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Texas A & M Cruise

68 - A - 6

June 3 - 11, 1968

R/V Alaminos

Scientific Party

Arnold Bouma - Chief Sci.

Frank. Chmelik -

Royal Naggert - } students

Ind. Boeens - }

Claudia Ludwig - new tech.

Jean Reit - student Tex Wesleyan

Ed Vos - marine tech

Teo Duys - " "

Ed Shiehman - electronics tech

- Pittman - electronics tech

me

Bill Burns - Super tech & student

ALAM 105096
#68003 68-A-6
10-100

Alaminos Cruise 68-A^E-6

June 3, 1968

0725 - Left ORP,
0805 - Arr. Hwy, Linco to Galveston
4.50 + .50 tip = \$5.00.

0930 - Aboard Alaminos
1330 - Left Galveston, started circling
on 180° crs, with 3500 fathoms,
40-140 Hz, 1 ad 2 seconds.

Records not good. Too much spread
between source & pickup (450 + ft)
to ever see anything shallower
than 250' below sealevel (approx.
depth of first arrival)

Also, freq. too low for high
resolution, and records are
very noisy with high gain.

2300 - Stood PDR watch 2100-2300 - off
ad checked seinc record - above notes
still true. Plan to run out to
30 fms & see if geometry any better
There. If not, will pick up ad steam
down to R.S. delta, skipping the
shallow work entirely.

June 4

0200 C/k to 258° and sparked along
the 30 fm contour.

1330 Stopped and took a piston core,
The Ewing corer (Core 1E) in about
40 fms. Core length was 8.20 m.

Core extruded on deck in about 1m
pieces of split PVC tubing. These
placed on racks of four liners,
made to fit 2 racks to a box.

Carried below where were made
vane shear tests. Sampled at
about 20 cm intervals for moisture
content (sealed in jar) and grain
size (about 10 g. in a plastic bag -
see sample of this bag).

Core then split and the whole - half
prepared for X-ray.

X-ray equipment was a Picker
Corp. Hotshot, cost about \$1900.00. See
Gilbert X-Ray Company, Houston, Jan Antonio.
using Kodak Indust X Ray Film, Type AA, 14X17"
Set at dist. 36", used 70 Kv, 5 ma, $2\frac{3}{4}$ min.
on $\frac{1}{2}$ cores with Thikken 1.5".

Burns numbers his cores consecutively
in addition to including core number &
cruise number (these 3 shots were 581, 582, 583).
He also keeps a notebook with all his
exposure & other pertinent data for each
X-ray exposure.

(next page)

Within the frame holding 4 core halves for X ray, he has molded a section to hold the part being X rayed.



This is made of a very fine sand in plastic (the plastic is Plaikon 751 from Elliot Chemical Co., Houston). This aids in preventing the edges of core pictures becoming fuzzy. Note that he made it upside down by pouring the goo over PVC halves coated with "Mold Release". A plexiglass plate forms the bottom & offers strength.

His film is separated from the cores themselves by nearly an inch of plexiglass (bottom of mold) and plywood (the frame for the X-ray machine).

He has a neat set of developer tanks made of Marine plywood with 2 coats of epoxy, made to take the film racks changing vertically.

2007 Finished wrapping core. Started arcer line in crs 180° across RG 4, 7 Kf (3.5 or 2 units), 40-140 Hz, 1 second sweep

June 5

0800 - Dropped Gilmore (elect. tech) off in the Port Isabel pilot boat. Began an arcer line due east.

1300 - Stopped in about 40 fms and made complete sample station. Ewing corer penetrated about 5-6 ft and bent the two lower joints (Core 2E, in bags). The box corer didn't trip properly, the grab sampler wouldn't trip at all, and the Chmelik corer tripped in the water on the way down. Total sample from that station was in 3-4 plastic bags, which showed surprisingly coarse sand and shells. Might try to C¹⁴ date it.

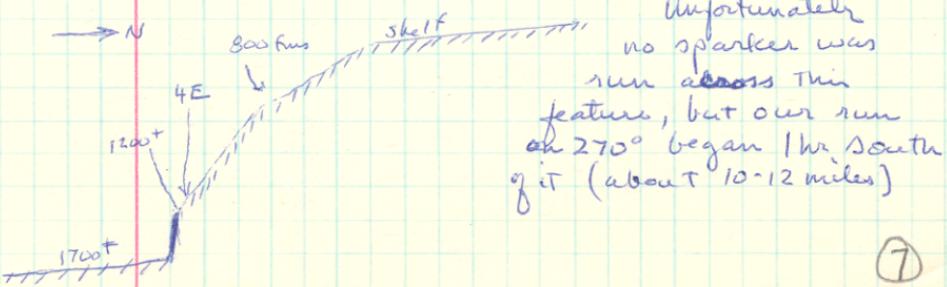
Arced to deeper water and made station just off R.G. delta in 500+ fms. Good Ewing core (3E) showed remarkable laminations of sand in lower parts, probably about 7m below the surface. Box corer didn't work. Chmelik got a sausage core, but didn't open it. Finished packing the 3E core about 0030, stood 0200-0400 watch next and went to bed.

