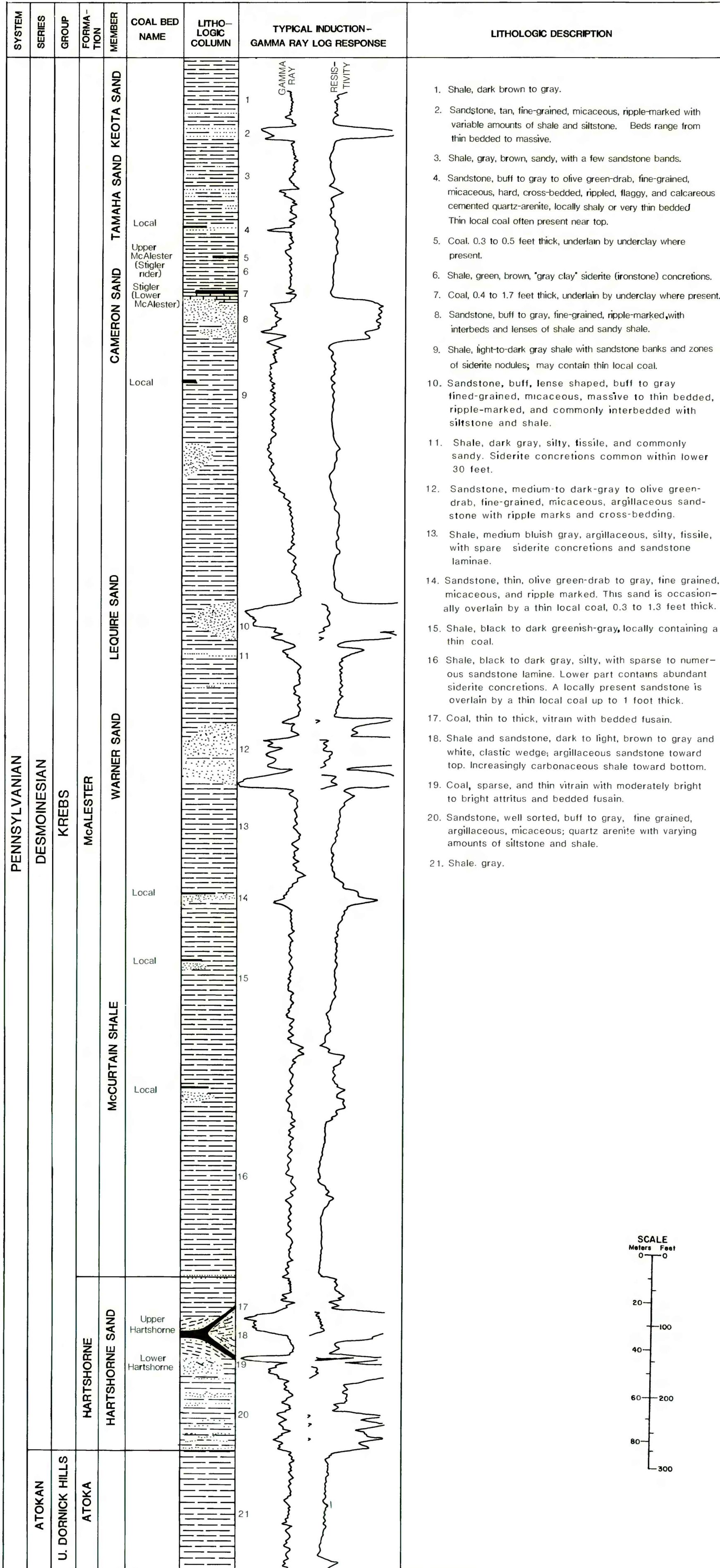


CORRELATION OF COAL BEDS IN WELL LOGS AND DEEP BORE HOLES

COMPOSITE COLUMNAR SECTION



**EXPLANATION**

Index Number  
 Petroleum Company Name  
 Well name and number (date logged)  
 Well or measured section location

Altitude, in feet, to top of drill hole or measured section. When estimated, when no altitude - NA  
 No record of lithology  
 Coal bed, showing estimated thickness in feet based on well log interpretation.  
 Rock interval  
 Break in rock interval showing thickness in feet not plotted  
 SS - Hartshorne sandstone formation reference datum - Formation top selected because of proximity of Hartshorne Coals. \* - Indicates suite of well logs insufficient to verify coal occurrence.  
 CNI (Coal Not Indicated) - Formation Density log indicates absence of a particular Coal seam.  
 Column shown truncated to TD in deep oil and gas well.  
 Total depth from ground level in feet. When TD not recorded - NR

Index number of composite mine section coal test hole, or outcrop measured section. USGS files source indicates non-proprietary information from Tulsa USGS office.  
 Bone Coal showing thickness in feet  
 NR - Coal thickness not recorded  
 Coal interbedded with rock, bone, or mixed rock and coal, total coal thickness/rock (including bone) thickness in feet.  
 Rock interval, thickness estimated (where lines dashed) as data not available. No record of lithology  
 Mixed Coal and rock interval thickness (precise coal or rock thickness not reported)

