

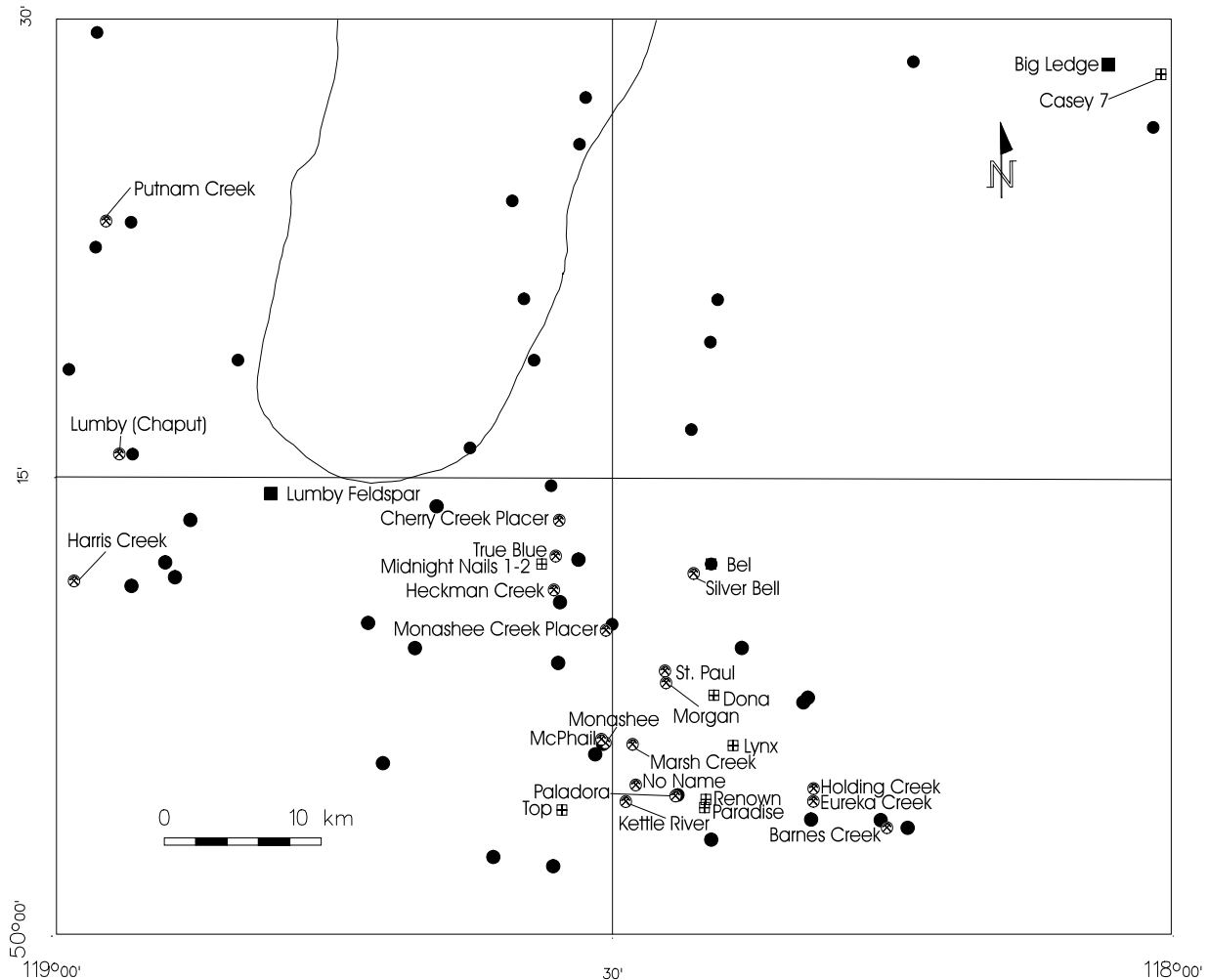
MINFILE

NTS 082LSE - SUGAR LAKE

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The Sugar Lake map area, located in south-central British Columbia, contains 72 documented mineral occurrences, of which 8 are industrial and 64 are precious and base metal. The map is published at a 1:100 000 scale.

