
0500	09-56N	161-02W	MODERATE	7	1011.9	80	73	79	ST	8	030	80	18	030	017	13
0600	10-08N	160-58W	MODERATE	7	1012.2	80	73	79	ST	8	030	80	15	030	017	13
0700	10-20N	160-56W	MODERATE	7	1012.5	80	73	79	ST	8	030	80	16	030	017	13
0800	10°-29.5N	160°-47.5W	MODERATE	10	1013.2	80	73	79	CU	7	030/4	80	16	030	017	13
0900	10°-41N	160°-43W	MODERATE	10	1014.2	80	74	83	CU	7	030/4	80	16	030	017	13
1000	10°-53N	160°-39.5W	MODERATE	10	1014.6	80	74	83	CU	7	030/4	80	16	030	017	13
1100	11°-07N	160°-36W	MODERATE	10	1014.2	80	74	83	CU	7	030/4	80	16	030	017	13
1200	11°-21N	160°-40W	"	10	1013.9	80	75	82	CU	7	030/4	80	16	030	017	13
1300	11°-40N	160°-35W	"	10	1013.5	81	75	82	CU	7	030/4	80	16	030	017	13
1400	11°-53N	160°-31W	"	10	1012.5	81	75	82	CU	7	030/4	80	16	030	017	13
1500	12°-11N	160°-28W	"	10	1012.2	82	77	80	CU	7	030/4	80	16	030	017	13
1600	12-19N	160-24W	"	10	1012.5	84	77	80	CU	7	030/4	80	15	030	017	13
1700	12-30N	160-19W	"	10	1012.5	84	77	80	CU	7	030/4	80	15	030	017	13
1800	12-43N	160-15W	"	10	1012.9	84	77	80	CU	7	030/4	80	15	030	017	13
1900	12-56N	160-12W	"	5	1012.9	84	77	80	CU	7	030/3	80	15	030	017	13
2000	13°-11.5N	160-17.2W	MODERATE	6	1014.2	79	75	87	SC	4	035/3	80	16	035	019	13.4
2100	13-13N	160-17W	MODERATE	6	1014.9	79	75	87	SC	4	035/3	80	16	035	019	13.5
2200	13-24N	160-12W	MODERATE	6	1015.2	78	79	83	SC	4	035/3	80	16	035	019	13.2
2300	13-37N	160-08W	MODERATE	6	1015.6	77	72	83	SC	4	035/3	80	17	035	019	13.4
2400	13-50N	160-03W	MODERATE	6	1015.6	77	72	83	CU	4	035/3	80	17	035	019	13

DATE 6 April 1964 — ENROUTE PEARL HARBOR 162 W N

TIME	LAT	LONG	PRES TEN	VIS	SLP	DRY B	DEW PT	HUM	TYPE CL	OBS SKY	WIND	SEA TEMP	WIND S	WIND D	SHIP COURSE
0100	14°-02'N	159°-59'W	MODERATE	6	1014.9	77	72	83	CU	5	030/3	80	16	030	019/13
0200	14°-15'N	159°-55'W	MODERATE	6	1014.2	77	72	83	CU	5	030/3	80	16	030	019/13
0300	14°-27'N	159°-50'W	MODERATE	6	1013.5	77	72	83	CU	5	030/3	80	16	030	019/13
0400	14°-38'N	159°-47'W	MODERATE	6	1013.2	76	70	82	CU	5	030/3	80	16	030	019/13
0500	15°-05'N	159°-35'W	MODERATE	6	1013.2	76	70	82	CU	7	030/3	80	16	030	019/13
0600	15°-17'N	159°-32'W	MODERATE	7	1014.2	76	70	82	CU	7	030/3	79	16	030	019/13
0700	15°-30'N	159°-28'W	MODERATE	7	1014.9	75	71	86	ST/CU	7	030/3	79	16	030	019/13
0800	15°-36'N	159°-30'W	"	7	1016.3	76	70	72	ST/CU	7	030/3	79	16	030	019/13
0900	15°-48'N	159°-27'W	"	7	1016.9	77	72	83	ST/CU	7	030/4	79	16	030	019/13
1000	16°-00'N	159°-28'W	"	9	1016.6	78	71	75	ST/CU	7	030/4	79	16	030	019/13
1100	16°-23'N	159°-18'W	"	9	1016.3	84	70	62	ST/CU	7	030/4	79	16	030	019/13
1200	16°-35'N	159°-15'W	"	10	1016.3	84	70	62	ST/CU	7	030/4	79	16	030	019/13
1300	16°-40'N	159°-11'W	"	10	1016.3	84	70	62	ST/CU	7	030/4	79	16	030	019/13
1400	16°-52'N	159°-05.5'W	"	10	1016.3	84	70	62	ST/CU	7	030/4	79	16	030	019/13
1500	17°-03.9'N	159°-01.5'W	"	10	1014.9	84	70	62	CU	7	030/3	79	14	030	019/13
1600	17°-16'N	158°-57'W	MODERATE	10	1015.5	80	73	79	CU/CI	6	040/3	79	14	040	019/13.4
1700	17°-28'N	158°-59'W	MODERATE	10	1015.5	80	73	79	CU/AC	6	040/3	79	14	040	019/13.4
1800	17°-40'N	158°-48'W	MODERATE	10	1015.8	80	73	79	CU	6	040/3	79	14	040	019/13.5
1900	17°-52'N	158°-44'W	MODERATE	10	1016.3	76	82	87	AC/CU	6	045/3	79	14	045	019/13.6
2000	18°-09'N	158°-30'W	MODERATE	6	1016.9	76	82	87	CU	6	045/3	79	14	045	019/14
2100	18°-21'N	158°-25'W	MODERATE	6	1017.6	76	82	87	CU	6	045/3	79	14	045	019/14
2200	18°-36'N	158°-19'W	MODERATE	6	1018.0	76	82	87	CU	6	045/3	79	14	045	019/14
2300	18°-46'N	158°-15'W	MODERATE	6	1018.6	76	82	87	CU	6	045/3	79	14	045	019/14
2400	19°-06.5'N	158°-09.5'W	MODERATE	6	1018.3	74	68	82	CU	6	045/3	78	15	045	019/14

DATE 7 APRIL 64

TIME	LAT	LONG	PRES TEN	VIS	SLP	DRY B	DEW PT	HUM	TYPE TL SKY	AMT OBS SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE
0100	19°-14'N	158°-07'W	MODERATE	6	1017.6	74	68	82	Cu	6	045/3	78	15	045	003/14
0200	19°-27'N	158°-06'W	MODERATE	6	1016.9	74	68	82	Cu	6	045/3	78	15	045	003/14
0300	19°-41'N	158-05'W	MODERATE	6	1016.3	74	68	82	Cu	6	045/3	78	15	045	003/14
0400	19°-55'N	158°-05'W	"	6	1016.3	75	68	78	Cu	6	045/3	78	15	045	003/14
0500	20°-09'N	158°-04'W	"	6	1016.6	75	68	78	Cu	6	045/3	78	15	045	003/14
0600	20°-23'N	158°-04'W	"	6	1017.3	75	68	78	Cu	6	060/3	78	15	060	003/14
0700	20°-37'N	158°-03'W	"	6	1018.0	75	68	78	Cu	6	060/3	78	15	060	007/14
0800	20°-50'N	158°-03'W	"	6	1018.8	75	68	78	Cu	6	060/3	78	15	060	007/14
0900	20-46'N	158-06'W	"	10	1019.0	75	68	78	Cu	6	060/3	78	15	060	007/14
1000	20-61'N	158°07'W	"	10	1019.0	75	68	78	Cu	6	060/3	78	15	060	007/14
1100		157°-4'W	"	10	1020.4	76	68	77	Cu	6	050/2	78	14	080	080/4
1200	21°-30'N	157°-55'W	"	10	1020.6	76	68	77	Cu	6	050/2	78	14	080	083/4
1300															
1400															
1500															
1600															
1700															
1800															
1900															
2000															
2100															
2200															
2300															
2400															

DATE 3 FEB 64

Time at sunrise = Position at sunrise =

Time at sunset 1729 Position at sunset = 159°-02'W 19°-40'N

Miles traveled from 0000 hours to sunrise = 0

Miles traveled from sunrise to sunset = 120

Miles traveled from sunset to 2400 hours = 67

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	1200	LORAN	~~158°-02'W~~ ~~158°-45'W~~	20°-37'N
2.	1800	LORAN	159°-02'W	19°-40'N
3.	2000	LORAN	159°-21'W	19°-19'N
4.				
5.				
6.				

DATE 4 FEB 64

Time at sunrise 0620 Position at sunrise = 161°-00'W 17°-40'N

Time at sunset 1757X Position at sunset = 16°-00'N 163°-00'W

Miles traveled from 0000 hours to sunrise = 80

Miles traveled from sunrise to sunset = 156

Miles traveled from sunset to 2400 hours = 78

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	1002	LORAN & Celestical	161°-49'W	17°-12'N
2.	1200	LORAN + celestial	162-11.5'W	16°-58'N
3.	2000 →	CELESTIAL	163°-17'W	15°-36'N
4.				
5.				
6.				

DATE 5 FEB 64

Time at sunrise 0625 Position at sunrise = 164°-39'W 13°-54'N

Time at sunset 1805 Position at sunset = 166°-28'W 11°-54'N

Miles traveled from 0000 hours to sunrise = 78

Miles traveled from sunrise to sunset = 150

Miles traveled from sunset to 2400 hours = 89

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800	CELESTIAL	164°-56'W	13°-40'N
2.	1055	LORAN	165°-25'W	13°-15'N
3.	1200	CELESTIAL	165°-34'W	12°-55'N
4.	2000	CELESTIAL	166°-46'W	11°-35'N
5.				
6.				

DATE 6 FEB 64

Time at sunrise 0634 Position at sunrise = 168°-22'W 09°-51'N

Time at sunset 1829 Position at sunset = 170°-11'W 07°-51.5'N

Miles traveled from 0000 hours to sunrise = 87

Miles traveled from sunrise to sunset = 161

Miles traveled from sunset to 2400 hours = 80

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800	CELESTIAL	168°-35'W	09°-36'N
2.	1200	CELESTIAL	169°-15'W	08°-57'N
3.	2000	CELESTIAL	170°-23'W	07°-38'N
4.				
5.				
6.				

DATE 7 Feb 64

Time at sunrise 0645 Position at sunrise = 171°-50'W 06°-01'N

Time at sunset 1847 Position at sunset = 173°-29'W 04°-15'N

Miles traveled from 0000 hours to sunrise = 82

Miles traveled from sunrise to sunset = 145

Miles traveled from sunset to 2400 hours = 73

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0622	CELESTIAL	172°-03'W	05°-45'N
2.	1242	CELESTIAL	172°-27'W	05°-09'N
3.	1916	CELESTIAL	173°-43'W	04°-01'N
4.				
5.				
6.				

DATE 8 FEB 64

Time at sunrise 0653 Position at sunrise = 175°-14'W 02°-08.5'N

Time at sunset = Position at sunset =

Miles traveled from 0000 hours to sunrise = LYING TO

Miles traveled from sunrise to sunset = OFF Howland

Miles traveled from sunset to 2400 hours = Island

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.				
2.				
3.				
4.				
5.				
6.				

At-Sea Observations 3-February, 1964
1 day out of Oahu, Hawaiian Is.

Weather: Sunny, warm, little wind, sea calm, small cumulus formations around horizon.

