

REPORT ON THE

TRADE GROUP,

MAYO MINING DIVISION, Y.T.

OF

REINDLER EXPLORATIONS LTD. (N.P.L.)

AGIIS EXPLORATION SERVICES LTD.

JULY 10, 1968



REPORT ON THE
TRADE GROUP,
MAYO MINING DIVISION, Y.T.,
OF
REINDEER EXPLORATIONS LTD. (N.P.L.)
AGILIS EXPLORATION SERVICES LTD.

This report has been examined by
the Geological Evaluation Unit.
Approved as to technical worth by:
Approved as indicated
RESIDENT GEOLOGIST
by covering page
Approved as to cost in ~~total~~ *money*
of: \$ 2400⁰⁰
J. B. Jamieson
RESIDENT MINING ENGINEER
Accepted as representation work
under Section 53(4) Yukon Quartz
Mining Act.
[Signature]
COMMISSIONER OF YUKON

MEMORANDUM

RESTRICTED

Mining Recorder,
Mayo, Y.T.

Box 1767,
Whitehorse, Y.T. August 5, 1969.
M.I. M-252

Report on TRADE and CAN Claims
East-North-East of Mayo, Y.T.
Agilis Exploration Services Ltd.
by R. Philp, P. Eng.

On the recommendation of the Resident Geologist and the Mining Inspector I hereby authorize you to accept this report as representation work under Section 53 (4) of the Yukon Quartz Mining Act to the value of Two Thousand Four Hundred Dollars.

Yours sincerely,

Original signed by
Commissioner J. Smith

James Smith,
Commissioner.

Attach.
J. C. Torrington:ras

cc: Chief, Oil and Mineral Division
Attention: Geological Evaluation Unit

Central Mining Records - Whitehorse ✓

Resident Geologist



Handwritten: HVA-10
106A10

TABLE OF CONTENTS

	Page
INTRODUCTION	1
LOCATION AND ACCESS	1
PHYSIOGRAPHY	2
CLAIMS	2
HISTORY	3
GEOLOGY	3
CONCLUSIONS	4
RECOMMENDATIONS	4
COST ESTIMATE	5
CERTIFICATE	7

MAPS

Scale

Geological Map - Reindeer Property	1" = 4 miles
Claim Map	1" = $\frac{1}{2}$ mile
Map of Geochem. - Soil Sampling Plan	1" = 500 feet

REPORT ON THE
TRADE GROUP,
MAYO MINING DIVISION, Y.T.,
OF
REINDEER EXPLORATIONS LTD. (N.P.L.)

INTRODUCTION:

The Trade Group of Reindeer Explorations Ltd. (N.P.L.) consists of 29 contiguous mineral claims lying 80 miles north-northwest of Mayo, Yukon Territory, and adjoining claims held by Hart River Mines Ltd.

Recently, interest has been focussed on the area following reports of favorable drill results by Hart River Mines, which company is exploring a massive sulphide deposit containing values in copper, lead, zinc, silver, and gold.

This report is based on a review of available published and unpublished maps and reports on the area, previous familiarity with the general area by the writer, plus a recent examination of the property on June 24 - 26, 1968.

22

LOCATION AND ACCESS:

The claims are situated 80 miles north-northwest of Mayo and 85 miles east-northeast of Dawson, Yukon Territory.

Co-ordinates are 64° 38' north latitude, 136° 50' west longitude.

Access to the property is by helicopter from either Mayo or Dawson. The nearest lake suitable for fixed-wing aircraft lies 12 miles northeast of the claims. Both Dawson and Mayo are served by scheduled airline service from Whitehorse.

PHYSIOGRAPHY:

Relief in the area is steep with elevations within the claims group varying between approximately 3200 and 6000 feet above sea-level. The claims occupy the broad valley and adjoining slopes of a northerly flowing tributary of the Hart River.

Timber is absent except for a few patches along the edges of the valley, but is abundant in the lower valleys below approximately 3000 feet elevation. Upper slopes consist of talus and outcrop, while the lower slopes and valleys are covered by overburden.

