

PATSEY COVE SILICA

20,000 TONS MINIMUM SIZE REQUIRED -

DIMENSIONS NEEDED AS PROVIDED BY A.D. McCUTCHEON

ASSUME VERTICAL DIP -

<u>WIDTH (Ft.(m))</u>	<u>LENGTH (ft.(m))</u>	<u>DEPTH (ft.(m))</u>	<u>T.F.(S.G.)</u>
10 (3)	2400 (732)	10 (3)	12 (2.65)
20 (6)	600 (183)	20 (6)	"
30 (9)	300 (91)	30 (9)	"
40 (12)	200 (61)	40 (12)	"

The fractures are generally clean but minor amounts of white mica may be present in the quartz. A few small granite inclusions occur near the exposed western contact which strikes 005 degrees with a steep dip.

An outcrop cut by quartz stockwork veining lies 70 metres west of the Quartz Dome (Figure 29). A quartz mass measuring 4 metres by 6 metres is exposed at its northern end. Otherwise, only thin, randomly oriented veins are present.

Chip samples were collected from the Quartz Dome in 1963 (A. Allen, 1963). Samples over a width of 23.2 metres across the vein at a point 12 metres from the north end, and over 21.3 metres across the vein at the south end, averaged 98.84 per cent SiO₂. The best assay obtained was 99.96 per cent SiO₂ from a 3-metre section of a drill hole. In 1975 open-pit reserves were estimated at more than 270,000 tonnes.

The following samples of clean white quartz were collected by Geological Survey Branch personnel in 1982 (see Figure 30). Values are in weight per cent.

	<u>SiO₂</u>	<u>Al₂O₃</u>	<u>Fe₂O₃</u>	<u>MgO</u>	<u>CaO</u>	<u>Na₂O</u>	<u>K₂O</u>	<u>TiO₂</u>	<u>MnO</u>	<u>LOI</u>
GSC-1	99.73	0.05	0.07	<.02	<.03	<.03	.02	<.04	<.002	0.8
GSC-3	99.84	0.06	<0.04	<.02	<.03	<.03	<.01	<.03	<.002	0.2

BANKS ISLAND

(S21)

Type: Vein

Minfile: 103G 022

NTS: 103G 08E

Elevation: 15m

Latitude: 53° 28' 11"

Longitude: 130° 02' 37"

Alias: Donaldson Creek

A silica prospect is located on the east side of Banks Island between Patsey Cove and Donaldson Lake (Figure 31). Banks Island is situated on the British Columbia coast approximately 100 kilometres south of Prince Rupert. Access to the deposit is by float plane or by boat.

The occurrence is on the reverted Margaret Crown Grant (L.110). Interest in the property dates back to at least 1907, due to the presence of sulphide mineralization.

Geological Survey of Canada Map 23-1970 indicates that Banks Island is largely underlain by Coast Plutonic Complex rocks.

