

# GEO THERMAL RESOURCES of BRITISH COLUMBIA

### HOT SPRINGS

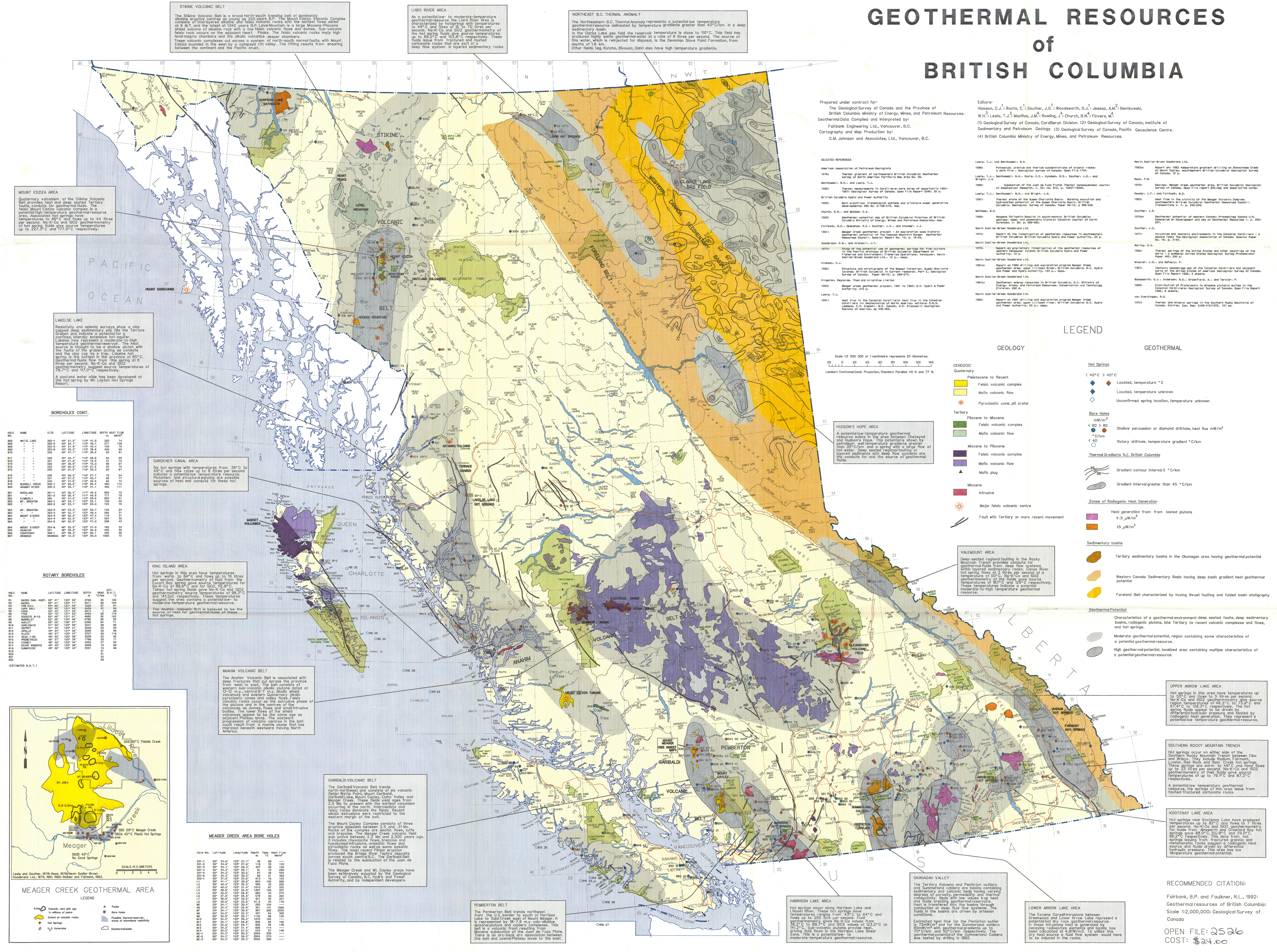
SPRING NAME	LATITUDE	LONGITUDE	TEMP	FLOW	PERIOD	PH
101	50° 00' N	125° 00' W	100	10	1950	8.2
102	50° 00' N	125° 00' W	100	10	1950	8.2
103	50° 00' N	125° 00' W	100	10	1950	8.2
104	50° 00' N	125° 00' W	100	10	1950	8.2
105	50° 00' N	125° 00' W	100	10	1950	8.2
106	50° 00' N	125° 00' W	100	10	1950	8.2
107	50° 00' N	125° 00' W	100	10	1950	8.2
108	50° 00' N	125° 00' W	100	10	1950	8.2
109	50° 00' N	125° 00' W	100	10	1950	8.2
110	50° 00' N	125° 00' W	100	10	1950	8.2