Time	No. Birds	Direction	Species and Remarks
930	1		Brown Booby - on bouy at harbour entrance.
940	2	n	Jaeger sp.
0944	1	N	Poma rine Jaeger
0948	1	SW	Jaeger sp.
0950	3	SW	Jaeger sp. (Group of 2 and of 1)
0953	2		Jaeger sp. Sitting in water.
1000	1	S	Jaeger sp.
1001	1	S	Jaeger sp.
1002	2	S	Jaeger sp.
1010	1		Blackfoot - following ship
1017	1	S	Jaeger sp.
1021	1	SE	Pomarine Jaeger
1029	2	SE	Jaeger sp. follw ing shipp.
1032	1	SE	Pomarine Jaeger - landing on water.
1040	1	SE	Jaeger sp.
1041	1	E	Pomarine Jaeger - crossing bow.
1045	1	S	Jaeger sp.
1051	1	SE	Jaeger sp.
1103	1	SW	Jaeger sp. dark phase
1103	1	SW	Jaeger sp. light phase
1103	1	SW	Jaeger sp. dark phase
1104	4		Jaeger sp. flying and in water 3 light phase 1 dark phase.
1112	1	S	Jaeger sp.
1125	1	SW	Jaeger sp. Light phase
1129	1	SW	Jaeger sp.
1138	8	N	Jaeger sp. following destroyer
	2	N	Blackfoot - following destroyer.
1140	1	NE	Jaeger sp.
1145	2	E	Bird sp.
1155	Lunch Break		
1215	Observations Begun		
1348	1	N	Red-footed Booby (southern type)
1415	1		Blackfoot
1440	5	N	Jaeger sp. (light phase)
1618	2	W	Bird sp.
1630	Flock 35	NE	Sooty Tern - several young birds, some actively feeding.
	1	NE	Wedgetail
1638	1		Bird sp.
1639	1		Bird sp.
1650	Flock 2	NE	Fairy Tern
	2-3		Shearwater sp.?
	1		Tropicbird sp.?
	20*		Tern sp.? Probably sooty.

At Sea Observations - Feb 3., 1964 cont.

1725	11	Flock	N	Sooty Tern
1736	3			Sooty tern
1815	1		SW	Pterodroma sp.?
1828	2		SW	Sooty Tern

1830 Observations concluded. Albatross still following ship.

At Sea Observations 4-Feb., 1964
2 days out of Oahu, H.I.

Weather: Sunny, warm, little wind, sea calm, cumulus formations more pronounced than on previous day.

Time	No. Birds	Direction		Species and Remarks
0700	1			Watch sta rted. Blackfooted Albatross still following ship . Almost certainly same one as last night.
0724	1	NE		Redfoot- circled ship and left.
0815	1	NE		Booby sp., circled ship.
0818	1	SE		R.T. Tropicbird - circled ship.
0820	15	SE	Flock	Sooty Tern
0822	1	NE		Red-footed Booby Adult
0910	4	N		Sooty Tern
0915	2	N		Sooty Tern
0916	1	N		Sooty Tern
0917	1	SW		Sooty Tern
0925	1	NW		Sooty Tern
1045	2	N		Fairy Tern
1046	1	S		Bird sp? Booby? Albatross ceased following ship at about 1020.
1140	1			Blackfooted Albatross came in from West, came to ship, and continued east.
1200	1			Blackfooted Albatross - different pattern from one of yesterday and this morning. Left 12:15 .
1212	1	SE		Fairy Tern
1217	1	NE		Booby sp?
1433	1			Black-footed Albatross again following ship. Dark rump and dark lower tail coverts. Possibly same bird as 12:00 sighting. 1435 Headed off towards SSW flew back and circled ship
1502	2	E		Gray-backed Tern.
1507	1			WT Tropic Bird
1514	1	N		Tropic bird sp?
1518	1	N SW		Tropic bird sp?
1521	1			Blackfooted Albatross - all dark behind following ship. Left shortly after.
1608	1	N		Tropic bird sp?
1615	35*		Flock	Sooty Tern (feeding)
1710	1			WT Tropicbird - circled ship.
1723	1			Bird sp? lost in sun.
1725	1	W		Harcourt's Storm Petrel - crossing bow at close range.
1735	Observations concluded.			

AT SEA OBSERVATIONS 5 February, 1964
3 days out of Oahu, Hawaiian Is.

Time	Number	Direction	Species and Remarks
0700			Observations begun
0834			School of porpoise 150-200 yds off starboa rd bow. 100 * est.
0852	1	NW	Tropic bird sp? Appeared dusky above as if heavily mottled on back. Most probably immature Red-tail.
0900	1	NW	Frigate bird male Lesser?
0910	1	SW	Shearwater sp.?
0920	1	NE	Phoenix Island Petrel - seemed too brown but had either band across throat or all dark head
1506	1	SW	Petrel sp.
1550	1	N	Pterodroma sp? (could have been light phase Wedgetail.
1602	1	E	R.T. Tropicbird
1613	1	SW	Pterodroma sp?
1625	2	S	Pterodroma sp?
1640	1	N	Phoenix Island Petrel - seemed to be but had rounded tail instead of wedge-shape.
1704	1		Red-footed Booby (immature) following ship
	1		Masked Booby (immature)
1720	1		White-tailed Tropic Bird
1740	1		Red-footed Booby (immature) circled ship.
1815			Observations concluded.

AT SEA OBSERVATIONS 6 Feb., 1964

Time	Number	Direction		Species and Remarks
0710				Observations begun
0747	1	SW		Shearwater-Petrel
0749	1			Blue-faced Booby immature circling ship
0847	1	NW		Small all dark petrel, too erratic to pick up in glasses.
0915	1	SE		Bird sp. Petrel-shearwater group. Appeared smaller than wedgetail with light underparts but was going away when seen and sighting inadequate for identification.
1035	4	SW		Shearwater sp.? flying in rain squall.
1105	1			Bird sp.,
1122	2			Blue faced booby Adult
1200	1			Red-footed Booby adult following ship
1232	2			Red-footed Booby immature following ship.
1325	1	N		Blue-faced Booby - adult
1330	1	Sw		Blue faced Booby - immature
1330	1	SW		Red-footed Booby - immature
1330	2	S		Tern sp.?
1402	2			immature Red-footed Booby
1402	1			immature Blue-faced Booby * These two observations are possibly the same birds as those spotted at 1330
1410	1	NE		Red-tailed Tropicbird
1413	100 *	NE	Flock	Sooty Tern not feeding at edge of rain squall
1413	3	NE		Shearwater sp.,
1458	1	S		Harcourt's Storm Petrel
1510	1	-		immature Blue-faced Booby circling ship
1540	1	NE		Blue-faced Booby.
1550	2	NE		Sooty Tern
1555	1	N		Tropic bird sp?
1558	3	SE		Sooty Tern
	2	NE		Pterodroma sp?
1645	1	NE		Harcourts Storm Petrel
1648	2			Harcourt's Storm Petrel
1655	120*	W	Flock	Sooty Terns - not feeding
	2	SW		Red-footed Booby
1657	1	SE		Pterodroma sp.?
1710	1	NE		Booby sp.?(Maksed?)
1711	1			immature RED-footed Booby - following ship.
1730	1	SE		Harcourts Storm Petrel
				Observations concluded.

AT SEA OBSERVATIONS 7, Feb., 1964

Time	Number	Direction ~~Species~~	Species and Rema rks
o700			Observations begun
0715	1	SW	Red-tailed Tropic Bird
0754	1	S	Blue-faced Booby
0830	1	SW	Pterodroma sp.? (white axillaries, dark head and neck, white belly, and dark back and wings.)
0840	1	NW	Phoenix Is. Petrel ?
0910	1	N	Blue-faced Booby adult (collected)
0945	1	SE	Blue-faced Booby adult
1020	2	SE	Red-footed Booby adult southern form. One collected at about 1100
1045	1	NE	Tropic Bird sp.?
1112	1	NE	W.T. Tropic Bird
1140	1	NE	Harcourt's Storm Petrel
1510	1	SW	Blue-faced Booby adult.
1610	1		Blue-fa ced Booby following ship, adult.
1750			Observations concluded.

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At. Sea Observation
Feb. 8, 1964

Time	Number	Direction	Species and Remarks
0710			Obser vations begun.
0729	1	NW	Pterodroma sp.
0739	1	N	Fairy Tern
0808	2	NW	Maksed Booby Adult
----------			No observations 1130-1155 - Lunch
1225	1	NE	Fairy Tern
1230	1	SE	Harcourt's Storm Petrel
1315	1	NE	Masked Booby
	1	SE	Bulwer's Petrel
1342			Howland Island seen

3 miles off. Booby 2 - 1-1-2 mile seen with glasses but not aked eye. Boobies visible (Proably maximum range) at about 1 mile.

DATE 9 Feb 64

Time at sunrise = Position at sunrise =

Time at sunset = Position at sunset =

Miles traveled from 0000 hours to sunrise =

Miles traveled from sunrise to sunset =

Miles traveled from sunset to 2400 hours =

LYING TO OFF Howland Island

De Poelsen Sun

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.			
2.			
3.			
4.			
5.			
6.			

DATE 10 Feb 64

Time at sunrise = Position at sunrise =

Time at sunset = Position at sunset =

Miles traveled from 0000 hours to sunrise =

Miles traveled from sunrise to sunset =

Miles traveled from sunset to 2400 hours =

LYING TO OFF HOWLAND ISLAND

De Poelsen Sun

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.			
2.			
3.			
4.			
5.			
6.			

DATE 11 Feb 64

Time at sunrise = Position at sunrise =

Time at sunset = Position at sunset =

Miles traveled from 0000 hours to sunrise =

Miles traveled from sunrise to sunset =

Miles traveled from sunset to 2400 hours =

Lying to off Heuland Island
A Gaelleson
Sam

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.			
2.			
3.			
4.			
5.			
6.			

DATE 12 Feb 64

Time at sunrise = Position at sunrise =

Time at sunset = Position at sunset =

Miles traveled from 0000 hours to sunrise =

Miles traveled from sunrise to sunset =

Miles traveled from sunset to 2400 hours =

Lying to off Heuland Island
A Gaelleson Sam

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.			
2.			
3.			
4.			
5.			
6.			

DATE 13 Feb 64

Time at sunrise = Position at sunrise =

Time at sunset 1900X Position at sunset = 00°-48'N 176°-38'W

Miles traveled from 0000 hours to sunrise = 0

Miles traveled from sunset to 2400 hours = 36

Miles traveled from sunset to 2400 hours = 0

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800X	Visual	176°-38'W	00°-48'N
2.	1200	arrived at Baker Island.		
3.				
4.				
5.				
6.				

DATE 14 Feb 64

Time at sunrise 0703 Position at sunrise = 00°-11'N 176°-31'W

Time at sunset 1858 Position at sunset = 0°-55'S 175°-52'W

Miles traveled from 0000 hours to sunrise = 70

Miles traveled from sunset to 2400 hours = 121

Miles traveled from sunset to 2400 hours = 55

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800	Visual	176°-31'W	00°-11'N
2.	1200	Visual	176°-29'W	00°-48'N
3.	2000	Celestial	176°-52'W	00°-58'S
4.				
5.				
6.				

DATE 15 Feb 64

Time at sunrise 0658 Position at sunrise = 02°-48'S 174-50'W

Time at sunset 1859 Position at sunset = 03°-34'S 174°-27'W

Miles traveled from 0000 hours to sunrise = 70

Miles traveled from sunrise to sunset = 118

Miles traveled from sunset to 2400 hours = 65

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800	CELESTIAL	174°-52'W	02°-51'S
2.	1200	DR	174°-32'W	02°-55'S
3.	2000	celestial	174°-27'W	03°-34'S
4.				
5.				
6.				

DATE 16 Feb 64.

Time at sunrise 0648 Position at sunrise = 03°-36'S 174°-07.5'W

Time at sunset 1851 Position at sunset = 03°-36'S 174°-09'W

Miles traveled from 0000 hours to sunrise = 45

Miles traveled from sunrise to sunset = 25

Miles traveled from sunset to 2400 hours = 8

Miles traveled from sunset to 2400 hours = 0

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800	Visual	174°-08'W	03°-35'S
2.	1200	Visual	174°-09'W	03°-36'S
3.	2000	Visual	174°-09'W	03°-35.7'S
4.				
5.				
6.				

