

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA Region 2/ERT

Location: 510 Sackett St., Brooklyn, NY

Logged By: J. Bolduc

GCMW-03S Northing (ft): 187028.967

GCMW-03S Easting (ft): 987518.249

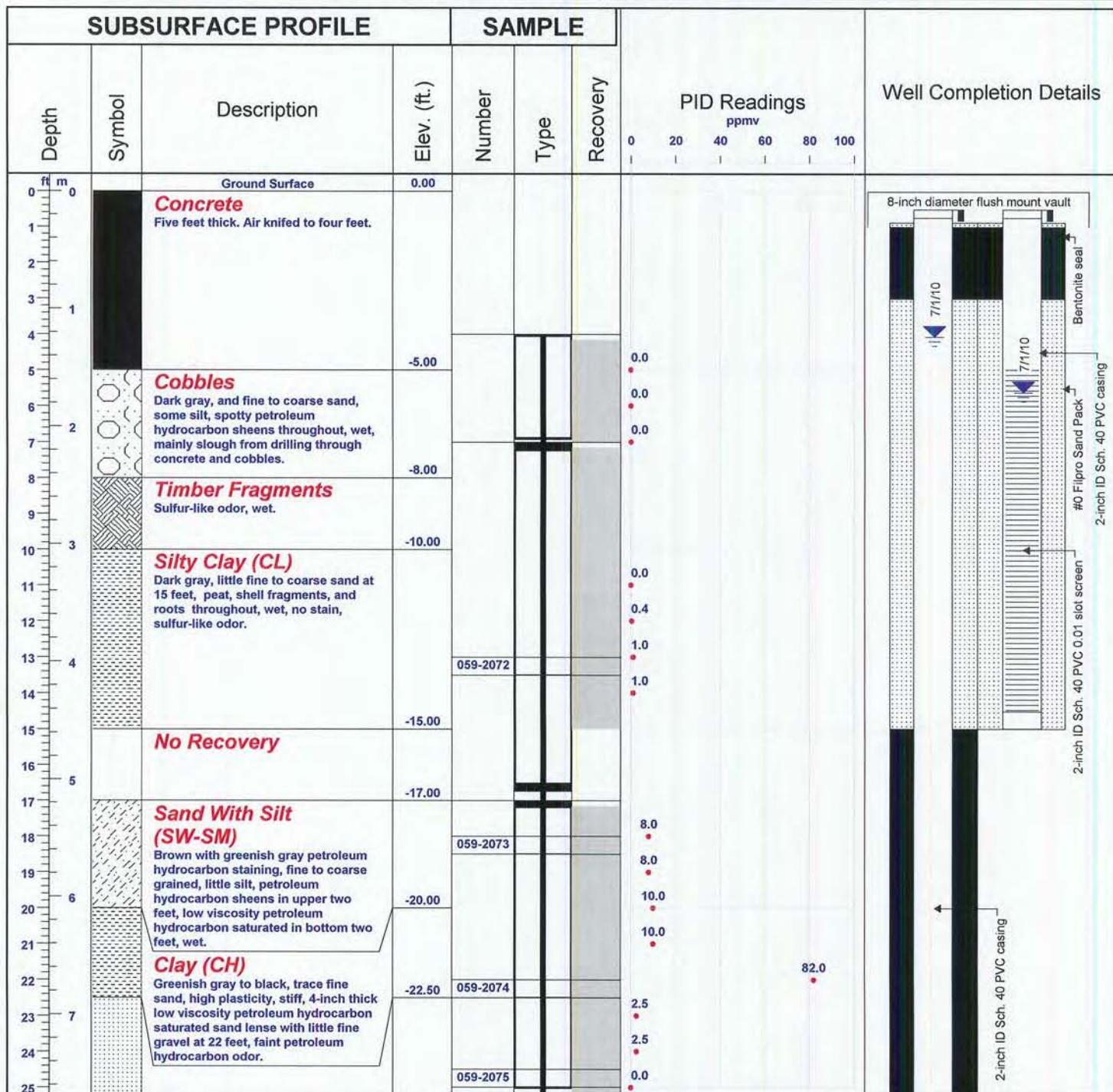
GCMW-03I Northing (ft): 187029.143

GCMW-03I Easting (ft): 987518.077

GCMW-03S Elevation (ft AMSL): 6.62

GCMW-03I Elevation (ft AMSL): 6.62

Log of Well: GCMW-03



Drill Method: A300 Rotary Sonic

Start Date: 1210 5/27/2010

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1600 5/27/2010

Sheet: 1 of 2

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA Region 2/ERT

Location: 510 Sackett St., Brooklyn, NY

Logged By: J. Bolduc

GCMW-03S Northing (ft): 187028.967

GCMW-03S Easting (ft): 987518.249

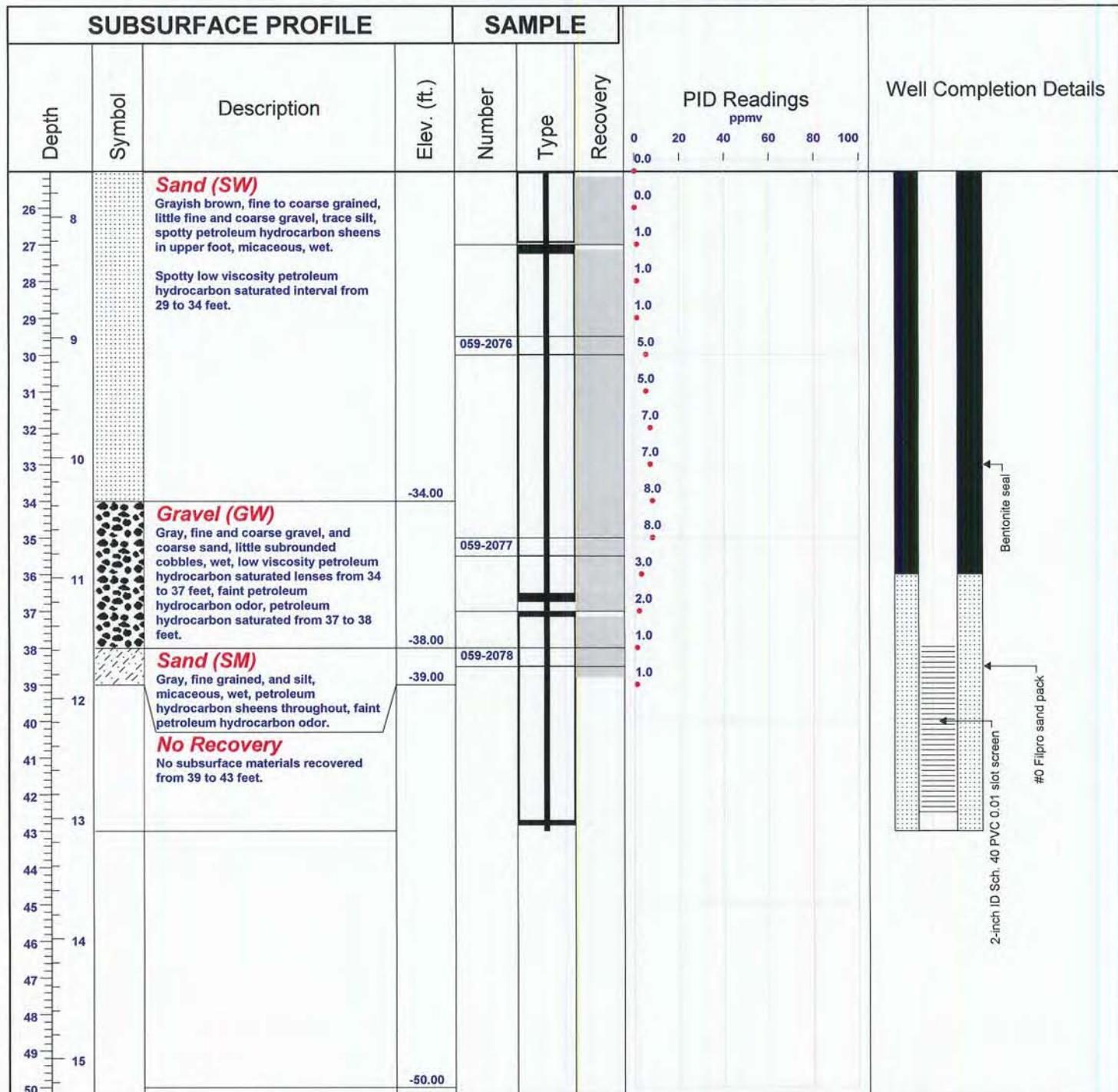
GCMW-03I Northing (ft): 187029.143

GCMW-03I Easting (ft): 987518.077

GCMW-03S Elevation (ft AMSL): 6.62

GCMW-03I Elevation (ft AMSL): 6.62

Log of Well: GCMW-03



Drill Method: A300 Rotary Sonic

Start Date: 1210 5/27/2010

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1600 5/27/2010

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Sheet: 2 of 2

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: Sackett St., Brooklyn, NY

Logged By: J. Bolduc

GCMW-04S Northing (ft): 187223.662

Log of Well: GCMW-04

GCMW-04S Easting (ft): 987328.457

GCMW-04I Northing (ft): 187223.801

GCMW-04| Easting (ft): 987328.323

GCMW-04S Elevation (ft AMSL): 8,62

GCMW-04S Elevation (ft AMSL): 8.56

Drill Method: A300 Rotary Sonic

Start Date: 0900 6/3/2010

Hole Size: 8 inches

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Drill Company: Boart Longyear

End Date: 1400 6/3/2010

Sheet 1 of 2

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: Sackett St., Brooklyn, NY

Logged By: J. Bolduc

GCMW-04S Northing (ft): 187223.662

GCMW-04S Easting (ft): 987328.457

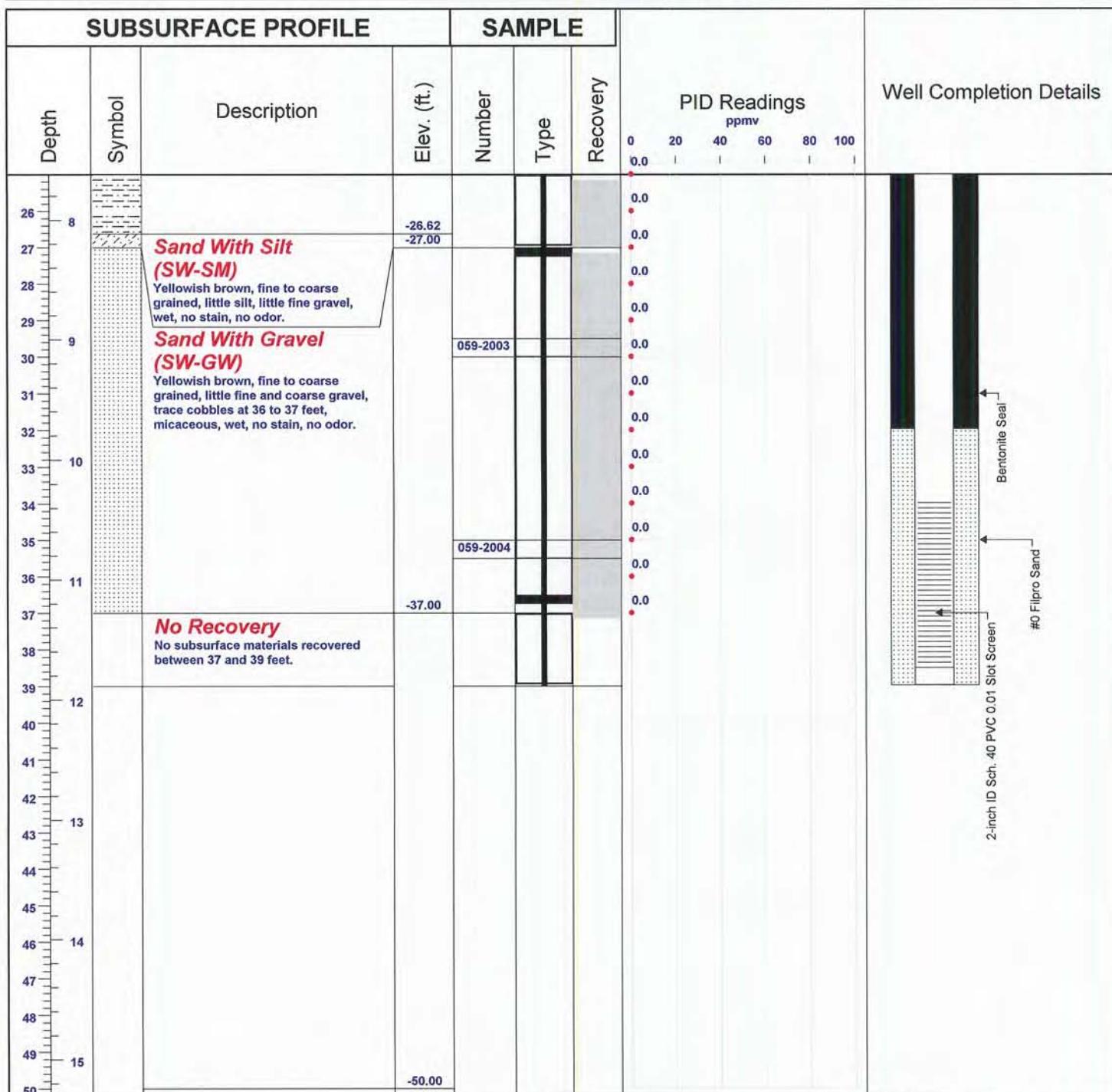
GCMW-04I Northing (ft): 187223.801

GCMW-04I Easting (ft): 987328.323

GCMW-04S Elevation (ft AMSL): 8.62

GCMW-04I Elevation (ft AMSL): 8.56

Log of Well: GCMW-04



Drill Method: A300 Rotary Sonic

Start Date: 0900 6/3/2010

Hole Size: 8 inches

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Drill Company: Boart Longyear

End Date: 1400 6/3/2010

Sheet: 2 of 2

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 365 Bond St., Brooklyn, NY

Logged By: J. Bolduc

GCMW-05S Northing (ft): 186001.425

GCMW-05S Easting (ft): 987079.213

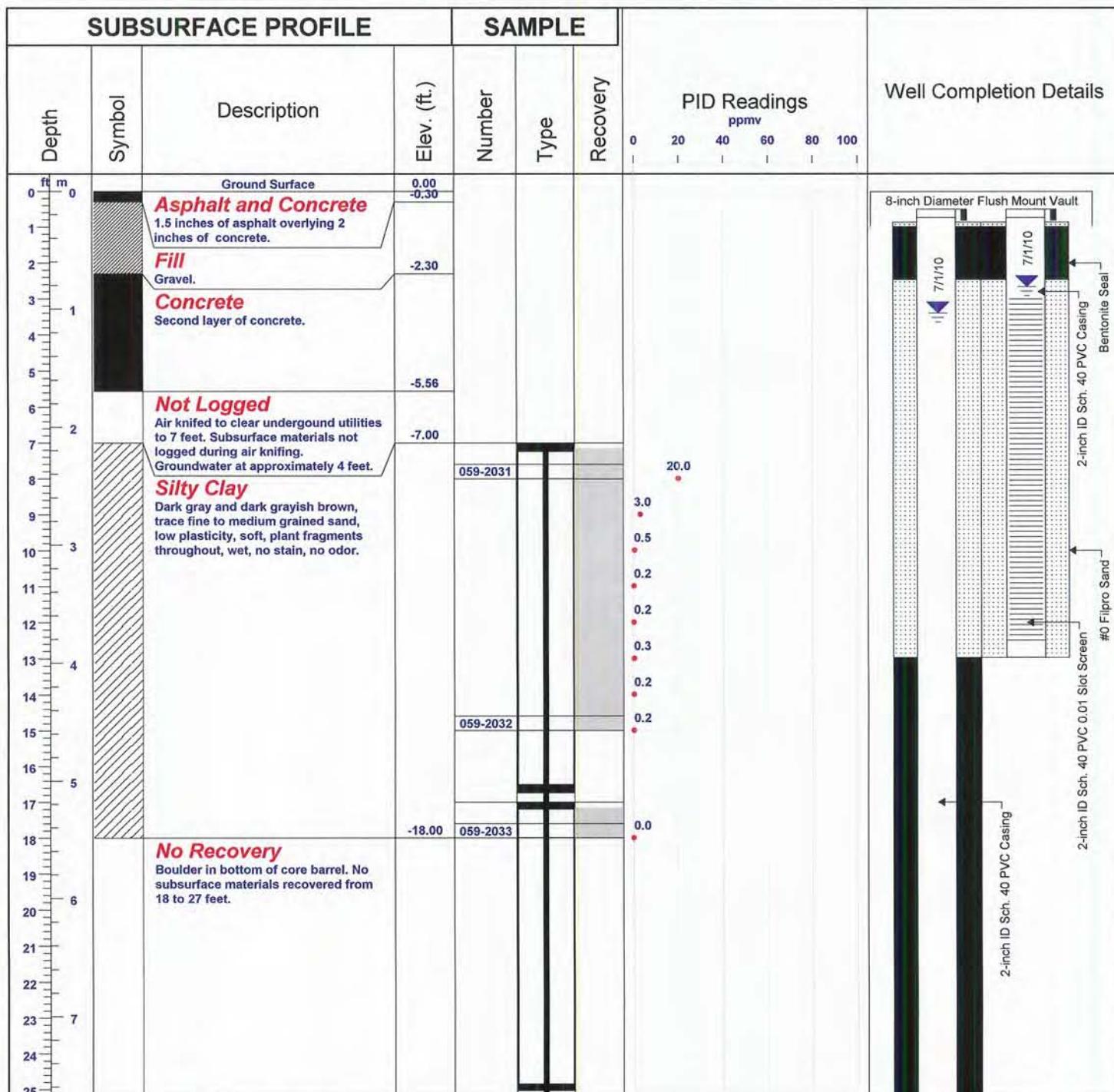
GCMW-05I Northing (ft): 186001.201

GCMW-05I Easting (ft): 987079.300

GCMW-05S Elevation (ft AMSL): 5.84

GCMW-05I Elevation (ft AMSL): 5.86

Log of Well: GCMW-05



Drill Method: A300 Rotary Sonic

Start Date: 0830 5/21/2010

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1200 5/21/2010

Sheet: 1 of 2

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 365 Bond St., Brooklyn, NY

Logged By: J. Bolduc

GCMW-05S Northing (ft): 186001.425

GCMW-05S Easting (ft): 987079.213

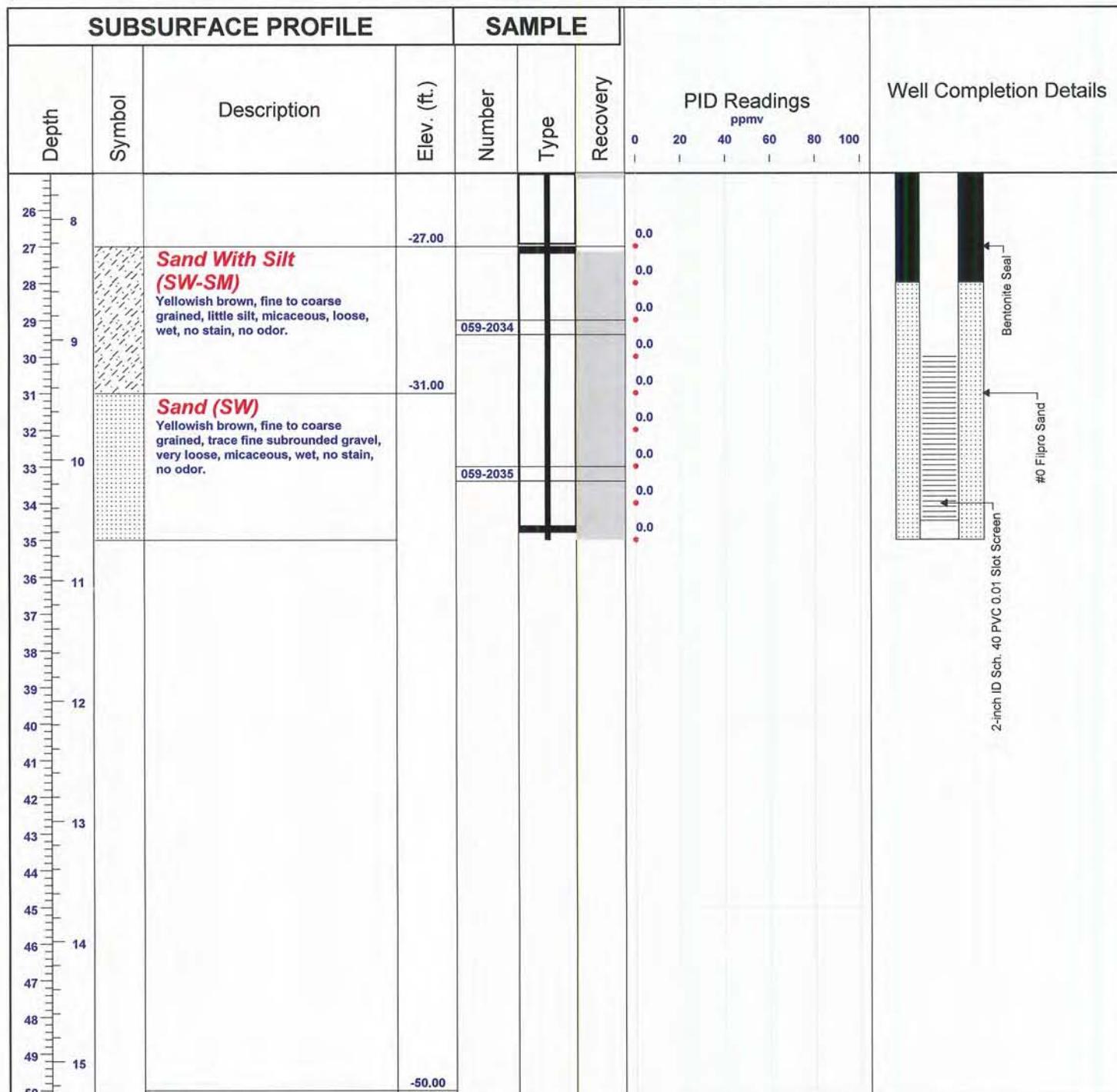
GCMW-05I Northing (ft): 186001.201

GCMW-05I Easting (ft): 987079.300

GCMW-05S Elevation (ft AMSL): 5.84

GCMW-05I Elevation (ft AMSL): 5.86

Log of Well: GCMW-05



Drill Method: A300 Rotary Sonic

Start Date: 0830 5/21/2010

Hole Size: 8 inches

Drill Company: Boart Longyear

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

End Date: 1200 5/21/2010

Sheet: 2 of 2

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 365 Bond Street, Brooklyn, NY

Logged By: J. Bolduc

GCMW-06S Northing (ft): 186086.940

GCMW-06S Easting (ft): 986949.708

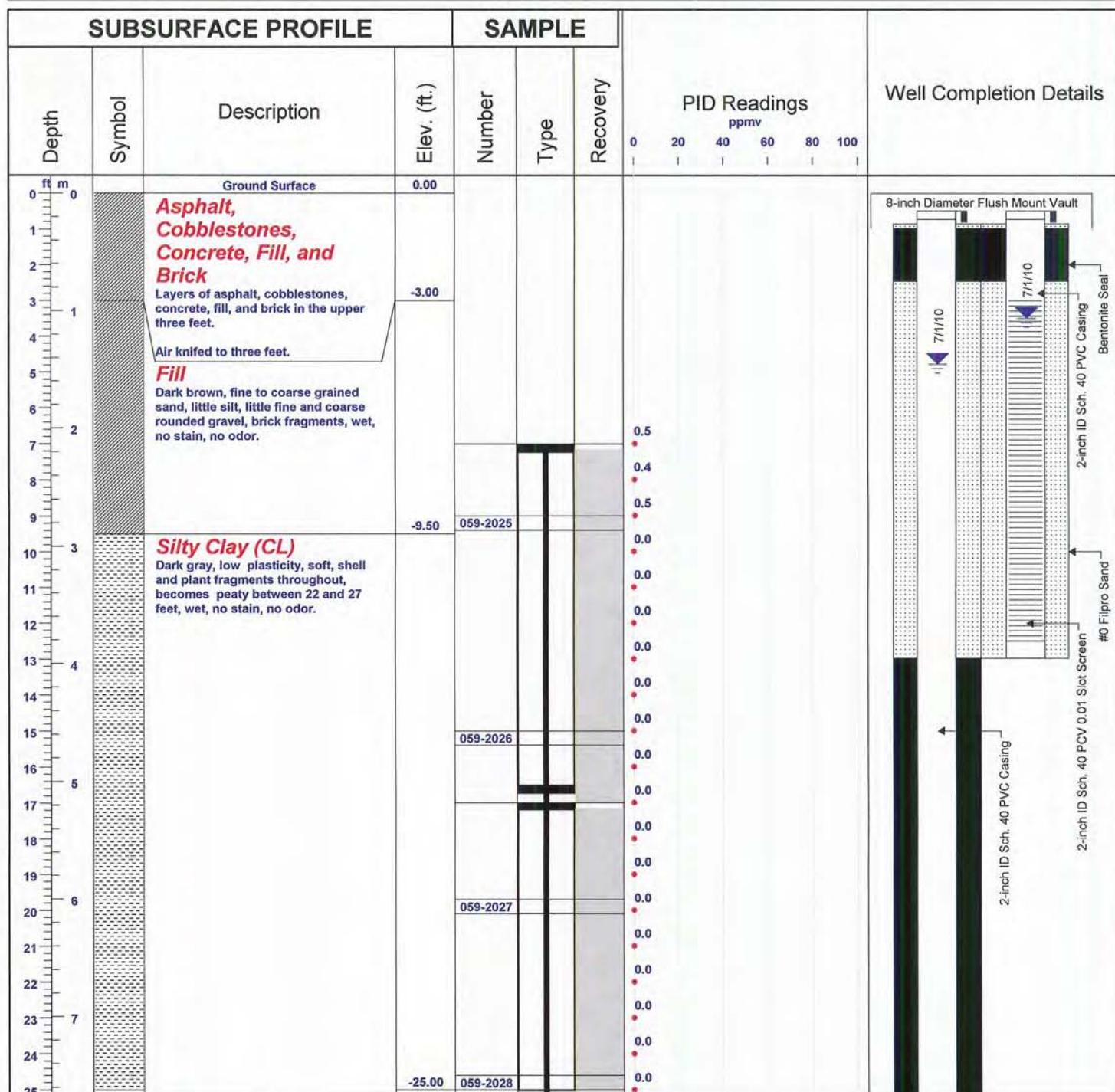
GCMW-06I Northing (ft): 186086.882

GCMW-06I Easting (ft): 986949.967

GCMW-06S Elevation (ft AMSL): 7.18

GCMW-06I Elevation (ft AMSL): 7.21

Log of Well: GCMW-06



Drill Method: A300 Rotary Sonic

Start Date: 1430 5/20/2010

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1700 5/20/2010

Sheet: 1 of 2

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 365 Bond Street, Brooklyn, NY

Logged By: J. Bolduc

GCMW-06S Northing (ft): 186086.940

GCMW-06S Easting (ft): 986949.708

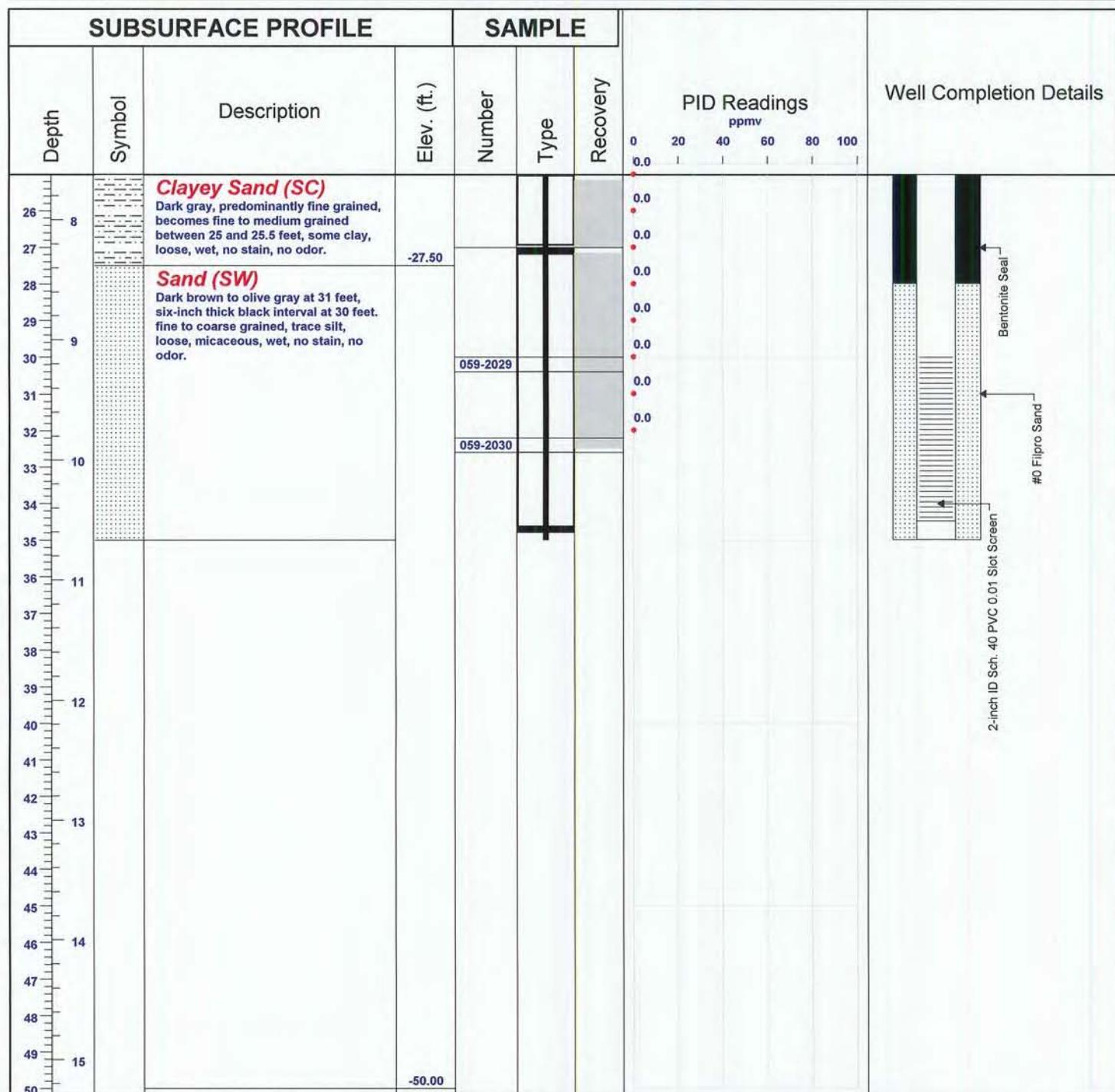
GCMW-06I Northing (ft): 186086.882

GCMW-06I Easting (ft): 986949.967

GCMW-06S Elevation (ft AMSL): 7.18

GCMW-06I Elevation (ft AMSL): 7.21

Log of Well: GCMW-06



Drill Method: A300 Rotary Sonic

Start Date: 1430 5/20/2010

Hole Size: 8 inches

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Drill Company: Boart Longyear

End Date: 1700 5/20/2010

Sheet: 2 of 2

Project No: SERAS-059

GCMW-07S Northing (ft): 185528.950

Log of Well: GCMW-07

Project: Gowanus Canal Superfund Site

GCMW-07S Easting (ft): 986673.468

Client: EPA/ERT

GCMW-07I Northing (ft): 185529.163

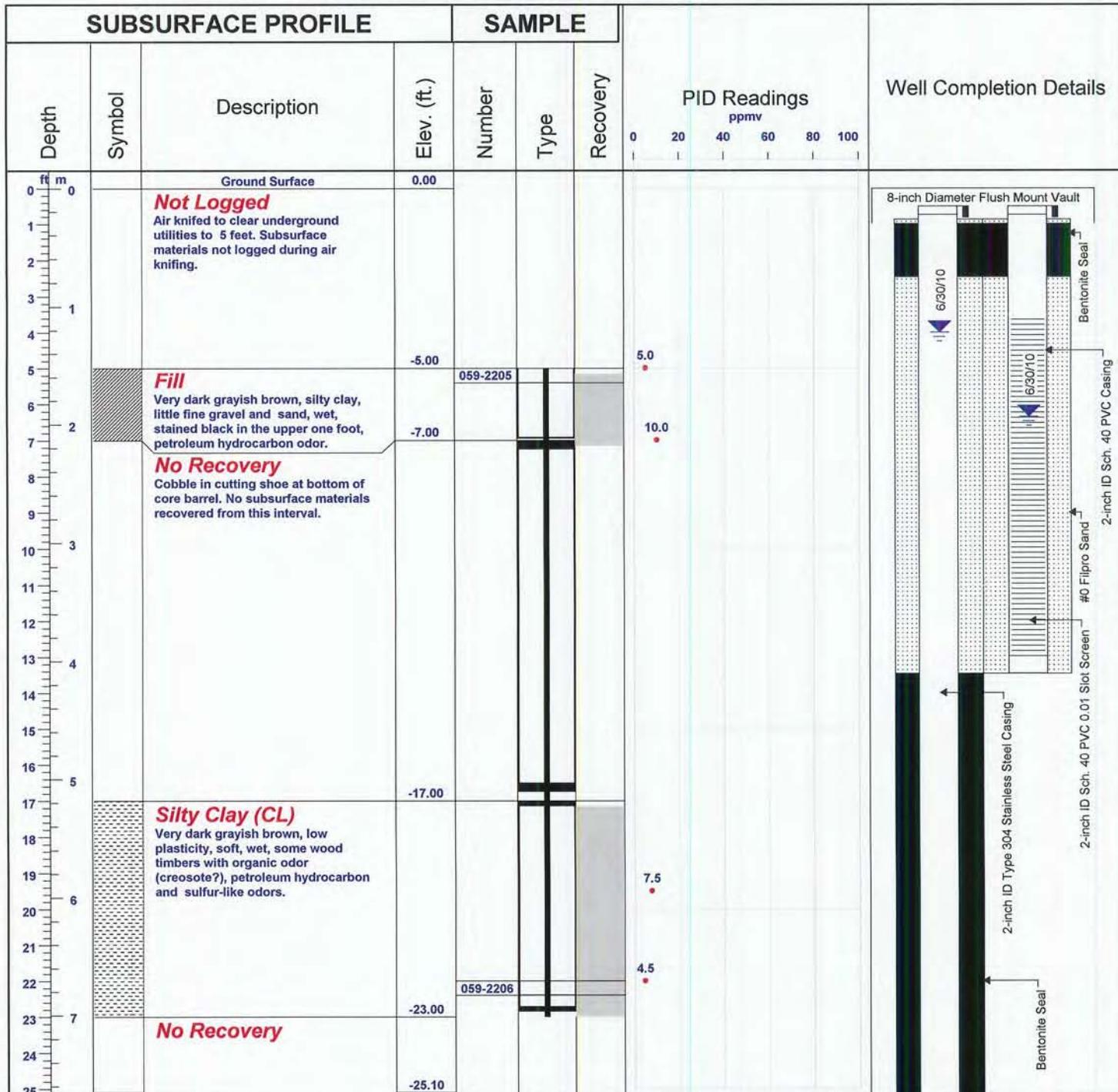
Location: 160 3rd St., Brooklyn, NY

GCMW-07I Easting (ft): 986673.578

Logged By: C. Sklaney

GCMW-07S Elevation (ft AMSL): 6.44

GCMW-07I Elevation (ft AMSL): 6.39



Drill Method: A300 Rotary Sonic

Start Date: 1020 6/21/10

Hole Size: 8 inches

Lockheed Martin/SERAS
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Edison, NJ 08837

Drill Company: Boart Longyear

End Date: 1120 6/21/10

Sheet: 1 of 2

Project No: SERAS-059

GCMW-07S Northing (ft): 185528.950

Log of Well: GCMW-07

Project: Gowanus Canal Superfund Site

GCMW-07S Easting (ft): 986673.468

Client: EPA/ERT

GCMW-07I Northing (ft): 185529.163

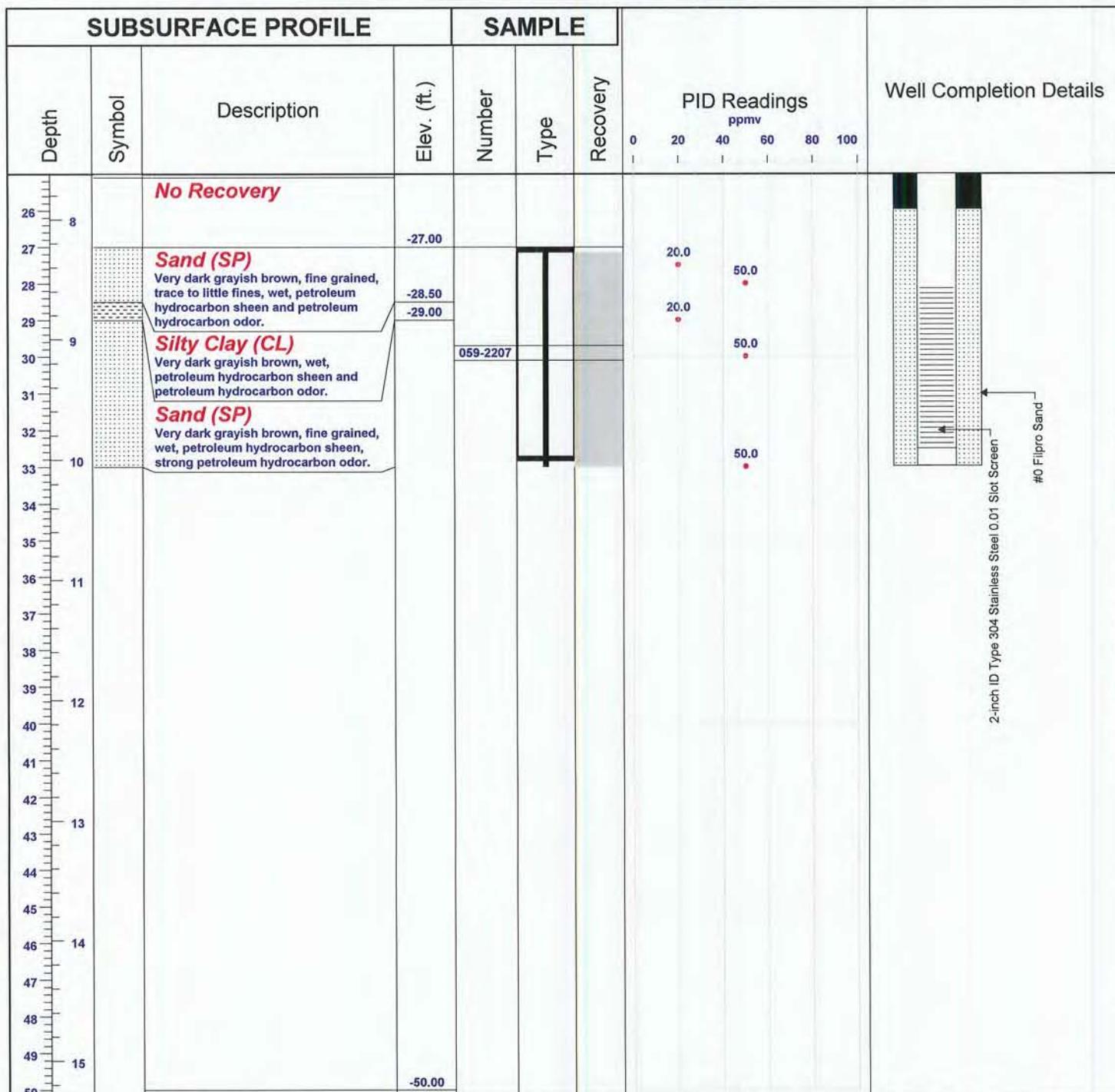
Location: 160 3rd St., Brooklyn, NY

GCMW-07I Easting (ft): 986673.578

Logged By: C. Sklaney

GCMW-07S Elevation (ft AMSL): 6.44

GCMW-07I Elevation (ft AMSL): 6.39



Drill Method: A300 Rotary Sonic

Start Date: 1020 6/21/10

Hole Size: 8 inches

Drill Company: Boart Longyear

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

End Date: 1120 6/21/10

Sheet: 2 of 2

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 160 3rd St., Brooklyn, NY

Logged By: C. Sklaney

GCMW-08S Northing (ft): 185649.648

GCMW-08S Easting (ft): 986734.160

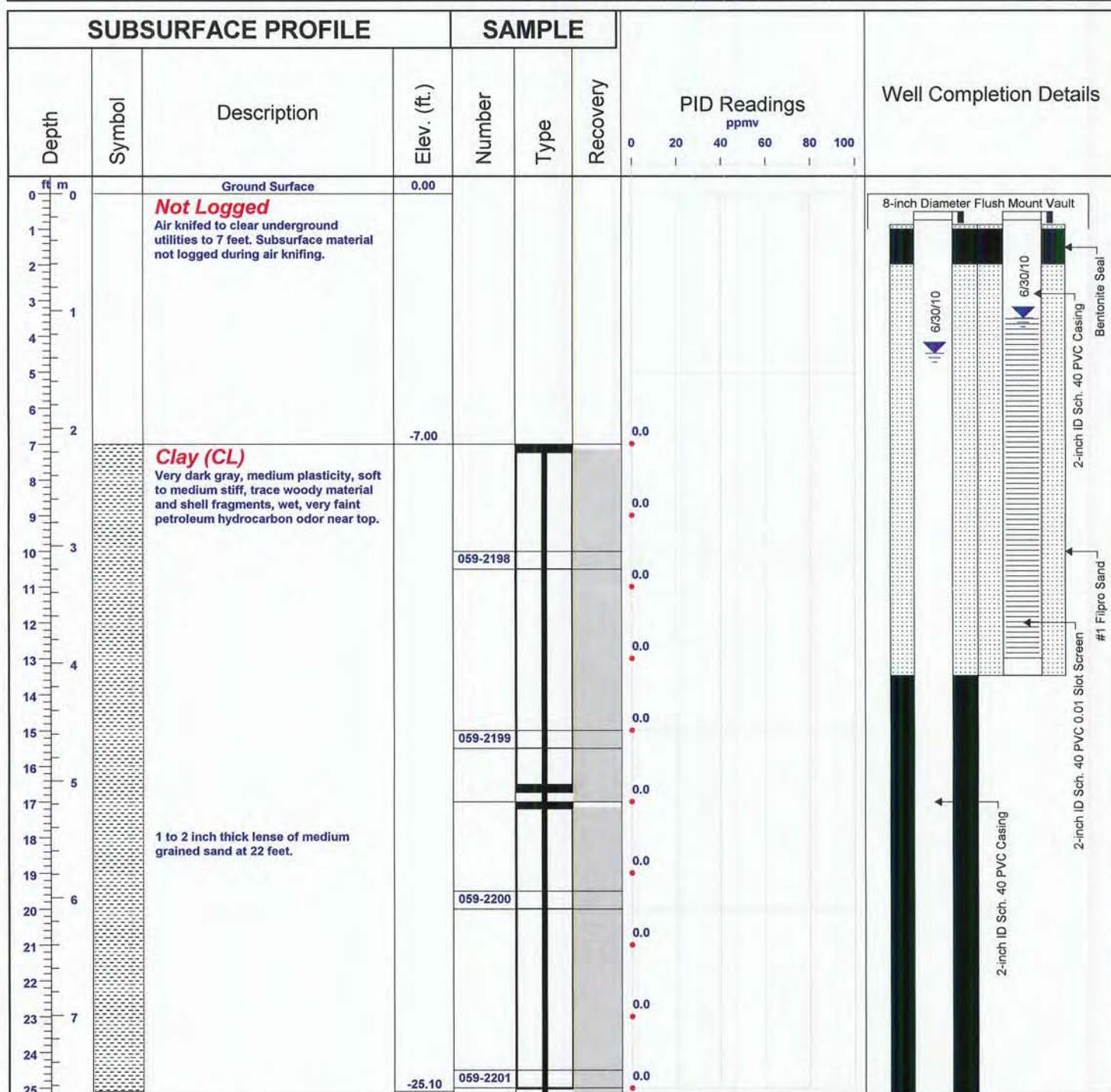
GCMW-08I Northing (ft): 185649.754

GCMW-08I Easting (ft): 986733.927

GCMW-08S Elevation (ft AMSL): 7.13

GCMW-08I Elevation (ft AMSL): 7.17

Log of Well: GCMW-08



Drill Method: A300 Rotary Sonic

Start Date: 1305 6/17/10

Hole Size: 8 inches

Drill Company: Boart Longyear

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

End Date: 1700 6/17/2010

Sheet: 1 of 2

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 160 3rd St., Brooklyn, NY

Logged By: C. Sklaney

GCMW-08S Northing (ft): 185649.648

GCMW-08S Easting (ft): 986734.160

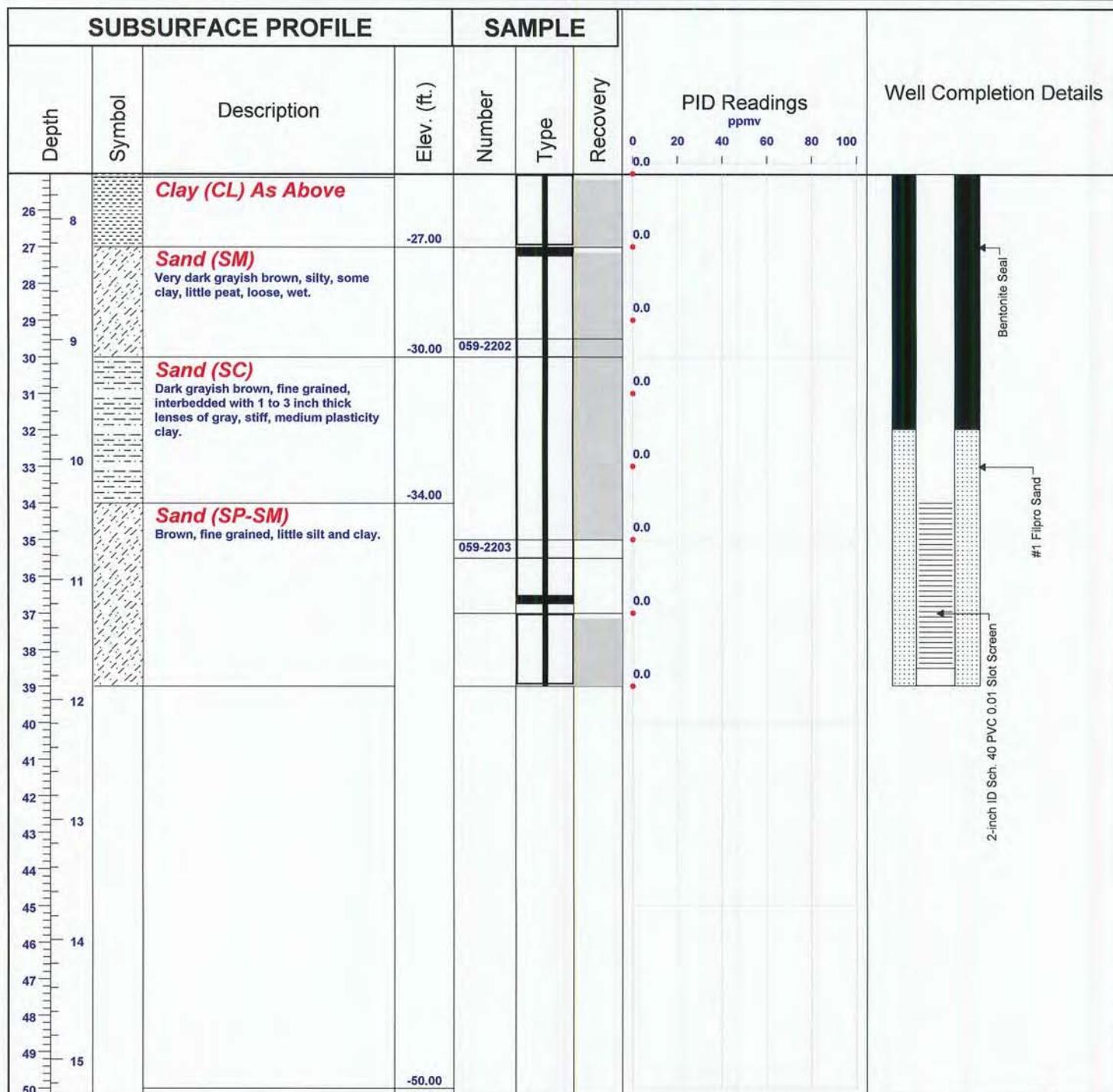
GCMW-08I Northing (ft): 185649.754

GCMW-08I Easting (ft): 986733.927

GCMW-08S Elevation (ft AMSL): 7.13

GCMW-08I Elevation (ft AMSL): 7.17

Log of Well: GCMW-08



Drill Method: A300 Rotary Sonic

Start Date: 1305 6/17/10

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1700 6/17/2010

Sheet: 2 of 2

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 503-537 Smith St., Brooklyn, NY

Logged By: J. Bolduc

GCMW-11S Northing (ft): 184748.913

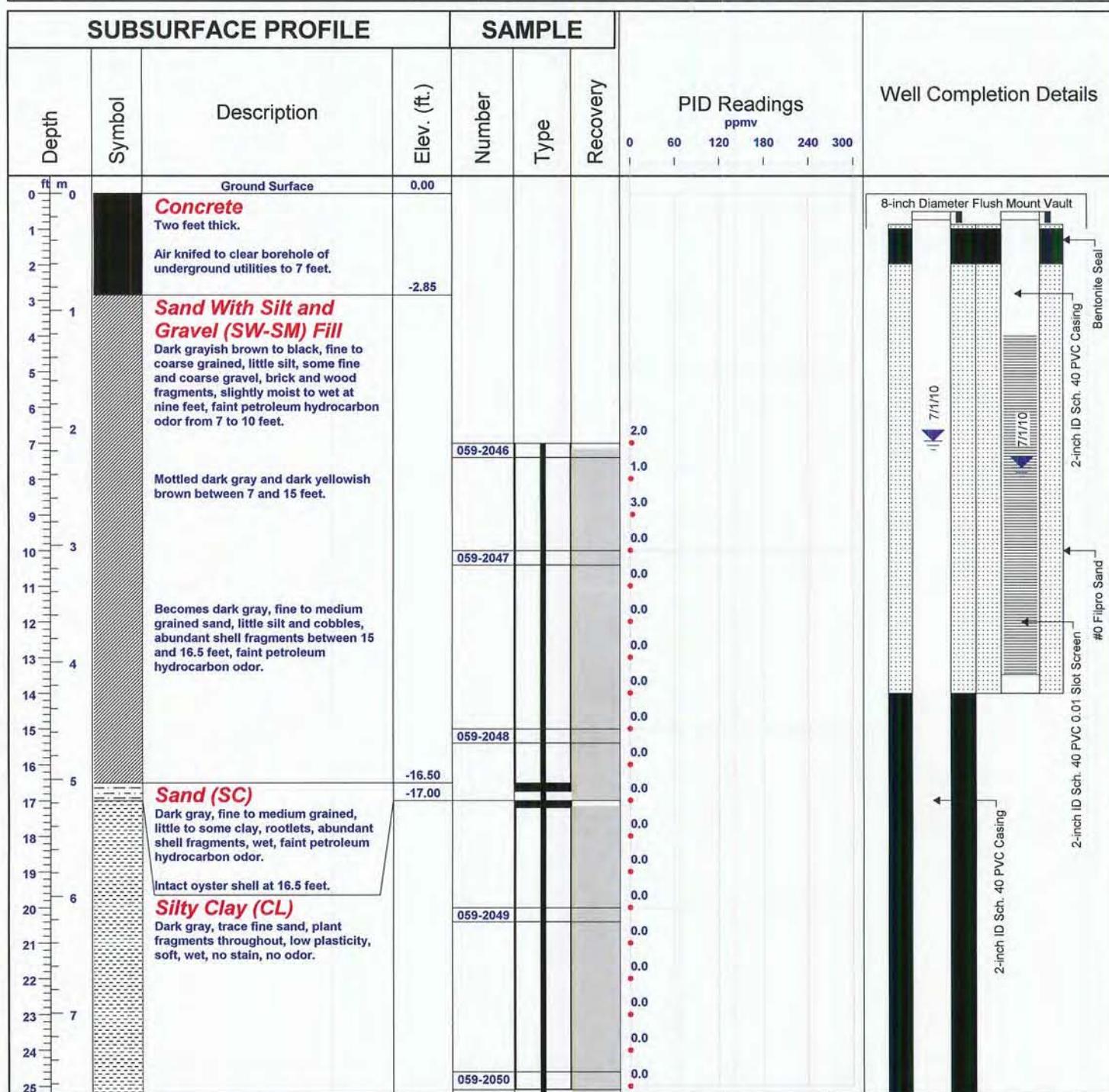
GCMW-11S Easting (ft): 985012.030

GCMW-11I Northing (ft): 184748.730

GCMW-11I Easting (ft): 985012.102

GCMW-11S Elevation (ft AMSL): 9.75

Log of Well: GCMW-11



Drill Method: A300 Rotary Sonic

Start Date: 0815 5/25/10

Hole Size: 8 inches

Drill Company: Boart Longyear

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

End Date: 1005 5/25/10

Sheet: 1 of 2

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 503-537 Smith St., Brooklyn, NY

