

LOG OF BORING

Project: Bolivar DMPA No. 36

Boring No.: PA 36-7

Groundwater during drilling: ---

Groundwater after drilling: ---

Date: 11/18/2009

Northing: 13,761,500.9

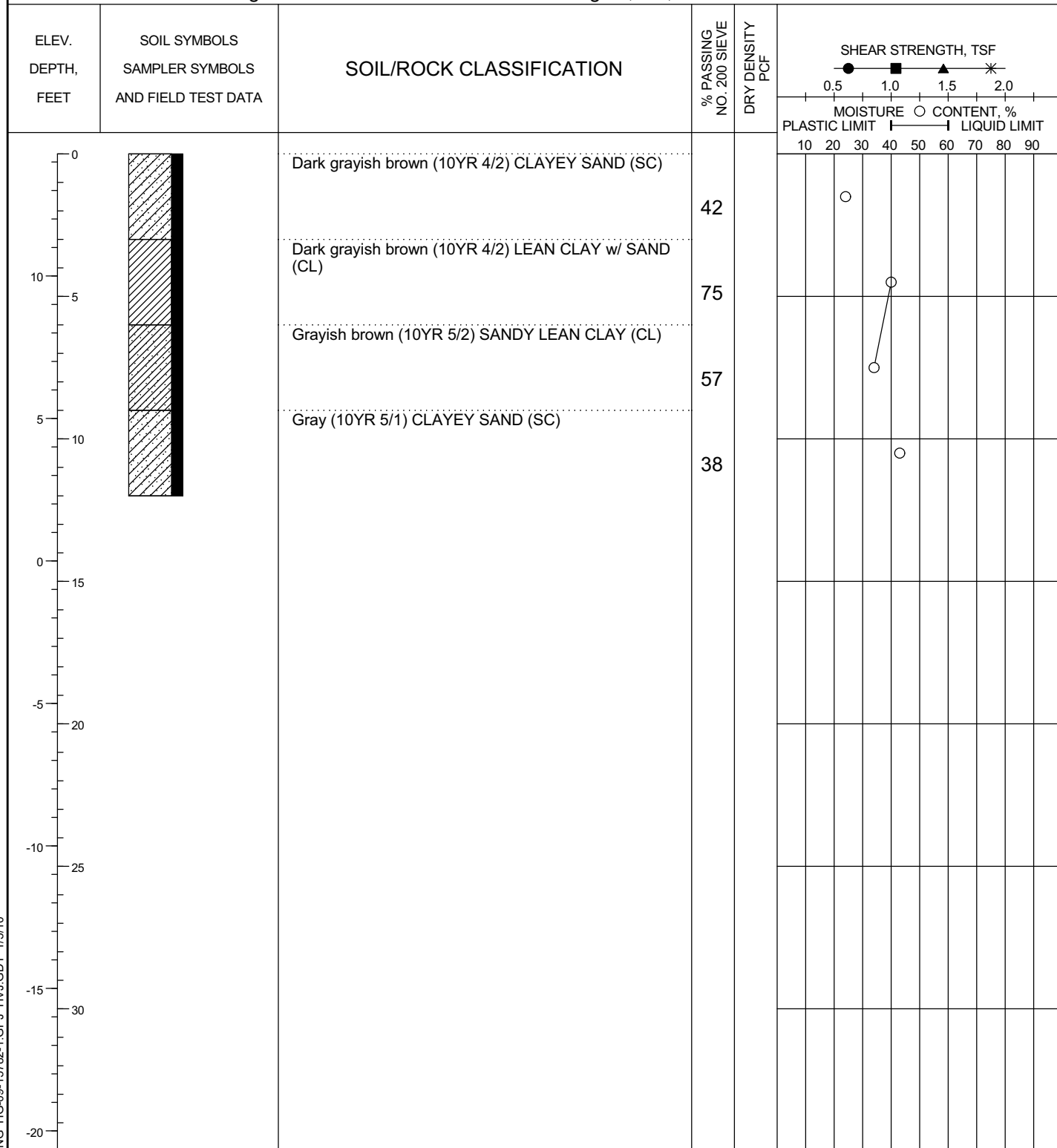
Easting: 3,391,060.4

Project No.: HG0915782

Elevation: 14.28 feet

Station: --

Offset: --



Shear Types:

● = Hand Penet.