DATE 17 FEBRUARY 1964

Time at sunrise 1658 Position at sunrise = 03°36'S 174°09'W

Time at sunset 1857 Position at sunset = 03°-36'S 174°-09'W

Miles traveled from 0000 hours to sunrise = 8

Miles traveled from sunrise to sunset = 10

Miles traveled from sunset to 2400 hours = 7

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800	Visual	174°-08'W	03°-35.9'S
2.	1200	Visual	174°-08'W	03°-35.9'S
3.	2000	Visual	174°-10'W	03°-36' S
4.				
5.				
6.				

DATE 18 FEB 64

Time at sunrise 0644 Position at sunrise = 03°-36'S 174°-09'W

Time at sunset 1857 Position at sunset = 03°-36'S 174°-09'W

Miles traveled from 0000 hours to sunrise = 8

Miles traveled from sunrise to sunset = 10

Miles traveled from sunset to 2400 hours = 7

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800	Visual	174°-09.5'W	03°-36'S
2.	1200	"	174°-11'W	03°-36.5'S
3.	2000	"	174°-09'W	03°-35'S
4.				
5.				
6.				

DATE 19 FEB 1964

Time at sunrise 0644 Position at sunrise = 174°-09'W 03°-36'S

Time at sunset 1857 Position at sunset = 174°-09'W 03°-36'S

Miles traveled from 0000 hours to sunrise = 7

Miles traveled from sunrise to sunset = 18

Miles traveled from sunset to 2400 hours = 9

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800X	VISual	174°-08.7'W	03°-35.9'S
2.	1200X	VISual	174°-08'W	03°-35'S
3.	2000X	VISual	174°-10'W	03°-35.5'S
4.				
5.				
6.				

DATE 20 FEB 64

Time at sunrise 0642 Position at sunrise = 174°— 11'W 03°-37'S

Time at sunset 1850 Position at sunset = 172°— 48'W 03°-36'S

Miles traveled from 0000 hours to sunrise = 7

Miles traveled from sunrise to sunset = 79

Miles traveled from sunset to 2400 hours = 65

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800X	VISual	174°-09'W	03°-36.5'S
2.	1200X	VISual	174°-07'W	03°-38'S
3.	2000X	CELESTIAL	172°-50'W	03°-39.5'S
4.				
5.				
6.				

DATE 21 FEB. 1964

Time at sunrise 0637X Position at sunrise = 03°-35.2'S 171°-32.4'W

Time at sunset 1847X Position at sunset = 03°-35'S 171°-32'W

Miles traveled from 0000 hours to sunrise = 30

Miles traveled from sunrise to sunset = 10

Miles traveled from sunset to 2400 hours = 7

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800X	VISUAL	171°-31.5'W	03°-35'S
2.	1200X	VISUAL	171°-33.8'W	03°-35.2'S
3.	2000X	VISUAL	171°-32.8'W	03°-35.5'S
4.				
5.				
6.				

DATE 22 FEB 1964

Time at sunrise 0633X Position at sunrise = 03°-35.5'S 171°-34.8'W

Time at sunset 1846X Position at sunset = 03°-35'S 171°-35'W

Miles traveled from 0000 hours to sunrise = 10

Miles traveled from sunrise to sunset = 10

Miles traveled from sunset to 2400 hours = 6

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800X	VISUAL	171°-32.6'W	03°-35.1'S
2.	1200X	VISUAL	171°-33.8'W	03°-36.5'S
3.	2000X	VISUAL	171°-30.5'W	03°-35.5'S
4.				
5.				
6.				

DATE 23 Feb 64

Time at sunrise 0636X Position at sunrise = 03°-35'S 171°-36'W

Time at sunset 1843X Position at sunset = 03°-43'S 170-44'W

Miles traveled from 0000 hours to sunrise = 50

Miles traveled from sunrise to sunset = 55

Miles traveled from sunset to 2400 hours = 7

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800 X	Visual	171°-30'W	03°-35'S
2.	1200 X	Visual	170°-42'W	03°-45'S
3.	2000 X	Visual	170°-44'W	03°-43.5'S
4.				
5.				
6.				

DATE 24 Feb 64

Time at sunrise 0630 Position at sunrise = 03°-42.5'S 170°-43.5'W

Time at sunset 1844 Position at sunset = 03°43.2'S 170°-45.1'W

Miles traveled from 0000 hours to sunrise = 7

Miles traveled from sunrise to sunset = 12

Miles traveled from sunset to 2400 hours = 8

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800 X	Visual	170°-44.3'W	03°-44'S
2.	1200 X	Visual	170°-45'W	03°-43.7'S
3.	2000 X	Visual	170°-45'W	03°-44.2'S
4.				
5.				
6.				

Phoenix Island

DATE 25 Feb 64

Time at sunrise 0630 Position at sunrise = 03°-43.1'S 170°-43.3'W

Time at sunset 1844 Position at sunset = 03°-43.4'S 170°-44'W

Miles traveled from 0000 hours to sunrise = 8

Miles traveled from sunrise to sunset = 15

Miles traveled from sunset to 2400 hours = 9

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800X	Visual	170°-46'W	03°-43.5'S
2.	1200X	Visual	170°-46'W	03°-43.8'S
3.	2000X	VISUAL	170°-47'W	03°-43.2'S
4.				
5.				
6.				

DATE 26 Feb 64

Time at sunrise 0631 Position at sunrise = 170°-42'W 03°-43'S

Time at sunset 1842 Position at sunset = 170°-42.5'W 03°-42.5'S

Miles traveled from 0000 hours to sunrise = 9

Miles traveled from sunrise to sunset = 18

Miles traveled from sunset to 2400 hours = 12

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800X	Visual	170°-43'W	03°-43'S
2.	1200X	Visual	170°-42'W	03°-44'S
3.	2000X	Visual	170°-42'W	03°-44'S
4.				
5.				
6.				

0800 underway from Phoenix to Enderbury

DATE 27 Feb 62

Time at sunrise 0630X Position at sunrise = 170°-43.1'W 03°-44.2'S

Time at sunset 1842X Position at sunset = 171°-07'W 03°-08'S

Miles traveled from 0000 hours to sunrise = 12

Miles traveled from sunrise to sunset = 47

Miles traveled from sunset to 2400 hours = 7

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800 X	Visual	170°-43'W	03°-43.2'S
2.	1200 X	VISUAL	171°-00'W	03°-09.1'S
3.	2000 X	Visual	171°-07'W	03°-08'S
4.				
5.				
6.				

DATE 28 FEB 62

Time at sunrise 0632X Position at sunrise = 171°-06.5'W 03°-08'S

Time at sunset 1842X Position at sunset = 171°-06'W 03°-07'S

Miles traveled from 0000 hours to sunrise = 14

Miles traveled from sunrise to sunset = 20

Miles traveled from sunset to 2400 hours = 7

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800 X	Visual	171°-06.5'W	03°-08'S
2.	1200 X	Visual	171°-08'W	03°-07'S
3.	2000 X	Visual	171°-06'W	03°-07'S
4.				
5.				
6.				

(Phoenix Group)
@ Enderbury Island

DATE 29 Feb 64

Time at sunrise 0633X Position at sunrise = 171°-06'W 03°-07'S

Time at sunset 1842X Position at sunset = 171°-07'W 03°-08'S

Miles traveled from 0000 hours to sunrise = 15

Miles traveled from sunrise to sunset = 18

Miles traveled from sunset to 2400 hours = 12

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800X	Visual	171°-08'W	03°-06'S
2.	1200X	Visual	171°-06.4'W	03°-09.2'S
3.	2000X	Visual	171°-09.1'W	03°-08.2'S
4.				
5.				

SI-MNH-955a
Rev. 4-9-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY OBSERVATIONS SUMMARY

DATE: March 4, 1964 Total Minutes: 560 Total Miles _____

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
23	208	9.04	

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
10	3		1	33	4		2	3.66	1.33		2				

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
3		3	3		3	1		1			

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
7	158	2.25	

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
0			

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
0															

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
1	6	6	

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
3	110		0	0	0

SI-MNH-955a
Rev. 4-9-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY OBSERVATIONS SUMMARY

DATE: March 5, 1964 Total Minutes: 615 Total Miles _____

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
23	110	4.78	

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
2				12				5							

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
6	1	4	8	1	5	1.33	1	1.25			

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
11	83	7.54	

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
2	2	1	

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
1				1				1							

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
1	82		0	0	

DATE: March 10 Total Minutes: 525 Total Miles: _____

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
44	214	4.86	

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
10	2			17	4			1.55	2.00						

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
11	0	13	13		13	1.18		1.18			

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
19	93	4.89	

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
10		5	5	89		80	9	8.9		20.0	1.8				

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/Mi.
3	113		1	20	

DATE: March 11 Total Minutes: 623 Total Miles: _____

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
18	29	1.61	

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
9	9	0	0	13	13	0	0	1.44	1.44	0	0				

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
2	0	2	3	0	3	1.5	0	1.5			

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
2	9	4.50	

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
0	0	0	

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
1	0	1	0	1	0	1	0	1.00	0	1.00	0				

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
0	0	0	

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/Mi.
0					

DATE: March 12, 1964 Total Minutes: 640 Total Miles: _____

1. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
8	61	7.63	

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
4	1	0	1	13	1	0	1	3.25	1.00	-	1.00				

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
0	0	0	0	0	0	0	0	0			

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
6	49	8.17	

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
0	0	0	

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
0	0	0	0	0	0	0	0	0	0	0	0				

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
0	0	0	

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/Mi.
2	35		2	35	

5.

6.

(Phoenix Group)

DATE 1 MARCH 64 @ Enderbury Island

Time at sunrise 0632X Position at sunrise = 171°-06.2'W 03°-08.2'S

Time at sunset 1842X Position at sunset = 171°-06'W 03°-08'S

Miles traveled from 0000 hours to sunrise = 17

Miles traveled from sunrise to sunset = 20

Miles traveled from sunset to 2400 hours = 12

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800X	Visual	171°-06'W	03°-08'S
2.	1200X	Visual	171°-10'W	03°-08'S
3.	2000X	Visual	171°-09'W	03°-08'S
4.				
5.				
6.				

DATE 22 MARCH 64

Time at sunrise 0632X Position at sunrise = 171°-06'W 03°-08'S

Time at sunset 1844X Position at sunset = 171°-44'W 02°-50'S

Miles traveled from 0000 hours to sunrise = 24

Miles traveled from sunrise to sunset = 60

Miles traveled from sunset to 2400 hours = 20

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800X	Visual	171°-14'W	03°-06'S
2.	1200X	"	171°-44.8'W	03°-47.8'S
3.	2000X	"	171°-44'W	02°-50'S
4.				
5.				
6.				

DATE _____

Time at sunrise = Position at sunrise =

Time at sunset = Position at sunset =

Miles traveled from 0000 hours to sunrise =

Miles traveled from sunrise to sunset =

Miles traveled from sunset to 2400 hours =

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.				
2.				
3.				
4.				
5.				
6.				

DATE 3 MARCH 64

Time at sunrise 0634X Position at sunrise = 170°-44'W 02°-50'S

Time at sunset 1840X Position at sunset =

Miles traveled from 0000 hours to sunrise = 19

Miles traveled from sunrise to sunset = 50

Miles traveled from sunset to 2400 hours = ↓

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800 X	Visual	171°-46'W	02°-48'S
2.	1200 X	"	171-41.8'W	02°-49.1S
3.				
4.				
5.				
6.				

DATE 4 March 64

Time at sunrise = Position at sunrise =

Time at sunset = Position at sunset =

Miles traveled from 0000 hours to sunrise =

Miles traveled from sunrise to sunset =

Miles traveled from sunset to 2400 hours =

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.				
2.				
3.				
4.				
5.				
6.				

SMITHSONIAN INSTITUTION

WASHINGTON 25, D. C.

