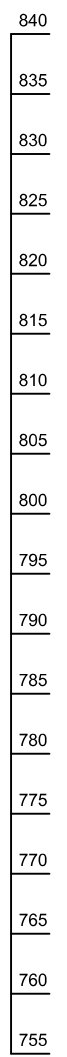


REV. NO.	DESCRIPTION	REVISIONS	DATE

**BORING NO. B-1**  
 Sta. 1034+19 Offset 74' Rt. of CRL  
 (Drilled March 24, 2014)



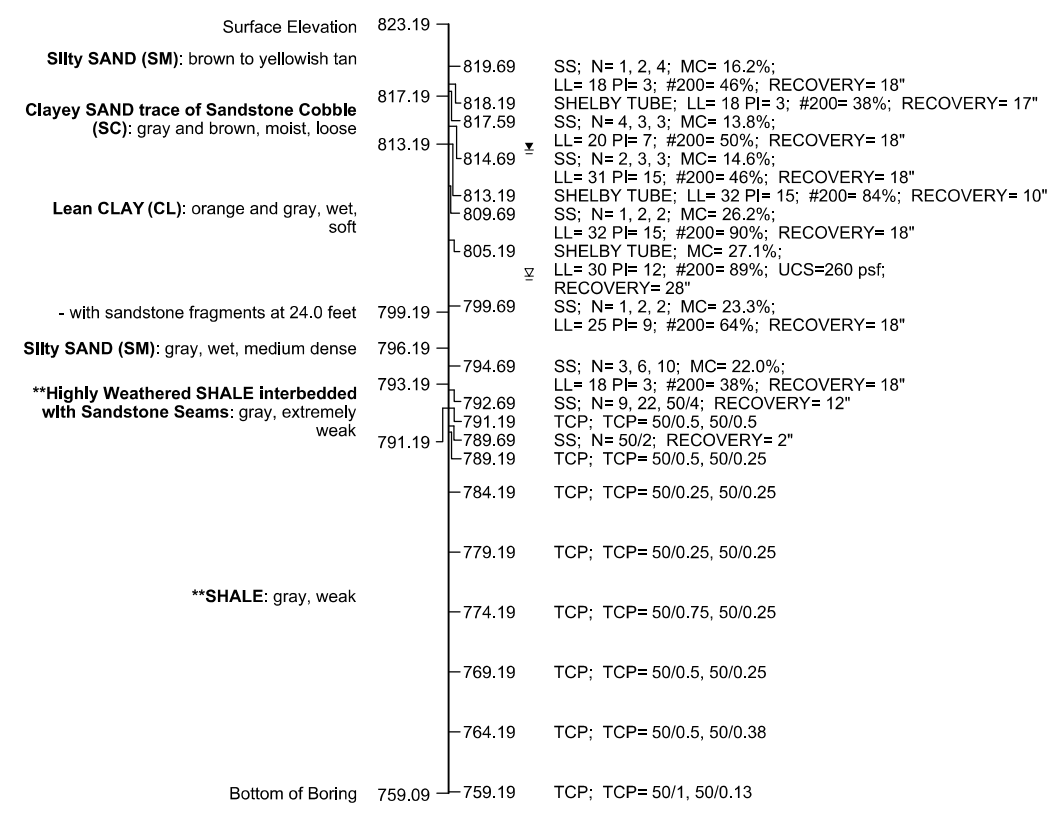
**SITE GEOLOGY**

ACCORDING TO THE "ENGINEERING CLASSIFICATION OF GEOLOGIC MATERIALS - DIVISION EIGHT" FROM THE OKLAHOMA HIGHWAY DEPARTMENT, 1970, THE SITES OF THE PROPOSED EMBANKMENTS APPEAR TO BE LOCATED WITHIN THE VAMOOSA UNIT (PVM). A BRIEF DESCRIPTION OF THIS UNIT IS PROVIDED IN THE FOLLOWING PARAGRAPHS.

VAMOOSA UNIT (PVM): THIS UNIT CONSISTS MOSTLY OF SHALE WHICH CONTAINS LENSES OF MASSIVE SANDSTONE AND A FEW THIN LIMESTONES. THE SHALE IS GRAY, GRAYISH GREEN, BLUE-GRAY, OR MAROON, AND IS SILTY TO CLAYEY.

THE VAMOOSA IS IN ZONES RANGING UP TO 100 FEET IN THICKNESS. THE SANDSTONES ARE MOSTLY SOFT TO MODERATELY HARD, BROWN TO TAN, GENERALLY 10 FEET TO 25 FEET OR MORE THICK, AND LOCALLY UP TO ABOUT 100 FEET THICK. APPROXIMATELY 100 FEET ABOVE THE BASE OF THE UNIT, A 10- TO 15-FOOT BED OF HARD SANDSTONE IS PRESENT.

THE LAND SURFACE FORMED BY THIS UNIT IS FAIRLY RUGGED AND HILLY. THE SANDSTONES CAP THE HILLS AND FORM SCARPS, WITH THE SHALES FORMING THE STEEP SLOPES AND VALLEYS. THIS UNIT OUTCROPS IN OSAGE AND PAWNEE COUNTIES OF DIVISION EIGHT.



**LEGEND**

SS	= SPLIT SPOON SAMPLER
N	= NUMBER OF BLOWS PER 12 INCHES
MC	= MOISTURE CONTENT
LL	= LIQUID LIMIT (NV=NO VALUE)
PI	= PLASTICITY INDEX (NP=NO PLASTICITY)
#200	= PERCENT PASSING #200 SIEVE
UCS	= UNCONFINED COMPRESSIVE STRENGTH
TCP	= TEXAS CONE PENETROMETER
WCI	= WET CAVE IN
∇	= WATER LEVEL WHILE DRILLING OR SAMPLING
◄	= WATER LEVEL AFTER DRILLING
◄	= WATER LEVEL 24 HOURS AFTER DRILLING

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

NOTE: SS DENOTES STANDARD PENETRATION TEST, AASHTO D1586-84 TCP DENOTES TEXAS CONE PENETRATION TEST.

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

Plotted By: rdm Date: 6/7/2017 4:52:39 PM  
 FILE: I:\2010\10K11 Birch Salt Rock Creek\001 - Birch Creek\Final PSE Submittal 6-7-17\106-Foundations Report.dgn

SH-99 OVER UNNAMED CREEK BRIDGE "B"		OSAGE COUNTY	Design	SBH	-
FOUNDATION REPORT			Detail	RM	EMH
			Check	SBH	-
NO. 5730 1170 X		NBI 04875	Squad:	....	
STATE OF OKLAHOMA		DEPARTMENT OF TRANSPORTATION	Engr.	....	
JOB PIECE NO. 24261(04)		SHEET NO. 106			