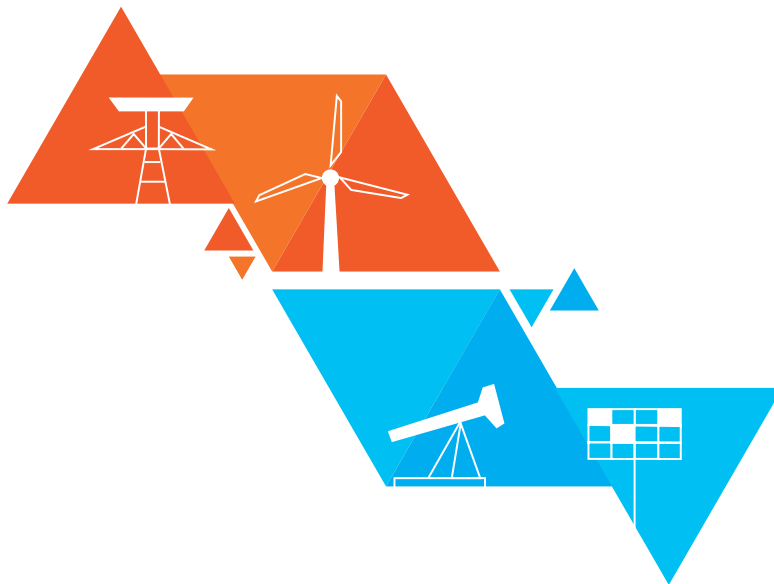


CONFIDENTIAL

# Geotechnical Report

Coles Wind Project  
Coles County, Illinois

**Apex Clean Energy, Inc.**



Prepared By:



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RRC Project No. GE2109045  
October 3, 2025

**experience matters**

October 3, 2025

Apex Clean Energy  
120 Garrett Street, Suite 700  
Charlottesville, VA 22902

Attn: Ms. Hunter Tyler

**Re: Geotechnical Report  
Coles Wind Project  
Coles County, Illinois  
RRC Project No. GE2502017**

RRC Power & Energy, LLC (RRC) has completed subsurface exploration and geotechnical engineering evaluation for the proposed Coles Wind Project. The purpose of this geotechnical engineering study is to explore and evaluate the subsurface conditions at various locations on the site and develop final geotechnical design and construction recommendations for the project. The attached report contains:

- A description of our findings from the field exploration and laboratory-testing program;
- Our engineering interpretation of the results with respect to the project characteristics; and
- Our geotechnical site development and foundation design recommendations for the wind project.

Should you have any questions concerning this Geotechnical Report, please do not hesitate to contact us. Your business is always appreciated.

Sincerely,

**RRC Power & Energy, LLC**



Jieliang Pan, Ph.D., P.E. (OK)  
Geotechnical Engineer



## COLES WIND PROJECT COLES COUNTY, ILLINOIS

### REVISION HISTORY

| Revision | Description               | Performed by | Reviewed by | Issued Date |
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| 0        | Draft Geotechnical Report | JP           | AW          | 5/23/2025   |
| 0        | Geotechnical Report       | JP           | AW          | 7/16/2025   |
| 1        | Geotechnical Report       | JP           | AW          | 7/21/2025   |
| 2        | Geotechnical Report       | JP           | AW          | 8/7/2025    |
| 3        | Geotechnical Report       | JP           | AW          | 8/14/2025   |
| 4        | Geotechnical Report       | JP           | AW          | 10/3/2025   |

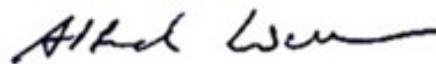
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Director of Geotechnical Engineering  
PE#: 62.07743  
Exp: 11/30/2025

**FIRM REGISTRATION NO. IL 184.008015-0002**

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## EXECUTIVE SUMMARY

RRC Power & Energy, LLC (RRC) presents the findings and recommendations of the subsurface exploration and geotechnical engineering evaluation for the proposed Coles Wind Project in Coles County, Illinois.

This geotechnical investigation consisted of geotechnical soil borings, cone penetration tests (CPT), standard penetration tests (SPT), split-spoon sampling, laboratory testing, electrical/thermal resistivity survey/testing, and Multi-Channel-Analysis-of-Surface-Waves (MASW) surveys.

In general, soils at this project site consist primarily of soft to hard clay strata and loose to very dense sand strata. Bedrock was not encountered in any of the borings.

The following is a summary of anticipated soil conditions that should be considered in design and construction:

1. This geotechnical study indicates that subsurface materials are suitable for support of gravity-type turbine foundations. RRC did not identify any known geohazards that would significantly impact the design or construction.
2. Soft to medium stiff clay soils were encountered below the foundation bearing elevation at two turbine sites (GEO-15 and GEO-20). At these locations, rammed-aggregate piers are required to remediate the site to achieve a net allowable bearing capacity of 2,000 psf.
3. Shallow groundwater was measured at each of the piezometers installed at the turbine locations across the site. Groundwater was measured from near the ground surface to a depth of 5 feet below the existing ground surface. Shallow groundwater will likely impact foundation design and construction.
4. Published maps indicate WTG locations are located in an area of “Low” to “High” risk for concrete corrosion. The laboratory test results indicate the soils in the upper 10 feet possess a “Negligible” risk for sulfate exposure and corrosion potential to concrete.
5. Published maps indicate WTG locations are located in an area of “Low” to “High” risk for steel corrosion. The laboratory test results indicate soils within the upper 10 feet exhibit “Corrosive” to “Moderately Corrosive” electrical characteristics with regards to galvanic corrosion of steel. For chlorides, the test results indicate “Non-Aggressive” corrosion potentials to steel.

# GEOTECHNICAL REPORT

## 1.0 INTRODUCTION

RRC completed the authorized subsurface exploration and geotechnical engineering evaluation for the proposed Coles Wind Project. The site is located approximately 8 miles north of the City of Charleston in Coles County, Illinois. The approximate boundaries of the site are shown on Figure 1, Site Location Map.

The purpose of this investigation and report was to:

- Explore subsurface soil, bedrock, and groundwater conditions;
- Conduct field and laboratory tests to characterize the subsurface soil and bedrock properties at selected locations across the site; and
- Provide geotechnical engineering parameters for the design of foundation systems and access roadways.

The recommendations contained in this report are based upon results of field and laboratory testing, engineering analyses, experience with similar soil/bedrock conditions, and our understanding of the proposed project. For the purposes of this report, the term “most recent” when discussing WTG and associated facility layouts refers to the most up-to-date plans provided to RRC by Invenenergy. We understand that the turbine array LAY 039 provided on August 14, 2025 to RRC is the most recent array.

Wind projects often go through multiple array layouts. These changes to the array can cause confusion if the turbine names vary between when the geotechnical investigation was conducted and when the geotechnical report is referenced. To mitigate against this, RRC assigns each turbine location a unique geotechnical boring ID (GEO-ID). The Logs of Boring, laboratory test results, thermal resistivity, geophysical reports and tables contained within this report will reference a GEO-ID. Table A1 within Appendix A specifies the coordinates and corresponding turbine name associated with each GEO-ID. The Final turbine name may vary from the turbine name presented in Tables A1 and A2. Therefore, it is critical to reference the coordinates and corresponding GEO-ID when determining what information and recommendations pertain to a specific turbine location.

## 2.0 PROPOSED CONSTRUCTION

The project will consist of fifty-one (51) wind turbine generators and associated facilities. However, for the purposes of this report, RRC conducted geotechnical analyses at 62 proposed turbine locations, although no more than 51 will be built. These 62 turbine locations are the same locations approved by Coles County in July 2025. The WTG model proposed for the project will be the GE 6.1-158 MW, 117m hub height WTG. The project team anticipates WTGs will be supported on gravity foundation systems with an embedment depth of about 12.3 feet below

finished grade. RRC assumes finished turbine pad grade will be at or slightly above existing site grades.

### 3.0 SITE EXPLORATION

As part of the project, associated facilities include a substation, an O&M building and access roadways. Private-access roadways will most likely be surfaced with imported road-base materials from nearby quarry pits.

RRC's subsurface exploration program consisted of:

- Conducted Cone Penetrometer Tests (CPT) at six-two (62) WTG locations;
- Drilled seven (7) conventional (SPT) geotechnical borings at selected WTG locations;
- Drilled two (2) conventional (SPT) borings at O&M building area;
- Installed a total of sixty-three (63) piezometers. Sixty-two (62) piezometers were installed at WTG locations and at one (1) piezometer was installed within the proposed substation area;
- Collected two (2) bulk samples for laboratory thermal resistivity testing; and
- Collected two (2) bulk samples for laboratory California Bearing Ratio (CBR) tests.

Figures 2 to 4 in Appendix A consist of maps for various CPT soundings and SPT borings and sample locations. A summary of subsurface exploration is provided within Table A2 within Appendix A.

### 3.1 Field Exploration and Testing

RRC geologist staked the boring locations using GPS coordinates provided by Apex Clean Energy, Inc. Drill crews under RRC's direction drilled the borings within 15 feet of each staked location, assuming average GPS accuracy for a hand-held device or smartphone.

#### 3.1.1 CPT Sounding

RRC commissioned Fugro to conduct Cone Penetrometer Test (CPT) soundings using a track-mounted CPT rig. We performed a total of eighty (80) CPT soundings at sixty-two (62) WTG locations. The additional CPT soundings for the second and third attempts were conducted when CPT refusal was encountered shallower than 35 feet. GPS coordinates and depths of each CPT sounding/boring are presented in Table A2 in Appendix A.

The CPT soundings were carried out using an integrated electronic cone system, in accordance with *ASTM D5778: Standard Test Method for Electronic Friction Cone and Piezocone Penetration Testing of Soils*. The soundings were conducted using a 22-ton track mounted CPT equipment with a cone tip area of 15 cm<sup>2</sup>, friction sleeve area of 200 cm<sup>2</sup>, and a 60-degree apex angle. The cone is designed with an equal end area friction sleeve and a tip end area ratio of 0.59.

During a CPT sounding, the cylindrical cone was pneumatically pushed vertically into the ground at a constant rate of penetration of 20 mm/sec; and measurements were made of the cone tip

resistance ( $q_c$ ), the friction sleeve resistance ( $f_s$ ), and penetration pore-water pressure ( $u$ ) at 5-cm intervals during penetration, to provide a near-continuous hydro-geologic log.

RRC performed CPT data reduction and interpretation using the Computer Program “CPeT-IT” developed by GeoLogismiki and Gregg Drilling Inc. The geotechnical parameters on the CPT logs are based on published correlations. The CPT logs included interpreted normalized Soil Behavior Type (SBT<sub>n</sub>) plots. Note that it is not always possible to clearly identify a soil type based solely on CPT tip resistance, sleeve friction and pore water pressure measurements. Experience and judgment of the CPT logs are often used to estimate the soil behavior type. A summary of CPT correlation equations and formulas used for the estimation of various soil properties are presented in Appendix A, together with the Logs of CPT sounding.

The theoretical relationship for undrained shear strength,  $s_u$ , of clay soils and corrected cone tip resistance,  $q_t$ , is given by the following equation:

$$s_u = \frac{q_t - \sigma_v}{N_{kt}}$$

Where  $\sigma_v$  is the total overburden stress and  $N_{kt}$  is the undrained shear strength cone factor. For estimating the undrained shear strength of clay soils encountered at the project site, RRC recommends using a  $N_{kt}$  value of 17.

CPT reports include an *SPT N60 chart*. The N60 is a traditional version of SPT blow counts converted from a cathead SPT tool with a 60% efficiency. Modern SPT values use automatic drop hammers with 95% efficiency or higher. Thus, the N60 chart values are different from N values obtained from the conventional geotechnical borings.

### 3.1.2 Conventional Geotechnical Borings

RRC conducted conventional borings with an ARDCO C-1000 ATV drill rig. Drillers used air rotary techniques. During the field operations, the drill crew observed groundwater levels. Following the completion of the drilling operations, the drillers backfilled each boring with soil cuttings in accordance with state regulations. At some locations, we added bentonite chips to supplement the soil cuttings.

At thermal resistivity and CBR sampling locations, we collected bulk samples at depths of 1 to 4 feet below existing site grade.

Standard Penetration Test (SPT) samplers obtain disturbed soil samples. RRC documented each penetration resistance value in accordance with *ASTM D1586: Standard Test Method for Standard Penetration Test (SPT) and Split-Barrel Sampling of Soils*. This test consists of driving the sampler into the ground with a 140-pound hammer free-falling 30 inches. The number of blows required to advance the SPT sampler 18 inches is counted and recorded, with the sum of the blows to drive the last 12 inches referred to as the standard penetration resistance value (N-value). Results of the field tests are shown on the logs of boring under the “Field Data” column

and are preceded by the letter “N.” Each soil sample from the SPT samplers collected in the field were visually classified, placed in plastic bags to preserve moisture content, and labeled as to location and depth. All SPT samples were arranged in core boxes and transported to our laboratory facility in Round Rock, Texas for further analysis.

We obtained relatively undisturbed samples of cohesive soils, utilizing hydraulically advanced 3-inch (OD) diameter stainless steel, thin-walled tube (Shelby) samplers in accordance with *ASTM D1587: Standard Practice for Thin-Walled Tube Sampling of Soils for Geotechnical Purposes*. We tested Shelby tube samples for consistency using a pocket-sized penetrometer. The penetrometer reading is included on the log of boring preceded by the letter “P.” Readings in excess of 4.5 tons per square feet (tsf), if any, indicate that the capacity of the device has been exceeded. Caution that the penetrometer value is not a measure of cohesion or shear strength. The P value is only a general means of assessing relative stiffness. Sufficient material from the lower end of the Shelby tube was removed for visual classification purposes. Both ends of the Shelby tube were sealed using plastic caps and secured with duct tape to prevent moisture loss. Sample location and depth was labeled on the outside surface of the tube. We transported all samples to our facility in Round Rock, Texas for further analysis.

RRC classifies soils in general accordance with the Unified Soil Classification System (USCS); *ASTM D2488: Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)*. The soil and bedrock classification symbols appear on the logs of boring and are briefly described in Appendix A. Bedrock materials were classified in general accordance with the general notes for rock classification included as part of *ASTM D5878: Standard Guides for Using Rock-Mass Classification Systems for Engineering Purposes*.

RRC’s field geologist prepared field logs for each boring. The logs of boring contain classification of the materials encountered during drilling as well as interpolation of the subsurface conditions between samples.

The project engineer/geologist reviewed all the field logs, soil samples, and lab test data to make appropriate modifications to the logs of boring, as necessary. Final Logs of Boring and laboratory testing are provided in Appendix A. The logs of boring describe the strata encountered, their approximate thickness, SPT results, soil classifications, the various depths at which the samples were obtained, as well as the presence of groundwater.

### **3.1.3 Standpipe Piezometers**

We installed a total of sixty-three (63) temporary standpipe piezometers, one (1) at each WTG, one (1) at the substation area. The piezometers were installed to a depth of about 13 feet below the existing ground surface. Piezometers installed using the CPT rig consist of 3/4-inch diameter, schedule 40 PVC pipe with perforations along the lower 5-feet. The screened portion of the piezometer was backfilled with sand to about one foot above the perforated section. Bentonite was then used to backfill the remaining portion of the piezometer boring to the top of existing ground surface. The piezometers extend about 2 feet above the ground. Groundwater levels



within the temporary piezometers were measured between March 31 and May 10, 2025 and summarized in Table A4 within Appendix A. Refer to Section 4.4 for discussion of groundwater.

### 3.2 Laboratory Tests

The soil samples were returned to the laboratory, examined by the project engineer/geologist, and applicable laboratory testing was assigned on selected soil samples. RRC commissioned Beyond Engineering & Testing, LLC to conduct laboratory tests. Laboratory testing was performed in general accordance with ASTM and locally accepted practices. The following laboratory methods of analyses were generally utilized, where sample quality allowed:

- Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System): ASTM D2487;
- Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass: ASTM D2216;
- Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils: ASTM D4318;
- Standard Test Methods for Amount of Material in Soils Finer than No. 200 (75- $\mu$ m) Sieve: ASTM D1140;
- Standard Test Method for Particle-Size Analysis of Soils: ASTM D6913;
- Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort: ASTM D698;
- Standard Test Methods for One Dimensional Swell: ASTM D4546;
- Standard Test Methods for One-Dimensional Consolidation Properties of Soils Using Incremental Loading: ASTM D2435;
- Standard Test Methods for Unconfined Compressive Strength of Cohesive Soils: ASTM D2166;
- Standard Test Method for Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils: ASTM D2850;
- Standard Test Methods for CBR (California Bearing Ratio) of Laboratory-Compacted Soils: ASTM D1883;
- Standard Test Method for Measurement of Soil Resistivity using the Two-Electrode Soil Box Method: ASTM G187;
- Standard Test Method for Measuring pH of Soil for Use in Corrosion Testing: ASTM G51; and
- Sulfate and Chlorides Content: EPA 300/300.1.

## 4.0 SUBSURFACE CONDITIONS

### 4.1 Geology

The geologic interpretations contained herein are based on geological maps and literature. In summary, the surficial materials at the project site surface are mostly glacial till deposits. The following Quaternary Formations are found within the general project site (References 1, 2, and 3) and are described below.

## Quaternary Period

- **Loamy Till (tla):** Light brown, gray loam to clay loam, sand, pebbles, boulders. Thickness is variable at 3-60 feet deep.

## Pennsylvanian Period

- **Loamy Till (tkb(e)):** Glacial Till consisting of Clay and Silt with rock fragments; thickness ranges up to 45 feet thick.
- **Loamy Till (tkc(e)):** Glacial Till consisting of Clay and Silt with rock fragments; thickness ranges up to 18 feet thick.
- **Loamy Till (tkc(g)):** Glacial Till consisting of Clay and Silt with rock fragments; thickness ranges up to 560 feet thick.
- **Loamy Till (tkd(g)):** Glacial Till consisting of Clay and Silt with rock fragments; thickness ranges up to 560 feet thick.

### 4.2 Subsurface Stratigraphy

As indicated on the logs of boring and CPT sounding, the soil stratigraphy at the site generally consisted of 2 to 12-inch topsoil underlain by either clay or sand layers. Bedrock was not encountered in any borings. The soil layers can generally be described as:

- Soft to hard, Lean to Fat Clay soils with varying amounts of sand and gravel;
- Loose to very dense, Sand with varying amounts of silt, clay and gravel.

Detailed Logs of Boring and CPT Sounding present detailed stratum descriptions, soil classifications, types of sampling used, laboratory test data, and additional field data. Boring logs are presented in Appendix A. The lines separating stratum types on the Logs of Boring do not necessarily represent distinct lines of demarcation because transitions can be gradual. The Boring Log Key, defining the terms and descriptive symbols used on each log of boring, is also presented in Appendix A.

### 4.3 Laboratory Test Results

RRC obtained the service of Beyond Engineering & Testing, LLC to conduct laboratory tests. The Laboratory test results indicate the native soils possess in-situ moisture contents in the range from about 12% to 27% with an average of 17%.

The native soils have Plasticity Indices (PI) ranging from 8 to 29 with an average PI of 17. Clay soils with a PI less than 15 are generally considered to exhibit a low expansive potential. Clay soils with a PI greater than 25 are generally considered to exhibit a high expansive potential if their moisture contents are allowed to change significantly.

We performed two (2) moisture/density relationships (Proctors) to determine the maximum dry unit weight and optimum moisture content in accordance with ASTM D698 (standard method). We also conducted Atterberg Limits on the samples to assess soil type. A summary of the test results is presented below.

**Table 4.3.1 Summary of Proctors and Atterberg Test Results**

| Sample Location | Depth (feet) | Material Type | Liquid Limit (%) | Plasticity Index (%) | Maximum Dry Unit Weight (pcf) | Optimum Moisture Content (%) |
|-----------------|--------------|---------------|------------------|----------------------|-------------------------------|------------------------------|
| TR-1a           | 1.5-5        | CL            | 47               | 29                   | 103.1                         | 19.4                         |
| TR-2            | 1.5-5        | CL            | 47               | 29                   | 101.3                         | 19.4                         |

Notes: pcf = pounds per cubic foot; CL = Lean Clay.

Unconsolidated-Undrained (UU) Triaxial tests were performed in accordance with ASTM D2850 on undisturbed soil samples at selected locations. The results are presented in Table 4.3.2.

**Table 4.3.2 Summary of Unconsolidated-Undrained Triaxial Test Results**

| Boring No. | Depth (feet) | Material Type | Confining Pressure (psi) | In-Situ Dry Unit Weight (pcf) | In-Situ Moisture Content (%) | Undrained Shear Strength, $S_u$ (psf) |
|------------|--------------|---------------|--------------------------|-------------------------------|------------------------------|---------------------------------------|
| GEO-02     | 9            | CL            | 7.5                      | 114.5                         | 16.1                         | 400                                   |
| GEO-21     | 9            | CL            | 7.5                      | 118.5                         | 13.4                         | 2,380                                 |
| GEO-22     | 12           | CL            | 10                       | 120.3                         | 13.2                         | 1,710                                 |
| GEO-28     | 9            | CL            | 7.5                      | 124.8                         | 12.5                         | 3,600                                 |
| GEO-32     | 9            | CL            | 7.5                      | 122.7                         | 13.5                         | 2,080                                 |
| O&M-1      | 3            | CL            | 2.5                      | 113.6                         | 18.4                         | 1,470                                 |
| O&M-2      | 10.5         | CL            | 8.5                      | 122.7                         | 14.4                         | 2,980                                 |

Notes: pcf = pounds per cubic foot; CL = Lean Clay.

Results of swell testing performed in accordance with ASTM D4546, on a selected undisturbed soil sample, are summarized in Table 4.3.3. It should be noted that laboratory test results are based on “as received” moisture content at the time of the geotechnical investigation.

**Table 4.3.3 Summary of Swell/ Expansion Test Results**

| Sample Location | Depth (feet) | Material Type | Dry Density (pcf) | Moisture Content (%) | Surcharge Load (psf) | Swell Strain (%) |
|-----------------|--------------|---------------|-------------------|----------------------|----------------------|------------------|
| O&M-1           | 3            | CL            | 124.8             | 11.0                 | 400                  | -0.1             |

Notes: pcf = pounds per cubic foot; psf = pounds per square foot; Negative swell strain indicates collapse during test; CL = Lean Clay.

One-dimensional Consolidation testing was performed in accordance with ASTM D2435 on relatively undisturbed soil samples. The results from these tests are presented in Table 4.3.4.

**Table 4.3.4 Summary of 1-D Consolidation Test**

| Sample Location | Depth (feet) | Material Type | $\sigma'_{vo}$ (psf) | $p'_c$ (psf) | $C_c$ | $C_r$ | $e_o$ | OCR  |
|-----------------|--------------|---------------|----------------------|--------------|-------|-------|-------|------|
| GEO-02          | 9            | CL            | 1,200                | 4,500        | 0.090 | 0.007 | 0.377 | 3.8  |
| GEO-21          | 9            | CL            | 1,210                | 9,400        | 0.122 | 0.008 | 0.675 | 7.8  |
| GEO-22          | 12           | CL            | 1,630                | 6,800        | 0.088 | 0.009 | 0.324 | 4.2  |
| GEO-28          | 9            | CL            | 1,270                | 11,000       | 0.086 | 0.008 | 0.342 | 8.7  |
| GEO-32          | 9            | CL            | 1,260                | 9,600        | 0.109 | 0.016 | 0.430 | 7.6  |
| O&M-1           | 3            | CL            | 400                  | 8,500        | 0.085 | 0.011 | 0.328 | 21.3 |

Notes: psf = pounds per square foot;  $\sigma'_{vo}$  = estimated in-situ Effective Vertical Stress;  $p'_c$  = Preconsolidation Pressure;  $C_c$  = Compression Index;  $C_r$  = Recompression Index;  $e_o$  = Initial Void Ratio; OCR = Over-consolidation Ratio; CL = Lean Clay.

We performed California Bearing Ratio (CBR) tests on selected samples. The test specimens are soaked for 96 hours prior to the CBR load test. A summary of the CBR test results is presented in Table 4.3.5. Design CBR values represent strength at 95% compaction relative to the maximum dry density as determined by ASTM D698. CBR increases with increased density.

**Table 4.3.5 Summary of CBR Test Results**

| Sample Location | Depth (feet) | Material Type | Design Dry Unit Weight (pcf) | Design CBR (%) |
|-----------------|--------------|---------------|------------------------------|----------------|
| TR-1a           | 1.5-5        | CL            | 97.9                         | 2.4            |
| TR-2            | 1.5-5        | CL            | 96.2                         | 2.3            |

Notes: pcf = pounds per cubic foot; CL = Lean Clay.

Results of water-soluble sulfate and chloride testing performed on shallow soil samples are summarized in Table 4.3.6.

**Table 4.3.6 Summary of Sulfate and Chloride Contents**

| Sample Location | Depth (feet) | Material Type | Sulfate Contents (% by weight) | Chloride Contents (% by weight) |
|-----------------|--------------|---------------|--------------------------------|---------------------------------|
| GEO-02          | 1-9          | CL/CH         | 0.0088                         | 0.0082                          |
| GEO-21          | 1-9          | CL            | 0.0011                         | 0.0123                          |
| GEO-22          | 1-9          | CL            | 0.0070                         | 0.0099                          |
| GEO-23          | 1-9          | CL            | 0.0021                         | 0.0100                          |
| GEO-25          | 1-9          | CL            | 0.0023                         | 0.0097                          |
| GEO-28          | 1-9          | CL            | 0.0131                         | 0.0073                          |
| GEO-32          | 1-9          | CL            | 0.0016                         | 0.0086                          |
| TR-1a           | 1.5-5        | CL            | 0.0022                         | 0.0097                          |
| TR-2            | 1.5-5        | CL            | 0.0019                         | 0.0101                          |

Notes: CL = Lean Clay; CH = Fat Clay.

Results of minimum resistivity and pH performed on shallow soil samples are summarized in Table 4.3.7.

**Table 4.3.7 Summary of Minimum Soil Box Resistivity and pH Tests**

| Sample Location | Depth (feet) | Material Type | Minimum Soil Box Resistivity (ohm-cm) | pH  |
|-----------------|--------------|---------------|---------------------------------------|-----|
| GEO-02          | 1-9          | CL/CH         | 2,483                                 | 7.1 |
| GEO-21          | 1-9          | CL            | 2,589                                 | 8.0 |
| GEO-22          | 1-9          | CL            | 2,257                                 | 7.6 |
| GEO-23          | 1-9          | CL            | 1,752                                 | 5.9 |
| GEO-25          | 1-9          | CL            | 3,350                                 | 7.7 |
| GEO-28          | 1-9          | CL            | 2,273                                 | 7.7 |
| GEO-32          | 1-9          | CL            | 3,395                                 | 7.4 |
| TR-1a           | 1.5-5        | CL            | 1,461                                 | 6.7 |
| TR-2            | 1.5-5        | CL            | 2,102                                 | 6.2 |

Notes: CL = Lean Clay; CH = Fat Clay.

Individual test reports and a summary of laboratory tests are presented in Appendix B.

#### 4.4 Groundwater Conditions

Based upon the information obtained from the borings, piezometers, and historical water data for the region, it is RRC's opinion that static groundwater level will likely have an impact on shallow gravity foundations. We encountered groundwater in all borings completed as part of this study. Groundwater observations for each WTG location and substation area are presented on Table A2 in Appendix A.

RRC installed temporary piezometers within the foundation footprint of sixty-two (62) WTG sites as well as one (1) within substation area. The temporary piezometers were installed to a depth of about 13 feet below existing grade. We recorded piezometer groundwater levels between March 31 and May 10, 2025. These are summarized in Table A4 within Appendix A. The design groundwater level in Table A1 assumes that groundwater might vary by one foot shallower relative to those measured.

We reviewed published water well logs for Coles County, Illinois, available from Illinois State Geological Survey (Reference 4). Historical water well logs within the project site presented the depth from static groundwater levels and were reported to be between 9 and 26 feet below the ground surface. The shallowest groundwater depth was recorded in the year 1991 at about 9 feet below the ground surface at State Well No. 120292344400. The well locations presented on Table A3 in Appendix A are plotted on Figure 8 in Appendix A.

We note that majority of the water wells were installed to deep aquifers below typical turbine foundation depth and indicate piezometric or static groundwater level within those deep aquifers only. The static water levels from the deep wells do not always provide useful groundwater information for shallow aquifers or perched water tables near turbine foundation depths that should be considered in turbine foundation design.

It is imperative to note that the short-term groundwater level observations presented in this study are not an accurate evaluation of groundwater levels. This Report is not to be interpreted as a comprehensive groundwater study. Groundwater levels are highly dependent on climatic and hydrologic conditions before and after construction, and site development including irrigation demands, drainage and other factors. The presence of water during construction can vary relative to this Report. It is understood that the presence of groundwater may influence certain construction activities and long-term performance of foundations and pavements. If a detailed groundwater study is desired, a groundwater hydrologist should be retained to perform these services.

#### **4.5 Geohazard Assessment**

The following subject items represent geologic or physical hazards to the project. Within each subject, we address the level of risk associated with the particular hazard relative to this project.

##### **4.5.1 Flood Hazard**

We reviewed the floodplain boundary maps available for Coles County from the Federal Emergency Management Agency (FEMA). The turbine sites and Project substation are located within Zone X flood zone. Areas identified as Zone X are outside of the 0.2 annual chance flood zone (500-year floodplain) and are within a minimal flood hazard area.

##### **4.5.2 Expansive Soils**

Low to high expansive clay soils exist at this site. Laboratory tests indicate the native clay soils have PI values ranging from 8 to 29 with an average of 17. Clay soils with a PI greater than 25 are considered 'highly expansive'. The clay soils are also relatively moist with in-situ moisture contents in the range from about 12% to 27% (average of 17%). Expansive clays undergo shrink and swell when significant moisture changes occur. Therefore, it is important to maintain the clay soils natural moisture during and after construction.

WTG foundation embedment depths are anticipated to be near 12.3 feet below the ground surface. Moisture variations at that depth due to normal climatic variations are low. It is RRC's opinion that WTG foundations will not experience significant shrink/swell movement provided the recommendations in Section 6.6 are followed.

##### **4.5.3 Frost Penetration Depth**

Based on EM 1110-1-1905 (Reference 5), the average frost penetration depth for Coles County is approximately three (3) feet below finished site grade. Therefore, spread or strip footings at the site should have a minimum embedment depth of three (3) feet below finished site grade.

##### **4.5.4 Corrosion Potential**

The published map that indicates a range from "Low" to "High" risk for concrete corrosion. Figure 6 in Appendix A is the map that attempts to indicate concrete corrosion risk boundaries. RRC cautions that this published map is only estimates based on soil types and cannot be precise. The

laboratory test results indicate the soils in the upper 10 feet possess a “Negligible” risk for sulfate exposure and corrosion potential to concrete

The published map, presented in Figure 7 for approximate steel corrosion risk boundaries, indicates that the project site has a “Low” to “High” risk for steel corrosion. Again, we caution that this map is not precise and is only generalizations based on soil types. The laboratory test results indicate soils within the upper 10 feet exhibit “Corrosive” to “Moderately Corrosive” electrical characteristics with regards to galvanic corrosion of steel. For chlorides, the test results indicate “Non-Aggressive” corrosion potentials to steel

Section 5.3 discusses laboratory test results in greater detail for concrete and steel corrosion.

#### **4.5.5 Slope Stability**

The project site consists of broader flat to gently rolling plains. Where most of the site exhibits gradual to moderate slopes, occasional steeper slopes may exist near drainage features. Based on existing site topography and RRC’s observations during geotechnical field exploration, slope stability is not anticipated to be a major concern for this project site, assuming minimum site grading occurs during construction phase.

#### **4.5.6 Seismicity Hazards**

Coles County, Illinois is an area with relatively low seismicity. Specific seismic design values are provided in Section 5.5.

### **4.6 Geophysical Properties**

RRC performed One-Dimensional Multi-Channel Analysis of Subsurface Waves (MASW) surveys at five (5) selected WTG locations in the final phase. The purpose of MASW is to obtain shear wave velocity ( $V_s$ ) profiles. The survey locations are mapped on Figure 3 in Appendix A. The MASW survey methodologies and results are discussed in Section 4.6.1.

RRC retained the services of Geotherm to conduct two (2) thermal resistivity (TR) tests at the selected locations provided by Apex Clean Energy. Thermal resistivity test methodologies are presented in Section 4.6.2. These locations are mapped on Figure 4 in Appendix A.

#### **4.6.1 MASW Survey**

The Multi-Channel-Analysis-of-Surface-Waves (MASW) method is a non-intrusive/non-destructive technique which uses Rayleigh waves to evaluate the stiffness of subsurface strata. Rayleigh waves of different wavelengths (or frequencies) travel at different velocities as they propagate through different soils. The waves also bounce along the surface of different layers, called dispersion. MASW reports are presented in Appendix C.

For a 1-D MASW survey, twenty-four geophones with a 5-foot spacing are laid out in a linear array. The total length of the array is approximately 115 feet. A 16-pound sledgehammer striking a metal plate is employed as the seismic source located 10, 25 and 40 feet away from the first geophone. RRC uses SurfSeis 4.04 software to collect and process the seismic data.



The shear wave velocities are used to determine certain soil and bedrock characteristics based on simple equations. For example, the soil/bedrock shear modulus can be calculated using the following equation:

$$G = \rho V_s^2$$

Where:  $G$  = Shear Modulus (psf);  
 $\rho$  = Mass density (pcf/(ft/sec.<sup>2</sup>)); and  
 $V_s$  = Shear wave velocity (ft/sec.)

Young's Modulus,  $E$ , can also be calculated from the shear wave velocity data using the following equation:

$$E = 2G(1 + \nu)$$

Where:  $E$  = Young's Modulus (psf);  
 $G$  = Shear Modulus (psf); and  
 $\nu$  = Poisson's Ratio.

The weighted average for measured shear wave velocities below assumed foundation bearing elevation at the project site for selected turbine locations were determined to be in the range of 1,040 to 1,165 feet per second (ft/sec).

The weighted average is calculated based on the following formula based on the 2021 International Building Code (IBC) (Reference 6):

$$\overline{V_s} = \frac{\sum_i^n d_i}{\sum_i^n \frac{d_i}{V_{si}}}$$

Where:  $d_i$  = Thickness of any layer between 0 and 100 feet; and  
 $V_{si}$  = Shear wave velocity of a layer.

Note the measured shear wave velocity using MASW may not be available down to a depth of 100 feet. In the case where measured shear wave velocity is less than 100 feet, the weighted shear wave velocity is calculated based on available depths. Figure 9 within Appendix A shows the weighted average shear wave velocities at selected WTG locations.

To determine the rotational stiffness of the underlying soil and/or structural fill, the parameters outlined in Table 4.6.1.1 can be used to compute the elastic and shear moduli. These values are generic values from published sources and typical for the respective soil type.

**Table 4.6.1.1 Recommended Soil Parameters for Rotational Stiffness**

| Soil/ Material Type              | Poisson's Ratio <sup>(1)</sup> | Average Total Unit Weight (pcf) <sup>(1,2)</sup> |
|----------------------------------|--------------------------------|--------------------------------------------------|
| Saturated Clay and Silt Soils    | 0.45                           | 115                                              |
| Unsaturated Clay and Silt Soils  | 0.35                           | 105                                              |
| Loose to Medium Dense Sand Soils | 0.35                           | 115                                              |



| Soil/ Material Type              | Poisson's Ratio <sup>(1)</sup> | Average Total Unit Weight (pcf) <sup>(1,2)</sup> |
|----------------------------------|--------------------------------|--------------------------------------------------|
| Medium Dense to Dense Sand Soils | 0.30                           | 120                                              |
| Structural Fill                  | 0.30                           | 120                                              |

Note: (1) Based on Reference 7 (see page 123 for Poisson's ratio and page 163 for unit weight).

(2) Based on laboratory measurements (see Section 4.3).

Computed parameters from the MASW surveys represent soil behavior at small strain. The foundation designer should incorporate appropriate reduction factors to determine the rotational stiffness of the foundation system. The MASW survey results are included in Appendix C.

#### 4.6.2 Thermal Resistivity of Soils

RRC obtained the services of Geotherm to conduct in-situ and laboratory thermal resistivity tests. On April 16, 2025, Geotherm conducted in-situ thermal resistivity testing at two (2) selected locations. At each location, a backhoe was used to excavate a test pit to a depth of 5 to 5.5 feet below existing site grade. In addition, Geotherm collected bulk samples to conduct laboratory thermal resistivity dry-out curves at different soil density.

Geotherm conducted in-situ tests at depths of 2, 3, 4 feet below grade. In-situ thermal resistivity and ambient temperature measurements were made using field thermal probes and the Geotherm TPA-2000 equipment. All in-situ thermal resistivity testing was performed in accordance with the IEEE Standard 442-2017. The field thermal resistivity values were measured at the natural soil moisture on that day. Depending on weather and environmental conditions, i.e., drying due to cable heat or other heat source, seasonal drying (drought), artificial draining, water demand of crops, etc., the soil may be drier at certain times of the year. The design thermal resistivity for the native soils should be based on the expected driest conditions.

Laboratory bulk samples are remolded/compacted to about 85% to 95% compaction of the maximum dry density as determined by ASTM D698 at "as-received" or optimum moisture content, whichever is greater. Thermal resistivity samples are then tested at a series of moisture contents from greater of "as-received" or optimum moisture content to 0% moisture content. The tests are conducted in accordance with IEEE standard 442-2017. The result is a thermal resistivity dry-out curve. Thermal resistivity tests results are presented within Appendix C.

*Interpretation of the thermal resistivity tests results is beyond the scope of this study and should be performed by the design team.*

## 5.0 GEOTECHNICAL RECOMMENDATIONS

The project will consist of fifty-one (51) wind turbine generators and associated facilities. However, for the purposes of this report, RRC conducted geotechnical analyses at 62 proposed turbine locations, although no more than 51 will be built. These 62 turbine locations are the same locations approved by Coles County in July 2025. The WTG model proposed for the project will be the GE 6.1-158 MW, 117m hub height WTG. Current designs show gravity foundations with

an embedment depth of 12.3 feet below finished grade. RRC's recommendations provide for an embedment depth of 12.3 feet below natural/existing grade.

The extent and location of site grading is also unknown currently. RRC should be retained to review the civil drawings and cross-sections for each turbine location and other critical areas along the proposed roadways. This will allow us to evaluate the need for additional studies such as slope stability analyses. If current site grade is changed at a WTG location, we can assess whether our original recommendations apply. However, for this current study, we anticipate turbine foundations will bear on native soils with finish grade at or slightly above current existing site grade with minimal slope stability impacts. RRC's geotechnical recommendations presented in this report should be verified when information on the foundation design and site grading become available.

### 5.1 General Turbine Foundation Expectations

RRC performed bearing capacity and settlement calculations in general accordance with methodologies outlined in the 2<sup>nd</sup> Edition of *Guidelines for Design of Wind Turbines* (Reference 8). We also used generally accepted standard of care and practice along with experience with similar soil conditions in this type of geological setting. Detailed discussions of bearing capacity and settlement for WTG bearing on native soils are outlined in the following subsections. Natural conditions vary, providing variable soil strengths that provide net allowable bearing capacities ranging from 1,750 to 3,500 psf. RRC's goal is to provide recommendations that allow one or two foundation designs for the entire site.

Table A1, *Summary of Foundation Design Net Allowable Bearing Pressure and Design Groundwater Recommendations* in Appendix A provides detailed summary of RRC's recommendations for WTGs geotechnical design. A summary of anticipated conditions that will require particular attention in the design and construction is presented below:

- RRC based our design parameters and construction recommendations to allow for foundations to bear at about 12.1 feet below the existing ground surface, for an in-situ net allowable end bearing capacity of 2,000 psf, with a maximum settlement of 2.5 inches and a maximum differential settlement or tilt potential of 0.17 degree across the foundation.
- To be capable of supporting a net allowable bearing capacity of 2,000 psf, alternate foundation designs may be required at two (2) locations (GEO-15, GEO-20). Otherwise, remediation of the foundation supporting soils is necessary.
- T47a and T39a shifted 65 feet from GEO-25 and 60 feet from GEO-32 respectively in Array 37, the recommendations at these two locations are still valid.
- The depths of remediation for supporting a net allowable bearing capacity of 2,000 psf are provided in Table A1. These depths to remediation are based relative to naturally existing grade and foundations bearing about 12.1 feet below grade. If final grade results in the

foundation bearing at a different depth, then adjustments should be made to the depth of remediation.

- Over-excavation and replacement with structural fill materials could be considered for soil improvement depths up to about 4 feet below foundation bearing elevation, if feasible. For soil improvements greater than 4 feet below foundation bearing elevation, the cost for performing over-excavation and replacement will likely be excessive, and therefore, deep soil improvement measures such as Rammed Aggregate Piers (RAP), compaction grouting or other equivalent ground improvement techniques could be considered. The recommended deep soil improvement depths should be verified by the deep soil improvement designer/contractor. If the RAP option is considered, the design-build contractor shall be prepared to drill through shallow hard layers to mitigate target weaker zone at deeper depths. The intent of deep soil improvement is to improve bearing capacity and reduce settlement potential of the underlying subsurface soils. Alternatively, use compaction grouting or alternative methods.
- Shallow groundwater was encountered at depths ranging from 0 to 5 feet at the turbine locations. RRC may monitor the piezometers for groundwater levels and take more readings before construction upon request. The information will help the contractor assess groundwater issues at the time of excavation.
- Turbine foundations located adjacent to natural or man-made slopes should be setback laterally from the top of the slope. The minimum setback distance should be 25 feet from the edge of foundation to the crest of any natural or man-made slopes. Proper drainage measures should be taken to reduce impacts to man-made cut and fill slopes as well as all undisturbed natural slopes.

#### **5.1.1 Bearing Capacity and Settlement of Gravity Foundation System**

A net allowable bearing pressure of 2,000 psf can be used for the structural design for turbine foundations. This allowable bearing includes a safety factor of three for general shear failure. This net allowable bearing pressure value may be increased by 25% when considering short duration loading conditions such as extreme wind and seismic forces. Two (2) locations (GEO-15, GEO-20) will require remedial measures outlined in Section 6.6 in order to achieve a net allowable bearing pressure of 2,000 psf.

The estimated total turbine foundation settlement is expected to be on the order of 0.5 to 2.5 inches under normal operating loading conditions at the center of the foundation. The estimated differential settlement or tilt across the foundation diameter is less than 0.17 degree under both dead load and normal operating loading conditions.

**Table 5.1.1.1 Geotechnical Design Parameters for Gravity Foundation**

| Parameters/Soil Type*                                                   | Recommended Values |
|-------------------------------------------------------------------------|--------------------|
| Min. Undrained Shear Strength / Clay                                    | 1,000 (psf)        |
| Min. Internal Friction Angle / Sand                                     | 30 (deg.)          |
| Min. Net Allowable Bearing Capacity (Normal Operating Load, $F_s=3.0$ ) | 2,000 (psf)        |
| Shear Wave Velocity for Soils Under Foundation                          | 400 – 900 (ft/sec) |
| Poisson's Ratio                                                         | 0.35               |

\*Parameters for bedrock omitted as the interpreted bearing capacity and shear wave velocity for bedrock is much higher than those for soils, which will govern the foundation design.

Table 5.1.1.2 presents a summary of Modulus of Subgrade Reaction for different soil and structural fill materials.

**Table 5.1.1.2 Recommended Soil and Structural Fill Design Parameters**

| Soil/ Material Type            | Friction Coefficient <sup>(1)</sup> | Modulus of Subgrade Reaction, $k_s^{(2)}$ (pci) |
|--------------------------------|-------------------------------------|-------------------------------------------------|
| Firm Clay Soils                | 0.35                                | 75                                              |
| Stiff to Hard Clay Soils       | 0.35                                | 100                                             |
| Medium Dense Sand Soils        | 0.35                                | 150                                             |
| Dense to Very Dense Sand Soils | 0.45                                | 200                                             |
| Structural Fill Materials      | 0.45                                | 300                                             |

Note: <sup>(1)</sup> If necessary, lateral passive earth pressures can be considered to develop additional resistance. The coefficient of base friction should be reduced to 0.30 when used in conjunction with passive pressure.

<sup>(2)</sup> For 1-ft. X 1-ft. Plate.

To determine the rotational stiffness of the underlying soils/bedrock, the foundation designer should reference the results of the MASW testing performed as part of this study. The results of these surveys completed as part of this study are presented in Appendix C.

## 5.1.2 Overburden Backfill on Turbine Foundation

The use of native soil/rock as backfill materials placed above and against the side of turbine foundations is acceptable. RRC recommends the backfill materials placed over the turbine foundations be compacted to dry densities of at least 95% of the maximum dry density as determined by ASTM D698. This compaction is necessary to reduce erosion and deter settlement. RRC recommends using an average long-term moisture content of 10% for native soils used as overburden. Contractor should place overburden backfill material in accordance with specifications outlined in Section 6.6.3 of this report.

Using the Standard Proctor tests listed in Table 4.3.1, the recommended over-burden backfill unit weight values for turbine foundation design are presented in Table 5.1.2.1 below. RRC recommends using an average long-term moisture content of 10% for overburden soils.

**Table 5.1.2.1 Overburden Backfill Density Range Requirement**

| Soil/ Material Type | Dry Backfill Unit Weight<br>Lower Limit, $\gamma_d$ (pcf) | Moist Backfill Unit Weight<br>Range, $\gamma_{total}$ (pcf) |
|---------------------|-----------------------------------------------------------|-------------------------------------------------------------|
| Native Soils        | 95                                                        | 110 - 140                                                   |

Note: pcf= pounds per cubic foot

These overburden unit weights range from 95% to 100% compaction and moisture from the long-term moisture to slightly greater than optimum moisture content.

## 5.2 O&M Building Shallow Foundation Systems

Target grade elevations for the proposed O&M buildings were not available during preparation of this report. RRC has assumed the finished grade will be near or slightly above the existing ground surface. Spread or strip footings at the site should have a minimum embedment depth of 3 feet below finished site grade.

The native soils at the O&M Buildings are lean clay. Typically, lean clay soils are of concern for supporting lightly loaded structures on a shallow foundation system due to their expansive nature. The laboratory tests indicated the lean clay soils at the O&M buildings possess an expansive potential when experiencing significant moist changes.

Shallow foundation components should have a minimum embedment of 36-inches below finished site grade for frost protection and may utilize an allowable bearing capacity of up to 2,000 psf. This presumes that footings bear on either undisturbed native soils or on properly compacted Select Fill or Structural Fill, or on flowable fill (controlled low strength material) having compressive strength of at least 150 psi. Mat foundations bearing near the ground surface may use a maximum allowable bearing capacity of 1,800 psf. Table 5.2.1 presents various design parameters associated with shallow foundations.

For reinforced concrete slabs bearing at finished grade, we recommend over-excavation of foundation subgrade soils to a minimum of 3 feet below the finished grade and replacement with non-frost susceptible fill material or flowable fill (controlled low strength material) having compressive strength of at least 150 psi. The non-frost susceptible fill material should be in accordance with Section 6.5 of this report. Other alternatives such as thermal insulation may be used to protect against frost and the contractor or designer of thermal insulation shall be responsible for compliance with local building codes.

**Table 5.2.1 Soil Parameters for O&M Buildings**

| Parameter                                            | Design Value |
|------------------------------------------------------|--------------|
| Design Groundwater Level, ft                         | 1.0          |
| Average Unit Weight, pcf                             | 95           |
| Modulus of Subgrade Reaction of Select Fill Pad, pci | 120*         |
| Friction Coefficient at Foundation Base              | 0.35         |
| Allowable Bearing Pressure for Mat Foundation, psf   | 1,800        |

| Parameter                                                                                 | Design Value |
|-------------------------------------------------------------------------------------------|--------------|
| Allowable Bearing Pressure for Continuous and Spread Footings<br>Bearing 3 feet deep, psf | 2,000        |

Notes: pcf = pounds per cubic foot; psf = pounds per square foot; pci = pounds per cubic inch.

\* For a 1 ft. x 1 ft. Plate.

### 5.3 Corrosivity of Soils

Water-soluble sulfate and chloride test results are presented in Table 4.3.6. The test results indicate the soils in the upper 10 feet possess a “Negligible” risk for sulfate exposure and corrosion potential to concrete. Foundation concrete should be designed in accordance with *ACI 318: Building Code Requirements for Structural Concrete and Commentary*.

Minimum Soil Box Electrical Resistivity and pH testing results are presented in Table 4.3.7 of this report. Soil Box Electrical Resistivity results indicate soils within the upper 10 feet exhibit “Corrosive” to “Moderately Corrosive” electrical characteristics with regards to galvanic corrosion of steel. For chlorides, the test results indicate “Non-Aggressive” corrosion potentials to steel. Cathodic protection for buried metal pipe should be designed by a qualified corrosion engineer.

**Table 5.3.1 Effect of Soil Box Electrical Resistivity on Corrosion**

| Aggressiveness       | Resistivity in ohm-cm |
|----------------------|-----------------------|
| Very Corrosive       | < 700                 |
| Corrosive            | 700 – 2,000           |
| Moderately Corrosive | 2,000 – 5,000         |
| Mildly Corrosive     | 5,000 – 10,000        |
| Non-Corrosive        | > 10,000              |

### 5.4 Lateral Earth Pressures

Lateral earth pressures will apply in soil strata. The WTG foundations will be designed to resist all lateral movements; therefore, the “at rest” lateral earth pressure will apply. The following “at rest” equivalent fluid pressures are recommended in Table 5.4.1. RRC applied unit weights listed in Table 5.1.2.1 for overburden backfill soils with minimal compaction and low moisture content. The lightweight range is more conservative and necessary for the “at rest” and “passive” condition. The heavier weights are more conservative for the “active” condition.

**Table 5.4.1 Equivalent Fluid Pressures**

| Soil Type                                                 | Condition            | Equivalent Fluid Pressure (psf/ft) |
|-----------------------------------------------------------|----------------------|------------------------------------|
| Clay Soils<br>$\phi=20^\circ$ , $\gamma_t=100$ to 125 pcf | At Rest, $k_o= 0.65$ | 65                                 |
|                                                           | Active, $k_a= 0.49$  | 61                                 |
|                                                           | Passive, $k_p= 2.04$ | 204                                |
| Sand Soils<br>$\phi=34^\circ$ , $\gamma_t=105$ to 130 pcf | At Rest, $k_o= 0.44$ | 46                                 |
|                                                           | Active, $k_a= 0.28$  | 36                                 |
|                                                           | Passive, $k_p= 3.54$ | 372                                |

Passive and active earth pressure resistance will only mobilize after significant movement of the foundation. The passive case occurs where a structural element tends to move into the soil mass. The active case occurs when the element tends to move away from the soil mass. Both cases are applicable for unrestrained foundation elements.

The above earth pressure values do not include safety factors. We recommend a minimum safety factor of 2.0 be applied when using passive earth pressure for lateral load resistance. Surcharge loads should also be considered where appropriate. The values apply only to cases where the ground surface is level. We should be contacted to provide suitable values for cases where the ground surface is sloped. Similarly, if a structure is submerged below water, then the earth pressures change dramatically and require a different analysis.

## 5.5 Seismic Design

RRC provides seismic design using 2021 International Building Code (IBC) (Reference 6). Based on Logs of Boring data, we recommend using a Site Class D for stiff soils. The Mapped Spectral Response Acceleration for the 1 second ( $S_1$ ) and short periods ( $S_s$ ) were computed using ASCE Hazard Tool, which is a web-based application program (Reference 9). The table below summarizes recommended seismic parameters to be used in the design:

**Table 5.5.1 Recommended Seismic Parameters**

| Parameter                                                                  | Recommended Value |
|----------------------------------------------------------------------------|-------------------|
| $S_s$ – Mapped Spectral Response Acceleration at Short Period (0.2-Second) | 0.243 g           |
| $S_1$ – Mapped Spectral Response Acceleration at 1-Second Period           | 0.110 g           |
| $F_a$ (Site Coefficient) – Site Class D                                    | 1.6               |
| $F_v$ (Site Coefficient) – Site Class D                                    | 2.4               |
| $PGA_M$ – Site Modified Peak Ground Acceleration – Site Class D            | 0.192 g           |
| Seismic Design Category                                                    | C                 |



## **6.0 FOUNDATION CONSTRUCTION CRITERIA**

### **6.1 Site Preparation**

Prior to construction, we recommend adequate positive drainage be provided to maintain a relatively dry condition in the area of proposed construction. This will be very important if any work is attempted during periods of prolonged rainfall or heavy snowfall followed by warmer days. Ponding of water in the areas of construction should be avoided. Winter conditions can also impact the construction process. Newly placed fill should not be placed on frozen subgrade and frozen material should not be used for fill.

During excavation of the turbine foundations, every effort should be made to avoid disturbing subgrade materials at the planned foundation bearing elevation. When the subgrade is disturbed, the resulting surface should be re-compacted to achieve a minimum compaction of 98% of the maximum dry density as determined by ASTM D698 and moisture conditioned within 2% of optimum moisture content or drier. A qualified representative of the geotechnical engineer should verify the stability of the subgrade prior to foundation installation.

### **6.2 Structural Fill Specifications**

Structural fill material should consist of a non-expansive, well-graded material with sufficient binder for compaction purposes and meet the requirements of *Standard Specifications for Road and Bridge Construction* (Adopted January 1, 2022), Illinois Department of Transportation, Article 1004.04, Aggregate Base Course (or better). RRC's intent is to make Structural Fill interchangeable with flexible road base, where convenient.

Structural fill should be compacted to a minimum of 95% of ASTM D1557. The structural fill should be moisture conditioned near optimum, but moisture is not a pass-fail criterion. Typically, 9-inch lifts are maximum, but if a contractor can complete thicker lifts and it can be verified that full densification occurs throughout the lift, then lifts to 12-inches are possible.

### **6.3 Native Soils as Select Fill below Foundations**

RRC understands the importance of using native soils whenever feasible. The following specifications allow reasonable native soil reuse while maintaining structural requirements for end bearing capacity and settlement. Modification of unsuitable foundation soils shall consist of over-excavation and replacement with any of the following materials:

Select Fill are soils that possess the following properties: maximum plasticity index of 15 and a maximum liquid limit of 40, and classify as SC-SM, SC, Sandy CL, well-graded GC, and well-graded GM.

Select Fill placement under turbines should be limited to two-feet thick. Deeper replacement must be approved by the Geotechnical Engineer in order to assess settlement potential for that specific location. Otherwise, use Structural Fill.



All reused and Select Fill soils used under foundations shall be compacted to a minimum of 98% of the maximum dry density as determined by ASTM D698 and shall be moisture conditioned within 3% of optimum moisture content.

When dealing with subgrade pumping, rutting, or moisture, and the remediation has a maximum thickness of 12-inches, then the excavated soils may be scarified and reused to complete the remediation. Deeper remediation requires either Select Fill (2-foot max) or Structural Fill.

#### **6.4 General Use Fill**

The use of native clay and sand soils is acceptable as general use fill. The requirements presented in this section are not applicable to materials placed above or below any structures or roadways.

All backfill should adhere to the specifications below.

- All general use fill should be free of significant organics, roots, and deleterious materials.
- The general use fill materials should be placed in loose lifts not exceeding 12 inches.
- Each lift of general use fill should be compacted to dry densities of at least 90% of the maximum dry density as determined by ASTM D698. This compaction reduces fill settlement and erosion.

The top surface of the general use fill should have a minimum 2% drainage slope away from structures and roadways to allow surface water drainage. Development of a site grading plan is the responsibility of the Civil Engineer or Hydrology Engineer.

#### **6.5 Non-Frost Susceptible Fill**

The non-frost susceptible fill material should consist of well-graded gravel or sand which has less than 5% passing a No. 200 Sieve. This material should classify as either SP, SW, GP, or GW using Table 1 of ASTM D2487. Compact to a minimum of 98% of the maximum dry density as determined by ASTM D698. Moisture content is not a pass/fail criterion for this material.

#### **6.6 Turbine Earthwork Requirements**

RRC reviewed each log of boring and CPT sounding for the presence of soft to medium stiff clays, loose sand layer(s) and/or non-competent materials below and near the anticipated foundation bearing elevation. In *Table A1, Summary of Foundation Design Net Allowable Bearing Pressure and Design Groundwater Recommendations* within Appendix A, we list locations that we expect will require remediation. Following are various options and methods to remediate subsurface soils to support the intended gravity foundations. We also present other earthwork requirements related to the turbines, such as overburden backfill and crane pads on overburden fill.

### **6.6.1 Verification of Turbine Foundation Subgrade**

All WTG excavations should be verified that bearing soils are suitable for construction. RRC prefers proof-roll tests to verify the stability of foundation excavations. RRC does anticipate that shallow groundwater might deter proof-roll tests. Where the foundation design allows for relatively soft soils or where shallow groundwater deters the proof-roll, then the Geotechnical Engineer shall consider alternate verification methods. Alternate methods might consist of Dynamic Cone Penetrometer (DCP) for sandy/gravelly soils or Static Cone Penetrometer (SCP) for clay with low sand content. After foundation designs are complete and after the DCP/SCP equipment are known, the geotechnical engineer can devise test specifications.

If an excavation is dry and stable, then perform a proof-roll test. There is a preference to perform a proof-roll test using a fully loaded water truck, or similar equipment. Conduct the proof-roll test in at least two directions with a minimum of two passes per area. Proof-roll tests should not exceed ½-inch of deflection, rutting, or pumping. Areas that fail this proof-roll shall be excavated and the removed soils be recompacted or replaced.

### **6.6.2 Subgrade Remediation Methods**

A representative of the Geotechnical Engineer should observe and verify over-excavations. In some cases, additional over-excavation may be necessary. In some cases, less excavation is sufficient.

In order to disperse the foundation load over a larger area, structural fill pads should be larger than the foundation. Deeper remediation also requires a wider distance. The over-excavated areas should extend laterally a distance such that the edge is at least a distance equal to the pad thickness. Foundation stresses extend downward and outward at a 45-degree angle through the structural fill. For example, a 3-foot-thick remediation will require a pad that is 3 feet beyond the edge of the foundation.

If compacted structural fill or select fill is used below the turbine foundation, the fill thickness shall be kept uniform with a maximum thickness difference of two feet across the foundation footprint. This uniform thickness is to deter differential settlement. Where subgrade is a combination of bedrock and soil, then either excavate the rock or replace the soil with lean concrete or structural fill.

It is possible to encounter suitable soils at shallower depths. It is also feasible to verify that suspect soils are suitable to support the foundation design intent. If Table A1 recommends excavation to a depth, it is because this is the anticipated bottom of the suspect stratum. Contractor may choose to conduct additional tests to verify whether the suspect soils meet strength requirements. These tests should extend through the suspect layer. RRC can recommend Dynamic Cone Penetrometer (DCP) tests and/or Static Cone Penetration (SCP) tests to conduct this verification. Once a foundation design is complete, the geotechnical team can work with the quality assurance team to devise a suitable DCP/SCP test procedure and minimum DCP/SCP test values.

The stability of the subgrade at foundation bearing elevation may be affected by the proximity to shallow groundwater levels and/or “Perched” Groundwater conditions. In areas where bearing capacity and settlement are not the concern, such as a thin layer of mud, the contractor may establish a stable platform using the following options:

- Dewater the site. Means and methods for dewatering are the responsibility of the contractor.
- Use geogrid/geotextile in combination with structural fill to create a stable surface. Obtain design input from the product manufacturer.
- Use coarse rip rap to bridge wet soils. Compact rip rap to bed the aggregate within the wet soils. Cap the rip rap with compacted structural fill then verify overall stability using a proof-roll method.

It is crucial to maintain a uniform foundation subgrade support below the turbine foundation to reduce differential foundation settlement. In areas where a combination of soil and bedrock are exposed at the foundation bearing elevation, the soil portion should be over-excavated to competent bedrock and replaced with either compacted structural fill or lean concrete having a 28-day compressive strength of 1,000 psi or higher. Do not use select fill or native soils. Alternatively, the entire foundation footprint can be over-excavated for a depth of 2 feet below the foundation bearing elevation and replaced with compacted structural fill.

Should boulders be exposed at foundation bearing elevation during excavation, remove the boulder and replace with structural fill. Foundations bearing on exposed boulders have the potential to create point loads at the bottom of the foundations. This increases differential foundation stress.

### **6.6.3 Excavated Materials as Overburden Backfill**

The use of native clay and sand soils is acceptable as overburden backfill materials placed above and against the sides of turbine foundations. All backfill should be free of significant organics, roots, and deleterious materials and should be properly processed and compacted. See specifications below.

Overburden Backfill Placement:

- The backfill materials should be placed in loose lifts not exceeding 12 inches.
- Each lift of backfill should be moisture conditioned, compacted, and tested to meet the minimum and maximum dry and moist unit weight values specified in the foundation design drawings. If not on the drawings, refer to Section 5.1.2 of this report for target overburden weights.
- Each lift of backfill materials over turbine foundations should be compacted to dry densities of at least 95% of the maximum dry density as determined by ASTM D698. Even if this

level of compaction is greater than the minimum target weights from item 2 above. This compaction reduces fill settlement, erosion, and provides support for the transformer.

Poorly graded sand (classified as SP) and gravel are highly permeable and allow water entry. These soils make poor overburden backfill. If overburden material consists of SP or Gravel, then RRC recommends adding a 12-inch-thick clay cap. This clay cap should extend at least five feet beyond the turbine foundation excavation. Alternately, the contractor can consider mixing clayey soils into the overburden backfill materials in order to create a less permeable mixture. The Geotechnical Engineer should be allowed to review such mixtures.

The top surface of the backfill should have a minimum 2% drainage slope away from the turbine to allow surface water runoff.

#### **6.6.4 Crane Pads on Overburden**

As modern WTGs become larger and towers taller, crane pad designs require more soil strength to support larger loads. As such, traditional overburden backfill compaction specifications do not always provide sufficient soil strengths. Contractors can either design crane mats that better distribute crane loads, or they can request stricter soil density and strength requirements to support design crane loads. In this *Geotechnical Report*, RRC provides density requirements that we expect can support typical crane loads distributed by mats. Once the contractor is able to assess crane pad design options, the contractor may request modified specifications in the future.

In areas where crane pads extend over the overburden backfill zone, then the crane operator's bearing capacity requirements must apply. As a general guideline, RRC suggests a minimum three feet (in thickness) of the overburden backfill below crane pads be compacted to a minimum of 98% of the maximum dry density as determined by ASTM D698. Moisture condition soils to be dry of optimum, where moisture is not a pass/fail criterion. Refer to Section 7.2 of this Report for additional issues related to crane pads.

#### **6.7 O&M Building Structures**

This section provides construction recommendations and specifications related to shallow foundations for structures not consisting of turbines. This section is intended to apply for all electrical Substation and O&M Building structures. If in the future, more specific geotechnical studies for those facilities are conducted, then disregard this section and refer to the recommendations in those more specific studies.

##### **6.7.1 Shallow Foundation Construction**

The following construction criteria and general guidance should be observed during foundation construction:

- All foundation excavations should be observed by the engineer's qualified representative to assess proper bearing materials are present at foundation bearing elevation in accordance with the recommendations given herein, and to assess the need for densification of the subgrade materials. In addition to a geotechnical representative in the

field, RRC Geotechnical Engineer will provide consultation during construction upon request.

- Care should be taken to protect the exposed soils from being disturbed, freezing or desiccation.
  - The foundation excavation should be sloped sufficiently to create internal sumps for runoff collection and removal. Foundation excavations subject to rainfall and possible deterioration from accumulated water should be protected using a protective “mud-slab” (lean concrete). If surface runoff water or groundwater seepage accumulates at the bottom of the foundation excavation, it should be collected and removed and not allowed to adversely affect the quality of the bearing surface.
  - The foundation excavations should be checked for size and cleaned prior to the placement of reinforcing steel. Take precautions during the placement of reinforcement
- Open Excavations

With all excavations in soils, sloped excavations and trench shields are required for excavations greater than four feet in depth. The contractor’s “Competent Person” (as defined by OSHA) must inspect each trench wall to determine the type of bench or slope that is required. With all excavations, only a “Competent Person” shall determine whether sloped, benched, or trench shields can be used. OSHA and applicable state and local standards should be observed and followed. Site safety is the responsibility of the contractor. For general planning purposes, RRC offers the following:

- The presence of water within any excavation automatically creates a Type C classification. All Type C class excavations require a 1.5H:1V slope or bench.
- The surficial cohesive clay soils across this site are generally soft to medium stiff. This soil type classifies as an OSHA Type B material that requires the excavation’s sidewall be sloped at 1H:1V (or flatter). This does not apply in the presence of free water.
- The sandy soils at the site possess low to zero cohesion. This soil type classifies as an OSHA Type B material that requires the excavation’s sidewall be sloped at a 1H:1V slope (or flatter). The silt content may give the appearance of cohesion when first excavated, but this is not correct.

Protect construction slopes and permanent embankment slopes from surface runoff water. Design site grading to deter surface water from flowing down unprotected slopes. The contractor should avoid surcharge loads, either static or dynamic, adjacent to an excavation slope. Prevent construction equipment from traveling along or near the top of the excavation slope. The contractor’s “Competent Person” must monitor temporary slopes, trenches, and dewatering during construction in order to detect early warnings of movement. Site safety is the responsibility of the contractor.

## **6.8 Drainage and Construction Dewatering**

Proper drainage should be provided away from the foundation elements during all phases of construction and post-construction grading. Proper drainage is essential to the long-term stability of the structures. Ponding of water near the foundation elements from improper drainage should not be permitted.

Based on the available groundwater information, shallow groundwater should be anticipated for WTG foundation excavations. If rain causes perched water conditions, we anticipate the groundwater re-charge rate should be slow enough to conduct excavation dewatering with conventional sumps and pumps. Means and methods for dewatering are the responsibility of the contractor.

## **7.0 ACCESS ROADWAYS AND CRANE PADS**

Private access roadways will be built for construction and maintenance purposes. Traffic volumes during construction are anticipated to be frequent with heavy equipment utilizing the access roadways. Following the construction period, the traffic volumes will be light and vehicles accessing the roadways will generally consist of pickup trucks and occasional single and multi-axle truck traffic. The section thickness design should be based upon the methodology outlined by the American Association of State Highways and Transportation Officials (AASHTO) for design of aggregate-surfaced roadways (Reference 10).

Crane pads require sufficient bearing capacity to support the large cranes used to lift the turbine sections. The design intent for these crane pads is not related to regular traffic.

### **7.1 Pavement Section Thickness Recommendations Based on AASHTO 1993**

Surficial soils encountered within the borings indicated native soils consisting primarily of clay soils. These materials are generally considered to be poor in terms of supporting vehicular and construction traffic as defined by AASHTO when used for support of pavement structures. The actual pavement thickness should be determined by the design/build contractor, keeping in mind the frequency, duration and requirements of the turbine manufacturer.

CBR tests were performed at two (2) selected locations. The CBRs are soaked and compacted to 95% of the maximum dry density at optimum moisture content as determined by ASTM D698. Soaked CBR values were 2.3% and 2.4% for clay soils. For design purposes, RRC recommends a CBR value of 2.3%, which correlates to a subgrade resilient modulus (MR) value of 4,350 psi. It is important to understand that the CBR value is for soils without topsoil. Leaving topsoil within the road subgrade will significantly reduce the CBR value, thus negating the recommendations below.

RRC anticipates that the project team will use crushed stone for private access roadways. Crushed stone should meet IDOT, Article 1004.04, Aggregate Base Course (or better). The thickness of the crushed stone base course is dependent on the traffic loads, traffic frequency, duration, and performance expectations. Crushed stone 'pavement' is not an engineered

pavement and can be expected to require regular maintenance regardless of thickness. This is especially true if traffic is allowed onto it when saturated.

**Table 7.1.1 Summary of Design Parameters**

| Parameter                                                           | Design Value |
|---------------------------------------------------------------------|--------------|
| Modulus of Aggregate Base Layer ( $E_{BS}$ ) in psi                 | 30,000       |
| CBR Design Value of Subgrade Materials (%)                          | 2.3          |
| Calculated Resilient Modulus of Roadbed Materials ( $M_R$ ) in psi* | 4,350        |
| Allowable Rutting Design Value (Option A) in inches                 | 1.0          |
| Allowable Rutting Design Value (Option B) in inches                 | 2.0          |

Notes:  $M_R$  (psi) =  $2,555(CBR)^{0.64}$  (AASHTO 1993)

The following table provides a summary of design recommendations for aggregate base course roadways based on the 1993 AASHTO Design Manual (Reference 10). We used AASHTO's design chart for low-volume aggregate base surface roads, which designs based on acceptable rutting. Traffic 18-kip Equivalent Single-Axle Loads (ESAL) were estimated based upon our experience with similar type projects. For this project we estimate 1,000 ESAL for each turbine. AASHTO's 1993 nomograph from low-volume aggregate pavement design was utilized to calculate the required aggregate base layer thickness for the corresponding ESAL traffic load.

**Table 7.1.2 Summary of Aggregate Base Course Thickness (Clay Soil, CBR=2.3%)**

| ESAL   | Aggregate Base Thickness (in.) – 1.0-inch Allowable Rutting | Aggregate Base Thickness (in.) - 2.0-inch Allowable Rutting |
|--------|-------------------------------------------------------------|-------------------------------------------------------------|
| 1,000  | 6.0                                                         | 4.0                                                         |
| 5,000  | 11.0                                                        | 5.5                                                         |
| 10,000 | 15.5                                                        | 7.0                                                         |
| 15,000 | 19.0*                                                       | 8.0                                                         |

\* - Estimated (out of range in nomograph)

RRC cautions that many trucking companies define a 2-inch rut as a failure for a roadway. This amount of rutting is typically rejected by trucking and turbine providers. We provide these values because it is part of the AASHTO method, and it provides the team with comparisons for the performance of different pavement cross-sections.

Prior to the placement of the aggregate base materials along access roadway alignments, stripping and removal of existing vegetation and other deleterious materials from the proposed roadway alignment should be performed. Topsoil and organics could be up to about 24 inches or more in thickness in some areas and should not be allowed for use in structural areas or along roadway alignments. Compact the resulting subgrade to provide a stable surface.

The exposed subgrade should then be proof rolled with a tandem axle dump truck/water truck with a total rear axle load of no less than 40,000 lbs. to assess the presence of soft areas and the



need for remedial measures. A proof-roll test should include at least two passes over each area. Ruts and deflections during the proof-roll shall be ½-inch or less. Remove unsuitable soils and process the soils or replace with suitable soils and compact to a minimum compaction of 98% relative to ASTM D698. Moisture is not a criterion for road subgrades.

As an alternative to thick road base sections, the team can consider using geogrid (Tensar Biaxial Type 2 or equivalent) on top of geotextile (Mirafi HP 570 or equivalent) in areas where excessive “pumping” is observed. Aggregate base materials should be compacted to a minimum of 95% of ASTM D1557 where moisture content is not a pass/fail criterion.

Consideration could also be given to performing a cement or lime stabilization for the subgrade soils supporting pavements. A stabilized subgrade will achieve a higher CBR value that in turn allows a reduction in the flexible base course. The flexible base course thickness for a properly stabilized subgrade section could be reduced to about four inches. A formal cement or lime mix design should be performed to determine the lime/cement content, compaction targets, design CBR values and aggregate base thicknesses

## **7.2 Crane Pads Design and Construction Recommendations**

Section 7.2 works in conjunction with Section 6.6.4 within the turbine earthwork requirements. That previous section defines earthwork requirements for the overburden backfill. In areas where the crane pad does not overlap with the overburden backfill, then follow the subgrade requirements below.

The crane pad should extend at least two feet beyond the footprint of the crane tracks. Strip and removal topsoil, vegetation and other deleterious materials. When the subgrade consists of soils, scarify and rework the resulting subgrade to a depth of 12 inches. Compact the reworked soils to a minimum of 98% of the maximum dry density per ASTM D698. This compaction specification is intended to provide an Ultimate bearing capacity of 6,000 psf for the crane pad. Also, the contractor’s use of mats can affect the necessary compaction requirement.

After verifying subgrade density, perform a proof-roll test using a fully loaded water truck, or similar equipment. Conduct the proof-roll in two directions and perform at least two passes per location. Maximum allowable deflection under the proof-roll is one inch. If higher deflections are observed, the subgrade soil should be over-excavated to suitable material and replaced with either Select Fill or Structural Fill, defined in Section 6.3 or Section 6.2 respectively.

Once a suitable subgrade condition has been achieved, use flexible road base aggregate materials (structural fill) to construct the crane pad. The pad should be at least 9-inches thick. The aggregate base should conform to the requirements of Section 6.2 of this report. Compact aggregate base to a minimum of 95% of the maximum dry density as determined in accordance with ASTM D1557. Moisture is not a test criterion. These recommendations are expected to provide an Ultimate bearing capacity of 6,000 psf at the finished surface. This value assumes a crane track width of six feet, treated as a mat bearing on the ground surface.



For cranes that impart loads in excess of that provided above, alternate designs will be necessary. The crane operators can consider load distribution mats, such as timber mats or composite mats. If crane mats are to be used, RRC should be retained to review the design of the crane mats to check that bearing capacities are met. Otherwise, an alternate crane pad cross section may be necessary.

## 8.0 LIMITATIONS

Recommendations contained in this report are based on our field observations and subsurface explorations, limited laboratory tests, and our present knowledge of the proposed construction. It is likely soil conditions will vary between or beyond the points explored. If soil conditions are encountered during construction that differ from those described herein, we should be notified immediately in order to provide supplemental recommendations (if needed). If the scope of the proposed construction, including the proposed loads or structural locations, changes from those described in this report, our data should also be reviewed.

We have prepared this report in substantial accordance with the generally accepted geotechnical engineering practice as it exists in the site area at the time of our study. No warranty is expressed or implied. The recommendations provided in this report assume an adequate program of tests and observations will be performed during the construction phase in order to evaluate compliance with our recommendations.

This report may be used only by the client and only for the purposes stated, within three years from its issuance. Land use, site conditions (both on site and off site) or other factors may change over time, and additional work may be required with the passage of time. Any party other than the client, or the client's design team members for this project, who wishes to use this report shall notify RRC of such intended use. Based on the intended use of the report, RRC may require that additional work be performed and that an updated report be issued. Non-compliance with any of these requirements by the client or anyone else will release RRC from any liability resulting from the use of this report by any unauthorized party.

Other standards or documents referenced in any given standard cited in this report, or otherwise relied upon by the authors of this report, are only mentioned in the given standard; they are not incorporated into it or "included by reference," as that latter term is used relative to contracts or other matters of law.

## 9.0 REFERENCES

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## **APPENDIX A**

Revision 3, August 14, 2025

Table A1 - Summary of Foundation Design Net Allowable Bearing Pressure and Design Groundwater Recommendations

| GEO ID | Turbine No.<br>(Array 34 -<br>02.20.2025) | Boring<br>Latitude<br>(Array 34 -<br>02.20.2025) | Boring<br>Longitude<br>(Array 34 -<br>02.20.2025) | Turbine No.<br>(Array 37 -<br>07.07.2025) | Turbine<br>Latitude<br>(Array 37 -<br>07.07.2025) | Turbine<br>Longitude<br>(Array 37 -<br>07.07.2025) | Turbine No.<br>(Array 39 -<br>08.14.2025) | Turbine<br>Latitude<br>(Array 39 -<br>08.14.2025) | Turbine<br>Longitude<br>(Array 39 -<br>08.14.2025) | Groundwater<br>During Drilling<br>(SPT Boring)<br>(ft) | Groundwater<br>Immediately<br>After Drilling<br>(SPT Boring)<br>(ft) | Minimum<br>Piezometer<br>Groundwater<br>Level (ft) | Estimated<br>Design<br>Groundwater<br>Depth (ft) | In-Situ Net Allowable<br>Bearing Capacity at<br>Foundation Bearing<br>Elevation of 12.3 ft<br>(bgs, psf) | Minimum Ground Improvement<br>Depth (bgs, ft) for Net Allowable<br>Bearing Capacity of 2,000 psf at<br>Foundation Bearing Elevation of<br>12.3 ft (bgs) | Remarks                           |
|--------|-------------------------------------------|--------------------------------------------------|---------------------------------------------------|-------------------------------------------|---------------------------------------------------|----------------------------------------------------|-------------------------------------------|---------------------------------------------------|----------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| GEO-01 | 1                                         | 39.574644                                        | -88.148535                                        | Removed                                   | 39.574644                                         | -88.148535                                         | Removed                                   |                                                   |                                                    |                                                        |                                                                      | 4.0                                                | 3.0                                              | 2,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-02 | 2                                         | 39.565118                                        | -88.132452                                        | 48                                        | 39.565118                                         | -88.132452                                         | T48                                       | 39.565118                                         | -88.132451                                         | 7.5                                                    | 10.0                                                                 | 1.8                                                | 0.8                                              | 2,000                                                                                                    |                                                                                                                                                         |                                   |
| GEO-03 | 3                                         | 39.591355                                        | -88.161488                                        | Removed                                   | 39.591355                                         | -88.161488                                         | Removed                                   |                                                   |                                                    |                                                        |                                                                      | 4.3                                                | 3.3                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-04 | 4                                         | 39.606469                                        | -88.155401                                        | Removed                                   | 39.606469                                         | -88.155401                                         | Removed                                   |                                                   |                                                    |                                                        |                                                                      | 2.9                                                | 1.9                                              | 3,250                                                                                                    |                                                                                                                                                         |                                   |
| GEO-05 | 5                                         | 39.612989                                        | -88.141627                                        | Removed                                   | 39.612989                                         | -88.141627                                         | T32                                       | 39.612989                                         | -88.141627                                         |                                                        |                                                                      | 2.9                                                | 1.9                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-06 | 6                                         | 39.618923                                        | -88.122631                                        | 31                                        | 39.618923                                         | -88.122631                                         | T31                                       | 39.618923                                         | -88.122631                                         |                                                        |                                                                      | 3.7                                                | 2.7                                              | 2,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-07 | 7                                         | 39.641706                                        | -88.161275                                        | Removed                                   | 39.641706                                         | -88.161275                                         | T27                                       | 39.641706                                         | -88.161275                                         |                                                        |                                                                      | 3.9                                                | 2.9                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-08 | 8                                         | 39.647149                                        | -88.154455                                        | Removed                                   | 39.647149                                         | -88.154455                                         | T24                                       | 39.647149                                         | -88.154455                                         |                                                        |                                                                      | 1.8                                                | 0.8                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-09 | 9                                         | 39.648528                                        | -88.173981                                        | ---                                       | ---                                               | ---                                                | Removed                                   |                                                   |                                                    |                                                        |                                                                      | 3.5                                                | 2.5                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-10 | 10                                        | 39.626559                                        | -88.229542                                        | Removed                                   | 39.626559                                         | -88.229542                                         | T14                                       | 39.626559                                         | -88.229542                                         |                                                        |                                                                      | 3.7                                                | 2.7                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-11 | 11                                        | 39.630431                                        | -88.200456                                        | Removed                                   | 39.630431                                         | -88.200456                                         | T9                                        | 39.630431                                         | -88.200456                                         |                                                        |                                                                      | 4.1                                                | 3.1                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-12 | 12                                        | 39.603647                                        | -88.220991                                        | 62                                        | 39.603647                                         | -88.220991                                         | T62                                       | 39.603647                                         | -88.220991                                         |                                                        |                                                                      | 2.4                                                | 1.4                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-13 | 13                                        | 39.604831                                        | -88.210781                                        | 61                                        | 39.604831                                         | -88.210781                                         | T61                                       | 39.604831                                         | -88.210781                                         |                                                        |                                                                      | 4.3                                                | 3.3                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-14 | 14                                        | 39.585320                                        | -88.211622                                        | 60                                        | 39.585320                                         | -88.211622                                         | T60                                       | 39.585320                                         | -88.211622                                         |                                                        |                                                                      | 4.3                                                | 3.3                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-15 | 15                                        | 39.587266                                        | -88.235878                                        | 59                                        | 39.587266                                         | -88.235878                                         | T59                                       | 39.587266                                         | -88.235878                                         |                                                        |                                                                      | 2.6                                                | 1.6                                              | 1,750                                                                                                    | 46                                                                                                                                                      | Rammed-Aggregate Piers            |
| GEO-16 | 16                                        | 39.580814                                        | -88.240424                                        | 58                                        | 39.580814                                         | -88.240424                                         | T58                                       | 39.580814                                         | -88.240424                                         |                                                        |                                                                      | 2.9                                                | 1.9                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-17 | 17                                        | 39.574408                                        | -88.217758                                        | 57                                        | 39.574408                                         | -88.217758                                         | T57                                       | 39.574408                                         | -88.217758                                         |                                                        |                                                                      | 1.2                                                | 0.2                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-18 | 18                                        | 39.574363                                        | -88.208448                                        | 56                                        | 39.574363                                         | -88.208448                                         | T56                                       | 39.574363                                         | -88.208448                                         |                                                        |                                                                      | 2.5                                                | 1.5                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-19 | 19                                        | 39.573124                                        | -88.201857                                        | 55                                        | 39.573124                                         | -88.201857                                         | T55                                       | 39.573124                                         | -88.201857                                         |                                                        |                                                                      | 3.3                                                | 2.3                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-20 | 20                                        | 39.565034                                        | -88.201263                                        | 54                                        | 39.565034                                         | -88.201263                                         | T54                                       | 39.565034                                         | -88.201263                                         |                                                        |                                                                      | 5.0                                                | 4.0                                              | --                                                                                                       | 34                                                                                                                                                      | Rammed-Aggregate Piers            |
| GEO-21 | 21                                        | 39.573270                                        | -88.169910                                        | 53                                        | 39.573270                                         | -88.169910                                         | Removed                                   |                                                   |                                                    | 19.0                                                   | 30.0                                                                 | 3.3                                                | 2.3                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-22 | 22                                        | 39.565394                                        | -88.152425                                        | 52                                        | 39.565394                                         | -88.152425                                         | Removed                                   |                                                   |                                                    | 24.0                                                   | NA                                                                   | 4.7                                                | 3.7                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-23 | 23                                        | 39.573187                                        | -88.154941                                        | 51                                        | 39.573187                                         | -88.154941                                         | Removed                                   |                                                   |                                                    | 9.0                                                    | NA                                                                   | 3.2                                                | 2.2                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-24 | 24                                        | 39.569341                                        | -88.136830                                        | 49                                        | 39.569341                                         | -88.136830                                         | T49                                       | 39.569341                                         | -88.136830                                         |                                                        |                                                                      | 4.0                                                | 3.0                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-25 | 25                                        | 39.572765                                        | -88.132383                                        | 47a*                                      | 39.572840                                         | -88.132593                                         | T47a                                      | 39.572840                                         | -88.132593                                         | 5.0                                                    | NA                                                                   | 3.5                                                | 2.5                                              | 3,500                                                                                                    |                                                                                                                                                         | DCP/SCP Verification to 30 Inches |
| GEO-26 | 26                                        | 39.574592                                        | -88.118216                                        | 46                                        | 39.574592                                         | -88.118216                                         | T46                                       | 39.574592                                         | -88.118216                                         |                                                        |                                                                      | 1.6                                                | 0.6                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-27 | 27                                        | 39.584660                                        | -88.117432                                        | 45                                        | 39.584660                                         | -88.117432                                         | Removed                                   |                                                   |                                                    |                                                        |                                                                      | 0.0                                                | 0.0                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-28 | 28                                        | 39.585767                                        | -88.174319                                        | 44                                        | 39.585767                                         | -88.174319                                         | Removed                                   |                                                   |                                                    | 39.0                                                   | 54.0                                                                 | 4.2                                                | 3.2                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-29 | 29                                        | 39.589955                                        | -88.172555                                        | 43                                        | 39.589955                                         | -88.172555                                         | Removed                                   |                                                   |                                                    |                                                        |                                                                      | 4.0                                                | 3.0                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-30 | 30                                        | 39.591131                                        | -88.167294                                        | Removed                                   | 39.591131                                         | -88.167294                                         | Removed                                   |                                                   |                                                    |                                                        |                                                                      | 3.8                                                | 2.8                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-31 | 31                                        | 39.590992                                        | -88.151334                                        | 40                                        | 39.590992                                         | -88.151334                                         | Removed                                   |                                                   |                                                    |                                                        |                                                                      | 1.5                                                | 0.5                                              | 2,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-32 | 32                                        | 39.591143                                        | -88.120681                                        | 39a*                                      | 39.590987                                         | -88.120622                                         | Removed                                   |                                                   |                                                    | 8.0                                                    | 18.0                                                                 | 3.1                                                | 2.1                                              | 3,000                                                                                                    |                                                                                                                                                         | DCP/SCP Verification to 30 Inches |
| GEO-33 | 33                                        | 39.597987                                        | -88.144878                                        | 38                                        | 39.597987                                         | -88.144878                                         | Removed                                   |                                                   |                                                    |                                                        |                                                                      | 3.3                                                | 2.3                                              | 3,250                                                                                                    |                                                                                                                                                         |                                   |
| GEO-34 | 34                                        | 39.603394                                        | -88.159948                                        | 36                                        | 39.603394                                         | -88.159948                                         | Removed                                   |                                                   |                                                    |                                                        |                                                                      | 4.6                                                | 3.6                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-35 | 35                                        | 39.619080                                        | -88.162749                                        | 35                                        | 39.619080                                         | -88.162749                                         | T35                                       | 39.619080                                         | -88.162749                                         |                                                        |                                                                      | 3.0                                                | 2.0                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-36 | 36                                        | 39.613774                                        | -88.153886                                        | 34                                        | 39.613774                                         | -88.153886                                         | T34                                       | 39.613774                                         | -88.153886                                         |                                                        |                                                                      | 2.7                                                | 1.7                                              | 3,000                                                                                                    |                                                                                                                                                         |                                   |
| GEO-37 | 37                                        | 39.617396                                        | -88.142108                                        | 33                                        | 39.617396                                         | -88.142108                                         | T33                                       | 39.617396                                         | -88.142108                                         |                                                        |                                                                      | 2.9                                                | 1.9                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-38 | 38                                        | 39.629819                                        | -88.138768                                        | 30                                        | 39.629819                                         | -88.138768                                         | T30                                       | 39.629819                                         | -88.138768                                         |                                                        |                                                                      | 1.3                                                | 0.3                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-39 | 39                                        | 39.632904                                        | -88.161243                                        | 29                                        | 39.632904                                         | -88.161243                                         | T29                                       | 39.632904                                         | -88.161243                                         |                                                        |                                                                      | 4.6                                                | 3.6                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-40 | 40                                        | 39.640726                                        | -88.170557                                        | 28                                        | 39.640726                                         | -88.170557                                         | T28                                       | 39.640726                                         | -88.170557                                         |                                                        |                                                                      | 2.4                                                | 1.4                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-41 | 41                                        | 39.640932                                        | -88.150410                                        | 26                                        | 39.640932                                         | -88.150410                                         | T26                                       | 39.640932                                         | -88.150410                                         |                                                        |                                                                      | 3.2                                                | 2.2                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-42 | 42                                        | 39.642241                                        | -88.145311                                        | 25                                        | 39.642241                                         | -88.145311                                         | T25                                       | 39.642241                                         | -88.145311                                         |                                                        |                                                                      | 2.4                                                | 1.4                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-43 | 43                                        | 39.649785                                        | -88.163058                                        | 23                                        | 39.649785                                         | -88.163058                                         | T23                                       | 39.649785                                         | -88.163058                                         |                                                        |                                                                      | 3.6                                                | 2.6                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-44 | 44                                        | 39.645392                                        | -88.164683                                        | 22                                        | 39.645392                                         | -88.164683                                         | T22                                       | 39.645392                                         | -88.164683                                         |                                                        |                                                                      | 3.6                                                | 2.6                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-45 | 45                                        | 39.612310                                        | -88.180226                                        | 20                                        | 39.612310                                         | -88.180226                                         | T20                                       | 39.612310                                         | -88.180226                                         |                                                        |                                                                      | 2.6                                                | 1.6                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-46 | 46                                        | 39.612409                                        | -88.188892                                        | 19                                        | 39.612409                                         | -88.188892                                         | T19                                       | 39.612409                                         | -88.188892                                         |                                                        |                                                                      | 3.1                                                | 2.1                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-47 | 47                                        | 39.621062                                        | -88.198786                                        | 18                                        | 39.621062                                         | -88.198786                                         | T18                                       | 39.621062                                         | -88.198786                                         |                                                        |                                                                      | 2.7                                                | 1.7                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-48 | 48                                        | 39.614735                                        | -88.208232                                        | 17                                        | 39.614735                                         | -88.208232                                         | T17                                       | 39.614735                                         | -88.208232                                         |                                                        |                                                                      | 2.6                                                | 1.6                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-49 | 49                                        | 39.613690                                        | -88.220885                                        | Removed                                   | 39.613690                                         | -88.220885                                         | T16                                       | 39.613690                                         | -88.220885                                         |                                                        |                                                                      | 2.1                                                | 1.1                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-50 | 50                                        | 39.626564                                        | -88.236070                                        | 15                                        | 39.626564                                         | -88.236070                                         | T15                                       | 39.626564                                         | -88.236070                                         |                                                        |                                                                      | 0.8                                                | 0.0                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-51 | 51                                        | 39.629093                                        | -88.223195                                        | 13                                        | 39.629093                                         | -88.223195                                         | T13                                       | 39.629093                                         | -88.223195                                         |                                                        |                                                                      | 3.1                                                | 2.1                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |
| GEO-52 | 52                                        | 39.626261                                        | -88.187792                                        | 12                                        | 39.626261                                         | -88.187792                                         | T12                                       | 39.626261                                         | -88.187792                                         |                                                        |                                                                      | 2.0                                                | 1.0                                              | 3,500                                                                                                    |                                                                                                                                                         |                                   |

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Table A1 - Summary of Foundation Design Net Allowable Bearing Pressure and Design Groundwater Recommendations

| GEO ID | Turbine No.<br>(Array 34 -<br>02.20.2025) | Boring<br>Latitude<br>(Array 34 -<br>02.20.2025) | Boring<br>Longitude<br>(Array 34 -<br>02.20.2025) | Turbine No.<br>(Array 37 -<br>07.07.2025) | Turbine<br>Latitude<br>(Array 37 -<br>07.07.2025) | Turbine<br>Longitude<br>(Array 37 -<br>07.07.2025) | Turbine No.<br>(Array 39 -<br>08.14.2025) | Turbine<br>Latitude<br>(Array 39 -<br>08.14.2025) | Turbine<br>Longitude<br>(Array 39 -<br>08.14.2025) | Groundwater<br>During Drilling<br>(SPT Boring)<br>(ft) | Groundwater<br>Immediately<br>After Drilling<br>(SPT Boring)<br>(ft) | Minimum<br>Piezometer<br>Groundwater<br>Level (ft) | Estimated<br>Design<br>Groundwater<br>Depth (ft) | In-Situ Net Allowable<br>Bearing Capacity at<br>Foundation Bearing<br>Elevation of 12.3 ft<br>(bgs, psf) | Minimum Ground Improvement<br>Depth (bgs, ft) for Net Allowable<br>Bearing Capacity of 2,000 psf at<br>Foundation Bearing Elevation of<br>12.3 ft (bgs) | Remarks |
|--------|-------------------------------------------|--------------------------------------------------|---------------------------------------------------|-------------------------------------------|---------------------------------------------------|----------------------------------------------------|-------------------------------------------|---------------------------------------------------|----------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| GEO-53 | 53                                        | 39.628019                                        | -88.180345                                        | 11                                        | 39.628019                                         | -88.180345                                         | T11                                       | 39.628019                                         | -88.180345                                         |                                                        |                                                                      | 3.3                                                | 2.3                                              | 3,500                                                                                                    |                                                                                                                                                         |         |
| GEO-54 | 54                                        | 39.631708                                        | -88.189183                                        | 10                                        | 39.631708                                         | -88.189183                                         | T10                                       | 39.631708                                         | -88.189183                                         |                                                        |                                                                      | 3.3                                                | 2.3                                              | 3,500                                                                                                    |                                                                                                                                                         |         |
| GEO-55 | 55                                        | 39.631481                                        | -88.229020                                        | 8                                         | 39.631481                                         | -88.229020                                         | T8                                        | 39.631481                                         | -88.229020                                         |                                                        |                                                                      | 1.6                                                | 0.6                                              | 3,500                                                                                                    |                                                                                                                                                         |         |
| GEO-56 | 56                                        | 39.635483                                        | -88.226039                                        | 7                                         | 39.635483                                         | -88.226039                                         | T7                                        | 39.635483                                         | -88.226039                                         |                                                        |                                                                      | 3.5                                                | 2.5                                              | 3,500                                                                                                    |                                                                                                                                                         |         |
| GEO-57 | 57                                        | 39.640777                                        | -88.227044                                        | 6                                         | 39.640777                                         | -88.227044                                         | T6                                        | 39.640777                                         | -88.227044                                         |                                                        |                                                                      | 2.4                                                | 1.4                                              | 3,500                                                                                                    |                                                                                                                                                         |         |
| GEO-58 | 58                                        | 39.641917                                        | -88.217304                                        | 5                                         | 39.641917                                         | -88.217304                                         | T5                                        | 39.641917                                         | -88.217304                                         |                                                        |                                                                      | 1.7                                                | 0.7                                              | 3,500                                                                                                    |                                                                                                                                                         |         |
| GEO-59 | 59                                        | 39.640117                                        | -88.201895                                        | 4                                         | 39.640117                                         | -88.201895                                         | T4                                        | 39.640117                                         | -88.201895                                         |                                                        |                                                                      | 3.8                                                | 2.8                                              | 3,000                                                                                                    |                                                                                                                                                         |         |
| GEO-60 | 60                                        | 39.647183                                        | -88.181358                                        | 3                                         | 39.647183                                         | -88.181358                                         | T3                                        | 39.647183                                         | -88.181358                                         |                                                        |                                                                      | 1.5                                                | 0.5                                              | 3,500                                                                                                    |                                                                                                                                                         |         |
| GEO-61 | 61                                        | 39.646727                                        | -88.202823                                        | 2                                         | 39.646727                                         | -88.202823                                         | T2                                        | 39.646727                                         | -88.202823                                         |                                                        |                                                                      | 1.3                                                | 0.3                                              | 3,500                                                                                                    |                                                                                                                                                         |         |
| GEO-62 | 62                                        | 39.649995                                        | -88.188005                                        | 1                                         | 39.649995                                         | -88.188005                                         | T1                                        | 39.649995                                         | -88.188005                                         |                                                        |                                                                      | 2.4                                                | 1.4                                              | 3,500                                                                                                    |                                                                                                                                                         |         |

Notes: NE = Not Encountered; NA = Not Available; Estimated Design Groundwater Depth with 1 ft buffer; \* - T47a and T39a shifted 65 feet from GEO-25 and 60 feet from GEO-32 respectively in Array 37, the recommendations at these two locations are still valid.



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Table A2 - Summary of Subsurface Exploration and Geographic Coordinates

| GEO ID | Turbine No.<br>(Array 34 -<br>02.20.2025) | Boring<br>Latitude<br>(Array 34 -<br>02.20.2025) | Boring<br>Longitude<br>(Array 34 -<br>02.20.2025) | Turbine No.<br>(Array 37 -<br>07.07.2025) | Turbine<br>Latitude<br>(Array 37 -<br>07.07.2025) | Turbine<br>Longitude<br>(Array 37 -<br>07.07.2025) | Turbine No.<br>(Array 39 -<br>08.14.2025) | Turbine<br>Latitude<br>(Array 39 -<br>08.14.2025) | Turbine<br>Longitude<br>(Array 39 -<br>08.14.2025) | MASW     | Thermal<br>Resistivity<br>Sampling | CBR Sampling | Chemical<br>Sampling | Drilling/<br>Excavation<br>Date | Air/Mud<br>Rotary (ft) | Total Drilling/<br>Excavation<br>Footage (ft) | Groundwater<br>During Drilling<br>(ft) | Groundwater<br>Immediately<br>After Drilling<br>(ft) | CPT<br>Sounding<br>& PZ Install<br>Date | CPT 1st<br>Attempt (ft) | CPT 2nd<br>Attempt (ft) | CPT 3rd<br>Attempt (ft) | Total<br>Sounding<br>Depth (ft) | Remarks                                |
|--------|-------------------------------------------|--------------------------------------------------|---------------------------------------------------|-------------------------------------------|---------------------------------------------------|----------------------------------------------------|-------------------------------------------|---------------------------------------------------|----------------------------------------------------|----------|------------------------------------|--------------|----------------------|---------------------------------|------------------------|-----------------------------------------------|----------------------------------------|------------------------------------------------------|-----------------------------------------|-------------------------|-------------------------|-------------------------|---------------------------------|----------------------------------------|
| GEO-01 | 1                                         | 39.574644                                        | -88.148535                                        | Removed                                   | 39.574644                                         | -88.148535                                         | Removed                                   |                                                   |                                                    |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/01/25                                | 20.7                    | 15.3                    | 43.7                    | 79.7                            |                                        |
| GEO-02 | 2                                         | 39.565118                                        | -88.132452                                        | 48                                        | 39.565118                                         | -88.132452                                         | T48                                       | 39.565118                                         | -88.132451                                         |          |                                    |              | 04/27/25             | 4/26&4/27/25                    | 59                     | 60.5                                          | 7.5                                    | 10                                                   | 03/31/25                                | 18.7                    | 22.1                    | 21.9                    | 62.7                            |                                        |
| GEO-03 | 3                                         | 39.591355                                        | -88.161488                                        | Removed                                   | 39.591355                                         | -88.161488                                         | Removed                                   |                                                   |                                                    |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/16/25                                | 41.6                    |                         |                         | 41.6                            |                                        |
| GEO-04 | 4                                         | 39.606469                                        | -88.155401                                        | Removed                                   | 39.606469                                         | -88.155401                                         | Removed                                   |                                                   |                                                    |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/17/25                                | 36.3                    |                         |                         | 36.3                            |                                        |
| GEO-05 | 5                                         | 39.612989                                        | -88.141627                                        | Removed                                   | 39.612989                                         | -88.141627                                         | T32                                       | 39.612989                                         | -88.141627                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/17/25                                | 44.8                    |                         |                         | 44.8                            |                                        |
| GEO-06 | 6                                         | 39.618923                                        | -88.122631                                        | 31                                        | 39.618923                                         | -88.122631                                         | T31                                       | 39.618923                                         | -88.122631                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/18/25                                | 22.4                    | 22.7                    | 58.9                    | 104.0                           |                                        |
| GEO-07 | 7                                         | 39.641706                                        | -88.161275                                        | Removed                                   | 39.641706                                         | -88.161275                                         | T27                                       | 39.641706                                         | -88.161275                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/21/25                                | 59.7                    |                         |                         | 59.7                            |                                        |
| GEO-08 | 8                                         | 39.647149                                        | -88.154455                                        | Removed                                   | 39.647149                                         | -88.154455                                         | T24                                       | 39.647149                                         | -88.154455                                         | 05/19/25 |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/21/25                                | 59.7                    |                         |                         | 59.7                            |                                        |
| GEO-09 | 9                                         | 39.648528                                        | -88.173981                                        | ---                                       | ---                                               | ---                                                | Removed                                   |                                                   |                                                    |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/22/25                                | 59.6                    |                         |                         | 59.6                            |                                        |
| GEO-10 | 10                                        | 39.626559                                        | -88.229542                                        | Removed                                   | 39.626559                                         | -88.229542                                         | T14                                       | 39.626559                                         | -88.229542                                         | 05/19/25 |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/23/24                                | 57.9                    |                         |                         | 57.9                            |                                        |
| GEO-11 | 11                                        | 39.630431                                        | -88.200456                                        | Removed                                   | 39.630431                                         | -88.200456                                         | T9                                        | 39.630431                                         | -88.200456                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/26/25                                | 59.7                    |                         |                         | 59.7                            |                                        |
| GEO-12 | 12                                        | 39.603647                                        | -88.220991                                        | 62                                        | 39.603647                                         | -88.220991                                         | T62                                       | 39.603647                                         | -88.220991                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/30/25                                | 50.5                    |                         |                         | 50.5                            |                                        |
| GEO-13 | 13                                        | 39.604831                                        | -88.210781                                        | 61                                        | 39.604831                                         | -88.210781                                         | T61                                       | 39.604831                                         | -88.210781                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/30/25                                | 45.1                    |                         |                         | 45.1                            |                                        |
| GEO-14 | 14                                        | 39.585320                                        | -88.211622                                        | 60                                        | 39.585320                                         | -88.211622                                         | T60                                       | 39.585320                                         | -88.211622                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/27/25                                | 59.7                    |                         |                         | 59.7                            |                                        |
| GEO-15 | 15                                        | 39.587266                                        | -88.235878                                        | 59                                        | 39.587266                                         | -88.235878                                         | T59                                       | 39.587266                                         | -88.235878                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/29/25                                | 56.1                    | 52.1                    |                         | 108.2                           |                                        |
| GEO-16 | 16                                        | 39.580814                                        | -88.240424                                        | 58                                        | 39.580814                                         | -88.240424                                         | T58                                       | 39.580814                                         | -88.240424                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/29/25                                | 50.0                    |                         |                         | 50.0                            |                                        |
| GEO-17 | 17                                        | 39.574408                                        | -88.217758                                        | 57                                        | 39.574408                                         | -88.217758                                         | T57                                       | 39.574408                                         | -88.217758                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/27/25                                | 59.7                    |                         |                         | 59.7                            |                                        |
| GEO-18 | 18                                        | 39.574363                                        | -88.208448                                        | 56                                        | 39.574363                                         | -88.208448                                         | T56                                       | 39.574363                                         | -88.208448                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/27/25                                | 18.3                    | 59.4                    |                         | 77.7                            |                                        |
| GEO-19 | 19                                        | 39.573124                                        | -88.201857                                        | 55                                        | 39.573124                                         | -88.201857                                         | T55                                       | 39.573124                                         | -88.201857                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/27/25                                | 37.9                    |                         |                         | 37.9                            |                                        |
| GEO-20 | 20                                        | 39.565034                                        | -88.201263                                        | 54                                        | 39.565034                                         | -88.201263                                         | T54                                       | 39.565034                                         | -88.201263                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/27/25                                | 59.7                    |                         |                         | 59.7                            |                                        |
| GEO-21 | 21                                        | 39.573270                                        | -88.169910                                        | 53                                        | 39.573270                                         | -88.169910                                         | Removed                                   |                                                   |                                                    |          |                                    |              | 04/28/25             | 04/28/25                        | 59                     | 60.5                                          | 19                                     | 30                                                   | 04/01/25                                | 18.0                    | 27.3                    | 17.7                    | 63.0                            |                                        |
| GEO-22 | 22                                        | 39.565394                                        | -88.152425                                        | 52                                        | 39.565394                                         | -88.152425                                         | Removed                                   |                                                   |                                                    |          |                                    |              | 04/28/25             | 04/28/25                        | 59                     | 60.5                                          | 24                                     | 32                                                   | 04/01/25                                | 23.2                    | 23.0                    | 23.8                    | 70.0                            |                                        |
| GEO-23 | 23                                        | 39.573187                                        | -88.154941                                        | 51                                        | 39.573187                                         | -88.154941                                         | Removed                                   |                                                   |                                                    |          |                                    |              | 04/27/25             | 04/27/25                        | 59                     | 60.5                                          | 9                                      | NA                                                   | 04/01/25                                | 16.1                    | 19.4                    | 17.2                    | 52.7                            |                                        |
| GEO-24 | 24                                        | 39.569341                                        | -88.136830                                        | 49                                        | 39.569341                                         | -88.136830                                         | T49                                       | 39.569341                                         | -88.136830                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 03/31/25                                | 59.7                    |                         |                         | 59.7                            |                                        |
| GEO-25 | 25                                        | 39.572765                                        | -88.132383                                        | 47a*                                      | 39.572840                                         | -88.132593                                         | T47a                                      | 39.572840                                         | -88.132593                                         |          |                                    |              | 04/26/25             | 4/24-4/26/25                    | 59                     | 60                                            | 5                                      | NA                                                   | 03/31/25                                | 16.0                    | 13.9                    | 23.9                    | 53.8                            | T47a shifted 65 feet from GEO-25       |
| GEO-26 | 26                                        | 39.574592                                        | -88.118216                                        | 46                                        | 39.574592                                         | -88.118216                                         | T46                                       | 39.574592                                         | -88.118216                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/02/25                                | 46.6                    |                         |                         | 46.6                            |                                        |
| GEO-27 | 27                                        | 39.584660                                        | -88.117432                                        | 45                                        | 39.584660                                         | -88.117432                                         | Removed                                   |                                                   |                                                    | 05/19/25 |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/02/25                                | 23.1                    | 59.8                    |                         | 82.9                            |                                        |
| GEO-28 | 28                                        | 39.585767                                        | -88.174319                                        | 44                                        | 39.585767                                         | -88.174319                                         | Removed                                   |                                                   |                                                    |          |                                    |              | 04/30/25             | 4/30/2025                       | 59                     | 60.5                                          | 39                                     | 54                                                   | 04/16/25                                | 59.7                    |                         |                         | 59.7                            |                                        |
| GEO-29 | 29                                        | 39.589955                                        | -88.172555                                        | 43                                        | 39.589955                                         | -88.172555                                         | Removed                                   |                                                   |                                                    |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/16/25                                | 45.1                    |                         |                         | 45.1                            |                                        |
| GEO-30 | 30                                        | 39.591131                                        | -88.167294                                        | Removed                                   | 39.591131                                         | -88.167294                                         | Removed                                   |                                                   |                                                    |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/16/25                                | 59.3                    |                         |                         | 59.3                            |                                        |
| GEO-31 | 31                                        | 39.590992                                        | -88.151334                                        | 40                                        | 39.590992                                         | -88.151334                                         | Removed                                   |                                                   |                                                    |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/02/25                                | 59.9                    |                         |                         | 59.9                            |                                        |
| GEO-32 | 32                                        | 39.591143                                        | -88.120681                                        | 39a*                                      | 39.590987                                         | -88.120622                                         | Removed                                   |                                                   |                                                    |          |                                    |              | 05/01/25             | 5/1/2025                        | 59.0                   | 59.5                                          | 8                                      | 18                                                   | 04/02/25                                | 36.5                    |                         |                         | 36.5                            | T39a shifted about 60 feet from GEO-32 |
| GEO-33 | 33                                        | 39.597987                                        | -88.144878                                        | 38                                        | 39.597987                                         | -88.144878                                         | Removed                                   |                                                   |                                                    |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/02/25                                | 59.8                    |                         |                         | 59.8                            |                                        |
| GEO-34 | 34                                        | 39.603394                                        | -88.159948                                        | 36                                        | 39.603394                                         | -88.159948                                         | Removed                                   |                                                   |                                                    |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/17/25                                | 39.5                    |                         |                         | 39.5                            |                                        |
| GEO-35 | 35                                        | 39.619080                                        | -88.162749                                        | 35                                        | 39.619080                                         | -88.162749                                         | T35                                       | 39.619080                                         | -88.162749                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/18/25                                | 34.7                    |                         |                         | 34.7                            |                                        |
| GEO-36 | 36                                        | 39.613774                                        | -88.153886                                        | 34                                        | 39.613774                                         | -88.153886                                         | T34                                       | 39.613774                                         | -88.153886                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/17/25                                | 52.8                    |                         |                         | 52.8                            |                                        |
| GEO-37 | 37                                        | 39.617396                                        | -88.142108                                        | 33                                        | 39.617396                                         | -88.142108                                         | T33                                       | 39.617396                                         | -88.142108                                         | 05/19/25 |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/17/25                                | 55.9                    |                         |                         | 55.9                            |                                        |
| GEO-38 | 38                                        | 39.629819                                        | -88.138768                                        | 30                                        | 39.629819                                         | -88.138768                                         | T30                                       | 39.629819                                         | -88.138768                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/18/25                                | 59.5                    |                         |                         | 59.5                            |                                        |
| GEO-39 | 39                                        | 39.632904                                        | -88.161243                                        | 29                                        | 39.632904                                         | -88.161243                                         | T29                                       | 39.632904                                         | -88.161243                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/18/25                                | 59.7                    |                         |                         | 59.7                            |                                        |
| GEO-40 | 40                                        | 39.640726                                        | -88.170557                                        | 28                                        | 39.640726                                         | -88.170557                                         | T28                                       | 39.640726                                         | -88.170557                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/22/25                                | 59.5                    |                         |                         | 59.5                            |                                        |
| GEO-41 | 41                                        | 39.640932                                        | -88.150410                                        | 26                                        | 39.640932                                         | -88.150410                                         | T26                                       | 39.640932                                         | -88.150410                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/21/25                                | 59.6                    |                         |                         | 59.6                            |                                        |
| GEO-42 | 42                                        | 39.642241                                        | -88.145311                                        | 25                                        | 39.642241                                         | -88.145311                                         | T25                                       | 39.642241                                         | -88.145311                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/18/25                                | 59.7                    |                         |                         | 59.7                            |                                        |
| GEO-43 | 43                                        | 39.649785                                        | -88.163058                                        | 23                                        | 39.649785                                         | -88.163058                                         | T23                                       | 39.649785                                         | -88.163058                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/21/25                                | 59.7                    |                         |                         | 59.7                            |                                        |
| GEO-44 | 44                                        | 39.645392                                        | -88.164683                                        | 22                                        | 39.645392                                         | -88.164683                                         | T22                                       | 39.645392                                         | -88.164683                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/21/25                                | 59.6                    |                         |                         | 59.6                            |                                        |
| GEO-45 | 45                                        | 39.612310                                        | -88.180226                                        | 20                                        | 39.612310                                         | -88.180226                                         | T20                                       | 39.612310                                         | -88.180226                                         | 05/19/25 |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/26/25                                | 42.6                    |                         |                         | 42.6                            |                                        |
| GEO-46 | 46                                        | 39.612409                                        | -88.188892                                        | 19                                        | 39.612409                                         | -88.188892                                         | T19                                       | 39.612409                                         | -88.188892                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/26/25                                | 48.6                    |                         |                         | 48.6                            |                                        |
| GEO-47 | 47                                        | 39.621062                                        | -88.198786                                        | 18                                        | 39.621062                                         | -88.198786                                         | T18                                       | 39.621062                                         | -88.198786                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/30/25                                | 47.0                    |                         |                         | 47.0                            |                                        |
| GEO-48 | 48                                        | 39.614735                                        | -88.208232                                        | 17                                        | 39.614735                                         | -88.208232                                         | T17                                       | 39.614735                                         | -88.208232                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/29/25                                | 38.9                    |                         |                         | 38.9                            |                                        |
| GEO-49 | 49                                        | 39.613690                                        | -88.220885                                        | Removed                                   | 39.613690                                         | -88.220885                                         | T16                                       | 39.613690                                         | -88.220885                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/30/25                                | 50.6                    |                         |                         | 50.6                            |                                        |
| GEO-50 | 50                                        | 39.626564                                        | -88.236070                                        | 15                                        | 39.626564                                         | -88.236070                                         | T15                                       | 39.626564                                         | -88.236070                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/24/25                                | 57.6                    |                         |                         | 57.6                            |                                        |
| GEO-51 | 51                                        | 39.629093                                        | -88.223195                                        | 13                                        | 39.629093                                         | -88.223195                                         | T13                                       | 39.629093                                         | -88.223195                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/23/24                                | 60.1                    |                         |                         | 60.1                            |                                        |
| GEO-52 | 52                                        | 39.626261                                        | -88.187792                                        | 12                                        | 39.626261                                         | -88.187792                                         | T12                                       | 39.626261                                         | -88.187792                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/26/25                                | 58.6                    |                         |                         | 58.6                            |                                        |
| GEO-53 | 53                                        | 39.628019                                        | -88.180345                                        | 11                                        | 39.628019                                         | -88.180345                                         | T11                                       | 39.628019                                         | -88.180345                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/26/25                                | 59.6                    |                         |                         | 59.6                            |                                        |
| GEO-54 | 54                                        | 39.631708                                        | -88.189183                                        | 10                                        | 39.631708                                         | -88.189183                                         | T10                                       | 39.631708                                         | -88.189183                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/26/25                                | 59.7                    |                         |                         | 59.7                            |                                        |
| GEO-55 | 55                                        | 39.631481                                        | -88.229020                                        | 8                                         | 39.631481                                         | -88.229020                                         | T8                                        | 39.631481                                         | -88.229020                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/23/24                                | 59.6                    |                         |                         | 59.6                            |                                        |
| GEO-56 | 56                                        | 39.635483                                        | -88.226039                                        | 7                                         | 39.635483                                         | -88.226039                                         | T7                                        | 39.635483                                         | -88.226039                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/23/24                                | 59.3                    |                         |                         | 59.3                            |                                        |
| GEO-57 | 57                                        | 39.640777                                        | -88.227044                                        | 6                                         | 39.640777                                         | -88.227044                                         | T6                                        | 39.640777                                         | -88.227044                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/23/24                                | 32.3                    | 59.4                    |                         | 91.7                            |                                        |
| GEO-58 | 58                                        | 39.641917                                        | -88.217304                                        | 5                                         | 39.641917                                         | -88.217304                                         | T5                                        | 39.641917                                         | -88.217304                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/23/24                                | 59.7                    |                         |                         | 59.7                            |                                        |
| GEO-59 | 59                                        | 39.640117                                        | -88.201895                                        | 4                                         | 39.640117                                         | -88.201895                                         | T4                                        | 39.640117                                         | -88.201895                                         |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      | 04/24/25                                | 54.7                    |                         |                         | 54.7                            |                                        |
| GEO-60 | 60                                        | 39.647183                                        | -88.18                                            |                                           |                                                   |                                                    |                                           |                                                   |                                                    |          |                                    |              |                      |                                 |                        |                                               |                                        |                                                      |                                         |                         |                         |                         |                                 |                                        |

**Table A3 - Well Log Information Obtained from the Illinois State Geological Survey, Geological Records Unit**

| <b>Well Report No.<br/>(ISGS)</b> | <b>Latitude</b> | <b>Longitude</b> | <b>Elevation<br/>(feet above sea level)</b> | <b>Well Depth<br/>(feet below land<br/>surface)</b> | <b>Water Level Record<br/>(feet below land<br/>surface)</b> | <b>Date of Record<br/>(MM/DD/YYYY)</b> |
|-----------------------------------|-----------------|------------------|---------------------------------------------|-----------------------------------------------------|-------------------------------------------------------------|----------------------------------------|
| 120292344400                      | 39.584679       | -88.200350       | N/D                                         | 42                                                  | 9                                                           | 04/04/1991                             |
| 120292362800                      | 39.605816       | -88.109362       | N/D                                         | 50                                                  | 26                                                          | 07/25/1993                             |
| 120292376600                      | 39.577940       | -88.171258       | N/D                                         | 48                                                  | 18                                                          | 05/29/1995                             |
| 120292379500                      | 39.577928       | -88.173548       | N/D                                         | 48                                                  | 18                                                          | 05/29/1995                             |
| 120292432900                      | 39.636315       | -88.178052       | N/D                                         | 42                                                  | 16                                                          | 08/18/2003                             |
| 120412205100                      | 39.652579       | -88.154587       | N/D                                         | 160                                                 | 20                                                          | 06/27/1991                             |
| 121072302000                      | 39.626750       | -88.231033       | N/D                                         | 99                                                  | 22                                                          | 11/06/2012                             |

N/D = No Data Available





Revision 3, August 14, 2025

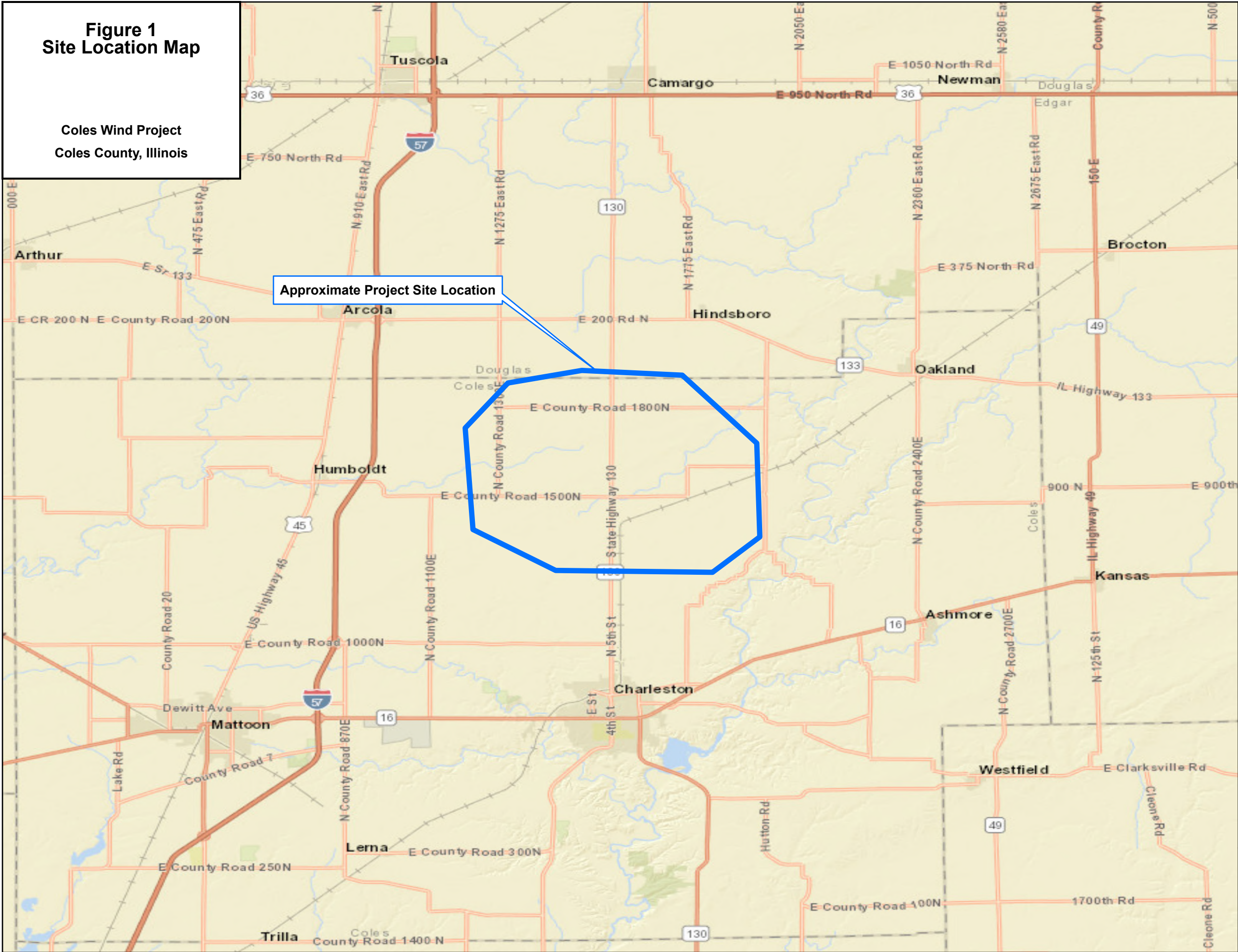
Table A4 - Summary of Piezometer Readings

| RRC GEO ID | Turbine/Boring ID<br>(Array 34 -<br>02.20.2025) | Boring Latitude<br>(Array 34 -<br>02.20.2025) | Boring Longitude<br>(Array 34 -<br>02.20.2025) | Turbine No.<br>(Array 37 -<br>07.07.2025) | Turbine<br>Latitude (Array<br>37 - 07.07.2025) | Turbine<br>Longitude<br>(Array 37 -<br>07.07.2025) | Turbine No.<br>(Array 39 -<br>08.14.2025) | Turbine<br>Latitude<br>(Array 39 -<br>08.14.2025) | Turbine<br>Longitude<br>(Array 39 -<br>08.14.2025) | PZ Install Date | PZ Install Depth<br>(ft, BGS) | PZ Stickup<br>Height (ft,<br>Above BGS) | GWL After PZ<br>Install (ft, BGS) | PZ GWL #1<br>Date | PZ GWL #1<br>(ft, BGS) | PZ GWL #2<br>Date | PZ GWL #2<br>(ft, BGS) | PZ GWL #3<br>Date | PZ GWL #3<br>(ft, BGS) | PZ GWL #4<br>Date | PZ GWL #4<br>(ft, BGS) | Min PZ<br>GWL<br>(ft, BGS) | Remarks                          |
|------------|-------------------------------------------------|-----------------------------------------------|------------------------------------------------|-------------------------------------------|------------------------------------------------|----------------------------------------------------|-------------------------------------------|---------------------------------------------------|----------------------------------------------------|-----------------|-------------------------------|-----------------------------------------|-----------------------------------|-------------------|------------------------|-------------------|------------------------|-------------------|------------------------|-------------------|------------------------|----------------------------|----------------------------------|
| GEO-01     | 1                                               | 39.574644                                     | -88.148535                                     | Removed                                   | 39.574644                                      | -88.148535                                         | Removed                                   |                                                   |                                                    | 04/01/25        | 13                            | 2                                       | 6.0                               | 04/02/25          | 5.1                    | 04/23/25          | 4.3                    | 04/28/25          | 4.1                    | 05/10/25          | 4.0                    | 4.0                        |                                  |
| GEO-02     | 2                                               | 39.565118                                     | -88.132452                                     | 48                                        | 39.565118                                      | -88.132452                                         | T48                                       | 39.565118                                         | -88.132451                                         | 03/31/25        | 13                            | 2                                       | 7.0                               | 04/01/25          | 4.0                    | 04/23/25          | 2.5                    | 04/26/25          | 2.8                    | 05/10/25          | 1.8                    | 1.8                        |                                  |
| GEO-03     | 3                                               | 39.591355                                     | -88.161488                                     | Removed                                   | 39.591355                                      | -88.161488                                         | Removed                                   |                                                   |                                                    | 04/16/25        | 13                            | 2                                       | 8.4                               | 04/17/25          | 4.5                    |                   |                        |                   |                        | 05/10/25          | 4.3                    | 4.3                        |                                  |
| GEO-04     | 4                                               | 39.606469                                     | -88.155401                                     | Removed                                   | 39.606469                                      | -88.155401                                         | Removed                                   |                                                   |                                                    | 04/17/25        | 13                            | 2                                       | 7.6                               | 04/18/25          | 4.6                    |                   |                        |                   |                        | 05/10/25          | 2.9                    | 2.9                        |                                  |
| GEO-05     | 5                                               | 39.612989                                     | -88.141627                                     | Removed                                   | 39.612989                                      | -88.141627                                         | T32                                       | 39.612989                                         | -88.141627                                         | 04/17/25        | 13                            | 2                                       | 10.5                              | 04/18/25          | 2.9                    |                   |                        |                   |                        | 05/09/25          | 3.0                    | 2.9                        |                                  |
| GEO-06     | 6                                               | 39.618923                                     | -88.122631                                     | 31                                        | 39.618923                                      | -88.122631                                         | T31                                       | 39.618923                                         | -88.122631                                         | 04/18/25        | 13                            | 2                                       | 4.5                               | 04/19/25          | 3.7                    |                   |                        |                   |                        | 05/09/25          | 3.8                    | 3.7                        |                                  |
| GEO-07     | 7                                               | 39.641706                                     | -88.161275                                     | Removed                                   | 39.641706                                      | -88.161275                                         | T27                                       | 39.641706                                         | -88.161275                                         | 04/21/25        | 13                            | 2                                       | 11.0                              | 04/22/25          | 4.8                    |                   |                        |                   |                        | 05/09/25          | 3.9                    | 3.9                        |                                  |
| GEO-08     | 8                                               | 39.647149                                     | -88.154455                                     | Removed                                   | 39.647149                                      | -88.154455                                         | T24                                       | 39.647149                                         | -88.154455                                         | 04/21/25        | 13                            | 2                                       | 8.4                               | 04/22/25          | 2.8                    |                   |                        |                   |                        | 05/09/25          | 1.8                    | 1.8                        |                                  |
| GEO-09     | 9                                               | 39.648528                                     | -88.173981                                     | ---                                       | ---                                            | ---                                                | Removed                                   |                                                   |                                                    | 04/22/25        | 13                            | 2                                       | 9.1                               | 04/23/25          | 6.0                    |                   |                        |                   |                        | 05/09/25          | 3.5                    | 3.5                        |                                  |
| GEO-10     | 10                                              | 39.626559                                     | -88.229542                                     | Removed                                   | 39.626559                                      | -88.229542                                         | T14                                       | 39.626559                                         | -88.229542                                         | 04/23/25        | 13                            | 2                                       | 12.5                              | 04/24/25          | 8.4                    |                   |                        |                   |                        | 05/10/25          | 3.7                    | 3.7                        |                                  |
| GEO-11     | 11                                              | 39.630431                                     | -88.200456                                     | Removed                                   | 39.630431                                      | -88.200456                                         | T9                                        | 39.630431                                         | -88.200456                                         | 04/26/25        | 13                            | 2                                       | 8.5                               | 04/27/25          | 8.0                    |                   |                        |                   |                        | 05/09/25          | 4.1                    | 4.1                        |                                  |
| GEO-12     | 12                                              | 39.603647                                     | -88.220991                                     | 62                                        | 39.603647                                      | -88.220991                                         | T62                                       | 39.603647                                         | -88.220991                                         | 04/30/25        | 13                            | 2                                       | NE                                | 05/01/25          | 2.5                    |                   |                        |                   |                        | 05/09/25          | 2.4                    | 2.4                        |                                  |
| GEO-13     | 13                                              | 39.604831                                     | -88.210781                                     | 61                                        | 39.604831                                      | -88.210781                                         | T61                                       | 39.604831                                         | -88.210781                                         | 04/30/25        | 13                            | 2                                       | NE                                | 05/01/25          | 4.5                    |                   |                        |                   |                        | 05/10/25          | 4.3                    | 4.3                        |                                  |
| GEO-14     | 14                                              | 39.585320                                     | -88.211622                                     | 60                                        | 39.585320                                      | -88.211622                                         | T60                                       | 39.585320                                         | -88.211622                                         | 04/27/25        | 13                            | 2                                       | 6.1                               | 04/28/25          | 5.5                    |                   |                        |                   |                        | 05/09/25          | 4.3                    | 4.3                        |                                  |
| GEO-15     | 15                                              | 39.587266                                     | -88.235878                                     | 59                                        | 39.587266                                      | -88.235878                                         | T59                                       | 39.587266                                         | -88.235878                                         | 04/29/25        | 13                            | 2                                       | 9.5                               | 04/30/25          | 4.0                    |                   |                        |                   |                        | 05/09/25          | 2.6                    | 2.6                        |                                  |
| GEO-16     | 16                                              | 39.580814                                     | -88.240424                                     | 58                                        | 39.580814                                      | -88.240424                                         | T58                                       | 39.580814                                         | -88.240424                                         | 04/29/25        | 13                            | 2                                       | 7.5                               | 04/30/25          | 3.0                    |                   |                        |                   |                        | 05/09/25          | 2.9                    | 2.9                        |                                  |
| GEO-17     | 17                                              | 39.574408                                     | -88.217758                                     | 57                                        | 39.574408                                      | -88.217758                                         | T57                                       | 39.574408                                         | -88.217758                                         | 04/27/25        | 13                            | 2                                       | 1.6                               | 04/28/25          | 1.2                    |                   |                        |                   |                        | 05/10/25          | 2.4                    | 1.2                        |                                  |
| GEO-18     | 18                                              | 39.574363                                     | -88.208448                                     | 56                                        | 39.574363                                      | -88.208448                                         | T56                                       | 39.574363                                         | -88.208448                                         | 04/27/25        | 13                            | 2                                       | 3.0                               | 04/28/25          | 2.5                    |                   |                        |                   |                        | 05/10/25          | 3.1                    | 2.5                        |                                  |
| GEO-19     | 19                                              | 39.573124                                     | -88.201857                                     | 55                                        | 39.573124                                      | -88.201857                                         | T55                                       | 39.573124                                         | -88.201857                                         | 04/27/25        | 13                            | 2                                       | 11.0                              | 04/28/25          | 10.5                   |                   |                        |                   |                        | 05/10/25          | 3.3                    | 3.3                        |                                  |
| GEO-20     | 20                                              | 39.565034                                     | -88.201263                                     | 54                                        | 39.565034                                      | -88.201263                                         | T54                                       | 39.565034                                         | -88.201263                                         | 04/27/25        | 13                            | 2                                       | 10.5                              | 04/28/25          | 10.2                   |                   |                        |                   |                        | 05/10/25          | 5.0                    | 5.0                        |                                  |
| GEO-21     | 21                                              | 39.573270                                     | -88.169910                                     | 53                                        | 39.573270                                      | -88.169910                                         | Removed                                   |                                                   |                                                    | 04/01/25        | 13                            | 2                                       | 10.6                              | 04/02/25          | 5.8                    | 04/23/25          | 3.3                    |                   |                        | 05/10/25          | n/a                    | 3.3                        |                                  |
| GEO-22     | 22                                              | 39.565394                                     | -88.152425                                     | 52                                        | 39.565394                                      | -88.152425                                         | Removed                                   |                                                   |                                                    | 04/01/25        | 13                            | 2                                       | 10.4                              | 04/02/25          | 6.7                    | 04/23/25          | 6.4                    | 04/28/25          | 4.8                    | 05/10/25          | 4.7                    | 4.7                        |                                  |
| GEO-23     | 23                                              | 39.573187                                     | -88.154941                                     | 51                                        | 39.573187                                      | -88.154941                                         | Removed                                   |                                                   |                                                    | 04/01/25        | 13                            | 2                                       | 10.1                              | 04/02/25          | 7.0                    | 04/23/25          | 3.3                    | 04/27/25          | 3.5                    | 05/10/25          | 3.2                    | 3.2                        |                                  |
| GEO-24     | 24                                              | 39.569341                                     | -88.136830                                     | 49                                        | 39.569341                                      | -88.136830                                         | T49                                       | 39.569341                                         | -88.136830                                         | 03/31/25        | 13                            | 2                                       | NE                                | 04/01/25          | 11.5                   | 04/23/25          | 4.5                    | 04/24/25          | 4.5                    | 05/10/25          | 4.0                    | 4.0                        |                                  |
| GEO-25     | 25                                              | 39.572765                                     | -88.132383                                     | 47a*                                      | 39.572840                                      | -88.132593                                         | T47a                                      | 39.572840                                         | -88.132593                                         | 03/31/25        | 13                            | 2                                       | 8.0                               | 04/01/25          | 5.5                    | 04/23/25          | 3.5                    | 04/24/25          | 4.6                    | 05/10/25          | 4.2                    | 3.5                        | T47a shifted 65 feet from GEO-25 |
| GEO-26     | 26                                              | 39.574592                                     | -88.118216                                     | 46                                        | 39.574592                                      | -88.118216                                         | T46                                       | 39.574592                                         | -88.118216                                         | 04/02/25        | 13                            | 2                                       | 7.3                               | 04/03/25          | 1.7                    | 05/03/25          | 2.5                    |                   |                        | 05/10/25          | 1.6                    | 1.6                        |                                  |
| GEO-27     | 27                                              | 39.584660                                     | -88.117432                                     | 45                                        | 39.584660                                      | -88.117432                                         | Removed                                   |                                                   |                                                    | 04/02/25        | 13                            | 2                                       | 8.1                               | 04/03/25          | 0.0                    | 05/03/25          | 5.5                    |                   |                        | 05/10/25          | 2.0                    | 0.0                        |                                  |
| GEO-28     | 28                                              | 39.585767                                     | -88.174319                                     | 44                                        | 39.585767                                      | -88.174319                                         | Removed                                   |                                                   |                                                    | 04/16/25        | 13                            | 2                                       | 8.5                               | 04/17/25          | 4.8                    | 04/30/25          | 5.5                    |                   |                        | 05/10/25          | 4.2                    | 4.2                        |                                  |
| GEO-29     | 29                                              | 39.589955                                     | -88.172555                                     | 43                                        | 39.589955                                      | -88.172555                                         | Removed                                   |                                                   |                                                    | 04/16/25        | 13                            | 2                                       | 8.5                               | 04/17/25          | 4.5                    |                   |                        |                   |                        | 05/10/25          | 4.0                    | 4.0                        |                                  |
| GEO-30     | 30                                              | 39.591131                                     | -88.167294                                     | Removed                                   | 39.591131                                      | -88.167294                                         | Removed                                   |                                                   |                                                    | 04/16/25        | 13                            | 2                                       | 9.0                               | 04/17/25          | 3.8                    |                   |                        |                   |                        | 05/10/25          | 3.9                    | 3.8                        |                                  |
| GEO-31     | 31                                              | 39.590992                                     | -88.151334                                     | 40                                        | 39.590992                                      | -88.151334                                         | Removed                                   |                                                   |                                                    | 04/02/25        | 13                            | 2                                       | 9.0                               | 04/03/25          | 1.8                    |                   |                        |                   |                        | 05/10/25          | 1.5                    | 1.5                        |                                  |
| GEO-32     | 32                                              | 39.591143                                     | -88.120681                                     | 39a*                                      | 39.590987                                      | -88.120622                                         | Removed                                   |                                                   |                                                    | 04/02/25        | 13                            | 2                                       | 10.3                              | 04/03/25          | 4.4                    | 05/01/25          | 3.3                    |                   |                        | 05/10/25          | 3.1                    | 3.1                        | T39a shifted 60 feet from GEO-32 |
| GEO-33     | 33                                              | 39.597987                                     | -88.144878                                     | 38                                        | 39.597987                                      | -88.144878                                         | Removed                                   |                                                   |                                                    | 04/02/25        | 13                            | 2                                       | 10.1                              | 04/03/25          | 3.5                    | 04/23/25          | 3.5                    |                   |                        | 05/10/25          | 3.3                    | 3.3                        |                                  |
| GEO-34     | 34                                              | 39.603394                                     | -88.159948                                     | 36                                        | 39.603394                                      | -88.159948                                         | Removed                                   |                                                   |                                                    | 04/17/25        | 13                            | 2                                       | 8.0                               | 04/18/25          | 5.4                    |                   |                        |                   |                        | 05/10/25          | 4.6                    | 4.6                        |                                  |
| GEO-35     | 35                                              | 39.619080                                     | -88.162749                                     | 35                                        | 39.619080                                      | -88.162749                                         | T35                                       | 39.619080                                         | -88.162749                                         | 04/18/25        | 13                            | 2                                       | 10.2                              | 04/19/25          | 3.0                    |                   |                        |                   |                        | 05/10/25          | 3.2                    | 3.0                        |                                  |
| GEO-36     | 36                                              | 39.613774                                     | -88.153886                                     | 34                                        | 39.613774                                      | -88.153886                                         | T34                                       | 39.613774                                         | -88.153886                                         | 04/17/25        | 13                            | 2                                       | 8.1                               | 04/18/25          | 4.4                    |                   |                        |                   |                        | 05/10/25          | 2.7                    | 2.7                        |                                  |
| GEO-37     | 37                                              | 39.617396                                     | -88.142108                                     | 33                                        | 39.617396                                      | -88.142108                                         | T33                                       | 39.617396                                         | -88.142108                                         | 04/17/25        | 13                            | 2                                       | 7.5                               | 04/18/25          | 2.9                    |                   |                        |                   |                        | 05/10/25          | 3.0                    | 2.9                        |                                  |
| GEO-38     | 38                                              | 39.629819                                     | -88.138768                                     | 30                                        | 39.629819                                      | -88.138768                                         | T30                                       | 39.629819                                         | -88.138768                                         | 04/18/25        | 13                            | 2                                       | 4.1                               | 04/19/25          | 1.3                    |                   |                        |                   |                        | 05/09/25          | 1.5                    | 1.3                        |                                  |
| GEO-39     | 39                                              | 39.632904                                     | -88.161243                                     | 29                                        | 39.632904                                      | -88.161243                                         | T29                                       | 39.632904                                         | -88.161243                                         | 04/18/25        | 13                            | 2                                       | 5.4                               | 04/19/25          | 4.6                    |                   |                        |                   |                        | 05/09/25          | 4.8                    | 4.6                        |                                  |
| GEO-40     | 40                                              | 39.640726                                     | -88.170557                                     | 28                                        | 39.640726                                      | -88.170557                                         | T28                                       | 39.640726                                         | -88.170557                                         | 04/22/25        | 13                            | 2                                       | 8.5                               | 04/23/25          | 2.4                    |                   |                        |                   |                        | 05/10/25          | 2.9                    | 2.4                        |                                  |
| GEO-41     | 41                                              | 39.640932                                     | -88.150410                                     | 26                                        | 39.640932                                      | -88.150410                                         | T26                                       | 39.640932                                         | -88.150410                                         | 04/21/25        | 13                            | 2                                       | 7.4                               | 04/22/25          | 3.7                    |                   |                        |                   |                        | 05/09/25          | 3.2                    | 3.2                        |                                  |
| GEO-42     | 42                                              | 39.642241                                     | -88.145311                                     | 25                                        | 39.642241                                      | -88.145311                                         | T25                                       | 39.642241                                         | -88.145311                                         | 04/18/25        | 13                            | 2                                       | 8.5                               | 04/19/25          | 2.4                    |                   |                        |                   |                        | 05/09/25          | 2.5                    | 2.4                        |                                  |
| GEO-43     | 43                                              | 39.649785                                     | -88.163058                                     | 23                                        | 39.649785                                      | -88.163058                                         | T23                                       | 39.649785                                         | -88.163058                                         | 04/21/25        | 13                            | 2                                       | 10.1                              | 04/22/25          | 3.6                    |                   |                        |                   |                        | 05/09/25          | 3.8                    | 3.6                        |                                  |
| GEO-44     | 44                                              | 39.645392                                     | -88.164683                                     | 22                                        | 39.645392                                      | -88.164683                                         | T22                                       | 39.645392                                         | -88.164683                                         | 04/21/25        | 13                            | 2                                       | 5.4                               | 04/22/25          | 3.7                    |                   |                        |                   |                        | 05/09/25          | 3.6                    | 3.6                        |                                  |
| GEO-45     | 45                                              | 39.612310                                     | -88.180226                                     | 20                                        | 39.612310                                      | -88.180226                                         | T20                                       | 39.612310                                         | -88.180226                                         | 04/26/25        | 13                            | 2                                       | 8.6                               | 04/27/25          | 7.5                    |                   |                        |                   |                        | 05/10/25          | 2.6                    | 2.6                        |                                  |
| GEO-46     | 46                                              | 39.612409                                     | -88.188892                                     | 19                                        | 39.612409                                      | -88.188892                                         | T19                                       | 39.612409                                         | -88.188892                                         | 04/26/25        | 13                            | 2                                       | 10.6                              | 04/27/25          | 10.0                   |                   |                        |                   |                        | 05/10/25          | 3.1                    | 3.1                        |                                  |
| GEO-47     | 47                                              | 39.621062                                     | -88.198786                                     | 18                                        | 39.621062                                      | -88.198786                                         | T18                                       | 39.621062                                         | -88.198786                                         | 04/30/25        | 13                            | 2                                       | n/a                               | 05/01/25          | n/a                    |                   |                        |                   |                        | 05/09/25          | 2.7                    | 2.7                        |                                  |
| GEO-48     | 48                                              | 39.614735                                     | -88.208232                                     | 17                                        | 39.614735                                      | -88.208232                                         | T17                                       | 39.614735                                         | -88.208232                                         | 04/29/25        | 13                            | 2                                       | 4.4                               |                   |                        |                   |                        |                   |                        | 05/09/25          | 2.6                    | 2.6                        |                                  |
| GEO-49     | 49                                              | 39.613690                                     | -88.220885                                     | Removed                                   | 39.613690                                      | -88.220885                                         | T16                                       | 39.613690                                         | -88.220885                                         | 04/30/25        | 13                            | 2                                       | n/a                               | 05/01/25          | n/a                    |                   |                        |                   |                        | 05/09/25          | 2.1                    | 2.1                        |                                  |
| GEO-50     | 50                                              | 39.626564                                     | -88.236070                                     | 15                                        | 39.626564                                      | -88.236070                                         | T15                                       | 39.626564                                         | -88.236070                                         | 04/24/25        | 13                            | 2                                       | 0.8                               | 04/25/25          | 1.5                    |                   |                        |                   |                        | 05/10/25          | 1.7                    | 0.8                        |                                  |
| GEO-51     | 51                                              | 39.629093                                     | -88.223195                                     | 13                                        | 39.629093                                      | -88.223195                                         | T13                                       | 39.629093                                         | -88.223195                                         | 04/23/25        | 13                            | 2                                       | 12.0                              | 04/24/25          | 4.5                    |                   |                        |                   |                        | 05/10/25          | 3.1                    | 3.1                        |                                  |
| GEO-52     | 52                                              | 39.626261                                     | -88.187792                                     | 12                                        | 39.626261                                      | -88.187792                                         | T12                                       | 39.626261                                         | -88.187792                                         | 04/26/25        | 13                            | 2                                       | 11.0                              | 04/27/25          | 10.1                   |                   |                        |                   |                        | 05/09/25          | 2.0                    | 2.0                        |                                  |
| GEO-53     | 53                                              | 39.628019                                     | -88.180345                                     | 11                                        | 39.628019                                      | -88.180345                                         | T11                                       | 39.628019                                         | -88.180345                                         | 04/26/25        | 13                            | 2                                       | 11.0                              | 04/27/25          | 10.0                   |                   |                        |                   |                        | 05/09/25          | 3.3                    | 3.3                        |                                  |
| GEO-54     | 54                                              | 39.631708                                     | -                                              |                                           |                                                |                                                    |                                           |                                                   |                                                    |                 |                               |                                         |                                   |                   |                        |                   |                        |                   |                        |                   |                        |                            |                                  |

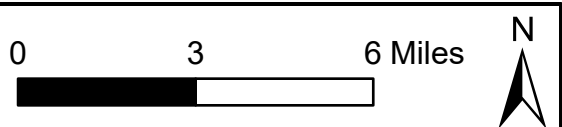


**Figure 1**  
**Site Location Map**

Coles Wind Project  
Coles County, Illinois

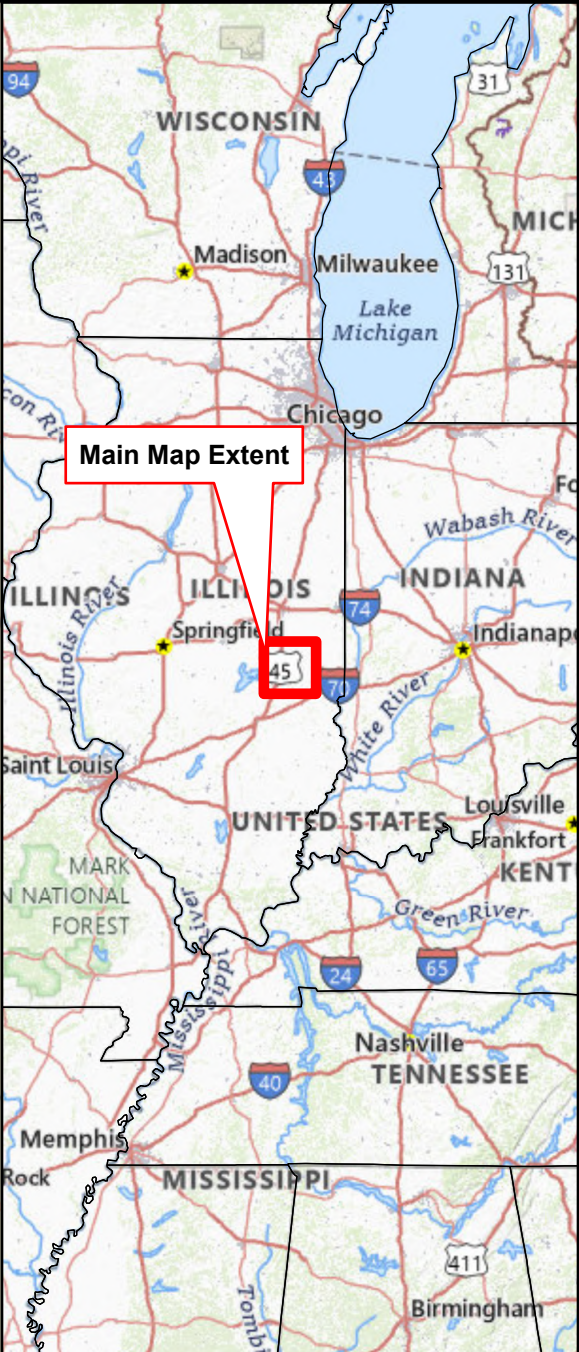


Approximate Project Site Location



**Legend**

 General Project Site



Main Map Extent



Figure 2a  
WTG CPT Sounding  
Locations on a  
Topographic Map

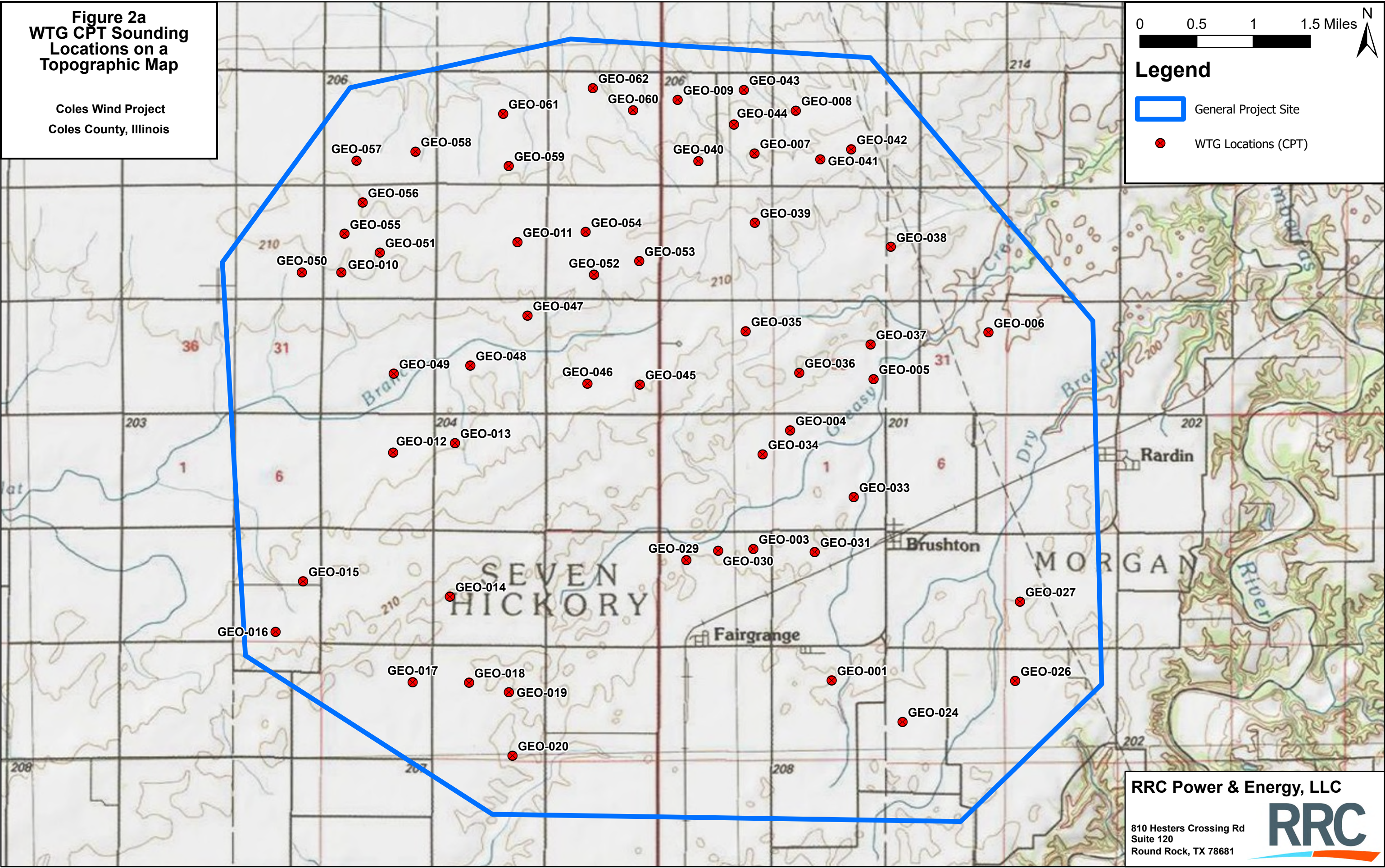
Coles Wind Project  
Coles County, Illinois

0 0.5 1 1.5 Miles



Legend

-  General Project Site
-  WTG Locations (CPT)



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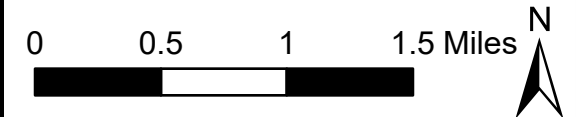


810 Hesters Crossing Rd  
Suite 120  
Round Rock, TX 78681



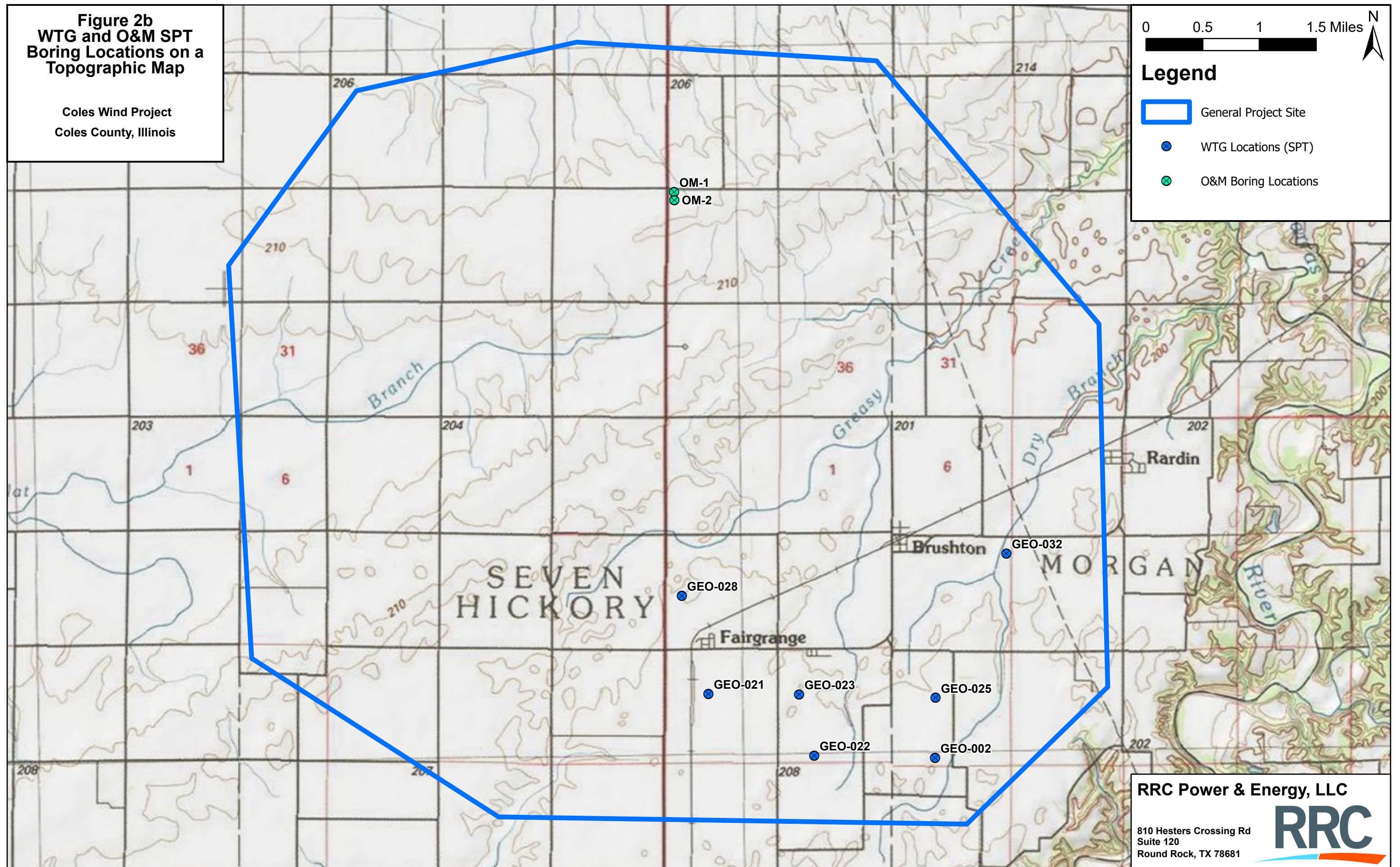
**Figure 2b**  
**WTG and O&M SPT**  
**Boring Locations on a**  
**Topographic Map**

Coles Wind Project  
Coles County, Illinois



**Legend**

-  General Project Site
-  WTG Locations (SPT)
-  O&M Boring Locations



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**Figure 3**  
**MASW Survey Locations**  
**Map**

Coles Wind Project  
Coles County, Illinois

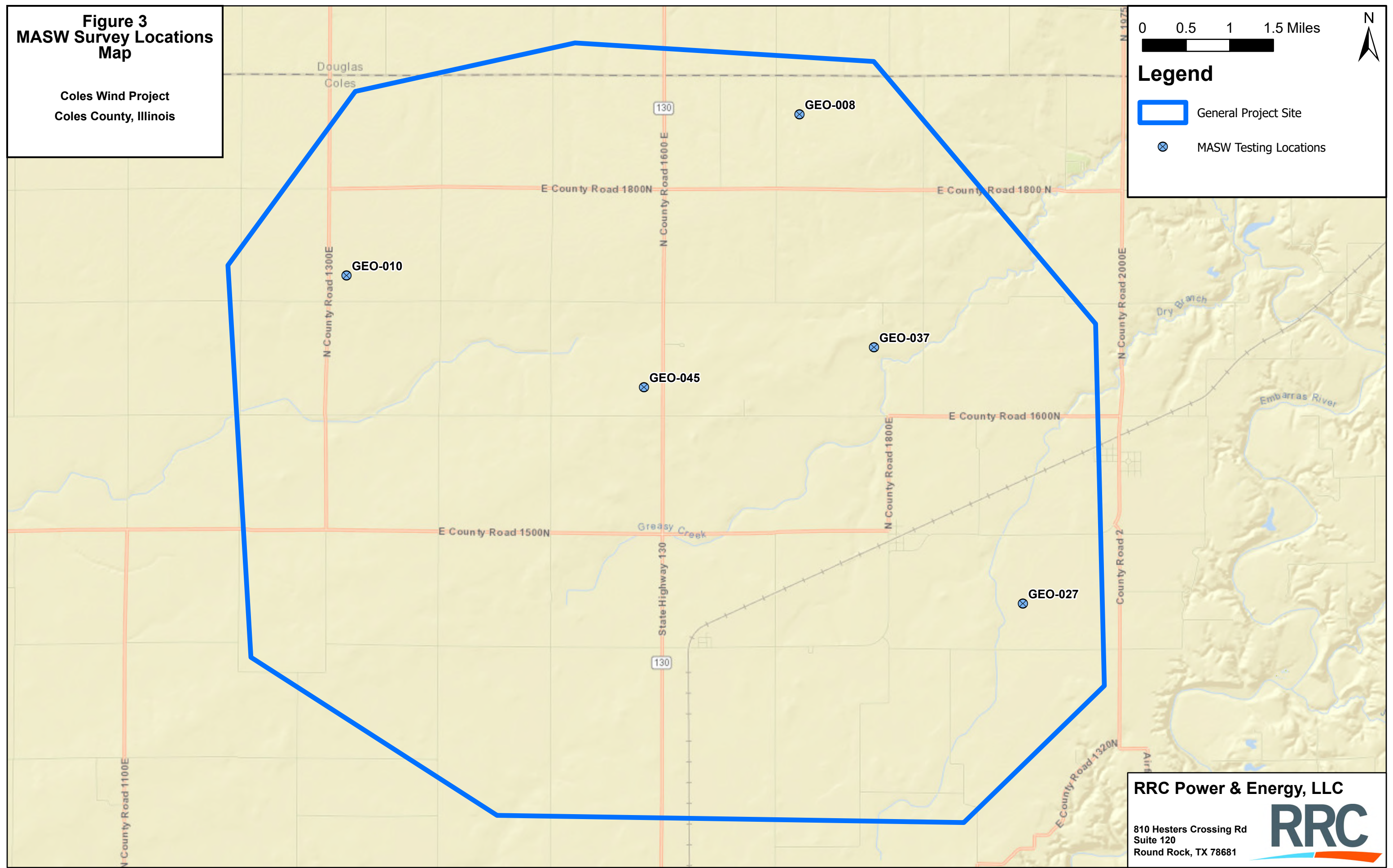
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N

Legend

General Project Site

MASW Testing Locations



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RRC



**Figure 4**  
**Thermal Resistivity (TR)**  
**and CBR Testing**  
**Locations Map**

Coles Wind Project  
Coles County, Illinois

0 0.5 1 1.5 Miles



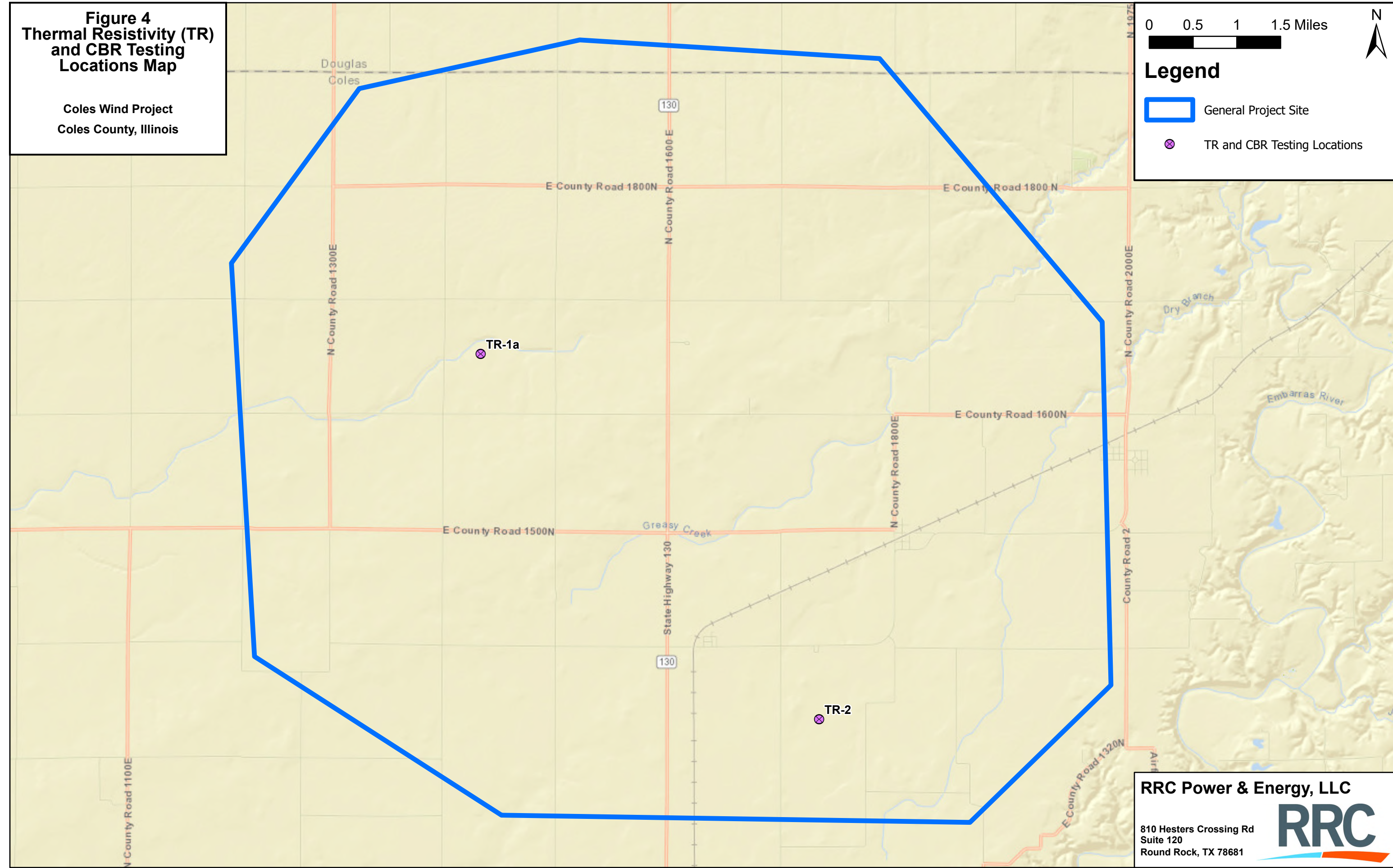
**Legend**



General Project Site



TR and CBR Testing Locations



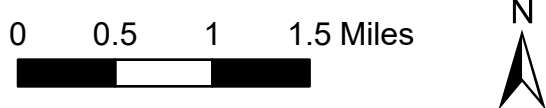
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**RRC**

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**Figure 5**  
**Site Vicinity Geologic Map**

Coles Wind Project  
Coles County, Illinois



**Legend**

General Project Site

WTG Locations

O&M Locations

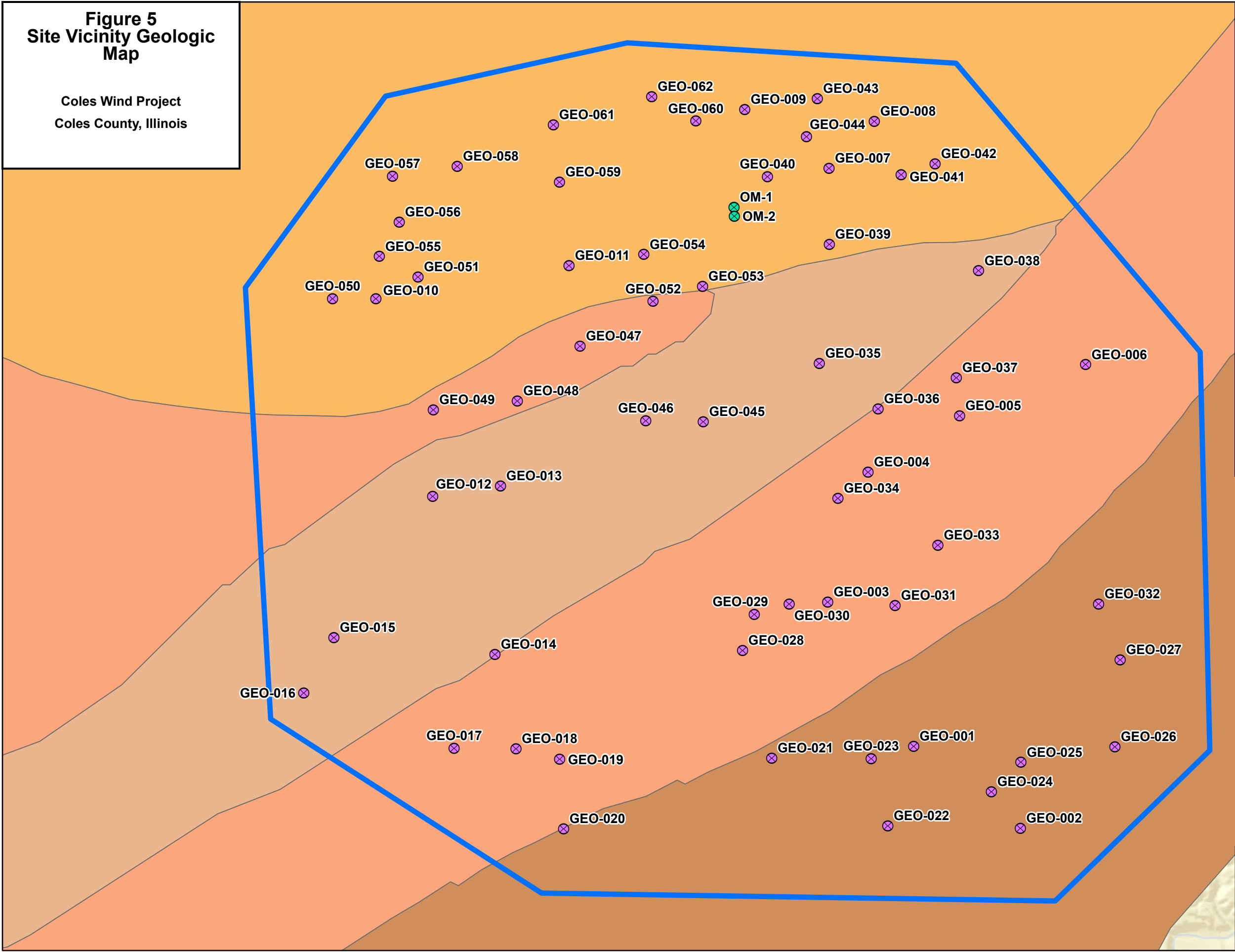
**Surficial Geologic Units**

tkb(e)-Loamy Till, End Moraine (Batestown and Malden Till Members)

tkc(e)-Loamy Till, End Moraine (Platte Member)

tkc(g)-Loamy Till, Ground Moraine (Platte Till Member)

tkd(g)-Loamy Till, Ground Moraine (Fairgrange Till Member)



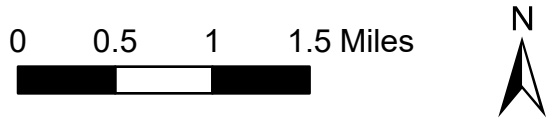
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**Figure 6**  
**Concrete Corrosion Map**

Coles Wind Project  
Coles County, Illinois

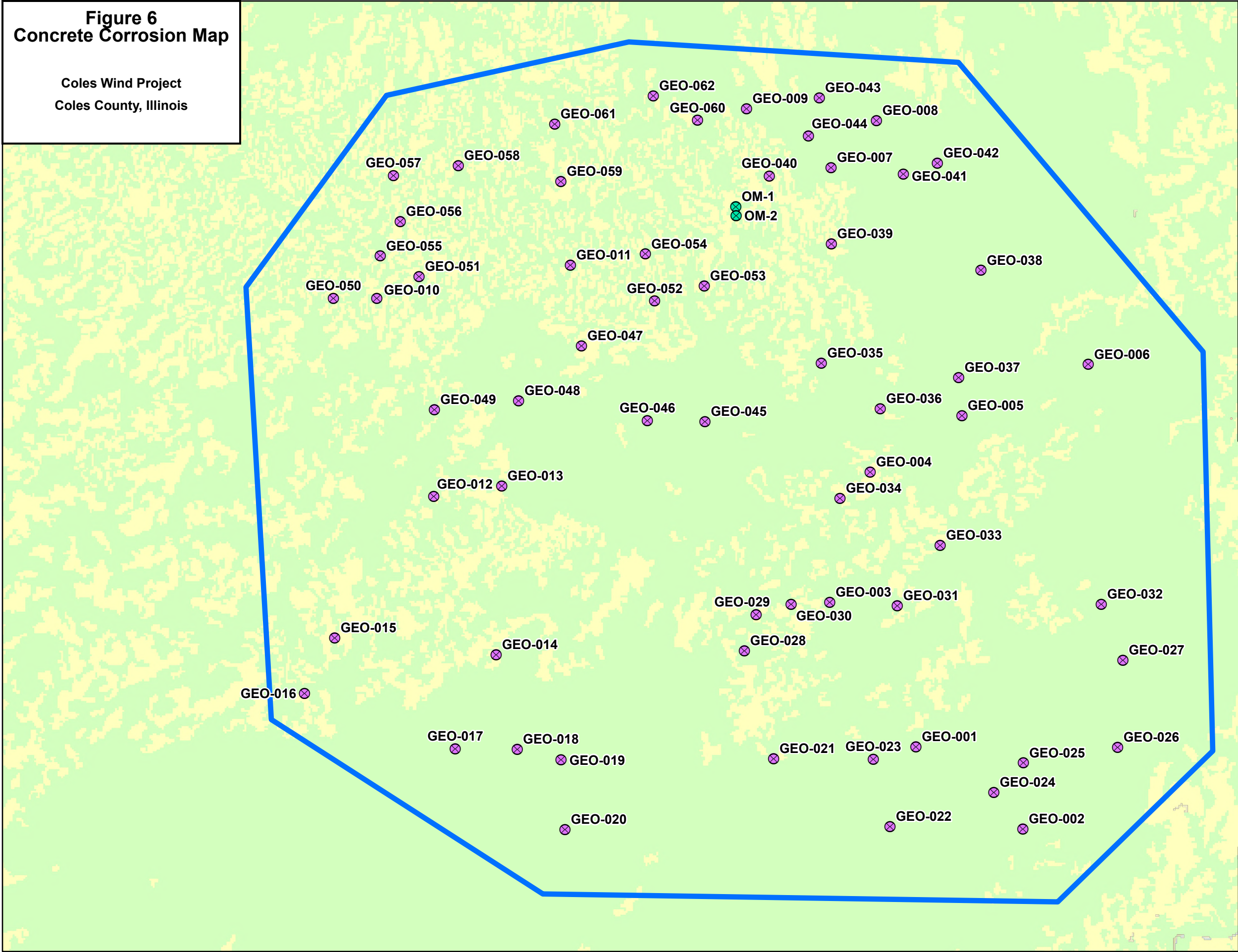


**Legend**

- General Project Site
- WTG Locations
- O&M Locations

**Corrosion Potential for Concrete**

- Low
- Moderate
- High



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**Figure 7**  
**Steel Corrosion Map**

Coles Wind Project  
Coles County, Illinois

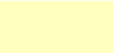
0 0.5 1 1.5 Miles

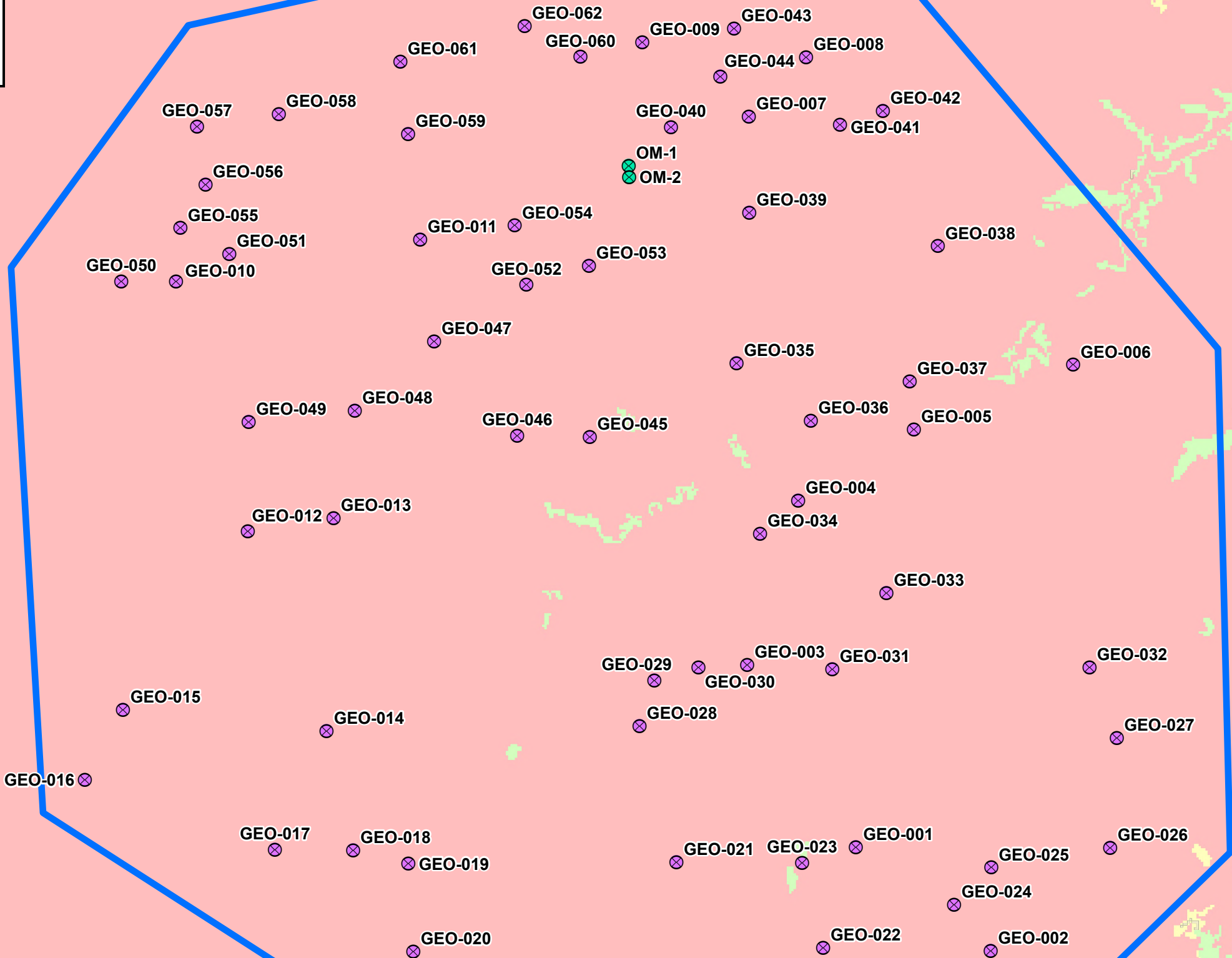


**Legend**

-  General Project Site
-  WTG Locations
-  O&M Locations

**Corrosion Potential for Steel**

-  Low
-  Moderate
-  High



**RRC Power & Energy, LLC**

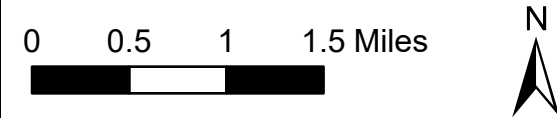
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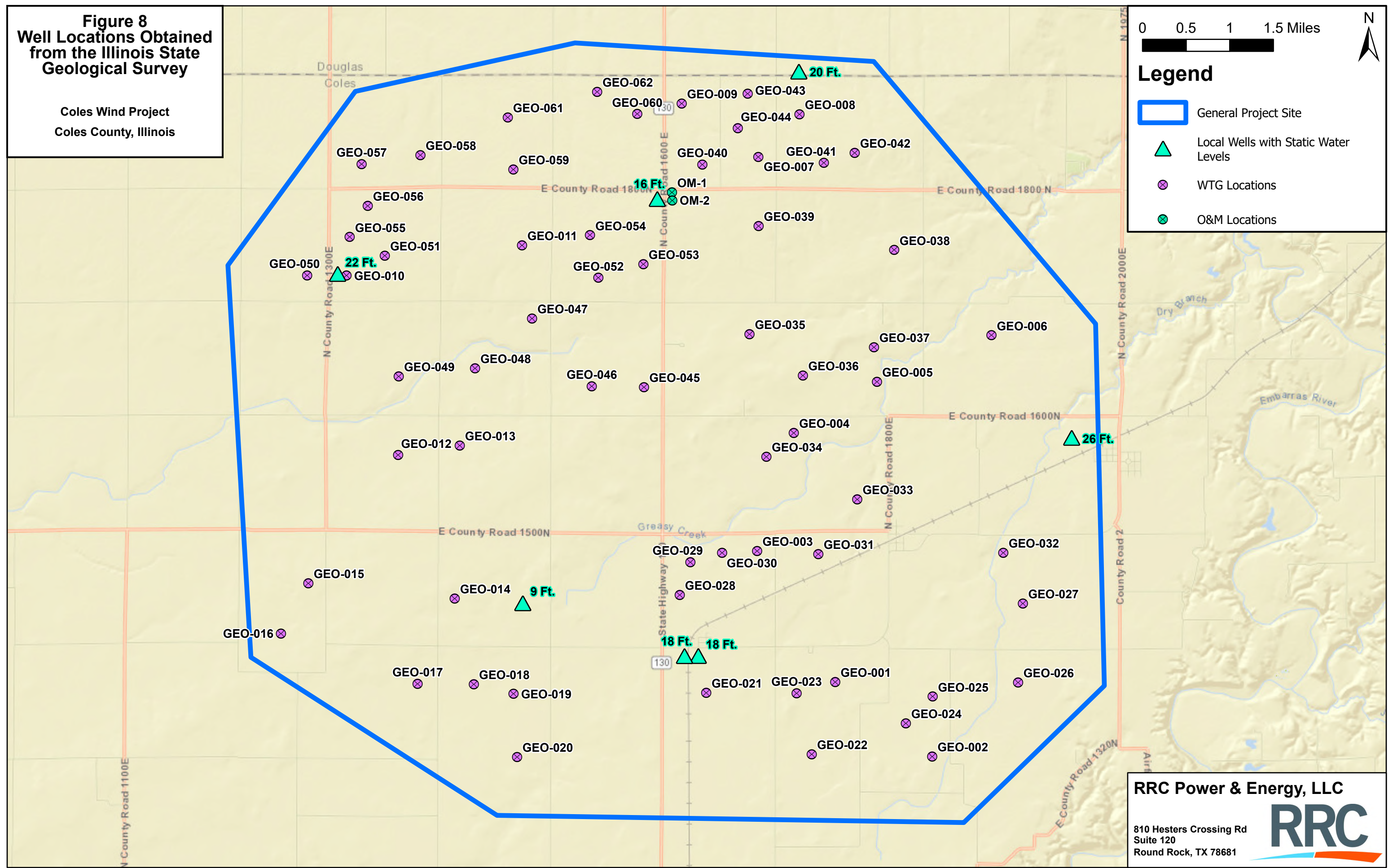
**Figure 8**  
**Well Locations Obtained**  
**from the Illinois State**  
**Geological Survey**

Coles Wind Project  
Coles County, Illinois



**Legend**

- General Project Site
- Local Wells with Static Water Levels
- WTG Locations
- O&M Locations



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Suite 120  
Round Rock, TX 78681

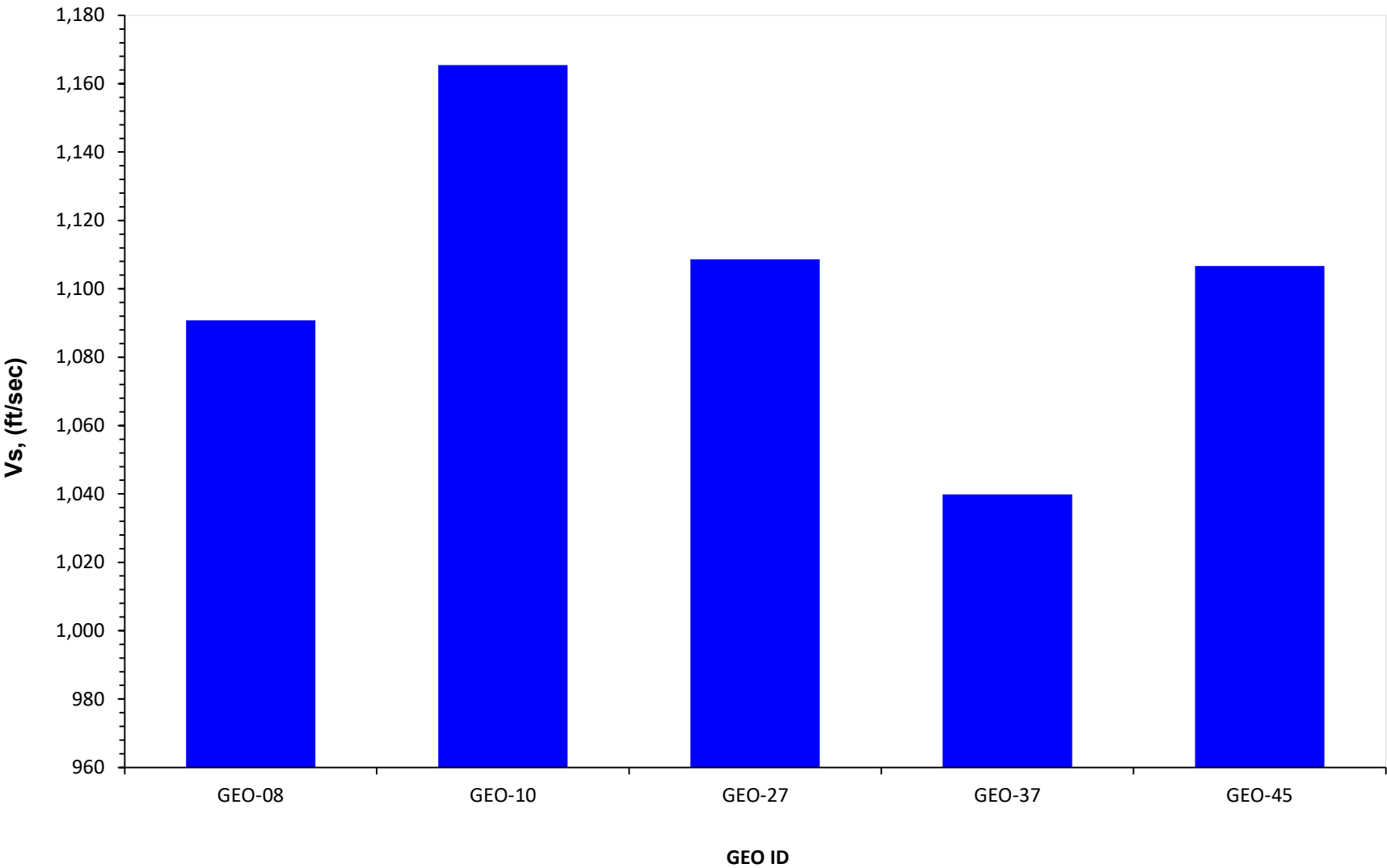
**RRC**

**Figure 9**  
**Weighted Average Shear Wave Velocity at MASW Locations**

Coles Wind Project  
Coles County, Illinois

**RRC Power & Energy, LLC**

810 Hesters Crossing Rd  
Suite 120  
Round Rock, TX 78681  
Phone: (512) 992-2087



# BORING LOG KEY

| FIELD DATA             |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                      | LABORATORY DATA    |                     |                        |                             |                                         |                    |                                      | DRILLING METHOD(S):<br>Continuous Flight Auger/Hollow-stem Auger/Wet Rotary/NX Core |                                                                                                                               |
|------------------------|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|---------------------|------------------------|-----------------------------|-----------------------------------------|--------------------|--------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| SOIL SYMBOL            | DEPTH (FT) | SAMPLES<br>N: BLOWS/FT<br>P: TONS/SQ FT<br>T: BLOWS<br>R: %<br>RQD: %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | MOISTURE CONTENT (%) | ATTERBERG LIMITS   |                     |                        | DRY DENSITY<br>POUNDS/CU.FT | COMPRESSIVE<br>STRENGTH<br>(TONS/SQ FT) | FAILURE STRAIN (%) | CONFINING PRESSURE<br>(POUNDS/SQ IN) | MINUS NO. 200 SIEVE (%)                                                             | GROUNDWATER INFORMATION:<br>Subsurface water was not encountered either during or upon completion of the drilling operations. |
|                        |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                      | LIQUID LIMIT<br>LL | PLASTIC LIMIT<br>PL | PLASTICITY INDEX<br>PI |                             |                                         |                    |                                      |                                                                                     |                                                                                                                               |
| SURFACE ELEVATION: ft. |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                      |                    |                     |                        |                             |                                         |                    |                                      |                                                                                     | DESCRIPTION OF STRATUM                                                                                                        |
|                        |            |  - INTACT PUSH TUBE SAMPLE<br> - SPLIT SPOON SAMPLE<br> N = 40 (Modified CA Sampler)<br> - AUGER CUTTINGS<br> T = 100/2.5" (TCP Blow Count) - INITIAL GROUNDWATER OBSERVATION<br> - WATER LEVEL AT END OF DRILLING, OR AS SHOWN<br> - ROCK CORE SAMPLE<br>R = 100<br>RQD = 50 |                      |                    |                     |                        |                             |                                         |                    |                                      |                                                                                     |                                                                                                                               |

-- TESTING SYMBOLS DEFINITIONS --

N - STANDARD PENETRATION TEST RESISTANCE  
P - POCKET PENETROMETER RESISTANCE  
T - TXDOT CONE PENETRATION RESISTANCE  
R - ROCK CORE RECOVERY  
RQD - ROCK QUALITY DESIGNATION

## TYPICAL SOIL AND ROCK SYMBOLS (USCS CLASSIFICATION)

|                                                                                     |                            |                                                                                     |                           |                                                                                       |               |
|-------------------------------------------------------------------------------------|----------------------------|-------------------------------------------------------------------------------------|---------------------------|---------------------------------------------------------------------------------------|---------------|
|  | Lean Clay (CL)             |  | Poorly-Graded Sand (SP)   |  | Claystone     |
|  | Fat Clay (CH)              |  | Well-Graded Sand (SW)     |  | BASALT        |
|  | Silt (ML)                  |  | Poorly-Graded Gravel (GP) |  | Limestone     |
|  | Elastic Silt (MH)          |  | Well-Graded Gravel (GW)   |  | Sandstone     |
|  | Silty Sand (SM)            |  | Clayey Gravel (GC)        |  | Siltstone     |
|  | Clayey Sand (SC)           |  | Silty Gravel (GM)         |  | Fill Material |
|  | Silty, Clayey Sand (SC-SM) |  | Silty Clay (CL-ML)        |  | Shale         |

## DEGREE OF WEATHERING

- 1) Unweathered: No evidence of any chemical or mechanical alteration.
- 2) Slightly weathered: Slight discoloration on surface, slight alteration along discontinuities, less than 10% of the rock volume altered.
- 3) Moderately weathered: Discoloring evident, surface pitted and altered with alteration penetrating well below rock surfaces, weathering "halos" evident, 10% to 50% of the rock volume altered.
- 4) Highly weathered: Entire mass discolored, alteration pervading nearly all of the rock with some pockets of slightly weathered rock noticeable, some minerals leached away.
- 5) Decomposed: rock reduced to a soil with relic rock texture, generally molded and crumbled by hand.