At Sea Observations - March 4, 1964

Time	No. Birds	Direction	Remarks
0730			Observations begun
0842	2	N	Bird sp. At long range- Seen only by member of crew
0915	2	W	Sooty Tern
1001	2	N	Sooty Tern
1015	1	E	Sooty Tern
1113	1	N	Storm petrel? Very small, dark, rapid erratic flight low over surface of water.
1226	1	E	Puffinus sp? Probably Wedgetail. Flapped occasionally Dark above and below. Wing pattern like WT.
1235	Flock		Not feeding
	10	SW	Sooty and Common Noddy. At least 5 Sooty.
	2	N	Puffinus sp. WT?
1236	1	S	Common Noddy
1240	1	SE	Fregata sp? Very high, 1000 ft. plus.
1303	1	E	Harcourt's Storm Petrel.
1310	1	S	Puffinus sp. WT? All Puffinus listed above have been dark above and below.
1345	Flock		Apparently not feeding.
	1		Fairy Tern
	8		Puffinus sp? WT?
	70		Tern - Sooty and Noddy
	6		Fregata sp.
1342	1	S	WT Tropicbird. Bill light yellowish.
1408	1	N	Puffinus sp. Prob. WT.
1432	1	S	WT TB
1447	1	N	WT TB
1510	2	N	Wedgetail
1514	Flock		
	15	E	Wedgetail (14 dark phase, 1 light phase)
	70	E	Sooty Tern (not feeding)
	1	E	Fairy Tern
1517	1	E	Harcourt's Storm Petrel
1530	1	S	Wedgetail
1745	1	SW	Petrel Sp.
1752	2	E	Probable Bulwer Petrel. All dark, Bulwer size, short glides.
1756	1	SE	Wedgetail.
1820			Watch secured.

SMITHSONIAN INSTITUTION

WASHINGTON 25, D. C.

At Sea Observatio ns - March 5, 1964

Time	Number	Direction	Remarks
0730			Observations begun
0809	2	W SE	~~Bird sp.~~ Puffinus sp. prob. WT
0832	1	W	Bird sp.
0837	1	E	Bird sp.
0858	1		Ruddy Turnstone - circled ship 7 or 8 times.
0907	3	S	WT TB
0910	1	S	WT TB
0935	1	E	Fairy Tern
0937	1	E	RT TB Tail feathers not seen, pure white upperparts.
0940	2	E	Tropic bird sp.
0945	Flock		
	2	NE	Booby sp?
	55	NE	Fairy Tern
	10	NE	Shearwater sp? Not feeding
	10	NE	Common Noddy
	5	NE	Sooty Tern
0958	1	E	Fairy Tern
1004	1	S	Fairy Tern
1005	2	SE	Fairy Tern
1012	1	E	Fairy Tern
1016	2	E	Fairy Tern
1034	1	S	Fairy Tern
1056	1	SE	Fairy Tern
1138	1	-	Fairy Tern
1215	1	N	Wt TB
1520			School of small porpoise seen.
1529	2		Tern sp?
1705	1		Ruddy turnstone
1725	1	E	Fairy Tern
1735	1	SW	W.T. T.B.
1815			Watch secured.

AT 0900X Departed Pago Pago, AMERICAN SAMOA. S. E. Yoemans Sm1

DATE 10 March 64

Time at sunrise = Position at sunrise =

Time at sunset 1825X Position at sunset = 12°-46'S 169-11'W

Miles traveled from 0000 hours to sunrise = NONE

Miles traveled from sunrise to sunset = 118

Miles traveled from sunset to 2400 hours = 67

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	1200X	Visual & DR	170°-30'W	14°-00'S
2.	1856X	Celestial	169°-11'W	12°-46'S
3.				
4.				
5.				
6.				

DATE 11 March 64

Time at sunrise 0615 Position at sunrise = 09-20'S 166-25'W

Time at sunset 1821 Position at sunset = 09°-40'S 166°-20'W

Miles traveled from 0000 hours to sunrise = 63

Miles traveled from sunrise to sunset = 156

Miles traveled from sunset to 2400 hours = 68.5

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800X	DR	167°-38'W	10°-47'S
2.	1200X	Celestial	167°-10'W	10°-23.5'S
3.	2000X	Celestial	165°-55.5'W	09°-02'S
4.				
5.				
6.				

ALL TIMES +11 (XRAY)

S. E. Yoemans Sm1
U.S.S. LIPAN ATF 85

ENROUTE FROM PAGO PAGO TO JARVIS ISLAND.

DATE 12 MARCH 64

Time at sunrise 0605X Position at sunrise = 164°-55'W 07°-00'S

Time at sunset 1808 Position at sunset = 163°-12'W 04°-20'S

Miles traveled from 0000 hours to sunrise = 75

Miles traveled from sunrise to sunset = 160

Miles traveled from sunset to 2400 hours = 89

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800X	CELESTIAL	164°-53'W	06°-55'S.
2.	1200X	CELESTIAL	164°-19.5'W	06°-04.4'S
3.	2000X	CELESTIAL	163°-16'W	04°-26.5'S
4.				
5.				
6.				

DATE 13 MARCH 1964

Time at sunrise 0553X Position at sunrise = 162°-12'W 02°-20'S

Time at sunset 1755X Position at sunset = ~~161°~~ 160 -40'W 01°-03'S

Miles traveled from 0000 hours to sunrise = 66

Miles traveled from sunrise to sunset = 156

Miles traveled from sunset to 2400 hours = 60

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800X	CELESTIAL	162°-16'W	02°-30'S
2.	1200X	CELESTIAL XDR	161°-37'W	01°-55.5'S
3.	2000X	Celestial	160°-41.5'W	00°-48.5'S
4.				
5.				
6.				

ALL TIMES +11 XRAY.

J E Jackson Sm1
USS WIPAN ATF 85

DATE 14 MARCH 64

Time at sunrise 0546X Position at sunrise = 160°-02'W 00°-23'S

Time at sunset 1752X Position at sunset = 160°-02'W 00°-22'S

Miles traveled from 0000 hours to sunrise = 42

Miles traveled from sunrise to sunset = 40

Miles traveled from sunset to 2400 hours = 20

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800X	VISUAL	160°-02'W	00°-23'S
2.	1200X	VISUAL	160°-03'W	00°-24'S
3.	2000X	VISUAL & RADAR	160°-03'W	00°-24'S
4.				
5.				
6.				

DATE 15 MARCH 64

Time at sunrise 0546X Position at sunrise = 160°-02'W / 00°-23'S

Time at sunset 1752 Position at sunset = 160°-04'W / 00°-22'S

Miles traveled from 0000 hours to sunrise = 22

Miles traveled from sunrise to sunset = 48

Miles traveled from sunset to 2400 hours = 24

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800X	VISUAL	160°-03'W	00°-23'S
2.	1200X	VISUAL	160°-02'W	00°-23'S
3.	2000X	RADAR	160°-06'W	00°-24'S
4.				
5.				
6.				

ALL TIMES +11 XRAY.
AT SARNIS ISLAND.
D.E. Coleman Lt

SMITHSONIAN INSTITUTION

WASHINGTON 25, D. C.

At Sea Observations - March 10

Time	Number	Direction	Species and Remarks
0930			Left Pago Pago
0930	1		Common Noddy
	1		Fairy Tern
0935	1		Water very calm, hardly a wind ripple on (Brown Booby) its surface, When water is like this the brown booby fly very low over the water 2-5 feet, with a heavy laborious flight.
0941	5		Common Noddy
	1		Fairy Tern
0944	1		Common Noddy
0950	1		Fairy Tern
0952	1		Common Noddy
	2		Brown Booby
	1		Shearwater sp.?
0953	1		Fairy Tern - actively feeding at surface
	5		Common Noddy - actively feeding at surface
0953	20	Flock	Common Noddy actively feeding
0956	1		Common Noddy
0959	1		Shearwater sp
	3		Common Noddy
1003	1		Fairy Tern
1012	3	NE	Shearwater sp.
	6	NE	Common Noddy
	1	NE	Brown Booby
1015	12	NE	Common Noddy
	1	NE	Shearwater sp.
1020	3		Wedgetail
	2		Red-footed Booby
1023	8		Common Noddy
1024	1		Fairy Tern
1030	3	E	Brown Booby
	1	E	Shearwater sp.
1033	1	w	Fairy Tern
1035	1	E	Common Noddy
1045	1	W	W.T. Tropic Bird
1055	2	E	Brown Booby
1055	1	E	Fairy Tern
1102	1		W.T. Tropic Bird sitting in water.
	2		Shearwater sp.?
1105	3	NE	W.T. Tropicbird
1105	2	NE	Audubon's Shearwater
1142	Flock		
	6	NE	Red-footed Booby
	2	NE	Fairy Tern
	15	NE	Tern sp?
1145	2	N	Fairy Tern
	1	NE	Shea rwater sp?
1147	Flock		
	70		Red-footed Booby- at least 2 northern phase.

SMITHSONIAN INSTITUTION

WASHINGTON 25, D. C.

At-Sea-Observations March 10 cont.

1148	1	W	Bird sp.
1153	1		White-tailed Tropic Bird on water
1157	1	N	Wedge tail
1213	1	sw	Red-footed Booby
1220	1		Red-footed Booby
1222	1		W.T. Tropic Bird (circled ship)
1237	1		W.T. Tropic Bird (circled ship)
1258	1		W.T. Tropic Bird
1330	1	N	Wedge-tail
1337	1		W.T. Tropic Bird
1402	1	NE	W.T. Tropic Bird
1404	1	SE	W.T. Tropic Bird
1455	1	E	W.T. Tropic Bird
1505	2	NE	Fairy Tern
1540	1	NE	Bird sp? white.
1815			Observations concluded.

SMITHSONIAN INSTITUTION

WASHINGTON 25, D. C.

At-Sea-Observations - March 11, 1964

Ship course - NE, Wind - N-15-20 mph. Sky - threatening, heavy cumulonimbus to N, rain squalls.

Time	Number	Direction	Species and Remarks
0730			Observations begun, sea slightly choppy clouds 8/10
0800	2	SW	Wedgetail
0825	1		Bird sp.
0830			Visibility 0, heavy rain and wind. Observations discontinued until clearing at 0845.
0900	2	NE	W.T. Tropicbird
0905	1	NE	Bird sp.
0925	1		W.T. Tropicbird
0926	3	NE	Noddy Tern
0945	1		Bird sp.
1043	1	NE	Wedgetail
1044	1	E	Wedgetail
1159	2	E	Wedgetail
1245	1	Circling	Red-footed Booby Immature
1315	1	E	Wedgetail
1317	1	SE	Wedgetail
1318	1	E	Wedgetail
1324	1	N	Wedgetail
1343	3	N	Wedgetail
1645	4	NE	Sooty Tern
	2	NE	Fairy Tern
1808			Watch secured.

At-Sea observations - March 12, 1964

Wind E - 15-20 mph. Ship course NNE Clouds cumulus 2/10
Sea-Moderate, small white caps.

***

Time	Birds	Direction		Species and Remarks
0730				Observations begun
0810	2			Sooty Terns (very far out)
0812	14	N		Sooty Terns
	1	N		Wedgetail
0830	1	N		Bulwer's Petrel
1210	10	W	Flock	Shearwater sp. probably WT. feeding
	20	W		Sooty Tern feeding
1250	2	SW		Fairy Tern
	2	NE		Noddy (porb. Hawaaian)
1310	1	NW		Storm Petrel sp. (had white patch at base of tail on upper side of bird but couldn't see if it continued around. Prob. Harcourt's)
1315	3	NE		Sooty Tern
1330	2		Flock	Fairy Tern feeding
	3			Sooty Tern feeding
1810				Watch secured.

