

APPENDIX R

Incident Report: October 1995 *USCGC Reliance* Whale Strike

U.S. Department
of Transportation

United States
Coast Guard



Commander
First Coast Guard District

408 Atlantic Avenue
Boston MA 02110-3350
Staff Symbol: (ole)
Phone: 617-223-8420

16214

From: Commander, First Coast Guard District (ole)
To: Commanding Officer, USCGC RELIANCE (WMEC 615)

Subj: INVESTIGATION OF REPORTED WHALES STRIKE

1. Enclosed is a copy of your investigation and the report of the final reviewing authority. Please contact LCDR S.D. Austin of my staff at 617-223-8423 if there are any questions regarding this matter.


P. J. HOWARD
By direction

Encl: (1) Investigation of Reported Whale Strike by USCGC
Reliance and Action of the Final Reviewing Authority

Copy: COMDT (G-NIO), COMDT (G-LEL), CG LANTAREA (AO), NMFS-RD



16473

JAN 30 1996

INVESTIGATION OF REPORTED WHALE STRIKE BY USCGC RELIANCE
(WMEC 915) ON 9 OCTOBER 1995

ACTION OF THE FINAL REVIEWING AUTHORITY

1. Subject to the comments set forth below, the Letter Incident Report of 30 November 1995, as amended by First District message 121523Z DEC 95 and CGC RELIANCE message 131431Z DEC 95 (Enclosure 1), is approved.
2. On 11 December 1995, the First District issued a change to the Atlantic Venture Operations Order regarding the requirements for vessels coming into contact with whales. This change aligned the District's policies with the National Marine Fisheries Service Biological Opinion of 15 September 1995 regarding Coast Guard vessel and aircraft activities along the Atlantic coast. (Enclosure 2).
3. The First District Law Enforcement Branch is directed to modify the First District's Marine Mammal Protection Program to include the reporting requirements of the Atlantic Venture Operations Order and to affirm completion of the "Entanglement and Boat Collision Reporting Form" if a Coast Guard vessel comes in contact with a whale.
4. USCGC RELIANCE is commended for the following actions:
 - a. Use of a field guide for marine mammal identification.
 - b. Tasking the lookout to keep alert for whales.
 - c. First District notifications per guidance then in effect.
 - d. Conducting a search to check for injury to the whale.
5. This investigation is closed. The original Report of Investigation is filed in the First District Law Enforcement Branch.

A handwritten signature in black ink, appearing to read "J. L. Linnon".

J. L. LINNON
Rear Admiral, U. S. Coast Guard
Commander, First Coast Guard District

Encl: (1) CCGD1 121523Z DEC 95, CGC RELIANCE 131431Z DEC 95
(2) CCGD1 111606Z DEC 95

Copy: CGC RELIANCE (WMEC 615), COMDT (G-NIO), COMDT (G-LEL),
CG LANTAREA (Ao), NMFS-RD

Subj: LETTER INCIDENT REPORT; INVESTIGATION OF REPORTED WHALE STRIKE ON 9 OCTOBER 1995

4. At 1605Q, in position 42-26.7 N, 067-31.6 W (10.0 NM northwest of the northern edge of CAII), SA MacDonald reported to ENS Cooper that he had observed a whale surface directly off the bow and believed the ship had come into contact with it. SA MacDonald heard a "thudding" noise and felt the ship shudder slightly after losing sight of the whale. ENS Cooper, who did not see the whale, called down to SN Macchiarella and asked him if we had just come into contact with a whale. SN Macchiarella said he saw a whale surface approximately 15 to 20 feet off the starboard bow and that he had tried to warn the bridge. As the whale began to dive, SN Macchiarella felt a shudder and believed the whale had been struck by the ship. SN Macchiarella also informed ENS Cooper that he was unable to report the whale in time for the ship to have avoided contact with it. Based on this information, ENS Cooper directed the Quartermaster of the Watch to mark the position on the GPS navigation system and brought RELIANCE to all stop. ENS Cooper notified me of the situation and I directed him to return to the area of the possible contact and search for evidence of the whale. RELIANCE returned to the position of the contact and commenced a search for any indication of the struck whale (e.g. blood, flesh, etc.). While conducting the search, I personally saw two whales 1 to 2 NM away from the ship. Using the book A Field Guide to Whales, Porpoises, and Seals From Cape Cod to Newfoundland, by Katona, Rough, and Richardson, I identified these whales as Minke whales. Finding no evidence of a whale that had been struck, we departed the area at approximately 1630Q and continued our transit. This incident was documented in the unit logs (enclosure (5)) and reported via letter in accordance with current directives (enclosure (1)).

