

# HARTMAN & ASSOCIATES, INC.

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engineers, hydrogeologists, surveyors & management consultants

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January 19, 2004

HAI #99.0331.007

Phase 5

File 12.0

Via UPS Overnight

Ms. Susan Pelz, P.E. *8/12/04*  
Florida Department of Environmental Protection  
Southwest District  
3804 Coconut Palm Drive  
Tampa, Florida 33619



**Subject:** Notification of Shallow Subsidence  
Enterprise Recycling & Disposal Facility  
Angelo's Aggregate Materials, Ltd.  
FDEP Permit Nos. 177982-001-SC, 177982-002-SO  
Pasco County, Florida

Dear Ms. Pelz:

On behalf of Angelo's Aggregate Materials, Ltd. (Angelo's), Hartman & Associates, Inc. (HAI) is submitting the required written notification to the Department of a subsurface instability observed at the above facility. A description of the subsidence, the approximate location, actions taken, and proposed remediation are discussed below.

On January 12, 2003, HAI's geologist and the operator of the facility observed an opening in the surface of the temporary pond. This opening was approximately 12 to 15 feet across, five feet in depth, and located approximately 30 feet north of the temporary berm in Cell 16. The attached figure indicates the approximate location. A surveyed location of the area will be provided once this information is received by HAI. Photographs taken by Miguel Garcia of HAI are attached for your review.

On January 13, 2003, under the direction of Jim Golden, P.G. of HSA Golden, the area was partially excavated, then back-filled with on-site clay material so that investigative drilling could begin as quickly as possible. As required by permit condition, HAI provided verbal notification to the DEP on January 13.

Universal Engineering Sciences (UES) began drilling on January 15, 2003 under the direction of HAI, and completed the drilling on January 17. A total of 11 borings were completed to depths between 20 and 32 feet below land surface. The approximate locations are indicated on the attached figure. A survey of these locations will be provided once this information is received by HAI. The borings indicate a layer of loose or raveling material at a depth of 15 to 18 feet below land surface, and a second smaller area (3 borings) at 8 to 10 feet below land surface, at the site of the subsidence. HAI believes that the area of potential instability has been delineated, based on the field logs and the professional opinion of UES's

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Ms. Susan Pelz, P.E.  
January 19, 2004  
Page 2

geotechnical engineer. Field logs prepared by HAI's on-site geologists are attached for your review. A survey of the

It appears that the subsidence may have occurred due to removal of the overlying stable soils along with vibration caused by the operation of heavy equipment in the area used to construct the temporary berm between Cells 15 and 16. We believe that the vibration caused loose sand to ravel from a pocket below the opening. Once these cells are no longer used for stormwater retention, five feet of compacted, stabilized confining clay will be placed over the cells to bring the elevation to that approved on the construction plans and to provide a solid, stable base for the landfill.

Based on the information obtained during the investigation of the unstable area, we recommend that the unstable interval be stabilized by pressure grouting. We are requesting quotes from geotechnical contractors that specialize in cavity specialization.

Once the grouting is completed, additional borings for geotechnical analysis are required to ensure that the area has been stabilized. Those results will be forwarded to the DEP once the analysis is completed.



W. Bruce Lafrenz, P.G.  
Senior Hydrogeologist/Associate

JLD/wbl/99.0331.007/T5/corresp/Pelz4.jld

cc: Dominic Iafrate, Angelo's  
Craig Bryan, Angelo's  
Kim Ford, P.E., FDEP  
John Morris, P.G., FDEP  
James E. Golden, P.G., HSA Golden

Very truly yours,

Hartman & Associates, Inc.

  
A handwritten signature in black ink, appearing to read "Jennifer L. Deal".

