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Geotechnical & Environmental Engineering



Construction Materials Engineering & Testing



Laboratory Testing of Soils, Concrete & Asphalt



Geo-Environmental Drilling & Sampling

Preliminary Geotechnical Report

320-Acre Site Development- Aligned Data Centers

SEQ Reed & Carbon Hill Roads

Coal City, Illinois

Kimley-Horn

GEOTECHNICAL GROUP





January 13, 2025

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Mr. Christian Jones, P.E.
Kimley-Horn
11995 Singletree Lane, Suite 225
Eden Prairie, MN 55344

RE: L-98,197
320-Acre Site Development
Aligned Data Centers
SEQ Reed & Carbon Hill Roads
Coal City, Illinois

Dear Mr. Jones:

This preliminary geotechnical report presents results of previous soils explorations as well as a more recent one for a site in Coal City being considered for a proposed data center development. These geotechnical engineering services are being provided in accordance with TSC Proposal No. 74,035A dated November 1, 2024 and the attached General Conditions, incorporated herein by reference.

The project site encompasses 320 acres lying on the southeast quadrant (SEQ) of E. Reed and S. Carbon Hill Roads in Coal City, Illinois. Approximately 30 acres in the northwest corner and 50 acres in the east-central area are excluded for flood zone and associated substation, respectively. The assemblage presently consists of gently rolling to rolling farm fields. Ground surface elevations at the boring locations varied by approximately 13 feet, with the site generally sloping down to the west.

The Coal City area contains large tracts of active and abandoned coal mining operations. The Illinois State Geological Survey (ISGS) has produced a map of the known coal mines in this vicinity. It shows the nearest mined area as the Braceville Coal Company, located approximately $\frac{1}{2}$ to $\frac{3}{4}$ of a mile east of the project site. This report does not contain any further discussion of mining issues.

A Concept Site Plan provided to TSC (dated October 29, 2024) shows nine (9) 2-story data centers having building footprints ranging from 152,000 to 233,000 square feet (sf). It also shows several stormwater management facilities (detention ponds) which are mostly concentrated on the southern portion of the site.

Foundation loads for the proposed 2-story data center buildings were not available at the time this report was prepared. However, based on similar data center projects it is estimated that column and wall loads (DL + LL) may reach up to about 2000 kips and 30 kips/ft, respectively. Based also on past experience with data center projects, the slab-on-grade of the buildings typically have a design load on the order of 500 pounds per square (psf).

Field Investigation and Laboratory Testing

Previous soils explorations by TSC covered all but the southernmost 80 acres of the project site. They included a total of sixty (60) soil borings (Nos. 301 - 347 and 401 - 413) which were all extended to 15 feet in depth. This previous boring information has been incorporated and made a part of this report with no significant changes to the site appearing to have been made in the intervening years.

Thirty-four (34) supplemental soil borings (Nos. 501 - 534) were added as part of this most recent subsurface exploration. The majority of these were concentrated on the southernmost 80 acres of the site (where no previous borings had been drilled) and extended 15 to 25 feet below existing grade. Ten (10) deeper borings (Nos. 501 - 510) were also performed within the footprints of the proposed data center buildings. They were extended to the top of apparent bedrock at depths of about 25 to 45 feet below existing grade, with rock then being cored for 10 feet in Borings 501, 506 and 509.

The previous and latest borings have all been plotted on the Concept Site Plan provided as well as a recent aerial photo of the site. Reference is made to these Boring Location Plans in the Appendix, which indicate the drilling layout as well as ground surface elevations at the borings. The elevations at the previous borings (Nos. 301 - 347 and 401 - 413) were provided by others and the most recent borings (Nos. 501 - 534) acquired by TSC using a Trimble R12 GNSS Receiver, with all being rounded to the nearest 0.5 foot.

The borings were drilled and samples tested according to currently recommended American Society for Testing and Materials specifications. Soil sampling was performed at 2½-foot intervals to depths of 15 to 20 feet and at 5-foot intervals thereafter. The samples were taken in conjunction with the Standard Penetration Test (SPT), for which driving resistance to a 2" split-spoon sampler (N-value in blows per foot) provides an indication of the relative density of granular materials and consistency of cohesive soils. Water level readings were taken during and following completion of drilling and soil sampling operations.

Borings 501, 506 and 509 were extended to apparent bedrock at depths of 25 to 39 feet below existing grade, followed by rock coring for 10 feet. Rock was cored using an NWD-4 size core barrel (2.06" diameter core). Each core was placed in a separate core box for transportation to our laboratory.

All soil samples were examined in the laboratory to verify field descriptions and to classify them in accordance with the Unified Soil Classification System. Laboratory testing included water content determinations for all cohesive and intermediate (silt or loamy) soil types. An estimate of unconfined compressive strength was obtained for all cohesive soils using a calibrated pocket penetrometer, with actual measurements of unconfined compressive strength (Qu) performed on representative samples of native clays.

The rock cores obtained in Borings 501, 506 and 509 were described by a geologist, with recovery and RQD (Rock Quality Designation) determined. An uniaxial compression test was performed on an intact rock core specimen from Boring 506.

Reference is made to the boring logs in the Appendix which indicate subsurface stratigraphy, soil and rock descriptions, results of field and laboratory tests, as well as water level observations. Definitions of descriptive terminology are also included. While strata changes are shown as a definite line on the boring logs, the actual transition between soil layers will probably be more gradual. It should be noted that in the absence of foreign substances it is often very difficult to distinguish fill materials from native soil samples.

Fluctuations in the groundwater table may also occur due to variations in nearby land use, precipitation (short-term and seasonal) as well as rises or drops in creek, pond or other nearby surface water features. This will mean that water levels at a future date may be higher or lower than those recorded at the time of drilling.

Discussion of Test Data

Surficial topsoil was between 12 and 18 inches thick at the majority of the boring locations. It was up to 2 to 3 feet deep at Borings 306, 322, 328, 401 and 406. The samples of these deeper sandy topsoil deposits exhibited water contents of 17 to 25 percent.

Very loose to firm sand, silty/clayey sand and sandy/ clayey silt deposits were encountered directly underlying the topsoil layer in about two-thirds of the borings. These granular/intermediate materials extended between 2 and 9 feet below existing grade, exhibiting SPT N-values typically ranging from 3 to 15 blows per foot (bpf).

Relatively soft silty clay soils were also encountered directly underlying the topsoil layer at Borings 318, 322, 327, 407 and 410 - 413 (8 total). They generally extended between 3 and 6 feet below existing grade. The soft clays typically had unconfined compressive strengths of 0.75 tons per square foot (tsf) or less at water contents ranging from 17 to 34 percent.

Uppermost cohesive soils otherwise typically consisted of tough to hard silty clay soils of apparent medium to high plasticity. These CL/CH materials (Unified classification) generally extended between 5 and 13 feet below existing grade, occasionally to the bottom of the 15-foot deep borings as well as 18 feet deep in Borings 523 and 532. They exhibited unconfined compressive strengths typically ranging from 1.0 to 5.0 tsf and occasionally lower. Water contents were relatively high, varying from 25 to 38 percent.

Native soils otherwise typically consisted of interbedded strata of tough to hard silty clay, very silty clay and sandy clay and loose to very dense sand, gravel, clayey/silty sand, silt and clayey/sandy silt. They extended to the bottom of the 15 to 25-foot deep borings (Nos. 301 - 347, 401 - 413 and 511 - 534) and to the top of apparent weathered/sound rock at depths of about 28 to 39 feet below existing grade in Borings 501 - 510. The cohesive soils exhibited unconfined compressive strengths/pocket penetrometer readings of 1.5 to 4.5+ tsf, occasionally lower but typically exceeding 2.0 tsf. Water contents generally varied from about 9 to 20 percent (sometimes both lower and higher). The silt, sand and gravel deposits exhibited variable SPT N-values ranging from as low as 4 bpf to as high as 50

blows for 1 inch, with the blowcounts increasing with depth especially below about 30 feet below existing grade in Borings 501 - 510.

Borings 501 - 510 were extended to the top of apparent weathered/sound bedrock at depths of about 25 to 39 feet below existing grade. Rock cores taken in Borings 501, 506 and 509 revealed the bedrock to consist of Shale in a slightly to moderately weathered condition. The core runs had good recoveries of 88 to 100 percent. The Run 1 from 25 to 27½ feet in B-509 consisted of very dense/hard clayey silt/very silty clay soils, with Run 2 from 27½ to 35 feet comprised of Shale. The core runs had RQD indices of 67 to 93 percent, indicative of a rock of fair to excellent quality. An unconfined compressive strength of 3,000 pounds per square inch (psi) was obtained on a intact core specimen from the upper portion of the rock core from B-506.

Free water was first encountered at depths of 19 to 28 feet below existing grade in Borings 504, 509 and 510. Free groundwater was otherwise initially revealed at between 3 and 13 feet below existing grade in the over three-quarters of the borings. Upon completion of drilling operations, the water levels had generally remained within 3 feet of initial readings, rising by as much as 4 to 8 feet in Borings 304, 345 and 505 and dropping 4 to 8 feet in Borings 301, 327, 332, 339, 410 and 411. Borings 315, 321, 322, 325, 331, 346, 405 and 406 were “dry” both during and following completion of drilling operations.

Analysis and Preliminary Recommendations

The Concept Site Plan provided to TSC (dated October 29, 2024) shows nine (9) 2-story data centers having building footprints ranging from 152,000 to 233,000 sf. Equipment/ generator yards are planned along one of the long sides of each data center building. While foundation loads were not available at the time this report was prepared, based on similar data center projects it is estimated that column and wall loads (DL + LL) may reach up to about 2000 kips and 30 kips/ft, respectively. The slab-on-grade of the buildings typically have a design load on the order of 500 psf.

A relatively large electrical substation is shown in the east-central area of the site (±50 acres). The most common types of structures to be found in the substations include dead-end structures, static poles and bus supports/equipment stands. These will be variable in size as well as weight and in many cases will be subjected to relatively high lateral loads. However, as previously mentioned the proposed substation site is excluded from the subject data center development.

(1) 2-Story Data Center Foundations

As previously discussed, heavy column and wall loads of up to about 2000 kips and 30 kips/ft are anticipated for the 2 story data centers. While shallow footing foundations may be an option, this is to typically depend on associated settlements which we estimate to exceed 2 inches for this site based on the soil conditions revealed by the borings. It is therefore recommended that the 2-story data centers be supported on deep foundations.

Belled drilled piers (“caissons”) are typically the most economical deep foundation type used in this area. However, they are not recommended for this project due to the presence of very moist to wet (saturated) intermediate and granular layers at variable depths in most of the borings, which would significantly complicate caisson construction (especially bellings operations). Based on the subsurface conditions revealed by the borings and anticipated foundation loads, augered cast-in-place (ACIP) piles and steel H-piles are the recommended deep foundation types for the support of 2-story data center buildings. Although the bottom of pile caps (or top of piles) are required to estimate pile capacities, the following are preliminary design capacities for 18" and 24" diameter ACIP piles and steel HP 14x89 piles extended to bedrock and using the soil and rock stratigraphy for the deeper borings (Nos. 501 - 510). The ACIP and H-piles are briefly discussed separately below.

ACIP Piles

Design capacities of 220 and 320 kips are preliminary recommended for 18" and 24" diameter ACIP piles, respectively, assuming that they are extended to refusal on the top of bedrock. It is estimated that piles will have to be extended at least 1 foot into sound Shale bedrock to obtain the recommended allowable capacities.

There are a number of risks associated with the installation of ACIP piles since little of the operation can be seen. It is important that an adequate “head” of grout be provided at all times, a continuous flow of grout be provided to the auger, and that during the auger extraction, rotation and grout pumping not be interrupted. Interruption of any of these activities can cause discontinuities in the pile. We recommend that ACIP piles be installed by a Contractor having a minimum of five (5) years of experience in the installation of this type of foundation. The minimum distance between the previous day partially cured ACIP pile and a new one is 25 feet to avoid ACIP shaft disturbance due to vibration.

It is recommended that the ACIP piles be reinforced with at least one (1) #8 rebar placed down the middle of the pile and extended its entire length. The reinforcement bar should be installed while the grout is still fluid, thereby providing a check for major discontinuities in the grout column. It is also recommended that the Contractor be required to place a minimum of 115 percent of the theoretical volume of grout required in each 5-foot segment of pile. With regard to spacing, it is recommended that the ACIP piles be installed no closer than 3.0 diameters center to center. Compressive stresses in the piles should not exceed $0.3 \times f'_c$ of the pile grout (per IBC guidelines), with the pile design engineer to determine additional strength and reinforcing requirements.

Settlements of ACIP pile foundations extended to bedrock are not anticipated to exceed about $\frac{1}{2}$ ". Pile capacity will have to be verified for ACIP piles by performing load tests (1 minimum for each pile diameter and capacity utilized). The load test(s) should be in accordance with ASTM D1143 and meet IBC evaluation methods. Alternatively, pile capacity may be verified by means of Osterberg cell testing.

Steel H-Piles

Based on the soil stratigraphy revealed by the borings, driven steel H-piles may alternatively be considered for structure support. The following table summarizes the anticipated pile toe elevations for an allowable pile capacity of 220 kips for a typical H-pile section. They are based on the IDOT static

pile capacity method and utilize the soil, rock and groundwater conditions revealed by the borings where bedrock was verified by rock coring (Borings 501, 506 and 509).

Boring No.	Ground Surface Elevation	HP 14x89 Units	Approximate Pile Toe Elevation
		Allowable Pile Capacity (Kips)	
501	566.5	220	526
506	571.0	220	528
509	562.0	220	530

The above estimated pile toe elevations should serve as a guideline, actual pile lengths/elevations to be verified by the use of appropriate driving criteria. Probe piles should initially be driven at various locations around the proposed structures to aid in ordering piles for production driving. Actual pile lengths should be determined during installation based on resistance to driving criteria, with minimum toe elevations to also likely be set on the basis of the test piles.

Based on the estimated tip elevations, the piles will have to penetrate several feet into very dense/hard native soils as well as a couple feet into Shale bedrock which have to be taken into account by the pile driving contractor. In this regard, a large hammer will be required in order to attain this penetration. In any event, the driving equipment should be selected so that it can drive the piles to the required capacity at an adequate final penetration resistance and without inducing pile stresses that exceed allowable values.

Settlements of H-pile foundations extended to bedrock are not anticipated to exceed about ½". Pile capacity should also be verified by performing pile load testing on at least one of the probe piles meeting proposed driving criteria. The load test(s) should be in accordance with ASTM D1143 or ASTM D4945 and meet IBC evaluation methods. The load test(s) should be performed to a total load of least two times the design load. With regard to spacing, it is recommended that the piles be installed no closer than 3.0 diameters center to center.

(2) Mass-Grading

It is recommended that building, equipment yard and pavement areas be cleared of vegetation prior to mass-grading. Stripping operations should also include the removal of all surficial topsoil, root zone materials and other decomposable plant matter. The building, equipment yard and pavement areas should then be proof-rolled, in order to detect the presence of unsuitable soil types in the upper subgrade. The proof-roll should be performed using a loaded dump truck or other approved piece of heavy rubber-tired construction equipment. All soft or unstable materials determined by proof-rolling should be reworked and recompacted or, if that does not improve subgrade stability, removed and replaced.

The traffic of heavy construction equipment frequently causes silt/clayey silt, clayey/silty sand and fine sand deposits encountered at shallow depths in over one-half of the borings to experience a short-term decrease in stability. The associated soft and spongy condition of exposed soils, which will be made worse by the shallow groundwater table also typically revealed, is commonly referred to as "pumping" in this area. It is recommended that heavy construction equipment be detoured around any areas where pumping conditions are found to be developing. Depending upon grading requirements and specific site conditions, solutions to a persistent pumping problem may include removal or the unstable soils, placement of a bridging lift of granular backfill, use of geotextile stabilization fabric or geogrid products in conjunction with the granular fill, construction of trench drains (to lower the groundwater table) or a combination thereof. Other developments in the area have used "cat and pan" equipment in lieu of "scrapers" to alleviate instability and pumping.

Marginal subgrade stability, represented by clay soil types having unconfined compressive strengths of 1.0 to 1.5 tsf and/or water contents exceeding 25 percent, was also encountered in some of the remaining borings. These materials may need to be reduced in moisture content and recompacted in order to provide a stable base. Lime stabilization can achieve similar results and has the advantage of allowing work to proceed under adverse weather conditions. In any event, the need for subgrade reworking or additional undercutting should be evaluated on the basis of proof-rolling.

New fill should consist of approved granular materials or inorganic silty clays of medium plasticity. It is recommended that compaction for building pad and pavement areas be to a minimum of 95 and 90 percent of maximum dry density, respectively, as determined by the Modified Proctor test (ASTM D 1557). The upper 2 feet of roadway subgrade is also often compacted to the 95 percent criterion, to create a more stable base for final proof-rolling. The fill should be placed in approximate 9 inch lifts loose measure for cohesive soils and up to 12 inches for granular materials, each lift to be compacted to the specified density prior to the placement of additional fill.

Moisture control is important in the compaction of most soil types, and it is recommended that the water content of new fill be within about 3 percentage points of optimum moisture as established by its laboratory compaction curve. If the soil is compacted too dry, it will have an apparent stability which will be lost if it later becomes saturated. If the soil is too wet, the Contractor will not be able to achieve proper compaction.

In regard to use of on-site borrow, shallow silty clay soils were often relatively moist - having water contents of between 22 and 34 percent. It is estimated their use as engineered fill will require that the in-situ moisture be reduced by 6 to 12+ percentage points. This reduction in moisture content is typically achieved by spreading the material in a single lift and aerating with a continuous discing operation. For obvious reasons it will work best in hot, dry and windy weather. Lime modification can also be used and has the advantage of working in less ideal weather conditions.

Clayey/silty sand, clayey silt and fine sand deposits encountered at relatively shallow depths in approximately half of the borings are considered moisture sensitive, i.e. can experience loss of stability when subjected to rainfall or groundwater seepage. They are also prone to instability under the traffic of heavy construction equipment. While none of these properties makes them unsuitable as engineered fill, they do point to difficulties in handling and compaction of them.

(3) Ground Supported Slabs

A modulus of subgrade reaction of 150 pounds per cubic inch (pci) may be used for concrete floor slab design. However, for sustained loads such as racking system leg loads, the subgrade modulus should be reduced to 100 pci or lower, dependent on the loading and loaded footprint. Use of these values assumes that new fill and uppermost soils are compacted to 95 percent Modified Proctor density as part of building pad preparation.

In connection with slab-on-grade construction, it is also recommended that a minimum 4 to 6-inch thick granular base be utilized for load distribution and as leveling course and capillary break. Base course materials should consist of gravel having a maximum size of about one inch and containing less than about 10 percent fines (passing No. 200 sieve). Typical base course materials include IDOT gradation CA-6 (well-graded sand and gravel mixture with fines) and CA-7 ($\frac{1}{4}$ to $\frac{3}{4}$ inch chips). The CA-7 material is considered to be free-draining, providing a superior capillary break. The CA-6 material should be compacted to 95 percent Modified Proctor density, CA-7 rolled to a dense and stable state.

Use of a vapor barrier beneath the floor slabs is generally not considered necessary in areas without floor coverings. In finished areas, the specifications and recommendations of the floor covering manufacturer(s) should be strictly followed.

The concrete slabs should be designed and jointed to minimize the effects of any slab movement and related cracking. In this regard, slab-on-grade construction and jointing should be in accordance with ACI 360-10 (Guide to Design of Slabs-on-Ground).

(4) Pavement Design and Construction

Pavement subgrade preparation may be in general accordance with previous recommendations for mass-grading, i.e. strip topsoil and root zone materials and proof-roll. It is anticipated that existing subgrade will in some areas have to be reduced in moisture content and recompacted, to be based on proof-rolling. Compaction to at least 90 percent Modified Proctor density is recommended in pavement areas. However, at least the upper 2 feet of pavement subgrade is usually compacted to 95 percent Modified Proctor density to create a more stable base for final proof-rolling and paving. If paving construction is performed when drying of surficial soils cannot be accomplished, lime modification or removal of unstable subgrade and replacement with 1 to 2 feet of coarse granular materials may be required in some areas.

Clayey/silty sand and clayey silt deposits were encountered at relatively shallow depths in many of the borings. These intermediate soil types are often classified as frost susceptible per IDOT guidelines on gradation and plasticity. In areas of high groundwater, they should ideally be removed and replaced to a depth of about 3 feet below top of pavement.

Pumping of silt and loamy soil types, as discussed under mass-grading, is typically more of a problem in pavement areas than for building pads. This condition is likely to require undercuts and the use of geotextile stabilization fabric or geogrid products and coarse aggregate backfill for a portion of pavement areas. Subgrade stability will also be affected by weather conditions at the time of paving.

It is recommended that a nominal California Bearing Ratio (CBR) value of 3.0 be used in the design of asphalt pavements. A modulus of subgrade reaction (k) of 150 pci may be used for rigid pavement design. Use of these values assume that any soft or unstable areas will be remediated, i.e. subgrade stabilized until passing a proof-roll.

Base course materials should conform to IDOT gradation specification CA-6 and be compacted to 95 percent Modified Proctor density or 100 percent of the Standard Proctor (ASTM D 698) maximum density value. Bituminous materials should conform to an approved current IDOT Superpave mix design (N30 or N50 typical for pavements with light traffic and N50 or N70 for pavements with heavy truck traffic), as well as Standard Specifications for Road and Bridge Construction, Sections 406 and 1032. They should be compacted to between 93 and 97 percent of their theoretical maximum density, as determined by the supplier.

Portland Cement Concrete (PCC) or heavy duty asphaltic concrete is recommended for pavements with heavy truck traffic and high traffic load areas such as garbage truck dumpster loading areas and aprons approaching parking areas. Standard Specifications for Road and Bridge Construction, Sections 353 and 420, should be followed.

(5) Detention Ponds

As previously mentioned, the Concept Site Plan provided shows several stormwater management facilities (detention ponds) which are mostly concentrated on the southern portion of the site. Grading information such as the proposed pond bottom elevations was not available at the time this preliminary report was prepared.

Borings 306, 308, 314, 321, 326, 329, 341, 406, 407, 410, 511 - 514 and 523 - 534 were drilled in the areas of the proposed detention ponds. Strata of cohesive, intermediate and granular soils predominated in the upper approximate 10 to 15 feet of these borings. Based on the field and laboratory test data, these materials are anticipated to be stable on the 3H:1V to 5H:1V slopes typically used for detention ponds in this area.

It should be noted, however, water retention will likely be difficult at about half of the above referenced borings due to the presence of clayey sand, silty sand and sand deposits in the upper 3 to 10 feet of them. If water retention is desired, it is recommended that these soils be removed from the side slopes and bottom of the pond excavation. The intermediate/granular soils should be replaced with cohesive materials for a distance of about 2.0 feet perpendicular to the cut. "Capping" of intermediate and granular soil layers will protect the side slopes from erosion as well as promote water retention.

Replacement materials should consist of clay soil types of medium to high plasticity, ideally containing less than 35 percent sand and gravel size particles. The majority of the cohesive deposits encountered by the borings meet these general requirements. The liner materials should be placed in approximate 10 inch lifts loose measure and compacted to at least 90 percent of maximum dry density as determined by the Modified Proctor test (ASTM D 1557). At the time of placement and compaction the clay fill should also be on the wet side of optimum moisture content, as determined by the laboratory compaction curve.

The silt/clayey silt, clayey/silty sand and fine sand deposits will be highly erodible where exposed on the sides of the basin excavations. Localized sloughing is also likely to occur when water levels rises and then drops after a heavy storm. For these reasons it is extremely important to quickly establish good groundcover or place a gravel protective layer on the slopes.

(6) Groundwater Management

Free groundwater was initially encountered between 3 and 13 feet below existing grade at over three-quarters of the boring locations. Wet (saturated) granular deposits were encountered within 6 feet of ground surface at about half of the borings. In a portion of these borings the wet granular layers consisted of relatively thin deposits which were interbedded within mostly clay and/or intermediate soils. However, in Borings 340, 341, 344, and 413 these layers were over 5 feet in thickness. While shallow groundwater in these areas likely represents a perched condition, it may still impact subgrade stability in pavement and building pad areas, as well as being a problem for deeper utility lines and detention pond excavations. If these layers are penetrated during foundation, utility trench construction or detention pond excavations, normal pumping procedures may not be able to keep up with the rate of groundwater inflow.

Closure

This preliminary report has been prepared using widely-spaced borings, a minimum number of deep borings and without the benefit of final building and grading plans. It is recommended that additional borings be performed when final site plans are available to fill in gaps in information. Also, the shear wave velocity of soils in the upper 100' should also be determined using the SeisOpt ReMi method, to determine the Site Class for seismic design in accordance with the International Building Code (IBC). In addition to water content determinations and unconfined compressive strength tests (as appropriate), labwork for data centers will typically include thermal resistivity testing as well as measurements of corrosivity including sulfate and chloride contents.

The analysis and preliminary recommendations submitted in this report are based upon the data obtained from the soil borings performed at the locations indicated on the Boring Location Plan. This report does not reflect any variations which may occur between these borings or elsewhere on the site, the nature and extent of which may not become evident until during the course of construction. If variations are then identified, recommendations contained in this report should be re-evaluated after performing on-site observations.

It has been a pleasure to assist you with this work. Please call if there are any questions or if we may be of further service.

Respectfully submitted,

TESTING SERVICE CORPORATION



Alfredo J. Bermudez
Senior Geotechnical Engineer
Registered Professional Engineer
Illinois No. 062-046608

AJB:MVM:ab
Enc.



Michael V. Machalinski, P.E.
Vice President

APPENDIX

GENERAL CONDITIONS

UNIFIED CLASSIFICATION CHART

LEGEND FOR BORING LOGS

BORING LOGS

BORING LOCATION PLAN



TESTING SERVICE CORPORATION

1. PARTIES AND SCOPE OF WORK: If Client is ordering the services on behalf of another, Client represents and warrants that Client is the duly authorized agent of said party for the purpose of ordering and directing said services, and in such case the term "Client" shall also include the principal for whom the services are being performed. Prices quoted and charged by TSC for its services are predicated on the conditions and the allocations of risks and obligations expressed in these General Conditions. Unless otherwise stated in writing, Client assumes sole responsibility for determining whether the quantity and the nature of the services ordered by Client are adequate and sufficient for Client's intended purpose. Unless otherwise expressly assumed in writing, TSC's services are provided exclusively for client. TSC shall have no duty or obligation other than those duties and obligations expressly set forth in this Agreement. TSC shall have no duty to any third party. Client shall communicate these General Conditions to each and every party to whom the Client transmits any report prepared by TSC. Ordering services from TSC shall constitute acceptance of TSC's proposal and these General Conditions.

2. SCHEDULING OF SERVICES: The services set forth in this Agreement will be accomplished in a timely and workmanlike manner. If TSC is required to delay any part of its services to accommodate the requests or requirements of Client, regulatory agencies, or third parties, or due to any cause beyond its reasonable control, Client agrees to pay such additional charges, if any, as may be applicable.

3. ACCESS TO SITE: TSC shall take reasonable measures and precautions to minimize damage to the site and any improvements located thereon as a result of its services or the use of its equipment; however, TSC has not included in its fee the cost of restoration of damage which may occur. If Client desires or requires TSC to restore the site to its former condition, TSC will, upon written request, perform such additional work as is necessary to do so and Client agrees to pay to TSC the cost thereof plus TSC's normal markup for overhead and profit.

4. CLIENT'S DUTY TO NOTIFY ENGINEER: Client represents and warrants that Client has advised TSC of any known or suspected hazardous materials, utility lines and underground structures at any site at which TSC is to perform services under this Agreement. Unless otherwise agreed in writing, TSC's responsibility with respect to underground utility locations is to contact the Illinois Joint Utility Locating Information for Excavators for the location of public, but not private, utilities.

5. DISCOVERY OF POLLUTANTS: TSC's services shall not include investigation for hazardous materials as defined by the Resource Conservation Recovery Act, 42 U.S.C. § 6901, et. seq., as amended ("RCRA") or by any state or Federal statute or regulation. In the event that hazardous materials are discovered and identified by TSC, TSC's sole duty shall be to notify Client.

6. MONITORING: If this Agreement includes testing construction materials or observing any aspect of construction of improvements, Client's construction personnel will verify that the pad is properly located and sized to meet Client's projected building loads. Client shall cause all tests and inspections of the site, materials and work to be timely and properly performed in accordance with the plans, specifications, contract documents, and TSC's recommendations. No claims for loss, damage or injury shall be brought against TSC unless all tests and inspections have been so performed and unless TSC's recommendations have been followed.

TSC's services shall not include determining or implementing the means, methods, techniques or procedures of work done by the contractor(s) being monitored or whose work is being tested. TSC's services shall not include the authority to accept or reject work or to in any manner supervise the work of any contractor. TSC's services or failure to

perform same shall not in any way operate or excuse any contractor from the performance of its work in accordance with its contract. "Contractor" as used herein shall include subcontractors, suppliers, architects, engineers and construction managers.

Information obtained from borings, observations and analyses of sample materials shall be reported in formats considered appropriate by TSC unless directed otherwise by Client. Such information is considered evidence, but any inference or conclusion based thereon is, necessarily, an opinion also based on engineering judgment and shall not be construed as a representation of fact. Subsurface conditions may not be uniform throughout an entire site and ground water levels may fluctuate due to climatic and other variations. Construction materials may vary from the samples taken. Unless otherwise agreed in writing, the procedures employed by TSC are not designed to detect intentional concealment or misrepresentation of facts by others.

7. DOCUMENTS AND SAMPLES: Client is granted an exclusive license to use findings and reports prepared and issued by TSC and any sub-consultants pursuant to this Agreement for the purpose set forth in TSC's proposal provided that TSC has received payment in full for its services. TSC and, if applicable, its sub-consultant, retain all copyright and ownership interests in the reports, boring logs, maps, field data, field notes, laboratory test data and similar documents, and the ownership and freedom to use all data generated by it for any purpose. Unless otherwise agreed in writing, test specimens or samples will be disposed immediately upon completion of the test. All drilling samples or specimens will be disposed sixty (60) days after submission of TSC's report.

8. TERMINATION: TSC's obligation to provide services may be terminated by either party upon (7) seven days prior written notice. In the event of termination of TSC's services, TSC shall be compensated by Client for all services performed up to and including the termination date, including reimbursable expenses. The terms and conditions of these General Conditions shall survive the termination of TSC's obligation to provide services.

9. PAYMENT: Client shall be invoiced periodically for services performed. Client agrees to pay each invoice within thirty (30) days of its receipt. Client further agrees to pay interest on all amounts invoiced and not paid or objected to in writing for valid cause within sixty (60) days at the rate of twelve (12%) per annum (or the maximum interest rate permitted by applicable law, whichever is the lesser) until paid and TSC's costs of collection of such accounts, including court costs and reasonable attorney's fees.

10. WARRANTY: TSC's professional services will be performed, its findings obtained and its reports prepared in accordance with these General Conditions and with generally accepted principles and practices. In performing its professional services, TSC will use that degree of care and skill ordinarily exercised under similar circumstances by members of its profession. In performing physical work in pursuit of its professional services, TSC will use that degree of care and skill ordinarily used under similar circumstances. This warranty is in lieu of all other warranties or representations, either express or implied. Statements made in TSC reports are opinions based upon engineering judgment and are not to be construed as representations of fact.

Should TSC or any of its employees be found to have been negligent in performing professional services or to have made and breached any express or implied warranty, representation or contract, Client, all parties claiming through Client and all parties claiming to have in any way relied upon TSC's services or work agree that the maximum aggregate amount of damages for which TSC, its officers, employees and agents shall be liable is limited to \$50,000 or the total amount of the fee paid to TSC for its services performed with respect to the project, whichever amount is greater.

In the event Client is unwilling or unable to limit the damages for which TSC may be liable in accordance with the provisions set forth in the preceding paragraph, upon written request of Client received within five days of Client's acceptance of TSC's proposal together with payment of an additional fee in the amount of 5% of TSC's estimated cost for its services (to be adjusted to 5% of the amount actually billed by TSC for its services on the project at time of completion), the limit on damages shall be increased to \$500,000 or the amount of TSC's fee, whichever is the greater. This charge is not to be construed as being a charge for insurance of any type, but is increased consideration for the exposure to an award of greater damages.

11. INDEMNITY: Subject to the provisions set forth herein, TSC and Client hereby agree to indemnify and hold harmless each other and their respective shareholders, directors, officers, partners, employees, agents, subsidiaries and division (and each of their heirs, successors, and assigns) from any and all claims, demands, liabilities, suits, causes of action, judgments, costs and expenses, including reasonable attorneys' fees, arising, or allegedly arising, from personal injury, including death, property damage, including loss of use thereof, due in any manner to the negligence of either of them or their agents or employees or independent contractors. In the event both TSC and Client are found to be negligent or at fault, then any liability shall be apportioned between them pursuant to their pro rata share of negligence or fault. TSC and Client further agree that their liability to any third party shall, to the extent permitted by law, be several and not joint. The liability of TSC under this provision shall not exceed the policy limits of insurance carried by TSC. Neither TSC nor Client shall be bound under this indemnity agreement to liability determined in a proceeding in which it did not participate represented by its own independent counsel. The indemnities provided hereunder shall not terminate upon the termination or expiration of this Agreement, but may be modified to the extent of any waiver of subrogation agreed to by TSC and paid for by Client.

12. SUBPOENAS: TSC's employees shall not be retained as expert witnesses except by separate, written agreement. Client agrees to pay TSC pursuant to TSC's then current fee schedule for any TSC employee(s) subpoenaed by any party as an occurrence witness as a result of TSC's services.

13. OTHER AGREEMENTS: TSC shall not be bound by any provision or agreement (i) requiring or providing for arbitration of disputes or controversies arising out of this Agreement or its performance, (ii) wherein TSC waives any rights to a mechanics lien or surety bond claim; (iii) that conditions TSC's right to receive payment for its services upon payment to Client by any third party or (iv) that requires TSC to indemnify any party beyond its own negligence. These General Conditions are notice, where required, that TSC shall file a lien whenever necessary to collect past due amounts. This Agreement contains the entire understanding between the parties. Unless expressly accepted by TSC in writing prior to delivery of TSC's services, Client shall not add any conditions or impose conditions which are in conflict with those contained herein, and no such additional or conflicting terms shall be binding upon TSC. The unenforceability or invalidity of any provision or provisions shall not render any other provision or provisions unenforceable or invalid. This Agreement shall be construed and enforced in accordance with the laws of the State of Illinois. In the event of a dispute arising out of or relating to the performance of this Agreement, the breach thereof or TSC's services, the parties agree to try in good faith to settle the dispute by mediation under the Construction Industry Mediation Rules of the American Arbitration Association as a condition precedent to filing any demand for arbitration, or any petition or complaint with any court. Paragraph headings are for convenience only and shall not be construed as limiting the meaning of the provisions contained in these General Conditions.

Testing Service Corporation

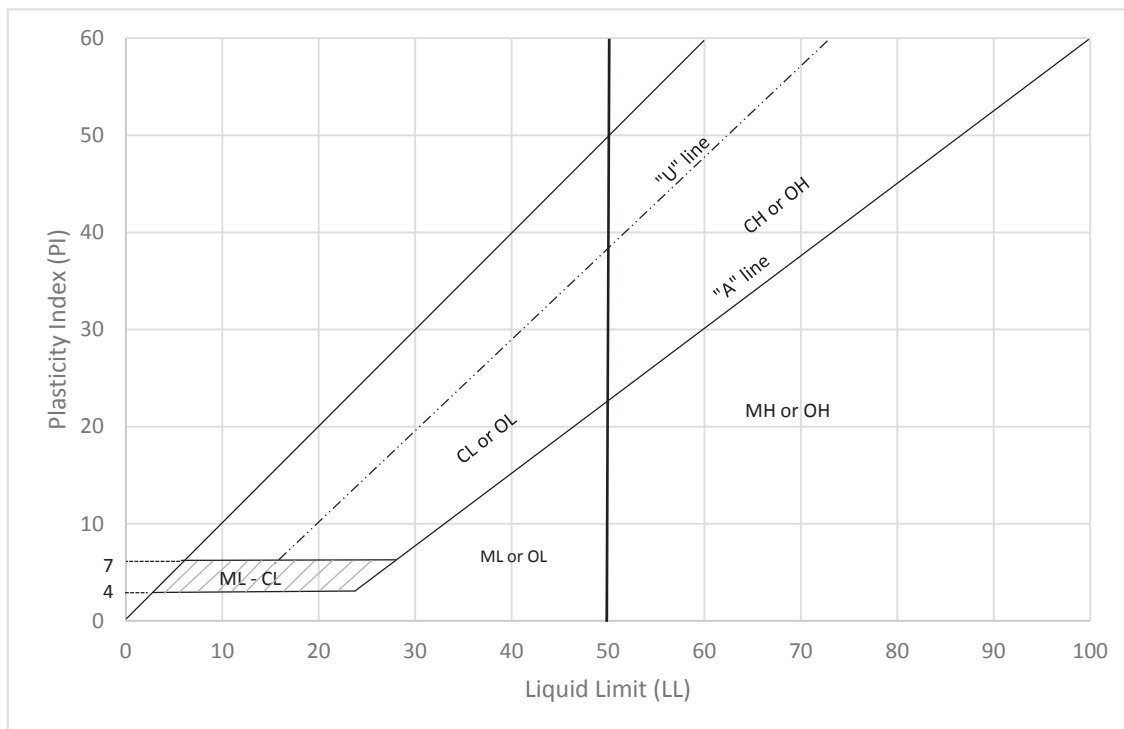
Unified Classification Chart



CRITERIA FOR ASSIGNING GROUP SYMBOLS AND GROUP NAMES USING LABORATORY TEST °				SOIL CLASSIFICATION		
				Group Symbol	GROUP NAME ^b	
COARSE - GRAINED SOILS more than 50% retained on No. 200 sieve	GRAVELS More than 50% of coarse fraction retained on No. 4 sieve	CLEAN GRAVELS less than 5% fines ^c	$C_u \geq 4$ and $1 \leq C_c \leq 3$ °	GW	Well-graded gravel ^f	
			$C_u < 4$ and/or $1 > C_c > 3$ °	GP	Poorly-graded gravel ^f	
	GRAVELS WITH FINES more than 12% fines ^c	Fines classify as ML or MH	GM	Silty gravel ^{f, g, h}		
		Fines classify as CL or CH	GC	Clayey gravel ^{f, g, h}		
	SANDS 50% or more of coarse fraction passes No. 4 sieve	CLEAN SANDS less than 5% fines ^d	$C_u \geq 6$ and $1 \leq C_c \leq 3$ °	SW	Well-graded sand ⁱ	
			$C_u < 6$ and/or $1 > C_c > 3$ °	SP	Poorly-graded sand ⁱ	
	SANDS WITH FINES more than 12% fines ^d	Fines classify as ML or MH	SM	Silty sand ^{g, h, f}		
		Fines classify as CL or CH	SC	Clayey sand ^{g, h, f}		
FINE - GRAINED SOILS 50% or more passed the No. 200 sieve	SILTS & CLAYS Liquid limit less than 50%	Inorganic	PI > 7 or plots on or above "A" line j	CL	Lean clay ^{k, l, m}	
			PI < 4 or plots below "A" line j	ML	Silt ^{k, l, m}	
		Organic	$\frac{\text{Liquid limit} - \text{oven dried}}{\text{Liquid limit} - \text{not dried}} < 0.75$	OL	Organic clay ^{k, l, m, n} Organic silt ^{k, l, m, o}	
	SILTS & CLAYS Liquid limit 50% or more	Inorganic	PI plots on or above "A" line	CH	Fat clay ^{k, l, m}	
			PI plots below "A" line	MH	Elastic silt ^{k, l, m}	
		Organic	$\frac{\text{Liquid limit} - \text{oven dried}}{\text{Liquid limit} - \text{not dried}} < 0.75$	OH	Organic clay ^{k, l, m, p} Organic silt ^{k, l, m, q}	
	Highly organic soils		Primarily organic matter, dark in color, and organic odor		PT	Peat

- a. Based on the material passing the 3-inch (75-mm) sieve.
- b. If field sample contained cobbles and/or boulders, add "with cobbles and/or boulders" to group name
- c. Gravels with 5 to 12% fines required dual symbols
GW-GM well graded gravel with silt
GW-GC well graded gravel with clay
GP-GM poorly graded gravel with silt
GP-GC poorly graded gravel with clay
- d. Sands with 5 to 12% fines require dual symbols
SW-SM well graded sand with silt
SW-SC well graded sand with clay
SP-SM poorly graded sand with silt
SP-SC poorly graded sand with clay
- e. $C_u = D_{60}/D_{10}$ $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$

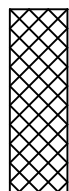
- f. If soils contains $\geq 15\%$ sand, add "with sand" to group name.
- g. If fines classify as CL-ML, use dual symbol GC-GM, SC-SM
- h. If fines are organic, add "with organic fines" to group name
- i. If soils contains $\geq 15\%$ gravel, add "with gravel" to group name
- j. If Atterberg Limits plot in hatched area, soil is a CL – ML, silty clay
- k. If soils contains 15 to 29% plus No. 200, add "with sand" or "with gravel" whichever is predominant
- l. If soil contains $\geq 30\%$ plus No. 200, predominantly sand, add "sandy" to group name.
- m. If soils contains $\geq 30\%$ plus No. 200, predominantly gravel, add "gravelly" to group name
- n. PI ≥ 4 and plots on or above "A" line
- o. PI ≥ 4 and plots below "A" line
- p. PI plots on or above "A" line
- q. PI plots below "A" line





TESTING SERVICE CORPORATION

LEGEND FOR BORING LOGS



FILL



TOPSOIL



PEAT



GRAVEL



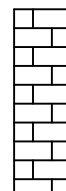
SAND



SILT



CLAY



DOLOMITE

SAMPLE TYPE

SS = Split Spoon
ST = Thin-Walled Tube
A = Auger
MC = Macro-Core (Geo Probe)

WATER LEVELS:

▼ While Drilling
▽ End of Boring
▼ 24 Hours

FIELD AND LABORATORY TEST DATA

N = Standard Penetration Resistance in Blows per Foot
WC = In-Situ Water Content
Qu = Unconfined Compressive Strength in Tons per Square Foot
* Pocket Penetrometer Measurement: Maximum Reading = 4.5 tsf
Y_{DRY} = Dry Unit Weight in Pounds per Cubic Foot

SOIL DESCRIPTION

MATERIAL

BOULDER
COBBLE
Coarse GRAVEL
Small GRAVEL
Coarse SAND
Medium SAND
Fine SAND
SILT and CLAY

PARTICLE SIZE RANGE

Over 12 inches
12 inches to 3 inches
3 inches to $\frac{3}{4}$ inch
 $\frac{3}{4}$ inch to No. 4 Sieve
No. 4 Sieve to No. 10 Sieve
No. 10 Sieve to No. 40 Sieve
No. 40 Sieve to No. 200 Sieve
Passing No. 200 Sieve

COHESIVE SOILS

<u>CONSISTENCY</u>	<u>Qu (tsf)</u>
Very Soft	Less than 0.3
Soft	0.3 to 0.6
Stiff	0.6 to 1.0
Tough	1.0 to 2.0
Very Tough	2.0 to 4.0
Hard	4.0 and over

COHESIONLESS SOILS

<u>RELATIVE DENSITY</u>	<u>N (bpf)</u>
Very Loose	0 - 4
Loose	4 - 10
Firm	10 - 30
Dense	30 - 50
Very Dense	50 and over

MODIFYING TERM

Trace
Little
Some

PERCENT BY WEIGHT

1 - 10
10 - 20
20 - 35

PROJECT **580-Acre Parcel, Reed & Carbon Hill Roads, Coal City, Illinois**CLIENT **Unicorn Investments, Chicago, Illinois**BORING **301**DATE STARTED **6-7-05**DATE COMPLETED **6-7-05**JOB **L-63,386**

