

ACADIANA 87-2

June 14-26, 1987

Chandeaur Islands

J. Kindinger

NAVIGATION &  
GEOPHYSICS SUMMARY

#87023 Syd  
#87025 Sei  
#87026 Sei

Legs 2,3

87-1,2,3  
ACAD 101574  
#87023



1321 Position: 29 45.88  
88 47.14

1335 Position: 29 44.71  
88 47.31

Equipment is deployed and tuning is in progress. Shifts are organized as Jack/Randy afternoon/midnight and Shea/Ken morning/evening. Shea works the first shift through Saturday midnight, my first 12 hours of official compensatory time.

1347 Position: 29 42 87  
88 47 24

SOL Line 27 started about 4 miles southeast of Monkey Bayou. At the start of this line we are profiling seaward dipping clinoforms which resemble the beach ridge plain action proposed for this area.

1417 Position: 29 42.50  
88 44.48

Beach ridge action is diminishing and terminated down dip by extensive channeling.

1444 Position: 29 42.16  
88 42.08

Entering area of "sand piles" as Jack calls them. We are immediately west of major subaqueous bumps.

1505 Position: 29 41.80  
88 40.20

Course	Speed	Tape Count	Paper Roll
096	4.5	13/1234	1/09, 2/03

1602 Position: 29 41.04  
88 35.34

Statistics same

1627 Position: 29 40.7N,  
88 33.13

Statistics same

1641 Position: 29 40.44N  
88 31.98W

Eol line 27 and SOL line 28.

Course	Speed	Tape Count	Paper Roll
136	4.6	13/1504	1/09, 2/03

End of our first line, the seas remain 1-2 with a slight swell. Data looks good on the 3.5 in shallow water. The ORE is improving as we progress into deeper water.

1711 Position: 29 38.71  
88 30.44

Statistics same

1715 Position: 29 37.87  
88 29.54

Tape change 13 to 14.

1800 Position: 29 35 79  
88 27 66

1834 Position: 29 33.89  
88 25.83

1900 Position deleted by error

1928 Position: 29 30.58  
88 22.77

1958 Position: 29 28.85  
88 21.02

2033 Position: 29 26.69  
88 19.06

Major Pleistocene sequence is pinching at this location.

2102 Position: 29 24.84  
88 17.24

2119 Encountering some rain squalls and seas starting to pick up slightly.

2134 Seas have picked up considerably. 3.5 shut down due to cross talk and pancake stratigraphy.

Position: 29 22 73  
88 15 32

2205 Position: 29 21 15  
88 13 74

2237 Position: 29 19 21  
88 11 94

2305 Position: 29 17.41  
88 10.34

2350 Position: 29 14 84  
88 07 81

SUNDAY, JUNE 21, 1987

0000 Crew change: Randy and Jack on  
Shea and Ken off

0004 Position: 29 13 98  
88 06 96

EOL 28 and SOL 29

Course	Speed	Tape Count	Paper Roll
250	4.8	15/0202	1/09, 2/03

0015 Position: 29 13 76  
88 07 59

0020 Paper change: Roll 10

0032 Position: 29 13.35N, 88 09.19W

Running strike line (250) for about 1 hour then heading north.

0100 Position: 29 12 72  
88 11 70

0115 Position: 29 12 50  
88 12 54

EOL 29 and SOL 30

Course	Speed	Tape/Count	Paper Roll
341	5.4	15/620	1/10, 2/03

Delay 0.15 sec (GeoPulse) and 3.5 is still off due to cross talk.

0155 Position: 29 15 63  
88 13 64

Seas 2-4 ft. with light chop and wind out of the south.

0230 Position: 29 18 53  
88 14 54

0300 Position: 29 20 83  
88 15 22

0330 Position: 29 23 07  
88 16 00

0430 Position: 29 26 92  
88 17 21

0455 3.5 started back up again. Both records looking good. 26 fathoms water depth. Some rain squalls in area. Barometer 29.97 and falling slightly. Seas relatively calm (1-2 ft.) and winds out of the south.

Position: 29 29 31  
88 17 97

0555 Position: 29 33 17  
88 19 19

0600 Tape change: 15 to 16

0625 Position: 29 35.78  
88 20.01

Weed is removed from the boomer.

0712 Position: 29 38.09  
88 20.7

Paper change on the ORE 3.5. New roll is 2/4. Weather is good, all systems go.

0741 Position: 29 40.12  
88 21.41

0754 Position: 29 21.01  
88 21.66

Located here appears to be a wave cut terrace a la Suter. We will continue line 30 past its intended EOL in order to pick up the up dip termination. To date Leg 2 has logged 100 line miles. In addition, a major break through is occurring-Shea is learning to use the computer.

