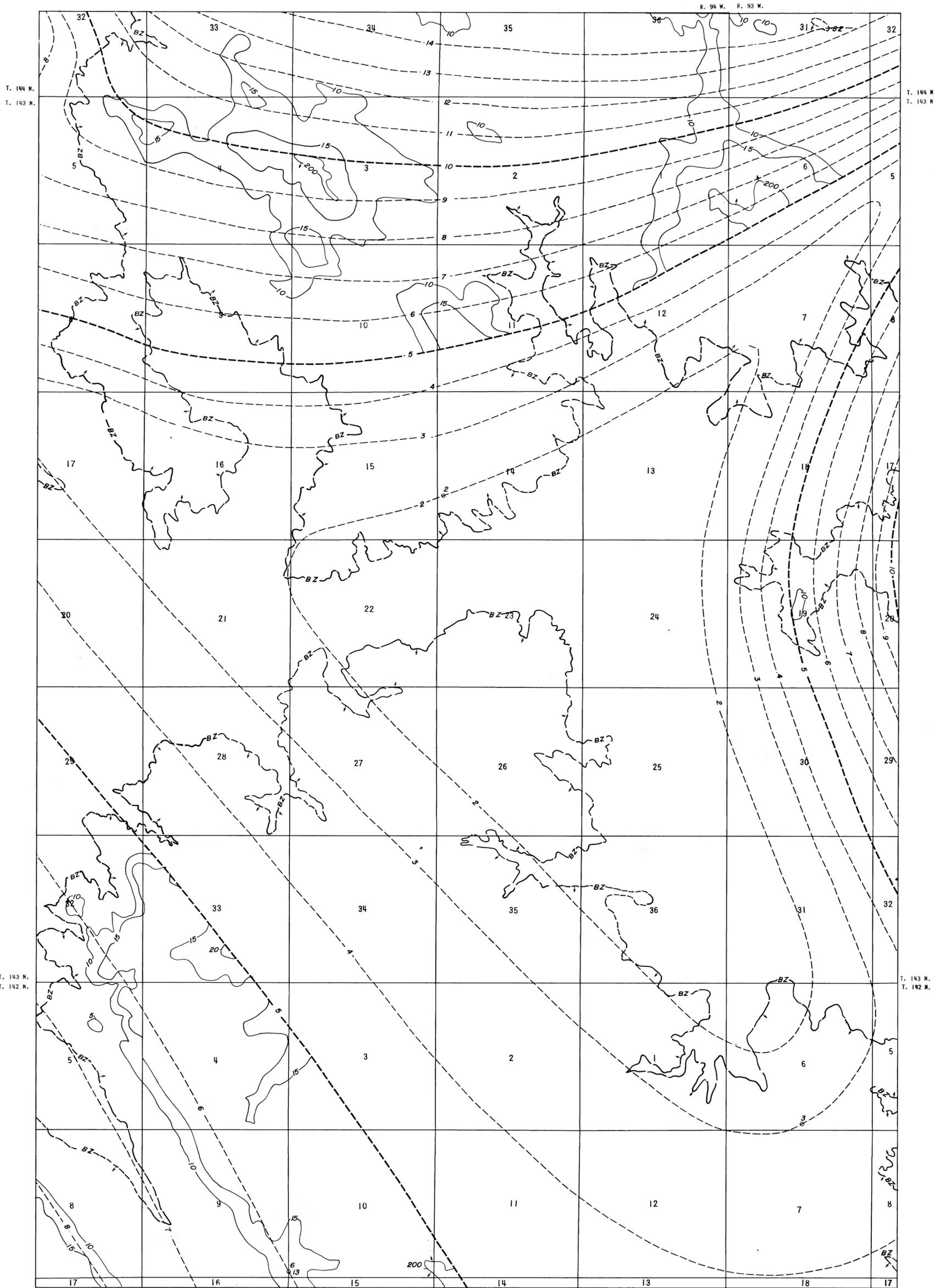
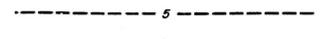


This report has not been edited for conformity with U.S. Geological Survey editorial standards or stratigraphic nomenclature.



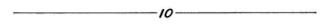
EXPLANATION



ISOPACH OF COAL BED--Showing thickness in feet. Isopach interval 1 foot (0.3m).



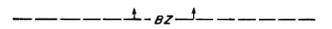
DRILL HOLE--Showing thickness of the coal bed in feet, (upper number). Showing value of mining ratio for the coal bed within stripping limit (lower number).



MINING RATIO CONTOUR FOR THE COAL BED--Number indicated cubic yards of overburden per ton of recoverable coal by surface mining methods.



200 FOOT OVERBURDEN ISOPACH--Used as boundary for surface mining. Arrows point toward area suitable for surface mining.

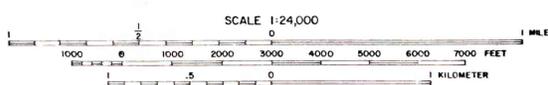
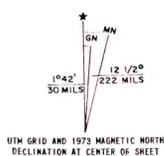


TRACE OF INFERRED COAL BED OUTCROP--Arrow points toward coal bearing area.

To convert feet to meters, multiply feet by 0.3048.

To convert cubic yards/short ton to cubic meters/metric ton, multiply by 0.842.

BASE FROM U.S. GEOLOGICAL SURVEY, 1970



COMPILED IN 1978

COAL RESOURCE OCCURRENCE MAP OF THE ZINER BUTTE QUADRANGLE,
DUNN COUNTY, NORTH DAKOTA

BY
WOODWARD-CLYDE CONSULTANTS
1978

PLATE 13
ISOPACH AND MINING RATIO MAP
OF THE BEULAH ZAP COAL BED