




# Memo

**Date:** May 17, 2021

**To:** Nick Olson, Project Manager  
Metro District

**From:** Chelsey A. Brummer, Graduate Engineer  
Geotechnical Section 

**Concur:** Rich Lamb, Foundations Engineer  
Geotechnical Section

**Subject:** S.P. 0215-76 Noise Walls  
Located between W Main St. And 7<sup>th</sup> Ave in Anoka, MN  
Geotechnical Data Report

---

## 1.0 Project Description

This letter provides a foundation analysis and set of recommendations for the construction of five precast concrete noise walls along TH 10 between W Main St. and 7<sup>th</sup> Ave in Anoka, MN.

## 2.0 Field Investigation and Foundation Conditions

75 Cone Penetration Tests (CPT) were advanced in June of 2020 near the proposed noise wall locations by MnDOT consultant Braun Intertec. Several CPTs produced inconclusive results and a second test was run at these locations and is denoted with an A on the CPT logs. A copy of the CPT results are attached to this report.

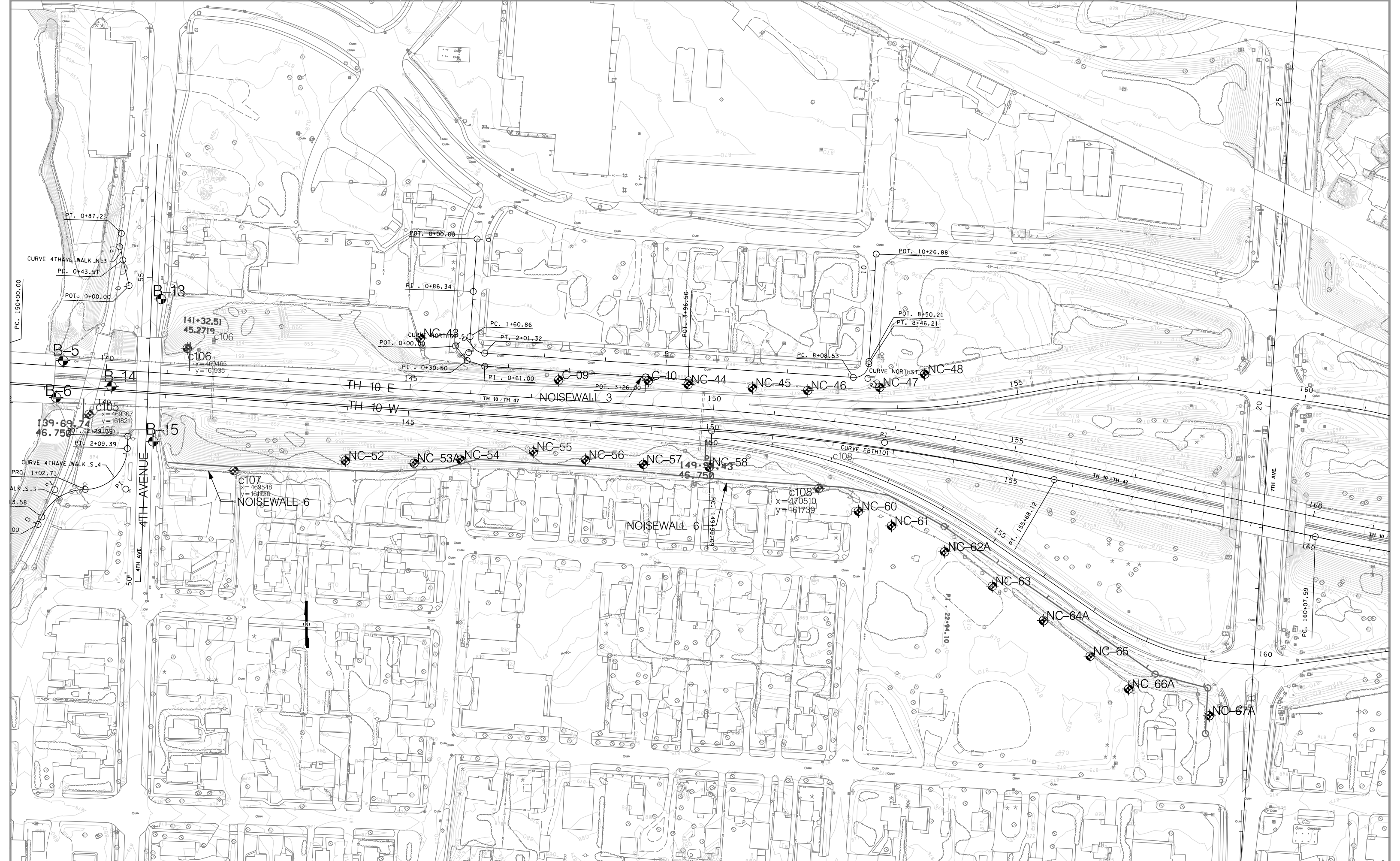
The soils encountered at the noise wall locations generally consist of dense to very dense sandy soils with firm to hard silt and clay seams starting at approximately 25 feet deep. NC-11, NC-22, NC-22A, NC-23, NC-36, NC-63, NC-65, and NC-67A all contain an approximately 10 to 15 foot layer of firm to hard silt and clay ranging from 25 to 40 feet deep. The CPT soundings were terminated between approximately 3 and 70 feet. Ground water was not measured during testing.

Attachments: CPT Location Plan  
CPT Plan and Profile  
CPT Sounding Index  
CPT Sounding Logs

cc: Brad Skow (Geotechnical Section Manager)  
Dave VanDeusen (Metro District Materials Engineer)







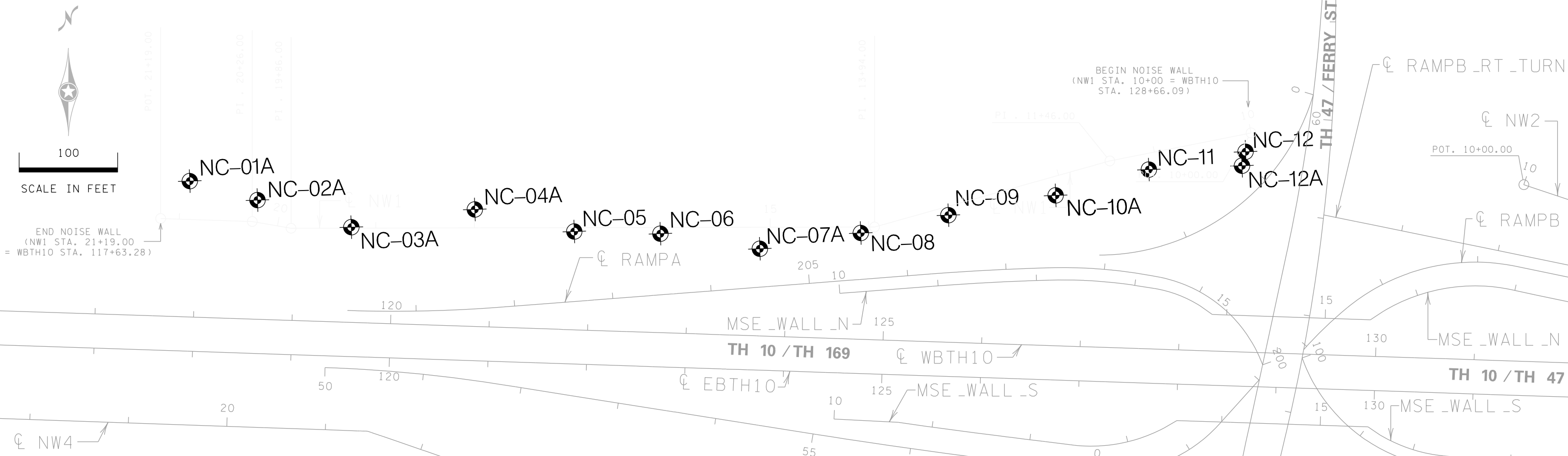


100

SCALE IN FEET

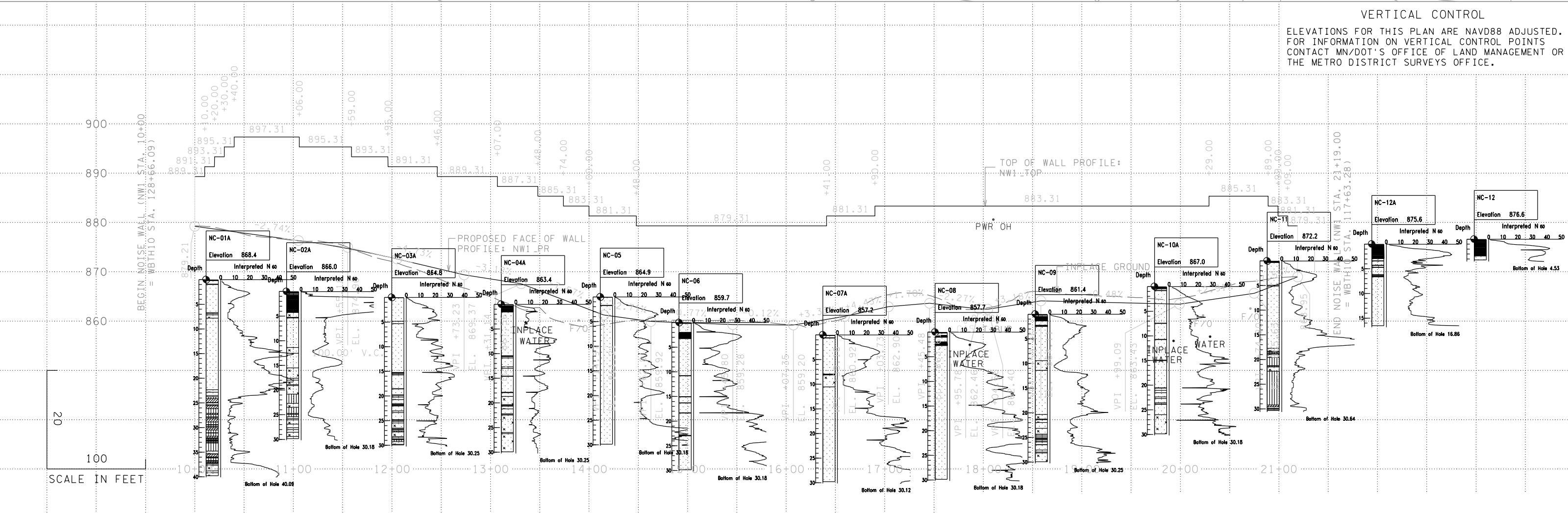
END NOISE WALL  
(NW1 STA. 21+19.00  
= WBTH10 STA. 117+63.28)

BEGIN NOISE WALL  
(NW1 STA. 10+00 = WBTH10  
STA. 128+66.09)



VERTICAL CONTROL

ELEVATIONS FOR THIS PLAN ARE NAVD88 ADJUSTED.  
FOR INFORMATION ON VERTICAL CONTROL POINTS  
CONTACT MN/DOT'S OFFICE OF LAND MANAGEMENT OR  
THE METRO DISTRICT SURVEYS OFFICE.

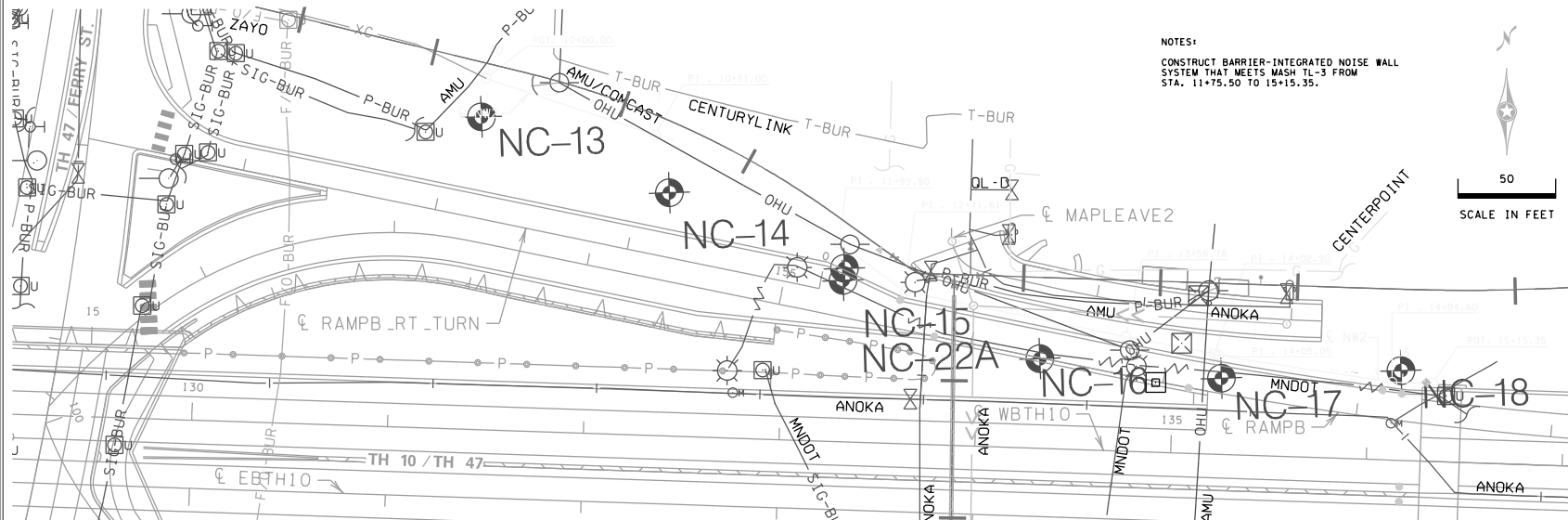


20

100

SCALE IN FEET

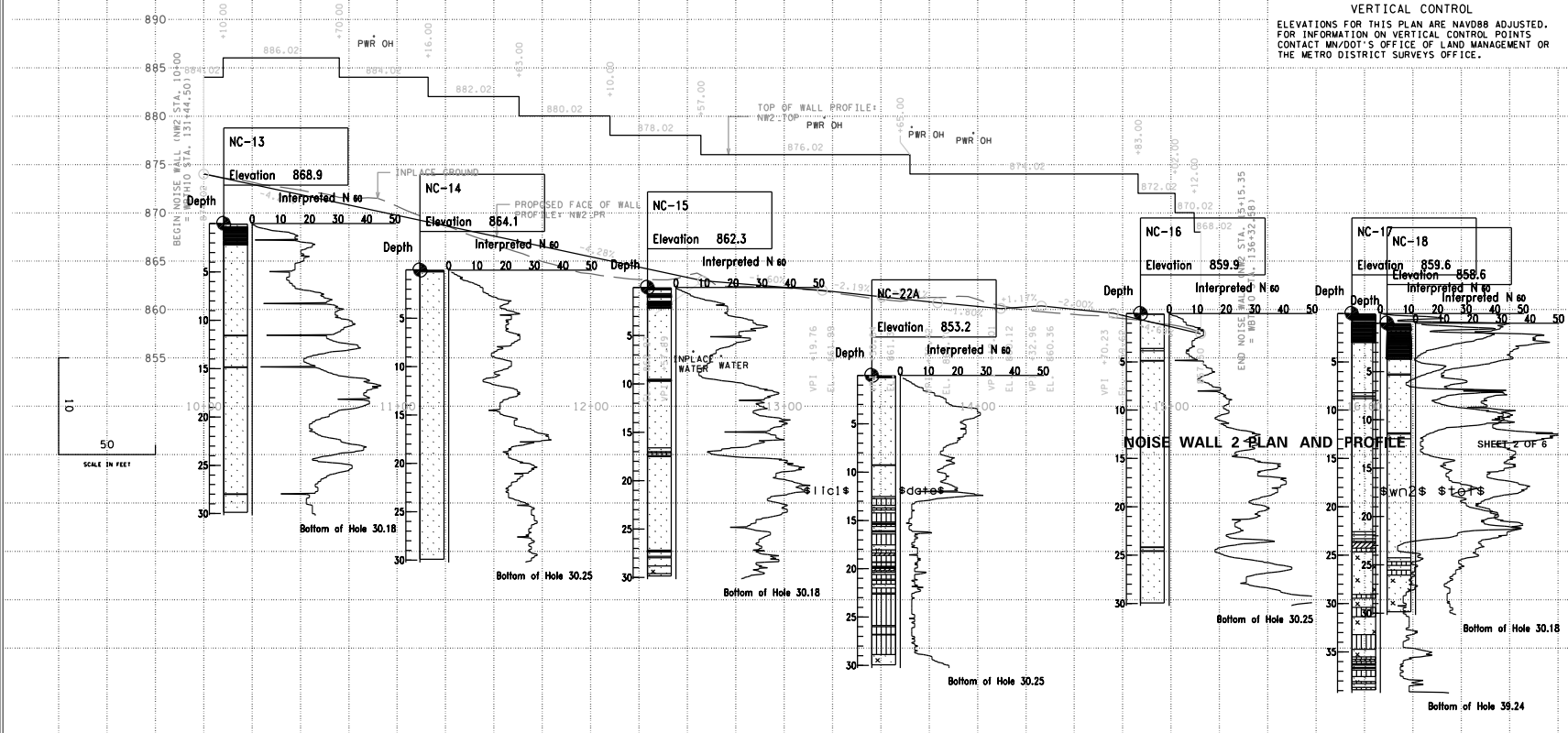
NOISE WALL 1 PLAN AND PROFILE



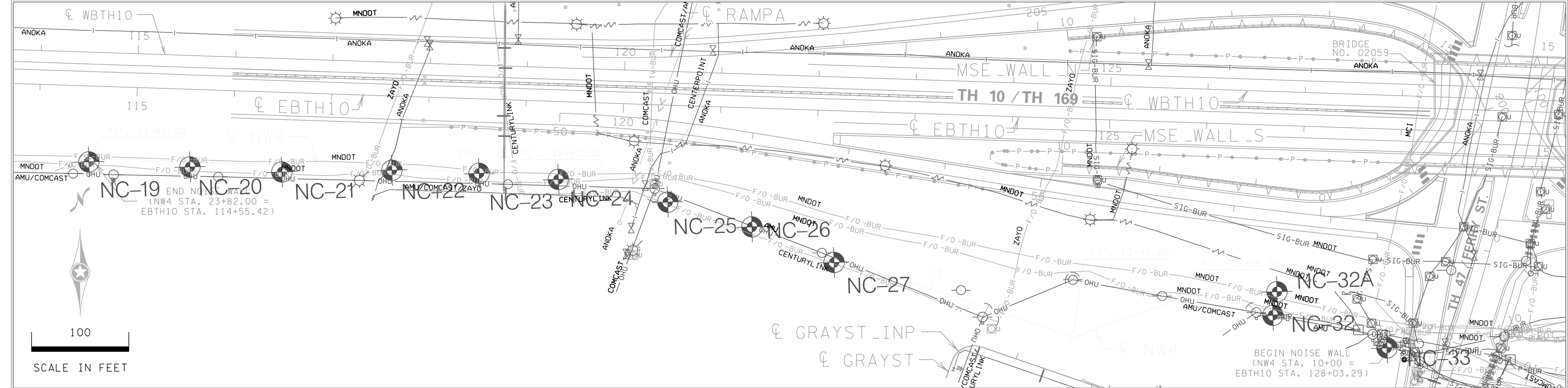
NOTES:  
 CONSTRUCT BARRIER-INTEGRATED NOISE WALL SYSTEM THAT MEETS WASH TL-3 FROM STA. 11+75.50 TO 15+15.35.

50  
 SCALE IN FEET

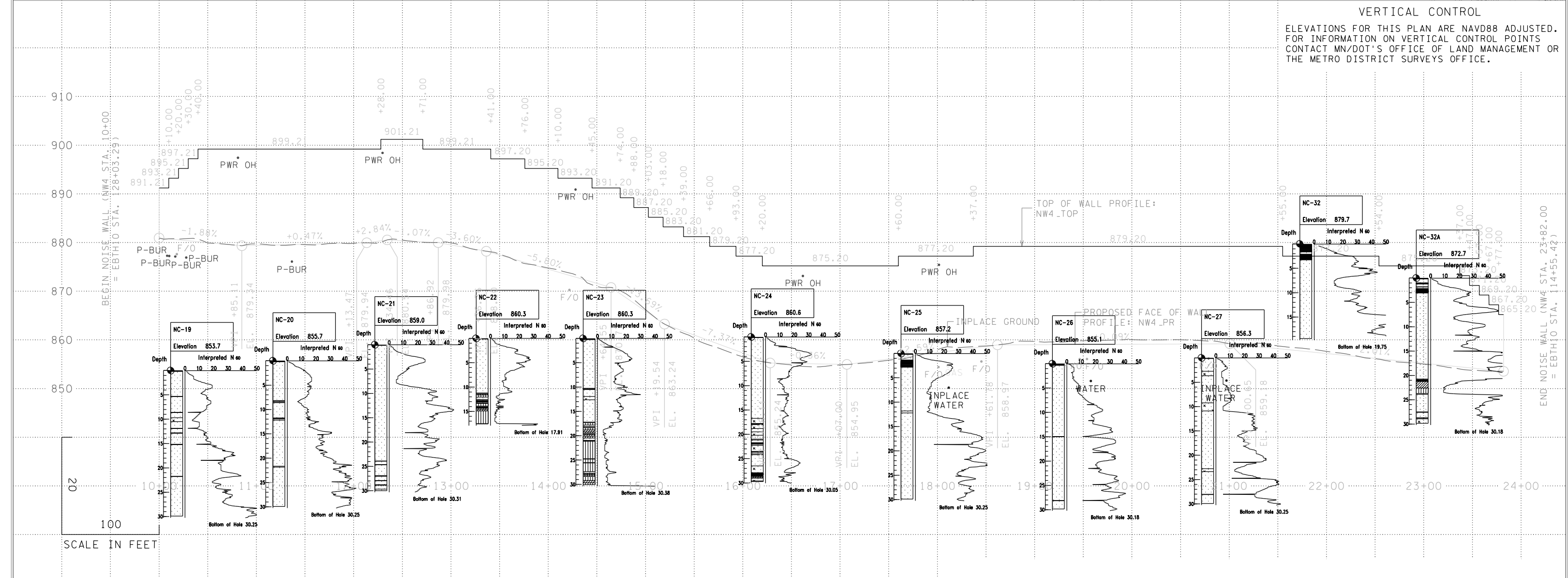
VERTICAL CONTROL  
 ELEVATIONS FOR THIS PLAN ARE NAVD88 ADJUSTED. FOR INFORMATION ON VERTICAL CONTROL POINTS CONTACT MN/DOT'S OFFICE OF LAND MANAGEMENT OR THE METRO DISTRICT SURVEYS OFFICE.

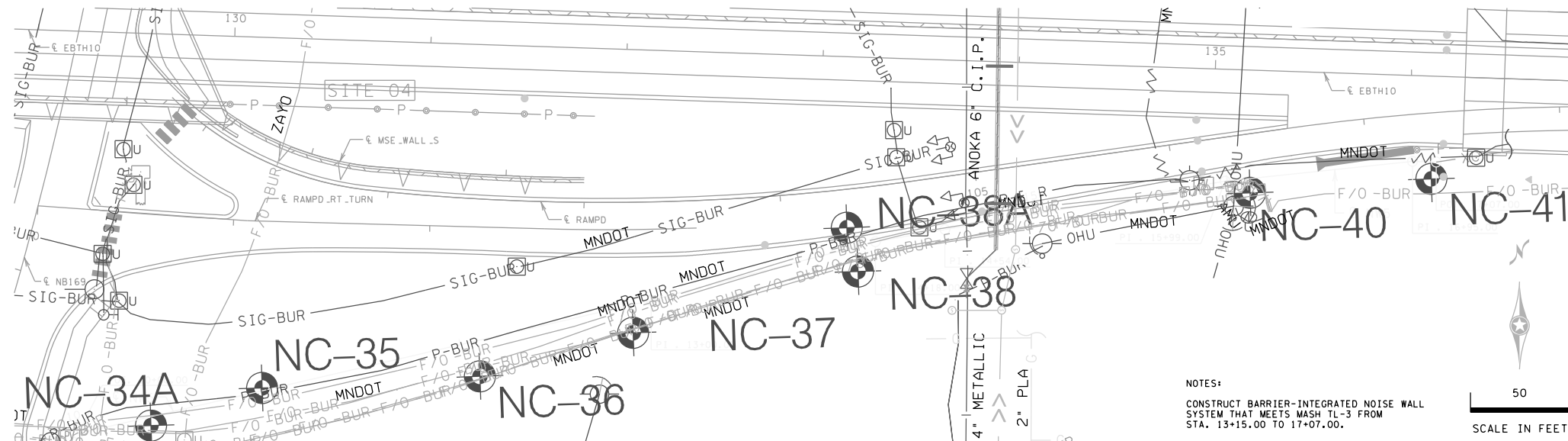


**NOISE WALL 2 PLAN AND PROFILE**



**VERTICAL CONTROL**  
 ELEVATIONS FOR THIS PLAN ARE NAVD88 ADJUSTED.  
 FOR INFORMATION ON VERTICAL CONTROL POINTS  
 CONTACT MN/DOT'S OFFICE OF LAND MANAGEMENT OR  
 THE METRO DISTRICT SURVEYS OFFICE.



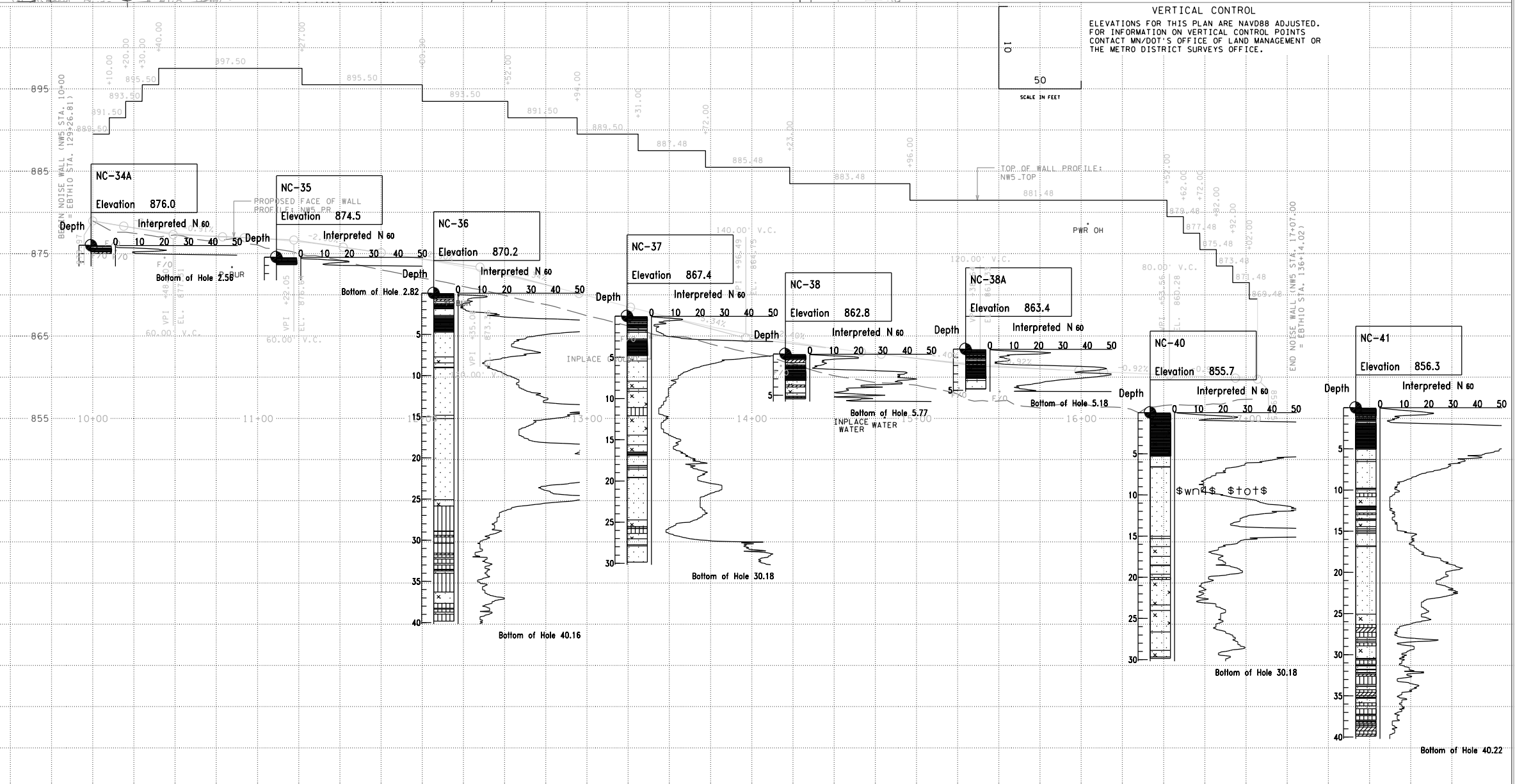


NOTES:  
 CONSTRUCT BARRIER-INTEGRATED NOISE WALL SYSTEM THAT MEETS MASH TL-3 FROM STA. 13+15.00 TO 17+07.00.

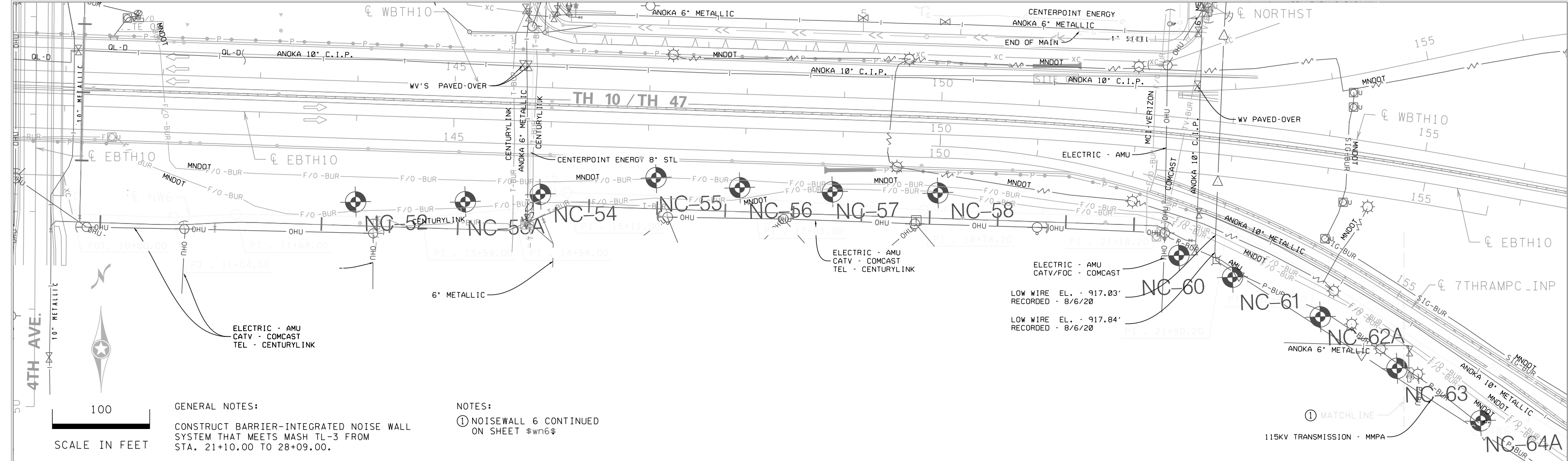
SCALE IN FEET

VERTICAL CONTROL  
 ELEVATIONS FOR THIS PLAN ARE NAVD88 ADJUSTED. FOR INFORMATION ON VERTICAL CONTROL POINTS CONTACT MN/DOT'S OFFICE OF LAND MANAGEMENT OR THE METRO DISTRICT SURVEYS OFFICE.

SCALE IN FEET



**NOISE WALL 5 PLAN AND PROFILE**



**GENERAL NOTES:**

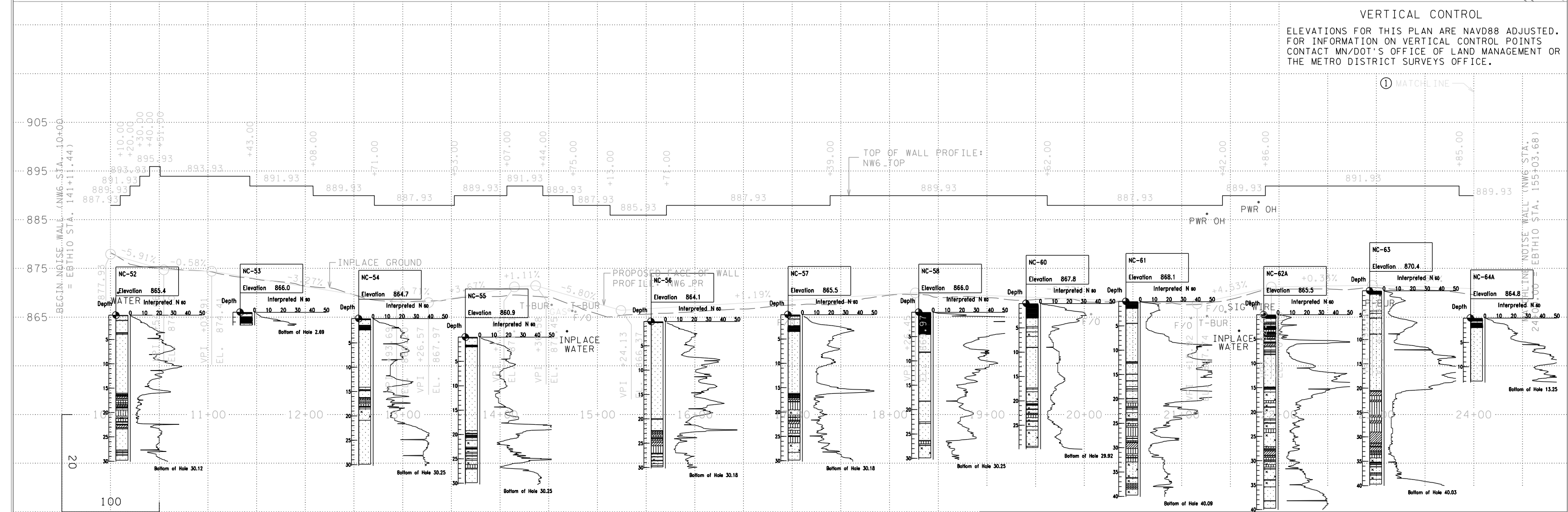
CONSTRUCT BARRIER-INTEGRATED NOISE WALL SYSTEM THAT MEETS MASH TL-3 FROM STA. 21+10.00 TO 28+09.00.

**NOTES:**

① NOISEWALL 6 CONTINUED ON SHEET \$wn6\$

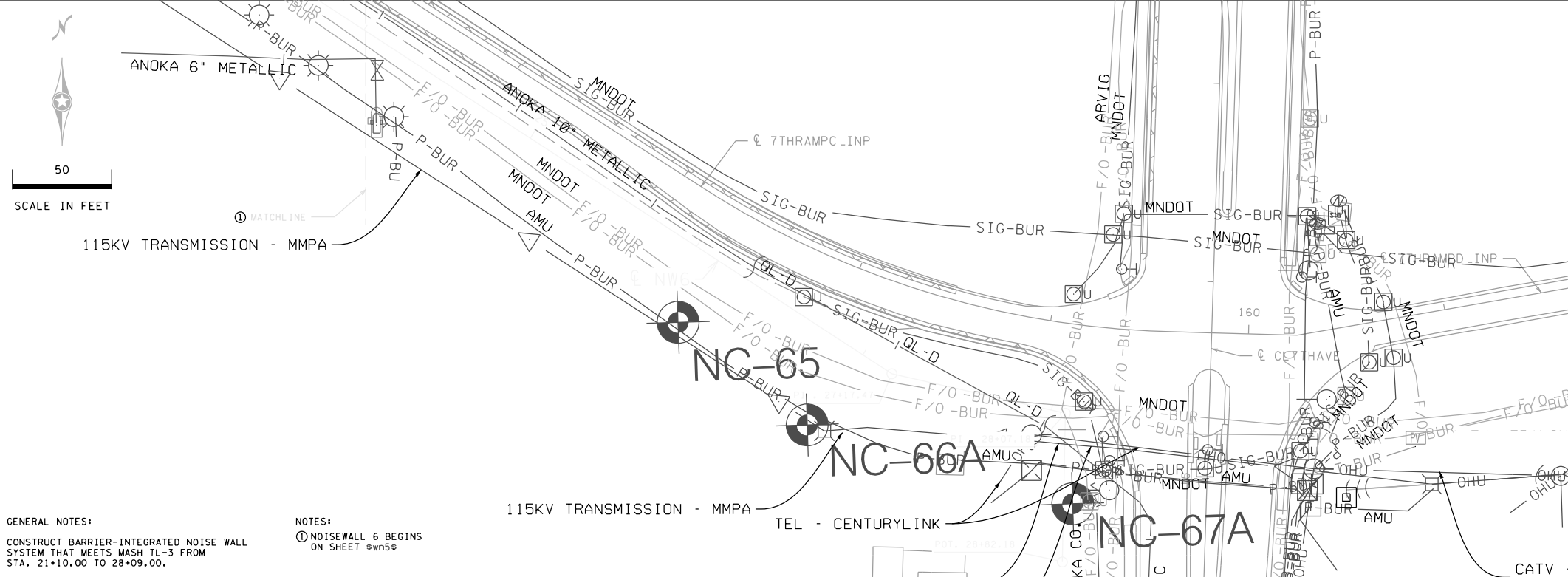
**VERTICAL CONTROL**

ELEVATIONS FOR THIS PLAN ARE NAVD88 ADJUSTED. FOR INFORMATION ON VERTICAL CONTROL POINTS CONTACT MN/DOT'S OFFICE OF LAND MANAGEMENT OR THE METRO DISTRICT SURVEYS OFFICE.



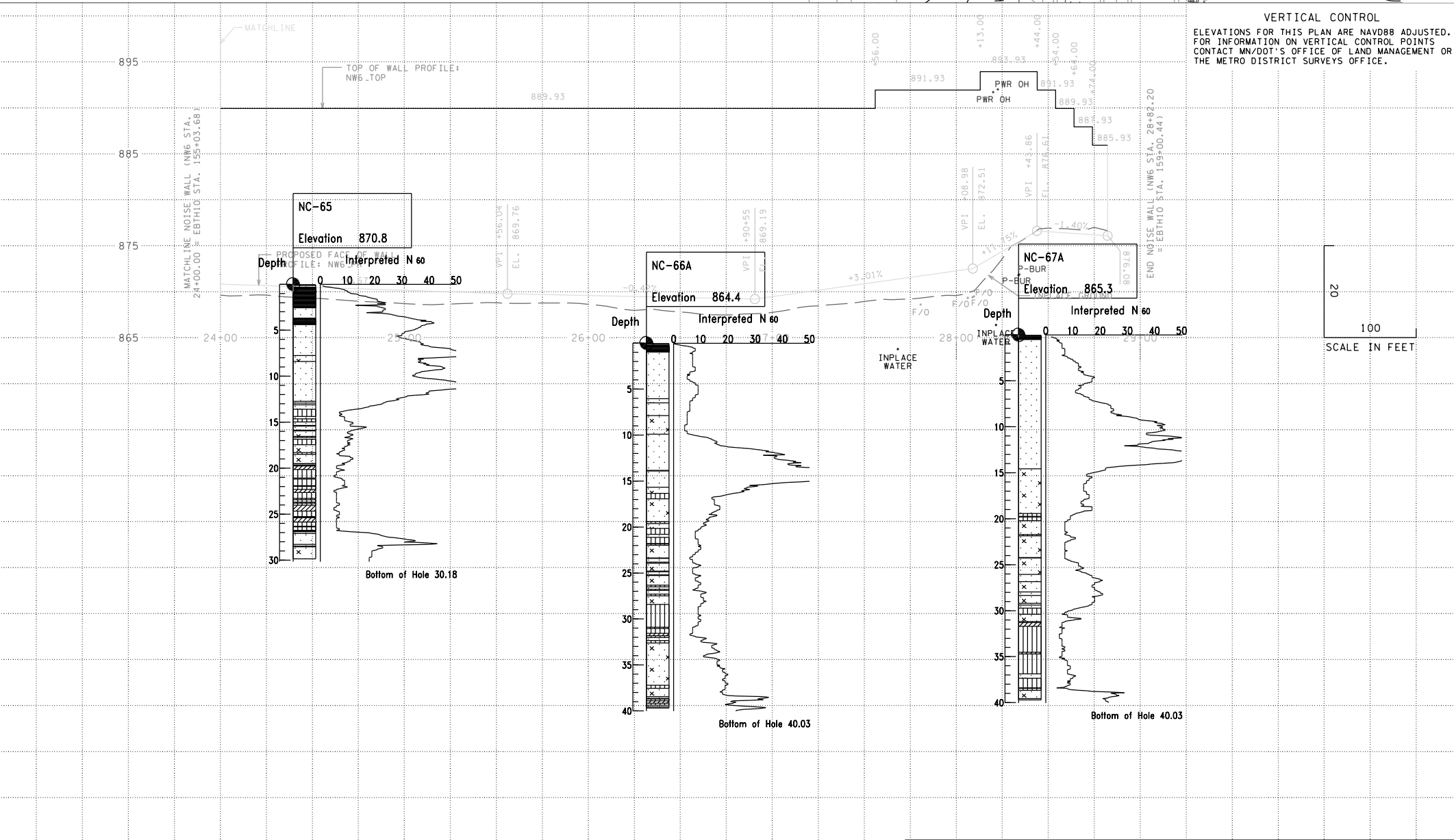
**NOISE WALL 6 PLAN AND PROFILE**





GENERAL NOTES:  
 CONSTRUCT BARRIER-INTEGRATED NOISE WALL SYSTEM THAT MEETS MASH TL-3 FROM STA. 21+10.00 TO 28+09.00.

NOTES:  
 NOISEWALL 6 BEGINS ON SHEET #wrt5#

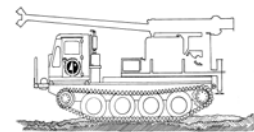


VERTICAL CONTROL  
 ELEVATIONS FOR THIS PLAN ARE NAVD88 ADJUSTED. FOR INFORMATION ON VERTICAL CONTROL POINTS CONTACT MNDOT'S OFFICE OF LAND MANAGEMENT OR THE METRO DISTRICT SURVEYS OFFICE.

SCALE IN FEET  
 20  
 100



# Minnesota Department of Transportation Geotechnical Section



## Cone Penetration Test Index Sheet 1.0 (CPT 1.0)

### USER NOTES, ABBREVIATIONS AND DEFINITIONS

This Index sheet accompanies Cone Penetration Test Data. Please refer to the Boring Log Descriptive Terminology Sheet for information relevant to conventional boring logs.

This Cone Penetration Test (CPT) Sounding follows ASTM D 5778 and was made by ordinary and conventional methods and with care deemed adequate for the Department's design purposes. Since this sounding was not taken to gather information relating to the construction of the project, the data noted in the field and recorded may not necessarily be the same as that which a contractor would desire. While the Department believes that the information as to the conditions and materials reported is accurate, it does not warrant that the information is necessarily complete. This information has been edited or abridged and may not reveal all the information which might be useful or of interest to the contractor. Consequently, the Department will make available at its offices, the field logs relating to this sounding.

Since subsurface conditions outside each CPT Sounding are unknown, and soil, rock and water conditions cannot be relied upon to be consistent or uniform, no warrant is made that conditions adjacent to this sounding will necessarily be the same as or similar to those shown on this log. Furthermore, the Department will not be responsible for any interpretations, assumptions, projections or interpolations made by contractors, or other users of this log.

Water pressure measurements and subsequent interpreted water levels shown on this log should be used with discretion since they represent dynamic conditions. Dynamic Pore water pressure measurements may deviate substantially from hydrostatic conditions, especially in cohesive soils. In cohesive soils, water pressures often take extended periods of time to reach equilibrium and thus reflect their true field level. Water levels can be expected to vary both seasonally and yearly. The absence of notations on this log regarding water does not necessarily mean that this boring was dry or that the contractor will not encounter subsurface water during the course of construction.

### CPT Terminology

- CPT ..... Cone Penetration Test
- CPTU ..... Cone Penetration Test with Pore Pressure measurements
- SCPTU ..... Cone Penetration Test with Pore Pressure and Seismic measurements
- Piezocone... Common name for CPTU test

(Note: This test is not related to the Dynamic Cone Penetrometer DCP)

### q<sub>t</sub> TIP RESISTANCE

The resistance at the cone corrected for water pressure. Data is from cone with 60 degree apex angle and a 10 cm<sup>2</sup> end area.

