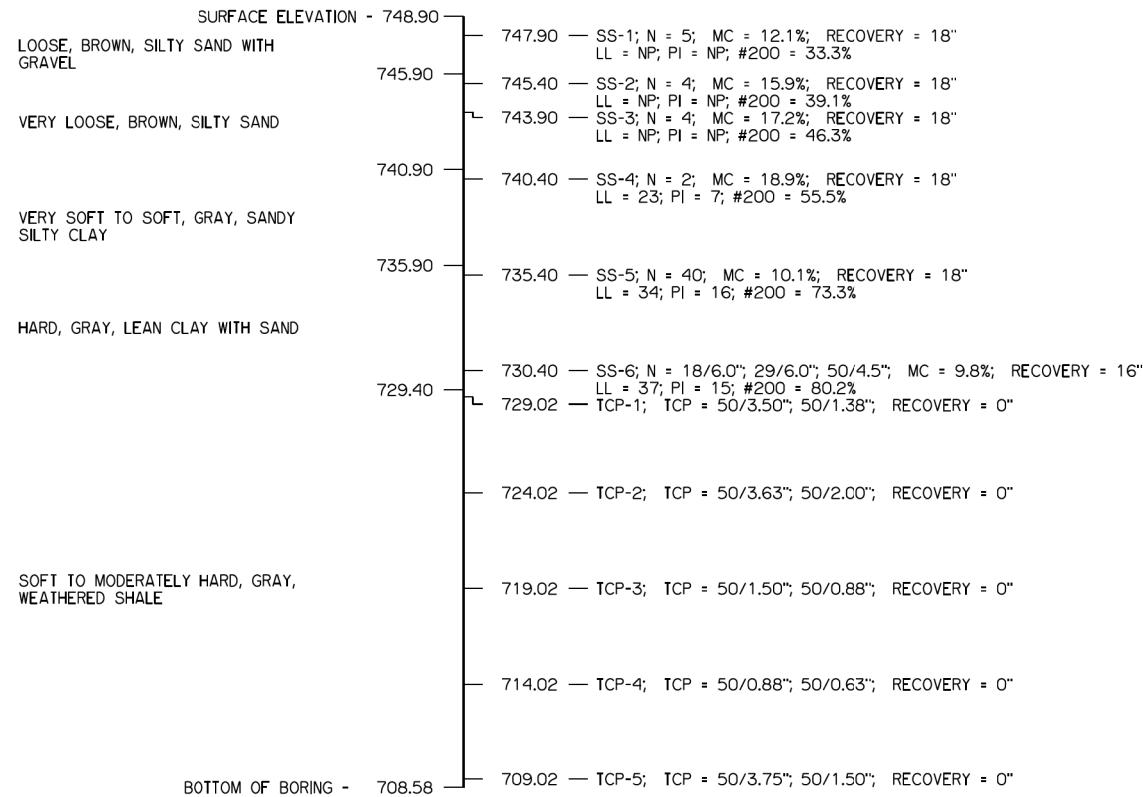




**BORING NO. B-01**  
STATION 7+50, 5.9' RIGHT OF CL. SURVEY  
(DRILLED MAY 14, 2015)



**SITE GEOLOGY**

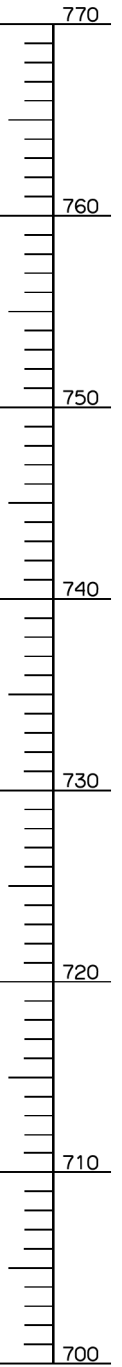
THE SUBJECT BRIDGE IS LOCATED IN A GEOLOGIC AREA BEST DESCRIBED AS BEING PART OF THE ATOKA UNIT (PA). HOWEVER, BASED ON THE SUBSURFACE MATERIALS ENCOUNTERED DURING OUR DRILLING OPERATIONS, WE BELIEVE THE WAPANUCKA-SPRINGER UNIT (PWS) IS MOST LIKELY PRESENT. ACCORDING TO PUBLISHED MATERIALS (ENGINEERING CLASSIFICATION OF GEOLOGIC MATERIALS, DIVISION TWO, 1966, OKLAHOMA HIGHWAY DEPARTMENT), THE WAPANUCKA-SPRINGER UNIT CONSISTS OF SHALE AND LIMESTONE. THE LIMESTONE IS ABOUT 550 FEET THICK IN WESTERN ATOKA COUNTY AND IS REFERRED TO AS THE WAPANUCKA LIMESTONE. IT IS GRAY AND PALE BROWN, FINE TO COARSE-GRAINED, MASSIVE BEDDED, AND LOCALLY CONTAINS AMOOTH DARK GRAY CHERT NODULES.

THE ATOKA UNIT CONSISTS DOMINANTLY OF SHALE ALTERNATING WITH SANDSTONES. THE SANDSTONES MAKE UP LESS THAN 25 PERCENT OF THE UNIT. THE BASAL ATOKA IS COMPOSED OF GRAY SHALE WITH THIN BEDS OF LIGHT GRAY SANDSTONE AND THIN LAYERS OF CHERT. NEAR THE BASE, THE UNIT CONTAINS A RELATIVELY HIGH PROPORTION OF SANDSTONE WHICH FORMS PROMINENT RIDGES. THE FIRST RIDGE-FORMING SANDSTONES OCCUR 300 TO 500 FEET ABOVE THE BASE. THE UPPER PORTION OF THE UNIT CONSISTS MOSTLY OF SILTY, MICACEOUS, GRAY TO BROWN SHALES, AND CONTAINS THE UPPERMOST SANDSTONE RIDGE FORMER WHICH OCCURS APPROXIMATELY 266 FEET BELOW THE TOP OF THE UNIT.

