3/2/09 Texas offshore Survey

Shoreline calibration, Shore JJ lines off of Galveston jetties

Skies clear, sea calm.

Crew Dana W., Jordan S., Jim Dellagana (TAMUG), Jim F.

R/V Manta (NOAA)

Swath, Sidescan.

30 m spacing lines 1.5 km long.

head is 1.4 m below water line 2049 cal turning around

1930 CT Running zig-zag lines across Sabine Ship Channel, onshore-offshore Chirp 512, sidescan, swath.

Chirp off stern about 7' below water line.

Potential core sites

09C04 4200 29°34'3" 93°48'31" Thickening surface wedge, deeper fluvial dep.

09C05 2950 29°35'10" 93°45'09" Near surface channel, extends deep

09C05 4400 29°35'19" 93°44'33" " , wide

52) 09C05 10700 29°36'14" 93°42'17" large nearsurface channel

09C06 1300 29°35'57" 93°42'1" "

09C06 12200 29°33'7" 93°45'34" Shallow channeling - may be too close (to Ship Ch.)

09C07 2600 29°32'5" 93°46'57" Deep channel - too deep to core

09C08 4350 29°30'20" 93°48'12" Thick seq. of stratified seds. (valley fill?)

09C09 8300 29°33'44" 93°50'12" Deep channel sequence

09C10 4500 29°32'56 93°51'44" Small nearsurface channel

09C10 6950 29°32'20" 93°51'56" " "

09C10 9600 29°31'40" 93°52'24" Investigate surface strat.

09C14 2500 29°22'33" 94°00'46" thin shoals also seen in swath

09C14 8800 29°21'32" 94°02'37" thin shoal at surface (chirp)

10200 - 10500 above shoals continue

09C22 1300 29°24'49" 93°47'27" Shallow shoaling

09c22 8450 29°25'45" 93°45'45 small shoal sitting on channel

09c23 3750 29°27'26" 93°46'17" deep channel under stratified units ~5m deep

09c24 200 29°29'22" 93°46'46" edge of channel, ~~possible sh~~ high variability

09c25 3400 29°27'16" 93°42'49" bank

09c26 5100 29°27'50" 93°43'2" bank on incised channel.

09c25 11600 29°30'9" 93°43'55" stratified channel, may be too deep

09c25 14000 29°31'1" 93°44'18" possible sand channel fill

09c26 ~~14900~~ 15000 29°31'21" 93°44'23" transparent fill at base of unit

09c26 3700 29°30'50" 93°43'27" channel ~5m

09c29 2850 29°30'54" 93°36'33" small nearsurface channel

09c30 1950 29°31'8.8 93°36'59" "

09c30 9000 29°30'17" 93°40'4" pronounced channel, possible sand thalweg

09c30 12800 29°29'52 93°41'42" very pronounced channel, stratified.

09c30 13750 29°29'45 93°42'6" Main fluvial channel? sand in thalweg

09c31 8800 29°28'43" 93°45'55" Investigate nearsurface transparent unit

09c33 2900 29°24'32" 93°48'44" Shoal on top of transparent reflector

09c33 4400 29°24'52" 93°48'59" Thick shoal sequence

09c38 2050 29°25'34" 93°50'29" small channel - may be too close to rig

09c38 4300 29°25'54" 93°49'41" Shoal crest w/ possible channels beneath

09c38 6850 29°26'7" 93°48'52" thick part of shoal

09c39 13800 29°28'8" 93°42'8" v. large channel beneath shoal

09c40 1250 29°28'19" 93°41'29" channel below shoal.

09c40 5700 29°28'40" 93°40'10" Possible channel near surface

Heald:

09c48 10700 29°10'55" 94°17'15" investigate deep transparent reflector
11000 interfluve?

09c48 18900 29°11'50" 94°20'46" large incised channel

" 21150 29°12'5" 94°21'43" "

09c48 23800 29°12'23" 94°22'51" good st

3/4/09 Texas offshore survey continued.

