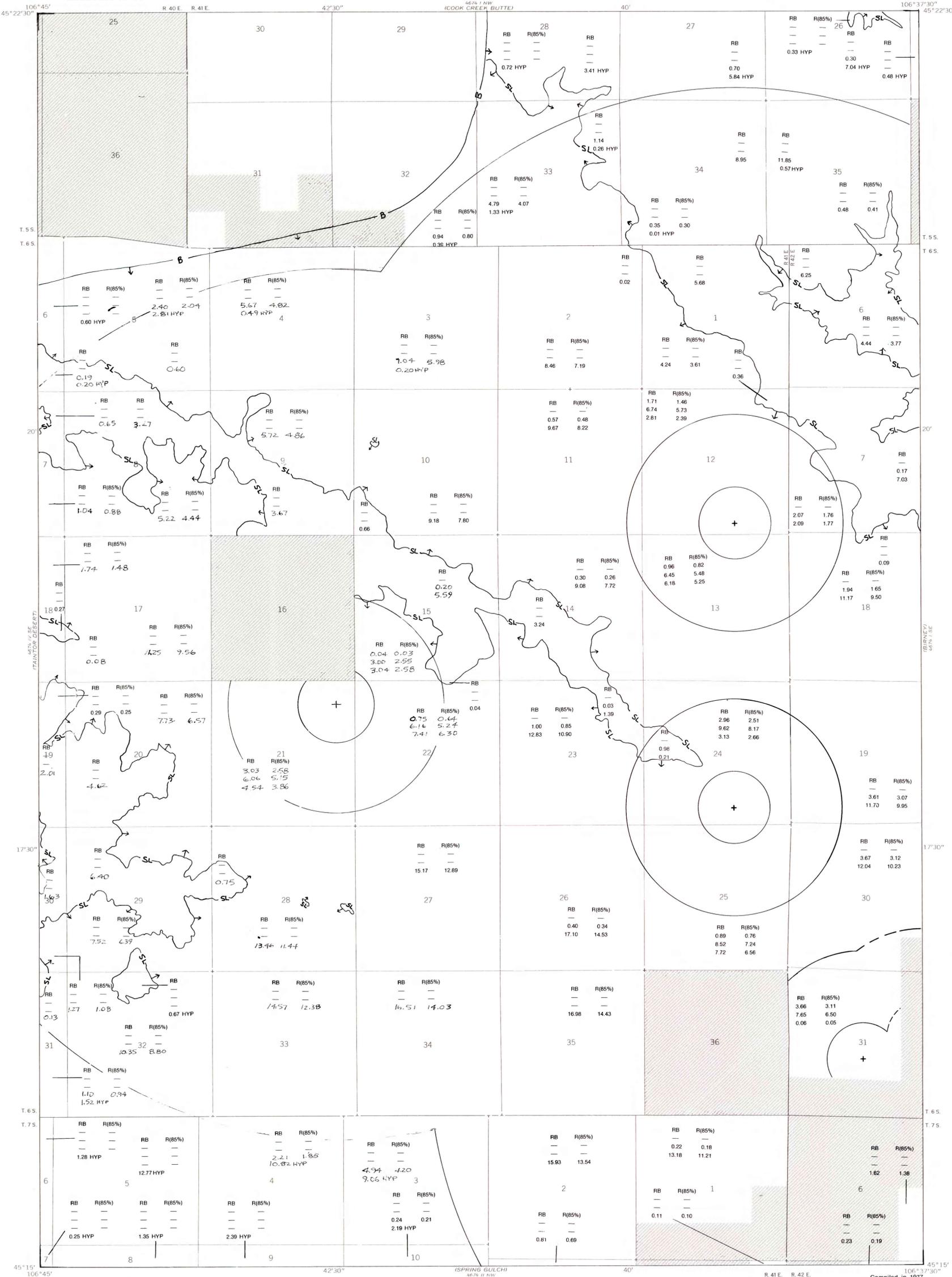


OPEN-FILE REPORT
This report has not been edited for conformity with
U.S. Geological Survey editorial standards or
stratigraphic nomenclature.



