

Tectonic and magmatic controls of base and precious metal mineralization Pentiction east-half map sheet, southern B.C. (082E/East)



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2015: Almond Mountain project

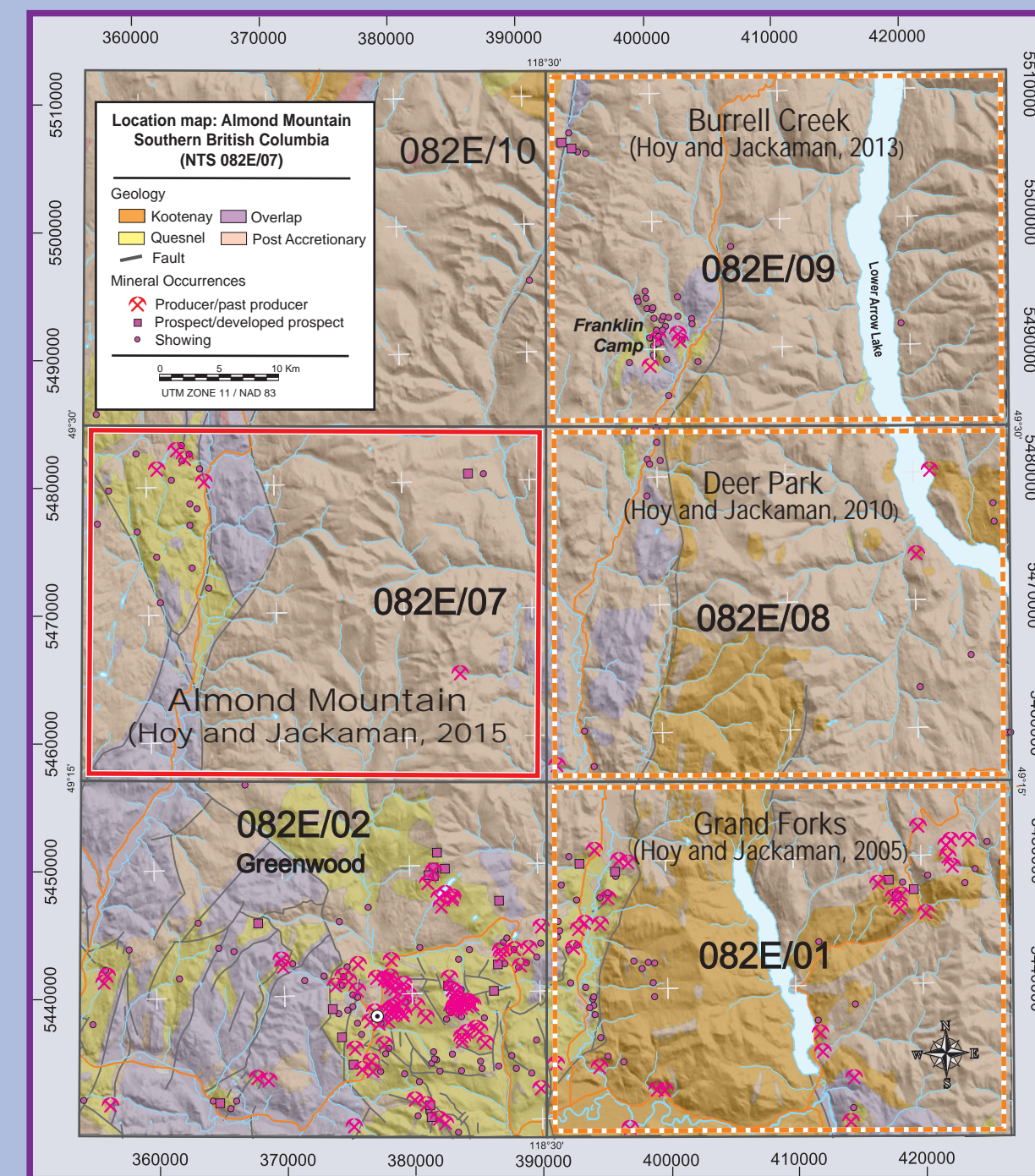
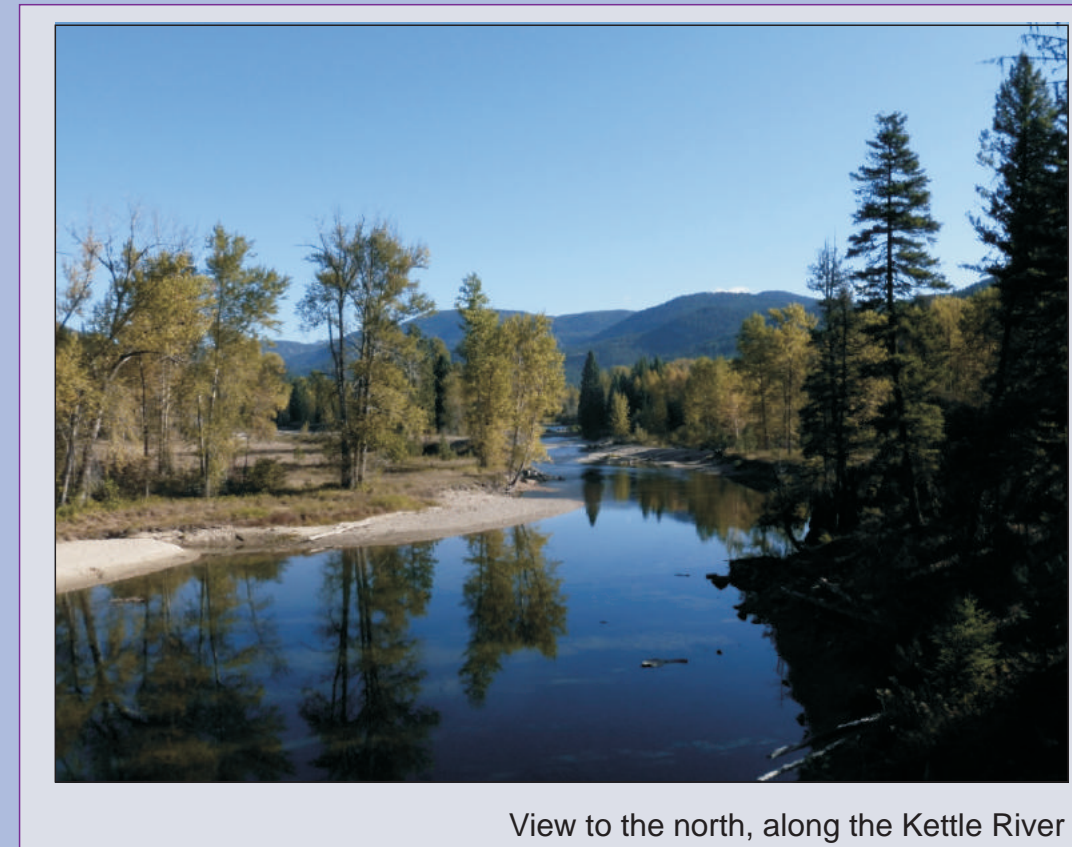


