

BFAST

PROB (CONTD)

1993

(NOTE: NO SOIL IS DISREGARDED FOR STRENGTH ANALYSIS)

DRILLING REPORT

COUNTY- HARRIS CO.
 HIGHWAY NO.- SH 99
 CONTROL- 3510-04-003
 PROJECT NO.-
 DATE- 09/06/89
 GRD. ELEV.- 73.6
 DISTRICT- 12

STRUCTURE- SH 99 @ DITCH M
 HOLE NO.- 1
 STATION- 758+14.00
 OFFSET- 5.70' LT
 CODED BY- JPG
 GRD. WATER ELEV.- 73.6 - No GWE measured:
 Hole collapsed

D E F P T T . H	PEN 1ST 6IN	PEN 2ND 6IN	S A M N P O L . E	TAT LAT- ULT PSI	NET DEN PCF	MOI %	LL %	PI %	DESCRIPTION OF MATERIAL AND REMARKS
0									CLAY, BLACK, W/ORGANICS, STIFF
1			1		125	24	72		-BLACK, BROWN, W/FERROUS & CALCS
2			2	0-	25	128	20		
3									
4									
5	10	12							
6			3	0-	35	136	11	35	-BROWN, SL. SANDY, W/CALCS
7									
8									
9									SAND, SILTY, BROWN, SL. COMPACT
10	11	12							
11									
12									
13									
14									
15	12	6							
16			4	0-	15	125	28		CLAY, BROWN, SOFT
17			5	0-	21	127	27		
18			6	0-	18	118	37	83	
19									
20	7	9							
21			7	0-	25	124	30		-W/SOME CALCS
22									
23									
24									
25	7	8							
26			8	0-	10	131	21	39	CLAY, BROWN, W/SOME CALCS, SOFT
27									-SILTY
28									
29									
30	8	10							
31			9	0-	28	120	28		
32									
33									
34									
35	8	7							

36			10	124	23
37			11	128	22
38			12	127	22
39			13	128	23
40	12	18			
41			14		21
42			15	123	26
43			16		24
44			17		21
45	8	10			
46					
47					
48					
49					
50	18	8			
51					
52					
53					
54					
55	16	22			
56					
57					
58					
59					
60	16	15			
61					
62					
63					
64					
65	32	28			
66					
67					
68					
69					
70	50/4.00	50/3.00			
71					
72					
73					
74					
75	39	32			

SAND, SILTY, BROWN, LOOSE
 -W/CLAY POCKET
 -W/CLAY POCKET

SAND, SILTY, BROWN, SLIGHTLY COMPACT
 -W/CLAY POCKET
 -W/CLAY POCKET

SAND, LOOSE, DRILLER NOTE: W. B.

SAND, DRILLED OUT, DRILLER NOTE: W. B.

SAND, DRILLED OUT, DRILLER NOTE: W. B.

SAND, DRILLED OUT, DRILLER NOTE: W. B.

SAND, DRILLED OUT, DRILLER NOTE: W. B.

SAND, DRILLED OUT, DRILLER NOTE: W. B.

DRILLER- MIKE BAHM

LOGGER- AL FARRELL
 TITLE-

PROB (CONTD)

1993

(NOTE: NO SOIL IS DISREGARDED FOR STRENGTH ANALYSIS)

SOIL STRENGTH ANALYSIS RESULTS

HOLE NUMBER 1

STRAT NUM.	ELEVATION -FEET-		STRAT THICK NESS FEET	CEN- TROID DEPTH FEET	UNIF. SOIL CLASS	PEN TEST BLOWS/ FOOT	TEST CONST	SOIL WET			VARIANCE TAT		
	FROM	TO						COHES LBS/ SQFT	DENS LBS/ CUFT	INT. FRIC ANG.	PEAK	AVG	RATIO
1	74	65	9.0	4.5	CH	22.0	50	2189	132	0.0			
2	65	59	6.0	12.0	OTHE	23.0	80						
3	59	49	10.0	20.0	CH	17.0	50	1436	123	0.0	2.7	1.6	4.4
4	49	39	10.0	30.0	CL	16.5	60	1368	125	0.0			
5	39	32	7.0	38.5	OTHE	22.5	80						
6	32	21	11.0	47.5	OTHE	22.0	80						
7	21	6	15.0	60.5	OTHE	43.0	80						
8	6	-1	7.0	71.5	OTHE	171.4	80						