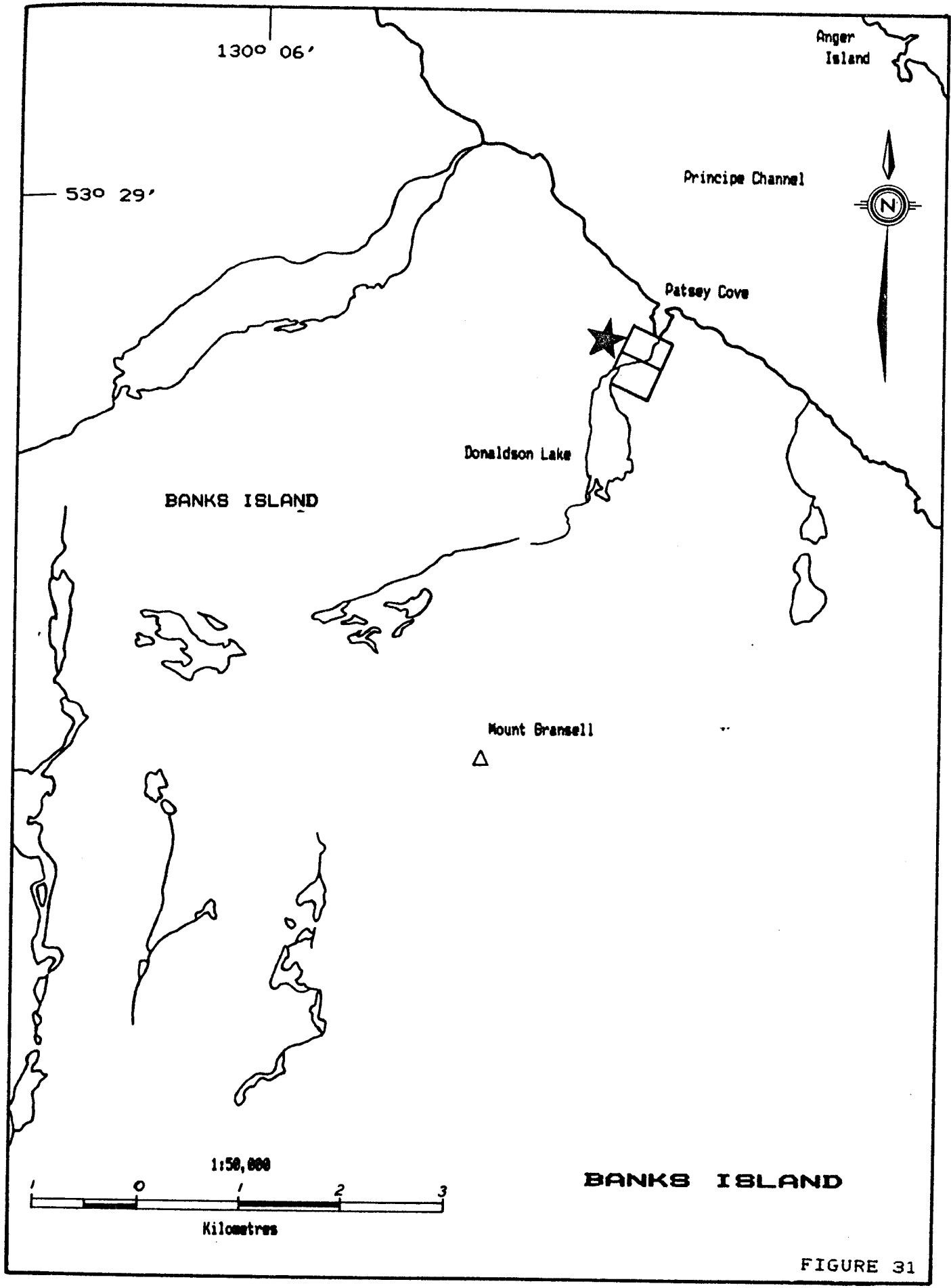


FIGURE 31

There are also some exposures of Permian and/or older metasediments, consisting mainly of thinly laminated micaceous quartzite, crystalline limestone, skarn and schist. The vicinity of the showing is underlain by a gneissic diorite-migmatite complex near the contact with hornblende biotite quartz diorite.

Several outcrops of pure white quartz occur on the northwest side of Donaldson Creek (Figure 32). The outcrops define a northeasterly trending body exposed over an area measuring at least 20 by 30 metres. Contacts are not exposed. The quartz is usually massive, coarse-grained and milky white, but minor amounts of smoky quartz are present. Some zones are intensely fractured with the fracture surfaces being clean or rust-stained. Orange-weathering quartz, with a slightly granular texture, occurs in one place.

Two other small bodies of quartz are exposed in Donaldson Creek to the southwest of the main group of outcrops. This quartz is white weathering, coarse-grained and massive. It contains veinlets of magnetite as well as amphibolitic inclusions and is therefore less pure than the quartz in the main outcrops. The inclusions, which are not necessarily confined to the edge of the vein, are rich in actinolite and are mineralized with pyrite, pyrrhotite and magnetite. Smoky quartz is associated with the inclusions. A larger body of mineralized amphibolite measuring 6 by 18 metres occurs further to the east in the creek (J.Pell, 1982).

A chip sample taken over approximately 7 metres along the south face of a cliff was collected by the Geological Survey Branch in 1982 (Figure 32). The sample was comprised mainly of clean white vein quartz with minor amounts of smoky and rust-stained quartz. It assayed as follows:

SiO ₂	99.26	per cent
Al ₂ O ₃	<0.04	per cent
Fe ₂ O ₃	<0.05	per cent
MgO	<0.03	per cent
CaO	<0.03	per cent
Na ₂ O	<0.04	per cent
K ₂ O	<0.02	per cent
TiO ₂	<0.02	per cent
MnO	<0.002	per cent
LOI	<0.1	per cent

In 1975 reserves were estimated to be at least 9,000 tonnes of silica with a grade of 98.8 per cent SiO₂.