Logged By: J. Bolduc

GCMW-11S Northing (ft): 184748.913

GCMW-11S Easting (ft): 985012.030

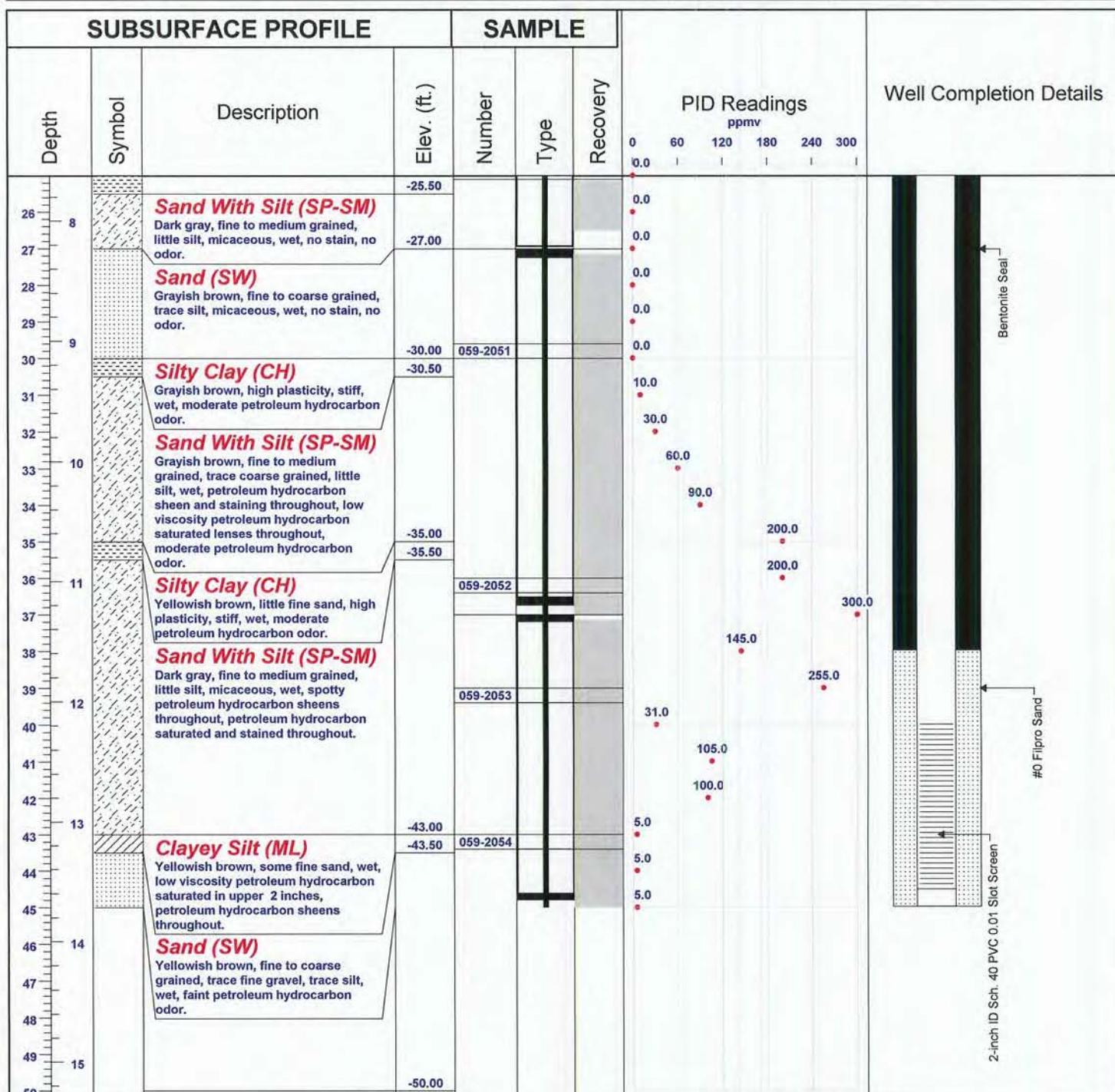
GCMW-11I Northing (ft): 184748.730

GCMW-11I Easting (ft): 985012.102

GCMW-11S Elevation (ft AMSL): 9.75

GCMW-11I Elevation (ft AMSL): 9.75

Log of Well: GCMW-11



Drill Method: A300 Rotary Sonic

Start Date: 0815 5/25/10

Hole Size: 8 inches

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Drill Company: Boart Longyear

End Date: 1005 5/25/10

Sheet: 2 of 2

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 503-537 Smith St., Brooklyn, NY

Logged By: J. Bolduc

GCMW-12S Northing (ft): 184880.719

GCMW-12S Easting (ft): 984934.324

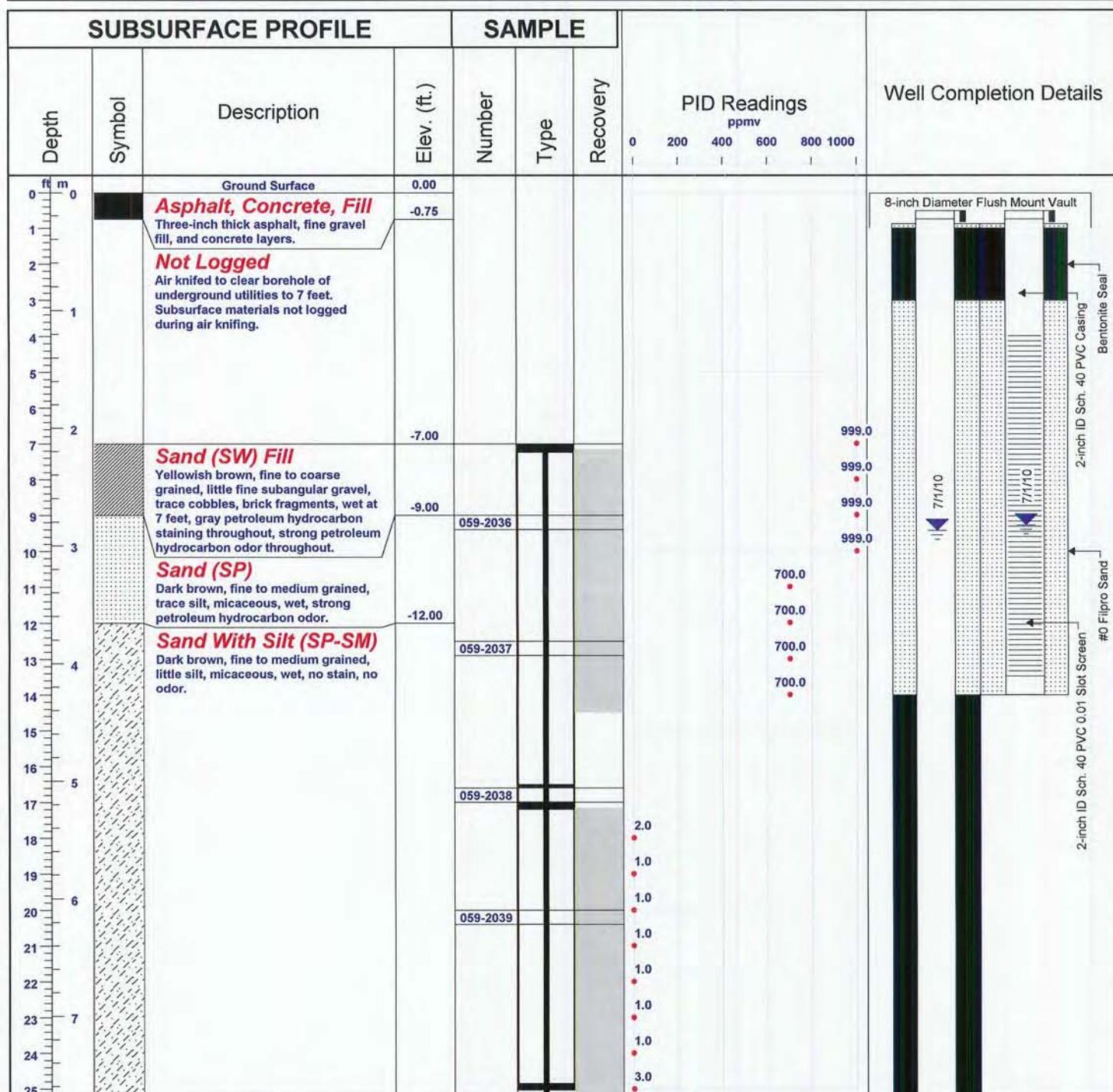
GCMW-12I Northing (ft): 184880.925

GCMW-12I Easting (ft): 984934.330

GCMW-12S Elevation (ft AMSL): 11.84

GCMW-12I Elevation (ft AMSL): 11.75

Log of Well: GCMW-12



Drill Method: A300 Rotary Sonic

Start Date: 0800 5/24/10

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1340 5/24/10

Sheet: 1 of 2

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 503-537 Smith St., Brooklyn, NY

Logged By: J. Bolduc

GCMW-12S Northing (ft): 184880.719

GCMW-12S Easting (ft): 984934.324

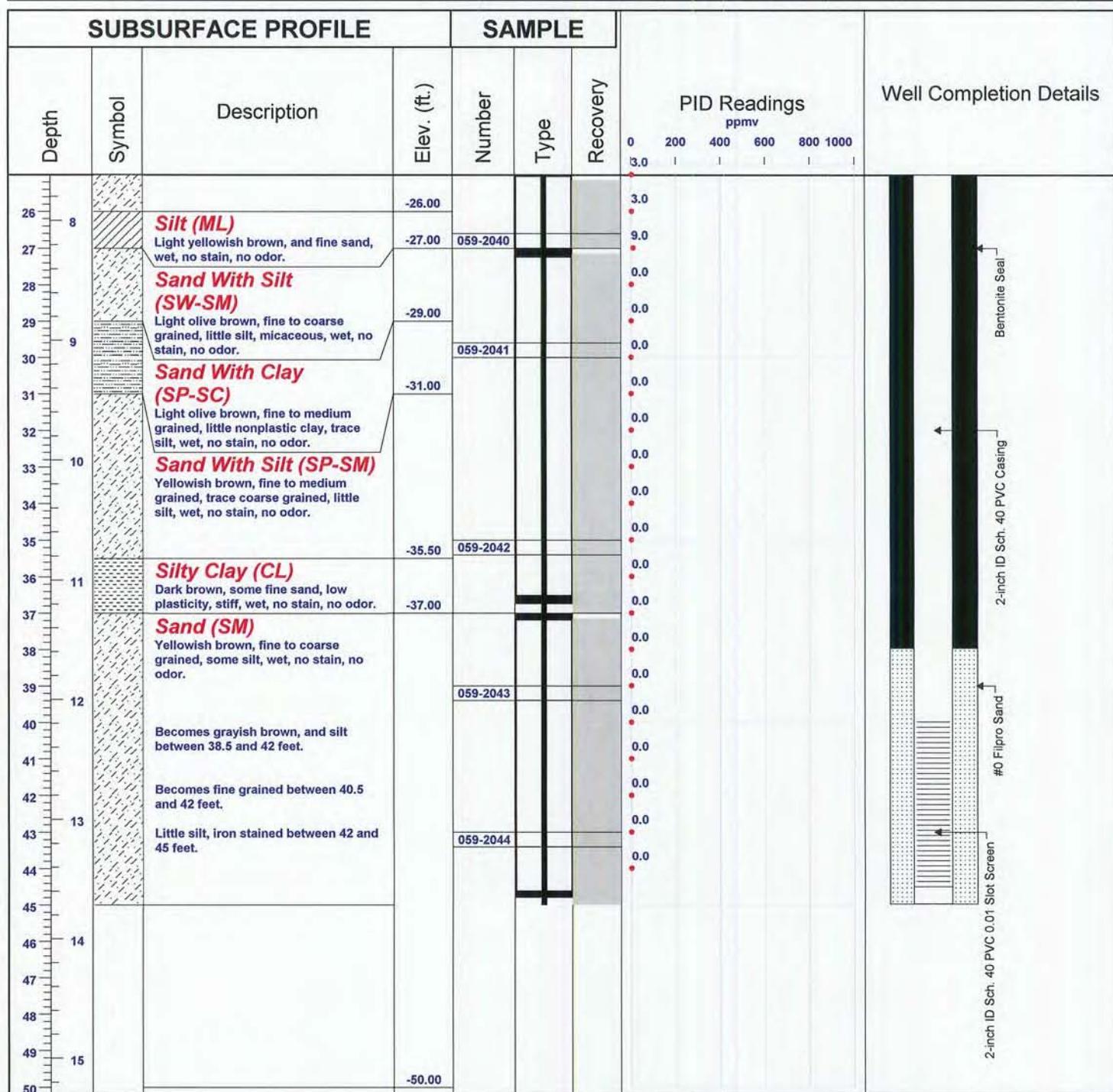
GCMW-12I Northing (ft): 184880.925

GCMW-12I Easting (ft): 984934.330

GCMW-12S Elevation (ft AMSL): 11.84

GCMW-12I Elevation (ft AMSL): 11.75

Log of Well: GCMW-12



Drill Method: A300 Rotary Sonic

Start Date: 0800 5/24/10

Hole Size: 8 inches

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Drill Company: Boart Longyear

End Date: 1340 5/24/10

Sheet: 2 of 2

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 627 Smith St., Brooklyn, NY

Logged By: C. Sklaney

GCMW-13S Northing (ft): 183233.711

GCMW-13S Easting (ft): 984254.685

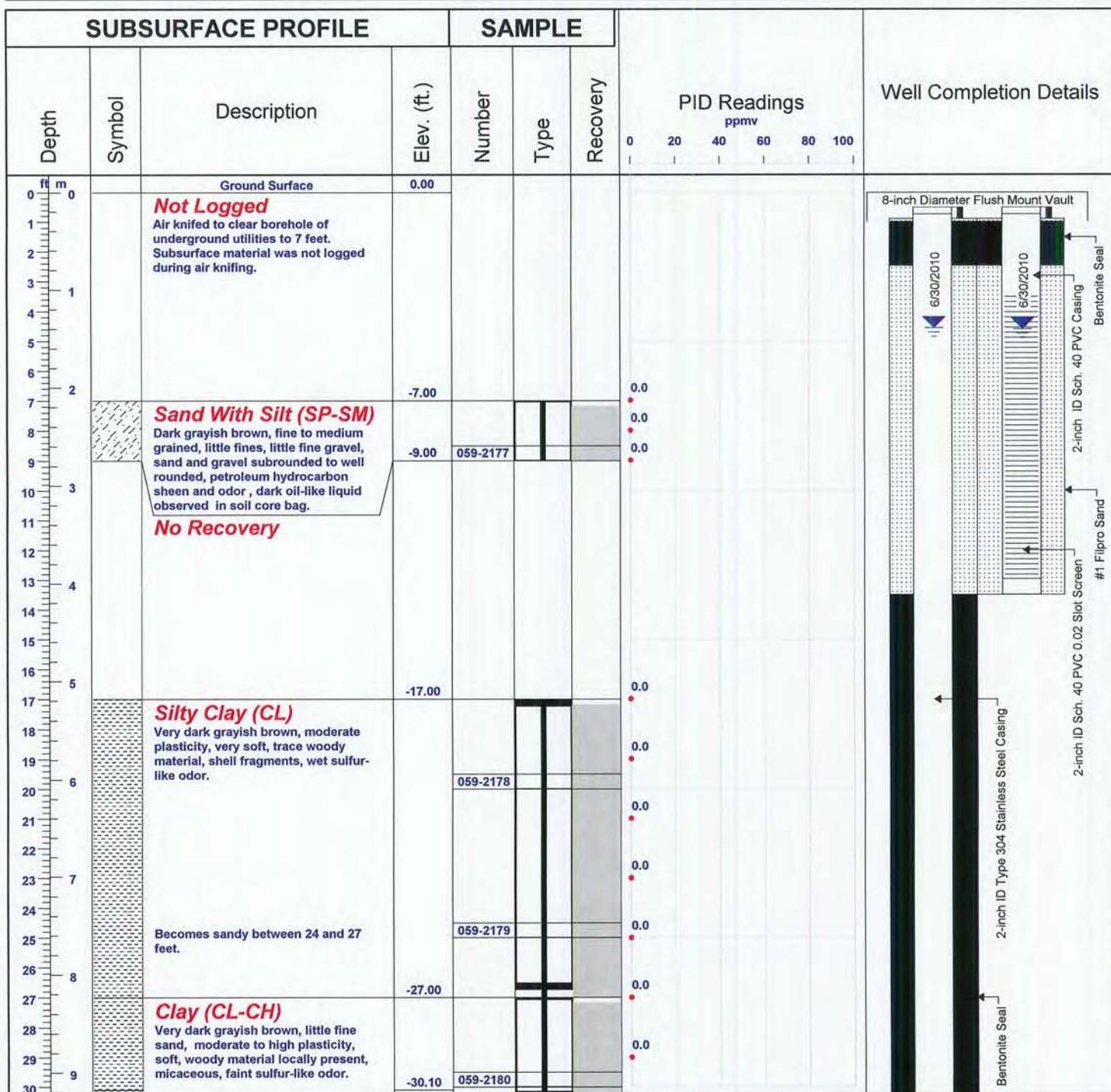
GCMW-13I Northing (ft): 183233.635

GCMW-13I Easting (ft): 984245.432

GCMW-13S Elevation (ft AMSL): 5.85

GCMW-13I Elevation (ft AMSL): 5.82

Log of Well: GCMW-13



Drill Method: A300 Rotary Sonic

Start Date: 1005 6/16/10

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1130 6/16/10

Sheet: 1 of 2

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 627 Smith St., Brooklyn, NY

Logged By: C. Sklaney

GCMW-13S Northing (ft): 183233.711

GCMW-13S Easting (ft): 984254.685

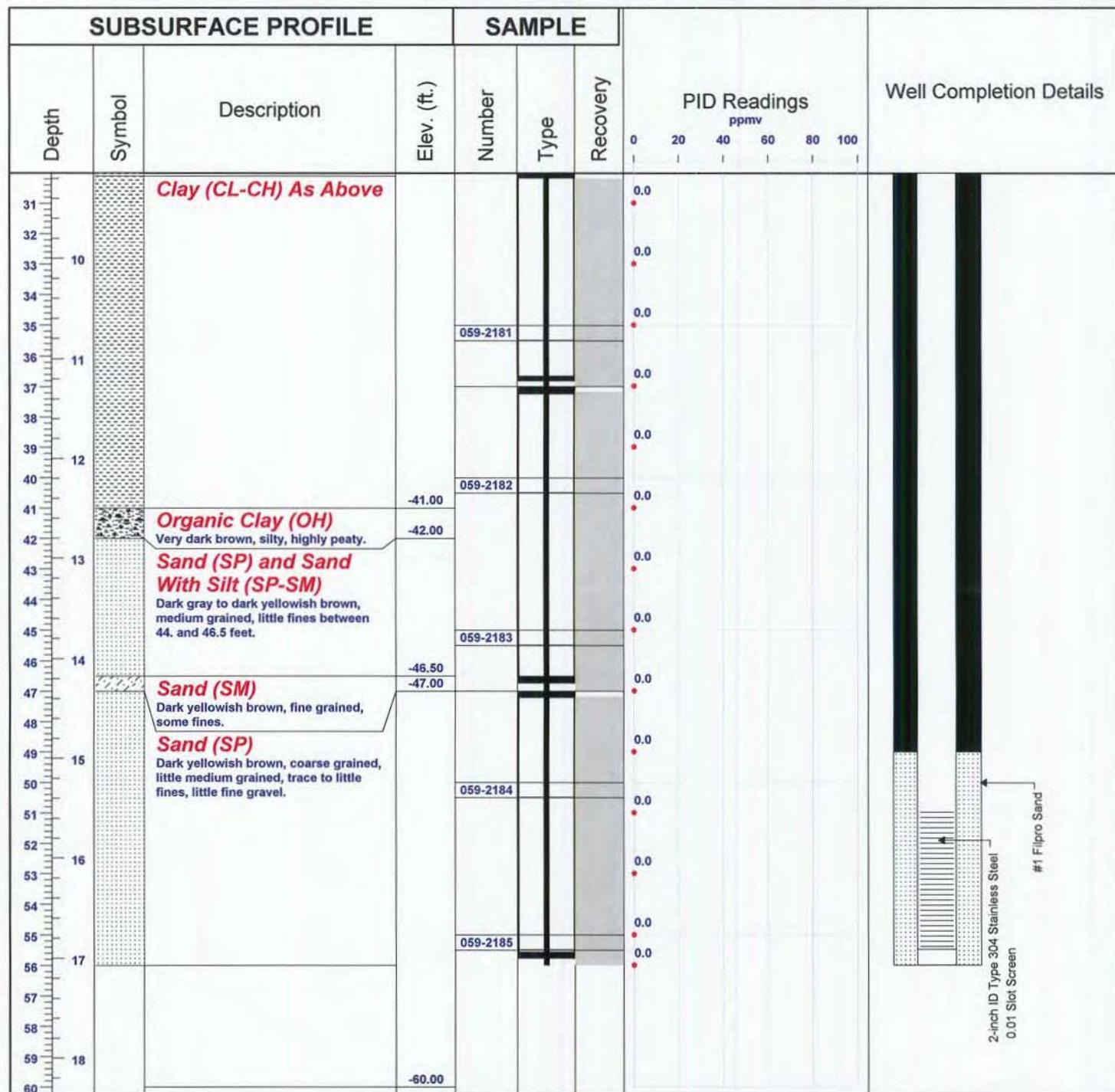
GCMW-13I Northing (ft): 183233.635

GCMW-13I Easting (ft): 984245.432

GCMW-13S Elevation (ft AMSL): 5.85

GCMW-13I Elevation (ft AMSL): 5.82

Log of Well: GCMW-13



Drill Method: A300 Rotary Sonic

Start Date: 1005 6/16/10

Hole Size: 8 inches

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Drill Company: Boart Longyear

End Date: 1130 6/16/10

Sheet: 2 of 2

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 641 Smith St., Brooklyn, NY

Logged By: C. Sklaney

GCMW-14S Northing (ft): 183476.514

GCMW-14S Easting (ft): 984232.892

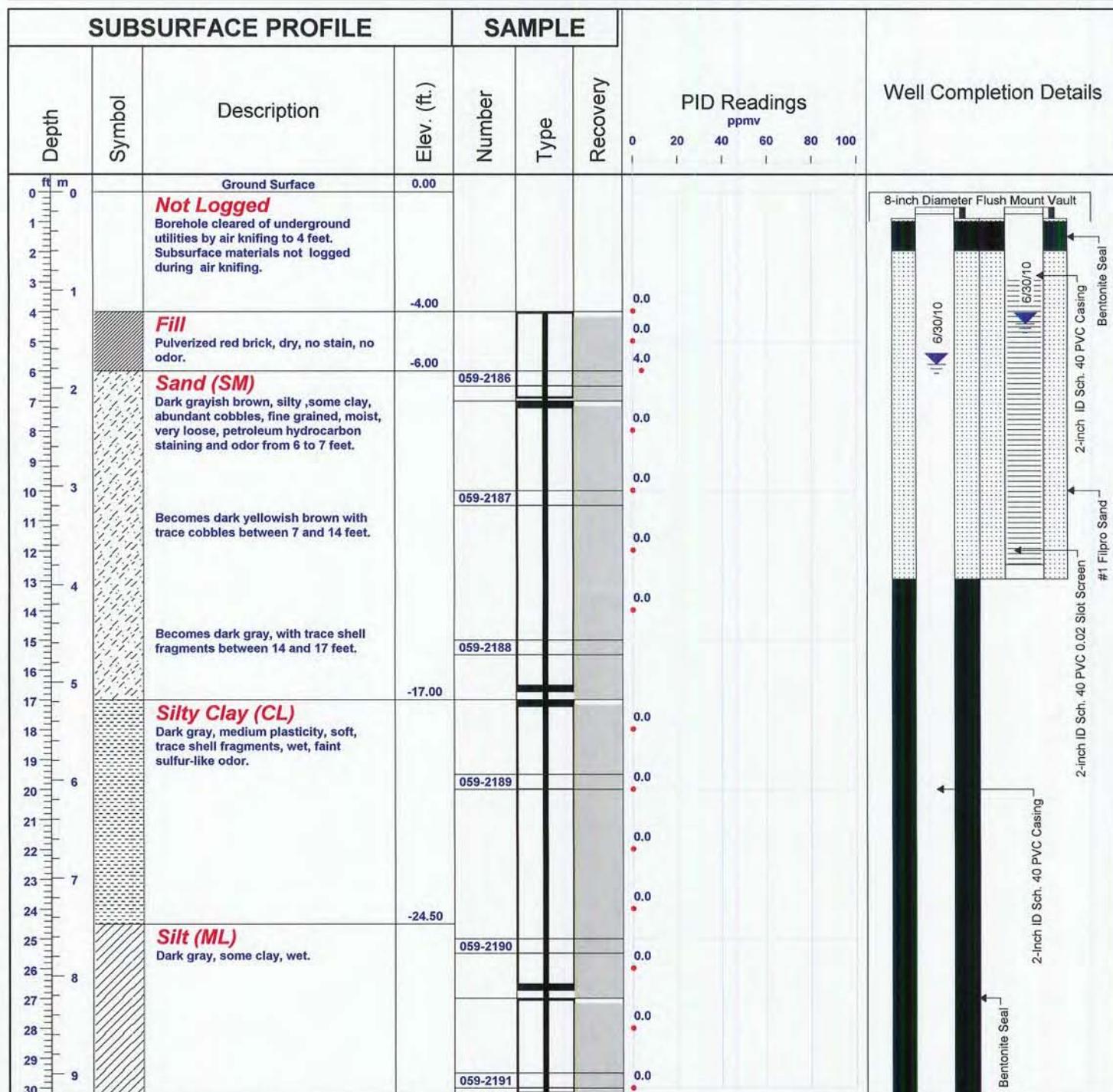
GCMW-14I Northing (ft): 183476.665

GCMW-14I Easting (ft): 984232.657

GCMW-14S Elevation (ft AMSL): 7.04

GCMW-14I Elevation (ft AMSL): 7.05

Log of Well: GCMW-14



Drill Method: A300 Rotary Sonic

Start Date: 0730 6/17/10

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1130 6/17/10

Sheet: 1 of 2

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 641 Smith St., Brooklyn, NY

Logged By: C. Sklaney

GCMW-14S Northing (ft): 183476.514

GCMW-14S Easting (ft): 984232.892

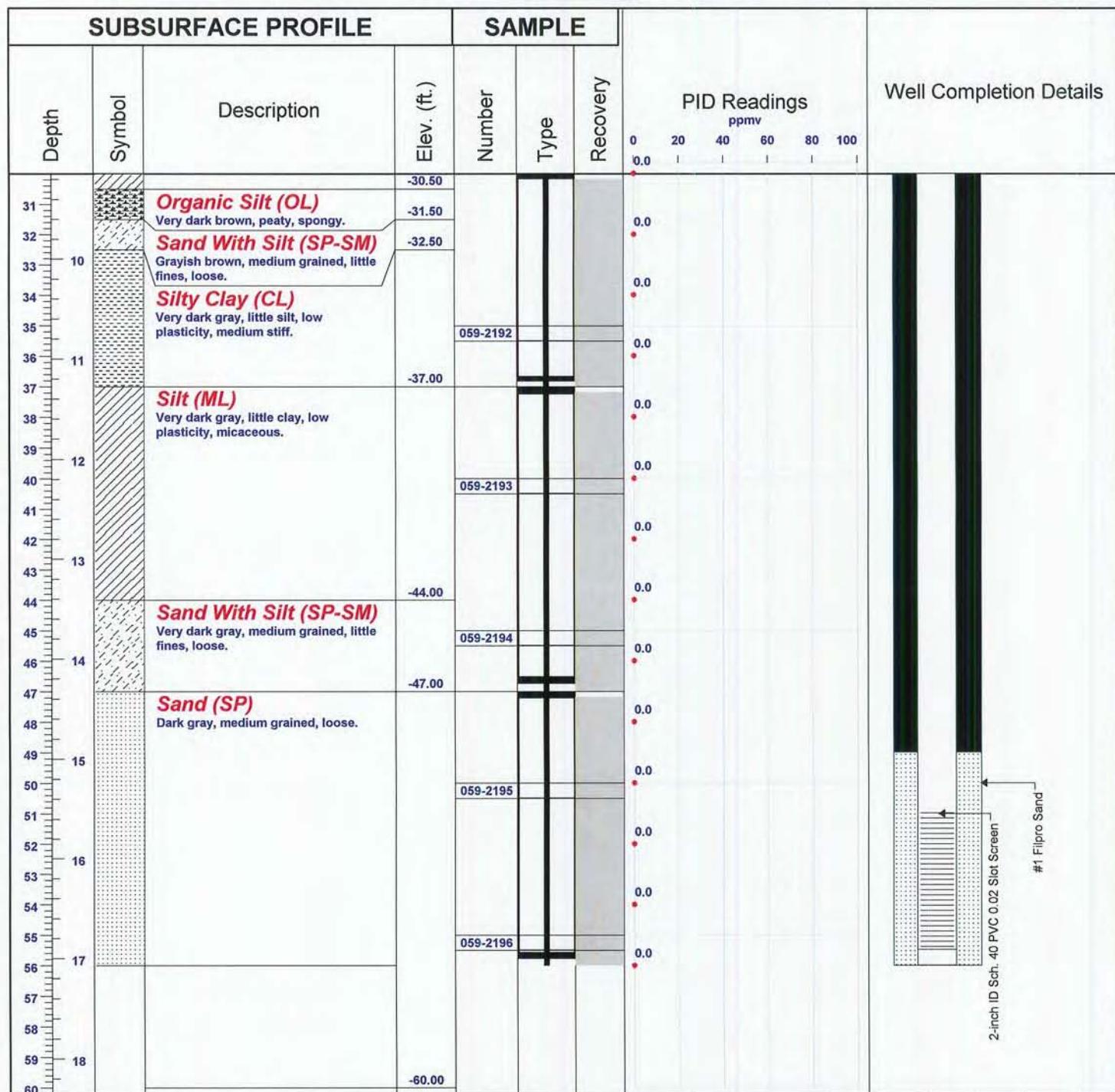
GCMW-14I Northing (ft): 183476.665

GCMW-14I Easting (ft): 984232.657

GCMW-14S Elevation (ft AMSL): 7.04

GCMW-14I Elevation (ft AMSL): 7.05

Log of Well: GCMW-14



Drill Method: A300 Rotary Sonic

Start Date: 0730 6/17/10

Hole Size: 8 inches

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Drill Company: Boart Longyear

End Date: 1130 6/17/10

Sheet: 2 of 2

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 764 Court St., Brooklyn, NY

Logged By: J. Bolduc

GCMW-15S Northing (ft): 182543.823

Log of Well: GCMW-15

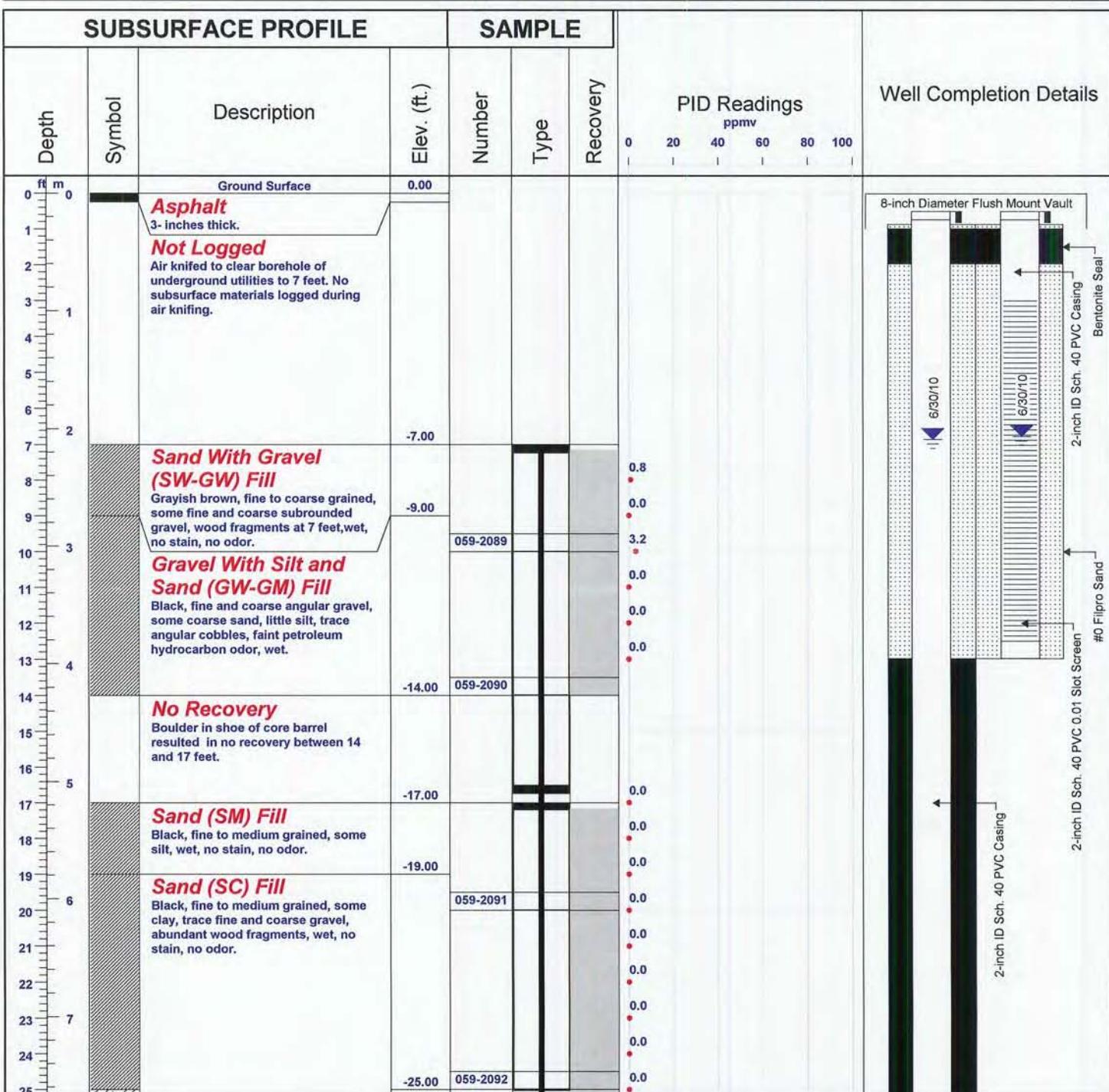
GCMW-15S Easting (ft): 983485.511

GCMW-15I Northing (ft): 182543.674

GCMW-15I Easting (ft): 983485.631

GCMW-15S Elevation (ft AMSL): 7.46

GCMW-15I Elevation (ft AMSL): 7,49



Drill Method: A300 Rotary Sonic

Start Date: 0835 6/2/10

Hole Size: 8 inches

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Drill Company: Boart Longyear

End Date: 1200 6/2/10

Sheet: 1 of 3

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 764 Court St., Brooklyn, NY

Logged By: J. Bolduc

GCMW-15S Northing (ft): 182543.823

GCMW-15S Easting (ft): 983485.511

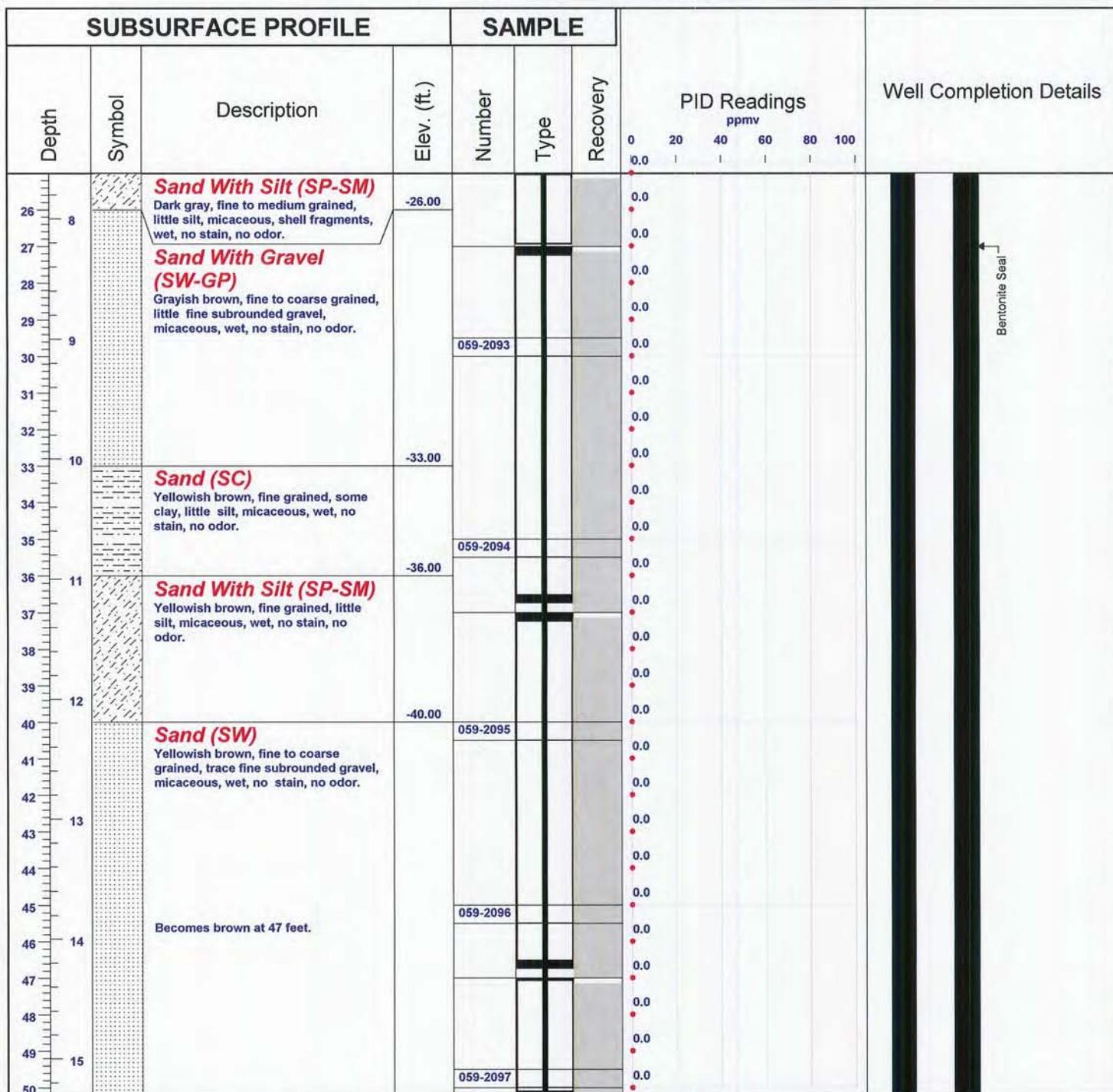
GCMW-15I Northing (ft): 182543.674

GCMW-15I Easting (ft): 983485.631

GCMW-15S Elevation (ft AMSL): 7.46

GCMW-15I Elevation (ft AMSL): 7.49

Log of Well: GCMW-15



Drill Method: A300 Rotary Sonic

Start Date: 0835 6/2/10

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1200 6/2/10

Sheet: 2 of 3

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 764 Court St., Brooklyn, NY

Logged By: J. Bolduc

GCMW-15S Northing (ft): 182543.823

GCMW-15S Easting (ft): 983485.511

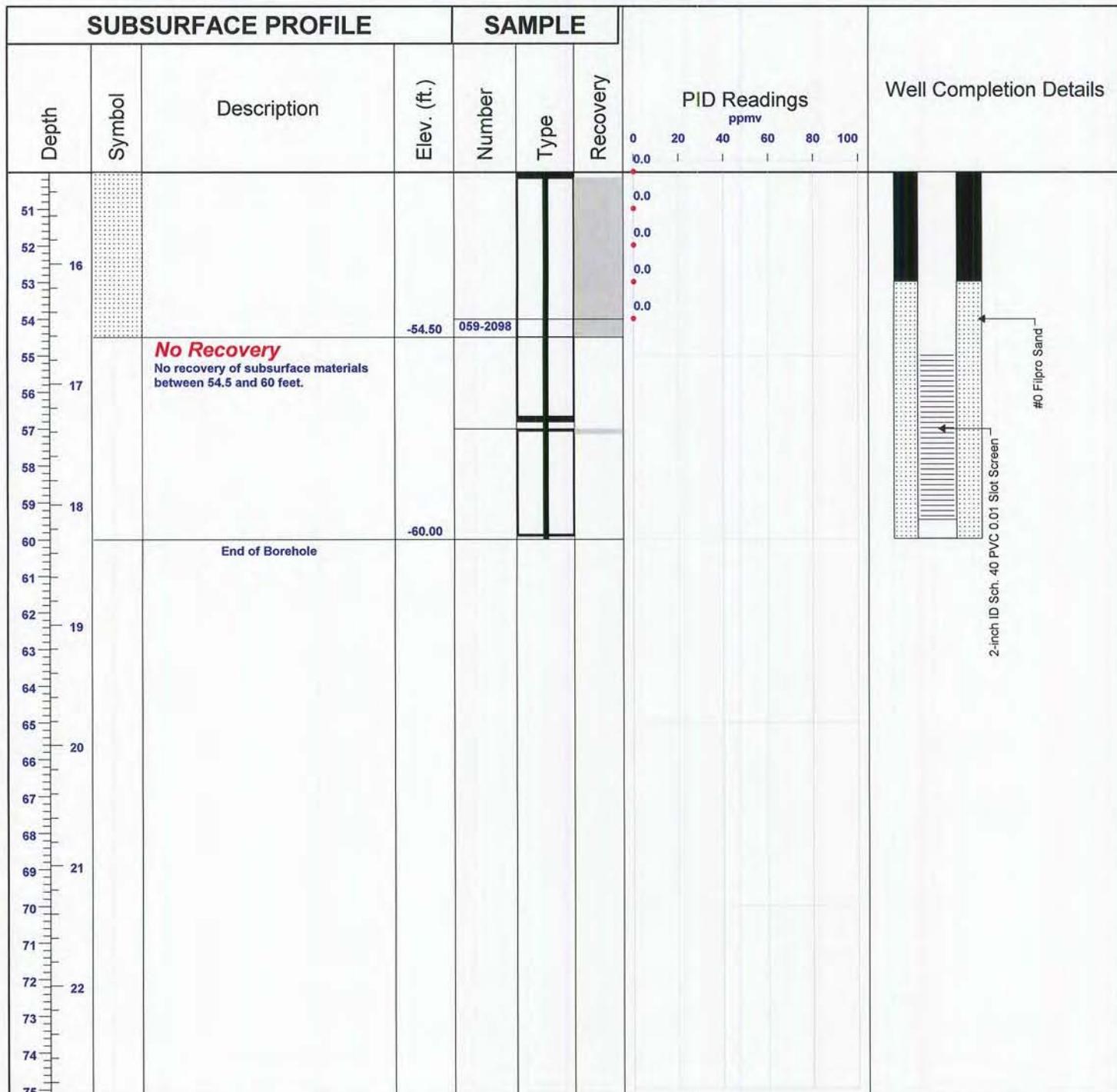
GCMW-15I Northing (ft): 182543.674

GCMW-15I Easting (ft): 983485.631

GCMW-15S Elevation (ft AMSL): 7.46

GCMW-15I Elevation (ft AMSL): 7.49

Log of Well: GCMW-15



Drill Method: A300 Rotary Sonic

Start Date: 0835 6/2/10

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1200 6/2/10

Sheet: 3 of 3

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

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Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: Bryant St., Brooklyn, NY

Logged By: C. Sklaney

GCMW-16S Northing (ft): 182991.714

GCMW-16S Easting (ft): 983418.757

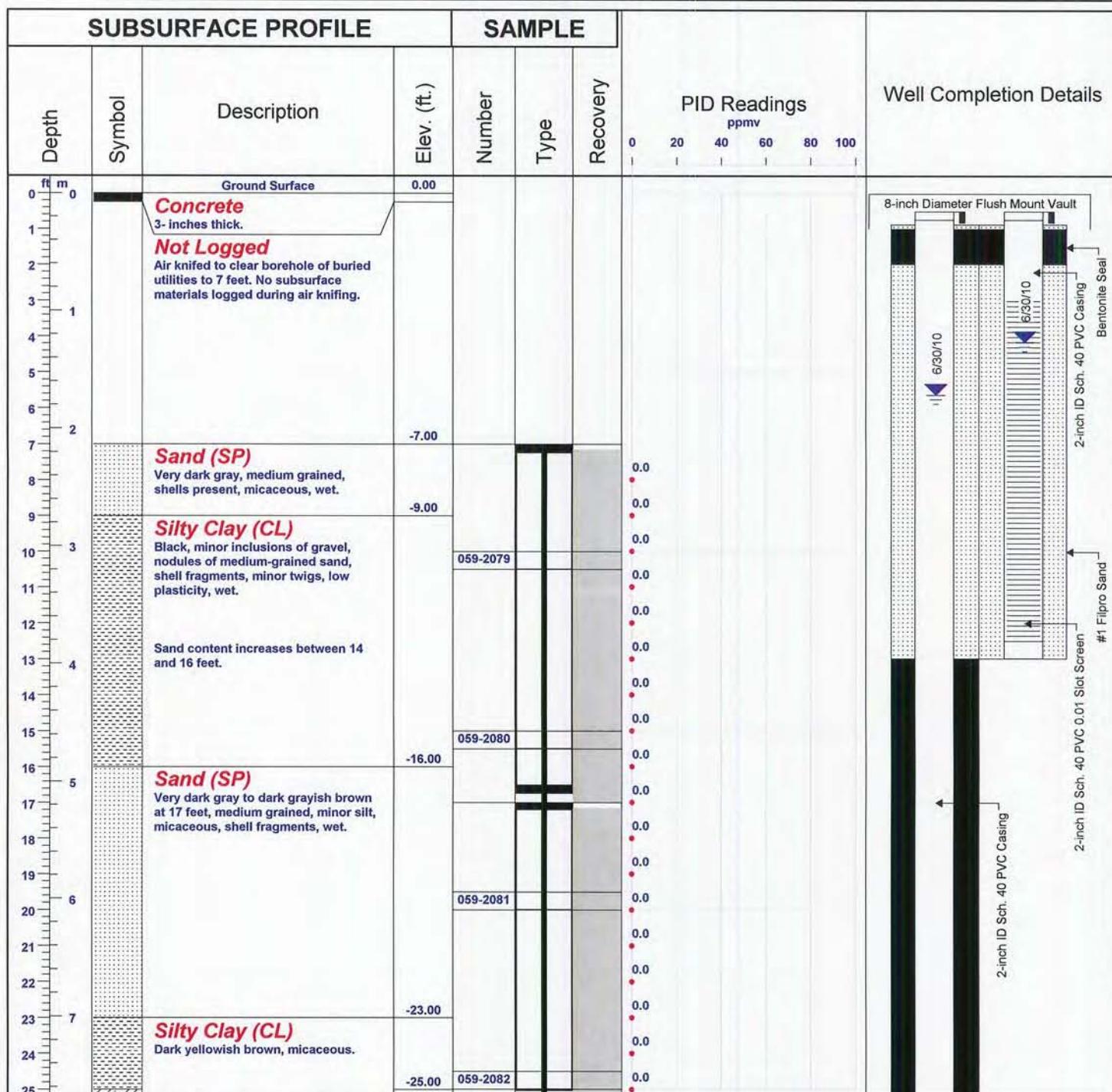
GCMW-16I Northing (ft): 182991.680

GCMW-16I Easting (ft): 983418.913

GCMW-16S Elevation (ft AMSL): 6.72

GCMW-16I Elevation (ft AMSL): 6.77

Log of Well: GCMW-16



Drill Method: A300 Rotary Sonic

Start Date: 0800 6/1/10

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1430 6/1/10

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Sheet: 1 of 3

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: Bryant St., Brooklyn, NY

Logged By: C. Sklaney

GCMW-16S Northing (ft): 182991.714

Log of Well: GCMW-16

GCMW-16S Easting (ft): 983418.757

GCMW-16I Northing (ft): 182991.680

GCMW-16I Easting (ft): 983418.913

GCMW-16S Elevation (ft AMSL): 6.72

GCMW-16S Elevation (ft AMSL): 6.77

SUBSURFACE PROFILE			SAMPLE									
Depth	Symbol	Description	Elev. (ft.)	Number	Type	Recovery	PID Readings ppmv			Well Completion Details		
26		Sand With Silt (SP-SM) Dark yellowish brown, medium grained, inclusions of dark grayish brown clayey silt, micaceous, wet.	-27.00				0	20	40	60	80	100
27		Silty Clay (CL) Very dark grayish brown, micaceous, wet, locally iron stained.					0.0	0.0	0.0	0.0	0.0	0.0
28							0.0	0.0	0.0	0.0	0.0	0.0
29							0.0	0.0	0.0	0.0	0.0	0.0
30							0.0	0.0	0.0	0.0	0.0	0.0
31		Sand (SC) Dark yellowish brown, fine grained, clayey, some silt, laminated in 1/4 to 1/8 inch intervals, micaceous, wet.					0.0	0.0	0.0	0.0	0.0	0.0
32							0.0	0.0	0.0	0.0	0.0	0.0
33							0.0	0.0	0.0	0.0	0.0	0.0
34							0.0	0.0	0.0	0.0	0.0	0.0
35		Silt (ML) Dark grayish brown, sandy, blocky, 10 to 15% clay in laminations of 1/8 to 1/4 inch thickness, wet.					0.0	0.0	0.0	0.0	0.0	0.0
36							0.0	0.0	0.0	0.0	0.0	0.0
37		Sand (SW) Brown, coarse grained, little fine rounded gravel in lower 5 feet, loose, wet.					0.0	0.0	0.0	0.0	0.0	0.0
38							0.0	0.0	0.0	0.0	0.0	0.0
39							0.0	0.0	0.0	0.0	0.0	0.0
40							0.0	0.0	0.0	0.0	0.0	0.0
41							0.0	0.0	0.0	0.0	0.0	0.0
42							0.0	0.0	0.0	0.0	0.0	0.0
43							0.0	0.0	0.0	0.0	0.0	0.0
44							0.0	0.0	0.0	0.0	0.0	0.0
45							0.0	0.0	0.0	0.0	0.0	0.0
46							0.0	0.0	0.0	0.0	0.0	0.0
47							0.0	0.0	0.0	0.0	0.0	0.0
48							0.0	0.0	0.0	0.0	0.0	0.0
49							0.0	0.0	0.0	0.0	0.0	0.0
50							0.0	0.0	0.0	0.0	0.0	0.0