■ = Torvane

▲ = Unconf. Comp.

✱ = UU Triaxial

PLATE A-7

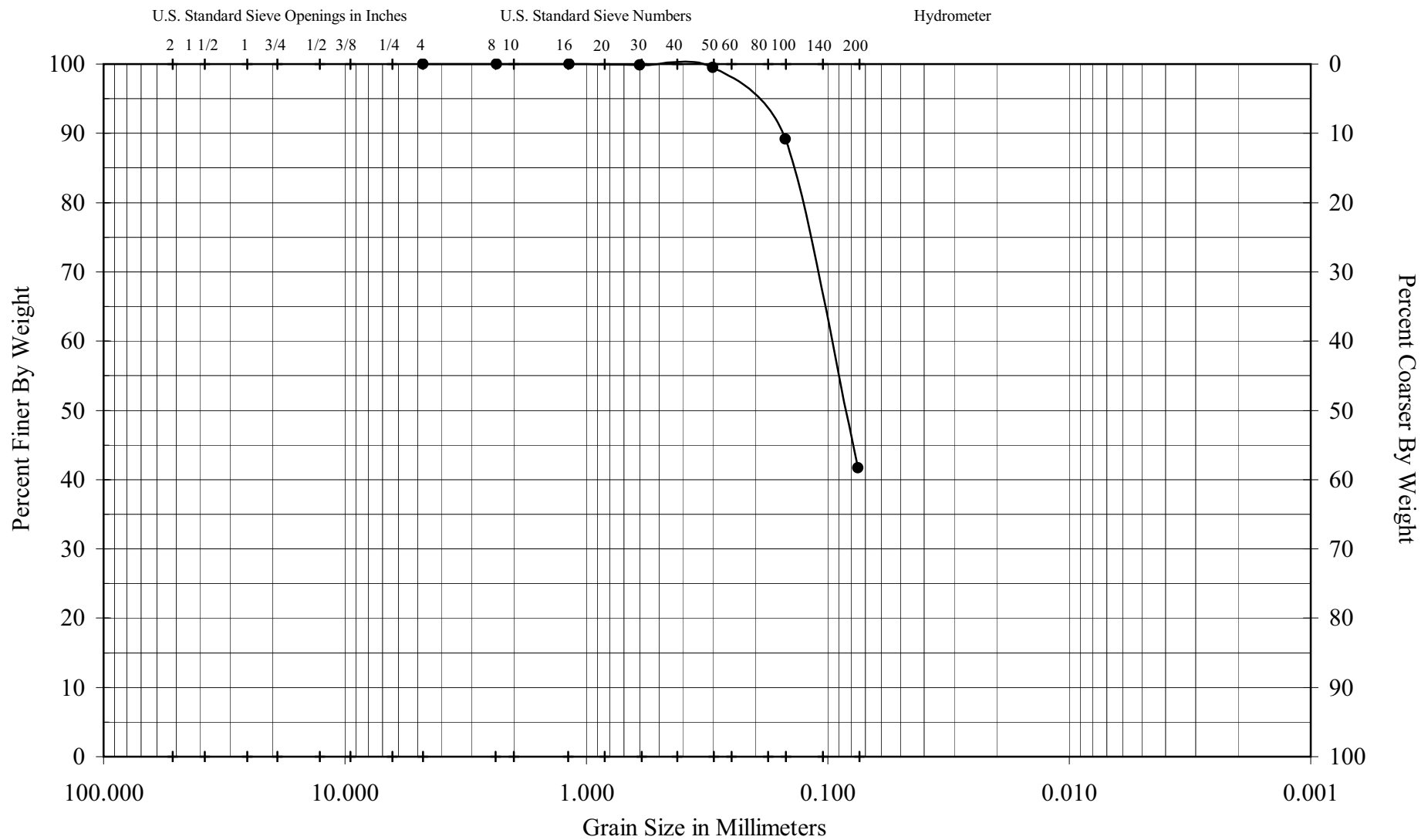
SIEVE ANALYSIS DATA

Project: Bolivar DMPA No. 36 Job No. HG09-15782 Date: December 10, 2009
Boring No. PA 36-7 Sample No. 1 Depth: 0'-3'
Matl Desc. Dark Grayish Brown Clayey Sand