## SOIL STRUCTURE

- Calcareous.....Containing calcium carbonate
- Slickensided.....The presence of planes of weakness having a slick and glossy appearance
- Interbedded.....Alternating layers of varying material



# LOG OF BORING GEO-02

SHEET 1 of 1



RRC Power & Energy, LLC  
810 Hesters Crossing Rd, Suite 120  
Round Rock, TX 78681  
Telephone: (512) 992-2087

CLIENT: Apex Clean Energy  
PROJECT: Coles Wind Project  
LOCATION: Coles County, IL  
NUMBER: GE2502017

DATE(S) DRILLED: 4/26/2025 - 4/27/2025

RENEWABLE LOG - LOG A GNNL01.GDT - 6/6/25 09:58 - C:\USERS\CHRISTIAN\MIRANDA\RRC COMPANIES\GEO\TECHNICAL ENGINEERING - DATABASES\03 GINT\PROJECTS\2025\COLES WIND-GE2502017.GPJ

| FIELD DATA                                                                                                                                                                          |            | LABORATORY DATA |                                                            |                      |                  |    |    |                             |                                          |                                                               |                                      | DRILLING METHOD(S):     |                                                                                                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----------------|------------------------------------------------------------|----------------------|------------------|----|----|-----------------------------|------------------------------------------|---------------------------------------------------------------|--------------------------------------|-------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| SOIL SYMBOL                                                                                                                                                                         | DEPTH (FT) | SAMPLES         | N: BLOWS/FT<br>P: TONS/SQ FT<br>T: BLOWS<br>R: %<br>RQD: % | MOISTURE CONTENT (%) | ATTERBERG LIMITS |    |    | DRY DENSITY<br>POUNDS/CU.FT | COMPRESSIVE<br>STRENGTH<br>(TONS/SQ. FT) | STRAIN AT FAILURE (%)                                         | CONFINING PRESSURE<br>(POUNDS/SQ IN) | MINUS NO. 200 SIEVE (%) | GROUNDWATER INFORMATION:<br>Groundwater encountered at 7.5 ft. during drilling and measured at 10 ft. immediately after drilling |
|                                                                                                                                                                                     |            |                 |                                                            |                      | LL               | PL | PI |                             |                                          |                                                               |                                      |                         |                                                                                                                                  |
| DESCRIPTION OF STRATUM                                                                                                                                                              |            |                 |                                                            |                      |                  |    |    |                             |                                          |                                                               |                                      |                         |                                                                                                                                  |
|                                                                                                                                                                                     |            | N = 10          |                                                            |                      |                  |    |    |                             |                                          |                                                               |                                      |                         | 12 in. Topsoil                                                                                                                   |
|                                                                                                                                                                                     |            | N = 7           |                                                            | 16                   |                  |    |    |                             |                                          |                                                               |                                      |                         | LEAN CLAY (CL), trace Sand, brown, stiff, dry to moist, iron stained                                                             |
|                                                                                                                                                                                     |            | N = 6           |                                                            |                      |                  |    |    |                             |                                          |                                                               |                                      |                         | FAT CLAY (CH), trace Sand, brown to light brown, medium stiff, moist, iron stained                                               |
|                                                                                                                                                                                     | 10         | P = 0.75        |                                                            | 16                   | 22               | 11 | 11 | 115                         | 0.40                                     | 14.8                                                          | 7.5                                  | 58                      | LEAN CLAY (CL), with Sand, brown, medium stiff, dry to moist, iron stained<br>Grading wet                                        |
|                                                                                                                                                                                     |            | N = 17          |                                                            |                      |                  |    |    |                             |                                          |                                                               |                                      |                         | SANDY LEAN CLAY (CL), brown, soft to hard, moist, iron stained                                                                   |
|                                                                                                                                                                                     |            | N = 40          |                                                            |                      |                  |    |    |                             |                                          |                                                               |                                      |                         | Grading trace Gravel, gray<br>Grading brown                                                                                      |
|                                                                                                                                                                                     | 20         | N = 82          |                                                            |                      |                  |    |    |                             |                                          |                                                               |                                      |                         | CLAYEY SAND (SC), trace Gravel, gray to brown, very dense, moist, fine to coarse grained                                         |
|                                                                                                                                                                                     | 25         | N = 63          |                                                            |                      |                  |    |    |                             |                                          |                                                               |                                      |                         | SILTY SAND (SM), with Gravel, brown to gray, very dense, moist, fine to coarse grained                                           |
|                                                                                                                                                                                     | 30         | N = 57          |                                                            |                      |                  |    |    |                             |                                          |                                                               |                                      |                         | POORLY-GRADED SAND (SP-SM) with Silt and Gravel, brown to gray, very dense, moist, fine to coarse grained                        |
|                                                                                                                                                                                     | 35         | N = 14          |                                                            |                      |                  |    |    |                             |                                          |                                                               |                                      |                         | CLAYEY SAND (SC), with Gravel, gray, medium dense, moist, fine to coarse grained                                                 |
|                                                                                                                                                                                     | 40         | N = 90/11"      |                                                            |                      |                  |    |    |                             |                                          |                                                               |                                      |                         | SANDY LEAN CLAY (CL), trace Gravel, gray to brown, hard, moist, iron stained                                                     |
|                                                                                                                                                                                     | 45         | N = 59          |                                                            |                      |                  |    |    |                             |                                          |                                                               |                                      |                         |                                                                                                                                  |
|                                                                                                                                                                                     | 50         | N = 59          |                                                            |                      |                  |    |    |                             |                                          |                                                               |                                      |                         |                                                                                                                                  |
|                                                                                                                                                                                     | 55         | N = 51          |                                                            |                      |                  |    |    |                             |                                          |                                                               |                                      |                         |                                                                                                                                  |
|                                                                                                                                                                                     | 60         | N = 58          |                                                            |                      |                  |    |    |                             |                                          |                                                               |                                      |                         |                                                                                                                                  |
| Total Depth = 60.5 ft.                                                                                                                                                              |            |                 |                                                            |                      |                  |    |    |                             |                                          |                                                               |                                      |                         |                                                                                                                                  |
| N - STANDARD PENETRATION TEST RESISTANCE<br>P - POCKET PENETROMETER RESISTANCE<br>T - TXDOT CONE PENETRATION RESISTANCE<br>R - ROCK CORE RECOVERY<br>RQD - ROCK QUALITY DESIGNATION |            |                 |                                                            |                      |                  |    |    |                             |                                          | REMARKS:<br>GPS COORDINATES: Lat. 39.565118, Long. -88.132452 |                                      |                         |                                                                                                                                  |

# LOG OF BORING GEO-21

SHEET 1 of 1



RRC Power & Energy, LLC  
810 Hesters Crossing Rd, Suite 120  
Round Rock, TX 78681  
Telephone: (512) 992-2087

CLIENT: Apex Clean Energy  
PROJECT: Coles Wind Project  
LOCATION: Coles County, IL  
NUMBER: GE2502017  
DATE(S) DRILLED: 4/28/2025

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| FIELD DATA                                                                                                                                                                          |            | LABORATORY DATA    |                                                            |                      |                  |    |    |                             |                                          |                       |                                      | DRILLING METHOD(S):     |                                                                                                                                                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------|------------------------------------------------------------|----------------------|------------------|----|----|-----------------------------|------------------------------------------|-----------------------|--------------------------------------|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SOIL SYMBOL                                                                                                                                                                         | DEPTH (FT) | SAMPLES            | N: BLOWS/FT<br>P: TONS/SQ FT<br>T: BLOWS<br>R: %<br>RQD: % | MOISTURE CONTENT (%) | ATTERBERG LIMITS |    |    | DRY DENSITY<br>POUNDS/CU.FT | COMPRESSIVE<br>STRENGTH<br>(TONS/SQ. FT) | STRAIN AT FAILURE (%) | CONFINING PRESSURE<br>(POUNDS/SQ IN) | MINUS NO. 200 SIEVE (%) | GROUNDWATER INFORMATION:<br>Groundwater encountered at 19 ft. during drilling and measured at 30 ft. immediately after drilling<br><br>SURFACE ELEVATION (FT): |
|                                                                                                                                                                                     |            |                    |                                                            |                      | LL               | PL | PI |                             |                                          |                       |                                      |                         |                                                                                                                                                                |
|                                                                                                                                                                                     |            |                    |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         |                                                                                                                                                                |
|                                                                                                                                                                                     |            |                    |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | DESCRIPTION OF STRATUM                                                                                                                                         |
|                                                                                                                                                                                     | 5          | N = 7<br>N = 13    |                                                            | 14                   |                  |    |    |                             |                                          |                       |                                      |                         | 2 in. Topsoil<br>LEAN CLAY (CL), trace Sand, brown, medium stiff to very stiff, dry to moist, iron stained<br>Grading with Sand                                |
|                                                                                                                                                                                     | 10         | N = 28<br>P = 1.75 |                                                            | 13                   | 30               | 22 | 8  | 119                         | 2.38                                     | 14.8                  | 7.5                                  | 93                      | Grading with Gravel<br>Grading trace Sand                                                                                                                      |
|                                                                                                                                                                                     | 15         | N = 28<br>N = 18   |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | Grading with Sand, gray                                                                                                                                        |
|                                                                                                                                                                                     | 20         | N = 34             |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | SANDY LEAN CLAY (CL), with Gravel, gray, hard, wet                                                                                                             |
|                                                                                                                                                                                     | 25         | N = 46             |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         |                                                                                                                                                                |
|                                                                                                                                                                                     | 30         | N = 61             |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | SILTY SAND (SM), trace Gravel, gray, very dense, wet, fine to coarse grained                                                                                   |
|                                                                                                                                                                                     | 35         | N = 31             |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | SANDY LEAN CLAY (CL), gray, very stiff to hard, moist                                                                                                          |
|                                                                                                                                                                                     | 40         | N = 26             |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         |                                                                                                                                                                |
|                                                                                                                                                                                     | 45         | N = 22             |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         |                                                                                                                                                                |
|                                                                                                                                                                                     | 50         | N = 26             |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         |                                                                                                                                                                |
|                                                                                                                                                                                     | 55         | N = 34             |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         |                                                                                                                                                                |
|                                                                                                                                                                                     | 60         | N = 37             |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | Total Depth = 60.5 ft.                                                                                                                                         |
| N - STANDARD PENETRATION TEST RESISTANCE<br>P - POCKET PENETROMETER RESISTANCE<br>T - TXDOT CONE PENETRATION RESISTANCE<br>R - ROCK CORE RECOVERY<br>RQD - ROCK QUALITY DESIGNATION |            |                    |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | REMARKS:<br>GPS COORDINATES: Lat. 39.573270, Long. -88.169910                                                                                                  |

# LOG OF BORING GEO-22

SHEET 1 of 1



RRC Power & Energy, LLC  
810 Hesters Crossing Rd, Suite 120  
Round Rock, TX 78681  
Telephone: (512) 992-2087

CLIENT: Apex Clean Energy  
PROJECT: Coles Wind Project  
LOCATION: Coles County, IL  
NUMBER: GE2502017  
DATE(S) DRILLED: 4/28/2025

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| FIELD DATA                                                                                                                                                                          |            |                   |                                                            | LABORATORY DATA      |                    |                     |                        |                             |                                          |                       |                                      | DRILLING METHOD(S):     |                                                                                                                                                                                                        |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-------------------|------------------------------------------------------------|----------------------|--------------------|---------------------|------------------------|-----------------------------|------------------------------------------|-----------------------|--------------------------------------|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| SOIL SYMBOL                                                                                                                                                                         | DEPTH (FT) | SAMPLES           | N: BLOWS/FT<br>P: TONS/SQ FT<br>T: BLOWS<br>R: %<br>RQD: % | MOISTURE CONTENT (%) | ATTERBERG LIMITS   |                     |                        | DRY DENSITY<br>POUNDS/CU.FT | COMPRESSIVE<br>STRENGTH<br>(TONS/SQ. FT) | STRAIN AT FAILURE (%) | CONFINING PRESSURE<br>(POUNDS/SQ IN) | MINUS NO. 200 SIEVE (%) | Air Rotary                                                                                                                                                                                             |  |
|                                                                                                                                                                                     |            |                   |                                                            |                      | LIQUID LIMIT<br>LL | PLASTIC LIMIT<br>PL | PLASTICITY INDEX<br>PI |                             |                                          |                       |                                      |                         | GROUNDWATER INFORMATION:                                                                                                                                                                               |  |
|                                                                                                                                                                                     |            |                   |                                                            |                      |                    |                     |                        |                             |                                          |                       |                                      |                         | Groundwater encountered at 24 ft. during drilling and measured at 32 ft. immediately after drilling                                                                                                    |  |
| SURFACE ELEVATION (FT):                                                                                                                                                             |            |                   |                                                            |                      |                    |                     |                        |                             |                                          |                       |                                      |                         | DESCRIPTION OF STRATUM                                                                                                                                                                                 |  |
|                                                                                                    | 5          | N = 8<br>N = 9    | 14                                                         |                      |                    |                     |                        |                             |                                          |                       |                                      |                         | 10 in. Topsoil<br>LEAN CLAY (CL), trace Sand, brown to reddish brown, medium stiff to very stiff, dry to moist, iron stained                                                                           |  |
|                                                                                                                                                                                     | 10         | N = 21<br>N = 13  |                                                            |                      |                    |                     |                        |                             |                                          |                       |                                      |                         | Grading with Sand, trace Gravel<br>Grading light gray to reddish brown                                                                                                                                 |  |
|                                                                                                                                                                                     | 15         | P = 2.0<br>N = 35 | 13                                                         | 24                   | 12                 | 12                  | 120                    | 1.71                        | 14.8                                     | 10.0                  | 62                                   |                         | SANDY LEAN CLAY (CL), trace Gravel, light gray to reddish brown, stiff, moist, iron stained<br>LEAN CLAY (CL), trace Sand, light gray to reddish brown, very stiff to hard, dry to moist, iron stained |  |
|                                                                                                                                                                                     | 20         | N = 24            |                                                            |                      |                    |                     |                        |                             |                                          |                       |                                      |                         | Iron stain grades out                                                                                                                                                                                  |  |
|                                                                                                                                                                                     | 25         | N = 52            |                                                            |                      |                    |                     |                        |                             |                                          |                       |                                      |                         | SANDY LEAN CLAY (CL), gray, hard, wet                                                                                                                                                                  |  |
|                                                                                                                                                                                     | 30         | N = 66            |                                                            |                      |                    |                     |                        |                             |                                          |                       |                                      |                         |                                                                                                                                                                                                        |  |
|                                                                                                                                                                                     | 35         | N = 62            |                                                            |                      |                    |                     |                        |                             |                                          |                       |                                      |                         | CLAYEY SAND (SC), light gray to brown, very dense, moist, fine to medium grained                                                                                                                       |  |
|                                                                                                                                                                                     | 40         | N = 38            |                                                            |                      |                    |                     |                        |                             |                                          |                       |                                      |                         | SANDY LEAN CLAY (CL), trace Gravel, brown to light gray, very stiff to hard, moist                                                                                                                     |  |
|                                                                                                                                                                                     | 45         | N = 43            |                                                            |                      |                    |                     |                        |                             |                                          |                       |                                      |                         |                                                                                                                                                                                                        |  |
|                                                                                                                                                                                     | 50         | N = 22            |                                                            |                      |                    |                     |                        |                             |                                          |                       |                                      |                         |                                                                                                                                                                                                        |  |
|                                                                                                                                                                                     | 55         | N = 79            |                                                            |                      |                    |                     |                        |                             |                                          |                       |                                      |                         | LEAN CLAY (CL), trace Sand, gray to light gray, hard, moist                                                                                                                                            |  |
|                                                                                                                                                                                     | 60         | N = 79            |                                                            |                      |                    |                     |                        |                             |                                          |                       |                                      |                         | Grading with Sand, brown to light gray                                                                                                                                                                 |  |
|                                                                                                                                                                                     |            |                   |                                                            |                      |                    |                     |                        |                             |                                          |                       |                                      |                         | Total Depth = 60.5 ft.                                                                                                                                                                                 |  |
| N - STANDARD PENETRATION TEST RESISTANCE<br>P - POCKET PENETROMETER RESISTANCE<br>T - TXDOT CONE PENETRATION RESISTANCE<br>R - ROCK CORE RECOVERY<br>RQD - ROCK QUALITY DESIGNATION |            |                   |                                                            |                      |                    |                     |                        |                             |                                          |                       |                                      |                         | REMARKS:<br>GPS COORDINATES: Lat. 39.565394, Long. -88.152425                                                                                                                                          |  |

# LOG OF BORING GEO-23

SHEET 1 of 1



RRC Power & Energy, LLC  
810 Hesters Crossing Rd, Suite 120  
Round Rock, TX 78681  
Telephone: (512) 992-2087

CLIENT: Apex Clean Energy  
PROJECT: Coles Wind Project  
LOCATION: Coles County, IL  
NUMBER: GE2502017  
DATE(S) DRILLED: 4/27/2025

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| FIELD DATA                                                                                                                                                                          |            | LABORATORY DATA |                                                            |                      |                  |    |    |                             |                                          |                       |                                      | DRILLING METHOD(S):     |                                                                                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----------------|------------------------------------------------------------|----------------------|------------------|----|----|-----------------------------|------------------------------------------|-----------------------|--------------------------------------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| SOIL SYMBOL                                                                                                                                                                         | DEPTH (FT) | SAMPLES         | N: BLOWS/FT<br>P: TONS/SQ FT<br>T: BLOWS<br>R: %<br>RQD: % | MOISTURE CONTENT (%) | ATTERBERG LIMITS |    |    | DRY DENSITY<br>POUNDS/CU.FT | COMPRESSIVE<br>STRENGTH<br>(TONS/SQ. FT) | STRAIN AT FAILURE (%) | CONFINING PRESSURE<br>(POUNDS/SQ IN) | MINUS NO. 200 SIEVE (%) | GROUNDWATER INFORMATION:<br>Groundwater encountered at 9 ft. during drilling and not measured immediately after drilling<br><br>SURFACE ELEVATION (FT): |
|                                                                                                                                                                                     |            |                 |                                                            |                      | LL               | PL | PI |                             |                                          |                       |                                      |                         |                                                                                                                                                         |
|                                                                                                                                                                                     |            |                 |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         |                                                                                                                                                         |
|                                                                                                                                                                                     |            |                 |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | DESCRIPTION OF STRATUM                                                                                                                                  |
|                                                                                                                                                                                     | 5          | N = 7           |                                                            |                      |                  |    |    |                             |                                          |                       |                                      | 85                      | 3 in. Topsoil                                                                                                                                           |
|                                                                                                                                                                                     |            | N = 11          |                                                            | 21                   | 49               | 21 | 28 |                             |                                          |                       |                                      |                         | LEAN CLAY (CL), with Sand, dark brown to reddish brown, medium stiff to very stiff, dry to moist, iron stained                                          |
|                                                                                                                                                                                     | 10         | N = 12          |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | Grading light brown to reddish brown                                                                                                                    |
|                                                                                                                                                                                     |            | N = 19          |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | Grading wet                                                                                                                                             |
|                                                                                                                                                                                     |            | N = 22          |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | Grading light gray to brown                                                                                                                             |
|                                                                                                                                                                                     | 15         | N = 79          |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | SANDY LEAN CLAY (CL), light gray to brown, hard, moist, iron stained                                                                                    |
|                                                                                                                                                                                     | 20         | N = 50/5"       |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | Grading reddish brown to brown                                                                                                                          |
|                                                                                                                                                                                     | 25         | N = 55          |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         |                                                                                                                                                         |
|                                                                                                                                                                                     | 30         | N = 63          |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | Grading dark brown to light brown                                                                                                                       |
|                                                                                                                                                                                     | 35         | N = 88/11"      |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | LEAN CLAY (CL), trace Sand and Gravel, light gray to brown, hard, moist                                                                                 |
|                                                                                                                                                                                     | 40         | N = 81          |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | SANDY LEAN CLAY (CL), trace Gravel, brown to reddish brown, hard, moist                                                                                 |
|                                                                                                                                                                                     | 45         | N = 59          |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | LEAN CLAY (CL), trace Sand, gray to light gray, very stiff to hard, moist                                                                               |
|                                                                                                                                                                                     | 50         | N = 30          |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | Grading with Sand, gray to brown, iron stained                                                                                                          |
|                                                                                                                                                                                     | 55         | N = 27          |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | CLAYEY SAND (SC), brown to dark brown, medium dense, moist, fine to coarse grained                                                                      |
|                                                                                                                                                                                     | 60         | N = 40          |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | POORLY-GRADED SAND (SP), brown to light gray, dense, moist, fine to medium grained<br>Total Depth = 60.5 ft.                                            |
| N - STANDARD PENETRATION TEST RESISTANCE<br>P - POCKET PENETROMETER RESISTANCE<br>T - TXDOT CONE PENETRATION RESISTANCE<br>R - ROCK CORE RECOVERY<br>RQD - ROCK QUALITY DESIGNATION |            |                 |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | REMARKS:<br>GPS COORDINATES: Lat. 39.573187, Long. -88.154941                                                                                           |



# LOG OF BORING GEO-25

SHEET 1 of 1



RRC Power & Energy, LLC  
810 Hesters Crossing Rd, Suite 120  
Round Rock, TX 78681  
Telephone: (512) 992-2087

CLIENT: Apex Clean Energy  
PROJECT: Coles Wind Project  
LOCATION: Coles County, IL  
NUMBER: GE2502017

DATE(S) DRILLED: 4/24/2025 - 4/26/2025

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| SOIL SYMBOL                                                                                                                                                                         | FIELD DATA |                  | LABORATORY DATA                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | DRILLING METHOD(S):                                                                                                                                                    |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------------|------------------------------------------------------------|----------------------|------------------|----|----|-----------------------------|------------------------------------------|-----------------------|--------------------------------------|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|                                                                                                                                                                                     | DEPTH (FT) | SAMPLES          | N: BLOWS/FT<br>P: TONS/SQ FT<br>T: BLOWS<br>R: %<br>RQD: % | MOISTURE CONTENT (%) | ATTERBERG LIMITS |    |    | DRY DENSITY<br>POUNDS/CU.FT | COMPRESSIVE<br>STRENGTH<br>(TONS/SQ. FT) | STRAIN AT FAILURE (%) | CONFINING PRESSURE<br>(POUNDS/SQ IN) | MINUS NO. 200 SIEVE (%) | GROUNDWATER INFORMATION:                                                                                                                                               |  |
|                                                                                                                                                                                     |            |                  |                                                            |                      | LL               | PL | PI |                             |                                          |                       |                                      |                         | SURFACE ELEVATION (FT):                                                                                                                                                |  |
|                                                                                                                                                                                     |            |                  |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | DESCRIPTION OF STRATUM                                                                                                                                                 |  |
|                                                                                                                                                                                     | 5          | N = 5<br>N = 7   |                                                            | 18                   | 32               | 17 | 15 |                             |                                          |                       |                                      | 33                      | 12 in. Topsoil<br>CLAYEY SAND (SC), dark brown to reddish brown, loose to very dense, dry to moist, fine grained, iron stained<br>Grading gray to brown<br>Grading wet |  |
|                                                                                                                                                                                     | 10         | N = 4<br>N = 56  |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | Grading fine to medium grained                                                                                                                                         |  |
|                                                                                                                                                                                     | 15         | N = 36<br>N = 80 |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | LEAN CLAY (CL), with Sand, gray to brown, hard, moist                                                                                                                  |  |
|                                                                                                                                                                                     | 20         | N = 84           |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | CLAYEY SAND (SC), light gray to brown, medium dense to very dense, moist, fine to medium grained                                                                       |  |
|                                                                                                                                                                                     | 25         | N = 93/9"        |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         |                                                                                                                                                                        |  |
|                                                                                                                                                                                     | 30         | N = 70           |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         |                                                                                                                                                                        |  |
|                                                                                                                                                                                     | 35         | N = 28           |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | Grading trace Gravel, fine to coarse grained                                                                                                                           |  |
|                                                                                                                                                                                     | 40         | N = 16           |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | SANDY LEAN CLAY (CL), light gray, very stiff, moist                                                                                                                    |  |
|                                                                                                                                                                                     | 45         | N = 24           |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | CLAYEY SAND (SC), brown to dark brown, medium dense, moist, fine to medium grained                                                                                     |  |
|                                                                                                                                                                                     | 50         | N = 17           |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | LEAN CLAY (CL), trace Sand, brown to light gray, very stiff, moist                                                                                                     |  |
|                                                                                                                                                                                     | 55         | N = 83/11"       |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | SANDY LEAN CLAY (CL), trace Gravel, light brown to brown, hard, moist                                                                                                  |  |
|                                                                                                                                                                                     | 60         | N = 50/3"        |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | Total Depth = 60 ft.                                                                                                                                                   |  |
| N - STANDARD PENETRATION TEST RESISTANCE<br>P - POCKET PENETROMETER RESISTANCE<br>T - TXDOT CONE PENETRATION RESISTANCE<br>R - ROCK CORE RECOVERY<br>RQD - ROCK QUALITY DESIGNATION |            |                  |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | REMARKS:<br>GPS COORDINATES: Lat. 39.572765, Long. -88.132383                                                                                                          |  |

# LOG OF BORING GEO-28

SHEET 1 of 1



RRC Power & Energy, LLC  
810 Hesters Crossing Rd, Suite 120  
Round Rock, TX 78681  
Telephone: (512) 992-2087

CLIENT: Apex Clean Energy  
PROJECT: Coles Wind Project  
LOCATION: Coles County, IL  
NUMBER: GE2502017  
DATE(S) DRILLED: 4/30/2025

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| FIELD DATA                                                                                                                                                                          |            | LABORATORY DATA              |                                                            |                      |                  |    |    |                             |                                          |                       |                                      | DRILLING METHOD(S):     |                                                                                                                                                                                                                                                              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------------------------|------------------------------------------------------------|----------------------|------------------|----|----|-----------------------------|------------------------------------------|-----------------------|--------------------------------------|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SOIL SYMBOL                                                                                                                                                                         | DEPTH (FT) | SAMPLES                      | N: BLOWS/FT<br>P: TONS/SQ FT<br>T: BLOWS<br>R: %<br>RQD: % | MOISTURE CONTENT (%) | ATTERBERG LIMITS |    |    | DRY DENSITY<br>POUNDS/CU.FT | COMPRESSIVE<br>STRENGTH<br>(TONS/SQ. FT) | STRAIN AT FAILURE (%) | CONFINING PRESSURE<br>(POUNDS/SQ IN) | MINUS NO. 200 SIEVE (%) | Air Rotary                                                                                                                                                                                                                                                   |
|                                                                                                                                                                                     |            |                              |                                                            |                      | LL               | PL | PI |                             |                                          |                       |                                      |                         | GROUNDWATER INFORMATION:                                                                                                                                                                                                                                     |
|                                                                                                                                                                                     |            |                              |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | Groundwater encountered at 39 ft. during drilling and measured at 54 ft. immediately after drilling                                                                                                                                                          |
|                                                                                                                                                                                     |            |                              |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | SURFACE ELEVATION (FT):                                                                                                                                                                                                                                      |
|                                                                                                                                                                                     |            |                              |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | DESCRIPTION OF STRATUM                                                                                                                                                                                                                                       |
|                                                                                                                                                                                     | 5          | N = 11<br>N = 9<br>N = 11    |                                                            | 13                   |                  |    |    |                             |                                          |                       |                                      |                         | 10 in. Topsoil<br>LEAN CLAY (CL), trace Sand, light brown to light gray, stiff, dry to moist<br>Grading reddish brown to light gray, iron stained<br>Grading gray to brown                                                                                   |
|                                                                                                                                                                                     | 10         | P = 0.75<br>N = 19<br>N = 21 |                                                            | 13                   | 31               | 15 | 16 | 125                         | 3.60                                     | 14.6                  | 7.5                                  | 62                      | SANDY LEAN CLAY (CL), gray to brown, very stiff, dry to moist, iron stained<br>Grading with Gravel<br>Gravel grades out                                                                                                                                      |
|                                                                                                                                                                                     | 20         | N = 23                       |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         |                                                                                                                                                                                                                                                              |
|                                                                                                                                                                                     | 25         | N = 22                       |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | LEAN CLAY (CL), with Sand, light gray, very stiff to hard, dry to moist<br>Grading trace Sand, light gray to brown, iron stained<br>Grading brown to light brown<br>Grading with Sand, wet<br>Grading trace Gravel, light gray to brown<br>Grading with Coal |
|                                                                                                                                                                                     | 30         | N = 24                       |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         |                                                                                                                                                                                                                                                              |
|                                                                                                                                                                                     | 35         | N = 25                       |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         |                                                                                                                                                                                                                                                              |
|                                                                                                                                                                                     | 40         | N = 28                       |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         |                                                                                                                                                                                                                                                              |
|                                                                                                                                                                                     | 45         | N = 46                       |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         |                                                                                                                                                                                                                                                              |
|                                                                                                                                                                                     | 50         | N = 62                       |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         |                                                                                                                                                                                                                                                              |
|                                                                                                                                                                                     | 55         | N = 53                       |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         |                                                                                                                                                                                                                                                              |
|                                                                                                                                                                                     | 60         | N = 63                       |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | Grading dark brown to brown<br>Total Depth = 60.5 ft.                                                                                                                                                                                                        |
| N - STANDARD PENETRATION TEST RESISTANCE<br>P - POCKET PENETROMETER RESISTANCE<br>T - TXDOT CONE PENETRATION RESISTANCE<br>R - ROCK CORE RECOVERY<br>RQD - ROCK QUALITY DESIGNATION |            |                              |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | REMARKS:<br>GPS COORDINATES: Lat. 39.585767, Long. -88.174319                                                                                                                                                                                                |

# LOG OF BORING GEO-32

SHEET 1 of 1



RRC Power & Energy, LLC  
810 Hesters Crossing Rd, Suite 120  
Round Rock, TX 78681  
Telephone: (512) 992-2087

CLIENT: Apex Clean Energy  
PROJECT: Coles Wind Project  
LOCATION: Coles County, IL  
NUMBER: GE2502017  
DATE(S) DRILLED: 5/1/2025

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| FIELD DATA                                                                                                                                                                          |            | LABORATORY DATA |                                                            |                      |                  |    |    |                             |                                          |                       |                                      | DRILLING METHOD(S):     |                                                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----------------|------------------------------------------------------------|----------------------|------------------|----|----|-----------------------------|------------------------------------------|-----------------------|--------------------------------------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SOIL SYMBOL                                                                                                                                                                         | DEPTH (FT) | SAMPLES         | N: BLOWS/FT<br>P: TONS/SQ FT<br>T: BLOWS<br>R: %<br>RQD: % | MOISTURE CONTENT (%) | ATTERBERG LIMITS |    |    | DRY DENSITY<br>POUNDS/CU.FT | COMPRESSIVE<br>STRENGTH<br>(TONS/SQ. FT) | STRAIN AT FAILURE (%) | CONFINING PRESSURE<br>(POUNDS/SQ IN) | MINUS NO. 200 SIEVE (%) | GROUNDWATER INFORMATION:<br>Groundwater encountered at 8 ft. during drilling and measured at 18 ft. immediately after drilling<br><br>SURFACE ELEVATION (FT): |
|                                                                                                                                                                                     |            |                 |                                                            |                      | LL               | PL | PI |                             |                                          |                       |                                      |                         |                                                                                                                                                               |
|                                                                                                                                                                                     |            |                 |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         |                                                                                                                                                               |
|                                                                                                                                                                                     |            |                 |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | DESCRIPTION OF STRATUM                                                                                                                                        |
|                                                                                                                                                                                     |            |                 |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | 12 in. Topsoil                                                                                                                                                |
|                                                                                                                                                                                     | 5          | N = 10          |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | LEAN CLAY (CL), with Sand, light brown to reddish brown, medium stiff to hard, dry to moist, iron stained                                                     |
|                                                                                                                                                                                     |            | N = 7           |                                                            | 22                   | 33               | 15 | 18 |                             |                                          |                       |                                      | 70                      |                                                                                                                                                               |
|                                                                                                                                                                                     |            | N = 19          |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | Grading light gray to reddish brown                                                                                                                           |
|                                                                                                                                                                                     | 10         | P = 2.5         |                                                            | 14                   | 23               | 12 | 11 | 123                         | 2.08                                     | 14.8                  | 7.5                                  | 75                      | Grading wet                                                                                                                                                   |
|                                                                                                                                                                                     |            | N = 40          |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | Grading trace Sand, gray to brown                                                                                                                             |
|                                                                                                                                                                                     | 15         | N = 50          |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | Grading with Sand                                                                                                                                             |
|                                                                                                                                                                                     |            | N = 47          |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | Grading with Gravel                                                                                                                                           |
|                                                                                                                                                                                     | 20         | N = 23          |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         |                                                                                                                                                               |
|                                                                                                                                                                                     | 25         | N = 26          |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         |                                                                                                                                                               |
|                                                                                                                                                                                     | 30         | N = 44          |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | POORLY-GRADED SAND (SP), light gray to dark brown, dense, moist, fine to coarse grained                                                                       |
|                                                                                                                                                                                     | 35         | N = 26          |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | CLAYEY SAND (SC), gray to brown, medium dense, moist, fine to coarse grained                                                                                  |
|                                                                                                                                                                                     | 40         | N = 15          |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | LEAN CLAY (CL), trace Sand, gray to brown, stiff to hard, moist, with occasional Shale fragments                                                              |
|                                                                                                                                                                                     | 45         | N = 15          |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | Grading light gray, iron stained                                                                                                                              |
|                                                                                                                                                                                     | 50         | N = 50/6"       |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | Grading trace Gravel, light gray to brown                                                                                                                     |
|                                                                                                                                                                                     | 55         | N = 50/6"       |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | Grading with Gravel                                                                                                                                           |
|                                                                                                                                                                                     |            |                 |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | Total Depth = 59.5 ft.                                                                                                                                        |
| N - STANDARD PENETRATION TEST RESISTANCE<br>P - POCKET PENETROMETER RESISTANCE<br>T - TXDOT CONE PENETRATION RESISTANCE<br>R - ROCK CORE RECOVERY<br>RQD - ROCK QUALITY DESIGNATION |            |                 |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                         | REMARKS:<br>GPS COORDINATES: Lat. 39.591143, Long. -88.120681                                                                                                 |

# LOG OF BORING OM-1

SHEET 1 of 1



RRC Power & Energy, LLC  
810 Hesters Crossing Rd, Suite 120  
Round Rock, TX 78681  
Telephone: (512) 992-2087

CLIENT: Apex Clean Energy  
PROJECT: Coles Wind Project  
LOCATION: Coles County, IL  
NUMBER: GE2502017  
DATE(S) DRILLED: 4/29/2025

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| FIELD DATA                                                                                                                                                                          |            |         |                                                            | LABORATORY DATA      |                    |                     |                        |                             |                                          |                       |                                      | DRILLING METHOD(S):                                                                                    |                                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|---------|------------------------------------------------------------|----------------------|--------------------|---------------------|------------------------|-----------------------------|------------------------------------------|-----------------------|--------------------------------------|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| SOIL SYMBOL                                                                                                                                                                         | DEPTH (FT) | SAMPLES | N: BLOWS/FT<br>P: TONS/SQ FT<br>T: BLOWS<br>R: %<br>RQD: % | MOISTURE CONTENT (%) | ATTERBERG LIMITS   |                     |                        | DRY DENSITY<br>POUNDS/CU.FT | COMPRESSIVE<br>STRENGTH<br>(TONS/SQ. FT) | STRAIN AT FAILURE (%) | CONFINING PRESSURE<br>(POUNDS/SQ IN) | MINUS NO. 200 SIEVE (%)                                                                                | DRILLING METHOD(S):                                                                                                             |
|                                                                                                                                                                                     |            |         |                                                            |                      | LIQUID LIMIT<br>LL | PLASTIC LIMIT<br>PL | PLASTICITY INDEX<br>PI |                             |                                          |                       |                                      |                                                                                                        | Air Rotary                                                                                                                      |
|                                                                                                                                                                                     |            |         |                                                            |                      |                    |                     |                        |                             |                                          |                       |                                      |                                                                                                        | GROUNDWATER INFORMATION:<br>Groundwater encountered at 12 ft. during drilling and measured at 16 ft. immediately after drilling |
| SURFACE ELEVATION (FT):                                                                                                                                                             |            |         |                                                            |                      |                    |                     |                        |                             |                                          |                       |                                      |                                                                                                        | DESCRIPTION OF STRATUM                                                                                                          |
|                                                                                                                                                                                     |            |         |                                                            |                      |                    |                     |                        |                             |                                          |                       |                                      |                                                                                                        |                                                                                                                                 |
|                                                                                                                                                                                     |            | N = 10  |                                                            |                      |                    |                     |                        |                             |                                          |                       |                                      | 3 in. Topsoil<br>LEAN CLAY (CL), trace Sand, reddish brown to brown, stiff, dry to moist, iron stained |                                                                                                                                 |
|                                                                                                                                                                                     | 5          |         | P = 2.75                                                   | 18                   | 23                 | 12                  | 11                     | 114                         | 1.47                                     | 14.8                  | 2.5                                  | 58                                                                                                     | SANDY LEAN CLAY (CL), reddish brown to brown, stiff to hard, dry to moist, iron stained                                         |
|                                                                                                                                                                                     |            |         | N = 24                                                     |                      |                    |                     |                        |                             |                                          |                       |                                      |                                                                                                        |                                                                                                                                 |
|                                                                                                                                                                                     | 10         |         | N = 33                                                     | 12                   |                    |                     |                        |                             |                                          |                       |                                      |                                                                                                        |                                                                                                                                 |
|                                                                                                                                                                                     |            |         | N = 32                                                     |                      |                    |                     |                        |                             |                                          |                       |                                      |                                                                                                        | LEAN CLAY (CL), with Sand, gray to reddish brown, very stiff to hard, wet, iron stained                                         |
|                                                                                                                                                                                     | 15         |         | N = 29                                                     |                      |                    |                     |                        |                             |                                          |                       |                                      |                                                                                                        | Grading trace Sand, light gray                                                                                                  |
|                                                                                                                                                                                     |            |         | N = 22                                                     |                      |                    |                     |                        |                             |                                          |                       |                                      |                                                                                                        |                                                                                                                                 |
| 20                                                                                                                                                                                  |            |         |                                                            |                      |                    |                     |                        |                             |                                          |                       |                                      |                                                                                                        |                                                                                                                                 |
|                                                                                                                                                                                     |            | N = 20  |                                                            |                      |                    |                     |                        |                             |                                          |                       |                                      |                                                                                                        |                                                                                                                                 |
| 25                                                                                                                                                                                  |            |         |                                                            |                      |                    |                     |                        |                             |                                          |                       |                                      |                                                                                                        |                                                                                                                                 |
|                                                                                                                                                                                     |            |         |                                                            |                      |                    |                     |                        |                             |                                          |                       |                                      |                                                                                                        | Total Depth = 25.5 ft.                                                                                                          |
| N - STANDARD PENETRATION TEST RESISTANCE<br>P - POCKET PENETROMETER RESISTANCE<br>T - TXDOT CONE PENETRATION RESISTANCE<br>R - ROCK CORE RECOVERY<br>RQD - ROCK QUALITY DESIGNATION |            |         |                                                            |                      |                    |                     |                        |                             |                                          |                       |                                      |                                                                                                        | REMARKS:<br>GPS COORDINATES: Lat. 39.637191, Long. -88.175591                                                                   |



# LOG OF BORING OM-2

SHEET 1 of 1



RRC Power & Energy, LLC  
810 Hesters Crossing Rd, Suite 120  
Round Rock, TX 78681  
Telephone: (512) 992-2087

CLIENT: Apex Clean Energy  
PROJECT: Coles Wind Project  
LOCATION: Coles County, IL  
NUMBER: GE2502017  
DATE(S) DRILLED: 4/29/2025

## FIELD DATA

## LABORATORY DATA

## DRILLING METHOD(S):

Air Rotary

## GROUNDWATER INFORMATION:

Groundwater encountered at 10 ft. during drilling and measured at 16 ft. immediately after drilling

## SURFACE ELEVATION (FT):

## DESCRIPTION OF STRATUM

3 in. Topsoil  
LEAN CLAY (CL), trace Sand, brown to reddish brown, medium stiff to stiff, dry to moist, iron stained

SANDY LEAN CLAY (CL), brown to reddish brown, stiff to very stiff, dry to moist, iron stained

Grading wet

LEAN CLAY (CL), trace Sand, light gray to brown, very stiff to hard, wet, iron stained

Total Depth = 25.5 ft.

N - STANDARD PENETRATION TEST RESISTANCE  
P - POCKET PENETROMETER RESISTANCE  
T - TXDOT CONE PENETRATION RESISTANCE  
R - ROCK CORE RECOVERY  
RQD - ROCK QUALITY DESIGNATION

## REMARKS:

GPS COORDINATES: Lat. 39.636144, Long. -88.175548

# LOG OF TEST PIT TR-1a

SHEET 1 of 1



RRC Power & Energy, LLC  
810 Hesters Crossing Rd, Suite 120  
Round Rock, TX 78681  
Telephone: (512) 992-2087

CLIENT: Apex Clean Energy  
PROJECT: Coles Wind Project  
LOCATION: Coles County, IL  
NUMBER: GE2502017  
DATE(S) EXCAVATED: 4/16/25

RENEWABLE LOG - TEST PIT - LOG-A GNNL01.GDT - 6/3/25 13:56 - C:\USERS\CHRISTIAN\IRAND\AIRRC COMPANIES\GEOTECHNICAL ENGINEERING - DATABASES\03.GINT\PROJECTS\2025\COLES WIND-GE2502017\COLES WIND-GE2502017.GPJ

| FIELD DATA                                                                                                                                                                                     |            | LABORATORY DATA |                                                            |                      |                  |    |    |                             |                                          |                       |                                      | EXCAVATION METHOD(S):<br>Excavator |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----------------|------------------------------------------------------------|----------------------|------------------|----|----|-----------------------------|------------------------------------------|-----------------------|--------------------------------------|------------------------------------|--|
| SOIL SYMBOL                                                                                                                                                                                    | DEPTH (FT) | SAMPLES         | N: BLOWS/FT<br>P: TONS/SQ FT<br>T: BLOWS<br>R: %<br>RQD: % | MOISTURE CONTENT (%) | ATTERBERG LIMITS |    |    | DRY DENSITY<br>POUNDS/CU.FT | COMPRESSIVE<br>STRENGTH<br>(TONS/SQ. FT) | STRAIN AT FAILURE (%) | CONFINING PRESSURE<br>(POUNDS/SQ IN) | MINUS NO. 200 SIEVE (%)            |  |
|                                                                                                                                                                                                |            |                 |                                                            |                      | LL               | PL | PI |                             |                                          |                       |                                      |                                    |  |
|                                                                                                                                                                                                | 1          | P = 1.75        |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                                    |  |
|                                                                                                                                                                                                | 2          | P = 1.75        |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                                    |  |
|                                                                                                                                                                                                | 3          | P = 2.0         |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                                    |  |
|                                                                                                                                                                                                | 4          | P = 2.5         |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                                    |  |
|                                                                                                                                                                                                | 5          |                 |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                                    |  |
|                                                                                                                                                                                                |            |                 |                                                            | 27                   | 47               | 18 | 29 |                             |                                          |                       |                                      | 89                                 |  |
|                                                                                                                                                                                                |            |                 |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                                    |  |
| 6 in. Topsoil<br>SANDY LEAN CLAY (CL), brown, stiff, dry to moist<br>LEAN CLAY (CL), trace Sand, gray, stiff to very stiff, dry to moist, iron stained<br>Grading wet<br>Total Depth = 5.5 ft. |            |                 |                                                            |                      |                  |    |    |                             |                                          |                       |                                      |                                    |  |

N - STANDARD PENETRATION TEST RESISTANCE  
P - POCKET PENETROMETER RESISTANCE  
T - TXDOT CONE PENETRATION RESISTANCE  
R - ROCK CORE RECOVERY  
RQD - ROCK QUALITY DESIGNATION

REMARKS:  
GPS COORDINATES: Lat. 39.616331, Long. -88.208044

# LOG OF TEST PIT TR-2

SHEET 1 of 1

RENEWABLE LOG - TEST PIT - LOG-A GNNL01.GDT - 6/3/25 13:56 - C:\USERS\CHRISTIAN\IRAND\AIRRC COMPANIES\GEOTECHNICAL ENGINEERING - DATABASES\03.GINT\PROJECTS\2025\COLES WIND-GE2502017\COLES WIND-GE2502017.GPJ



RRC Power & Energy, LLC  
810 Hesters Crossing Rd, Suite 120  
Round Rock, TX 78681  
Telephone: (512) 992-2087

CLIENT: Apex Clean Energy  
PROJECT: Coles Wind Project  
LOCATION: Coles County, IL  
NUMBER: GE2502017  
DATE(S) EXCAVATED: 4/16/25

| FIELD DATA                                                                                                                                                                          |            | LABORATORY DATA |                                                            |                      |                  |               |                  |                             |                                          |                       |                                      | EXCAVATION METHOD(S):   |                                                                                                                              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----------------|------------------------------------------------------------|----------------------|------------------|---------------|------------------|-----------------------------|------------------------------------------|-----------------------|--------------------------------------|-------------------------|------------------------------------------------------------------------------------------------------------------------------|
| SOIL SYMBOL                                                                                                                                                                         | DEPTH (FT) | SAMPLES         | N: BLOWS/FT<br>P: TONS/SQ FT<br>T: BLOWS<br>R: %<br>RQD: % | MOISTURE CONTENT (%) | ATTERBERG LIMITS |               |                  | DRY DENSITY<br>POUNDS/CU.FT | COMPRESSIVE<br>STRENGTH<br>(TONS/SQ. FT) | STRAIN AT FAILURE (%) | CONFINING PRESSURE<br>(POUNDS/SQ IN) | MINUS NO. 200 SIEVE (%) | Excavator                                                                                                                    |
|                                                                                                                                                                                     |            |                 |                                                            |                      | LIQUID LIMIT     | PLASTIC LIMIT | PLASTICITY INDEX |                             |                                          |                       |                                      |                         | GROUNDWATER INFORMATION:<br>Groundwater encountered at 4 ft. during excavation and not measured immediately after excavation |
|                                                                                                                                                                                     |            |                 |                                                            |                      |                  |               |                  |                             |                                          |                       |                                      |                         |                                                                                                                              |
| DESCRIPTION OF STRATUM                                                                                                                                                              |            |                 |                                                            |                      |                  |               |                  |                             |                                          |                       |                                      |                         |                                                                                                                              |
|                                                                                                                                                                                     | 1          | P = 1.75        |                                                            |                      |                  |               |                  |                             |                                          |                       |                                      |                         | 5 in. Topsoil                                                                                                                |
|                                                                                                                                                                                     | 2          | P = 2.0         |                                                            |                      |                  |               |                  |                             |                                          |                       |                                      |                         | SANDY LEAN CLAY (CL), brown, stiff, dry to moist                                                                             |
|                                                                                                                                                                                     | 3          | P = 2.25        |                                                            |                      |                  |               |                  |                             |                                          |                       |                                      |                         | LEAN CLAY (CL), trace Sand, gray, stiff to very stiff, dry to moist                                                          |
|                                                                                                                                                                                     | 4          | P = 2.5         | 25                                                         | 47                   | 18               | 29            |                  |                             |                                          |                       |                                      | 93                      | Grading gray to brown                                                                                                        |
|                                                                                                                                                                                     | 5          |                 |                                                            |                      |                  |               |                  |                             |                                          |                       |                                      |                         | Grading wet                                                                                                                  |
|                                                                                                                                                                                     |            |                 |                                                            |                      |                  |               |                  |                             |                                          |                       |                                      |                         | Total Depth = 5 ft.                                                                                                          |
| N - STANDARD PENETRATION TEST RESISTANCE<br>P - POCKET PENETROMETER RESISTANCE<br>T - TXDOT CONE PENETRATION RESISTANCE<br>R - ROCK CORE RECOVERY<br>RQD - ROCK QUALITY DESIGNATION |            |                 |                                                            |                      |                  |               |                  |                             |                                          |                       |                                      |                         | REMARKS:<br>GPS COORDINATES: Lat. 39.569814, Long. -88.152125                                                                |

## Summary of CPT Correlation Equations and Formulas

Presented below is a list of formulas used for the estimation of various soil properties. The formulas are presented in SI unit system and assume that all components are expressed in the same units.

### :: Unit Weight, $g$ (kN/m<sup>3</sup>) ::

$$g = g_w \cdot \left( 0.27 \cdot \log(R_f) + 0.36 \cdot \log\left(\frac{q_t}{p_a}\right) + 1.236 \right)$$

where  $g_w$  = water unit weight

### :: Permeability, $k$ (m/s) ::

$$I_c < 3.27 \text{ and } I_c > 1.00 \text{ then } k = 10^{0.952 - 3.04 \cdot I_c}$$

$$I_c \leq 4.00 \text{ and } I_c > 3.27 \text{ then } k = 10^{-4.52 - 1.37 \cdot I_c}$$

### :: $N_{SPT}$ (blows per 30 cm) ::

$$N_{60} = \left( \frac{q_c}{p_a} \right) \cdot \frac{1}{10^{1.1268 - 0.2817 \cdot I_c}}$$

$$N_{1(60)} = Q_{tn} \cdot \frac{1}{10^{1.1268 - 0.2817 \cdot I_c}}$$

### :: Young's Modulus, $E_s$ (MPa) ::

$$(q_t - \sigma_v) \cdot 0.015 \cdot 10^{0.55 \cdot I_c + 1.68}$$

(applicable only to  $I_c < I_{c\_cutoff}$ )

### :: Relative Density, $Dr$ (%) ::

$$100 \cdot \sqrt{\frac{Q_{tn}}{k_{DR}}} \quad \text{(applicable only to } SBT_n: 5, 6, 7 \text{ and } 8 \text{ or } I_c < I_{c\_cutoff})$$

### :: State Parameter, $\psi$ ::

$$\psi = 0.56 - 0.33 \cdot \log(Q_{tn,cs})$$

### :: Peak drained friction angle, $\phi$ (°) ::

$$\phi = 17.60 + 11 \cdot \log(Q_{tn})$$

(applicable only to  $SBT_n: 5, 6, 7 \text{ and } 8$ )

### :: 1-D constrained modulus, $M$ (MPa) ::

If  $I_c > 2.20$   
 $\alpha = 14$  for  $Q_{tn} > 14$   
 $\alpha = Q_{tn}$  for  $Q_{tn} \leq 14$   
 $M_{CPT} = \alpha \cdot (q_t - \sigma_v)$

If  $I_c \leq 2.20$   
 $M_{CPT} = (q_t - \sigma_v) \cdot 0.0188 \cdot 10^{0.55 \cdot I_c + 1.68}$

### :: Small strain shear Modulus, $G_0$ (MPa) ::

$$G_0 = (q_t - \sigma_v) \cdot 0.0188 \cdot 10^{0.55 \cdot I_c + 1.68}$$

### :: Shear Wave Velocity, $V_s$ (m/s) ::

$$V_s = \left( \frac{G_0}{\rho} \right)^{0.50}$$

### :: Undrained peak shear strength, $S_u$ (kPa) ::

$$N_{kt} = 10.50 + 7 \cdot \log(F_r) \text{ or user defined}$$

$$S_u = \frac{(q_t - \sigma_v)}{N_{kt}}$$

(applicable only to  $SBT_n: 1, 2, 3, 4 \text{ and } 9$  or  $I_c > I_{c\_cutoff}$ )

### :: Remolded undrained shear strength, $S_u(rem)$ (kPa) ::

$$S_{u(rem)} = f_s \quad \text{(applicable only to } SBT_n: 1, 2, 3, 4 \text{ and } 9 \text{ or } I_c > I_{c\_cutoff})$$

### :: Overconsolidation Ratio, OCR ::

$$k_{OCR} = \left[ \frac{Q_{tn}^{0.20}}{0.25 \cdot (10.50 + 7 \cdot \log(F_r))} \right]^{1.25} \text{ or user defined}$$

$$OCR = k_{OCR} \cdot Q_{tn}$$

(applicable only to  $SBT_n: 1, 2, 3, 4 \text{ and } 9$  or  $I_c > I_{c\_cutoff}$ )

### :: In situ Stress Ratio, $K_0$ ::

$$K_0 = (1 - \sin \phi') \cdot OCR^{\sin \phi'}$$

(applicable only to  $SBT_n: 1, 2, 3, 4 \text{ and } 9$  or  $I_c > I_{c\_cutoff}$ )

### :: Soil Sensitivity, $S_t$ ::

$$S_t = \frac{N_s}{F_r}$$

(applicable only to  $SBT_n: 1, 2, 3, 4 \text{ and } 9$  or  $I_c > I_{c\_cutoff}$ )

### :: Effective Stress Friction Angle, $\phi'$ (°) ::

$$\phi' = 29.5^\circ \cdot B_q^{0.121} \cdot (0.256 + 0.336 \cdot B_q + \log Q_t)$$

(applicable for  $0.10 < B_q < 1.00$ )

## SBT legend

|                                                                                     |                           |                                                                                     |                              |                                                                                     |                                   |
|-------------------------------------------------------------------------------------|---------------------------|-------------------------------------------------------------------------------------|------------------------------|-------------------------------------------------------------------------------------|-----------------------------------|
|  | 1. Sensitive fine grained |  | 4. Clayey silt to silty clay |  | 7. Gravely sand to sand           |
|  | 2. Organic material       |  | 5. Silty sand to sandy silt  |  | 8. Very stiff sand to clayey sand |
|  | 3. Clay to silty clay     |  | 6. Clean sand to silty sand  |  | 9. Very stiff fine grained        |

## References

- Robertson, P.K., Cabal K.L., Guide to Cone Penetration Testing for Geotechnical Engineering, Gregg Drilling & Testing, Inc., 5<sup>th</sup> Edition, November 2012
- Robertson, P.K., Interpretation of Cone Penetration Tests - a unified approach., Can. Geotech. J. 46(11): 1337–1355 (2009)

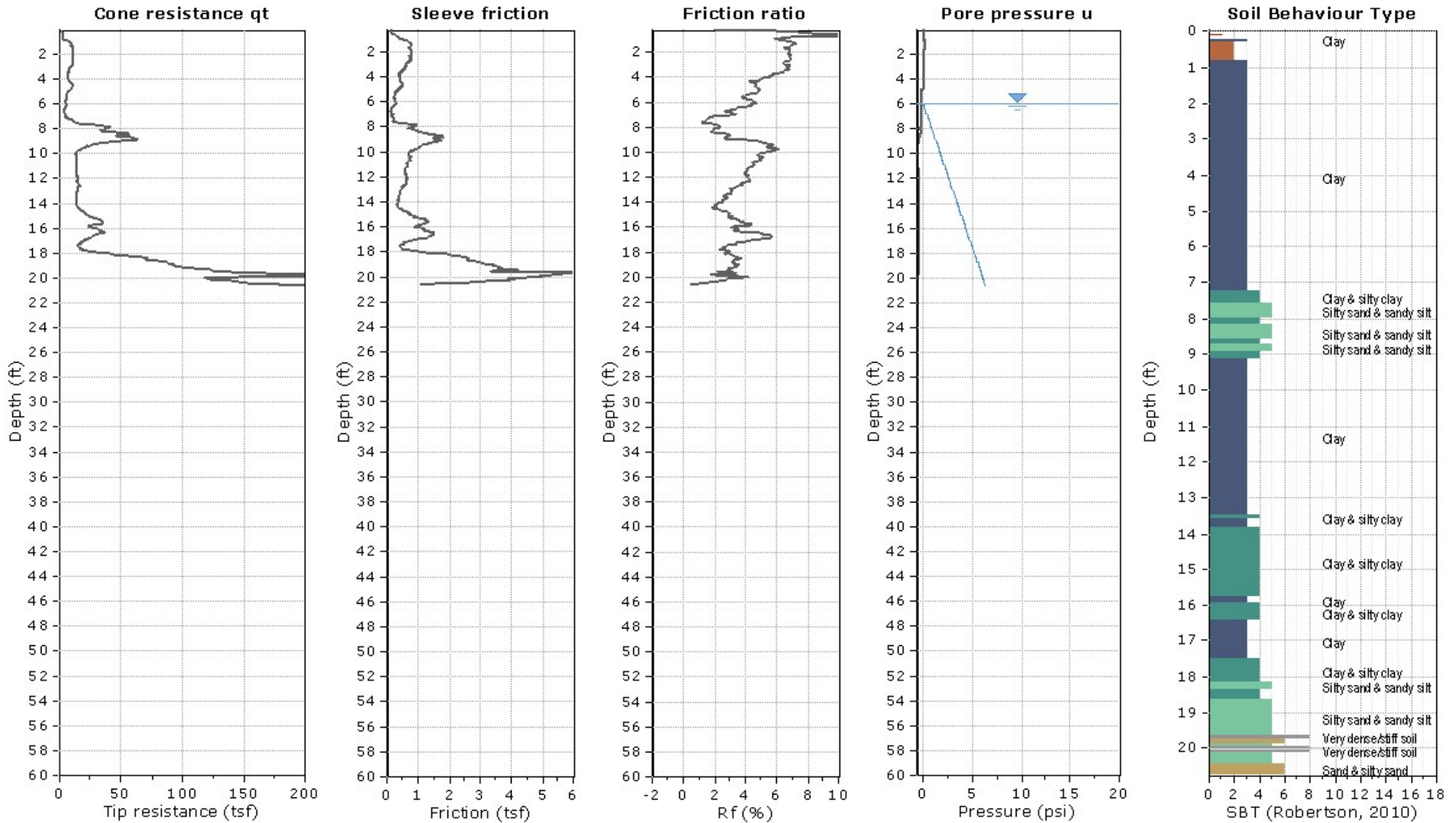




**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-01**

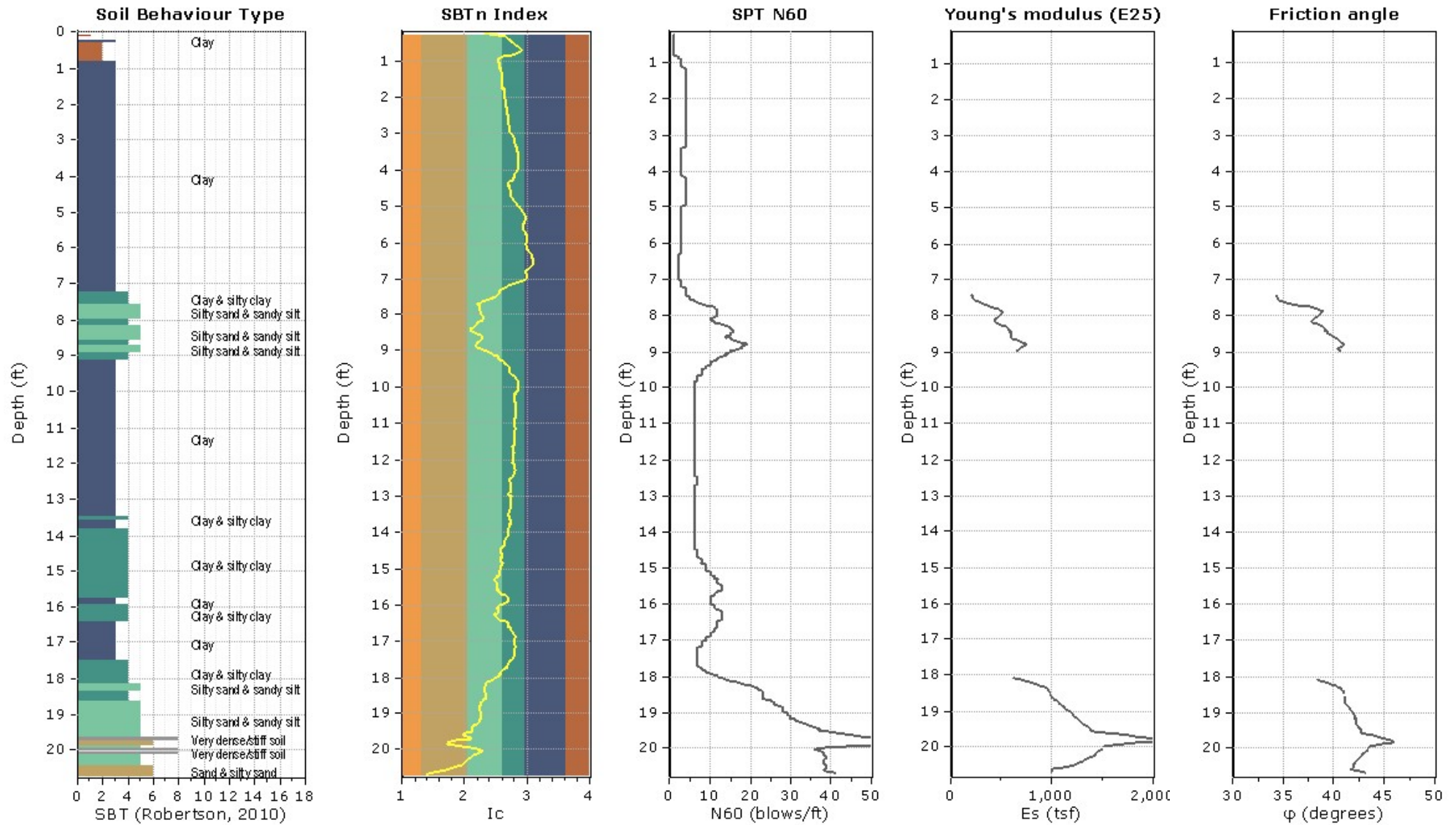
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Coords: lat 39.574644° lon -88.148535°  
Cone Type: cpt  
Cone Operator: Fugro





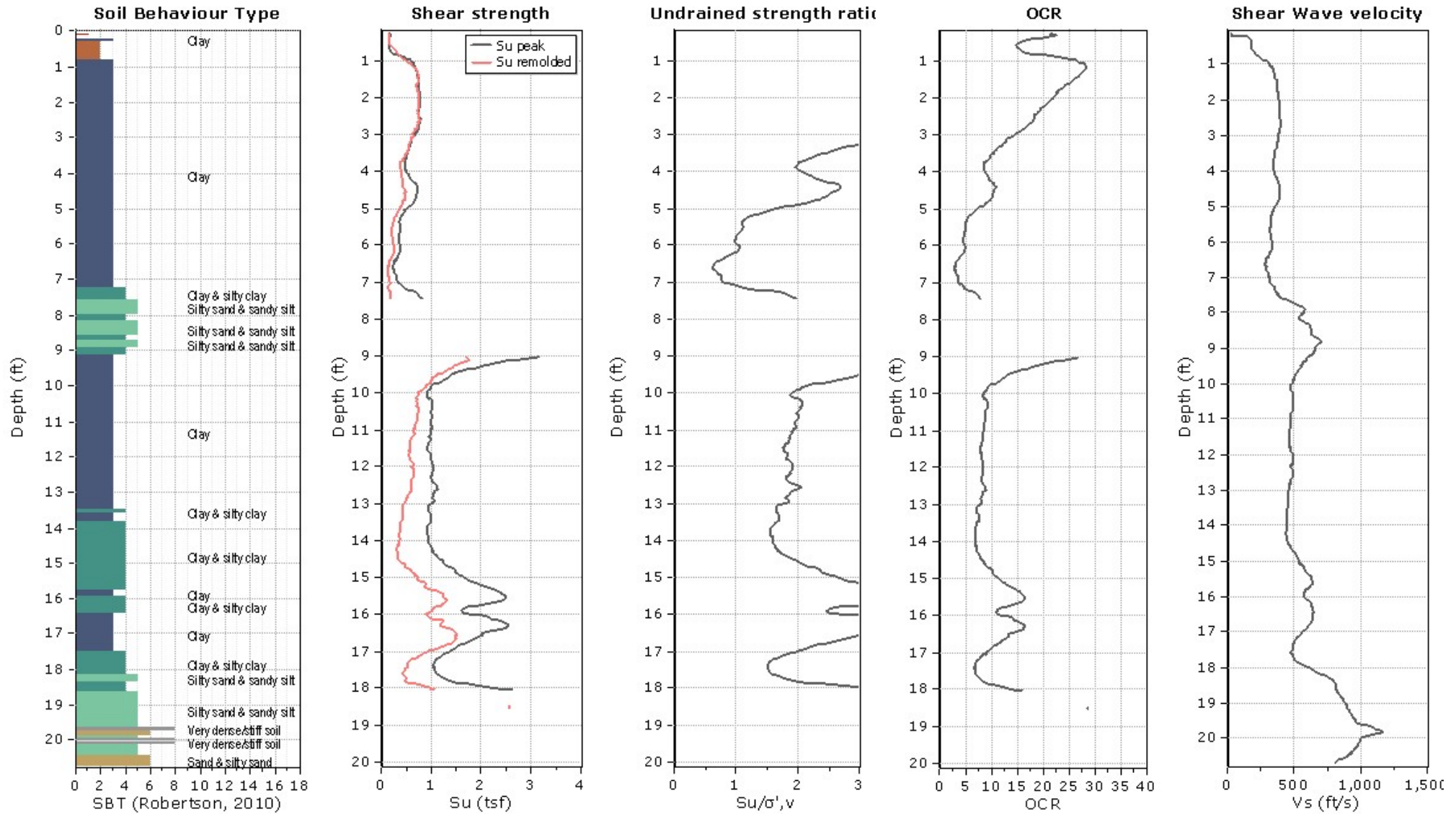
**Project:** Coles Wind

**Location:** Coles County, Illinois





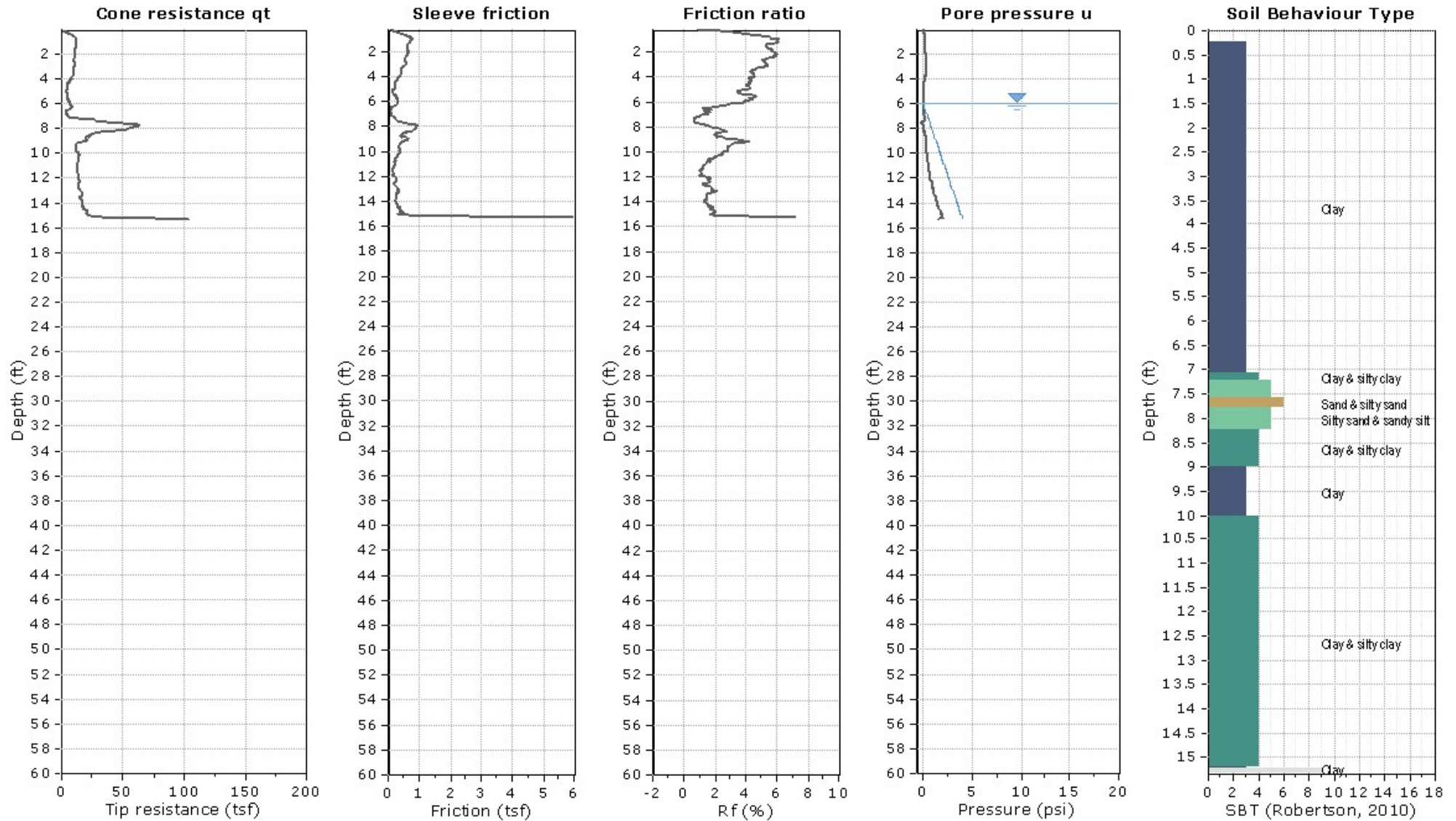
**Project:** Coles Wind  
**Location:** Coles County, Illinois







**Project:** Coles Wind  
**Location:** Coles County, Illinois

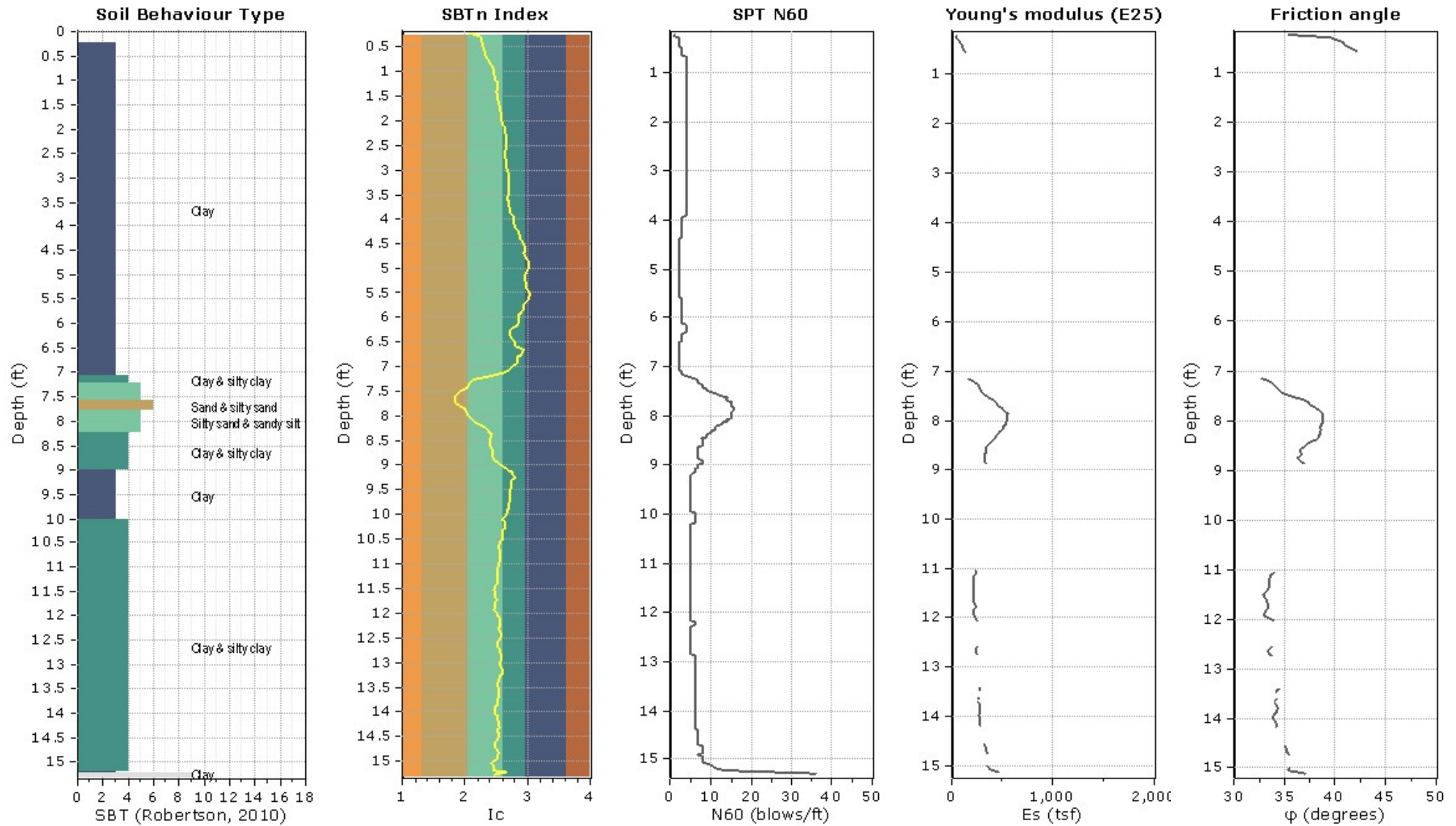






**Project:** Coles Wind

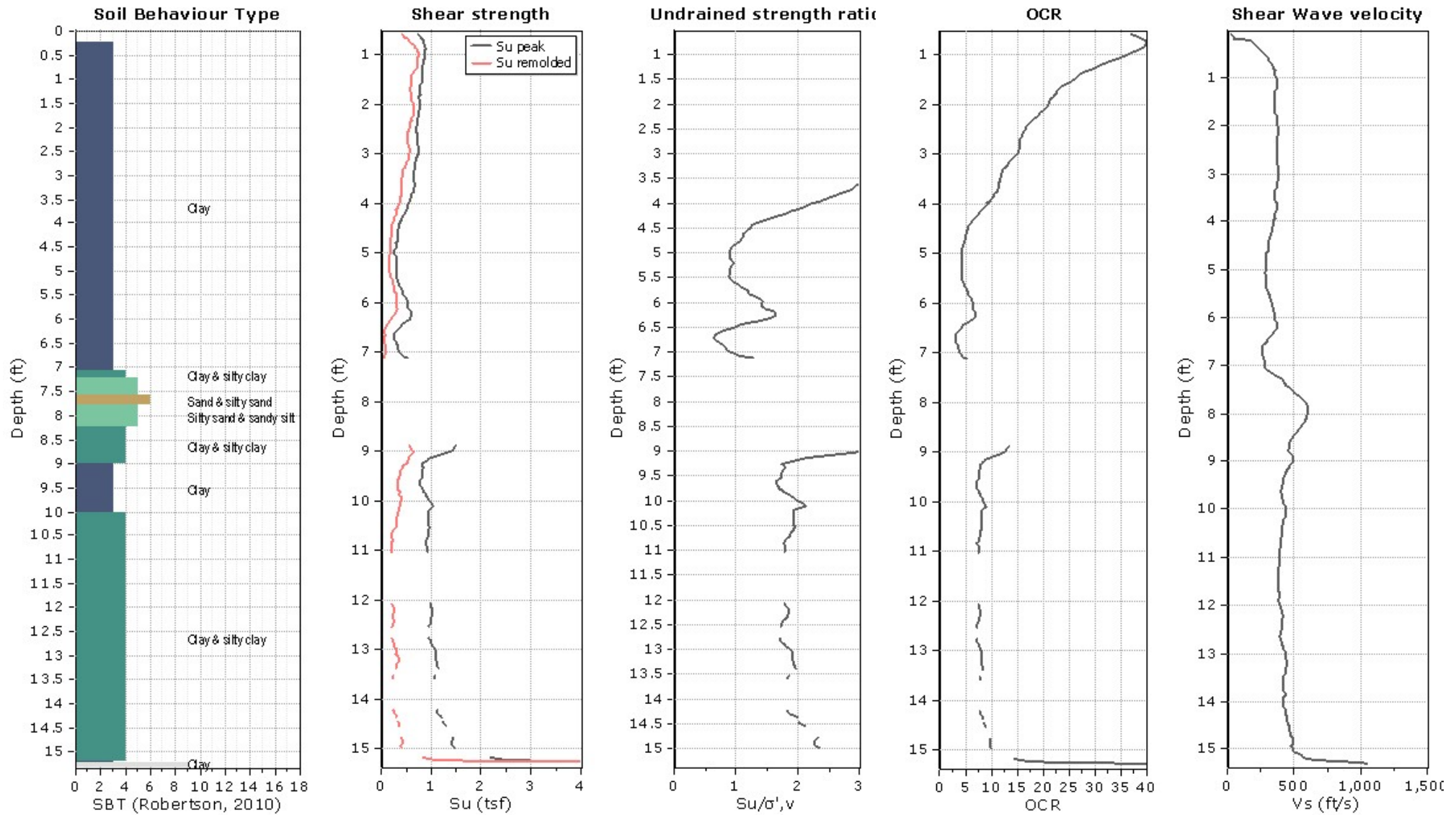
**Location:** Coles County, Illinois





**Project: Coles Wind**

**Location: Coles County, Illinois**



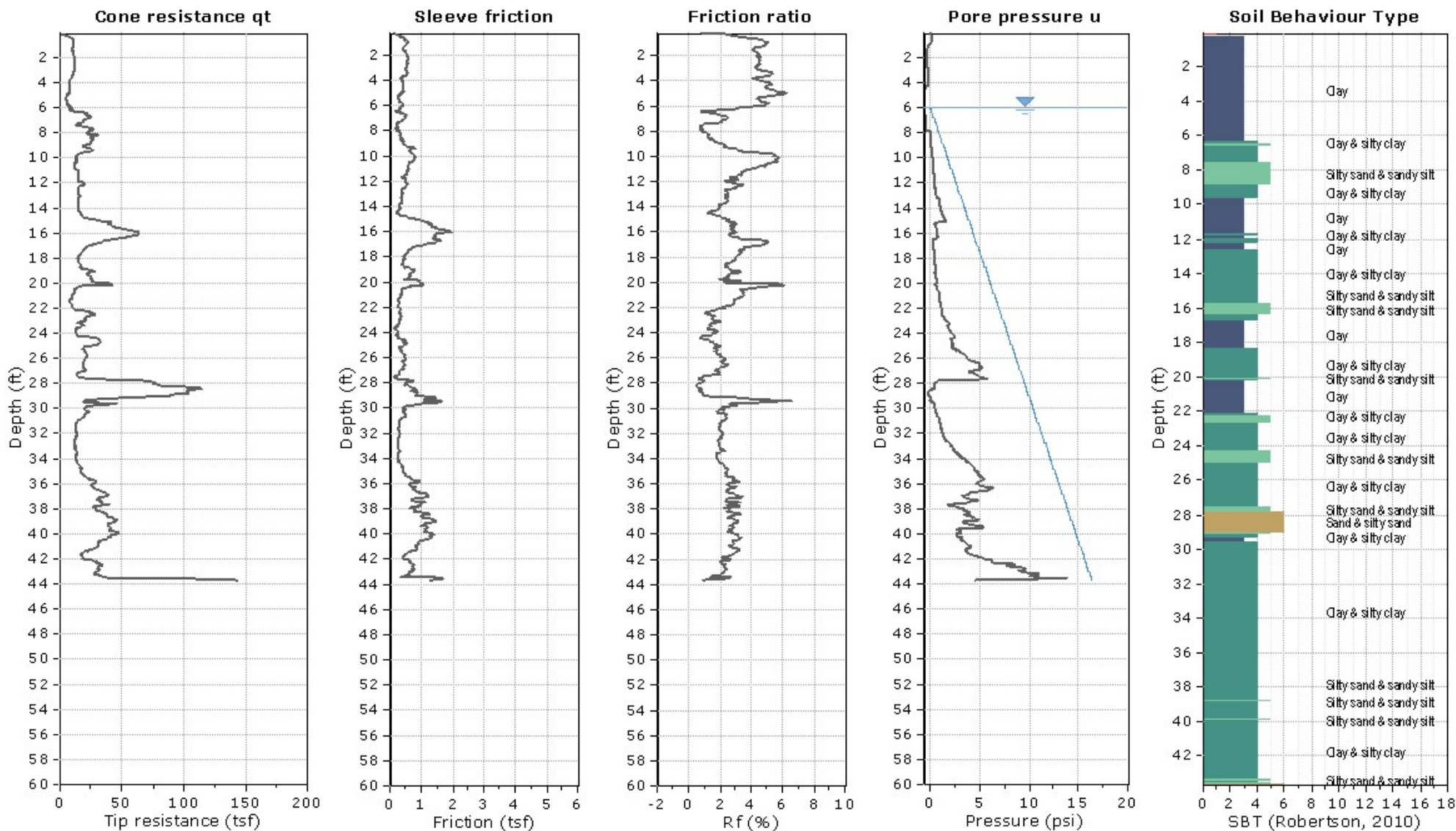


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-01B**

Total depth: 43.70 ft, Date: 4/1/2025  
Coords: lat 39.574644° lon -88.148535°  
Cone Type: CPT  
Cone Operator: Fugro





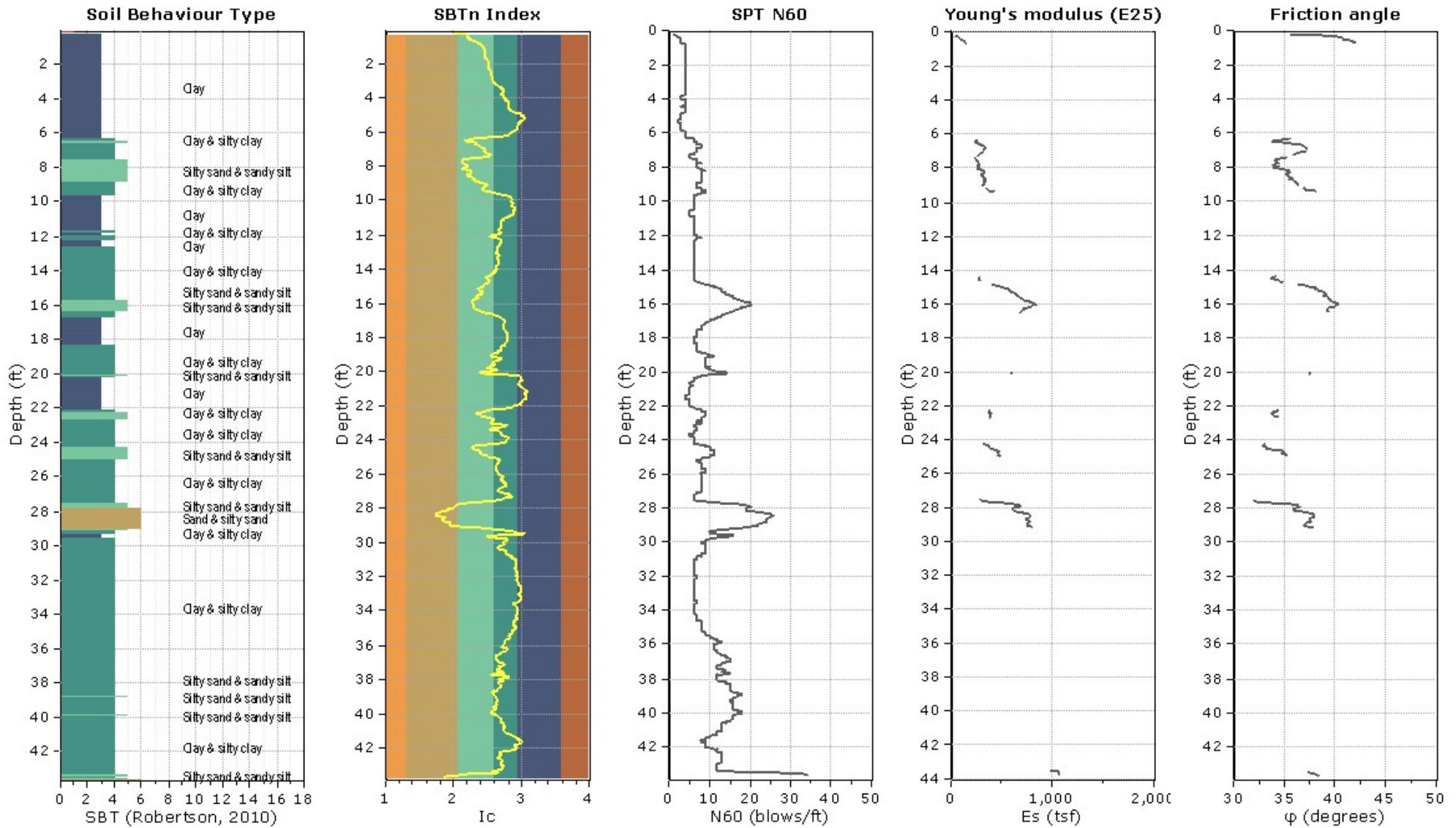


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**CPT: GEO-01B**

Total depth: 43.70 ft, Date: 4/1/2025  
Coords: lat 39.574644° lon -88.148535°  
Cone Type: CPT  
Cone Operator: Fugro

**Project:** Coles Wind  
**Location:** Coles County, Illinois





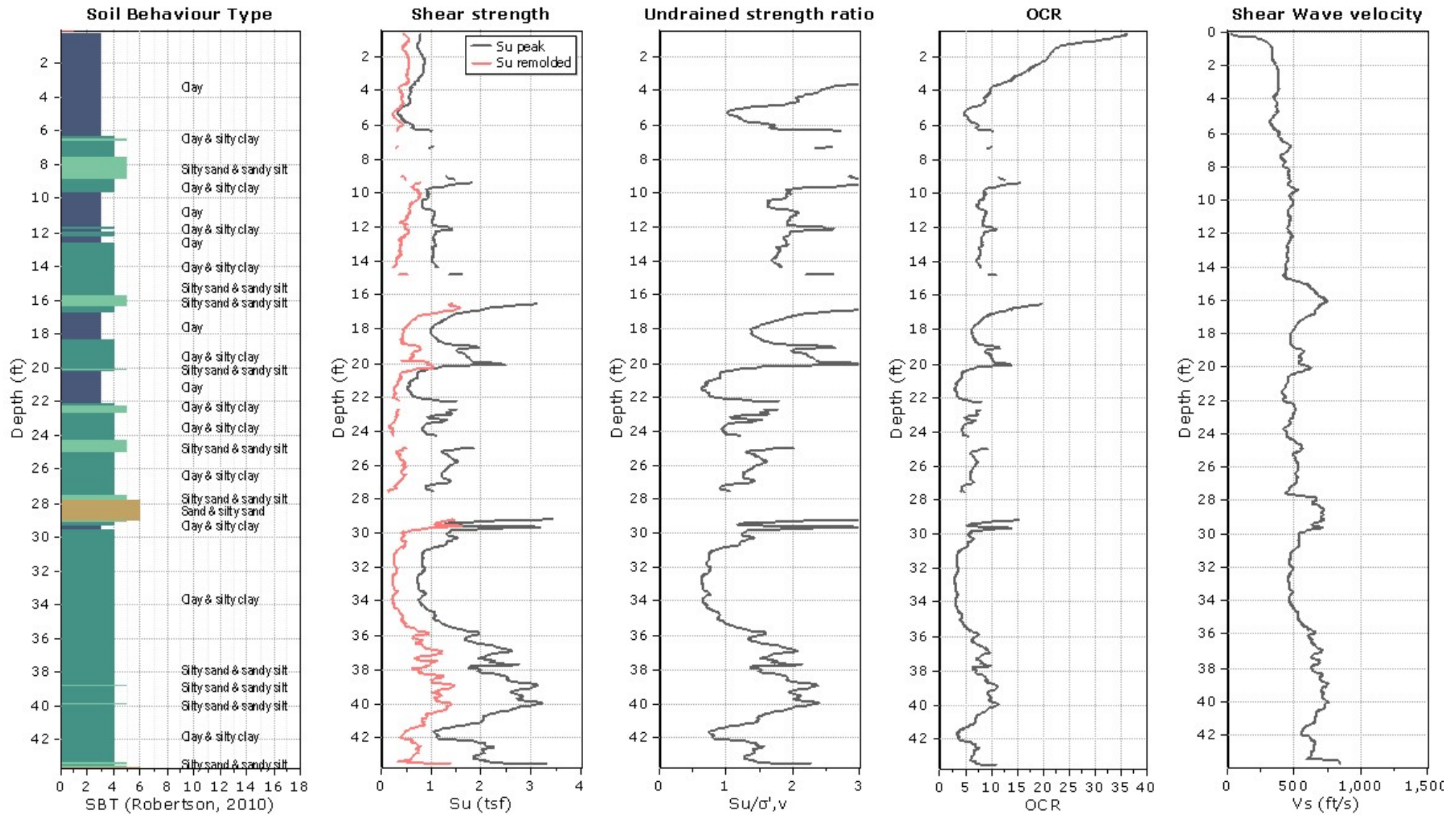


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**CPT: GEO-01B**

Total depth: 43.70 ft, Date: 4/1/2025  
Coords: lat 39.574644° lon -88.148535°  
Cone Type: CPT  
Cone Operator: Fugro

**Project: Coles Wind**  
**Location: Coles County, Illinois**

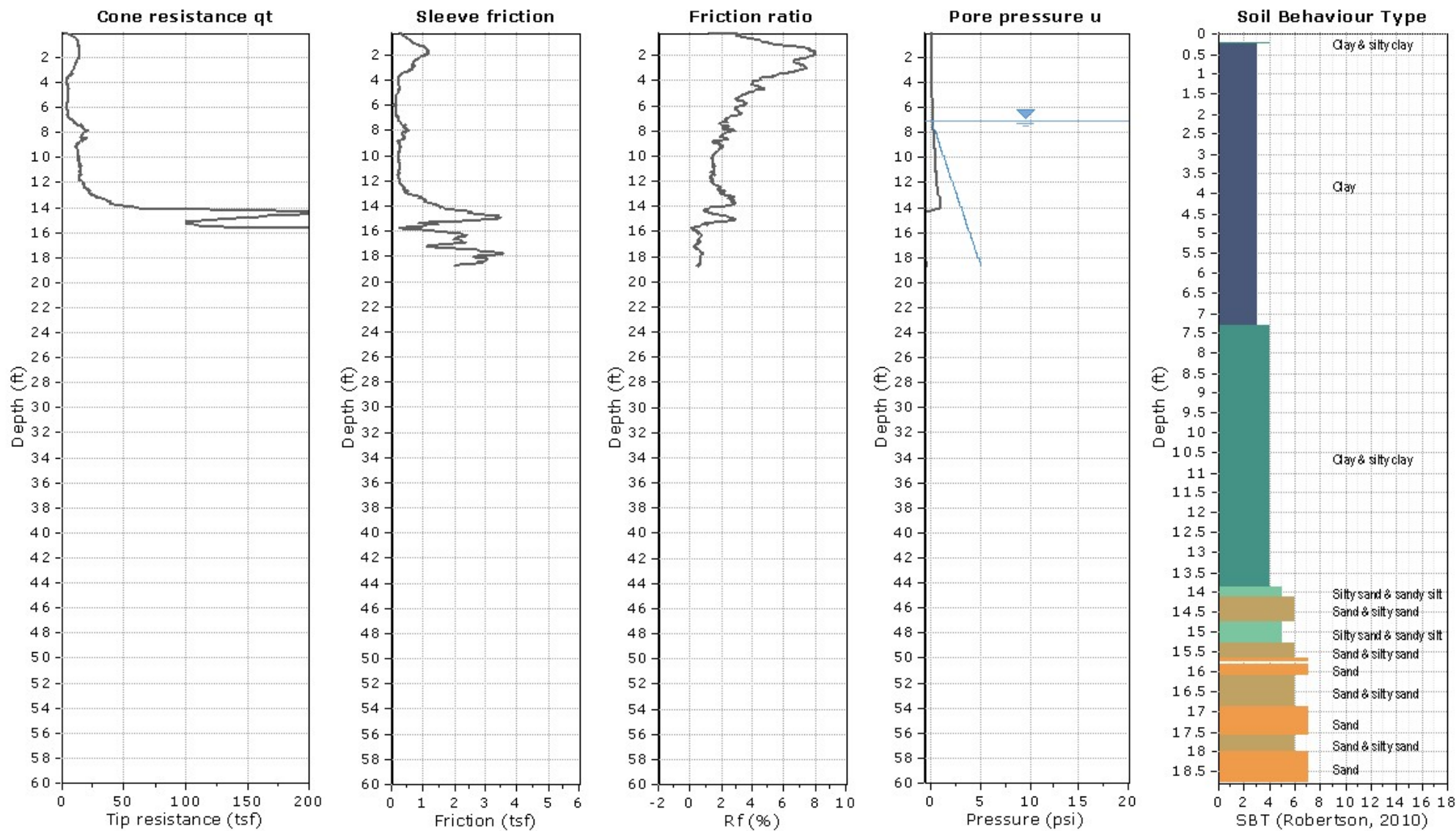




**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-02**

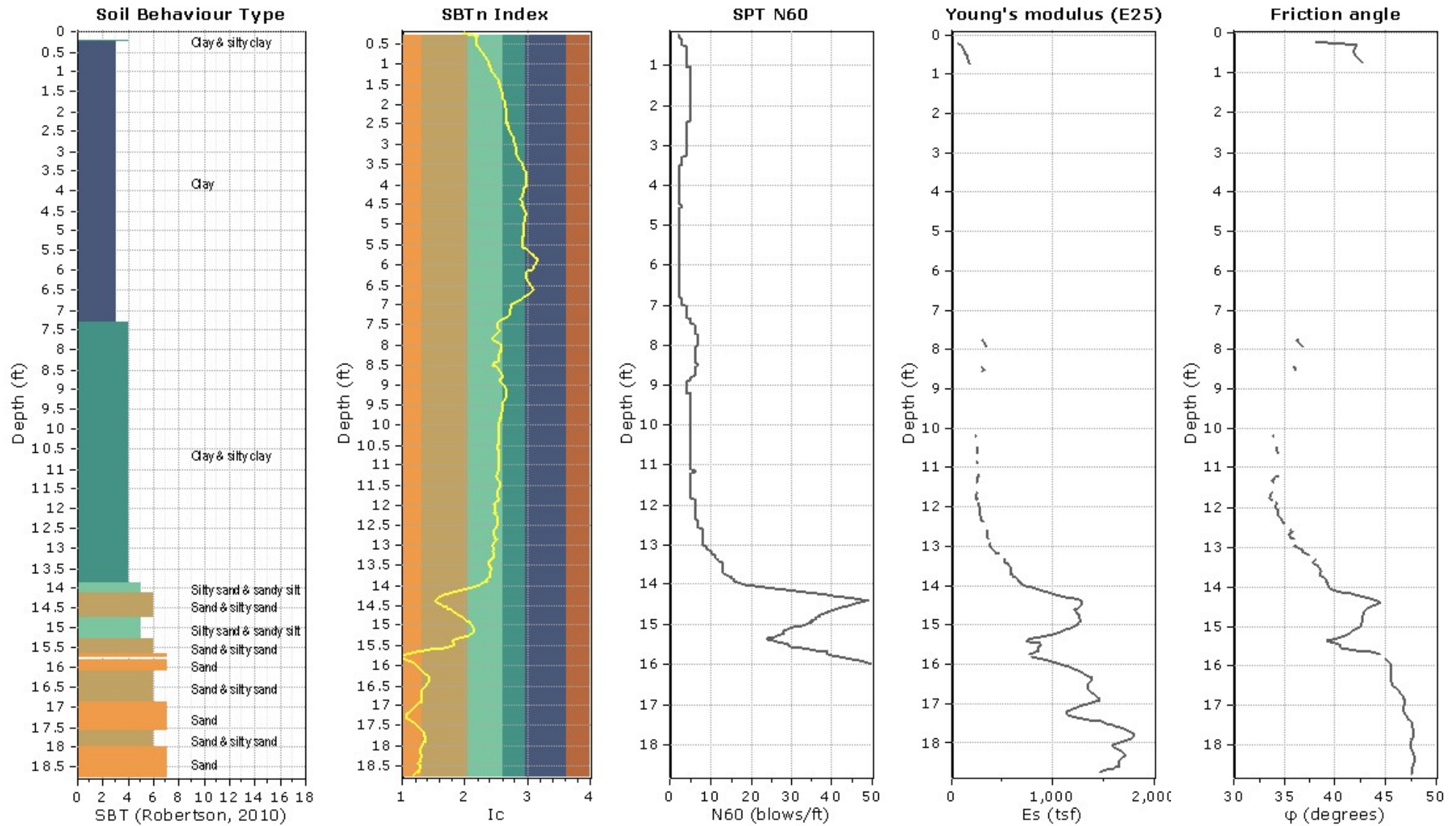
Total depth: 18.73 ft, Date: 3/31/2025  
Coords: lat 39.565118° lon -88.132452°  
Cone Type: CPT  
Cone Operator: Fugro





**Project:** Coles Wind

**Location:** Coles County, Illinois

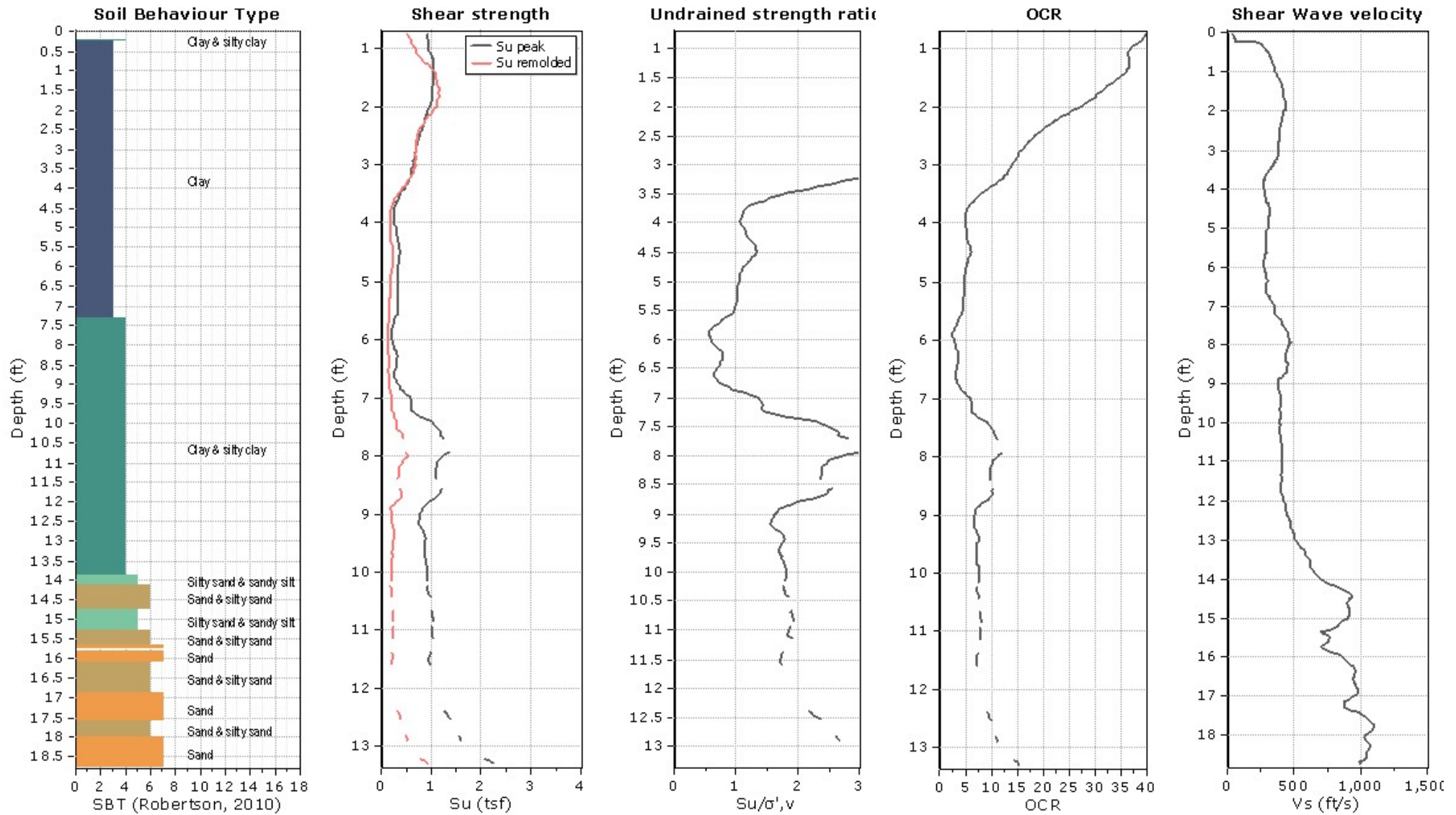






**Project:** Coles Wind

**Location:** Coles County, Illinois

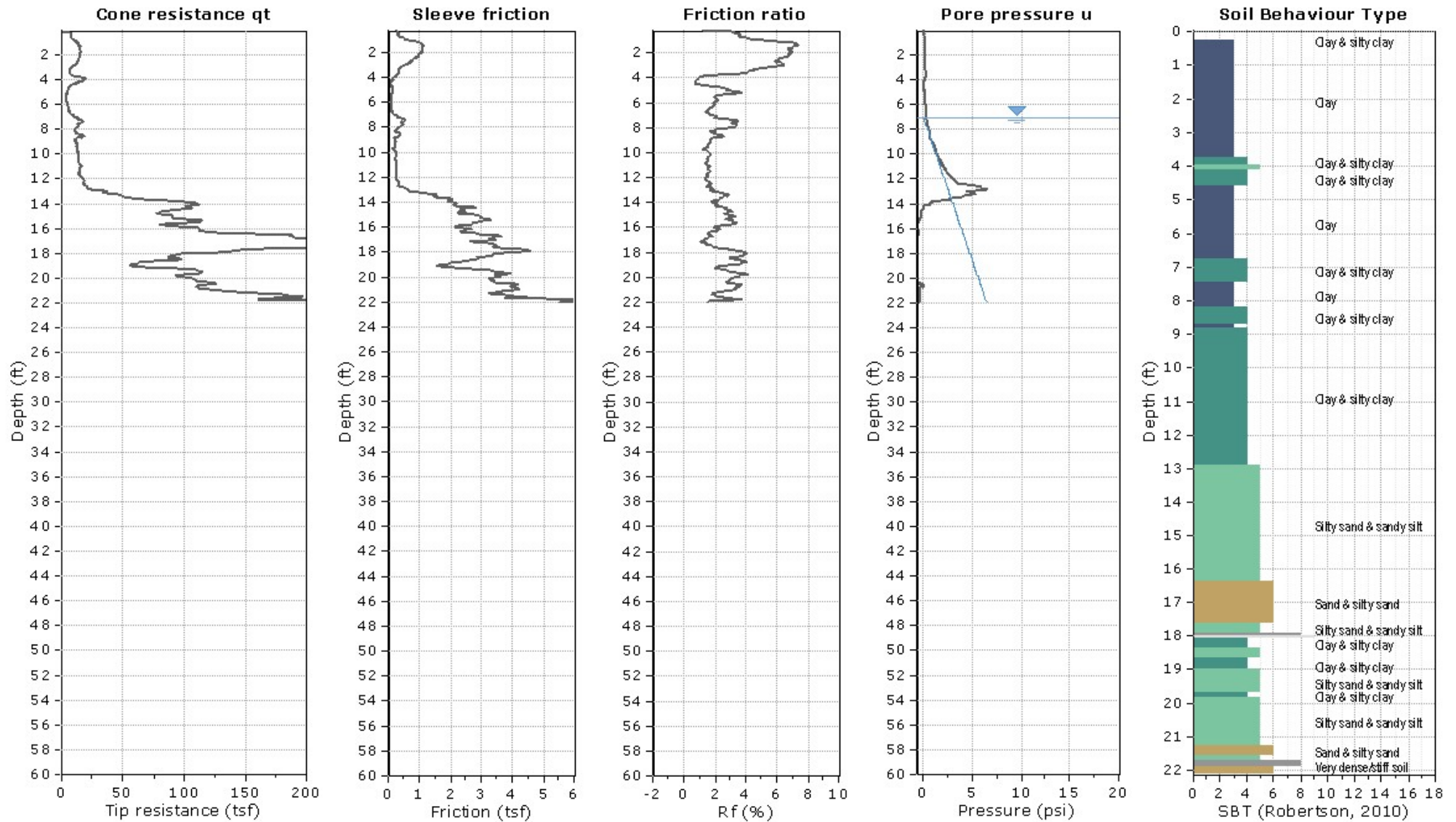






**Project:** Coles Wind

**Location:** Coles County, Illinois





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**CPT: GEO-02A**

Total depth: 22.05 ft, Date: 3/31/2025

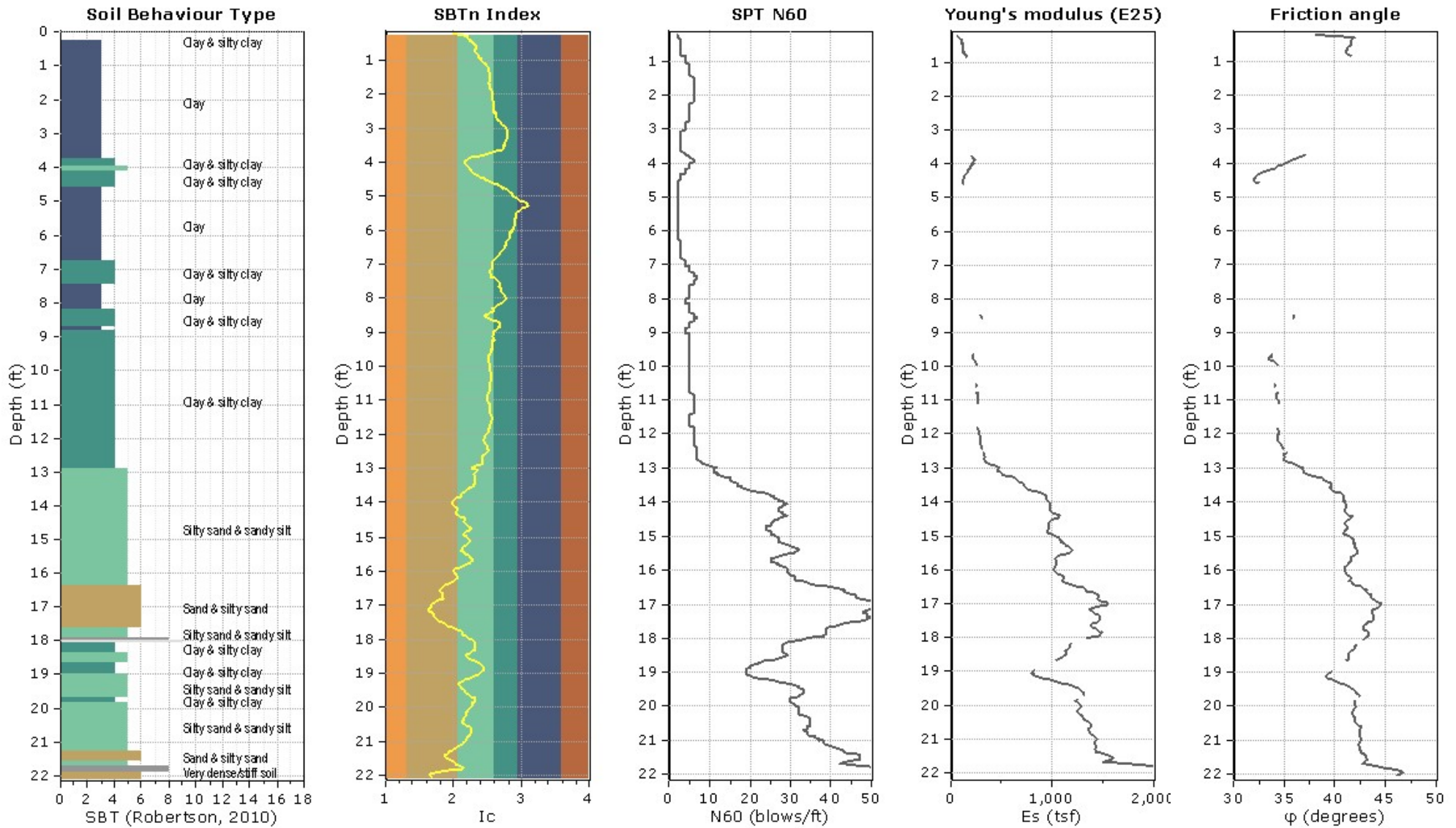
Coords: lat 39.565118° lon -88.132452°

Cone Type: CPT

Cone Operator: Fugro

**Project: Coles Wind**

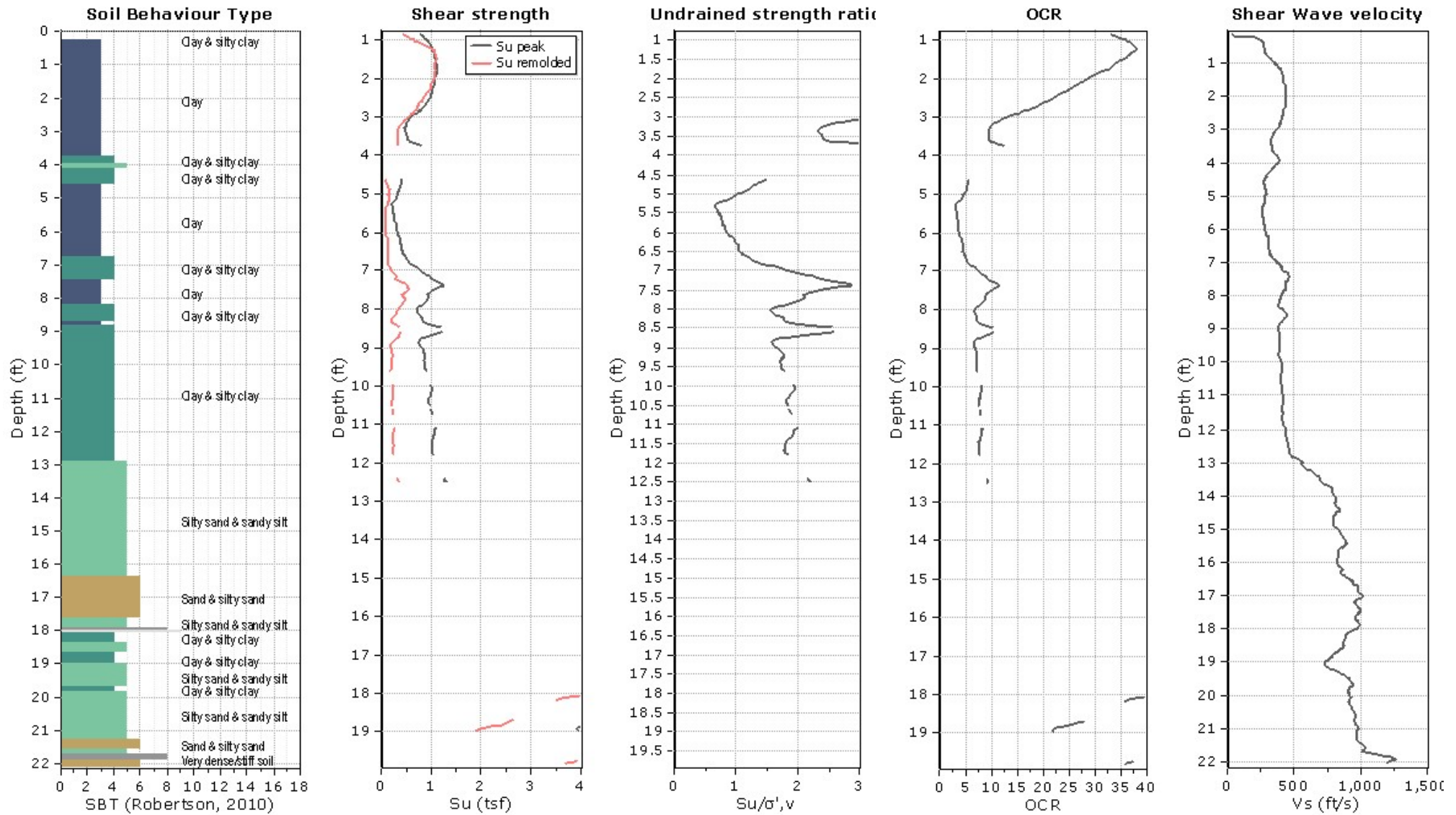
**Location: Coles County, Illinois**





**Project:** Coles Wind

**Location:** Coles County, Illinois

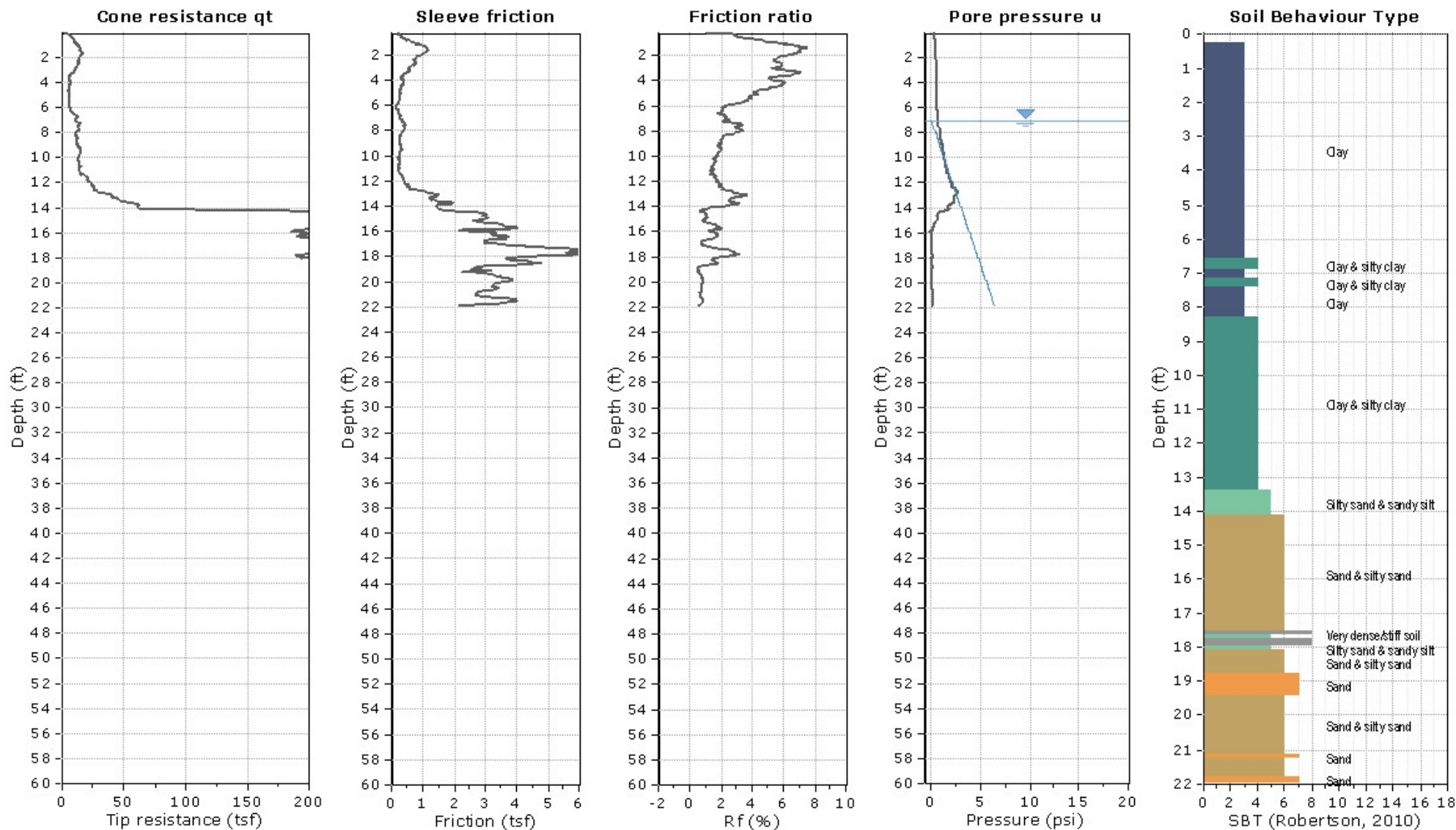






**Project:** Coles Wind

**Location:** Coles County, Illinois







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**CPT: GEO-02B**

Total depth: 21.92 ft, Date: 3/31/2025

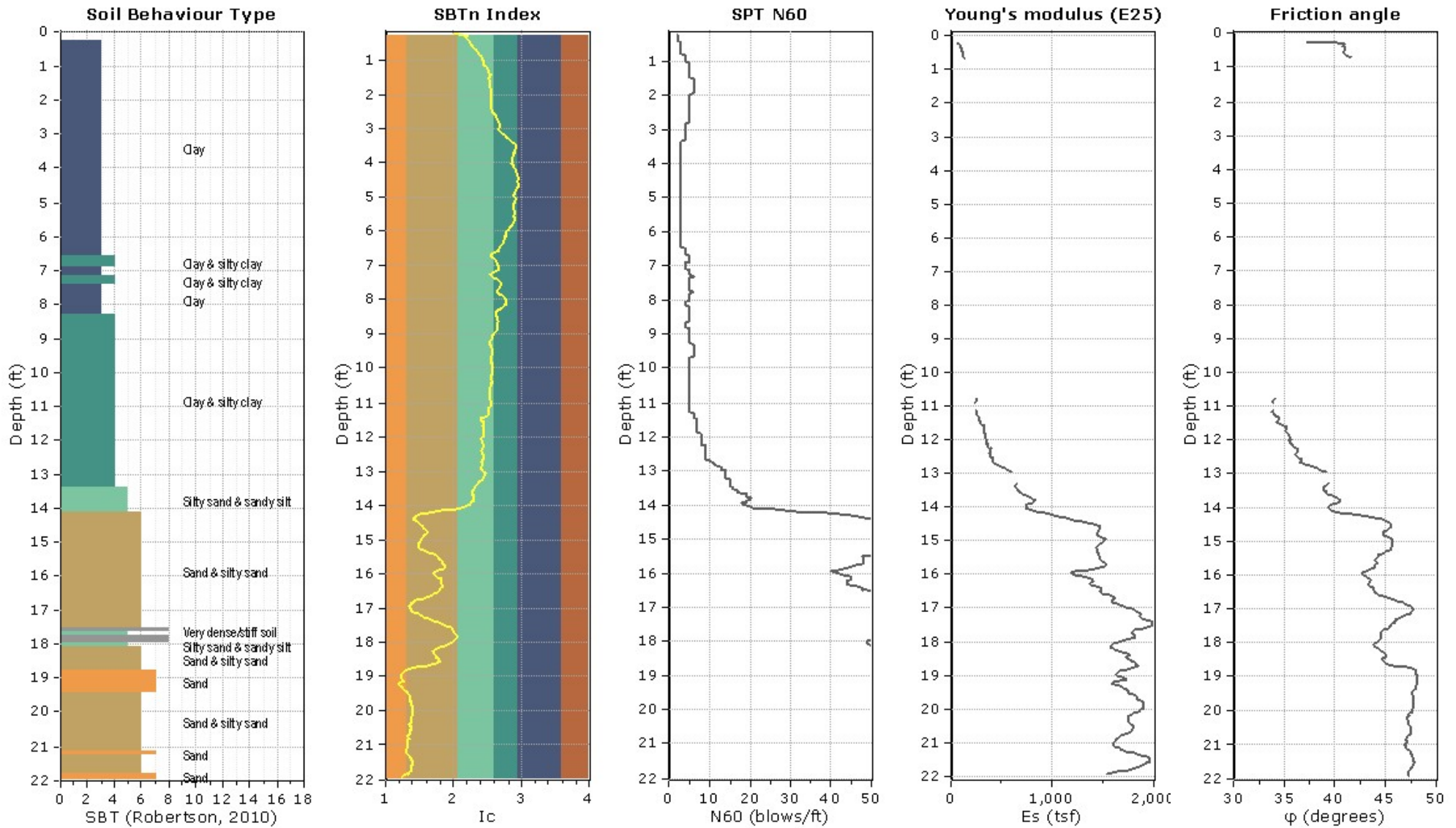
Coords: lat 39.565118° lon -88.132452°

Cone Type: CPT

Cone Operator: Fugro

**Project: Coles Wind**

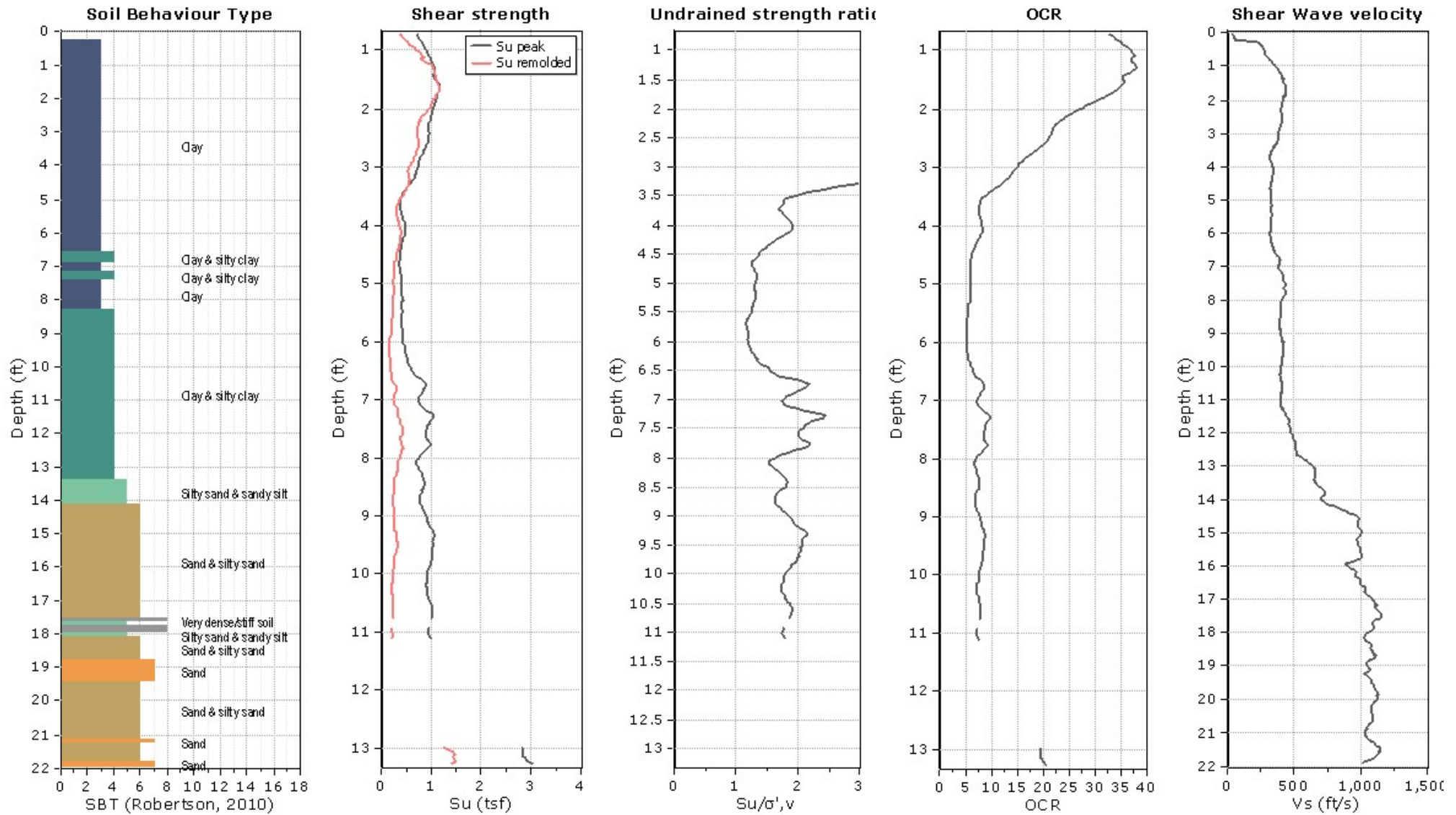
**Location: Coles County, Illinois**





**Project:** Coles Wind

**Location:** Coles County, Illinois





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**CPT: GEO-03**

Total depth: 41.57 ft, Date: 4/16/2025

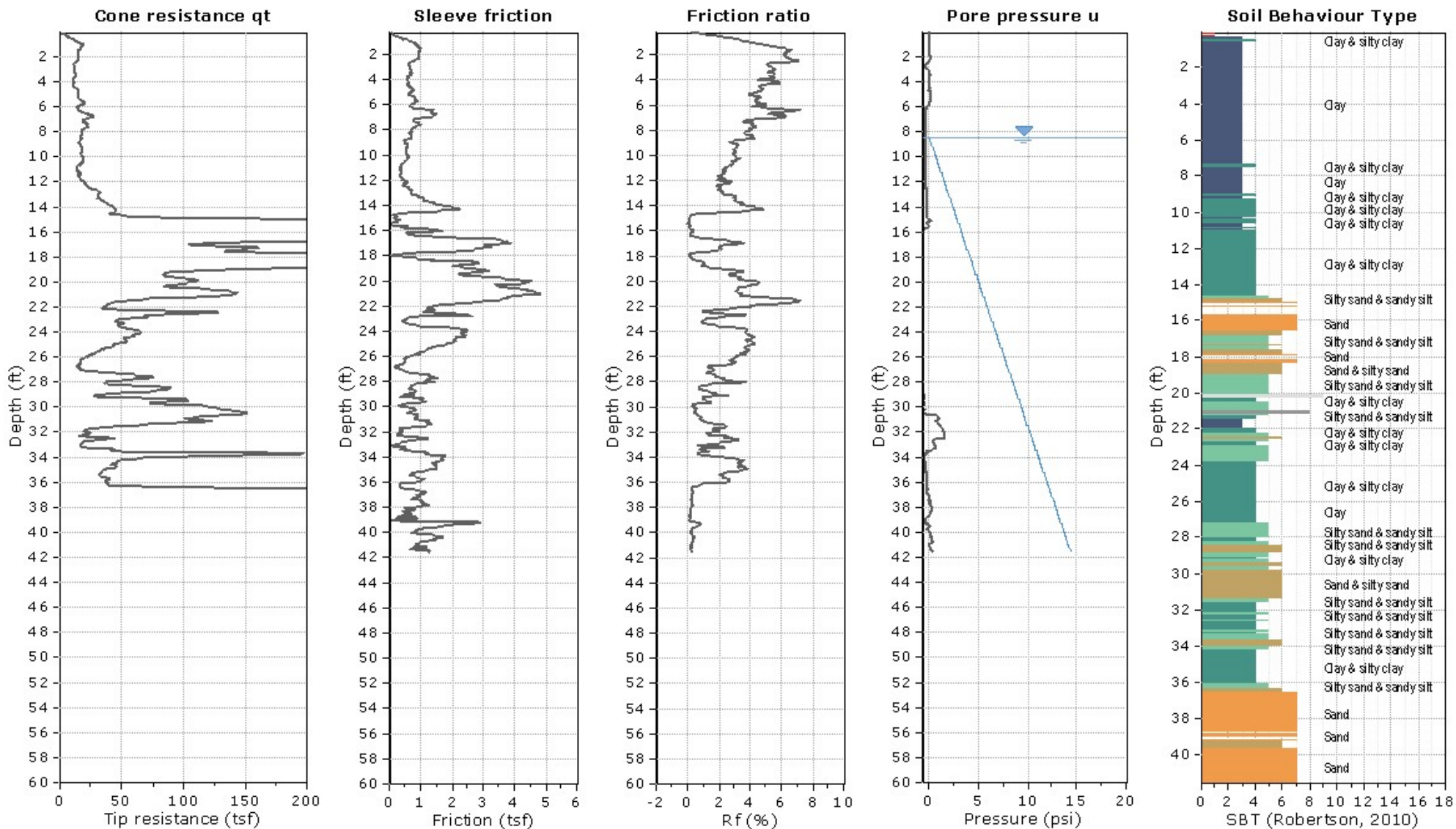
Coords: lat 39.591355° lon -88.161488°

Cone Type: CPT

Cone Operator: Fugro

**Project:** Coles Wind

**Location:** Coles County, Illinois







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**CPT: GEO-03**

Total depth: 41.57 ft, Date: 4/16/2025

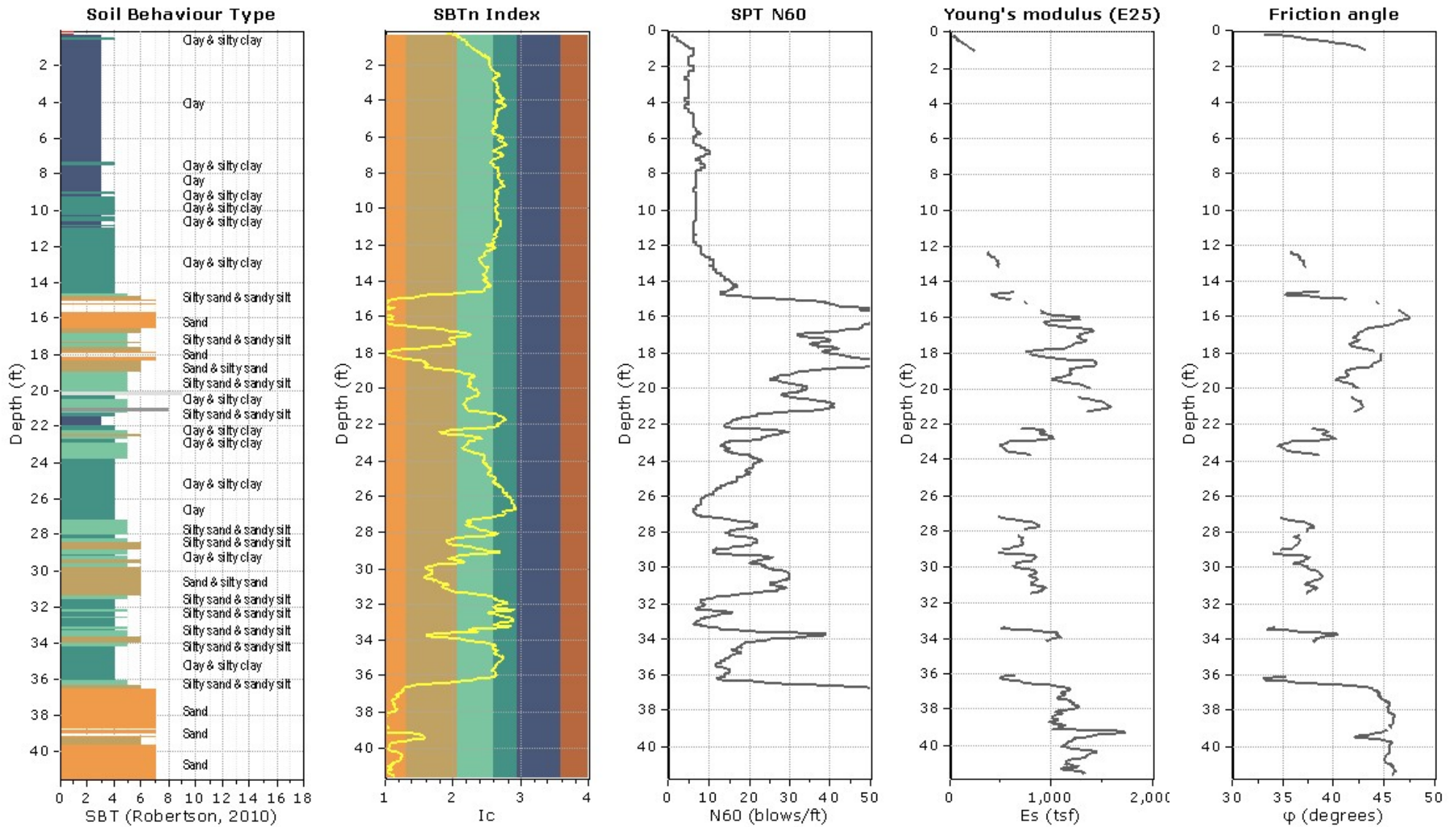
Coords: lat 39.591355° lon -88.161488°

Cone Type: CPT

Cone Operator: Fugro

**Project: Coles Wind**

**Location: Coles County, Illinois**

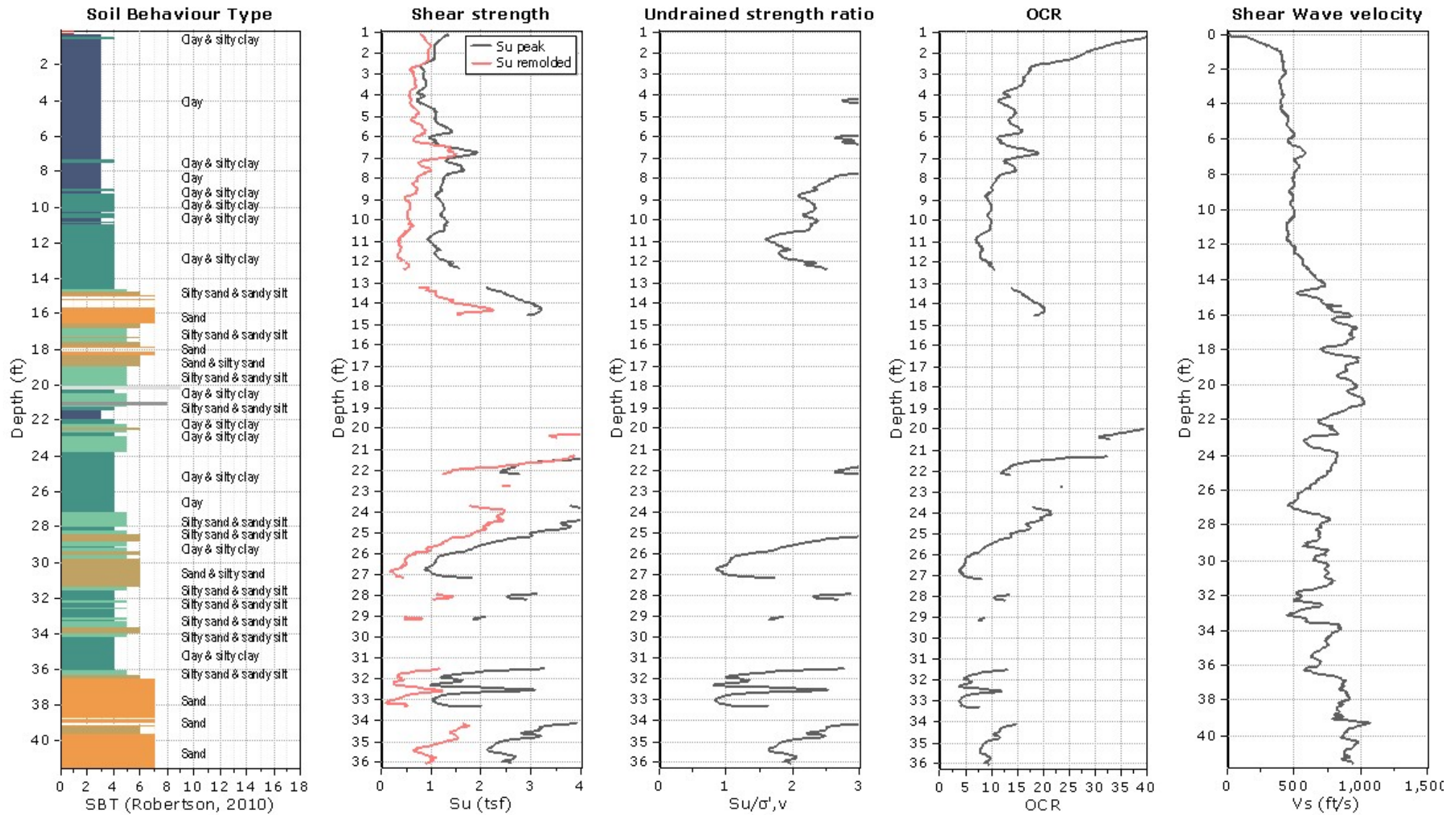






**Project: Coles Wind**

**Location: Coles County, Illinois**

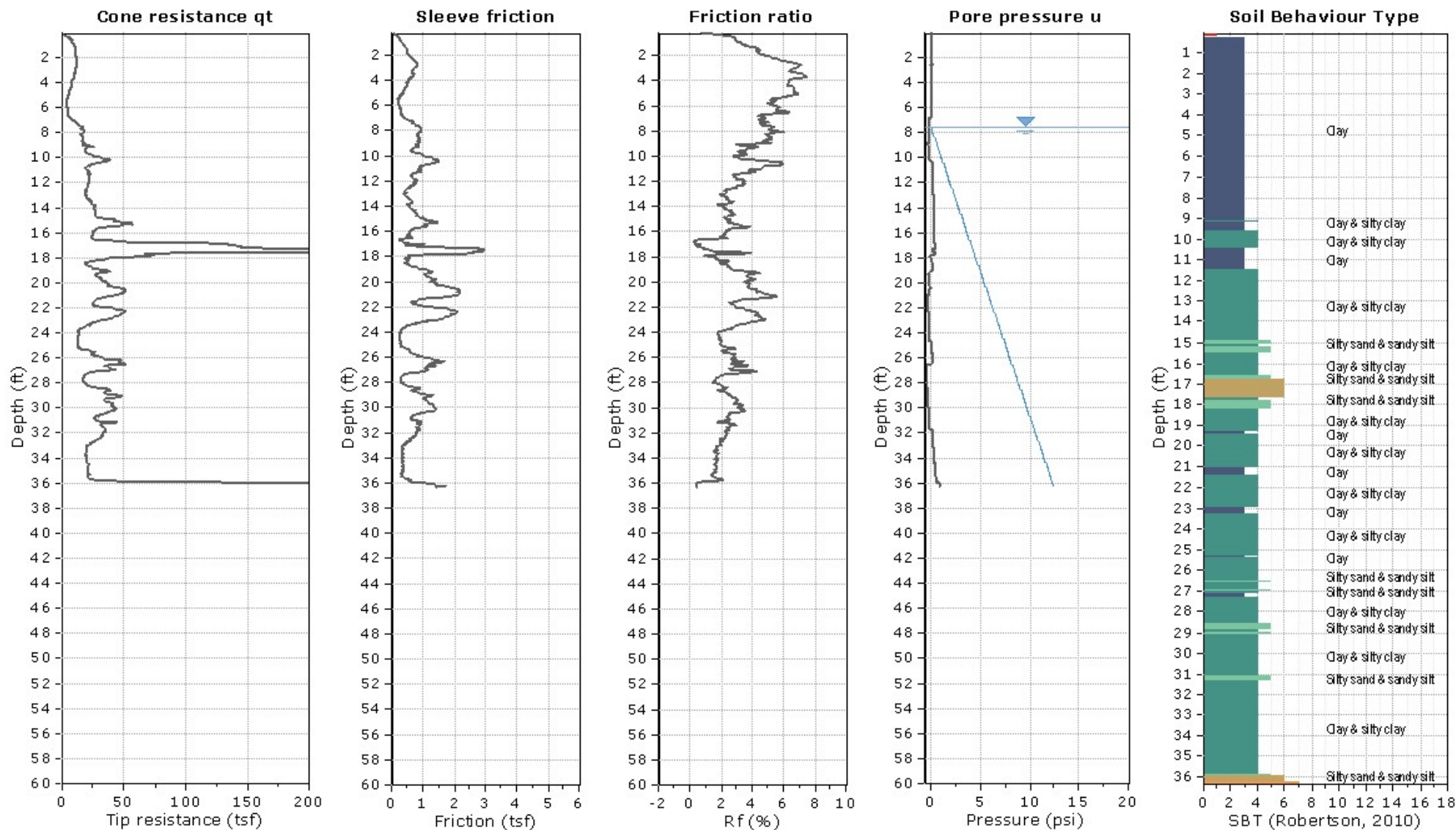




**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-04**

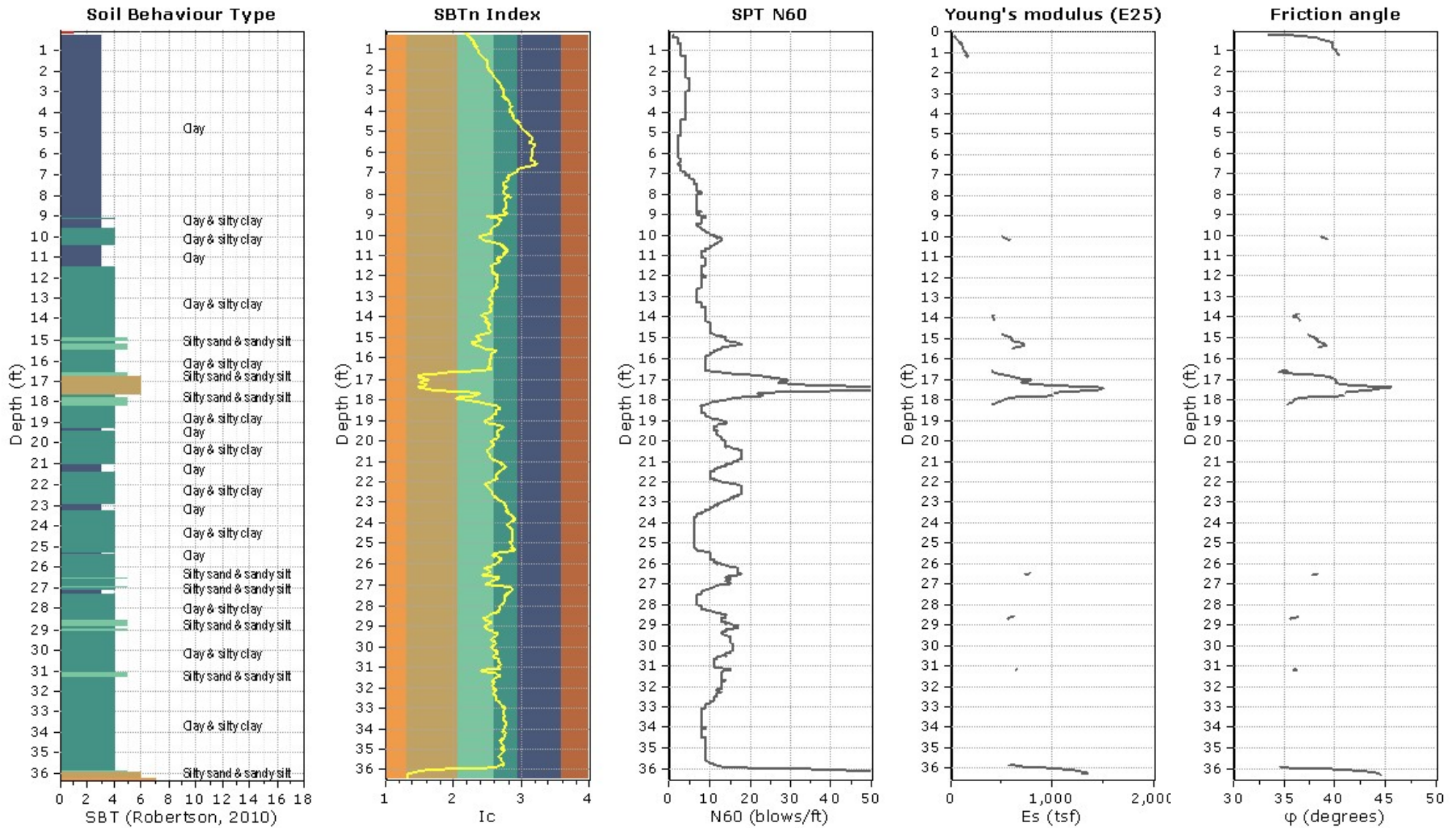
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Coords: lat 39.606469° lon -88.155401°  
Cone Type: CPT  
Cone Operator: Fugro





**Project:** Coles Wind

**Location:** Coles County, Illinois

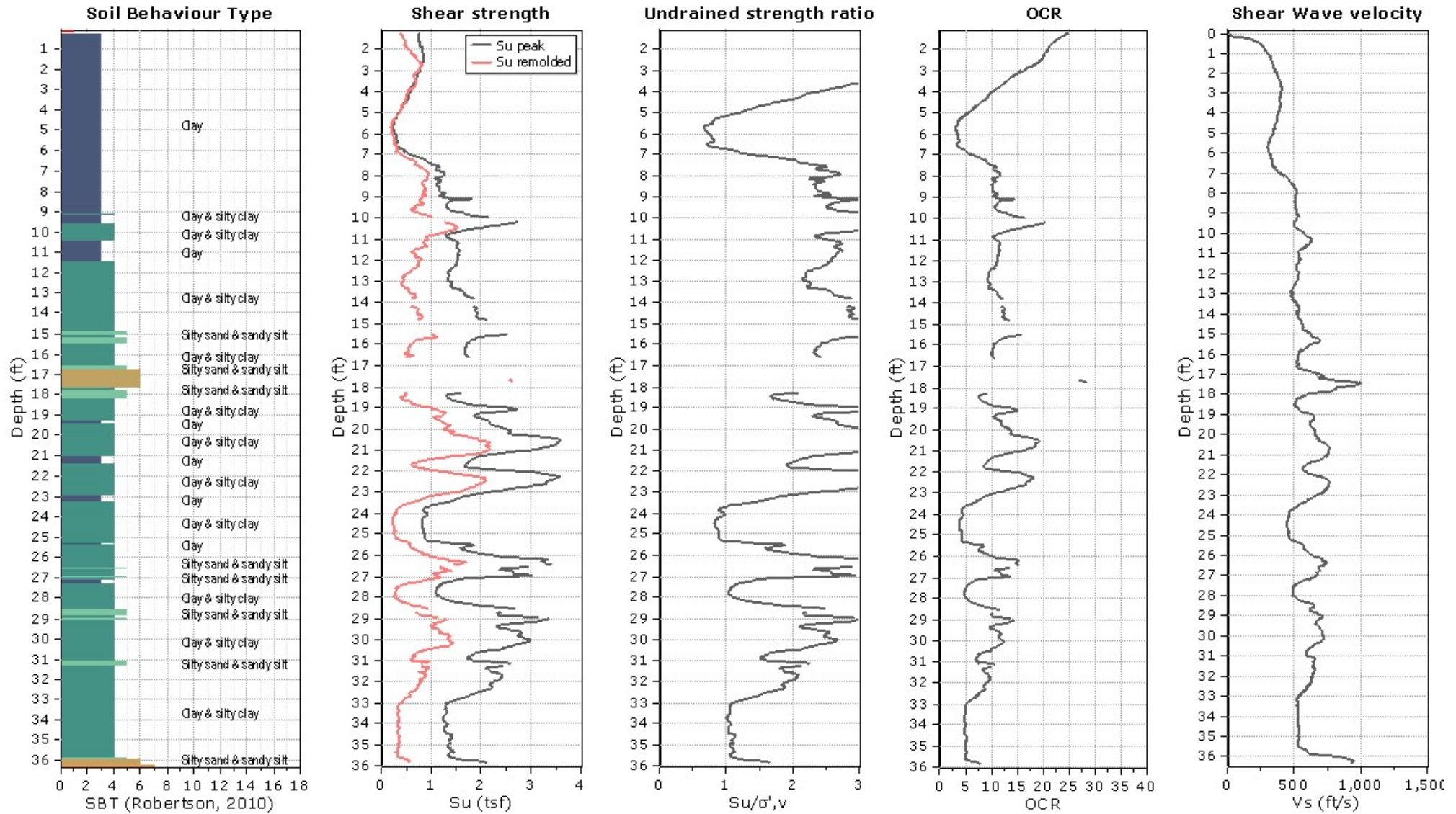






**Project:** Coles Wind

**Location:** Coles County, Illinois





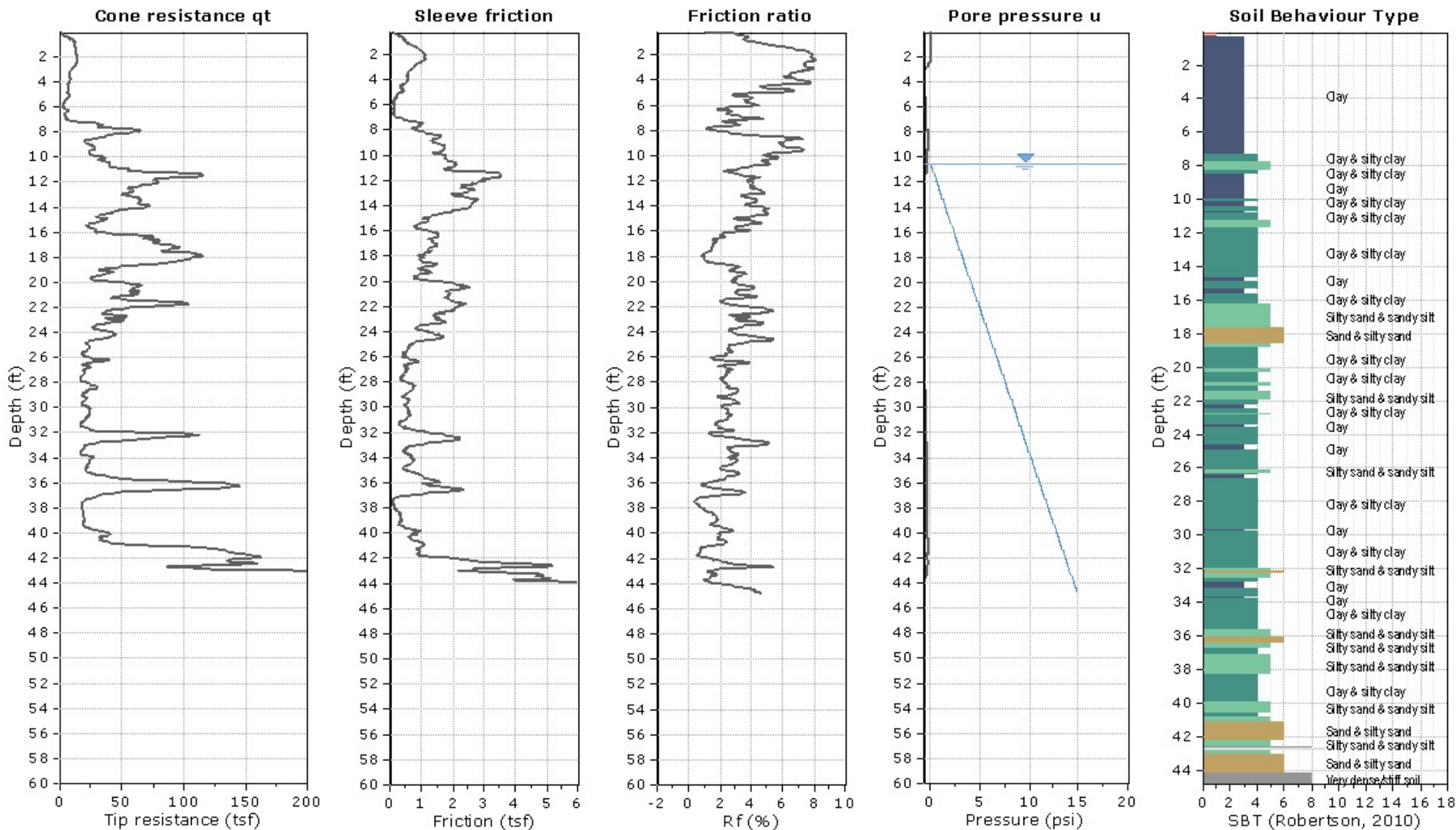


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-05**

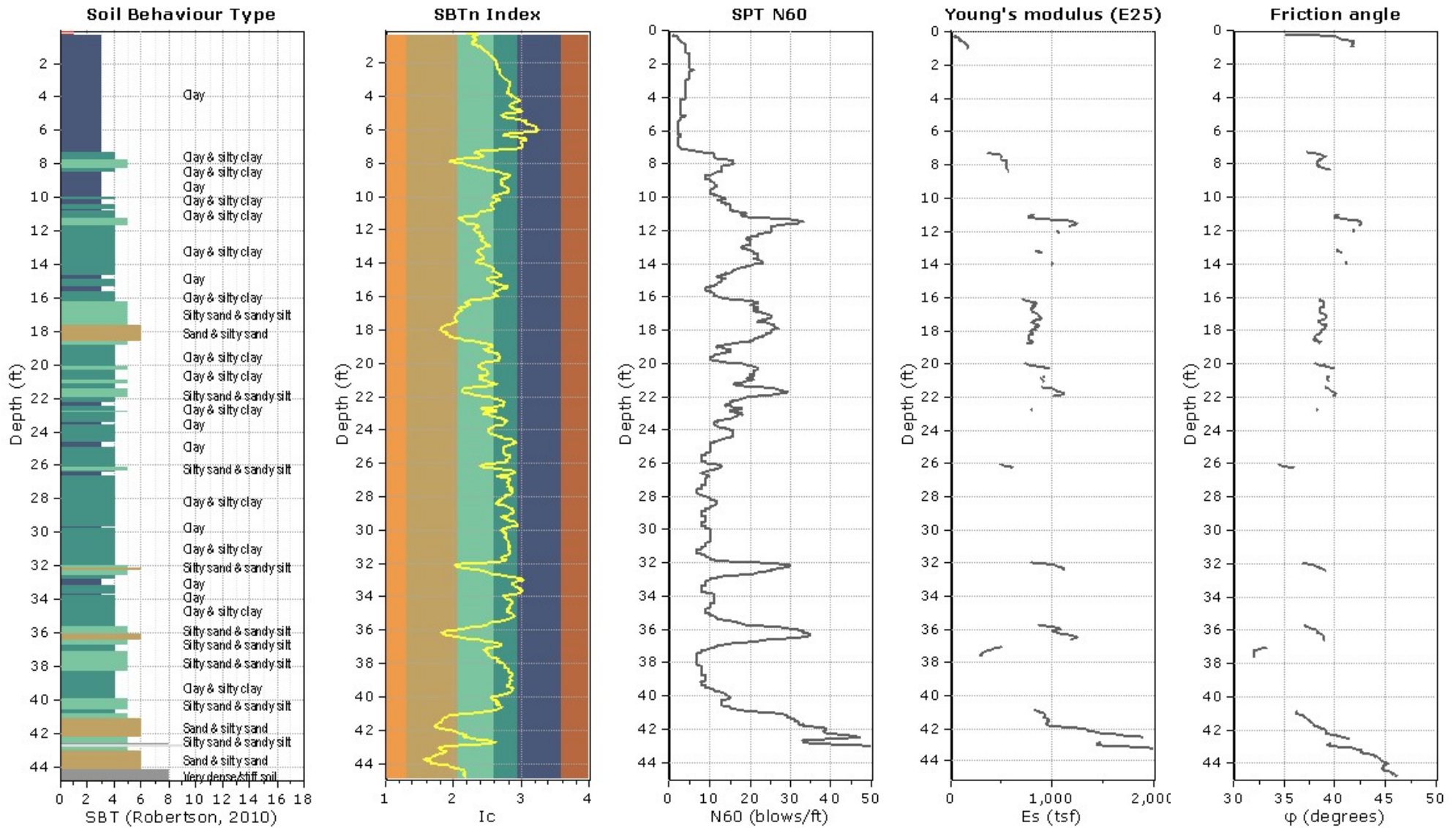
Total depth: 44.82 ft, Date: 4/17/2025  
Coords: lat 39.612989° lon -88.141627°  
Cone Type: CPT  
Cone Operator: Fugro





**Project: Coles Wind**

**Location: Coles County, Illinois**



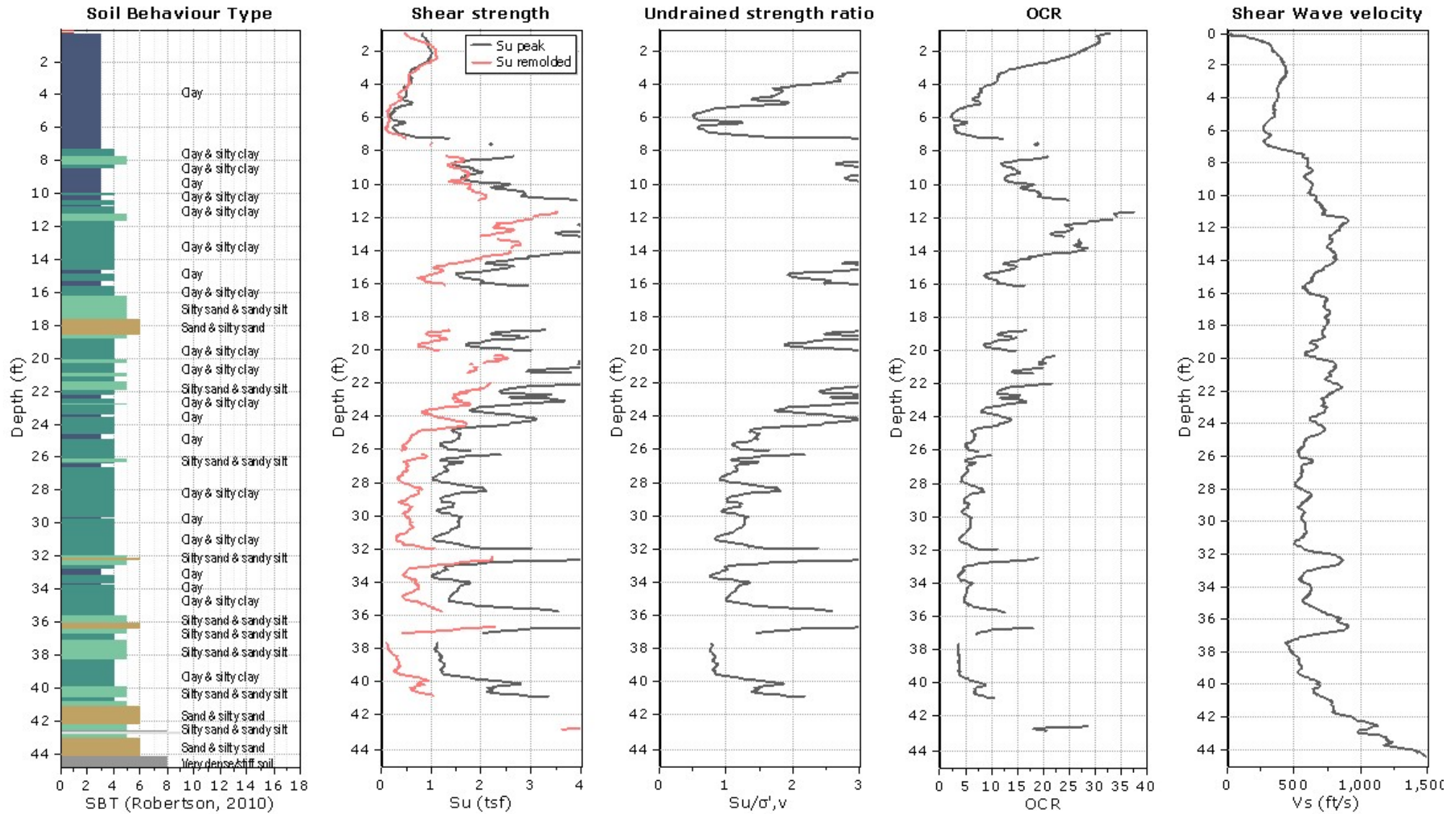


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-05**

Total depth: 44.82 ft, Date: 4/17/2025  
Coords: lat 39.612989° lon -88.141627°  
Cone Type: CPT  
Cone Operator: Fugro