Drill Method: A300 Rotary Sonic

Start Date: 0800 6/1/10

Hole Size: 8 inches

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Drill Company: Boart Longyear

End Date: 1430 6/1/10

Sheet: 2 of 3

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: Bryant St., Brooklyn, NY

Logged By: C. Sklaney

GCMW-16S Northing (ft): 182991.714

GCMW-16S Easting (ft): 983418.757

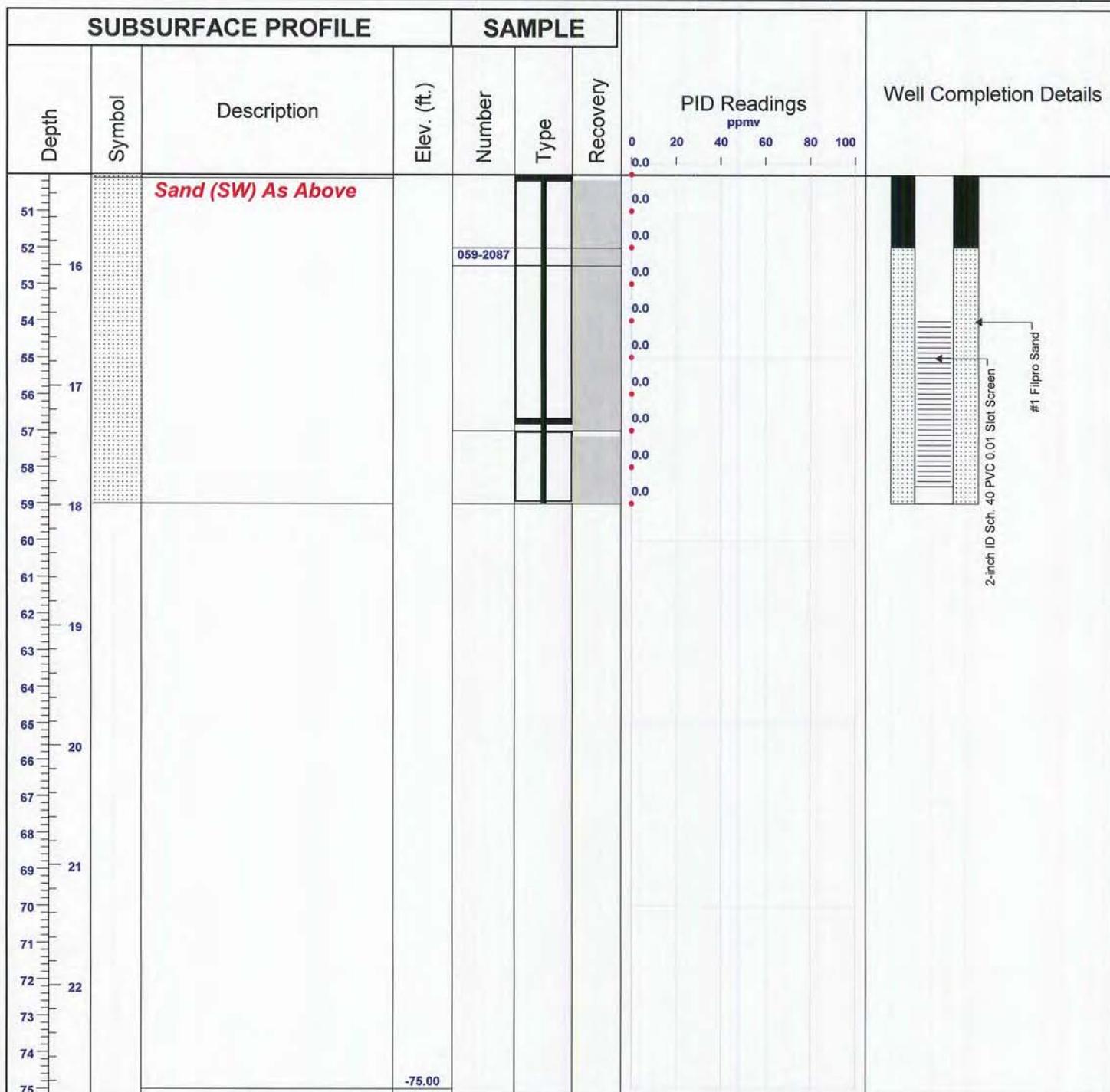
GCMW-16I Northing (ft): 182991.680

GCMW-16I Easting (ft): 983418.913

GCMW-16S Elevation (ft AMSL): 6.72

GCMW-16I Elevation (ft AMSL): 6.77

Log of Well: GCMW-16



Drill Method: A300 Rotary Sonic

Start Date: 0800 6/1/10

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1430 6/1/10

Sheet: 3 of 3

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

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Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 9th St., Brooklyn, NY

Logged By: J. Bolduc

GCMW-20S Northing (ft): 185002.658

GCMW-20S Easting (ft): 985421.611

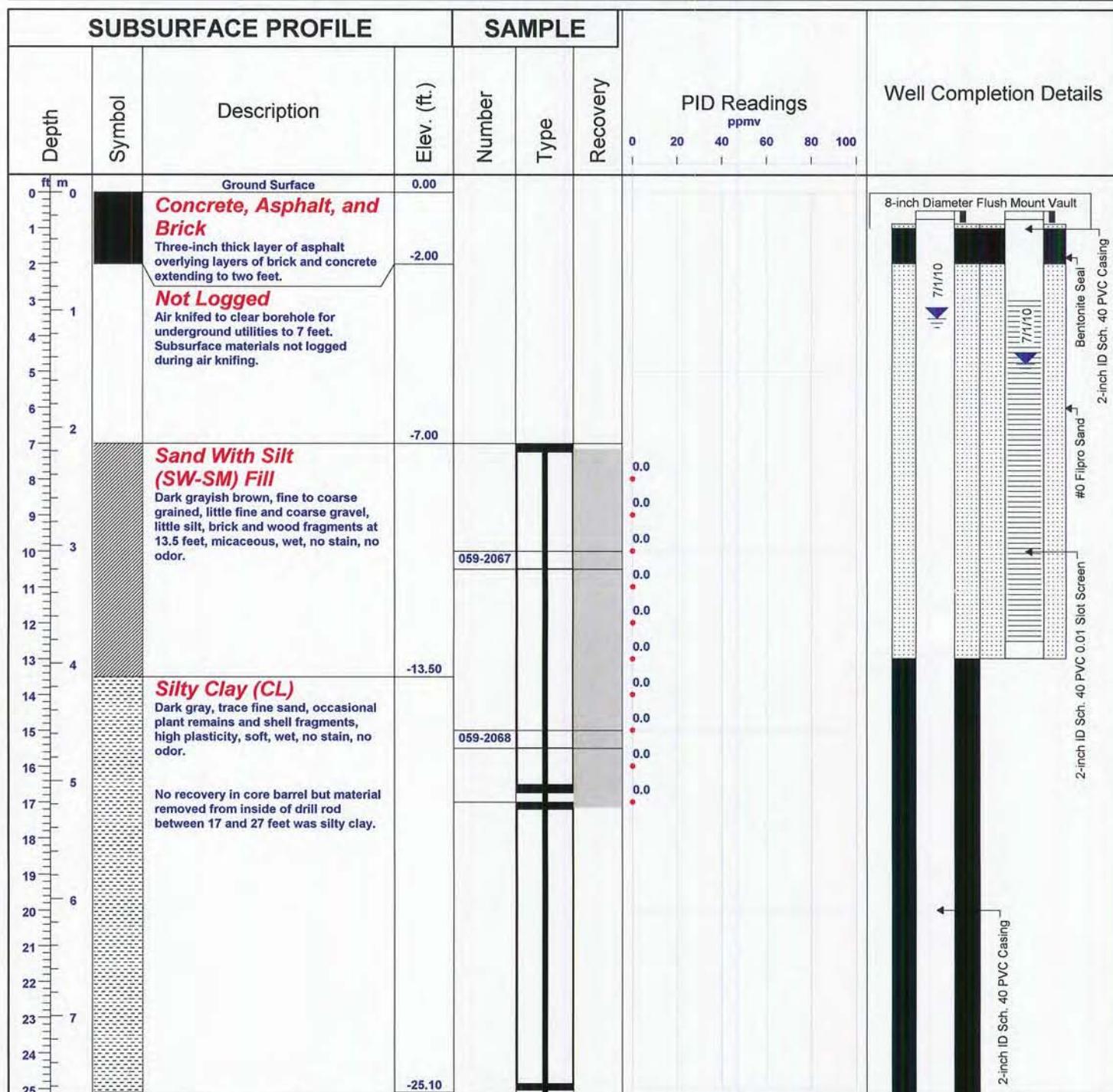
GCMW-20I Northing (ft): 185002.448

GCMW-20I Easting (ft): 985421.455

GCMW-20S Elevation (ft AMSL): 6.00

GCMW-20I Elevation (ft AMSL): 6.06

Log of Well: GCMW-20



Drill Method: A300 Rotary Sonic

Start Date: 1430 5/26/10

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1800 5/26/10

Sheet: 1 of 2

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 9th St., Brooklyn, NY

Logged By: J. Bolduc

GCMW-20S Northing (ft): 185002.658

GCMW-20S Easting (ft): 985421.611

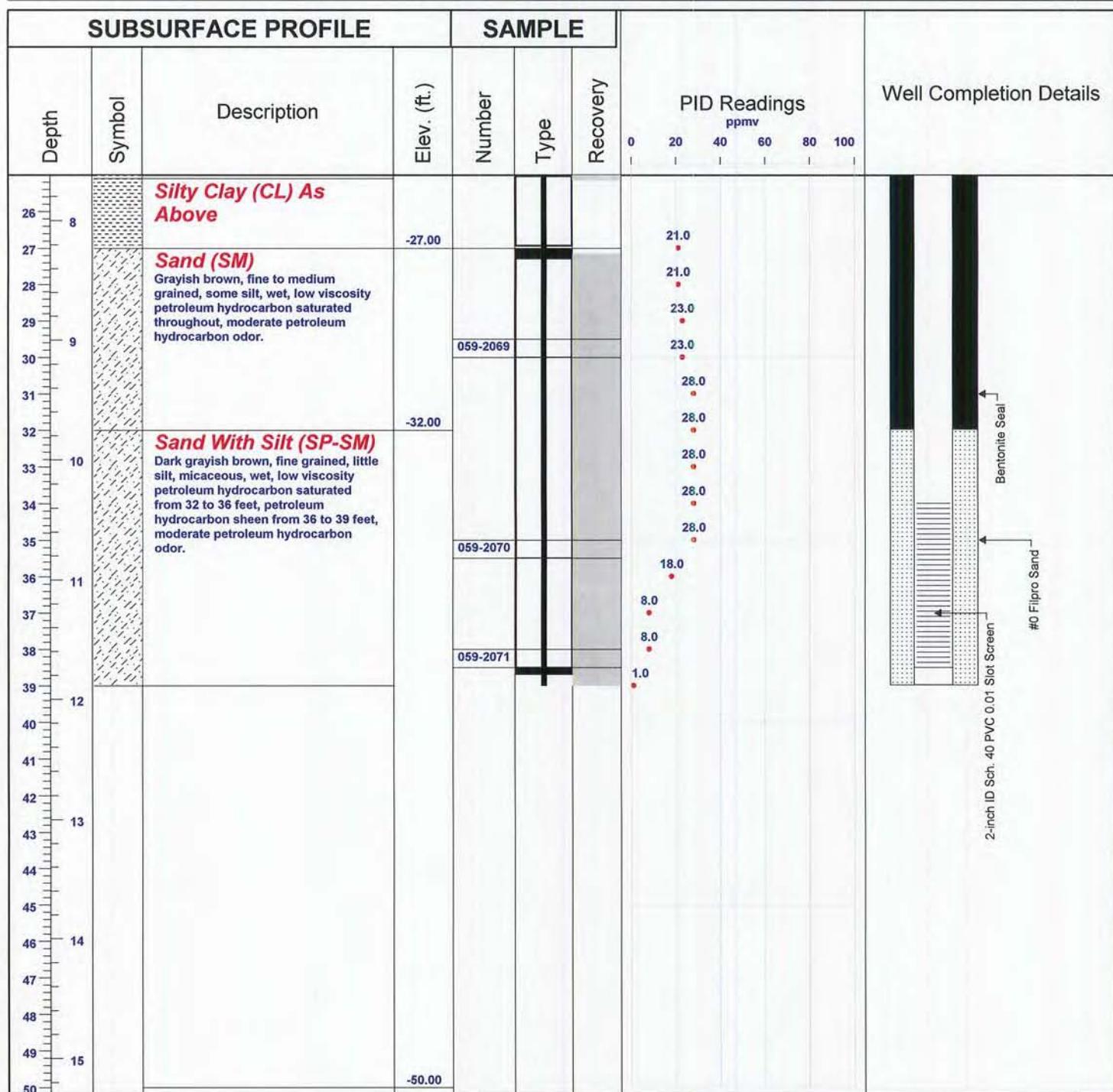
GCMW-20I Northing (ft): 185002.448

GCMW-20I Easting (ft): 985421.455

GCMW-20S Elevation (ft AMSL): 6.00

GCMW-20I Elevation (ft AMSL): 6.06

Log of Well: GCMW-20



Drill Method: A300 Rotary Sonic

Start Date: 1430 5/26/10

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1800 5/26/10

Sheet: 2 of 2

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 9th St., Brooklyn, NY

Logged By: J. Bolduc

GCMW-21S Northing (ft): 184893.024

Log of Well: GCMW-21

GCMW-21S Easting (ft): 985677.980

GCMW-21I Northing (ft): 184893.096

GCMW-21I Easting (ft): 985678.313

GCMW-21S Elevation (ft AMSL): 6.22

GCMW-21 | Elevation (ft AMSL): 6.31

Subsurface Profile			Sample				Well Completion Details	
Depth	Symbol	Description	Elev. (ft.)	Number	Type	Recovery	PID Readings ppmv	
0 ft m 0		Ground Surface	0.00				0	100
1		Asphalt, Cobblestones, and Concrete Layers of asphalt, cobblestones and concrete to 4 feet. Groundwater at 4 feet.	-4.00				1	1
2							1	1
3							1	1
4							1	1
5		Not Logged Air knifed to clear borehole for underground utilities to 7 feet. Subsurface materials not logged during air knifing.	-7.00				1	1
6							1	1
7							1	1
8		Gravel With Sand (GW-SW) Fill	-9.00				1	1
9							1	1
10		Silty Clay (CL) Dark gray, trace fine sand, low plasticity, very soft, abundant plant remains and occasional shell fragments throughout, micaceous, wet, no stain, no odor.	-19.00	059-2055			1	1
11							1	1
12							1	1
13							1	1
14							1	1
15				059-2056			1	1
16							1	1
17							1	1
18							0.0	0.0
19		Sand With Silt (SP-SM) Dark gray, fine to medium grained, trace coarse grained, little silt, micaceous, wet, no stain, no odor.	-25.00	059-2057			0.0	0.0
20							0.0	0.0
21							0.0	0.0
22							0.0	0.0
23							0.0	0.0
24							0.0	0.0
25				059-2058			0.0	0.0

Drill Method: A300 Rotary Sonic

Start Date: 1300 5/25/10

Hole Size: 8 inches

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Drill Company: Boart Longyear

End Date: 1600 5/25/10

Sheet: 1 of 2

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 9th St., Brooklyn, NY

Logged By: J. Bolduc

GCMW-21S Northing (ft): 184893.024

GCMW-21S Easting (ft): 985677.980

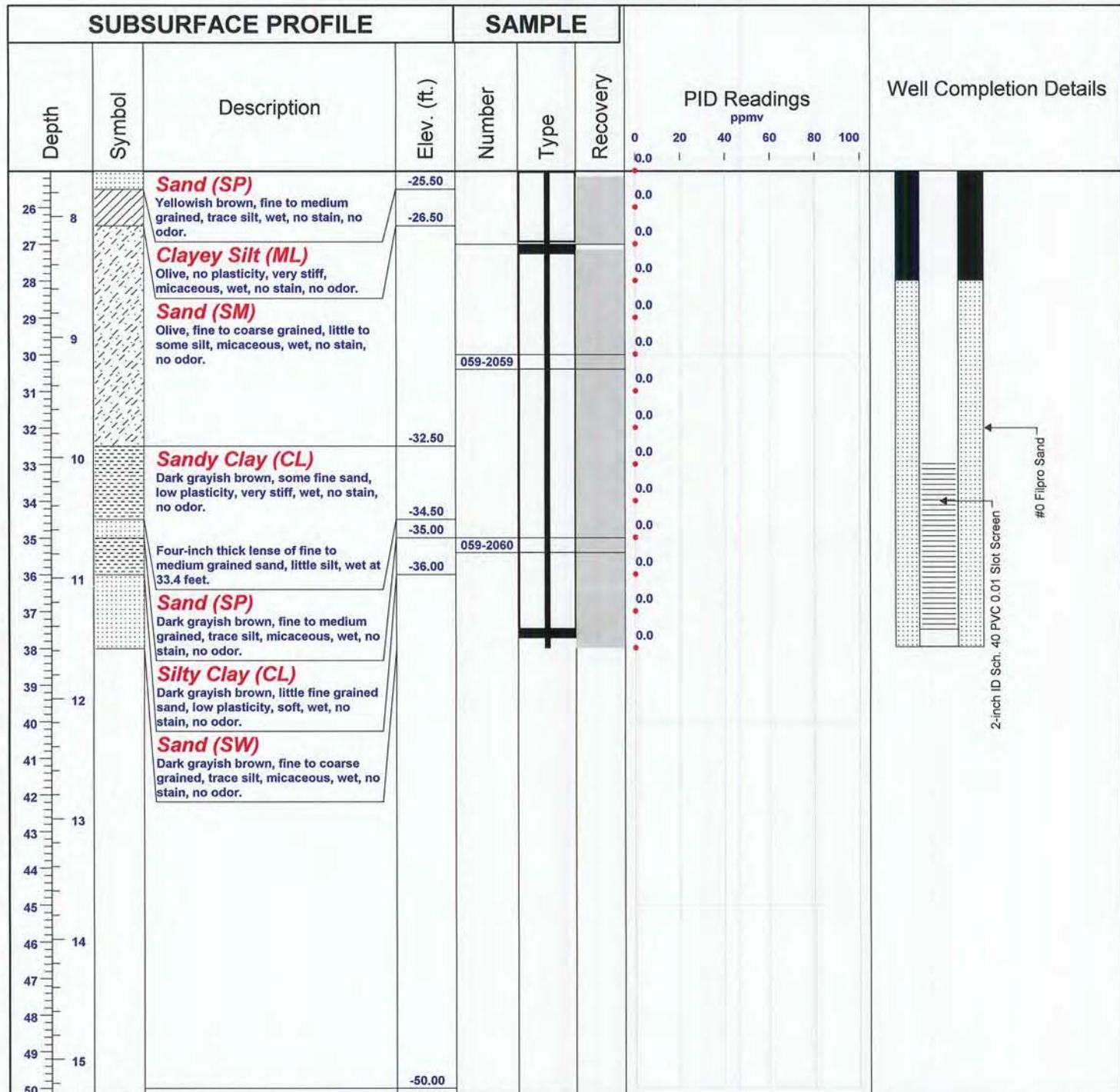
GCMW-21I Northing (ft): 184893.096

GCMW-21I Easting (ft): 985678.313

GCMW-21S Elevation (ft AMSL): 6.22

GCMW-21I Elevation (ft AMSL): 6.31

Log of Well: GCMW-21



Drill Method: A300 Rotary Sonic

Start Date: 1300 5/25/10

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1600 5/25/10

Sheet: 2 of 2

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 6th St. & 2nd Ave., Brooklyn, NY

Logged By: J. Bolduc

GCMW-24S Northing (ft): 185075.269

GCMW-24S Easting (ft): 986309.247

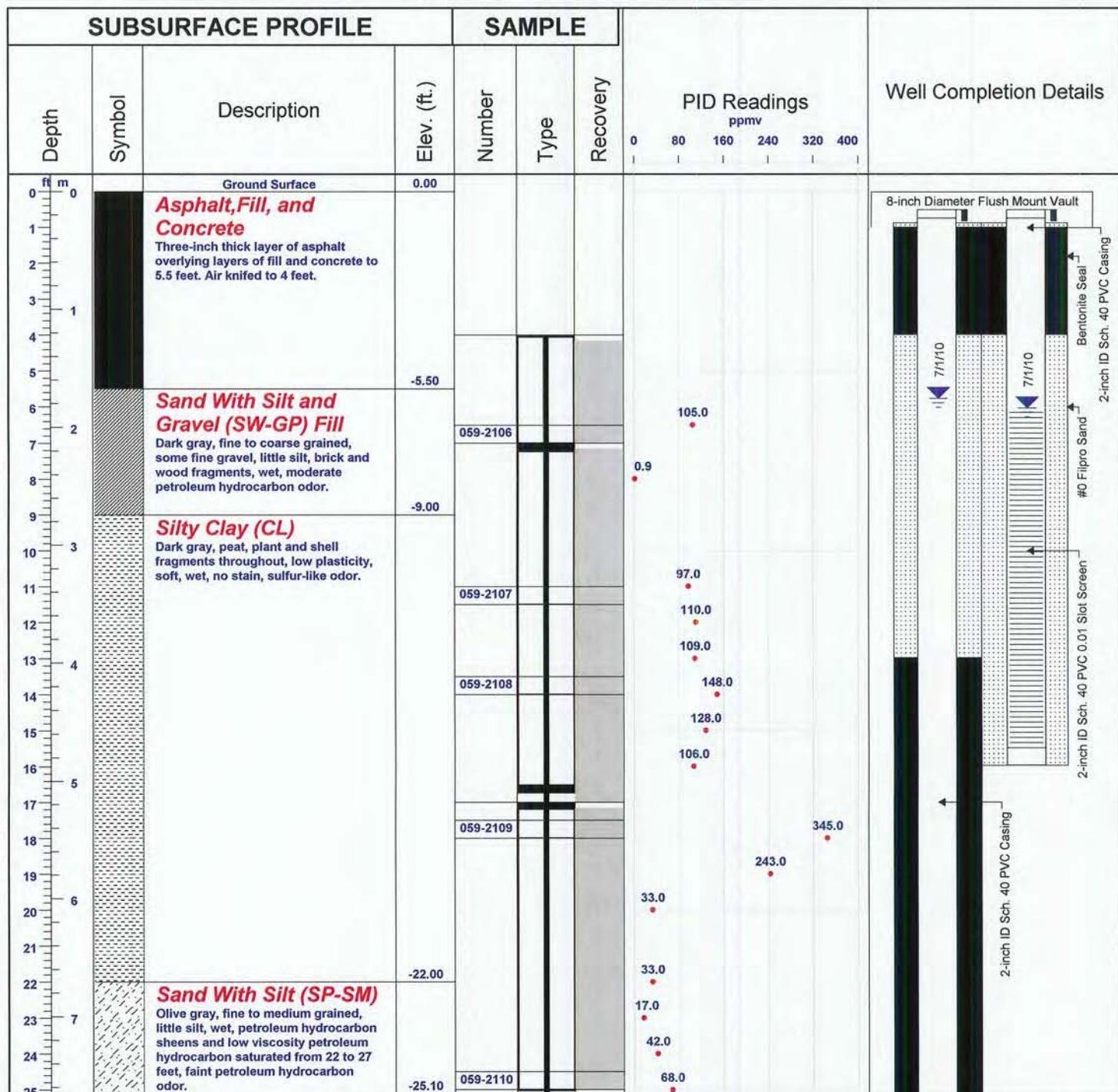
GCMW-24I Northing (ft): 185075.460

GCMW-24I Easting (ft): 986309.052

GCMW-24S Elevation (ft AMSL): 8.71

GCMW-24I Elevation (ft AMSL): 8.71

Log of Well: GCMW-24



Drill Method: A300 Rotary Sonic

Start Date: 1000 6/7/10

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1300 6/7/10

Sheet: 1 of 2

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 6th St. & 2nd Ave., Brooklyn, NY

Logged By: J. Bolduc

GCMW-24S Northing (ft): 185075.269

GCMW-24S Easting (ft): 986309.247

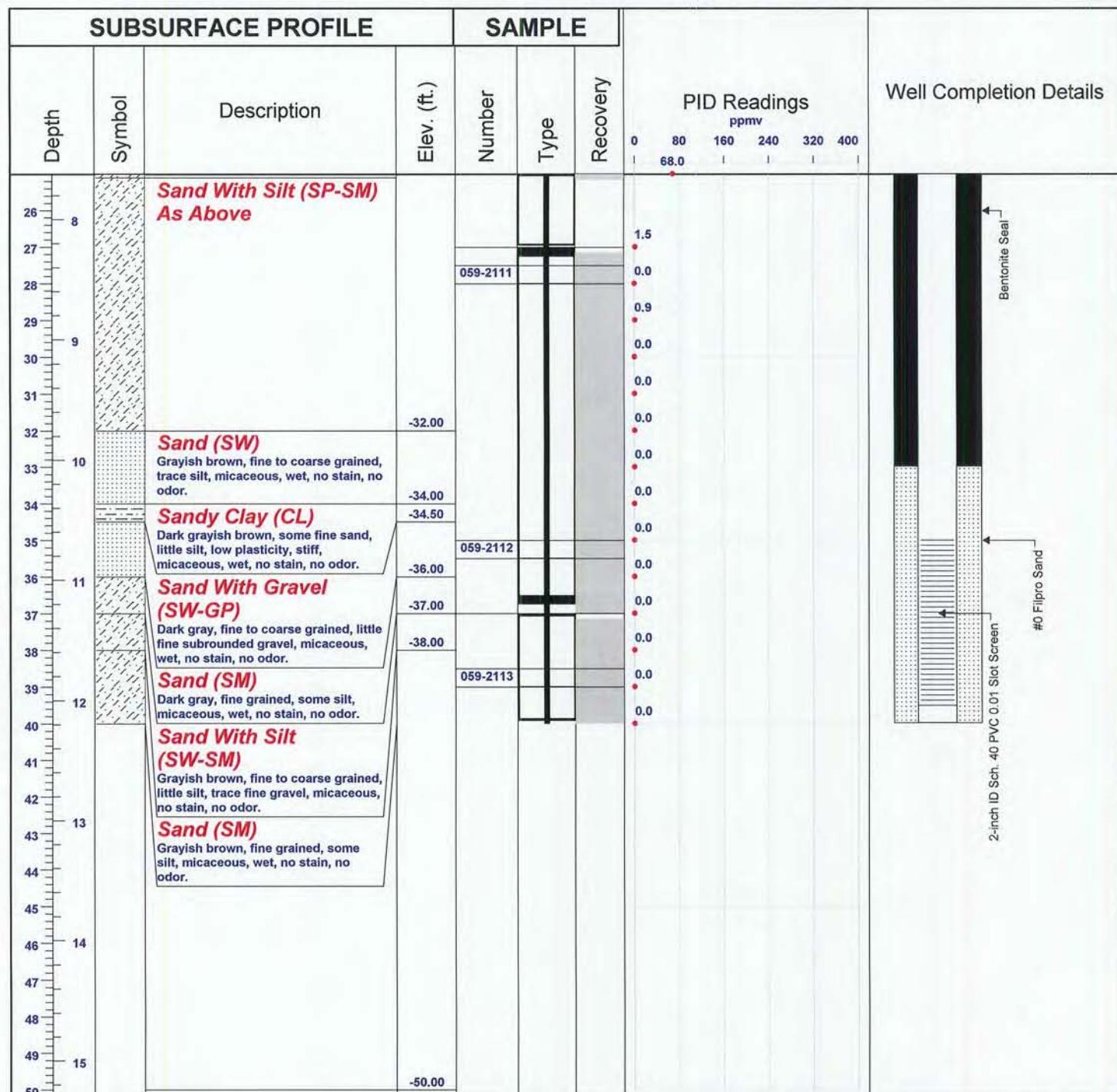
GCMW-24I Northing (ft): 185075.460

GCMW-24I Easting (ft): 986309.052

GCMW-24S Elevation (ft AMSL): 8.71

GCMW-24I Elevation (ft AMSL): 8.71

Log of Well: GCMW-24



Drill Method: A300 Rotary Sonic

Start Date: 1000 6/7/10

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1300 6/7/10

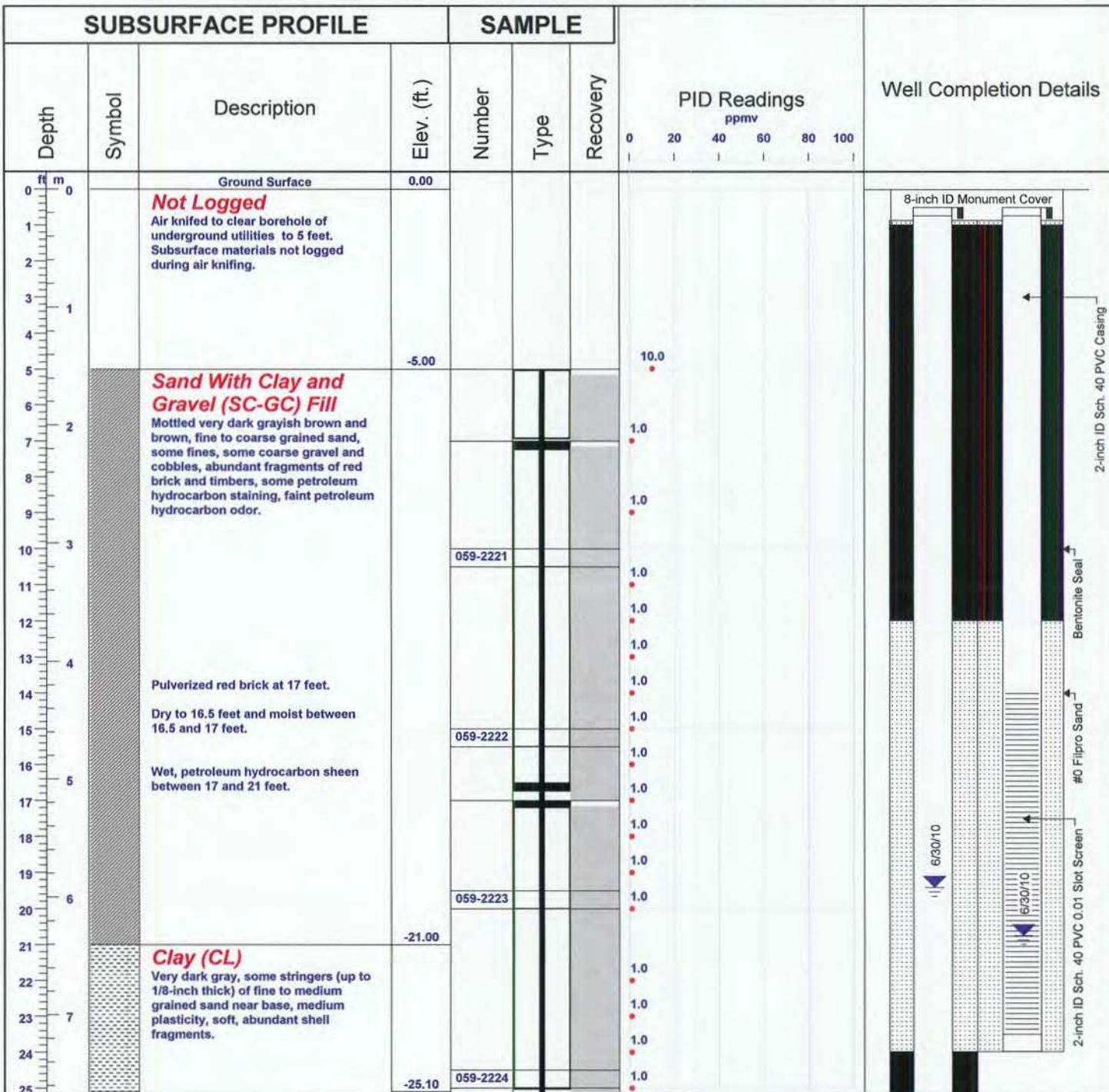
Sheet: 2 of 2

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Project No: SERAS-059
Project: Gowanus Canal Superfund Site
Client: EPA/ERT
Location: 322 3rd Ave., Brooklyn, NY
Logged By: C. Sklaney

GCMW-25S Northing (ft): 185867.292
GCMW-25S Easting (ft): 987252.779
GCMW-25I Northing (ft): 185867.214
GCMW-25I Easting (ft): 987252.914
GCMW-25S Elevation (ft AMSL): 22.25
GCMW-25I Elevation (ft AMSL): 22.25

Log of Well: GCMW-25



Drill Method: A300 Rotary Sonic

Start Date: 0800 6/23/10

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 0910 6/23/10

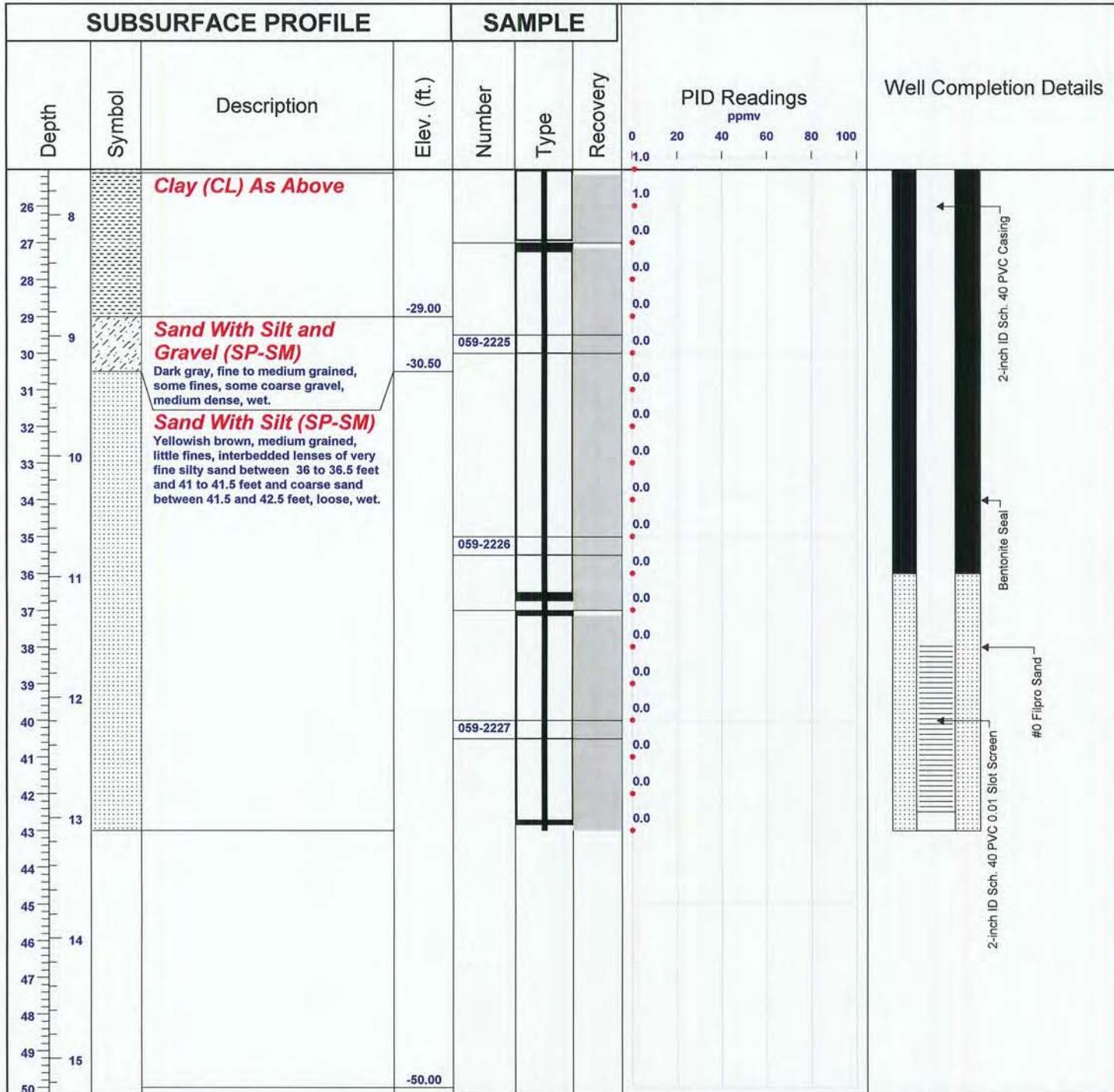
Sheet: 1 of 2

Lockheed Martin/SERAS
 2890 Woodbridge Avenue
 Building 209 Annex
 Edison, NJ 08837

Project No: SERAS-059
Project: Gowanus Canal Superfund Site
Client: EPA/ERT
Location: 322 3rd Ave., Brooklyn, NY
Logged By: C. Sklaney

GCMW-25S Northing (ft): 185867.292
GCMW-25S Easting (ft): 987252.779
GCMW-25I Northing (ft): 185867.214
GCMW-25I Easting (ft): 987252.914
GCMW-25S Elevation (ft AMSL): 22.25
GCMW-25I Elevation (ft AMSL): 22.25

Log of Well: GCMW-25



Drill Method: A300 Rotary Sonic

Start Date: 0800 6/23/10

Hole Size: 8 inches

Drill Company: Boart Longyear

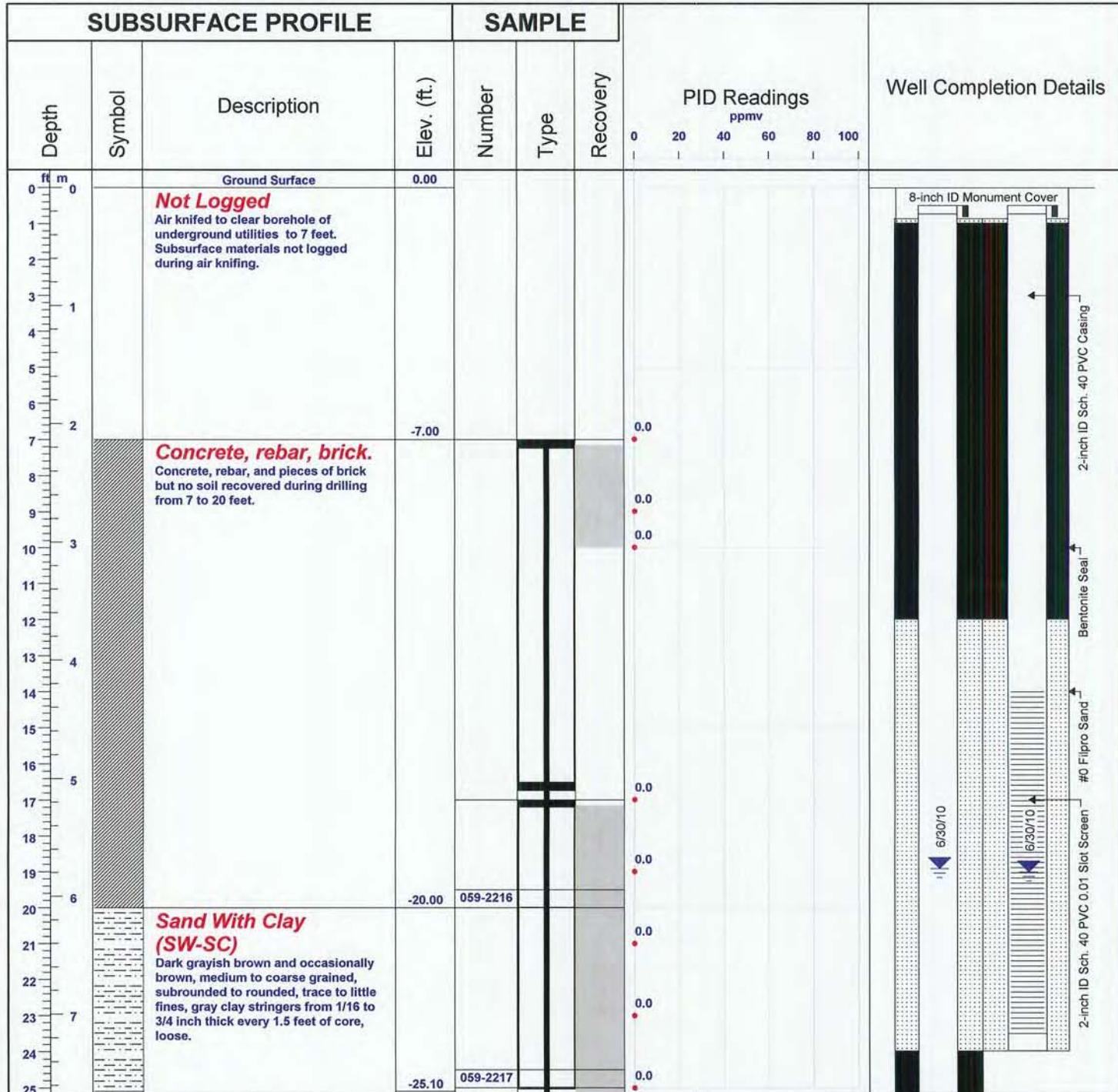
End Date: 0910 6/23/10

Sheet: 2 of 2

Lockheed Martin/SERAS
 2890 Woodbridge Avenue
 Building 209 Annex
 Edison, NJ 08837

Project No: SERAS-059
Project: Gowanus Canal Superfund Site
Client: EPA/ERT
Location: 322 3rd Ave., Brooklyn, NY
Logged By: C. Sklaney

GCMW-26S Northing (ft): 185867.716 **Log of Well: GCMW-26**
GCMW-26S Easting (ft): 987430.701
GCMW-26I Northing (ft): 185867.408
GCMW-26I Easting (ft): 987430.631
GCMW-26S Elevation (ft AMSL): 21.44
GCMW-26I Elevation (ft AMSL): 21.44



Drill Method: A300 Rotary Sonic

Start Date: 1125 6/23/10

Hole Size: 8 inches

Lockheed Martin/SERAS
 2890 Woodbridge Avenue
 Building 209 Annex
 Edison, NJ 08837

Drill Company: Boart Longyear

End Date: 1600 6/23/10

Sheet: 1 of 2

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 322 3rd Ave., Brooklyn, NY

Logged By: C. Sklaney

GCMW-26S Northing (ft): 185867.716

GCMW-26S Easting (ft): 987430.701

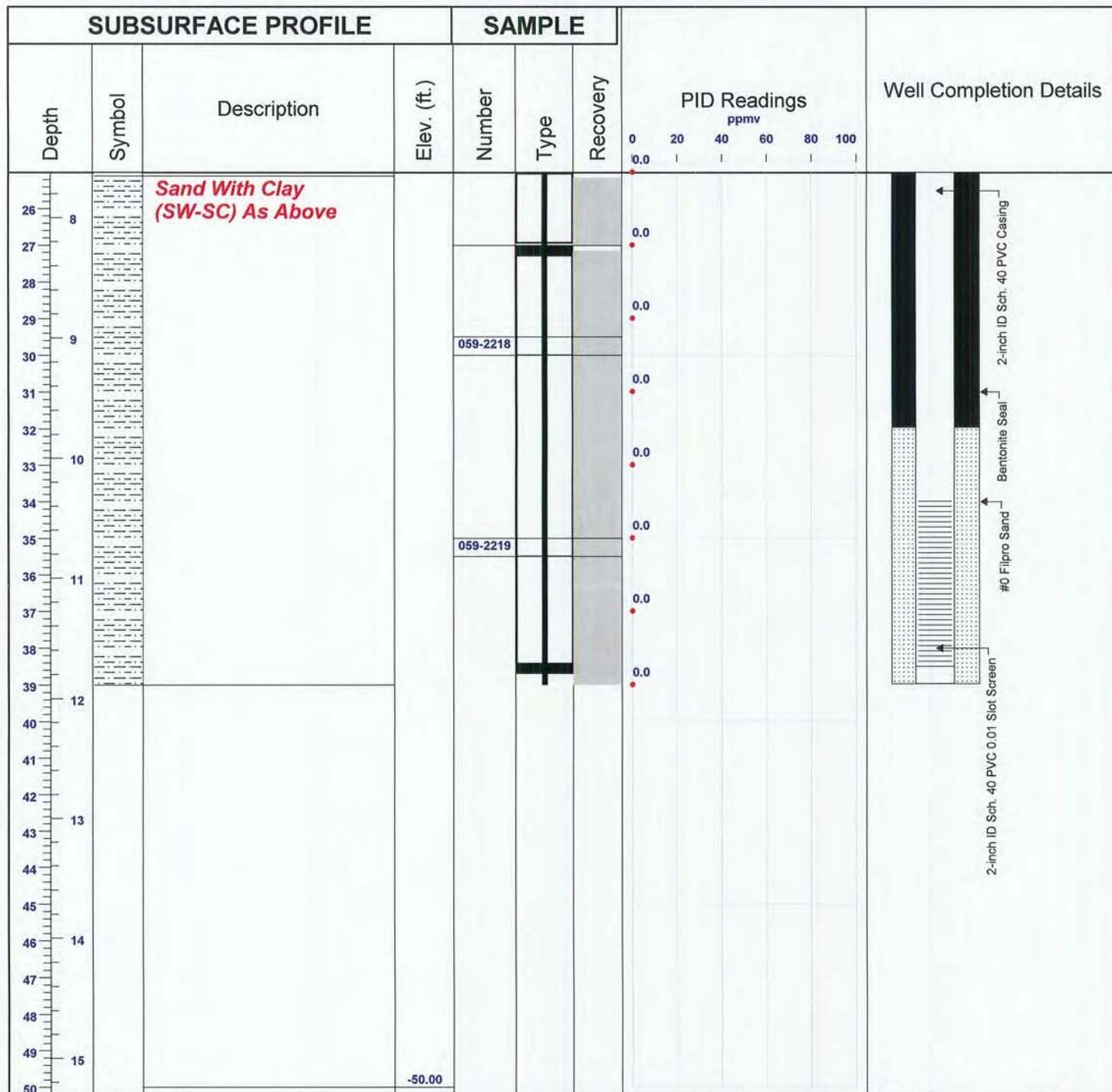
GCMW-26I Northing (ft): 185867.408

GCMW-26I Easting (ft): 987430.631

GCMW-26S Elevation (ft AMSL): 21.44

GCMW-26I Elevation (ft AMSL): 21.44

Log of Well: GCMW-26



Drill Method: A300 Rotary Sonic

Start Date: 1125 6/23/10

Hole Size: 8 inches

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Drill Company: Boart Longyear

End Date: 1600 6/23/10

Sheet: 2 of 2

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 322 3rd Ave., Brooklyn, NY

Logged By: C. Sklaney

GCMW-27S Northing (ft): 185935.881

GCMW-27S Easting (ft): 987404.816

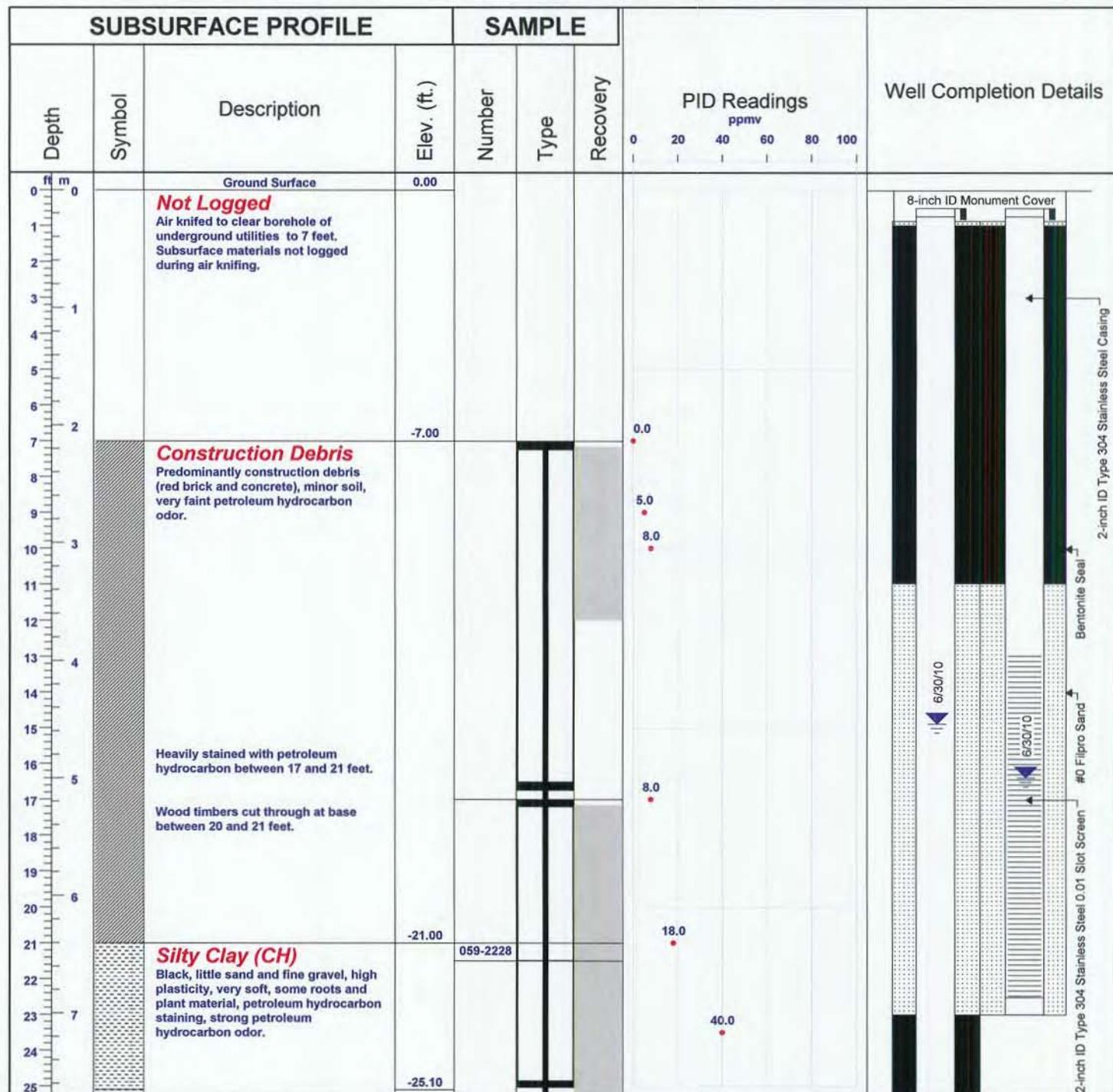
GCMW-27I Northing (ft): 185936.353

GCMW-27I Easting (ft): 987404.783

GCMW-27S Elevation (ft AMSL): 17.41

GCMW-27I Elevation (ft AMSL): 17.41

Log of Well: GCMW-27



Drill Method: A300 Rotary Sonic

Start Date: 1110 6/24/10

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1600 6/24/10

Sheet: 1 of 2

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 322 3rd Ave., Brooklyn, NY

Logged By: C. Sklaney

GCMW-27S Northing (ft): 185935.881

GCMW-27S Easting (ft): 987404.816

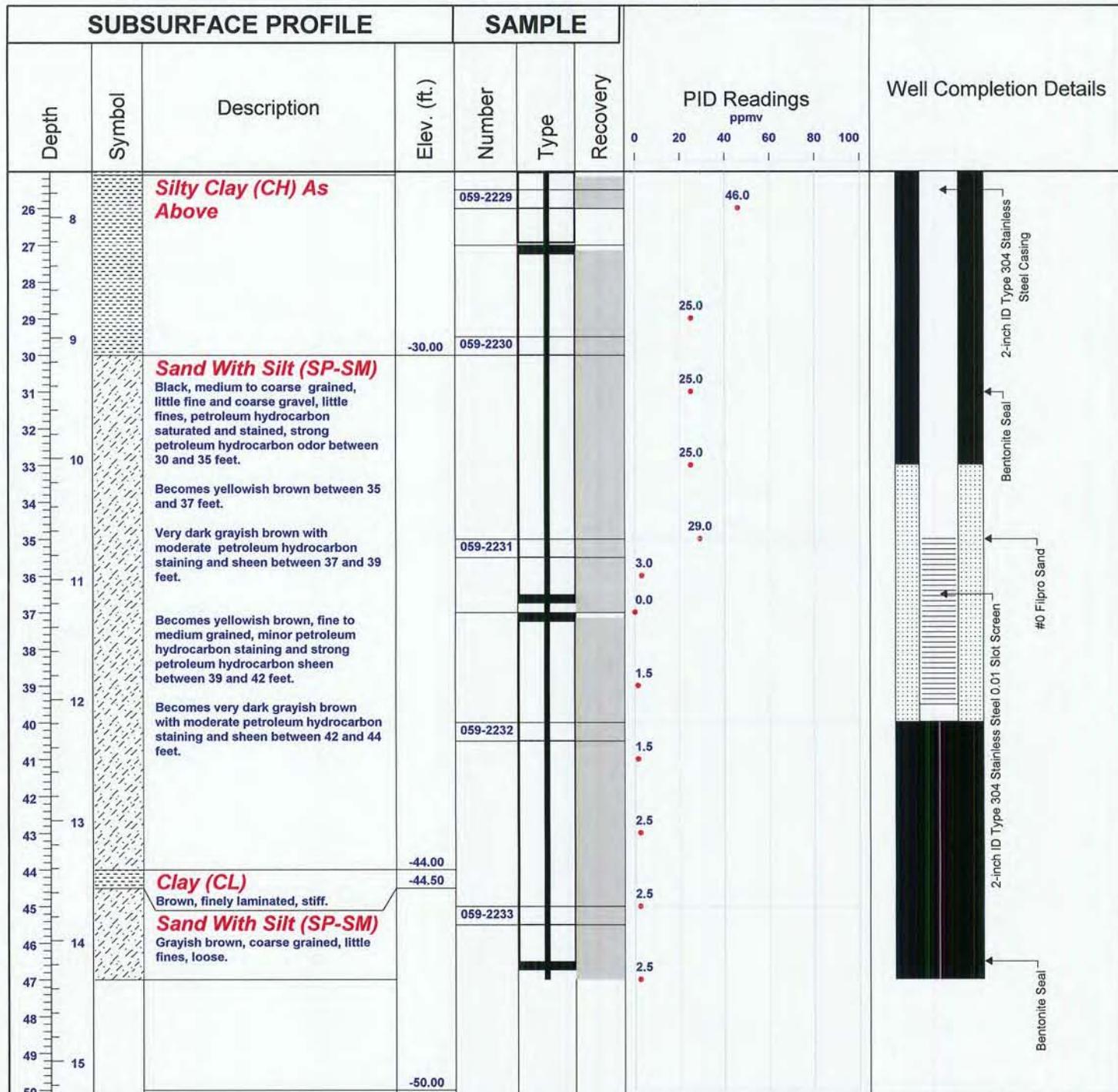
GCMW-27I Northing (ft): 185936.353

GCMW-27I Easting (ft): 987404.783

GCMW-27S Elevation (ft AMSL): 17.41

GCMW-27I Elevation (ft AMSL): 17.41

Log of Well: GCMW-27



Drill Method: A300 Rotary Sonic

Start Date: 1110 6/24/10

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1600 6/24/10

Sheet: 2 of 2

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 318 Nevins St., Brooklyn, NY