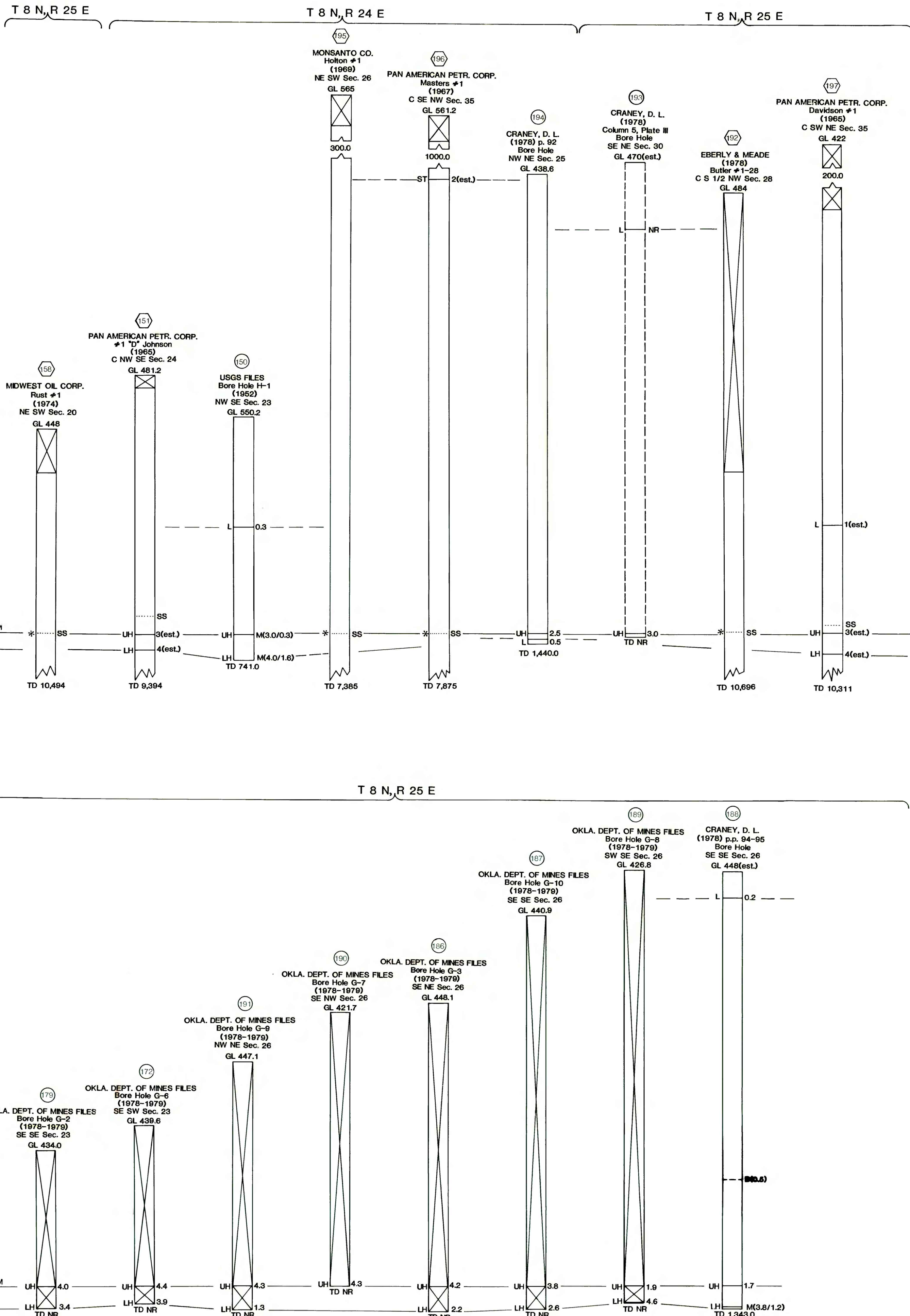
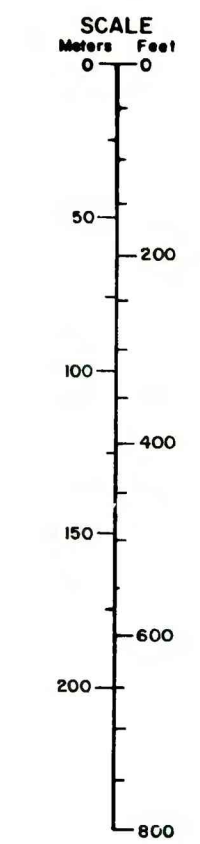
Index number of line measured section  
 Reference source and date of publication

Column left open at ends when measured section continues into rock units  
 NOTE: Thickness reported to tenths of feet only when resolution of data permitted

L Local (unnamed) coal bed  
 SE Secor Coal  
 UM Upper McAlester (Stigler rider) Coal  
 ST Stigler (Lower McAlester) Coal  
 UH Upper Hartshorne Coal  
 LH Lower Hartshorne Coal  
 H Hartshorne Coal

**COAL BED SYMBOLS AND NAMES**

NOTE: The explanation has been compiled to depict all possible combinations of data and does not intentionally represent any particular data points.



This report was prepared under contract to the U.S. Geological Survey, and has not been edited for conformity with Geological Survey editorial standards or stratigraphic nomenclature. Opinions expressed herein do not necessarily represent those of the Geological Survey.

COMPILED IN 1980  
 This map intended for land-use planning purposes only

FEDERAL COAL RESOURCE OCCURRENCE MAP OF THE PANAMA 7.5-MINUTE QUADRANGLE, LEFLORE COUNTY, OKLAHOMA  
 BY GEOLOGICAL SERVICES OF TULSA, INC., B. T. BRADY, USGS, AND J. L. QUERRY, BLM