

FM 32

Depart Austin ~ 0930 23 May 86

Arrive Galveston ~ 1410 (2:10 PM) " with 8 students

Archie showed me how to attach some hooks to the hose bundle for attaching it to the chain as it goes out (New Gun Array) Raper, McPherson, Griffiths & Widenpiller in residence

Toured ship

Assigned berths

Assigned watches - recommended reading references on fire watch swing ^{7 hrs} sleep

24 May Worked with Archie most of the morning:

Secured all shackles on new airgun array

Taped new airgun array hoses

Made up balloon harnesses

Put trigger cover w/ in core box & secured line on winch (no control!) ^{winch}

Assigned students to review cruise plan.

6 hrs sleep

25 May Secured balloons on upper deck; secured new gun array. Began intensive instructions on student duties & 3.5 kHz operation. Weather prediction includes NORTHER Monday. This would make it bad for PLAN A: shortly after getting offshore we would do the experiments on how to use the new airgun array. Thence to the OBS drop, thence to wherever down the line we needed to go to make up for lost time with the airguns.

Plan B: follow original schedule. Stop & pull in streamer and do air gun experiment whenever weather permitted. Pick up line wherever needed to get back on schedule for making up time spent in airgun experiment.

1st extended afternoon & night watches in 'DFS' operation

Began instruction in raw data processing retired ~ 3 AM

26 May arose 7 AM

4 hrs sleep

Departed dock ~ 1130

Began 'recording' 1200 = 1700Z

End of jetées 12:25

Drills completed smoothly by 1300

Began gun array experiment ~ 2:30 PM. The array was in the water in ~ 1 hour. ^{4 hrs} Guns were lifted down to the deck with the big gun gear; one went down by running off the end of the I beam; one was lifted down by Archie & Oscar.

1 hr nap

Sleep

The guns were loaded (4-8 kt) mostly ~ 6 kt and fired ~ 1600-1930
 RETRIEVAL went very smoothly with each gun being lifted to the beam by the Big Gun hydraulic system.
 Got to OBS sight on a good schedule ~ 11 PM but OBSs weren't ready until after 0230. Dropped them at:

1. 0713:25 27 48.82 94 37.29
 2. 0721:31 27 48.85 94 37.28

Earthquake unit lost primary release clock & had no acoustic release. We abandoned it rather than rely on only one release mechanism or to take a couple of hours to reprogram.

21 May Because of time loss to OBSs we headed 1 hr. down line and started streamer party ~ 0400. Buoy in the water ~ 0423 with only the tail end of the stretch section in the water, the streamer winch power died - the electric motor running the hydraulic pump burned out. 0430 - 1030 it was replaced by Archie & the engineers (and students). 0515-0745

Streamer party was finished 1030 - 1330. Guns deployed ~ 1430 - retrieved after a few shots for repairs. - Couldn't get to write this otherwise

OBS Drop sites identified by event mode trigger fix (a 'comment' push button on LOGGER'S BlueBox programmed by MW at my request).

A check of Tape capacity on Gun showed 53 shots (8 sec records) on one tape - limit of 50 shots was set. This would allow us about 50 hrs of shooting - we need 80-90

Mark wrote a program to strip the Aux channels and 24/96 of the seismic channels (& thus reuse the tapes). Later learned that we got the 50 shots/tape from an experiment w/ 3600' tape where as ours are 2400'. The condensing will still give us 89 hours, but we'll (and the 1134) be really busy.

Below 3kt. streamer drops below 100'

① 40' setting: 53 45 out 45 26 25

ABOUT 5:30 PM Start UTIG's first record taking with the GUS!

This became a three ring chinese fire drill for the next couple of hours. Processing 3 tapes → 1 cannot be kept up with. We'll go to G250 on the ~~2nd~~ 3rd line.

The first line - SC 85 - actually contains three distinct segments, because I did not want to add the ~~#~~ record keeping of line changes to all of those already befuddling everyone.

Maggie deployed ~ 9 PM, 'calibrated' ~ 9:20-9:30 PM (first several values should be zeroed.)

single channel monitor hooked up about 9 PM.

Got behind & behind on condensing tapes. GUSDEL couldn't get 100% debugged. The second EOF designating EOT never appeared; \therefore GUSPLT couldn't be run. So we went to 6250 BPI recording, and life was no longer threatened by GUS.

28 May 86 Operation proceeded quite smoothly. GUSDEL still not debugged. ~ 3 PM checked guns in a turn.

Observed one GUS tape change pre SHOT LIMIT (automatic)

4-8 AM

3-6 PM

Later - Mark W. ran GUSDEL for 3 datasets (3 tapes to one conversion of 1600 BPI data. All went right. We proceeded to do the processing on ~ 40+ backlogged 1600 BPI tapes.

29 May Nav processing proceeding. Flow-log sheets seem like a good idea - I'll make up some tomorrow.

2 AM - 7 AM

One gun began firing erratically - Oscar & Ken fixed. Gun firing, especially w/o complete blast phase information, still seems weirdly complex. Time zero on the data will be mostly from fire commands which are ~ 19 ms from field time breaks. I anticipate a lot of static problems.

Condensation of first ~ 40+ tapes completed with smoothly running GUSDEL

~ 10 AM main generator caught fire & was lost. ALL scientific operations ceased. Ken & Mark shut down the lab.

Archie & Oscar pulled in the Maggie; Oscar & George & students pulled in guns

I retrieved the streamer w/ 4 students ~ 10-11 AM. Contacted Mitchell w/ sat radio 1 PM (couldn't get through the marine operator until 12:05 and then Galveston crew was out to lunch). Decision was made to return to port & retrieve OBSs with another vessel (IDA GREEN) tomorrow. Counted leads on streamer - excellent wind by students.

Gould make port by 0300 but Mitchell advised us to delay 'till 7:30 to have daylight and to enable him to move the Green??

Afternoon spent catching up on sleep. Then cleaned up the lab & packed tapes & supplies for Austin. Need to do some more NAV data processing but can't till we get air conditioned on shore power.

At TI w/ TI & S 4 days will leave 6 for August?

30 May arrived at the dock in Galveston ~ 8 AM

completed logger data processing on shore power. departed for Austin ~ 11 AM arrived ~ 3:30 PM.