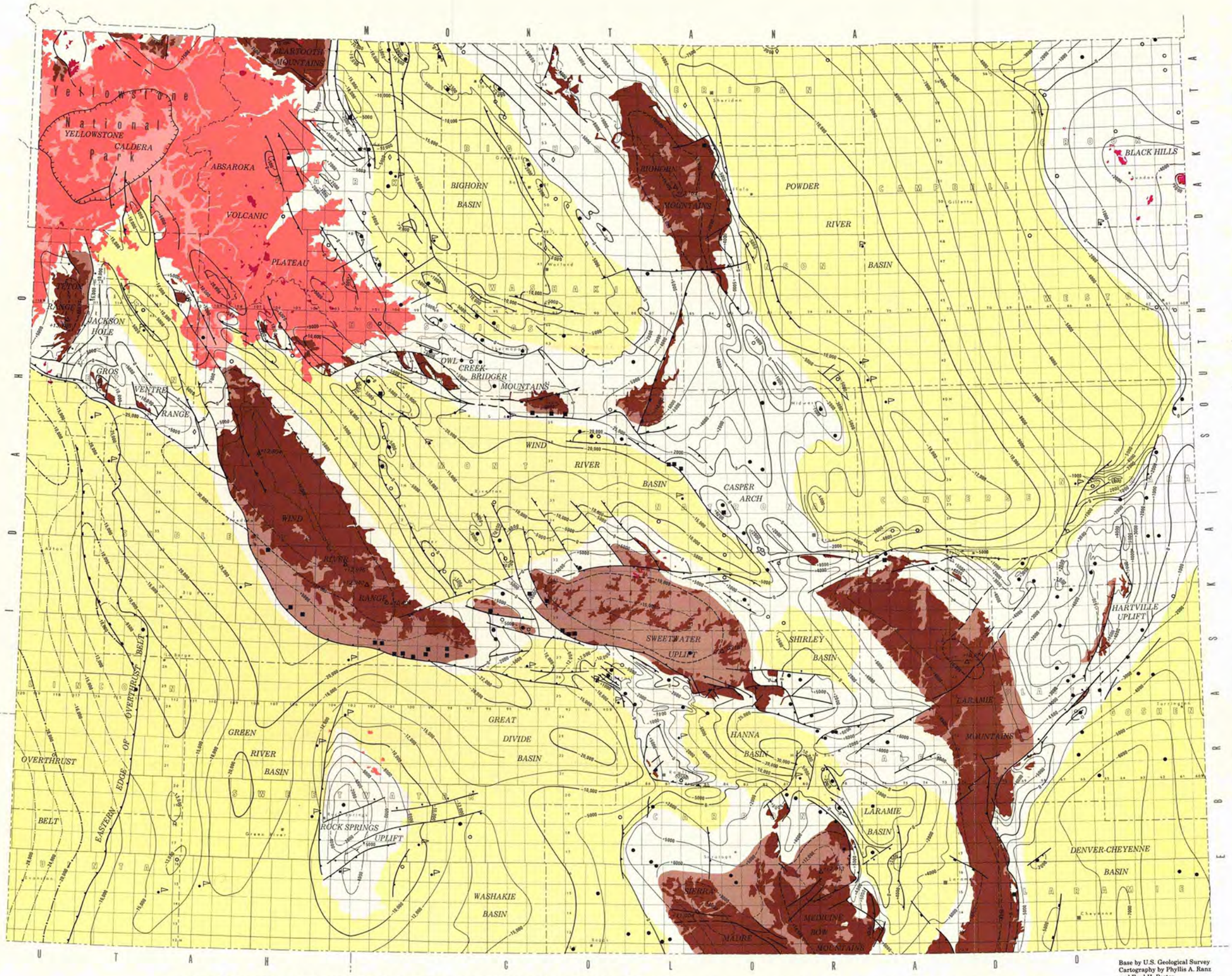
THE GEOLOGICAL SURVEY OF WYOMING
Gary B. Glass, State Geologist



Base by U.S. Geological Survey
Cartography by Phyllis A. Ranz
and Fred H. Porter.

EXPLANATION

Lithologic Units[1]

- Precambrian rock outcrop.
- Precambrian rock present in subsurface at shallow depth.
- Tertiary and Quaternary volcanic rock outcrop.
- Tertiary and Quaternary volcanic rocks present in subsurface at shallow depths.
- Tertiary igneous intrusive rocks.

Faults (shown where they intersect Precambrian rocks at the surface or at the level of the Precambrian rocks in the subsurface).

- Thrust fault, sawteeth on upthrown side; dashed where inferred.
- Normal fault, ball and bar on downthrown side; dashed were inferred.
- High-angle fault, bars on upthrown side; dashed where inferred.
- Fault, movement unspecified; dashed where inferred.

Contours

- 10,000 / +6000 — Structure contour on top of Precambrian basement, in feet above (+) or below (-) mean sea level. Contour interval varies; heavy contour lines at 10,000-foot intervals.
- -2000 — Structure contour in footwall of thrust.
- +8000 — Structure contour restored to pre-erosion elevation.

Data Points

- Well drilled to the Precambrian.
- Well drilled into or through the Precambrian.
- Well drilled to the Cambrian.
- Well drilled to the Ordovician.
- Wells critical to interpretation (drilled to units younger than Ordovician).
- +13,785 — Elevation of Precambrian rocks in some of the highest mountain peaks (in feet).

Other Boundaries

- Yellowstone caldera boundary.
- Major Wyoming basins and overthrust belt[2].

[1]Outcrop modified from J.D. Love and A.C. Christiansen, 1985, Geologic map of Wyoming: U.S. Geological Survey, scale 1:500,000.

[2]Boundaries of basins modified from R.H. DeBruin and C.S. Boyd, 1991, Oil and gas map of Wyoming: Geological Survey of Wyoming Map Series 35, scale 1:500,000.

The basement map presented here was prepared using all well data, published information, gravity, magnetics, and reflection seismic data available to the author. Numerous cross sections were constructed to aid in interpretation. The Geological Survey of Wyoming and the compiler welcome comments.

Scale 1:1,000,000

10 0 10 20 30 40 Miles

10 0 10 20 30 40 50 Kilometers

PRECAMBRIAN BASEMENT MAP OF WYOMING: OUTCROP AND STRUCTURAL CONFIGURATION

by
D.L. Blackstone, Jr.

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