



MAPPING OF SILICA OCCURRENCES IN BRITISH COLUMBIA

By Z. D. Hora

This project was started in 1981 and continued during the 1982 field season. The following properties not included in the 1981 survey were examined for information on size and quality:

(1) QUARTZITE UNITS

EK (82E/3E, 49°00.5'-119°06')

About 5 kilometres southwest of Bridesville fine-grained cherty quartzite crops out on several small knolls over an area 200 metres by 100 metres. The quartzite is mostly massive but has local quartz cemented breccia zones. The surrounding rocks are dominated by phyllitic slate; however, siliceous bands and, less commonly, zones of fine-grained massive greenish grey volcanic rock occur. The rocks are part of the Permo-Triassic Anarchist Group.

WIN (930/2W, 55°02'-122°54')

The quartzite from this property, which is a medium grained buff to white rock, is 150 metres wide and has been traced for about 700 metres along the strike. It crops out in the northern part of the summit of Mount Chingee, approximately 15 kilometres southeast of the Hart Highway between Fort McLeod and Mackenzie. Numerous coarse-grained, massive white quartz veins of varying widths that strike mainly north-south cut the quartzite. The surrounding rocks are black slates and brown schistose greywacke of the Cambrian (?) Misinchinka Group.

NONDA QUARTZITE (94H/14W, 53°57'-121°27')

About 100 kilometres east of Prince George a thick band of pure white orthoquartzite crops out approximately 3 kilometres north of the town of Longworth on the north side of the Fraser River. The quartzite is massive and consists of well-sorted, well-rounded quartz grains in a siliceous matrix. Two parallel bands, each 100 to 250 metres thick, are separated by a 300 to 500-metre-thick sequence of carbonate rocks. The carbonates are mainly limestone, but dolomite is also present. Outcrops of the lower band lie at elevations between 1 000 to 1 150 metres, while the higher band is exposed in the upper part of the slope between 1 300 and 1 650 metres. Outcrops occur for several kilometres. The quartzite is part of the Silurian Nonda Formation.

ROUNDTOP MOUNTAIN (93A/14E, 52°55'-121°18')

A 300 to 500-metre-wide quartzite band extends in a northwest-southeast direction from Roundtop Mountain in the Cariboo Lake area. The quartzite is predominantly medium to fine grained and consists of well-rounded grains. It is white to buff-weathering with mica flakes on foliation planes. The band continues for at least 15 kilometres along strike, mostly at elevations between 1 000 and 1 700 metres. The quartzite is part of the Hadrynian/Cambrian Yanks Peak Formation.

YANKS PEAK (93A/14W, 52°51'-121°26')

A folded band of massive, white, fine-grained quartzite crops out on Yanks Peak, 12 kilometres northwest of Cariboo Lake. The rock is composed of well-sorted and rounded quartz grains in a siliceous matrix; tiny flakes of muscovite occur rarely. The quartzite, which is exposed over the area of approximately 300 metres by 500 metres, is apparently Hadrynian (?).

MARYSVILLE (82G/12W, 49°36'-115°57')

Medium to coarse-grained massive quartzite 90 to 100 metres thick is exposed in the Perry Creek area, 2 kilometres south of Marysville. The range of quartzite colours is from white to green and brown. White and light pink rocks that constitute the upper part of the quartzite sequence consist of well-rounded, moderately sorted grains in a siliceous matrix. The quartzite is part of the Cambrian Cranbrook Formation.

(2) DYKE AND VEIN OCCURRENCES

SWAN (82E/12W, 49°43'-119°54')

Quartz on this property forms part of a pegmatite body that is exposed in scattered outcrops, road cuts, and trenches over an area of approximately 60 metres by 120 metres. The property lies 27 kilometres northwest of Summerland at an elevation of 1 475 metres. The showing is on a steep northeast-facing slope and the vertical exposure of the pegmatite body is approximately 75 metres. In exposed areas, pure quartz constitutes approximately 25 per cent of the pegmatite body; the rest is either contaminated by muscovite (10 per cent), intergrown with feldspar (55 per cent), or composed of massive feldspar (10 per cent).

FS (82L/13W, 50°49'-119°49')

A milky white quartz vein crops out in two locations on Nisconlith Creek, approximately 10 kilometres west of the town of Chase. A white massive quartz vein from 3.5 to 15 metres wide, which is

exposed over the length of about 110 metres, comprises the southern outcrop of the north-south-striking vein. Occasionally, crystals developed that are up to 30 centimetres long and 15 centimetres in diameter. The quartzite in this area is quarried for industrial uses. The northern outcrop is about 400 metres from the southern outcrop. The outcrop is dome shaped and consists of leucocratic granitic rock cut by quartz stockwork veining and a 20-metre-wide quartz vein. The outcrop is 120 metres by 200 metres.

CAMPANIA ISLAND (103H/3W, 53°05'-129°25')

The silica prospect is 160 kilometres south of Prince Rupert on the west side of Campania Island, about 1 kilometre from the coast. The main showing is a quartz outcrop 105 metres by 35 metres in size that rises 20 metres above the surrounding terrane. The main component is milky white quartz; occasional fragments of granitic host rock occur along the southern and northern margins of the quartz exposure. Granitic inclusions are estimated to be less than 5 per cent. A smaller, parallel quartz vein is exposed 160 metres east of the main showing. The vein is exposed in three north-south outcrops and is apparently 10 metres in width.

BANKS ISLAND (103G/8E, 53°28'-130°02')

A number of outcrops of pure white quartz occur near Patsy Cove south of Prince Rupert. The outcrops are part of a northeasterly trending body that is at least 20 to 30 metres wide. At the southwestern end of these outcrops the quartz is exposed in a 10-metre cliff. The quartz is massive, coarse grained, and milky white. The quartz body is in Coast granodiorite intrusions, but the contact is not exposed so its real size and orientation are uncertain.

GLACIER CREEK (103P/13W, 55°59'-129°55')

Quartz veins 3 to 9 metres wide are reported from several old properties about 5 kilometres northeast of Stewart. Our reconnaissance study concentrated on veins intersected in Dunwell Mines Limited No. 4 adit and in the Silver Princess adit north of Glacier Creek. However, veins in the area are zones of predominantly quartz-argillite breccia, rather than pure quartz.

MORRIS SUMMIT (104B/1E, 56°13'-130°05')

'A huge quartz lode' was reported at a site 110 metres north of Scottie Gold Mines Ltd.'s 1 097 metre adit about 35 kilometres north of Stewart. The exposure consists of quartz vein breccia with many altered, rusty orange rock fragments.

MAPLE BAY (103P/5W, 55°25'-130°00')

This area provided a significant tonnage of quartz flux for the Anyox smelter during the years of its activity. Maple Bay is located on the east shore of Portland Canal about 56 kilometres south of Stewart. Nine major veins crop out east and northeast of Maple Bay; they contain variable amounts of sulphides. The Friday vein occurs 25 kilometres north of Maple Bay, about 500 metres from the shoreline. It consists of coarse-grained, milky quartz, is 4 to 5 metres wide and is at least 50 metres long.

Fieldwork was carried out by Z. D. Hora and Jennifer Pell with Gabrielle Sutton as a field assistant. Analysis of data collected during the summer is currently in progress.