Snowfall is moderate although winters are severe and the summer exploration season generally extends from early June to mid-September. Water is plentiful in the main valley passing through the claims.

CLAIMS:

The following claims comprise the Trade Group of Reindeer Explorations Ltd. (N.P.I.).

<u>Claims</u>	<u>Record Numbers</u>
Trade 1 - 8	Y 14643 - 650
Trade 17 - 24	Y 14699 - 706
Trade 25 - 32	Y 14659 - 666
Can 37 - 41	Not Available

A title search of the above claims has not been conducted by the writer. The Trade claims have all been tagged and all posts were checked by the writer and his assistant. The Can claims were staked under the supervision

of the writer. It is the writer's opinion that the claims are staked in accordance with the regulations set forth in the Quartz Mining Act for the Yukon Territory.

HISTORY:

The presence of several small copper occurrences in the general area, which have been known for several years, are mentioned briefly in Geological Survey of Canada Paper 62-7 published in 1962.

Trenching was carried out on chalcopyrite showings lying 5 miles northwest of the Trade Group by Asbestos Corporation in 1956. Drilling was carried out in the 1960's on a copper prospect approximately 19 miles to the southeast.

The prospect currently being drilled by Hart River Mines was discovered in 1966, and that company has carried out trenching, geochemical and electromagnetic surveys over a portion of their claims.

The Trade claims were staked in April of this year. Since this time several companies, including Hart River Mines, have acquired claims in the area.

GEOLOGY:

Geological mapping of the area by the Geological Survey of Canada has been published as map 14-1962 at a scale of 1 inch = 4 miles. This shows a strongly deformed north-westerly trending belt of Precambrian and early Palaeozoic sedimentary units, intruded by several small diorite sills. Dolomitic and argillaceous sediments of Precambrian Age are shown in the vicinity of the Trade Group, with a diorite sill to the immediate north.

An orange weathering slabby dolomite occupies much of the southern portion of the claims, with quartzite, limestone, and shale to the north. Considerable quartz-carbonate veins and stringers are present, especially in the dolomites. In general, the units strike west to northwest and dip steeply to the southwest.

In the northwest portion of the claims pyrite was

noted in all the different rock types, and chalcopyrite at one point in a grey limestone. Strong iron sulphides with galena were noted in a few boulders within the main creek near the southern claim line.

The main zone currently being explored by Hart River Mines lies approximately 3000 feet northeast of the Trade Group and consists of massive sulphides containing copper, lead, zinc, gold and silver values occurring in a faulted zone in argillites in contact with a diorite sill. A second lead-zinc showing has been reported on the Hart River property, consisting of galena and sphalerite occurring in northeasterly trending shears in andesite and diorite, and lying approximately 3700 feet north of the Trade claims. Other gossan zones have been reported on the Hart River claims south of the Trade Group.

Several soil samples were taken by the writer during the recent examination. Values ranged between 27 - 278 ppm zinc, 11 - 58 ppm copper, 10 - 105 ppm lead.

CONCLUSIONS:

The Trade Group is underlain mainly by dolomitic and argillaceous sediments, of probable Precambrian Age.

Copper-zinc-lead mineralization occurs in similar sediments on the property adjoining the Trade Group to the north, and at several other points in the surrounding area.

During the initial examination, iron sulphides were noted in several places and chalcopyrite at one point.

Overburden covers approximately two-thirds of the claim group limiting the applicability of outcrop prospecting and necessitating the use of geochemical and geophysical exploration methods.

RECOMMENDATIONS:

The following exploration program, divided into 3 stages, is recommended to initially explore the Trade Group of Reindeer Explorations Ltd. Considering the remoteness of the area and short exploration season, provision

should be made for a continuous program through each successive stage as warranted.

Stage 1:

1. Prospecting and geological mapping.
2. Geochemical survey. Samples should be collected at 100 foot intervals on lines spaced 200 feet apart.
3. Electromagnetic survey.

Stage 2:

Assuming anomalous zones warranting additional investigation will be located during Stage 1, allowance should be made for detailed surveys over an area equal to approximately 3 claims in this stage.

