

MONTANA GEOLOGY



Rick Graetz

Chinese Wall
Bob Marshall Wilderness

January

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

February

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March

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24 ³¹	25	26	27	28	29	30

April

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May

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July

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October

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November

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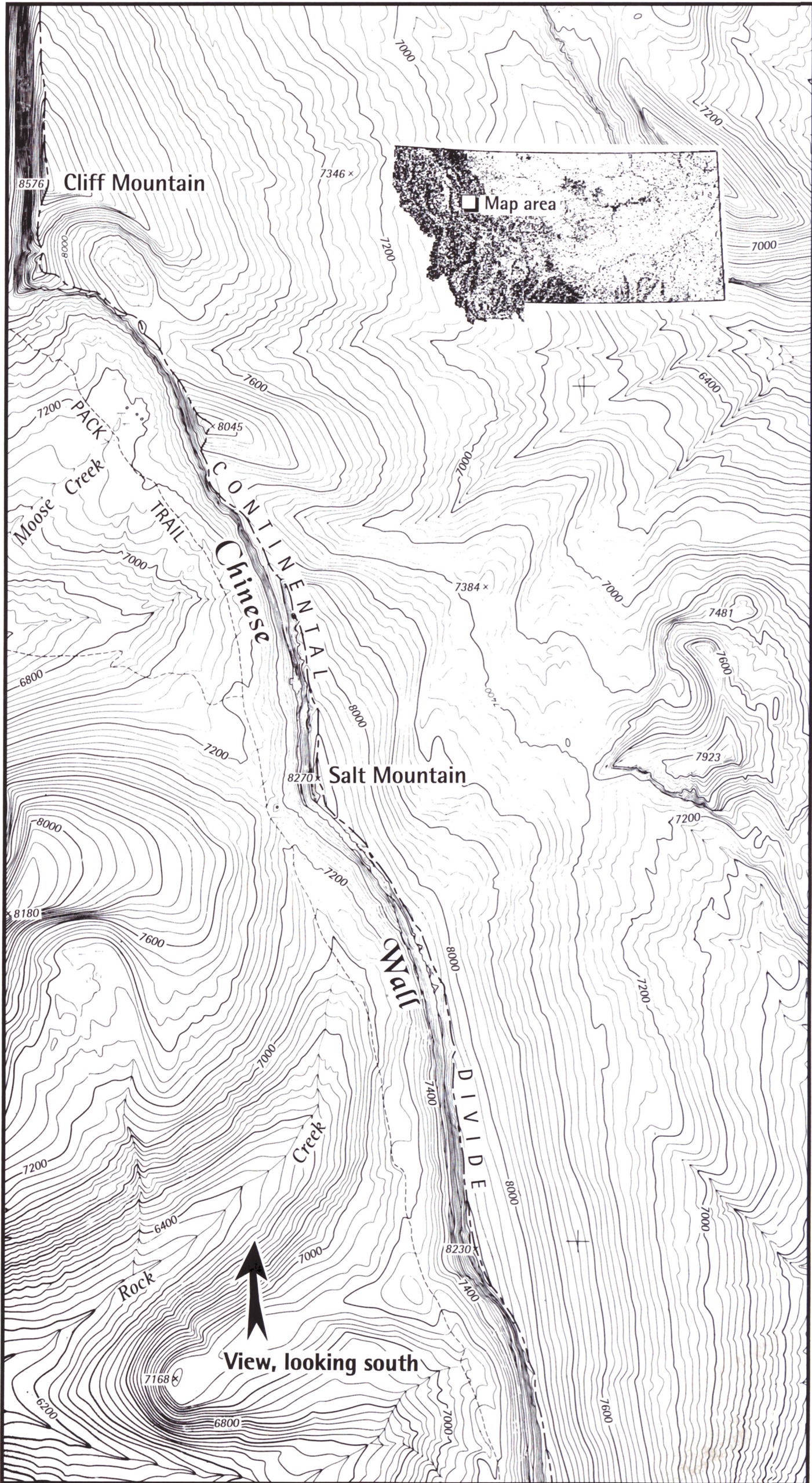
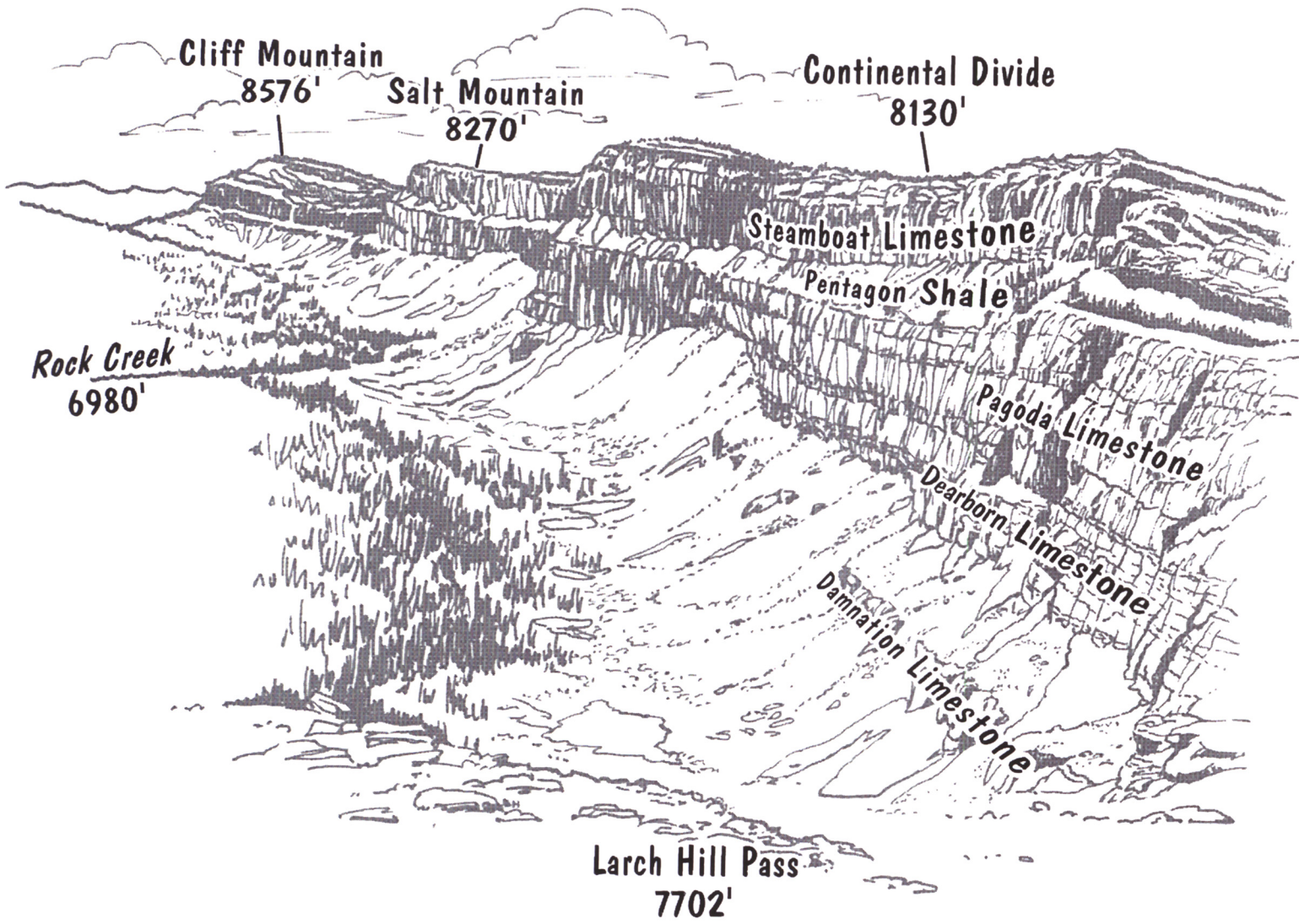
December