Figure 5: Location map



Project proposal

The Almond Mountain project, slated for 2015, includes:

- geological mapping at 1:20,000 scale in selected areas;
- compilation of all geological, regional geophysical and silt geochemical data;
- update BC Minfile data base;
- release of 1:50,000 Almond Mountain map sheet;
- extend mapping and compilation into 082E/10 in 2016;
- compilation of geology of Pentiction East-half, and release in digital format (1:100,000 base scale).

Objectives

- provide base geological maps in areas that have had limited geological mapping since a regional mapping - compilation project completed by the GSC in 1989;
- determine structural and magmatic controls of base and precious metal vein mineralization in order to spur and focus future exploration in the area.

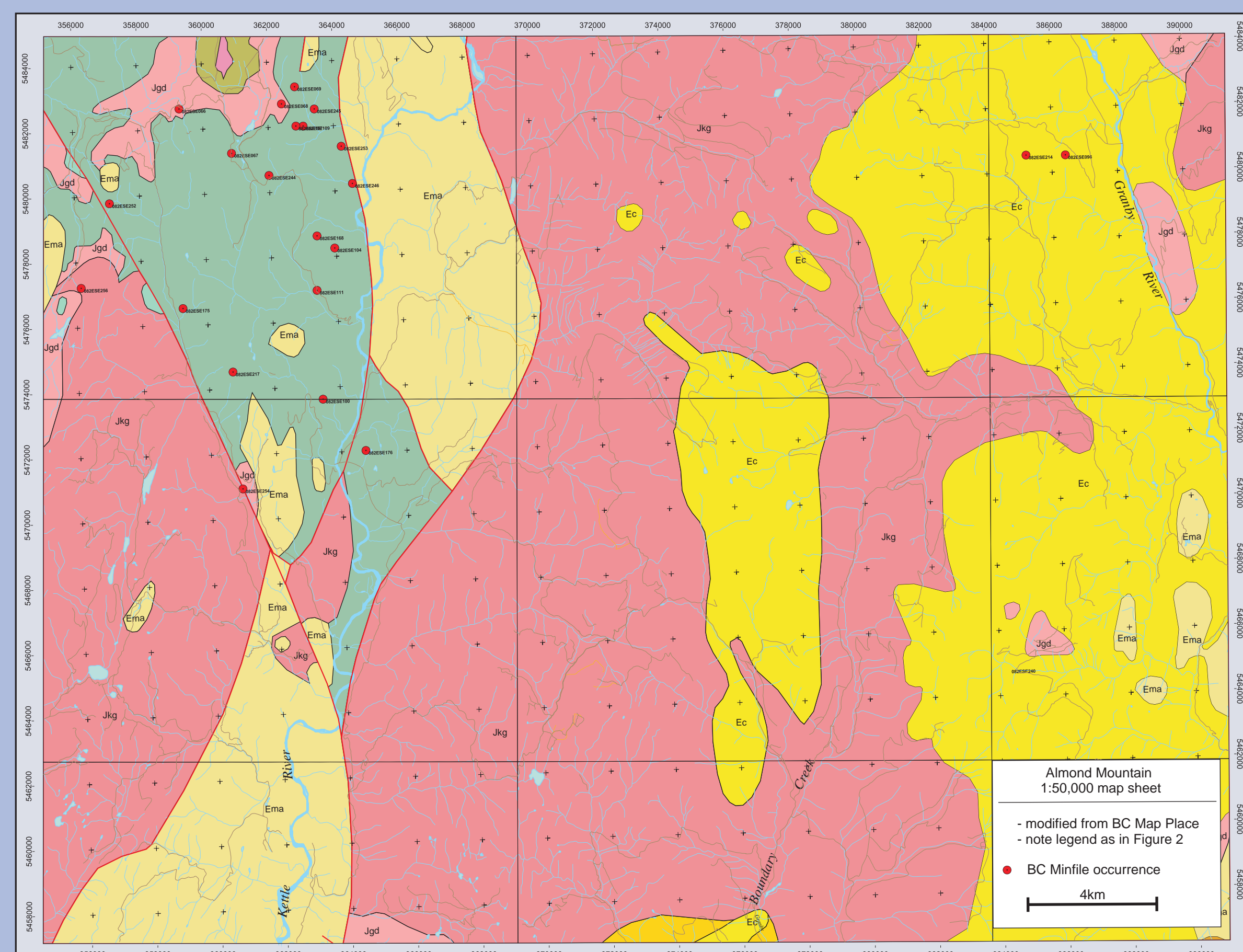


Figure 6: Simplified geological map of the Almond Mountain map sheet, from BC Map Place, showing major structures and mineral occurrences



Introduction: Project Summary

The Pentiction East-half project is located in southern B.C., extending west from Arrow Lake to the Highland Bell camp and south to the U.S. border. The Greenwood mineral camp occurs in the southern part of the area, the Rossland camp immediately to the east, and the Republic District in Washington state to the south.

The project is intended to evaluate the mineral potential of the area and to provide models for the controls of base and precious metal mineralization in an area that is dominated by Eocene extension and magmatism.

The area has been mapped and compiled at 1:100,000 scale by Tempelman-Kluit (1989), with more recent work at 1:50,000 scales concentrated along the east edge of the map sheet, as shown in the summary map to the right.

Work in 2015 will concentrate on the Almond Mountain sheet (082E/07) and in 2016 in 082E/10 located immediately to the north, both financed by Geoscience BC.

Deposit controls

Numerous base and precious metal deposits occur throughout the Pentiction East-half map sheet, including the Greenwood and Franklin mining camps.

