85-289-14260

Prospecting in the Needlepoint Mountain and Pooley Creek Areas, Cassiar, Liard Mining District of British Columbia.

T.Liverton and A.Black, October 1984

05/86

Claim Blocks: Ror 1 to 3, Plata 1 to4
N.T.S. 104 P- 4 East and West
Latitude: 59°08'N
Longitude: 129°40' W
Owner and operator: Wayne Waters
823-409 Granville St., Vancouver, B.C.

Contents

Drawings Appended

LOcation: 1:250,000 scale	Number 1
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Location, Access and Topography

The Needlepoint and Pooley Creek prospects are located 15 and 20 kilometres South-East of Cassiar town, in the Liard Mining Division of British Columbia. The area may be found on the Mc. Dame 1:250,000 topographic and 104P -4 (East and West halves) 1:50,000 claim maps. Access to the claims may be gained from the Stewart-Cassiar Highway, from where it is possible to walk to the West side of the Needlepoint group from the South end of Simmons Lake and from the Cusac Mine road where a track has been constructed to the head of Pooley Creek. From there the other claims are within (rather strenuous) walking distance. Camps were also set out on the Pooley Creek claim block by means of helicopter chartered from Watson Lake.

Most of the Needlepoint claims and about a third of the Pooley block are above tree line. Rock exposure is excellent and walking mostly unhindered by vegetation. Below the tree-line, particularly in the lower portion of Pooley Creek and towards the Dease Valley there is little exposure and much balsam and spruce hinder movement.

The area is quite high, extending to some 2000 metres above sea level and the district is not noted for benevolent weather; in fact one of our camps was wrecked by 80- knot winds. Snowfalls (which later melted) caused two weeks delay in completing the work.

Claims

The claim blocks covered by this exploration programme are:

Needlepoint Area:

Rorl Record 3043, 12 units, Staked 5th. April 1984

Pooley Area:

Ror 2	3044, 18 units,	13th. April 1984
Ror 3	3045, 18 units,	4th. April 1984
Plata 1	3046, 20 units,	6th. April 1984
Plata 2	3047, 12 units,	6th. April 1984
Plata 3	3048, 18 units,	6th. April 1984
Plata 4	3049, 20 units,	5th. April 1984

The Current Work Programme.

The object of this years work was to prospect the claim blocks examining as much of the rock exposure as possible to search for quartz veins in the Sylvester Group which might carry gold mineralisation similar to that of the Erickson and Cusac deposits.

Because the Pooley Creek valley is mostly meadow and swamp and there is only rare exposure in the Dease Valley, attention was concentrated on the East and West ends of the Pooley Creek block. Virtually all of the Needlepoint block was walked. No quartz of significance was found on the Needlepoint claims but eighteen systems of veins were located on the Western side of the Pooley block. These veins were sampled. Prospecting has been presented on sketches at 1:25,000 and 1:1250 scales. Three square kilometres were covered on the Needlepoint and 9.5 square kilometres on the Pooley blocks.

Geology

According to Gabrielse (Mc. Dame 1:250,000 Geological Sheet) the Needlepoint claims cover portion of the Sylvester Group (Devonian to Mississippian) greenstones and chert at their Eastern half and two ages of carbonates (Mc. Dame Group - Middle Devonian and Kechika Group - Cambrian to Ordovician) to the West. Also in the Western end of the claims portion of the Cassiar Batholith has intruded the carbonate and our prospecting revealed the development of some magnetite / tremolite-actinolite / vesuvianite skarns at the contact.

The Pooley Creek block covers Sylvester Group greenstones with interbedded green and black cherts in the West and occasional limestone lenses in the Eastern section.

Prospecting : a) Needlepoint Mountain

On the Western side of Needlepoint Mountain some skarns were found at the limestone / quartz - monzonite contact. These are of a banded massive magnetite / tremolite - actinolite / vesuvianite type, similar to those occurring on the Windy claims to the North - West of Cassiar. It was not possible to estimate the thickness of the skarn due to limited exposure.

