

Terraprobe

*Consulting Geotechnical & Environmental Engineering
Construction Materials Inspection & Testing*

**NATURAL HAZARD SETBACK AND
SLOPE STABILITY REQUIREMENTS
PROPOSED RESIDENTIAL DEVELOPMENT
MEAFORD HIGHLANDS RESORT
3RD LINE, SOUTH OF HIGHWAY 26
MUNICIPALITY OF MEAFORD, ONTARIO**

Prepared For: Meaford A2A Developments Inc.
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Attention: Mr. Steve Warsh, President

**File No. 31-12-8015(B)
May 25, 2012
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1.0 INTRODUCTION

We are pleased to present our report on the slope stability assessment carried out for the proposed residential development in Meaford, Ontario. Authorization to complete this investigation was provided by Mr. Steve Warsh, on January 23, 2012.

The purpose of the investigation was to determine the soil, rock and groundwater conditions on the site as they pertain to the natural hazards setback along existing slopes and drainage routes beyond which development may be restricted.

Concurrent with this study was an overall geotechnical investigation reported separately (May 17, 2012).

2.0 SITE AND PROJECT DESCRIPTION

The site is located on the east side of 3rd Line, south of Highway 26, in the Municipality of Meaford, Ontario (see Figure 1 & 2).

It is proposed to proceed with design and construction of full municipal services and internal streets associated with a resort development.

The property is currently open, agricultural land for the most part with some overgrown areas of trees and brush. The site generally falls in grade by about 42m from the south to north (ie: elevation 357 to 315m) on the upper plateau. Further to the north, grades fall significantly along a natural ridge making up portions of the northern property boundary. Georgian Bay is located north of the site.

Four (4) blocks of land dedicated for Stormwater Management Facilities are located throughout the property, and in the areas of Boreholes 3, 6, 12 and 16. The current Development Concept Plan is included as Figure 3 of this report.

There are three (3) main gullies oriented in an approximate north-south direction which cut into the property as well as the main ridge slope along the north property boundary which will be assessed from a slope stability perspective.

A senior soil engineer visited the site (see Figure 1) on March 21, 2012, to visually inspect the various slope conditions, which noted some active erosion and signs of historical slope instability, in preparation for the intrusive subsurface investigation and slope analysis.

Terraprobe has concurrently completed a comprehensive Geotechnical Investigation report for the proposed development and a Pesticide Assessment report under separate covers.

3.0 FIELD WORK

The field work associated with this project comprised of the advancement of twenty (20) sampled boreholes to depths of 6.6 to 9.6m below existing grade. An additional five (5) boreholes were advanced adjacent to the 9.6m boreholes in order to allow installations of deep and shallow monitoring wells in separate holes as requested by Cole Engineering Group Ltd. to assist in their hydrogeologic study of the property.

Borehole locations, depths and installations were selected in consultation with Cole Engineering and the design team. The proposed borehole locations were staked and surveyed by the client's surveyor. Buried service locates were organized by Terraprobe prior to initiating the field investigation.

The field work was completed between March 21 and 26, 2012, using a track-mounted D50T power auger provided by a specialist soil drilling contractor. At the time of drilling, Boreholes 1 and 3 were advanced at different locations than initially proposed and staked due to access constraints including tree cover and sloping ground. The new elevations for these two (2) boreholes were surveyed for elevation by Terraprobe and locations were collected by handheld GPS coordinates.

The sampled boreholes were advanced using Standard Penetration Test methods at regular 0.75 to 1.5 m intervals in each borehole. All soil samples were sealed in plastic containers and returned to our laboratory for further evaluation and testing including moisture content determination and select grain size analyses.

Following completion of the advancement of the boreholes, a standpipe type piezometer comprising of 19 mm diameter PVC tubing slotted at the base was installed in Boreholes 2, 7, 8, 11, 14, 15, 17, 19 and 20 while the remaining shallow and deep boreholes received Schedule 40, 50mm diameter monitoring wells as noted on the attached borehole logs.

A return visit was made to the site on March 29, 2012 to measure static water levels in the installed standpipes and monitoring wells.

The field work (drilling, sampling, testing) was observed and recorded by a member of our engineering staff, who also transported the samples to our geotechnical testing laboratory.

4.0 SUBSURFACE CONDITIONS

The details of the subsurface conditions encountered at each borehole are presented on the attached Borehole Logs. It should be noted that the conditions are confirmed at the borehole locations only and could vary between and beyond these locations. In addition, the changes in soil stratigraphy delineated on the Borehole Logs have been inferred from non-continuous sampling. In this regard, the changes should be taken as transitions from one soil type to another as opposed to exact planes of geologic change.

In general, the boreholes encountered about 0 to 250mm of topsoil and/or organic stained silt. The native soils were primarily silt with some clay to clayey silt, trace sand and trace gravel (see attached grain size analyses). Occasional sandy seams or layers and cobbles/boulders were also noted as shown on the attached logs.

The upper red, clayey silt generally graded into weathered shale bedrock below depths of about 2 to 5.3m below existing grades (elevations 313.9 to 344.8m). It is typically difficult to distinguish the transition from clayey silt to the underlying weathered shale bedrock. Based on the consistency and the relatively high penetration resistance, this stratum has been interpolated as a highly weathered zone of the bedrock formation.

Coring of the bedrock was not carried out as part of this assignment, however, the bedrock beneath the site is known to consist of Queenston Formation Shale which is comprised of predominantly thinly bedded reddish brown calcareous shale with grey/green bands of inter-bedded argillaceous limestone. The limestone interbeds are typically about 50 to 75mm thick however, limestone interbeds of up to 350mm have been reported for this formation. The Queenston Formation shale is of relatively low strength and the harder limestone layers are of medium strength.

All of the boreholes were augered and sampled to their initially proposed drilling depth without grinding auger refusal on the bedrock stratum. This would generally suggest that the soil and bedrock encountered to the investigation extents will be excavatable with heavy, large excavation equipment.

The native soils exhibited moisture contents varying between 24 to 6% and generally decreased with depth. Moisture content in the shale generally ranged from about 5 to 24%. Some perched groundwater should be anticipated in sandy seams/layers.

Across the site, Standard Penetration Tests conducted in each borehole generally indicated 'N' values of about 8 to greater than 50 blows per 0.3 m of penetration with depth in the native soils and shale. Therefore, these soils are considered to be stiff to hard.

The water levels noted during drilling and measured during our return site visit are tabulated below.

Borehole Number	Ground Surface Elevation (m)	Water Level			
		Noted During Drilling		Measured March 29, 2012	
		Depth (m)	Elevation (m)	Depth (m)	Elevation (m)
1A (deep)	316.7	5.8	310.9	6.3	310.4
1B (shallow)	316.7	Dry	-	2.7	314.0
2	324.6	Dry	-	2.6	322.0
3	323.1	6.0	317.1	0.7	322.4
4	325.8	Dry	-	1.4	324.4
5A (deep)	326.3	Dry	-	9.0	317.3
5B (shallow)	326.3	Dry	-	2.0	324.3
6	329.5	Dry	-	3.2	326.3
7	333.0	Dry	-	1.8	331.2
8	331.4	5.8	325.6	1.6	329.8
9	331.7	Dry	-	(+0.1)	331.8
10A (deep)	339.0	1.8	337.2	2.2	336.8
10B (shallow)	339.0	1.8	337.2	0.7	338.3
11	340.5	5.6	334.9	4.1	336.4
12A (deep)	331.3	Dry	-	8.1	323.2
12B (shallow)	331.3	Dry	-	2.0	329.3
13	333.4	Dry	-	2.9	330.5
16A (deep)	324.1	5.5	318.6	5.6	318.5
16B (shallow)	324.1	Dry	-	2.7	321.4
17	341.6	3.3	338.3	3.1	338.5
18	353.6	Dry	-	4.0	349.6
19	347.0	1.8	345.2	1.6	345.4
20	341.2	5.5	335.7	2.0	339.2

It is anticipated that some fluctuations of the groundwater table will occur seasonally and may be higher during wetter seasons and/or years. It is our recommendation that ongoing monthly monitoring of static groundwater levels continue through the spring/summer of 2012 as a minimum and preferably for a full year. Shallow groundwater flow direction appears to generally fall with surface topography from a high point in the central part of the site, along the south property line, down towards the north, east and west. Shallow,

overburden water levels generally fall in elevation from about 350m (Borehole 18) to 314m (Borehole 1). The groundwater levels measured in the deeper, bedrock monitoring wells indicate levels that are about 1.5 to 7m lower than the adjacent, overburden water levels indicating a downward gradient on these upper table lands. A slightly artesian water level was measured at Borehole 9.

Inspection of the eroded gullies depicted generally minor shallow surface flow in an incised channel in the shale (see photographs).

5.0 SLOPE ASSESSMENT

The characteristics of the slopes situated across the site are represented by cross sections included as Figures 4 to 10. The sections are taken at the locations selected in consultation with the Grey Sauble Conservation Authority (GSCA), as shown on Figure 2.

The cross sections A-A' to D-D' (Figure 4 to 7) represent the distinct north-facing main ridge slope which shows evidence of active surficial erosion in localized areas. For the most part, the main ridge runs along the north property line in this area with no distinct watercourse located along the slope toe. The inclination along the slope is generally in the range of 1:1 to 6:1 (horizontal to vertical) or flatter with occasional localized steeper sections associated with recent surficial slumping.

Cross sections E-E' to G-G' (Figures 8 to 10) represent the three (3) main gully systems that cut north-south into the site. Some erosion is noted along the banks of these creeks, especially closer to the main ridge slope. It is unknown if the creeks in these three (3) gullies run all year or if they are intermittent, but there appears to be evidence of significant runoff flow during the spring. The inclination along the slopes are generally in the range of 1:1 to 6:1 (horizontal to vertical) or flatter with occasional localized steeper sections associated with undercutting of the shallow creeks as they are incised into the shale.

A visual inspection of the site indicates well established vegetation on the majority of the slopes, including ground cover and mid to large sized trees. Along the main ridge, large sections have eroded and slumped leaving a bare surface near the crest and talus on the lower slope. Localized areas of erosion and slope steepening are noted along the creek gullies. This appears to be primarily due to undercutting by the creeks at the slope toe. Site photographs are appended which show the vegetated portions of the slope, bared sections and the existing creek conditions.

Based on the survey information provided, the main ridge slope toe is situated nearly coincident with the south side of Highway 26. The main slope heights along this ridge are generally about 90 to 100m from toe to crest. The slope heights along the three (3) gully/valley sections on the site range from about 0.5m in the south to about 10 to 14m in the north (ie: near the main ridge).

6.0 SLOPE STABILITY ANALYSIS

A detailed engineering analysis of the slope stability was carried out using a computerized version (SLOPE/W by GEO-SLOPE International Ltd.) of the Bishop method of analysis. This method of analysis allows calculation of Factors of Safety for hypothetical or assumed failure through the slope. The analysis method is used to assess potential for movements of masses of soil over a specific failure surface which is often curved or circular.

For a specific failure surface the **Factor of Safety** (FS) is defined as the ratio of the available soil strength resisting movement, divided by the gravitational forces tending to cause movement. A Factor of Safety of 1.0 represents a “limiting equilibrium” condition where the slope is at a point of pending failure since the soil resistance is equal to forces tending to cause movement. A Factor of Safety greater than 1 is required to maintain stability of the slope. The typical Factor of Safety used for engineering design of slopes for stability ranges from about 1.2 to 1.5, for shallow failures depending on the severity of the assumed conditions (groundwater level, seismic loads, tension cracks, etc.).

The analysis was carried out by preparing representative models of the existing slope geometry as provided at the locations of sections shown with subsurface conditions as encountered in the recent borehole investigation and then analyzing numerous failure surface through the slopes in search of the minimum or critical Factor of Safety for specific conditions (see Figures 11 to 17). In addition, hypothetical 2:1, 1.5:1 and 1:1 slope sections were modeled as shown on Figures 18,19,and 20 respectively. This was completed in order to determine the theoretical stable slope condition with a Factor of Safety of 1.5 for the land use on the plateau above the slope.

The results of the field surveying, topographic mapping, and the borehole information, were input for the slope stability analysis. Many calculations were carried out to examine the Factory of Safety for varying depths of potential failure surfaces. The following average soil properties were utilized for the slope strata in the slope stability analysis, based on borehole results.

Soil Strata	Effective Angle of Internal Friction, Φ' (degrees)	Unit Weight, γ (kN/m ³)	Cohesion, c' (kPa)
Silt to clayey silt, stiff to hard	30	18.5	5
Shale, weathered, hard	28	22	2000

The above soil strength parameters are based on effective stress for long-term slope stability.

The results of the slope stability analyses are summarized on the attached Figures 11 to 20. The minimum Factor of Safety calculated by the analyses were as follows;

	Calculated Minimum Factor of Safety for Side Slopes	Shown on Figure
Existing Section A-A'	7.14	11
Existing Section B-B'	2.77	12
Existing Section C-C'	7.35	13
Existing Section D-D'	7.30	14
Existing Section E-E'	52.77	15
Existing Section F-F'	4.72	16
Existing Section G-G'	9.08	17
Hypothetical Profile (2.0:1 Inclination)	2.27	18
Hypothetical Profile (1.5:1 Inclination)	2.28	19
Hypothetical Profile (1.0:1 Inclination)	1.74	20

For residential settings (Type C: active land-use), the MNR Policy Guidelines allow a minimum Factor of Safety of 1.3 to 1.5 for slope stability as follows:

TYPE	LAND-USES	DESIGN MINIMUM FACTOR OF SAFETY
A	PASSIVE: no buildings near slope; farm field, bush, forest, timberland, woods, wasteland, badlands, tundra	1.10
B	LIGHT: no habitable structures near slope; recreational parks, golf courses, buried small utilities, tile beds, barns, garages, swimming pools, shed, satellite dishes, dog houses	1.20 to 1.30
C	ACTIVE: habitable or occupied structures near slopes; residential, commercial and industrial buildings, retaining walls, storage/warehousing of non-hazardous substances	1.30 to 1.50
D	INFRASTRUCTURE and PUBLIC USE: public use structures and buildings (i.e. hospitals, schools, stadiums), cemeteries, bridges, high voltage power transmission lines, towers, storage/warehousing of hazardous materials, waste management areas	1.40 to 1.50

Based on the analysis results, the natural undisturbed and well vegetated slope is considered to be adequately stable against slope slides when a 1:1 to 1.5:1 (horizontal to vertical) slope or flatter is experienced with a Factor of Safety of at least 1.5.

The analysis confirms the observed site conditions of a largely stable slope for the majority of the site with only some localized surficial erosion.

Based on this engineering analysis, a slope inclination of 1 to 1 (45°) or flatter is generally required, to obtain a minimum Factor of Safety of 1.5. This slope inclination of 1 to 1 (horizontal to vertical) is considered to be the long term stable slope inclination for the site conditions. For a slope height of about 100m, the stable slope crest position will be about 100m (1 x 100m) measured horizontally from the slope toe. Likewise, for a 6m slope height, the stable slope crest position will be about 6m (1 x 6m). This distance is considered the stable slope allowance or set-back.

Based on the above analysis, the crest of the existing slopes are currently beyond or coincident with the stable setback condition for stability.

7.0 TOE EROSION

MNR Policy Guidelines (ref. Natural Hazards Policies (3.1), 2001) also require an erosion allowance set-back equal to 100 years of the average annual erosion rate based on at least 25 years of reliable data. A detailed study can be used to calculate the erosion allowance or, a guideline table can be used based on the soil type and watercourse size.

Based on the current observations within the three (3) site gullies, the creeks at a distance generally less than 15m from the slope toe, minor active erosion along the slope toe and the natural, stiff to hard clayey silt to shale strata, a toe erosion allowance or setback of 5m is recommended from the MNR Technical Guide. No toe erosion allowance is required for the main ridge slope as there is no water body along or near the ridge toe. However, the shale formation has been weathering at some locations which has caused some bare surfaces to be exposed and surficial erosion to occur. An allowance of 5m is recommended for the long-term weathering along the main ridge slope.

For development control purposes, it is recommended that the average minimum toe erosion allowance or set-back may be used and be measured from the average slope toe position along the gully slopes. This erosion set back is in addition to the stability set back value (i.e. based on 1:1 to 1.5:1 slope). The 5m weathering allowance for the main ridge slope is measured at the top of slope rather than the toe.

Based on the topographic survey data provided to Terraprobe, general slope sections along the north-south oriented gullies only exceed 3:1 (horizontal to vertical) inclinations in areas within about 100 to 150m south of the main ridge slope crest. In these areas where slopes are locally steeper than 3:1, the above erosion and slope stability allowance setbacks have been applied. In all cases along these gullies the 5m erosion allowance from the existing creeks plus the 1:1 stability allowance will daylight through the existing stable slopes prior to reaching the existing top of bank or crest. Therefore, the long-term stable slope position will be coincident with the existing crest along these sections of the three (3) north-south gullies and only an access allowance will need to be considered beyond the crest in these areas.

8.0 ACCESS ALLOWANCE

Current policy guidelines for development setbacks are based on slope stability, erosion and access.

MNR suggests an access allowance near slope crests and along one side of a lot, to permit access to slopes for emergency purposes and to carry out stabilization works if necessary. Based on the slope heights of about

6 to 100m at this site, it is Terraprobe's opinion that an access allowance of 6m could be considered more than adequate. This will permit access for excavators, skid-steers and the like if maintenance along the slope is required in the future.

The total development setback is therefore calculated, taken from the main slope toe. The recommended development setback line is shown approximately on the enclosed Figure 2. This line is dependent on the actual slope heights at various points along the slopes. However, it is generally representative of 11m (ie: 5m erosion/weathering and 6m access allowance) in total from the existing main ridge crest of the slope. Along the north-south oriented gullies the erosion and stability allowance will daylight the existing slope, so the 6m access allowance should be measured from the existing slope crest. This will apply to the northerly 100 to 150m of these gully sections where existing slopes are steeper than 3:1 (horizontal to vertical). Where slopes are flatter than 3:1 no hazard allowance or setback will be required from the slope crest as excavation equipment may easily traverse these low slopes as outlined in the MNR Guideline. It is recommended that the final development plan be reviewed with Terraprobe to address any possible localized adjustments in setbacks.

In summary, our analysis has enabled a building setback to be delineated (see Figure 2). Terraprobe has approximately inferred the top of bank/crest location for the existing slopes based on contours from detailed topographic mapping. It is suggested that all buildings, swimming pools, septic beds, etc. that are proposed on the upper plateau (behind the slope crest) be constructed behind this setback line. (11m back from the crest of the main ridge, 6m back from the northerly 100 to 150m of each gully and 0m from the crest of the southerly gully slopes which are generally flatter than 3:1 currently).

Terraprobe also recommends that the structure(s) be sited to allow space for swales or grading away from the crest such that stormwater/runoff is not directed over the slope in a concentrated manner increasing the potential for surface erosion. Where the slope will remain in its natural state, no trees should be cut from the existing slope as the deep root structures contribute to surficial stability and likely are a significant factor in the observed stable slope.

The final grading of slopes on the property should be set at 2:1 (horizontal to vertical) inclination or flatter. If landscaping or grass cutting is required this should at least be at 3:1 (horizontal to vertical) inclinations or flatter. It should also be noted that attempts to provide topsoil and surface protection against runoff on 2:1 slopes may require a few seasons of maintenance until vegetative cover has the opportunity to develop.

Erosion protection within drainage channels will need to be provided in order to support the design velocities and scour anticipated.

It is our understanding that site stormwater will be collected into ponds through lined channels and/or storm sewers and then discharged in a controlled manner to protected surface channels designed by others.

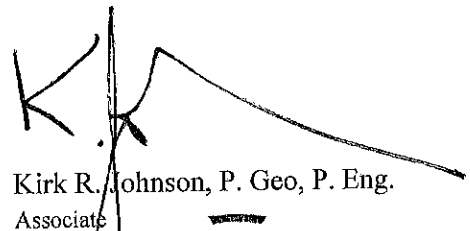
We trust that this report, with attached figures and analyses, will meet your present requirements. If you should have any questions, or if we can be of further assistance, please do not hesitate to contact the undersigned.