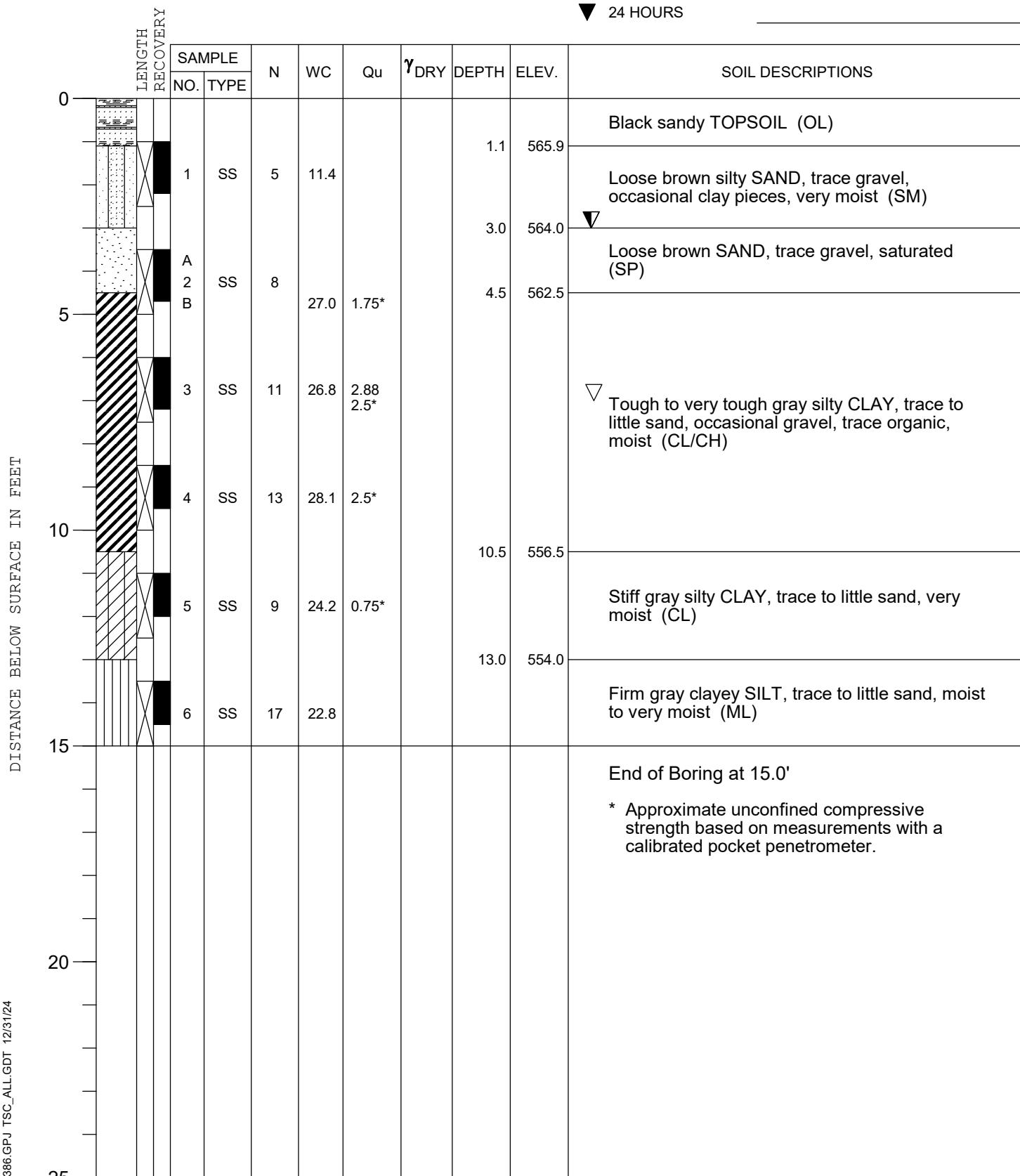
ELEVATIONS

GROUND SURFACE **567.0**END OF BORING **552.0**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **3.0'**▽ AT END OF BORING **7.0'**

▼ 24 HOURS



Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **201**

PROJECT **580-Acre Parcel, Reed & Carbon Hill Roads, Coal City, Illinois**CLIENT **Unicorn Investments, Chicago, Illinois**BORING **302**DATE STARTED **6-7-05**DATE COMPLETED **6-7-05**JOB **L-63,386**

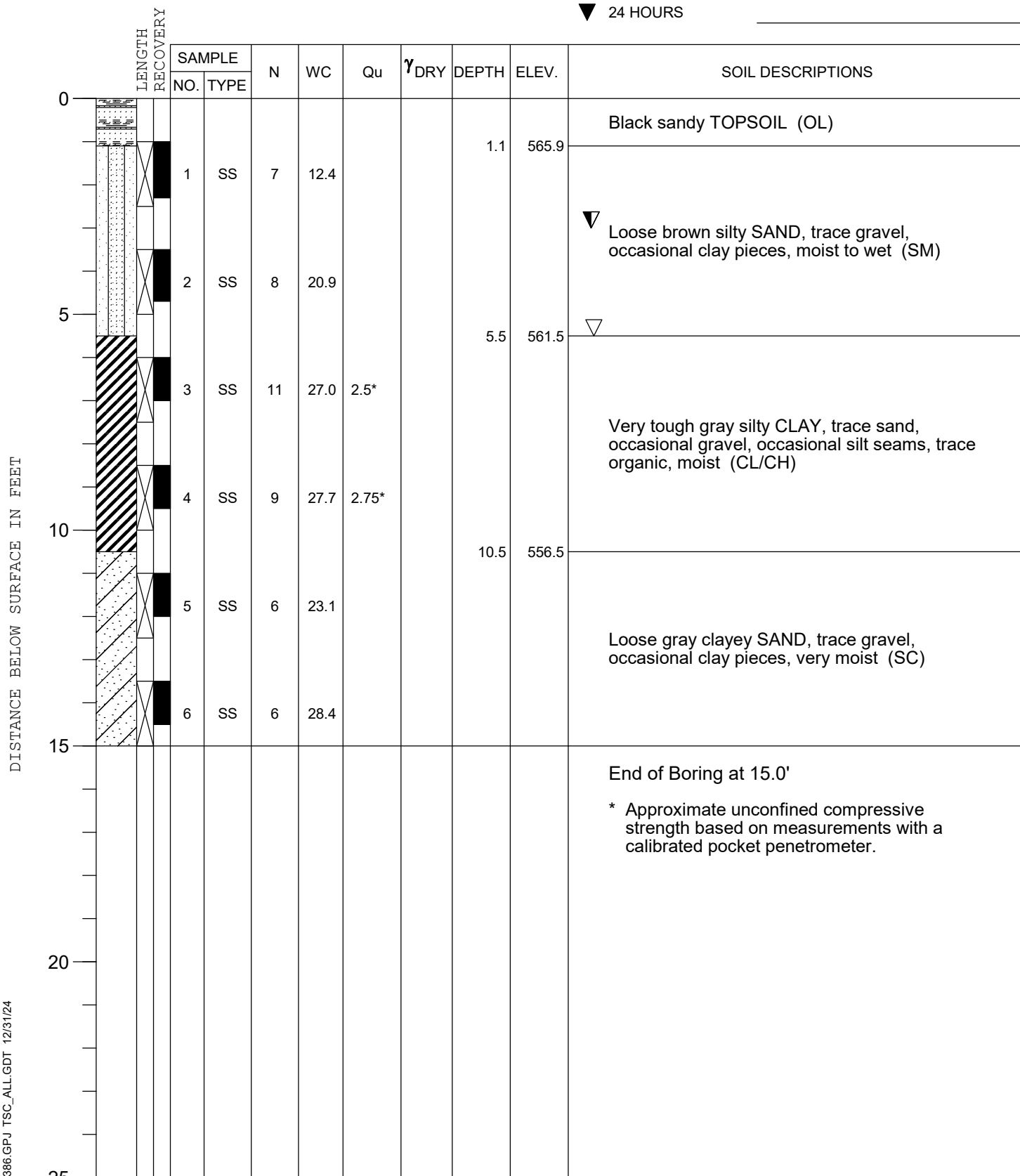
ELEVATIONS

GROUND SURFACE **567.0**END OF BORING **552.0**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **3.0'**▽ AT END OF BORING **5.5'**

▼ 24 HOURS



* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **201**

PROJECT **580-Acre Parcel, Reed & Carbon Hill Roads, Coal City, Illinois**CLIENT **Unicorn Investments, Chicago, Illinois**BORING **303**DATE STARTED **6-8-05**DATE COMPLETED **6-8-05**JOB **L-63,386**

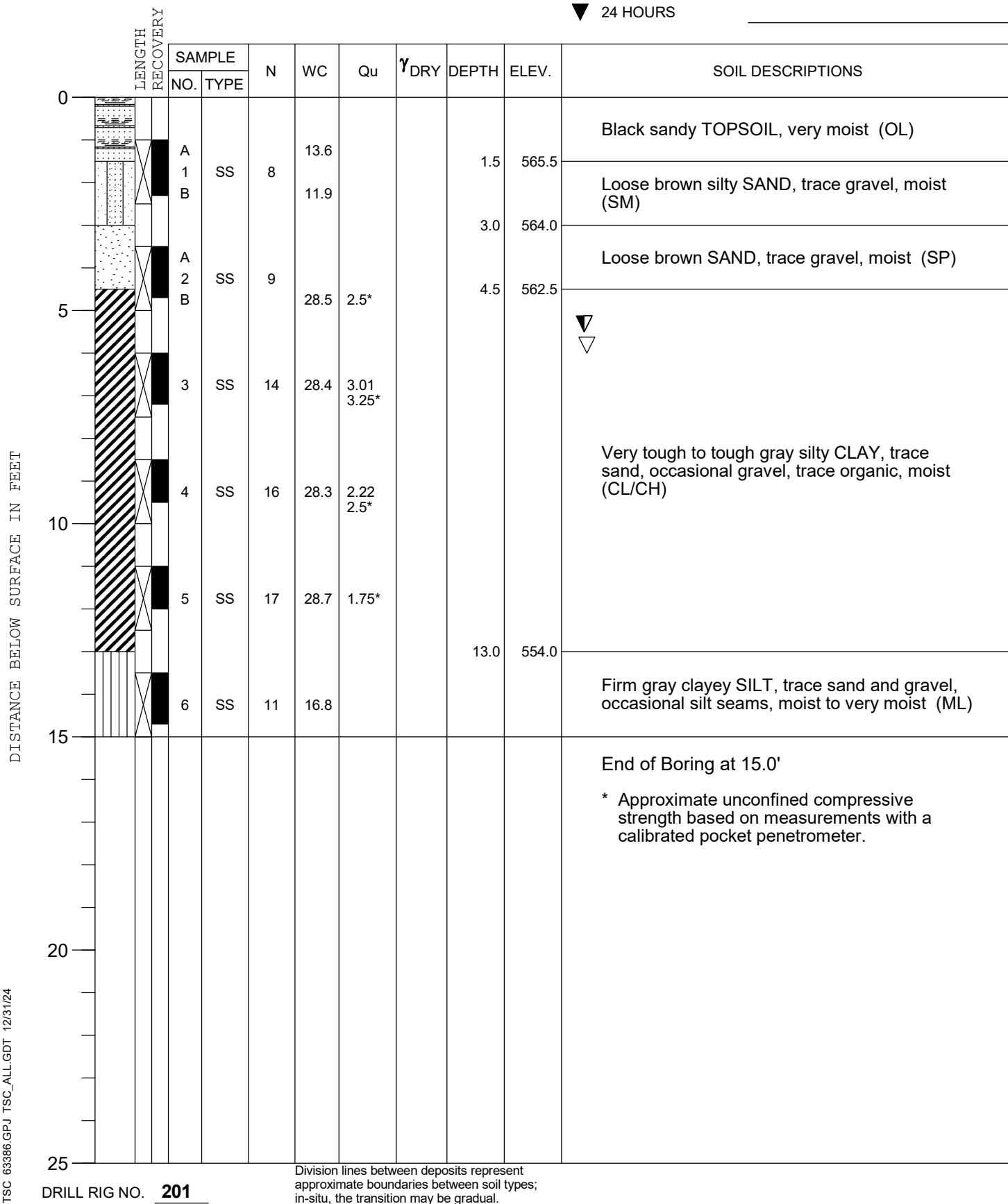
ELEVATIONS

GROUND SURFACE **567.0**END OF BORING **552.0**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **5.5'**▽ AT END OF BORING **6.0'**

▼ 24 HOURS

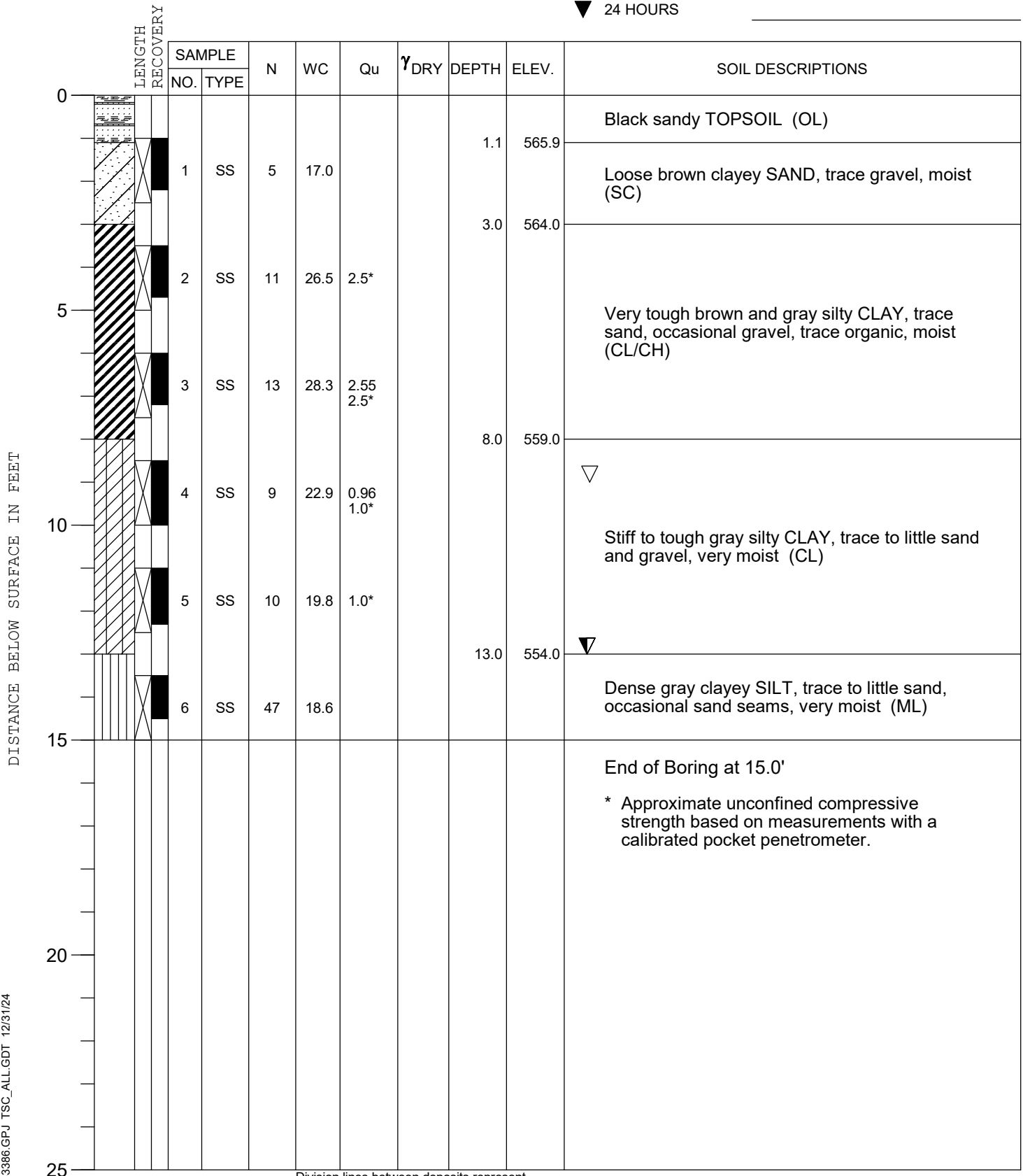




JOB **L-63,386**

WATER LEVEL OBSERVATIONS

▼ 24 HOURS

DRILL RIG NO. **201**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

TSC 63386.GPJ TSC_ALL.GDT 12/31/24

PROJECT **580-Acre Parcel, Reed & Carbon Hill Roads, Coal City, Illinois**CLIENT **Unicorn Investments, Chicago, Illinois**BORING **305**DATE STARTED **6-8-05**DATE COMPLETED **6-8-05**JOB **L-63,386**

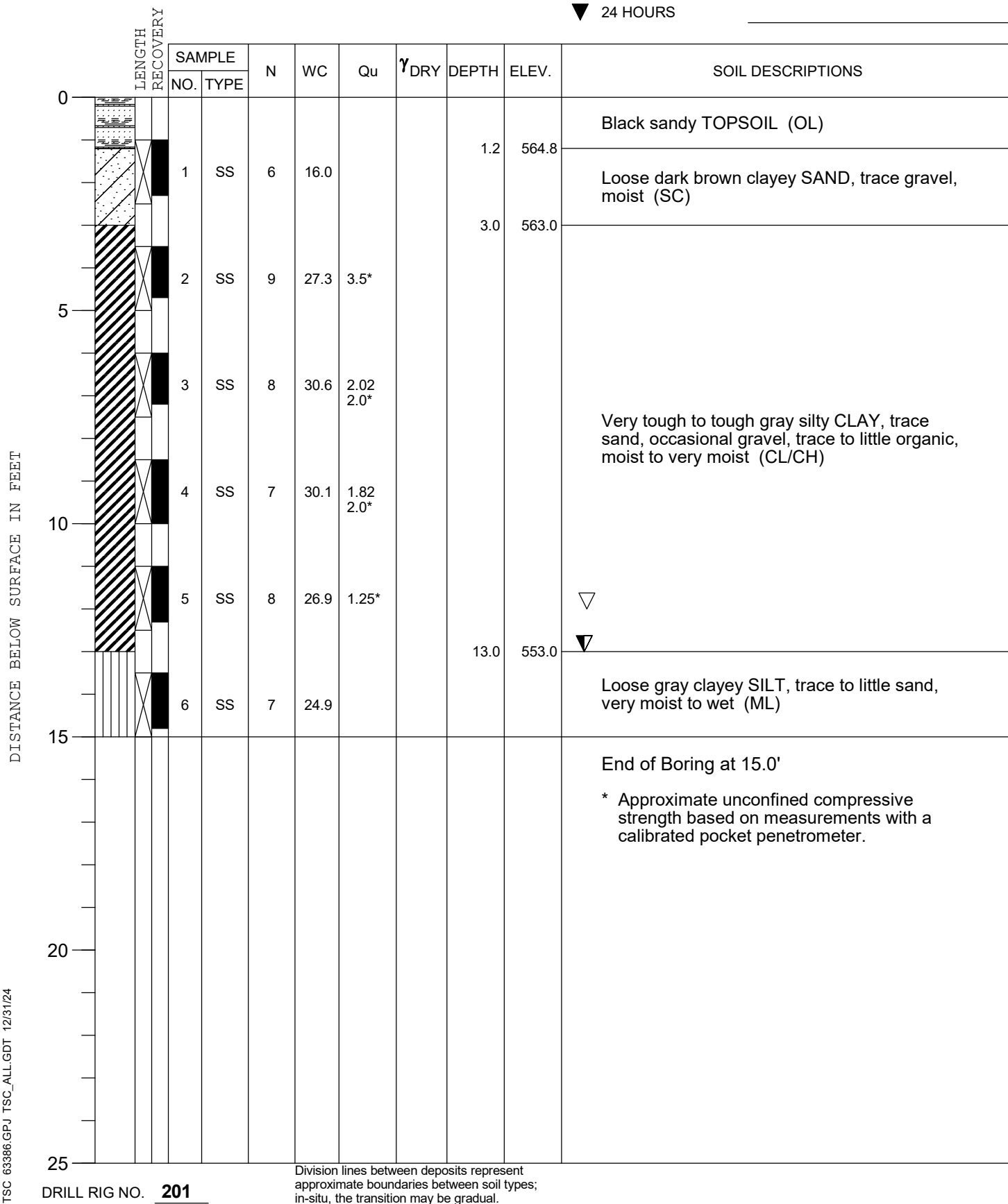
ELEVATIONS

GROUND SURFACE **566.0**END OF BORING **551.0**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **13.0 '**▽ AT END OF BORING **12.0 '**

▼ 24 HOURS





CLIENT **Unicorn Investments, Chicago, Illinois**

BORING	306	DATE STARTED	6-8-05	DATE COMPLETED	6-8-05	JOB	L-63,386
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ELEVATIONS

GROUND SURFACE **566.5**

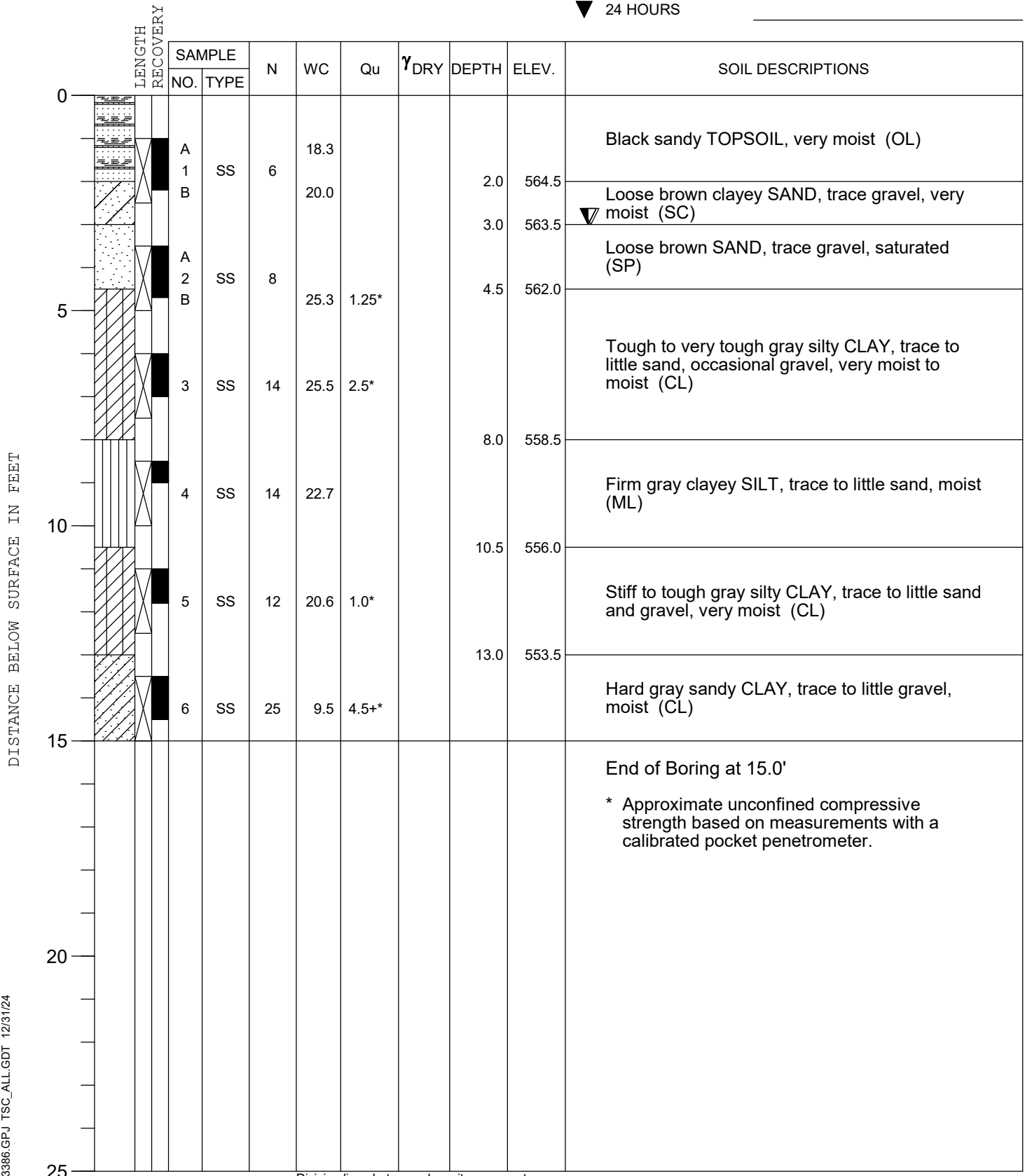
END OF BORING **551.5**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING 3.0'

▽ AT END OF BORING **3.0'**

▼ 24 HOURS



Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **201**

PROJECT **580-Acre Parcel, Reed & Carbon Hill Roads, Coal City, Illinois**CLIENT **Unicorn Investments, Chicago, Illinois**BORING **307**DATE STARTED **6-8-05**DATE COMPLETED **6-8-05**JOB **L-63,386**

ELEVATIONS

GROUND SURFACE **569.0**END OF BORING **554.0**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **5.5'**▽ AT END OF BORING **8.0'**

▼ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black sandy TOPSOIL (OL)
		1	SS	6				1.1	567.9	Loose brown SAND, trace gravel, moist (SP)
		2	SS	9	16.5	2.0*		3.0	566.0	Tough to very tough brown and gray silty CLAY, little sand and gravel, moist (CL)
5								5.5	563.5	▼
		3	SS	16	11.8					▽
		4	SS	20	13.8					Firm gray clayey SILT, trace sand and gravel, very moist to wet (ML)
10		5	SS	20	14.4					
		6	SS	39	8.8			13.0	556.0	Dense gray clayey SAND, trace gravel, very moist (SC)
15										End of Boring at 15.0'
										* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
20										
25										

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **201**



CLIENT **Unicorn Investments, Chicago, Illinois**

BORING	308	DATE STARTED	6-8-05	DATE COMPLETED	6-8-05	JOB	L-63,386
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ELEVATIONS

GROUND SURFACE **567.0**

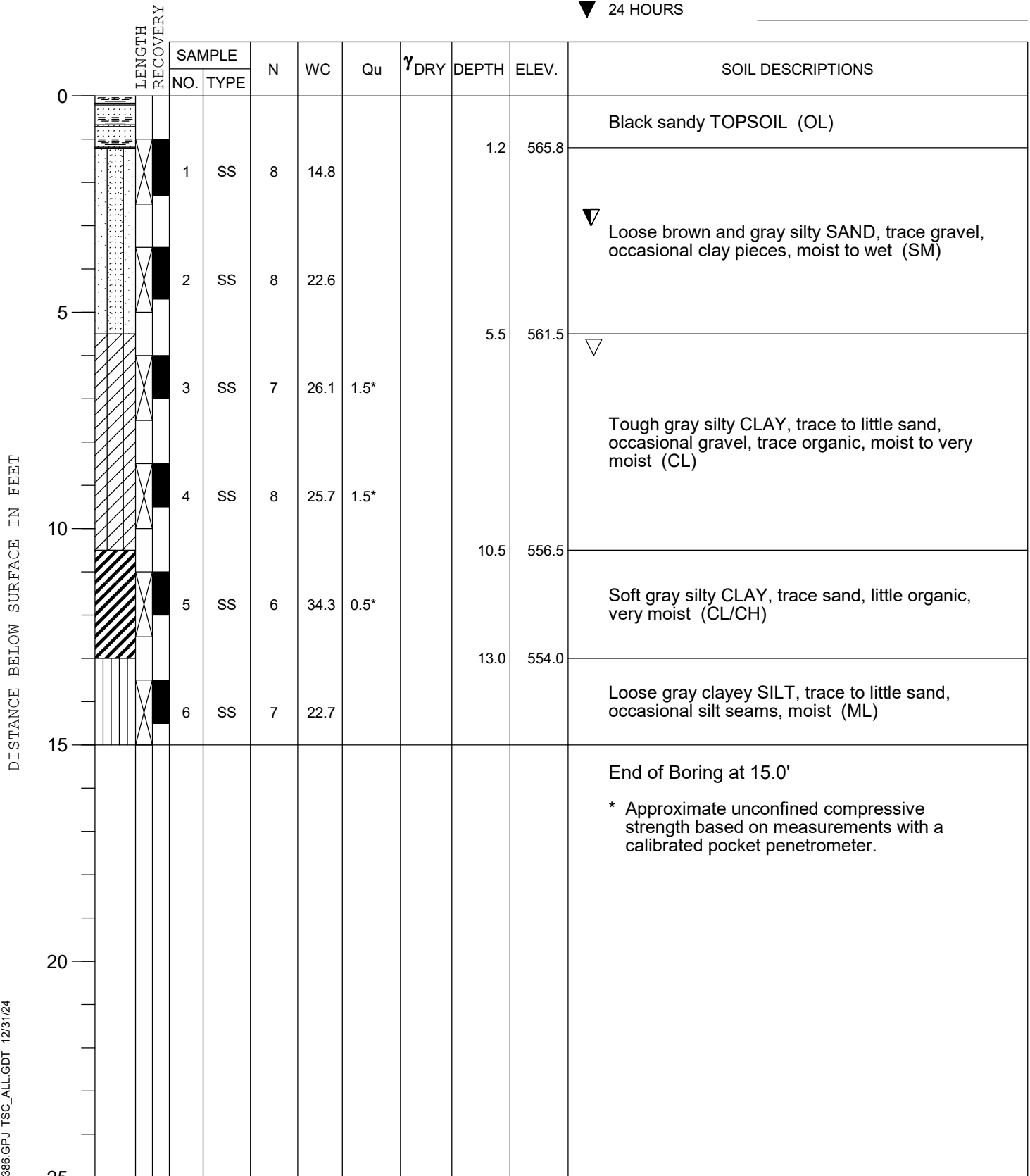
END OF BORING **552.0**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING 3.0'

▽ AT END OF BORING **6.0'**

▼ 24 HOURS



Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **201**

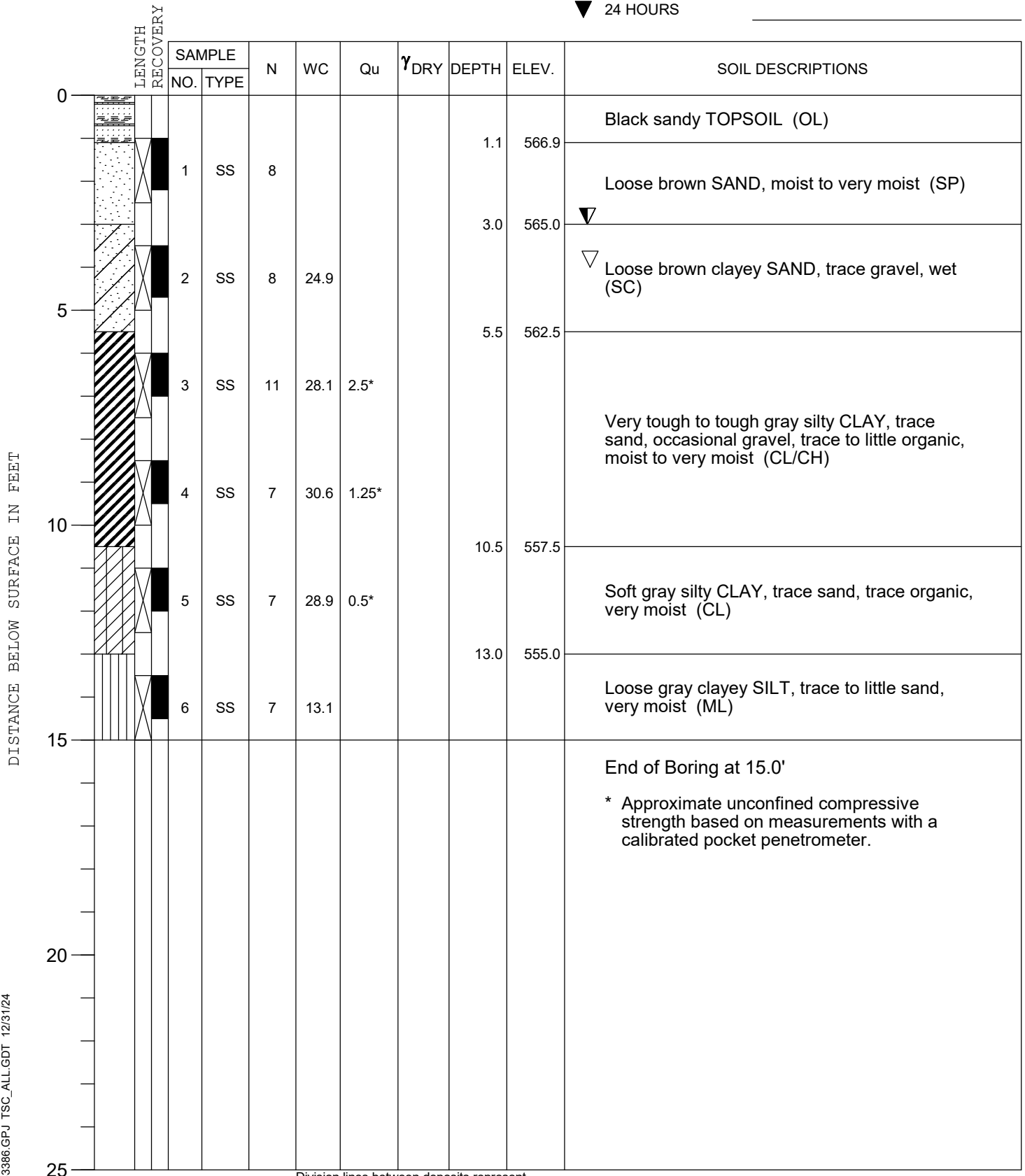
BORING **309** DATE STARTED **6-8-05** DATE COMPLETED **6-8-05** JOB **L-63,386**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **3.0'**

▽ AT END OF BORING **4.0'**

▼ 24 HOURS



Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **201**



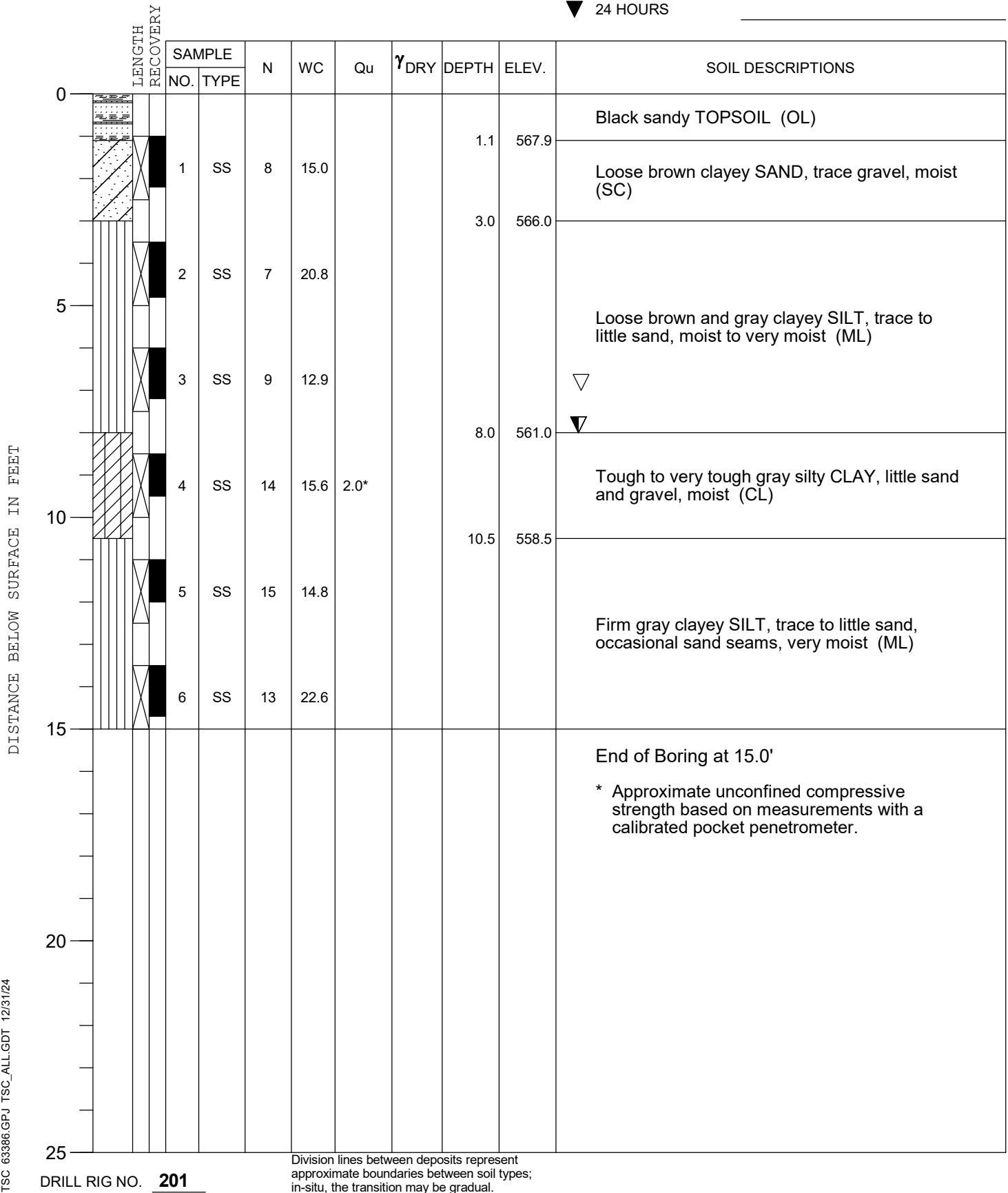
BORING **310** DATE STARTED **6-8-05** DATE COMPLETED **6-8-05** JOB **L-63,386**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING 8.0'

▽ AT END OF BORING **7.0'**

▼ 24 HOURS



PROJECT **580-Acre Parcel, Reed & Carbon Hill Roads, Coal City, Illinois**CLIENT **Unicorn Investments, Chicago, Illinois**BORING **311**DATE STARTED **6-8-05**DATE COMPLETED **6-8-05**JOB **L-63,386**

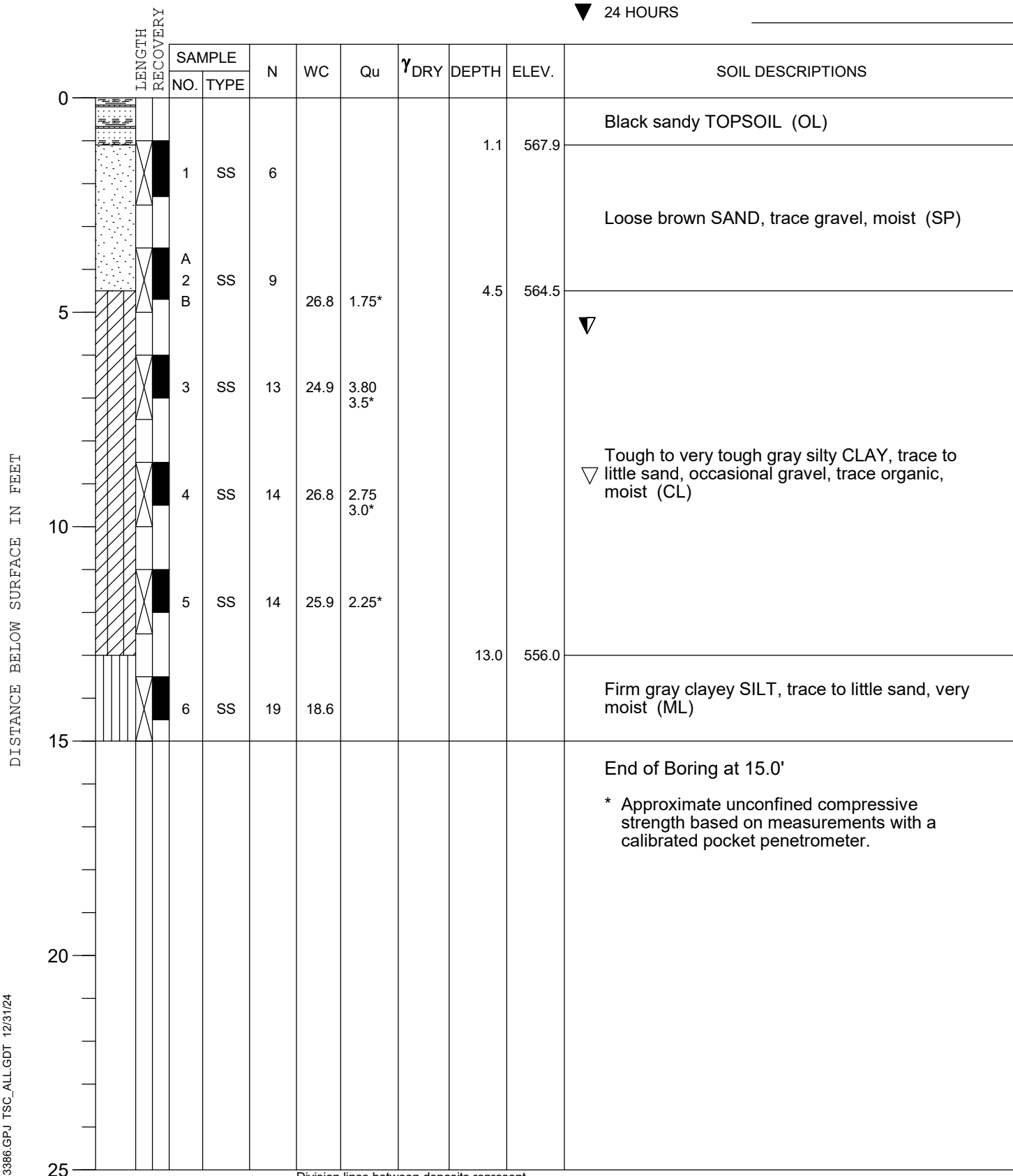
ELEVATIONS

GROUND SURFACE **569.0**END OF BORING **554.0**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **5.5'**▽ AT END OF BORING **9.0'**

▼ 24 HOURS



Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **201**

PROJECT **580-Acre Parcel, Reed & Carbon Hill Roads, Coal City, Illinois**CLIENT **Unicorn Investments, Chicago, Illinois**BORING **312**DATE STARTED **6-15-05**DATE COMPLETED **6-15-05**JOB **L-63,386**

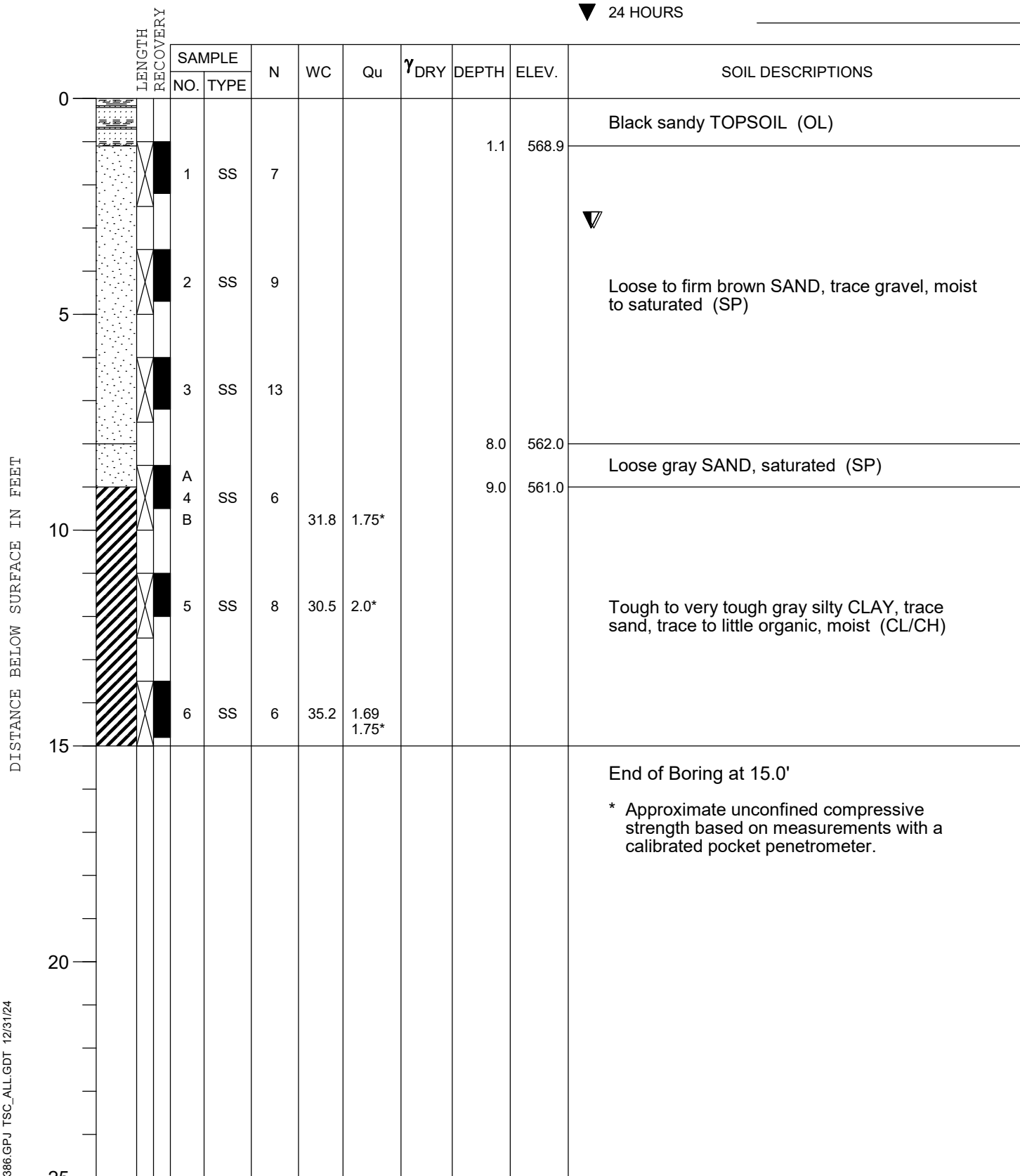
ELEVATIONS

GROUND SURFACE **570.0**END OF BORING **555.0**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **3.0'**▽ AT END OF BORING **3.0'**