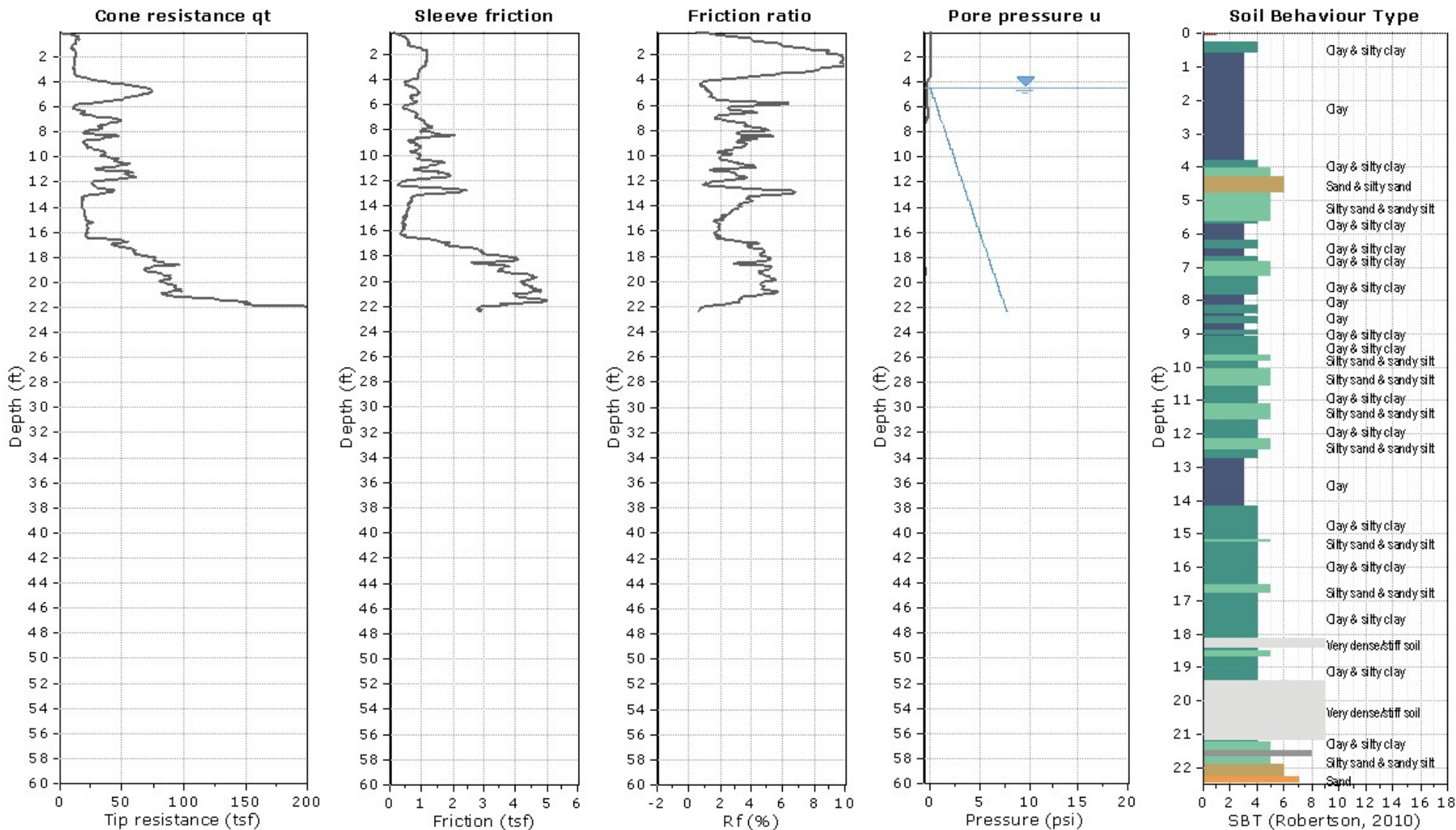




**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-06**

Total depth: 22.41 ft, Date: 4/18/2025  
Coords: lat 39.618923° lon -88.122631°  
Cone Type: CPT  
Cone Operator: FUGRO







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**CPT: GEO-06**

Total depth: 22.41 ft, Date: 4/18/2025

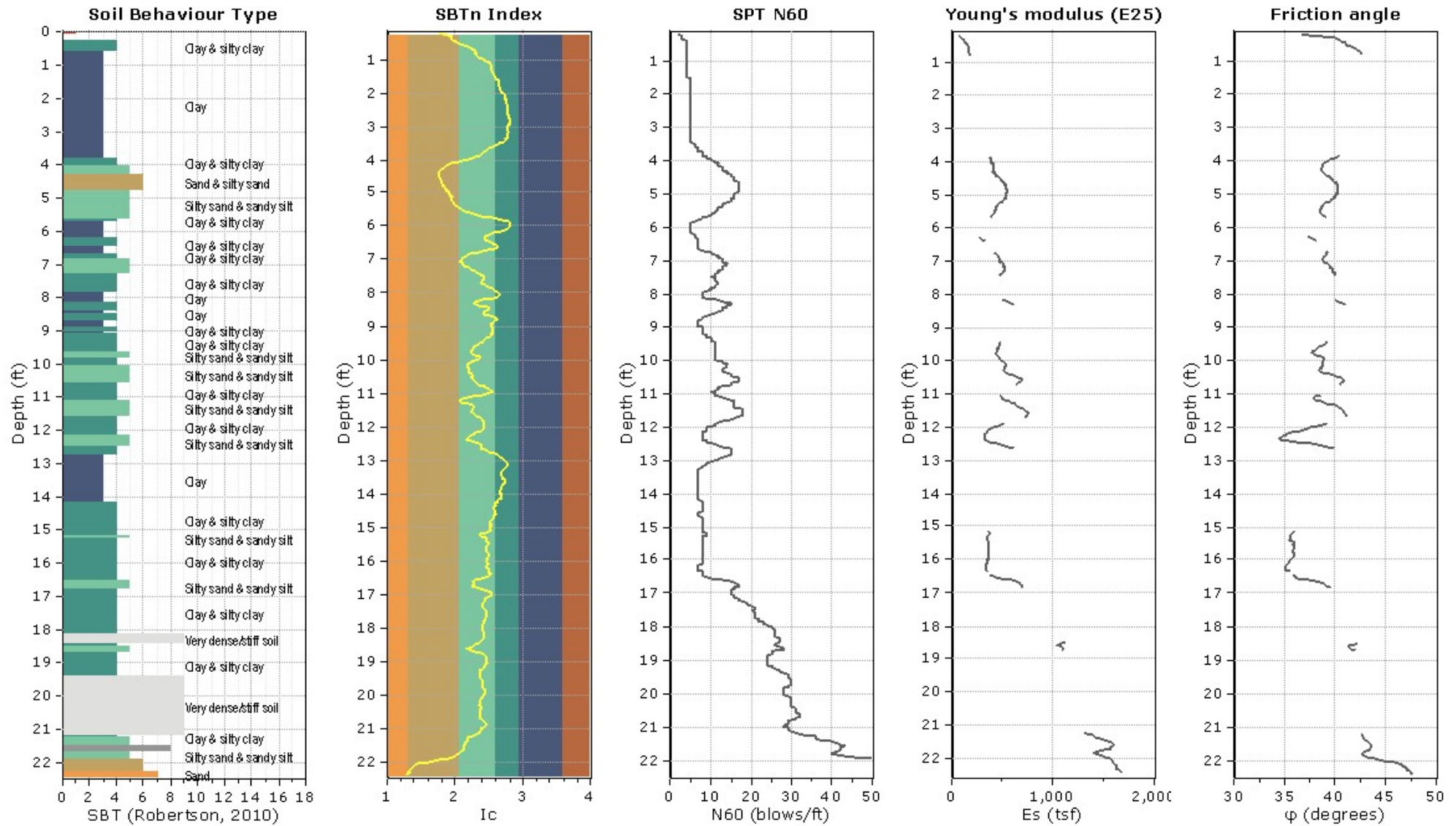
Coords: lat 39.618923° lon -88.122631°

Cone Type: CPT

Cone Operator: FUGRO

**Project: Coles Wind**

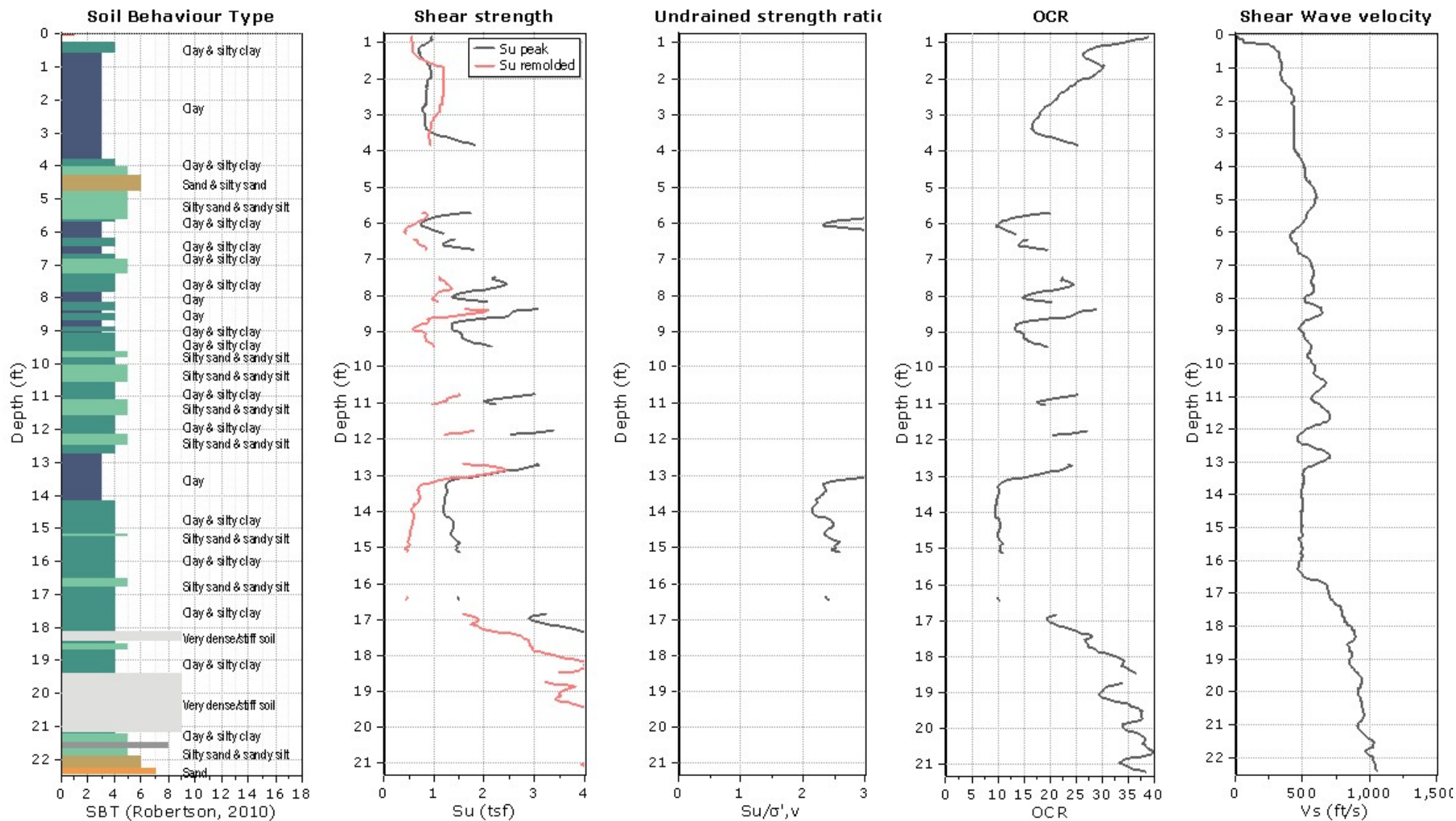
**Location: Coles County, Illinois**





**Project:** Coles Wind

**Location:** Coles County, Illinois



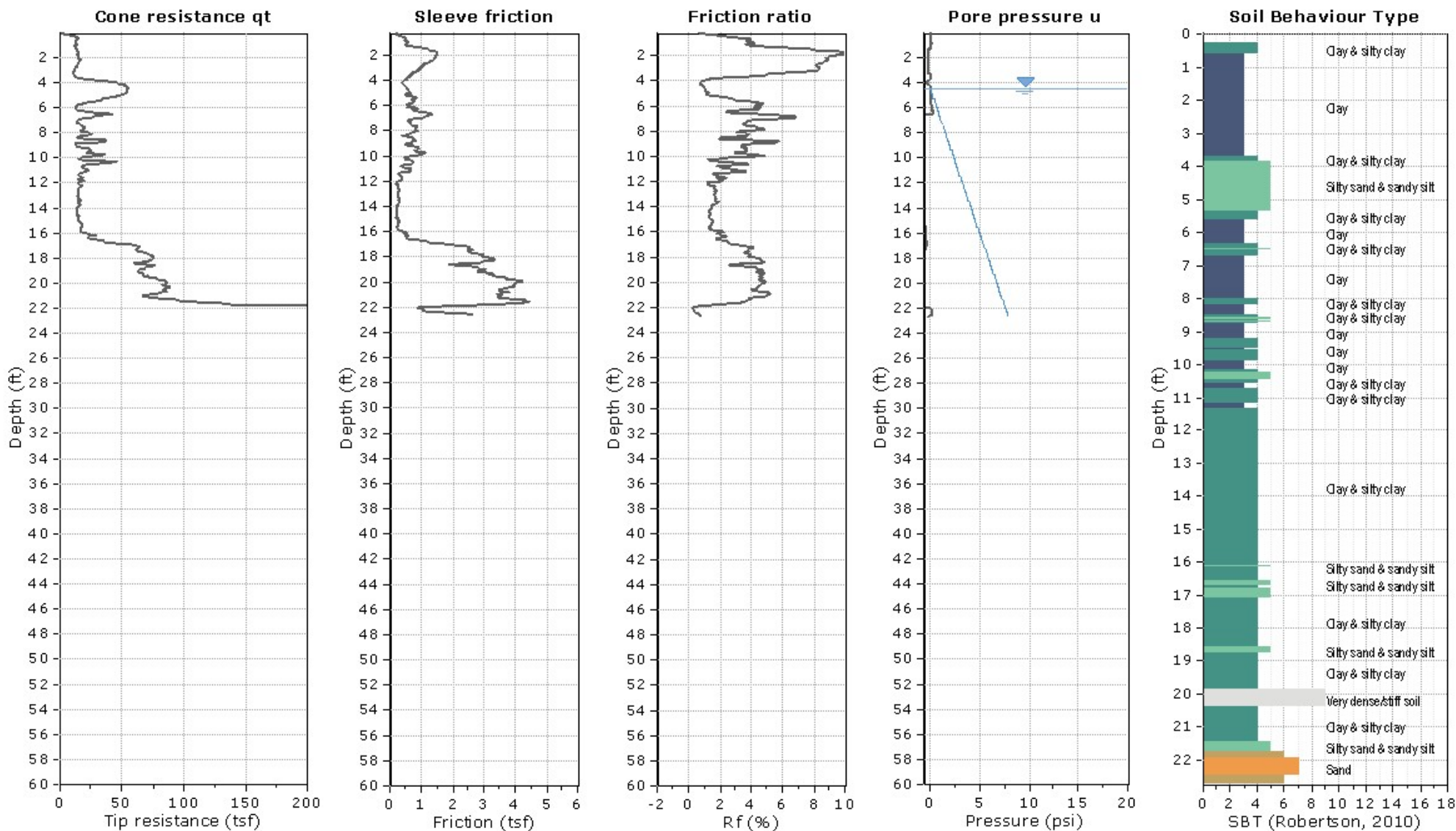


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-06A**

Total depth: 22.67 ft, Date: 4/18/2025  
Coords: lat 39.618923° lon -88.122631°  
Cone Type: CPT  
Cone Operator: FUGRO

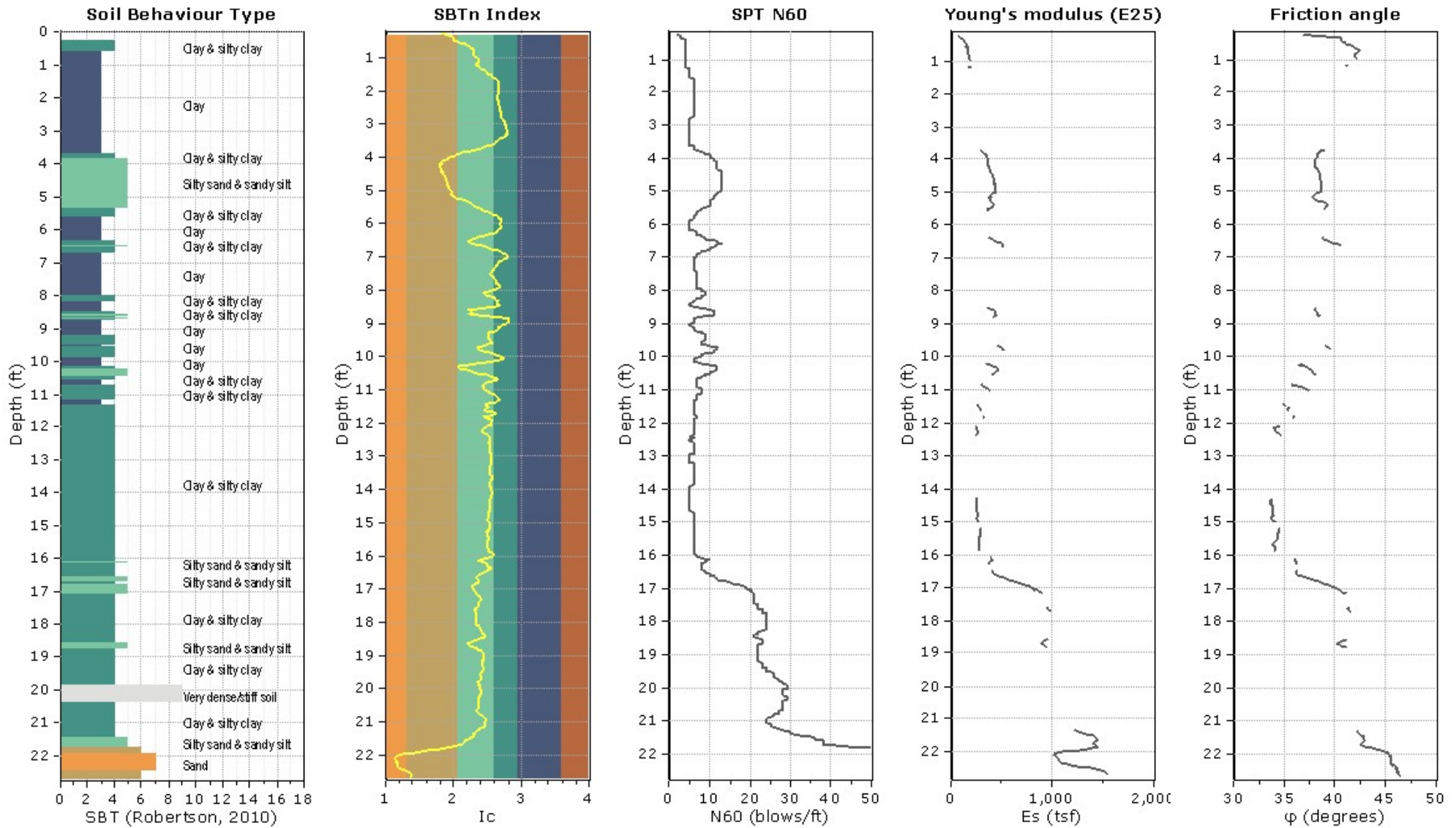






**Project:** Coles Wind

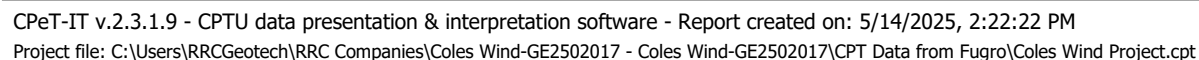
**Location:** Coles County, Illinois







**CPT: GEO-06A**  
Total depth: 22.67 ft, Date: 4/18/2025  
Coords: lat 39.618923° lon -88.122631°  
Cone Type: CPT  
Cone Operator: FUGRO



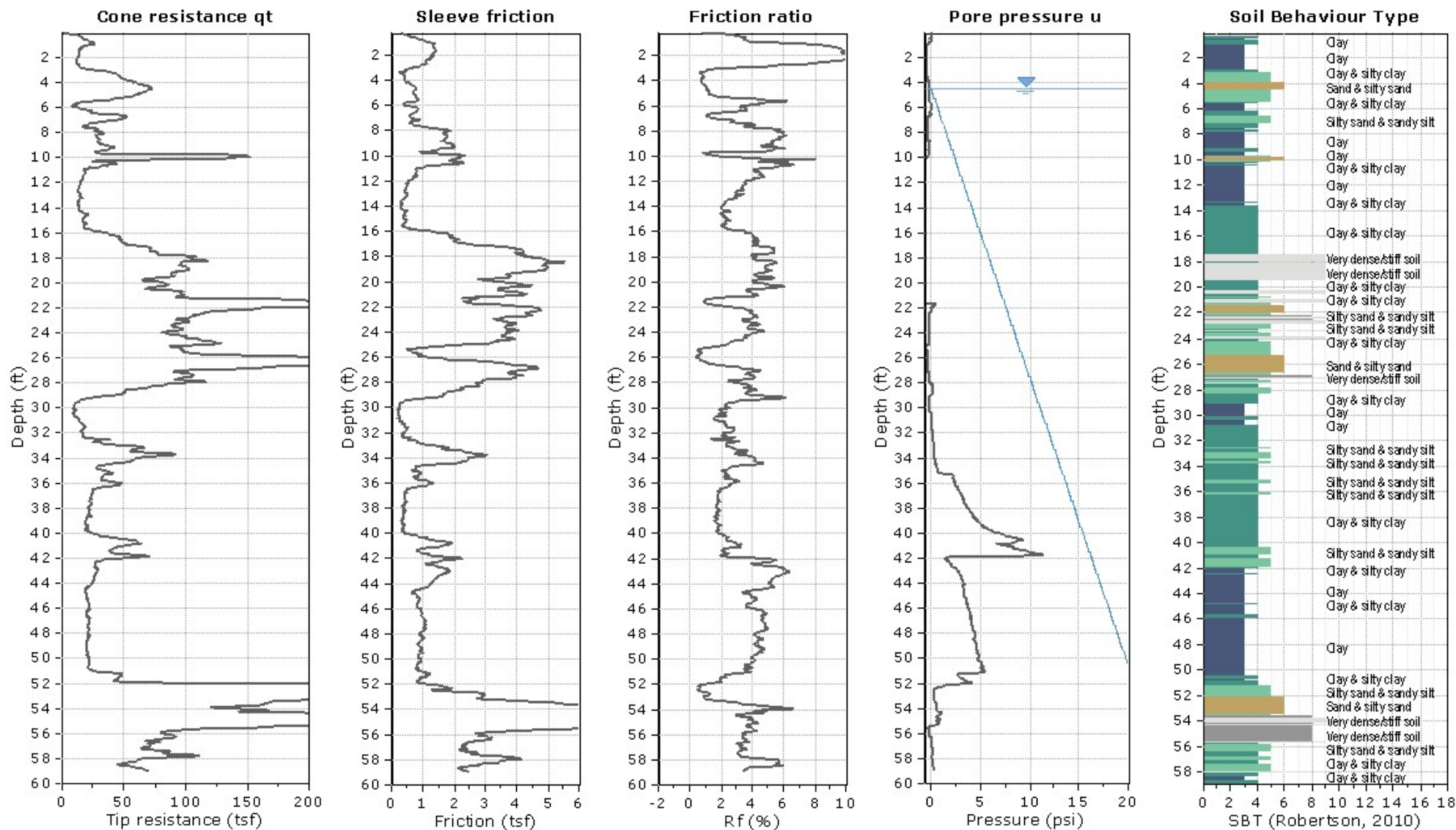


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Round Rock, TX 78681  
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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-06B**

Total depth: 58.92 ft, Date: 4/18/2025  
Coords: lat 39.618923° lon -88.122631°  
Cone Type: CPT  
Cone Operator: FUGRO





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Round Rock, TX 78681  
rrccompanies.com

**CPT: GEO-06B**

Total depth: 58.92 ft, Date: 4/18/2025

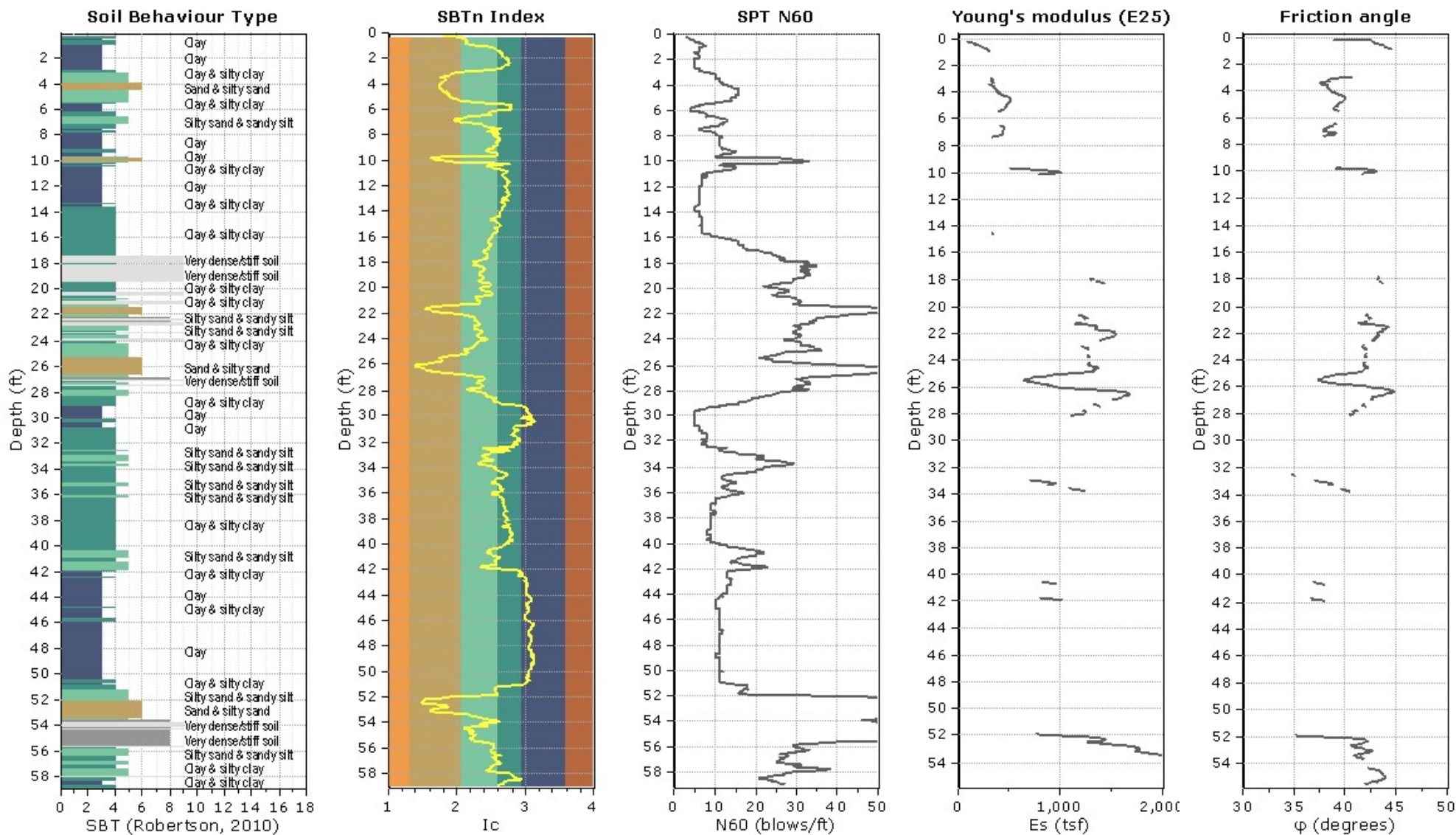
Coords: lat 39.618923° lon -88.122631°

Cone Type: CPT

Cone Operator: FUGRO

**Project: Coles Wind**

**Location: Coles County, Illinois**







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**CPT: GEO-06B**

Total depth: 58.92 ft, Date: 4/18/2025

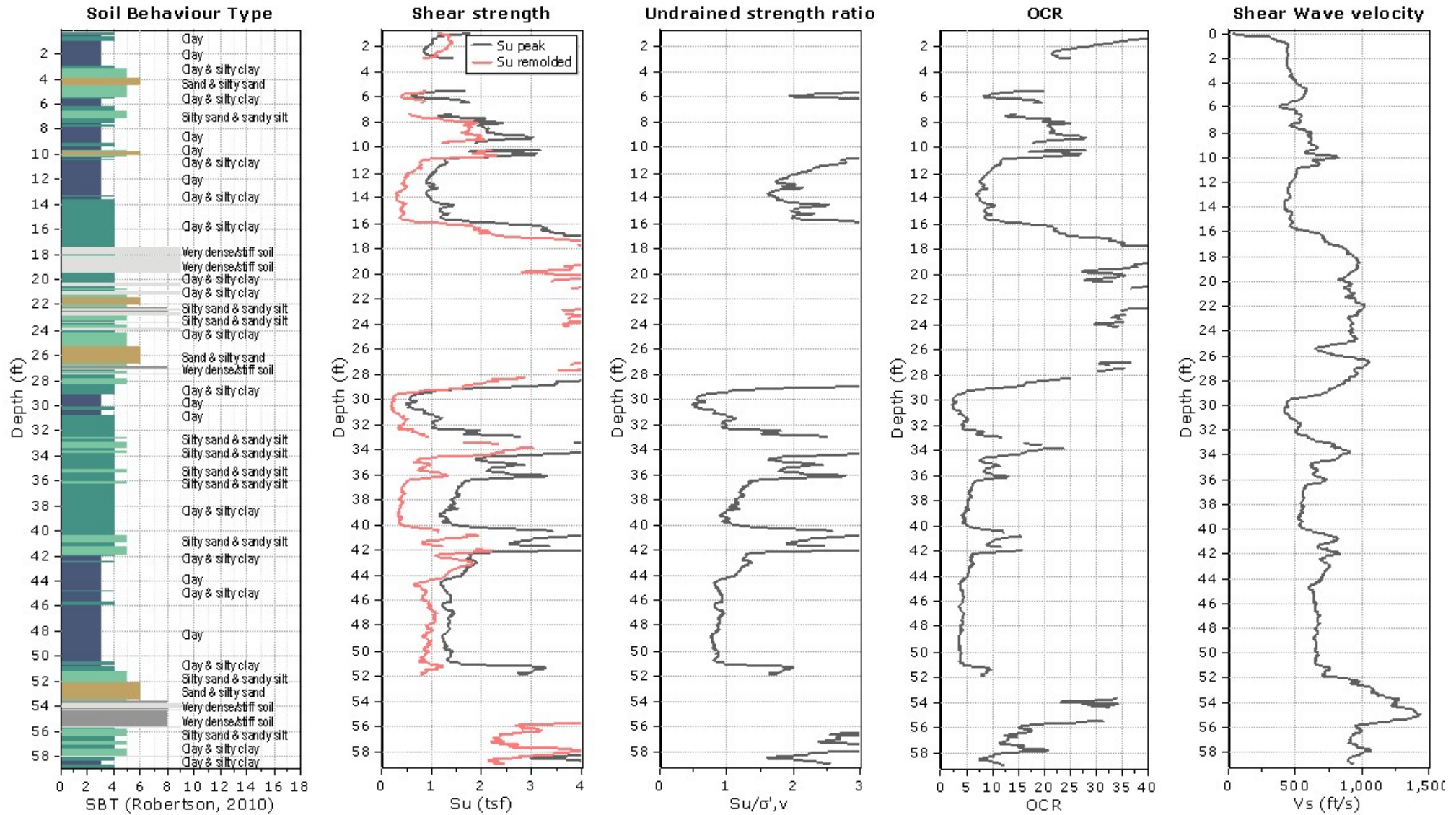
Coords: lat 39.618923° lon -88.122631°

Cone Type: CPT

Cone Operator: FUGRO

**Project: Coles Wind**

**Location: Coles County, Illinois**





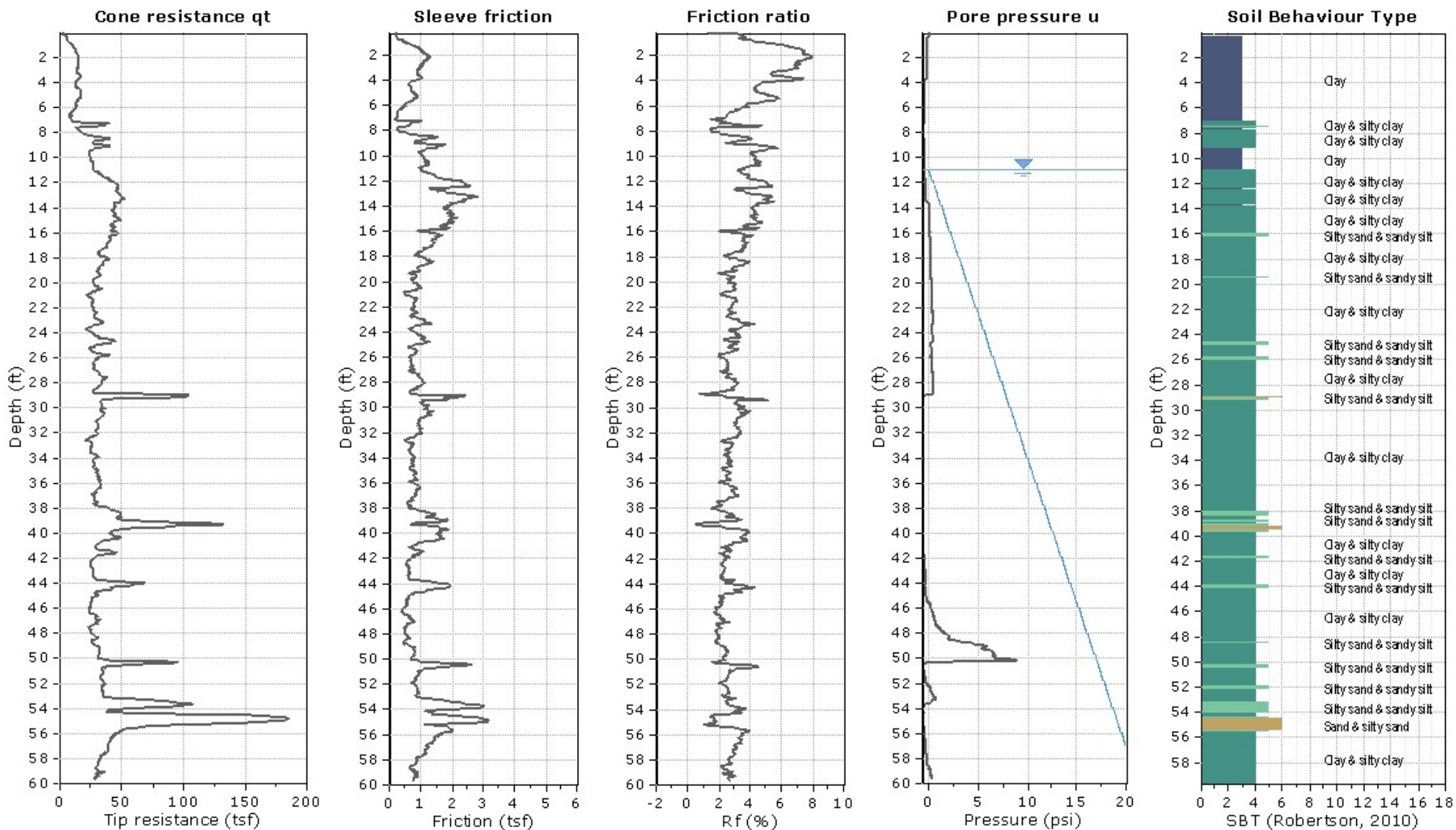


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rrccompanies.com

**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-07**

Total depth: 59.68 ft, Date: 4/21/2025  
Coords: lat 39.641706° lon -88.161275°  
Cone Type: CPT  
Cone Operator: FUGRO



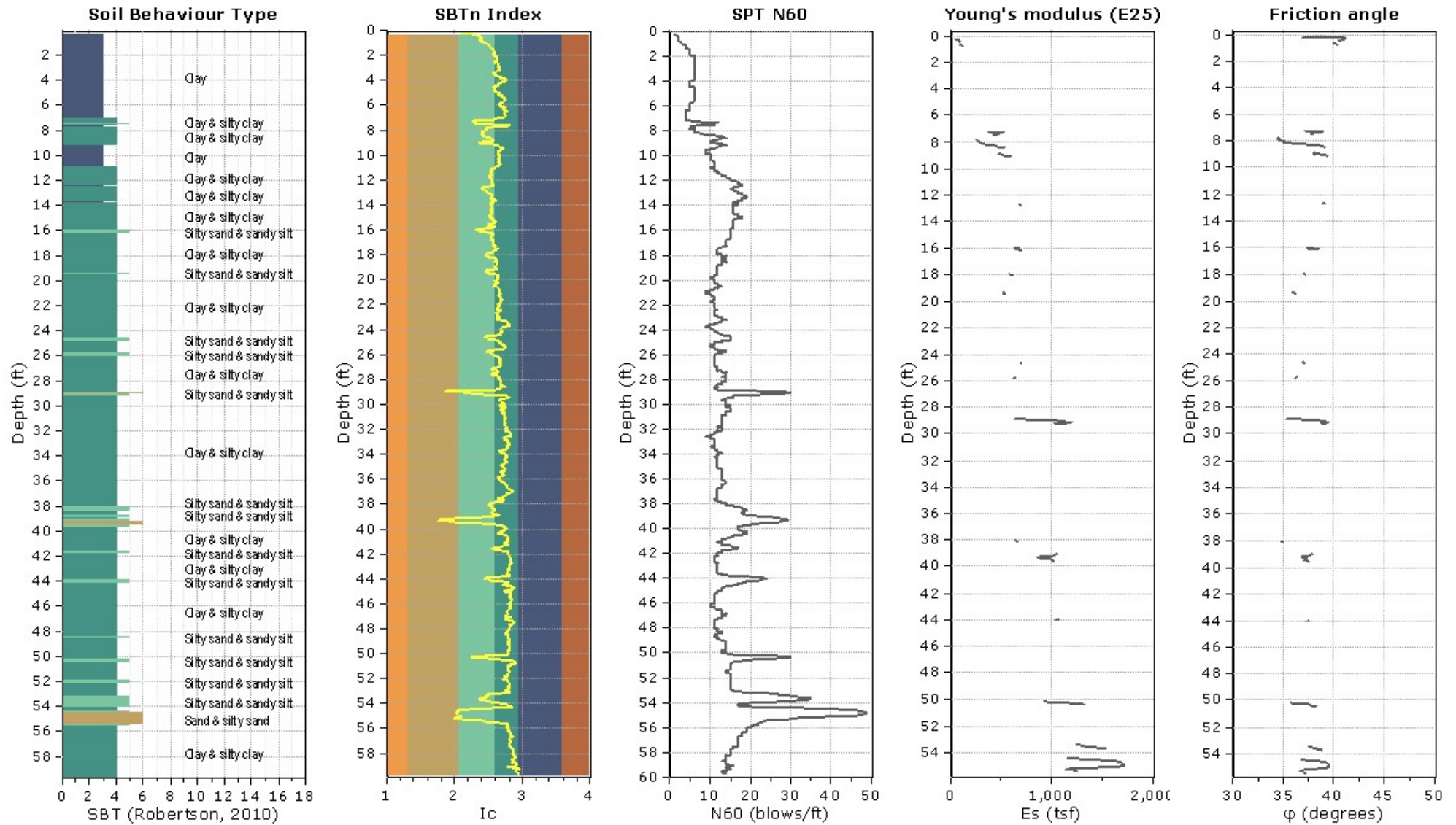


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-07**

Total depth: 59.68 ft, Date: 4/21/2025  
Coords: lat 39.641706° lon -88.161275°  
Cone Type: CPT  
Cone Operator: FUGRO

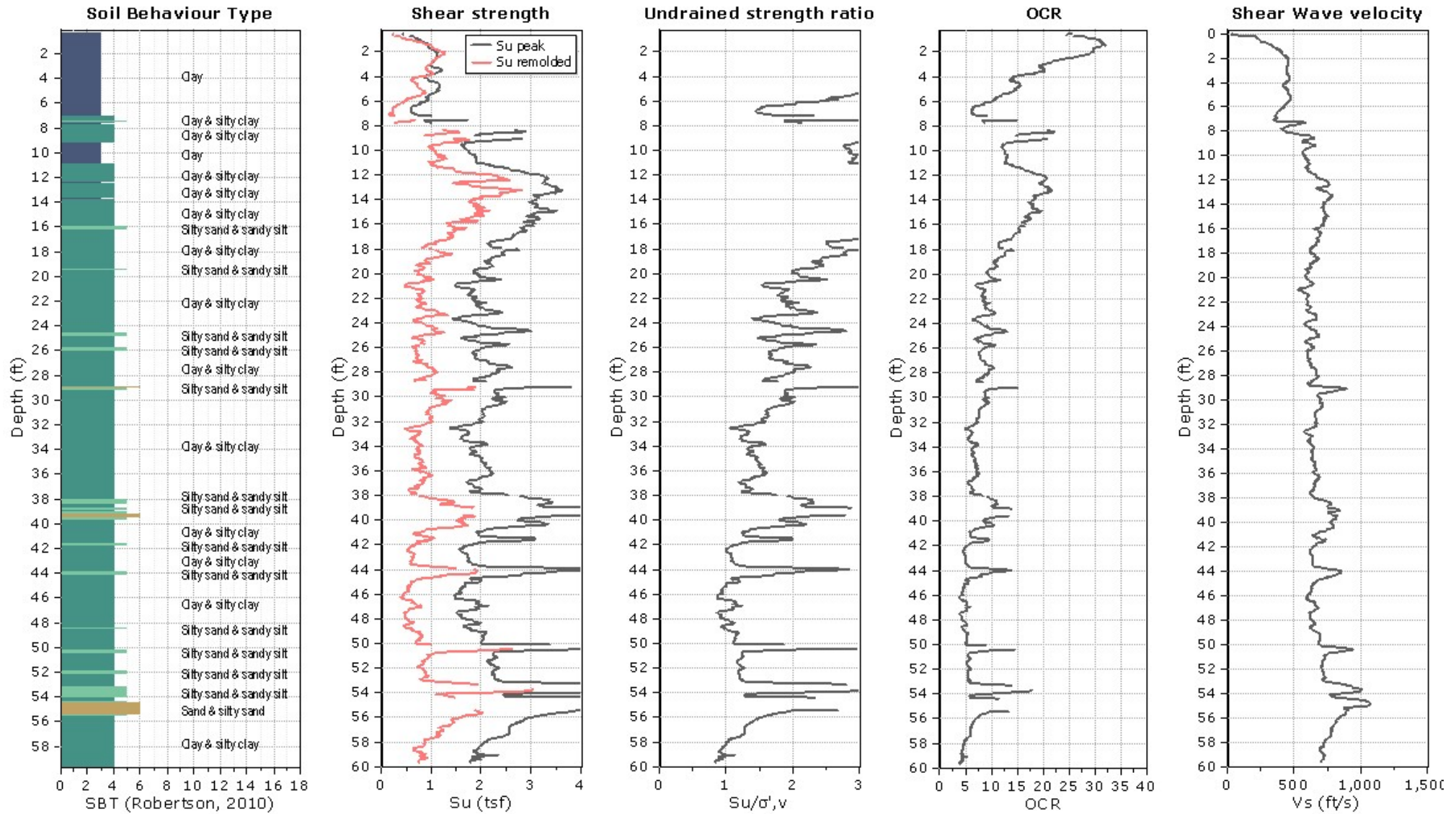






**Project:** Coles Wind

**Location:** Coles County, Illinois





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**CPT: GEO-08**

Total depth: 59.68 ft, Date: 4/21/2025

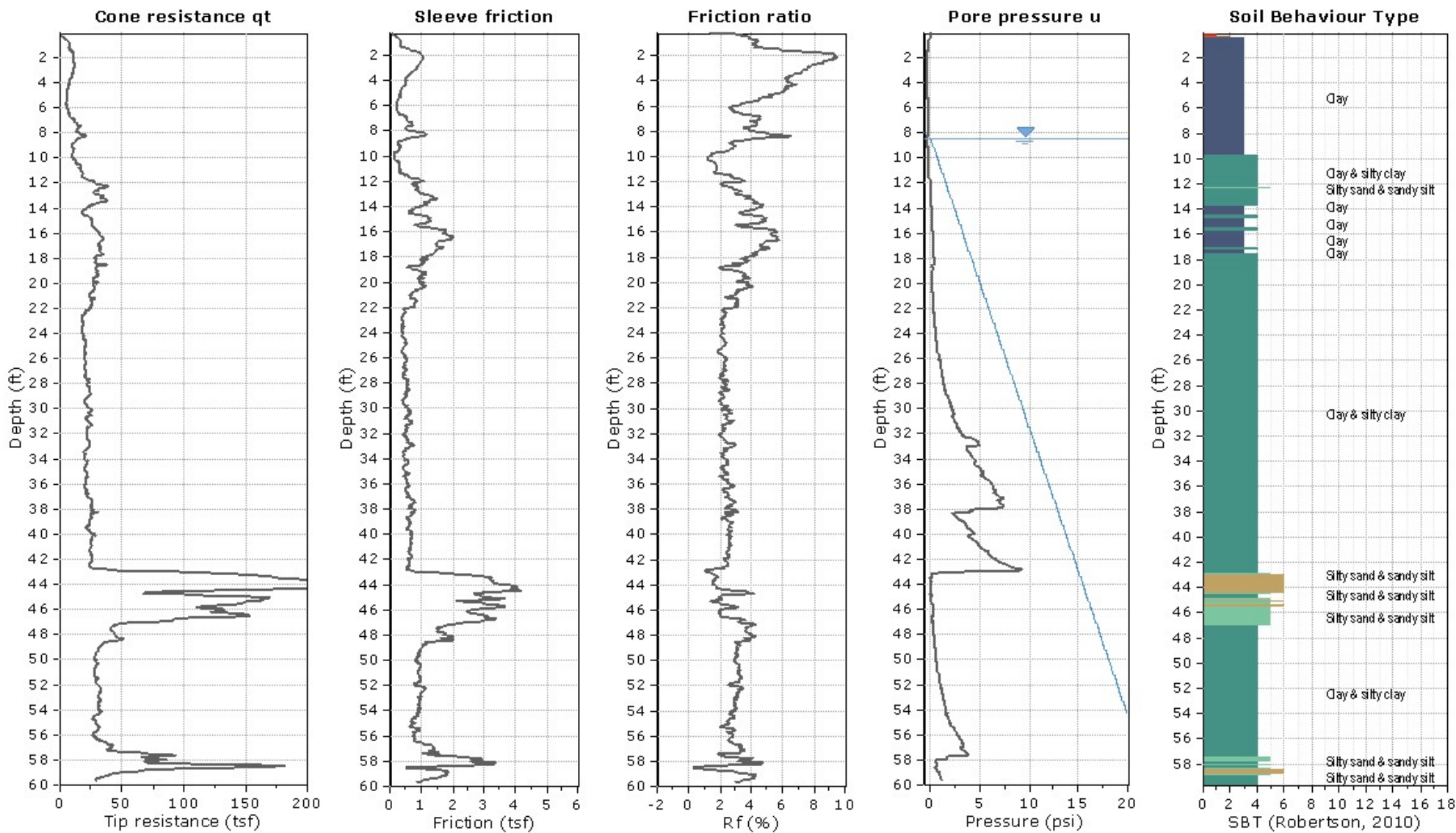
Coords: lat 39.647149° lon -88.154455°

Cone Type: CPT

Cone Operator: FUGRO

**Project:** Coles Wind

**Location:** Coles County, Illinois

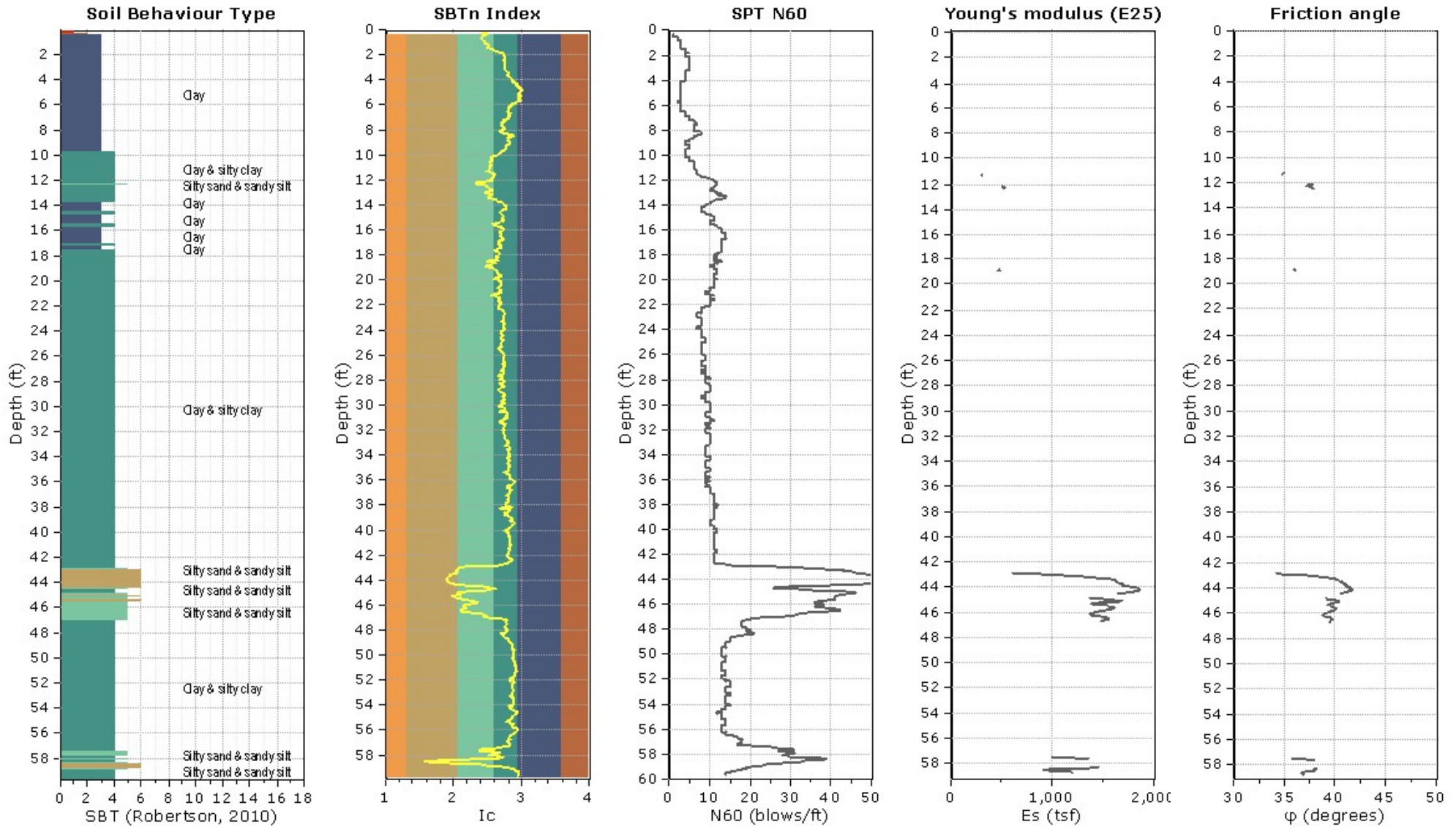






**Project:** Coles Wind

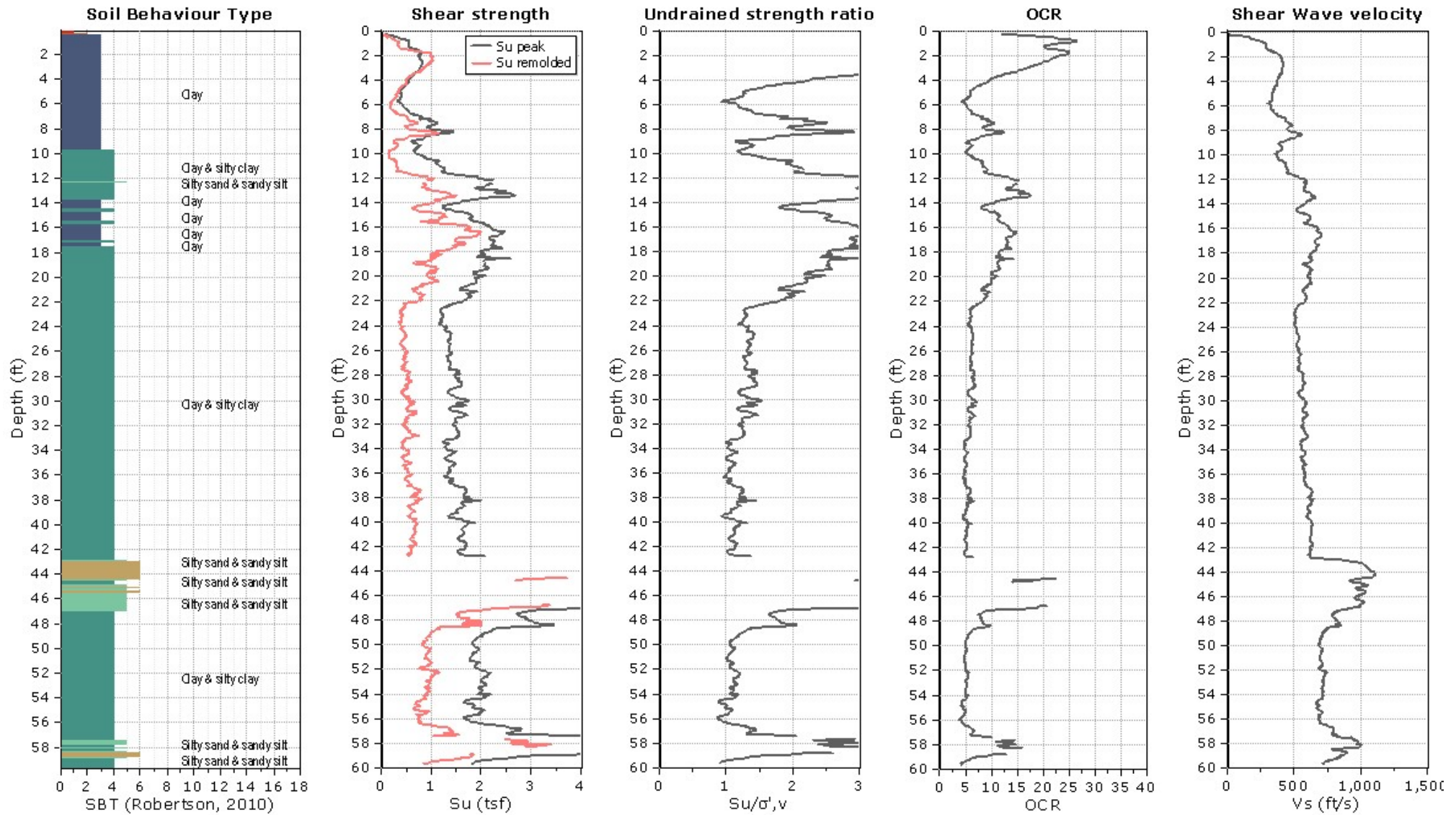
**Location:** Coles County, Illinois





**Project: Coles Wind**

**Location: Coles County, Illinois**



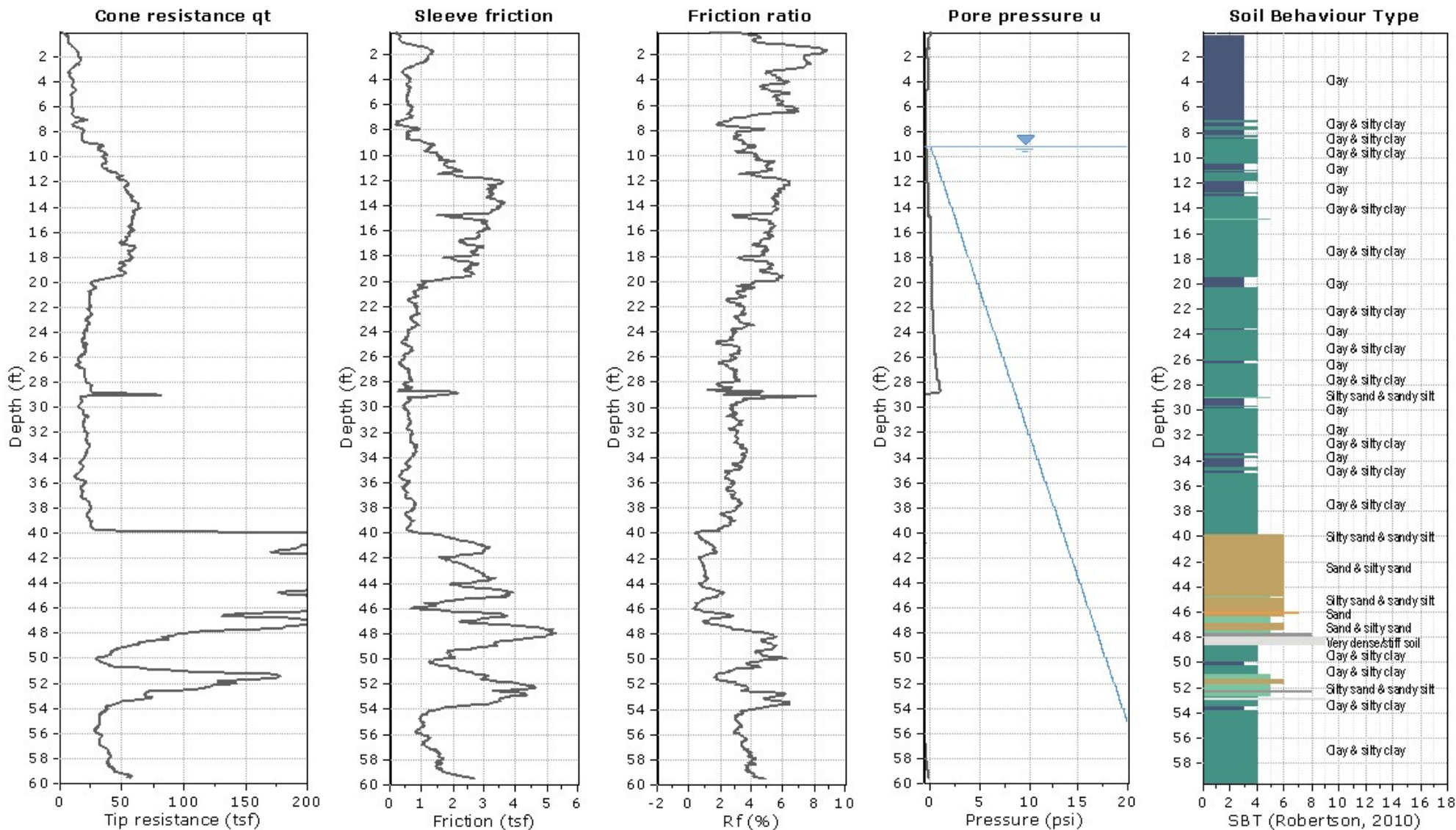


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-09**

Total depth: 59.58 ft, Date: 4/22/2025  
Coords: lat 39.648528° lon -88.173981°  
Cone Type: CPT  
Cone Operator: FUGRO



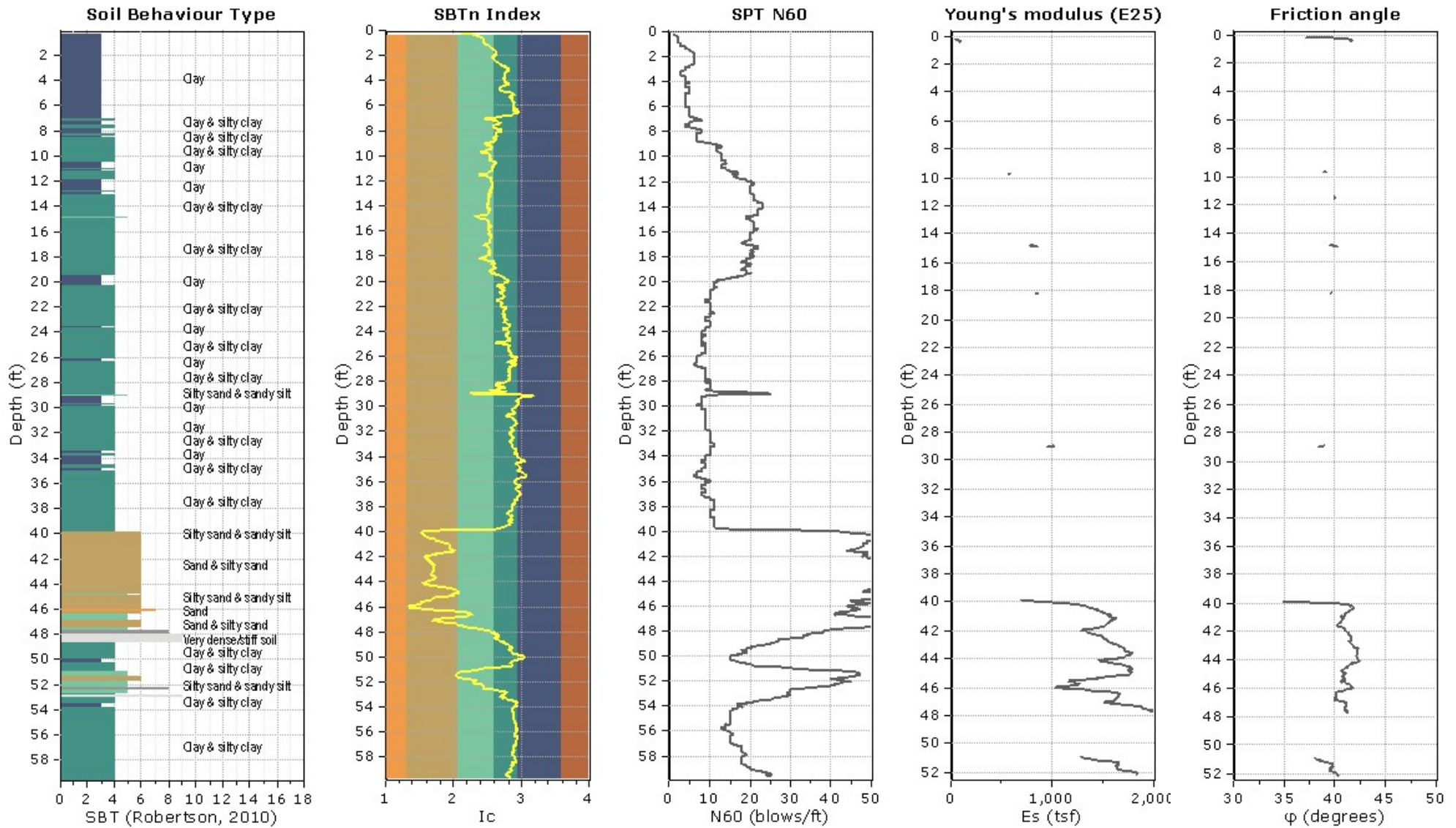




**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-09**

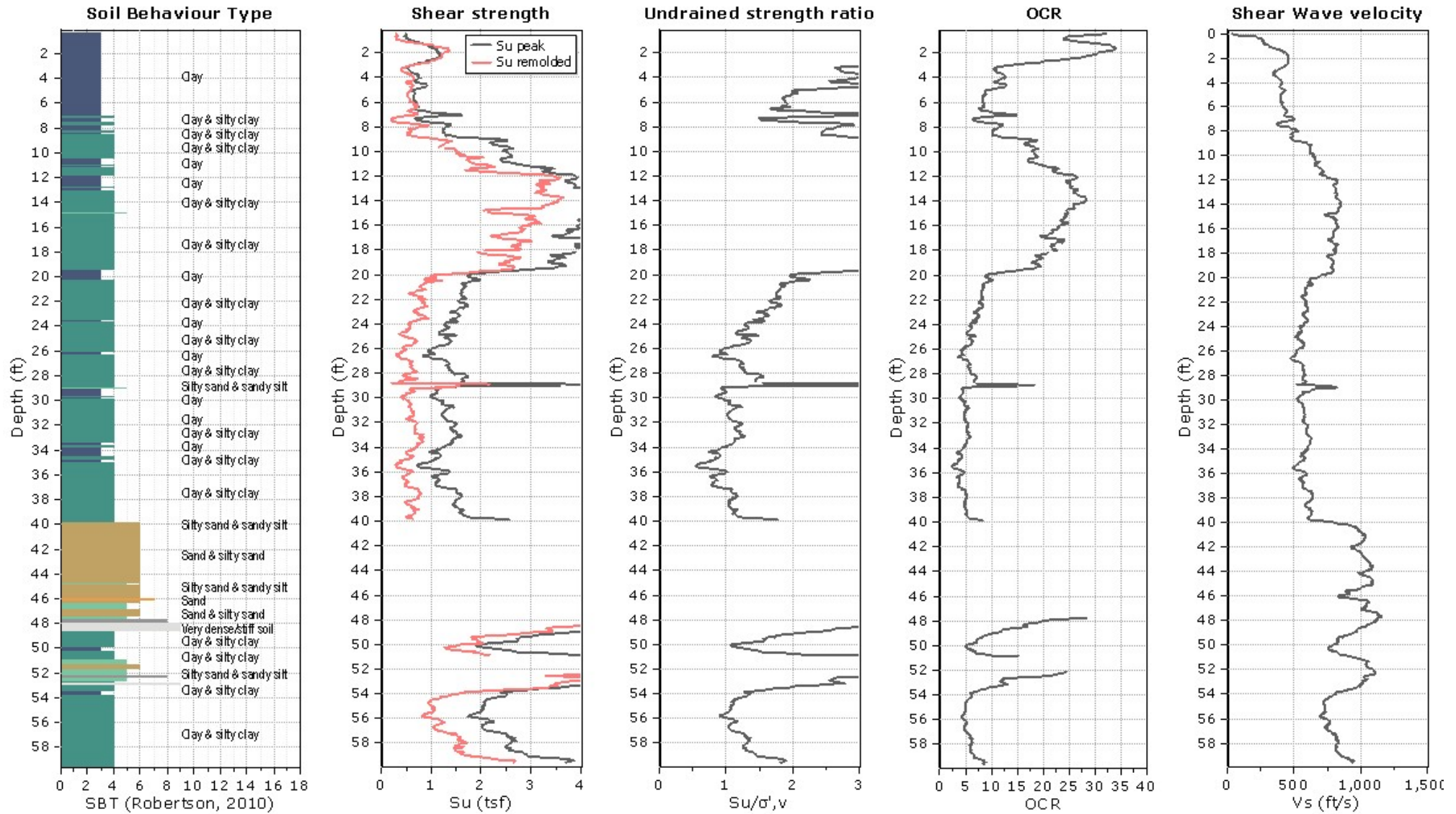
Total depth: 59.58 ft, Date: 4/22/2025  
Coords: lat 39.648528° lon -88.173981°  
Cone Type: CPT  
Cone Operator: FUGRO





**Project: Coles Wind**

**Location: Coles County, Illinois**





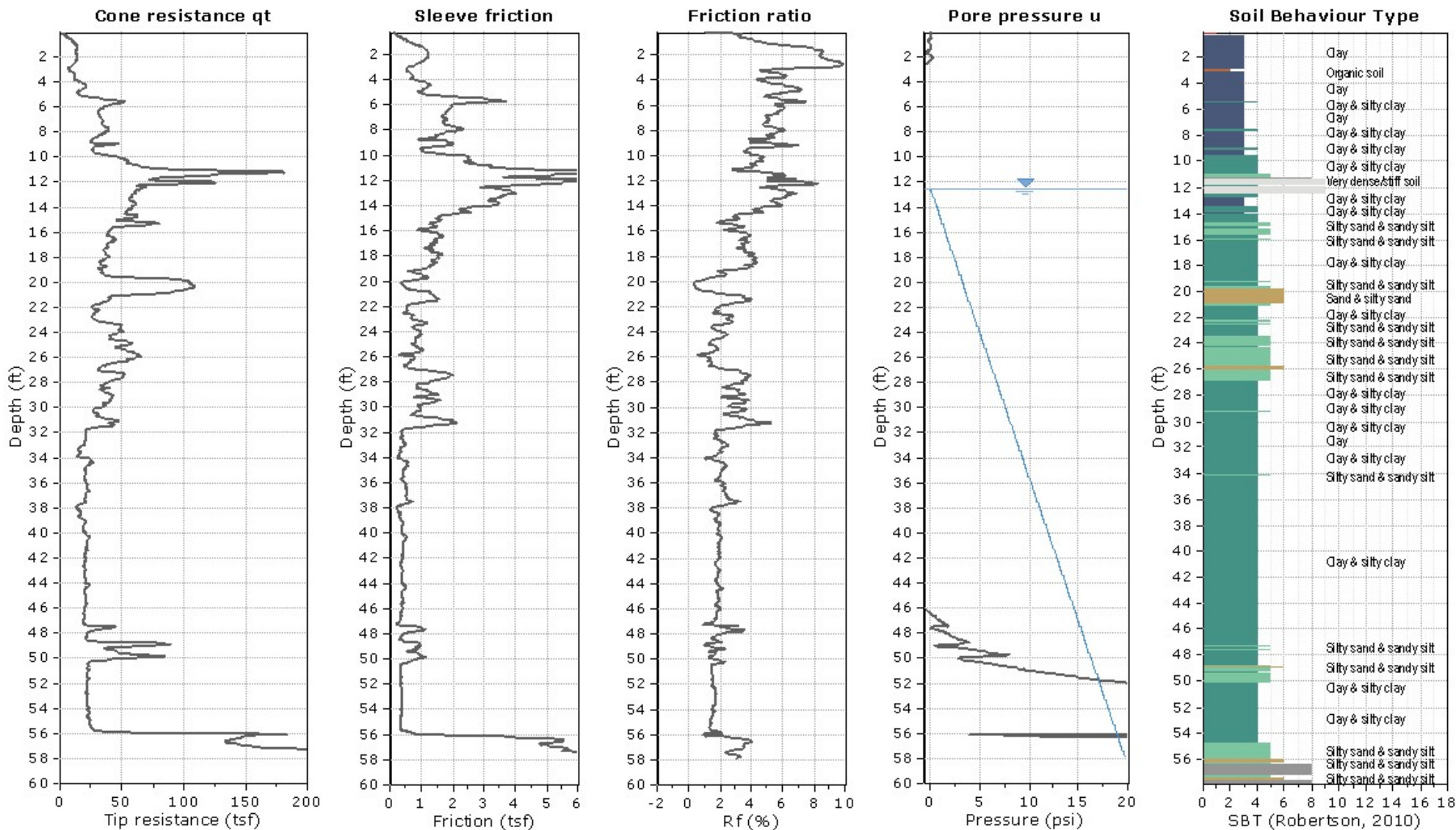


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-10**

Total depth: 57.91 ft, Date: 4/23/2025  
Coords: lat 39.626559° lon -88.229542°  
Cone Type: CPT  
Cone Operator: Fugro





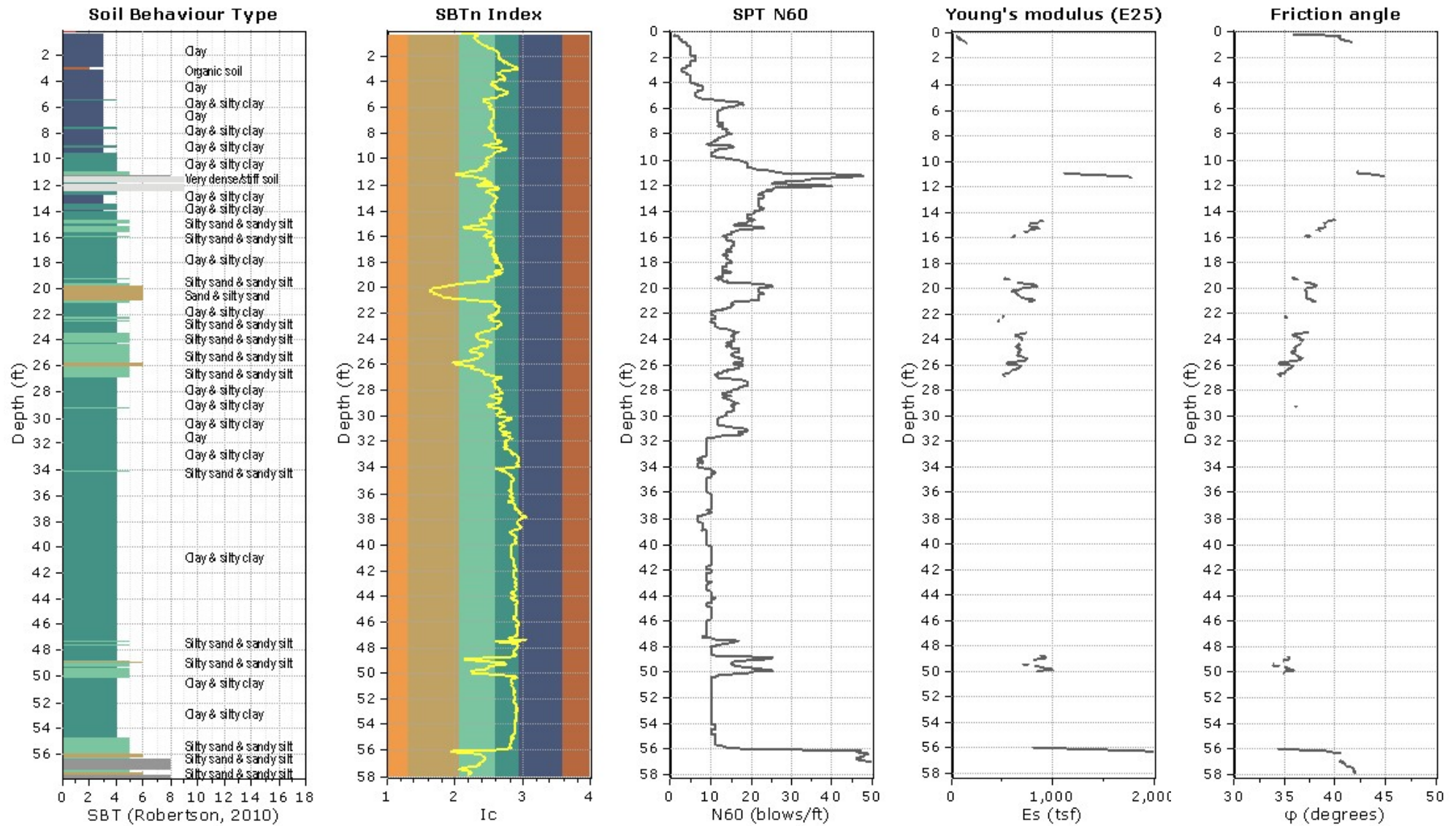


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-10**

Total depth: 57.91 ft, Date: 4/23/2025  
Coords: lat 39.626559° lon -88.229542°  
Cone Type: CPT  
Cone Operator: Fugro



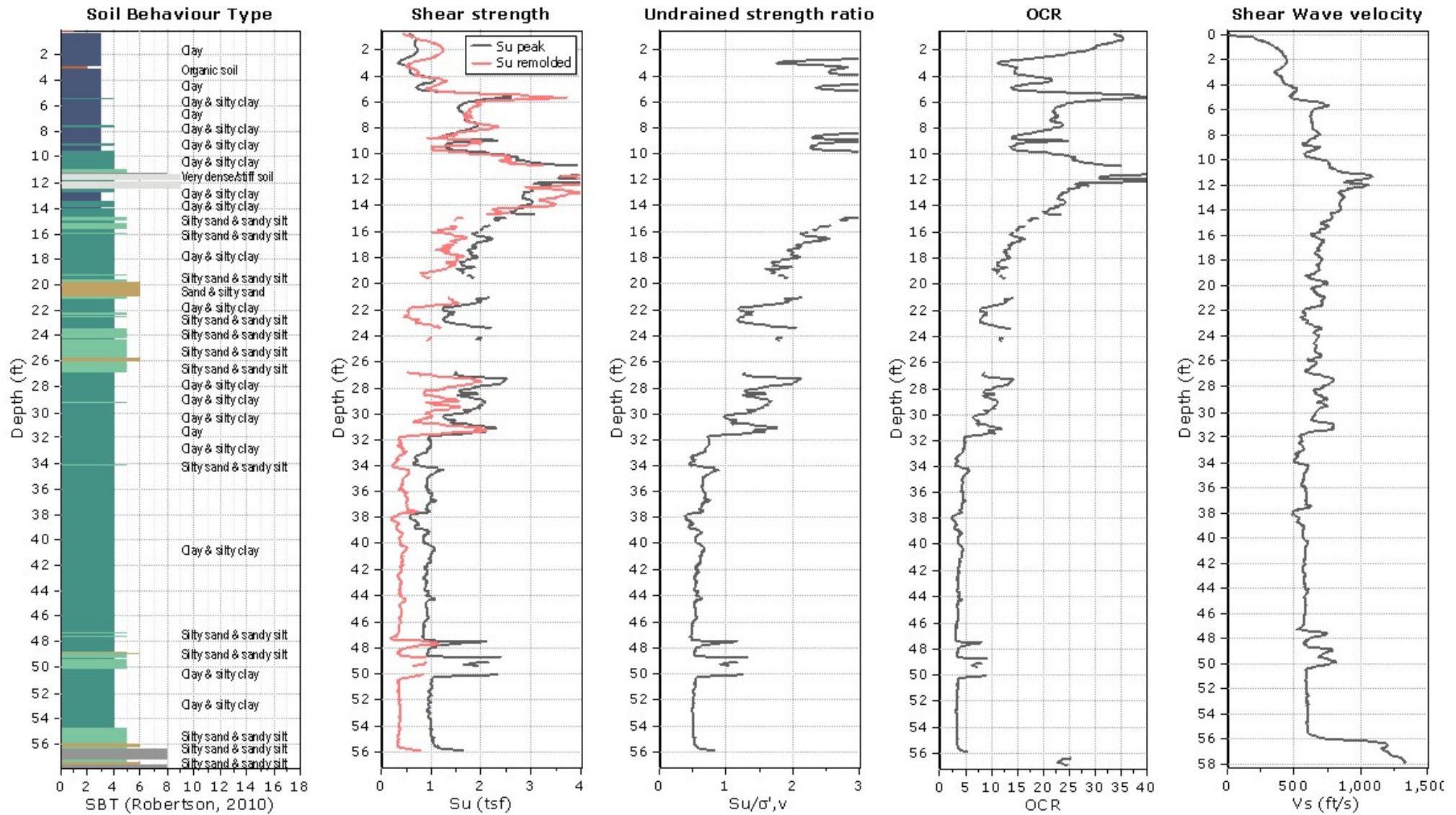


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-10**

Total depth: 57.91 ft, Date: 4/23/2025  
Coords: lat 39.626559° lon -88.229542°  
Cone Type: CPT  
Cone Operator: Fugro





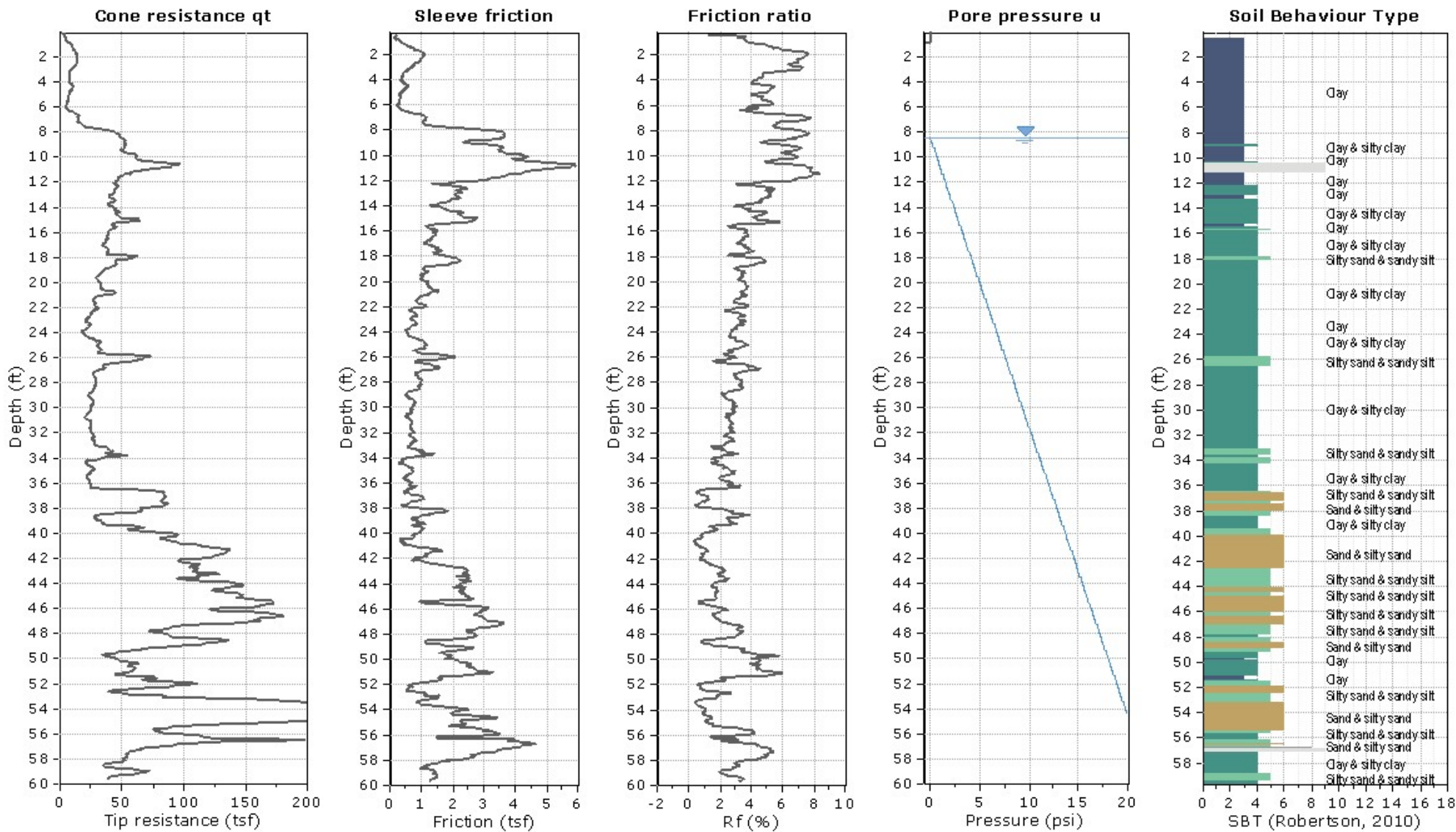


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-11**

Total depth: 59.68 ft, Date: 4/26/2025  
Coords: lat 39.630431° lon -88.200456°  
Cone Type: CPT  
Cone Operator: Fugro







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**CPT: GEO-11**

Total depth: 59.68 ft, Date: 4/26/2025

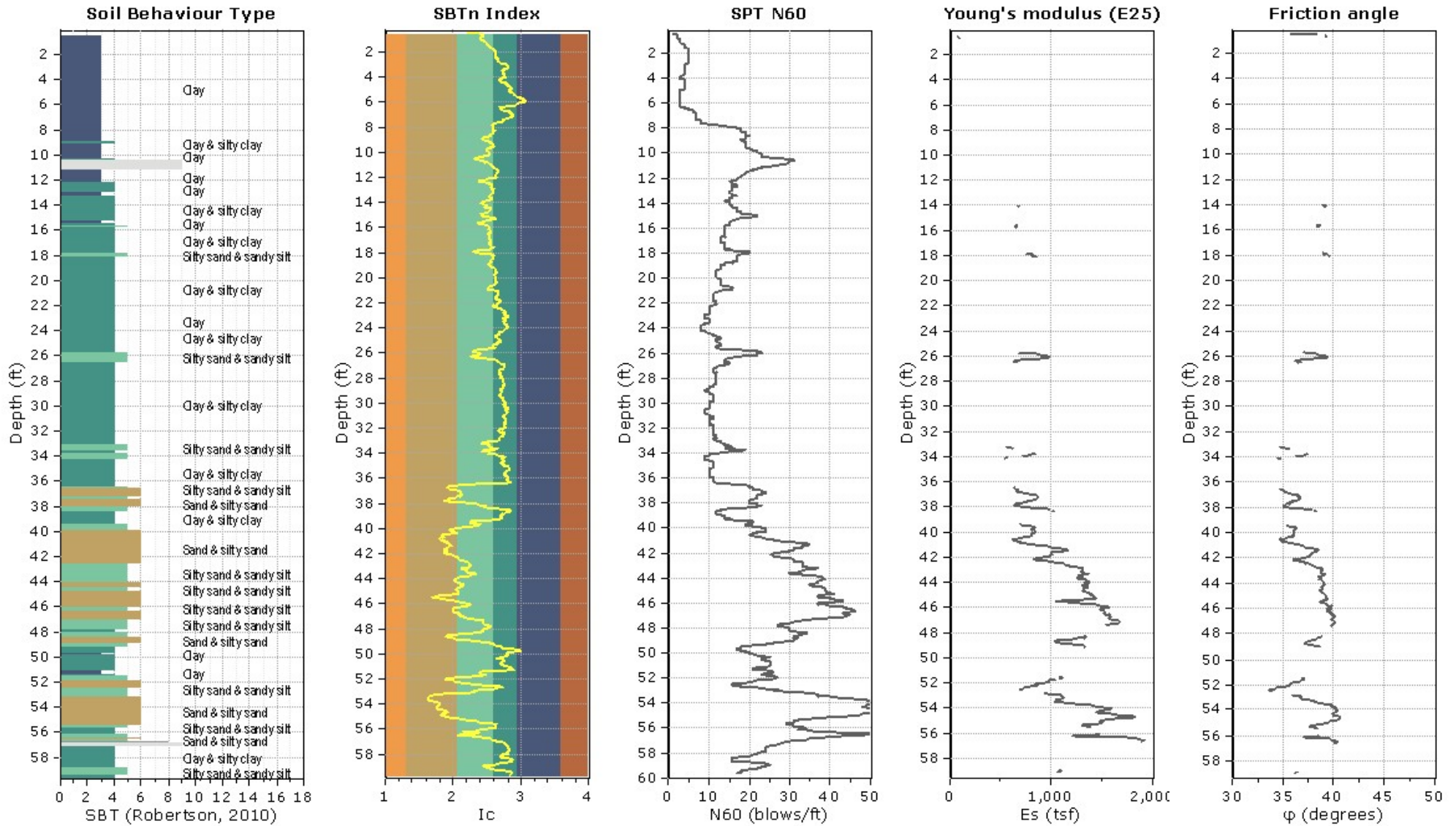
Coords: lat 39.630431° lon -88.200456°

Cone Type: CPT

Cone Operator: Fugro

**Project: Coles Wind**

**Location: Coles County, Illinois**



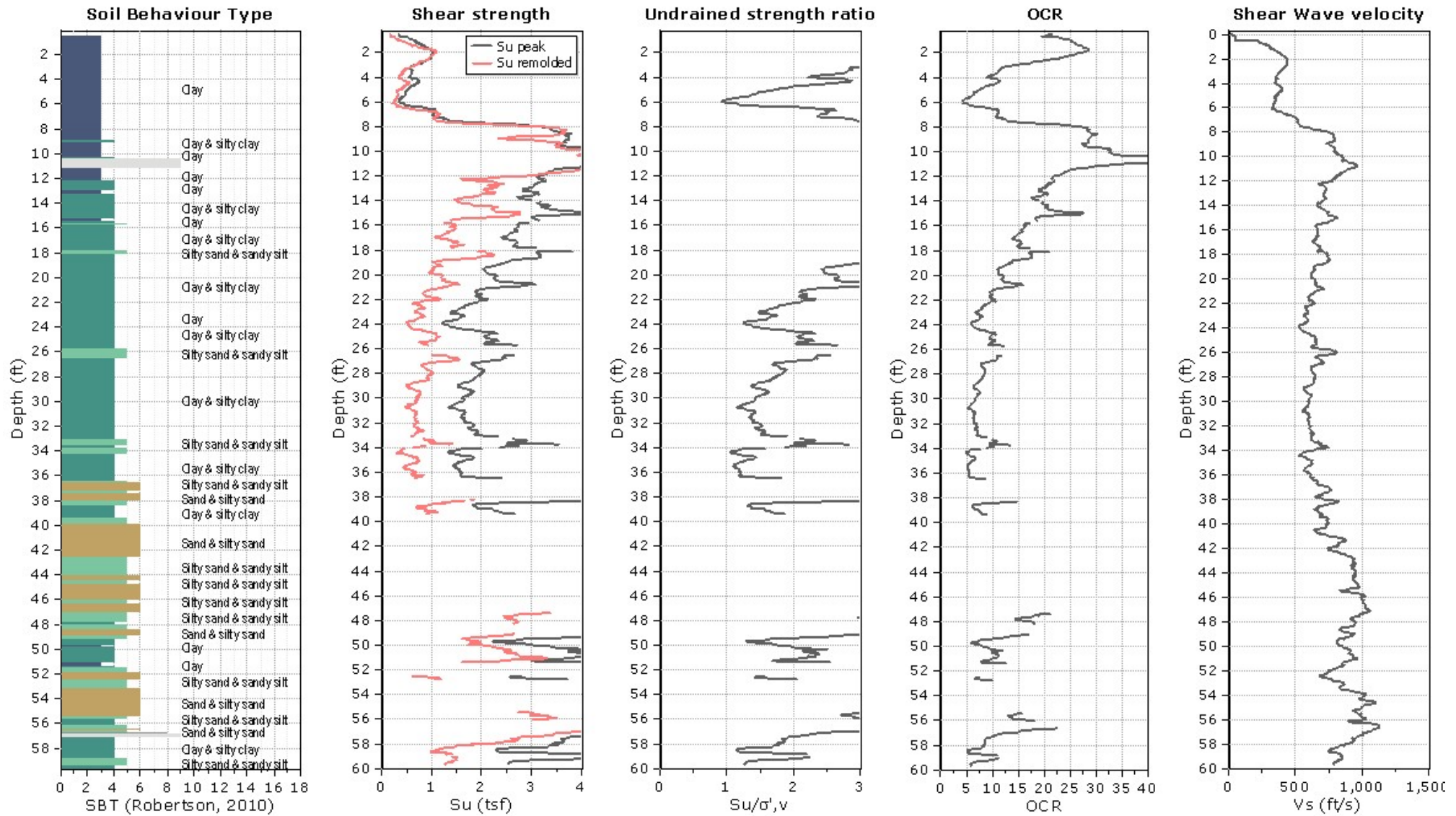


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-11**

Total depth: 59.68 ft, Date: 4/26/2025  
Coords: lat 39.630431° lon -88.200456°  
Cone Type: CPT  
Cone Operator: Fugro





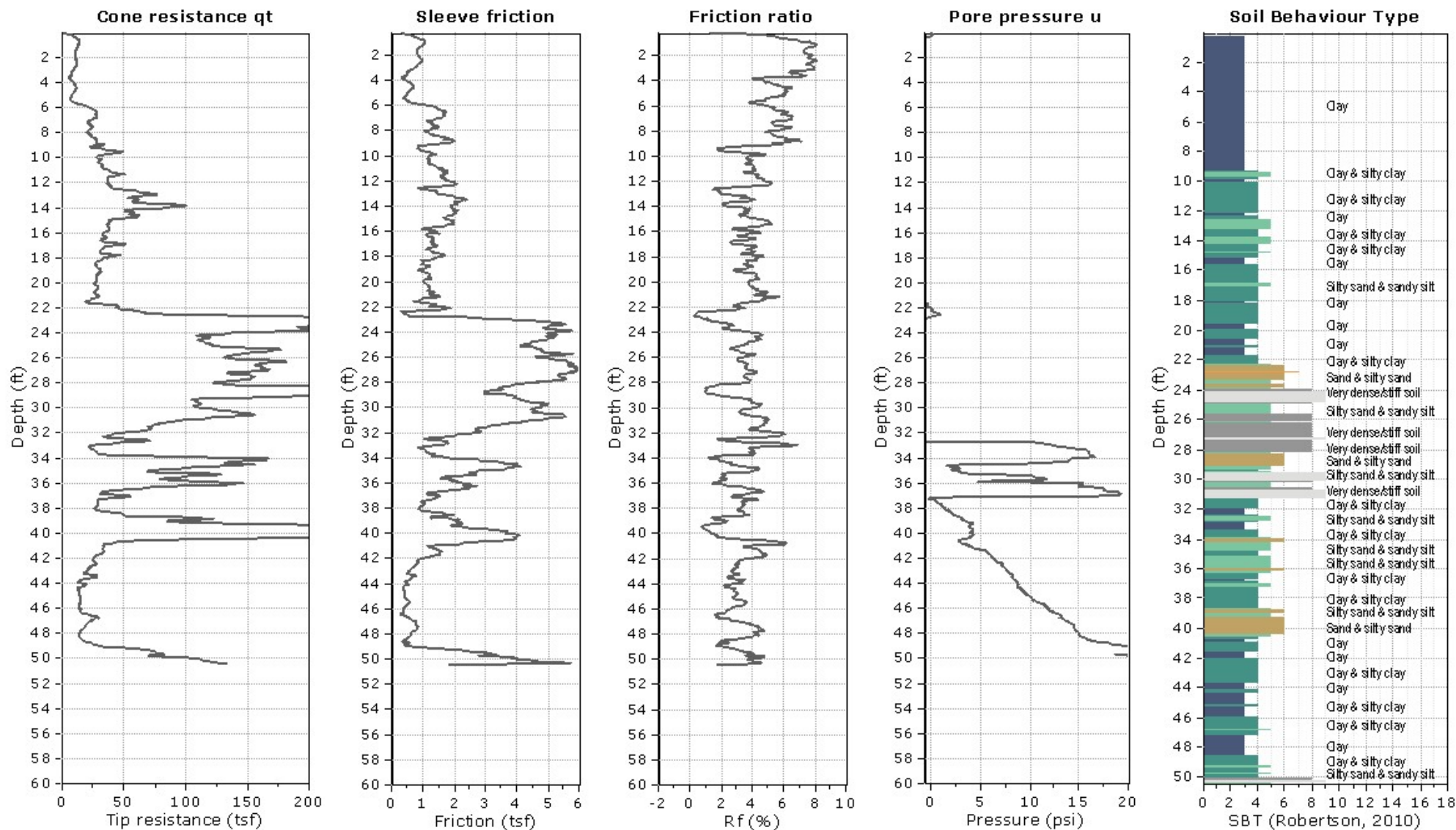


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-12**

Total depth: 50.46 ft, Date: 4/30/2025  
Coords: lat 39.603647° lon -88.220991°  
Cone Type: CPT  
Cone Operator: Fugro







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**CPT: GEO-12**

Total depth: 50.46 ft, Date: 4/30/2025

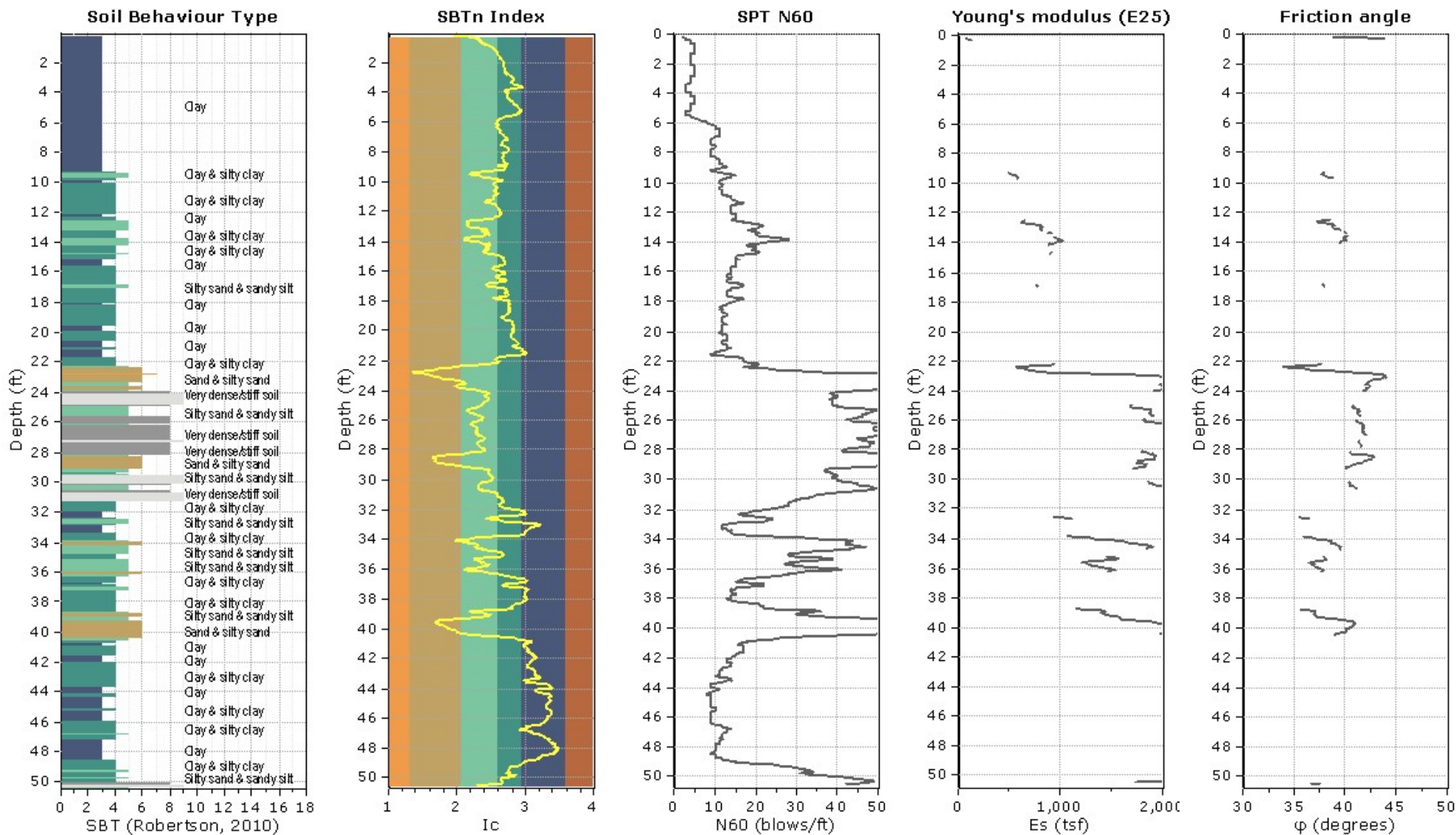
Coords: lat 39.603647° lon -88.220991°

Cone Type: CPT

Cone Operator: Fugro

**Project: Coles Wind**

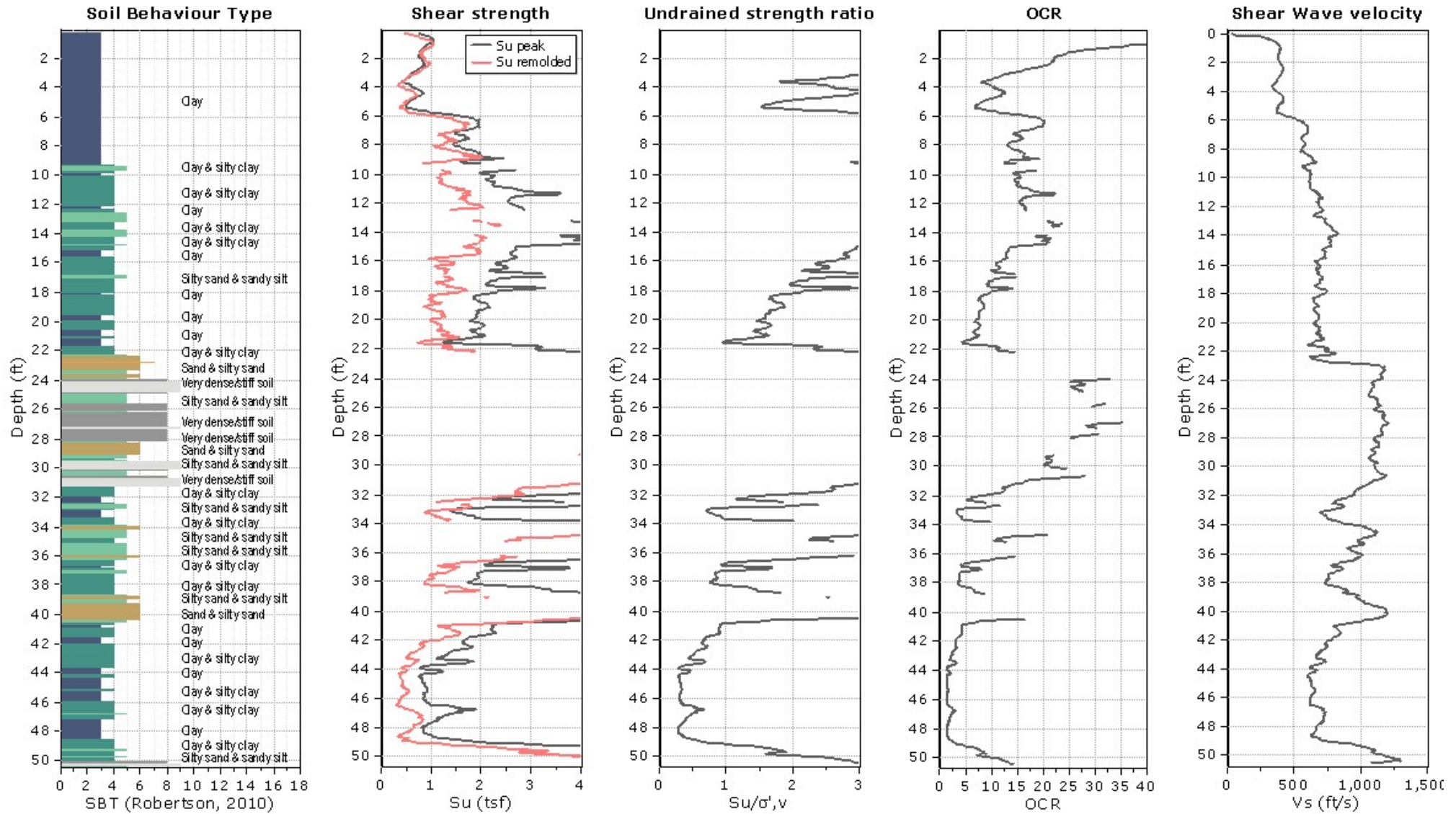
**Location: Coles County, Illinois**





**Project: Coles Wind**

**Location: Coles County, Illinois**



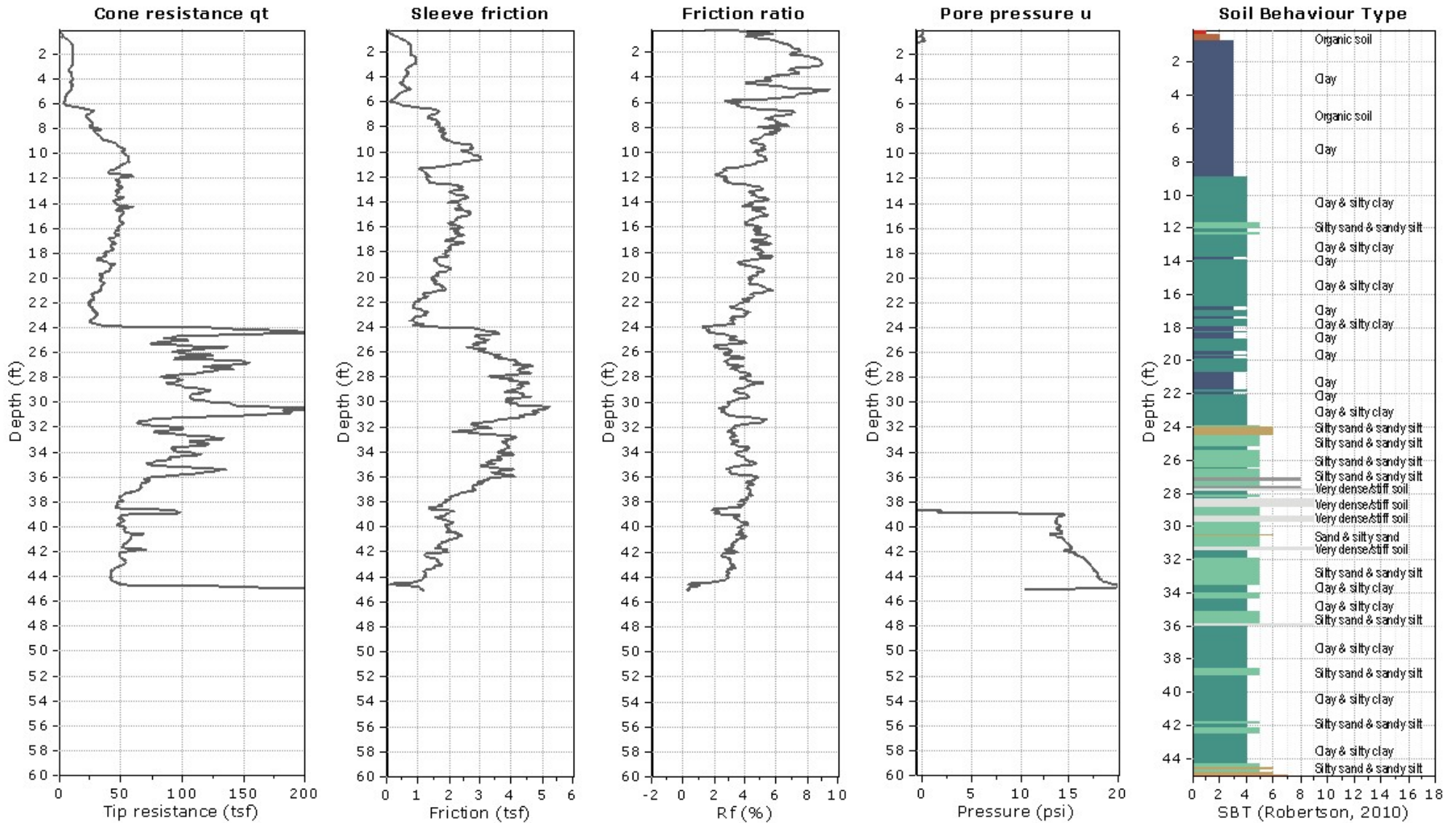


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-13**

Total depth: 45.08 ft, Date: 4/30/2025  
Coords: lat 39.604831° lon -88.210781°  
Cone Type: CPT  
Cone Operator: Fugro







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**CPT: GEO-13**

Total depth: 45.08 ft, Date: 4/30/2025

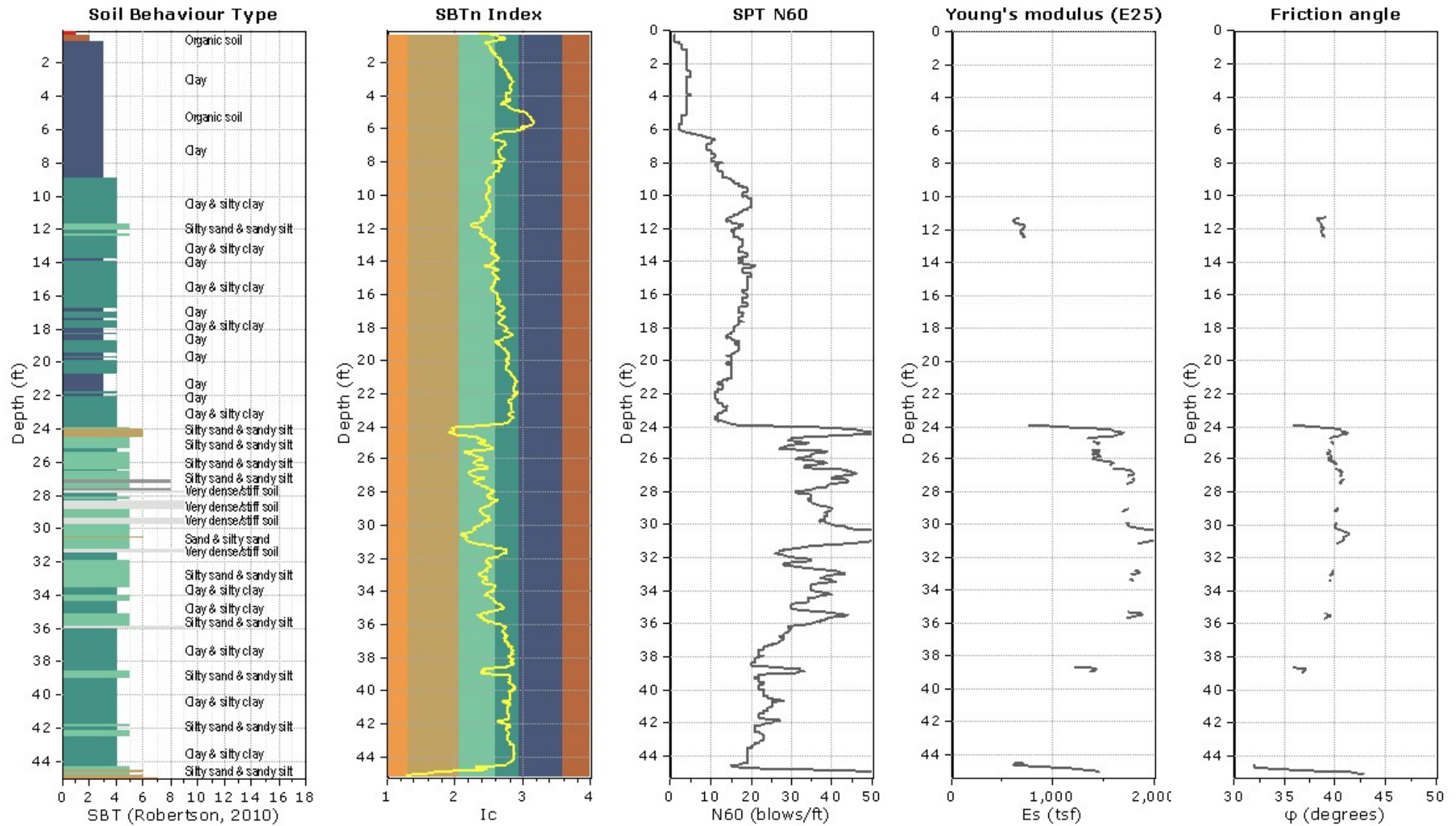
Coords: lat 39.604831° lon -88.210781°

Cone Type: CPT

Cone Operator: Fugro

**Project: Coles Wind**

**Location: Coles County, Illinois**



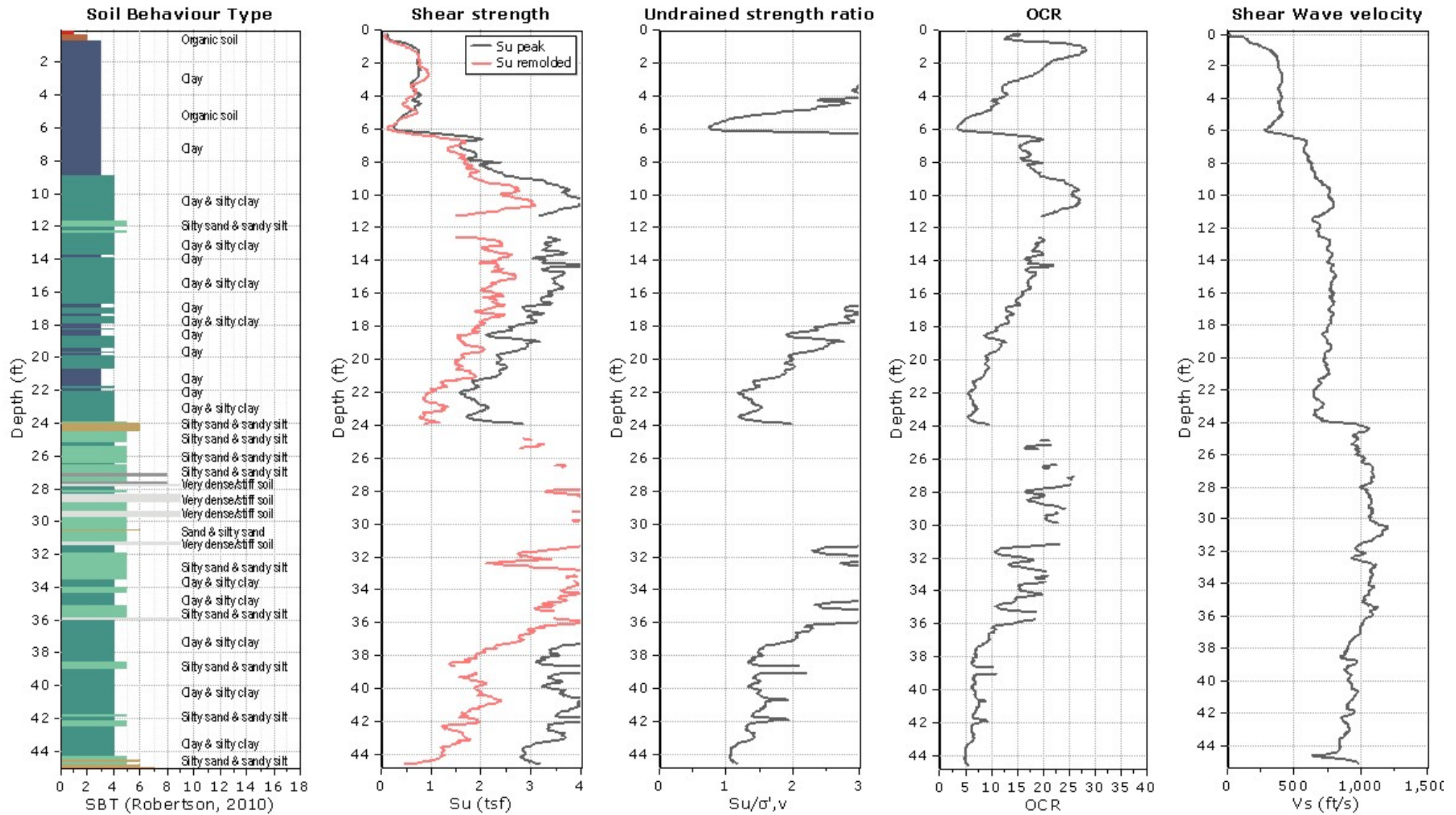


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-13**

Total depth: 45.08 ft, Date: 4/30/2025  
Coords: lat 39.604831° lon -88.210781°  
Cone Type: CPT  
Cone Operator: Fugro





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**Project:** Coles Wind  
**Location:** Coles County, Illinois

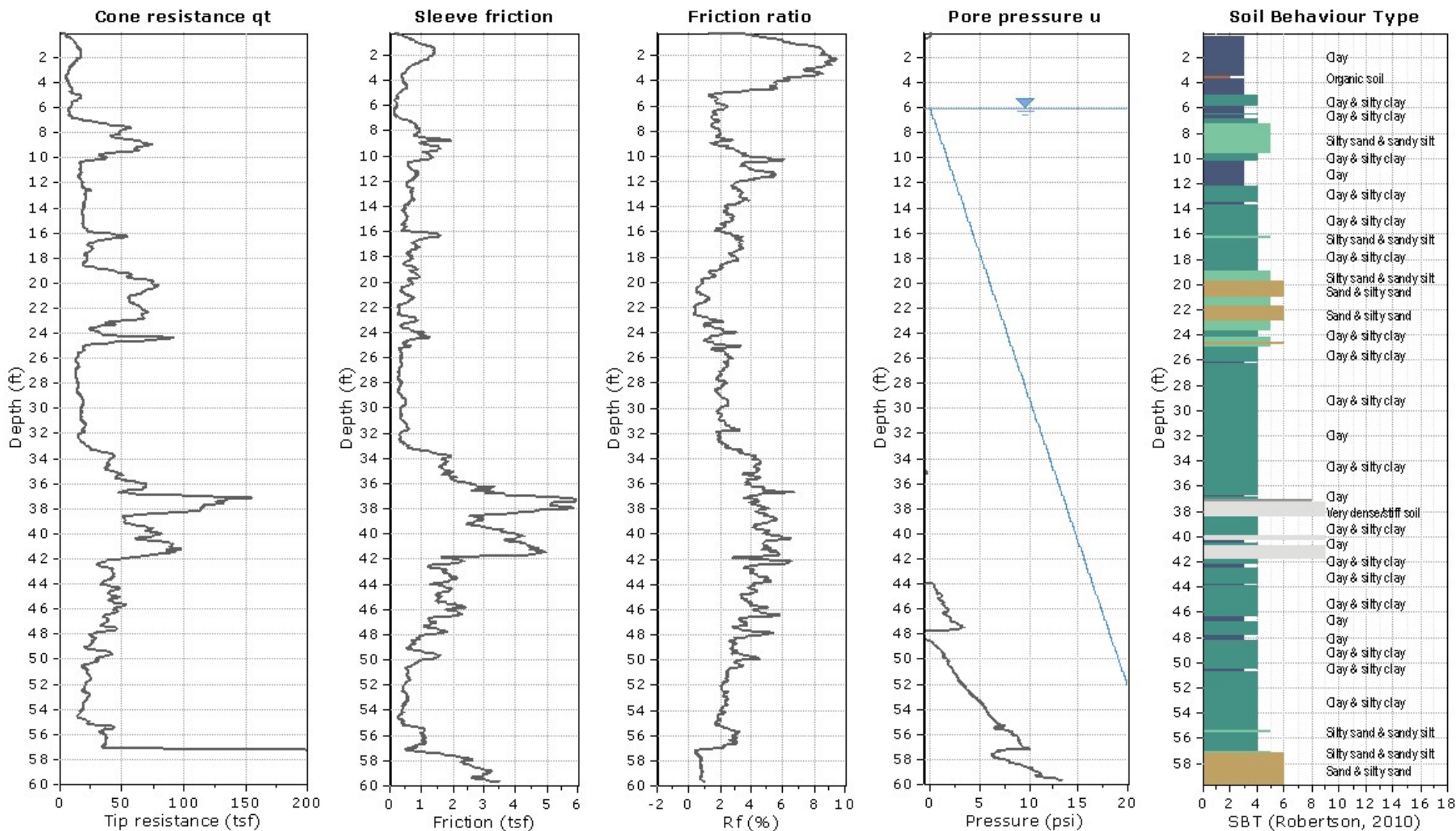
**CPT: GEO-14**

Total depth: 59.68 ft, Date: 4/27/2025

Coords: lat 39.58532° lon -88.211622°

Cone Type: CPT

Cone Operator: FUGRO







**Project:** Coles Wind  
**Location:** Coles County, Illinois

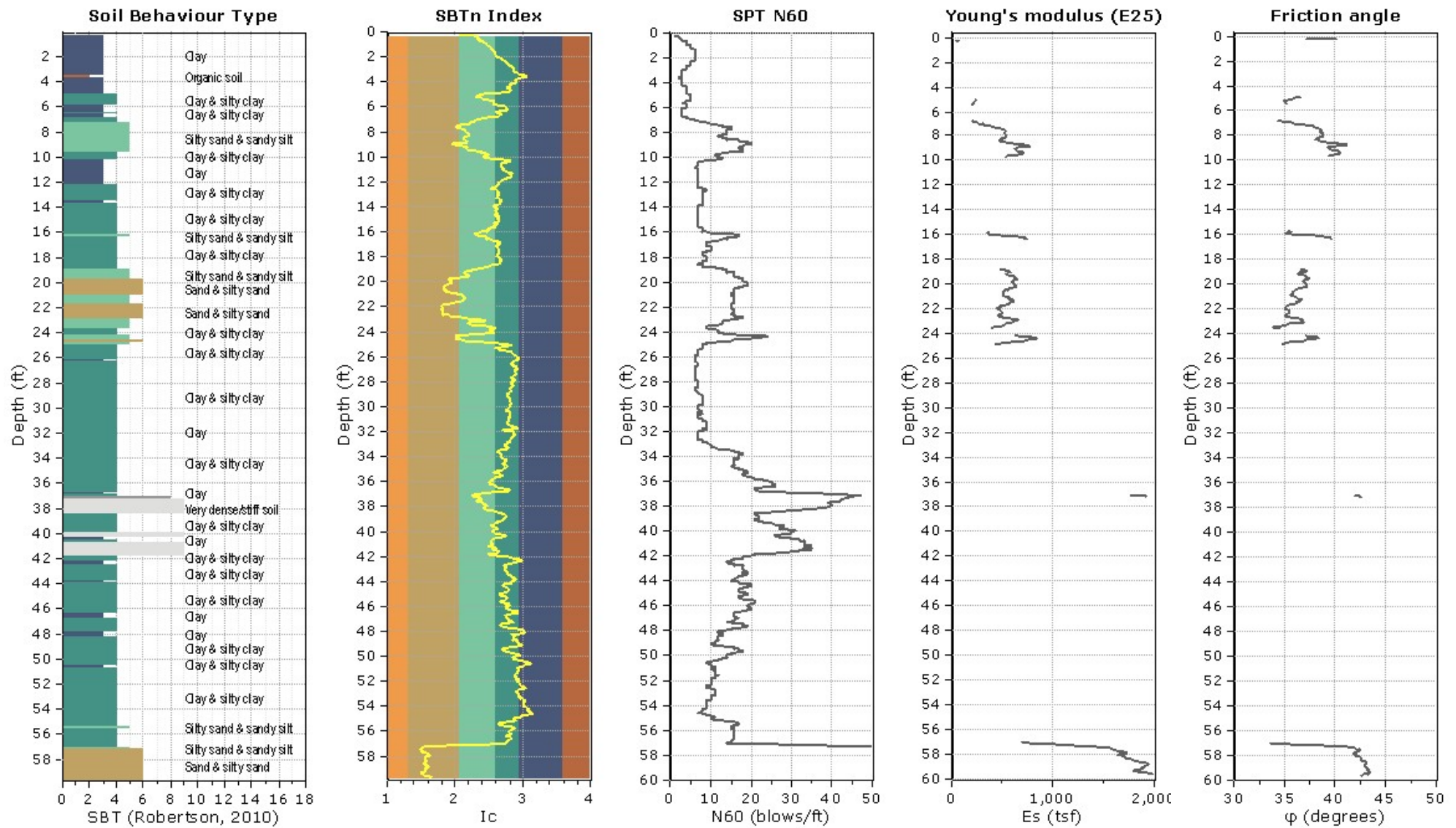
**CPT: GEO-14**

Total depth: 59.68 ft, Date: 4/27/2025

Coords: lat 39.58532° lon -88.211622°

Cone Type: CPT

Cone Operator: FUGRO



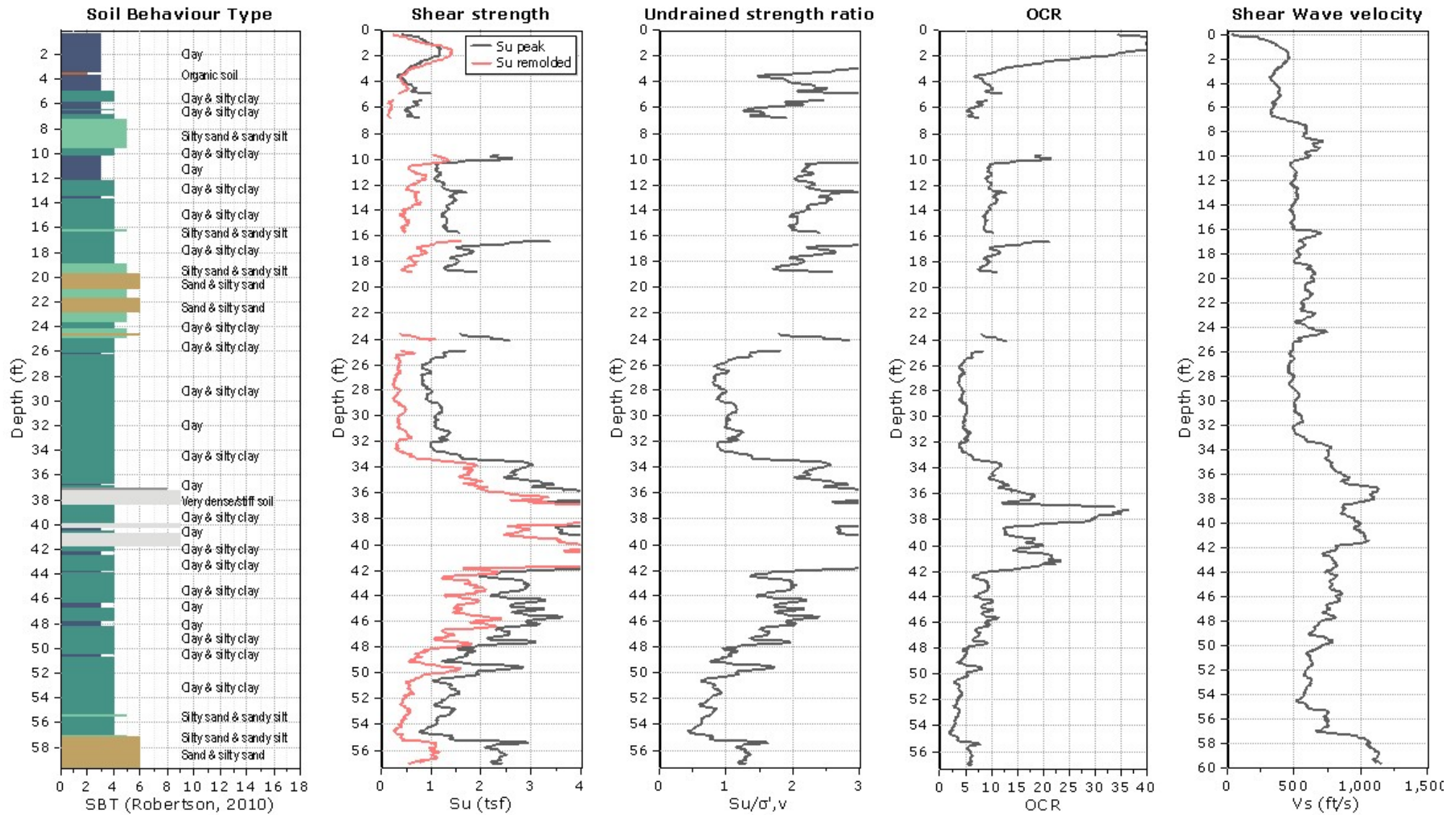


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-14**

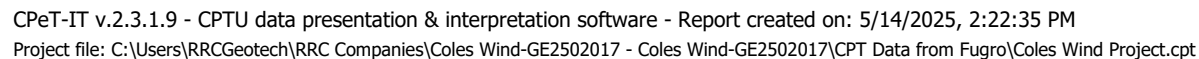
Total depth: 59.68 ft, Date: 4/27/2025  
Coords: lat 39.58532° lon -88.211622°  
Cone Type: CPT  
Cone Operator: FUGRO







**CPT: GEO-15**  
Total depth: 56.14 ft, Date: 4/29/2025  
Coords: lat 39.587266° lon -88.235878°  
Cone Type: CPT  
Cone Operator: Fugro







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**CPT: GEO-15**

Total depth: 56.14 ft, Date: 4/29/2025

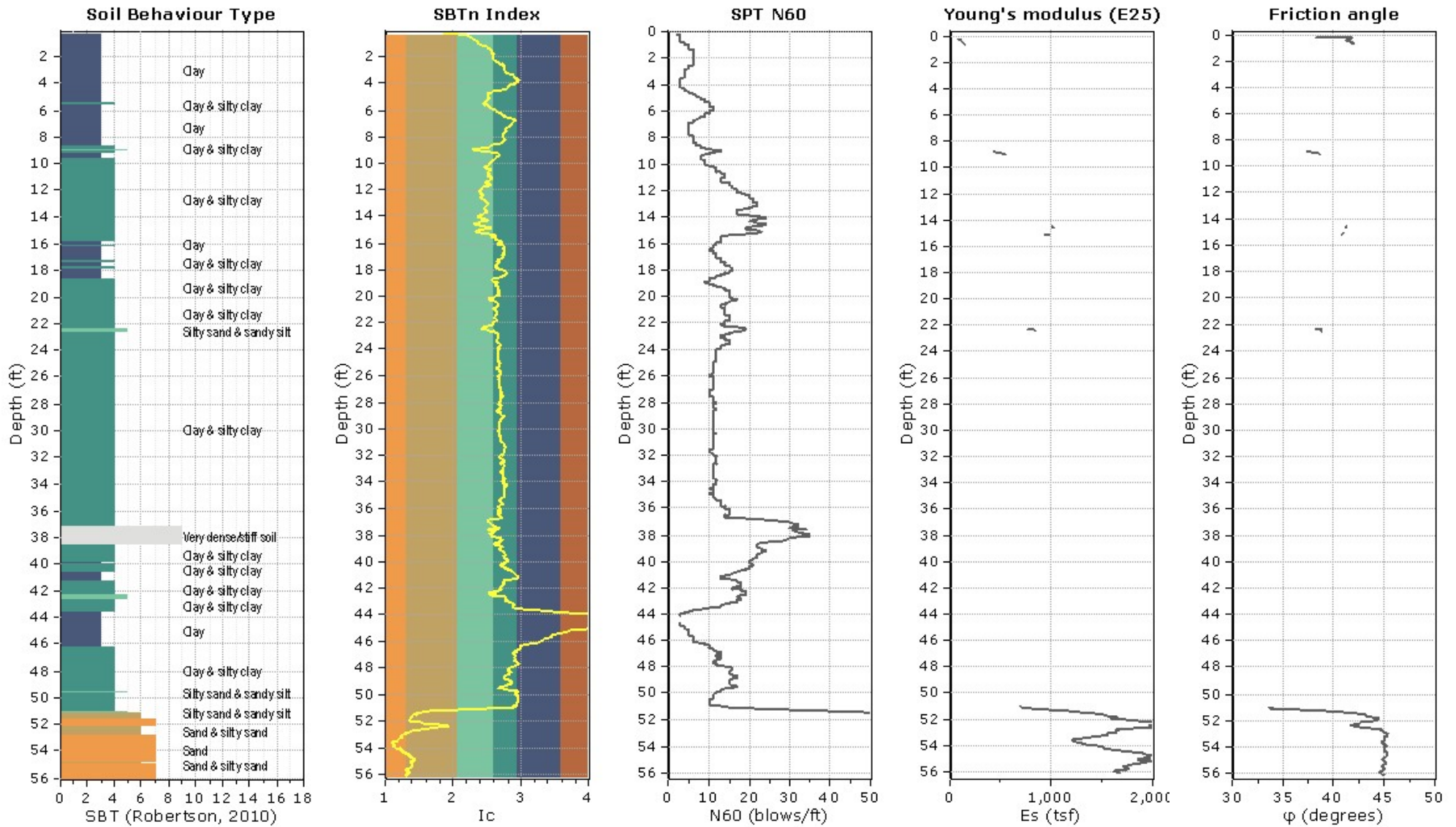
Coords: lat 39.587266° lon -88.235878°

Cone Type: CPT

Cone Operator: Fugro

**Project: Coles Wind**

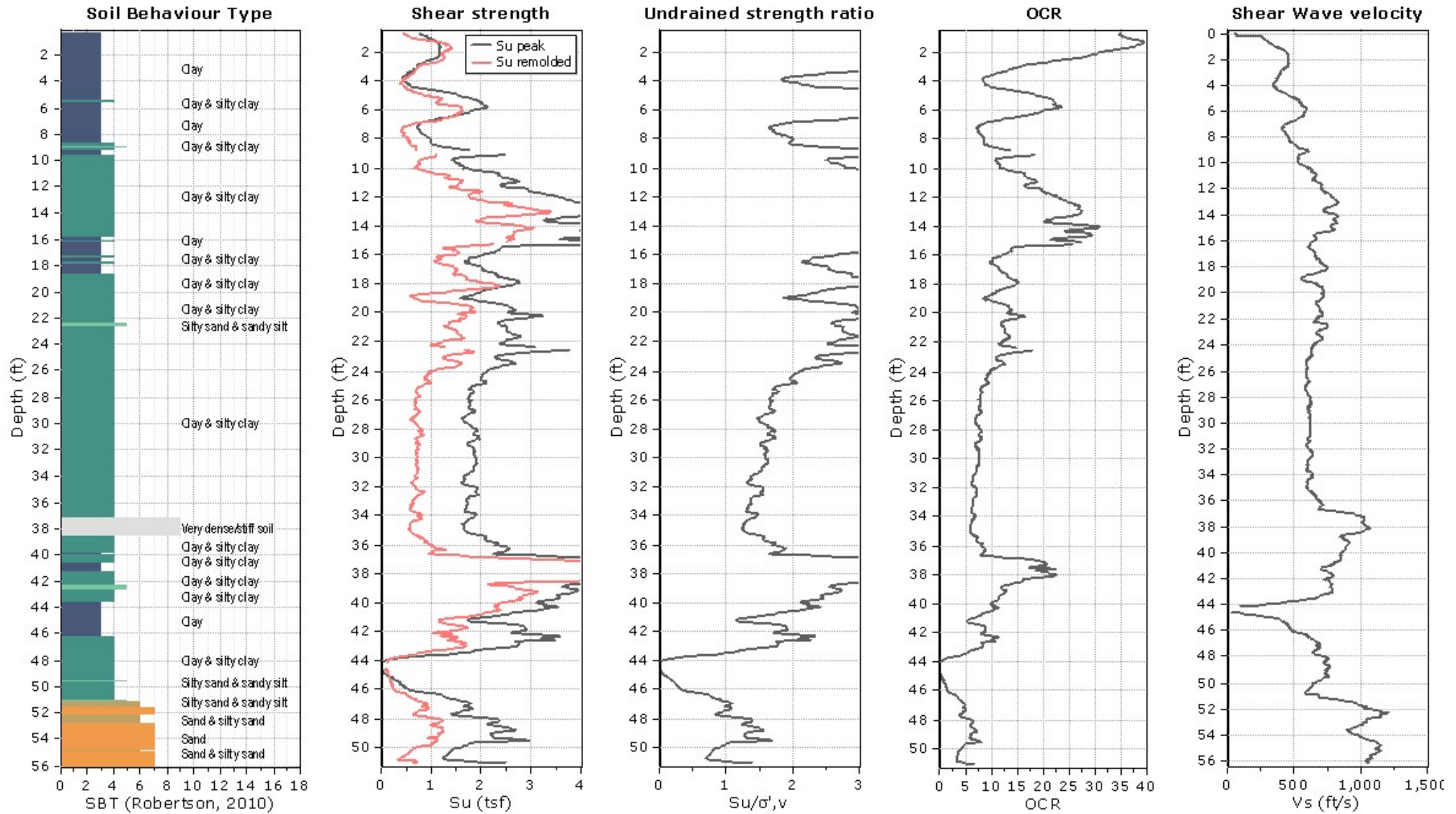
**Location: Coles County, Illinois**





**Project: Coles Wind**

**Location: Coles County, Illinois**



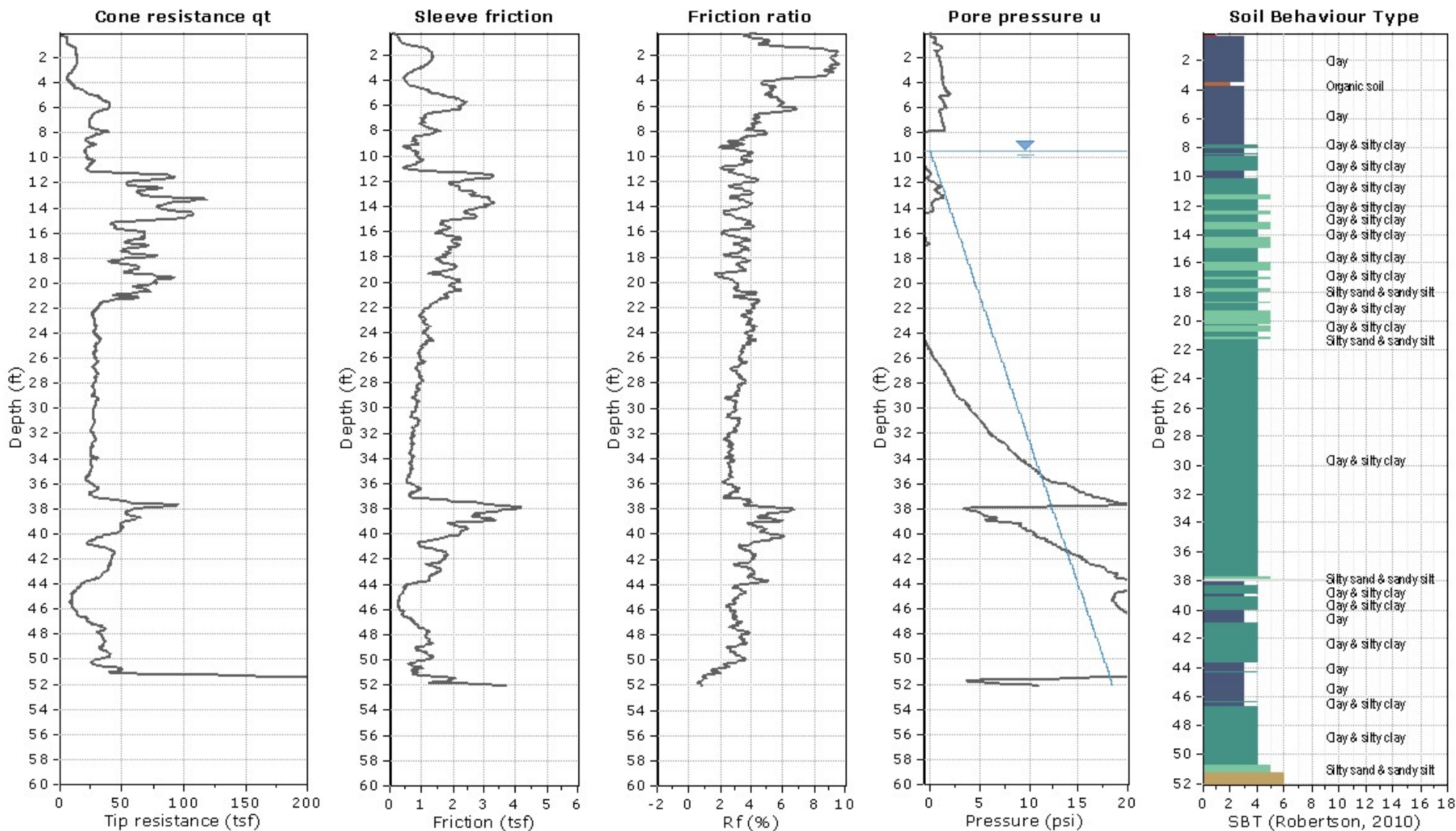


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-15A**

Total depth: 52.13 ft, Date: 4/29/2025  
Coords: lat 39.587266° lon -88.235878°  
Cone Type: CPT  
Cone Operator: Fugro

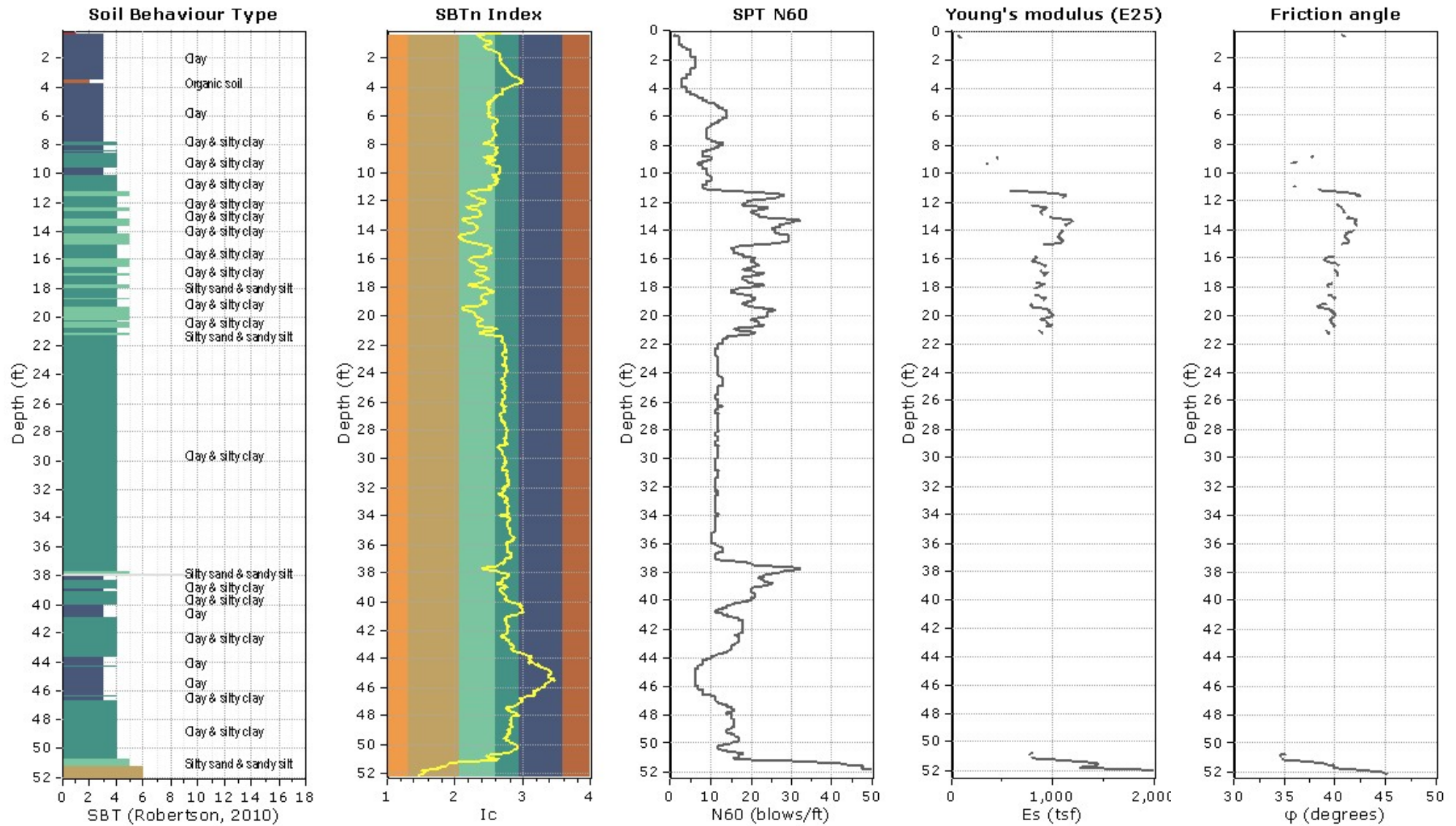






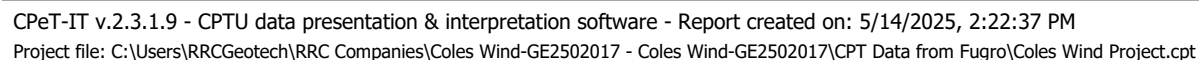
**Project:** Coles Wind

**Location:** Coles County, Illinois



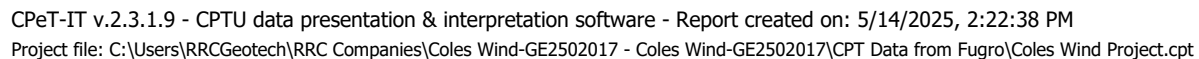


**CPT: GEO-15A**  
Total depth: 52.13 ft, Date: 4/29/2025  
Coords: lat 39.587266° lon -88.235878°  
Cone Type: CPT  
Cone Operator: Fugro





**CPT: GEO-16**  
Total depth: 49.97 ft, Date: 4/29/2025  
Coords: lat 39.580814° lon -88.240424°  
Cone Type: CPT  
Cone Operator: Fugro

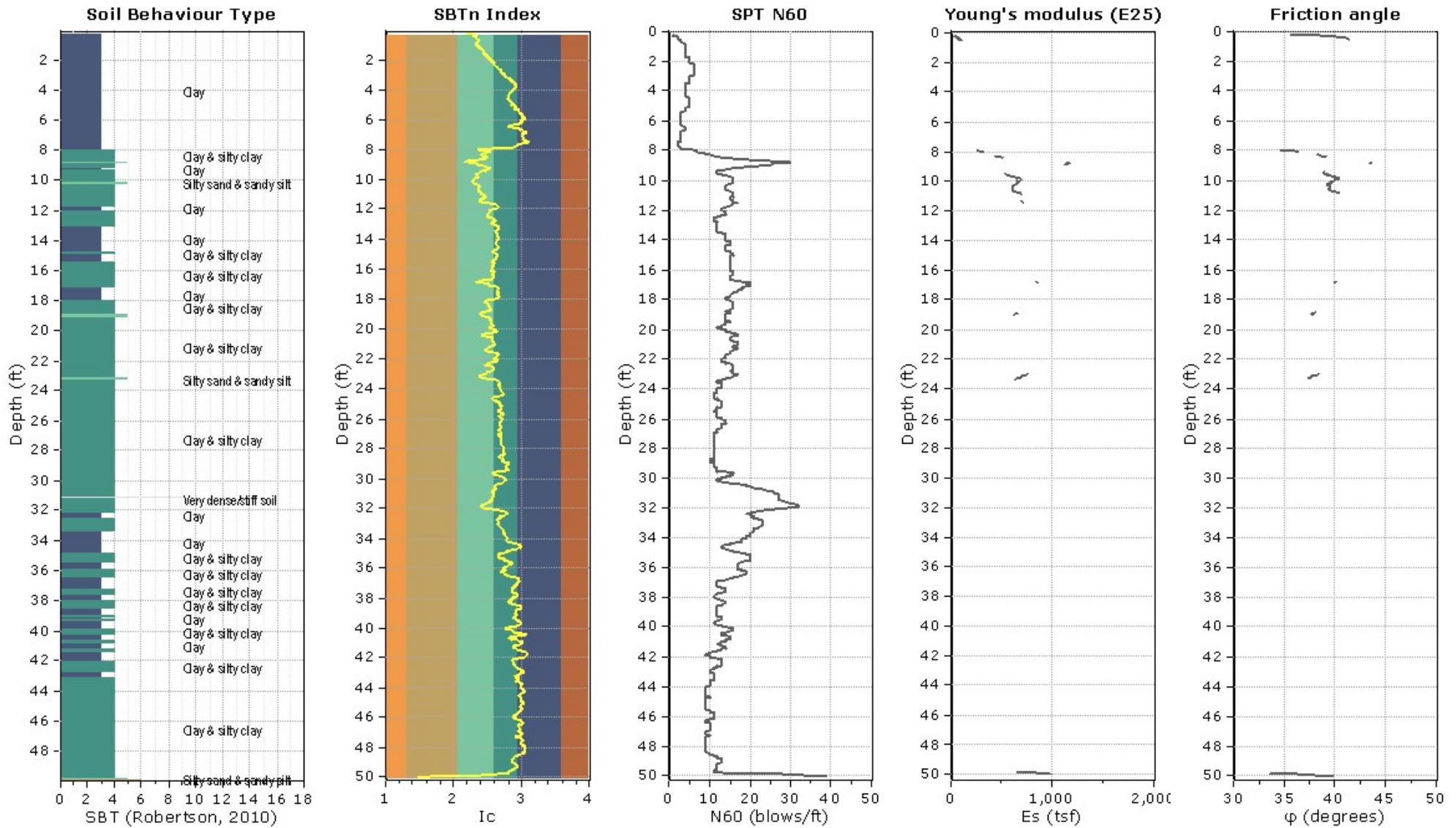






**Project:** Coles Wind

**Location:** Coles County, Illinois





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**CPT: GEO-16**

Total depth: 49.97 ft, Date: 4/29/2025

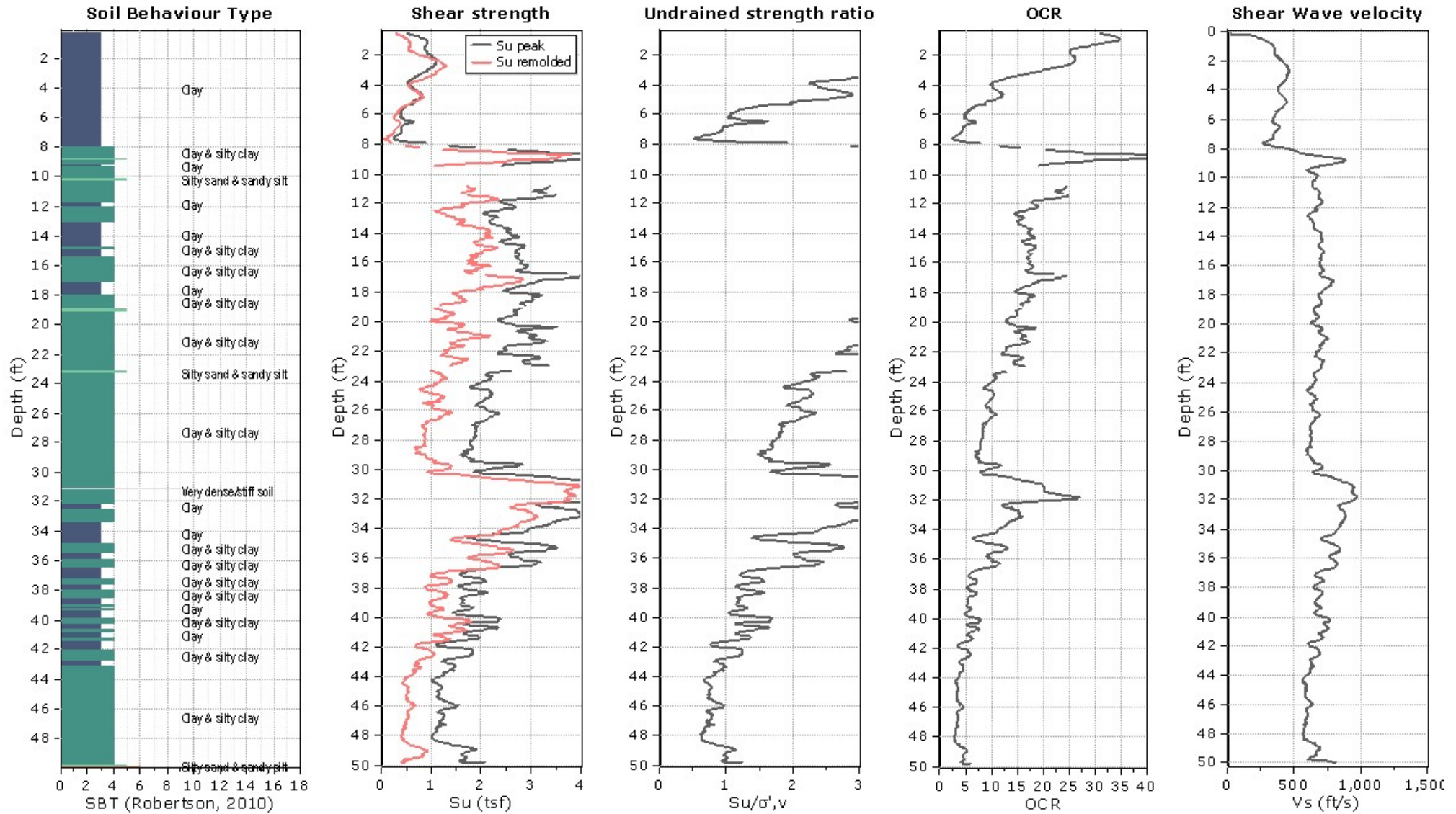
Coords: lat 39.580814° lon -88.240424°

Cone Type: CPT

Cone Operator: Fugro

**Project: Coles Wind**

**Location: Coles County, Illinois**



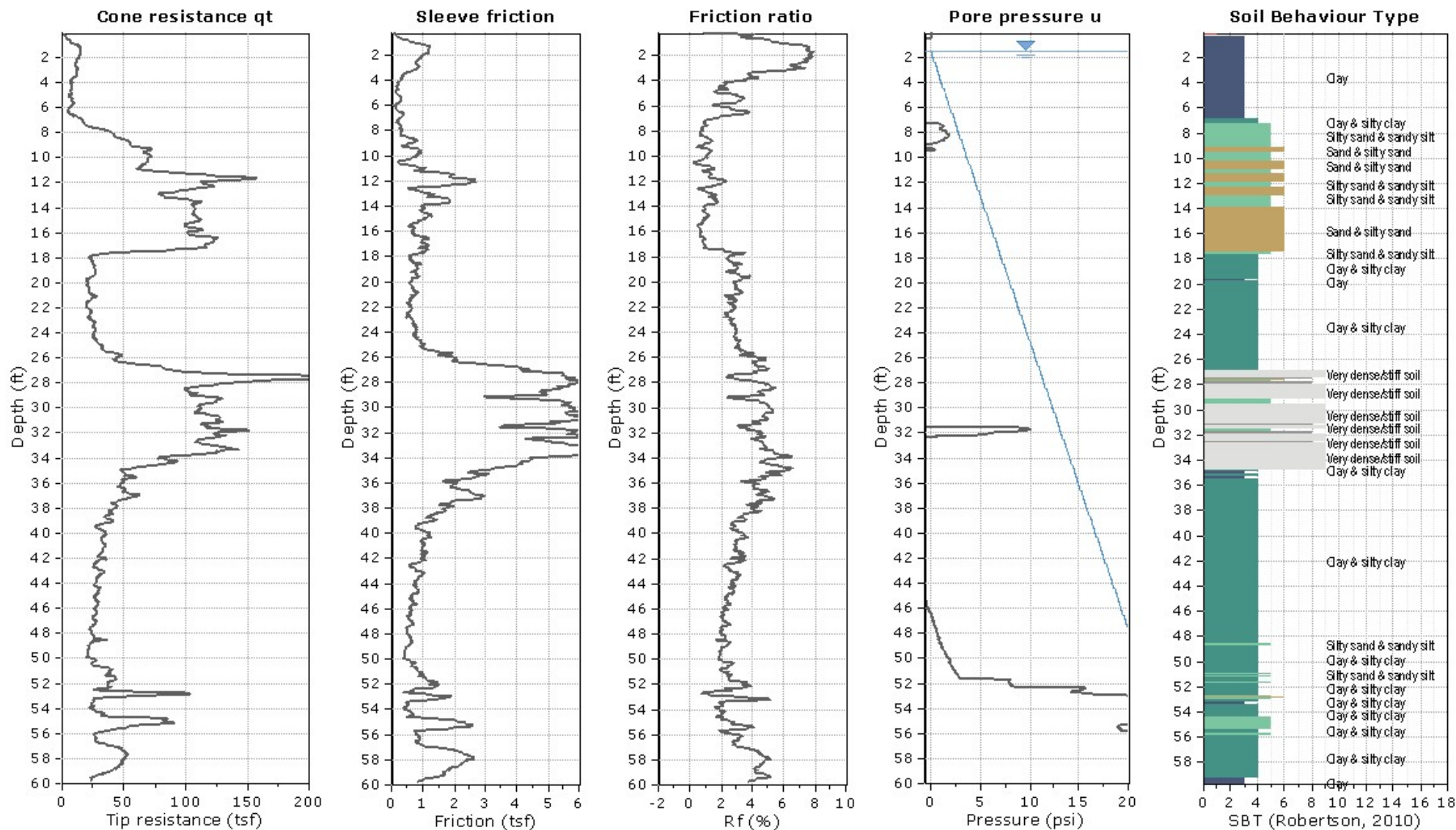


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-17**

Total depth: 59.71 ft, Date: 4/27/2025  
Coords: lat 39.574408° lon -88.217758°  
Cone Type: CPT  
Cone Operator: Fugro





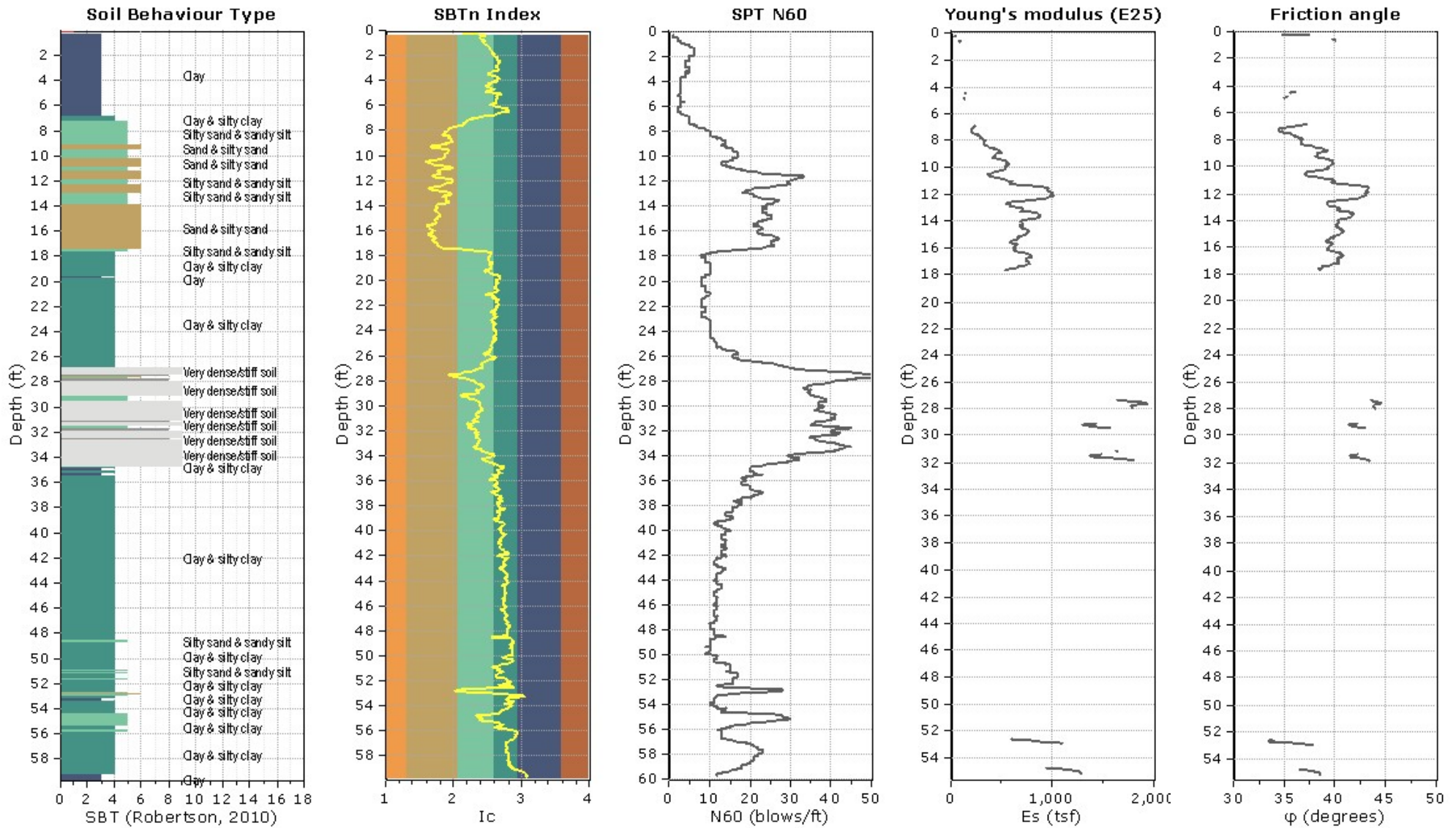


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-17**

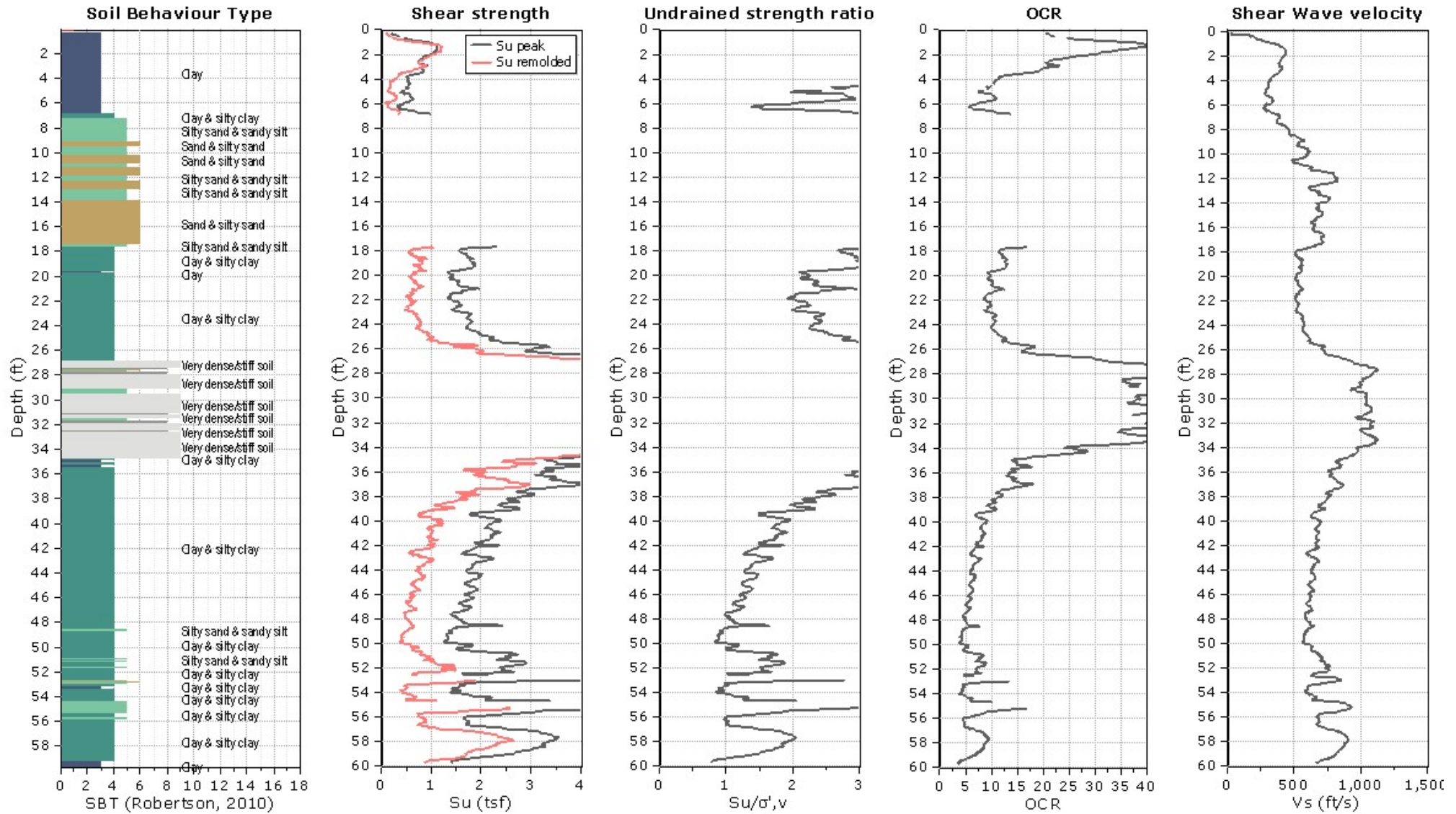
Total depth: 59.71 ft, Date: 4/27/2025  
Coords: lat 39.574408° lon -88.217758°  
Cone Type: CPT  
Cone Operator: Fugro





**Project: Coles Wind**

**Location: Coles County, Illinois**



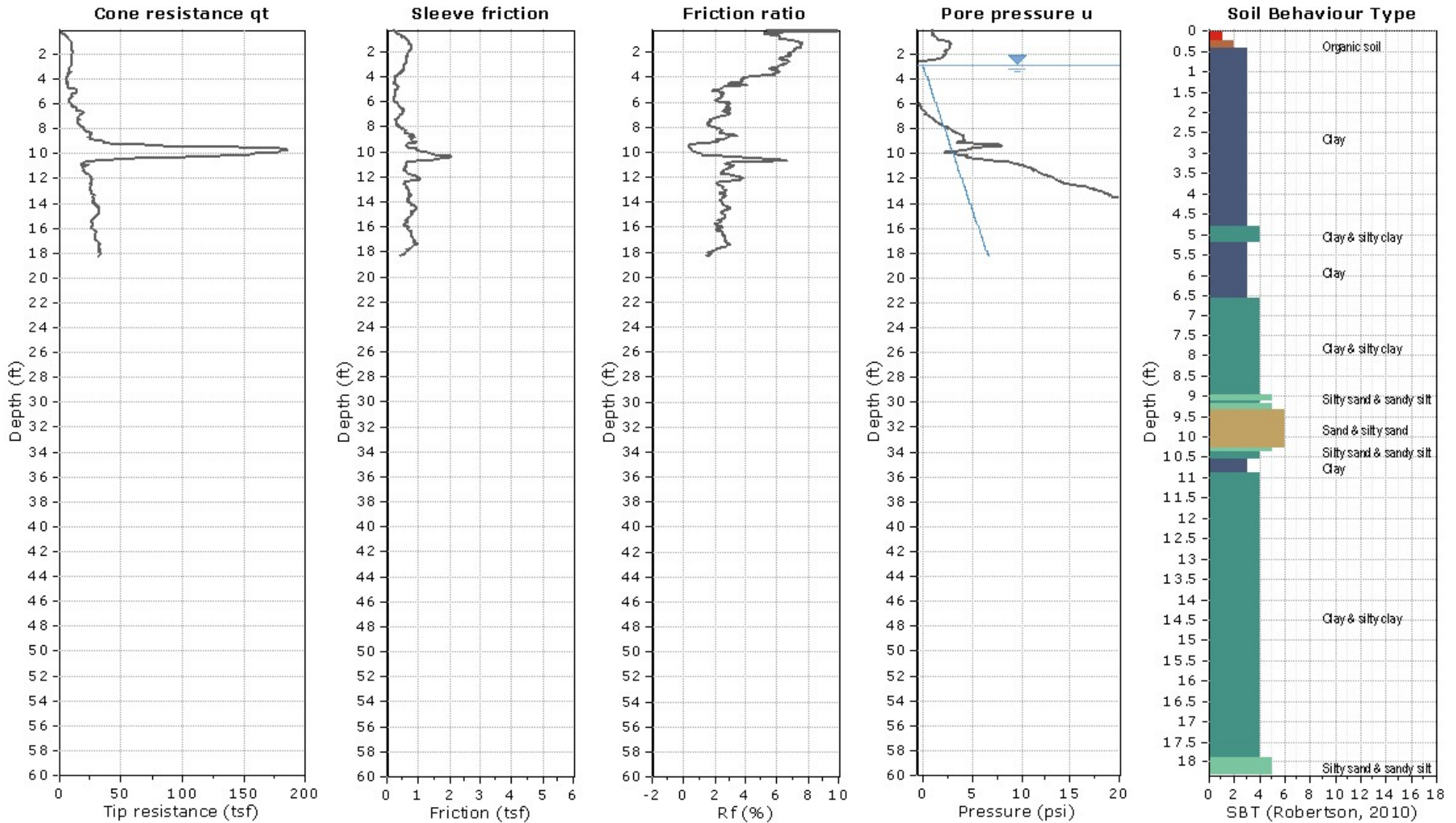


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Round Rock, TX 78681  
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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-18**

Total depth: 18.27 ft, Date: 4/27/2025  
Coords: lat 39.574363° lon -88.208448°  
Cone Type: CPT  
Cone Operator: Fugro