In orderto check for scheelite a large soil sample was dug from the hollow draining the contact zone to the North. It was then panned in the creek. In addition the gravels of the creek were also panned. Upon examination under short - wave ultraviolet light some scheelite was noted in the concentrate obtained from the soil but neither scheelite nor gold were noted in that obtained from the creek. The few hand - specimens of skarn carried out showed no scheelite however. It was not possible to return to the area to carry out night - lamping for scheelite due to the neccessity to work on the Pooley area.

The Western side of Needlepoint shows excellent exposure, Chert and quartzite forming the lower (Northern) portion of the ridge and aphanitic altered volcanics the upper part. Not one quartz vein was found on the mountain and even the creeks showed only a handful of quartz float. The Eastern side of the mountain was reached from Pooley Creek and similar volcanics were seen with an absence of quartz or anything else of interest to a prospector.

b) Pooley Creek

The Eastern side of Pooley Creek was prospected first. The area covered (see sketch) shows almost entirely outcrop of very fine grained intermediate to basic volcanics, with no intercalated chert. Two localities were found where limestone or dolomite is interbedded and these are marked "A" and "B" on the map. The contact between the carbonate and volcanics is well exposed and is quite discordant to bedding on a very local scale. Much clastic volcanic material is included in the limestone near to the contacts and which rapidly diminishes with lateral distance. It appears that these pods of carbonate represent former reefs. Bedding at "B" was measured as strike 090° magnetic and dip 50° South. The presence of reef limestone within the sequence suggests that this part of the Sylvester Group is not of particularly deep water origin. A few sulphide - rich outcrops were seen particularly at localities marked "C" and "D", but the mineralisation is entirely of pyrite and covers only about 80 metres length at the most. Literally only a very few small quartz veins (no more than 4 metres long) were seen on this side of the claims.

The sequence on the opposite side of Pooley Creek does appear somewhat different to that of the East. It is suggested that there is a major contact between the two sides of the valley. On the West side of the valley the volcanics are fine to medium grained and have green or black well-bedded

cherts intercalated. The presence of chert as the only sediment might suggest a deeper water origin for this part of the Sylvester Group. On this side quartz veins are at least visible in two areas. These veins have a predominant attitude of 060° magnetic (approximately East - West True) and are mostly steep to vertically dipping. Observed bedding in the chert is almost normal to the general attitude of the veins.

Four quartz vein systems were examined outside the area mapped in detail. Attitudes and dimensions observed are as follows:-

Sample Area	Vein thickness	Exposed Length	Strike and dip, Mag.
1	3 veins 20 to 100 cms.	25 meteres	175 / 25 W
2	10 to 50 cms. - many small veins	3 metres	Irregular
3	many small veins 10 cms.	3 m. max.	Irregular
4	30cms.	5 metres	065 / 80 S

The details of the other veins, which are plotted at 1:1250 scale are contained on the sketch. Three of the veins contain an accessory mineral which is tentatively identified as axinite - in crystals up to 5 cm. long.

Chip samples were collected from each of the veins. Only on the larger systems (numbers 1 and7) was any attempt made to obtain anything close to a representative sample. The others were chipped over much of their exposed length and material from various of the smaller veins combined in one sample The object is to detect the presence of gold by carrying out an analysis. No macroscopically visible gold was seen. If gold is detected representative sampling will require the collection of large samples, probably by drilling and blasting at a later date. Samples collected were crushed to minus 3mm. size in a reciprocating jaw crusher and split by cone - and - quarter method before shipping for assay, one half being retained for future reference.

It should be noted that sulphides were only rarely noted as microscopic specks in the quartz and that the outcrop is almost pure white, suggesting that they are rare. The area on this side of the valley has, however, seen little post - glacial weathering and many of the small hills show glacial polish and striations. Two areas are noteworthy : locality 1 and the group 7 to 10. These two groups of veins have fair strike - length exposed and show veins up to 1 metre thick. Lengths observed are limited by exposure rather than possible strike - length. If any appreciable gold is discovered in these they will be well worth bulk - sampling.