1. Establish control grid.
2. Detailed geological and topographic mapping.
3. Geochemical survey. Samples should be collected at 50 foot intervals on lines spaced 100 feet apart.
4. Electromagnetic survey.

Stage 3:

Allowance should be made for trenching and/or drilling of possible anomalous areas warranting further testing.

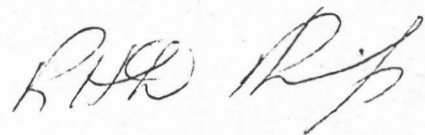
COST ESTIMATE:

Stage 1:

Transportation, mobilization, and demobilization	\$5400.00
Geological mapping and prospecting	1400.00
Geochemical survey	
- collecting samples	3600.00
- testing samples	4000.00
Electromagnetic survey	2900.00

Supervision, draughting, reports	<u>\$2000.00</u>
	\$19,300.00
+ 20% contingency - approximately	<u>3,800.00</u>
Total (Stage 1)	<u>\$23,100.00</u>
Stage 2:	
Grid	\$1100.00
Mapping	800.00
Geochemical survey	2400.00
Electromagnetic survey	1100.00
Supervision, draughting	<u>1000.00</u>
	\$6,400.00
+ 20% contingency - approximately	<u>1,200.00</u>
Total (Stage 2)	<u>\$7,600.00</u>
Stage 3:	
Trenching	\$3000.00
Drilling - allow for 1500 feet @ \$14/foot	21,000.00
Supervision, assays, etc.	<u>4000.00</u>
	\$28,000.00
+ 20% contingency - approximately	<u>5,600.00</u>
Total (Stage 3)	<u>\$33,600.00</u>
Total estimated costs (Stage 1, 2, and 3)	<u>\$64,300.00</u>

Respectfully Submitted,



R.H.D. Philp, P. Eng.

AGILIS EXPLORATION SERVICES LTD.

CERTIFICATE

I, Ronald H.D. Philp of 812 Blundell Road, Richmond, British Columbia, do hereby certify that:

1. I am a registered Professional Engineer of the Province of British Columbia.

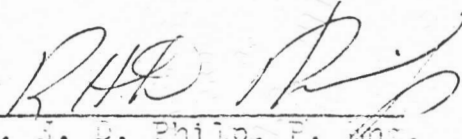
2. I am a graduate from the University of British Columbia. (B.A. Sc. 1961)

3. I have practiced my profession since 1961 while employed with Caseco Consultants Ltd., Asbestos Corporation (Explorations) Ltd., Alrae Exploration Limited, and Agilis Exploration Services Ltd.

4. My report is based on a review of available reports and maps, the writers previous familiarity with the area, plus an examination of the property on June 24 - 26, 1968.