09c49 1900 29°12'3" 94°22'46" Investigate nearsurface transparent reflectors (interfluve?)

09c49 2700 29°11'56" 94°22'40" stereotype channel

09c49 4000 29°11'35" 94°22'29" possible sandy channel

09c49 8100 29°10'43 94°21'55" incised valley fill - do deep for cores

09h54 10 20 30 sandwaves in swath

09c54 13400 29°05'30" 94°11'57" large near surface channel. (core)

09c55 beginning 15 29°06'1" 94°11'35" Good strat sequence (fluvial/est./shoal)

09c55 1400 29°06'26" 94°11'16" "

09c56 9350 29°12'36" 94°06'42" Near surface channel in record

09c57 9700 29°13'8", 94°08'9" " (small)

09c59 15300 29°07'42", 94°18'55" Nice seq. strat., fluvial, est., shoal. ← inv.

09c61 14100 29°03'10", 94°27'51" channel underlying stratified overburden

09c72 3850 29°05'9", 94°33'37" Inv. channel into Dewayne/overburden

09c72 13500 & 14000 29°05'38", 94°31'5" large channel incises dewey ~4m deep

09c74 200 29°06'25", 94°26'15" possible shoal/est./fluvial sequence

09c77 10500 29°09'24", 94°16'27" possible sandy units above/below stratified unit

09c77 11750 29°09'38", 94°16'13" sandy interfluve?

/ [redacted]

130723

29° 33.287
93 45.4215

4/29 Galveston bath. grid
29°55' / 28°45' -94°55' / -93°30'
1584 x 1307 pixels 72 dpi
1 pixel: .000893 deg. lat .0008944 deg. long
- 29.91667 / 28.75 -94.91667 / -93.5

Notes
- Target fluvial terraces and older deposits? (see fig. 9 Thomas/Anderson

* 93.752 / 29 626 → ~~93°45.565~~ ~~29°37.857~~ 16325

Potential core sites: PCS 01 _ 09c01 Shot 16200 - 16450
est. x-sec. area 2250 m² @ 1m depth - 4.5m deep

*	PCS 02	- 09c02	Shot 20600		nearsurface channel
*	PCS 03	09c05	Shot 300		nearsurface ch., cont. of PCS 01
	PCS 03A	09c06	Shot 1400	93°42.01956	" 29°35.95788
	PCS 04	09c06	Shot ~~7150~~ 7200 7198	93°43.8934	29°34.49658
	PCS 05	09c08	Shot 12250		"
	PCS 06	09c10	Shot 5200		" (cont. of line 10)
	PCS 07	09c10	Shot 6900		surface channel - laminated
	PCS 08	09c30	Shot 2000		surface channel
	PCS 09	09c30	Shot 9000		wide, shallow suff. ch. - laminate
	PCS 10	09c30	Shot 11150		pair of channels ↑ overburden
	PCS 11	09c30	Shot 12550		deep channel
	PCS 12	09c30	Shot 13200		wide channel ch. - laminated
		6003	93.8136625	29.4867149	
	PCS 13	09c32	Shot 600		shoal, X-ing w/ 09c38
	PCS 14	09c33	Shot 1350		shoal crest on rainbow mark
	PCS 15	09c35	Shot 600		shoal crest X-ing w/ 09c33
	PCS 16	09c39	Shot 900		" w/ 09c26
	PCS 17	09c40	Shot 2350		fluvial seg. w/in core depth

✓ $\frac{15}{2000} = \frac{x}{200}$ 3500 26400

* See Notes →

Cont.

2839 93 609769 29 513993

pcs 18 09c29 Shot ~~2840~~ near surface channel,

pcs 19 09c28 Shot 3140 " Shallow, low priority

* pcs 20 09c28 Shot ~~8400~~ 8800 93 629713 29 473802 fluvial sequence

pcs 21 09c26 Shot ~~11830~~ ~~10000~~ 9999 29 49391 93 70904 edge of large channel

0923 Good Shoal example Skip

pcs 22 09c22 Shot 8340 Shallow channel w/ small shoal on top.