Logged By: C. Sklaney

GCMW-28S Northing (ft): 186404.234

GCMW-28S Easting (ft): 987354.962

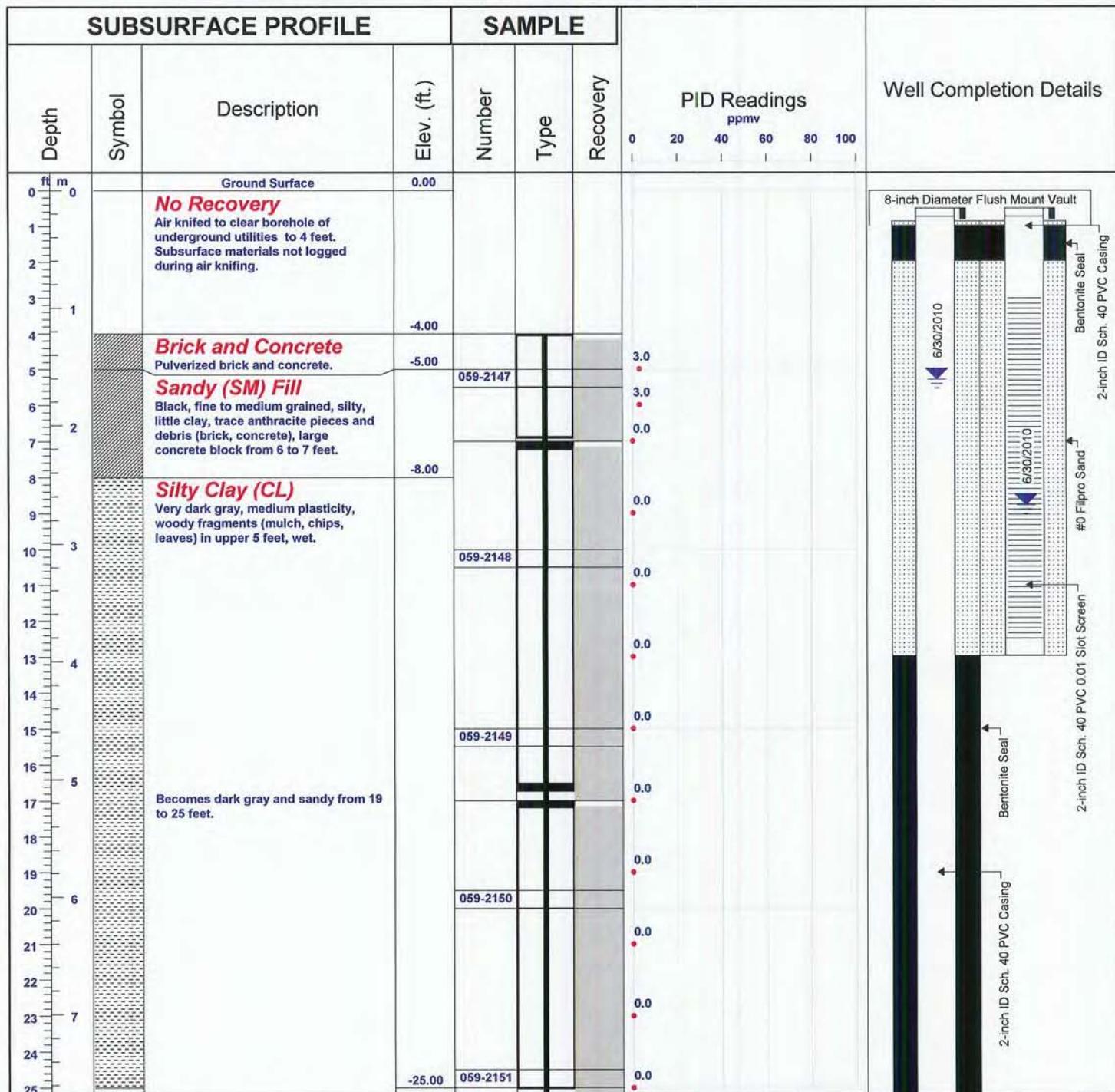
GCMW-28I Northing (ft): 186404.300

GCMW-28I Easting (ft): 987355.131

GCMW-28S Elevation (ft AMSL): 7.80

GCMW-28I Elevation (ft AMSL): 7.75

Log of Well: GCMW-28



Drill Method: A300 Rotary Sonic

Start Date: 0900 6/14/10

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1015 6/14/10

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Sheet: 1 of 2

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 318 Nevins St., Brooklyn, NY

Logged By: C. Sklaney

GCMW-28S Northing (ft): 186404.234

GCMW-28S Easting (ft): 987354.962

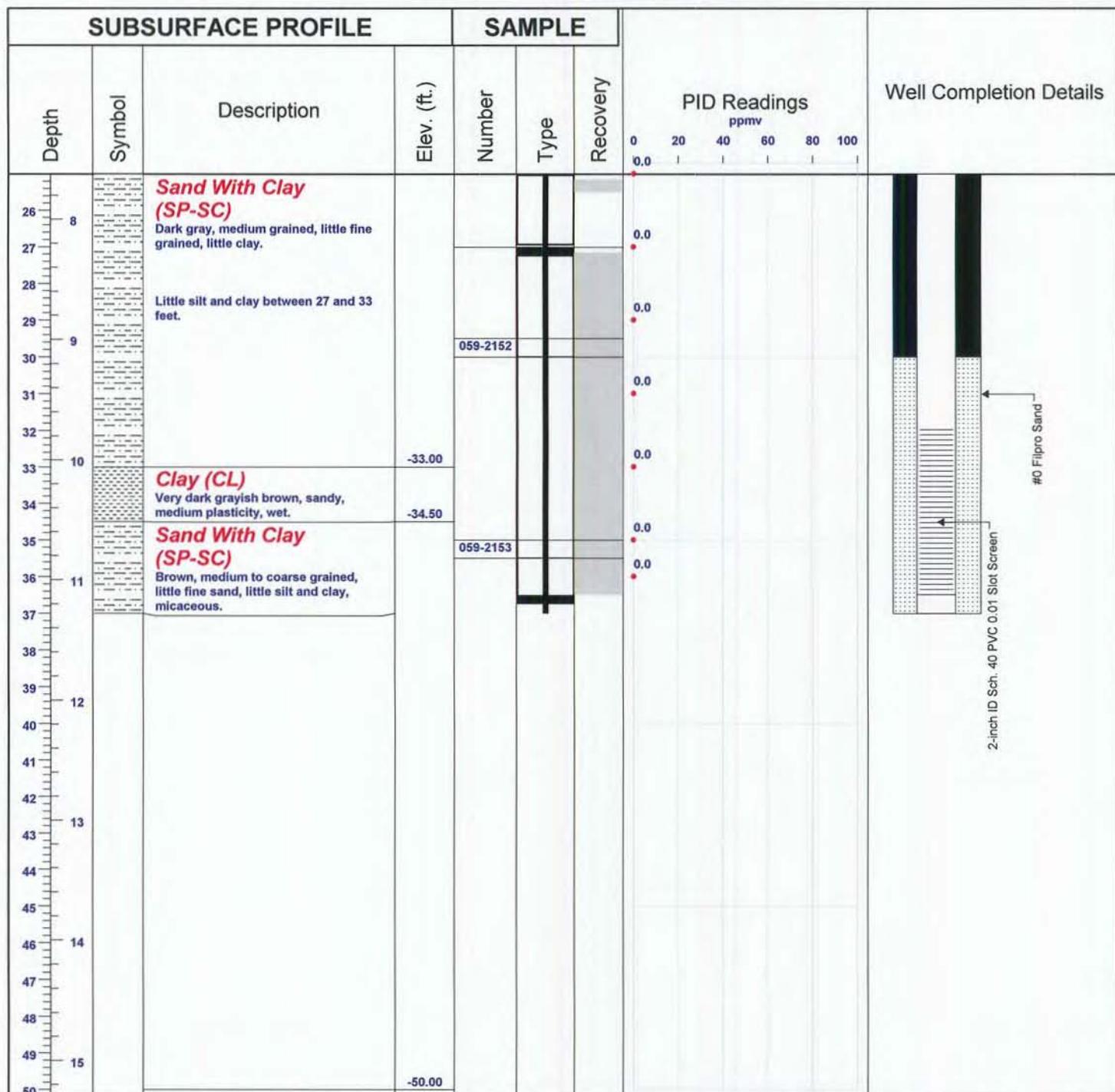
GCMW-28I Northing (ft): 186404.300

GCMW-28I Easting (ft): 987355.131

GCMW-28S Elevation (ft AMSL): 7.80

GCMW-28I Elevation (ft AMSL): 7.75

Log of Well: GCMW-28



Drill Method: A300 Rotary Sonic

Start Date: 0900 6/14/10

Hole Size: 8 inches

Drill Company: Boart Longyear

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

End Date: 1015 6/14/10

Sheet: 2 of 2

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 318 Nevins St., Brooklyn, NY

Logged By: C. Sklaney

GCMW-29S Northing (ft): 186311.536

GCMW-29S Easting (ft): 987450.036

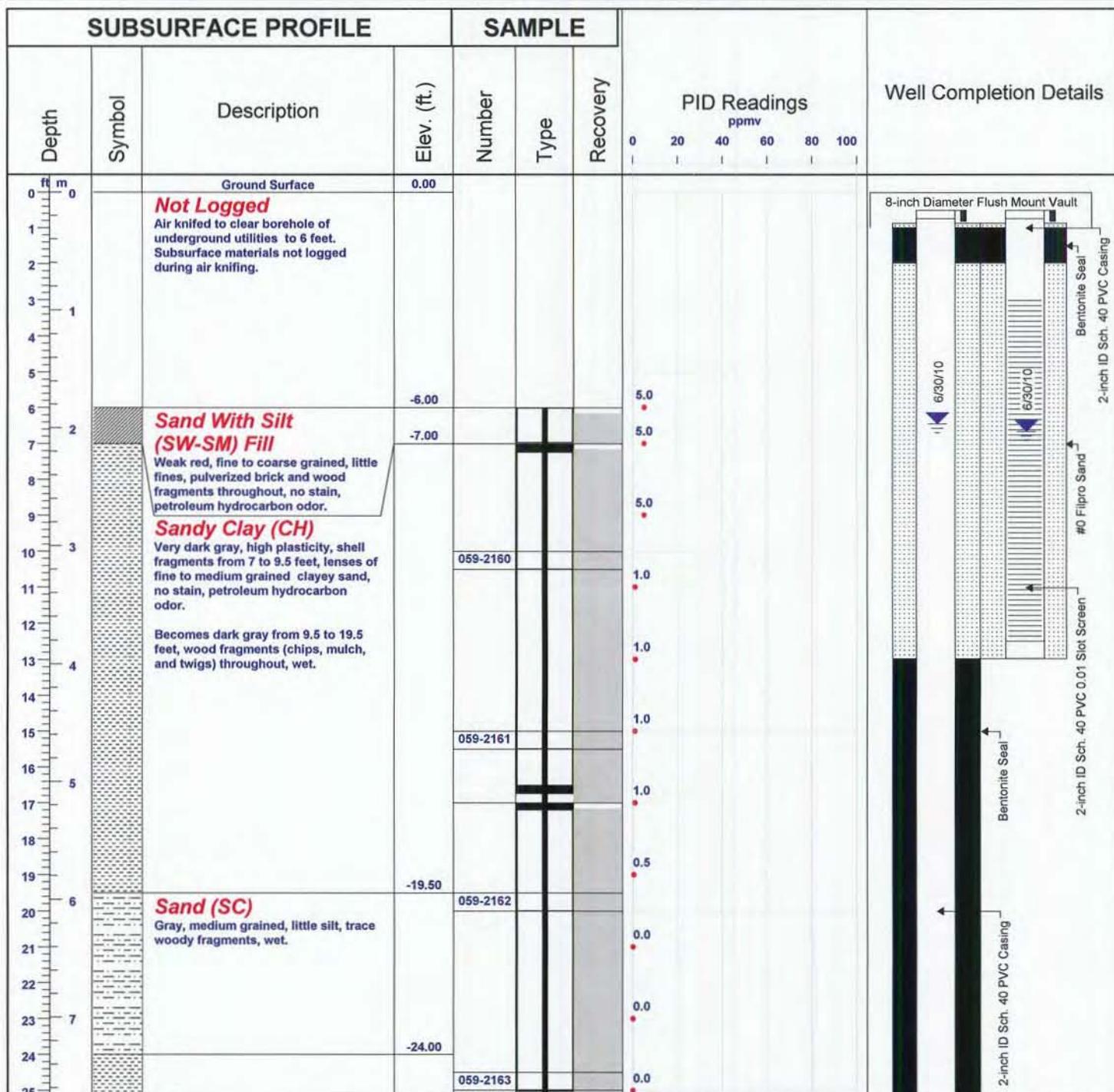
GCMW-29I Northing (ft): 186311.276

GCMW-29I Easting (ft): 987449.987

GCMW-29S Elevation (ft AMSL): 8.82

GCMW-29I Elevation (ft AMSL): 8.86

Log of Well: GCMW-29



Drill Method: A300 Rotary Sonic

Start Date: 1000 6/15/10

Hole Size: 8 inches

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2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Drill Company: Boart Longyear

End Date: 1100 6/15/10

Sheet: 1 of 2

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 318 Nevins St., Brooklyn, NY

Logged By: C. Sklaney

GCMW-29S Northing (ft): 186311.536

GCMW-29S Easting (ft): 987450.036

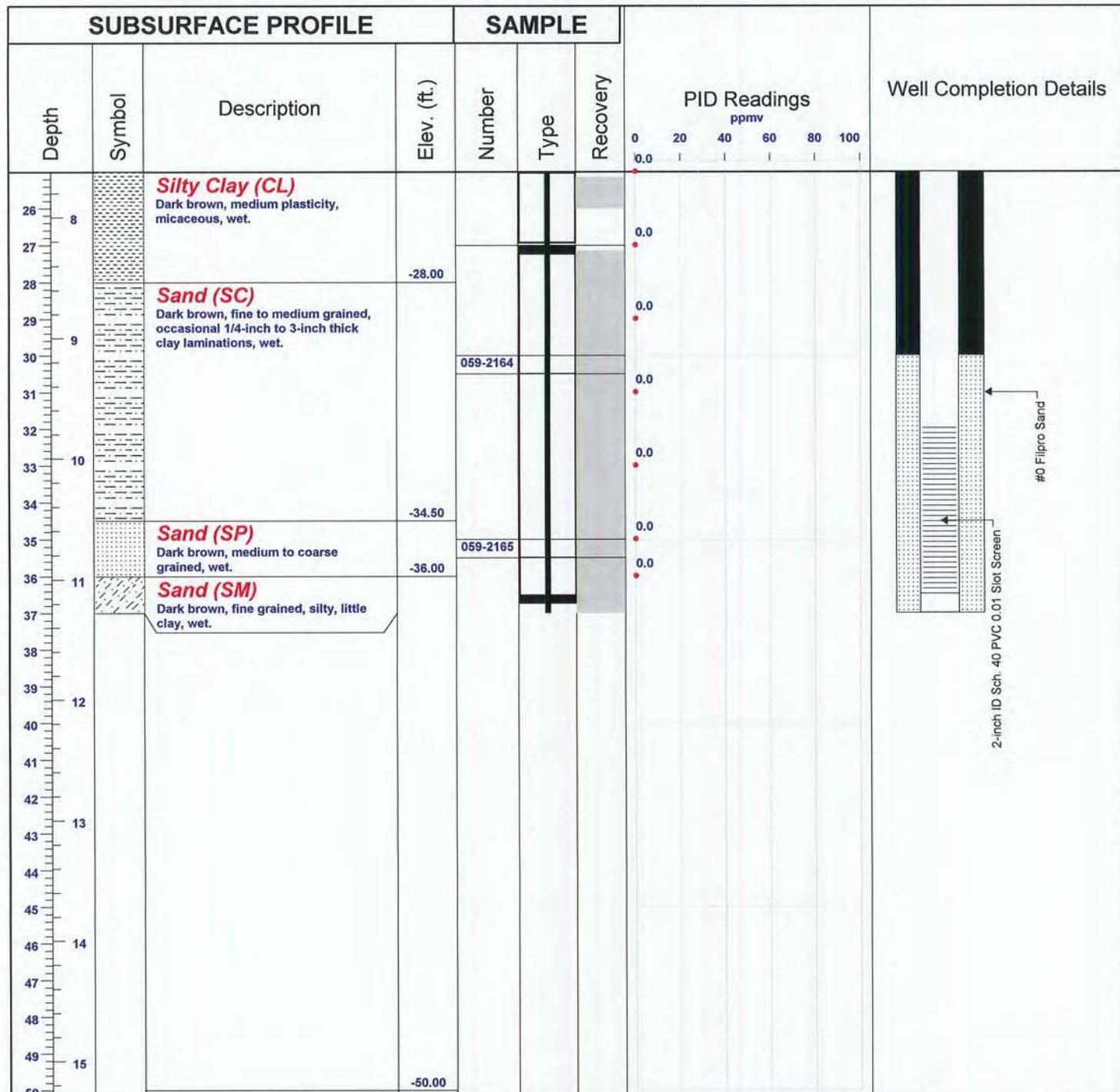
GCMW-29I Northing (ft): 186311.276

GCMW-29I Easting (ft): 987449.987

GCMW-29S Elevation (ft AMSL): 8.82

GCMW-29I Elevation (ft AMSL): 8.86

Log of Well: GCMW-29



Drill Method: A300 Rotary Sonic

Start Date: 1000 6/15/10

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1100 6/15/10

Sheet: 2 of 2

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: Nevins St., Brooklyn, NY

Logged By: J. Bolduc

GCMW-33S Northing (ft): 187466.253

Log of Well: GCMW-33

GCMW-33S Easting (ft): 988127.989

GCMW-33I Northing (ft): 187466.275

GCMW-33I Easting (ft): 988127.694

GCMW-33S Elevation (ft AMSL): 7.31

GCMW-33I Elevation (ft AMSL): 7.24

Subsurface Profile			Sample			Well Completion Details	
Depth	Symbol	Description	Elev. (ft.)	Number	Type	Recovery	PID Readings ppmv
0 ft m 0		Ground Surface	0.00				0 200 400 600 800 1000
1		Concrete 1/4 foot thick. Air knifed to 8 feet.	-1.74				
2		Sand (SW) Fill Yellowish brown, fine to coarse grained, trace fine gravel, wet, no stain, no odor.	-2.50				
3		Sand With Silt (SW-SM) Fill Dark brown, fine to coarse grained, trace fine gravel, little silt, brick fragments, wet, no stain, strong sulfur-like odor from 15 to 15.5 feet.					
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16		Silty Clay (CL) Very dark gray, low plasticity, soft, occasional shell fragments, abundant peat from 15.5 to 17 feet, wet, sulfur-like odor.	-15.50				
17		Peat (PT) Black, little fine sand, little clay, fibrous, wet, strong sulfur-like odor.	-17.00	059-2140			
18							
19							
20							
21		Silty Clay (CL) Dark gray, little fine sand, low plasticity, soft, micaceous, strong sulfur-like odor.	-21.00	059-2141			
22							
23							
24							
25							
				059-2142			

Detailed description of the Well Completion Diagram:

- The borehole profile shows concentric casings: 2-inch ID Sch. 40 PVC Casing, 2-inch ID Sch. 40 PVC 0.01 Slot Screen, and 8-inch Diameter Flush Mount Vault.
- Seals include Bentonite Seal at the bottom and #0 Filpro Sand seal between the slot screen and the vault.
- Completion dates are marked as 6/30/10 for each section.

Drill Method: A300 Rotary Sonic

Start Date: 0900 6/10/10

Hole Size: 8 inches

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Drill Company: Boart Longyear

End Date: 1440 6/10/10

Sheet: 1 of 2

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: Nevins St., Brooklyn, NY

Logged By: J. Bolduc

GCMW-33S Northing (ft): 187466.253

GCMW-33S Easting (ft): 988127.989

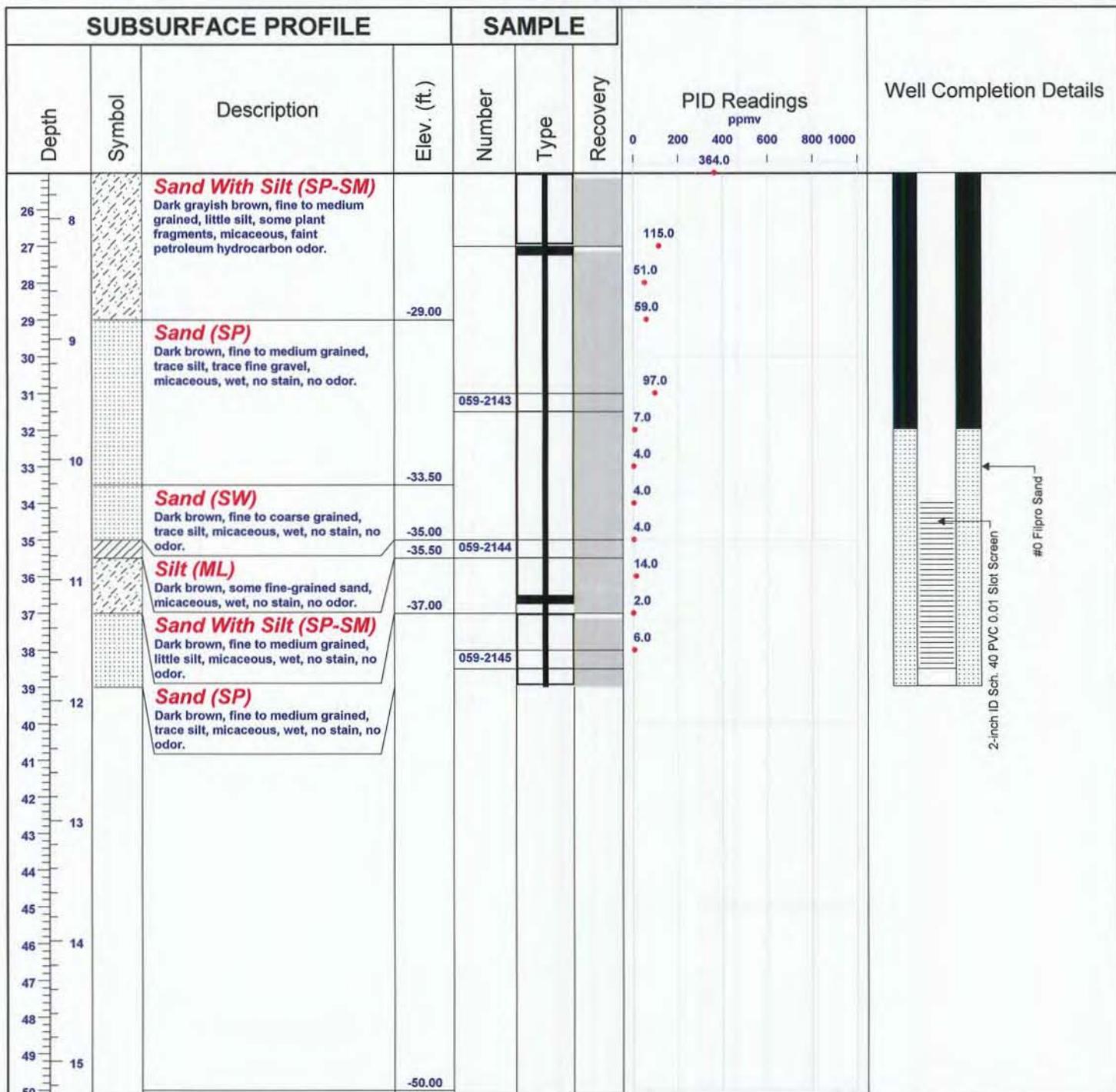
GCMW-33I Northing (ft): 187466.275

GCMW-33I Easting (ft): 988127.694

GCMW-33S Elevation (ft AMSL): 7.31

GCMW-33I Elevation (ft AMSL): 7.24

Log of Well: GCMW-33



Drill Method: A300 Rotary Sonic

Start Date: 0900 6/10/10

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1440 6/10/10

Sheet: 2 of 2

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 495 Sackett St., Brooklyn, NY

Logged By: J. Bolduc

GCMW-34S Northing (ft): 187149.018

GCMW-34S Easting (ft): 987564.388

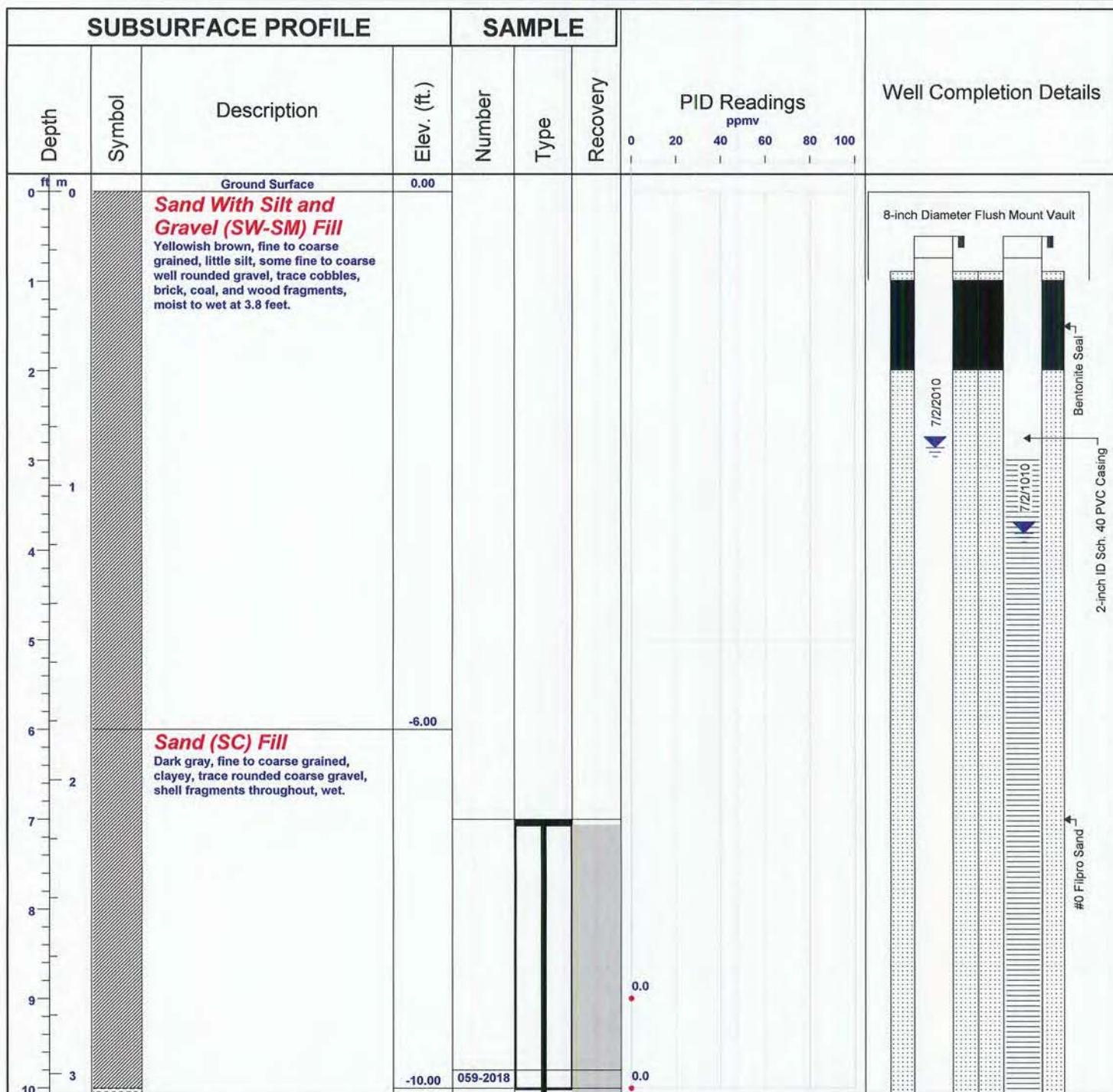
GCMW-34I Northing (ft): 187149.129

GCMW-34I Easting (ft): 987564.186

GCMW-34S Elevation (ft AMSL): 4.99

GCMW-34I Elevation (ft AMSL): 5.00

Log of Well: GCMW-34



Drill Method: A300 Rotary Sonic

Start Date: 1310 5/19/10

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1600 5/19/10

Sheet: 1 of 4

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 495 Sackett St., Brooklyn, NY

Logged By: J. Bolduc

GCMW-34S Northing (ft): 187149.018

GCMW-34S Easting (ft): 987564.388

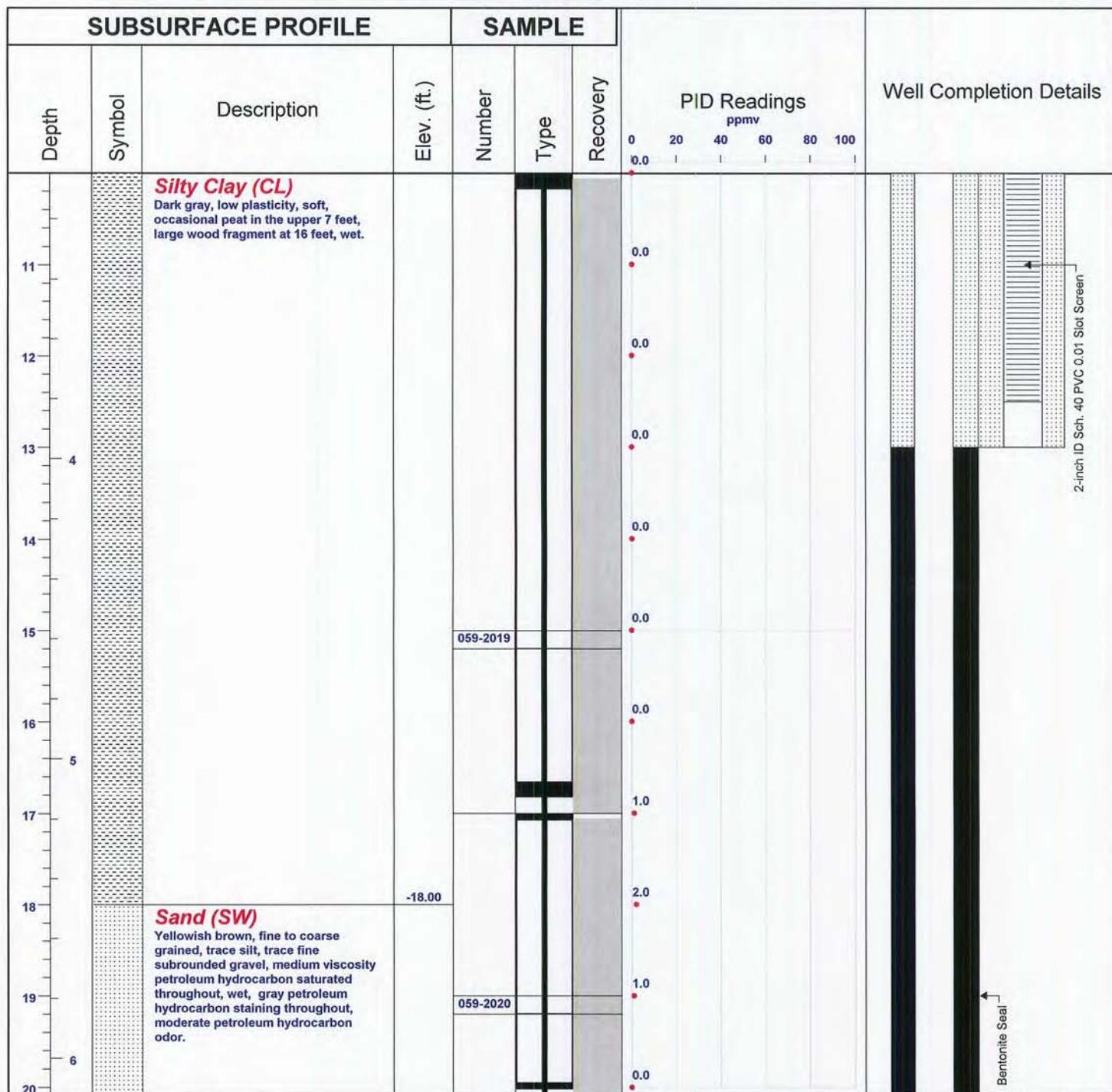
GCMW-34I Northing (ft): 187149.129

GCMW-34I Easting (ft): 987564.186

GCMW-34S Elevation (ft AMSL): 4.99

GCMW-34I Elevation (ft AMSL): 5.00

Log of Well: GCMW-34



Drill Method: A300 Rotary Sonic

Start Date: 1310 5/19/10

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1600 5/19/10

Sheet: 2 of 4

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 495 Sackett St., Brooklyn, NY

Logged By: J. Bolduc

GCMW-34S Northing (ft): 187149.018

GCMW-34S Easting (ft): 987564.388

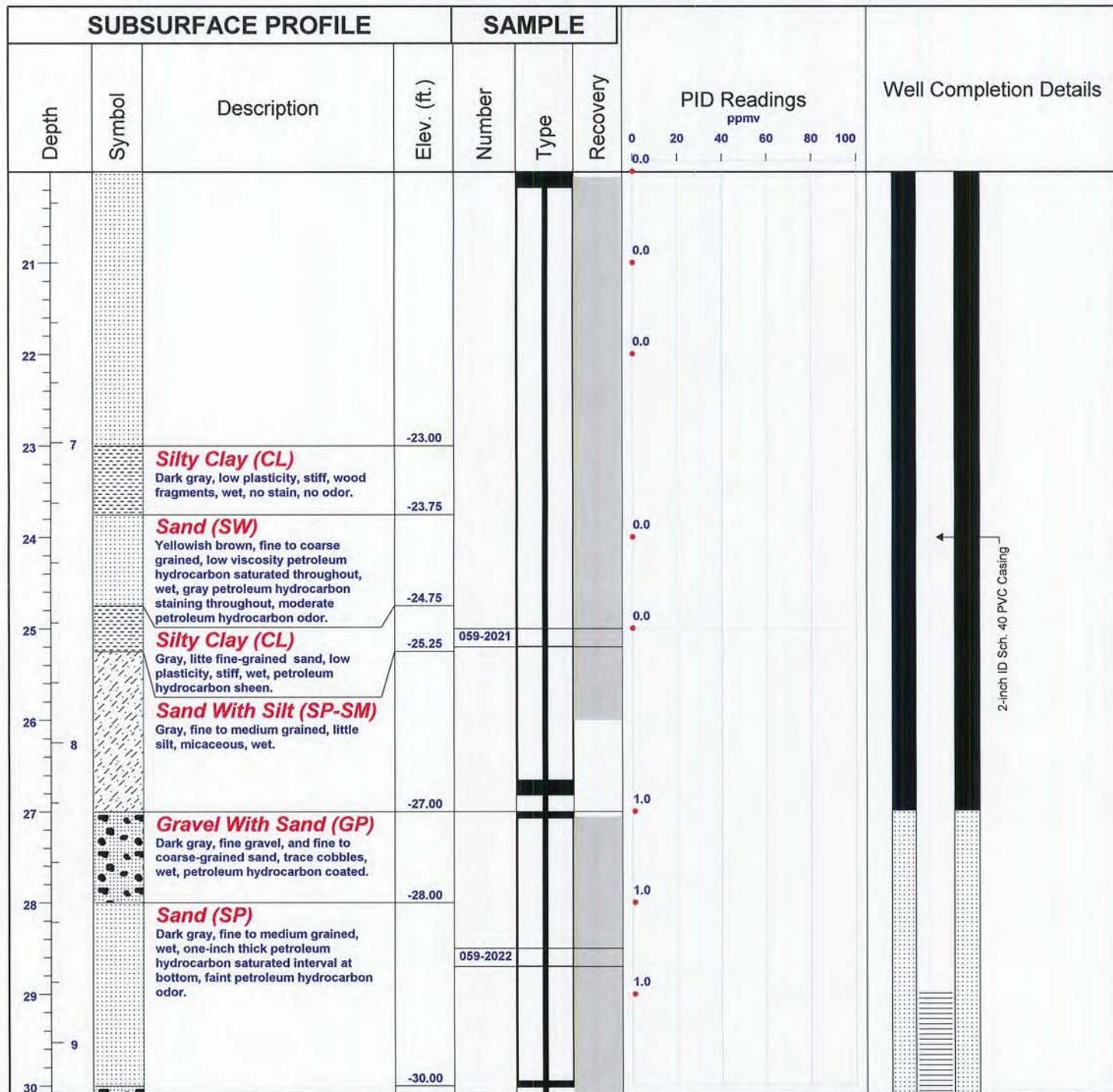
GCMW-34I Northing (ft): 187149.129

GCMW-34I Easting (ft): 987564.186

GCMW-34S Elevation (ft AMSL): 4.99

GCMW-34I Elevation (ft AMSL): 5.00

Log of Well: GCMW-34



Drill Method: A300 Rotary Sonic

Start Date: 1310 5/19/10

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1600 5/19/10

Sheet: 3 of 4

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 495 Sackett St., Brooklyn, NY

Logged By: J. Bolduc

GCMW-34S Northing (ft): 187149.018

GCMW-34S Easting (ft): 987564.388

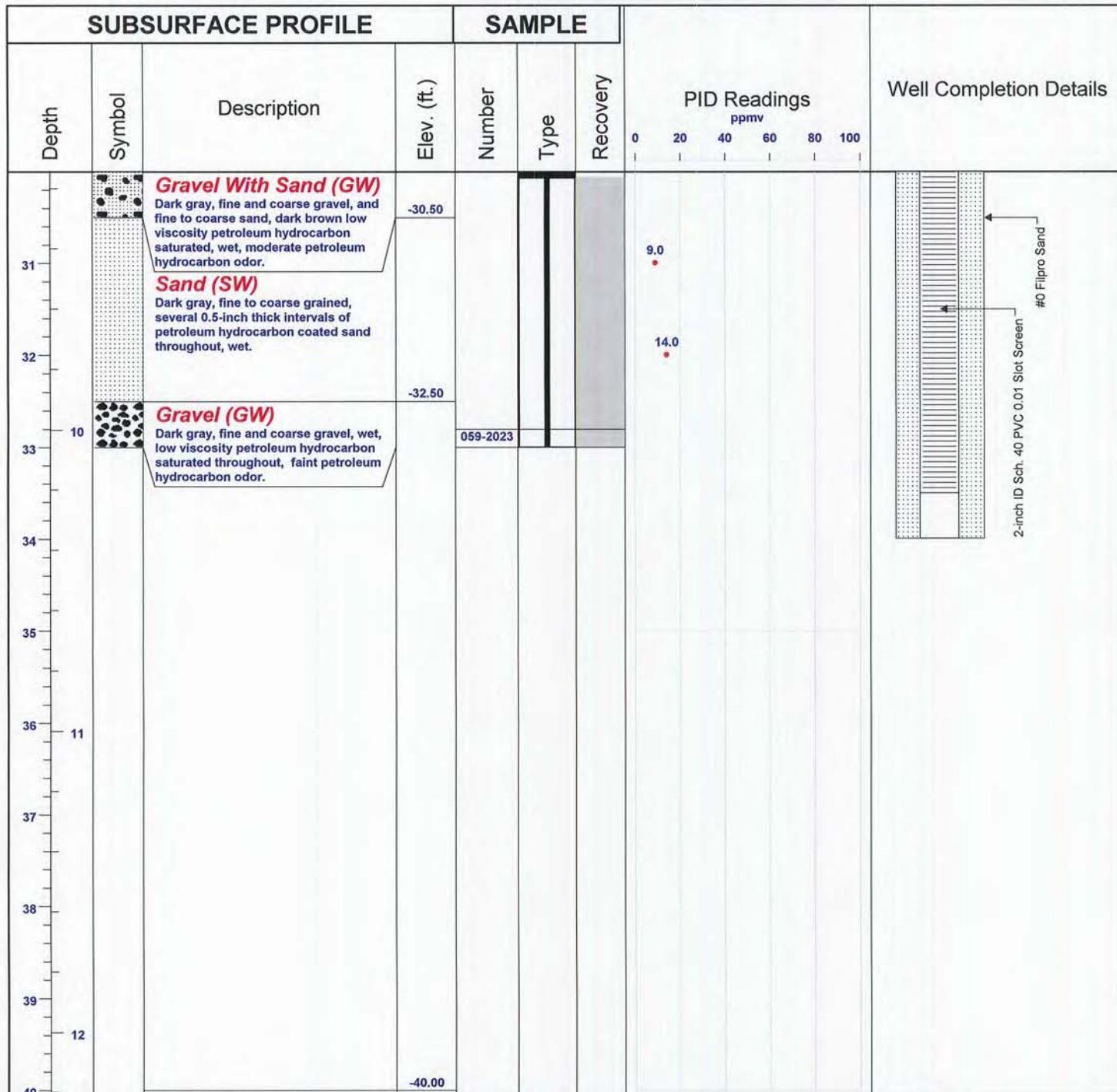
GCMW-34I Northing (ft): 187149.129

GCMW-34I Easting (ft): 987564.186

GCMW-34S Elevation (ft AMSL): 4.99

GCMW-34I Elevation (ft AMSL): 5.00

Log of Well: GCMW-34



Drill Method: A300 Rotary Sonic

Start Date: 1310 5/19/10

Hole Size: 8 inches

Drill Company: Boart Longyear

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

End Date: 1600 5/19/10

Sheet: 4 of 4

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 318 Nevins St., Brooklyn, NY

Logged By: C. Sklaney

GCMW-35S Northing (ft): 186602.739

Log of Well: GCMW-35

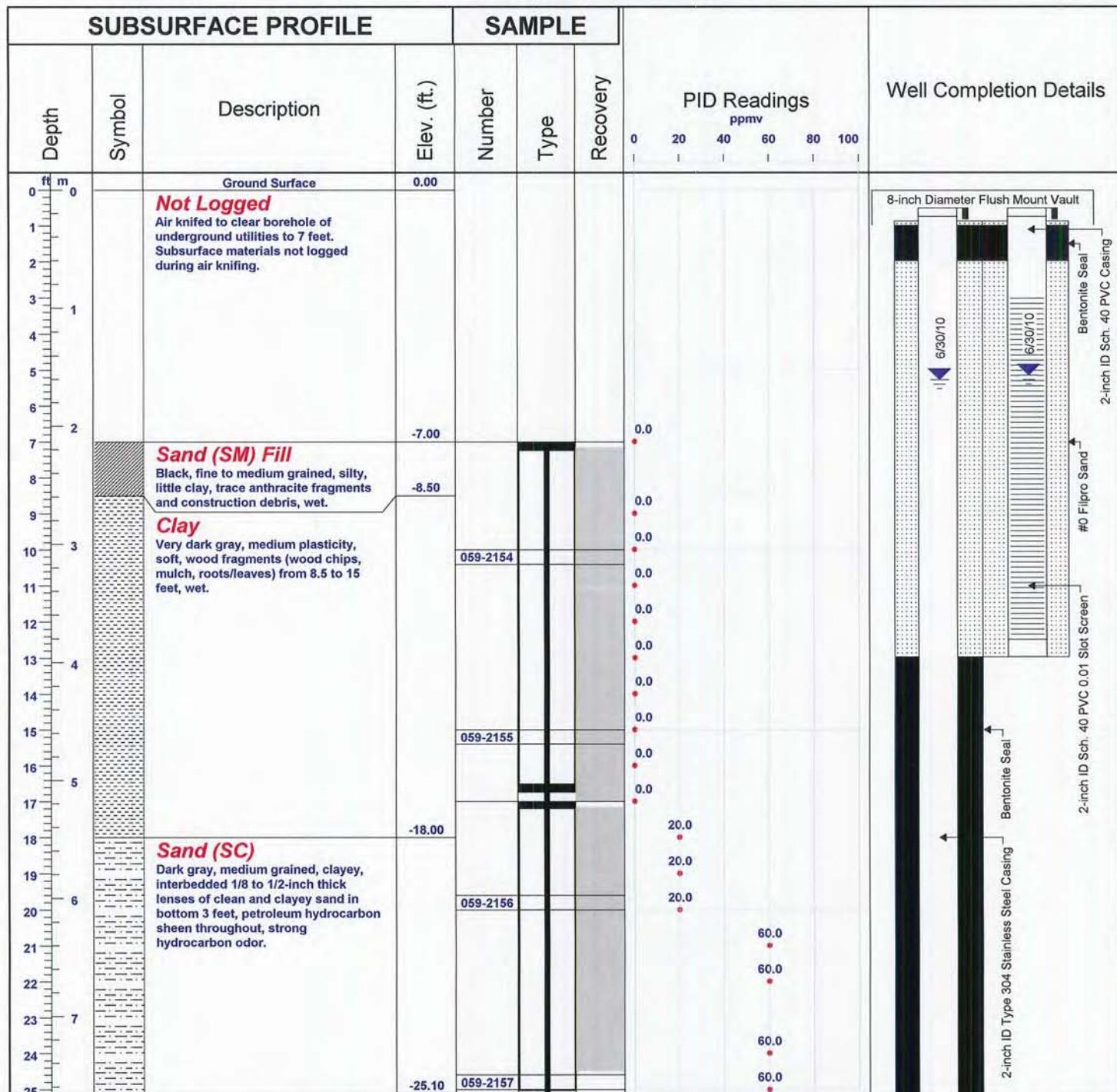
GCMW-35S Easting (ft): 987449.595

GCMW-35I Northing (ft): 186602.578

GCMW-35I Easting (ft): 987449.482

GCMW-35S Elevation (ft AMSL): 7.68

GCMW-351 Elevation (ft AMSL): 7.54



Drill Method: A300 Rotary Sonic

Start Date: 1110 6/14/10

Hole Size: 8 inches

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Drill Company: Boart Longyear

End Date: 1215 6/14/10

Sheet: 1 of 2

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 318 Nevins St., Brooklyn, NY

Logged By: C. Sklaney

GCMW-35S Northing (ft): 186602.739

GCMW-35S Easting (ft): 987449.595

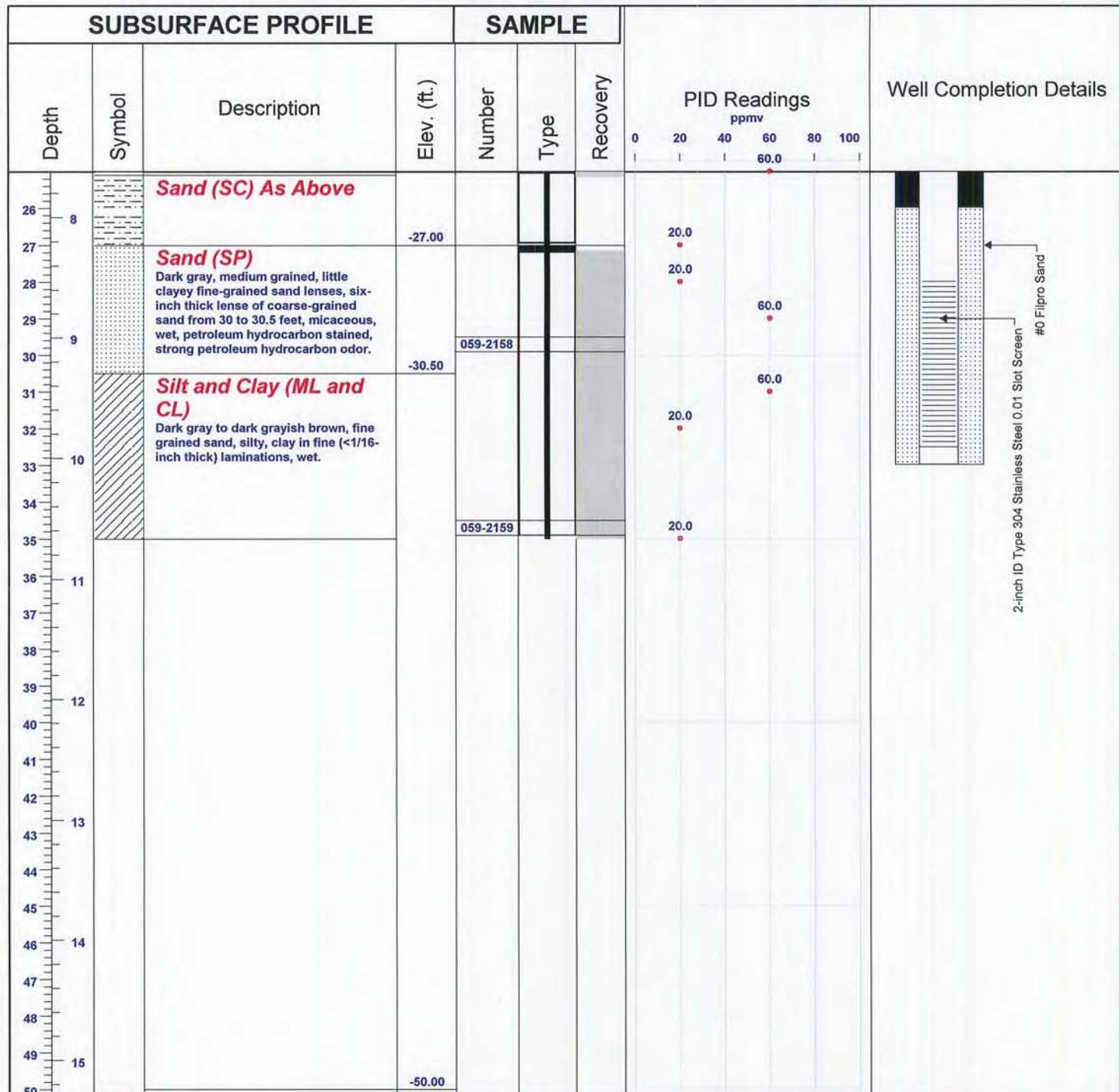
GCMW-35I Northing (ft): 186602.578

GCMW-35I Easting (ft): 987449.482

GCMW-35S Elevation (ft AMSL): 7.68

GCMW-35I Elevation (ft AMSL): 7.54

Log of Well: GCMW-35



Drill Method: A300 Rotary Sonic

Start Date: 1110 6/14/10

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1215 6/14/10

Sheet: 2 of 2

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 400 Carroll St., Brooklyn, NY