At-Sea-Observations - Feb. 13, 1964

Time ~~Number~~	Direction	Number ~~Time~~	Species and Remarks
0730			Watch begun.
0800	SW	5	Sooty Tern
0800	SW	2	Fregata sp.
0803	NE	1	intermediate phase Wedgetail
0935	NW	5	Sooty Tern
1003		2	Fairy Tern
1020	E	1	Harcourt's Storm Petrel
1030	NW	1	Bulwers Petrel
1150	~~1~~	1	Fairy Tern
1203		1	Hawaiian Noddy with patch of white feathers about 1 inch by 1 1/2 inches on the left wing, about in the middle.
1235		1	Sooty Tern
1305	Flock		Over a large school (200 *) of porpoise.
	E	2	Wedgetail
		15	Sooty Tern No birds in flock observed feeding.
		1	Fairy Tern A small form of porpoise 305 feet long. Many were accompanied by young. One WTS kept getting up and sitting down on the water for periods of about two minutes apiece.
1340		1	R.T. Tropic Bird
		2	Sooty Tern
1354	SW	2	Sooty Tern
1357		2	Sooty Tern
1407	S	16	Sooty Tern
1425	SSW	14	Sooty Tern not actively feeding
1435	SW	2	Sooty Tern
1445	NE	2	Sooty Tern
1455	W	1	Sooty Tern
1505	N	2	Sooty Tern
1515	NNE	1	Fregata sp.
1540	SW	4	Sooty Tern
1542	SW	1	Sooty Tern
1543	S	1	Blue faced Booby (on water.)
1544	±	1	imm. Red-footed Booby (circled ship)
1545	E	4	Sooty Tern
1605	SW	1	Sooty Tern
1620	SE	1	Sooty Tern
1625	SW	1	Fregata sp. distant.
1630	SW	6	Sooty Tern
1632	SW	1	Sooty Tern
1630	NE	Porpoiase	about 200 in 2 groups, some small ones observed. Appeared light on underside, brownish on top. When ship approached both groups headed SE
1650 F	NE	5	Fregata sp (not actively feeding)
		35	Sooty Tern " " "
1653	NE	2	Great Frigate chasing Wedgetail
1705	SW	1	Sooty Tern
1707	NE	6	Sooty Tern
1735	NE	1	Sooty Tern
1738	E	1	Harcourt's Storm Petrel.
1800			Watch secured.
1810			The Blue faced Booby seen.

AT JARVIS ISLAND.

DATE 16 MARCH 64

Time at sunrise 0546X Position at sunrise = 160°-05'W 00°-24'S

Time at sunset 1752X Position at sunset = 160°-04'W 00°-23'S

Miles traveled from 0000 hours to sunrise = 30

Miles traveled from sunrise to sunset = 35

Miles traveled from sunset to 2400 hours = 24

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800 X	VISUAL	160°-04'W	00°-23'S
2.	1200 X	VISUAL	160°-03.1'W	00°-23.1'S
3.	2000 X	VISUAL & RADAR.	160°-06.2'W	00°-23.7'S
4.				
5.				
6.				

DATE 17 MARCH 1964

Time at sunrise 0545X Position at sunrise = 160°-04'W 00°-23'S

Time at sunset 1752X Position at sunset = 160°-07'W 00°-22'S

Miles traveled from 0000 hours to sunrise = 25

Miles traveled from sunrise to sunset = 35

Miles traveled from sunset to 2400 hours = 20

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800X	VISUAL & RADAR	160°-04'W	00°-21.8'S
2.	1200X	VISUAL	160°-08'W	00°-21'S
3.	2000X	VISUAL	160°-03'W	000-24'S
4.				
5.				
6.				

ALL TIMES +11 (XRAY)

[illegible] Sn/
USS LIPAN ATF85.

AT Jarvis Island

DATE 18 MARCH 64

Time at sunrise 0545X Position at sunrise = 160°-03'W 00°-22'S

Time at sunset 1750X Position at sunset = 160°-07'W 00°-23'S

Miles traveled from 0000 hours to sunrise = 35

Miles traveled from sunrise to sunset = 35

Miles traveled from sunset to 2400 hours = 30

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800X	Visual	160°-03'W	00°-23'S
2.	1200X	Visual	160°-03'W	00°-23'S
3.	2000X	Visual	160°-05'W	00°-23'S
4.				
5.				
6.				

DATE 19 MARCH 64

Time at sunrise 0545X Position at sunrise = 160°-03'W 00°-23'S at 1300 U/W FWS JARVIS TO XMAS IS.

Time at sunset 1750X Position at sunset =

Miles traveled from 0000 hours to sunrise =

Miles traveled from sunrise to sunset =

Miles traveled from sunset to 2400 hours =

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800X	Visual	160°-05'W	00°-23'S
2.	1200X	Visual	160°-05'W	00°-23'S
3.	2000X	DR	158°-55'W	00°-42'N
4.				
5.				
6.				

all times + 11 XMAS

J Jackson SM1

AT 0000 Set ALL clock AHEAD 1 HOUR to
+10 WHISKEY ZONE TIME

DATE 20 March 64

Time at sunrise 0636 Position at sunrise = 157°44'W 02°02'N

Time at sunset 1945 Position at sunset =

Miles traveled from 0000 hours to sunrise =

Miles traveled from sunrise to sunset =

Miles traveled from sunset to 2400 hours =

AT 0900 ARRIVED XMAS ISLAND

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800W	DR.	157°54'W	01°55'N
2.				
3.				
4.				
5.				
6.				

AT 1200 Set clocks ahead 1 HOUR to
+9 VICTOR TIME ZONE.

DeDeeuson SM1

DATE 21 March 64

Time at sunrise 0733 Position at sunrise = @ XMAS ISLAND

Time at sunset 1942 Position at sunset = @ " "

Miles traveled from 0000 hours to sunrise =

Miles traveled from sunrise to sunset =

Miles traveled from sunset to 2400 hours =

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.				
2.				
3.				
4.				
5.				
6.				

DeDeeuson SM1
LPAO ATT 85

DATE 22 March 64

Time at sunrise 0733 Position at sunrise = @ Xmas Island

Time at sunset 1942 Position at sunset = " " "

Miles traveled from 0000 hours to sunrise =

Miles traveled from sunrise to sunset =

Miles traveled from sunset to 2400 hours =

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.				
2.				
3.				
4.				
5.				
6.				

DATE 23 March 64

Time at sunrise 0733 Position at sunrise = AT Xmas Island

Time at sunset 1942 Position at sunset =

Miles traveled from 0000 hours to sunrise =

Miles traveled from sunrise to sunset =

Miles traveled from sunset to 2400 hours =

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.				
2.				
3.				
4.				
5.				
6.				

DATE 24 March 64

Time at sunrise 0733 Position at sunrise = At Xmas Island

Time at sunset 1942 Position at sunset = " " "

Miles traveled from 0000 hours to sunrise =

Miles traveled from sunrise to sunset =

Miles traveled from sunset to 2400 hours =

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	~~0800~~			
2.				
3.				
4.				
5.				
6.				

[illegible] USN
LIPAN ATF 85

DATE 25 March 64

Time at sunrise 0640 Position at sunrise = 03°30'N 159.00' W

Time at sunset 1844 Position at sunset = Fanning Islands

Miles traveled from 0000 hours to sunrise = 90

Miles traveled from sunrise to sunset = 25

Miles traveled from sunset to 2400 hours = 0

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800	Celestial	159°-07'W	03°-33' N
2.				
3.				
4.				
5.				
6.				

DATE 26 March 64

Time at sunrise 0640 Position at sunrise = at Fanning Island

Time at sunset 1844 Position at sunset = " " "

Miles traveled from 0000 hours to sunrise = 0

Miles traveled from sunrise to sunset = 0

Miles traveled from sunset to 2400 hours = 0

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.			
2.			
3.			
4.			
5.			
6.			

DATE 27 March 64

Time at sunrise 0640 Position at sunrise = AT FANNING ISLAND

Time at sunset 1844 Position at sunset = " " "

Miles traveled from 0000 hours to sunrise = 0

Miles traveled from sunrise to sunset = 0

Miles traveled from sunset to 2400 hours = 10

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1. Underway Steaming off Fanning for			
2. Tidal wave alert.			
3.			
4.			
5.			
6.			

DATE 28 MARCH 44

Time at sunrise 0640 Position at sunrise = 159°-30'W 03°-50'N

Time at sunset 1844 Position at sunset = anchored Fanning Isl.

Miles traveled from 0000 hours to sunrise = 40

Miles traveled from sunrise to sunset = 10

Miles traveled from sunset to 2400 hours = 0

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800W	RADAR	159.30'W	03°-50'N
2.				
3.				
4.				
5.				
6.				

DATE 29 March 44

Time at sunrise 0641 Position at sunrise = 160°-27'W 04°-42'N

Time at sunset 1848 Position at sunset = 160°-27'W 04°-42'N

Miles traveled from 0000 hours to sunrise = 53

Miles traveled from sunrise to sunset = 12

Miles traveled from sunset to 2400 hours = 30

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800W	RADAR	160°-24'W	04°-43.6'N
2.	1200	RADAR & VISUAL	160°-26'W	04°-42.8'N
3.	2000	RADAR & VISUAL	160°-26'W	04°-40'N
4.				
5.				
6.				

(at Washington Island. Ellis Grp.)

all times +10 WHISKEY

D E Jackson Sun

DATE 30 MARCH 64

Time at sunrise 0641 Position at sunrise = 160°-26'W 04°-40'N

Time at sunset 1851 Position at sunset = ~~28~~

Miles traveled from 0000 hours to sunrise = 28

Miles traveled from sunrise to sunset =

Miles traveled from sunset to 2400 hours =

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800	visual.	160°-34.1'W	04°-41.1'N
2.	1200			
3.				
4.				
5.				
6.	Cell Times + 10 Whiskey			

DATE _____

Time at sunrise = Position at sunrise =

Time at sunset = Position at sunset =

Miles traveled from 0000 hours to sunrise =

Miles traveled from sunrise to sunset =

Miles traveled from sunset to 2400 hours =

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.				
2.				
3.				
4.				
5.				
6.				

Ack 1

SI-MNH-955a
Rev. 4-9-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY OBSERVATIONS SUMMARY

DATE: April 6, 1964 Total Minutes: 620 Total Miles _____

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
30	47	1.56	

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
21	4		1	31	5		1	1.47	1.25		1				

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
1	1		1	1		1	1				

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
3	8	2.66	

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
0			

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
1	1			1	1			1	1						

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
0			

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
0					

DATE 4 APRIL 1964 @ 0845 U/W FOR PEARL HARBOR

Time at sunrise 0647 Position at sunrise = at SUNRISE AT PALMYRA ISLAND

Time at sunset 1859 Position at sunset = 08°-00'N 161°-38'W

Miles traveled from 0000 hours to sunrise = 0

Miles traveled from sunrise to sunset = 108

Miles traveled from sunset to 2400 hours = 150

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0900W	Visual	162°-10'W	05°-55'N
2.	1200W	LORAN	162°-00'W	06°-38'N
3.	2000W	LORAN	161°-35'W	08°-06'N
4.				
5.				
6.				

all times +10 whiskey

DATE 5 APRIL 1964

Time at sunrise 0639 Position at sunrise = 10°-20'N 160°-54'W

Time at sunset 1853 Position at sunset = 12°-30'N 160-00'W

Miles traveled from 0000 hours to sunrise = 112

Miles traveled from sunrise to sunset = 158

Miles traveled from sunset to 2400 hours = 75

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800	LORAN	160°-47.5'W	10°-29.5'N
2.	1200	LORAN + celestial	160°-40'W	11°-27.5'N
3.	2000	Celestial	160°-17'W	13°-11.5'N
4.				
5.				
6.				

all times whiskey.

DATE 6 APRIL 1964

Time at sunrise 0632 Position at sunrise = 159°-30'W 15°30'N

Time at sunset 1851 Position at sunset = 158°-40'W 17°-50'N

Miles traveled from 0000 hours to sunrise = 85

Miles traveled from sunrise to sunset = 150

Miles traveled from sunset to 2400 hours = 65

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800W	LORAN	159° 30'W	15°-36'W
2.	1200N	LORAN	159°-15'W	16°-26'N
3.	2000W	LORAN celestial	158°-24'W	18°-08.5'N
4.				
5.				
6.				

all times ±10 minutes

DATE 7 April 64

Time at sunrise 0621 Position at sunrise = 158°-10'W 20°-17'N

Time at sunset = at Pearl Harbor Position at sunset =

Miles traveled from 0000 hours to sunrise = 78

Miles traveled from sunrise to sunset = 66

Miles traveled from sunset to 2400 hours = Ø

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0800	LORAN	158°-04'W	20° 33'N
2.	13 arrive Pearl Harbor			
3.				
4.				
5.				
6.				