### f<sub>s</sub> SLEEVE FRICTION RESISTANCE

The resistance along the sleeve of the penetrometer.

### FR Friction Ratio

Ratio of sleeve friction over corrected tip resistance.

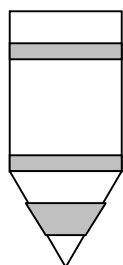
$$FR = f_s/q_t$$

### V<sub>s</sub> Shear Wave Velocity

A measure of the speed at which a seismic wave travels through soil/rock.

### PORE WATER MEASUREMENTS

Pore water measurements reported on CPT Log are representative of water pressures measured at the U2 location, just behind the cone tip, prior to the sleeve, as shown in the figure below. These measurements are considered to be dynamic water pressures due to the local disturbance caused by the cone tip. Dynamic water pressure decay and Static water pressure measurements are reported on a Pore Water Pressure Dissipation Graph.



U2

### SBT SOIL BEHAVIOR TYPE

Soil Classification methods for the Cone Penetration Test are based on correlation charts developed from observations of CPT data and conventional borings. Please note that these classification charts are meant to provide a guide to Soil Behavior Type and should not be used to infer a soil classification based on grain size distribution.

The numbers corresponding to different regions on the charts represent the following soil behavior types:

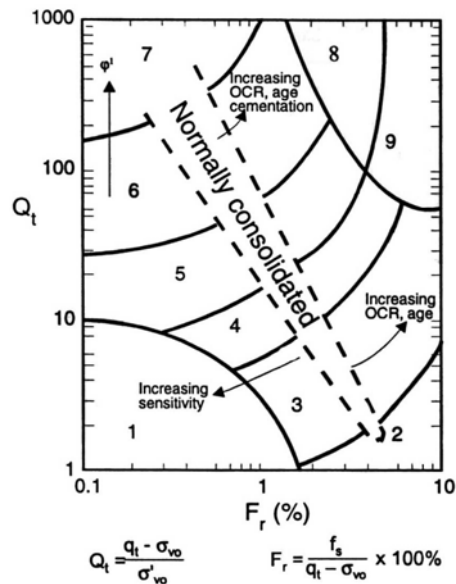
1. Sensitive, Fine Grained
2. Organic Soils - Peats
3. Clays - Clay to Silty Clay
4. Silt Mixtures - Clayey Silt to Silty Clay
5. Sand Mixtures - Silty Sand to Sandy Silt
6. Sands - Clean Sand to Silty Sand
7. Gravelly Sand to Sand
8. Very Stiff Sand to Clayey Sand
9. Very Stiff, Fine Grained

Note that engineering judgment, and comparison with conventional borings is especially important in the proper interpretation of CPT data in certain geo-materials.

The following charts are used to provide a Soil Behavior Type for the CPT Data.

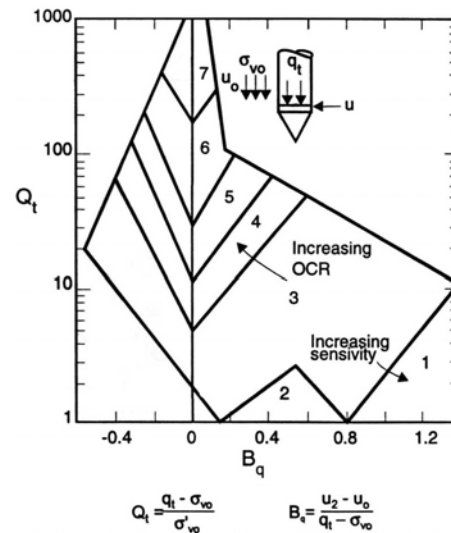
### Robertson CPT 1990

Soil Behavior type based on friction ratio



### Robertson CPTU 1990

Soil Behavior type based on pore pressure



where ...

- QT ..... normalized cone resistance
- Bq ..... pore pressure ratio
- Fr ..... Normalized friction ratio
- sigma\_vo ..... overburden pressure
- sigma'\_vo ..... effective over burden pressure
- u2 ..... measured pore pressure
- u0 ..... equilibrium pore pressure

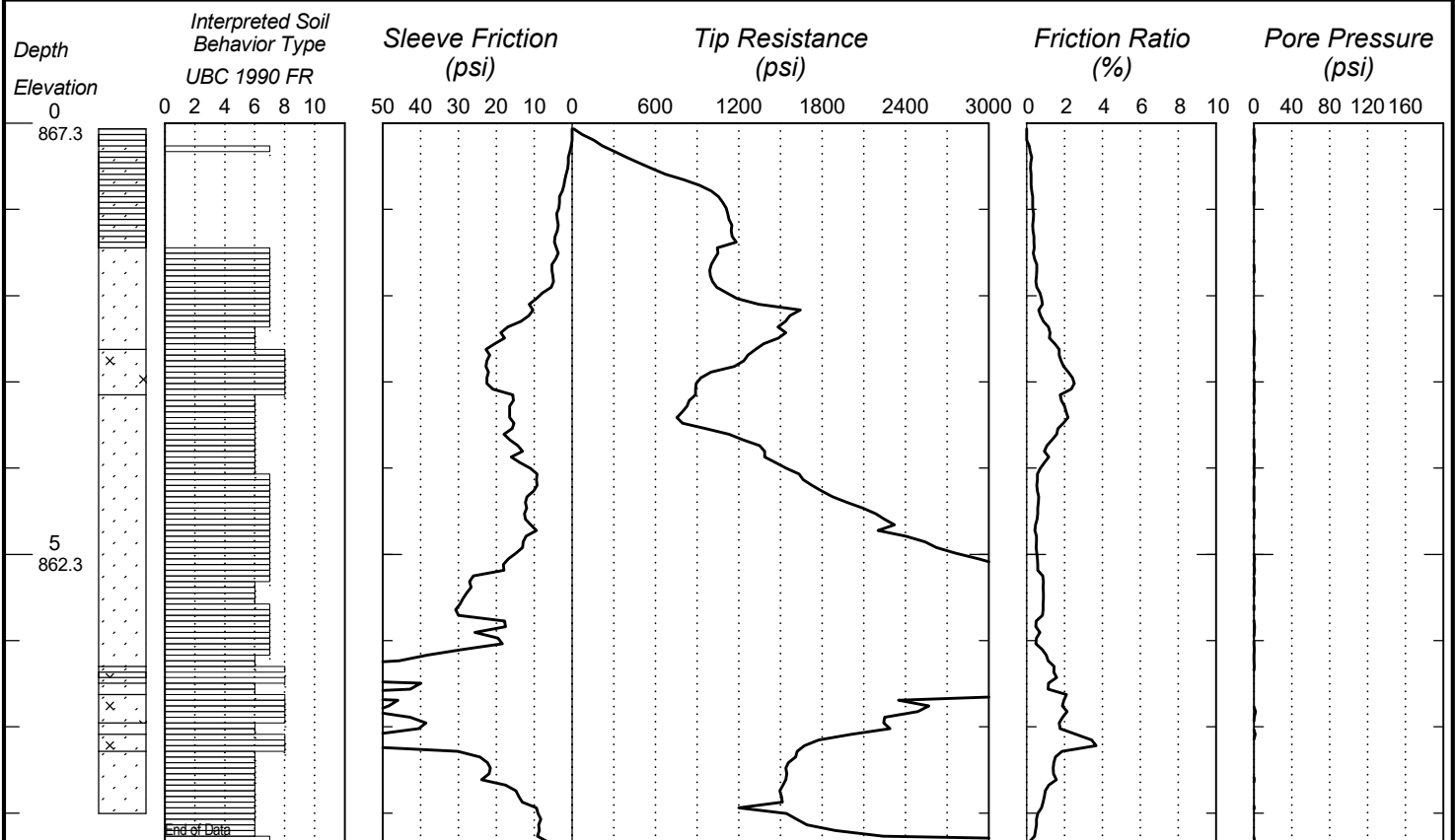
G:\GEOTECH\PUBLIC\FORMS\CPTINDEX.DOC January 30, 2002

**BRAUN**<sup>SM</sup>  
**INTERTEC**

**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85569**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-01</b>	Ground Elevation <b>867.3</b> (Surveyed)
Location Anoka County Coordinate System <b>X=467130 Y=162107</b>		CPT Machine <b>CPT-01</b>		SHEET 1 of 1
Latitude (North)=45°12'19.93" Longitude (West)=93°23'39.06"		CPT Operator <b>Holmbo</b>		Date Completed
		Hole Type <b>CPT-STD</b>		<b>6/23/20</b>



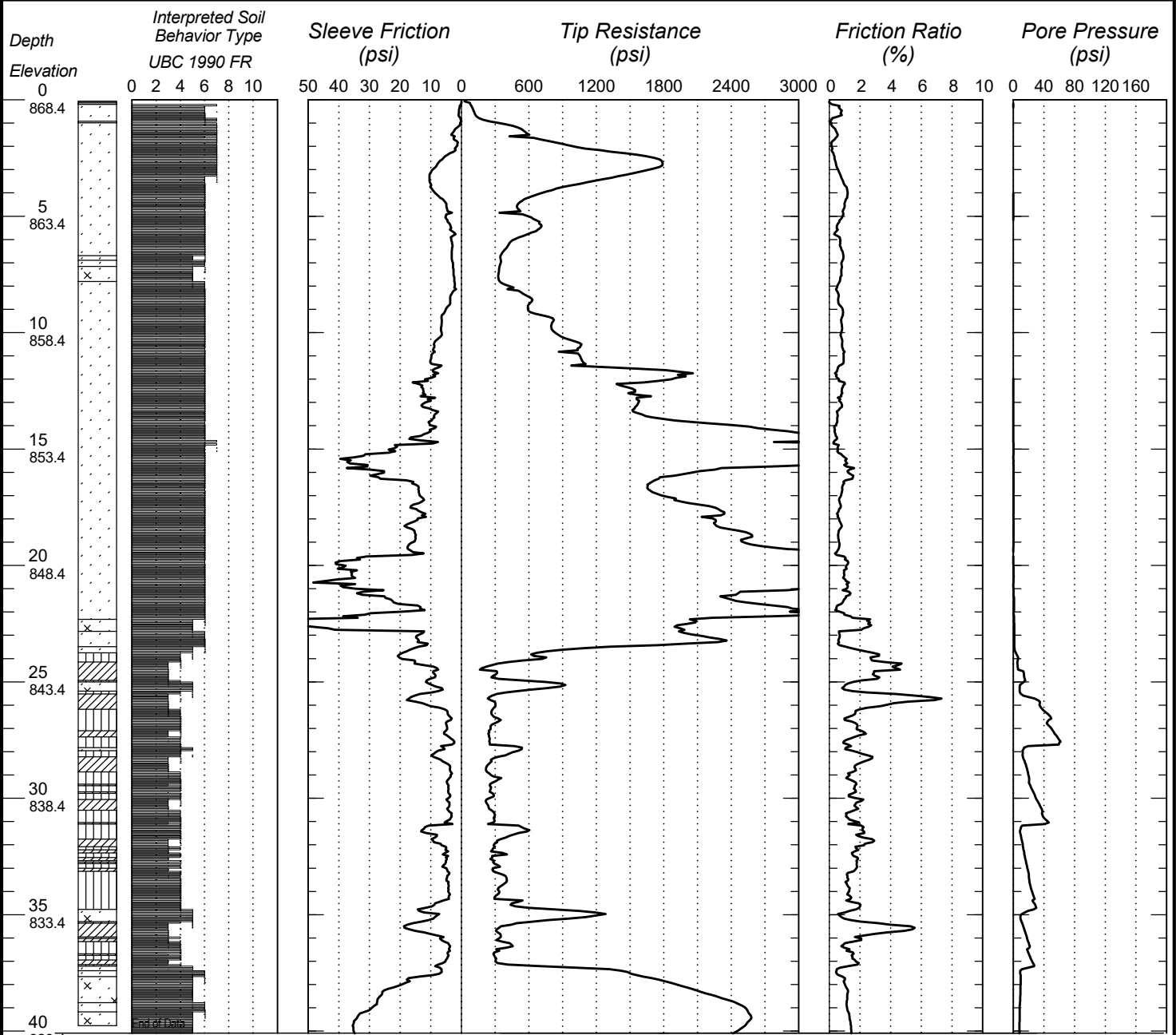
Bottom of Hole 8.33

**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85570**

**BRAUN**<sup>SM</sup>  
**INTERTEC**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-01A</b>	Ground Elevation <b>868.4</b> ( )
Location Anoka County Coordinate System <b>X=467130 Y=162107</b>		CPT Machine <b>CPT-01</b>		SHEET 1 of 1
Latitude (North)=45°12'19.93" Longitude (West)=93°23'39.06"		CPT Operator <b>Holmbo</b>		Date Completed
		Hole Type <b>CPT-STD</b>		<b>7/21/20</b>



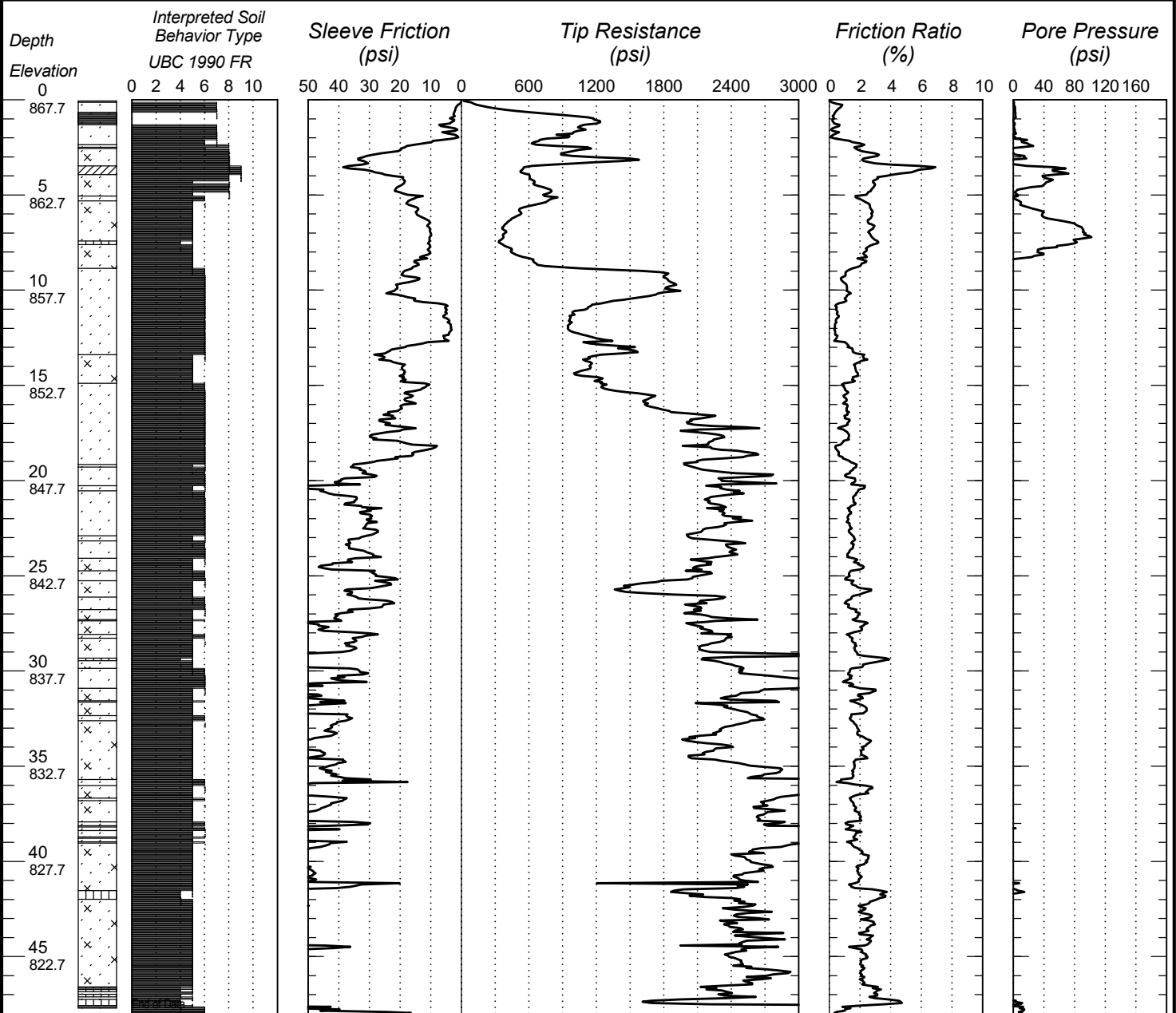
Bottom of Hole 40.09

**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85571**

**BRAUN**<sup>SM</sup>  
**INTERTEC**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-02</b>	Ground Elevation <b>867.7</b> (Surveyed)
Location Anoka County Coordinate System <b>X=467199 Y=162088</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'19.74" Longitude (West)=93°23'38.10"		CPT Operator <b>Holmbo</b>	Date Completed <b>6/23/20</b>	
		Hole Type <b>CPT-STD</b>		



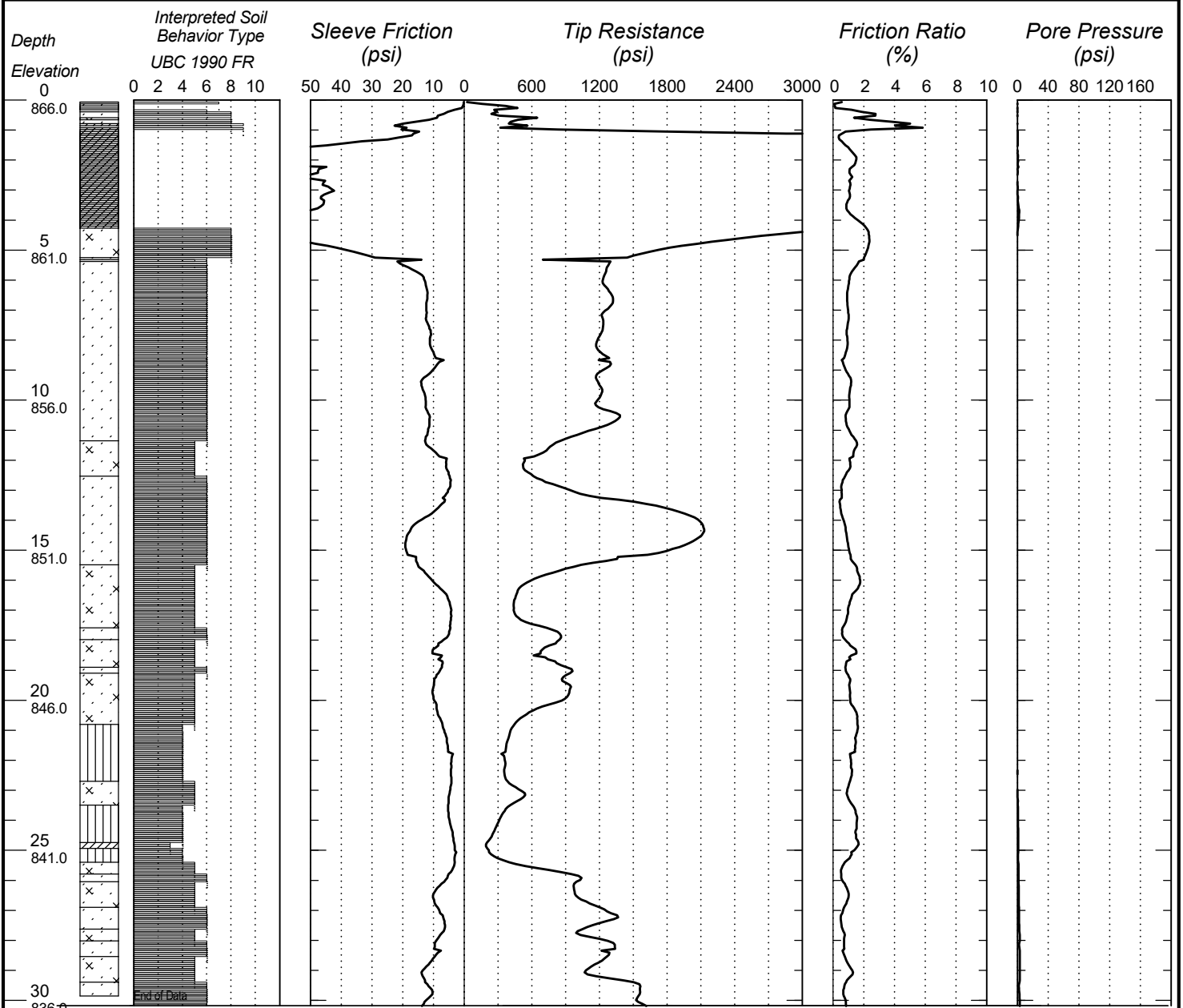
Bottom of Hole 48.03



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85572**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-02A</b>	Ground Elevation <b>866.0</b> ( )
Location Anoka County Coordinate System <b>X=467199 Y=162088</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'19.74" Longitude (West)=93°23'38.10"		CPT Operator <b>Holmbo</b>	Date Completed	
		Hole Type <b>CPT-STD</b>	<b>7/23/20</b>	



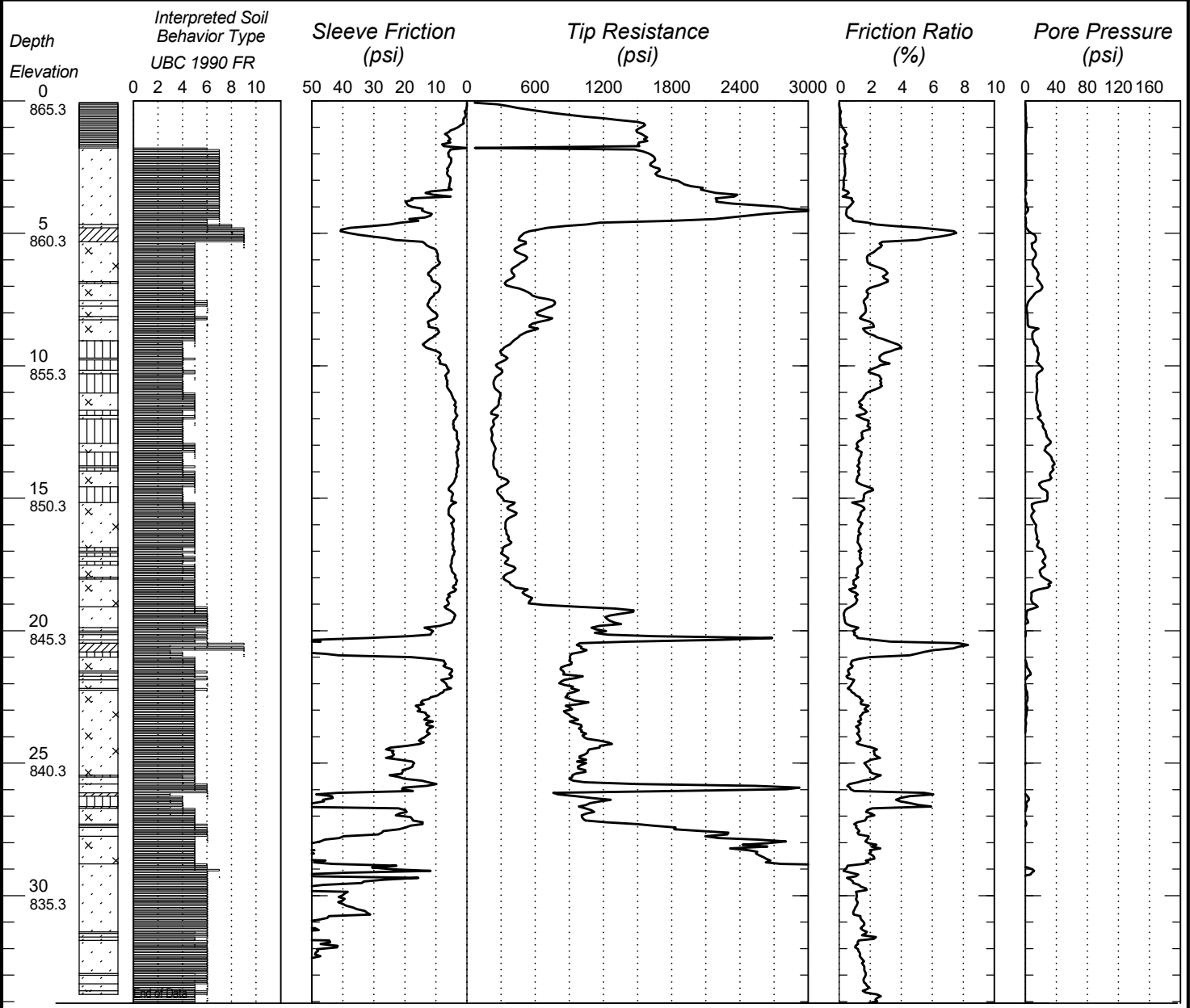
Bottom of Hole 30.18

**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85573**

**BRAUN**<sup>SM</sup>  
**INTERTEC**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-03</b>	Ground Elevation <b>865.3</b> (Surveyed)
Location Anoka County Coordinate System <b>X=467294 Y=162060</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'19.47" Longitude (West)=93°23'36.77"		CPT Operator <b>Holmbo</b>	Date Completed <b>6/23/20</b>	
		Hole Type <b>CPT-STD</b>		



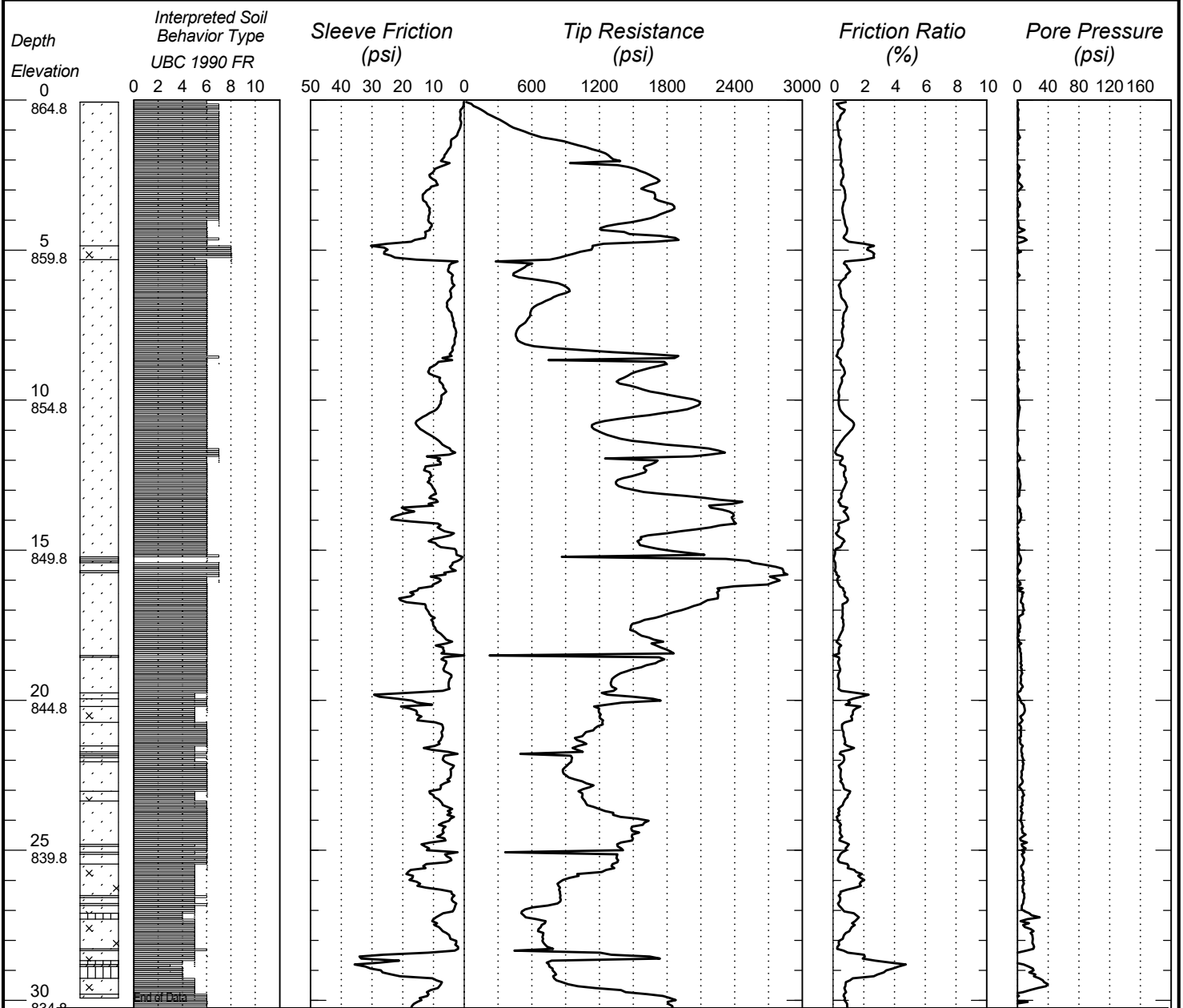
Bottom of Hole 34.06



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85574**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-03A</b>	Ground Elevation <b>864.8</b> ( )
Location Anoka County Coordinate System <b>X=467294 Y=162060</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'19.47" Longitude (West)=93°23'36.77"		CPT Operator <b>Holmbo</b>	Date Completed <b>6/25/20</b>	
		Hole Type <b>CPT-STD</b>		



Bottom of Hole 30.25

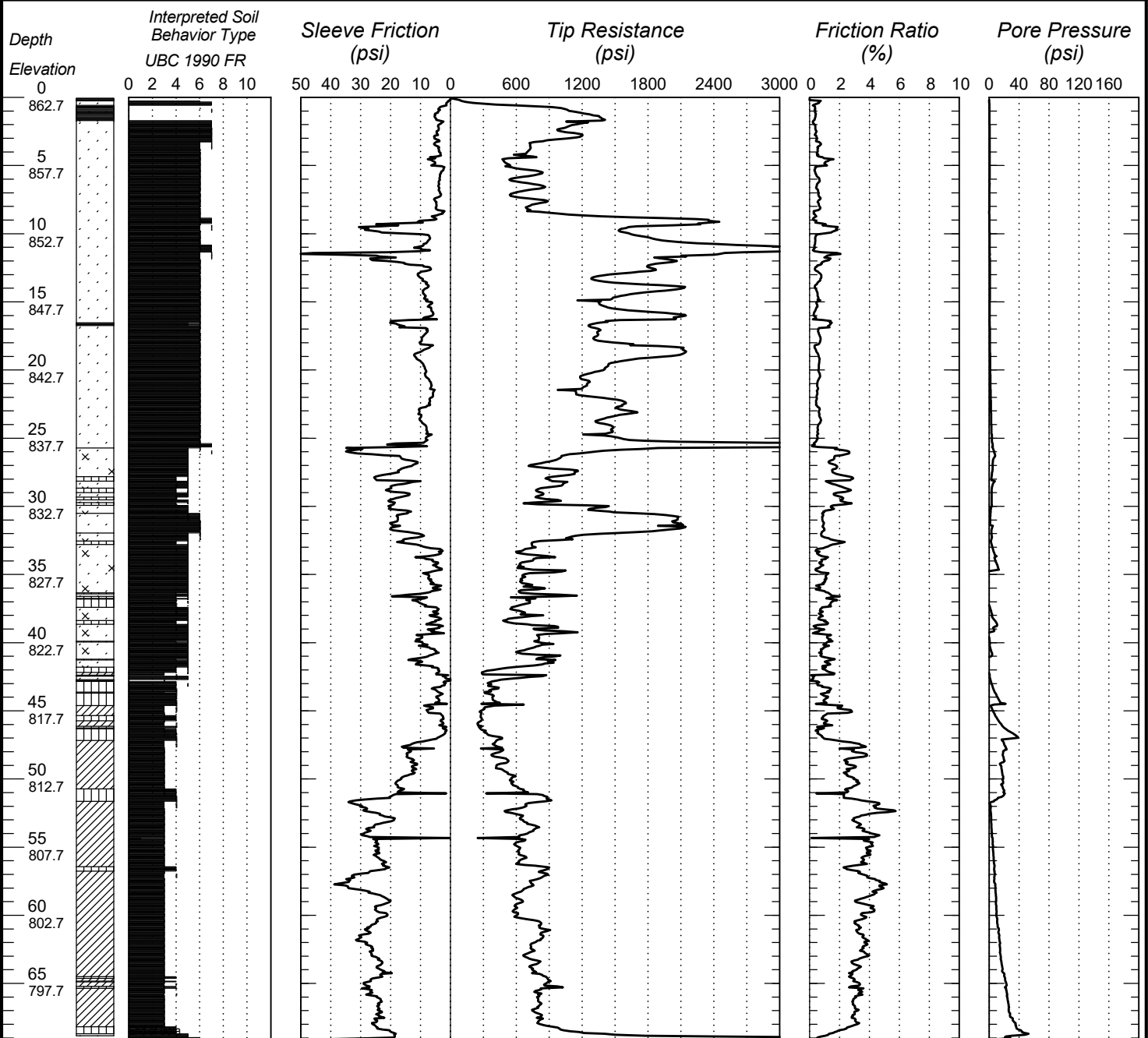


**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85575**

**BRAUN**<sup>SM</sup>  
**INTERTEC**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-04</b>	Ground Elevation <b>862.7</b> (Surveyed)
Location Anoka County Coordinate System <b>X=467420 Y=162078</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'19.65" Longitude (West)=93°23'35.02"		CPT Operator <b>Holmbo</b>	Date Completed <b>6/23/20</b>	
		Hole Type <b>CPT-STD</b>		



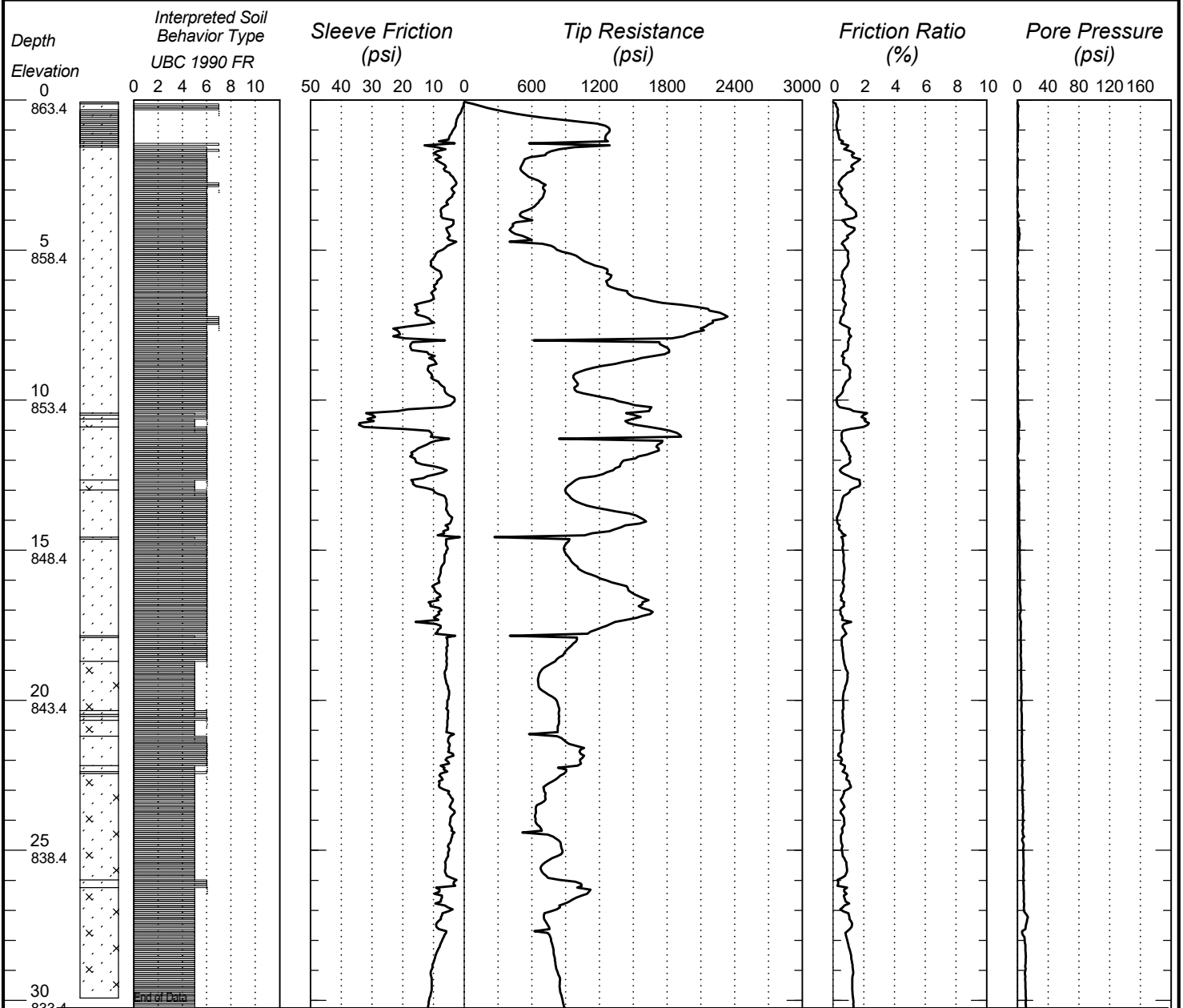
Bottom of Hole 69.16



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85576**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-04A</b>	Ground Elevation <b>863.4 ()</b>
Location Anoka County Coordinate System <b>X=467420 Y=162078</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'19.65" Longitude (West)=93°23'35.02"		CPT Operator <b>Holmbo</b>	Date Completed <b>6/25/20</b>	
		Hole Type <b>CPT-STD</b>		



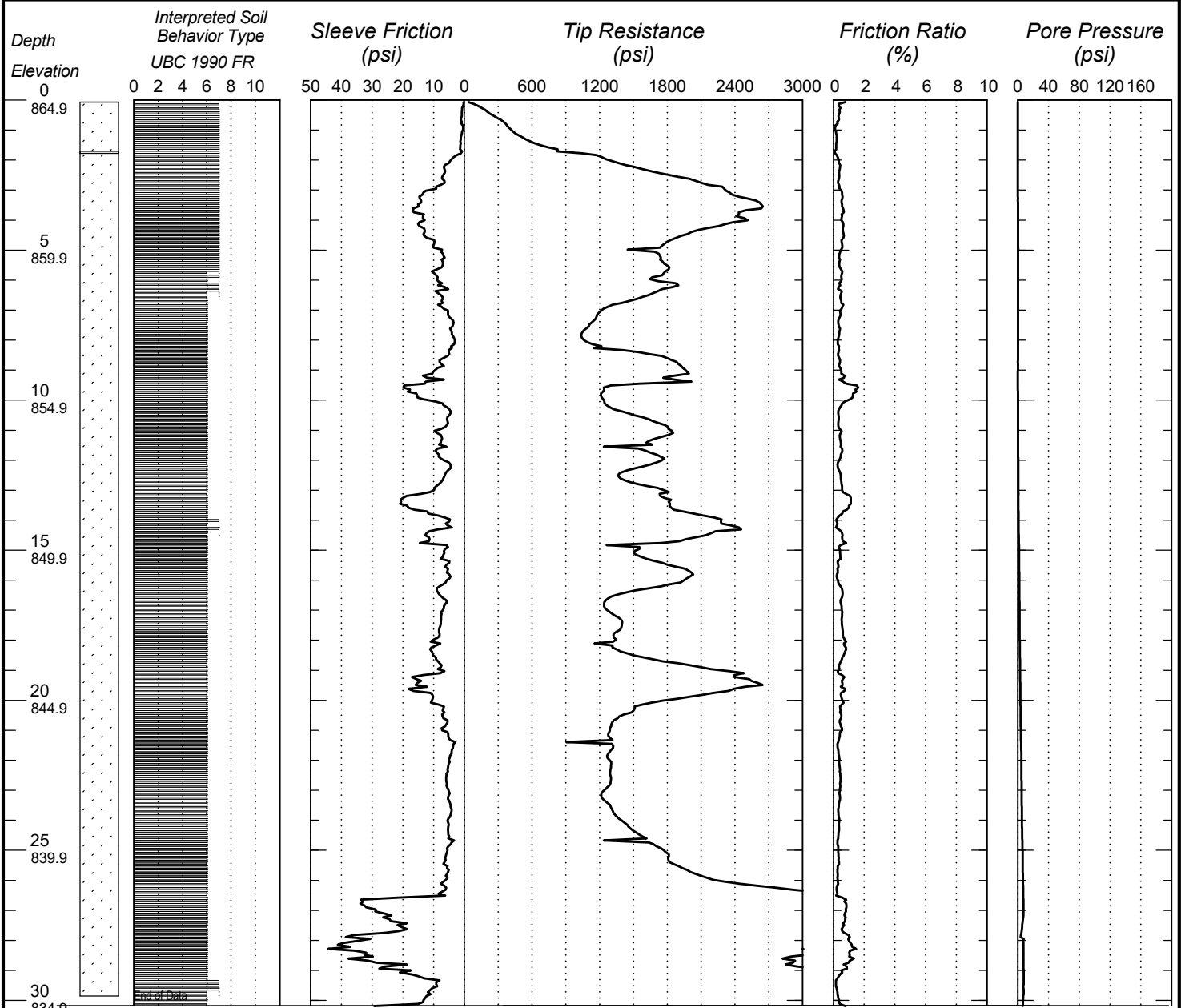
Bottom of Hole 30.25



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85577**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-05</b>	Ground Elevation <b>864.9</b> (Surveyed)
Location Anoka County Coordinate System <b>X=467521 Y=162056</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'19.43" Longitude (West)=93°23'33.61"		CPT Operator <b>Holmbo</b>	Date Completed <b>6/25/20</b>	
		Hole Type <b>CPT-STD</b>		



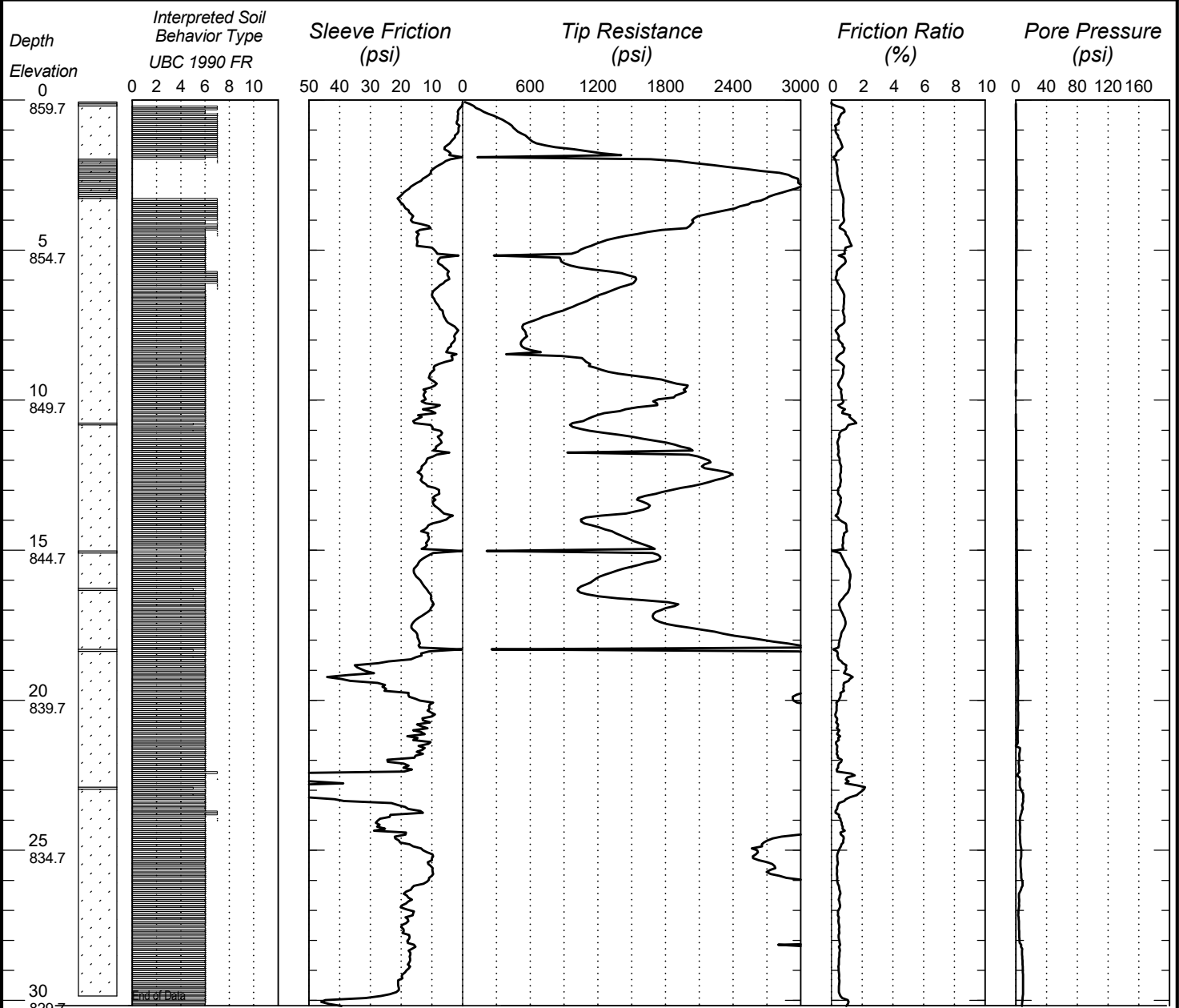
Bottom of Hole 30.18



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85578**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-06</b>	Ground Elevation <b>859.7 (Surveyed)</b>
Location Anoka County Coordinate System <b>X=467608 Y=162054</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'19.41" Longitude (West)=93°23'32.39"		CPT Operator <b>Holmbo</b>	Date Completed <b>6/25/20</b>	
		Hole Type <b>CPT-STD</b>		



