5/12 Fri. Barataria Sound Study

Seismic / Sidescan / CHIRP Survey.
Crew: Mark K., Dana W., Beth Y., Jim F.
~~Seas~~ wind 15-20 South, Seas 3-4', working inside Barataria Bay. SW to NE transect across bay.

West side of Bay, heading north to core ~~23~~
SOL BS500_01 time 1506 CST
100 j Seismic, shooting 500ms, recording 100ms. time 20:37:52
Recording bathy (Fugawi) ~~Eill 50~~ on z 201150
20:43:52 turn
CHIRP SOL ~~BS500~~ BS500C_01A time 20:46 z
2053 EOL Chirp BS500C_01A
2056 SOL Chirp BS500C_01B
2147 EOL Chirp down
EOL 2145 Seismic down

Back-on!
Chirp
SOL BS500C_01C ~~[illegible]~~ 215906
heading to ~~[illegible]~~ core site BS500_13

Seismic
SOL BS500_02 22:06
EOL BS500_02 22:17:49 "Target write file" error - system crash.
221821 BS500C_01C (Chirp) Loss of Gain.

SOL ~~BS500C_0~~ BS500C_01d Chirp 223706 heading to core site 13.
SOL BS500_01D (HRSP) 2247
EOL BS500C_01d 2259 at core site 13
EOL BS500_1D (HRSP) 225908

END

NOTE: DEPTH AT END OF LINE BS501D IS 2.4 meters (PDR), HRSP shows depth to be 12 ms

5-13-00 Saturday Barataria Sound Study

Crew: Rich V. (capt.), Dana W. (seismic), Mark K. (c.s.)

ODEC members: Dave Caulfield, Russell P., Lloyd B.

weather: Slightly cloudy, wind 220° 0-3 Knots, very calm in Bara Bay.

Itenerary: Head to Barataria Pass when ODEC will calibrate their equipment in the deeper water. Then head offshore to calibrate at vibracore locations #'s 50, 51, and 46. Run seismic as time and weather allows.

Port departure: ~~[illegible]~~ 11:45

~~[illegible]~~ 13:10 Boomer overboard, ODEC calibration phase overboard (Bay side of Islands in channel)

SOL ODEC1 (calibration run) 13:32

300j, 100ms recording, 500ms shooting interval, Barataria Pass

EOL 13:46

14:22 Vibracore site 50

ODEC calibration site; site is apparently too shallow for effective calibration, I was not aware that depth was a concern for ODEC operations! will move straight to site 46

- Vibracore site 46 with deeper water for calibration operations

ODEC calibration site

16:29 Deploy seismic and chirp at ~~site~~ vibracore site 45

SOL BSS00_03 Seismic time: 16:48

large swells at beginning due to south bearing into swells

100j, 100 ms recording, 500 ms shoot interval

BSS00c_03 chirp no hardcopy output

multiple losses of power on Boomer (marked on record) centered around 17:31:38

EOL BSS00_03 17:41 SEISMIC DOWN

change of waypoints from vibracore site #33 to #63 and then back to site #35; rough seas trying to find a "lump free" (smooth sailing) path

SOL BSS00_04 17:48 Seismic
very rough seas
EOL BSS00_04 18:08 seismic
EOL BSS00c_03 18:08 chirp

Seas are very rough; heading into Bay, will see what conditions are like there.

19:35
Came through Barataria Pass into much calmer water, rough ride on the shelf! Will set up to run line from ~~Pass Abel~~ Pass Abel northwest toward limit of vibracoring in Wilkinson Bay.
Waypoints vibracore locations #10, #24, #2

SOL BSS00_05 time 20:43 seismic 6ms delay on seismic
start of line should match waypoint which is vibracore location #10 on bayside of Pass Abel
SOL BSS00c_05 20:38 chirp

time: 20:46:10 H_2O depth = 1.4 m

Chirp: ~~20:5~~ 20:56:30 sand ridges? showing at seafloor on chirp
very strong reflector showing up on chirp screen
at approx. 07 ms
20:58 pipe on Chirp?

Seismic: strong reflector at 20ms 21:10:19

time: 21:18:30 H_2O depth = 2.4 m

seismic: strong reflection at 20ms 21:23:19

Chirp: channel-like feature ~21:30:00

time: 21:50:30 H_2O depth = 2.7 m
Chirp: dense structure on profile ~21:52:00 pipelines?
~22:00:00 7-8ms very nice reflectors
time: 22:15:00 H_2O depth = 2.6 m
chirp: 22:19:00 shallow channel?
time: 22:41:00 hard subbottom on chirp at ~2ms ~~below~~
below seabed

time: 22:43:30 H_2O depth = 2.4 m

Chirp ~23:00:00 major subbottom reflectors, troughlike
Seismic down ~~22:59:00~~
EOL BSS00_05 22:59:00

time: 23:08:20 Chirp showing strong channel-like reflectors
SOL BSS00_05a Seismic — aborted
~ ~~23:15:00~~ 23:15:00 crossed vibracore site 21
retrieve equipment, storm heading our way head for dock.

Monday May 15th
~~11:20 leave~~ Crew: Rich Y., Dana W., Shea P., Mark K.
11:25 leave dock, sunny with strong wind out of N/NE at 15-20 knots
Bay with 2-3' waves, going to try and get some seismic northeast out of Barataria Pass. Will try to run some shore-parallel lines
Approaching starting point at 29°18', 89°44' just south of Chaland Pass, seas are much calmer in this area with the north wind

SOL BSS00_6 time 14:52: SEISMIC 100 j, shot 500ms, recording 100ms
SOL BSS00c_6 time 14:57 Chirp in water slightly more than 1m

14:53 Water depth 4.4 m
14:57 water depth 4.4
* 6 ms delay on seismic

15:07 water depth 4.3 m

15:19:30 change of heading 05°S
15:20:30 water depth 4.0 m

15:30:15 change of heading 05°S

EOL BSS00c_6 time 15:36

15:40:30 Water depth 3.9 m
15:46:00 change of heading 05°S

EOL BSS00-6 15:47

SOL BSS00-6a Seismic 15:54

15:56:50 Water depth = 4.0m

SOL BSS00c-6a Chirp 16:40 (printout)

16:27 water depth = 4.5m
16:34 water depth = 4.2m

16:46:15 35° change toward south in direction
heading toward vibracore location 40
headed more parallel to waves than, more roll
16:48:00 water depth = 3.4m

17:13:50 waypoint Vibracore location 40
: continuing southwest then will head back around to
site 36 which is located farther out on shelf
17:18:00 seismic out of paper EOL BSS00-6a
17:20:00 water depth = 3.6m
swinging around
17:28:00 90° turn toward south east
17:33 EOL BSS00c-6 chirp
~~SOL BSS00-7~~

Have reloaded paper into both seismic and chirp swinging around to run coast-parallel line offshore of last line BSS00-6 & 6a

SOL BSS00c-7 17:45 chirp back on
water depth = 6.3m

SOL BSS00-7 17:46 seismic back on

17:52 core site 6A

17:53:43 headed onward core site 36
water depth = 7.1 m

18:09:45
water depth = 6.5 m

18:22:59 crossing core site 36, water depth = 6.4m

~~18:26~~ 18:27 seismic down

SOL BSS00-7a seismic back on 18:33

18:54:58 water depth = 5.8 m
chang heading toward east to follow 6.0 m contours

19:20 adjusted the Chirp anchoring, data looks improved
change in course heading 05° south

19:29:00 water depth = 5.8 m

19:37:19 05° south change in heading

EOL BSS00a 19:44 seismic end
EOL BSS00c-7 19:38 chirp

SOL BSS00-08 19:48 seismic line started

SOL BSS00c-08 19:43 chirp line started

19:47 H_2O depth 5.8 m
19:53 05° south adjustment toward south
~~20:24~~
20:25 6.1 m H_2O depth

20:58 18° course correction to south

21:00 messing with seismic to better portray bottom reflector and extract the water column noise

21:23 H_2O depth = 5.8m

21:31 change in course toward shoreline
water depth = 5.9 m

21:41 H_2O depth = 4.8m

22:07 H_2O depth = 4.2m

22:15 10° toward south, water depth 4.1 m

22:34:30 have reached the starting point for todays lines approximately 0.5 Km offshore of western limit of Bay Joe Wise

EOL BS00-08 22:37 end of seismic line
EOL BS00c-08 22:37 end of chirp

22:40 END OF DAY, HEAD FOR HOME

Tuesday May 16, 2000 Barataria Sound Study
Crew: Rich Y., Dana W., Shea P., Mark K.