Sincerely,
Terraprobe Inc.

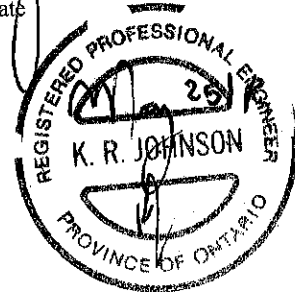


Blair E. Goss, P. Eng.
Associate

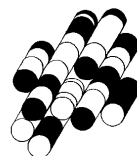
BEG/ct
Barrie Office



Kirk R. Johnson, P. Geo, P. Eng.
Associate



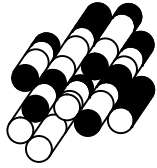
BOREHOLE LOGS



Terraprobe Inc.

BOREHOLE LOGS

SAMPLING METHOD		PENETRATION RESISTANCE		
SS	split spoon	Standard Penetration Test (SPT) resistance ('N' values) is defined as the number of blows by a hammer weighing 63.6 kg (140 lb.) falling freely for a distance of 0.76 m (30 in.) required to advance a standard 50 mm (2 in.) diameter split spoon sampler for a distance of 0.3 m (12 in.).		
ST	Shelby tube			
AS	auger sample			
WS	wash sample			
RC	rock core			
WH	weight of hammer	Dynamic Cone Test (DCT) resistance is defined as the number of blows by a hammer weighing 63.6 kg (140 lb.) falling freely for a distance of 0.76 m (30 in.) required to advance a conical steel point of 50 mm (2 in.) diameter and with 60° sides on 'A' size drill rods for a distance of 0.3 m (12 in.).		
PH	pressure, hydraulic			
SOIL DESCRIPTION - COHESIONLESS SOILS		SOIL DESCRIPTION - COHESIVE SOILS		
Relative Density	'N' value	Consistency	Undrained Shear Strength, kPa	'N' value
very loose	< 4	very soft	< 12	< 2
loose	4 - 10	soft	12 - 25	2 - 4
compact	10 - 30	firm	25 - 50	4 - 8
dense	30 - 50	stiff	50 - 100	8 - 16
very dense	> 50	very stiff	100 - 200	16 - 32
		hard	> 200	> 32
SOIL COMPOSITION		TESTS, SYMBOLS		
	% by weight	MH	mechanical sieve and hydrometer analysis	
		w, w _c	water content	
		w _l	liquid limit	
		w _p	plastic limit	
		I _p	plasticity index	
		k	coefficient of permeability	
		Y	soil unit weight, bulk	
		φ'	angle of internal friction	
		c'	cohesion shear strength	
		C _c	compression index	
GENERAL INFORMATION, LIMITATIONS				
The conclusions and recommendations provided in this report are based on the factual information obtained from the boreholes and/or test pits. Subsurface conditions between the test holes may vary.				
The engineering interpretation and report recommendations are given only for the specific project detailed within, and only for the original client. Any third party decision, reliance, or use of this report is the sole and exclusive responsibility of such third party. The number and siting of boreholes and/or test pits may not be sufficient to determine all factors required for different purposes.				
It is recommended Terraprobe be retained to review the project final design and to provide construction inspection and testing.				



Terraprobe

PROJECT NAME: Meaford Subdivision

CLIENT: Meaford A2A Developments Inc.

LOCATION: Meaford, Ontario

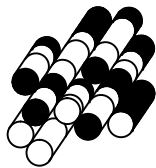
LOG OF BOREHOLE ..1A..

PROJECT No.: 31-12-8015

BORING DATE: March 26, 2012

ELEVATION DATUM: Geodetic

BORING METHOD	DEPTH SCALE IN METRES	SOIL PROFILE			SAMPLES			PENETRATION RESISTANCE PLOT				WATER CONTENT (%)	INSTALLATION INFORMATION		
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	"N" VALUE	X X X X							
								SHEAR STRENGTH kPa							
								20	40	60	80				
						nat.V - +		Q - ●							
						rem.V - ⊕		U - ○							
						20		40		60		80			
										10		20		30	
D-50T Crawler-mounted Drill Rig / Solid Stem Augers	0	GROUND SURFACE			316.7										
		75mm - TOPSOIL			0.0										
		Red	Stiff to Hard	Moist		1	SS	9	x					○	
	1	SILT, some clay to clayey, trace sand, trace gravel, grading into shale at depth, with grey seams/inclusions			2	SS	25		x					○	
					3	SS	40			x				○	
	2														
					4	SS	50/150mm							○	
	3	Red	Hard	Moist to Wet										○	
		SHALE, with limey inter beds, weathered, thinly bedded			5	SS	86				x			○	
	4														
					6	SS	50/150mm							○	
5															
6															
7															
	Grey	Hard	Wet												
8	CLAYEY SILT, to SHALE, grinding on hard layers			8	SS	50/50mm								○	
9															



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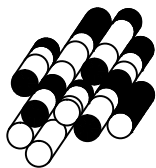
PROJECT NAME: Meaford Subdivision
 CLIENT: Meaford A2A Developments Inc.
 LOCATION: Meaford, Ontario

LOG OF BOREHOLE ..1B..

PROJECT No.: 31-12-8015
 BORING DATE: March 26, 2012
 ELEVATION DATUM: Geodetic

BORING METHOD DEPTH SCALE IN METRES	SOIL PROFILE			SAMPLES			PENETRATION RESISTANCE PLOT				WATER CONTENT (%)			INSTALLATION INFORMATION
	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	"N" VALUE	SHEAR STRENGTH kPa							
							20 40 60 80							
							20 40 60 80							
0	GROUND SURFACE		316.7											
	See Borehole Log 1A for strata description.		0.0											
1													<p>1. Borehole remained open upon completion of drilling.</p> <p>2. Water level noted dry during drilling.</p> <p>3. Schedule 40, 50mm diameter monitoring well installed with 1.5m screen tip at 3.0m.</p> <p>4. Water level on March 29, 2012 measured at 2.7m (elev. 314.0m).</p>	
2														
3	End of Borehole		313.7											
4														
5														
6														
7														
8														
9														

BORING METHOD	DEPTH SCALE IN METRES	SOIL PROFILE			SAMPLES			PENETRATION RESISTANCE PLOT				WATER CONTENT (%)	INSTALLATION INFORMATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	"N" VALUE	SHEAR STRENGTH kPa					
								20 40 60 80					
								nat.V - +	rem.V - ⊕	Q - ●	U - ○		
	0	GROUND SURFACE		324.6									
		50mm - TOPSOIL		0.0									
		Red Stiff to Hard Moist			1	SS	8	x				○	
	1	SILT, some clay to clayey, trace sand, trace gravel, grading into shale at depth, with grey seams/inclusions			2	SS	20	x				○	
					3	SS	33	x				○	
	2				4	SS	39	x				○	
	3				5	SS	67			x		○	
	4	Red Hard Moist		320.6									
				4.0									
	5	SHALE, with limey inter beds, weathered, thinly bedded			6	SS	50/125mm					○	
	6												
					7	SS	50/75mm					○	
		End of Borehole		318.0									
				6.6									
	7												1. Borehole remained open upon completion of drilling.
	8												2. Water level noted dry during drilling.
	9												3. 75mm standpipe installed with 3m slotted screen tip at 6.1m.
													4. Water level on March 29, 2012 measured at 2.6m (elev. 322.0m).



Terraprobe

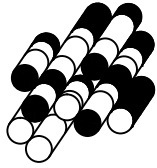
PROJECT NAME: Meaford Subdivision
 CLIENT: Meaford A2A Developments Inc.
 LOCATION: Meaford, Ontario

LOG OF BOREHOLE ..3..

PROJECT No.: 31-12-8015
 BORING DATE: March 22, 2012
 ELEVATION DATUM: Geodetic

BORING METHOD	DEPTH SCALE IN METRES	SOIL PROFILE			SAMPLES			PENETRATION RESISTANCE PLOT				WATER CONTENT (%)				INSTALLATION INFORMATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	"N" VALUE	SHEAR STRENGTH kPa				WATER CONTENT (%)				
								SHEAR STRENGTH kPa								
								20	40	60	80	nat.V - +	Q - ●	rem.V - ⊕	U - ○	
				20	40	60	80					WP — W — WL				
				10	20	30										

0	GROUND SURFACE		323.1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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Terraprobe

PROJECT NAME: Meaford Subdivision

CLIENT: Meaford A2A Developments Inc.

LOCATION: Meaford, Ontario

LOG OF BOREHOLE ..4..

PROJECT No.: 31-12-8015

BORING DATE: March 21, 2012

ELEVATION DATUM: Geodetic

BORING METHOD	DEPTH SCALE IN METRES	SOIL PROFILE			SAMPLES			PENETRATION RESISTANCE PLOT				WATER CONTENT (%)	INSTALLATION INFORMATION		
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	"N" VALUE	SHEAR STRENGTH kPa							
								SHEAR STRENGTH kPa							
								SHEAR STRENGTH kPa							
D-50T Crawler-mounted Drill Rig / Solid Stem Augers	0	GROUND SURFACE		325.8										<p>Concrete</p> <p>Bentonite Seal</p> <p>1.4m</p>	
		100mm - TOPSOIL		0.0											
		Red Stiff to Hard Moist			1	SS	8	x							
	1	SILT, some clay to clayey, trace sand, trace gravel, grading into shale at depth, with grey seams/inclusions			2	SS	28		x						
					3	SS	26		x						
	2														
					4	SS	50/100mm								
	3	Red Hard Moist		322.6											
				3.2	5	SS	50/25mm								
	4														
		SHALE, with limey inter beds, weathered, thinly bedded			6	SS	50/100mm								
	5														
6															
			319.2	7	SS	50/100mm									
7	End of Borehole		6.6												
8															
9															

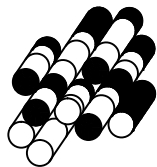
1. Borehole remained open upon completion of drilling.

2. Water level noted dry during drilling.

3. Schedule 40, 50mm diameter monitoring well installed with 3m slotted screen tip at 6.2m.

4. Water level on March 29, 2012 measured at 1.4m (elev. 324.4m).

SHEET 1 OF 1



Terraprobe

PROJECT NAME: Meaford Subdivision
 CLIENT: Meaford A2A Developments Inc.
 LOCATION: Meaford, Ontario

LOG OF BOREHOLE ..5A..

PROJECT No.: 31-12-8015
 BORING DATE: March 22, 2012
 ELEVATION DATUM: Geodetic

BORING METHOD	DEPTH SCALE IN METRES	SOIL PROFILE			SAMPLES		PENETRATION RESISTANCE PLOT				WATER CONTENT (%)	INSTALLATION INFORMATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	"N" VALUE	X x x x					
								SHEAR STRENGTH kPa					
								20	40	60			80
							nat.V - + Q - ● rem.V - ⊕ U - ○				Wp — W — Wl		
							20 40 60 80				10 20 30		

0	GROUND SURFACE		326.3									
	150mm - TOPSOIL		0.0									
	Red Stiff to Hard Moist			1	SS	6	x				○	
1	SILT, some clay to clayey, trace sand, trace gravel, grading into shale at depth, with grey seams/inclusions			2	SS	24	x				○	
2				3	SS	31	x				○	
3				4	SS	46	x				○	
4				5	SS	50	150mm				○	
	Red Hard Moist		322.8									
5	SHALE, with limey inter beds, weathered, thinly bedded, with grey layers, difficult augering below 8.5m		3.5								○	
				6	SS	50	125mm					
6												
					7	SS	50	100mm				○
7												
8				8	SS	50	25mm				○	
9				9	SS	50	15mm				○	
	End of Borehole		316.7									
			9.6									

Concrete

Bentonite Seal

9.0m

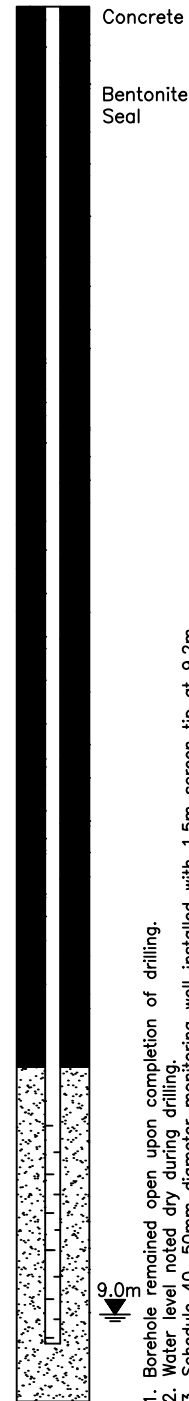
1. Borehole remained open upon completion of drilling.

2. Water level noted dry during drilling.

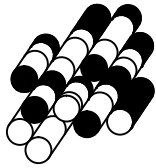
3. Schedule 40, 50mm diameter monitoring well installed with 1.5m screen tip at 9.2m.

4. Water level on March 29, 2012 measured at 9.0m (elev. 317.3m).

SHEET 1 OF 1



1. Borehole remained open upon completion of drilling.
2. Water level noted dry during drilling.
3. Schedule 40, 50mm diameter monitoring well installed with 1.5m screen tip at 9.2m.
4. Water level on March 29, 2012 measured at 9.0m (elev. 317.3m).



Terraprobe

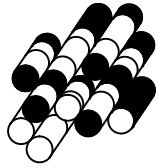
PROJECT NAME: Meaford Subdivision
 CLIENT: Meaford A2A Developments Inc.
 LOCATION: Meaford, Ontario

LOG OF BOREHOLE ..5B..

PROJECT No.: 31-12-8015
 BORING DATE: March 22, 2012
 ELEVATION DATUM: Geodetic

BORING METHOD DEPTH SCALE IN METRES	SOIL PROFILE			SAMPLES		PENETRATION RESISTANCE PLOT				WATER CONTENT (%)			INSTALLATION INFORMATION
	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	"N" VALUE	SHEAR STRENGTH kPa						
0	GROUND SURFACE		326.3										<p>Concrete</p> <p>Bentonite Seal</p> <p>2.0m</p> <p>Well Sand</p>
	See Borehole Log 5A for strata description.		0.0										
1													
2													
3													
4													
5													
6			320.2										
	End of Borehole		6.1										
7													
8													
9													

1. Borehole remained open upon completion of drilling.
2. Water level noted dry during drilling.
3. Schedule 40, 50mm diameter monitoring well installed with 3m screen tip at 6.0m.
4. Water level on March 29, 2012 measured at 2.0m (elev. 324.3m).

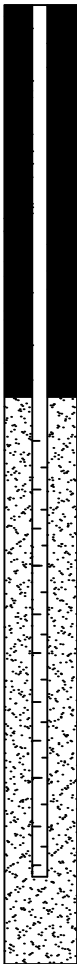
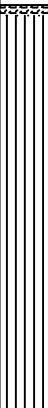
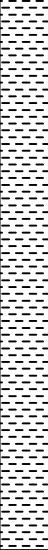


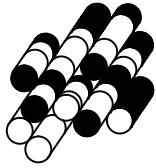
Terraprobe

PROJECT NAME: Meaford Subdivision
 CLIENT: Meaford A2A Developments Inc.
 LOCATION: Meaford, Ontario

LOG OF BOREHOLE ..6..

PROJECT No.: 31-12-8015
 BORING DATE: March 22, 2012
 ELEVATION DATUM: Geodetic

BORING METHOD	DEPTH SCALE IN METRES	SOIL PROFILE			SAMPLES			PENETRATION RESISTANCE PLOT				WATER CONTENT (%)			INSTALLATION INFORMATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	"N" VALUE	SHEAR STRENGTH kPa				WATER CONTENT (%)			
								20 40 60 80				10 20 30			
								nat.V - +	rem.V - ⊕	Q - ●	U - ○				
D-50T Crawler-mounted Drill Rig / Solid Stem Augers	0	GROUND SURFACE		329.5										 <div>Concrete</div> <div>Bentonite Seal</div> <div>3.2m</div>	
		75mm - TOPSOIL		0.0	1	SS	4	x							
		Red/Grey	Stiff to Hard	Moist											
	1	SILT, some clay to clayey, trace sand, trace gravel, grading into shale at depth, with grey seams/inclusions			2	SS	19	x							
	2														
	3	Red	Hard	Moist											
		SHALE, with limey inter beds, weathered, thinly bedded, difficult augering below 5.5m			4										
	4														



Terraprobe

PROJECT NAME: Meaford Subdivision
 CLIENT: Meaford A2A Developments Inc.
 LOCATION: Meaford, Ontario

LOG OF BOREHOLE ..7..

PROJECT No.: 31-12-8015
 BORING DATE: March 22, 2012
 ELEVATION DATUM: Geodetic

BORING METHOD	DEPTH SCALE IN METRES	SOIL PROFILE			SAMPLES			PENETRATION RESISTANCE PLOT				WATER CONTENT (%)	INSTALLATION INFORMATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	"N" VALUE	SHEAR STRENGTH kPa					
								SHEAR STRENGTH kPa					
								SHEAR STRENGTH kPa					
D-50T Crawler-mounted Drill Rig / Solid Stem Augers	0	GROUND SURFACE		333.0									
		200mm - TOPSOIL		0.0									
		Red			1	SS	5	x					
		Stiff to Hard											
		Moist											
	1	SILT, some clay to clayey, trace sand, trace gravel, grading into shale at depth, with brown sandy silt seams			2	SS	21	x					
					3	SS	23	x					
					4	SS	30	x					
2													
3													
				5	SS	33	x						
4													
	Red		328.9										
	Hard		4.1										
	Moist												
5	SHALE, with limey inter beds, weathered, thinly bedded			6	SS	50/75mm							
6													
				7	SS	50/150mm							
	End of Borehole		326.4										
			6.6										
7													
8													
9													

1. Borehole remained open upon completion of drilling.

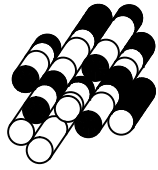
2. Water level noted dry during drilling.

3. 75mm standpipe installed with 1.5m slotted screen tip at 6.1m.

4. Water level on March 29, 2012 measured at 1.8m (elev. 331.2m).

SHEET 1 OF 1

- Borehole remained open upon completion of drilling.
- Water level noted dry during drilling.
- 75mm standpipe installed with 1.5m slotted screen tip at 6.1m.
- Water level on March 29, 2012 measured at 1.8m (elev. 331.2m).



Terraprobe

PROJECT NAME: Meaford Subdivision
 CLIENT: Meaford A2A Developments Inc.
 LOCATION: Meaford, Ontario

LOG OF BOREHOLE ..8..

PROJECT No.: 31-12-8015
 BORING DATE: March 21, 2012
 ELEVATION DATUM: Geodetic

BORING METHOD	DEPTH SCALE IN METRES	SOIL PROFILE			SAMPLES			PENETRATION RESISTANCE PLOT				WATER CONTENT (%)				INSTALLATION INFORMATION		
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	"N" VALUE	SHEAR STRENGTH kPa				WATER CONTENT (%)						
								20 40 60 80				10 20 30						
								20 40 60 80				10 20 30						
								nat.V - + Q - ● rem.V - ⊕ U - ○										
								20 40 60 80				10 20 30						
D-50T Crawler-mounted Drill Rig / Solid Stem Augers	0	GROUND SURFACE			331.4											<div><div></div><div>Bentonite Seal</div><div>1.6m</div><div>5.8m</div></div>		
		Red	Stiff to Hard	Moist	0.0	1	SS	11	x									
	1	SILT, some clay to clayey, trace sand, trace gravel, grading into shale at depth				2	SS	21	x									
							3	SS	19	x								
	2																	
							4	SS	39		x							
	3																	
4																		
5	Red	Hard	Moist	326.6 4.8	6	SS	80				x							
6	SHALE, with limey inter beds, weathered, thinly bedded																	
7	End of Borehole			324.8 6.6	7	SS	50/75mm											
8																		
9																		

1. Borehole remained open upon completion of drilling.

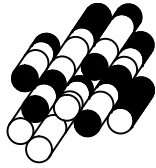
2. Water level noted at 5.8m during drilling.

3. 75mm standpipe installed with 1.5m slotted screen tip at 6.3m.

