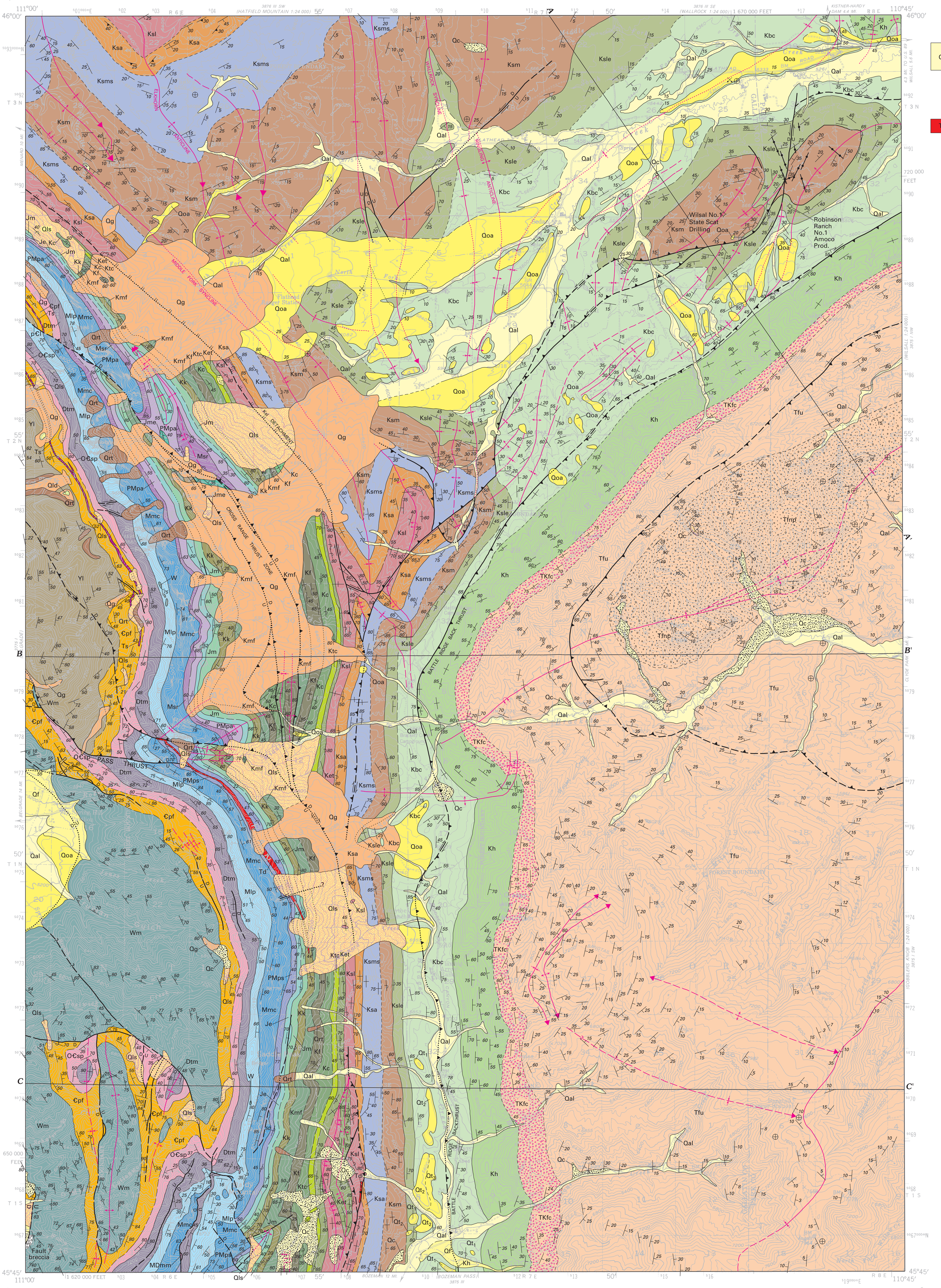
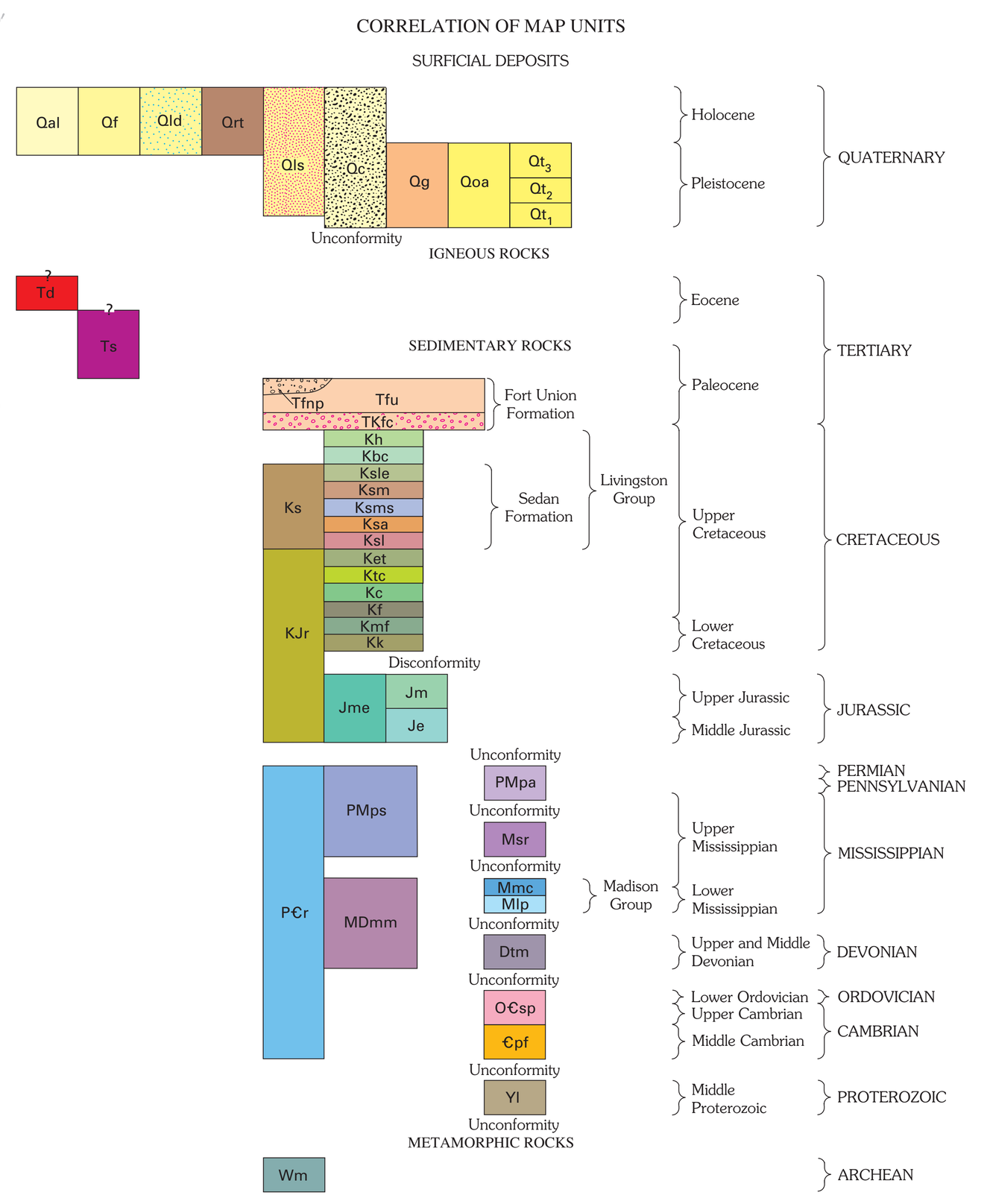
GEOLOGIC INVESTIGATIONS SERIES I–2634
Version 2.1





Msr **Snowcrest Range Group (Upper Mississippian)**—Gray and gray-brown limestone and dolostone; red, pink, and yellow-orange sandstone; red and pink siltstone; red to purple shale; and a red-stained breccia. Group is divisible into three formations, described in descending order: The Conover Ranch Formation consists of ledge-forming, medium-bedded, gray to gray-brown, chert-nodule-bearing limestone and dolostone. Lower contact is gradational with Lombard Limestone, which consists of dark-gray to purplish-gray and black, fossiliferous shale or shaly limestone. Thickness of combined Conover Ranch Formation and Lombard Limestone varies from zero to about 61 m. Lombard Limestone unconformably overlies Kibbey Formation, which consists of three parts: upper part is red, pink, and pale-yellow-orange, platy to massive sandstone, sandy siltstone, and sandy dolostone, containing