### BORERHOLES

WELL NAME	SITE	LATITUDE	LONGITUDE	DEPTH	HEAT FLOW	PH
111	111	50° 00' N	125° 00' W	100	10	8.2
112	112	50° 00' N	125° 00' W	100	10	8.2
113	113	50° 00' N	125° 00' W	100	10	8.2
114	114	50° 00' N	125° 00' W	100	10	8.2
115	115	50° 00' N	125° 00' W	100	10	8.2
116	116	50° 00' N	125° 00' W	100	10	8.2
117	117	50° 00' N	125° 00' W	100	10	8.2
118	118	50° 00' N	125° 00' W	100	10	8.2
119	119	50° 00' N	125° 00' W	100	10	8.2
120	120	50° 00' N	125° 00' W	100	10	8.2

### MEAGER CREEK AREA BORE HOLES

WELL NAME	SITE	LATITUDE	LONGITUDE	DEPTH	HEAT FLOW	PH
121	121	50° 00' N	125° 00' W	100	10	8.2
122	122	50° 00' N	125° 00' W	100	10	8.2
123	123	50° 00' N	125° 00' W	100	10	8.2
124	124	50° 00' N	125° 00' W	100	10	8.2
125	125	50° 00' N	125° 00' W	100	10	8.2
126	126	50° 00' N	125° 00' W	100	10	8.2
127	127	50° 00' N	125° 00' W	100	10	8.2
128	128	50° 00' N	125° 00' W	100	10	8.2
129	129	50° 00' N	125° 00' W	100	10	8.2
130	130	50° 00' N	125° 00' W	100	10	8.2



**STIKINE VOLCANIC BELT**  
The Stikine Volcanic Belt is a broad north-south trending belt of geologically young volcanic rocks covering 40,000 sq km. The belt extends from the Bulkley Mountains in the north to the Bulkley River in the south. The rocks are of Miocene-Pliocene age and consist of andesite, dacite, and rhyolite. The belt is bounded to the west by a complex rift valley. The rifting results from shearing between the continent and the Pacific crust.

**LIARD RIVER AREA**  
As a potential low- to moderate-temperature geothermal resource the Liard River Area is bounded by the Bulkley Mountains to the north and the Bulkley River to the south. The rocks are of Miocene-Pliocene age and consist of andesite, dacite, and rhyolite. The belt is bounded to the west by a complex rift valley. The rifting results from shearing between the continent and the Pacific crust.

**NORTHEAST B.C. THERMAL ANOMALY**  
The Northeastern B.C. Thermal Anomaly represents a potential low-temperature geothermal resource. The anomaly is bounded by the Bulkley Mountains to the north and the Bulkley River to the south. The rocks are of Miocene-Pliocene age and consist of andesite, dacite, and rhyolite. The belt is bounded to the west by a complex rift valley. The rifting results from shearing between the continent and the Pacific crust.

**MOUNT EDZIZA AREA**  
Geologically young volcanic rocks of the Stikine Volcanic Belt provide a potential geothermal resource. The rocks are of Miocene-Pliocene age and consist of andesite, dacite, and rhyolite. The belt is bounded to the west by a complex rift valley. The rifting results from shearing between the continent and the Pacific crust.

**LAKELAKE AREA**  
Reactivity and seismic surveys show a clay capped deep sedimentary pile in the Terrace Basin and indicate a potential for a geothermal resource. The rocks are of Miocene-Pliocene age and consist of andesite, dacite, and rhyolite. The belt is bounded to the west by a complex rift valley. The rifting results from shearing between the continent and the Pacific crust.

