Terrace profiles and relative ages of alluvial surfaces and end moraines in the northwestern Uinta Basin

Mapped and compiled by:

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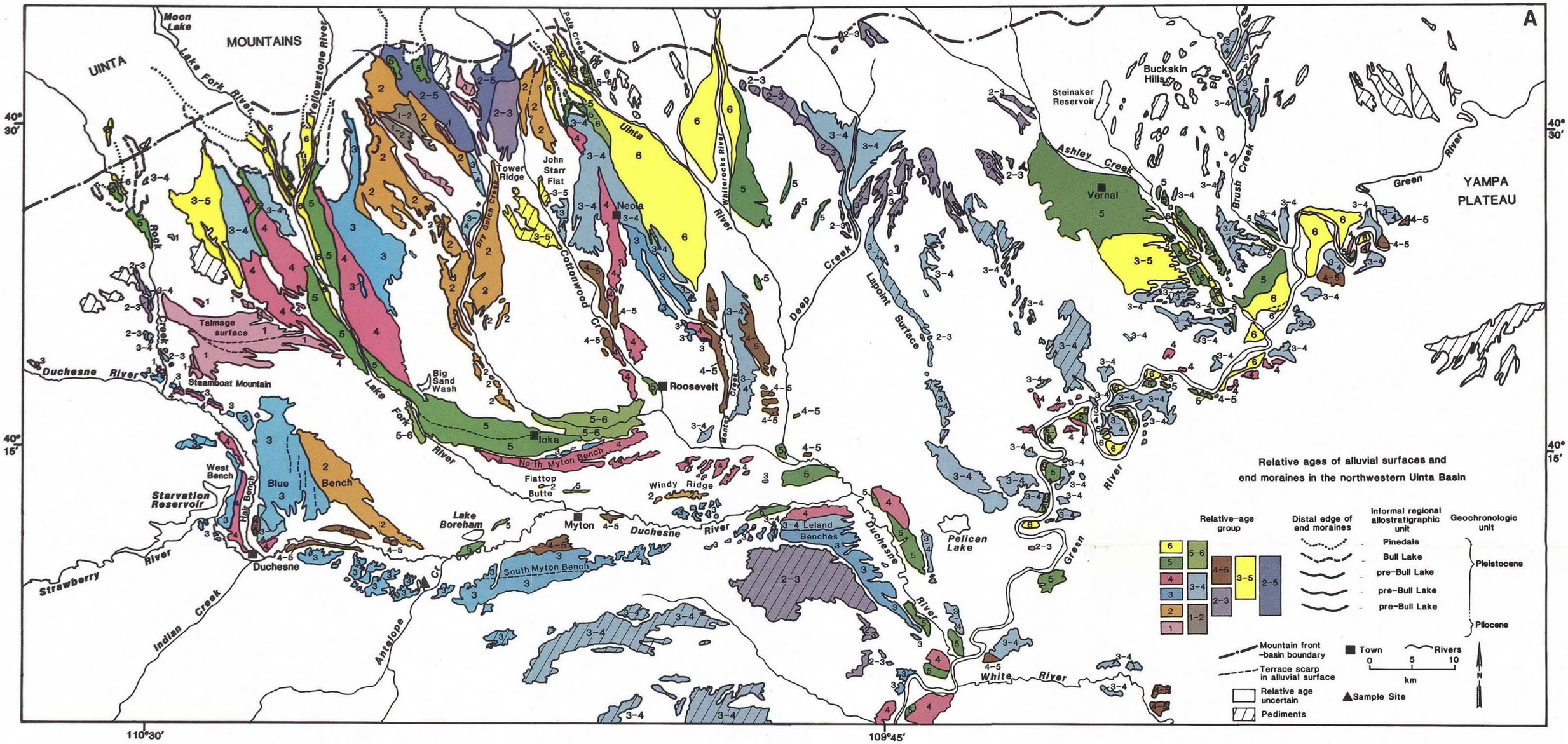

