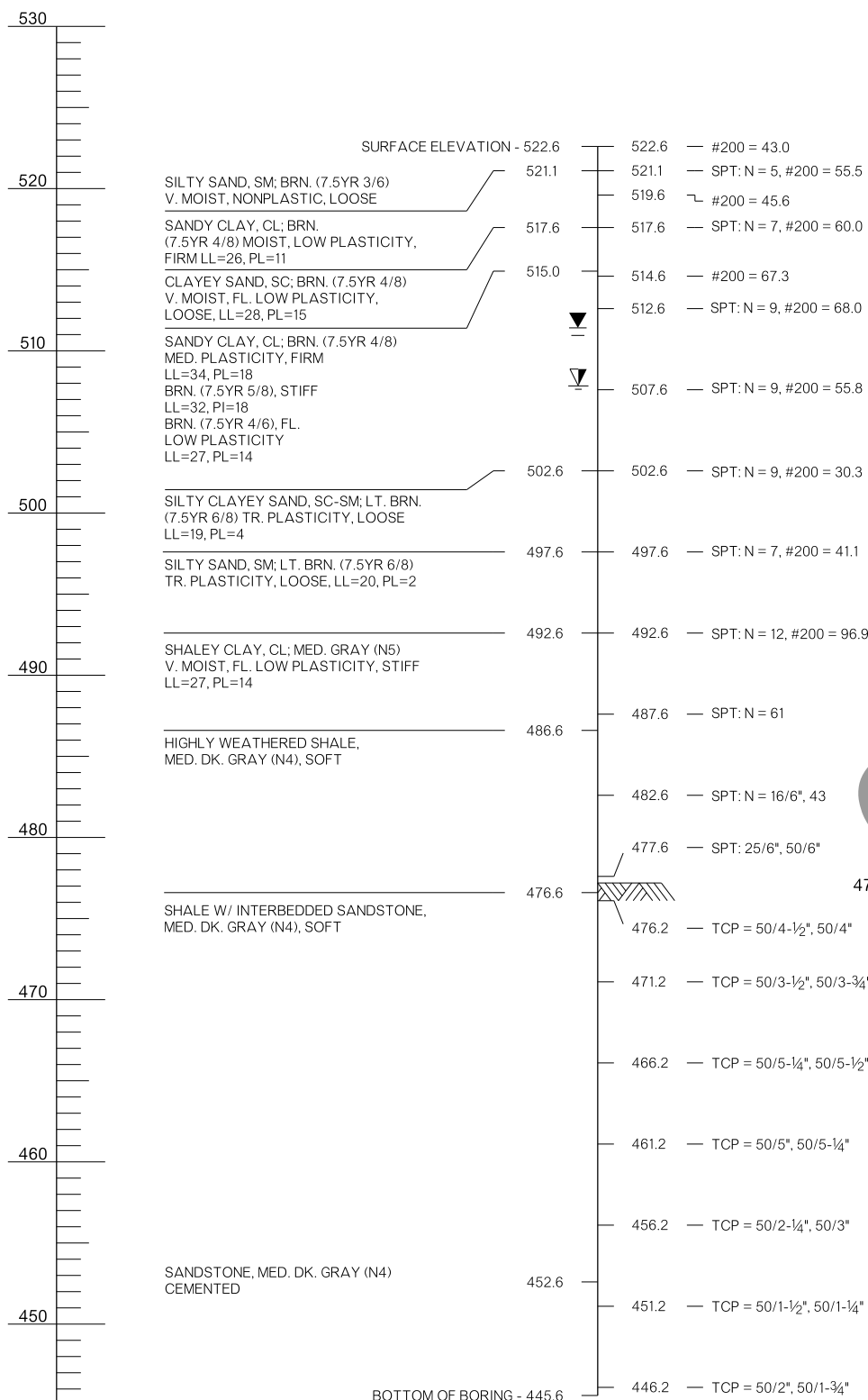


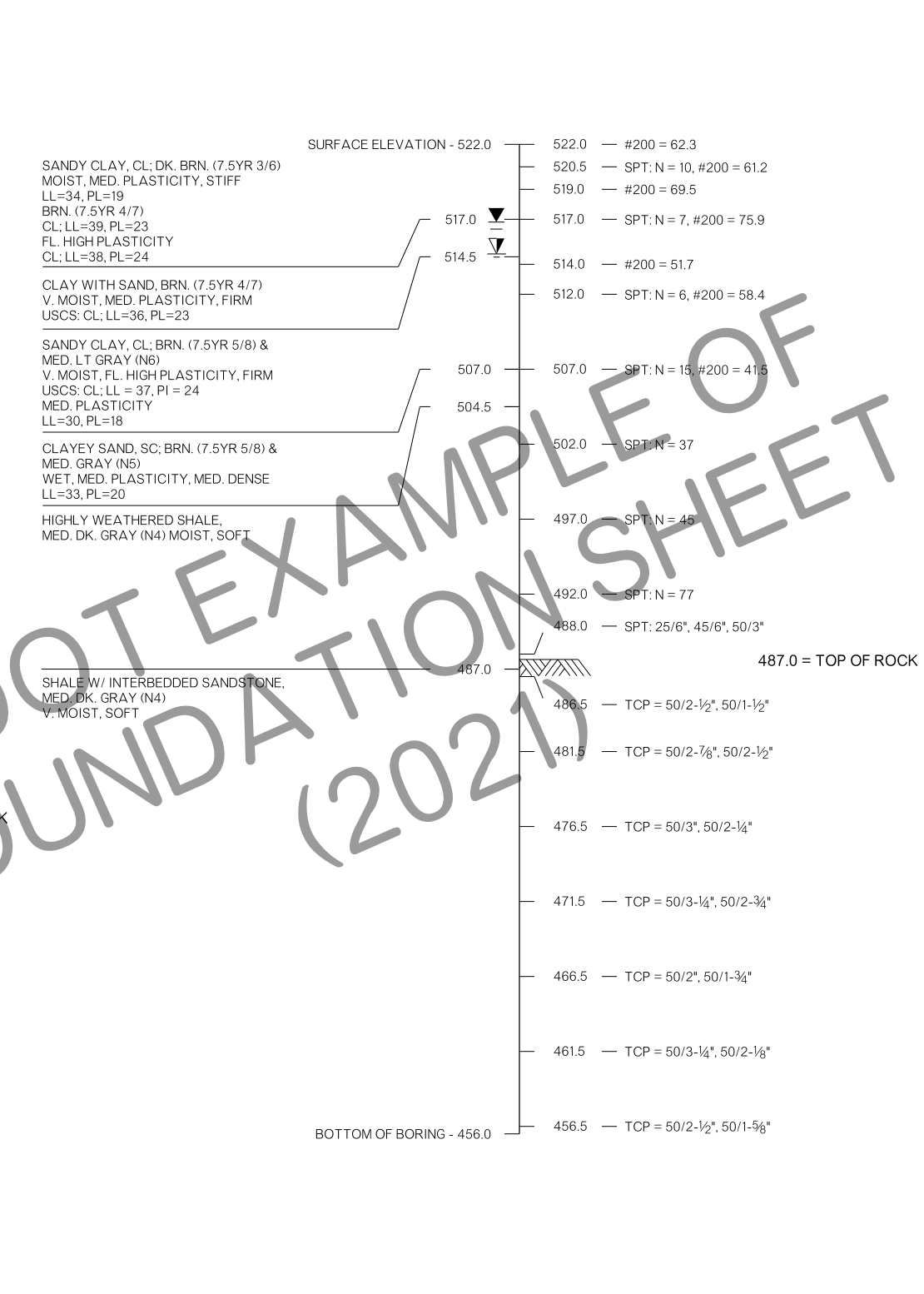
**BORING NO. B-01**

STATION 399+49, 91' LT. OF C SURVEY  
(JANUARY 20, 2010)



**BORING NO. B-02**

STATION 400+21, 130' LT. OF C SURVEY  
(JANUARY 21, 2010)



REVISIONS		
REV. NO.	DESCRIPTION	DATE

**LEGEND**

- V. = VERY
  - FL. = FAIRLY
  - SL. = SLIGHTLY
  - LT. = LIGHT
  - MED. = MEDIUM
  - BRN. = BROWN
  - TR. = TRACE
  - DRK. = DARK
  - BLK. = BLACK
- DCD = DIAMOND CORE DRILLING, ASTM D2113-83
  - SPT = STANDARD PENETRATION TEST, ASTM D1586
  - 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
  - ▨ = TOP OF ROCK

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

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

\*\* NOTE: ROCK CLASSIFICATION IS BASED ON DRILLING CHARACTERISTICS AND VISUAL OBSERVATION OF ROCK CORE SAMPLES. PETROGRAPHIC ANALYSIS OF THIN SECTIONS OF THE ROCK CORE SAMPLES MAY REVEAL OTHER TYPES.