The area straddles several important physiographic domains within the Omineca Belt. The northeast portion lies within the Monashee Mountains. The southern portion lies within the Okanagan Highlands and the northwest portion lies within the Shuswap Highlands.



The oldest rocks in the area belong to the Kootenay Terrane and the Monashee Terrane. The Kootenay Terrane, comprised of metamorphosed Proterozoic to Paleozoic rocks, forms part of the western extremity of the North American craton. Lower Paleozoic rocks (Silver Creek, Tsalkom, Sicamous and Eagle Bay formations) structurally overlie the Proterozoic rocks and may have been deposited near the rifted margin of North America. The Monashee Terrane (Monashee Complex) is comprised of craton-related metasedimentary rocks overlying basement paragneiss and orthogneiss of Early Proterozoic age.

The Quesnel Terrane includes Upper Triassic to Lower Jurassic island-arc rocks of the Nicola Group, which unconformably overlie Devonian to Triassic arc-related rocks of the Harper Ranch Group. These assemblages are inferred to have been tectonically emplaced eastward over the Kootenay Terrane in the early Middle Jurassic.

Numerous foliated and unfoliated calc-alkalic and alkalic intrusions of Early Jurassic to Cretaceous age cut Proterozoic through Mesozoic bedded assemblages. Eocene sedimentary and volcanic rocks of the Kamloops Group is present in grabens and as extensive gently tilted or flat-lying sheets. Plateau and valley basalts of the Miocene and Pliocene Chilcotin Group are the youngest rocks.

The first recorded mineral exploration in the area, east of Vernon, was placer mining dating from the 1870's right to present day. Limited production came from a number of streams: Cherry Creek (**082LSE013**), Monashee Creek (**082LSE059**), Barnes Creek (**082LSE053**), Eureka Creek (**082LSE046**) Marsh Creek (**082LSE039**), No Name (**082LSE038**), Kettle River (**082LSE042**), Harris Creek (**082LSE031**), Putnam Creek (**082LSE069**), Heckman Creek (**082LSE033**) and Holding Creek (**082LSE045**). In the early part of this century, veins mineralized with pyrite, chalcopyrite, galena and sphalerite with significant values in gold and silver were explored at the St. Paul (**082LSE010**) and Morgan (**082LSE022**) deposits, located on Monashee Mountain. During 1914 to 1973, intermittent mining from these deposits produced 112,406 grams of gold, 5630 grams of silver, 3720 kilograms of lead and 1258 kilograms of zinc from 392 tonnes of ore.

The major mineral occurrences in the area are predominantly quartz veins variably mineralized with pyrite, galena, chalcopyrite, sphalerite and native gold. These veins contain silver and gold values and are hosted in metasedimentary rocks; generally associated with granitic rocks. These include the Monashee (**082LSE001**), McPhail (**082LSE009**), Paladora (**082LSE008**), True Blue (**082LSE035**), Silver Bell (**082LSE011**) and the Lumby (Chaput) (**082LSE006**) which have all produced small tonnage's. Many of these veins have significant mineralization and are considered to be of some interest. These prospects are the: Paradise (**082LSE002**), Renown (**082LSE004**), Lynx (**082LSE055**), Dona (**082LSE016**), Bel (**082LSE054**) and Midnight Nails 1-2 (**082LSE063**). One prospect, the Top (**082LSE017**), contains gold-silver mineralization in quartz veins in shears and in altered dikes.

The Big Ledge (**082LSE012**) sedimentary exhalative deposit, hosted in graphitic-sericitic schist, contains 6.5 million tonnes of indicated ore grading less than 6 per cent combined lead-zinc. The Casey 7 (**082LSE027**) prospect is the eastern, lower grade, extension of the mineralized horizon that hosts the Big Ledge deposit.

The Lumby Feldspar (**082LSE015**) pegmatite deposit contains 100 million tonnes of material grading 50 per cent feldspar. The Lumby (Chaput) (**082LSE006**) deposit has also been evaluated for several industrial mineral products; new unclassified reserves are 27 million tonnes of graphite and mica.

REGIONAL REFERENCES (082LSE - SUGAR LAKE)

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