5. Whale sightings during recent patrols have been frequent. Until this incident, we had typically not experienced whales approaching RELIANCE closer than approximately 500 yards. Whales had been present on 9 October 1995, yet none this day had been sighted closer than 1 NM. No course and/or speed adjustments had been required on this day, however OOD's routinely do so if whales are sighted close to the ship. The whale in question was first seen by SN Macchiarella and SA MacDonald as it surfaced approximately 15 to 20 feet off the starboard bow of RELIANCE. This whale was in view at the surface for approximately 5 seconds. The whale was moving from right to left and was in the process of diving when RELIANCE apparently struck the whale's posterior portion. There was no indication of this whale's proximity to RELIANCE prior to its sudden appearance on the bow, and no time was available to maneuver the ship to avoid contact. It is uncertain how hard RELIANCE struck the whale, but SA MacDonald heard a "thudding" noise and both he and SN Macchiarella felt a slight shudder in the ship. No exterior or interior structural damage was discovered by the Boatswain Mate

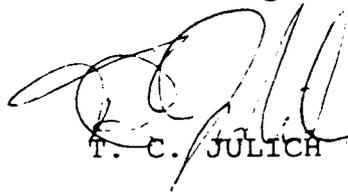
Subj: LETTER INCIDENT REPORT; INVESTIGATION OF REPORTED WHALE STRIKE ON 9 OCTOBER 1995

of the Watch who immediately went to the forward portion of the ship to investigate following the alleged contact. A more detailed inspection for possible damage was conducted by the ship's Damage Control Assistant with negative results.

6. All of my OOD's are required to review current Coast Guard and District One guidance on the protection of marine mammals. RELIANCE participates in the District One Whale Sighting program. At the time of the whale strike, RELIANCE was 47.0 NM northeast of the Great South Channel Designated Critical Habitat for Northern Right whales, as outlined in 50 CFR 226. We did not identify any Northern Right whales during this patrol.

7. While my OOD's are familiar with the District One whale sighting program and have identified whales in the past, none are experts on marine mammals. Because of this, we keep a copy of the aforementioned Katona, Rough, and Richardson field guide on the bridge as an aid for whale identification. After the whale strike on 9 October, ENS Cooper showed this book to SN Macchiarella and asked him to try and identify the species of whale. SN Macchiarella identified the whale as a Humpback whale, but stated he only saw it for approximately 5 seconds and could not be sure. It could very well have been a Minke whale, based on my personal observation of Minke whales in the area immediately after the whale strike.

8. RELIANCE will continue to stress the importance of and support Coast Guard and District One guidance on the protection of marine mammals.



T. C. JULICH

Encl: (1) REL ltr 16473 of 16 October 1995
(2) Statement from ENS Cooper
(3) Statement from SN Macchiarella
(4) Statement from SA MacDonald
(5) RELIANCE Unit Logs of 9 October 1995

U.S. Department
of Transportation

United States
Coast Guard



Commanding Officer
USCGC Reliance (WMEC 615)

c/o USCG Station
New Castle, NH 03854-0615
Staff Symbol:
Phone: (603) 433-7315

16473
16 October 1995

From: Commanding Officer, USCGC RELIANCE (WMEC 615)
To: Commandant (G-LEL)

Subj: CONTACT WITH A WHALE

Ref: (a) CGDONE OORDER 06-94 (Atlantic Venture)

1. In accordance with reference (a), forwarded herewith is documentation concerning RELIANCE's contact with a whale on 09 Oct 1995.
2. POC: Ens David W. Cooper.

A handwritten signature in black ink, appearing to read "T. G. Julich".

T. G. JULICH

Encl: (1) Copy of RELIANCE's Smooth Log.

Copy: CGD1 (ole)

COPY

ENCLOSURE(1)

Statement of LTjg David W. Cooper, Officer of the Deck (OOD).

At 1530 on 09 OCT 95, I relieved LTjg Ellis as RELIANCE's OOD for the 1600 to 2000 watch. During the relief, LTjg Ellis pointed out several whales approximately 3 miles off the port quarter. Visibility was clear (approximately 10 miles) and the weather was good with few clouds. Due to the previous watch passing whales, I informed the lookout to pay extra attention for whales and positioned myself in the forward part of the bridge with a pair of binoculars.

