



Geological Mapping of
Barytes Showings on the Brod Claims
Liard River, Yukon

NTS 105A - 2

T. Liverton, October 1981

090882

This report has been examined by
the Geological Evaluation Unit
under Section 53 (4) Yukon Quartz
Mining Act and is allowed as
representation work in the amount
of \$ 200.00.

Ruth DeBick

Regional Manager, Exploration and
Geological Services for Commissioner
of Yukon Territory.

388000

Location

The Brod claims are 5-1/2 kilometres south-east of Watson Lake on the north bank of the Liard River. They may be reached by an hour's walk south from the Alaska Highway or as an alternative, by boat along the river.

Claims

Two claims are held by Alex Black; Brod 1, YA57123 and Brod 2, YA57124. They expire on the 15th October 1981. These mineral showings have been staked several times in the past; judging by one old post still legible at least as early as 1946. The lead showings downstream have been known since 1888. The present claims were staked to cover the barytes outcropping on the river bank.

Geology

The exposures mapped along the north bank of the Liard at 1:500 scale constitute the only outcrop on the claims on that side of the river.

The lithologies exposed are black slate of presumably Cambrian-Ordovician age, with two pyritic dacite dykes. The slate shows a well developed cleavage which strikes north-easterly and shows dips from 80° south-west to 50° north-west across the length of the exposures. Bedding is discernable in a few localities and shows gentle folding and moderate dips.

Pyrite-rich bands up to 10 cm thick occur in places within the slate. A few transgressive pyrite veins parallel to cleavage were also seen. Several barytes veins are found in the slate from 10 cm to 2 metres width. They generally follow the attitude of the cleavage but are locally irregular. The thicker veins retain their size over only a few metres strike-length whilst the thin veins may be traced for 10 metres or so. These thinner veins are of

pure, white barytes while the thicker, more irregular bodies carry some quartz and fragments of country-rock.

Potential - Recommendations

As a barytes prospect the Brod claims have very low tonnage potential since the widest vein (around 2 metres) quickly narrows along strike or forms anastomosing irregular thin veins with much country-rock between. The individual purer veins are only a fraction of a metre thick and no great amount could be mined from them.

Because of accessibility it would be possible to mine a few tens of tons of barytes from the showing with little cost or difficulty late in the summer season when the river level is low or even during early spring when the river has considerable ice thickness.

Perhaps the potential of the property might be enhanced if any significant base metal mineralization is found on the adjoining claims in stratigraphically lower position.

If further work is desired the various veins should be blasted out and representative samples taken to determine the grade of the barytes.

Expenditures

Mapping: 29th September 1981

T. Liverton	1 day at \$100	\$100.00
A. Black	1 day at \$ 80	80.00
vehicle use		15.00
report preparation		<u>25.00</u>
		<u>\$220.00</u>



STATEMENT OF QUALIFICATIONS OF AUTHOR

Timothy Liverton - Graduated from the University of Sydney with a B Sc degree in Geology and Geophysics in 1964.

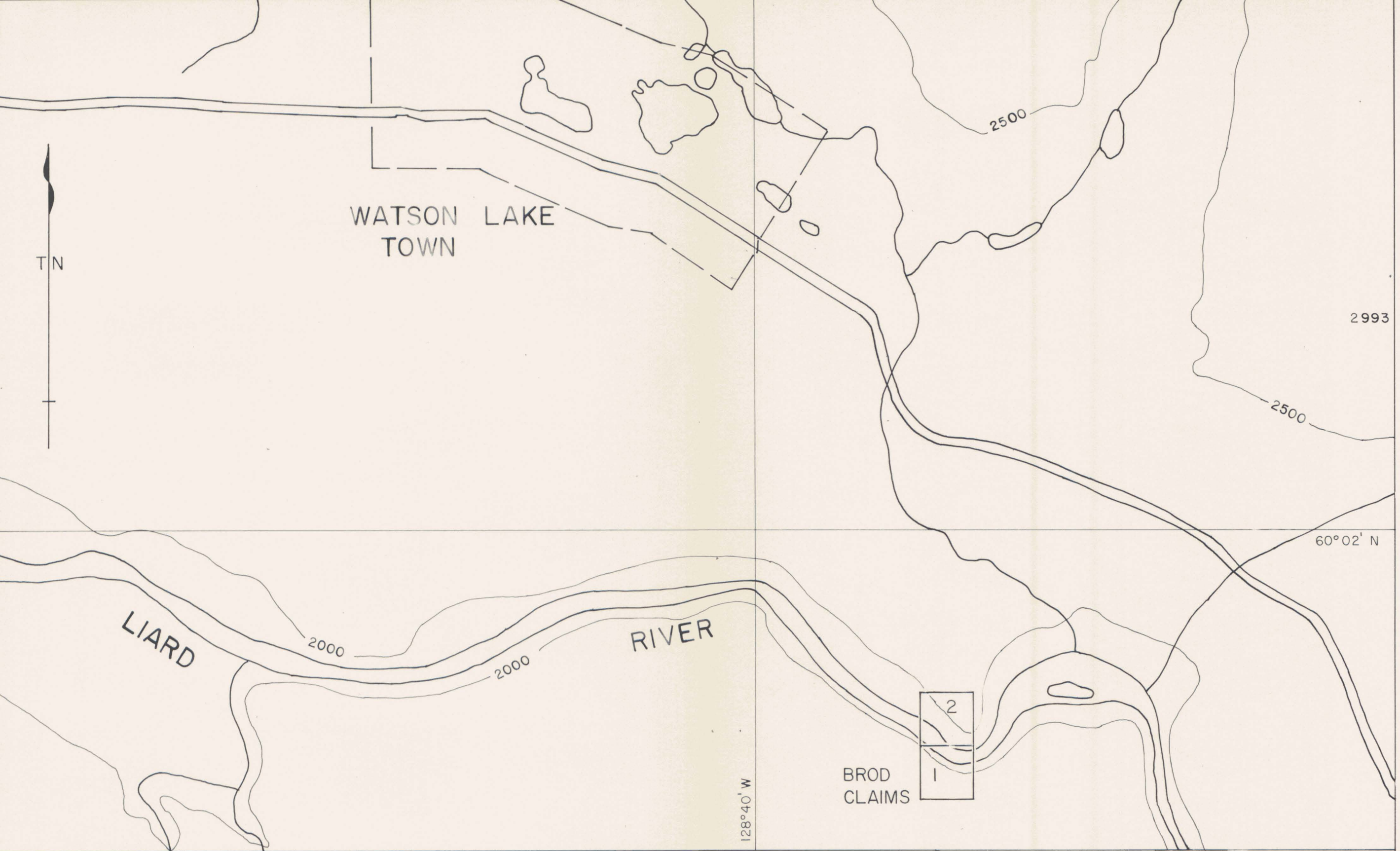
Experience:

(In Australia)

- 1965 - Employed by R. Hare & Associates (consultants) to work on tin, tungsten, and copper mines and prospects in Queensland and Western Australia. Work included surface and underground surveying and geological mapping, supervision of diamond drilling and regional mapping.
- 1966 - 1967 - Employed by the Electrolytic Zinc Company of A'Asia Limited. to work on base metal exploration in southern N.S.W. and uranium prospect in South Australia. Work involved detailed mapping, supervision of drilling, geochemical surveys and geophysics and petrographic studies.
- 1968 - 1970 - Employed by Trans Australian Exploration (Mc Phar, Sumitomo, St. Joseph, Bethlehem Copper) to carry out regional mapping and prospecting over 2000 square miles of Queensland to explore for copper, molybdenum and tungsten.
- 1971 & 1972 - Employed by ANZ Exploration (Union Carbide) to carry out uranium exploration in the Northern Territory in the Alligator River region.

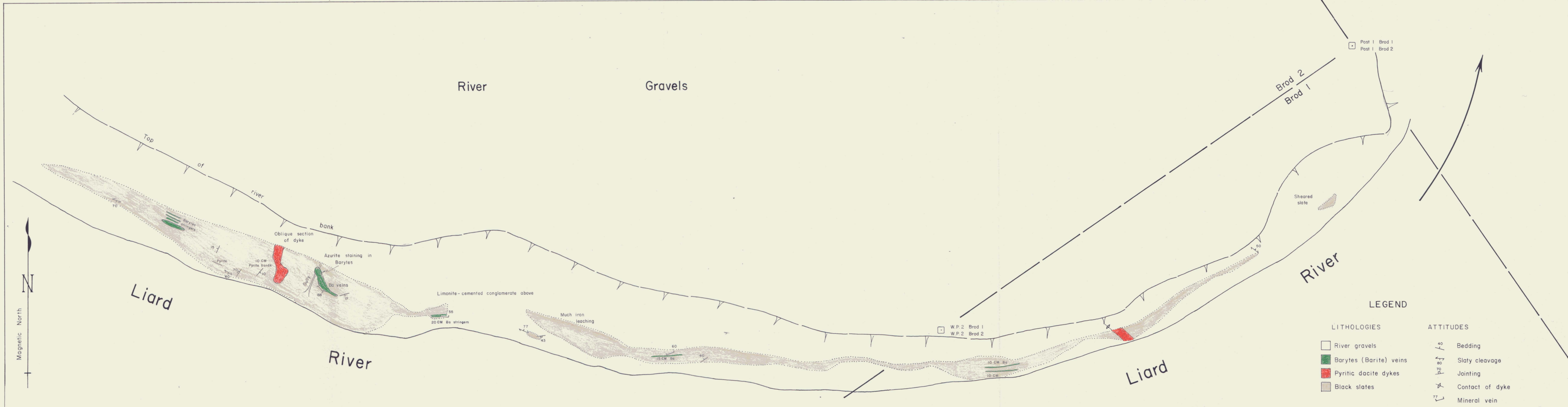
(In Canada & Abroad)

- 1973 - Working as a civil engineer in England, supervising harbour construction.
- 1974 to 1979 - Employed by Union Carbide Canada Limited to work in Yukon and Northern British Columbia tungsten projects during the summer. During the winter months working on reconnaissance for quartz in Greenland, for Manganese in Amazonia, Brazil; as a mine geologist at the Pine Creek Mine, California, on Tungsten exploration in Norway and development work in Portugal.
- 1980 & 1981 - Self-employed, carrying out various projects in the Yukon, Northern B.C, and Saskatchewan (Geological mapping, surveying and property examination) for exploration companies.



BROD CLAIMS, 105A-2 : LOCATION

Scale 2" to 1 mile or 1:31 680



BROD CLAIMS LIARD RIVER, YUKON : GEOLOGY

LEGEND

LITHOLOGIES		ATTITUDES	
	River gravels		40° Bedding
	Barytes (Barite) veins		80° Slaty cleavage
	Pyritic dacite dykes		70° Jointing
	Black slates		Contact of dyke
			Mineral vein

Mapping was carried out by compass, tape and clinometer traversing.