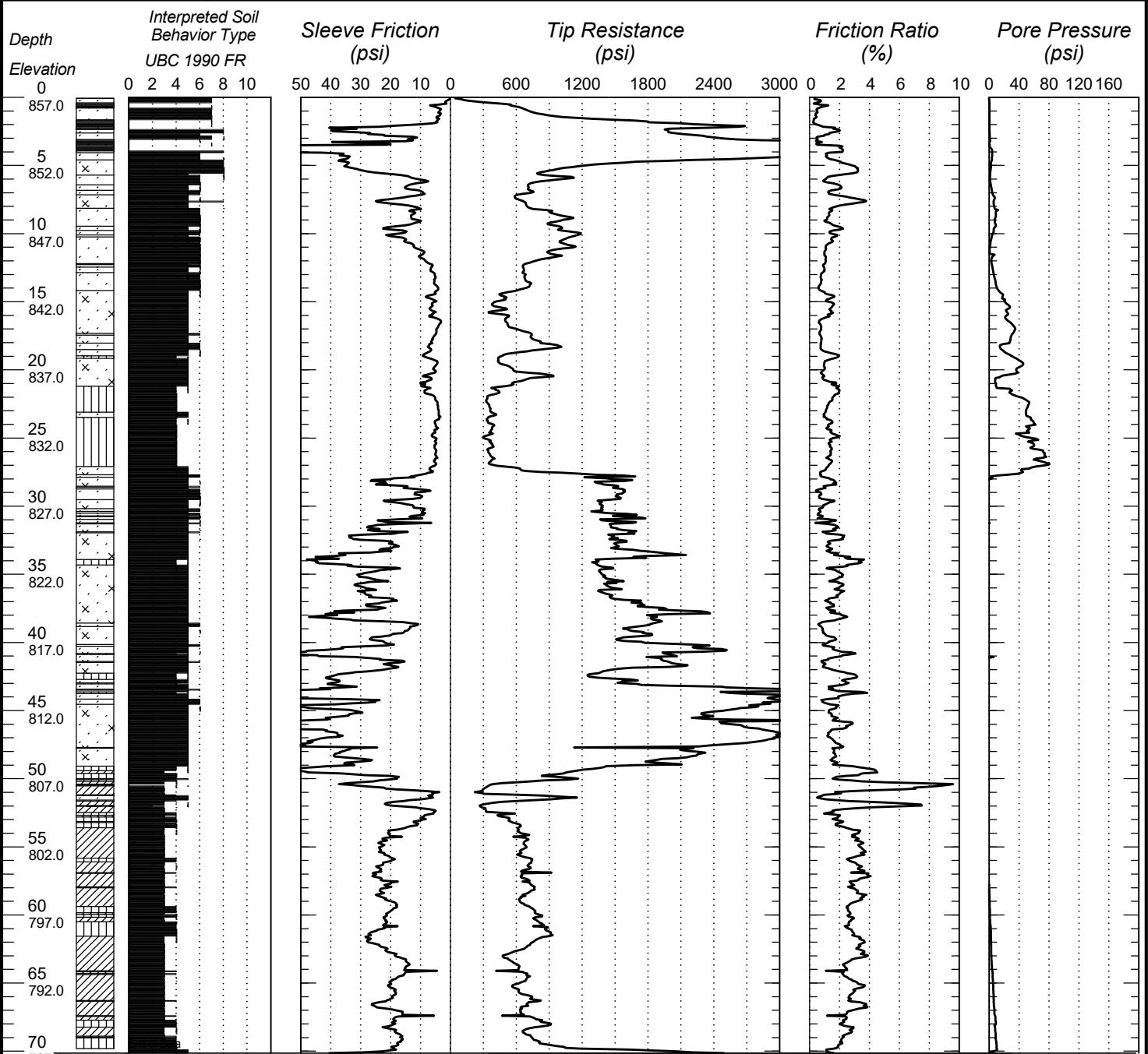
Bottom of Hole 30.18

**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85579**

**BRAUN**<sup>SM</sup>  
**INTERTEC**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-07</b>	Ground Elevation <b>857.0</b> (Surveyed)
Location Anoka County Coordinate System <b>X=467709 Y=162038</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'19.26" Longitude (West)=93°23'30.98"		CPT Operator <b>Holmbo</b>	Date Completed <b>6/23/20</b>	
		Hole Type <b>CPT-STD</b>		



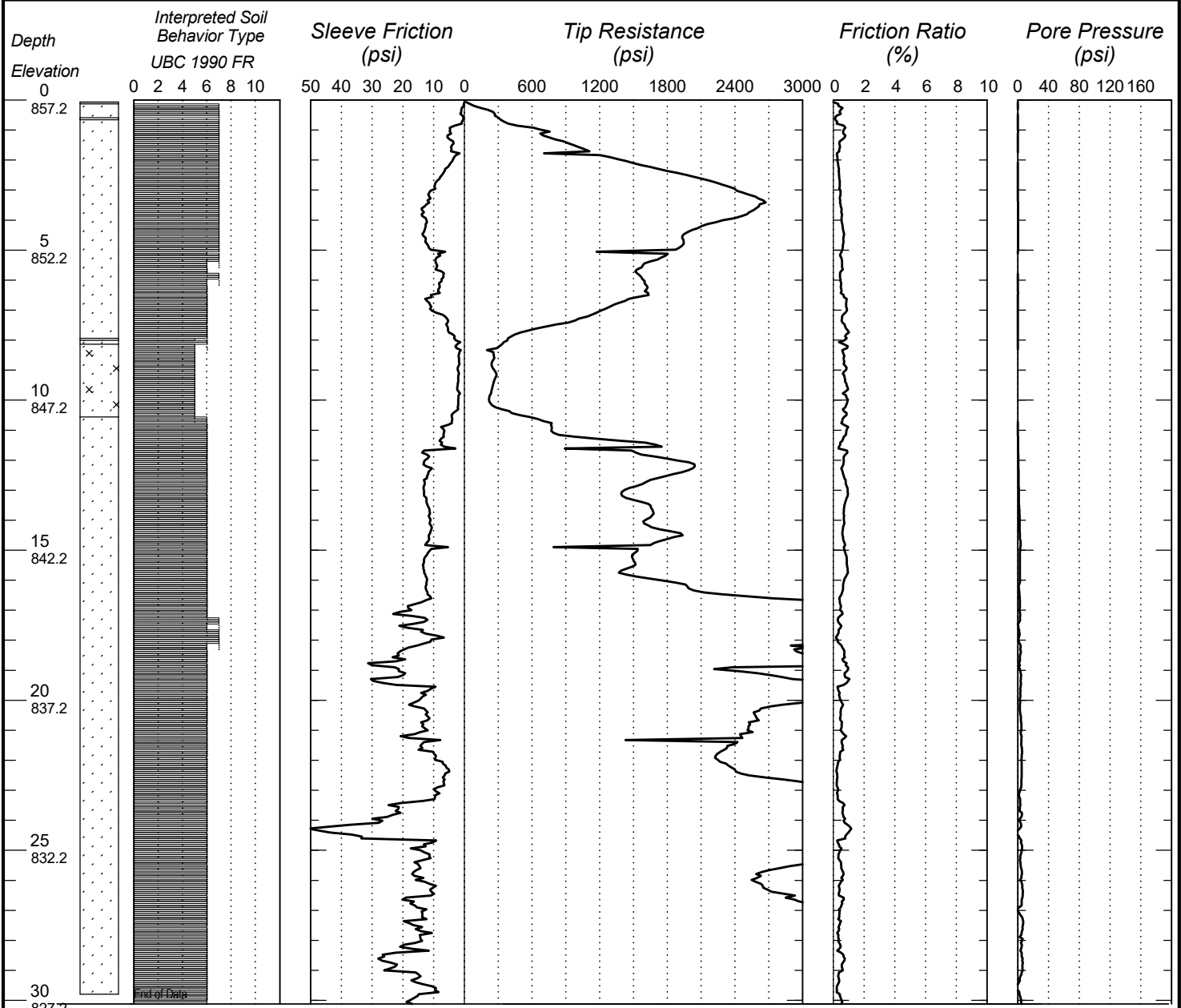
Bottom of Hole 70.14



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85580**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-07A</b>	Ground Elevation <b>857.2 ()</b>
Location Anoka County Coordinate System <b>X=467709 Y=162038</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'19.26" Longitude (West)=93°23'30.98"		CPT Operator <b>Holmbo</b>	Date Completed <b>6/25/20</b>	
		Hole Type <b>CPT-STD</b>		



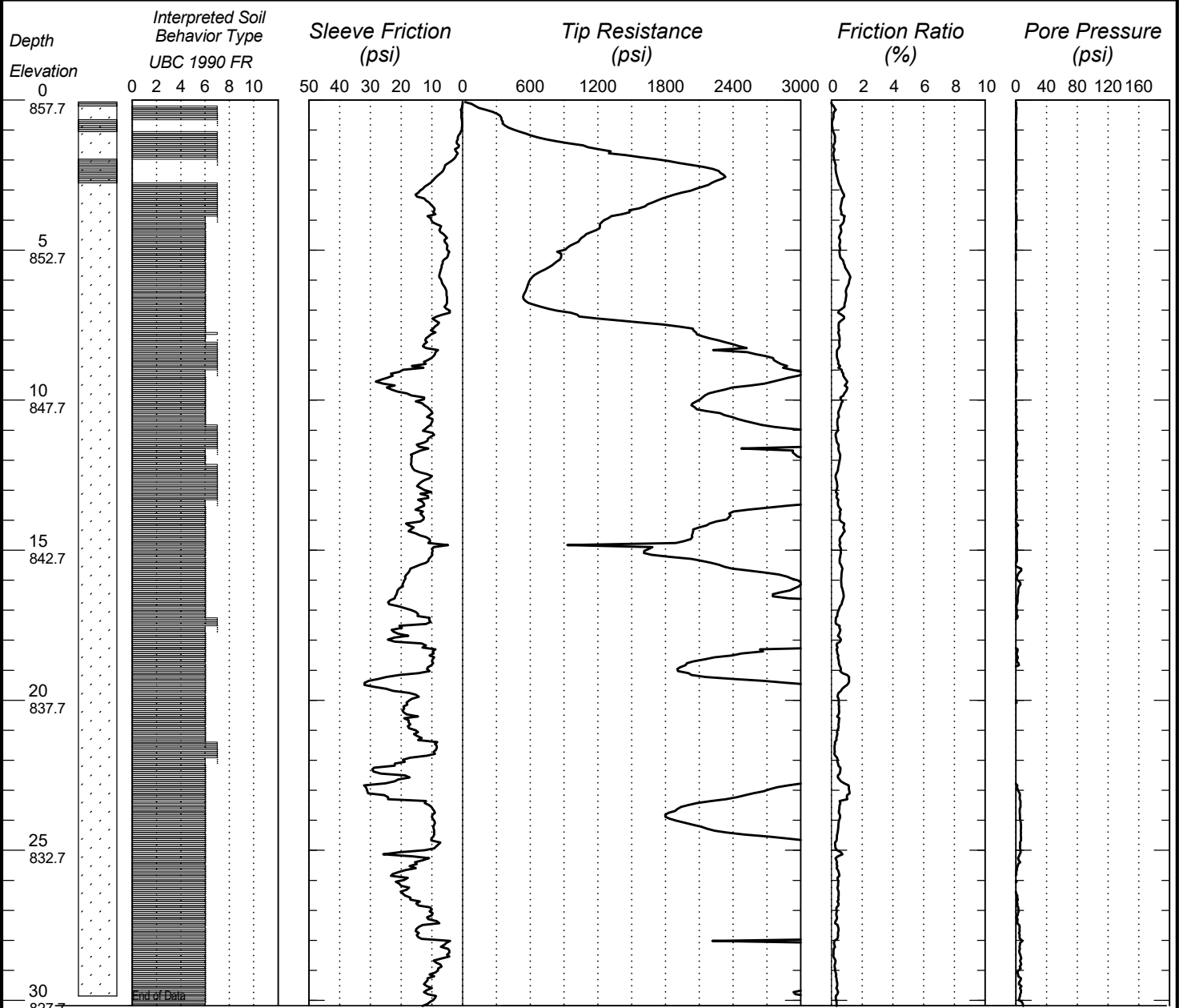
Bottom of Hole 30.12



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85581**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-08</b>	Ground Elevation <b>857.7 (Surveyed)</b>
Location Anoka County Coordinate System <b>X=467811 Y=162054</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'19.42" Longitude (West)=93°23'29.55"		CPT Operator <b>Holmbo</b>	Date Completed <b>6/25/20</b>	
		Hole Type <b>CPT-STD</b>		



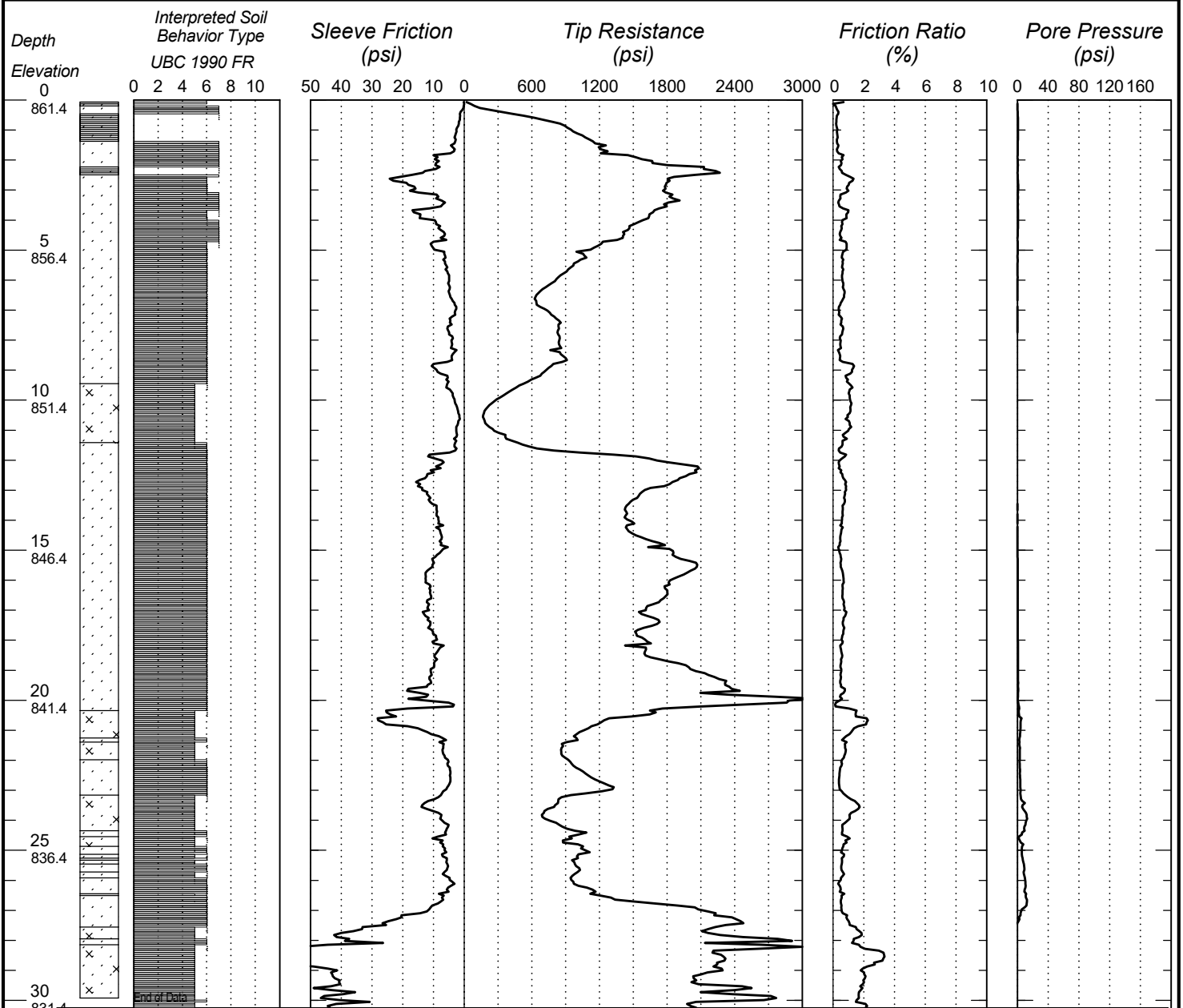
Bottom of Hole 30.18



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85582**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-09</b>	Ground Elevation <b>861.4 (Surveyed)</b>
Location Anoka County Coordinate System <b>X=467900 Y=162072</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'19.60" Longitude (West)=93°23'28.31"		CPT Operator <b>Holmbo</b>	Date Completed <b>6/25/20</b>	
		Hole Type <b>CPT-STD</b>		



Bottom of Hole 30.25

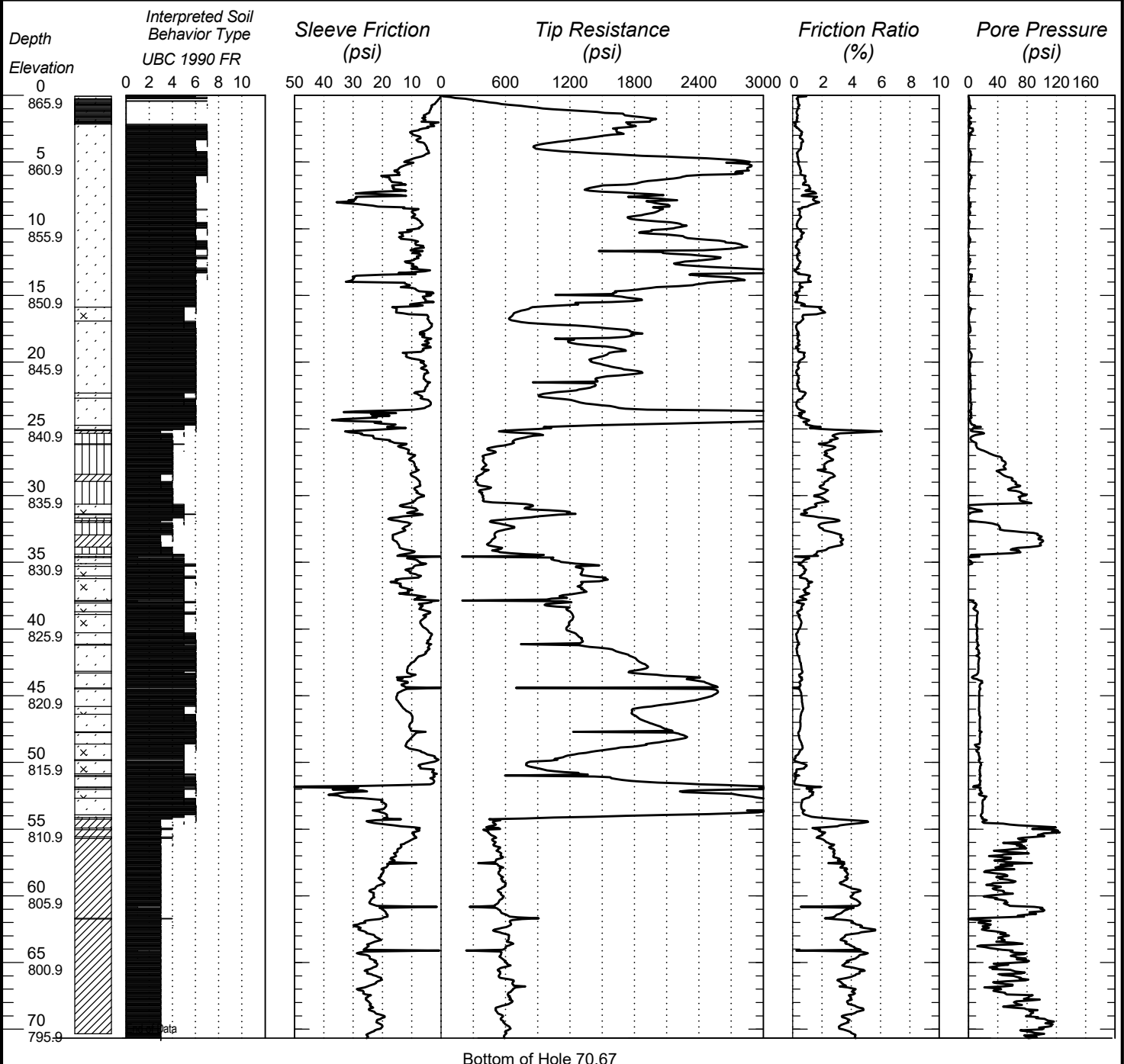




**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85583**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-10</b>	Ground Elevation <b>865.9</b> (Surveyed)
Location Anoka County Coordinate System <b>X=468009 Y=162092</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'19.80" Longitude (West)=93°23'26.79"		CPT Operator <b>Holmbo</b>	Date Completed <b>6/22/20</b>	
		Hole Type <b>CPT-STD</b>		



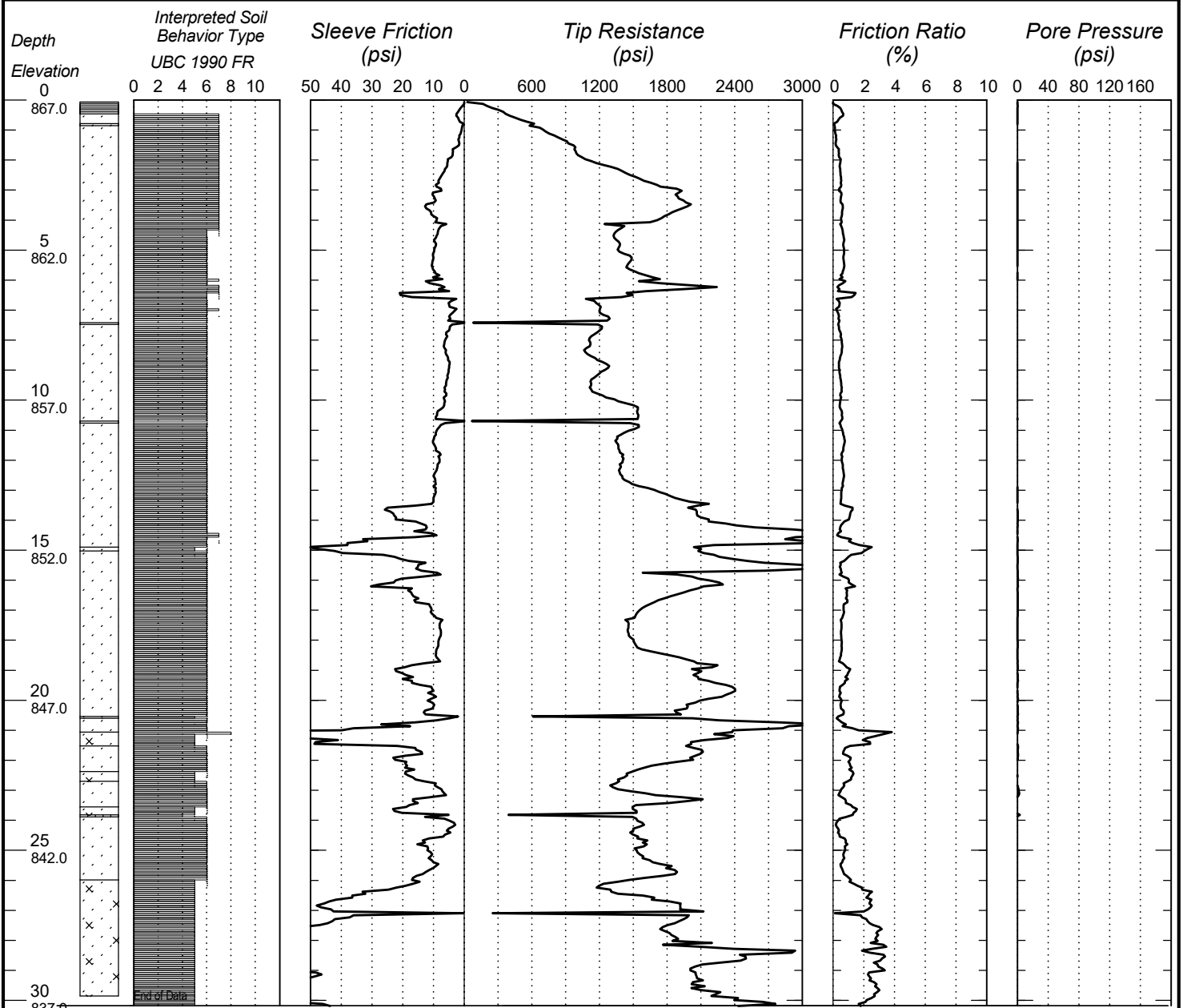
**CONE PENETRATION TEST RESULTS**

**UNIQUE NUMBER 85584**

**BRAUN**<sup>SM</sup>  
**INTERTEC**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-10A</b>	Ground Elevation <b>867.0</b> ( )
Location Anoka County Coordinate System <b>X=468009 Y=162092</b>		CPT Machine <b>CPT-01</b>		SHEET 1 of 1
Latitude (North)=45°12'19.80" Longitude (West)=93°23'26.79"		CPT Operator <b>Holmbo</b>		Date Completed
		Hole Type <b>CPT-STD</b>		<b>6/25/20</b>



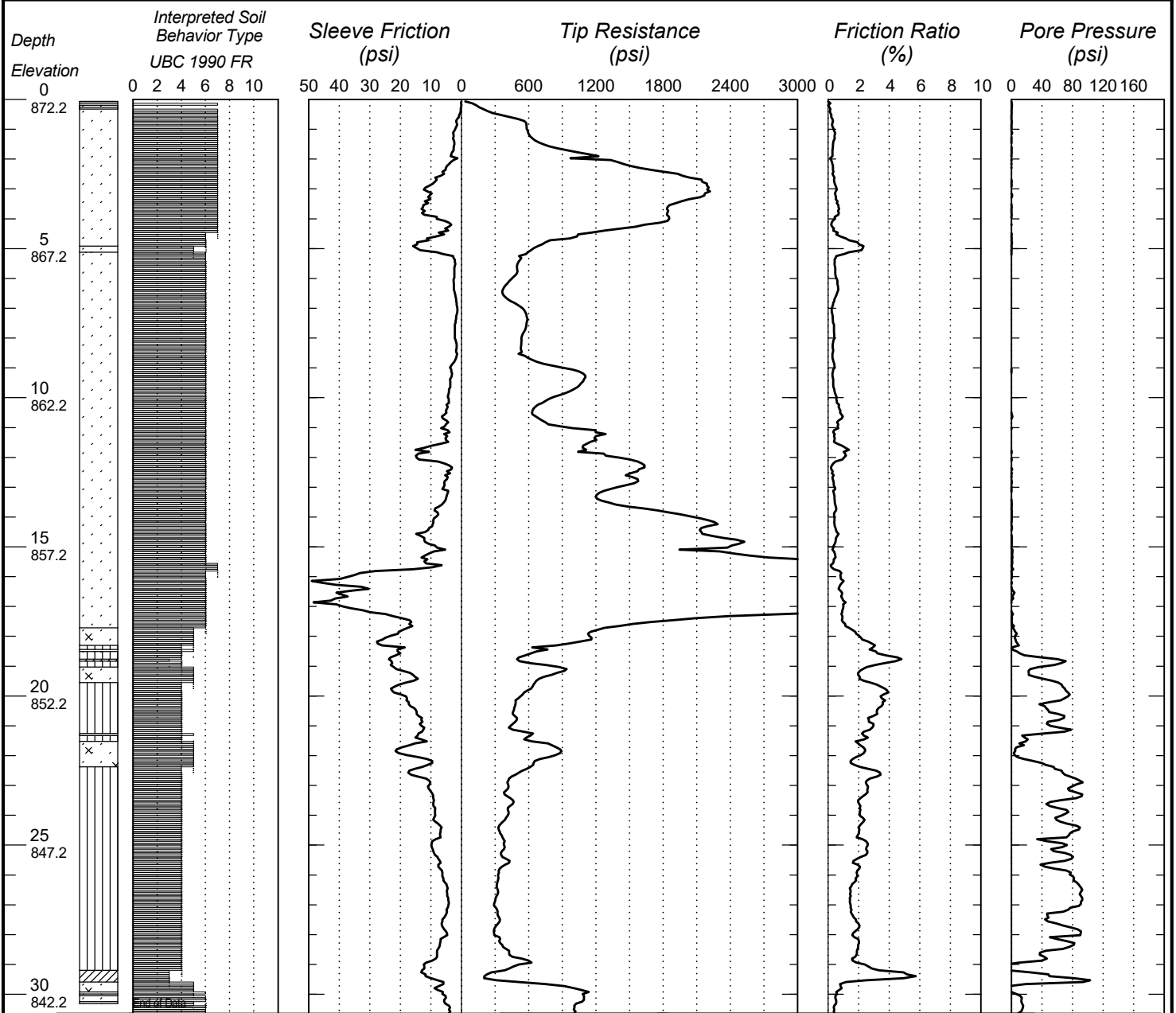
Bottom of Hole 30.18



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85585**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-11</b>	Ground Elevation <b>872.2 (Surveyed)</b>
Location Anoka County Coordinate System <b>X=468104 Y=162119</b>		CPT Machine <b>CPT-01</b>		SHEET 1 of 1
Latitude (North)=45°12'20.06" Longitude (West)=93°23'25.47"		CPT Operator <b>Holmbo</b>		Date Completed
		Hole Type <b>CPT-STD</b>		<b>6/25/20</b>



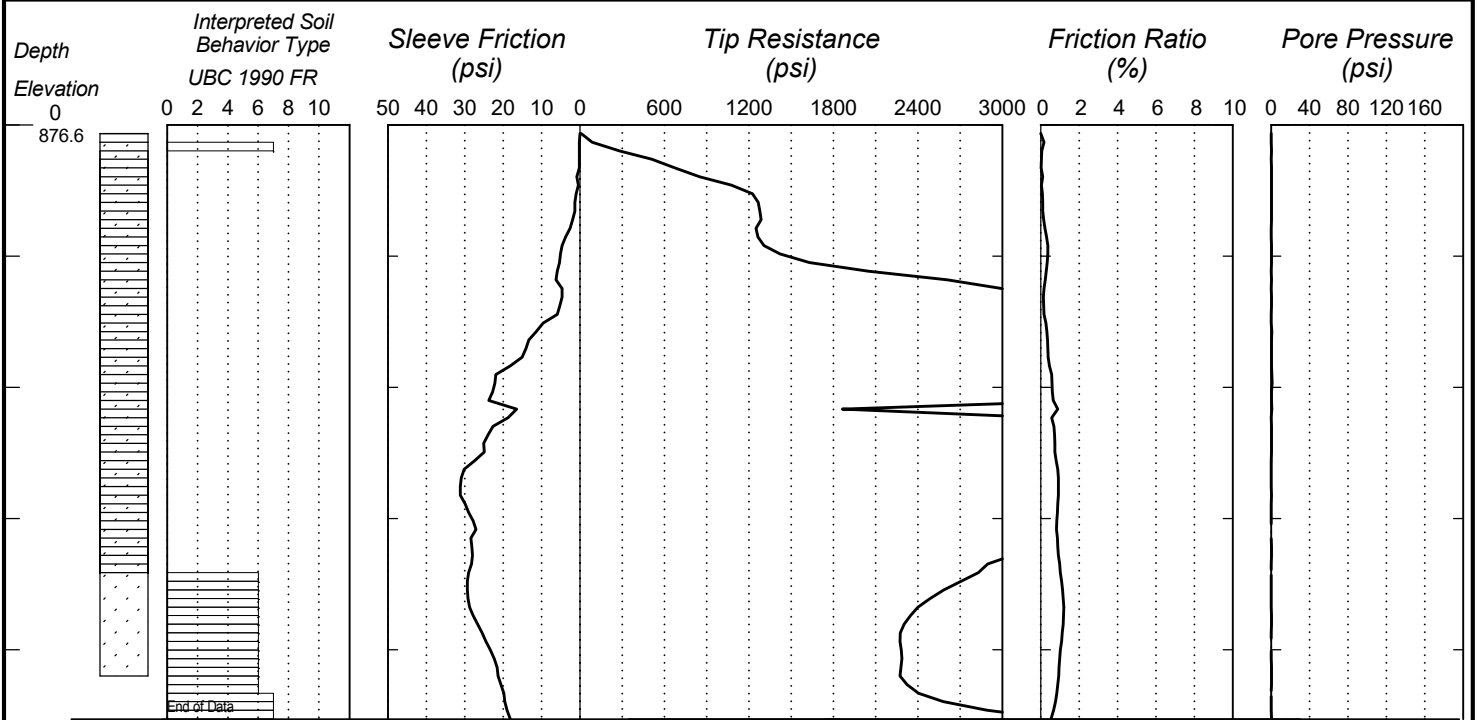
Bottom of Hole 30.64



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85586**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-12</b>	Ground Elevation <b>876.6</b> (Surveyed)
Location Anoka County Coordinate System <b>X=468202 Y=162137</b>		CPT Machine <b>CPT-01</b>		SHEET 1 of 1
Latitude (North)=45°12'20.24" Longitude (West)=93°23'24.10"		CPT Operator <b>Holmbo</b>		Date Completed
		Hole Type <b>CPT-STD</b>		<b>6/25/20</b>



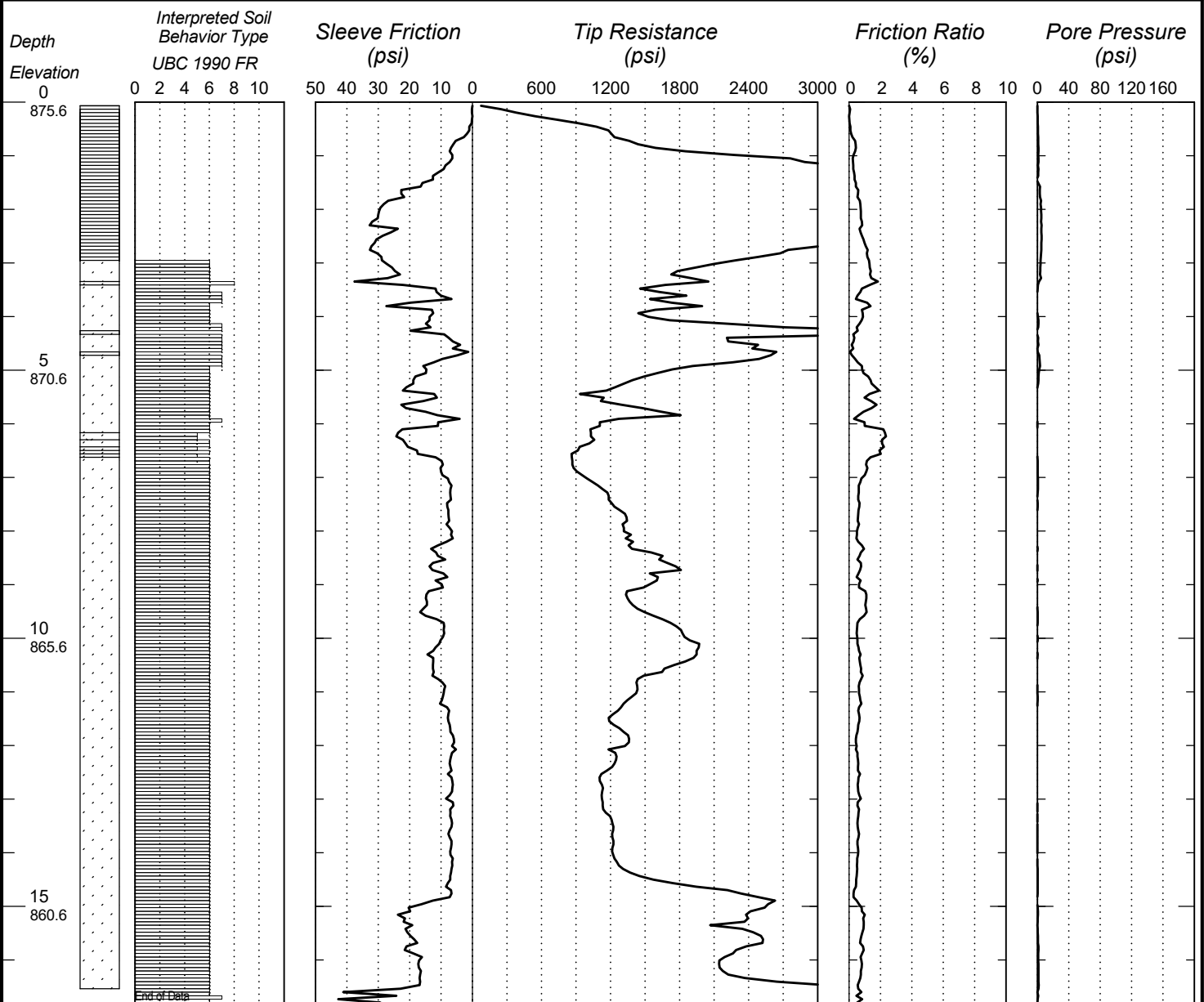
Bottom of Hole 4.53



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85587**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-12A</b>	Ground Elevation <b>875.6</b> (Surveyed)
Location Anoka County Coordinate System <b>X=468198 Y=162123</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'20.10" Longitude (West)=93°23'24.15"		CPT Operator <b>Holmbo</b>	Date Completed <b>6/25/20</b>	
		Hole Type <b>CPT-STD</b>		



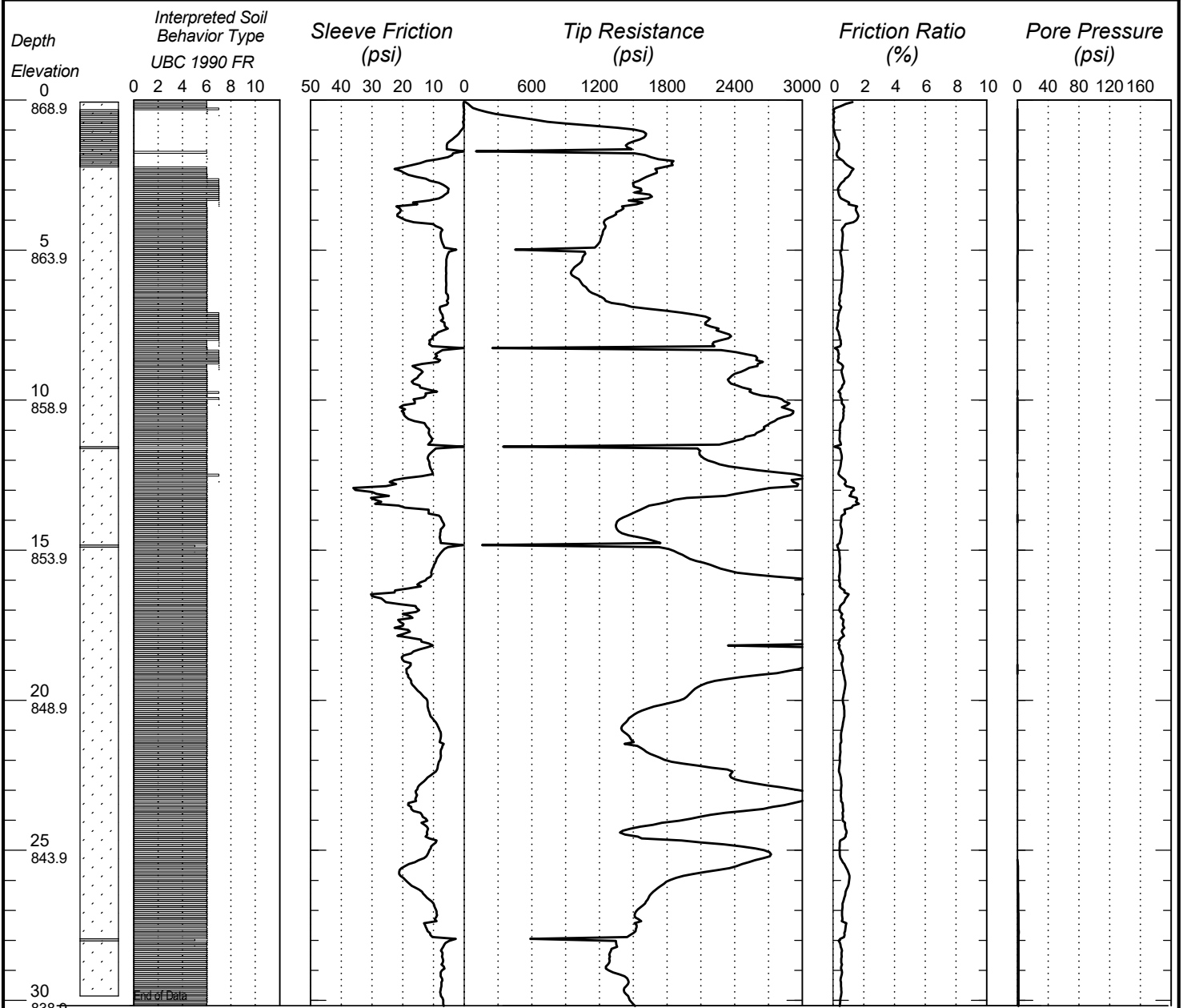
Bottom of Hole 16.86



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85588**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-13</b>	Ground Elevation <b>868.9</b> (Surveyed)
Location Anoka County Coordinate System <b>X=468482 Y=162084</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'19.72" Longitude (West)=93°23'20.19"		CPT Operator <b>Holmbo</b>	Date Completed <b>6/25/20</b>	
		Hole Type <b>CPT-STD</b>		