12:00:00 Clear skies and sunny, light wind 5-10 knots out of the north east, light chop in the Bay hopefully the same outside on the shelf. Will head up to vibracore site #15 and head south out Barataria Pass. If seas are calm will attempt to acquire lines east of Barataria Pass toward the western limit of yesterday's cruise.
Have switched plotters for Chirp and Seismic. Chirp plotter was "jumping" around yesterday on the position of the plotting (Chirp Roll #2)

Seismic settings 100j, 500 shooting interval, 100ms recording interval

SDL BSS009 13:41 Seismic up 6ms delay
Concerned about shallow water as we head out of the Bay area. Will have to adjust for shoaling indicated by bathy charts for this area.

~~13:52~~
13:53:30 water depth = 2.7m

~~13~~

~~SDL BSS009c~~
SDL BSS00C-09 13:54 Chirp up (subbottom profiler set at ~1.5m sub sea level)

13:56: crossing vibracore site, will turn toward west to avoid shallow water
13:58 Water depth = 2.8m
~~13~~
14:04 turning toward south into channel for Barataria Pass
14:13 water depth = 3.8m
14:27 water depth = 4.1m
14:40 water depth = 5.3m
14:44 water depth = 5.7m ; noise and seafloor separation on seismic

losing chirp because of depth
EOL BSS009 ~~14:46~~ 14:47 seismic down

SOL BSS009a 14:54 seismic back up 6 ms delay

14:56 water depth ~~8~~ 4.2 m

15:02 heading out between Grand Isle and Grand Terre
15:03 water depth = 8.7 m

15:09 seismic down
EOL BSS00_9a
15:36:30 water depth = 5.0 m
SOL BSS00_9b 15:45 seismic back up 6ms delay

15:47:00 water depth = 4.2m
passing swells from Coast Guard boat

16:07:00 water depth = 6.9 m

16:15 adjusting depth of subbottom profiler (Chirp) below the sea surface for the progressively increasing water depth profiler is tied off at starboard stern cleat hanging over edge of boat.

16:30:15 vibracore site 45 cleared

16:33 water depth = 10.9 m
16:48 water depth = 13.0 m
gas pockets showing up on seismic?
17:09 still heading southeast will soon turn toward northeast for several kilometers then back toward shore

17:17 turning northeast ~45°
17:55 attempting to determine most reasonable track toward shore, difficult based on plotted vibracores
~18:05 adjusting Chirp gear and towing bridles
~~18:~~

changing direction toward shore, heading northwest

EOL BS00_09b
EOL BS00c_09 18:10 chirp

SOL BS00_10 18:13 seismic
SOL BS00c_10 18: chirp

18:25 water depth = 11.9 m
18:26:14 vibracore site 32 ~ 15.24 m to west

18:33:00 large school of Jackfish swimming with chirp

18:53:00 problems with seismic plotter
also have lit seagrass, switching to port and starboard engines to see if center engine clears at the intake, change in speed

~19:05 vibracore site #56 crossed
~19:31 vibracore site #58 crossed
19:31 have adjusted depth of chirp for approach into shallow water
19:33 water depth = 4.7m

19:52 raised subbottom profiler for more shallow water
19:53 Water depth = 2.0m
19:54 passing over vibracore site 34
turning toward port will align with vibracore transect running offshore that consists of sites #41, 57, 46 to capture these points as well as thread the gap in seismic data of previous surveys.

20:07 turning toward southeast to head offshore
EOL BSS00_10 20:07 seismic
EOL BSS00c_10 20:11 chirp

SOL BSS00_11 20:09 seismic 6ms delay
SOL BSS00c_11 20:14 chirp

20:30 vibracore site #57
20:34 water depth = 4.8m

20:50 lower subbottom profiler (chirp) into water to adjust for increasing water depth
20:53 seismic acting up, plotter problem

21:09 lowered subbottom profiler again

EOL BSS00_11 seismic "write file error"

21:29:50 turning northeast toward ~~site~~ vibracore site 32

SOL BSS00_11a 21:40 Seismic back on 6ms delay
experiencing problems with plotter

21:54 crossing vibracore site # 32

22:01 Turning toward northwest heading toward shore
EOL BSS00_11a ~~22:00:00 seismic~~ 22:02 seismic
EOL BSS00c_11 22:09 chirp

SOL BSS00_12 22:05 seismic no plotter output
SOL BSS00c_12 22:07 chirp

heading toward vibracore site #61 just east of Pass Abel

22:40 water depth = 7.8m

22:49 seismic testing "tag thing" no record
22:57 water depth = 5.7 m

~~11:04~~
23:04 raised chirp to within approximately 1.0–2.0 m of sea surface to adjust for decreasing water depth
23:07 water depth 4.5 m

~~22~~
23:25:45 vibracore site #61 just offshore of Pass Abel
23:26:40 turning toward ~~port~~ starboard

~~23:44 pull in equipment, head for home~~

EOL BS500-12 ~~seis~~ 23:29 seismic
EOL BS500c-12 23:29 chirp

23:44 pull in equipment, head for home, Good Day!

Wednesday May 11, 2000 Barataria Sound Study
Crew: Rich Y, Dana W., Mark K.
11:45 Sunny & cool, light south wind, calling for increasing wind from the south will try to run lines off of Grand Terre Island before winds kick up, refueling first.

13:15 rough seas beyond pass 2-4' waves, will run out to past location for vibracore site 45 and run a line backward toward Grand Isle on westside of Barataria Pass.

14:21 Rough seas, have deployed one heading back offshore as far as possible and will realign to vibracore sites 42 and then head toward 49, will go offshore as far as possible but platforms are in way.

SOL BS00 13 14:22 seismic lens delay

~~SOL BS00c 13 14:22 chirp ~ 8ms from bottom, tied off at starboard stern cleat~~

14:32 water depth = 9.5m
14:35 turning toward shore

SOL BS500c 13 14:38 restart chirp ~ 8ms from bottom, tied off at starboard stern cleat

15:00 vibracore site 42
15:03 lots of trawlers moving through this area, sediment-laden water second is also becoming more noisy entering into shallow water with the seas this high
15:05 water depth = 4.2 m
15:08 adjusting chirp depth for decreasing water depth, raised ~ 1.0m water depth = 3.4 m
15:08 adjust profiler depth for chirp

15:22 boat passing in front across bow, slowing speed, other vessel not ~~15:25~~ responding to calls, crossing over lots
15:24 vibracore site
EOL BS500_13 15:25 seismic
EOL BS500_13 15:24 chirp

15:25 turning about, very rough water, testing to see if data is any good running into waves, marked as test line data is marginal

16:03 Captain makes the call, seas are potentially unsafe, large unpredictable swells, head for Bay.