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**CPT: GEO-18**

Total depth: 18.27 ft, Date: 4/27/2025

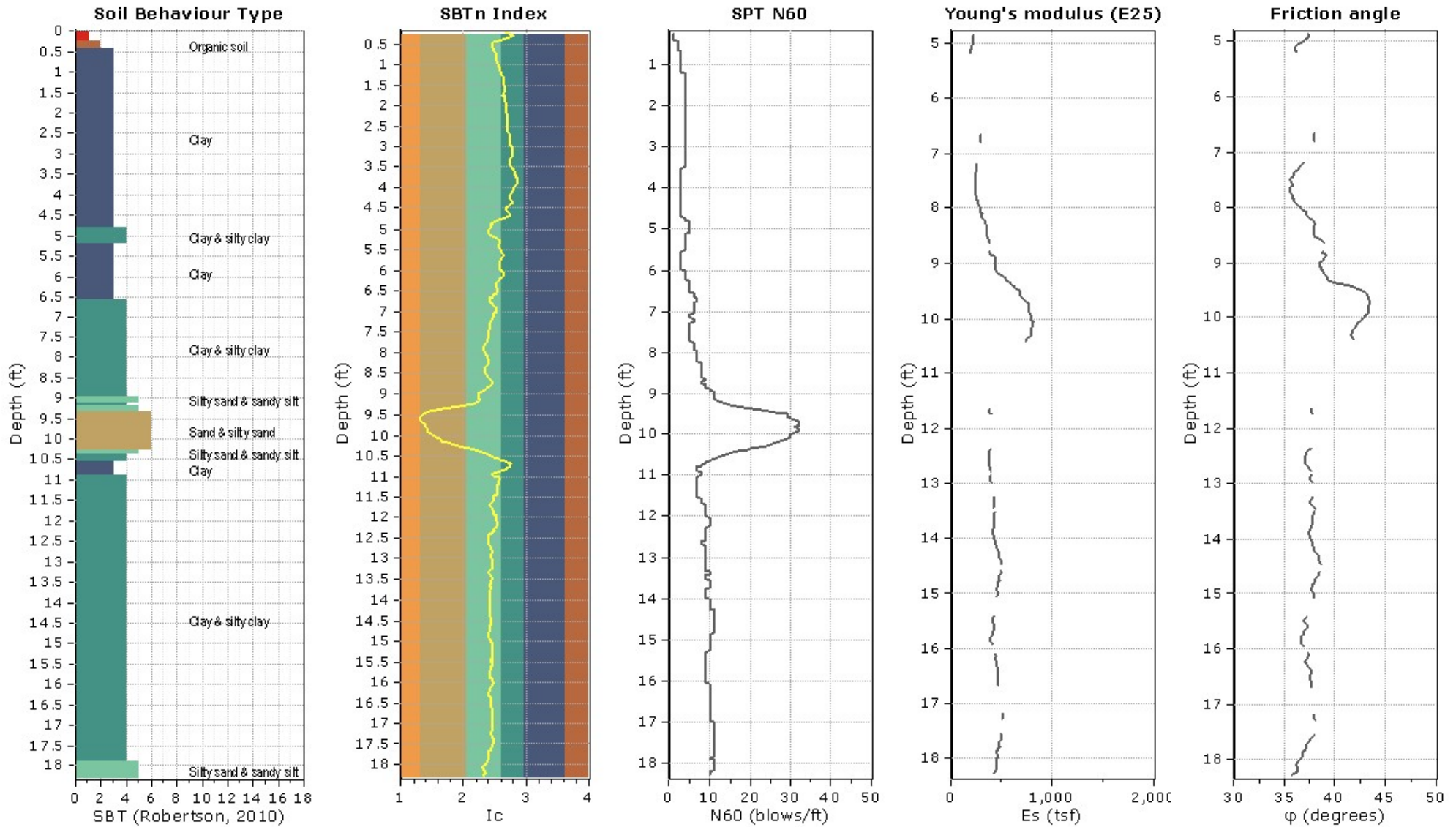
Coords: lat 39.574363° lon -88.208448°

Cone Type: CPT

Cone Operator: Fugro

**Project: Coles Wind**

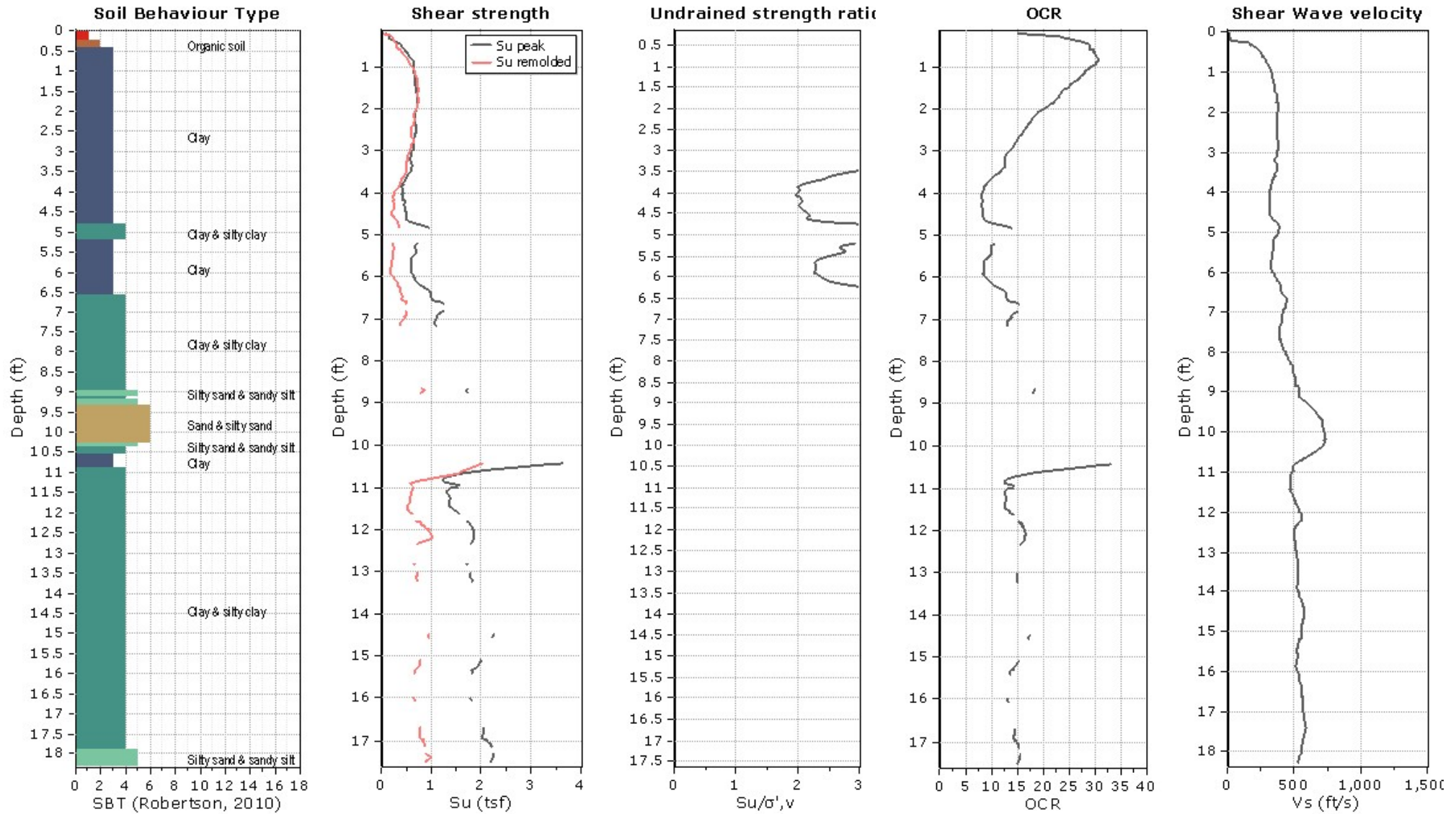
**Location: Coles County, Illinois**





**Project:** Coles Wind

**Location:** Coles County, Illinois



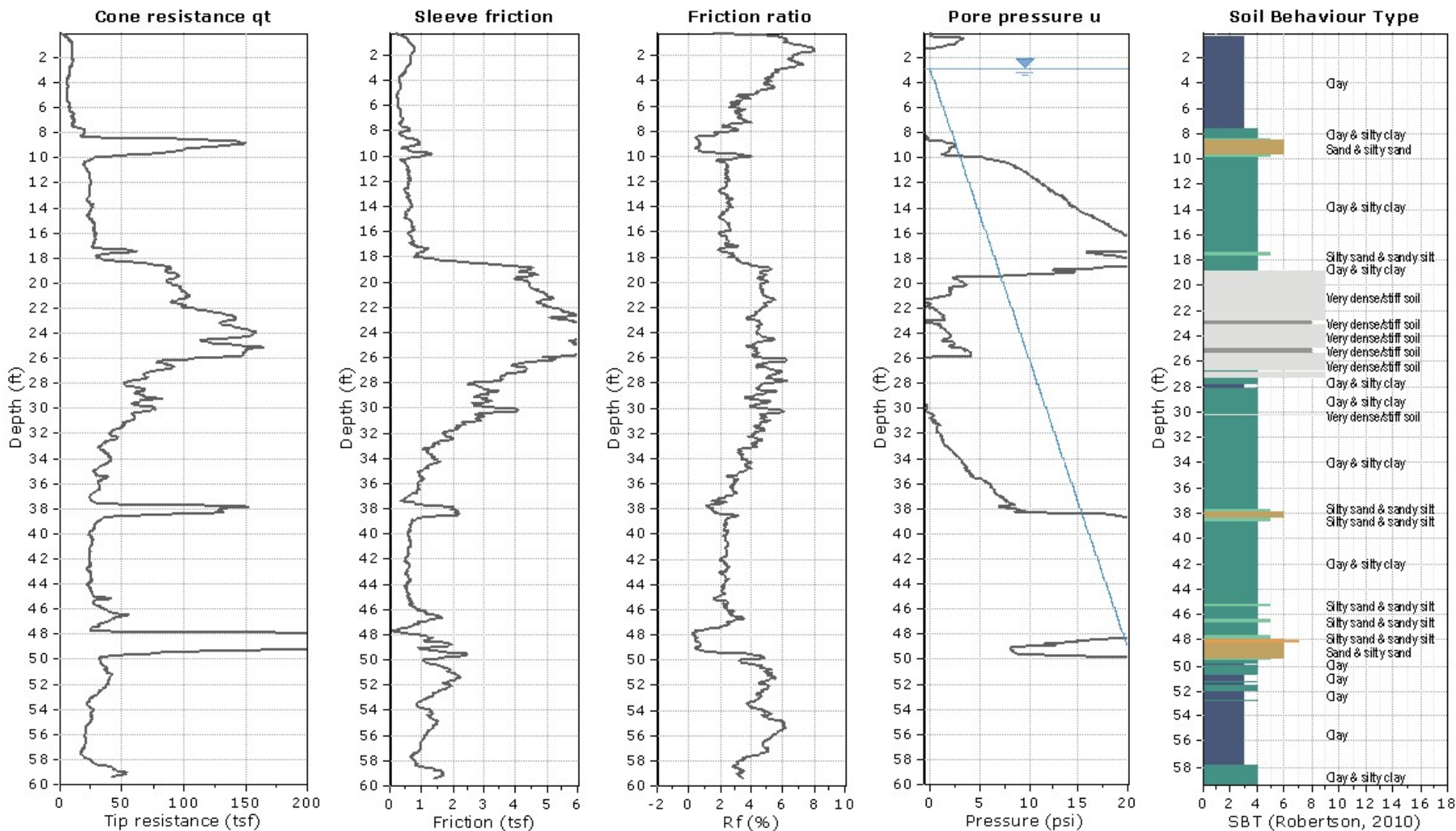


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-18A**

Total depth: 59.42 ft, Date: 4/27/2025  
Coords: lat 39.574363° lon -88.208448°  
Cone Type: CPT  
Cone Operator: Fugro

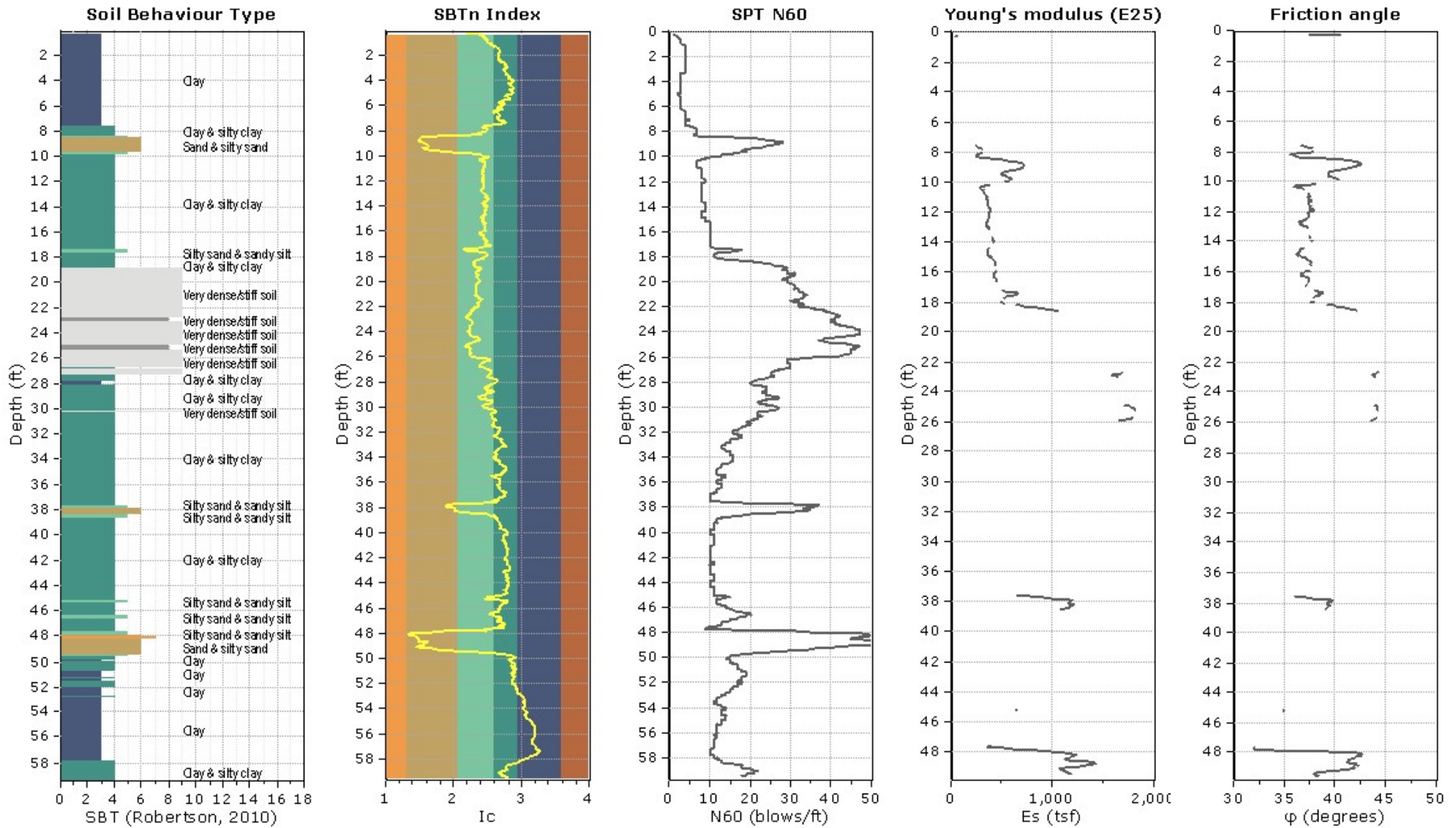






**Project:** Coles Wind

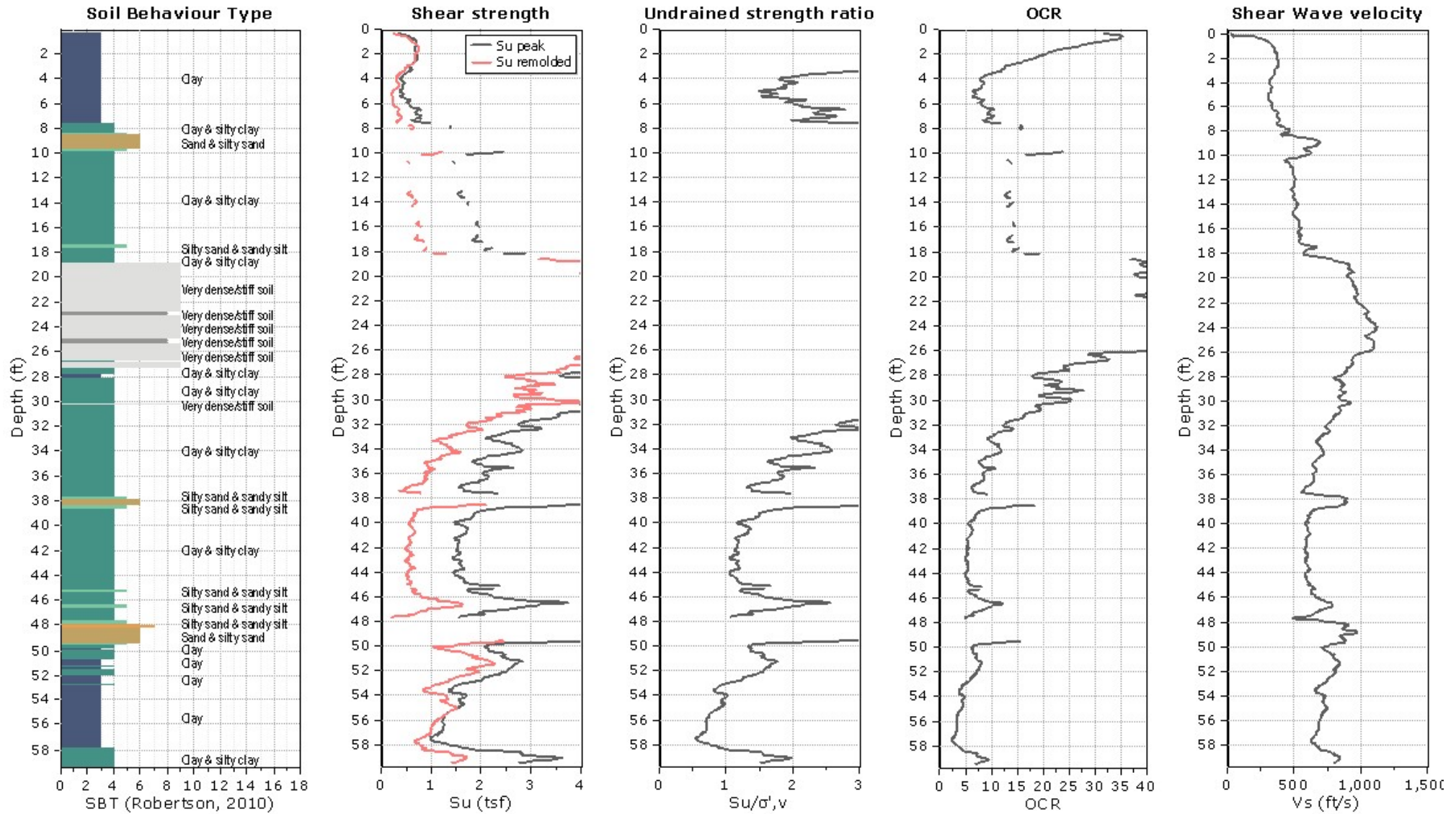
**Location:** Coles County, Illinois





**Project:** Coles Wind

**Location:** Coles County, Illinois



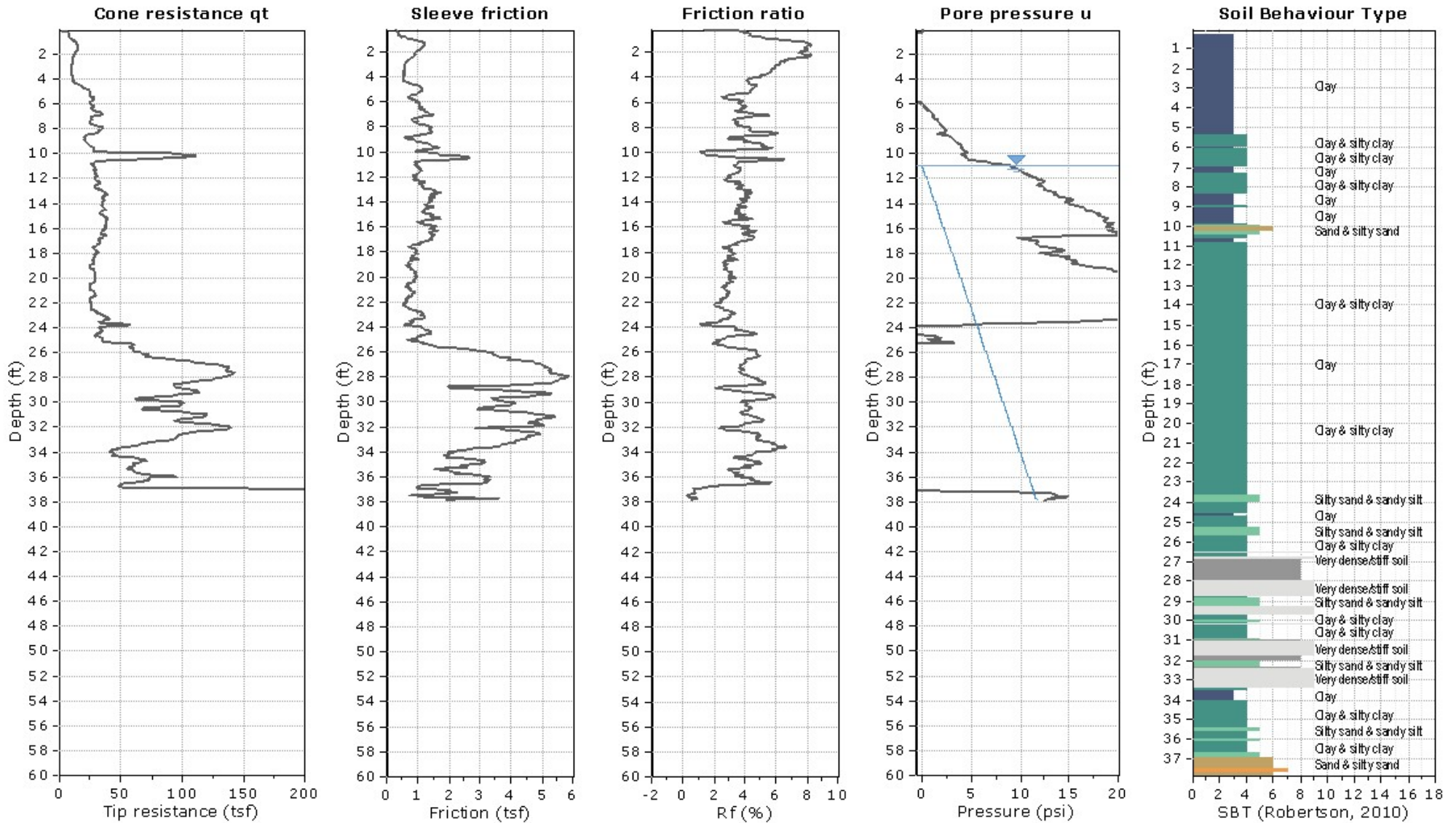


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rrccompanies.com

**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-19**

Total depth: 37.86 ft, Date: 4/27/2025  
Coords: lat 39.573124° lon -88.201857°  
Cone Type: CPT  
Cone Operator: Fugro

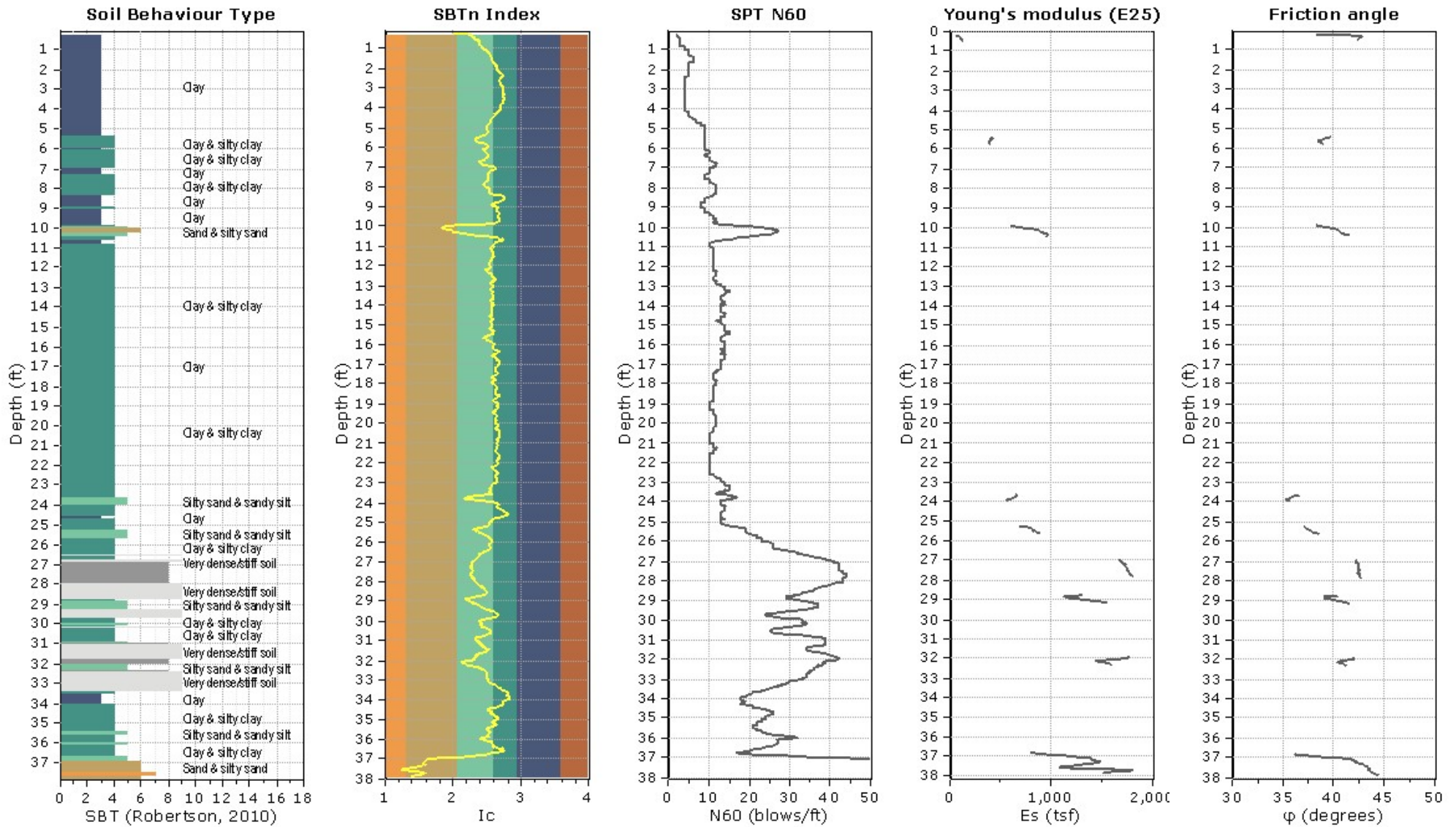






**Project:** Coles Wind

**Location:** Coles County, Illinois



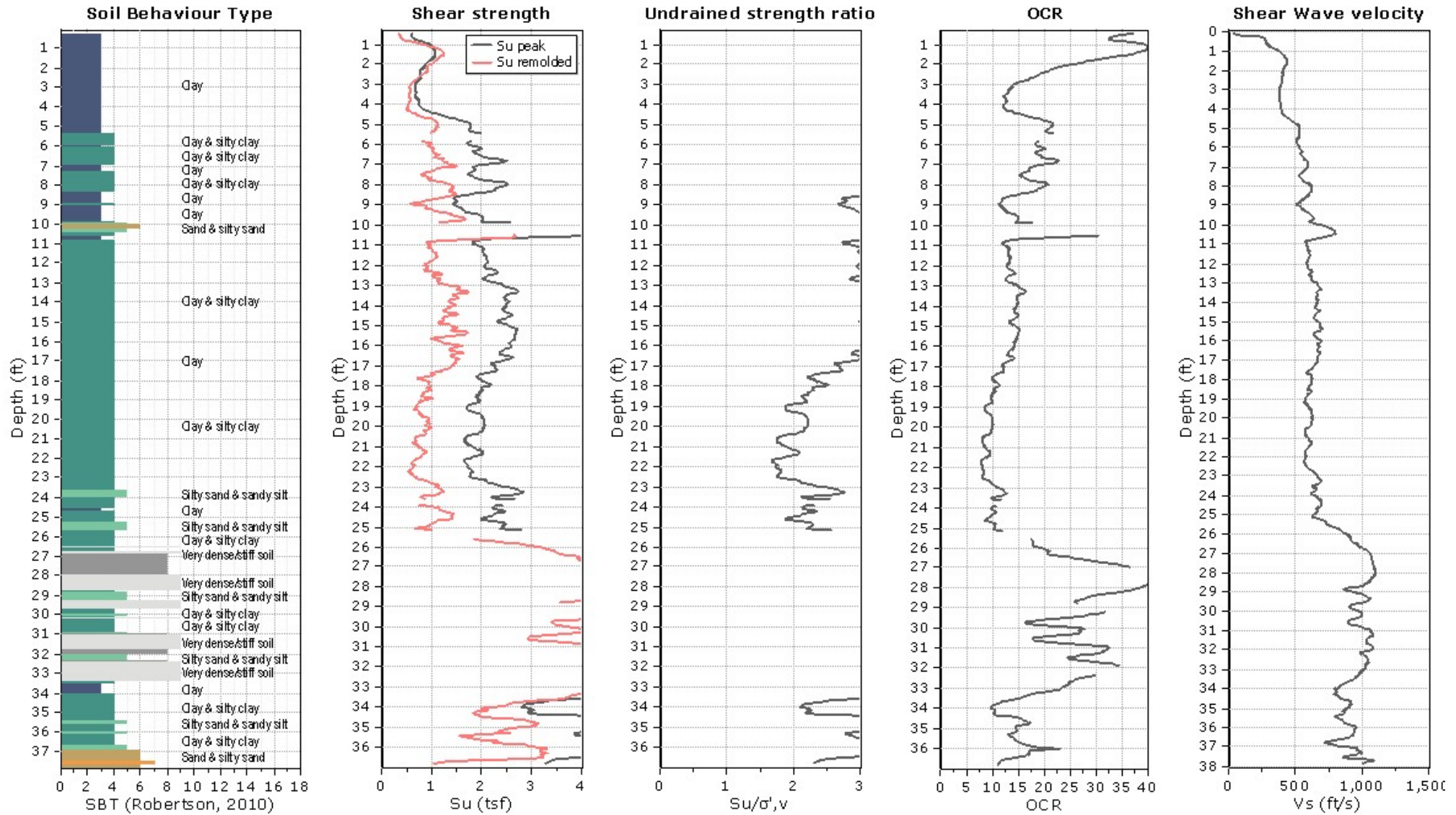


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rrccompanies.com

**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-19**

Total depth: 37.86 ft, Date: 4/27/2025  
Coords: lat 39.573124° lon -88.201857°  
Cone Type: CPT  
Cone Operator: Fugro





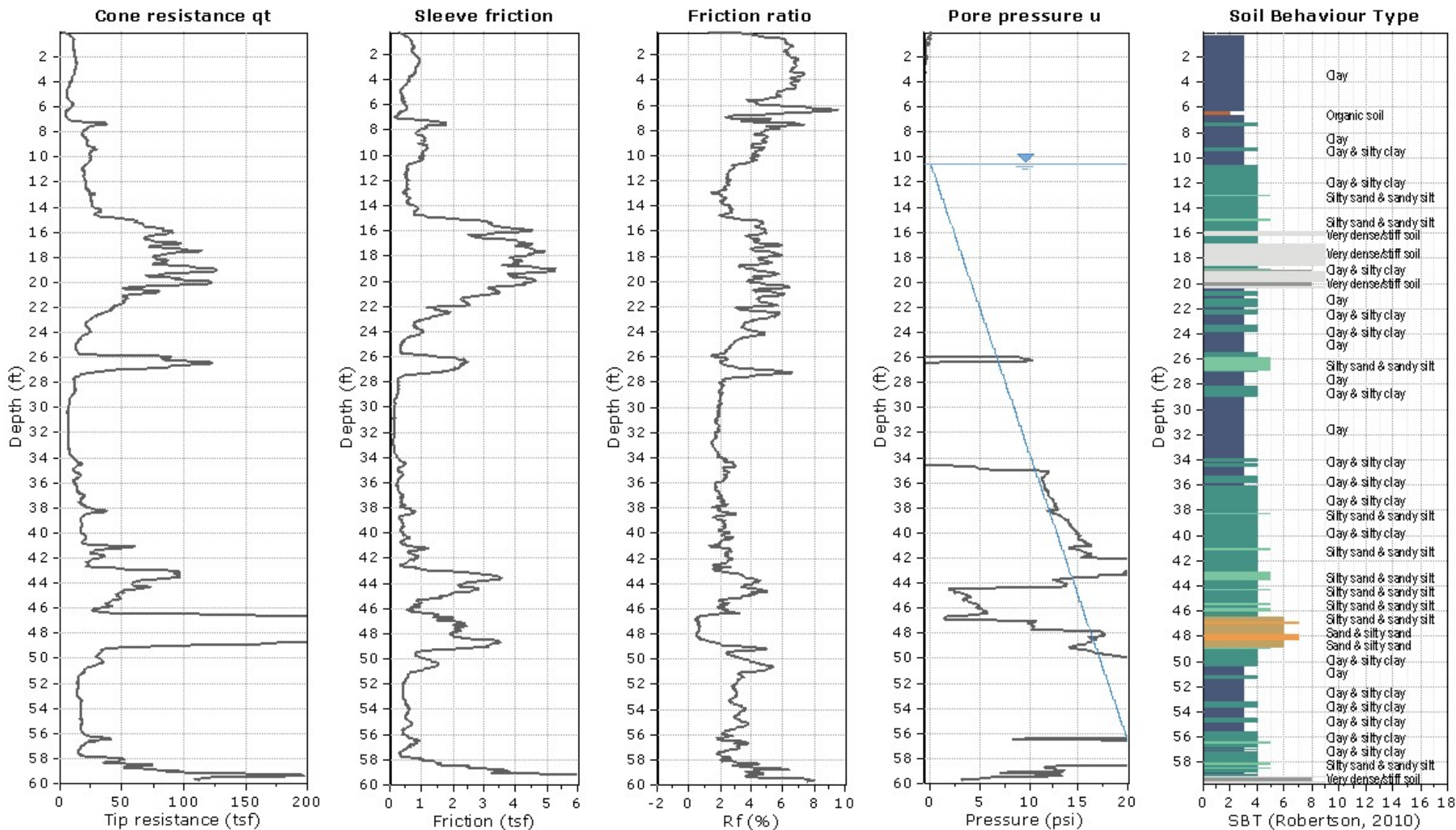


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-20**

Total depth: 59.71 ft, Date: 4/27/2025  
Coords: lat 39.565034° lon -88.201263°  
Cone Type: CPT  
Cone Operator: Fugro







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**CPT: GEO-20**

Total depth: 59.71 ft, Date: 4/27/2025

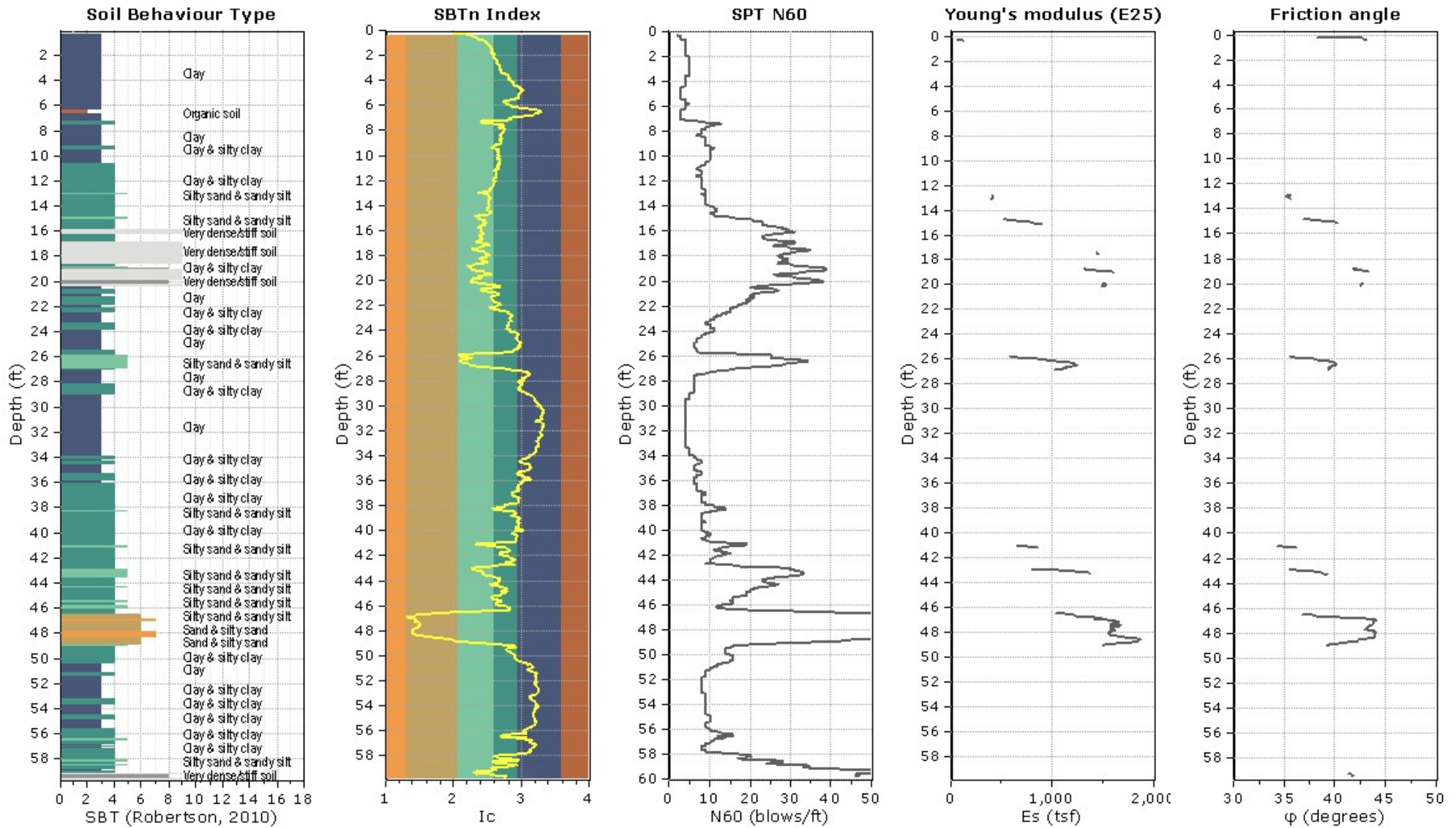
Coords: lat 39.565034° lon -88.201263°

Cone Type: CPT

Cone Operator: Fugro

**Project: Coles Wind**

**Location: Coles County, Illinois**



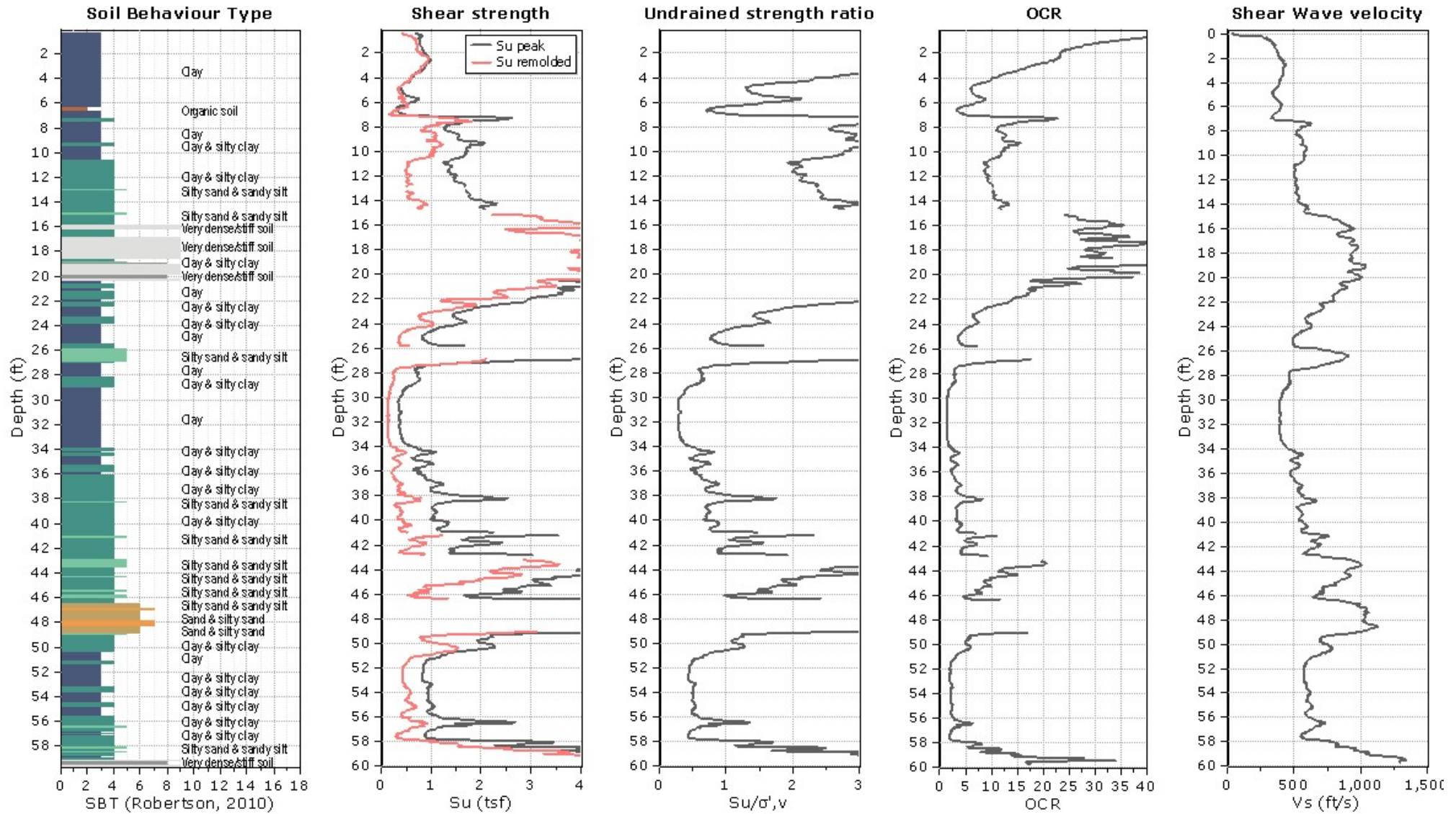


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-20**

Total depth: 59.71 ft, Date: 4/27/2025  
Coords: lat 39.565034° lon -88.201263°  
Cone Type: CPT  
Cone Operator: Fugro

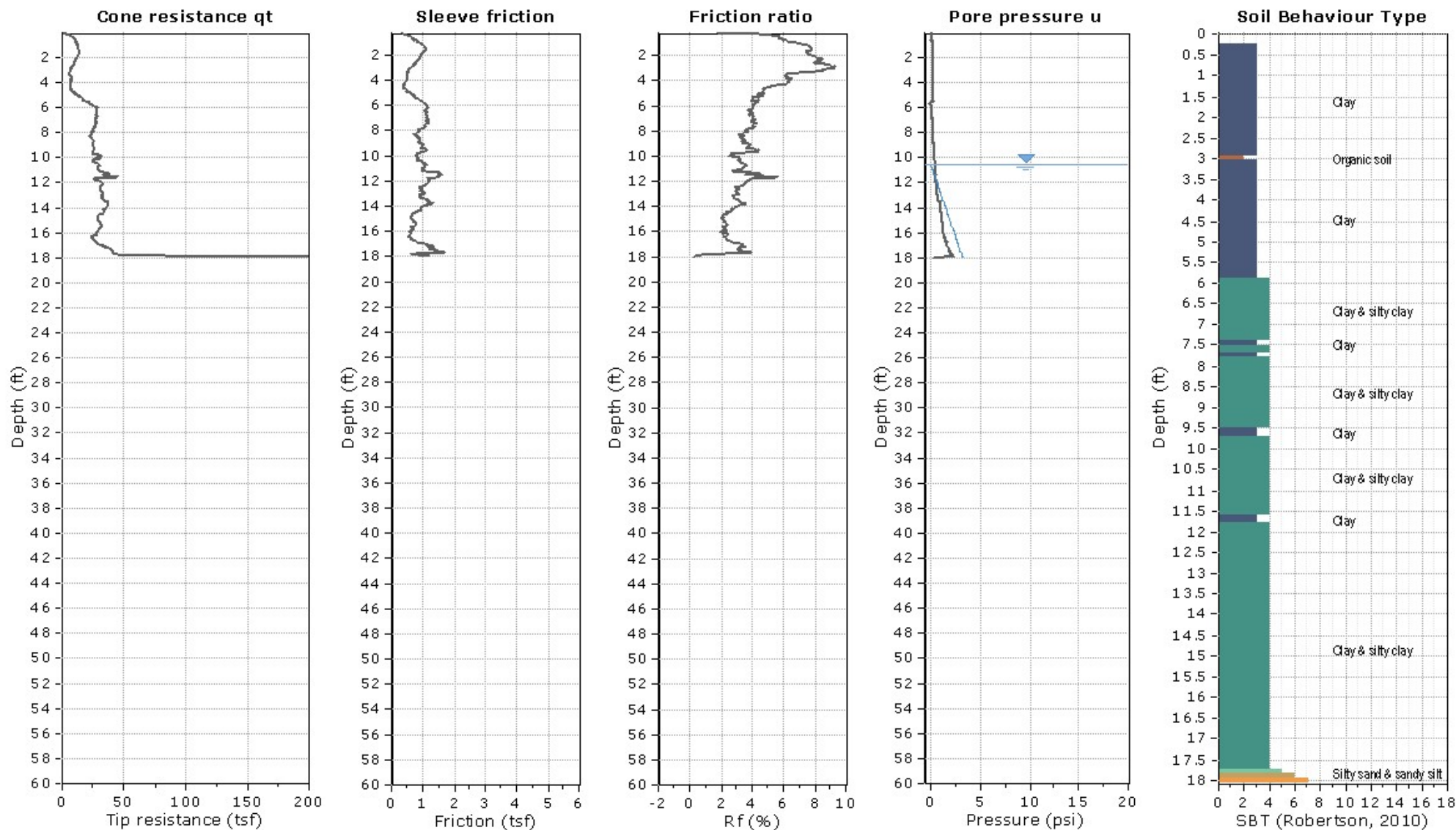






**Project:** Coles Wind

**Location:** Coles County, Illinois







**Project:** Coles Wind  
**Location:** Coles County, Illinois

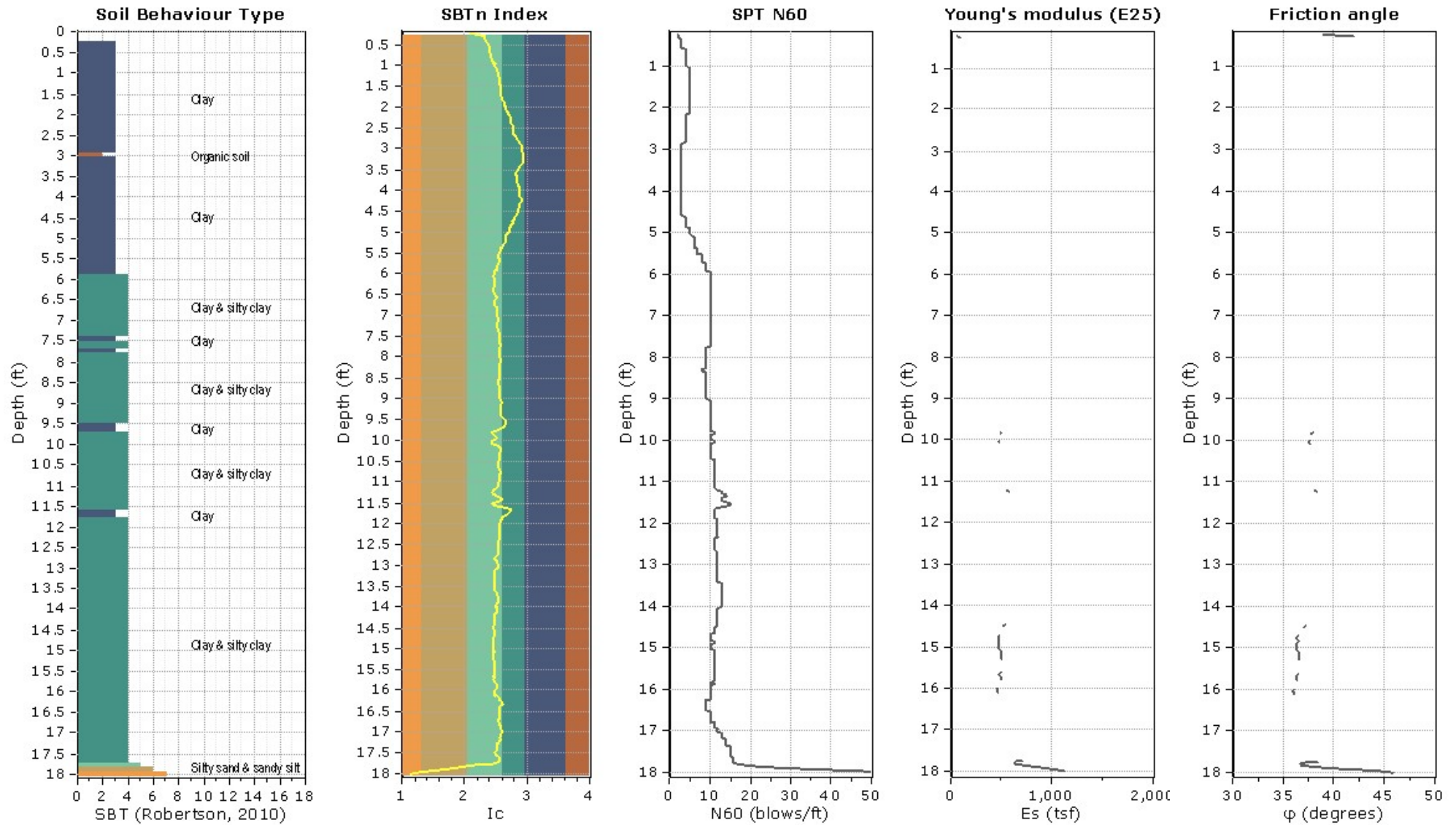
**CPT: GEO-21**

Total depth: 18.01 ft, Date: 4/1/2025

Coords: lat 39.57327° lon -88.16991°

Cone Type: CPT

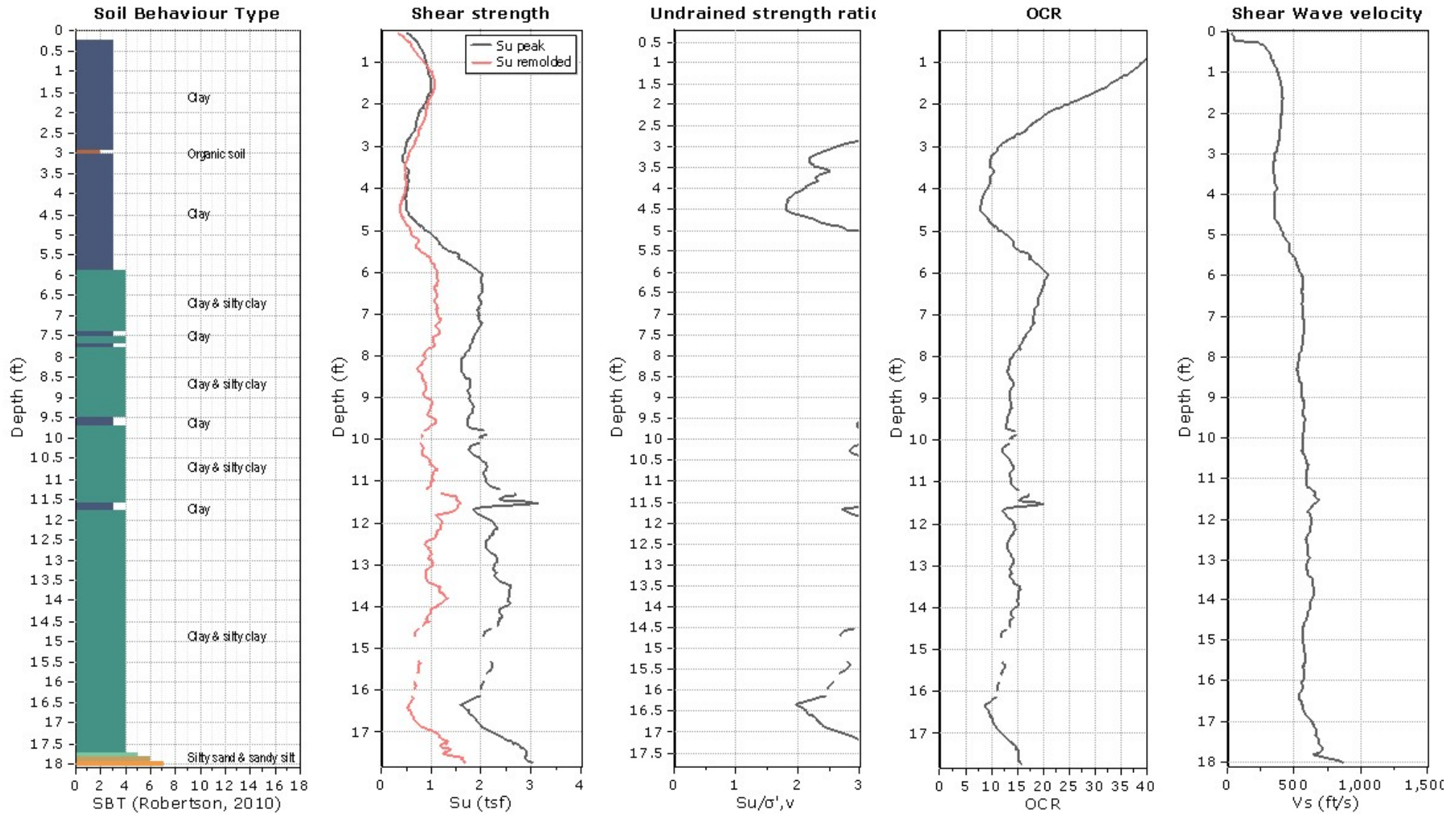
Cone Operator: FUGRO





**Project:** Coles Wind

**Location:** Coles County, Illinois





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**Project:** Coles Wind  
**Location:** Coles County, Illinois

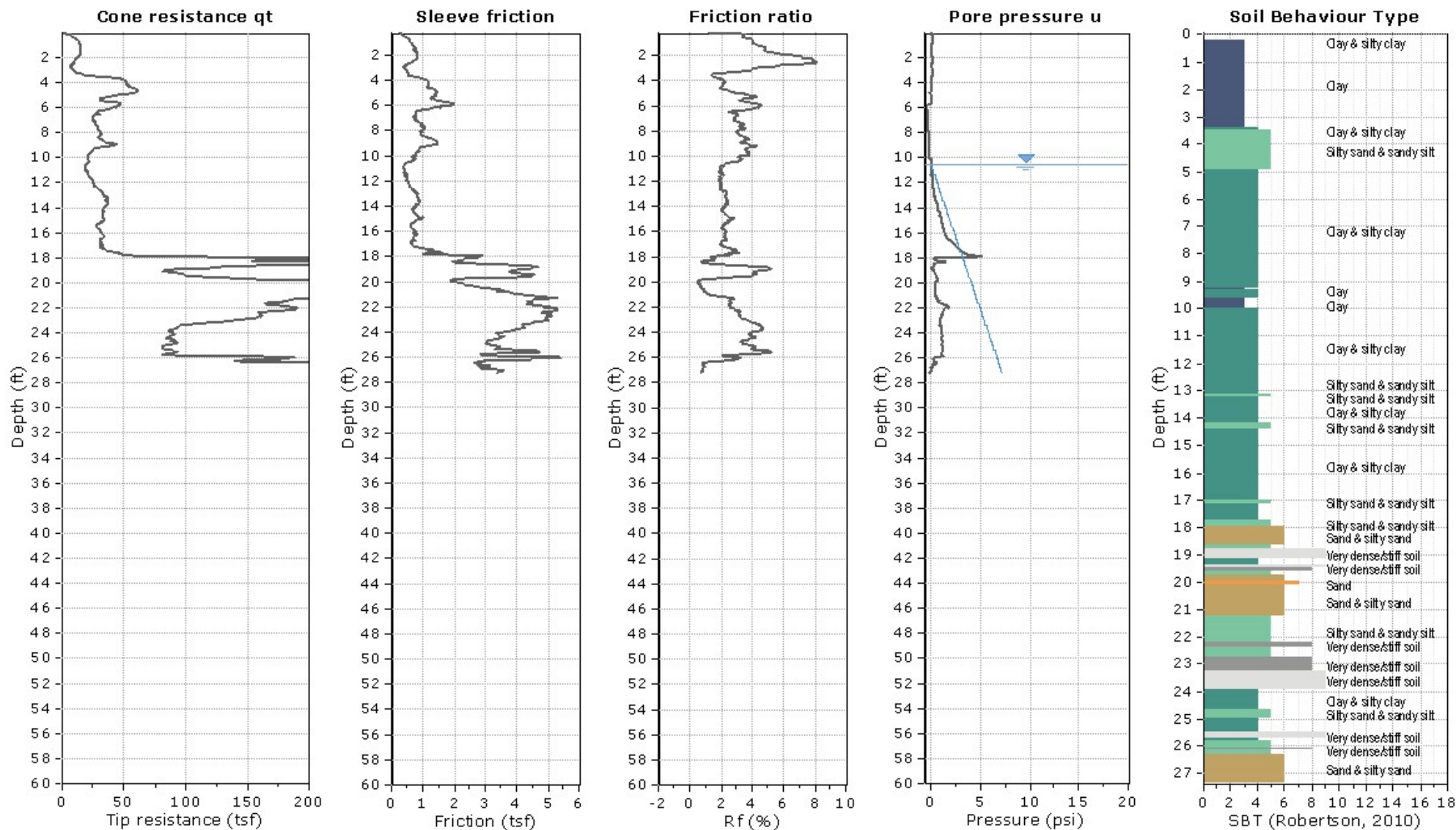
**CPT: GEO-21A**

Total depth: 27.26 ft, Date: 4/1/2025

Coords: lat 39.57327° lon -88.16991°

Cone Type: CPT

Cone Operator: FUGRO

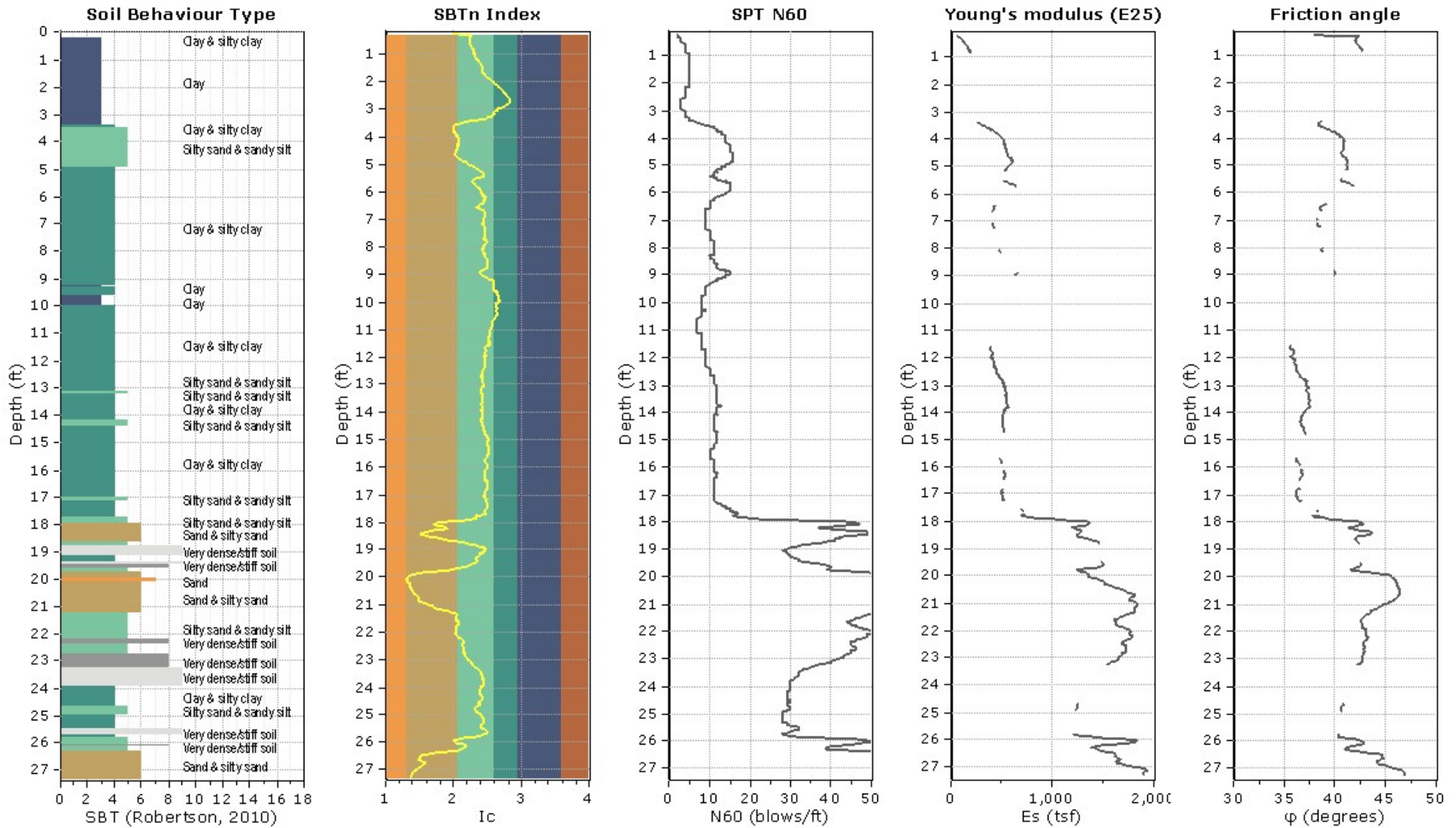






**Project: Coles Wind**

**Location: Coles County, Illinois**





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**CPT: GEO-21A**

Total depth: 27.26 ft, Date: 4/1/2025

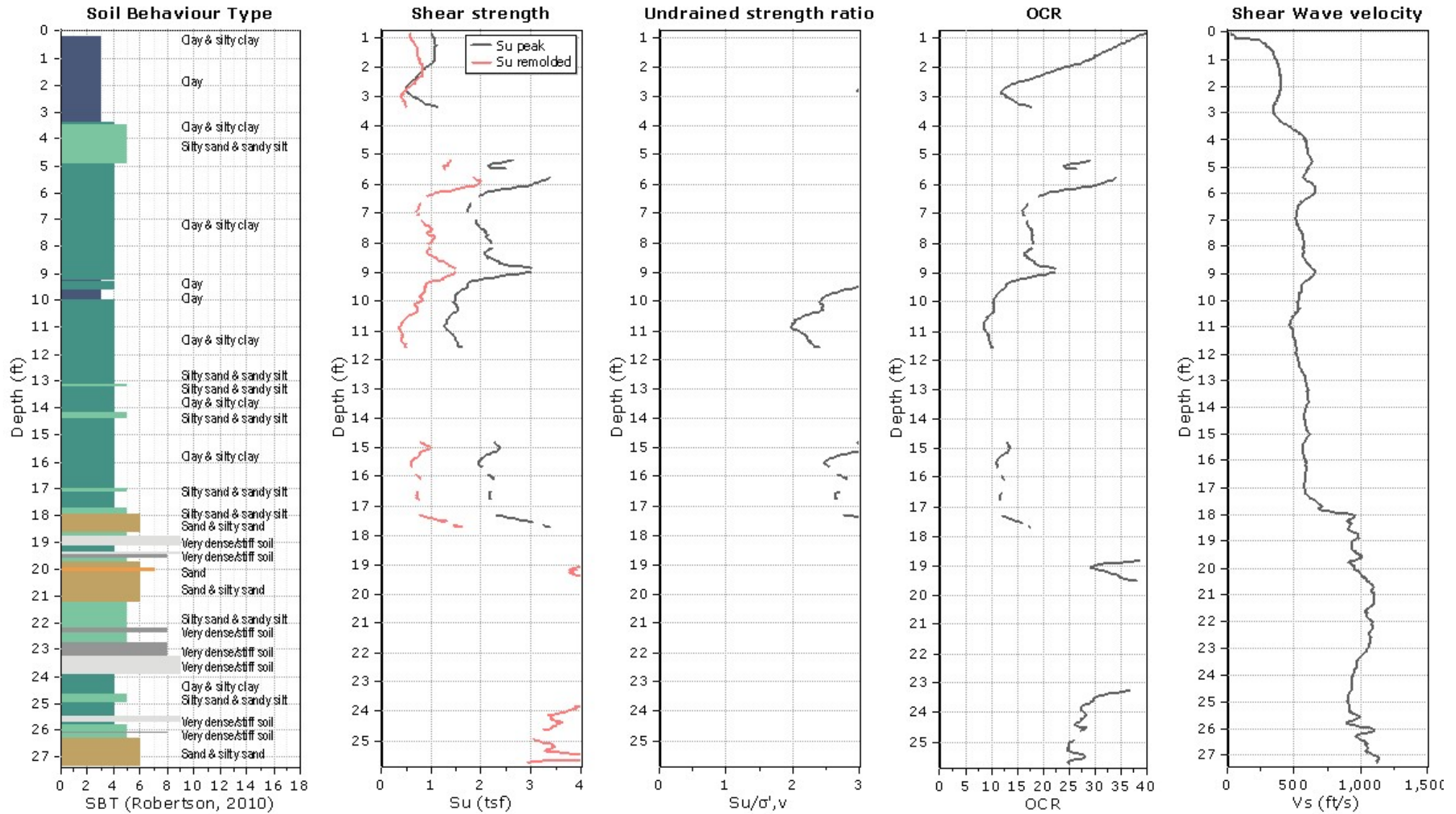
Coords: lat 39.57327° lon -88.16991°

Cone Type: CPT

Cone Operator: FUGRO

**Project: Coles Wind**

**Location: Coles County, Illinois**

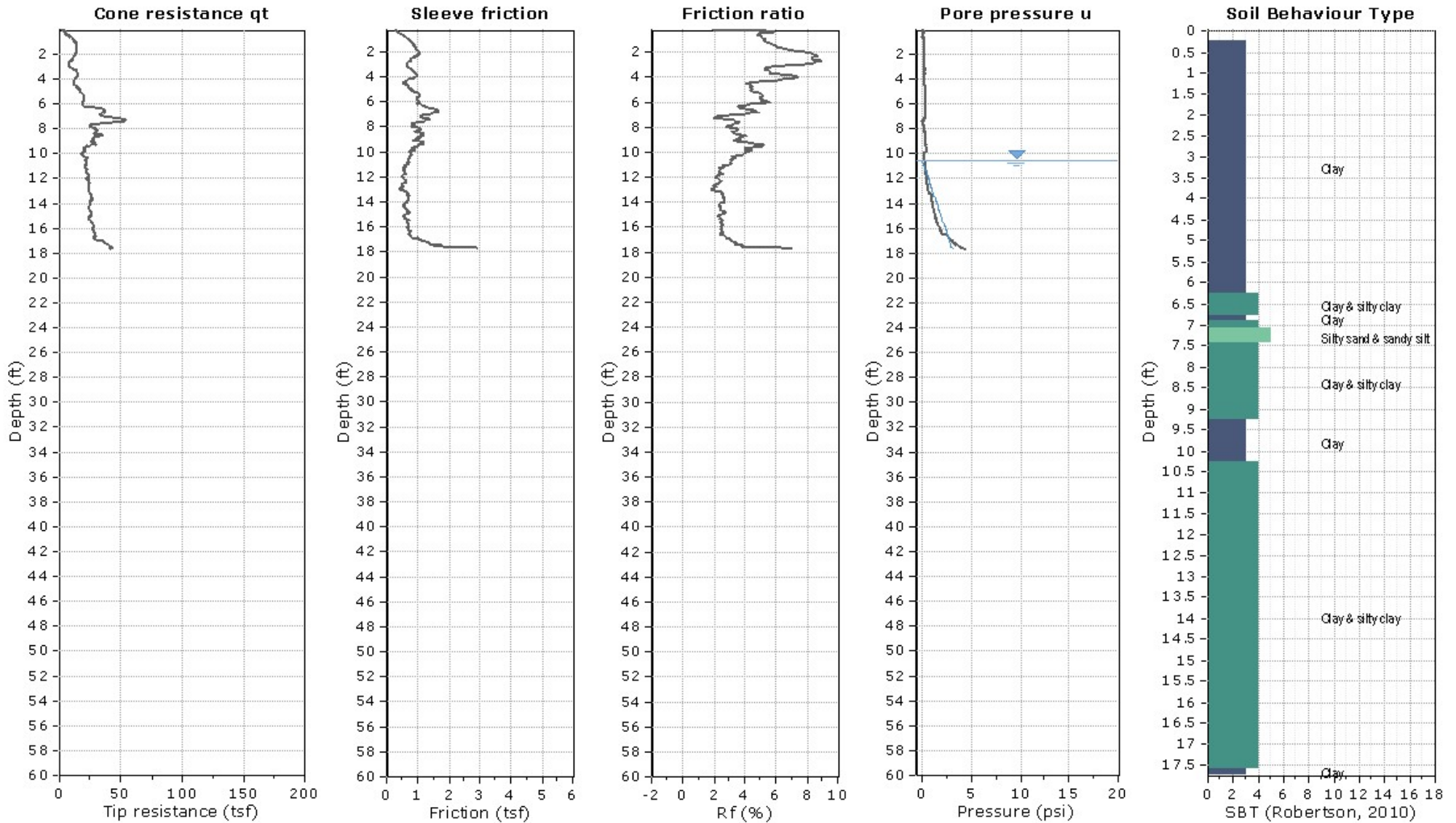




**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-21B**

Total depth: 17.68 ft, Date: 4/1/2025  
Coords: lat 39.57327° lon -88.16991°  
Cone Type: CPT  
Cone Operator: FUGRO







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**CPT: GEO-21B**

Total depth: 17.68 ft, Date: 4/1/2025

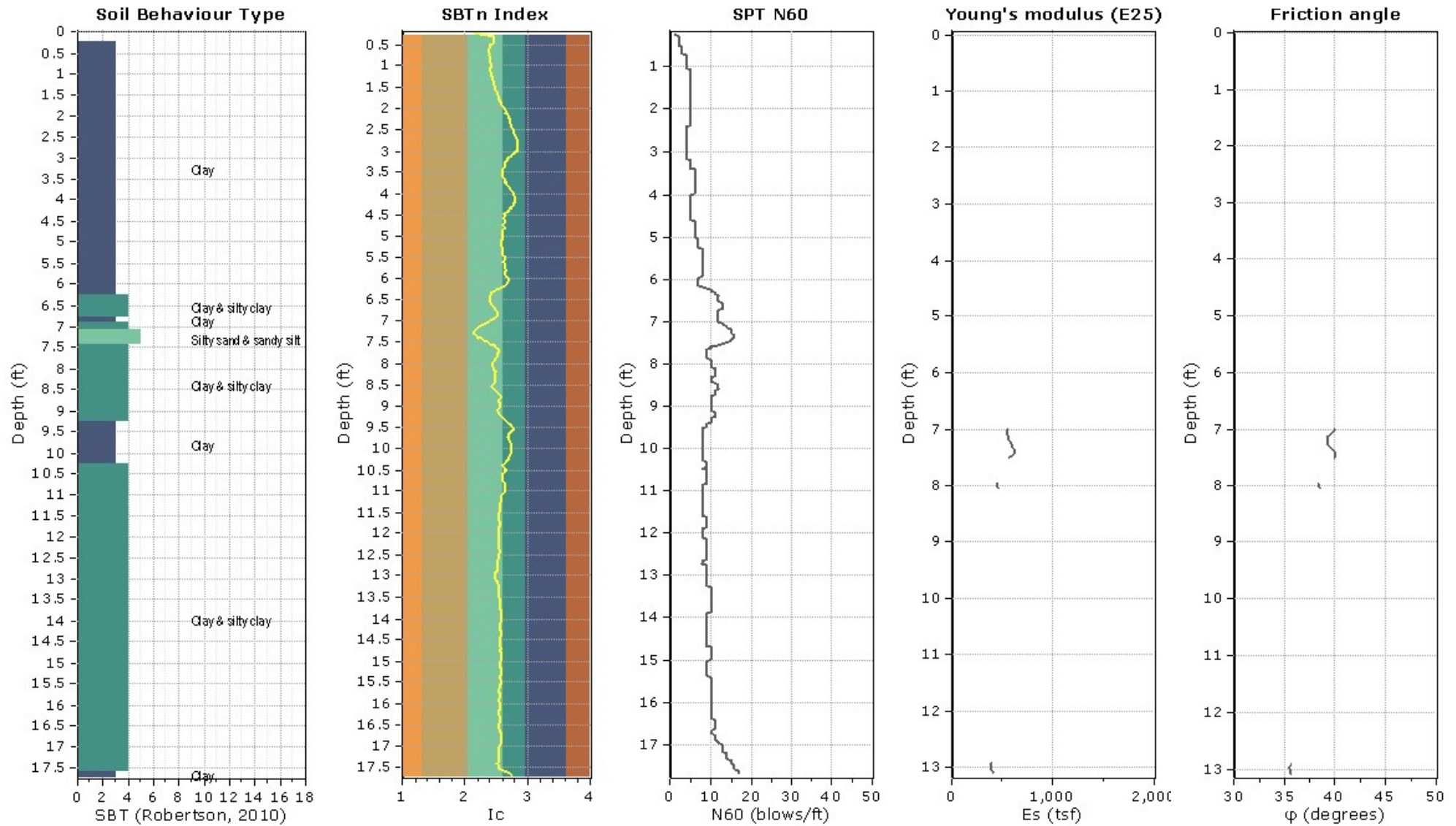
Coords: lat 39.57327° lon -88.16991°

Cone Type: CPT

Cone Operator: FUGRO

**Project: Coles Wind**

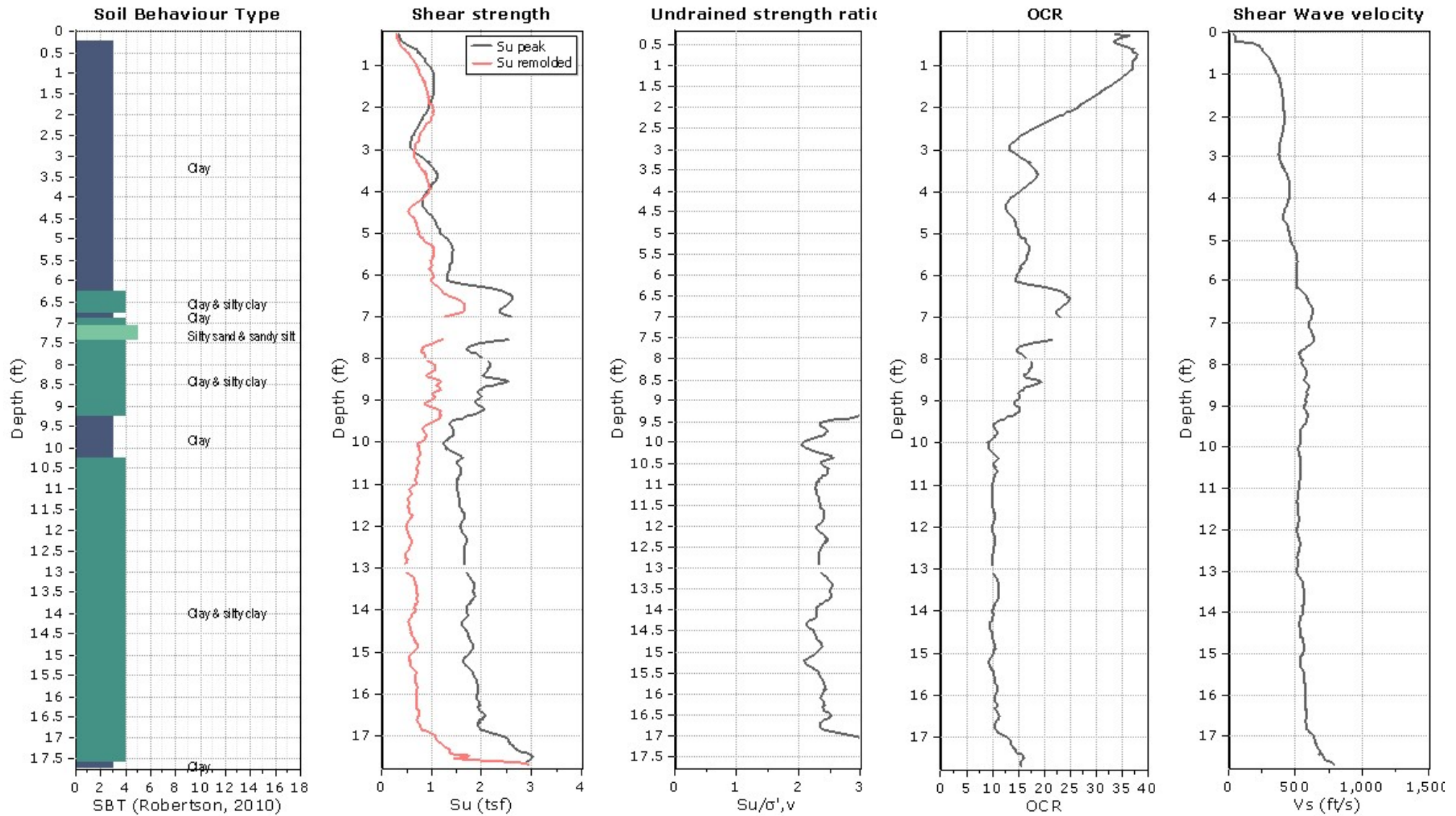
**Location: Coles County, Illinois**





**Project:** Coles Wind

**Location:** Coles County, Illinois

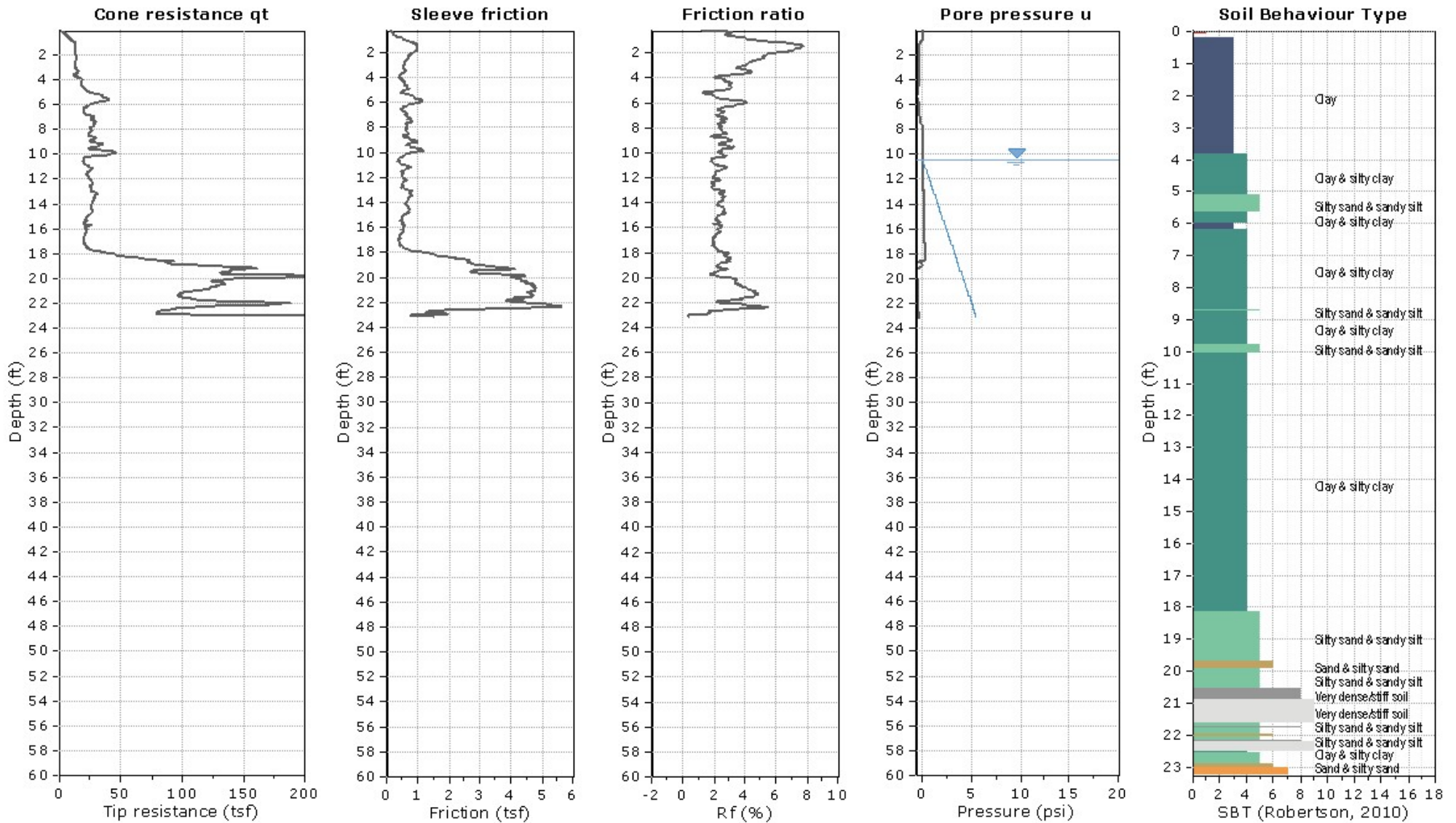




**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-22**

Total depth: 23.16 ft, Date: 4/1/2025  
Coords: lat 39.565394° lon -88.152425°  
Cone Type: CPT  
Cone Operator: FUGRO

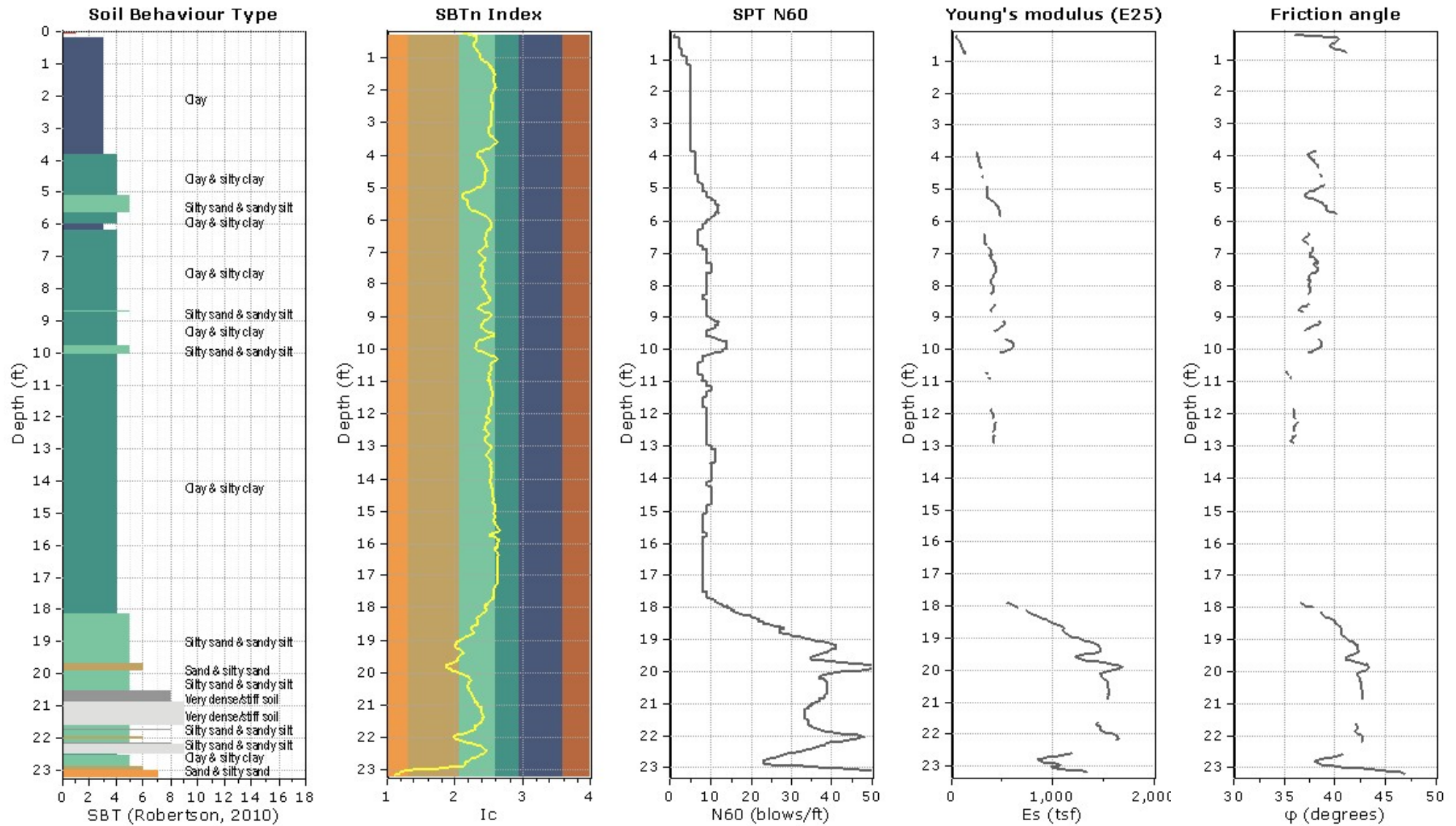






**Project:** Coles Wind

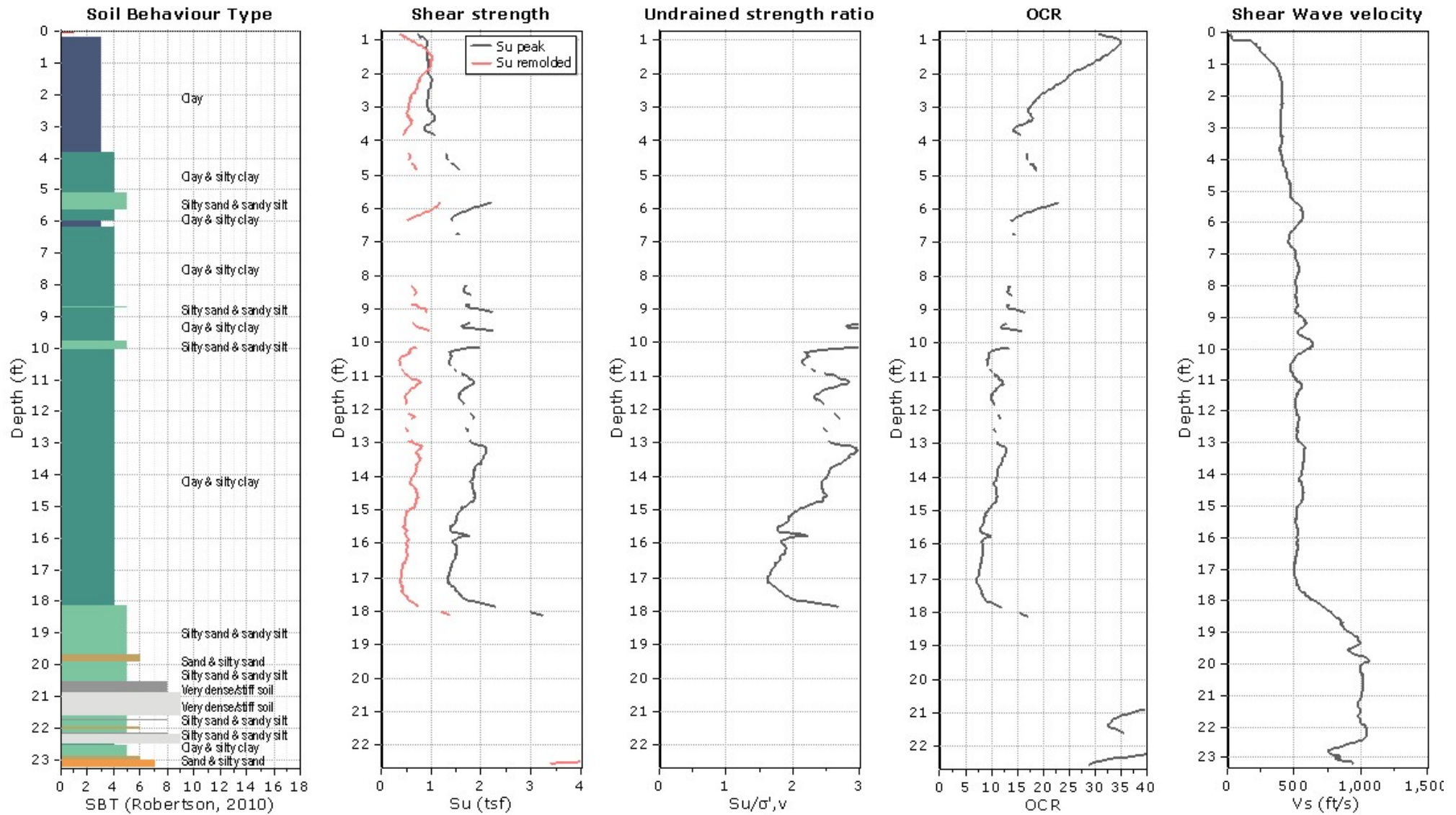
**Location:** Coles County, Illinois





**Project: Coles Wind**

**Location: Coles County, Illinois**



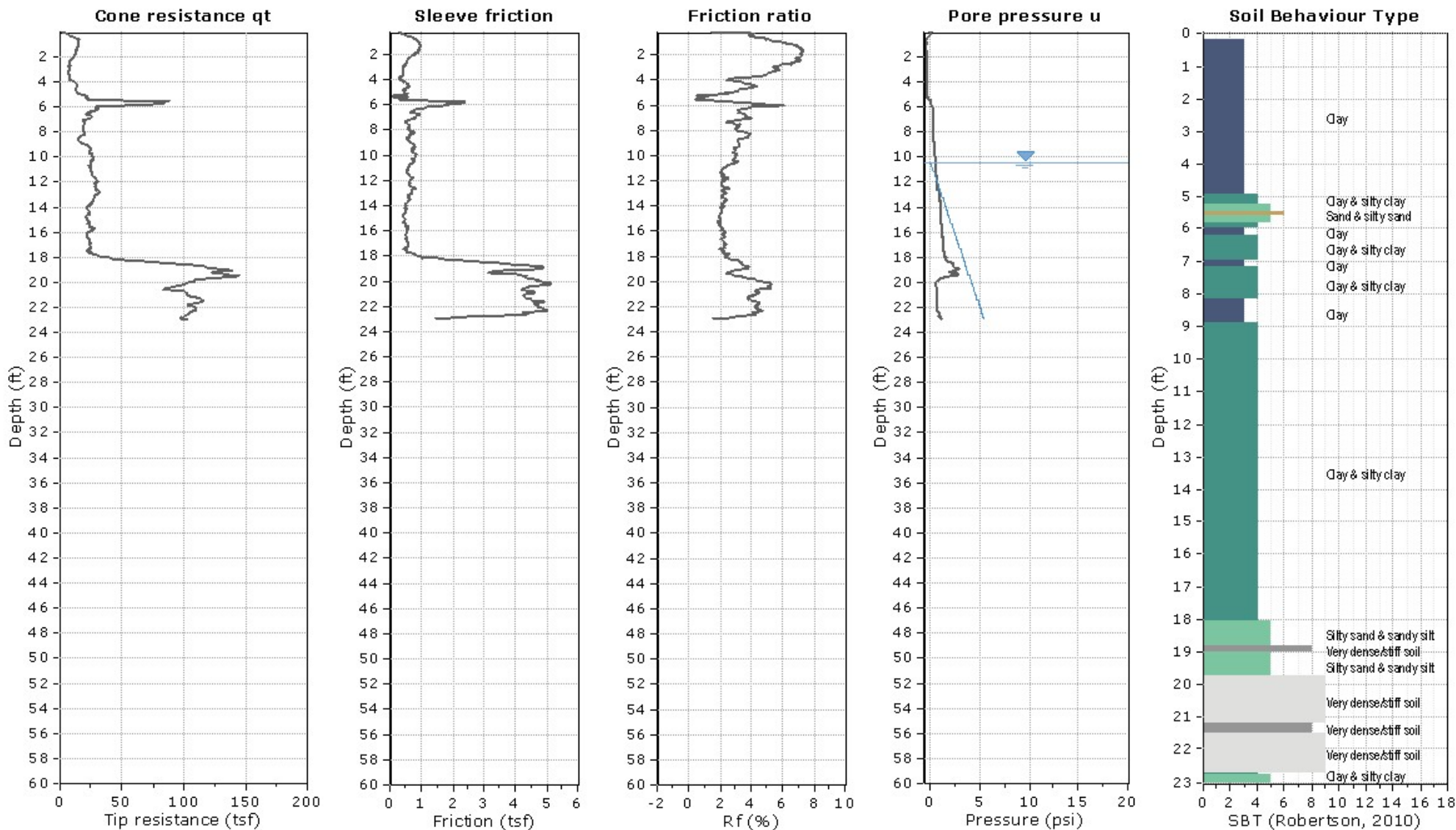


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-22A**

Total depth: 22.97 ft, Date: 4/1/2025  
Coords: lat 39.565394° lon -88.152425°  
Cone Type: CPT  
Cone Operator: FUGRO

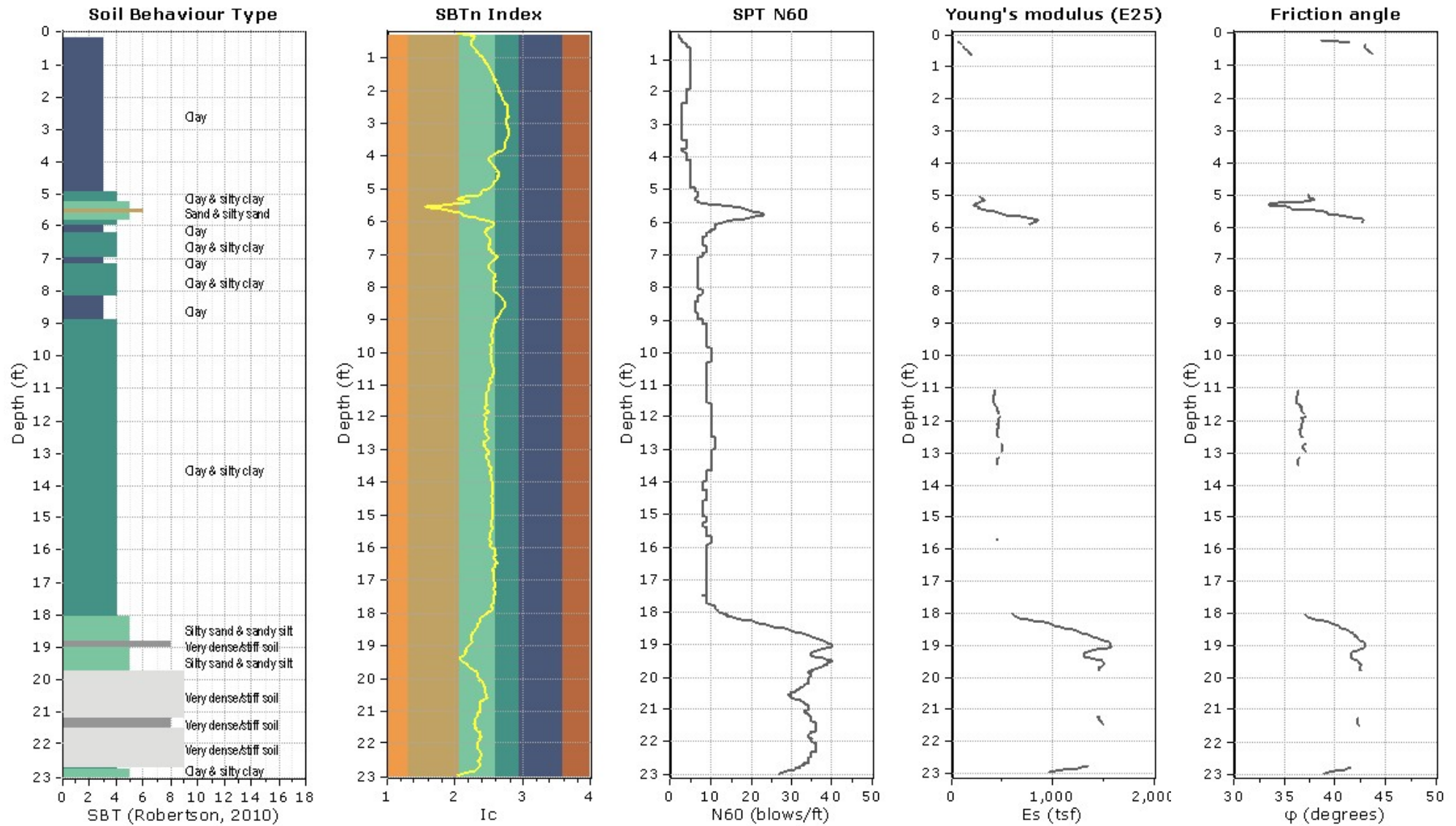






**Project:** Coles Wind

**Location:** Coles County, Illinois





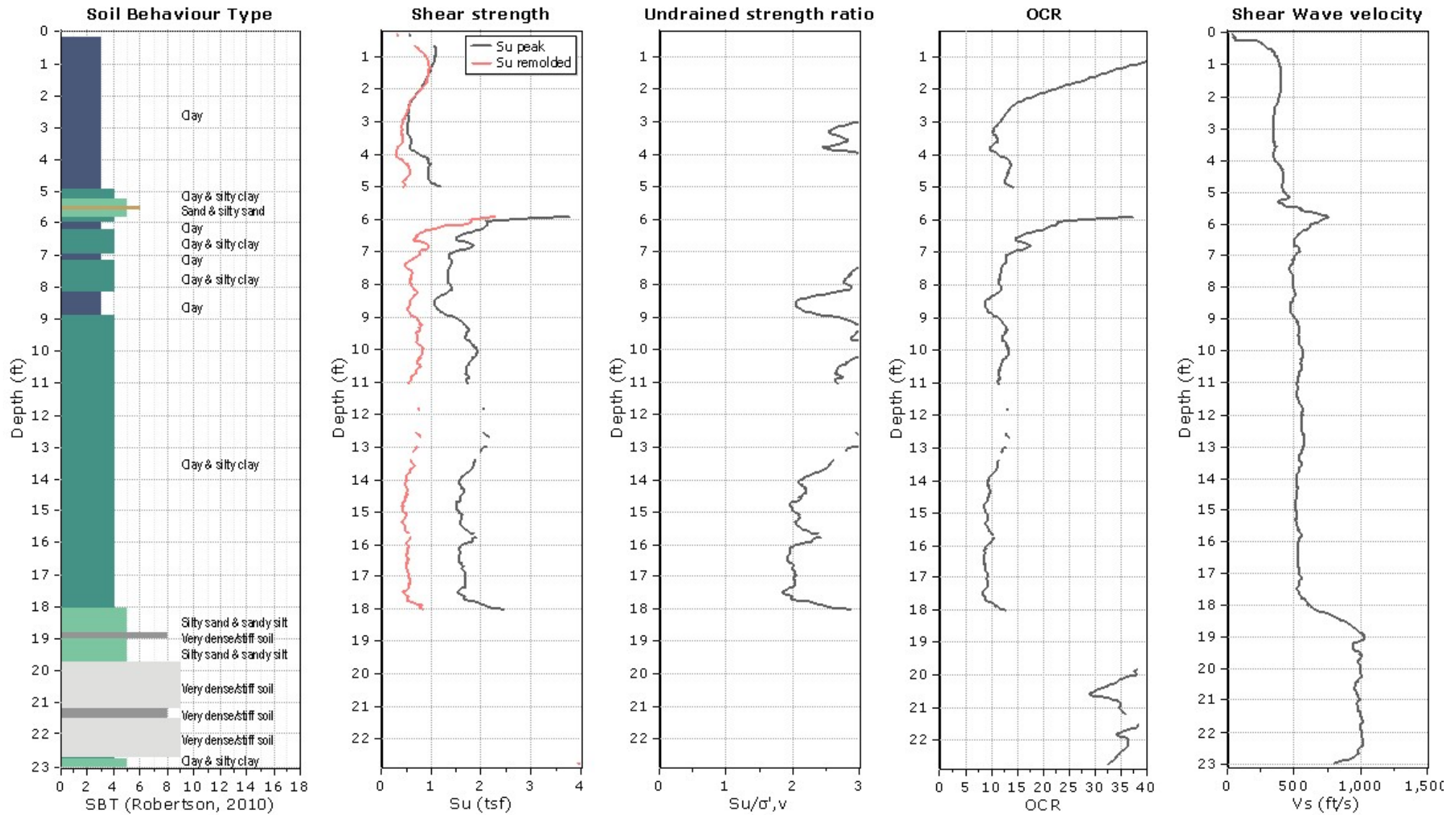
**RRC Power & Energy, LLC**  
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rrccompanies.com

**CPT: GEO-22A**

Total depth: 22.97 ft, Date: 4/1/2025  
Coords: lat 39.565394° lon -88.152425°  
Cone Type: CPT  
Cone Operator: FUGRO

**Project: Coles Wind**

**Location: Coles County, Illinois**





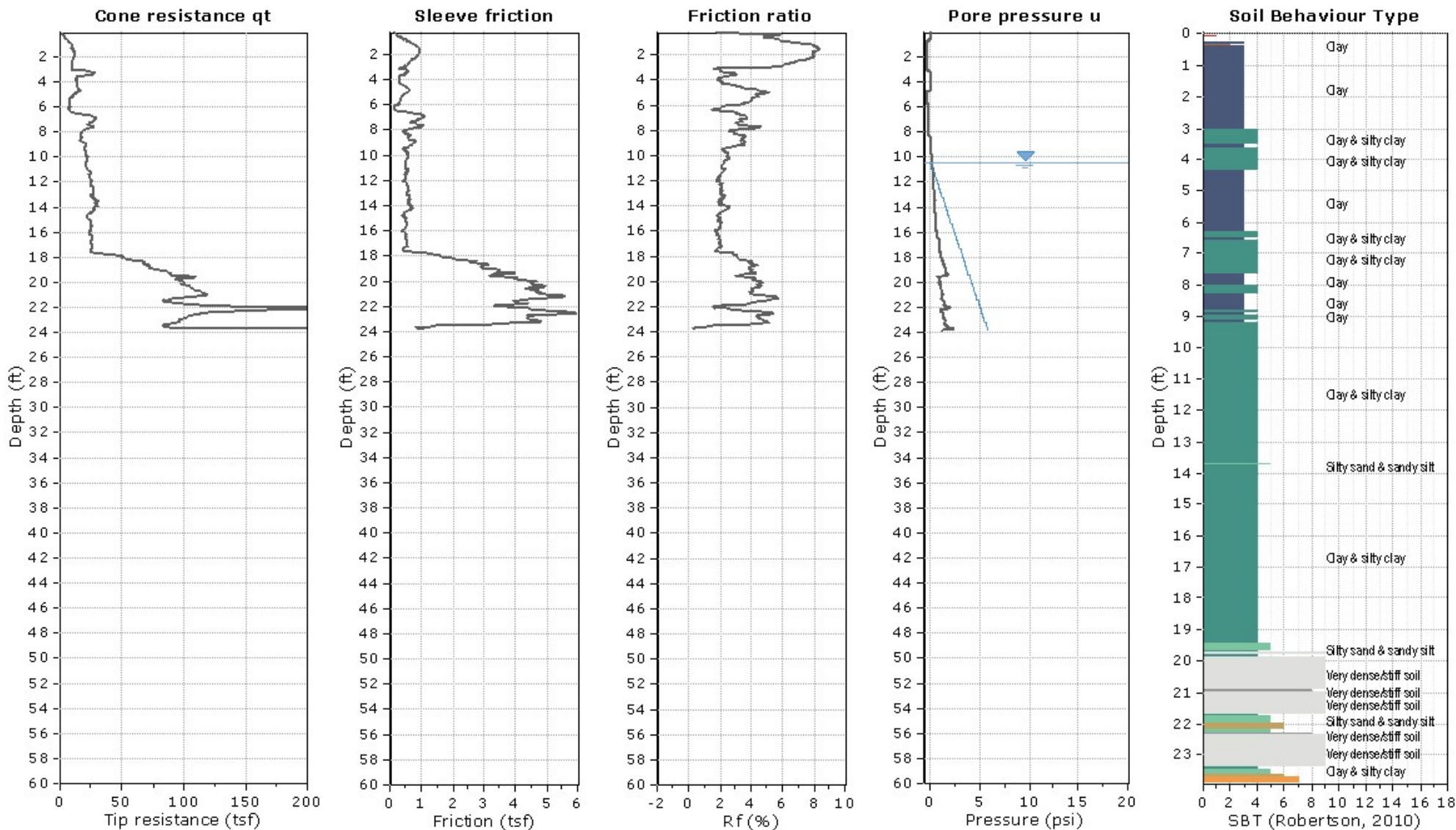
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**CPT: GEO-22B**

Total depth: 23.82 ft, Date: 4/1/2025  
Coords: lat 39.565394° lon -88.152425°  
Cone Type: CPT  
Cone Operator: LURGO

**Project: Coles Wind**

**Location: Coles County, Illinois**

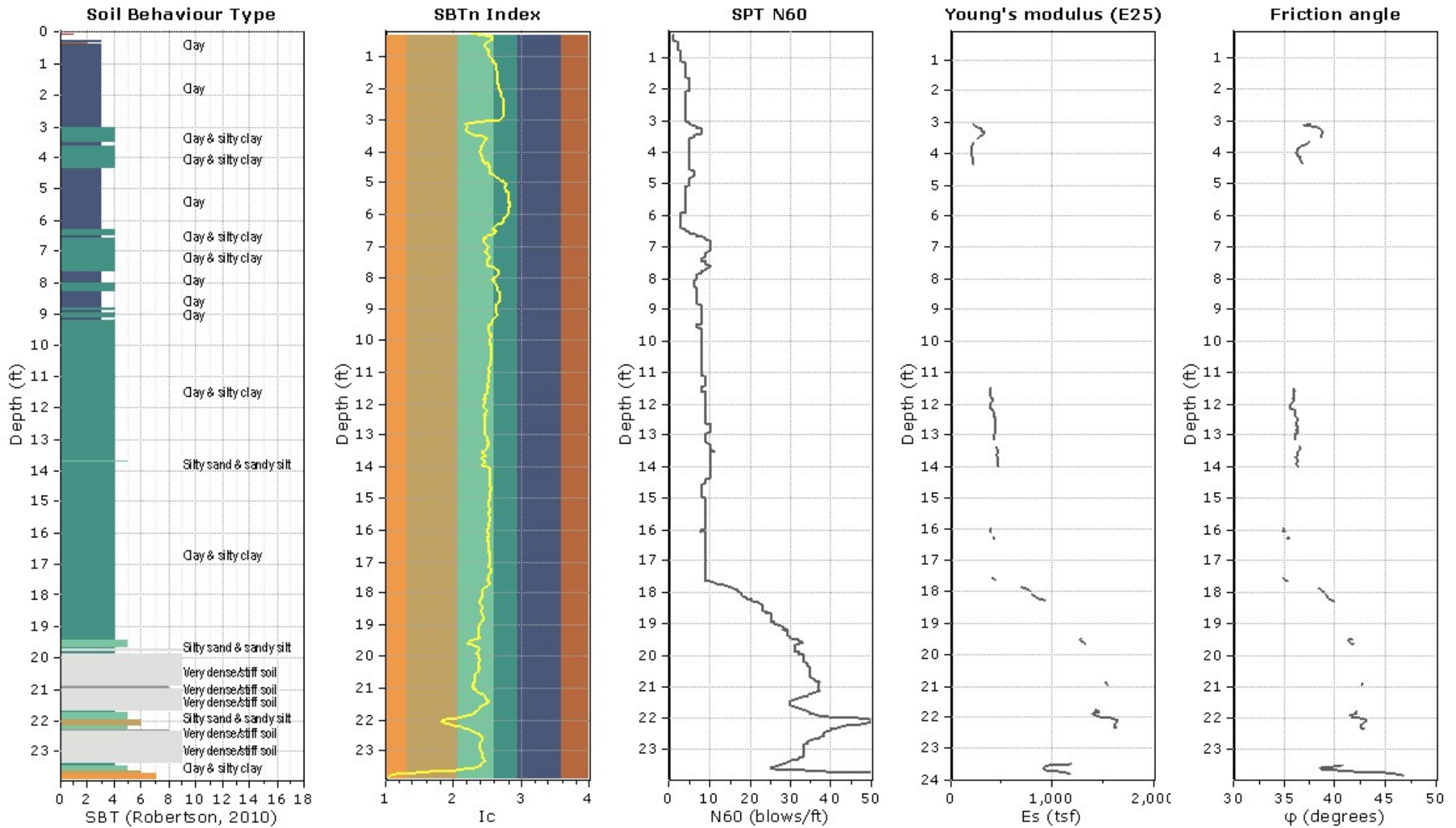






**Project:** Coles Wind

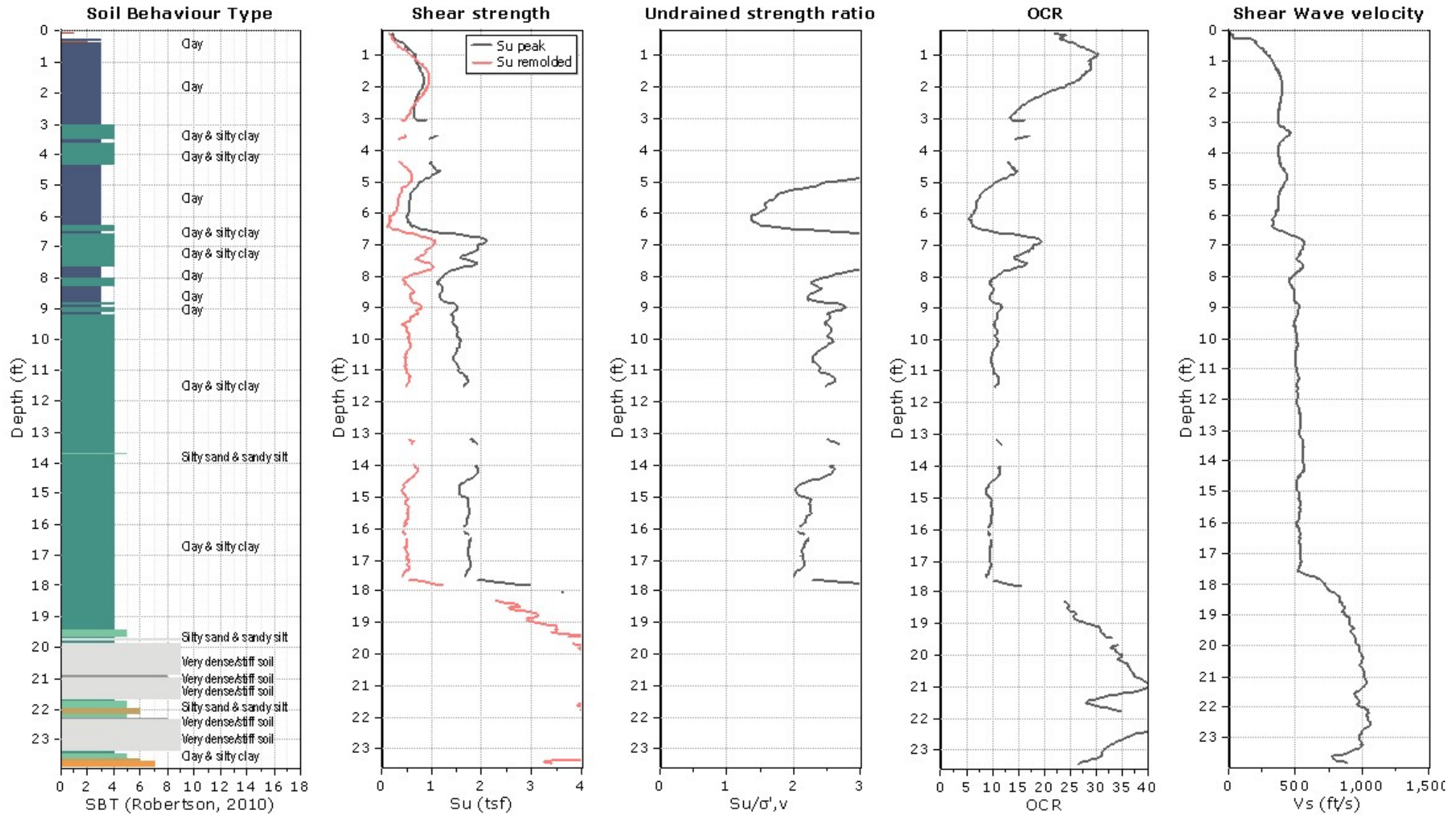
**Location:** Coles County, Illinois





**Project: Coles Wind**

**Location: Coles County, Illinois**





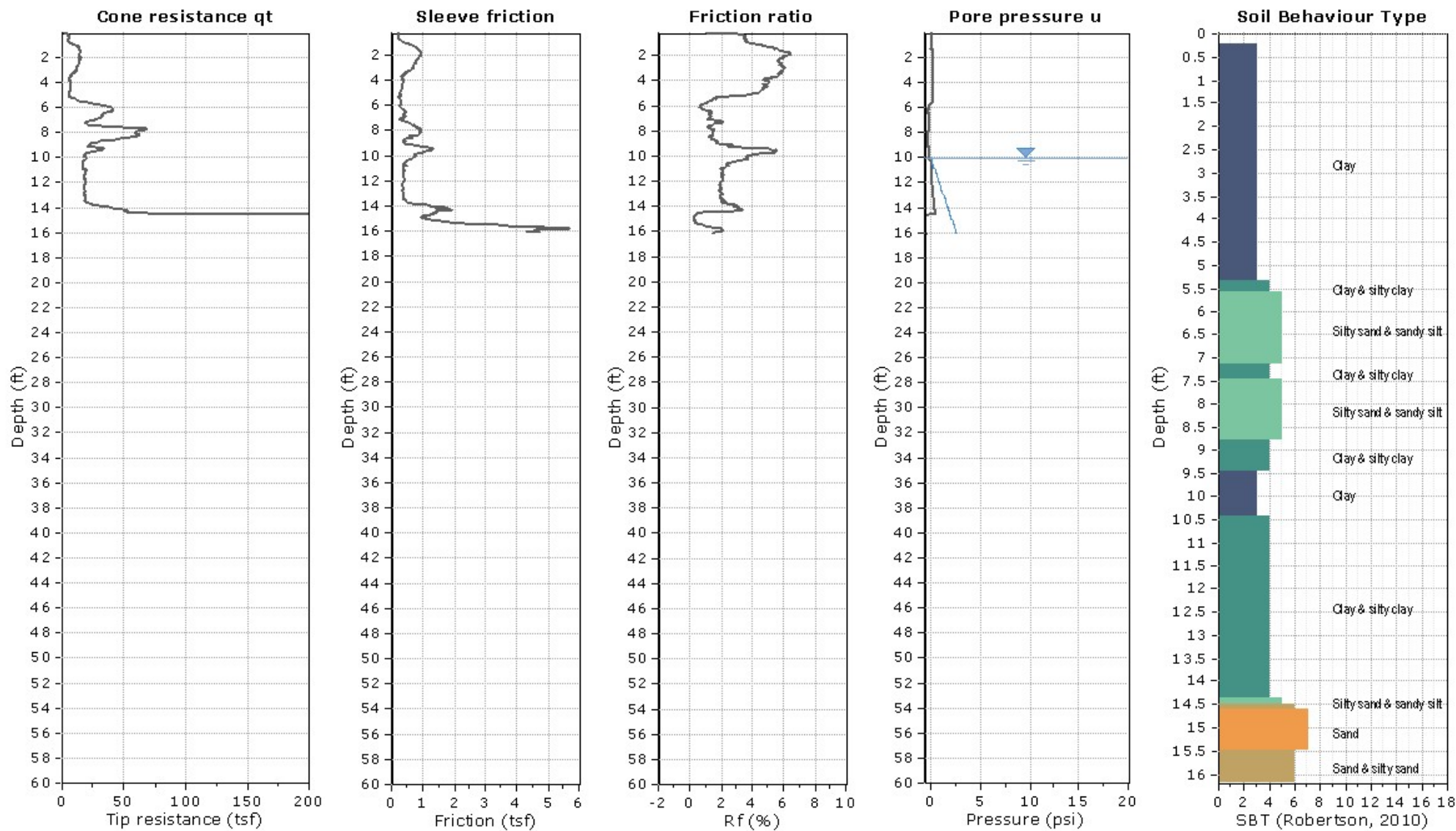
**RRC Power & Energy, LLC**  
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**CPT: GEO-23**

Total depth: 16.14 ft, Date: 4/1/2025  
Coords: lat 39.573187° lon -88.154941°  
Cone Type: CPT  
Cone Operator:

**Project: Coles Wind**

**Location: Coles County, Illinois**

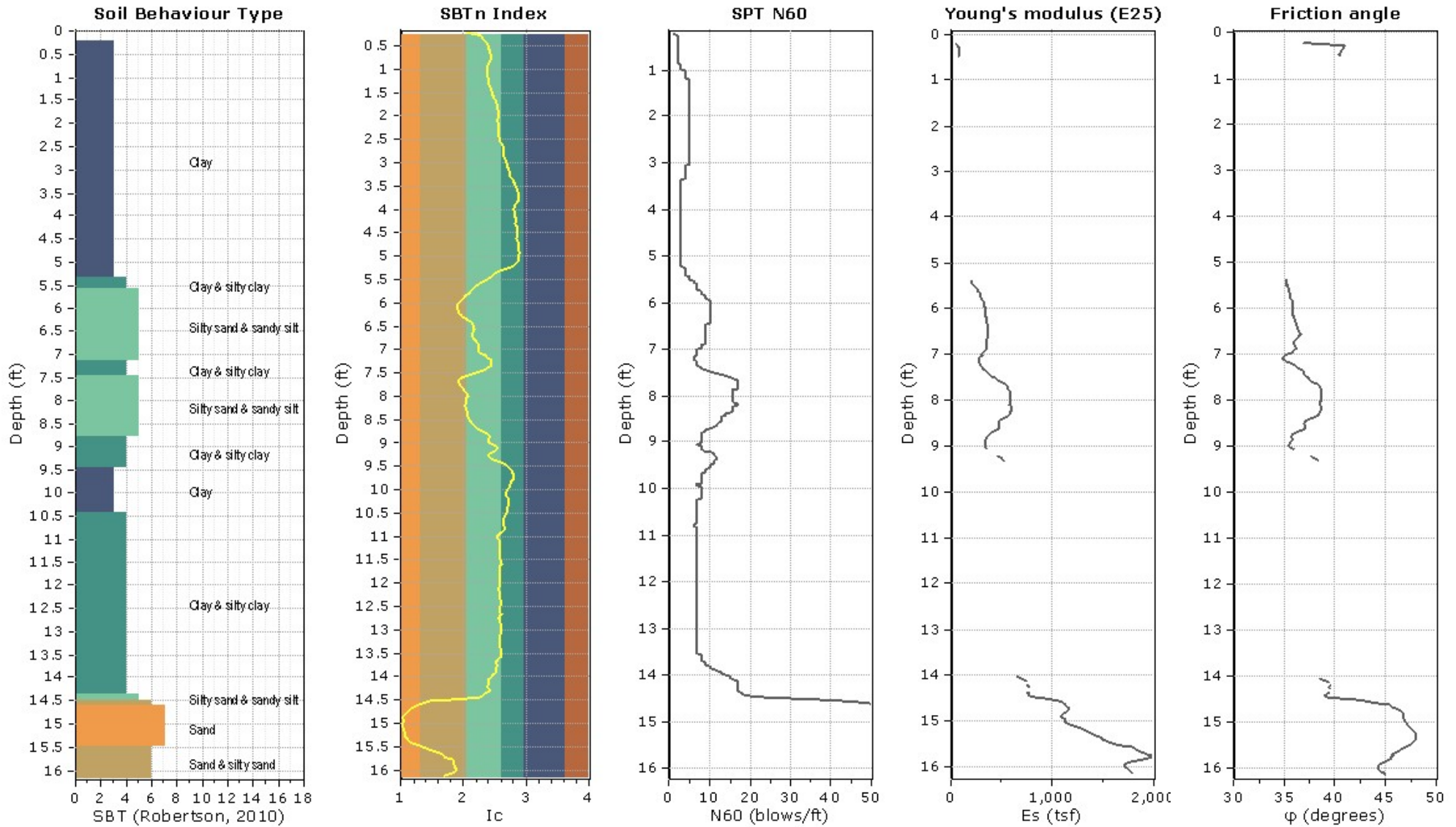






**Project:** Coles Wind

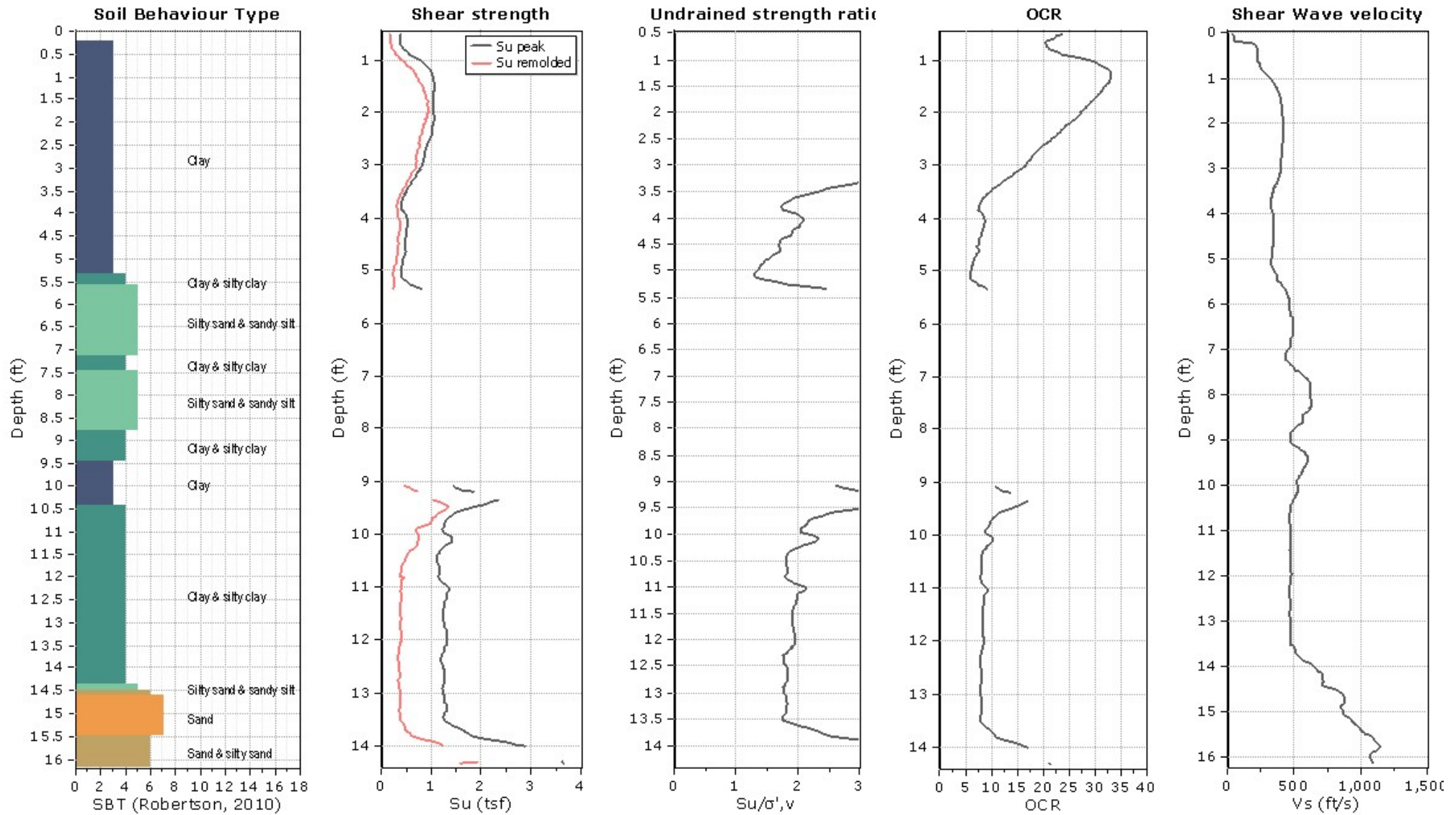
**Location:** Coles County, Illinois





**Project: Coles Wind**

**Location: Coles County, Illinois**





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# CPT: GEO-23A

Total depth: 19.36 ft, Date: 4/21/2025

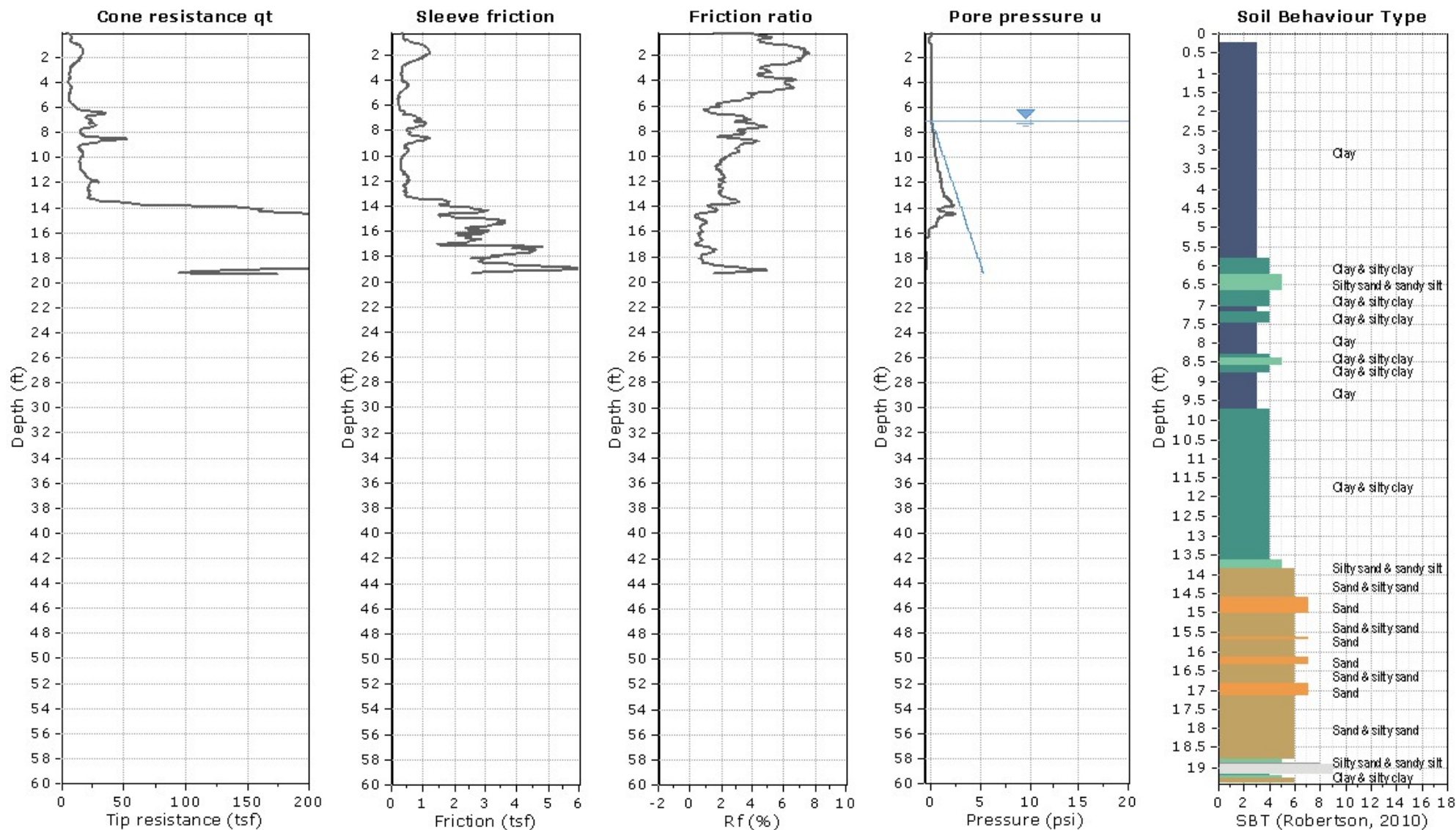
Coords: lat 39.573187° lon -88.154941°

Cone Type: CPT

Cone Operator: FUGRO

**Project:** Coles Wind

**Location:** Coles County, Illinois

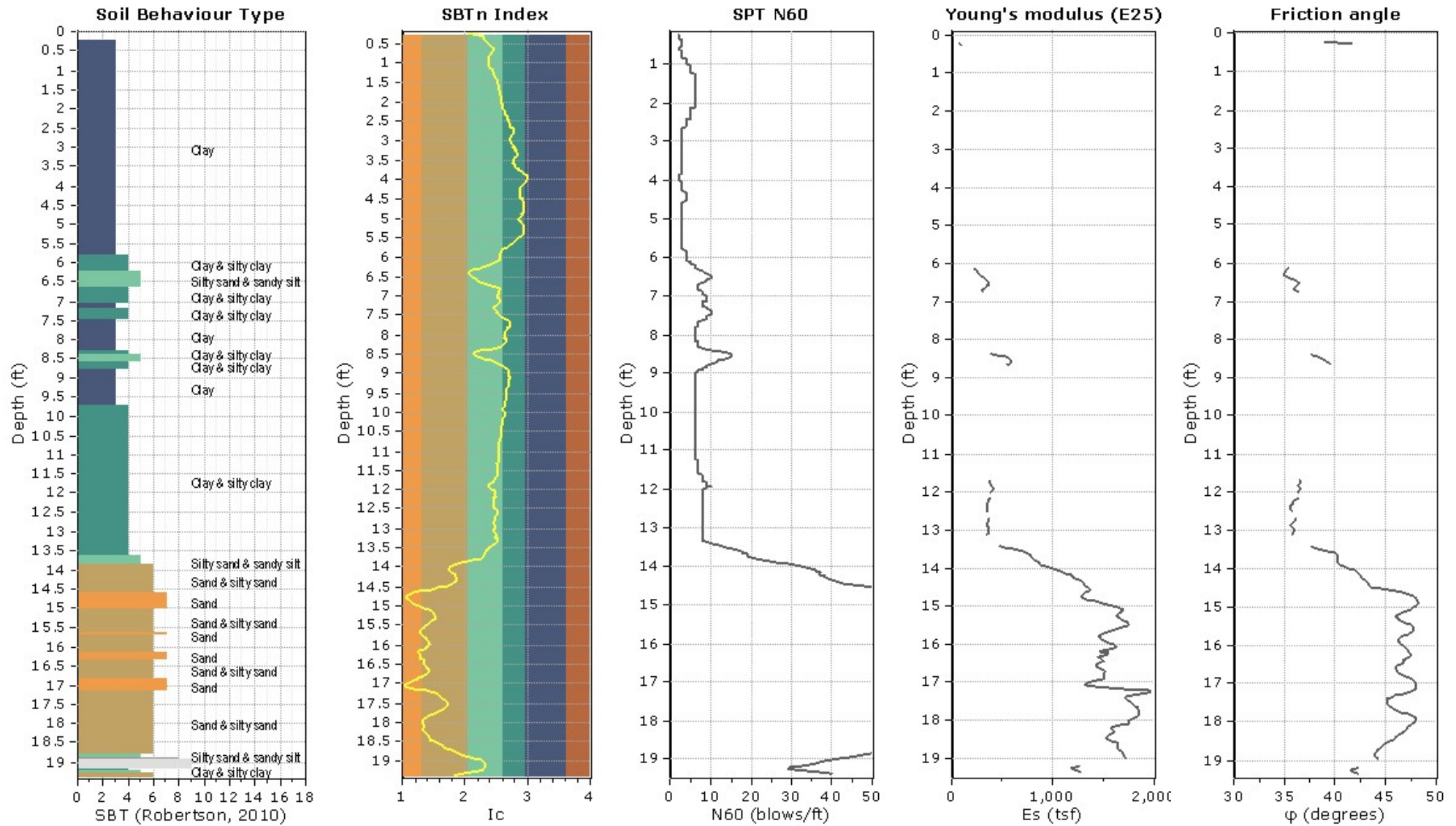






**Project:** Coles Wind

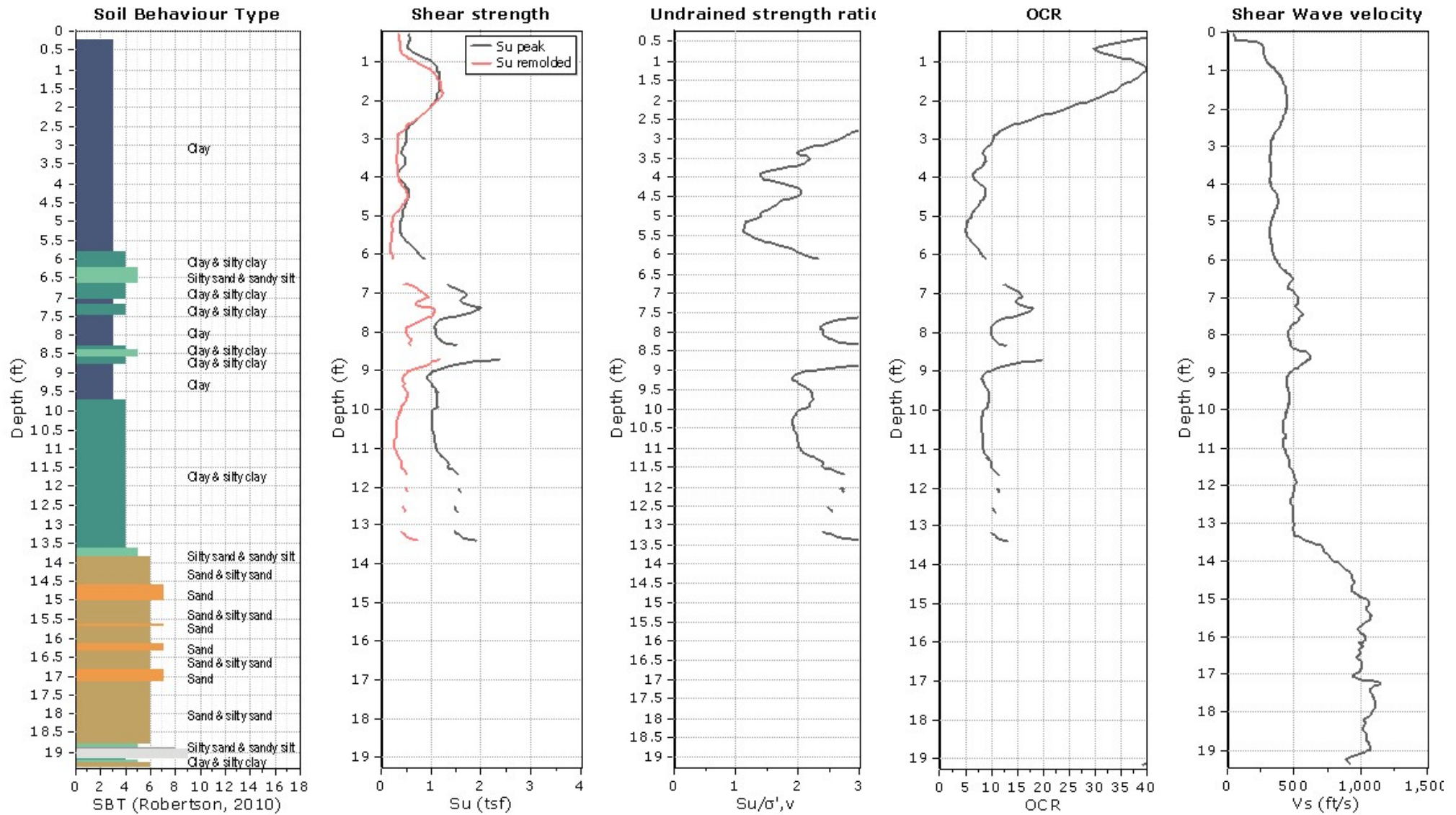
**Location:** Coles County, Illinois





**Project:** Coles Wind

**Location:** Coles County, Illinois



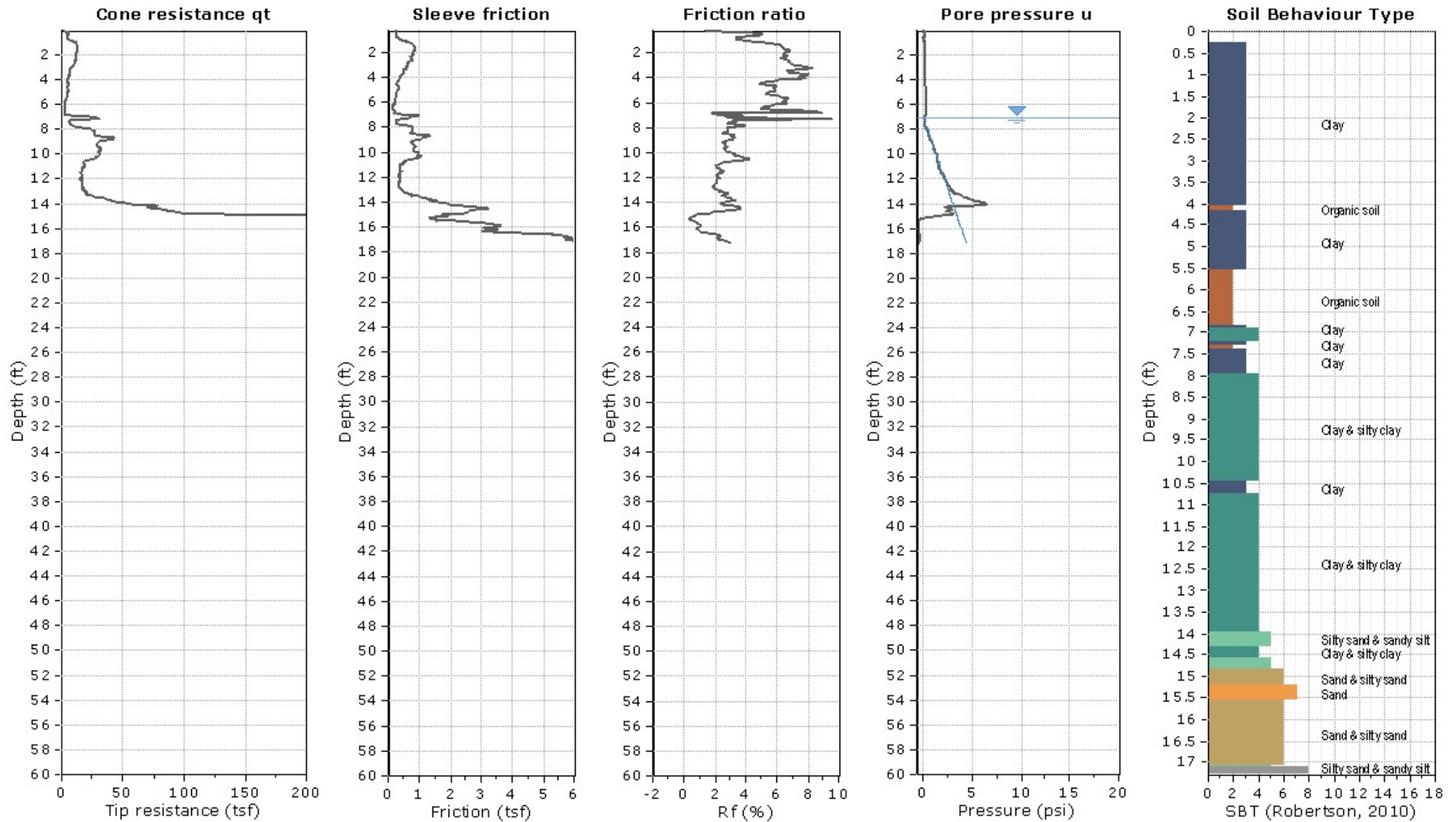


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-23B**

Total depth: 17.22 ft, Date: 4/21/2025  
Coords: lat 39.573187° lon -88.154941°  
Cone Type: CPT  
Cone Operator: FUGRO

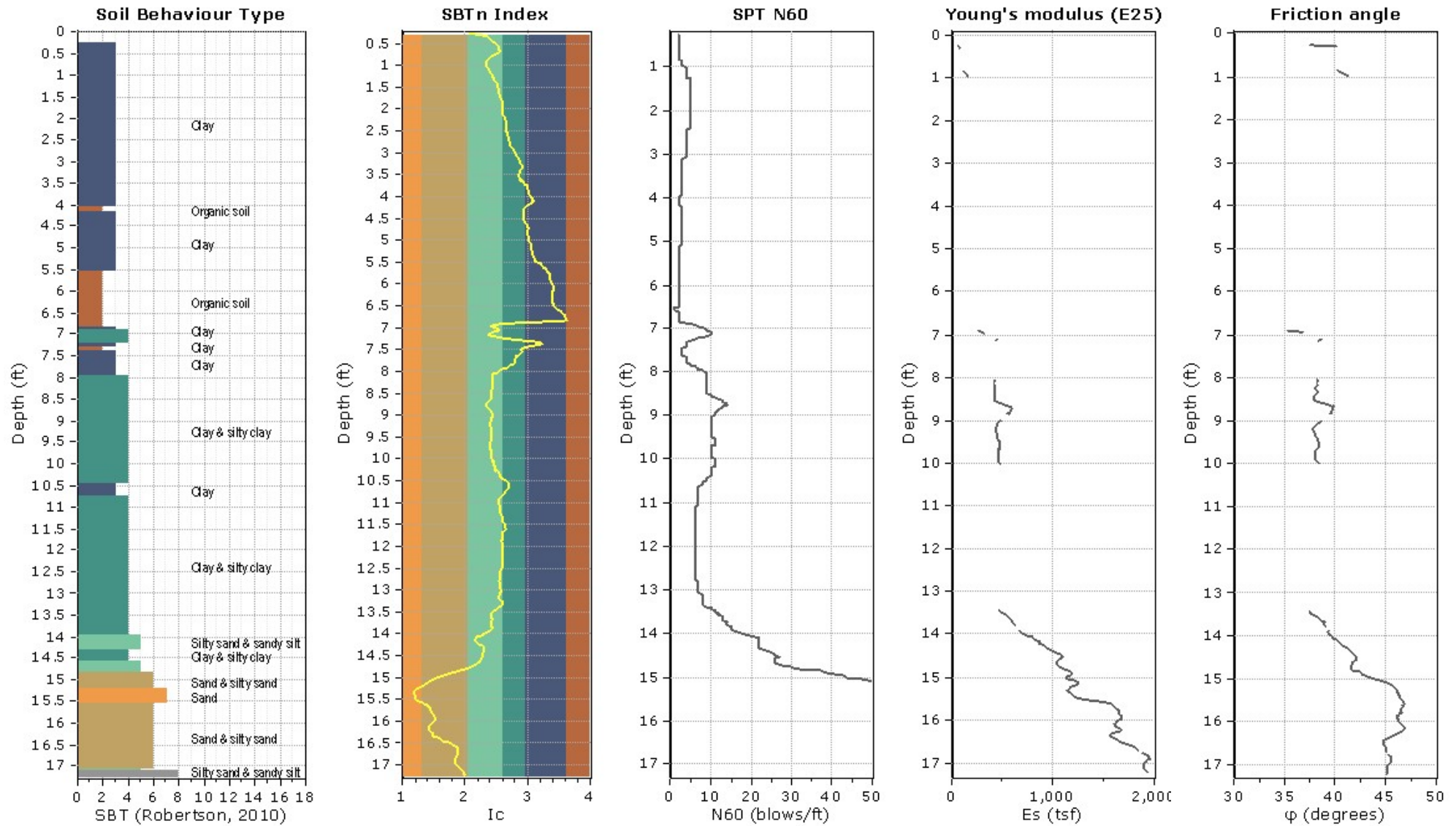






**Project:** Coles Wind

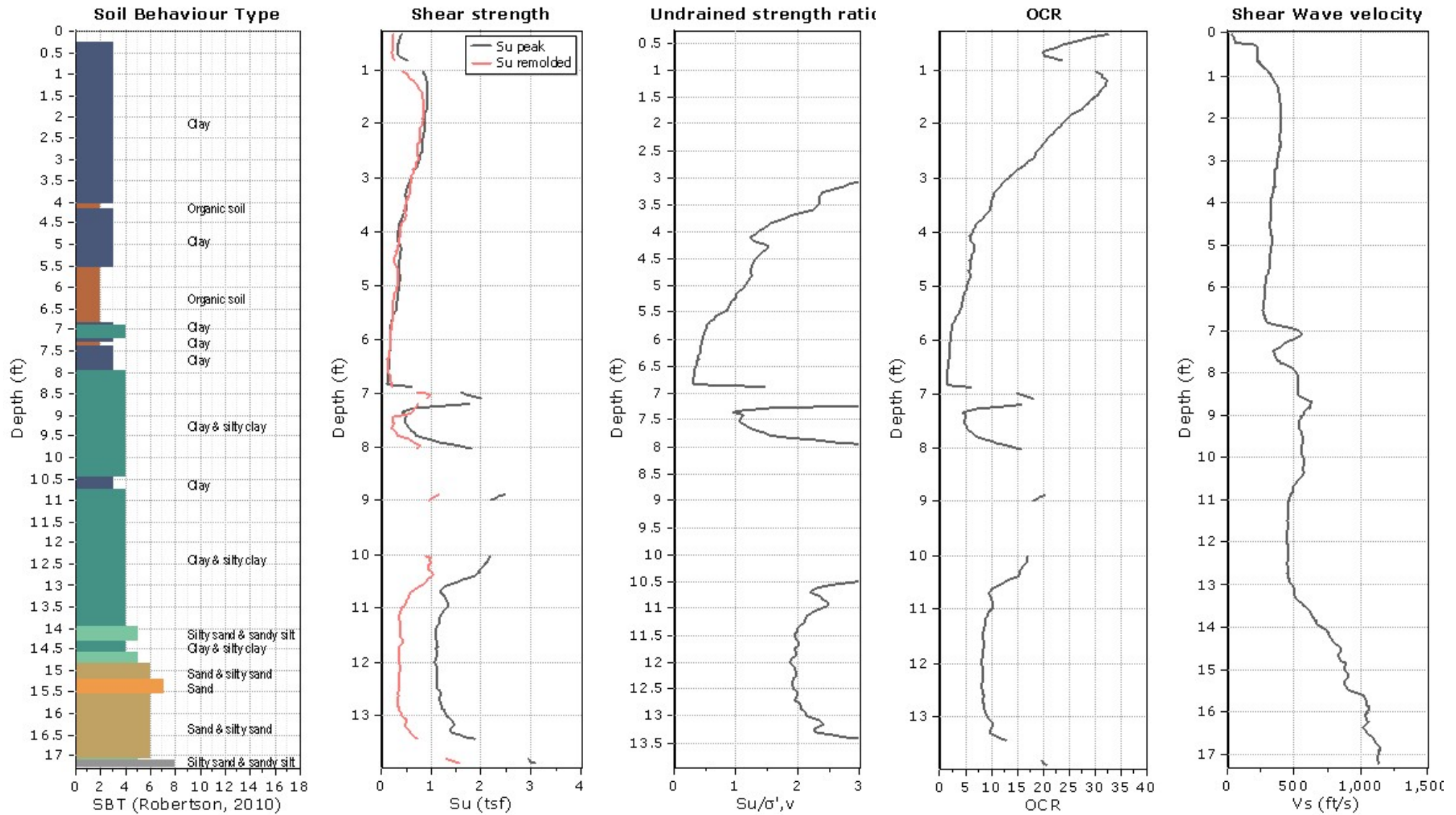
**Location:** Coles County, Illinois





**Project: Coles Wind**

**Location: Coles County, Illinois**





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**Project:** Coles Wind  
**Location:** Coles County, Illinois

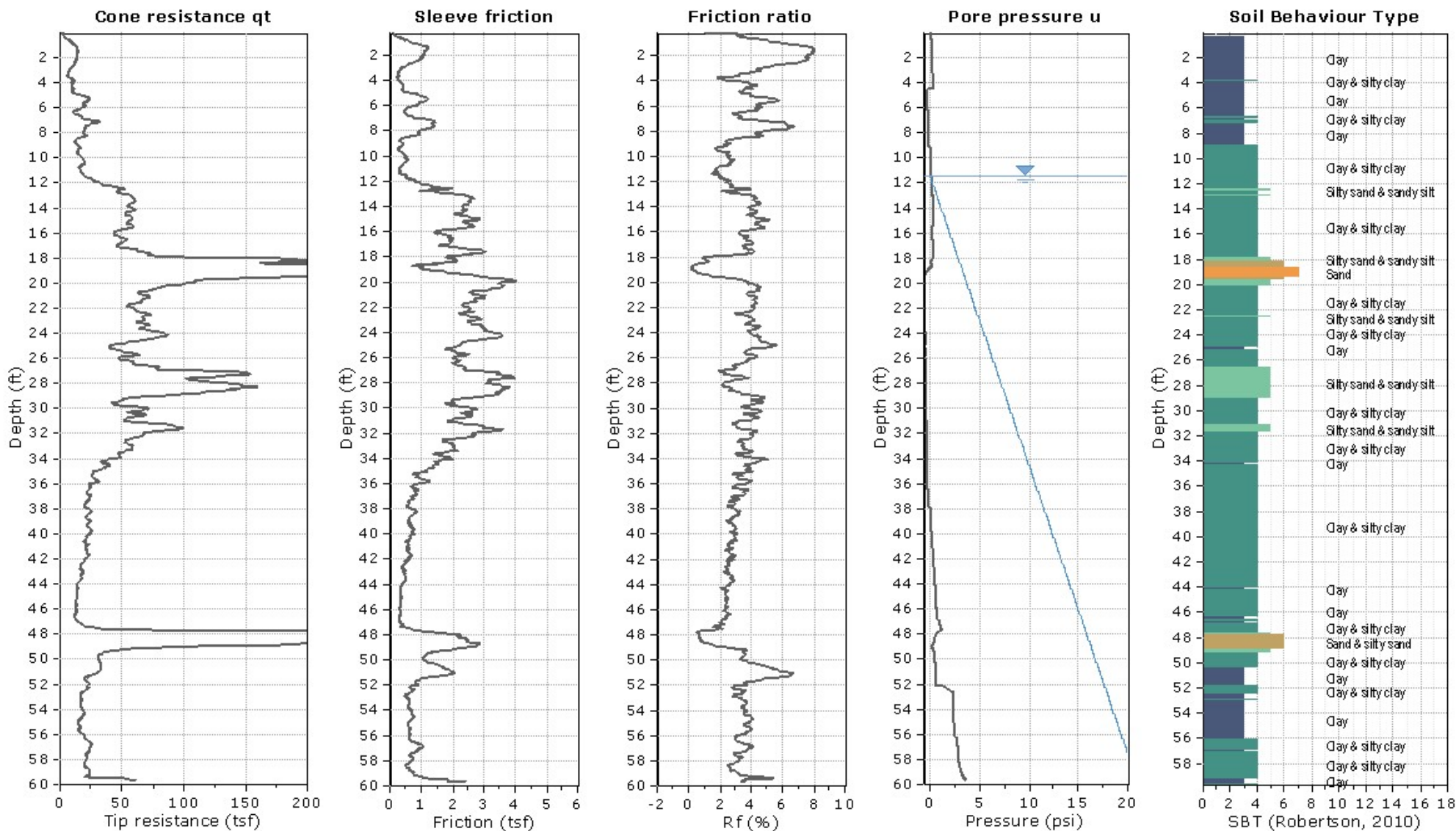
**CPT: GEO-24**

Total depth: 59.68 ft, Date: 3/31/2025

Coords: lat 39.569341° lon -88.13683°

Cone Type: CPT

Cone Operator: FUGRO







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**Project:** Coles Wind  
**Location:** Coles County, Illinois

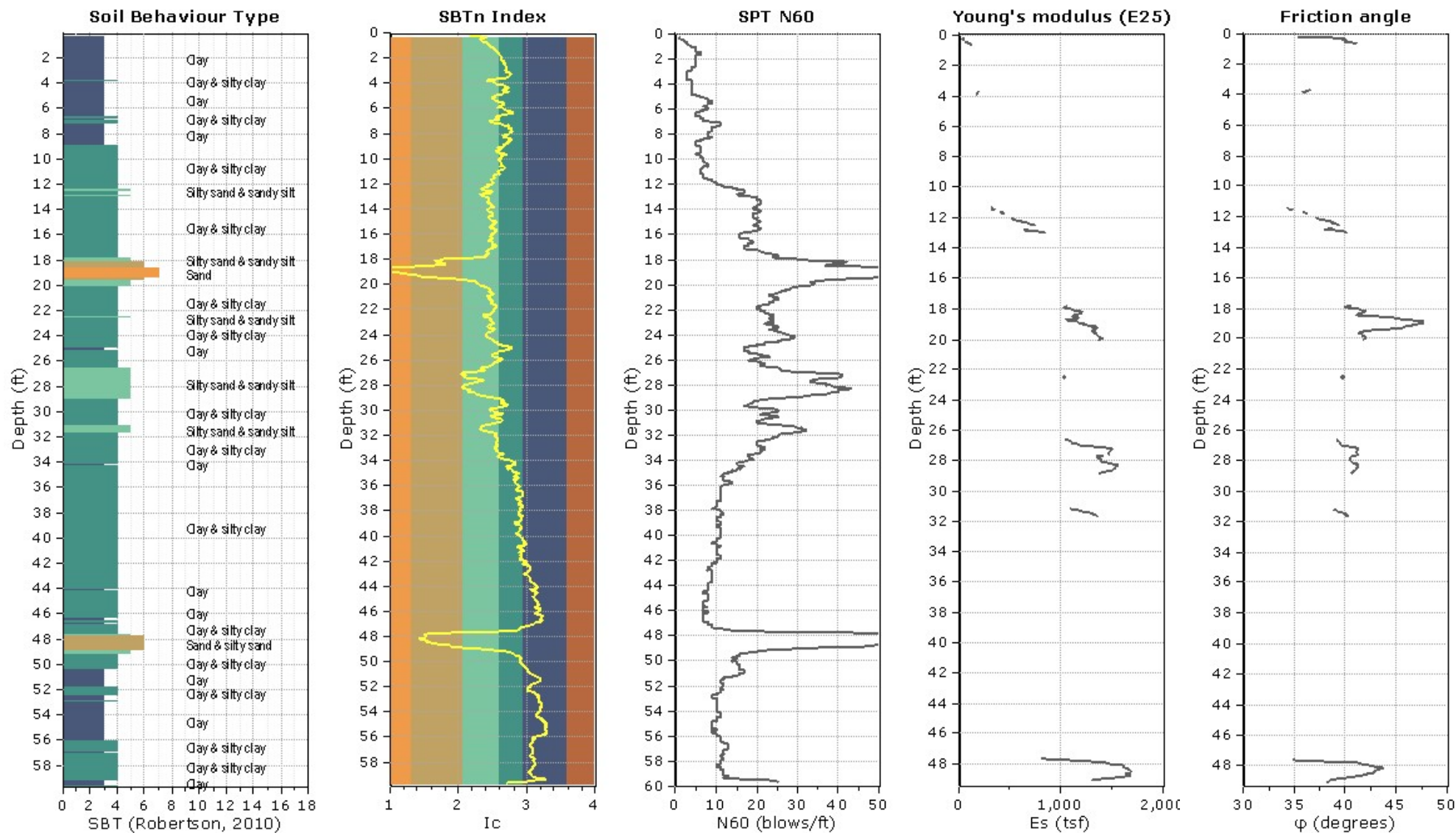
**CPT: GEO-24**

Total depth: 59.68 ft, Date: 3/31/2025

Coords: lat 39.569341° lon -88.13683°

Cone Type: CPT

Cone Operator: FUGRO





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**CPT: GEO-24**

Total depth: 59.68 ft, Date: 3/31/2025

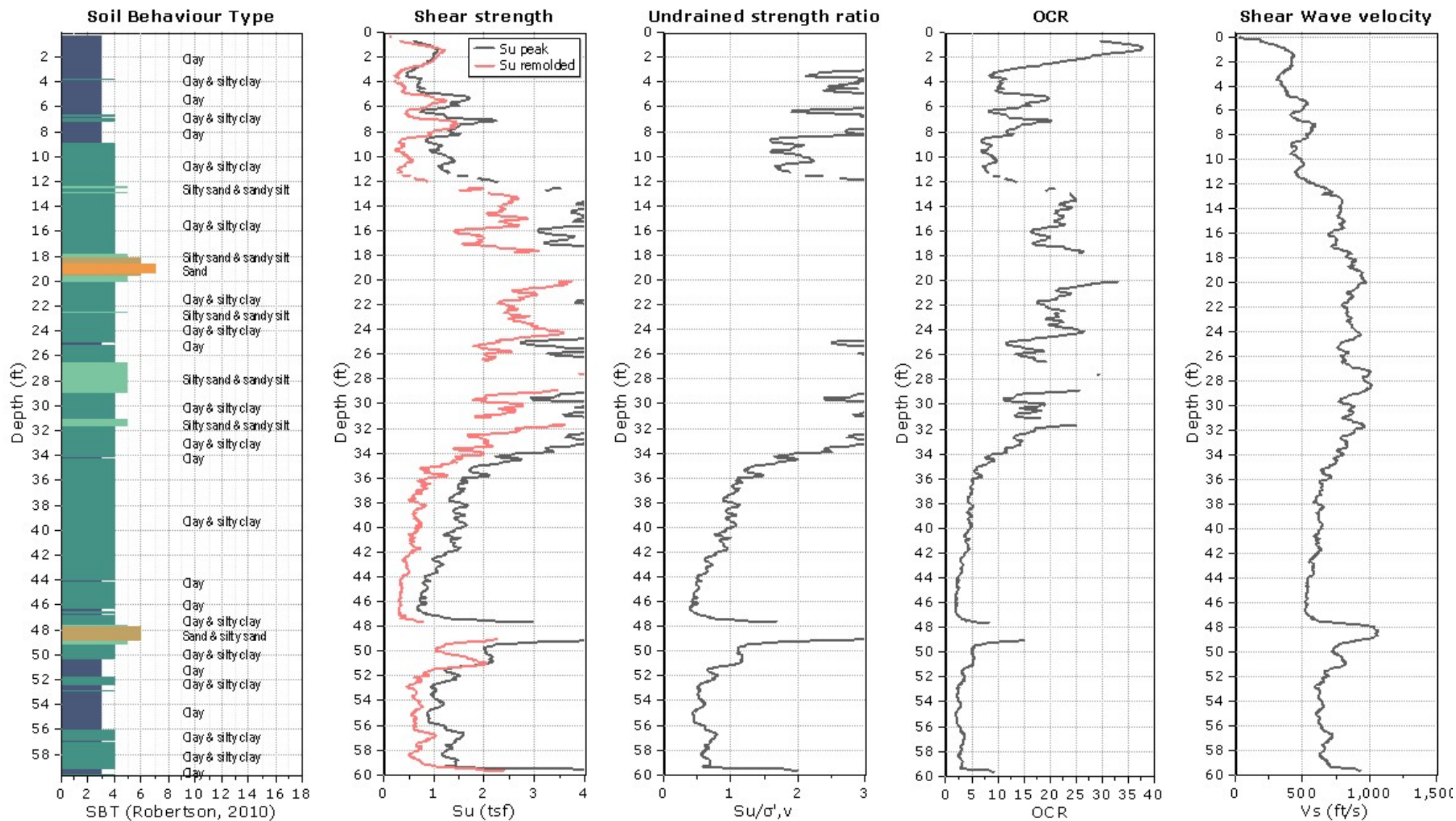
Coords: lat 39.569341° lon -88.13683°

Cone Type: CPT

Cone Operator: FUGRO

**Project: Coles Wind**

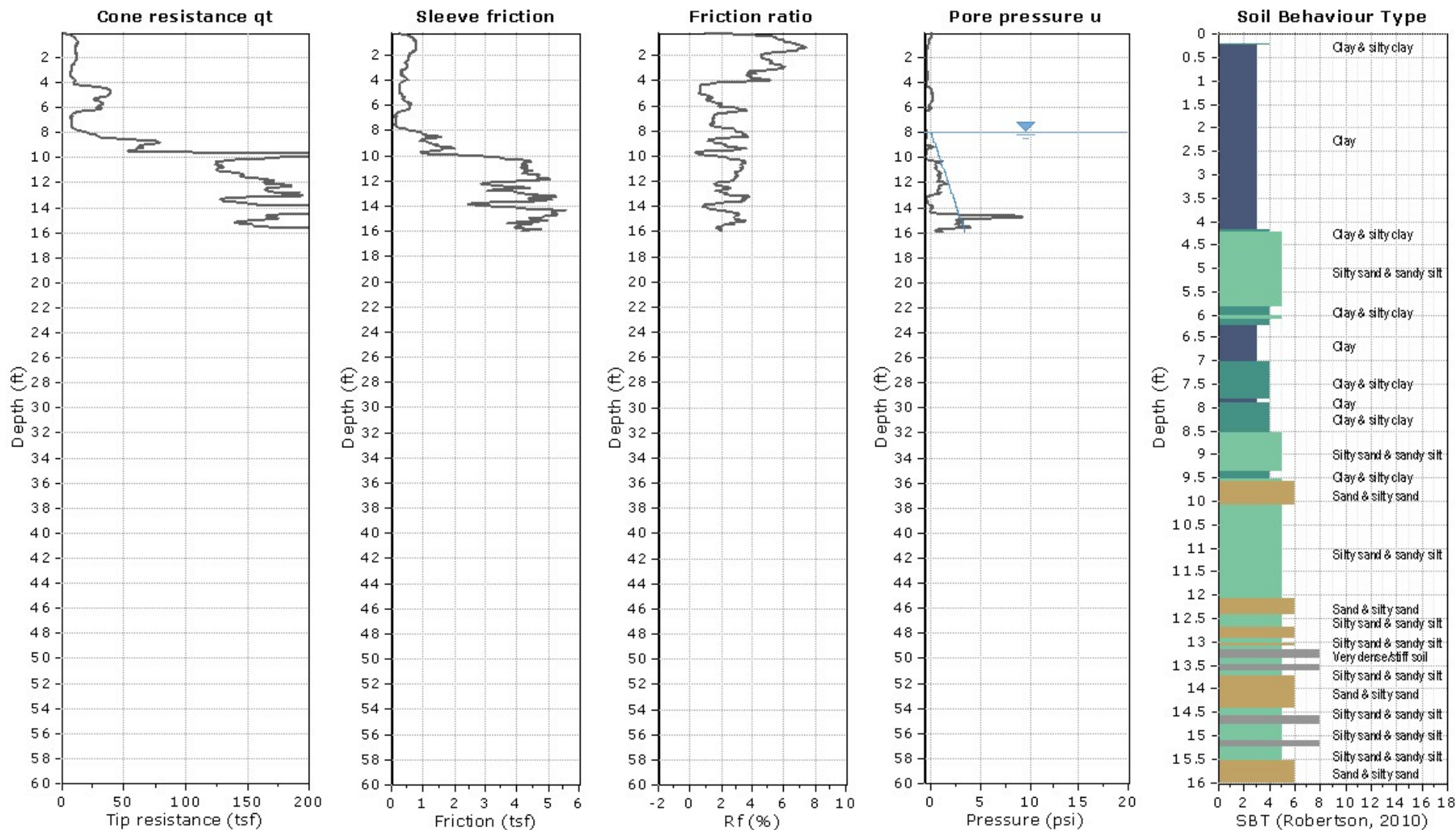
**Location: Coles County, Illinois**





**Project:** Coles Wind

**Location:** Coles County, Illinois







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**CPT: GEO-25**

Total depth: 15.98 ft, Date: 3/31/2025

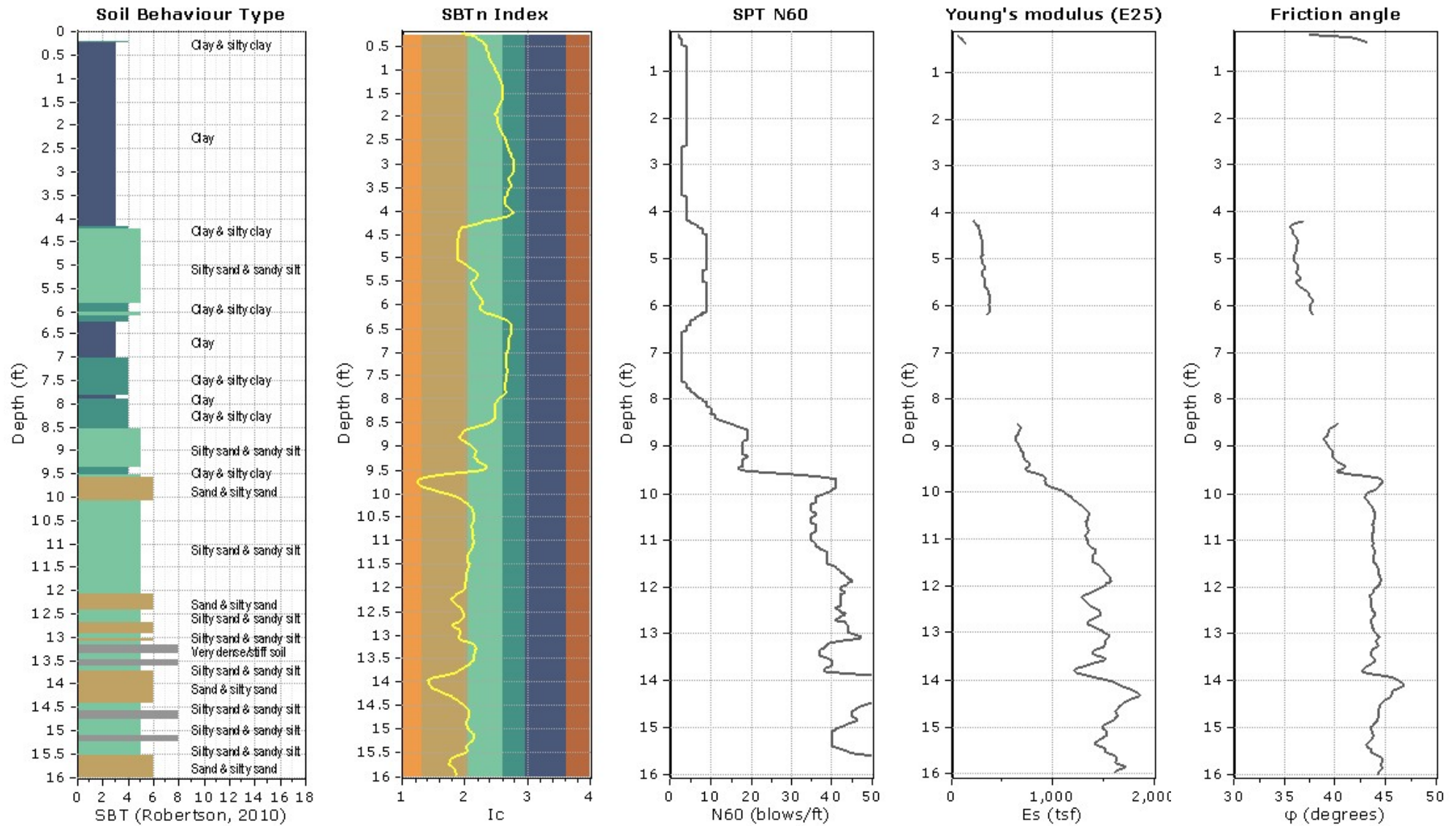
Coords: lat 39.572765° lon -88.132383°

Cone Type: CPT

Cone Operator: FUGRO

**Project: Coles Wind**

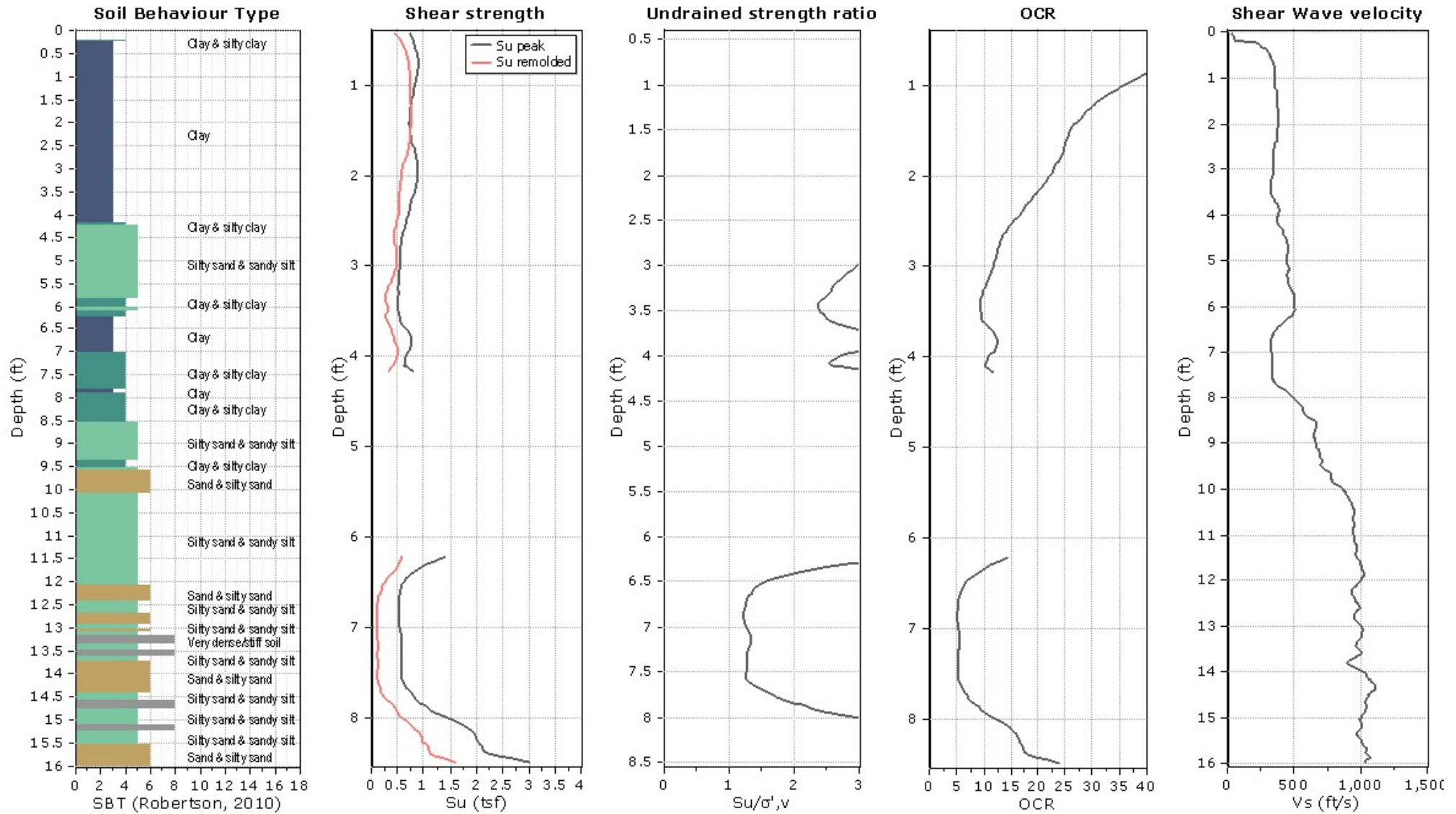
**Location: Coles County, Illinois**





**Project:** Coles Wind

**Location:** Coles County, Illinois





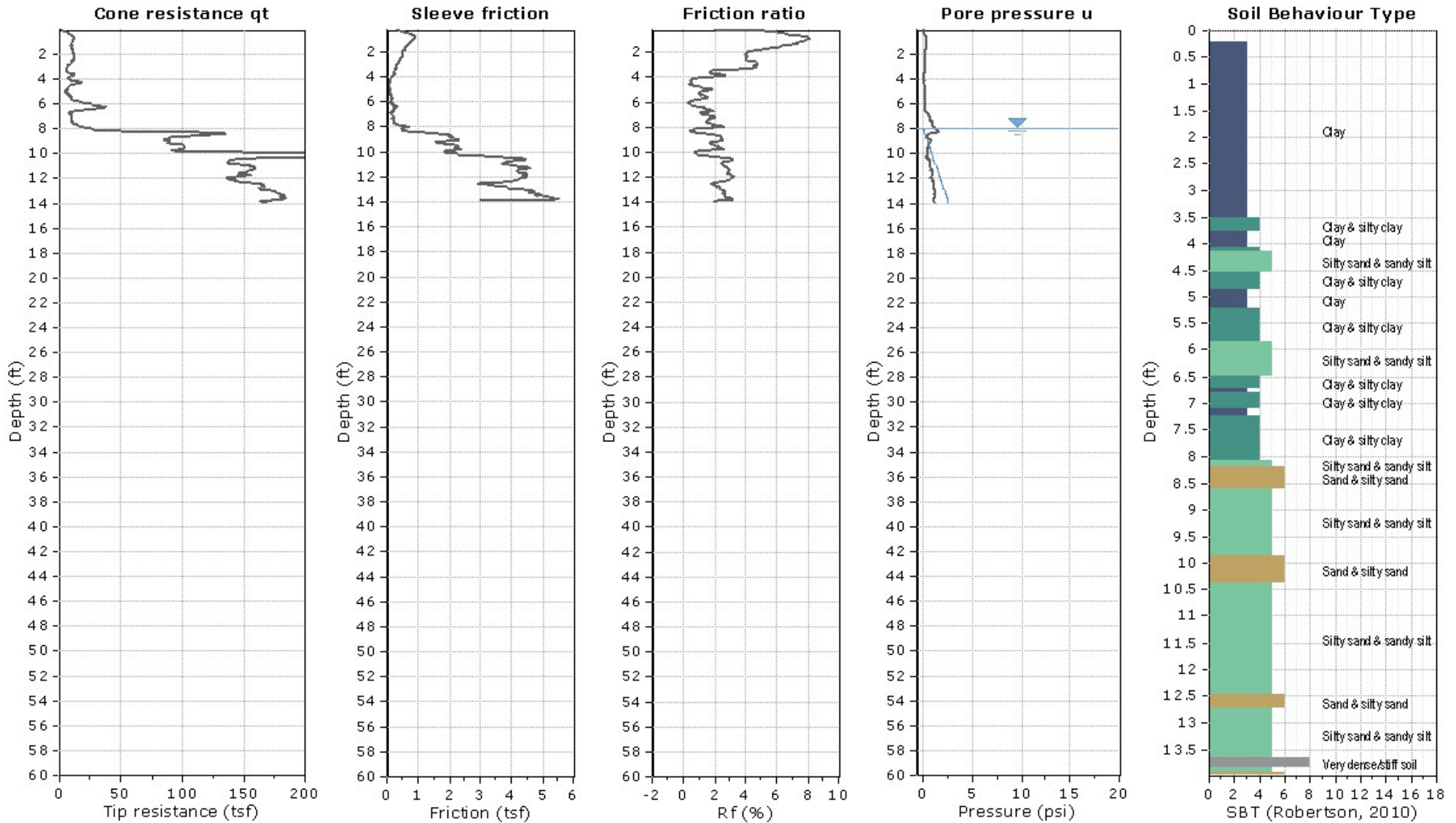
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Round Rock, TX 78681  
rrccompanies.com

**CPT: GEO-25A**

Total depth: 13.94 ft, Date: 3/31/2025  
Coords: lat 39.572765° lon -88.132383°  
Cone Type: CPT  
Cone Operator: FUGRO

