

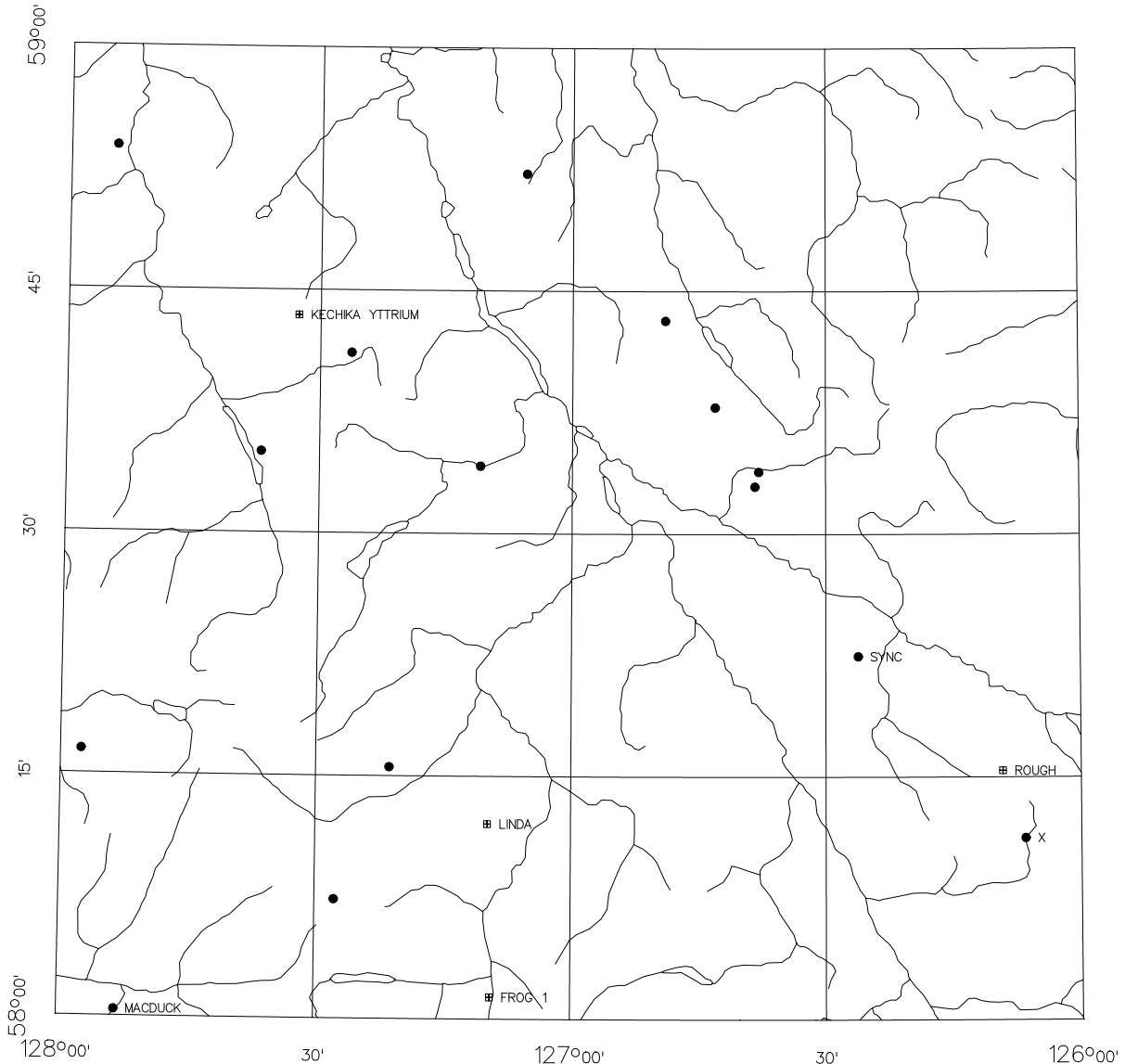


MINFILE NTS 094L – KECHIKA

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The Kechika map area, situated 240 kilometres west of Fort Nelson in north-central British Columbia, contains 42 documented mineral occurrences.

Most of the terrain is mountainous, and there are no roads into the area. An airstrip at Terminus Mountain is in use and supports an outfitting operation.



The northwest-trending Northern Rocky Mountain Trench Fault divides the map area diagonally in half. To the northeast are the Muskwa Ranges of the Northern Rocky Mountains, which are underlain entirely by unmetamorphosed siliciclastic and calcareous sedimentary rocks of Ancestral North America. These rocks, ranging in age from Upper Proterozoic to Upper Paleozoic, are deformed into a series of folds and northeast-verging thrust sheets. The northeastern half of this region is dominated by platform carbonates, sandstones and argillites. To the southwest are their more basal-facies equivalents, in what is known as the Kechika Trough, the southeastern arm of the Selwyn Basin. The Kechika Trough is known for hosting a number of 'sedex' shale-hosted barite-lead-zinc mineral deposits, particularly in the Devonian-Mississippian Earn Group. The most important deposits are southeast of the Kechika map area, in the main part of

the Gataga mineral district, but there are some minor occurrences here, immediately south of the Gataga River. These include the **Rough** prospect (094L 011), and the smaller **X** (094L 013) and **Sync** (094L 012) showings. North of the Gataga River, this type of syngenetic mineralization may continue in thin thrust slices of Earn Group siliciclastics, but the only indications to date are minor barite-bearing slate outcrops, and a few gossans and geochemical anomalies. The Ministry is currently (1994-96) mapping this area to improve the geological database.

Southwest of the Northern Rocky Mountain Trench, in the Cassiar terrane of the Omineca Belt, are similar Upper Proterozoic and Paleozoic stratigraphic units, but they are generally more deformed and metamorphosed. Several minor, vein-hosted copper or lead showings are documented. The largest is the **Linda** silver-lead-zinc prospect (094L 001), an area of fault-controlled alteration and base metal sulphide mineralization in metasediments.

Perhaps the most interesting occurrence in this terrane is the **Kechika Yttrium** rare-earth prospect (094L 017), which lies within a 20-kilometres long, fault-bounded, mid-Paleozoic alkaline intrusive-extrusive complex. Trachytic and calcareous tuffs and related phyllites contain phosphatic zones rich in yttrium and medium and heavy rare earth elements, notably dysprosium and gadolinium. Other rock types include volcanic breccia, mafic syenite, a diatreme breccia pipe, and several carbonatite dikes.

In the southwest of the map area, across the mid-Cretaceous Cassiar and Thudaka batholiths, is the terrane of Quesnellia, which here is dominated by the Early Jurassic Pitman Batholith. This large quartz diorite and granodiorite intrusion hosts the **Frog 1** prospect (094L 014), where a system of narrow quartz veins is mineralized with copper, silver and free gold. A small, fault-bounded area of Stikinia terrane is present in the extreme southwest corner of the map area, where a minor zinc showing, the **MacDuck** (094L 010), occurs in altered schists.

Mapping from 1994 to 1996 by the Geological Survey Branch improved the geological database and added 23 occurrences, mainly barite showings, to the mineral occurrence database. (See Geoscience Map 1998-09 for details).

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