EXPLANATION

NON-FEDERAL COAL LAND—Land for which the Federal Government does not own the coal rights.

STRIPPING-LIMIT LINE—Boundary for surface mining of the coal bed (in this quadrangle, the 500-foot overburden isopach). Arrows point toward the area suitable for surface mining. Recovery factor of 85 percent within that area of this quadrangle.

BOUNDARY OF COAL 5 FEET OR MORE THICK—Drawn along the outcrop of coal bed and/or the inferred contact between burned and unburned coal, and/or the 5-foot coal isopach. Arrows point toward area of coal 5 feet or more thick.

POINT OF MEASUREMENT ON COAL BED

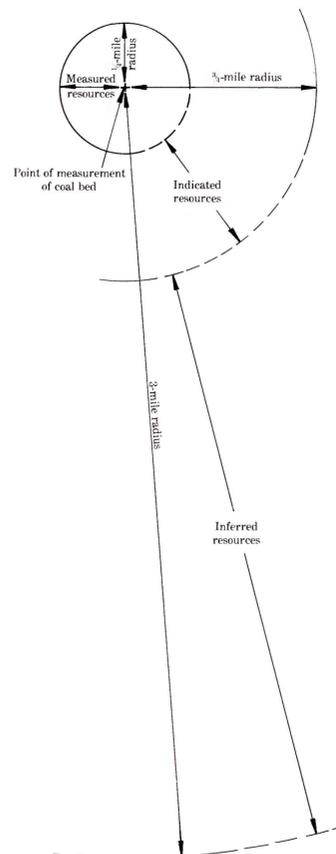


DIAGRAM SHOWING COMPONENT AREAS OF IDENTIFIED COAL RESOURCES—Shows arcuate boundary lines enclosing areas of measured, indicated, and inferred coal resources. Boundaries of areas are dashed where projected from an adjacent quadrangle. Areas of measured, indicated, or inferred resources may be present on this map without their outer boundaries being shown. Coal resources beyond the inferred category are hypothetical resources.

RB R(85%)
— — (Measured resources)
— — (Indicated resources)
4.94 4.20 (Inferred resources)
9.06 HYP (Hypothetical resources)

IDENTIFIED AND HYPOTHETICAL COAL RESOURCES—Showing totals for Reserve Base (RB), Reserves (R), and Hypothetical (HYP) resources, in millions of short tons, for each section or part(s) of a section of Federal coal land within the stripping-limit line. Dash indicates no resources in that category. Reserve Base (RB) X the Recovery Factor (85 percent) = Reserves (R).

RB R(85%)
— — (Measured resources)
— — (Indicated resources)
0.70 (Inferred resources)
5.64 HYP (Hypothetical resources)

IDENTIFIED AND HYPOTHETICAL COAL RESOURCES—Showing totals for Reserve Base (RB) and Hypothetical (HYP) resources, in millions of short tons, for each section or part(s) of a section of Federal coal land outside the stripping-limit line. Dash indicates no resources in that category.

NOTE: Recovery factors have not been established for underground development of coal in this quadrangle. Therefore, Reserves (R) were not calculated for the coal bed in areas outside the stripping-limit line.

To convert short tons to metric tons, multiply short tons by 0.9072.

To convert feet to meters, multiply feet by 0.3048.

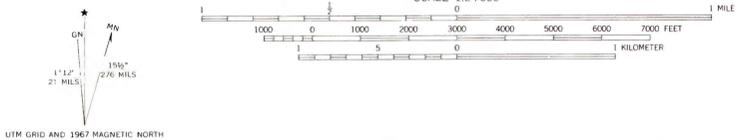
To convert miles to kilometers, multiply miles by 1.61.

Base map from U.S. Geological Survey, 1967

(SPRING GULCH)
1879 II 1879

SCALE 1:24,000

Computed in 1977



COAL RESOURCE OCCURRENCE MAP OF THE BIRNEY SW QUADRANGLE,
ROSEBUD AND BIG HORN COUNTIES, MONTANA
BY
COLORADO SCHOOL OF MINES RESEARCH INSTITUTE
1979