PROB (CONTD)

1993

(NOTE: NO SOIL IS DISREGARDED FOR STRENGTH ANALYSIS)

SOIL STRENGTH ANALYSIS RESULTS
 DISREGARD TO ELEVATION IS 73.6 FEET

HOLE NUMBER 1

STRATA NUMBER	ELEVATION -FEET-		DESIGN STRESS OF SOIL TONS/SQFT PER STRAT	ALLOWABLE STATIC FRICTIONAL RESISTANCE (DS) TONS PER FT OF PERIMETER PER ACCUM-		SR	REDUCED ALLOWABLE STATIC FRICTIONAL RESISTANCE PER ACCUM-		BEAR FACTOR NC	POINT BEARING STRENGTH SNC TONS/SQFT	TAT TO PEN RAT
	FROM	TO		PER STRATUM	ULATIVE		PER STRATUM	ULATIVE			
1	73.6	64.6	0.55	4.92	4.92	0.7	3.45	3.45	2.57	0.00	1.2
2	64.6	58.6	0.29	1.72	6.65	0.7	1.21	4.65	4.29	0.00	0.0
3	58.6	48.6	0.36	3.59	10.24	0.7	2.51	7.17	2.57	0.00	1.1
4	48.6	38.6	0.34	3.42	13.66	0.7	2.39	9.56	3.62	0.00	1.2
5	38.6	31.6	0.28	1.97	15.63	0.7	1.38	10.94	4.29	0.00	0.0
6	31.6	20.6	0.27	3.02	18.66	0.7	2.12	13.06	4.29	0.00	0.0
7	20.6	5.6	0.54	8.06	26.72	0.7	5.64	18.70	4.29	0.00	0.0
8	5.6	-1.4	0.96	6.75	33.47	1.0	6.75	25.45	4.29	0.00	0.0

DRILLING LOG

COUNTY HARRIS CO.
 HIGHWAY NO SH 99
 CONTROL 3510-04-003
 IPE

STRUCTURE SH 99 ■ DITCH M
 HOLE NO 1
 STATION 758+14.00
 LOCATION 5.70' LT

THD DIST 12
 DATE 09/06/89
 GRD. ELEV. 73.6
 GRD. WATER ELEV. 73.6

ELEV FT.	LOG	THD PEN. TEST NO. OF BLOWS		DESCRIPTION OF MATERIAL	METHOD OF CORING
		1ST 6"	2ND 6"		
73.6	0			CLAY. BLK. BRN. W/SM FER & CALCS. STIFF	0
		10 (6.0")	12 (6.0")		
64.6	10	11 (6.0")	12 (6.0")	SAND. SILTY. BROWN. SL. COMPACT	10
		12 (6.0")	6 (6.0")		
58.6				CLAY. BROWN. W/SOME CALCS. SOFT	
	20	7 (6.0")	9 (6.0")		20
		7 (6.0")	8 (6.0")		
48.6				CLAY. SILTY. BROWN. W/SOME CALCS. SOFT	
	30	9 (6.0")	10 (6.0")		30
		8 (6.0")	7 (6.0")		
38.6				SAND. SILTY. BRN. W/SM CLAY. SL. COMPACT	
	40	12 (6.0")	16 (6.0")		40
31.6				SAND. W. B. SL. COMPACT, DRILLED OUT	
	50	9 (6.0")	10 (6.0")		50
		18 (6.0")	8 (6.0")		
20.6				SAND. W. B. COMPACT, DRILLED OUT	
	60	16 (6.0")	22 (6.0")		60
		16 (6.0")	15 (6.0")		
		32 (6.0")	28 (6.0")		
5.6	70			SAND. W. B. DENSE, DRILLED OUT	70
		50 (4.0")	50 (3.0")		
		39 (6.0")	32 (6.0")		