4. Water level on March 29, 2012 measured at 1.6m (elev. 329.8m).

SHEET 1 OF 1

[illegible]



Terraprobe

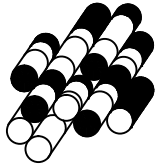
PROJECT NAME: Meaford Subdivision
 CLIENT: Meaford A2A Developments Inc.
 LOCATION: Meaford, Ontario

LOG OF BOREHOLE ..10A..

PROJECT No.: 31-12-8015
 BORING DATE: March 22, 2012
 ELEVATION DATUM: Geodetic

BORING METHOD	DEPTH SCALE IN METRES	SOIL PROFILE			SAMPLES			PENETRATION RESISTANCE PLOT				WATER CONTENT (%)			INSTALLATION INFORMATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	"N" VALUE	SHEAR STRENGTH kPa				WATER CONTENT (%)			
								20 40 60 80				10 20 30			
								nat.V - + rem.V - ⊕				Q - ● U - ○			
D-50T Crawler-mounted Drill Rig / Solid Stem Augers	0	GROUND SURFACE		339.0											<div>Concrete</div> <div>Bentonite Seal</div> <div>▽ 1.8m</div> <div>▽ 2.2m</div> <div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><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- Borehole remained open upon completion of drilling.
- Water level noted at 1.8m during drilling.
- Schedule 40, 50mm diameter monitoring well installed with 1.5m screen tip at 9.2m.
- Water level on March 29, 2012 measured at 2.2m (elev. 336.8m).



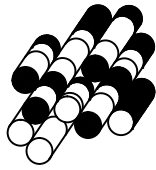
Terraprobe

PROJECT NAME: Meaford Subdivision
 CLIENT: Meaford A2A Developments Inc.
 LOCATION: Meaford, Ontario

LOG OF BOREHOLE ..10B..

PROJECT No.: 31-12-8015
 BORING DATE: March 22, 2012
 ELEVATION DATUM: Geodetic

BORING METHOD	DEPTH SCALE IN METRES	SOIL PROFILE		SAMPLES		PENETRATION RESISTANCE PLOT				WATER CONTENT (%)			INSTALLATION INFORMATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	"N" VALUE	SHEAR STRENGTH kPa					
D-50T Crawler-mounted Drill Rig / Solid Stem Augers	0	GROUND SURFACE		339.0									<p>Concrete Bentonite Seal ≡ 0.7m</p> <p>Well Sand ≡ 1.8m</p>
		See Borehole Log 10A for strata description.		0.0									
	1												
	2												
	3												
		End of Borehole		335.7									
	4			3.3									
	5												
	6												
	7												
8											<ol style="list-style-type: none"> Borehole remained open upon completion of drilling. Water level noted at 1.8m during drilling. Schedule 40, 50mm diameter monitoring well installed with 1.5m screen tip at 3.3m. Water level on March 29, 2012 measured at 0.7m (elev. 338.3m). 		
9													



Terraprobe

PROJECT NAME: Meaford Subdivision
 CLIENT: Meaford A2A Developments Inc.
 LOCATION: Meaford, Ontario

LOG OF BOREHOLE ..11..

PROJECT No.: 31-12-8015
 BORING DATE: March 22, 2012
 ELEVATION DATUM: Geodetic

BORING METHOD	DEPTH SCALE IN METRES	SOIL PROFILE			SAMPLES			PENETRATION RESISTANCE PLOT				WATER CONTENT (%)	INSTALLATION INFORMATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	"N" VALUE	SHEAR STRENGTH kPa					
								20 40 60 80					
								20 40 60 80					
D-50T Crawler-mounted Drill Rig / Solid Stem Augers	0	GROUND SURFACE		340.5									<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div>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LOG OF BOREHOLE ..12A..

PROJECT No.: 31-12-8015
BORING DATE: March 23, 2012
ELEVATION DATUM: Geodetic

BORING METHOD	DEPTH SCALE IN METRES	SOIL PROFILE			SAMPLES			PENETRATION RESISTANCE PLOT				WATER CONTENT (%)	INSTALLATION INFORMATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	"N" VALUE	SHEAR STRENGTH kPa					
								20 40 60 80					
								nat.V - + Q - ● rem.V - ⊕ U - ○					
								20 40 60 80				10 20 30	

D-50T Crawler-mounted Drill Rig / Solid Stem Augers

0

GROUND SURFACE

125mm - TOPSOIL

Red

Stiff to Hard

Moist

1

SILT, some clay to clayey, trace sand, trace gravel, grading into shale at depth, with grey layers

2

3

4

Red

Hard

Moist

5

SHALE, with limey inter beds, weathered, thinly bedded, with grey layers at about 7.5 to 8.0m depth

6

7

8

9

End of Borehole

331.3

0.0

1

SS

10

x

2

SS

28

x

3

SS

43

x

4

SS

73

x

5

SS

33

x

327.3

4.0

6

SS

50/100mm

7

SS

50/75mm

8

SS

50/50mm

9

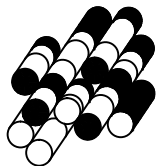
SS

50/150mm

321.7

9.6

</



Terraprobe

PROJECT NAME: Meaford Subdivision
 CLIENT: Meaford A2A Developments Inc.
 LOCATION: Meaford, Ontario

LOG OF BOREHOLE ..12B..

PROJECT No.: 31-12-8015
 BORING DATE: March 23, 2012
 ELEVATION DATUM: Geodetic

BORING METHOD DEPTH SCALE IN METRES	SOIL PROFILE			SAMPLES		PENETRATION RESISTANCE PLOT				WATER CONTENT (%)			INSTALLATION INFORMATION
	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	"N" VALUE	SHEAR STRENGTH kPa						
0	GROUND SURFACE		331.3										<p>Concrete Bentonite Seal Well Sand 2.0m</p>
	See Borehole Log 12A for strata description.		0.0										
1													
2													
3													
3	End of Borehole		328.2										
			3.1										
4													
5													
6													
7													
8													
9													

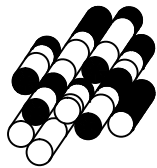
1. Borehole remained open upon completion of drilling.

2. Water level noted dry during drilling.

3. Schedule 40, 50mm diameter monitoring well installed with 1.5m screen tip at 3.1m.

4. Water level on March 29, 2012 measured at 2.0m (elev. 329.3m).

SHEET 1 OF 1



Terraprobe

PROJECT NAME: Meaford Subdivision
 CLIENT: Meaford A2A Developments Inc.
 LOCATION: Meaford, Ontario

LOG OF BOREHOLE ..13..

PROJECT No.: 31-12-8015
 BORING DATE: March 23, 2012
 ELEVATION DATUM: Geodetic

BORING METHOD	DEPTH SCALE IN METRES	SOIL PROFILE			SAMPLES			PENETRATION RESISTANCE PLOT				WATER CONTENT (%)			INSTALLATION INFORMATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	"N" VALUE	SHEAR STRENGTH kPa							
								X _x x							
								20	40	60	80				
								nat.V - +	Q - ●						
								rem.V - ⊕	U - ○						
								20	40	60	80				

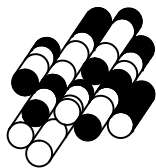
0	GROUND SURFACE		333.4														
	150mm - TOPSOIL		0.0														
	Red			1	SS	10	x							○			
	Stiff to Hard	Moist															
1	SILT, some clay to clayey, trace sand, trace gravel, grading into shale at depth			2	SS	22	x							○			
																○	
2				3	SS	34		x									
				4	SS	53			x					○			
3	Red		330.5														
	Hard	Moist	2.9	5	SS	50/150mm								○			
	SHALE, with limey inter beds, weathered, thinly bedded, with grey layers																
4																	
5				6	SS	50/100mm								○			
6																	
				7	SS	50/75mm								○			
			326.8														
	End of Borehole		6.6														
7															<div>1. Borehole remained open upon completion of drilling.</div> <div>2. Water level noted dry during drilling.</div> <div>3. Schedule 40, 50mm diameter monitoring well installed with 3m screen tip at 6.2m.</div> <div>4. Water level on March 29, 2012 measured at 2.9m (elev. 330.5m).</div>		
8																	
9																	

Concrete

Bentonite Seal

2.9m

SHEET 1 OF 1



Terraprobe

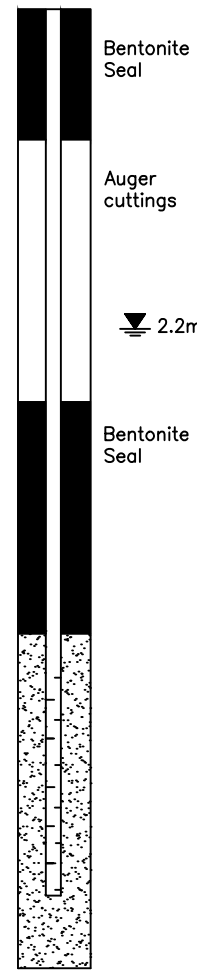
PROJECT NAME: Meaford Subdivision
 CLIENT: Meaford A2A Developments Inc.
 LOCATION: Meaford, Ontario

LOG OF BOREHOLE ..14..

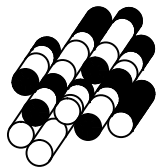
PROJECT No.: 31-12-8015
 BORING DATE: March 26, 2012
 ELEVATION DATUM: Geodetic

BORING METHOD DEPTH SCALE IN METRES	SOIL PROFILE			SAMPLES			PENETRATION RESISTANCE PLOT				WATER CONTENT (%)	INSTALLATION INFORMATION	
	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	"N" VALUE	SHEAR STRENGTH kPa						
							20	40	60	80			
							nat.V - +	rem.V - ⊕	Q - ●	U - ○			
							20	40	60	80	10	20	30

0	GROUND SURFACE		341.8																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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1. Borehole remained open upon completion of drilling.
2. Water level noted dry during drilling.
3. 75mm standpipe installed with 1.5m slotted screen tip at 6.1m.
4. Water level on March 29, 2012 measured at 2.2m (elev. 339.6m).



Terraprobe

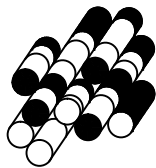
PROJECT NAME: Meaford Subdivision
 CLIENT: Meaford A2A Developments Inc.
 LOCATION: Meaford, Ontario

LOG OF BOREHOLE ..15..

PROJECT No.: 31-12-8015
 BORING DATE: March 26, 2012
 ELEVATION DATUM: Geodetic

BORING METHOD	DEPTH SCALE IN METRES	SOIL PROFILE			SAMPLES			PENETRATION RESISTANCE PLOT				WATER CONTENT (%)	INSTALLATION INFORMATION																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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- Borehole remained open upon completion of drilling.
- Water level noted dry during drilling.
- 75mm standpipe installed with 3m slotted screen tip at 6.2m.
- Water level on March 29, 2012 measured at 2.9m (elev. 341.2m).



Terraprobe

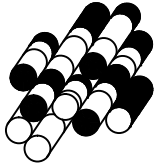
PROJECT NAME: Meaford Subdivision
 CLIENT: Meaford A2A Developments Inc.
 LOCATION: Meaford, Ontario

LOG OF BOREHOLE ..16A..

PROJECT No.: 31-12-8015
 BORING DATE: March 26, 2012
 ELEVATION DATUM: Geodetic

BORING METHOD	DEPTH SCALE IN METRES	SOIL PROFILE			SAMPLES			PENETRATION RESISTANCE PLOT				WATER CONTENT (%)	INSTALLATION INFORMATION		
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	"N" VALUE	SHEAR STRENGTH kPa							
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								20 40 60 80							
						nat.V - +		Q - ●		wp		w		wl	
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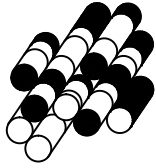
Terraprobe

PROJECT NAME: Meaford Subdivision
 CLIENT: Meaford A2A Developments Inc.
 LOCATION: Meaford, Ontario

LOG OF BOREHOLE ..16B..

PROJECT No.: 31-12-8015
 BORING DATE: March 26, 2012
 ELEVATION DATUM: Geodetic

BORING METHOD DEPTH SCALE IN METRES	SOIL PROFILE		SAMPLES		PENETRATION RESISTANCE PLOT		WATER CONTENT (%)	INSTALLATION INFORMATION	
	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	"N" VALUE			SHEAR STRENGTH kPa
0	GROUND SURFACE		324.1						
	See Borehole Log 16A for strata description.		0.0						
1								<p>Concrete</p> <p>Bentonite Seal</p> <p>Well Sand</p> <p>2.7m</p> <p>1. Borehole remained open upon completion of drilling.</p> <p>2. Water level noted dry during drilling.</p> <p>3. Schedule 40, 50mm diameter monitoring well installed with 1.5m screen tip at 3.1m.</p> <p>4. Water level on March 29, 2012 measured at 2.7m (elev. 321.4m).</p>	
2									
3	End of Borehole		321.0						
4									
5									
6									
7									
8									
9									



Terraprobe

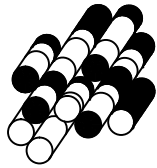
PROJECT NAME: Meaford Subdivision
 CLIENT: Meaford A2A Developments Inc.
 LOCATION: Meaford, Ontario

LOG OF BOREHOLE ..17..

PROJECT No.: 31-12-8015
 BORING DATE: March 26, 2012
 ELEVATION DATUM: Geodetic

BORING METHOD	DEPTH SCALE IN METRES	SOIL PROFILE			SAMPLES			PENETRATION RESISTANCE PLOT				WATER CONTENT (%)	INSTALLATION INFORMATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	"N" VALUE	SHEAR STRENGTH kPa					
								20 40 60 80					
								20 40 60 80					
D-50T Crawler-mounted Drill Rig / Solid Stem Augers													
0	GROUND SURFACE		341.6										
	100mm - TOPSOIL		0.0										
	Red	Stiff to Hard	Moist	1	SS	7	x						
1	SILT, some clay to clayey, trace sand, trace gravel, grading into shale at depth			2	SS	20	x						
				3	SS	35	x						
2			339.4										
	Grey/Red	Hard	Moist to Wet	4	SS	50	150mm						
3	SHALE, with limey inter beds, weathered, thinly bedded, with wet seam at 2.2m and below 6m			5	SS	50	150mm						
4													
				6	SS	50	125mm						
5													
6													
				7	SS	50	75mm						
	End of Borehole		335.0										
			6.6										
7													
8													
9													

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Terraprobe

PROJECT NAME: Meaford Subdivision
 CLIENT: Meaford A2A Developments Inc.
 LOCATION: Meaford, Ontario

LOG OF BOREHOLE ..18..

PROJECT No.: 31-12-8015
 BORING DATE: March 26, 2012
 ELEVATION DATUM: Geodetic

BORING METHOD	DEPTH SCALE IN METRES	SOIL PROFILE			SAMPLES			PENETRATION RESISTANCE PLOT				WATER CONTENT (%)			INSTALLATION INFORMATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	"N" VALUE	SHEAR STRENGTH kPa				WATER CONTENT (%)			
								20 40 60 80				10 20 30			
								20 40 60 80				10 20 30			
D-50T Crawler-mounted Drill Rig / Solid Stem Augers	0	GROUND SURFACE		353.6											<div><div></div><div>Concrete</div><div>Bentonite Seal</div><div></div><div>4.0m</div></div>
		150mm - TOPSOIL		0.0											
		Red	Stiff to Hard	Moist	1	SS	8	x							
	1	CLAY & SILT, to CLAYEY SILT, trace sand, trace gravel, grading into shale at depth			2	SS	32		x						
					3	SS	42			x					
	2	Red	Hard	Moist											
					4	SS	65				x				
3	SHALE, with limey inter beds, weathered, thinly bedded, with grey layer at 5m depth														
				5	SS	50/150mm									
4															
5															
				6	SS	50/100mm									
6															
7	End of Borehole			347.0	7	SS	50/100mm								
				6.6											
8															
9															

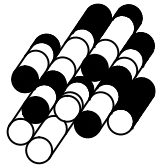
1. Borehole remained open upon completion of drilling.

2. Water level noted dry during drilling.

3. Schedule 40, 50mm diameter monitoring well installed with 3m screen tip at 5.8m.

4. Water level on March 29, 2012 measured at 4.0m (elev. 349.6m).

SHEET 1 OF 1



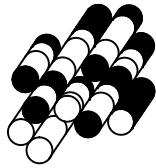
Terraprobe

PROJECT NAME: Meaford Subdivision
 CLIENT: Meaford A2A Developments Inc.
 LOCATION: Meaford, Ontario

LOG OF BOREHOLE ..19..

PROJECT No.: 31-12-8015
 BORING DATE: March 26, 2012
 ELEVATION DATUM: Geodetic

BORING METHOD DEPTH SCALE IN METRES	SOIL PROFILE			SAMPLES			PENETRATION RESISTANCE PLOT				WATER CONTENT (%)			INSTALLATION INFORMATION
	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	"N" VALUE	SHEAR STRENGTH kPa				WATER CONTENT (%)			
							20 40 60 80				10 20 30			
							nat.V - + Q - ● rem.V - ⊕ U - ○							
D-50T Crawler-mounted Drill Rig / Solid Stem Augers	0	GROUND SURFACE		347.0										
		100mm - TOPSOIL Red	Moist				x							
		CLAY & SILT, to CLAYEY SILT, trace sand, trace to some gravel, grading into shale at depth, with occasional cobbles												
	1				2	SS	27							
					3	SS	30							
	2			344.8										
		Red/ Grey	Hard	Moist to Wet										
					4	SS	50/150mm							
3		SHALE, with limey inter beds, weathered, thinly bedded, with wet seam at 3.6m depth												
4														
5														
6														
7				340.4										
	End of Borehole		6.6											
8														
9														



Terraprobe

PROJECT NAME: Meaford Subdivision
 CLIENT: Meaford A2A Developments Inc.
 LOCATION: Meaford, Ontario

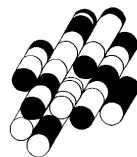
LOG OF BOREHOLE ..20..

PROJECT No.: 31-12-8015
 BORING DATE: March 23, 2012
 ELEVATION DATUM: Geodetic

BORING METHOD DEPTH SCALE IN METRES	SOIL PROFILE			SAMPLES			PENETRATION RESISTANCE PLOT				WATER CONTENT (%)				INSTALLATION INFORMATION
	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	"N" VALUE	SHEAR STRENGTH kPa				WATER CONTENT (%)				
							20 40 60 80				10 20 30				
							nat.V - + Q - ● rem.V - ⊕ U - ○								
							20	40	60	80					

0	GROUND SURFACE		341.2											
	150mm - TOPSOIL		0.0											
	Red	Stiff to Hard	Moist	1	SS	10	x							
1	SILT, some clay to clayey, trace sand, trace gravel, grading into shale at depth			2	SS	39		x						
				3	SS	37		x						
				4	SS	23	x							
2														
3				5	SS	24	x							
4	Red	Hard	Moist											
	SHALE, with limey inter beds, weathered, thinly bedded		337.2											
			4.0											
				6	SS	50/150mm								
5														
6														
			334.6	7	SS	50/50mm								
	End of Borehole		6.6											
7														
8														
9														

GRAIN SIZE ANALYSIS



Terraprobe Inc.