Jennifer L. Deal, P.E.  
Project Manager



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IMG\_0772.JPG

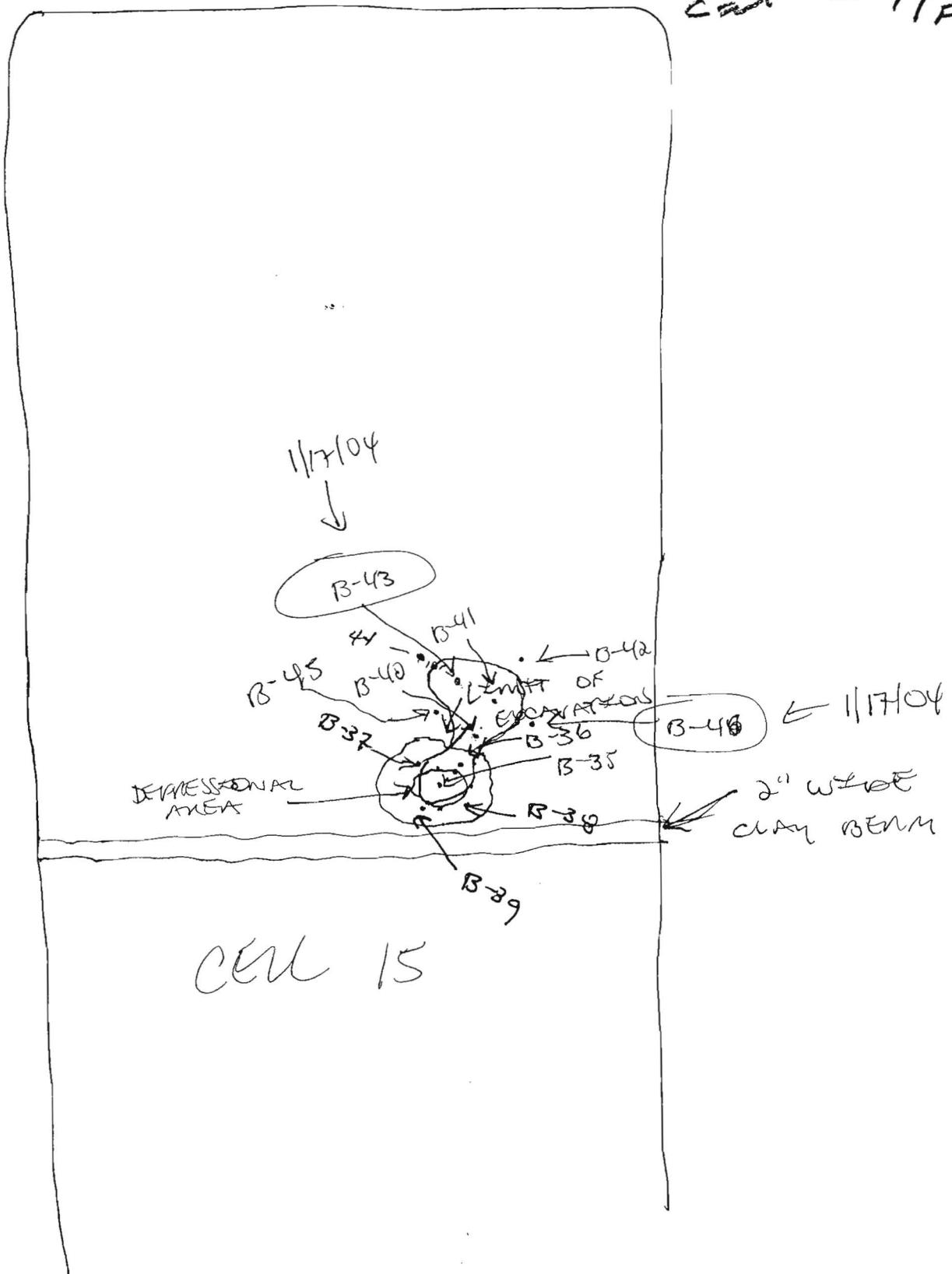


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1-15-04  
14F ~ A PAX HOLE  
cast - 14F B35





