

NAKAHARA

FRED H. MOORE CRUISE 20 LEG 2 MULTICHANNEL WORK

27 Nov 1983 to 4 Dec 1983

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This report concerns the Multichannel work done on Fred Moore 20-2, with special attention to the use of the Seismic Engineering-Mobil 6-trace streamer. This streamer has not been used for over five years so this cruise gave us the opportunity to get some test data in an area already covered with the 48-trace streamer.

GENERAL NOTES:

DFS Channel	Signal
1	Trace 1 (Far Trace)
2	" 2
3	" 3
4	" 4
5	" 5 (Near Trace)
6	Sonobuoy (-20dB)
7	" (-40dB)
8	Stbd gun blast phone
9	Port gun blast phone

The '6-trace' streamer was configured as follows:

Leader 100 meters to short tow point
200 meters to long tow point
Stretch 75 meters
5 Active 100 meters, 64 phones, centroid array
Tail 50 meters line to float

Depth transducers are located at the tail of the streamer and ahead of trace 5.

Two Syntron birds were used. The outboard bird was located at the tail end of section 2, and the inboard bird was located at the forward end of section 5 (just back of the stretch section). Both birds were set for 35 feet. The streamer was towing deep so both birds were rebuilt between line 4 and line 3. There was no obvious internal damage, but age had dried up some of the rubber parts and lubrication was questionable.

LINE 4

Filled section 2 on the way out. It was very low. Zeroed both depth transducers but did not try to calibrate them. All 5 traces showed good seis-check but no signal on trace 2. Towed the streamer from the long tow point. There are 2 bad kinks in the leader just inboard of this tow point. We tried to keep as much tension off of these kinks as possible but some was unavoidable. We did not tow off of the reel but used the clamp at the tow point and the safety chains on the top deck. Near trace record (chan 5) looked good.

LINE 5

Filled sections 1,3,5 and stretch as we went out. They were slightly low and it did not take much to fill them. Tried towing from the short tow-point to see if we could get the inboard end up a little. Uncalibrated depth at the inboard end was about 60 feet. The noise level on the near trace monitor was up a little but we were running faster to make our over-the-ground speed of 5 knots. Outboard DT failed sometime during the line.

LINE 3

Tried to calibrate the depth transducers. Outboard DT still bad but we did calibrate the inboard one. The meter had been reading about twice the true depth, so a 60 foot reading on lines 4 and 5 was 30 feet true depth. All traces outboard of active 5 went open, the outboard DT also showed open. As we brought the streamer in we could see a spot in the middle of trace 5 where the jacket was about half the diameter of the rest of the streamer.

During transit to Line 2 we spooled off the streamer and replaced section 5 with the spare section. All 3 stress members and the wiring had parted inside the jacket. We were probably towing the streamer by the jacket only during most or all of line 3. When we opened the boots to replace section 5 the Noroma in both of them was contaminated, the inboard boot being more water than oil. I suspect that the oil in some of the other sections may also be contaminated.

LINE 2

Towing the streamer from the near tow point, and using only the outboard bird. Inboard DT between 10 and 30 feet depending on speed. Outboard DT is still not reliable. Section 2 still shows good seis-check but no data. Other traces looked good and the near trace monitor was as good as can be expected in shallow water.

STREAMER RECAP

We have 4 good sections in a 12 year old streamer. Two of the sections look clean, while 2 may have some Noroma contamination. Stretch section looked fine. Leader has 2 bad kinks inboard of the long tow point but is otherwise in good condition. Outboard DT is erratic.

SONOBUOYS

Per Dr. Phillips request we used sonobuoys on all lines. The line length generally allowed 3 buoys per line, with 3 hours recording per buoy. For the most part the sonobuoy data looked good. The batch of buoys on channel 30 all worked without problems. Most of the older buoys (with rotochutes or tape measure type antennas) were duds. Record length for all lines was 15 seconds. A total of 13 buoys were used.