0809 Position: 29 42.03  
88 21.99

EOL line 30 and the beginning of line 31. New heading is 285 with 24.47 miles to run. This line is an onshore dip to the CHI shoreline.

0824 Position: 29 42.03  
88 21.99

Dead in water, the 3.5 has broken loose from its bow line. Repairs in progress.

0846 Position: 29 42.44  
88 23.73

Repairs completed. Back on line.

0855 Position: 29 42.47  
88 23.90

Speed is variable to avoid barge and tug.

0902 Position: 29 42.59  
88 24.53

Back on schedule and course.

0939 Position: 29 43.64  
88 27.56

All systems are go.

1003 Position: 29 44.30  
88 29.74

1029 Position: 29 44.98  
88 32.19

1055 Position: 29 45.73  
88 34.60

Moving onto the toe of the St. Bernard, transition from eaward dipping clinoforms to distributary channeling. We are on the lower St. Bernard delta.

1137 Position: 29 46.96  
88 38.70

1215 Watch change: Randy and Jack on

1220 Position: 29 48 08  
88 42 51

1225 Tape change from 16 to 17. Weather remains perfect for seismic profiling. Seas calm (1 ft.) and wind from the south (10-15 knots). Warm moist, tropical air with scattered thunderstorms in area. Skies are mostly cloudy. Barometer is still falling (29.89) and relative humidity at 85%.

1300 Position: 29 49 16  
88 45 76

3.5 changed to 1/8 s. sweep. Heading towards southern Chandeleur Islands (just south of Redfish Pt.) on a bearing of 283 degrees. Water depth 35 ft. Beginning to encounter the toe of the Chandeleur Island sandbody, basal parts of tidal inlet channeling.

1315 Position: 29 49 60  
88 47 42

30 ft. water depth

1330 Position: 29 49 87  
88 48 49

1337 Position: 29 49 94  
88 49 30

1341 Position: 29 49 99  
88 49 61

EOL 31 and SOL 32. 12 ft. water depth

COURSE	SPEED	TAPE COUNT	PAPER ROLL
9	5.0	17/0480	1/10, 2/4

Currently following the 10 ft. contour (lower shoreface) N-NE along the Chandeleur Islands.

1404 Position: 29 51 75  
88 49 25

At this location, tidal inlet channels can be seen overlying distributary channels.

1437 Position  
29 54 22  
88 48 74

EOL 32 and SOL 33.

COURSE	SPEED	TAPE COUNT	PAPER ROLL
87	5.0	17/0730	1/10, 2/4

1445 Position: 29 54 13  
88 47 56

Belt change on 3.5. Weather conditions quickly changing as we head essentially due east into a front. Seas 2-3 ft. with slight chop. Skies completely cloudy and quite dark. Winds out of the SE at about 15-20 knots. Shea down below and Wayne at the wheel.

1505 Position: 29 54 24  
88 46 05

Seas 2-4 ft. with constant rain.

1530 Position: 29 54 10  
88 44 05

1600 Position: 29 54 06  
88 41 70

1606 Paper change on 3.5 (Roll 2/5)

Weather starting to clear slightly but seas still 2-4 ft.

1630 Position: 29 54 07  
88 39 10

1715 Position: 29 54 05  
88 35 52

1745 Position: 29 54 08  
88 33 35

Partly sunny skies and seas have calmed down (2-3ft.).

1817 Position: 29 54.00  
88 30.17

Seas are inceasing, solid 2-4 feet. We have to deviate to the south of the course to get out of the side sea.

1850 Position: 29 53.88  
88 27.07

Tape change to 18.

1927 Position: 29 53.95  
88 24.09

EOL line 33. New course 348-5.1 miles to go.2

2000 Position: 29 56.20  
88 24.75

EOL line 34-start line 35. New course is 282.

2055 Position: 29 57.55  
88 29.92

All systems go, sea 3-5 and following limiting the quality of the data. Currently running line onshore to the Chandeleur lighthouse.

2200 Position: 29 58.95  
88 35.93

All systems go, seas are decreasing.

2218 Position: 29 59.30  
88 37.58

Roll change on the 3.5 to 2/6.

2318 Position: 29 59.28  
88 42.88

2348 Position: 29 59.44  
88 45 82

MONDAY June 22, 1987

0002 Position: 29 59.78  
88 46.89

EOL line 35-SOL line 36.

Randy and Jack on  
Shea and Ken to bed  
Bob at the wheel

0045 Position: 30 02 82  
88 48 91

EOL 36 and SOL 37

COURSE	SPEED	Tape count	Paper Roll
62	4.7	18/1522	1/11, 2/6

Seas 2-3 ft. with winds out of the SE. Heading towards Petit Bois Island, Mississippi and must cross Pascagoula ship channel. The lights of Gulfport and Pascagoula are visible on the horizon off port.