16:45 Back in Barataria Bay heading to behind Grand Isle will attempt to run a line eastwardly from core site 30 toward core site 25 and then perhaps a north-south line through sites 27, 26, 25 and 21. Depends on water depth and accessibility. Additionally although Bay water is calmer it is still choppy and white capping in places. 1-2' chop. Wind speed ~ 15 knots from south

18:00 Deployed seismic near site 30, still pretty rough up in here behind Grand Island

Bearing southwest, will swing around

* refers to test lines for time 15:25

SOL BSS00 – 14 seismic Lost delay, not saved

SOL BSS00c – 19 chirp

heading toward vibracore site #30

SOL BSS00 – 15 seismic 18:08

SOL BSS00c – 15 chirp 18:06

18:15 water depth = 1.9 m

18:16:30 vibracore site #30

18:21:46 water depth = 1.7 m

Seismic output does not seem to match the water depth. chirp data contains much noise due to sway as a result of boat direction and wave direction, not much that can be done to remedy this situation because of shallow water depth beyond our current track

18:23 seismic system is off as a likely result of geometry between track direction, wave direction, and wind direction.
Chirp tow fish is swaying around in water and impacting record

18:50 Boat is tracking differently from deployed equipment, as the trailing equipment is "fishing" around the signal becomes very distorted, may decide to abort this day even on lee side of Grand Isle there seems that little can be done.

19:45 core site #25 ~ 180' (55m) to port

20:07 turning toward north to hit vibracore site #27

20:08 water depth = 1.2m

20:43:08 water depth = 1.2m

20:44:00 crossing vibracore site #27 36m to the east will turn back around and retrieve gear, wanted to head toward site 28 but seas are not cooperating.

EOL BS00—15 ~~20:45~~ 20:49 seismic
EOL BS500c—15 20:49 chirp

21:34 Gear has been retrieved and we are heading in to dock. Any other potential lines in Bay would require an hour of travel from this location and thus, not feasible this late in the day.
* Note the seismic (BOOMER) lines today in the Bay do not clearly show the seafloor. With the long delay and indicated 1.0-2.0m of water depth the seafloor, although likely to be tied into the pulse width, should have been at approximately 8-10ms. However, first real record, noise or otherwise, was coming in at approximately 12-14ms. May be related to heavy weather affecting the tow geometry of the equipment. Perhaps processing will also help. Disappointing day. Weather forecasts indicate that next 2-3 days may be too rough as a front with increasing winds is moving in to position, rain is expected.
* 22:17 Note: Upon returning to dock it was noted that the fathometer readings during the last line may have been wrong or very likely are wrong. Shrimp trawlers have created considerable turbidity

Some add explanation for heavy frequency bottom data.

in the Bay water and this may have been the cause. The suggestion is that the first significant reflections/pulse widths in the seismic record yields is the seafloor interval. At vibracore site #25 A_2O depth is recorded at 7.0' (2.13 m) on seismic record this is approximately time mark 20:44:00, ~~On seismic~~ with a 10-15 ms interval of first reflections/pulse widths. Accounting for 6ms delay and minimum time depth (e.g. 10 ms - 6 ms [delay] = 4 ms * 0.75 ≈ 3 m). Certainly there is a problem here. Dana says processing the data may help more clearly elucidate seafloor on these records.

Thursday May 18, 2000

11:45:00 Sunny but windy, south wind 15+ knots with higher gusts. Water is very rough with reported 3-6' seas, looks as if everyone is staying in, not even the trawlers are outside. We'd be best around will work on boat and do some mapping

21:30 end of day, remapped some tracklines and located preexisting vibracores for future reference

Friday May 19, 2000 crew: Rich Y, Dana W., Mark K.,

12:05:00 Partly cloudy with steady 13-17 knot south wind reported 2-4' seas, does not look good from along the beach but will go outside Barabara Pass to see what the water looks like. Very busy this morning in the Bay.

13:55 have deployed gear heading onshore to sit vibracore #54 will continue toward shore, seems optimal for waves, still rather large swells

SOL BS500 - 15 13:47 seismic

SOL BS500c - 15 13:45 chirp

} cancelled, line #'s duplicated

13:48 water depth = 10.4m

SOL BS00-16 13:57 ~~chirp~~ seismic 6 ms delay

SOL BS00c-16 13:54 ~~seismic~~ chirp

14:00
~~13:54~~ vibracore site #54

14:02 adjusting course heading to find a smooth ride

14:47 pulled chirp up a bit ~2m for decreasing H_2O depth
14:48 water depth = 3.6 m

EOL BS00c-16 14:24 chirp network problem

14:58 turning tracing port (southwest)

~~network error with chirp~~

SOL BS00c-17 15:20 chirp

EOL BS00-16 15:22 seismic

SOL BS00-17 15:23 seismic 6 ms delay

~~16:15~~
16:08 adjusted chirp profiler to lower depth ~2 m to account for increasing water depth
16:09 water depth 8.6 m
16:46 lowered chirp profiler for increasing water depth
water depth = 11.0 m
17:45 swinging toward northeast to 1.... m.

seismic and chirp offline during early part of swing about

EOL BSS00_17 17:37 seismic
EOL BSS00c_17 17:36 chirp

SOL BSS00_18 17:49 seismic 6ms delay
SOL BSS00c_18 17:43 chirp

18:02 H_2O depth = 13.2 m
attempting to shoot the line between gap in pre-existing coverage

19:45 adjust depth of subbottom profiler, raised for decreasing water depth
19:46 turning toward west to run short coast-parallel line

EOL BSS00_17 20:01 seismic 6ms delay
EOL BSS00c_17 20:02 chirp

turning toward offshore

SOL BSS00_18 ~~19:05~~ 20:05 seismic 6ms delay
SOL BSS00c_18 ~~19:~~ 20:04 chirp

20:10 water depth = 3.5 m

20:48 lower chirp profiler in water

22:14 adjust depth of chirp profiler for increasing H_2O depth
22:21 H_2O depth = 14.1 m

22:24 turning about for a reciprocal heading, now heading with swells, and is to provide a less noisy record to use for calibration against noisy record resulting from previous offshore, against swell-direction record.

22:52 testing ~~on~~ a relay in the seismic system to eliminate the 6 ms delay
- not enough time to complete test, retrieve gear.

~~23:26~~ ~~CJ~~

EOL BSS00-18 ~~22:~~ 23: seismic
EOL BSS00c-18 23:00 chirp

23:26 gear retrieved, head for home; rough seas prevented great data acquisition during offshore-directed transects but onshore lines look much better; last segment of lines 18 is a reciprocal trend that provides a clearer record and hopefully can be used for calibration of lower quality, offshore transect.

01:25 Back at dock, end of Kulp log. The last week was overall a week of poor weather. Managed to acquire several transects offshore and slightly east of Barataria Pass. Jim Flocks on beginning tomorrow.

* Reference to adjustment of chirp system/profiler. Ideally the chirp profiler is within 2-5 m of the seafloor. As a result increasing and decreasing water depths require adjusting elevation of profiler. Typically each indicated adjustment (either recorded on log or indicated by jumps on seismic records) was on the order of 2-4 m. Calibration of profiles should be/can be achieved by ~~refer~~ referring to fathometer readings for the seafloor elevation or reference to Boomer record.

Shea hm ~~wk~~. 504-861-9167 504 220-3119
Beeper ~~504-338-8015~~ 1888-491-2527

5/24/00 S-SW swell

HRSP survey, offshore 30' w.d. Shore parallel going east. East of Barataria Inlet. Skies rain, seas 1-2' swell, 1' chop

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

SOL BSS00_20 Seismic 12:44:26 z tracing into east run.

