

JULY 29 SAN JUAN, PUERTO RICO

(AM)

44

1. BOTH CATERPILLER AND DECCA ARE WORKING TODAY. DECCA WORKED YESTERDAY, AND PROGRESS IS BEING MADE ON BOTH PORT + STARBOARD RADARS. CATERPILLER MAINTENANCE SHOULD BE FINISHED TODAY, BUT WE WILL KEEP YOU INFORMED.

2. LEG 1 TAPES WILL BE OFF-LOADED THIS MORNING. OUR AIR FREIGHT IS AT THE AIRPORT, AND IS BEING BROUGHT TO THE SHIP THIS MORNING.

3. EXXON TRIED TO REFUEL US YESTERDAY WITH THE WRONG FUEL. THE PRESENT PLAN IS TO GO TO A FUEL DOCK TO REFUEL PRIOR TO DEPARTURE EARLY TOMORROW MORNING.

4. DO YOU HAVE ANY PREFERENCE REGARDING THE OIL COMPANY THAT WE DEAL WITH?
(ANSWER: EXXON — UTMSI HAS CONTRACT W/THEM).

5. STEVE BOND + LUIS SANCHEZ LEFT THIS MORNING.

JULY 30

SAN JUAN, P.R.

(AM)

45

STATUS

1. RADAR — STARBOARD WORKING. PORT SIDE UNDER REPAIR.
 2. ENGINES — FUEL PUMPS (PRE-INJECTION) OK. THROTTLES ADJUSTED — O.K. GENERATORS UNDER REPAIR.
 3. AIR CONDITIONING — NEW UNIT (COMPRESSOR/MOTOR) IS BEING INSTALLED NOW. (BRAND NAME: COPELAMATIC 5 TON). ESTIMATED COMPLETION — 6-7 PM.
 4. WE PLAN TO DEPART FOR FUELING DOCK AS SOON AS REPAIRS ARE COMPLETED. ESTIMATED TIME OF DEPARTURE / MIDNIGHT TONIGHT.
 5. PATTY EBELL, GALLEYHAND, RETURNING TO GALVESTON.
-

(AM)

1. AIR FREIGHT ARRIVED YESTERDAY. ALL NECESSARY AIR GUN SUPPLIES APPEAR TO BE IN THE SHIPMENT. TAPES FROM CT2-LEG1 ALSO LEFT YESTERDAY.
2. CATERPILLER CONTINUING TO WORK. THERE MAY BE A PRE-INJECTION PROBLEM ON BOTH MAIN ENGINE FUEL PUMPS. IF THEY CAN CORRECT IT, NO FURTHER WORK ON THE MAINS WILL BE NECESSARY.
3. THE ~~CONDENSER~~ COMPRESSOR ON THE UPPER DECK AIR CONDITIONER WENT OUT YESTERDAY. IT IS BEING WORKED ON.
4. PRESENT PLAN IS TO SAIL TONIGHT AT MIDNIGHT AFTER REFUELING THIS EVENING AT FUEL DOCK.

31 JULY 1980 SAN JUAN, P.R.

0900L
(AM)

1. CATERPILLER PLANS TO WORK ON THE MOTOR OF THE STARBOARD GENERATOR TODAY. THEY ARE ALREADY WORKING. OUR PLAN IS TO REFUEL AS SOON AS REPAIRS ARE COMPLETED, AND TO LEAVE SAN JUAN SOMETIME THIS EVENING.

1400L (PM)

1. REPAIRS ARE NEARING COMPLETION ON THE STARBOARD GENERATOR. AT 1500L, A PILOT WILL TAKE US TO THE FUELING DOCK. WE SHOULD BE ABLE TO LEAVE SAN JUAN EARLY THIS EVENING.

2. A.J. HURTADO HAS NOTIFIED ME THAT HIS WIFE IS ILL AND THAT HE MUST RETURN TO GALVESTON. HE FEELS THAT BYRON WILL BE ABLE THIS SITUATION WITH ASSISTANCE FROM STEVE PAYNE. UNDER THE (CIRCUMSTANCES), WE CAN ONLY ALLOW A.J. TO LEAVE AND PROCEED AS SCHEDULED (ANS: LAB CONCURS)

M E M O R A N D U M

J. S. Hurtado
Date: 1 August 1980

To: Staff

From: R. H. Ewing

Re: R/V Fred H. Moore Cruise #5, Leg 3.

The ship departed San Juan at 1900 on 7/31/80 for the Bahama project. Position at 1300 today was 20-24N, 68-37W. Expect to be on station about midnight tonight and commence working early tomorrow morning. Everything is operating normally.

(96)

M E M O R A N D U M

J. J. Hurtado
Date: 1 August 1980

To: Staff

From: *R. H. Ewing*
R. H. Ewing

Re: R/V Fred H. Moore Cruise #5, Leg 3.

The ship departed San Juan at 1900 on 7/31/80 for the Bahama project. Position at 1300 today was 20-24N, 68-37W. Expect to be on station about midnight tonight and commence working early tomorrow morning. Everything is operating normally.

(96)

1 AUGUST 1980

(AM)

48

POSITION: $19^{\circ} 52'$ $- 67^{\circ} 55'$

1. ENROUTE TO STREAMER DEPLOYMENT SITE,
MAKING BETWEEN 10 + 11 KTS. WEATHER EXCELLENT.

2. LEFT SAN JUAN WITH FUELING AND ALL
REPAIRS COMPLETED EARLY LAST NIGHT. WE
EXPECT TO BEGIN DEPLOYING THE
STREAMER LATE TONIGHT OR EARLY TOMORROW
MORNING.

POSITION: $20^{\circ} 24' N$ $68^{\circ} 37' W$ (PM)

1. CONTINUING ENROUTE TO STREAMER
DEPLOYMENT LOCATION AT 10 KTS. WE
ANTICIPATE OUR ARRIVAL AT THAT LOCATION
AT MIDNIGHT TONIGHT. WEATHER IS
EXCELLENT, AND ALL EQUIPMENT IS FUNCTIONING
NORMALLY.

2. AS SOON AS WE HAVE FINISHED
DEPLOYING THE STREAMER AND MADE ANY
NECESSARY REPAIRS, WE WILL GIVE GARY AN
INVENTORY OF SPARE STREAMER SECTIONS AND
THEIR CONDITION.

3. DON MORSEFIELD + JIMMY SULLIVAN WOULD
LIKE TO KNOW THE STATUS OF THEIR
PAYCHECKS (ANS: CHECKS HAVE BEEN MAILED.
CAPT EWING WILL CHECK WITH THEIR
FAMILIES TO VERIFY ARRIVAL OF THE CHECKS)

CAPT. EWING WILL BE UP
TOMORROW MORNING, AND KEN GRIFFITHS
SUNDAY MORNING.