Conclusions

a) The Needlepoint area offers no potential for quartz - vein gold mineralisation. The possibility of any extensive skarn development under the carbonate roof pendants is not great, but some further work could be carried out next year if desired. Soil sampling and panning of the material followed by ultraviolet examination would soon show if any tungsten mineralisation is significant.

b) Of the portions of the Pooley Creek area examined, the West end seems to be the only part to have any potential for quartz - vein development The extreme South - west corner of the claims also appears devoid of mineral veins. Eighteen systems of quartz veining were sampled and two of these show appreciable size. If analysis shows the presence of any grade of gold then excavation and bulk sampling to obtain representative grades should proceed next year.

Should such encouragement be found there may be justification in trying to prospect the timber and meadow covered portions of the claims at least as far as Pooley Creek. There may be sufficient accessory minerals present to allow geochemistry by pathfinder elements (eg. Cu, As for tetrahedrite) to be applied on the hillsides. In the Pooley Valley which is largely peat - bog, geochemistry would not provide sensible results but perhaps magnetic and V.L.F. electromagnetic surveys might show some structure of interest.

c) Assays are not available at the time of writing but may be appended to the report when available.

Timothy Liverton

Timothy Liverton

Alex Black

Alex Black
Watson Lake, Yukon
October 1984

Cost Statement

Needlepoint Area ; Ror1, 2nd. to 4th. August 1984	
T.Liverton, 3 days at 150 per day	$ 450.00
Fuel and camp supplies	$ 96.29
Vehicle : 204 miles at 50¢ per mile	$ 102.00
	$ 648.29
Pooley Creek Area: Plata 1 to 4, August 22nd. to 25th.	
t.Liverton, 4 days at $150	$ 600.00
A.Black, 4 days at $100	$ 400.00
Helicopter : Frontier Helicopters, Watson Lake	$ 802.50
supplies and fuel	$ 160.33
Vehicle : 210 miles at 50¢	$ 105.00
	$2067.83
Ror 2 and 3 : 3rd. Sept., 8th. to 16th. Sept.	
T.Liverton, 10 days at $150	$1500.00
A.Black, 9 days at $100	$ 900.00
Helicopter, 3rd., 11th., 16th., September	$2782.00
camp supplies	$ 217.03
Plywood, sample bags, flagging	$ 64.13
vehicle : 206 miles at 50¢	$ 103.00
	$5566.16
report Preparation	
T.Liverton, 4 days at $150	$ 600.00
Assay Costs	
25 Assays for Au at ~~$150~~	$ 281.25
airfreight to Vancouver	$ 33.25
	$ 914.50
Grand total	$9196.78
less	281.25
	8915.53

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, geochemcial surveys and geophysics and petrographic studies.

1968 - 1970 - Employed by Trans Australiam 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.

1982 to 1984 - Continuing contract exploration work in the Yukon and Northern B.C.