At approximately 1605, the lookout informed me that he believed RELIANCE had come in contact with a whale. Since the whales at the beginning of the watch were well clear and past and I had not seen any whales in the area that were close enough to pose a threat, or felt any vibrations, I immediately went outside to assess the situation. I did not see the whale nor any evidence to indicate a whale might have just been struck. I asked SN Macchiarella, who was on the forecastle if he believed RELIANCE had come in contact with a whale. SN Macchiarella informed me the whale had suddenly surfaced in front of the ship and that there was no time for the ship to maneuver to avoid the whale. Therefore, he believed RELIANCE had come in contact with the whale. I immediately brought RELIANCE to all stop and sent the BMOW to investigate for any shipboard damage. Next, I called the Commanding Officer (CO) and informed him of the situation. The CO instructed me to immediately return back and search the area where RELIANCE had possibly come in contact with the whale. Upon arrival in that position, there was no evidence of the whale. The BMOW reported no apparent damage to the ship. I showed SN Macchiarella the book, A Field Guide to Whales, Porpoises, and Seals From Cape Cod to Newfoundland that we keep on the bridge to assist in identifying marine mammals. Due to only getting a quick glimpse of the whale and lacking experience in whale identification, SN Macchiarella could not be positive as to the species of the whale. SN Macchiarella believed the whale to be a Humpback.

This statement is true and accurate to the best of my knowledge.


David W. Cooper, LTjg

ENCLOSURE(2)

Statement By SN Macchiarella

On 09 Oct 95, I stood the 1200-1600 bridge watch, and during that watch, I had seen numerous whales. After getting off watch at approximately 1545, I went to the bow of RELIANCE with the intention of taking pictures of whales. It was a clear sunny day, with good visibility. After waiting approximately 20 minutes without taking a single picture the whale in question appeared. The whale came up about 15-20 feet in front of RELIANCE on her starboard bow. I quickly snapped off a picture, then turned to face the bridge to report the whale to the lookout or OOD. I yelled up the bridge, then turned back around in time to see the whale directly in front of the bow, submerging. About 2 seconds later, I felt the ship shutter as if it had hit something. I believe what we had hit was the whale.

The entire duration of the incident was only a few seconds and in my opinion, the ship did not have time to avoid the whale. I stayed on the bow looking for the whale as we searched the area, but didn't see anything. Later, ENS Cooper gave me a whale ID book and asked me to try to identify the type of whale I thought we had hit. After looking through the book, my best guess is that the whale was a humpback, but I only saw it for a few seconds and can't be sure. After pulling in to home port I had the film developed and the photo of the whale in question did not come out.

This statement is true and accurate to the best of my knowledge.


John S. Macchiarella, SN

ENCLOSURE

On ~~November~~^{October} 9th I was standing the 1600-2000 lookout watch on the bridge of RELIANCE. During the watch, I had sighted numerous whales between 1 and 2 NM from the ship. The whales were generally coming from our left to right side. The whale in question surfaced on our right side heading towards our left at a distance of only a few yards from the bow. As the whale crossed in front of us, I lost sight of it and a few seconds later I heard a thud and felt the ship shudder slightly. At that point I knew we hit something which I assumed to be the whale. I immediately reported my observations to the OOD. I never reestablished visual contact of the whale or any debris or discoloration of the water when we circled back to look for any sign of the object we struck.

I certify that the above statement is true and correct to the best of my knowledge.


Ronald F. MacDonald
SA, U.S. Coast Guard

ENCLOSURE

DEPARTMENT OF
TRANSPORTATION
U. S. COAST GUARD
CG-4380A (Rev. 3-67)

LOG - REMARKS SHEET

VESSEL: ~~TAHOMA~~

ZONE DESCRIPTION

DAY OF WEEK

DATE (Day, mo., yr.)

USCGC RELIANCE (WMEC-615)

+4 QUEBEC

MONDAY

09 OCT 95

→/PASSAGE FROM

PASSAGE TO

HALIFAX, N.S., CANADA

CLOSED AREA II

POSITION	METHOD
0800 L 42°51.8'N λ 067°51.7'W	2

POSITION	METHOD
1200 L 43°09.2'N λ 067°58.6'W	2

POSITION	METHOD
2000 L 42°09.5'N λ 067°36.5'W	2

METHOD CODE:

- 1 - CELESTIAL
- 2 - ELECTRONIC
- 3 - VISUAL
- 4 - O. R.

REMARKS

~~0400 - 0400~~

UNDERWAY IN POSITION 43° ~~00.0~~'N ~~060~~ 28.4' W ON A COURSE OF 271° T
CONDUCTING A NORTHWEST ATLANTIC FISHERIES PATROL IN ACCORDANCE WITH
CGDOME MSG 131453Z SEP 95 UNDER THE UPLON OF CGDOME AND THE ADCON OF
COMLANTAREA. * TURNING 2000 SRPM ON BOTH MAIN DIESEL ENGINES FOR A SOA OF
12.0 KNOTS THE NUMBER ONE SHIPS SERVICE GENERATOR IS ON LINE ALL PRESENT
NAVIGATION LIGHTS ARE ENERGIZED AND BURNING BRIGHTLY MATERIAL CONDITION
VOILE IS SET THROUGHOUT THE SHIP ENS COOPER HAS THE DECK ENS CARROLL
HAS THE COXN 2300 ENERGIZED THE SOUND SIGNAL AND SET THE FOG WATCH
DUE TO VISIBILITY REDUCED TO LESS THAN ONE NAUTICAL MILES ~~0300~~
VISIBILITY INCREASED TO 6NM SECURE FOG WATCH AND SOUND SIGNAL ~~031~~
THIS VESSEL IS UNDER THE TACON OF USCGC TAHOMA (WMEC-938) 0324 LTJG
TELFER ASSUMED THE DECK ENS HILBERT ASSUMED THE COXN