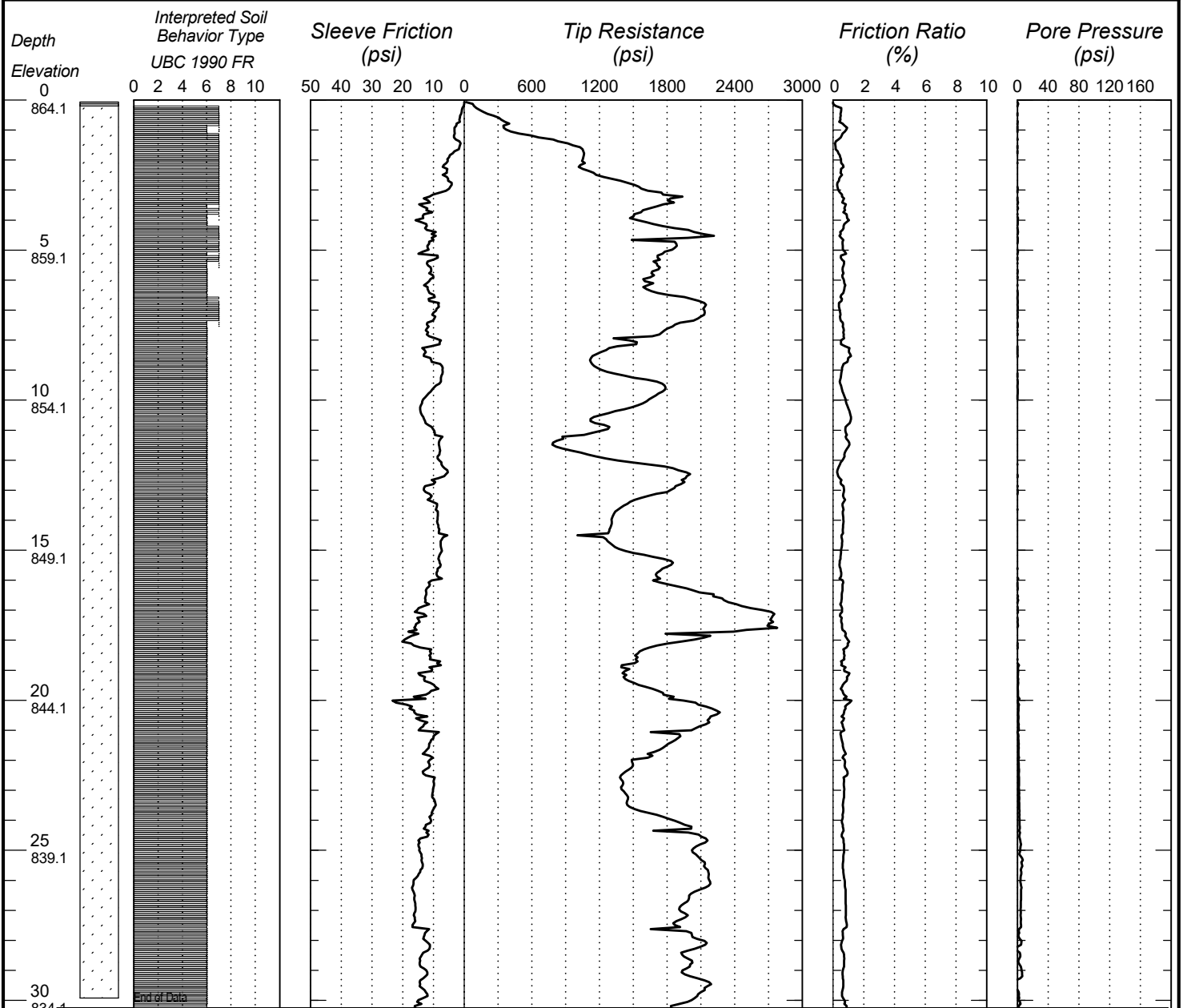
Bottom of Hole 30.18

**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85589**

**BRAUN**<sup>SM</sup>  
**INTERTEC**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-14</b>	Ground Elevation <b>864.1</b> (Surveyed)
Location Anoka County Coordinate System <b>X=468577 Y=162045</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'19.34" Longitude (West)=93°23'18.85"		CPT Operator <b>Holmbo</b>	Date Completed <b>6/24/20</b>	
		Hole Type <b>CPT-STD</b>		



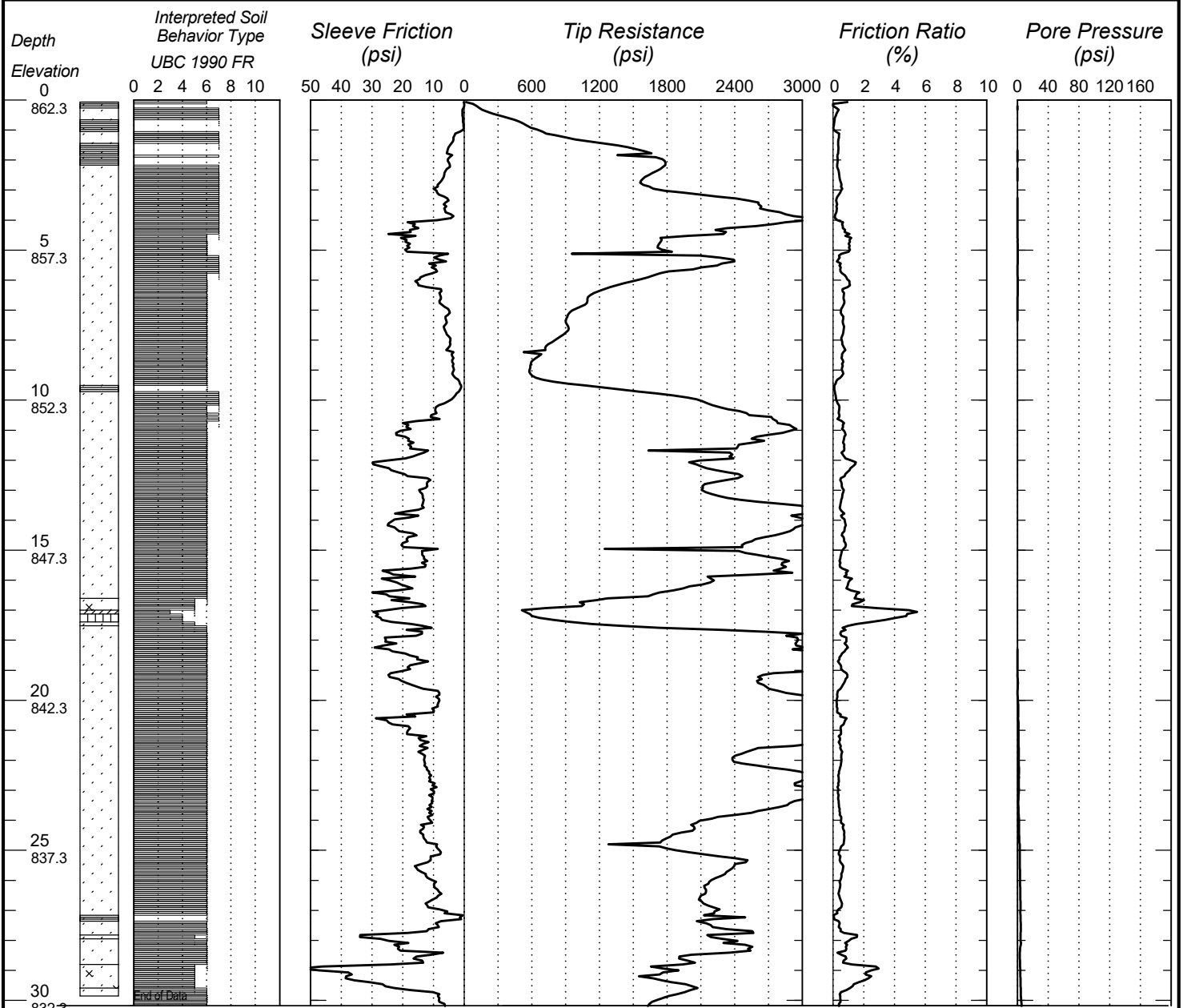
Bottom of Hole 30.25



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85590**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-15</b>	Ground Elevation <b>862.3</b> (Surveyed)
Location Anoka County Coordinate System <b>X=468667 Y=162006</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'18.96" Longitude (West)=93°23'17.60"		CPT Operator <b>Holmbo</b>	Date Completed <b>6/24/20</b>	
		Hole Type <b>CPT-STD</b>		



Bottom of Hole 30.18

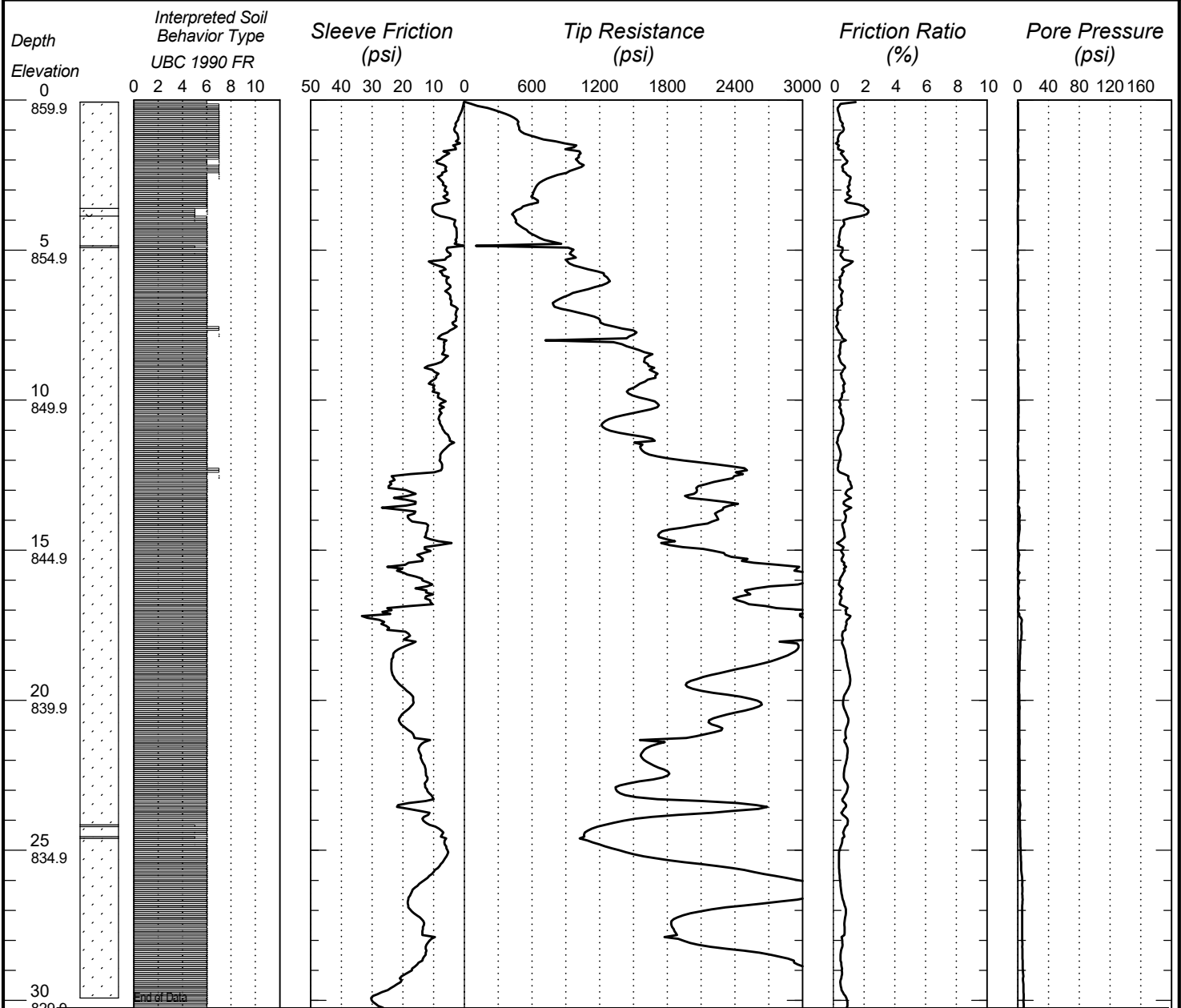




**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85591**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-16</b>	Ground Elevation <b>859.9</b> (Surveyed)
Location Anoka County Coordinate System <b>X=468768 Y=161960</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'18.50" Longitude (West)=93°23'16.19"		CPT Operator <b>Holmbo</b>	Date Completed <b>6/24/20</b>	
		Hole Type <b>CPT-STD</b>		



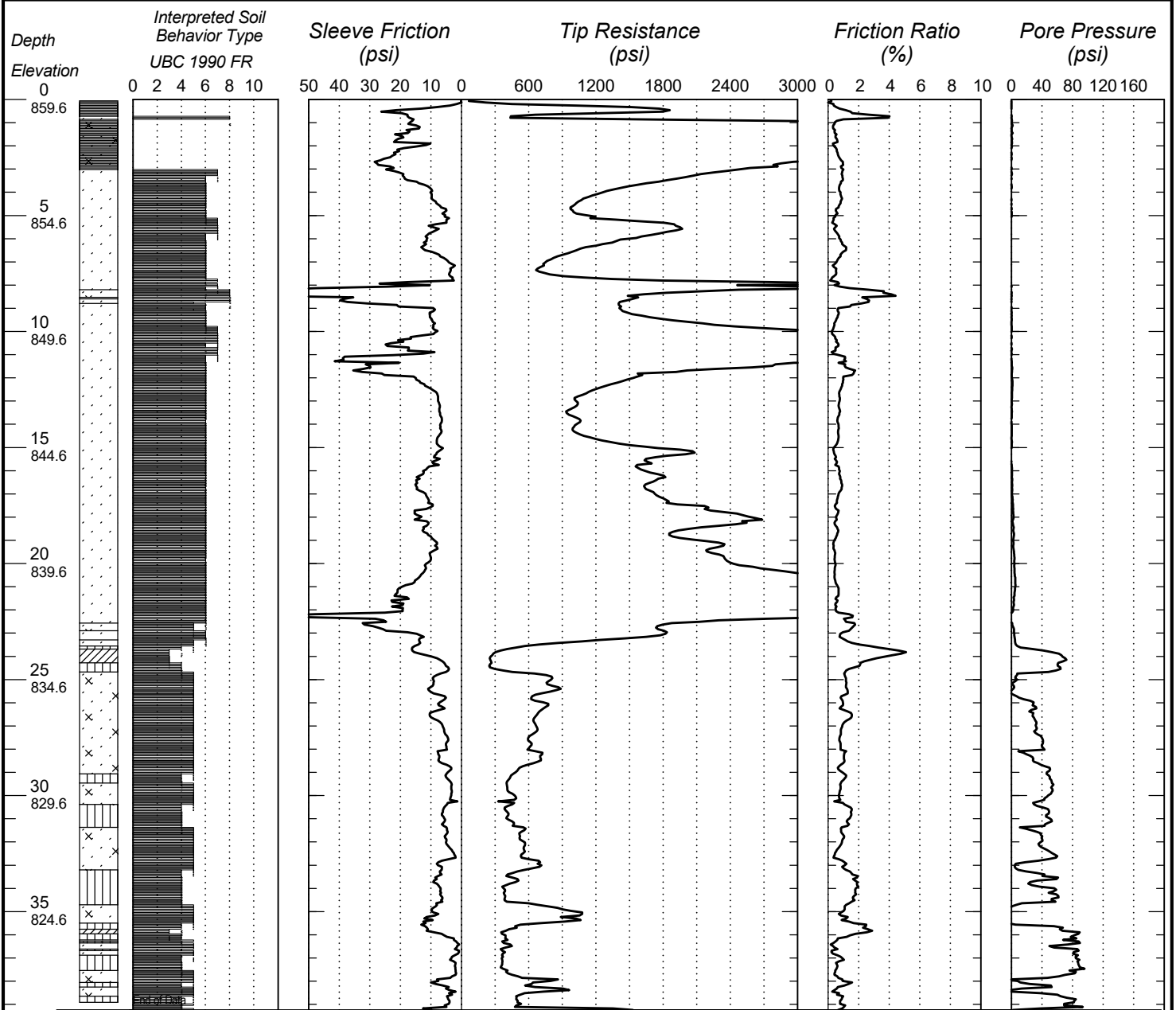
Bottom of Hole 30.25



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85592**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-17</b>	Ground Elevation <b>859.6</b> (Surveyed)
Location Anoka County Coordinate System <b>X=468859 Y=161950</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'18.41" Longitude (West)=93°23'14.91"		CPT Operator <b>Holmbo</b>	Date Completed <b>6/24/20</b>	
		Hole Type <b>CPT-STD</b>		



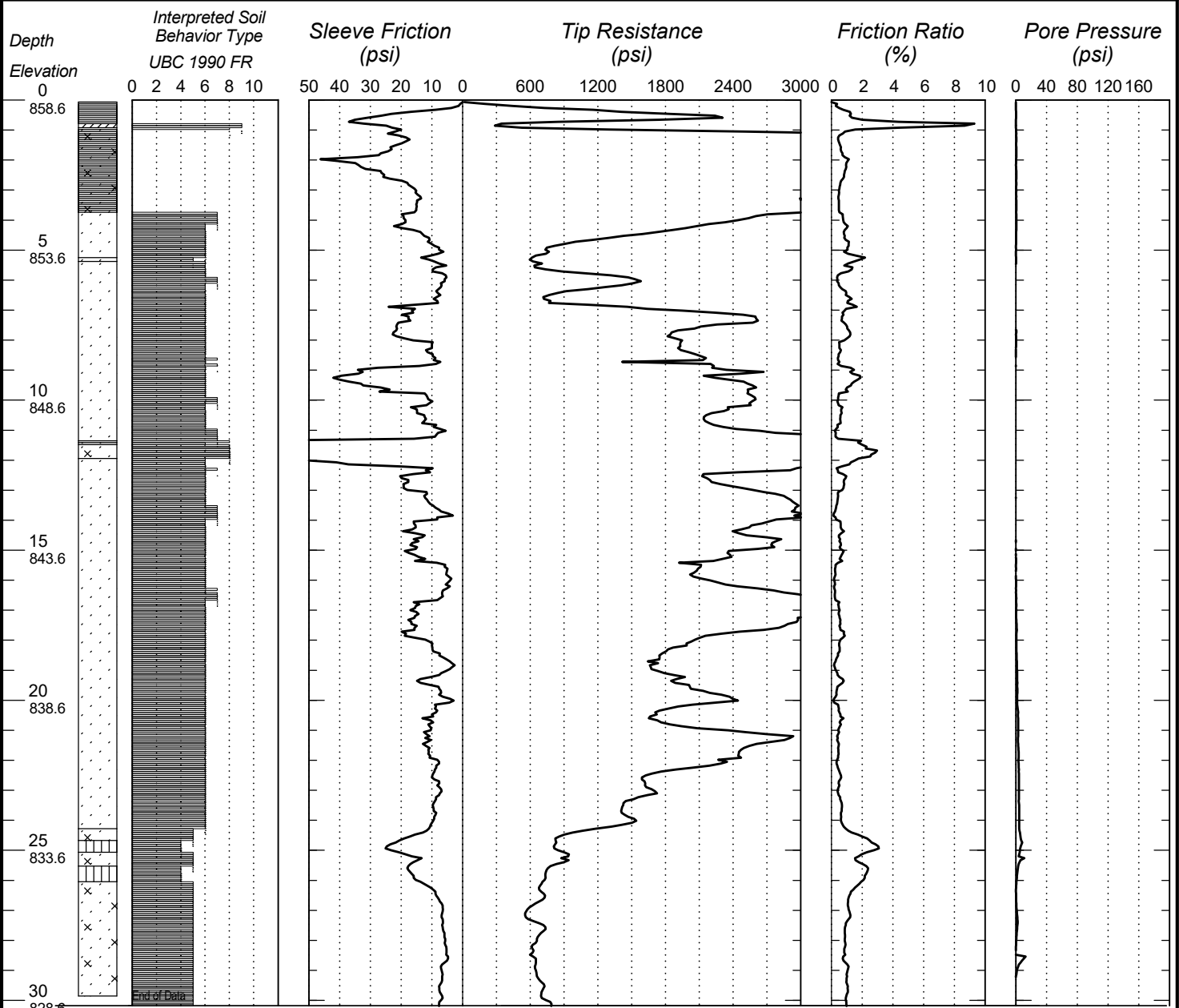
Bottom of Hole 39.24

**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85593**

**BRAUN**<sup>SM</sup>  
**INTERTEC**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-18</b>	Ground Elevation <b>858.6</b> (Surveyed)
Location Anoka County Coordinate System <b>X=468951 Y=161954</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'18.45" Longitude (West)=93°23'13.63"		CPT Operator <b>Holmbo</b>	Date Completed <b>6/24/20</b>	
		Hole Type <b>CPT-STD</b>		



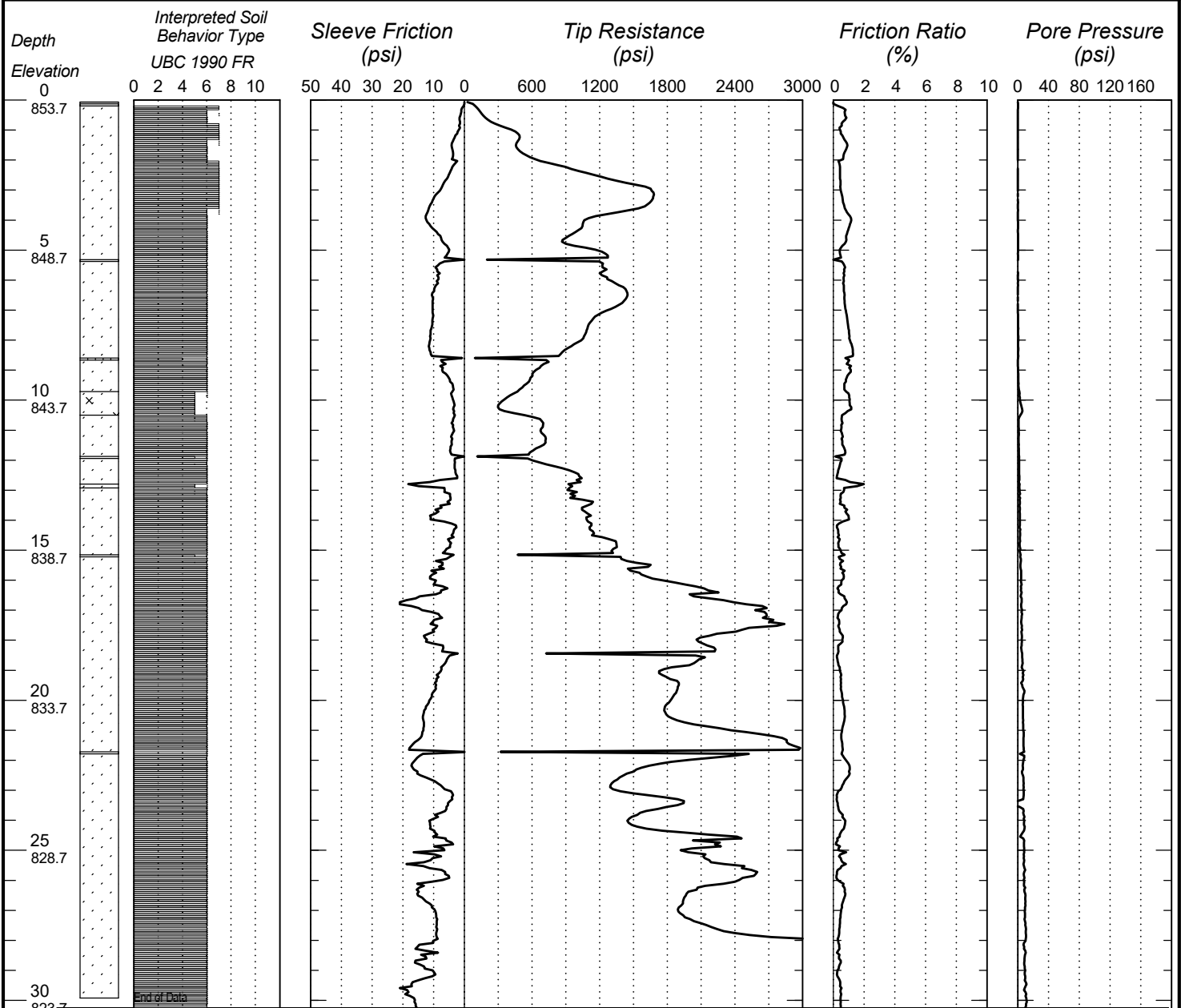
Bottom of Hole 30.18



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85594**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-19</b>	Ground Elevation <b>853.7 (Surveyed)</b>
Location Anoka County Coordinate System <b>X=466783 Y=161867</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'17.56" Longitude (West)=93°23'43.90"		CPT Operator <b>Holmbo</b>	Date Completed <b>7/9/20</b>	
		Hole Type <b>CPT-STD</b>		



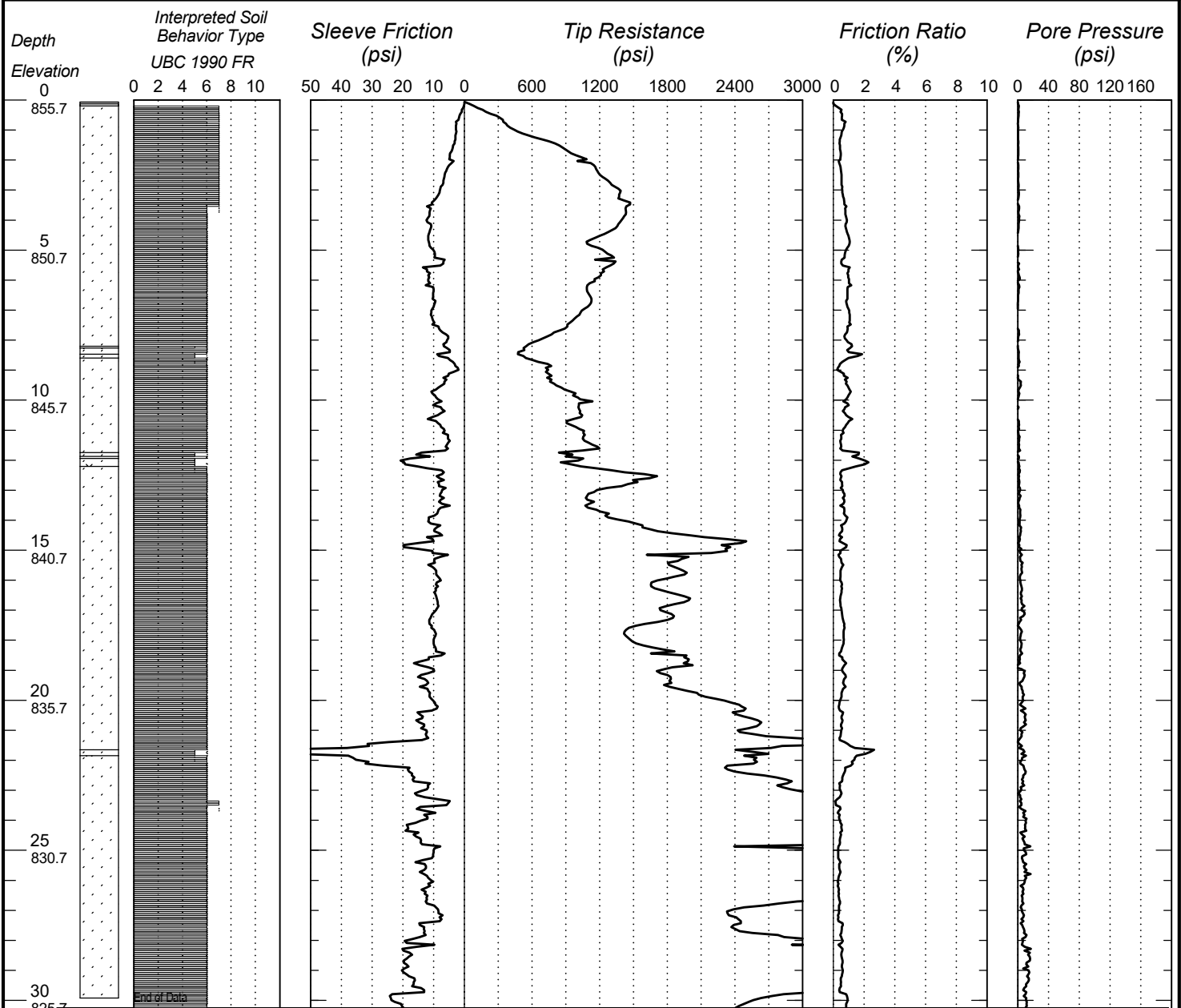
Bottom of Hole 30.25



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85595**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-20</b>	Ground Elevation <b>855.7 (Surveyed)</b>
Location Anoka County Coordinate System <b>X=466887 Y=161862</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'17.51" Longitude (West)=93°23'42.45"		CPT Operator <b>Holmbo</b>	Date Completed <b>7/9/20</b>	
		Hole Type <b>CPT-STD</b>		



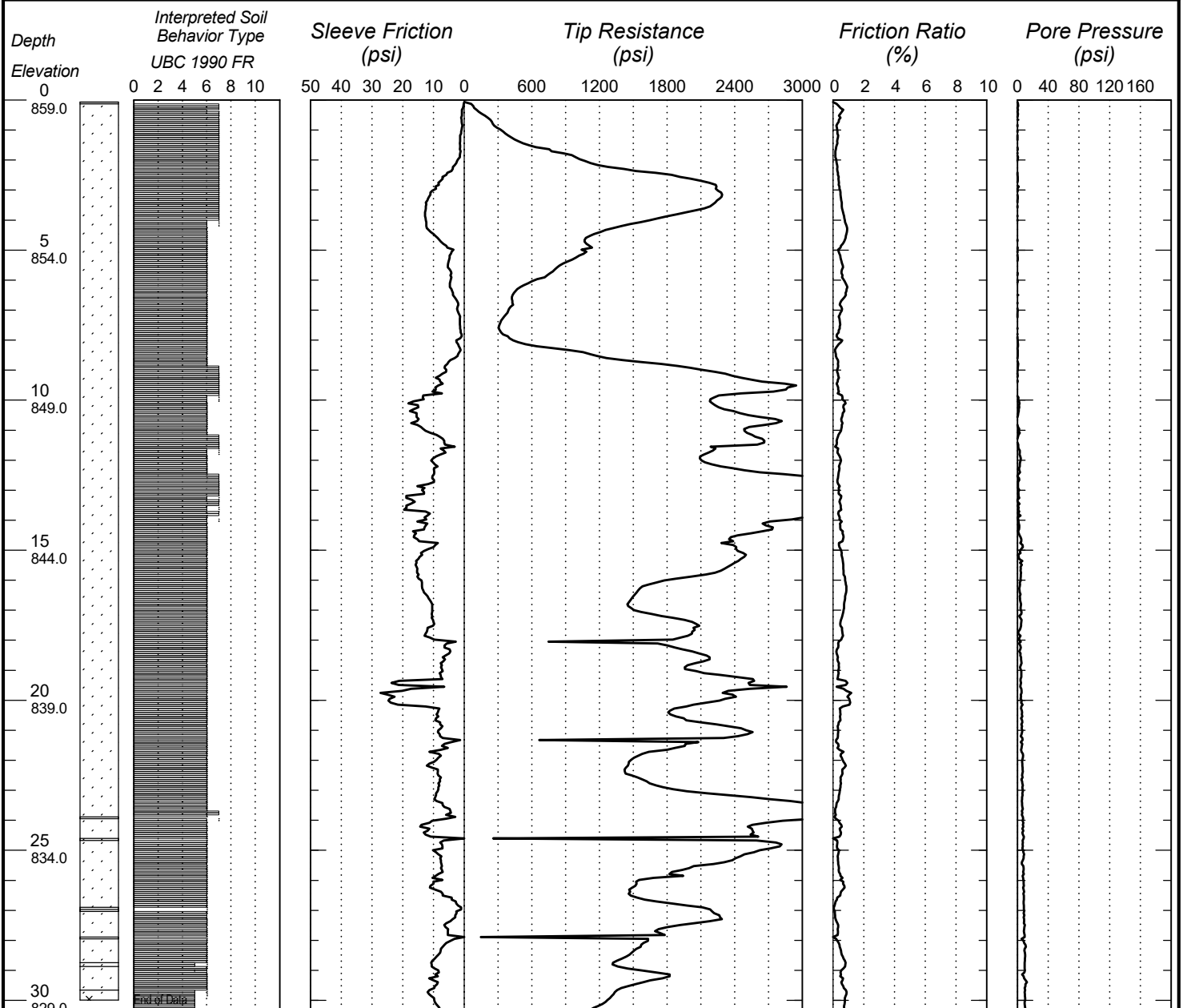
Bottom of Hole 30.25



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85596**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-21</b>	Ground Elevation <b>859.0</b> (Surveyed)
Location Anoka County Coordinate System <b>X=466982 Y=161857</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'17.46" Longitude (West)=93°23'41.13"		CPT Operator <b>Holmbo</b>	Date Completed <b>7/9/20</b>	
		Hole Type <b>CPT-STD</b>		



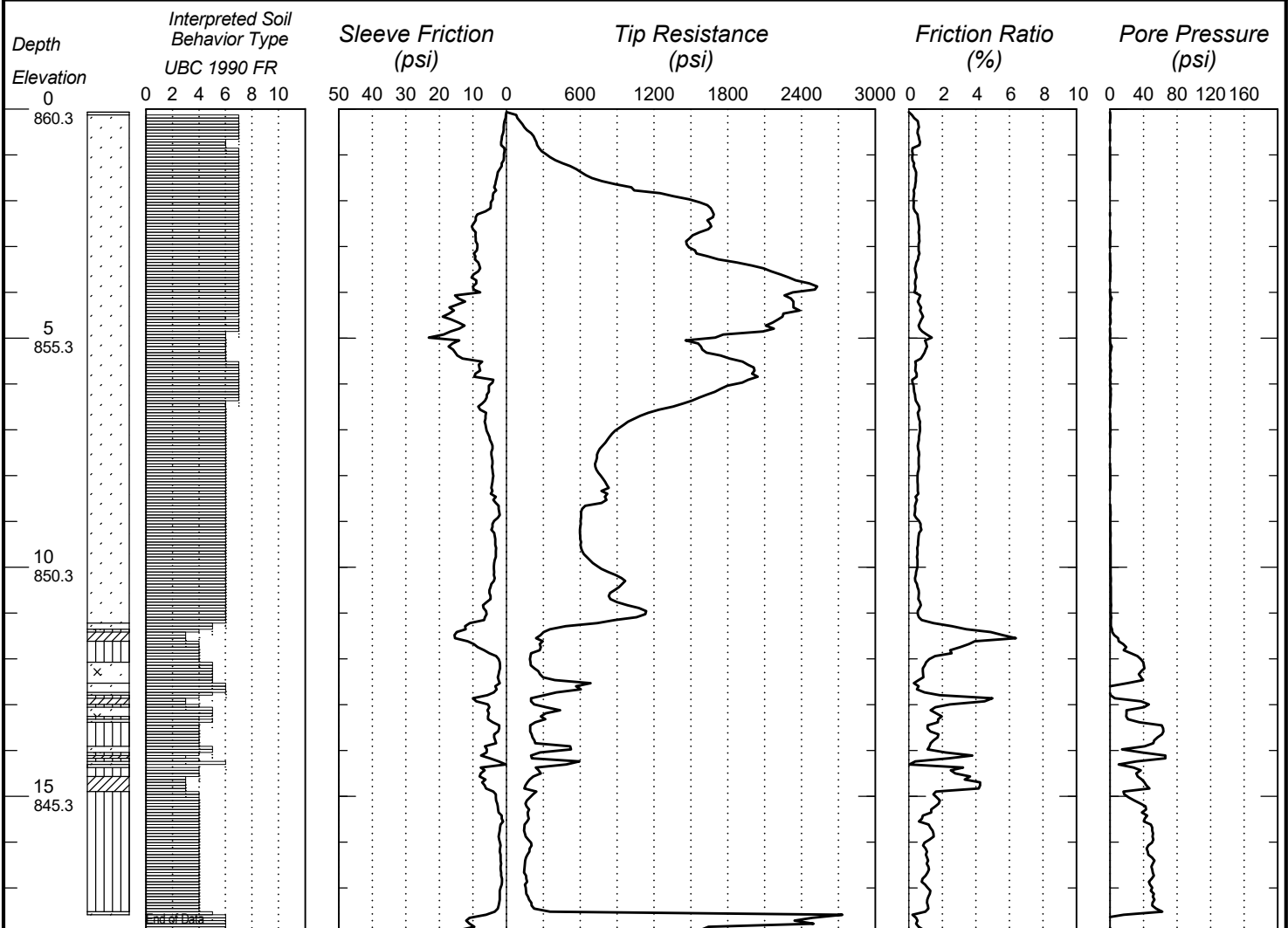
Bottom of Hole 30.31



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85597**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-22</b>	Ground Elevation <b>860.3</b> (Surveyed)
Location Anoka County Coordinate System <b>X=467095 Y=161859</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'17.48" Longitude (West)=93°23'39.55"		CPT Operator <b>Holmbo</b>	Date Completed <b>7/9/20</b>	
		Hole Type <b>CPT-STD</b>		



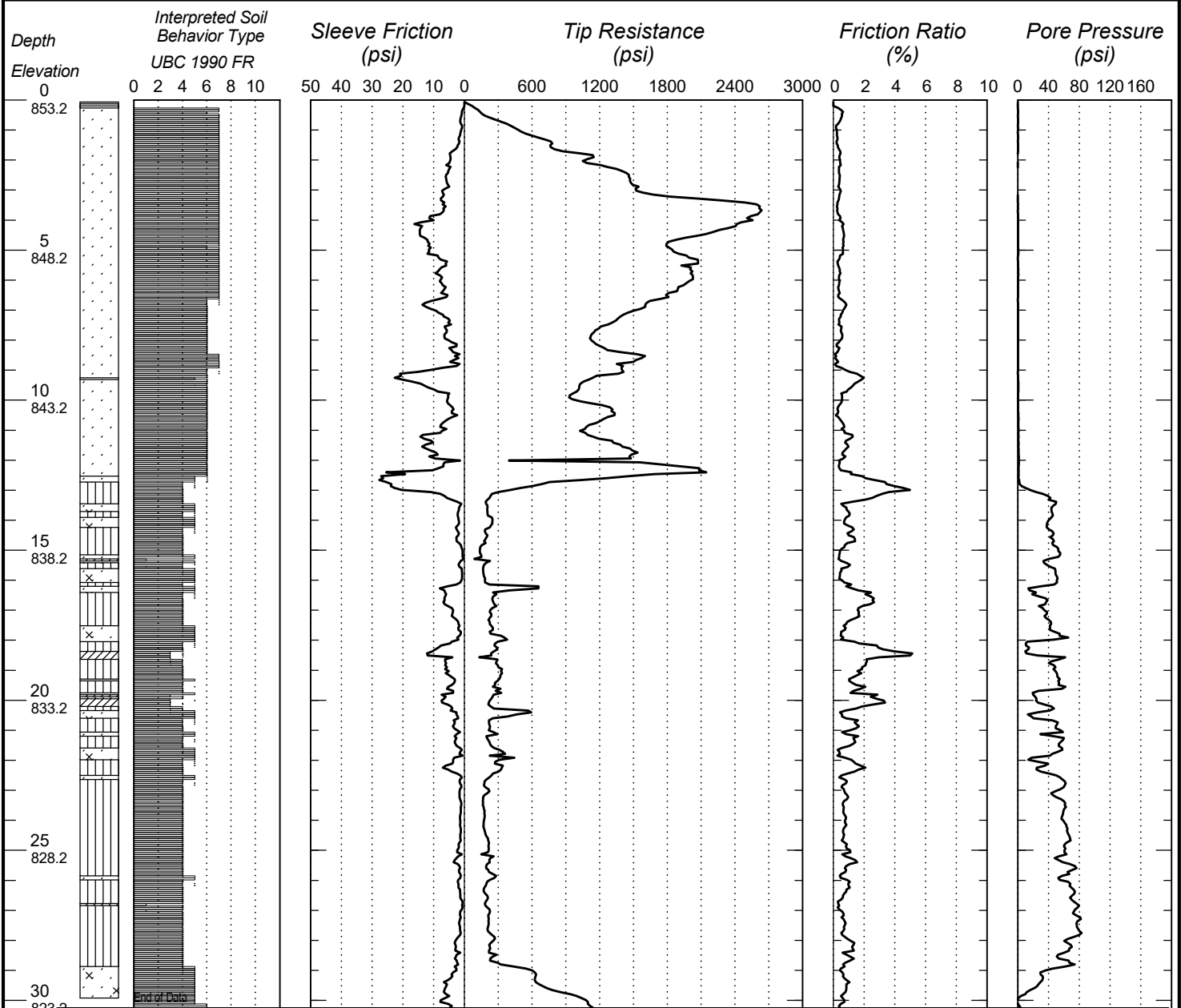
Bottom of Hole 17.91



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85598**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-22A</b>	Ground Elevation <b>853.2 ()</b>
Location Anoka County Coordinate System <b>X=468666 Y=162000</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'18.90" Longitude (West)=93°23'17.61"		CPT Operator <b>Holmbo</b>	Date Completed <b>7/9/20</b>	
		Hole Type <b>CPT-STD</b>		



Bottom of Hole 30.25

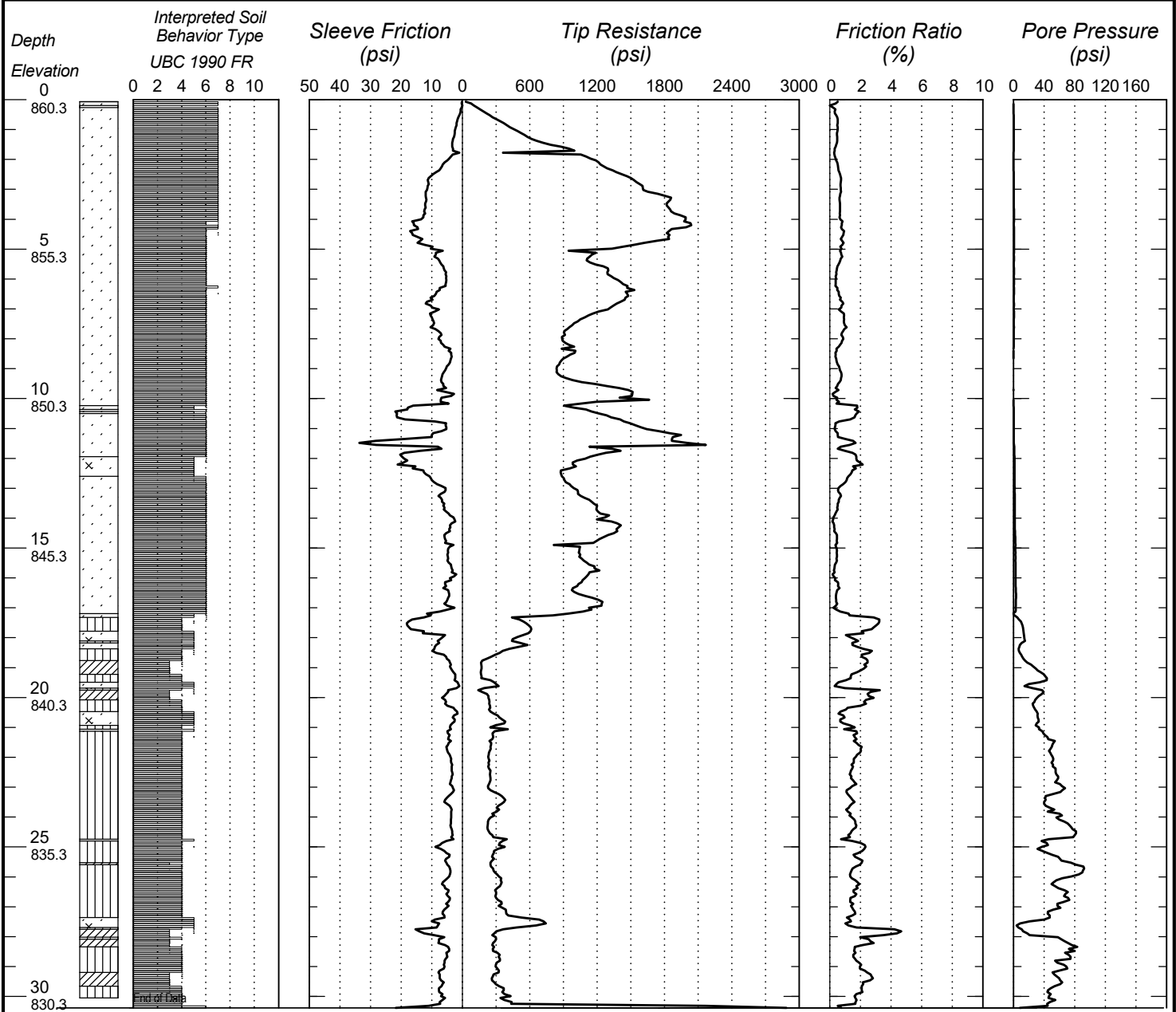




**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85599**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-23</b>	Ground Elevation <b>860.3</b> (Surveyed)
Location Anoka County Coordinate System <b>X=467184 Y=161856</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'17.45" Longitude (West)=93°23'38.30"		CPT Operator <b>Holmbo</b>	Date Completed <b>7/9/20</b>	
		Hole Type <b>CPT-STD</b>		