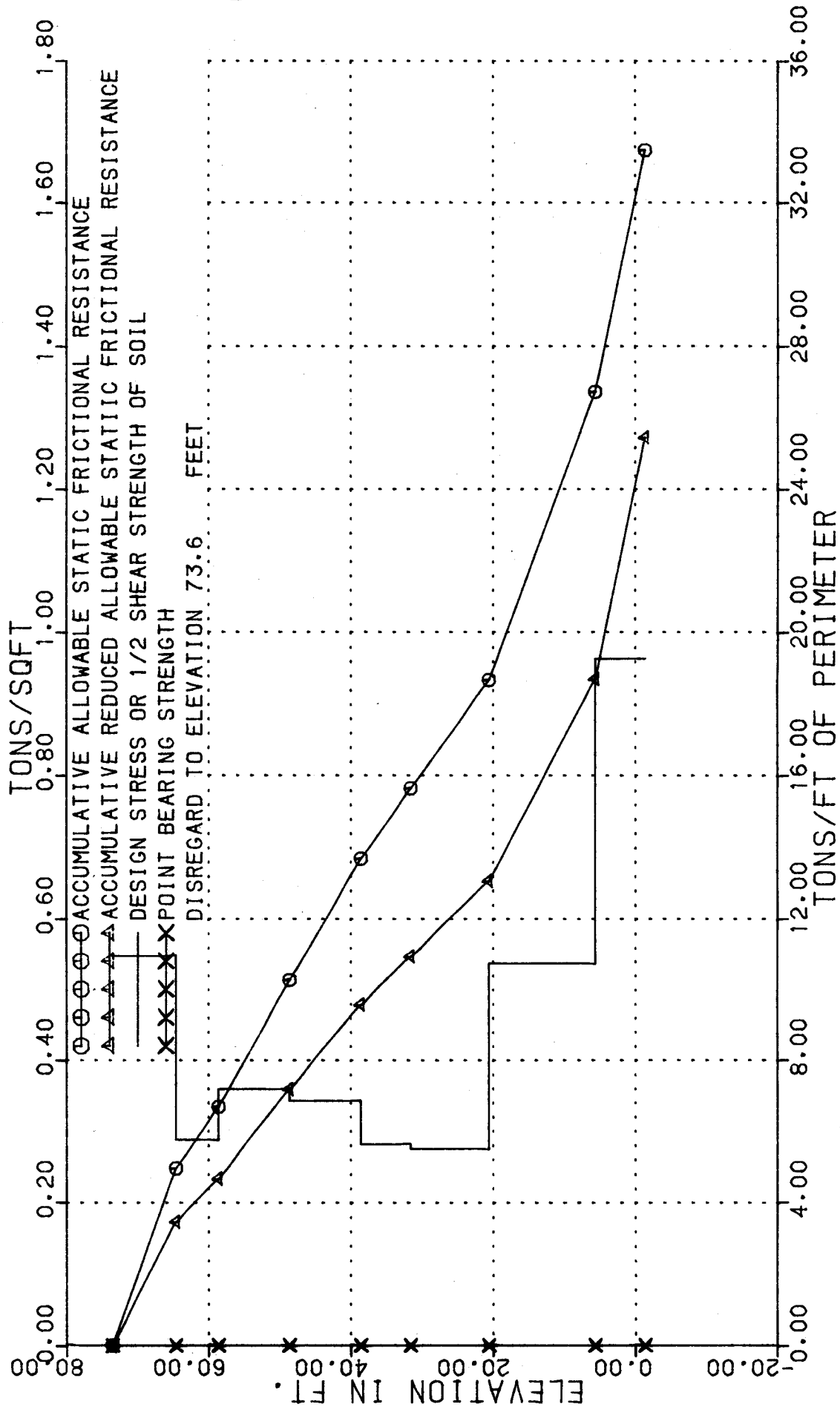
*REMARKS: NO GWE MEASURED - Hole collapsed