ALL PAU

[illegible] Sgt
OOS Hqs AFBS

At Sea Observations - April 6, 1964

Time	Number	Direction	Species and Remarks
0800	1	NNE	Storm Petrel species
0815	1	N	Wedge-tailed Shearwater
0820	1	NNW	Shearwater sp.
0845	1	N	Shearwater sp.-distant in rain squall
0855	2	N	Shearwater sp. - dark brown on back, golden brown on underparts; wings with dark edgings - silvery in center. Heavy-bodied. Sooty?
0915			Visibility improving-clearing rapidly.
0915	1	N	Shearwater sp. - straight ahead and distant
0935	1	NW	Shearwater sp.-distant
0945	1		Bird sp - distant, on the horizon.
1030	1	N	Shearwater sp.-distant
1040	2	N	Shearwater sp.
1045	1	N	Shearwater sp. - poor light (rain squalls)
1047	1	N	Shearwater sp. - poor light
1050	1	N	Shearwater sp. - poor light
1053	1	N	Bulwer's Petrel
1105	1	N	Shearwater sp.
1110	2	N	Jaeger sp. (prob. Pomarine)
	(1120-1210 no observations - noon meal)		
1220	1	N	Shearwater sp.
1230	5	N	Shearwater sp.
1232	1	N	Shearwater sp.
1300	3	N	Shearwater sp.
1305	2	NE	Sooty Tern
	1	N	Wedge-tailed Shearwater
1320	1	SE	Unk sp. White breast and body, light wing linings sharp demarcation between light breast and dark throat. Some white areas on the head. The white portions dull and creamy. The back brown. A large, chunky bird.
1335	1	NE	Red-tailed Tropicbird
1350	1	N	Wedge-tailed Shearwater
1415	4	NE	Sooty Tern
1418	2	N	Wedge-tailed Shearwater
1430	2	N	Sooty Tern
1445	1	E	Bird sp - distant
	1	N	Shearwater sp. - distant
1530	1	NE	Blue-faced Booby (adult)
1630	1	NE	Bird species seen by lookout-distant.
	(observations continued to 1710)		
1710			Watch secured.

At Sea Observations - April 6, 1964

Time	Number	Direction	Species and Remarks
0800	[illegible]	NNE	Storm Petrel species
0815	1	N	Wedge-tailed Shearwater
0820	1	NNW	Shearwater sp.
0845	1	N	Shearwater sp.-distant in rain squall
0855	2	N	Shearwater sp. - dark brown on back, golden brown on underparts; wings with dark edgings - silvery in center. Heavy-bodied.
0915			Visibility improving-clearing rapidly.
0915	1	N	Shearwater sp. - straight ahead and distant
0935	1	NW	Shearwater sp.-distant
0945	1		Bird sp - distant, on the horizon.
1030	1	N	Shearwater sp.-distant
1040	2	N	Shearwater sp.
1045	1	N	Shearwater sp. - poor light (rain squalls)
1047	1	N	Shearwater sp. - poor light
1050	1	N	Shearwater sp. - poor light
1053	1	N	Bulwer's Petrel
1105	1	N	Shearwater sp.
1110	2	N	Jaeger sp. (prob. Pomarine)
	(1120-1210 no observations - noon meal)		
1220	1	N	Shearwater sp.
1230	5	N	Shearwater sp.
1232	1	N	Shearwater sp.
1300	3	N	Shearwater sp.
1305	2	NE	Sooty Tern
	1	N	Wedge-tailed Shearwater
1320	1	SE	Unk sp. White breast and body, light wing linings sharp demarcation between light breast and dark throat. Some white areas on the head. The white portions dull and creamy. The back brown. A large, chunky bird.
1335	1	NE	Red-tailed Tropicbird
1350	1	N	Wedge-tailed Shearwater
1415	4	NE	Sooty Tern
1418	2	N	Wedge-tailed Shearwater
1430	2	N	Sooty Tern
1445	1	E	Bird sp - distant
	1	N	Shearwater sp. - distant
1530	1	NE	Blue-faced Booby (adult)
1630	1	NE	Bird species seen by lookout-distant.
	(observations continued to 1710)		
1710			Watch secured.

Date: ~~7~~ 3, Feb; 1964
Observers:

Weather: Sunny, warm; little wind; sea calm - Small cumulus formations around horizon -

Time	No.	Direction	Species
9:30	1		BBooby - on buoy
9:40	2	→ N	Jaeger sp
9:44	1	→ N	Pomarine Jaeger
9:48	1	→ SW	Jaeger sp.
9:50	3	→ SW	" " (Group of 2 + group of 1
9:53	2	—	" " sitting in wate
10:00	1	— S	" "
10:01	1	— S	" "
10:02	2	— S	" "
10:10	1		BF. Alb. - following ship
10:17	1	— S	Jaeger sp
10:21	1	- SE	Pomarine Jaeger
10:29	2	— SE	Jaeger sp - following ship's path
10:32	1	- SE	Pomarine Jaeger lady in water
10:40	1	- SE	Jaeger sp.
10:41	1	— E	Pomarine Jaeger crossing bow
10:45	1	— SE	Jaeger sp
10:51	1	— SE	Jaeger sp
11:03	1	— SW	Jaeger sp DP
11:03	1	— SW	Jaeger sp LP
11:03	1	— SW	Jaeger sp. ~~LP~~ DP
11:04	4		flight on Jaeger on water 3LP 1DP
11:12	1	— S	Jaeger sp.?
11:25	1	— SW	Jaeger sp?. LP
11:29	1	— SW	Jaeger sp?
11:38	8	- N	Jaeger sp? following destroyer
	2	- N	B.F. Albatross
11:40	1	- NE	Jaeger sp?

45 137

6 73

6

6 9

1216

6 ⟌73

6

13

12

10

[illegible]

44

1830

0930

66

346

[illegible]

520

3.04

45 ⟌137

2 135

200

180

Time	No.	Direction	Species
11:45	2	E	?
~~8~~ 11:55			quit for lunch
12:15			start
1:48	1	N	R.F. Booby (southern type E)
2:15	1		B.F. albatross
2:40	5	N	Jaeger sp. (Light phase)
~~3:30~~			
1618	2	W	Bird sp.?
	~~7~~		
1630	(F) 35	— NE	Sooty Tern - (several young - some actively feeding)
	1	— NE	WT - near flock of Sooty Tern
1638	1		Bird sp.? (white?)
1639	1		Bird sp.? Tropicbird -?
1650	2		FT
	2-3	Huh	Shearwater sp.
	1	— NE	Tropic-bird sp.
	20±		Tern sp.? Prob. Sooty
1725			~~Albatross ceased following ship~~
1730	30 ±		Sooty Tern - (actively feeding)
1735	11	N	Sooty Terns (in flock could be feed)
1736	2.		Sooty terns -
1815	1	SW	Pterodroma sp.?
1830			closed - albatross seen at 2:15 still following.
1828	2	SW	→ Sooty Tern

4 Feb, 1964 — ATF Lipan

Time	No	Direction	species
7:00			watch started - Blackfooted
	1		albatross still following - almost
			certainly same one as last night.
7:24	1	NE	R-f. Booby - circled ship
8:15	1	NE	1 [redacted] Booby sp. - followed ship
8:18	1	SE	R-t. Tropicbird - circled ship
8:20	15	SE	Sooty Terns
8:22	1	NE	Red-footed Booby - Adult
9:10	4	N	Sooty Tern
9:15	2	N	Sooty Tern
9:16	1	N	Sooty Tern
9:17	1	SW	Sooty Tern
9:25	1	NW	Sooty Tern
10:45	2	N	Fairy Tern
10:46	1	S	Bird sp? Booby?
			Albatross ceased following ship
			at about 10:20
11:40	1		BF albatross came in from West
			come to ship and continued east
12:00	1		Black-footed albatross - different
			pattern from one of yesterday
			and this morning - left 12:15
12:12	1	SE	Hairy Tern
12:17	1	NE	1 Booby sp?
1433	1		Black-footed Albatross again following
			ship - Dark rump + dark lower tail
			coverts - Possibly same bird as 12:00
			entry - 1435 - Headed off towards
			SSW (Tem bch + direct ship -

Feb. 4

15.02	2	E	Gray backed terns
15:07	1		W. Tailed Tropic bird
15:14	1	N	Tropic bird
15:18	1	SW	Tropic bird
15:21	1		B. F albatross all dark behind following ship – left shortly after
1608	1	N	Tropic bird
16:15	35+		Sooty terns (feeding)
17:10	1		W.T. Tropic bird – circled ship
17:23	1		Bulwer's – lost in sun –
17:25	1	W	Harcourt's Storm Petrel
17:35			sign out

5 Feb. 1963

07.00			Observations begun
08:34			School of porpoise 150 - 200 yds off starboard bow. 100± est.
0852	1	NW	Tropic bird sp.? Appeared dusky above as if heavily mottled on back. Most probably immature Red-tail -
0900	1	NW	Frigate-bird ♂ Lesser?
0910	1	SW	Shearwater sp?
0920	1	NE	Phoenix Is. Petrel - seemed too brown but had either band across throat or all dark head
1506	1	SW	Petrel sp?
1550	1	N	Pterodroma sp? (could have been a light phase wedgetail)
1602	1	E	R.T. Tropic bird
1613	1	SW	Pterodroma sp?
1623	1	SW	Pterodroma sp?
1625	2	S	Pterodroma sp?
1640	1	N.	Phoenix Island Petrel - seemed to be but had rounded tail instead of wedge-shape
1704	1		Red-footed Booby - following ship
	1		immature ~~ship~~. Blue faced booby
1720	1		White tailed tropic bird
1740	1		Red foot - immature circled ship

6 Feb, 1964

Time	No	Direction	
07:10			Started observations
0747	1	SW	Shearwater - Petrel
0749	1		Blue-faced Booby - Im. - circling ship
0847	1	NW	Small all dark petrel - too erratic to pick up in glasses.
0915	1	SE	Bird sp. - Petrel - Shearwater group - appeared smaller than wedgetail with light underparts but was going away when seen and sighting inadequate for identification -
1035	4	SW	Shearwater species - flying in rain squall
1105	1		Bird sp?
1122	2		Blue-faced Booby - Adult following ship?
1200	1		Red-footed Booby - Ad - following
1232	2		Red-footed Booby - Im. - "
1325	1	N	Blue-faced Booby - Adult
1330	1	SW	" " " - Imm.
"	1	SW	Red-footed Booby - Imm.
"	2	S	Tern species
1402	2		Imm. Red-footed Booby } poss. same
1402	1		Imm. Blue-faced Booby } as 1330 birds
1410	1	NE	Red-tailed Tropicbird.
1413	100	NE	Sooty Terns - not feeding } flying at edge of rain squall
1413	3	NE	Shearwater sp.
1458	1	S	Harcourt's St. Petrel
1510	1	—	Imm. Blue-f. Booby - circling ship
1540	1	NE	Blue-faced Booby

$$33\overline{)266.00}\ \ 8.06$$

$$\begin{array}{r} 264 \\ \hline 200 \\ 198 \end{array}$$

$$2\overline{)8}\ \ 1.1$$

$$\begin{array}{r} 7 \\ \hline 10 \\ 7 \\ \hline 30 \end{array}$$

$$7\overline{)9.00}\ \ 1.29$$

$$\begin{array}{r} 7 \\ \hline 20 \\ 14 \\ \hline 60 \end{array}$$

$$11\overline{)18.000}\ \ 1.63$$

$$\begin{array}{r} 11 \\ \hline 70 \\ 66 \\ \hline 40 \\ 33 \end{array}$$

$$5\overline{)27}\ \ 5\tfrac{4}{5}$$

$$\begin{array}{r} 20 \\ \hline 27 \\ 25 \\ \hline 20 \end{array}$$

6 Feb, 1964

Time	#	direction	
1550	2	NE	Sooty terns
1555	1	N	Tropicbird sp?
1558	3	SE	Sooty terns
	2.	NE	Pterodroma sp?
1645	1	NE	Harcourts S. petrel
1648	2		~~Pterodroma sp~~ " " "
1655	120+	W	sooty terns
	2.	SW	R.F. Booby ~~sp?~~ ~~(probably R.F.)~~
1657	1	SE	Pterodroma sp.?
1710	1	NE	Booby sp? (could have been immature B.F.B.
~~1711~~	~~1~~		
1711	1		immature Red foot — following ship
1730	1	SE	Harcorsts storm petrel