BSS00C_20 Chirp

12:52:26 turning onto line - heading towards vibracore P-86-20 from Suter Tech. Rep. No 8. Downcore interp shows sand between 5-9 m core depth.

- 1320 Sled had wrapped around sea anchor producing substandard HRSP. Had to slow boat and maneuver to correct. ~~Begin line~~ Recontinue line at 1320 z. PDR had also locked up - so bathy not good. (Not recording anything at this point).

1324 Begin recording BSS00_20 - 6ms delay.

1326 Begin recording BSS00C_20, Bathy 11358-1

1340 Lower Chirp to 6.75 meters above bottom.

1351 Chirp - Hardcopy: surface being truncated on plot. Reset origin from 20ms to 5ms

1358 20 HRSP: Hit core side P-86-20, continue line E-NE

134814 Possible horizon near surface, dropping away

lat 29°12.984 lng 89°12.673 / 142414 Near surface reflector in HRSP/CHIRP drops away - potential shallow ~~in~~ incised channel. Designated ~~potential core site~~ #5

150615 HRSP - delay changed from 6ms to 5ms

152334 CHIRP: Deeper horizon comes up to surface. Designate pvc #6

lat 29°12.2076 89°39.2130 This area may be ~~channel~~ sheet sands with a shallow base reflector

1540 Wind picking up ~14Kts S-SW.

~154745 Potential incised channel (shallow reflector) on CHIRP. ~~Designate pvc #7.~~ Strong reflector at 10.5ms, possible channel. 29°11.733 89°37.114

1553 ~~Large incised channel on chirp~~ Designate pvc #7

29°11.654 89°36.724 1555 Strong subsurface reflector on CHIRP ~~pvc #8~~

1601 58 incised channel thalweg (CHIRP), seen on seismic. ~~pvc #8~~

1610 (002100 on paper) strong subsurface horizon approaches surface

EOL BSS00_20, BSS00C_20 161408

turning north for shoreward line.

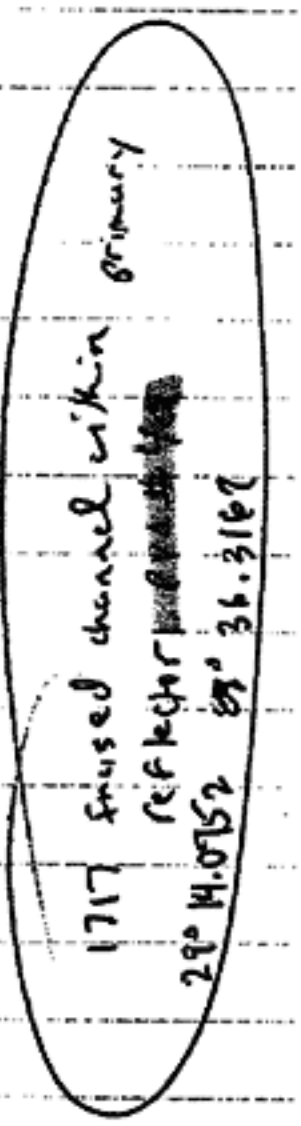
SOL BSS00_21 162059, SOL BSS00C_21 1623 North transect

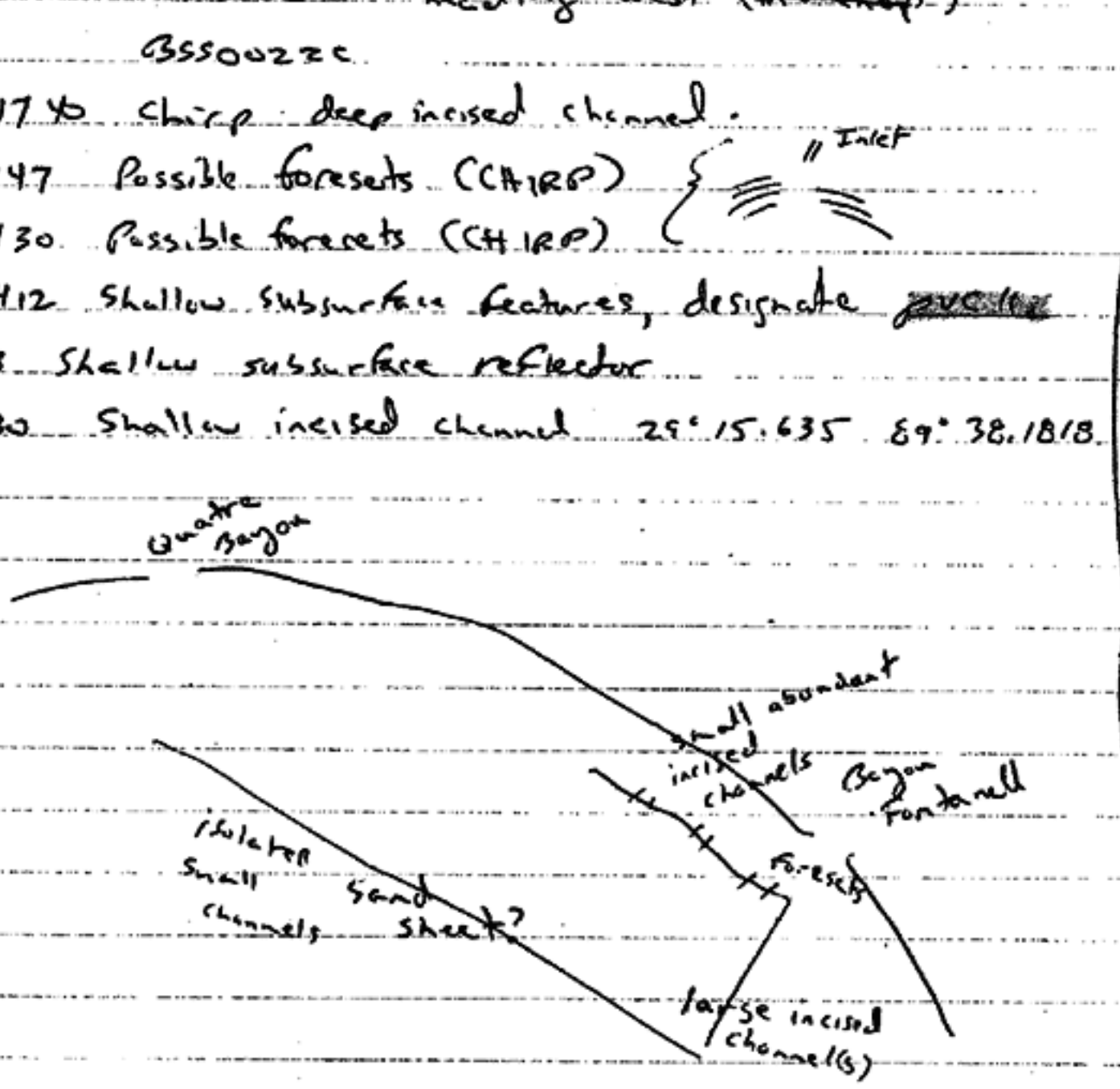
163324 CHIRP incised channel bottom reflector nears surface - designate as pvc #9 - overlapping reflectors (CHIRP) 29° 12.4208 89° 35.6058

1638 - Chirp - incised channels - TIME ANNOTATIONS IS JUMPING - went from 1628 to 1528 between nav. fixes.