By: *Taylor* QM3
[Signature] QM3

0400 - 0800

UNDERWAY AS BEFORE 0631 OBSERVED SUNRISE, SECURED ALL NAVIGATIONAL
RUNNING LIGHTS. GYRO ERROR DETERMINED TO BE 1° E BY AMPLITUDE TO
THE SUN 0656 DIVERTED TO IDENTIFY CONTACT BEARING 323° T AT 26.5 NM
FROM POSITION 42° 40.4' N 067° 44.3' W 0729 BONE MOISE ASSUMED THE

0800 ~~COXN~~ ASSUMED THE COXN

[Signature] QM3

SIGNATURE

DATE

[Signature] QM3
[Signature] QM3

ENCLOSURE(S)

11: 09 OCT 95

REMARKS (Continued)

0800 - 1200

UNDERWAY AS BEFORE. 0830 SET L/E PHASE ONE, BOARDING TEAM WILL CONSIST OF LTJG ELLIS, ENS HILBERT, MKZ LUNTON, SN ONIATOWSKI. 0845 SET L/E PHASE TWO FOR FIV ALEXANDER W. 0848 REL I LOWERED TO MAIN DECK RAIL. 0902 REL I LOWERED TO WATER'S EDGE WITH BMZ SWAN AS COXSWAIN, AND A CREW OF MKZ MILLERMAN, SN McCLERREN, AND BREAK IN SN MACCHIARELLA. BOARDING TEAM SAFELY ABOARD. 0905 REL I AWAY TO STARBOARD. 0912 REL I ALONGSIDE FIV ALEXANDER W TO STARBOARD. 0915 BOARDING TEAM SAFELY ABOARD. 1022 BOARDING COMPLETE ON FIV ALEXANDER W. NO VIOLATIONS. 1026 REL I ENROUTE CUTTER WITH BOARDING TEAM SAFELY ABOARD. 1031 REL I ALONGSIDE TO STARBOARD. 1034 REL I RAISED TO MAIN DECK RAIL, BOAT CREW AND BOARDING TEAM SAFELY ABOARD. 1106 SET L/E PHASE ONE, BOARDING TEAM WILL CONSIST OF ENS COOPER, ENS HILBERT, MKZ LUNTON, SA ~~REYNOLDS~~ WEBER FOR FIV

VIRGINIA SURE. 1115 SET L/E PHASE TWO. BOAT CREW SAME AS BEFORE WITH THE CREW OF MACCHIARELLA. 1125 REL I LOWERED TO THE WATER'S EDGE. BOAT CREW AND BOARDING TEAM SAFELY ABOARD. 1128 REL I AWAY ENROUTE FIV VIRGINIA SURE. 1132 REL I ALONGSIDE FIV VIRGINIA SURE. BOARDING TEAM SAFELY ABOARD. 1133 AT 1100 ALL SMALL ARMS, AMMUNITION AND PYRO CHECKED SIGHTED AND ACCOUNTED FOR. MAGAZINES FOUND TO BE OK AND NORMAL. 1135 LTJG ELLIS ASSUMED THE DECK, ENS LUDBRANDSEN ASSUMED THE COM.

CERTIFIED TO BE A TRUE COPY

12 OCT 95 1156 24 NOV 95

SIGNATURE

DATE

Robert W. Perry Com³

E. J. ...

12000 - 16000

UNDERWAY AS BEFORE. 1200 HELD SATISFACTORY TEST OF THE SHIP'S ALARMS. 1240 BOARDING COMPLETE. NO VIOLATIONS. REL I ALONGSIDE FIV VIRGINIA SURE. 1241 BOARDING TEAM SAFELY ABOARD. REL I ENROUTE RELIANCE. 1249 REL I ALONGSIDE. 1250 REL I RAISED CRADLED AND SECURED FOR SEA. BOAT CREW BOARDING TEAM SAFELY ABOARD RELIANCE. 1305 DIVERTED TO A FIV ON FIRE IN POSITION 42°08'N, 066°10.4'W. REPORTED TWO POB IN LIFE RAFT. SHIFTED FOCUS TO CLIMBER

ENCLOSURE (5)

