

8/7/97 seismic

starting seismic line, continuing line in middle ground, heading south toward Cheat Mountain Pass. Starting at station # 41 line no 96-05. Crew Rich Y., Dana W., Rita B., Tim F.

from <del>97-1</del> start waypt.	30° 09.92	89° 47.85
to pon 97-18	30° 08.503	89° 48.823
to rig 9610	30° 07.475	89° 49.854
to rig 9611	30° 06.479	89° 49.704

1935 2 sal pon 97-1 Middle Ground going south 280j. recording 100ms

1936 stopped due to Dana's inability to regain consciousness Middle Ground going south

1948 resumed survey -- Dana regained consciousness Middle Ground going south 280j.

1933 recording 100ms

54021 dodging crab trap buoys.

20023 turning toward next waypt.

210023 turning toward mouth of Pass.

2130 going about 3.5 kts over ground.

17

2222 - end of line @ bridge on Highway 90

Start at rig 9610

to rig 9609 30° 08.278 89° 47.388

to rig 9605 30° 09.008 89° 46.134

to rig 9601 30° 10.095 89° 45.495

start line Pon 97-2 (in south Middle Ground near core site Rig 9610 heading NE)

2230

2356 end at rig 9605

8/8 Pench / Lake Bourne Seismic continued

connecting core sites in east lake Pontchartrain:

core: PON97-14	30° 10.677	89° 47.805	30° 10' 40.6"	89° 47' 46.5"
to rig 9604	30° 09.635	89° 46.967	30° 09' 38.1"	89° 46' 58."
to rig 9605	30° 09.008	89° 46.134	30° 09' 00.4"	89° 46' 08."
to rig 9606	30° 08.845	89° 45.827		
to rig 9607	30° 08.636	89° 45.443		

Crew: Rich Y., Penn W., Jim F.

Skies partly cloudy light breeze, seas ~1' se.  
 heading se along above course.

1552 sul pon 97-3

1600 winds increasing out of west, storm approaching,  
 165140 eol at rig 9607 (nearshore)

Lake Bourne transect across '96 cores.

From Chef Menteur	to 15-9601	30° 01' 2.5"	89° 46' 02"
	to 15-9602	30° 02.072	89° 46.034
	to 15-9603	30° 00' 51.3	89° 45' 13.7
	to North Packer Pt.	30° 00.856	89° 45.229
		29° 59' 40.5"	89° 44' 35"
		29° 59.675	89° 44.550'
		29° 57' 36"	89° 43' 4"
		29° 57.6	89° 43.7

Start line downstream of Hwy 90 & rail bridge, Chef Menteur pass  
 1805 sul pon 97-4

29° 57.6 89° 43.7

1840 Entering Lake Borgne going south/southeast - seas 1-2' se  
 1952 rain south chop

2007 eol. turning northwest back across lake Borgne  
 2008 sul nw. to 30° 01' 45" 89° 50' 15"  
 pon 97-5 30° 01.75' 89° 50.25'

214644 stop boat to remove crab trap from sta anchor  
 29° 56' 89° 48.6

220444 eol at north shore, turning south

220550 sul pon 97-6 heading south to Packer Pt. (Lake Borgne)  
 to way pt. 29° 56' 89° 48.6'

2229 Noticed that DGPS has been turned off, turned on.

2316 eol at near south shore (stakes in way of shore)

# 8/9 Lake Borgne Seismic (cont.)

Zig-zags across lake Borgne, crossing core sites PON97-17-19,  
PON97-20, PON97-22, PON97-21

Start 30° 8' 89° 30'

thru pon 97-18 30° 07.074 89° 30.679

to pon 97-20 30° 02.557 89° 32.053

to pon 97-22 30° 04.042 89° 38.271

to pon 97-21 29° 57.847 89° 36.447

~~tie-in to Army core cross section A-A' at Alligator Pt~~

~~> 30° 01.1 89° 43.4~~

~~See~~ light chop (1-2') from south. Crew Rich Y., Dana W., Jim F.

1445 (945) sol pon 97-7 heading south west to Malheureux Pt.

