2124

GEOLOGICAL and GEOCHEMICAL REPORT

on the

SAM GROUP of MINERAL CLAIMS

GOOSLY LAKE

OMINECA MINING DIVISION

54° - 126° SE

by

A.L'Orsa and R.H. Seraphim, Ph.D. P.Eng

for

MAVERICK MOUNTAIN RESOURCES LTD.

of

534 - 789 West Pender Street,

VANCOUVER 1, B.C.

Covering work done July 17 to October 6, 1969.

December 8, 1969.

TABLE OF CONTENTS

MAPS

SAM GROUP

GOOSLY LAKE AREA

OMINECA M.D.

SUMMARY and CONCLUSIONS

The Sam group of claims is located near Goosly Lake, thirty miles by road southeast of Houston, B.C. The claim group is surrounded by claims staked by Kennco Explorations (Canada) Ltd. Kennco is known to have found a mineral deposit containing chalcopyrite, tetrahedrite, and sphalerite, with silver values, within a few thousand feet to the north of the Sam claims.

The Sam claims are underlain by rhyolitic pyroclastic rocks, intermediate tuffs, minor amygdaloidal andesite, tuffaceous conglomerate(?) and minor shale and argillite, all assigned to the Hazelton Group. These rocks are intruded by several feldspar porphyry and rhyolitic dykes and sills(?), some of which may be related to the overlying Ootsa Lake Group exposed along Foxy Creek three miles to the north. In addition, two small diorite outcrops were found in the northeastern claims.

The volcanic and sedimentary rocks generally strike northeast and dip steeply to the west, suggesting overturning of the syncline shown on Geological Compilation Map 69-1.

Small amounts of chalcopyrite were found in rhyolitic rocks and minor pyrite is present in all rock types but particularly in the rhyolitic rocks. A piece of rhyolite float, reportedly found near the western part of the claims, is mineralized with both pyrite and sphalerite.

A geochemical survey, with samples taken at 200 ft intervals on lines 400 feet apart, was completed over the claim group. A total of 420 samples were assayed for copper using hot HCl extraction, and 266 of these samples were also assayed for silver, using KCN extraction. A strong anomaly was located, with 24 contiguous readings ranging from 82 to 1430 ppm copper. The area which is anomalous is approximately 2500 feet by 1200 feet, on claims Sam 1,2,3,4, and 5. This anomaly, and several smaller ones, are elongated approximately parallel to the inferred bedding of the underlying volcanic rocks.

INTRODUCTION

This report describes work completed between July 17 and October 6, 1969 by A. L'Orsa, and on August 9, August 10, and October 6 by R.H. Seraphim. L'Orsa mapped

the claim group, using a series of cut grid lines for control. The resultant map is found in the pocket attached to this report. Seraphim inspected some of the exposures within the claim group in the course of mapping a considerably larger area, and later re-examined some of the key outcrops in company with A. L'Orsa. The object of this work was to determine if the rock types and structure are similar to those known to host the mineralization on the neighboring ground.

LOCATION and ACCESS

The Sam group comprises 19 recorded mineral claims situated at 3300-5000 ft elevation, 22 miles southeast of Houston, B.C.

The group is easily accessible via approximately 32 miles of good gravel logging road from Houston.