46
120

166
102

Feb 7

7:15 ~~7:18~~	1	SW	Red Tailed tropic bird
7:54	1	S	Blue-faced booby
830	1	SW	Pterdroma sp? (white axillies, dark head and neck, white belly and dark ~~[illegible]~~ back and wings.
840	1	NW	Phoenix's petrel ?
0910	1	N	Blue-footed Booby - Ad - collected
0945	1	SE	Blue-footed Booby - Adult
1020	2 same	following	Red-footed Booby - Adult (southern form)
1023	1 11:00	restart	1 R-f booby - shot + collected
11:12	1	NE	W/ Tropic-bird ~~ship~~ - sp. (smaller 75 ?)
1045	1	NE	Tropic-bird sp.?
1440	1	NE	Harcourt's Storm Petrel
1510	1	SW	Blue-faced Booby - Adult
1610	1	—	B.F. Booby - following ship - adult
1750			Observations concluded

1,08
12) 13.000
12
100
96

11
6) 12.00
6
00
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06

Feb 7

0715			Observations begun –
0729	1	NW	Pterodroma sp.?
0739	1	N	FT
0808	2	NW	M Boob 2 adult
—	—	—	No observations 1130 – 1155 Lunch
1225	1	NE	Fairy Tern
1230	1	SE	Harcourt's Storm Petrel
1315	1	NE	Blue-faced Booby
	1	SE	Bulwer's Petrel
1342			Howland Island seen
			3 mile off – Booby 2 – 1½ mi. glasses but not naked eye. Boobies visible – (Probably maximum range) at about 1 mile)

April 6, 1964

AT SEA OBSERVATIONS

Weather: Overcast with rain squalls, visibility variable. Wind 25mph NE., sea wind-whipped and broken.

#	Direction	Time	Species - Acty
1	NNE	0800	Storm Petrel sp.
1	N	0815	Wedge-tail Shearwater.
1	NNW	0820	Shearwater sp. - going away - appeared sharp-winged with light undersides
1	N	0845	Shearwater sp - distant in rain squall
2	N	0855	Shearwater sp - dark brown on back golden brown on underparts - wings dark edges - silvery in center. heavy body.

Clouds breaking - clearing rapidly at 0915.

1	N	0915	Shearwater sp - straight away from bow. distant.
1	NW	0935	Shearwater sp - distant - poor light.
1	—	0945	Bird sp - distant - on horizon
1	N	1030	Shearwater sp - like 2 seen at 0855
2	N	1040	Shearwater sp —
1	N	1045	Shearwater sp. - poor light
1	N	1047	Shearwater sp - poor light.
1	N	1050	Shearwater sp - like 2 seen 0855
1	N	1053	Bulwer's Petrel
1	N	1105	Shearwater sp -
1	N	1110	Jaeger sp. (Pomarine ?)
(1120 - 1210 chow)			
1	N	1220	Shearwater sp.
5	N	1230	Shearwater sp.
1	N	1232	Shearwater sp.
3	N	1300	Shearwater sp.
2	NE	1305	Sooty Tern
1	N	1305	Wedge-tail Shearwater.

April 6, 1964

At Sea Observations

#	Dir.	Time	Species - Acty
1	SE	1330	White breast + body, light wing linings, sharp demarcation between white breast and dark throat — large - appeared to have some white on head.
1	NE	1335	Red-t. Tropicbird
1	N	1350	Wedge-tail. Shearwater
4	NE	1415	Sooty Tern
2	N	1418	Wedge-tailed Shearwater
(43) 2	N	1430	Sooty Tern
1	E	1445	Bird sp. - distant
1	N	1445	Shearwater sp - distant
1	NE	1530	Blue-faced Booby - adult.
1	NE	1630	Bird species - seen by lookout

The white portions - dull, creamy. Back brownish.

((stopped at 1700))

47 birds

✓ Banko
✓ Sandell
✓ Ely
Humphrey
✓ Linda

SMITHSONIAN INSTITUTION
WASHINGTON 25, D. C.

ATF Progress Report

During the period from Feb. 3 to Mar. 6, 21 days were spent ashore on 7 islands. 20,045 birds were banded. 1880 returns were obtained, 70 birds were collected, and 230 blood samples were taken. In addition, collections were made of fish, crustacea, and mammals on various islands.

Each island visited is discussed separately in the body of this report.

At-Sea Observation

Two-man watches were maintained during daylight hours from Pearl Harbor to Howland Island and from Canton Island to Pago-Pago, American Samoa. The raw data is enclosed with this report.

Various observations were made as we approached islands on the maximum range at which a bird could be seen. Masked Boobies are not visible to the naked eye at distances over one mile and Sooty Terns are not visible at distances over 3/4 of a mile. It is unlikely that these birds would be seen at these distances unless one knew that a bird was there, before one began observing.

Radar

Despite considerable time spent on the set it still hasn't functioned properly. The ship has hopes of fixing the wiring but so far no luck. Any attempt to use the repeater completely ruins the radar image on the ship's radar.

Photographs

Good photographic coverage of the islands was maintained until two of the focal plane shutters ceased to function.

Blood Samples

The need for 8 cc. samples has greatly reduced the number of samples which can be taken in a given period as well as eliminating some birds from consideration entirely. (If one must sample more than 40 individuals to get 10 samples it is hardly worth the effort.

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Despite advice to the contrary, dead birds give little blood and killing a bird produces no beneficial results.

Fred C. Sibley

Fred C. Sibley
Glorious Leader
Line Island Expedition
Phoenix Island Expedition
Pago-Pago Representative of A.O.U.
Adviser and Field Tester for
Booth Food Products
Fellow in Good Standing of the
) O.O.M. (Order of Masochists)
Den-Mother to McKean Island
Troop (POOP) 6.
C.I.S.B.E. (Canton Island
Shuffle-Board Expert)
M.S.B.L.N.H. (Member of the
Society to Browbeat Larry
N. Huber)
S.M.L.L.C. (Senior Member- Life
List Committee)

Roger Clapp
Secretarial Drudge to F.C.S. Peerless Leader F.G.S.O.O.M, C.I.S.B.E., etc.

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Schedule for First Half of Line Island Trip

Feb. 3	Depart Pearl Harbor
Feb. 8	Arrive Howland Island
Feb. 13	Depart Howland Island
Feb. 13	Arrive Baker Island
Feb. 14	Depart Baker Island
Feb. 16	Arrive McKean Island
Feb. 20	Depart McKean Island
Feb. 21	Arrive Birnie Island
Feb. 23	Depart Birnie Island
Feb. 23	Arrive Phoenix Island
Feb. 27	Depart Phoenix Island
March*2 Feb. 27	Arrive Enderbury Island
March 2	Depa rt Enderbury Island
Ma rch 2	Arrive Canton Island
March 3	Depart Canton Island
March 6	Arrive Pago-Pago

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Progress Report - Howland Island - Feb 8-12, 1964

Five days and nights were spent on Howland. Birds, plants, mammals, reptiles, fish, crustacea, and insects were studied. Photographs were taken of all major habitats. New personnel were trained and blood samples were taken.

Birds

There was a great reduction in numbers from previous visits. Only Brown Boobies were breeding (five nests) and only 10 species were observed. 171 individuals were banded and 960 returns were made.

	Recoveries	Banded	Returns	Pct. of Pop. Handled
Masked Booby	3	157	922	95
Brown Booby	-	10	34	50
Red-footed Booby	-	4	4	40

Shore-bird counts were made and populations were lower than October, 1963 with two common species (bristle thighed curlew and ruddy turnstone) being absent.

Mammals

Cats were greatly reduced in number from previous visits. We found that cats could be more easily run to death than shot so all four cats seen were run down and killed. No cat lasted more than about 300 yards.

One porpoise washed up on shore and this was measured and skeletonized.

Reptiles

15 * geckos and 50 * skinks were collected. Small green turtles were seen regularly feeding on the reef.

Fish

600 * individuals of 50 * species were collected with notes on habitat etc

Crustacea

160 individuals of 40* species of land and reef crabs were collected with notes on their ecology.

Insects

400 * individuals of 35-40 species were collected. A total of about 40 man hours were spent on insect collecting. Each of the four major habitats were searched; every species of plant was carefully examined for associated insect species; rotten meat was used to bait certain species, sweep-netting was done over a large pa rt of the island and Berlizi samples were run on old bird nests (4 species) and soil samples from major habitats. (8 samples). With the Berlizi material and the insests collected from the October-November trip we estimate that we have 95-100 percent of the insect species occuring on the island, as well as a representative sample of the Arachnida.

Plants

One vascular plant new to the island was discovered. One fungus and two species of marine algae were collected. Notes and photographs were taken of the vegetation in selected areas.

Blood Samples

20 samples were taken from two species. No other species were available in sufficient numbers to make blood sampling practical.

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Baker Island

Birds

Birds greatly reduced from previous visits. Only 11 species observed, none breeding, and only 6 species using island as a roosting area. No birds banded. No blood samples taken. One species of gull new to the island was collected.

Mammals

Three of four cats seen were run to death.

Insects

Complete coverage of all habitats with sweep net, aspirators, and hand searching. Six Berlizi samples were taken. A total of 400 * individuals of about 25 species were collected.

Remarks

Twenty-four hours were spent here. Island vegetation much more lush than in October. Surf conditions very poor with 10-12 foot waves.

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Progress Report
McKean Island

Four nights were spent here, the moon greatly hampering the bird banding. Surf was variable, being rough enough one day to upset the boat completely, tossing it and blood samples end over end. Only damage was the loss of our second motor cover, putting both S.I. motors our of action. (first cover lost during a near capsize on Howland)

Birds

Very abundant with Sooty Terns being one of the commoner species. An epidemic had hit the immature frigates and boobies killing ~~of~~ 75 percent or ~~better~~ more of the birds and as a result 845 Lesser Frigate and 43 Masked Booby bands were recovered. 14,495 birds of 14 species were banded and 197 returns were obtained on previously banded birds. This is broken down by species below.

Species	Number Banded	Returns	Pct. Pop. Handled
Wedge-tailed Shearwater	253	4	70
Audubon's Shearwater	418	2	50
White Thr. Storm Petrel	9	-	50
Red-tailed Tropic Bird	6	-	40
Blue-faced Booby	248	151	85
Brown Booby	23	1	50
Red-footed Booby	410	34	90
Golden Plover	1	-	01
Bristle Th. Curlew	22	-	25
Sooty Tern	11,926	-	10
Gray-backed Tern	299	1	08
Common Noddy	579	1	08
Fairy Tern	101	2	20
Blue-gray Noddy	200	1	08

11 birds of 4 species which died during blood sampling were collected

Mammals: None

Reptiles: Several geckos collected

Fish: 15 individuals of 5 species were collected.

Insects: All habitats and plant species were sampled. Six Berlizi samples were run. 140 specimens of 13 species were preserved. 1500 live ticks were collected

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for shipment from Pago Pago.

Plants: Vegetation much lusher than last time. Bushes to four feet in height covered large areas. No additions to the seven species previously recorded.