DEPARTMENT OF
TRANSPORTATION
U. S. COAST GUARD
CG-4380A (Rev. 3-67)

LOG - REMARKS SHEET

VESSEL/STATION USCGC RELIANCE (WMEC-615)	ZONE DESCRIPTION + 4 QUEBEC	DAY OF WEEK MONDAY	DATE (Day, mo., yr.) 09 OCT 95
AT/PASSAGE FROM		PASSAGE TO	

POSITION	METHOD
0000	
L _____	
λ _____	

POSITION	METHOD
1200	
L _____	
λ _____	

POSITION	METHOD
2000	
L _____	
λ _____	

METHOD CODE: 1 - CELESTIAL 2 - ELECTRONIC 3 - VISUAL 4 - O. R.
--

REMARKS

1200 - 1600 (cont.)

1455. ACCEPTED RADIO GUARD FOR COAST GUARD RESCUE 2126 WITH 5 POB AND 3 HRS OF FUEL. 1500 AT 1400 RELEASED FROM SAR CASE RETURNED TACON TO USCGC TAHOMA (WMEC-908) 1530 ENS COOPER ASSUMED THE DECK AND THE CONN

MA [Signature] QM3
Cal A. Ellis LOG

CERTIFIED TO BE A TRUE COPY

Cal A. Ellis
SIGNATURE DATE

1600 - 2000

UNDERWAY AS BEFORE 1605 CAME IN CONTACT WITH A WHALE IN POSITION 42° 26.7' N 067° 31.6' W. THE WHALE SURFACED 15 FT IN FRONT OF THE BOW. WHALE WAS OBSERVED BY CREWMEMBER ON THE FOC'S TO MOST LIKELY BE A HUMPBACK WHALE. THE OOD, THE LOOKOUT NOR CREWMEMBER ON FOC'SLE OBSERVED ANY INDICATION OF THE WHALE'S PRESENCE UNTIL IT SURFACED. RELIANCE RETURNED TO THE SCENE AND COMMENCED SEARCH FOR THE WHALE. UNABLE TO LOCATE ANY EVIDENCE OF INJURED WHALE. RESUMED PATROL 1700 ENS CARROLL ASSUMED THE CONN 1750 DIVERTED TO 10 F/V IN POSITION 42° 05.1' N 067° 25.1' W 1755 VESSEL 1 F/V JILLIAN 1800 OBSERVED SUNSET ENERGIZED. PRESCRIBED NAVIGATION LIGHTS 1804 SET L/E PHASE ONE BOARDING TEAM CONSISTS OF LTJG TELFER QM3 STERLING, MK3 RYAN AND ENS GUDBRANSEN BOAT CREW IS BM2 SWAN MK2 OLLERMAN

ENCLOSURE (2)

1600 - 2000 (CONT)

1824 REL II LOWERED TO THE MAIN DECK RAIL 1827 REL II LOWERED TO THE WATERS EDGE BOAT CREW AND BOARDING TEAM SAFELY ABOARD 1830 REL II AWAY TO PORT ENROUTE F/V JILLIAN DOC # 577968 1838 REL II HAVING ENGINE PROBLEMS RETURNING TO CUTTER 1844 REL II RAISED TO THE MAIN DECK RAIL BOAT CREW AND BOARDING TEAM SAFELY ABOARD SHIFTING TO REL I 1852 REL I LOWERED TO THE MAIN DECK RAIL 1900 CHECKED MATERIAL CONDITION VOICE THROUGHOUT THE SHIP 1902 REL I LOWERED TO THE WATERS EDGE BOAT CREW AND BOARDING TEAM SAFELY ABOARD 1904 REL I AWAY ENROUTE F/V JILLIAN 1907 REL II RAISED CRADLED AND SECURED FOR SEA 1912 REL II ALONGSIDE F/V BOARDING TEAM SAFELY ABOARD 1930 ENS HILBERT ASSUMED THE CONN

Bya F Taylor QMS
David M [Signature]

2000 - 2400

UNDERWAY AS BEFORE. 2000 BOARDING COMPLETE ON F/V JILLIAN. NO VIOLATIONS. 2003 REL I ALONGSIDE F/V JILLIAN 2009 REL I ENROUTE CUTTER WITH BOARDING TEAM SAFELY ABOARD 2008 REL I ALONGSIDE TO STARBOARD 2009 REL I RAISED TO MAIN DECK RAIL. BOAT CREW, BOARDING TEAM SAFELY ABOARD 2024 REL I RAISED, CRADLED, AND SECURED FOR SEA. 2045 LTJG TELFER ASSUMED THE DECK 2323 BMC MUISE ASSUMED THE DECK AND CONN.