Statement of Qualifications : Alex Black

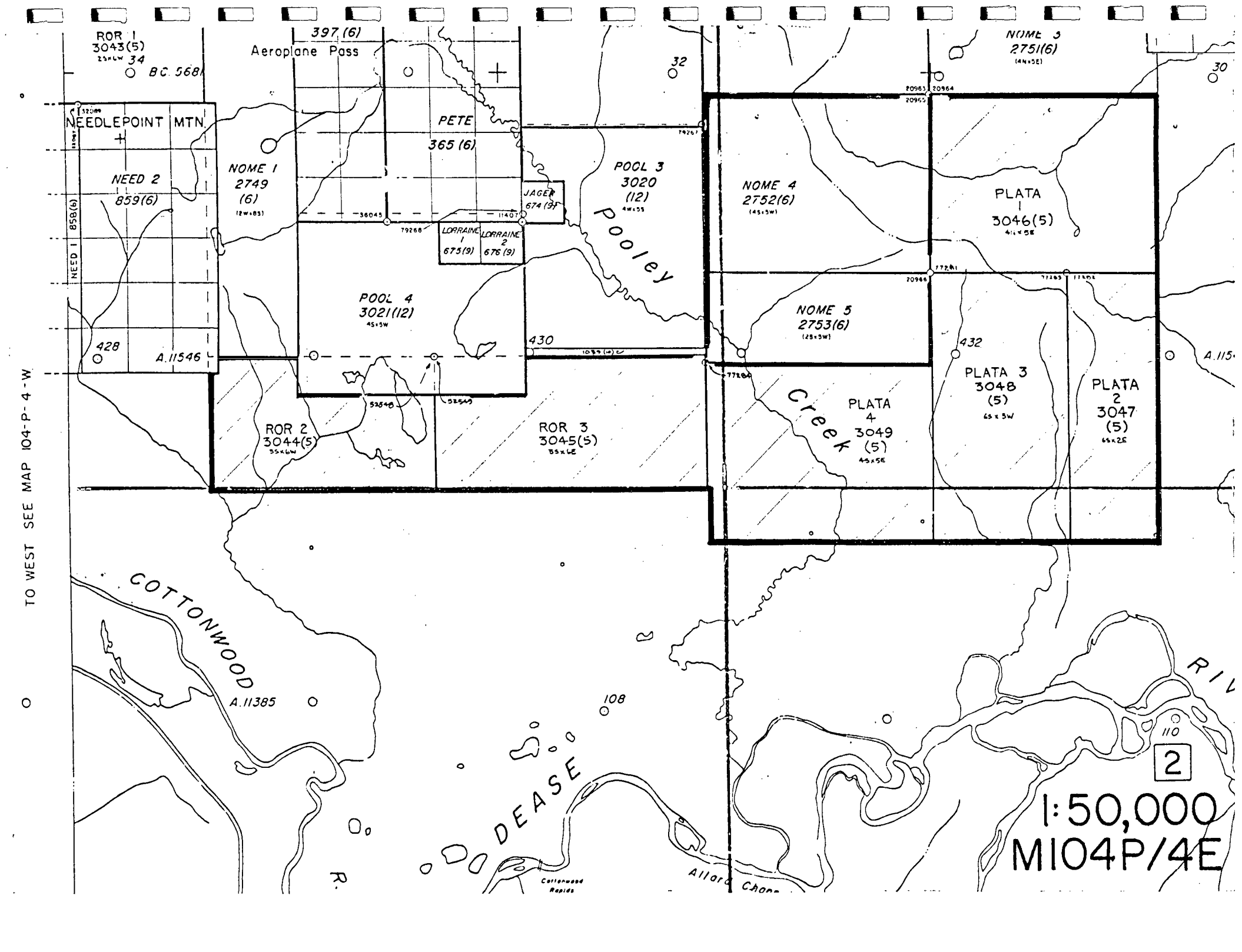
Prospector: he has worked as a prospector as his main means of earning an income for the past fifteen years, both as a salaried employee of exploration companies and on his own account, discovering and acquiring mineral properties then optioning them to exploration companies.