2 AUGUST 80

(AM)

POSITION: $21^{\circ} 29.07'$ $-70^{\circ} 00.21'$ HEADING 221°

① WEATHER EXCELLENT

② WE ARE WITHIN TWO HOURS OF BEGINNING LINE 1.
WE ANTICIPATE TO HAVE ALL EQUIPMENT WORKING.
4 GUNS SERVICEABLE

③ WE WOULD LIKE TO ORDER SOME TRANSISTORS FOR
SPARES. THEY ARE USED IN THE AMPLIFIER CARDS IN
OUR TAP TRANSPORTS. ④ 2N697 ⑤ 2N1132 ⑥ 2N1711

RECEIVED: NO MESSAGES RECEIVED CSP

2 AUGUST 80

(PM)

POSITION: $21^{\circ} 15.20'$ $-70^{\circ} 13.0'$ HEADING 223°

(UT GRAVESTON NOT MONITORING) NO TRAFFIC SENT
CSP

3 AUGUST 1960

SAMPLE 19° 50' N - 70° 18' W

RECENTLY SHOOTING LINE 3.
 LAUNCHER EXCELLENT, DATA EXCELLENT, FOUR
 ARE OPERATIONAL, AND ALL OTHER EQUIPMENT
 FUNCTIONING NORMALLY.

WILL GIVE INVENTORY OF STREAMER
 AND THEIR CONDITION TOMORROW
 MORNING.

KEN TELLS US ABOUT
 TROPICAL STORM "ALLEN"

0600 EDT 3 AUGUST

POSITION: 12° 30' N
 - 54° 30' W

MOVING WEST AT 20 MPH, w/ TOP
 WINDS OF 70 MPH AND GALE FORCE WINDS
 UP TO 100 MILES NORTH OF THE
 CENTER. THEY WILL KEEP US INFORMED.

4 August 1980

1100 L

FM05-03

CSE

0300 L

AM

Position: $28^{\circ}08'N$ $-71^{\circ}39'W$

R
53

1. STATUS -- WE ARE ABOUT TO FINISH LINE 4. ALL EQUIPMENT FUNCTIONING NORMALLY. DATA + WEATHER EXCELLENT.

2. WE WOULD LIKE A RECENT UPDATE ON HURRICANE "ALLEN":

→ 0600 EDT $14.0^{\circ}N$ $62.6^{\circ}W$
moving @ 280° @ 20 MPH

Mile Barbados last night -- fair amount of damage, w/ 25 MPH wind at the center.

1700 L

PM.

Position: $20^{\circ}23'N$ $-71^{\circ}55'W$

3
5

1. WE ARE PRESENTLY SHOOTING LINE 5. ALL EQUIPMENT FUNCTIONING NORMALLY. WEATHER GOOD, DATA EXCELLENT.

2. WHAT IS THE LATEST INFORMATION ON "ALLEN" -- 1200 EDT -- $14.3^{\circ}N$ $64.4^{\circ}W$ moving @ 280° @ 20 MPH. Top winds 35 MPH, hurricane extending 25 mi. from center, w/ gale force wind extending 125 mi. from center (N) and 75 mi (S). Significant change in movement expected next 12-24 hours. "ALLEN" is the only major disturbance at this time.

3. Streamer Spars:

a. Winch -- 1 broken, 1 live, 2 deads (new).

2 dead, 2 live (repaired)

b. on deck -- 1 live, 1 dead (need repair)

1 stretch (needs recovering)

→ DO NOT REPAIR.

M E M O R A N D U M

R. H. Ewing
Date: 5 Aug. 80

To: Staff

From: R. H. Ewing

R/V FRED H. MOORE Cruise #5, Leg 3.

Saturday, 8/2/80 at 0800

Position was 21-29N, 70-00W. Will begin line #1 in one hour. Weather excellent, conditions normal. Need for tape transport:

20 ea 2N697
20 ea 2N1132
20 ea 2N1711

Sunday, 8/3/80 at 0800

Position was 19-50N, 70-18W. Shooting line #3 with four guns. Data, weather excellent. Notified ship of location of Hurricane Allen.

Monday, 8/4/80 at 0800

Position was 20-08N, 71-39W. Conditions normal.

Position at 1300 was 20-23, 71-55W. Shooting one line #5. Conditions normal, Following is an inventory of spare streamer sections:

Aux. winch: 1 ea new stretch
1 ea new line
2 ea new dead
2 ea repaired dead
3 ea repaired line

On deck: 1 ea bad stretch
1 ea line - needs repair
1 ea dead - needs repair

RHE/ld

5 AUGUST

(400L) 1800Z

52

POSITION: 22° 07' N 72° 18' W

① SHOOTING LINE 6 (OLD LINE 13), FIRING ON ALL 4 GUNS. WEATHER IS GETTING HEAVIER. DATA STILL GOOD.

TRAFFIC FROM GAL

① FOR PATTY GANEY - NEW NOTICE! BRITANY TERESE
816 202 JULY 30

② FOR JIM GILROY - FROM GARY CRANDOCK, LANDLORD MOVING BACK IN. WOULD GILROY LIKE TO SHARE ANOTHER APT OR GET ONE ON HIS OWN? QUERY: FUNDING IN AUSTIN FOR APT?

HURRICANE ALLEN

1200 EDT

16.2 N 71.9 W

COURSE: WNW @ 20 mph EXPECTED TO
CONTINUE

GUSTS TO 170 mph

HURR WINDS 40 mi from Center
GALE " 175 mi. N - 100 mi S

SHOULD HIT JAMAICA

5 AUGUST

(0900L) 1980

51

POSITION: $21^{\circ}49'N$ $72^{\circ}30'W$

1. WE HAVE JUST BEGUN TO SHOOT OLD LINE #13, AFTER FINISHING LINE #5 LAST NIGHT. WE DECIDED TO SHOOT THE ATLANTIC LINE (TO DSDP 99) EARLY IN ORDER TO GET AS FAR AWAY FROM HURRICANE ALLEN AS POSSIBLE.

2. ALLEN: (FROM NWS via Malabar)

0600 EDT $15.5^{\circ}N$ $70.0^{\circ}W$

Movement WNW @ 20 MPH. Little change in direction expected, but storm should slow next 24 hours. Highest winds 170 MPH, with gale force winds extending 175 miles north of the center.

3. Doug McGowan would like you to call his wife to remind her to prepare in advance for the hurricane should it enter the Gulf of Mexico. Capt. Leslie would like the same message to go to Marie Liberator @ 763-6428.