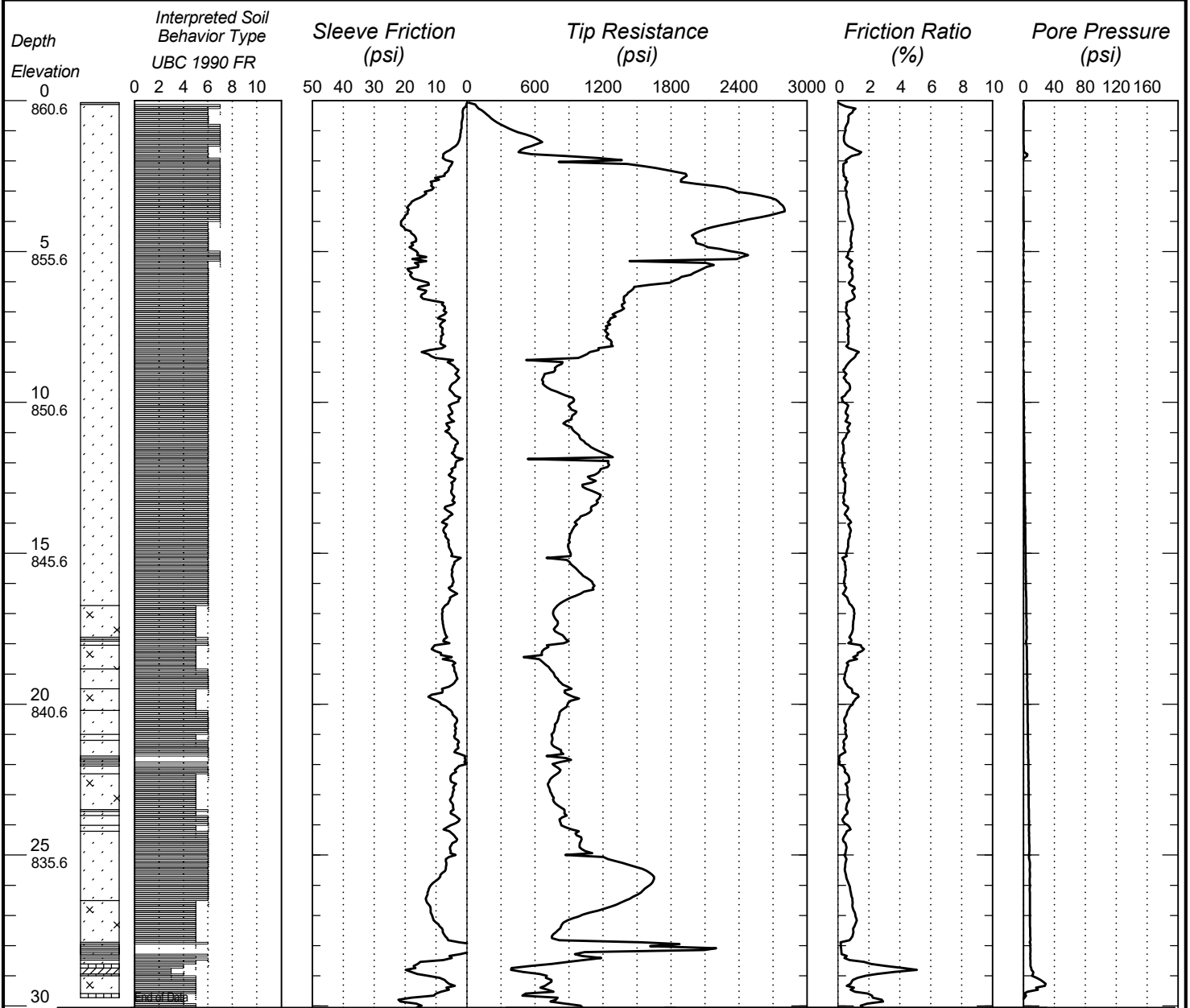
Bottom of Hole 30.38



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85600**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-24</b>	Ground Elevation <b>860.6</b> (Surveyed)
Location Anoka County Coordinate System <b>X=467266 Y=161849</b>		CPT Machine <b>CPT-01</b>		SHEET 1 of 1
Latitude (North)=45°12'17.39" Longitude (West)=93°23'37.16"		CPT Operator <b>Holmbo</b>		Date Completed
		Hole Type <b>CPT-STD</b>		<b>7/9/20</b>



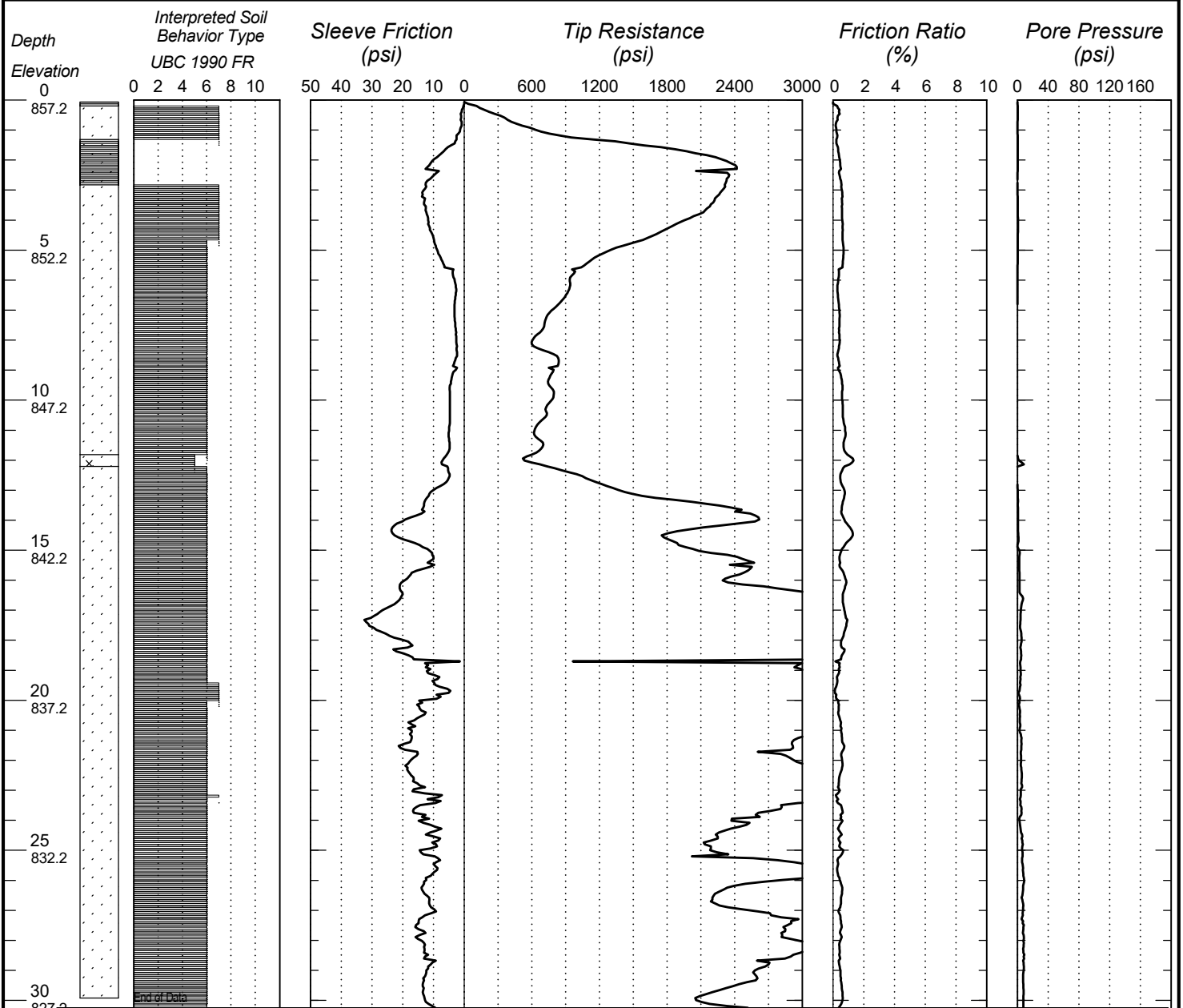
Bottom of Hole 30.05



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85601**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-25</b>	Ground Elevation <b>857.2 (Surveyed)</b>
Location Anoka County Coordinate System <b>X=467378 Y=161826</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'17.16" Longitude (West)=93°23'35.59"		CPT Operator <b>Holmbo</b>	Date Completed <b>7/9/20</b>	
		Hole Type <b>CPT-STD</b>		



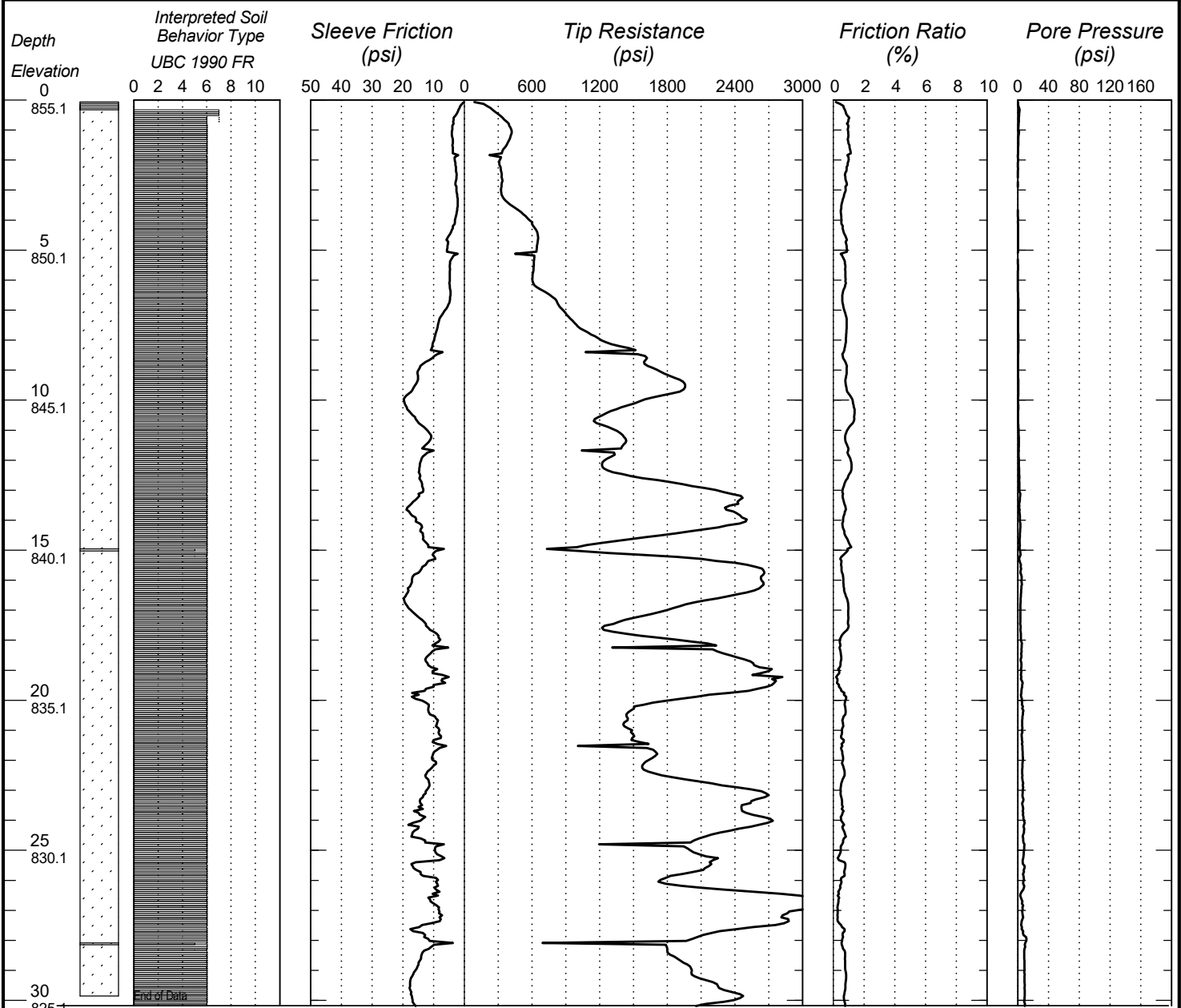
Bottom of Hole 30.25



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85602**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-26</b>	Ground Elevation <b>855.1 (Surveyed)</b>
Location Anoka County Coordinate System <b>X=467465 Y=161801</b>		CPT Machine <b>CPT-01</b>		SHEET 1 of 1
Latitude (North)=45°12'16.91" Longitude (West)=93°23'34.38"		CPT Operator <b>Holmbo</b>		Date Completed
		Hole Type <b>CPT-STD</b>		<b>7/10/20</b>



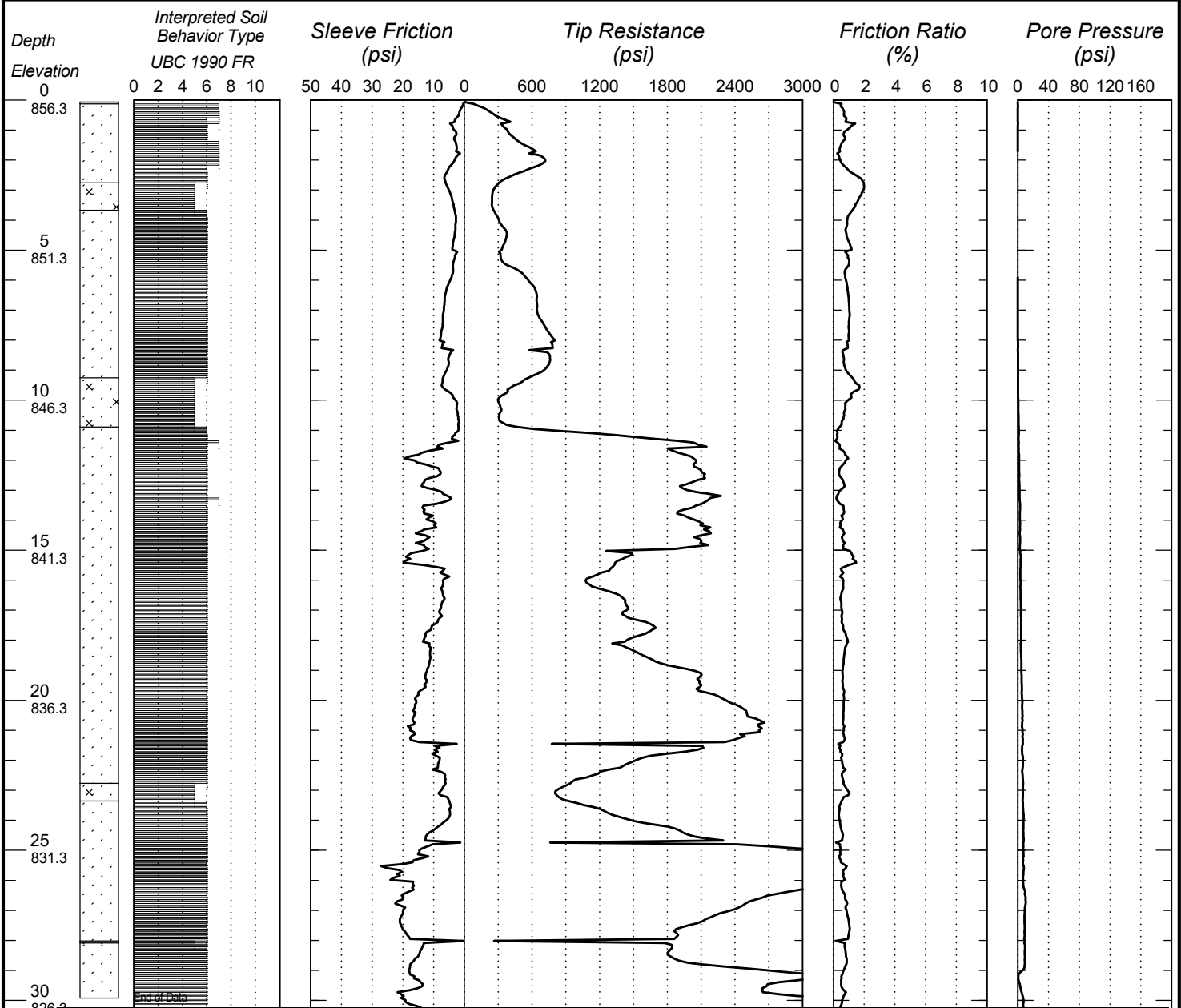
Bottom of Hole 30.18



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85603**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-27</b>	Ground Elevation <b>856.3 (Surveyed)</b>
Location Anoka County Coordinate System <b>X=467549 Y=161764</b>		CPT Machine <b>CPT-01</b>		SHEET 1 of 1
Latitude (North)=45°12'16.55" Longitude (West)=93°23'33.20"		CPT Operator <b>Holmbo</b>		Date Completed
		Hole Type <b>CPT-STD</b>		<b>7/13/20</b>



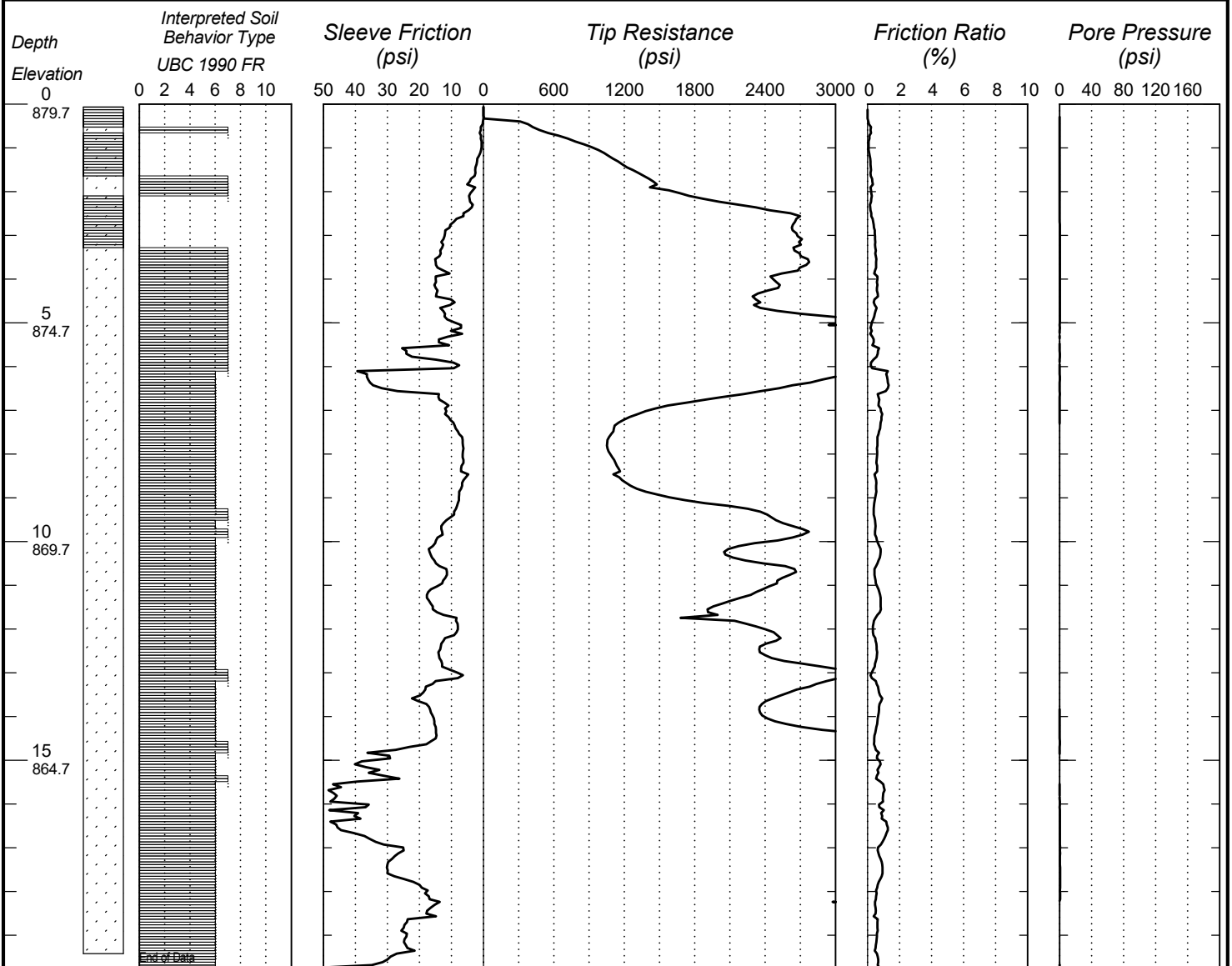
Bottom of Hole 30.25

**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85604**

**BRAUN**<sup>SM</sup>  
**INTERTEC**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-32</b>	Ground Elevation <b>879.7 (Surveyed)</b>
Location Anoka County Coordinate System <b>X=468001 Y=161710</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'16.02" Longitude (West)=93°23'26.90"		CPT Operator <b>Holmbo</b>	Date Completed <b>7/13/20</b>	
		Hole Type <b>CPT-STD</b>		



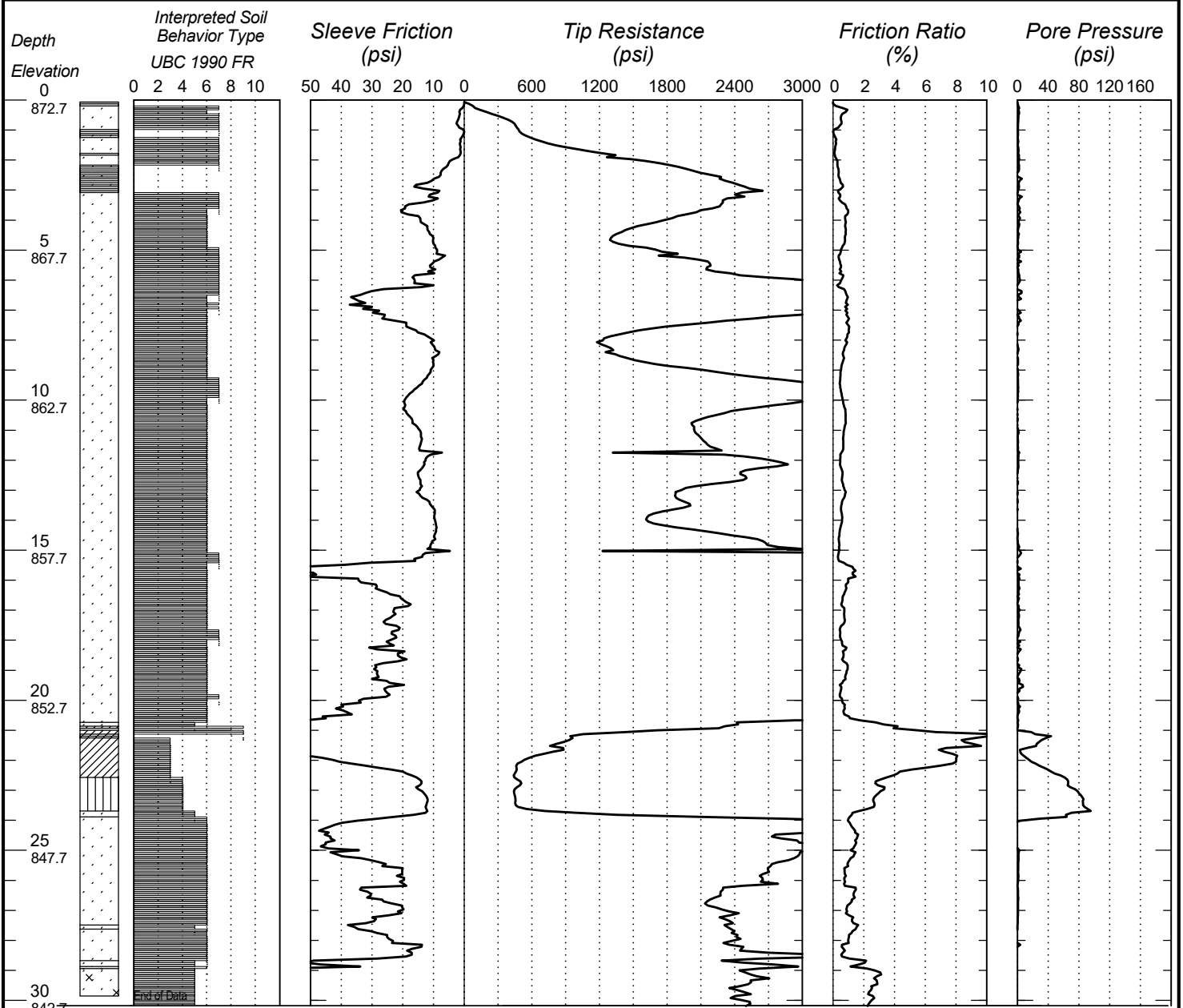
Bottom of Hole 19.75



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85605**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-32A</b>	Ground Elevation <b>872.7 (Surveyed)</b>
Location Anoka County Coordinate System <b>X=468005 Y=161734</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'16.26" Longitude (West)=93°23'26.84"		CPT Operator <b>Holmbo</b>	Date Completed	
		Hole Type <b>CPT-STD</b>	<b>7/13/20</b>	



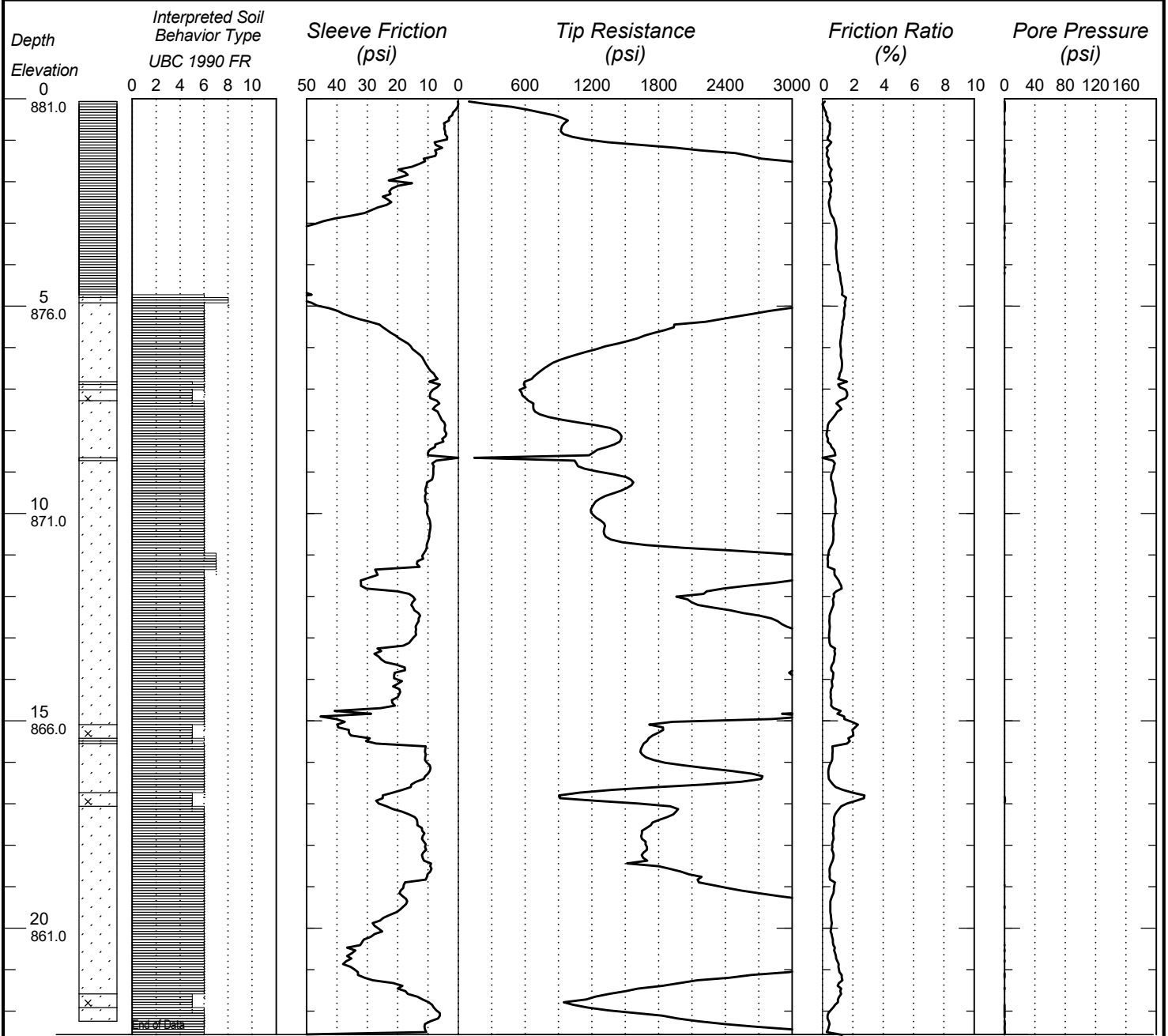
Bottom of Hole 30.18

**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85606**

**BRAUN**<sup>SM</sup>  
**INTERTEC**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-33</b>	Ground Elevation <b>881.0</b> (Surveyed)
Location Anoka County Coordinate System <b>X=468118 Y=161676</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'15.69" Longitude (West)=93°23'25.26"		CPT Operator <b>Holmbo</b>	Date Completed <b>7/13/20</b>	
		Hole Type <b>CPT-STD</b>		



Bottom of Hole 22.57

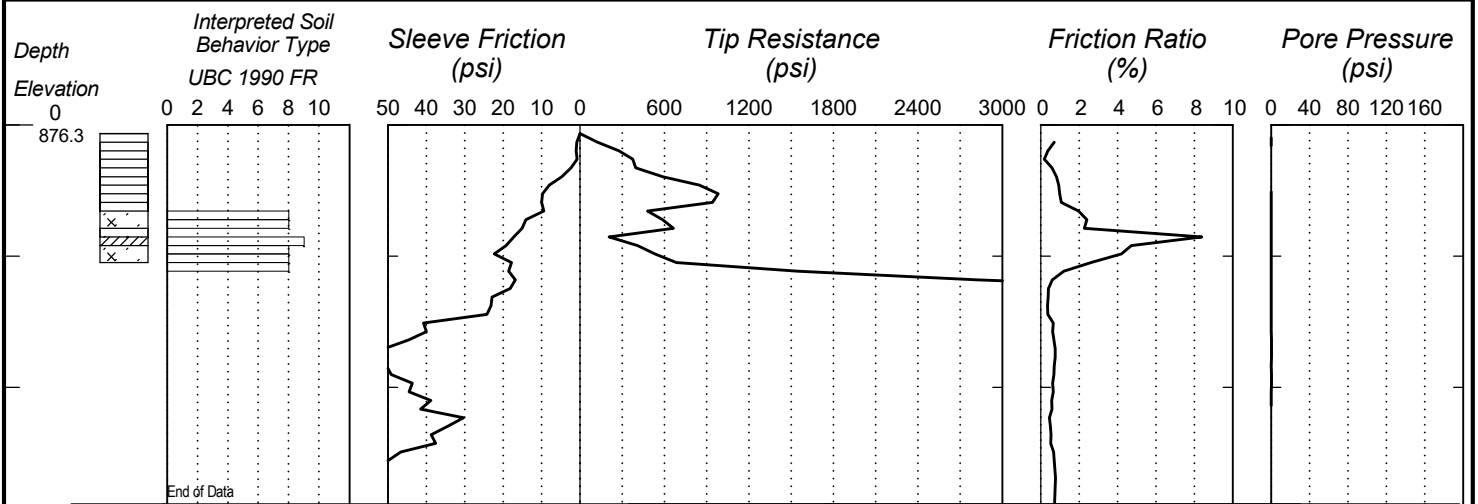




**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85607**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-34</b>	Ground Elevation <b>876.3 (Surveyed)</b>
Location Anoka County Coordinate System <b>X=468276 Y=161691</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'15.84" Longitude (West)=93°23'23.05"		CPT Operator <b>Holmbo</b>	Date Completed <b>7/14/20</b>	
		Hole Type <b>CPT-STD</b>		



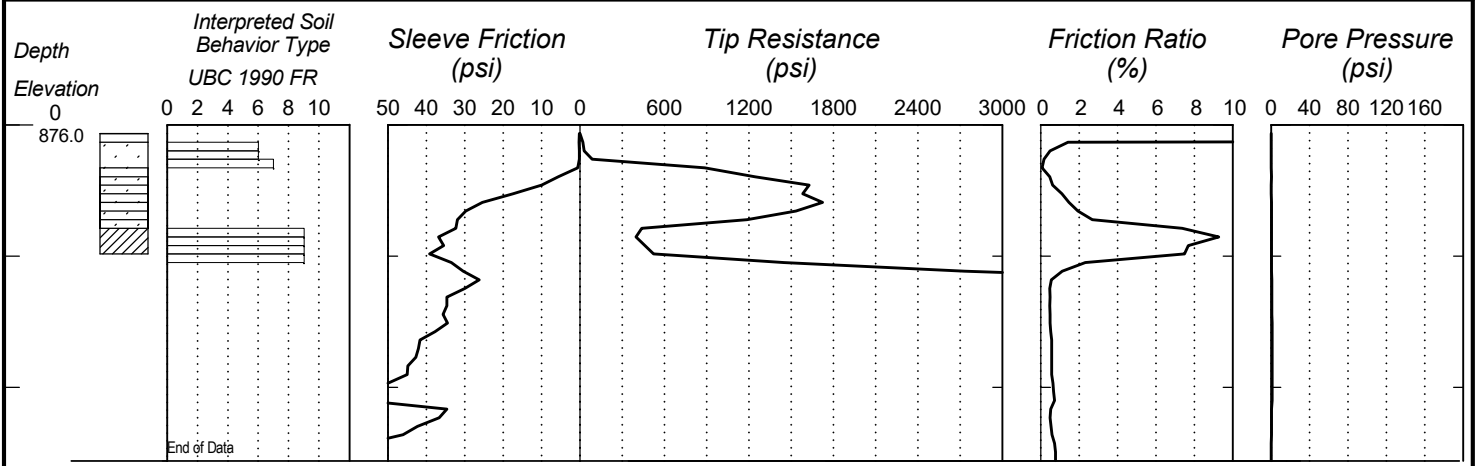
Bottom of Hole 2.89



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85608**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

<b>State Project</b> 0215-76	<b>Bridge No. or Job Desc.</b>	<b>Trunk Highway/Location</b> US Highway TH 10	<b>Sounding No.</b> NC-34A	<b>Ground Elevation</b> 876.0 (Surveyed)
<b>Location</b> Anoka County Coordinate System <b>X=468290 Y=161696</b>		<b>CPT Machine</b> CPT-01		<b>SHEET 1 of 1</b>
<b>Latitude (North)=45°12'15.89" Longitude (West)=93°23'22.86"</b>		<b>CPT Operator</b> Holmbo		<b>Date Completed</b>
		<b>Hole Type</b> CPT-STD		<b>7/14/20</b>



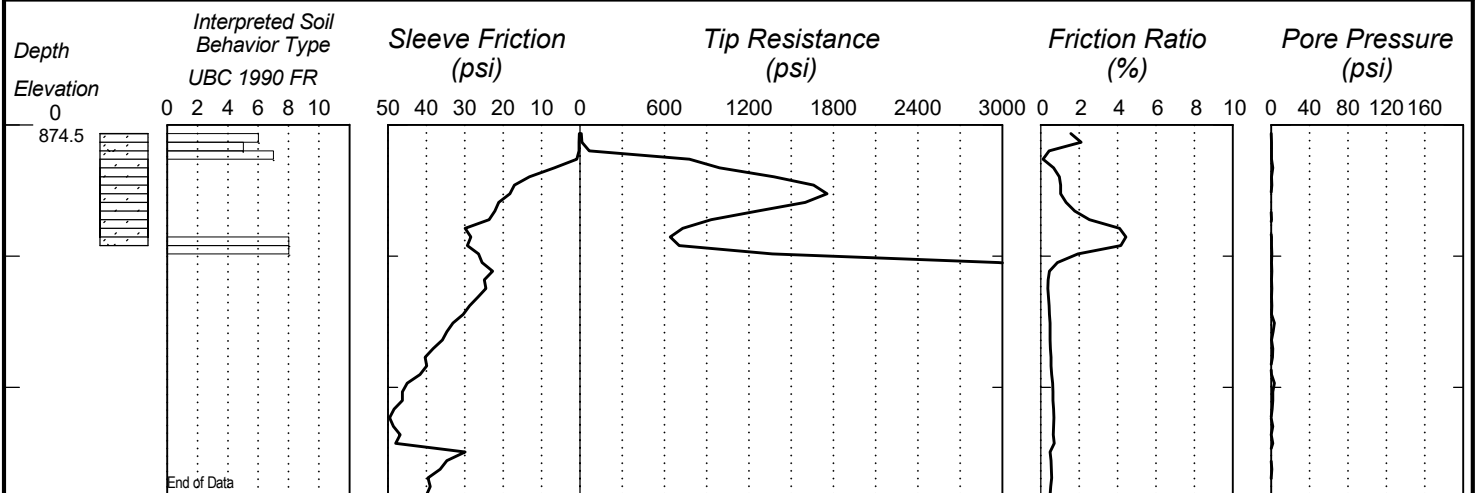
Bottom of Hole 2.56



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85609**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

<b>State Project</b> 0215-76	<b>Bridge No. or Job Desc.</b>	<b>Trunk Highway/Location</b> US Highway TH 10	<b>Sounding No.</b> NC-35	<b>Ground Elevation</b> 874.5 (Surveyed)
<b>Location</b> Anoka County Coordinate System <b>X=468347 Y=161694</b>		<b>CPT Machine</b> CPT-01		<b>SHEET 1 of 1</b>
<b>Latitude (North)=45°12'15.87" Longitude (West)=93°23'22.06"</b>		<b>CPT Operator</b> Holmbo		<b>Date Completed</b>
		<b>Hole Type</b> CPT-STD		<b>7/14/20</b>



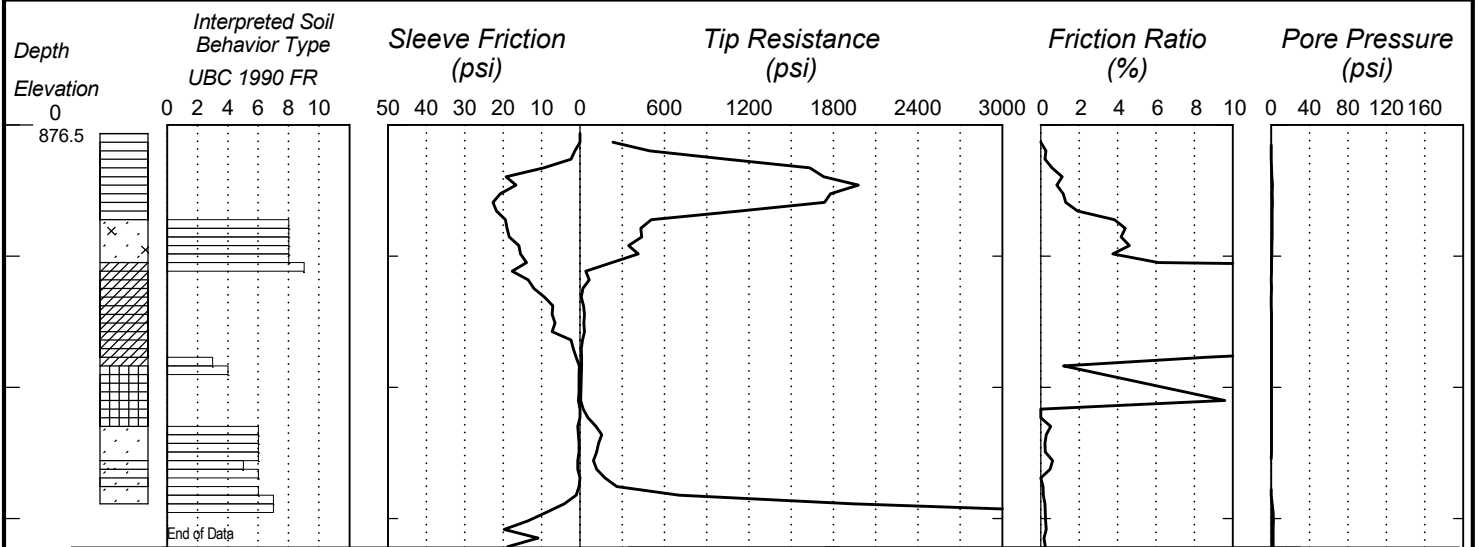
Bottom of Hole 2.82

**BRAUN**<sup>SM</sup>  
**INTERTEC**

**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85610**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-35A</b>	Ground Elevation <b>876.5</b> (Surveyed)
Location Anoka County Coordinate System <b>X=468346 Y=161715</b>		CPT Machine <b>CPT-01</b>		SHEET 1 of 1
Latitude (North)=45°12'16.08" Longitude (West)=93°23'22.07"		CPT Operator <b>Holmbo</b>		Date Completed
		Hole Type <b>CPT-STD</b>		<b>7/14/20</b>

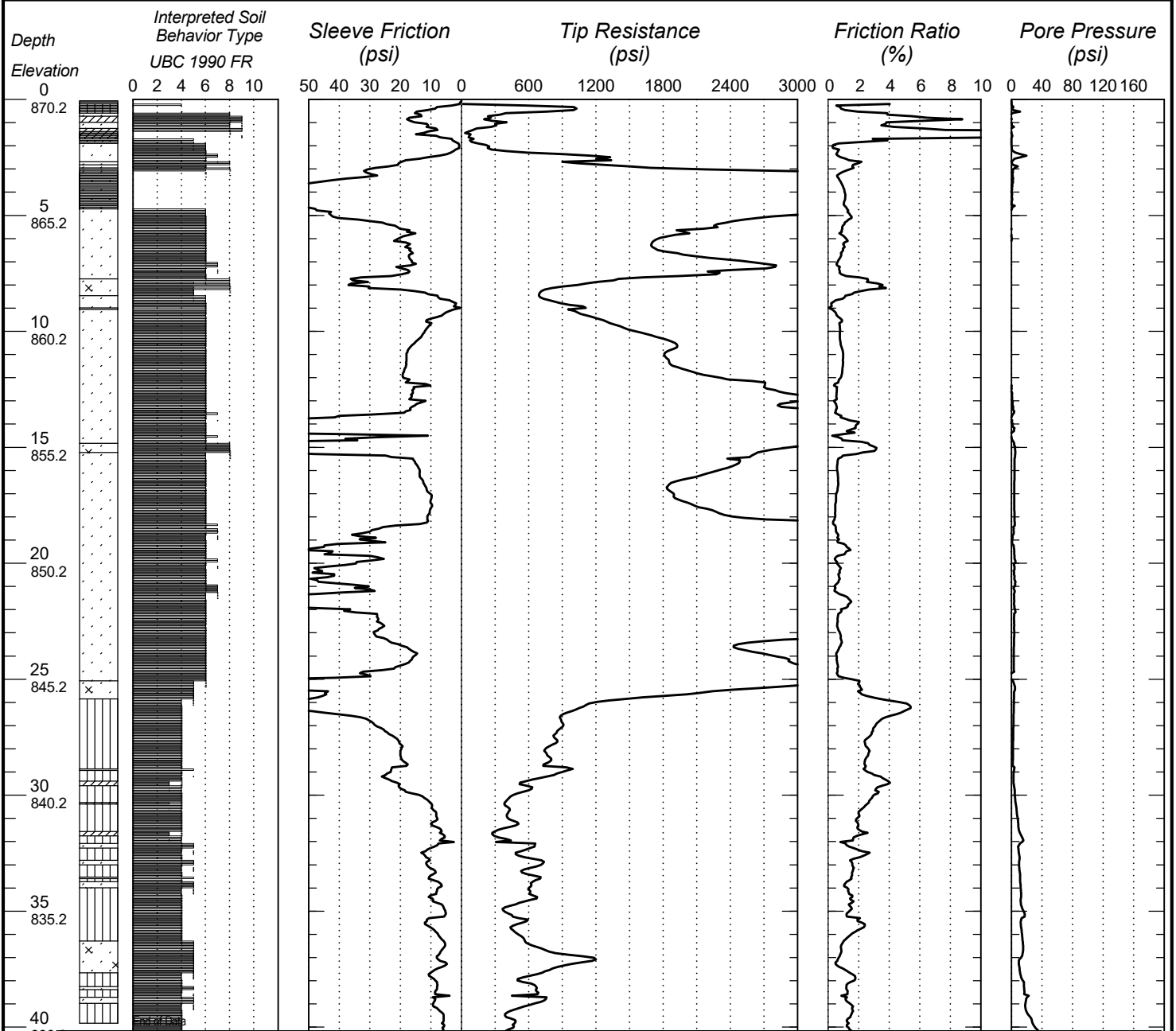




**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85611**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-36</b>	Ground Elevation <b>870.2 (Surveyed)</b>
Location Anoka County Coordinate System <b>X=468457 Y=161721</b>		CPT Machine <b>CPT-01</b>		SHEET 1 of 1
Latitude (North)=45°12'16.14" Longitude (West)=93°23'20.52"		CPT Operator <b>Holmbo</b>		Date Completed
		Hole Type <b>CPT-STD</b>		<b>7/14/20</b>