3999 - 93 865702 29 42034

pcs 23 09c20 Shots 4000 Cross line pick

pcs 24 09c15 Shot 7200 seq. strat core, converge of horizons

* pcs 25 09c78 Shot 5680 id shoal text. deep channeling

* pcs 26 09c77 Shot ~~7500~~ 8450 x-ing line w/ ac 59a, condensed sec.

pcs 27 09c77 Shot 11600 deep ~~chn~~ channel edge, condensed sec.

pcs 28 09c43 Shot ~~6350~~ 14100 target acoustic transparent deep, strat.

pcs 29 09c45 Shot 26400 Shallow channel

pcs 30 09c45 Shot 27950 adj. to shallow deep refl. near surf.

pcs 31 09c46 Shot ~~7800~~ 9550 Strat near surface, low priority

pcs 32 09c47 Shot 10560 channel deep.

pcs 33 09c47 Shot 11770 condensed strat,

pcs 34 09c49 Shot 990 edge of deep channel

pcs 35 09c49 Shot 1300 "terraced" material. adj. to ch. poss. bhd.

pcs 36 09c49 Shot 1900 significant channel

* pcs 37 09c49 Shot 2550 " w/in above

pcs 38 09c49 Shot 6800 condensed strat,

pcs 39 09c52 Shot 800 deep channel, low priority

pcs 40 09c53 Shot 3100 large near surface channel

pcs 41 09c53 Shot 4210 " overburden removed

pcs 42 09c54 Shot 4150 channel deep (4.5m)

pcs 43 09c54 Shot 13560 large channel stratified

* pcs 44 09c55 Shot 10200 top of shoal, x-ing line

	pcs 45	09c55	Shot 12800	Strat nearsurface,
*	pcs 46	09c56	Shot 850	Channel deep, (4.5m)
	pcs 47	09c56	Shot 10460	Channel w/ strat on top
*	pcs 48	09c56	Shot 9220	~~Chan~~ 1g. Channel nearsurface
	pcs 49	09c56	Shot 13780	channel deep
	pcs 50	09c59	Sol (Shot 1)	X-ing w/ line 09c48
	pcs 51	09c60	Shot 2000	X-ing w/ line 09c50
	pcs 52	09c63	Shot 9850	Shallow channel.
	pcs 53	09c63	Shot 13100	large channel (?)
*	pcs 54	09c65 29°10.693	Shot Sol	Channel near surface (?),
	pcs 55	09c65	Shot 12780 2733	29°10'41.6 / 94°39'19.23 94°39.3205 deep reflector surfacing
	pcs 56	09c68	Shot 15650 15413	shallow channeling near crossing
	~~pcs 57~~	~~09c65~~	~~Shot 2770~~	~~channel deep~~
	pcs 58	09c67 29°12.482	Shot 18220 18214	29°12'27.71 / 94°40'47.48 94°40.791 investigate deep (4.5m)
	pcs 59	09c68 29°10.408	Shot 4350 4297	29°10'24.48 / 94°40'46.35 94°40.773 Sandy ch. fill nears surface
	pcs 60	09c70	Shot 1870	deep reflector surfacing, sand fill
	pcs 61	09c70	Shot 9850	" sandy below
	pcs 62	09c71	Shot ~~1790~~ 1450	possible channel, possible gas
	pcs 63	09c71	Shot 7250	channel nearsurface
	pcs 64	09c72	Shot 3350	down dipping refl. nearsurface
	pcs 65	09c72	Shot 13550	same strat as 1 but more texture
	pcs 67	09c25	Shot 5100	-93.717154 29.463077 Shot w/ strat at depth
	pcs 68	09c11	Shot 3772	-93.89249 29.493563 Strat