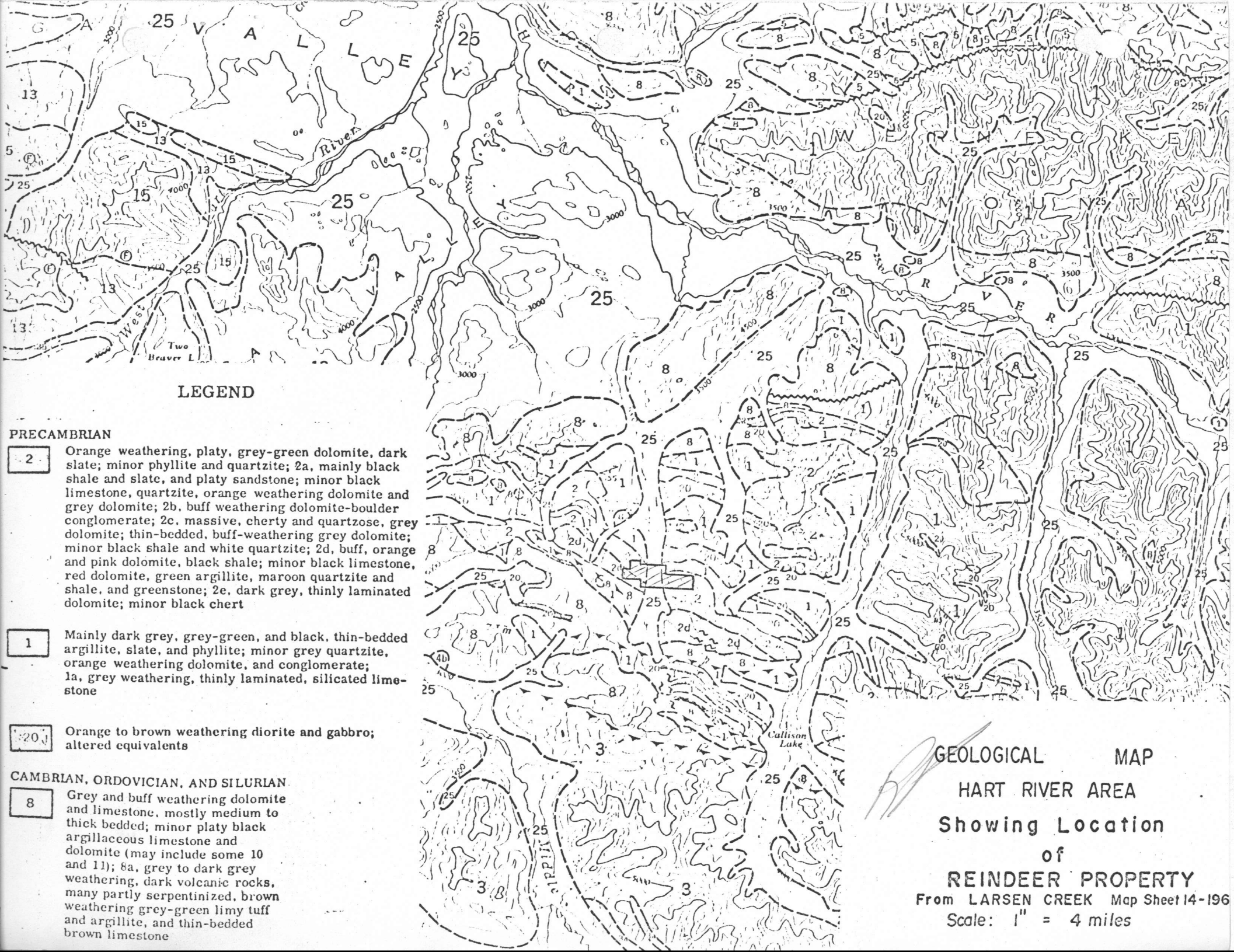
I have no interest, nor do I expect to receive any interest, in the property described herein or securities of Reindeer Explorations Ltd. (M.F.L.).

6. While on the property I have examined the staking of the Reindeer Explorations Ltd. (M.F.L.) claims, and found them to be staked in accordance with the regulations set forth in the Quartz Mining Act for the Yukon Territory.


R. H. D. Philp, P. Eng.

July 10, 1968

Vancouver, B.C.



LEGEND

PRECAMBRIAN

2 Orange weathering, platy, grey-green dolomite, dark slate; minor phyllite and quartzite; 2a, mainly black shale and slate, and platy sandstone; minor black limestone, quartzite, orange weathering dolomite and grey dolomite; 2b, buff weathering dolomite-boulder conglomerate; 2c, massive, cherty and quartzose, grey dolomite; thin-bedded, buff-weathering grey dolomite; minor black shale and white quartzite; 2d, buff, orange and pink dolomite, black shale; minor black limestone, red dolomite, green argillite, maroon quartzite and shale, and greenstone; 2e, dark grey, thinly laminated dolomite; minor black chert