▼ 24 HOURS



* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **201**

PROJECT **580-Acre Parcel, Reed & Carbon Hill Roads, Coal City, Illinois**CLIENT **Unicorn Investments, Chicago, Illinois**BORING **313**DATE STARTED **6-15-05**DATE COMPLETED **6-15-05**JOB **L-63,386**

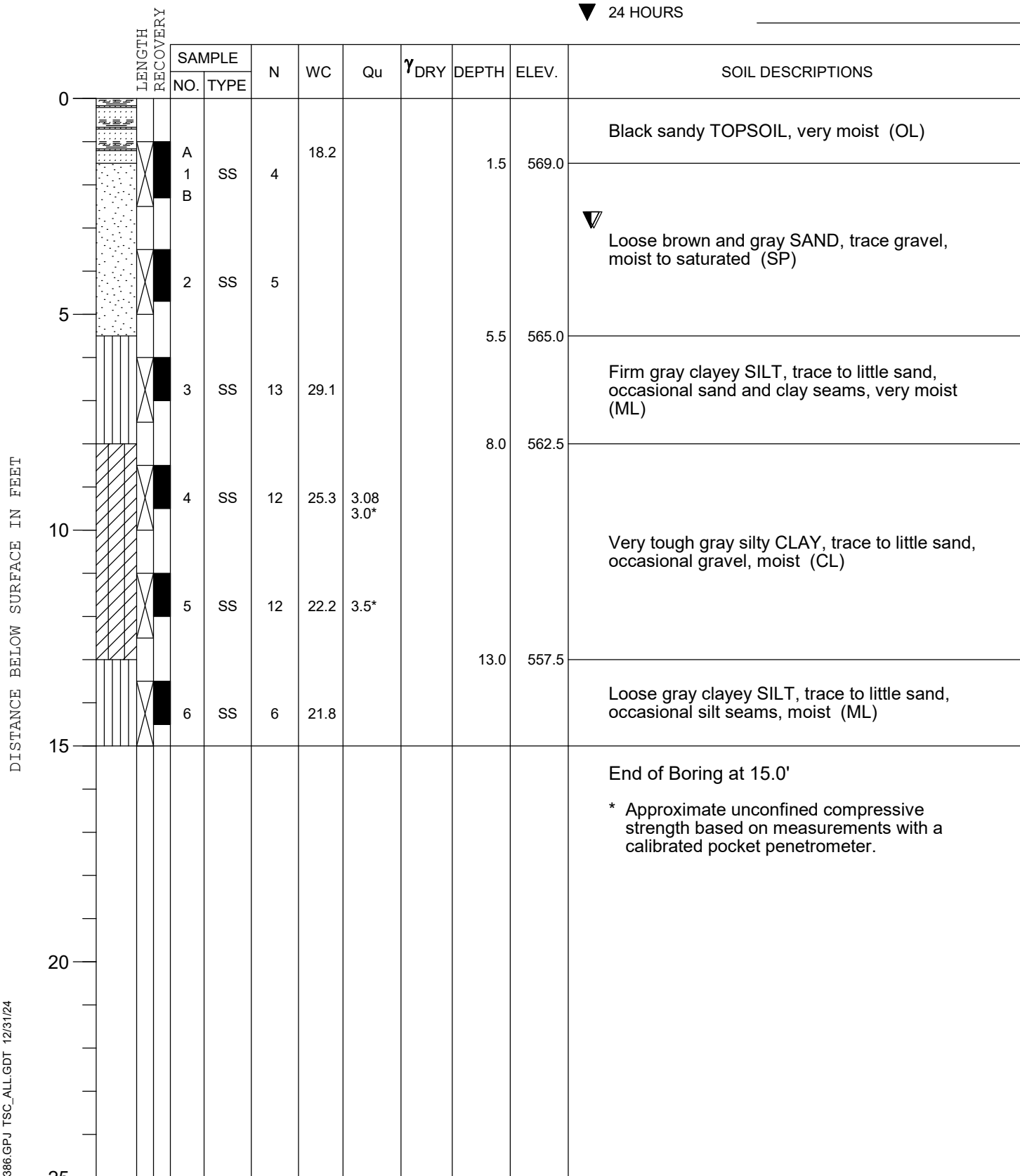
ELEVATIONS

GROUND SURFACE **570.5**END OF BORING **555.5**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **3.0'**▽ AT END OF BORING **3.0'**

▼ 24 HOURS



Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **201**

PROJECT **580-Acre Parcel, Reed & Carbon Hill Roads, Coal City, Illinois**CLIENT **Unicorn Investments, Chicago, Illinois**BORING **314**DATE STARTED **6-15-05**DATE COMPLETED **6-15-05**JOB **L-63,386**

ELEVATIONS

GROUND SURFACE **566.0**END OF BORING **551.0**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **10.5'**▽ AT END OF BORING **8.0'**

▼ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black sandy TOPSOIL (OL)
		1	SS	4	16.7			1.2	564.8	Loose brown clayey SAND, trace gravel, moist (SC)
		2	SS	9	28.0	3.60 3.5*		3.0	563.0	Very tough brown silty CLAY, trace sand, trace organic, moist (CL/CH)
5		3	SS	10	22.1	4.25*		5.5	560.5	Hard brown and gray silty CLAY, trace sand and gravel, moist (CL)
		4	SS	9	14.5	1.0*		8.0	558.0	Stiff to tough brown and gray silty CLAY, little sand and gravel, very moist (CL)
10		5	SS	38	10.5	4.5+*		10.5	555.5	Hard gray sandy CLAY, trace to little gravel, moist (CL)
		6	SS	43	10.4	4.5+*				End of Boring at 15.0'
15										* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
20										
25										

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **201**

PROJECT **580-Acre Parcel, Reed & Carbon Hill Roads, Coal City, Illinois**CLIENT **Unicorn Investments, Chicago, Illinois**BORING **315** DATE STARTED **6-15-05** DATE COMPLETED **6-15-05** JOB **L-63,386**

ELEVATIONS

GROUND SURFACE **568.0**END OF BORING **553.0**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **Dry**▼ AT END OF BORING **Dry**

▼ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black sandy TOPSOIL (OL)
		1	SS	3	18.9			1.2	566.8	Very loose brown clayey SAND, trace gravel, moist (SC)
		2	SS	8	26.0	2.75*		3.0	565.0	Very tough brown silty CLAY, trace to little sand, occasional gravel, trace organic, moist (CL)
5		3	SS	9	27.1	3.5*				
		4	SS	7	32.0	1.16 1.0*		8.0	560.0	Tough gray silty CLAY, trace sand, trace to little organic, very moist (CL/CH)
10		5	SS	8	19.7	1.0*		10.5	557.5	Stiff to tough gray silty CLAY, little sand and gravel, occasional silt seams, very moist (CL)
		A						13.0	555.0	Loose gray clayey SILT, trace to little sand, moist (ML)
		B						14.5	553.5	Very tough gray sandy CLAY, trace gravel, moist (CL)
15										End of Boring at 15.0'
										* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
20										
25										

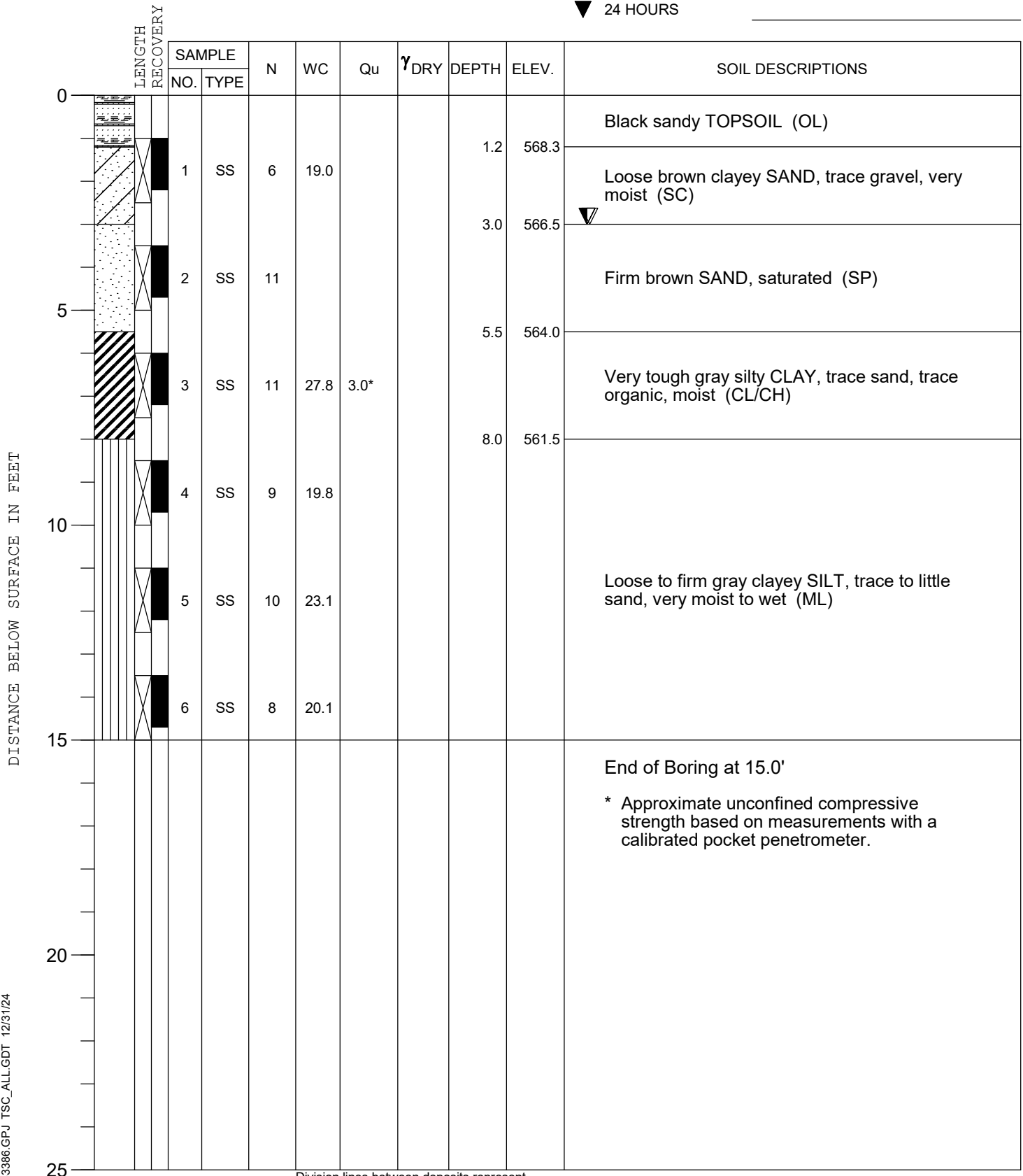
Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **201**



JOB **L-63,386**

▼ 24 HOURS



Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **201**



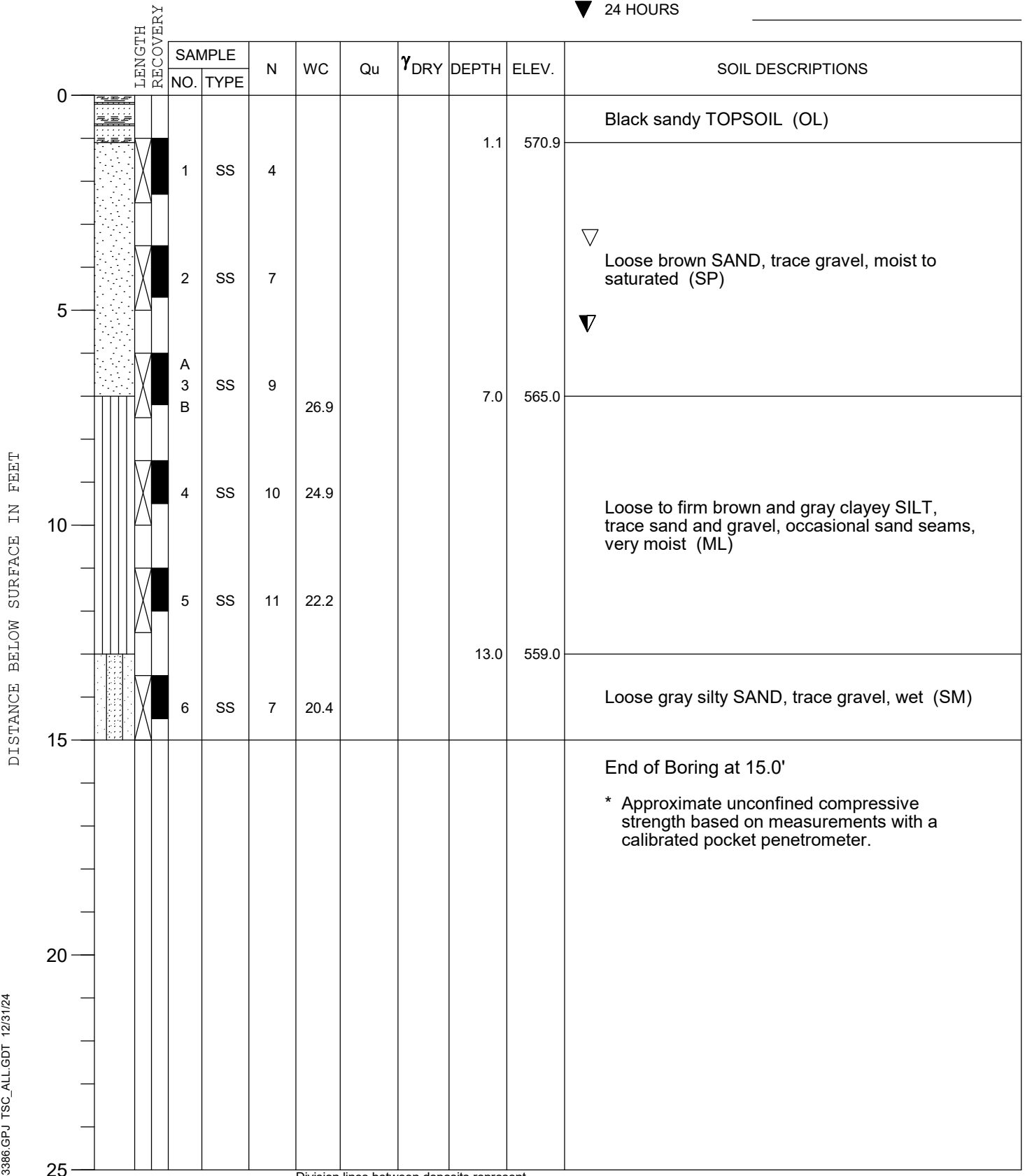
BORING **317** DATE STARTED **6-15-05** DATE COMPLETED **6-15-05** JOB **L-63,386**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **5.5'**

▽ AT END OF BORING **3.5'**

▼ 24 HOURS



Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **201**

PROJECT **580-Acre Parcel, Reed & Carbon Hill Roads, Coal City, Illinois**CLIENT **Unicorn Investments, Chicago, Illinois**BORING **318**DATE STARTED **6-15-05**DATE COMPLETED **6-15-05**JOB **L-63,386**

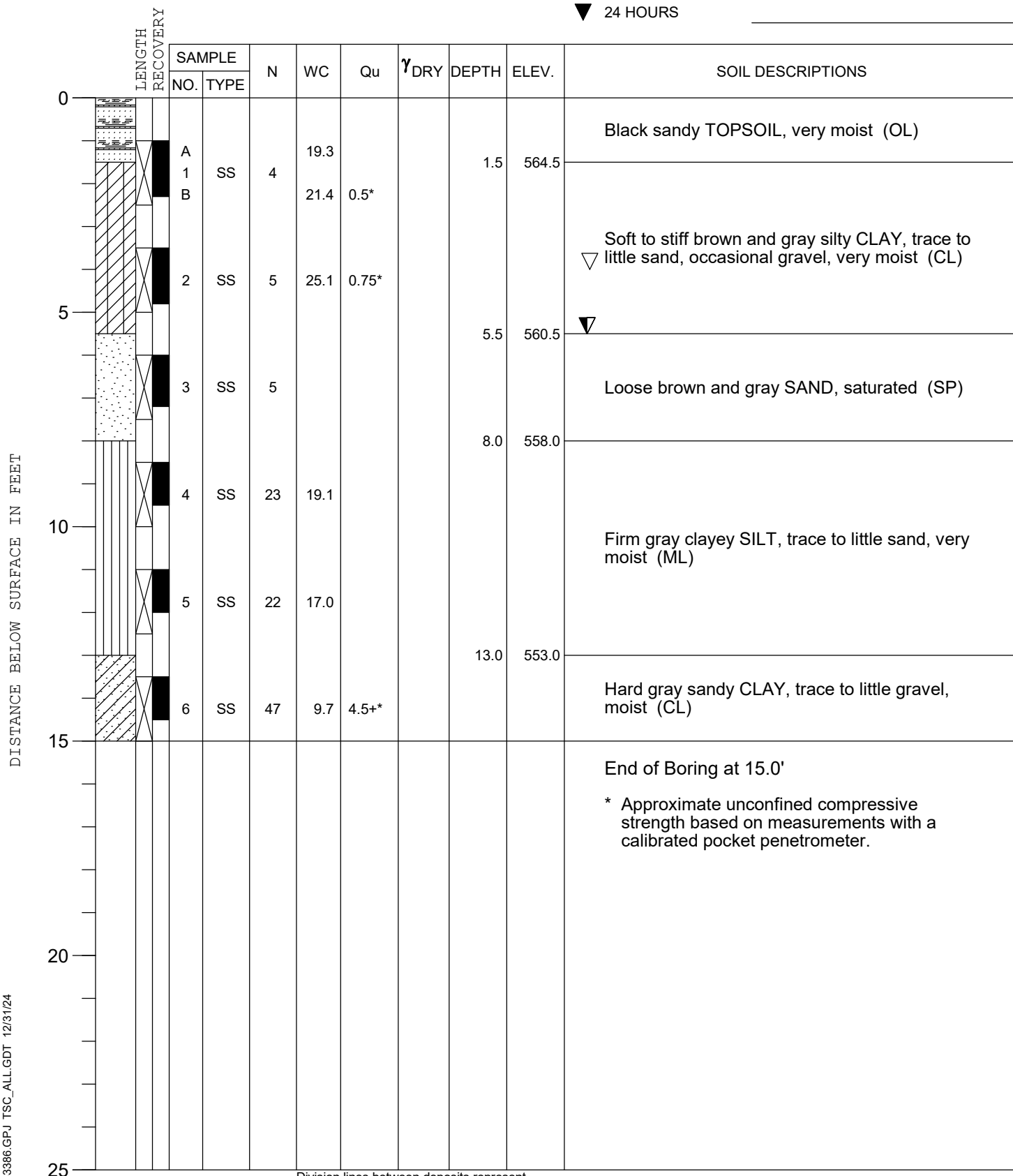
ELEVATIONS

GROUND SURFACE **566.0**END OF BORING **551.0**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **5.5'**▽ AT END OF BORING **4.0'**

▼ 24 HOURS



Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **201**

PROJECT **580-Acre Parcel, Reed & Carbon Hill Roads, Coal City, Illinois**CLIENT **Unicorn Investments, Chicago, Illinois**BORING **319** DATE STARTED **6-15-05** DATE COMPLETED **6-15-05** JOB **L-63,386**

ELEVATIONS

GROUND SURFACE **568.5**END OF BORING **553.5**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **13.0 '**▽ AT END OF BORING **12.0 '**

▼ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black sandy TOPSOIL (OL)
		1	SS	6	20.2	1.25*		1.1	567.4	Tough brown silty CLAY, trace to little sand and gravel, very moist (CL)
		2	SS	8	25.6	3.5*		3.0	565.5	Very tough brown and gray silty CLAY, trace to little sand, occasional gravel, trace organic, moist (CL/CH)
5		3	SS	9	29.3	3.0*				
		4	SS	9	18.6			8.0	560.5	Loose to firm gray clayey SILT, trace to little sand, very moist (ML)
10		5	SS	10	19.6					
		6	SS	15	13.8			13.0	555.5	Firm gray silty SAND, trace gravel, occasional silt pockets, wet (SM)
15										End of Boring at 15.0'
										* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
20										
25										

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **201**

PROJECT **580-Acre Parcel, Reed & Carbon Hill Roads, Coal City, Illinois**CLIENT **Unicorn Investments, Chicago, Illinois**BORING **320**DATE STARTED **6-15-05**DATE COMPLETED **6-15-05**JOB **L-63,386**

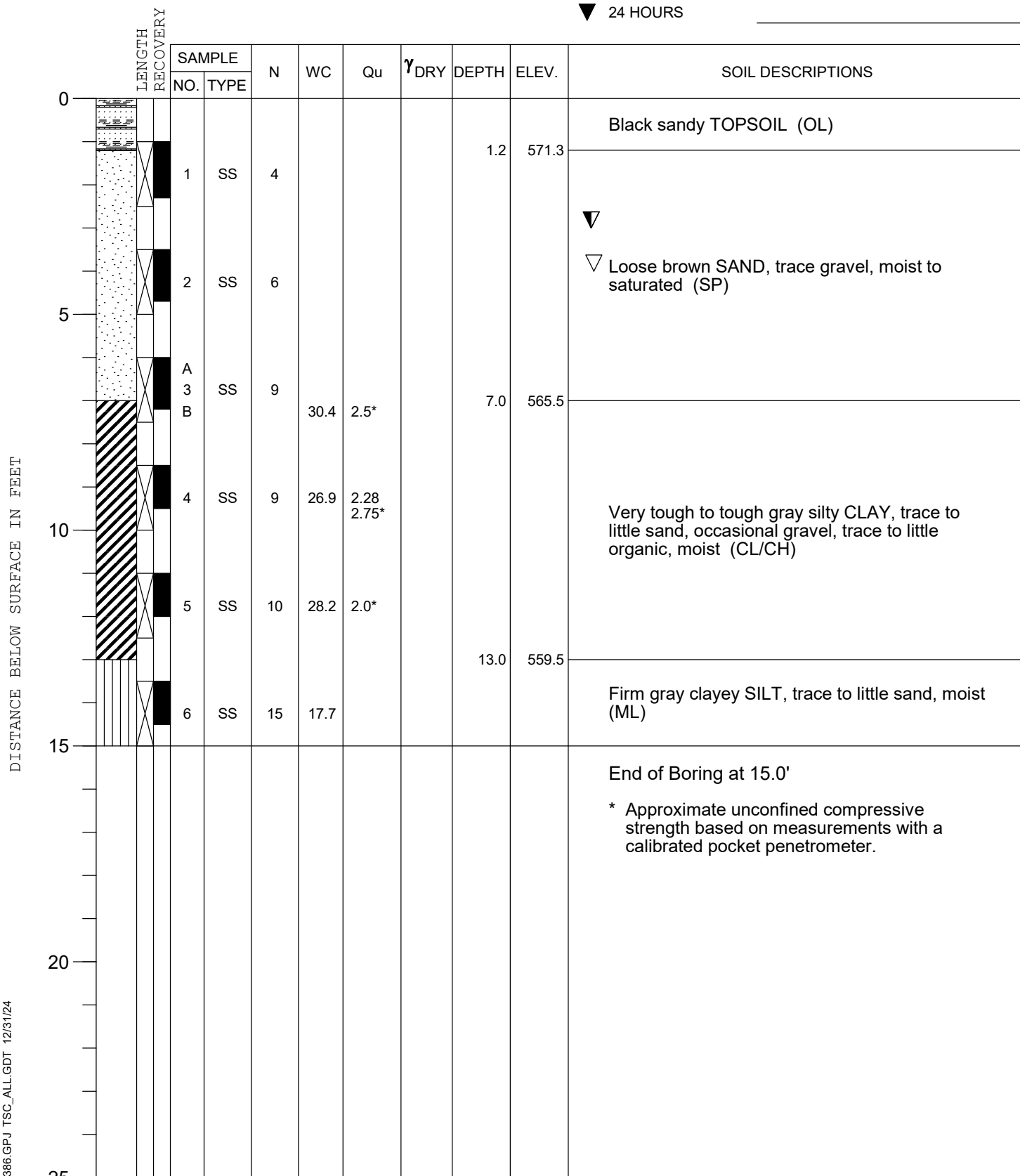
ELEVATIONS

GROUND SURFACE **572.5**END OF BORING **557.5**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **3.0'**▽ AT END OF BORING **4.0'**

▼ 24 HOURS



Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

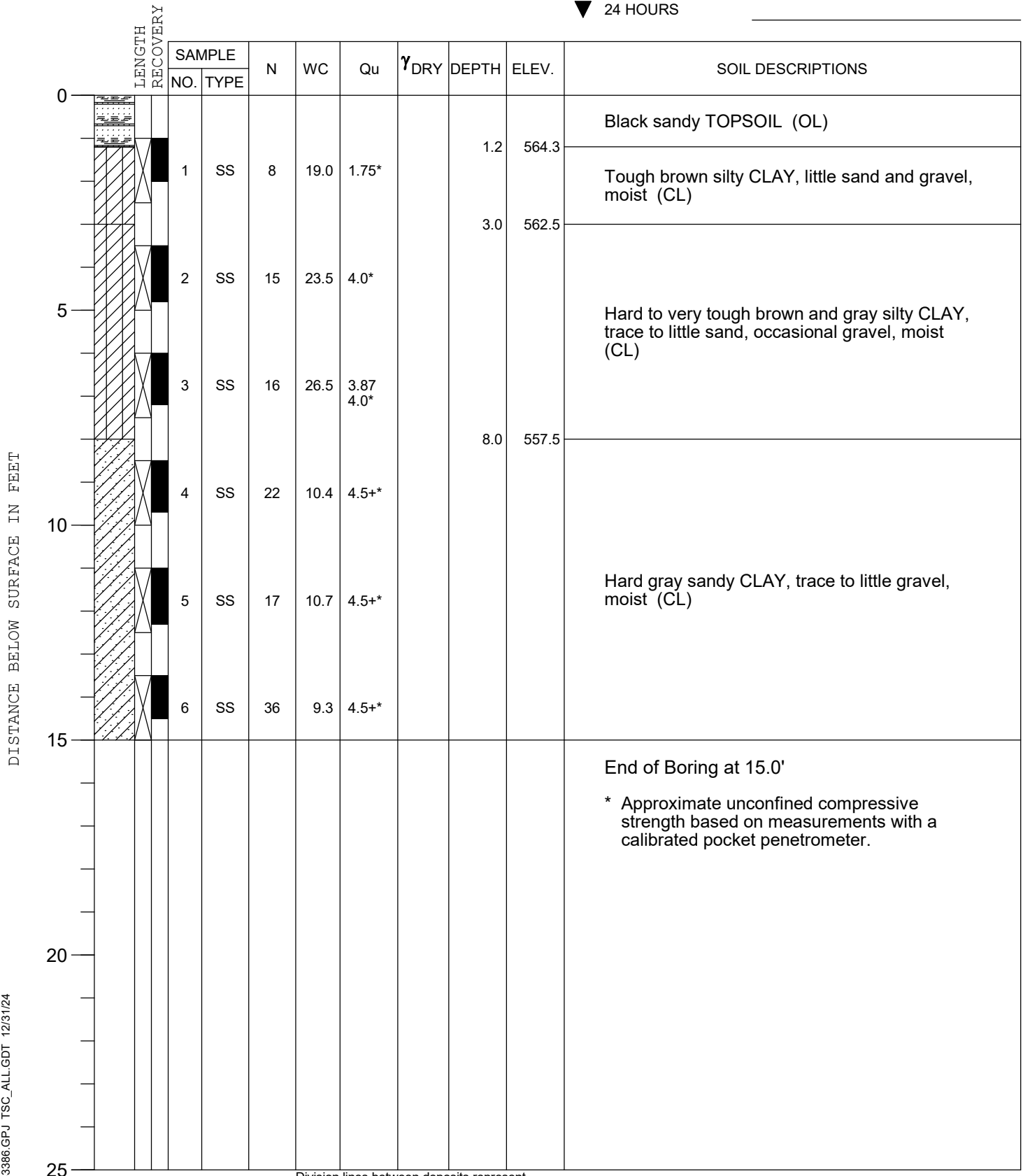
DRILL RIG NO. **201**



JOB **L-63,386**

WATER LEVEL OBSERVATIONS

▼ 24 HOURS

DRILL RIG NO. **201**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

PROJECT **580-Acre Parcel, Reed & Carbon Hill Roads, Coal City, Illinois**CLIENT **Unicorn Investments, Chicago, Illinois**BORING **322**DATE STARTED **6-16-05**DATE COMPLETED **6-16-05**JOB **L-63,386**

ELEVATIONS

GROUND SURFACE **565.5**END OF BORING **550.5**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **Dry**▽ AT END OF BORING **Dry**

▼ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black sandy TOPSOIL, very moist (OL)
		A			18.8					
		1	SS	6				2.0	563.5	
		B			22.2	0.75*		3.0	562.5	Stiff dark brown silty CLAY, trace sand and gravel, occasional sand seams, very moist (CL)
		2	SS	4	31.8	0.5*		5.5	560.0	Soft brown and gray silty CLAY, trace sand, occasional sand seams, trace to little organic, very moist (CL/CH)
		3	SS	9	23.4	2.02 2.0*				Very tough gray silty CLAY, trace to little sand and gravel, occasional silt seams, moist (CL)
		4	SS	13	17.5	2.5*		10.5	555.0	
		5	SS	15	17.9					Firm gray clayey SILT, trace to little sand and gravel, moist (ML)
		6	SS	25	10.2					
15										End of Boring at 15.0'
										* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
20										
25										

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **201**

PROJECT **580-Acre Parcel, Reed & Carbon Hill Roads, Coal City, Illinois**CLIENT **Unicorn Investments, Chicago, Illinois**BORING **323**DATE STARTED **6-16-05**DATE COMPLETED **6-16-05**JOB **L-63,386**

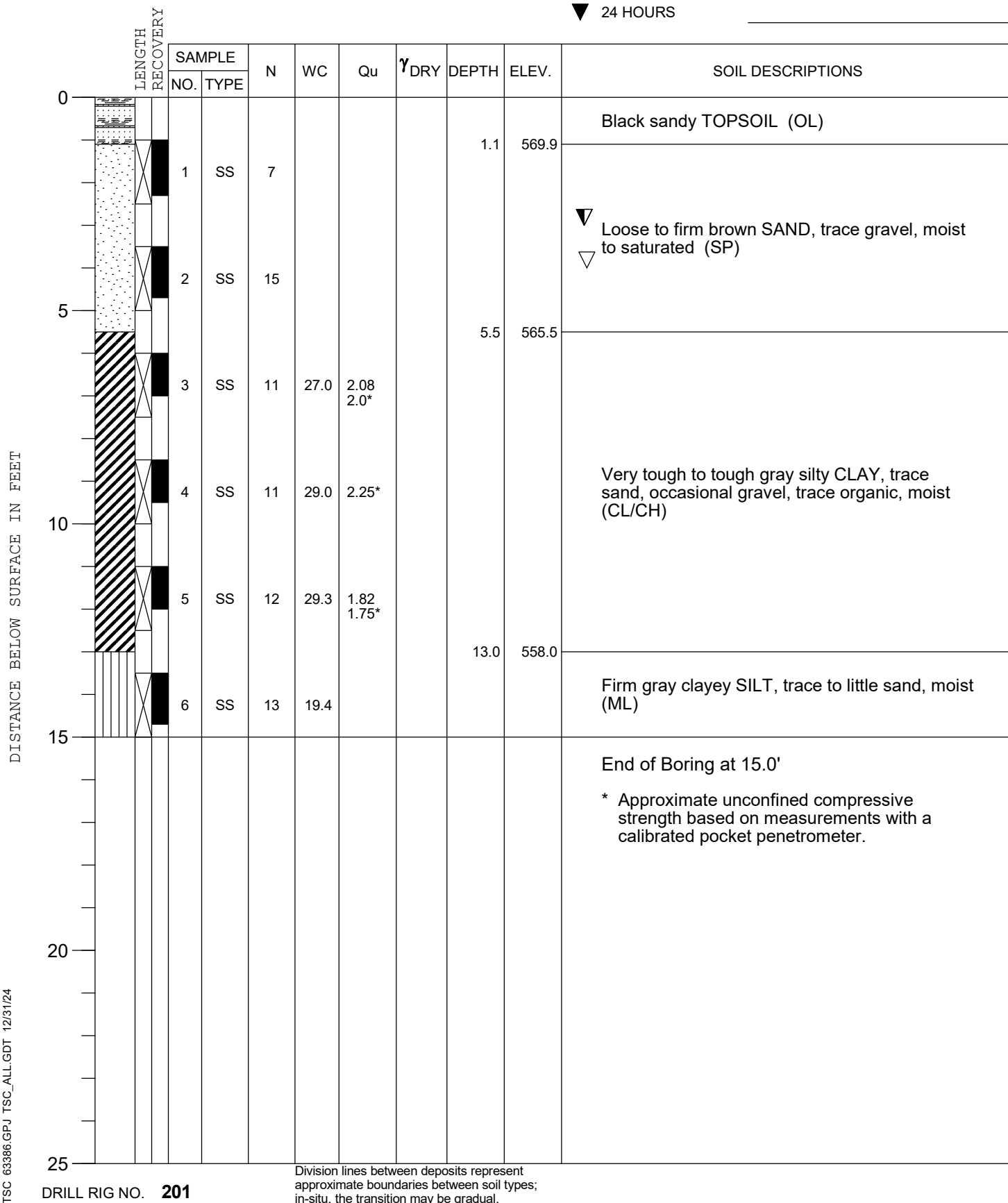
ELEVATIONS

GROUND SURFACE **571.0**END OF BORING **556.0**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **3.0'**▽ AT END OF BORING **4.0'**

▼ 24 HOURS

DRILL RIG NO. **201**

PROJECT **580-Acre Parcel, Reed & Carbon Hill Roads, Coal City, Illinois**CLIENT **Unicorn Investments, Chicago, Illinois**BORING **324**DATE STARTED **6-15-05**DATE COMPLETED **6-15-05**JOB **L-63,386**

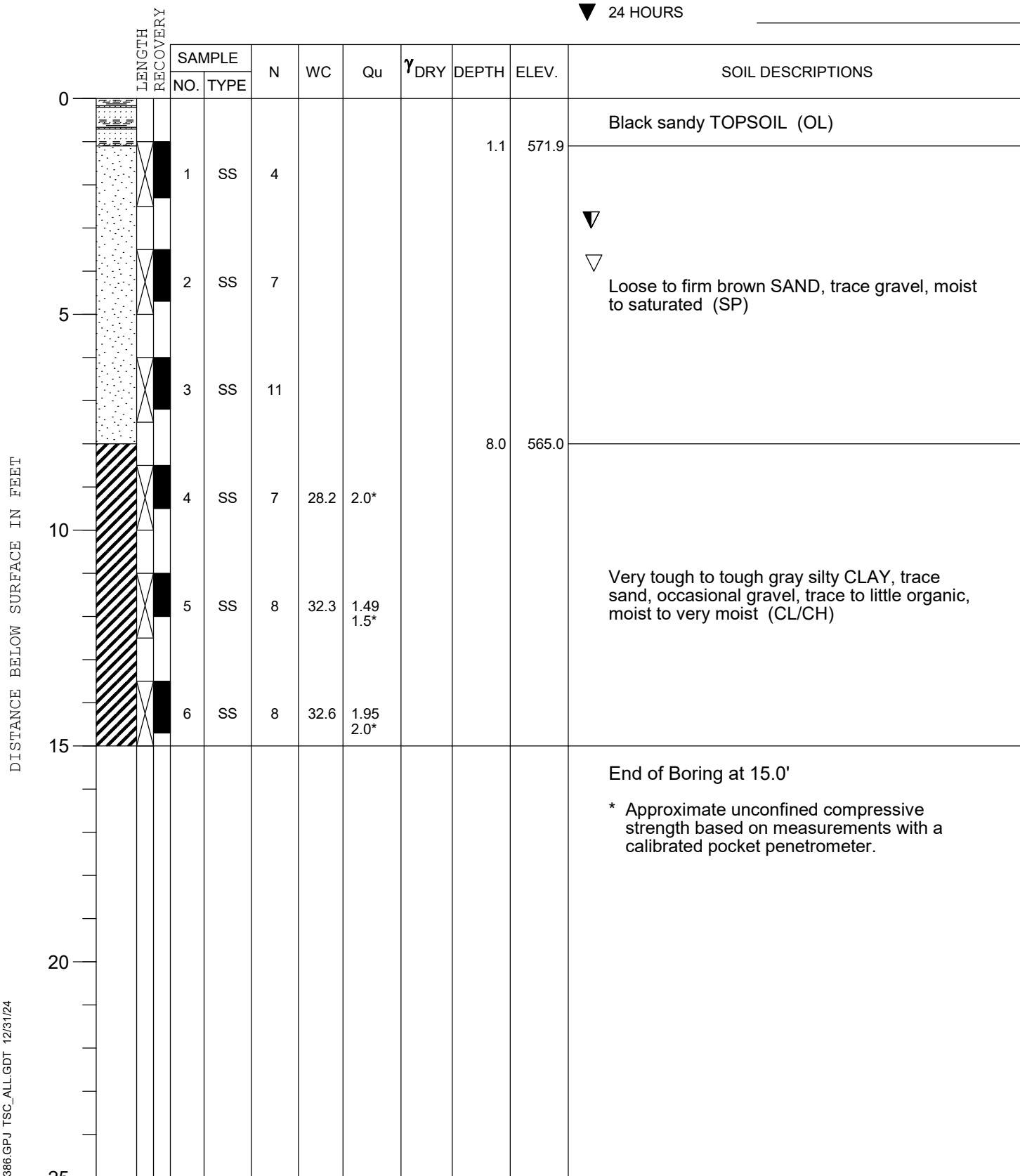
ELEVATIONS

GROUND SURFACE **573.0**END OF BORING **558.0**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **3.0'**▽ AT END OF BORING **4.0'**

▼ 24 HOURS



End of Boring at 15.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **201**

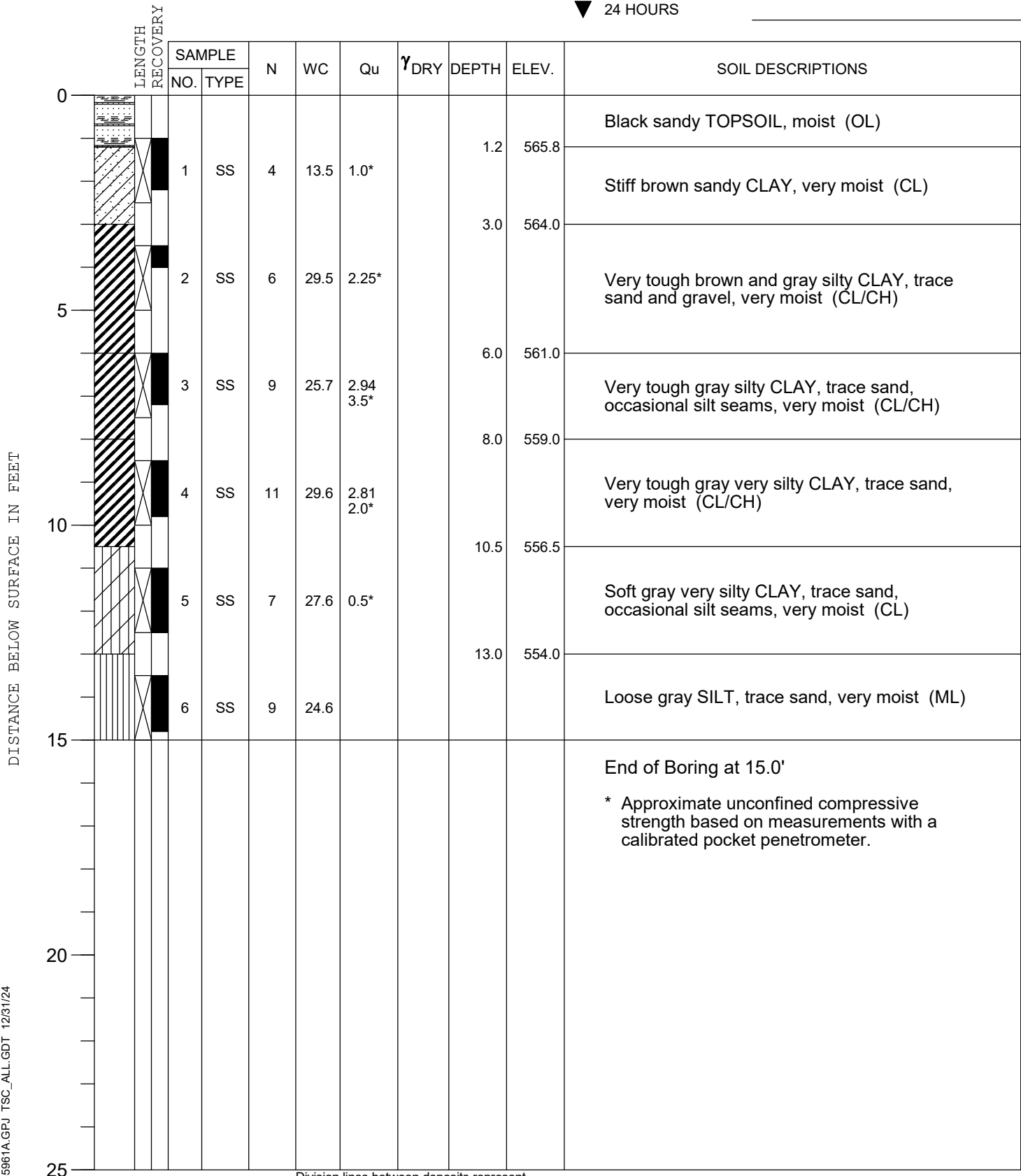
PROJECT **231 Acre Assemblage, Carbon Hill Road, Coal City, Illinois**CLIENT **Lakewood Homes, Inc., Hoffman Estates, Illinois**BORING **325** DATE STARTED **5-3-06** DATE COMPLETED **5-3-06** JOB **L-65,961A**

ELEVATIONS

GROUND SURFACE **567.0**
END OF BORING **552.0**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **Dry**
 ▼ AT END OF BORING **Dry**
 ▼ 24 HOURS



* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **201**

PROJECT **231 Acre Assemblage, Carbon Hill Road, Coal City, Illinois**CLIENT **Lakewood Homes, Inc., Hoffman Estates, Illinois**BORING **326**DATE STARTED **5-3-06**DATE COMPLETED **5-3-06**JOB **L-65,961A**