**Project:** Coles Wind

**Location:** Coles County, Illinois

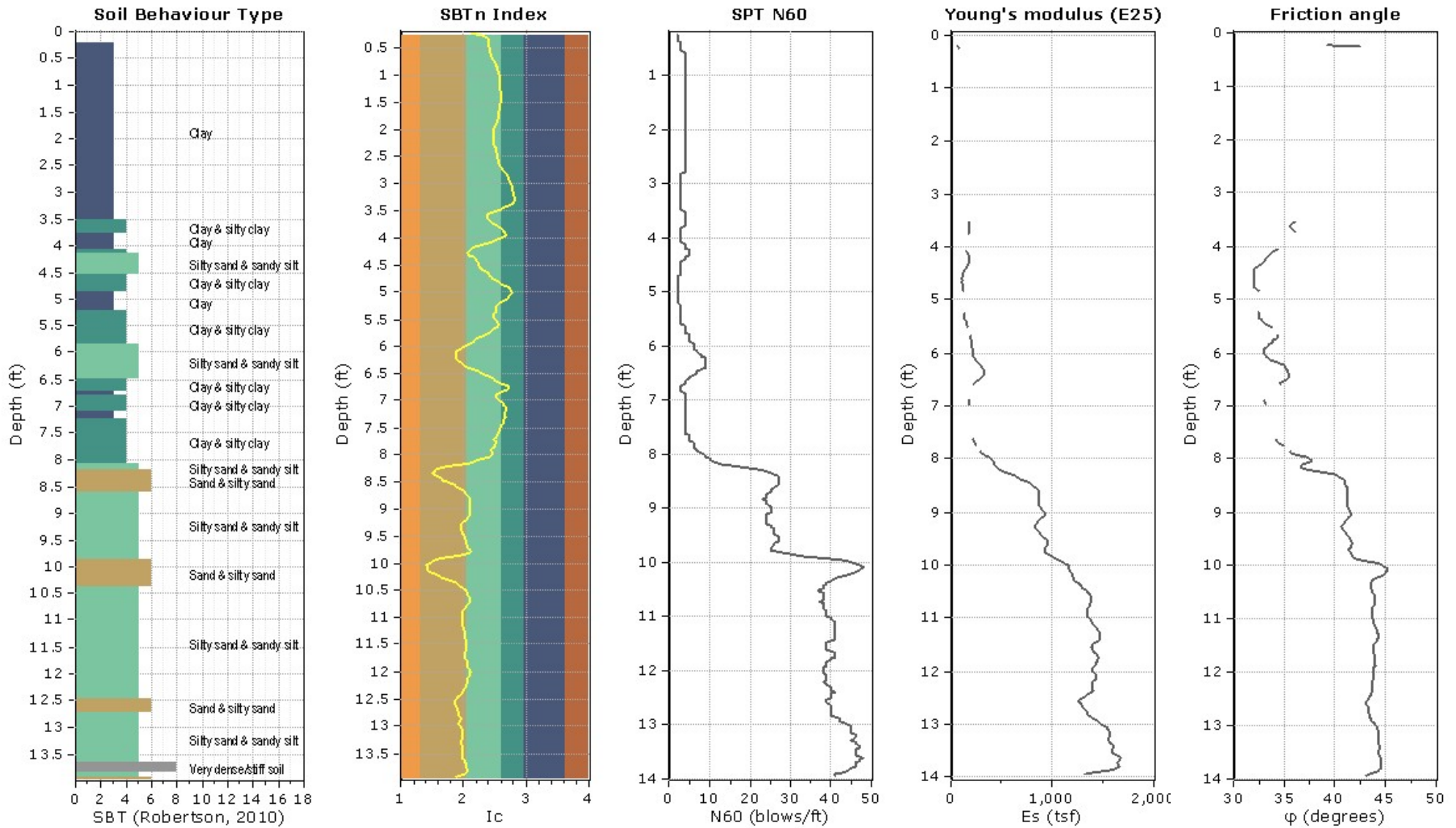






**Project:** Coles Wind

**Location:** Coles County, Illinois





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**CPT: GEO-25A**

Total depth: 13.94 ft, Date: 3/31/2025

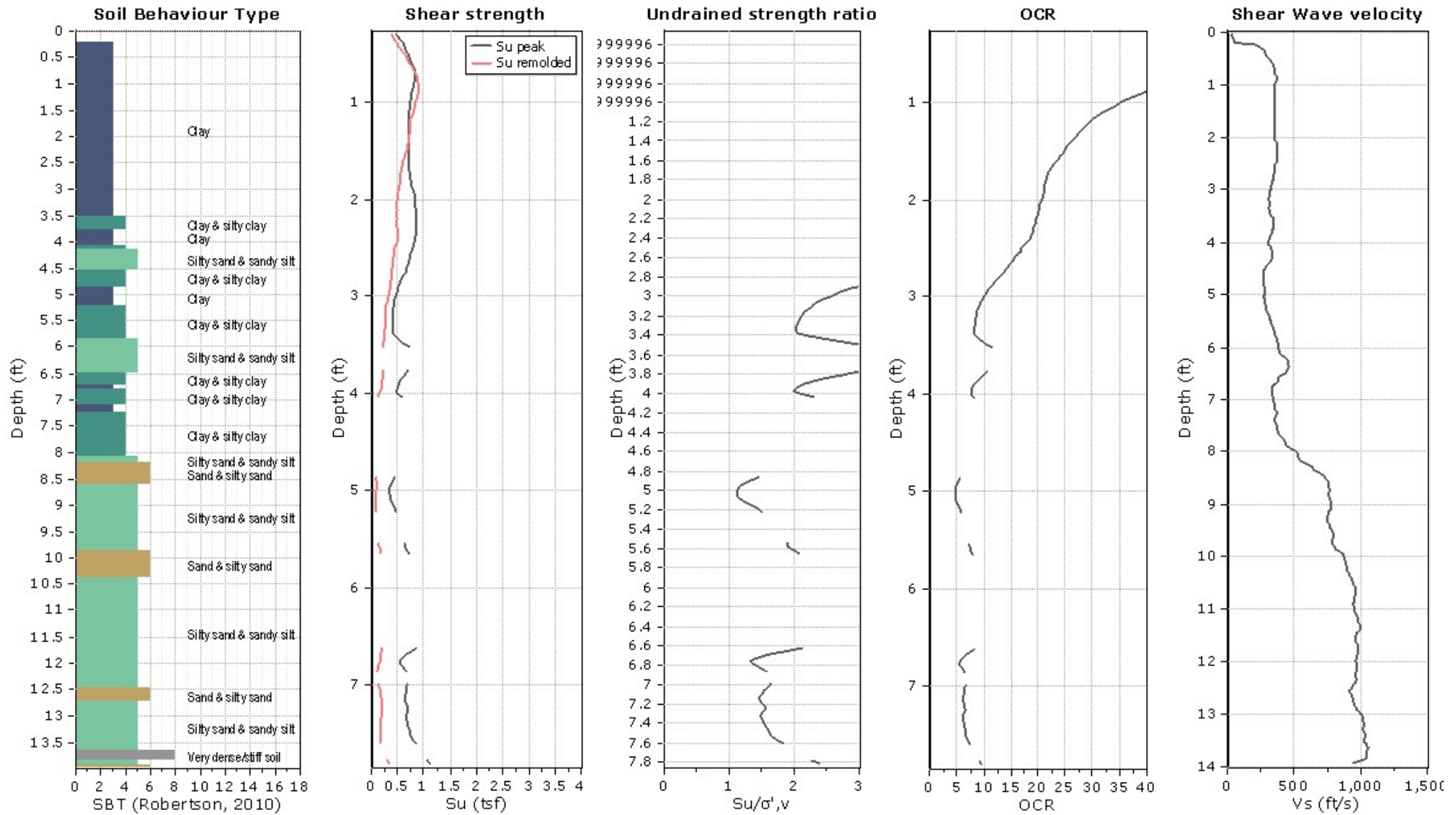
Coords: lat 39.572765° lon -88.132383°

Cone Type: CPT

Cone Operator: FUGRO

**Project: Coles Wind**

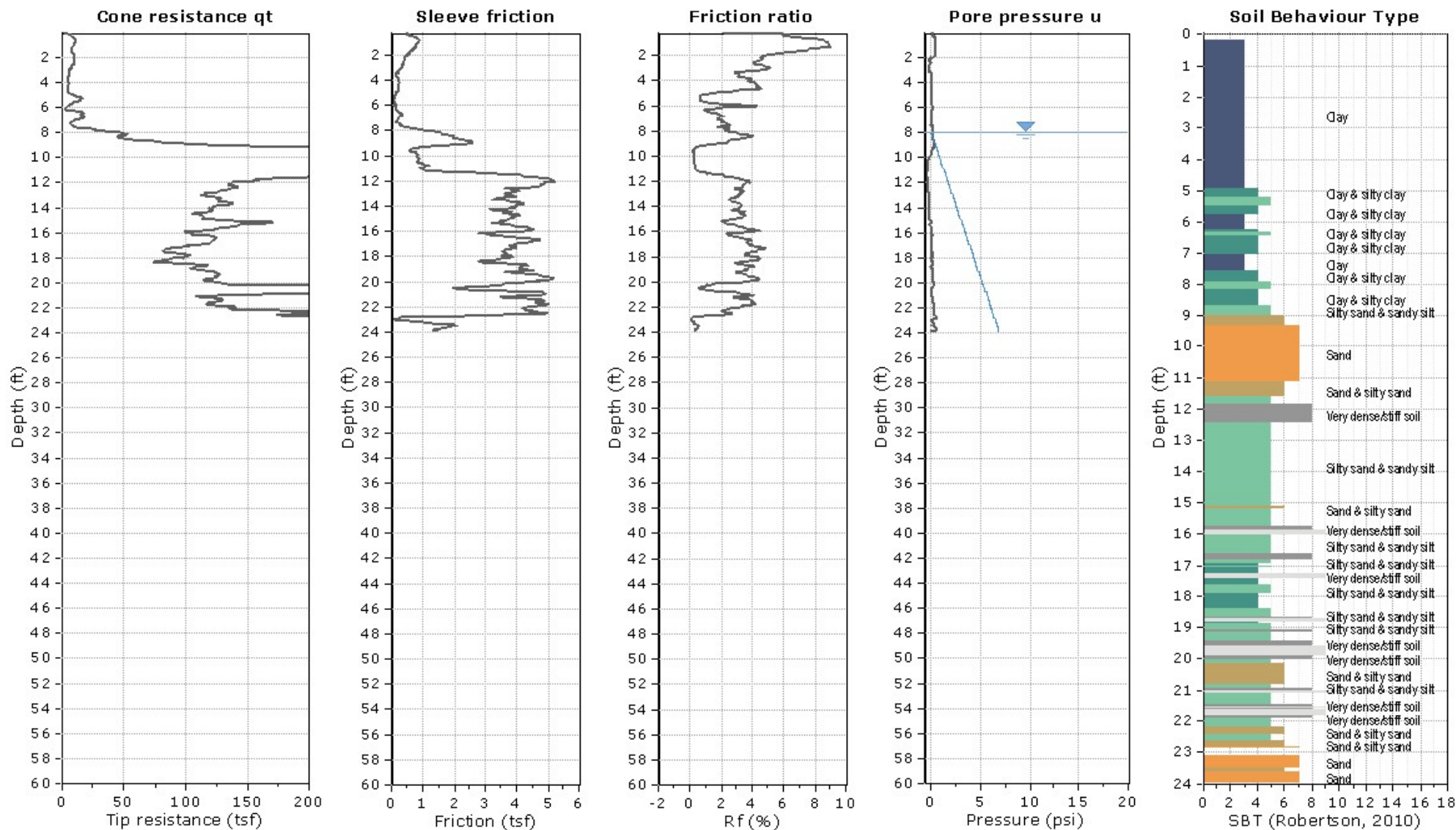
**Location: Coles County, Illinois**





**Project:** Coles Wind

**Location:** Coles County, Illinois







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**CPT: GEO-25B**

Total depth: 23.92 ft, Date: 3/31/2025

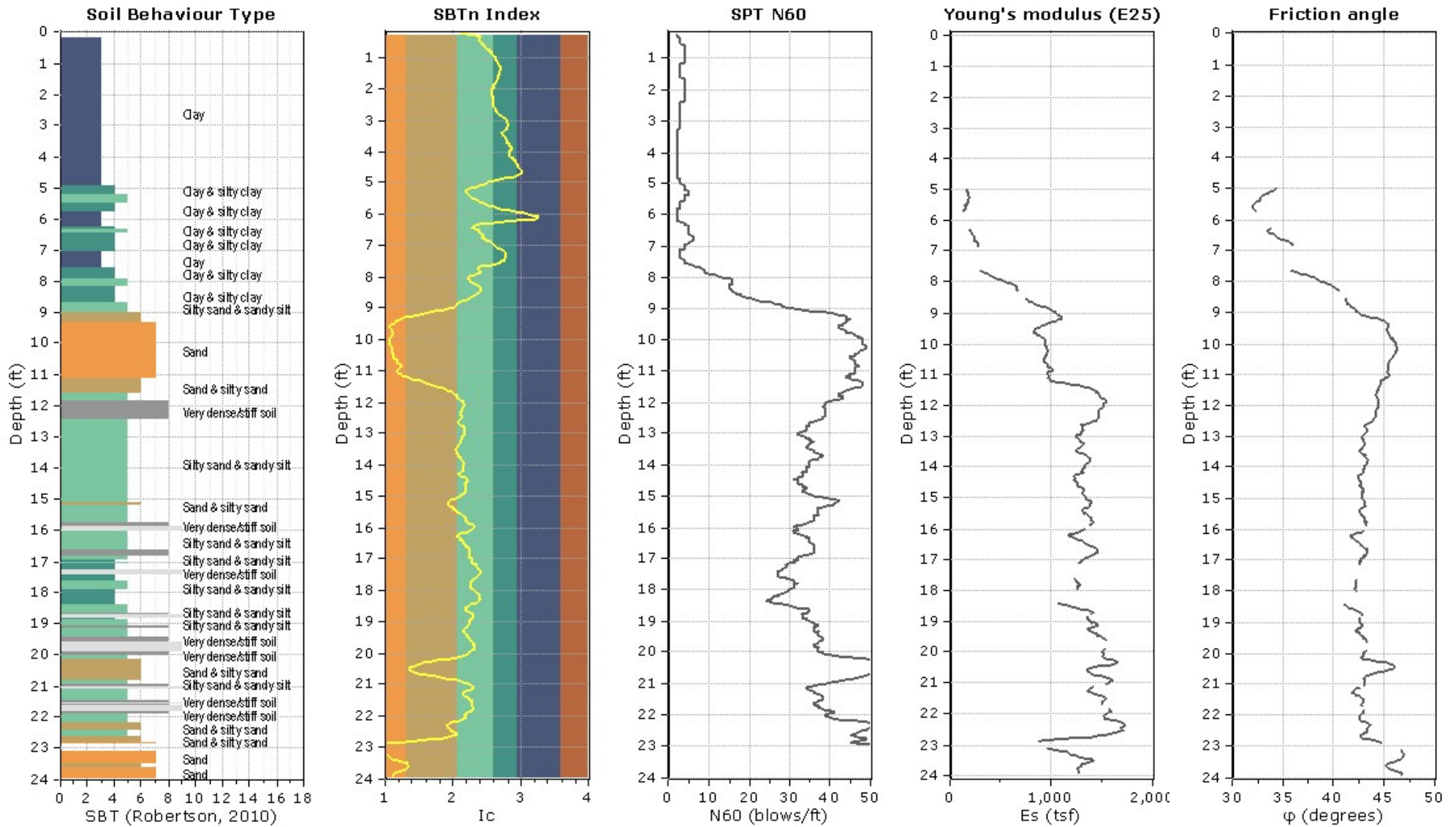
Coords: lat 39.572765° lon -88.132383°

Cone Type: CPT

Cone Operator: FUGRO

**Project: Coles Wind**

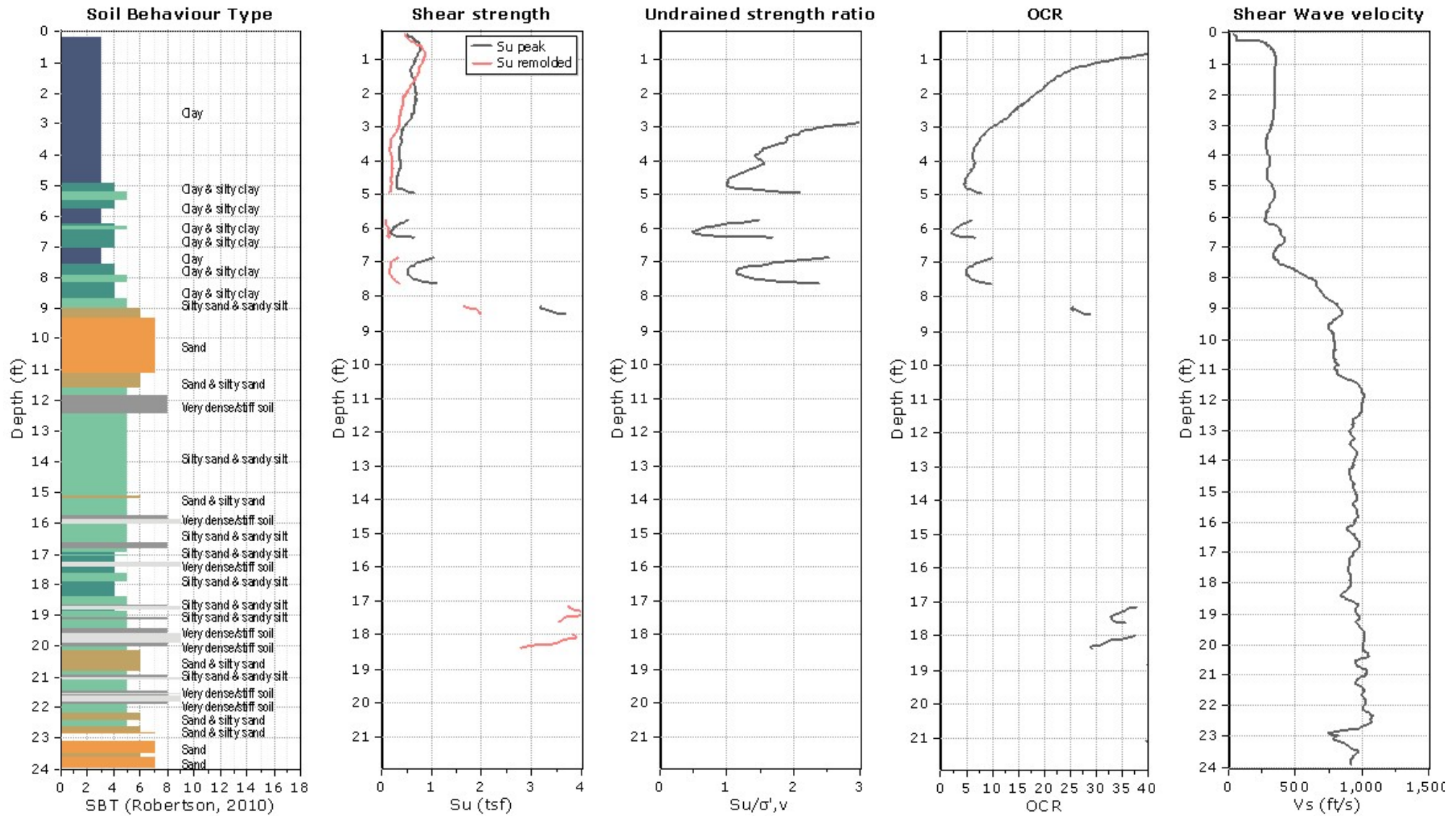
**Location: Coles County, Illinois**





**Project: Coles Wind**

**Location: Coles County, Illinois**



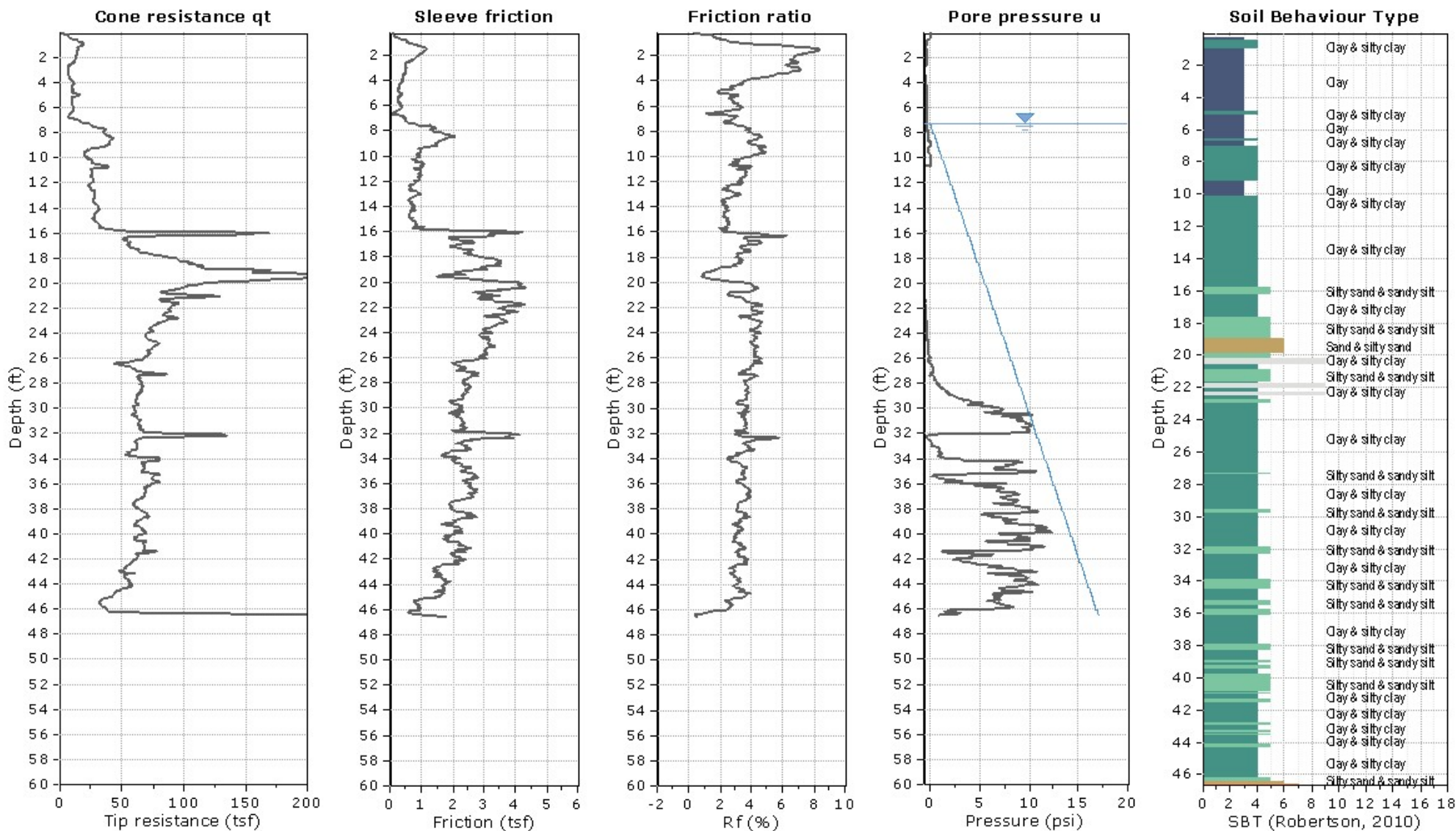


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-26**

Total depth: 46.59 ft, Date: 4/2/2025  
Coords: lat 39.574592° lon -88.118216°  
Cone Type: CPT  
Cone Operator: FUGRO





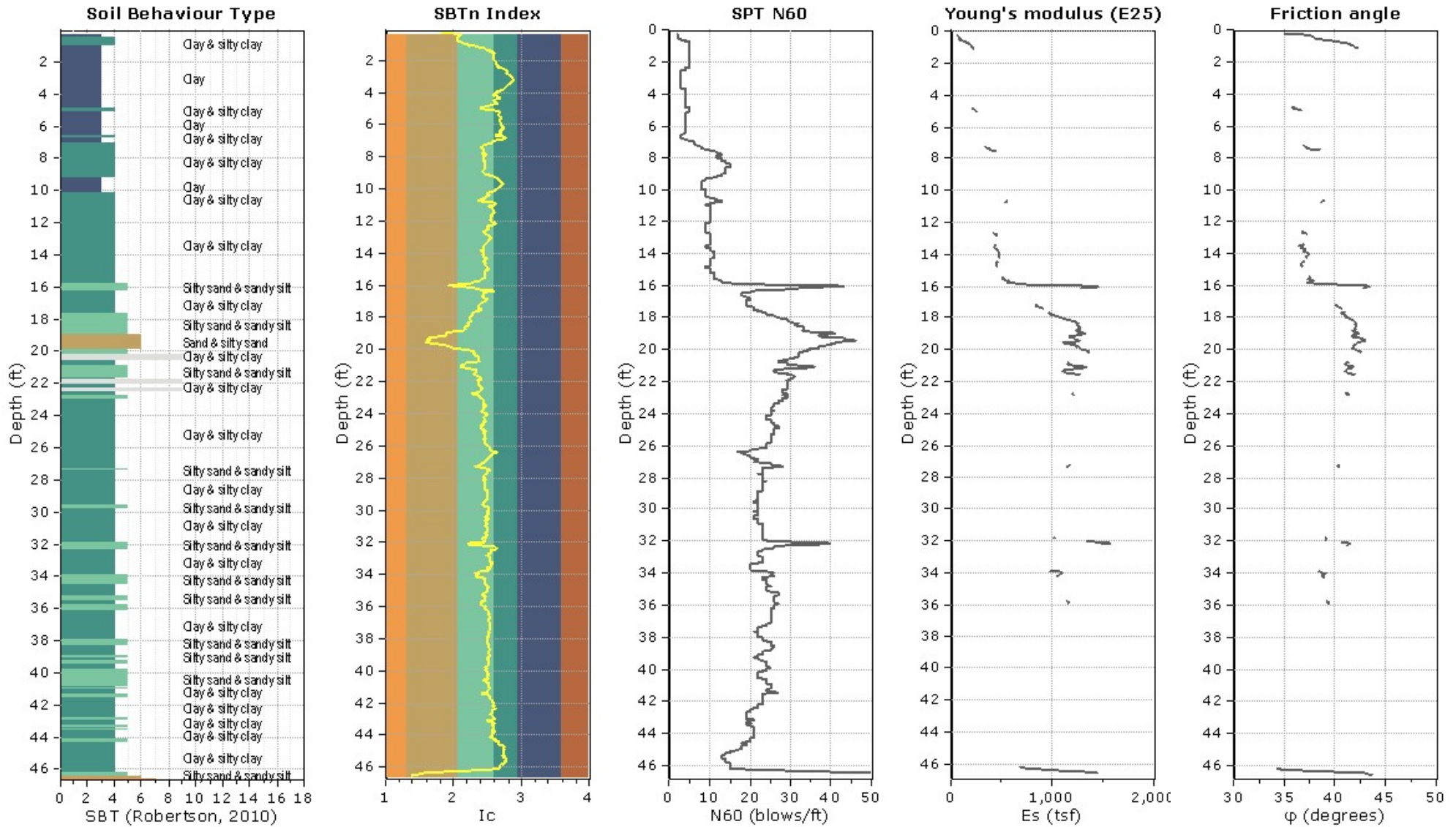


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rrccompanies.com

**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-26**

Total depth: 46.59 ft, Date: 4/2/2025  
Coords: lat 39.574592° lon -88.118216°  
Cone Type: CPT  
Cone Operator: FUGRO



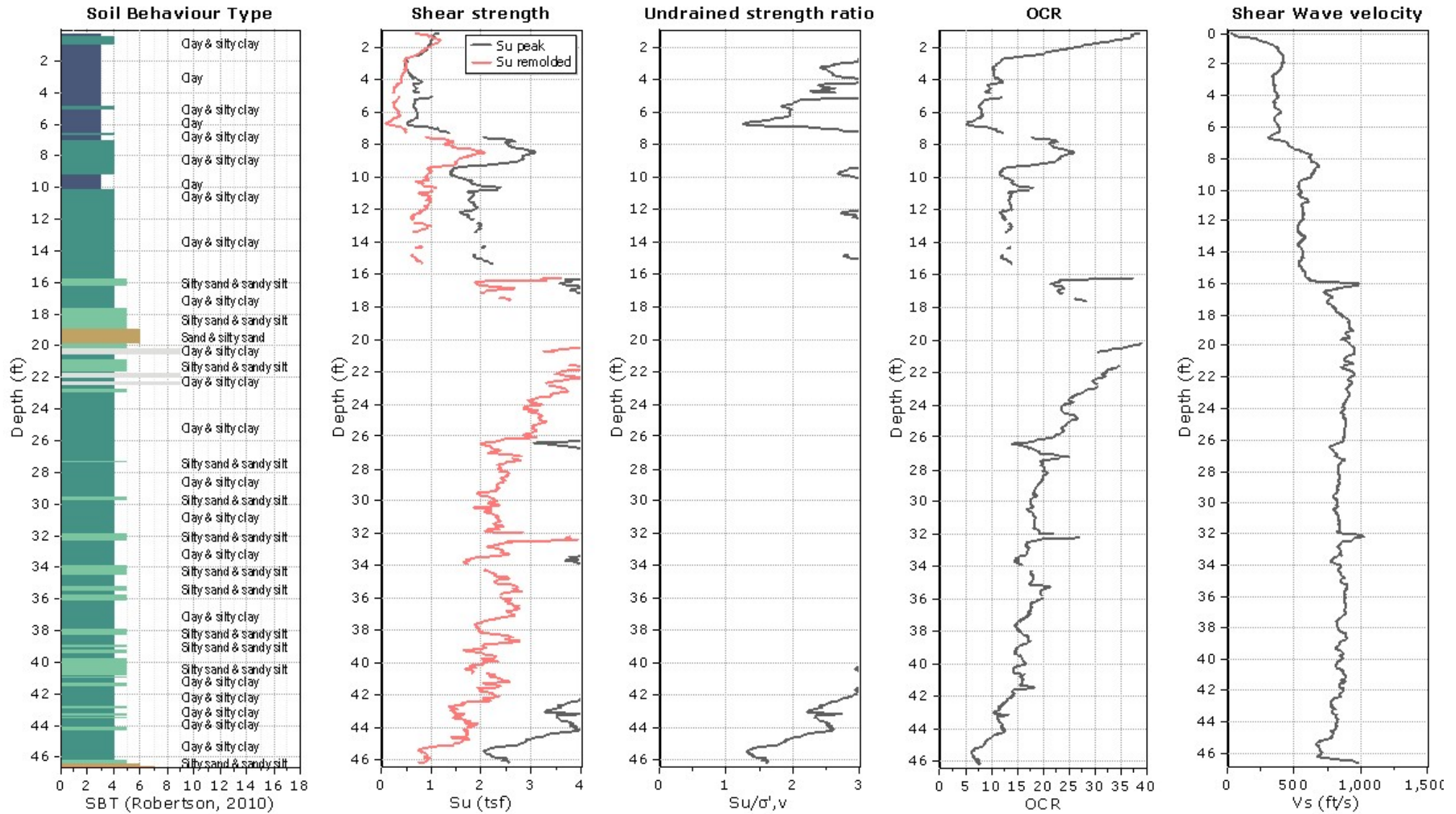


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-26**

Total depth: 46.59 ft, Date: 4/2/2025  
Coords: lat 39.574592° lon -88.118216°  
Cone Type: CPT  
Cone Operator: FUGRO



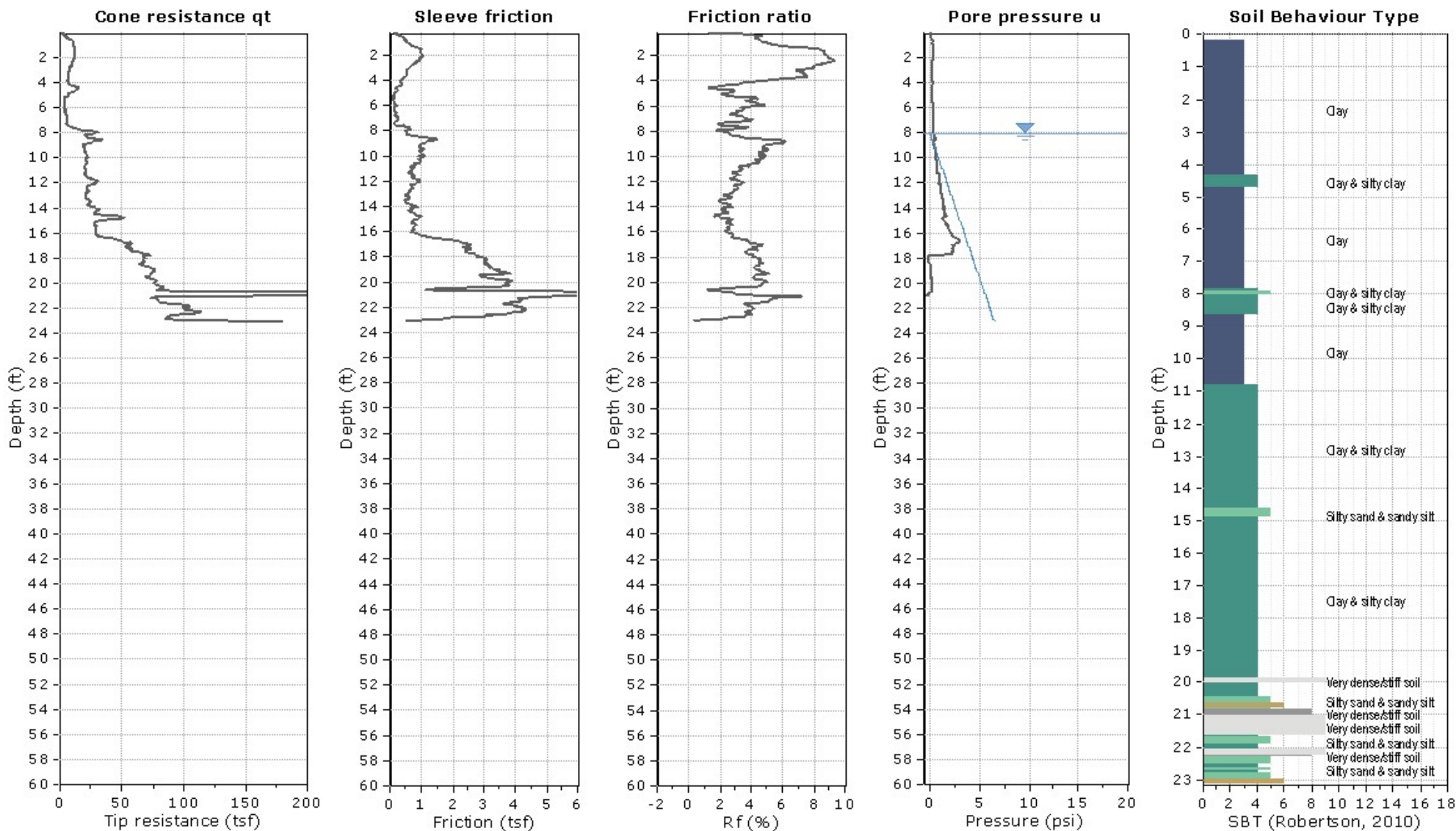


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-27**

Total depth: 23.06 ft, Date: 4/2/2025  
Coords: lat 39.58466° lon -88.117432°  
Cone Type: CPT  
Cone Operator: FUGRO

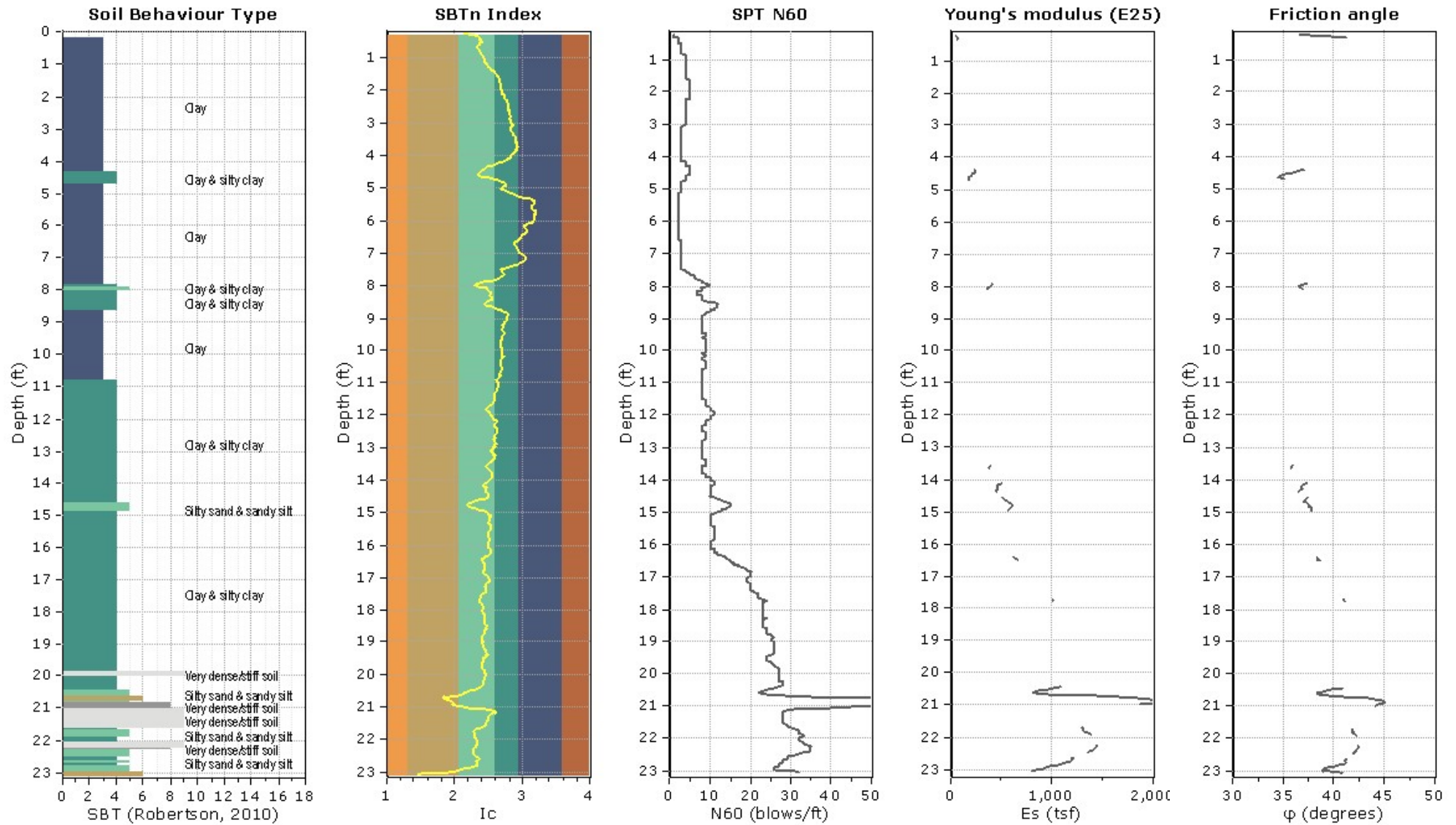






**Project:** Coles Wind

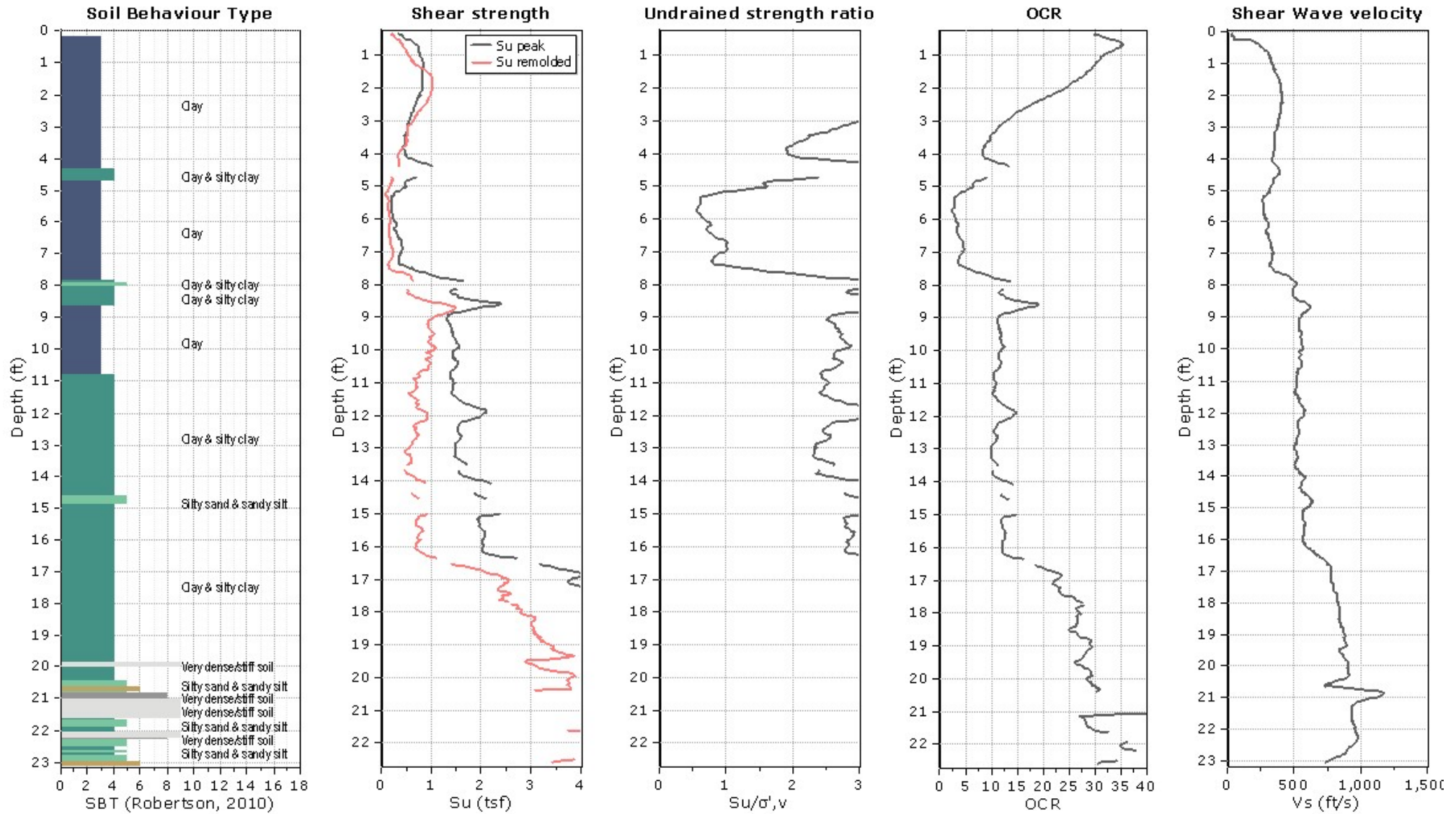
**Location:** Coles County, Illinois





**Project:** Coles Wind

**Location:** Coles County, Illinois



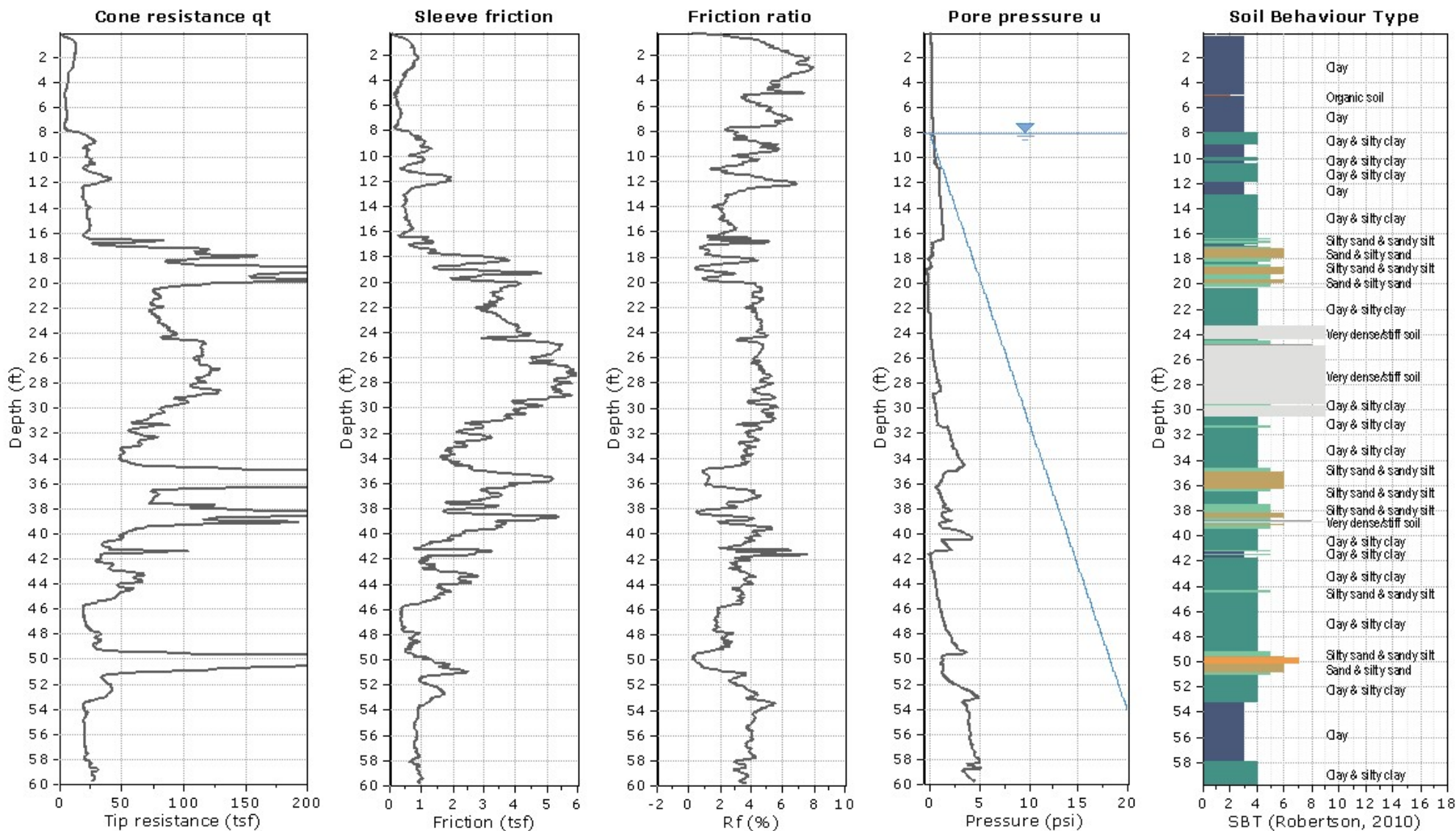


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-27A**

Total depth: 59.78 ft, Date: 4/2/2025  
Coords: lat 39.58466° lon -88.117432°  
Cone Type: CPT  
Cone Operator: FUGRO







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Round Rock, TX 78681  
rrccompanies.com

**CPT: GEO-27A**

Total depth: 59.78 ft, Date: 4/2/2025

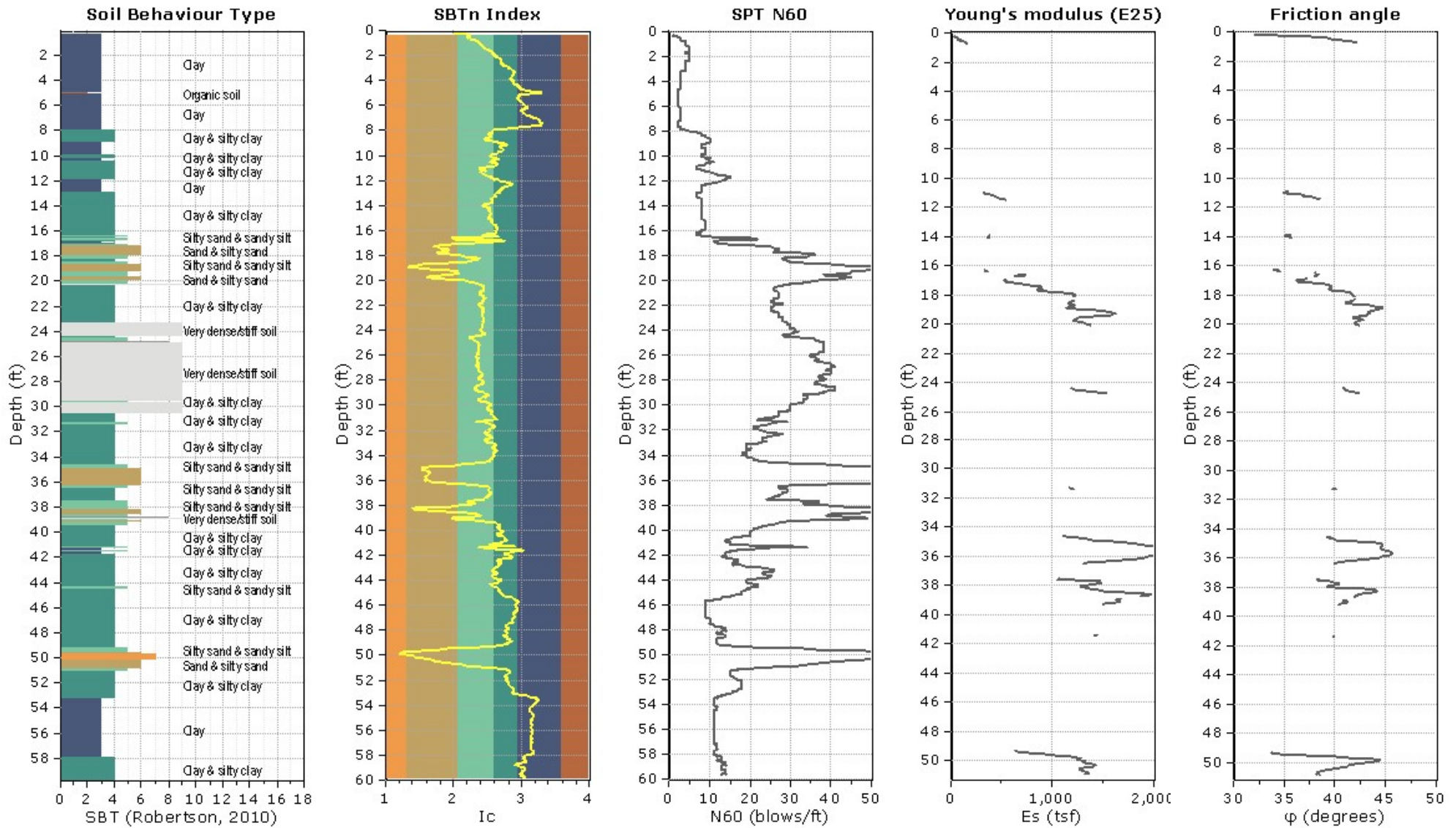
Coords: lat 39.58466° lon -88.117432°

Cone Type: CPT

Cone Operator: FUGRO

**Project: Coles Wind**

**Location: Coles County, Illinois**





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**Project:** Coles Wind  
**Location:** Coles County, Illinois

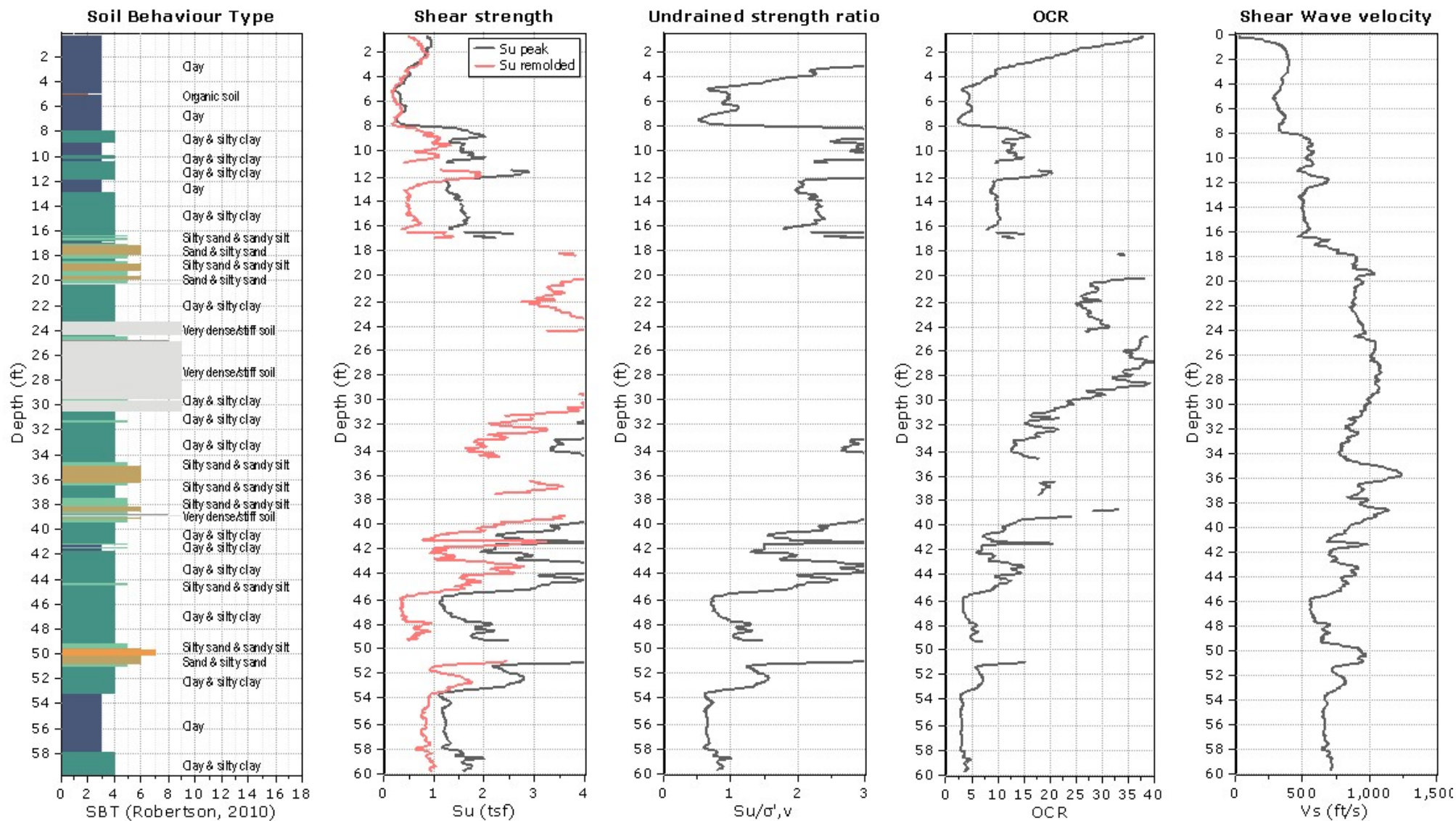
**CPT: GEO-27A**

Total depth: 59.78 ft, Date: 4/2/2025

Coords: lat 39.58466° lon -88.117432°

Cone Type: CPT

Cone Operator: FUGRO





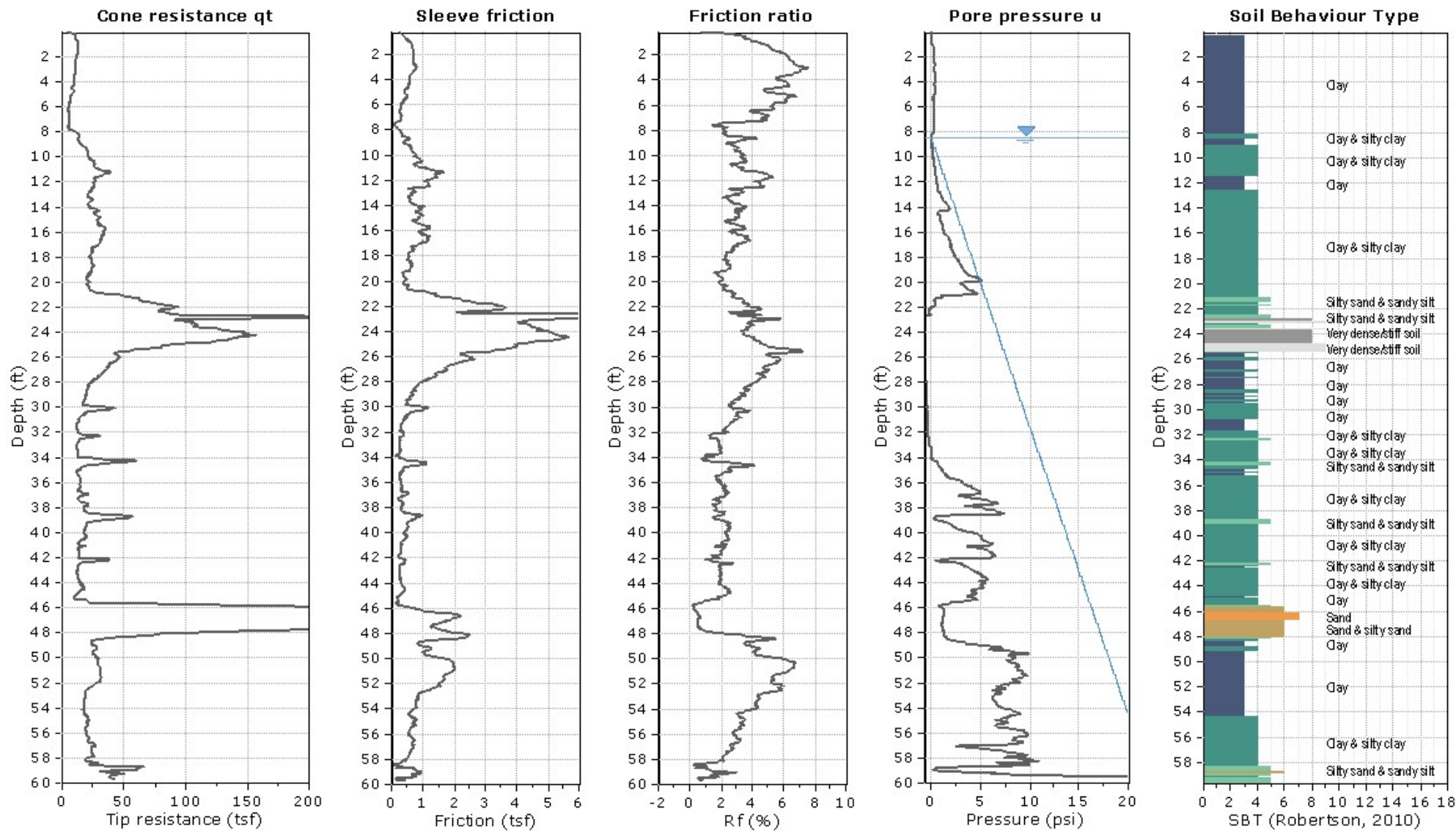


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-28**

Total depth: 59.65 ft, Date: 4/16/2025  
Coords: lat 39.585767° lon -88.174319°  
Cone Type: CPT  
Cone Operator: FUGRO





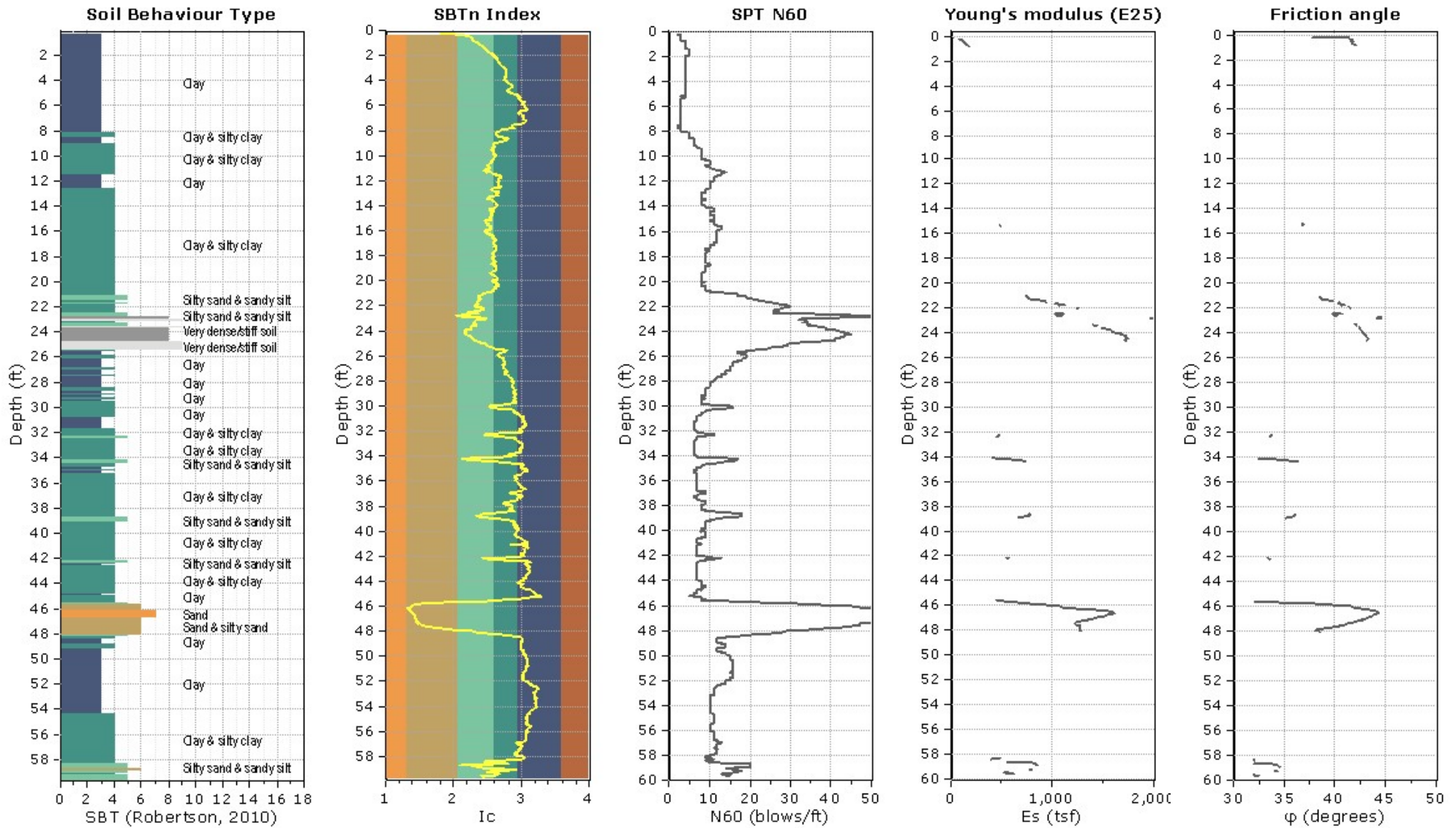


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-28**

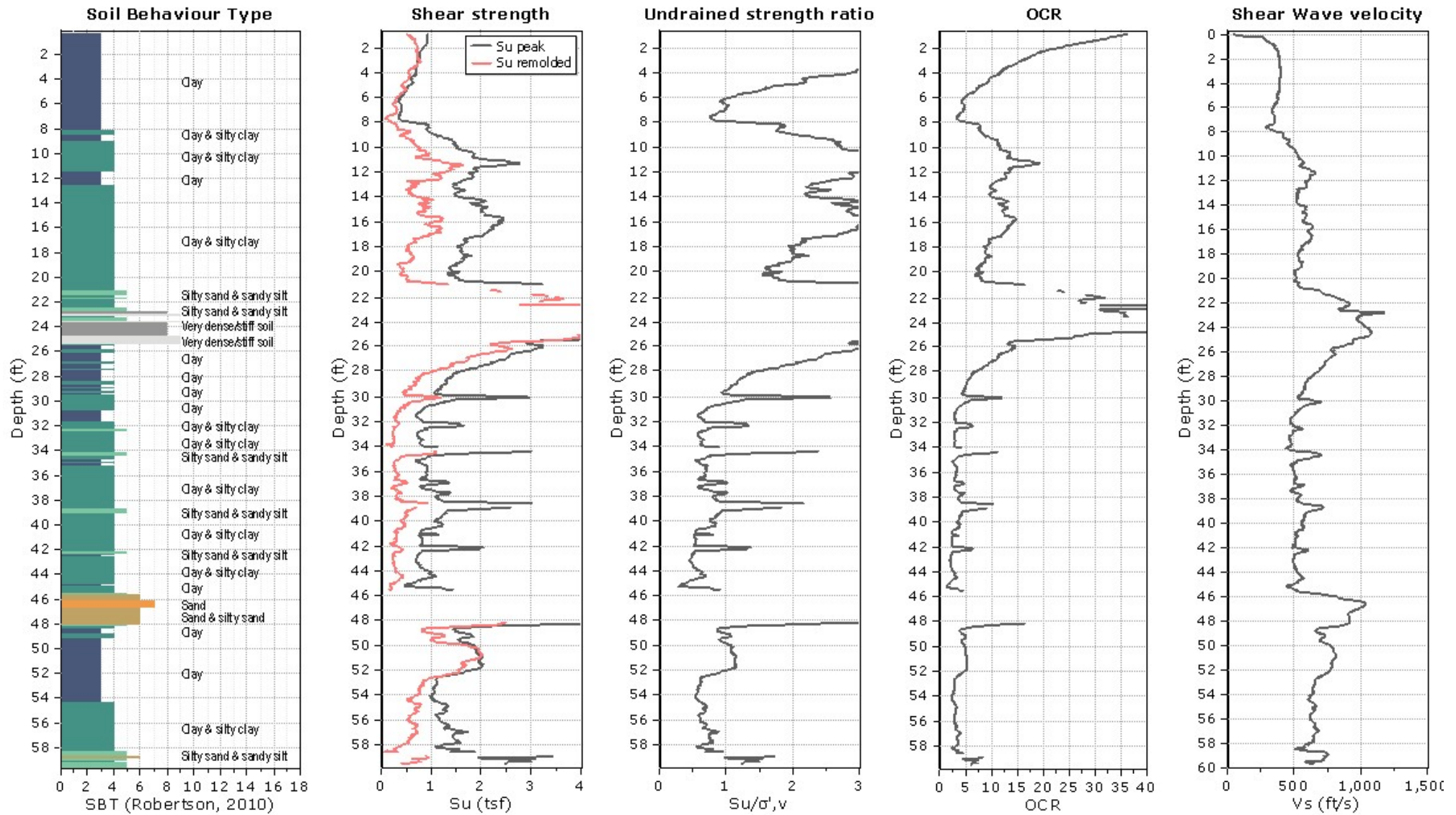
Total depth: 59.65 ft, Date: 4/16/2025  
Coords: lat 39.585767° lon -88.174319°  
Cone Type: CPT  
Cone Operator: FUGRO





**Project:** Coles Wind

**Location:** Coles County, Illinois

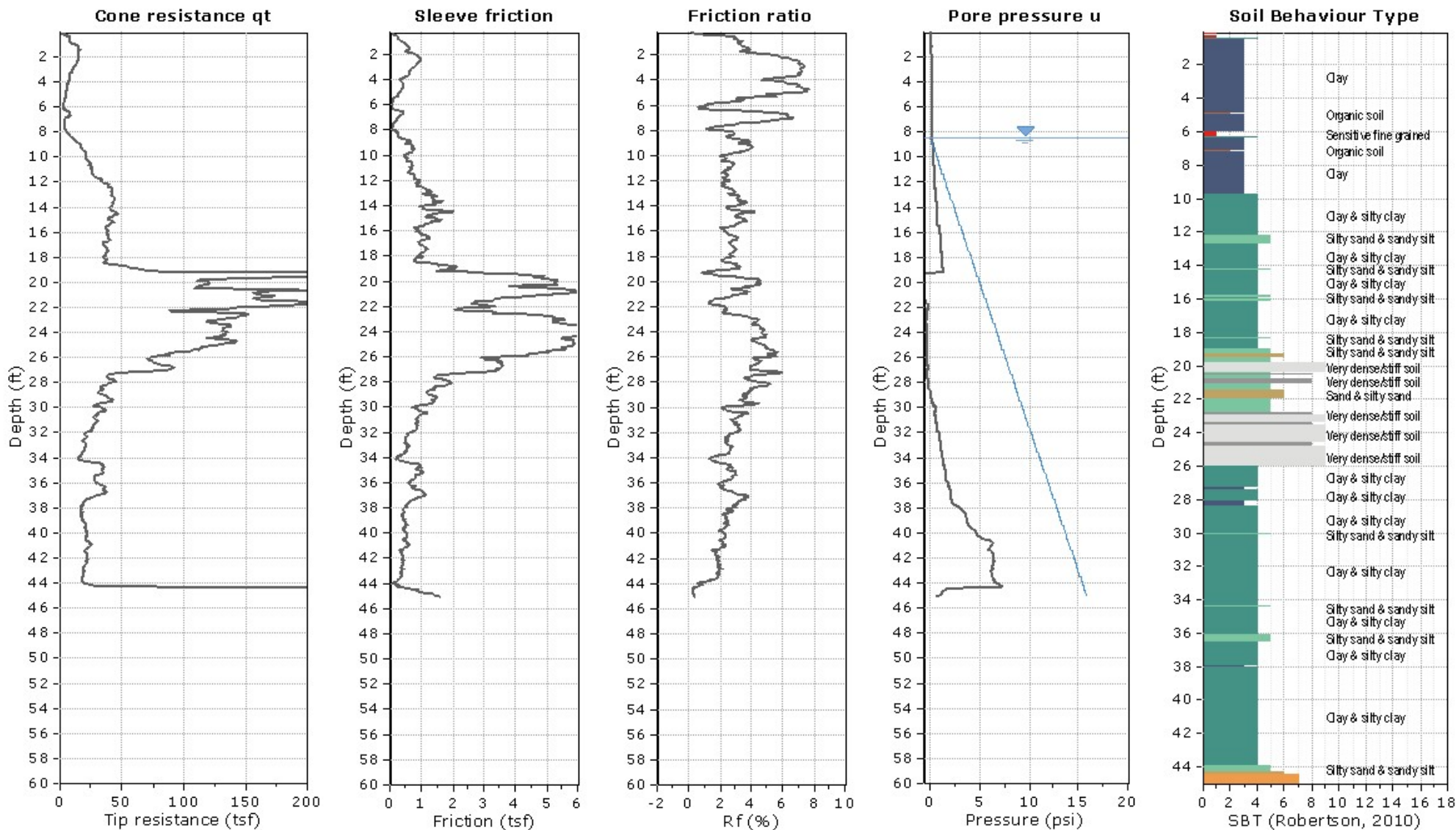




**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-29**

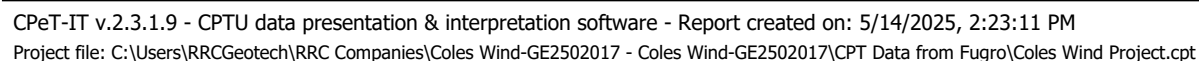
Total depth: 45.05 ft, Date: 4/16/2025  
Coords: lat 39.589955° lon -88.172555°  
Cone Type: CPT  
Cone Operator: FUGRO





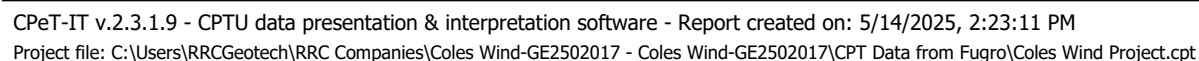


**CPT: GEO-29**  
Total depth: 45.05 ft, Date: 4/16/2025  
Coords: lat 39.589955° lon -88.172555°  
Cone Type: CPT  
Cone Operator: FUGRO





**CPT: GEO-29**  
Total depth: 45.05 ft, Date: 4/16/2025  
Coords: lat 39.589955° lon -88.172555°  
Cone Type: CPT  
Cone Operator: FUGRO



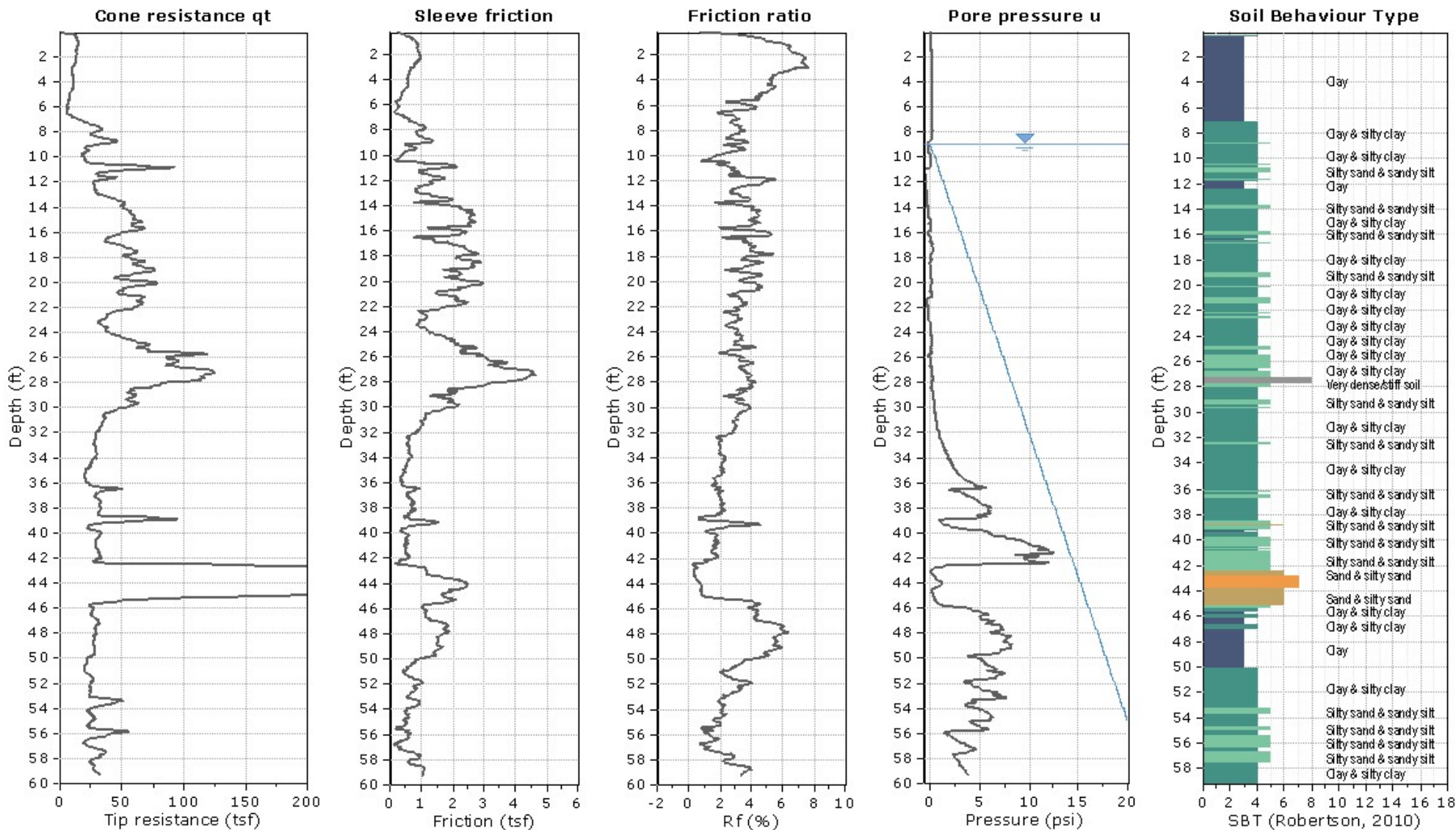


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rrccompanies.com

**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-30**

Total depth: 59.25 ft, Date: 4/16/2025  
Coords: lat 39.591131° lon -88.167294°  
Cone Type: CPT  
Cone Operator: FUGRO





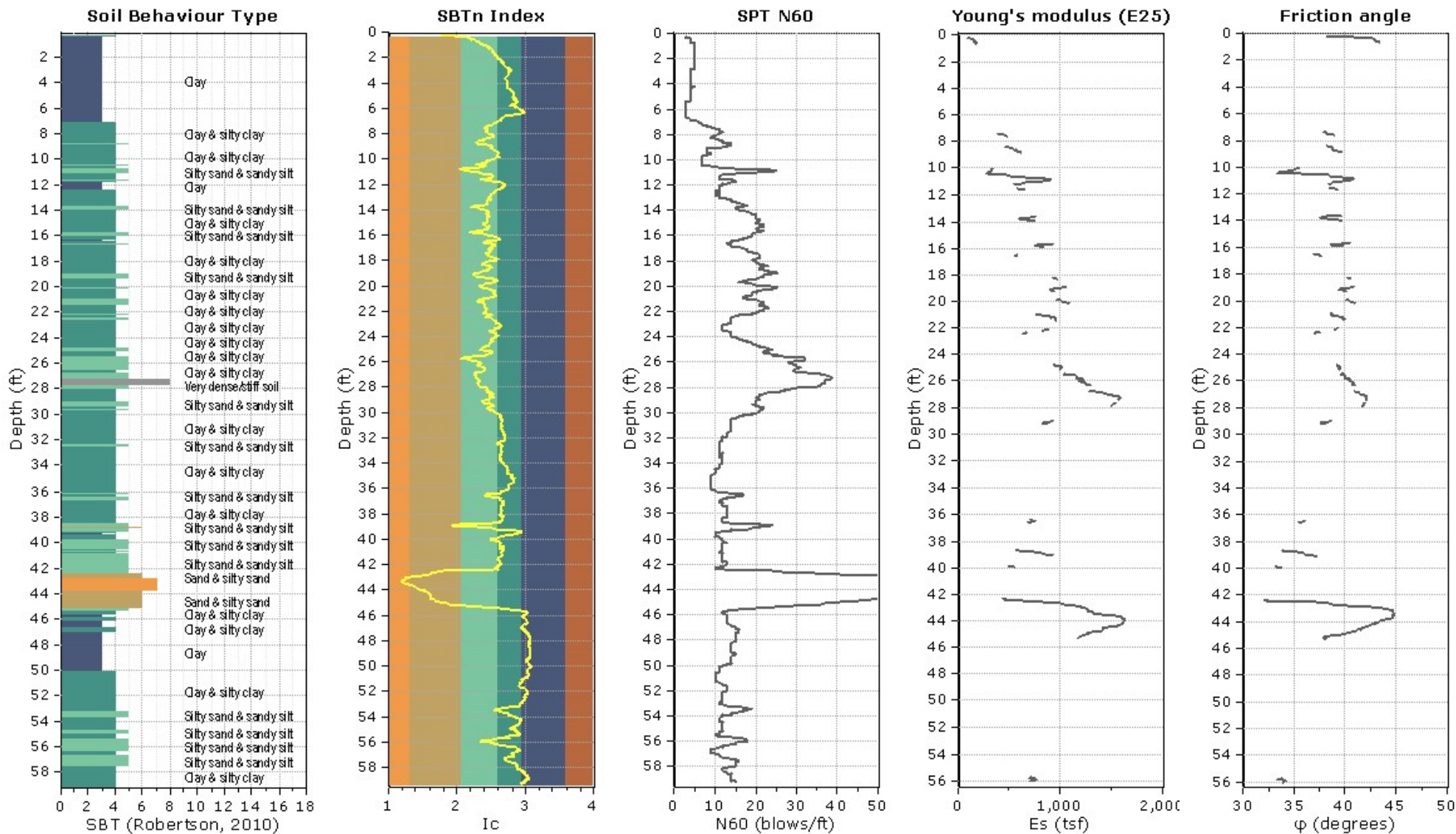


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rrccompanies.com

**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-30**

Total depth: 59.25 ft, Date: 4/16/2025  
Coords: lat 39.591131° lon -88.167294°  
Cone Type: CPT  
Cone Operator: FUGRO





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rrccompanies.com

**CPT: GEO-30**

Total depth: 59.25 ft, Date: 4/16/2025

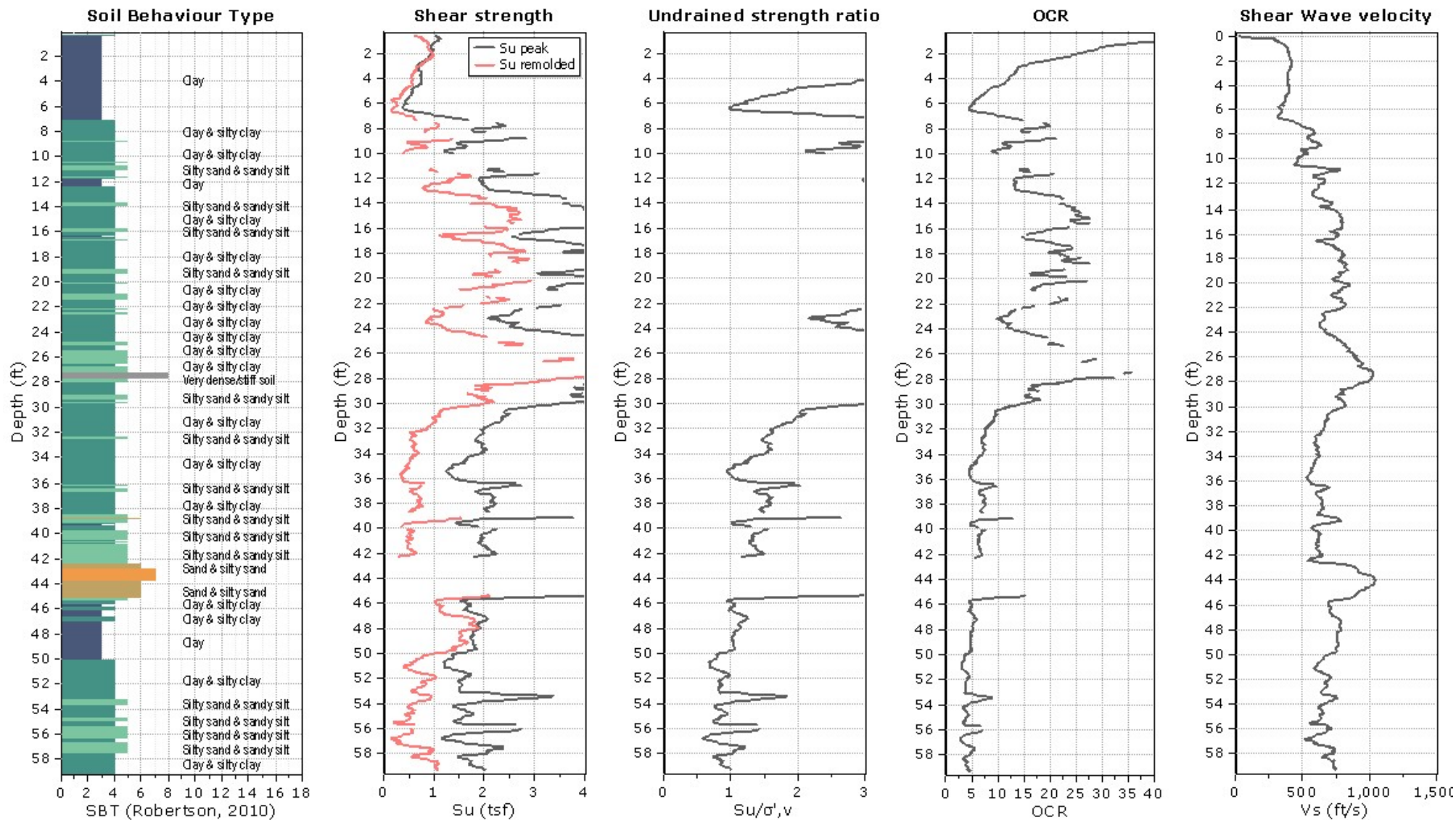
Coords: lat 39.591131° lon -88.167294°

Cone Type: CPT

Cone Operator: FUGRO

**Project: Coles Wind**

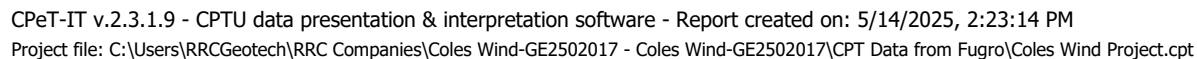
**Location: Coles County, Illinois**







**CPT: GEO-31**  
Total depth: 59.78 ft, Date: 4/2/2025  
Coords: lat 39.590992° lon -88.151334°  
Cone Type: CPT  
Cone Operator: FUGRO





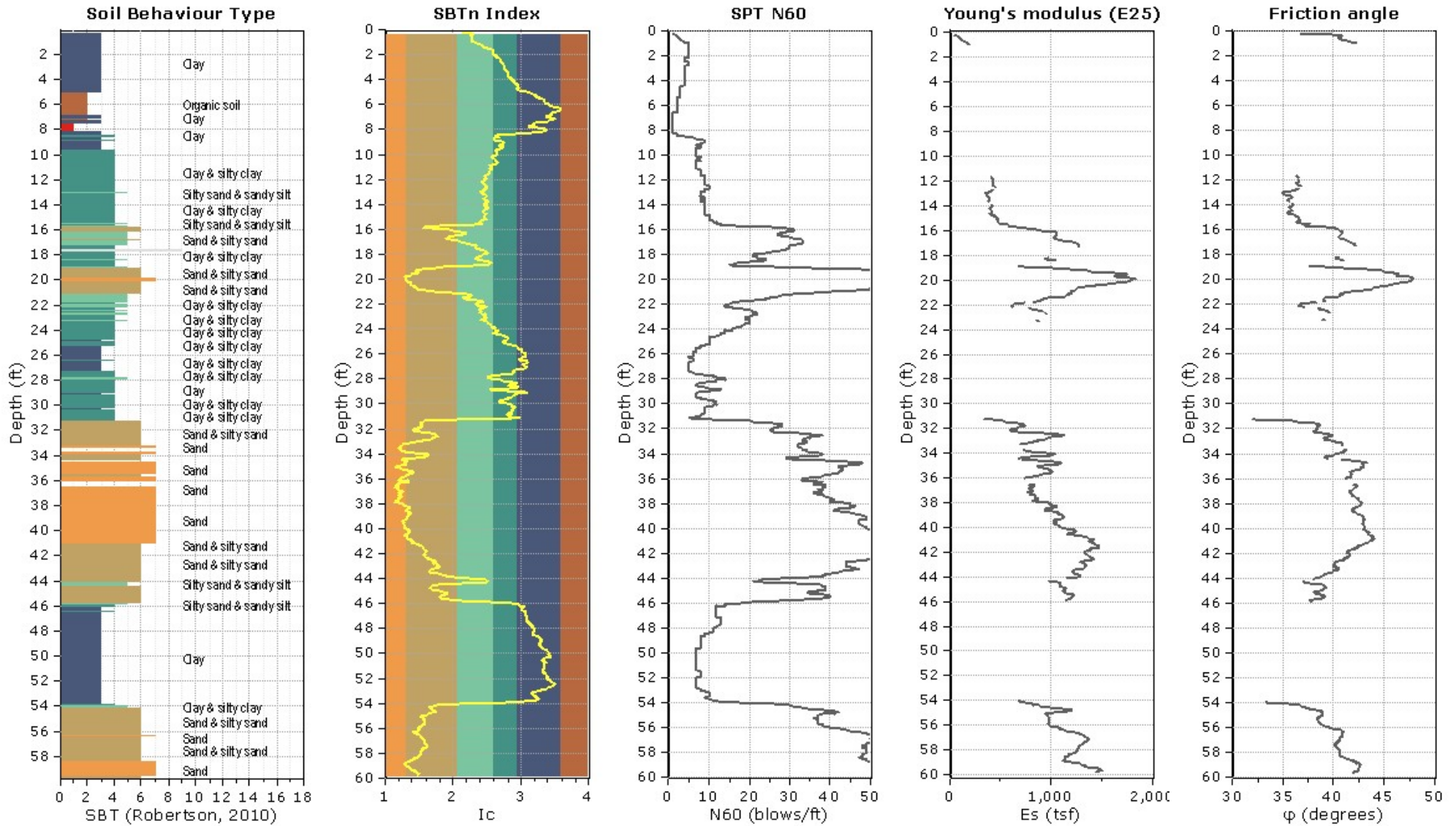


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-31**

Total depth: 59.78 ft, Date: 4/2/2025  
Coords: lat 39.590992° lon -88.151334°  
Cone Type: CPT  
Cone Operator: FUGRO





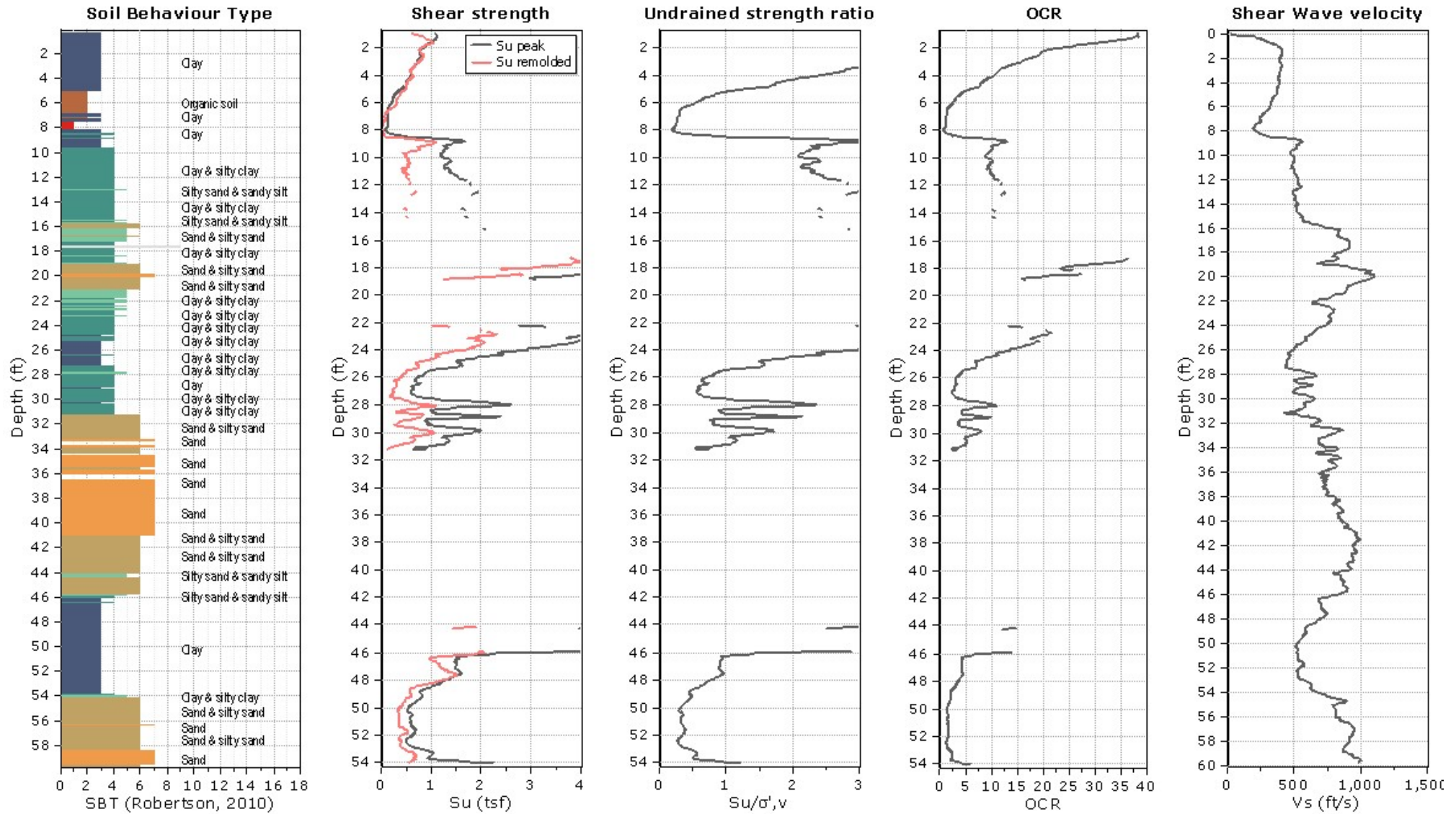
**RRC Power & Energy, LLC**  
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Round Rock, TX 78681  
rrccompanies.com

**CPT: GEO-31**

Total depth: 59.78 ft, Date: 4/2/2025  
Coords: lat 39.590992° lon -88.151334°  
Cone Type: CPT  
Cone Operator: FUGRO

**Project: Coles Wind**

**Location: Coles County, Illinois**

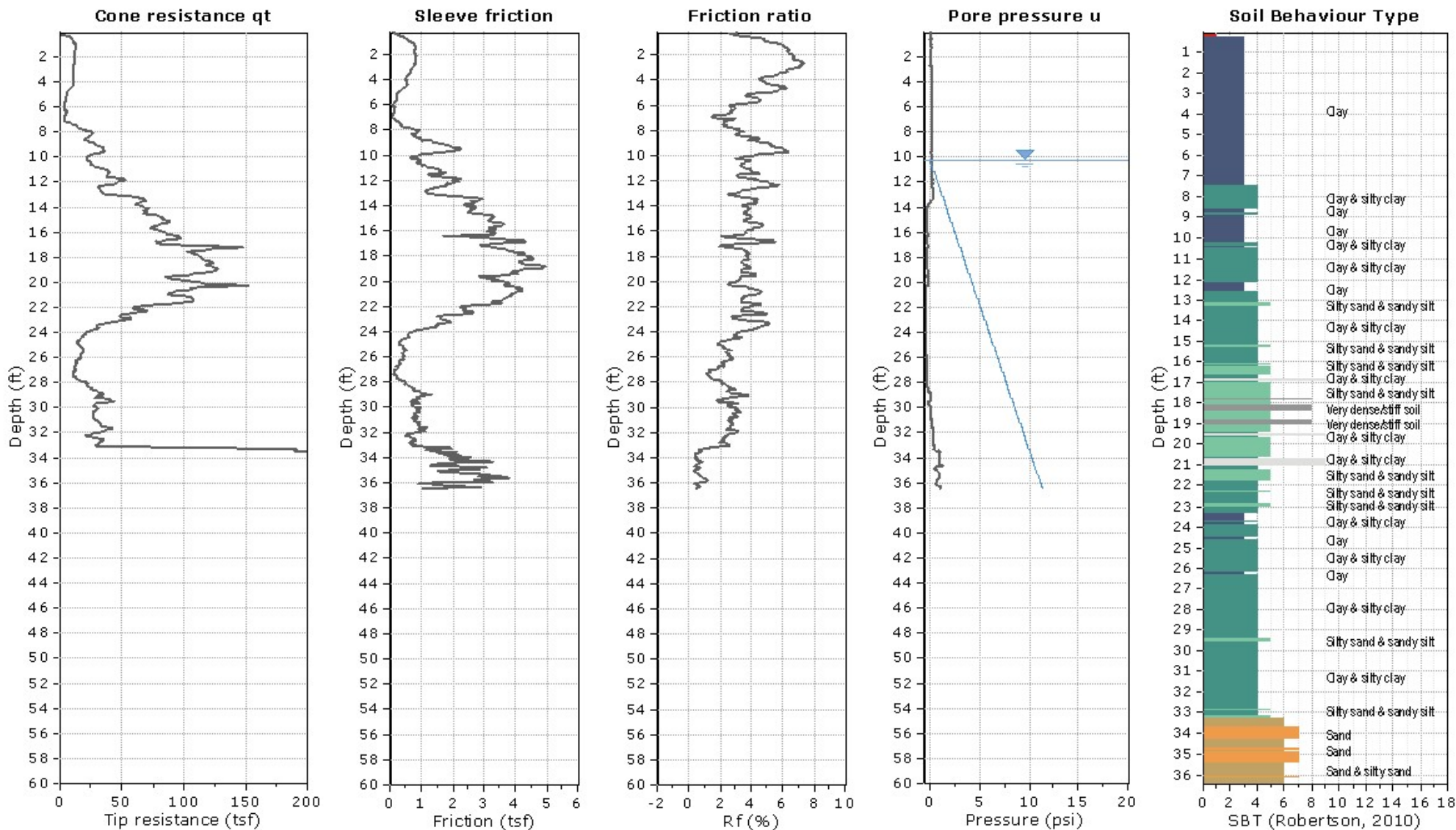




**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-32**

Total depth: 36.45 ft, Date: 4/2/2025  
Coords: lat 39.591143° lon -88.120681°  
Cone Type: CPT  
Cone Operator: FUGRO







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**CPT: GEO-32**

Total depth: 36.45 ft, Date: 4/2/2025

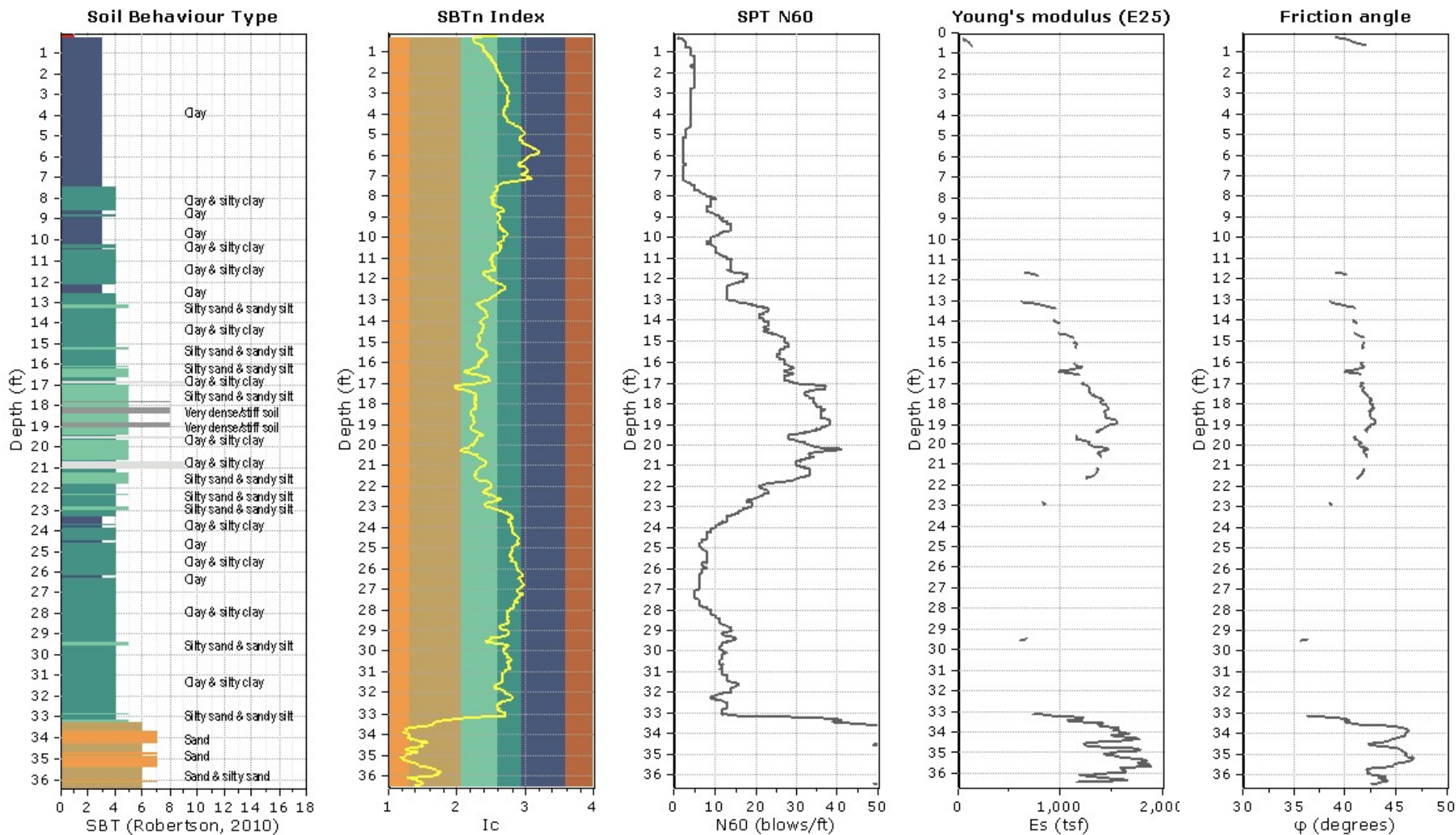
Coords: lat 39.591143° lon -88.120681°

Cone Type: CPT

Cone Operator: FUGRO

**Project: Coles Wind**

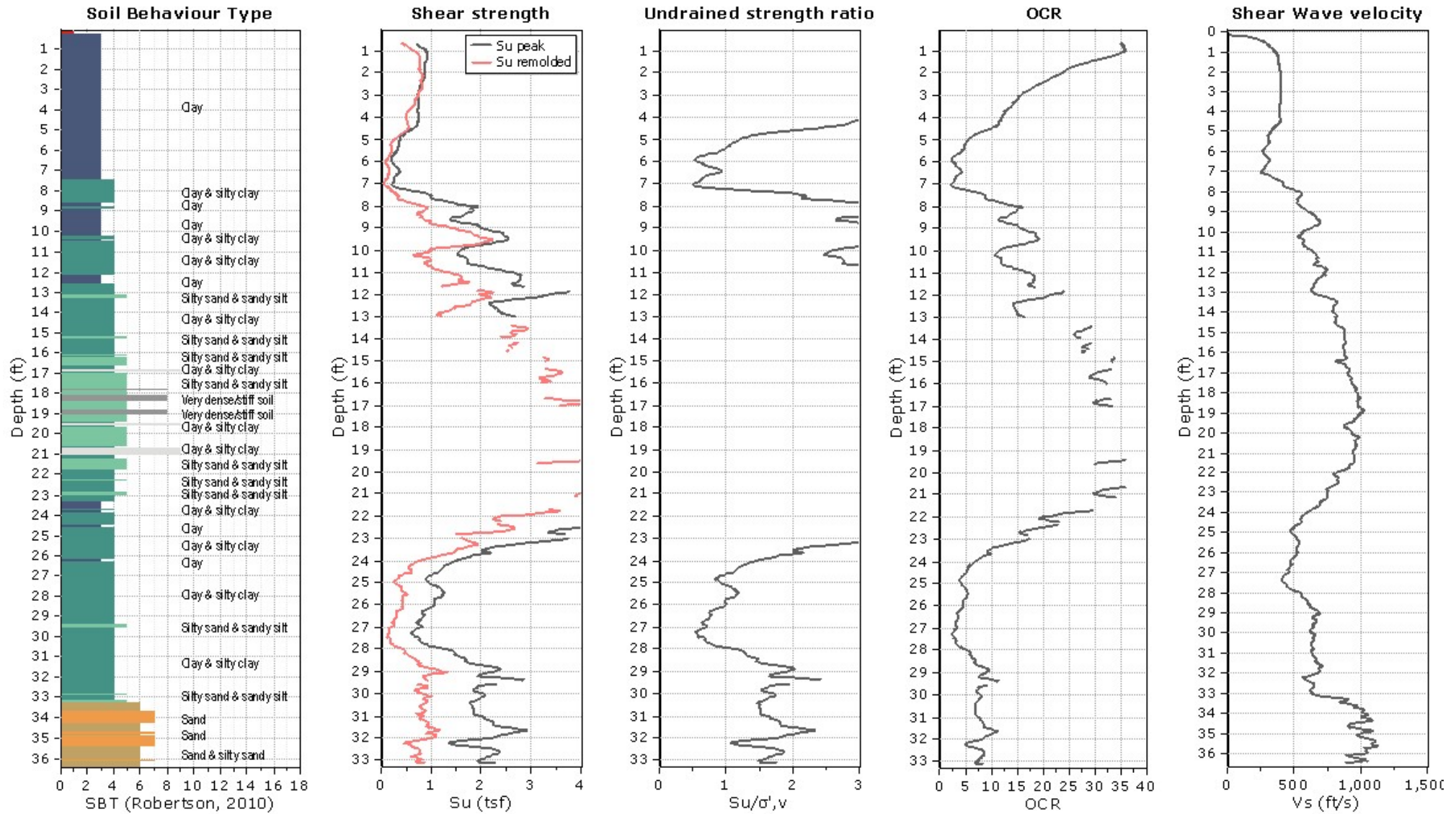
**Location: Coles County, Illinois**





**Project:** Coles Wind

**Location:** Coles County, Illinois

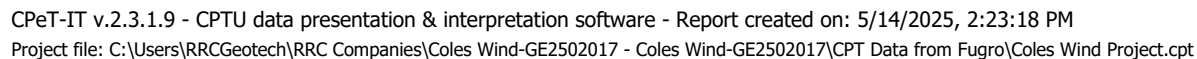






**CPT: GEO-33**

Total depth: 59.78 ft, Date: 4/2/2025  
Coords: lat 39.597987° lon -88.144878°  
Cone Type: CPT  
Cone Operator: FUGRO

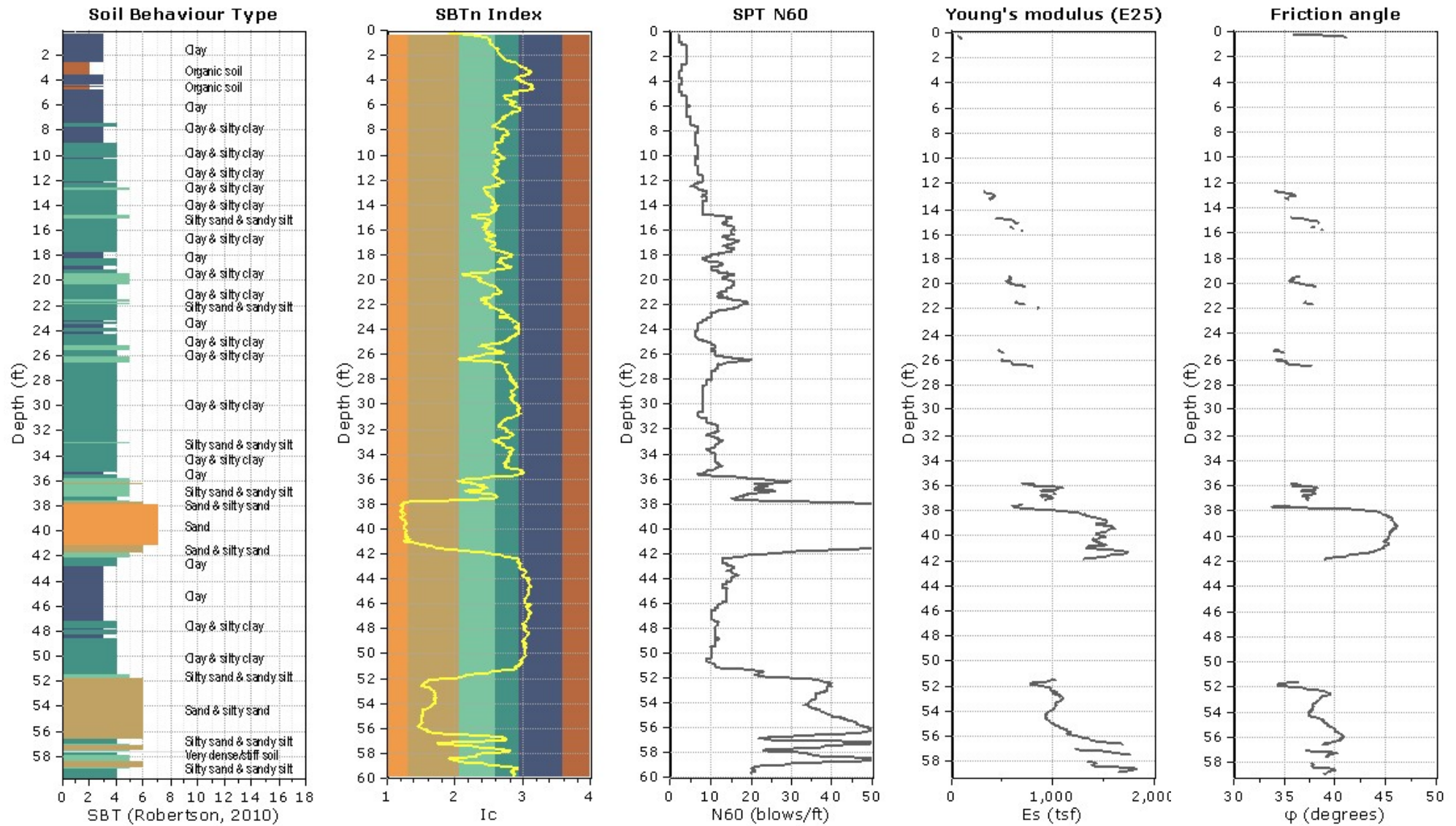






**Project:** Coles Wind

**Location:** Coles County, Illinois



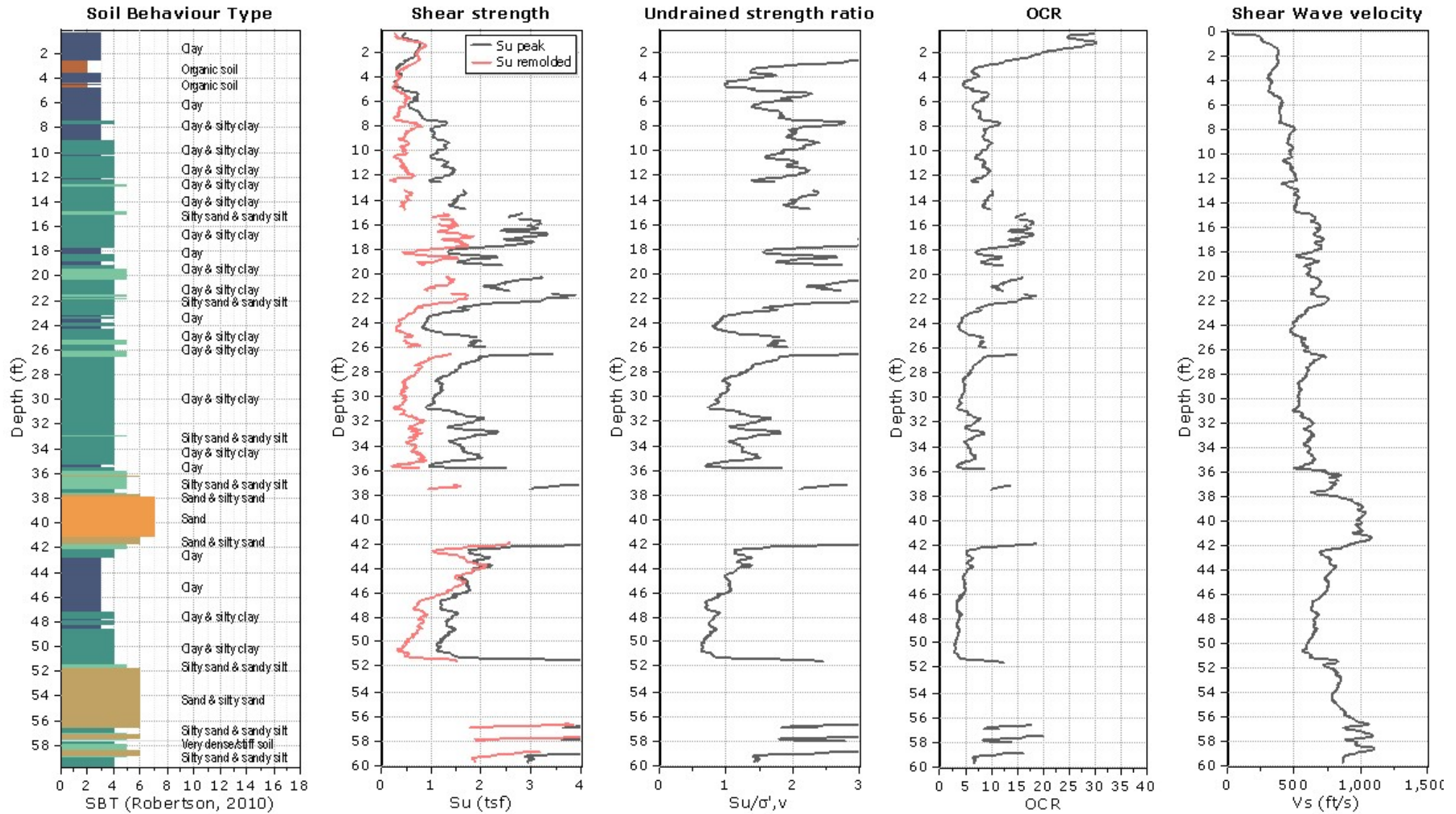


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**CPT: GEO-33**

Total depth: 59.78 ft, Date: 4/2/2025  
Coords: lat 39.597987° lon -88.144878°  
Cone Type: CPT  
Cone Operator: FUGRO

**Project: Coles Wind**  
**Location: Coles County, Illinois**





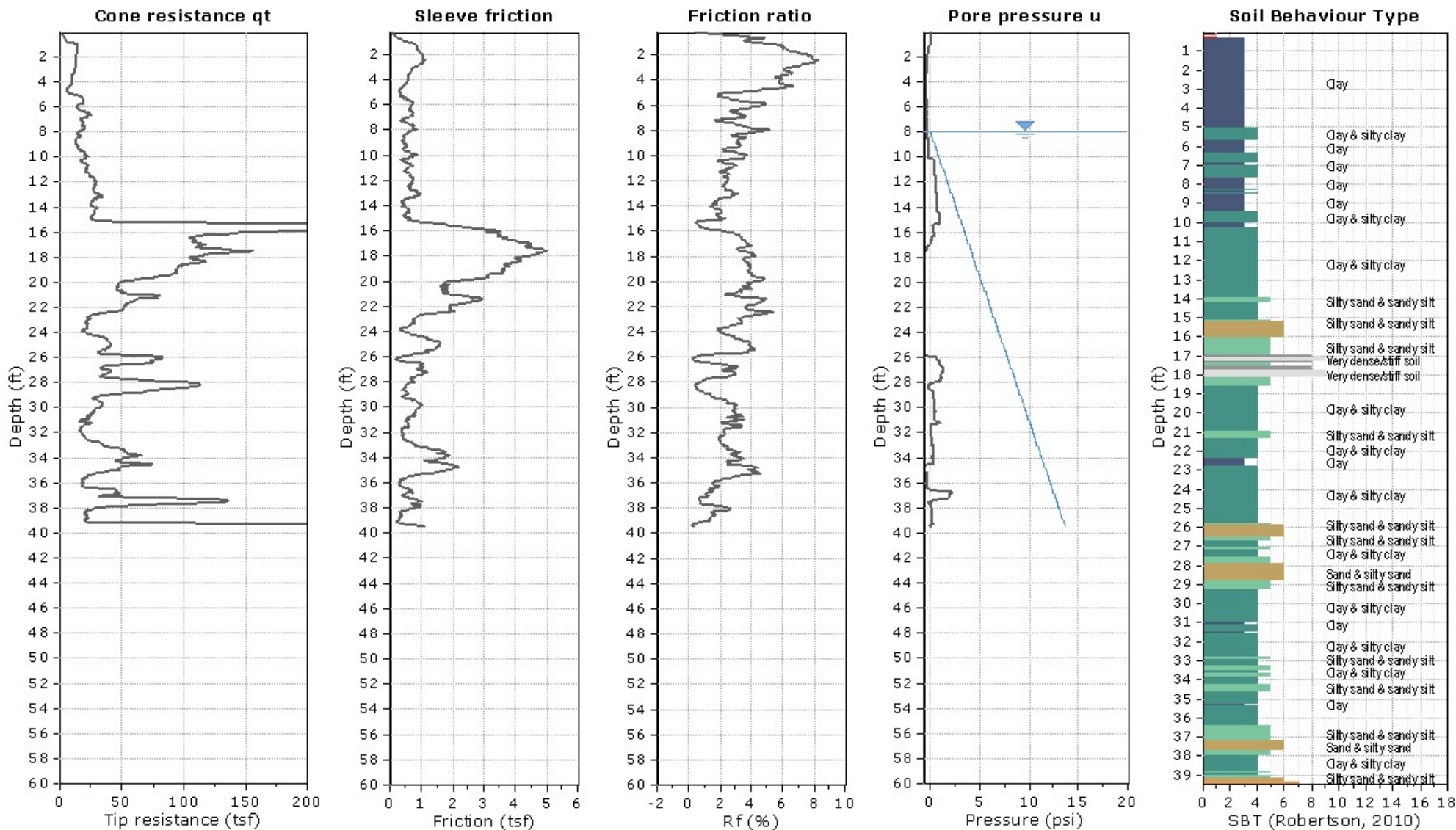


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-34**

Total depth: 39.50 ft, Date: 4/17/2025  
Coords: lat 39.603394° lon -88.159948°  
Cone Type: CPT  
Cone Operator: FUGRO







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**CPT: GEO-34**

Total depth: 39.50 ft, Date: 4/17/2025

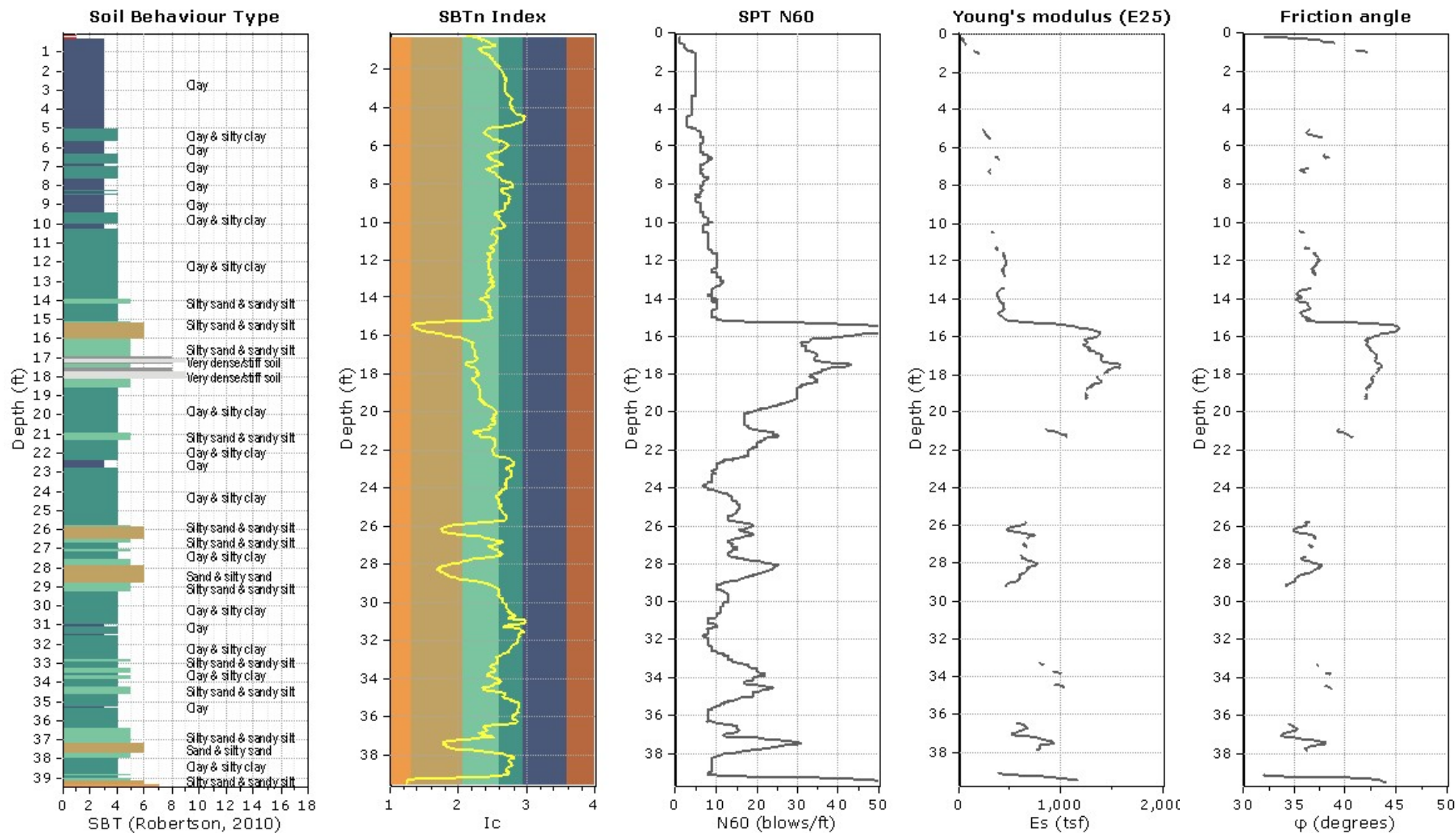
Coords: lat 39.603394° lon -88.159948°

Cone Type: CPT

Cone Operator: FUGRO

**Project: Coles Wind**

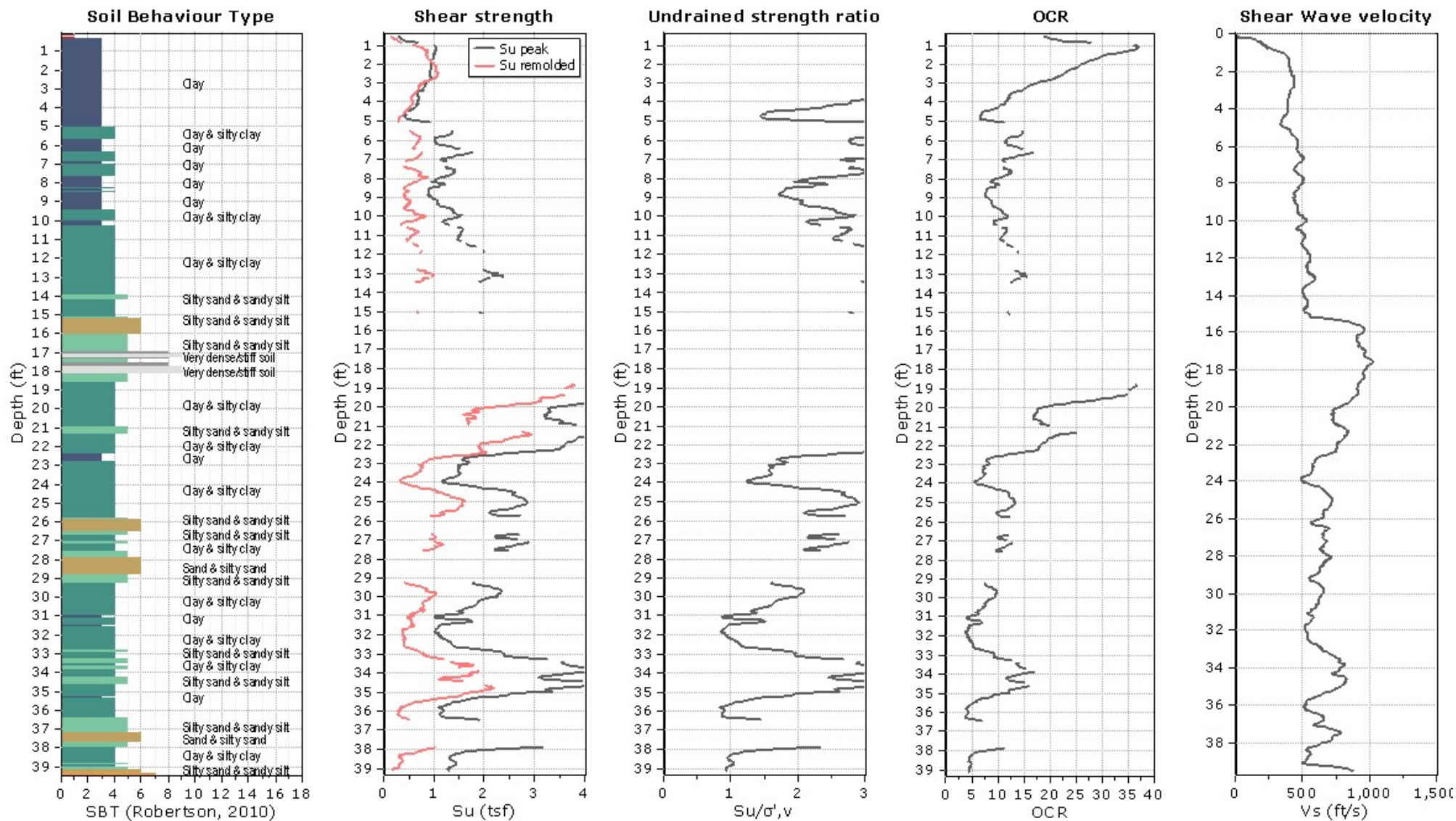
**Location: Coles County, Illinois**





**Project: Coles Wind**

**Location: Coles County, Illinois**





**Project:** Coles Wind  
**Location:** Coles County, Illinois

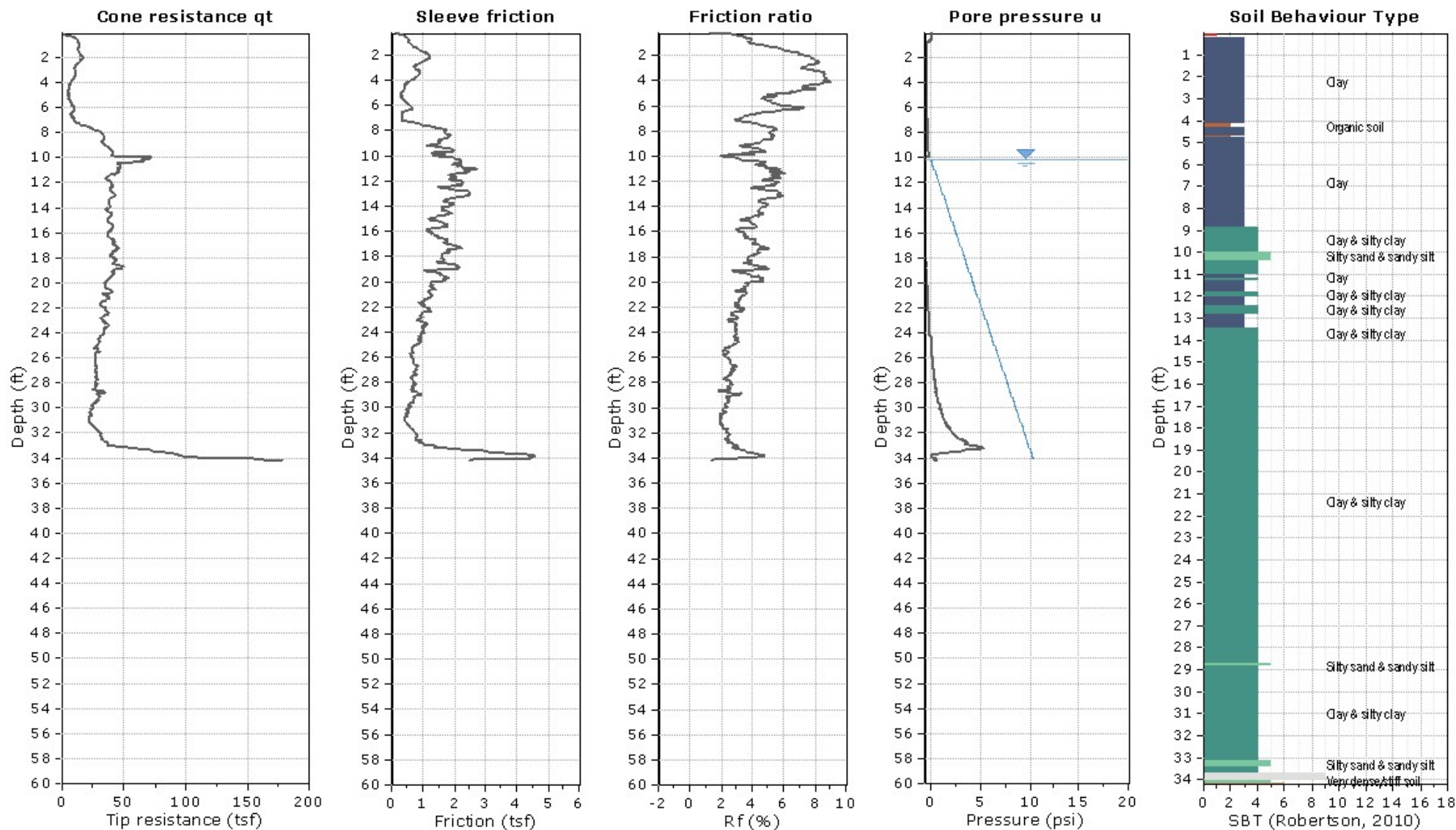
**CPT: GEO-35**

Total depth: 34.22 ft, Date: 4/18/2025

Coords: lat 39.61908° lon -88.162749°

Cone Type: CPT

Cone Operator: FUGRO







**Project:** Coles Wind  
**Location:** Coles County, Illinois

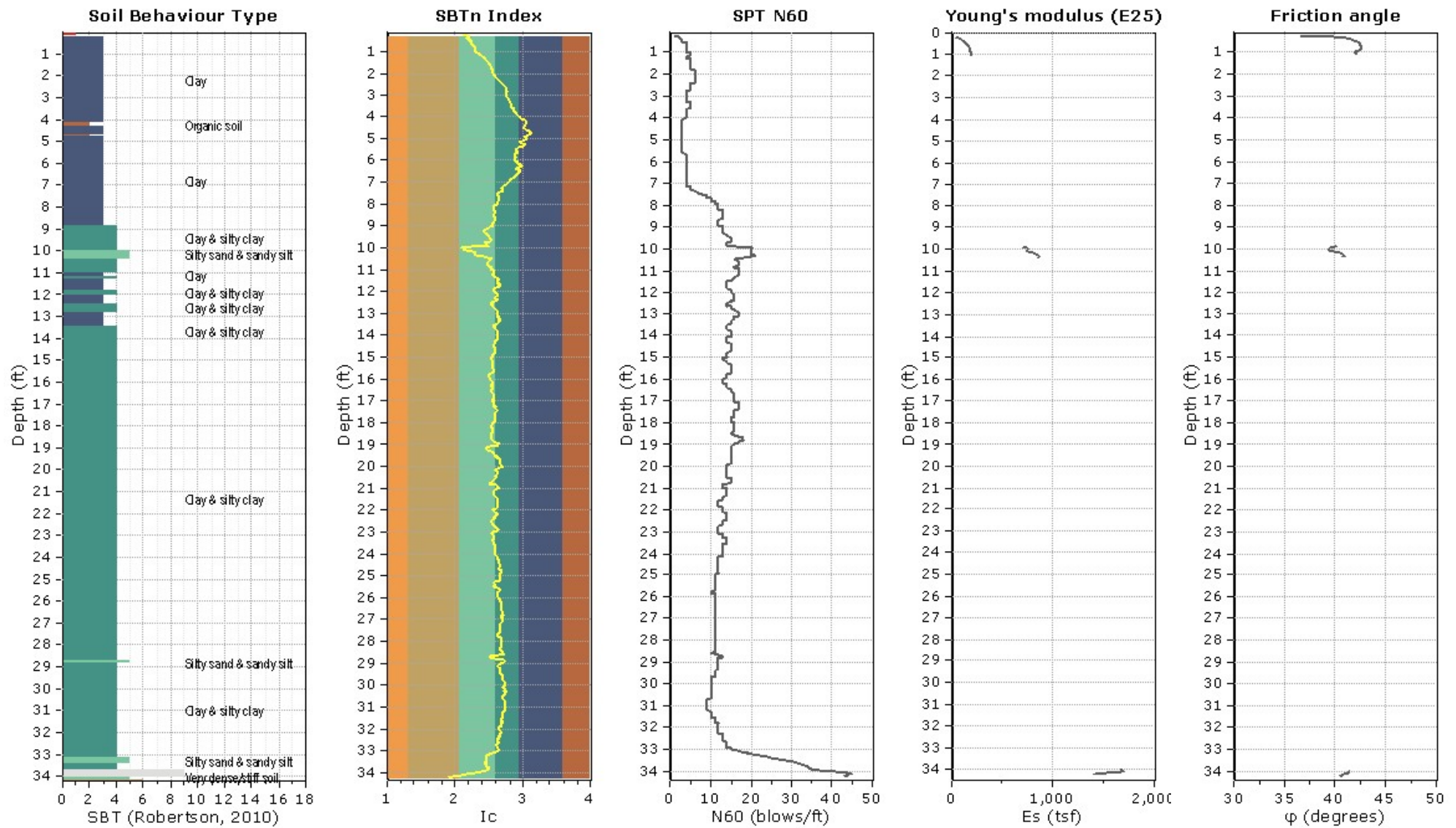
**CPT: GEO-35**

Total depth: 34.22 ft, Date: 4/18/2025

Coords: lat 39.61908° lon -88.162749°

Cone Type: CPT

Cone Operator: FUGRO





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**Project:** Coles Wind  
**Location:** Coles County, Illinois

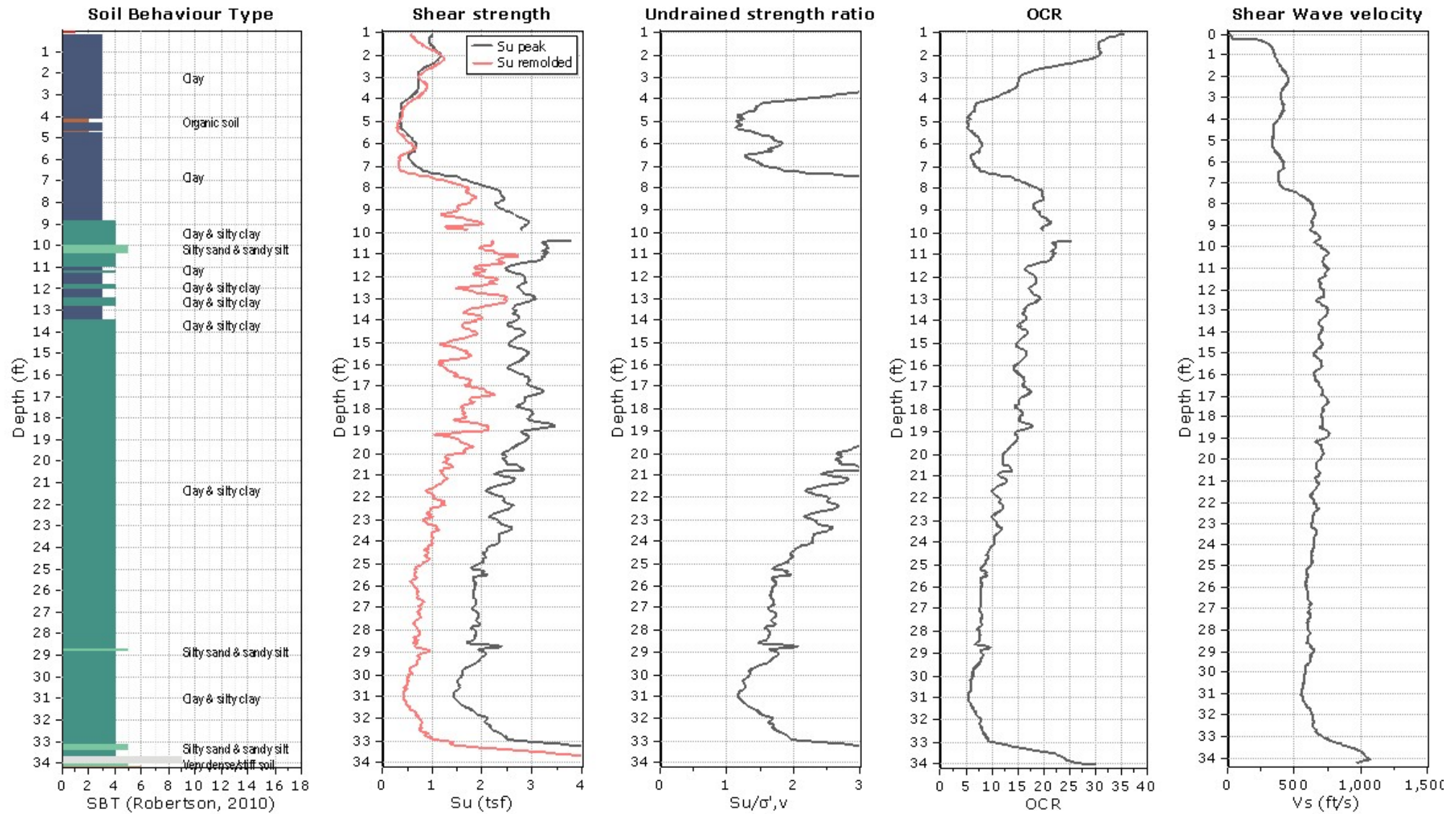
**CPT: GEO-35**

Total depth: 34.22 ft, Date: 4/18/2025

Coords: lat 39.61908° lon -88.162749°

Cone Type: CPT

Cone Operator: FUGRO



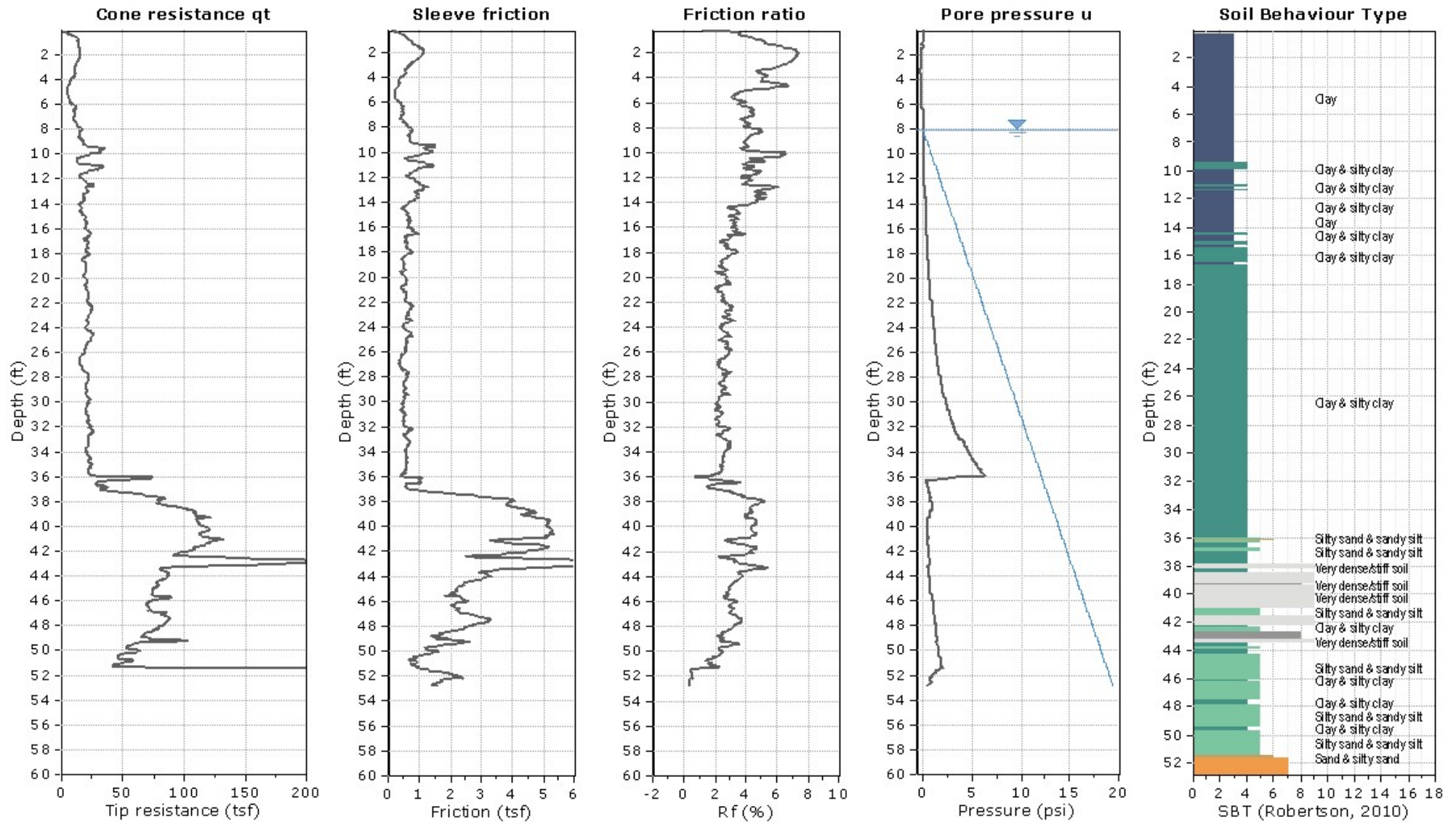


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-36**

Total depth: 52.82 ft, Date: 4/17/2025  
Coords: lat 39.613774° lon -88.153886°  
Cone Type: CPT  
Cone Operator: FUGRO

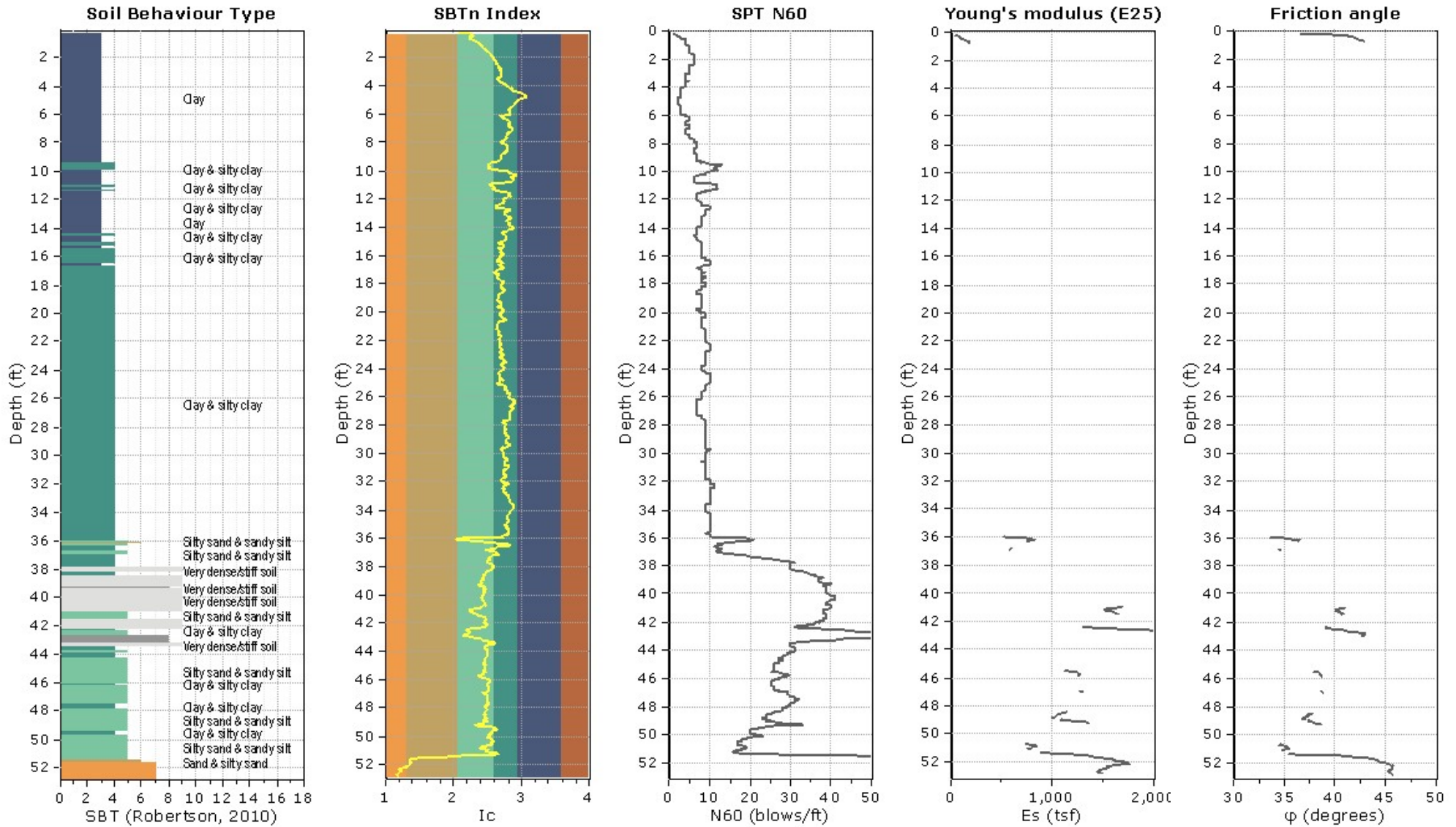






**Project:** Coles Wind

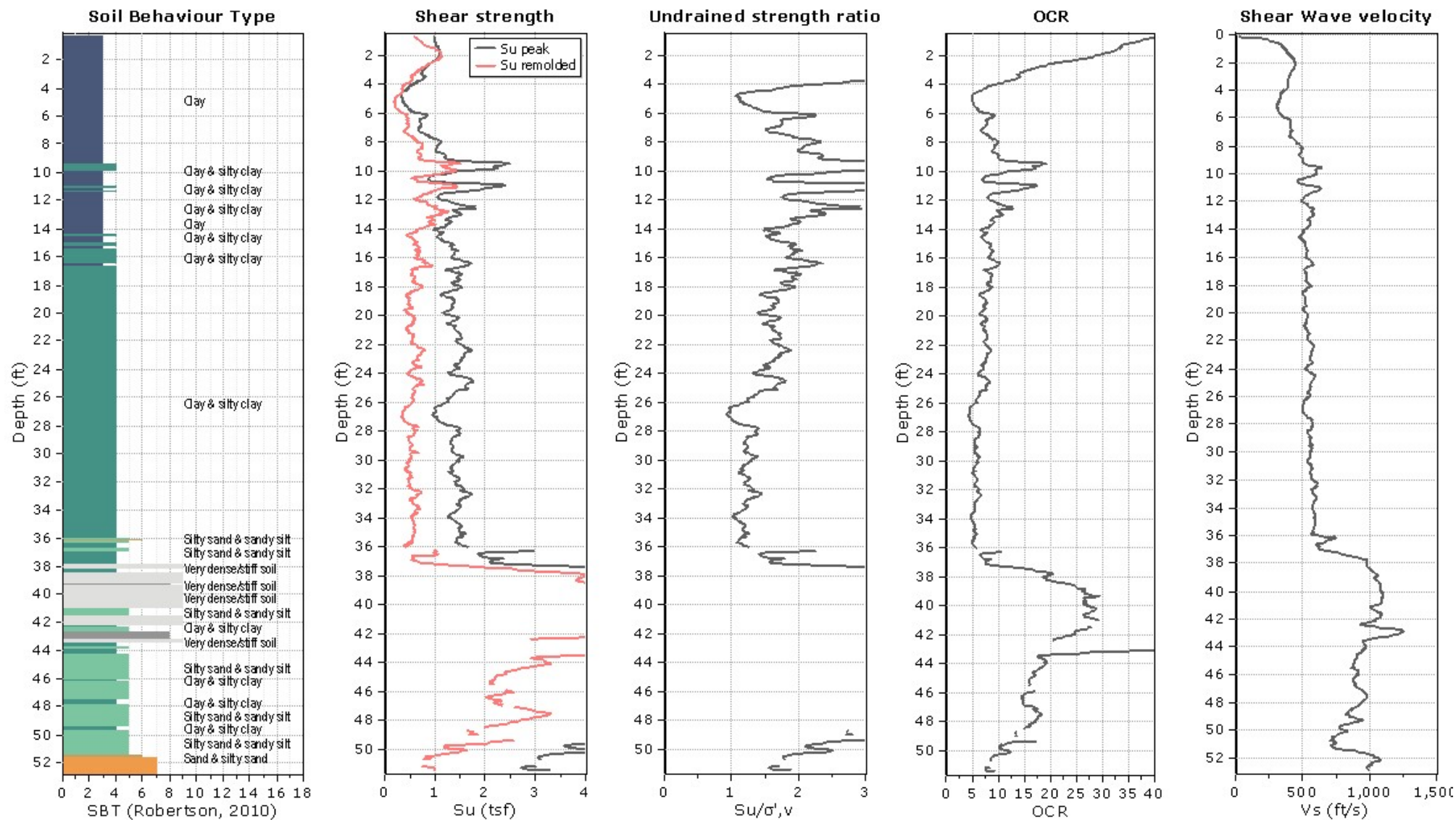
**Location:** Coles County, Illinois





**Project:** Coles Wind

**Location:** Coles County, Illinois



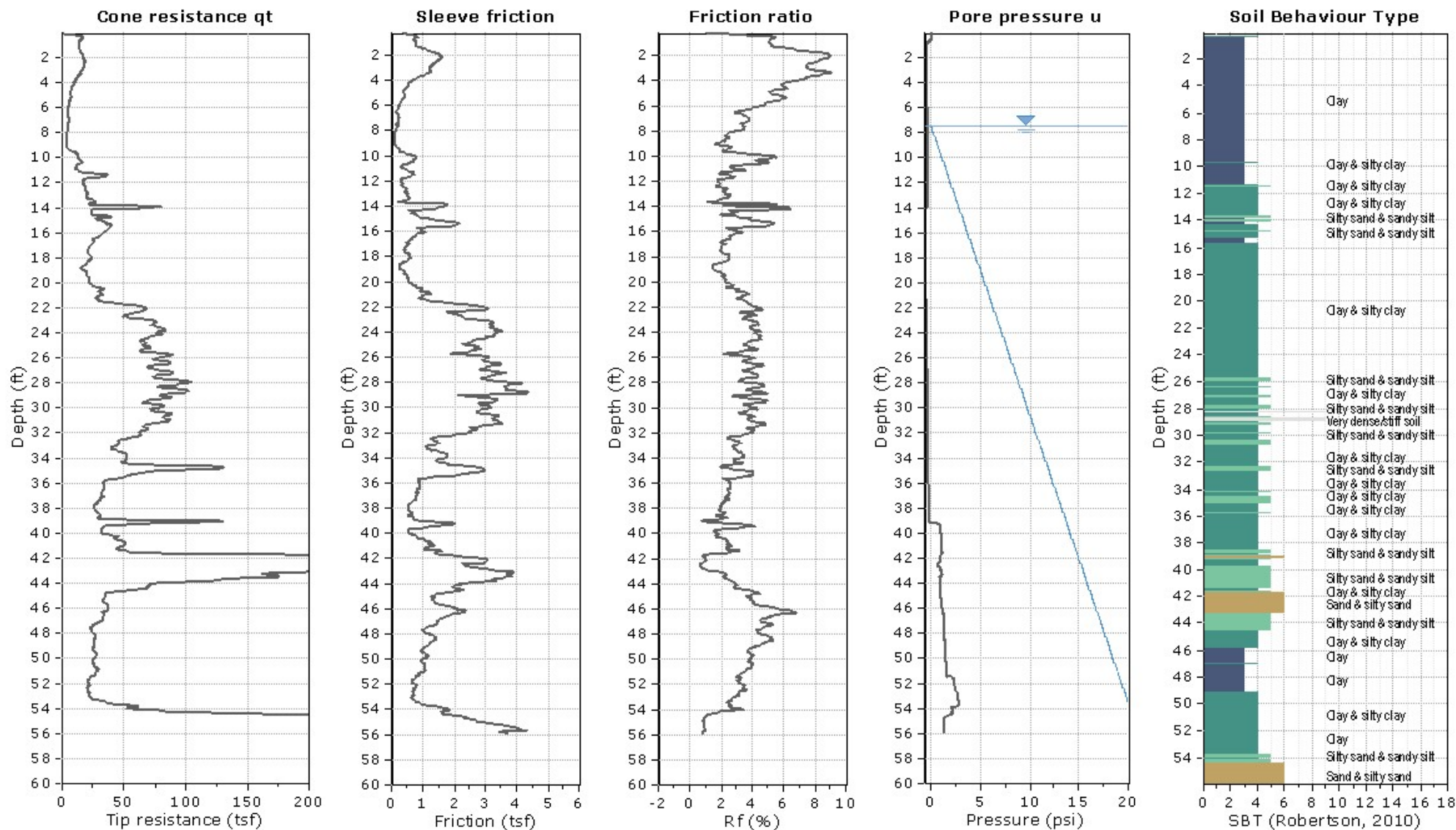


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-37**

Total depth: 55.94 ft, Date: 4/17/2025  
Coords: lat 39.617396° lon -88.142108°  
Cone Type: CPT  
Cone Operator: FUGRO





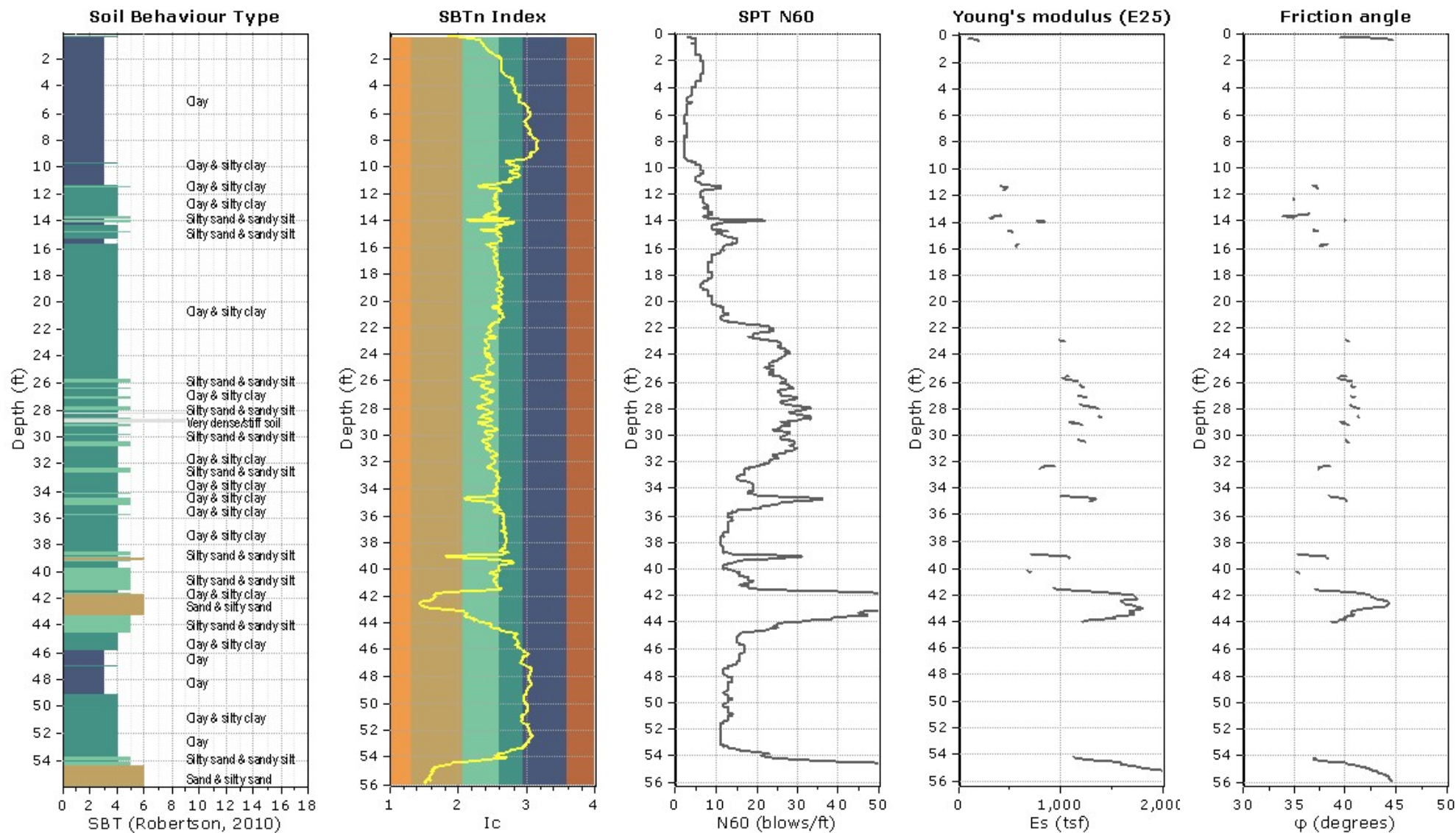


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rrccompanies.com

**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-37**

Total depth: 55.94 ft, Date: 4/17/2025  
Coords: lat 39.617396° lon -88.142108°  
Cone Type: CPT  
Cone Operator: FUGRO



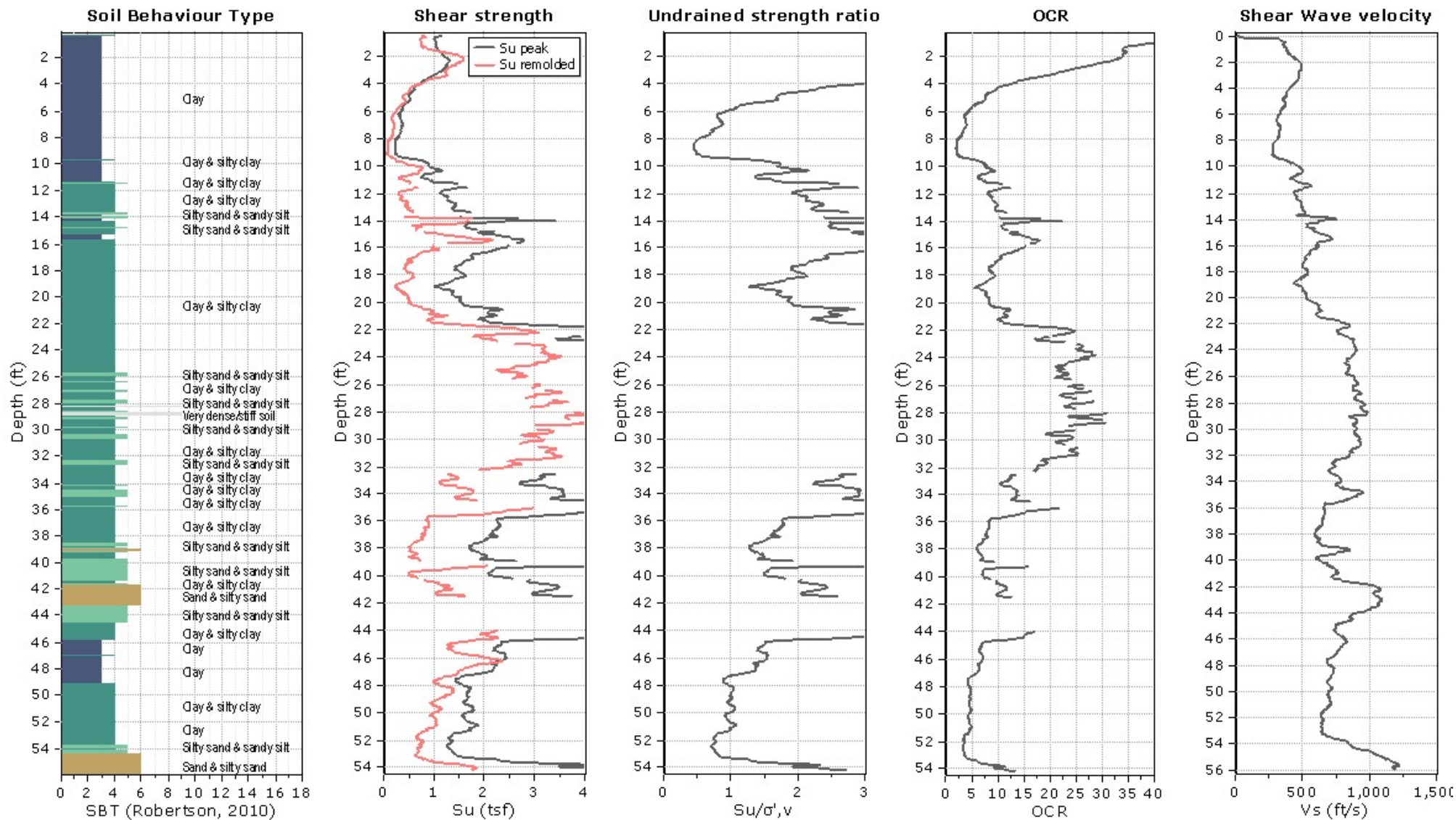


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rrccompanies.com

**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-37**

Total depth: 55.94 ft, Date: 4/17/2025  
Coords: lat 39.617396° lon -88.142108°  
Cone Type: CPT  
Cone Operator: FUGRO





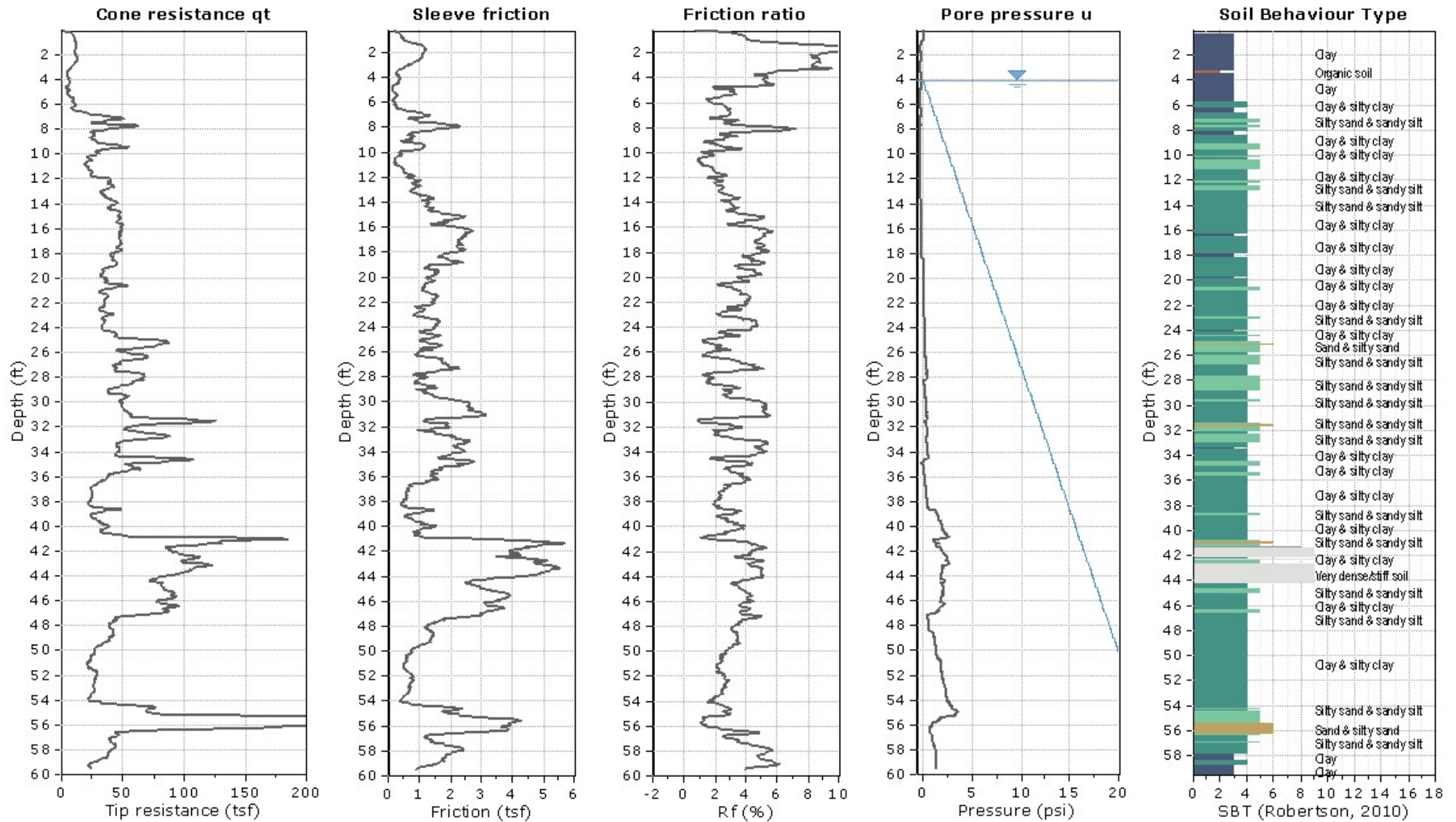


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-38**

Total depth: 59.48 ft, Date: 4/18/2025  
Coords: lat 39.629819° lon -88.138768°  
Cone Type: CPT  
Cone Operator: FUGRO





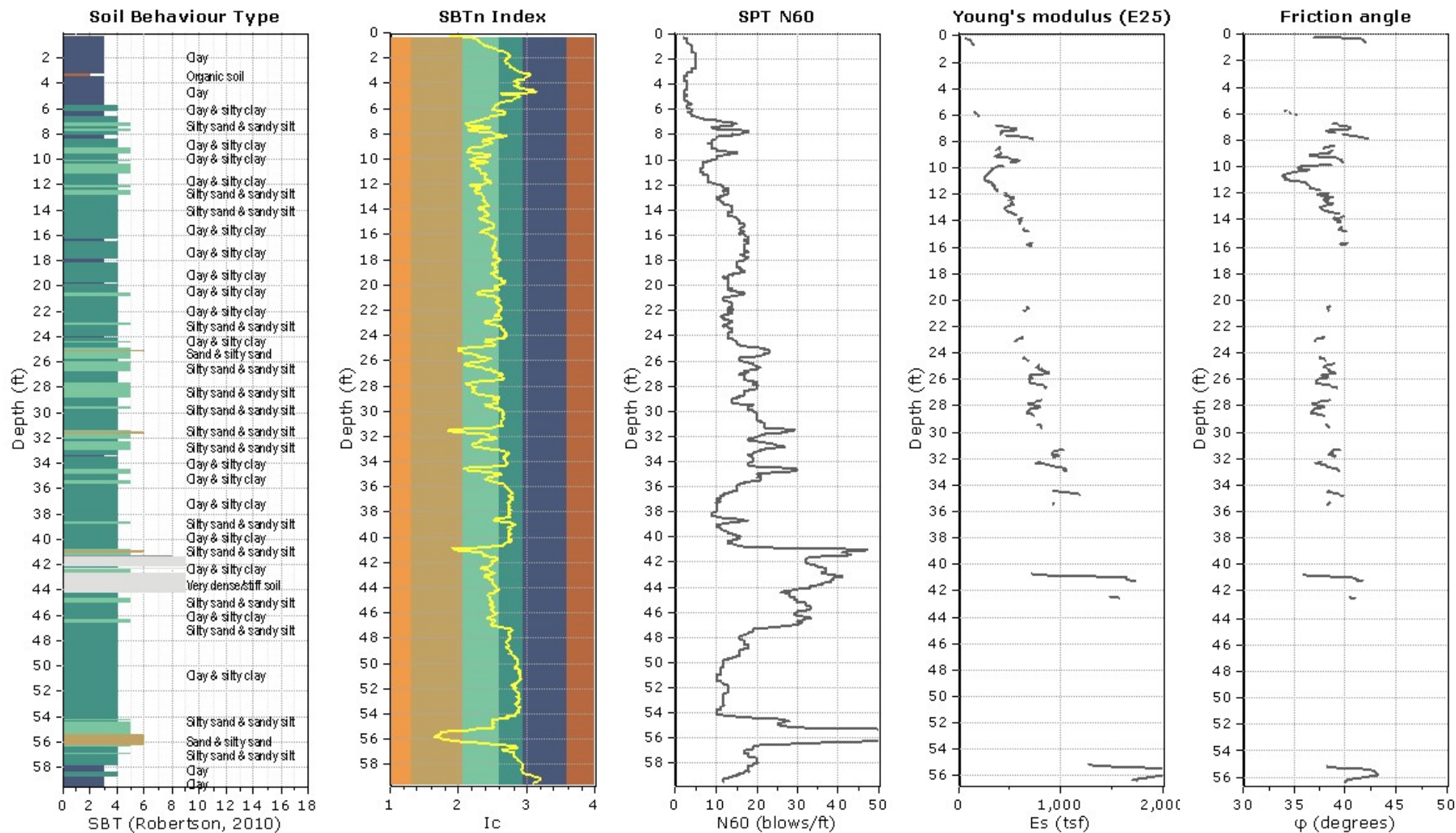


**RRC Power & Energy, LLC**  
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Round Rock, TX 78681  
rrccompanies.com

**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-38**

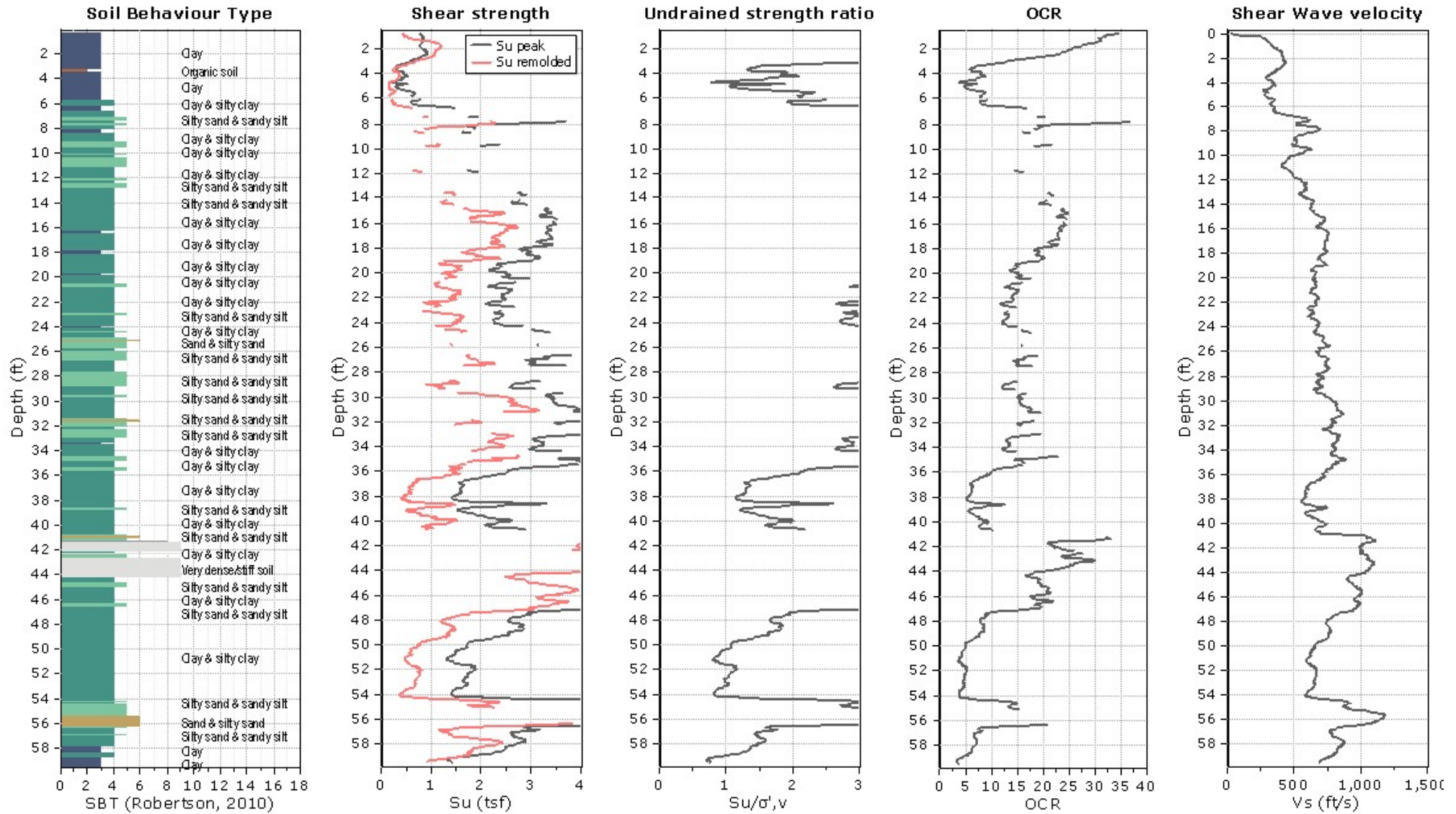
Total depth: 59.48 ft, Date: 4/18/2025  
Coords: lat 39.629819° lon -88.138768°  
Cone Type: CPT  
Cone Operator: FUGRO





**Project: Coles Wind**

**Location: Coles County, Illinois**





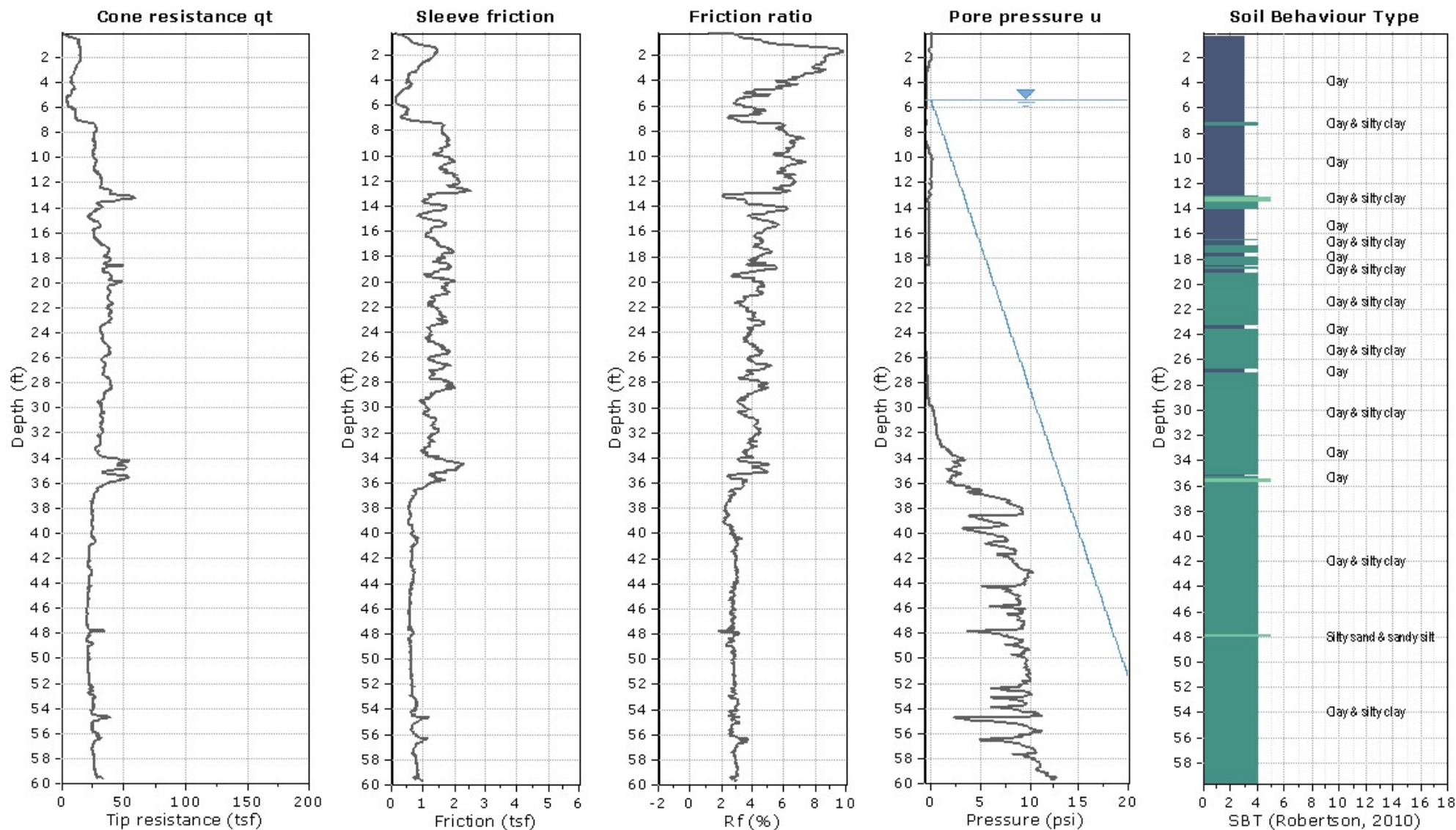


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-39**

Total depth: 59.65 ft, Date: 4/18/2025  
Coords: lat 39.632904° lon -88.161243°  
Cone Type: CPT  
Cone Operator: FUGRO