REGIONAL GEOLOGY

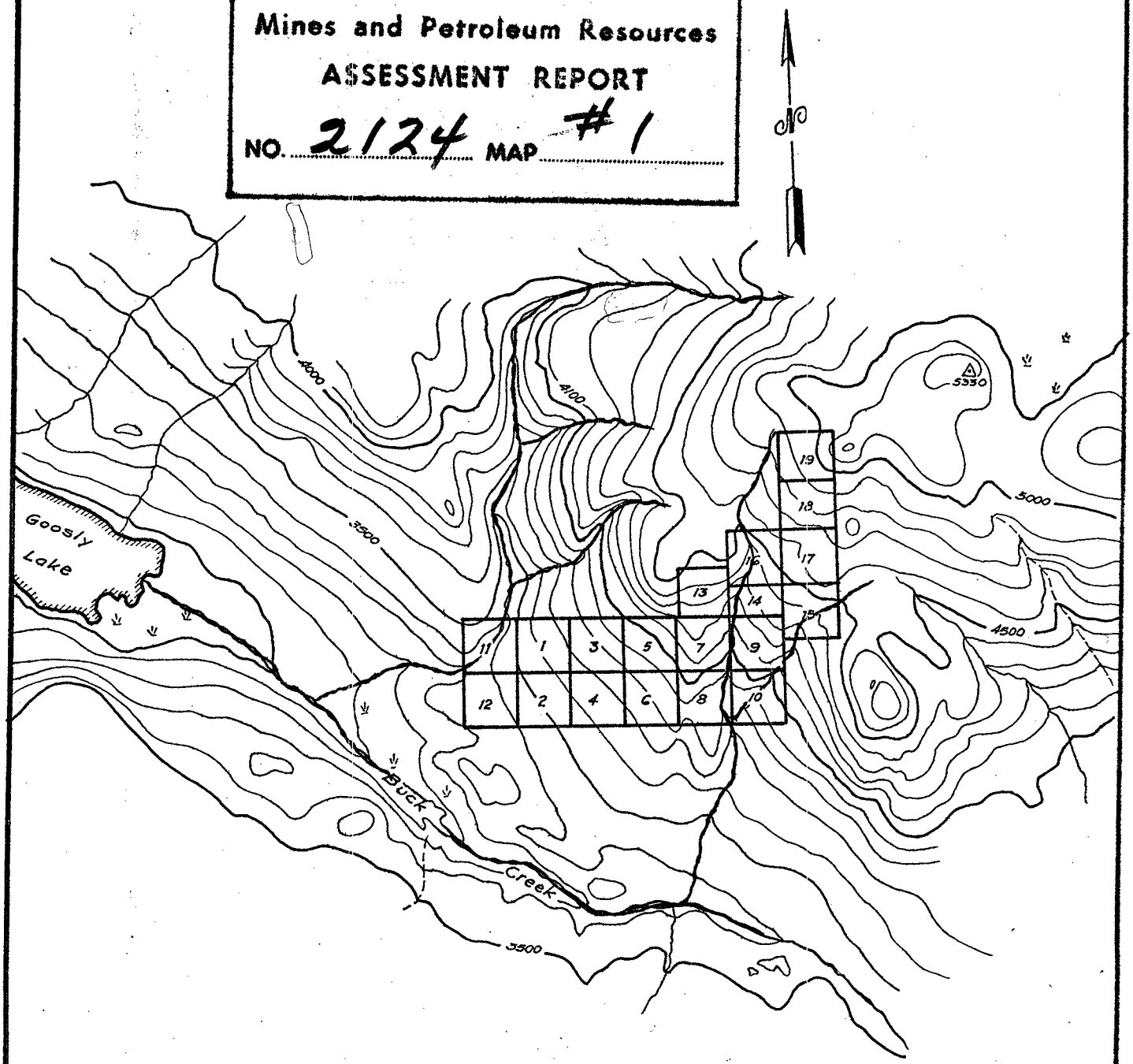
The B.C. Department of Mines has compiled map 69-1 from work by the department and the Geological Survey of Canada in the area. Their map shows a belt of Hazelton sediments and volcanics with porphyry intrusives trending north to northeast through both the Kennco claims and the Sam claims. These Hazelton rocks form a 'window'

artment of

Mines and Petroleum Resources

ASSESSMENT REPORT

NO. 2124 MAP #1



MAVERICK MOUNTAIN RESOURCES LTD.

SAM GROUP

LOCATION MAP

SCALE : 1" = 50.000'

Work by : A. L'Orsa Drawn by : C.D. November 1969

in widespread Tertiary volcanics. Seraphim examined many outcrops in the area, confirmed the work of the department, and also discovered that at least two types of intrusive are present. A granitic rock, in places mineralized with pyrite and chalcopyrite, is exposed near and north of the westmost Sam claims. A more basic intrusive, diorite to gabbro, is exposed in and north of the north-east most Sam claims. The Hazelton rocks between these two intrusives are locally shattered, and host copper-zinc-silver mineralization in the area.