After station 3 we began arcing on 090° toward Alaminos (canyon - never seeing 30 kft).

June 6, 1968

Circling on 090° toward Alaminos Canyon, crossed that feature (?) during the morning.

- 1200 Stopped circling in around 800 fms on the east side of Canyon. Pulled in gear and ran south for deeper water.
- 1315 Stopped at about 1200 fms on a steep slope and made station 4. Piston core was 1046 cm long, gray and brown clay. A full box core was obtained (about 1m long), and a full Chonok core (10 ft) taken.
- 1800 Departed station 4 on southerly heading. Will run south to about Lat 26° , turn to 270° and arc up on to the fan off Alaminos Canyon. There to take a piston core.
- 2130 Came a controversy over our water depth - PDR appeared to show 1280 fms, star fix put us at 1780 fms, as did scis profile. The answer lay in our crossing a scarp while on 180° which was so steep we missed a 400 fm cycle on PDR. This scarp lay at $25^\circ 50' N, 94^\circ - 15' W$ about. It was at the base of a lesser slope (continental slope?) upon which we took core 4E.



Frank Chmelik's corer

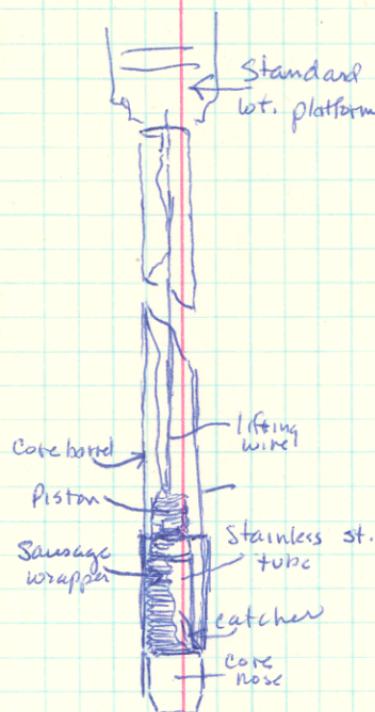
The sausage skin is packed tightly over the chromed surface of the inner tube, which is about 14"-18" long. It is attached to the nose i catcher at bottom and to piston at top.

As core enters behind piston, it unfolds the sausage skin and packages itself therein.

Thus there is a minimum of slippage between core ad liner (only the 18" of chrome tube) and a minimum distortion.

It seems to work rather well, comes packaged in a neat cylinder which attaches to base of core barrel, and the core comes out swell wrapped and held into shape.

Looks as though it would be much better than extrusion as in the Zornig, or a plastic rigid liner as in Kellenberg, which offers drag to the incoming core all the way up.



June 7, 1968

0030 Elec. tech. discovered that a part was burnt out in sparker controls and one sparker unit was out completely. Only $\frac{1}{2}$ power.

0055 Stopped at foot of western cont. slope for station 5. Depth about 1680 fms.

0630 Underway on 270° again. Took SE here, but not yet extruded. Also Chmelik core, but trouble with tripper and it brought in a bag of water. Circling on this course. Went to bed.

1300 Up to prepare for station. Had to extrude SE and by that time were on station 6. This station was around 500 fms on the cont. slope ~~east~~ of the R.G. D. The sparker showed buried ridges between core from which were filled basins. Some of these ridges were topographically expressed. We cored in a basin, got 10 m of gray mud, the lower 3 m strong with H₂S. The only thing odd about this core was that the lower 2'-3' were rather dry, stiff mud and were fractured.

Core SE was opened and looked very pelagic. It was, however, strongly bioturbated (is it a bioturbite?) and in its generally rusty brown color, had two zones 3-4 cm thick of a light bluish green - nearly a turquoise color. They were separated by about 4 cm of brown clay and there was no lith. diff. or break at all.

From Station 6 we moved up to Station 7 at 60 fms, looking for a relief shoreline. Cored 7E at a sharp break

in slope at 60 fms ad recovered
20 ft (only used 2 joints) of soft, gray
mud with a very watery top. The break
was obviously no shoreline, but may have
been toe of modern R.G. delta deposits.