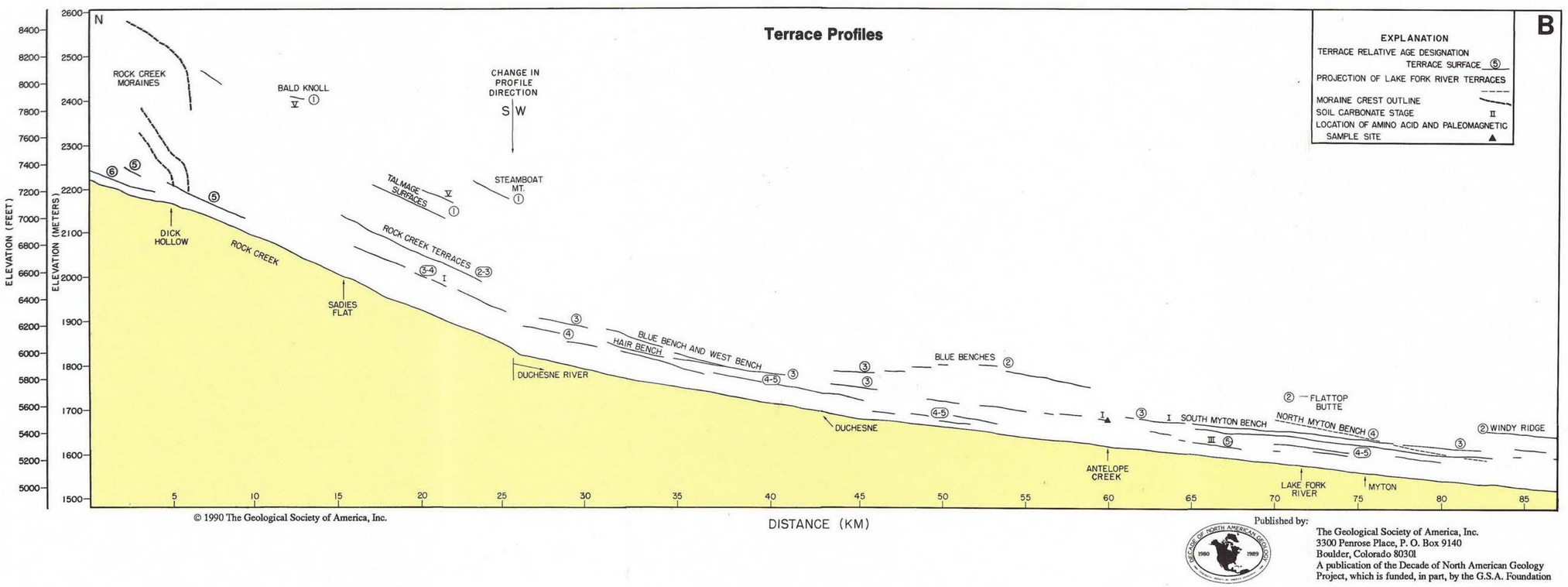

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PLATE A. Longitudinal profiles of terrace surfaces along Rock Creek and the Duchesne River showing the projection of correlative surfaces along the Lake Fork River, moraine crest outlines, soil carbonate stage (Table 2) in exposures, and the location of paleomagnetic and amino-acid samples (Fig. 15). Martin and others (1985) discuss surfaces along the Lake Fork-Yellowstone rivers in more detail. Circled numbers refer to relative-age groups (RAGs) discussed in text. Dashes between RAGs indicate age uncertainty.

PLATE B. Major Quaternary erosion surfaces, fluvial terraces, and the distal edge of major moraine systems in the northwestern Uinta Basin and their estimated relative ages (Table 2; RAG 1 = late Tertiary or early Quaternary, RAG 6 = late Wisconsin; modified from Kinney, 1955, Osborn, 1973, Carrara, 1980, and Bryant, 1987). Where the relative age of a surface is uncertain or where surfaces of several ages are mapped as one unit, a range of relative ages is indicated. The map east of the Lapoint surface is taken largely from Kinney (1955) and Carrara (1980) and ages are more uncertain in this area than in the western part of the map. Because many older surfaces south of the Duchesne River and in the eastern part of the map may range in age from RAG 2 to RAG 4 (some near the Buckskin Hills may be in RAG 1) no relative ages are shown for some surfaces. Moraines of RAG 6 correlate regionally with Pinedale moraines (= late Wisconsin), those of RAG 5 with Bull Lake moraines, and older moraines with pre-Bull Lake moraines. Along Dry Gulch Creek, RAG 2 moraines of at least two separate glacial advances and remnants of at least 3 outwash terraces of different relative height (about 15 to 30 m apart), deposited during the youngest of these advances, can be distinguished. However, because we have no other relative-age data for these surfaces and because correlations with surfaces of about the same age at several different levels elsewhere in the basin are uncertain, we group all these surfaces into one relative-age group, RAG 2.

Plate 4. Terrace profiles and relative ages of alluvial surfaces and end moraines in the northwestern Uinta Basin
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