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**CPT: GEO-39**

Total depth: 59.65 ft, Date: 4/18/2025

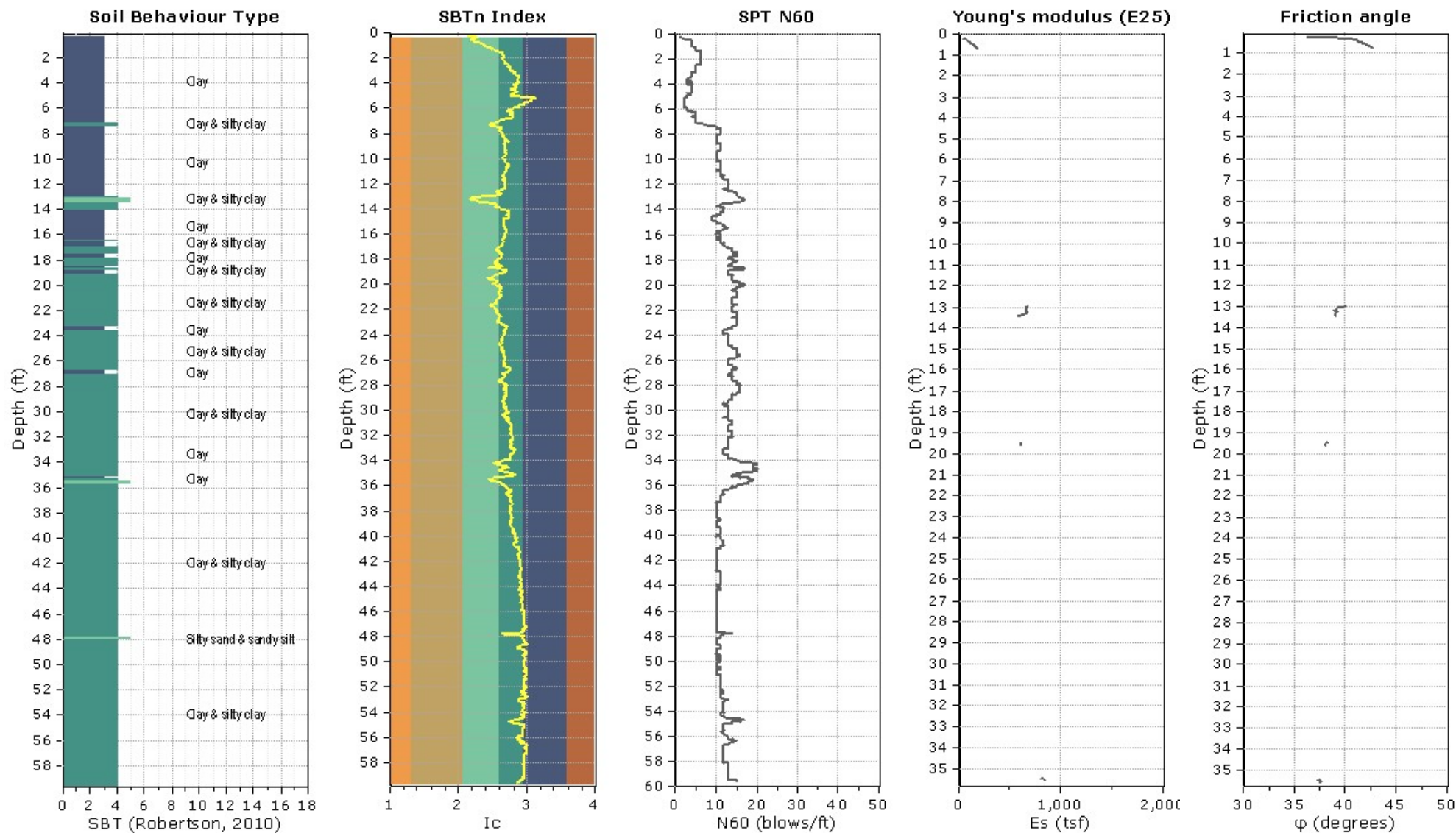
Coords: lat 39.632904° lon -88.161243°

Cone Type: CPT

Cone Operator: FUGRO

**Project: Coles Wind**

**Location: Coles County, Illinois**



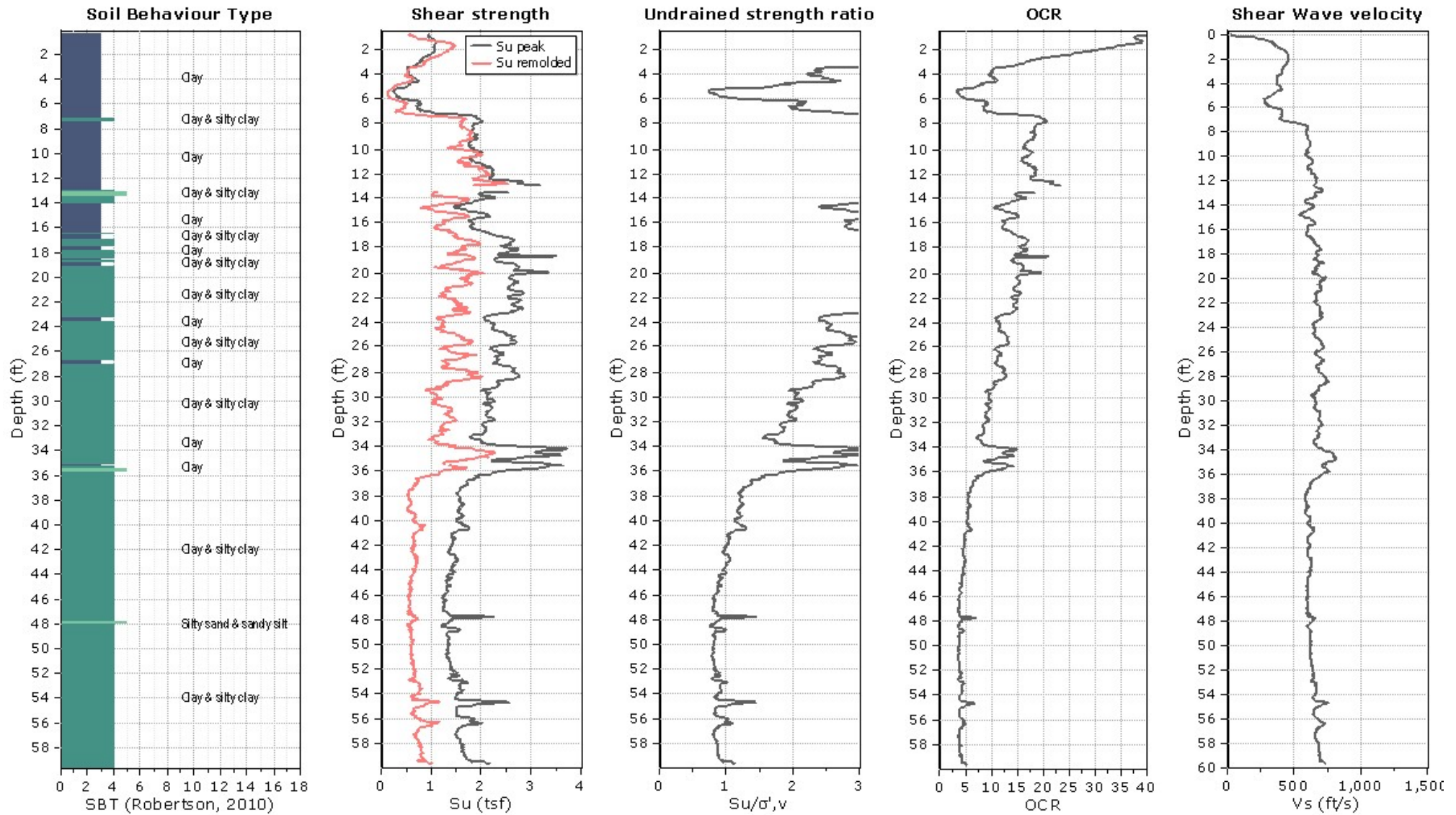


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-39**

Total depth: 59.65 ft, Date: 4/18/2025  
Coords: lat 39.632904° lon -88.161243°  
Cone Type: CPT  
Cone Operator: FUGRO



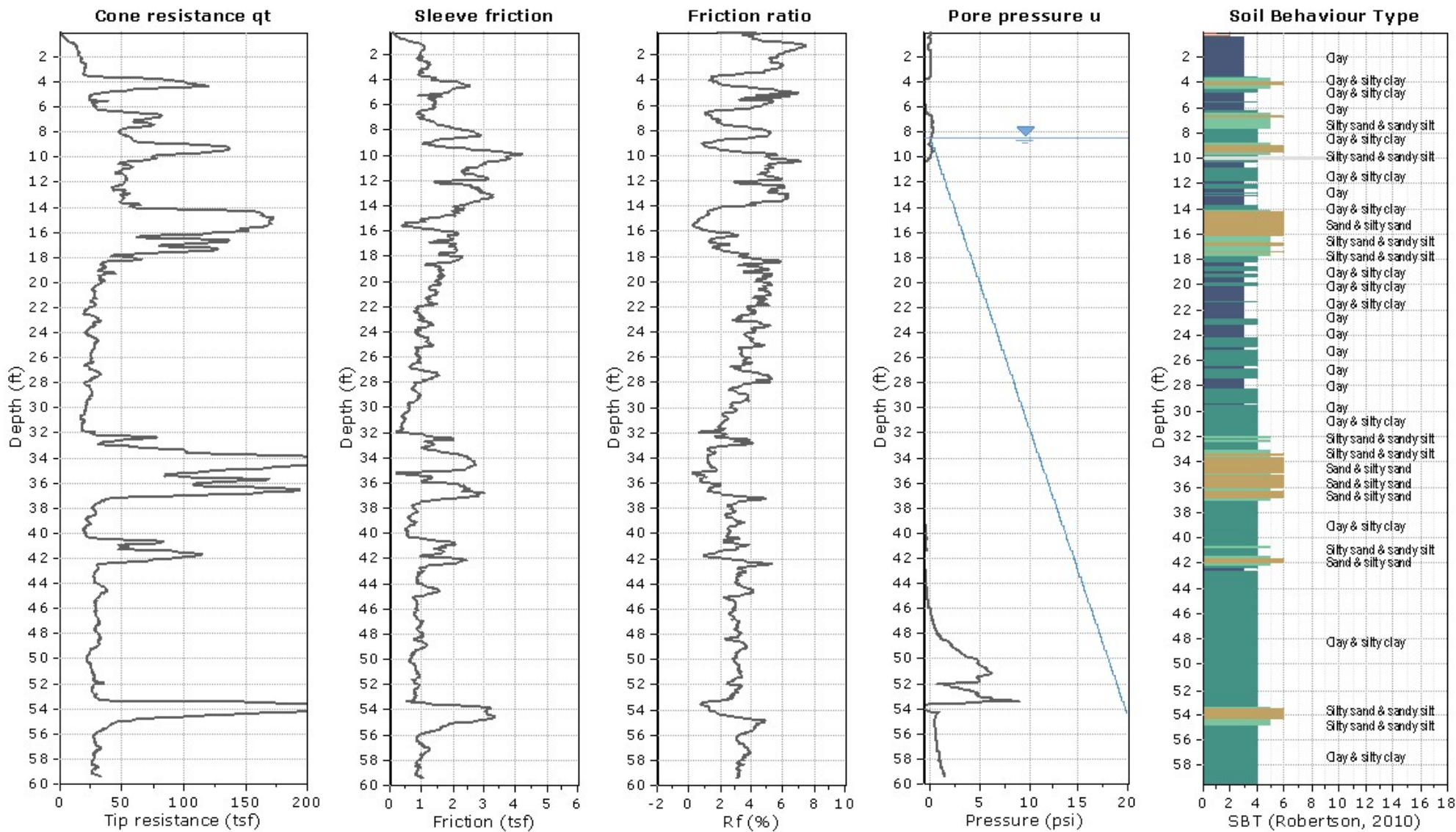


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-40**

Total depth: 59.45 ft, Date: 4/22/2025  
Coords: lat 39.640726° lon -88.170557°  
Cone Type: CPT  
Cone Operator: Fugro







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**CPT: GEO-40**

Total depth: 59.45 ft, Date: 4/22/2025

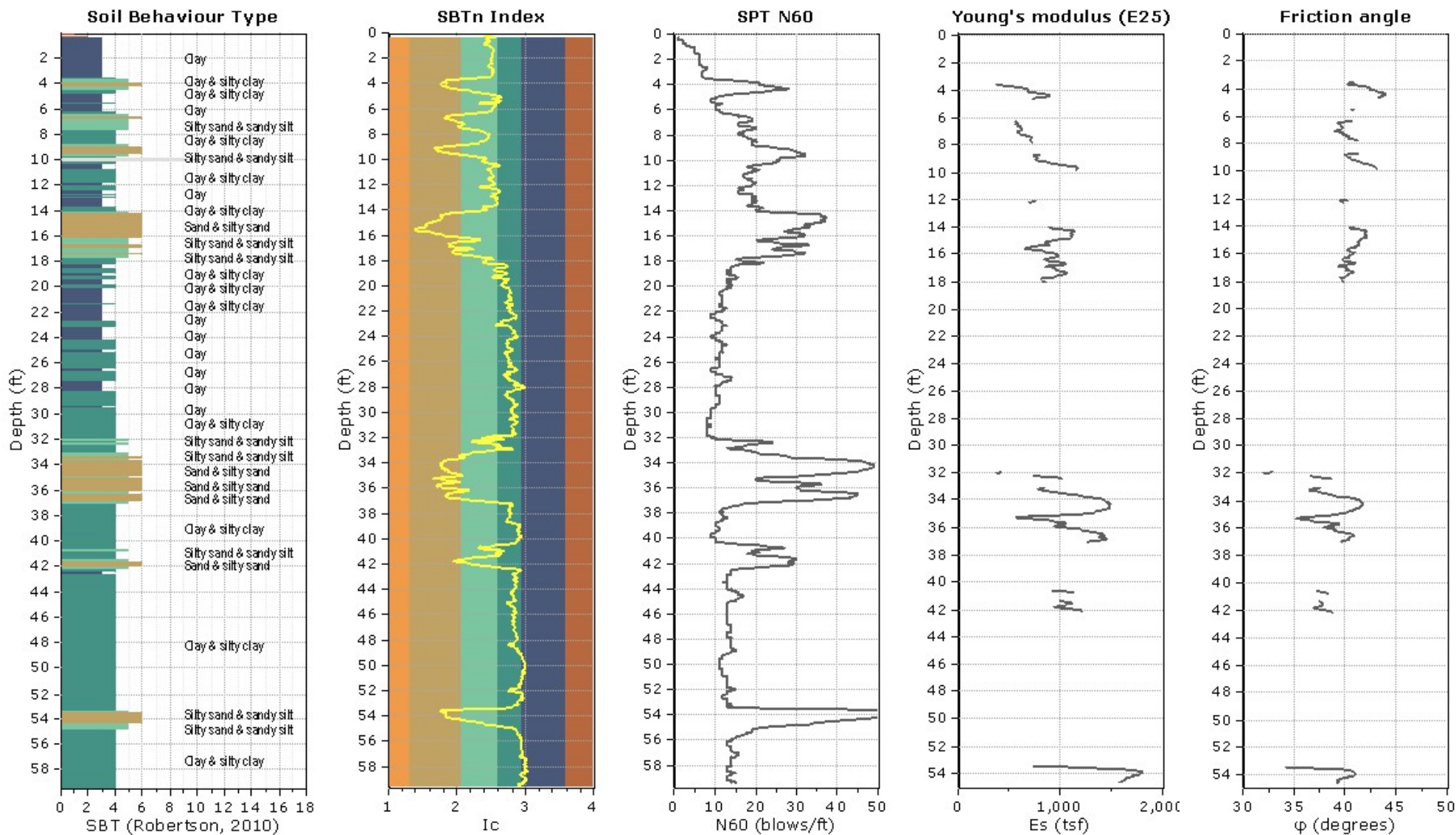
Coords: lat 39.640726° lon -88.170557°

Cone Type: CPT

Cone Operator: Fugro

**Project: Coles Wind**

**Location: Coles County, Illinois**





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**CPT: GEO-40**

Total depth: 59.45 ft, Date: 4/22/2025

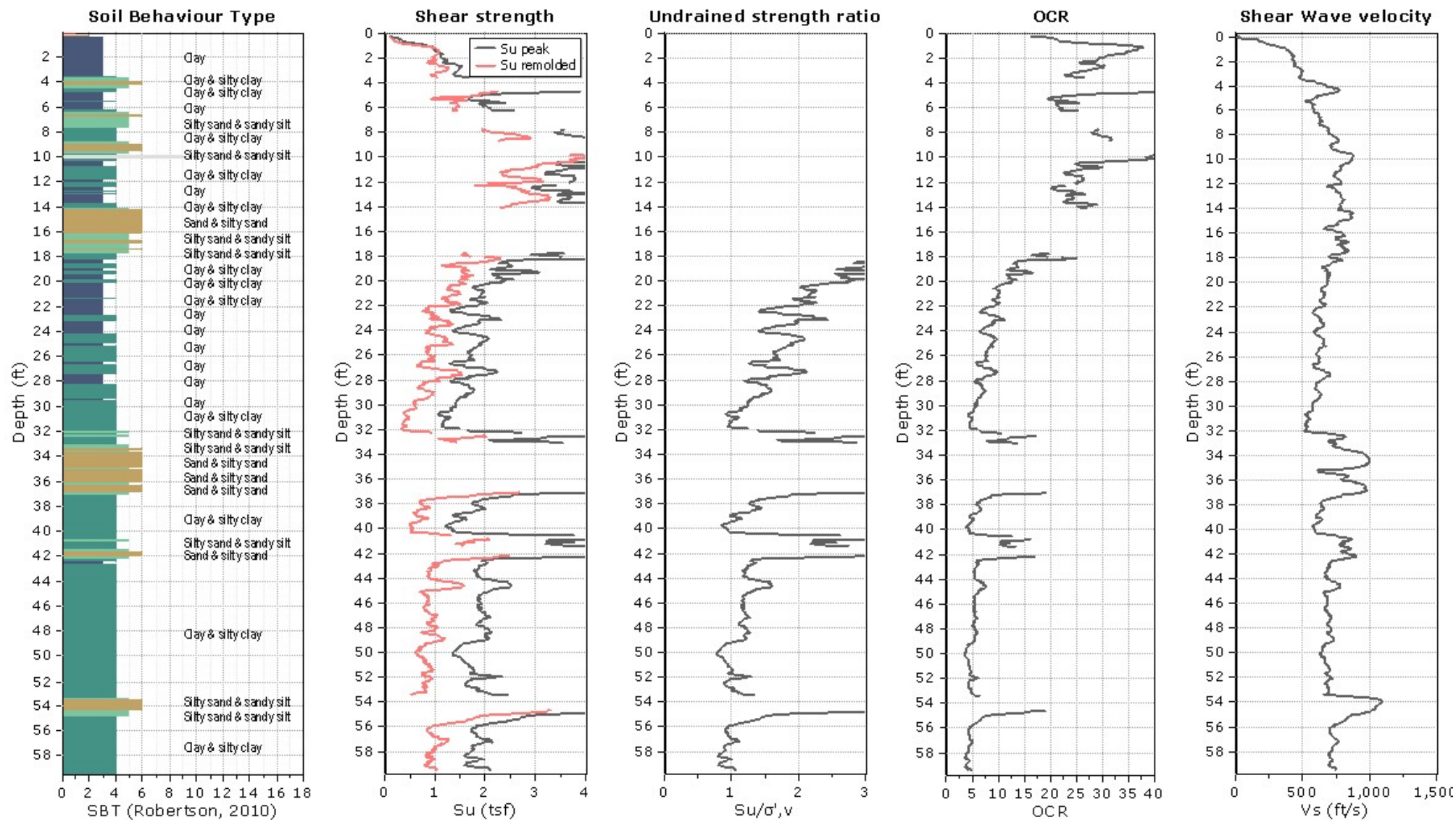
Coords: lat 39.640726° lon -88.170557°

Cone Type: CPT

Cone Operator: Fugro

**Project: Coles Wind**

**Location: Coles County, Illinois**







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**Project:** Coles Wind  
**Location:** Coles County, Illinois

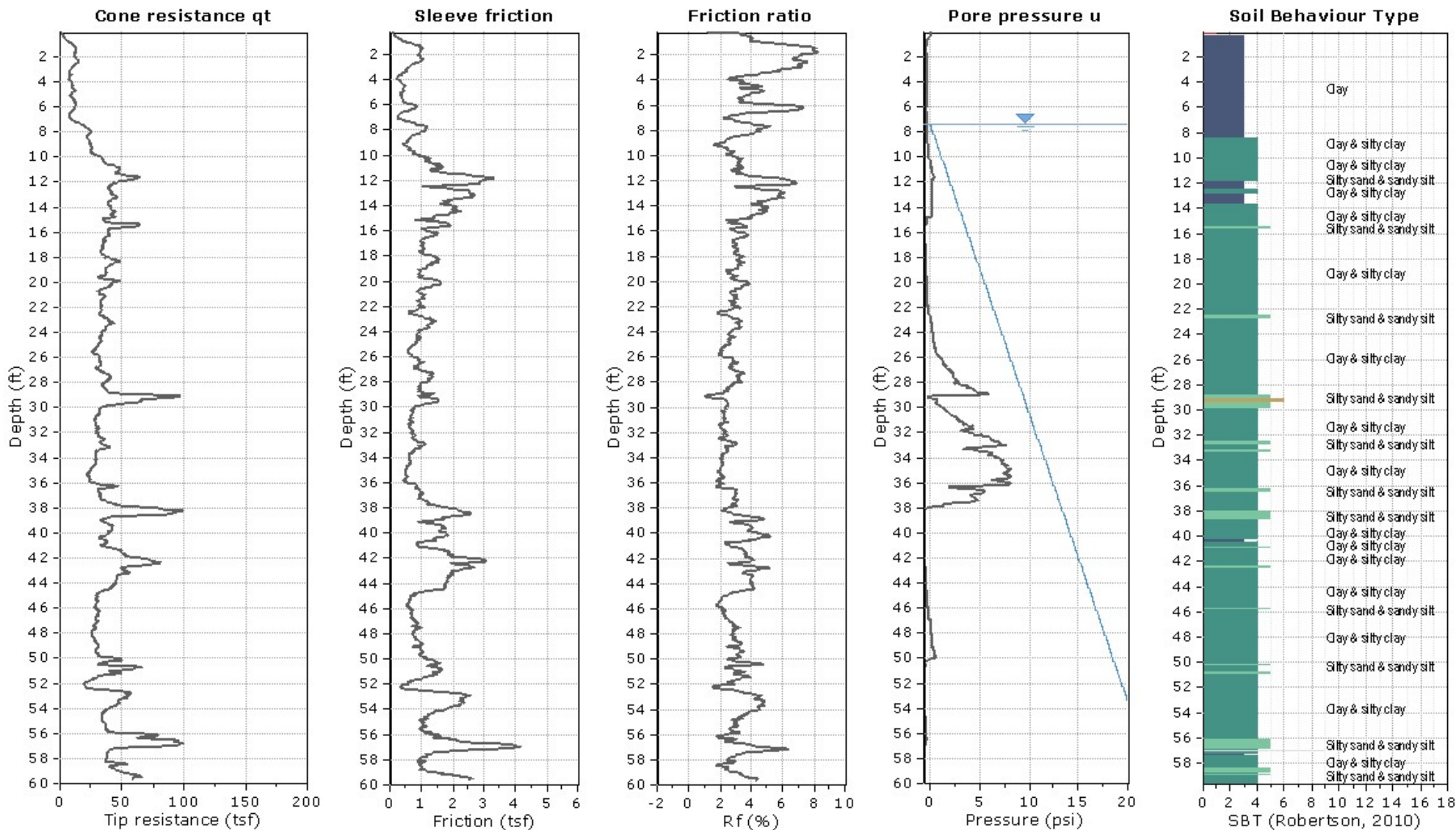
**CPT: GEO-41**

Total depth: 59.61 ft, Date: 4/21/2025

Coords: lat 39.640932° lon -88.15041°

Cone Type: CPT

Cone Operator: FUGRO







**Project:** Coles Wind  
**Location:** Coles County, Illinois

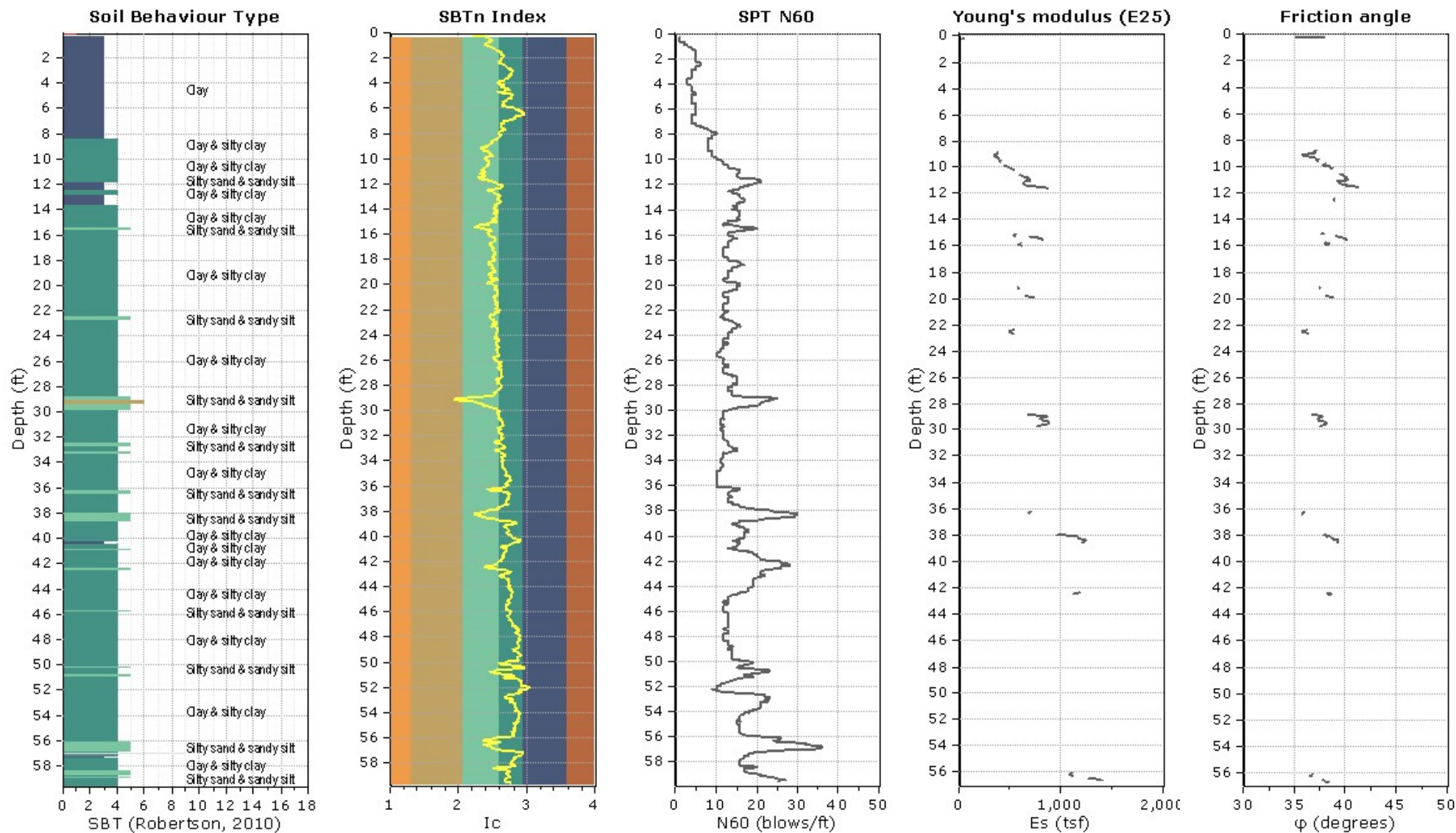
**CPT: GEO-41**

Total depth: 59.61 ft, Date: 4/21/2025

Coords: lat 39.640932° lon -88.15041°

Cone Type: CPT

Cone Operator: FUGRO





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**Project:** Coles Wind  
**Location:** Coles County, Illinois

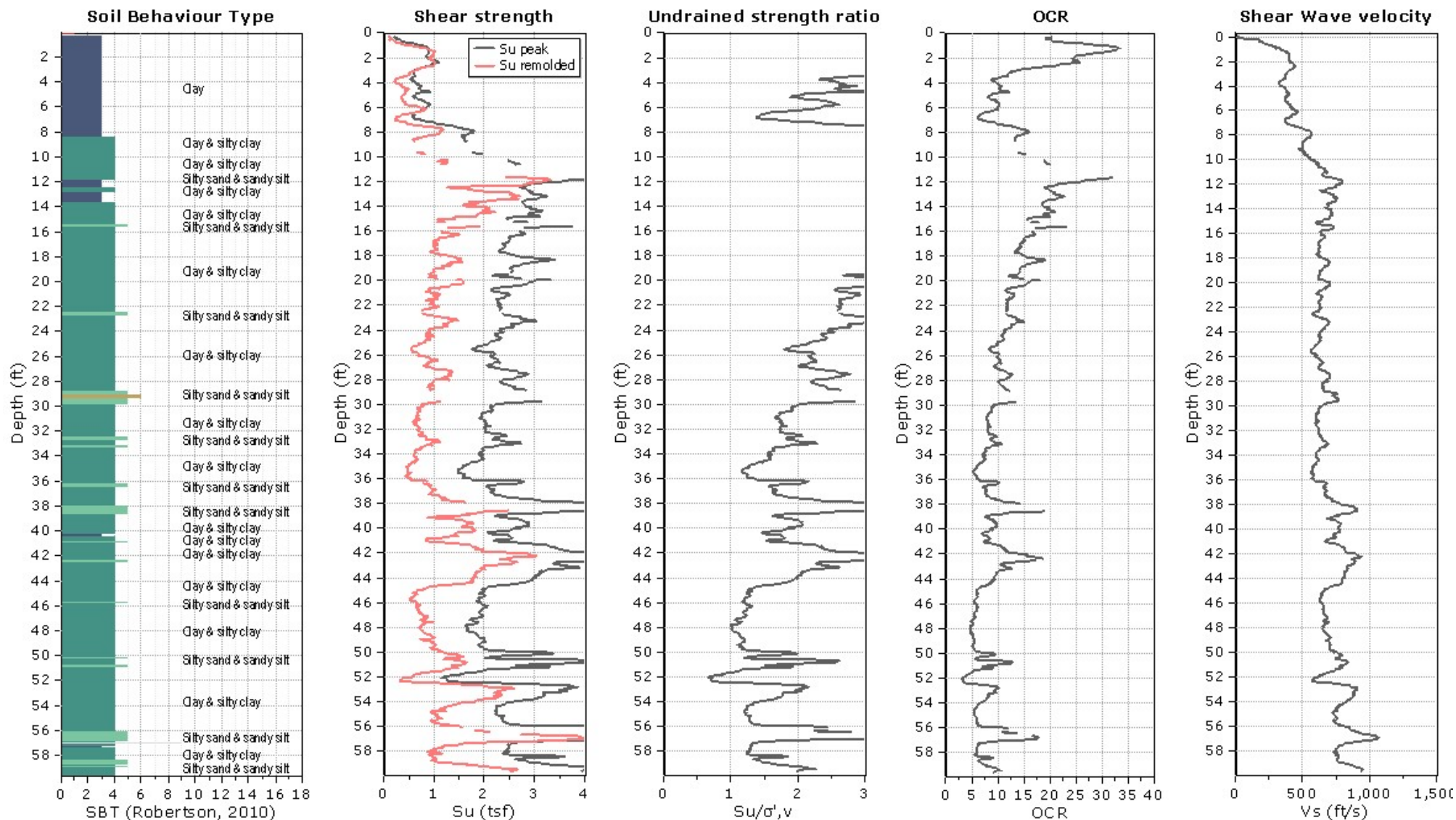
**CPT: GEO-41**

Total depth: 59.61 ft, Date: 4/21/2025

Coords: lat 39.640932° lon -88.15041°

Cone Type: CPT

Cone Operator: FUGRO



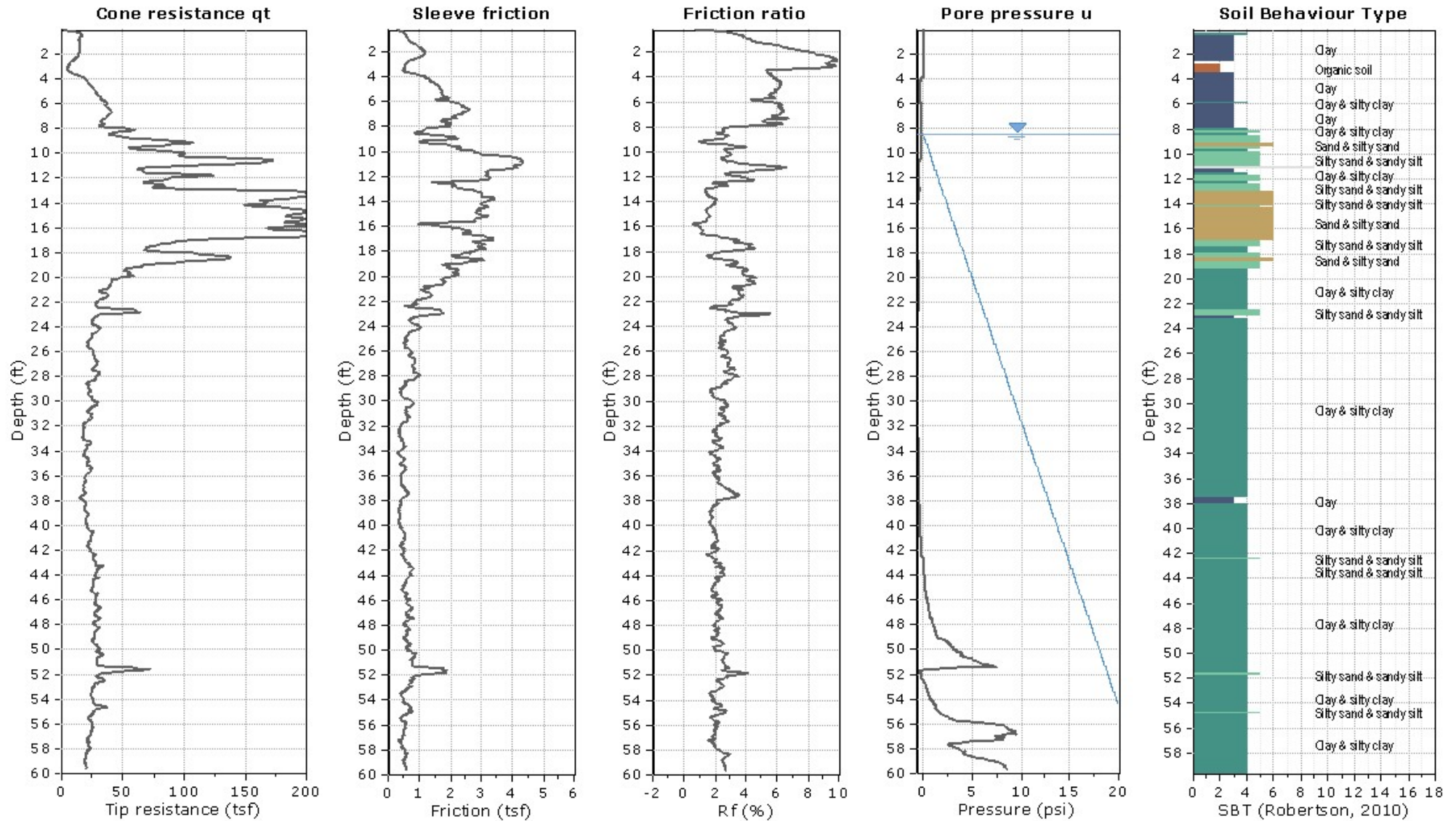




**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-42**

Total depth: 59.65 ft, Date: 4/18/2025  
Coords: lat 39.642241° lon -88.145311°  
Cone Type: CPT  
Cone Operator: FUGRO





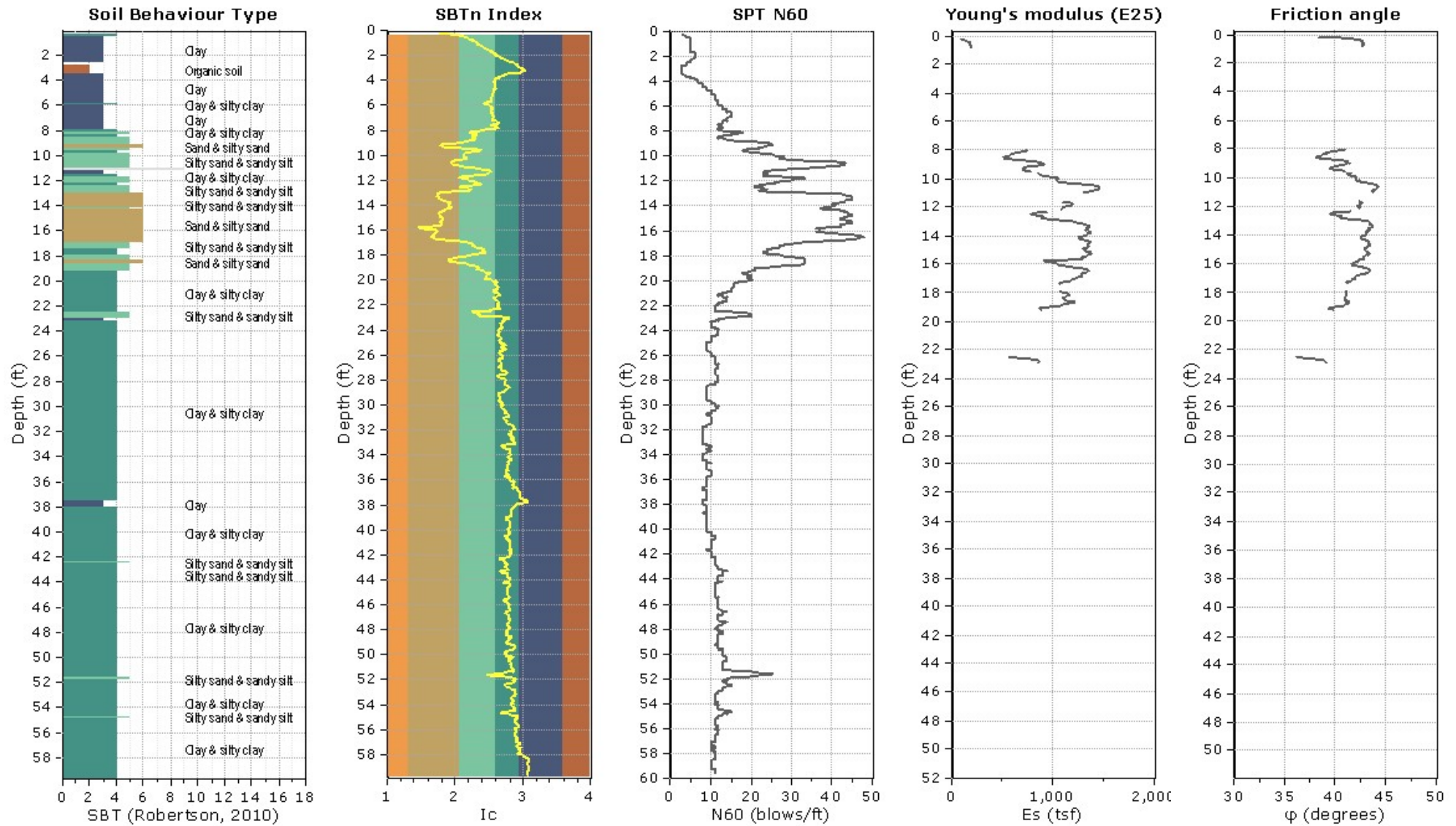


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

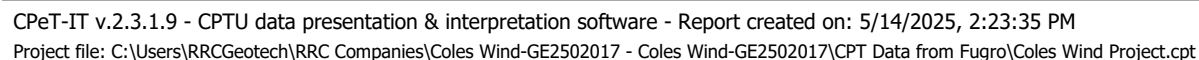
**CPT: GEO-42**

Total depth: 59.65 ft, Date: 4/18/2025  
Coords: lat 39.642241° lon -88.145311°  
Cone Type: CPT  
Cone Operator: FUGRO





**CPT: GEO-42**  
Total depth: 59.65 ft, Date: 4/18/2025  
Coords: lat 39.642241° lon -88.145311°  
Cone Type: CPT  
Cone Operator: FUGRO



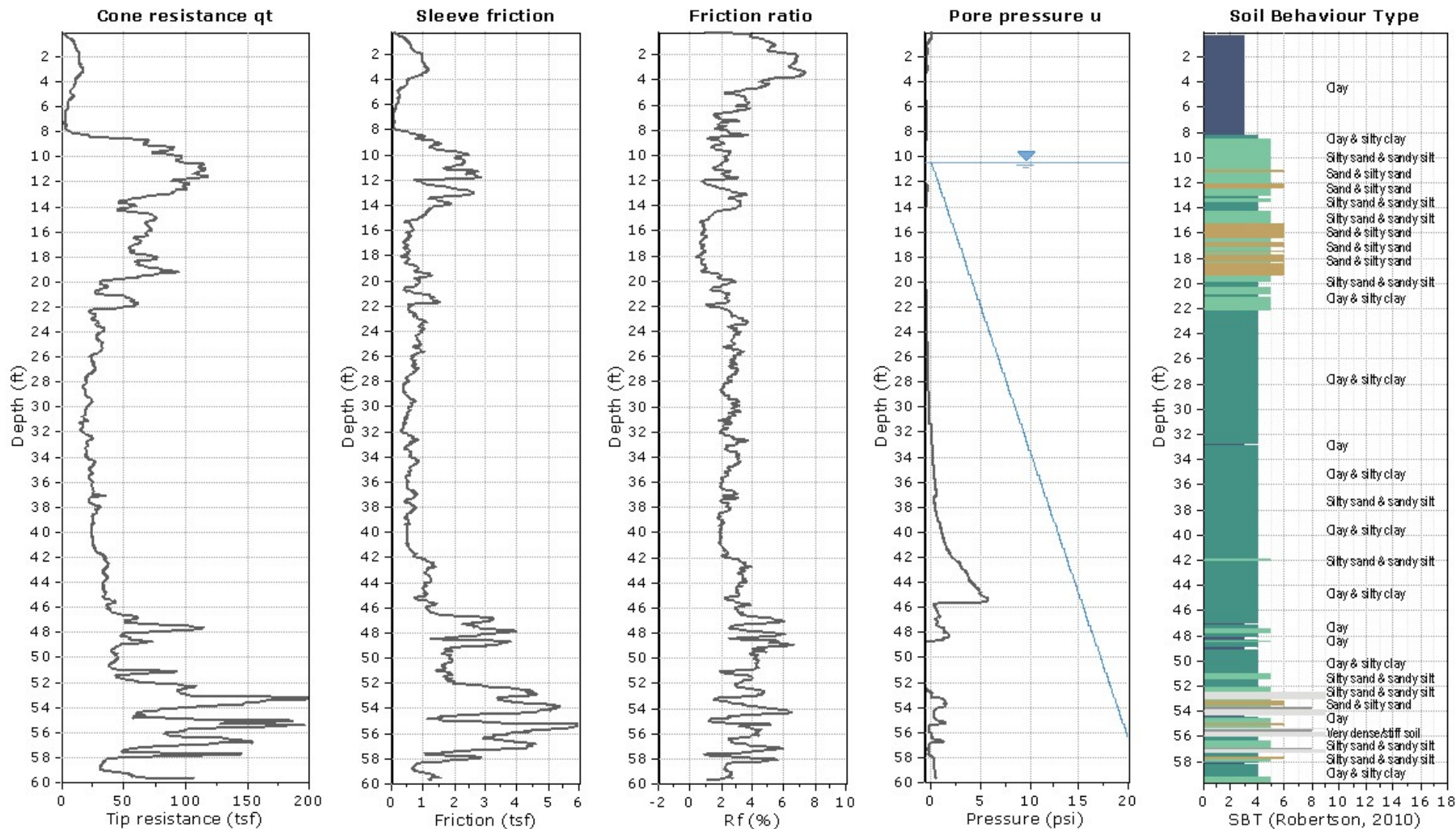


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-43**

Total depth: 59.68 ft, Date: 4/21/2025  
Coords: lat 39.649785° lon -88.163058°  
Cone Type: CPT  
Cone Operator: Fugro

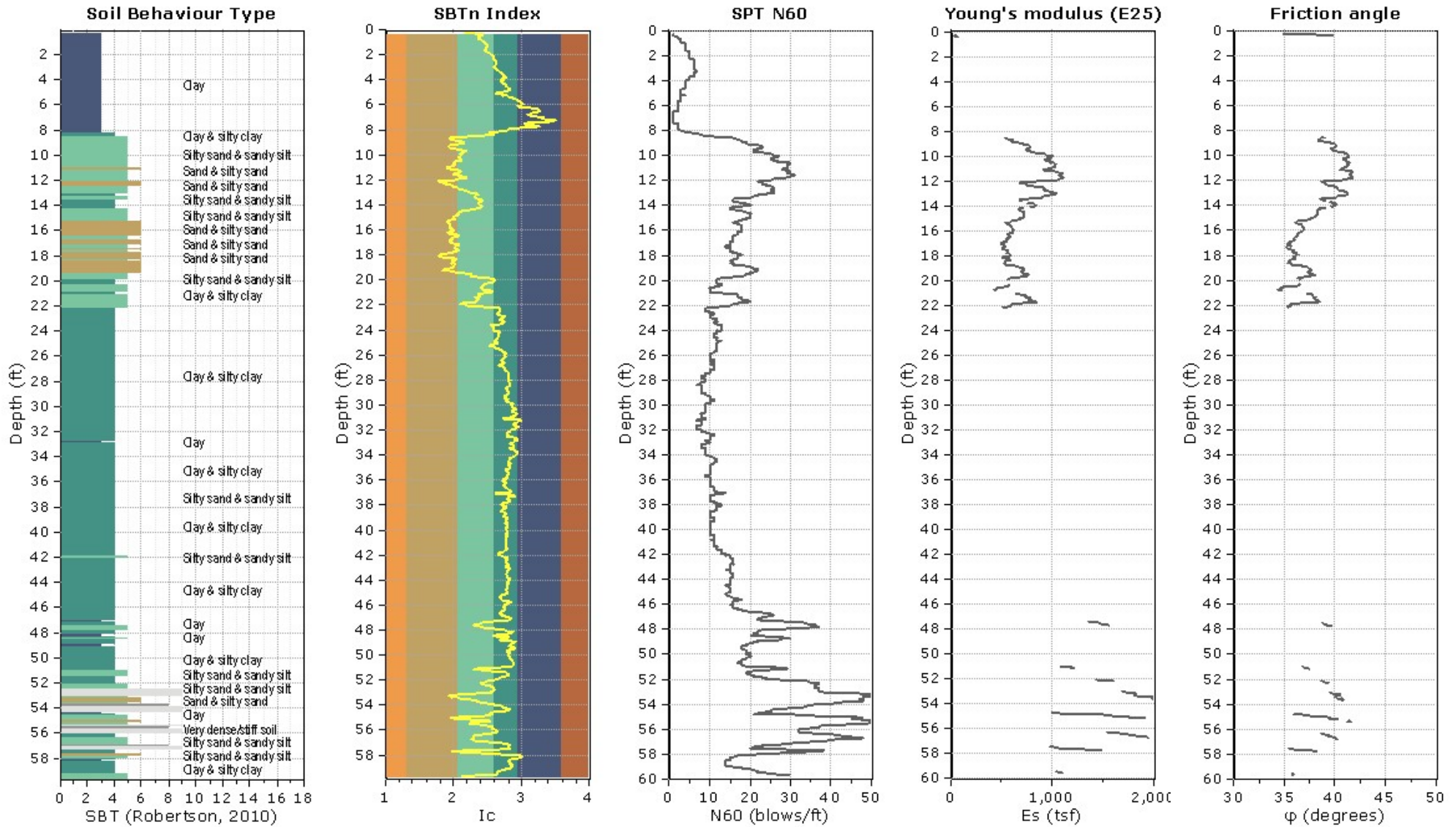






**Project:** Coles Wind

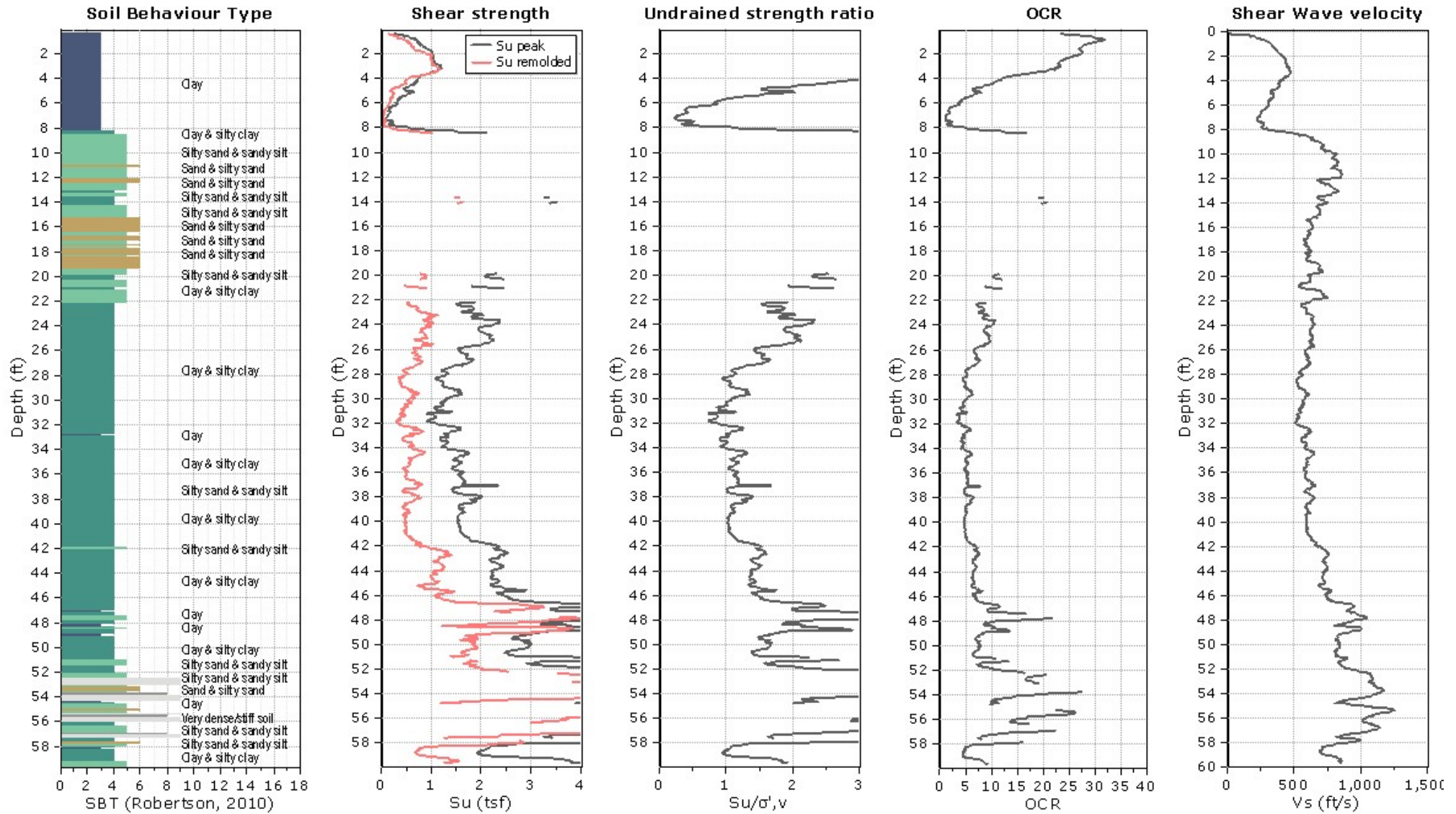
**Location:** Coles County, Illinois





**Project:** Coles Wind

**Location:** Coles County, Illinois



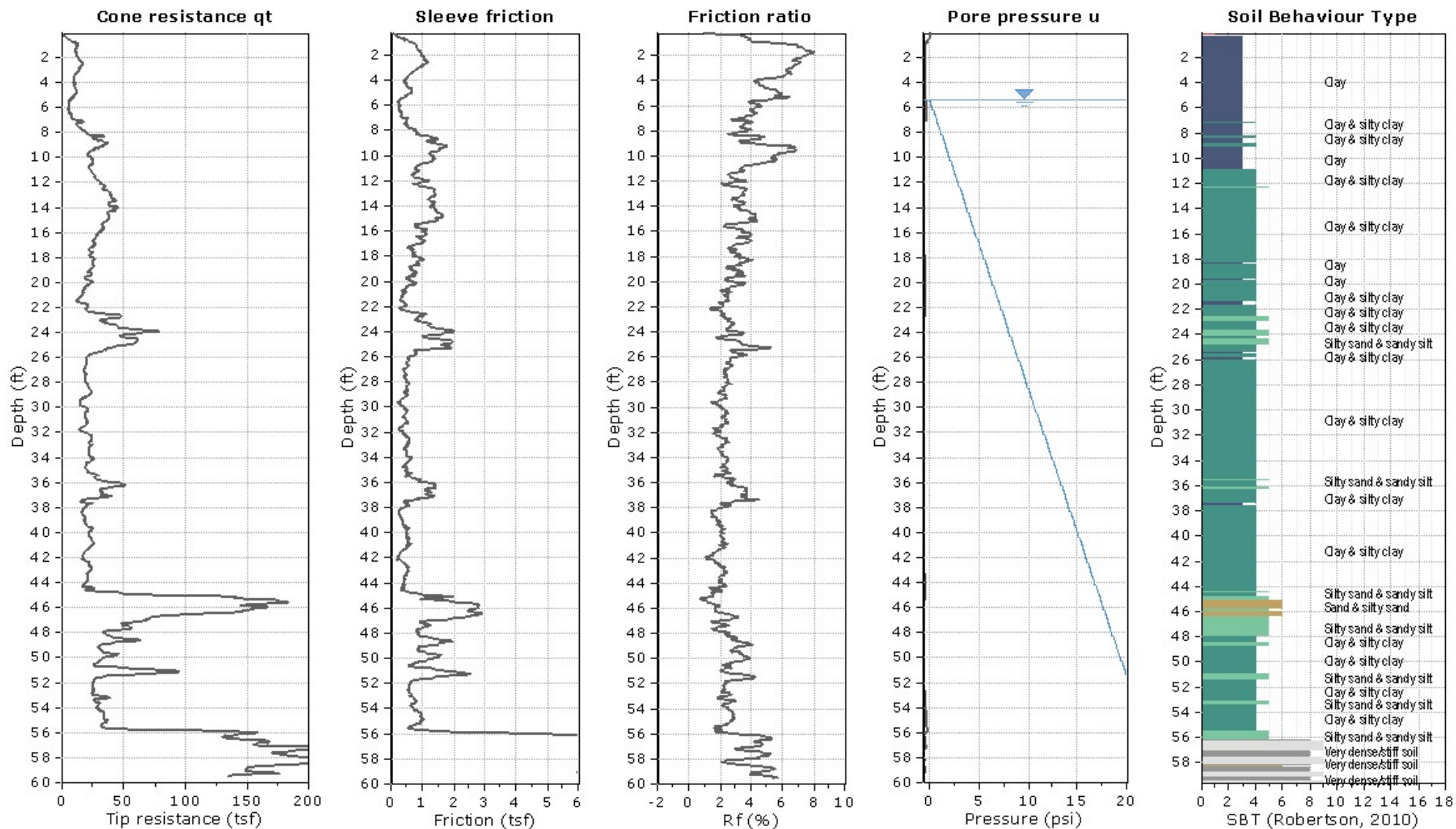


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-44**

Total depth: 59.58 ft, Date: 4/21/2025  
Coords: lat 39.645392° lon -88.164683°  
Cone Type: CPT  
Cone Operator: Fugro







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**CPT: GEO-44**

Total depth: 59.58 ft, Date: 4/21/2025

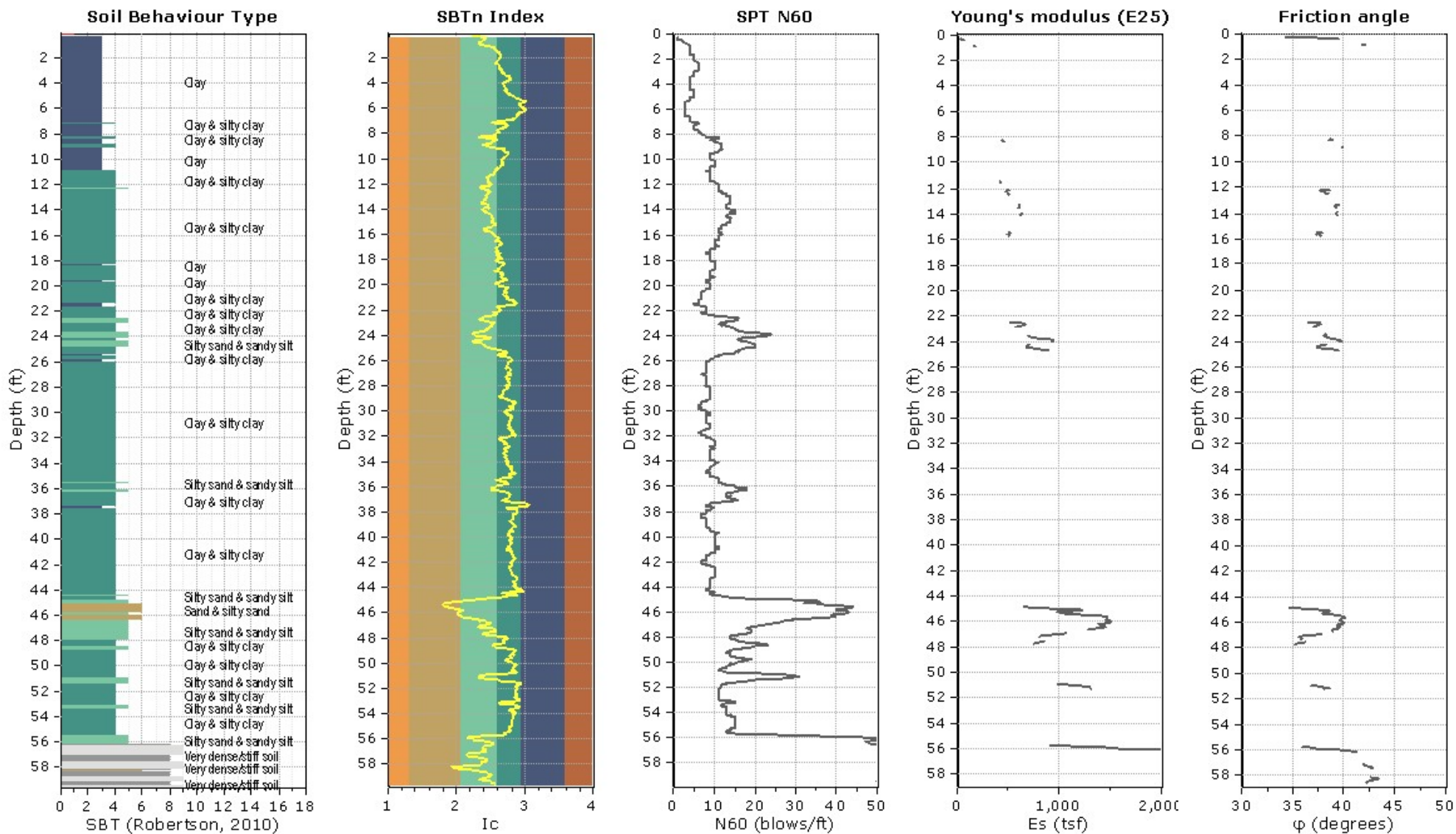
Coords: lat 39.645392° lon -88.164683°

Cone Type: CPT

Cone Operator: Fugro

**Project: Coles Wind**

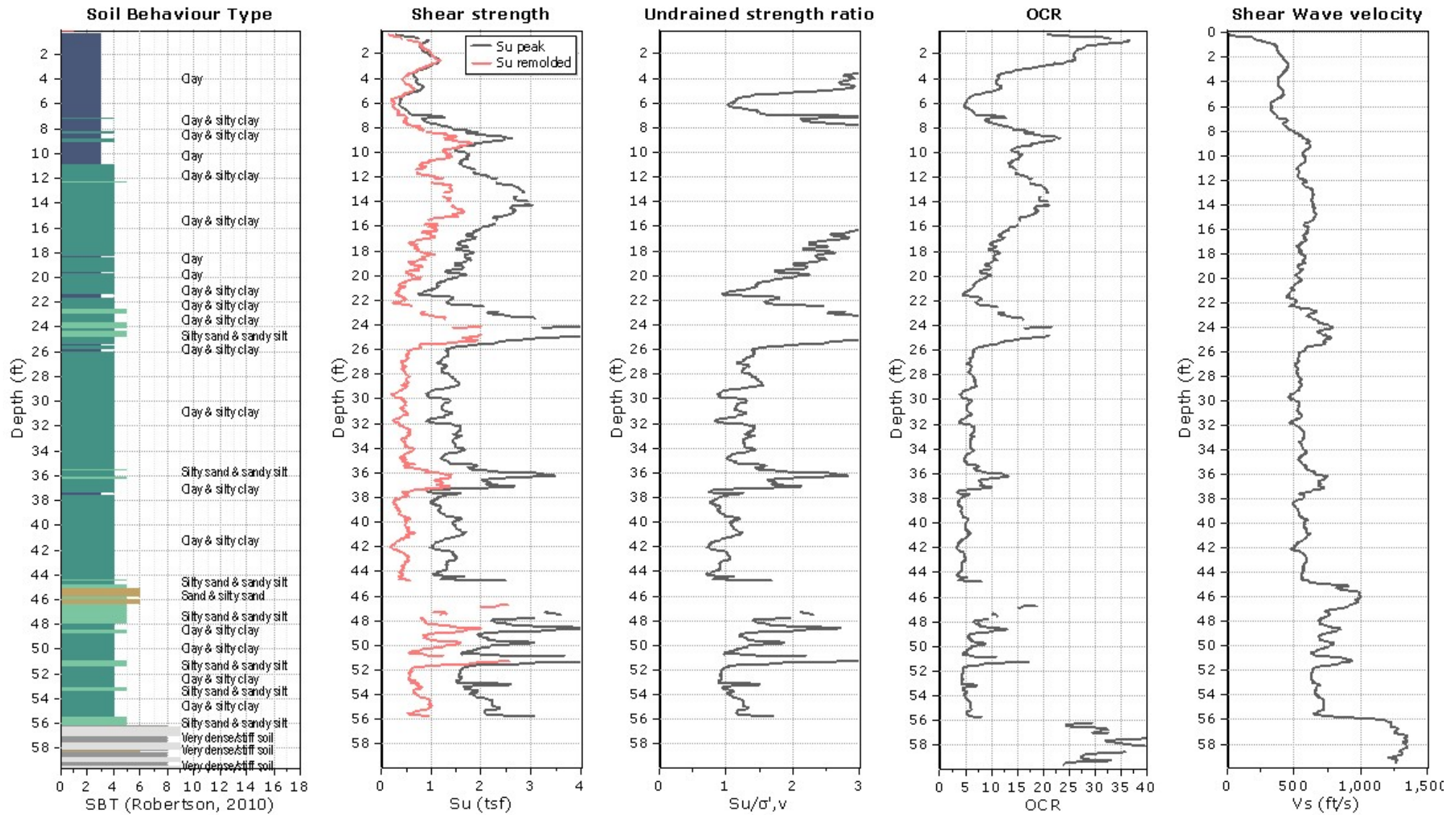
**Location: Coles County, Illinois**





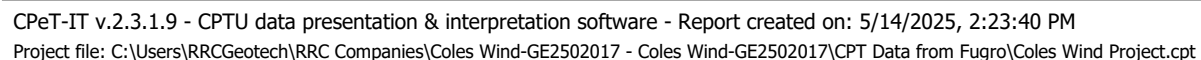
**Project:** Coles Wind

**Location:** Coles County, Illinois





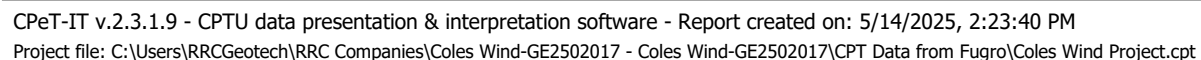
**CPT: GEO-45**  
Total depth: 42.62 ft, Date: 4/26/2025  
Coords: lat 39.61231° lon -88.180226°  
Cone Type: CPT  
Cone Operator: Fugro







**CPT: GEO-45**  
2.62 ft, Date: 4/26/2025  
61231° lon -88.180226°  
Cone Type: CPT  
Cone Operator: Fugro





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**Project:** Coles Wind  
**Location:** Coles County, Illinois

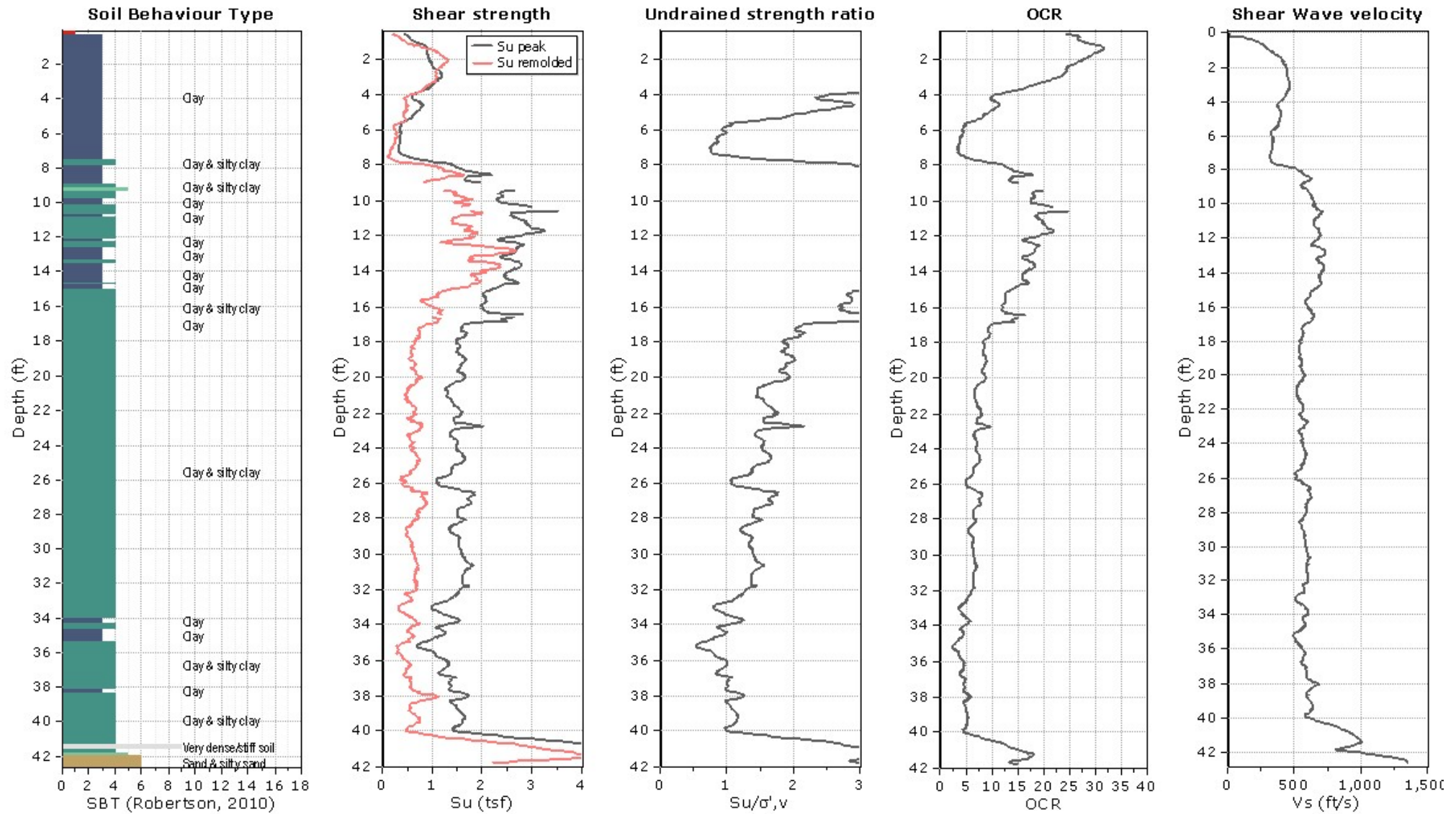
**CPT: GEO-45**

Total depth: 42.62 ft, Date: 4/26/2025

Coords: lat 39.61231° lon -88.180226°

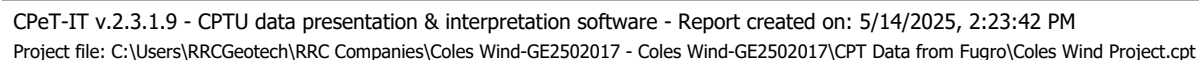
Cone Type: CPT

Cone Operator: Fugro





**CPT: GEO-46**  
Total depth: 48.62 ft, Date: 4/26/2025  
Coords: lat 39.612409° lon -88.188892°  
Cone Type: CPT  
Cone Operator: Fugro





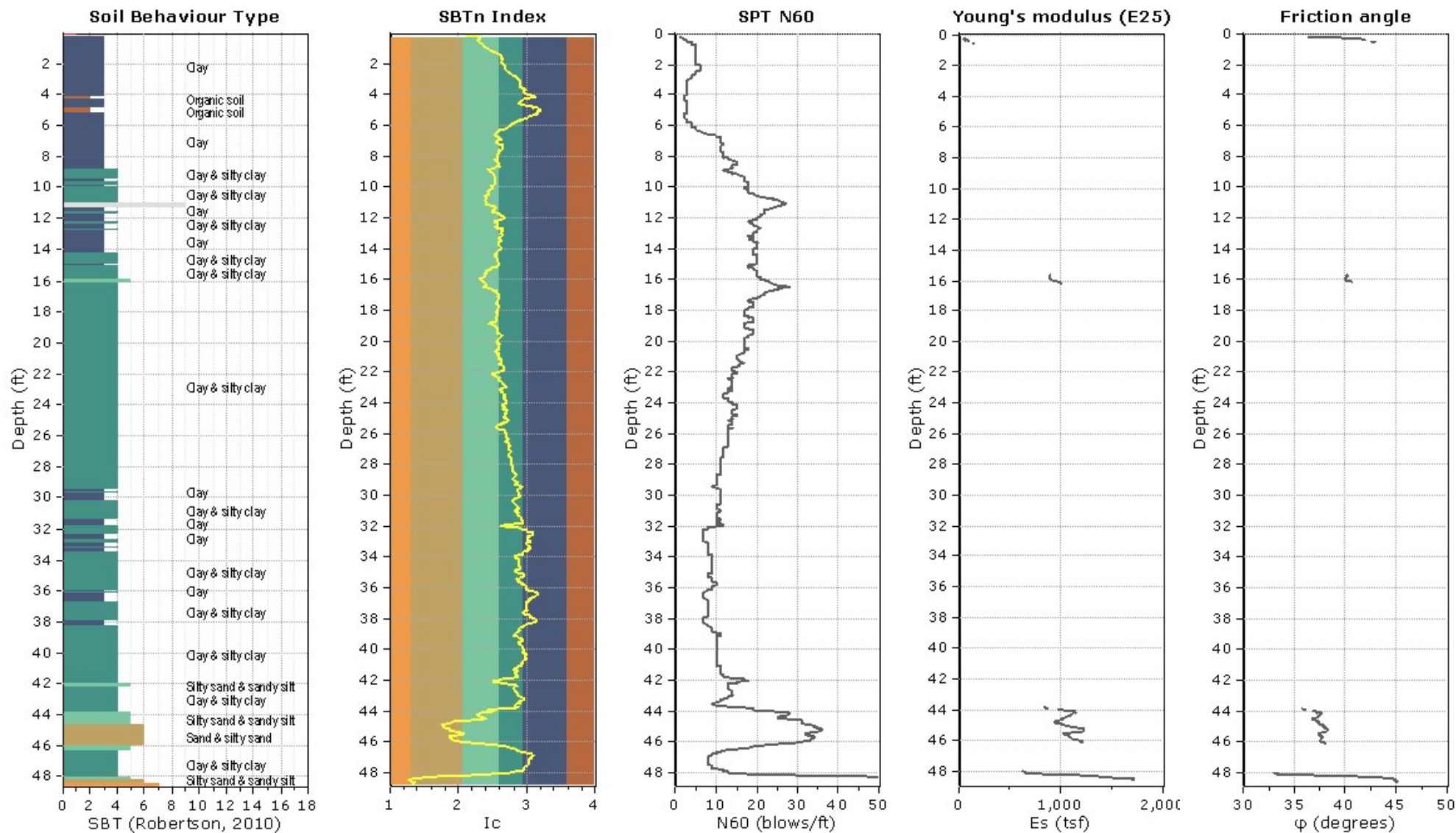


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-46**

Total depth: 48.62 ft, Date: 4/26/2025  
Coords: lat 39.612409° lon -88.188892°  
Cone Type: CPT  
Cone Operator: Fugro





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rrccompanies.com

**CPT: GEO-46**

Total depth: 48.62 ft, Date: 4/26/2025

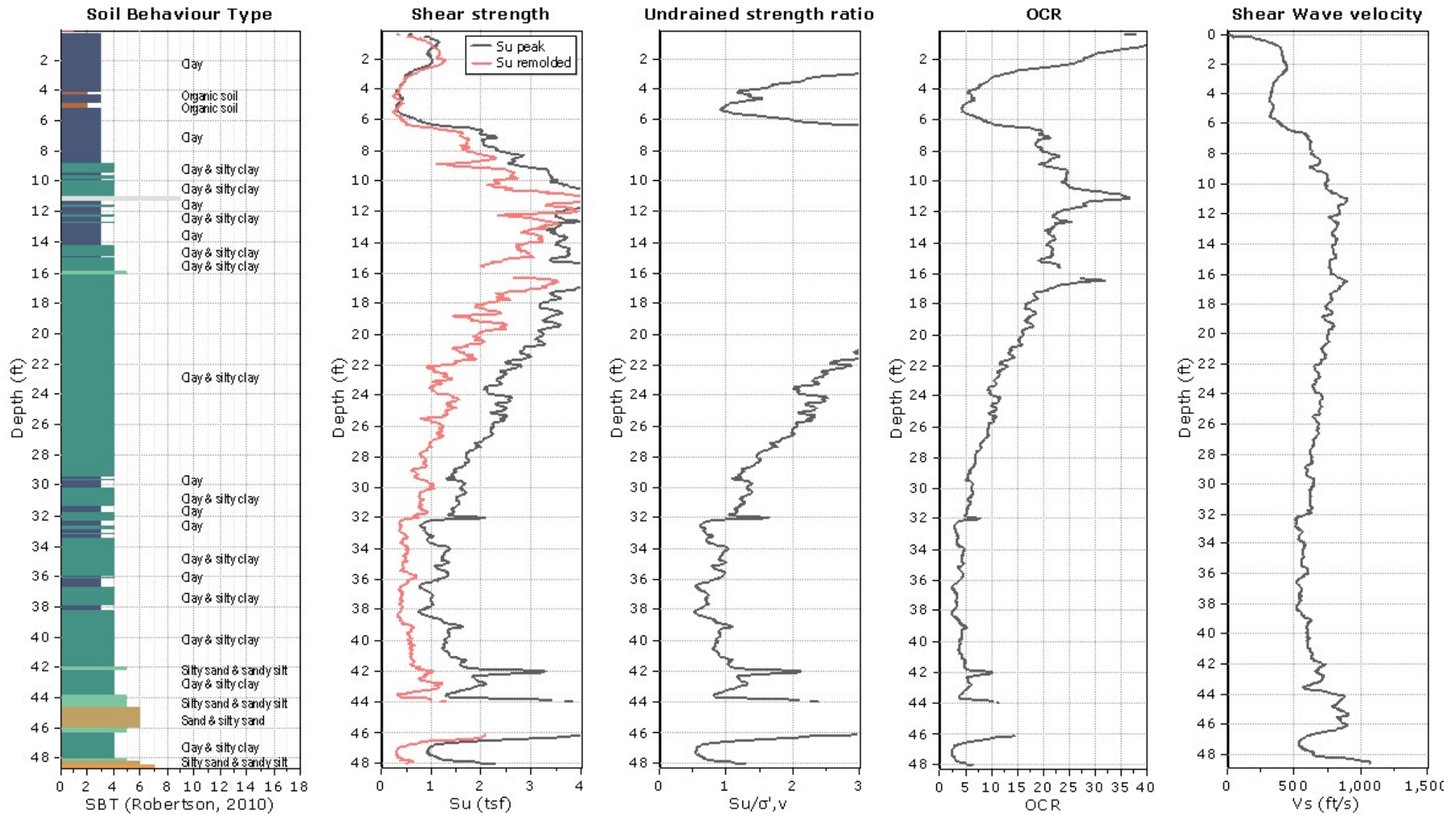
Coords: lat 39.612409° lon -88.188892°

Cone Type: CPT

Cone Operator: Fugro

**Project: Coles Wind**

**Location: Coles County, Illinois**



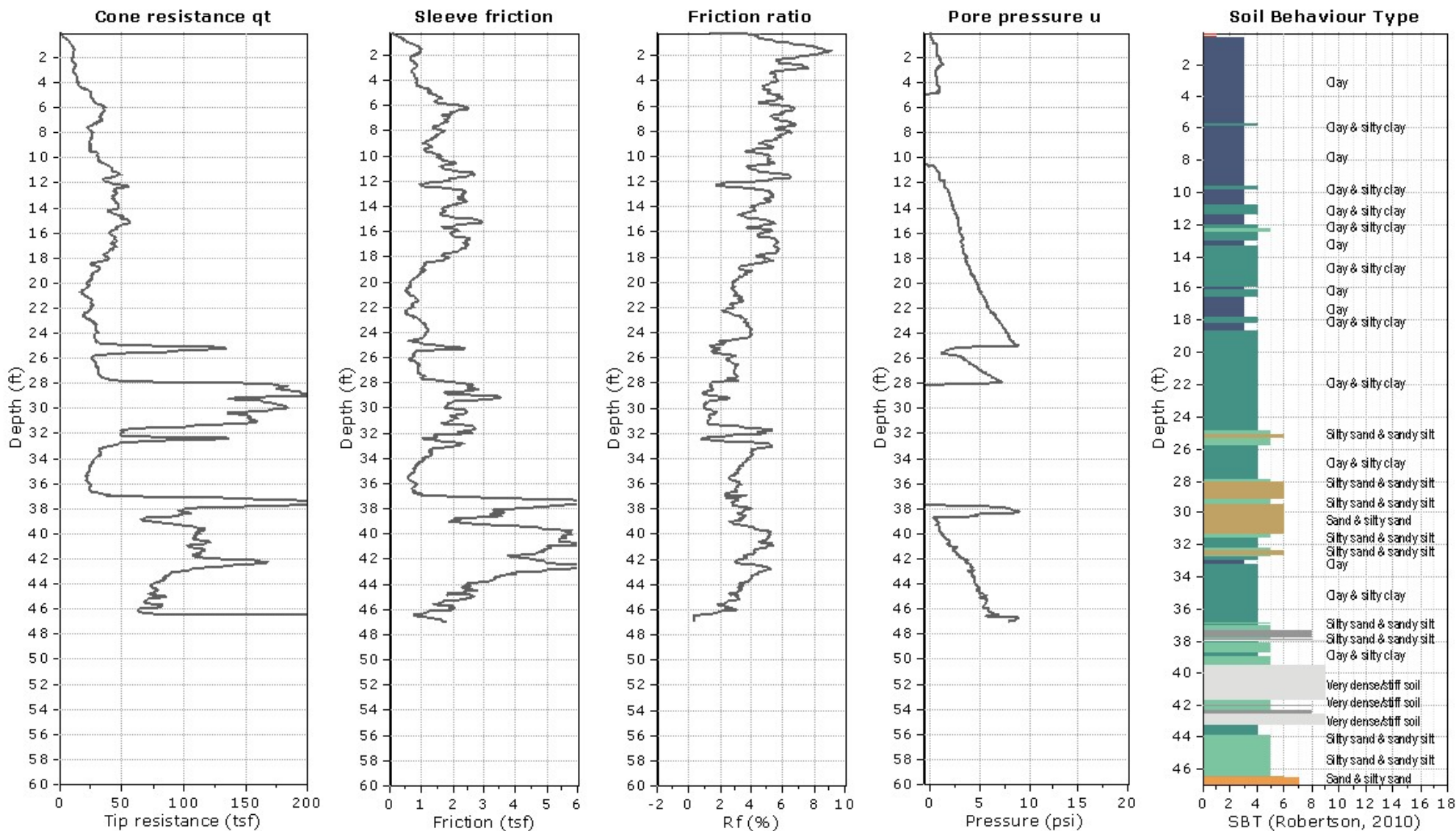


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-47**

Total depth: 46.98 ft, Date: 4/30/2025  
Coords: lat 39.621062° lon -88.198786°  
Cone Type: CPT  
Cone Operator: Fugro



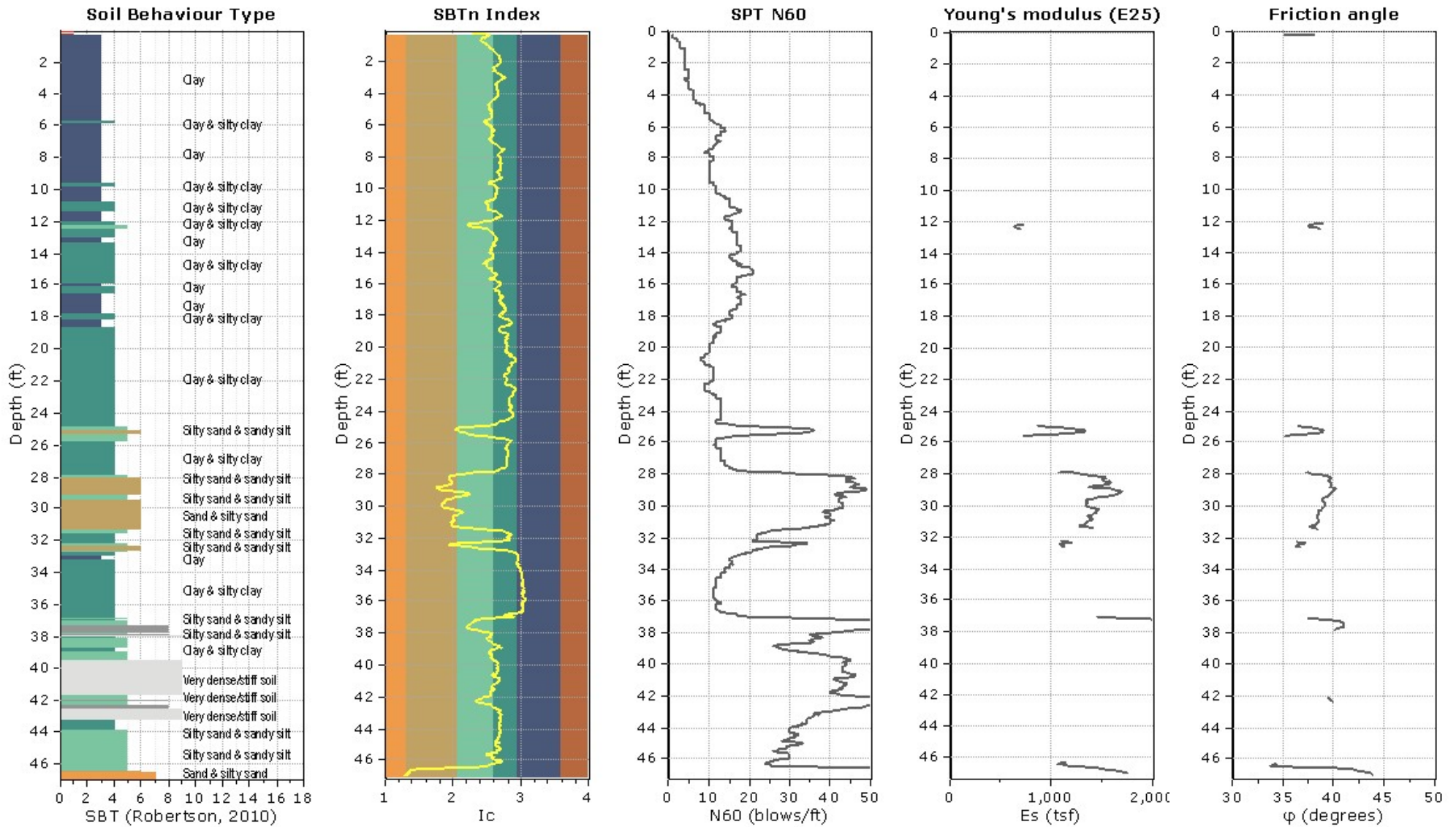




**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-47**

Total depth: 46.98 ft, Date: 4/30/2025  
Coords: lat 39.621062° lon -88.198786°  
Cone Type: CPT  
Cone Operator: Fugro



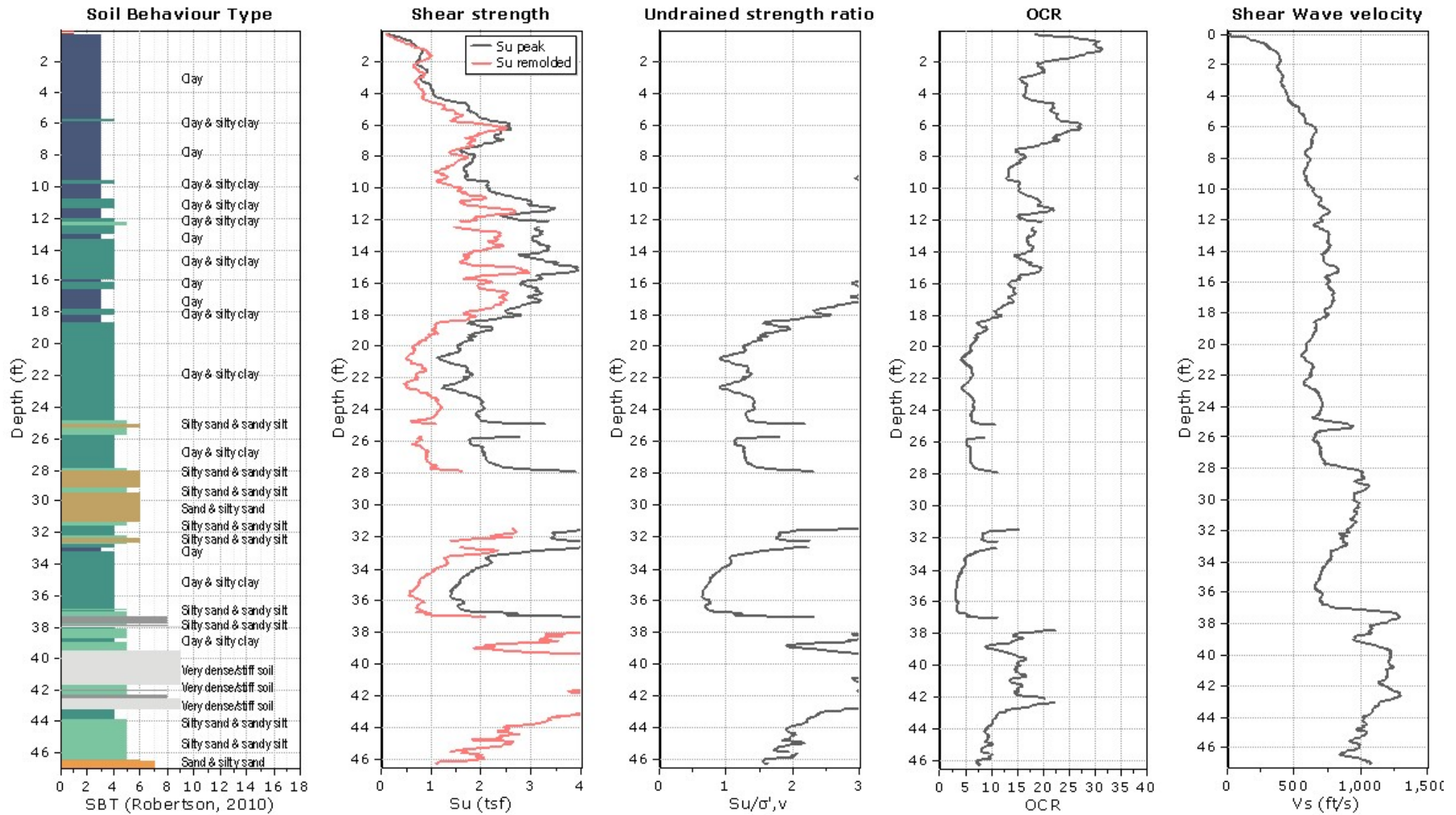


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-47**

Total depth: 46.98 ft, Date: 4/30/2025  
Coords: lat 39.621062° lon -88.198786°  
Cone Type: CPT  
Cone Operator: Fugro



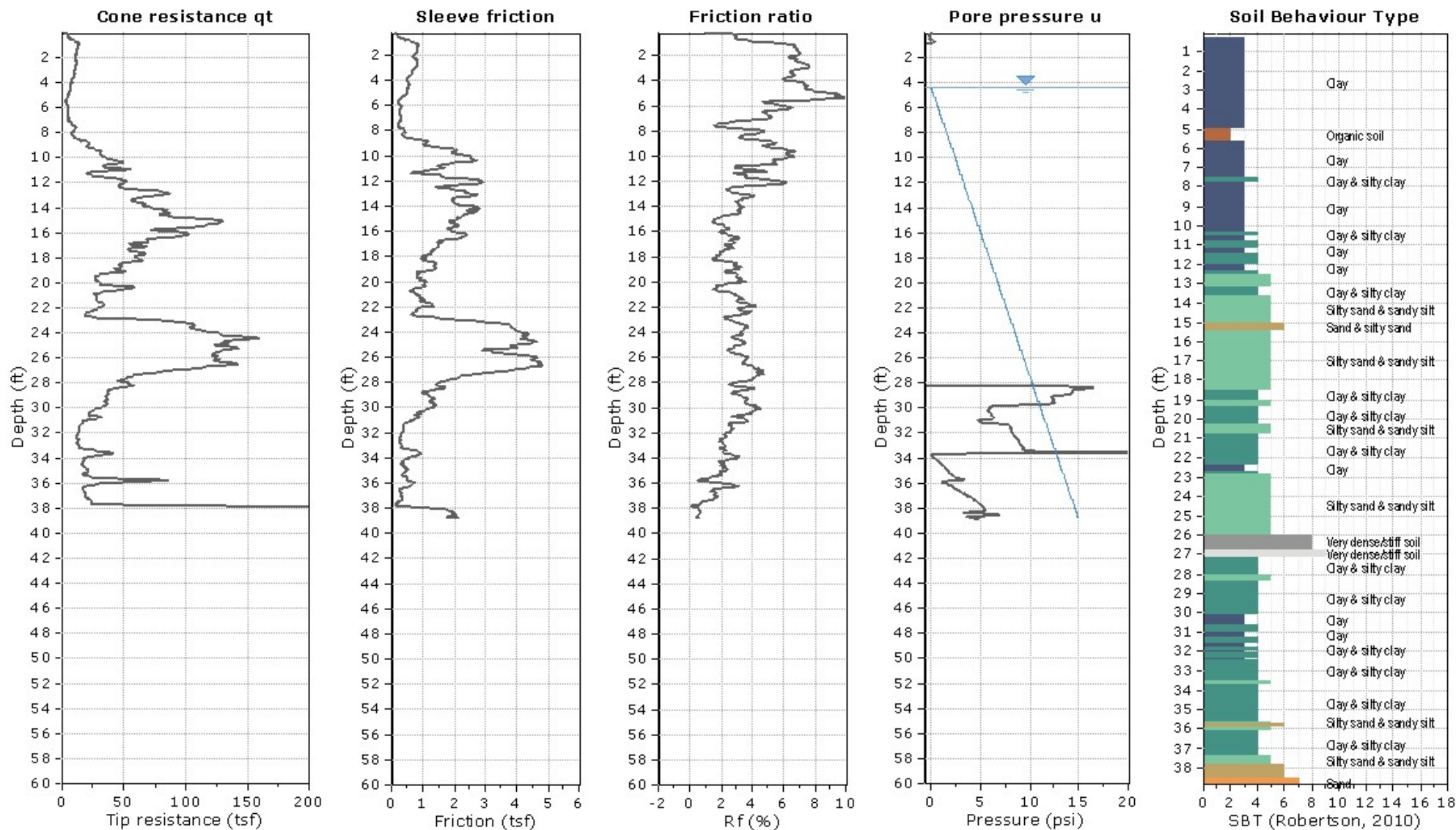


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-48**

Total depth: 38.85 ft, Date: 4/29/2025  
Coords: lat 39.614735° lon -88.208232°  
Cone Type: CPT  
Cone Operator: Fugro

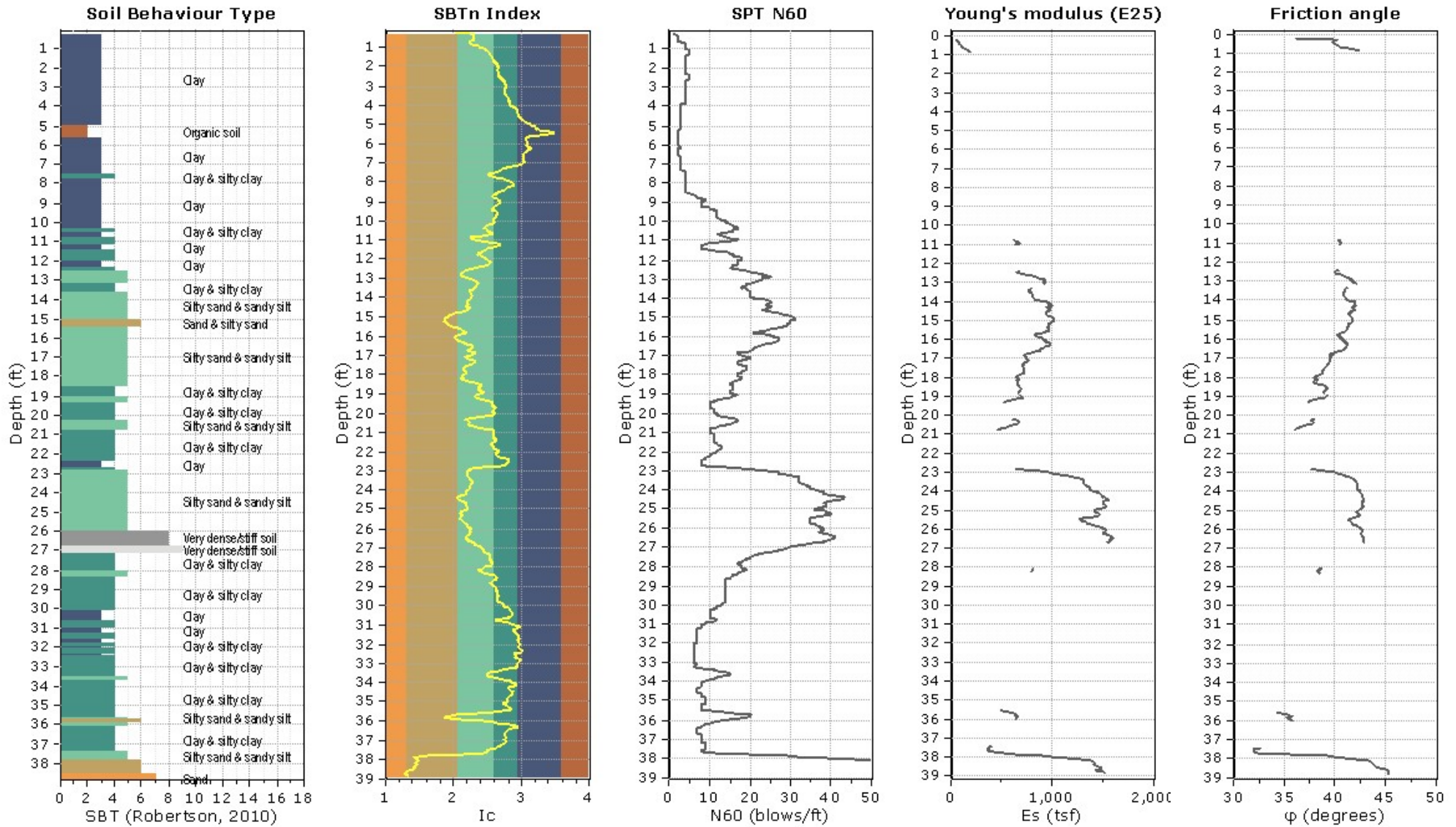






**Project:** Coles Wind

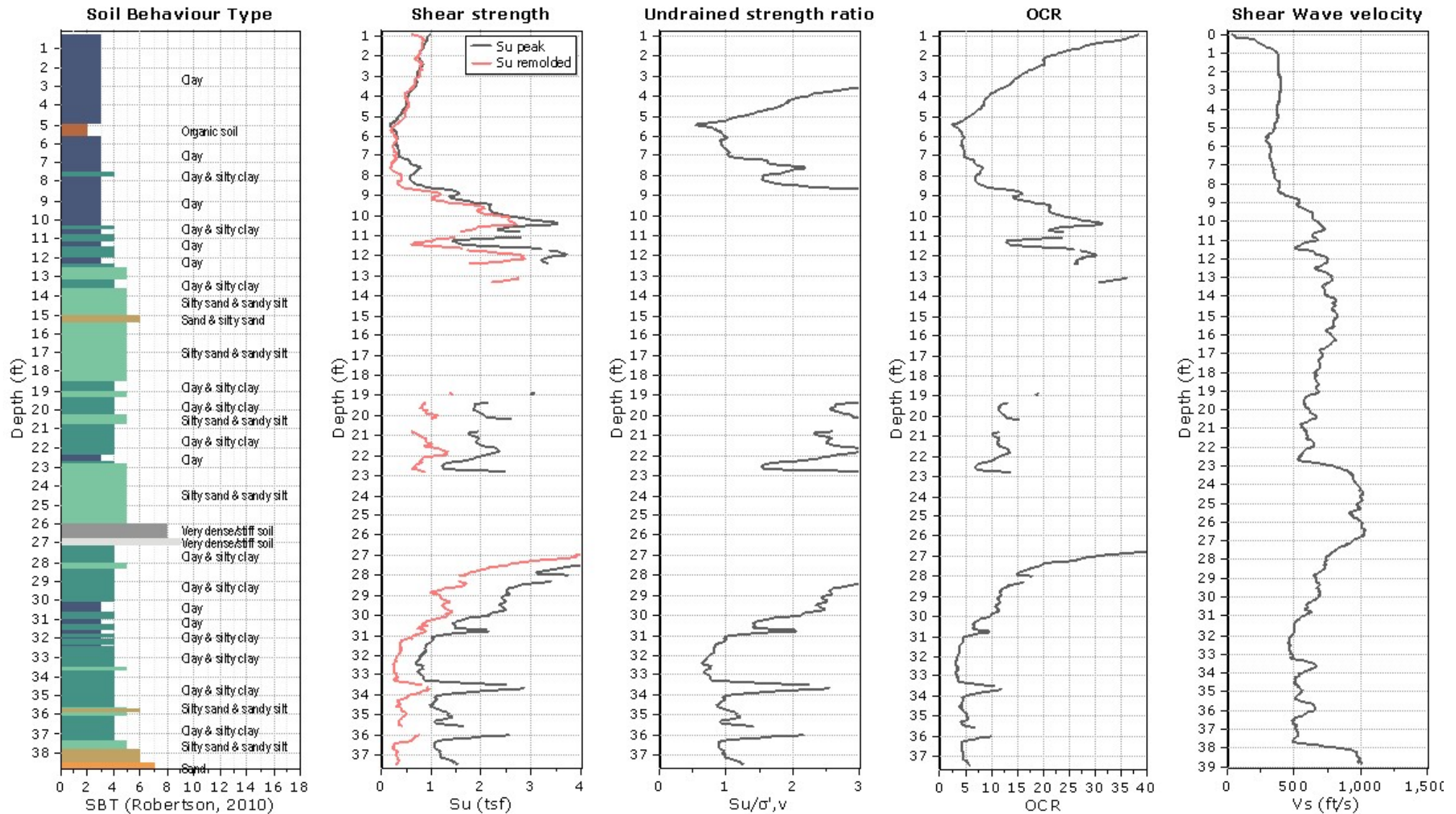
**Location:** Coles County, Illinois





**Project:** Coles Wind

**Location:** Coles County, Illinois







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**Project:** Coles Wind  
**Location:** Coles County, Illinois

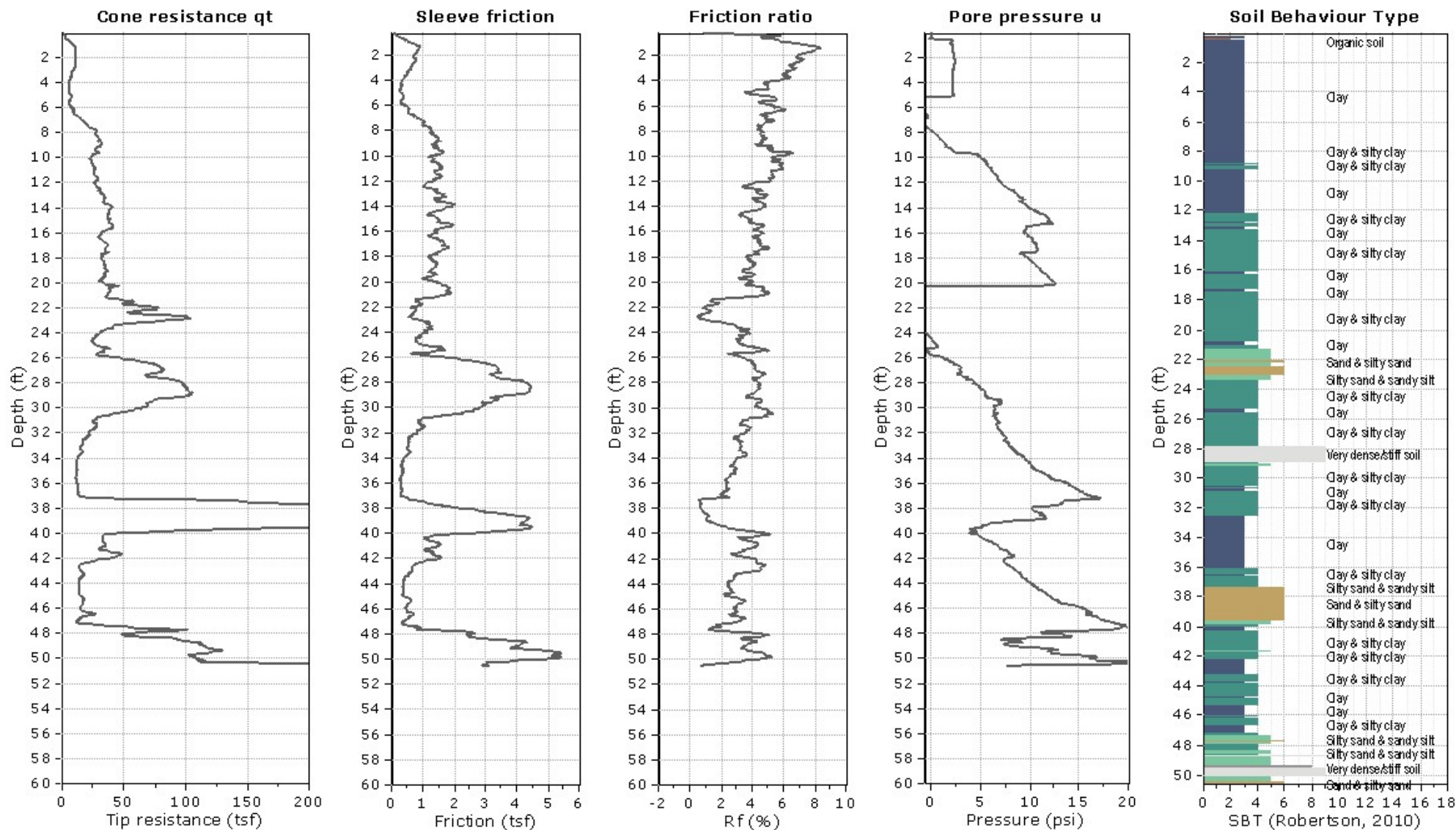
**CPT: GEO-49**

Total depth: 50.59 ft, Date: 4/30/2025

Coords: lat 39.61369° lon -88.220885°

Cone Type: CPT

Cone Operator: Fugro







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**Project:** Coles Wind  
**Location:** Coles County, Illinois

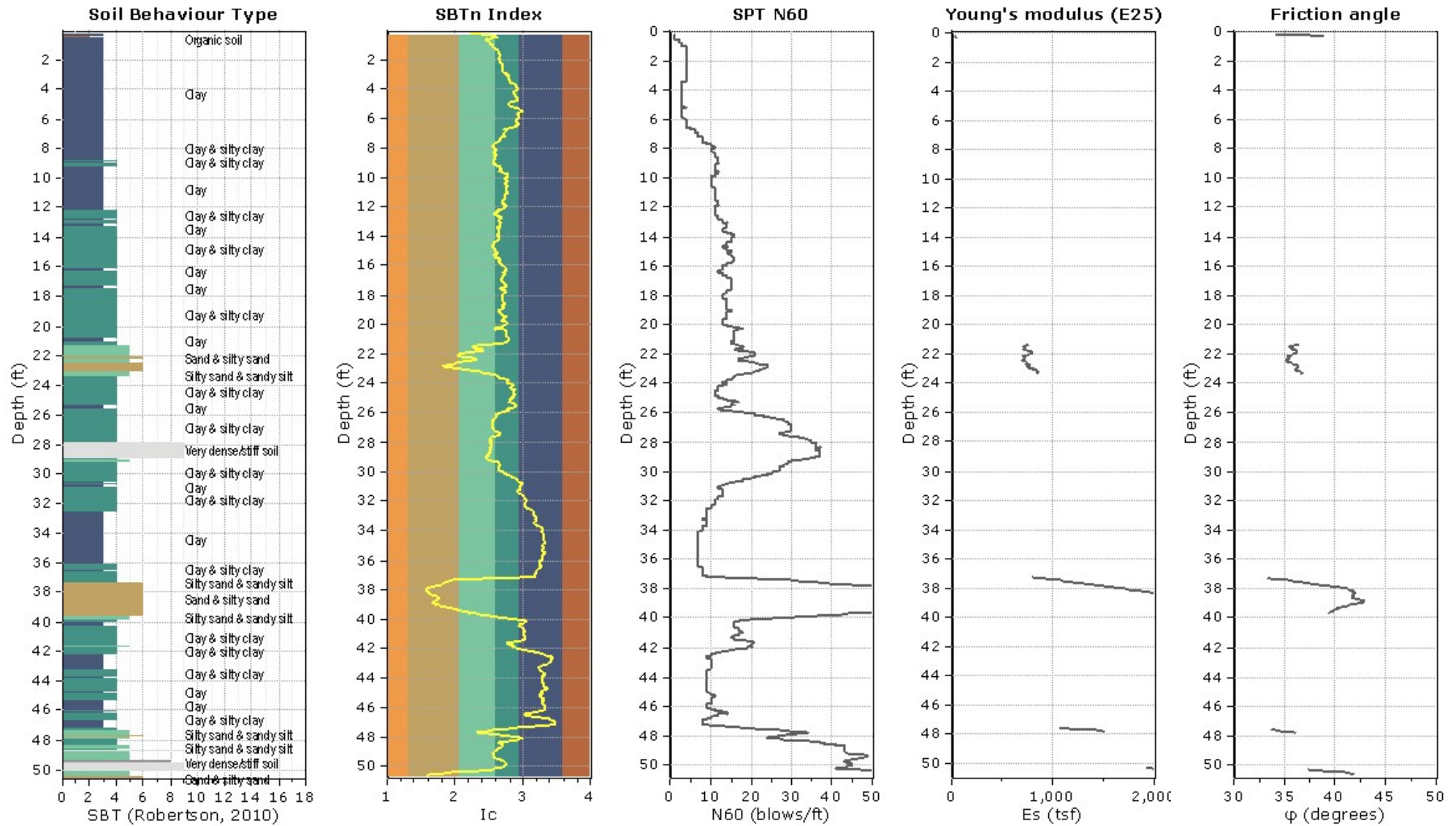
**CPT: GEO-49**

Total depth: 50.59 ft, Date: 4/30/2025

Coords: lat 39.61369° lon -88.220885°

Cone Type: CPT

Cone Operator: Fugro





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Round Rock, TX 78681  
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**Project:** Coles Wind  
**Location:** Coles County, Illinois

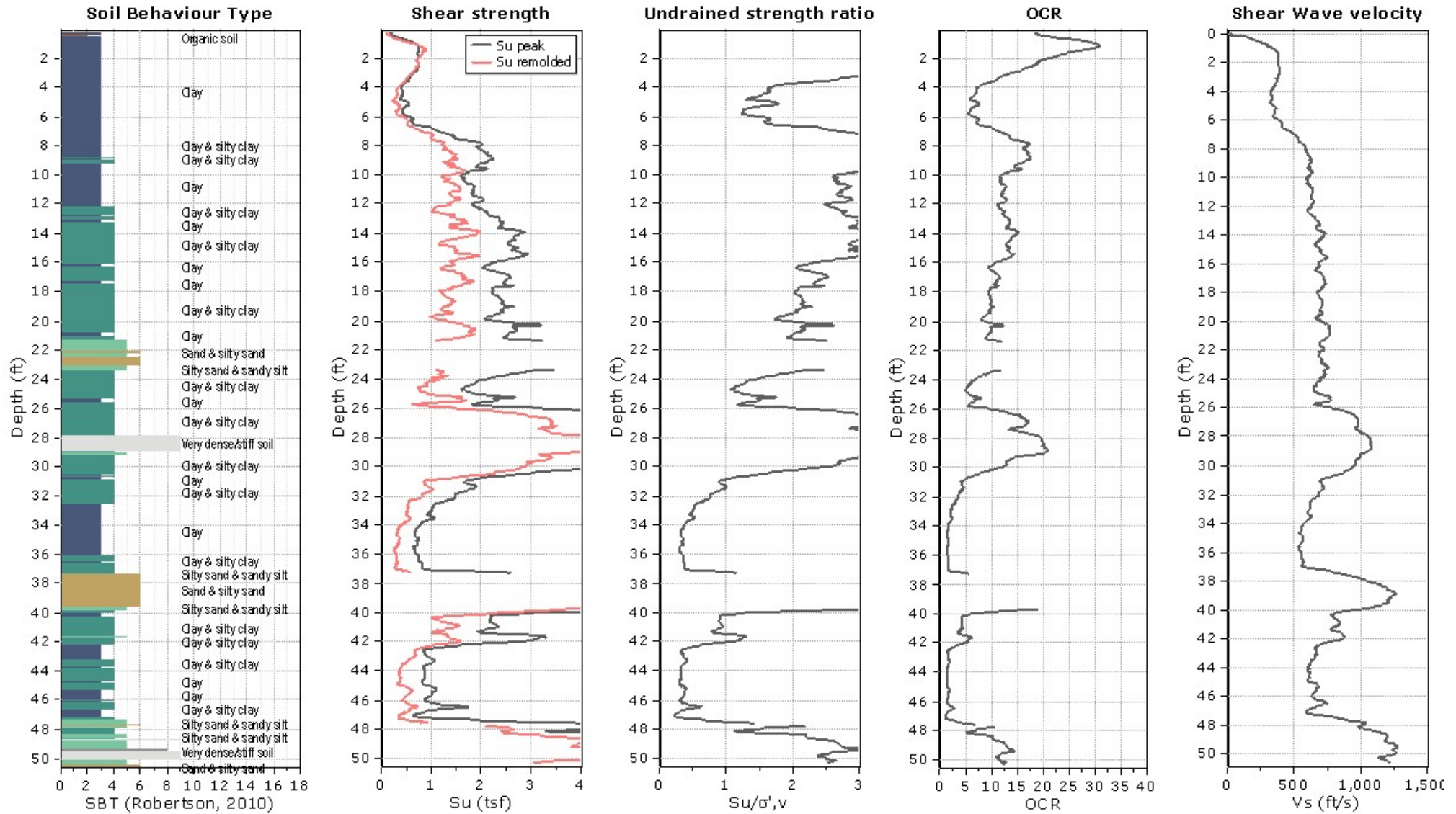
**CPT: GEO-49**

Total depth: 50.59 ft, Date: 4/30/2025

Coords: lat 39.61369° lon -88.220885°

Cone Type: CPT

Cone Operator: Fugro





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**Project:** Coles Wind  
**Location:** Coles County, Illinois

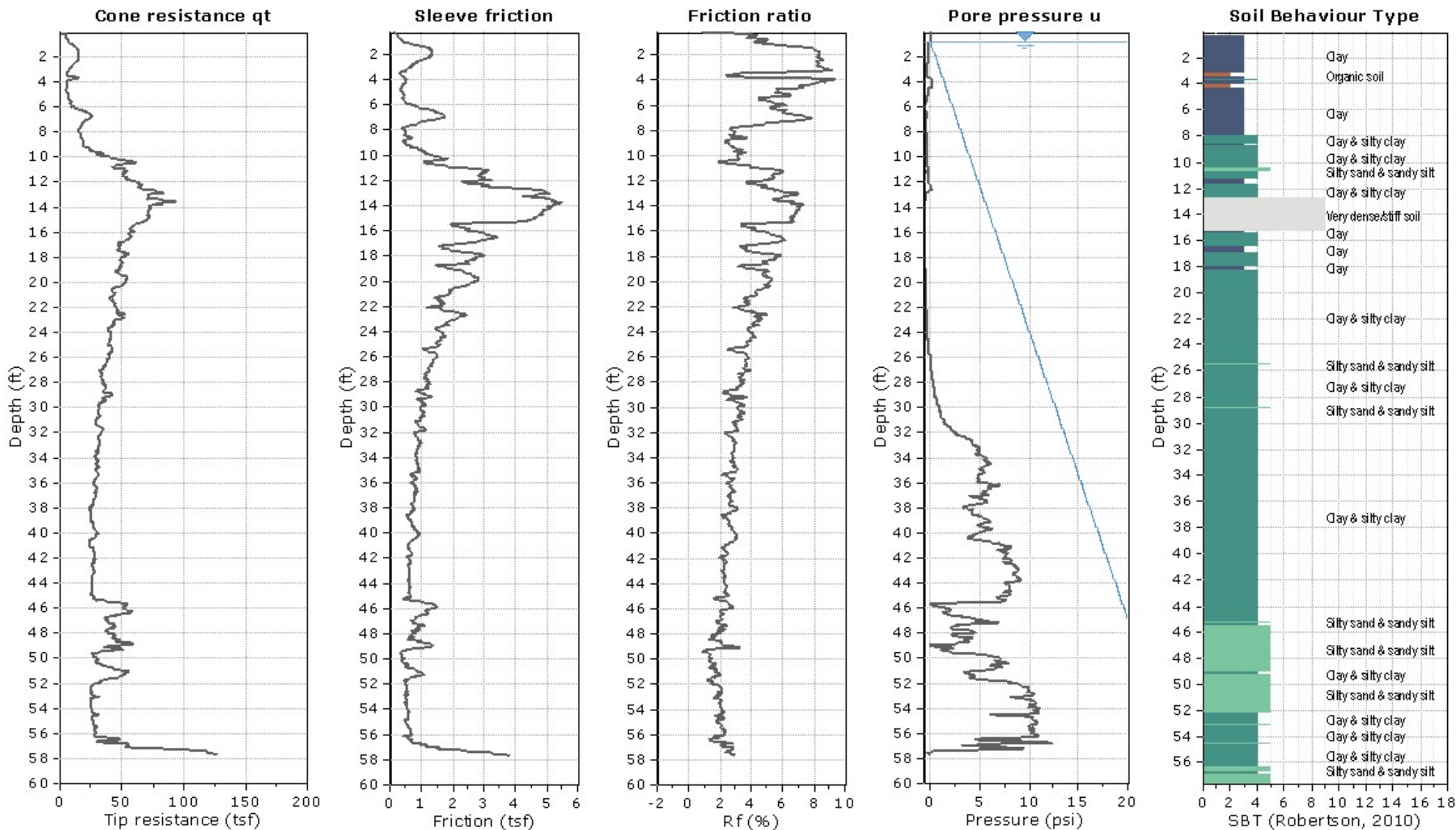
**CPT: GEO-50**

Total depth: 57.64 ft, Date: 4/24/2025

Coords: lat 39.626564° lon -88.23607°

Cone Type: CPT

Cone Operator: Fugro







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**Project:** Coles Wind  
**Location:** Coles County, Illinois

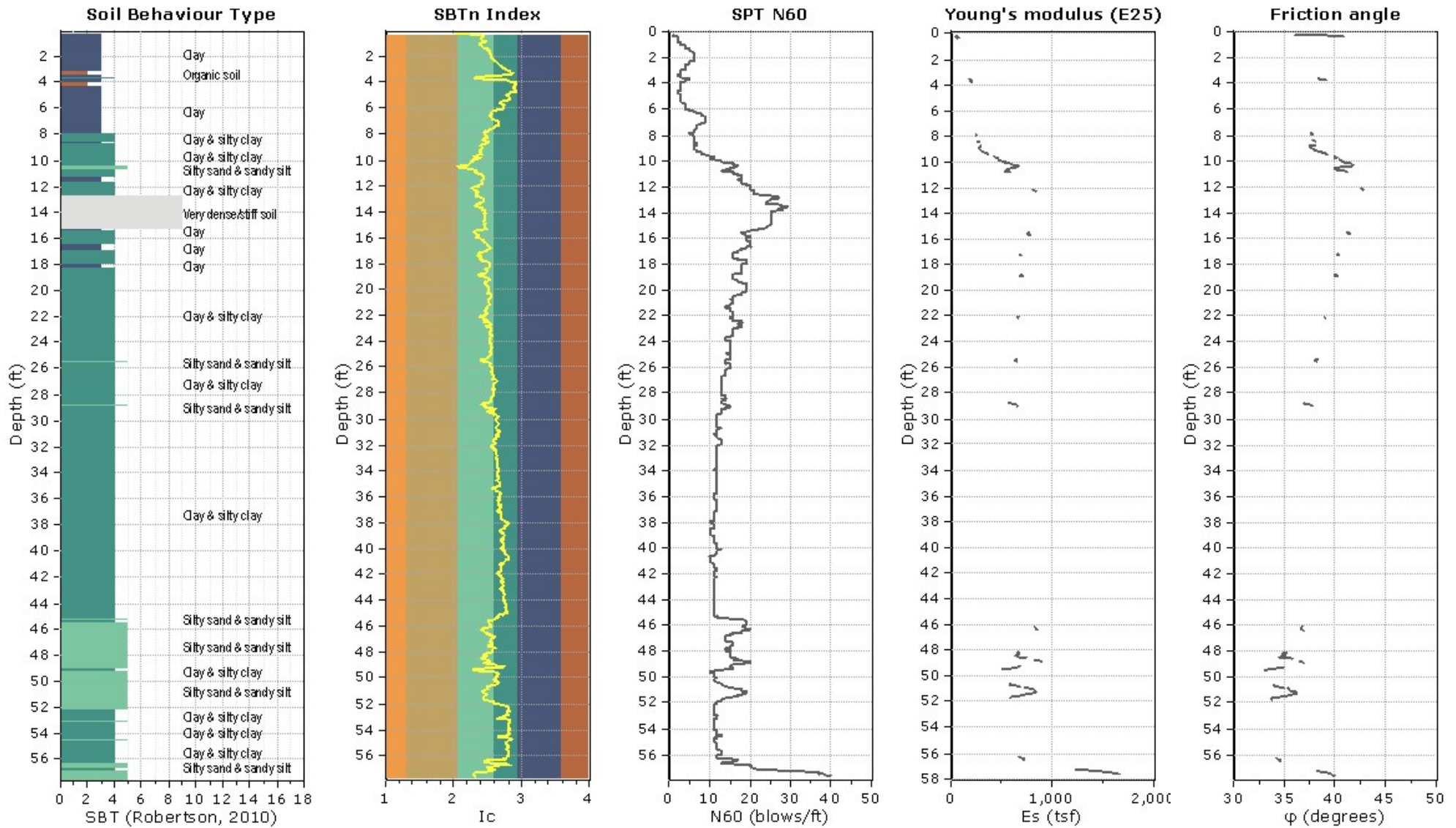
**CPT: GEO-50**

Total depth: 57.64 ft, Date: 4/24/2025

Coords: lat 39.626564° lon -88.23607°

Cone Type: CPT

Cone Operator: Fugro





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**Project:** Coles Wind  
**Location:** Coles County, Illinois

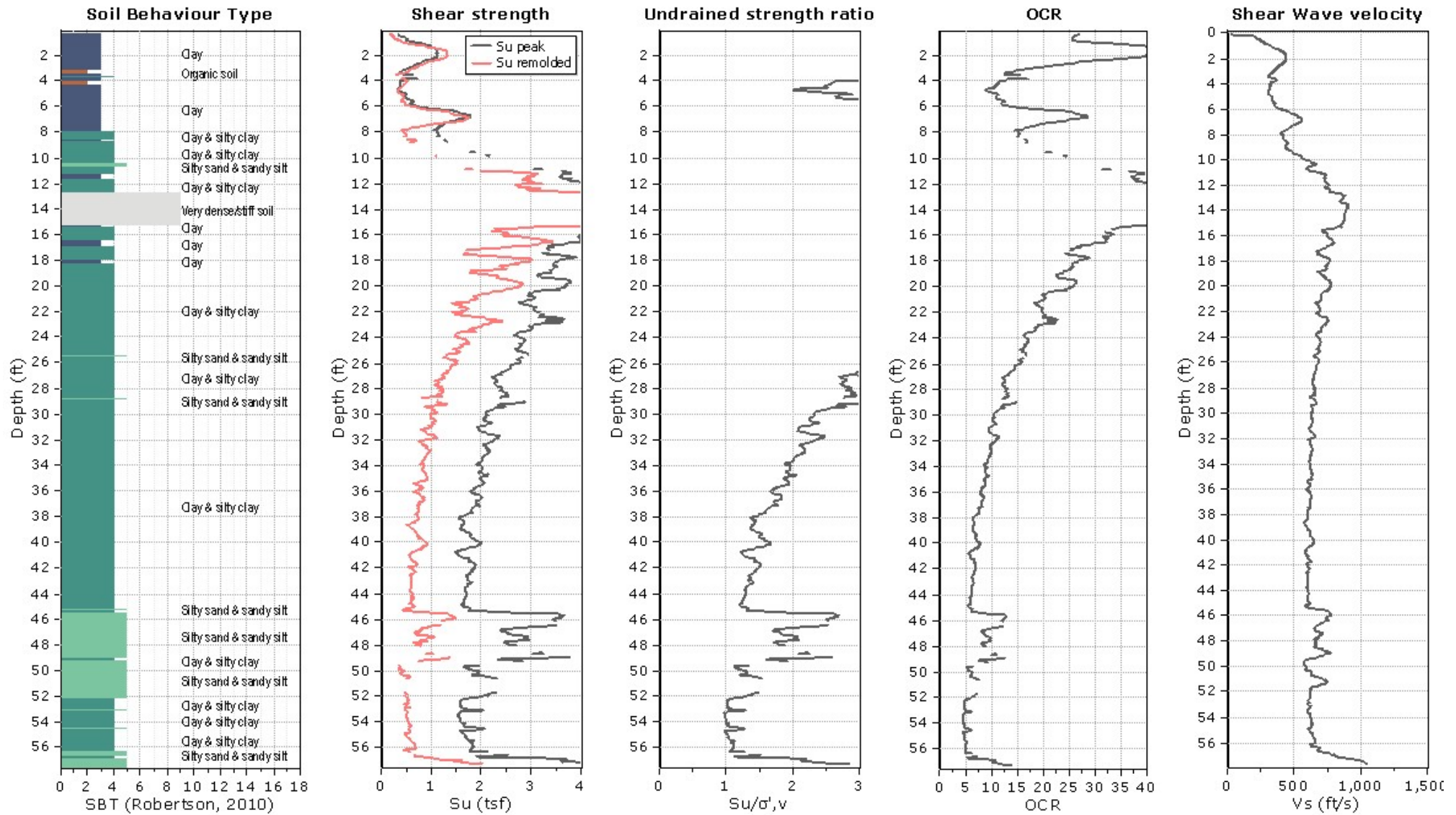
**CPT: GEO-50**

Total depth: 57.64 ft, Date: 4/24/2025

Coords: lat 39.626564° lon -88.23607°

Cone Type: CPT

Cone Operator: Fugro



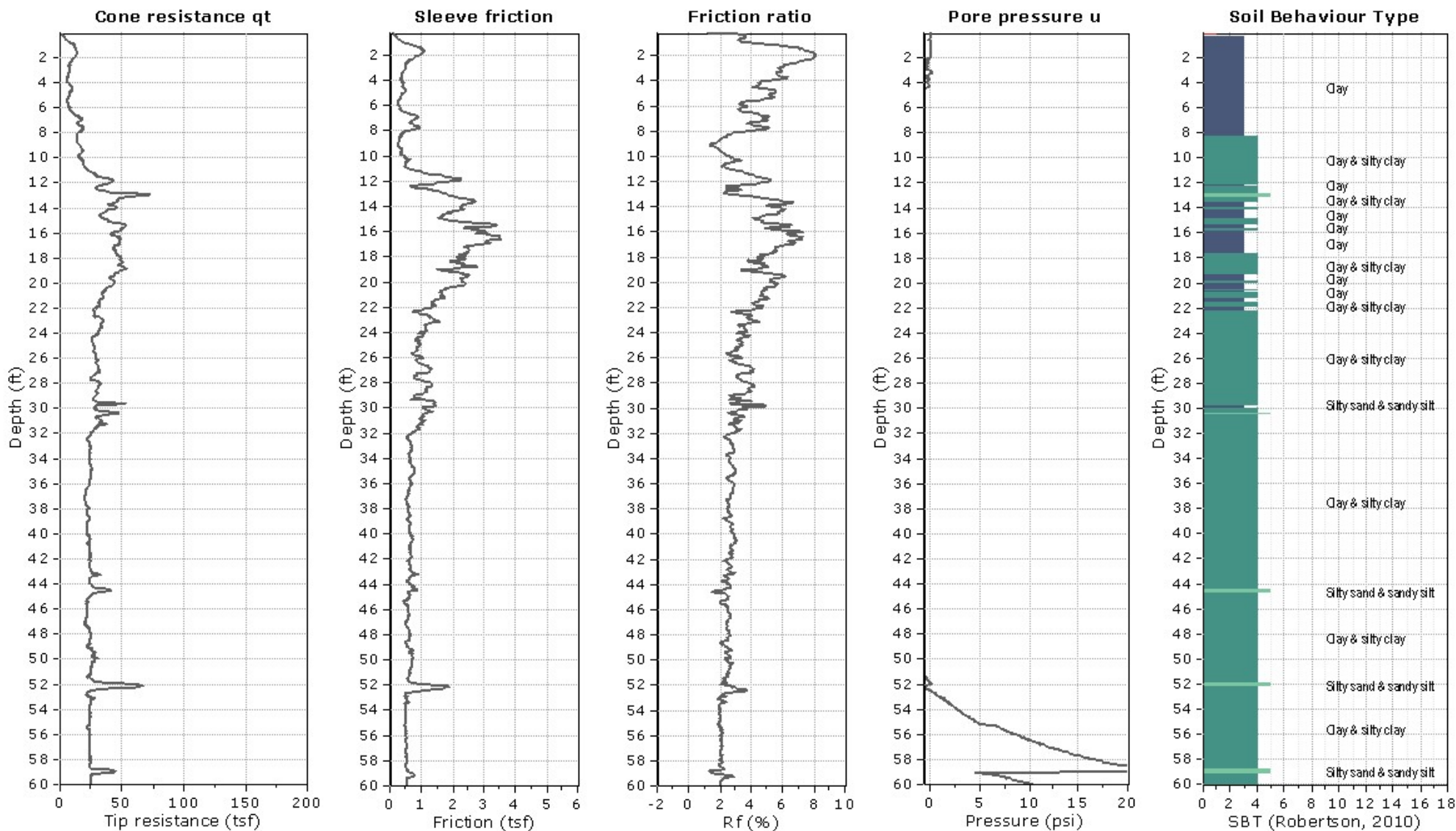


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-51**

Total depth: 60.10 ft, Date: 4/23/2025  
Coords: lat 39.629093° lon -88.223195°  
Cone Type: CPT  
Cone Operator: Fugro

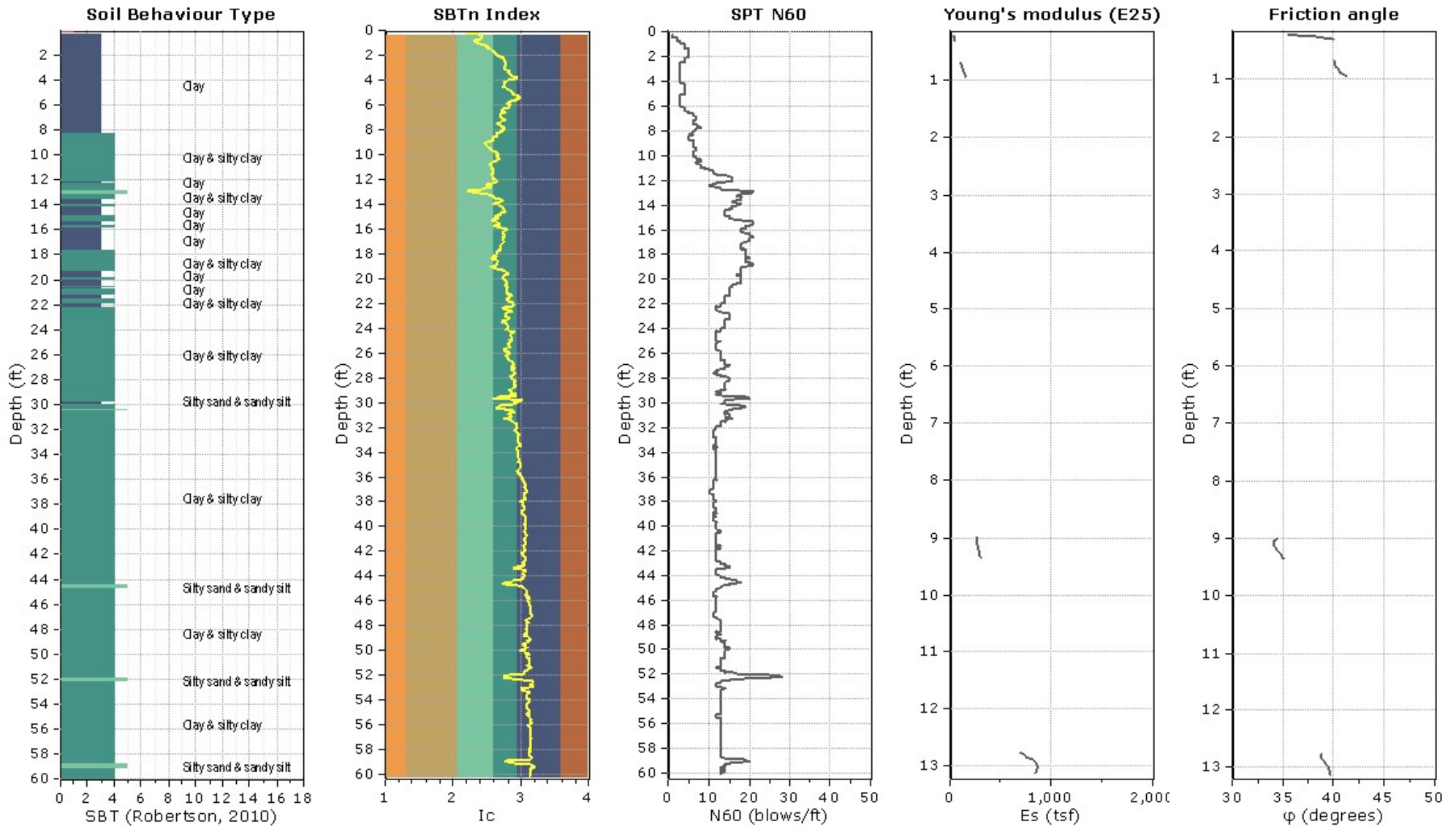






**Project:** Coles Wind

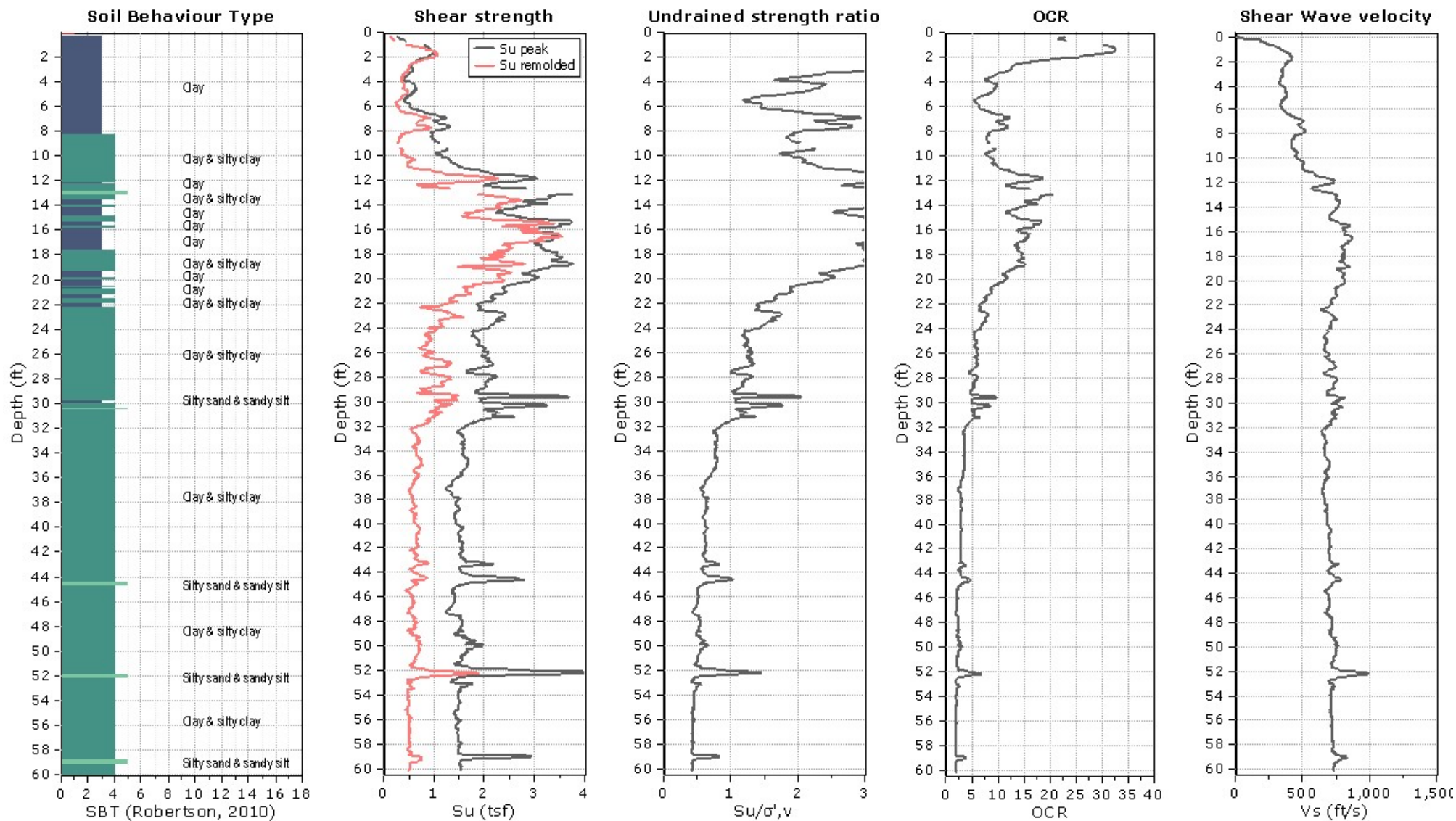
**Location:** Coles County, Illinois





**Project:** Coles Wind

**Location:** Coles County, Illinois



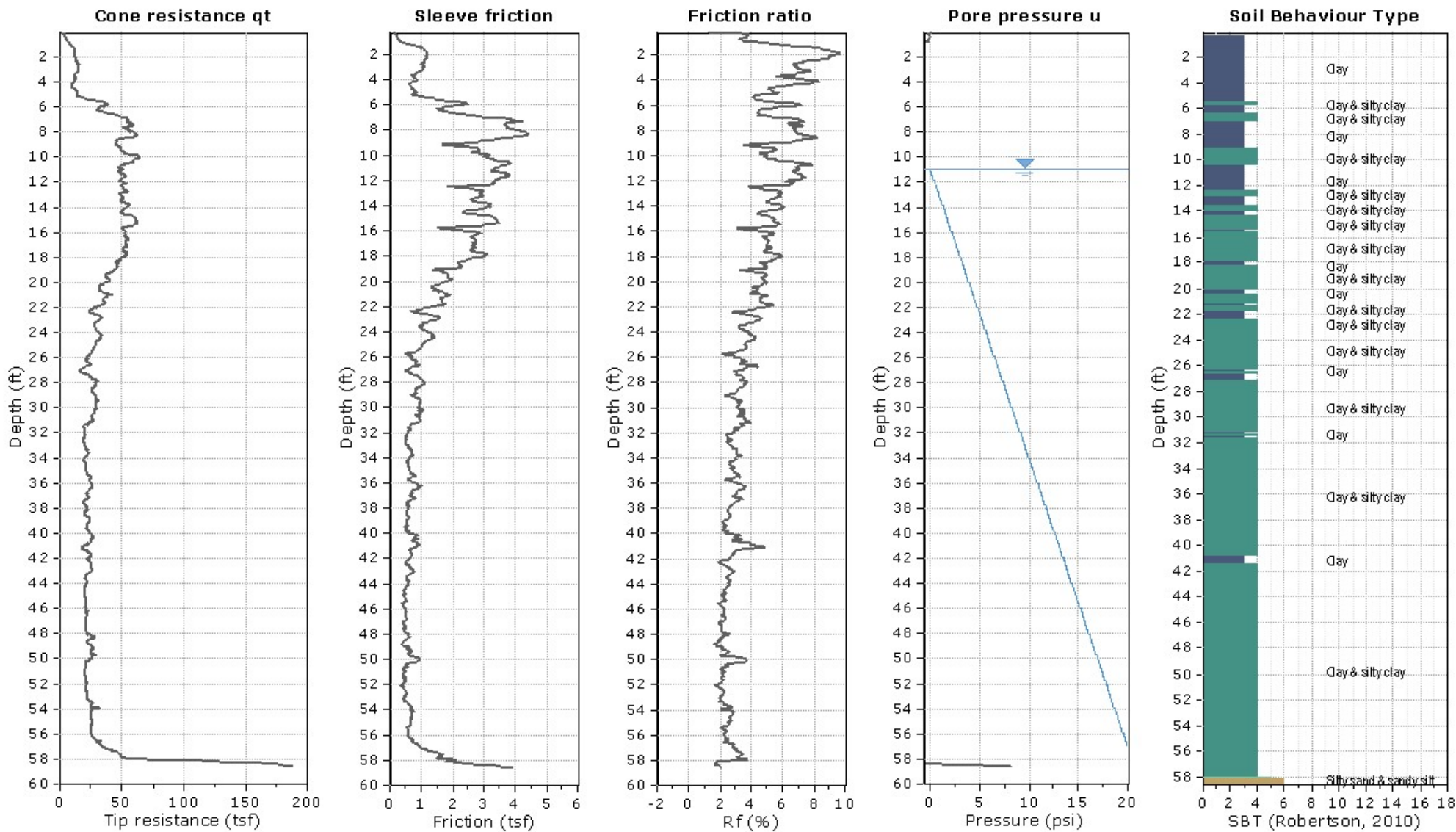


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-52**

Total depth: 58.60 ft, Date: 4/26/2025  
Coords: lat 39.626261° lon -88.187792°  
Cone Type: CPT  
Cone Operator: Fugro

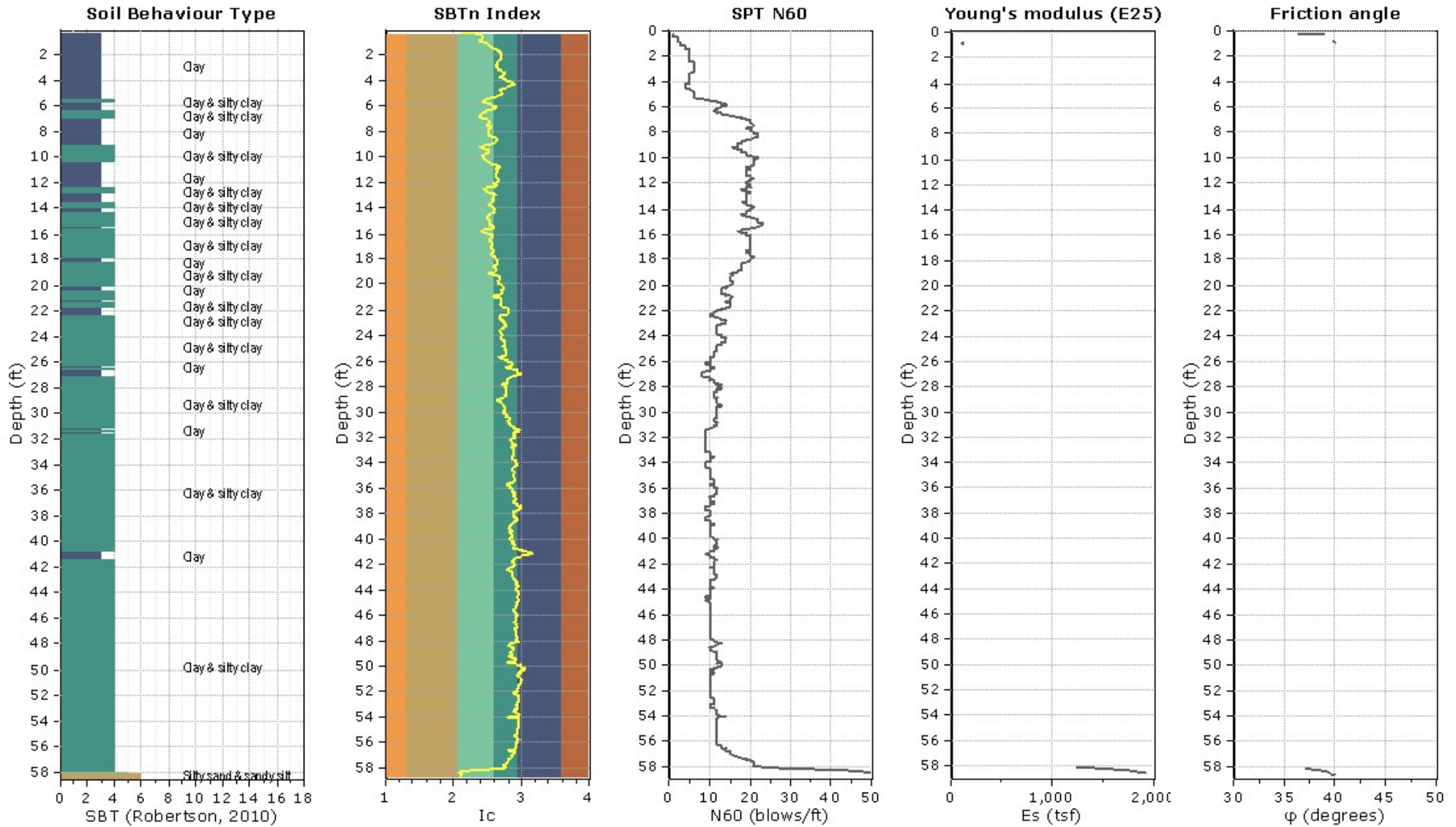






**Project:** Coles Wind

**Location:** Coles County, Illinois





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Round Rock, TX 78681  
rrccompanies.com

**CPT: GEO-52**

Total depth: 58.60 ft, Date: 4/26/2025

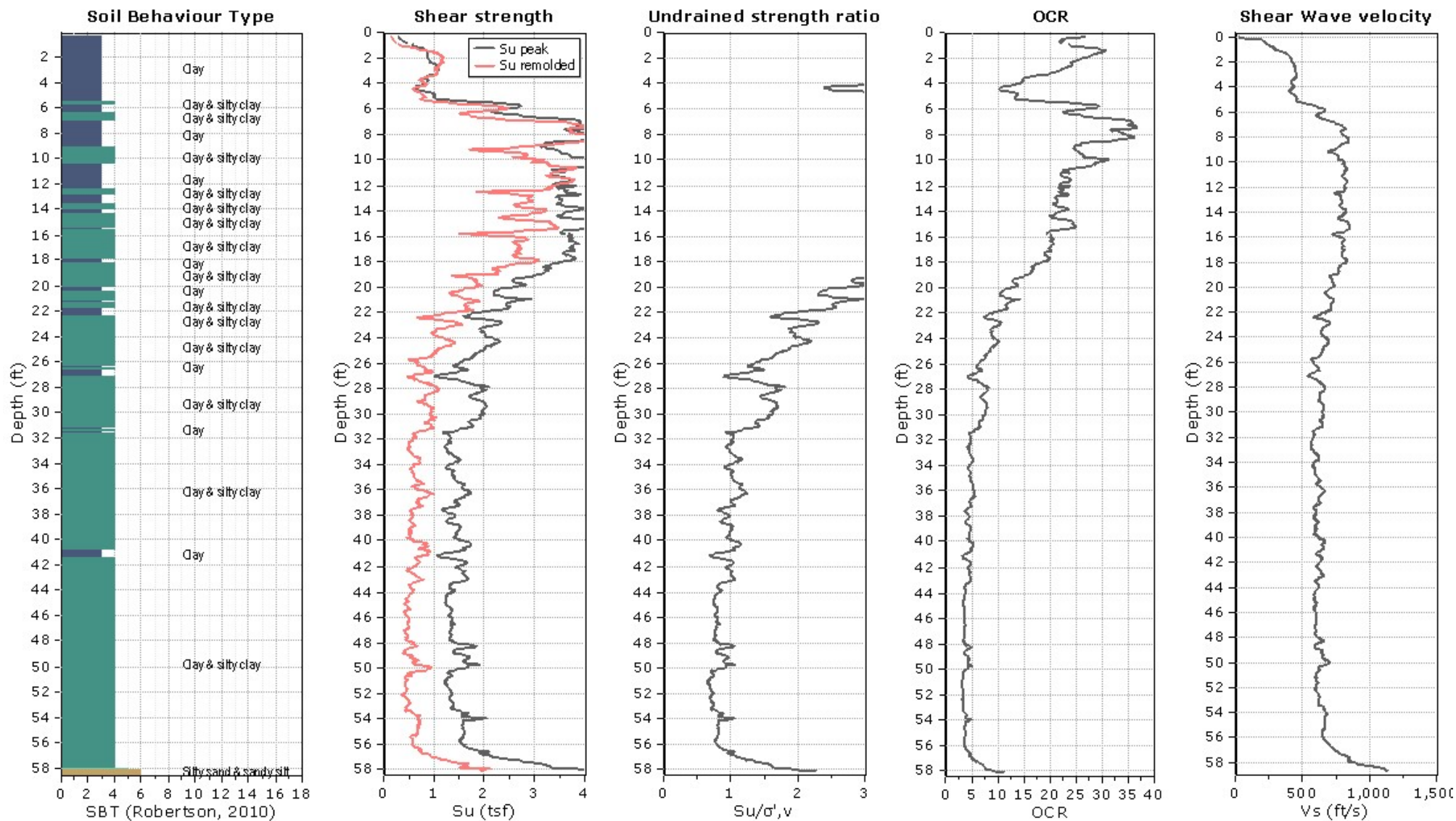
Coords: lat 39.626261° lon -88.187792°

Cone Type: CPT

Cone Operator: Fugro

**Project: Coles Wind**

**Location: Coles County, Illinois**



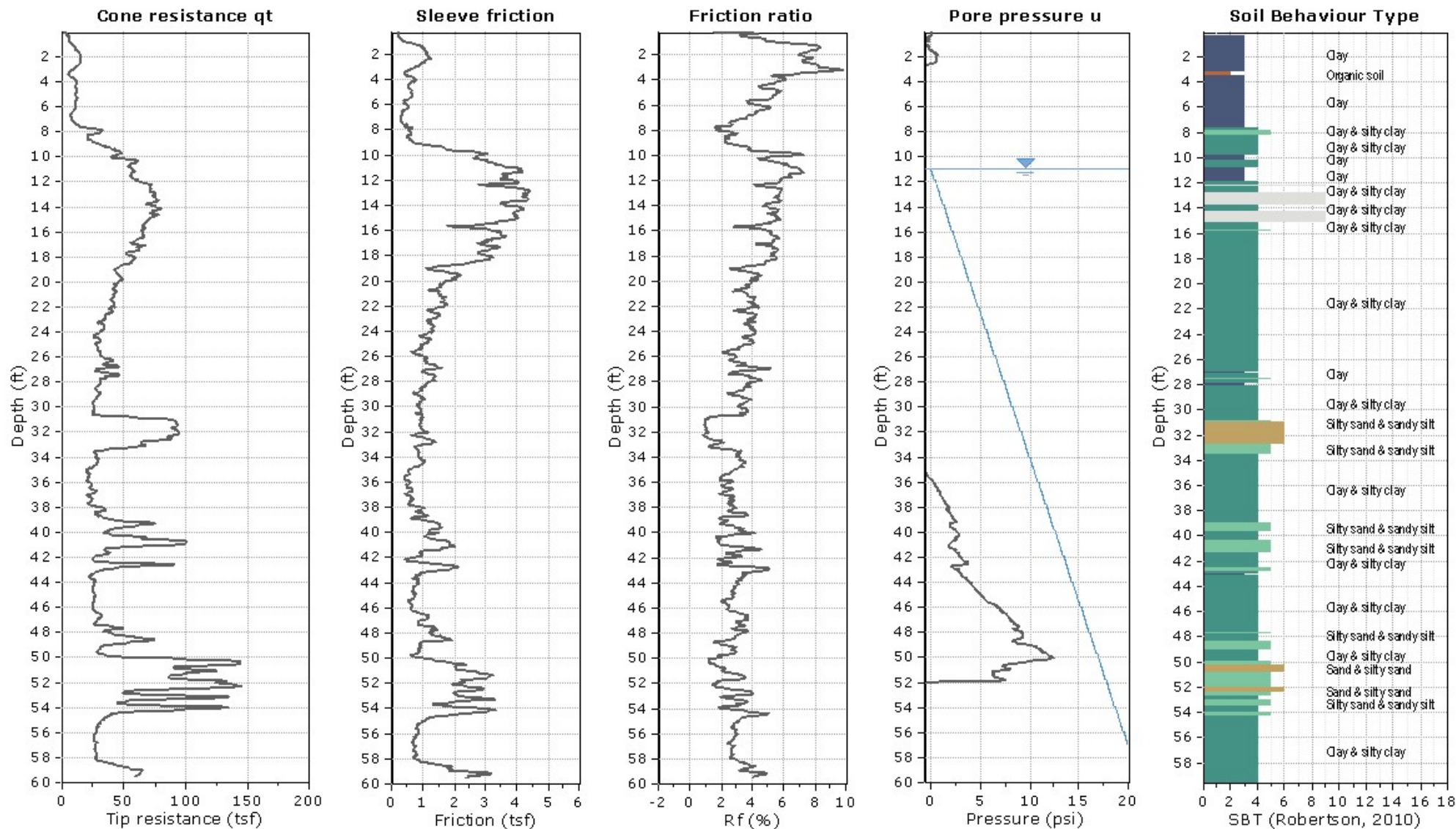


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Round Rock, TX 78681  
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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-53**

Total depth: 59.55 ft, Date: 4/26/2025  
Coords: lat 39.628019° lon -88.180345°  
Cone Type: CPT  
Cone Operator: Fugro





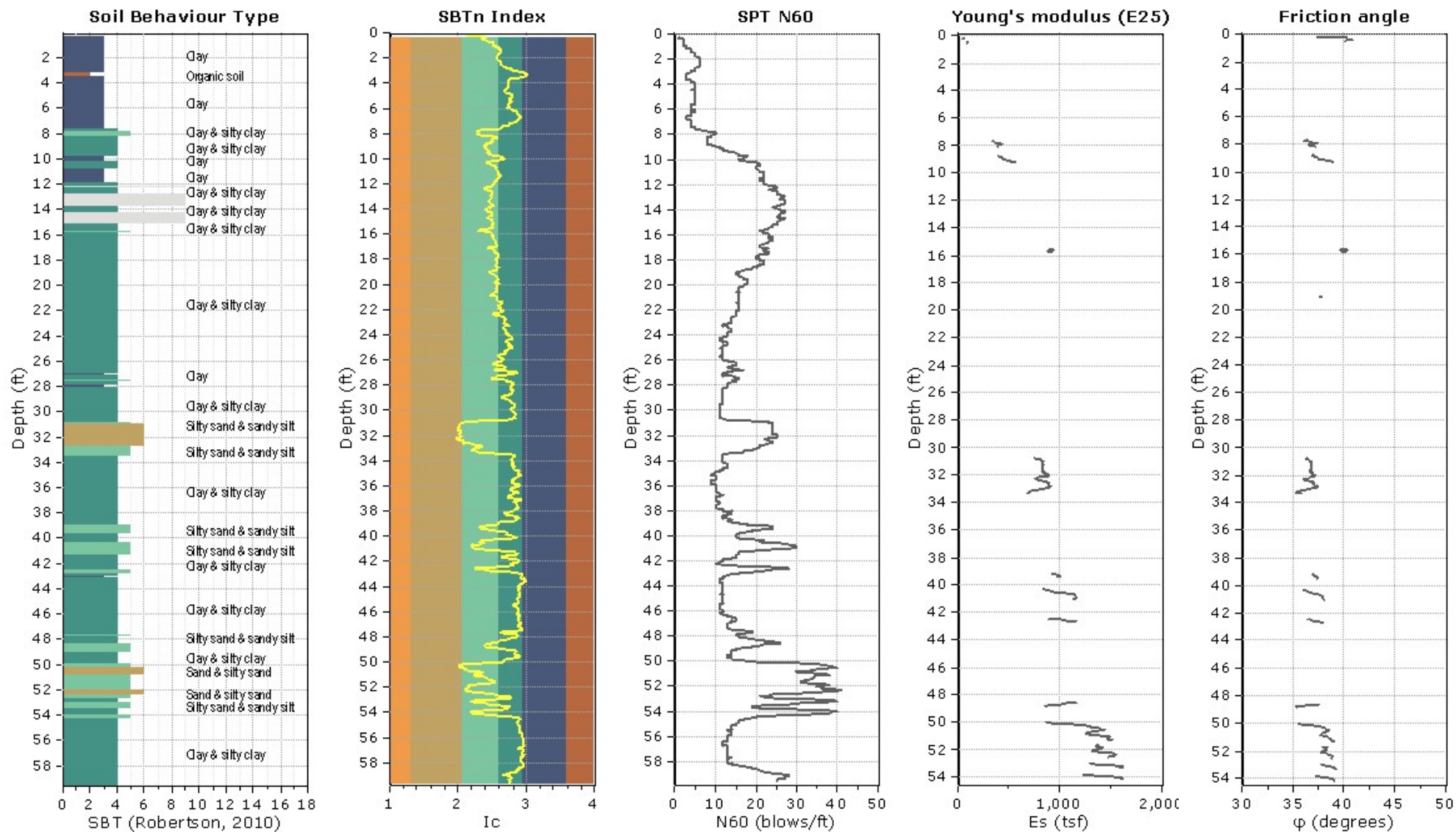


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-53**

Total depth: 59.55 ft, Date: 4/26/2025  
Coords: lat 39.628019° lon -88.180345°  
Cone Type: CPT  
Cone Operator: Fugro



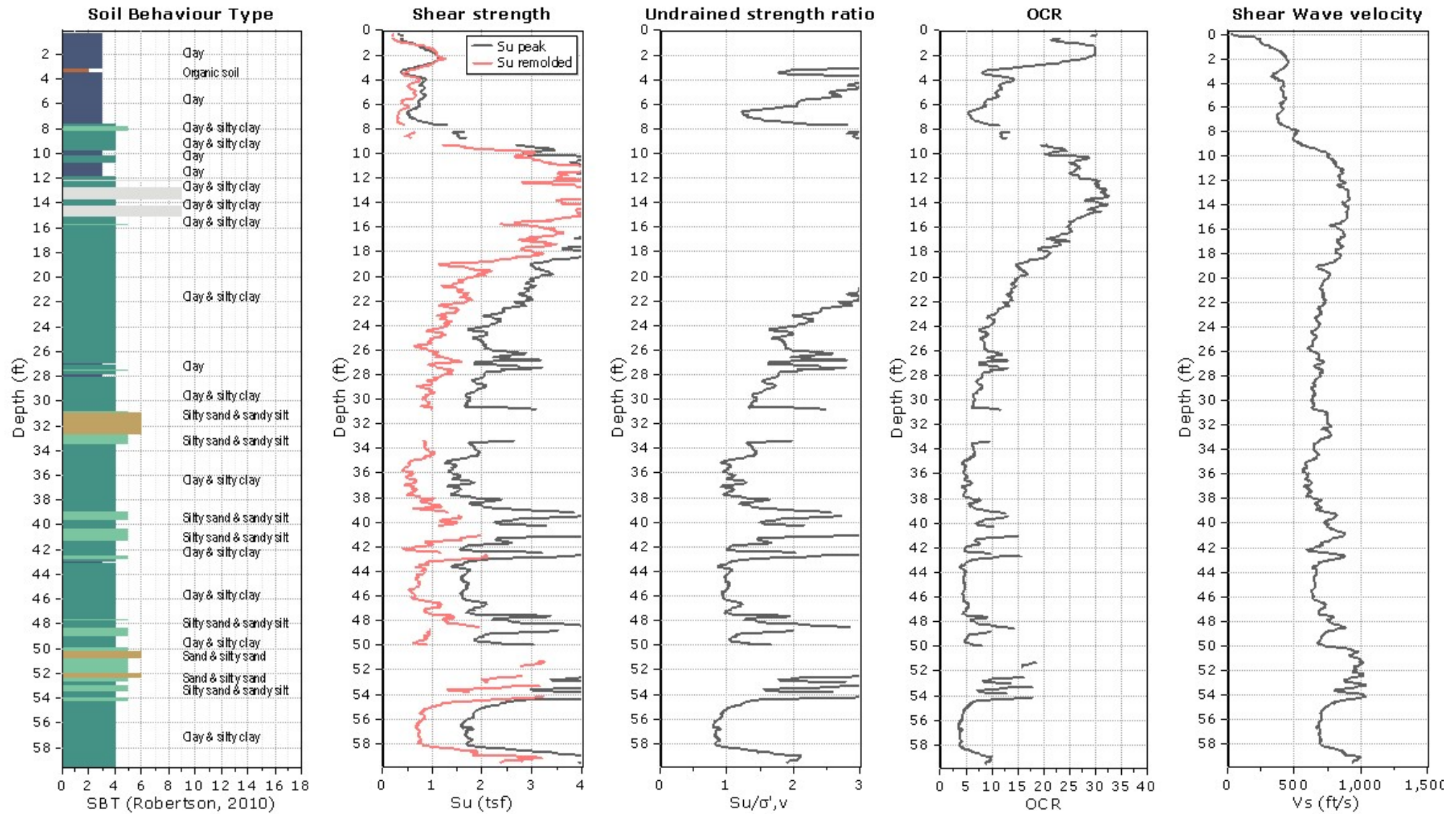


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-53**

Total depth: 59.55 ft, Date: 4/26/2025  
Coords: lat 39.628019° lon -88.180345°  
Cone Type: CPT  
Cone Operator: Fugro



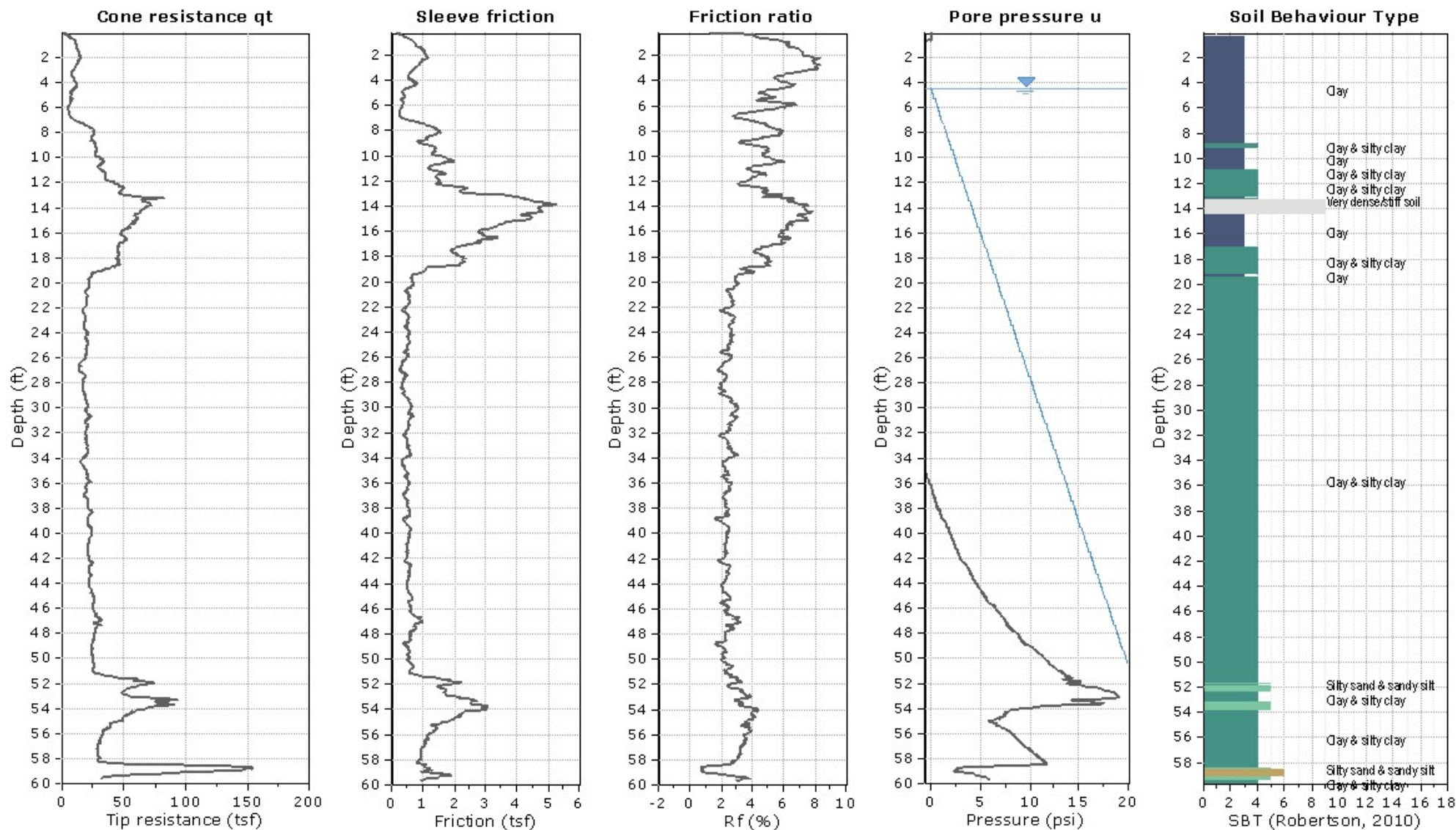


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-54**

Total depth: 59.68 ft, Date: 4/26/2025  
Coords: lat 39.631708° lon -88.189183°  
Cone Type: CPT  
Cone Operator: Fugro

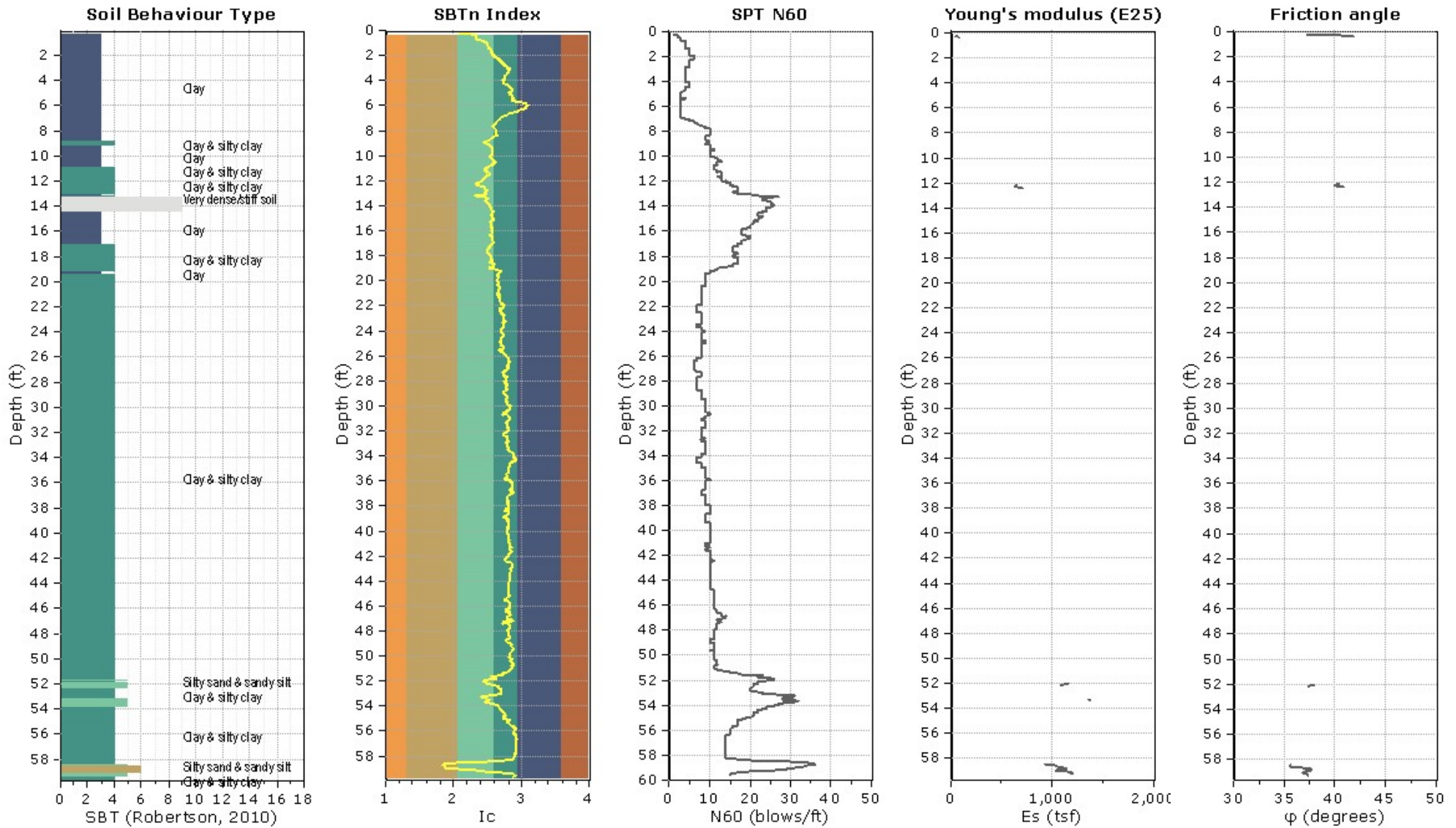


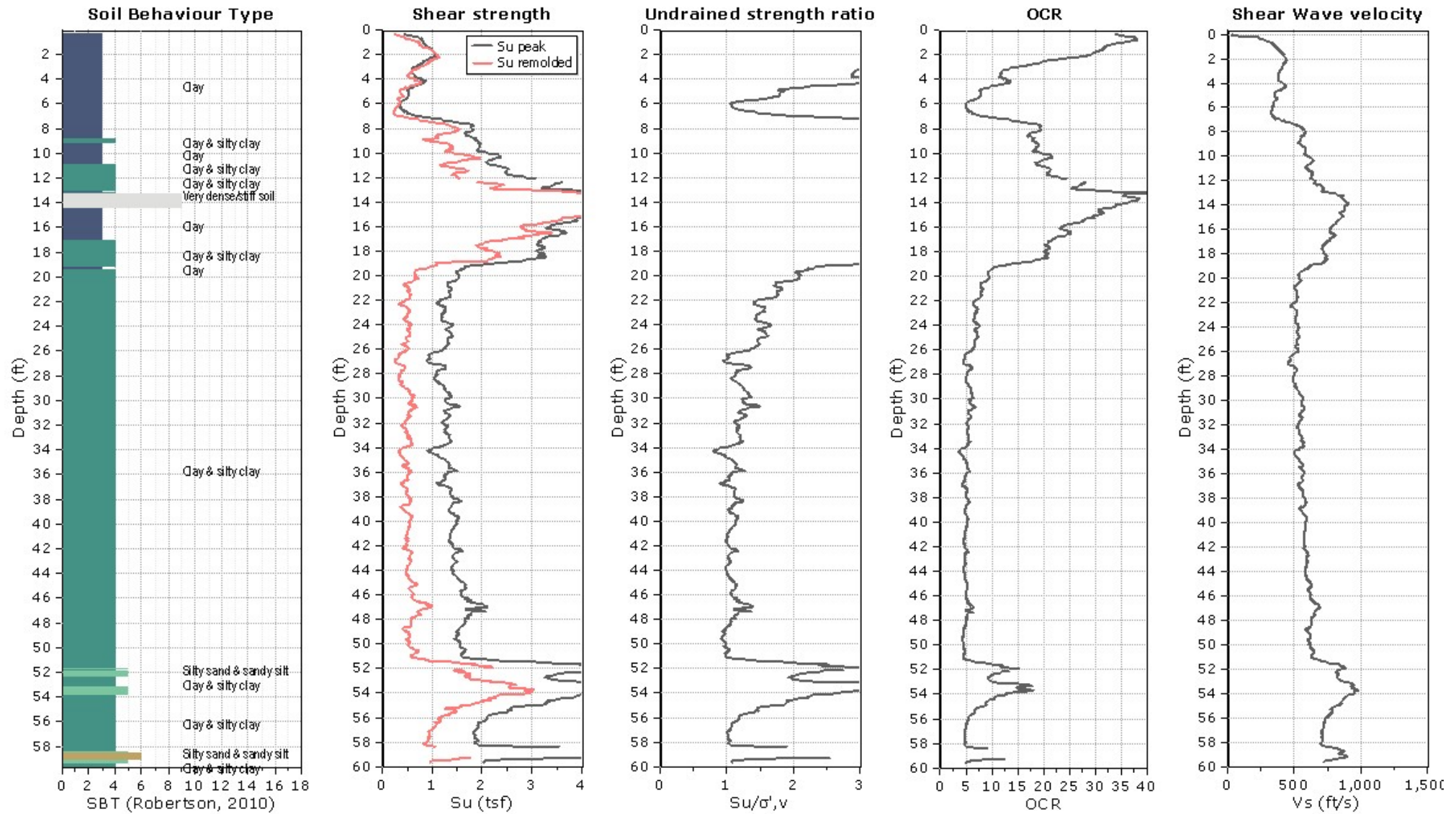




**Project:** Coles Wind

**Location:** Coles County, Illinois







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**Project:** Coles Wind  
**Location:** Coles County, Illinois