Logged By: C. Sklaney

GCMW-36S Northing (ft): 186263.814

GCMW-36S Easting (ft): 987170.657

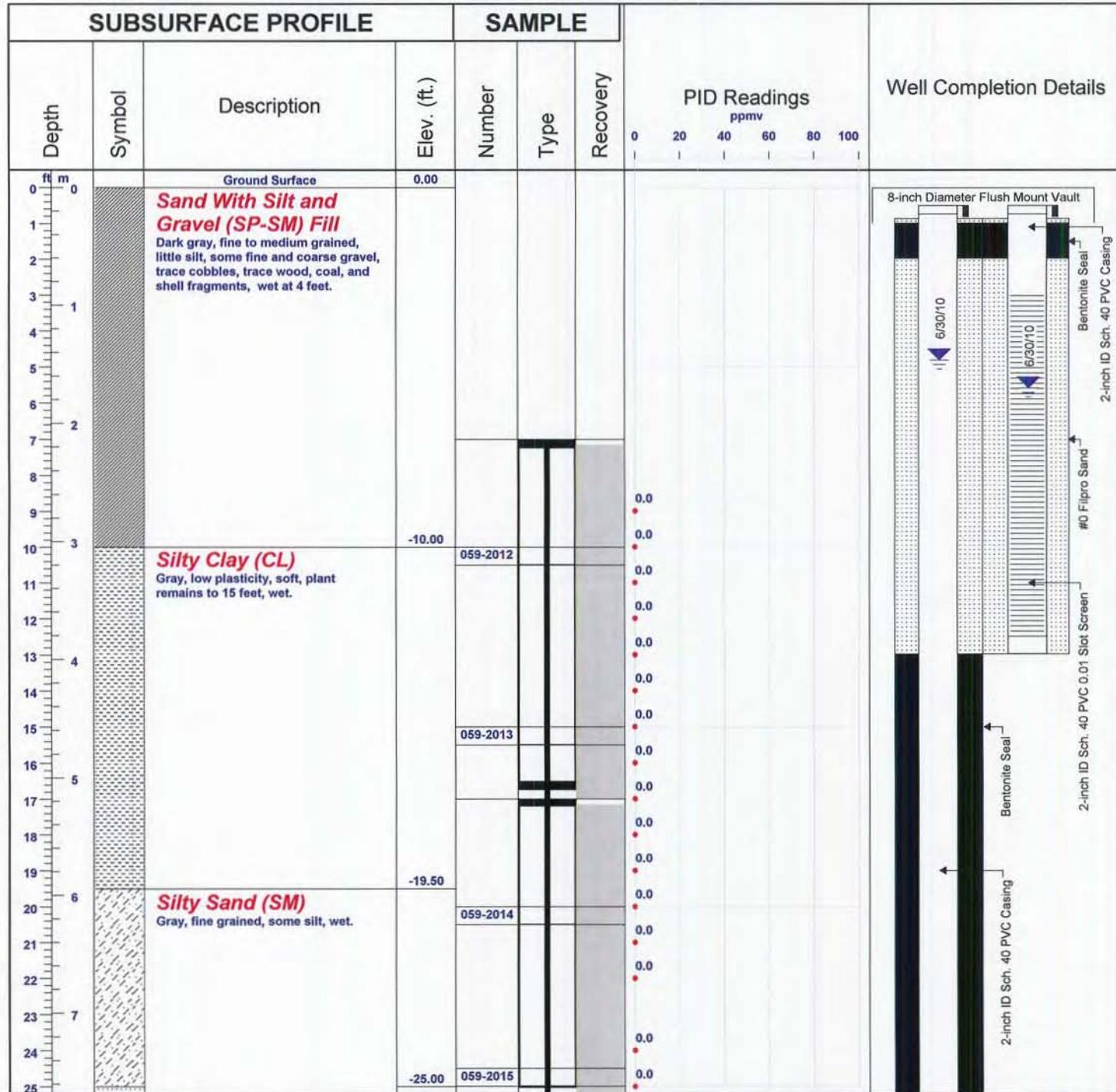
GCMW-36I Northing (ft): 186264.067

GCMW-36I Easting (ft): 987170.546

GCMW-36S Elevation (ft AMSL): 5.31

GCMW-36I Elevation (ft AMSL): 5.24

Log of Well: GCMW-36



Drill Method: A300 Rotary Sonic

Start Date: 1200 5/18/10

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1800 5/18/10

Sheet: 1 of 2

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 400 Carroll St., Brooklyn, NY

Logged By: C. Sklaney

GCMW-36S Northing (ft): 186263.814

GCMW-36S Easting (ft): 987170.657

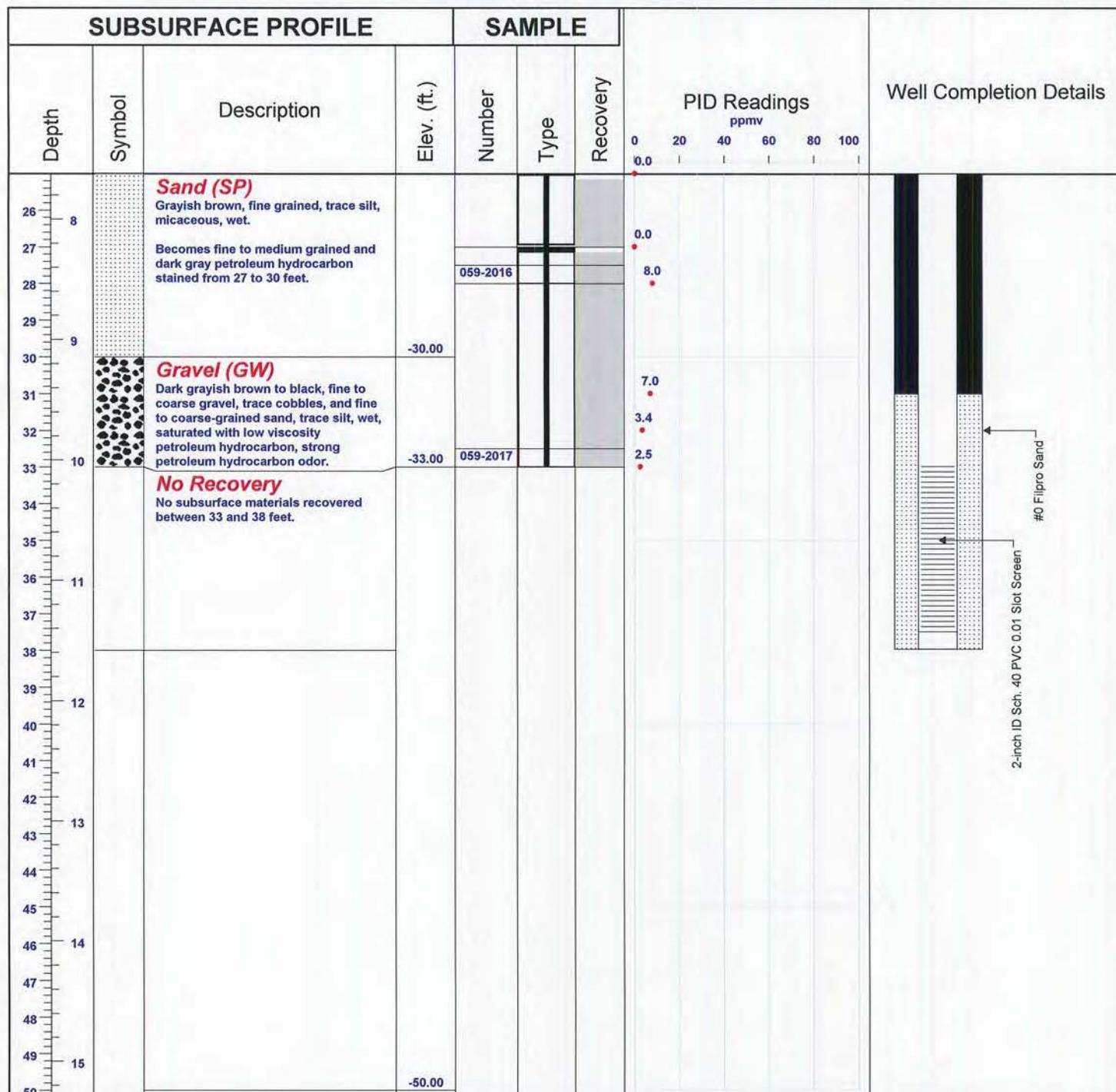
GCMW-36I Northing (ft): 186264.067

GCMW-36I Easting (ft): 987170.546

GCMW-36S Elevation (ft AMSL): 5.31

GCMW-36I Elevation (ft AMSL): 5.24

Log of Well: GCMW-36



Drill Method: A300 Rotary Sonic

Start Date: 1200 5/18/10

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1800 5/18/10

Sheet: 2 of 2

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 186 3rd St., Brooklyn, NY

Logged By: C. Sklaney

GCMW-37S Northing (ft): 185247.680

GCMW-37S Easting (ft): 986964.244

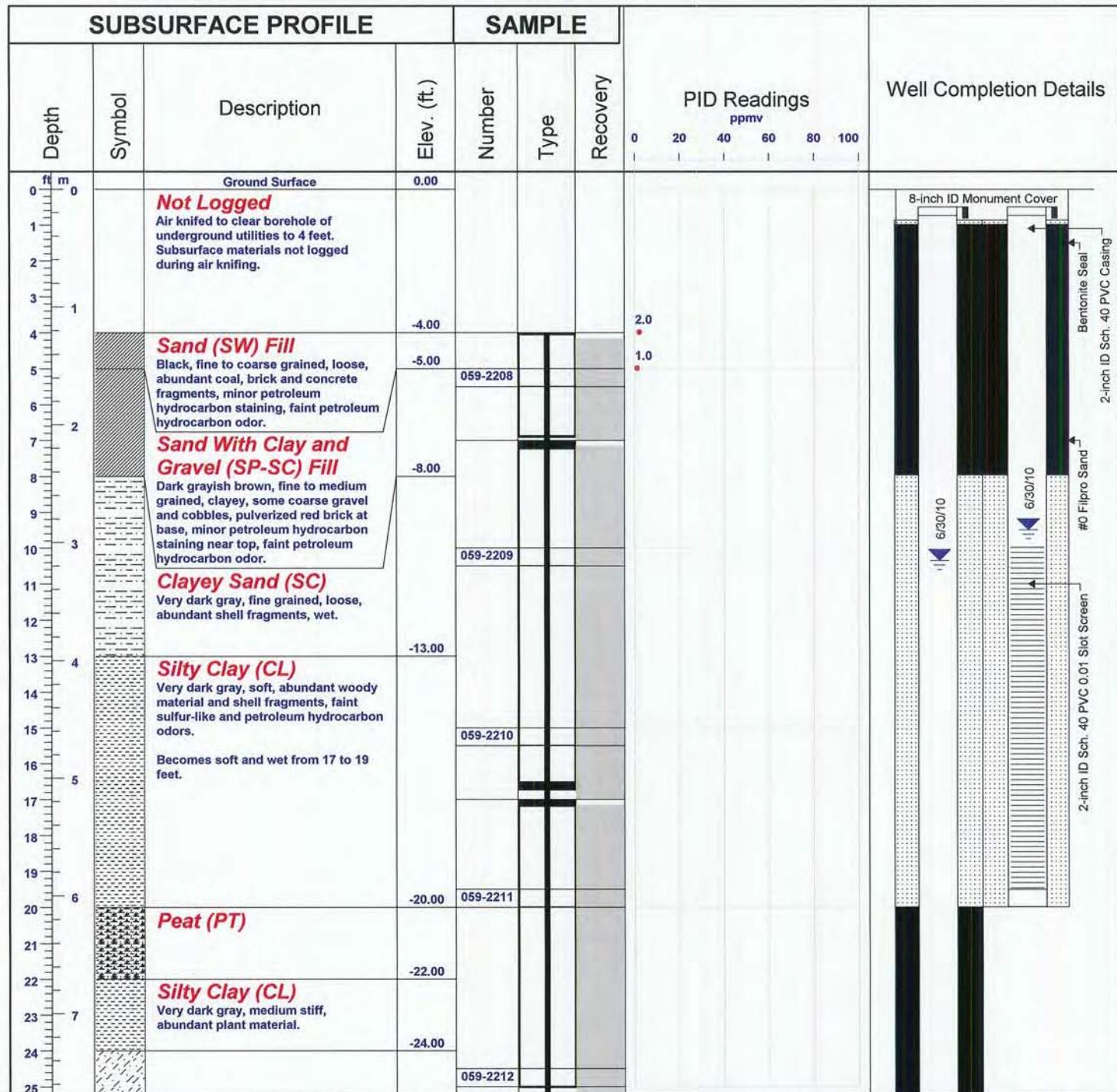
GCMW-37I Northing (ft): 185247.749

GCMW-37I Easting (ft): 986964.051

GCMW-37S Elevation (ft AMSL): 12.05

GCMW-37I Elevation (ft AMSL): 11.99

Log of Well: GCMW-37



Drill Method: A300 Rotary Sonic

Start Date: 0840 6/22/10

Hole Size: 8 inches

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Drill Company: Boart Longyear

End Date: 1000 6/22/10

Sheet: 1 of 2

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 186 3rd St., Brooklyn, NY

Logged By: C. Sklaney

GCMW-37S Northing (ft): 185247.680

GCMW-37S Easting (ft): 986964.244

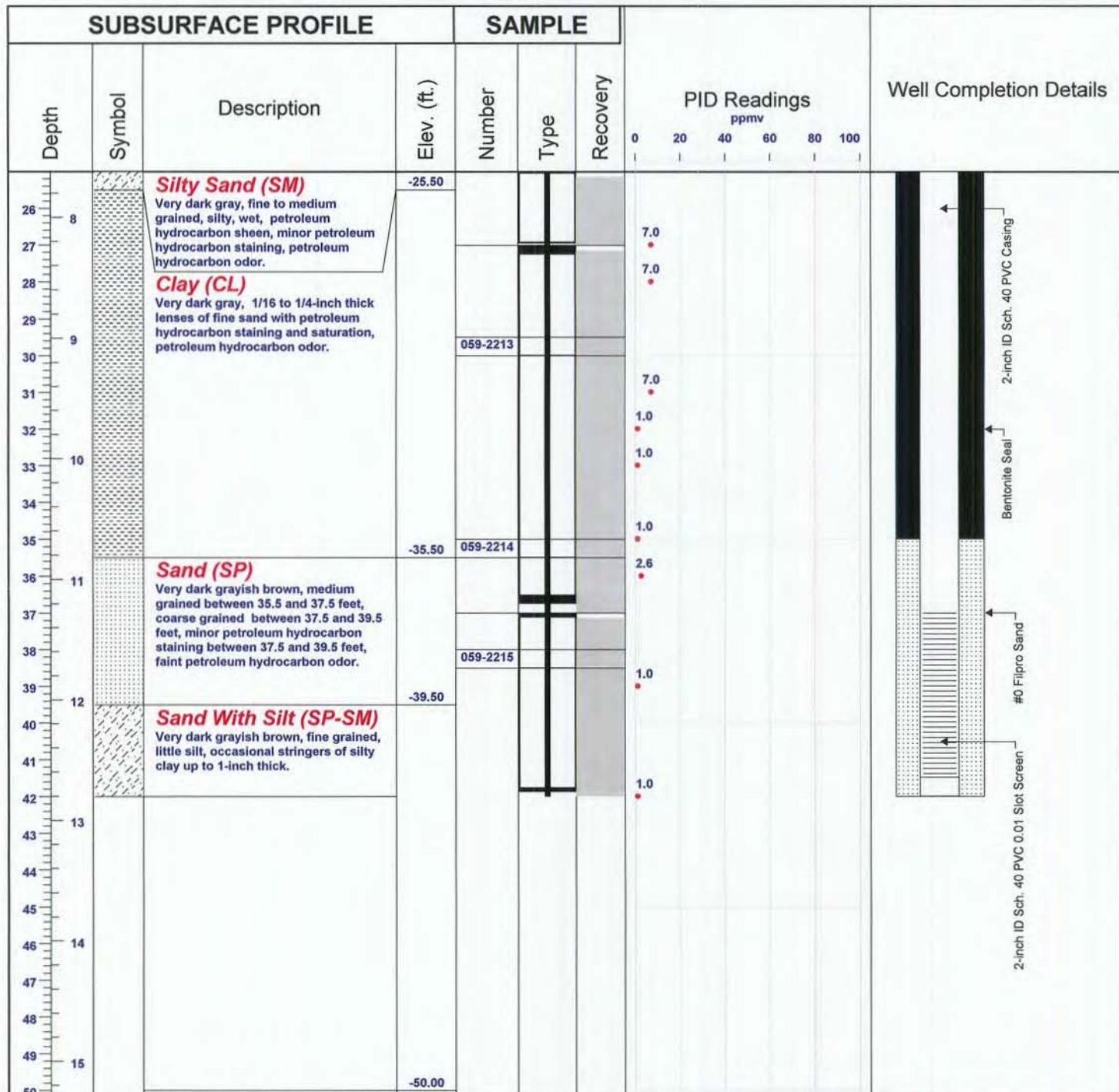
GCMW-37I Northing (ft): 185247.749

GCMW-37I Easting (ft): 986964.051

GCMW-37S Elevation (ft AMSL): 12.05

GCMW-37I Elevation (ft AMSL): 11.99

Log of Well: GCMW-37



Drill Method: A300 Rotary Sonic

Start Date: 0840 6/22/10

Hole Size: 8 inches

Drill Company: Boart Longyear

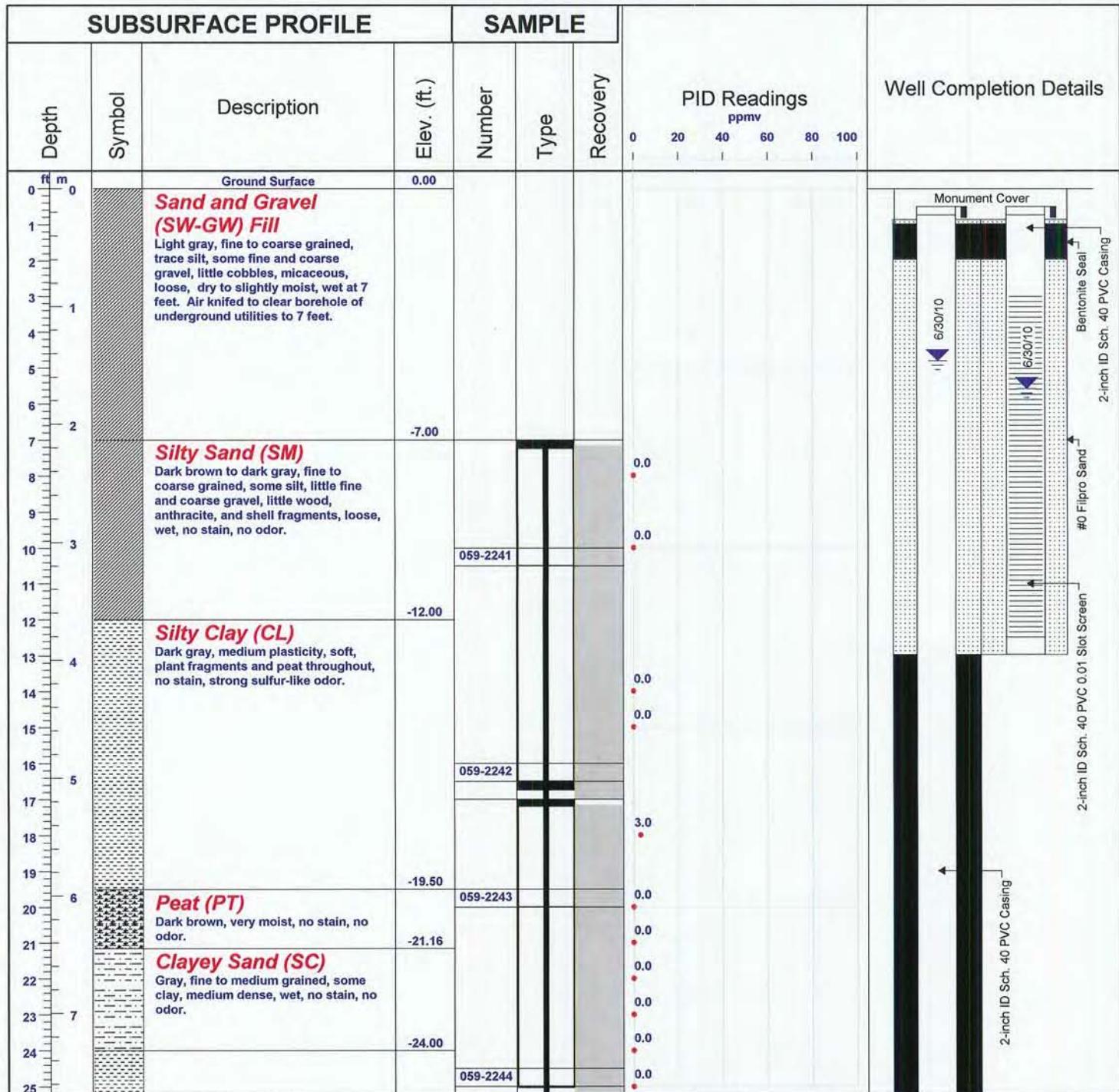
End Date: 1000 6/22/10

Sheet: 2 of 2

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Project No: SERA01-SER00059
Project: Gowanus Canal Superfund Site
Client: EPA/ERT
Location: 190 3rd St., Brooklyn, NY
Logged By: J. Bolduc

GCMW-38S Northing (ft): 185069.990 **Log of Well: GCMW-38**
GCMW-38S Easting (ft): 987233.128
GCMW-38I Northing (ft): 185069.967
GCMW-38I Easting (ft): 987233.285
GCMW-38S Elevation (ft AMSL): 11.33
GCMW-38I Elevation (ft AMSL): 11.32



Drill Method: A300 Rotary Sonic

Start Date: 0800 6/29/10

Hole Size: 8 inches

Lockheed Martin/SERAS
 2890 Woodbridge Avenue
 Building 209 Annex
 Edison, NJ 08837

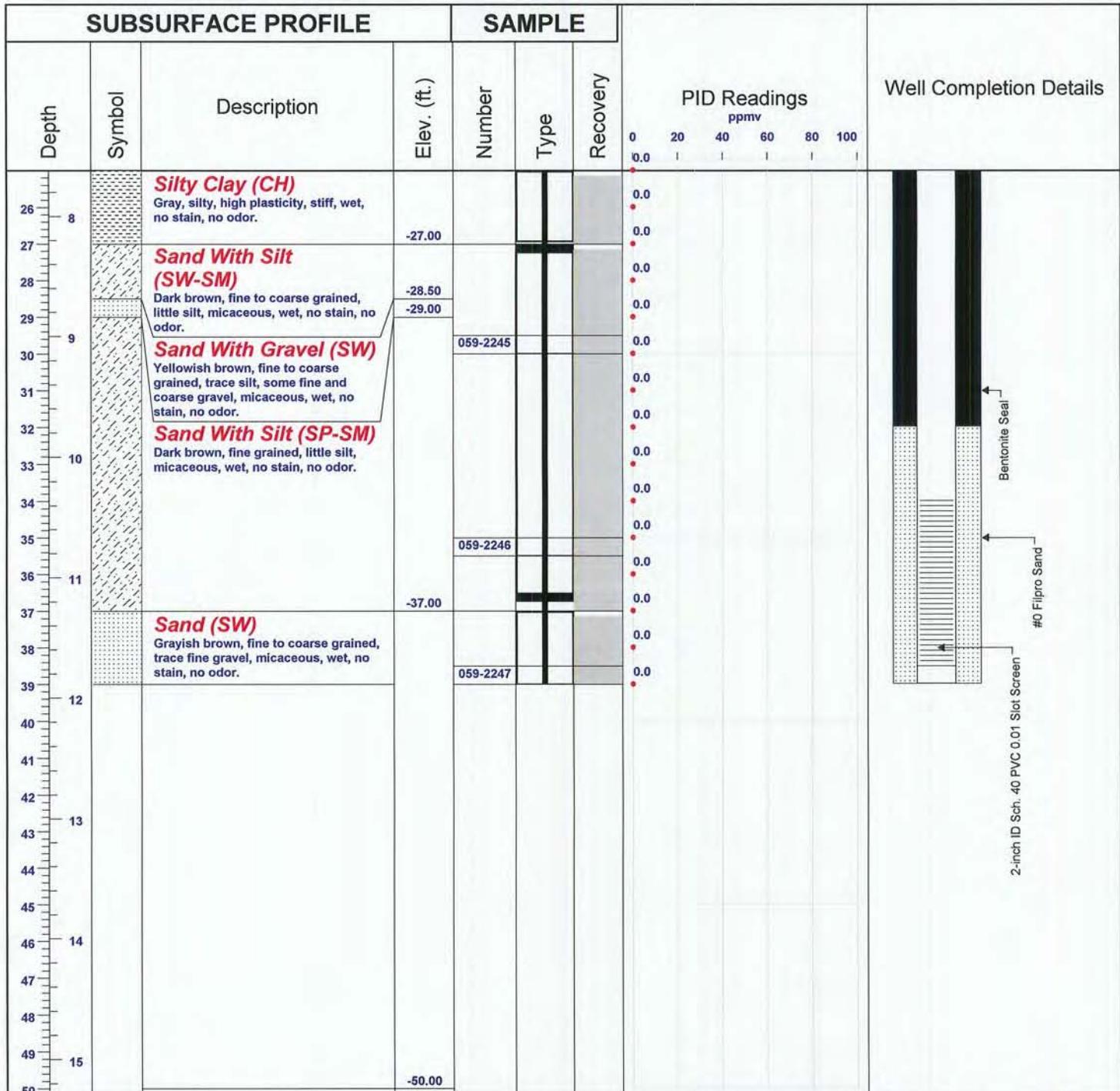
Drill Company: Boart Longyear

End Date: 1300 6/29/10

Sheet: 1 of 2

Project No: SERA01-SER00059
Project: Gowanus Canal Superfund Site
Client: EPA/ERT
Location: 190 3rd St., Brooklyn, NY
Logged By: J. Bolduc

GCMW-38S Northing (ft): 185069.990 **Log of Well: GCMW-38**
GCMW-38S Easting (ft): 987233.128
GCMW-38I Northing (ft): 185069.967
GCMW-38I Easting (ft): 987233.285
GCMW-38S Elevation (ft AMSL): 11.33
GCMW-38I Elevation (ft AMSL): 11.32



Drill Method: A300 Rotary Sonic

Start Date: 0800 6/29/10

Hole Size: 8 inches

Lockheed Martin/SERAS
 2890 Woodbridge Avenue
 Building 209 Annex
 Edison, NJ 08837

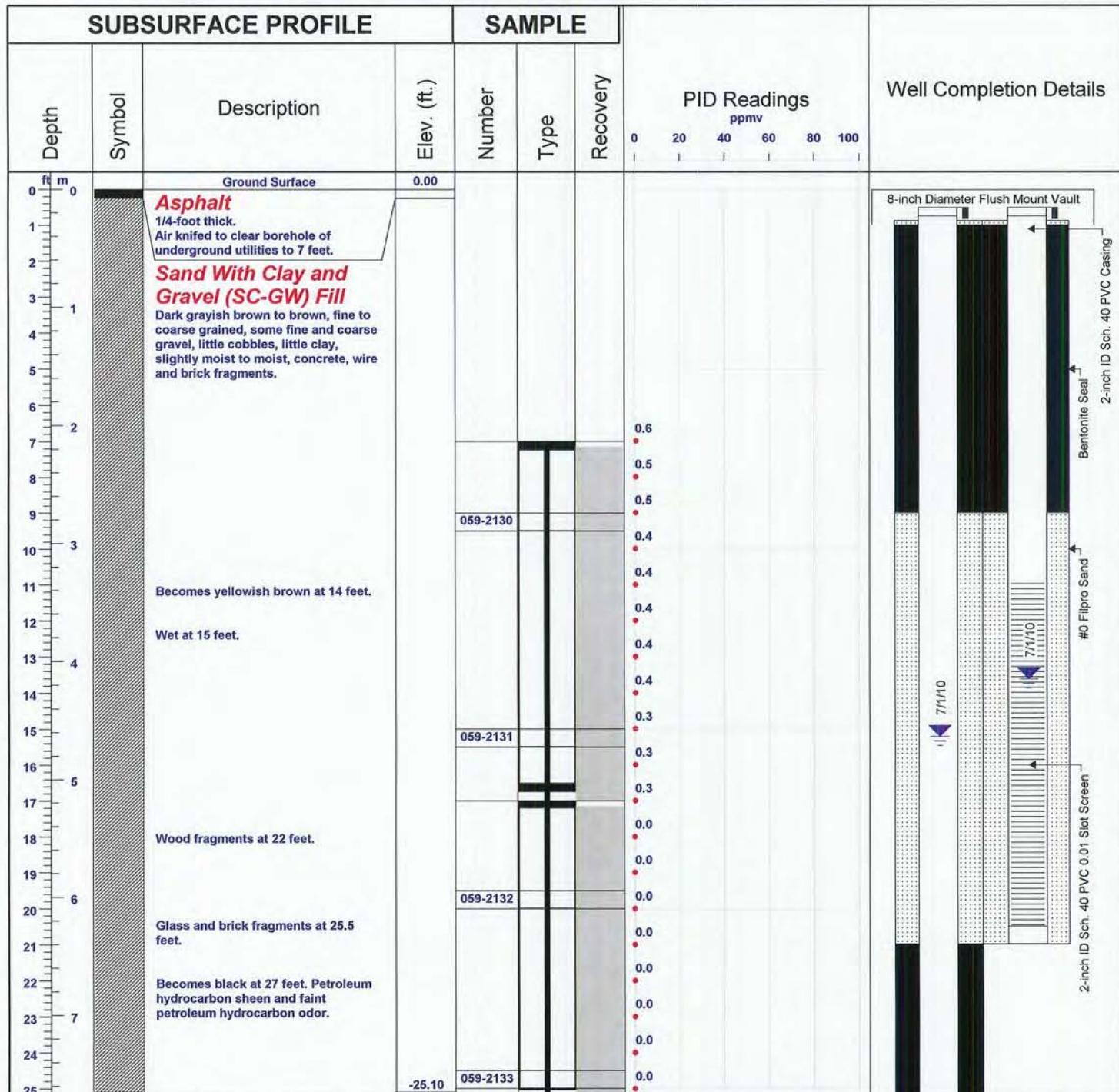
Drill Company: Boart Longyear

End Date: 1300 6/29/10

Sheet: 2 of 2

Project No: SERA01-SER00059
Project: Gowanus Canal Superfund Site
Client: EPA/ERT
Location: 3rd Ave. U Haul, Brooklyn, NY
Logged By: J. Bolduc

GCMW-39S Northing (ft): 184845.371 **Log of Well: GCMW-39**
GCMW-39S Easting (ft): 987427.894
GCMW-39I Northing (ft): 184845.430
GCMW-39I Easting (ft): 987427.630
GCMW-39S Elevation (ft AMSL): 18.14
GCMW-39I Elevation (ft AMSL): 18.16



Drill Method: A300 Rotary Sonic

Start Date: 1100 6/9/10

Hole Size: 8 inches

Lockheed Martin/SERAS
 2890 Woodbridge Avenue
 Building 209 Annex
 Edison, NJ 08837

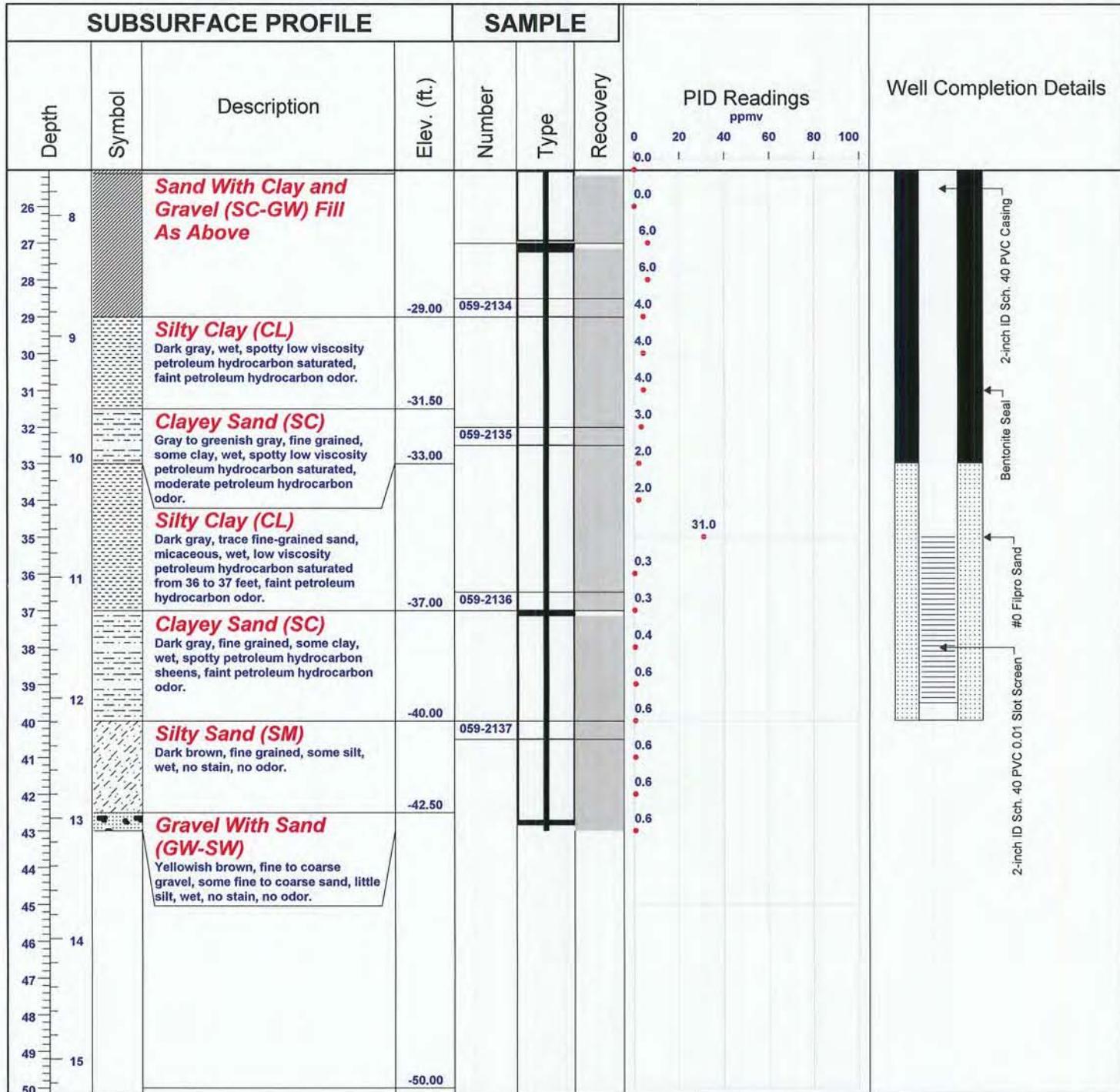
Drill Company: Boart Longyear

End Date: 1430 6/9/10

Sheet: 1 of 2

Project No: SERA01-SER00059
Project: Gowanus Canal Superfund Site
Client: EPA/ERT
Location: 3rd Ave. U Haul, Brooklyn, NY
Logged By: J. Bolduc

GCMW-39S Northing (ft): 184845.371 **Log of Well: GCMW-39**
GCMW-39S Easting (ft): 987427.894
GCMW-39I Northing (ft): 184845.430
GCMW-39I Easting (ft): 987427.630
GCMW-39S Elevation (ft AMSL): 18.14
GCMW-39I Elevation (ft AMSL): 18.16



Drill Method: A300 Rotary Sonic

Start Date: 1100 6/9/10

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1430 6/9/10

Sheet: 2 of 2

Lockheed Martin/SERAS
 2890 Woodbridge Avenue
 Building 209 Annex
 Edison, NJ 08837

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 9th St., Brooklyn, NY

Logged By: J. Bolduc

GCMW-42S Northing (ft): 185003.726

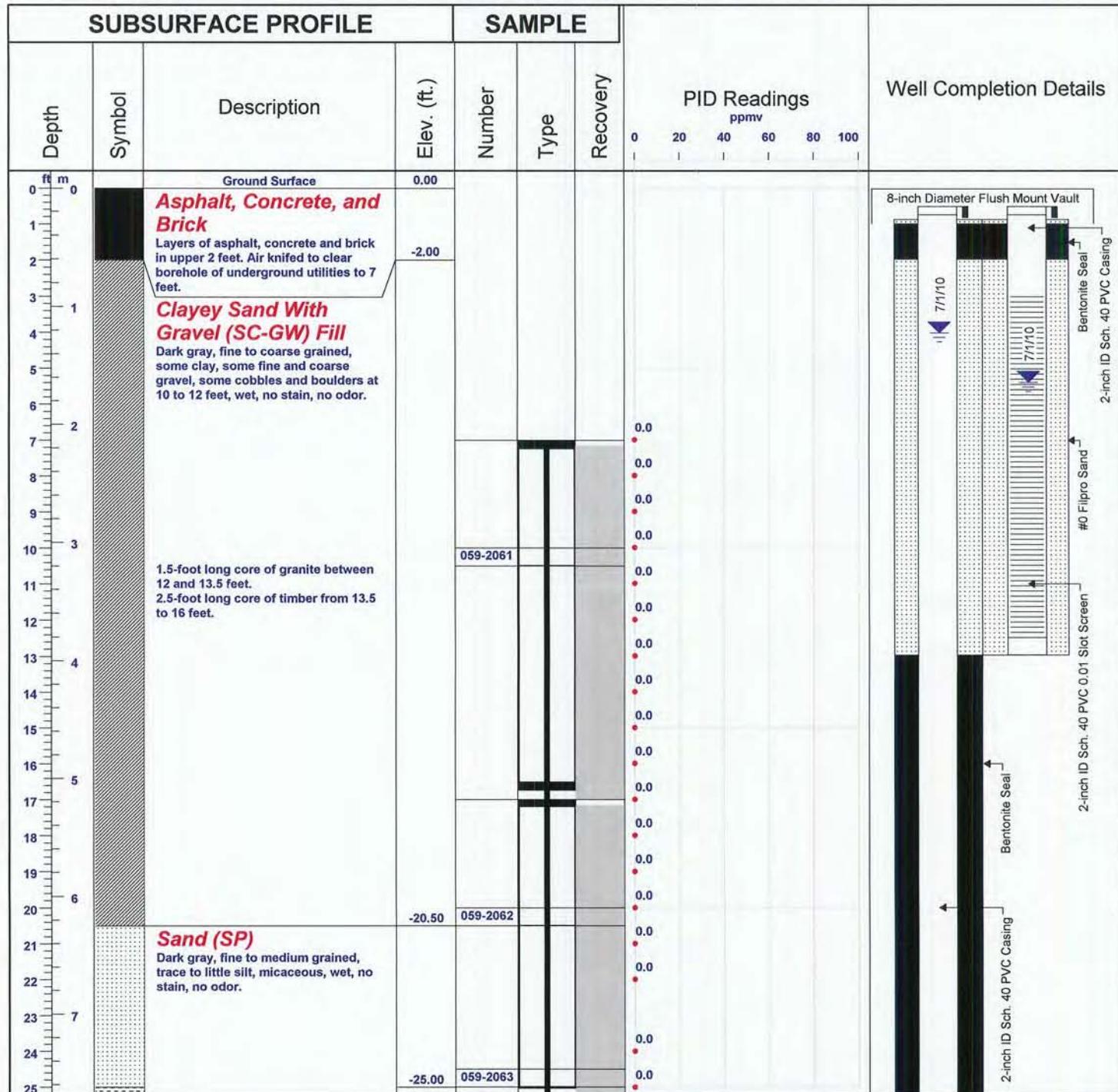
GCMW-42S Easting (ft): 985760.590

GCMW-42I Northing (ft): 185003.578

GCMW-42I Easting (ft): 985760.275

GCMW-42S Elevation (ft AMSL): 6.81

Log of Well: GCMW-42



Drill Method: A300 Rotary Sonic

Start Date: 0800 5/26/10

Hole Size: 8 inches

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Drill Company: Boart Longyear

End Date: 1430 5/26/10

Sheet: 1 of 2

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 9th St., Brooklyn, NY

Logged By: J. Bolduc

GCMW-42S Northing (ft): 185003.726

GCMW-42S Easting (ft): 985760.590

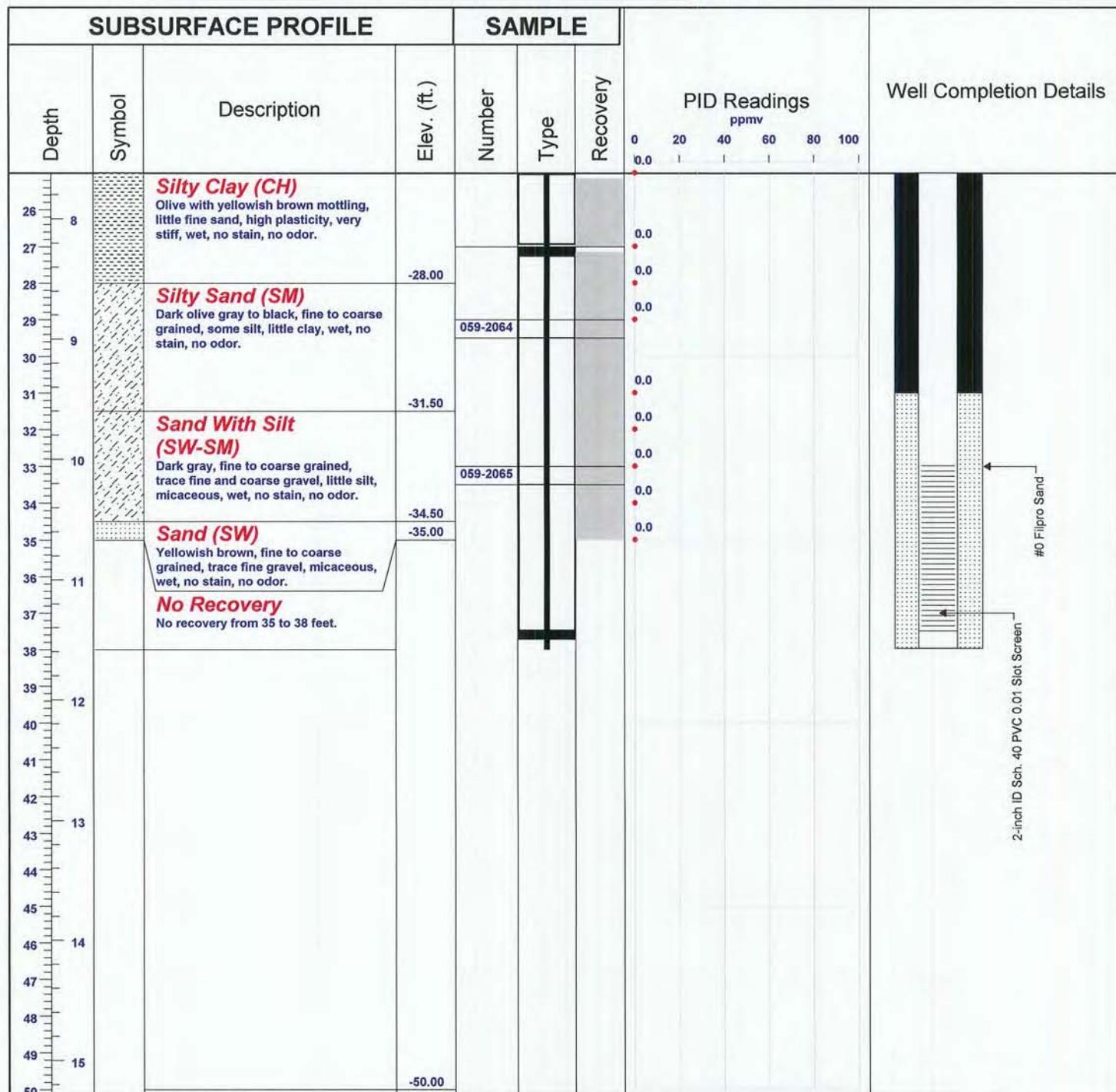
GCMW-42I Northing (ft): 185003.578

GCMW-42I Easting (ft): 985760.275

GCMW-42S Elevation (ft AMSL): 6.81

GCMW-42I Elevation (ft AMSL): 6.82

Log of Well: GCMW-42



Drill Method: A300 Rotary Sonic

Start Date: 0800 5/26/10

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1430 5/26/10

Sheet: 2 of 2

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 400 Carroll St., Brooklyn, NY

Logged By: J. Bolduc

GCMW-43S Northing (ft): 186235.390

GCMW-43S Easting (ft): 987143.769

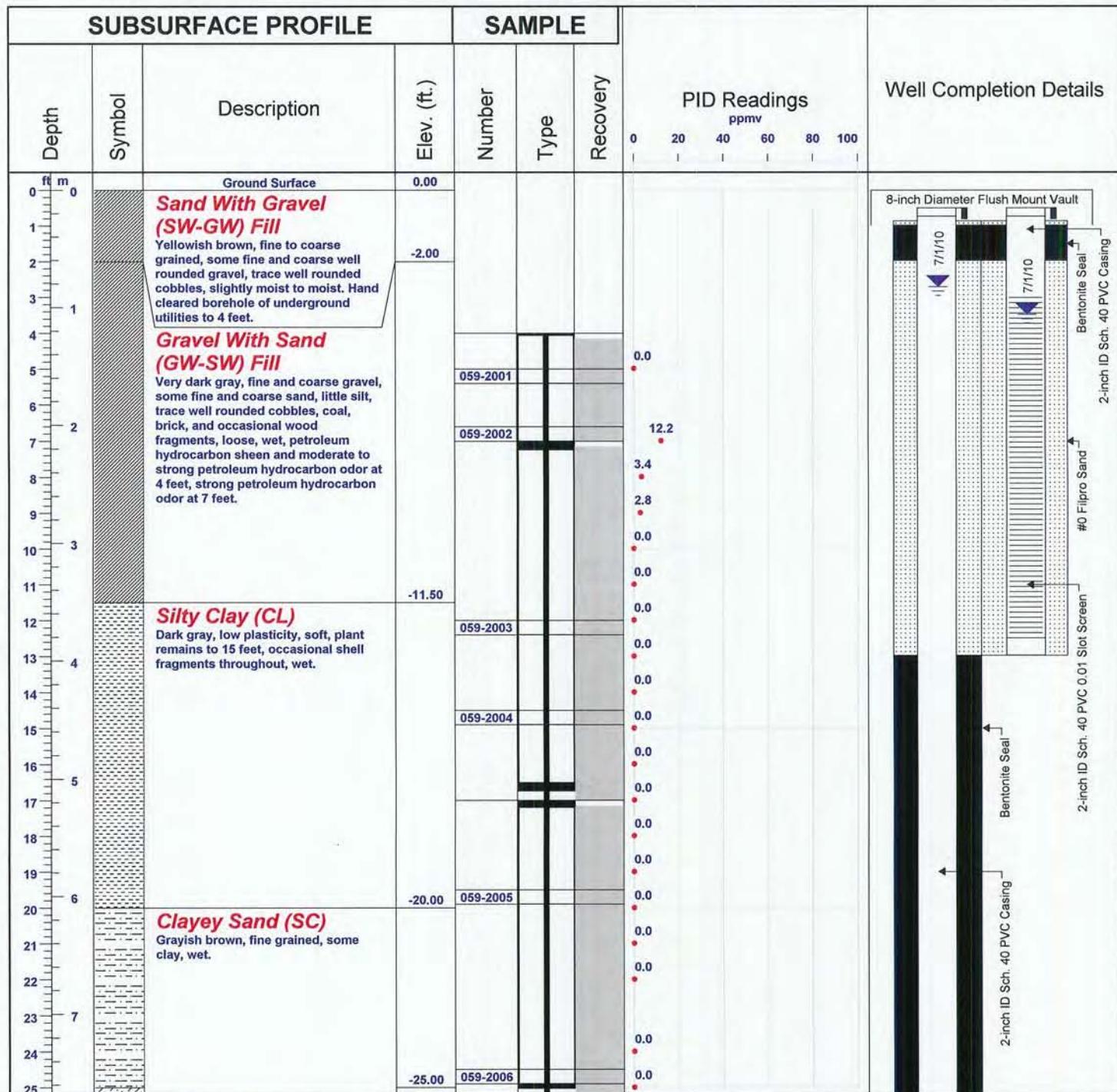
GCMW-43I Northing (ft): 186235.575

GCMW-43I Easting (ft): 987143.829

GCMW-43S Elevation (ft AMSL): 5.39

GCMW-43I Elevation (ft AMSL): 5.40

Log of Well: GCMW-43



Drill Method: A300 Rotary Sonic

Start Date: 1300 5/17/10

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1843 5/17/10

Sheet: 1 of 2

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 400 Carroll St., Brooklyn, NY