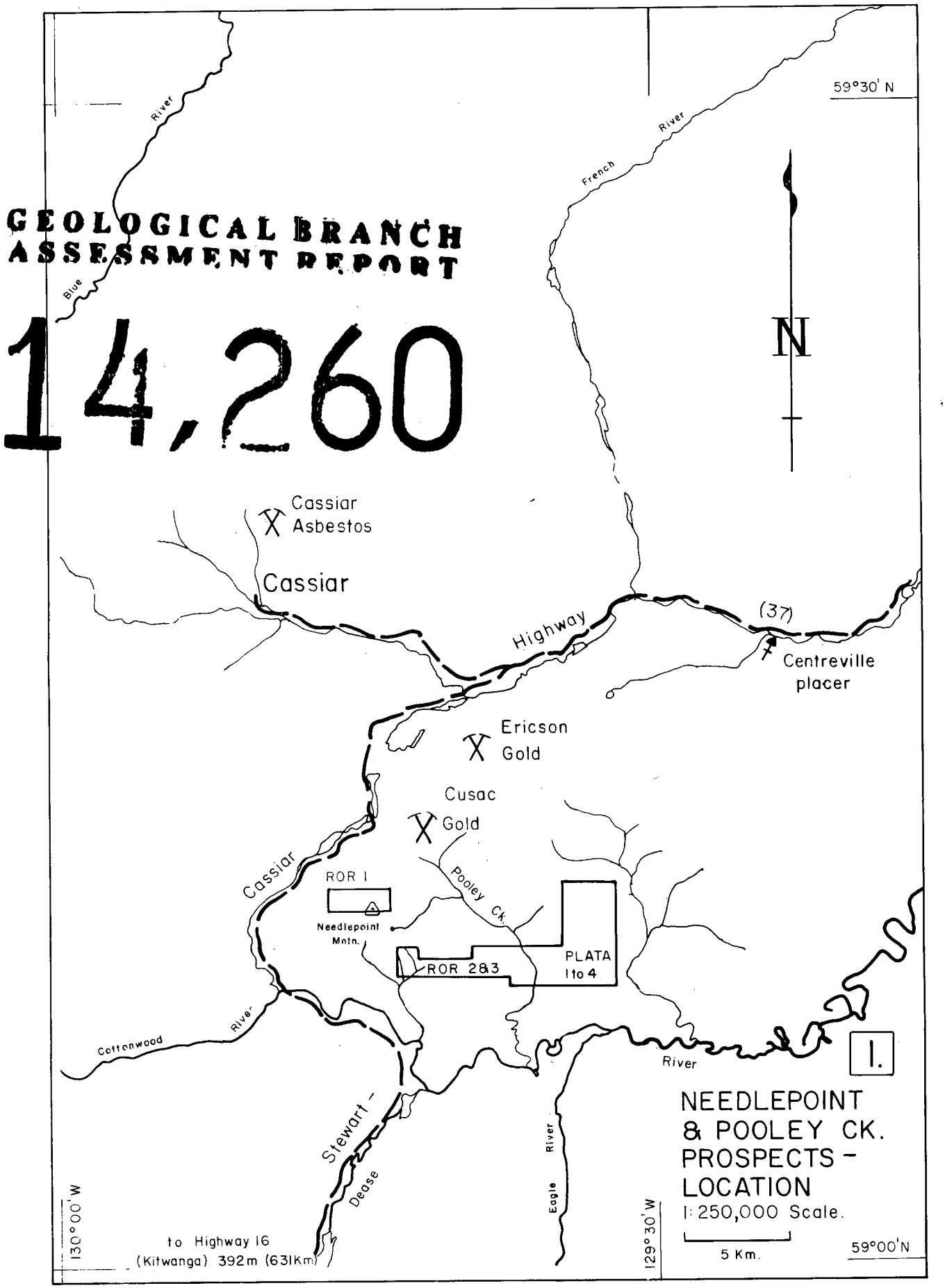
1970 to 1974- Prospecting on own account in the South-Eastern Yukon for base metals and tungsten.

1975 to 1976 Prospecting for tungsten for the Canada Tungsten Corp.

1977 to 1979 Prospecting for base metals in the Dawson region for Serem Exploration.

1980 to 1984 Prospecting on his own account in the N.W.T., Eastern Yukon and Cassiar region of British Columbia.