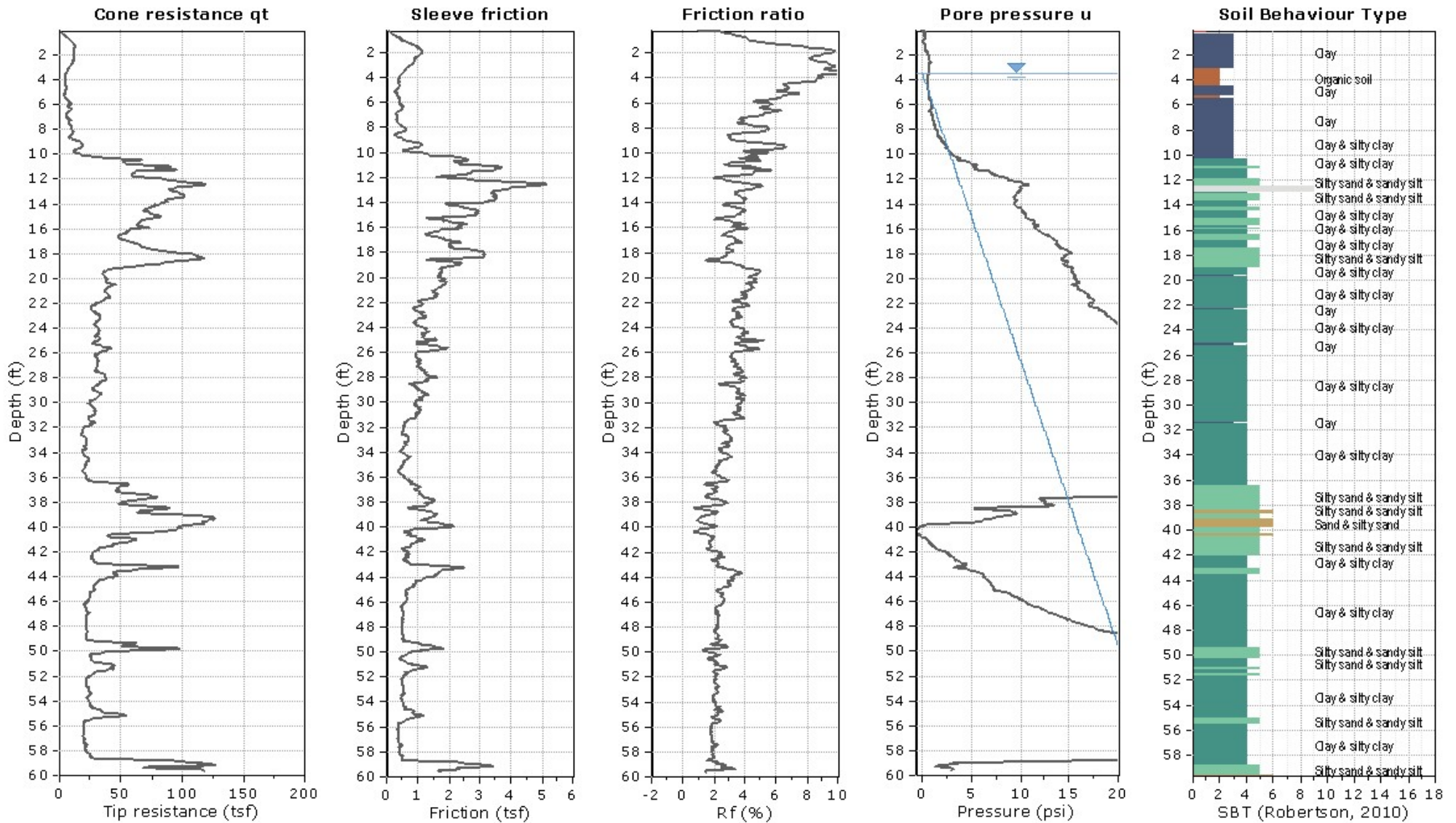
**CPT: GEO-55**

Total depth: 59.61 ft, Date: 4/23/2025

Coords: lat 39.631481° lon -88.22902°

Cone Type: CPT

Cone Operator: Fugro







**Project:** Coles Wind  
**Location:** Coles County, Illinois

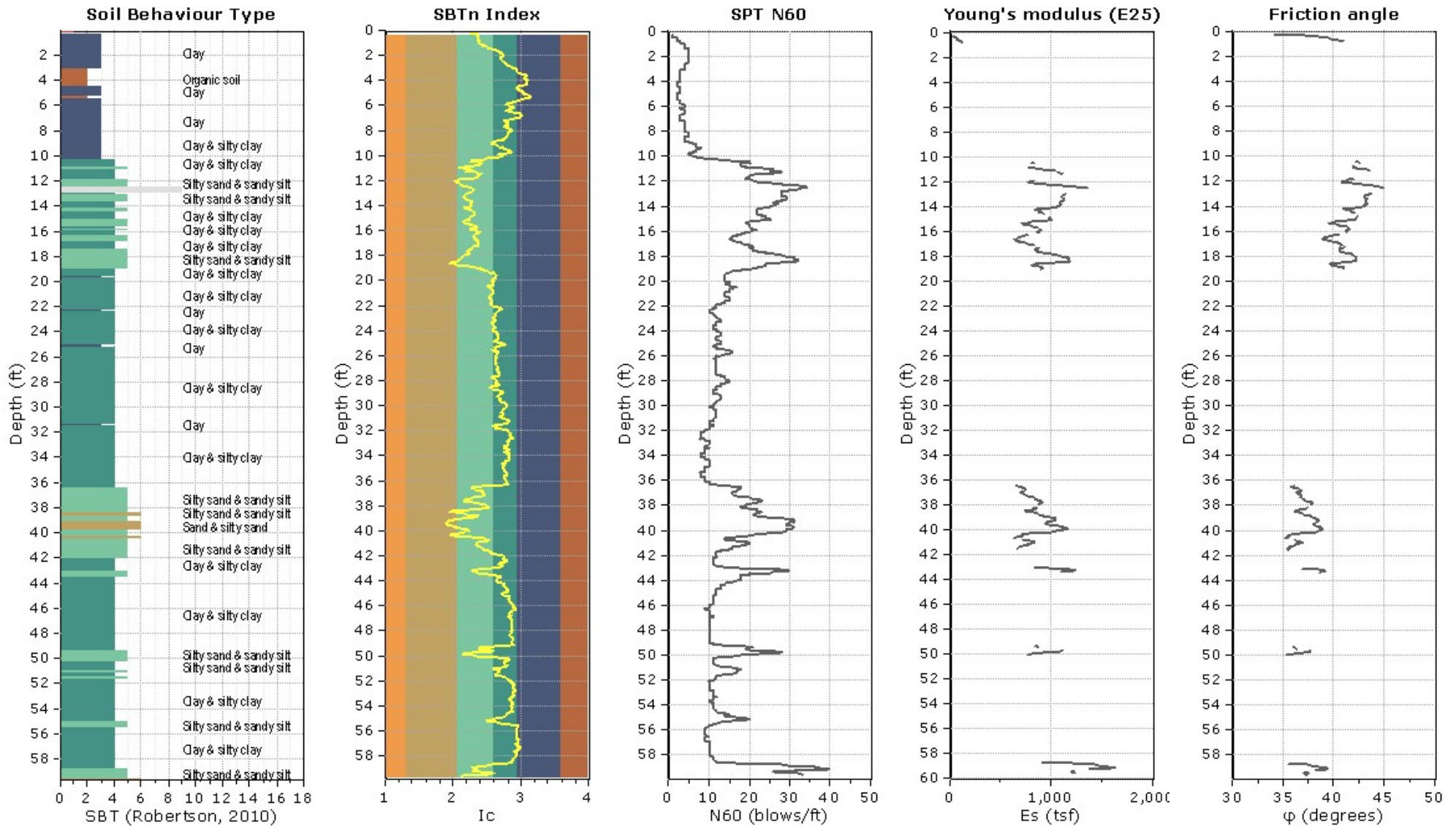
**CPT: GEO-55**

Total depth: 59.61 ft, Date: 4/23/2025

Coords: lat 39.631481° lon -88.22902°

Cone Type: CPT

Cone Operator: Fugro





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**Project:** Coles Wind  
**Location:** Coles County, Illinois

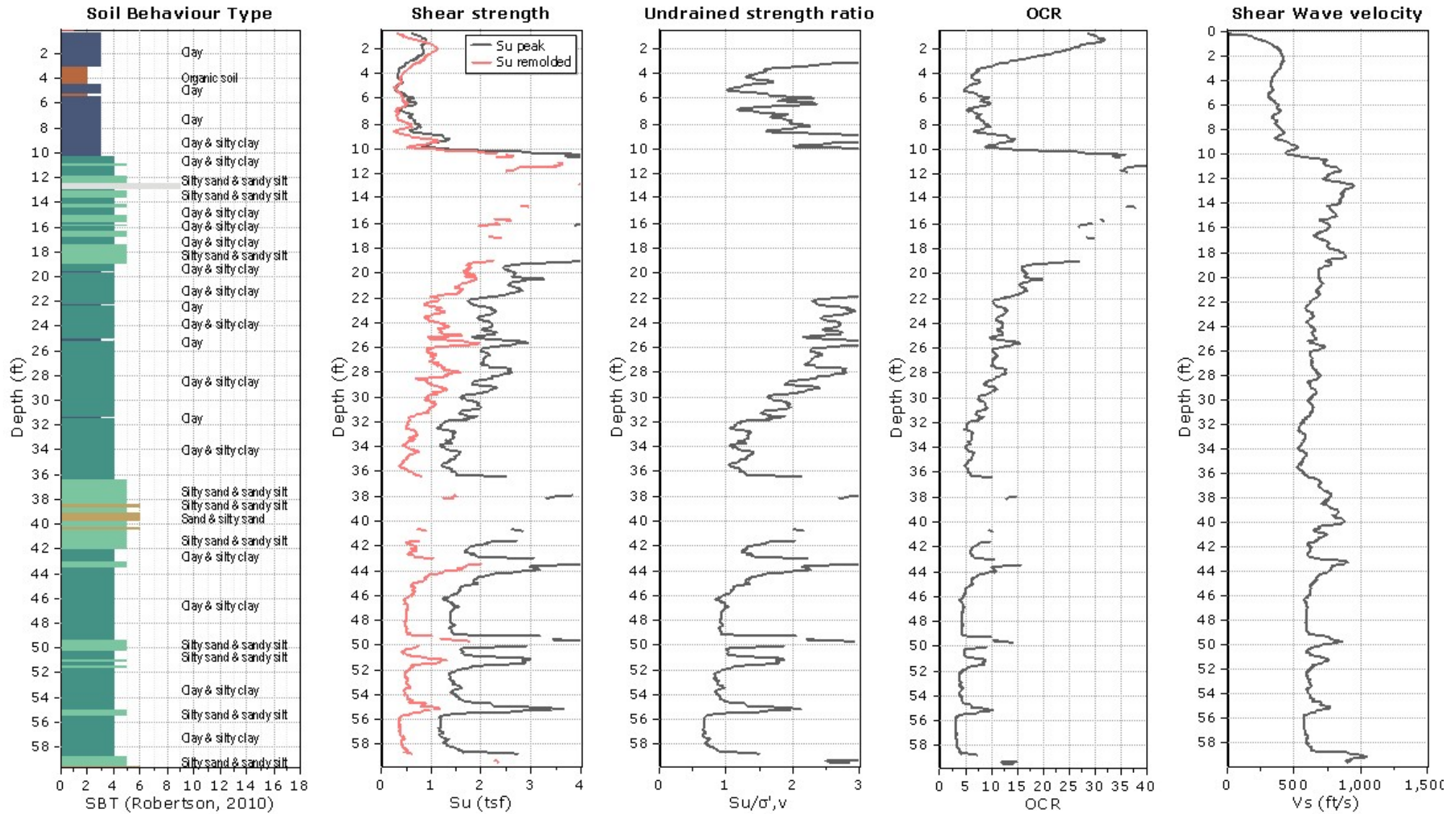
**CPT: GEO-55**

Total depth: 59.61 ft, Date: 4/23/2025

Coords: lat 39.631481° lon -88.22902°

Cone Type: CPT

Cone Operator: Fugro



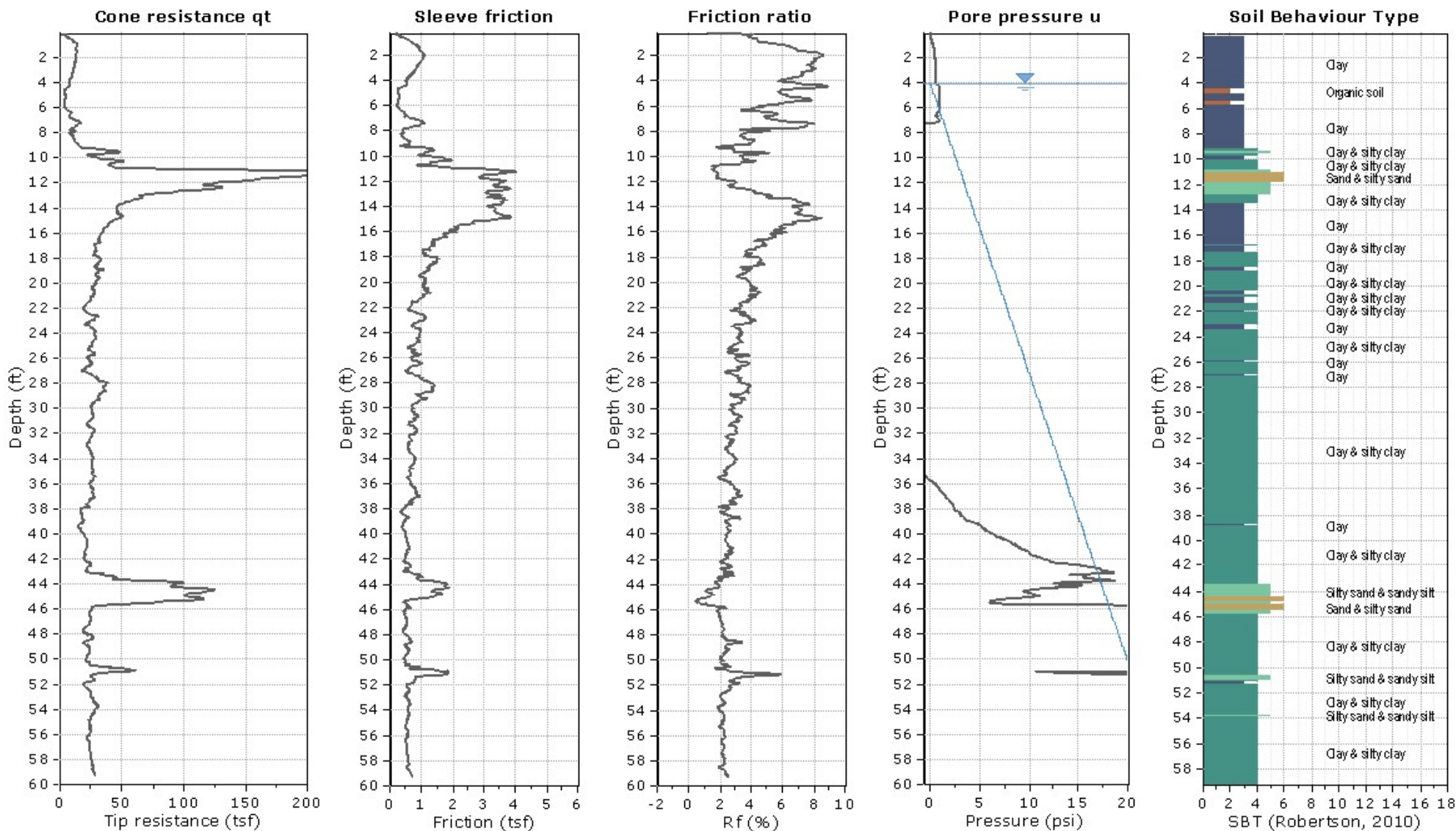


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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-56**

Total depth: 59.28 ft, Date: 4/23/2025  
Coords: lat 39.635483° lon -88.226039°  
Cone Type: CPT  
Cone Operator: Fugro





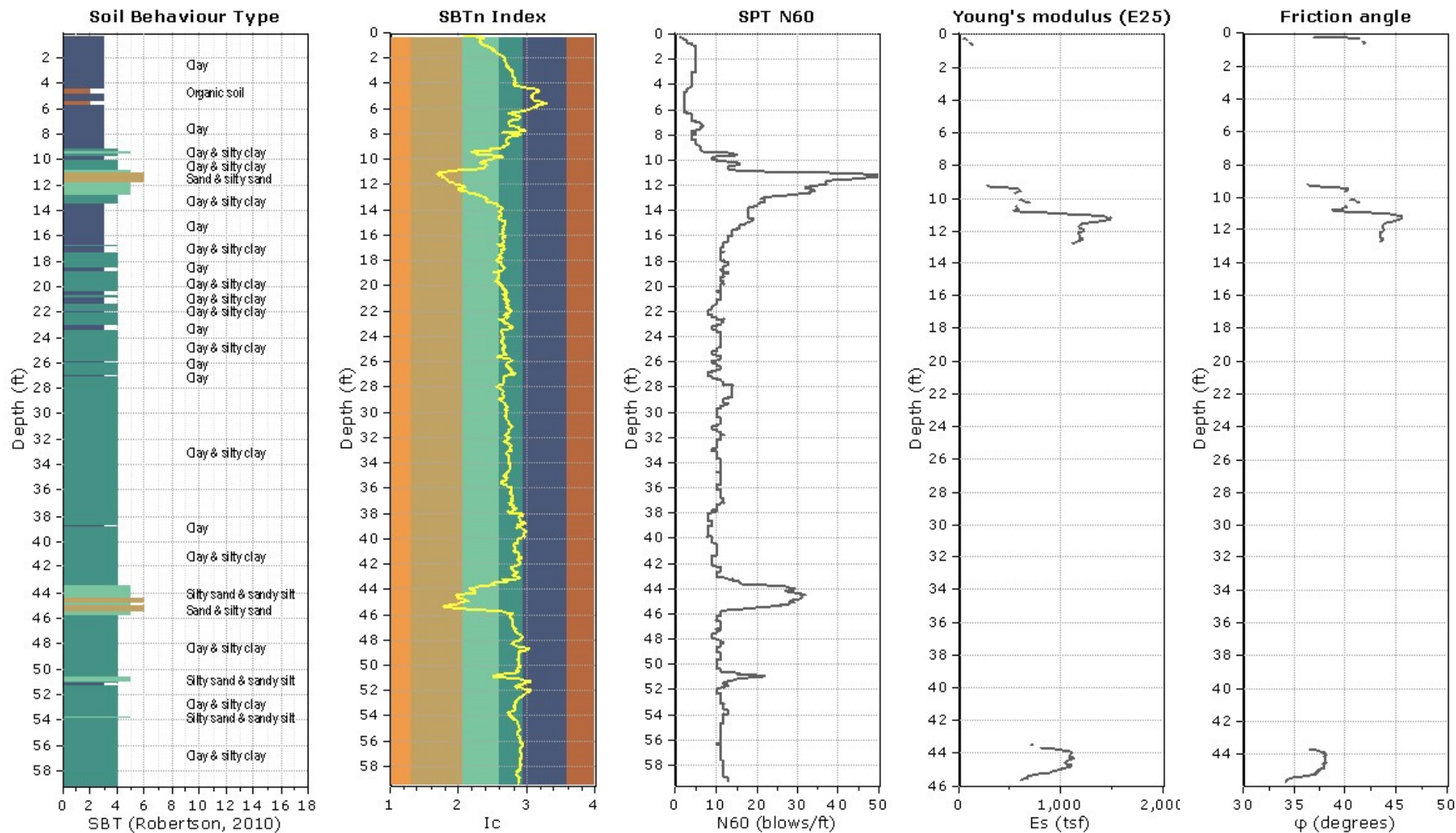


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Round Rock, TX 78681  
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**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-56**

Total depth: 59.28 ft, Date: 4/23/2025  
Coords: lat 39.635483° lon -88.226039°  
Cone Type: CPT  
Cone Operator: Fugro



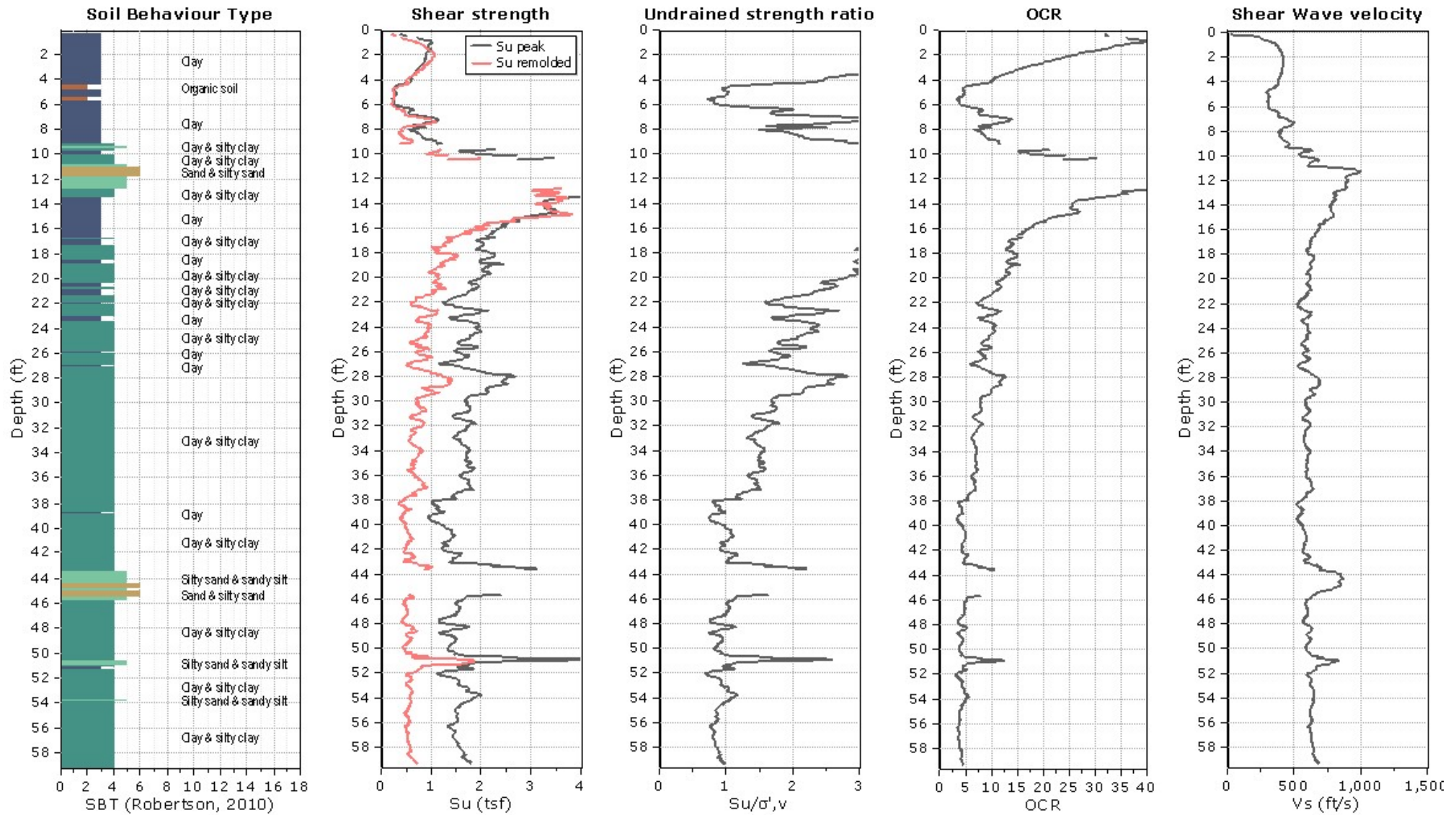


**RRC Power & Energy, LLC**  
810 Hesters Crossing Rd, Suite 120  
Round Rock, TX 78681  
rrccompanies.com

**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-56**

Total depth: 59.28 ft, Date: 4/23/2025  
Coords: lat 39.635483° lon -88.226039°  
Cone Type: CPT  
Cone Operator: Fugro



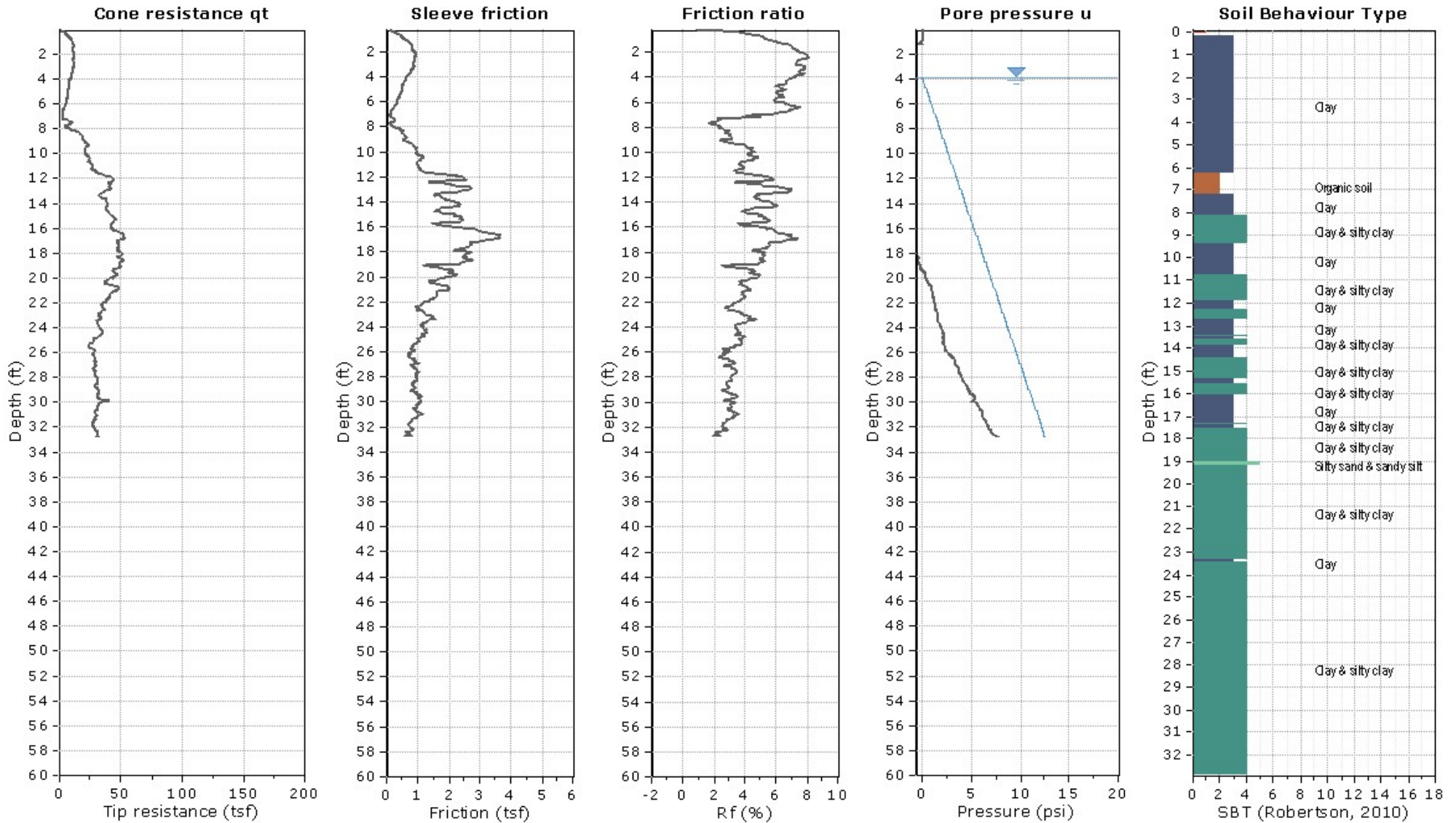


**RRC Power & Energy, LLC**  
810 Hesters Crossing Rd, Suite 120  
Round Rock, TX 78681  
rrccompanies.com

**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-57**

Total depth: 32.78 ft, Date: 4/23/2025  
Coords: lat 39.640777° lon -88.227044°  
Cone Type: CPT  
Cone Operator: Fugro

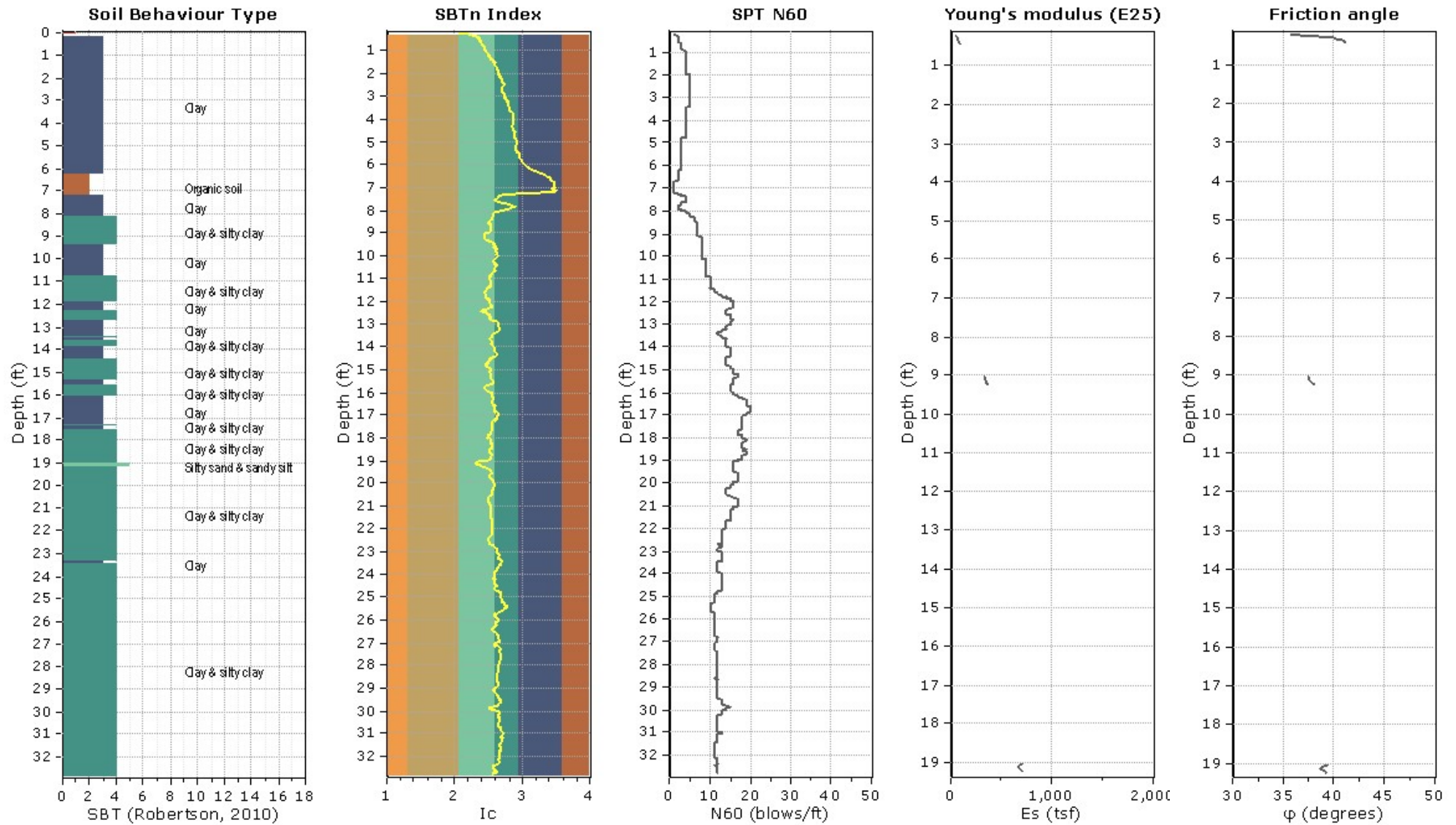






**Project:** Coles Wind

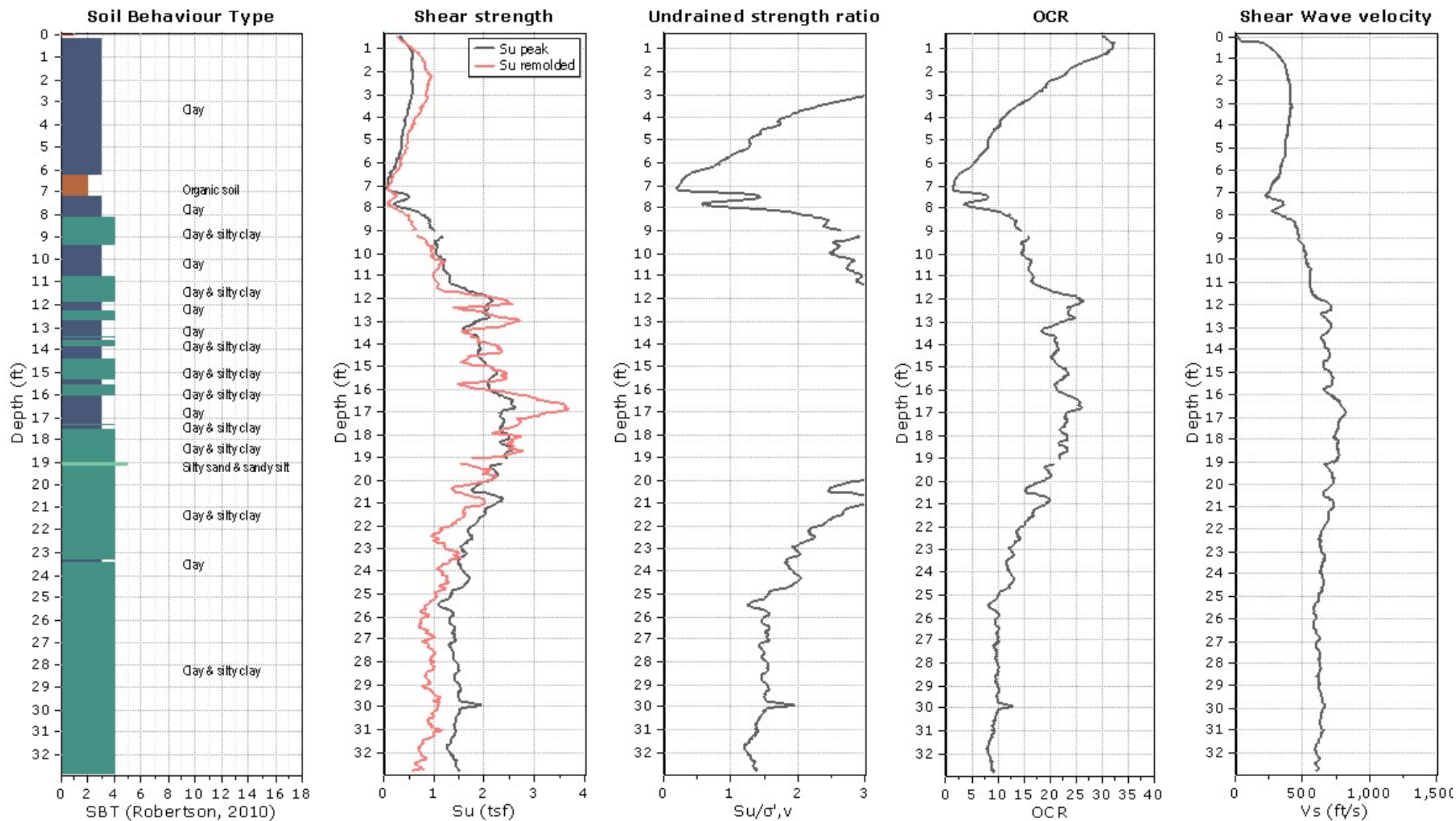
**Location:** Coles County, Illinois





**Project:** Coles Wind

**Location:** Coles County, Illinois





**RRC Power & Energy, LLC**  
810 Hesters Crossing Rd, Suite 120  
Round Rock, TX 78681  
rrccompanies.com

**CPT: GEO-57A**

Total depth: 59.35 ft, Date: 4/23/2025

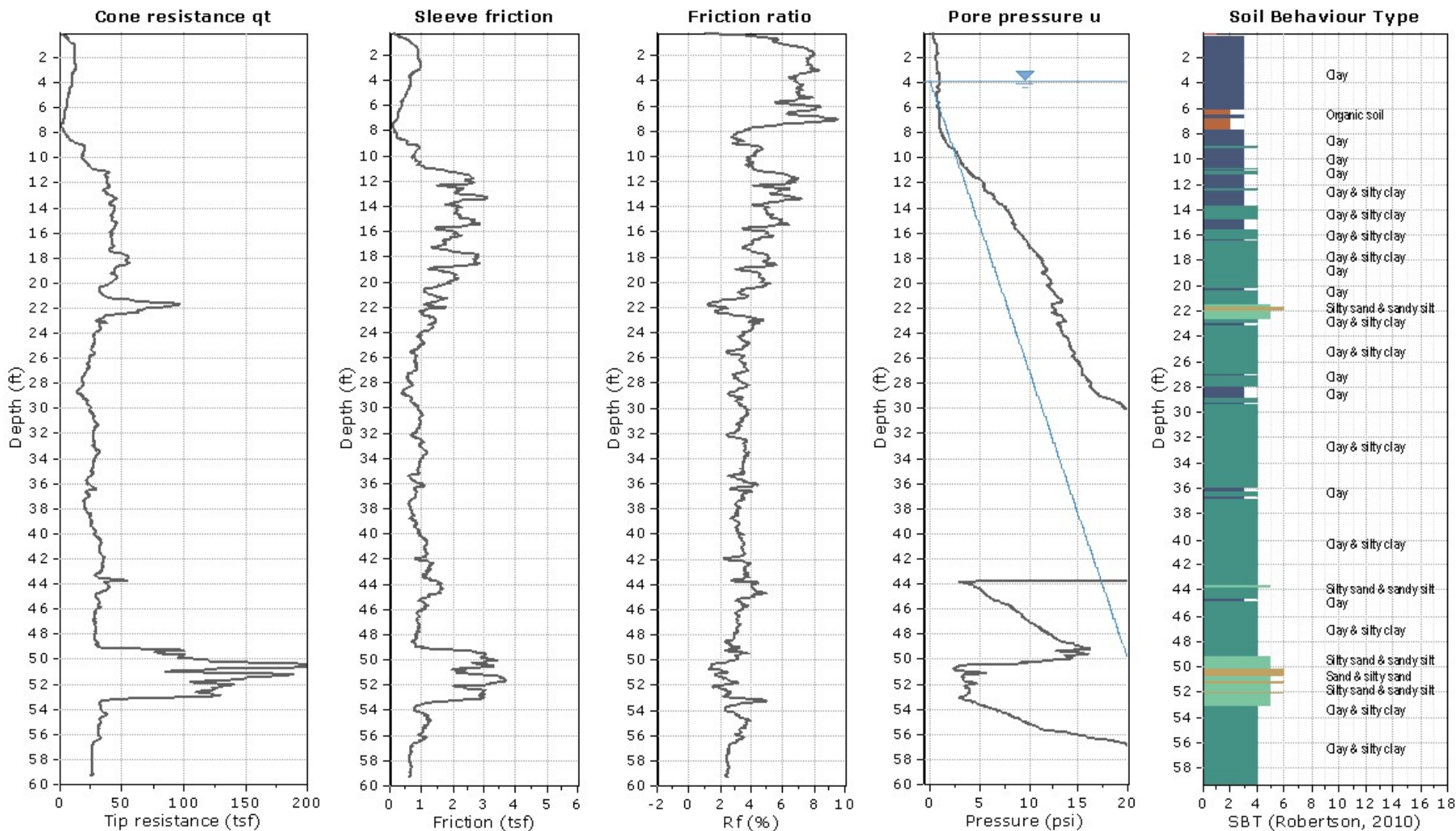
Coords: lat 39.640777° lon -88.227044°

Cone Type: CPT

Cone Operator: Fugro

**Project:** Coles Wind

**Location:** Coles County, Illinois







**RRC Power & Energy, LLC**  
810 Hesters Crossing Rd, Suite 120  
Round Rock, TX 78681  
rrccompanies.com

**CPT: GEO-57A**

Total depth: 59.35 ft, Date: 4/23/2025

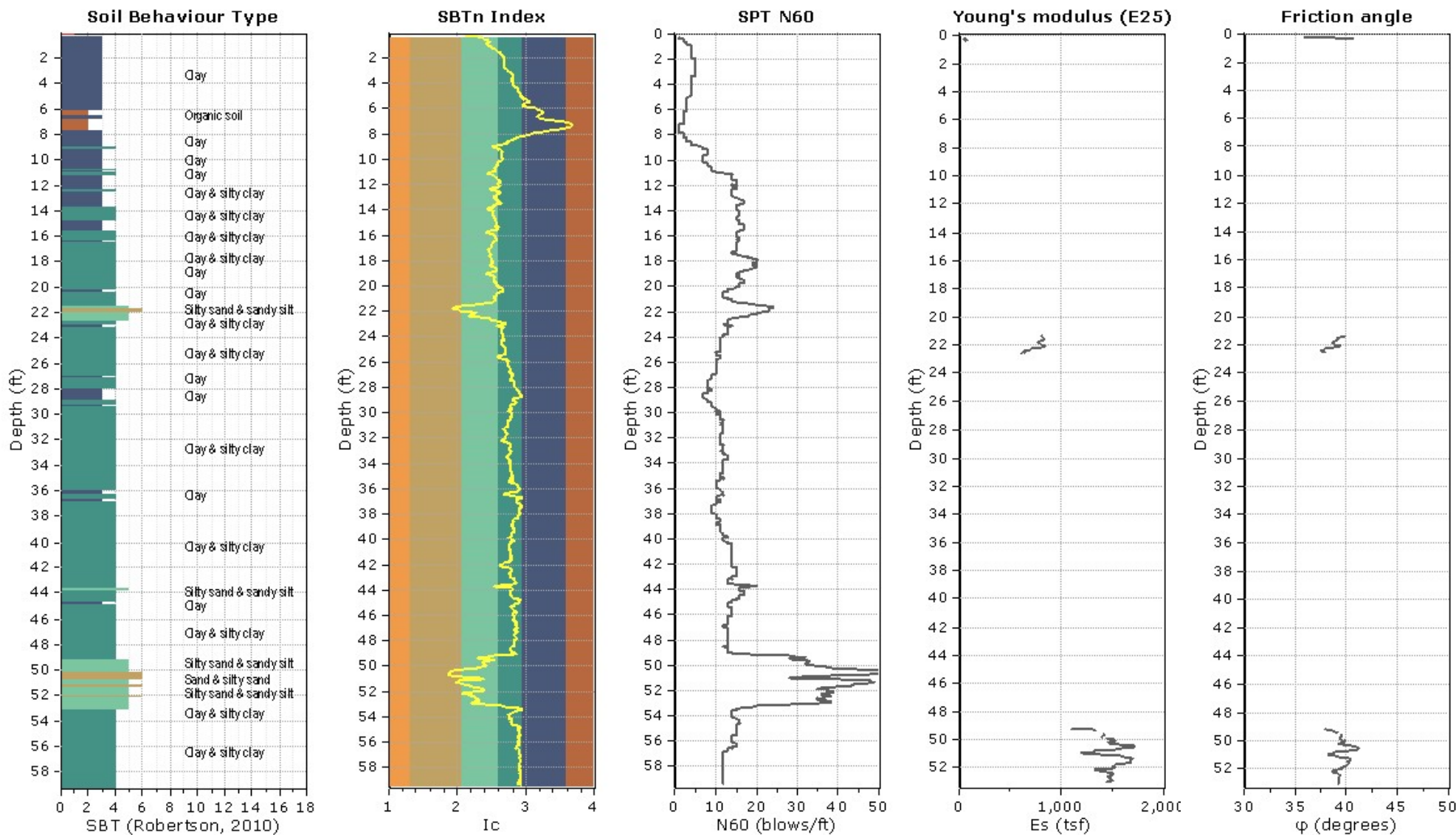
Coords: lat 39.640777° lon -88.227044°

Cone Type: CPT

Cone Operator: Fugro

**Project: Coles Wind**

**Location: Coles County, Illinois**





**RRC Power & Energy, LLC**  
810 Hesters Crossing Rd, Suite 120  
Round Rock, TX 78681  
rrccompanies.com

**CPT: GEO-57A**

Total depth: 59.35 ft, Date: 4/23/2025

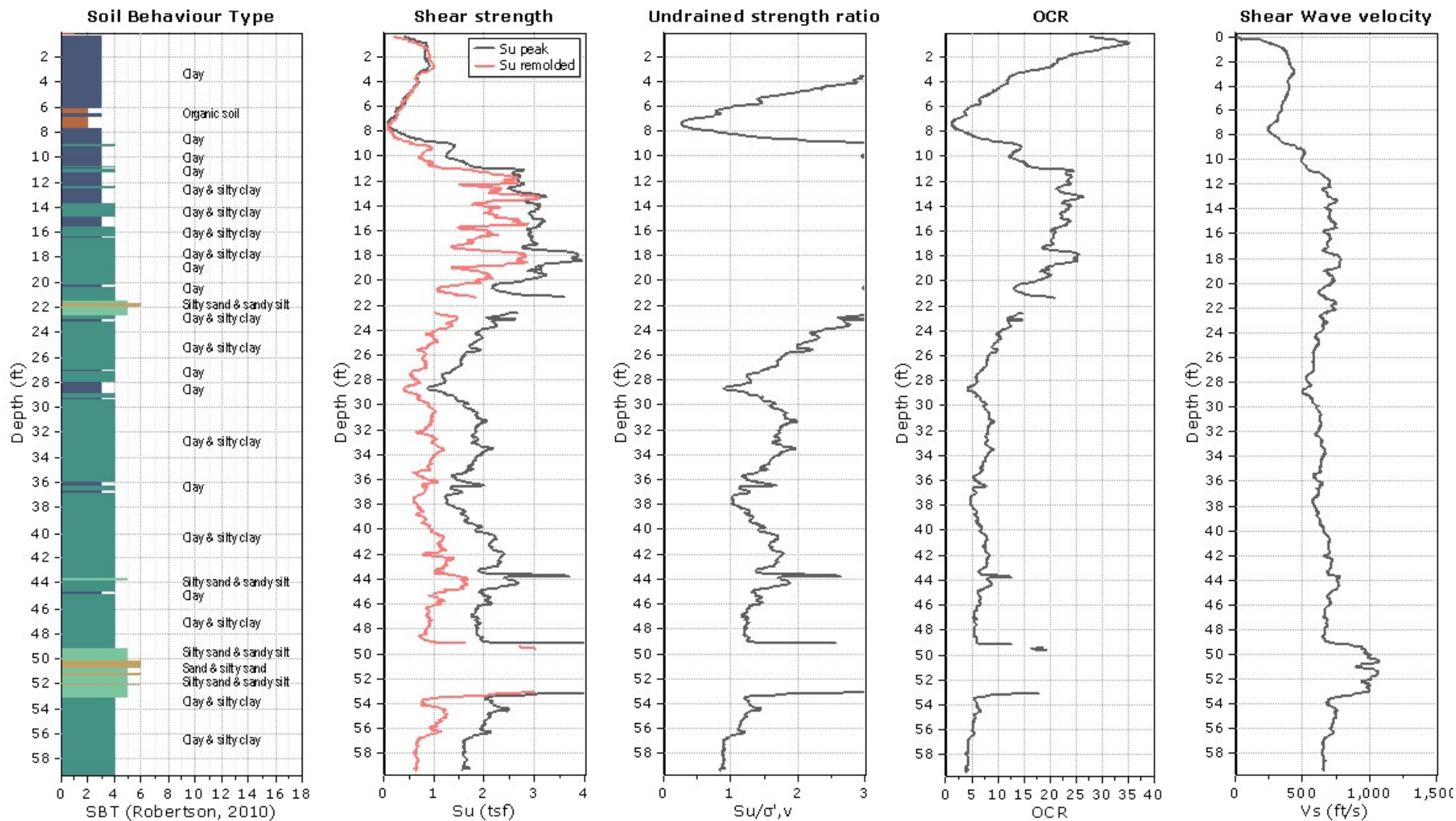
Coords: lat 39.640777° lon -88.227044°

Cone Type: CPT

Cone Operator: Fugro

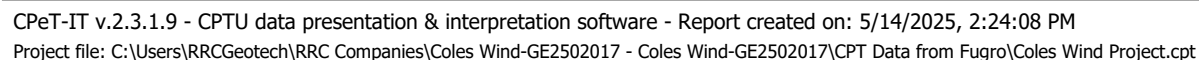
**Project: Coles Wind**

**Location: Coles County, Illinois**





**CPT: GEO-58**  
Total depth: 59.68 ft, Date: 4/23/2025  
Coords: lat 39.641917° lon -88.217304°  
Cone Type: CPT  
Cone Operator: Fugro







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Round Rock, TX 78681  
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**CPT: GEO-58**

Total depth: 59.68 ft, Date: 4/23/2025

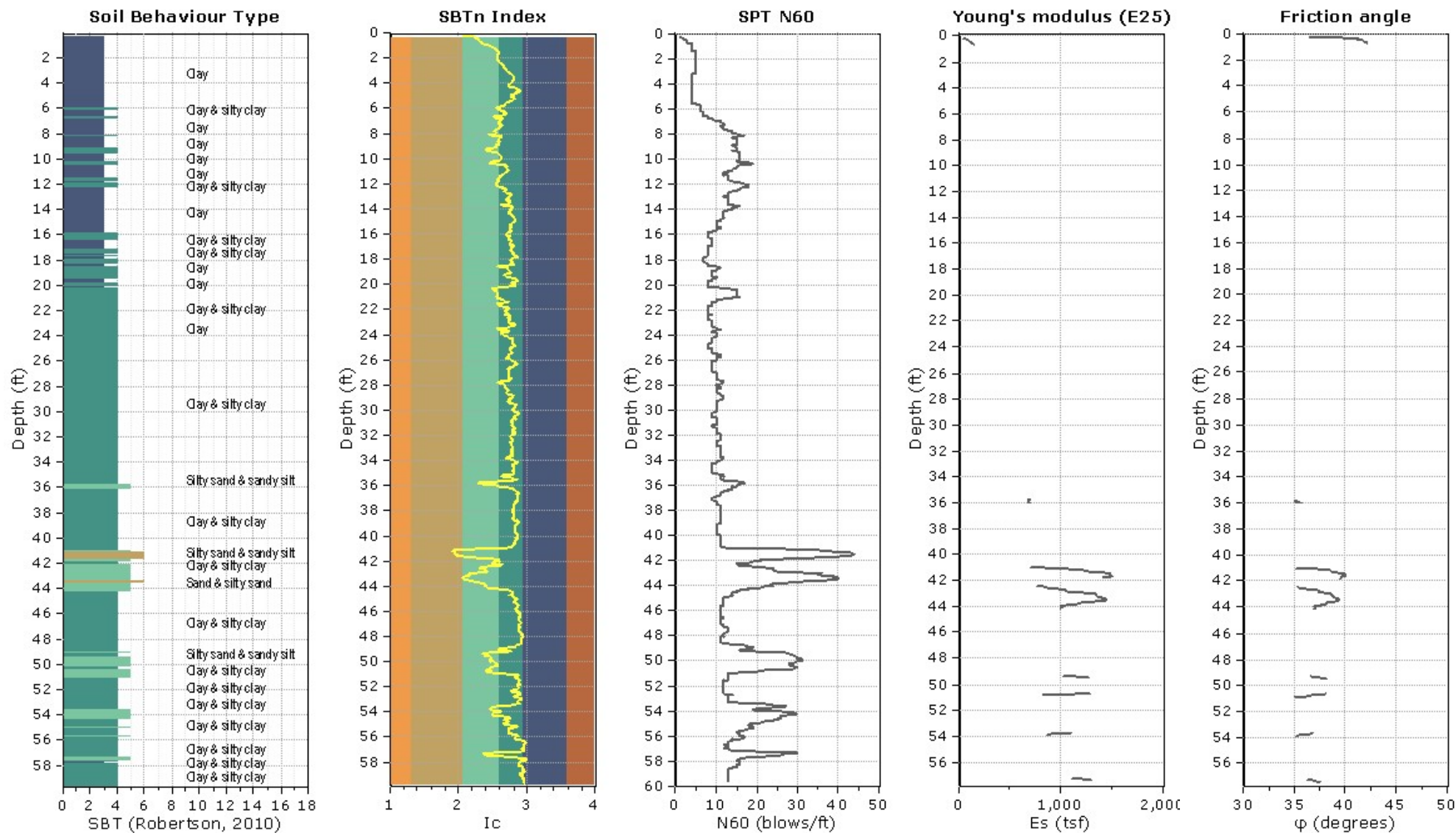
Coords: lat 39.641917° lon -88.217304°

Cone Type: CPT

Cone Operator: Fugro

**Project: Coles Wind**

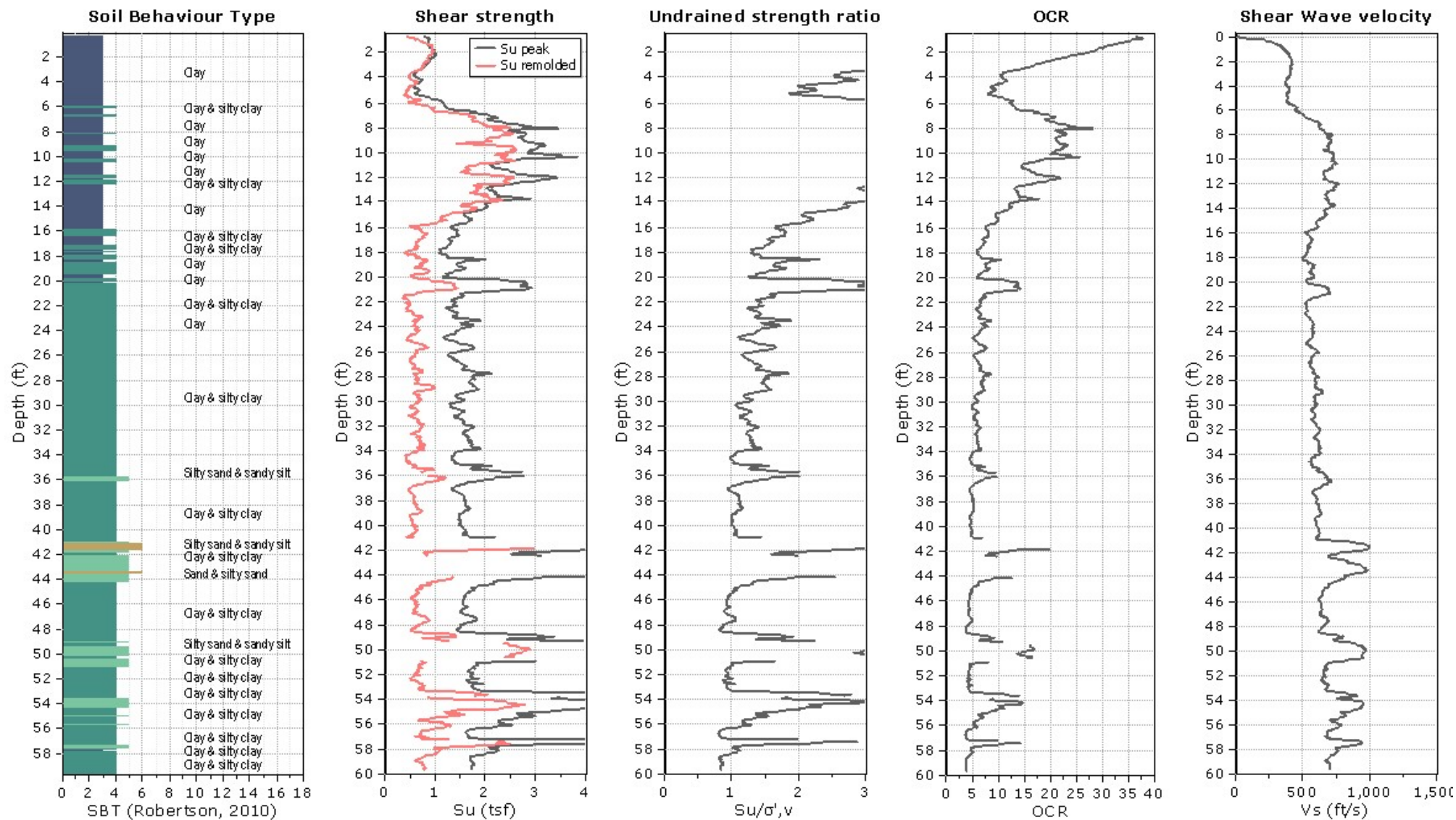
**Location: Coles County, Illinois**





**Project: Coles Wind**

**Location: Coles County, Illinois**



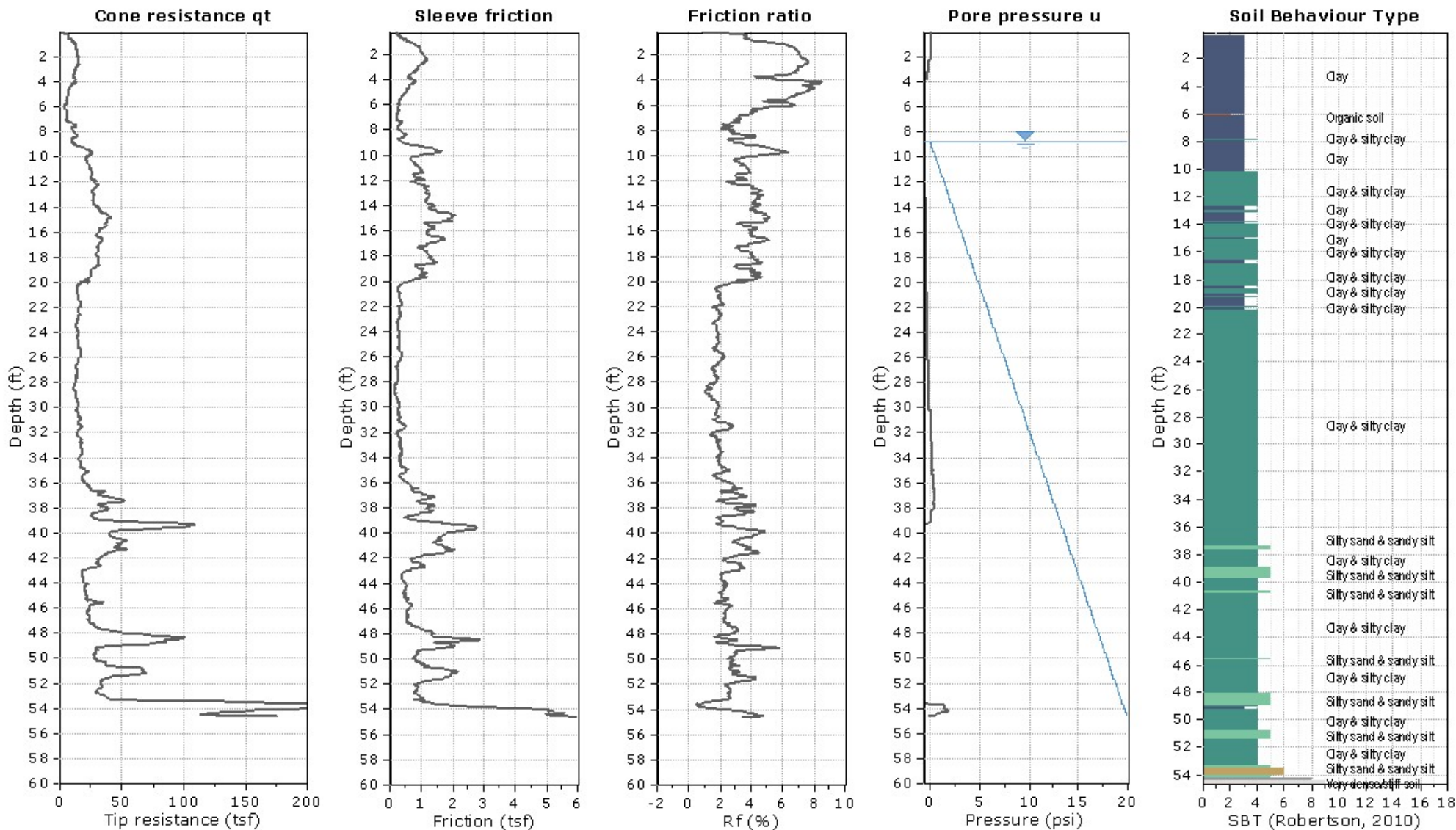


**RRC Power & Energy, LLC**  
810 Hesters Crossing Rd, Suite 120  
Round Rock, TX 78681  
rrccompanies.com

**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-59**

Total depth: 54.66 ft, Date: 4/24/2025  
Coords: lat 39.640117° lon -88.201895°  
Cone Type: CPT  
Cone Operator: Fugro

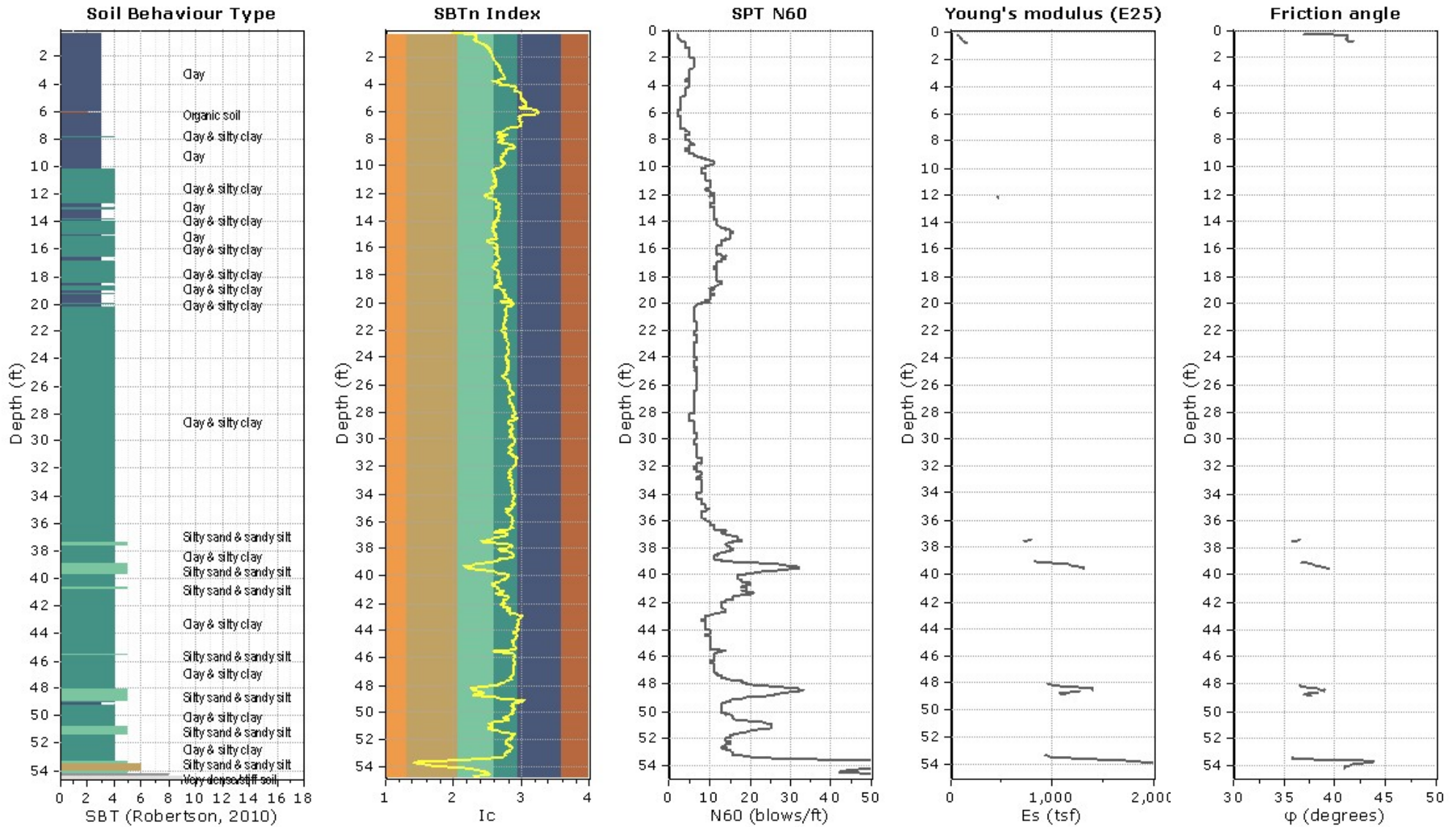






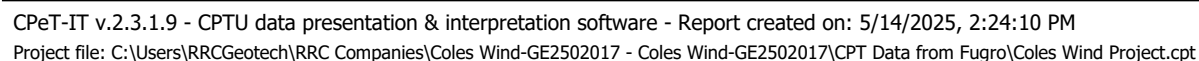
**Project:** Coles Wind

**Location:** Coles County, Illinois





**CPT: GEO-59**  
Total depth: 54.66 ft, Date: 4/24/2025  
Coords: lat 39.640117° lon -88.201895°  
Cone Type: CPT  
Cone Operator: Fugro



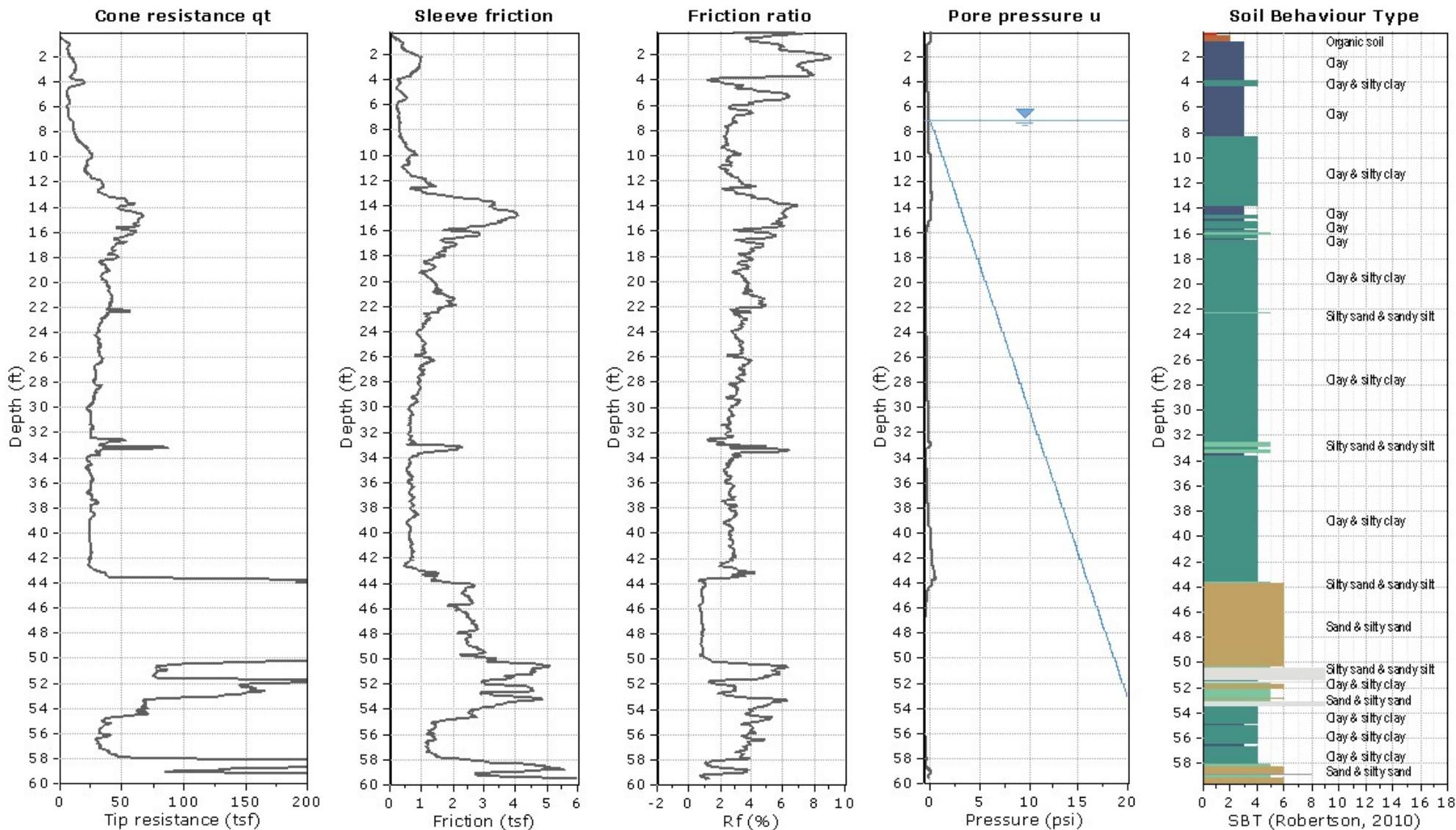


**RRC Power & Energy, LLC**  
810 Hesters Crossing Rd, Suite 120  
Round Rock, TX 78681  
rrccompanies.com

**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-60**

Total depth: 59.58 ft, Date: 4/22/2025  
Coords: lat 39.647183° lon -88.181358°  
Cone Type: CPT  
Cone Operator: FUGRO





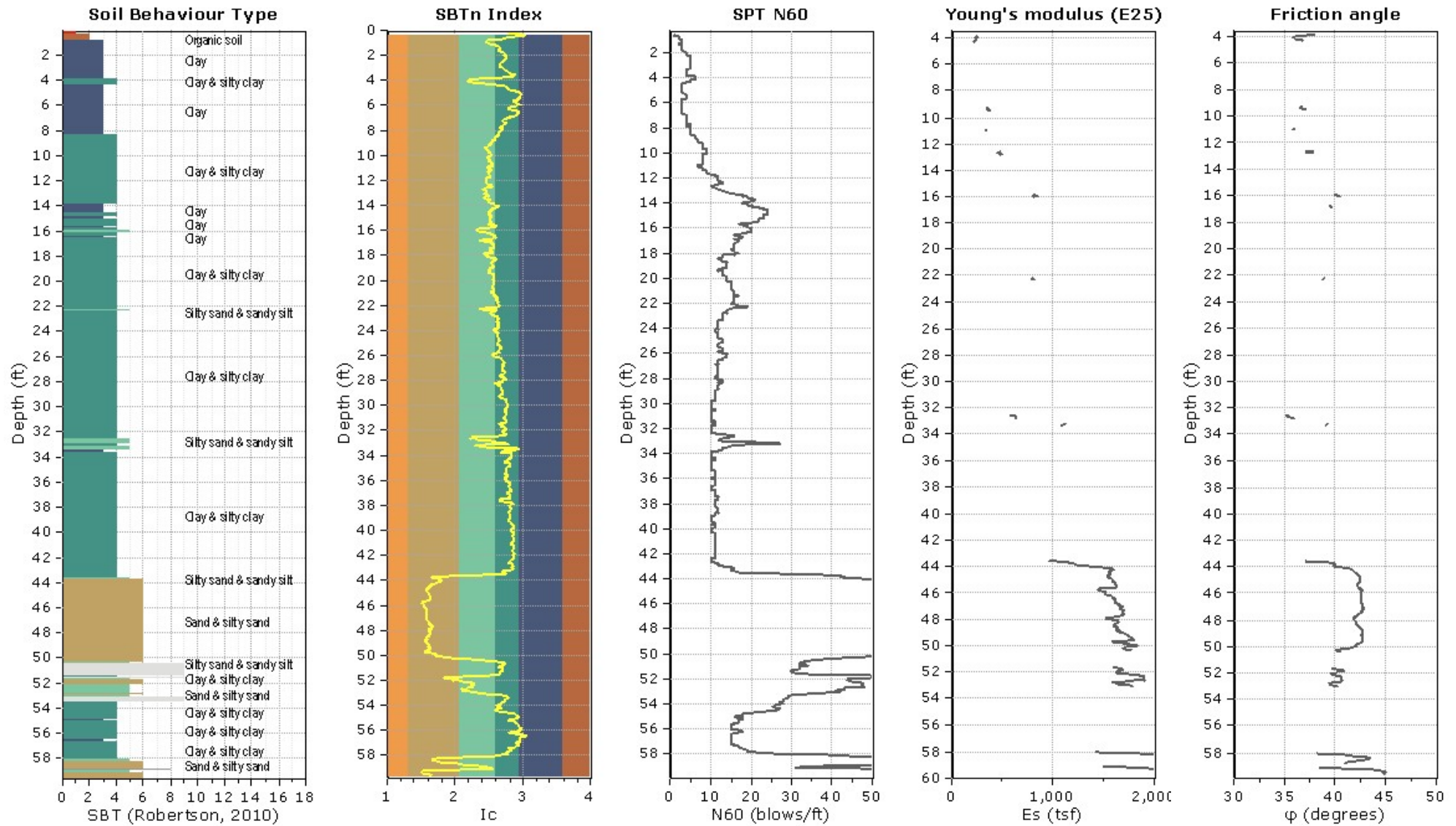


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810 Hesters Crossing Rd, Suite 120  
Round Rock, TX 78681  
rrccompanies.com

**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-60**

Total depth: 59.58 ft, Date: 4/22/2025  
Coords: lat 39.647183° lon -88.181358°  
Cone Type: CPT  
Cone Operator: FUGRO



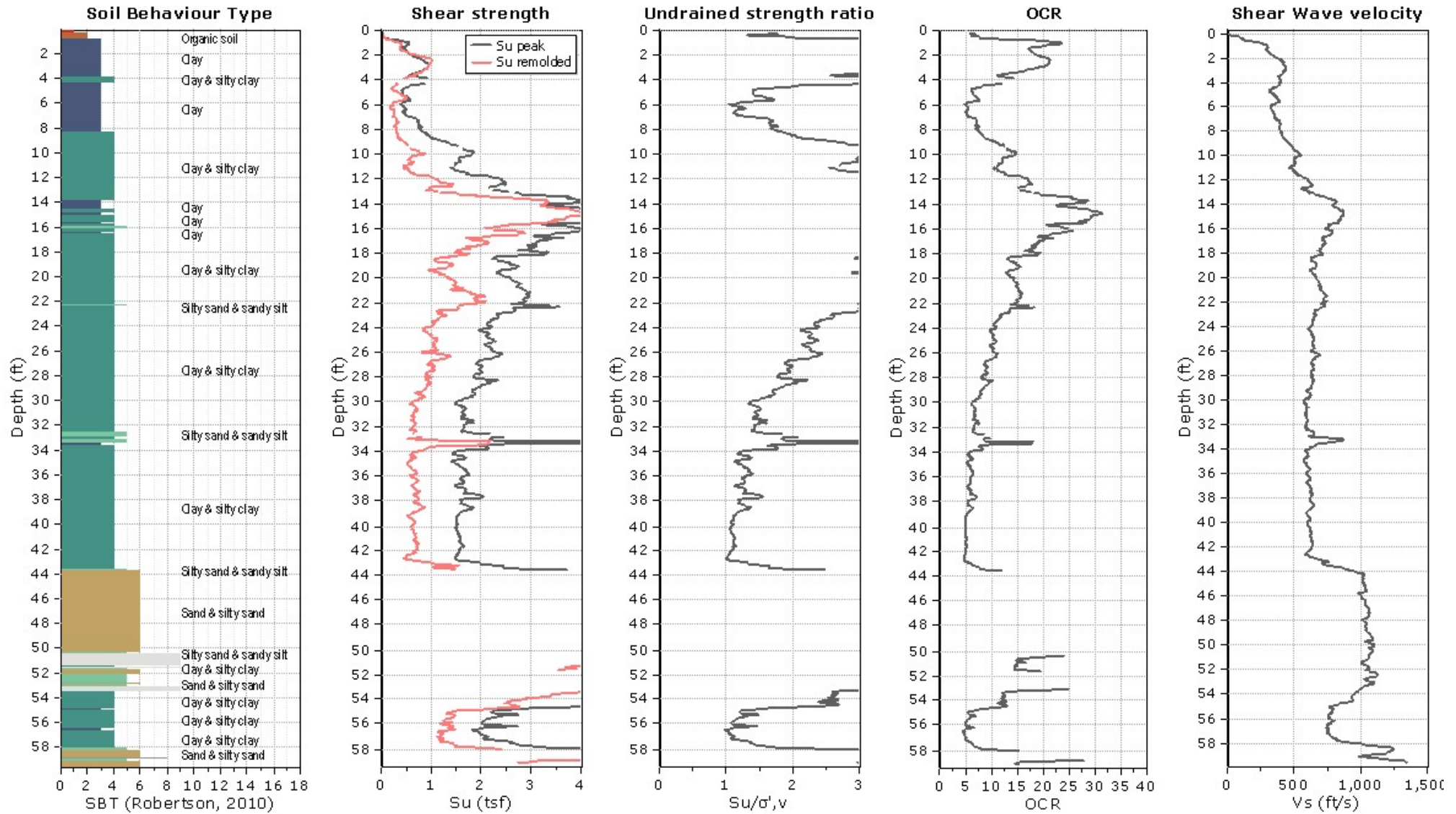


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Round Rock, TX 78681  
rrccompanies.com

**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-60**

Total depth: 59.58 ft, Date: 4/22/2025  
Coords: lat 39.647183° lon -88.181358°  
Cone Type: CPT  
Cone Operator: FUGRO



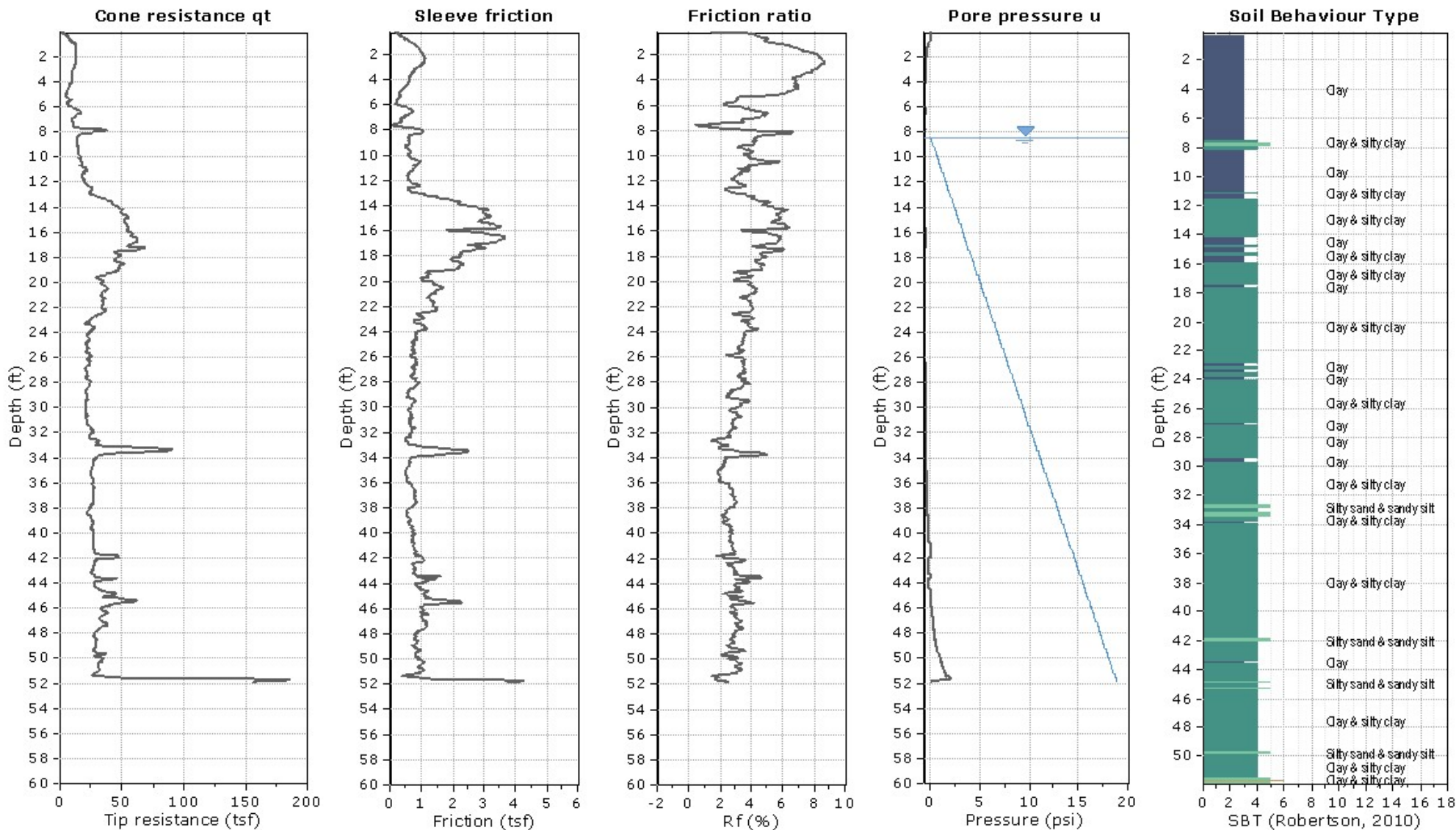


**RRC Power & Energy, LLC**  
810 Hesters Crossing Rd, Suite 120  
Round Rock, TX 78681  
rrccompanies.com

**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-61**

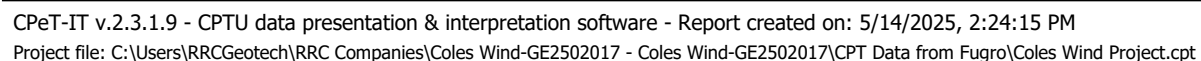
Total depth: 51.90 ft, Date: 4/22/2025  
Coords: lat 39.646727° lon -88.202823°  
Cone Type: cpt  
Cone Operator: FUGRO







**CPT: GEO-61**  
Total depth: 51.90 ft, Date: 4/22/2025  
Coords: lat 39.646727° lon -88.202823°  
Cone Type: cpt  
Cone Operator: FUGRO





**RRC Power & Energy, LLC**  
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Round Rock, TX 78681  
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**CPT: GEO-61**

Total depth: 51.90 ft, Date: 4/22/2025

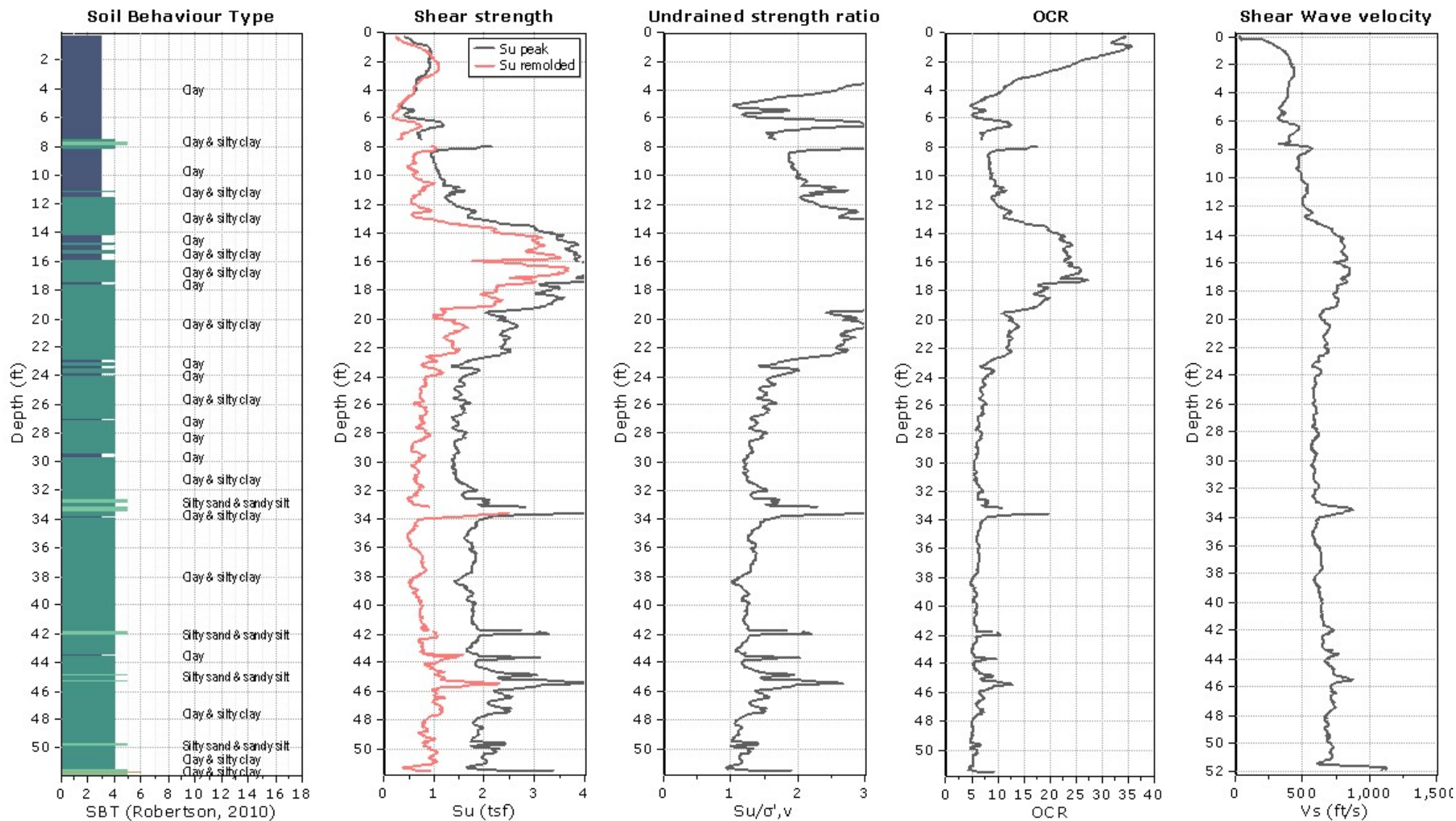
Coords: lat 39.646727° lon -88.202823°

Cone Type: cpt

Cone Operator: FUGRO

**Project: Coles Wind**

**Location: Coles County, Illinois**



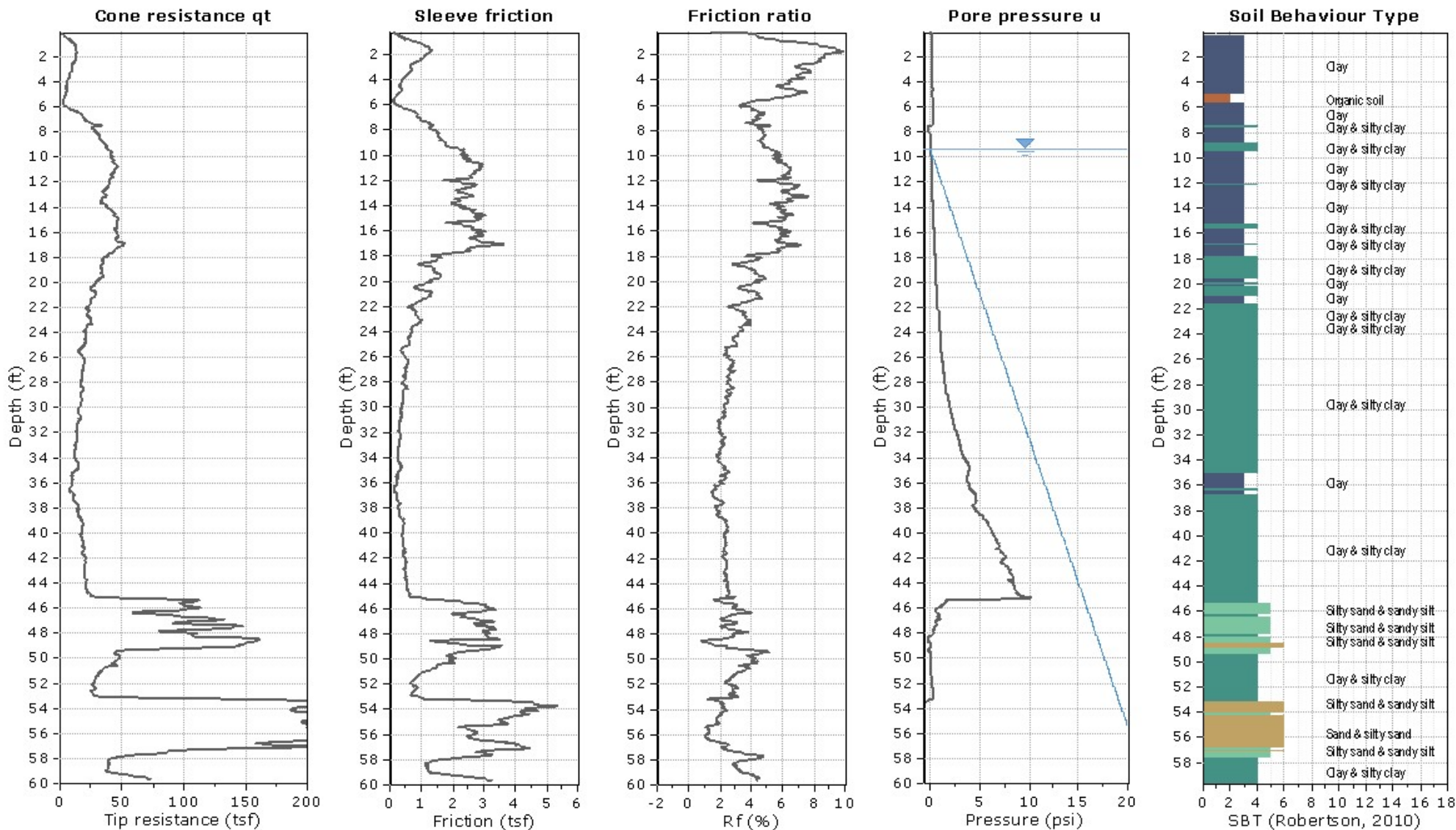


**RRC Power & Energy, LLC**  
810 Hesters Crossing Rd, Suite 120  
Round Rock, TX 78681  
rrccompanies.com

**Project:** Coles Wind  
**Location:** Coles County, Illinois

**CPT: GEO-62**

Total depth: 59.68 ft, Date: 4/22/2025  
Coords: lat 39.649995° lon -88.188005°  
Cone Type: cpt  
Cone Operator: FUGRO

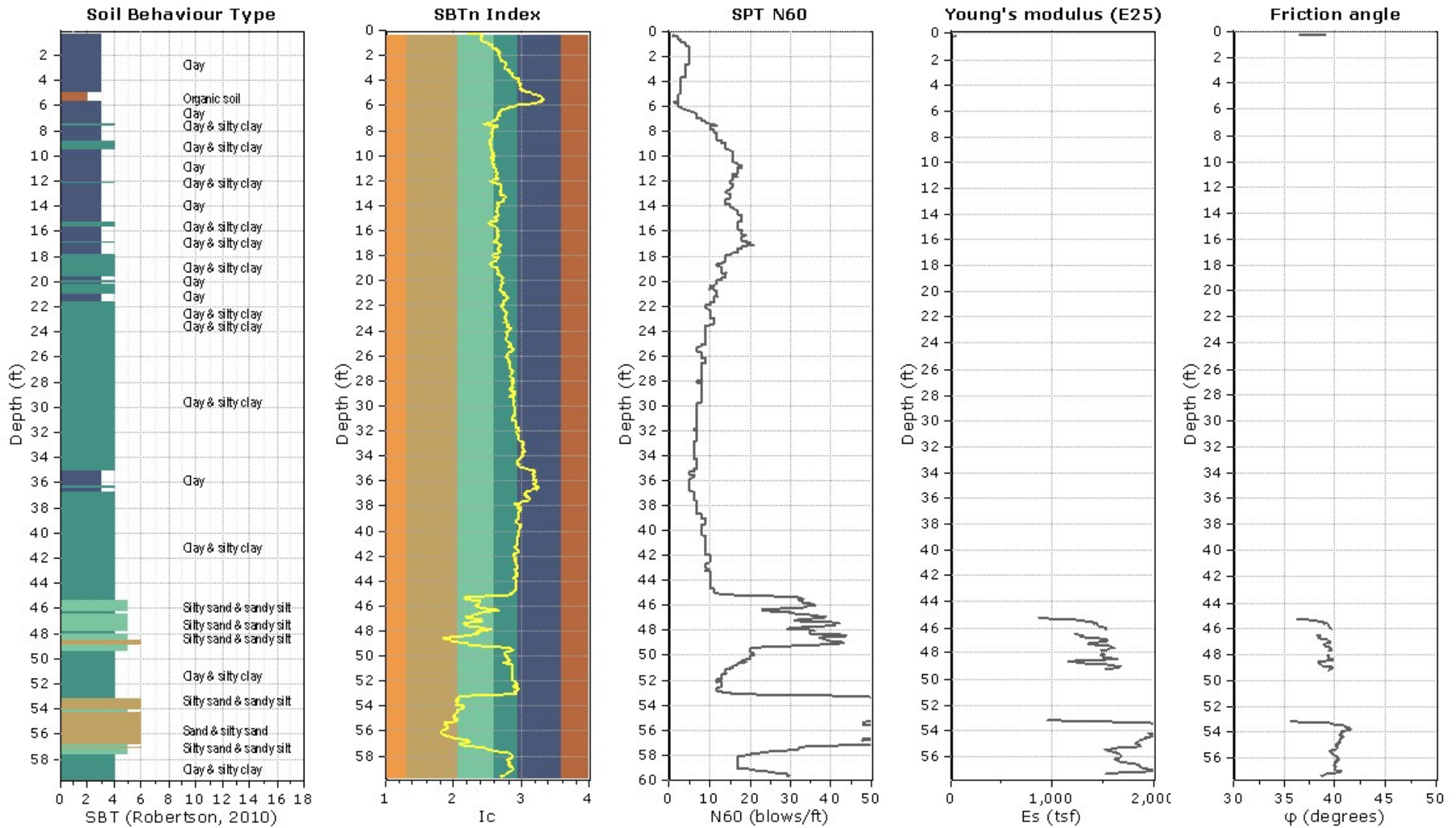






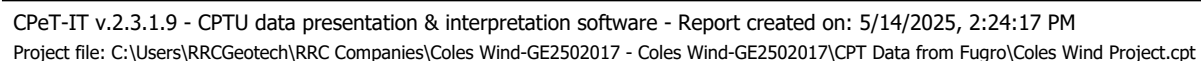
**Project: Coles Wind**

**Location: Coles County, Illinois**





**CPT: GEO-62**  
Total depth: 59.68 ft, Date: 4/22/2025  
Coords: lat 39.649995° lon -88.188005°  
Cone Type: cpt  
Cone Operator: FUGRO





[www.RRCcompanies.com](http://www.RRCcompanies.com)

810 Hesters Crossing Rd, Suite 120  
Round Rock, TX 78661  
512.992.2087

## **APPENDIX B**





Beyond Engineering & Testing, LLC  
3801 Doris Lane, Suite B  
Round Rock, TX 78664  
Telephone: (512) 358-6048

## MOISTURE-DENSITY RELATIONSHIP

CLIENT: RRC Power & Energy, LLC  
PROJECT: Coles Wind Project  
LOCATION: Coles County, IL  
NUMBER: GE2502017

Sample ID

TR-1a at 1.5 to 5.0 ft.

Description of Material

BROWN LEAN CLAY(CL)

Test Method

ASTM D698 Method A,  
Automatic Hammer

### TEST RESULTS

Maximum Dry Density 103.1 PCF

Optimum Water Content 19.4 %

### ATTERBERG LIMITS

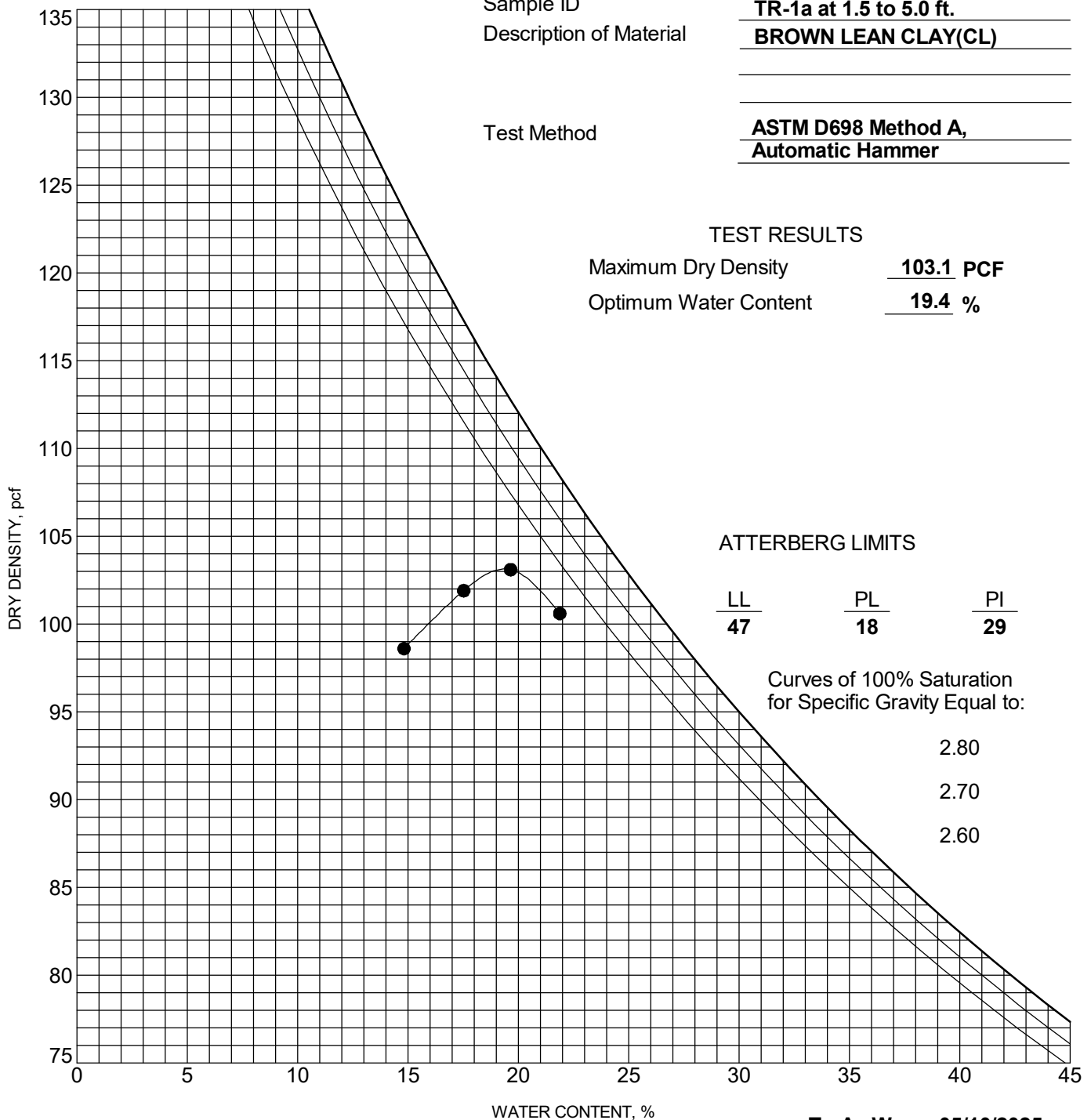
| LL        | PL        | PI        |
|-----------|-----------|-----------|
| <u>47</u> | <u>18</u> | <u>29</u> |

Curves of 100% Saturation  
for Specific Gravity Equal to:

2.80

2.70

2.60



Te-An Wang, 05/10/2025

Analysis & Quality Review/Date

Specimens prepared by: T.W.

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Beyond Engineering & Testing, LLC  
3801 Doris Lane, Suite B  
Round Rock, TX 78664  
Telephone: (512) 358-6048

## MOISTURE-DENSITY RELATIONSHIP

CLIENT: RRC Power & Energy, LLC  
PROJECT: Coles Wind Project  
LOCATION: Coles County, IL  
NUMBER: GE2502017

Sample ID

TR-2 at 1.5 to 5.0 ft.

Description of Material

BROWN LEAN CLAY(CL)

Test Method

ASTM D698 Method A,  
Automatic Hammer

### TEST RESULTS

Maximum Dry Density 101.3 PCF

Optimum Water Content 19.4 %

### ATTERBERG LIMITS

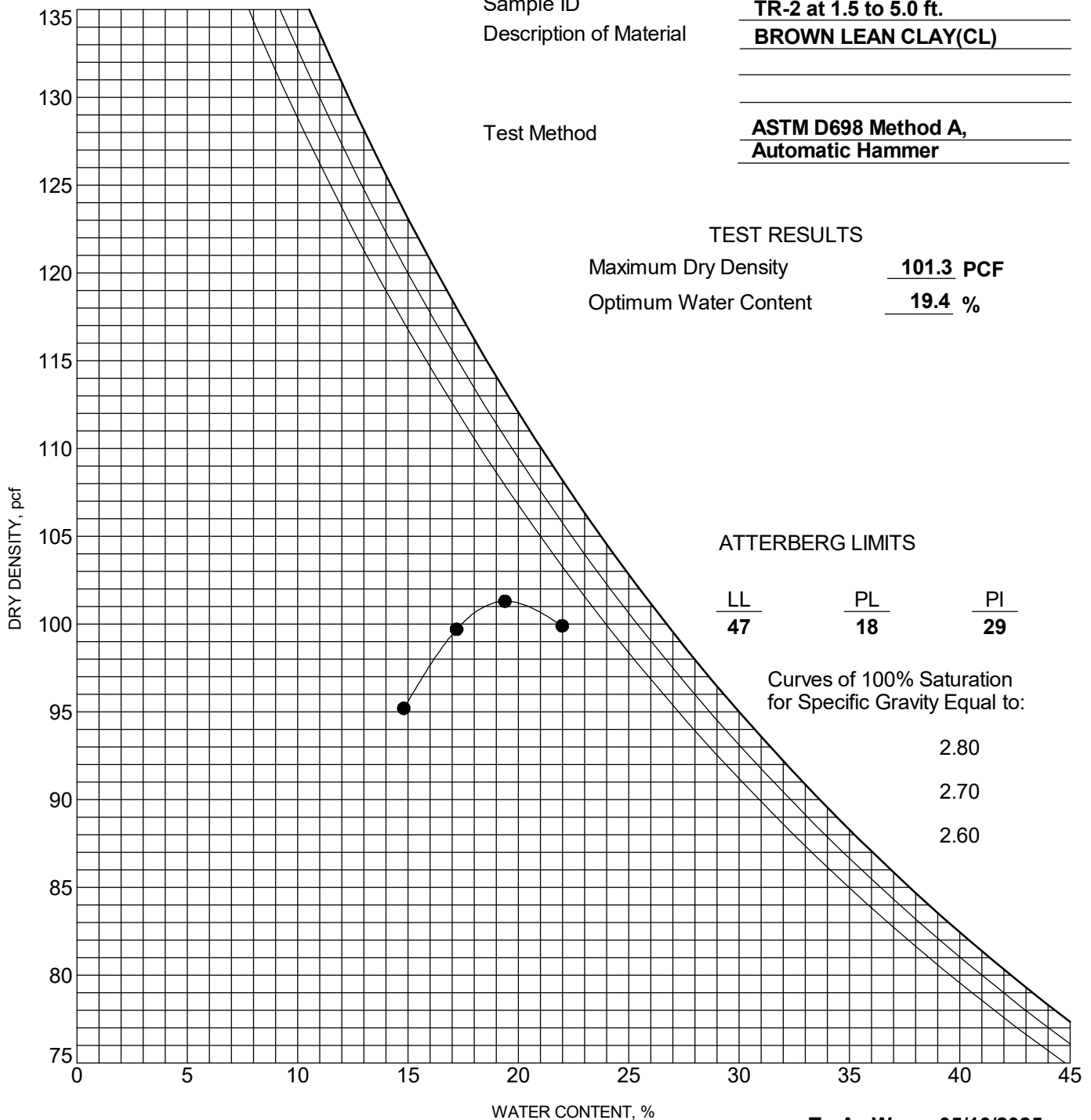
| LL        | PL        | PI        |
|-----------|-----------|-----------|
| <u>47</u> | <u>18</u> | <u>29</u> |

Curves of 100% Saturation  
for Specific Gravity Equal to:

2.80

2.70

2.60



Te-An Wang, 05/10/2025

Analysis & Quality Review/Date

Specimens prepared by: T.W.

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## Unconsolidated-Undrained Triaxial Compression Test

Client: RRC Power & Energy,  
LLC

Project No.: GE2502017

Type of Specimen: Shelby Tube

Type of Test: Q-Test

Strain Rate: 1.0 %/min

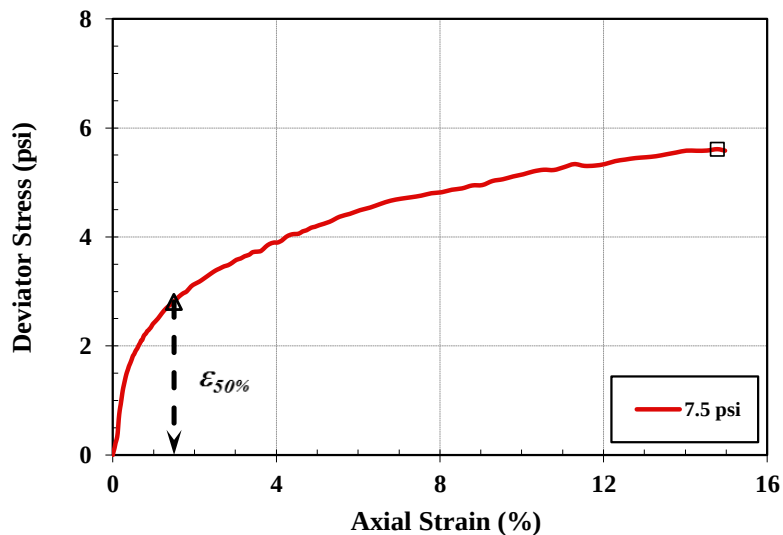
Project: Coles Wind Project

Test Date: 5/21/2025

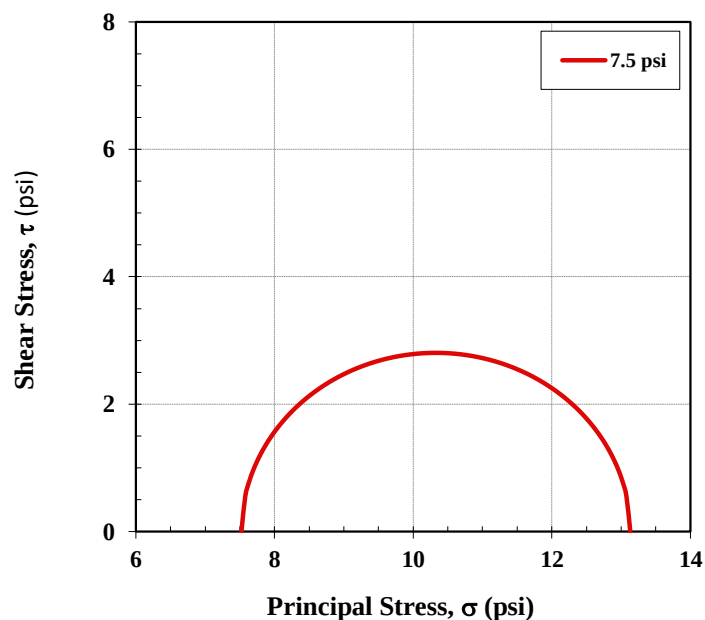
Test Method: ASTM D2850

Sample No.: GEO-02 at 9 ft

Principal Stress Difference vs. Axial Strain



Mohr Circles (Total Stress) for Peak Stress at Failure



### Initial Specimen Conditions

|                            |                  |       |
|----------------------------|------------------|-------|
| Confining Pressure (psi)   |                  | 7.5   |
| Avg. Diameter (in)         | $D_o$            | 2.88  |
| Avg. Height (in)           | $H_o$            | 5.41  |
| In-situ Water Content (%)  | $w_o$            | 16.1  |
| Total Unit Weight (pcf)    | $\gamma_{total}$ | 133.0 |
| Dry Unit Weight (pcf)      | $\gamma_{dry}$   | 114.5 |
| Saturation (%)             | $S_r$            | 92.4  |
| Void Ratio                 | $e_o$            | 0.47  |
| Specific Gravity (Assumed) | $G_s$            | 2.70  |

### Stresses at Failure

|                                                    |      |
|----------------------------------------------------|------|
| Maximum Deviator Stress (psi)                      | 5.6  |
| Axial Strain at Failure (%)                        | 14.8 |
| Axial Strain at 50% of $q_u$ , $\epsilon_{50}$ (%) | 1.5  |
| <b>Total Stresses at Failure</b>                   |      |
| Major Principal Stress Corrected, $s_{1C}$ (psi)   | 13.1 |
| Minor Principal Stress, $s_3$ (psi)                | 7.5  |

### Test Results

|                                                                                          |      |
|------------------------------------------------------------------------------------------|------|
| Unconsolidated-Undrained Compressive Strength at Failure, $\sigma_{1C} - \sigma_3$ (tsf) | 0.40 |
|------------------------------------------------------------------------------------------|------|

Note: Failure was determined at the maximum deviator stress or deviator stress at 15 % axial strain, whenever is obtained first.

Kainat Batool, 05/22/25

Analysis & Quality Review/Date

Specimen Prepared by: A.B.





## Unconsolidated-Undrained Triaxial Compression Test Appendix

Client: RRC Power & Energy, LLC  
Project: Coles Wind Project  
Specimen: GEO-02 at 9 ft

Project No.: GE2502017  
Test Method: ASTM D2850  
Test Date: 05/21/25



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## Unconsolidated-Undrained Triaxial Compression Test

Client: RRC Power & Energy,  
LLC

Project No.: GE2502017

Type of Specimen: Shelby Tube

Type of Test: Q-Test

Strain Rate: 1.0 %/min

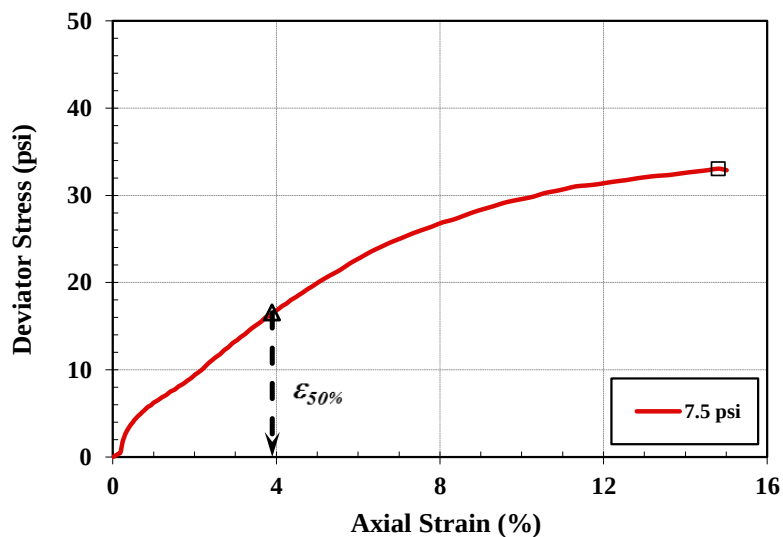
Project: Coles Wind Project

Test Date: 5/21/2025

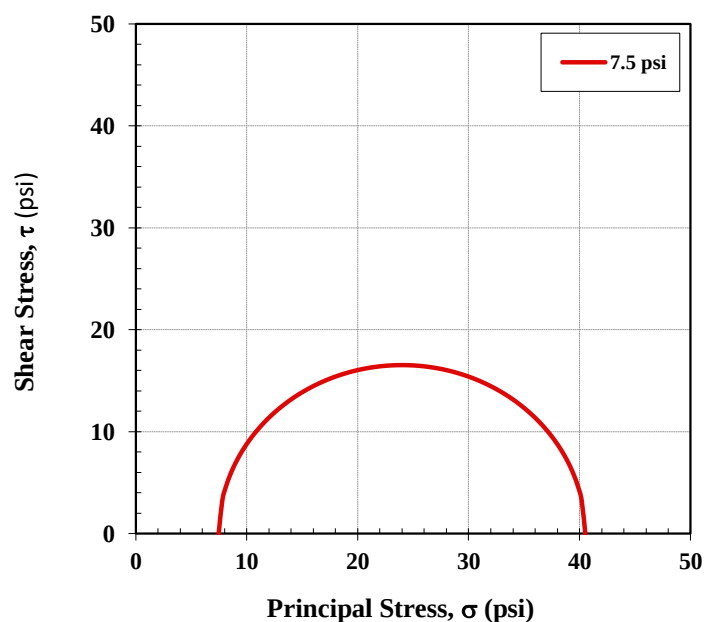
Test Method: ASTM D2850

Sample No.: GEO-21 at 9 ft

Principal Stress Difference vs. Axial Strain



Mohr Circles (Total Stress) for Peak Stress at Failure



### Initial Specimen Conditions

|                            |                  |       |
|----------------------------|------------------|-------|
| Confining Pressure (psi)   |                  | 7.5   |
| Avg. Diameter (in)         | $D_o$            | 2.84  |
| Avg. Height (in)           | $H_o$            | 5.63  |
| In-situ Water Content (%)  | $w_o$            | 13.4  |
| Total Unit Weight (pcf)    | $\gamma_{total}$ | 134.4 |
| Dry Unit Weight (pcf)      | $\gamma_{dry}$   | 118.5 |
| Saturation (%)             | $S_r$            | 85.7  |
| Void Ratio                 | $e_o$            | 0.42  |
| Specific Gravity (Assumed) | $G_s$            | 2.70  |

### Stresses at Failure

|                                                    |      |
|----------------------------------------------------|------|
| Maximum Deviator Stress (psi)                      | 33.1 |
| Axial Strain at Failure (%)                        | 14.8 |
| Axial Strain at 50% of $q_u$ , $\epsilon_{50}$ (%) | 3.9  |
| <b>Total Stresses at Failure</b>                   |      |
| Major Principal Stress Corrected, $s_{1C}$ (psi)   | 40.5 |
| Minor Principal Stress, $s_3$ (psi)                | 7.5  |

### Test Results

|                                                                                          |      |
|------------------------------------------------------------------------------------------|------|
| Unconsolidated-Undrained Compressive Strength at Failure, $\sigma_{1C} - \sigma_3$ (tsf) | 2.38 |
|------------------------------------------------------------------------------------------|------|

Note: Failure was determined at the maximum deviator stress or deviator stress at 15 % axial strain, whenever is obtained first.

Kainat Batool, 05/22/25

Analysis & Quality Review/Date

Specimen Prepared by: A.B.



## Unconsolidated-Undrained Triaxial Compression Test Appendix

Client: RRC Power & Energy, LLC

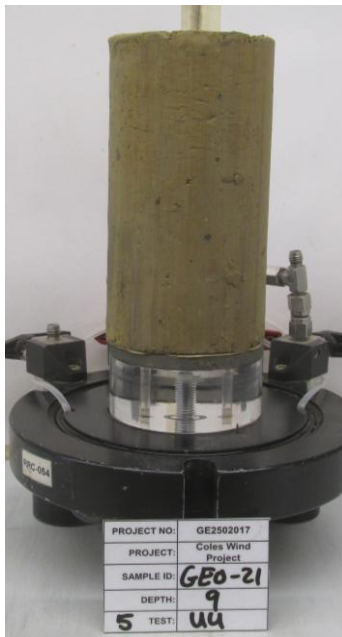
Project: Coles Wind Project

Specimen: GEO-21 at 9 ft

Project No.: GE2502017

Test Method: ASTM D2850

Test Date: 05/21/25



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## Unconsolidated-Undrained Triaxial Compression Test

Client: RRC Power & Energy,  
LLC

Project No.: GE2502017

Type of Specimen: Shelby Tube

Type of Test: Q-Test

Strain Rate: 1.0 %/min

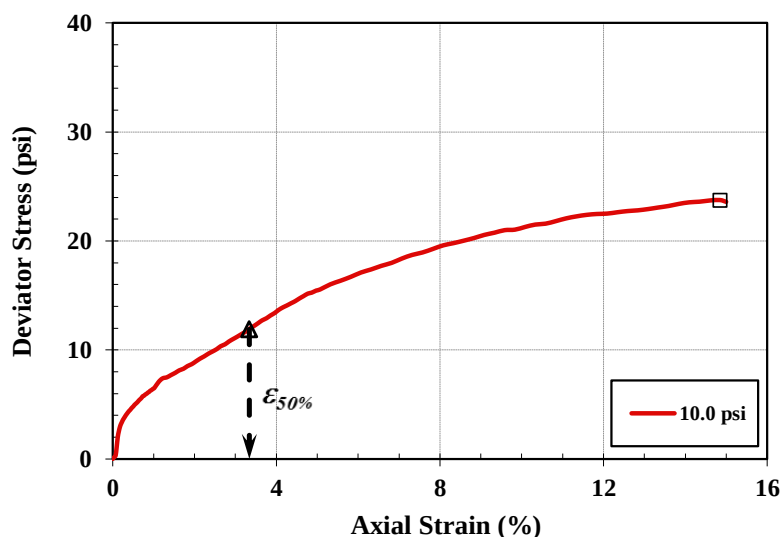
Project: Coles Wind Project

Test Date: 5/21/2025

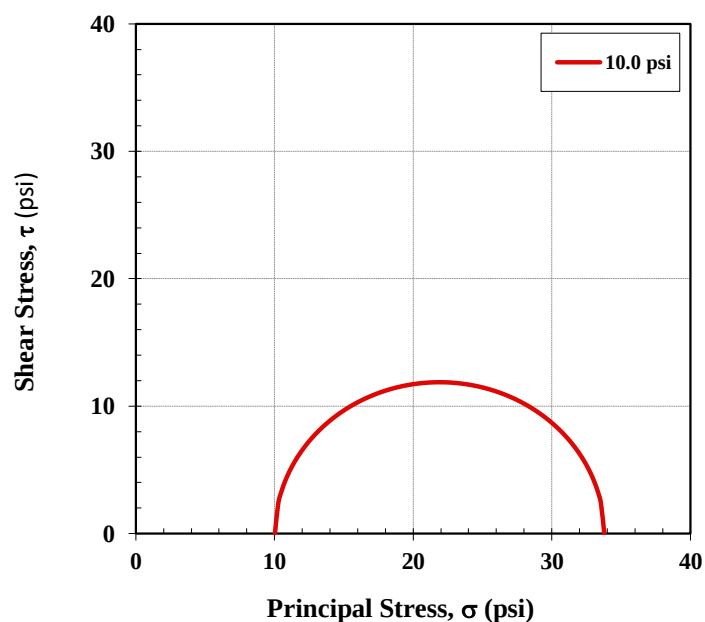
Test Method: ASTM D2850

Sample No.: GEO-22 at 12 ft

Principal Stress Difference vs. Axial Strain



Mohr Circles (Total Stress) for Peak Stress at Failure



### Initial Specimen Conditions

|                            |                  |       |
|----------------------------|------------------|-------|
| Confining Pressure (psi)   |                  | 10.0  |
| Avg. Diameter (in)         | $D_o$            | 2.83  |
| Avg. Height (in)           | $H_o$            | 5.67  |
| In-situ Water Content (%)  | $w_o$            | 13.2  |
| Total Unit Weight (pcf)    | $\gamma_{total}$ | 136.1 |
| Dry Unit Weight (pcf)      | $\gamma_{dry}$   | 120.3 |
| Saturation (%)             | $S_r$            | 88.6  |
| Void Ratio                 | $e_o$            | 0.40  |
| Specific Gravity (Assumed) | $G_s$            | 2.70  |

### Stresses at Failure

|                                                    |      |
|----------------------------------------------------|------|
| Maximum Deviator Stress (psi)                      | 23.8 |
| Axial Strain at Failure (%)                        | 14.8 |
| Axial Strain at 50% of $q_u$ , $\epsilon_{50}$ (%) | 3.3  |

### Total Stresses at Failure

|                                                  |      |
|--------------------------------------------------|------|
| Major Principal Stress Corrected, $s_{1C}$ (psi) | 33.8 |
| Minor Principal Stress, $s_3$ (psi)              | 10.0 |

### Test Results

|                                                                                          |      |
|------------------------------------------------------------------------------------------|------|
| Unconsolidated-Undrained Compressive Strength at Failure, $\sigma_{1C} - \sigma_3$ (tsf) | 1.71 |
|------------------------------------------------------------------------------------------|------|

Note: Failure was determined at the maximum deviator stress or deviator stress at 15 % axial strain, whenever is obtained first.

Kainat Batool, 05/22/25

Analysis & Quality Review/Date

Specimen Prepared by: A.B.



## Unconsolidated-Undrained Triaxial Compression Test Appendix

Client: RRC Power & Energy, LLC

Project: Coles Wind Project

Specimen: GEO-22 at 12 ft

Project No.: GE2502017

Test Method: ASTM D2850

Test Date: 05/21/25



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## Unconsolidated-Undrained Triaxial Compression Test

Client: RRC Power & Energy,  
LLC

Project No.: GE2502017

Type of Specimen: Shelby Tube

Type of Test: Q-Test

Strain Rate: 1.0 %/min

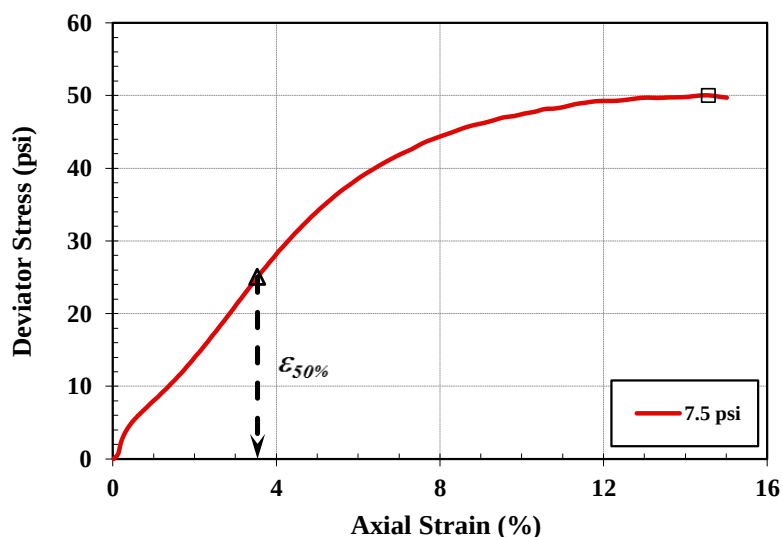
Project: Coles Wind Project

Test Date: 5/22/2025

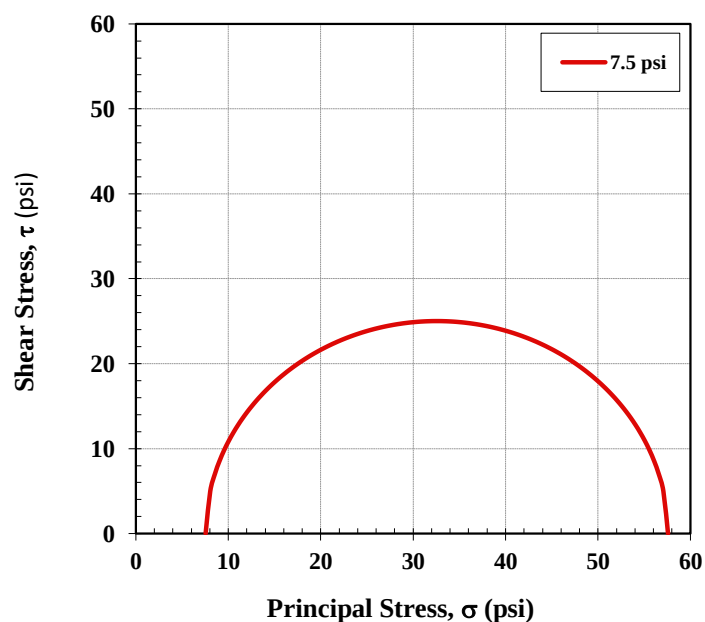
Test Method: ASTM D2850

Sample No.: GEO-28 at 9 ft

Principal Stress Difference vs. Axial Strain



Mohr Circles (Total Stress) for Peak Stress at Failure



### Initial Specimen Conditions

|                            |             |       |
|----------------------------|-------------|-------|
| Confining Pressure (psi)   |             | 7.5   |
| Avg. Diameter (in)         | $D_o$       | 2.85  |
| Avg. Height (in)           | $H_o$       | 5.59  |
| In-situ Water Content (%)  | $w_o$       | 12.5  |
| Total Unit Weight (pcf)    | $q_{total}$ | 140.4 |
| Dry Unit Weight (pcf)      | $q_{dry}$   | 124.8 |
| Saturation (%)             | $S_r$       | 96.3  |
| Void Ratio                 | $e_o$       | 0.35  |
| Specific Gravity (Assumed) | $G_s$       | 2.70  |

### Stresses at Failure

|                                                    |      |
|----------------------------------------------------|------|
| Maximum Deviator Stress (psi)                      | 50.0 |
| Axial Strain at Failure (%)                        | 14.6 |
| Axial Strain at 50% of $q_u$ , $\epsilon_{50}$ (%) | 3.5  |

### Total Stresses at Failure

|                                                  |      |
|--------------------------------------------------|------|
| Major Principal Stress Corrected, $s_{1C}$ (psi) | 57.6 |
| Minor Principal Stress, $s_3$ (psi)              | 7.5  |

### Test Results

|                                                                                          |      |
|------------------------------------------------------------------------------------------|------|
| Unconsolidated-Undrained Compressive Strength at Failure, $\sigma_{1C} - \sigma_3$ (tsf) | 3.60 |
|------------------------------------------------------------------------------------------|------|

Note: Failure was determined at the maximum deviator stress or deviator stress at 15 % axial strain, whenever is obtained first.

Kainat Batool, 05/23/25

Analysis & Quality Review/Date

Specimen Prepared by: A.B.





## Unconsolidated-Undrained Triaxial Compression Test Appendix

Client: RRC Power & Energy, LLC

Project: Coles Wind Project

Specimen: GEO-28 at 9 ft

Project No.: GE2502017

Test Method: ASTM D2850

Test Date: 05/22/25



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## Unconsolidated-Undrained Triaxial Compression Test

Client: RRC Power & Energy,  
LLC

Project No.: GE2502017

Type of Specimen: Shelby Tube

Type of Test: Q-Test

Strain Rate: 1.0 %/min

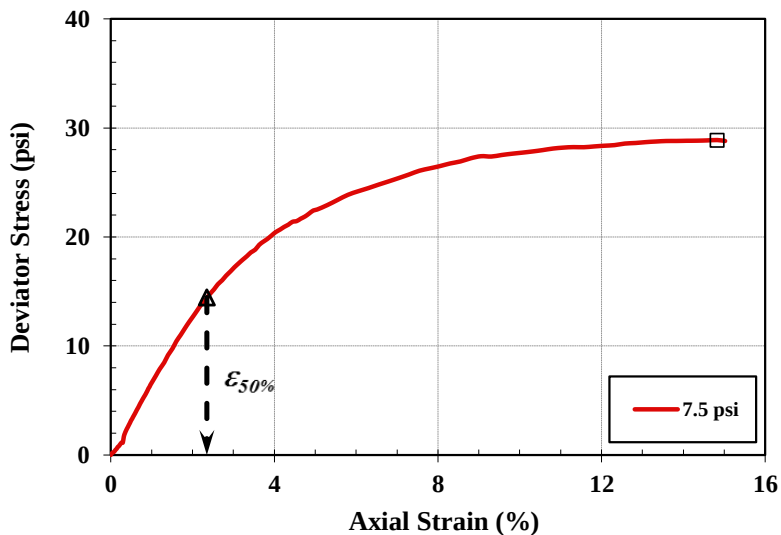
Project: Coles Wind Project

Test Date: 5/22/2025

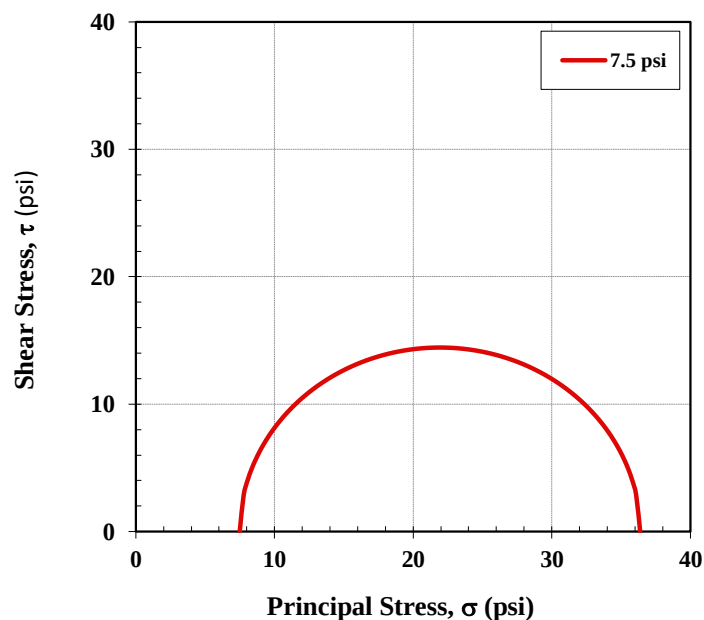
Test Method: ASTM D2850

Sample No.: GEO-32 at 9 ft

Principal Stress Difference vs. Axial Strain



Mohr Circles (Total Stress) for Peak Stress at Failure



### Initial Specimen Conditions

|                            |                    |       |
|----------------------------|--------------------|-------|
| Confining Pressure (psi)   |                    | 7.5   |
| Avg. Diameter (in)         | D <sub>o</sub>     | 2.89  |
| Avg. Height (in)           | H <sub>o</sub>     | 5.60  |
| In-situ Water Content (%)  | w <sub>o</sub>     | 13.5  |
| Total Unit Weight (pcf)    | g <sub>total</sub> | 139.3 |
| Dry Unit Weight (pcf)      | g <sub>dry</sub>   | 122.7 |
| Saturation (%)             | S <sub>r</sub>     | 97.8  |
| Void Ratio                 | e <sub>o</sub>     | 0.37  |
| Specific Gravity (Assumed) | G <sub>s</sub>     | 2.70  |

### Stresses at Failure

|                                                    |      |
|----------------------------------------------------|------|
| Maximum Deviator Stress (psi)                      | 28.9 |
| Axial Strain at Failure (%)                        | 14.8 |
| Axial Strain at 50% of $q_u$ , $\epsilon_{50}$ (%) | 2.4  |
| Total Stresses at Failure                          |      |
| Major Principal Stress Corrected, $s_{1C}$ (psi)   | 36.4 |
| Minor Principal Stress, $s_3$ (psi)                | 7.5  |

### Test Results

|                                                                                          |      |
|------------------------------------------------------------------------------------------|------|
| Unconsolidated-Undrained Compressive Strength at Failure, $\sigma_{1C} - \sigma_3$ (tsf) | 2.08 |
|------------------------------------------------------------------------------------------|------|

Note: Failure was determined at the maximum deviator stress or deviator stress at 15 % axial strain, whenever is obtained first.

Kainat Batool, 05/23/25

Analysis & Quality Review/Date

Specimen Prepared by: A.B.



## Unconsolidated-Undrained Triaxial Compression Test Appendix

Client: RRC Power & Energy, LLC  
Project: Coles Wind Project  
Specimen: GEO-32 at 9 ft

Project No.: GE2502017  
Test Method: ASTM D2850  
Test Date: 05/22/25



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## Unconsolidated-Undrained Triaxial Compression Test

Client: RRC Power & Energy,  
LLC

Project No.: GE2502017

Type of Specimen: Shelby Tube

Type of Test: Q-Test

Strain Rate: 1.0 %/min

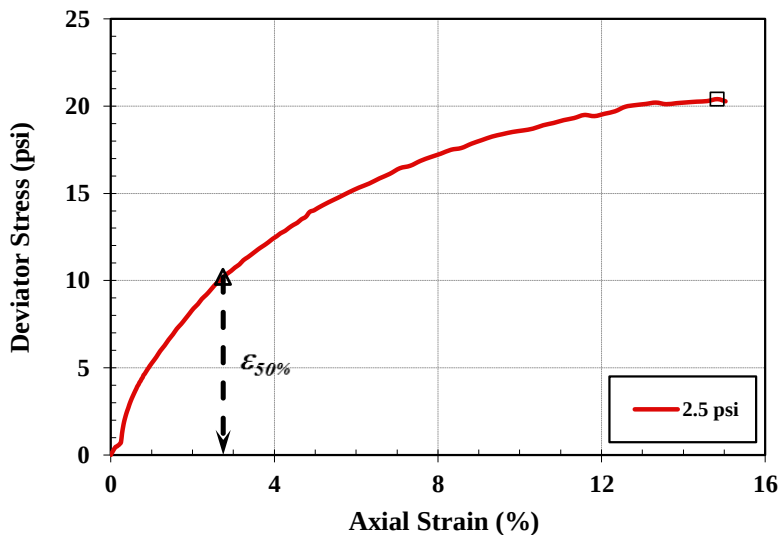
Project: Coles Wind Project

Test Date: 5/22/2025

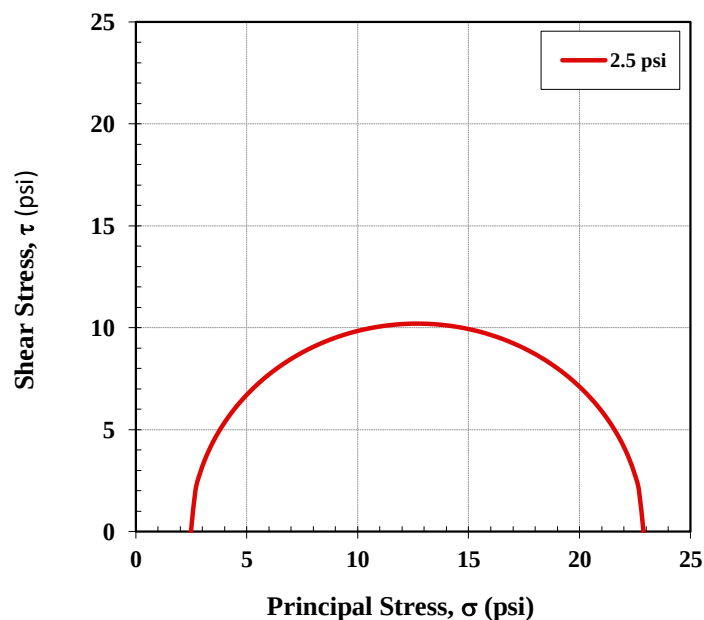
Test Method: ASTM D2850

Sample No.: OM-1 at 3 ft

Principal Stress Difference vs. Axial Strain



Mohr Circles (Total Stress) for Peak Stress at Failure



### Initial Specimen Conditions

|                            |                  |       |
|----------------------------|------------------|-------|
| Confining Pressure (psi)   |                  | 2.5   |
| Avg. Diameter (in)         | $D_o$            | 2.87  |
| Avg. Height (in)           | $H_o$            | 5.57  |
| In-situ Water Content (%)  | $w_o$            | 18.4  |
| Total Unit Weight (pcf)    | $\gamma_{total}$ | 134.5 |
| Dry Unit Weight (pcf)      | $\gamma_{dry}$   | 113.6 |
| Saturation (%)             | $S_r$            | 100.0 |
| Void Ratio                 | $e_o$            | 0.48  |
| Specific Gravity (Assumed) | $G_s$            | 2.70  |

### Stresses at Failure

|                                                    |      |
|----------------------------------------------------|------|
| Maximum Deviator Stress (psi)                      | 20.4 |
| Axial Strain at Failure (%)                        | 14.8 |
| Axial Strain at 50% of $q_u$ , $\epsilon_{50}$ (%) | 2.8  |
| <b>Total Stresses at Failure</b>                   |      |
| Major Principal Stress Corrected, $s_{1C}$ (psi)   | 22.9 |
| Minor Principal Stress, $s_3$ (psi)                | 2.5  |

### Test Results

|                                                                                          |      |
|------------------------------------------------------------------------------------------|------|
| Unconsolidated-Undrained Compressive Strength at Failure, $\sigma_{1C} - \sigma_3$ (tsf) | 1.47 |
|------------------------------------------------------------------------------------------|------|

Note: Failure was determined at the maximum deviator stress or deviator stress at 15 % axial strain, whenever is obtained first.

Kainat Batool, 05/23/25

Analysis & Quality Review/Date

Specimen Prepared by: A.B.



## Unconsolidated-Undrained Triaxial Compression Test Appendix

Client: RRC Power & Energy, LLC

Project: Coles Wind Project

Specimen: OM-1 at 3 ft

Project No.: GE2502017

Test Method: ASTM D2850

Test Date: 05/22/25



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## Unconsolidated-Undrained Triaxial Compression Test

Client: RRC Power & Energy,  
LLC

Project No.: GE2502017

Type of Specimen: Shelby Tube

Type of Test: Q-Test

Strain Rate: 1.0 %/min

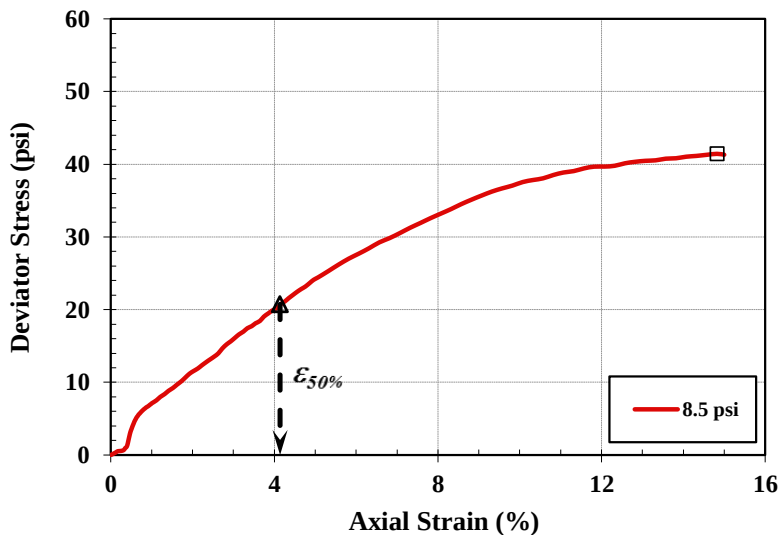
Project: Coles Wind Project

Test Date: 5/22/2025

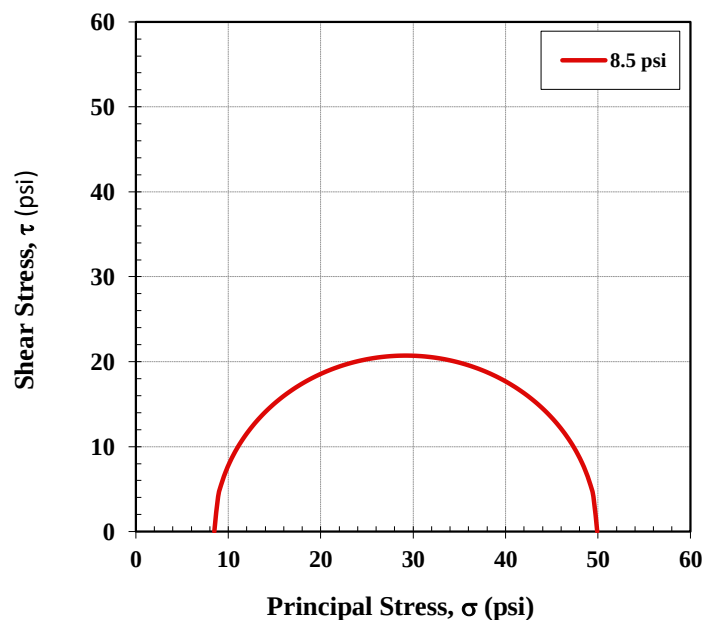
Test Method: ASTM D2850

Sample No.: OM-2 at 10.5 ft

Principal Stress Difference vs. Axial Strain



Mohr Circles (Total Stress) for Peak Stress at Failure



### Initial Specimen Conditions

|                            |                  |       |
|----------------------------|------------------|-------|
| Confining Pressure (psi)   |                  | 8.5   |
| Avg. Diameter (in)         | $D_o$            | 2.87  |
| Avg. Height (in)           | $H_o$            | 5.59  |
| In-situ Water Content (%)  | $w_o$            | 14.4  |
| Total Unit Weight (pcf)    | $\gamma_{total}$ | 140.4 |
| Dry Unit Weight (pcf)      | $\gamma_{dry}$   | 122.7 |
| Saturation (%)             | $S_r$            | 100.0 |
| Void Ratio                 | $e_o$            | 0.37  |
| Specific Gravity (Assumed) | $G_s$            | 2.70  |

### Stresses at Failure

|                                                    |      |
|----------------------------------------------------|------|
| Maximum Deviator Stress (psi)                      | 41.4 |
| Axial Strain at Failure (%)                        | 14.8 |
| Axial Strain at 50% of $q_u$ , $\epsilon_{50}$ (%) | 4.1  |
| <b>Total Stresses at Failure</b>                   |      |
| Major Principal Stress Corrected, $s_{1C}$ (psi)   | 49.9 |
| Minor Principal Stress, $s_3$ (psi)                | 8.5  |

### Test Results

|                                                                                          |      |
|------------------------------------------------------------------------------------------|------|
| Unconsolidated-Undrained Compressive Strength at Failure, $\sigma_{1C} - \sigma_3$ (tsf) | 2.98 |
|------------------------------------------------------------------------------------------|------|

Note: Failure was determined at the maximum deviator stress or deviator stress at 15 % axial strain, whenever is obtained first.

Kainat Batool, 05/23/25

Analysis & Quality Review/Date

Specimen Prepared by: A.B.





## Unconsolidated-Undrained Triaxial Compression Test Appendix

Client: RRC Power & Energy, LLC

Project: Coles Wind Project

Specimen: OM-2 at 10.5 ft

Project No.: GE2502017

Test Method: ASTM D2850

Test Date: 05/22/25



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## One-Dimensional Swell or Collapse of Soils

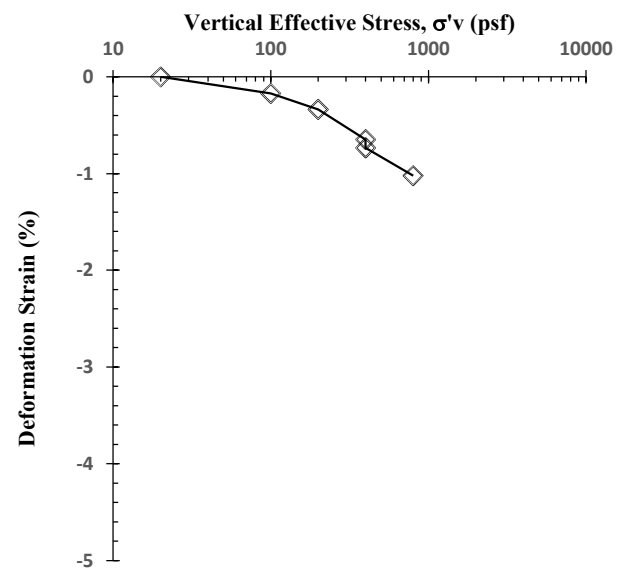
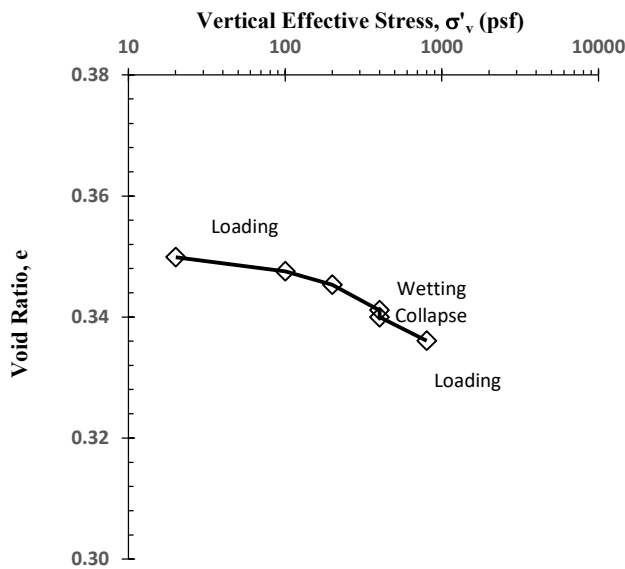
**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** OM-1 at 3 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D4546, Method C  
**Test Date:** 5/21/25-5/23/25

| Specimen Conditions                       |       |
|-------------------------------------------|-------|
| Avg. Water Content of Trimmings (%)       | 11.0  |
| Final Specimen Water Content (%)          | 12.0  |
| Initial Specimen Height (in)              | 0.802 |
| Final Specimen Height (in)                | 0.793 |
| Initial Dry Unit Weight, $\gamma_o$ (pcf) | 124.8 |
| Final Dry Unit Weight, $\gamma_f$ (pcf)   | 126.1 |
| Initial Void Ratio, $e_o$                 | 0.350 |
| Final Void Ratio, $e_f$                   | 0.336 |
| Initial Degree of Saturation (%)          | 84.7  |
| Final Degree of Saturation (%)            | 96.0  |
| Collapse Strain (%)                       | -0.1  |

Specimen was inundated with tap water during testing. Loading increment duration was minimum 24 hours. The calculation included the machine deflections that measured in each loading steps.

Gs assumed to be 2.70  
Specimen Diameter: 2.501 inches



| Stage No.         | Dry   |       |       |       | Inundated |       |
|-------------------|-------|-------|-------|-------|-----------|-------|
|                   | 1     | 2     | 3     | 4     | 5         | 6     |
| $\sigma'_v$ (psf) | 20    | 100   | 200   | 400   | 400       | 800   |
| Height (inch)     | 0.802 | 0.800 | 0.799 | 0.796 | 0.796     | 0.793 |
| Void Ratio, $e$   | 0.350 | 0.348 | 0.345 | 0.341 | 0.340     | 0.336 |
| Axial Strain (%)  | 0.00  | -0.17 | -0.34 | -0.65 | -0.73     | -1.02 |

Huamiao Cao, P.E. 6/2/25

Analysis & Quality Review/Date  
Specimen prepared and tested by: J.Z.

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## One-Dimensional Swell or Collapse of Soils

**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** OM-1 at 3 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D4546, Method C  
**Test Date:** 5/21/25-5/23/25



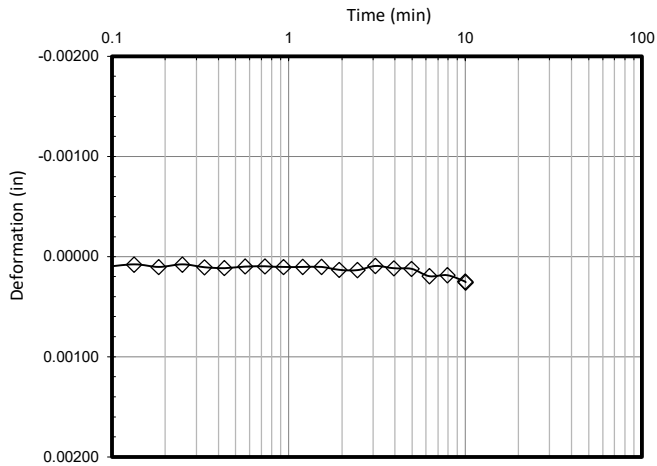


## One-Dimensional Swell or Collapse of Soils

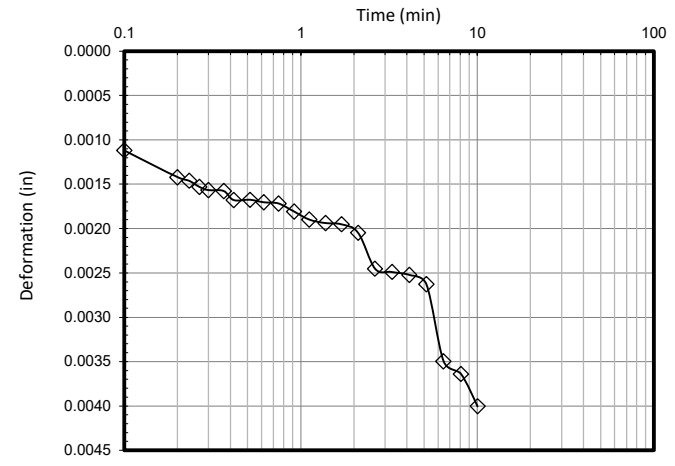
**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** OM-1 at 3 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D4546, Method C  
**Test Date:** 5/21/25-5/23/25

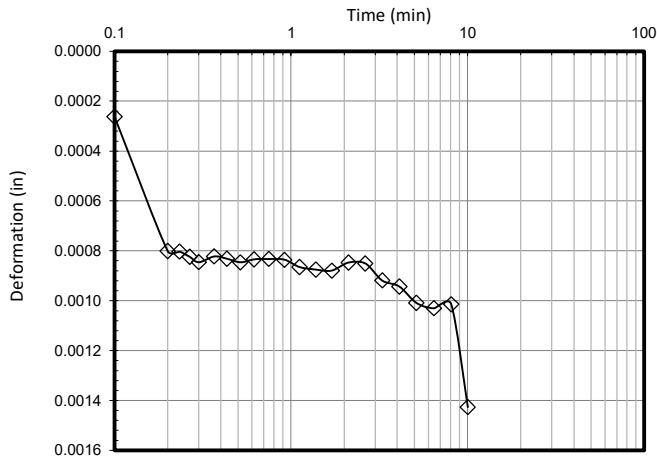
### 20-psf Load (Seating Load)



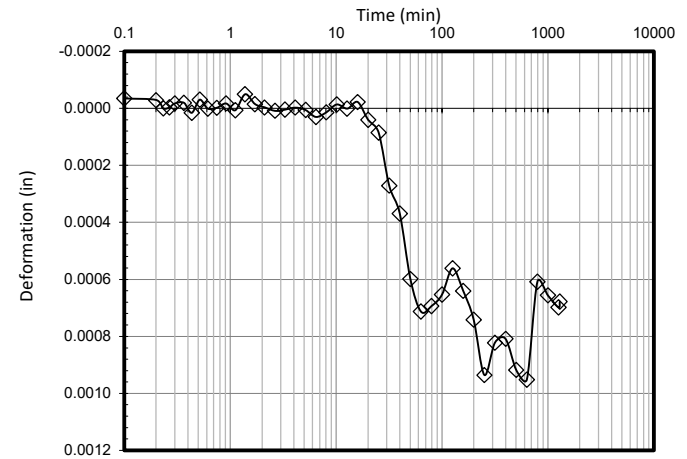
### 400-psf Load



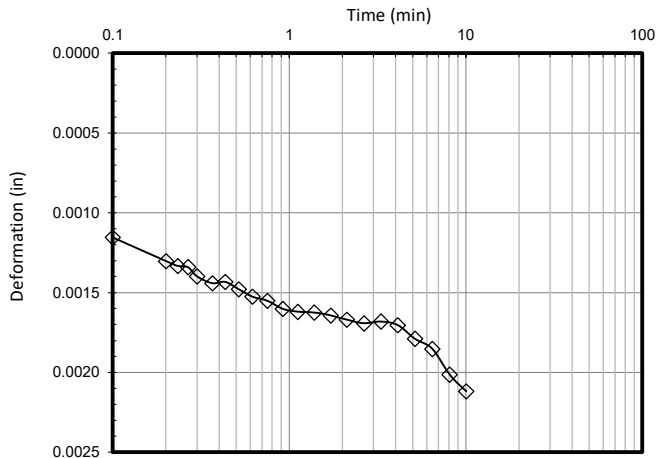
### 100-psf Load



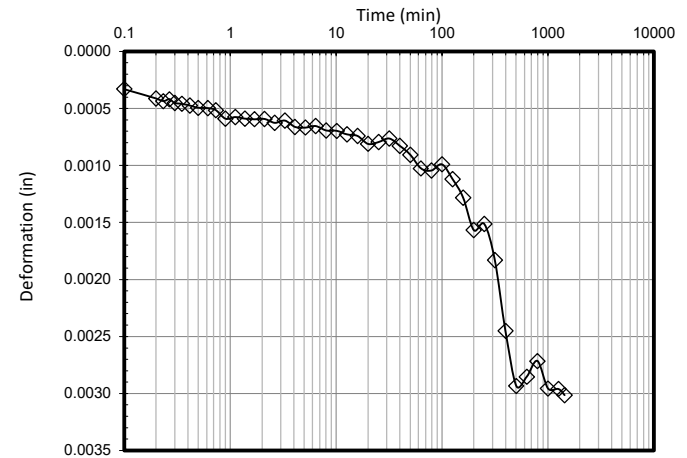
### 400-psf Load (inundated)



### 200-psf Load



### 800-psf Load (inundated)



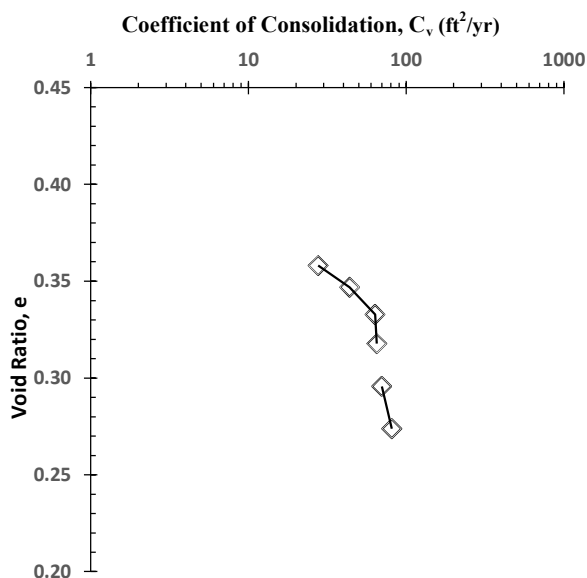
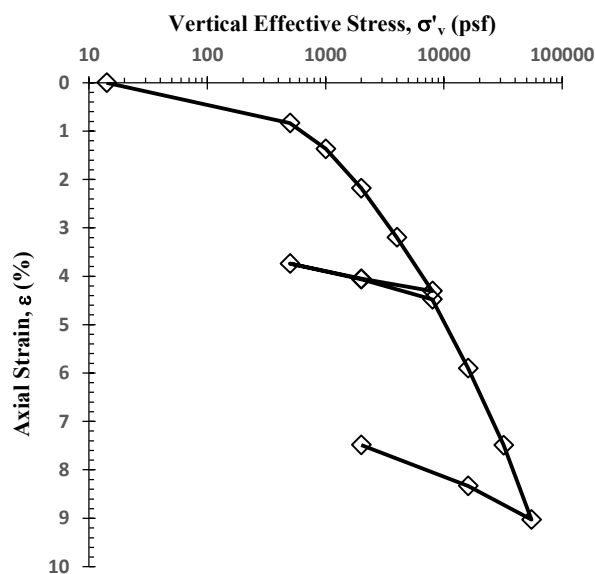
## One-Dimensional Consolidation Properties of Soil

**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** GEO-02 at 9 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/20/25-6/6/25

| Specimen Conditions                     |       |
|-----------------------------------------|-------|
| Initial Specimen Water Content (%)      | 13.8  |
| Final Specimen Water Content (%)        | 10.6  |
| Initial Specimen Height (in)            | 0.889 |
| Final Specimen Height (in)              | 0.823 |
| Initial Dry Unit Weight, $g_o$ (pcf)    | 122.4 |
| Final Dry Unit Weight, $g_r$ (pcf)      | 132.3 |
| Initial Void Ratio, $e_o$               | 0.377 |
| Final Void Ratio, $e_f$                 | 0.274 |
| Initial Degree of Saturation (%)        | 99.0  |
| Preconsolidation Pressure, $p'_c$ (psf) | 4500  |
| "Swell Pressure" (psf)                  | 14    |

Specimen was trimmed using a trimming turntable.  
Specimen was inundated with tap water during testing.  
Coefficient of Consolidation was determined using the Log Time Method. Loading increment duration was 24 hours. The calculation was included the machine deflections that were measured in each loading step.  
 $G_s$  (assumed) 2.70  
Preconsolidation pressure was determined by using the Casagrande construction technique  
Compression Index,  $C_c$  & Recompression Index,  $C_r$  calculated in accordance with void ratio ( $\Delta e$ ).  
Specimen Diameter: 2.495 inches



|                   |       |       |       |       |       |       |       |       |       |       |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $\sigma'_v$ (psf) | 14    | 500   | 1000  | 2000  | 4000  | 8000  | 2000  | 500   | 2000  | 8000  |
| $C_v$ (ft²/yr)    | -     | -     | 27.7  | 43.9  | 63.4  | 65.1  | -     | -     | -     | -     |
| Axial Strain (%)  | 0.00  | 0.83  | 1.37  | 2.18  | 3.20  | 4.30  | 4.05  | 3.74  | 4.06  | 4.48  |
| $e$               | 0.377 | 0.365 | 0.358 | 0.347 | 0.333 | 0.318 | 0.321 | 0.325 | 0.321 | 0.315 |

|                   |       |       |       |       |       |
|-------------------|-------|-------|-------|-------|-------|
| $\sigma'_v$ (psf) | 16000 | 32000 | 55000 | 16000 | 2000  |
| $C_v$ (ft²/yr)    | 69.9  | 81.1  | -     | -     | -     |
| Axial Strain (%)  | 5.90  | 7.49  | 9.03  | 8.33  | 7.49  |
| $e$               | 0.296 | 0.274 | 0.253 | 0.262 | 0.274 |

Compression Index,  $C_c$  0.090  
Recompression Index,  $C_r$  0.007  
Swell Index,  $C_s$  (1st Rebound) 0.006  
Swell Index,  $C_s$  (2nd Rebound) 0.015

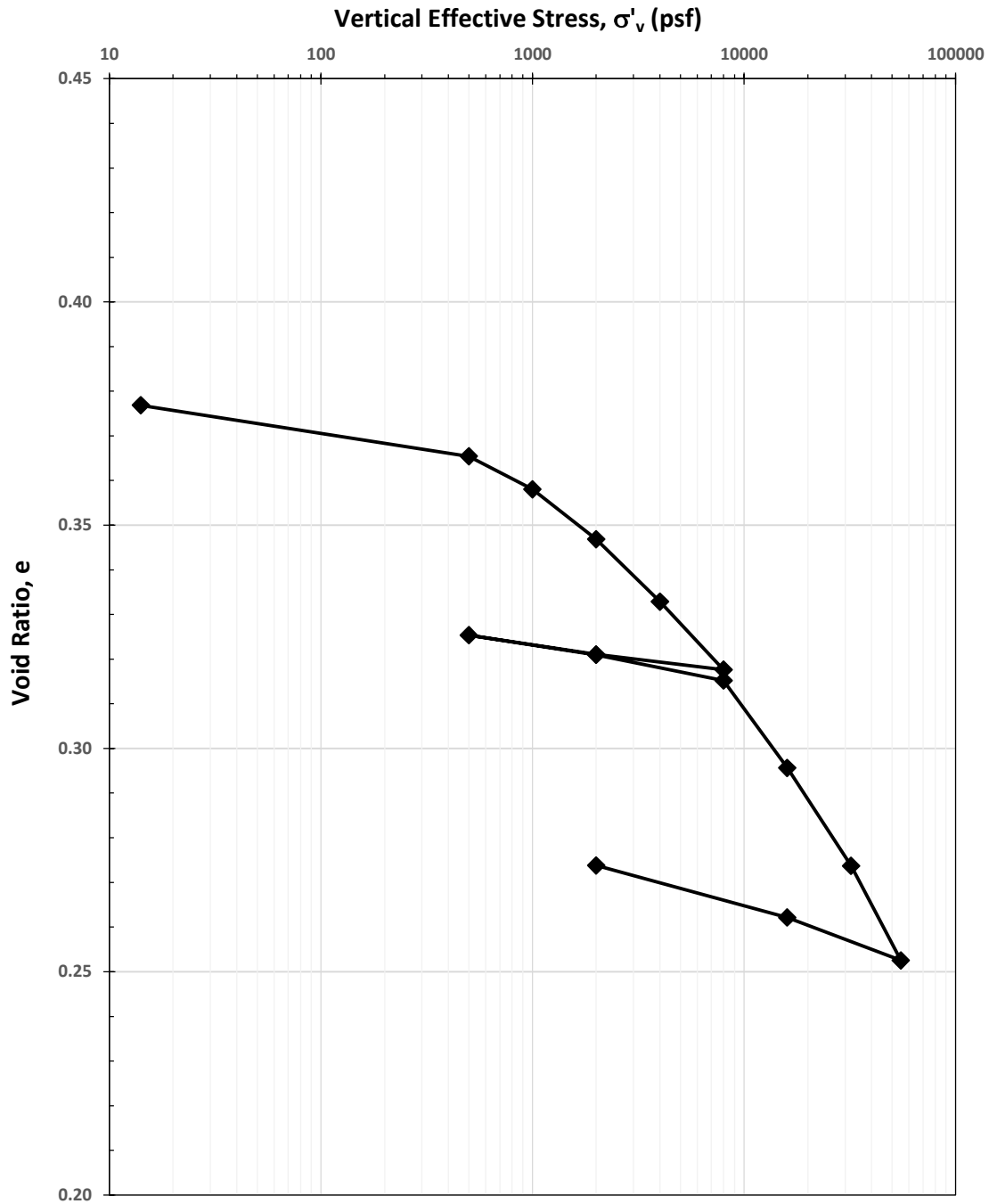
Huamiao Cao, P.E. 6/6/25  
Analysis & Quality Review/Date

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## One-Dimensional Consolidation Properties of Soil

**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** GEO-02 at 9 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/20/25-6/6/25



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## One-Dimensional Consolidation Properties of Soil Appendix

**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** GEO-02 at 9 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/20/25-6/6/25



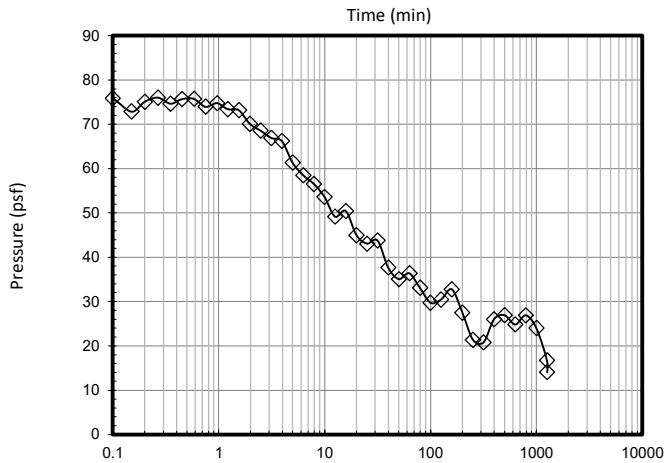
The results shown on this report are for the exclusive use of the client for whom they were obtained and apply only to the sample tested and / or inspected. They are not intended to be indicative of qualities of apparently identical products. The use of our name must receive prior written approval. Reports must be reproduced in their entirety. Unauthorized use or copying of this document is strictly prohibited by anyone other than the client for the specific project.

