

PRELIMINARY INVESTIGATIONS OF SUBMERGED AREAS

Delivery Order Number 023

Date 10/21/04

Project ANL Refuge

Location ID Number J-28

Coordinates: X 2634645

Y 13232902

Water Depth 3.9

Pipe Length 19 13/16s

Tide Staff Readings:

Time Reading

Morning

Mid-Day

Evening

Push No. 1 Time 2:52

Weight of Pipe Penetration (WOP) 5.5

One-Hand Push (40-lb) Depth 6.4

Comment soft CL w/ shell

Comments on Bottom

One-Hand Push (70-lb) Depth 6.4

Comments shell

Two-Hand Push to Refusal - Depth 7.0 Comments shell

Jig 7.4 shell

Push No. 2 Time 3:06

Weight of Pipe Penetration (WOP) 5.4

One-Hand Push (40-lb) Depth 6.5

Comment shell on Bottom

Comments 1" shell layer / soft CL

One-Hand Push (70-lb) Depth 7.0

Comments shell on Bottom

Two-Hand Push to Refusal - Depth 7.0 Comments shell

Jig 7.5 shell

Hand Proving Ring Penetrometer Test? yes

Hand Vane Shear Test?

Technician (Probe Handler) mike A.

Recorder Gary L.

HAND CONE PENETRATION TEST (CPT)

Delivery Order Number 023
Project ANW Refuge

Date 10/21/04

Location ID Number J-28
Time 3:16

Weight of Proving Ring _____
Weight of Rod Section 13.65

Weight of Rod Penetration 6.6
Comments _____

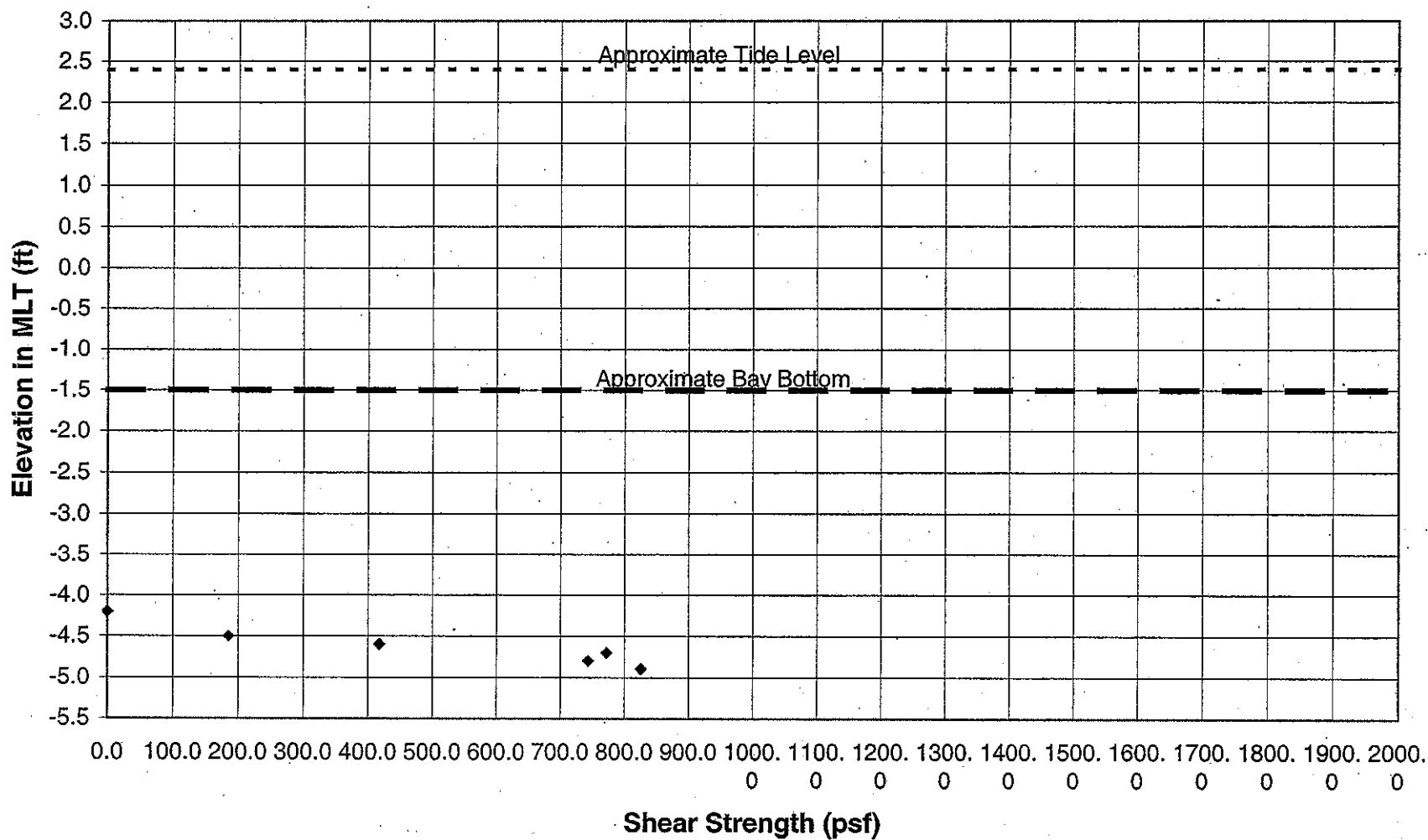
Number of Rods 3

[illegible]

Comments _____

Depth Vs. Shear Strength

♦ J28



Hand Cone Penetrometer Test and Analysis:

RTB 11/8/4

Project: Arkansas 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	5.4	-3.1	-3.0	-3.1
1 HP (40lbs)	6.4	6.5	-4.0	-4.1	-4.1
1 HP (70lbs)	6.4	7.0	-4.0	-4.6	-4.3
2 Hand Refusal	7	7.0	-4.6	-4.6	-4.6

[illegible]