

**LOG OF GEOPROBE B1**  
**DRAFT** SHEET 1 OF 1

Client City of Duluth  
 Project Name Duluth Waterfront  
 Number 23/69-823 INV 240  
 Location \_\_\_\_\_

Drill Contractor TPT  
 Drill Method HSA  
 Drilling Started 6/2/04 Ended 6/2/04  
 Logged By Herb Garcia

Elevation --  
 Total Depth 15.0

DEPTH FEET	SAMPLE RECOVERY NUMBER	%GR/SA/FINES	HEADSPACE ppm	ODOR-SHEEN	MOISTURE	USCS	LITHOLOGY	DESCRIPTION	DEPTH FEET
5		15/70/15	ND	-None-None	Moist	SC	[Hatched Pattern]	Brown, fine to coarse, clayey sand with Class 5 angular gravel and organics. (FILL)	5
						SP SC		Brown to light brown, fine to medium clayey sand with trace gravel, compact. Moist to wet/saturated at 8'. (FILL)	
10		5/80/15 -/90/10	ND	-None-None	Moist		[Dotted Pattern]	Brown to light brown, fine to medium, poorly graded sand with clay. Only trace gravel. Very saturated and loose. (FILL)	10
						SP			
15		-/90/10 -/95/5	ND	-None-None -Trace-Trace	Wet/Sat. Sat.		[Dotted Pattern]		15
		-/95/5	ND	-Trace-Trace	Sat.				

ENVIRO LOG 4 CURRENT 2369823.GPJ BARRLOG.GDT 7/1/04



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Remarks

See key sheet for symbols and abbreviations used above.  
 Additional data may have been collected in the field which is not included on this log.

**LOG OF GEOPROBE B2**  
**DRAFT** SHEET 1 OF 1

Client City of Duluth  
Project Name Duluth Waterfront  
Number 23/69-823 INV 240  
Location \_\_\_\_\_

Drill Contractor TPT  
Drill Method HSA  
Drilling Started 6/2/04 Ended 6/2/04  
Logged By Herb Garcia

Elevation --  
Total Depth 10.0

DEPTH FEET	SAMPLE RECOVERY NUMBER	%GR/SA FINES	HEADSPACE ppm	ODOR-SHEEN	MOISTURE	USCS	LITHOLOGY	DESCRIPTION	DEPTH FEET
0									0
2		10/75/15	ND	-- -None- None	Moist	SC		Reddish brown, fine to medium, clayey sand with some angular (Class 5) gravel in upper 6". Very compact.	2
4									4
6								Gradational contact from above to fine to medium poorly graded sand at 5 to 7'. Slight "sewer-like" odor at water table. (FILL)	6
8		-/80/20 -/90/10	ND	-None- None	Moist Wet/sat.	SP		Starts sloughing (very loose) at 8".	8
10		-/95/5	ND	-Trace- None	Sat.				10
12									12
14									14

ENVIRO LOG 4 CURRENT 2369823.GPJ BARRLOG.GDT 7/1/04



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**LOG OF GEOPROBE B3**  
**DRAFT** SHEET 1 OF 1

Client City of Duluth  
 Project Name Duluth Waterfront  
 Number 23/69-823 INV 240  
 Location \_\_\_\_\_

Drill Contractor TPT  
 Drill Method HSA  
 Drilling Started 6/2/04 Ended 6/2/04  
 Logged By Herb Garcia

Elevation --  
 Total Depth 5.0

DEPTH FEET	SAMPLE RECOVERY NUMBER	%GR/SA FINES	HEADSPACE ppm	ODOR-SHEEN	MOISTURE	USCS	LITHOLOGY	DESCRIPTION	DEPTH FEET
2		30/45/25	0.4	-None-None	Moist	SC		Dark brown and gray, fine to coarse sand with gravel, wood, brick and asphalt debris. Some cobbles and larger rocks present. (FILL)	2
4		-/95/5	ND	-None-None	Wet	SP		Light brown, fine to medium, clean, poorly graded sand. Wet to saturated. (FILL) Refusal at two nearby locations at 2' and 5' respectively.	4
6									6
8									8

ENVIRO LOG 4 CURRENT 2369823.GPJ BARRLOG.GDT 7/6/04



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**LOG OF GEOPROBE B4**  
**DRAFT** SHEET 1 OF 1

Client City of Duluth  
 Project Name Duluth Waterfront  
 Number 23/69-823 INV 240  
 Location \_\_\_\_\_

Drill Contractor TPT  
 Drill Method HSA  
 Drilling Started 6/2/04 Ended 6/2/04  
 Logged By Herb Garcia

Elevation --  
 Total Depth 5.0

DEPTH FEET	SAMPLE RECOVERY NUMBER	%GR/SA/FINES	HEADSPACE ppm	ODOR-SHEEN	MOISTURE	USCS	LITHOLOGY	DESCRIPTION	DEPTH FEET
2		-95/5	ND	-None-None	Moist	SP		Light brown, fine to medium, poorly graded sand. No obvious debris or waste materials. (FILL)	2
4		-95/5	ND	-None-None	Wet/Sat				4
6									6
8									8