[Signature] QMS
Eric M Telfer LTJG

* UNDER THE TACON OF CTU 44.1.1

REPORT OF INCIDENT BY [Signature]
 DATE 24 OCT 75
 SIGNATURE DATE

ENCLOSURE(S)

APPROVED [Signature]

COMMANDING

LOG - WEATHER OBSERVATION AND OPERATIONAL SUMMARY SHEET

VESSEL/STATION: USCGC RELIANCE (WMEC-615) DAY: MONDAY DATE: 09 OCT 95 ZONE/DESTINATION: 14 QUEBEC

I. WEATHER OBSERVATIONS

TIME	MILES	TENTS	WINDS IF ESTIMATED		VISI-BILITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches) SEA LEVEL	TEMPERATURE (Degrees)		CLOUDS		SEA WATER TEMP. (Degrees)	SEA WAVES		SWELL WAVES	
			DIRECT-ION (True)	FORCE (Knots)				DRY BULB	WET BULB	AMOUNT (Tenths)	TYPE		DIRECT-ION (True)	HEIGHT (Feet)	DIRECT-ION (True)	HEIGHT (Feet)
01	11	1	306	15	08	OK	29.87	56	55	10	ST	54°	300	02	120	07
02	11	0	305	16	08	OK	29.88	56	55	10	ST	54	300	03	120	07
03	9	0	314	13	10	CLR	29.90	57	55	00	-	54	310	02	270	05
04	13	9	313	15	10	CLR	29.92	56	54	00	-	58	310	02	260	05
05	14	0	322	15	10	CLR	29.94	56	54	00	-	58	315	02	230	05
06	11	0	323	15	10	CLR	29.98	57	54	00	-	58	315	02	230	05
07	8	5	322	16	10	CLR	30.00	57	54	00	-	58	315	02	230	05
08	12	5	330	19	10	CLR	30.02	60	55	0	-	58	330	03	260	03
09	11	2	324	13	10	CLR	30.04	63	57	0	-	56	330	03	260	03
10	6	6	320	13	10	CLR	30.06	60	55	0	-	56	330	03	270	03
11	4	8	334	12	10	CLR	30.06	62	56	0	-	56	320	03	290	02
12	5	5	330	11	10	CLR	30.05	62	56	00	-	56	320	03	290	02
13	5	2	332	12	10	CLR	30.05	62	56	00	-	56	320	03	290	02
14	14	9	318	12	10	CLR	30.06	65	60	0	-	56	320	02	290	02
15	15	1	305	09	10	CLR	30.08	65	61	0	-	56	310	01	250	03
16	15	0	317	08	10	CLR	30.09	66	61	0	-	60	310	01	250	03
17	9	8	332	07	10	CLR	30.10	62	57	0	-	60	315	01	250	03
18	6	9	335	07	10	CLR	30.10	62	57	0	-	60	325	01	350	03
19	4	0	002	07	10	CLR	30.11	59	54	0	-	60	355	01	355	03
20	4	7	006	07	10	CLR	30.13	59	54	00	-	56	355	01	355	03
21	7	5	015	06	10	CLR	30.14	57	54	00	-	56	000	01	020	03
22	11	5	061	03	10	CLR	30.14	56	54	00	-	56	CALM		150	02
23	12	0	060	02	10	CLR	30.16	56	54	00	-	56	CALM		140	02
24	12	6	099	01	10	CLR	30.16	56	54	0	-	56	CALM		140	02
101	238	3														

II. OPERATIONAL SUMMARY

STATUS AT 0001		CHECK LIST		TIME	INITIALS			
MATERIAL CONDITION	YOKO	1. Held quarters	MUSTER	1100	LC			
READINESS CONDITION	DECON IV	2. Chronometer(s) wound.		1020	AMS			
OPERATIONAL STATUS	ALPHA	3. Held evening reports.		1945	JDS			
MISSION	SAR AND SLT	4. Magazines inspected.		1100	AMS			
		4a. Maximum temperature:	77°	4b. Minimum temperature:	50°			
MACHINERY CONDITION AND DISCREPANCIES		DRILLS AND TRAINING						
1AW ENGINE ROOM LOGS		Began	Ended	TITLE COPY Type				
		1100	1100	1100 34 NOV 95				
		SIGNATURE		DATE				
ELECTRONIC/COMMUNICATION CONDITION AND DISCREPANCIES								
1AW RADIO / CASREP LOGS		ENCLOSURE (5)						
		Personnel	Auth.	Attached	Leave	TAD	Other	On Board
		Officers	12	13	0	0	0	13

U.S.C.G.C. RELIANCE (WMEC-615)