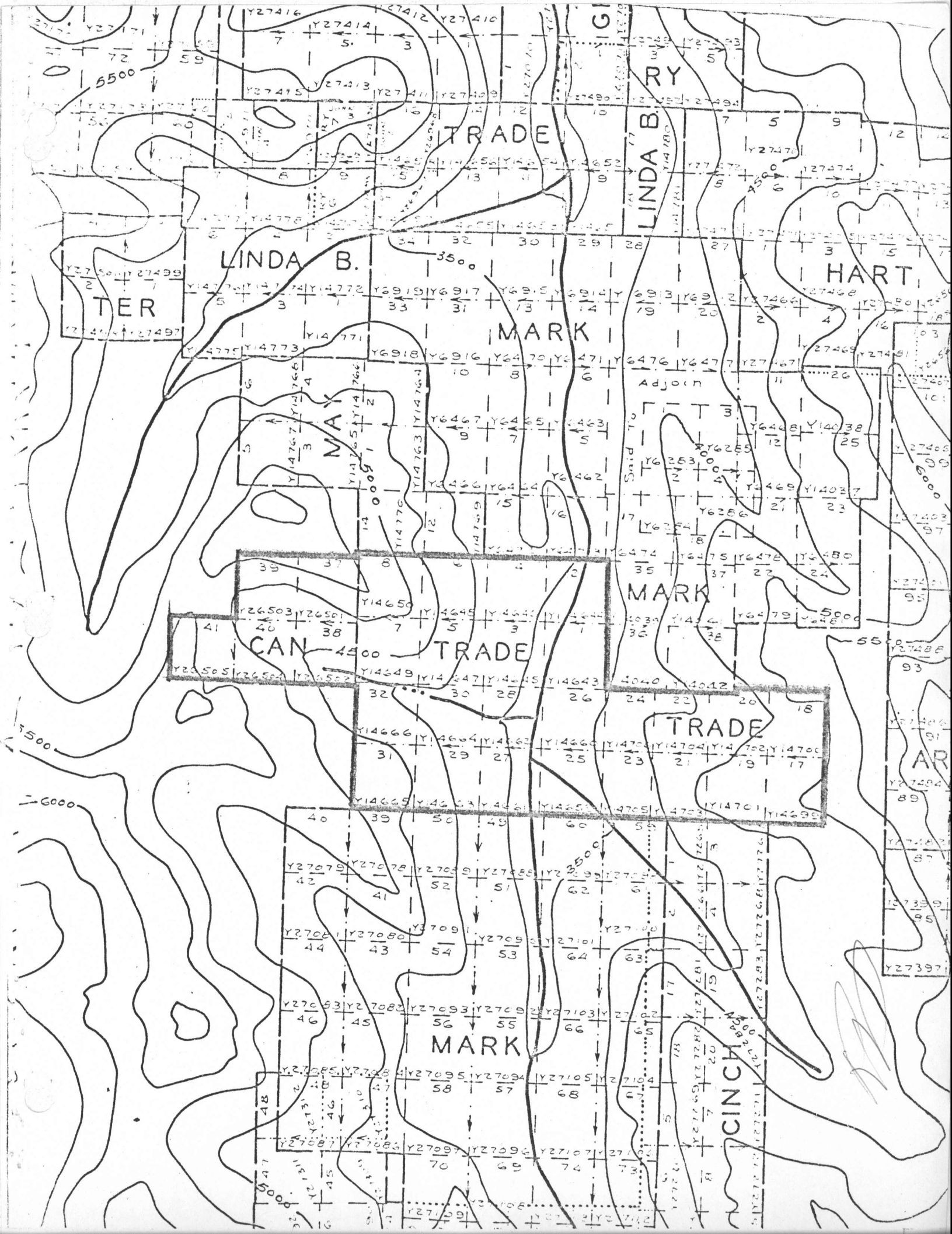
1 Mainly dark grey, grey-green, and black, thin-bedded argillite, slate, and phyllite; minor grey quartzite, orange weathering dolomite, and conglomerate; 1a, grey weathering, thinly laminated, silicated limestone

