

191 L 580

SC XV

081

~ 1430 PM Depart Dock for Cann Brown Harbor refueling

2311 Z passed MSI Boat Basin - CRUISE BEGINS

2335 slow down for test shots - Gun check

01/234

00010 test complete - gun aboard

01:14 Loran Calibration check

	Latitude [min]	Longitude [min]
avg. diff.	.21	.16
std. dev.	.04	.03

04:06 Loran Calibration (Variation from bridge unit)

	Latitude	Longitude
Avg. diff	- .047 min.	- .101 min.

07:00 Loran Calibration (Variation from bridge unit)

	Latitude	Longitude	
Avg. diff	.01 min	.018 min	R

	Latitude	Longitude	
~1000	+0.18	+0.18	-used for directing bridge

1140 Change Course + speed:

~~Lat +27.07~~ Lat -27.07.30 Long - 9537.76  
Heading - 180

1151 streamer deployed

1156 Air Gun deployed

1205 begin turn on to line 1

1225 sweep direction changed: R → L (3.5)

1227 Begin line 1

1415 GUN FRONT END: 63 dB gain, 10 Hz LOW CUT  
110 Hz HI CUT

SDAY 234 22 Aug 91

1420 channel 4 (inboard) trace has much 60 Hz, testing implies it is outboard of lead in to preamp connector. Will check during coring.

Severe occasional strumming of all channels. mostly < 20 Hz

1530

C/C speed: 5.4

~~1535~~

lat - 27 17.82N long - 95 50.25W  
heading 102°

1535

sweep direction changed: L → R (3.5)  
begin line 2

1622

LORAN calibration (variation from bridge unit)

Avg. diff. Latitude  
- .155

Longitude  
- .145

1656

CHANGE GUN DELAY FROM 43 ms TO <sup>45</sup>~~43~~ ms.

MEASURED BUBBLES WITH GEN ONLY: 85 ms PRESS = 2150 psi  
GUN DEPTH ≈ 4 meters

1650

C/C

heading 046

begin line 3

1807

speed change to 2 knots. Retrieved seismic gear.

1840

stopped for coring (CORE #1)

1940

resumed course, planned speed:

2022 began coring for #2 (core tool down)

2039 CORE HIT (#2)

2056 Core surfaced

2015 resume course planned speed

2249 SAIL SYSTEM RESTARTED - WHY?  
- PRINTER WAS OFF LINE -

2303 THERMOSAL PUMP NOW ON.

2306 Stop for Coring (Core #3)

2311.5 Core tool submerged

02/235 2342 core retrieved aboard

0004 resume course planned speed

0155 change speed 8.1 knots →  
deploy streamer for  
seismic line #4

0231  
~~0226~~ begin line #4

0237 Found channel 4 had been  
polarity reversed during testing -  
probably since 1400 yesterday

(Approx)

0336 Compressor malfunction - Shots quit firing.

0444 Compressor repaired - increasing speed from 2.6 to 5 kts.

0017 gun deployed

0018 gun in water

23 AUG 91

235

0616 COURSE CHANGE TO 222°

23 Aug 91

0940

reversed sweep direction for 3.5 @ seismic for line ~~###~~ 6

1115

reversed seismic sweep so parallel 3.5

23 Aug 91

1320

Cse change to 190°

1739

change in course to 78°

2028

LAST SHOT, #8500 end line 9

26 52.96N

95 01.45W

2100

DRIFT CHECK

2114

change in course, started engines  
and backtracking to coring site  
#4.

2251

stopped engines Core # 4

2255

Core #4 submerged

2310

Core triggered (#4)

2342

Core #4 retrieved

24 Aug. 91

0007

begin deploy of streamers

0017

gun deployed

0018

gun in water

Day

23/6

29 Aug. 91

085

0028.0 started compressor

0034.5 Sht 1 Line #10 Sht #8501

0039 slowing down possible gun repair

0040.15 resuming speed

0211 small change in course  $221^{\circ}$   
0248 " "  $208^{\circ}$

0522 small course change to  $182^{\circ}$

0550 Speed increase to 6.1

0610 LORAN CALIBRATION

BRIDGE UNIT IS AVG  $+ .43$  min Lat from Lab Unit  
 $+ .23$  min Long

1029 Turn - course change to  $012^{\circ}$

~~(140000)~~

1045 Turn complete

1140 Turn course change to  $184^{\circ}$

1149 Switch sweep patterns

1155 out of turn (complete)

1318 Course Change to  $012$

0840 local LORAN vs GPS

GPS > LORAN

lat. -  $0.37'$

long. -  $0.17'$

24 AUG 91 236

1835 TAPE REEL CHANGE Last Shot - # 14982  
~~2035~~ END 5 Begin Reel 6

1838 Begin Reel 6 First Shot 14983

1927 changing Course to due East

1930 begin line 13 (end line 12)  
2638.54N 2516.72W2032 COURSE CHANGE TO 204°  
\* change in Sweep Direction2240 change to 10 sweep  
reduced Speed to retrieve seismic  
equip.  
end line #13 (2238)