**SITE GEOLOGY**

THE "ENGINEERING CLASSIFICATION OF GEOLOGIC MATERIALS, DIVISION ONE, "RESEARCH AND DEVELOPMENT DIVISION OF OKLAHOMA HIGHWAY DEPARTMENT, 1970, INDICATES THAT THE PROJECT SITE IS LOCATED OVER THE MCALESTER UNIT (IPMA). THIS GEOLOGIC FORMATION IS DESCRIBED THEREIN AS FOLLOWS:

MCALESTER UNIT (IPMA): THIS UNIT CONSISTS OF PREDOMINATELY SHALE, A FEW WIDELY SPACED BEDS OF SANDSTONE, AND POSSIBLY A FEW VERY THIN LIMESTONE BEDS. THE SHALE IS GENERALLY DARK COLORED, MOSTLY SILTY, LOCALLY CLAYEY, AND OCCURS IN THICK INTERVALS. THE SANDSTONE IS MODERATELY HARD TO HARD, BROWN TO GRAY, IN BEDS A FEW INCHES THICK TO 10 FEET THICK, AND IN SEQUENCES UP TO 30 FEET THICK. THE LIMESTONES ARE INSIGNIFICANT IN THIS UNIT.

THE THICKNESS OF THE MCALESTER UNIT IS 200 TO 400 FEET IN MUSKOGEE COUNTY, 275 TO 600 FEET IN MCINTOSH COUNTY, 500 TO 700 FEET IN SEQUOYAH, 700 TO 2,000 FEET IN HASKELL COUNTY, AND 1,500 TO 2,800 FEET IN PITTSBURG COUNTY. THE UNIT THINS RAPIDLY NORTHWARD IN WAGONER COUNTY FROM ABOUT 200 FEET AT THE SOUTH END TO LESS THAN 50 FEET AT ITS NORTHERN BOUNDARY. THE MCALESTER UNIT DOES NOT OUTCROP IN THE REMAINING COUNTIES OF DIVISION ONE.

THE TOPOGRAPHY OF THIS UNIT IS CHARACTERIZED BY BROAD FLAT SHALE AREAS INTERRUPTED BY OCCASIONAL FAIRLY PROMINENT RIDGES CAPPED BY THE WIDELY SPACED SANDSTONE BEDS OR SEQUENCES OF BEDS.

ACCORDING TO THE GEOLOGIC MAP OF THE "HYDROLOGIC ATLAS 1" OF OKLAHOMA, "RECONNAISSANCE OF THE WATER RESOURCES OF THE FORT SMITH QUADRANGLE, EAST-CENTRAL OKLAHOMA," BY MELVIN V. MARCHER, U.S. GEOLOGICAL SURVEY, SECOND PRINT 1988, INDICATES THAT THE PROJECT SITE IS LOCATED OVER THE MCALESTER AND HARTSHORNE FORMATIONS (IPMH). THIS GEOLOGIC FORMATION IS DESCRIBED THEREIN AS FOLLOWS:

MCALESTER AND HARTSHORNE FORMATIONS (QT): SHALE, SANDSTONE, AND COAL. YIELD LIMITED AMOUNTS OF WATER OF POOR QUALITY.

**GEOTECHNICAL REPORT**

ALL GEOTECHNICAL INFORMATION CONTAINED ON THIS SHEET IS COVERED BY THE ENGINEERING SEAL AFFIXED TO AN ORIGINAL GEOTECHNICAL ENGINEERING REPORT THAT HAS BEEN STAMPED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN OKLAHOMA. TO OBTAIN A COPY OF THE COMPLETE REPORT, CONTACT THE ODOT OFFICE ENGINEER AT (405) 521-2625. THE CONTRACTOR SHOULD BE FULLY AWARE OF THE SITE CONDITIONS PRIOR TO BEGINNING WORK. ANY ADDITIONAL GEOTECHNICAL INFORMATION WHICH MAY BE DESIRED IS THE RESPONSIBILITY OF THE CONTRACTOR.

(PLACE COMPANY NAME OR LOGO HERE)	BRIDGE "A" SH-XX OVER XXXX CREEK	XXXXX COUNTY	Design	XX	X/XX
	FOUNDATION BORING LOGS (SHEET 1 OF 2)		Detail	XX	X/XX
			Check	XX	X/XX
			Squad	XXXXXX	
		Engr.	XXXXXX		
STATE OF OKLAHOMA		DEPARTMENT OF TRANSPORTATION			
		JOB/PIECE NO. XXXXX(XX)			SHEET NO. B000