4. John Kunselman advises us that trace #24 is inverted — we can check it with the Galvo camera. If we change its polarity, do it at the end of a line.

M E M O R A N D U M

Date: 8-5-80

To: Staff

From: R. H. Ewing *R.H. Ewing*

Re: R/V FRED H. MOORE Cruise #5, Leg 3.

Position at 0800 was 21-49N, 72-30W, and at 1300 22-07N, 72-18W. The ship has deviated from the planned track by moving from line #5 to line #13 this morning. This has now put them North of the Bahamas, significantly increasing the distance from the hurricane. The weather is a bit heavier in the Atlantic but data is still excellent and all equipment working normally.

(96)

6 AUGUST 1980

FM05-03

(AM)

POSITION: 23° 08' N

72° 06' W

1. AT THE PRESENT TIME WE ARE TRANSITING SLOWLY BACK TO PICK UP LINE 14. WE BROKE THE LINE LAST NIGHT IN ORDER TO HEAD NE IN CASE ALLEN DECIDED TO CUT NORTH THROUGH THE WINDWARD PASSAGE. WEATHER WAS DETERIORATING HERE W/ ~~30 MPH~~ ¹⁵ WINDS FROM THE EAST AND 12-15' SEAS. HOWEVER, WEATHER THIS MORNING IS IMPROVING, AS ALLEN PASSES US TO THE SOUTH AND WEST.

2. EQUIPMENT — THE STARBOARD MAGNETOMETER WAS LOST LAST NIGHT. WE MAY FIND IT WRAPPED AROUND THE STREAMER AS WE DID LAST YEAR. WE ALSO LOST TWO OF THE WOODEN FLOOR GRATINGS AFT OF THE STREAMER WINCH. HOWEVER, WE GOT THE GUNS ON BOARD SUCCESSFULLY, AND THE STREAMER CAME THROUGH THE NIGHT IN APPARENT GOOD SHAPE. WE SHOULD BE BACK ON LINE BY THE MID-AFTERNOON. WE WILL USE THE PORT-SIDE MAGGIE, AS WE HAVE CHECKED IT AND IT APPEARS TO BE FUNCTIONING NORMALLY.

3. JIM GILROY — in response to ? From Gary Craddock in Austin —
 a. Definitely wants to continue sharing a house or apt. — preferably close to campus or IF shuttle. Please make arrangements.
 b. He will settle the finances when he returns in the latter part of this month.

4. Regarding reversed polarity, trace 24 — Byron would like to know if correcting the problem means simply reversing trace 24's plug on patch panel? YES

6 AUGUST 80

FM05-03

(PM)

Position: $22^{\circ} 49' N$ $72^{\circ} 21' W$

① WILL BE BACK ON LINE @ 400 PM EDT

① FRED TAYLOR - Sister Betsy is having ~~caes~~
caesarean tomorrow - will keep advised.

M E M O R A N D U M

R. Ewing
Date: August 6, 1980

To: Staff

From: R. H. Ewing

Re: R/V FRED H. MOORE Cruise #5, Leg 3.

Position at 0800 was 23-08N 72-06W and at 1300 22-49N 72-21W. At 0800 the ship was in transit back to pick up line #14, having diverted to the North during the night because of heavy weather. Believe the stbd maggie head is lost, or else wrapped around the streamer. Lost two wooden floor gratings. Having some trouble with streamer depth control, perhaps damaged birds. Estimate will be back on the line and recording data by 1600, having lost about 36 hours due to storm evasion.

(96)

7 AUGUST 1980

FM05-03

(AM)

55

OLD BAHAMA CHANNEL

POSITION: $+23^{\circ}29'(N)$ $-073^{\circ}32'(W)$

1. PRESENTLY CONTINUING TO SHOOT LINE 14. HOWEVER, WE HAVE A NUMBER OF BAD TRACES WHICH MAY BE CORRECTED BY SWITCHING STRETCH SECTIONS. WE PLAN TO DO THIS IMMEDIATELY. ALL OTHER EQUIPMENT IS FUNCTIONING NORMALLY. WEATHER IS STEADILY IMPROVING HERE. WE DO NOT PLAN TO PULL IN THE ENTIRE STREAMER TODAY.
2. WHAT IS THE MOOD IN GALVESTON REGARDING HURRICANE ALLEN? (GENERAL PREPAREDNESS)
3. DID ANY WORD COME FROM CHEVRON YET REGARDING THIS SURVEY?
(NOT YET.)

POSITION: $+23^{\circ}29'(N)$ $-73^{\circ}41'(W)$ PM

1. SUCCESS! WE PULLED IN THE LEADER AND STRETCH SECTION TO FIND THE STARBOARD MAGNETOMETER + MAG. TAPE WRAPPED AROUND THEM. WE RECOVERED THE MAGGIE, AND REPLACED A BADLY TWISTED STRETCH SECTION TO RECOVER OUR FORMER DATA QUALITY. WE ARE PUTTING THE GUNS IN, AND HAVE JUST BEGUN SHOOTING DATA ON LINE 14 AGAIN.

M E M O R A N D U M

78
R. H. Ewing
Date: August 7, 1980

To: Staff

From: R. H. Ewing

Re: R/V FRED H. MOORE Cruise #5, Leg 3.

Position at 0800 was 23-08N 72-06W and at 1300 22-49N 72-21W. At 0800 the ship was in transit back to pick up line #14, having diverted to the North during the night because of heavy weather. Believe the stbd maggie head is lost, or else wrapped around the streamer. Lost two wooden floor gratings. Having some trouble with streamer depth control, perhaps damaged birds. Estimate will be back on the line and recording data by 1600, having lost about 36 hours due to storm evasion.

(96)

8 August

(AM)

Position: 22° 50' N 74° 42' W

1. WE ARE ABOUT TO FINISH
LINE IS. DATA AND WEATHER ARE
EXCELLENT. ALL EQUIPMENT FUNCTIONING
NORMALLY.

2. WHAT IS THE WEATHER LIKE
IN GALVESTON?

Ans. — BEAUTIFUL AT THE PRESENT TIME,
BUT EVERYONE IS BATTENING
DOWN THE HATCHES AT THE
LAB AND AT HOME
— SOME ARE STAYING — SOME
ARE GOING. THE CAPTAIN WILL
STAY ON UNLESS IT LOOKS
LIKE GALVESTON WILL BE HIT
DIRECTLY.