Logged By: J. Bolduc

GCMW-43S Northing (ft): 186235.390

GCMW-43S Easting (ft): 987143.769

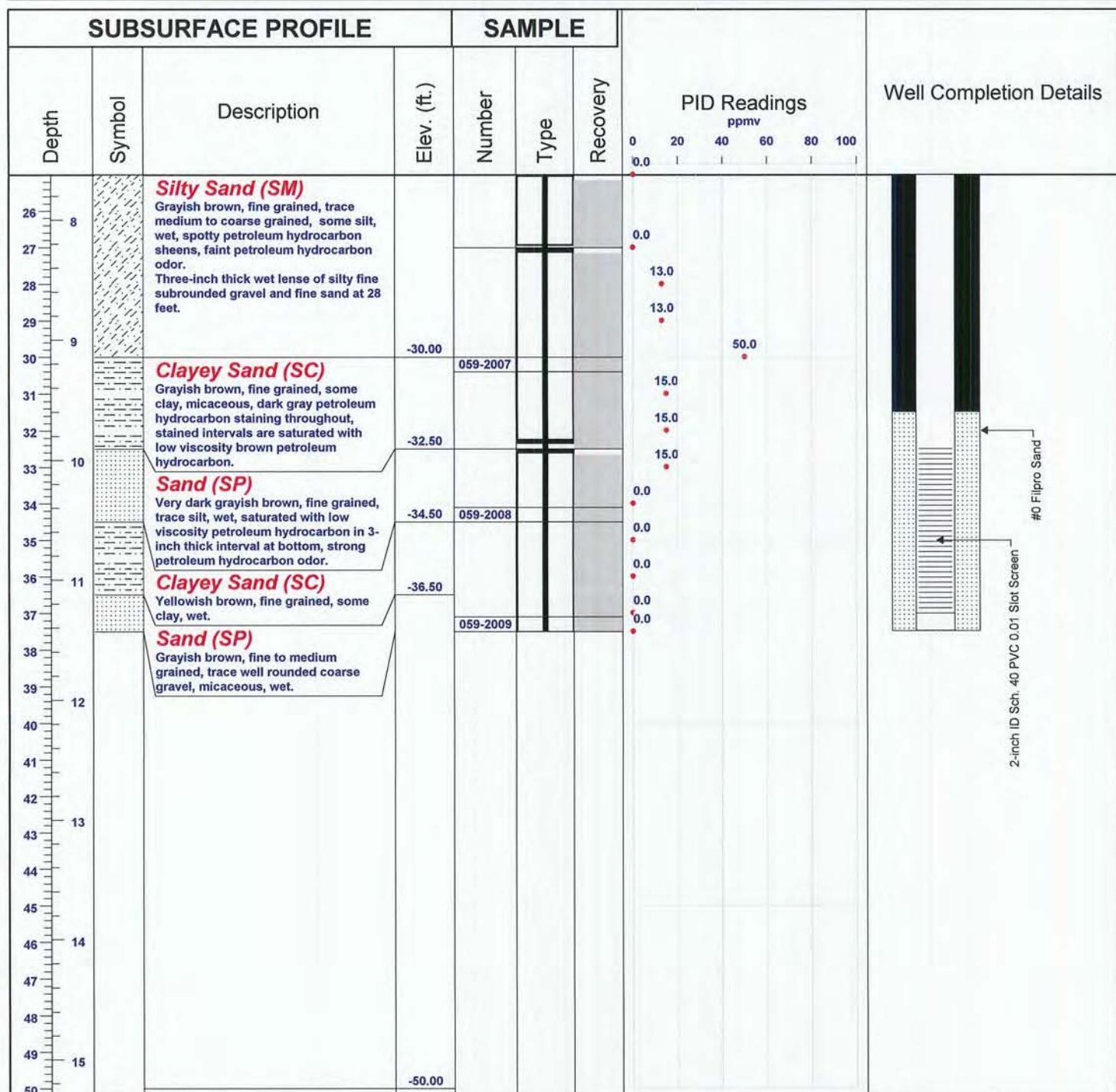
GCMW-43I Northing (ft): 186235.575

GCMW-43I Easting (ft): 987143.829

GCMW-43S Elevation (ft AMSL): 5.39

GCMW-43I Elevation (ft AMSL): 5.40

Log of Well: GCMW-43



Drill Method: A300 Rotary Sonic

Start Date: 1300 5/17/10

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1843 5/17/10

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Sheet: 2 of 2

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 118 2nd Ave., Brooklyn, NY

Logged By: J. Bolduc

GCMW-44S Northing (ft): 184458.534

GCMW-44S Easting (ft): 985077.566

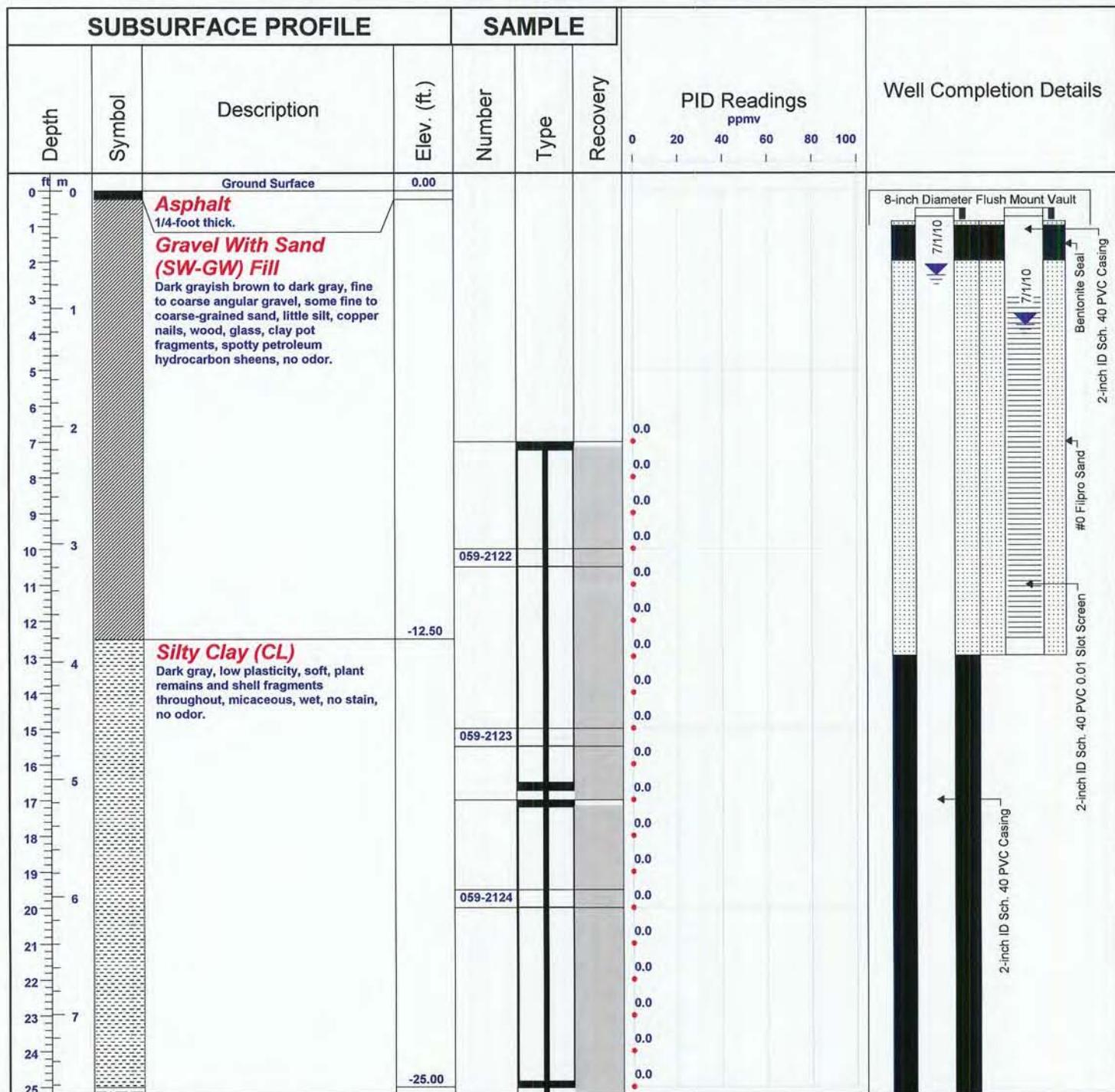
GCMW-44I Northing (ft): 184458.434

GCMW-44I Easting (ft): 985077.808

GCMW-44S Elevation (ft AMSL): 4.72

GCMW-44I Elevation (ft AMSL): 4.73

Log of Well: GCMW-44



Drill Method: A300 Rotary Sonic

Start Date: 1300 6/8/10

Hole Size: 8 inches

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Drill Company: Boart Longyear

End Date: 1630 6/8/10

Sheet: 1 of 2

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 118 2nd Ave., Brooklyn, NY

Logged By: J. Bolduc

GCMW-44S Northing (ft): 184458.534

Log of Well: GCMW-44

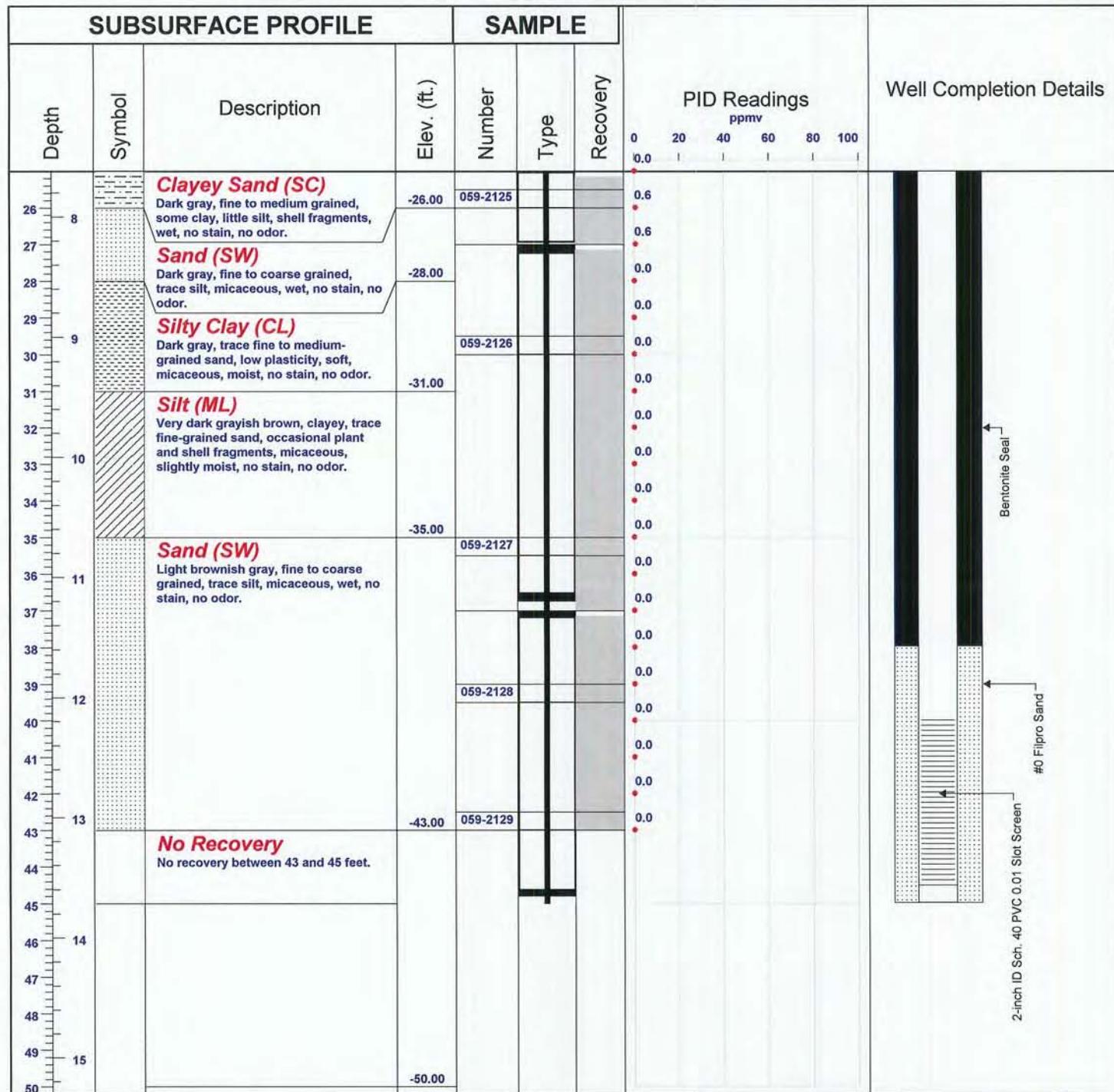
GCMW-44S Easting (ft): 985077.566

GCMW-44I Northing (ft): 184458.434

GCMW-44I Easting (ft): 985077.808

GCMW-44S Elevation (ft AMSL): 4.72

GCMW-44I Elevation (ft AMSL): 4.73



Drill Method: A300 Rotary Sonic

Start Date: 1300 6/8/10

Hole Size: 8 inches

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Drill Company: Boart Longyear

End Date: 1630 6/8/10

Sheet: 2 of 2

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: Lowes, Brooklyn, NY

Logged By: J. Bolduc

GCMW-45S Northing (ft): 184648.833

GCMW-45S Easting (ft): 985200.254

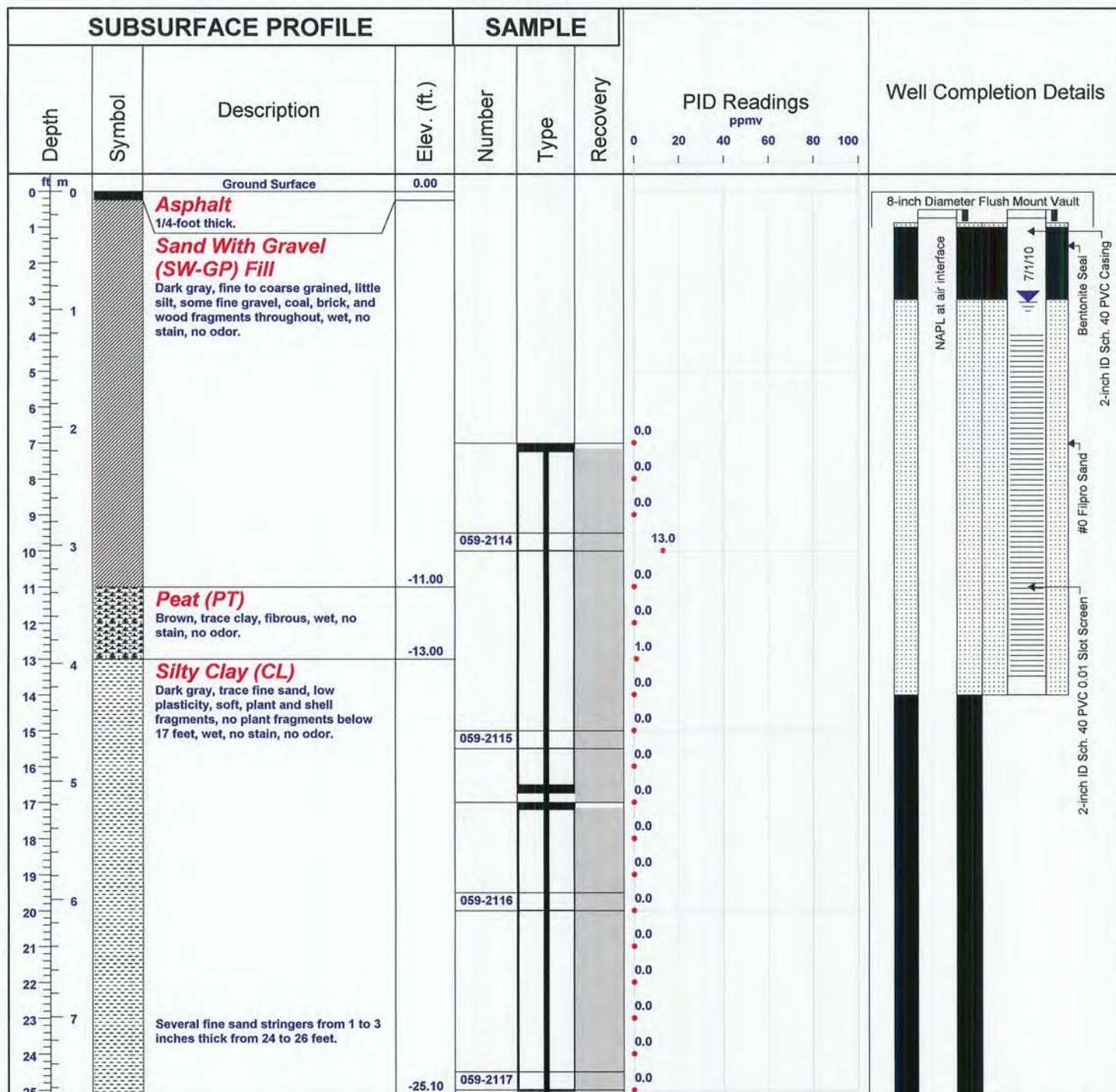
GCMW-45I Northing (ft): 184648.804

GCMW-45I Easting (ft): 985199.988

GCMW-45S Elevation (ft AMSL): 4.49

GCMW-45I Elevation (ft AMSL): 4.50

Log of Well: GCMW-45



Drill Method: A300 Rotary Sonic

Start Date: 0813 6/8/10

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1025 6/8/10

Sheet: 1 of 2

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: Lowes, Brooklyn, NY

Logged By: J. Bolduc

GCMW-45S Northing (ft): 184648.833

GCMW-45S Easting (ft): 985200.254

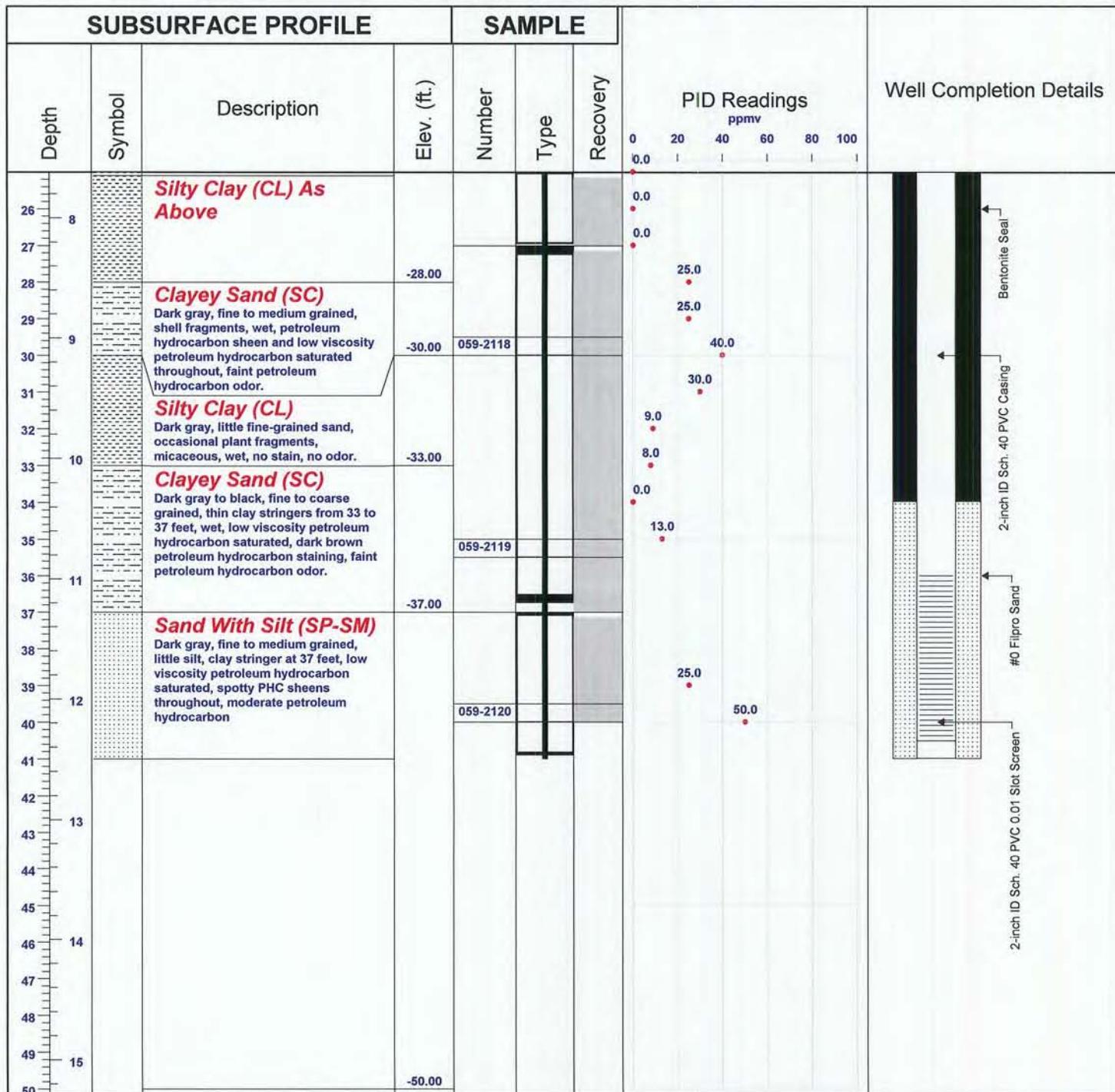
GCMW-45I Northing (ft): 184648.804

GCMW-45I Easting (ft): 985199.988

GCMW-45S Elevation (ft AMSL): 4.49

GCMW-45I Elevation (ft AMSL): 4.50

Log of Well: GCMW-45



Drill Method: A300 Rotary Sonic

Start Date: 0813 6/8/10

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1025 6/8/10

Sheet: 2 of 2

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 118 2nd Ave., Brooklyn, NY

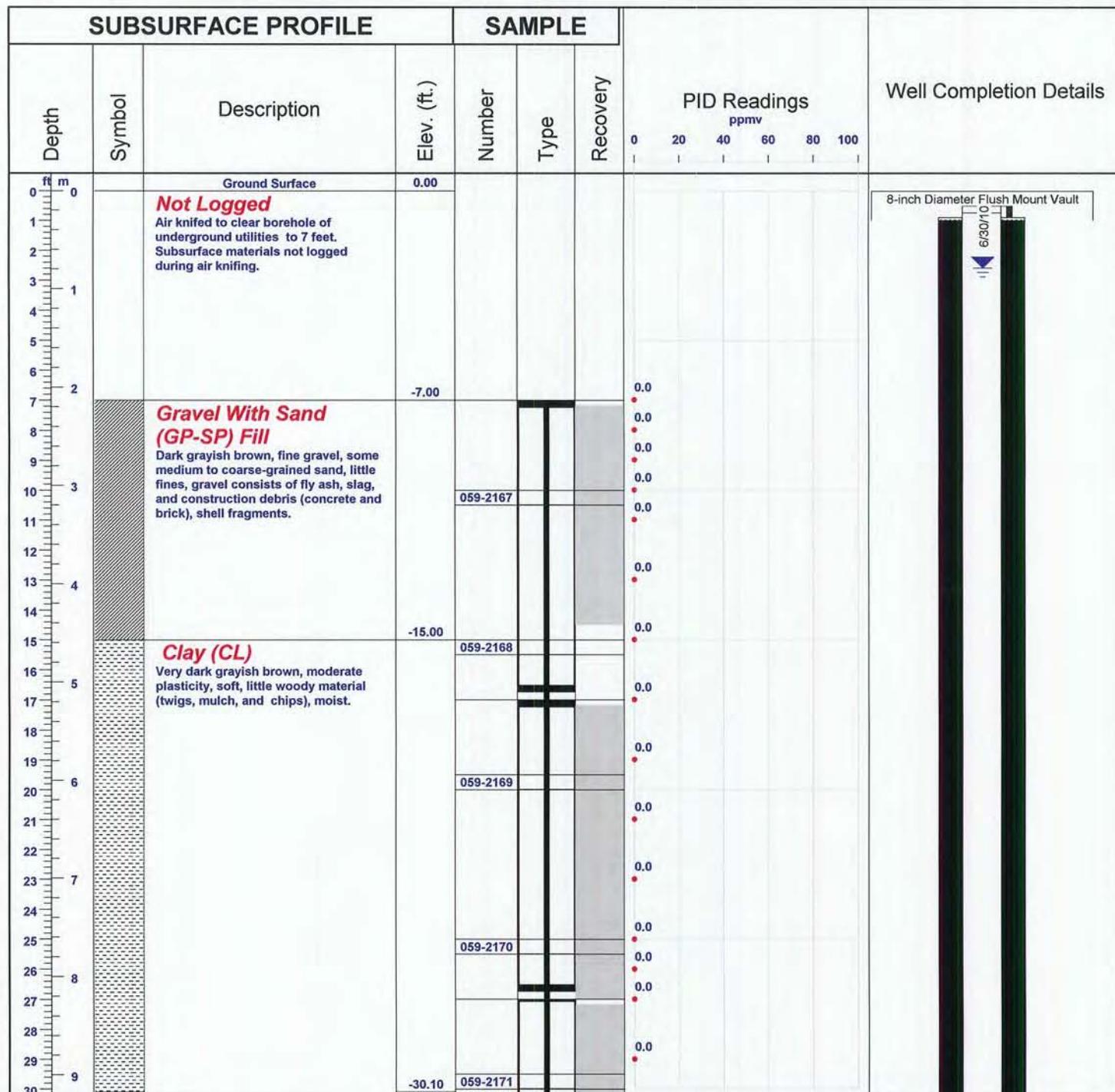
Logged By: C. Sklaney

GCMW-46I Northing (ft): 184593.888

GCMW-46I Easting (ft): 985167.173

GCMW-46I Elevation (ft AMSL): 4.76

Log of Well: GCMW-46



Drill Method: A300 Rotary Sonic

Start Date: 1415 6/15/10

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1620 6/15/10

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Sheet: 1 of 2

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 118 2nd Ave., Brooklyn, NY

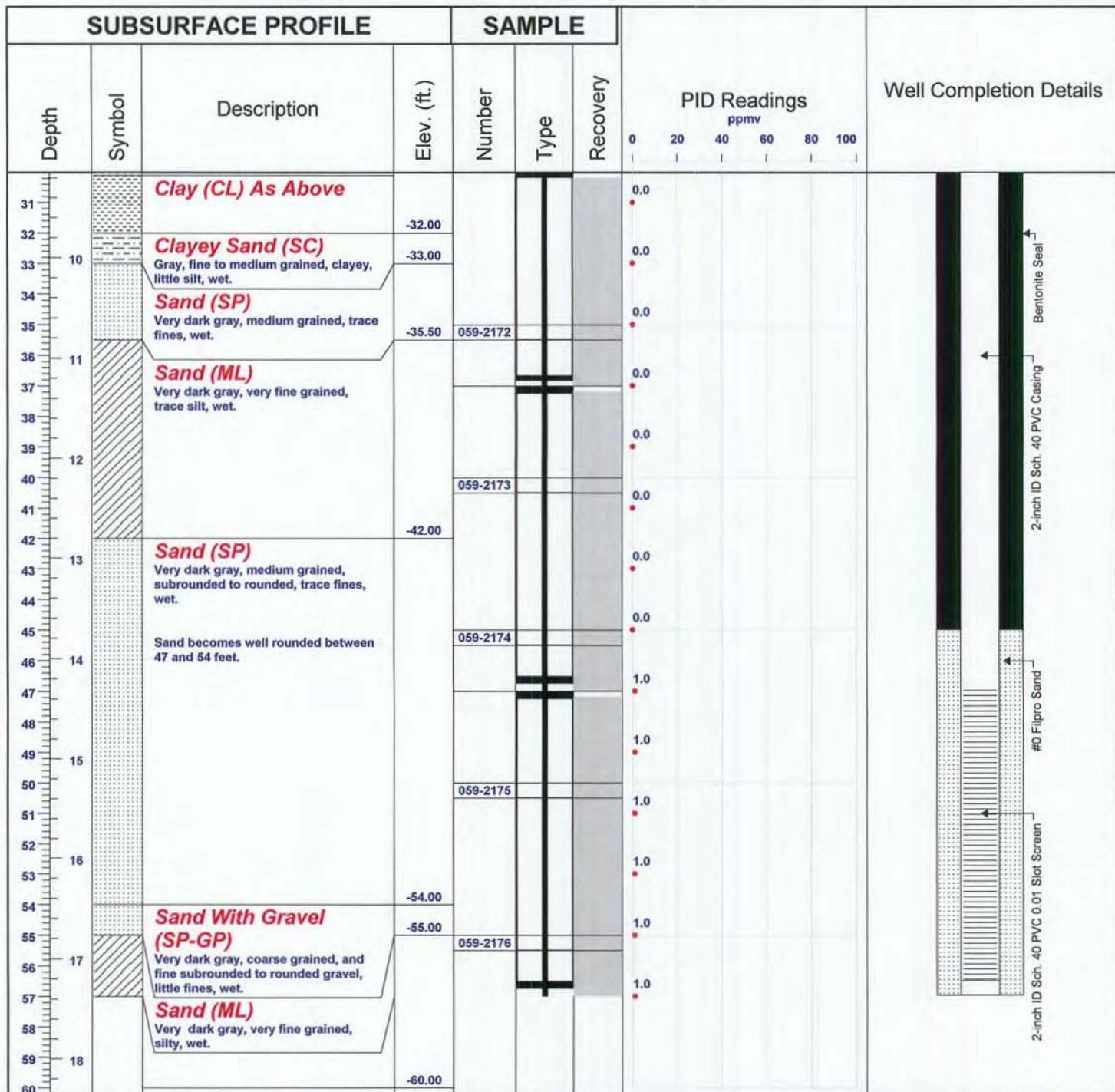
Logged By: C. Sklaney

GCMW-46I Northing (ft): 184593.888

GCMW-46I Easting (ft): 985167.173

GCMW-46I Elevation (ft AMSL): 4.76

Log of Well: GCMW-46



Drill Method: A300 Rotary Sonic

Start Date: 1415 6/15/10

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1620 6/15/10

Sheet: 2 of 2

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 118 2nd Ave., Brooklyn, NY

Logged By: C. Sklaney

GCMW-47S Northing (ft): 184690.704

GCMW-47S Easting (ft): 985209.243

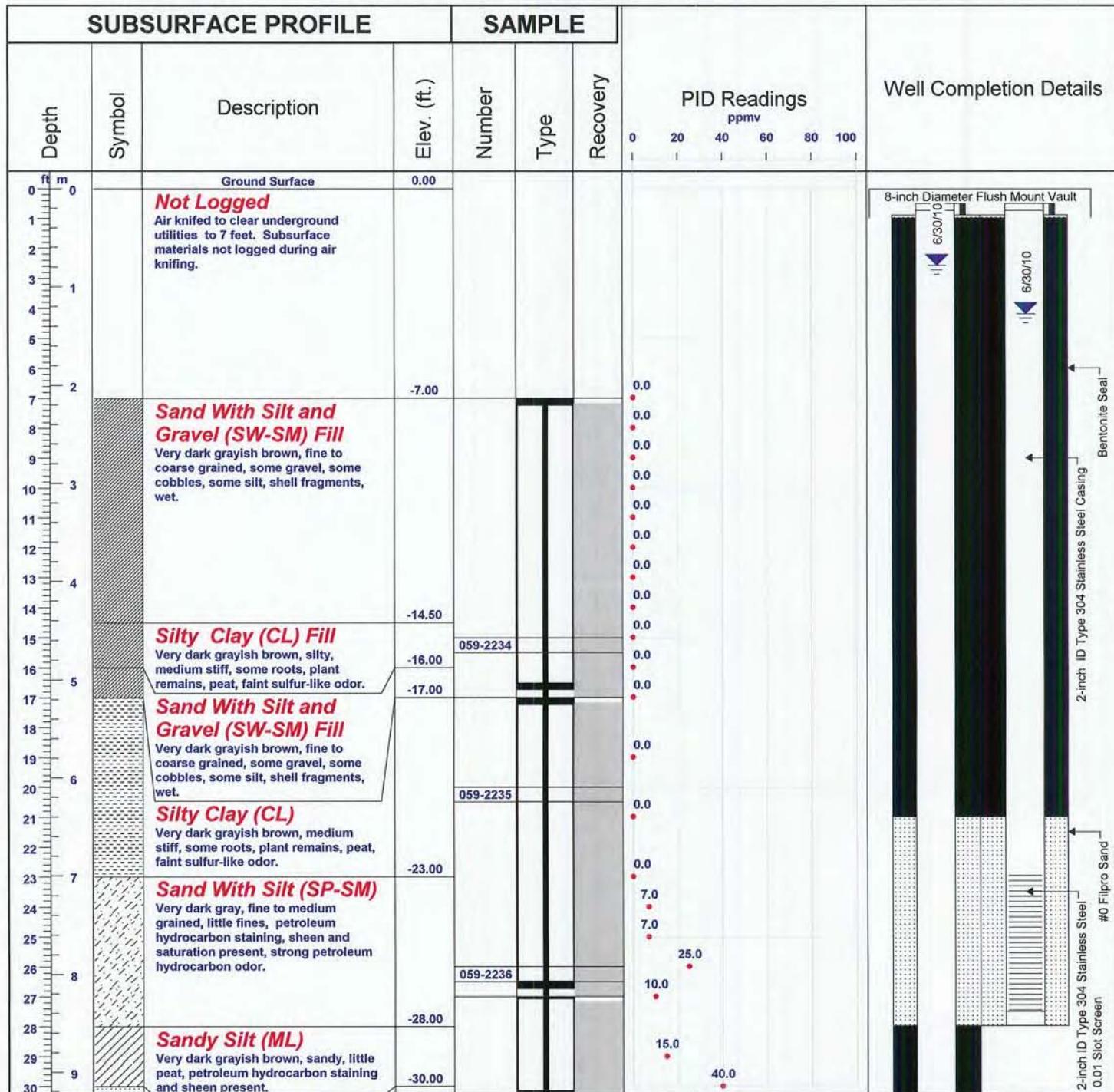
GCMW-47I Northing (ft): 184690.893

GCMW-47I Easting (ft): 985209.050

GCMW-47S Elevation (ft AMSL): 4.53

GCMW-47I Elevation (ft AMSL): 4.62

Log of Well: GCMW-47



Drill Method: A300 Rotary Sonic

Start Date: 0935 6/28/10

Hole Size: 8 inches

Drill Company: Boart Longyear

End Date: 1430 6/28/10

Sheet: 1 of 2

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Project No: SERAS-059

Project: Gowanus Canal Superfund Site

Client: EPA/ERT

Location: 118 2nd Ave., Brooklyn, NY

Logged By: C. Sklaney

GCMW-47S Northing (ft): 184690.704

GCMW-47S Easting (ft): 985209.243

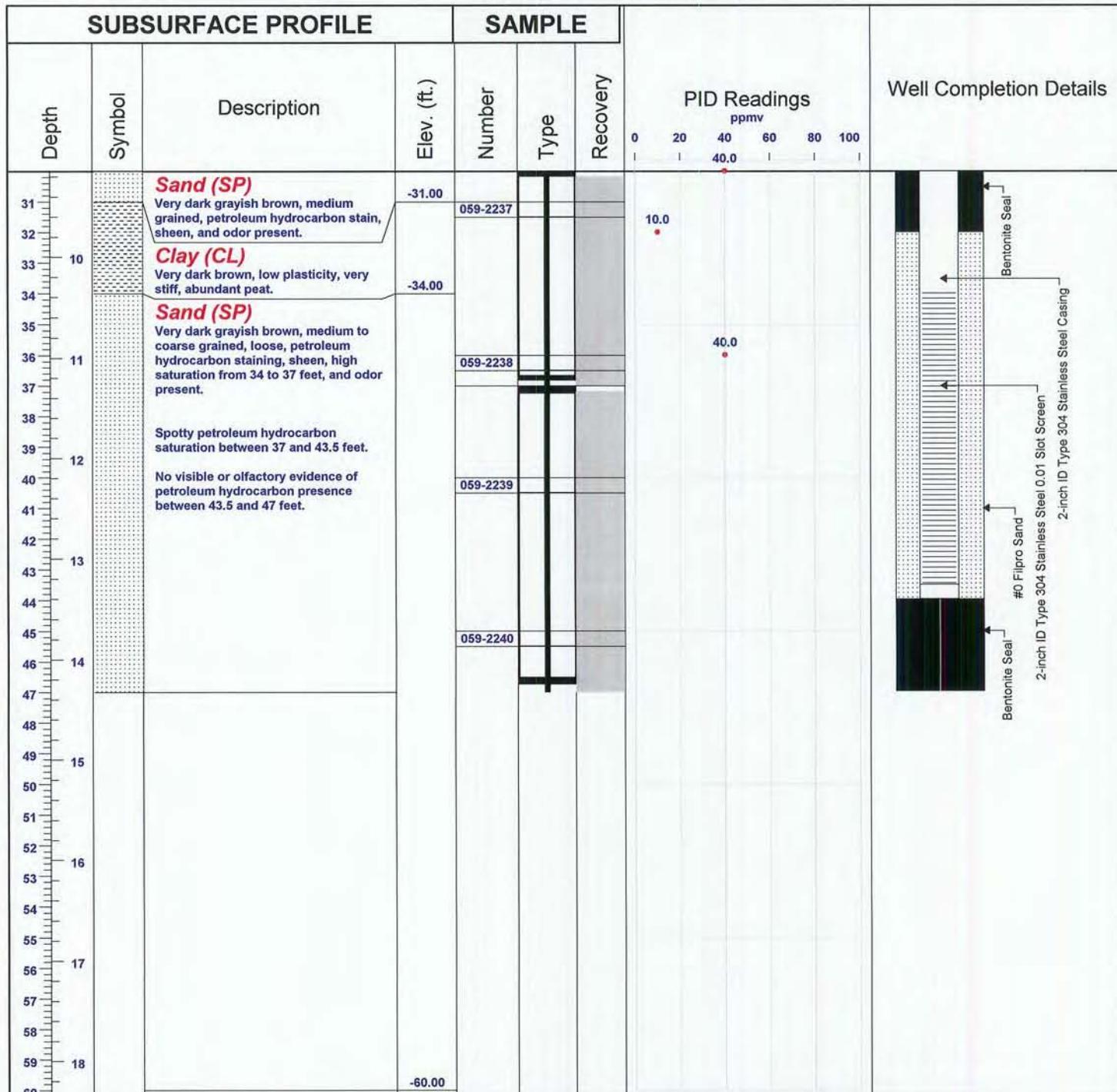
GCMW-47I Northing (ft): 184690.893

GCMW-47I Easting (ft): 985209.050

GCMW-47S Elevation (ft AMSL): 4.53

GCMW-47I Elevation (ft AMSL): 4.62

Log of Well: GCMW-47



Drill Method: A300 Rotary Sonic

Start Date: 0935 6/28/10

Hole Size: 8 inches

Drill Company: Boart Longyear

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

End Date: 1430 6/28/10

Sheet: 2 of 2

Appendix D

Field Documentation

D-04 – Soil Boring Logs and Monitoring Well Construction Diagrams

**National Grid Soil Boring Logs and
Monitoring Well Construction Diagrams**

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GEI Consultants, Inc. 455 Winding Brook Road Glastonbury, CT 06033 (860) 368-5300				CLIENT: National Grid PROJECT: Gowanus Canal Uplands Assessment CITY/STATE: Brooklyn, NY GEI PROJECT NUMBER: 093010-3-1302			BORING LOG	
							PAGE 1 of 3	GC-MW23I
GROUND SURFACE ELEVATION (FT):				LOCATION: Gate Station				
NORTHING:		EASTING:		TOTAL DEPTH (FT): 39.00				
DRILLED BY: Boart Longyear / Frank Gardella				DATUM VERT. / HORZ.: NAVD 88 / NAD 83				
LOGGED BY: Mitch Weier				DATE START / END: 6/29/2010 - 6/29/2010				
DRILLING DETAILS: Sonic Coring								
WATER LEVEL DEPTHS (FT): 20.00 6/29/2010 11:10 am								
DEPTH FT.	SAMPLE INFO			STRATA	VISUAL IMPACTS	ODOR	SOIL / BEDROCK DESCRIPTION	WELL CONSTRUCTION DETAILS
	TYPE and NO.	PEN FT.	REC FT.					
0	HC-1	5.0					(0'- 0.4') ASPHALT; 2" asphalt pavement overlying 2" gravel base. (0.4'- 5') SILTY SAND (SM); ~60% sand, fine to coarse, ~25% fines, ~10% gravel, fine to coarse, subangular; trace brick fragments, max. size 4 in., moderate petroleum-like odor, moist, black, FILL, 1/4-inch thick wood plank encountered at 4.3 feet.	 
5	S-1	5.0	48	13.2		PLO	(5'- 7') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~55% sand, fine to coarse, ~35% gravel, fine to coarse, ~10% fines; max. size 3 in., black, FILL, ash. (7'- 8') SILTY SAND (SM); ~55% sand, fine to coarse, ~35% fines, ~10% gravel, fine; moist, black, FILL, ash. (8'- 10') SILTY SAND (SM); ~55% sand, fine, ~45% fines, ~0% gravel; moist, black, FILL.	 
10	S-2	5.0	34	0.7			(10'- 12') SILT (ML); ~90% fines, low plasticity, ~10% sand, fine; wood, moderate sulfur-like odor, moist, gray and black, peat fragments.	 
15				2		SLO	(12'- 16.5') ORGANIC SOIL (OL/OH); moderate sulfur-like odor, moist, brown and gray, PEAT.	 

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL
 REC = RECOVERY LENGTH OF SAMPLE
 PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

ppm = PARTS PER MILLION
 IN. = INCHES
 FT. = FEET

NLO = NAPHTHALENE LIKE ODOR
 PLO = PETROLEUM LIKE ODOR
 TLO = TAR LIKE ODOR
 CLO = CHEMICAL LIKE ODOR
 ALO = ASPHALT LIKE ODOR

CLO = CREOSOTE LIKE ODOR
 OLO = ORGANIC LIKE ODOR
 SLO = SULFUR LIKE ODOR
 MLO = MUSTY LIKE ODOR

DRAFT

 <p>GEI Consultants</p> <p>GEI Consultants, Inc. 455 Winding Brook Road Glastonbury, CT 06033 (860) 368-5300</p>							CLIENT: National Grid		BORING LOG		
							PROJECT: Gowanus Canal Uplands Assessment	CITY/STATE: Brooklyn, NY	PAGE 2 of 3	GC-MW23I	
DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	SOIL / BEDROCK DESCRIPTION		WELL CONSTRUCTION DETAILS	
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)							
15	S-3	5.0	60				SLO	(16.5'- 18') ELASTIC SILT (MH); ~95% fines, high plasticity, ~5% sand, fine; peat, strong sulfur-like odor, moist, gray, 40% peat.			
					1		SLO				
							SLO				
20	S-4	5.0	48				PLO	(20'- 22') NARROWLY GRADED SAND WITH SILT (SP-SM); ~90% sand, fine to medium, ~10% fines; strong petroleum-like odor, wet, gray, sheen.			
					5003		TLO				
							TLO				
							SLO				
25	S-5	5.0	48				SLO	(22'- 23') NARROWLY GRADED SAND WITH SILT (SP-SM); ~90% sand, fine to medium, ~10% fines; strong tar-like odor, wet, gray and brown, heavy coating. (23'- 24') SILTY SAND (SM); ~85% sand, fine to medium, ~15% fines; moderate tar-like odor, wet, gray, sheen. (24'- 25') SILTY SAND (SM); ~80% sand, fine to medium, ~20% fines; slight sulfur-like odor, wet, gray.			
							SLO				
					196		PLO				
30	S-6	5.0	46				NLO	(30'- 32') NARROWLY GRADED SAND (SP); ~90% sand, fine to medium, ~5% gravel, fine to coarse, ~5% fines; max. size 2 in., moderate naphthalene-like odor, wet, gray, sheen.			
							NLO				
								(32'- 33') CLAYEY SAND (SC); ~65% sand, fine to			
NOTES:											
ENVIRONMENTAL BORING LOG GOWANUS LOGS GPU GEI CONSULTANTS GDT 10/7/10					ppm = PARTS PER MILLION			NLO = NAPHTHALENE LIKE ODOR	CrLO= CREOSOTE LIKE ODOR		
PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL					IN. = INCHES			PLO = PETROLEUM LIKE ODOR	OLO = ORGANIC LIKE ODOR		
REC = RECOVERY LENGTH OF SAMPLE					FT. = FEET			TLO = TAR LIKE ODOR	SLO = SULFUR LIKE ODOR		
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)					CLO = CHEMICAL LIKE ODOR			ALO = ASPHALT LIKE ODOR	MLO = MUSTY LIKE ODOR		

DRAFT



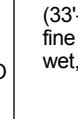
GEI Consultants, Inc.
455 Winding Brook Road
Glastonbury, CT 06033
(860) 368-5300

CLIENT: National Grid
PROJECT: Gowanus Canal Uplands Assessment
CITY/STATE: Brooklyn, NY
GEI PROJECT NUMBER: 093010-3-1302

BORING LOG

GC-MW23I

PAGE
3 of 3

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	SOIL / BEDROCK DESCRIPTION	WELL CONSTRUCTION DETAILS
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
35	S-7	4.0	48	213			NLO	medium, ~35% fines; slight naphthalene-like odor, wet, brown. (33'- 35') NARROWLY GRADED SAND (SP); ~95% sand, fine to medium, ~5% fines; strong naphthalene-like odor, wet, brown, light coating.	 
							NLO	(35'- 36.5') NARROWLY GRADED SAND (SP); ~95% sand, fine to medium, ~5% fines; strong naphthalene-like odor, wet, brown and orange, heavy coating.	
	S-7	4.0	48	869			NLO	(36.5'- 38') SILTY SAND (SM); ~55% sand, fine, ~45% fines; slight naphthalene-like odor, wet, gray.	 
							NLO	(38'- 39') SILTY SAND (SM); ~70% sand, fine, ~30% fines; slight naphthalene-like odor, wet, gray.	

Bottom of borehole at 39.0 feet.