DRILLER MIKE BAHM

LOGGER AL FARRELL

TITLE

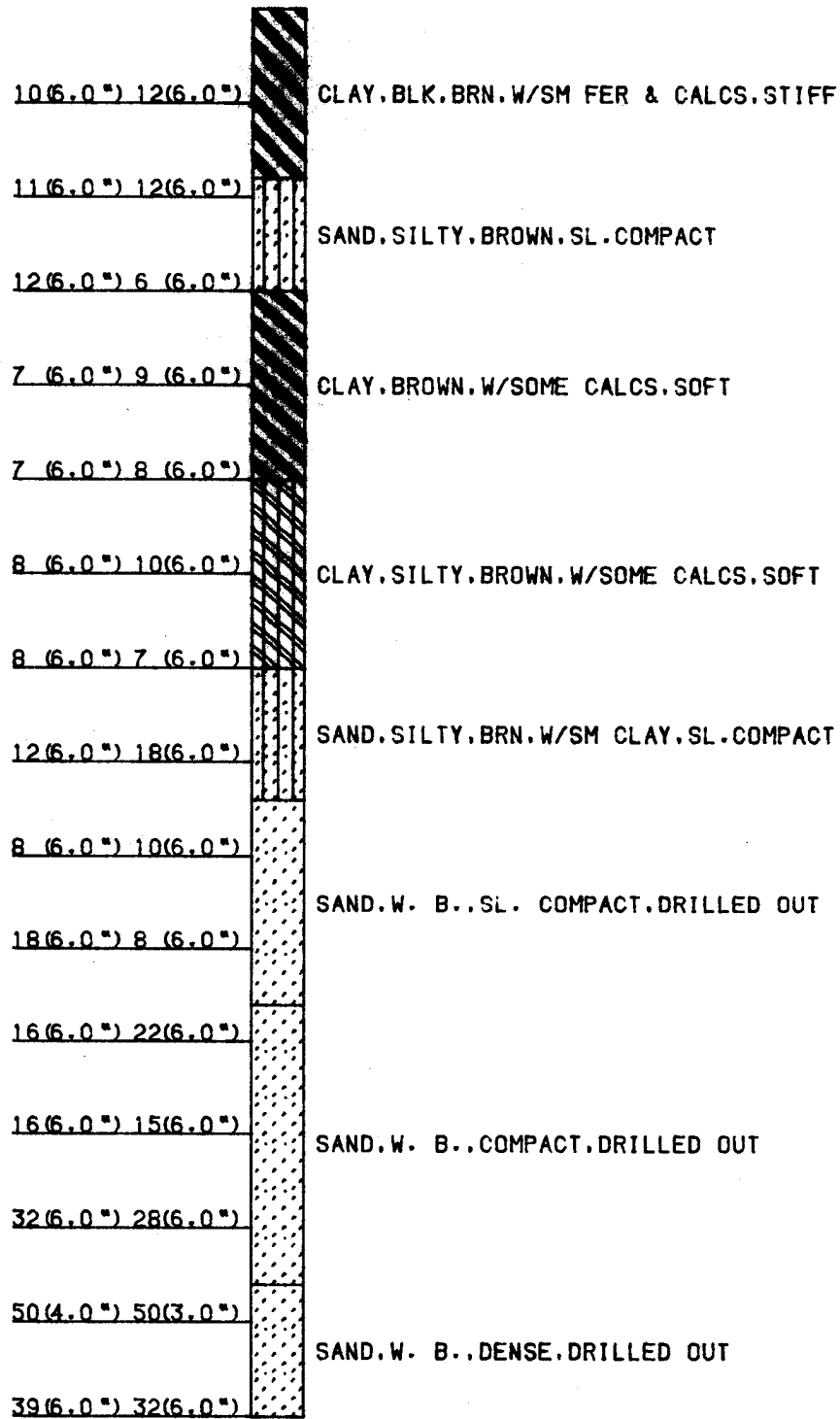
FOUNDING MATERIAL PROPERTIES



COUNTY	HARRIS CO.	STRUCTURE SH 99	DITCH M
HIGHWAY NO	SH 99	HOLE NO	1
CONTROL	3510-04-003	STATION	758+14.00
TYPE		LOCATION	5.70' LT
		THD DIST	12
		DATE	09/06/89
		BY	JPG

TEST HOLE NO. 1

GROUND ELEV. 73.6



BFAST

PROB (CONTD)

1993

(NOTE: NO SOIL IS DISREGARDED FOR STRENGTH ANALYSIS)

DRILLING REPORT

COUNTY- HARRIS CO.
 HIGHWAY NO.- SH 99
 CONTROL- 3510-04-003
 PROJECT NO.-
 DATE- 09/06/89
 GRD. ELEV.- 74.3
 DISTRICT- 12