3. PAUL (MALABAR) WILL GIVE US AMATEUR
RADIO FREQUENCIES TO MONITOR FOR TEXAS
EMERGENCY HURRICANE INFORMATION:

CONTINUOUS
REPORTS 14325 MHz / (14313 (20M))
Texas: (outgoing only) (night) 3.967
(day) 7.283

24 hr. (two-way traffic) 3.935
3.961 - back-up

additional daytime 7.240 - 7.250

Emergency weather (outgoing) 3.955

Health + welfare (two-way) 7.290

W. Texas emergency net 3.945 (night)
7.260 (day)

8 AUGUST (cont.)

(AM)

4. UPDATE ON "ALLEN"

AT 0900 LOCAL POSITION WAS 23.5 N 90.8 W
MOVING ON A WNW W COURSE AND EXPECTED TO MAINTAIN
PRESENT COURSE FOR TODAY. HURRICANE WATCH
HAS BEEN POSTED FOR THE ENTIRE TEXAS COAST

(PM)

POSITION: 22° 50' N 75° 09' W

1. Presently shooting line 16 Weather
excellent, data excellent, all equipment
functioning normally.

2. WHAT'S THE LATEST ON "ALLEN" VS.
GALVESTON?

9 AUGUST 1980

(AM)

0900L POSITION $22^{\circ} 23' N$ $75^{\circ} 01' W$ NO CONTACT FROM CAB WILL
GIVE TRAFFIC THIS PM.

9 AUGUST 1980

1400L POSITION $22^{\circ} 24' N$ $75^{\circ} 04' W$

NO CONTACT FROM BOB EWING

10 AUGUST 1980

(AM)

59

POSITION: 21° 36' N 74° 23' W

1. WE ARE PRESENTLY SHOOTING LINE
18. YESTERDAY, MORE STREAMER WORK WAS
NECESSARY IN ORDER TO REPAIR
DAMAGED BIRDS, BUT NOW ALL EQUIPMENT
IS FUNCTIONING NORMALLY. WEATHER HERE
IS GOOD.

2. HOW DID GALVESTON FAIR DURING
THE APPROACH AND ARRIVAL OF ALLEN?

~~REMOVED~~

NOTE: PAX EDEN ANSWERED A PATCH TO JOHN McCOWAN'S HOME
NO CONTACT MADE. CSP

10 AUGUST 80

(PM)

POSITION: 21° 08' N 74° 06' W

NO CONTACT WITH CAB

11

August, 1980

(AM)

Position: $21^{\circ}05'N$ $74^{\circ}15'W$

1. WE ARE PRESENTLY SHOOTING LINE 11. WEATHER IS GOOD, DATA IS GOOD, AND ALL EQUIPMENT IS FUNCTIONING NORMALLY EXCEPT THE SEISMIC MONITOR RAYTHEON FLAT-BED RECORDER IN THE LAB. BYRON HAS A ? FOR KEN ABOUT THIS PROBLEM — DO WE HAVE ANY BULBS, (part no. 253) on board? THESE BULBS GO IN THE "PHOTRAN", WHICH IS USED WITH PHOTOCELLS FOR TIMING IN THE RAYTHEON RECORDER. TWO OF THESE BULBS ARE BURNED OUT — AND MAY BE CAUSING THE PROBLEM IN THE RECORDER.

2. How is GALVESTON DOING AFTER THE NEAR-MISS? IS EVERYONE BACK AT THE LAB, AND BACK ON THE ISLAND?

3. BARRING FURTHER DELAYS, WE SHOULD BE BACK IN GALVESTON BY AUGUST 22ND.

11 AUGUST 80

(PM)

Position: $21^{\circ}28'N$ $73^{\circ}56'W$ 11.

1. WE ARE PRESENTLY SHOOTING LINE 11. ~~WEATHER~~ WE WILL BEGIN SHOOTING LINE 12 IN ABOUT AN HOUR. WEATHER EXCELLENT, DATA IS GOOD, ALL EQUIPMENT WITH EXCEPTION TO RAYTHEON SEISMIC MONITOR FUNCTIONING NORMALLY.
2. WE WOULD LIKE TO TALK TO KEN ABOUT RAYTHEON SEISMIC MONITOR.

12 AUGUST

(AM)

POSITION = $21^{\circ} 43' N$, $72^{\circ} 33' W$

1. WE ARE TRANSITING TO THE START OF LINE 6. WEATHER IS GOOD, DATA HAS BEEN EXCELLENT, AND ALL EQUIPMENT EXCEPT THE RAYTHEON RECORDER IS FUNCTIONING NORMALLY. BYRON AND STEVE ARE WORKING ON THE RAYTHEON, BUT FOR THE MOMENT ONE OF THE EPC'S IS HANDLING 3.5 KHZ AND THE OTHER IS SERVING AS A SEISMIC MONITOR.

2. BOTH BRAD STEVENSON AND DAVE ANGSTADT APPEAR TO WANT TO WORK ON MSI DATA. BOTH WOULD BE WILLING TO COME TO GALVESTON IN JANUARY. DOUG MCCOWAN WOULD BE WILLING TO WORK WITH BRAD, AND I COULD WORK WITH DAVE. WE WOULD LIKE TO GET THE BALL ROLLING AS SOON AS POSSIBLE ON FINANCIAL SUPPORT FOR THESE STUDENTS FOR SPRING, 1981.

12 AUGUST

(PM)

① WE ARE PRESENTLY SHOOTING LINE 6. WEATHER IS GOOD, DATA GOOD. ALL EQUIPMENT FUNCTIONING NORMALLY EXCEPT THE RAYTHEON RECORDER WHICH WILL NOT BE ABLE TO BE REPAIR DUE TO TRANSISTORS WE DONT HAVE REPLACEMENT FOR.

① PAUL WILL BE LATE TOMMORROW MORNING.

M E M O R A N D U M

Date: August 12, 1980

To: Staff From: R. H. Ewing

Re: R/V FRED H MOORE Cruise #5, Leg 3.

8-7-80

Position at 0800 was 23-29N 73-32W and at 1300 was 23-29N 73-41W. After returning to line 14, found numerous bad traces. Pulled in streamer to stretch section which was twisted and wrapped with stbd maggie. Recovered maggie and replaced stretch section. Streamer now looks OK. Weather improving. Back in business with 4 guns.

8-8-80

Position at 0800 was 22-50N 74-42W. Almost finished shooting line #15. Data and weather excellent. Position at 1300 was 22-50N 75-09W.

NOTE: Removed radio antenna from the roof in preparation for Hurricane Allen. No contact with ship 8-9-80 or 8-10-80.