ENVIRONMENTAL BORING LOG GOWANUS LOGS, SPY GEI CONSULTANTS.GDT 10/7/10

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR
HEADSPACE)

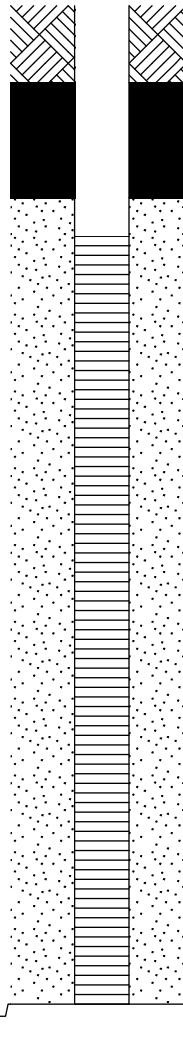
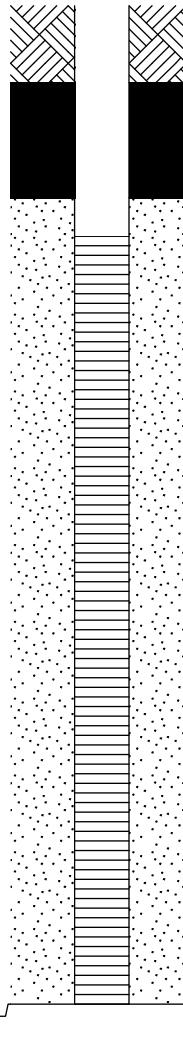
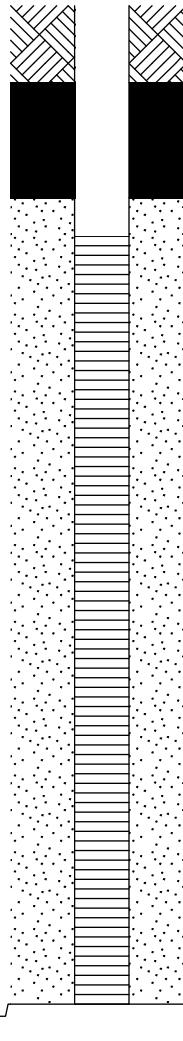
ppm = PARTS PER MILLION
IN. = INCHES
FT = FEET

NLO = NAPHTHALENE LIKE ODOR
PLO = PETROLEUM LIKE ODOR
TLO = TAR LIKE ODOR
CLO = CHEMICAL LIKE ODOR
ALO = ASPHALT LIKE ODOR

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR

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GEI Consultants, Inc. 455 Winding Brook Road Glastonbury, CT 06033 (860) 368-5300				CLIENT: National Grid PROJECT: Gowanus Canal Uplands Assessment CITY/STATE: Brooklyn, NY GEI PROJECT NUMBER: 093010-3-1302	BORING LOG PAGE 1 of 1 GC-MW23S	
GROUND SURFACE ELEVATION (FT):				LOCATION: Gate Station		
NORTHING:		EASTING:		TOTAL DEPTH (FT): 13.00		
DRILLED BY: Boat Longyear / Frank Gardella				DATUM VERT. / HORIZ.: NAVD 88 / NAD 83		
LOGGED BY: Mitch Weier				DATE START / END: 6/29/2010 - 6/30/2010		
DRILLING DETAILS: Sonic Coring						
WATER LEVEL DEPTHS (FT): ▽ 5.00 6/28/2010 1:55 pm						
DEPTH FT.	SAMPLE INFO			STRATA	SOIL / BEDROCK DESCRIPTION	WELL CONSTRUCTION DETAILS
	TYPE and NO.	PEN FT.	REC FT.			
0	HC-1	5.0		0.0	(0'- 0.5') ASPHALT; 3" asphalt pavement overlying 3" gravel base. (0.5'- 5') SILTY SAND (SM); ~65% sand, fine to coarse, ~20% fines, non plastic, ~10% gravel, fine to coarse, subangular; ~5% cobbles, trace wood, trace brick fragments, max. size 4 in., moderate petroleum-like odor, moist, black, FILL, 1/4-inch wood planks observed in side of borehole at 3 feet.	
5	S-1	3.0	18	6.1	(5'- 9.5') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~70% sand, fine to coarse, ~20% gravel, fine to coarse, angular, ~10% fines; trace ash, trace wood, trace porcelain, max. size 1 in., slight chemical-like odor, wet, black, FILL, possible wood deck from 5 to 5.3 feet, moderate sweet chemical-like odor.	
10	S-2	5.0	53	0.0	(9.5'- 10') SILTY SAND (SM); ~60% sand, fine to medium, ~40% fines, non plastic; wet, gray. (10'- 11') ELASTIC SILT (MH); ~95% fines, medium plasticity, ~5% sand, fine; moist, gray. (11'- 11.5') LEAN CLAY (CL); ~95% fines, medium plasticity, ~5% sand; peat, strong sulfur-like odor, moist, brown. (11.5'- 12.5') ORGANIC SOIL (PT); strong sulfur-like odor, moist, brown. (12.5'- 13') SILTY SAND (SM); ~55% sand, fine, ~45% fines, non plastic; peat, moderate sulfur-like odor, wet, gray. Bottom of borehole at 13.0 feet.	
NOTES: PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC = RECOVERY LENGTH OF SAMPLE PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE) ppm = PARTS PER MILLION IN. = INCHES FT. = FEET NLO = NAPHTHALENE LIKE ODOR PLO = PETROLEUM LIKE ODOR TLO = TAR LIKE ODOR CLO = CHEMICAL LIKE ODOR ALO = ASPHALT LIKE ODOR CLO = CREOSOTE LIKE ODOR OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR MLO = MUSTY LIKE ODOR						

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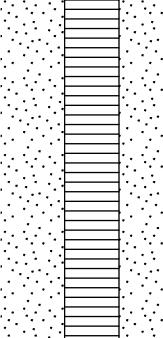
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 <p>GEI Consultants, Inc. 455 Winding Brook Road Glastonbury, CT 06033 (860) 368-5300</p>	<p>CLIENT: National Grid PROJECT: Gowanus Canal Uplands Assessment CITY/STATE: Brooklyn, NY GEI PROJECT NUMBER: 093010-3-1302</p>	BORING LOG PAGE 1 of 3 GC-MW30I										
GROUND SURFACE ELEVATION (FT): _____ NORTHING: _____ EASTING: _____ DRILLED BY: ADT / Greg Rivera LOGGED BY: Amy Malsbary DRILLING DETAILS: Hollow Stem Auger / ATV WATER LEVEL DEPTHS (FT): ▽ 8.00 6/30/2010												
DEPTH FT.	SAMPLE INFORMATION					STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION	WELL CONSTRUCTION DETAILS	
	TYPE and NO.	PEN FT.	REC FT.	Blows (/6 in.)	PID (ppm)							
ENVIRONMENTAL BORING LOG GOWANUS LOGS.GPJ GEI CONSULTANTS.GDT 10/7/10	0	S-1	2.0	8	1-1-1-1					(0'- 0.3') ASPHALT. (0.3'- 1.5') WIDELY GRADED SAND WITH GRAVEL (SW); ~65% sand, fine to coarse, ~30% gravel, fine to coarse, ~5% fines; moist, dark brown, FILL, brick and asphalt fragments. (1.5'- 2') SILTY SAND WITH GRAVEL (SM); ~60% sand, fine to coarse, ~25% gravel, fine to coarse, ~15% fines; moist, dark brown, FILL, brick and asphalt fragments. (2'- 3') WIDELY GRADED SAND WITH GRAVEL (SW); ~65% sand, fine to coarse, ~30% gravel, fine to coarse, ~5% fines; moist, dark brown, FILL, brick and asphalt fragments.	X	X
	S-2	2.0	17	2-0-6-7						(3'- 5') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~20% gravel, fine to coarse; ~15% organics, moist, dark brown, FILL, brick fragments. (5'- 6') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~60% sand, fine to coarse, ~30% gravel, fine to coarse, subangular, ~10% fines; max. size 2.5 in., moist, reddish brown, FILL, brick fragments. (6'- 8') WIDELY GRADED SAND WITH GRAVEL (SW); ~65% sand, fine to coarse, ~30% gravel, fine to coarse, ~5% fines; moist, dark brown, FILL, brick and asphalt fragments.	X	X
	S-3	2.0	24							(8'- 10') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines; wet, brown. (10.5'- 12') SANDY SILT (ML); ~50% sand, fine to coarse, ~50% fines, ~0% gravel; wet, brown.	X	X
	S-4	2.0	24	10-7-4-2						(11.5'- 15') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines; wet, brown.	X	X
	S-5	2.0	16	1-0-0-1						(15'- 18') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines; wet, brown.	X	X
	S-6	2.0	12							(18'- 20') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines; wet, brown.	X	X
	S-7	2.0	24	1-1-1-1						(20'- 22') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines; wet, brown.	X	X
	S-8	2.0	18	0-2-3-3						(22'- 25') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines; wet, brown.	X	X
NOTES: PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL ppm = PARTS PER MILLION NLO = NAPHTHALENE LIKE ODOR REC = RECOVERY LENGTH OF SAMPLE IN. = INCHES PLO = PETROLEUM LIKE ODOR OLO = ORGANIC LIKE ODOR PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE) FT. = FEET TLO = TAR LIKE ODOR SLO = SULFUR LIKE ODOR ALO = ASPHALT LIKE ODOR CLO = CHEMICAL LIKE ODOR MLO = MUSTY LIKE ODOR												

DRAFT

GEI Consultants	GEI Consultants, Inc. 455 Winding Brook Road Glastonbury, CT 06033 (860) 368-5300	CLIENT: National Grid PROJECT: Gowanus Canal Uplands Assessment CITY/STATE: Brooklyn, NY GEI PROJECT NUMBER: 093010-3-1302	PAGE 2 of 3	BORING LOG GC-MW30I											
	SAMPLE INFORMATION	DEPTH FT.	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION	WELL CONSTRUCTION DETAILS							
DEPTH FT.	TYPE and NO.	PEN FT.	REC FT.	Blows (/6 in.)	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION	WELL CONSTRUCTION DETAILS				
15									GC-MW30I (15-20) GC-MW30I (17.5)	(15'- 19.5') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines; wet, brown.					
	S-9	2.0	17	6-5-6-7											
	S-10	2.0	17		8.7										
	S-11	2.0	24	13-19-10-9											
	S-12	2.0	24	4-4-6-8											
	S-13	2.0	16	3-3-7-5			NLO								
	S-14	2.0	18	7-21-14-19											
	S-15	2.0	18	4-5-12-6			NLO								
	S-16	2.0	16	24-31-14-9	44.8										
	S-17	2.0	14	4-3-5-7			NLO								
NOTES:															
ENVIRONMENTAL BORING LOG GOWANUS LOGS GPJ GEI CONSULTANTS GDT 10/7/10				ppm = PARTS PER MILLION			NLO = NAPHTHALENE LIKE ODOR			CLO = CREOSOTE LIKE ODOR					
PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL				IN. = INCHES			PLO = PETROLEUM LIKE ODOR			OLO = ORGANIC LIKE ODOR					
REC = RECOVERY LENGTH OF SAMPLE				FT. = FEET			TLO = TAR LIKE ODOR			SLO = SULFUR LIKE ODOR					
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)				CLO = CHEMICAL LIKE ODOR			MLO = MUSTY LIKE ODOR			ALO = ASPHALT LIKE ODOR					

DRAFT

 GEI Consultants						CLIENT: National Grid PROJECT: Gowanus Canal Uplands Assessment CITY/STATE: Brooklyn, NY GEI PROJECT NUMBER: 093010-3-1302				BORING LOG <hr/> PAGE 3 of 3 GC-MW30I			
DEPTH FT.	SAMPLE INFORMATION					STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION	WELL CONSTRUCTION DETAILS		
	TYPE and NO.	PEN FT.	REC FT.	Blows (/6 in.)	PID (ppm)								
35						NLO	GC-MW30I (35-36) GC-MW30I (35.5)		SAND (SW); ~95% sand, fine to coarse, ~5% fines; slight naphthalene-like odor, wet, brown. (34'- 35.8') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines; wet, brown.				
	S-18	2.0	15	2-4-6-9									
	S-19	2.0	0	5-18-16-16									
Bottom of borehole at 38.0 feet.													
NOTES:													
PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC = RECOVERY LENGTH OF SAMPLE PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)					ppm = PARTS PER MILLION IN. = INCHES FT. = FEET					NLO = NAPHTHALENE LIKE ODOR PLO = PETROLEUM LIKE ODOR TLO = TAR LIKE ODOR CLO = CHEMICAL LIKE ODOR ALO = ASPHALT LIKE ODOR		CrLO= CREOSOTE LIKE ODOR OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR MLO = MUSTY LIKE ODOR	

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GEI Consultants, Inc.
455 Winding Brook Road
Glastonbury, CT 06033
(860) 368-5300

CLIENT: National Grid
PROJECT: Gowanus Canal Uplands Assessment
CITY/STATE: Brooklyn, NY
GEI PROJECT NUMBER: 093010-3-1302

BORING LOG

GC-MW31I

GROUND SURFACE ELEVATION (FT): _____ LOCATION: Mazai Property
NORTHING: _____ EASTING: _____ TOTAL DEPTH (FT): 36.00
DRILLED BY: ADT / Greg Rivera DATUM VERT. / HORZ.: NAVD 88 / NAD 83
LOGGED BY: Kari Weber DATE START / END: 6/25/2010 - 6/28/2010
DRILLING DETAILS: Hollow Stem Auger / ATV
WATER LEVEL DEPTHS (FT): ± 8.00 6/25/2010

DEPTH FT.	SAMPLE INFORMATION					STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION	WELL CONSTRUCTION DETAILS	
	TYPE and NO.	PEN FT.	REC FT.	Blows (/6 in.)	PID (ppm)							
0	S-1	2.0		1-2-1-1	73.4				GC-MW31I (0-6) GC-MW31I (3.5-4)	(0'- 4') SILTY SAND (SM); ~70% sand, fine to coarse, ~20% fines, ~10% gravel, fine to coarse; max. size 1 in., moist, dark brownish gray, FILL, little brick, coal, and concrete fragments.		
	S-2	2.0	12	3-2-2-2								
	S-3	2.0	15	3-2-2-2				PLO	GC-MW31I (6-10) GC-MW31I (6-6.5)	(4'- 5.2') WIDELY GRADED SAND WITH SILT (SW-SM); ~80% sand, fine to coarse, ~10% gravel, fine to coarse, ~10% fines; max. size 1 in., slight petroleum-like odor, moist, dark brownish gray, FILL, little coal fragments. (5.2'- 5.7') SILTY SAND (SM); ~60% sand, fine to medium, ~30% fines, ~10% gravel, fine; trace brick fragments, max. size 0.5 in., slight petroleum-like odor, moist, brown with gray, FILL.		
	S-4	2.0	17	3-5-1-8	22.5							
	S-5	2.0	18	1-1-1-1				OLO				
	S-6	2.0	24	0-0-1-1	7.5				GC-MW31I (10-15) GC-MW31I (12-12.5)	(5.7'- 6') SILTY SAND WITH GRAVEL (SM); ~65% sand, fine to coarse, ~20% gravel, fine to coarse, ~15% fines; max. size 1 in., moderate petroleum-like odor, moist, dark brown, FILL, slight petroleum-like staining. (6'- 7.6') WIDELY GRADED SAND (SW); ~80% sand, fine to coarse, ~10% gravel, fine to coarse, ~10% fines; little brick and wood fragments, moist to wet, dark gray, FILL, slight sewage-like odor.		
	S-7	0.5										
10	S-8	2.0	22	0-0-1-0				OLO	GC-MW31I (12-12.5)	(7.6'- 8') WOOD; FILL. (8'- 10.8') ELASTIC SILT (MH); ~90% fines, low plasticity, slow dilatancy, ~10% sand, fine; slight organic-like odor, wet, gray, shells at ~9.2 ft., little peat at 9.8-10 ft. sand percentage increases with depth to 20 percent.		

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR
HEADSPACE)

ppm = PARTS PER MILLION
IN. = INCHES
FT = FEET

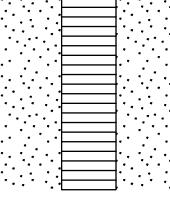
NLO = NAPHTHALENE LIKE ODOR
PLO = PETROLEUM LIKE ODOR
TLO = TAR LIKE ODOR
CLO = CHEMICAL LIKE ODOR
ALO = ASPHALT LIKE ODOR

CrLO = CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR

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 <p>GEI Consultants, Inc. 455 Winding Brook Road Glastonbury, CT 06033 (860) 368-5300</p>						CLIENT: National Grid				BORING LOG	
						PROJECT: Gowanus Canal Uplands Assessment				PAGE 2 of 3	GC-MW31I
DEPTH FT.	SAMPLE INFORMATION					STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION	WELL CONSTRUCTION DETAILS
	TYPE and NO.	PEN FT.	REC FT.	Blows (/6 in.)	PID (ppm)						
15					3.4			OLO	GC-MW31I (15-20) GC-MW31I (19-19.5)	(10.8'- 12') SILT (ML); ~95% fines, ~5% sand, fine; ~50% peat, moderate organic-like odor, moist, light brown with dark gray, trace shells in sampler shoe. (12'- 16') SILT (ML); ~95% fines, ~5% sand, fine; slight organic-like odor, moist, dark gray, shell and peat fragments. (16'- 16.2') ELASTIC SILT (MH); ~90% fines, ~10% sand, fine; ~60% peat, moderate organic-like odor, wet, gray with brown.	
	S-9	2.0	24	0-2-1-2				OLO		(16.2'- 18') SILT (ML); ~95% fines, ~5% sand, fine; slight organic-like odor, moist, dark gray, shell and peat fragments. (18'- 21') SILT (ML); ~95% fines, low plasticity, slow dilatancy, ~5% sand, fine; slight organic-like odor, wet, dark gray.	
	S-10	2.0	24	0-1-0-1				OLO	GC-MW31I (20-26) GC-MW31I (23-23.5)	(21'- 22') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines; moist, gray, lenses of silt. (22'- 24') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines; moist, gray, lenses of silt up to 2 in. thick.	
	S-11	2.0	24	0-0-2-4	15.5					(24'- 26') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines; moist, gray, lenses of silt.	
	S-12	2.0	24	6-6-4-4							
	S-13	2.0	24	2-2-4-10							
	S-14	2.0	24	2-7-12-17	119.1				GC-MW31I (26-30) GC-MW31I (29.2)	(26'- 26.8') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines; wet, gray. (26.8'- 27.5') SANDY SILT (ML); ~50% sand, fine, ~50% fines; slight naphthalene-like odor, wet, gray.	
	S-15	2.0	24	4-7-5-8				NLO		(27.5'- 28') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines; slight naphthalene-like odor, wet, gray. (28'- 30') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines; moderate naphthalene-like odor, moist, gray.	
	S-16	2.0	24	4-3-11-16	5890			NLO	GC-MW31I (30-36) GC-MW31I (35.75-36)	(30'- 36') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines; strong naphthalene-like	
	S-17	2.0	24	4-13-11-				NLO			
NOTES: PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC = RECOVERY LENGTH OF SAMPLE PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE) ppm = PARTS PER MILLION IN. = INCHES FT. = FEET NLO = NAPHTHALENE LIKE ODOR PLO = PETROLEUM LIKE ODOR TLO = TAR LIKE ODOR CLO = CHEMICAL LIKE ODOR ALO = ASPHALT LIKE ODOR CrLO = CREOSOTE LIKE ODOR OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR MLO = MUSTY LIKE ODOR											

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GEI Consultants, Inc. 455 Winding Brook Road Glastonbury, CT 06033 (860) 368-5300						CLIENT: National Grid PROJECT: Gowanus Canal Uplands Assessment CITY/STATE: Brooklyn, NY GEI PROJECT NUMBER: 093010-3-1302				BORING LOG	
										PAGE 3 of 3	GC-MW31I
DEPTH FT.	SAMPLE INFORMATION					STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION	WELL CONSTRUCTION DETAILS
	TYPE and NO.	PEN FT.	REC FT.	Blows (/6 in.)	PID (ppm)						
35			16							odor, wet, brownish gray, tar-like staining.	
	S-18	2.0	24	11-17- 22-39			NLO				

Bottom of borehole at 36.0 feet.

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL ppm = PARTS PER MILLION NLO = NAPHTHALENE LIKE ODOR CLO = CREOSOTE LIKE ODOR
 REC = RECOVERY LENGTH OF SAMPLE IN. = INCHES PLO = PETROLEUM LIKE ODOR OLO = ORGANIC LIKE ODOR
 PID = PHOTOIONIZATION DETECTOR READING (JAR
HEADSPACE) FT. = FEET TLO = TAR LIKE ODOR SLO = SULFUR LIKE ODOR
 ALO = ASPHALT LIKE ODOR MLO = MUSTY LIKE ODOR

ENVIRONMENTAL BORING LOG GOWANUS LOGS GPJ GEI CONSULTANTS GDT 10/7/10

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455 Winding Brook Road
Glastonbury, CT 06033
(860) 368-5300

CLIENT: National Grid
PROJECT: Gowanus Canal Uplands Assessment
CITY/STATE: Brooklyn, NY
GEI PROJECT NUMBER: 093010-3-1302

BORING LOG

GC-MW32I

GROUND SURFACE ELEVATION (FT): _____ LOCATION: Thomas Greene Park
NORTHING: _____ EASTING: _____ TOTAL DEPTH (FT): 46.00
DRILLED BY: ADT / Greg Rivera DATUM VERT. / HORIZ.: NAVD 88 / NAD 83
LOGGED BY: Kari Weber DATE START / END: 6/23/2010 - 6/24/2010
DRILLING DETAILS: Hollow Stem Auger / ATV
WATER LEVEL DEPTHS (FT): ± 13.00 6/23/2010

DEPTH FT.	SAMPLE INFORMATION					STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION	WELL CONSTRUCTION DETAILS
	TYPE and NO.	PEN FT.	REC FT.	Blows (/6 in.)	PID (ppm)						
0	S-1	2.0	15	7-8-9-8					GC-MW32I (0.5-5) GC-MW32I (0.5-1)	(0'- 2') WIDELY GRADED SAND WITH GRAVEL (SW); ~65% sand, fine to coarse, ~25% gravel, fine to coarse, ~10% fines; little brick and coal fragments, max. size 2.5 in., dry, dark brown, FILL.	
	S-2	2.0	16	7-2-4-4	15.2					(2'- 4') SILTY SAND (SM); ~75% sand, fine to coarse, ~15% fines, ~10% gravel, fine; trace coal, max. size 0.75 in., dry, dark brown, FILL, 2- brick pieces up to 2" at ~3.75'.	
	S-3	2.0	16	2-8-8-15					GC-MW32I (5-10) GC-MW32I (9.5-10)	(4'- 5.7') SILTY SAND WITH GRAVEL (SM); ~70% sand, fine to coarse, ~15% gravel, fine to coarse, ~15% fines; some coal, max. size 1.5 in., dry, dark brown, FILL.	
	S-4	2.0	24	18-22-14-10						(5.7'- 6') WIDELY GRADED SAND WITH SILT (SW-SM); ~80% sand, fine to coarse, ~10% gravel, fine, ~10% fines; max. size 0.75 in., dry, orangeish brown to yellowish brown, FILL.	
	S-5	2.0	19	2-4-2-4	5.6				GC-MW32I (10-15) GC-MW32I (10-10.5)	(6'- 7') SILTY SAND (SM); ~75% sand, fine to coarse, ~15% fines, ~10% gravel, fine to coarse; trace coal, max. size 1 in., dry, orangeish brown, FILL.	
	S-6	2.0	18	2-2-2-3						(7'- 8') WIDELY GRADED SAND WITH GRAVEL (SW); ~70% sand, fine to coarse, ~30% gravel, fine to coarse; ~50% coal fragments, max. size 1 in., dry, black and orangeish brown, FILL, dark gray sandy silt lens from 7-7.2 ft..	
	S-7	2.0	15	4-3-2-1	3.2				GC-MW32I (10-15) GC-MW32I (10-10.5)	(8'- 8.5') WIDELY GRADED SAND WITH GRAVEL (SW); ~70% sand, fine to coarse, ~30% gravel, fine to coarse; max. size 1 in., dry, black and orangeish brown, FILL.	
	S-8	2.0	11	3-2-2-2						(8.5'- 10') SILTY SAND (SM); ~60% sand, fine to coarse, ~30% fines, ~10% gravel, fine; ~60% coal fragments and cinders, dry, black with white, FILL.	

NOTES:

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PID = PHOTIONIZATION DETECTOR READING (JAR
HEADSPACE)

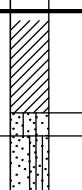
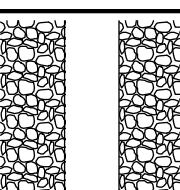
ppm = PARTS PER MILLION
IN. = INCHES
FT = FEET

NLO = NAPHTHALENE LIKE ODOR
PLO = PETROLEUM LIKE ODOR
TLO = TAR LIKE ODOR
CLO = CHEMICAL LIKE ODOR
ALO = ASPHALT LIKE ODOR

CrLO = CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR

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SAMPLE INFORMATION						STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	BORING LOG			
DEPTH FT.	TYPE and NO.	PEN FT.	REC FT.	Blows (/6 in.)	PID (ppm)					SOIL / BEDROCK DESCRIPTION			
35					24.0		OLO		<p>~20% gravel, fine, ~5% fines; max. size 0.5 in., wet, dark gray. (25'- 26') PEAT; moist, brown. (26'- 26.7') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine, ~5% fines; max. size 0.5 in., wet, brown.</p> <p>(26.7'- 27') SILTY SAND (SM); ~55% sand, fine, ~40% fines, ~5% gravel, fine; little peat, slight organic-like odor, wet, gray.</p> <p>(27'- 28') LEAN CLAY (CL); ~90% fines, medium plasticity, no dilatancy, ~10% sand, fine; some peat, strong organic-like odor, wet, gray.</p> <p>(28'- 30') LEAN CLAY (CL); ~95% fines, medium plasticity, no dilatancy, ~5% sand, fine; strong organic-like odor, moist, gray with brown, sample is mostly peat.</p> <p>(30'- 32.5') ELASTIC SILT WITH SAND (MH); ~85% fines, low plasticity, slow dilatancy, ~15% sand, fine; little peat, moderate organic-like odor, moist, gray and black.</p> <p>(32.5'- 33.7') LEAN CLAY WITH SAND (CL); ~85% fines, medium plasticity, slow dilatancy, ~15% sand, fine; trace peat, slight organic-like odor, moist, gray.</p> <p>(33.7'- 34') SILTY SAND (SM); ~60% sand, fine to medium, ~35% fines, ~5% gravel, fine; wet, brownish gray.</p> <p>(34'- 36') NARROWLY GRADED SAND WITH SILT (SP-SM); ~90% sand, fine to medium, ~10% fines; wet, gray.</p> <p>(36'- 38') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines; wet, gray.</p> <p>(38'- 40') NARROWLY GRADED SAND (SP); ~95% sand, fine to medium, ~5% fines; wet, gray.</p> <p>(40'- 41') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines; strong naphthalene-like odor, wet, brown.</p> <p>(41'- 42') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines; strong naphthalene-like odor, wet, brown.</p>				
	S-18	2.0	21	3-8-14-21									
	S-19	2.0	22	2-3-2-1	1.6								
	S-20	2.0	24	3-7-5-12			NLO						
	S-21	2.0	20	6-0-2-4	15000 over								
	S-22	2.0	24	2-9-14-6									
	S-23	2.0	24	2-4-5-12			NLO						
NOTES: PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL ppm = PARTS PER MILLION REC = RECOVERY LENGTH OF SAMPLE IN. = INCHES PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE) FT. = FEET NLO = NAPHTHALENE LIKE ODOR CrLO= CREOSOTE LIKE ODOR PLO = PETROLEUM LIKE ODOR OLO = ORGANIC LIKE ODOR TLO = TAR LIKE ODOR SLO = SULFUR LIKE ODOR CLO = CHEMICAL LIKE ODOR ALLO = ASPHALT LIKE ODOR MLO = MUSTY LIKE ODOR													

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 GEI Consultants	GEI Consultants, Inc. 455 Winding Brook Road Glastonbury, CT 06033 (860) 368-5300	CLIENT: <u>National Grid</u> PROJECT: <u>Gowanus Canal Uplands Assessment</u> CITY/STATE: <u>Brooklyn, NY</u> GEI PROJECT NUMBER: <u>093010-3-1302</u>				BORING LOG <hr/> PAGE <u>4 of 4</u> GC-MW32I				
SAMPLE INFORMATION										
DEPTH FT.	TYPE and NO.	PEN FT.	REC FT.	Blows (/6 in.)	PID (ppm)	STRATA VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION	WELL CONSTRUCTION DETAILS
(42'- 46') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines; strong naphthalene-like odor, wet, brown, tar-like coating. Bottom of borehole at 46.0 feet.										
NOTES: <p> PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL ppm = PARTS PER MILLION NLO = NAPHTHALENE LIKE ODOR REC = RECOVERY LENGTH OF SAMPLE IN. = INCHES PLO = PETROLEUM LIKE ODOR CrLO= CREOSOTE LIKE ODOR PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE) FT. = FEET TLO = TAR LIKE ODOR OLO = ORGANIC LIKE ODOR CLO = CHEMICAL LIKE ODOR SLO = SULFUR LIKE ODOR ALO = ASPHALT LIKE ODOR MLO = MUSTY LIKE ODOR </p>										
ENVIRONMENTAL BORING LOG GOWANUS LOGS.GPJ GEI CONSULTANTS.GDT 10/7/10										

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GEI Consultants, Inc. 455 Winding Brook Road Glastonbury, CT 06033 (860) 368-5300				CLIENT: National Grid PROJECT: Gowanus Canal Uplands Assessment CITY/STATE: Brooklyn, NY GEI PROJECT NUMBER: 093010-3-1302	BORING LOG PAGE 1 of 4 GC-MW401			
GROUND SURFACE ELEVATION (FT):				LOCATION: Red Hook Property				
NORTHING: EASTING:				TOTAL DEPTH (FT): 58.00				
DRILLED BY: Boart Longyear / Frank Gardella				DATUM VERT. / HORIZ.: NAVD 88 / NAD 83				
LOGGED BY: Mitch Weier				DATE START / END: 6/23/2010 - 6/23/2010				
DRILLING DETAILS: Sonic Coring								
WATER LEVEL DEPTHS (FT): ▽ 5.00 6/23/2010 11:00 am								
DEPTH FT.	SAMPLE INFO			STRATA	VISUAL IMPACTS	ODOR	SOIL / BEDROCK DESCRIPTION	WELL CONSTRUCTION DETAILS
	TYPE and NO.	PEN FT.	REC FT.					
0	HC-1	5.0		NM		PLO	(0'- 0.7') ASPHALT. (0.7'- 1.9') SANDY SILT (ML); ~50% fines, low plasticity, ~45% sand, fine to medium, ~5% gravel, rounded; max. size 3 in., strong petroleum-like odor, wet, black and brown, intermittent coated areas; wooden platform or dock from 1.5 to 1.9 feet, coated with product. (1.9'- 5') POORLY GRADED SAND WITH SILT (SP-SM); ~90% sand, fine to medium, ~10% fines, non plastic; slight petroleum-like odor, wet, gray.	
5	S-1	5.0	50	4703		PLO	(5'- 11.5') SANDY SILT (ML); ~50% fines, low plasticity, ~45% sand, fine to medium, ~5% gravel, rounded; max. size 3 in., strong petroleum-like odor, wet, black and brown, sheen from 0 to 0.4 feet.	
10	S-2	10.0	120			CrLO	(11.5'- 11.9') strong creosote-like odor, Wood. (11.9'- 15') POORLY GRADED SAND WITH SILT (SP-SM); ~90% sand, fine to medium, ~10% fines, non plastic; slight petroleum-like odor, wet, gray.	
15								
NOTES: PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL ppm = PARTS PER MILLION NLO = NAPHTHALENE LIKE ODOR REC = RECOVERY LENGTH OF SAMPLE IN. = INCHES PLO = PETROLEUM LIKE ODOR CLO = CREOSOTE LIKE ODOR PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE) FT. = FEET TLO = TAR LIKE ODOR OLO = ORGANIC LIKE ODOR ALO = ASPHALT LIKE ODOR SLO = SULFUR LIKE ODOR MLO = MUSTY LIKE ODOR								

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				PAGE 2 of 4		GC-MW40I							
DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	SOIL / BEDROCK DESCRIPTION			WELL CONSTRUCTION DETAILS		
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)									
15				9				(15'- 16') POORLY GRADED SAND WITH SILT (SP-SM); ~90% sand, fine to medium, ~10% fines, non plastic; wet, gray. (16'- 20') ELASTIC SILT (MH); ~95% sand, fine, ~5% fines, high plasticity; moist, gray, 3-inch thick silty sand lens at 17 feet.					
20	S-3	10.0	120	324				(20'- 24') ELASTIC SILT (MH); ~95% fines, high plasticity, ~5% sand, fine; slight petroleum-like odor, wet, gray, greasy texture.					
25				40.3			PLO	(24'- 25') ELASTIC SILT (MH); ~90% fines, high plasticity, ~10% sand, fine; slight petroleum-like odor, wet, gray, greasy texture. (25'- 25.5') SILTY SAND (SM); ~65% sand, fine, ~35% fines, non plastic; brownish gray. (25.5'- 26') NARROWLY GRADED SAND WITH SILT (SP-SM); ~90% sand, fine to medium, ~10% fines, non plastic; wet, grayish brown. (26'- 27') NARROWLY GRADED SAND (SP); ~90% sand, fine to medium, ~5% fines; slight petroleum-like odor, wet, brown. (27'- 28') NARROWLY GRADED SAND WITH CLAY (SP-SC); ~65% sand, fine to medium, ~35% fines, non plastic; slight petroleum-like odor, wet, brown. (28'- 30') NARROWLY GRADED SAND (SP); ~90% sand, fine to medium, ~5% fines; slight petroleum-like odor, wet, brown.					
30	S-4	10.0	90				PLO	(30'- 32') SILTY SAND (SM); ~85% sand, fine to medium, ~15% fines, non plastic; slight petroleum-like odor, wet, grayish brown and mottled orange.					
							PLO	(32'- 34') SILTY SAND (SM); ~55% sand, fine, ~45% fines,					
NOTES:													
PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC = RECOVERY LENGTH OF SAMPLE PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)				ppm = PARTS PER MILLION IN. = INCHES FT. = FEET				NLO = NAPHTHALENE LIKE ODOR PLO = PETROLEUM LIKE ODOR TLO = TAR LIKE ODOR CLO = CHEMICAL LIKE ODOR ALO = ASPHALT LIKE ODOR					
								CrLO= CREOSOTE LIKE ODOR OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR MLO = MUSTY LIKE ODOR					

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							PROJECT: Gowanus Canal Uplands Assessment	CITY/STATE: Brooklyn, NY	PAGE 3 of 4	GC-MW40I	
DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	SOIL / BEDROCK DESCRIPTION		WELL CONSTRUCTION DETAILS	
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)							
35				141			PLO	non plastic; slight petroleum-like odor, dark brownish gray.			
							PLO	(34'- 35') SILTY SAND (SM); ~70% sand, ~30% fines, non plastic; slight petroleum-like odor, wet, brown.			
							PLO	(35'- 40') SILTY SAND (SM); ~60% sand, fine, ~40% fines, non plastic; slight petroleum-like odor, wet, brown, 2-inch thick sandy silt lens at 35 feet.			
40	S-5	10.0	90	93.8			PLO	(40'- 42') SILTY SAND (SM); ~85% sand, fine to medium, ~15% fines, non plastic; slight petroleum-like odor, wet, brownish gray.			
							PLO	(42'- 43') SILTY SAND (SM); ~85% sand, fine to coarse, ~15% fines, non plastic; slight petroleum-like odor, wet, brownish gray.			
							PLO	(43'- 45') SILTY SAND (SM); ~85% sand, fine to coarse, ~15% fines, non plastic; slight petroleum-like odor, wet, brownish gray.			
45				30.9				(45'- 46') NARROWLY GRADED SAND WITH SILT (SP-SM); ~90% sand, fine to medium, ~10% fines, non plastic; wet, gray.			
								(46'- 50') NARROWLY GRADED SAND WITH SILT (SP-SM); ~90% sand, fine to coarse, ~10% fines, non plastic; wet, brown.			
50											
NOTES:											
PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC = RECOVERY LENGTH OF SAMPLE PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)				ppm = PARTS PER MILLION IN. = INCHES FT. = FEET				NLO = NAPHTHALENE LIKE ODOR PLO = PETROLEUM LIKE ODOR TLO = TAR LIKE ODOR CLO = CHEMICAL LIKE ODOR ALO = ASPHALT LIKE ODOR			
								CrLO= CREOSOTE LIKE ODOR OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR MLO = MUSTY LIKE ODOR			

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GEI Consultants, Inc.
455 Winding Brook Road
Glastonbury, CT 06033
(860) 368-5300

CLIENT: National Grid
PROJECT: Gowanus Canal Uplands Assessment
CITY/STATE: Brooklyn, NY
GEI PROJECT NUMBER: 093010-3-1302

BORING LOG

GC-MW40I

PAGE
4 of 4

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	SOIL / BEDROCK DESCRIPTION	WELL CONSTRUCTION DETAILS
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
50	S-6	8.0	96		9			(50'- 55') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine to coarse, subrounded, ~5% fines; wet, brown.	
55					0			(55'- 58') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine to coarse, subrounded, ~5% fines; max. size 1.5 in., wet, brown.	

Bottom of borehole at 58.0 feet.

ENVIRONMENTAL BORING LOG GOWANUS LOGS.GPJ GEI CONSULTANTS.GDT 10/7/10

NOTES:

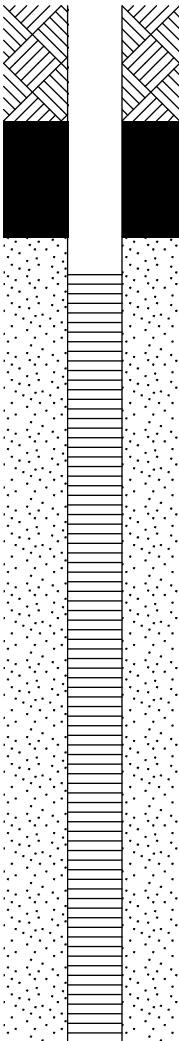
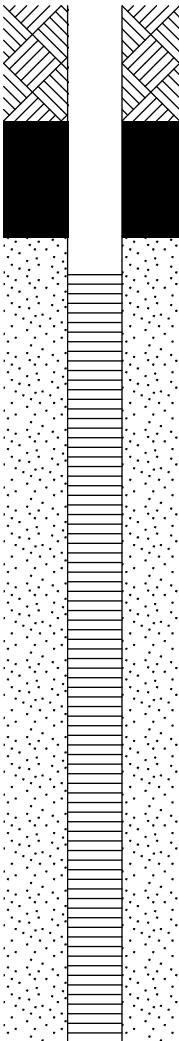
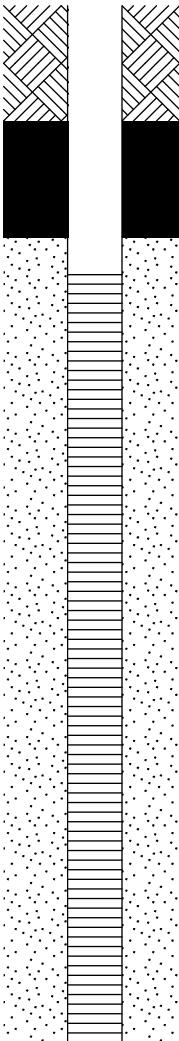
PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR
HEADSPACE)

ppm = PARTS PER MILLION
IN. = INCHES
FT = FEET

NLO = NAPHTHALENE LIKE ODOR
PLO = PETROLEUM LIKE ODOR
TLO = TAR LIKE ODOR
CLO = CHEMICAL LIKE ODOR
ALO = ASPHALT LIKE ODOR

CrLO = CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR

DRAFT

 <p>GEI Consultants, Inc. 455 Winding Brook Road Glastonbury, CT 06033 (860) 368-5300</p>	<p>CLIENT: National Grid PROJECT: Gowanus Canal Uplands Assessment CITY/STATE: Brooklyn, NY GEI PROJECT NUMBER: 093010-3-1302</p>	BORING LOG PAGE 1 of 1 GC-MW40S					
GROUND SURFACE ELEVATION (FT): _____ LOCATION: Red Hook Property NORTHING: _____ EASTING: _____ TOTAL DEPTH (FT): 13.50 DRILLED BY: Boart Longyear / Frank Gardella DATUM VERT. / HORZ.: NAVD 88 / NAD 83 LOGGED BY: Mitch Weier DATE START / END: 6/24/2010 - 6/24/2010 DRILLING DETAILS: Sonic Coring WATER LEVEL DEPTHS (FT): ▽ 4.90 6/24/2010 10:00 am							
DEPTH FT.	SAMPLE INFO				SOIL / BEDROCK DESCRIPTION	WELL CONSTRUCTION DETAILS	
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)			STRATA
0	HC-1	5.0				(0'- 0.7') ASPHALT ASPHALT; 3 inches asphalt, 5 inches gravel base. (0.7'- 5') SILTY SAND WITH GRAVEL (SM); ~55% sand, fine to coarse, ~30% gravel, fine to coarse, subrounded, ~15% fines, non plastic; max. size 5 in., slight petroleum-like odor, moist, dark brown and black, FILL, 5-inch diameter concrete chunk at 2 feet.	
5	S-1	8.0	60	NM	PLO	(5'- 9') CLAYEY SAND (SC); ~60% sand, fine to medium, ~30% fines, medium plasticity, ~10% gravel, fine to coarse, rounded; moderate petroleum-like odor, wet, dark brown and black, FILL, heavily coated fibrous material from 5 to 6 feet, wood from 8.75 to 9 feet, blebs & globs throughout.	
10				3378	PLO	(9'- 13') CLAYEY SAND (SC); ~60% sand, fine, ~35% fines, medium plasticity, ~5% gravel, fine, subrounded; trace roots, moderate petroleum-like odor, wet, gray to black, FILL.	
Bottom of borehole at 13.5 feet.							
NOTES:							
PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC = RECOVERY LENGTH OF SAMPLE PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)				ppm = PARTS PER MILLION IN. = INCHES FT. = FEET NLO = NAPHTHALENE LIKE ODOR PLO = PETROLEUM LIKE ODOR TLO = TAR LIKE ODOR CLO = CHEMICAL LIKE ODOR ALO = ASPHALT LIKE ODOR CrLO = CREOSOTE LIKE ODOR OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR MLO = MUSTY LIKE ODOR			
ENVIRONMENTAL BORING LOG GOWANUS LOGS.GPJ GEI CONSULTANTS.GDT 10/7/10							

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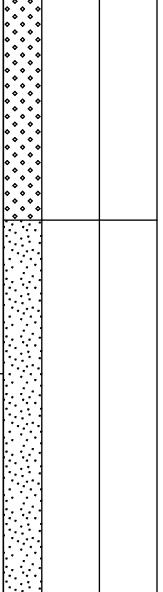
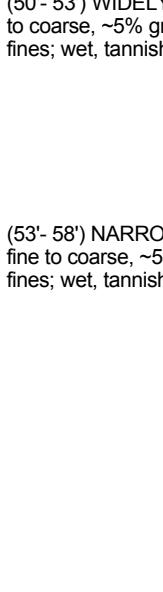
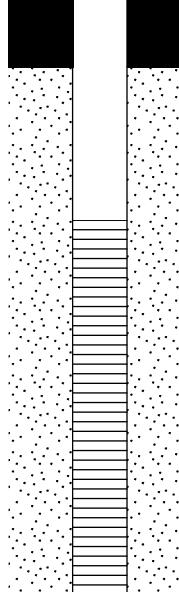
 <p>GEI Consultants, Inc. 455 Winding Brook Road Glastonbury, CT 06033 (860) 368-5300</p>	<p>CLIENT: National Grid PROJECT: Gowanus Canal Uplands Assessment CITY/STATE: Brooklyn, NY GEI PROJECT NUMBER: 093010-3-1302</p>	BORING LOG PAGE 1 of 4 GC-MW41I									
GROUND SURFACE ELEVATION (FT): _____ LOCATION: Red Hook Property NORTHING: _____ EASTING: _____ TOTAL DEPTH (FT): 58.00 DRILLED BY: Boart Longyear / Frank Gardella DATUM VERT. / HORZ.: NAVD 88 / NAD 83 LOGGED BY: Mitch Weier DATE START / END: 6/25/2010 - 6/25/2010 DRILLING DETAILS: Sonic Coring WATER LEVEL DEPTHS (FT): ▽ 2.75 6/25/2010 8:00 am											
DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	SOIL / BEDROCK DESCRIPTION	WELL CONSTRUCTION DETAILS		
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)							
0	HC-1	5.0						(0'- 0.7') ASPHALT; 4" asphalt, 4" gravel subbase.			
5	S-1	5.0	60	57		CrLO		(0.7'- 1.5') WIDELY GRADED SAND WITH SILT (SW-SM); ~80% sand, ~10% fines, ~5% gravel; slight creosote-like odor, moist, black, FILL, hardened tar, wood with creosote odor from 1 to 1.5 feet. (1.5'- 5') FILL; moist, black, FILL, mostly hardened viscous tar.			
10	S-1	5.0	60	170		PLO		(5'- 6') SILTY SAND (SM); ~70% sand, fine to medium, ~30% fines, medium plasticity; strong petroleum-like odor, wet, black, FILL, 3-inch brick fragment. (6'- 7') SILTY SAND (SM); ~75% sand, ~25% fines; moderate petroleum-like odor, blackish gray, FILL.			
15	S-2	5.0	42	35		PLO		(7'- 8') CLAYEY SAND (SC); ~60% sand, ~40% fines, medium plasticity; slight petroleum-like odor, wet, gray. (8'- 10') CLAYEY SAND (SC); ~60% sand, ~40% fines, medium plasticity; wet, gray.			
								(10'- 11.5') SILTY SAND (SM); ~60% sand, fine to medium, ~40% fines; trace shells, slight petroleum-like odor, wet, dark gray. (11.5'- 16.7') CLAYEY SAND (SC); ~65% sand, fine to medium, ~35% fines; trace shells, wet, dark gray and black.			
NOTES:											
PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC = RECOVERY LENGTH OF SAMPLE PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)					ppm = PARTS PER MILLION IN. = INCHES FT. = FEET					NLO = NAPHTHALENE LIKE ODOR PLO = PETROLEUM LIKE ODOR TLO = TAR LIKE ODOR CLO = CHEMICAL LIKE ODOR ALO = ASPHALT LIKE ODOR	
										CrLO= CREOSOTE LIKE ODOR OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR MLO = MUSTY LIKE ODOR	
ENVIRONMENTAL BORING LOG GOWANUS LOGS.GPJ GEI CONSULTANTS.GDT 10/7/10											

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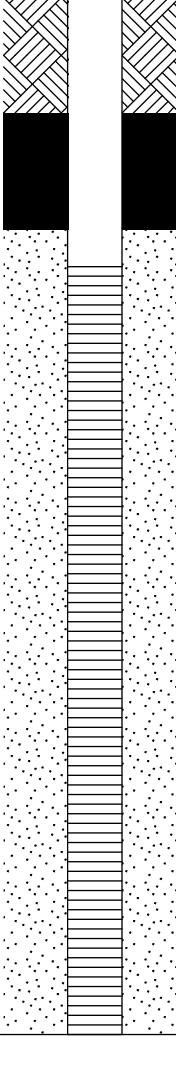
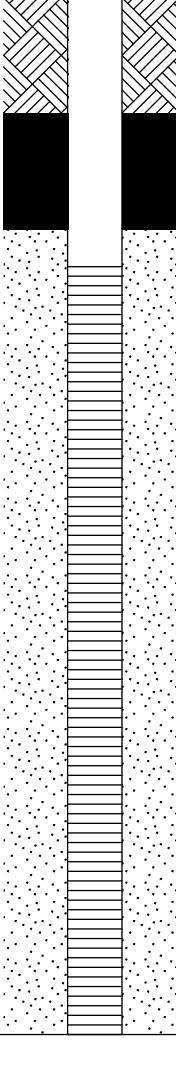
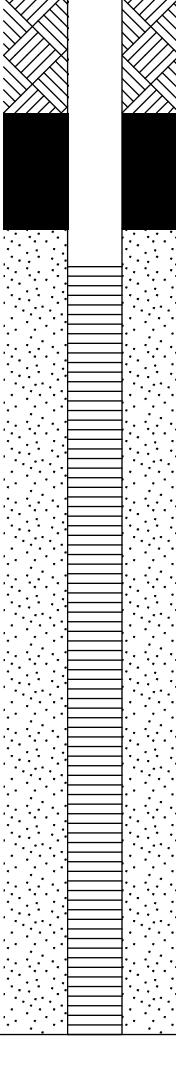
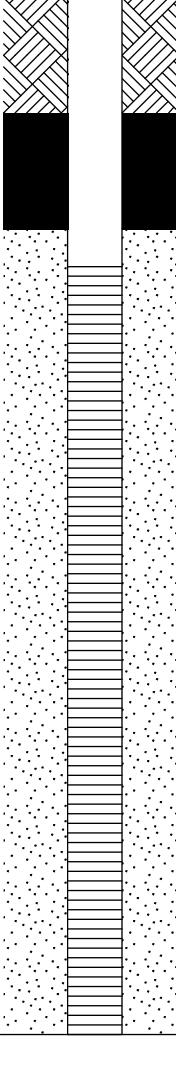
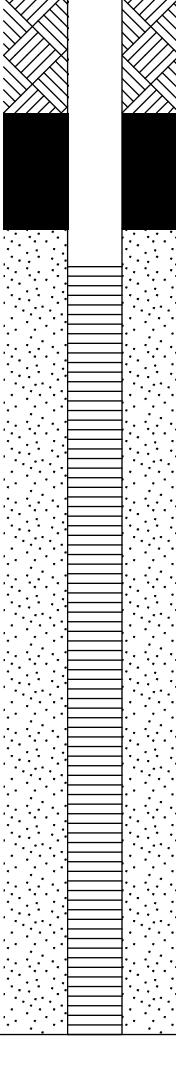
SAMPLE INFO					CLIENT: National Grid PROJECT: Gowanus Canal Uplands Assessment CITY/STATE: Brooklyn, NY GEI PROJECT NUMBER: 093010-3-1302			BORING LOG	
DEPTH FT.	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	SOIL / BEDROCK DESCRIPTION	WELL CONSTRUCTION DETAILS
15	S-3	5.0	60					(16.7'- 18') ELASTIC SILT (MH); ~95% fines, high plasticity, ~5% sand, fine; some peat, moist, dark gray.	
				99				(18'- 19.5') ORGANIC SOIL (OL/OH); ~90% fines, high plasticity, ~10% sand, fine; with peat, moderate sulfur-like odor, moist, dark gray.	
20	S-4	5.0	42					(19.5'- 21') CLAYEY SAND (SC); ~65% sand, fine to medium, ~35% fines; wet, dark gray and black.	
				71				(21'- 22') NARROWLY GRADED SAND WITH CLAY; ~90% sand, fine, ~10% fines; moderate petroleum-like odor, wet, gray.	
								(22'- 25') SILTY SAND (SM); ~60% sand, ~40% fines; moderate petroleum-like odor, wet, gray.	
25	S-5	5.0	60					(25'- 26.5') SILTY SAND; ~85% sand, fine to medium, ~15% fines; slight petroleum-like odor, wet, gray.	
				154				(26.5'- 28.5') NARROWLY GRADED SAND WITH SILT (SP-SM); ~90% sand, fine to medium, ~10% fines; slight petroleum-like odor, wet, gray.	
								(28.5'- 30') SILTY SAND; ~85% sand, fine to medium, ~15% fines; slight petroleum-like odor, wet, gray.	
30	S-6	5.0	60					(30'- 31.5') LEAN CLAY WITH SAND (CL); ~75% fines, medium plasticity, ~25% sand, fine; slight petroleum-like odor, moist, gray.	
				245				(31.5'- 37.5') NARROWLY GRADED SAND WITH SILT; ~90% sand, fine, ~10% fines; wet, grayish brown.	