LOCAL GEOLOGY

L'Orsa's work has shown that although many outcrops exist on the Sam claim group, these outcrops are generally very small. They indicate that the claims cover northeast-striking volcanic and sedimentary rocks of the Hazelton Group which are cut by a variety of hypabyssal intrusions. Dips, rarely observed, tend to be steep and to the west. Outcrops are generally very scattered.

Small amounts of pyrite and chalcopyrite were found in rhyolitic rocks. Pyrite also occurs in the sedimentary rocks and, less commonly, in intrusive rocks.

Volcanic Rocks

Pyroclastic rhyolites are the most abundant rock type within the claims area. The rhyolites include very fine-grained tuffs generally pale grey to reddish-grey in colour, coarse rhyolite tuffs and rhyolite lapilli tuffs. In some of the lapilli tuffs, rhyolite fragments 30 mm in diameter are common. The coarser tuffs carry rounded as well as angular fragments and at present it is uncertain whether some of them are not rather tuffaceous conglomerates.

Tuffs of intermediate composition are also represented, ranging in colour from pale green-grey to dark red. A few outcrops of green andesite with calcite amygdule fillings occur in the eastern claims.

Sedimentary Rocks

Sediments are found along a creek on claims Sam 8 and 10 and in a creek bank on Sam 15. These rocks are black shale and argillite with minor chert and a few interbedded tuffs. Although exposures are poor, it appears that the thickness of the argillaceous rocks may exceed 100 ft. Some of the argillite on Sam 15 is fossiliferous and contains numerous small (± 1 cm) pelecypods.

Tuffaceous conglomerates (?) and tuffaceous sandstone (?) are exposed on claim Sam 16. These rocks contain a mixture of sub-rounded to rounded pebbles and grains as well as angular fragments. Most if not all of the clasts and fragments are rhyolitic. Similar appearing outcrops have also been found in the central claims, but with a higher proportion of angular fragments. Thus the latter rocks have been tentatively grouped with the lapilli tuffs.

Intrusive Rocks

Several types of dykes and sills (?) occur in outcrop, particularly in the eastern claims. The most common is a distinctive feldspar porpjyry with long ($\pm$ 1 cm) plagioclase phenocrysts set in a fine-grained grey to black-grey matrix with accessory magnetite. Dark masses of chlorite replacing hornblende are present in some outcrops. This rock is tentatively labelled P1 on the accompanying map.

A second type of feldspar porphyry (P2) appears spatially related to the above but carries smaller plagioclase phenocrysts in a grey to grey-green matrix with minor quartz and biotite. Both these dykes appear to strike north.

A rhyolitic dyke was observed cutting across argillite bedding on claim Sam 10. Several outcrops of buff rhyolite (?) with cream-coloured feldspar phenocrysts and, locally, quartz phenocrysts may represent dykes.

Outcrops of rhyolite, andesite porphyry and basalt porphyry assigned to the Ootsa Lake Group were noted on Foxy Creek, three miles north, and it is possible that some of the dykes are related to this stage of Tertiary volcanism.

An equigranular and very weakly magnetic diorite was found in two small outcrops in the northeastern claims.

Mineralization

Small amounts of chalcopyrite were found in the rhyolitic rocks and minor pyrite is present in all rock types, but is most abundant in the rhyolitic rocks. A piece of rhyolite float, reportedly found near the western part of the claims (i.e. near the geochemical anomaly) is mineralized with sphalerite as well as pyrite.

GEOCHEMICAL SURVEY

Method

Grid lines totalling 20.5 line miles were cut by Audet Bros., contract line cutters. Marked pickets were placed at intervals of 100 feet along lines 400 feet apart. Soil samples were collected at 200 ft intervals along most of the lines. Active logging operations prevented completion of the grid on the Sam 5 claim.

The samples were collected and air dried in Kraft envelopes and then sieved to minus 80 mesh using a nylon screen. Analyses were made by Barringer Research Ltd., 1198 West Pender St., Vancouver, B.C., for hot HCl (0.5 N) leachable copper and KCN soluble silver.