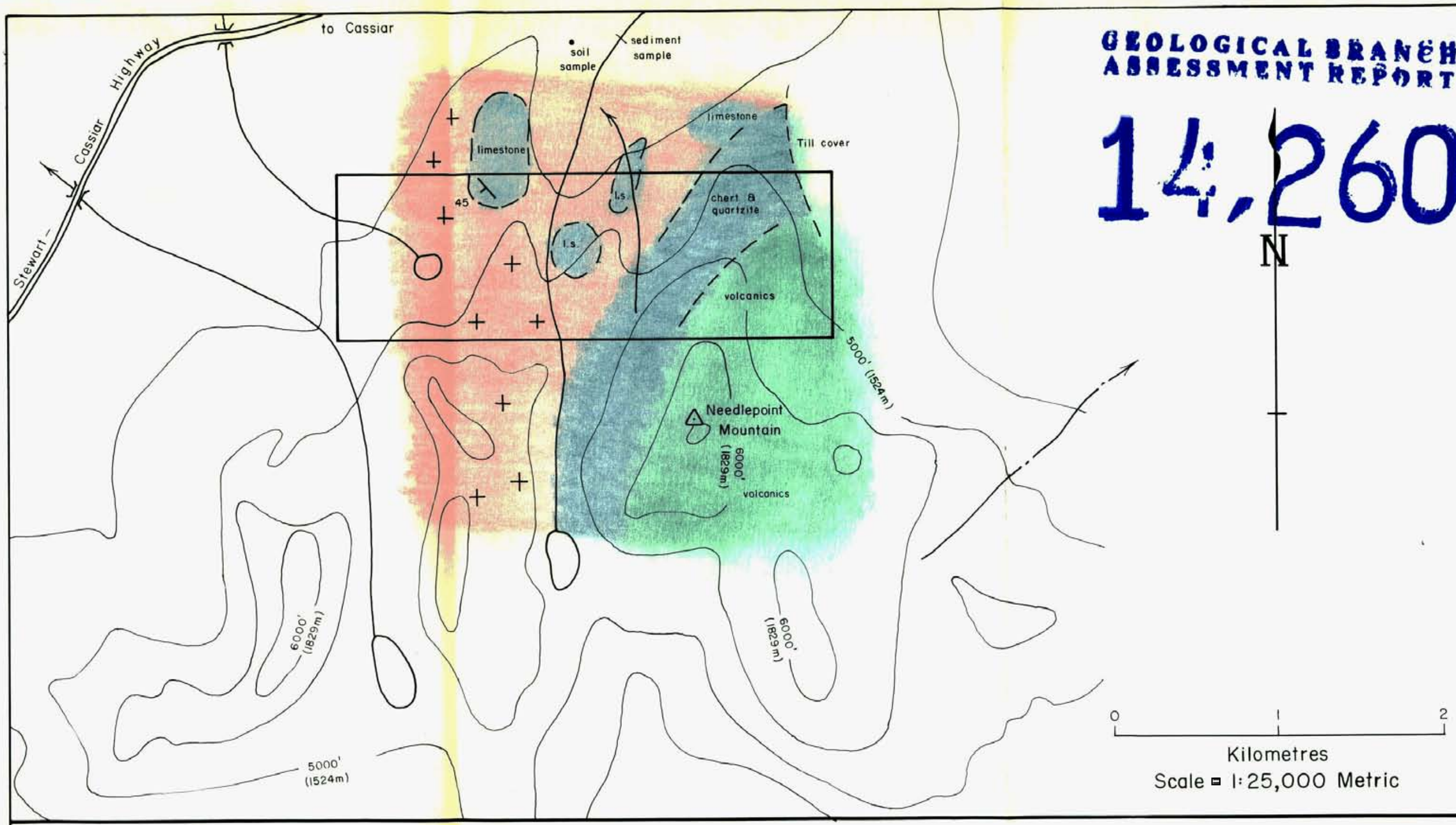

ROR 1
3043(5)
25x6W
34
B.C. 568
397 (6)
Aeroplane Pass
32
NOME 3
2751(6)
(4N x 5E)
30
NEEDLEPOINT MTN.
NEED 2
859(6)
NEED 1
858(6)
NOME 1
2749
(6)
(2W x 6S)
PETE
365 (6)
JAGER
674 (9)
POOL 3
3020
(12)
4W x 5S
Pooley
NOME 4
2752(6)
(4S x 5W)
PLATA
1
3046(5)
4½ x 5E
LORRAINE
1
675(9)
LORRAINE
2
676 (9)
POOL 4
3021(12)
4S x 5W
NOME 5
2753(6)
(2S x 5W)
428
A.11546
430
432
A.115
ROR 2
3044(5)
3S x 6W
ROR 3
3045(5)
8S x 6E
Creek
PLATA
4
3049
(5)
4S x 5E
PLATA 3
3048
(5)
6S x 5W
PLATA
2
3047
(5)
6S x 2E
TO WEST SEE MAP 104-P-4-W
COTTONWOOD
A.11385
108
110
DEASE
R.
Allard Chan
2
1:50,000
M104P/4E



I.