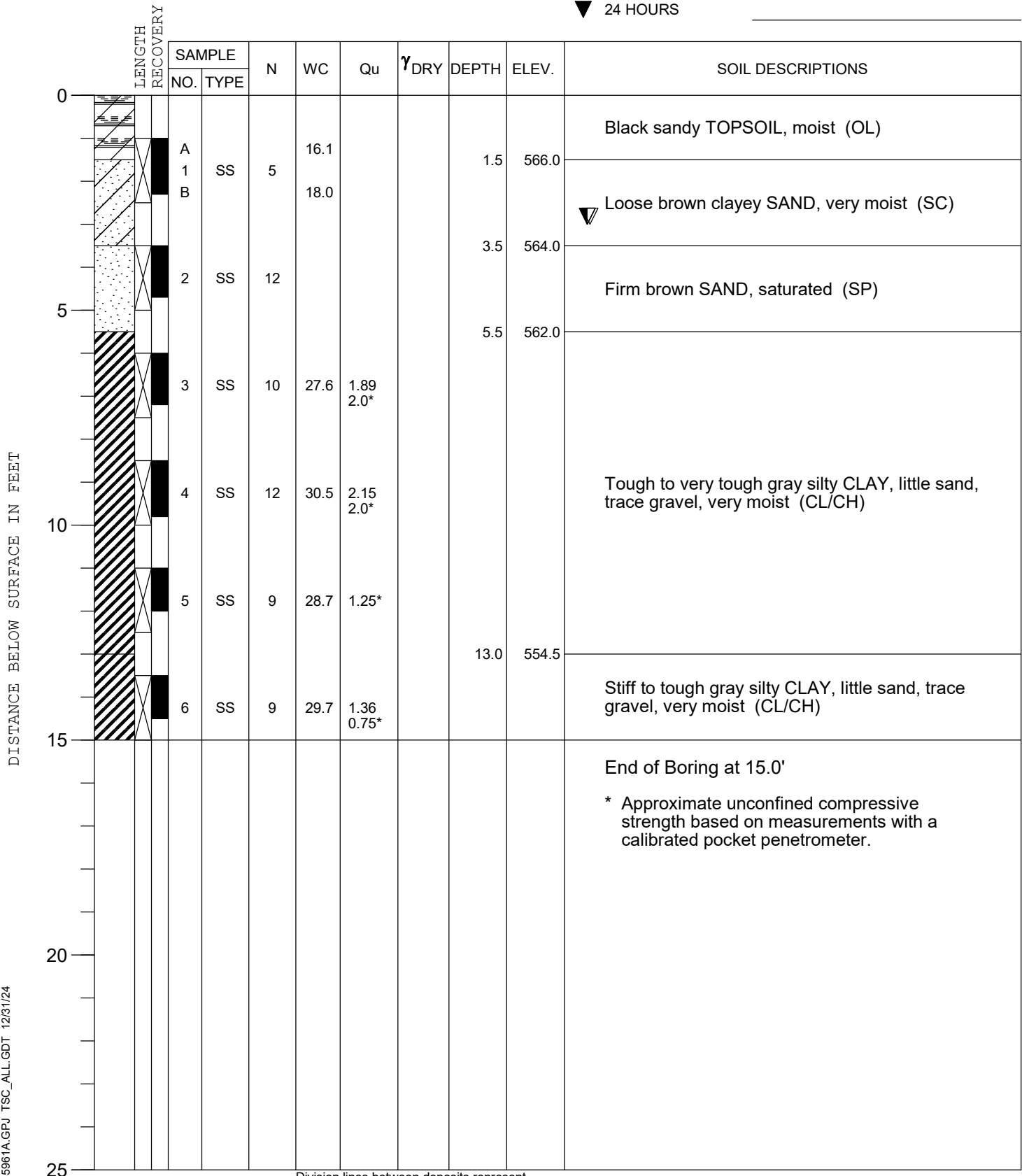
ELEVATIONS

GROUND SURFACE **567.5**END OF BORING **552.5**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **3.0'**▼ AT END OF BORING **3.0'**

▼ 24 HOURS



* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **201**



CLIENT **Lakewood Homes, Inc., Hoffman Estates, Illinois**

BORING **327** DATE STARTED **5-3-06** DATE COMPLETED **5-3-06** JOB **L-65,961A**

ELEVATIONS

GROUND SURFACE **568.0**

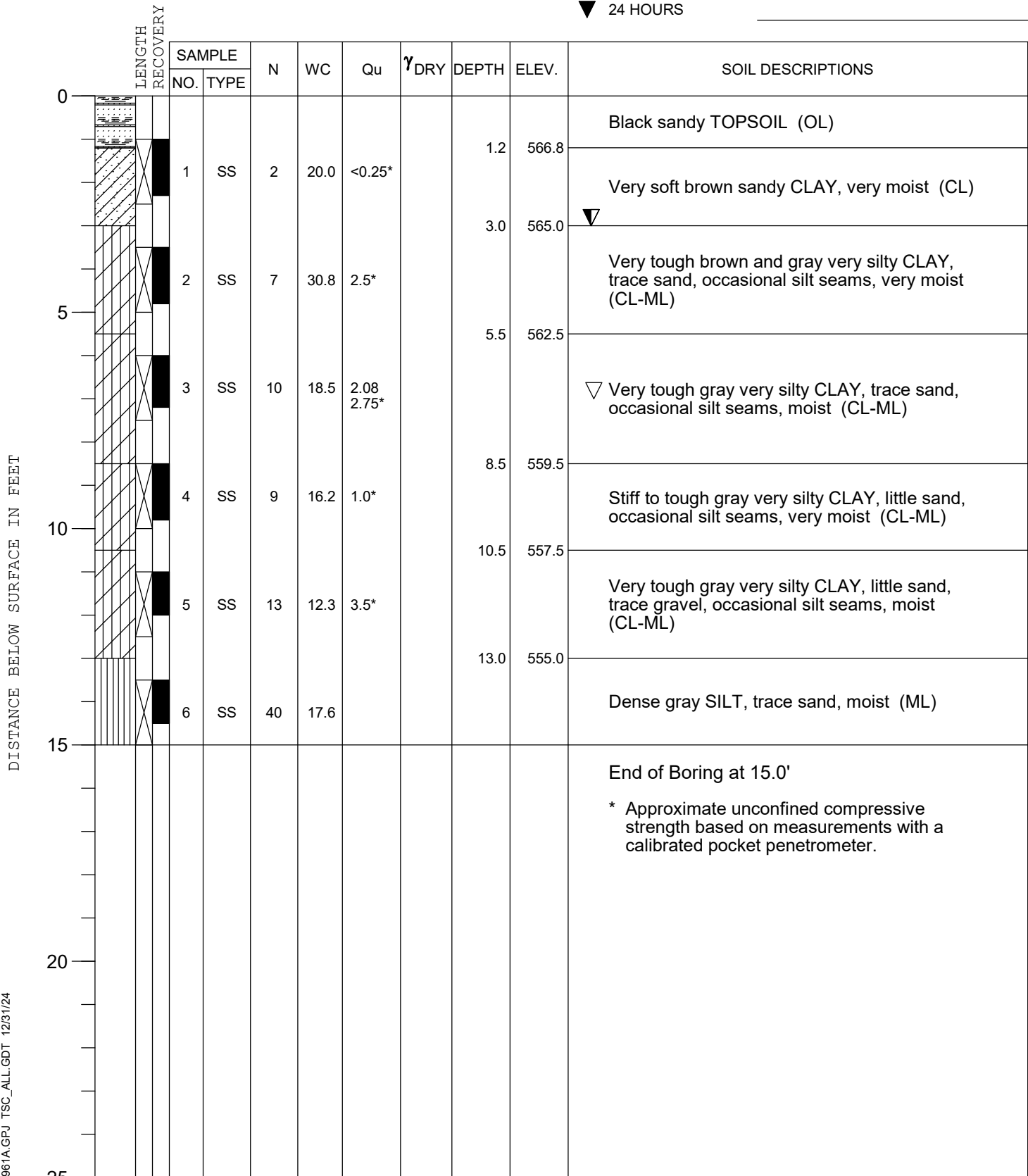
END OF BORING **553.0**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING 3.0'

▽ AT END OF BORING **7.0'**

▼ 24 HOURS



Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **201**



CLIENT **Lakewood Homes, Inc., Hoffman Estates, Illinois**

BORING **328** DATE STARTED **5-3-06** DATE COMPLETED **5-3-06** JOB **L-65,961A**

ELEVATIONS

GROUND SURFACE	566.0
END OF BORING	551.0

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING	10.5'
▽ AT END OF BORING	7.0'
▼ 24 HOURS	

[illegible]

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

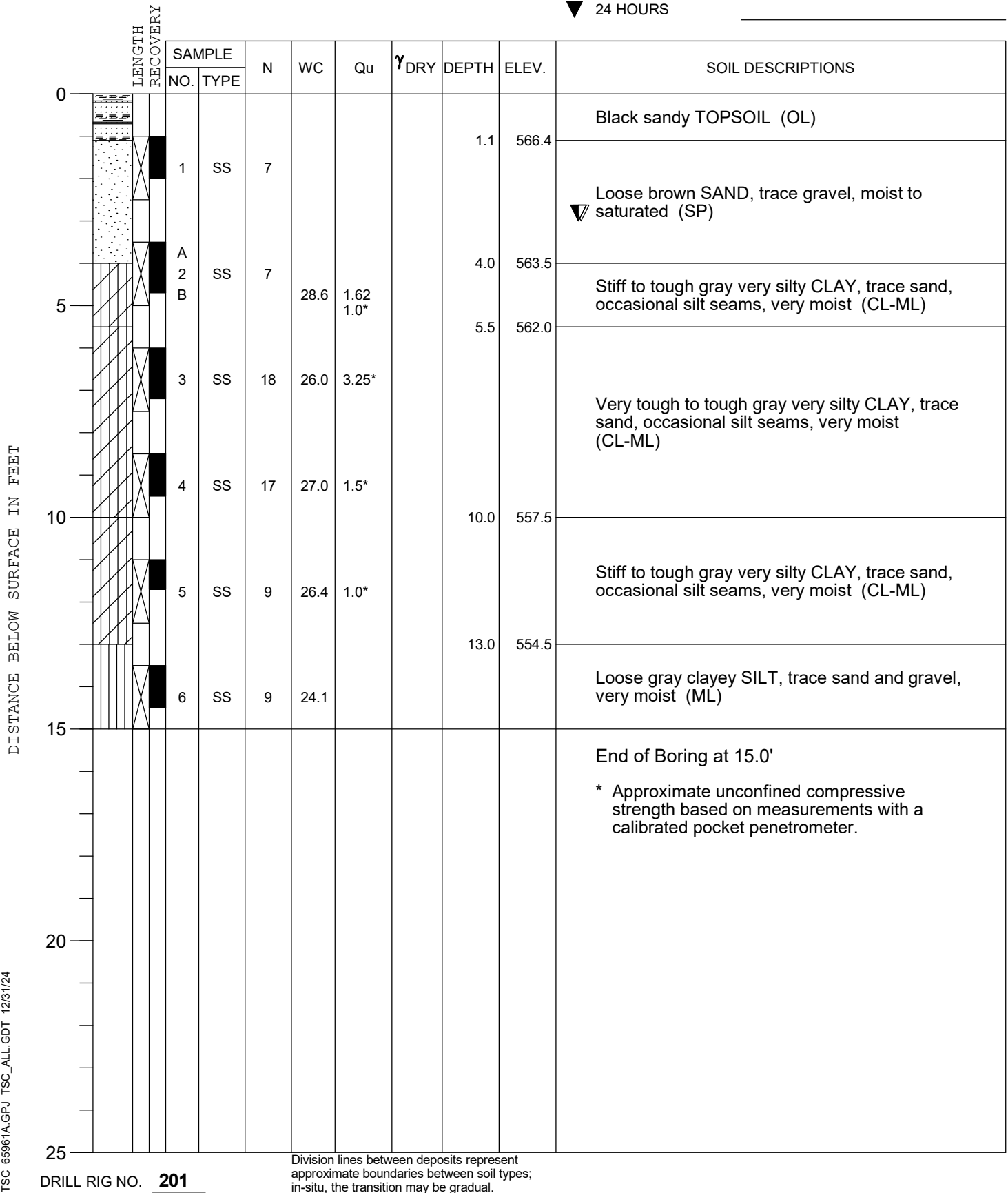
DRILL RIG NO. **201**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING 3.0'

▽ AT END OF BORING **3.0'**

▼ 24 HOURS





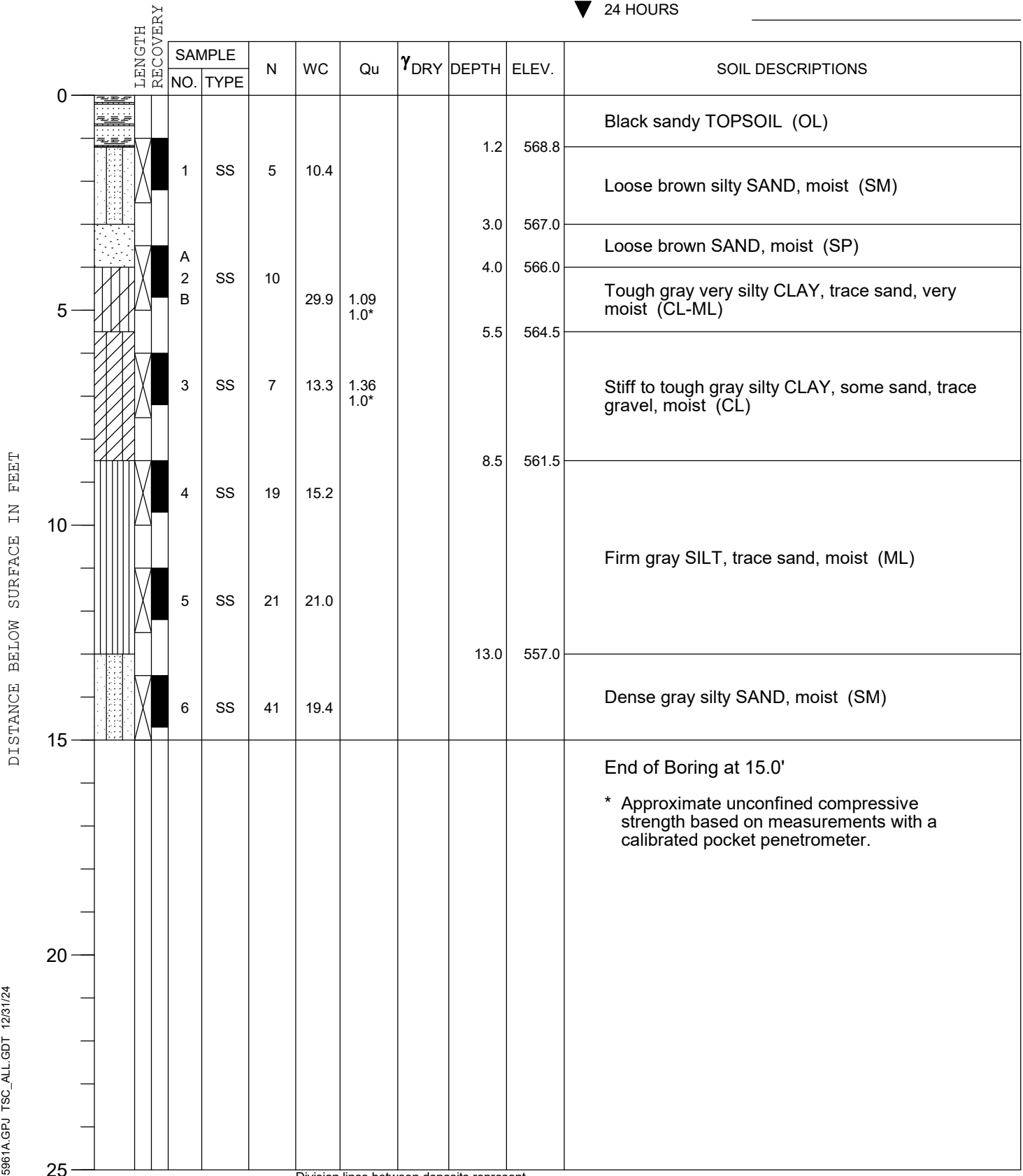
BORING **331** DATE STARTED **5-3-06** DATE COMPLETED **5-3-06** JOB **L-65,961A**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING Dry

▽ AT END OF BORING **Dry**

▼ 24 HOURS



Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **201**



CLIENT **Lakewood Homes, Inc., Hoffman Estates, Illinois**

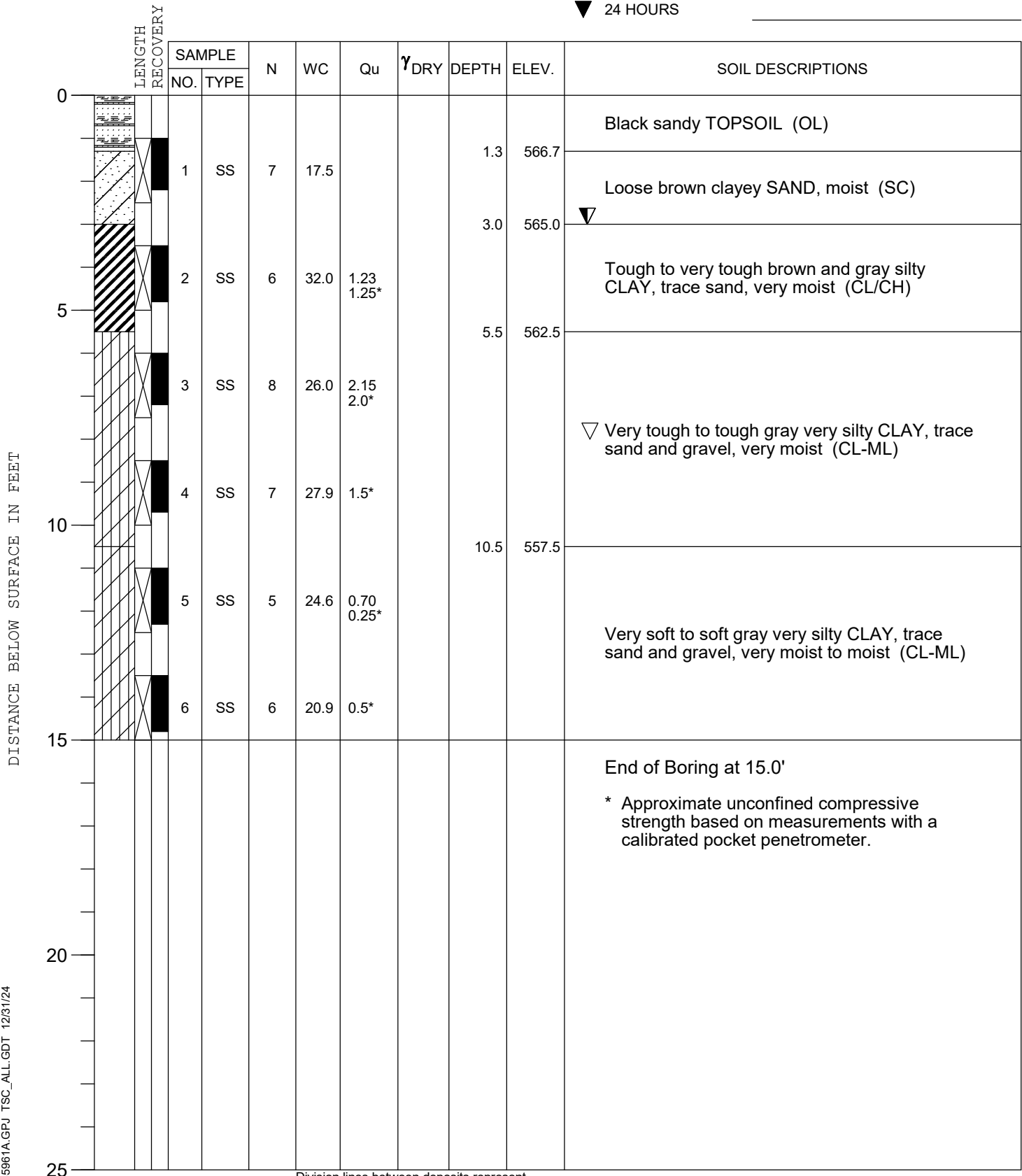
BORING **332** DATE STARTED **5-3-06** DATE COMPLETED **5-3-06** JOB **L-65,961A**

ELEVATIONS

GROUND SURFACE	568.0
END OF BORING	553.0

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING	3.0'
▽ AT END OF BORING	8.0'
▼ 24 HOURS	

DRILL RIG NO. **201**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

PROJECT **231 Acre Assemblage, Carbon Hill Road, Coal City, Illinois**CLIENT **Lakewood Homes, Inc., Hoffman Estates, Illinois**BORING **333** DATE STARTED **5-3-06** DATE COMPLETED **5-3-06** JOB **L-65,961A**

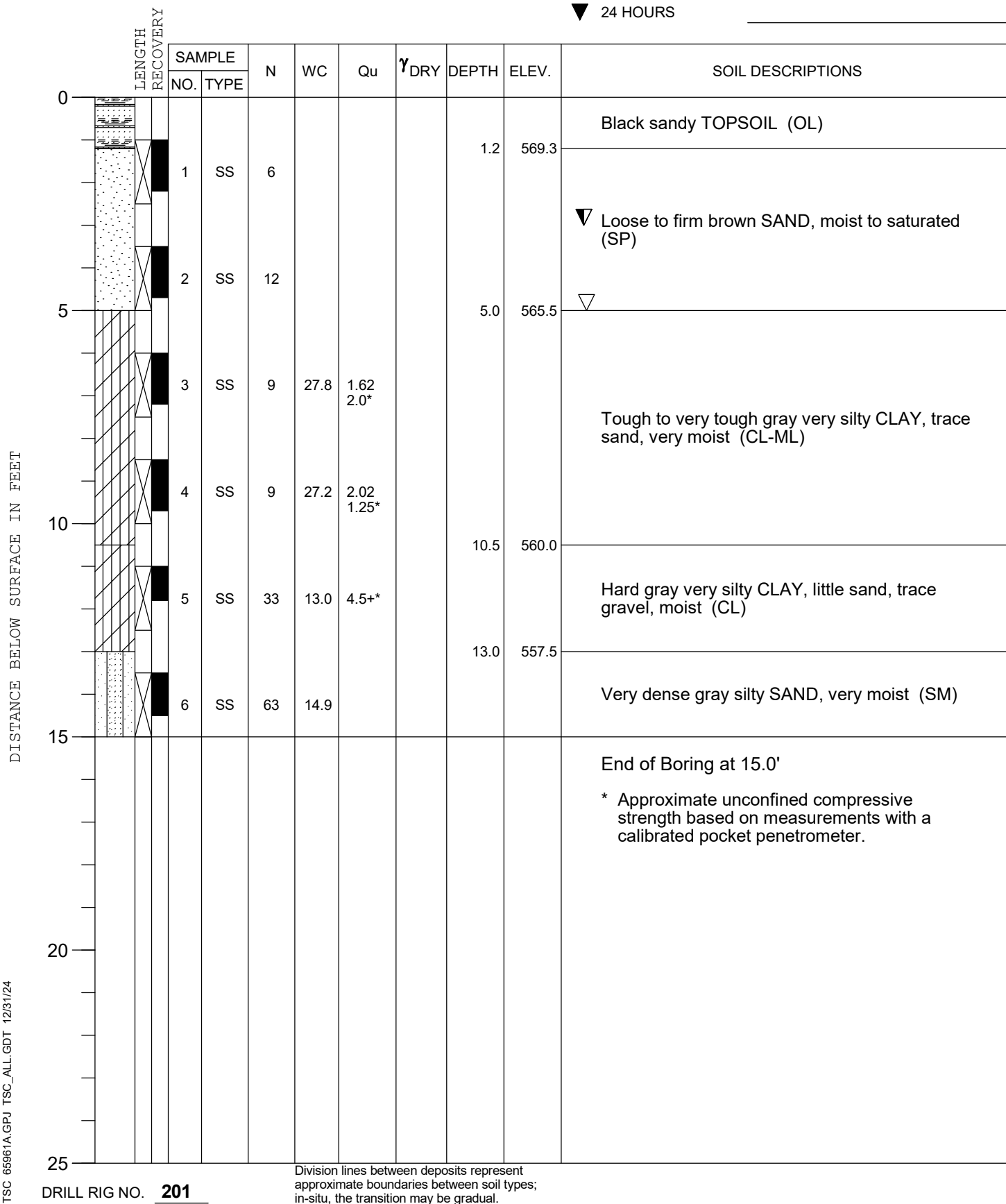
ELEVATIONS

GROUND SURFACE **570.5**END OF BORING **555.5**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **3.0'**▽ AT END OF BORING **5.0'**

▼ 24 HOURS



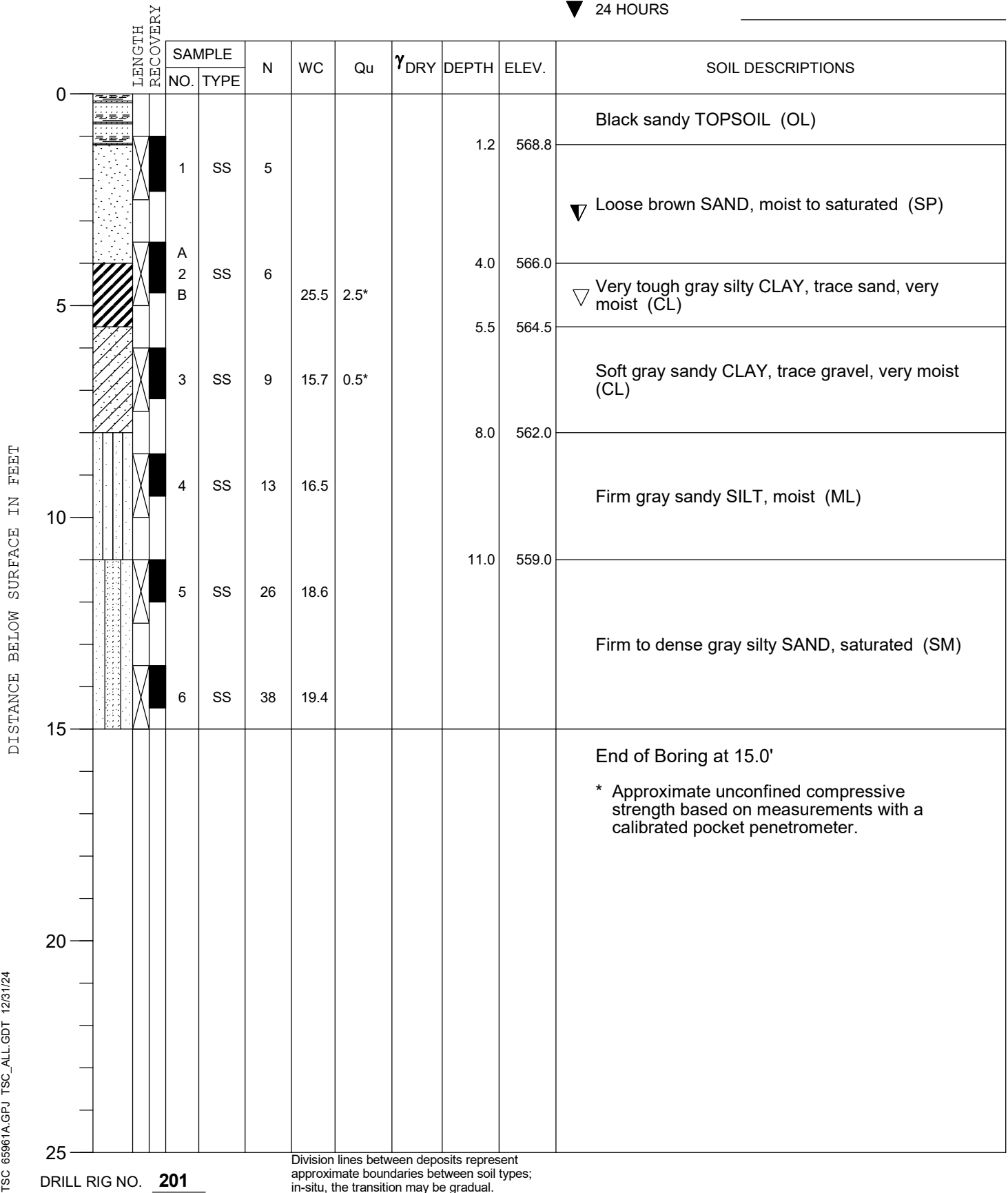
BORING **334** DATE STARTED **5-8-06** DATE COMPLETED **5-8-06** JOB **L-65,961A**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING 3.0'

▽ AT END OF BORING **5.0'**

▼ 24 HOURS





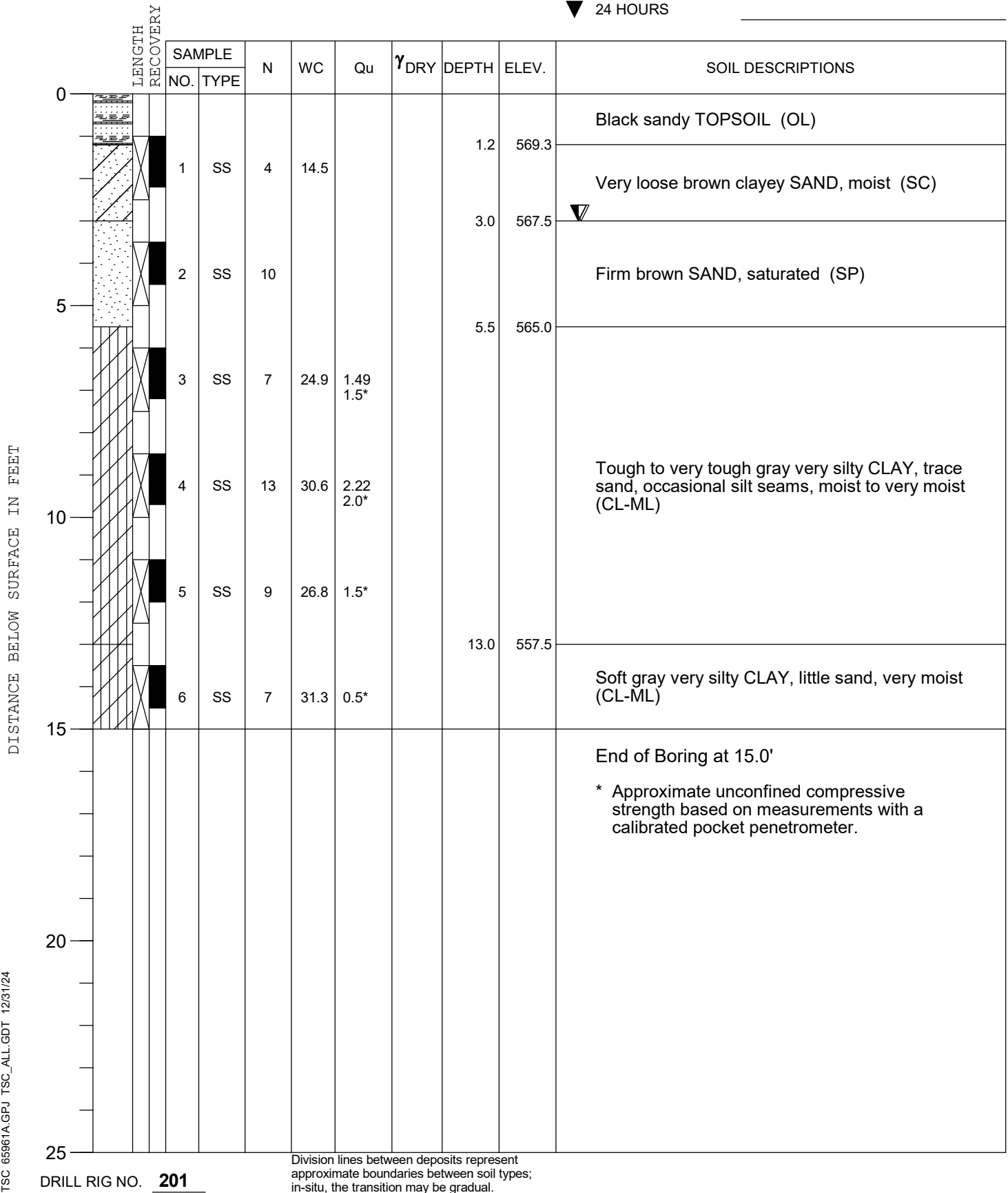
BORING **335** DATE STARTED **5-8-06** DATE COMPLETED **5-8-06** JOB **L-65,961A**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **3.0'**

▽ AT END OF BORING **3.0'**

▼ 24 HOURS



PROJECT **231 Acre Assemblage, Carbon Hill Road, Coal City, Illinois**CLIENT **Lakewood Homes, Inc., Hoffman Estates, Illinois**BORING **336** DATE STARTED **5-8-06** DATE COMPLETED **5-8-06** JOB **L-65,961A**

ELEVATIONS

GROUND SURFACE **571.0**END OF BORING **556.0**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **4.0'**▽ AT END OF BORING **3.0'**

▼ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black sandy TOPSOIL (OL)
		1	SS	6				1.3	569.7	Loose to firm brown SAND, moist to saturated (SP)
		2	SS	8						
		3	SS	16						
		4	SS	8	27.7	2.15 2.25*		8.0	563.0	Very tough to tough gray very silty CLAY, trace sand, very moist (CL-ML)
		5	SS	9	29.9	1.36 1.75*				
		6	SS	9	26.2	1.25*				
15										End of Boring at 15.0' * Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
20										
25										

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **201**

PROJECT **231 Acre Assemblage, Carbon Hill Road, Coal City, Illinois**CLIENT **Lakewood Homes, Inc., Hoffman Estates, Illinois**BORING **337** DATE STARTED **5-8-06** DATE COMPLETED **5-8-06** JOB **L-65,961A**

ELEVATIONS

GROUND SURFACE **571.5**END OF BORING **556.5**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **5.5'**▽ AT END OF BORING **5.0'**

▼ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black sandy TOPSOIL (OL)
		1	SS	4	8.9			1.2	570.3	Loose brown silty SAND, moist to saturated (SM)
		2	SS	7	21.1					
5								5.5	566.0	Soft to stiff gray silty CLAY, trace sand, very moist (CL)
		3	SS	5	16.4	0.83 0.5*				
		4	SS	8	16.0	1.0*		8.0	563.5	Stiff to tough gray very silty CLAY, little sand, occasional sand seams, very moist (CL-ML)
10								10.5	561.0	
		5	SS	6	23.9					Loose gray SILT, trace sand, saturated (ML)
		6	SS	12	22.6			13.5	558.0	
15										Firm gray silty SAND, saturated (SM)
20										End of Boring at 15.0'
25										

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **201**



CLIENT **Lakewood Homes, Inc., Hoffman Estates, Illinois**

BORING **338** DATE STARTED **5-9-06** DATE COMPLETED **5-9-06** JOB **L-65,961A**

ELEVATIONS

GROUND SURFACE	568.5
END OF BORING	553.5

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING	13.0'
▽ AT END OF BORING	13.0'
▼ 24 HOURS	

▼ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ _{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black clayey TOPSOIL (OL)
		1	SS	8	26.6	0.74 1.5*		1.2	567.3	Stiff to tough brown and gray silty CLAY, trace sand, very moist (CL)
		2	SS	11	25.8	3.21 3.5*		3.0	565.5	Very tough brown and gray silty CLAY, trace sand, very moist (CL/CH)
5		3	SS	12	11.2	2.5*		5.0	563.5	Very tough brown silty CLAY, trace sand, moist (CL)
		4	SS	9	26.1			8.5	560.0	Loose gray SILT, little sand, very moist (ML)
10		5	SS	50	10.1			10.0	558.5	Dense gray SAND, little gravel, little silt, occasional Cobbles, moist (SP)
		6	SS	61	9.1	3.25*		13.0	555.5	Very tough gray silty CLAY, some sand, little gravel, damp (CL)
15										End of Boring at 15.0'
20										* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
25										

DRILL RIG NO. **201**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

PROJECT **231 Acre Assemblage, Carbon Hill Road, Coal City, Illinois**CLIENT **Lakewood Homes, Inc., Hoffman Estates, Illinois**BORING **339** DATE STARTED **5-9-06** DATE COMPLETED **5-9-06** JOB **L-65,961A**

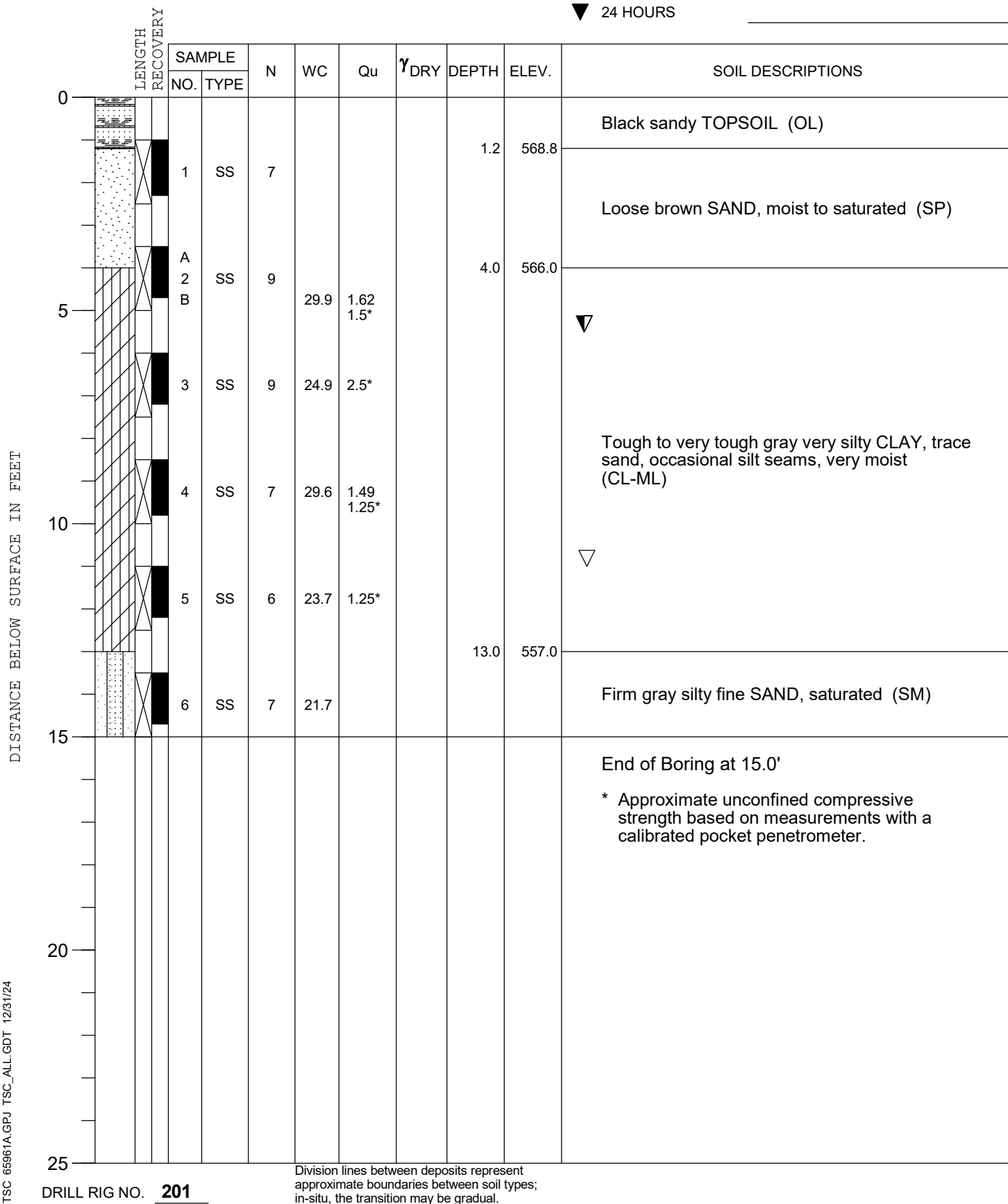
ELEVATIONS

GROUND SURFACE **570.0**END OF BORING **555.0**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **5.5'**▽ AT END OF BORING **11.0'**

▼ 24 HOURS





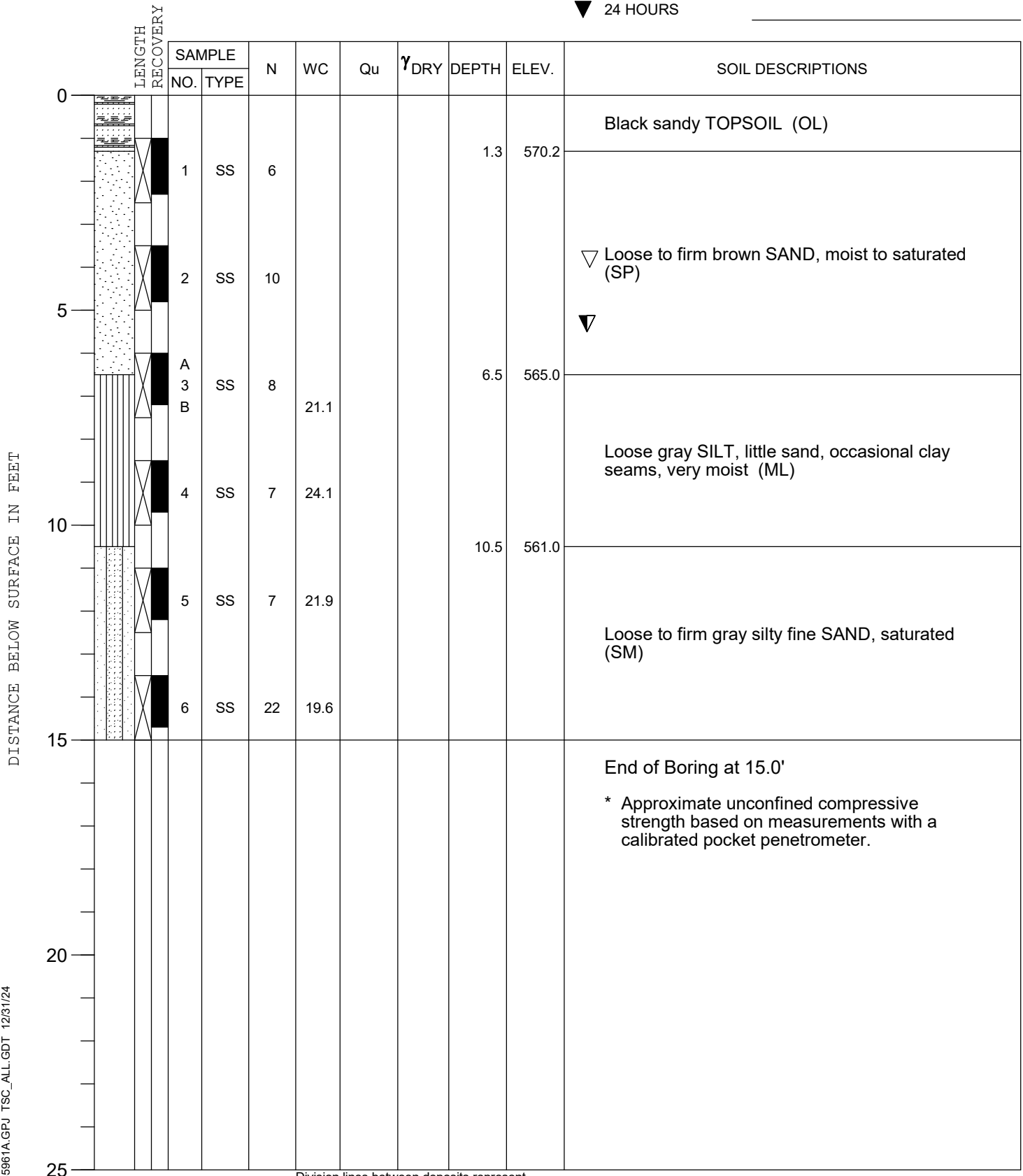
BORING **340** DATE STARTED **5-10-06** DATE COMPLETED **5-10-06** JOB **L-65,961A**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING 5.5'

▽ AT END OF BORING **4.0'**

▼ 24 HOURS

DRILL RIG NO. **201**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.