ENVIRO LOG 4 CURRENT 2369823.GPJ BARRLOG.GDT 7/6/04



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**LOG OF GEOPROBE B5**  
**DRAFT** SHEET 1 OF 1

Client City of Duluth  
 Project Name Duluth Waterfront  
 Number 23/69-823 INV 240  
 Location \_\_\_\_\_

Drill Contractor TPT  
 Drill Method HSA  
 Drilling Started 6/2/04 Ended 6/2/04  
 Logged By Herb Garcia

Elevation --  
 Total Depth 10.0

DEPTH FEET	SAMPLE RECOVERY NUMBER	%GR/SA FINES	HEADSPACE ppm	ODOR-SHEEN	MOISTURE	USCS	LITHOLOGY	DESCRIPTION	DEPTH FEET
0		5/85/10	0.0	-None-Trace	Moist	SP SC		Gravelly topsoil. Very fine to coarse poorly graded sand with clay. No obvious debris or waste materials. (FILL)	0
2		-/90/10	0.0	-Trace-Trace	Wet	SP SC			2
4		-/93/7	0.0	-Trace-Trace	Wet/sat			Poorly graded sand with clay. No obvious debris or waste materials. Some odor and some mottled staining. (FILL)	4
6		-/93/7	0.0	-None-Trace	Sat.	SP			6
8									8
10									10
12									12
14									14

ENVIRO LOG 4 CURRENT 2369823.GPJ BARRLOG.GDT 7/12/04



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Client City of Duluth

Drill Contractor TPT

Project Name Duluth Waterfront

Drill Method HSA

Number 23/69-823 INV 240

Drilling Started 6/2/04 Ended 6/2/04

Elevation --

Location \_\_\_\_\_

Logged By Herb Garcia

Total Depth 10.0

DEPTH FEET	SAMPLE RECOVERY NUMBER	%GR/SA/FINES	HEADSPACE ppm	ODOR-SHEEN	MOISTURE	USCS	LITHOLOGY	DESCRIPTION	DEPTH FEET
0						SC	Asphalt.		0
2		25/35/40	ND	-- None-None	Moist	CL	Reddish clayey sand with brick, concrete, and gravel. Very compact. Trace grayish mottling. (FILL)		2
4						GC	Reddish sandy, gravelly clay. Very compact with concrete and rock. (FILL)		4
6						GC	Brown to gray, wet, clayey gravel (imported rock). (FILL)		6
8		25/25/50 80/10/10	ND	-None-Trace -Trace-None	Moist Sat.	GC			8
10		80/10/10	ND	-None-None	Sat				10
12									12
14									14

ENVIRO LOG 4 CURRENT 2369823.GPJ BARRLOG.GDT 7/1/04



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Client City of Duluth

Drill Contractor TPT

Project Name Duluth Waterfront

Drill Method HSA

Number 23/69-823 INV 240

Drilling Started 6/2/04 Ended 6/2/04

Elevation --

Location \_\_\_\_\_

Logged By Herb Garcia

Total Depth 10.0

DEPTH FEET	SAMPLE RECOVERY NUMBER	%GR/SA/ FINES	HEADSPACE ppm	ODOR-SHEEN	MOISTURE	USCS	LITHOLOGY	DESCRIPTION	DEPTH FEET
		15/45/40	2.1	-None-Trace	Moist	SC	Class 5 gravel. Light reddish brown to reddish brown at 5.5 feet, fine to medium clayey sand. No debris. (FILL)		
5		10/75/15	0.0	-None-Trace	Moist/Dry	SC			5
		5/80/15	0.0	-None-Trace	Moist				
10		5/80/15	1.1	-None-Trace	Moist/Wet				10
15									15

ENVIRO LOG 4 CURRENT 2369823.GPJ BARRLOG.GDT 7/6/04



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**DRAFT**

Client City of Duluth

Drill Contractor TPT

Project Name Duluth Waterfront

Drill Method HSA

Number 23/69-823 INV 240

Drilling Started 6/2/04 Ended 6/2/04

Elevation --

Location \_\_\_\_\_

Logged By Herb Garcia

Total Depth 15.0

DEPTH FEET	SAMPLE RECOVERY NUMBER	%GR/SA/FINES	HEADSPACE ppm	ODOR, DISY, SHEEN	MOISTURE	USCS	LITHOLOGY	DESCRIPTION	DEPTH FEET
		25/55/20		-None-None	Moist	SC		Brown to dark brown fine to coarse grained clayey sand with gravel, brick, concrete, etc. Very compact. (FILL)	
		30/50/20	ND	-None-None	Moist	SC			
5		40/20/40		-None-Medium	Wet/Sat.	GC		Dark brown and dark gray crushed rock, brick, clayey, sandy gravel. Very angular. Coarse to fine grained. (FILL)	5
		30/15/55	ND	-None-Medium	Sat.	CL		Water table at 8.5'.	
10				-	Sat.	SC		White and dark gray very fine to coarse sandy lean clay with brick, (sharp) metal and rock. Possibly fly ash. Metal is very thin, shredded. (FILL) Coarse to fine, loose clayey sand. Very loose and saturated. Low recovery. (FILL)	10
				-None-Trace	Sat.	SC			
15									15

ENVIRO LOG 4 CURRENT 2369823.GPJ BARR.LOG.GDT 7/16/04



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