This study, based on work along the eastern margin, suggests two main tectonic/magmatic controls to metallic mineral distribution:

- (1) along regional northwest-trending structures, identified by magnetic anomalies and geological mapping (Figs 2, 3).
- (2) the hangingwall of Eocene extensional faults - in part because hangingwall panels contain and expose higher, more favourable intrusive and structural levels (Fig 4). Host lithologies are also a prominent control, although these largely reflect structural levels, with Paleozoic successions and more differentiated and altered intrusive phases exposed in higher level hangingwall panels.

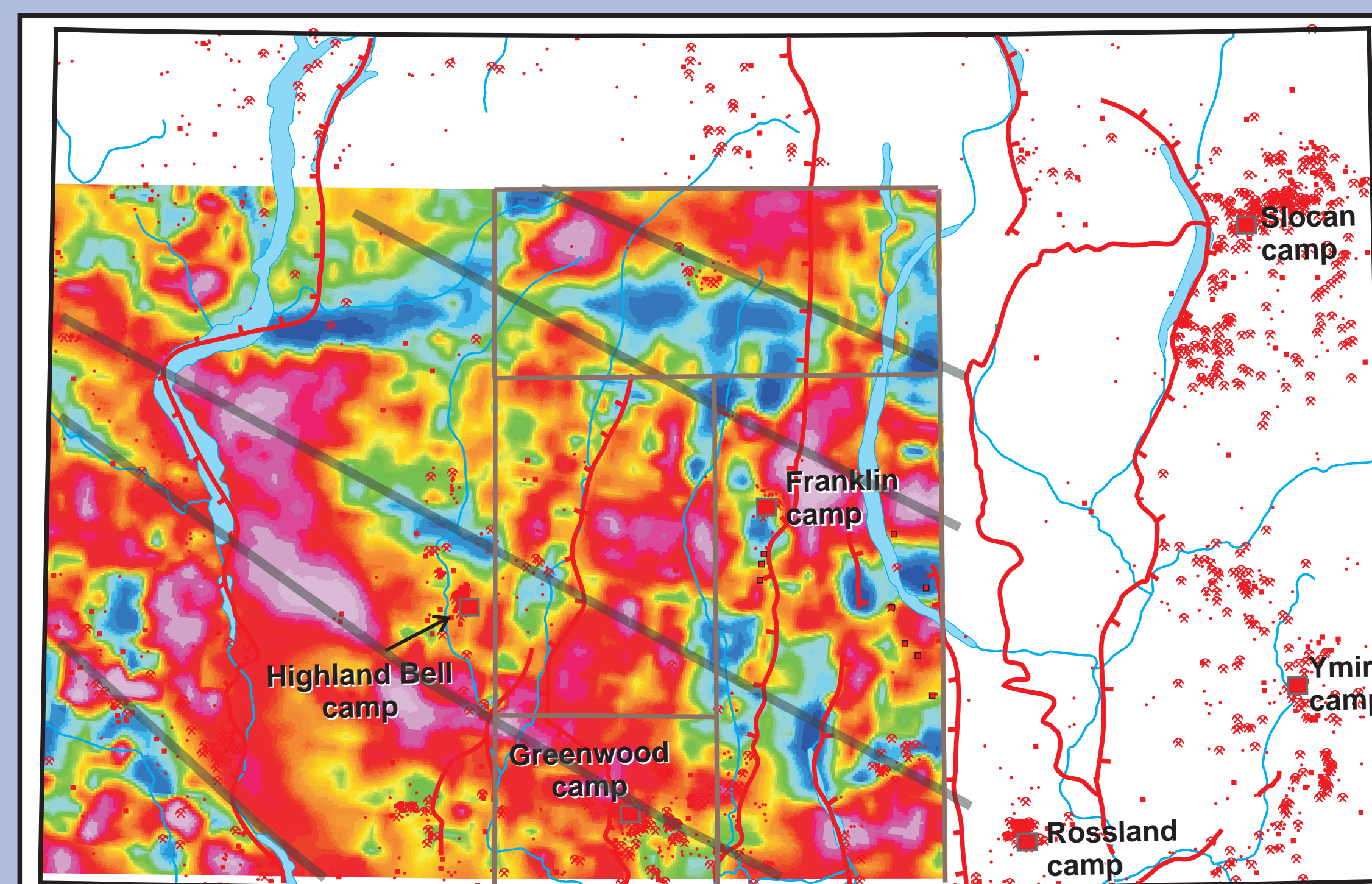


Figure 3: Airborne magnetic signature, showing northwest trending linears.

