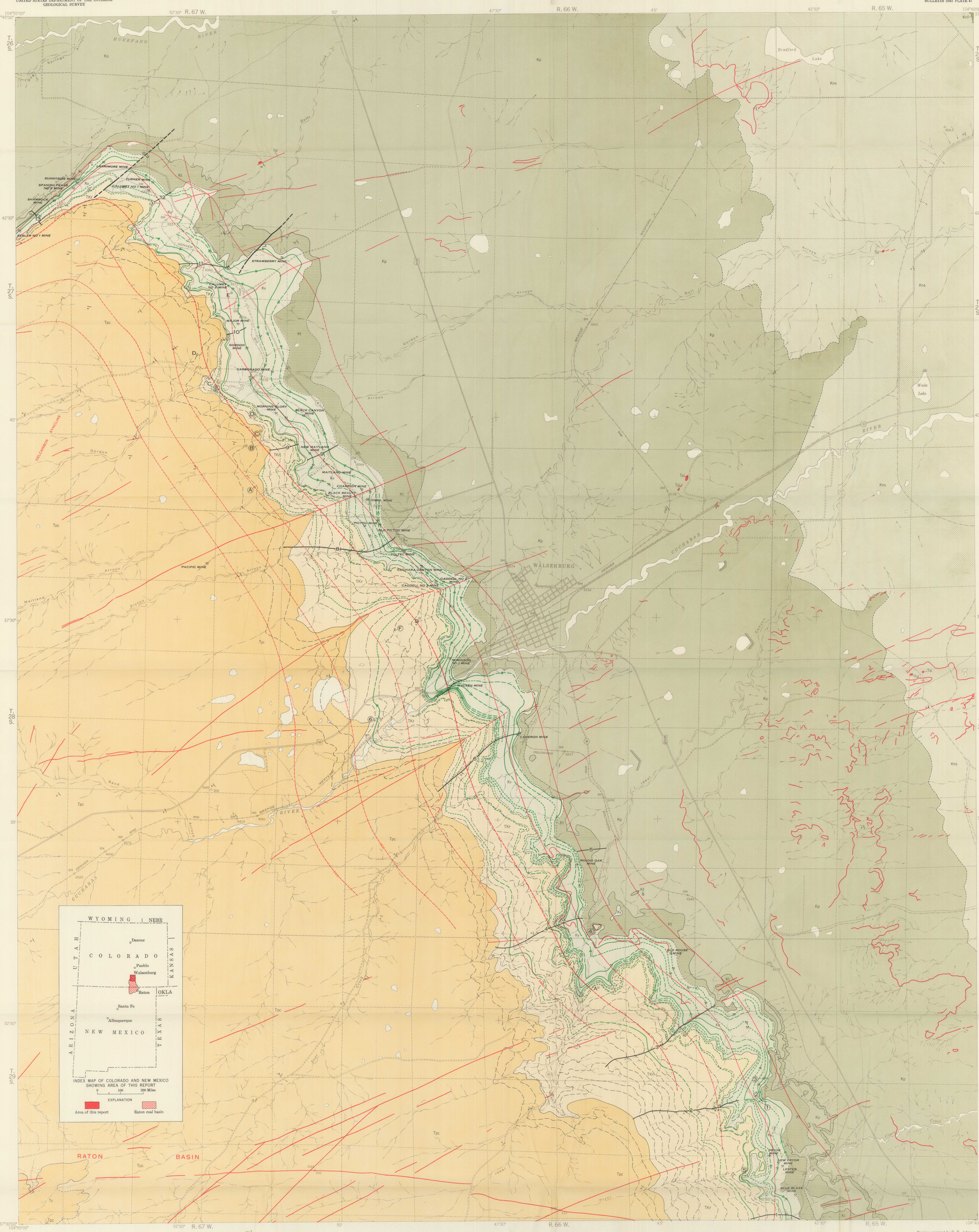

EXPLANATION

SEDIMENTARY ROCKS

Tc — Cuchara formation (Eocene)
Red, pink, and white sandstone; red and tan shale