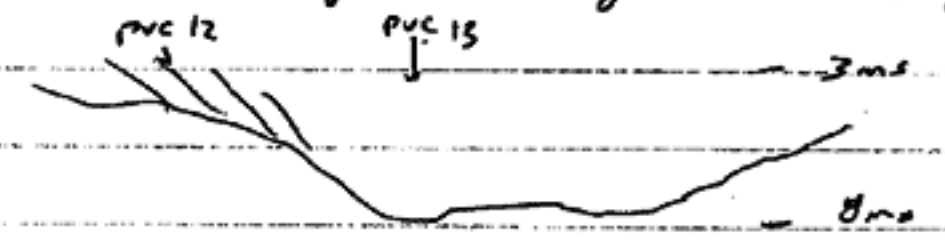
$\left(\left|lat1 - lat2\right| \times \frac{n}{10}\right) + lat1$ Priority 10 9 23.65

Line 355021 continued
~164400
~~164330~~ - Internal reflectors w/in incised channel.
Designate ~~pvc10~~ ~~12.6015 lat~~ 29° 12.6015 89° 35.5985
164939 · Good internal reflectors
1655 Adjusting chirp elev (raising), turning
1701 SCL 350022 heading west (~~interchop~~)
350022c
171740 chirp deep incised channel.
172747 Possible foresets (CHIRP)
173130 Possible foresets (CHIRP)
175412 Shallow subsurface features, designate ~~pvc11~~
1808 Shallow subsurface reflector
181430 Shallow incised channel 29° 15.635 89° 38.1818





182035 - Small incised channel 29° 15.7943 18° ~~00.75~~ 38.3971
1826 - turn to avoid trawler (course modification)
183243 Shallow subsurface features, possible forsets.
29° 16.0488 89° 38.8425 ~~pvc 12~~
183515 Good core depth for ~~deep~~ reflector ~~pvc 13~~



29° 16.0782
89° 38.8725

192327 Seas state worsening 15-20 kts, chop 3', ~~and~~ currently at Grisian Inlet, change course to vibracore 350054 ~~to~~ to put bow into waves. Will continue course until sea state ruins CHIRP record.
194031 - Sea state too rough - CHIRP & signal gone. EOL

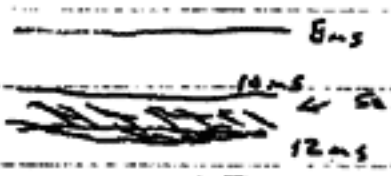
5/22/00 Seismic / Chirp

Shore perpendicular transects east of Barataria Bay.
Beginning offshore 13m water heading inshore.
Skies p. cloudy, wind 11 kts. seas 1' chop.
Crew: Rich Y., Dana W., Shea P., Jim F.

Line SOL 35500023, 35500023c 130210 Z
132225 Chirp. Horiz. reflectors down to strong reflector at 12ms.
Designate ~~pvc 14~~ 29° 14.5132 89° 47.6665'

Rest 133426 ~~deeper~~ reflectors deeper than primary reflector. If core could get through primary reflector might be good site for curvatron. ~~pvc # 15~~ 29° 15.1858 89° 47.7322
134729 Similar to pvc # 15 w/ ~~dee~~ stronger secondary reflector emerging at 12 ms. 29° 15.8135 89° 47.7854.
pvc # 16

142546 reflectors coming near surface, ~~pvc # 17~~ 89° 47.9744 29° 17.857
143146 Possible small incised channel. ~~pvc # 18~~ 89° 48.002 29° 18.195
begin turn just after feature
1446 EOL 35500-23. Turning seaward

SOL 35500 24, 35500 24c 145108 Seaward transect 177°
145956 Reflectors above primary reflector dipping seaward
Similar to site pvc # 17. ~~This site will be redesignate~~ pvc # 19
29° 17.7008 89° 46.6767
150556 Reflectors ascend ~~above~~ seaward above primary reflector, may be other ~~end~~ edge of shallow channel marked by ~~pvc # 19~~, ~~pvc # 20~~
29° 17.3438 89° 46.6725
153900 Strong reflectors  possible incised channel.

29° 15.35975 89° 46.635 ~~pvc 21~~
160604
EOL 35500 24. Turning shoreward

SOL 35500_25, 161033, ~~35500 25c~~ 35500c_25 161128
Shoreward parallel transect. The area out here is characterized by strong horizontal reflectors, down to 14ms. Might want to core this area just to characterize reflectors. If so, the end of line 35500-24 shows better signal than the beginning of line 35500-25.

~~29 14~~

1622 Primary reflector drops down, contains internal reflectors. Good core site
29 14.3397 ~89° 46.21 (no long on record) ~~pvc~~

photo's 26, 25, 29, 24, 27, 23

BSS00 25 Cont

pic 23

163645 Bathymetry rises. (edge of ebb tide delta?) 29° 15.0847 89° 46.0834

163946 Transparent return w/in strong horiz reflectors possible incised channel
29° 15.2889 89° 46.0476 pic 24

165156 Thin surficial sand wedge (?) coming in at surface
29° 15.877 89° 45.9277 pic 26

165752 Good, downdipping (seaward) internal reflectors (CHIRP)
29° 16.1968 89° 45.8694 pic 26

1717 29° 17.2306 89° 45.7054 small nearsurface incised channel pic 27

173235 Beach inshore marsh, terra seaward EOL BSS00 25

SOL BSS00-26 1739 seaward angle (bearing 167°)

174304 possible incised channel. 29° 17.868 89° 45.2978 pic 28

180718 Transparent returns similar to pic 24 show up again. (pipeline?)

181525 Primary reflector breaks up, large incised channel overlap
89° 44.895 29° 15.858

182730 distinct reflectors w/in incised channel (?) 89° 44.7403
pic 30 29° 15.1669

183544 turning shore parallel west towards core site BSS0032

185957 Came out of incised channel 89° 45.7454 29° 14.1716

195413 Strong reflector descends from surface pic 31 29° 13.5627 89° 49.0585

200002 Deep reflectors show up on CHIRP

201227 Reach core site BSS0032, turn to 252° to core site BSS0042
across ebb tidal delta

2016-2026 roll up for paper feed (CHIRP) jammed, paper lost.
(kept recording)

Area is characterized by relatively transparent return to 12ms,
and semi-parallel reflectors to 18ms.

204044 Possible incised channel in mud (secondary?) reflectors 12-14ms.
89°57.847, 29° 12.9381 pic 32

215636 Reached core site BSS0042, turning shoreward towards
Barataria Inlet

SOL BSS00.27 220025 heading 14.3° toward Barataria Pass
225025 EOL EOD At Barataria Inlet.

Priority → pvc 37, pvc 38

5/23/00 Barataria Sand Resource Study.
Seismic/CHIRP - Barataria Inlet.
Crew: Keith L., Carlos A. (U.N.O.), Dana W., Jim F.
Skies P. cloudy, 16 kts SW, seas 1' swell, 1' chop.
Shore parallel transect from Grand Isle across Inlet across Grand Terre shoreface.

