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1 Compiled by C. P. Ross from incomplete data
2 Compiled by C. P. Ross from maps and notes of M. R. Campbell's field parties
3 Field checked and revised by C. P. Ross and assistants
4 Compiled by C. P. Ross from maps and field notes by M. R. Campbell, W. C. Alder, Eugene Stebbins, and their assistants
5 Mapped by C. P. Ross and assistants

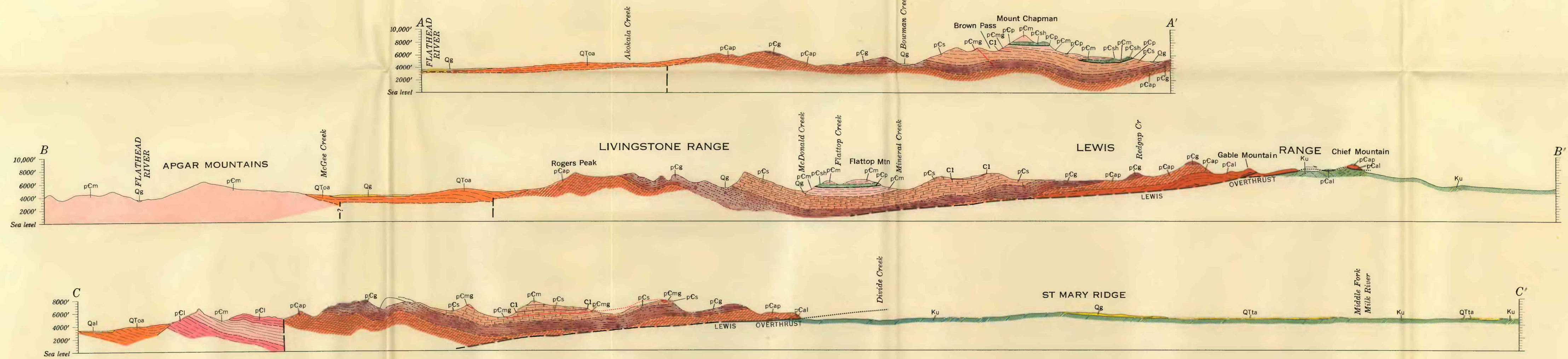
EXPLANATION
STRATIFIED ROCKS

- QUATERNARY**
 - Modern alluvium: Gravel, sand, and silt, in places merges with other unconsolidated deposits. Shown only where recent mapping has been done.
 - Glacial deposits: Deposits of mountains, piedmont, and continental glaciers. In the mountains, shown only where recent mapping was done. On the plains, only the thicker, discrete masses are shown.
 - Terrace alluvium: Gravel, sand, and silt. Only broad terrace remnants east of the park are included. They may in part be related to glaciation.
 - Old alluvium and associated deposits: Consolidated and unconsolidated sand, gravel, silt, with lignite and limestone locally. Mostly Tertiary, but includes a mantle of Pleistocene material largely glacial.
- CRETACEOUS**
 - Unidentified Cretaceous deposits: Probably includes representatives of Cretaceous sedimentary formations from Kootenai up through St. Mary River formation. Mapped in many places by a cover of ground moraine, alluvium, and other unconsolidated material; not so far as to be mappable on the basis of available information.
 - Kootenai formation: Largely red-purple and green sandstone and shale; large chert concretions locally; some limestone also. Possibly some beds of pre- or post-Kootenai are included.
 - Ellis group: Fine to dark shale and sandstone, some sandy limestone.
 - Hannan limestone: Thick and thin-bedded gray limestone, in part dolomitic, commonly with abundant chert and little shale.
- JURASSIC**
 - Shepard formation: Mainly impure limestone and calcareous argillite that weathers yellow. Some quartzite and locally red and green argillite. Recognized mainly where it overlies the Purcell basalt.
 - Unnamed parts of Missoula group: The main body is largely argillite, quartzite, and quartzite, in which reddish tones predominate, but green is plentiful, and white and pink beds are included. At the base is a discontinuous body of greenish calcareous argillite, etc. Limestone, etc., similar to the St. Mary limestone is present and has several localities, one of which, known as the Conophyton zone, C2, is shown where known.
 - Purcell basalt: Flow of green and purple amygdaloidal lava of calcic composition, with pillow structure. Mostly low in Missoula group.
- MISSISSIPPIAN**
 - Siyeh limestone: Rather massive limestone with varying content of magnesia, silica, and argillaceous matter; locally calcic. Commonly has red markings on weathered surfaces. Generally fairly fine when fresh and orange and brownish on weathered surfaces. Has several local zones, one of which, known as the Conophyton zone, C1, is shown where known.
 - Grinnell argillite: Green, white, purple, and red-purple argillite, mostly siliceous.
 - Appokany argillite: Green and gray argillite with some black argillite and pale quartzite.
 - Altyn limestone: Light-gray magnesian limestone, weathering grayish orange; in part sandy.
- PRECAMBRIAN**
 - Metagabbro: Sills and dikes of dark rocks of diabasic texture, containing pyroxene, amphibole, calcic plagioclase, orthoclase, and microgabbro.

- CONTAINS**
Dashed where approximately located; queried where checked from incomplete data.
- HIGH-ANGLE FAULT**
Dashed where approximately located, dotted where concealed; U, upthrown side; D, downthrown side.
- FAULT SHOWING RELATIVE MOVEMENT**
- THRUST FAULT; T DESIGNATES UPPER PLATE**
Dashed where approximately located, dotted where concealed.
- ARTICLE SHOWING TRACE OF AXIAL PLANE**
Dashed where approximately located.
- SYNCLINE SHOWING TRACE OF AXIAL PLANE**
Dashed where approximately located.
- OVERTURNED ANTICLINE**
- STRIKE AND DIP OF BEDS**
- STRIKE AND DIP OF OVERTURNED BEDS**
- HORIZONTAL BEDS**
- PROJECT HOLE ON COPRIFEROUS DEPOSITS**
- CONTORTED OR CLOSELY FOLDED BEDS**
- APPROXIMATE BORDER OF NEWLY CREATED HUNGRY HORSE RESERVOIR**

Base compiled from U. S. Geological Survey maps of the Kintla Lakes, Chief Mountain, Browning, Nyeck, and Marias Pass quadrangles, with additions by C. P. Ross

Map compiled from geologic data gathered in 1911-14 by M. R. Campbell, W. C. Alder, Eugene Stebbins, J. R. Hoels, E. M. Parks, C. S. Corbett, C. R. Williams, and H. R. Bennett; in 1949 by C. P. Ross, and J. R. Hendry; and in 1950 by C. P. Ross, E. C. Stover, and C. S. Nording



RECONNAISSANCE GEOLOGIC MAP AND SECTIONS OF GLACIER NATIONAL PARK, NORTHWESTERN MONTANA

Scale 1:125,000
10 Miles
Contour interval 100 feet
Distances in miles and feet