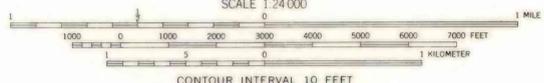




- EXPLANATION**
- OVERBURDEN ISOPACHS**-Showing thickness of overburden, in feet, (upper number) from the surface to top of the Hartshorne coal bed (or Upper Hartshorne where split) isopach interval 200 feet (61.0 m)
 - INTERBURDEN ISOPACH**-Showing thickness of interburden, in feet, between the Upper and Lower Hartshorne coal beds. Isopach interval 100 ft (30.5 m)
 - COAL TEST MEASUREMENT**-Showing thickness of overburden, in feet, (upper number) from the surface to top of the Hartshorne coal bed (or Upper Hartshorne where split) and thickness of interburden, in feet, (lower number in parentheses) between the Upper and Lower Hartshorne splits of the Hartshorne coal bed. Mining ratio in brackets.
 - OIL AND GAS TEST HOLE**-Showing thickness of overburden and thickness of interburden as outlined above. Mining ratio in brackets.
 - TRACE OF COAL BED OUTCROP**-Showing symbol of name of coal bed. Arrow points toward coal-bearing area. Dashed where inferred by present authors.
 - NORMAL FAULT**-Bar and ball on downthrown side; dashed where approximately located.
 - MINING-RATIO CONTOUR**-Number indicates cubic yards of overburden per ton of recoverable coal by surface mining methods. Contours shown only in areas underlain by coal of Reserve Base thickness within the stripping-limit (in this quadrangle, the 150-foot-overburden isopach). To convert mining ratio to cubic meters of overburden per metric ton of recoverable coal, multiply mining ratio by 0.8428.
 - 150 SL STRIPPING-LIMIT LINE**-Boundary for surface mining (in this quadrangle, the 150-foot-overburden isopach). Arrow points toward the area suitable for surface mining where the recovery factor is 80 percent, and away from the area suitable for subsurface mining (down dip to the 3,000-foot-overburden isopach) where the recovery factor is 50 percent.
 - SPLIT LINE**-Line along which the Hartshorne Coal bed splits into the Upper and Lower Hartshorne coal beds. This line corresponds to the 1 foot interburden isopach.
- NOTE:** Thickness rounded to nearest foot.
To convert feet to meters, multiply feet by 0.3048.

NOTE: Mining Ratios have not been drawn through mined-out areas or in areas where coal does not exceed Reserve Base thickness (1 foot or 30.5m).



CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

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 SPIRO 7.5-MINUTE QUADRANGLE, LEFLORE COUNTY, OKLAHOMA

BY GEOLOGICAL SERVICES OF TULSA, INC., B. T. BRADY, USGS, AND J. L. QUERRY, BLM

PLATE 6
INTERBURDEN ISOPACH MAP OF THE UPPER AND LOWER SPLITS OF THE HARTSHORNE COAL BED AND OVERBURDEN ISOPACH AND MINING RATIO MAP OF THE HARTSHORNE COAL BED AND UPPER SPLIT