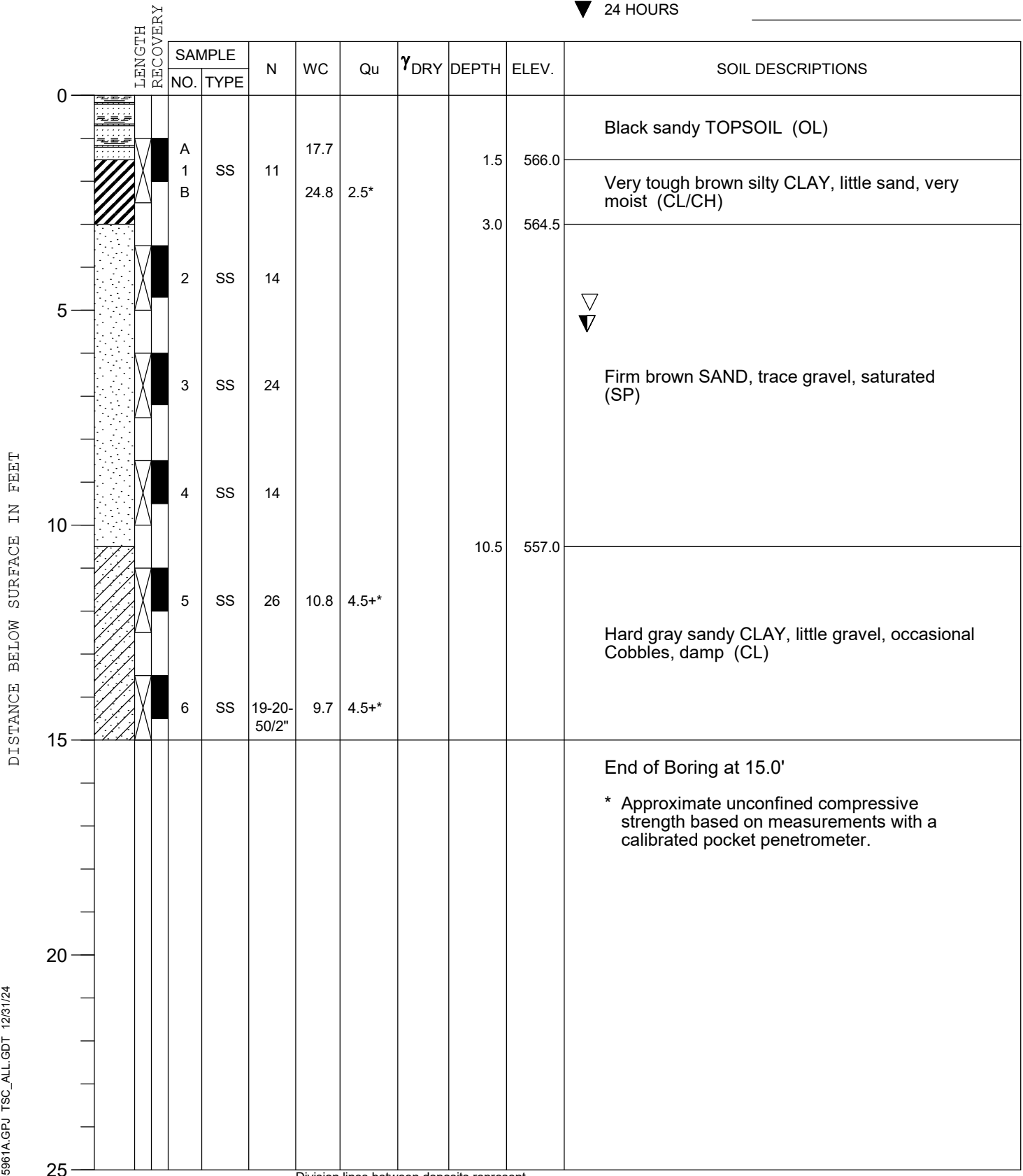
BORING **341** DATE STARTED **5-10-06** DATE COMPLETED **5-10-06** JOB **L-65,961A**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **5.5'**

▽ AT END OF BORING **5.0'**

▼ 24 HOURS



Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **201**



CLIENT **Lakewood Homes, Inc., Hoffman Estates, Illinois**

BORING **342** DATE STARTED **5-9-06** DATE COMPLETED **5-9-06** JOB **L-65,961A**

ELEVATIONS

GROUND SURFACE	567.5
END OF BORING	552.5

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING	13.0'
▽ AT END OF BORING	13.0'
▼ 24 HOURS	

											▼ 24 HOURS
DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ _{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS	
		NO.	TYPE								
0										Black sandy TOPSOIL (OL)	
		1	SS	9	19.6	1.75 2.0*		1.2	566.3	Tough to very tough brown and gray silty CLAY, trace sand, moist (CL)	
		2	SS	13	24.2	4.13 4.5+*		3.0	564.5	Hard brown and gray silty CLAY, trace sand, very moist (CL/CH)	
5		A 3	SS	11	20.9	3.25*		5.5	562.0	Very tough gray very silty CLAY, trace sand, moist (CL)	
		B			20.3			7.0	560.5	Firm gray and brown SILT, little sand, trace clay, moist (ML)	
		4	SS	26	17.8			8.0	559.5	Firm gray silty SAND, moist (SM)	
10		5	SS	43	10.3	2.5*		10.0	557.5	Very tough gray very silty CLAY, little sand, trace gravel, moist (CL-ML) ▼	
		6	SS	27	12.7	3.25*					
15	End of Boring at 15.0'										
	* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.										
20											
25											

5961A.GPJ TSC_ALL.GDT 12/31/24

Division lines between deposits represent

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **201**



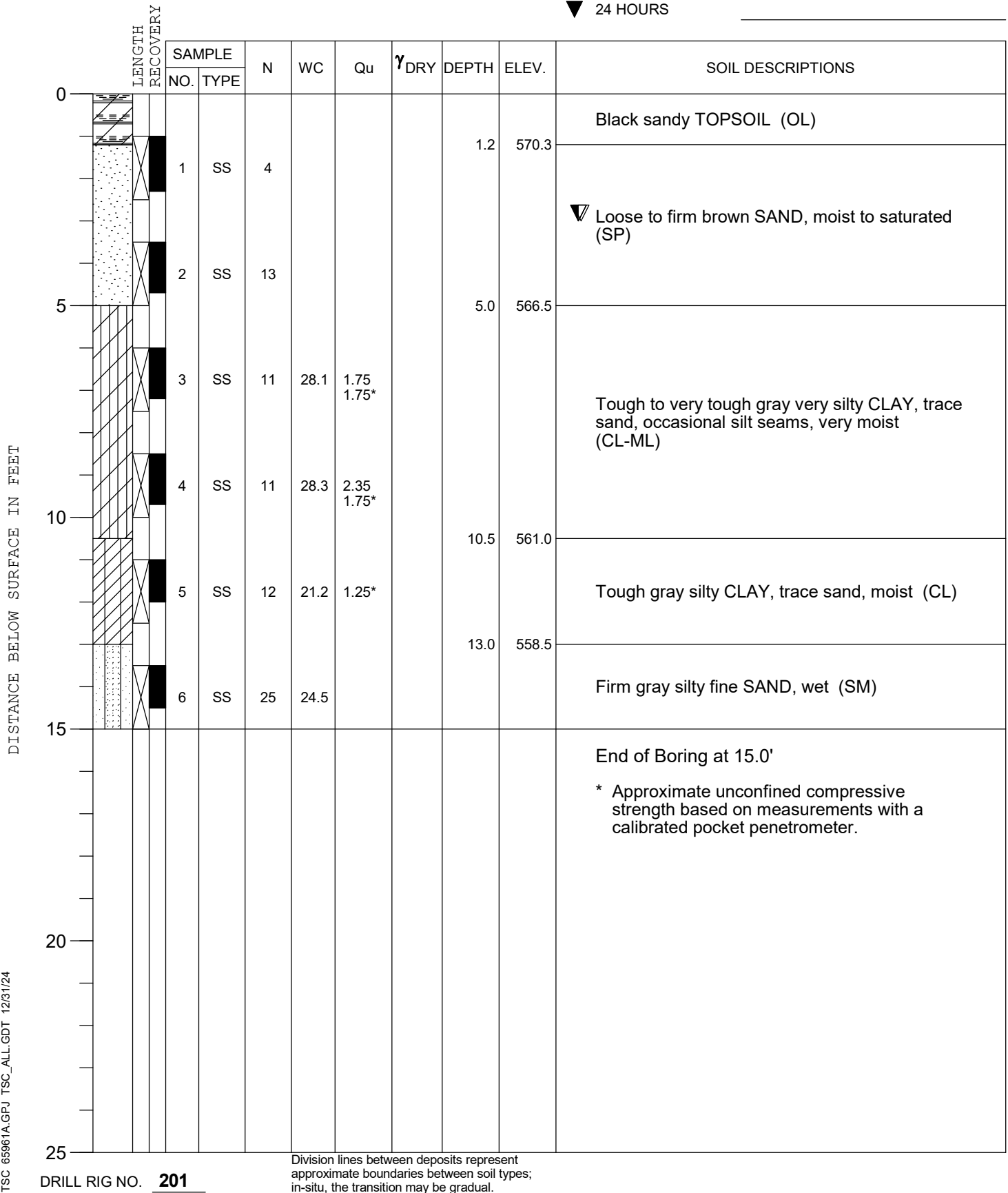
BORING **343** DATE STARTED **5-10-06** DATE COMPLETED **5-10-06** JOB **L-65,961A**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING 3.0'

▽ AT END OF BORING **3.0'**

▼ 24 HOURS



PROJECT **231 Acre Assemblage, Carbon Hill Road, Coal City, Illinois**CLIENT **Lakewood Homes, Inc., Hoffman Estates, Illinois**BORING **344** DATE STARTED **5-10-06** DATE COMPLETED **5-10-06** JOB **L-65,961A**

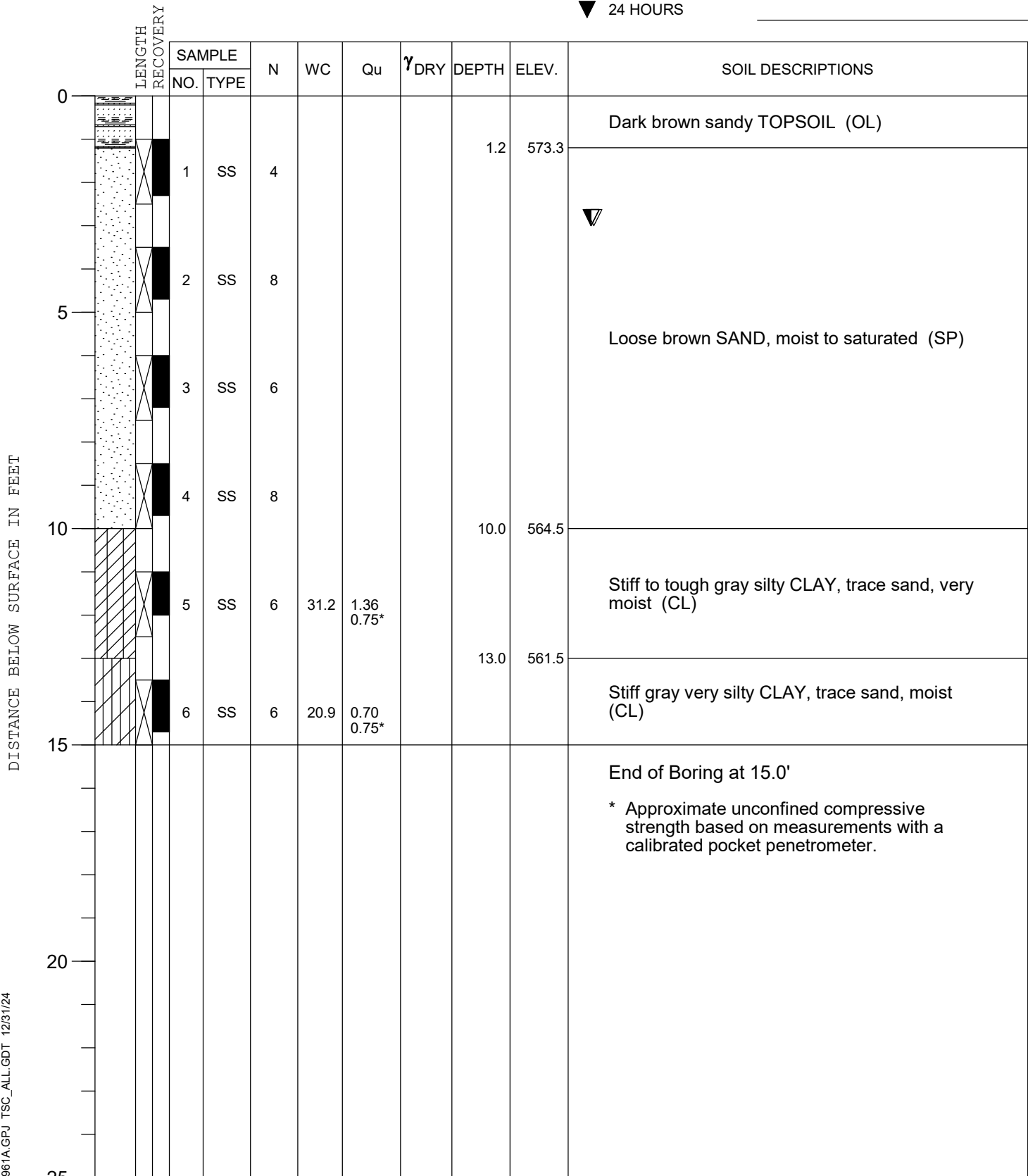
ELEVATIONS

GROUND SURFACE **574.5**END OF BORING **559.5**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **3.0'**▽ AT END OF BORING **3.0'**

▼ 24 HOURS



* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **201**



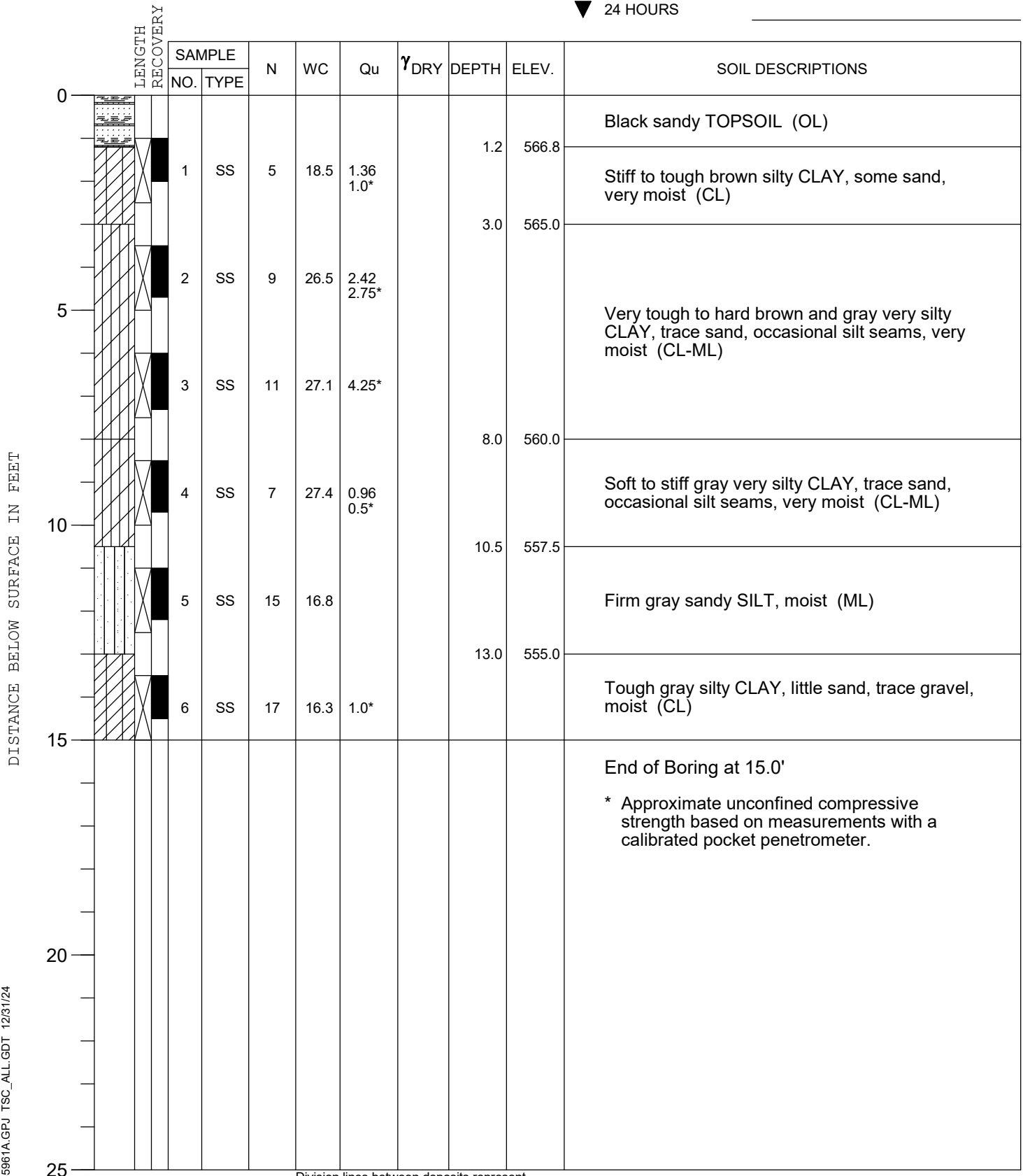
BORING **346** DATE STARTED **5-10-06** DATE COMPLETED **5-10-06** JOB **L-65,961A**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **Dry**

▽ AT END OF BORING **Dry**

▼ 24 HOURS

DRILL RIG NO. **201**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.



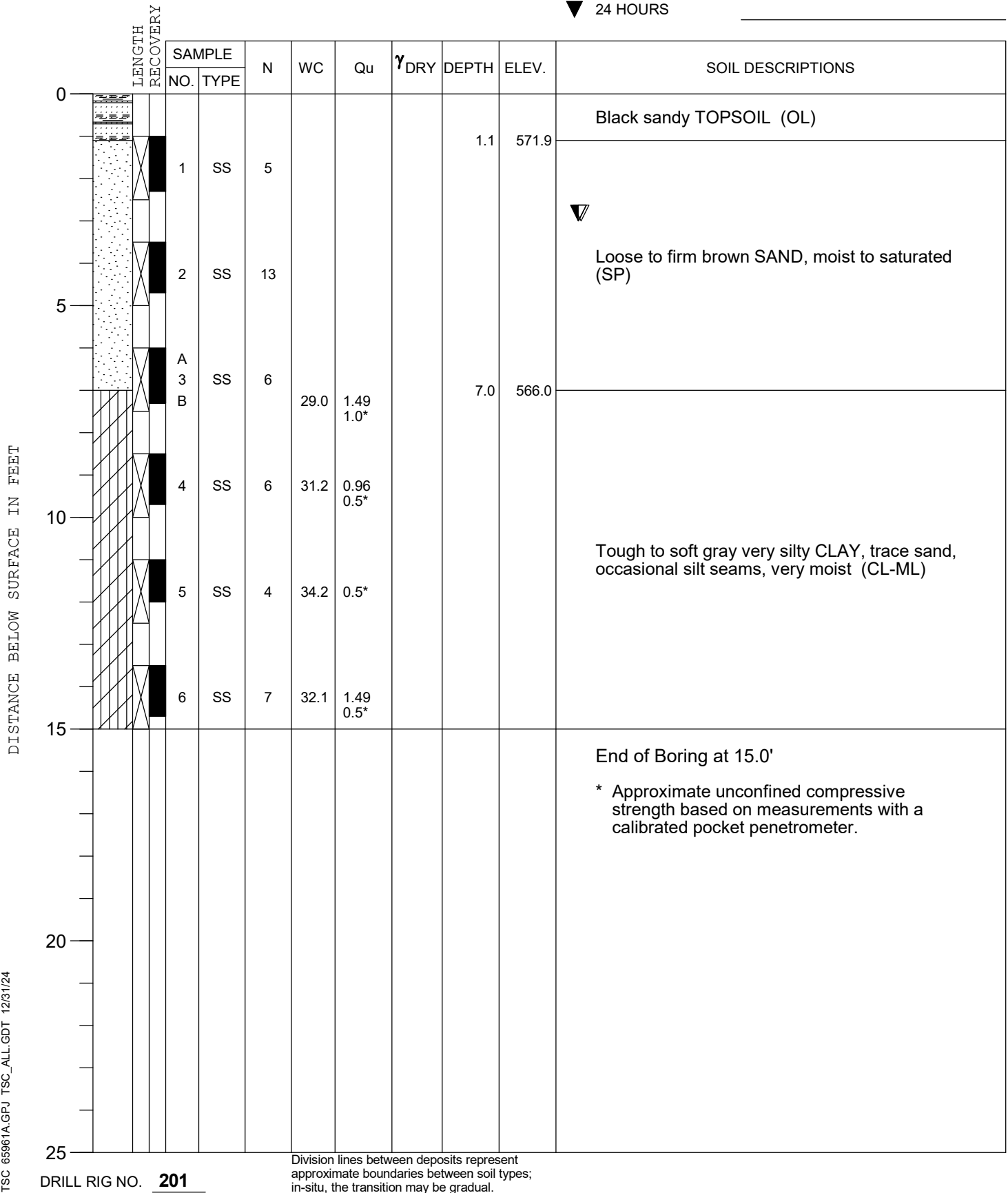
BORING **347** DATE STARTED **5-10-06** DATE COMPLETED **5-10-06** JOB **L-65,961A**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING 3.0'

▽ AT END OF BORING **3.0'**

▼ 24 HOURS



PROJECT **231 Acre Assemblage, Carbon Hill Road, Coal City, Illinois**CLIENT **Lakewood Homes, Inc., Hoffman Estates, Illinois**BORING **401** DATE STARTED **5-9-06** DATE COMPLETED **5-9-06** JOB **L-65,961A**

ELEVATIONS

GROUND SURFACE **567.5**END OF BORING **552.5**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **3.0'**▽ AT END OF BORING **3.0'**

▼ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										
		1	SS	4	17.6					Black sandy TOPSOIL, moist (OL)
								3.0	564.5	▼
5		2	SS	7						Loose brown and gray fine to medium SAND, trace to little gravel, saturated (SP)
		A								
		3	SS	9	25.4	1.75		6.5	561.0	
		B				1.5*				
10		4	SS	10	30.1	1.89				Tough to stiff gray very silty CLAY, trace sand, very moist (CL-ML)
						1.5*				
		5	SS	5	32.6	0.75*				
								12.5	555.0	
15		6	SS	9	12.6					Loose gray clayey SILT, little sand, moist (ML)
20										
25										End of Boring at 15.0'
										* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

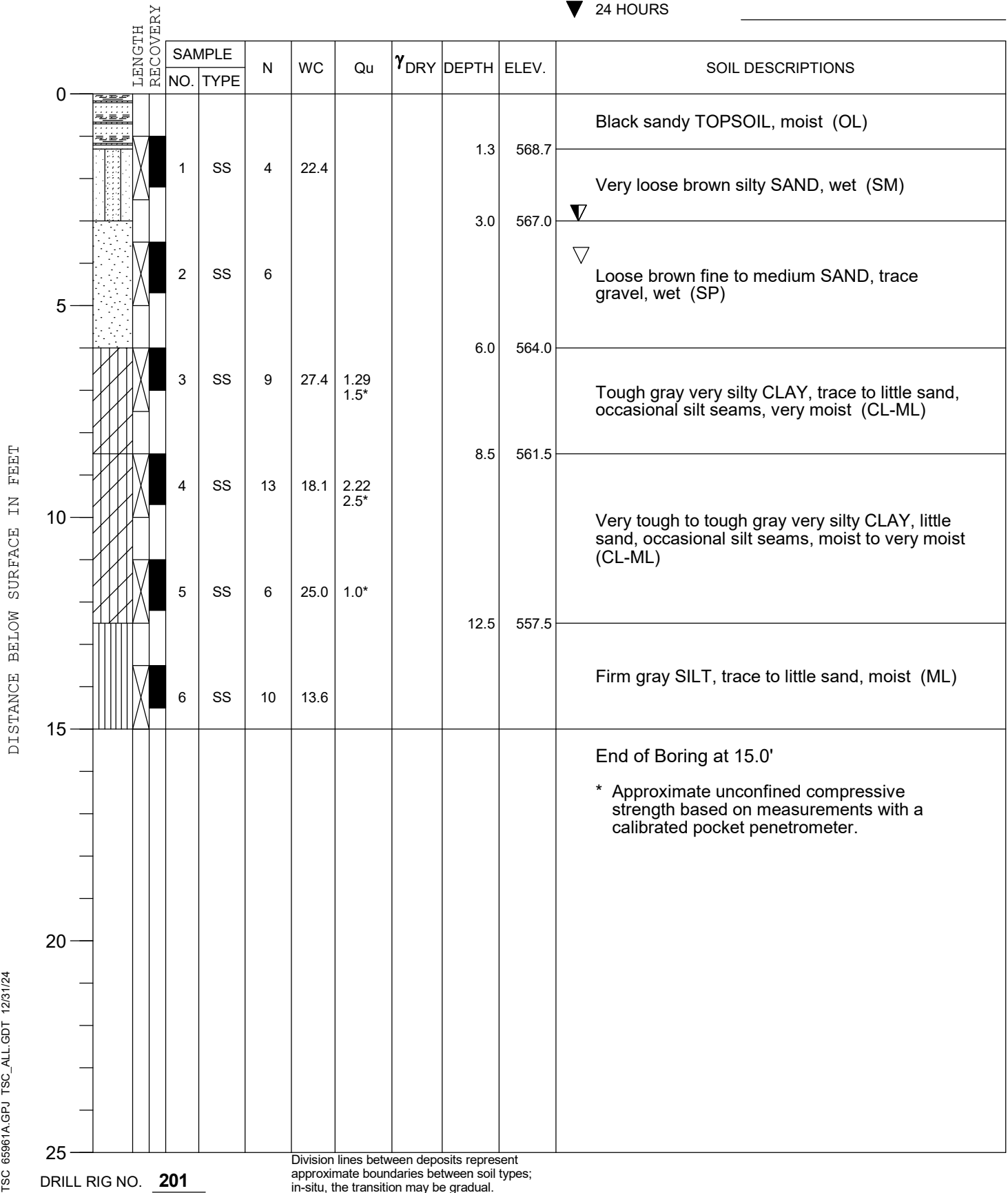
DRILL RIG NO. **201**



BORING **402** DATE STARTED **5-9-06** DATE COMPLETED **5-9-06** JOB **L-65,961A**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING	3.0'
▽ AT END OF BORING	4.0'
▼ 24 HOURS	



PROJECT **231 Acre Assemblage, Carbon Hill Road, Coal City, Illinois**CLIENT **Lakewood Homes, Inc., Hoffman Estates, Illinois**BORING **403** DATE STARTED **5-8-06** DATE COMPLETED **5-8-06** JOB **L-65,961A**

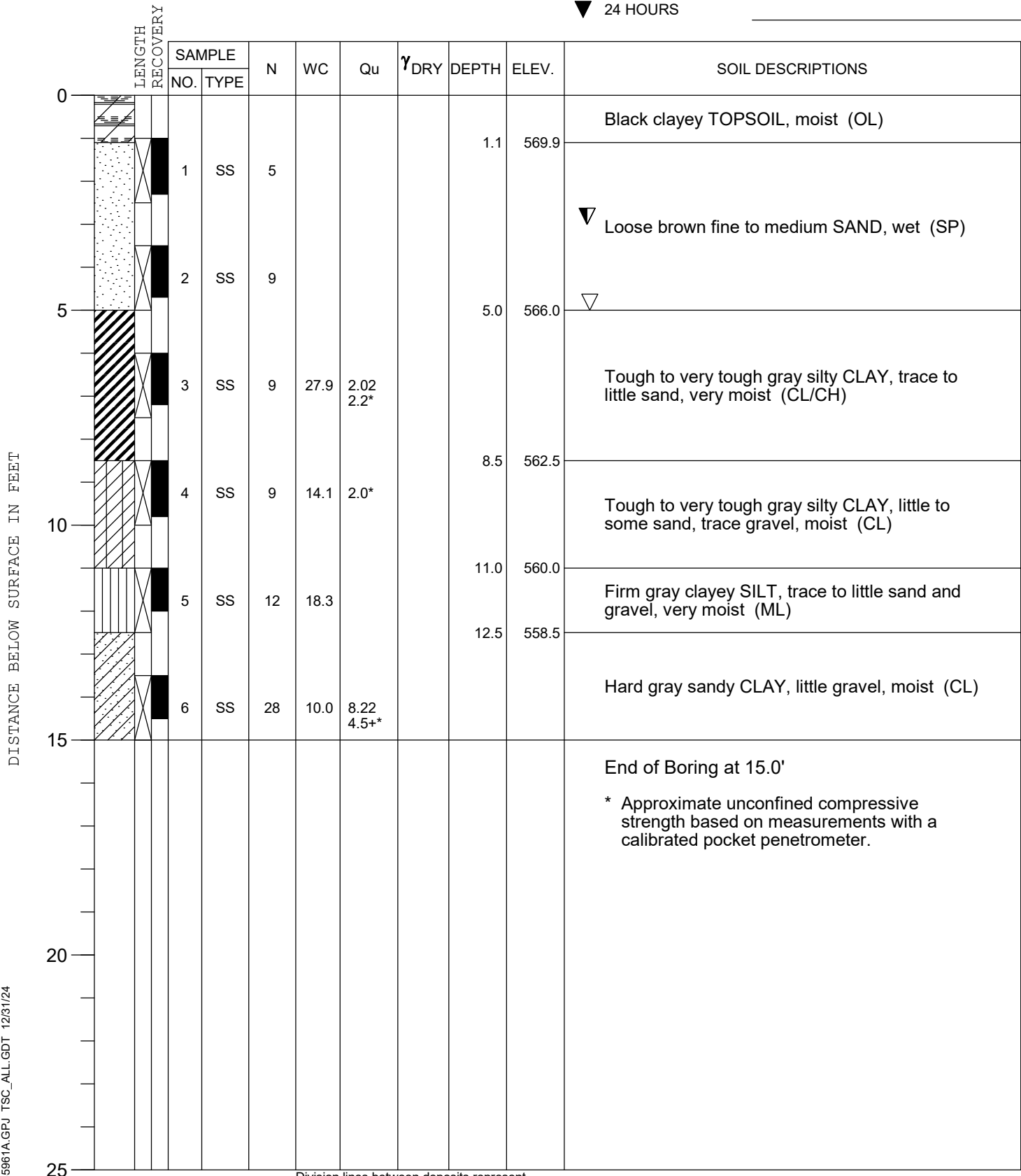
ELEVATIONS

GROUND SURFACE **571.0**END OF BORING **556.0**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **3.0'**▽ AT END OF BORING **5.0'**

▼ 24 HOURS

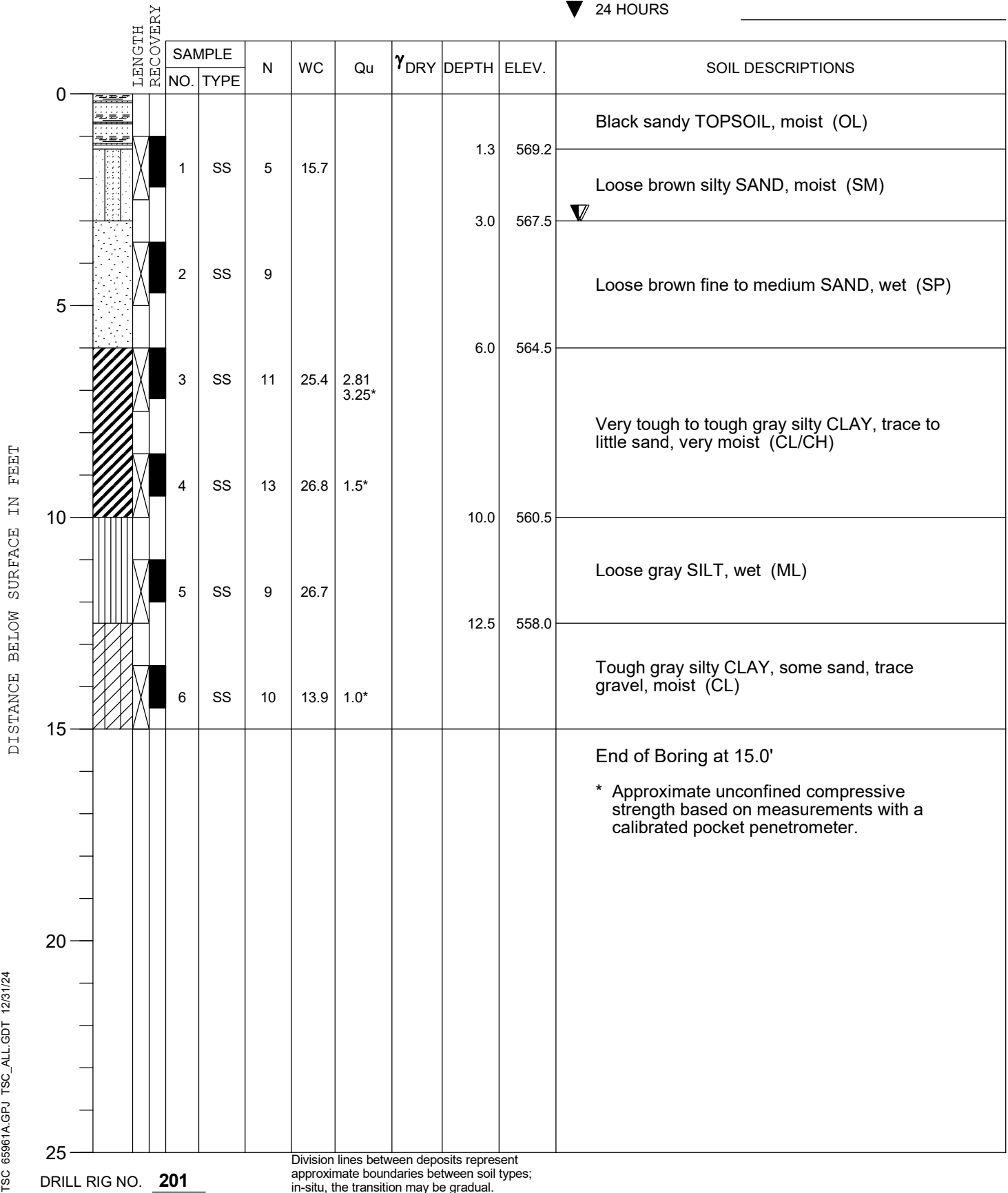


Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **201**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING	3.0'
▽ AT END OF BORING	3.0'
▼ 24 HOURS	



BORING **405** DATE STARTED **5-9-06** DATE COMPLETED **5-9-06** JOB **L-65,961A**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **Dry**

▽ AT END OF BORING **Dry**

▼ 24 HOURS

DISTANCE BELOW SURFACE IN FEET

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.



CLIENT **Lakewood Homes, Inc., Hoffman Estates, Illinois**

BORING	406	DATE STARTED	5-9-06	DATE COMPLETED	5-9-06	JOB	L-65,961A
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ELEVATIONS

GROUND SURFACE **568.0**

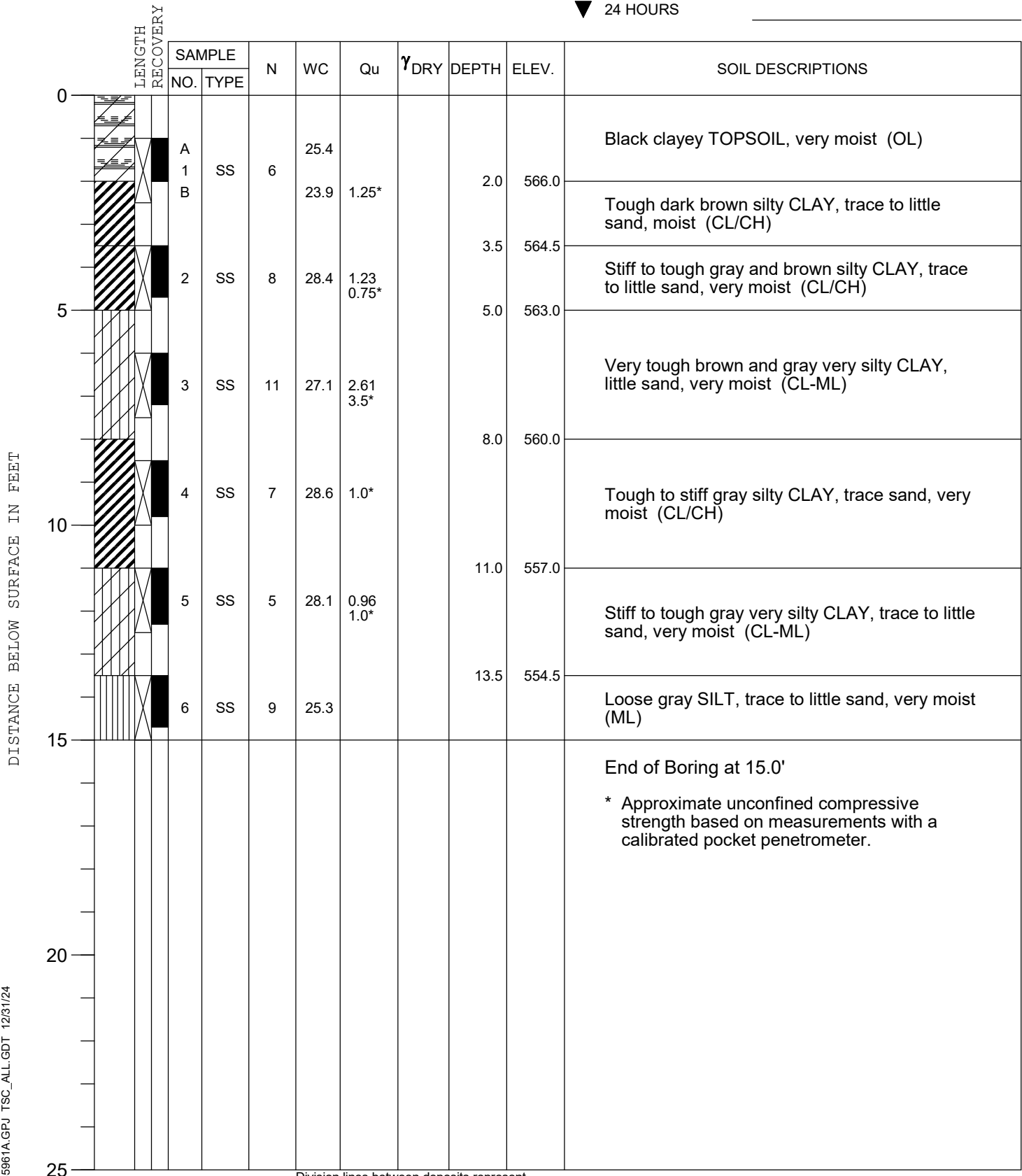
END OF BORING **553.0**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **Dry**

▽ AT END OF BORING **Dry**

▼ 24 HOURS



Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **201**

BORING **407** DATE STARTED **5-9-06** DATE COMPLETED **5-9-06** JOB **L-65,961A**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING 3.0'

▽ AT END OF BORING **4.0'**

▼ 24 HOURS

[illegible]

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **201**

PROJECT **231 Acre Assemblage, Carbon Hill Road, Coal City, Illinois**CLIENT **Lakewood Homes, Inc., Hoffman Estates, Illinois**BORING **408** DATE STARTED **5-8-06** DATE COMPLETED **5-8-06** JOB **L-65,961A**

ELEVATIONS

GROUND SURFACE **569.5**END OF BORING **554.5**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **3.0'**▽ AT END OF BORING **3.0'**

▼ 24 HOURS

	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black clayey TOPSOIL, moist (OL)
		1	SS	5	17.6			1.2	568.3	Loose brown silty SAND, moist (SM) ▼ Loose brown fine to medium SAND, wet (SP)
		A						3.0	566.5	
		2	SS	5	25.6	3.34 3.25*		4.0	565.5	
5		B								Very tough to tough gray silty CLAY, trace to little sand, occasional silt seams, very moist (CL/CH)
		3	SS	13	28.2	1.36 1.5*				
		4	SS	9	14.3			8.5	561.0	Loose to firm gray clayey SILT, some sand, trace gravel, moist to very moist (ML)
10		5	SS	6	23.5					
		6	SS	11	25.6					
15										End of Boring at 15.0' * Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
20										
25										

Division lines between deposits represent
approximate boundaries between soil types;
in-situ, the transition may be gradual.