Terraprobe

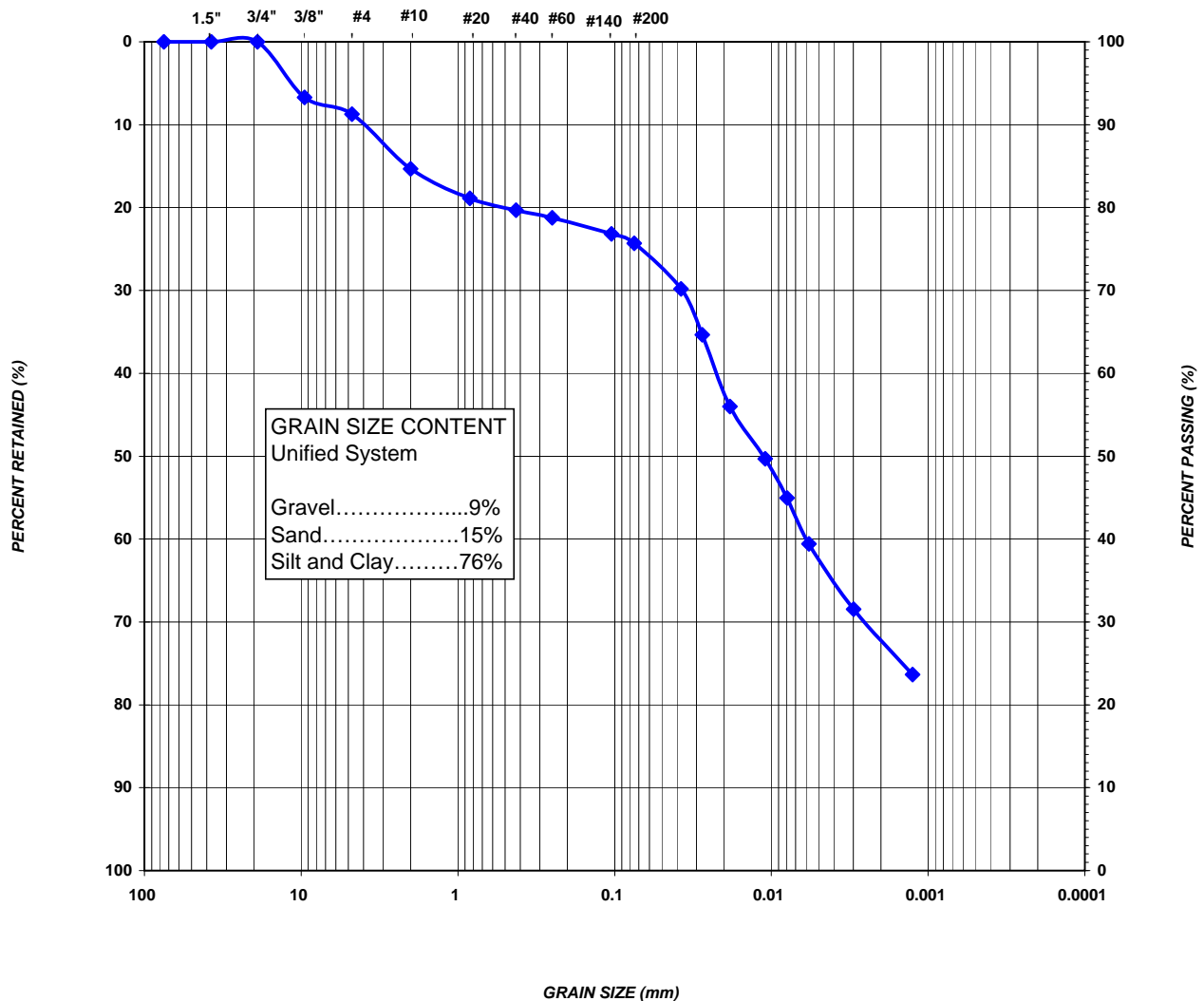
SIEVE AND HYDROMETER ANALYSIS TEST REPORT

PROJECT: **Meaford Subdivision**
LOCATION: **Meaford, ON**
CLIENT: **Meaford A2A Developments Inc.**
c/o Friedman & Associates
BOREHOLE NUMBER: **1** SAMPLE DEPTH: **N/G**
SAMPLE NUMBER: **2**
SAMPLE LOCATION: **as above**
SAMPLE DESCRIPTION: **Silt, some clay, some sand, trace gravel**

FILE NO.: **31-12-8015**
LAB NO.: **1514a**
SAMPLE DATE: **Apr-03-12**
SAMPLED BY: **B.H.**

GRAIN SIZE DISTRIBUTION

U.S. STANDARD SIEVE SIZES



MIT SYSTEM	GRAVEL		COARSE	MEDIUM	FINE	SILT	CLAY
			SAND				
UNIFIED SYSTEM	COARSE	FINE	COARSE	MEDIUM	FINE	SILT AND CLAY	
	GRAVEL		SAND				



Terraprobe

SIEVE AND HYDROMETER ANALYSIS TEST REPORT

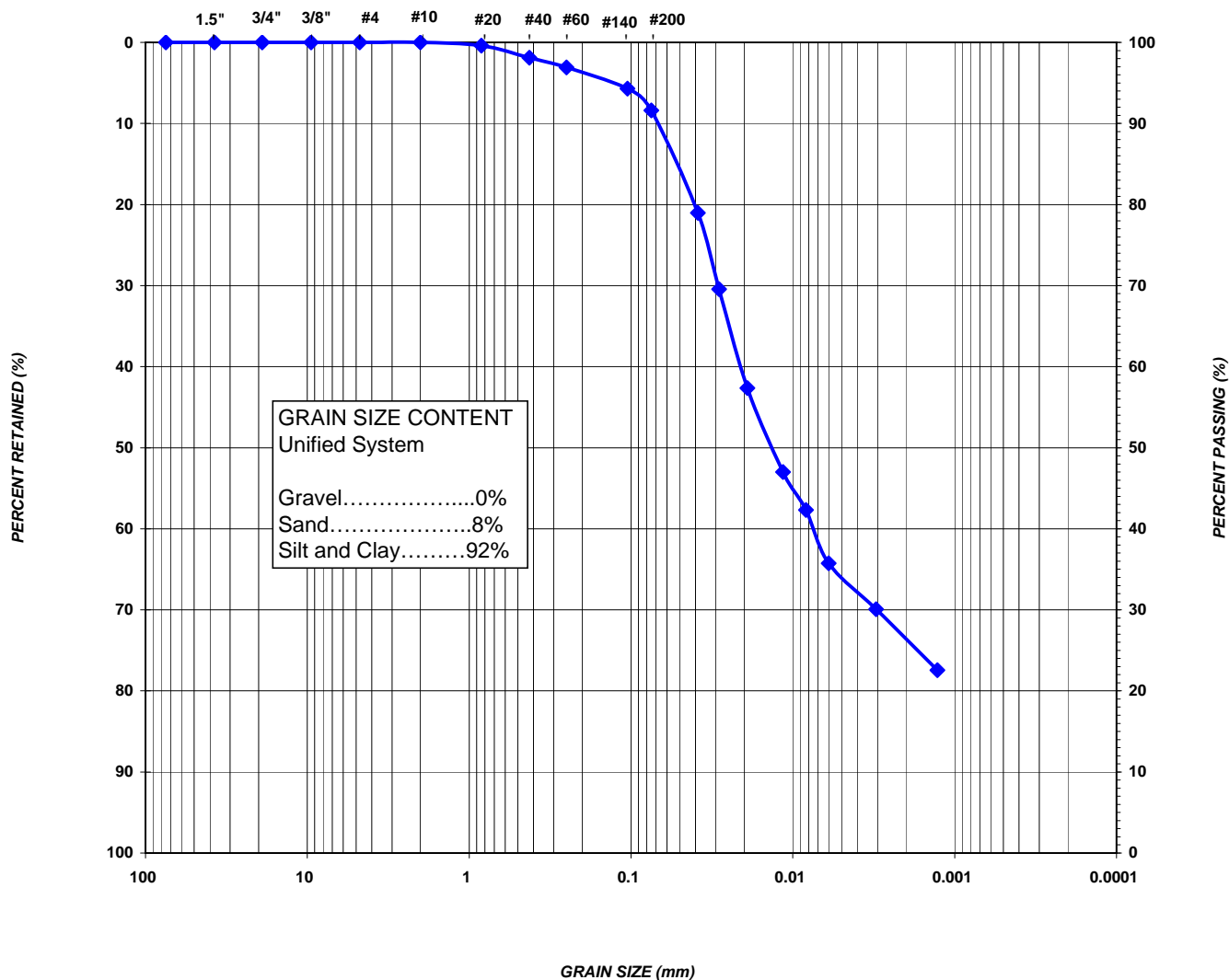
PROJECT: Meaford Subdivision
LOCATION: Meaford, ON
CLIENT: Meaford A2A Developments Inc.
c/o Friedman & Associates

FILE NO.: 31-12-8015
LAB NO.: 1514b
SAMPLE DATE: Apr-03-12
SAMPLED BY: B.H.

BOREHOLE NUMBER: 6
SAMPLE NUMBER: 4
SAMPLE LOCATION: as above
SAMPLE DESCRIPTION: Clayey silt, trace sand

GRAIN SIZE DISTRIBUTION

U.S. STANDARD SIEVE SIZES



MIT SYSTEM	GRAVEL		COARSE	MEDIUM	FINE	SILT	CLAY
			SAND				
UNIFIED SYSTEM	COARSE	FINE	COARSE	MEDIUM	FINE	SILT AND CLAY	
	GRAVEL		SAND				



Terraprobe

SIEVE AND HYDROMETER ANALYSIS TEST REPORT

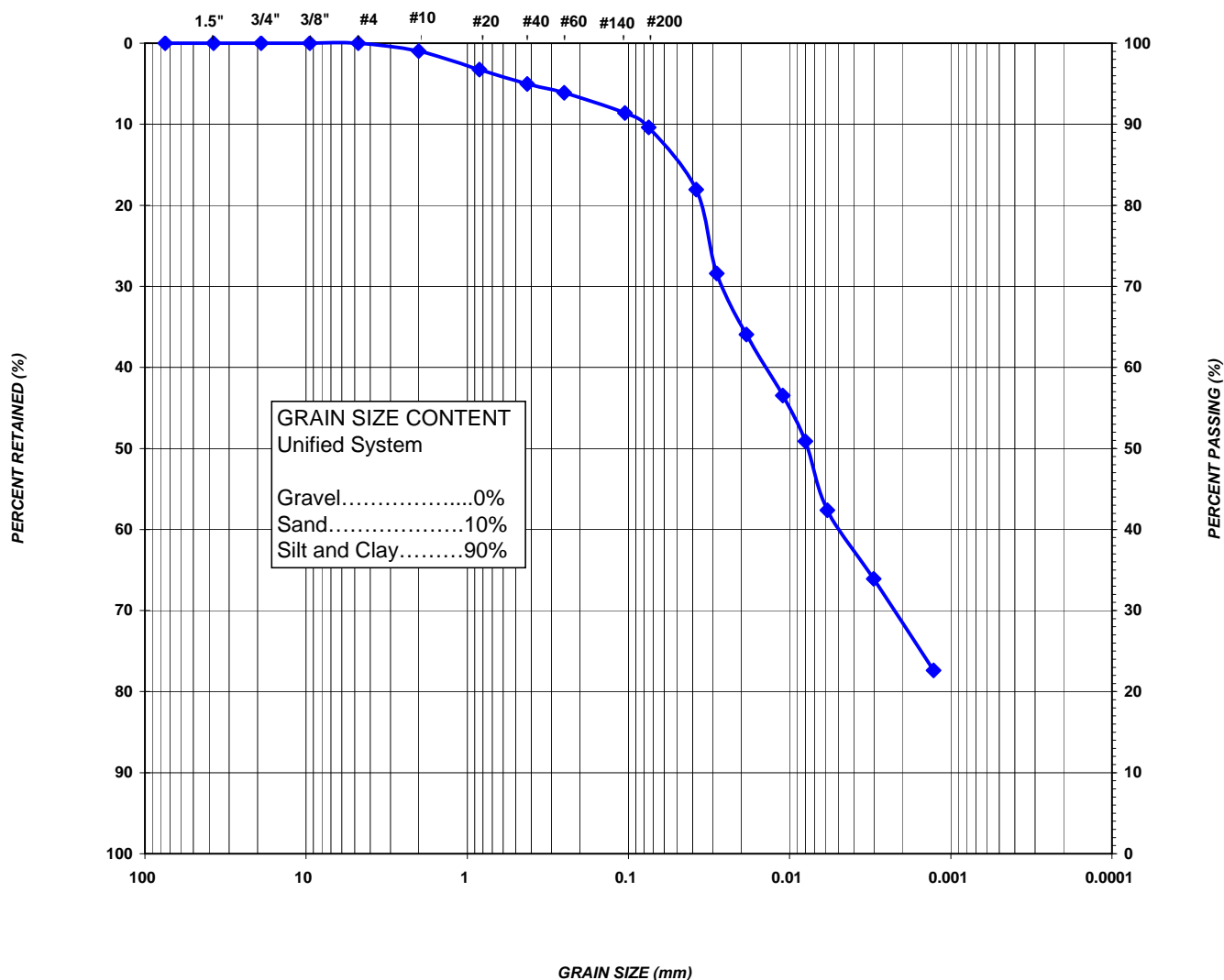
PROJECT: **Meaford Subdivision**
LOCATION: **Meaford, ON**
CLIENT: **Meaford A2A Developments Inc.**
c/o Friedman & Associates

FILE NO.: **31-12-8015**
LAB NO.: **1514c**
SAMPLE DATE: **Apr-03-12**
SAMPLED BY: **B.H.**

BOREHOLE NUMBER: **16** SAMPLE DEPTH: **N/G**
SAMPLE NUMBER: **7**
SAMPLE LOCATION: **as above**
SAMPLE DESCRIPTION: **Clayey silt, trace sand**

GRAIN SIZE DISTRIBUTION

U.S. STANDARD SIEVE SIZES



MIT SYSTEM	GRAVEL		COARSE	MEDIUM	FINE	SILT	CLAY
			SAND				

UNIFIED SYSTEM	COARSE	FINE	COARSE	MEDIUM	FINE	SILT AND CLAY
	GRAVEL		SAND			



Terraprobe

SIEVE AND HYDROMETER ANALYSIS TEST REPORT

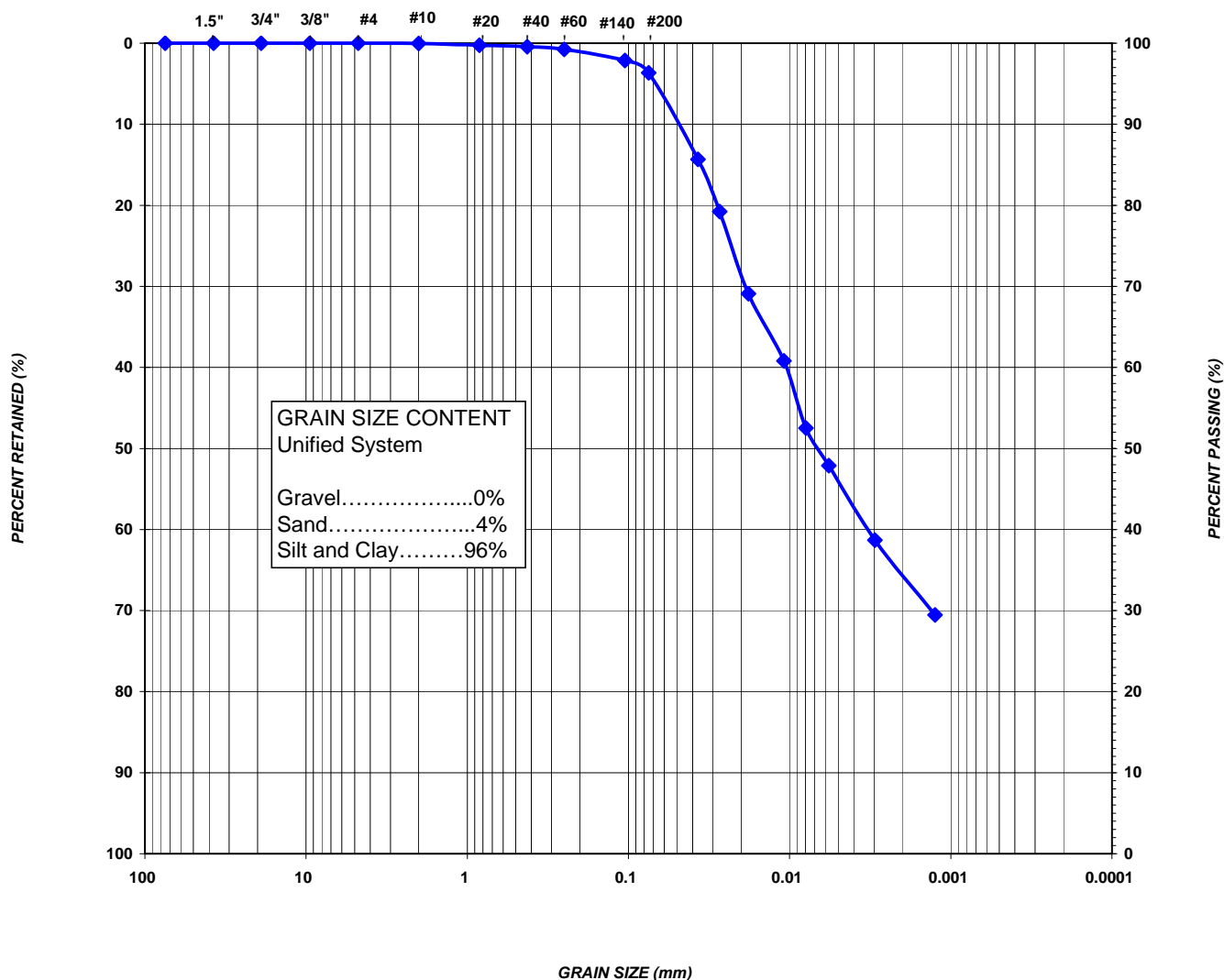
PROJECT: Meaford Subdivision
LOCATION: Meaford, ON
CLIENT: Meaford A2A Developments Inc.
c/o Friedman & Associates

FILE NO.: 31-12-8015
LAB NO.: 1514d
SAMPLE DATE: Apr-03-12
SAMPLED BY: B.H.