## One-Dimensional Consolidation Properties of Soil Appendix

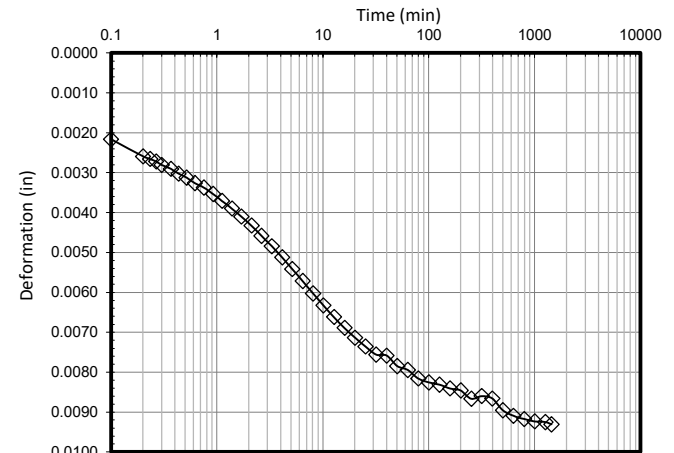
**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** GEO-02 at 9 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/20/25-6/6/25

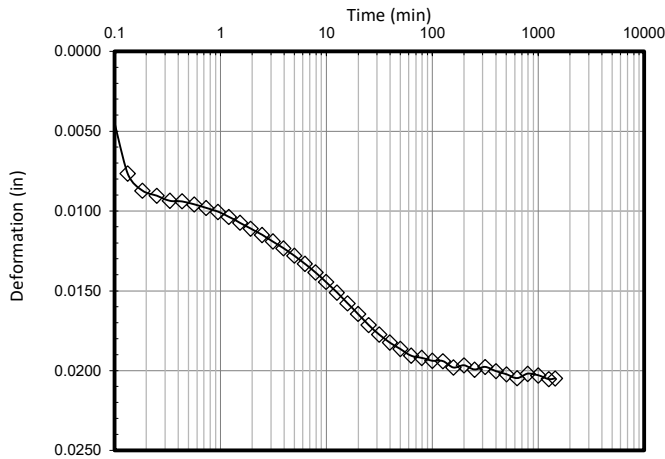
### Swell Pressure Measurement



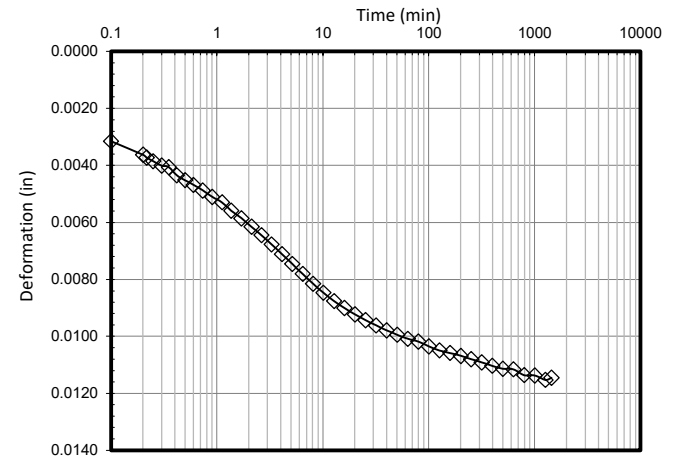
### 2000-psf Load



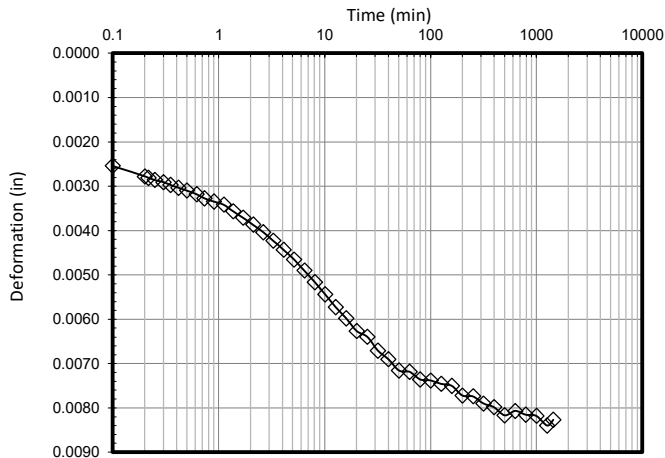
### 500-psf Load



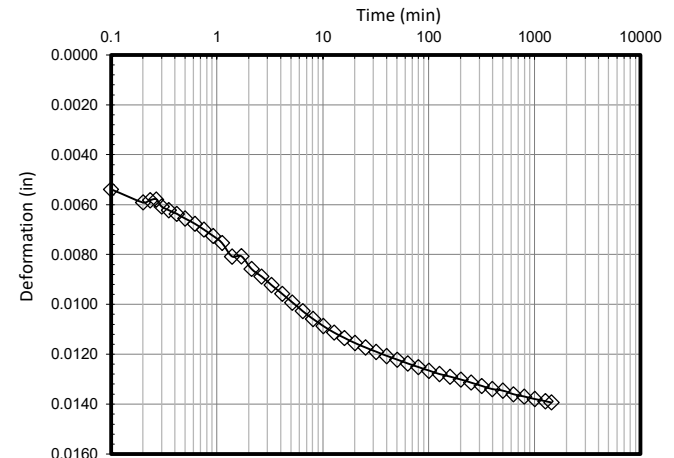
### 4000-psf Load



### 1000-psf Load



### 8000-psf Load

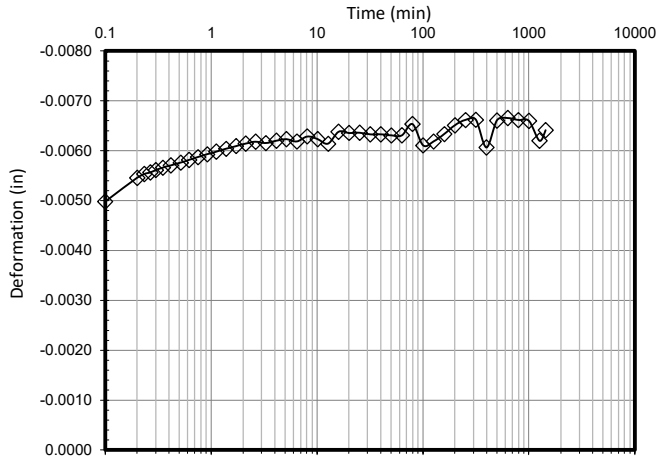


## One-Dimensional Consolidation Properties of Soil Appendix

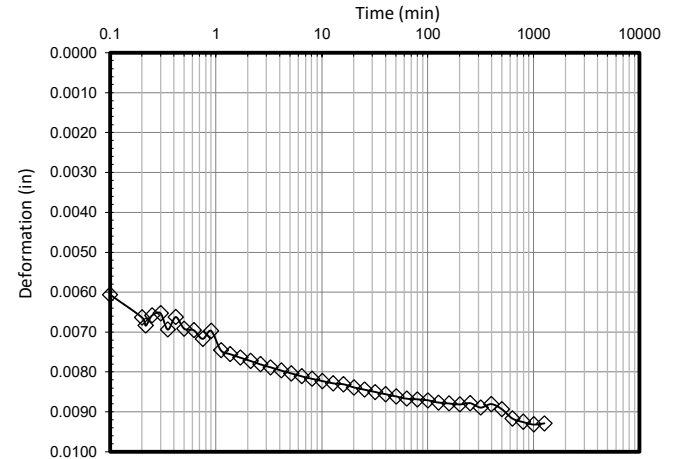
**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** GEO-02 at 9 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/20/25-6/6/25

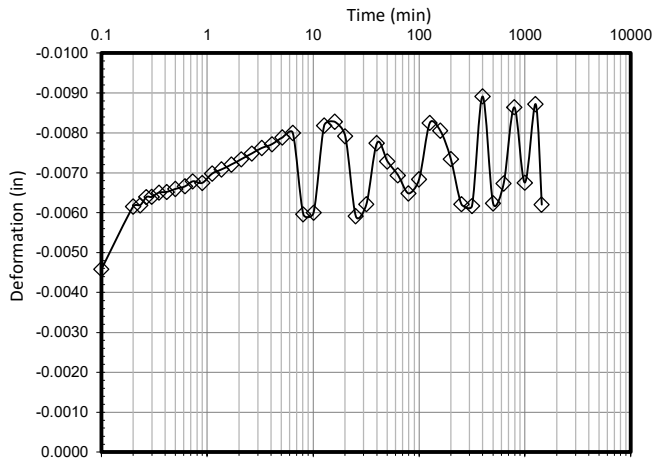
### 2000-psf Load



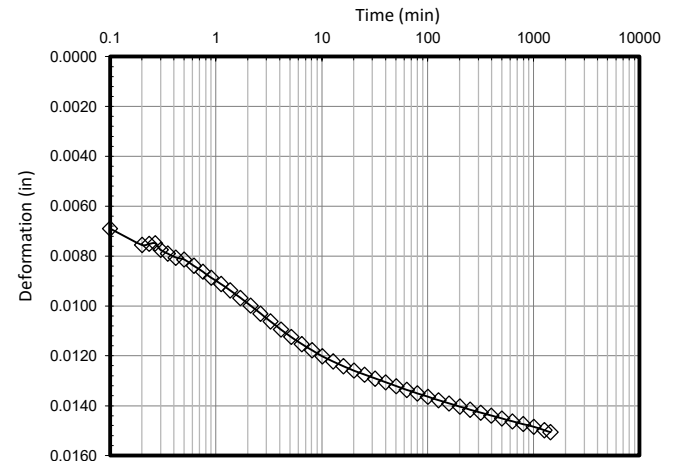
### 8000-psf Load



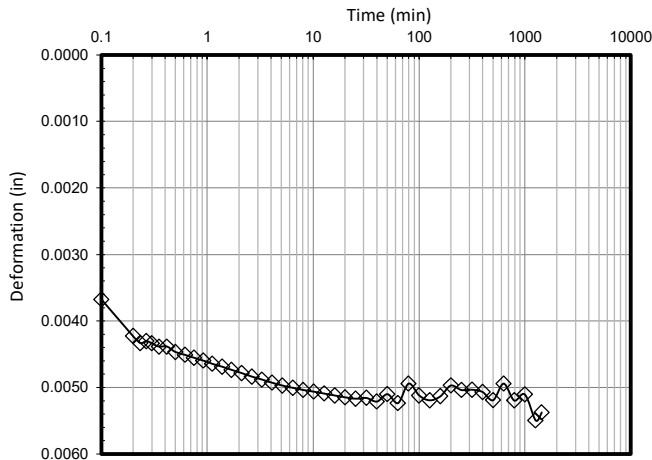
### 500-psf Load



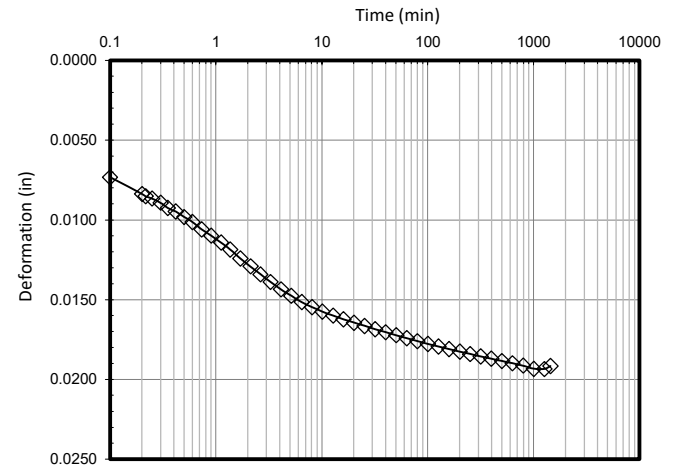
### 16000-psf Load



### 2000-psf Load



### 32000-psf Load



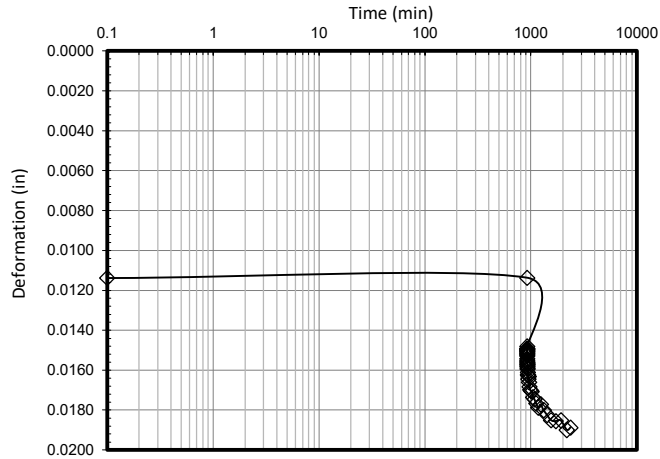


## One-Dimensional Consolidation Properties of Soil Appendix

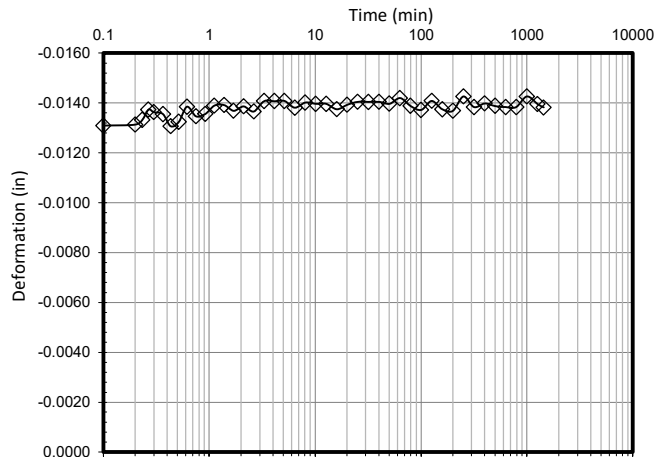
**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** GEO-02 at 9 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/20/25-6/6/25

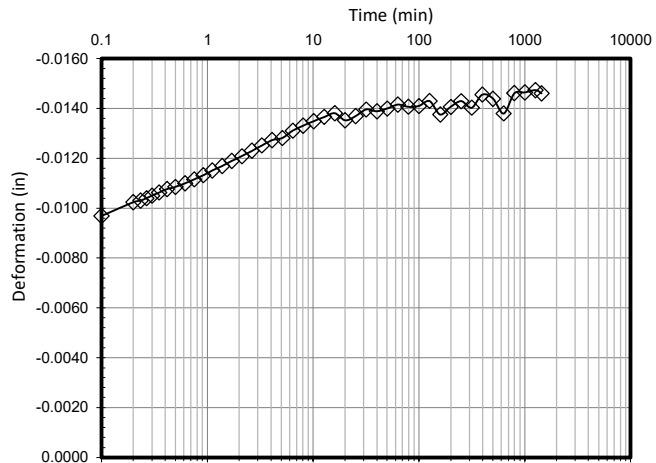
### 55000-psf Load



### 16000-psf Load



### 2000-psf Load



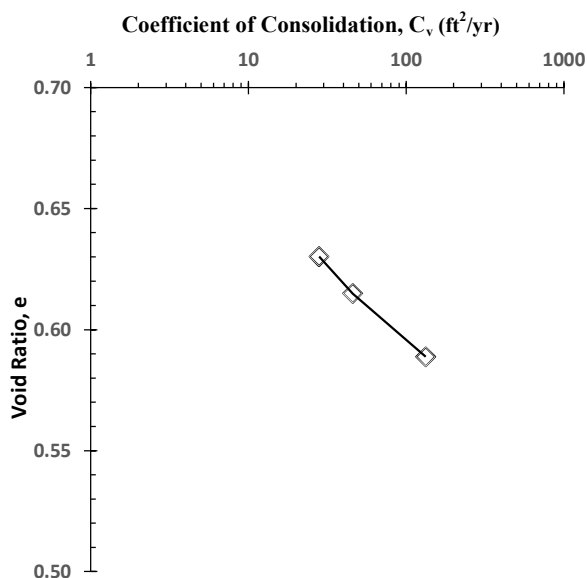
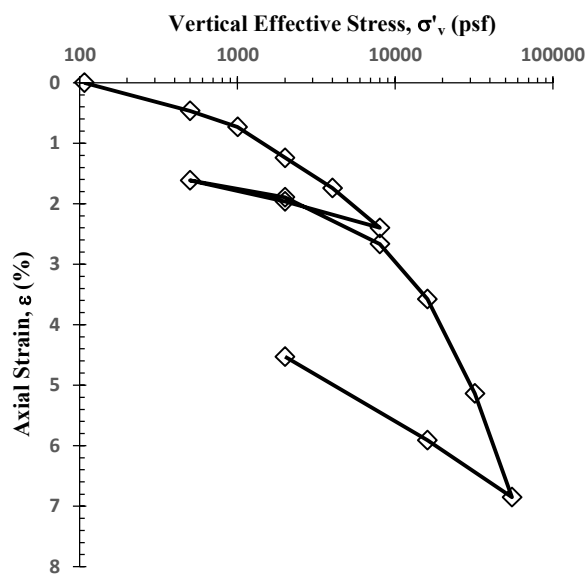
## One-Dimensional Consolidation Properties of Soil

**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** GEO-21 at 9 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/20/25-6/5/25

| Specimen Conditions                     |       |
|-----------------------------------------|-------|
| Initial Specimen Water Content (%)      | 23.2  |
| Final Specimen Water Content (%)        | 23.6  |
| Initial Specimen Height (in)            | 0.907 |
| Final Specimen Height (in)              | 0.866 |
| Initial Dry Unit Weight, $g_o$ (pcf)    | 100.6 |
| Final Dry Unit Weight, $g_r$ (pcf)      | 105.4 |
| Initial Void Ratio, $e_o$               | 0.675 |
| Final Void Ratio, $e_f$                 | 0.599 |
| Initial Degree of Saturation (%)        | 92.9  |
| Preconsolidation Pressure, $p'_c$ (psf) | 9400  |
| "Swell Pressure" (psf)                  | 107   |

Specimen was trimmed using a trimming turntable.  
Specimen was inundated with tap water during testing.  
Coefficient of Consolidation was determined using the Log Time Method. Loading increment duration was 24 hours. The calculation was included the machine deflections that were measured in each loading step.  
 $G_s$  (assumed) 2.70  
Preconsolidation pressure was determined by using the Casagrande construction technique  
Compression Index,  $C_c$  & Recompression Index,  $C_r$  calculated in accordance with void ratio ( $\Delta e$ ).  
Specimen Diameter: 2.498 inches



|                   |       |       |       |       |       |       |       |       |       |       |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $\sigma'_v$ (psf) | 107   | 500   | 1000  | 2000  | 4000  | 8000  | 2000  | 500   | 2000  | 8000  |
| $C_v$ (ft²/yr)    | -     | -     | -     | -     | -     | -     | -     | -     | -     | 28.0  |
| Axial Strain (%)  | 0.00  | 0.46  | 0.73  | 1.24  | 1.74  | 2.40  | 1.96  | 1.62  | 1.89  | 2.67  |
| $e$               | 0.675 | 0.667 | 0.663 | 0.654 | 0.646 | 0.635 | 0.642 | 0.648 | 0.643 | 0.630 |

|                   |       |       |       |       |       |
|-------------------|-------|-------|-------|-------|-------|
| $\sigma'_v$ (psf) | 16000 | 32000 | 55000 | 16000 | 2000  |
| $C_v$ (ft²/yr)    | 45.8  | 133.0 | -     | -     | -     |
| Axial Strain (%)  | 3.57  | 5.14  | 6.85  | 5.91  | 4.53  |
| $e$               | 0.615 | 0.589 | 0.560 | 0.576 | 0.599 |

Compression Index,  $C_c$  0.122  
Recompression Index,  $C_r$  0.008  
Swell Index,  $C_s$  (1st Rebound) 0.011  
Swell Index,  $C_s$  (2nd Rebound) 0.027

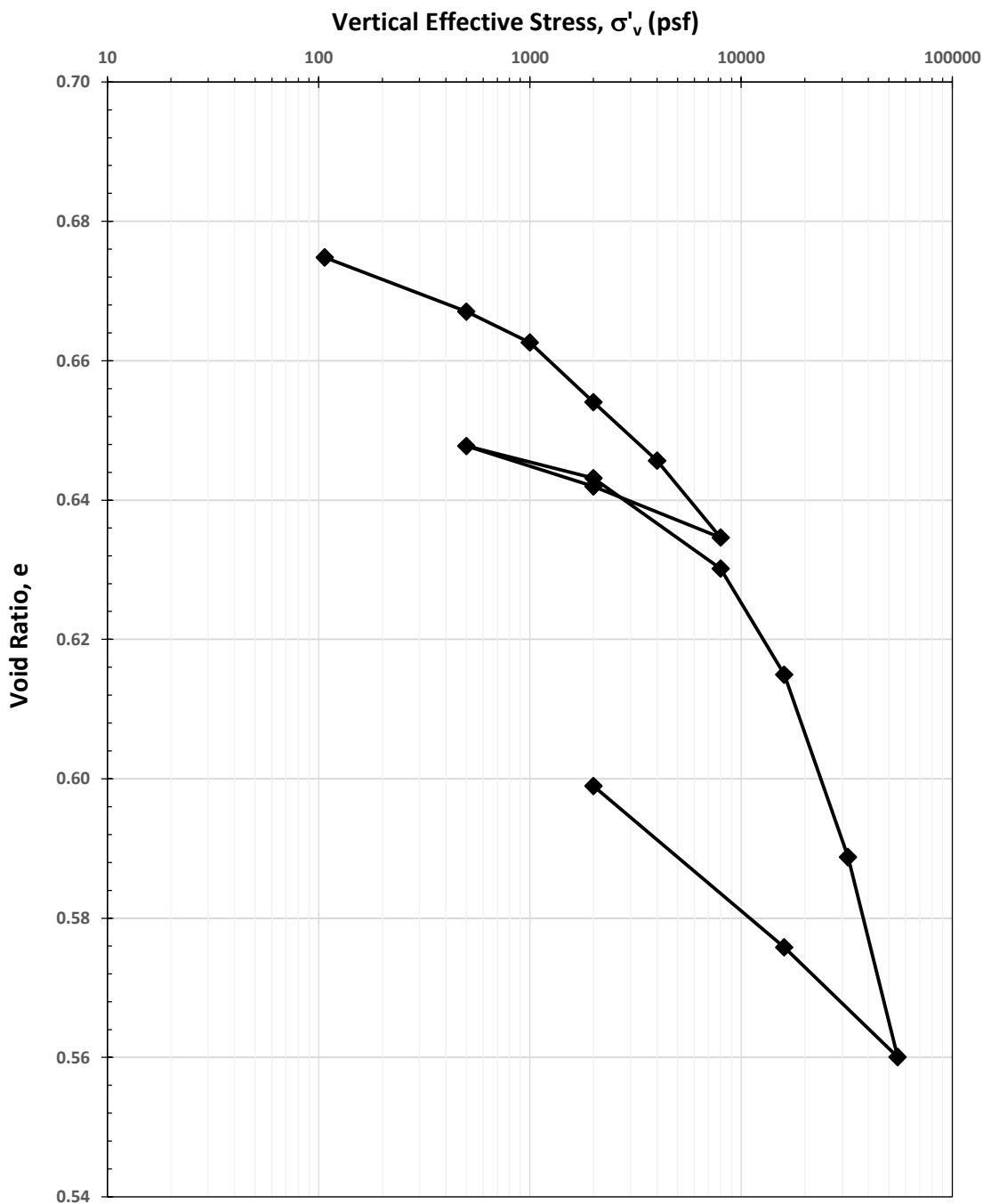
Huamiao Cao, P.E. 6/6/25  
Analysis & Quality Review/Date

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## One-Dimensional Consolidation Properties of Soil

**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** GEO-21 at 9 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/20/25-6/5/25



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## One-Dimensional Consolidation Properties of Soil Appendix

**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** GEO-21 at 9 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/20/25-6/5/25



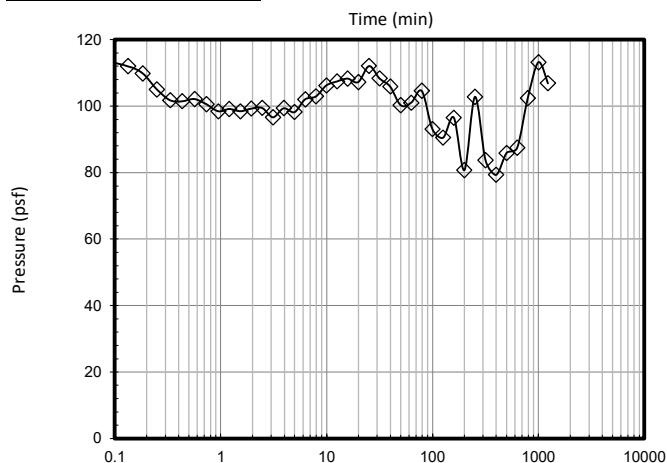
The results shown on this report are for the exclusive use of the client for whom they were obtained and apply only to the sample tested and / or inspected. They are not intended to be indicative of qualities of apparently identical products. The use of our name must receive prior written approval. Reports must be reproduced in their entirety. Unauthorized use or copying of this document is strictly prohibited by anyone other than the client for the specific project.

## One-Dimensional Consolidation Properties of Soil Appendix

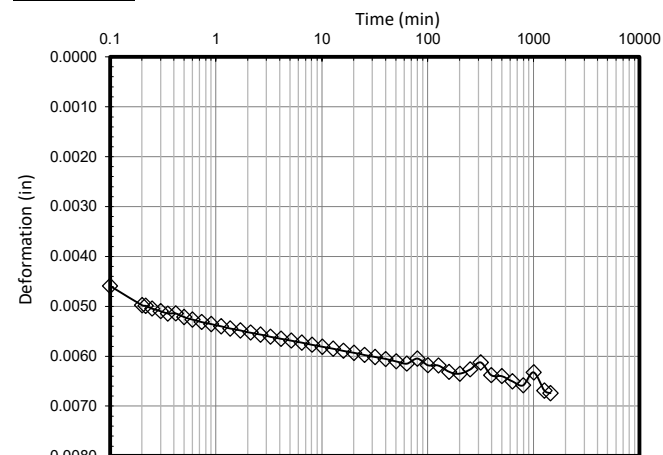
**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** GEO-21 at 9 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/20/25-6/5/25

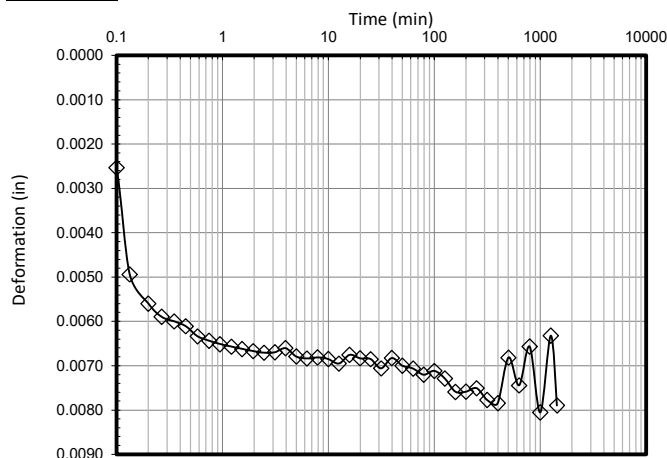
### Swell Pressure Measurement



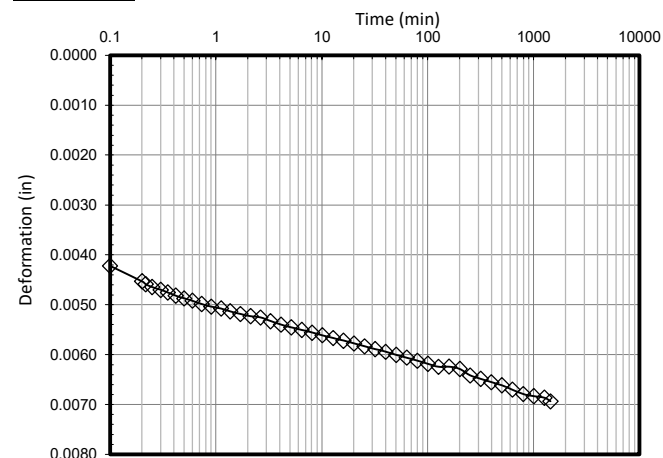
### 2000-psf Load



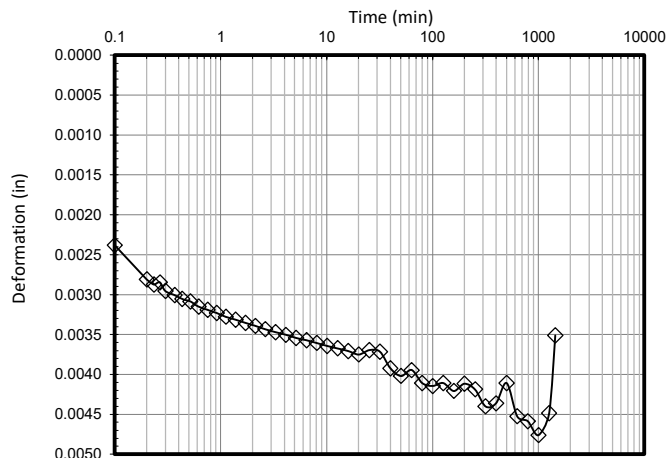
### 500-psf Load



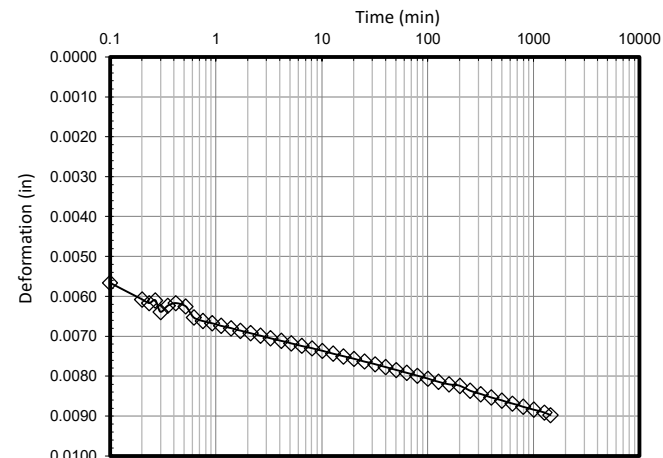
### 4000-psf Load



### 1000-psf Load



### 8000-psf Load

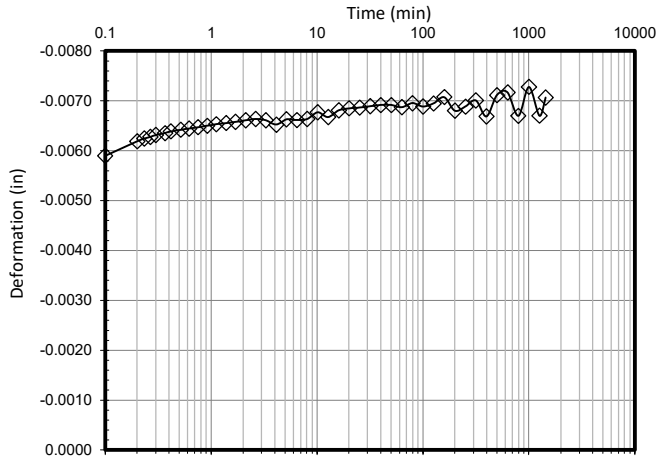


## One-Dimensional Consolidation Properties of Soil Appendix

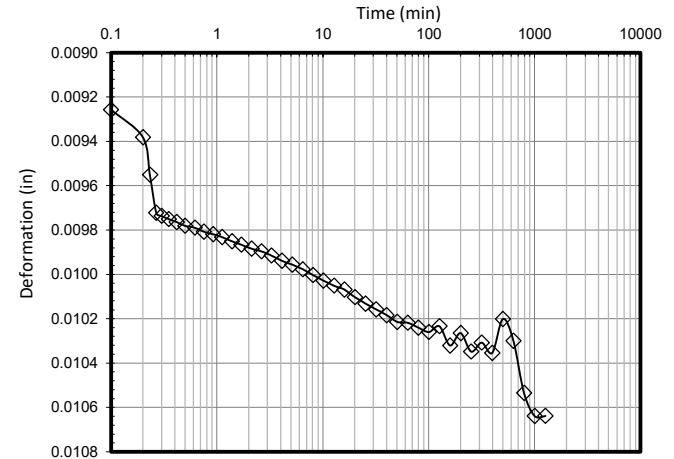
**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** GEO-21 at 9 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/20/25-6/5/25

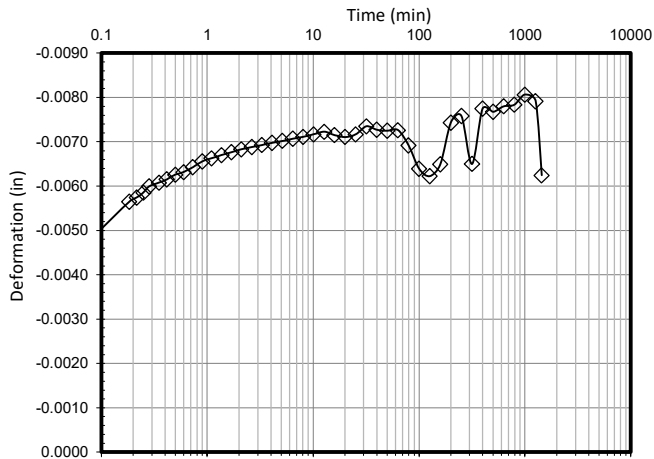
**2000-psf Load**



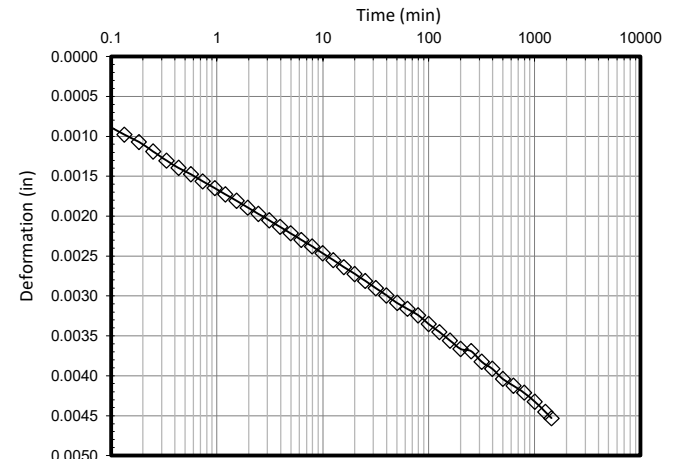
**8000-psf Load**



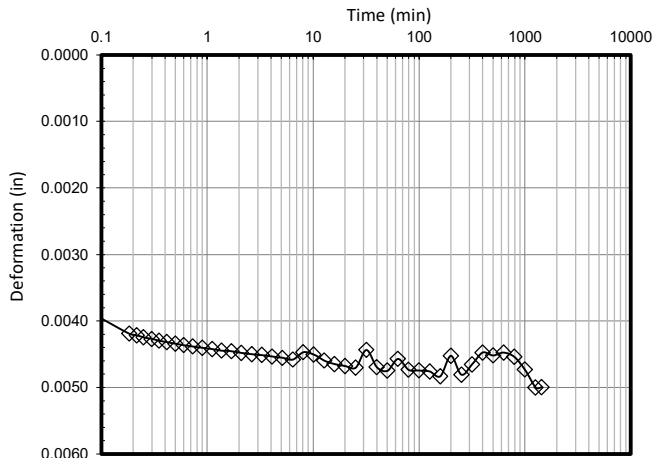
**500-psf Load**



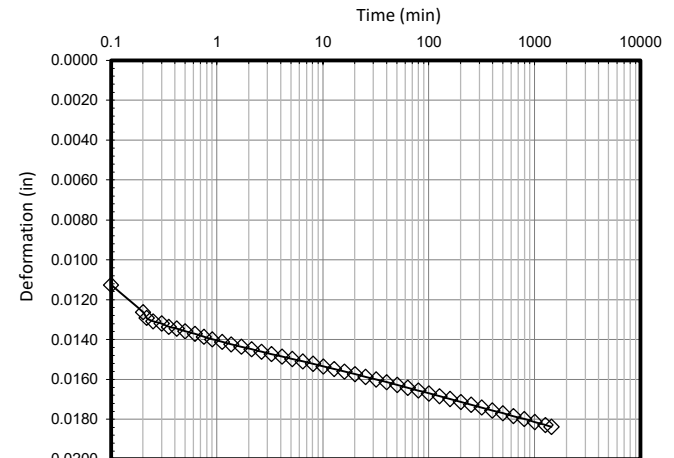
**16000-psf Load**



**2000-psf Load**



**32000-psf Load**



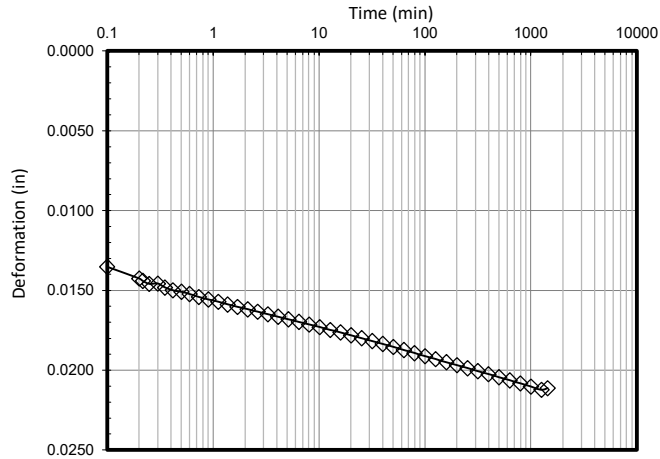


## One-Dimensional Consolidation Properties of Soil Appendix

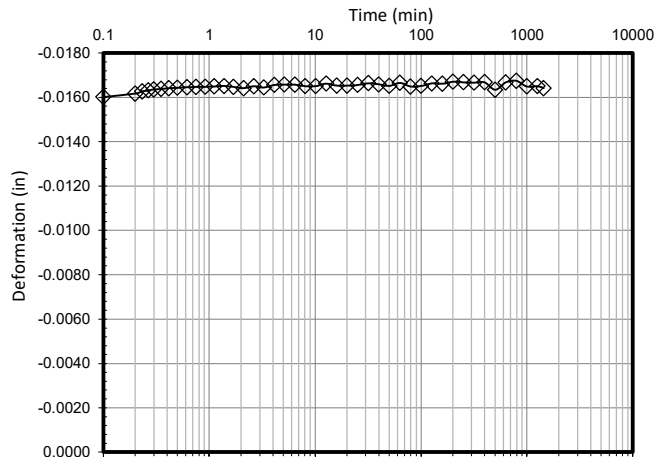
**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** GEO-21 at 9 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/20/25-6/5/25

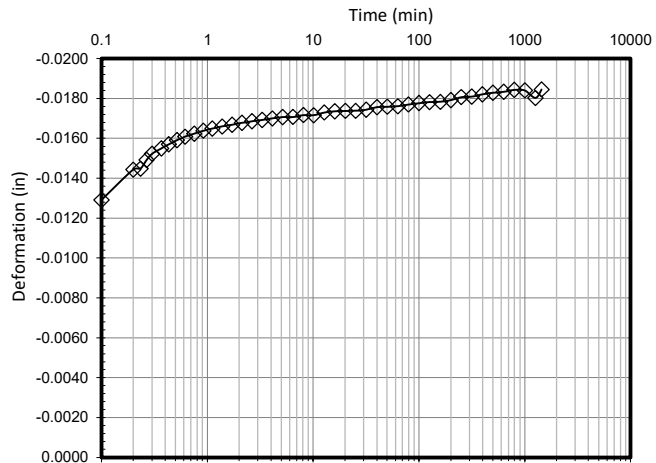
### 55000-psf Load



### 16000-psf Load



### 2000-psf Load



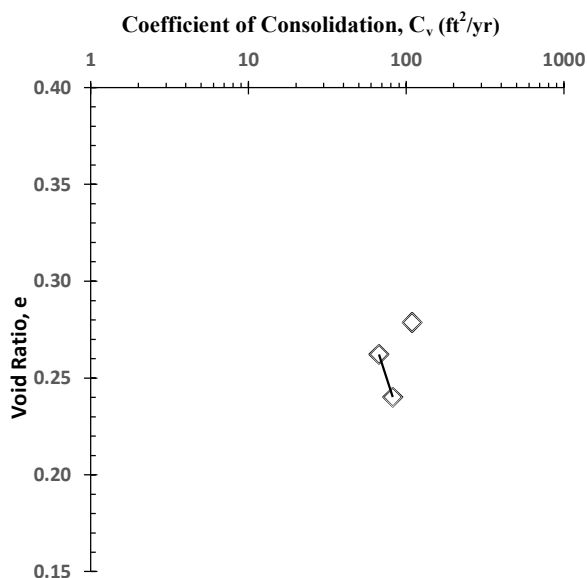
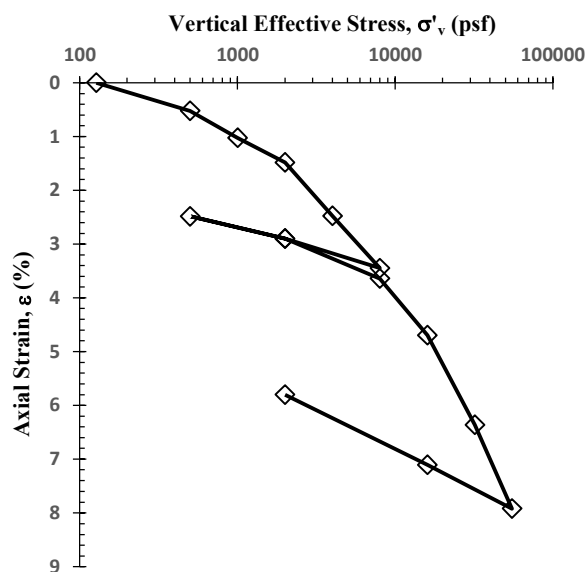
## One-Dimensional Consolidation Properties of Soil

**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** GEO-22 at 12 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/20/25-6/5/25

| Specimen Conditions                     |       |
|-----------------------------------------|-------|
| Initial Specimen Water Content (%)      | 11.3  |
| Final Specimen Water Content (%)        | 10.6  |
| Initial Specimen Height (in)            | 0.884 |
| Final Specimen Height (in)              | 0.833 |
| Initial Dry Unit Weight, $g_o$ (pcf)    | 127.2 |
| Final Dry Unit Weight, $g_r$ (pcf)      | 135.1 |
| Initial Void Ratio, $e_o$               | 0.324 |
| Final Void Ratio, $e_f$                 | 0.248 |
| Initial Degree of Saturation (%)        | 94.3  |
| Preconsolidation Pressure, $p'_c$ (psf) | 6800  |
| "Swell Pressure" (psf)                  | 127   |

Specimen was trimmed using a trimming turntable.  
Specimen was inundated with tap water during testing.  
Coefficient of Consolidation was determined using the Log Time Method. Loading increment duration was 24 hours. The calculation was included the machine deflections that were measured in each loading step.  
 $G_s$  (assumed) 2.70  
Preconsolidation pressure was determined by using the Casagrande construction technique  
Compression Index,  $C_c$  & Recompression Index,  $C_r$  calculated in accordance with void ratio ( $\Delta e$ ).  
Specimen Diameter: 2.496 inches



|                                   |       |       |       |       |       |       |       |       |       |       |
|-----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $\sigma'_v$ (psf)                 | 127   | 500   | 1000  | 2000  | 4000  | 8000  | 2000  | 500   | 2000  | 8000  |
| $C_v$ ( $\text{ft}^2/\text{yr}$ ) | -     | -     | -     | -     | -     | 109.1 | -     | -     | -     | -     |
| Axial Strain (%)                  | 0.00  | 0.52  | 1.02  | 1.48  | 2.48  | 3.45  | 2.90  | 2.48  | 2.90  | 3.64  |
| $e$                               | 0.324 | 0.317 | 0.311 | 0.305 | 0.292 | 0.279 | 0.286 | 0.291 | 0.286 | 0.276 |

|                                   |       |       |       |       |       |
|-----------------------------------|-------|-------|-------|-------|-------|
| $\sigma'_v$ (psf)                 | 16000 | 32000 | 55000 | 16000 | 2000  |
| $C_v$ ( $\text{ft}^2/\text{yr}$ ) | 67.2  | 82.1  | -     | -     | -     |
| Axial Strain (%)                  | 4.70  | 6.36  | 7.92  | 7.11  | 5.80  |
| $e$                               | 0.262 | 0.240 | 0.219 | 0.230 | 0.248 |

Compression Index,  $C_c$  0.088  
Recompression Index,  $C_r$  0.009  
Swell Index,  $C_s$  (1st Rebound) 0.011  
Swell Index,  $C_s$  (2nd Rebound) 0.019

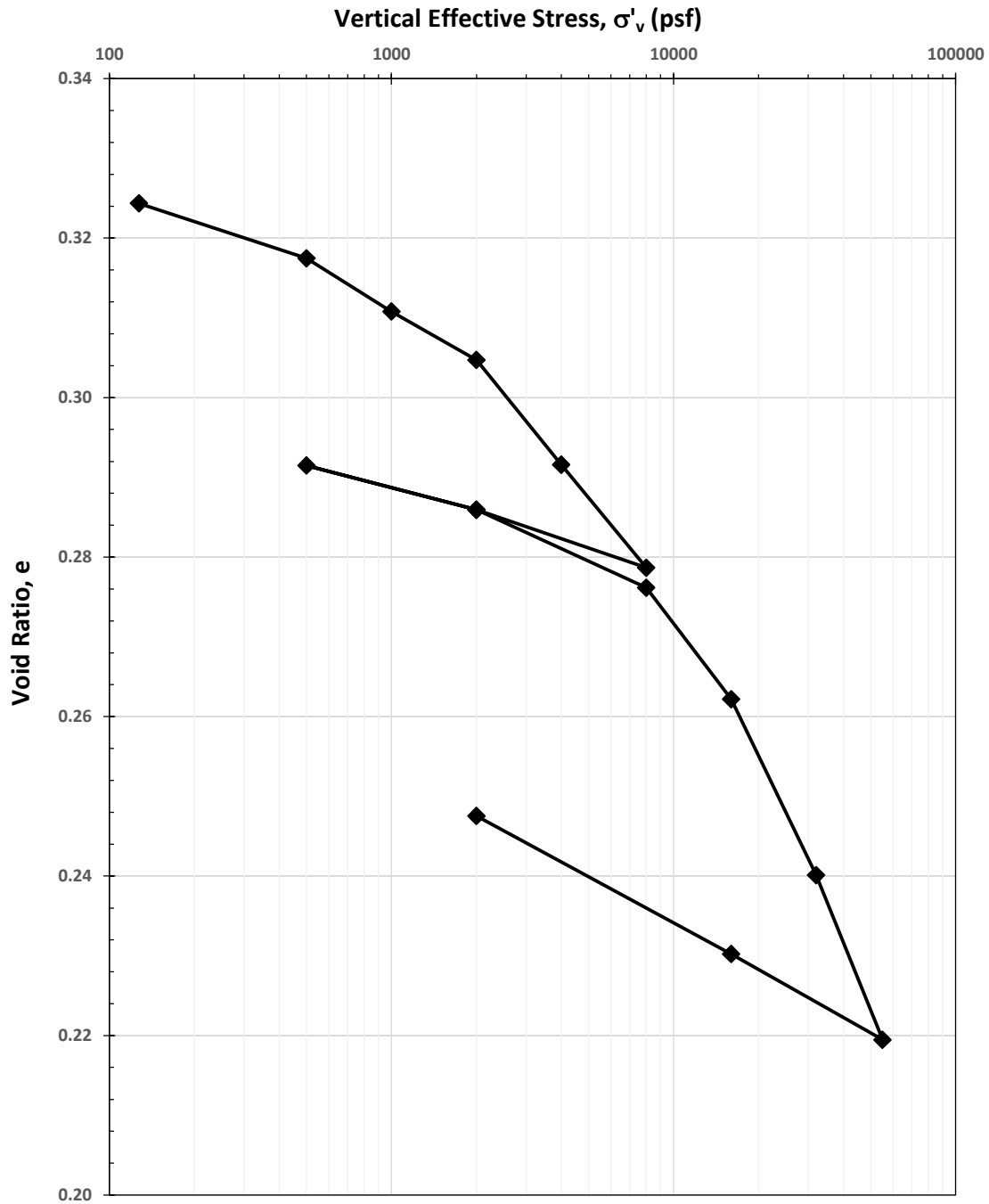
Huamiao Cao, P.E. 6/6/25  
Analysis & Quality Review/Date

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## One-Dimensional Consolidation Properties of Soil

**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** GEO-22 at 12 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/20/25-6/5/25



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## One-Dimensional Consolidation Properties of Soil Appendix

**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** GEO-22 at 12 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/20/25-6/5/25



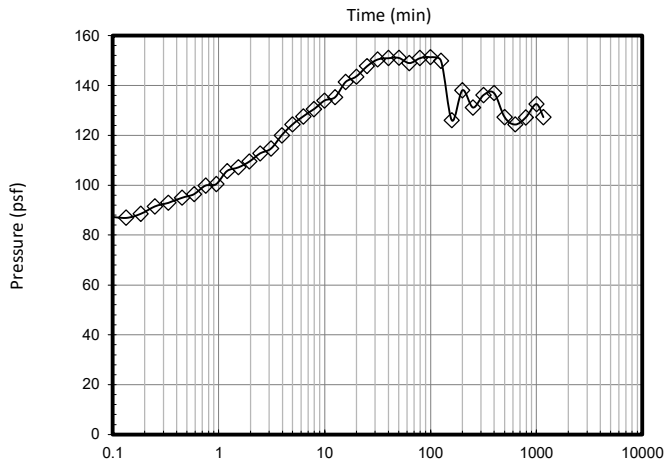
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## One-Dimensional Consolidation Properties of Soil Appendix

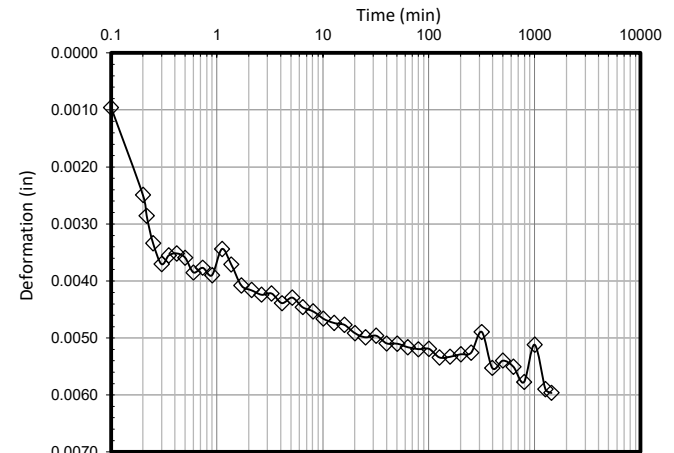
**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** GEO-22 at 12 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/20/25-6/5/25

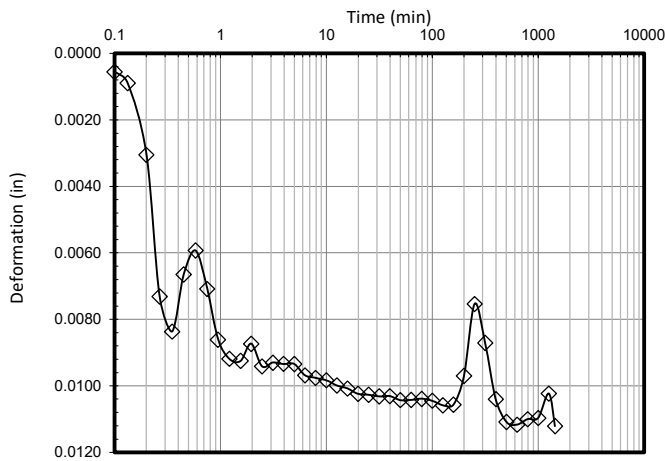
### Swell Pressure Measurement



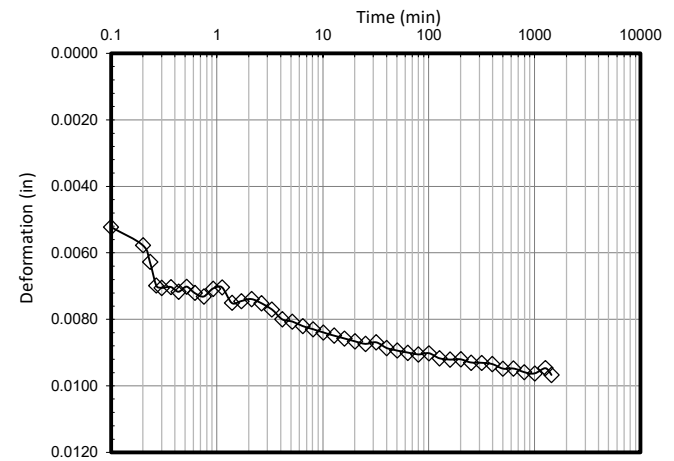
### 2000-psf Load



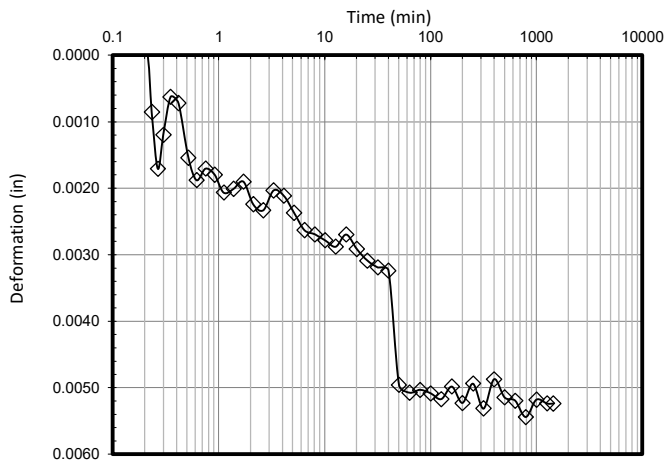
### 500-psf Load



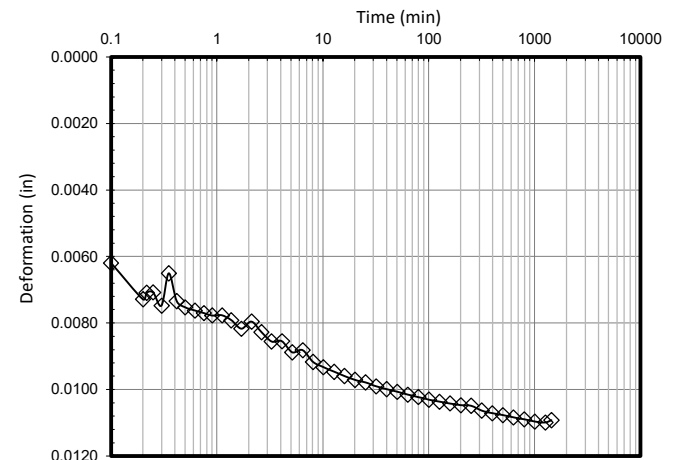
### 4000-psf Load



### 1000-psf Load



### 8000-psf Load

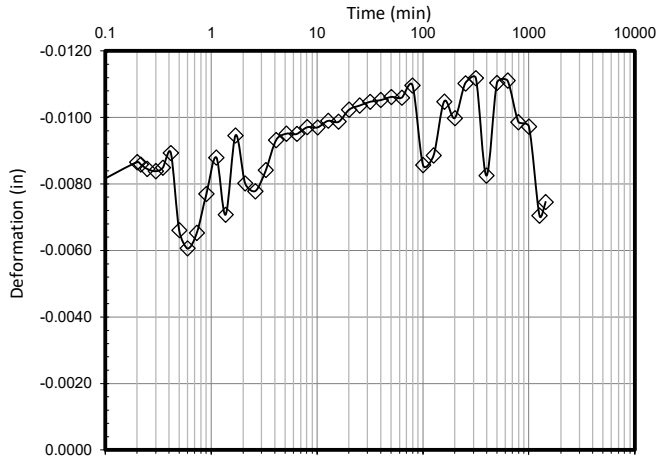


## One-Dimensional Consolidation Properties of Soil Appendix

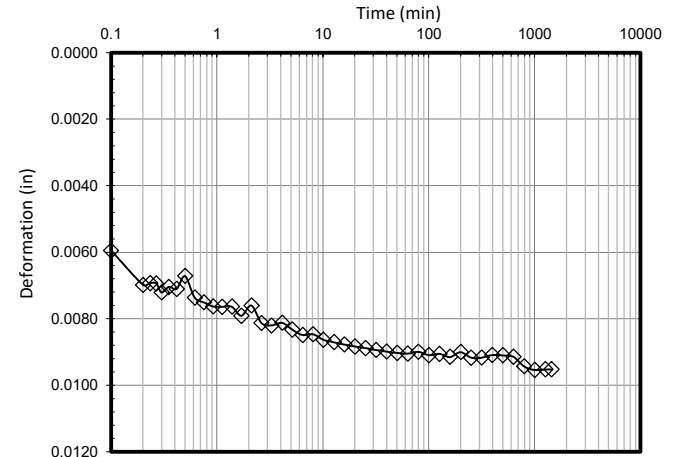
**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** GEO-22 at 12 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/20/25-6/5/25

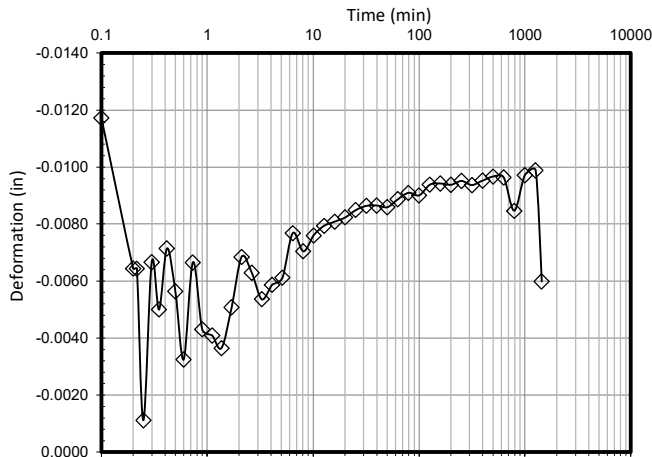
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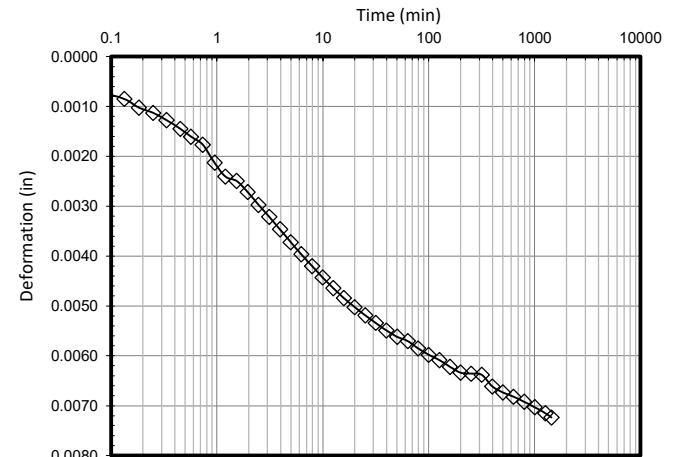
### 8000-psf Load



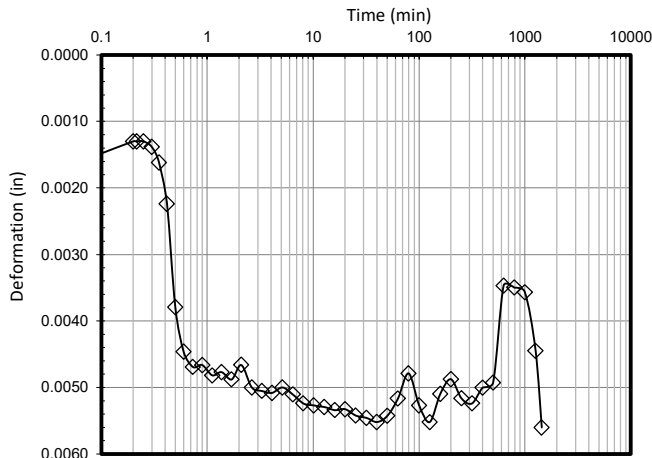
### 500-psf Load



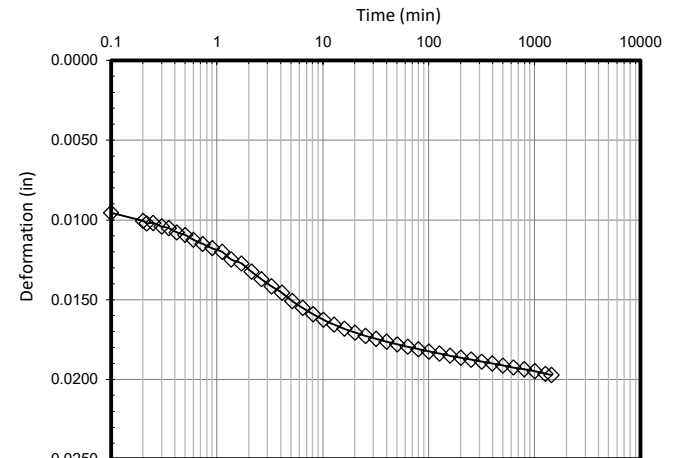
### 16000-psf Load



### 2000-psf Load



### 32000-psf Load



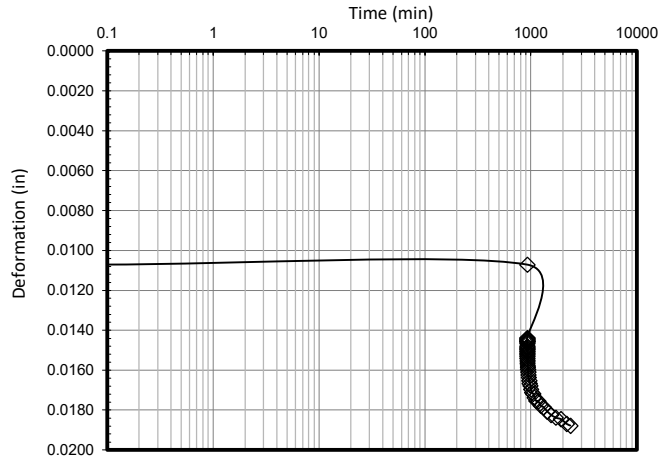


## One-Dimensional Consolidation Properties of Soil Appendix

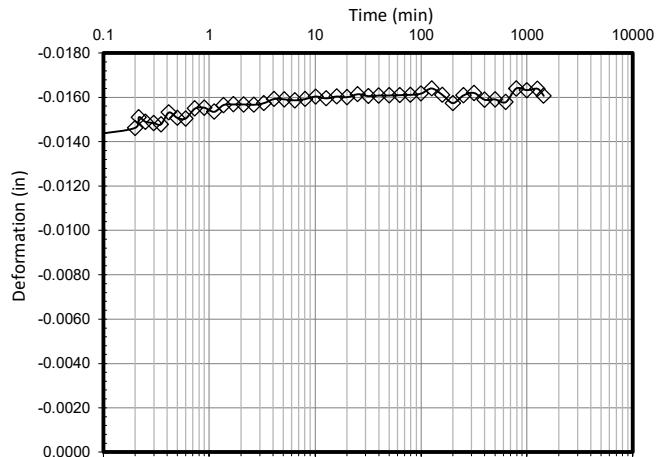
**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** GEO-22 at 12 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/20/25-6/5/25

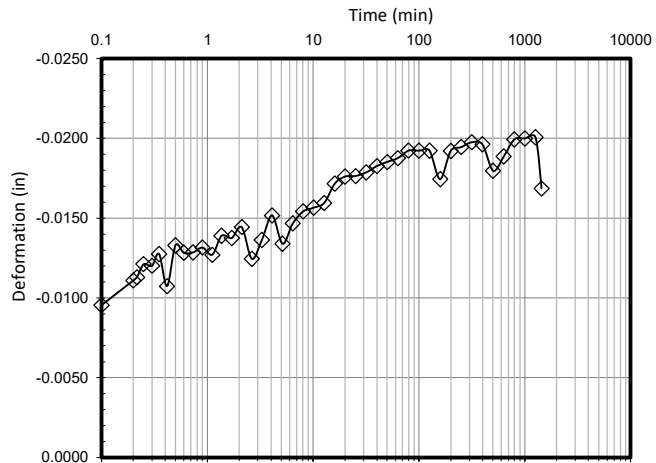
### 55000-psf Load



### 16000-psf Load



### 2000-psf Load



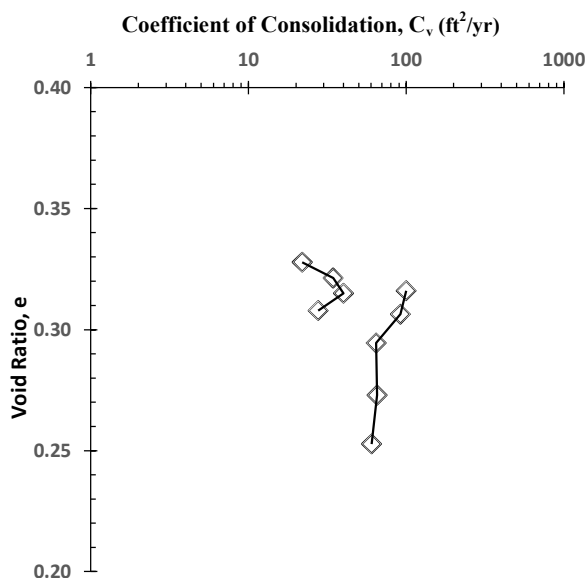
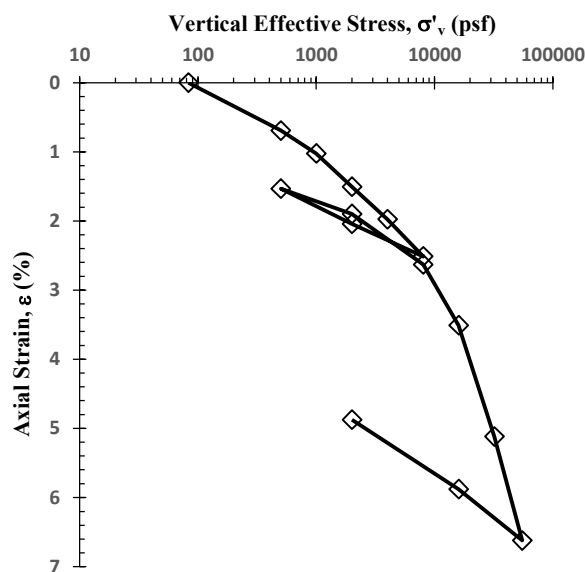
## One-Dimensional Consolidation Properties of Soil

**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** GEO-28 at 9 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/21/25-6/5/25

| Specimen Conditions                     |       |
|-----------------------------------------|-------|
| Initial Specimen Water Content (%)      | 12.5  |
| Final Specimen Water Content (%)        | 10.3  |
| Initial Specimen Height (in)            | 0.900 |
| Final Specimen Height (in)              | 0.856 |
| Initial Dry Unit Weight, $g_o$ (pcf)    | 125.6 |
| Final Dry Unit Weight, $g_f$ (pcf)      | 132.0 |
| Initial Void Ratio, $e_o$               | 0.342 |
| Final Void Ratio, $e_f$                 | 0.276 |
| Initial Degree of Saturation (%)        | 98.8  |
| Preconsolidation Pressure, $p'_c$ (psf) | 11000 |
| "Swell Pressure" (psf)                  | 83    |

Specimen was trimmed using a trimming turntable.  
Specimen was inundated with tap water during testing.  
Coefficient of Consolidation was determined using the Log Time Method. Loading increment duration was 24 hours. The calculation was included the machine deflections that were measured in each loading step.  
 $G_s$  (assumed) 2.70  
Preconsolidation pressure was determined by using the Casagrande construction technique  
Compression Index,  $C_c$  & Recompression Index,  $C_r$  calculated in accordance with void ratio ( $\Delta e$ ).  
Specimen Diameter: 2.492 inches



|                                   |       |       |       |       |       |       |       |       |       |       |
|-----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $\sigma'_v$ (psf)                 | 83    | 500   | 1000  | 2000  | 4000  | 8000  | 2000  | 500   | 2000  | 8000  |
| $C_v$ ( $\text{ft}^2/\text{yr}$ ) | -     | -     | 21.9  | 34.4  | 40.0  | 27.7  | -     | -     | 100.0 | 92.0  |
| Axial Strain (%)                  | 0.00  | 0.69  | 1.02  | 1.51  | 1.98  | 2.51  | 2.04  | 1.53  | 1.90  | 2.63  |
| $e$                               | 0.342 | 0.332 | 0.328 | 0.321 | 0.315 | 0.308 | 0.314 | 0.321 | 0.316 | 0.306 |

|                                   |       |       |       |       |       |
|-----------------------------------|-------|-------|-------|-------|-------|
| $\sigma'_v$ (psf)                 | 16000 | 32000 | 55000 | 16000 | 2000  |
| $C_v$ ( $\text{ft}^2/\text{yr}$ ) | 64.5  | 65.5  | 60.4  | -     | -     |
| Axial Strain (%)                  | 3.51  | 5.12  | 6.62  | 5.88  | 4.88  |
| $e$                               | 0.294 | 0.273 | 0.253 | 0.263 | 0.276 |

Compression Index,  $C_c$  0.086  
Recompression Index,  $C_r$  0.008  
Swell Index,  $C_s$  (1st Rebound) 0.011  
Swell Index,  $C_s$  (2nd Rebound) 0.016

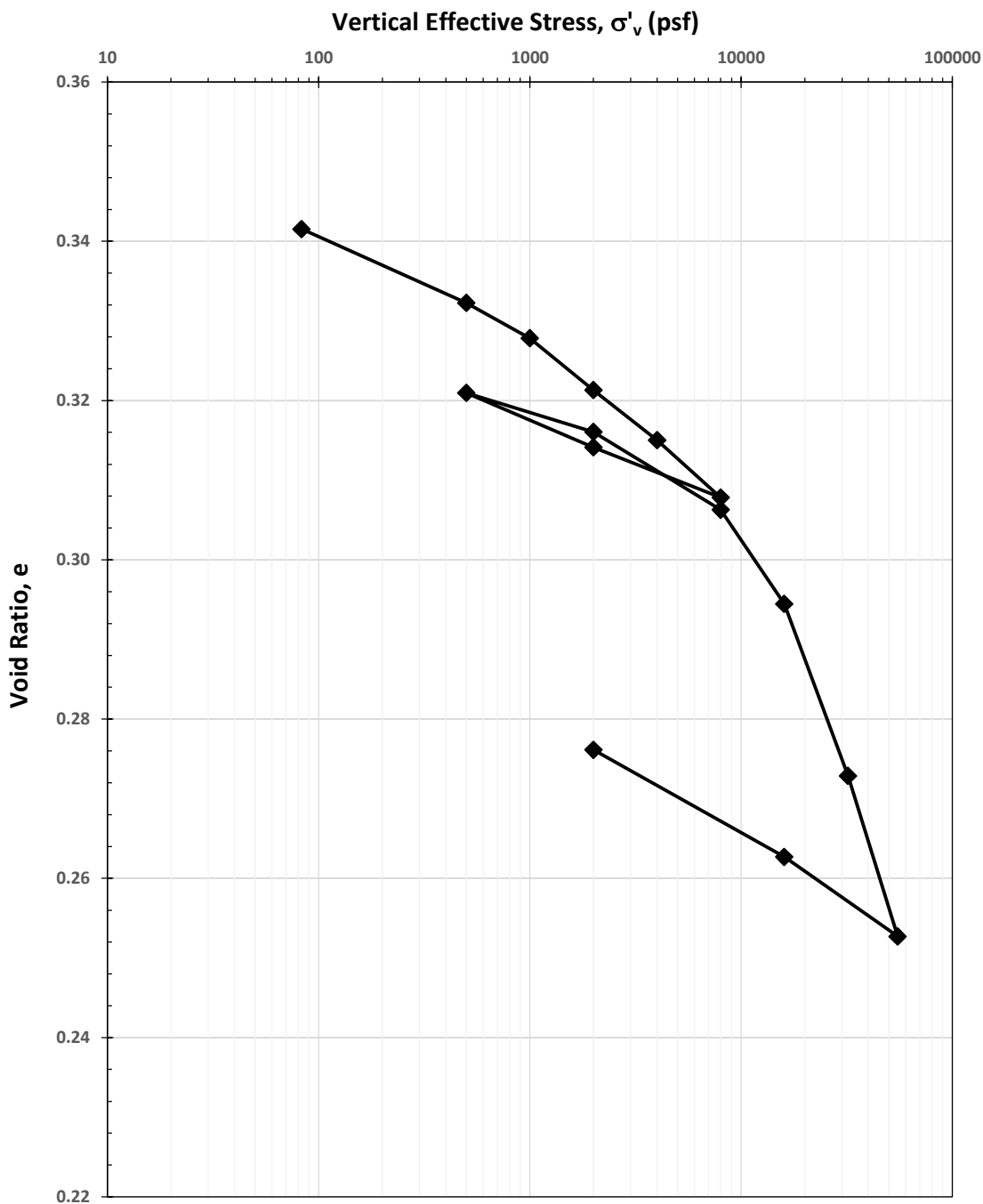
Huamiao Cao, P.E. 6/6/25  
Analysis & Quality Review/Date

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## One-Dimensional Consolidation Properties of Soil

**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** GEO-28 at 9 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/21/25-6/5/25



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## One-Dimensional Consolidation Properties of Soil Appendix

**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** GEO-28 at 9 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/21/25-6/5/25



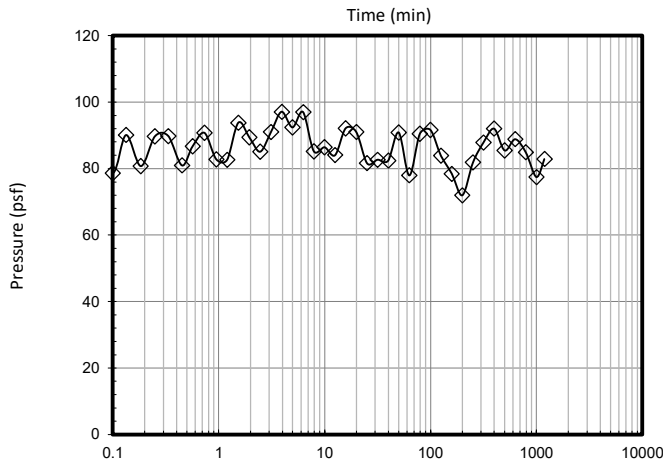
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## One-Dimensional Consolidation Properties of Soil Appendix

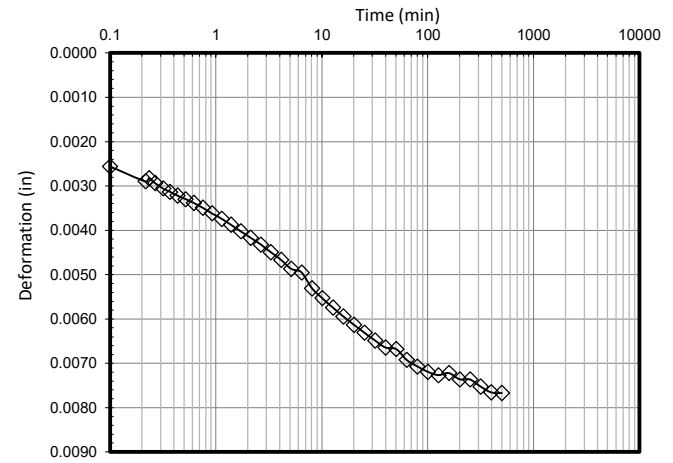
**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** GEO-28 at 9 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/21/25-6/5/25

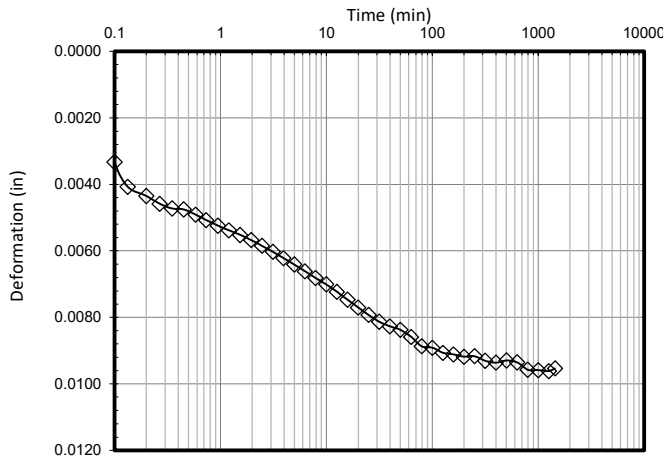
### Swell Pressure Measurement



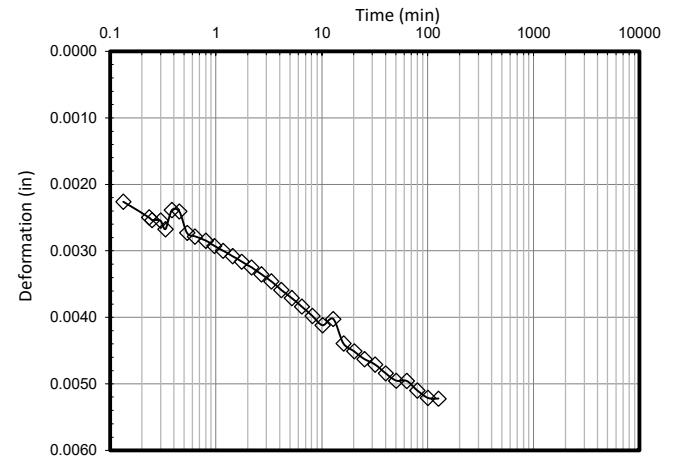
### 2000-psf Load



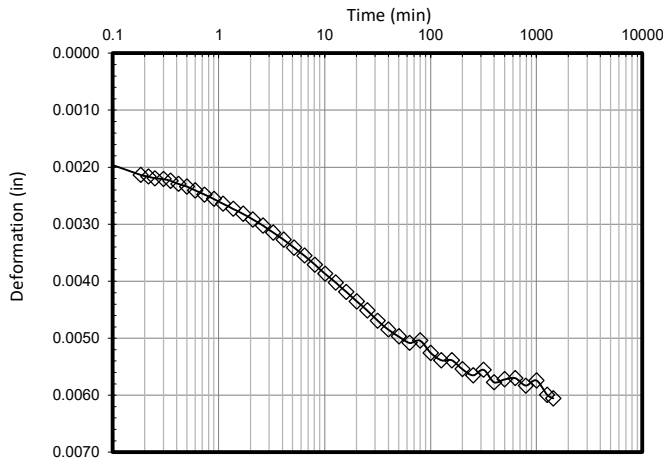
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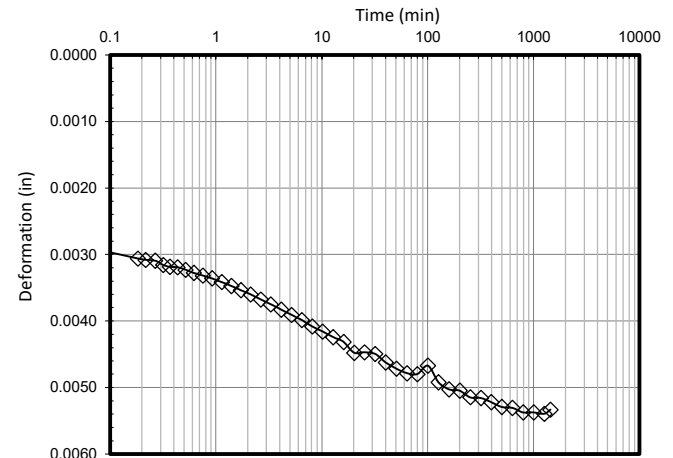
### 4000-psf Load



### 1000-psf Load



### 8000-psf Load

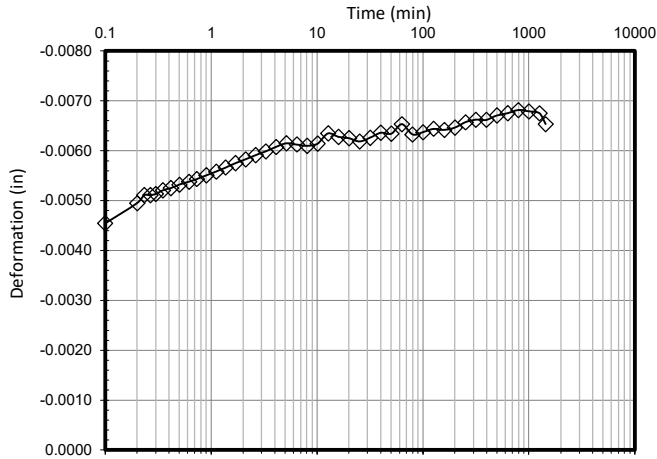


## One-Dimensional Consolidation Properties of Soil Appendix

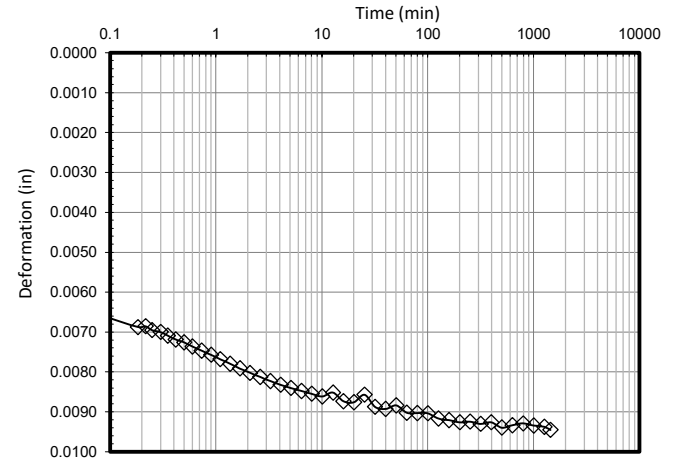
**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** GEO-28 at 9 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/21/25-6/5/25

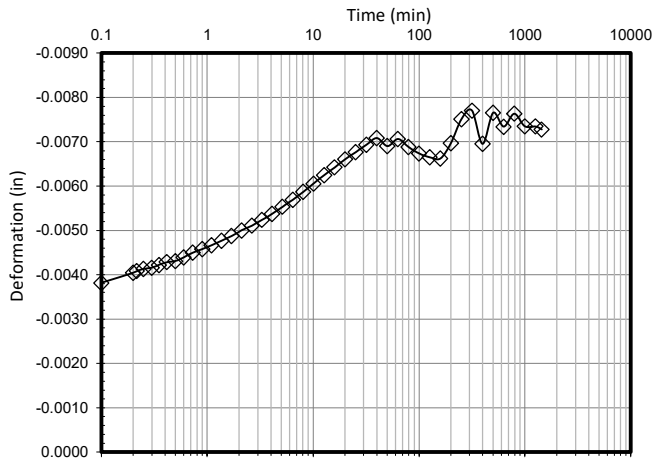
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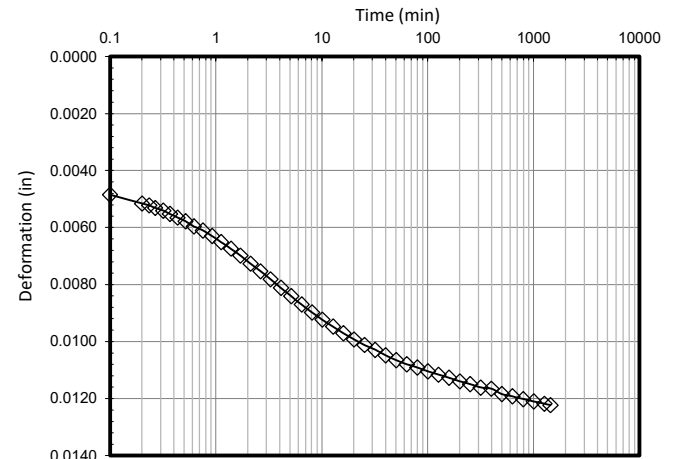
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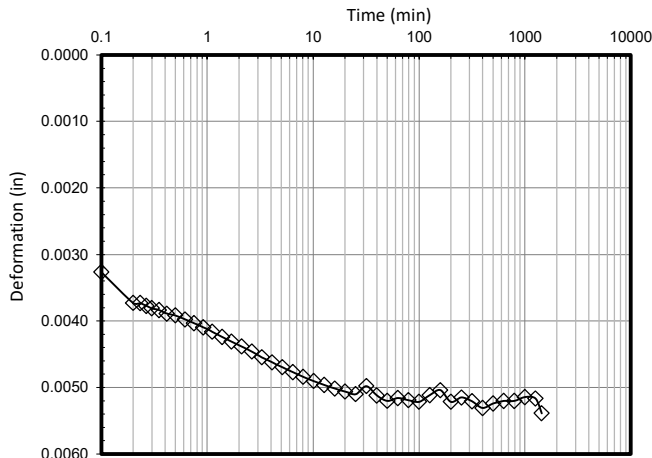
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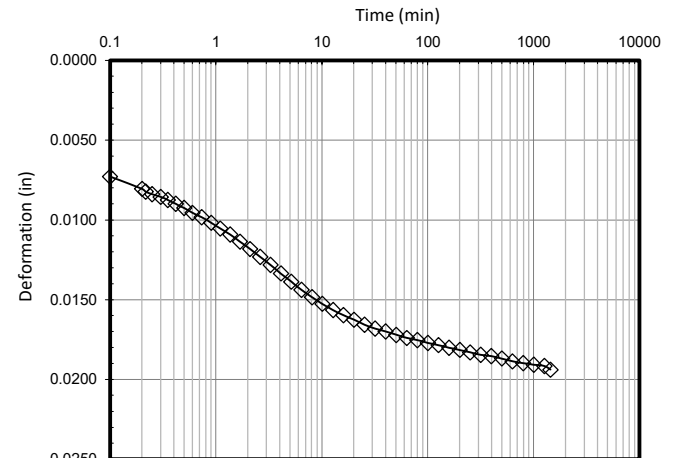
### 16000-psf Load



### 2000-psf Load



### 32000-psf Load



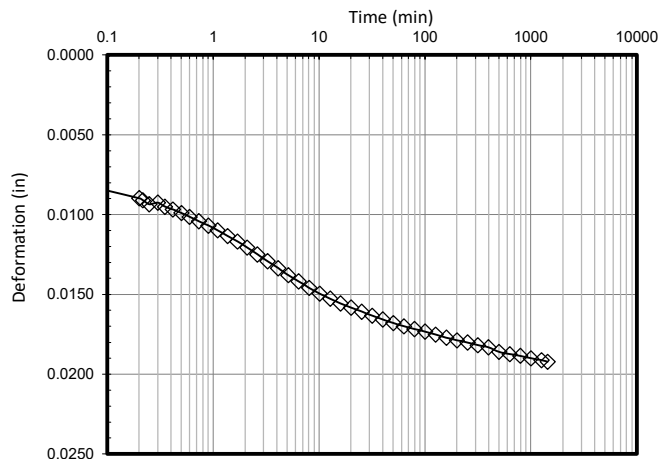


## One-Dimensional Consolidation Properties of Soil Appendix

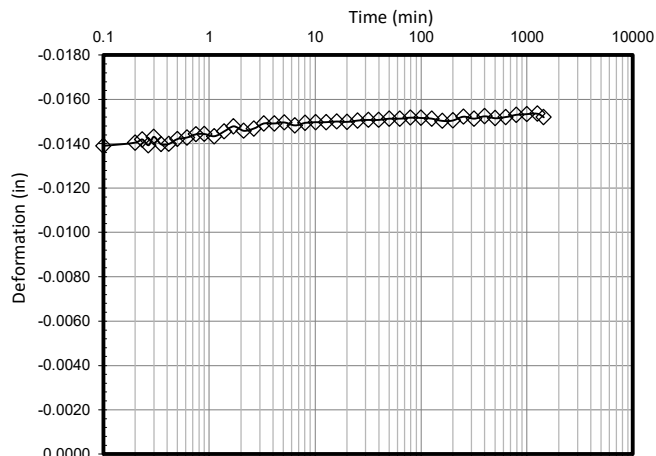
**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** GEO-28 at 9 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/21/25-6/5/25

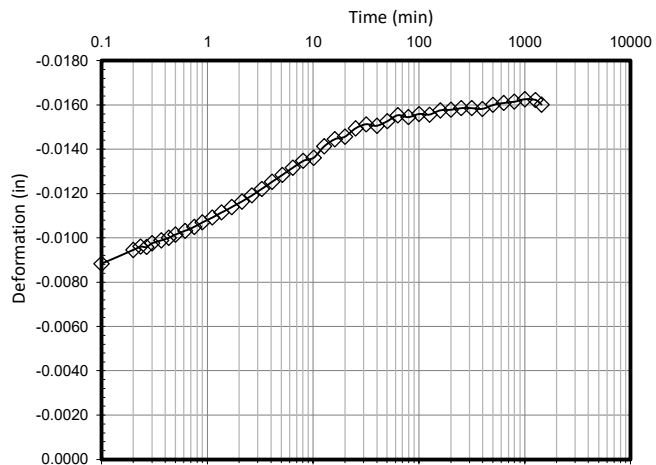
### 55000-psf Load



### 16000-psf Load



### 2000-psf Load



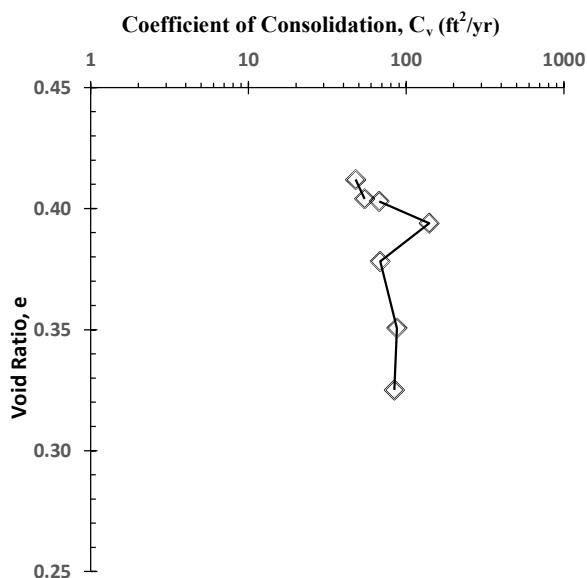
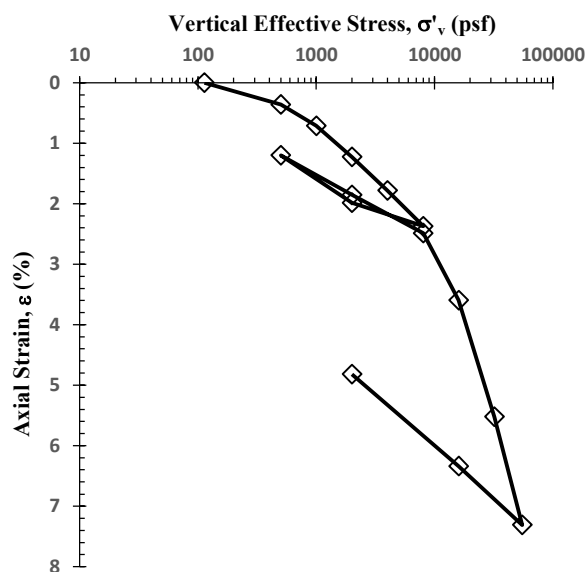
## One-Dimensional Consolidation Properties of Soil

**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** GEO-32 at 9 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/21/25-6/5/25

| Specimen Conditions                     |       |
|-----------------------------------------|-------|
| Initial Specimen Water Content (%)      | 15.5  |
| Final Specimen Water Content (%)        | 13.5  |
| Initial Specimen Height (in)            | 0.904 |
| Final Specimen Height (in)              | 0.861 |
| Initial Dry Unit Weight, $g_o$ (pcf)    | 117.9 |
| Final Dry Unit Weight, $g_r$ (pcf)      | 123.8 |
| Initial Void Ratio, $e_o$               | 0.430 |
| Final Void Ratio, $e_f$                 | 0.361 |
| Initial Degree of Saturation (%)        | 97.5  |
| Preconsolidation Pressure, $p'_c$ (psf) | 9600  |
| "Swell Pressure" (psf)                  | 113   |

Specimen was trimmed using a trimming turntable.  
Specimen was inundated with tap water during testing.  
Coefficient of Consolidation was determined using the Log Time Method. Loading increment duration was 24 hours. The calculation was included the machine deflections that were measured in each loading step.  
 $G_s$  (assumed) 2.70  
Preconsolidation pressure was determined by using the Casagrande construction technique  
Compression Index,  $C_c$  & Recompression Index,  $C_r$  calculated in accordance with void ratio ( $\Delta e$ ).  
Specimen Diameter: 2.494 inches



|                                   |       |       |       |       |       |       |       |       |       |       |
|-----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $\sigma'_v$ (psf)                 | 113   | 500   | 1000  | 2000  | 4000  | 8000  | 2000  | 500   | 2000  | 8000  |
| $C_v$ ( $\text{ft}^2/\text{yr}$ ) | -     | -     | -     | 47.8  | 54.5  | -     | -     | -     | 67.4  | 139.8 |
| Axial Strain (%)                  | 0.00  | 0.36  | 0.71  | 1.23  | 1.78  | 2.37  | 1.98  | 1.20  | 1.86  | 2.49  |
| $e$                               | 0.430 | 0.424 | 0.419 | 0.412 | 0.404 | 0.396 | 0.401 | 0.412 | 0.403 | 0.394 |

|                                   |       |       |       |       |       |
|-----------------------------------|-------|-------|-------|-------|-------|
| $\sigma'_v$ (psf)                 | 16000 | 32000 | 55000 | 16000 | 2000  |
| $C_v$ ( $\text{ft}^2/\text{yr}$ ) | 68.3  | 87.5  | 84.2  | -     | -     |
| Axial Strain (%)                  | 3.59  | 5.52  | 7.31  | 6.34  | 4.82  |
| $e$                               | 0.378 | 0.351 | 0.325 | 0.339 | 0.361 |

Compression Index,  $C_c$  0.109  
Recompression Index,  $C_r$  0.016  
Swell Index,  $C_s$  (1st Rebound) 0.014  
Swell Index,  $C_s$  (2nd Rebound) 0.025

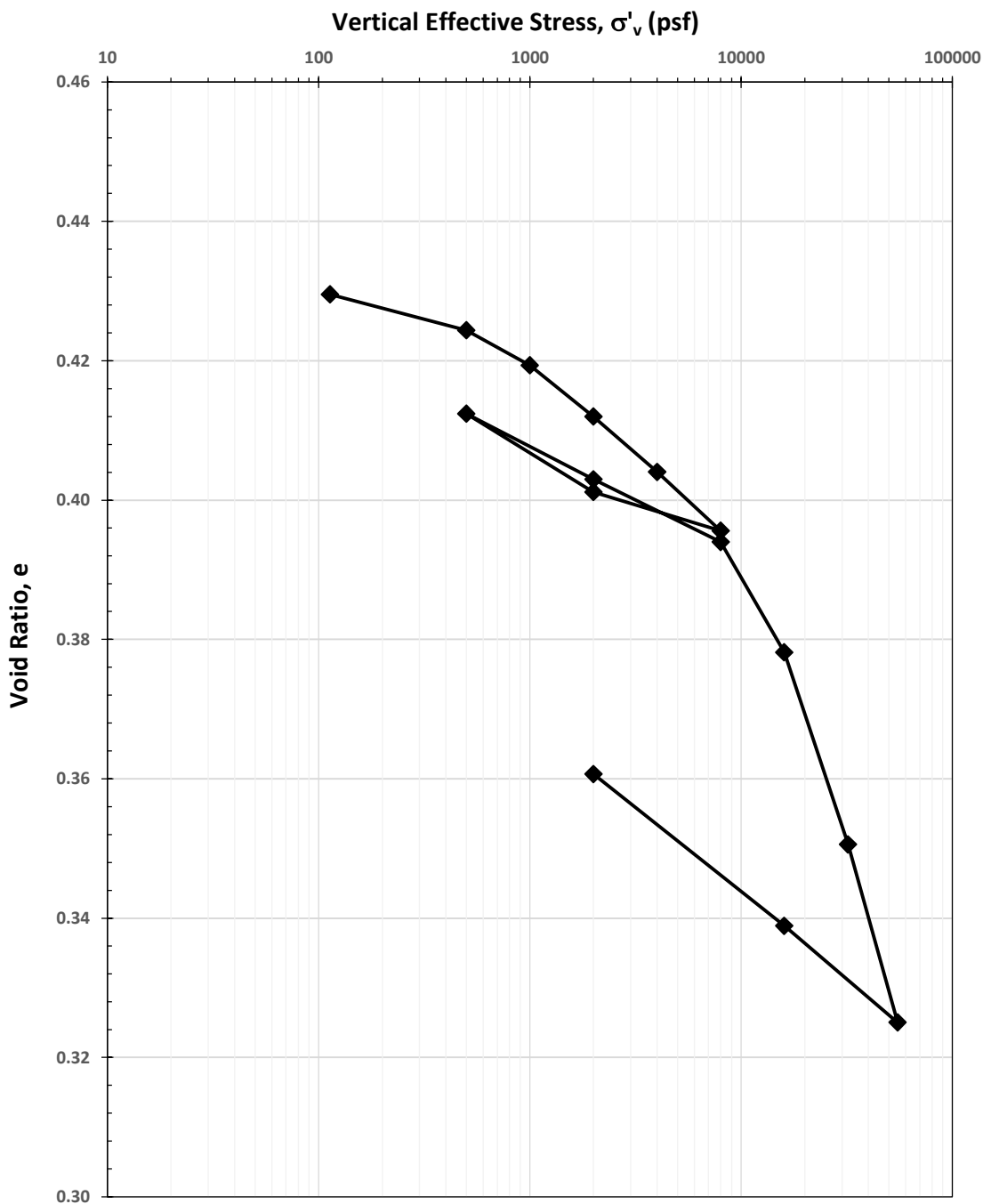
Huamiao Cao, P.E. 6/6/25  
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## One-Dimensional Consolidation Properties of Soil

**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** GEO-32 at 9 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/21/25-6/5/25



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## One-Dimensional Consolidation Properties of Soil Appendix

**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** GEO-32 at 9 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/21/25-6/5/25



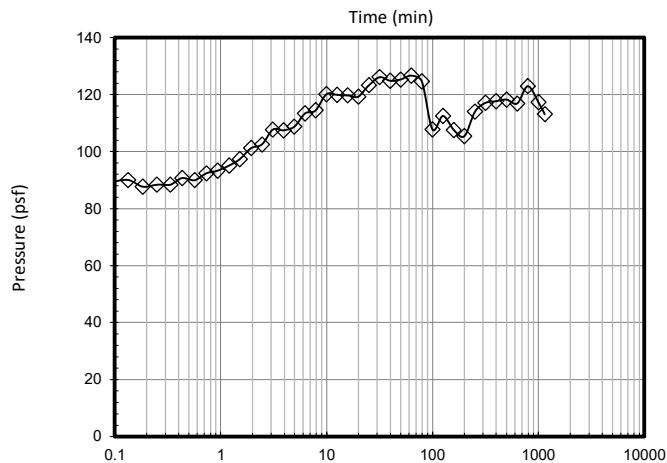
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## One-Dimensional Consolidation Properties of Soil Appendix

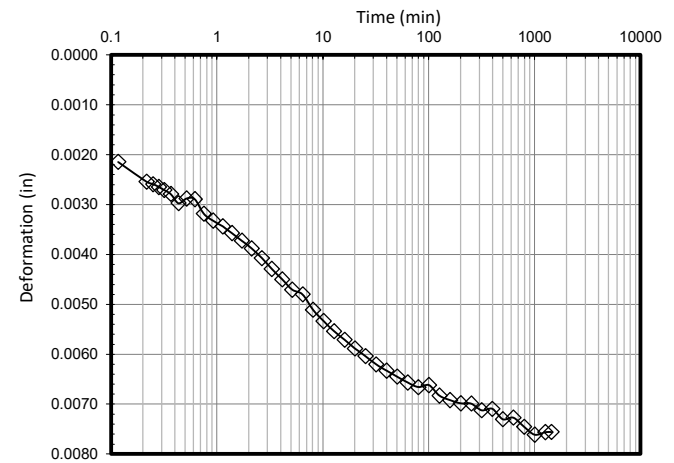
**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** GEO-32 at 9 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/21/25-6/5/25

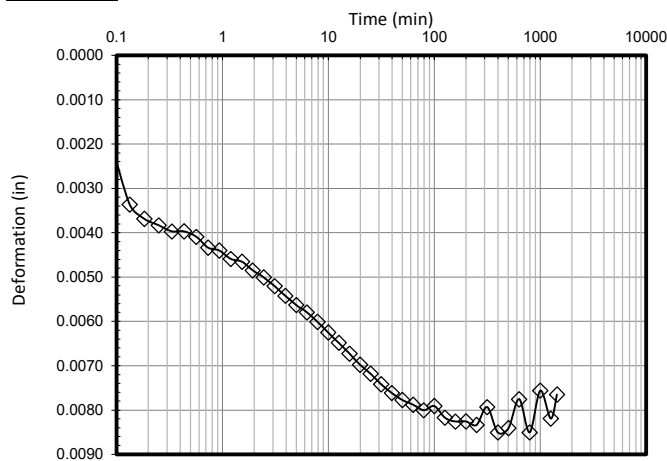
### Swell Pressure Measurement



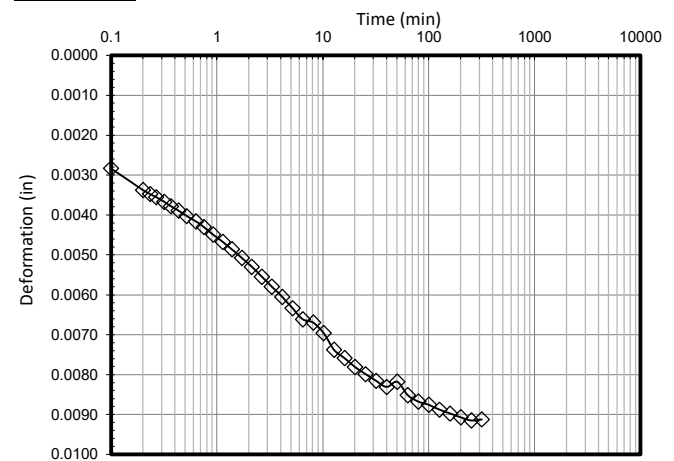
### 2000-psf Load



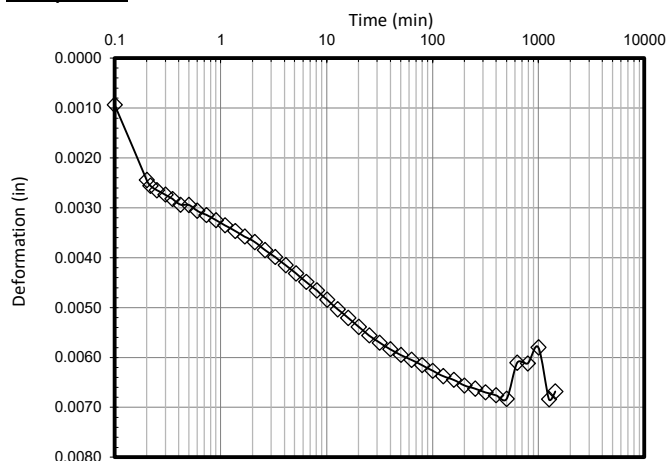
### 500-psf Load



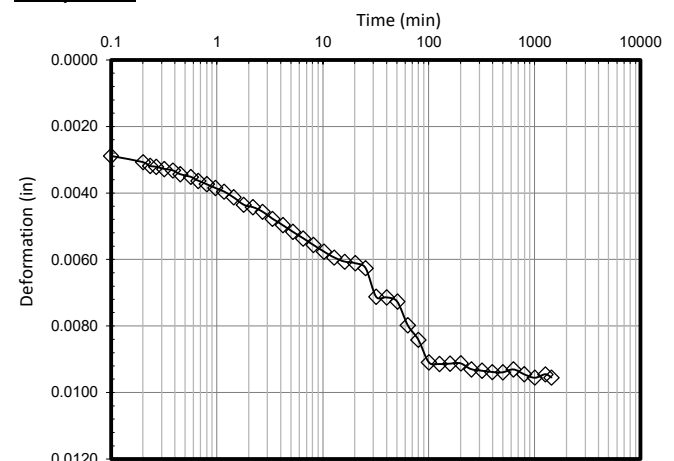
### 4000-psf Load



### 1000-psf Load



### 8000-psf Load

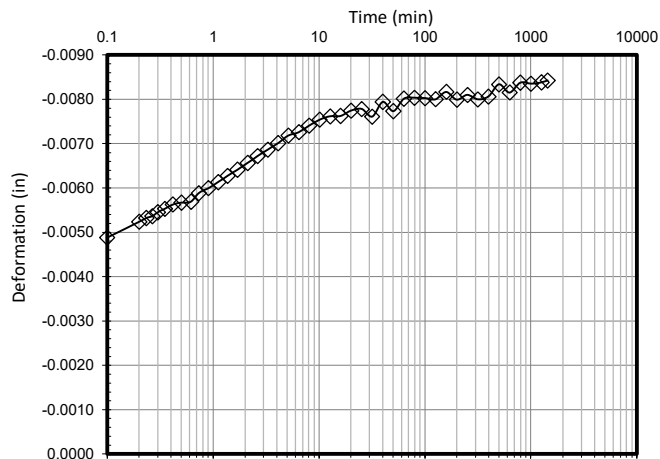


## One-Dimensional Consolidation Properties of Soil Appendix

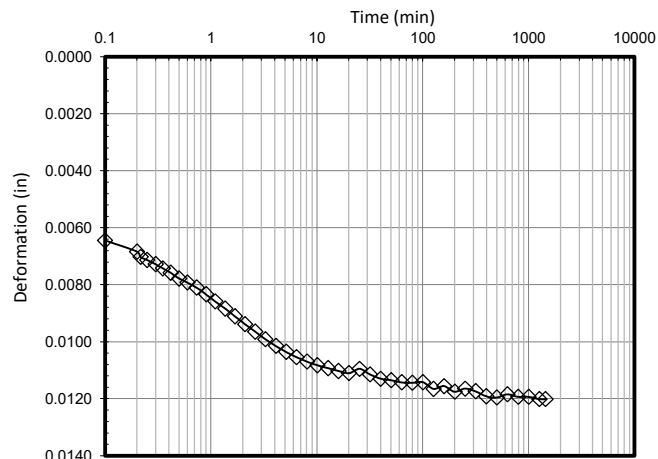
**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** GEO-32 at 9 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/21/25-6/5/25

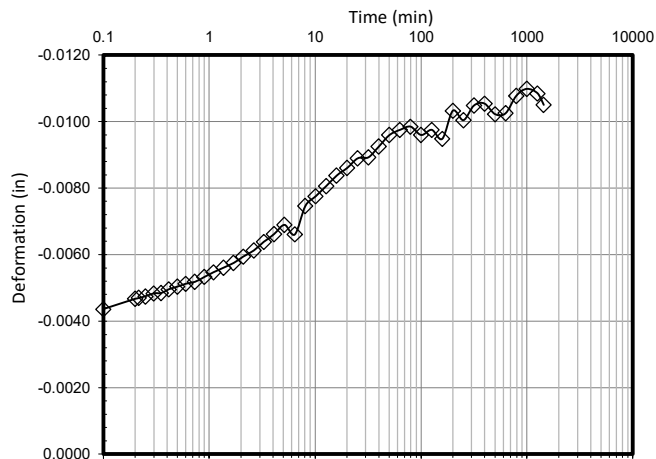
**2000-psf Load**



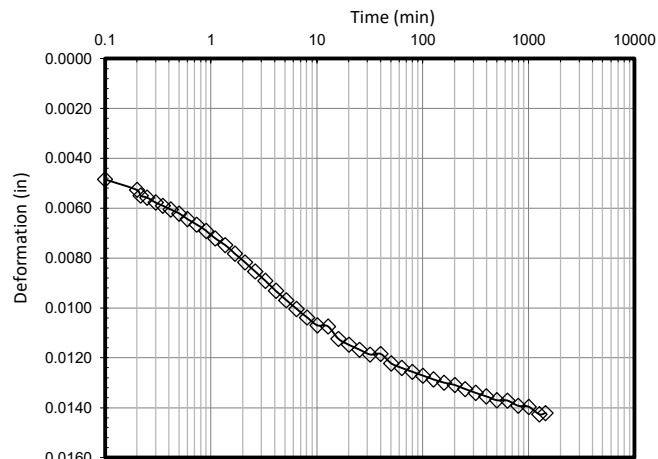
**8000-psf Load**



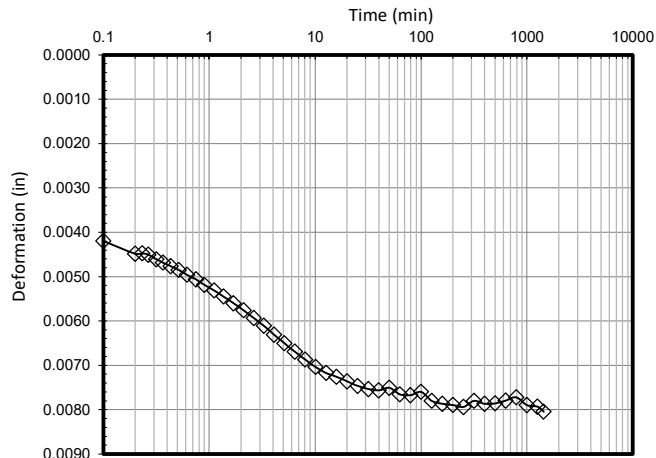
**500-psf Load**



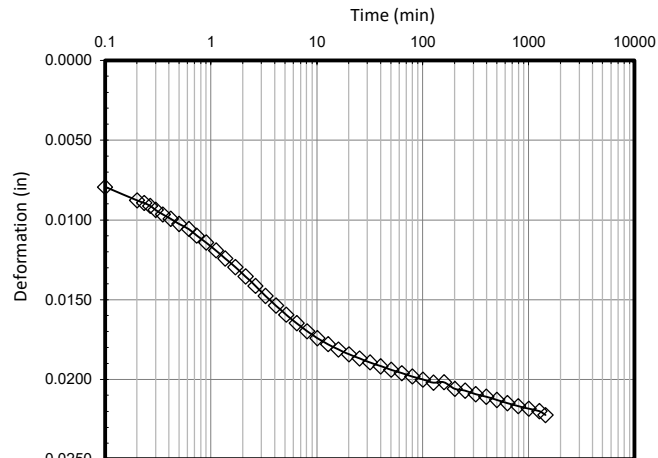
**16000-psf Load**



**2000-psf Load**



**32000-psf Load**



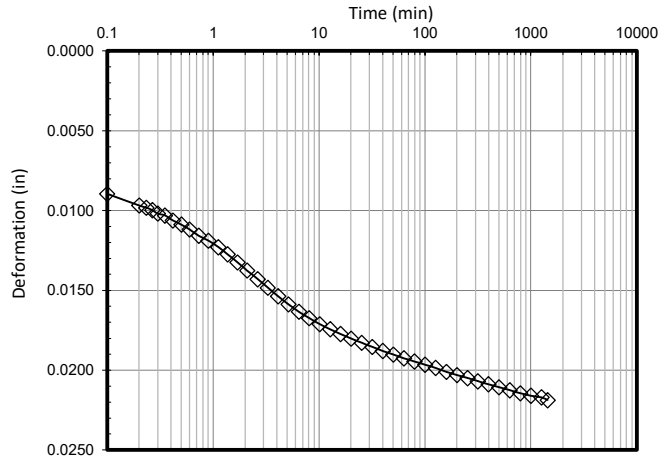


## One-Dimensional Consolidation Properties of Soil Appendix

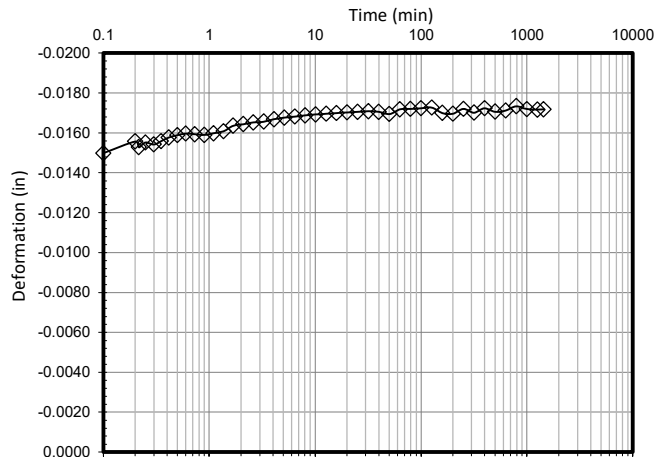
**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** GEO-32 at 9 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/21/25-6/5/25

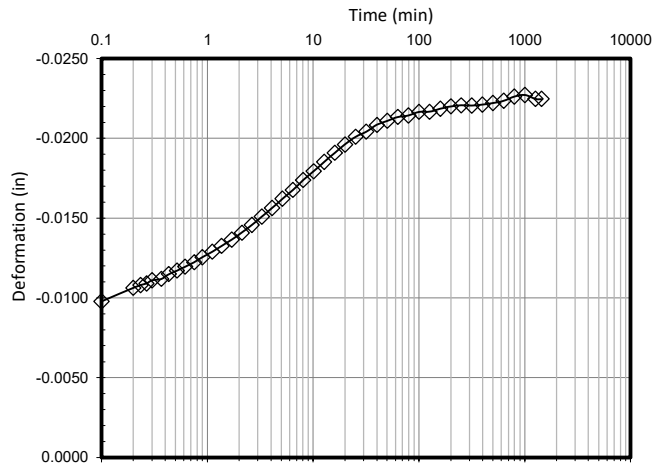
### 55000-psf Load



### 16000-psf Load



### 2000-psf Load



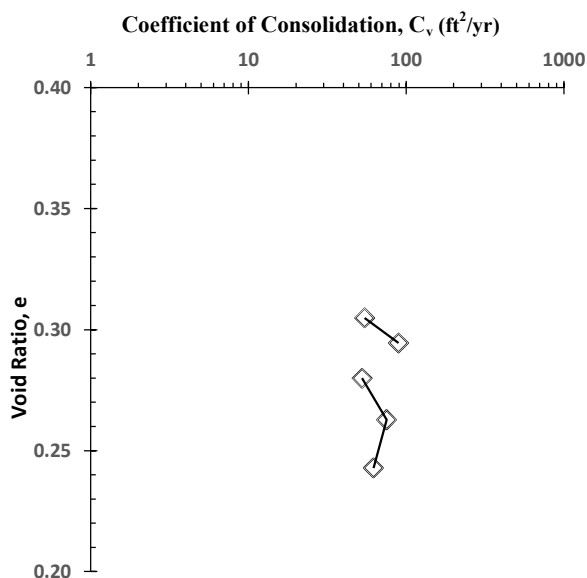
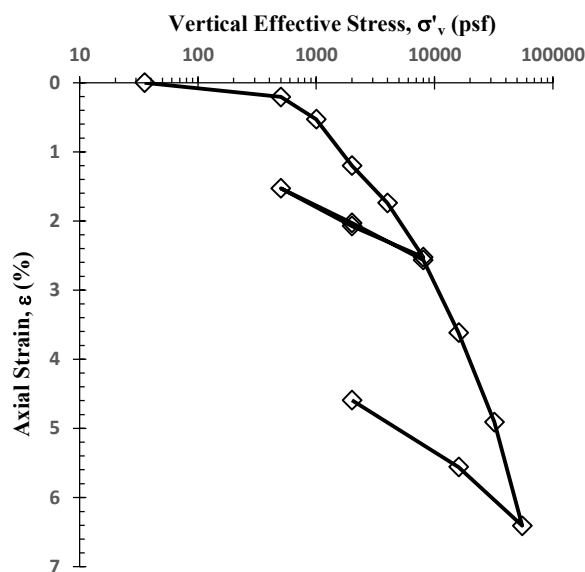
## One-Dimensional Consolidation Properties of Soil

**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** OM-1 at 3 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/21/25-6/5/25

| Specimen Conditions                     |       |
|-----------------------------------------|-------|
| Initial Specimen Water Content (%)      | 11.4  |
| Final Specimen Water Content (%)        | 10.4  |
| Initial Specimen Height (in)            | 0.887 |
| Final Specimen Height (in)              | 0.846 |
| Initial Dry Unit Weight, $g_o$ (pcf)    | 126.9 |
| Final Dry Unit Weight, $g_r$ (pcf)      | 133.0 |
| Initial Void Ratio, $e_o$               | 0.328 |
| Final Void Ratio, $e_f$                 | 0.267 |
| Initial Degree of Saturation (%)        | 93.8  |
| Preconsolidation Pressure, $p'_c$ (psf) | 8500  |
| "Swell Pressure" (psf)                  | 35    |

Specimen was trimmed using a trimming turntable.  
Specimen was inundated with tap water during testing.  
Coefficient of Consolidation was determined using the Log Time Method. Loading increment duration was 24 hours. The calculation was included the machine deflections that were measured in each loading step.  
 $G_s$  (assumed) 2.70  
Preconsolidation pressure was determined by using the Casagrande construction technique  
Compression Index,  $C_c$  & Recompression Index,  $C_r$  calculated in accordance with void ratio ( $\Delta e$ ).  
Specimen Diameter: 2.497 inches



|                   |       |       |       |       |       |       |       |       |       |       |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $\sigma'_v$ (psf) | 35    | 500   | 1000  | 2000  | 4000  | 8000  | 2000  | 500   | 2000  | 8000  |
| $C_v$ (ft²/yr)    | -     | -     | -     | -     | 54.6  | 89.5  | -     | -     | -     | -     |
| Axial Strain (%)  | 0.00  | 0.21  | 0.53  | 1.20  | 1.74  | 2.52  | 2.07  | 1.53  | 2.03  | 2.57  |
| $e$               | 0.328 | 0.325 | 0.321 | 0.312 | 0.305 | 0.294 | 0.300 | 0.308 | 0.301 | 0.294 |

|                   |       |       |       |       |       |
|-------------------|-------|-------|-------|-------|-------|
| $\sigma'_v$ (psf) | 16000 | 32000 | 55000 | 16000 | 2000  |
| $C_v$ (ft²/yr)    | 52.5  | 75.1  | 61.9  | -     | -     |
| Axial Strain (%)  | 3.62  | 4.91  | 6.41  | 5.56  | 4.59  |
| $e$               | 0.280 | 0.263 | 0.243 | 0.254 | 0.267 |

Compression Index,  $C_c$  0.085  
Recompression Index,  $C_r$  0.011  
Swell Index,  $C_s$  (1st Rebound) 0.011  
Swell Index,  $C_s$  (2nd Rebound) 0.017

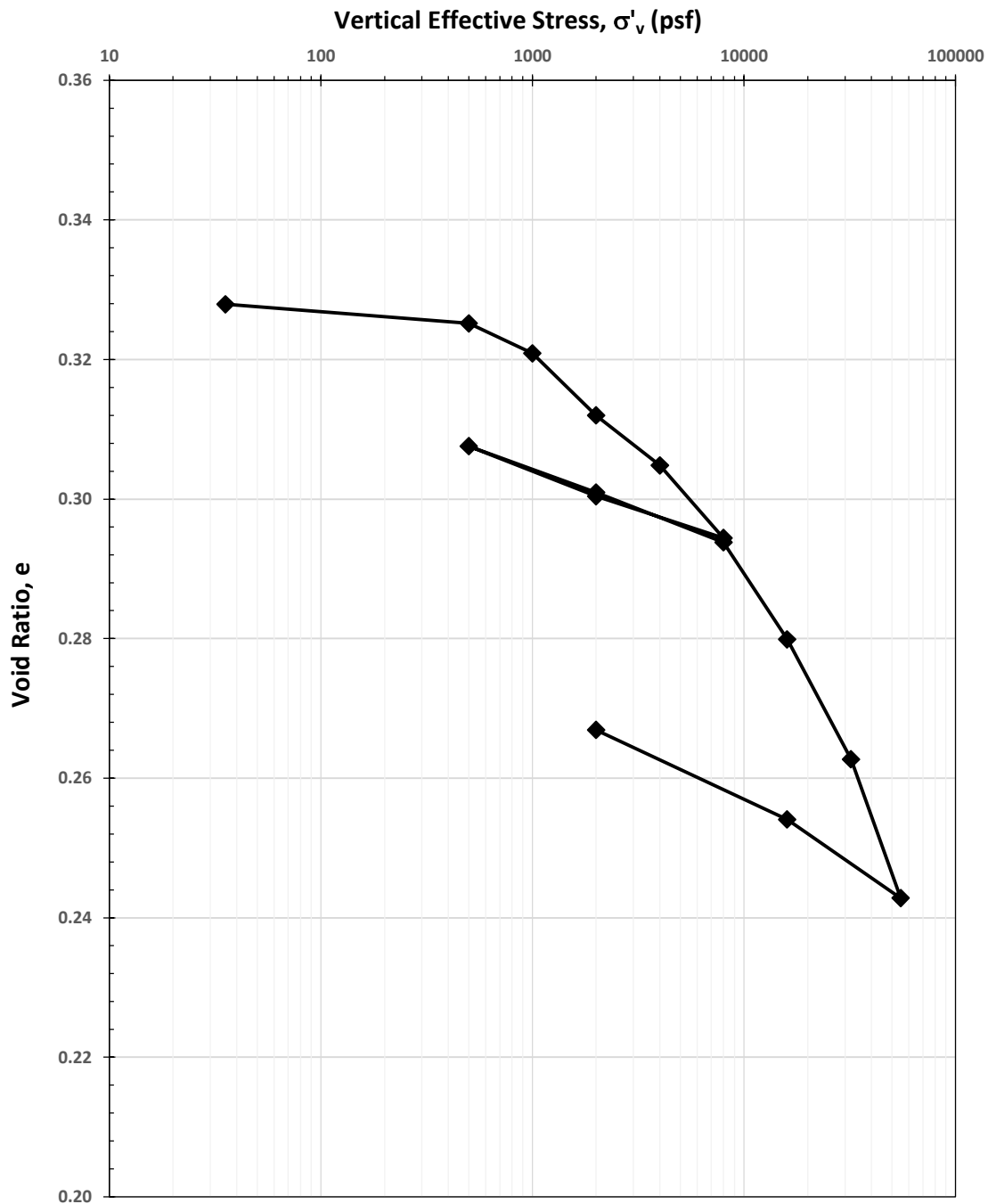
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## One-Dimensional Consolidation Properties of Soil

**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** OM-1 at 3 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/21/25-6/5/25



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## One-Dimensional Consolidation Properties of Soil Appendix

**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** OM-1 at 3 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/21/25-6/5/25



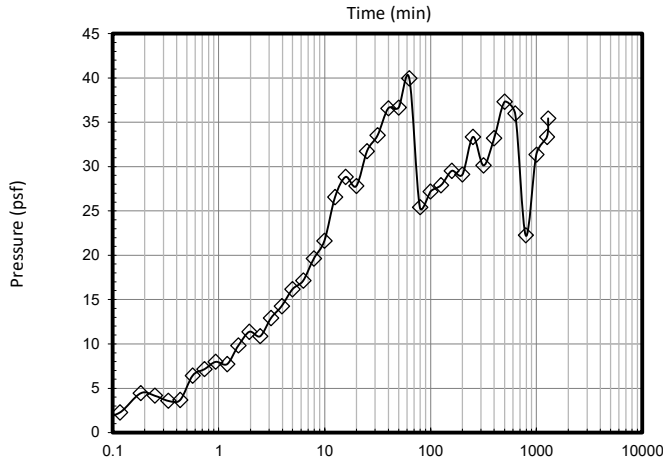
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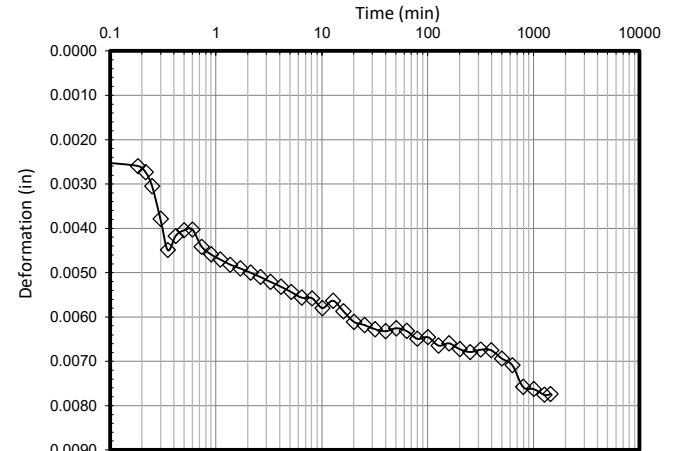
**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** OM-1 at 3 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/21/25-6/5/25

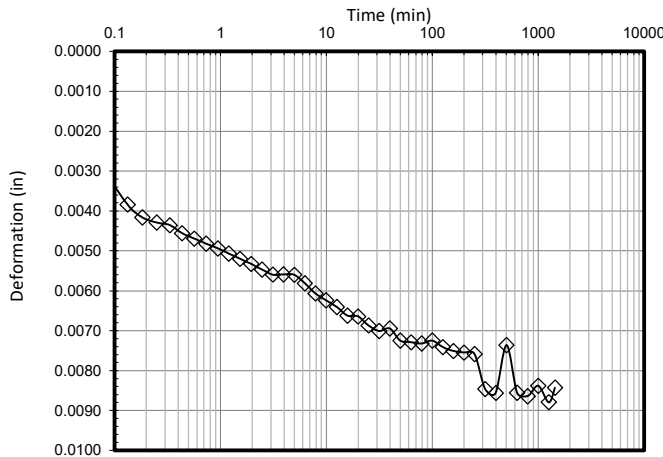
### Swell Pressure Measurement



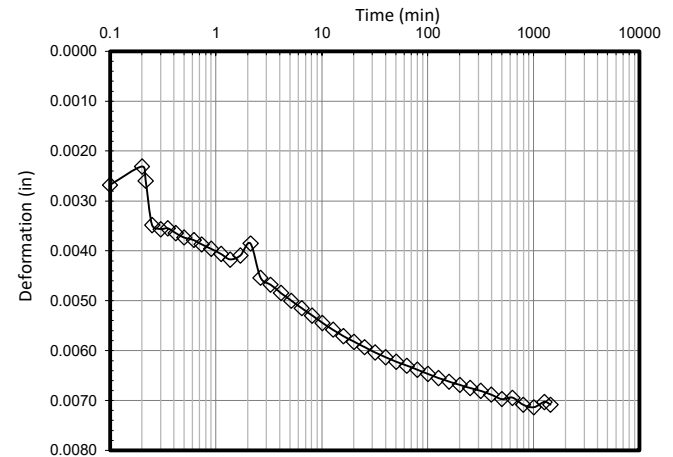
### 2000-psf Load



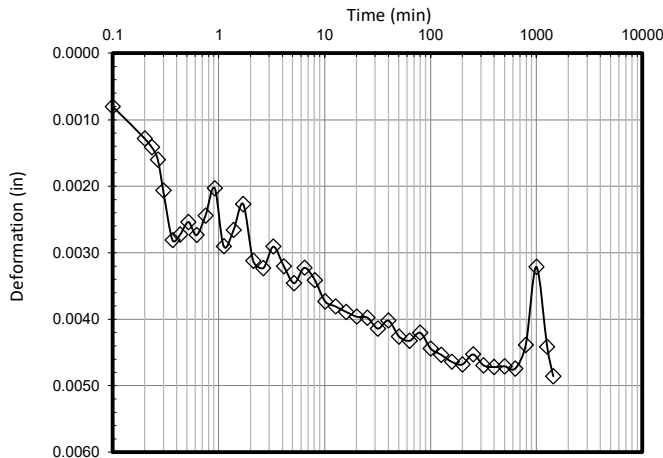
### 500-psf Load



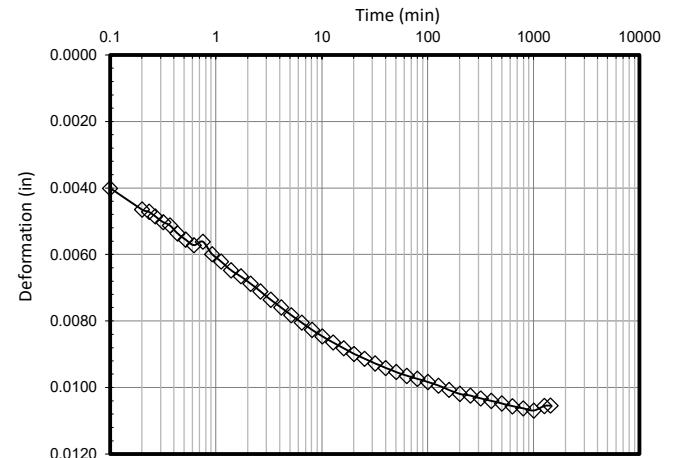
### 4000-psf Load



### 1000-psf Load



### 8000-psf Load

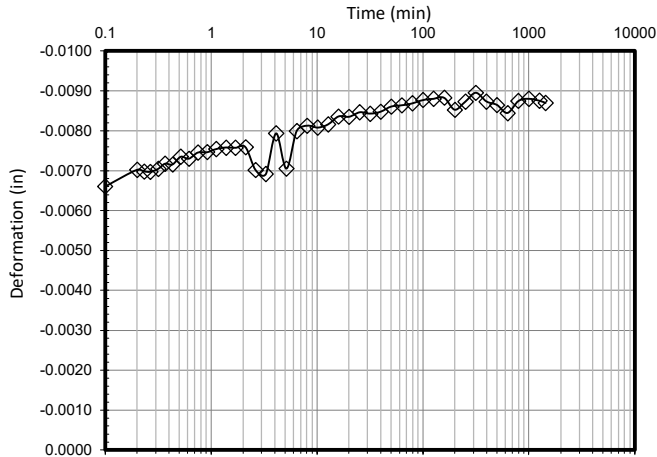


## One-Dimensional Consolidation Properties of Soil Appendix

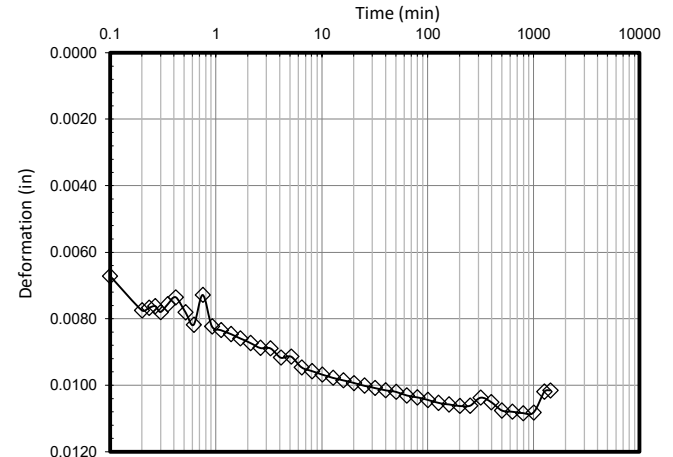
**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** OM-1 at 3 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/21/25-6/5/25

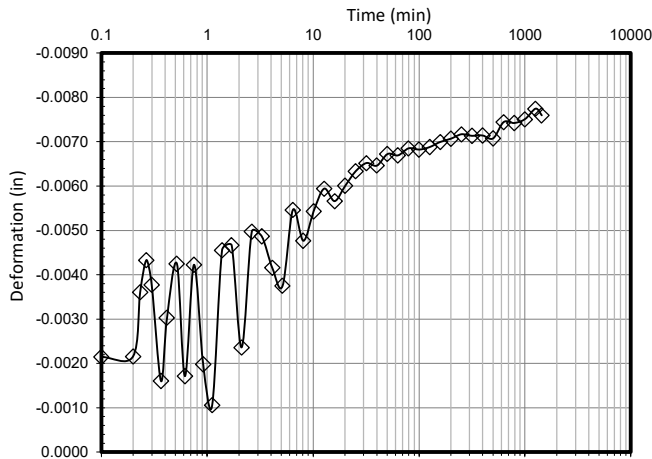
**2000-psf Load**



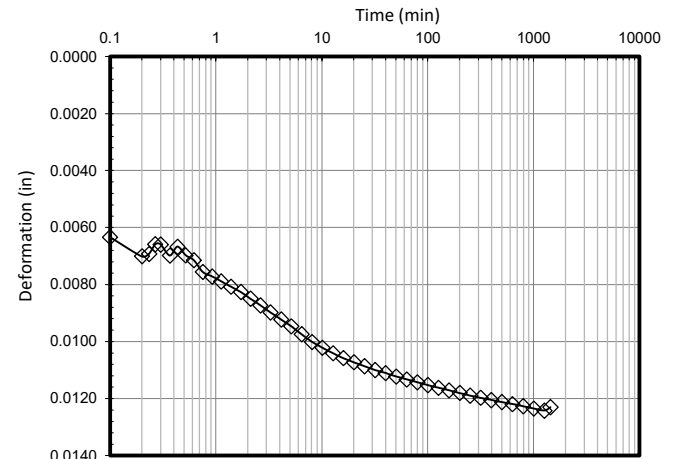
**8000-psf Load**



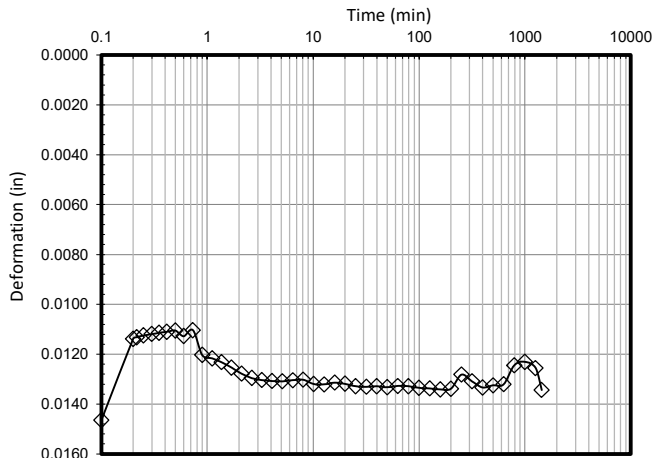
**500-psf Load**



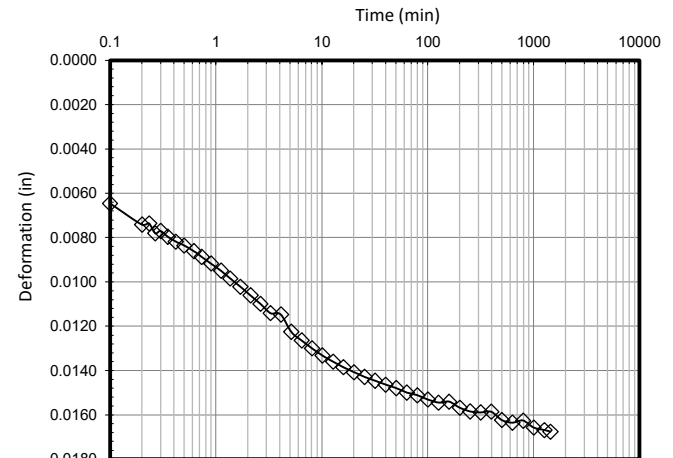
**16000-psf Load**



**2000-psf Load**



**32000-psf Load**



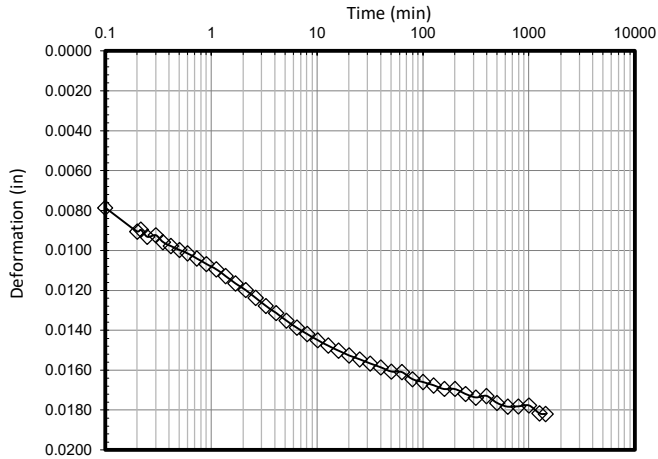


## One-Dimensional Consolidation Properties of Soil Appendix

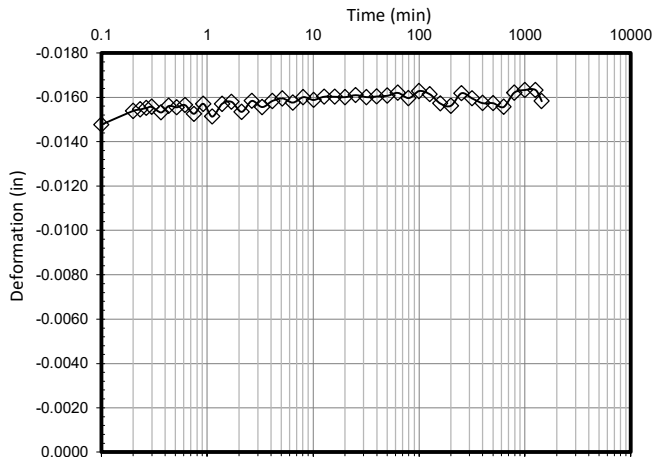
**Client:** RRC Power & Energy, LLC  
**Project Name:** Coles Wind Project  
**Sample ID:** OM-1 at 3 ft

**Beyond Project No.:** GE2502017  
**Test Method:** ASTM D2435, Method A  
**Test Date:** 5/21/25-6/5/25

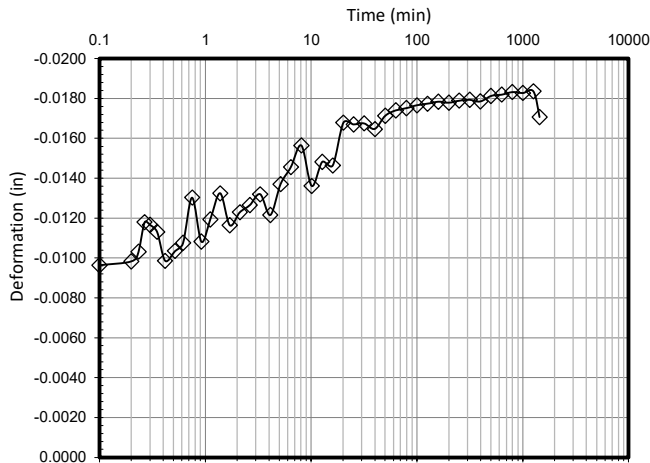
### 55000-psf Load



### 16000-psf Load



### 2000-psf Load





Beyond Engineering & Testing, LLC  
3801 Doris Lane, Suite B  
Round Rock, TX 78664  
(512) 358-6048

## CBR (California Bearing Ratio) Test

Client: RRC Power & Energy, LLC

Project: Coles Wind Project

Sample No: TR-1a at 1.5-5 ft

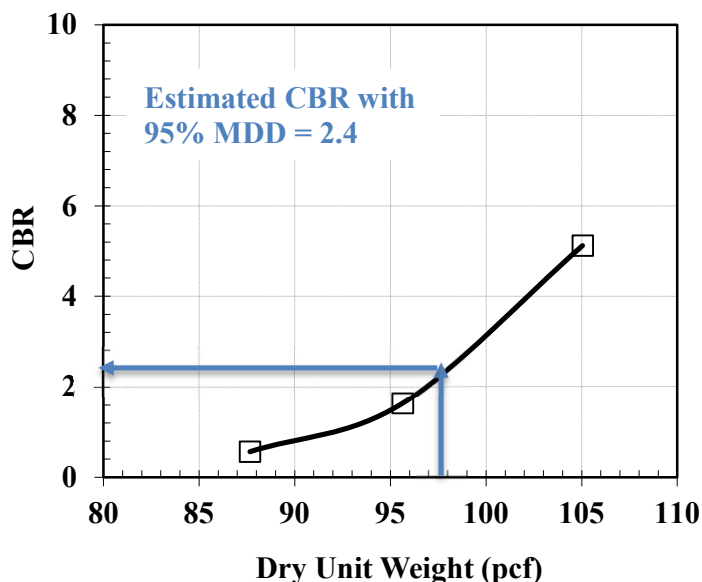
Beyond Project No.: GE2502017

Test Method: ASTM D1883

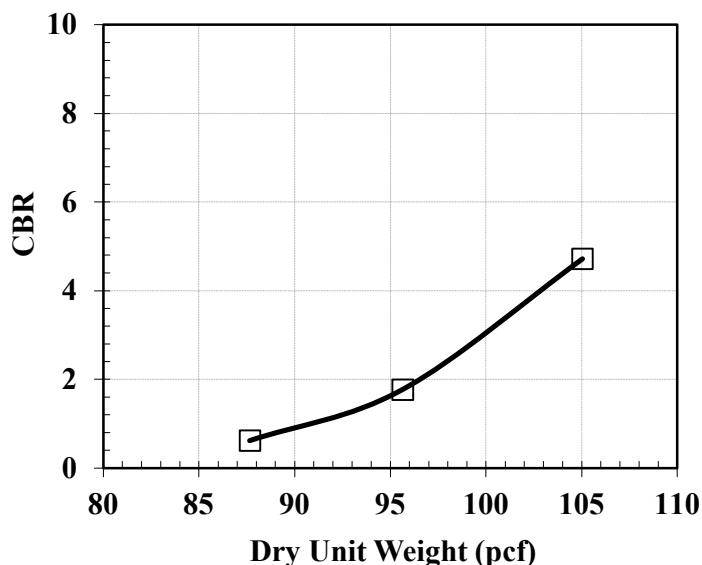
Test Date: 5/27/2025

Rate of Penetration: 0.05 in/min

### CBR for 0.100-in Penetration



### CBR for 0.200-in Penetration



| Initial Conditions                                |      |      |       |
|---------------------------------------------------|------|------|-------|
| Specimen No.                                      | 1    | 2    | 3     |
| Blows per Layer                                   | 10   | 25   | 60    |
| Surcharge Weight (lbs)                            | 10   | 10   | 10    |
| Water Content (%)                                 | 18.9 | 19.0 | 18.2  |
| Dry Unit Weight (pcf)                             | 87.7 | 95.6 | 105.0 |
| Percent Compaction (%)                            | 85.0 | 92.8 | 101.9 |
| Final Conditions (soaked)                         |      |      |       |
| Water Content (%) at top 1-in layer after soaking | 30.1 | 29.4 | 25.0  |
| Swell (% of initial height)                       | 2.7  | 2.5  | 1.3   |
| Bearing Ratio of Sample at 0.100 in penetration   | 0.6  | 1.6  | 5.1   |
| Bearing Ratio of Sample at 0.200 in penetration   | 0.6  | 1.8  | 4.7   |

Note: Soil specimens were molded to a range of densities using 10, 25 and 60 blows at optimum moisture content as per ASTM D 1883 to develop the CBR versus dry density curve. It was allowed the specimens to soak for 96 hrs prior bearing test. Removed the free water and allow the specimens to drain out for 15 min. The 10-lbs surcharge load was placed during bearing test.

HuaMiao Cao, P.E., 5/28/25

Analysis & Quality Review/Date  
Specimens prepared and tested by: A.S.

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Round Rock, TX 78664  
(512) 358-6048

## CBR (California Bearing Ratio) Test

Client: RRC Power & Energy, LLC

Project: Coles Wind Project

Sample No: TR-2 at 1.5-5 ft

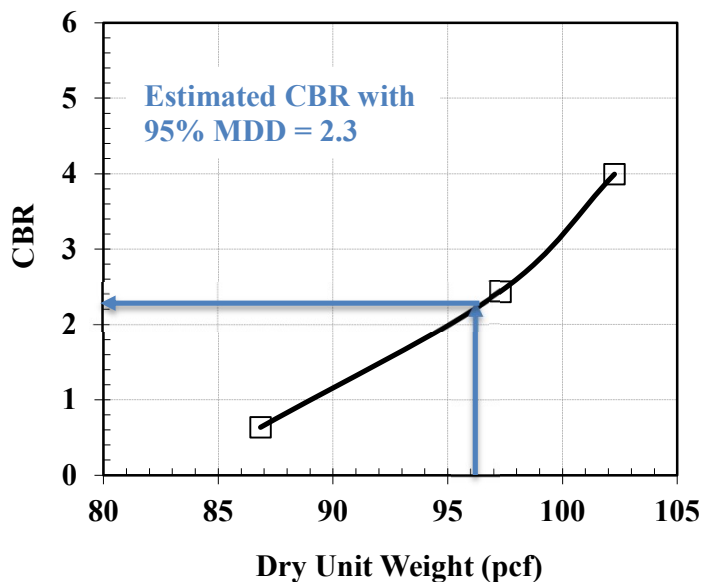
Beyond Project No.: GE2502017

Test Method: ASTM D1883

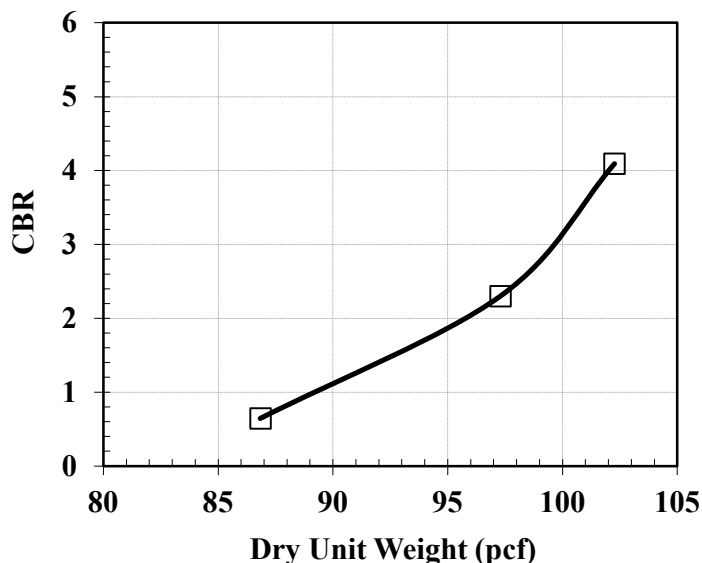
Test Date: 5/27/2025

Rate of Penetration: 0.05 in/min

### CBR for 0.100-in Penetration



### CBR for 0.200-in Penetration



| Initial Conditions                                |      |      |       |
|---------------------------------------------------|------|------|-------|
| Specimen No.                                      | 1    | 2    | 3     |
| Blows per Layer                                   | 10   | 25   | 60    |
| Surcharge Weight (lbs)                            | 10   | 10   | 10    |
| Water Content (%)                                 | 20.2 | 19.2 | 19.8  |
| Dry Unit Weight (pcf)                             | 86.8 | 97.3 | 102.3 |
| Percent Compaction (%)                            | 85.7 | 96.0 | 100.9 |
| Final Conditions (soaked)                         |      |      |       |
| Water Content (%) at top 1-in layer after soaking | 33.8 | 28.0 | 24.9  |
| Swell (% of initial height)                       | 2.2  | 1.7  | 1.3   |
| Bearing Ratio of Sample at 0.100 in penetration   | 0.6  | 2.4  | 4.0   |
| Bearing Ratio of Sample at 0.200 in penetration   | 0.6  | 2.3  | 4.1   |

Note: Soil specimens were molded to a range of densities using 10, 25 and 60 blows at optimum moisture content as per ASTM D 1883 to develop the CBR versus dry density curve. It was allowed the specimens to soak for 96 hrs prior bearing test. Removed the free water and allow the specimens to drain out for 15 min. The 10-lbs surcharge load was placed during bearing test.

HuaMiao Cao, P.E., 5/28/25

Analysis & Quality Review/Date  
Specimens prepared and tested by: A.S.

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RRC Power & Energy, LLC  
810 Hesters Crossing Rd, Suite 120  
Round Rock, TX 78681  
Telephone: (512) 992-2087

## SUMMARY OF LABORATORY RESULTS

CLIENT: Apex Clean Energy  
PROJECT: Coles Wind Project  
LOCATION: Coles County, IL  
NUMBER: GE2502017

| Borehole | Depth (ft) | USCS | Water Content (%) | Dry Unit Weight (pcf) | < No. 200 (%) | LL | PL | PI | Compressive Strength (tsf) | Strain at Failure (%) | Confining Pressure (psi) | Chlorides (%/weight) | Sulfates (%/weight) | pH  | Minimum Resistivity (ohm-cm) |
|----------|------------|------|-------------------|-----------------------|---------------|----|----|----|----------------------------|-----------------------|--------------------------|----------------------|---------------------|-----|------------------------------|
| GEO-02   | 1.0        |      | 16                |                       |               |    |    |    |                            |                       |                          | 0.0082               | 0.0088              | 7.1 | 2,483                        |
| GEO-02   | 9.0        | CL   | 16                | 115                   | 58            | 22 | 11 | 11 | 0.40                       | 14.8                  | 7.5                      |                      |                     |     |                              |
| GEO-21   | 1.0        |      | 14                |                       |               |    |    |    |                            |                       |                          | 0.0123               | 0.0011              | 8.0 | 2,589                        |
| GEO-21   | 9.0        | CL   | 13                | 119                   | 93            | 30 | 22 | 8  | 2.38                       | 14.8                  | 7.5                      |                      |                     |     |                              |
| GEO-22   | 1.0        |      | 14                |                       |               |    |    |    |                            |                       |                          | 0.0099               | 0.0070              | 7.6 | 2,257                        |
| GEO-22   | 12.0       | CL   | 13                | 120                   | 62            | 24 | 12 | 12 | 1.71                       | 14.8                  | 10.0                     |                      |                     |     |                              |
| GEO-23   | 1.0        | CL   | 21                |                       | 85            | 49 | 21 | 28 |                            |                       |                          | 0.0100               | 0.0021              | 5.9 | 1,752                        |
| GEO-25   | 1.0        | SC   | 18                |                       | 33            | 32 | 17 | 15 |                            |                       |                          | 0.0097               | 0.0023              | 7.7 | 3,350                        |
| GEO-28   | 1.0        |      | 13                |                       |               |    |    |    |                            |                       |                          | 0.0073               | 0.0131              | 7.7 | 2,273                        |
| GEO-28   | 9.0        | CL   | 13                | 125                   | 62            | 31 | 15 | 16 | 3.60                       | 14.6                  | 7.5                      |                      |                     |     |                              |
| GEO-32   | 1.0        | CL   | 22                |                       | 70            | 33 | 15 | 18 |                            |                       |                          | 0.0086               | 0.0016              | 7.4 | 3,395                        |
| GEO-32   | 9.0        | CL   | 14                | 123                   | 75            | 23 | 12 | 11 | 2.08                       | 14.8                  | 7.5                      |                      |                     |     |                              |
| OM-1     | 3.0        | CL   | 18                | 114                   | 58            | 23 | 12 | 11 | 1.47                       | 14.8                  | 2.5                      |                      |                     |     |                              |
| OM-1     | 9.0        |      | 12                |                       |               |    |    |    |                            |                       |                          |                      |                     |     |                              |
| OM-2     | 1.0        |      | 23                |                       |               |    |    |    |                            |                       |                          |                      |                     |     |                              |
| OM-2     | 10.5       | CL   | 14                | 123                   | 68            | 25 | 14 | 11 | 2.98                       | 14.8                  | 8.5                      |                      |                     |     |                              |
| TR-1a    | 1.5        | CL   | 27                |                       | 89            | 47 | 18 | 29 |                            |                       |                          | 0.0097               | 0.0022              | 6.7 | 1,461                        |
| TR-2     | 1.5        | CL   | 25                |                       | 93            | 47 | 18 | 29 |                            |                       |                          | 0.0101               | 0.0019              | 6.2 | 2,102                        |



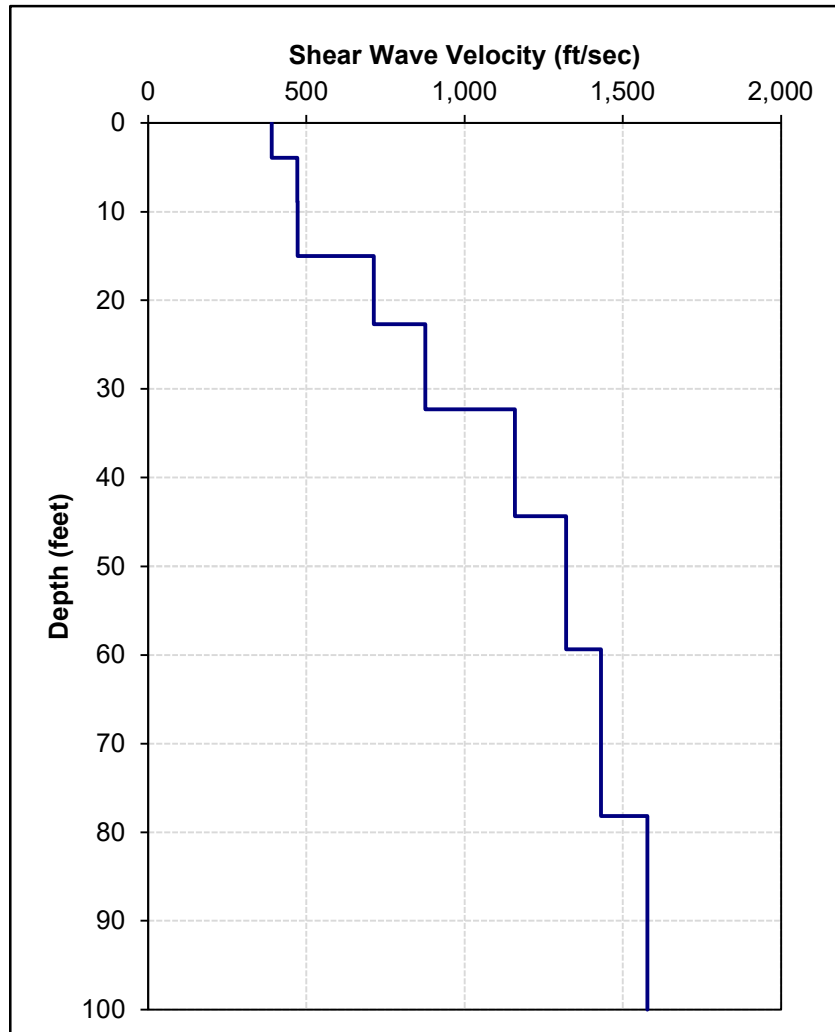
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Round Rock, TX 78661  
512.992.2087

## **APPENDIX C**

**Multi-Channel Analysis of Surface Waves (MASW) Survey Results for WTG No. GEO-08**

| Depth<br>(ft) | Shear Wave<br>Velocity<br>(ft/sec) |
|---------------|------------------------------------|
| 3.9           | 390                                |
| 8.9           | 470                                |
| 15.0          | 472                                |
| 22.7          | 713                                |
| 32.3          | 875                                |
| 44.4          | 1,159                              |
| 59.4          | 1,321                              |
| 78.2          | 1,431                              |
| 100.0         | 1,577                              |



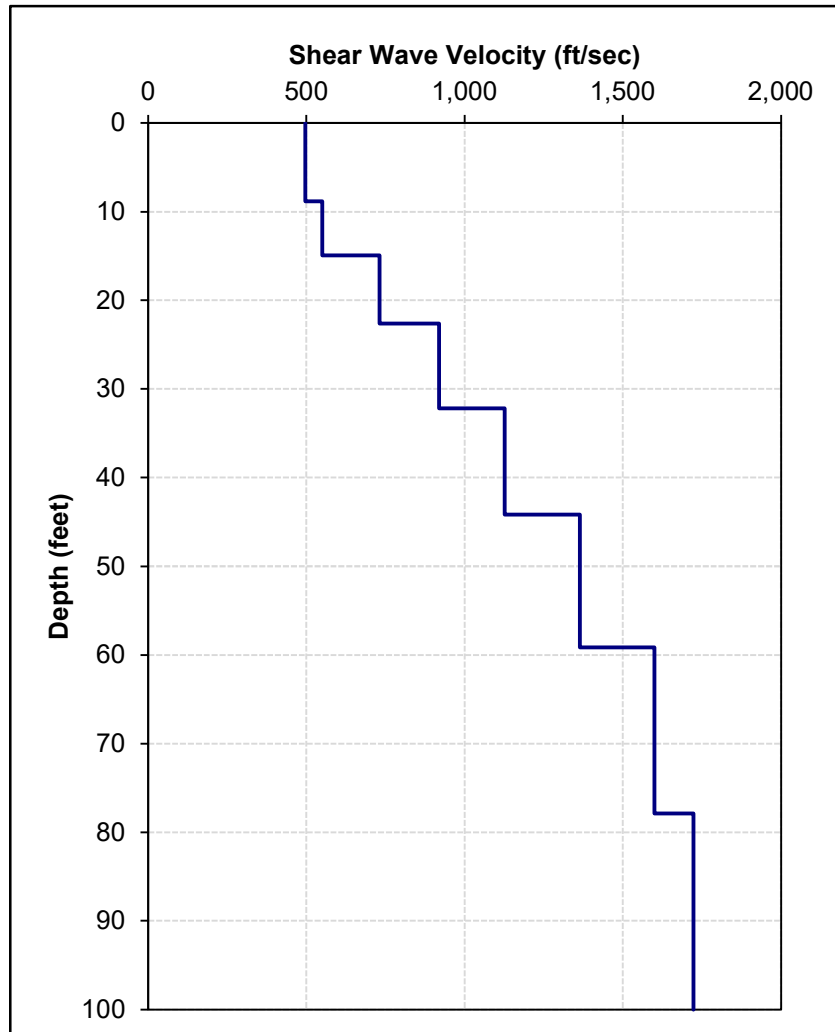
**Note:**

1. Data collected on May 19, 2025
2. SurfSeis v. 4.2.4.5 computer software developed by Kansas Geological Survey was used to process the field data.



**Multi-Channel Analysis of Surface Waves (MASW) Survey Results for WTG No. GEO-10**

| Depth<br>(ft) | Shear Wave<br>Velocity<br>(ft/sec) |
|---------------|------------------------------------|
| 3.9           | 496                                |
| 8.8           | 497                                |
| 15.0          | 550                                |
| 22.6          | 730                                |
| 32.2          | 919                                |
| 44.2          | 1,126                              |
| 59.2          | 1,364                              |
| 77.9          | 1,601                              |
| 100.0         | 1,723                              |

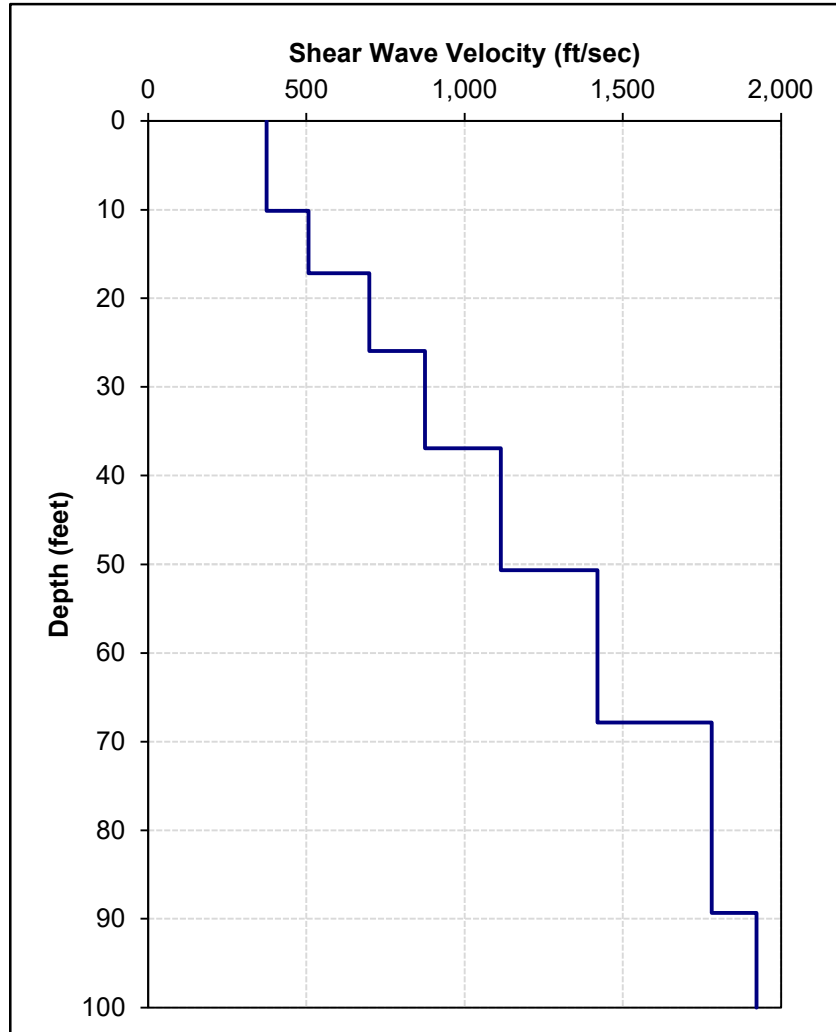


**Note:**

1. Data collected on May 19, 2025
2. SurfSeis v. 4.2.4.5 computer software developed by Kansas Geological Survey was used to process the field data.

**Multi-Channel Analysis of Surface Waves (MASW) Survey Results for WTG No. GEO-27**

| Depth<br>(ft) | Shear Wave<br>Velocity<br>(ft/sec) |
|---------------|------------------------------------|
| 4.5           | 374                                |
| 10.1          | 374                                |
| 17.2          | 507                                |
| 26.0          | 699                                |
| 36.9          | 874                                |
| 50.7          | 1,114                              |
| 67.9          | 1,420                              |
| 89.3          | 1,780                              |
| 100.0         | 1,923                              |

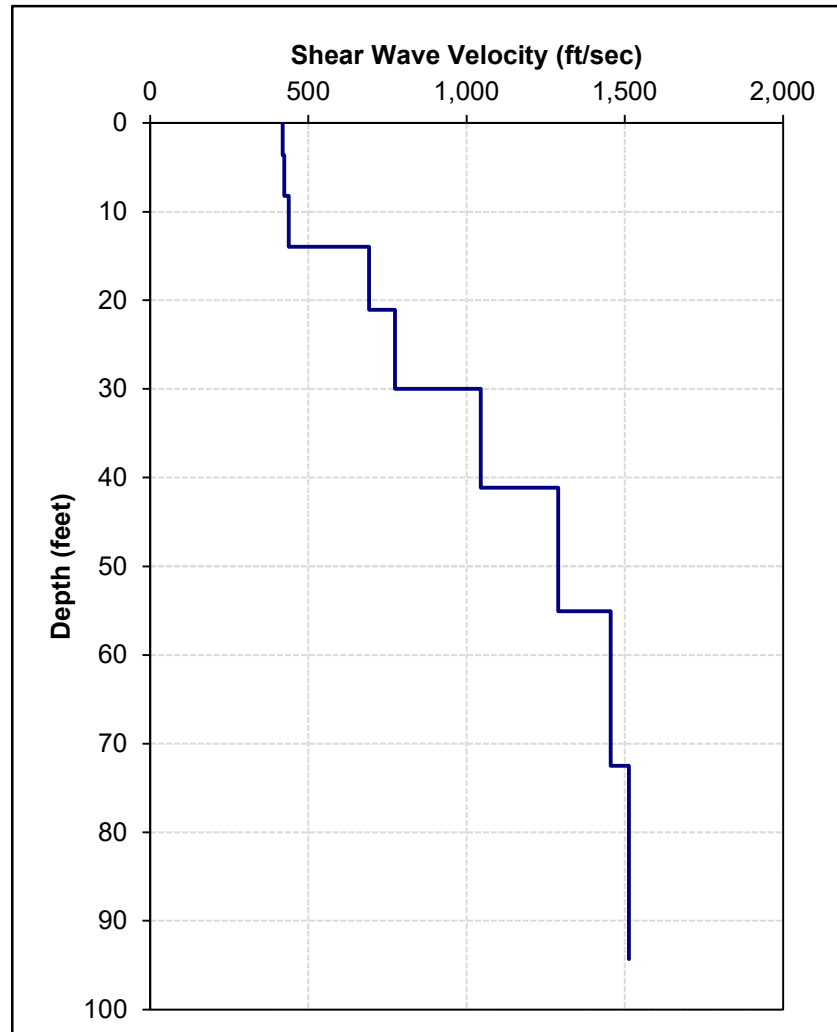


**Note:**

1. Data collected on May 19, 2025
2. SurfSeis v. 4.2.4.5 computer software developed by Kansas Geological Survey was used to process the field data.

**Multi-Channel Analysis of Surface Waves (MASW) Survey Results for WTG No. GEO-37**

| Depth<br>(ft) | Shear Wave<br>Velocity<br>(ft/sec) |
|---------------|------------------------------------|
| 3.7           | 418                                |
| 8.2           | 424                                |
| 13.9          | 438                                |
| 21.1          | 691                                |
| 30.0          | 773                                |
| 41.2          | 1,045                              |
| 55.1          | 1,290                              |
| 72.5          | 1,455                              |
| 94.3          | 1,513                              |



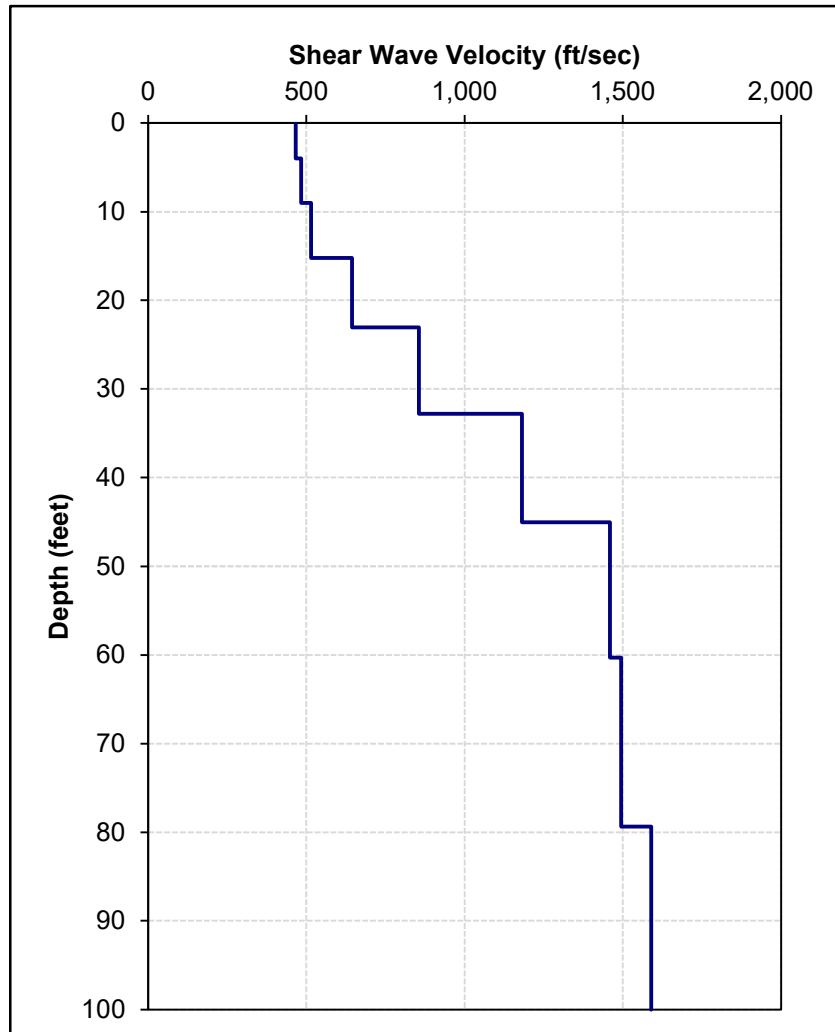
**Note:**

1. Data collected on May 19, 2025
2. SurfSeis v. 4.2.4.5 computer software developed by Kansas Geological Survey was used to process the field data.



**Multi-Channel Analysis of Surface Waves (MASW) Survey Results for GEO-45**

| Depth<br>(ft) | Shear Wave<br>Velocity<br>(ft/sec) |
|---------------|------------------------------------|
| 4.0           | 466                                |
| 9.0           | 483                                |
| 15.3          | 515                                |
| 23.1          | 644                                |
| 32.8          | 855                                |
| 45.0          | 1,181                              |
| 60.3          | 1,459                              |
| 79.4          | 1,495                              |
| 100.0         | 1,590                              |



**Note:**

1. Data collected on May 19, 2025
2. SurfSeis v. 4.2.4.5 computer software developed by Kansas Geological Survey was used to process the field data.

**SOIL THERMAL SURVEY AND LABORATORY TESTING  
COLES WIND PROJECT  
COLES COUNTY, ILLINOIS**

**JUNE 2025**

**Prepared for:**

**RRC Power & Energy, LLC  
810 Hesters Crossing Road, Suite 120  
Round Rock, TX 78681**

**Submitted by:**

**GEO THERM USA, LLC**

**Introduction:** A field thermal resistivity survey of native soils was performed for the proposed underground power cables at **Coles Wind near Coles County, Illinois**. In-situ thermal resistivity and ambient temperature measurements were conducted at two (2) locations across the project site. The fieldwork was carried out on April 16<sup>th</sup>, 2025. **RRC** marked the test locations, obtained permits, cleared services, provided a backhoe with operator and collected soil samples.

**Field Testing and Soil Sampling:** In-situ thermal testing was carried out at two (2) test pit locations. A backhoe was used to dig test pits, and ambient temperature and thermal resistivity measurements were conducted at three (3) depths below the estimated final grade (**Table 1**). In addition, samples for laboratory testing - moisture content, density and thermal dryout characterization were taken.

In-situ thermal tests were conducted in accordance with the IEEE Standard (**IEEE-442-2017**) using thermal probes and the *Geotherm TPA-2000* using a portable power source. All laboratory geotechnical testing was conducted in accordance with **ASTM**. Soil descriptions were provided by **RRC**, and the test locations are referenced by the numbers given by **RRC**.

The field thermal resistivity values were measured at the in-situ soil moisture on that day. Depending on weather and environmental conditions, such as drying due to cable heat or other heat sources, seasonal drying (drought), artificial draining, etc., the soil may be drier at certain times of the year. Therefore, the design thermal resistivity for the native soils should be based on the driest expected conditions.

*The test report contains factual information on the subsurface conditions at the specific borehole and test pit locations, and no warrantee is expressed or implied that materials or conditions other than those described may not be encountered along the cable routes.*

**Laboratory Testing:** The tests included the measurement of moisture content, density and thermal dryout characterization (thermal resistivity as a function of moisture content). Bulk samples from 1.5 - 5 ft were reconstituted at greater of the 'optimum' or the 'as received' moisture content, and at 85% and 95% of the standard Proctor dry density **provided by RRC**. All thermal tests were conducted in accordance with IEEE standard 442-2017. The test results are given in **Table 2** and the thermal dryout curves are presented in **Figures 1 and 2**. Laboratory thermal resistivity measurements were conducted at the ambient temperature of 22°C.

Please contact us if you have any questions or if we can be of further assistance.

**Geotherm USA**



Nimesh Patel





**TABLE 1 – In-Situ Test Results**

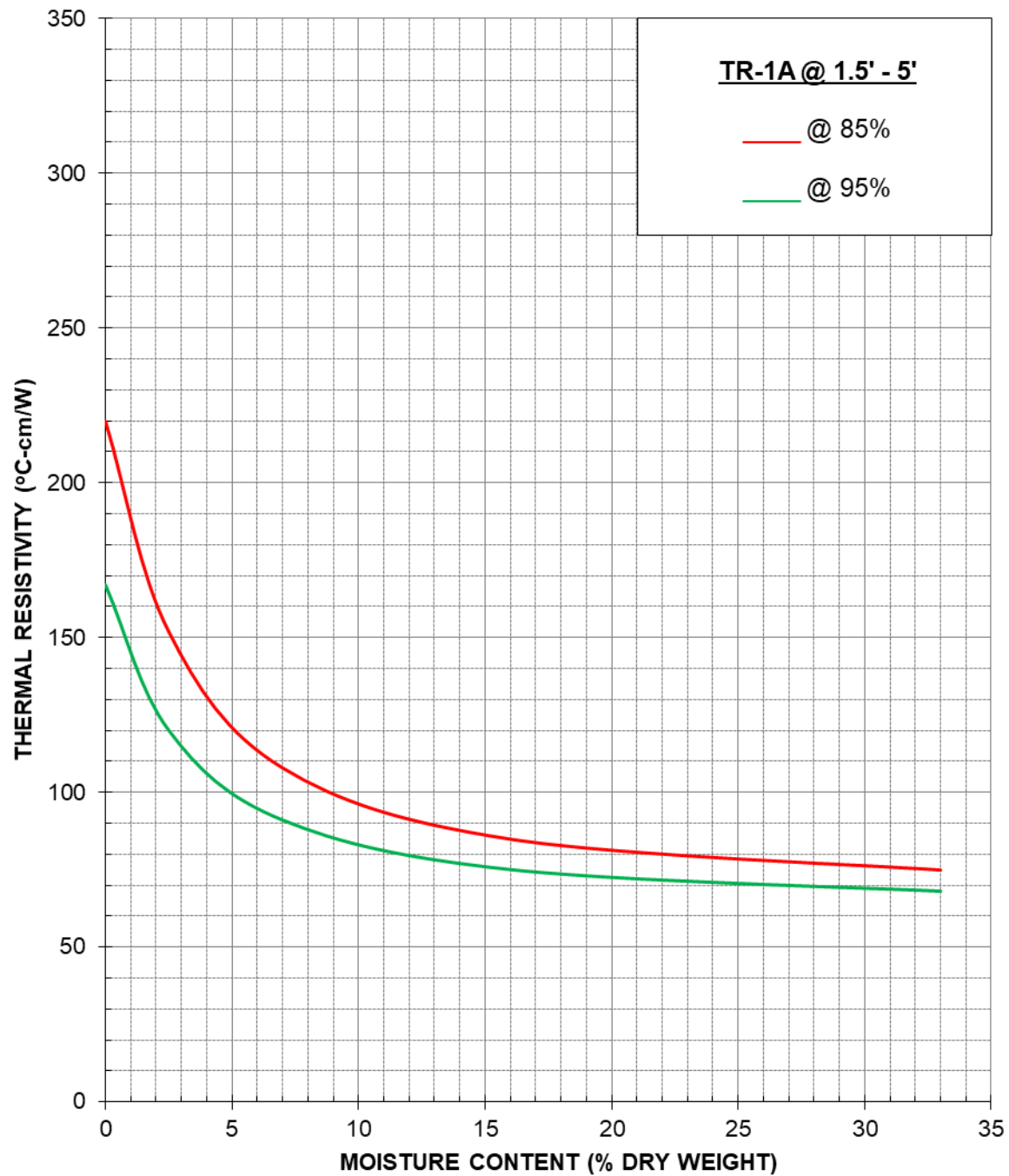
| Test Pit Coordinates |           |            | Depth<br>(ft.) | Ambient<br>Temperature<br>(°C) | In-situ<br>Thermal<br>Resistivity<br>(°C-cm/W) |
|----------------------|-----------|------------|----------------|--------------------------------|------------------------------------------------|
| Boring ID            | Latitude  | Longitude  |                |                                |                                                |
| TR1A                 | 39.616331 | -88.208044 | 2              | 9.2                            | 79                                             |
|                      |           |            | 3              | 10.9                           | 66                                             |
|                      |           |            | 4              | 8.7                            | 67                                             |
| TR-2                 | 39.569814 | -88.152125 | 2              | 8.7                            | 74                                             |
|                      |           |            | 3              | 10.7                           | 63                                             |
|                      |           |            | 4              | 8.7                            | 69                                             |

**Table 2 – Laboratory Testing**

| Sample<br>ID | Depth<br>(ft) | Compaction<br>(%) | Thermal Resistivity<br>(°C-cm/W) |     | Moisture<br>Content<br>(%) | Dry<br>Density<br>(lb/ft <sup>3</sup> ) | Soil Description<br>(RRC) |
|--------------|---------------|-------------------|----------------------------------|-----|----------------------------|-----------------------------------------|---------------------------|
|              |               |                   | Wet                              | Dry |                            |                                         |                           |
| TR-1A        | 1.5 - 5       | 85                | 75                               | 220 | 33                         | 88                                      | Lean Clay (CL)            |
| TR-1A        | 1.5 - 5       | 95                | 68                               | 167 | 33                         | 98                                      | Lean Clay (CL)            |
| TR-2         | 1.5 - 5       | 85                | 81                               | 240 | 31                         | 86                                      | Lean Clay (CL)            |
| TR-2         | 1.5 - 5       | 95                | 73                               | 182 | 31                         | 96                                      | Lean Clay (CL)            |



## THERMAL DRYOUT CURVES



RRC Power & Energy (Project No. GE2502017)

Coles Wind Project – Coles County, IL

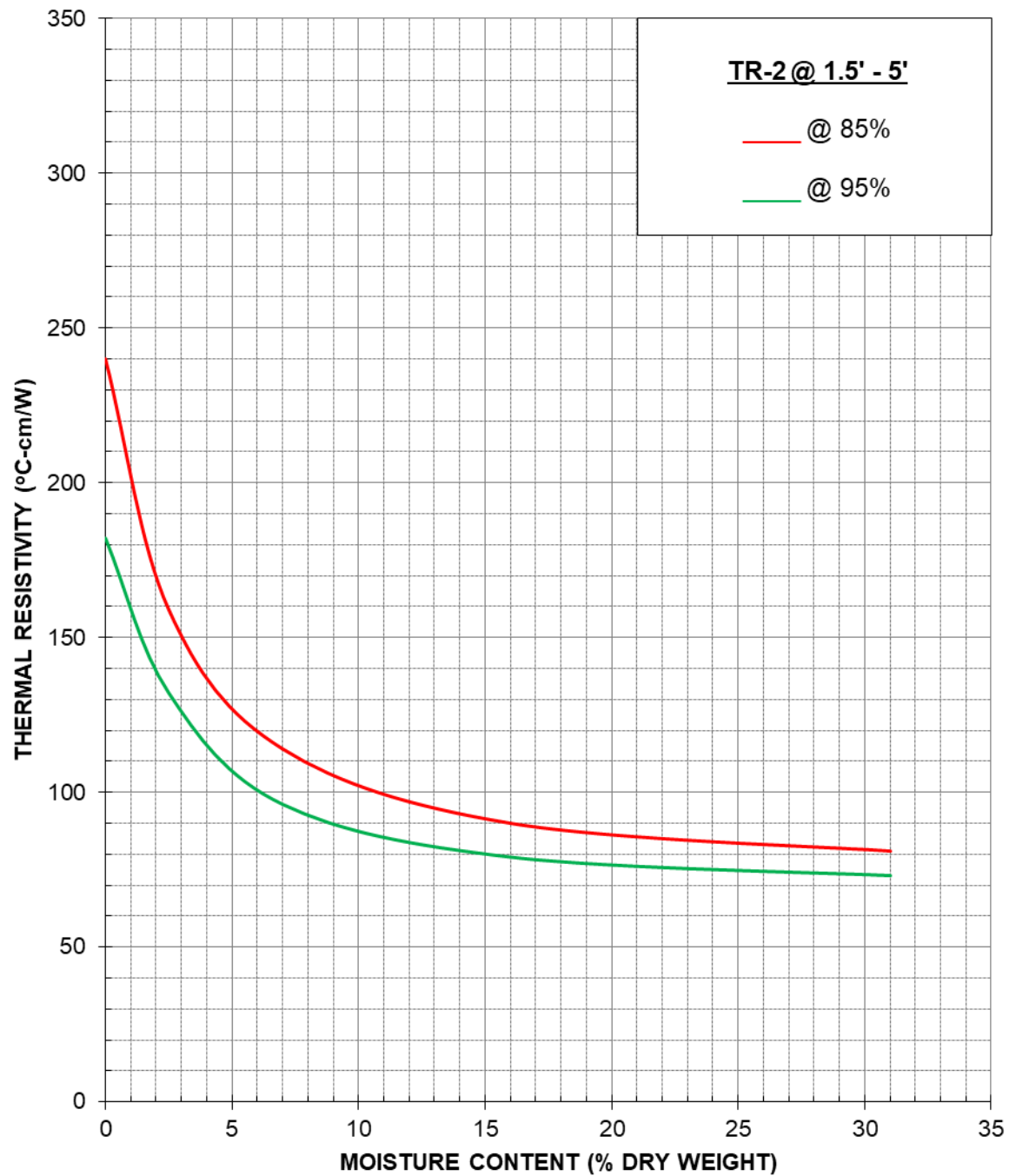
Thermal Resistivity Report

June 2025

Figure 1



## THERMAL DRYOUT CURVES



RRC Power & Energy (Project No. GE2502017)

Coles Wind Project – Coles County, IL

Thermal Resistivity Report

June 2025

Figure 2