DRILL RIG NO. **201**



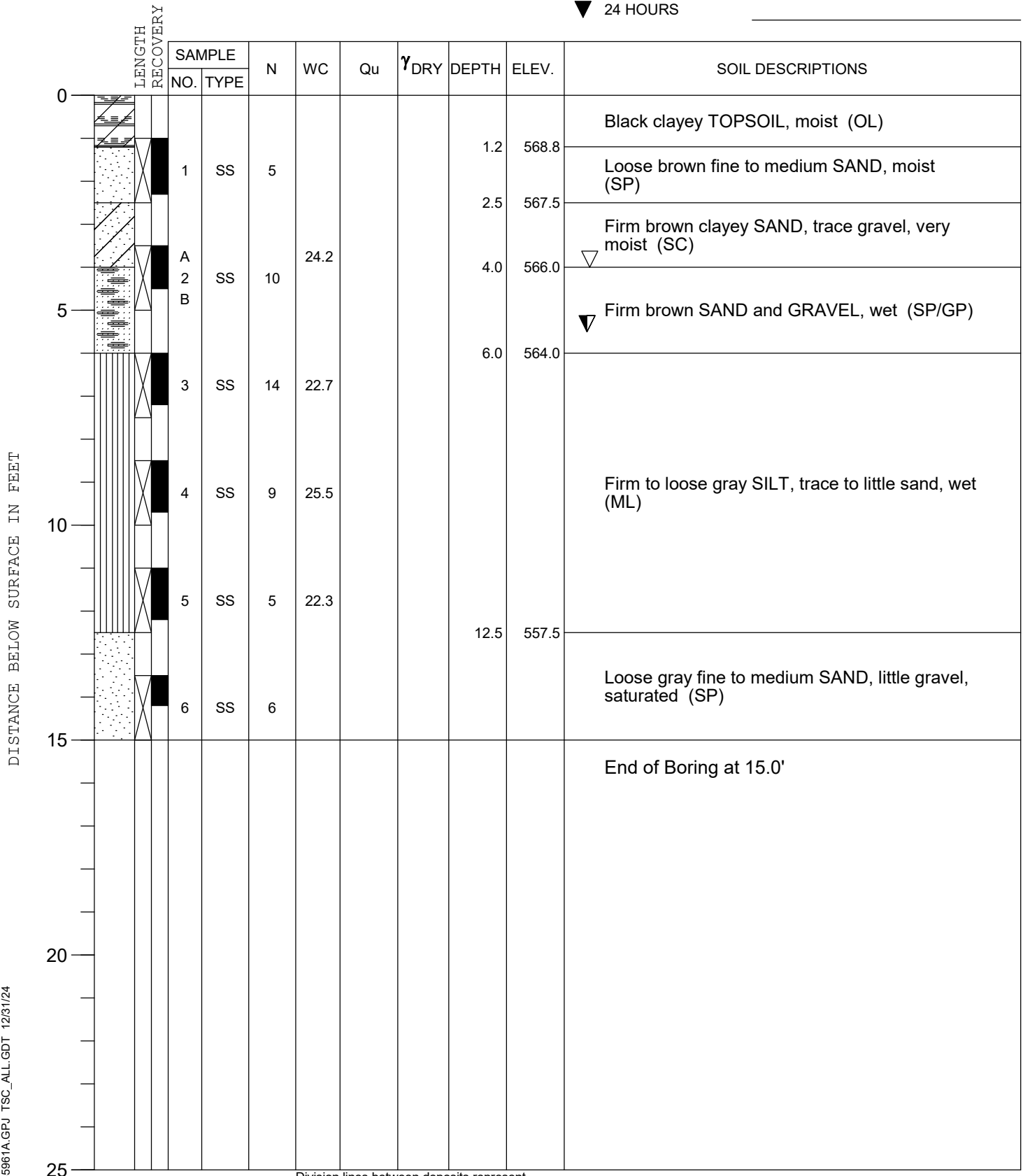
BORING **409** DATE STARTED **5-8-06** DATE COMPLETED **5-8-06** JOB **L-65,961A**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING 5.5'

▽ AT END OF BORING **4.0'**

▼ 24 HOURS



Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **201**

PROJECT **231 Acre Assemblage, Carbon Hill Road, Coal City, Illinois**CLIENT **Lakewood Homes, Inc., Hoffman Estates, Illinois**BORING **410** DATE STARTED **5-8-06** DATE COMPLETED **5-8-06** JOB **L-65,961A**

ELEVATIONS

GROUND SURFACE **568.0**END OF BORING **553.0**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **5.5'**▽ AT END OF BORING **13.0'**

▼ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black sandy TOPSOIL, moist (OL)
		1	SS	6	18.1	0.5*		1.3	566.7	Soft to stiff brown and gray silty CLAY, trace sand, occasional silt seams, moist to very moist (CL/CH)
		2	SS	6	34.0	0.96 0.75*		5.5	562.5	
		3	SS	14	23.4	4.26 4.5+*		8.0	560.0	Hard gray very silty CLAY, little sand, moist (CL-ML)
		4	SS	14	29.1	2.0*		11.0	557.0	Very tough to tough gray silty CLAY, trace sand, very moist (CL/CH)
		5	SS	9	23.6	1.75 1.5*		12.5	555.5	Tough gray very silty CLAY, little sand, moist (CL-ML)
		6	SS	10	25.3					Firm gray SILT, little sand, very moist (ML)
15										End of Boring at 15.0'
20										* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
25										

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **201**



CLIENT **Lakewood Homes, Inc., Hoffman Estates, Illinois**

BORING	411	DATE STARTED	5-9-06	DATE COMPLETED	5-9-06	JOB	L-65,961A
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ELEVATIONS

GROUND SURFACE **568.0**

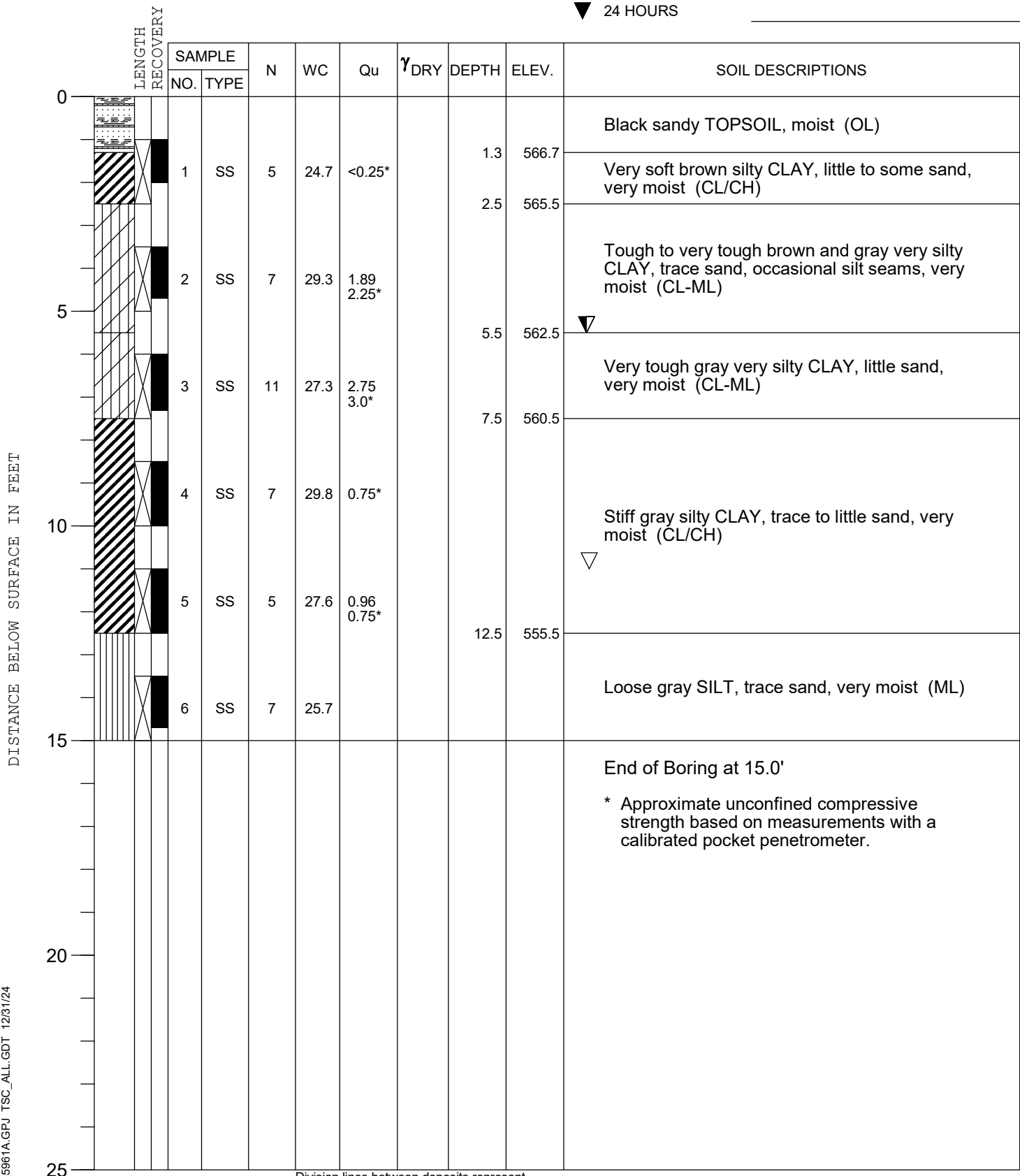
END OF BORING **553.0**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING 5.5'

▽ AT END OF BORING **11.0'**

▼ 24 HOURS



Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **201**

BORING **412** DATE STARTED **5-8-06** DATE COMPLETED **5-8-06** JOB **L-65,961A**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING	3.0'
▽ AT END OF BORING	3.0'
▼ 24 HOURS	

DRILL RIG NO. 201

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ _{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black sandy TOPSOIL, moist (OL)
1.5		A 1	SS	4	17.5				567.5	
3.0		B			17.6	0.25*			566.0	Very soft brown sandy CLAY, moist (CL)
5.0		2	SS	12						Firm brown SAND, trace gravel, saturated (SP)
6.0		3	SS	8	16.0	1.75*			563.0	Tough gray silty CLAY, little sand, moist (CL)
8.5		4	SS	10	24.4	0.75*			560.5	Stiff gray very silty CLAY, little to some sand, trace gravel, moist (CL-ML)
10.5		5	SS	7	23.4					Loose gray sandy SILT, wet (ML)
15.0		6	SS	8	28.7					
15.0										End of Boring at 15.0'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

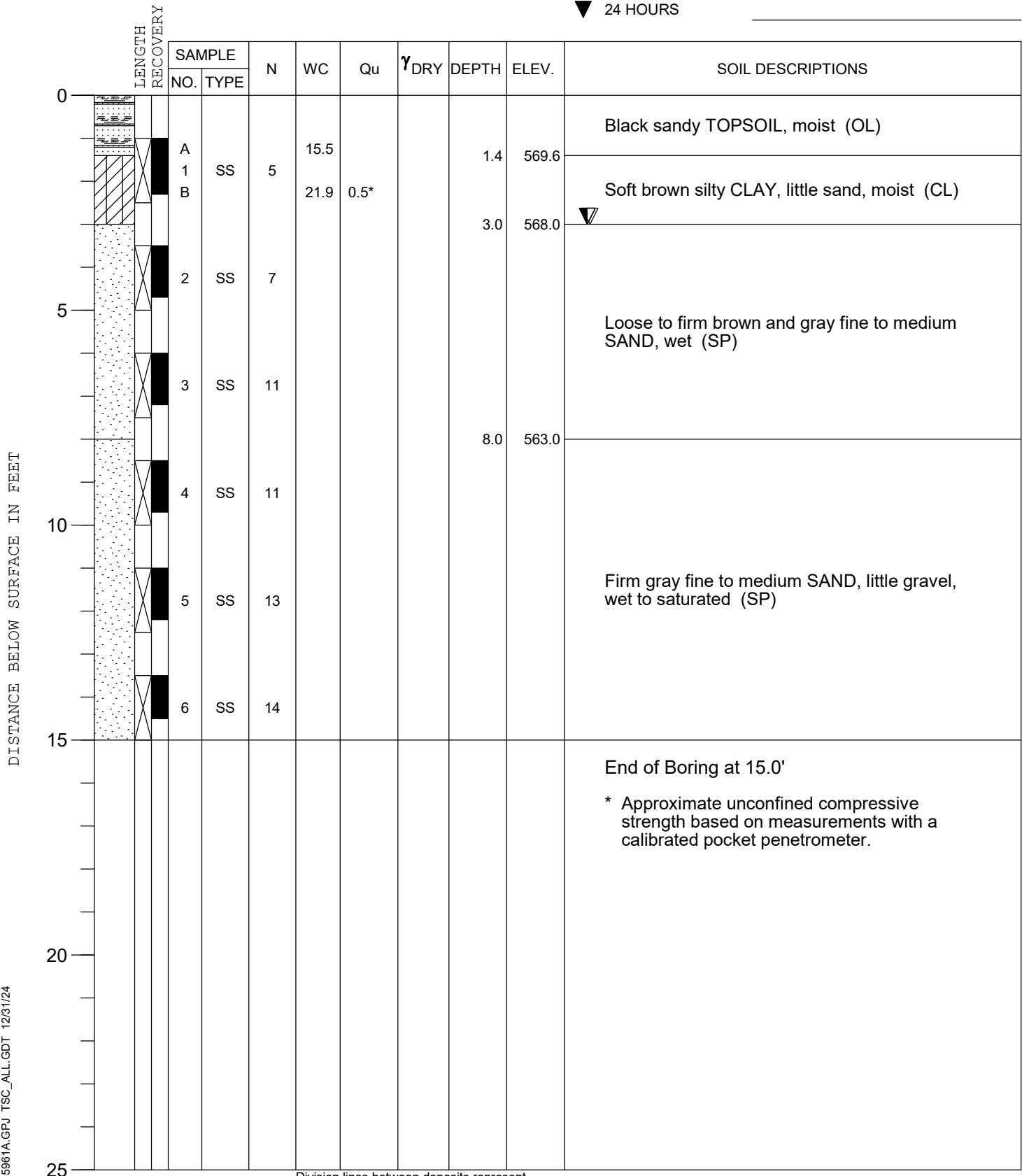
BORING **413** DATE STARTED **5-8-06** DATE COMPLETED **5-8-06** JOB **L-65,961A**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING 3.0'

▽ AT END OF BORING **3.0'**

▼ 24 HOURS



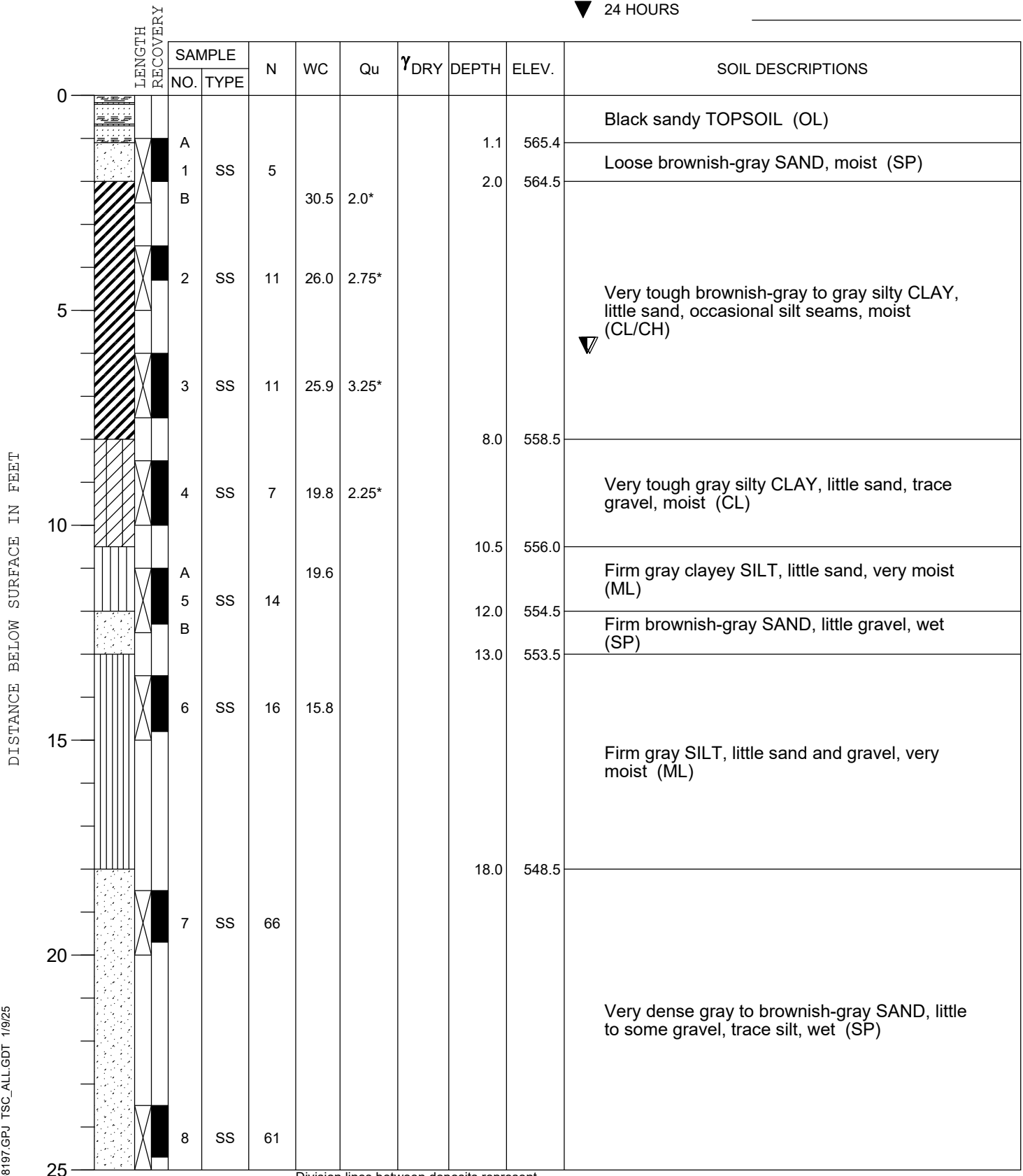
Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **201**

ELEVATIONS

 GROUND SURFACE **566.5**
 END OF BORING **516.5**

WATER LEVEL OBSERVATIONS

 ▽ WHILE DRILLING **6.0'**
 ▽ AT END OF BORING **6.0'**
 ▽ 24 HOURS


Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

PROJECT **Aligned DD - Coal City IL, Aligned Data Centers, Coal City, IL**CLIENT **Kimley-Horn, 11995 Singletree Lane Suite 225, Eden Prairie, MN**BORING **501** DATE STARTED **12-27-24** DATE COMPLETED **12-27-24** JOB **L-98,197**

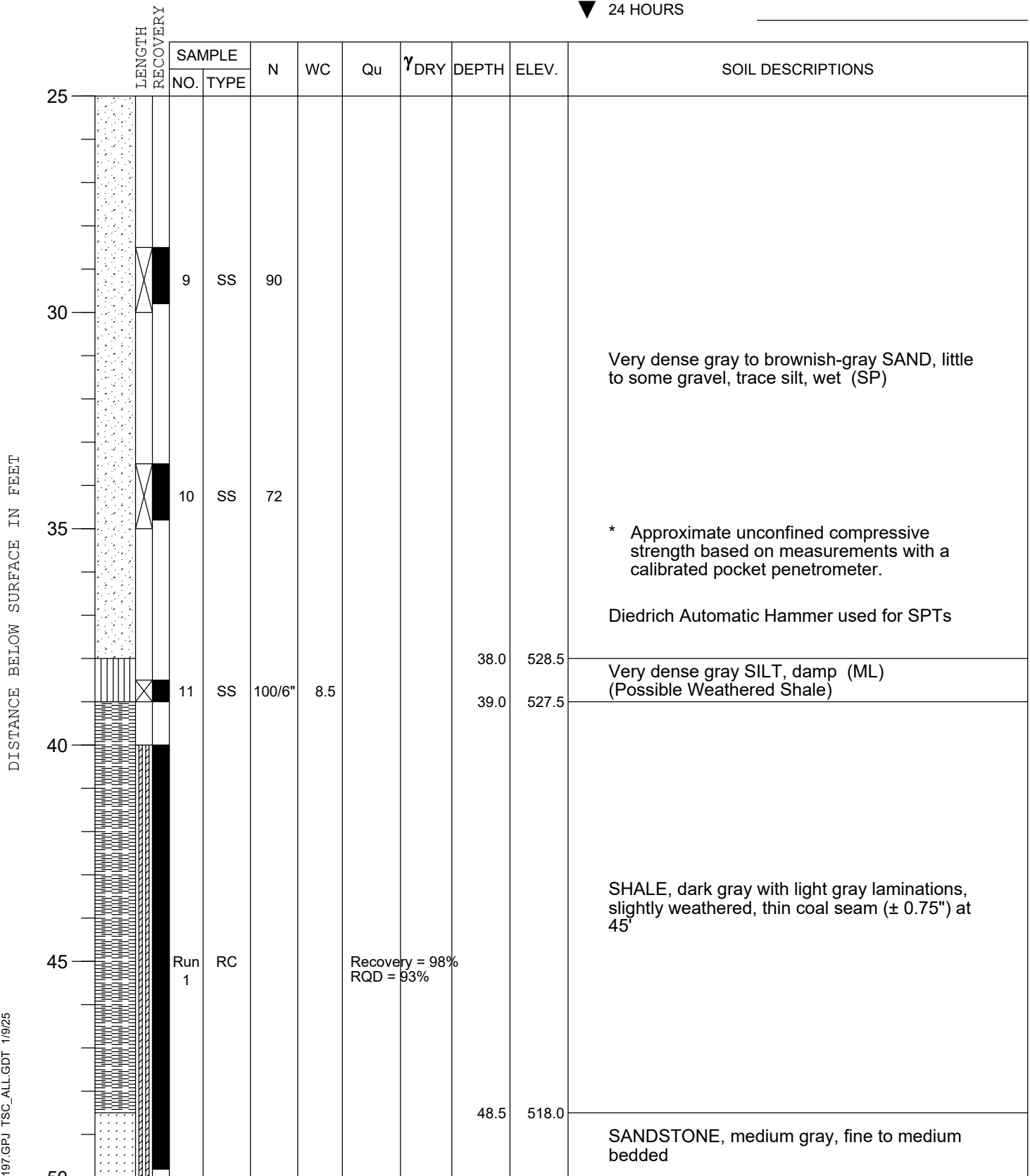
ELEVATIONS

GROUND SURFACE **566.5**END OF BORING **516.5**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **6.0'**▽ AT END OF BORING **6.0'**

▼ 24 HOURS



TSC 98197.GPJ TSC_ALL.GDT 1/9/25

DRILL RIG NO. **314**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

End of Boring at 50.0'

Page **2 of 2**

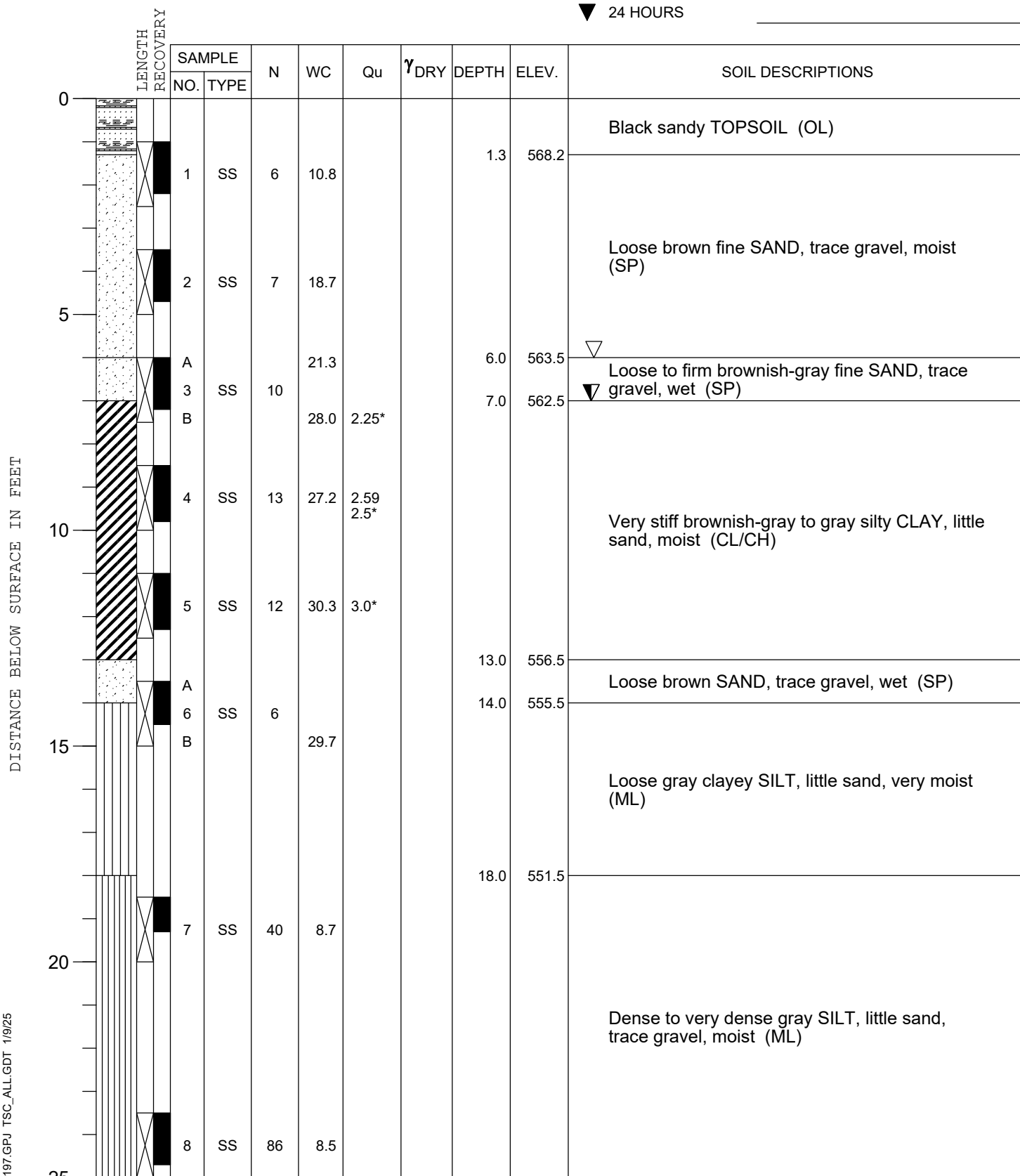
ELEVATIONS

GROUND SURFACE **569.5**END OF BORING **529.5**

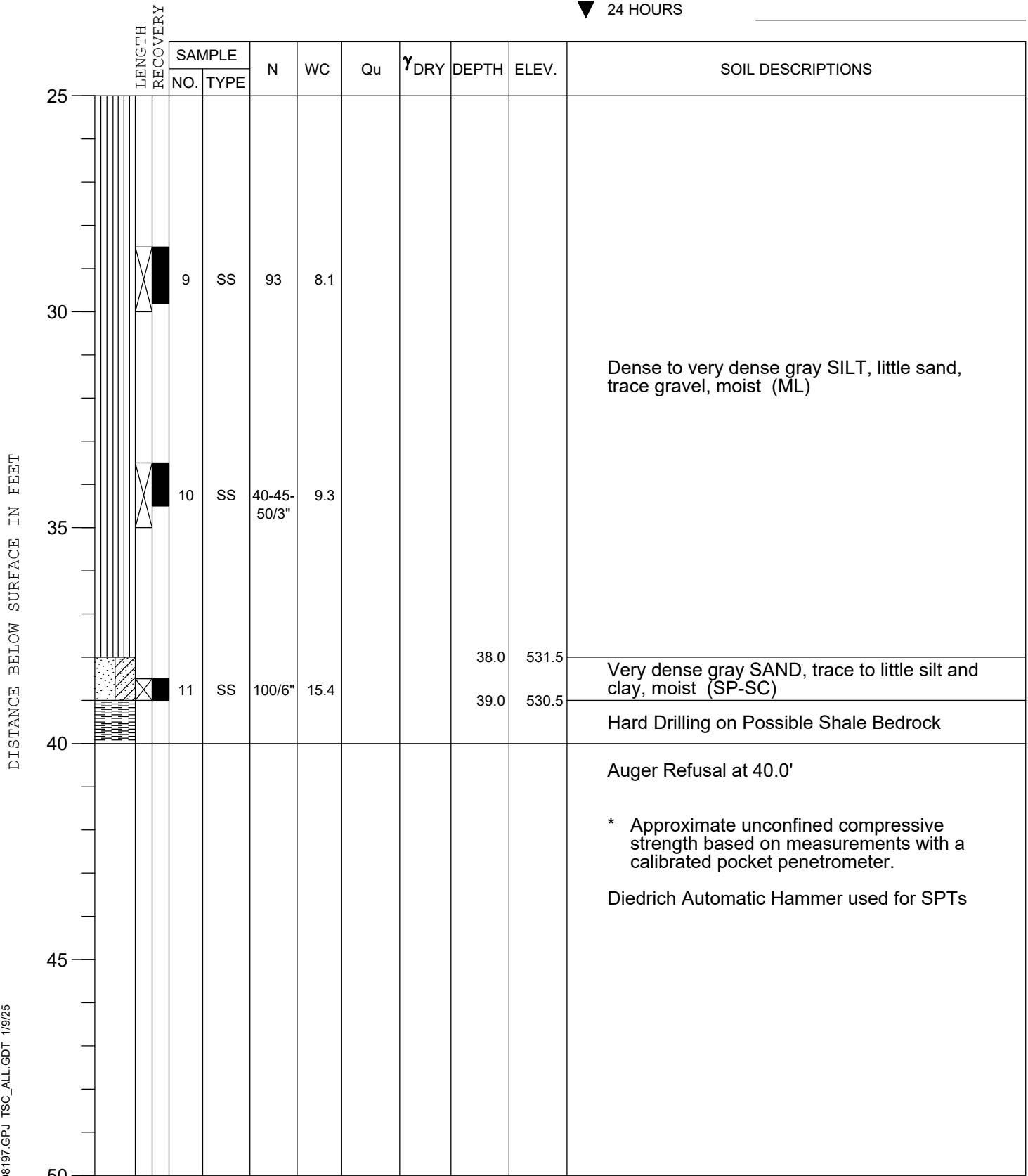
WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **7.0 '**▽ AT END OF BORING **6.0 '**

▼ 24 HOURS



Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

PROJECT **Aligned DD - Coal City IL, Aligned Data Centers, Coal City, IL**CLIENT **Kimley-Horn, 11995 Singletree Lane Suite 225, Eden Prairie, MN**BORING **502** DATE STARTED **12-20-24** DATE COMPLETED **12-20-24** JOB **L-98,197**ELEVATIONS
GROUND SURFACE **569.5**
END OF BORING **529.5**WATER LEVEL OBSERVATIONS
▽ WHILE DRILLING **7.0'**
▽ AT END OF BORING **6.0'**
▽ 24 HOURS

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **314**

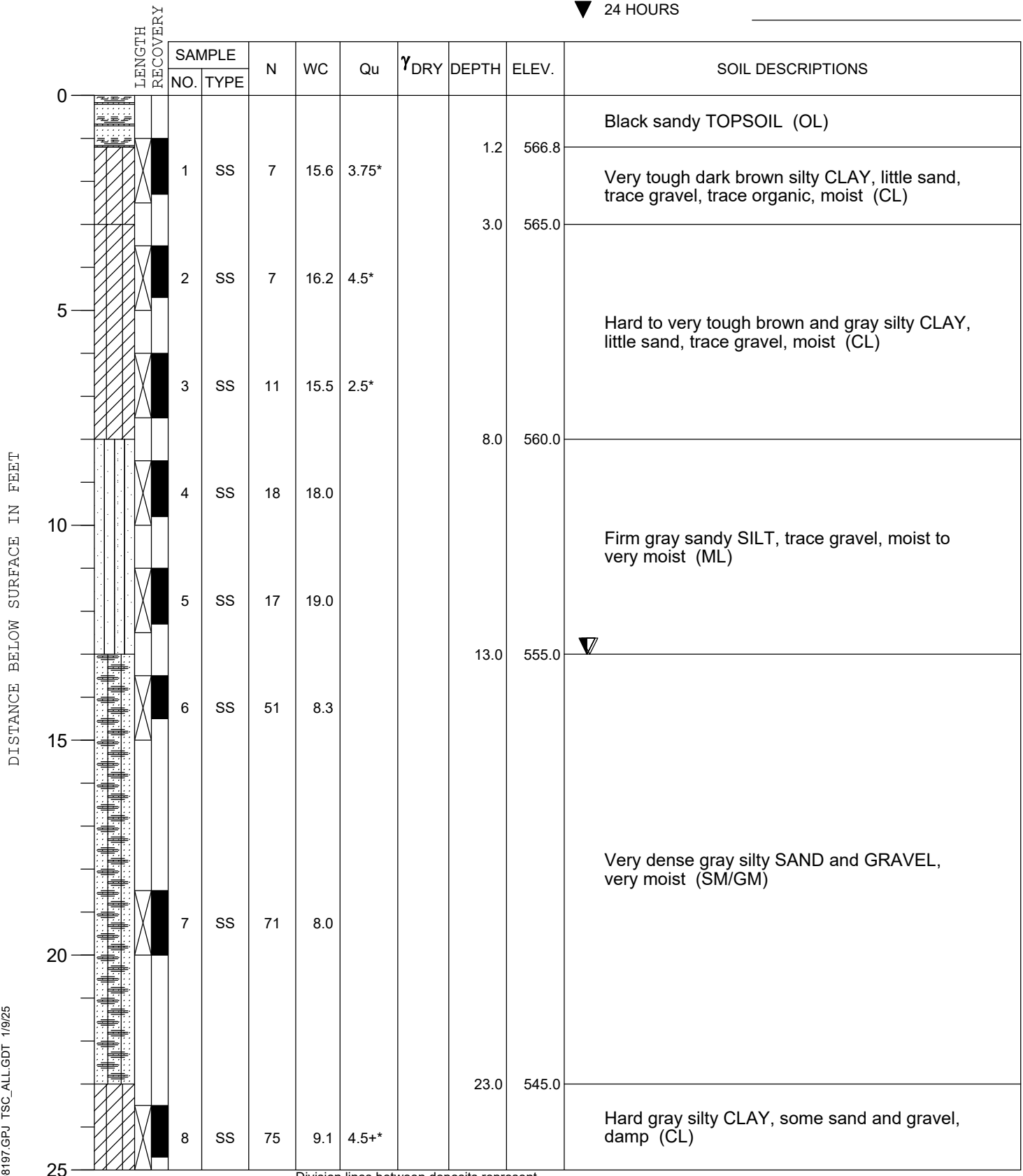
Page 2 of 2

ELEVATIONS

GROUND SURFACE **568.0**
 END OF BORING **528.0**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **13.0'**
 ▽ AT END OF BORING **13.0'**
 ▼ 24 HOURS



Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

ELEVATIONS

GROUND SURFACE **568.0**END OF BORING **528.0**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **13.0 '**▽ AT END OF BORING **13.0 '**

▼ 24 HOURS

	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
25										Hard gray silty CLAY, some sand and gravel, damp (CL)
								28.0	540.0	
30		9	SS	92	8.3					Very dense gray sandy SILT, trace gravel, damp to moist (ML)
35		10	SS	86	9.1					
								38.0	530.0	
40		11	SS	100/7"	11.6					Very dense gray SILT, some sand, damp (ML) (Possible Weathered Shale)
										Auger Refusal at 40.0'
										* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
										Diedrich Automatic Hammer used for SPTs
45										
50										

DISTANCE BELOW SURFACE IN FEET

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

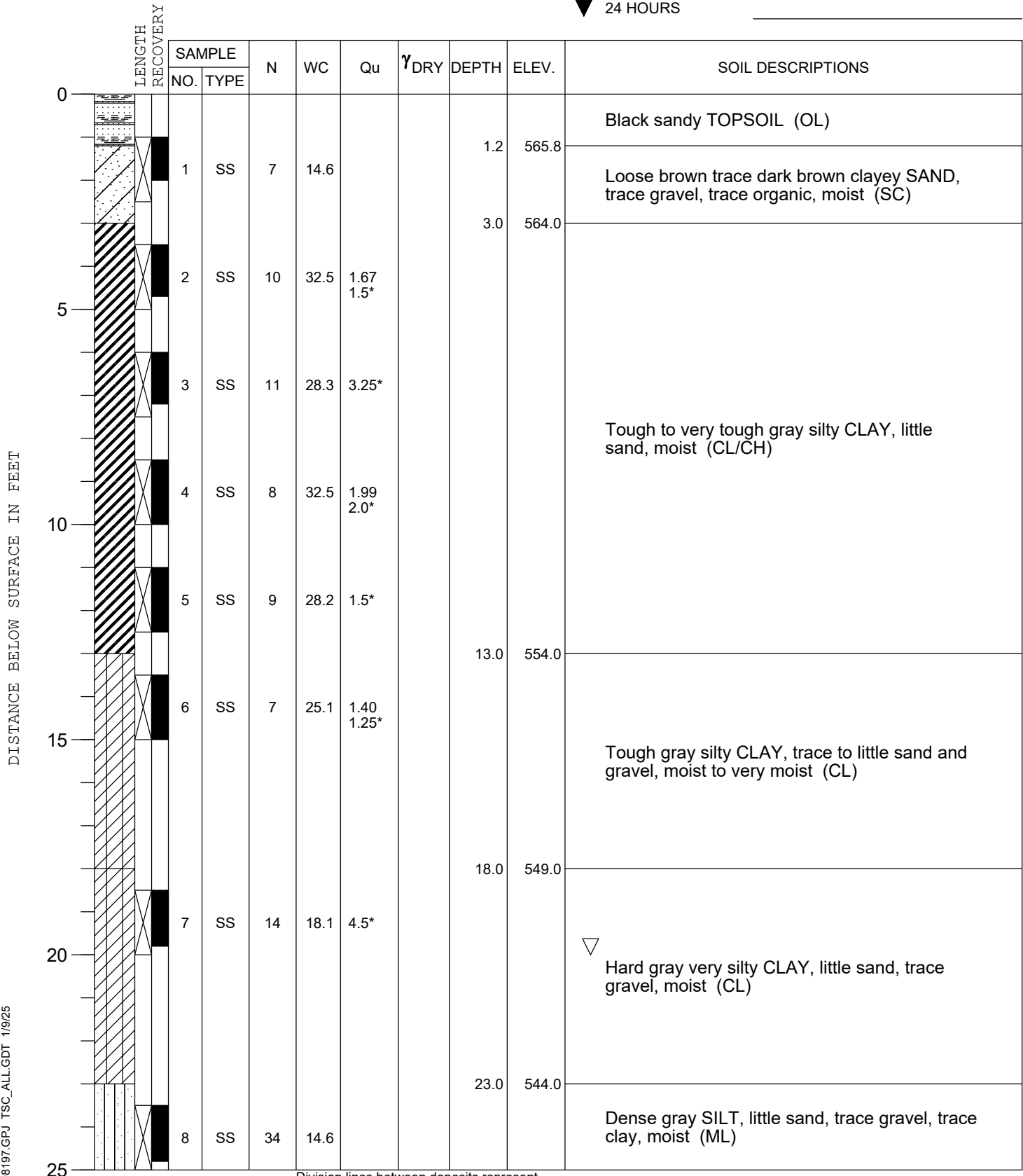
ELEVATIONS

GROUND SURFACE **567.0**END OF BORING **527.0**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **28.0 '**▽ AT END OF BORING **20.0 '**

▼ 24 HOURS

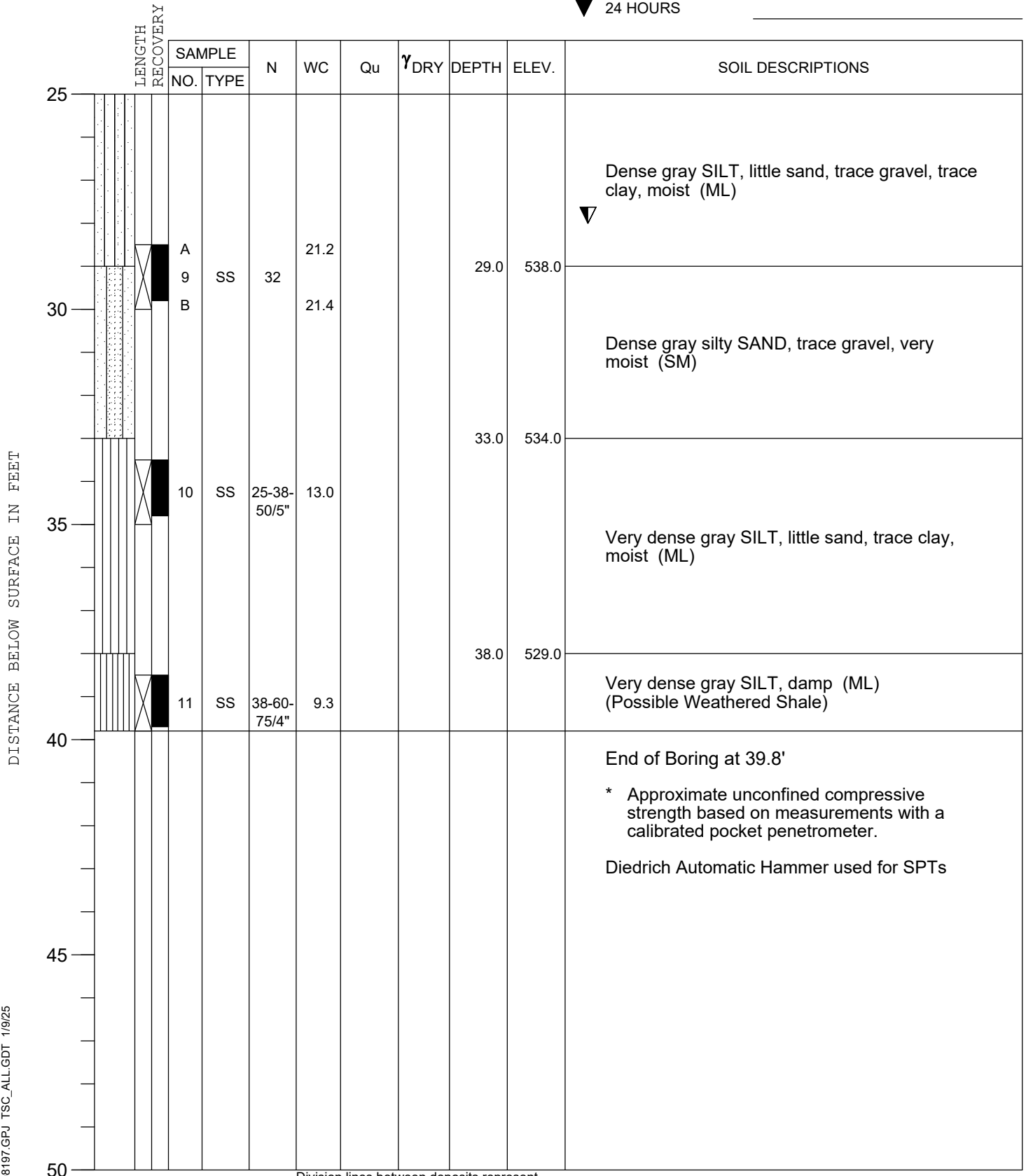


WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING 28.0'

▽ AT END OF BORING **20.0'**

▼ 24 HOURS



Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

ELEVATIONS

GROUND SURFACE **567.5**END OF BORING **528.8**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **4.0'**▽ AT END OF BORING **3.0'**

▼ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black sandy TOPSOIL (OL)
		1	SS	7	16.8			1.2	566.3	Loose brown silty SAND, trace clay, very moist (SM)
		2	SS	11	21.9			3.0	564.5	▼ Firm brown silty fine SAND, very moist to wet (SM)
5		3	SS	11	27.8	2.0*		5.5	562.0	Very tough to tough gray silty CLAY, little sand, moist (CL/CH)
		4	SS	10	27.6	2.0*				
		5	SS	13	27.2	1.5*				
10		6	SS	9	25.6			13.0	554.5	Loose gray SILT, little sand, trace clay, very moist (ML)
15		7	SS	19	10.8	2.25*		18.0	549.5	Very stiff gray very silty CLAY, some sand, trace gravel, moist (CL-ML)
20		8	SS	37	15.0	4.5+*		23.0	544.5	Hard gray silty CLAY, little sand, trace gravel, moist (CL)
25										

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

PROJECT **Aligned DD - Coal City IL, Aligned Data Centers, Coal City, IL**CLIENT **Kimley-Horn, 11995 Singletree Lane Suite 225, Eden Prairie, MN**BORING **505** DATE STARTED **12-26-24** DATE COMPLETED **12-26-24** JOB **L-98,197**

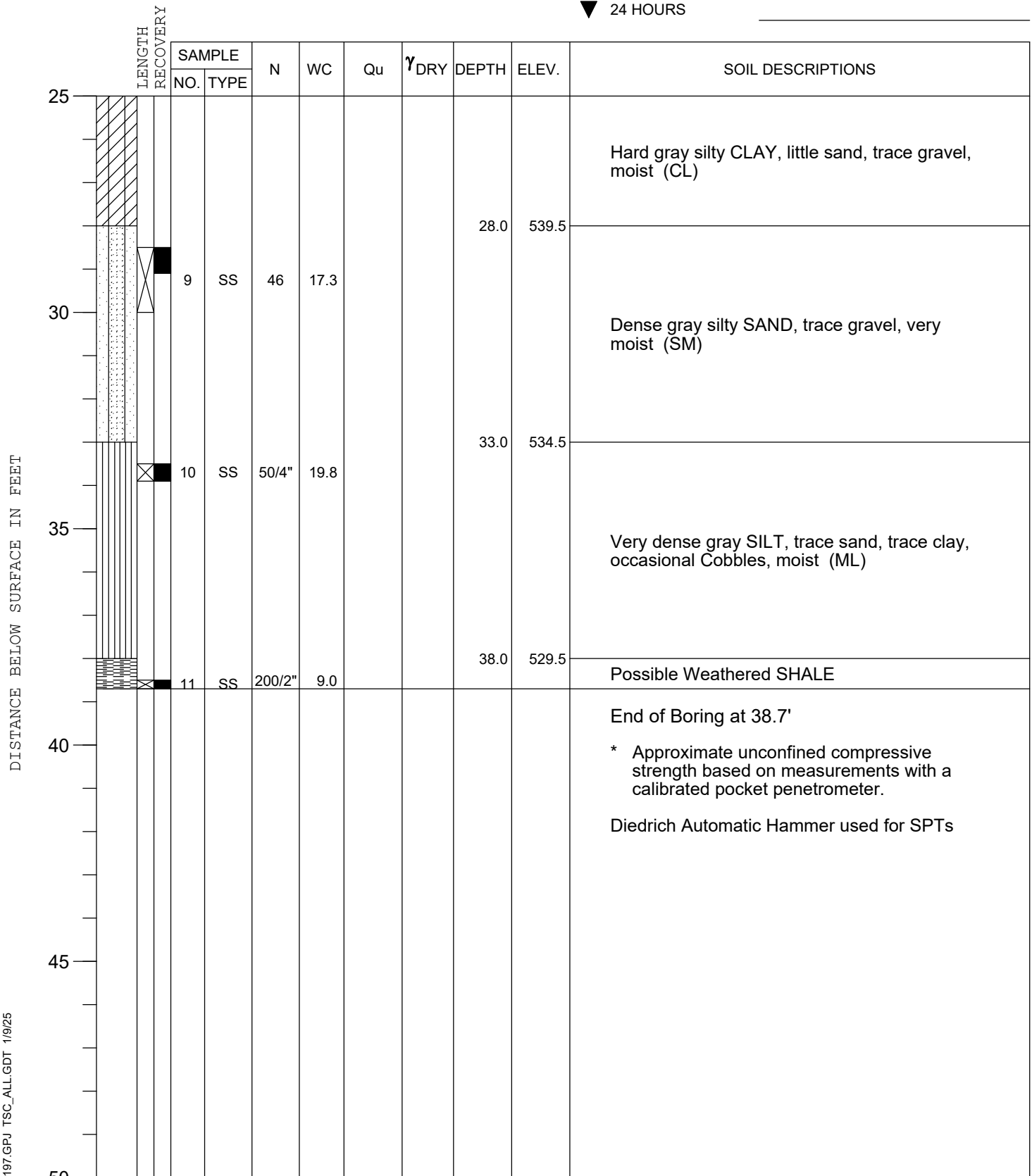
ELEVATIONS

GROUND SURFACE **567.5**END OF BORING **528.8**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **4.0'**▽ AT END OF BORING **3.0'**