BOREHOLE NUMBER: 5
SAMPLE NUMBER: 3
SAMPLE LOCATION: as above
SAMPLE DESCRIPTION: Clayey silt, trace sand

GRAIN SIZE DISTRIBUTION

U.S. STANDARD SIEVE SIZES



MIT SYSTEM	GRAVEL		COARSE	MEDIUM	FINE	SILT	CLAY
			SAND				

UNIFIED SYSTEM	COARSE	FINE	COARSE	MEDIUM	FINE	SILT AND CLAY
	GRAVEL		SAND			



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SIEVE AND HYDROMETER ANALYSIS TEST REPORT

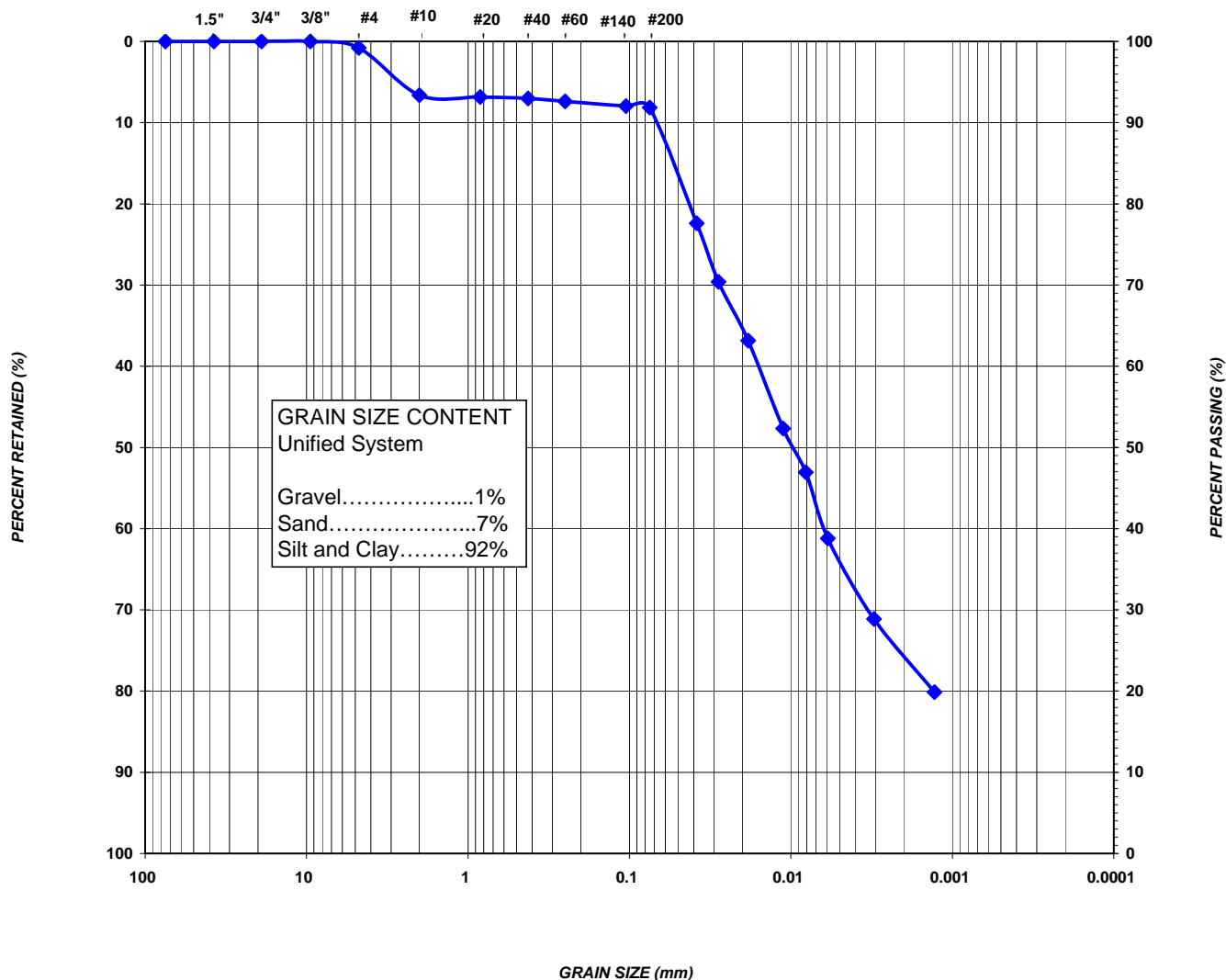
PROJECT: **Meaford Subdivision**
LOCATION: **Meaford, ON**
CLIENT: **Meaford A2A Developments Inc.**
c/o Friedman & Associates

FILE NO.: **31-12-8015**
LAB NO.: **1514e**
SAMPLE DATE: **Apr-03-12**
SAMPLED BY: **B.H.**

BOREHOLE NUMBER: **12** SAMPLE DEPTH: **N/G**
SAMPLE NUMBER: **7**
SAMPLE LOCATION: **as above**
SAMPLE DESCRIPTION: **Silt, some clay, trace sand, trace gravel**

GRAIN SIZE DISTRIBUTION

U.S. STANDARD SIEVE SIZES



MIT SYSTEM	GRAVEL		COARSE	MEDIUM	FINE	SILT	CLAY
			SAND				

UNIFIED SYSTEM	COARSE	FINE	COARSE	MEDIUM	FINE	SILT AND CLAY
	GRAVEL		SAND			



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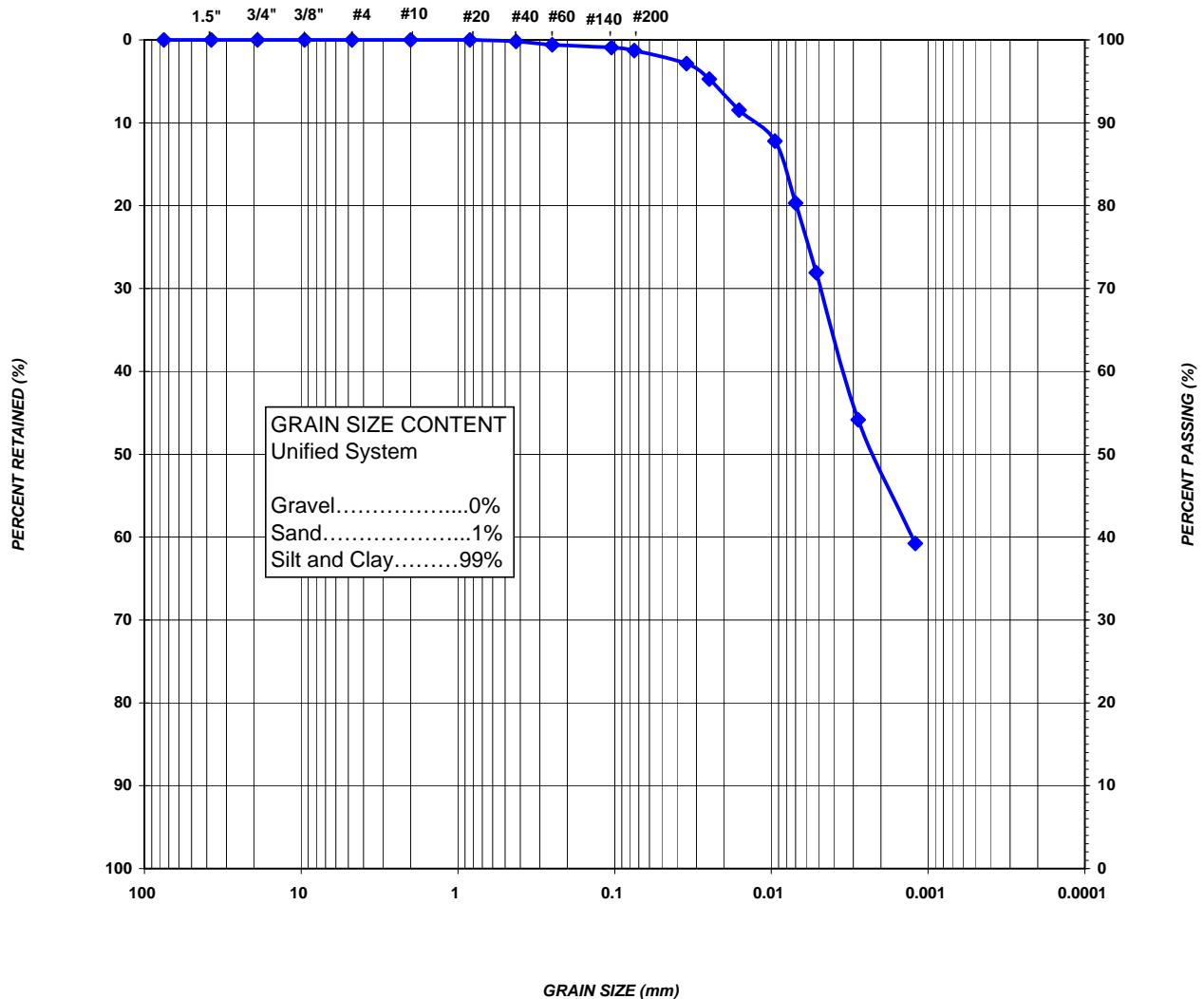
SIEVE AND HYDROMETER ANALYSIS TEST REPORT

PROJECT: **Meaford Subdivision**
LOCATION: **Meaford, ON**
CLIENT: **Meaford A2A Developments Inc.**
c/o Friedman & Associates
BOREHOLE NUMBER: **18** SAMPLE DEPTH: **N/G**
SAMPLE NUMBER: **3**
SAMPLE LOCATION: **as above**
SAMPLE DESCRIPTION: **silt and clay, trace sand**

FILE NO.: **31-12-8015**
LAB NO.: **1514f**
SAMPLE DATE: **Apr-03-12**
SAMPLED BY: **B.H.**

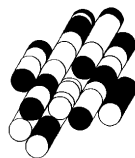
GRAIN SIZE DISTRIBUTION

U.S. STANDARD SIEVE SIZES



MIT SYSTEM	GRAVEL		COARSE	MEDIUM	FINE	SILT	CLAY	
			SAND					
UNIFIED SYSTEM	COARSE	FINE	COARSE	MEDIUM	FINE	SILT AND CLAY		
	GRAVEL		SAND					

SITE PHOTOGRAPHS



Terraprobe Inc.



MAY 2012

SITE PHOTOGRAPHS

31-12-8015



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31-12-8015



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SITE PHOTOGRAPHS

31-12-8015

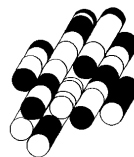


MAY 2012

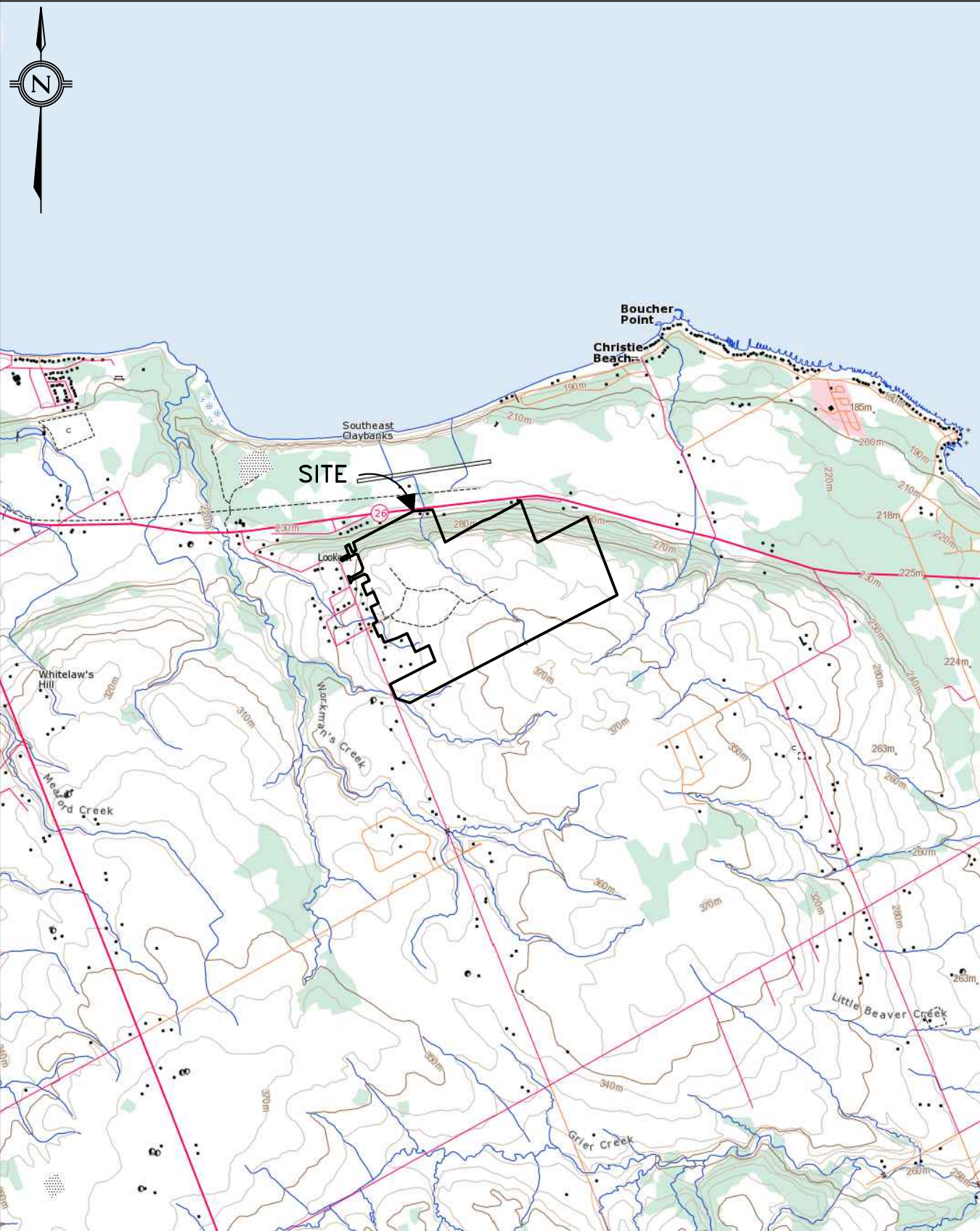
SITE PHOTOGRAPHS

31-12-8015

FIGURES



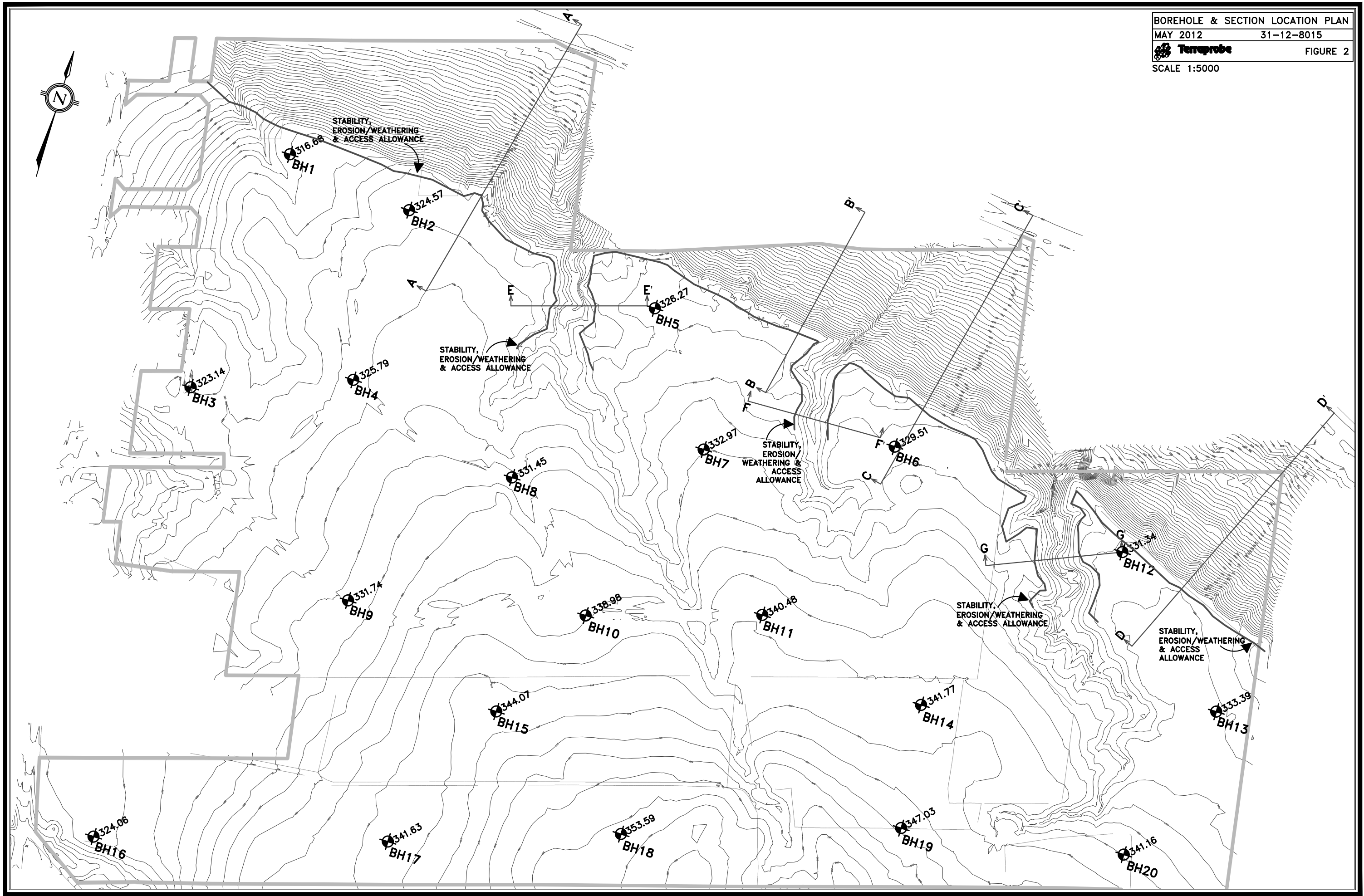
Terraprobe Inc.



MARCH 2012

SITE LOCATION PLAN

31-12-8015





DEVELOPMENT CONCEPT MEAFORD HIGHLANDS RESORT LOTS 9 & 10 3RD LINE MEAFORD COUNTY OF GREY



DEVELOPMENT STATISTICS

RESORT	
Meaford Highlands Inn and Villas	16.53 ha
Spa / Retail/ Aquatic & Wellness Centre	
Golf Course and Club House	19.37 ha
RESORT RESIDENTIAL	
Low Density Resort Residential	21.57 ha
Resort Residential	24.26 ha
Roads	18.79 ha
Environmental Area	40.42 ha
Open Space / Buffer / Trail	1.76 ha
Park	5.14 ha
Storm Water Management	6.06 ha
TOTAL SITE AREA	153.90 ha

ROAD LENGTH

26m ROW:	985 m
20m ROW:	3,295 m
18m ROW:	4,560 m
14m ROW:	540 m

LEGEND

	Property Boundary
	Meaford Highlands Resort and Villas
	Low Density Resort Residential (21m)
	Low Density Resort Residential (18.3m)
	Resort Residential Single Family (15.2m)
	Resort Residential Single Family (12.2m)
	Resort Residential Semi Detached (9m)
	Resort Residential Townhomes(7m)
	Resort Golf Course
	Environmental - High Constraint Area Source: Beacon Environmental, Nov. 2010
	Environmental - Medium Constraint Area Source: Beacon Environmental, Nov. 2010
	Park / Parkette
	Trail block / Buffer
	Storm Water Management

REVISIONS LIST

DATE	REVISION
2012 APR 11	REVISE NW SWMP, REMOVE CUL-DE-SAC, REMOVE N SWMP.
2012 APR 5	REVISE LOCATION OF AMPHITHEATRE

WESTON CONSULTING GROUP INC.
 Vaughan Office: 201 Midway Avenue, Unit 19, Vaughan, Ontario, L4K 5R3
 Phone: (905) 738-8080
 1-800-363-3558 Fax: (905) 738-8637 www.westonconsulting.com
 Oakville Office: 1660 North Service Road E., Suite 114, Oakville, Ontario, L6H 7G3
 Phone: (905) 844-8749

File Number: 5305-1	Drawing Number: C10
Date Drawn: 2012 MAR 27	
Drawn By: SB	
Planner: RG	
Scale: see scale bar	
CAD: 5305-1/concepts/C10rev for sub Apr 26, 12.dgn	

NOT TO SCALE.