8-11-80

Position at 0800 was 21-05N 74-15W. Shooting on line #11. Data and weather good. Conditions normal except for Ratheon Flatbed Recorder. Two bulbs (#253) burned out. Asks if any replacement on board. ETA Galveston is August 22, plus any additional work in Straits of Florida. Position at 1300 was 21-28N 73-56W. Informed Dr. Austin that we plan to follow "Plan A" in the Florida Straits en route to Galveston.

8-12-80

Position at 0800 was 21-43N 72-33W and at 1300 was 21-19N 72-43W. Working on Line #6. Everything operating normally except the Raytheon recorder. Data and weather good.

13 AUGUST

(AM)

POSITION: 20° 35' N 73° 07' W

1. WE ARE PRESENTLY SHOOTING LINE 7. WEATHER AND DATA ARE EXCELLENT, AND ALL EQUIPMENT IS FUNCTIONING NORMALLY
2. WOULD DICK BUFFLER LIKE HIS DATA AT 48-TRACE 24-FOLD OR 24-TRACE 34-FOLD? ^{WHAT RECORD LENGTH WOULD HE LIKE?} ^{WHAT WOULD HE LIKE?} HIS LINES TO BE CALLED? (ANS: AT 1300)
3. DOUG MCCOWAN WOULD LIKE TO KNOW IF THERE HAS BEEN ANY NEWS AT ALL ON ACQUISITION OF A VAX COMPUTER SYSTEM FOR THE LAB. (ANS: NOTHING SPECIFIC)

14 AUGUST

(PM)

POSITION: 20° 34' N 73° 27' W

1. WE ARE PRESENTLY SHOOTING LINE 8. WEATHER AND DATA EXCELLENT. ALL EQUIPMENT FUNCTIONING NORMALLY. (ANS: ROGER THAT)
- FROM THEM:
2. BUFFLER'S DATA SHOULD BE 48 TRACE - 24 FOLD @ 10 SEC. RECORDS. NAME HIS LINES "SE 26"
3. DON TALKED TO BOB EWING ABOUT THE AIR CONDITIONER BEING DOWN. CANNOT REPAIR IT UNTIL GALVESTON. (ANS: ROGER THAT.)

M E M O R A N D U M

R. Ewing
R. Ewing

Date: August 13, 1980

To: Staff

From: _____

Re: R/V Fred H. Moore, Cruise 5-3

Position at 0800 was 20-35N 73-07W and at 1300 was 20-34N 73-27W. Almost finished with line #8. Conditions are normal. Weather and data are good. Informed Dr. Austin that the Florida Straits data should be 48 Trace, 24 Fold, 10 second records and that lines should be numbered from SF26. Ship reported that the upper level air-conditioning system is out again due to chaffing of two freon lines.

(96)

14 AUGUST

(AM)

POSITION: 21° 07' N 74° 37' W

1. WE ARE PRESENTLY SHOOTING LINE 19. WEATHER AND DATA ARE EXCELLENT, AND ALL EQUIPMENT IS FUNCTIONING NORMALLY.



— TELL DON RE. AIR CONDITIONING
— SEAL ALL LEAKS AND PUT SLIGHTLY
POSITIVE CHARGE OF FREON INTO THE
SYSTEM TO KEEP MOISTURE OUT.

14 AUGUST 80

(PM)

POSITION 21° 22' N 75° 03' W

1/3

- 1) WE ARE PRESENTLY SHOOTING LINE 20. WEATHER AND DATA ARE EXCELLENT, AND ALL EQUIPMENT IS FUNCTIONING NORMALLY.

2) FOR CAPTAIN LESLIE — YOUR SISTER CALLED THE LAB, AND WOULD LIKE YOU TO GET IN TOUCH WITH HER. BUSINESS, NOT AN EMERGENCY, BUT IMPORTANT.

M E M O R A N D U M

R. H. Ewing
R. H. Ewing

Date: 14 Aug. 80

To: Staff

From:

R/V FRED H. MOORE Cruise #5, Leg 3.

Position at 0800 was 21-07N, 74-37W and at 1300 was 21-22N, 75-03W. Weather and data are good; conditions normal. Commenced line #20 about noon.

RHE/lld

15 AUGUST 80

(AM)

POSITION 21°42'N 76°03'W

1. WE ARE PRESENTLY SHOOTING LINE 22.
 WEATHER AND DATA ARE EXCELLENT.
 ALL EQUIPMENT FUNCTIONING NORMALLY.

2. WE HAD A TWO-HOUR ENCOUNTER
 WITH AN UNIDENTIFIED RUSSIAN VESSEL
 LAST NIGHT, AS WE APPROACHED IN THE CUBAN COAST
 US AND HE GOT IN THE FRONT OF
 CIRCLE OFF-LINE BEFORE HE MOVED OFF.
 I WOULD LIKE TO HAVE YOU CLARIFY
 A PROCEDURE FOR US SHOULD THIS
 HAPPEN AGAIN.

4.3 PLEASE CALL CAPT. LESLIE'S SISTER AT
 713-360-1659 (OFFICE X2355) — HE
 COULDN'T GET THROUGH, AND HE WOULD LIKE
 YOU TO FIND OUT THE NATURE OF
 HER BUSINESS.

4.3 WE PLAN TO TRY TO SHOOT DICK
 BUFFLER'S LINES AS SOON AS WE
 FINISH THIS SURVEY. WE MAY HAVE TROUBLE
 SHOOTING THESE DATA E → W IN THE
 FLORIDA STRAITS. CURRENTS THERE RUN 1.5-3.0
 KTS, AND I DO NOT WANT TO TOW THE
 GEAR THROUGH THE WATER AT MORE
 THAN 6.5 KTS. WE WILL LET YOU KNOW
 AS WE BEGIN TO SHOOT THERE.

15 AUGUST 80

(PM)

POSITION: 22° 05' N

76° 09' W

1. WE ARE PRESENTLY SHOOTING LINE 23
WEATHER AND DATA ARE EXCELLENT.
ALL EQUIPMENT FUNCTIONING NORMALLY.

2. BOB EWING ~~# ~~LESLIE~~ TO CAPTAIN LESLIE'S SISTER~~
TRIED TO CALL CAPT. LESLIE'S SISTER - NO ANSWER.
SHE DID TELL CAPT EWING THAT SHE IS
WORKING NIGHTS.

3. CAPT. EWING CALLED THE STATE DEPARTMENT.
THEY HAD NOTHING TO ADD AS FAR AS A
PROCEDURE IN CASE OF ANOTHER ENCOUNTER.
CAPT EWING SAID TO CONTACT COAST GUARD IN
MIAMI IN CASE OF TROUBLE.