STRUCTURE- SH 99 @ DITCH M

HOLE NO.- 2

STATION- 756+86.00

OFFSET- 12.60' RT

CODED BY- JPC

GRD. WATER ELEV.- 74.3 - No GWE measured:
 Hole collapsed

DEPTH	PEN 1ST 6IN	PEN 2ND 6IN	S A M P L E	TAT LAT- ULT PSI	WET DEN PCF	MOI %	LL %	PI %	DESCRIPTION OF MATERIAL AND REMARKS
0									CLAY, BLACK, W/ORGANICS, STIFF
1			1	0-	19	119	31		
2			2	0-	41	127	18	69	-BLACK, BROWN, W/SOME CALCS
3									
4									
5	14	17							
6			3	0-	30	138	11		CLAY, SANDY, BLK, BRN, W/SM CALCS, STIFF
7			4	0-	22	139	11	35	
8									
9									
10	16	16							
11			5					7	SAND, SILTY, BROWN, SL. COMPACT
12									
13									
14									CLAY, SILTY, BROWN, W/SM CALCS, SOFT
15	6	7							
16			6					23	SAND, SILTY, BROWN, LOOSE
17									
18									
19									
20	4	7							
21			7	0-	22	129	26	60	CLAY, BROWN, FIRM
22			8	0-	25	128	26		-W/SOME CALCS
23			9	0-	31	130	20		-BLACK, BROWN, W/SOME CALCS
24									
25	8	8							
26			10					18	-BLACK, BROWN, W/SM CALCS, STIFF
27			11					21	-SL. SILTY, W/SOME CALCS
28									-SILTY, W/CALCS NODS
29									
30	8	9							
31			12	0-	31	125	26	63	CLAY, DK. BROWN, W/SM CALCS, FIRM
32									
33									
34									
35	6	8							

36 13 0- 25 126 29

37

38

39

40 5 4

41 14 23

CLAY, SANDY, BROWN, GRAY, FIRM

42 15 0- 13 132 20

43 16 0- 20 131 24 37

44

45 6 5

SAND, DRILLED OUT, DRILLER NOTE: W. B.

46

47

48

49

50 14 23

SAND, DRILLED OUT, DRILLER NOTE: W. B.

51

52

53

54

55 35 37

SAND, DRILLED OUT, DRILLER NOTE: W. B.

56

57

58

59

60 8 9

SAND, DRILLED OUT, DRILLER NOTE: W. B.

61

62

63

64

65 21 19

SAND, DRILLED OUT, DRILLER NOTE: W. B.

66

67

68

69

70 50/2.50 50/1.50

SAND, DRILLED OUT, DRILLER NOTE: W. B.

71

72

73

74

75 41 28

DRILLER- MIKE BAHM

LOGGER- AL FARRELL
TITLE-

BFAST

PROB (CONTD)

1993

(NOTE: NO SOIL IS DISREGARDED FOR STRENGTH ANALYSIS)

SOIL STRENGTH ANALYSIS RESULTS

HOLE NUMBER 2

STRAT NUM.	ELEVATION -FEET-		STRAT THICK NESS FEET	CEN- TROID DEPTH FEET	UNIF. SOIL CLASS	PEN TEST BLOWS/ FOOT	TEST CONST	SOIL WET			VARIANCE TAT		
	FROM	TO						COHES LBS/ SQFT	DENS LBS/ CUFT	INT. FRIC ANG.	PEAK	AVG	RATIO
1	74	69	5.0	2.5	CH			2167	123	0.0			
2	69	65	4.0	7.0	CL	31.0	60	1861	138	0.0			
3	65	60	5.0	11.5	OTHE	32.0	80						
4	60	59	1.0	14.5	CL								
5	59	54	5.0	17.5	OTHE	13.0	80						
6	54	44	10.0	25.0	CH	13.5	50	1877	129	0.0	2.6	1.7	3.8
7	44	34	10.0	35.0	CH	15.5	50	2016	125	0.0			
8	34	30	4.0	42.0	CL	9.0	60	1199	131	0.0			
9	30	26	4.0	46.0	OTHE	11.0	80						
10	26	21	5.0	50.5	OTHE	37.0	80						
11	21	17	4.0	55.0	OTHE	72.0	80						
12	17	11	6.0	60.0	OTHE	17.0	80						
13	11	6	5.0	65.5	OTHE	40.0	80						
14	6	-1	7.0	71.5	OTHE	300.0	80						

BFAST

PROB (CONTD)
 1993

(NOTE: NO SOIL IS DISREGARDED FOR STRENGTH ANALYSIS)