▼ 24 HOURS



Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

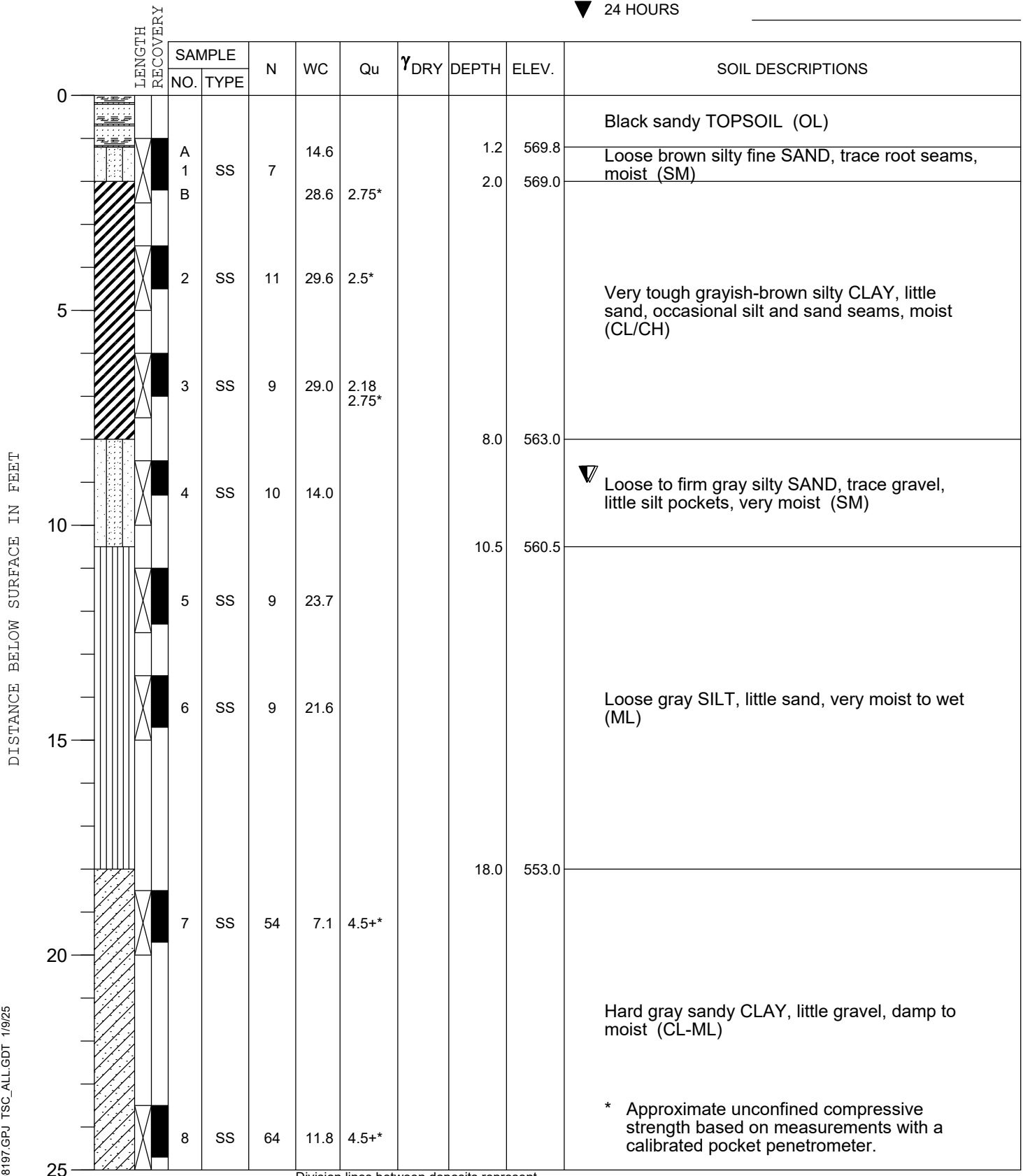
DRILL RIG NO. **314**Page **2 of 2**

ELEVATIONS

GROUND SURFACE **571.0**
END OF BORING **522.0**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **9.0'**
▽ AT END OF BORING **9.0'**
▼ 24 HOURS



Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

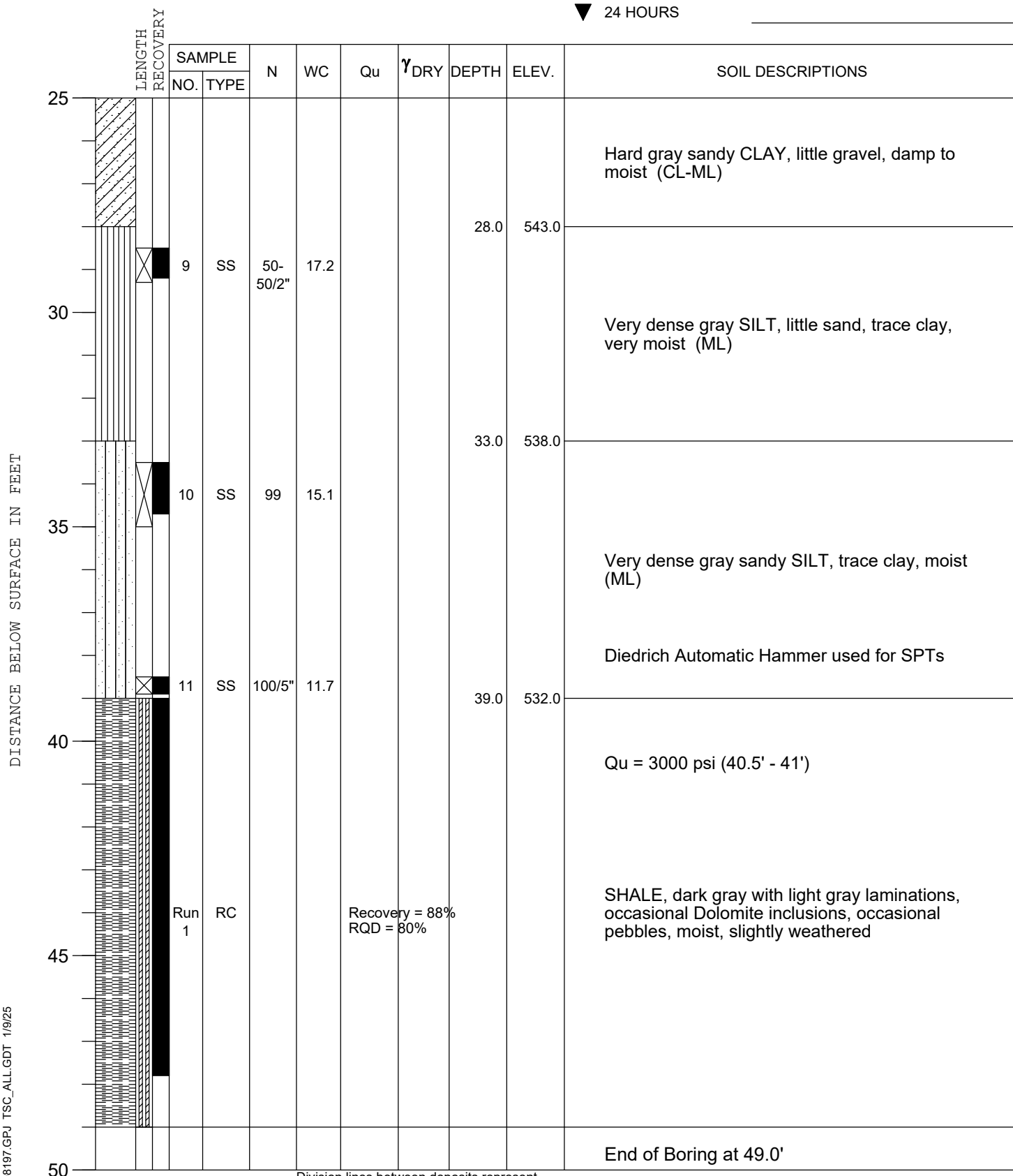
ELEVATIONS

GROUND SURFACE **571.0**END OF BORING **522.0**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **9.0'**▽ AT END OF BORING **9.0'**

▼ 24 HOURS



Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

PROJECT **Aligned DD - Coal City IL, Aligned Data Centers, Coal City, IL**CLIENT **Kimley-Horn, 11995 Singletree Lane Suite 225, Eden Prairie, MN**BORING **507** DATE STARTED **12-18-24** DATE COMPLETED **12-18-24** JOB **L-98,197**

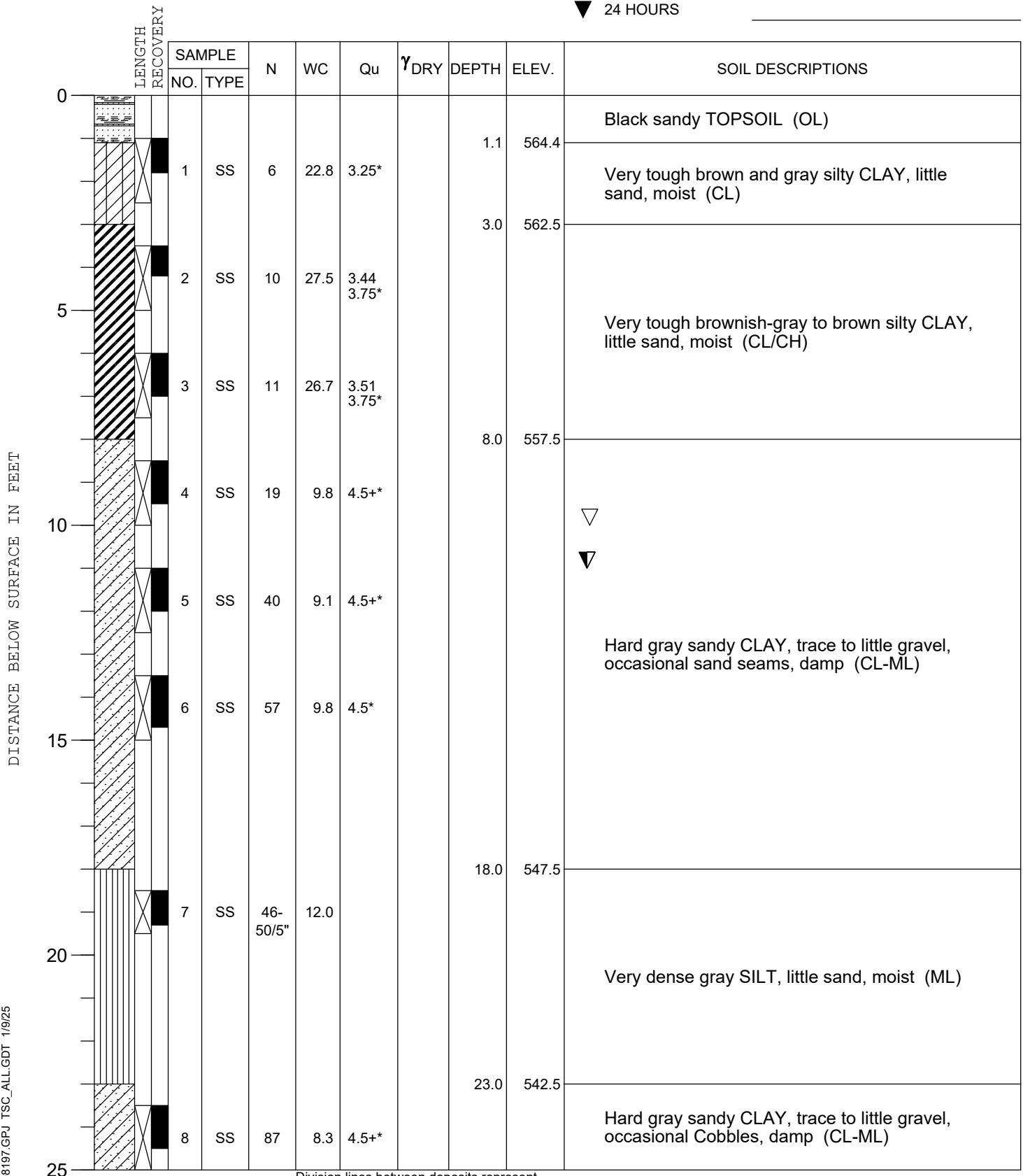
ELEVATIONS

GROUND SURFACE **565.5**END OF BORING **521.4**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **11.0 '**▽ AT END OF BORING **10.0 '**

▼ 24 HOURS



Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **314**Page **1** of **2**

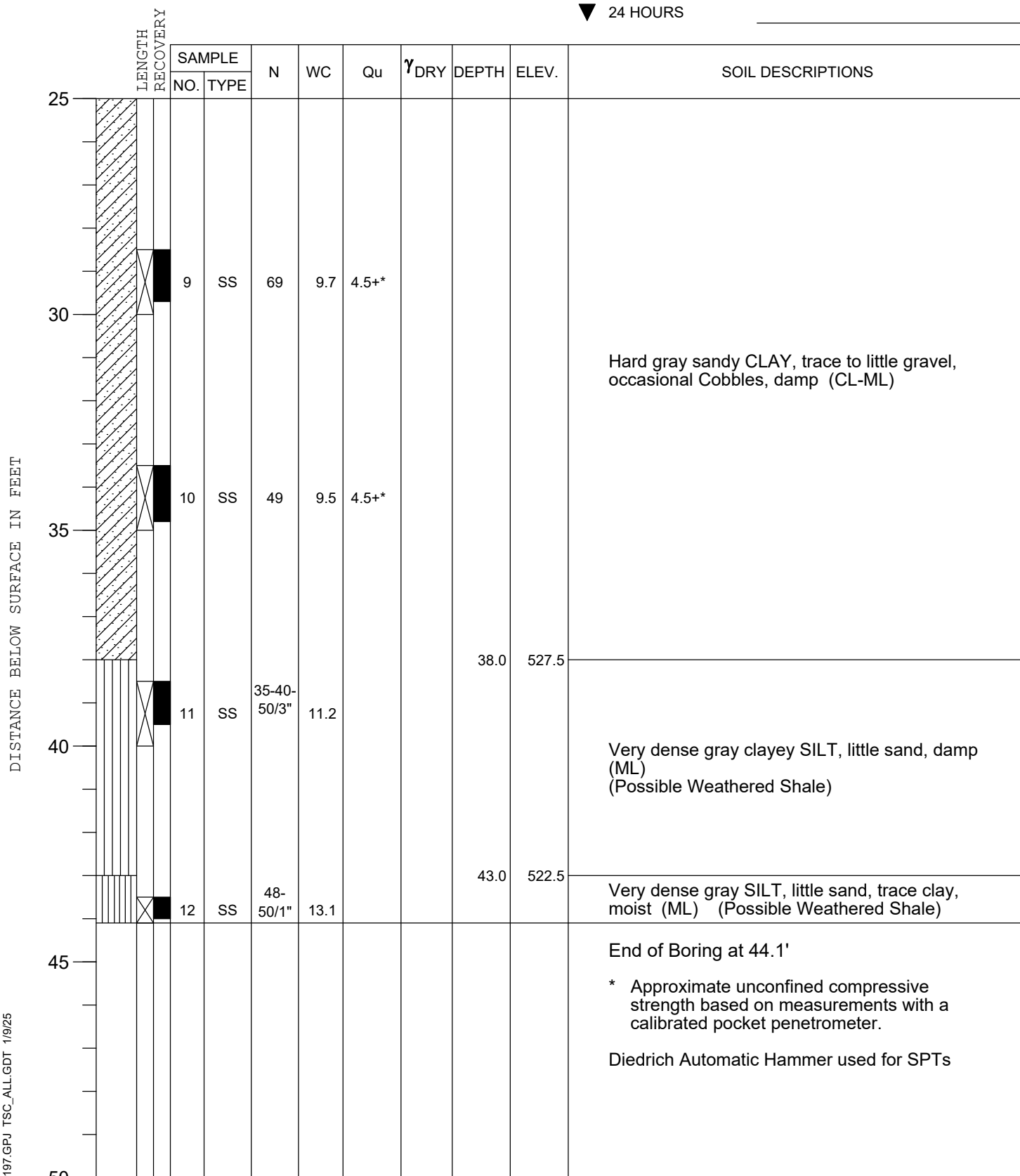
ELEVATIONS

GROUND SURFACE **565.5**END OF BORING **521.4**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **11.0 '**▽ AT END OF BORING **10.0 '**

▼ 24 HOURS



Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

PROJECT **Aligned DD - Coal City IL, Aligned Data Centers, Coal City, IL**CLIENT **Kimley-Horn, 11995 Singletree Lane Suite 225, Eden Prairie, MN**BORING **508** DATE STARTED **12-19-24** DATE COMPLETED **12-19-24** JOB **L-98,197**

ELEVATIONS

GROUND SURFACE **565.5**END OF BORING **527.5**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **18.0 '**▽ AT END OF BORING **18.0 '**

▼ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black sandy TOPSOIL (OL)
		1	SS	5	19.8	1.5*		1.3	564.2	Tough brownish-gray sandy CLAY, trace gravel, moist (CL)
5		2	SS	11	28.9	2.85 3.5*		3.0	562.5	Very tough brown and gray to gray silty CLAY, little sand, moist (CL/CH)
		3	SS	12	28.9	2.5*				
		4	SS	9	27.4	2.5*		10.5	555.0	
10		5	SS	9	19.6	3.0*				Very stiff gray very silty CLAY, little sand, moist (CL)
		6	SS	8	21.5			13.0	552.5	▽ Loose to firm gray SILT, little sand, trace clay, moist (ML)
15		7	SS	10	17.1					
20										Hard gray silty CLAY, some sand, trace gravel, damp (CL)
		8	SS	71	9.5	4.5+*		23.0	542.5	
25										

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **314**Page **1 of 2**

PROJECT **Aligned DD - Coal City IL, Aligned Data Centers, Coal City, IL**CLIENT **Kimley-Horn, 11995 Singletree Lane Suite 225, Eden Prairie, MN**BORING **508** DATE STARTED **12-19-24** DATE COMPLETED **12-19-24** JOB **L-98,197**ELEVATIONS
GROUND SURFACE **565.5**
END OF BORING **527.5**WATER LEVEL OBSERVATIONS
▽ WHILE DRILLING **18.0 '**
▽ AT END OF BORING **18.0 '**
▽ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
25										Hard gray silty CLAY, some sand, trace gravel, damp (CL)
								28.0	537.5	
30		9	SS	40-46-50/4"	12.8					Very dense gray SILT, little sand, trace clay, moist (CL)
		10	SS	36-47-50/0"	13.7			34.5	531.0	Possible SHALE Bedrock (Very Hard Drilling)
35										
										Auger Refusal at 38.0'
40										* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer. Diedrich Automatic Hammer used for SPTs
45										
50										

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **314**

Page 2 of 2

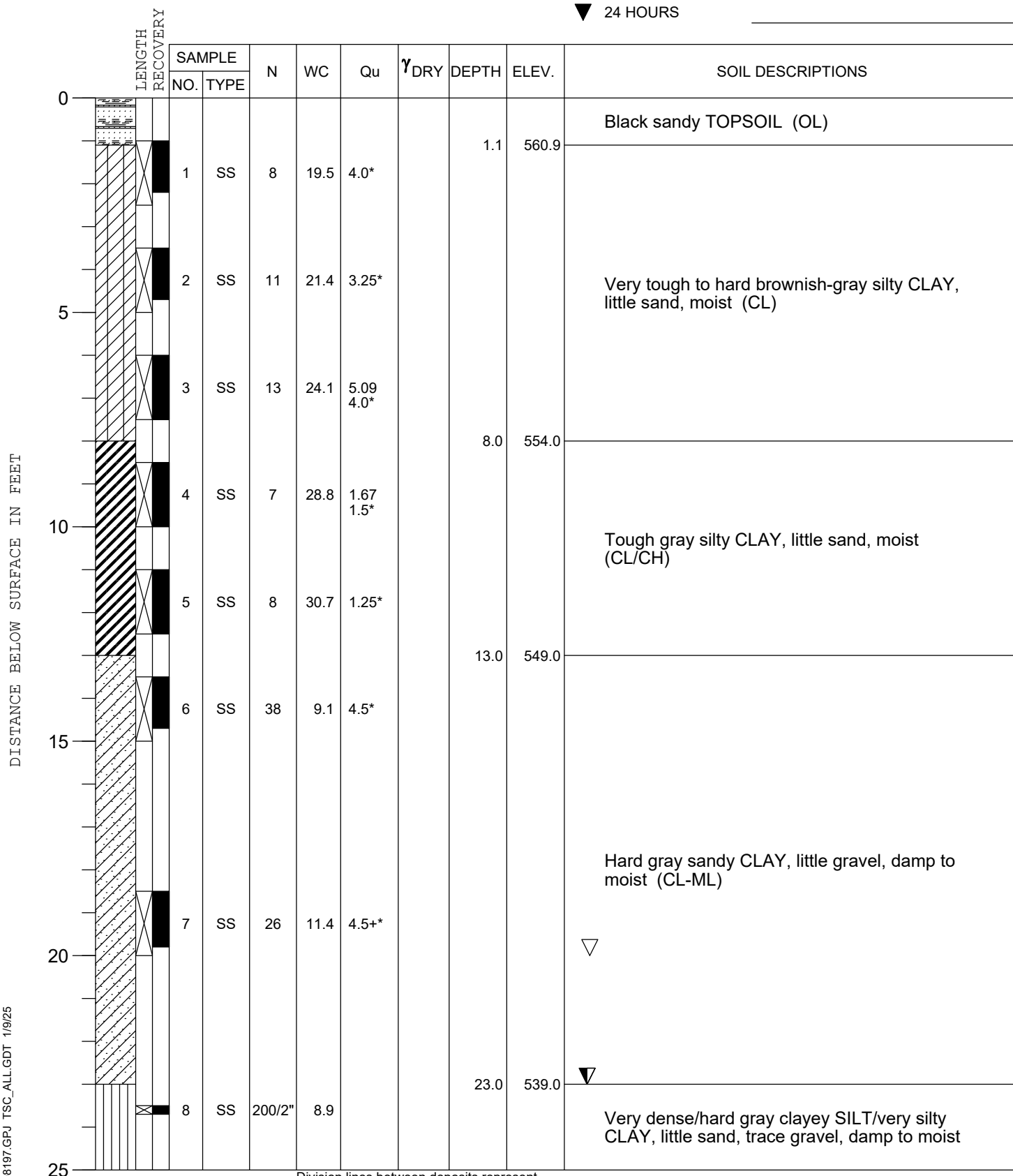
ELEVATIONS

GROUND SURFACE **562.0**END OF BORING **527.0**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **23.0**▽ AT END OF BORING **20.0**

▼ 24 HOURS



PROJECT Aligned DD - Coal City IL, Aligned Data Centers, Coal City, ILCLIENT Kimley-Horn, 11995 Singletree Lane Suite 225, Eden Prairie, MNBORING 509 DATE STARTED 12-27-24 DATE COMPLETED 12-27-24 JOB L-98,197

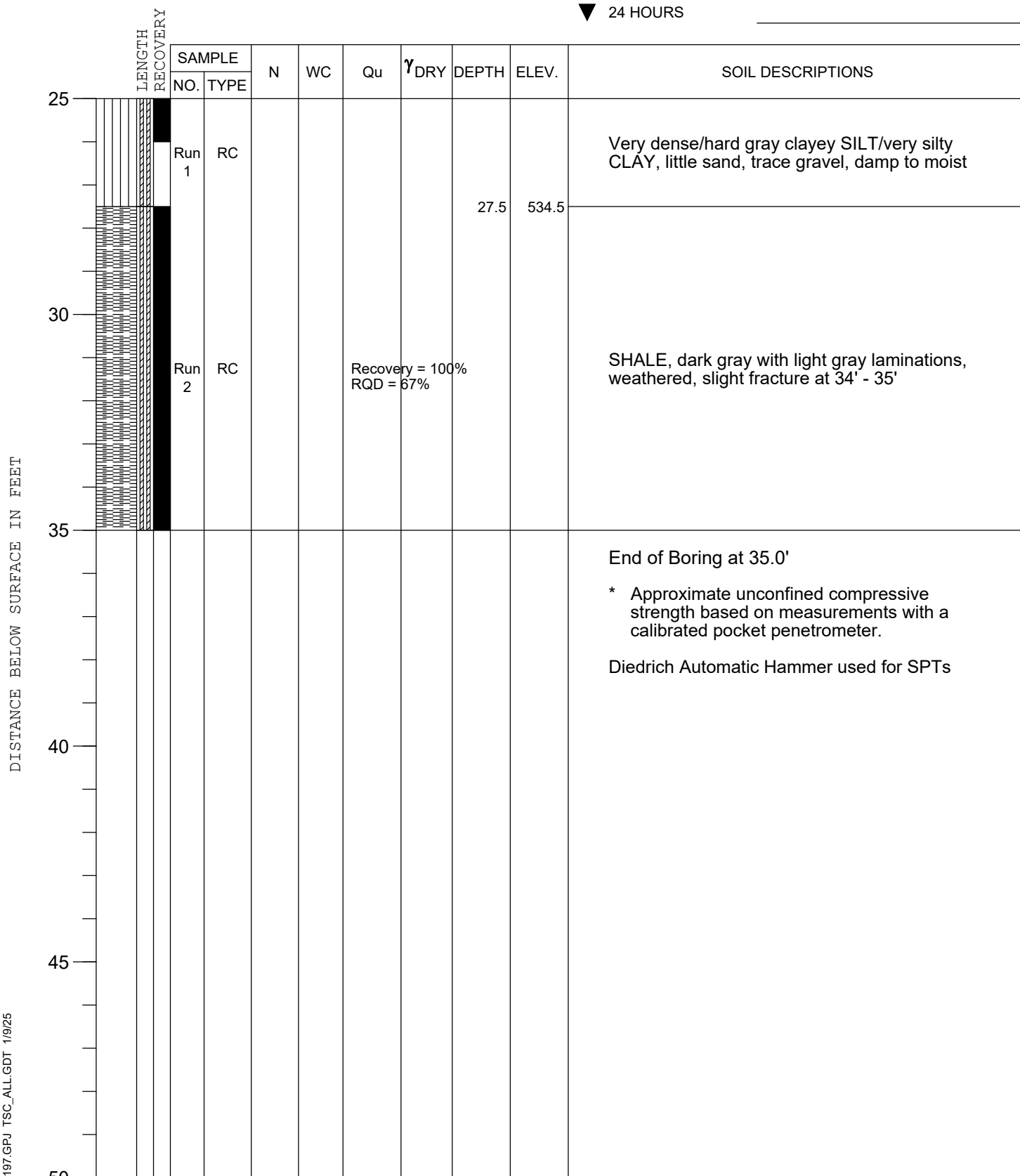
ELEVATIONS

GROUND SURFACE 562.0END OF BORING 527.0

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING 23.0▽ AT END OF BORING 20.0

▼ 24 HOURS



Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. 314

Page 2 of 2

PROJECT **Aligned DD - Coal City IL, Aligned Data Centers, Coal City, IL**CLIENT **Kimley-Horn, 11995 Singletree Lane Suite 225, Eden Prairie, MN**BORING **510** DATE STARTED **12-19-24** DATE COMPLETED **12-19-24** JOB **L-98,197**

ELEVATIONS

GROUND SURFACE **565.0**END OF BORING **531.2**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **19.0 '**▽ AT END OF BORING **18.0 '**

▼ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black sandy TOPSOIL (OL)
		1	SS	8	18.1	2.75*		1.2	563.8	Very tough brown and gray silty CLAY, little sand, trace gravel, moist (CL)
		2	SS	10	29.0	2.5*		3.0	562.0	Very tough brownish-gray silty CLAY, little sand, moist (CL/CH)
5		A						5.5	559.5	Firm brownish-gray SAND, trace gravel, moist (SP)
		3	SS	12				7.0	558.0	
		B			27.8	2.5*				
		4	SS	9	24.5	2.25*				Very tough gray silty CLAY, little sand, moist (CL/CH)
10								10.5	554.5	
		5	SS	11	16.8	2.75*				
		6	SS	14	15.5	3.75*				Very tough gray silty CLAY, little sand, trace gravel, moist (CL)
15										
		7	SS	36-55-50/3"	7.5	4.5+*		18.0	547.0	
20										
		8	SS	72	9.6	4.5+*				Hard gray very silty CLAY, some sand, trace gravel, damp (CL-ML)
25										

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **314**Page **1 of 2**

PROJECT **Aligned DD - Coal City IL, Aligned Data Centers, Coal City, IL**CLIENT **Kimley-Horn, 11995 Singletree Lane Suite 225, Eden Prairie, MN**BORING **510** DATE STARTED **12-19-24** DATE COMPLETED **12-19-24** JOB **L-98,197**

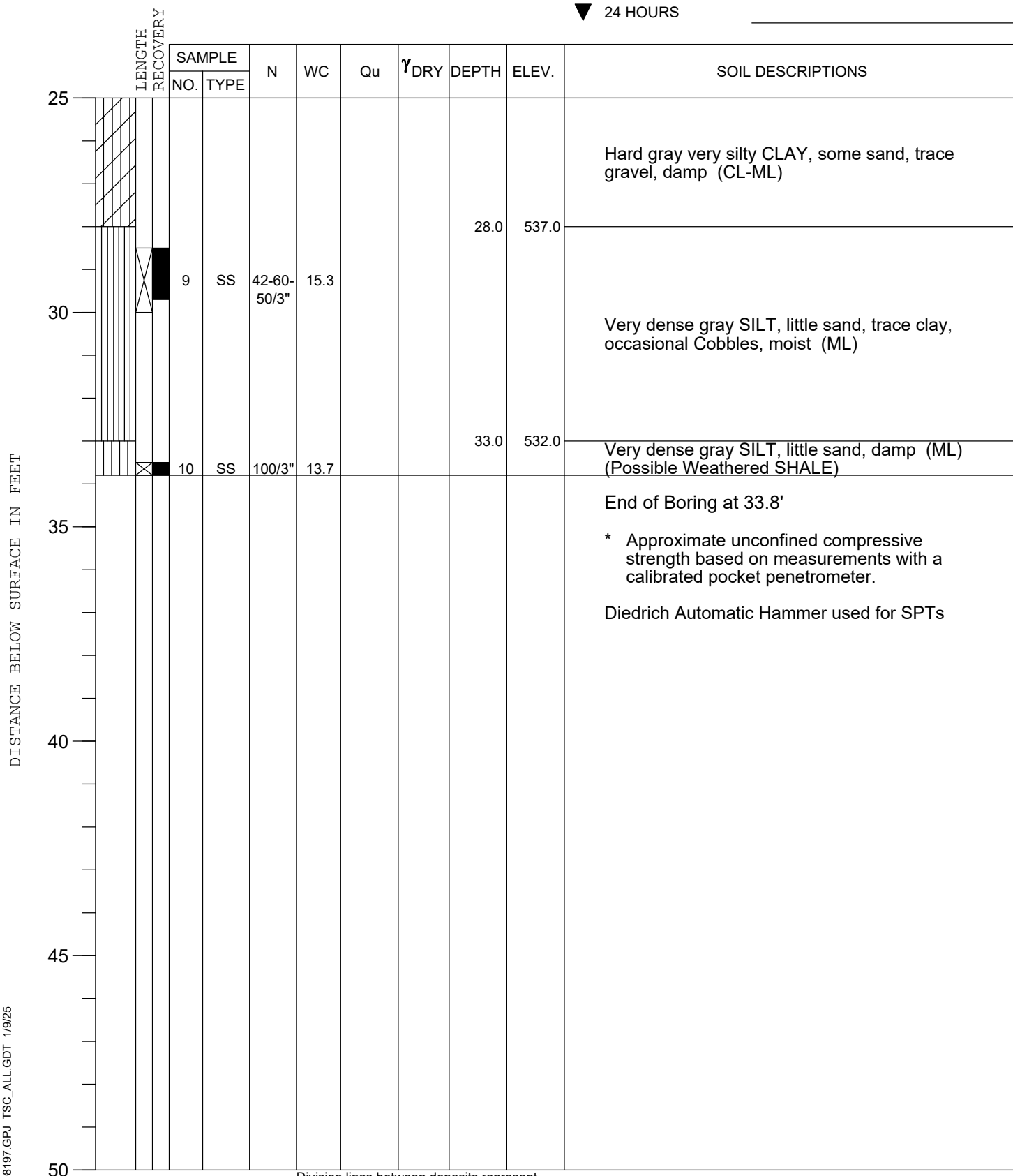
ELEVATIONS

GROUND SURFACE **565.0**END OF BORING **531.2**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **19.0 '**▽ AT END OF BORING **18.0 '**

▼ 24 HOURS



Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **314**Page **2 of 2**

PROJECT **Aligned DD - Coal City IL, Aligned Data Centers, Coal City, IL**CLIENT **Kimley-Horn, 11995 Singletree Lane Suite 225, Eden Prairie, MN**BORING **511** DATE STARTED **12-17-24** DATE COMPLETED **12-17-24** JOB **L-98,197**

ELEVATIONS

GROUND SURFACE **565.5**END OF BORING **540.5**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **24.0'**▽ AT END OF BORING **24.0'**

▼ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black sandy TOPSOIL (OL)
		1	SS	5	14.4			1.2	564.3	Loose brown and gray clayey SAND, trace gravel, moist (SC)
		2	SS	11	29.7	3.0*		3.0	562.5	Very tough brownish-gray silty CLAY, little sand, moist (CL/CH)
5		A			13.5			5.5	560.0	Firm brownish-gray silty fine SAND, moist (SM)
		3	SS	14				7.0	558.5	Very tough to tough gray silty CLAY, little sand, moist (CL/CH)
		B			28.7	3.45 3.5*				
		4	SS	10	27.0	1.80 1.75*				
10		5	SS	11	31.6	1.5*				* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
		6	SS	10	13.8			13.0	552.5	
		7	SS	37	9.7					
15		8	SS	31	9.5			15.5	550.0	Loose to firm gray clayey SILT, little sand, very moist (ML)
										Dense gray SILT, little sand, moist (ML)
20										Diedrich Automatic Hammer used for SPTs
		A			12.3	4.0*		22.0	543.5	Very tough to hard gray silty CLAY, little sand and gravel, moist (CL)
		9	SS	29				24.0	541.5	Very tough to hard gray silty CLAY, little sand and gravel, moist (CL)
25		B			16.3					Firm gray silty SAND, trace gravel, very moist (SM)

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **314**

End of Boring at 25.0'

PROJECT **Aligned DD - Coal City IL, Aligned Data Centers, Coal City, IL**CLIENT **Kimley-Horn, 11995 Singletree Lane Suite 225, Eden Prairie, MN**BORING **512** DATE STARTED **12-17-24** DATE COMPLETED **12-17-24** JOB **L-98,197**

ELEVATIONS

GROUND SURFACE **567.0**END OF BORING **542.0**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **6.0'**▽ AT END OF BORING **6.0'**

▼ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black sandy TOPSOIL (OL)
		1	SS	5	19.2			1.1	565.9	Loose brownish-gray silty SAND, moist (SM)
		2	SS	9	28.6	2.59 2.5*		3.0	564.0	Very tough gray trace brown silty CLAY, trace sand, very moist (CL/CH)
5		A						6.0	561.0	▽ Firm brown SAND, little gravel, wet (SP)
		3	SS	11				7.0	560.0	Very stiff gray silty CLAY, little sand, moist (CL/CH)
		B			26.6	2.5*		8.0	559.0	Soft gray silty CLAY, little sand, very moist (CL/CH)
		4	SS	8	37.6	0.5*				
10								10.5	556.5	Firm gray silty CLAY, little sand, very moist (CL)
		5	SS	7	30.1	0.75*				
		6	SS	10	13.0	2.75*		13.0	554.0	Very stiff gray silty CLAY, little sand, trace gravel, moist (CL)
15								15.5	551.5	Very tough to hard gray silty CLAY, little sand, moist (CL)
		7	SS	9	23.1	4.0*				
								18.0	549.0	Tough gray silty CLAY, little sand, trace gravel, very moist (CL)
20		8	SS	10	17.2	1.25*				
										* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
								23.0	544.0	Diedrich Automatic Hammer used for SPTs
		9	SS	9						Loose gray SAND and GRAVEL, wet (SP/GP)
25										

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **314**

End of Boring at 25.0'

PROJECT **Aligned DD - Coal City IL, Aligned Data Centers, Coal City, IL**CLIENT **Kimley-Horn, 11995 Singletree Lane Suite 225, Eden Prairie, MN**BORING **513** DATE STARTED **12-17-24** DATE COMPLETED **12-17-24** JOB **L-98,197**

ELEVATIONS

GROUND SURFACE **567.5**
END OF BORING **542.5**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **14.0'**
▽ AT END OF BORING **14.0'**
▼ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black sandy TOPSOIL (OL)
		1	SS	7	14.2	3.75*		1.1	566.4	Very tough brown silty CLAY, little sand, trace gravel, moist (CL)
		2	SS	11	30.4	2.5*		3.5	564.0	Very tough to hard gray silty CLAY, little sand, moist (CL/CH)
5		3	SS	11	25.2	4.25*				
		4	SS	9	26.3	2.19 2.75*				
10		5	SS	11	28.5	3.0*				
		6	SS	8	21.8			13.0	554.5	▽ Loose gray SILT, little sand, moist to very moist (ML)
15		7	SS	7	18.4					Hard gray very silty CLAY, some sand, trace gravel, damp (CL-ML) Diedrich Automatic Hammer used for SPTs
		8	SS	33	10.0	4.5+*		18.0	549.5	
20										
		9	SS	63	13.7			23.0	544.5	Very dense gray SILT, little sand, trace clay, moist (ML)
25										

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **314**

End of Boring at 25.0'

PROJECT **Aligned DD - Coal City IL, Aligned Data Centers, Coal City, IL**CLIENT **Kimley-Horn, 11995 Singletree Lane Suite 225, Eden Prairie, MN**BORING **514** DATE STARTED **12-18-24** DATE COMPLETED **12-18-24** JOB **L-98,197**

ELEVATIONS

GROUND SURFACE **566.5**END OF BORING **546.5**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **14.0'**▽ AT END OF BORING **14.0'**

▼ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black sandy TOPSOIL (OL)
		1	SS	9	20.1	2.25*		1.3	565.2	Very tough brown and gray silty CLAY, little sand, moist (CL)
		2	SS	9	27.9	2.25*		3.0	563.5	Very tough to hard brownish-gray to gray silty CLAY, little sand, moist (CL/CH)
5		3	SS	11	25.7	4.5+*				
		4	SS	12	24.6	2.39 2.5*		10.5	556.0	
10		5	SS	11	21.6	1.5*				Tough gray silty CLAY, little to some sand, very moist (CL)
		6	SS	19	10.8	4.5+*		13.0	553.5	▼ Hard gray very silty CLAY, some sand, trace gravel, damp (CL-ML)
15		7	SS	50-49- 50/2"	8.3	4.5+*				
20										End of Boring at 20.0'
										* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
										Diedrich Automatic Hammer used for SPTs
25										

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **314**

PROJECT **Aligned DD - Coal City IL, Aligned Data Centers, Coal City, IL**CLIENT **Kimley-Horn, 11995 Singletree Lane Suite 225, Eden Prairie, MN**BORING **515** DATE STARTED **12-13-24** DATE COMPLETED **12-13-24** JOB **L-98,197**

ELEVATIONS

GROUND SURFACE **564.0**END OF BORING **549.0**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **Dry**▼ AT END OF BORING **Dry**

▼ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black sandy TOPSOIL (OL)
		1	SS	7	21.7	3.75*	106	1.2	562.8	Tough brown and gray silty CLAY, little sand, trace gravel, moist (CL)
		2	SS	9	31.6	3.0*		3.0	561.0	Very tough brownish-gray silty CLAY, little sand, moist (CL/CH)
5		3	SS	13	28.7	3.51 3.5*		8.0	556.0	Tough gray silty CLAY, little sand, moist (CL/CH)
		4	SS	8	30.4	1.75*				Stiff gray silty CLAY, little to some sand, very moist (CL)
10		5	SS	10	26.0	1.53 1.5*		13.0	551.0	End of Boring at 15.0'
		6	SS	6	23.3	0.75*				* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
15										Diedrich Automatic Hammer used for SPTs
20										
25										

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **314**



CLIENT **Kimley-Horn, 11995 Singletree Lane Suite 225, Eden Prairie, MN**

BORING	516	DATE STARTED	12-13-24	DATE COMPLETED	12-13-24	JOB	L-98,197
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ELEVATIONS

GROUND SURFACE **563.0**

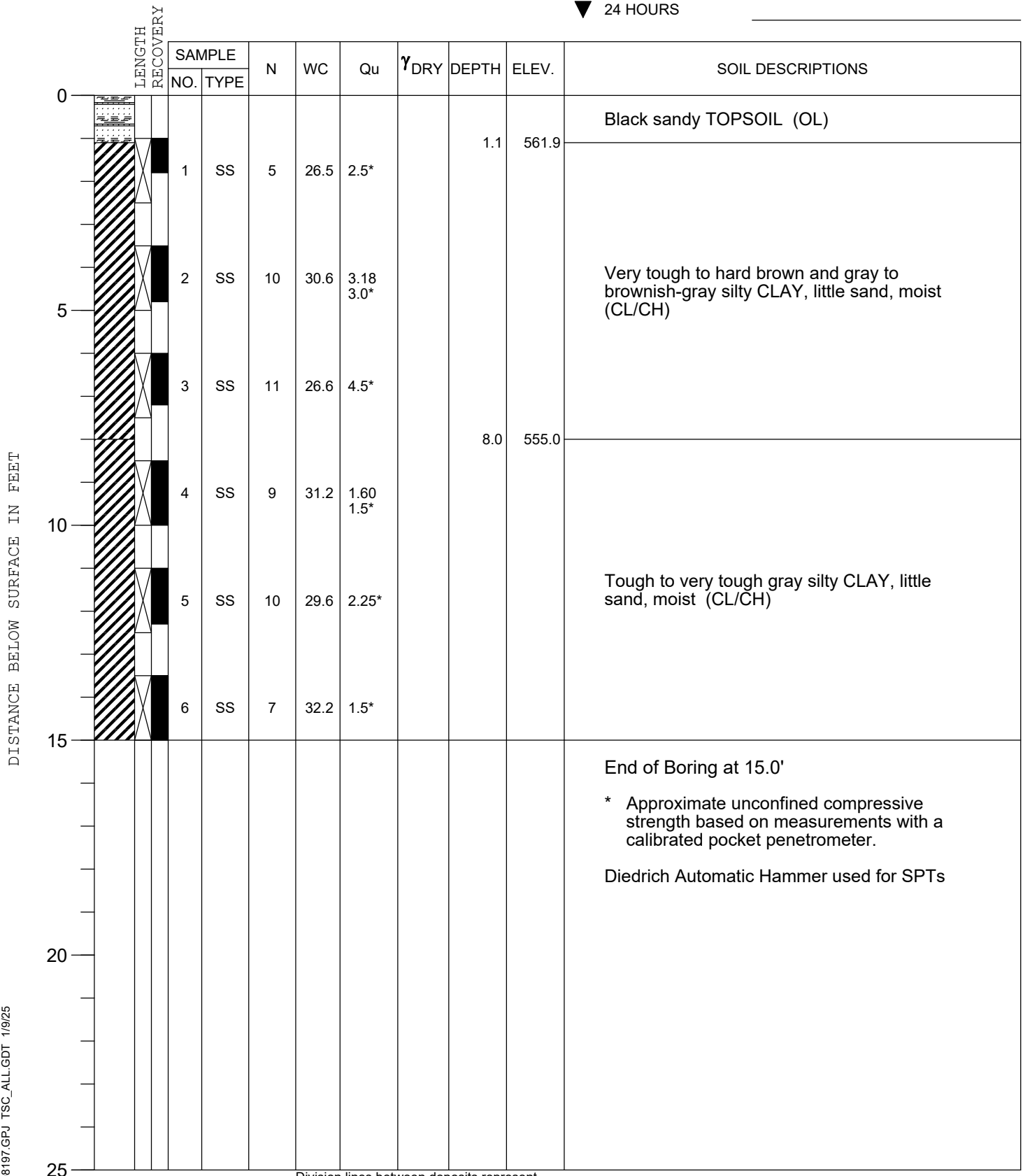
END OF BORING **548.0**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **Dry**

▽ AT END OF BORING **Dry**

▼ 24 HOURS



Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

PROJECT **Aligned DD - Coal City IL, Aligned Data Centers, Coal City, IL**CLIENT **Kimley-Horn, 11995 Singletree Lane Suite 225, Eden Prairie, MN**BORING **517** DATE STARTED **12-13-24** DATE COMPLETED **12-13-24** JOB **L-98,197**

ELEVATIONS

GROUND SURFACE **565.5**END OF BORING **550.5**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **6.0'**▽ AT END OF BORING **6.0'**

▼ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black sandy TOPSOIL (OL)
		1	SS	5	15.7			1.3	564.2	Loose brown clayey SAND, moist (SC)
		2	SS	9	28.7	2.32 2.5*		3.0	562.5	Very tough to tough gray silty CLAY, little sand, occasional silt seams, moist (CL/CH)
5		3	SS	9	27.6	2.0*				
		4	SS	8	29.1	1.80 1.75*				
10		5	SS	7	30.5	1.75*				
		6	SS	7	20.1			13.0	552.5	Loose gray silty SAND, trace gravel, very moist (SM)
15										End of Boring at 15.0'
										* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer. Diedrich Automatic Hammer used for SPTs
20										
25										

Division lines between deposits represent
approximate boundaries between soil types;
in-situ, the transition may be gradual.