150946 adjusting <sup>(decreasing)</sup> power setting to see if we can obtain higher  
resolution in shallow sediments. PAUSE

1514 decrease power to 105j

1606 - window

1632 end at pon 97-18, turning northward toward pon 97-20

1633 sol pon 97-8

1654 PLGR and GPS go down, no navigation

30° 03.178 89° 34.630

horizontal reflectors shallow, near surface, possible core site

1715 PLGR and GPS back up.

1723 Lose PLGR and GPS again

1732 PLGR and GPS back.

1746 Lose PLGR and GPS

175450 Nav. returns, pick up speed from ~3.0 kts to 3.2 kts.

1817 end. turning southward to core pon 97-22

181840 sol pon 97-9

192340 Main increased channel? 30° 00.307 89° 37.182

20740 end, turning northward to core 169603 (change of plan)

20940 sol pon 97-10, NW to core site 169603 between Alligator Pt  
and Malheureux Pt.

220604 paper out. stops acquisition just past core 169603

22140 sol pon 97-11 heading NW from 169603 ~281°

224530 end end, near seismic pon 97-5 mid-lake.

2/10/97 Seismic Lake Borgne (cont)

29° 51.9' 89° 40.0'  
29° 52.7' 89° 35.9'

Continuing Army Corps transect <sup>Bigolets</sup> ~~from Malheur~~ <sup>A-A'</sup> offshore southward across Lake Borgne:

Alligator Pt. : 30° 01.1' 89° 43.4'  
to South Lake Borgne 29° 52.7' 89° 35.9'

depending on data quality may survey to or pull equipment and run to adjacent site, South Lake Borgne: 29° 51.9' 89° 40.0' to North Proctor Pt. 29° 56.6' 89° 42.0'. ~~Will~~ Again depending on data quality will pull equipment and run west-east line across Southern Lake Borgne.

Skies partly cloudy, seas calm. Crew Rich Y, Dana W., Jim F.

144950 Sol pen 97-12 heading south across Lake Borgne  
1514 slow to adjust sea anchor.

NOTE: A-GC window width on ADE + ADC should be no smaller than the source signal.

154824 reflector drops down from surface

1602-1609, shallow channeling?

163245 possible small ~~shallow~~ shallow incision, ~~plastic~~ strong reflector (plastic?) dropping away to 20ms.

163930 ~~big~~ incised channel, possible related to big incision seen in Patch.  
29° 38.754 89° 35.884

173524 Sol at south shore, pull equipment and head to south west side.

1758 Sol pen 97-13 going south of Markello Castle going north to Proctor Pt.

180120 ~~plastic~~ surface obscuring record, dropping down from surface

181420 evidence of channel fill

1824.5 ~~plastic~~ surface drops away into channel. Potential core site  
29° 53.405 89° 40.730

1915 Sol at Proctor Pt.

29° 57.847 89° 36.447 (pen 97-21)

1959 Sol 97-14 ~~went to~~ travelling west from Malheur Pt toward ~~at~~ Fort Bayou. went to west side to shelter from wind which is picking up (2' chop)

200858 strong reflector (plastic?) comes to surface

2042 ~~plastic~~ surface horizon drops from surface

2056 small, shallow incised channel.

2109 ~~plastic~~ horizon returns toward surface

heading to Fort Bayou 29° 53.35 89° 42.9

212658 shallow channeling, ~~plastic~~ drops

2215 Sol near Fort Bayou, ~~about~~ 1.1 mile from above ~~in~~ 1000 ft.

8/11 Seismic Lake Borgne (cont.)

Long transect across axis of Lake Borgne.

East side:  $29^{\circ}55.1'$ ,  $89^{\circ}43.0'$

<sup>2002</sup> <sup>backward</sup> 2 thru inside channel on line PON97-9:  $30^{\circ}00.307$ ,  $89^{\circ}37.182'$

1 to core PON96-22 west side Lake Borgne:  $30^{\circ}07.596$ ,  $89^{\circ}25.705'$

North-South transect continuing Army Corps line A-A', 3-mile Bay Sheet

1. from core PON9620:  $30^{\circ}11.0'$ ,  $89^{\circ}29.4'$

2. to Malheroux Pt.  $30^{\circ}04.95'$   $89^{\circ}29.0'$

1000 local

1528 Sol PON17-15 at west side Heron Bay core PON9620, heading south to Malheroux Pt.

1551 Pleist. drops down from surface.

1603 Pleist. returns to surface

163 Pleist. drops back down.

1657.75 Small, shallow incision.

1715 end of line at Pt. Malheroux

1742 Sol PON97-16 SE of Half Moon Is. going south west to South Lake Borgne

175714 possible small channel into Pleist., which is at surface.