MAY 2012

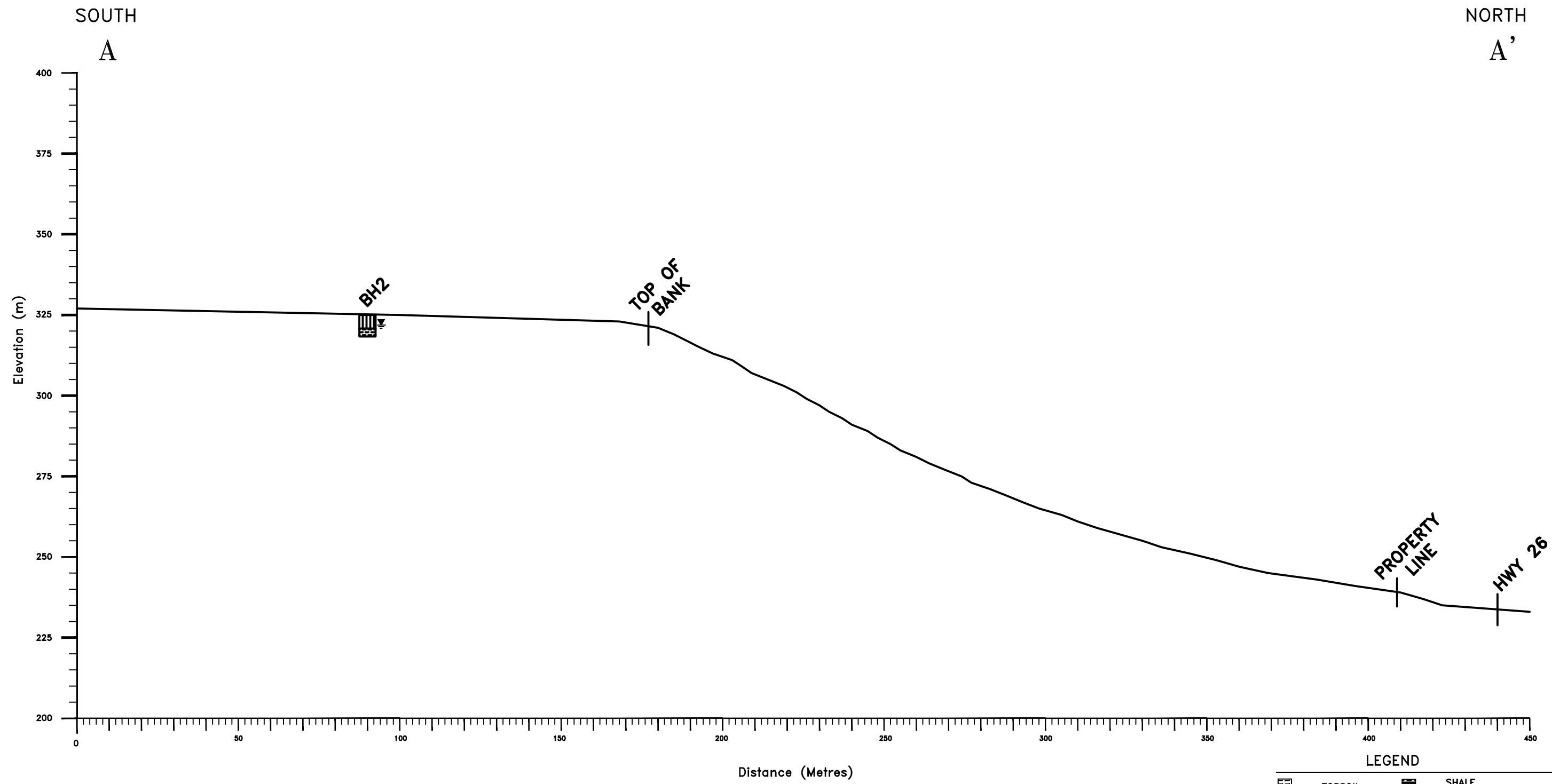
DEVELOPMENT CONCEPT PLAN

31-12-8015



FIGURE 3

SECTION A – A'



SCALES:

Horizontal 1 : 1250

Vertical 1 : 1250

LEGEND			
	TOPSOIL		SHALE
	FILL		STATIC WATER LEVEL
	SILT		WATER FOUND
	SAND		WELL NUMBER/POINT INFORMATION

MAY 2012

CROSS SECTION A–A'

31–12–8015

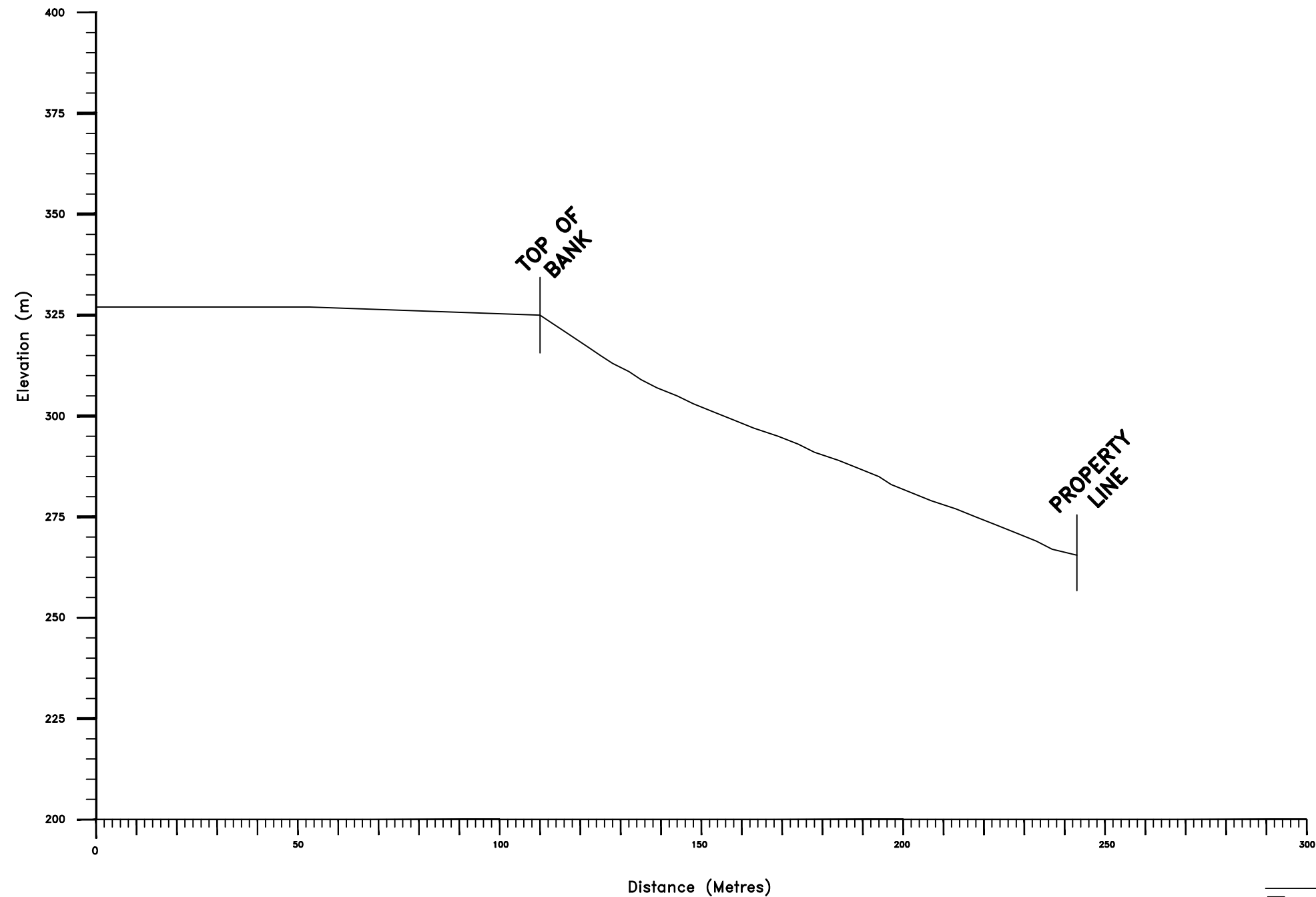


FIGURE 4

SECTION B – B'

SOUTH
B

NORTH
B'



SCALES:

Horizontal 1 : 1250
Vertical 1 : 1250

LEGEND

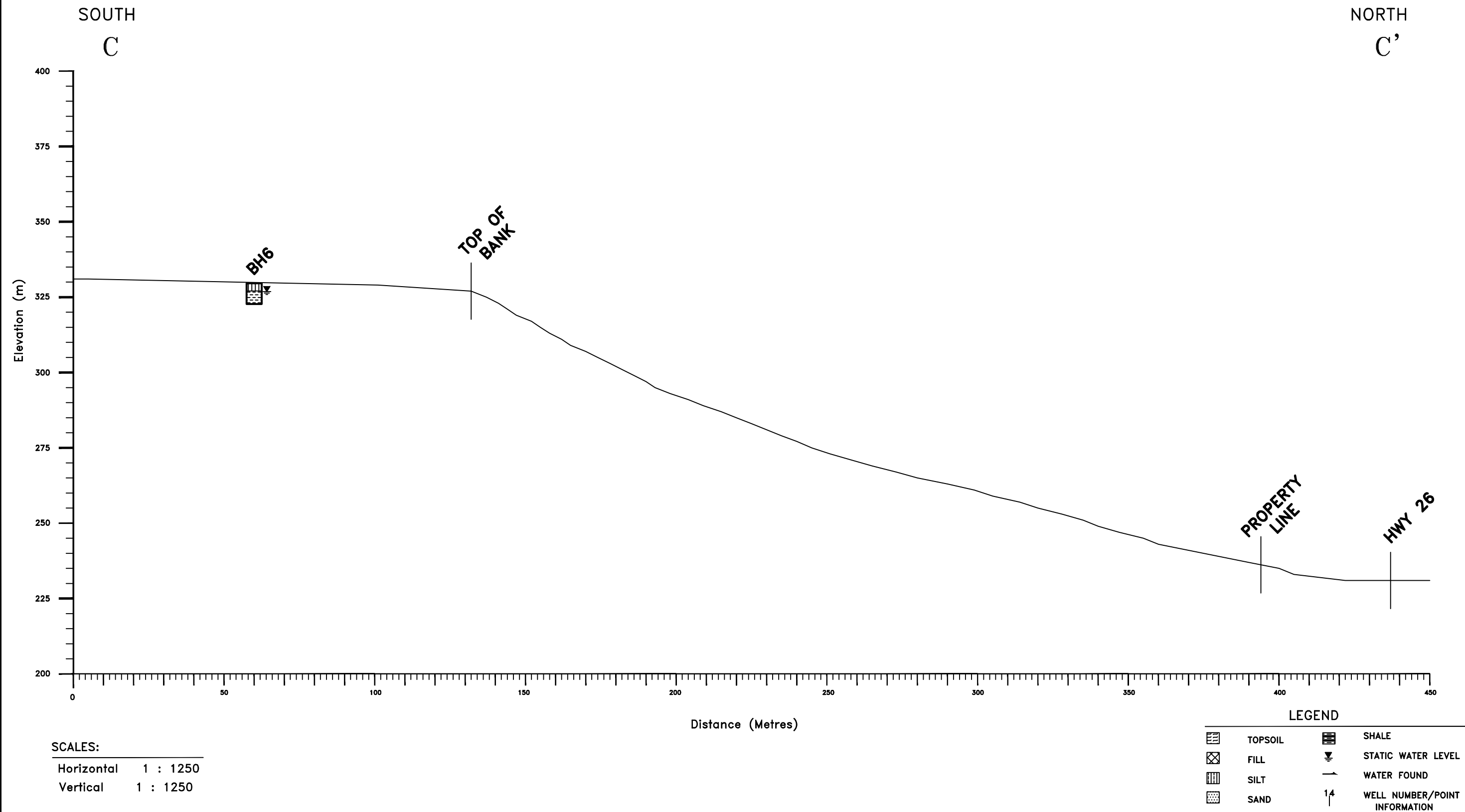
	TOPSOIL		SHALE
	FILL		STATIC WATER LEVEL
	SILT		WATER FOUND
	SAND		WELL NUMBER/POINT INFORMATION

MAY 2012

CROSS SECTION B–B'

31–12–8015

SECTION C – C'



MAY 2012

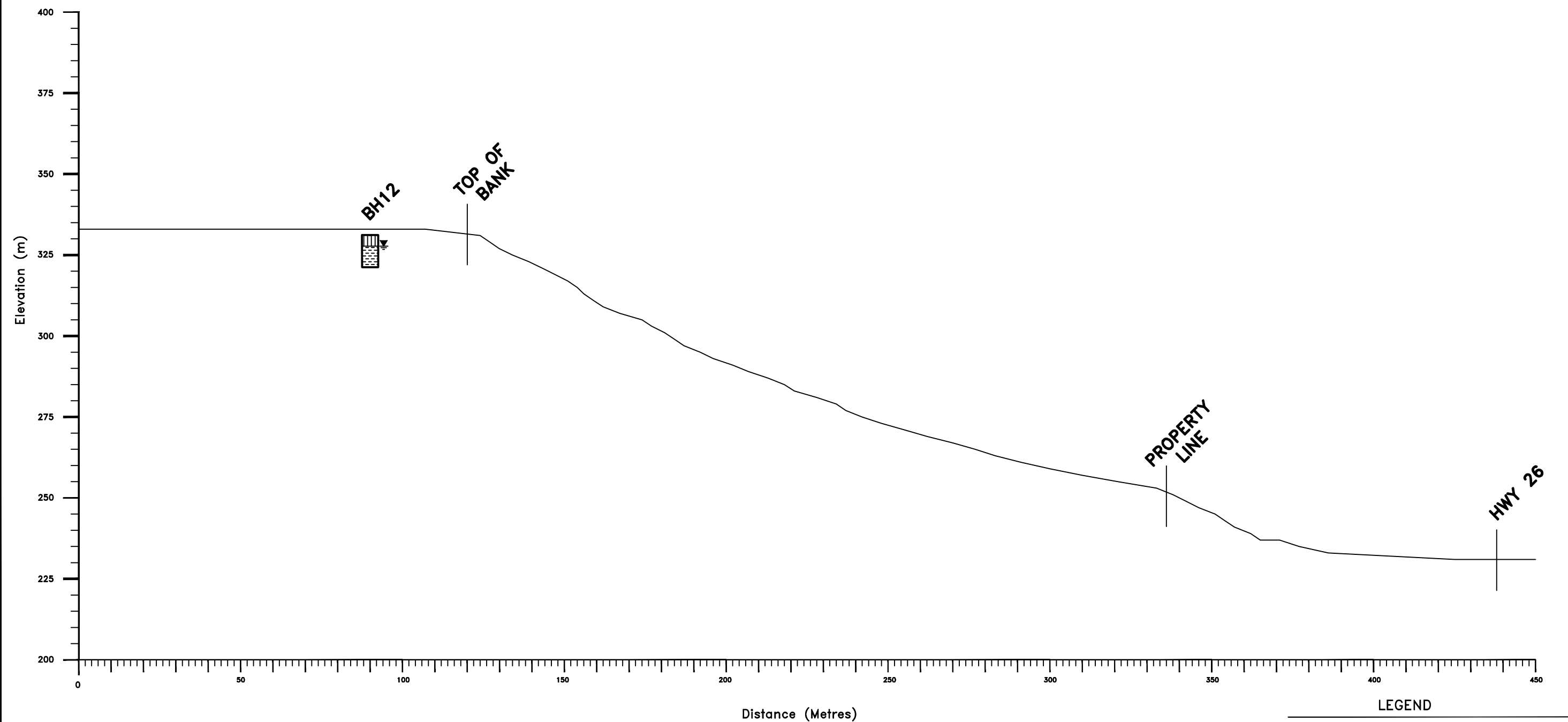
CROSS SECTION C–C'

31–12–8015

SECTION D – D'

SOUTH
D

NORTH
D'



SCALES:
Horizontal 1 : 1250
Vertical 1 : 1250

LEGEND			
	TOPSOIL		SHALE
	FILL		STATIC WATER LEVEL
	SILT		WATER FOUND
	SAND		WELL NUMBER/POINT INFORMATION

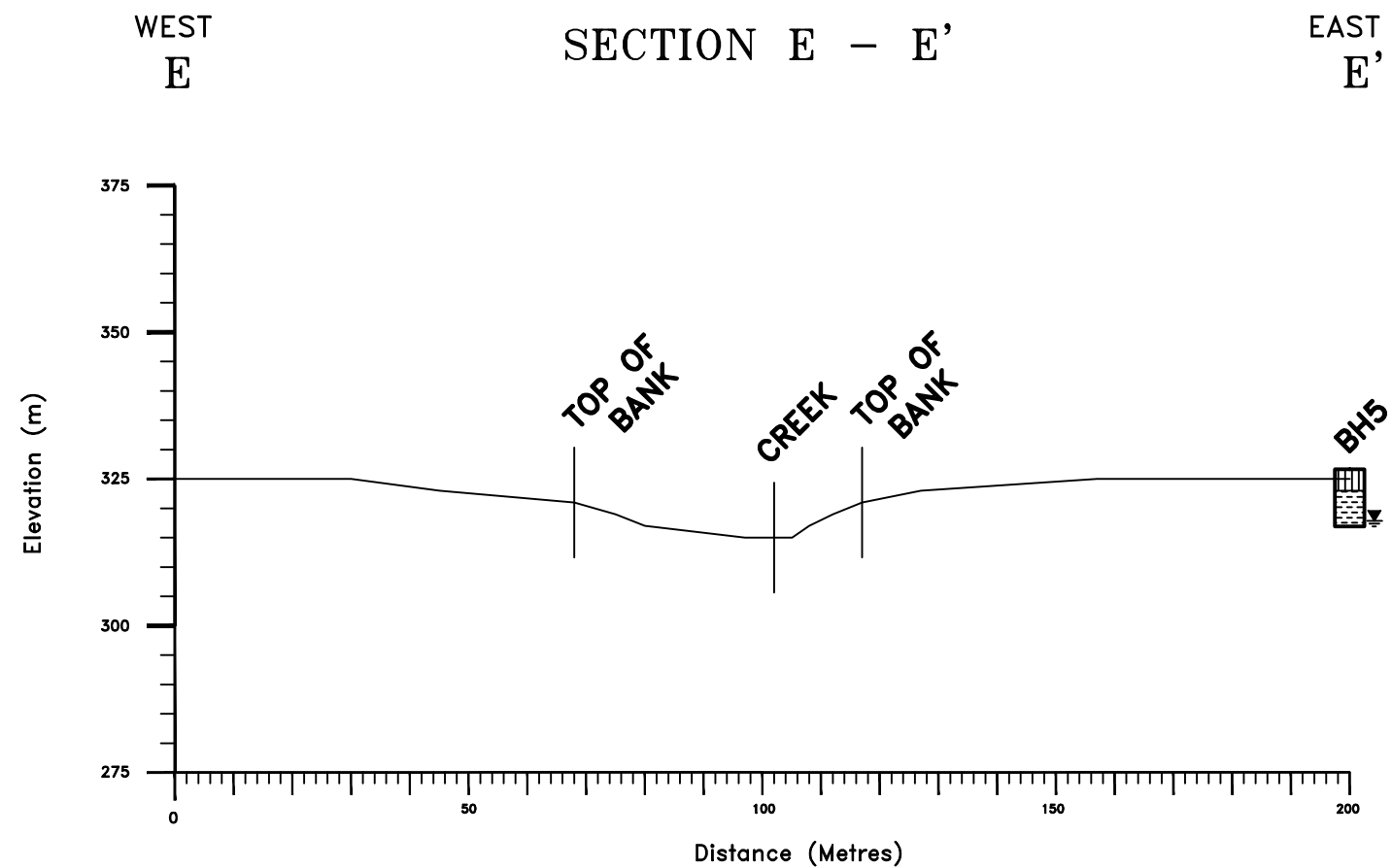
MAY 2012

CROSS SECTION D–D'

31–12–8015



FIGURE 7



SCALES:

Horizontal 1 : 1250
Vertical 1 : 1250

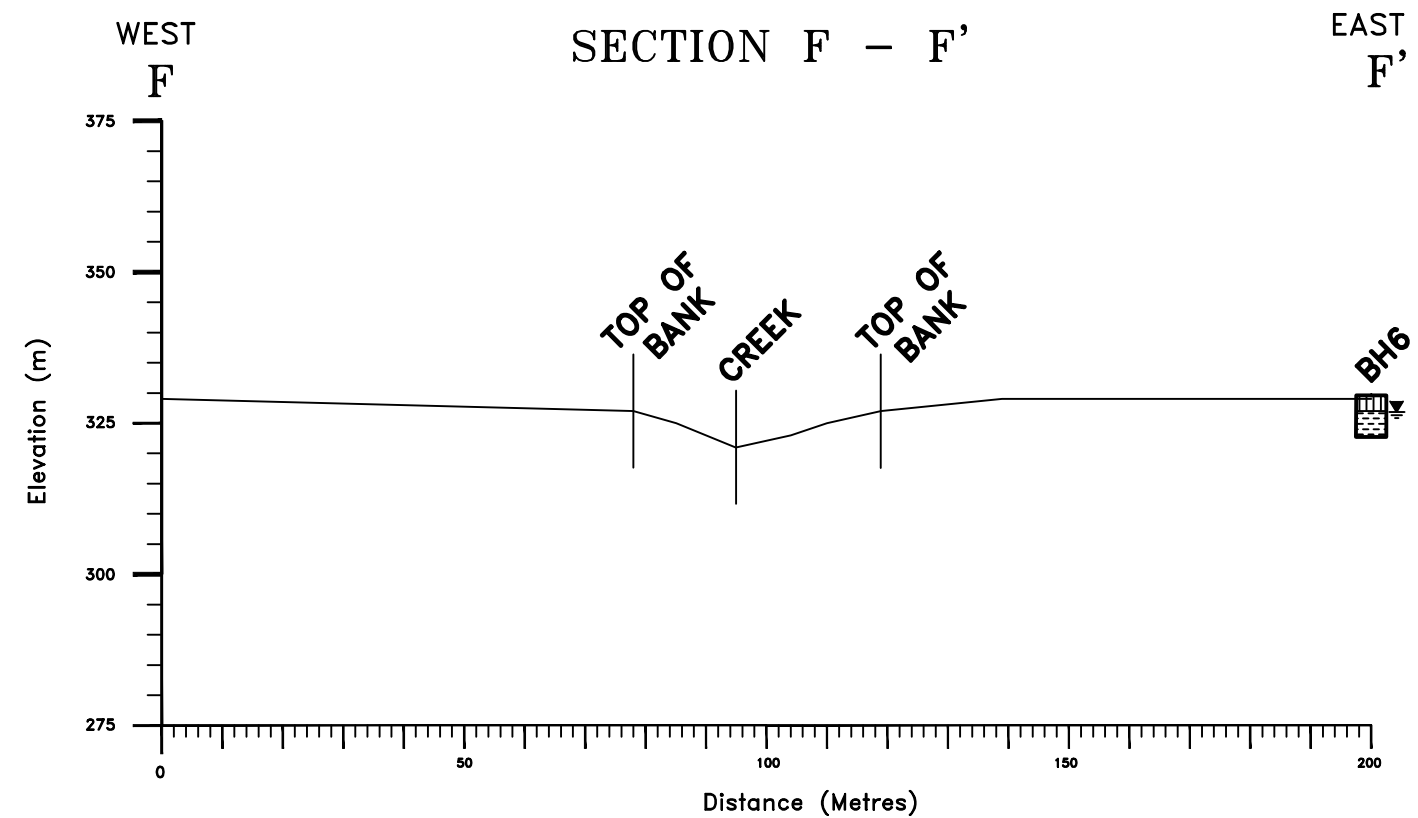
LEGEND

	TOPSOIL		SHALE
	FILL		STATIC WATER LEVEL
	SILT		WATER FOUND
	SAND		WELL NUMBER/POINT INFORMATION

MAY 2012

CROSS SECTION E–E'