2242 gun aboard

2249 streamers aboard

2250 resume speed

2253 change in course to 051

LAD LORAN vs Northstar 6000 caliber. Lat. L &gt; No. 48 LONG E &gt; N 0.31

2350 change in course to 220°

Day 237 25 Aug. 910126 change in course to 044°  
0130 turning point of turn

237 25 Aug 91

0442 start  $\Delta$  course 20°/min to 039°

0449 mid point

0635 change in course to 0220°

0891 change in course to 040° 10°/min.

0942 begin turn to 220° - change in course - 10°/min  
sp 8.1 knots

1004 turn completed to 220° speed 7.9 knots

1056 Change in course, 180° turn to 040° at 10°/min

1215 change of course to 000° speed 8.3

1216 turn completed speed 8.3

1250 Change of course to 236°

1309 change of course to 228°

1439 change of course to 050°  
 $\Delta$  sweep direction to L  $\rightarrow$  R

1445 turn completed spd 6.9

1459 Course change amended to 055°

1719 stopped engines for core #5

1724 core submerged

1739 core triggered

1809 core retrieved

25 Aug 91

1915 stopped engines for core #6

1920 core submerged

1936 core triggered 26 25.54N 95 11.26W

2010 core surfaced 26 25.74 -95 11.33

2020  $\Delta$  course to  $241^\circ$  at 7 knots

2100  $\Delta$  course to due west ( $270^\circ$ ) (sp  $\rightarrow$  7.8 knots)

2103 turn in course to  $270^\circ$  completed

2105 change course to  $003^\circ$  (speed 8.0 knots)

2106 change in turn to  $003^\circ$  completed

2148 change in course to  $214^\circ$   
( $12^\circ/\text{min}$ ) (sp 8.4 knots)

2200 turn complete (to  $214^\circ$  @  $12^\circ/\text{min}$ )

2310 change in course to  $131^\circ$

2315 turn complete to  $131^\circ$

Change in course to  $350^\circ$  at  $8^\circ/\text{min}$

26 Aug 91

0051 turn completed <sup>sp = 7.9 knots</sup> to  $350^\circ$

0124  $\Delta$  Course  $5^\circ$  to  $355^\circ$

0145  $\Delta$  Course to  $175^\circ$

0240 put out streamer for line 14

0302 Completed turn to CSE  $347^\circ$  & increasing speed



26 Aug., 1991

0400 - Position display on Mac began diverging from that of printout by a very small increment - time of event is now ~ 2 sec different, lat+lon are different, but TD's are same (at least sometimes).

0450 - Storm possibly responsible for suspect position readings. Plotting points with "?" beside them by estimating average course and speed

0710  $\Delta$  course to 007°

0949  $\Delta$  course to 213°  $\frac{1}{2}$  stern turn at 20% in

~~0953~~  
~~0955~~

$\Delta$  sweep from L  $\rightarrow$  R to R  $\rightarrow$  L

End line 14

Begin line 15

1034 change in course 4° Eastward  
at 3.7 knots new course 216°

1250 lost autopilot - made small circle

1257 resumed course of 212

~~1915~~ course change to 056°

End Line 15 & Begin Line 16 (1st shot #5857)

1945 end reel 8; begin reel 9 - shot point 6039

2019 shut compressor down for maintenance

~ 6300 - 6307 shots w/NO data

begin 360° turn @ 10°/min.

2051:00 restart firing w/shot 6309

2056 RESET LORAN TIME.

MAC PLUS (LORAN) TIME IS 18 SEC AHEAD OF GMT

2122 change of course to  $055^\circ$  heading  
sp. 5.6 knots

2146 change in course to  $034^\circ$   
sp 5.0 knots

2223 change in course  $\frac{1}{5}$  of a knot/mile

2225 c/c take heading of  $060$

2231 c/c to  $034$

2318 change of course to  $359^\circ$

2325 discovered 5 min printer off <sup>sp 4.4</sup> 5 min 2325 point is labelled 2320 -

2327 change mac clock forward by  
18 sec logging

2330 Loran printer time corrected  
was ~~~ 4:5:30~~ "higher" than  
slow, printed 20 min at 25:30.

2335 change 1 min LORAN time  
239:27 Aug 91

0009 change in course to  $025$   
sp. 4.8

0354 begin line 17  
end line 16  
Δ course to 248

04:28 end reel 9 - begin reel 10 - shot point 9028

0516 A course to  $180^\circ$  BEGIN LINE 18

0700 course change to  $112^\circ$  BEGIN LINE 19  
 2649.16N 9530.40W

~~1032 - A course to  $292^\circ$  at  $5^\circ/\text{min}$   
 end line 19, begin line 20~~