A total of 266 samples were tested for copper and silver. A total of 154 samples were tested for copper only.

The 'B' soil horizon was sampled wherever possible. Soil profile tests indicated a good response from that horizon. Swampy areas were not sampled. Silt samples were taken from active stream sediments in the eastern claim area.

The entire claim area is covered by a layer of glacial till and colluvium of variable depth (up to 50 ft.).

Interpretation

Frequency distribution histograms constructed for copper and for silver indicated the following concentration ranges:

Concentration Range	ppm Cu
Background	0-70
Threshold	70-80
Anomalous	80+
	ppm Ag
Background	0.1-1.1
Threshold	1.1-1.4
Anomalous	1.4+

A correlation diagram showed a general but not complete correlation between anomalous Cu and anomalous Ag.

Soil and silt samples are plotted on the accompanying maps. A strong copper anomaly, reinforced in part by silver, is shown on claims 1,2,3,4, and 5 with smaller and weaker anomalies elsewhere.

The main anomaly is elongated in a downslope direction. The slope is generally gentle but variable and there is a small hill within the topographically lower part of the anomaly on claim Sam 3, indicating that the long axis of the anomaly is not dictated by downslope migration alone. It should be noted that the anomaly is also elongated approximately parallel to the projected strike of the volcanic rocks. The abrupt closure of the anomaly to the southwest may be a function of overburden rather than a termination of underlying anomalous conditions.

A. L'Orsa

R.H. Seraphim Ph.D. P.Eng.

December 8, 1969.

REFERENCE

Carter, N.C., & Kirkham, R.V., 1969, Geological Compilation Map of the Smithers, Hazelton and Terrace Areas: B.C. Department Mines & Petroleum Res., Map 69-1.

STATEMENT OF COSTS

(a) Line-cutting - 20.5 miles @$125.00/mile, contract		$2,562.50
Personnel: Audet Bros., contractors, 9-27 Aug.		
(b) Geological Mapping -		
Personnel: A.L'Orsa, 18-19 July & 27-30 Aug. 6 days @$100/day		600.00
R.H. Seraphim, 9-10 Aug. & 6 Oct. 3 days @$100/day		300.00
H. Cote, 18 July, 1 day @$35/day		35.00
P. Higgins, 19 July, 1 day @$25/day		25.00
(c) Geochemical Work - 420 samples		
Personnel: H. Cote, 19 July, 27-30 Aug. 5 days @$35/day		170.00
P. Higgins, 18 July, 1 day @$25/day		25.00
Samples: Preparation; (drying & sieving)		63.60
Analysis; 266 @$2.50/sample		665.00
154 @$1.00/sample		154.00
Determinations by Barringer Research		
(d) Living Expenses -		
Meals and accomodation re above		103.90
(e) Vehicle -		
Transportation on and to and from claims		141.94
Total		$4,845.94

A. L'O

R.H. Seraphim

STATEMENT OF QUALIFICATIONS

I, Anthony L'Orsa, of Smithers, B.C., hereby certify that:

1. I am a graduate of Tulane University, New Orleans, La., U.S.A. with the degrees of B.Sc. (1961) and M.Sc. (1964) in geology.