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 GEI Consultants, Inc. 455 Winding Brook Road Glastonbury, CT 06033 (860) 368-5300							CLIENT: National Grid PROJECT: Gowanus Canal Uplands Assessment CITY/STATE: Brooklyn, NY GEI PROJECT NUMBER: 093010-3-1302		BORING LOG <small>PAGE 4 of 4</small> GC-MW41I				
DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	SOIL / BEDROCK DESCRIPTION	WELL CONSTRUCTION DETAILS				
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)									
50	S-10	5.0	60	1.5				(50'- 53') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine to coarse, subangular, ~5% fines; wet, tannish brown. (53'- 58') NARROWLY GRADED SAND (SP); ~90% sand, fine to coarse, ~5% gravel, fine to coarse, subangular, ~5% fines; wet, tannish brown, trace coarse and fine gravel.					
55	S-11	3.0	36	0									
Bottom of borehole at 58.0 feet.													
NOTES:													
PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC = RECOVERY LENGTH OF SAMPLE PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)					ppm = PARTS PER MILLION IN. = INCHES FT. = FEET					NLO = NAPHTHALENE LIKE ODOR PLO = PETROLEUM LIKE ODOR TLO = TAR LIKE ODOR CLO = CHEMICAL LIKE ODOR ALO = ASPHALT LIKE ODOR		CrLO= CREOSOTE LIKE ODOR OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR MLO = MUSTY LIKE ODOR	
<small>ENVIRONMENTAL BORING LOG GOWANUS LOGS.GPJ GEI CONSULTANTS.GDT 10/7/10</small>													

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GEI Consultants, Inc. 455 Winding Brook Road Glastonbury, CT 06033 (860) 368-5300				CLIENT: National Grid PROJECT: Gowanus Canal Uplands Assessment CITY/STATE: Brooklyn, NY GEI PROJECT NUMBER: 093010-3-1302			BORING LOG PAGE 1 of 1 GCMW-41S	
GROUND SURFACE ELEVATION (FT):				LOCATION: Red Hook Property				
NORTHING:		EASTING:		TOTAL DEPTH (FT): 13.50				
DRILLED BY: Boart Longyear / Frank Gardella				DATUM VERT. / HORIZ.: NAVD 88 / NAD 83				
LOGGED BY: Mitch Weier				DATE START / END: 6/28/2010 - 6/28/2010				
DRILLING DETAILS: Sonic Coring								
WATER LEVEL DEPTHS (FT):								
DEPTH FT.	SAMPLE INFO			STRATA	VISUAL IMPACTS	ODOR	SOIL / BEDROCK DESCRIPTION	WELL CONSTRUCTION DETAILS
	TYPE and NO.	PEN FT.	REC FT.					
0	HC-1	5.0					(0'- 0.75') FILL, asphalt and subbase.	
5	S-1	8.0	60	109		PLO	(0.75'- 2.75') WIDELY GRADED SAND WITH GRAVEL (SW); ~50% sand, fine to coarse, ~35% gravel, fine to coarse, angular, ~15% fines; trace rock fragments, max. size 5 in., moderate petroleum-like odor, dry, brown and brown, FILL, brick and debris.	
10				435		PLO	(2.75'- 6.5') WIDELY GRADED SAND WITH GRAVEL (SW); ~50% sand, fine to coarse, ~35% gravel, fine to coarse, angular, ~15% fines; trace rock fragments, max. size 5 in., moderate petroleum-like odor, dry, black, FILL, brick and debris, semi-solid tar.	
						PLO	(6.5'- 7') SILTY SAND (SM); ~75% sand, fine to medium, ~25% fines, low plasticity; slight petroleum-like odor, wet, black.	
						PLO	(7'- 13.5') SILTY SAND (SM); ~65% sand, fine, ~35% fines, medium plasticity; slight petroleum-like odor, wet, gray and tan.	
Bottom of borehole at 13.5 feet.								
NOTES: PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC = RECOVERY LENGTH OF SAMPLE PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE) ppm = PARTS PER MILLION IN. = INCHES FT. = FEET NLO = NAPHTHALENE LIKE ODOR PLO = PETROLEUM LIKE ODOR TLO = TAR LIKE ODOR CLO = CHEMICAL LIKE ODOR ALO = ASPHALT LIKE ODOR CLO = CREOSOTE LIKE ODOR OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR MLO = MUSTY LIKE ODOR								

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Appendix D

Field Documentation

D-04 – Soil Boring Logs and Monitoring Well Construction Diagrams

**NYC Soil Boring Logs and Monitoring Well
Construction Diagrams**

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Louis Berger & Assoc., P.C.
199 Water Street
New York, NY 10038

Drilling Log

Page 1 of 2

BORING NO.: SB01S

WELL NO.: MW01S

CLIENT: New York City Department of Design and Construction

PROJECT NO.: KT890A1

PROJECT: Gowanus Canal Groundwater Investigation

DATE STARTED: 6/2/2010

DRILLING CONTRACTOR: Aquifer Drilling and Testing

DATE FINISHED: 6/2/2010

DRILLING METHOD: Hollow Stem Auger

DRILLER: T.Palomeque

BOREHOLE DATA

WELL DATA

Diameter (in): 8

Completion: 2" PVC Flush Mount

Total Depth (ft): 17.00

Total Depth (ft): 17

Sampler: Split Spoons

Screen Length (ft) /Slot (in): 10 ft/0.010

Depth to Water (ft): 6

Depth to Water (ft): 6.65

Depth to Rock (ft): N/A

Permit No.: N/A

INSPECTOR: J.Lacanlale

NORTHING: 187653.9248

EASTING: 987942.3697

GROUND ELEVATION: 9.57

TOC ELEVATION: 8.8902

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6in	PID (ppm)	Description	Remarks
	0	FILL				7	22.8	Dark yellowish brown (10YR4/2) coarse to fine SAND, some medium to fine Gravel; dry.	Gravelly Sand (Fill)
	1	FILL				7			
	2	FILL				8			
	3	FILL				6			
	4	FILL				4	15.2	Medium dark gray (N4) Silty CLAY; moist.	Silty Clay (Fill)
	5	FILL				3			
	6	FILL				6			
	7	FILL				10			
	8	FILL				5	11.4	Dark gray (N3) WOOD (100% fill); moist.	Wood (Fill)
	9	FILL				32			
	10	FILL				14			
	11	FILL				9			
	12	FILL				13	19	Dark yellowish brown (10YR4/2) coarse to fine SAND, some coarse to fine Gravel (15% fill material: cinders); saturated.	Water Level 6 feet bgs Gravelly Sand (Fill)
	13	FILL				5			
	14	FILL				3			
	15	FILL				4			
	16	FILL				1	230	Medium dark gray (N4) Silty CLAY, little coarse to fine Gravel; saturated.	Silty Clay (Fill)
	17	FILL				1			



Louis Berger and Assoc., P.C.
199 Water Street
New York, NY 10038

PROJECT NO.: KT890A1

BORING NO.: SB01S

Page 2 of 2

WELL NO.: MW01S

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	10	FILL				1 1 4 2	56	Dusky yellowish brown (10YR2/2) coarse to fine SAND, some Silt, little medium to fine Gravel; saturated.	Silty Sand (Fill)
	11					1			
	12					1			
	13					1			
	14	SM			3 2	17		Dark gray (N3) coarse to fine SAND, some Silt, little medium to fine Gravel; saturated.	Silty Sand
	15				1				
	16	SP-SM			1				
17					3 1	12.8		Dark gray (N3) coarse to fine SAND, little Silt, some coarse to fine Gravel; saturated.	Gravelly Sand End of Boring at 17 feet bgs



Louis Berger & Assoc., P.C.
199 Water Street
New York, NY 10038

Drilling Log

Page 1 of 4

BORING NO.: SB01I

WELL NO.: MW01I

CLIENT: New York City Department of Design and Construction

PROJECT NO.: KT890A1

PROJECT: Gowanus Canal Groundwater Investigation

DATE STARTED: 6/2/2010

DRILLING CONTRACTOR: Aquifer Drilling and Testing

DATE FINISHED: 6/2/2010

DRILLING METHOD: Hollow Stem Auger

DRILLER: T.Palomeque

BOREHOLE DATA

WELL DATA

Diameter (in):	8	Completion: 2" PVC Flush Mount	INSPECTOR: J.Lacanlale
Total Depth (ft):	40.00	Total Depth (ft): 40	NORTHING: 187652.3208
Sampler:	Split Spoons	Screen Length (ft) /Slot (in): 5 ft/0.010	EASTING: 987945.1486
Depth to Water (ft):	6	Depth to Water (ft): 6.65	GROUND ELEVATION: 9.59
Depth to Rock (ft):	N/A	Permit No.: N/A	TOC ELEVATION: 9.4226

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6in	PID (ppm)	Description	Remarks
	0	FILL				7	22.8	Dark yellowish brown (10YR4/2) coarse to fine SAND, some medium to fine Gravel; dry.	Gravelly Sand (Fill), collected SB01A from 0.0 to 5.0 feet bgs (VOC from 0.2 to 0.7 feet bgs)
	1	FILL				7			
	2	FILL				8			
	3					6			
	4	FILL				4	15.2	Medium dark gray (N4) Silty CLAY; moist.	Silty Clay (Fill)
	5					3			
	6	FILL				10			
	7					5	11.4	Dark gray (N3) WOOD (100% fill material); moist.	Wood (Fill)
	8	FILL				32			
						14			
						9			
						13	19		Water Level 6 feet bgs
						5			Gravelly Sand (Fill)
						3			
						4			
						1	230	Dark yellowish brown (10YR4/2) coarse to fine SAND, some coarse to fine Gravel (15% fill material: cinders); saturated.	
								Medium dark gray (N4) Silty CLAY, little coarse to fine Gravel; saturated.	Silty Clay (Fill),



Louis Berger and Assoc., P.C.
199 Water Street
New York, NY 10038

PROJECT NO.: KT890A1

BORING NO.: SB01I

Page 2 of 4

WELL NO.: MW01I

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	9					1			collected SB01B from 5.0 to 10.0 feet bgs (VOC from 8.0 to 8.5 feet bgs)
	10	FILL				1	56	Dusky yellowish brown (10YR2/2) coarse to fine SAND, some Silt, little medium to fine Gravel; saturated.	Silty Sand (Fill), collected SB01C from 10.0 to 15.0 feet bgs (VOC from 10.0 to 10.5 feet bgs)
	11					1			
	12					1			
	13					1			
	14	SM				2	17	Dark gray (N3) coarse to fine SAND, some Silt, little medium to fine Gravel; saturated.	Silty Sand
	15					2			
	16	SP-SM				1	12.8	Dark gray (N3) coarse to fine SAND, little Silt, some coarse to fine Gravel; saturated.	Gravelly Sand, collected SB01D from 15.0 to 20.0 feet bgs (VOC from 16.8 to 17.3 feet bgs)
	17					3			
	18	SP-SM				1	8	Dark gray (N3) coarse to fine SAND, little Silt, some coarse to fine Gravel; saturated.	
	19					5			
	20	SP-SM				4			
	21					9			
						9	< 1.0	Dark gray (N3) WOOD; saturated.	Wood
						2			



Louis Berger and Assoc., P.C.
199 Water Street
New York, NY 10038

PROJECT NO.: KT890A1

BORING NO.: SB01I

Page 3 of 4

WELL NO.: MW01I

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	22	SP				3			
	23					4	2.3	Dark gray (N3) coarse to fine SAND, little Silt, little coarse to fine Gravel; saturated.	Sand, collected SB01E from 20.0 to 25.0 feet bgs (VOC from 22.0 to 22.5 feet bgs)
	24	SP				3			
	25					2			
	26	SP				2			
	27					32	10.2	Medium gray (N5) medium to fine SAND, trace Silt; saturated.	Collected SB01F from 25.0 to 30.0 feet bgs (VOC from 25.5 to 26.0 feet bgs)
	28	SP				11			
	29					21			
	30	SP				13			
	31					9			
	32	SP				14			
	33					13			
	34	SP				9			
						4		Dusky yellowish brown (10YR2/2) medium to fine SAND; saturated.	
						3			
						3			
						3			
						2		Dusky yellowish brown (10YR2/2) medium to fine SAND; saturated.	Collected SB01G from 30.0 to 35.0 feet bgs (VOC from 32.0 to 32.5 feet bgs)
						4			
						4			
						3			
						2		Dusky yellowish brown (10YR2/2) medium to fine SAND;	



Louis Berger and Assoc., P.C.
199 Water Street
New York, NY 10038

PROJECT NO.: KT890A1

BORING NO.: SB01I

Page 4 of 4

WELL NO.: MW01I

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	35					2		saturated.	
	36	SP				4			
	37					2	< 1.0	Dusky yellowish brown (10YR2/2) medium to fine SAND; saturated.	Collected SB01H from 35.0 to 40.0 feet bgs (VOC from 37.0 to 37.5 feet bgs)
	38	SP				4			
	39					5			
	40					2	< 1.0	Dusky yellowish brown (10YR2/2) medium to fine SAND; saturated.	
						2			End of Boring at 40 feet bgs



Louis Berger and Assoc., P.C.
199 Water Street
New York, NY 10038

PROJECT NO.: KT890A1

BORING NO.: SB02S

Page 2 of 2

WELL NO.: MW02S

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	8	ML				1	< 1.0	Medium dark gray (N4) Silty CLAY; saturated.	
	9					1			
	10	ML				1	36	Medium dark gray (N4) Silty CLAY; saturated.	
	11					1			
	12	ML				2	< 1.0	Medium dark gray (N4) Silty CLAY; saturated.	
	13					3			End of Boring at 13 feet bgs



Louis Berger and Assoc., P.C.
199 Water Street
New York, NY 10038

PROJECT NO.: KT890A1

BORING NO.: SB02I

Page 2 of 4

WELL NO.: MW02I

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	8	ML				1	< 1.0	Medium dark gray (N4) Silty CLAY; saturated.	Collected SB02B from 5.0 to 10.0 feet bgs (VOC from 8.0 to 8.5 feet bgs)
	9					1			
	10	ML				1	36	Medium dark gray (N4) Silty CLAY; saturated.	Collected SB02C from 10.0 to 15.0 feet bgs (VOC from 10.0 to 10.5 feet bgs)
	11					1			
	12	ML				2	< 1.0	Medium dark gray (N4) Silty CLAY; saturated.	
	13					3			
	14	ML				2			
	15					3			
	16	OL				3	< 1.0	Medium dark gray (N4) Organic SILT (high plasticity); saturated.	Organic Silt, collected SB02D from 15.0 to 20.0 feet bgs (VOC from 17.0 to 17.5 feet bgs)
	17					2			
	18	SM				3	< 1.0	Medium dark gray (N4) medium to fine SAND, some Silt; saturated.	Silty Sand
	19					3			



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PROJECT NO.: KT890A1

BORING NO.: SB02I

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WELL NO.: MW02I

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	20		SP			6	6.2	Medium gray (N5) medium to fine SAND, trace Silt; saturated.	Sand, collected SB02E from 20.0 to 25.0 feet bgs (VOC from 21.5 to 22.0 feet bgs)
	21					5			
	22		SP-SM			5	< 1.0	Medium gray (N5) to brownish gray (5YR4/1) medium to fine SAND, little Silt; saturated.	
	23					4			
	24		SP-SM			5	< 1.0	Brownish gray (5YR4/1) medium fine SAND, little Silt; saturated.	
	25					5			
	26		SP			2	< 1.0	Brownish gray (5YR4/1) coarse to fine SAND, trace Silt; saturated.	Collected SB02F from 25.0 to 30.0 feet bgs (VOC from 27.0 to 27.5 feet bgs)
	27					3			
	28		SP			2	< 1.0	Brownish gray (5YR4/1) medium to fine SAND, trace Silt; saturated.	
	29					2			
	30		SP			4	< 1.0	Brownish gray (5YR4/1) medium to fine SAND; saturated.	
	31					4			



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BORING NO.: SB02I

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WELL NO.: MW02I

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	32	SP				5	< 1.0	Brownish gray (5YR4/1) medium to fine SAND; saturated.	Collected SB02G from 30.0 to 35.0 feet bgs (VOC from 32.0 to 32.5 feet bgs)
	33					9			
	34	SP				10			
	35					7	< 1.0	Brownish gray (5YR4/1) medium to fine SAND; saturated.	Collected SB02H from 35.0 to 36.0 feet bgs (VOC from 35.5 to 36.0 feet bgs)
	36					7			
						8			End of Boring at 36 feet bgs



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BORING NO.: SB09S

WELL NO.: MW09S

CLIENT: New York City Department of Design and Construction

PROJECT NO: KT890A1

PROJECT: Gowanus Canal Groundwater Investigation

DATE STARTED: 6/7/2010

DRILLING CONTRACTOR: Aquifer Drilling and Testing

DATE FINISHED: 6/7/2010

DRILLING METHOD: Hollow Stem Auger

DRILLER: T.Palomeque

BOREHOLE DATA		WELL DATA		INSPECTOR: J.Lacanlae
Diameter (in):	8	Completion:	2" PVC Flush Mount	NORTHING: 184961.7634
Total Depth (ft):	15.00	Total Depth (ft):	15	EASTING: 985204.1709
Sampler:	Split Spoons	Screen Length (ft) /Slot (in):	10 ft/0.010	GROUND ELEVATION: 10.47
Depth to Water (ft):	9	Depth to Water (ft):	7.52	TOC ELEVATION: 10.2054
Depth to Rock (ft):	N/A	Permit No.:	N/A	

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0	FILL				28	< 1.0	Moderate yellowish brown (10YR5/4) to pale yellowish brown (10YR6/2) coarse to fine SAND, some coarse to fine Gravel (30% fill material: concrete); dry.	Gravelly Sand (Fill)
	1	FILL				50/2			
	2	FILL				50/4	< 1.0	Pale yellowish brown (10YR6/2) coarse to fine SAND, some coarse to fine Gravel (30% fill material: concrete); dry.	
	3								
	4	FILL				2	< 1.0	Dusky yellowish brown (10YR2/2) coarse to fine SAND, some coarse to fine Gravel; dry.	
	5					2			
	6	FILL				4			
	7					6			
	8					2			
	9					2			
						2			
						4			
						9			



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PROJECT NO.: KT890A1

BORING NO.: SB09S

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WELL NO.: MW09S

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	8	FILL				2	< 1.0	Dark yellowish brown (10YR4/2) coarse to fine SAND, little Silt, some coarse to fine Gravel; saturated.	
	9					2			Water Level 9 feet bgs
	10	SP-SM				4		Medium dark gray (N4) coarse to fine SAND, little Silt, little coarse to fine Gravel; saturated.	Sand
	11					1			
	12	SP				5	8.2	Medium dark gray (N4) coarse to fine SAND, trace Silt, little coarse to fine Gravel; saturated.	
	13					5			
	14	SP				6	31.8	Medium dark gray (N4) coarse to fine SAND, trace Silt, little coarse to fine Gravel; saturated.	End of Boring at 15 feet bgs
	15					3			
						3	10.8		



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BORING NO.: SB09I

WELL NO.: MW09I

CLIENT: New York City Department of Design and Construction

PROJECT NO: KT890A1

PROJECT: Gowanus Canal Groundwater Investigation

DATE STARTED: 6/7/2010

DRILLING CONTRACTOR: Aquifer Drilling and Testing

DATE FINISHED: 6/7/2010

DRILLING METHOD: Hollow Stem Auger

DRILLER: T.Palomeque

BOREHOLE DATA		WELL DATA	INSPECTOR: J.Lacanlale
Diameter (in):	8	Completion: 2" PVC Flush Mount	NORTHING: 184957.7341
Total Depth (ft):	40.00	Total Depth (ft): 15	EASTING: 985208.1607
Sampler:	Split Spoons	Screen Length (ft) /Slot (in): 10 ft/0.010	GROUND ELEVATION: 10.32
Depth to Water (ft):	9	Depth to Water (ft): 7.52	TOC ELEVATION: 9.7621
Depth to Rock (ft):	N/A	Permit No.: N/A	

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0	FILL				28	< 1.0	Moderate yellowish brown (10YR5/4) to pale yellowish brown (10YR6/2) coarse to fine SAND, some coarse to fine Gravel (30% fill material: concrete); dry.	Gravelly Sand (Fill)
	1	FILL				50/2			
	2	FILL				50/4	< 1.0	Pale yellowish brown (10YR6/2) coarse to fine SAND, some coarse to fine Gravel (30% fill material: concrete); dry.	Collected SB09A from 0.0 to 5.0 feet bgs (VOC from 2.0 to 2.5 feet bgs)
	3								
	4	FILL				2	< 1.0	Dusky yellowish brown (10YR2/2) coarse to fine SAND, some coarse to fine Gravel; dry.	
	5					2			
	6	FILL				4			
	7					6			
	8					2			
	9					2			
						2			
						4			
						9			



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BORING NO.: SB09I

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WELL NO.: MW09I

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	8	FILL				2	< 1.0	Dark yellowish brown (10YR4/2) coarse to fine SAND, little Silt, some coarse to fine Gravel; saturated.	
	9					2			Water Level 9 feet bgs
	10	SP-SM				4		Medium dark gray (N4) coarse to fine SAND, little Silt, little coarse to fine Gravel; saturated.	Sand
	11					1			
	12	SP				5	8.2	Medium dark gray (N4) coarse to fine SAND, trace Silt, little coarse to fine Gravel; saturated.	Collected SB09C from 10.0 to 15.0 feet bgs (VOC from 12.0 to 12.5 feet bgs)
	13					5			
	14	SP-SM				4	31.8	Medium dark gray (N4) coarse to fine SAND, trace Silt, little coarse to fine Gravel; saturated.	
	15					4			
	16	SP				3	10.8	Medium dark gray (N4) coarse to fine SAND, trace Silt, little coarse to fine Gravel; saturated.	Gravelly Sand, collected SB09D from 15.0 to 20.0 feet bgs (VOC from 16.5 to 17.0 feet bgs)
	17					3			
	18	SP				5		Medium dark gray (N4) coarse to fine SAND, some coarse to fine Gravel; saturated.	
	19					5			
						4	< 1.0	Medium dark gray (N4) coarse to fine SAND, some coarse to fine Gravel; saturated.	
						4			
						5			
						5			
						1	< 1.0	Medium dark gray (N4) coarse to fine SAND, some coarse to fine Gravel; saturated.	
						2			
						2			
						1			



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PROJECT NO.: KT890A1

BORING NO.: SB091

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WELL NO.: MW09I



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PROJECT NO.: KT890A1

BORING NO.: SB09I

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WELL NO.: MW09I

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	32	OL				2	< 1.0	Medium dark gray (N4) Organic SILT (high plasticity); saturated.	Collected SB09G from 30.0 to 35.0 feet bgs (VOC from 32.0 to 32.5 feet bgs)
	33					2			
	34	OL				3			
	35	SP-SM				2			
	36	SP-SM				6	< 1.0	Medium light gray (N6) medium to fine SAND, little Silt; saturated.	Sand
	37					5			Collected SB09H from 35.0 to 40.0 feet bgs (VOC from 36.5 to 37.0 feet bgs)
	38	SP-SM				5			
	39					5			
	40					6			End of Boring at 40 feet bgs



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BORING NO.: SB10S

WELL NO.: MW10S

CLIENT: New York City Department of Design and Construction

PROJECT NO: KT890A1

PROJECT: Gowanus Canal Groundwater Investigation

DATE STARTED: 6/7/2010

DRILLING CONTRACTOR: Aquifer Drilling and Testing

DATE FINISHED: 6/7/2010

DRILLING METHOD: Hollow Stem Auger

DRILLER: T.Palomeque

BOREHOLE DATA

WELL DATA

INSPECTOR: J.Lacanlale

Diameter (in): 8

Completion: 2" PVC Flush Mount

NORTHING: 185266.8562

Total Depth (ft): 15.00

EASTING: 985026.7643

Sampler: Split Spoons

Screen Length (ft) /Slot (in): 10 ft/0.010

GROUND ELEVATION: 13.63

Depth to Water (ft): 12

Depth to Water (ft): 6.8

TOC ELEVATION: 13.3134

Depth to Rock (ft): N/A

Permit No.: N/A

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NOTES:



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PROJECT NO.: KT890A1

BORING NO.: SB10S

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WELL NO.: MW10S

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	9	FILL				3			
	10					6	< 1.0	Dusky yellowish brown (10YR2/2) coarse to fine SAND, trace Silt, little coarse to fine Gravel (50% fill material: concrete, brick); dry.	
	11					4			
	12	SM				3	< 1.0	Dark yellowish brown (10YR4/2) medium to fine SAND, some Silt, trace fine Gravel; saturated.	Silty Sand
	13					2			
	14	SM				1			
	15					1	10.8	Dark yellowish brown (10YR4/2) medium to fine SAND, some Silt, trace fine Gravel; saturated.	Water Level 12 feet bgs
						1			
						1			
						1			
						1			
									End of Boring at 15 feet bgs



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BORING NO.: SB10I

WELL NO.: MW10I

CLIENT: New York City Department of Design and Construction

PROJECT NO.: KT890A1

PROJECT: Gowanus Canal Groundwater Investigation

DATE STARTED: 6/7/2010

DRILLING CONTRACTOR: Aquifer Drilling and Testing

DATE FINISHED: 6/7/2010

DRILLING METHOD: Hollow Stem Auger

DRILLER: T.Palomeque

BOREHOLE DATA

WELL DATA

Diameter (in):	8	Completion:	2" PVC Flush Mount	INSPECTOR:	J.Lacanlale
Total Depth (ft):	45.00	Total Depth (ft):	45	NORTHING:	185266.5634
Sampler:	Split Spoons	Screen Length (ft) /Slot (in):	5 ft/0.010	EASTING:	985019.8296
Depth to Water (ft):	12	Depth to Water (ft):	6.8	GROUND ELEVATION:	13.74
Depth to Rock (ft):	N/A	Permit No.:	N/A	TOC ELEVATION:	13.4567

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6in	PID (ppm)	Description	Remarks
	0	FILL				< 1.0		Dusky yellowish brown (10YR2/2) coarse to fine SAND, trace Silt, some coarse to fine Gravel (50% fill material: concrete, brick); dry.	Gravelly Sand (Fill), collected SB10A from 0.0 to 5.0 feet bgs (VOC from 2.0 to 2.5 feet bgs)
	1								
	2								
	3								
	4								
	5	FILL				3	< 1.0	Dusky yellowish brown (10YR2/2) coarse to fine SAND, trace Silt, little coarse to fine Gravel (50% fill material: concrete, brick); dry.	Sand (Fill), collected SB10B from 5.0 to 10.0 feet bgs (VOC from 5.5 to 6.0 feet bgs)
	6					4			
	7					3			
	8					5			
						5			
						4			



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PROJECT NO.: KT890A1

BORING NO.: SB10I

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WELL NO.: MW10I

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	9	FILL				3	< 1.0	Dusky yellowish brown (10YR2/2) coarse to fine SAND, trace Silt, little coarse to fine Gravel (50% fill material: concrete, brick); dry.	
	10					6			
	11	SM				4			
	12					3	< 1.0	Dark yellowish brown (10YR4/2) medium to fine SAND, some Silt, trace fine Gravel; saturated.	Silty Sand
	13	SM				2			
	14					1			Water Level 12 feet bgs
	15	SP-SM				1	10.8	Dark yellowish brown (10YR4/2) medium to fine SAND, some Silt, trace fine Gravel; saturated.	Collected SB10C from 10.0 to 15.0 feet bgs (VOC from 13.0 to 13.5 feet bgs)
	16					1			
	17	SP-SM				2	2.8	Dark yellowish brown (10YR4/2) medium to fine SAND, little Silt; saturated.	Sand, collected SB10D from 15.0 to 20.0 feet bgs (VOC from 15.5 to 16.0 feet bgs)
	18					1			
	19	SP				1	< 1.0	Moderate yellowish brown (10YR5/4) medium to fine SAND, little Silt; saturated.	
	20					1			
	21	SP				2			
						4			
						6			
						1	< 1.0	Dark yellowish brown (10YR4/2) medium to fine SAND;	Collected SB10E from



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PROJECT NO.: KT890A1

BORING NO.: SB10I

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WELL NO.: MW10I

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	22					1			20.0 to 25.0 feet bgs (VOC from 22.0 to 22.5 feet bgs)
	23	SP				1	< 1.0	Dark yellowish brown (10YR4/2) medium to fine SAND; saturated.	
	24					3			
	25	SP				3	< 1.0	Dark yellowish brown (10YR4/2) medium to fine SAND; saturated.	
	26					2			
	27	SP				3	< 1.0	Moderate yellowish brown (10YR5/4) to dark yellowish brown (10YR4/2) medium to fine SAND; saturated.	Collected SB10F from 25.0 to 30.0 feet bgs (VOC from 27.0 to 27.5 feet bgs)
	28					5			
	29	SP				4			
	30					7	< 1.0	Dark yellowish brown (10YR4/2) medium to fine SAND; saturated.	
	31	SP				5			
	32					8			
	33	SP				10			
	34					7			
						12	< 1.0	Dark yellowish brown (10YR4/2) medium to fine SAND; saturated.	Collected SB10G from 30.0 to 35.0 feet bgs (VOC from 32.0 to 32.5 feet bgs)
						5			
						5			
						6			
						6	< 1.0	Dark yellowish brown (10YR4/2) medium to fine SAND; saturated.	
						5			



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PROJECT NO.: KT890A1

BORING NO.: SB10I

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WELL NO.: MW10I

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description		Remarks
	35	SP				3				
	36					6	< 1.0	Dark yellowish brown (10YR4/2) medium to fine SAND; saturated.		
	37	SP				8				
	38					11				
	39	SP				7				
	40					8	< 1.0	Dark yellowish brown (10YR4/2) medium to fine SAND; saturated.	Collected SB10H from 35.0 to 40.0 feet bgs (VOC from 37.0 to 37.5 feet bgs)	
	41	SP				9				
	42					10				
	43	SP				12	< 1.0	Dark yellowish brown (10YR4/2) medium to fine SAND; saturated.	Collected SB10I from 40.0 to 45.0 feet bgs (VOC from 42.0 to 42.5 feet bgs)	
	44					5				
	45					5				
						7				
						7				
						8				
						9				
										End of Boring at 45 feet bgs



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Drilling Log

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BORING NO.: SB17S

WELL NO.: MW17S

CLIENT: New York City Department of Design and Construction

PROJECT NO.: KT890A1

PROJECT: Gowanus Canal Groundwater Investigation

DATE STARTED: 6/2/2010

DRILLING CONTRACTOR: Aquifer Drilling and Testing

DATE FINISHED: 6/2/2010

DRILLING METHOD: Hollow Stem Auger

DRILLER: S.Miller

BOREHOLE DATA

WELL DATA

Diameter (in):	8	Completion: 2" PVC Flush Mount	INSPECTOR: J.Ganz
Total Depth (ft):	15.00	Total Depth (ft): 15	NORTHING: 183635.2731
Sampler:	Split Spoons	Screen Length (ft) /Slot (in): 10 ft/0.010	EASTING: 984664.4093
Depth to Water (ft):	10	Depth to Water (ft): 7.24	GROUND ELEVATION: 10.41
Depth to Rock (ft):	N/A	Permit No.: N/A	TOC ELEVATION: 9.8922

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6in	PID (ppm)	Description	Remarks
	0	ASPHALT					< 1.0	Black (N1) Asphalt; dry.	Asphalt
	1	FILL				20	< 1.0	Olive gray (5Y4/1) medium to fine SAND, trace Silt, some coarse to fine Gravel; dry.	Gravelly Sand (Fill)
	2	FILL				36			
	2	FILL				22	< 1.0	Olive gray (5Y4/1) to dusky yellowish brown (10YR2/2) medium to fine SAND, trace Silt, some coarse to fine Gravel (5% fill material: brick); dry.	
	3	FILL				57			
	3	FILL				45			
	4	FILL				25			
	4	FILL				13	< 1.0	Dusky yellowish brown (10YR2/2) to olive gray (5Y4/1) medium to fine SAND, trace Silt, little coarse to fine Gravel; dry.	Sand (Fill)
	5	FILL				30			
	5	FILL				43			
	6	FILL				40			
	6	FILL				47	443	Black (N1) to olive black (5Y2/1) coarse to fine SAND, trace Silt, little coarse to fine Gravel; dry.	
	7					17			
	7					9			
	7					6			



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PROJECT NO.: KT890A1

BORING NO.: SB17S

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WELL NO.: MW17S

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	8	SP-SM				25	6.3	Grayish black (N2) coarse to fine SAND, little Silt, trace coarse to fine Gravel; saturated.	Sand
	9					6			
	10	SP				3			
	11					4			
	12	SP-SM				6	7.5	Grayish black (N2) coarse to fine SAND, trace Silt, trace medium to fine Gravel; saturated.	Water Level 10 feet bgs
	13					4			
	14	SP-SM				1			
	15					1		Olive black (5Y2/1) to dusky yellowish brown (10YR2/2) medium to fine SAND, little Silt, trace medium to fine Gravel; saturated.	
						1	3.3		
						1			
						1			
						1	< 1.0	Olive black (5Y2/1) to dusky yellowish brown (10YR2/2) coarse to fine SAND, little Silt, trace medium Gravel; saturated.	End of Boring at 15 feet bgs



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Drilling Log

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BORING NO.: SB17I

WELL NO.: MW17I

CLIENT: New York City Department of Design and Construction

PROJECT NO.: KT890A1

PROJECT: Gowanus Canal Groundwater Investigation

DATE STARTED: 6/2/2010

DRILLING CONTRACTOR: Aquifer Drilling and Testing

DATE FINISHED: 6/2/2010

DRILLING METHOD: Hollow Stem Auger

DRILLER: S.Miller

BOREHOLE DATA

WELL DATA

Diameter (in):	8	Completion:	2" PVC Flush Mount	INSPECTOR:	J.Ganz
Total Depth (ft):	46.00	Total Depth (ft):	44.5	NORTHING:	183640.2563
Sampler:	Split Spoons	Screen Length (ft) /Slot (in):	5 ft/0.010	EASTING:	984663.3425
Depth to Water (ft):	10	Depth to Water (ft):	7.24	GROUND ELEVATION:	10.32
Depth to Rock (ft):	N/A	Permit No.:	N/A	TOC ELEVATION:	9.938

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6in	PID (ppm)	Description	Remarks
	0	ASPHALT					< 1.0	Black (N1) Asphalt; dry.	Asphalt
	1	FILL				20	< 1.0	Olive gray (5Y4/1) medium to fine SAND, trace Silt, some coarse to fine Gravel; dry.	Gravelly Sand (Fill)
	2	FILL				36			
	3					22	< 1.0	Olive gray (5Y4/1) to dusky yellowish brown (10YR2/2) medium to fine SAND, trace Silt, some coarse to fine Gravel (5% fill material: brick); dry.	Collected SB17A from 2.0 to 5.0 feet bgs (VOC from 2.5 to 3.0 feet bgs)
	4	FILL				57			
	5					45			
	6	FILL				25			
	7					13	< 1.0	Dusky yellowish brown (10YR2/2) to olive gray (5Y4/1) medium to fine SAND, trace Silt, little coarse to fine Gravel; dry.	Sand (Fill)
	8	SP-SM				30			
						43			
						40			
						47	443	Black (N1) to olive black (5Y2/1) coarse to fine SAND, trace Silt, little coarse to fine Gravel; dry.	Collected SB17B from 5.0 to 10.0 feet bgs (VOC from 6.1 to 6.6 feet bgs)
						17			
						9			
						6			
						25	6.3	Grayish black (N2) coarse to fine SAND, little Silt, trace coarse to fine Gravel; saturated.	Sand



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PROJECT NO.: KT890A1

BORING NO.: SB17I

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WELL NO.: MW17I

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	9					6			
	10	SP				3			Water Level 10 feet bgs
	11					4			☒ Collected SB17C from from 10.0 to 15.0 feet bgs (VOC from 10 to 10.4 feet bgs)
	12	SP-SM				6	7.5	Grayish black (N2) coarse to fine SAND, trace Silt, trace medium to fine Gravel; saturated.	
	13					4			
	14	SP-SM				1	3.3	Olive black (5Y2/1) to dusky yellowish brown (10YR2/2) medium to fine SAND, little Silt, trace medium to fine Gravel; saturated.	
	15					1			
	16	SC				1	< 1.0	Olive black (5Y2/1) to dusky yellowish brown (10YR2/2) coarse to fine SAND, little Silt, trace medium Gravel; saturated.	
	17					1			Clayey Sand, collected SB17D from 15.0 to 20.0 feet bgs (VOC from 16.5 to 17.0 feet bgs)
	18	CL				2	< 1.0	Olive black (5Y2/1) to dusky yellowish brown (10YR2/2) fine SAND, and Silty Clay; saturated.	
	19					3			
	20	CL				2			
	21					2			
						WOH		Olive gray (5Y4/1) Silty CLAY, little fine Sand; saturated.	Silty Clay
						WOH			
						WOH			
						WOH			
						WOH			
						< 1.0		Olive gray (5Y4/1) Silty CLAY, trace fine Sand; saturated.	
						1			
						1			



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PROJECT NO.: KT890A1

BORING NO.: SB17I

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WELL NO.: MW17I

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	22	CL				1			
						WOH	< 1.0	Dark gray (N3) Silty CLAY; saturated.	Collected SB17E from 20.0 to 25.0 feet bgs (VOC from 22.5 to 23.0 feet bgs)
	23					WOH			
	24	CL				1			
						WOH	< 1.0	Dark gray (N3) Silty CLAY, trace fine Sand; saturated.	
	25					WOH			
	26	SP				1			
						WOH	< 1.0	Dark gray (N3) fine SAND; saturated.	Sand, Collected SB17F from 25.0 to 30.0 feet bgs (VOC from 26.5 to 27 feet bgs)
	27					WOH			
	28	SP				1			
						WOH	< 1.0	Dark gray (N3) fine SAND, trace Silt; saturated.	
	29	CL				1			
						3	< 1.0	Dark gray (N3) Silty CLAY, trace fine Sand; saturated.	Silty Clay
	30	CL				4			
						3	< 1.0	Olive black (5Y2/1) Silty CLAY, little fine Sand; saturated.	
	31					2			
	32	SP				1			
						2	< 1.0	Olive black (5Y2/1) medium to fine SAND, trace Silt; saturated.	Sand, collected SB17G from 30.0 to 35.0 feet bgs (VOC from 32.5 to 33.0 feet bgs)
	33					2			
	34	SP				1	< 1.0	Olive black (5Y2/1) medium to fine SAND, trace Silt;	



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BORING NO.: SB17I

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WELL NO.: MW17I

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	35					1		saturated.	
	36	SP				1			
	37					2			
	38	SP				3	< 1.0	Olive black (5Y2/1) medium to fine SAND, trace Silt; saturated.	Collected SB17H from 35.0 to 40.0 feet bgs (VOC from 36.5 to 37.0 feet bgs)
	39					3			
	40	SP				4			
	41					5			
	42	SP				6		Dusky yellowish brown (10YR2/2) fine SAND, trace Silt; saturated.	Collected SB17I from 40.0 to 45.0 feet bgs (VOC from 42.5 to 43 feet bgs)
	43					5			
	44					2		dusky yellowish brown (10YR2/2) fine SAND, trace Silt; saturated.	
	45					2			
	46					5			End of Boring at 46 feet bgs
						WOH			
						1			
						2			
						3			



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Drilling Log

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BORING NO.: SB18S

WELL NO.: MW18S

CLIENT: New York City Department of Design and Construction

PROJECT NO: KT890A1

PROJECT: Gowanus Canal Groundwater Investigation

DATE STARTED: 6/8/2010

DRILLING CONTRACTOR: Aquifer Drilling and Testing

DATE FINISHED: 6/8/2010

DRILLING METHOD: Hollow Stem Auger

DRILLER: S.Miller

BOREHOLE DATA		WELL DATA	INSPECTOR: J.Ganz
Diameter (in):	8	Completion: 2" PVC Flush Mount	NORTHING: 183308.9226
Total Depth (ft):	15.00	Total Depth (ft): 15	EASTING: 984590.7635
Sampler:	Split Spoons	Screen Length (ft) /Slot (in): 10 ft/0.010	GROUND ELEVATION: 11.35
Depth to Water (ft):	10	Depth to Water (ft): 9.58	TOC ELEVATION: 10.8873
Depth to Rock (ft):	N/A	Permit No.:	N/A

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6 in	PID (ppm)	Description	Remarks
	0	FILL				13	< 1.0	Dark yellowish brown (10YR4/2) medium to fine SAND, trace Silt, some fine Gravel; dry.	Gravelly Sand (Fill)
	1					13			
	2	FILL				14			
	3					40			
	7					7	< 1.0	Dark yellowish brown (10YR4/2) medium to fine SAND, trace Silt, some fine Gravel; dry.	
	8					8			
	3	ASPHALT				35	< 1.0	Black (N1) Asphalt; dry.	Asphalt
	4					16			
	5					50/3			
	6	FILL				53	34	Very light gray (N8) to very pale orange (10YR8/2) fine SAND, trace Silt, some coarse to fine Gravel; dry.	Gravelly Sand (Fill)
	7					50/0			



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BORING NO.: SB18S

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WELL NO.: MW18S

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description		Remarks
	8	FILL				4	355	Dark yellowish brown (10YR4/2) fine SAND, trace Silt, some coarse to fine Gravel; dry.		
	9	ML				3	751	Olive black (5Y2/1) SILT, trace fine Sand, trace medium Gravel; wet.		Silt
	10					4				
	11					3				
	12	SM				1	< 1.0	Olive black (5Y2/1) fine SAND, some Silt; saturated.		Silty Sand
	13					WOH				
	14	SM				1	WOH			
	15					WOH	< 1.0	Olive black (5Y2/1) fine SAND, some Silt; saturated.		End of Boring at 15 feet bgs
						WOH				



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BORING NO.: SB18I

WELL NO.: MW18I

CLIENT: New York City Department of Design and Construction

PROJECT NO: KT890A1

PROJECT: Gowanus Canal Groundwater Investigation

DATE STARTED: 6/7/2010

DRILLING CONTRACTOR: Aquifer Drilling and Testing

DATE FINISHED: 6/8/2010

DRILLING METHOD: Hollow Stem Auger

DRILLER: S.Miller

BOREHOLE DATA

WELL DATA

INSPECTOR: J.Ganz

Diameter (in): 8

Completion: 2" PVC Flush Mount

NORTHING: 183310.1333

Total Depth (ft): 58.00

Total Depth (ft): 57

EASTING: 984588.0388

Sampler: Split Spoons

Screen Length (ft) /Slot (in): 5 ft/0.010

GROUND ELEVATION: 11.08

Depth to Water (ft): 10

Depth to Water (ft): 9.58

TOC ELEVATION: 10.5153

Depth to Rock (ft): N/A

Permit No.: N/A

NOTES:



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BORING NO.: SB18I

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WELL NO.: MW18I

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	7								
	8	FILL				4	355	Dark yellowish brown (10YR4/2) fine SAND, trace Silt, some coarse to fine Gravel; dry.	
	9	ML				3	751	Olive black (5Y2/1) SILT, trace fine Sand, trace medium Gravel; wet.	Silt, collected SB18B from 5.0 to 10.0 feet bgs (VOC from 8.5 to 8.8 feet bgs)
	10					4			Water Level 10 feet bgs
	11					3			Collected SB18C from 10.0 to 15.0 feet bgs (VOC from 14.5 to 15.0 feet bgs)
	12	SM				1	< 1.0	Olive black (5Y2/1) fine SAND, some Silt; saturated.	Silty Sand
	13					WOH			
	14	SM				1			
	15					WOH			
	16	SM				WOH	< 1.0	Olive black (5Y2/1) fine SAND, some Silt; saturated.	Collected SB18D from 15.0 to 20.0 feet bgs (VOC from 18.0 to 18.5 feet bgs)
	17					1			
						1	< 1.0	Olive black (5Y2/1) fine SAND, some Silt; saturated.	
						1			



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BORING NO.: SB18I

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WELL NO.: MW18I

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	18	SM				WOH			
	19					WOH < 1.0		Olive gray (5Y4/1) fine SAND, some Silt; saturated.	
	20	SP-SM				WOH < 1.0		Olive gray (5Y4/1) fine SAND, little Silt; saturated.	Sand
	21					WOH			
	22	ML				WOH 238		Olive gray (5Y4/1) SILT, little fine Sand; saturated.	Silt, collected SB18E from 20.0 to 25.0 feet bgs (VOC from 22.0 to 22.5 feet bgs)
	23					WOH			
	24	ML				1			
	25					1			
	26	ML				2			
	27					WOH < 1.0		Olive gray (5Y4/1) SILT, little fine Sand; saturated.	Collected SB18F from 25.0 to 30.0 feet bgs (VOC from 26.5 to 27.0 feet bgs)
						WOH			
						1			
						2			



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WELL NO.: MW18I

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description		Remarks	
	28	ML				WOH	< 1.0	Olive gray (5Y4/1) SILT, and fine Sand; saturated.		Sandy Silt	
	29					WOH					
	30	SP			1	< 1.0	Olive gray (5Y4/1) fine SAND; saturated.			Sand	
	31				WOH						
	31	OL			1	< 1.0	Olive black (5Y2/1) Organic SILT (high plasticity), trace fine SAND; saturated.			Organic Silt	
	32	SP-SM			WOH	< 1.0	Olive gray (5Y4/1) medium to fine SAND, little Silt; saturated.			Sand, collected SB18G from 30.0 to 35.0 feet bgs (VOC from 32.5 to 33.0 feet bgs)	
	33				1						
	33	SP-SM			3						
	34				7	< 1.0	Dusky yellowish brown (10YR2/2) fine SAND, little Silt; saturated.				
	34	SM			6	< 1.0	Dusky yellowish brown (10YR2/2) fine SAND, some Silt; saturated.			Silty Sand	
	35				5						
	35				4						
	36	SP				5	< 1.0	Dark yellowish brown (10YR4/2) fine SAND, trace Silt; saturated.			
	36	SP			4	< 1.0	Dark yellowish brown (10YR4/2) fine SAND, trace Silt; saturated.			Collected SB18H from 35.0 to 40.0 feet bgs (VOC from 36.5 to 37.0 feet bgs)	
	37				5						
	37				10						
	38				12						
	38				WOH	< 1.0					



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BORING NO.: SB18I

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WELL NO.: MW18I

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	39	SP				4		Dark yellowish brown (10YR4/2) fine SAND trace Silt;	Product observed at 38.9 to 39.0 feet bgs
	40	SP-SM				8			Collected SB18I from 40.0 to 45.0 feet bgs (VOC from 44.3 to 44.8 feet bgs)
	41					8			Sheen observed
	42	ML				4	< 1.0	Olive black (5Y2/1) fine SAND, little Silt; saturated.	Sandy Clayey Silt, Product observed at 41.1 to 41.3 feet bgs
	43	SP				1	40	Dark yellowish brown (10YR4/2) Clayey SILT, some fine Sand; saturated.	Sand
	44	ML				1	70	Olive black (5Y2/1) fine SAND, trace Silt; saturated.	Sandy Clayey Silt, sheen observed, Product observed at 42.2 to 42.3 feet bgs
	45	SP				1	115	Dark yellowish brown (10YR4/2) medium to fine SAND, trace Silt; saturated.	Sand, Product observed at 44.4 to 44.5 feet bgs
	46	SP-SM				4	23	Dark yellowish brown (10YR4/2) fine SAND, little Silt; saturated.	Sheen observed
	47					6			Collected SB18J from 45.0 to 50.0 feet bgs (VOC from 45.5 to 46.0 feet bgs)
	48					7			
						WOH			
						WOH			
						WOH			
						1			
						3	< 1.0	Dark yellowish brown (10YR4/2) medium to fine SAND, little Silt; saturated.	Sheen observed



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BORING NO.: SB18I

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WELL NO.: MW18I

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	49					6			
	50	SP				10	< 1.0	Moderate yellowish brown (10YR5/4) medium to fine SAND, trace Silt; saturated.	Sheen observed
	51	SP				16			
	52	SP				4	< 1.0	Moderate yellowish brown (10YR5/4) medium to fine SAND, trace Silt; saturated.	Sheen observed, collected SB18K from 50.0 to 55.0 feet bgs (VOC from 54.0 to 54.5 feet bgs)
	53					6			
	54	SP				13			
	55	SP				19			
	56	SP				10	16.8	Moderate yellowish brown (10YR5/4) medium to fine SAND, trace Silt; saturated.	Sheen observed
	57	SP				9			
	58					11			
						13			
						11			
						13			
						11			
						11			
						11			
						10	18.3	Moderate yellowish brown (10YR5/4) medium to fine SAND, trace Silt; saturated.	Product observed at 54.3 to 54.4 feet bgs
						9			
						11			
						11			
						10			
						15			
						18			
						20			
									End of Boring at 58 feet bgs



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BORING NO.: SB19S

WELL NO.: MW19S

CLIENT: New York City Department of Design and Construction

PROJECT NO.: KT890A1

PROJECT: Gowanus Canal Groundwater Investigation

DATE STARTED: 6/4/2010

DRILLING CONTRACTOR: Aquifer Drilling and Testing

DATE FINISHED: 6/4/2010

DRILLING METHOD: Hollow Stem Auger

DRILLER: S.Miller

BOREHOLE DATA

WELL DATA

Diameter (in): 8

Completion: 2" PVC Flush Mount

Total Depth (ft): 15.00

Total Depth (ft): 15

Sampler: Split Spoons

Screen Length (ft) /Slot (in): 10 ft/0.010

Depth to Water (ft): 6

Depth to Water (ft): 8.13

Depth to Rock (ft): N/A

Permit No.: N/A

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6in	PID (ppm)	Description	Remarks
	0	ASPHALT				< 1.0		Black (N1) Asphalt; dry.	Asphalt
	1	ASPHALT				10	< 1.0	Black (N1) Asphalt; wet.	
	2	FILL				11	< 1.0	Olive gray (5Y4/1) coarse to fine SAND, some medium to fine Gravel; saturated.	Gravelly Sand (Fill)
	3	ASPHALT				9	< 1.0	Black (N1) Asphalt; wet.	Weathered Asphalt
	4	FILL				5	< 1.0	Olive gray (5Y4/1) medium to fine GRAVEL, and coarse to fine Sand (45% fill material: glass); saturated.	Sandy Gravel (Fill)
	5					13	< 1.0		
	6	FILL				6	< 1.0		
	7					11	< 1.0		
						10	< 1.0		
						50/4	< 1.0	Olive gray (5Y4/1) fine GRAVEL, little coarse to fine Sand (10% fill material: glass); saturated.	Water Level 6 feet bgs Gravel (Fill)



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WELL NO.: MW19S

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	8	FILL				7	< 1.0	Olive gray (5Y4/1) fine SAND, little Silt, some coarse to fine Gravel (10% fill material: glass, brick); saturated.	Gravelly Sand (Fill)
	9					17			
	10	SP-SM				11			
	11					6			
	12	SP-SM				1	< 1.0	Olive gray (5Y4/1) medium to fine SAND, little Silt, little coarse to fine Gravel; saturated.	Sand
	13					2			
	14	SP-SM				4			
	15					5			
						7	< 1.0	Olive gray (5Y4/1) coarse to fine SAND, little Silt, little coarse to fine Gravel; saturated.	
						2			
						3			
						7			
						9	< 1.0	Olive gray (5Y4/1) coarse to fine SAND, little Silt, little coarse to fine Gravel; saturated.	End of Boring at 15 feet bgs
						11			



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BORING NO.: SB19I

WELL NO.: MW19I

CLIENT: New York City Department of Design and Construction

PROJECT NO.: KT890A1

PROJECT: Gowanus Canal Groundwater Investigation

DATE STARTED: 6/3/2010

DRILLING CONTRACTOR: Aquifer Drilling and Testing

DATE FINISHED: 6/4/2010

DRILLING METHOD: Hollow Stem Auger

DRILLER: S.Miller

BOREHOLE DATA

WELL DATA

Diameter (in):	8	Completion:	2" PVC Flush Mount	INSPECTOR:	J.Ganz
Total Depth (ft):	62.00	Total Depth (ft):	59	NORTHING:	183333
Sampler:	Split Spoons	Screen Length (ft) /Slot (in):	5 ft/0.010	EASTING:	984873
Depth to Water (ft):	6	Depth to Water (ft):	8.13	GROUND ELEVATION:	12.14
Depth to Rock (ft):	N/A	Permit No.:	N/A	TOC ELEVATION:	11.69

NOTES:

Well Construction	Depth	Lithology	USCS	Sample Interval	Sample Recovery	Blows/6in	PID (ppm)	Description	Remarks
	0	ASPHALT				< 1.0		Black (N1) Asphalt; dry.	Asphalt
	1	ASPHALT				10	< 1.0	Black (N1) Asphalt; wet.	Collected SB19A from 2.3 to 5.0 feet bgs (VOC from 2.3 to 2.8 ft bgs)
	2	FILL				11	< 1.0	Olive gray (5Y4/1) coarse to fine SAND, some medium to fine Gravel; saturated.	Gravelly Sand (Fill)
	3	ASPHALT				9	< 1.0	Black (N1) Asphalt; wet.	Asphalt
	4	FILL				5			
	5					13	< 1.0	Olive gray (5Y4/1) medium to fine GRAVEL, and coarse to fine Sand (45% fill material: glass); saturated.	Sandy Gravel (Fill)
	6	FILL				6			
	7					11			
						10			
						50/4	< 1.0	Olive gray (5Y4/1) fine GRAVEL, little coarse to fine Sand (10% fill material: glass); saturated.	Water Level 6 feet bgs Gravel (Fill)



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BORING NO.: SB19I

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WELL NO.: MW19I

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	8	FILL				7	< 1.0	Olive gray (5Y4/1) fine SAND, little Silt, some coarse to fine Gravel (10% fill material: glass, brick); saturated.	Gravelly Sand (Fill), collected SB19B from 5.0 to 10.0 feet bgs (VOC from 8.0 to 8.5 feet bgs)
	9					17			
	10	SP-SM				11			
	11					6			
	12	SP-SM					1	Olive gray (5Y4/1) medium to fine SAND, little Silt, little coarse to fine Gravel; saturated.	Sand
	13						2		
	14	SP-SM					4		
	15	SP-SM					5		
	16	SP					7		
	17						9	Olive gray (5Y4/1) coarse to fine SAND, little Silt, little coarse to fine Gravel; saturated.	Collected SB19C from 10.0 to 15.0 feet bgs (VOC from 12.0 to 12.5 feet bgs)
	18	GP					11		
							25	Olive black (5Y2/1) medium to fine SAND, little Silt, little medium to fine Gravel; saturated.	
							18		
							4	Olive gray (5Y4/1) coarse to medium SAND, trace Silt, some coarse to fine Gravel; saturated.	Gravelly Sand
							17		
							12		
							18		
								Olive gray (5Y4/1) medium to fine GRAVEL, trace Silt, little	Gravel, collected



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BORING NO.: SB19I

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WELL NO.: MW19I

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	19					12			SB19D from 15.0 to 20.0 feet bgs (VOC from 18.0 to 18.5 feet bgs)
	20	SP-SM				5			
	21					4	< 1.0	Olive gray (5Y4/1) coarse to fine SAND, little Silt, little coarse to fine Gravel (5% fill material: glass); saturated.	Sand
	22	SP-SM				6			
	23					7			
	24	SP				9			
	25					7	< 1.0	Olive gray (5Y4/1) coarse to fine SAND, trace Silt, little medium to fine Gravel; saturated.	Collected SB19E from 20.0 to 25.0 feet bgs (VOC from 22.0 to 22.4 feet bgs)
	26	ML				12			
	27					2			
	28					1			
	29	SP				1			
						W.O.		Olive gray (5Y4/1) Clayey SILT, trace fine Sand; saturated.	Clayey Silt
						1			
						1			
						1			
						1			
						1			
						1			
						1			
						1			
						1			
						2	< 1.0	Olive gray (5Y4/1) fine SAND, trace Silt; saturated.	Sand



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WELL NO.: MW19I

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	30	SP-SM				4			
	31					5	< 1.0	Dark yellowish brown (10YR4/2) medium to fine SAND, little Silt; saturated.	
	32					7			
	33					9			
	34	SP				14			
	35					W.O.			
	36	ML				W.O.			
	37					W.O.			
	38	SM				W.O.			
	39	SP-SM				W.O.			
	40	SP				W.O.	< 1.0	Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; saturated.	



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BORING NO.: SB19I

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WELL NO.: MW19I

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description	Remarks
	41					W.O.			
	42	SP				3			
	43					8			
	44	SP				17	< 1.0	Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; saturated.	Collected SB19I from 40.0 to 45.0 feet bgs (VOC from 42.5 to 43.0 feet bgs)
	45					16			
	46	SP				19			
	47					25			
	48					9	< 1.0	Dark yellowish orange (10YR6/6) medium to fine SAND, trace Silt; saturated.	Collected SB19J from 45.0 to 50.0 feet bgs (VOC from 46.8 to 47.3 feet bgs)
	49					5			
	50	SP				3			
	51					4			
						6			
						4			
						28			
						14			
						21			
						5	< 1.0	Dark yellowish brown (10YR4/2) medium to fine SAND, trace Silt, trace fine Gravel; saturated.	
						19			
						27			



Louis Berger and Assoc., P.C.
199 Water Street
New York, NY 10038

PROJECT NO.: KT890A1

BORING NO.: SB19I

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WELL NO.: MW19I

Well	Depth	Lith.	USCS	Interval	Rec.	Blows	PID	Description		Remarks	
	52		SP			35		Moderate brown (5YR4/4) coarse to fine SAND, trace Silt, trace fine Gravel; saturated.		Collected SB19K from 50.0 to 55.0 feet bgs (VOC from 52.5 to 53.0 feet bgs)	
	53					16	< 1.0				
	54		SP			32					
	55					35					
	56		SP			47					
	56		SP			40	< 1.0	Dark yellowish brown (10YR4/2) medium to fine SAND; saturated.			
	57					31					
	58					22					
	59					25					
	60		SP			15	< 1.0	Moderate brown (5YR4/4) coarse to fine SAND, trace Silt; saturated.		Collected SB19L from 55.0 to 60.0 feet bgs (VOC from 56.6 to 57.1 feet bgs)	
	61					12	< 1.0	Moderate brown (5YR4/4) medium to fine SAND; saturated.			
	62					9					
						10					
						18	< 1.0	Moderate brown (5YR4/4) medium to fine SAND; saturated.		Collected SB19M from 60.0 to 62.0 feet bgs (VOC from 61.0 to 61.5 feet bgs)	
						9					
						6					
						7				End of Boring at 62 feet bgs	
						8	< 1.0	Moderate brown (5YR4/4) medium to fine SAND; saturated.			
						15					
						17					
						19					