0100 Position: 30 03 64  
88 47 68

0120 Position: 30 04 10  
88 46 34

End of Tape 18 and start of Tape 19.

0200 Position: 30 05 49  
88 43 11

0250 Position: 30 06 86  
88 39 31

Some channeling apparent on Geopulse.

0300 Position: 30 07 23  
88 38 38

0350 Position: 30 08 90  
88 34 31

0415 Position: 30 09 70  
88 32 27

Seas 3-4 ft. and a light wind from the SE. Skies are partly cloudy and temp. about 72 degrees.

0415 Barometer is holding steady at 29.91 with no rain in sight. Horn Island, Mississippi if off port about 3 miles. Water depth about 13.5 meters (40 ft.).

0445 Position: 30 10 81  
88 29 40

0451 Position: 30 11 00  
88 28 92

EOL 37 and SOL 38

COURSE	SPEED	Tape Count	Paper Roll
177	5.1	19/1073	1/11, 2/6

Heading essentially due south (177 degrees) for about 1 hour. Running over the landward portions of some shoreface-attached sand ridges which have orientations between 115 and 120 degrees. They form oblique angles to the adjacent barrier island shoreline and are open to the southeast. These features form at the base of the shoreface/inner continental shelf during erosional shoreface retreat. Their origin is probably related in this case to a combination of ebb-tidal deltas and shelf storm flow during the passage of large storms (extra tropical and tropical).

0525 Position: 30 08 46  
88 28 89

The seismic data is showing tidal inlet channeling underlying the Shoreface-attached ridges. The stratigraphic sequence should include the basal portion of a tidal inlet channel overlain by a possible ravinement surface and capped by ebb-tidal deposits.

0533 Belt change on 3.5

0545 Position: 30 07 07  
88 28 98

0558 Position: 30 05 99  
88 29 00

EOL 38 and SOL 39

COURSE	SPEED	TAPE/COUNT	PAPER ROLL
265	4.5	19/1289	1/11, 2/6

0633 Position: 30 05.95  
88 31.98

Thunderstorms in progress.

0658 Position: 30 05.96  
88 33.92

0737 Position: 30 06.00  
88 37.20

0805 Position: 30 05.91  
88 39.78

Tidal inlet channeling in the area.

0821 Position: 30 05.86  
88 41.18

Navigation tape changed from 9 to 10. The data tape was changed from 19 to 20.

0856 Position: 30 05.91  
88 44.37

0947 Position: 30 05.81  
88 49.20

1017 Position: 30 05.76  
88 51.95

3.5 paper change from 2/6 to 2/7.

1040 Position: 30 05.82  
88 54.22

1100 Position: 30 05.70  
88 56.23

1135 Position: 30 05.84  
88 59.88

1141 Position: 30 05.87  
89 00.49

Power change on the boomer to 105 joules from 180 joules.

1200 Position: 30 05 80  
89 02 20

Randy and Jack on. Shea and Ken off.

1230 Position: 30 05 84  
89 04 78

Cat Island, Mississippi is off starboard about 7 nautical miles. Water depth is 10 ft. Skies mostly cloudy with sunny intervals. Seas calm (1 ft.). Watching water depth closely and might abort course if water depth reaches 8 ft.

1245 Position: 30 05 75  
89 05 07

Water depth is holding at 9 ft.

1300 Position: 30 05 65  
89 07 52

1308 Position: 30 05 68  
89 08 06

EOL 39 and SOL 40

COURSE	SPEED	TAPE/COUNT	PAPER ROLL
22	4.9	20/1286	1/11, 2/7

Water depth 8.5 ft. Seas calm. Heading just east of Ship Island, Mississippi. Ship Island is about 3.5 nautical miles off port bow. Will be crossing Cat Island Channel.

1355 Position: 30 09 17  
89 06 10

COURSE	SPEED	TAPE/COUNT	PAPER ROLL
24	5.5	20/1406	1/11, 2/7

Located just east of Ship Island, Mississippi. Water depth 16 ft. and seas are like glass. Skies mostly cloudy with some isolated thunder storms. Barometer is 29.90 and holding.

1430 Position: 30 11 82  
89 04 72

Excellent tidal channeling showing migration from NE to SW (parallel to Ship Island barrier shoreline).