M E M O R A N D U M

Date: 8-15-80

To: Staff

From: Capt. Ewing

Re: R/V Fred H. Moore 5-3

Position at 0800 was 21-42N 76-03W and at 1300 was 22-05N 76-09W. Data and weather good. The ship reported an encounter with a Soviet vessel at 0200 this morning. The ship, possibly a large traveler, closed the Moore, inquired into the nature of her activity, and then moved across her bow, requiring Moore to maneuver. The incident has been reported to the State Dept.

16 August

(AM)

POSITION: 22°24' N

77° 44' W

1. WE ARE PRESENTLY SHOOTING LINE 24. WEATHER + DATA ARE EXCELLENT. ALL EQUIPMENT FUNCTIONING PERFECTLY. WE EXPECT TO BEGIN SHOOTING DICK BUFFERS LINES TOMORROW AFTERNOON.

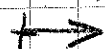
2. FOR PAUL EDEN — WE WOULD LIKE TO TRY TO PUT THROUGH TWO PHONE PATCHES THIS AFTERNOON IF THERE ISN'T TOO MUCH TRAFFIC.

16 AUGUST 80

(PM)

POSITION 22° 40' N 78° 09' W

1) WE ARE PRESENTLY SHOOTING LINE 25. WEATHER AND DATA ARE EXCELLENT. ALL EQUIPMENT FUNCTIONING NORMALLY.



NO CONTACT MADE WITH MSI, UT GARDENSTON.
CSP

REMARKS:

MADE PHONE PATCHES FOR FRED TAYLOR TO 919-471-2176,
MADE CONTACT. ALSO MADE PHONE PATCH FOR CAPTAIN
KESLIE TO HOUSTON, MADE CONTACT.

17 AUGUST (AM)

POSITION = 23° 28' N , 79° 53' W

1. WE ARE PRESENTLY SHOOTING SF-26.
WEATHER AND DATA ARE EXCELLENT
EQUIPMENT IS FUNCTIONING NORMALLY.
2. EVENTS OF NOTE: HAD A NICE
CONVERSATION W/ A CUBAN GUNBOAT LAST
NIGHT BUT THEN PICKED UP A U.S.
COAST GUARD CUTTER THAT STAYED ALONGSIDE
US UNTIL EARLY THIS MORNING NO
TROUBLE ENCOUNTERED.
3. Re: STREAMER PARTY — WHAT WILL
BE DONE W/ STREAMER WHEN WE RETURN
TO GALVESTON? (i.e. HOW MUCH MAINTENANCE
SHOULD WE DO (ie = PATCHING, etc.)
during recovery day after tomorrow?)
4. FOR PAUL EDEN: WE HAVE A
PHONE PATCH — WOULD THIS MORNING
OR THIS AFTERNOON BE MORE CONVENIENT?
(ANS.: EITHER THIS MORNING OR THIS
AFTERNOON).

1. 713 - 744 - 9618 - DOUG MCCOWAN
2. 713 - ~~945-8024~~ - JOYCE ELLIS —

945 - 8024
COULDN'T GET THROUGH — WILL TRY TO
GET THROUGH THIS AFTERNOON

Monday 18 August 80

(AM)

Position: $23^{\circ}51'N$ $82^{\circ}00'W$

1) WE ARE PRESENTLY SHOOTING LINE SF-28. WEATHER AND DATA ARE GOOD. WE HAVE 3 GUNS SERVICEABLE AS GUN #2 WENT BAD LAST NIGHT AROUND 2300 HOURS. AND OTHER EQUIPMENT FUNCTIONING NORMALLY.

2) WE ARE HAVING SOME TROUBLE WITH THE STARBOARD RADAR, HEADING MARKER, HOWEVER IT IS FUNCTIONING PROPERLY AT THIS TIME.

3) RE: STREAMER PARTY - WHAT WILL BE DONE WITH STREAMER WHEN WE RETURN TO GALVESTON? HOW MUCH MAINTENANCE SHOULD WE DO?

ANS: AS MUCH AS IS POSSIBLE AS WE WILL BE USING THE STREAMER WITH IN THE NEXT TWO WEEKS.

(PM)

Position: $23^{\circ}42'N$ $82^{\circ}20'W$

1. CONTINUING TO SHOOT LINE SF-28. WEATHER AND DATA ARE EXCELLENT. WE EXPECT TO BEGIN TO RECOVER THE STREAMER EARLY TOMORROW MORNING.

2. RE. STREAMER - WHAT IS THE NEXT PROGRAM FOR WHICH IT WILL BE USED? (ANS. MORE WORK FOR WESTERN)

3. ETA GALVESTON APPROXIMATELY NOON, 22 AUGUST

M E M O R A N D U M

Date: 8-18-80

To: Staff

From: R. Ewing

Re: R/V FRED H. MOORE Cruise #5, Leg 3.

Saturday, 16 August 1980

Position at 0800 was 22-24N, 77-44W. Shooting line #24. Conditions normal. Expect to commence shooting the "SF" lines Sunday afternoon.

Note: No contact with the ship made on Sunday.

Monday, 18 August 1980

Position at 0800 was 23-51N, 82-00W and at 1300 was 23-42N, 82-23W. Shooting on line SF 28 with 3 guns (one gun went down late Sunday night). Expect to recover the streamer Tuesday morning, making repairs as feasible. Traces 32 & 42, 44 & 9 are down. Several sections will need to be sent to the shop for repair.

ETA Galveston is noon on Friday, August 22nd.

RE/lid

19 AUGUST 80

(AM)

POSITION: 23° 16' N 83° 14' W

- 1) WE ARE PRESENTLY RECOVERING THE STREAMER, ALL OTHER EQUIPMENT IS SECURE. EXPECT TO BEGIN STEAMING FOR GAINESTON AT 1000 CDT.
- 2) DR. AUSTIN AND CREW RESPECTFULLY REQUEST THAT JACK BUFFARD HAVE REFRESHMENTS OF BEER ON THE DOCK FOR OUR RETURN

RETURNED TRAFFIC: DOES YOUR ETA OF FRIDAY NOON STILL LOOK GOOD?

Reply: YES, I'M SURE DR. AUSTIN WILL HAVE UPDATES ON OUR ETA AS TIME GOES ALONG.

CSP

19 AUGUST 80

(PM)

POSITION: 23° 30' N 83° 35' W

- 1) WE ARE PRESENTLY IN TRANSIT FOR GAINESTON, NO FURTHER UPDATE ON ETA GAINESTON. ETA REMAINS 1000 FRIDAY.

RETURN TRAFFIC:

1) WESTERN PRELIMINARY SET FOR TUESDAY. DURING NEXT WEEK WE WILL MOVE TO PELIANO ISLAND TO DO THE HEAVY LOADING, ETC. AFTER HEAVY LOADING IS COMPLETE WE WILL MOVE BACK TO MIST FOR OTHER INSTALLATIONS.