2. I am a fellow of the Geological Association of Canada.

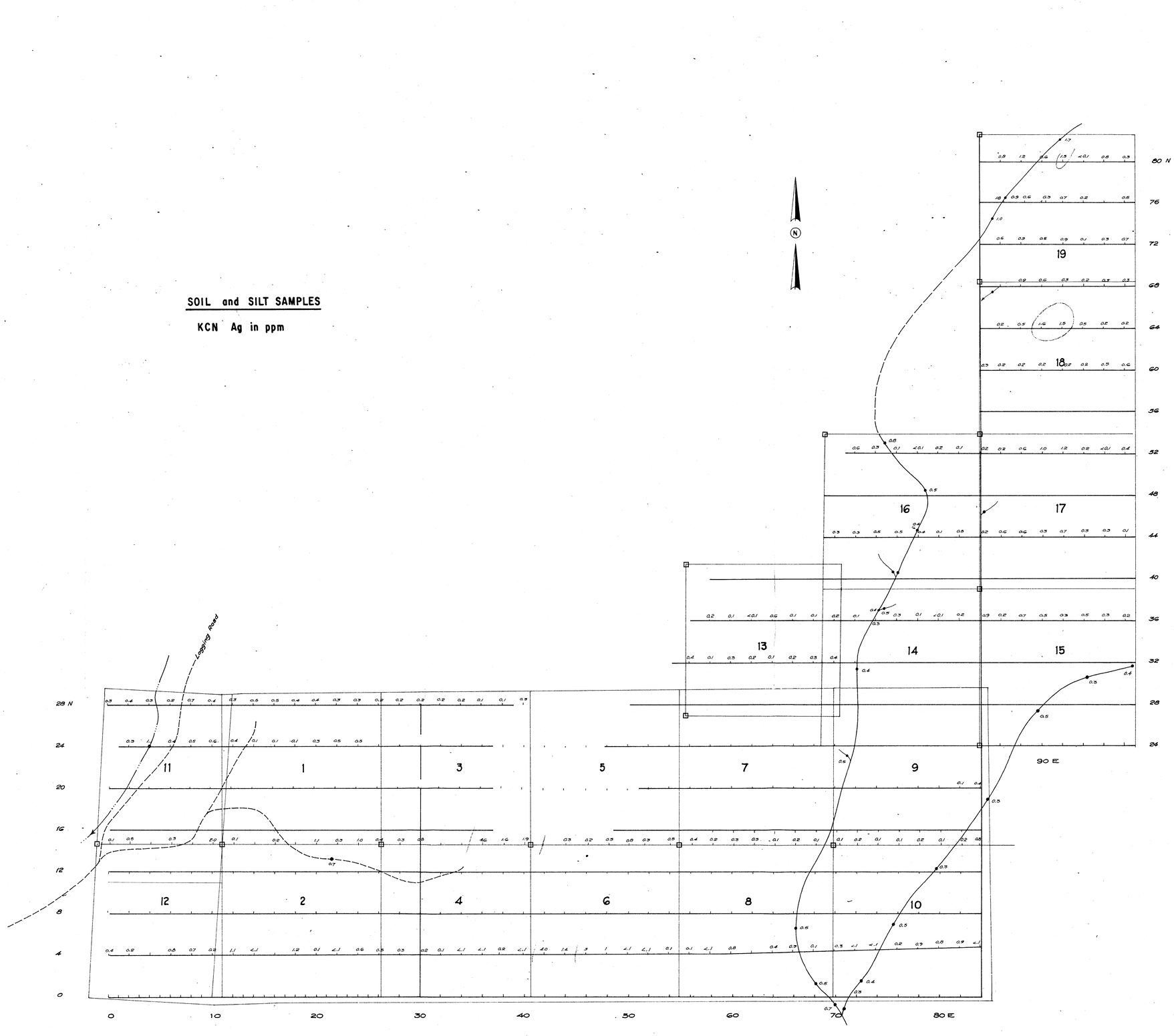
3. I have practiced my profession since 1962 with Belle Tahsis Mines Ltd., Phelps Dodge Corp. of Canada Ltd., and Texas Gulf Sulphur Co. Inc. as well as independently.

A. L'Orsa

A. L'Orsa, B.Sc. M.Sc.

SOIL and SILT SAMPLES

KCN Ag in ppm



2124

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2124 MAP # 3

MAVERICK MOUNTAIN RESOURCES LTD.

SAM CLAIMS

GEOCHEMISTRY: Ag

GOOSLY LAKE BRITISH COLUMBIA

SCALE: 1" = 400'