NEEDLEPOINT & POOLEY CK. PROSPECTS - LOCATION

1:250,000 Scale.

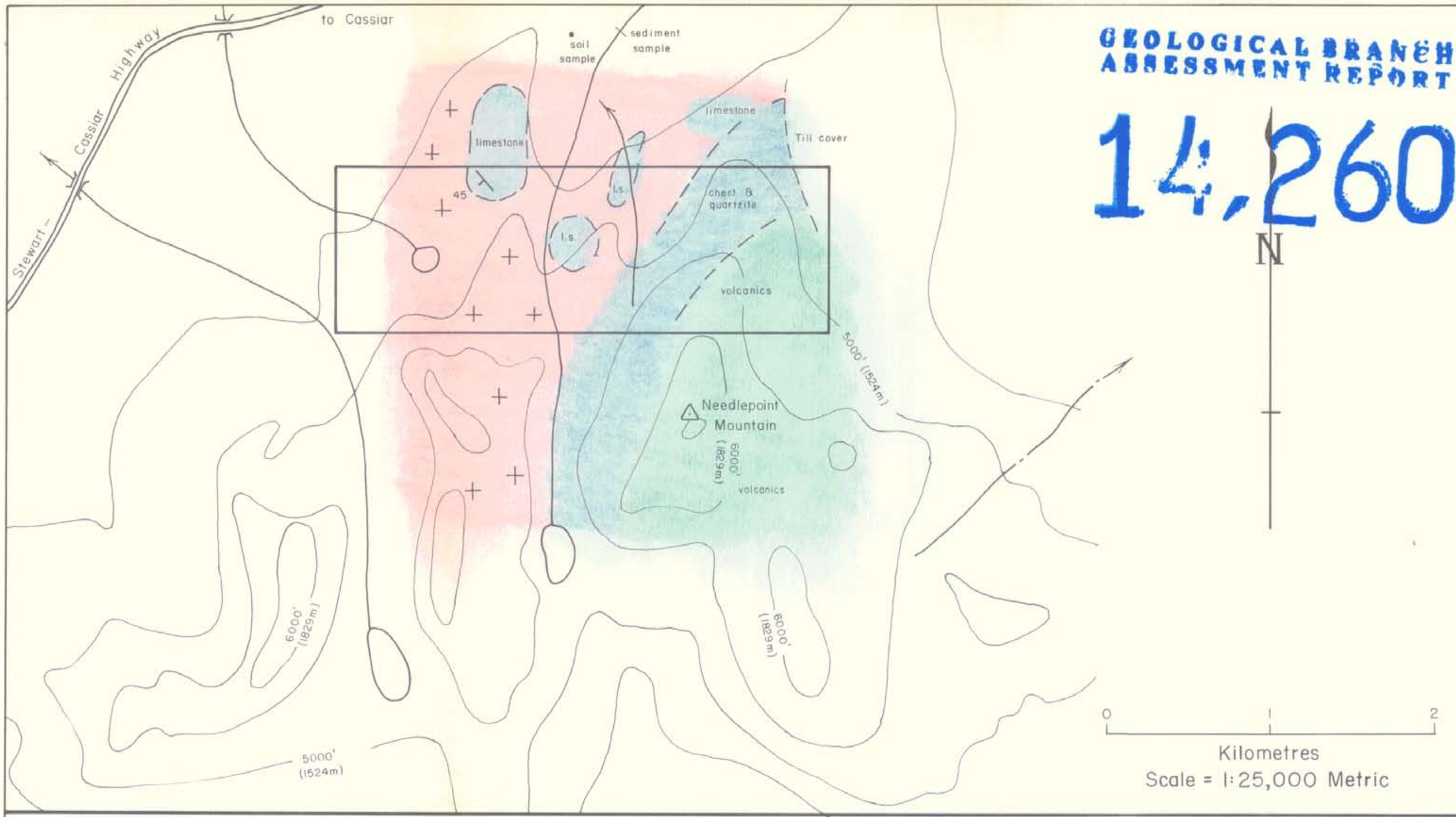


NEEDLEPOINT MOUNTAIN PROSPECT, CASSIAR: SKETCH SHOWING GEOLOGY

ROR 1 CLAIM GROUP (12 UNITS)

3.

T. Liverton, Tarmachan Exploration Services Ltd., September 1984.



NEEDLEPOINT MOUNTAIN PROSPECT, CASSIAR: SKETCH SHOWING GEOLOGY

ROR I CLAIM GROUP (12 UNITS)

3.

T.Liverton, Tarmachan Exploration Services Ltd., September 1984.

Camp 2

Pooley Creek

5000' (1524m)

4500' (1372m)

4000' (1219)

Huntergroup

L.C.P. located

A

Plata 1

Camp 1

B

C

D

fault zone

Plata 4

Plata 3

Plata 2

Creek

59°08'N

"Long Lake"

1:1250 Sheet area

Ror 2, 3
(Actual boundary uncertain)

Camp

4500' (1372m)

3500' (1067m)

3000' (914m)

129°40'W

Contour interval 500' (152.4 m)

Areas prospected in detail are shown by enclosing dotted lines.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

14,260

0 1 2

Kilometres

Scale = 1:25,000 Metric

TN

T. Liverton, Tarmachan Exploration Services Ltd., September 1984

ROR 2&3 AND PLATA 1,2,3&4 GROUPS

POOLEY CREEK AREA - SKETCH SHOWING EXTENT OF PROSPECTING AND LOCALITIES MENTIONED

4.

QUARTZ VEIN SYSTEMS