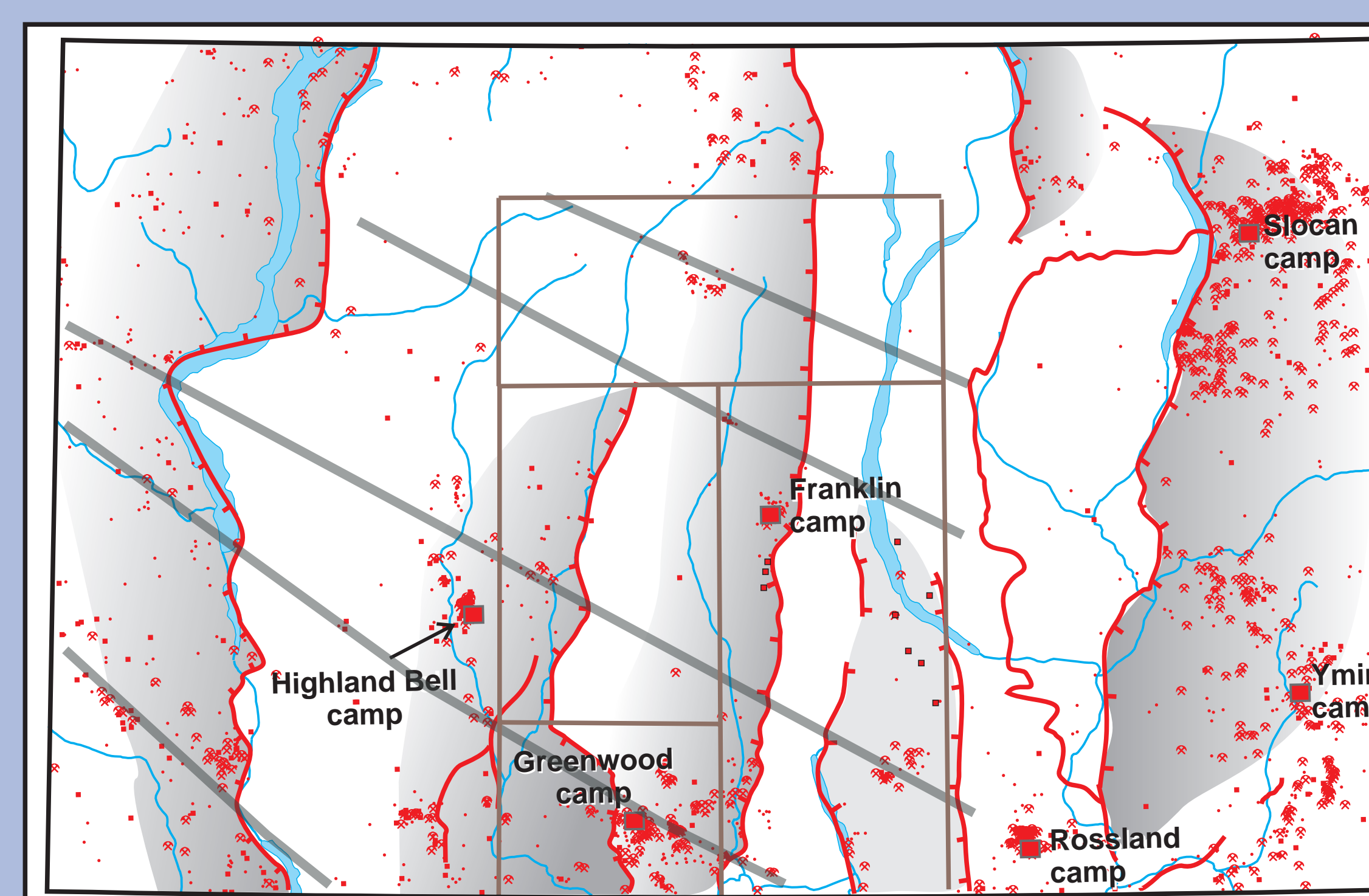


Figure 4: Eocene extensional faults showing magnetic linears and preferred distribution of metallic mineral deposits in hangingwall panels.