1800 GPS + PGLR down

1817 PGLR back

181758 No Nav,

corAN  $30^{\circ}06.87$ ,  $89^{\circ}27.05'$

? Small incision (no nav, close read from <sup>boat</sup> GPS  $30^{\circ}06.362$   $89^{\circ}27.651'$ )

? ~~Small~~ endence of Annual Fill DGPS  $30^{\circ}04.561$   $89^{\circ}30.493'$

1945 PGLR Back ~ 2.5 mile west of Pt. Malheroux

20819 Deep sequence of horizontal reflectors, strong reflector at 18ms

20119 eol ending line for backus.  $89^{\circ}31.911'$   $20^{\circ}09:19'$

2018 Sol PON97-17 continue track

2034 core pick strong reflector deep

205524 Nav out again.

210819 Nav back 0.02 left of line - adjust course

214119 Channel fill as seen in line PON97-9, potential core site.

225579 eol just crossing line PON97-12 eol, eol

TOTAL SEISMIC ~ 104 miles

Potential core sites based on 97 seismic ~~data~~ data set.

Pon 97-13 transect:

- 2) Pon 97-13 crosses pon 97-14 at about  $29^{\circ}54.35'$   $89^{\circ}41.33'$ . Seismic shows hard reflector (pleist?) at about 7.8'.
- 1) North end of transect:  $29^{\circ}56.096'$   $89^{\circ}42.503'$ . Seismic shows horizontal reflectors down to ~~24.8'~~ 14.8', hard reflector (pleist.) below 14.8'.
- 3.) Record shows possible fluvial fill at 16:17:20;  $29^{\circ}53.017'$ ,  $89^{\circ}40.467'$  down to about 17.2', hard reflector (pleist.) below 17.2'.
- 3a.) Beginning of line (south side) shows pleist. at surface. No real need for core. Hard reflector drops down at 18:04:30, potential core site to show this;  $29^{\circ}52.453'$   $89^{\circ}40.121'$ , 9.8' (pleist.)
- 4.) Pon 97-12 incised channel with fill at 16:40:24. Perhaps hit off center to get channel fill and underlying bed:  $29^{\circ}55.869'$ ,  $89^{\circ}38.735'$ . Also happens transect with <sup>like</sup> ~~to~~ pon 97-14.
- 5.) Pon 97-12 towards end, ~~the~~ deep section of horizontal reflectors overlying hard reflector (pleist.?) at about 14.76' 17:22:1  $29^{\circ}53.8436'$ ,  $89^{\circ}36.928'$
- 6.) Pon 97-17, deep sequence of horizontal reflectors, but with strong reflector within reach of good core (~17'). Also away from other core sites ~~20:34:19~~ ~~30:02.430~~,  $89^{\circ}33.209$   
Change to 20:38:53 30:02.691  $89^{\circ}33.433$
- 7.) Pon 97-9 and Pon 97-17 21:50:19 Channeled fill 30:00.29  $89^{\circ}37.193$

Most of the central axis of Lake Burgne is characterized by a strong reflector, ~~irregular~~ reflector running at about 14 ms bsl. but varying in depth from north to south. Generally the reflector dips to the south, but not necessarily. \* The reflector is overlain by less distinct, horizontal reflectors. Some shallow incisions and channel fill is evident locally. A larger incision with high angle clinoforms is apparent toward the central portion of Lake Burgne on the south side, seen in lines Pon 97-9 and Pon 97-16.

Where the strong reflector rises to the surface, primarily in the north and northwest portions of the lake, the record below the reflector gets obliterated, similar to what occurs below the <sup>present</sup> ~~surface~~ surface in Lake Pontchartrain. Gassed out areas are also ~~present~~ in various sizes and locations throughout the lake.

\* There appears to be a high, <sup>centered</sup> ~~located~~ about 2 miles west of Pt. Malheur aux, as seen in ~~lines~~ <sup>lines</sup> ~~Pen 97-17~~ <sup>Pen 97-16</sup> and ~~Pen 97-8~~ the <sup>usually</sup> horizontal reflectors offlap from this high, small shallow channeling fill is seen around the periphery of this high.

B.) Line ~~pen~~ 97-15 shows a bathymetric low <sup>or saddle</sup> influenced by a ~~low~~ <sup>strong</sup> similar shape in the underlying strong reflector, the ~~reflector~~ <sup>strata</sup> above the strong reflector appear to represent fill similar to a back-barrier environment. A core here at  $30^{\circ}9.733$   $89^{\circ}29.33625$  (time 15:15:15) would be interesting.