2) DATE SET FOR SEA 10 SEPT 80

3) WESTERN NEEDS INPUTS ON STREAMER, # OF CHANNELS, NOISE LEVEL ON CHANNELS, # OF BROS USED, # OF BIKES GOOD.

4) NEED EST. OF REPAIR ^{CEM} NECESSARY TO BE ABLE TO MEET 10 SEPT 80.
PARTS NEEDED?
SUPPLIES NEEDED?
PERSONNEL CHANGED?

CSP

M E M O R A N D U M

Date: 8-19-80

To: Staff

From: *R. H. Ewing*
R. H. Ewing

Re: R/V FRED H. MOORE Cruise 5, Leg 3.

The ship completed the regional lines in the Florida Straits this morning at 23-16N, 83-14W, retrieved the streamer and commenced transit (about noon) to Galveston. ETA is still Friday, Aug. 22nd at noon.

RHE/ld

(96)

20 AUGUST 1980

(AM)

POSITION:

1. STILL STEAMING TOWARDS GALVESTON.
SPEED: ETA GALVESTON:

2. STATUS OF STREAMER

a. Live traces 9, 32, 44, and 42
are bad

1. 32, 42 — bad in leader on
between cable connector and lab.
2. 44 and 9 — cause unknown.

Sections look OK

All other sections look good — noise levels OK

b. A number of inboard sections
are heavily patched (list-in Galveston):
1. Section # 73 (dead) — has bad hole
which we tried to fix w/ limited
success — will probably have to be
replaced.

2. Stretch section — already has
5 patches, at least one of
which is leaking. Will need to
be checked and refilled w/oil.
No spares aboard.

c. Status of spares on aux.
winch =

1. As I reported on 4 August
(except stretch is on streamer, as is
one of the repaired lives), leaving:

- 1 leader (old 6-channel)
- 2 - new deads
- 1 - new live
- 1 - repaired dead
- 2 - repaired lives

d. Status of repairs to sections on deck = 2 stretch

20 AUGUST 80

(AM)

3) ENGINEERING STATUS

A) PERSONNEL NEEDED THIRD ENG. TECHNICIAN

B) WORK TO BE COMPLETED WITH ASSISTANCE

1) REPAIR THROTTLES TO CAPTAIN'S SPECIFICATIONS

2) CHECK & REPAIR STOPS ENGINE EXHAUST SYSTEM FOR EXPANSION FITTINGS AND LEAKS

3) REPAIR STERN DECK LEAK

4) NEED ASSISTANCE ON AIR CONDITIONING

C) SUPPLIES NEEDED

1) OIL TO SERVICE ENGINES - APPROX. 500 GAL.

2) MAROMA ESTIMATE APPROXIMATELY 800 GAL.

3) 1 CASE 200 WATT BULBS, 1 CASE 25 VOLT 40 WATT

4) OVERALL ENGINEERS REPORT AND LIST OF ENGINE FILTERS, TOOLS TO SERVICE AIR CONDITIONERS, AND MISCL. TOOLS WILL BE TURNED IN UPON ARRIVAL.

5) D-398, 2 DZ. EACH GASKET 6H1540

6) D-398, 3 CASES FILTER 55405

4) ET PARTS & SUPPLIES

A) 1) 253 BULBS

2) 2N392

3) 2N1309

4) 2N2904

5) AUTO ARIAN CONTRACTS - DECCA CODE #9455620

B) RAYTHEON RECORDER AND PORT RIDER DOWN, ETS EXPECT TO MEET 10 SEPT SAME DATE.

5) JIM SULLIVAN WOULD LIKE YOU TO CALL HELEN SULLIVAN PHONE # 938-7977. INFORM HER OF ETA AND ANY UPDATED ETA, AND ~~WALK~~ HER TO HAVE HIS TRUCK AT DOCK, GASED & OILED TO GO TO ORANGE, ALSO HAVE KIDS READY IF THEY ARE GOING HOME.

20 August (cont)

(AM)

5.) CAPTAIN'S REPORT

- 1.) ETA ^N 11:30 AM -- BASED ON 10.0 KTS.
AND NO ^A 22 AUGUST CHANGE IN WEATHER.
- 2.) SUGGESTS THAT YOU ASK UTMB DIETARY SECTION FOR ASSISTANCE IN PREPARING A FOOD PROGRAM. PRESENT CREW SITUATION MAKES IT IMPOSSIBLE TO ORDER FROM BOAT.
- 3.) REPAIRS SUBJECT TO ANALYSIS BY EXPERIENCED + ABLE MARINE ENGINEER
- 4.) PERSONNEL CHANGES SUBJECT TO DISCUSSION -- NO RECOMMENDATIONS UNTIL ARRIVAL. WILL BE SHORT A DECK-HAND
- 5.) I HAVE HAD TROUBLE WITH JAMIE AUSTIN AND DOUG MCCOWAN DURING THE 3RD LEG. MY POSITION UNCLEAR UNTIL CLARIFICATION. I FIND SITUATION RELATING TO BRIDGE AND LAB OPERATIONS "INCREDIBLE AND INTOLERABLE."
- 6.) IF YOU WISH FURTHER CLARIFICATION, YOU CAN SET UP A PHONE PATCH VIA WOM RADIO.

LAST

20 August 1980 (PM)

Position: 25°30' N 87°03' W

1. ETA AROUND NOON, 22ND STILL LOOKS O.K.
2. CONDITION OF BIRDS — ALL O.K.,
ALTHOUGH SEVERAL ARE WITHOUT FUNCTIONAL
HINGES. CONDITION OF DEPTH INDICATORS —
OUTBOARD D.I. NOT FUNCTIONING PROPERLY, AND
ALL WILL HAVE TO BE RECALIBRATED
3. WOULD YOU HAVE MRS. BARNES CONTACT
SHERI THOMPSON AT ALADDIN TRAVEL CONCERNING
MY AIR RESERVATIONS, AND GIVE ME
THE DEPARTING FLIGHT # + TIME TOMORROW
MORNING? I BELIEVE I AM SCHEDULED
TO LEAVE THE EVENING OF THE 22ND.

M E M O R A N D U M

Date: 20 Aug. 80

To: Staff

From: *R. H. Ewing*
R. H. Ewing

R/V FRED H. MOORE Cruise #5, Leg 3.

Position at 0800 was 24-59N, 86-20W. Speed 10.5 kts. enroute Galveston. ETA still noon on Friday.