31–12–8015



SCALES:

Horizontal 1 : 1250
Vertical 1 : 1250

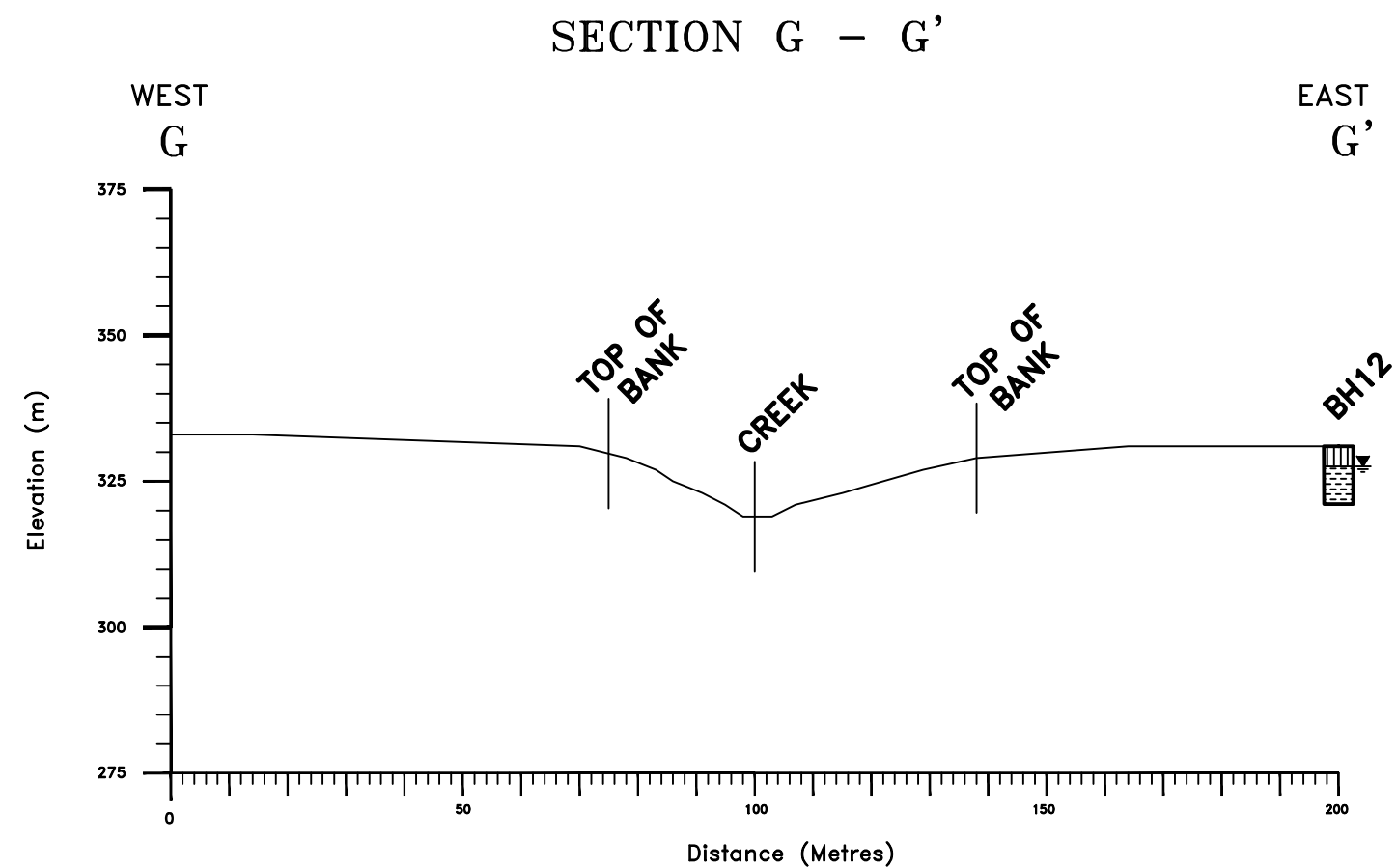
LEGEND

	TOPSOIL		SHALE
	FILL		STATIC WATER LEVEL
	SILT		WATER FOUND
	SAND		WELL NUMBER/POINT INFORMATION

MAY 2012

CROSS SECTION F-F'

31-12-8015



SCALES:

Horizontal 1 : 1250
 Vertical 1 : 1250

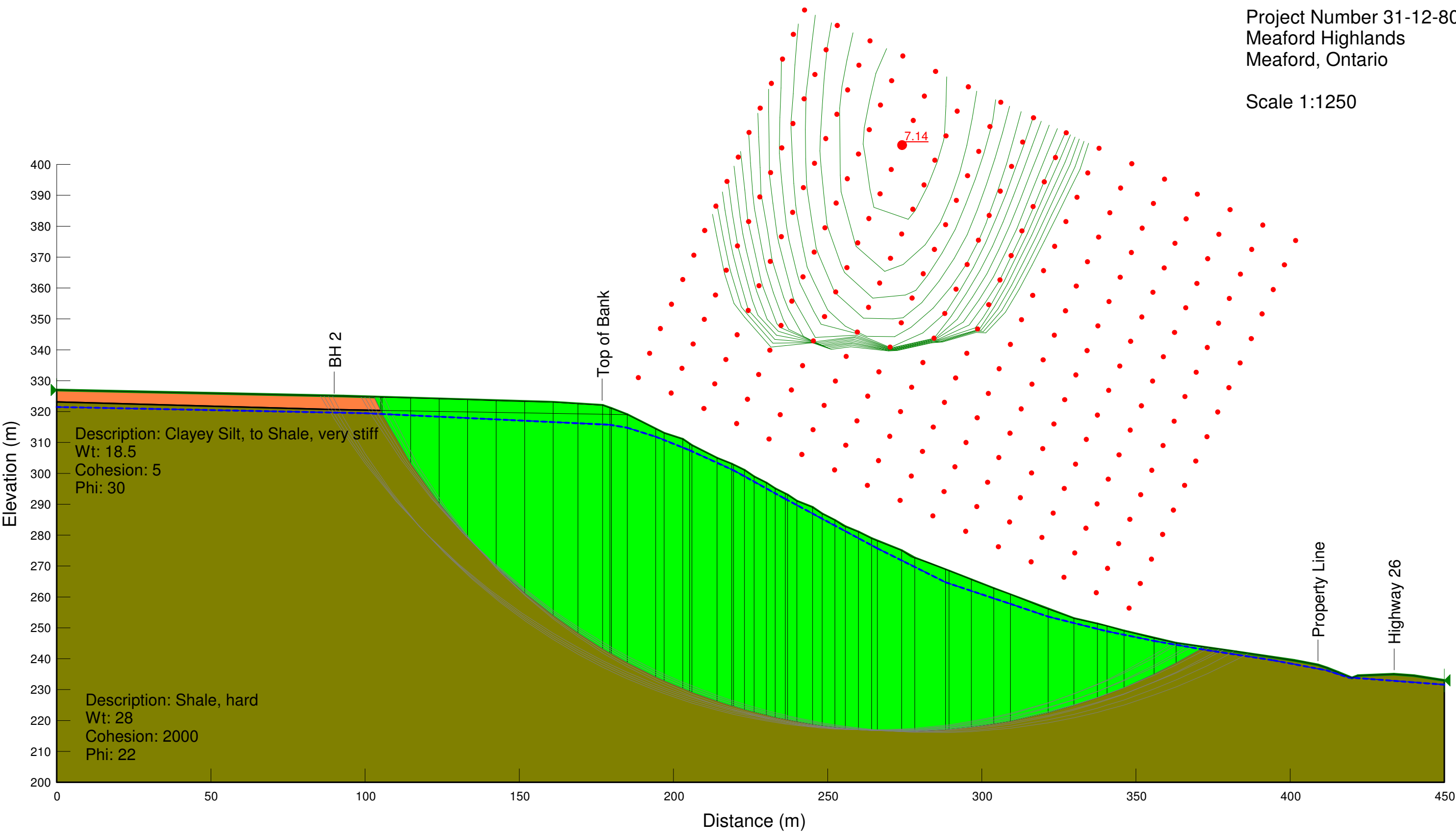
LEGEND

	TOPSOIL		SHALE
	FILL		STATIC WATER LEVEL
	SILT		WATER FOUND
	SAND		WELL NUMBER/POINT INFORMATION

MAY 2012

CROSS SECTION G–G'

31–12–8015

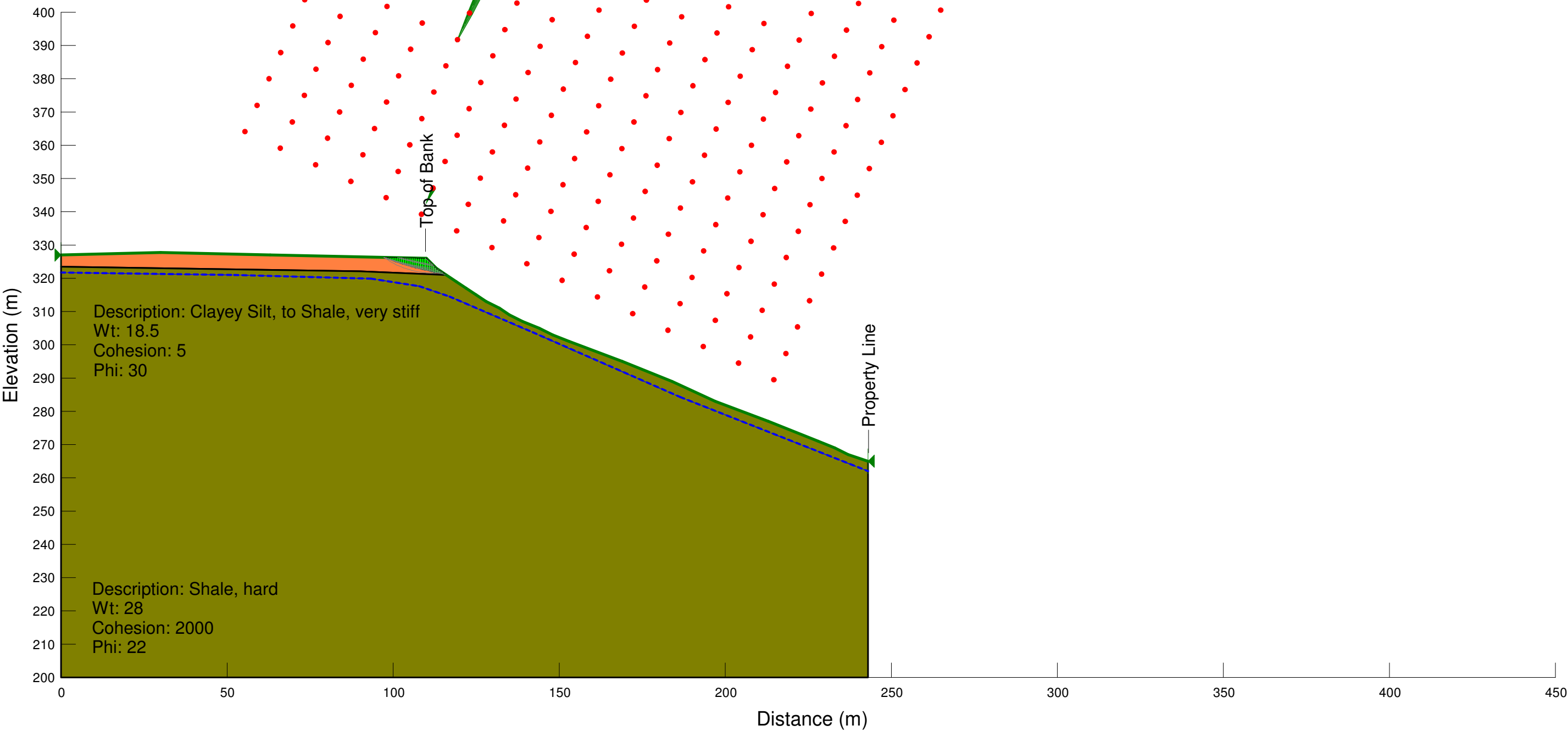


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Figure 12
Existing Section BB'

Project Number 31-12-8015
Meaford Highlands
Meaford, Ontario

Scale 1:1250

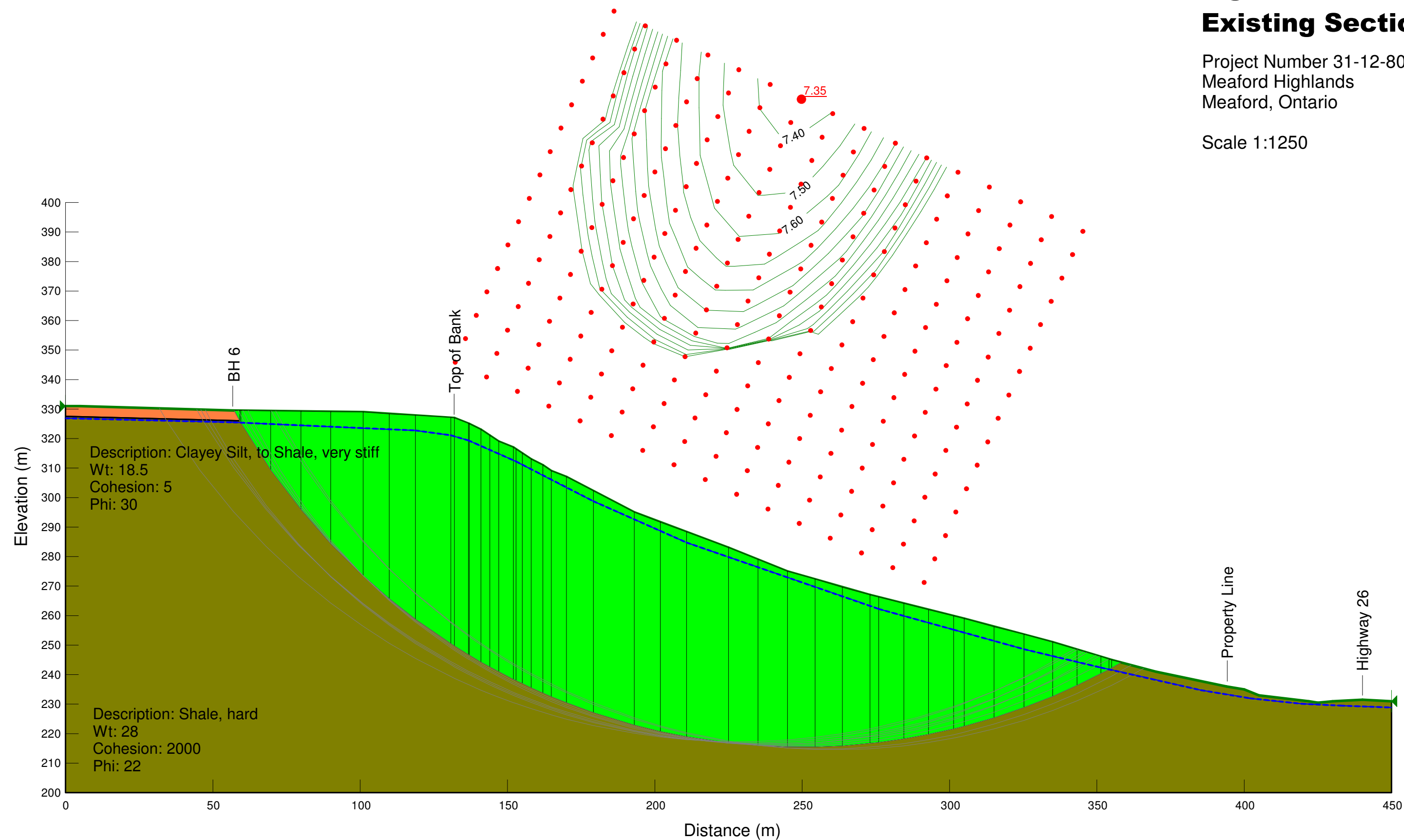


Terraprobe

Figure 13
Existing Section CC'

Project Number 31-12-8015
Meaford Highlands
Meaford, Ontario

Scale 1:1250

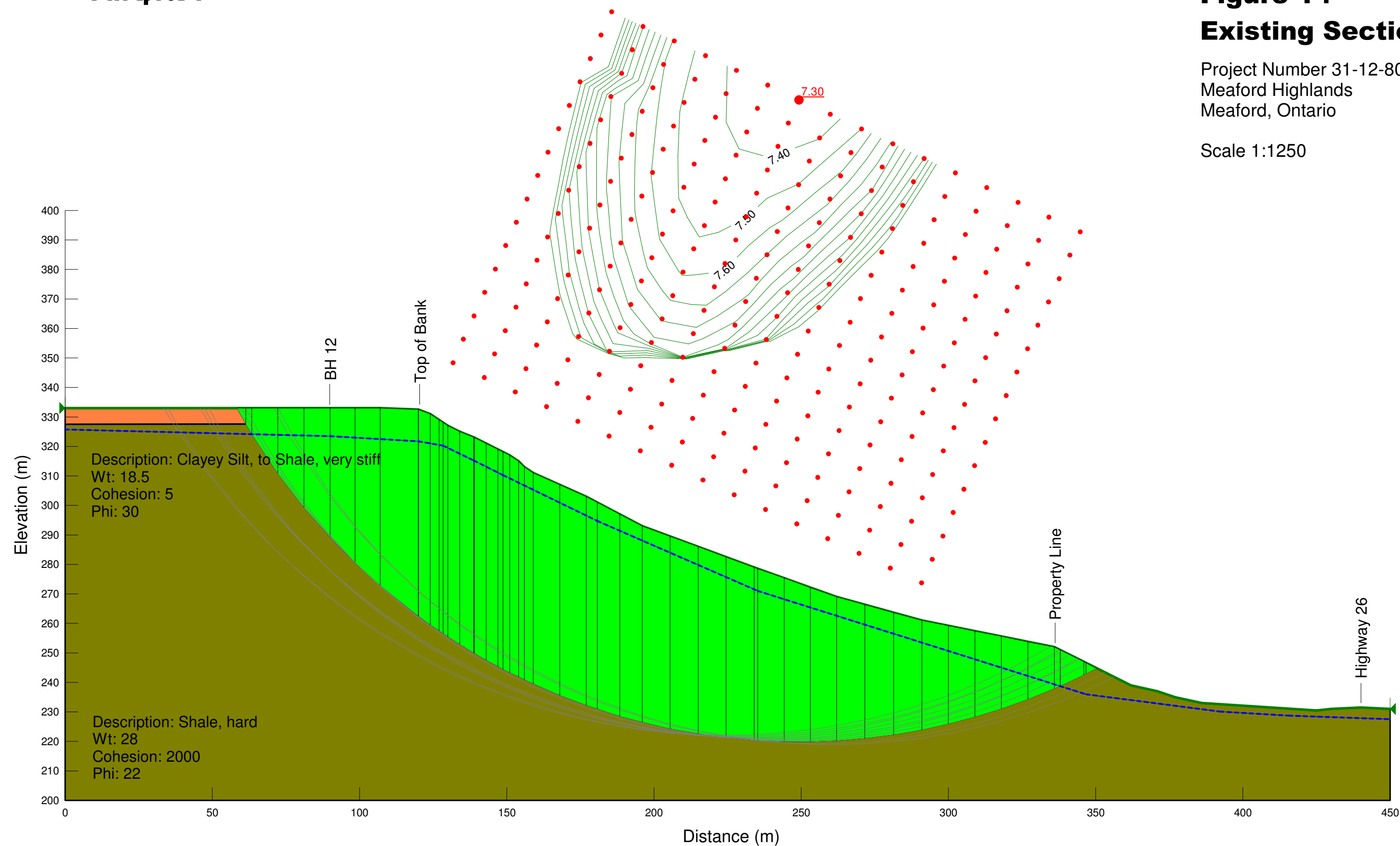


Terraprobe

Figure 14
Existing Section DD'

