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MEMORANDUM

THE UNIVERSITY OF TEXAS AT AUSTIN
INSTITUTE FOR GEOPHYSICS
AUSTIN, TEXAS 78751



May 27, 1983

TO: Dr. Maxwell
FROM: Dr. Buffler *MB*

RE: Cruise Report - Student Cruise (FM-16)

The student cruise (FM-16) sailed from Galveston at 2200 hrs., 17 May 1983 and returned to Galveston at about 1830, 22 May, 1983. Everything went well and the cruise was a success. I feel the students learned a great deal and gained a valuable experience. They were a wonderful group and were all eager to learn and participate. They stood their watches diligently, and were very cooperative. Participating in the cruise were;

Mabel Baumruk	Peter Kryniak
Tito Beveridge	Don Lessem
Greg Brewton	Kitty Milliken
Ben Brigham	Juergen Obser
Bill Corso	Mike Pruitt
Jay Flynn	Ramie Rangell
Joachim Genrich	Brett Thompson
Teresa Harkrader	

We collected approximately 270 n.m. of 12-fold seismic data using a 24-channel streamer with a 70 m group spacing. We ran one and two guns at both 30 ft. and 10 ft. The data length was 10 sec. and was collected at 4 ms. We collected magnetics along much of the track. The field area was the outer continental shelf-upper slope off Louisiana. Hopefully, we can get some of the data processed as student projects next semester.

The ships crew performed well and we were all impressed. It looks like we have assembled a real dedicated and professional group and I hope we can keep them together. They all worked well together and were very cooperative with the scientific staff and students.

The scientific staff also performed admirably. Patty Ganey was great as cruise manager and kept us all organized and in line. She handled the data logger and kept track of all the data and records. Ken and Stirling were always there when we needed them to handle the electronics problems, as was Ty and George to take care of the guns, cable, birds and other deck equipment. Special mention and

congratulations also must go to Mark, who finally had success with the Demux system and also helped out in many other ways.

There are several items regarding the scientific equipment that should be mentioned, particularly in light of our up-coming Mississippi Canyon cruise:

- 1) The data logger system worked but there still are some problems and bugs with it. Patty Ganey will review and report to us on this. It is critical that these bugs be worked out. Perhaps Mark could help us with this?
- 2) The Demux system seemed to work quite well. Playout of some of the data shows that all the data is there. I think there still may be a few bugs but nothing serious. Mark will give us a full report.
- 3) There is a serious problem with the depth transducers that has to be solved. It is not clear if it is in the transducers themselves or in the wiring at the reel jumper. We have to know how deep the cable is running. A first look at the data indicates that much of the middle part of the streamer is noisy and thus was shallow. Stirling is supposed to check with Western.
- 4) We also need a way to calibrate the depth transducers. The "bladder" device wasn't working properly and needs to be checked out. It is probably too expensive to buy new transducers with built-in wires for calibrating.
- 5) The in-board stretch section had a bad rip in it and we took it off when bringing in the streamer. It needs to be sent out right away for repairs.
- 6) There apparently is a problem with the air hose coming apart inside, possibly due to the synthetic oil being used in the compressors. Do we need to get different hoses? We also need the spare gun rigged with a harness plus extra harnesses made up ahead of time and on-board for quick change-out. Archie and Ty are taking care of this.
- 7) There are still problems with the solenoids on the guns. The signal seems to be bad and get noisy with time giving us an unreliable time break that may cause erratic firing. We need spare solenoids and a back-up system. Ken suggested making up blast-phones (crystals) mounted in epoxy. I would like these also to record the new field signal.
- 8) Tape drive B seemed to be getting weak. It probably needs attention, adjustment and repair?
- 9) The magnetics chart recorder needs adjustment. It would not calibrate at zero. Also, there is lots of noise (spikes) in data - can we track down the cause?
- 10) The Loran C worked fine, but we might take the spare set as a back-up.

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- 11) There were plans to rewire the magnetometer from the back deck to the lab. Will this be done? We also need to check out our spare magnetometers (Texaco) and see if they are okay. If so, put on board.
 - 12) We need to finish developing an on-board Quality Control System. Mark began working on this during the cruise. We need to know if data is being written onto tape.
 - 13) If possible, we might consider getting a better exhaust fan in the galley. When cooking with grease, the grease gets into the A/C and the lab. We can wipe grease off the tape drive glass covers.
 - 14) The rest of the streamer needs to be put on the ship. Twenty-five sections are on now.
 - 15) We need to get some hour-marks on the EPC recorders and some kind of time mark on magnetometer chart-recorder.
 - 16) Strain release on magnetometer head was loose. Screws would not tighten.
 - 17) We were getting lots of blank spaces (triggers) on EPC. Cause? Premature trigger by noisy solenoid. This problem should be tracked down.
 - 18) Are there still some Kennedy tape drives not working? Hopefully, Stirling will now be able to overhaul, adjust and fix all drives and have them ready?
- Most of these items are minor things, but I hope they will be solved and completed by the time of the Mississippi Canyon cruise.

RTB:km

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