355000_28, 355000_28c 125742 [redacted]
132630 89° 57.227 29° 14.8071 Small incised channel near surface (CHIRP)
135053 Large incised channel, to 12ms (CHIRP) [redacted]
29° 15.7464 89° 55.9599

~~1410~~ 1410 turn to avoid shrimp boat. reach core site 355000.4
1412 Chirp crashed. Heading to vibra core site 61

~~1442 Chirp started 355000 28a, missed core site 61, heading to core site 39~~

1443 GPS lost for both seismic + CHIRP
Now out. bearing 73° about 3.5 kts since about 1455
Cannot circle due to shrimp boats off bow and stern
Roughly 1500, circling. Both lines stopped

1655 Now fixed, (short in wire) - Had been circling near site.
resume heading to vibracore #38 near Quatre Bayou
SOL 355000 28b, 355000 28b

1711 Now crashed, end of line.

1756 Started 355000 28C line using boat GPS

1801 Paused seismic [redacted], resumed. No chirp.

1812 Chirp resumed

1849 possible large incised channel to 7ms. center @
89° 51.939, 29° 17.638 pvc 36
winds picking up 15 kts. chop 2-3'

182230 Large incised channel seen in seismic & chirp @
Quatre Bayou Pass. 15 ms depth @ center
pvc 37 29° 17.8057, 89° 51.624

5/23/00 Barataria Sand Study

1832 Pass through core site BSS-00-38

1836 End of line BSS0028C

184042 BSS0029 Started, no chirp, heading to core site BSS0032

191344 Possible incised channel seen in chirp, did not designate as prc site

192641 Large incised channel 16 ms, ~~29° 16.109~~, ~~89° 50.354~~ 29° 16.131, 89° 50.353 (edge of incised channel) [redacted], seen in chirp & seismic

193521 Shallow channeling continuous throughout seismic & chirp

194255 Secondary incised channel, 10 ms, in/near previous large channel 29° 15.454, 89° 50.364 [redacted]

193940 Elev. adjustment of chirp.

203253 End of line BSS0029,

2036 Start line BSS0030

213720 Secondary reflector (above strong reflector a 11ms) rising to surface heading NE to core PB6-19

214116 EOL [redacted] EOD Nearshore 1 nm from PB6-19

5/24/00 Barataria Sand Res. Study - Seismic / CHIRP

Shore parallel from Bay Marean near Fourchon headland nearshore 5m water depth across Caminada Pass to Grand Isle. Skies p. cloudy seas v. rough. Crew Keith L, Dana W; Carlos A, Jim F.

SOL 155000 31 heading toward Caminada Pass 1420 Z ~~1420~~.

1518 02 Reach Caminada Pass. heading towards core site P06-12 in front of Grand Isle (47° heading) - Not getting much w/ CHIRP / seismic - too choppy.

1641 reach destination, turning into seas

1657 Changing paper on CHIRP

171010 Changing paper on seismic.

171635 Seismic line EOL

171901 Chirp. Secondary reflector drops down onto primary at 6ms. Possible incised channel 89°42.716 29° 15.827 pvc 43

1756 Reached shore EOL

5/25/00 BARATARIA SOUND RES. STUDY SEISMIC
Seas long swell, 3Ft. light chop. Skies p. cloudy
crew same as yesterday.
Running shore perpendicular lines about 10nm east of
Barataria Inlet. Starting at core site P-86-20. running to
P-86-19

SOL BSSOO-32 124222Z
1249 Restart CHIRP - BSSOO c.32a
1250-1305 Sled got caught over seatow anchor
line, record bad.
140758 Reflectors down-dipping from surface 29° 15.627 89° 44.131
to primary reflector at 9ms (Chirp) PVC #41

BSSOO-33 Started 155445, shoreward towards Gr
164745 Primary reflector gets obscured, possible large
incised channel down to 12ms PVC #42 89°42.938 29°14.949

1852 started BSSOO-34 (Chirp)
changed logging length to 50ms on CHIRP @ 1852
started seismic @ 1854
1922 EOL Generators clogged have to shut down power.

195954 Start line BSSOO-35

2008 Shallow incised channel @ 89° 40. [redacted] 112,
29° 13.978 PVC #44

202542 Erosional type reflectors overlying primary
reflector @ 10 ms 89° 40.240 29° 15.042
PVC 45

202956 Incised channel nearsurface down to 11 ms.
29°15.232 89° 40.269 PVC 46

203845 has to slow down for a shimper.

205921 turning; 89°40.470 29°16.795 Strong
Clinoforms, above primary reflector @ 6 ms
possible incised channel. PVC 47

line 03500-35 (cont.)

2135 Secondary reflector (12ms) dropping from surface disrupted. Deeper reflectors with possible fill. 29° 15.055 S 89° 41.793 PVC 48

2209 End of line, end of day.

5/26/00 BRASSAHO SOND RESOURCE STUDY SEISMIC/CHIRP
Staging inside Bay, winds 15-20 Kts South, seas forget it.
Crew: Keith L., Dana W., Jim F.
Running bay ~~cont~~ periphery route tying cores 1-7
Bayside seas 1' chop.
1227 SOL BS500_36, BS500C_36 gms
Bay core site small incised channel deep. 29°18.225' 89° 56.372 pvc 49
1236, raise CHIRP a little and slowed for shrimper.
1246 passed core site 10, heading to core site 01
130238 Oyster mound
130925 Turning for shrimp boat.
132721 Turning northward to go towards core BS500_02
1444 Changing roll on CHIRP
1454 Reached core site 3, heading 38° to core site 17
150442 Deep incised channel down to 10 m s.
89° 58.250 28° 25.033 pvc 50
151947 Reached core site 17, turning 116° to core site 04.
1522 turning west to go around oyster bed markers
1535 Maneuvering to dodge oyster bed markers and gas platforms
reach core site 17, turn to core sites 5/6
1606 reached core site 5/6, heading to core site 20
162225 EOL at core site #20, heading to core site ~~to~~ 01 in
Central Bay

163657 SOL BS500_37 heading S-SW ~~across~~ across bay to coresite 01
165102 Shallow incised channel
1656 - trouble w/ CHIRP printer - circling.

1701 Start new ~~spiral~~ BS500_37a circling around back to line
171204 SOL BS500C_37a circling back on track.
172145 chaotic ~~reflector~~ signal at surface, primary reflector obscured.
Seismic sled "hard ringing". Could be sand-filled channel
~~using~~ looked more like a incised channel in previous line
before we circled than it does now. Using time 172250 to
mark for pvc 51 89° 53.603 29° 24.209
173855 Signal ~~becomes chaotic~~ changes from horizontal to chaotic, continues.
Possibly large incised channel. Sig 174012 signal resumes at 174733
two coresites at 174522 (29° 23.367 / 89° 54.370) and 174850 (29° 23.226 / 89° 54.488)
to identify cause for change in signal pvc 52 x 53

Line 32a (cont.)

175308 Distinctive shallow channeling between 175059 and 175516
pvc 54 89° 54.626 29° 23.063

180453 Angled reflectors, possible cross bedded fill for large channel
pvc 55 29° 22.621 89° 54.994

180557 Thalweg of above large channel. Signal transparent
pvc 56 29° 22.582 89° 55.028

about 1821, boat slows dramatically

1839 All hell breaking loose, center engine losing power, hydrophones wrapped around CHIRP, paper for CHIRP wrapped backwards around rollers and being munched in.

193935 Reached core site 01, EOL, EOD 29.04.7 90.10.1

5/28/00 BARATARIA SAND RESOURCE STUDY
Skies p. cloudy, winds 10-15 kts SW. Seas 1' swell S, 1' chop SW.
Long shore parallel line across Barataria Inlet pass and east, mid study area.
Crew: Keith L., Dana W., Jim F.