Blood Samples : Seventy blood samples were obtained from 104 individuals of 7 species.

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Birnie Island Progress Report

Two days were spent here during which the moon hampered activities considerably.

Birds

There were relatively few birds present on the island. Seventeen species were recorded of which 4 were breeding. 300 individuals of 6 species were banded. 217 returns were obtained from 3 species. This data is given below.

Species	Banded	Returns	Pct. Population Handled
Red-tailed Tropic Bird	14	-	50
Blue-faced Booby	57	109	50
Brown Booby	18	8	25
Red-footed Booby	1	-	50
Common Noddy	150	1	05
Fairy Tern	50	-	50

Mammals : Rats were very abundant. 22 were collected.

Insects : Complete collections were made from all plants and habitats. Three Berlizi samples were run.

Blood Samples : 21 samples from 31 birds were obtained.

Plants : The same three species observed on the last visit were again recorded.

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Phoenix Island Progress Report

Four nights were spent here. Continuous moonlight throughout the night made it impossible to band certain species. Rough surf conditions reduced boat trips to and from ship.

Birds

Twenty species were recorded of which nine were nesting. Sooty Terns were much less numbrous than at McKean although they were at approximatley the same stage of the breeding cycle. 4705 individuals of 13 species were banded and 346 returns were obtained from 7 species. This data is summarized below.

Species	Banded	Returns	Pct. Pop. Handled.
Wedge-tailed Shearwater	2183	18	30
Christmas Is. Shearwater	203	1	20
Audubon's Shearwater	600	11	40
Red.Tailed Tropic Bird	2	-	15
Blue-faced Booby	284	300	50
Brown Booby	4	-	10
Red-footed Booby	30	11	30
Lesser Frigate	-	4	0.5
Golden Plover	1	-	1.5
Bristle-thighed Curlew	1	-	2
Sooty Tern	1180	-	4
Common Noddy	99	-	10
Fairy Tern	42	-	15
Blue-gray Noddy	6	1	0.7

Fifty five birds of 8 species were collected.

Mammals: Rabbits were very common. Three were collected.

Insects: Collections were made from all plants and habitats. Six Berlizi samples were taken.

Blood Samples: 89 samples were obtained from 103 birds and 10 rabbits.

Plants : The same seven species observed on the lasttrip were again recorded.

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Progress Report - Enderbury Island

The moon continued to hamper banding. Numbers of birds present on the island were much lower than when we visited the island in Oct.-and Nov. 1963.

Birds

17 species were present of which seven species were breeding. 354 birds of 4 species were banded, 160 returns were obtained on 4 species, and 421 birds were recovered. Data are summarized below.

Species	Banded	Returns	Pct. Pop. Handled.
Red-tailed Tropic Bird	8	-	40
Blue-faced Booby	31	71	25
Brown Booby	15	5	10
Red-footed Booby	300	87	75
Greater Frigate	-	2	0.1

Two individuals of two species were collected.

Blood Samples: 30 samples were collected from three species.

Mammals: Only one cat was seen. This animal was run to death.

Fish: 300 plus or minus individuals of 50 plus or minus species were collected.

Insects: Usual complete collection. Dragonflies and a butterfly were collected from the island for the first time .

Canton Island Progress Report

An almost complete absence of birds prevented any extensive banding or collecting. The human population was much reduced from our last visit and a war on cats has killed over 100 of these predators. With a continued reduction in the numbers of people and cats the birds may again increase in numbers.

Birds

13 species were observed, only two of which were nesting. 20 individuals of 2 species were banded A complete daytime census of the island gave a total of less than 800 birds.

✓Humphrey
✓Banko
Ely
Linda

ATF Progress Report

During the period from March 7 to April 7, 17 days were spent ashore on 5 islands. 18,395 birds were banded and 88 blood samples were obtained. 134 individuals were collected. Plants, insects and other arthropods, fish, amphibians, reptiles, and mammals were collected as time permitted.

Itinerary

March 6	Arrive Pago Pago, American Samoa
March 10	Depart Pago Pago, American Samoa
March 14	Arrive Jarvis Island, Line Islands
March 19	Depart Jarvis Island, Line Islands
March 20	Arrive Cook Island, Christmas Island
March 21	Camps established on Motu Tabu, Motu Upua, and Cook Island
March 22	All camps moved to Motu Upua, Christmas Island
March 23	On Motu Upua
March 24	Returned to ship
March 25	Visited main island, Departed Christmas Island 2200
March 26	Arrive Fanning Island
March 28	Depart Fanning Island
March 29	Arrive Washington Island
March 31	Depart Washington Island
April 1	Arrive Palmyra Island
April 4	Depart Palmyra Island
April 7	Arrive Pearl Harbour, Honolulu, Oahu

Progress Report - Christmas Island

During our five day stay, camps were established on all three of the major islands in the lagoon; a tour of the island was made; and a short trip was made to NW point. Work here was complicated by failure of responsible parties to notify island of our visit. Mr. Roberts, District Commissioner, went out of his way to help and made our field work much more successful.

The ship had to wait an extra day for parts and with the rather tenuous communication system we didn't learn this until too late and returned to the ship a day early. Communication was complicated by lack of land transport, great distances, and complications of boat trips to and from ship.

A total of 7689 birds of 11 species were banded, 31 birds were collected, 30 blood samples were taken and several mammals and numerous insects were collected. This information is broken down under the four major areas worked

Cook Island

One night was spent here by the whole party and a second night by 1 member. Of the 15 species recorded 8 were breeding. 2033 birds of 8 species were banded. One porpoise skeleton was collected.

Species	Banded	Returns	Pct. of Population
Chirstmas Island Shearwater	114	2	15
Phoenix Island Petrel	12		15
Red-tailed Tropic Bird	21		20
Bristle-thighed Curlew	1		10
Sooty Tern	1600		20
Hawaiian Noddy	81		3
Fairy Tern	200	2	15
Crested Tern	4		2

Motu Tabu

One night was spent here by two party members. Of 15 species recorded 7 were breeding. 783 individuals of 4 species were banded.

Species	Banded	Returns	Pct. of Population
Wedge-tailed Shearwater	297		30
Chirstmas Island Shearwater	84		1~~0~~
Phoenix Is. Petrel	40~~0~~		~~20~~ 15
R.T. Tropic Bird	3		20

Motu Upua

Two nights spent here by the whole party and an additional night by 2 members. 21 species were recorded of which 6 were breeding. 31 individuals of 8 species of birds were collected. This includes 4 specimens of Laughing Gulls. 30 blood samples were collected from 33 individuals of 3 species. 4 mice and 1 rat were collected. 3767 individuals of 4 species were banded. Partial collection of insects, reptiles, and pl ants was made from the ixland.

Species	Banded	Pct. Population
Wedge-tailed Shearwater	646	40
Christmas I. Shearwater	2000	40
Phoenix Is. Petrel	1100	35
Red-footed Booby	21	25

Main Island

Three party members spent eight hours on the 23rd touring the western half of the island. (120 miles of driving) Two members visited Northwest Point for 6 hours on the 25th. Seventeen species were recorded and 1135 birds of 4 species were banded.

Species	Banded	Pct. Population
Masked Booby	3	
Red-footed Booby	31	
Great Frigate	1	
Sooty Tern	1100	

Progress Report - Fanning Island

Parts of three days were spent here. The six hour round trip from ship to shore greatly hampered operations. One boat crew took 7 hours to find us which effectively nullified our operations for that day. A tidal wave warning the same night left the party overly tired the next day. However, the scarcity of birds made banding quite impractical. 21 birds of 2 species were banded. 21 individuals of 7 species were collected and a general insect collection was made. Mr. Palmer, island manager, aided us greatly in finding good areas for birds and helped us cover the 30 mile plus perimeter of the island.

Mammals: Dogs, cats, and pigs were present under domesticatiàn and rats were fairly common everywhere. One rat collected. 400 ± Gilbertese workers are established on the island.

Plants: A rough survey of the plants was made.

Washington Island

Parts of three days were spent here. The extreme wetness of the island made camping impossible so only one night was spent ashore in the island manager's house. The island manager provided a boat and guides and we were therefore able to visit most of this island.

Birds: 32 birds of 4 species were collected including a good series of the two endemic land birds. 2 Red-footed Boobies were banded on the ship but it proved impossible to band on the island.

Mammals: Cats, dogs, and pigs kept as pets. Many cats running wild. Rats formerly abundant but now rare.

Other : Plant and insect collections made represent part of the total insect and plant fauna. Freshwater fish collected include only introduced species, others being rare or extinct. Collections of lizards were made.

Progress Report
Palmyra Island

Three days and three nights were spent here from April 1 to April 3. A new duck to the island (Anas carolinensis) was collected and positive sight identification was made of four Spatula clypeata, also unrecorded from this island. 2875 individuals of 5 species were banded. 25 individuals of 5 species were collected. 19 species were recorded of which number 8 were nesting.

Breakdown of Banding Totals

Species	Number Banded	Percent of Population
Red-footed Booby	1407	14
Brown Booby	63	30
Golden Plover	2	0.4
Bristle-thighed Curlew	3	6
Sooty Tern	1400	14

Mammals : 4 Cetaceans (Blackfish?) were found dead on the inner shore of the atoll and were cached so that they might be collected on future trips. Rats were observed and one was collected.

Reptiles: Several species of gekko were observed and collected. One small turtle was seen.

Amphibians: Toads were realtively common in certain areas. One was collected.

Fish: 69 individuals of 31 species were collected from the interior waters of the atoll.

Other : 21 blood samples of 2 species were collected. Approximately 270 individuals of at least 25 species of insects and other arthropods were collected. A partial collection was made of the plant fauna.

✓ Humphrey
✓ Banko
Ely
Conda
✓ Mr. Clark

ATF- March 14-19, 1964

Jarvis Island Progress Report

We landed on Jarvis on the morning of March 14 and left the island on March 19. Banding operations were partially hampered by a few hours of moonlight every night. Surf conditions were often very rough, capsizing the boat on one occasion, and knocking off the motor cover on another.

Thirteen species were recorded of which four were breeding. Terns and frigates are prevented from nesting on this island by the predatory activities of cats.

6810 individuals of 5 species were banded. 37 returns were obtained of birds banded in the Phoenix Islands. Totals are summarized below.

Species	Banded	Returns	Pct. Population Banded
Red-tailed Tropic Bird	38	—	35
Blue-faced Booby	5227	35	75
Brown Booby	165	—	20
Red-footed Booby	1379	2	75
Hawaiian Noddy	1	—	100

Mammals: The island was overrun with cats which were feeding on all small birds as well as frigates and a few Red-footed Boobies. We killed 211 or about 80 percent of the population.

Mummified mice were found in the building but evidently the cats have eliminated the mice or at least reduced the population to a very few individuals .

Reptiles: A few gekkos were collected. These are uncommon, probably because of cat predation. Turtles were seen off shore on days of arrival and departure.

Insects : Approximately 250 specimens of 19 insects species were collected, as well as a number of other Arthropods. 6 Berlizi samples were run. Usual complete coverage of all habitats. 300 plus live ticks were collected ~~in order to~~ so that we might try some new shipping techniques.

Plants : Specimens of most of the 9 species present were pressed. Distribution on the island was recorded.

Itinerary

March 6	Arrive Pago Pago, American Samoa
March 10	Depart Pago Pago, American Samoa
March 14	Arrive Jarvis Island, Line Islands
March 19	Depa rt Jarvis Island, Line Islands.

American Samoa

The four days spent here were mainly spent catching up on reports, and refitting for the final month of operations.

Considerable time was spent touring Tuitila and 21 specimens of 7 species of birds, 2 fruit bats, and humerous herpetological specimens were secured.

At sea observations were maintained during daylight hours on the tri p to Jarvis Island.

P.S. We are now on Christmas Island. Someone failed to notify either Christmas, Washington or Fanning of our visit. as a result we have initially recieved the cold shoulder and are fighting an uphill battle to tactfully accomplish our work.

Fred.