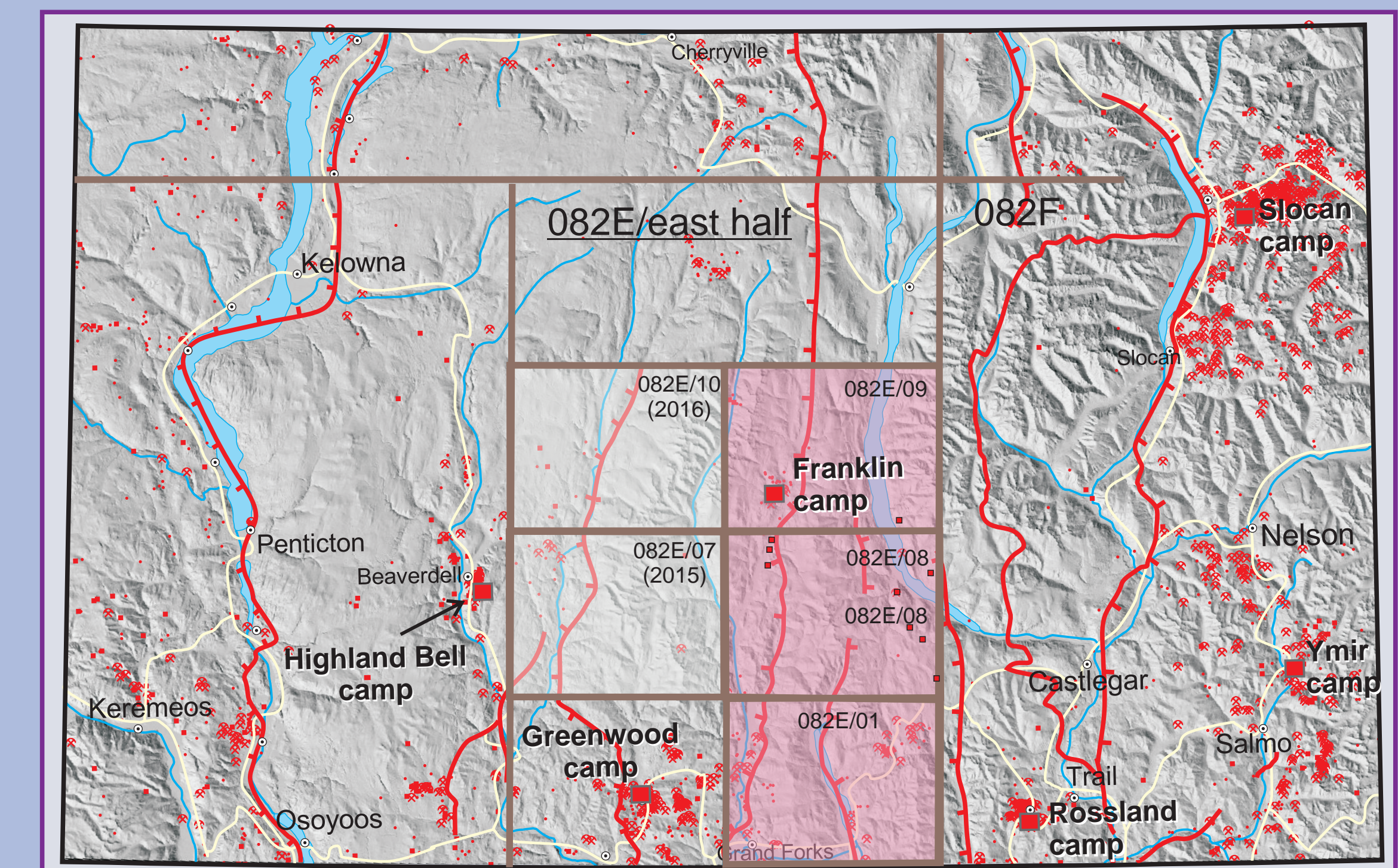


Figure 1: Regional location map

Figure 2: Geology of the eastern side of the Pentiction East-half map sheet