intercalated red siltstone; middle part is red and pink, blocky-fracturing dolomitic siltstone, and red to purple, hackly shale containing some thin pale-gray or cream-colored, purple-mottled, fine-grained dolostone; lower part is cream- and lavender-mottled, irregularly bedded, fine-grained dolostone or a red-stained breccia of limestone and dolostone fragments (McMannis, 1955). Thickness of Kibbey Formation varies from 11 to 71 m. Thickness of group varies from 11 to 122 m

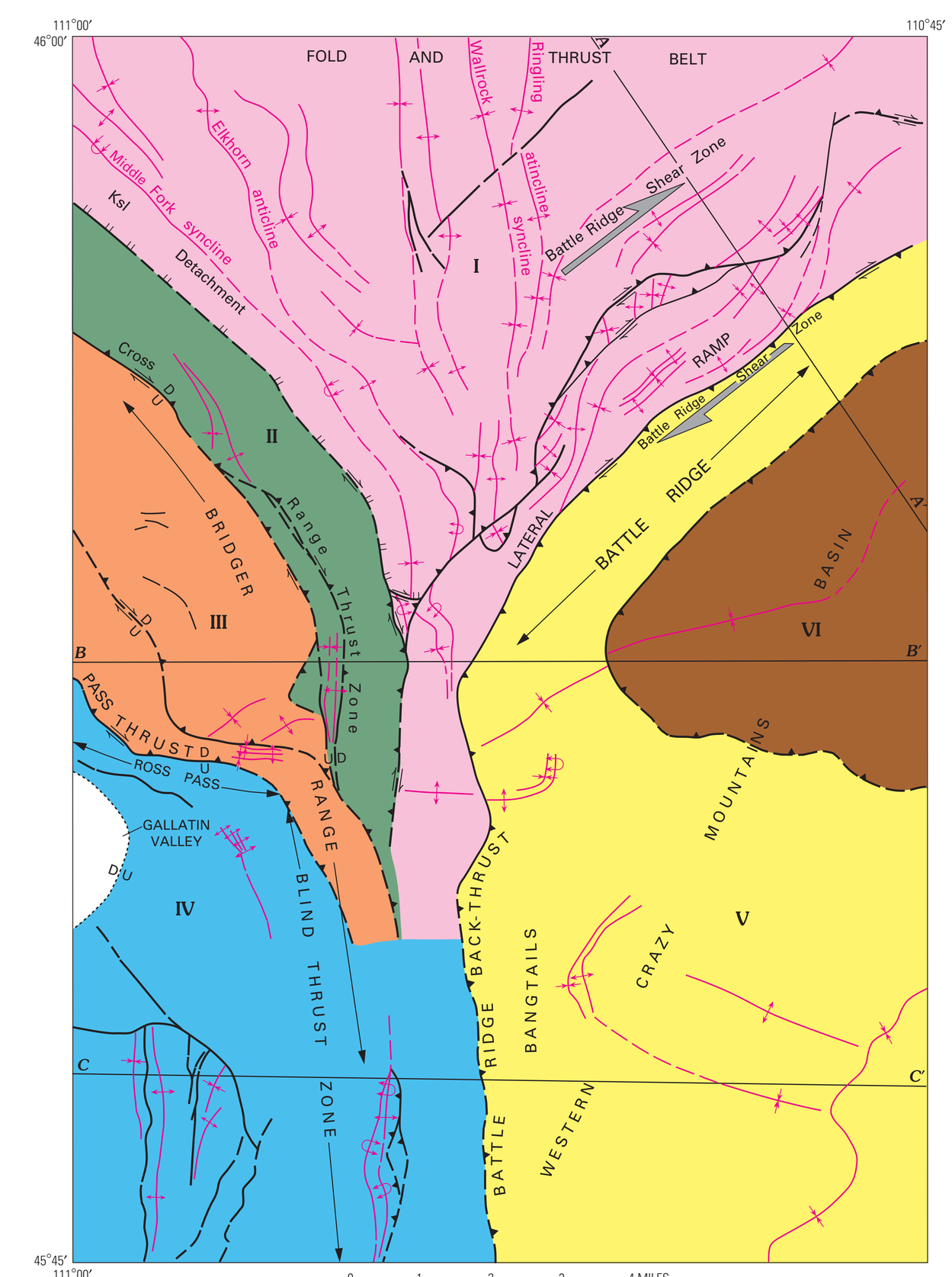
MDmm **Madison Group, Three Forks Formation, Jefferson Dolomite, and Maywood Formation, undivided (Mississippian and Devonian)**—Fault zone breccia consisting of limestone and dolostone fragments derived from these formations in a structural horse just north of southern border of quadrangle, southwest of Baldy Mountain

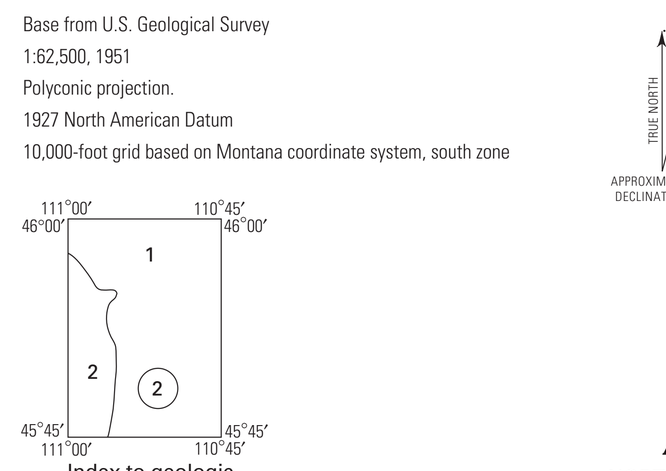
Madison Group (Upper and Lower Mississippian)—Limestone and dolostone divided into an upper thick-bedded formation, the Mission Canyon Limestone, and a lower thin-bedded formation, the Lodgepole Limestone

