

PRELIMINARY INVESTIGATIONS OF SUBMERGED AREAS

Delivery Order Number 023

Date 10/21/04

Project ANW Refuge

Location ID Number J-29

Coordinates: X 2634451

Y 13232323

Water Depth 3.6

Pipe Length 15 13 15

Tide Staff Readings:

Time Reading

Morning _____

Mid-Day _____

Evening _____

Push No. 1 Time 3:44

Weight of Pipe Penetration (WOP) 5.5

Comment SA CL

One-Hand Push (40-lb) Depth 6.5

Comments SA CL Shell frag.

One-Hand Push (70-lb) Depth 6.5

Comments Shell / SA

Two-Hand Push to Refusal - Depth 6.5

Comments Shell / SA

Jig 7.0 Shell

Push No. 2 Time 3:50

Weight of Pipe Penetration (WOP) 4.4

Comment _____

One-Hand Push (40-lb) Depth 7.0

Comments _____

4.4 to 4.6 SA Layer

soft CL to 7.0

One-Hand Push (70-lb) Depth 7.5

Comments SA CL SA seams

Two-Hand Push to Refusal - Depth 7.5

Comments Shell

Jig 8.5

7.5 to 8.0 shell

8.0 to 8.5 stiff CL

Hand Proving Ring Penetrometer Test? yes

Hand Vane Shear Test? _____

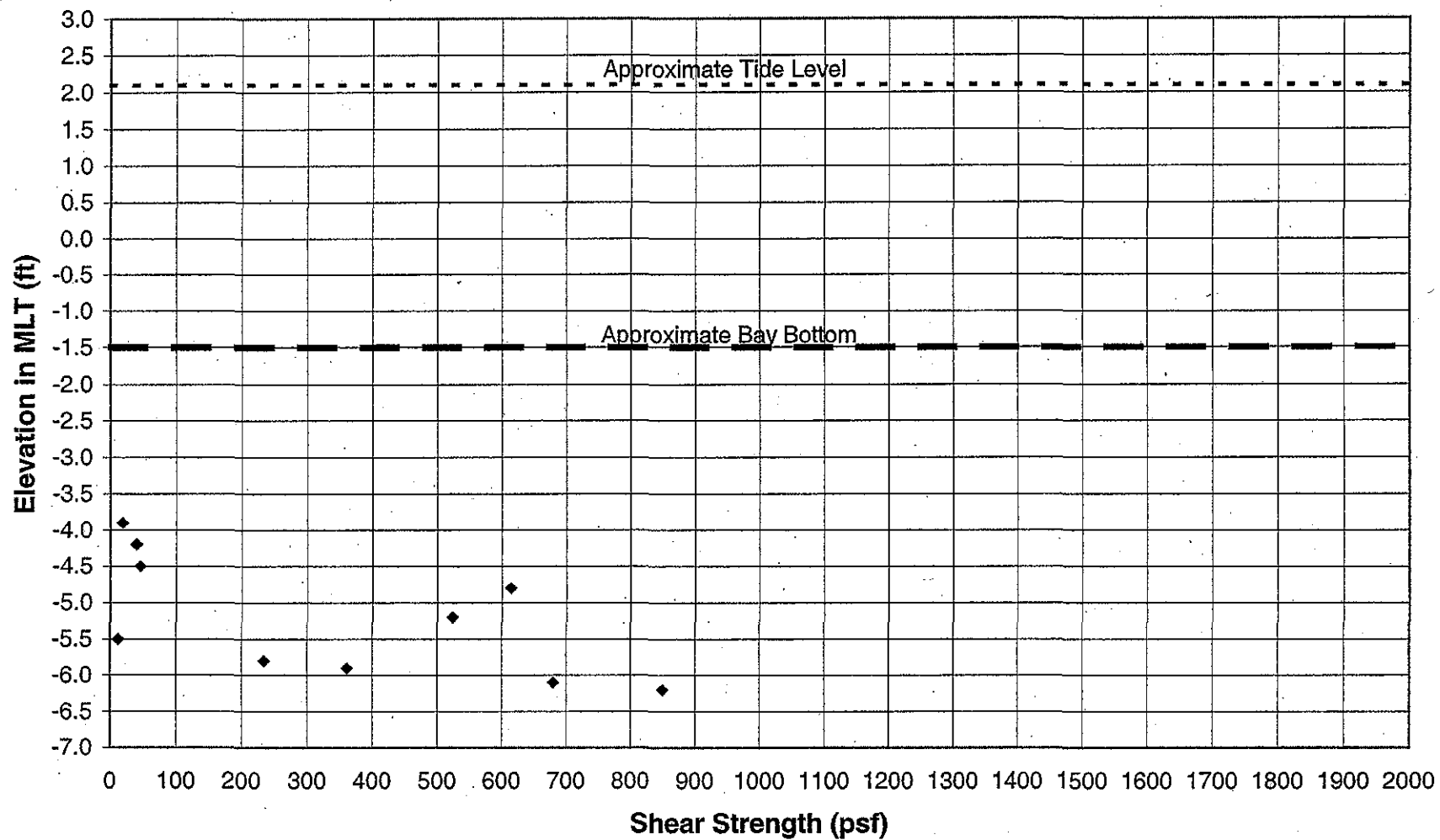
Technician (Probe Handler) mike A.

Recorder Gary L.

ASS

Depth Vs. Shear Strength

♦ J29



Hand Cone Penetrometer Test and Analysis:

RTB 11/8/4

Project: Aransas National Wildlife Ref. - BUS Site "J"
Location: Dunham Bay located outside of Rockport, TX
Delivery Order #: 0023
Date of Testing: 10/20/04 to 10/22/04

Probing Results

Resistance	Depth 1	Depth 2	MLT1'	MLT2'	Average
Weight of Pipe	5.5	4.4	-3.4	-2.3	-2.9
1 HP (40lbs)	6.5	7.0	-4.4	-4.9	-4.7
1 HP (70lbs)	6.5	7.5	-4.4	-5.4	-4.9
2 Hand Refusal	6.5	7.5	-4.4	-5.4	-4.9

[illegible]