



**EXPLANATION**

**2000**  
**OVERBURDEN ISOPACHS**--Showing thickness of overburden, in feet, from the surface to top of the Lower McAlester coal bed. Isopach interval 1000 feet (305m).

**164 (59.8)**  
**OIL AND GAS TEST HOLE**--Showing thickness of overburden, (upper number) from the surface to the top of the Lower McAlester coal bed. Mining ratio in brackets.

**LM**  
**INFERRED TRACE OF COAL BED OUTCROP**--Showing symbol of name of coal bed. Arrow points toward coal-bearing area.

**NOTE: Thickness rounded to nearest foot. To convert feet to meters, multiply feet by 0.3048.**

**15MR**  
**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**  
**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.

**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 305m).**

Base from U.S. Geological Survey, 1940  
 This map intended for land-use planning purposes only.

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.

UTM GRID AND 1979 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1:24 000

CONTOUR INTERVAL 20 FEET  
 NATIONAL GEODETIC VERTICAL DATUM OF 1929

Compiled 1980/1981

OKLAHOMA  
 QUADRANGLE LOCATION

**FEDERAL COAL RESOURCE OCCURRENCE MAP OF THE NORTHWEST QUARTER OF THE RED OAK 15-MINUTE QUADRANGLE, LATIMER COUNTY, OKLAHOMA**  
 BY GEOLOGICAL SERVICES OF TULSA, INC., AND B. T. BRADY, USGS