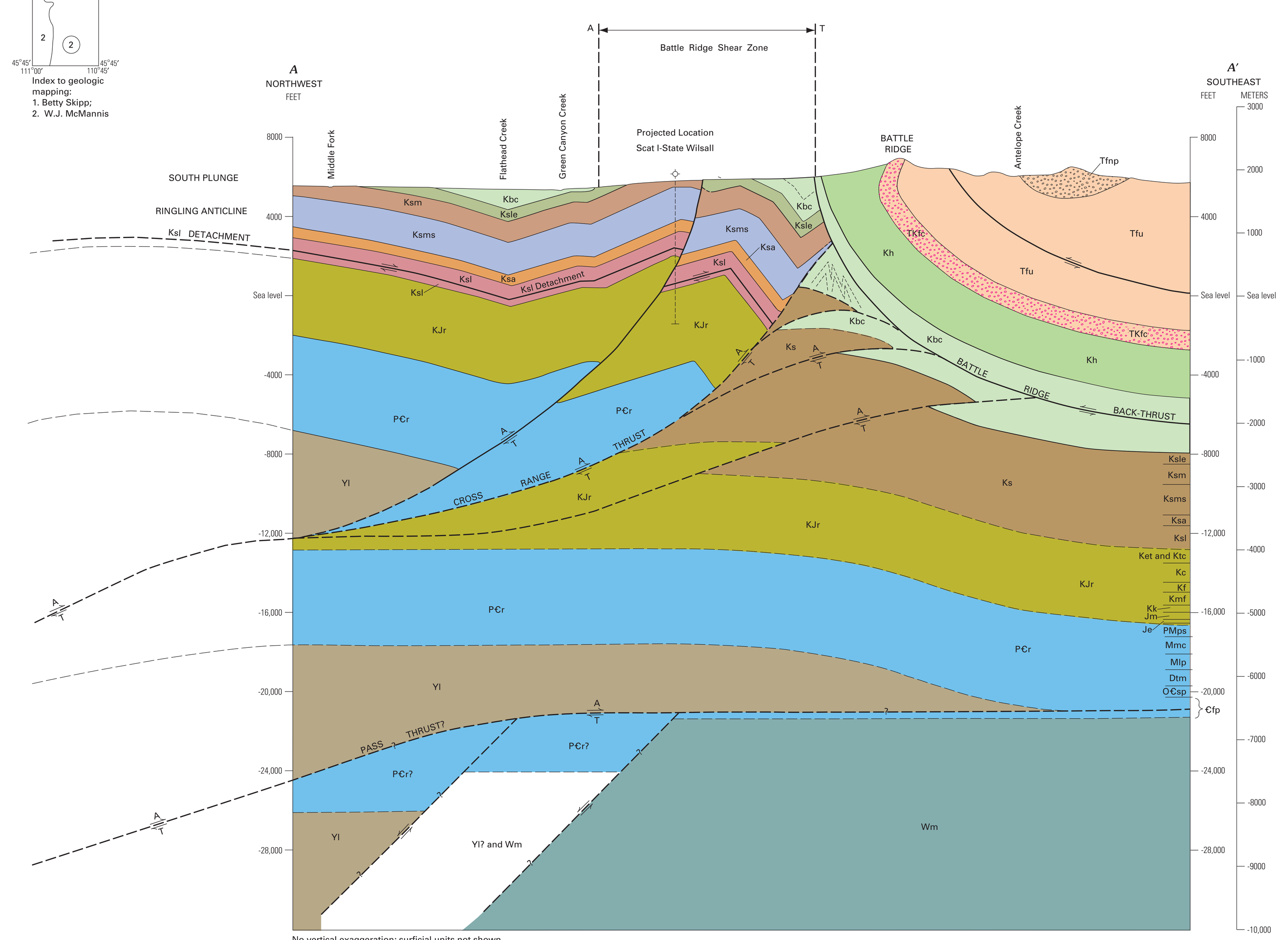
Mmc **Mission Canyon Limestone (Upper and Lower Mississippian)**—Pale-yellow-brown, massive, poorly bedded limestone and dolostone that weather light gray and form cliffs and castellated ridges. Chert and limestone nodules are common in middle and upper beds. Several conspicuous solution-collapse breccias occupy persistent stratigraphic positions. Unit has a gradational lower contact with Lodgepole Limestone (unit Mlp) and ranges in thickness from about 220 to 290 m; it is thickest near Sacagawea Peak

Mlp **Lodgepole Limestone (Lower Mississippian)**—Gray and brown limestone and minor dark-brown to black silty shale. Formation is divisible into three members: Upper Woodhurst Limestone Member consists of pale-yellow-brown, orange-brown, gray-brown, red-stained, thin-bedded, and fine-grained limestone, and intercalated medium- to thick-bedded, lighter