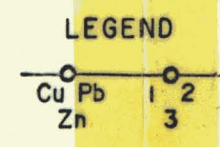
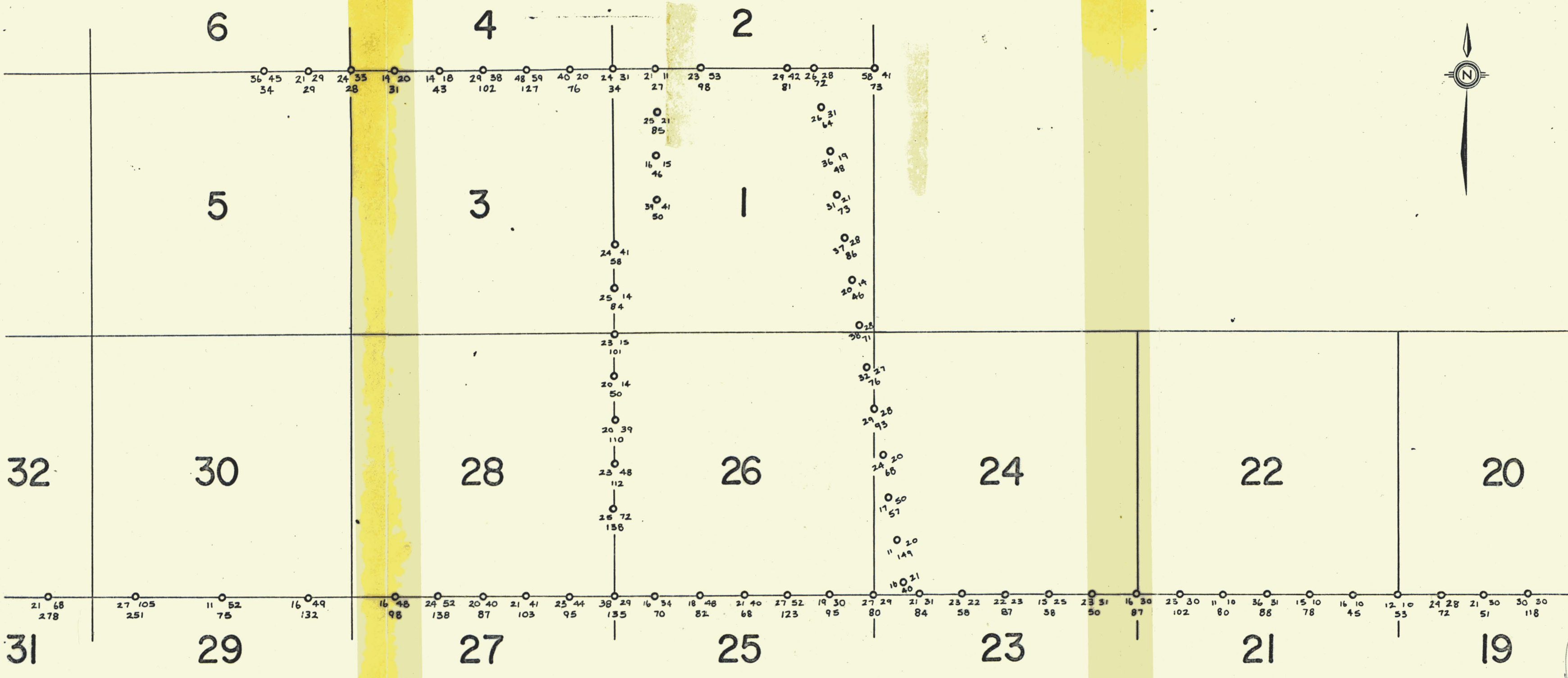
20 Orange to brown weathering diorite and gabbro; altered equivalents

CAMBRIAN, ORDOVICIAN, AND SILURIAN

8 Grey and buff weathering dolomite and limestone, mostly medium to thick bedded; minor platy black argillaceous limestone and dolomite (may include some 10 and 11); 8a, grey to dark grey weathering, dark volcanic rocks, many partly serpentinized, brown weathering grey-green limy tuff and argillite, and thin-bedded brown limestone

GEOLOGICAL MAP
HART RIVER AREA
 Showing Location
 of
REINDEER PROPERTY
 From LARSEN CREEK Map Sheet 14-196
 Scale: 1" = 4 miles





AGILIS EXPLORATION SERVICES LTD.	
REINDEER EXPLORATIONS LTD. (N.P.L.)	
TRADE GROUP, Y.T.	
SOIL SAMPLING PLAN	
DRAWN BY: J.I.W.	SCALE: 1" = 500'
CHECKED BY: R.P.	DATE: April, 1969