SOL B5500.38 121103Z 35500.6 38 121336Z
1342 Reach waypoint. Pass through pvc #39, turn to 86°, heading towards next waypoint which is ~~on a previously~~ pvc #16 ~~aquired core site~~.
5½ milliseconds delay in seismic removed by Dana's inverter.
130552 Sat GOC seismic. Start new line (error)
135752 SOL B5500.38b (seismic)
1424 Cross pvc site #16
1453 Adjusting course slightly to cross pvc #26
154455 Reach pvc #26 turn to 100° heading
152951 turning to 140° to cross core site pvc 41
153534 Reached pvc #41, turning w/ seas to check CHIRP record.
1602 Completed turn with seas, no improvement in CHIRP, ~~Cont~~ resuming east course. Speed slowed, probably seaweed in jets
1622 CHIRP, primary reflector disrupted, possible interval AB. pvc #57
29°15.~~[illegible]~~629 89° 42.973
161852 ~~[illegible]~~ Hit big seaweed. messed up CHIRP.
1707 Reach site pvc 45, eol.
Abandoned east route because of poor CHIRP.
Commencing South to North (shore ⊥) transects

175930 SOL B5500_39 S-N
1819 Altered course from ~~[illegible]~~ to S - NE (30°) to go with seas.
CHIRP improves
182453 Crosses downdipping reflector, possible ~~[illegible]~~ incised channel
pvc 58 29°12.883 89° 37.013
1910 eol at Pelican Island shore

SOL B5500.40 heading 30° to Scofield Bayou 195450
200639 Primary reflector approaches surface. ~~lat 29°11.884~~
200956 Possible shallow incised channel 29°12.007 89° 34.932° pvc 59
201826 Primary reflector drops away from surface. Internal reflectors suggest fill. 9ms. 89° 34.582 29° 12.341 pvc 60
2055 At shore EOL, EOD

29°10.240 ed. 29°07.537 29 8.418
89°58.440 90°01.712 90 2.23'
379

5/25/00 Barataria Sand Resource Study SEISMIC / CHIRP

Skies clear, winds 10 kt N-NE, 1' swell SW, <1' chop NE.

Crew: Keith K., Dena W., Jim F.

Running long shore parralel, west of Barataria Inlet, mid. study area. Starting at Inlet.

SOL 35500-41 120343 turning onto course

121325 Approaching course.

1545 Changing paper rolls (CHIRP)

161847 Near surface reflectors more ~~[illegible]~~ variable. Possible channel

29°07.100 90°06.40 pvc 60

165815 29°05.784 90°08.354 Small shallow incised channel 60b.

1744, turning westward to Bell Pass jetties

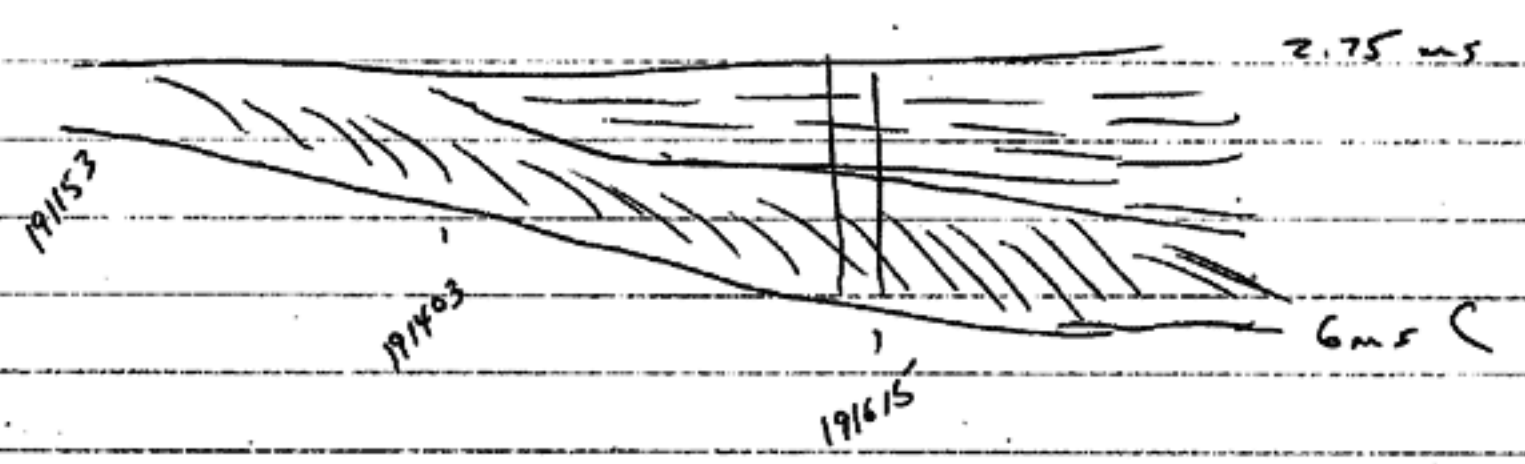
182032 EOL at jetties

1829 SOL 35500-42 at bell pass heading ~~[illegible]~~ east near shore.

1835 ~~Raise chirp~~ Slow down to raise chirp, 1836 Resume speed.

190105 Down-dipping reflectors from surface to 6ms pvc 61

29°06.012 ~~[illegible]~~ 90°11.177



core site pvc 62 29°06.472 / 90°10.379 90°02.1 29 07.8

192705 Primary reflector has dropped away below 7ms. Several Secondary reflectors become prominent, dipping down as well. possible ~~[illegible]~~ lithologic change

90°09.819 29°06.836 pvc ~~[illegible]~~ 63

194639 Strong reflector drops away to >5ms, angled reflectors within

pvc 64 29°07.450 90°08.792

204226 Reconnaissance core, chaotic signal 29°06.442, 90°05.556 pvc 65

205225 reached site L-89-10, heading offshore into swell. EOL

205755 SOL 35500-42, heading seaward ~125°.

212546 reflector w/ possible fill at 11ms 29°09.090 90°02.997 pvc 66

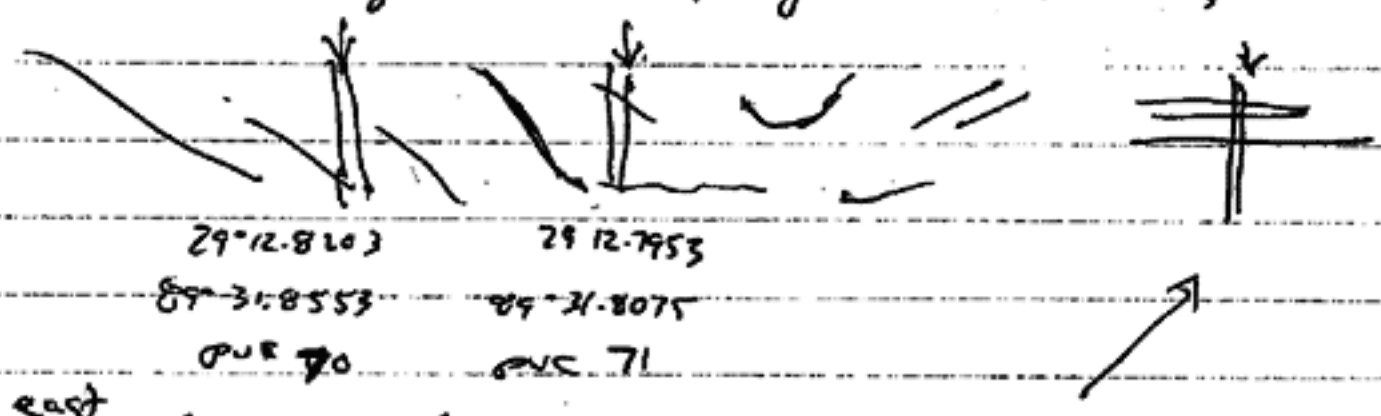
215752 EOL at 12.3m waterdepth offshore. Turning towards Barataria Inlet to core site 35500-44.