colored, massive, cliff-forming, crinoidal, very fossiliferous (corals, brachiopods) limestone. Woodhurst Limestone Member is 134–146 m thick. Middle Paine Shale Member includes dark-gray-brown, mainly thin-bedded and platy, fine-grained, brittle, sparsely fossiliferous limestone, intercalated with yellow-weathering shaly limestone, and local Waulsortian bioherms (Stone, 1972; Smith, 1982). "W" indicates positions of Waulsortian bioherms on map. Member is 94–99 m thick. Basal Cottonwood Canyon Member is dark-brown to black silty shale and siltstone. Member is 0.6–0.9 m thick. Formation unconformably overlies Sappington Member of Three Forks Formation (unit Dtm) Total thickness is 228–246 m

Dtm **Three Forks Formation, Jefferson Dolomite, and Maywood Formation, undivided (Upper Devonian)**—Light- and dark-brown dolostone; gray and gray-green, nodular limestone; yellowish-brown sandstone; pink and gray siltstone; black and green shale; and minor dolostone breccia. Unit comprises, in descending order, three formations and their members. The Three Forks Formation is divisible into three members: Sappington Member at top consists of yellowish-brown, very fine grained, calcareous sandstone that grades downward to gray and gray-green silty shale and silty to sandy, nodular, oncolith-bearing limestone and a thin basal conodont-bearing, black shale. Sappington Member disconformably overlies middle Trident Member, which consists of gray, nodular limestone in upper part and green shale intercalated with some dolomitic siltstone in main part. Underlying basal Logan Gulch Member includes an upper ledge-forming, brecciated limestone underlain by evaporite-solution breccia and red to orange, nodular, limonitic shale; conformable lower contact. Three Forks Formation is conformable above Jefferson Dolomite and is 61–70 m thick. Jefferson Dolomite consists of light- and dark-brown, mainly medium- to thick-bedded, fine- to medium-grained, saccharoidal dolostone; dolomitic limestone; and limestone having a few intercalated ...