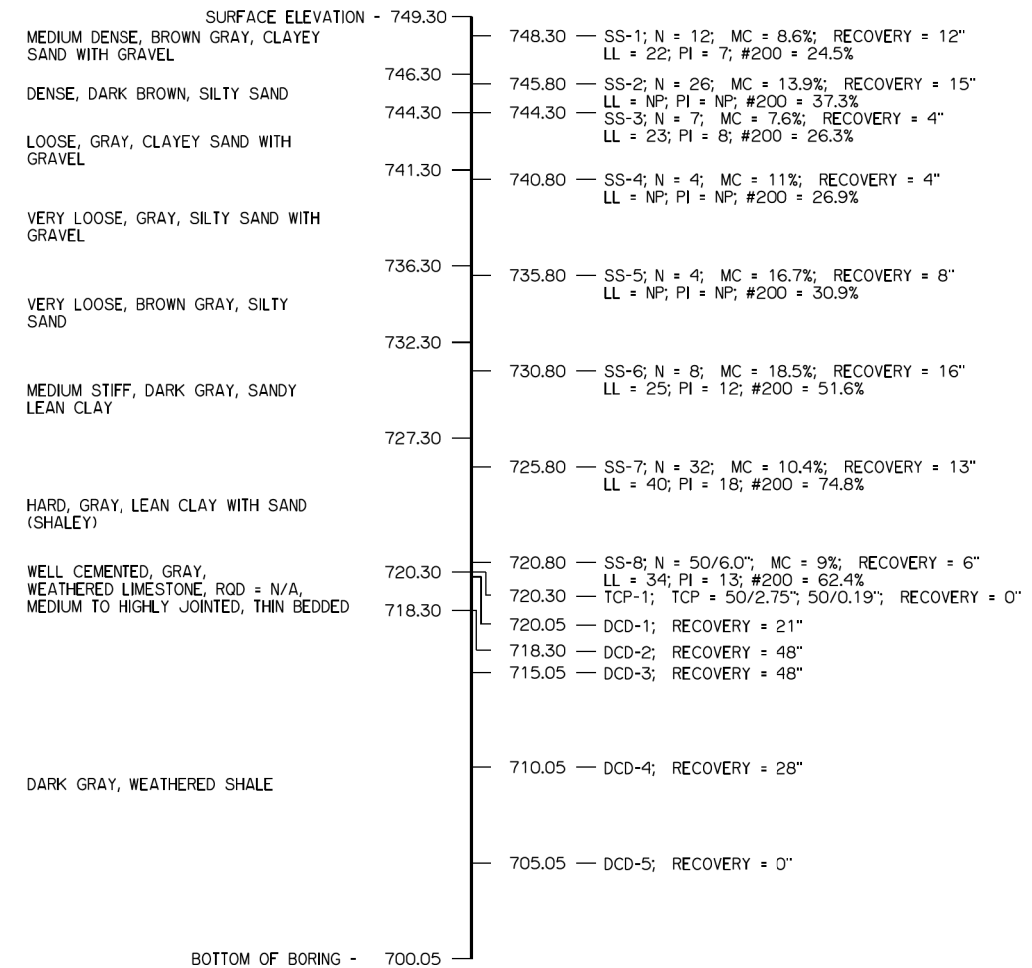
- SS = SPLIT SPOON SAMPLER
- N = NUMBER OF BLOWS PER 12 INCHES
- MC = MOISTURE CONTENT
- LL = LIQUID LIMIT
- PI = PLASTICITY INDEX
- #200 = PERCENT PASSING #200 SIEVE
- TCP = TEXAS CONE PENETROMETER

**LEGEND**

- DCD = DIAMOND CORE BARREL DRILLING
- UCS = UNCONFINED COMPRESSIVE STRENGTH
- DD = DRY DENSITY
- RQD = ROCK QUALITY DESIGNATION
- ▽ = WATER LEVEL WHILE DRILLING OR SAMPLING
- ▽ = WATER LEVEL AFTER DRILLING
- ▽ = WATER LEVEL 24 HOURS AFTER DRILLING



**BORING NO. B-02**  
STATION 8+10, 7.7' LEFT OF CL. SURVEY  
(DRILLED MAY 14, 2015)



**SEISMIC CLASS AND SPECTRAL RESPONSE ACCELERATIONS**

SITE CLASS	"D"
SEISMIC CATEGORY	A
A <sub>s</sub>	0.087g
S <sub>0s</sub>	0.189g
S <sub>01</sub>	0.101g

NOTE: FOR MORE INFORMATION ON THIS TABLE, SEE SECTION 4.3 OF THE GEOTECHNICAL REPORT

NOTE: WATER LEVEL ELEVATIONS SHOWN WERE OBTAINED AT THE TIME THE BORINGS WERE DRILLED AND MAY FLUCTUATE THROUGHOUT THE YEAR.

TO OBTAIN THE COMPLETE GEOTECHNICAL REPORT CONTACT THE BRIDGE DIVISION OF THE OKLAHOMA DEPARTMENT OF TRANSPORTATION AT (405) 521-2606

NS-4005 OVER DOYAL CREEK ATOKA COUNTY

FOUNDATION BORING LOGS  
(SHEET NO. 1 OF 1)

STATE JOB NO. 29925(04) SHEET NO. B002