**HARTMAN & ASSOCIATES, INC.**

engineers, hydrogeologists, surveyors & management consultants

FIELD BORING LOG M6A2CIA

B-35

1 or 2

DEPTH (FT)	SAMPLE			BLOWS PER IN	N-VALUE	BORING LOG	MATERIAL DESCRIPTION CLASSIFICATION	WELL	REMARKS	PROJECT	
	NO./TYPE	SYMBOL	% REC.							GR. ELEV.: ~75'	DATA-TYPE: 3 <sup>3</sup> / <sub>4</sub> " - MR
1				125	7		SANDY-CLAY, L. CLAY + TAN-ORANGE, MED. TO SILT, V. FIRM. 0-4		SMALL (1-2) CM) LR FRAG. 0-2'	CLIENT: ANGELO'S RECYCLED MATERIALS	LOCATION: DANE CITY, WI
2				122	6				SUPERFICIALLY SOFTEN		
3				122	3		SILTY-CLAY, TAN-ORANGE, FINE TO SILT, MED.				
				122			SOFT ~ 4 <sup>1</sup> / <sub>2</sub> '				
4				122	4		SAA				
5				122	4						
10				122	4				SEMI-FIRM 0-12'		
6				126	9		SAA				
7				123	6		SILTY-CLAY, GRAY + TAN-ORANGE, FINE TO SILT, SEMI-SOFT, 12-15'		SOFT-BRITTLE LR (WEATHERED)		
8				124	1		LS-MARL, SOFT + BRITTLE		ZONE 11-15' SMALL (1 CM) WEATH. LR FRAG.		
				123			LR FRAG (1-3 CM) w/ SOFT WHITE CLAY & SAND. 15-18'		DRILLING		
9				125	21		LR - MARL. LR FRAGMENTS (1-3 CM) FEATURES w/ MIXED w/ SOFT WHITE CLAY & SAND. 18-20'		RIG TYPE: CME 55		
20				125			SAA		CREW: UNIVERSAL		
10				120	7				SUPERVISOR: LEROY PITT		
11				125	1		SAA (1-2" CONTINUOUS LR FRAGMENTS, BROKEN)				
25				122	1		LR FRAGMENTS, BROKEN				
12				121	2		CONTINUOUS LR FRAGMENTS, BROKEN				
				121			SOFT WHITE CLAY & SAND. 26-32'				
13				128	24		SOFT WHITE CLAY & SAND. 26-32'				
14				123	2		SAA				
30				123	11						

PIEZ/WELL

CASING DIAM.:

CASING TYPE:

CASING DEPTH:

SCREEN DEPTH:

SCREEN LENGTH:

FILTER PACK:

RISER HEIGHT A.L.S.:

T.O.C. ELEV.:

REMARKS

LOOSE MAT, FIRM 15-18'



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## FIELD BORING LOG

M GARCIA

B-35

2002

DEPTH (FT)	SAMPLE				BORING LOG	MATERIAL DESCRIPTION CLASSIFICATION	WELL	REMARKS	PROJECT	
	NO./TYPE	SYMBOL	% REC.	BLOWS PER					GR. ELEV.: m 75'	NAME: ENTERPRISE
15			54	39		Lg - HARD BROWN GRAB mixed w/ SOFT CLAY SAND, 30'-32' EGB @ 32'			DATA-TYPE: 3 3/4" - MNL	RECYCLING + DISP.
35									DEPTH: 32'	CLIENT: ANGELO'S RECY MAT
0									DATE STARTED: 1-15-04	LOCATION: DANE CITY, WI
5									DATE ENDED: 1-15-04	
0										
5										
0										
5										
0										

### BORING

GR. ELEV.: m 75'

DATA-TYPE: 3 3/4" - MNL

DEPTH: 32'

DATE STARTED: 1-15-04

DATE ENDED: 1-15-04

### GROUNDWATER

DEPTH:

TIME:

DATE:

REMARKS:

### DRILLING

RIG TYPE: CMC 55

CREW: UNIVERSAL

SUPERVISOR: LEROY PITT

### PIEZ/WELL

CASING DIAM.:

CASING TYPE:

CASING DEPTH:

SCREEN DEPTH:

SCREEN LENGTH:

FILTER PACK:

RISER HEIGHT A/L:

T.O.C. ELEV.:

### REMARKS



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## FIELD BORING LOG

MARINA

B-36

1 of 1

DEPTH (FT)	SAMPLE			BLOWS PER	N-VALUE	BORING LOG	MATERIAL DESCRIPTION CLASSIFICATION	WELL	REMARKS	PROJECT	
	NO./TYPE	SYMBOL	% REC.							NUMBER: 99-0351.	NAME: ENTERPRISE
1				1	4		SANDY-CLAY, LT. GRAY + TAN - ORANGE (MOTTLED), MED. TO STUT, V. FIRM 0-4		(CL 1 cm) WEATHER. LR. FRAG. 0-4'	CLIENT: ANGELO'S RECY CLAY	RECYCLING + DISP.
2				3	7					LOCATION: DADE CITY FL	
3				3	8		SILT-CLAY, TAN-ORANGE TO L. GRAY FINE TO STUT, V. FIRM TO FIRM.				
4				4	8		4-8				
5				2	5		NO SAMPLE 8-10'				
6				WT			LS-MARL SOFT TAN SILT CLAY w/ HAN				
7				3<10"			BROKEN LR FRAG. (1-5 cm). <del>SOFT</del>				
8				3	6				poor rec. 10-12		
9				2							
10				3							
11				1							
12				7							
13				3							
14				1							
15				2							
16				2<10"							
17				2							
18				2							
19				2							
20				10							
21				24							
22				12							
23				9							
24				15							
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### BOILING

GR. ELEV.: ~75'

DRILL-TYPE: 33 1/4" - M

DEPTH: 20'

DATE STARTED: 1-15-94

DATE ENDED:

### GROUNDWATER

6"

DEPTH:

TIME:

DATE:

REMARKS:

### DRILLING

RIG TYPE: CME 45

CREW: UNIVERSAL

SUPERVISOR: LEROY PATE

### PIEZ/WELL

CASING DIAM.:

CASING TYPE:

CASING DEPTH:

SCREEN DEPTH:

SCREEN LENGTH:

FILTER PACK:

RISER HEIGHT A.S.L.:

T.O.C. ELEV.:

### REMARKS

1 LOOSE SOIL  
TO 10'  
8-10'



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FIELD BORING LOG

M6A1KTS

B-37

| or |

DEPTH (FT)	SAMPLE			BLOWs PER 6	N-VALUE	BORING LOG	MATERIAL DESCRIPTION CLASSIFICATION	WELL	REMARKS	PROJECT NUMBER: 99.0331. NAME: ENTERPRISE RECYCLING + DISP. CLIENT: ANGELO'S RECY MAT LOCATION: DADE CITY, FL
	NO.	TYPE	SYMBOL							
1				5			SILTY-CLAY, GRAY + TAN - ORANGE, MEDIUM TO SOFT, V. FIRM, 0-4		(1-3 cm) WEATH. LR. FRAG. 0.5-2.5'	
2				9					SMALL (1 cm) <del>GREY</del> BREAK LR. FRAG	BORING
3				10			SILTY-CLAY LT. GRAY FINE TO SOFT, V. FIRM 4-8			GR. ELEV.: ~75' DIA-TYPE: 33/4" - MR DEPTH: 26'
4				7			SAA (LT. GRAY + TAN - ORANGE (MOTTLED), 6-8			DATE STARTED: 1-15-04 DATE ENDED: 1-15-04
5				5			SILTY-CLAY LT. TAN + Orange, FIRM TO SOFT, MEDIUM TO SOFT		M.D. LR. FRAG (1-3 cm)	GROUNDWATER
10				2			SOFT, MEDIUM TO SOFT 8-10		8-10	DEPTH: TIME:
6				11			LS - MEDIUM, LIGHT TAN, <del>SOFT</del> HARD LR. FRAG., SOFT CLAYY-SAND.		LR. FRAG. (CROCKEN)	DATE: REMARKS:
7				6					(1-5 cm) LARGE AMT OF <del>SOFT</del> HARD + SOFT WEATH.	
15	8			21			LS - MEDIUM, CREAMY TAN SILTY-CLAY, WITH MOS. AMT OF SOFT + HARD LR. FRAG. 14-16.5		LR. FRAG. LR. FRAG. (1-3 cm)	DRILLING
9				12			LS - HARD LR. FRAG (CROCKEN) + SOFT (WEATHERED) WI SOFT L.TAN CLAYY-SAND. 16.5-19		12-16.5	RIG TYPE: CME 400 CREW: UNIVERSAL SUPERVISOR: LINCOLN PRTN
10				22			LS - MEDIUM, LIGHT TAN, HARD LR. FRAG. MIXED WI SOFT CLAYY SAND			PIEZ/WELL
20				10						CASING DIAM.: CASING TYPE:
	11			9						CASING DEPTH: SCREEN DEPTH:
	12			10						SCREEN LENGTH: FILTER PACK: RISER HEIGHT A.S.: T.O.C. ELEV.:
25	13			14						REMARKS: LOST CIRCULATION @ 12'
				15						
				16						
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## FIELD BORING LOG

MANICA

B-38

101

DEPTH (FT)	SAMPLE			BLows PER 60	N-VALUE	BORING LOG	MATERIAL DESCRIPTION CLASSIFICATION	WEIGHT	REMARKS	PROJECT	
	NO./TYPE	SYMBOL	% REC.							NUMBER: 99-0331.	
1				1-2	6		SANDY-CRST, GRAY + TAN CEMENTED (MOTTLED) NEW - TO SALT, V.FIRM, D-2		LR FINE. (CL - 3 cm) HARD. 0 - 8'	CLIENT: ANGELO'S RECY MAT	
2				2	4		SILT-CRST, GRAY + TAN CEMENTED, FINE TO SALT, V.FIRM 2-8' 7.5		V.FIRM TO SOFT-FIRM 4-6.5'	LOCATION: DATES CITY	
3				2	3		SILT			BORING	
4				1=2"	4		SILT			GR. ELEV.: ~75'	
5				3	8		LS-MUD, HARD LS-FINE + CEMENTED SS, MIXED W/ SOFT CRUMBLY S-N-S 7.5-18.5			DATA-TYPE: 238" - MK	
10				3	12		SAA			DEPTH: 20'	
6				6			SAA			DATE STARTED: 1-16-94	
7				10			SAA			DATE ENDED: 1-16-94	
15				24	20		SAA			GROUNDWATER	
8				10	13		SAA			DEPTH: ~4.5'	
9				34			SAA			TIME:	
10				10	17		SAA			DATE:	
20				15			L5-HARD, BRITTLE & L5-LENSES FROM 18.5- 19.5' MIXED W/ SAND LENSES TO 20'			REMARKS:	
				20	65					DRILLING	
				43						RIG TYPE:	
				24						CREW: UNIVERSAL	
										SUPERVISOR: LUCY PART	
										PIEZ/WELL	
										CASING DIAM.:	
										CASING TYPE:	
										CASING DEPTH:	
										SCREEN DEPTH:	
										SCREEN LENGTH:	
										FILTER PACK:	
										RISER HEIGHT ALS:	
										T.O.C. ELEV.:	
										REMARKS	
5											
0											

EOR @ 20'