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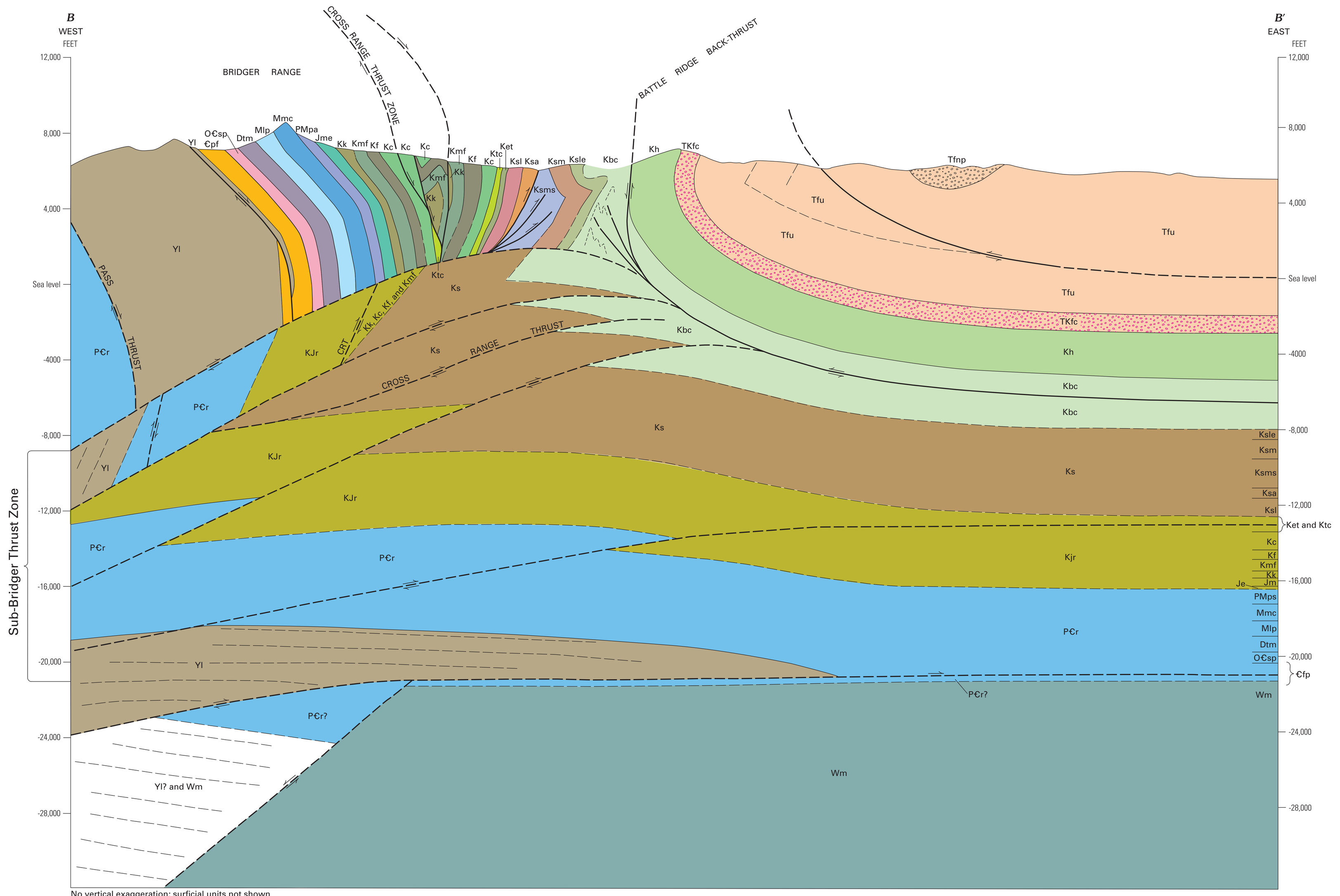
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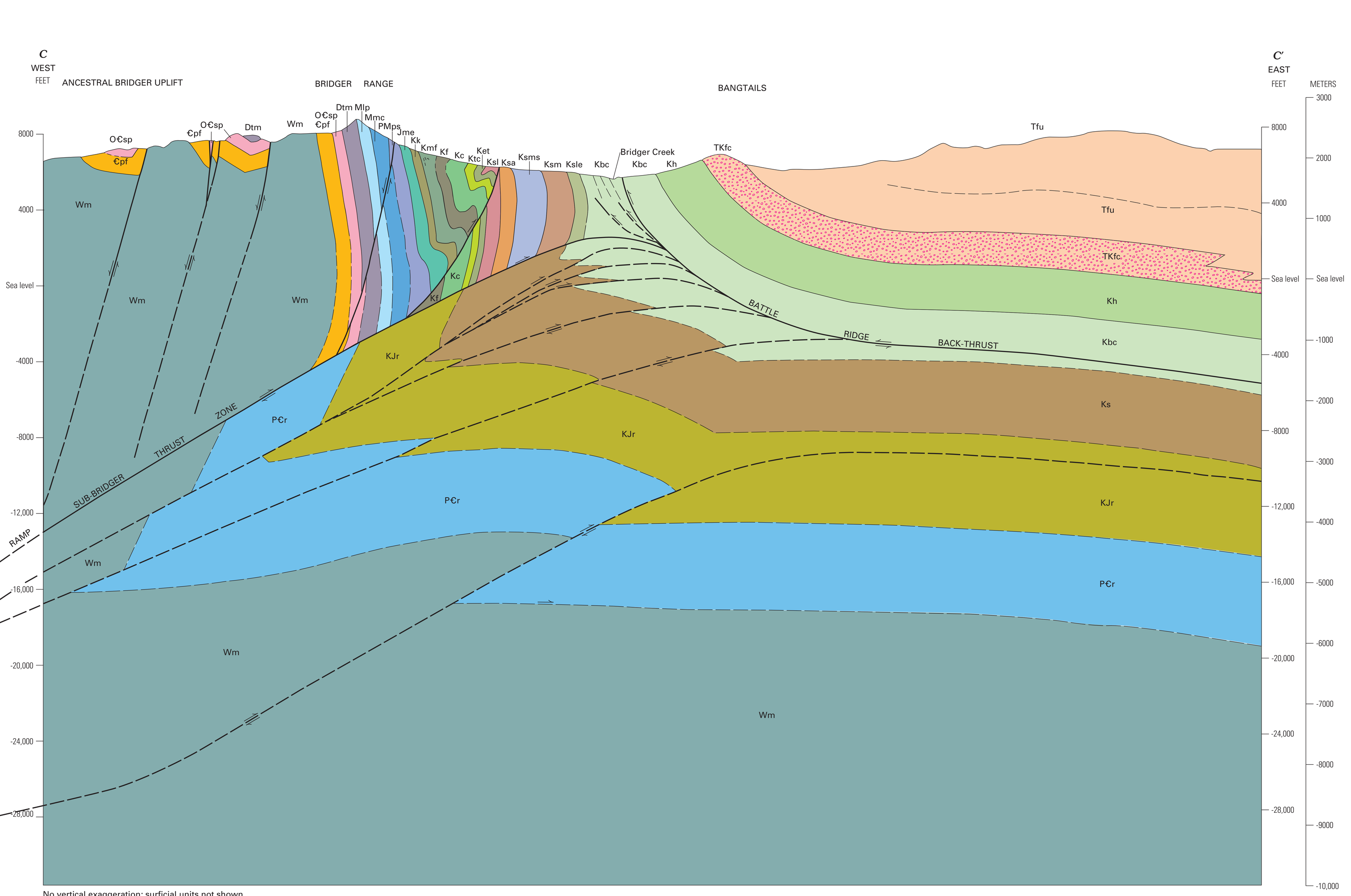
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GEOLOGIC MAP OF THE SEDAN QUADRANGLE, GALLATIN AND PARK COUNTIES, MONTANA

By
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1999

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