DATE
29 OCT 95

TIME	GYRO CRS/ BRG	GYRO ERROR	TRUE CRS/ BRG	VAR.	MAGCUS	DEV.	STEER COMPASS	SPEED OF ADVANCE	REMARKS
2349	271	1E	272	19W	291	0	291	12.0	C/S 240 SRPMs BMDE'S
0000	271	1E	272	19W	291	0	291	12.0	C/CK
0030	271	1E	272	19W	291	0	291	10.0	C/CK C/S 175 SRPM BMDE'S
0100	235	1E	236	19W	255	0	257	10.0	C/CK C/C CONTACT AVOIDANCE
0106	265	1E	266	19W	285	1E	284	10.0	C/C
0130	280	1E	281	19W	300	0	300	10.0	C/CK C/C
0200	280	1E	281	18W	299	1W	300	10.0	C/CK
0230	310	1E	311	18W	329	1E	328	10.0	C/CK C/C CONTACT AVOIDANCE
0232	269	1E	270	18W	288	0	288	10.0	C/C
0300	275	1E	276	18W	294	0	294	14.3	C/CK C/S 240 SRPM BMDE'S
0315	245	1E	246	18W	264	0	264	14.3	C/C
0319	280	1E	281	18W	299	0	299	14.3	C/C
0330	280	1E	281	18W	299	0	299	14.3	C/CK
/ <i>By R. Taylor OMS</i> <i>David M. Cook 1E'S</i>									
0357	275	1E	276	18W	294	0	294	14.3	C/C
0400	275	1E	276	18W	294	0	294	14.3	C/CK
0430	275	1E	276	18W	294	0	294	14.3	C/CK
0500	200	1E	201	18W	219	1E	218	14.3	C/C
0507	200	1E	201	18W	219	1E	218	10.0	C/S 175 SRPMs BMDE'S
0515	190	1E	191	18W	209	1E	208	10.0	C/C
0530	150	1E	151	18W	169	1W	170	9.5	C/C/S ¹⁷⁰ 150 SRPMs BMDE'S
0539	175	1E	176	18W	194	0	194	9.5	C/C CONTACT AVOIDANCE
0600	175	1E	176	18W	194	0	194	9.5	C/CK
0610	160	1E	161	18W	179	1W	180	9.5	C/C 10 CONTACT
0619	160	1E	161	18W	179	1W	180	11.0	C/S 185 SRPMs BMDE'S
0622	170	1E	171	18W	189	1E	188	11.0	C/C
0630	170	1E	171	18W	189	1E	188	11.0	C/C/C
0644	170	1E	171	18W	189	1W	190	11.0	C/C
0650	M V	C	S					V/S	MVCS
0700	000	1E	001	18W	019	1E	018	11.0	C/CK MVCS
0730	340	1E	341	18W	359	1W	000	15.0	C/CK MVCS 200 SRPMs BMDE'S
/ <i>By R. Taylor OMS</i> <i>David M. Cook 1E'S</i>									
0800	345	1E	346	18W	004	1W	005	V/S	C/CK MVCS
0810	269	1E	265	18W	293	1E	282	V/S	C/CK MVCS
0900	003	1E	004	18W	022	2E	020	V/S	C/CK MVCS
0930	025	1E	026	18W	044	3E	041	V/S	C/CK SIGNATURE DATE
1000	086	1E	087	18W	105	1W	106	V/S	C/CK MVCS
1030	000	1E	001	18W	019	3E	016	V/S	C/CK MVCS
1100	015	1E	016	18W	034	3E	031	V/S	C/CK MVCS
1130	012	1E	013	18W	031	3E	028	V/S	C/CK MVCS
/ <i>Robert W. Sturdy Com</i> <i>H. J. ...</i>									
1200	328	1E	329	18W	347	3E	345	V/S	C/CK MVCS
1230	300	1E	301	18W	329	1W	320	V/S	C/CK MVCS

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SIGNATURE DATE

NAVIGATION DATA (Continue @)