Project Number 31-12-8015
Meaford Highlands
Meaford, Ontario

Scale 1:1250

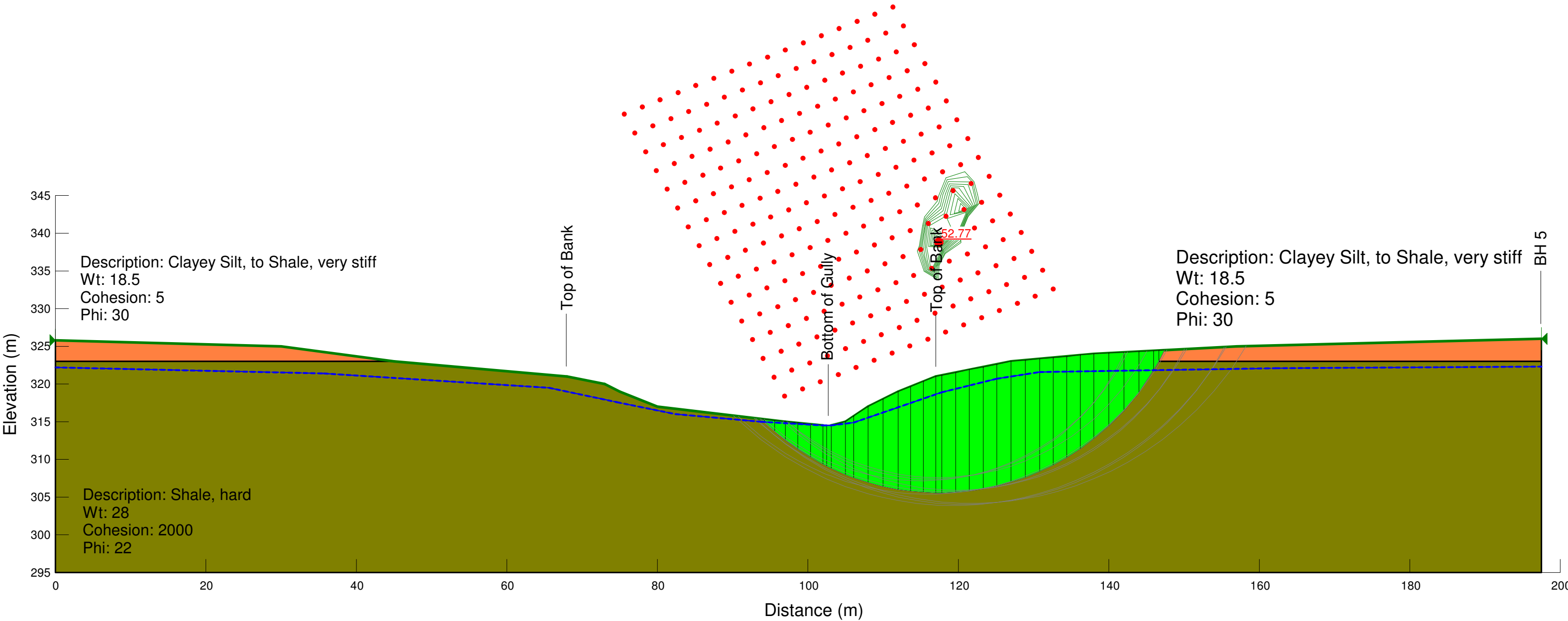


Terraprobe

Figure 15
Existing Section EE'

Project Number 31-12-8015
Meaford Highlands
Meaford, Ontario

Scale 1:500

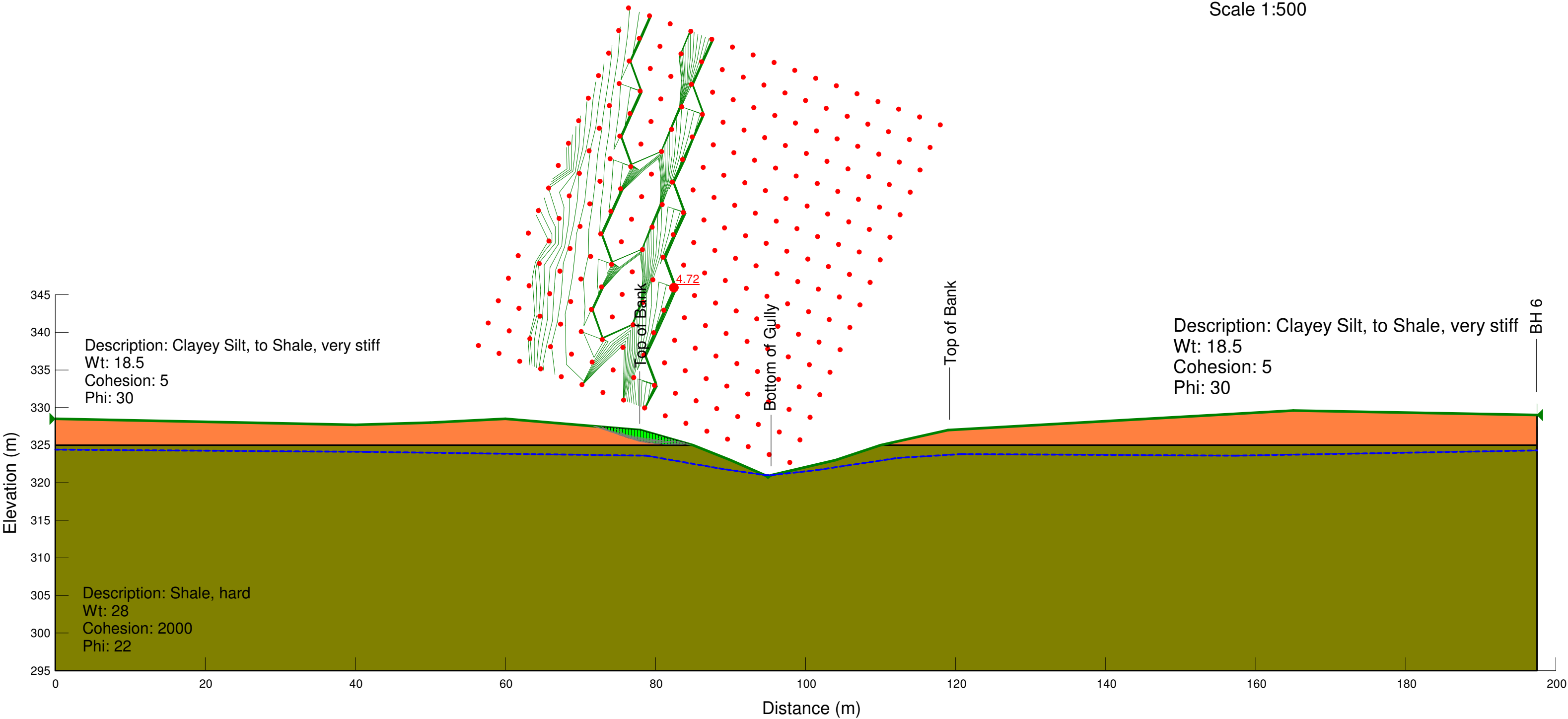


Terraprobe

Figure 16
Existing Section FF'

Project Number 31-12-8015
Meaford Highlands
Meaford, Ontario

Scale 1:500

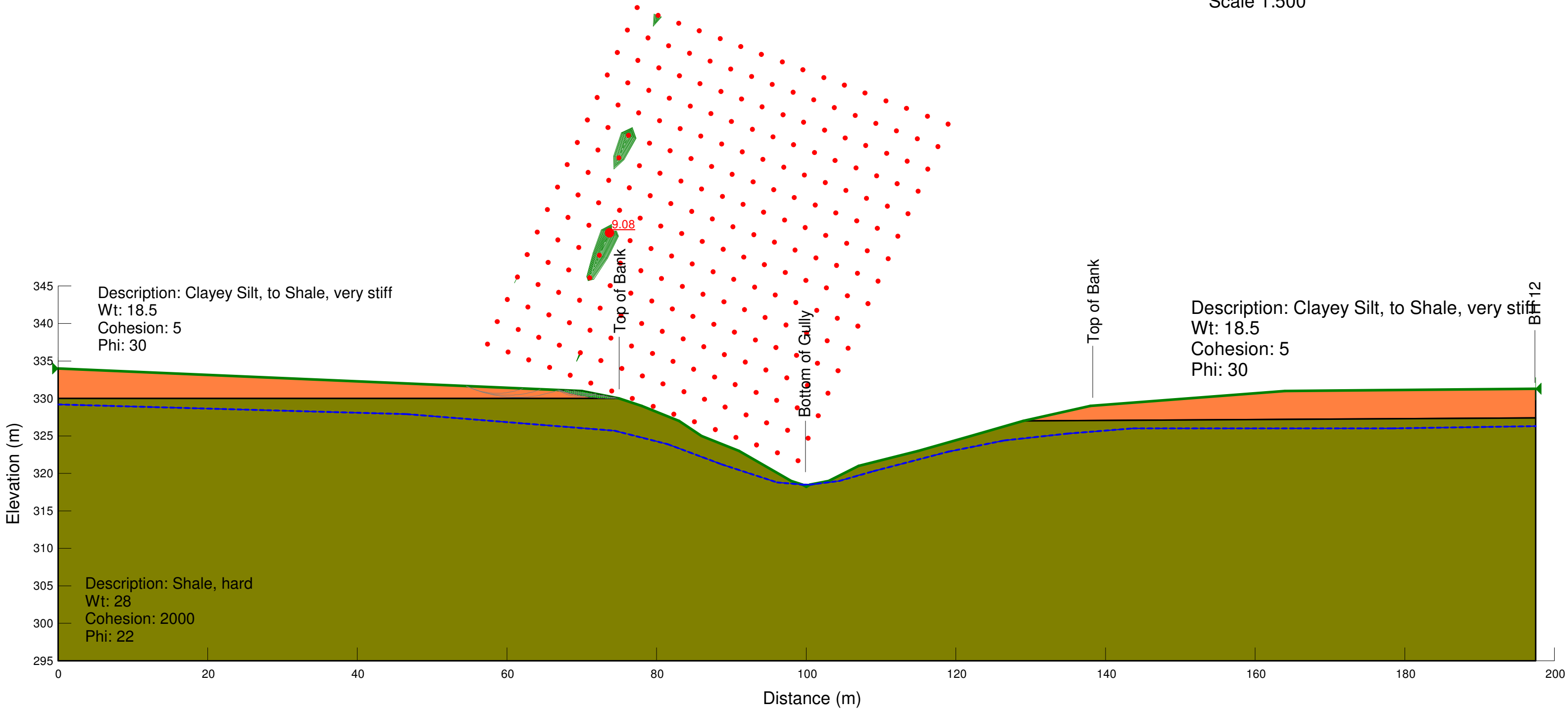


Terraprobe

Figure 17
Existing Section GG'

Project Number 31-12-8015
Meaford Highlands
Meaford, Ontario

Scale 1:500

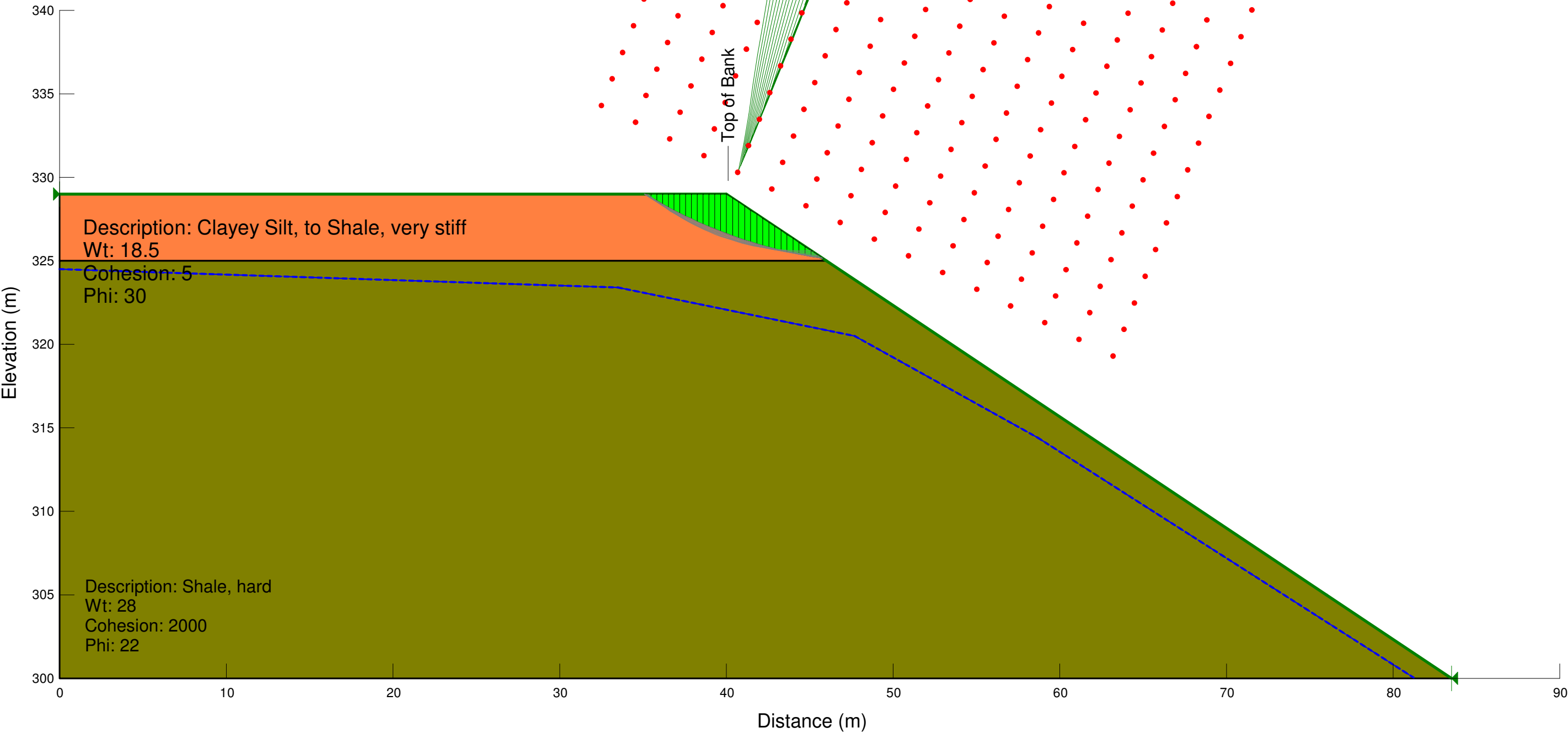


Terraprobe

Figure 19
Hypothetical 1.5:1 Section
For FS = 1.5

Project Number 31-12-8015
Meaford Highlands
Meaford, Ontario

Scale 1:250

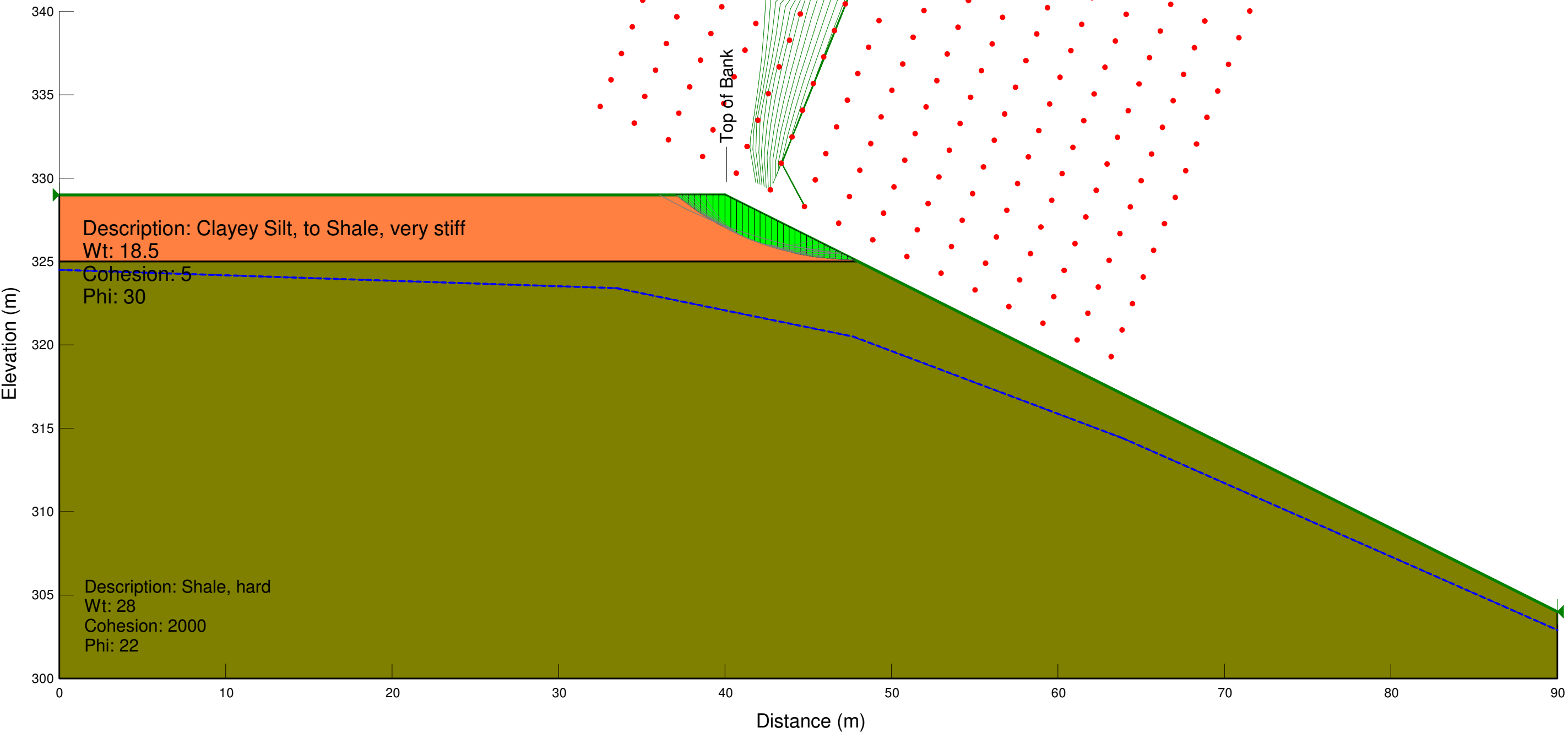


Terraprobe

Figure 18
Hypothetical 2:1 Section
For FS = 1.5

Project Number 31-12-8015
Meaford Highlands
Meaford, Ontario

Scale 1:250



Terraprobe

Figure 20
Hypothetical 1:1 Section
For FS = 1.5

Project Number 31-12-8015
Meaford Highlands
Meaford, Ontario

Scale 1:250

