DEPARTMENT OF THE INTERIOR
U. S. GEOLOGICAL SURVEY

BULLETIN 1722-A
PLATE 1

APPROXIMATE BOUNDARY OF THE BURNT LODGE WILDERNESS STUDY AREA (MT-065-278)

107°30'00" — 107°22'30" — 47°47'30" — 47°45'00" — 47°42'30"

T. 24 N. — T. 23 N. — T. 22 N.

R.33 E. — R.34 E.

FORT PECK LAKE

VALLEY CO
GARFIELD CO

INDIAN RESERVATION BOUNDARY

EXPLANATION

[Entire study area has low mineral resource potential for (1) bentonite and sand and gravel, with certainty level D, (2) all metallic minerals (including placer gold), with certainty level B, and (3) mineralization and diamantiferous rock associated with possible deeply seated diatremes, with certainty level B. Entire study area has low energy resource potential for geothermal energy, with certainty level B]

Geologic terrane having moderate mineral resource potential for kaolinite, with certainty level D

Geologic terrane having moderate energy resource potential for oil and gas and coal, with certainty level B—Applies to entire study area

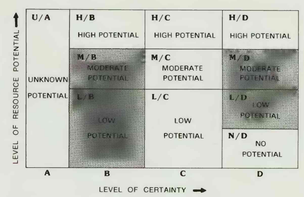
CORRELATION OF MAP UNITS

Qac, Qls, Qt	Holocene, Pleistocene	QUATERNARY
UNCONFORMITY		
Tft, Khc	Paleocene	TERTIARY
LOCAL UNCONFORMITY		
Kfh, Kb	Upper Cretaceous	CRETACEOUS

LIST OF MAP UNITS

- Qac — **Alluvium and colluvium, undifferentiated (Quaternary)**
- Qls — **Landslide deposits (Quaternary)**
- Qt — **Glacial till (Quaternary)**
- Tft — **Fort Union Formation, Tullock Member (Paleocene)**
- Khc — **Hell Creek Formation (Upper Cretaceous)**
- Kfh — **Fox Hills Sandstone (Upper Cretaceous)**—Includes the Colgate Member
- Kb — **Bearpaw Shale (Upper Cretaceous)**

- **Contact**—Approximately located; dashed where inferred
- **Fault**—Approximately located; dashed where inferred; dotted where concealed. Bar and ball on downthrown side. Includes fractures of unknown displacement
- **Anticline**—Showing inferred location of fold axis and direction of plunge. Dotted where concealed
- **Syncline**—Showing inferred location of fold axis and direction of plunge. Dotted where concealed
- — 2850 — **Structure contour**—Approximately located, showing altitude of top of Fox Hills Sandstone; dashed where restored. Contour interval 20 feet. Datum is mean sea level



LEVELS OF RESOURCE POTENTIAL

- **H** High mineral resource potential
- **M** Moderate mineral resource potential
- **L** Low mineral resource potential
- **U** Unknown mineral resource potential
- **N** No known mineral resource potential

LEVELS OF CERTAINTY

- **A** Available data not adequate
- **B** Data indicate geologic environment and suggest level of resource potential
- **C** Data indicate geologic environment, give good indication of level of resource potential, but do not establish activity of resource-forming processes
- **D** Data clearly define geologic environment and level of resource potential and indicate activity of resource-forming processes in all or part of the area

Diagram showing relationships between levels of mineral resource potential and levels of certainty. Shading shows levels that apply to this study area

Base from U.S. Geological Survey, Schuyler Butte, 1965; Swede Ridge and Wolfe Coulee, 1971; Smith Coulee and Whiskey Coulee, 1973

APPROXIMATE MEAN DECLINATION, 1973
GN MN
1° 48′ 32 MILS
16 1/2° 293 MILS

SCALE 1: 24,000
1 1/2 0 1 MILE
CONTOUR INTERVAL 40 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

MONTANA

Geology mapped by R.D. Hettinger, 1984

MAP SHOWING MINERAL AND ENERGY RESOURCE POTENTIAL AND GEOLOGY OF THE BURNT LODGE WILDERNESS STUDY AREA AND VICINITY, PHILLIPS AND VALLEY COUNTIES, MONTANA