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## FIELD BORING LOG

B-39

1 of 1

DEPTH (FT)	SAMPLE			BORING LOG	MATERIAL DESCRIPTION CLASSIFICATION	WELL	REMARKS	PROJECT NUMBER: 99.0331. NAME: ENTERPRISE PECYCCLINE + D.I.P. CLIENT: ANGELO'S RECY MAT LOCATION: RIVER CITY, FL
	NO./TYPE	SYMBOL	% REC.					
1				1	SANDY-CLAY, TAN-ORANGE only (MUD), MOO. TO SURF, V. FIRM 0-4		L.R. FRAG (L1-2 cm) 2-7.5 MOSTLY GLEY 2-4'	
2				2	SALT-CLAY, GRAY + DARK ORANGE, FINE TO SURF, V. FIRM. 4-7.5			
3				3				
4				4	LS-MARL, LIGHT TAN, MIXED L.R. FRAG. MIXED W/ SAVVY-CRAY (MOO). FIRM). 7.5-15		L.R. FRAG. (L1-5 cm) 7.5-14	GR. ELEV.: ~75 DA-TYPE: 2318 -MR DEPTH: 20' DATE STARTED: 1-16-84 DATE ENDED: 1-16-84
5				5				
6				6	SAT			
7				7	SAT			
8				8	LS - SAND BROKEN MIXED w/ CEMENT SAND 14-15'	LARGE L.R. FRAG (L1-6cm)		
9				9	LS - MARL: WHITE MARL L.R. FRAG. MIXED w/ CEMENT SAND, SOFT, 15-18			RIG TYPE: CME 55 CREW: UNIVERSAL SUPERVISOR: LUCILLE PITT
10				10	LS - SAND BROKEN LS FRAG. MIXED, w/ CEMENT SAND 18-20'			
11					E.D.B @ 20'			
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FIELD BORING LOG M61NC1A

B-40

1 of 1

DEPTH (FT)	SAMPLE			N-VALUE	BLOWS PER 6 IN	BORING LOG	WELL	REMARKS	PROJECT	
	NO./TYPE	SYMBOL	% REC.						NUMBER: 99-0331.	
1				2	650			SANDY-CRAG, LT. GRAY + TAN-ORANGE, MED. TO SILT, V. FIRM, 0-4	SMALL AMT. OF LR FRAG (21-3 cm) 0-4	NAME: ENTERPRISE RECYCLING + DISP.
2				7	88				LK. FRAG (21 cm)	CLIENT: ANGELO'S RECY MAT
3				9	10				0-4	LOCATION: DADE CITY FL
4				8	12					<u>BORING</u>
5				6	6					GR. ELEV.: ~75
6				9						DATA-TYPE: 2 3/8" - MR
7				6						DEPTH: 22'
8				5						DATE STARTED: 1-16-94
9				5						DATE ENDED: 1-16-94
10				5	1					<u>GROUNDWATER</u>
11				2	1					DEPTH:
12				6	12					TIME:
13				11						DATE:
14				3						REMARKS:
15				3						
16				2	2					<u>DRILLING</u>
17				6						RIG TYPE: CME 55
18				11						CREW: UNIVERSAL
19				3						SUPERVISOR: LEROY PTH
20				3						<u>PIEZ/WELL</u>
21				2	10					CASING DIAM.:
22				2	12					CASING TYPE:
23				9						CASING DEPTH:
24				2						SCREEN DEPTH:
25				2	30					SCREEN LENGTH:
26				17						FILTER PACK:
27				12						RISER HEIGHT A.L.S.:
28				3						T.O.C. ELEV.:
29				5						<u>REMARKS</u>
30				10						LOOSE SOIL FROM 10-11'
31				20						FROM 10-11' TO 14-15'
32				20						BS + 14-15'



## HARTMAN & ASSOCIATES, INC.

engineers, hydrogeologists, surveyors & management consultants

## FIELD BORING LOG

noticia

B-42

1 of 1



HARTMAN & ASSOCIATES, INC.