Tare No.	72	Init Wt. - Tare	110.75	% Ret.	58.31
Tare Wt.	6.56	Dry Wt. after test	64.58	% Pass #200	41.69
Init. Dry Wt.	117.31	Wt. Ret. on #200	64.58		

Sieve Size/No.	Sieve Size (mm)	Weight Ret.	% Retained	% Passing
4	4.750	0.00	0.00	100.00
8	2.360	0.00	0.00	100.00
16	1.180	0.01	0.01	99.99
30	0.600	0.14	0.13	99.87
50	0.300	0.58	0.52	99.48
100	0.150	11.98	10.82	89.18
200	0.075	64.58	58.31	41.69

Tested by: KK Computed by: NL Check by: SV
Date: 12/10/09 Date: Date:



Boring No.
PA-36-7

Depth, Ft.
0'-3'

Classification
Dark Grayish Brown Clayey Sand

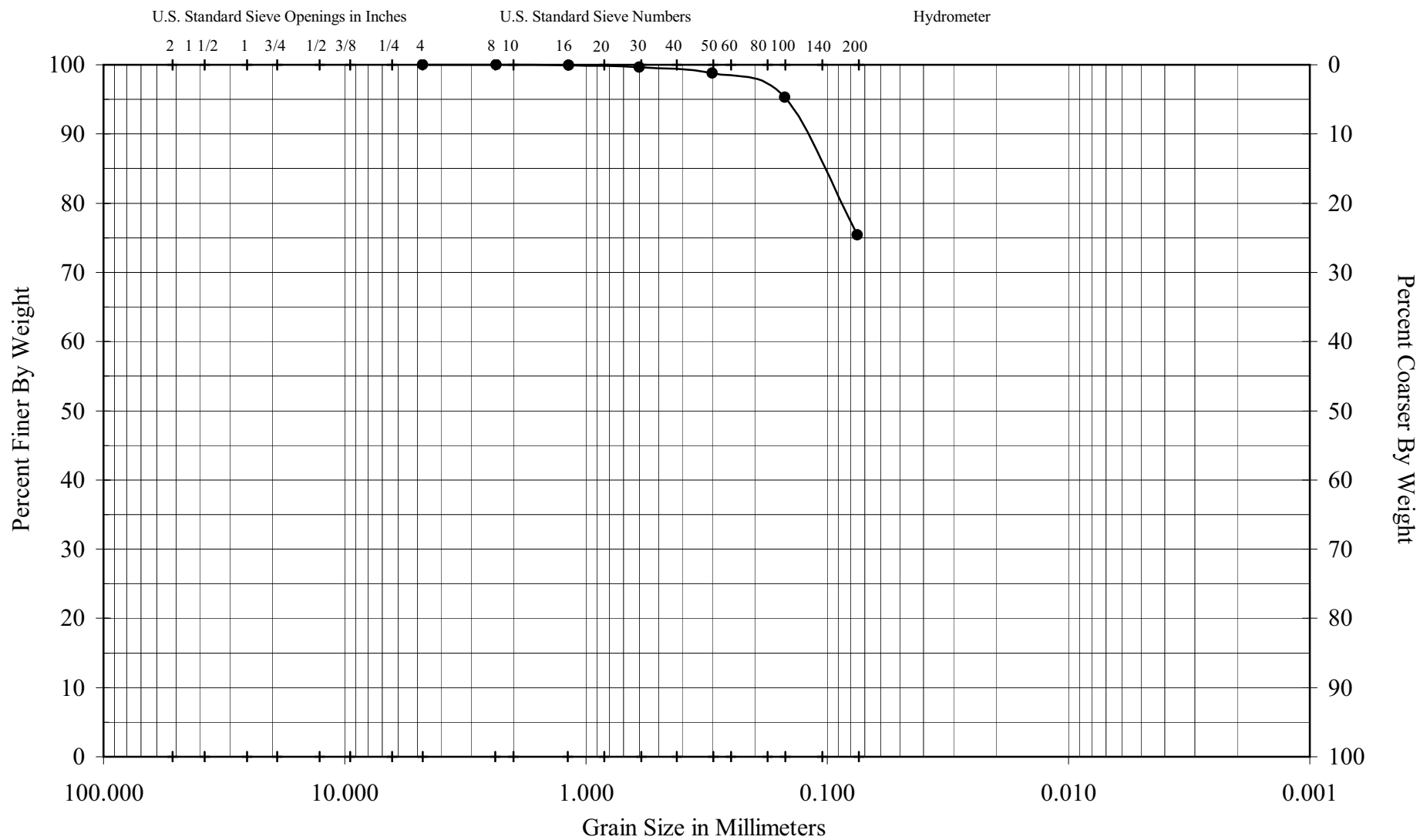
SIEVE ANALYSIS DATA

Project: Bolivar DMPA No. 36 Job No. HG09-15782 Date: December 10, 2009
Boring No. PA 36-7 Sample No. 2 Depth: 3'-6'
Matl Desc. Dark Grayish Brown Lean Clay w/ Sand

Tare No.	58	Init Wt. - Tare	88.55	% Ret.	24.56
Tare Wt.	6.59	Dry Wt. after test	21.75	% Pass #200	75.44
Init. Dry Wt.	95.14	Wt. Ret. on #200	21.75		

Sieve Size/No.	Sieve Size (mm)	Weight Ret.	% Retained	% Passing
4	4.750	0.00	0.00	100.00
8	2.360	0.01	0.01	99.99
16	1.180	0.08	0.09	99.91
30	0.600	0.30	0.34	99.66
50	0.300	1.08	1.22	98.78
100	0.150	4.14	4.68	95.32
200	0.075	21.75	24.56	75.44

Tested by: KK Computed by: NL Check by: SV
Date: 12/9/09 Date: Date:



Boring No.
PA-36-7

Depth, Ft.
3'-6'