DRILL RIG NO. **314**

24 HOURS											
DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ _{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS	
		NO.	TYPE								
0										Black sandy TOPSOIL (OL)	
		1	SS	8	22.4			1.1	566.4	Loose brown and gray clayey SAND, moist (SC)	
								3.0	564.5		
		2	SS	9	25.9	2.06 2.0*				Very tough gray silty CLAY, little sand, moist (CL/CH)	
5		A			18.8			5.5	562.0	Firm brown silty fine SAND, very moist (SM)	
		3	SS	11	26.8	2.5*		7.0	560.5		
		B								Very tough to tough gray silty CLAY, little sand, moist (CL/CH)	
		4	SS	8	34.9	1.5*					
10								10.5	557.0	Loose gray silty fine SAND, trace clay, very moist (SM)	
		5	SS	7	19.3						
		6	SS	7	19.3						
15		End of Boring at 15.0'									* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer. Diedrich Automatic Hammer used for SPTs
20											
25											

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

PROJECT **Aligned DD - Coal City IL, Aligned Data Centers, Coal City, IL**CLIENT **Kimley-Horn, 11995 Singletree Lane Suite 225, Eden Prairie, MN**BORING **519** DATE STARTED **12-10-24** DATE COMPLETED **12-10-24** JOB **L-98,197**

ELEVATIONS

GROUND SURFACE **564.0**END OF BORING **544.0**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **13.0 '**▽ AT END OF BORING **13.0 '**

▼ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black sandy TOPSOIL (OL)
		1	SS	6	19.8	2.0*		1.3	562.7	Tough to very tough brown and dark brown silty CLAY, little sand, trace organic, moist (CL)
		2	SS	9	31.4	3.25*		3.0	561.0	Very tough to tough gray silty CLAY, little sand, moist (CL/CH)
5		3	SS	7	28.1	1.5*				
		4	SS	8	20.7			8.0	556.0	Loose to firm gray SILT, little to some sand, moist to very moist (ML)
10		5	SS	12	22.9					
		6	SS	5	24.6			13.0	551.0	Loose gray fine SAND, wet (SP)
15										
		7	SS	52	9.5	4.5+*		18.0	546.0	Hard gray sandy CLAY, trace gravel, damp (CL-ML)
20										End of Boring at 20.0'
										* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
										CME Automatic Hammer used for SPTs
25										

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **358**



CLIENT **Kimley-Horn, 11995 Singletree Lane Suite 225, Eden Prairie, MN**

BORING	520	DATE STARTED	12-20-24	DATE COMPLETED	12-20-24	JOB	L-98,197
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ELEVATIONS

GROUND SURFACE **562.0**

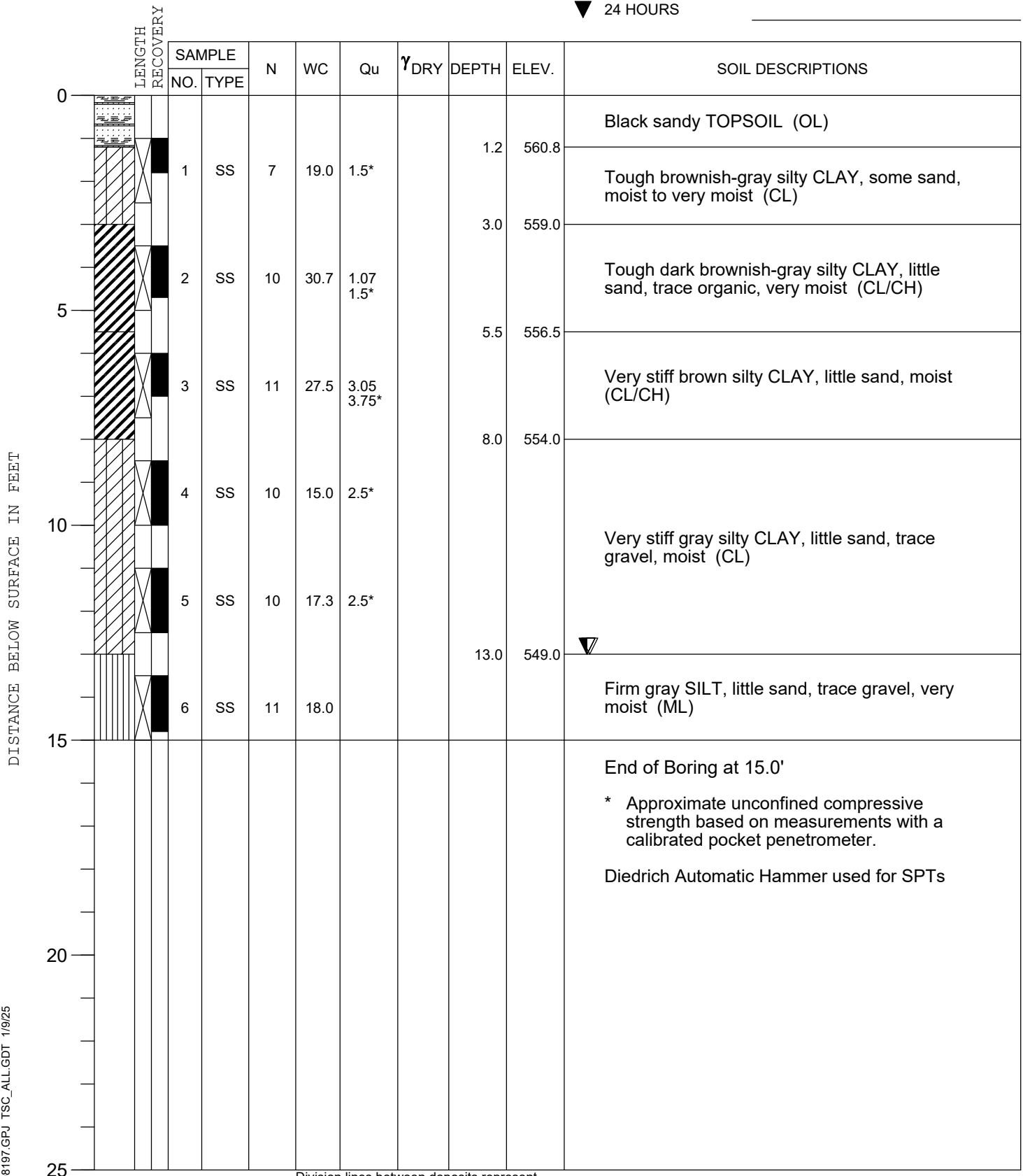
END OF BORING **547.0**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING 13.0'

▽ AT END OF BORING **13.0'**

▼ 24 HOURS



Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.



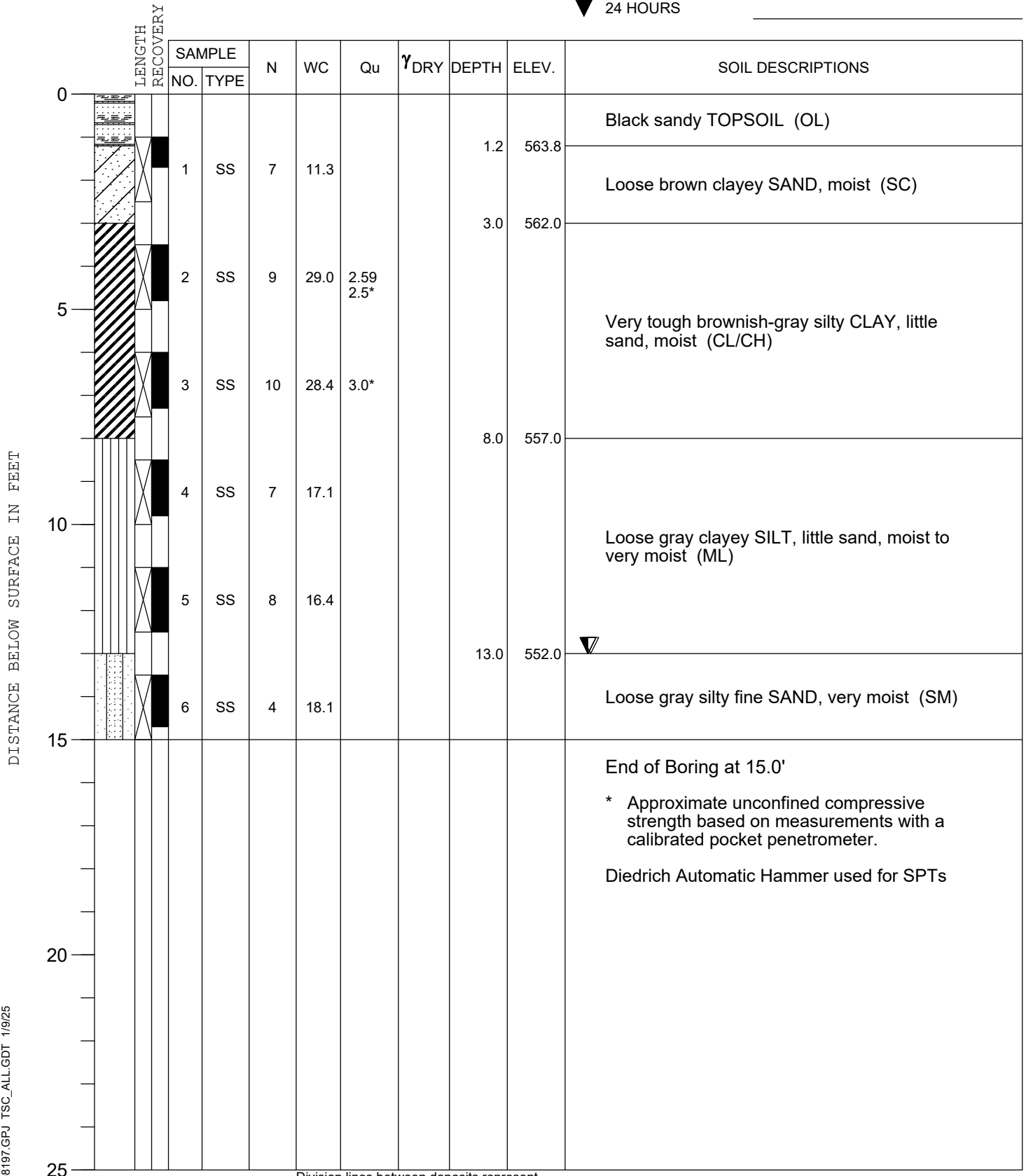
BORING **521** DATE STARTED **12-13-24** DATE COMPLETED **12-13-24** JOB **L-98,197**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING 13.0'

▽ AT END OF BORING **13.0'**

▼ 24 HOURS



Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **314**



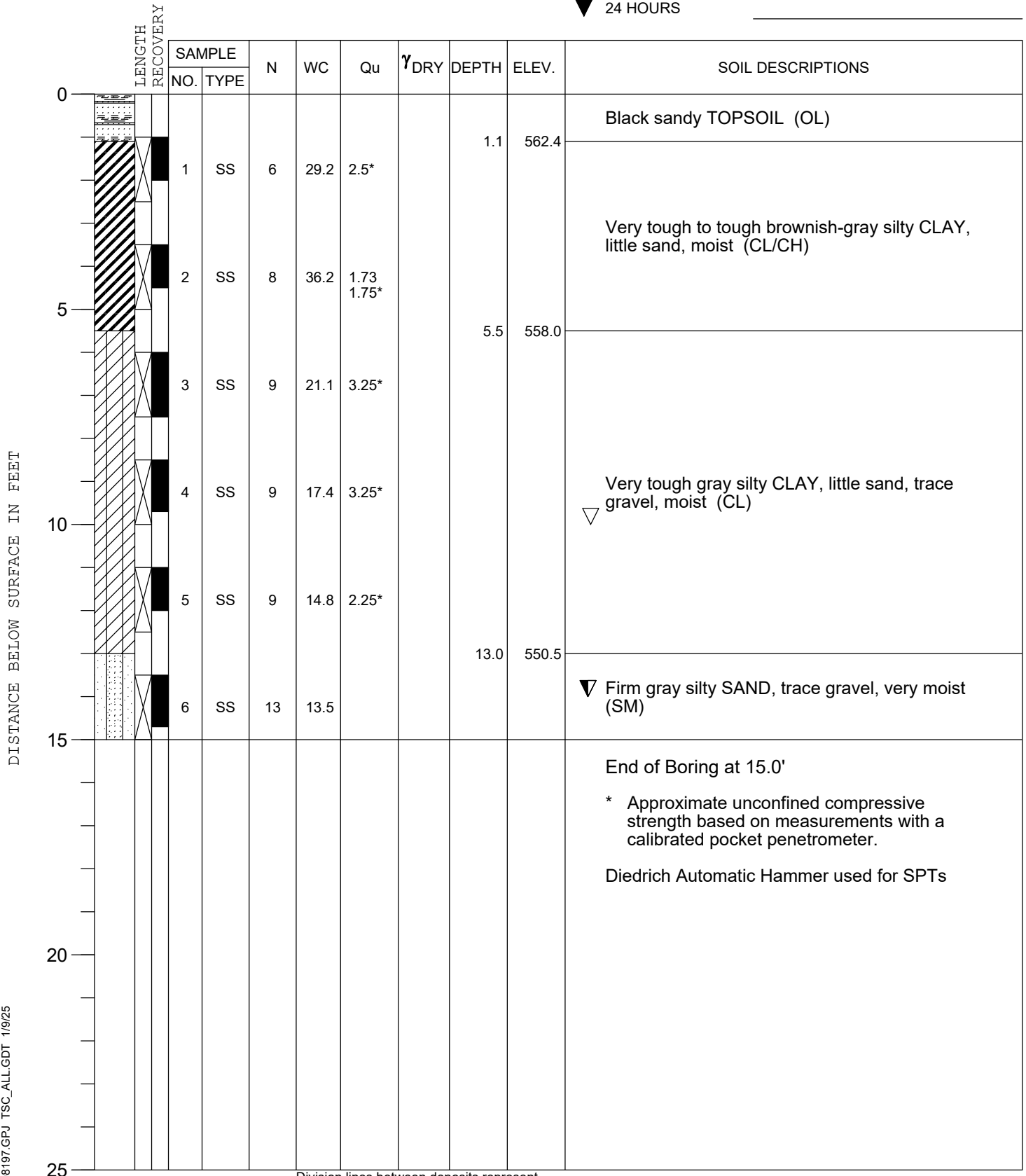
BORING **522** DATE STARTED **12-16-24** DATE COMPLETED **12-16-24** JOB **L-98,197**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING 14.0'

▽ AT END OF BORING **10.0'**

▼ 24 HOURS



Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **314**

PROJECT **Aligned DD - Coal City IL, Aligned Data Centers, Coal City, IL**CLIENT **Kimley-Horn, 11995 Singletree Lane Suite 225, Eden Prairie, MN**BORING **523** DATE STARTED **12-10-24** DATE COMPLETED **12-10-24** JOB **L-98,197**

ELEVATIONS

GROUND SURFACE **561.5**END OF BORING **541.5**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **18.0 '**▽ AT END OF BORING **18.0 '**

▼ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black sandy TOPSOIL (OL)
		1	SS	5	15.1	1.75*	111	1.3	560.2	Very tough brownish-gray sandy CLAY, trace gravel, trace organic, very moist (CL)
		2	SS	8	30.2	3.5*		3.0	558.5	Very tough brownish-gray silty CLAY, little sand, moist (CL/CH)
5		3	SS	16	24.6	4.96 4.5+*		5.5	556.0	Hard gray silty CLAY, little sand, moist (CL/CH)
		4	SS	13	28.8	2.5*		8.0	553.5	Very tough to tough gray silty CLAY, little sand, moist to very moist (CL/CH)
10		5	SS	7	27.7	1.5*				
		6	SS	8	36.7	1.01 1.0*				
15										
		7	SS	53	12.2			18.0	543.5	Dense gray clayey SAND, trace gravel, very moist (SC)
20										End of Boring at 20.0'
										* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
										CME Automatic Hammer used for SPTs
25										

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **358**

PROJECT **Aligned DD - Coal City IL, Aligned Data Centers, Coal City, IL**CLIENT **Kimley-Horn, 11995 Singletree Lane Suite 225, Eden Prairie, MN**BORING **524** DATE STARTED **12-13-24** DATE COMPLETED **12-13-24** JOB **L-98,197**

ELEVATIONS

GROUND SURFACE **563.0**END OF BORING **543.0**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **9.0'**▽ AT END OF BORING **9.0'**

▼ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black sandy TOPSOIL (OL)
		1	SS	7	19.8			1.3	561.7	Loose brown and gray trace dark brown clayey SAND, trace organic, moist (SC)
		2	SS	11	31.0	2.52 2.5*		3.0	560.0	Very tough brownish-gray silty CLAY, little sand, moist (CL/CH)
5		3	SS	11	27.6	3.75*				
								8.0	555.0	▽ Stiff to tough brownish-gray very silty CLAY, little sand, very moist (CL-ML)
		4	SS	8	22.2	1.0*				
10								10.5	552.5	Tough gray silty CLAY, trace to little sand and gravel, very moist (CL)
		5	SS	7	25.4	1.27 1.25*				
								13.0	550.0	Hard gray very silty CLAY, some sand, trace gravel, damp (CL-ML)
15		6	SS	34	10.0	4.5+*				
								17.0	546.0	Very dense gray SILT, little sand, trace gravel, moist (ML)
		7	SS	70	16.2					
20										End of Boring at 20.0'
										* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
										Diedrich Automatic Hammer used for SPTs
25										

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **314**

PROJECT **Aligned DD - Coal City IL, Aligned Data Centers, Coal City, IL**CLIENT **Kimley-Horn, 11995 Singletree Lane Suite 225, Eden Prairie, MN**BORING **525** DATE STARTED **12-13-24** DATE COMPLETED **12-13-24** JOB **L-98,197**

ELEVATIONS

GROUND SURFACE **563.0**END OF BORING **539.2**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **18.0 '**▼ AT END OF BORING **18.0 '**

▼ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black sandy TOPSOIL (OL)
		A	SS	6	19.5			1.3	561.7	Loose brown silty fine SAND, moist (SM)
		B			11.0			3.0	560.0	
5		2	SS	10	26.2	4.37 4.5*				Hard to tough brownish-gray to brown and gray silty CLAY, little sand, moist to very moist (CL/CH)
		A			27.2	2.85 3.0*				
		B			32.9	1.25*		8.0	555.0	
10		4	SS	7	18.3	0.94 1.0*		10.5	552.5	Stiff to tough gray very silty CLAY, little sand, very moist (CL-ML)
		5	SS	5	19.6			13.0	550.0	Loose gray SILT, little sand, trace clay, very moist (ML)
15		6	SS	29	9.2	4.5+*		15.5	547.5	Hard gray very silty CLAY, little sand, damp (CL-ML)
		7	SS	45-50/5"	8.5			18.0	545.0	Very dense gray SILT, some sand trace gravel, moist (ML)
20		8	SS	98						Very dense gray SAND and GRAVEL, wet (SP/GP)
								22.0	541.0	Diedrich Automatic Hammer used for SPTs
		9	SS	50/3"	12.4	4.5+*				Hard gray silty CLAY, some sand, trace gravel, occasional Cobbles, moist (CL)
25										End of Boring at 23.8'

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **314**

PROJECT **Aligned DD - Coal City IL, Aligned Data Centers, Coal City, IL**CLIENT **Kimley-Horn, 11995 Singletree Lane Suite 225, Eden Prairie, MN**BORING **526** DATE STARTED **12-10-24** DATE COMPLETED **12-10-24** JOB **L-98,197**

ELEVATIONS

GROUND SURFACE **565.0**END OF BORING **545.0**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **13.0 '**▽ AT END OF BORING **13.0 '**

▼ 24 HOURS

	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black sandy TOPSOIL (OL)
		1	SS	6	16.5	2.0*		1.3	563.7	Tough to very tough brown and gray sandy CLAY, moist (CL)
		2	SS	7	28.1	3.5*		3.0	562.0	Very tough to hard brown and gray to brownish-gray silty CLAY, little sand, moist (CL/CH)
5		3	SS	16	26.3	4.5*				
		4	SS	11	17.9	4.0*		8.0	557.0	Very tough gray silty CLAY, little sand, trace gravel, moist (CL)
10		5	SS	19	18.1			10.5	554.5	Firm gray SILT, little sand, trace clay, moist (ML)
		6	SS	44	10.7			13.0	552.0	Dense to very dense gray SILT, little sand and gravel, damp to moist (ML)
15		7	SS	64	10.9					
20										End of Boring at 20.0'
										* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
										CME Automatic Hammer used for SPTs
25										

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **358**

PROJECT **Aligned DD - Coal City IL, Aligned Data Centers, Coal City, IL**CLIENT **Kimley-Horn, 11995 Singletree Lane Suite 225, Eden Prairie, MN**BORING **527** DATE STARTED **12-16-24** DATE COMPLETED **12-16-24** JOB **L-98,197**

ELEVATIONS

GROUND SURFACE **565.5**
END OF BORING **540.5**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **17.0 '**
▽ AT END OF BORING **16.0 '**
▼ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black sandy TOPSOIL (OL)
		1	SS	8	18.1	1.5*		1.3	564.2	Tough brown trace dark brown silty CLAY, little sand, trace organic, moist (CL)
		2	SS	10	25.5	1.5*		3.0	562.5	Tough brown and gray silty CLAY, little sand, moist (CL/CH)
5		3	SS	13	29.8	2.92 3.5*		5.5	560.0	Very tough gray silty CLAY, little sand, moist (CL/CH) * Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
		4	SS	9	24.6	2.25*				
		5	SS	10	26.0	2.5*				
		6	SS	73	9.0	4.5+*		13.0	552.5	Hard gray sandy CLAY, little gravel, occasional sand seams, damp (CL-ML)
15		7	SS	83	8.7	4.5+*		18.0	547.5	Very dense gray clayey SILT, little sand, trace gravel, moist (ML-CL) Diedrich Automatic Hammer used for SPTs Dense gray SILT, little sand, trace gravel, trace clay, moist (ML)
		8	SS	84	13.5					
		9	SS	42	11.9			23.0	542.5	
25										

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **314**

End of Boring at 25.0'

PROJECT **Aligned DD - Coal City IL, Aligned Data Centers, Coal City, IL**CLIENT **Kimley-Horn, 11995 Singletree Lane Suite 225, Eden Prairie, MN**BORING **528** DATE STARTED **12-16-24** DATE COMPLETED **12-16-24** JOB **L-98,197**

ELEVATIONS

GROUND SURFACE **566.0**END OF BORING **546.0**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **19.0 '**▽ AT END OF BORING **19.0 '**

▼ 24 HOURS

	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black sandy TOPSOIL (OL)
		1	SS	8	18.4	2.5*		1.3	564.7	Very tough dark brown silty CLAY, little sand, moist (CL)
		2	SS	10	16.6	1.25*		3.0	563.0	Tough brown and gray sandy CLAY, trace gravel, very moist (CL)
5		3	SS	7	22.9			5.5	560.5	Loose gray silty SAND, trace gravel, very moist (SM)
		4	SS	10	32.7	2.5*		8.0	558.0	Very tough gray silty CLAY, little sand, moist (CL/CH)
		5	SS	9	30.2	2.32 2.25*		13.0	553.0	Tough gray silty CLAY, some sand, trace gravel, occasional Cobbles, moist (CL)
15		6	SS	13- 50/4"	17.9	1.5*		18.0	548.0	Dense gray SILT, little sand, trace gravel, moist (ML)
20		7	SS	48	7.5					End of Boring at 20.0'
										* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
										Diedrich Automatic Hammer used for SPTs
25										

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **314**

PROJECT **Aligned DD - Coal City IL, Aligned Data Centers, Coal City, IL**CLIENT **Kimley-Horn, 11995 Singletree Lane Suite 225, Eden Prairie, MN**BORING **529** DATE STARTED **12-16-24** DATE COMPLETED **12-16-24** JOB **L-98,197**

ELEVATIONS

GROUND SURFACE **566.5**END OF BORING **546.5**

WATER LEVEL OBSERVATIONS

▼ WHILE DRILLING **19.0 '**▼ AT END OF BORING **19.0 '**

▼ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black sandy TOPSOIL (OL)
		1	SS	6				1.2	565.3	Loose brown SAND, moist (SP)
		2	SS	9	29.0	4.5*		3.0	563.5	Hard to very tough gray silty CLAY, little sand, moist (CL/CH)
5		3	SS	13	26.7	3.75*				
		4	SS	8	29.4	2.0*		8.0	558.5	Tough to very tough gray silty CLAY, trace sand, very moist (CL/CH)
10		5	SS	9	29.9	2.0*				
		6	SS	45	8.0	4.5*		13.0	553.5	Hard gray sandy CLAY, little gravel, occasional Cobbles, damp (CL-ML)
15		7	SS	32-50/6"	7.6	4.5+*				
20										▼ End of Boring at 20.0' * Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer. Diedrich Automatic Hammer used for SPTs
25										

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **314**

PROJECT **Aligned DD - Coal City IL, Aligned Data Centers, Coal City, IL**CLIENT **Kimley-Horn, 11995 Singletree Lane Suite 225, Eden Prairie, MN**BORING **530** DATE STARTED **12-17-24** DATE COMPLETED **12-17-24** JOB **L-98,197**

ELEVATIONS

GROUND SURFACE **567.5**END OF BORING **542.5**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **3.0'**▽ AT END OF BORING **3.0'**

▼ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black sandy TOPSOIL (OL)
		1	SS	9	17.5			1.2	566.3	Loose brownish-gray to brown silty fine SAND, moist to very moist (SM)
		A			23.3					
		2	SS	9				4.0	563.5	Tough to very tough gray silty CLAY, little sand, moist (CL/CH)
5		B			27.6	1.53 1.5*				
		3	SS	11	27.1	1.5*				
		4	SS	12	30.8	1.60 1.5*				
10		5	SS	13	28.7	2.0*				* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
		6	SS	10	21.3	1.25*		13.0	554.5	
15		7	SS	11	22.0			15.5	552.0	Tough gray silty CLAY, little sand, trace gravel, very moist (CL)
		A						18.0	549.5	Firm gray clayey SILT, some sand, trace gravel, very moist (ML-CL)
		8	SS	24				19.0	548.5	Firm gray SAND, trace gravel, trace silt, wet (SP)
20		B			10.2					Firm gray silty fine SAND, trace gravel, very moist (SM)
		9	SS	85	10.7			23.0	544.5	Diedrich Automatic Hammer used for SPTs
25										Very dense gray clayey SILT, little sand, trace gravel, moist (ML)

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **314**

End of Boring at 25.0'

PROJECT **Aligned DD - Coal City IL, Aligned Data Centers, Coal City, IL**CLIENT **Kimley-Horn, 11995 Singletree Lane Suite 225, Eden Prairie, MN**BORING **531** DATE STARTED **12-10-24** DATE COMPLETED **12-10-24** JOB **L-98,197**

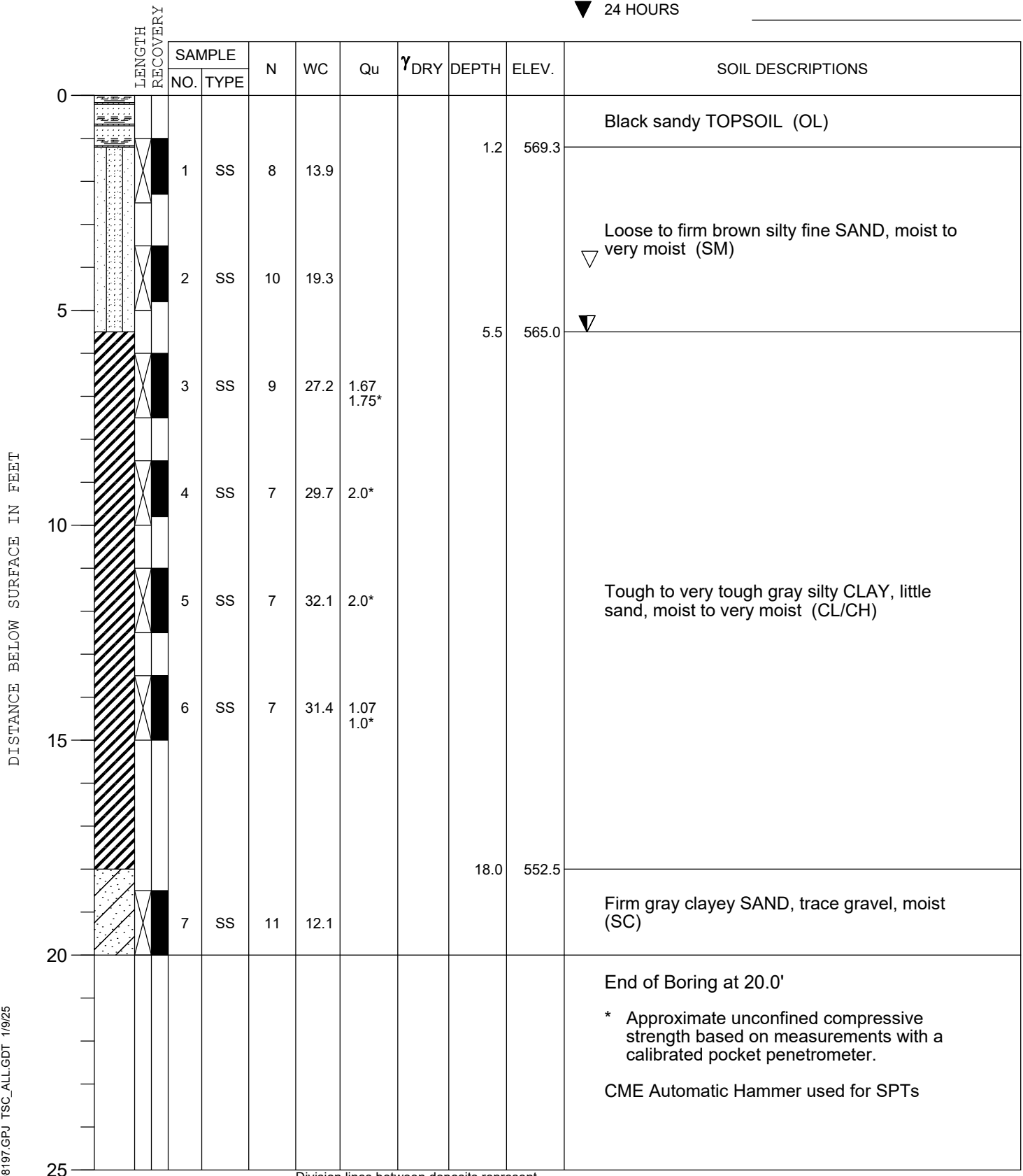
ELEVATIONS

GROUND SURFACE **570.5**END OF BORING **550.5**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **5.5'**▽ AT END OF BORING **4.0'**

▼ 24 HOURS



Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **358**

PROJECT **Aligned DD - Coal City IL, Aligned Data Centers, Coal City, IL**CLIENT **Kimley-Horn, 11995 Singletree Lane Suite 225, Eden Prairie, MN**BORING **532** DATE STARTED **12-10-24** DATE COMPLETED **12-10-24** JOB **L-98,197**

ELEVATIONS

GROUND SURFACE **567.0**END OF BORING **547.0**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **5.0'**▽ AT END OF BORING **5.0'**

▼ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black sandy TOPSOIL (OL)
		1	SS	8	17.3			1.2	565.8	Loose brown silty fine SAND, moist (SM)
		2	SS	14	27.1	2.52 2.5*		3.0	564.0	▽ Very tough gray silty CLAY, little sand, occasional silt seams, moist (CL/CH)
5		3	SS	13	25.1	3.5*				
		4	SS	7	31.0	1.25*		8.0	559.0	Tough gray silty CLAY, little sand, very moist (CL/CH)
10		5	SS	8	28.3	1.5*				
		6	SS	5	33.8	0.5*		13.0	554.0	Soft gray silty CLAY, little sand, very moist (CL/CH)
15										
		7	SS	49				18.0	549.0	Dense gray SAND, little gravel, wet (SP)
20										End of Boring at 20.0'
										* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
										CME Automatic Hammer used for SPTs
25										

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **358**

PROJECT **Aligned DD - Coal City IL, Aligned Data Centers, Coal City, IL**CLIENT **Kimley-Horn, 11995 Singletree Lane Suite 225, Eden Prairie, MN**BORING **533** DATE STARTED **12-10-24** DATE COMPLETED **12-10-24** JOB **L-98,197**

ELEVATIONS

GROUND SURFACE **565.5**END OF BORING **546.2**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **18.0'**▽ AT END OF BORING **6.0'**

▼ 24 HOURS

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE		N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
		NO.	TYPE							
0										Black sandy TOPSOIL (OL)
		1	SS	7	16.8	1.5*		1.3	564.2	Tough brownish-gray sandy CLAY, trace gravel, moist (CL)
		2	SS	6	21.5	2.75*		3.0	562.5	Very tough brown and gray silty CLAY, little sand, moist (CL)
5								5.5	560.0	▽ Tough to very tough gray silty CLAY, little sand, moist (CL/CH)
		3	SS	9	31.1	1.73 1.75*				
		4	SS	5	25.8	2.0*				
10								10.5	555.0	Loose gray clayey SILT, little sand, very moist (ML)
		5	SS	8	17.7					
		6	SS	14	13.5	1.5*		13.0	552.5	Tough gray very silty CLAY, little sand, moist (CL-ML)
15										▼ Very dense gray SILT, some sand, trace gravel, moist (ML)
		7	SS	38- 50/4"	10.7			18.0	547.5	
20										End of Boring at 19.3'
										* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.
										CME Automatic Hammer used for SPTs
25										

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **358**

PROJECT **Aligned DD - Coal City IL, Aligned Data Centers, Coal City, IL**CLIENT **Kimley-Horn, 11995 Singletree Lane Suite 225, Eden Prairie, MN**BORING **534** DATE STARTED **12-16-24** DATE COMPLETED **12-16-24** JOB **L-98,197**

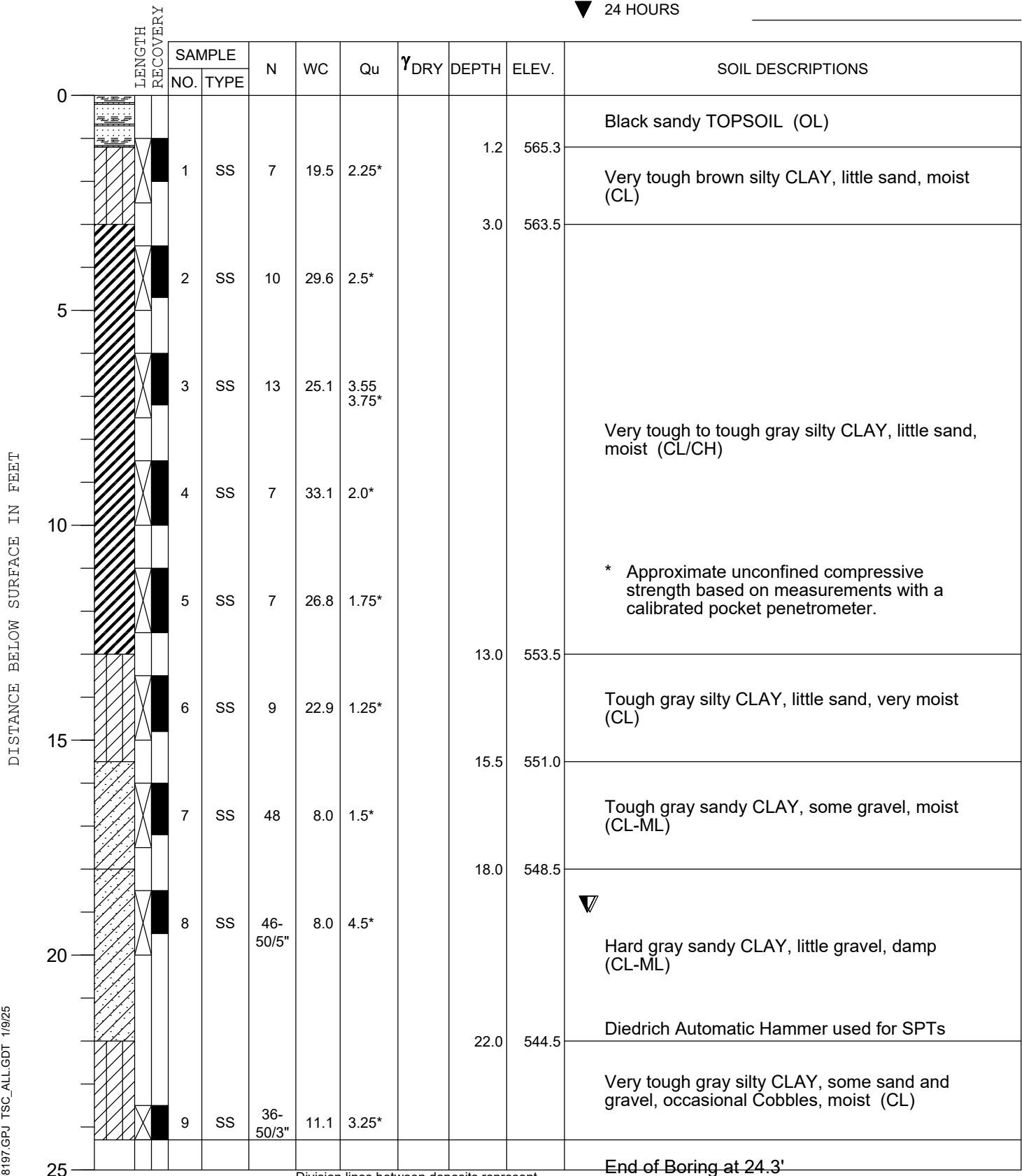
ELEVATIONS

GROUND SURFACE **566.5**END OF BORING **542.2**

WATER LEVEL OBSERVATIONS

▽ WHILE DRILLING **19.0 '**▽ AT END OF BORING **19.0 '**

▼ 24 HOURS

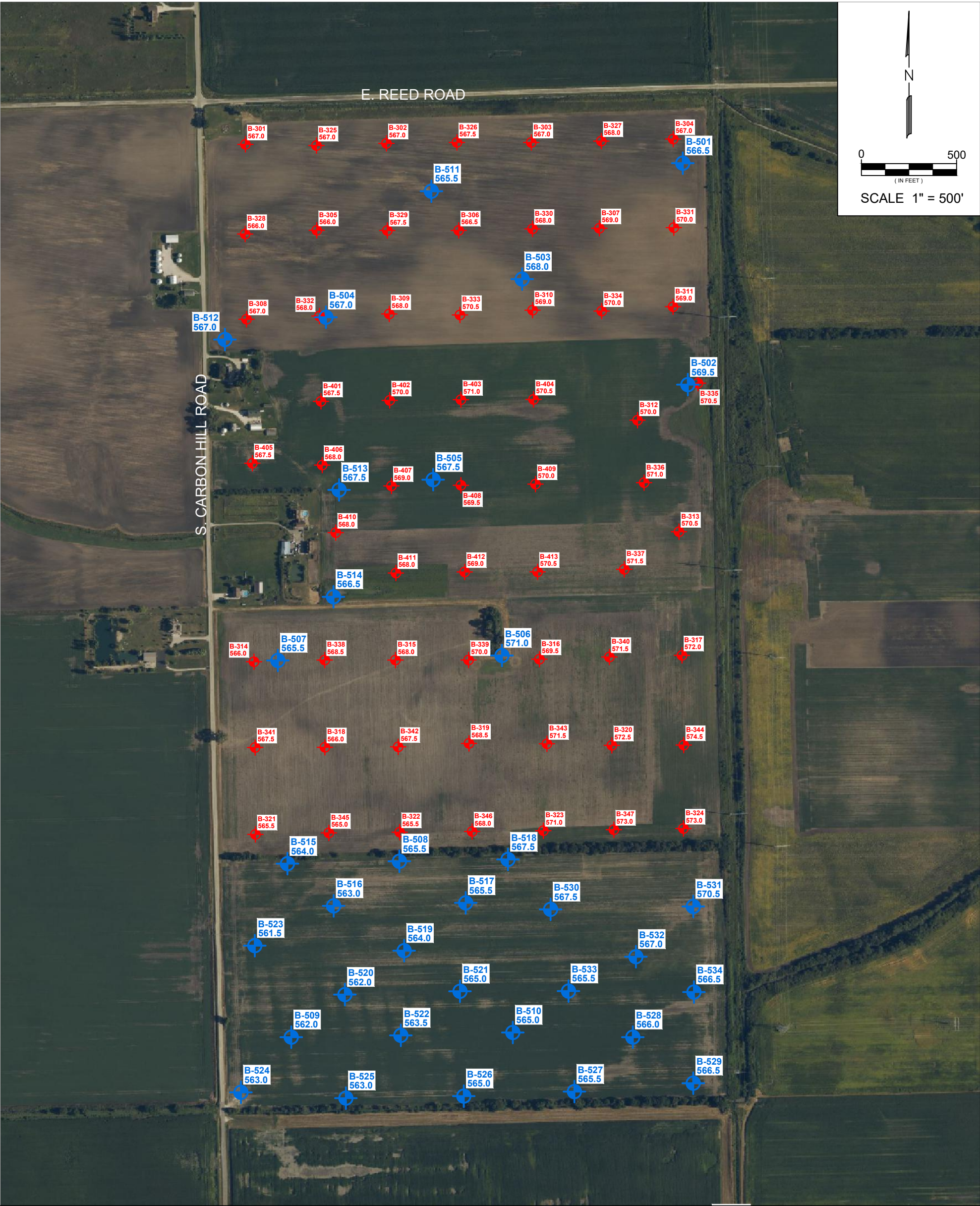


Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DRILL RIG NO. **314**



NOTE: GROUND SURFACE ELEVATIONS AT THE BORINGS WERE ACQUIRED BY TSC USING A TRIMBLE R12 GNSS RECEIVER, BEING ROUNDED TO THE NEAREST 0.5 FOOT.		LEGEND BORING LOCATION L-98,197 BORING LOCATION L-63,386 & L-65,961A	
BORING LOCATION PLAN 320-ACRE SITE DEVELOPMENT ALIGNED DATA CENTERS SEQ REED & CARBON HILL ROADS COAL CITY, ILLINOIS		TESTING SERVICE CORPORATION 457 EAST GUNDERSEN DRIVE CAROL STREAM, ILLINOIS 60188	
		DRAWN BY: FFE CHECKED BY: MVM JOB NO.: L-98,197 DATE: 12-27-24	PAGE NO. 1 OF 2



NOTE:	GROUND SURFACE ELEVATIONS AT THE BORINGS WERE ACQUIRED BY TSC USING A TRIMBLE R12 GNSS RECEIVER, BEING ROUNDED TO THE NEAREST 0.5 FOOT.	LEGEND  BORING LOCATION L-98,197  BORING LOCATION L-63,386 & L-65,961A		
		BORING LOCATION PLAN 320-ACRE SITE DEVELOPMENT ALIGNED DATA CENTERS SEQ REED & CARBON HILL ROADS COAL CITY, ILLINOIS	 TESTING SERVICE CORPORATION 457 EAST GUNDERSEN DRIVE CAROL STREAM, ILLINOIS 60188	DRAWN BY: FFE CHECKED BY: MVM JOB NO. : L-98,197 DATE: 12-27-24