TIME.	CYRO CRS BRG	CYRO ERROR	TRUE CRS. BRG	VAR.	MAGCUS	DEV.	STEER COMPASS	SPEED OF ADVANCE	REMARKS
1300	127	1E	128	19W	147	1E	146	14.7	C/C/S
1330	127	1E	128	19W	147	1E	146	14.7	C/C/C
1335	127	1E	128	19W	147	1E	146	17.7	45 3000 SRPMS BMDE
1400	169	1E	170	18W	188	1E	187	15.0	C/C/S 260 SRPM BMDE
1445	155	1E	156	18W	174	1E	176	15.0	C/C/S
1500	160	1E	161	18W	179	1E	180	15.0	C/C C/C
1530	177	1E	178	18W	196	0	196	15.0	C/C C/C
1600	177	1E	178	18W	196	0	196	15.0	C/C <i>Mr. A. E. ...</i>
1600	177	1E	178	18W	196	0	196	15.0	C/C
1630	177	1E	178	18W	196	0	196	15.0	C/C
1700	177	1E	178	18W	196	0	196	15.0	C/C
1730	177	1E	178	18W	196	0	196	15.0	C/C
1800	180	1E	181	18W	199	0	199	V/S	C/C MUCS TO 10 CONTACTS
1830	213	1E	214	18W	232	2E	230	V/S	C/C MUCS
1900	270	1E	271	18W	289	2E	287	V/S	C/C MUCS
1930	075	1E	076	18W	094	1W	095	V/S	C/C MUCS
2000	255	1E	256	18W	274	1E	273	V/S	C/C MUCS <i>Mr. R. ...</i>
2000	255	1E	256	18W	274	1E	273	V/S	C/C MUCS
2030	016	1E	017	18W	035	1E	034	14.0	C/C/S 220 SRPMS BMDE'S
2100	016	1E	017	18W	035	1E	034	13.0	C/S 215 SRPMS BMDE'S
2121	090	1E	091	18W	109	1W	110	13.0	C/C
2130	090	1E	091	18W	109	1W	110	13.0	C/C
2155	120	1E	121	18W	139	2W	141	13.0	C/C
2200	170	1E	171	18W	189	1W	190	13.0	C/C
2221	144	1E	145	18W	163	0	163	13.0	C/C
2230	144	1E	145	18W	163	0	163	13.0	C/C
2249	180	1E	181	18W	199	1E	198	13.0	C/C
2300	183	1E	184	18W	202	2E	200	13.0	C/C
2314	180	1E	181	18W	199	1E	198	13.0	C/C
2319	180	1E	181	18W	199	1E	198	14.3	C/S 240 SRPMS BMDE'S
2330	180	1E	181	18W	199	1E	198	14.3	C/C
/									<i>Mr. ...</i>
/									<i>Mr. ...</i>

CONFIRMED TO BE A TRUE COPY
Ed. H. ...
 DATE

ENCLOSURE (5)

DATE: 09 OCT 95
 CHART: 13260

TIME	9960-W	9960-X	5930-K	5930-Y	LONG	OTHER
	SNR 86	SNR 92	SNR 94	SNR 83		
	USING ABOVE SNR'S AND TD'S, GPS POSITION AND CORRECTIONS					
1030	12756.1	25410.1	12612.5	31475.7	43°03.0'	67°54.5' 105.2
1100	12732.0	25426.7	12653.1	31487.4	43°06.6'	67°54.2' 105.8
1130	12731.4	25438.5	12665.6	31503.9	43°08.36'	67°56.66' 103.2
1200	12735.5	25445.6	12668.6	31514.8	43°09.17'	67°58.55' 105.3
1230	12750.3	25457.4	12665.8	31518.7	43°09.18'	67°59.52' 105.5
1300	12730.5	25442.6	12670.8	31508.3	43°08.91'	67°56.74' 103.3
1335	12720.8	25405.3	12693.1	31452.5	43°03.9'	67°47.8' 110.9
1400	12713.4	25375.3	12620.5	31404.3	42°59.8'	67°40.5' 100.3
1430	12745.8	25336.2	12548.9	31361.4	42°51.8'	67°49' 126.3
1500	12772.3	25304.0	12490.3	31323.3	42°44.9'	67°33.5' 112.3
1530	12816.0	25267.5	12409.9	31288.6	42°36.4'	67°32.3' 114.5
	SNR - 78	SNR - 91	SNR - 95	SNR - 88		
	USING ABOVE TD'S AND SNR'S THREE TD'S CORRECTIONS WITH GPS ZERO					
1600	THE 9960-X TD DOES NOT CORRESPOND IF PLOTS 4000'S NNW					
1600	12865.1	25248.2	12341.6	31262.5	42 29.2	67 31.8 150
1630	12869.9	25225.4	12311.4	31248.7	42 26.07	67 31.25 61.5
1700	12902.3	25200.9	12257.2	31226.0	42 19.7	67 34.6 162
1730	12935.9	25174.6	12197.3	31198.2	42 12.6	67 29.4 126.2
1800	12967.4	25145.8	12136.8	31160.3	42 04.4	67 26.6 30.0
1830	12952.5	25146.6	12152.7	31149.7	42 05.0	67 23.8 41.0
1900	12969.8	25145.3	12134.2	31160.0	42 04.5	67 27.2 31.0
1930	12961.6	25145.1	12142.2	31154.0	42 04.4	67 25.1 27.3
2000	12967.1	25145.9	12137.4	31159.7	42 04.5	67 26.5 30.3
2030	12963.0	25156.7	12132.1	31166.9	42 04.6	67 28.0 36.3

CERTIFIED TRUE COPY
 12/16/95 1400 2900/95

ENCLOSURE(S)

SIGNATURE