**MEAGER CREEK AREA**  
Six hot springs with temperatures from 38°C to 49°C and flow rates from 0.5 to 1.5 l/s per second. Geothermometry of fluid from the hot springs indicates a potential geothermal resource. The rocks are of Miocene-Pliocene age and consist of andesite, dacite, and rhyolite. The belt is bounded to the west by a complex rift valley. The rifting results from shearing between the continent and the Pacific crust.

**ANAHIM VOLCANIC BELT**  
The Anahim Volcanic Belt is associated with deep fractures that cut across the province from west to east. The belt consists of Miocene-Pliocene volcanic rocks. The rocks are of Miocene-Pliocene age and consist of andesite, dacite, and rhyolite. The belt is bounded to the west by a complex rift valley. The rifting results from shearing between the continent and the Pacific crust.

**GARIBOLDI VOLCANIC BELT**  
The Garibaldi Volcanic Belt trends north-south and consists of Miocene-Pliocene volcanic rocks. The rocks are of Miocene-Pliocene age and consist of andesite, dacite, and rhyolite. The belt is bounded to the west by a complex rift valley. The rifting results from shearing between the continent and the Pacific crust.

**MEAGER CREEK AREA BORE HOLES**  
The Meager Creek area contains six hot springs with temperatures from 38°C to 49°C and flow rates from 0.5 to 1.5 l/s per second. Geothermometry of fluid from the hot springs indicates a potential geothermal resource. The rocks are of Miocene-Pliocene age and consist of andesite, dacite, and rhyolite. The belt is bounded to the west by a complex rift valley. The rifting results from shearing between the continent and the Pacific crust.

**ROTARY BOREHOLES**  
Hot springs in this area have temperatures up to 49°C and flow rates from 0.5 to 1.5 l/s per second. Geothermometry of fluid from the hot springs indicates a potential geothermal resource. The rocks are of Miocene-Pliocene age and consist of andesite, dacite, and rhyolite. The belt is bounded to the west by a complex rift valley. The rifting results from shearing between the continent and the Pacific crust.

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The Garibaldi Volcanic Belt trends north-south and consists of Miocene-Pliocene volcanic rocks. The rocks are of Miocene-Pliocene age and consist of andesite, dacite, and rhyolite. The belt is bounded to the west by a complex rift valley. The rifting results from shearing between the continent and the Pacific crust.

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  - 1992: Thermal measurements to estimate bare rock of opportunity 1947-1978. Geological Survey of Canada, Report 92-10.

- #### LEGEND
- Geology**
- Quaternary: Pleistocene to Recent, Felsic volcanic complex, Mafic volcanic flow, Pyroclastic cone, pit crater.
  - Tertiary: Pliocene to Miocene, Felsic volcanic complex, Mafic volcanic flow, Miocene to Pliocene, Felsic volcanic complex, Mafic volcanic flow, Major felsic volcanic centre.
  - Miocene: Felsic volcanic complex, Mafic volcanic flow, Intrusive.
- Geothermal**
- Hot Springs: Located, temperature > 40°C, Located, temperature unknown, Uncoloured spring location, temperature unknown.
  - Box Holes: > 80 m, < 80 m, Rotary drill hole, temperature gradient > 4°C/km, Gradient interval greater than 45°C/km.
  - Thermal Gradients: NE, SE, SW, NW, Gradient interval greater than 45°C/km.
  - Zones of Radiogenic Heat Generation: Heat generation from from tested plutons, > 5 μW/m².
  - Sedimentary Basins: Tertiary sedimentary basins in the Okanagan area having geothermal potential, Western Canada Sedimentary Basin having deep basin gradient heat geothermal potential, Foreland Belt characterized by having thrust faulting and folded basin stratigraphy.
  - Geothermal Potential: Characteristic of a geothermal environment, deep sedimentary basins, radiogenic plutons, late Tertiary to recent volcanic complexes and flows, and hot springs, Moderate geothermal potential, region containing some characteristics of a potential geothermal resource, High geothermal potential, localized areas containing multiple characteristics of a potential geothermal resource.