Classification
Dark Grayish Brown Lean Clay with
Sand

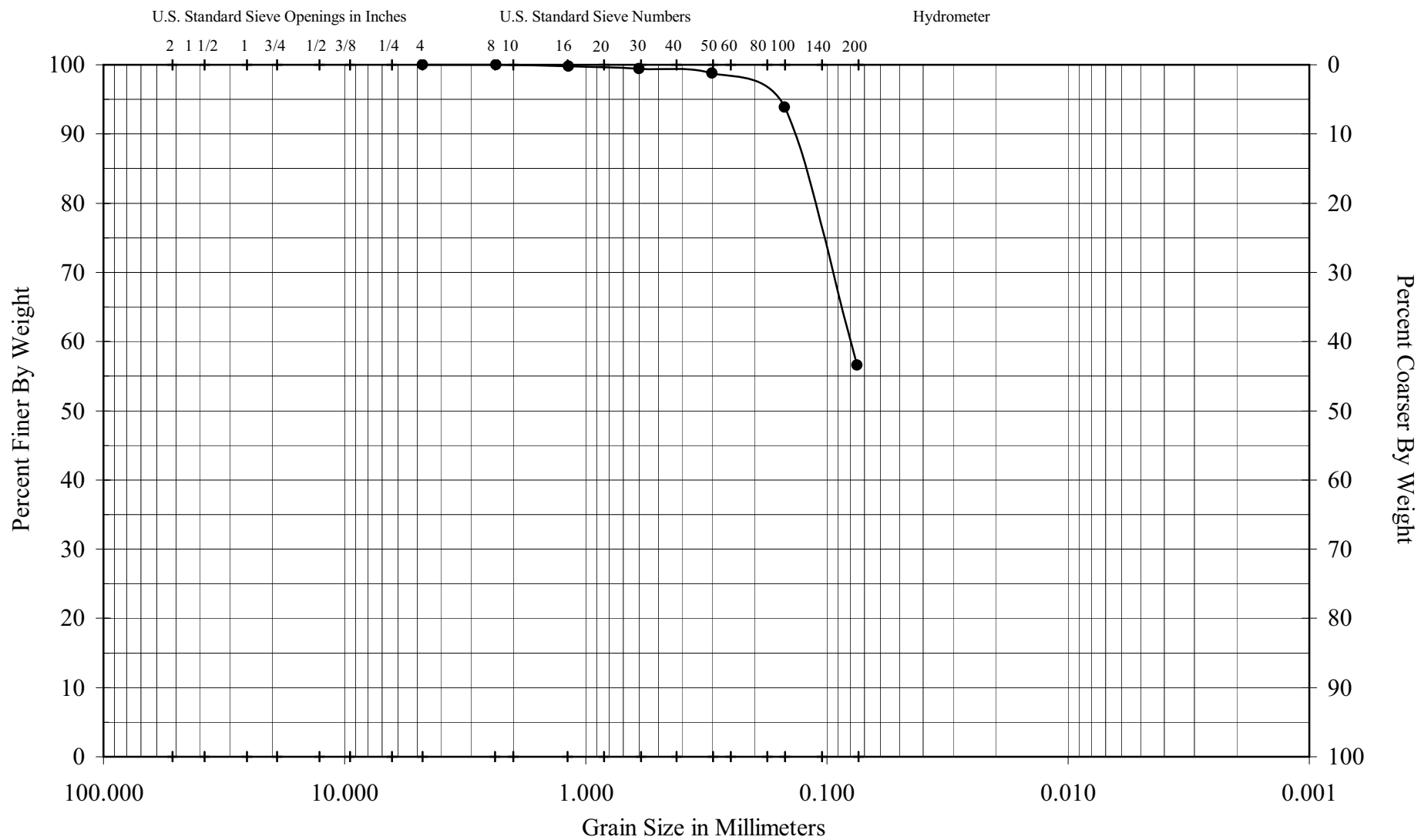
SIEVE ANALYSIS DATA

Project: Bolivar DMPA No. 36 Job No. HG09-15782 Date: December 10, 2009
Boring No. PA 36-7 Sample No. 3 Depth: 6'-9'
Matl Desc. Grayish Brown Sandy Clay

Tare No.	51	Init Wt. - Tare	102.54	% Ret.	43.38
Tare Wt.	6.68	Dry Wt. after test	44.48	% Pass #200	56.62
Init. Dry Wt.	109.22	Wt. Ret. on #200	44.48		

Sieve Size/No.	Sieve Size (mm)	Weight Ret.	% Retained	% Passing
4	4.750	0.00	0.00	100.00
8	2.360	0.00	0.00	100.00
16	1.180	0.20	0.20	99.80
30	0.600	0.60	0.59	99.41
50	0.300	1.26	1.23	98.77
100	0.150	6.28	6.12	93.88
200	0.075	44.48	43.38	56.62

Tested by: KK Computed by: NL Check by: SV
Date: 12/9/09 Date: _____ Date: _____



Boring No.
PA-36-7

Depth, Ft.
6'-9'