SOIL STRENGTH ANALYSIS RESULTS
 DISREGARD TO ELEVATION IS 74.3 FEET

HOLE NUMBER 2

STRATA NUMBER	ELEVATION -FEET-		DESIGN STRESS OF SOIL TONS/SQFT PER STRAT	ALLOWABLE STATIC FRICTIONAL RESISTANCE (DS) TONS PER FT OF PERIMETER PER ACCUM-		SR	REDUCED ALLOWABLE STATIC FRICTIONAL RESISTANCE PER ACCUM-		BEAR FACTOR NC	POINT BEARING STRENGTH SNC TONS/SQFT	TAT TO PEN RAT
	FROM	TO		PER	ULATIVE		STRATUM	ULATIVE			
1	74.3	69.3	0.54	2.71	2.71	0.7	1.90	1.90	2.57	0.00	0.0
2	69.3	65.3	0.47	1.86	4.57	0.7	1.30	3.20	3.62	0.00	0.9
3	65.3	60.3	0.40	2.00	6.57	0.7	1.40	4.60	4.29	0.00	0.0
4	60.3	59.3	0.00	0.00	6.57	0.7	0.00	4.60	3.62	0.00	0.0
5	59.3	54.3	0.16	0.81	7.38	0.7	0.57	5.17	4.29	0.00	0.0
6	54.3	44.3	0.47	4.69	12.08	0.7	3.28	8.45	2.57	0.00	1.7
7	44.3	34.3	0.50	5.04	17.12	0.7	3.53	11.98	2.57	0.00	1.6
8	34.3	30.3	0.30	1.20	18.31	0.7	0.84	12.82	3.62	0.00	2.0
9	30.3	26.3	0.14	0.55	18.86	0.7	0.38	13.21	4.29	0.00	0.0
10	26.3	21.3	0.46	2.31	21.18	0.7	1.62	14.82	4.29	0.00	0.0
11	21.3	17.3	0.90	3.60	24.78	0.7	2.52	17.34	4.29	0.00	0.0
12	17.3	11.3	0.21	1.27	26.05	0.7	0.89	18.24	4.29	0.00	0.0
13	11.3	6.3	0.50	2.50	28.55	0.7	1.75	19.99	4.29	0.00	0.0
14	6.3	-0.7	1.25	8.75	37.30	1.0	8.75	28.74	4.29	0.00	0.0

DRILLING LOG

COUNTY HARRIS CO.
 HIGHWAY NO SH 99
 CONTROL 3510-04-003
 IPE

STRUCTURE SH 99 ■ DITCH M
 HOLE NO 2
 STATION 756+86.00
 LOCATION 12.60' RT

THD DIST 12
 DATE 09/06/89
 GRD. ELEV. 74.3
 GRD. WATER ELEV. 74.3

ELEV FT.	LOG	THD PEN. TEST NO. OF BLOWS		DESCRIPTION OF MATERIAL	METHOD OF CORING
		1ST 6"	2ND 6"		
74.3	0			CLAY, BLK. BRN. W/SH CALCS. STIFF	0
69.3		14 (6.0")	17 (6.0")	CLAY, SANDY, BRN. BLK. W/CALCS. STIFF	
65.3	10	16 (6.0")	16 (6.0")	SAND, SILTY, BROWN, SL. COMPACT	10
60.3 59.3		5 (6.0")	7 (6.0")	CLAY, SILTY, BROWN, W/SOME CALCS. SOFT SAND, SILTY, BROWN, LOOSE	
54.3	20	4 (6.0")	7 (6.0")	CLAY, BLK. BRN. W/CALCS. W/SH SILT. FIRM	20
		9 (6.0")	8 (6.0")		
44.3	30	9 (6.0")	9 (6.0")	CLAY, DR. BROWN, W/CALCS. FIRM	30
		9 (6.0")	8 (6.0")		
34.3	40	5 (6.0")	4 (6.0")	CLAY, SANDY, BROWN, GRAY, FIRM	40
30.3		6 (6.0")	5 (6.0")	SAND, W. B., LOOSE, DRILLED OUT	
26.3	50	14 (6.0")	23 (6.0")	SAND, W. B., SL. COMPACT, DRILLED OUT	50
21.3		35 (6.0")	37 (6.0")	SAND, W. B., COMPACT, DRILLED OUT	
17.3	60	8 (6.0")	9 (6.0")	SAND, W. B., LOOSE, DRILLED OUT	60
11.3		21 (6.0")	19 (6.0")	SAND, W. B., SL. COMPACT, DRILLED OUT	
6.3	70	50 (2.5")	50 (1.5")	SAND, W. B., DENSE, DRILLED OUT	70
		41 (6.0")	29 (6.0")		
*REMARKS: NO GWE MEASURED -Hole collapsed					

DRILLER MIKE BAHM

LOGGER AL FARRELL

TITLE

TEST HOLE NO. 2

GROUND ELEV. 74.3