UNCONFORMITY

Tpc — Poison Canyon formation (Paleocene)
Includes buff to red arkosic sandstone and conglomerate, and yellow shale. Dashed lines within formation are drawn at bases of sandstone beds

UNCONFORMITY

TKr — Raton formation (Upper Cretaceous)
Includes black to gray carbonaceous and silty shale, buff to green sandstone, buff to red conglomerate, and coal. Dashed lines within formation are drawn at bases of sandstone beds

Kv — Vermejo formation (Upper Cretaceous)
Buff to light-gray sandstone; gray to dark-gray carbonaceous shale and coal

Kt — Trinidad sandstone (Upper Cretaceous)
Light-gray to buff massive sandstone

Kp — Pierre shale (Montana group, Upper Cretaceous)
Gray marine shale, locally silicified; upper 200 feet is alternating thin-bedded buff sandstone and shale

Kns — Niobrara formation (Colorado group, Upper Cretaceous)
Salmon-colored platy limestone and chalk; gray limestone and thin layers of calcareous shale. Includes Smoky Hill marl member, Kns; and Fort Hays limestone member, Knf

Knf — Niobrara formation (Colorado group, Upper Cretaceous)

IGNEOUS ROCKS

Tsi — Basic and silicic intrusive rocks (Eocene)
Plugs, dikes, and sills not marked by symbol (Tsi) are basic in composition

Contact
Dashed where approximately located

Coal bed
Solid line where correlation and linear extent are known; long dashes where probable; short dashes where possible. Coal beds less than 14 inches thick are not mapped. Arrow points indicate direction of diminishing thickness of coal beds; open arrow points enclose coal more than 28 inches thick, and solid arrow points enclose coal more than 42 inches thick

High-angle fault
Dashed where approximately located; U, upthrown side; D, downthrown side

Strike and dip of beds

Structure contours
Drawn on top of Trinidad sandstone; solid where approximately located; dashed where control is inadequate. Contour interval is 200 feet; datum is mean sea level

Mine or prospect

Drill hole
Used in stratigraphic sections and coal sections

Drill hole
Used only in coal sections

Line of measured section

Measured coal section

GENERALIZED COLUMNAR SECTION OF UPPER CRETACEOUS AND TERTIARY FORMATIONS IN THE WALSENBURG AREA, HUERFANO COUNTY, COLORADO

The Vermejo and Raton formations were measured at several outcrops near Gordon Arroyo (secs. 23, 25, 26, T. 27 S., R. 67 W.). The Trinidad sandstone was measured near Santa Clara Creek (sec. 18, T. 29 S., R. 65 W.).

SERIES	FORMATION AND MEMBER		THICKNESS IN FEET
Pleistocene or Recent	Alluvium		0-10
EOCENE	Cuchara formation		250-350
PALEOCENE	Poison Canyon formation		2000-2500
?	Raton formation		10-510
UPPER CRETACEOUS	Vermejo formation		240-410
	Trinidad sandstone		100-150
	Pierre shale		2000-2100
	Niobrara formation	Smoky Hill marl member	400-500
		Fort Hays limestone member	40-60

Base compiled from Bureau of Land Management township plats and planimetric maps prepared by the Geological Survey from aerial photographs

APPROXIMATE MEAN DECLINATION 1951

Geology mapped by R. B. Johnson and J. G. Stephens, 1951

EXPLANATION FOR COLUMNAR SECTION

Sandstone; Sandstone, arkosic; Sandstone, arkosic, conglomeratic; Sandstone, arkosic, conglomeratic, crossbedded; Sandstone, conglomeratic; Siltstone; Shale; Shale, calcareous; Limestone, argillaceous; Limestone; Coal

GEOLOGIC MAP OF THE WALSENBURG AREA, HUERFANO COUNTY, COLORADO

Scale 1:31,680

1 0 2 Miles

INTERIOR-GEOLOGICAL SURVEY, WASHINGTON, D. C.
M R-1932