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## FIELD BORING LOG

MURKIN

B-41

1 of 1

FIELD BORING LOG						MATERIAL	B-41	1 of 1
DEPTH (FT)	SAMPLE			N-VALUE	BORING LOG	MATERIAL DESCRIPTION CLASSIFICATION	ITEM	REMARKS
	NO./TYPE	SYMBOL	% REC.					
1				9		SANDY-CLAY, GRAY, CONCRETE TO SILT, EXT. FIRM. 0-2		
2				22		SILTY-CLAY, LT.GRAY + DR. ORANGE, FINE TO SILT, V. FIRM, 2-6		
3				16		SANDY-CLAY, LT.GRAY + ORANGE V. WAVE	V. LOOSE SAND + SAND VENUE 7'-8'	
4				12		TO SILT, FIRM. 6-8	LR. KNEE (LI - 4 CM) 7.5-12.5'	
5				7		SILTY-CLAY, LT.GRAY + TAN ORANGE COARSE TO SILT, V. FIRM TO FIRM. 8'-14'	LR. KNEE (LI - 4 CM) 7.5-12.5'	
6				4		BRICKS DIAM. (4.1 - 1.5 CM) ZONE FROM 12.5 - 13	V. LIGHT GRAY 7.5-12.5 POOR REC. DIA 14" ~7"	
7				2		LS-MARL HORN B.L.TAN LR. KNEE, MIXED W/ SOFT COARSE GRANITE CLAYEY-SAND 14-18	LR. KNEE (LI - 5 CM)	
8				17			14-18	
9				3				
10				36		L - HORN, LB FINE, BRITTLE (BROKEN), MIXED W/ SOFT CLAYEY SAND. 18-22'		
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## HARTMAN & ASSOCIATES, INC.

engineers, hydrogeologists, surveyors & management consultants

W H B  
B 43

## FIELD BORING LOG

DEPTH (FT)	SAMPLE				BORING LOG	MATERIAL DESCRIPTION CLASSIFICATION	WELL	REMARKS	PROJECT	
	NO./TYPE	SYMBOL	% REC.	BLOWS PER 6					NUMBER: 99.0331.	NAME: ENTERPRISE
0					(3)				RECYCLING + DISP.	
1						CLAY WITH MINOR ROCK IMMS PAU GR GRAN			CLIENT: ANGELO'S RECY CLAY	
2					(3)				LOCATION: DADÉ CITY FL	
3						CLAY SL RACK FRAGS PAU GR GRAN WITH THE FRAGS		RUSTY COLOR & VARIUS		
4					(2)	SILTY CLAY PAU GR GRAN				
5										
6					(3)	78 FRAGS				
7					11	SL CLAYEY SILT				
8					12	BECKN 6 SL CLAYEY VESAO				
9					8	PER GRAN (LAYERED)				
10					7	SL CLAYE VESAO				
11					4	BECKN 6				
12					3	SILTY CLAY PGR GRAN				
13					4	SL SAVD CL 44				
14					1	WAVE & FRAGS				
15					1	PGR GR WITH RUST VARIOUS				
16					1					
17					1	CLAYEY SOFT				
18					1	PGR GR WITH RUST PAST				
19					1					
20					1	SL CLAY M SAD				
21					2	WITH FRAGS				
22					6					
23					7					
24					7	LSS				
25					4	PALE TAN				
26					5					
27					2					
28					7	LS				
29					3	PALE TAN				
30					9					
31					0					
32					11	LS PGL TAN				
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# HARTMAN & ASSOCIATES, INC.