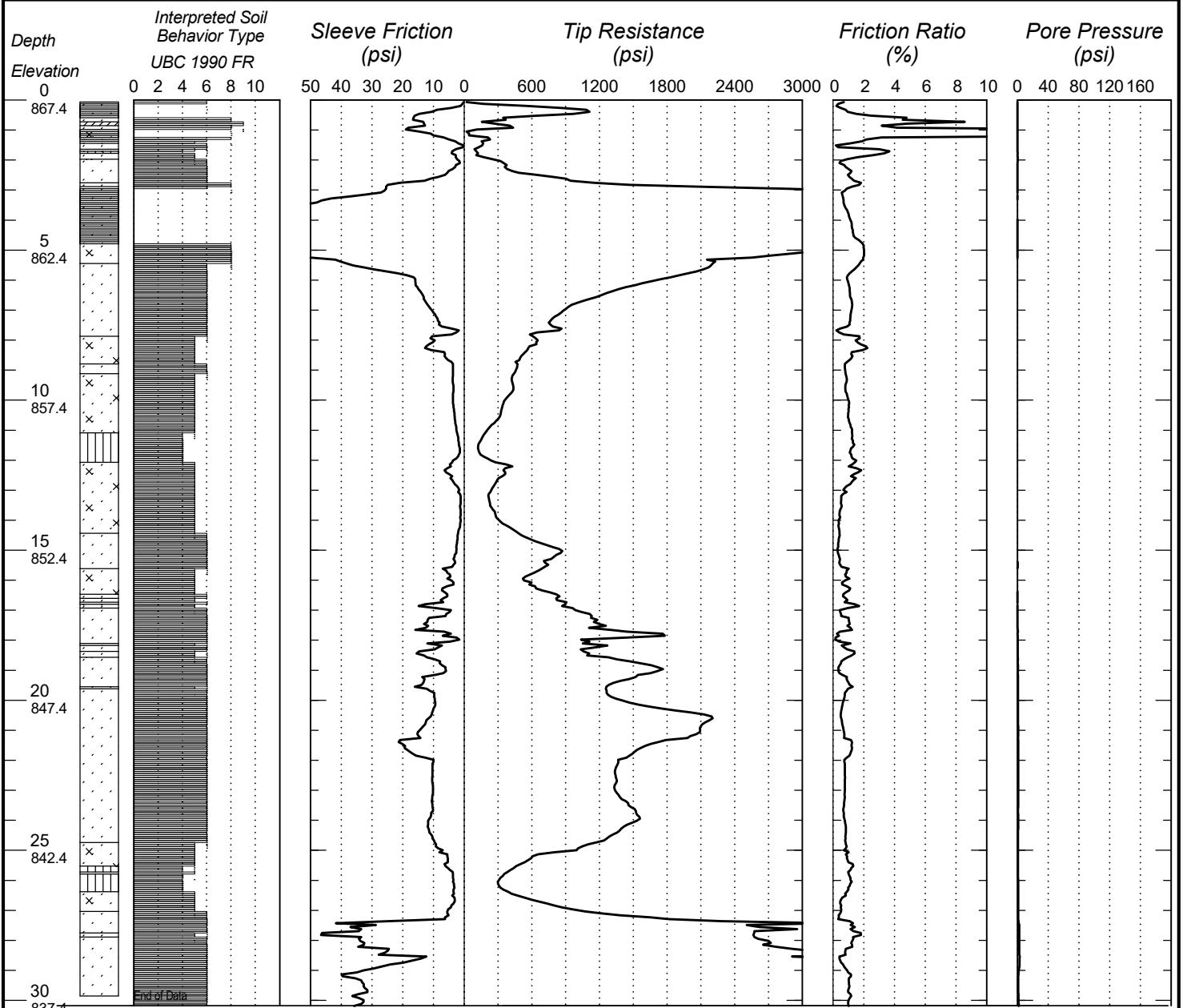
Bottom of Hole 40.16

**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85612**

**BRAUN**<sup>SM</sup>  
**INTERTEC**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-37</b>	Ground Elevation <b>867.4 (Surveyed)</b>
Location Anoka County Coordinate System <b>X=468535 Y=161743</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'16.36" Longitude (West)=93°23'19.43"		CPT Operator <b>Holmbo</b>	Date Completed <b>7/14/20</b>	
		Hole Type <b>CPT-STD</b>		



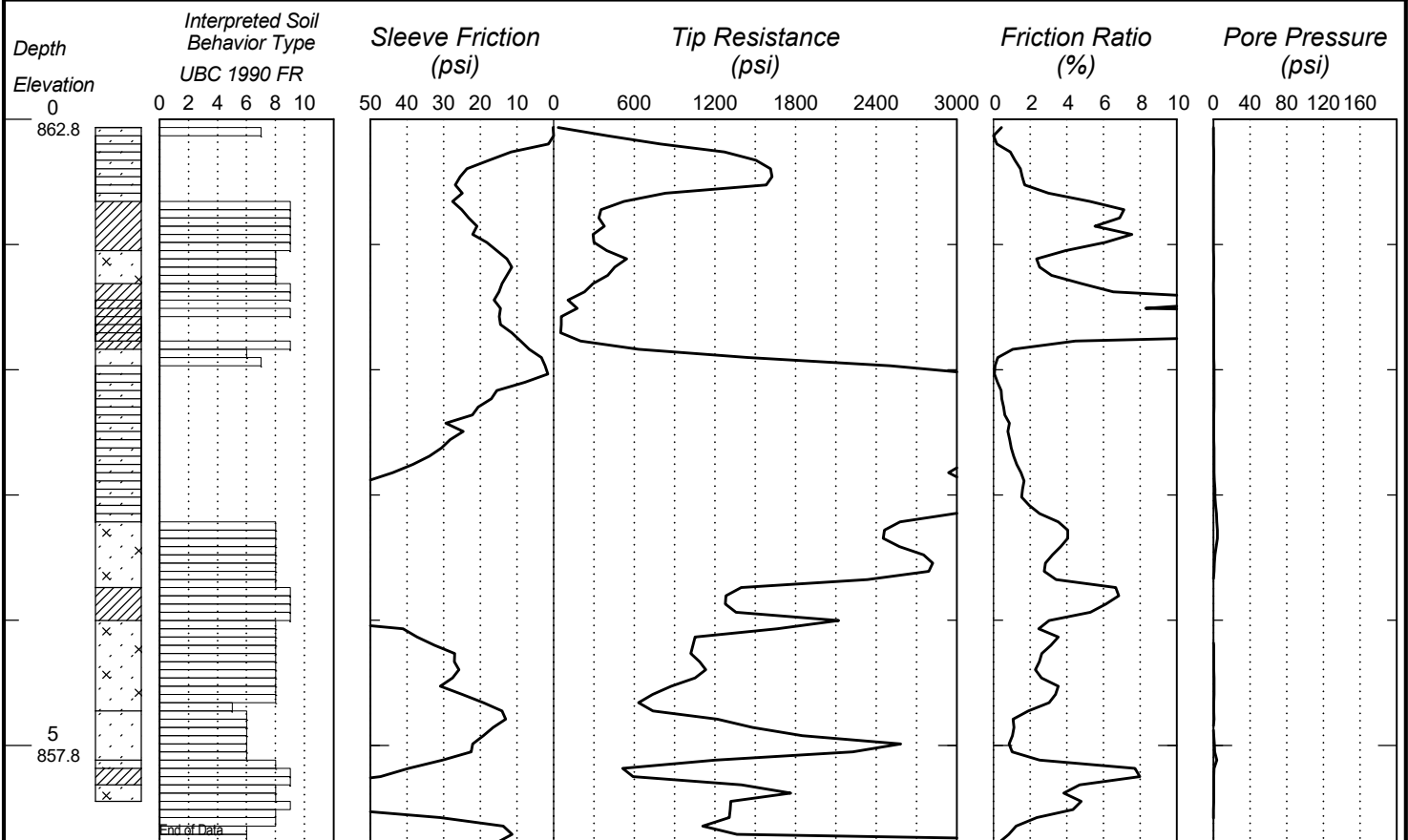
Bottom of Hole 30.18



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85613**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-38</b>	Ground Elevation <b>862.8</b> (Surveyed)
Location Anoka County Coordinate System <b>X=468650 Y=161774</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'16.67" Longitude (West)=93°23'17.83"		CPT Operator <b>Holmbo</b>	Date Completed <b>7/14/20</b>	
		Hole Type <b>CPT-STD</b>		



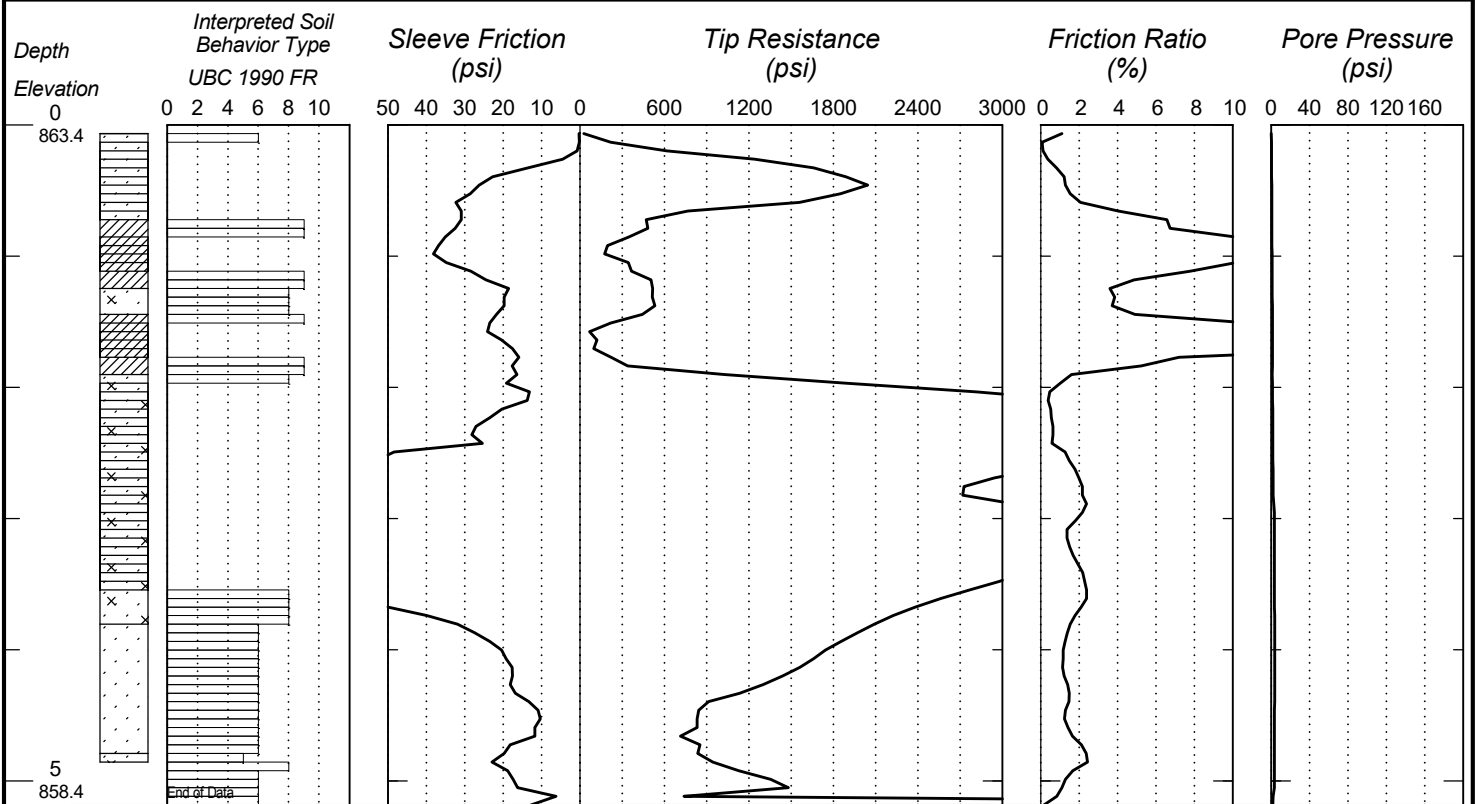
Bottom of Hole 5.77



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85614**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-38A</b>	Ground Elevation <b>863.4 (Surveyed)</b>
Location Anoka County Coordinate System <b>X=468644 Y=161797</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'16.89" Longitude (West)=93°23'17.91"		CPT Operator <b>Holmbo</b>	Date Completed <b>7/14/20</b>	
		Hole Type <b>CPT-STD</b>		



Bottom of Hole 5.18

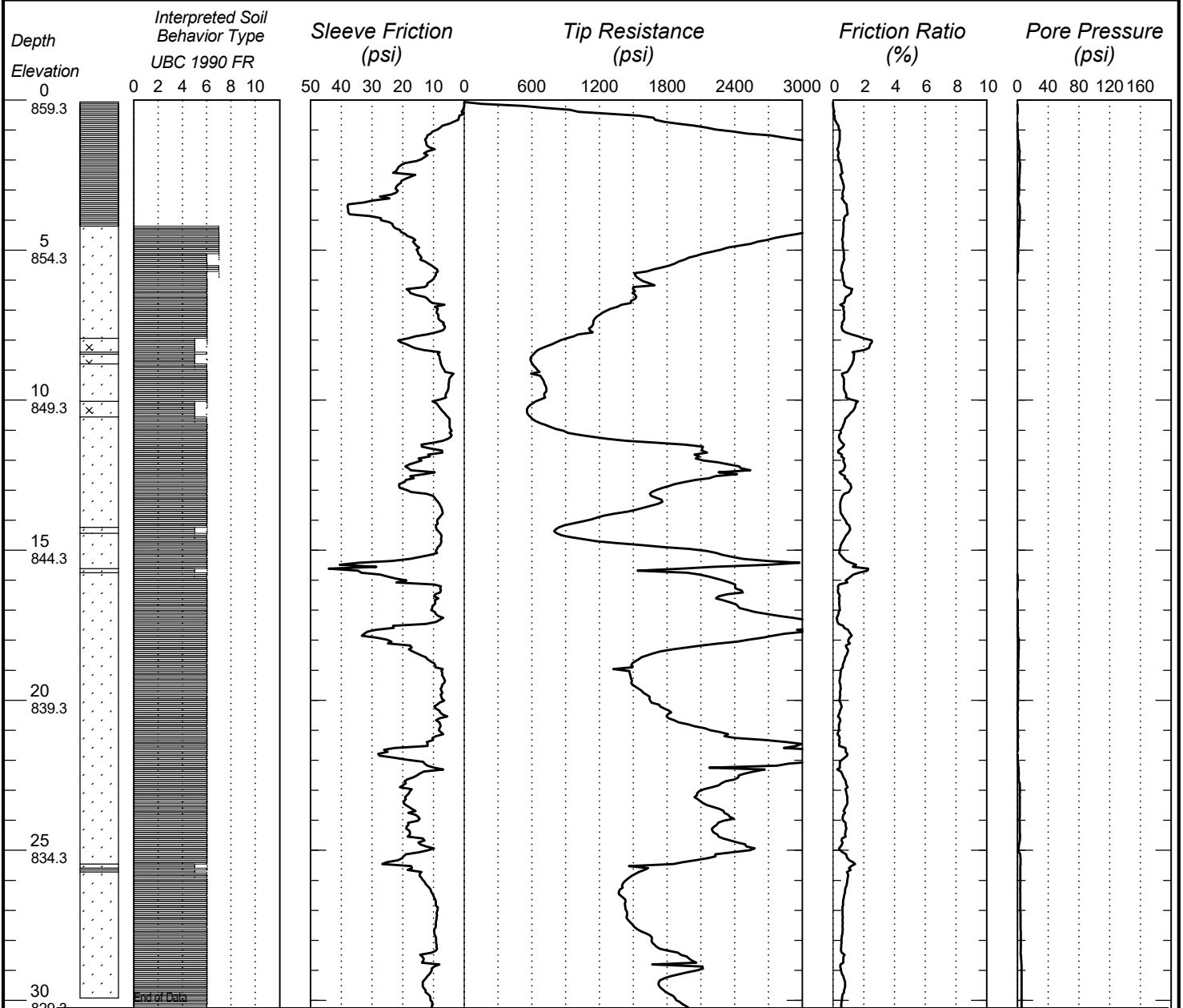




**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85615**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-39</b>	Ground Elevation <b>859.3 (Surveyed)</b>
Location Anoka County Coordinate System <b>X=468741 Y=161795</b>		CPT Machine <b>CPT-01</b>		SHEET 1 of 1
Latitude (North)=45°12'16.87" Longitude (West)=93°23'16.56"		CPT Operator <b>Holmbo</b>		Date Completed
		Hole Type <b>CPT-STD</b>		<b>7/15/20</b>



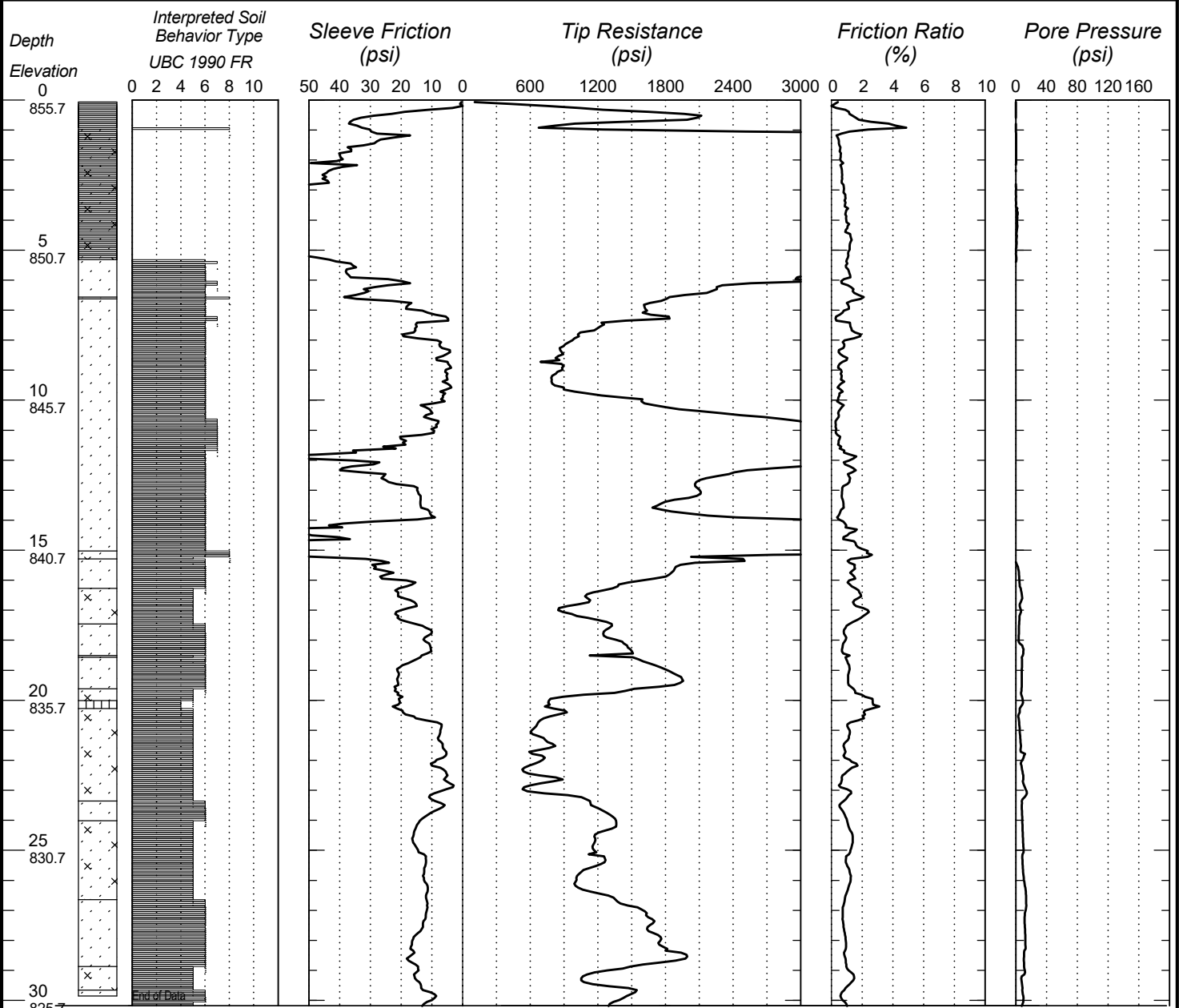
Bottom of Hole 30.25

**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85616**

**BRAUN**<sup>SM</sup>  
**INTERTEC**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-40</b>	Ground Elevation <b>855.7 (Surveyed)</b>
Location Anoka County Coordinate System <b>X=468850 Y=161815</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'17.07" Longitude (West)=93°23'15.04"		CPT Operator <b>Holmbo</b>	Date Completed <b>7/15/20</b>	
		Hole Type <b>CPT-STD</b>		



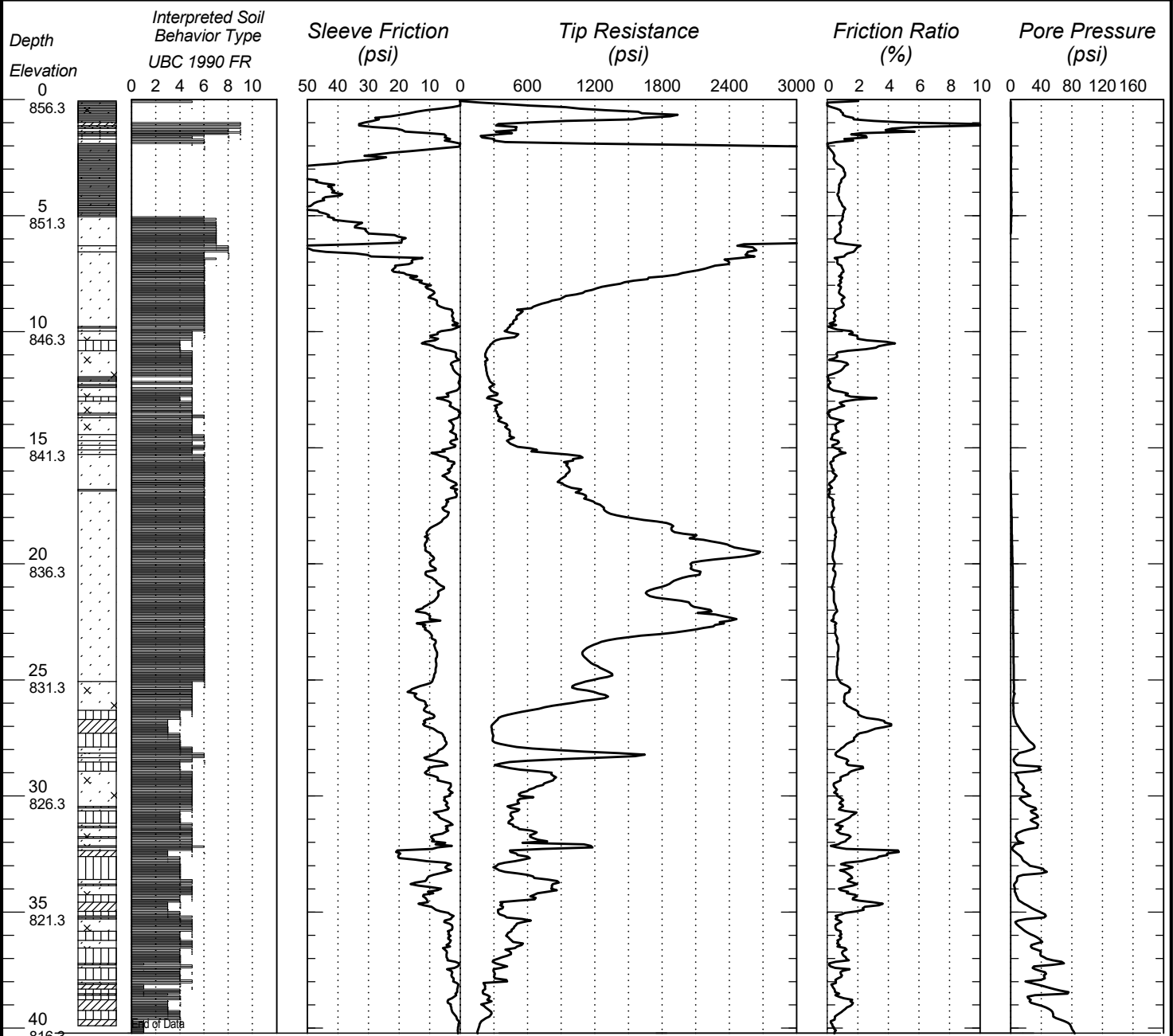
Bottom of Hole 30.18

**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85617**

**BRAUN**<sup>SM</sup>  
**INTERTEC**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-41</b>	Ground Elevation <b>856.3</b> (Surveyed)
Location Anoka County Coordinate System <b>X=468942 Y=161822</b>		CPT Machine <b>CPT-01</b>		SHEET 1 of 1
Latitude (North)=45°12'17.14" Longitude (West)=93°23'13.75"		CPT Operator <b>Holmbo</b>		Date Completed
		Hole Type <b>CPT-STD</b>		<b>7/15/20</b>



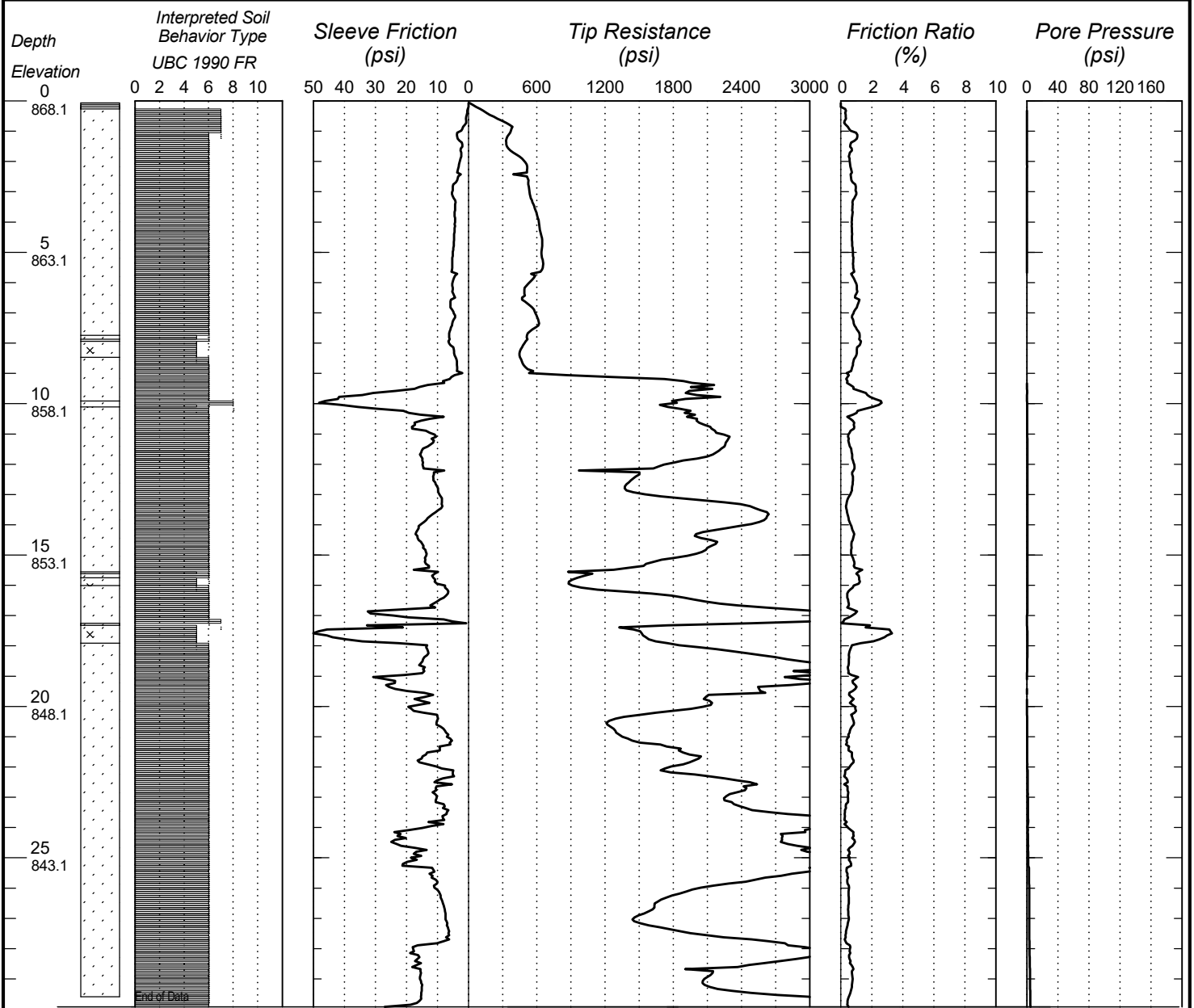
Bottom of Hole 40.22

**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85618**



This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-43</b>	Ground Elevation <b>868.1</b> (Surveyed)
Location Anoka County Coordinate System <b>X=469847 Y=161964</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'18.56" Longitude (West)=93°23'01.12"		CPT Operator <b>Holmbo</b>	Date Completed <b>7/21/20</b>	
		Hole Type <b>CPT-STD</b>		



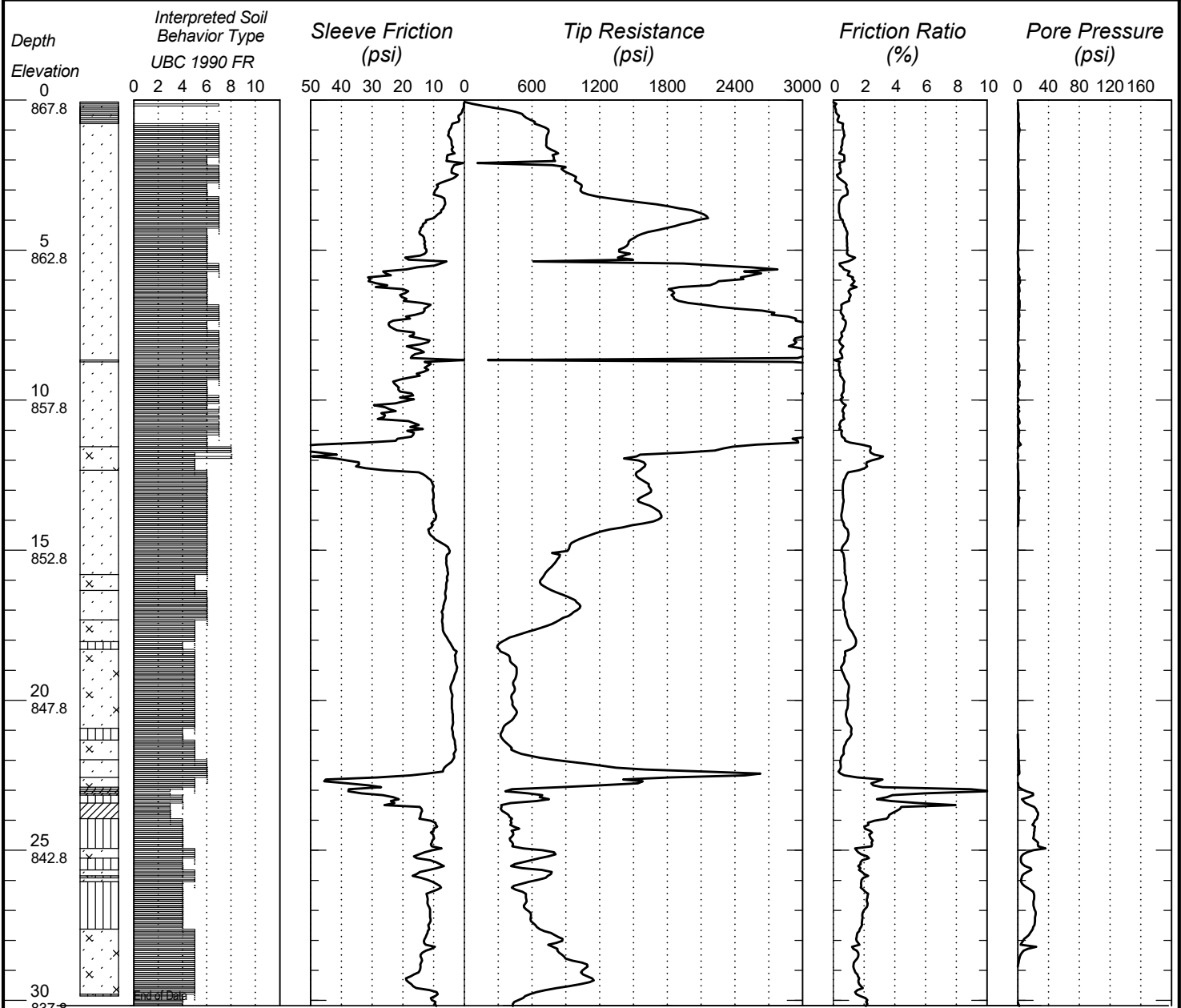
Bottom of Hole 29.92



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85619**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-44</b>	Ground Elevation <b>867.8</b> (Surveyed)
Location Anoka County Coordinate System <b>X=470289 Y=161903</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'17.96" Longitude (West)=93°22'54.94"		CPT Operator <b>Holmbo</b>	Date Completed <b>6/24/20</b>	
		Hole Type <b>CPT-STD</b>		



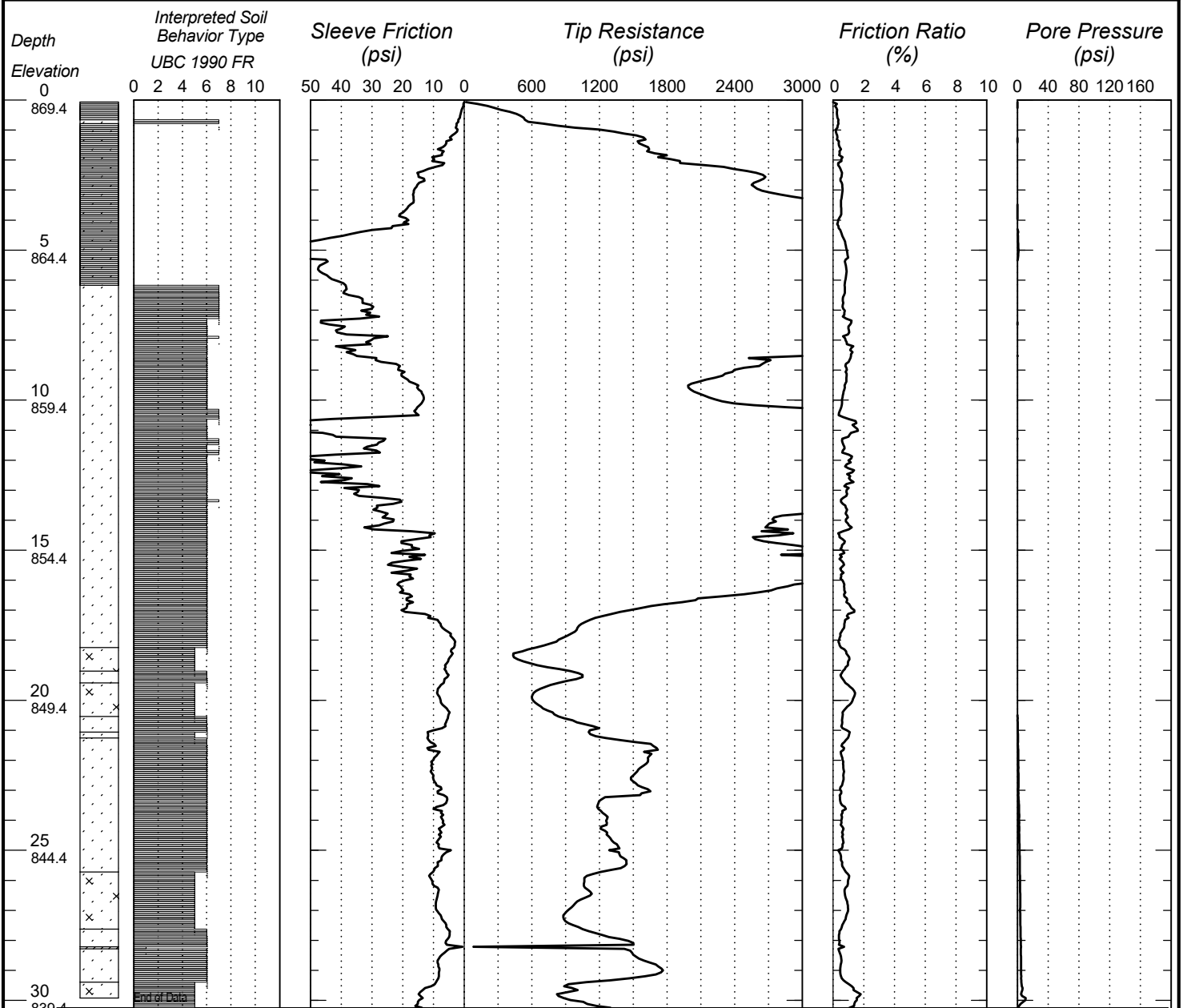
Bottom of Hole 30.18



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85620**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-45</b>	Ground Elevation <b>869.4 (Surveyed)</b>
Location Anoka County Coordinate System <b>X=470395 Y=161901</b>		CPT Machine <b>CPT-01</b>		SHEET 1 of 1
Latitude (North)=45°12'17.94" Longitude (West)=93°22'53.46"		CPT Operator <b>Holmbo</b>		Date Completed
		Hole Type <b>CPT-STD</b>		<b>6/24/20</b>



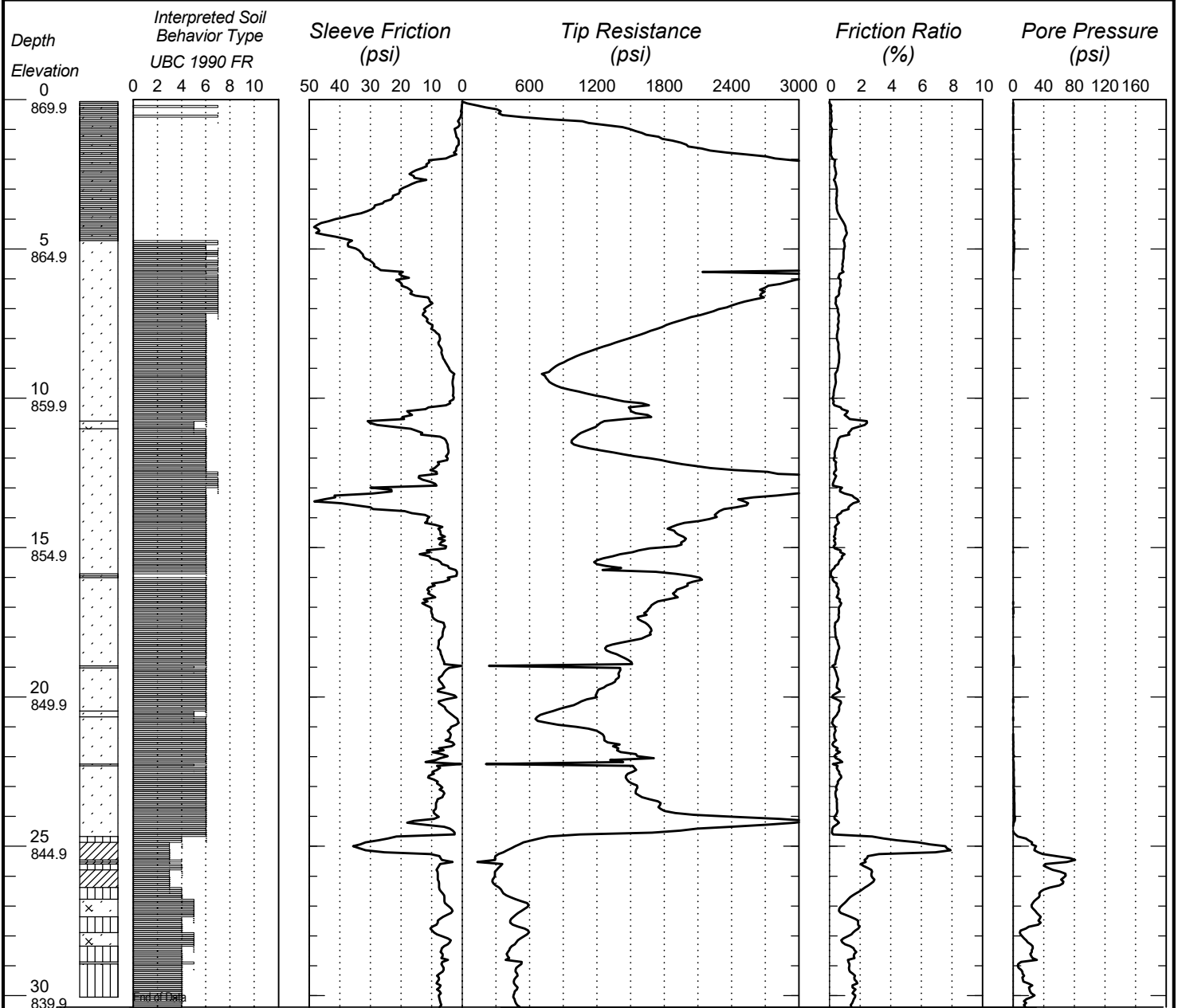
Bottom of Hole 30.25



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85621**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-46</b>	Ground Elevation <b>869.9</b> (Surveyed)
Location Anoka County Coordinate System <b>X=470486 Y=161899</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'17.93" Longitude (West)=93°22'52.19"		CPT Operator <b>Holmbo</b>	Date Completed <b>6/24/20</b>	
		Hole Type <b>CPT-STD</b>		



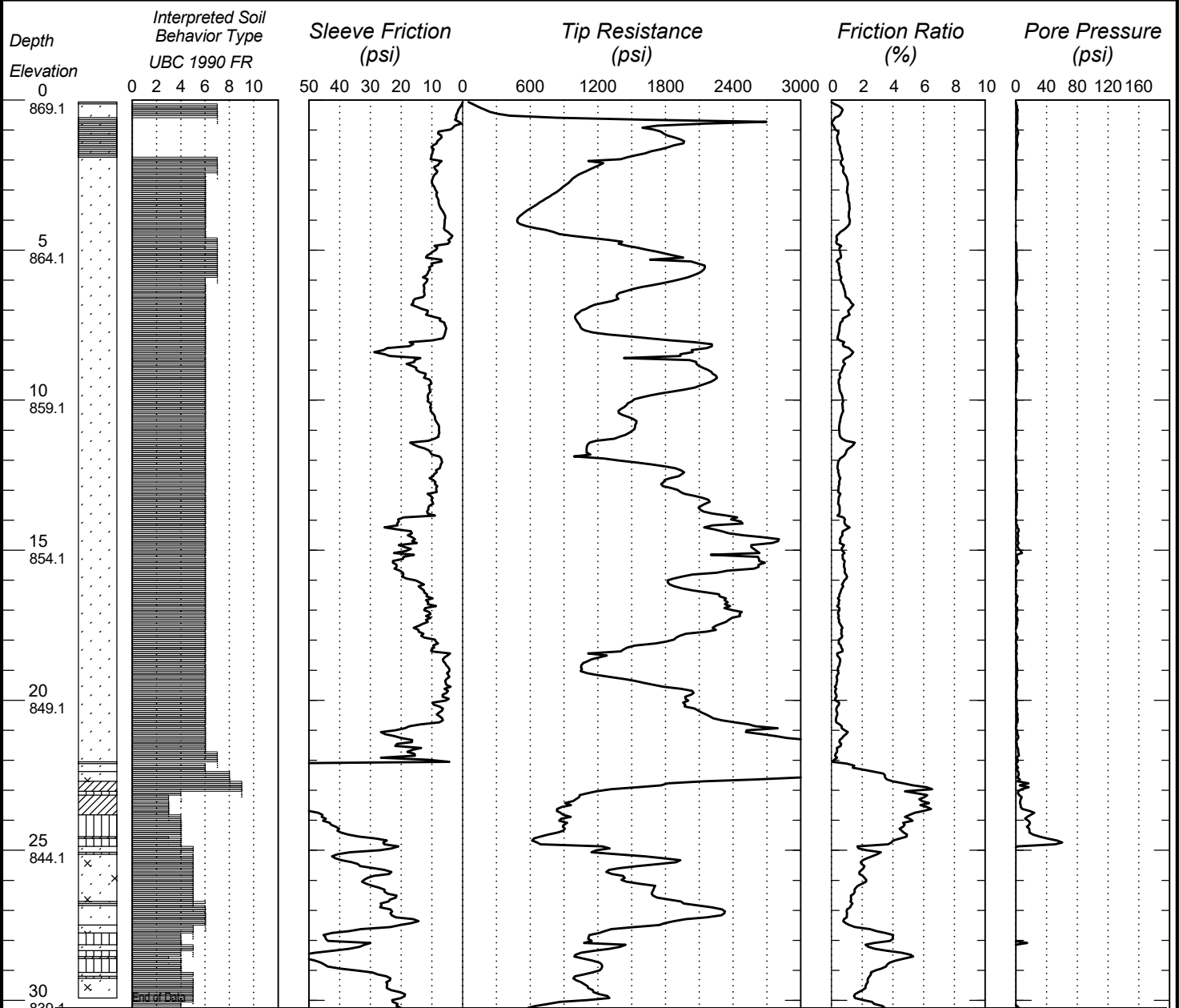
Bottom of Hole 30.38

**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85622**

**BRAUN**<sup>SM</sup>  
**INTERTEC**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-47</b>	Ground Elevation <b>869.1</b> (Surveyed)
Location Anoka County Coordinate System <b>X=470604 Y=161908</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'18.02" Longitude (West)=93°22'50.54"		CPT Operator <b>Holmbo</b>	Date Completed <b>6/24/20</b>	
		Hole Type <b>CPT-STD</b>		