Station 8 was located at the position
of Station 2 where we bent the corer. On
35 fms here we took a 2.5' box corer
of dirty sand with abundant shells,
mostly a small scallop species. Chmelik's
corer didn't tip properly here - no results.

Finished about 1:30 in the morning,
set a course to return us to Station 7
where we lay our anchor line dangering.
Will start airing there ad carry it
into the whistle buoy off Port Isabel.
ETA about 0600.

June 8, 1968

0730 Got up when we arrived on station 9, where took a box core only. This station in about 8 fms near entrance to Pt. Isabel channel. Ran back to southwest to about 14 fms then slowed and began coring. Cored to station 10, which was in about 35 fms and on the south flank of the R.G. delta. Here we took a box core, a piston core, ad Chmelik obtained a core.

1615 Left Sta 10 and arcing northerly across the delta. Will make last station about 0200 tomorrow on north delta flank, then arc toward Corpus Christi.

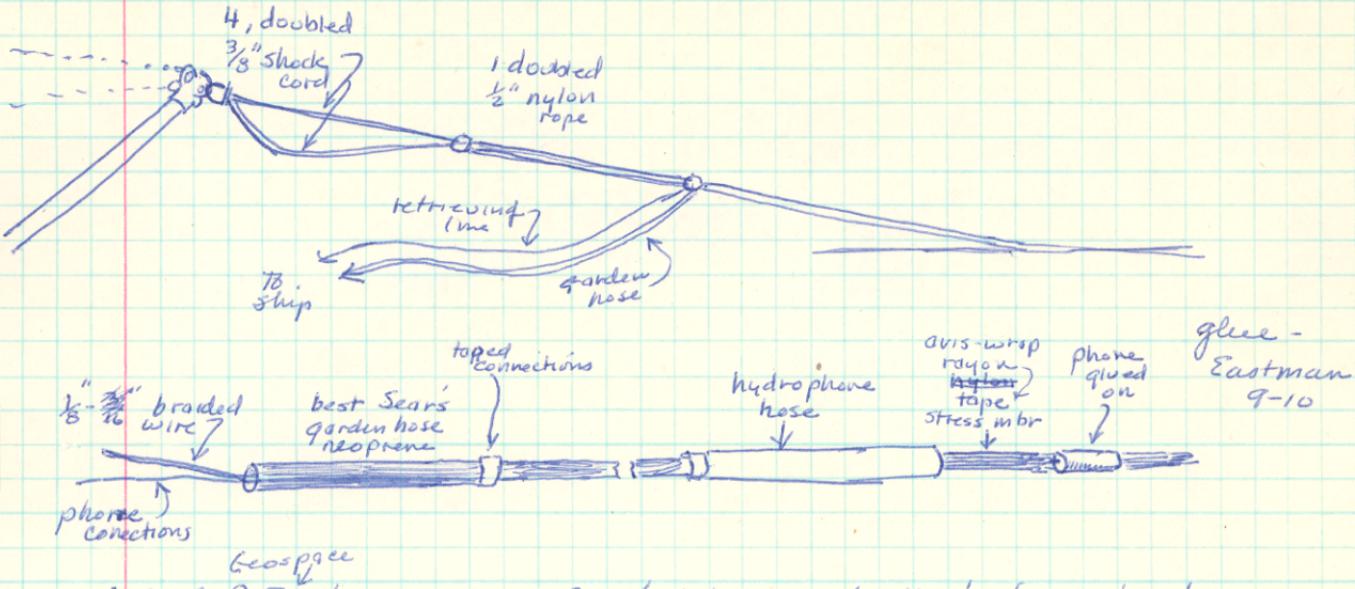
1115 Made it to Station 11 early. Took 40' 11E core, full box, ad Chmelik. Departed this station about 0200 ad started arcing north.

Core 10E was all sand ad looked like core barrel; couldn't be extruded. Was washed ad dug out and put into plastic bags - looked like silent beach.

11E was gray clay - not yet split. Lowest 2' all broken up, whether gas or sandy, I don't know, but a small pressure pocket blew out about 3' above this zone during extrusion.

June 9

- 0200 Began arcing on northerly course
0800 Turned westward, pulled in closer,
Made crs. for Corpus.
1315 Tied up at Army Engineers dock,
Corpus Christi, Texas. End of cruise for me.



100 MP-7 phones in a 200' tube, with 450' of garden hose leader. Hose takes no stress, prevents strumming, damps wire motion.