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## FIELD BORING LOG

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# HARTMAN & ASSOCIATES, INC.

engineers, hydrogeologists, surveyors & management consultants

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## FIELD BORING LOG

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1 of 1

DEPTH (FT)	SAMPLE			MATERIAL DESCRIPTION CLASSIFICATION	WELL	REMARKS	PROJECT
	NO./TYPE	SYMBOL	% REC.				NUMBER: 99-0331,
0				CLAY SLIGHTY P GR GR w.			NAME: ENTERPRISE RECYCLING + DISP.
1				CLAY + FRAGS P GR ABOVE CLAY MINOR SET			CLIENT: ANGELO'S RECY CLAY
2				M ORANGE			LOCATION: DANÉ CITY, FL
3				CLAY, M. ARE 3 IN T FEW SR. MOTTLED RUST			
4				FEW SR. CRACKS			
5				SILT/CLOUDY P GR GM TRACE FRAGS			
6				CLAY SLIGHTY PAWSW		WET	
7				FRAGS - WHITE CLAYY MATT			
8				CLAY SLGY & CTFH AQUICULTURE FRAGS			
9				LITH FRAGS			
10				PALE TO LITH PAWSW M DR.			
11				LITH PALE WHITE			
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HARTMAN &amp; ASSOCIATES, INC.

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## FIELD BORING LOG

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1 of 1

DEPTH (FT)	SAMPLE			N-VALUE	BORING LOG	MATERIAL DESCRIPTION CLASSIFICATION	WELL	REMARKS	PROJECT	
	NO./TYPE	SYMBOL	N REC.						NUMBER: 99-0331.	NAME: ENTERPRISE
1	①		2	2	(3)	CLAY SL SILTY PALE GR GR			RECYCLING + DISP.	CLIENT: ANGELO'S RECY MAT
2			2	2	(3)	CLAY SL SILTY PALE GR GR WITH SILT WAVES			LOCATION: DADIE CITY FL	
3	②		2	2	(3)	CLAY SL SILTY				
4			2	2	(3)	PALE GR GR ~ TR FRAGS				
5	③		2	2	(3)	CLAY SL SILTY PALE GR GR ~				
6			2	2	(3)	CLAY SL SILTY				
7	④		2	2	(3)	PALE GR GR ~				
8			2	2	(3)	CLAY SL SILTY				
9	⑤		2	2	(3)	PALE GR GR ~				
10			2	2	(3)	CLAY SL SILTY				
11	⑥		2	2	(3)	PALE GR GR ~				
12			2	2	(3)	CLAY SL SILTY				
13	⑦		2	2	(3)	PALE GR GR ~				
14			2	2	(3)	CLAY SL SILTY				
15	⑧		2	2	(3)	PALE GR GR ~				
16			2	2	(3)	CLAY SL SILTY				
17	⑨		2	2	(3)	PALE GR GR ~				
18			2	2	(3)	CLAY SL SILTY				
19	⑩		2	2	(3)	PALE GR GR ~				
20			2	2	(3)	CLAY SL SILTY				
21	⑪		2	2	(3)	PALE GR GR ~				
22			2	2	(3)	CLAY SL SILTY				
23	⑫		2	2	(3)	PALE GR GR ~				
24			2	2	(3)	CLAY SL SILTY				
25	⑬		2	2	(3)	PALE GR GR ~				
26			2	2	(3)	CLAY SL SILTY				
27	⑭		2	2	(3)	PALE GR GR ~				
28			2	2	(3)	CLAY SL SILTY				
29	⑮		2	2	(3)	PALE GR GR ~				
30			2	2	(3)	CLAY SL SILTY				
31	⑯		2	2	(3)	PALE GR GR ~				
32			2	2	(3)	CLAY SL SILTY				
33	⑰		2	2	(3)	PALE GR GR ~				
34			2	2	(3)	CLAY SL SILTY				
35	⑱		2	2	(3)	PALE GR GR ~				
36			2	2	(3)	CLAY SL SILTY				
37	⑲		2	2	(3)	PALE GR GR ~				
38			2	2	(3)	CLAY SL SILTY				
39	⑳		2	2	(3)	PALE GR GR ~				
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42			2	2	(3)	CLAY SL SILTY				
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