1445 Position: 30 12 95  
89 03 89

EOL 40 and SOL 41

COURSE	SPEED	TAPE COUNT	PAPER ROLL
53	4.7	20/1286	1/11, 2/7

Problems with 3.5 record. Presently no usable data on 3.5 as Ken and Jack work with it. Had to detour to the east (53°) to avoid spit/ebb-tidal delta on northern end of Ship Island, Mississippi. Present course will take us across the Gulfport Ship Channel to waypoint 30 16 00 north and 88 58 50 west. At that point, we head for port at

Broadwater Marina. Water depth about 10.5 ft.  
with partly sunny skies at present. Seas calm.

1455 3.5 totally shut down

1456 3.5 up and running

1515 Position: 30 14 02  
89 01 79

EOL 41 due to shallowing water. Tape 20 ends. LEG  
II completed and now pulling in gear. Will be  
heading to port within a couple of minutes.

1524 All gear pulled in and we are off to Broadwater  
Beach Marina. It's Miller time! Approximately 30  
line miles run on leg 2.

1630 Arrival at Broadwater Beach Marina

1645 John and Steve meet the Acadiana.

TAPE  
#

START  
END

COMMENTS AND OBSERVATIONS

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ACADIANA  
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Chandeleur Isl.  
June 20-26  
1987  
Less 2 & 3  
J. Kindinger

SEISMICS  
LOG

78 00 91

GMT				LINE #	SHIPS		FIX TIME	NAVIGATION				QUAL.
DAY	MO	YR	TIME		COURSE	SPD		LATITUDE		LONGITUDE		
							± DEGREES ±	MINUTES	± DEGREES ±	MINUTES		
20	06	87	1350	27			29	<del>48</del> .8	88	47.3		
			1644	27	136		29	40.3	88	32.5		
			1718	27	136		29	38.5		30.4		
			2140	27				22.7		15.4		
			2325					26.4		09.3		
21	06	87	0005	28				13.9		07.0		
			0116	29				12.4		12.5		
			0430	30								
			0645	30				35.8		19.9		
								37.8		20.7		
			0812					41.9		21.9		
			0814	31			29	41.9	88	22.1		
			0824	31				42.1		22.9		
			0850	31								
			1225	31				48.0		42.5		
			1343	31				49.7		49.6		
			1438	32				54.0		48.8		
			1850	33				53.8		37.6		
			1930	33				53.7		24.0		
			2000	34				56.0		24.7		
			2230	35				59.2		39.2		
			2345	35				56.7		45.8		
22	06	87	0005	36				59.4		46.8		
			0049	34			30	02.8	88	49.0		
			0120					<del>16.8</del>				
			0452	37				10.8		28.9		

TAPE #	START END	COMMENTS AND OBSERVATIONS	PAGE <u>2</u>
13		SOL 27	
		TAPE # 13	
		ROLL # 2/3 ON 3.5	
		ROLL # 9 ON GYPLUSIS	
		EOL 27 / SOL 28	
		CHANGES TAPES # 14	
		3.5 KHZ OFF	
		CHANGES TO TAPES 15	
		EOL 28 / SOL 29	
		EOL 29 / SOL 30	
		Silent 700 down 0430 → 0440 changed interface	
		OLKOR ROOM 15R	
		ROLL 2/4 ON 3.5 KHZ	
		EOL 30	
		EOL 31	
		SHUT DOWN SYSTEM TO REPAIR ONE 3.5	
		SIDE MOUNT. FORWARD STAYS BROOKS LOOSE	
		<del>SEE</del> EJECTOR BROKE	
		ON LINE	
		CHANGES TO TAPES # 17	
		EOL 31 / SOL 32	
		EOL 32 / SOL 33	
		CHANGES TO TAPES # 18	
		EOL 33	
		EOL 34 / SOL 35	
		START ROLL 2/6 (3.5)	
		START GYPLUSIS ROLL # 11	
		15MD LINE 35 START LINE 36	
		EOL 36 / SOL 37	
		END OF TAPE 18 / SOL 19	
		EOL 37 / SOL 38	



TAPE  
#

START  
END

COMMENTS AND OBSERVATIONS

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EOL 38/SOL 39

CHANGES NAV TAPES TAPES 10

CHANGES NUMB TAPES 19 TO 20

CHANGES 3.5 kHz ROLL 2-6 TO 2-7

EOL 39/SOL 40

EOL 40/SOL 41

EOL 41 END OF LEG 2

SOL 42 23/06/87 12:59

DROPT BILATI FOR LK6 3

PWR UP ON 2300 kHz 1758

C/E 162

C/E 185

WP # 48 20/209 47

WP # 48 21/218

CHANGES TO TAPE # 23

EOL 42/SOL 43

SOL 43/SOL 44

ROLL 219 ON

EOL 44/SOL 45

New Belt 3.5

Change to tape # 24

Change paper to Roll 1.3 Geopulse