Bottom of Hole 30.25

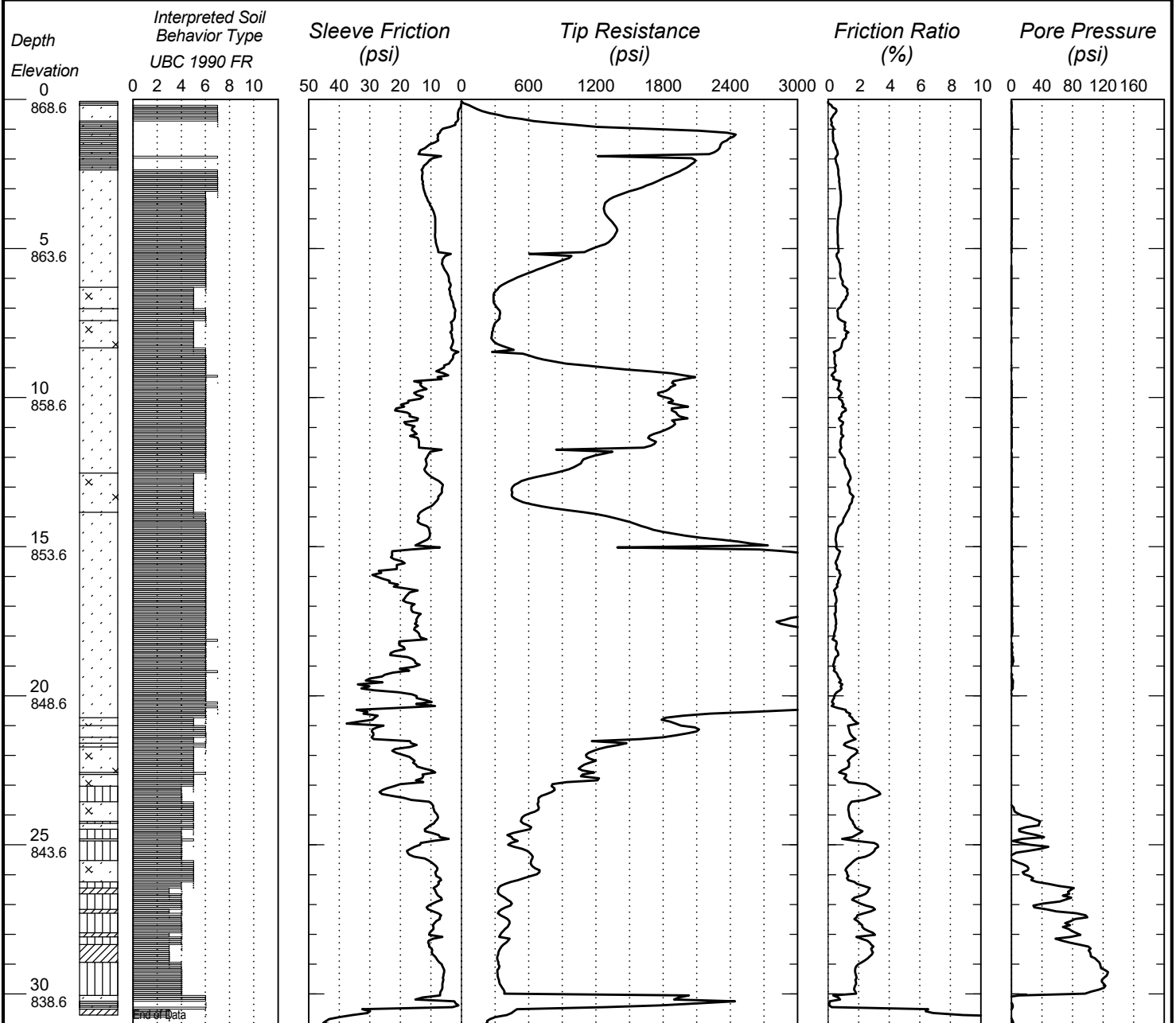




**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85623**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-48</b>	Ground Elevation <b>868.6</b> (Surveyed)
Location Anoka County Coordinate System <b>X=470677 Y=161933</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'18.26" Longitude (West)=93°22'49.52"		CPT Operator <b>Holmbo</b>	Date Completed <b>6/24/20</b>	
		Hole Type <b>CPT-STD</b>		



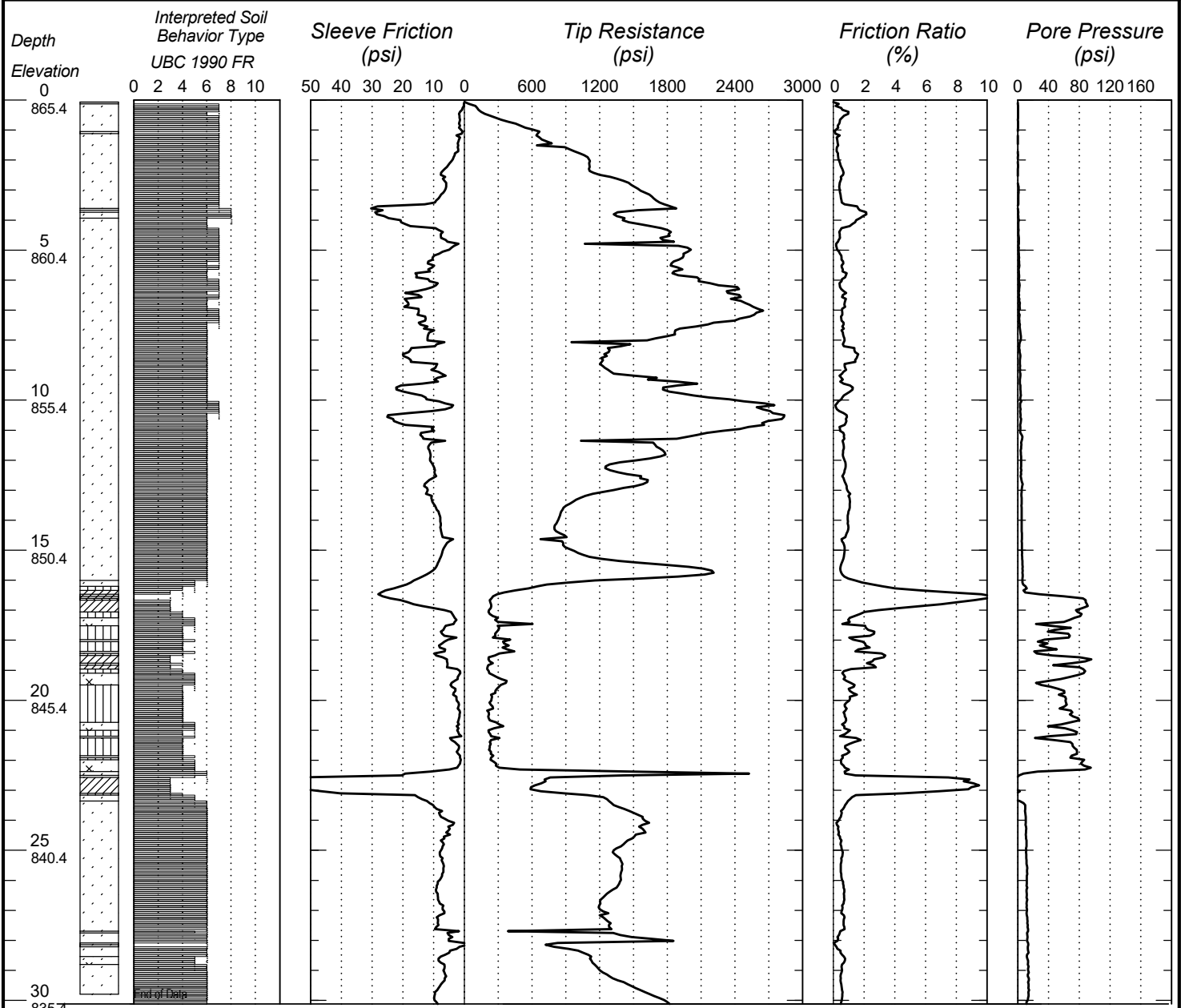
Bottom of Hole 31.04



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85624**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-52</b>	Ground Elevation <b>865.4 (Surveyed)</b>
Location Anoka County Coordinate System <b>X=469731 Y=161759</b>		CPT Machine <b>CPT-01</b>		SHEET 1 of 1
Latitude (North)=45°12'16.53" Longitude (West)=93°23'02.74"		CPT Operator <b>Holmbo</b>		Date Completed
		Hole Type <b>CPT-STD</b>		<b>7/15/20</b>



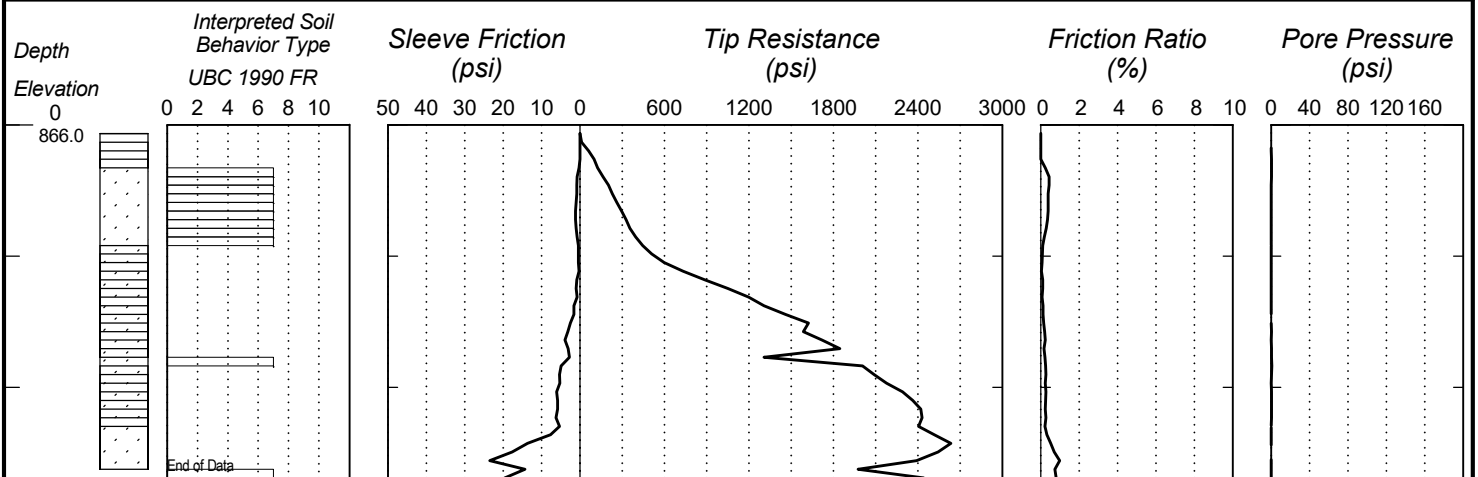
Bottom of Hole 30.12



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85625**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-53</b>	Ground Elevation <b>866.0</b> (Surveyed)
Location Anoka County Coordinate System <b>X=469844 Y=161758</b>		CPT Machine <b>CPT-01</b>		SHEET 1 of 1
Latitude (North)=45°12'16.53" Longitude (West)=93°23'01.16"		CPT Operator <b>Holmbo</b>		Date Completed
		Hole Type <b>CPT-STD</b>		<b>7/15/20</b>

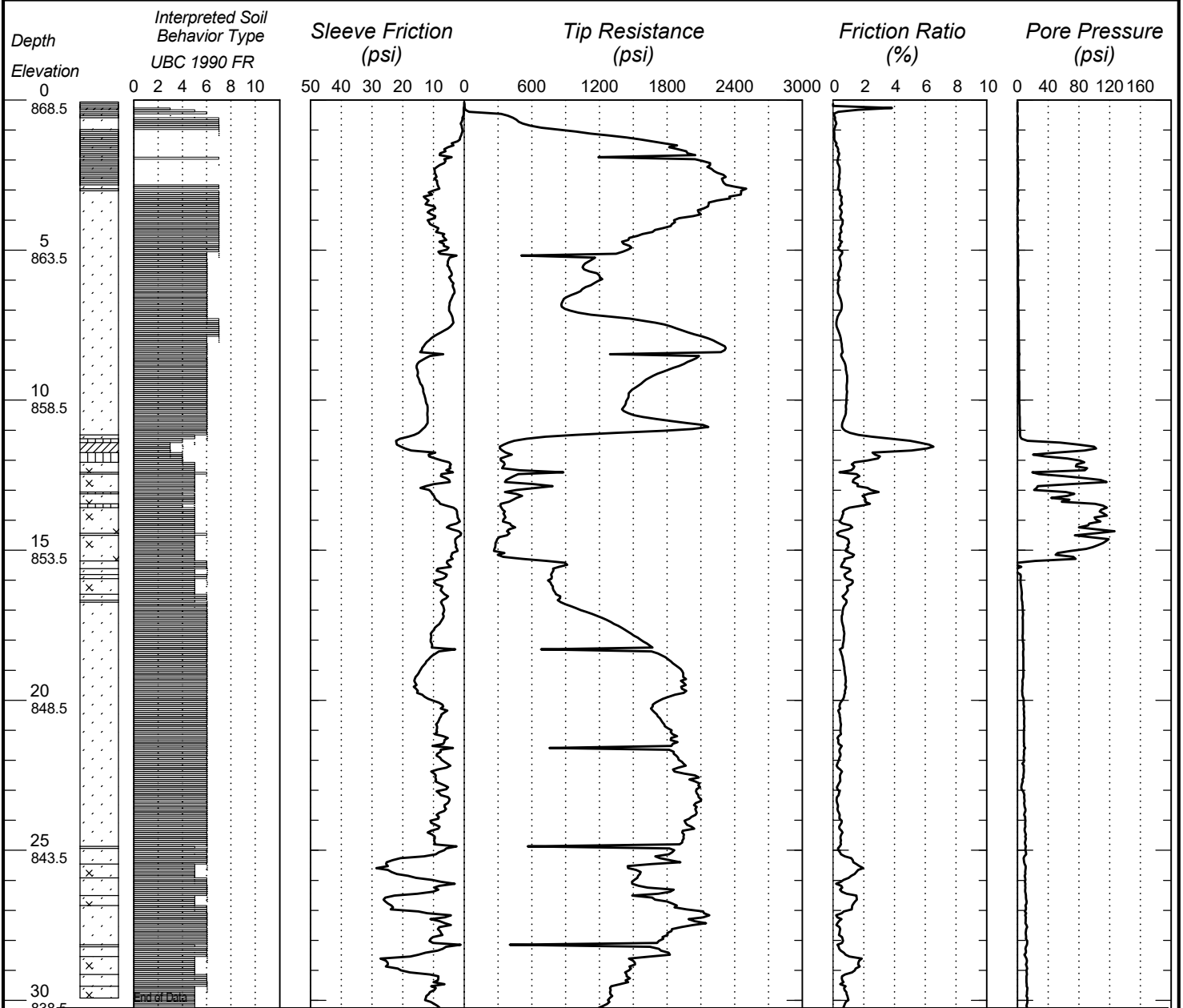




**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85626**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-53A</b>	Ground Elevation <b>868.5 ()</b>
Location Anoka County Coordinate System <b>X=469844 Y=161758</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'16.53" Longitude (West)=93°23'01.16"		CPT Operator <b>Holmbo</b>	Date Completed	
		Hole Type <b>CPT-STD</b>	<b>7/15/20</b>	



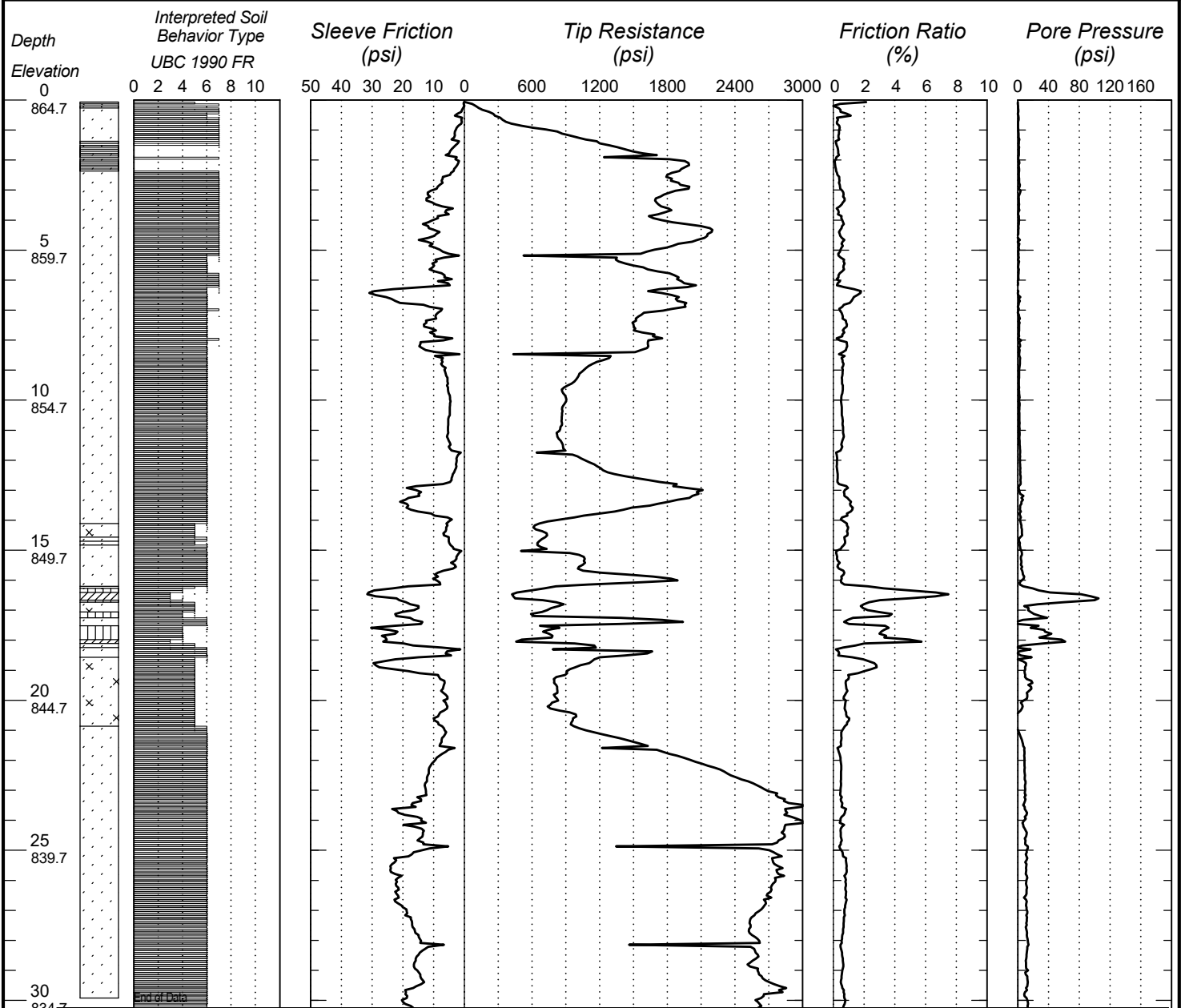
Bottom of Hole 30.25



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85627**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-54</b>	Ground Elevation <b>864.7</b> (Surveyed)
Location Anoka County Coordinate System <b>X=469920 Y=161766</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'16.61" Longitude (West)=93°23'00.09"		CPT Operator <b>Holmbo</b>	Date Completed <b>7/15/20</b>	
		Hole Type <b>CPT-STD</b>		



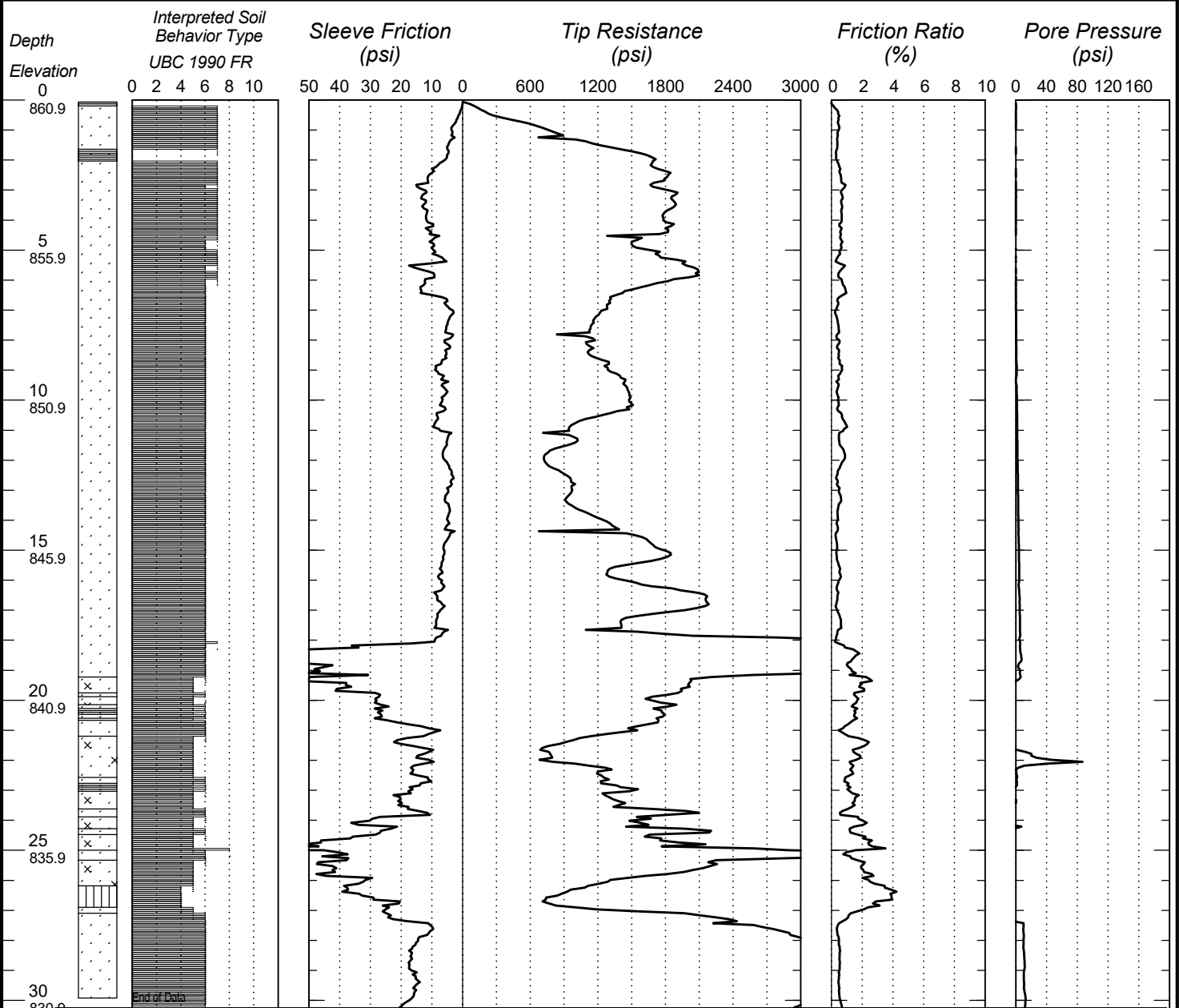
Bottom of Hole 30.25

**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85628**

**BRAUN**<sup>SM</sup>  
**INTERTEC**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-55</b>	Ground Elevation <b>860.9</b> (Surveyed)
Location Anoka County Coordinate System <b>X=470039 Y=161784</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'16.78" Longitude (West)=93°22'58.43"		CPT Operator <b>Holmbo</b>	Date Completed <b>7/15/20</b>	
		Hole Type <b>CPT-STD</b>		



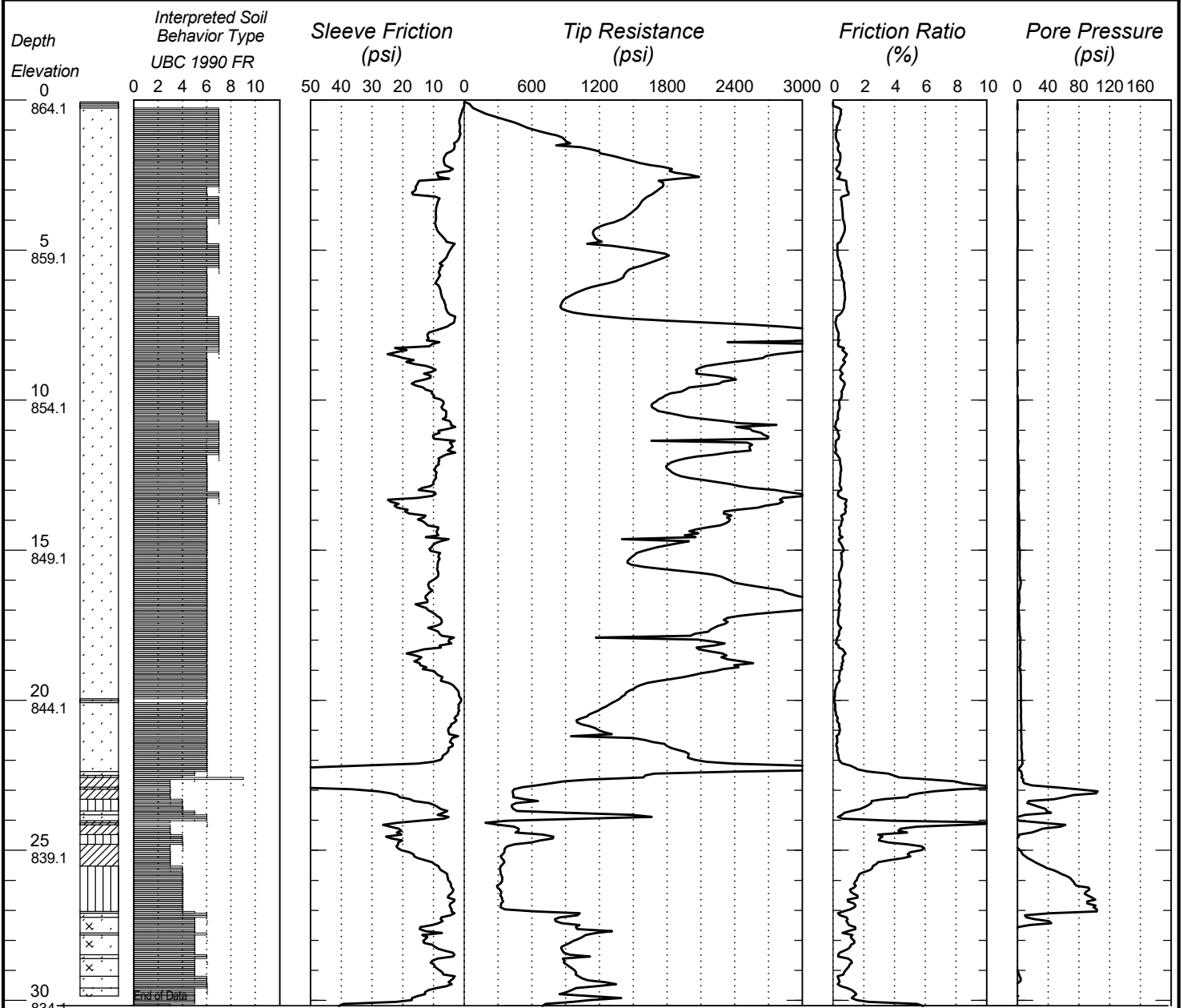
Bottom of Hole 30.25



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85629**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-56</b>	Ground Elevation <b>864.1 (Surveyed)</b>
Location Anoka County Coordinate System <b>X=470125 Y=161773</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'16.68" Longitude (West)=93°22'57.23"		CPT Operator <b>Holmbo</b>	Date Completed <b>7/15/20</b>	
		Hole Type <b>CPT-STD</b>		



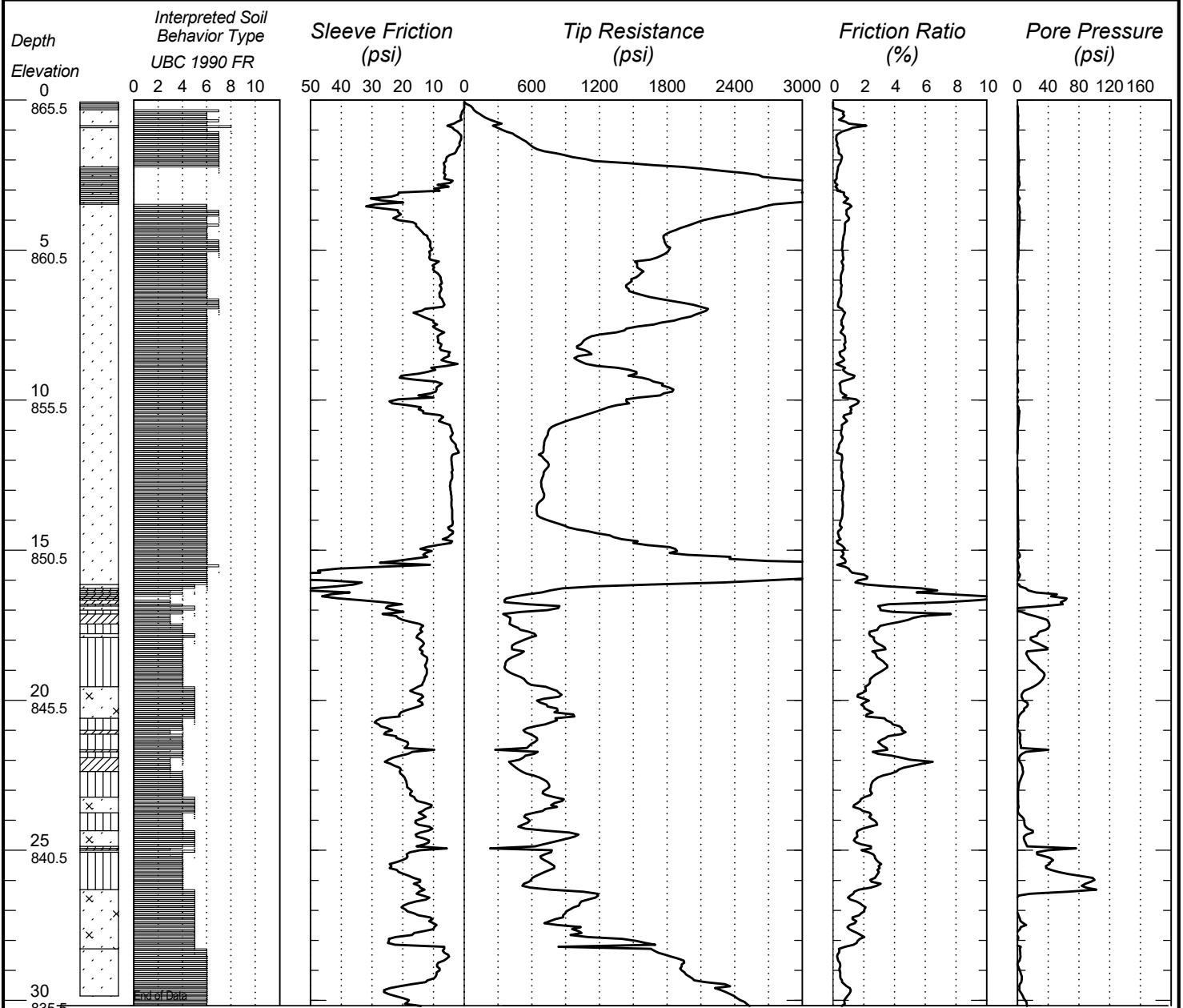
Bottom of Hole 30.18



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85630**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-57</b>	Ground Elevation <b>865.5 (Surveyed)</b>
Location Anoka County Coordinate System <b>X=470220 Y=161769</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'16.64" Longitude (West)=93°22'55.90"		CPT Operator <b>Holmbo</b>	Date Completed <b>7/15/20</b>	
		Hole Type <b>CPT-STD</b>		



Bottom of Hole 30.18

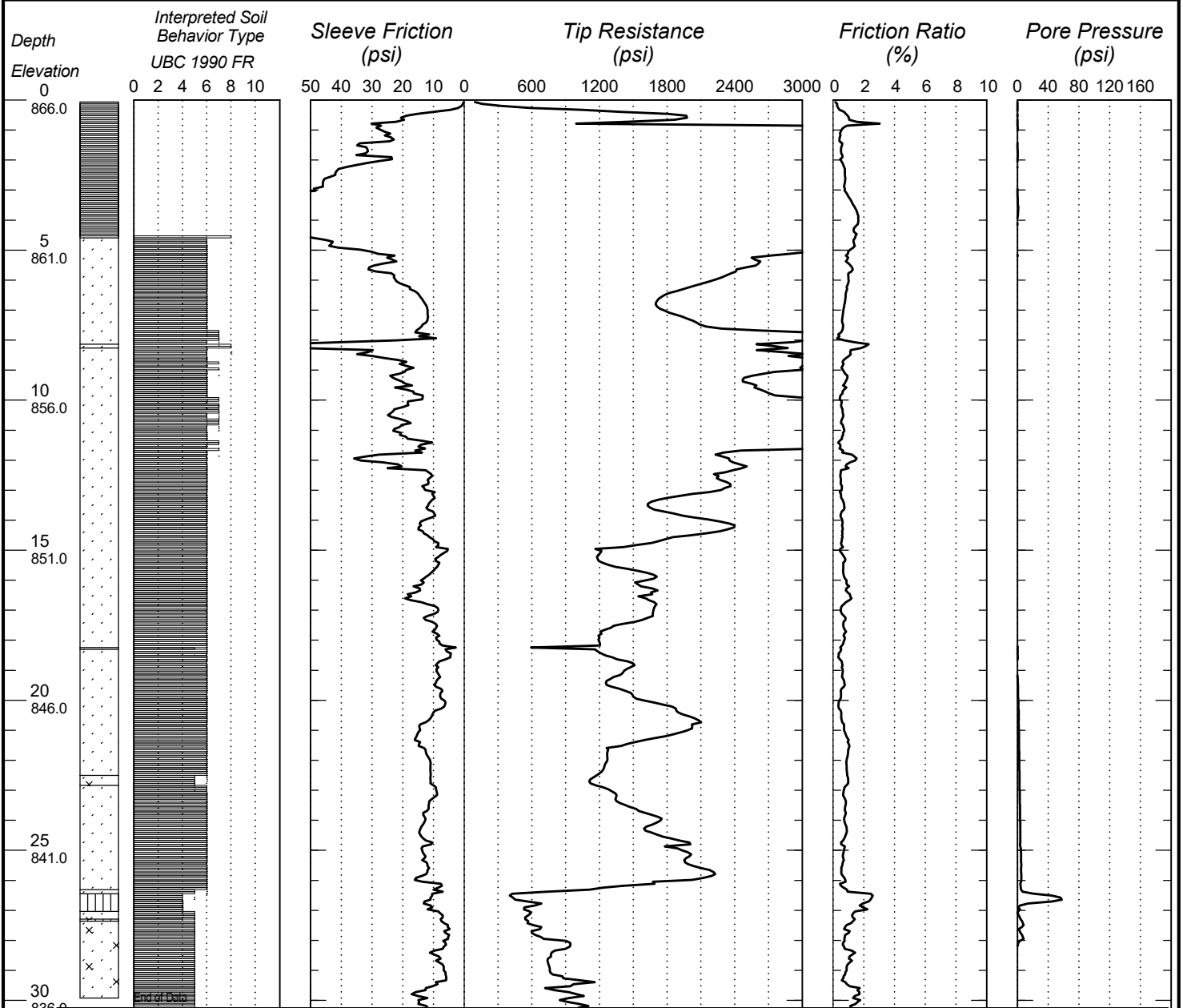




**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85631**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-58</b>	Ground Elevation <b>866.0</b> (Surveyed)
Location Anoka County Coordinate System <b>X=470328 Y=161768</b>		CPT Machine <b>CPT-01</b>		SHEET 1 of 1
Latitude (North)=45°12'16.63" Longitude (West)=93°22'54.39"		CPT Operator <b>Holmbo</b>		Date Completed
		Hole Type <b>CPT-STD</b>		<b>7/15/20</b>



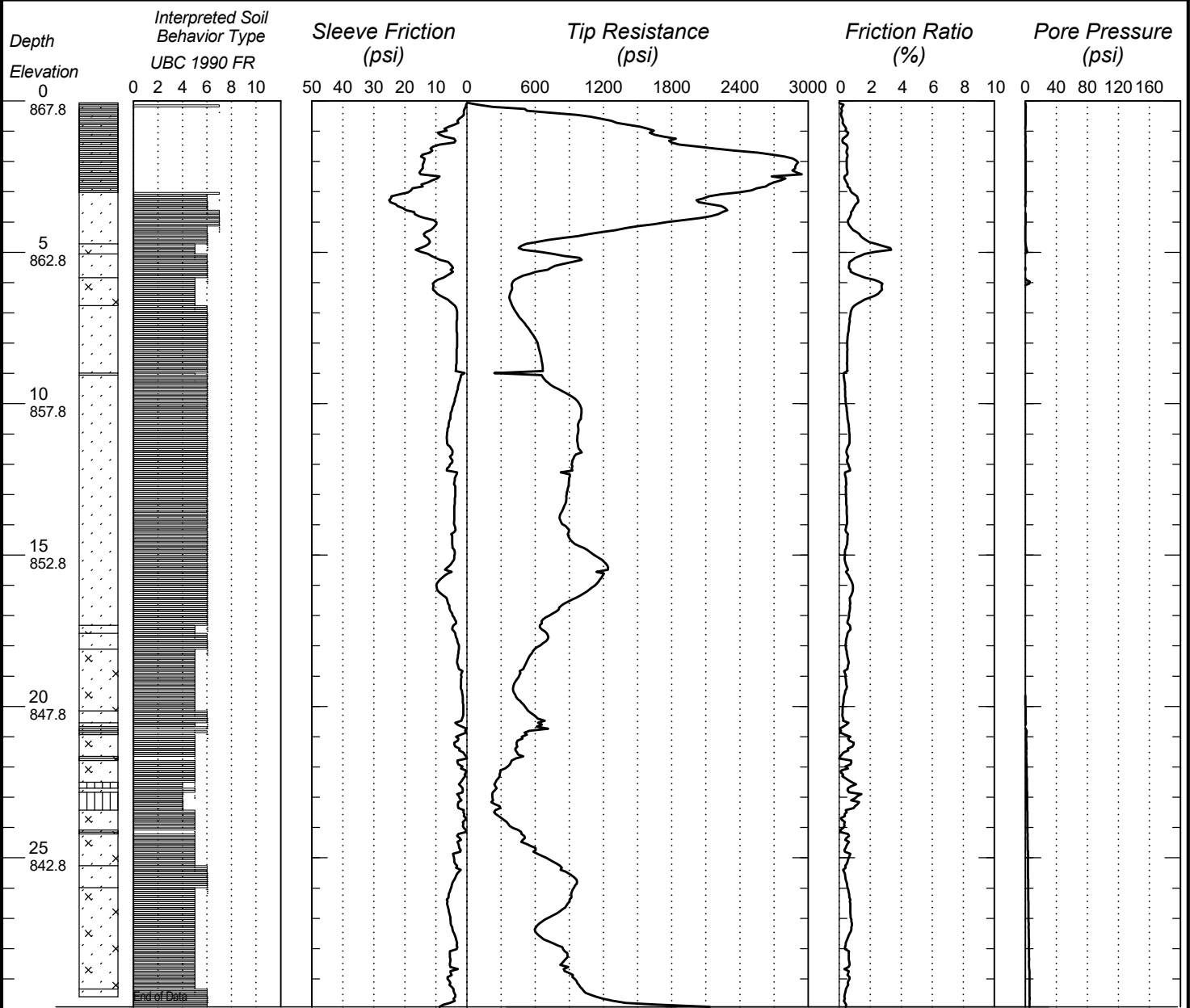
Bottom of Hole 30.25

**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85632**

**BRAUN**<sup>SM</sup>  
**INTERTEC**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-60</b>	Ground Elevation <b>867.8</b> (Surveyed)
Location Anoka County Coordinate System <b>X=470576 Y=161704</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'16.00" Longitude (West)=93°22'50.93"		CPT Operator <b>Holmbo</b>	Date Completed <b>7/16/20</b>	
		Hole Type <b>CPT-STD</b>		



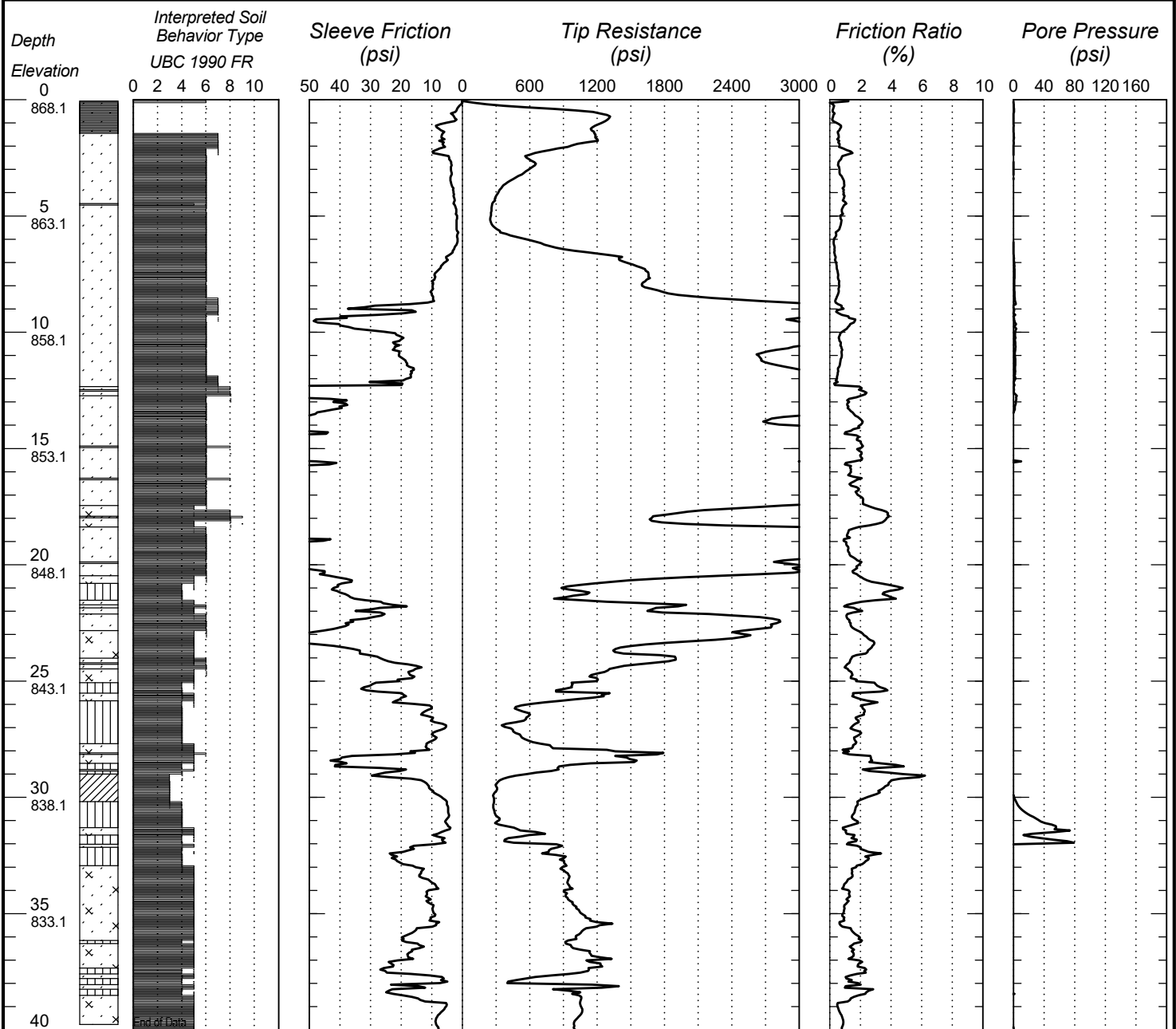
Bottom of Hole 29.92



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85633**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-61</b>	Ground Elevation <b>868.1 (Surveyed)</b>
Location Anoka County Coordinate System <b>X=470631 Y=161681</b>		CPT Machine <b>CPT-01</b>		SHEET 1 of 1
Latitude (North)=45°12'15.78" Longitude (West)=93°22'50.16"		CPT Operator <b>Holmbo</b>		Date Completed
		Hole Type <b>CPT-STD</b>		<b>7/16/20</b>