Sample area	Vein thickness	Exposed length	Accessory min.	Strike and dip (magnetic)
5	50 centimetres	6 metres	Axinite	025 / 65 W
	30	"	Axinite	"
7	10	2	-	030 / 70 E
	20	5	-	060 / 90
	30 - 50	30	-	060 / 90
	20	10	-	050 / 90
8	35 - 50	5	-	270
	"	5	-	245
9	20 - 100	40	-	060 / 80 SE
10	50	8	-	060
	100	5	-	040 / 90
	15	3	-	060 / 70 N
11	30 - 100	16	-	235 - 260
		3	-	260
12	40	4	-	060 / 70 S
	30		-	060 / 90
12a	50 - 80	12	-	060 - 075 / 75 S
13	50	11	-	265 - 255 / 80 S
14	10 - 30	6	-	235 / 90
	30	10	-	245
	50	6	-	240
15	20 - 40	15	-	070 / 80 S
16	40	7	-	060 / 90
	30	5	-	060 / 90
	10	3	-	065
	10 - 15	3	-	065
17	20 - 70	11	-	065 / 65 - 75 SE
18	25	4	-	250
	50	4	-	250
	-	4	-	250
	70	5	Axinite & K-feldspar.	260 / 90

LEGEND

Vertical quartz vein, length to scale
Dipping quartz vein, length to scale
Attitude of vein not to scale
Strike and dip of bedding
Geological contact
15 Sample area number
Lake shore
Creek

5

POOLEY CREEK AREA, CASSIAR DISTRICT, B.C.

ROR 2 AND 3 CLAIM GROUPS

QUARTZ VEIN SYSTEMS AT WEST END OF CLAIM BLOCK

Mapping was carried out by means of compass, tape and clinometer traversing

Fieldwork: T. Liverton & A. Black, September 1984

Tarmachan Exploration Services Ltd.