1032 - initiate  $180^\circ$  starboard turn to  $292^\circ$

1100 CSE 254 end line 19 begin line #20  
 little over midway through turn

1120 - On Course  $292^\circ$

1149-1200 Stylus belt jammed on 3.5

1242 last shot reel 10 # 12017

15:54 begin  $90^\circ$  turn to due south

15:55 compressor shut down  
 last shot - 3173  
 End line 20

16:13 compressor back up

16:16.40 begin line 21

3183  $\leftarrow$  1st shot line 21

1859 Turn due South continue Line 21  
 2637.21N 9545.06W

2116 last shot REEL 11 # 15007  
 2120 Reel 12 loaded 1st shot 15008

2140 change in course to  $026^{\circ}$  sp 5.7

2147 turn complete to  $026^{\circ}$  sp 6.9

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01404 change course to  $198^{\circ}$

0200 middle of turn to  $198^{\circ}$  sp 6.6  
 end line 22 shot # 16683  
 begin line 23 shot # 16683

0344  $\Delta$  Course to  $263^{\circ}$   
 end line 23  
 begin line 24

0512:50 end line 24; last shot #17840  
 26 39.13 -95 40.01

05:30 begin curve 25 - first shot #17841

Supplement: Gun not Firing

0532 GUN FIRING CORRECTLY

0555 COURSE CHANGE TO  $090^{\circ}$

0555. Reel 13 Shot # 7996 (begin)

0858 Course Change to  $213^{\circ}$   
 Begin Line 26

0915 out of turn to  $213^{\circ}$

1132 begin turn to Course  $020^{\circ}$  at 2.5°/min  
 sp 3.6

1136 LOST 7 hours of GPS due  
 to loose connection

1200 new line #27

1221 ~~stopped sound~~  
Compressor stopped

1235 Compressor up  
1239 Firing again

1413:49 END REEL 13 shot # 09805  
begin REEL 14 shot # 09805

1515  $\Delta$  CSE to  $180^\circ$

1517 END line 27: shot # 21363  
begin line 28: shot # 21363

1617  $\Delta$  CSE to  $225^\circ$

1738  $\Delta$  CSE to  $122^\circ$   
Begin Line 29 (shot # 2215)

1838  $\Delta$  CSE to  $190^\circ$  - begin Line #30 (sh. #2571)

22:19.50 last shot #23900

2235 Seismic Gear retrieved  
 $\Delta$  course to  $062^\circ$

23:48 stop for coring (Core #17)

2354.5 Coring gear submerged

29 Aug 191

0012 Core triggered (core #7).

0044 Core #7 retrieved aboard

0100 Underway on CSE  $297^\circ$

0330 ~~0303~~  $\Delta$  CSE to  $180^\circ$   
 0358  $\Delta$  CSE to  $015^\circ$

0358 Deploy streamer

0414:10 1<sup>st</sup> shot line 31  $\rightarrow$  23901

0417  $\Delta$  speed to 5 knots

0426 end reel 14  $\rightarrow$  23973  
 begin reel 15  $\rightarrow$  23973

0730  $\Delta$  cor to  $218^\circ$

1248  $\Delta$  course to  $015^\circ$  at  $20^\circ/\text{min}$

1252:30 start a new line #34

1324 last shot for line 34  
 (D wave 194 ms)

1345  $\Delta$  CSE  $180^\circ$  ~~back~~ back to coring station #8

1350 Seismic line: ① Circumference of take-up drum is 9.6 ft.  
 ② Number of wraps on line before reaching stretch section is 47.5

~~1350  $\Delta$  CSE to  $180^\circ$~~

1412  $\Delta$  CSE  $180^\circ$   
 stop for coring station #8

1434:30 Core triggered @ 856M @ 26.15.88  
 96 04.32

1451:20 Core surfaced

1600  $\Delta$  CRS ~~to~~ to  $290^\circ$   
 1608:30  $\Delta$  CRS to  $004^\circ$

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Julian 241

095

1619  $\Delta$  CRS to  $220^\circ$

1640  $\Delta$  CRS to  $336^\circ$

~~1743~~

1743 coining gear submerged

26 24.53 -96 11.23

1753 core triggered

26 24.66 -96 11.10

1805 core surfaced

1810 continue 3.5 kHz line (almost toward Port Aransas)

1930 adjust cors slightly to directly toward P.A.

ETA mid night.

2243 Apulse width on 3.5 to X1 instead of X10  
(.6 X)

30 Aug 1991

0145 MAC ICI Time Check 14 SECS AHEAD OF GMT  
MAC PLUS Time Check 11 SECS AHEAD OF GMT  
IBM PC (SAIL) Time Check 20 SECS AHEAD OF GMT

0520 Secured at MSI dock Port Aransas