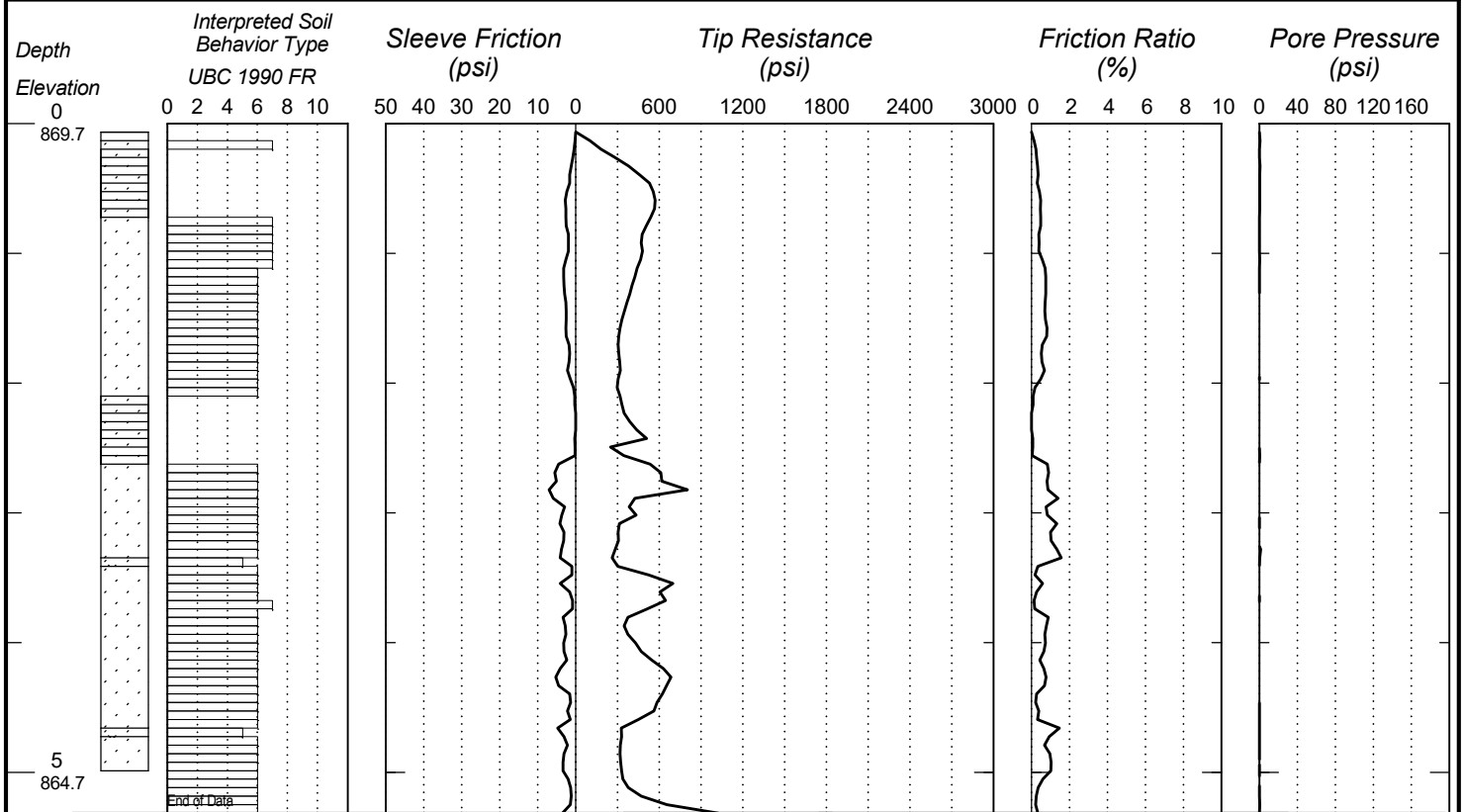
Bottom of Hole 40.09

**BRAUN**<sup>SM</sup>  
**INTERTEC**

**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85634**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-62</b>	Ground Elevation <b>869.7</b> (Surveyed)
Location Anoka County Coordinate System <b>X=470720 Y=161642</b>		CPT Machine <b>CPT-01</b>		SHEET 1 of 1
Latitude (North)=45°12'15.39" Longitude (West)=93°22'48.92"		CPT Operator <b>Holmbo</b>		Date Completed
		Hole Type <b>CPT-STD</b>		<b>7/17/20</b>



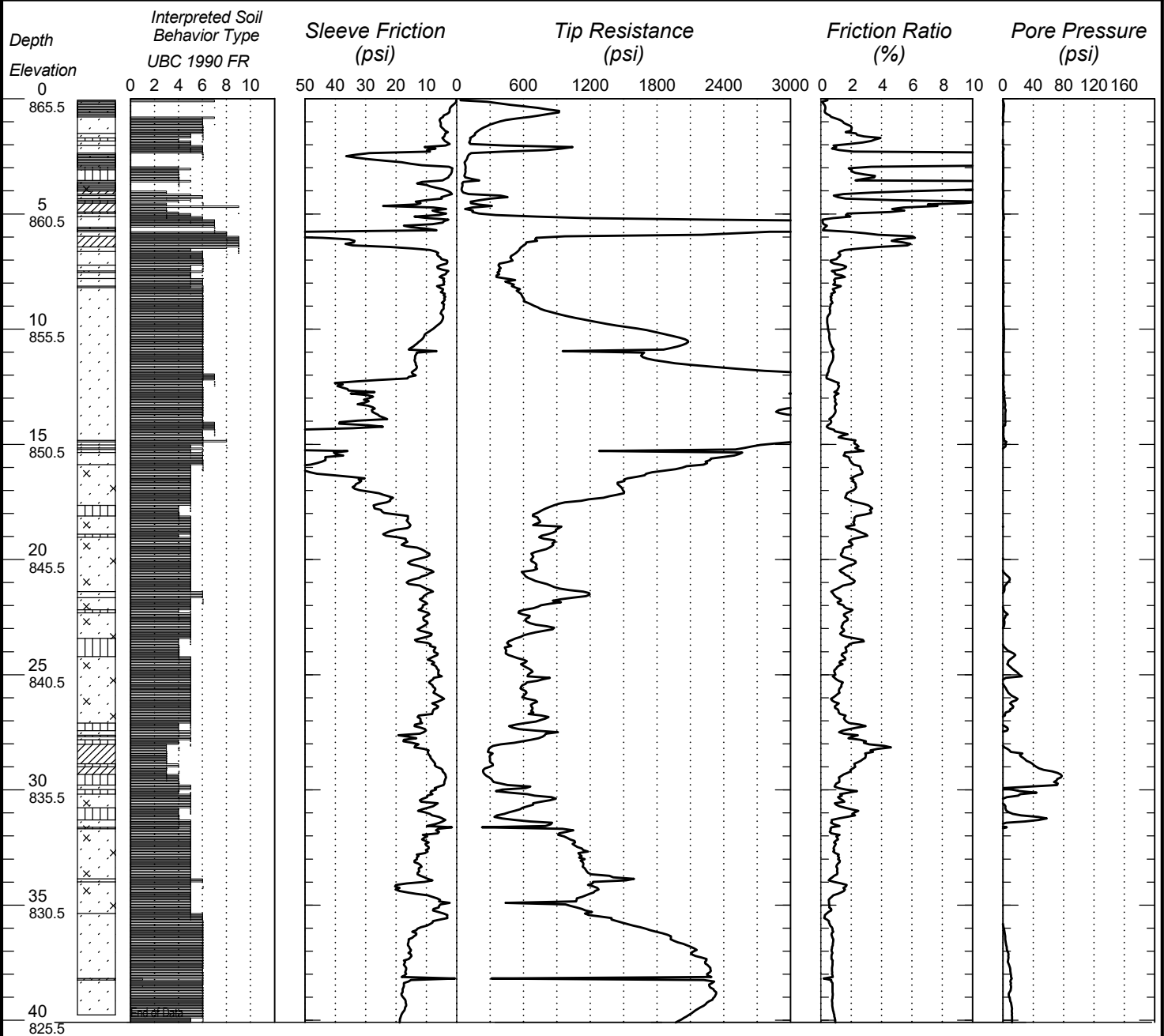
Bottom of Hole 5.31

**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85635**

**BRAUN**<sup>SM</sup>  
**INTERTEC**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-62A</b>	Ground Elevation <b>865.5</b> ( )
Location Anoka County Coordinate System <b>X=470720 Y=161642</b>		CPT Machine <b>CPT-01</b>		SHEET 1 of 1
Latitude (North)=45°12'15.39" Longitude (West)=93°22'48.92"		CPT Operator <b>Holmbo</b>		Date Completed
		Hole Type <b>CPT-STD</b>		<b>7/17/20</b>



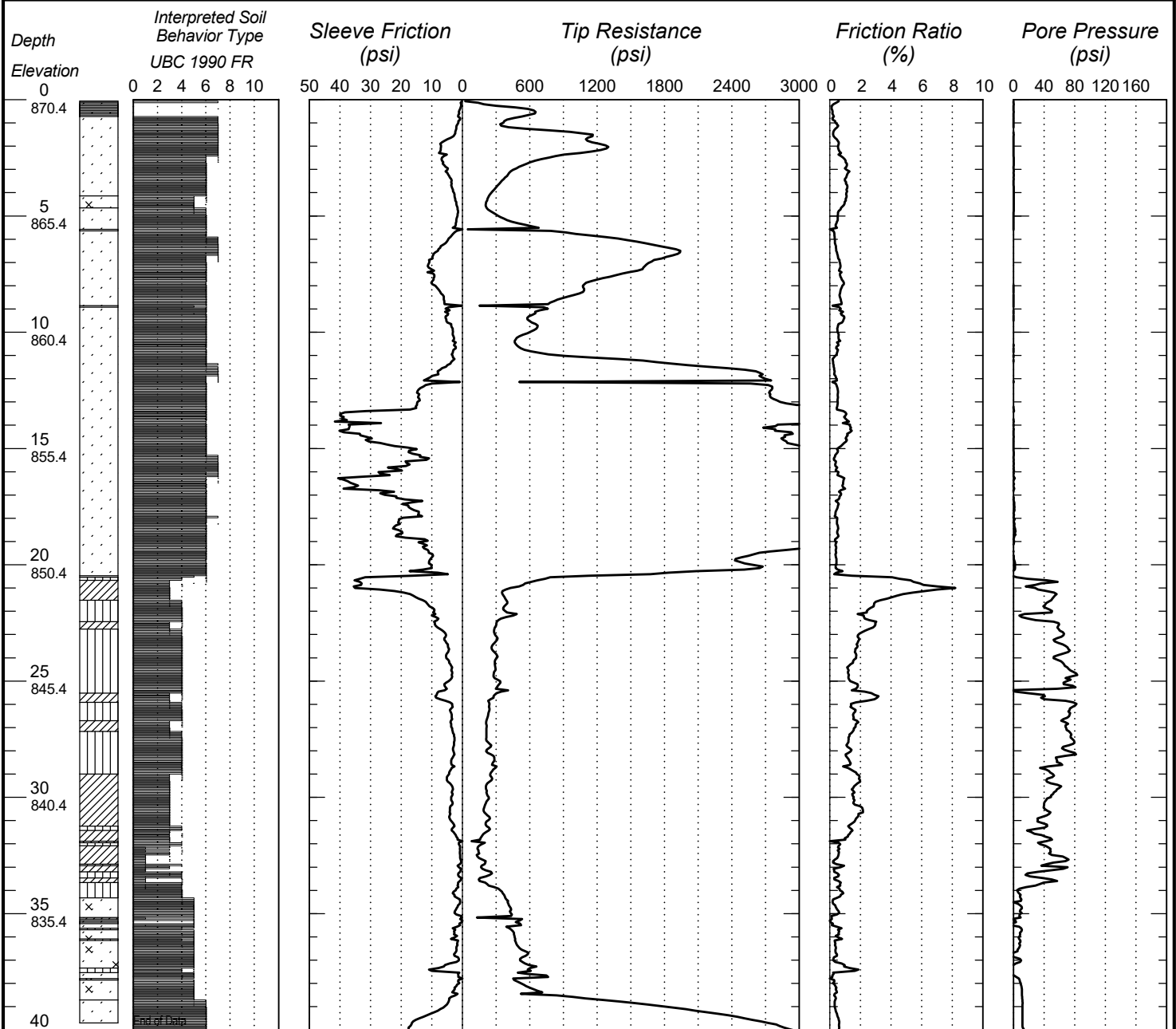
Bottom of Hole 40.09



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85636**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-63</b>	Ground Elevation <b>870.4 (Surveyed)</b>
Location Anoka County Coordinate System <b>X=470800 Y=161588</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'14.86" Longitude (West)=93°22'47.80"		CPT Operator <b>Holmbo</b>	Date Completed <b>7/17/20</b>	
		Hole Type <b>CPT-STD</b>		



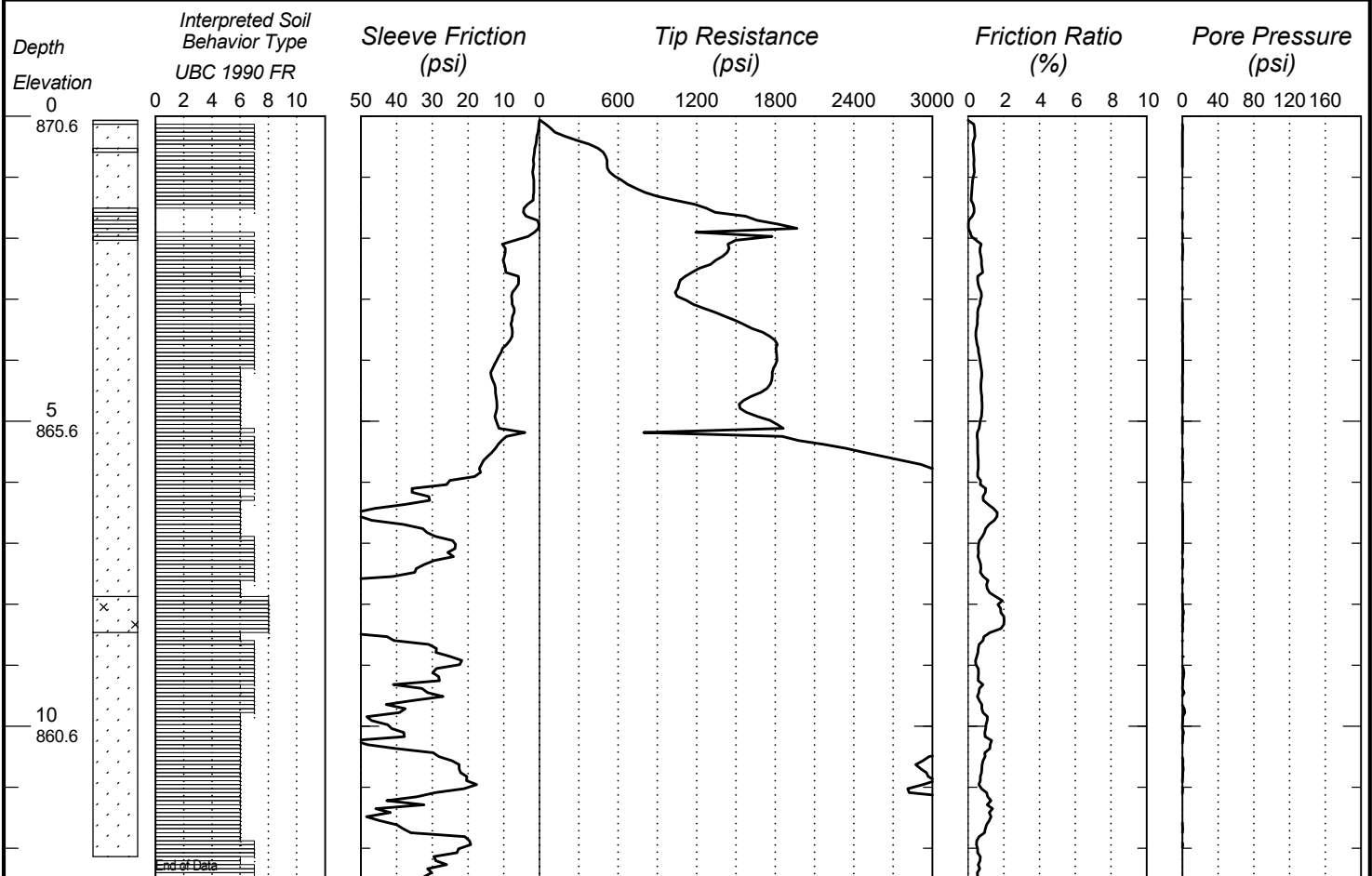
Bottom of Hole 40.03



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85637**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-64</b>	Ground Elevation <b>870.6</b> (Surveyed)
Location Anoka County Coordinate System <b>X=470886 Y=161534</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'14.33" Longitude (West)=93°22'46.60"		CPT Operator <b>Holmbo</b>	Date Completed <b>7/16/20</b>	
		Hole Type <b>CPT-STD</b>		



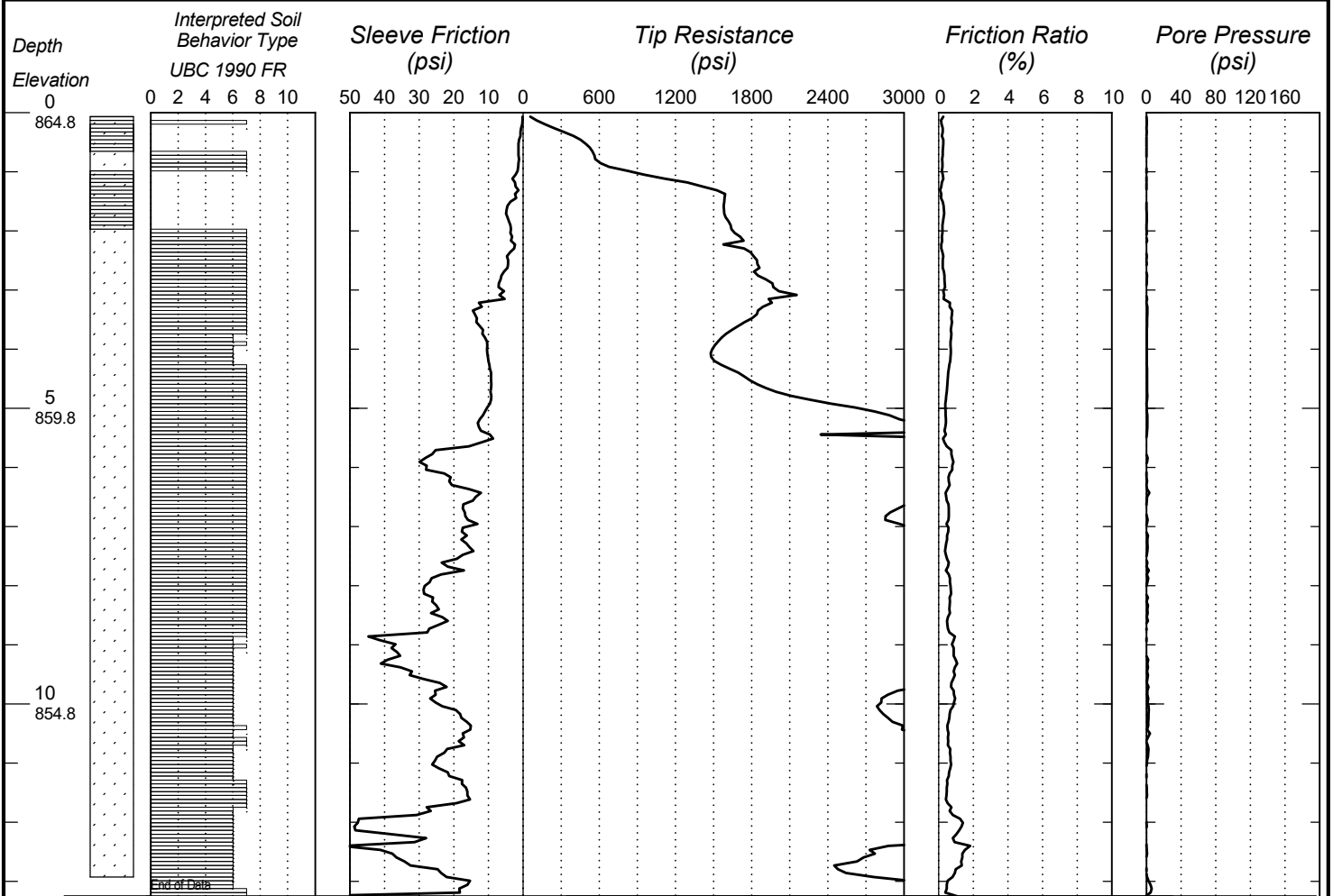
Bottom of Hole 12.47

**BRAUN**<sup>SM</sup>  
**INTERTEC**

**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85638**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-64A</b>	Ground Elevation <b>864.8</b> ( )
Location Anoka County Coordinate System <b>X=470886 Y=161534</b>		CPT Machine <b>CPT-01</b>		SHEET 1 of 1
Latitude (North)=45°12'14.33" Longitude (West)=93°22'46.60"		CPT Operator <b>Holmbo</b>		Date Completed
		Hole Type <b>CPT-STD</b>		<b>7/16/20</b>



Bottom of Hole 13.25

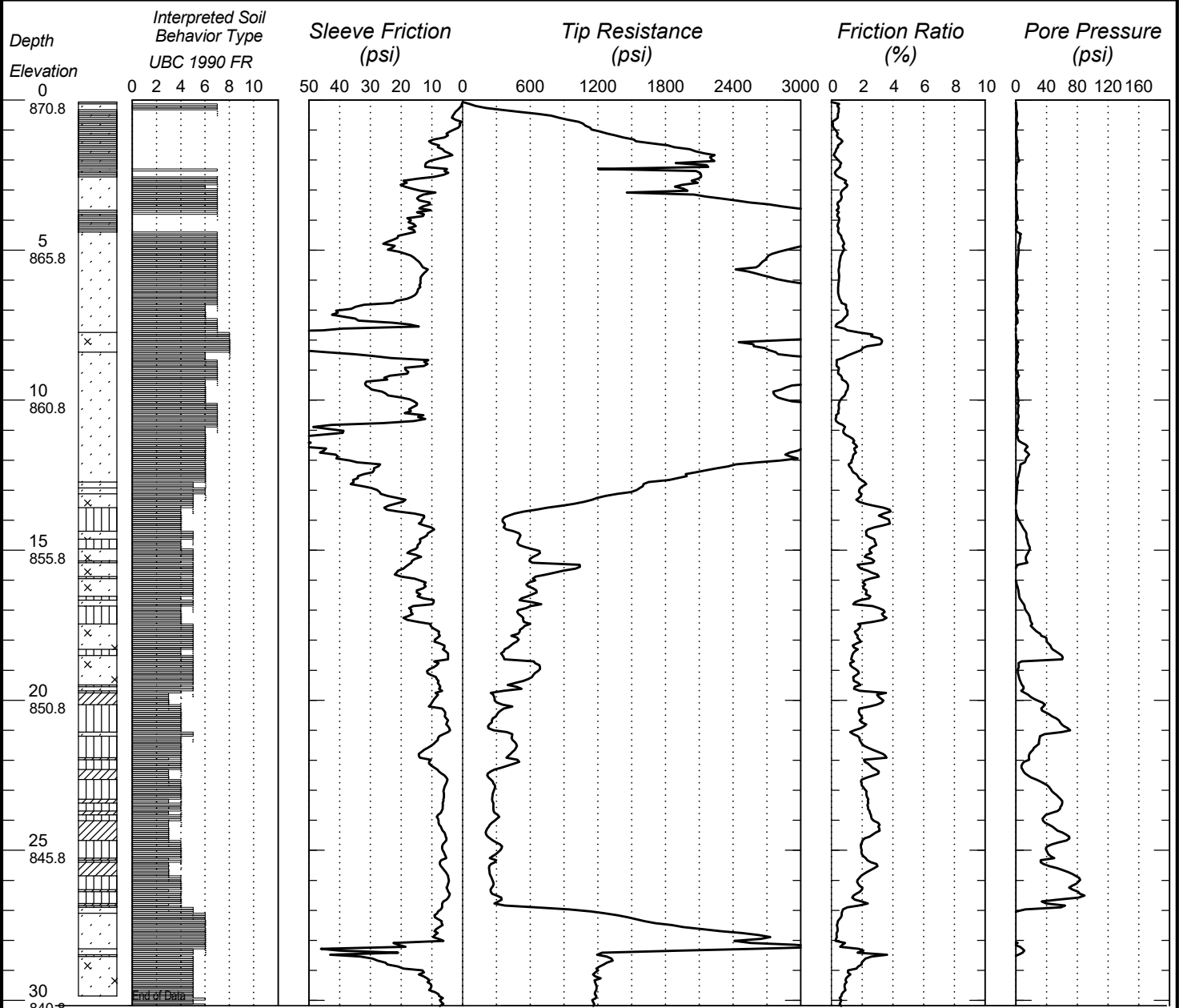




**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85639**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-65</b>	Ground Elevation <b>870.8 (Surveyed)</b>
Location Anoka County Coordinate System <b>X=470965 Y=161478</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'13.78" Longitude (West)=93°22'45.50"		CPT Operator <b>Holmbo</b>	Date Completed <b>7/16/20</b>	
		Hole Type <b>CPT-STD</b>		



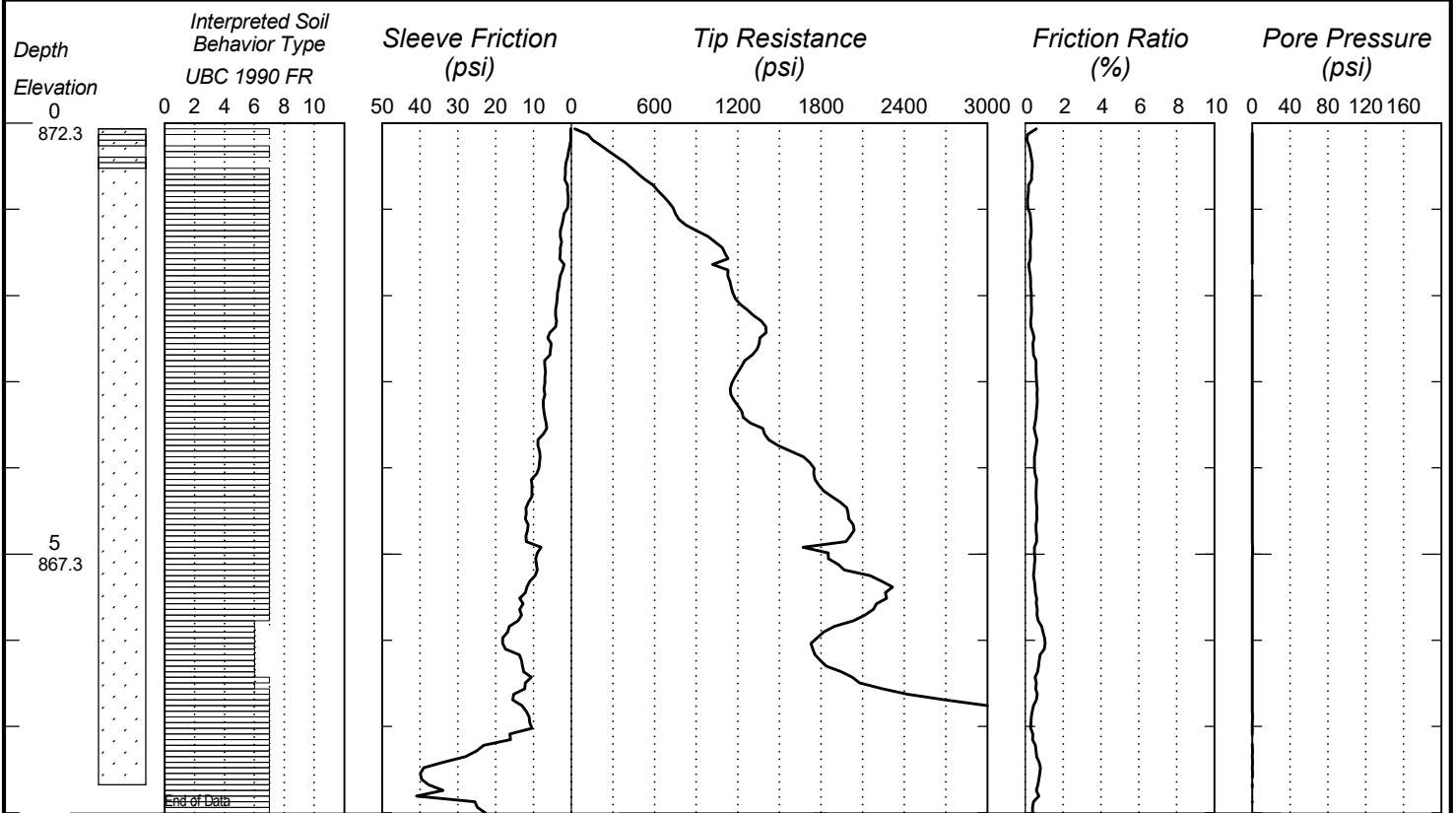
Bottom of Hole 30.18



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85640**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-66</b>	Ground Elevation <b>872.3 (Surveyed)</b>
Location Anoka County Coordinate System <b>X=471030 Y=161427</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'13.27" Longitude (West)=93°22'44.59"		CPT Operator <b>Holmbo</b>	Date Completed <b>7/16/20</b>	
		Hole Type <b>CPT-STD</b>		



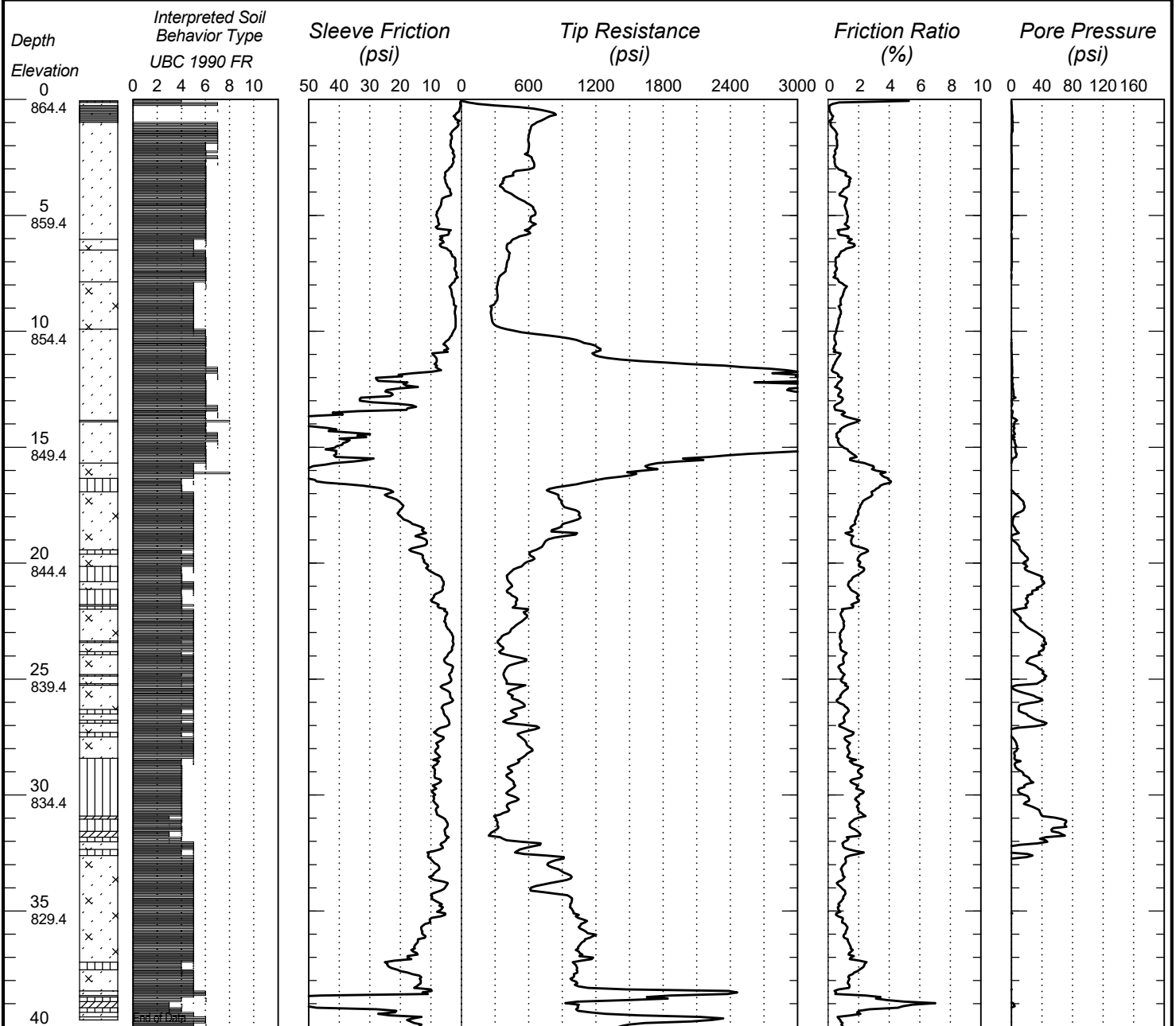
Bottom of Hole 8.01



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85641**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-66A</b>	Ground Elevation <b>864.4</b> ()
Location Anoka County Coordinate System <b>X=471030 Y=161427</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'13.27" Longitude (West)=93°22'44.59"		CPT Operator <b>Holmbo</b>	Date Completed <b>7/17/20</b>	
		Hole Type <b>CPT-STD</b>		



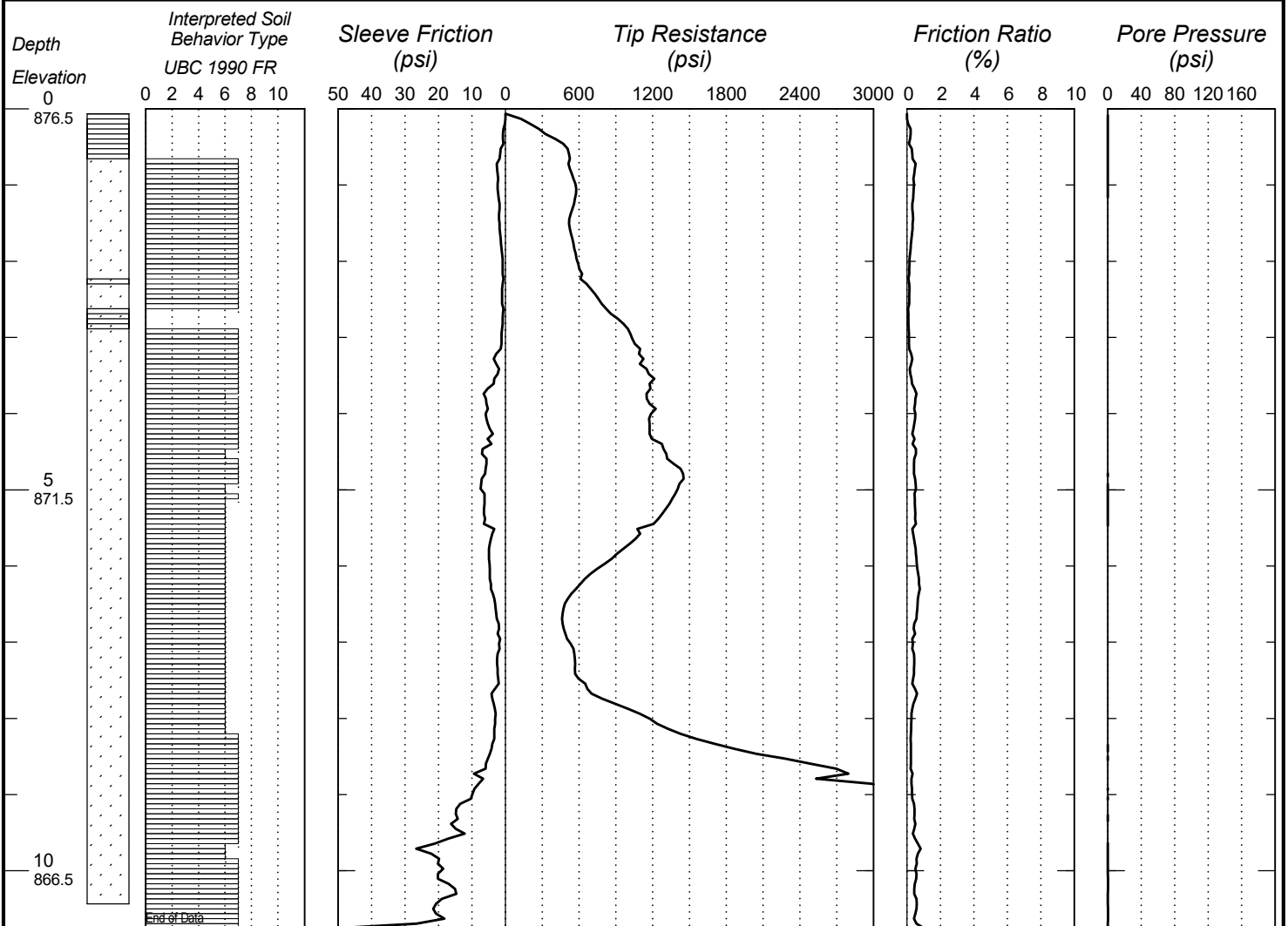
Bottom of Hole 40.03



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85642**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-67</b>	Ground Elevation <b>876.5</b> (Surveyed)
Location Anoka County Coordinate System <b>X=471163 Y=161387</b>		CPT Machine <b>CPT-01</b>	SHEET 1 of 1	
Latitude (North)=45°12'12.88" Longitude (West)=93°22'42.72"		CPT Operator <b>Holmbo</b>	Date Completed <b>7/16/20</b>	
		Hole Type <b>CPT-STD</b>		



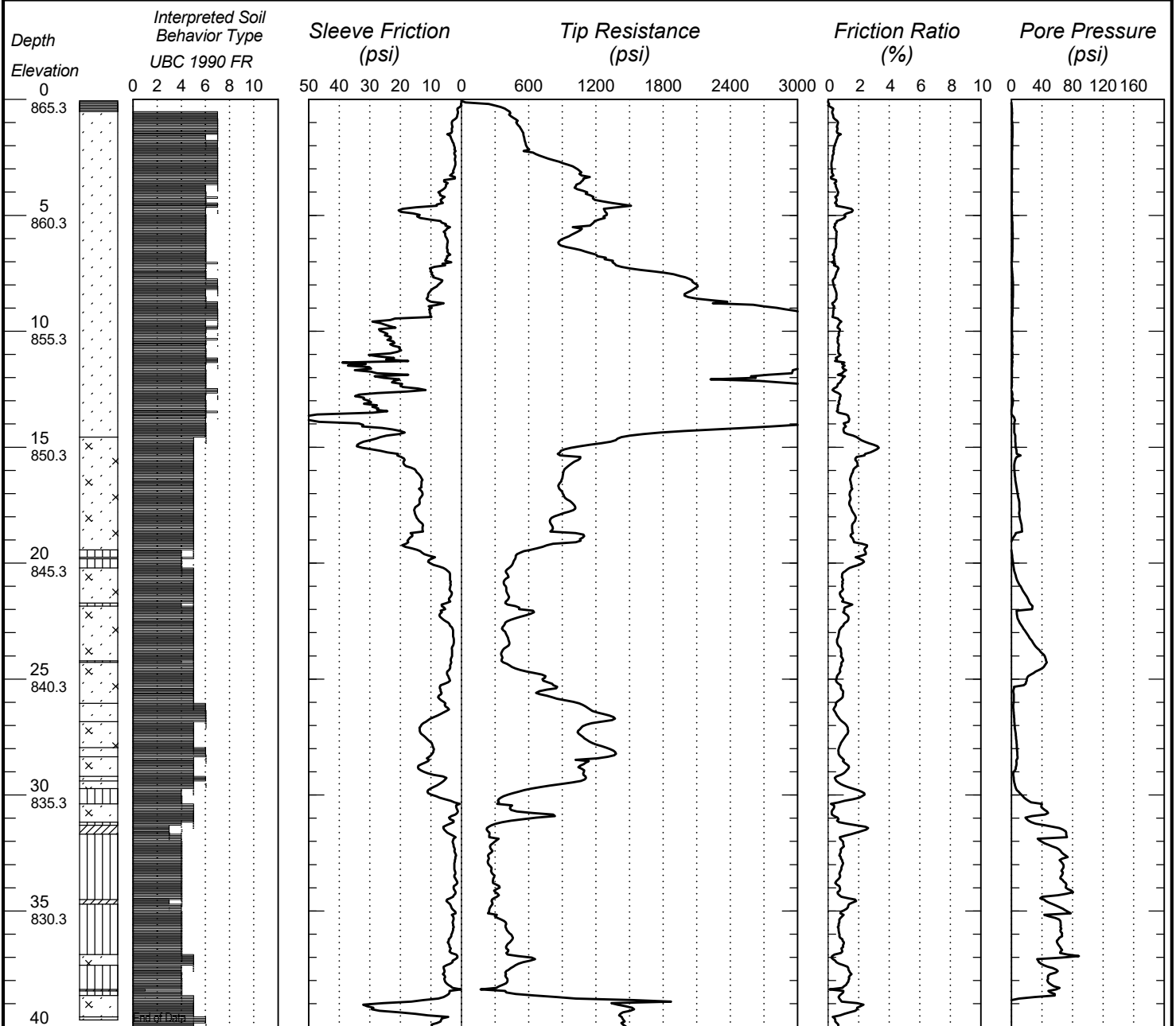
Bottom of Hole 10.76



**CONE PENETRATION TEST RESULTS**  
**UNIQUE NUMBER 85643**

This sounding was taken by Braun Intertec under a consultant contract for Mn/DOT.

State Project <b>0215-76</b>	Bridge No. or Job Desc.	Trunk Highway/Location <b>US Highway TH 10</b>	Sounding No. <b>NC-67A</b>	Ground Elevation <b>865.3 ()</b>
Location Anoka County Coordinate System <b>X=471163 Y=161387</b>		CPT Machine <b>CPT-01</b>		SHEET 1 of 1
Latitude (North)=45°12'12.88" Longitude (West)=93°22'42.72"		CPT Operator <b>Holmbo</b>		Date Completed
		Hole Type <b>CPT-STD</b>		<b>7/16/20</b>



Bottom of Hole 40.03