Classification
Grayish Brown Sandy Clay

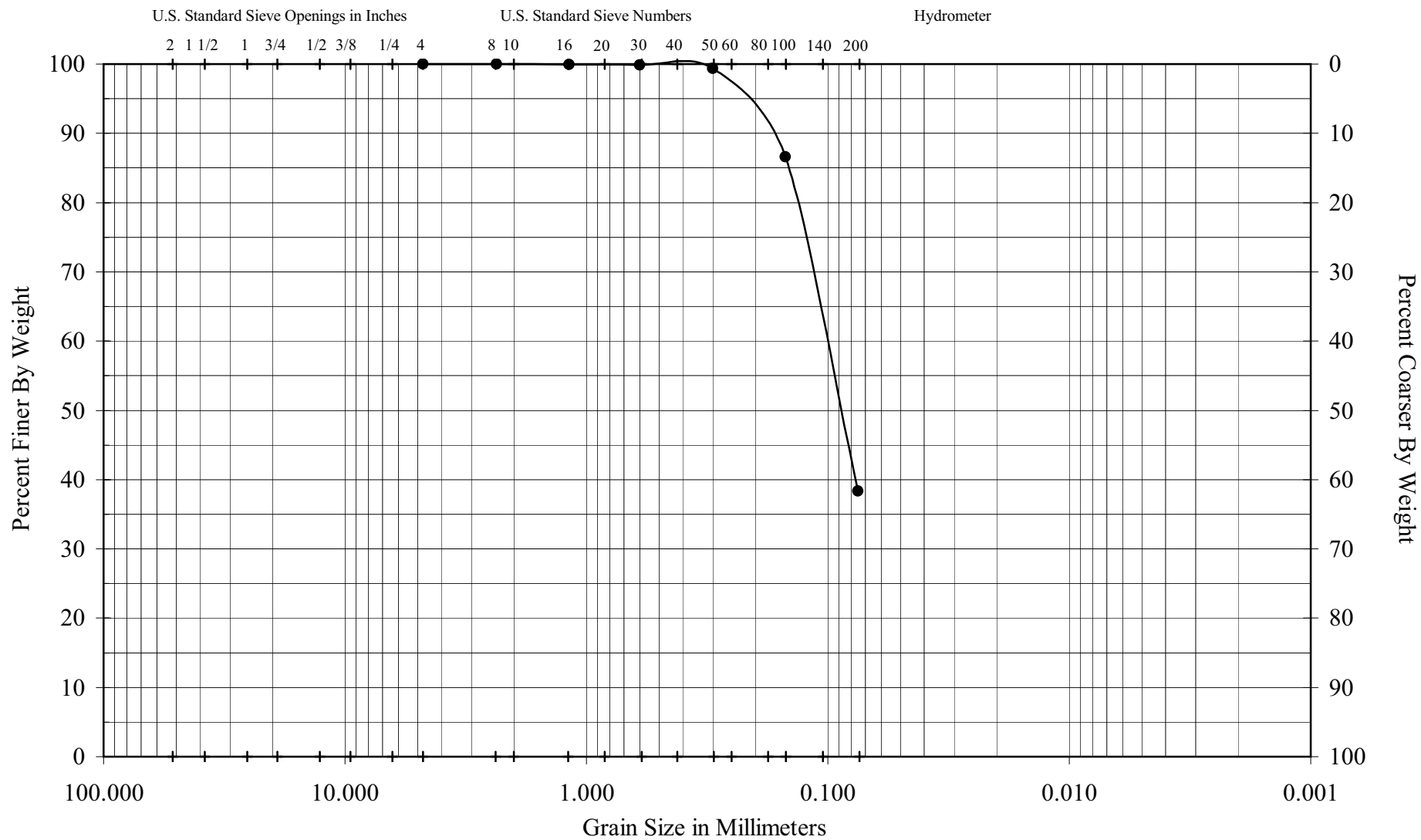
SIEVE ANALYSIS DATA

Project: Bolivar DMPA No. 36 Job No. HG09-15782 Date: December 10, 2009
Boring No. PA 36-7 Sample No. 4 Depth: 9'-12'
Matl Desc. Gray Clayey Sand

Tare No.	63	Init Wt. - Tare	151.83	% Ret.	61.67
Tare Wt.	6.67	Dry Wt. after test	93.63	% Pass #200	38.33
Init. Dry Wt.	158.50	Wt. Ret. on #200	93.63		

Sieve Size/No.	Sieve Size (mm)	Weight Ret.	% Retained	% Passing
4	4.750	0.00	0.00	100.00
8	2.360	0.04	0.03	99.97
16	1.180	0.10	0.07	99.93
30	0.600	0.27	0.18	99.82
50	0.300	0.96	0.63	99.37
100	0.150	20.32	13.38	86.62
200	0.075	93.63	61.67	38.33

Tested by: KK Computed by: NL Check by: SV
Date: 12/10/09 Date: Date:

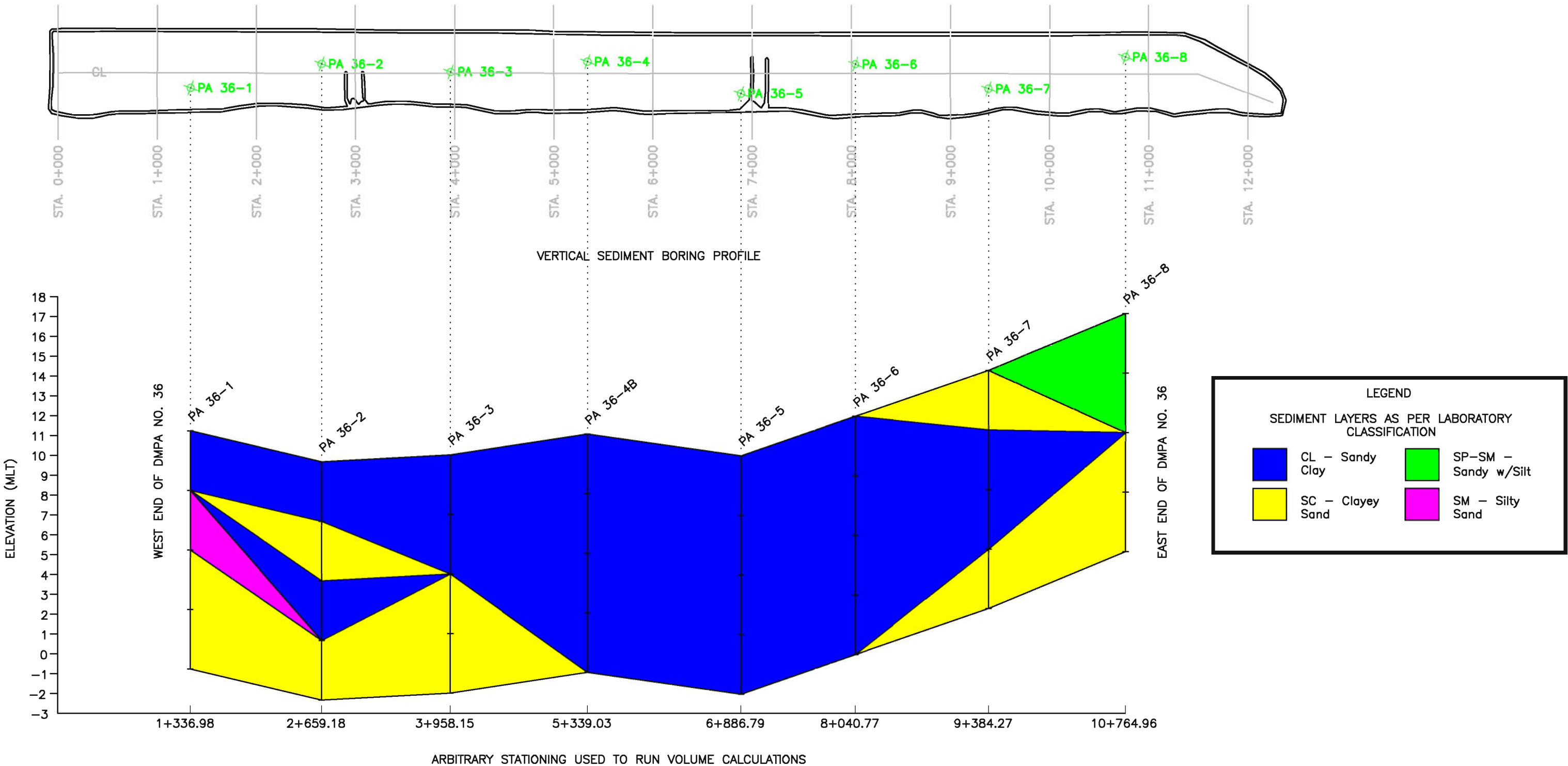


Boring No.
PA-36-7

Depth, Ft.
9'-12'

Classification
Gray Clayey Sand

PLAN VIEW OF SEDIMENT BORING LOCATIONS
CENTERLINE AND STATIONING USED TO CALCULATE VOLUMES



BOLIVAR SAND SEARCH
PLACEMENT AREA NO. 36

VERTICAL BORING PROFILE

Drawing Date:	14 JANUARY 2010
Drawn By:	S. HALPIN
Checked By:	DLC
Drawing Name:	BOL2009_PA36_BorProfile.DWG
Drawing Scale:	SEE DWG
Sheet Number:	7 OF 7

CONDITION SURVEY	
Survey Date:	18 NOVEMBER 2009
Horizontal Projection:	U.S. State Plane, NAD 83
Zone:	Texas South Central - 4204
Vertical Reference:	MLT
Survey Units:	U.S. Survey Feet

NOTES:
1. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES SHOWN AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITION EXISTING AT THAT TIME.

GBA
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