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29	30	31				

The Chinese Wall

A prominent escarpment in the Bob Marshall Wilderness, the Chinese Wall represents a segment of the Continental Divide that is located in the central Lewis and Clark Range. The east-facing crest of the wall forms the boundary between Flathead County and Lewis and Clark County west of Choteau. Its overall length is 15 miles, attaining its greatest elevation at Cliff Mountain (8576'). A favorite scenic destination of backpackers and outfitters, the impressive face rises 1300 feet in height. The view pictured is along the 10-mile northern section of the wall looking south from Larch Hill Pass (7702') (*see map index*).

The rocks that comprise the Chinese Wall are a tilted stack of five units of Middle Cambrian sedimentary rocks (mostly limestone) deposited in shallow seas approximately 500 million years ago (*see sketch*). Between 100 and 60 million years ago, the rocks were uplifted forming a part of the present Rocky Mountains. The sheer face of the wall owes its development to alpine glaciation that occurred between 60,000 and 30,000 years ago during the Pleistocene Epoch.



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speaking to public groups on aspects of Bureau research, and Montana geology and hydrology

Charter, Scope, and Organization

The Montana Bureau of Mines and Geology (MBMG) was established in 1919 as a public service agency and research entity for the State of Montana.

Enacted by the Legislative Assembly of the State of Montana (Section 75-607, R.C.M., 1947, Amended), the scope and the duties of the agency are summarized as follows:

☐ To collect, compile, and publish information on Montana's geology; mining, milling, and smelting operations; and ground-water resources.

☐ To maintain collections of geologic and mineral specimens, photographs, models, and drawings of mining and milling

equipment, and literature on geology, mining, and ground water.

☐ To conduct investigations of Montana geology, emphasizing economic mineral resources and ground-water quality and quantity.

In accordance with the enabling act, MBMG conducts research and provides information, but has no regulatory functions. To carry out its duties more effectively, the bureau operates in four divisions: Research, Administration, Analytical, and Publications.

The bureau director serves as the State Geologist and represents Montana in the Association of American State Geologists.

Selected Publications on Montana Geology

Special Publication 89 — Profiles of Montana geology: A layman's guide to the treasure state, David D. Alt, 1984, 168 p., 180 figs. \$12.00

Special Publication 94 — Belt Supergroup: A guide to Proterozoic rocks of western Montana and adjacent areas, Sheila M. Roberts (*ed.*), 1986, 311 p., 175 figs., 11 tables, 10 color plates. \$25.00

Special Publication 95 — Guidebook of the Helena area, west-central Montana, Richard B. Berg and Ray H. Breuniger (*eds.*), 1987, 65 p., 20 figs., 1 table. . \$5.00

Geologic Map 27 — Glacial features of the upper Swiftcurrent valley, Glacier National Park, Montana, H.L. James, 1982. \$2.50

Special Publication 102 — Coal geology of Montana, Mark A. Sholes (*ed.*), 1992, 157 p., 134 figs., 5 tables, 1 appendix, 2 sheets. \$25.00

Special Publication 110 — Geologic and historic guide to the Beartooth Highway, Montana and Wyoming, H.L. James, 1995, 130 p., 65 figs. \$15.00

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