Streamer Status

Traces 9 & 44 - Bad, reasons unknown, look OK.

" 32 & 42 - Bad in leader or between cable connector and lab.

All other sections good except many inboard sections have numerous patches

#93 Dead has a bad hole in it.

Stretch section has 5 patches, one leaking - will have to be repaired and refilled.

Good Spares (on upper reel)

1 leader (6 channel)

2 new dead sections

1 new live section

1 repaired live section

To be Repaired (now on deck)

2 stretch, 2 live, 1 dead.

Engine Repair, etc.

Want assistance with throttle, exhaust expansion systems and air conditioning.

Oil for engines 500 gal.

Noroma 800 gal.

Case 200 watt lamps

Case 25v, 40 watt lamps

3 cases filters 5S485 (Cat. #)

24 ea. gaskets 6L1540

Electronics Requirements

//253 bulbs

2N392

2N1309

2N2904

Decca 9455620 Auto Alignment

21 AUGUST

POSITION: 27°00' N 90°00' W

- ① STILL STEAMING FOR GALVESTON.
ETA: 1 PM (@ 10 KTS), 4 PM (@ 9 KTS).
UPDATE THIS AFTERNOON.

- ② BYRON ———
1. #7 — BAD BETWEEN END OF LEADER AND TRACE #48 (i.e. stretch section)
 2. #44 — same, although not showing open now.
 3. ALL TRACES NOW SHOWING HIGH LEAKAGE BETWEEN TRACE #48 AND END OF LEADER ——— PROBLEM WITH STRETCH SECTION.

- ③ DON ———
1. HAVE U.T. ELECTRICIAN CHECK OUT SHORE POWER. I BELIEVE WE BLEW A BREAKER ON IT ABOUT 2 DAYS PRIOR TO SAILING IN JUNE AND REMAINED ON SHIP'S POWER W/O. / CHECKING IT.
 2. ARE WE TYING UP OUTBOARD OF IDA GREEN? CAPTAIN WOULD RATHER NOT, AS HE DOES NOT FEEL THROTTLES ARE SENSITIVE ENOUGH TO DO THE JOB PROPERLY. IF WE DO, PLEASE POSITION THE GREEN SO THAT THE SHORE POWER CABLE WILL REACH OVER TO THE MOORE.
 3. I SUGGEST THAT WE HAVE MUSTANG CHECK OUT BOTH 100 KW GEN. ENGINES. PORT DOES HAVE BAD EXHAUST MANIFOLD GASKET LEAK. BOTH GEN'S SHOULD BE CHECKED FOR OPERATION AND CONSTANT OUTPUT. THE CAPTAIN BELIEVES THAT GENERATOR OUTPUT IS AFFECTING THE RADAR, BUT MY CYCLE & VOLTMETERS SHOW NO INDICATION OF TROUBLE.

21 August (AM)

④ PLEASE CONTACT THE FOLLOWING CONCERNING ETA, WHEN IT IS FIRM:

a. FOR JOYCE — LARRY @ 986-6600 OR SISTER (@ 945-8084) — HAVE SOMEONE PICK HER UP ON ARRIVAL.

b. PEGGY GANEY — THROUGH SHERI LAPIN —

c. JEANNE MCCOYAN

~~22-42 WIDE AREA (M. CONNECTOR)~~
POSITION: 27° 29' N 90° 55' W (PM)

① ETA GALVESTON = LOOKS GOOD FOR EARLY AFTERNOON TOMORROW (CA. 1 PM). PRESENTLY APPROX. 230 MI. SE OF GALVESTON.

② ANY NEWS ABOUT MY AIR RESERVATIONS?

③ FOR DON VASCO — IS IT O.K. IF ~~HEIDI~~ HEIDI PICKS YOU UP, OR ARE YOU MAKING OTHER ARRANGEMENTS?

22 AUGUST 1980 (AM)

POSITION: 29°00'N 93°56'W

1) ETA MSI CA. 1330 TODAY.

2) THE LOWER AIR CONDITIONER
(FOR THE UPPER DECK) THAT WAS
REPLACED IN SAN JUAN HAS
BROKEN DOWN. DON REQUESTS THE
FOLLOWING:

PARTS

HI-LOW PRESSURE CONTROL SWITCH
FREON 22 (4 CONTAINERS)
A/C OIL (HOW MUCH - ?)

AND ASSISTANCE UPON REACHING THE
DOCK, AS THE CAPTAIN HAS INFORMED
HIM THAT HE MUST REMAIN ABOARD
UNTIL IT IS FIXED!

3) HAVE HEIDI PICK DON VASCO UP.

4) THANK YOU, PAUL!

ELECTRONIC TECHNICIAN REPORT COVERING 6-2 LAB, BRIDGE, & BOAT SYSTEMS.

A) LAB

1) STRETCH - TRACE #9 BAD BETWEEN END OF LEADER AND TRACE #48, APPEARS TO BE IN THE STRETCH SECTION. #44 APPEARS TO BE THE SAME, ALTHOUGH IT'S NOT SHOWING OPEN NOW. #32 & 42 PROBLEM APPEARS TO BE IN THE REEL. ALL TRACES NOW SHOWING HIGH LEAKAGE BETWEEN TRACE #48 AND END OF LEADER; PROBLEM APPEARS TO BE IN THE STRETCH SECTION.

2) REPLICATION RECORDER - BEGINS BY NOT PRINTING EVERY THIRD CYCLE. THIS PROBLEM APPEARED TO BE WITH STYLUS #3, HOWEVER REPLACEMENT OF STYLUS & STYLUS BIT DID NOT CORRECT THE PROBLEM. CLEANING & RESINING OF STYLUS HOLDER, (TO INSURE PROPER CONTACT) FAILED TO CORRECT PROBLEM. FOUND THAT THE PRINT CONTROL TTR LEVER COMING OUT OF A15 SCAN F/F H72 TO BE FAULTY. IT WOULD HOLD A 1 STATE TO ALLOW PRINTING BUT INTERMITTENTLY FAILING TO LATCH IN ITS UPPER STATE. DURING EFFORTS TO TROUBLESHOOT PRINT CONTROL, THE FUSE F1(3A) BEGAN BLOWING. IT APPEARED THAT THE PUSH-PULL AMPLIFIER HAD BLOWN A TRANSISTOR. EFFORTS TO CORRECT THIS PROBLEM FAILED DUE TO LACK OF REPLACEMENT TRANSISTORS 2N392. ALSO, DISCOVERED THAT LIGHT BULBS #253 LOCATED IN PHOTOMOUNT ASSEMBLY TO BE OUT, ONLY ONE OUT OF THREE WORK.