SOL 35500-43 221636 heading 250° to core site 35500-44

2242 CHIRP Died.

29° 12.7 29° 12.55 29° 17.9 29° 17.1 89° 28.5
89° 40.5 89° 36.9 89° 32.0 89° 37.0
29 17.25
89 16.75

5/30 BARA STATE SAND RESOURCE SURVEY SEISMIC/CHIRP
Pelican Is. east to Sandy Pt. Shore parallel inshore.
Skies clear, wind 10kts E-NE., seas 1' east chop.
130629 SOL BSSOO-45 turning eastward.
130829 Down dipping reflectors from surface, possibly fluvial.
29° 14.5431 89° 35.8765 pvc. 67
134131 Chaotic ~~ref~~ signal above primary reflector pvc 68
89° 34.0327 29° 14.0718
141235 Chaotic signal above primary reflector, possible fill, hard ringing.
29° 13.325 89° 32.7637 pvc #69
143239 Steeply dipping reflectors, very distinct 2 cores,



One east ~~west~~ of above for comparison: pvc 72
~~143839 29° 12.9076 89° 32.9957~~ 143841 29° 12.670 89° 31.5742

144750 29° 12.4749 89° 13.089 Small shallow incised channel amidst transparent signal down to 7ms. pvc 73
145746 Prevalent transparent signal down to 7ms, reconnaissance core 29° 12.2371 89° 30.6461 pvc. 74
150545 Primary reflector drops away, ~~possible incised channel~~ chaotic fill, possible incised channel. 29° 11.9465 89° 30.0742 pvc #75
151400 ~~Chaotic~~ Shallow channeling reflectors pvc 76 29° 11.842 89° 29.854
(not as major site as 70-73, 74
1533 turning towards coresite P86-7 (reached coresite 86-5)

152457 Strong down dipping reflectors, similar to pvc 70, but other direction, 29° 11.5815 89° 29.3288 pvc. 77 (other side of channel?)
160414 Reached coresite P86-7. Turning seaward.
160636 SOL BSSOOC-46 heading seaward to SE corner of study area
160856 SOL BSSOO-46 (seismic) power increased to 200j from 100j.
1640 Shallow downdipping reflectors 29° 9.4083 89° 29.70 pvc. 78
1652 29° 9.681 89° 30.982 Concave reflectors shallow, possible channel pvc #78a
170830 Primary reflector is inclining and declining, channeled appearance. Secondary reflectors infill. ~~Core~~ A deep core here would be good characteristic pvc #79
89° 31.782 29° 10.009
175126 Primary reflector pinches out at surface a core at 175228 would capture what is below this horizon 29° 11.2066 89° 34.9923 pvc #80

29 13.9331 89 35.2955 89° 35.° 29 15:3 719 km
89°40.055 89 37.7095 29 14.287 29°12.5 89°37.
29°15.1 89 39.3613 89 44.5352 89 44.4711
29 14.7470 29 14.1238 29 14.1696

line 35500-46 (cont.)

1809, reach SE corner, turning NW

182254 29°12.266 89°36.490 Large incised channel with fill pvc #81

183030 29°12.207 89°36.566 Inclined bedding w/in incised channel compare w/ pvc 58, choose best site pvc 82

1858 Shallow incised channel (partially not included on paper - changing all) with fill 29° 13.9174 89° 37.6757, ~~picking~~ pvc 83

190240 Large incised channel w/ inclined fill 29° 14.0606 89° 37.9055 pvc 8

192230 Primary reflector becomes obscured, overlying reflectors faint, but ~~pas~~ inclined, possible channel 29° 14.728 89° 39.328 pvc 85

193306, reach crossgate turning SE to seaward edge of study area EOL

1938 SOL 35500-47 turning SE to get on line.

1947 Finished turn, heading into slight chop.

195046 Primary reflector drops away, infill = deep incised channel 89° 40.7323 29° 14.9546 pvc. 86

201557 Follows low angle, down-dipping reflectors near surface, possible thalweg. Compare w/ pvc 44 and pick best one. 089° 40.2352 29° 13.9485 pvc 87

205625 Primary reflector deep, (10.5 ms) reconaissence line 29° 12.0196 89° 39.3390 pvc 88

210634 Reached seaward extent 29° 11.6403 89° 39.0743 turning northeast to Bayou Fontenelle

2122 Shallow incised channel 29° ~~12.334~~ 12.50995 89° ~~38.591~~ 38.2824 pvc 89 with primary reflector below (9ms)

2216 eol at Bayou inlet EOD

JL

29 12.0755 29°12.0621 172854
89° 32.2412 89 32.1916 172754 2.5

172256 89° 31.929 29° 12.0151 2.5
173356 89° 31.8757 29° 12.0057

95
96
98 -82
105?

priority 93, 107

7.5

5/31 Barataria Sand Resource Study Seismic / Chirp
Mid study area east toward Sandy Pt.
Skies clear, wind 6-10 kts SE, seas east chop, 1'

12:54Z SOL BSS00-48 turning toward the east
1836 30 Shallow down-dipping reflectors ~~plus~~ reconnaissance core
29° 14.171 89° 44.497 pvc 90
141340 primary reflector has surfaced to east west, shallow incised feature
29° 13.827 89° 42.287 pvc 91
142140 29° 13.7373 89° 41.7978 Deep incision w/ internal fill
reflectors pvc 92
1436 29° 13.571 89° 40.879 Deep incision w/ internal fill pvc 93
151647 Primary reflector at 8 ms, horiz. reflectors above, reconnaissance
core pvc 94 89° 38.5445 29° 13.1679
152657 Large incised channel 29° 13.0903 89° 38.0967 pvc 95
155203 Deep channeling down to 9 1/2 msec, primary reflector very close
29° 12.8998 89° 36.9148 pvc 96 to pvc 56
160130 89° 12.8299 89° 36.44055 Steep incised channel to 8 ms. pvc 97
160445 29° 12.81005 89° 36.3023 Primary reflector drops away with fill pvc 98
161311 NOTE: BAD BATHY REPORTING TO THIS TIME
161211 Primary reflector drops away to 8 ms. internal reflectors suggest
fill pvc 99 29° 12.751 89° 35.911
161912 29° 12.686 89° 35.5507 deep incised channel with fill pvc 100
163121 29° 12.5797 89° 34.9688 Broad, subtle drop in primary reflector
w/ fill pvc 101
165835 Broad down dip in primary reflector, reconnaissance core pvc 102
29° 12.3775 89° 33.6867
172005 ~~1717 48~~ Fluvial character to reflectors overlying Pleiocene ~~29° 12.1743 89° 32.7143~~ pvc 103
29° 12.1451 89° 32.5567 pvc 103
172730 Down dipping reflectors above primary, 29° 12.065 89° 32.204
pvc 104, western edge of fluvial system.
173356 Very distinct, incised channel, associated with above system
pvc 105 89° 31.889 29° 12.011 pvc 105
1743 Storm blowing through CHIRP gear
1752 End line, ride out storm.

1816 SOL BSS00-49, heading offshore to 40' vibracore site, east
side of study area
Weather bad, quit. Go inshore
2000 SOL BSS00-50 Shore parallel from east to west along Pelican Is.
2001 Broad shallow channel with fill 29° 13.1665 89° 33.571

6.3 202730

29° 14.0091 89° 35.2780

B5500.50 (cont.)

202000 Nice incised channel with fill ~~pvc 107~~ to 9.5 ms pvc 107

29° 13.8535 89° 34.7565

202730 Same system as above, steep downdipping reflectors to 8ms

pvc 108 29° 14.0236 89° 35.3265

205103 29° 14.524 89° 37.1215 Fluvial character to signal down

to 8.5 ms pvc 109

210200 29° 14.7307 89° 37.7871 Primary reflector drops away to 9 ms

secondary fill reflectors above pvc 110

213022 CHIRP SOFTWARE CRASH

SOL 3550-50a 2143 same course

~~3500~~ 2151 CHIRP crash, eol, eod.