Work by: A. L'ORSA	Drawn by: C.D	10 November 1969

A.L'O

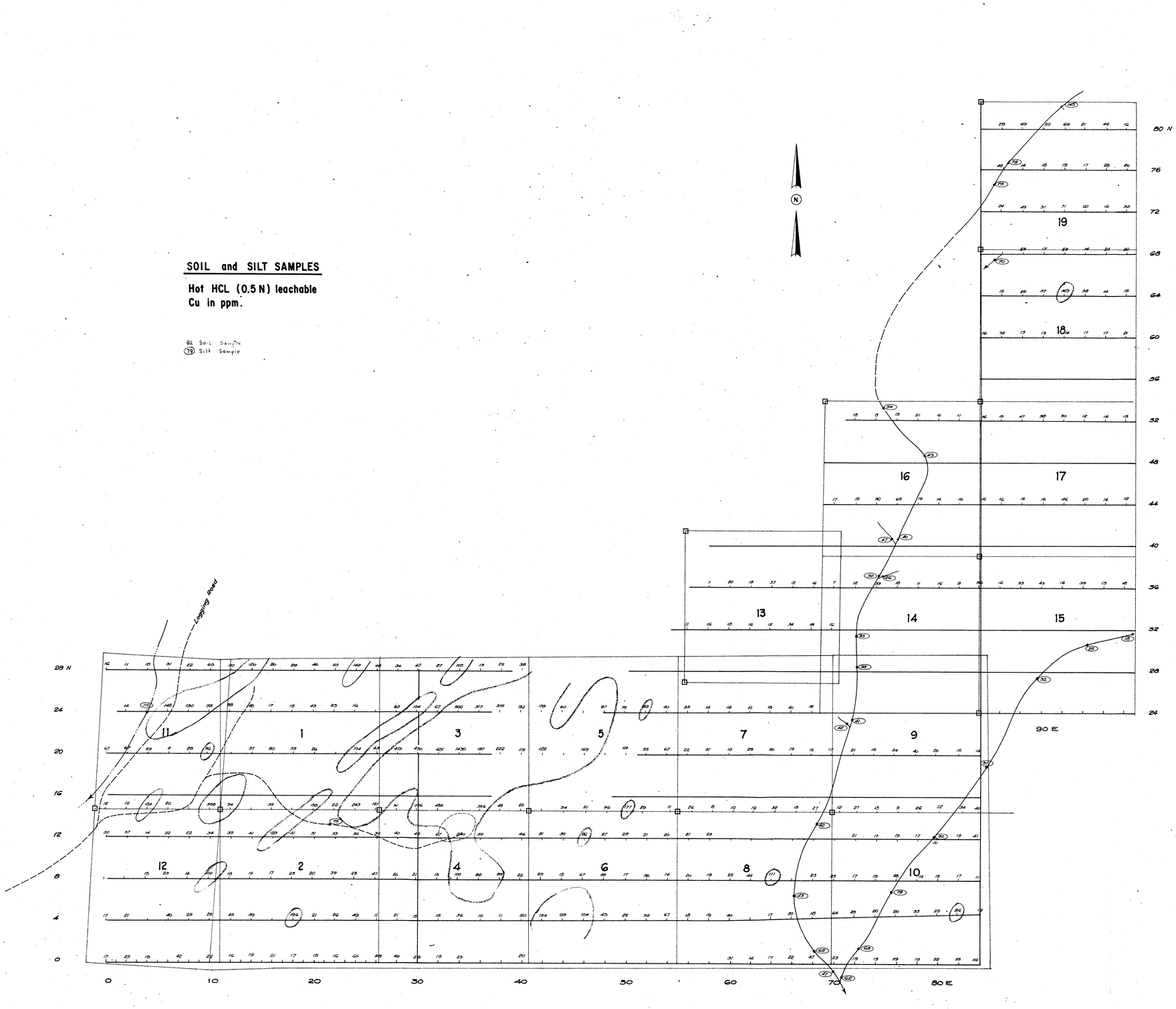
To accompany geochemical report;
by A. L'Orsa SAM GROUP, Goosly Lake,
Omineca Mining Division 10 November 1969

Approved
L.H. Klepacki

SOIL and SILT SAMPLES

Hot HCL (0.5 N) leachable Cu in ppm.

82 Soil Sample
(79) Silt Sample



2124

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2124 MAP # 4

MAVERICK MOUNTAIN RESOURCES LTD.

SAM CLAIMS

GEOCHEMISTRY: Cu

GOOSLY LAKE — BRITISH COLUMBIA

SCALE : 1" = 400'

Work by : A. L'ORSA	Drawn by : C.D	10 November 1969

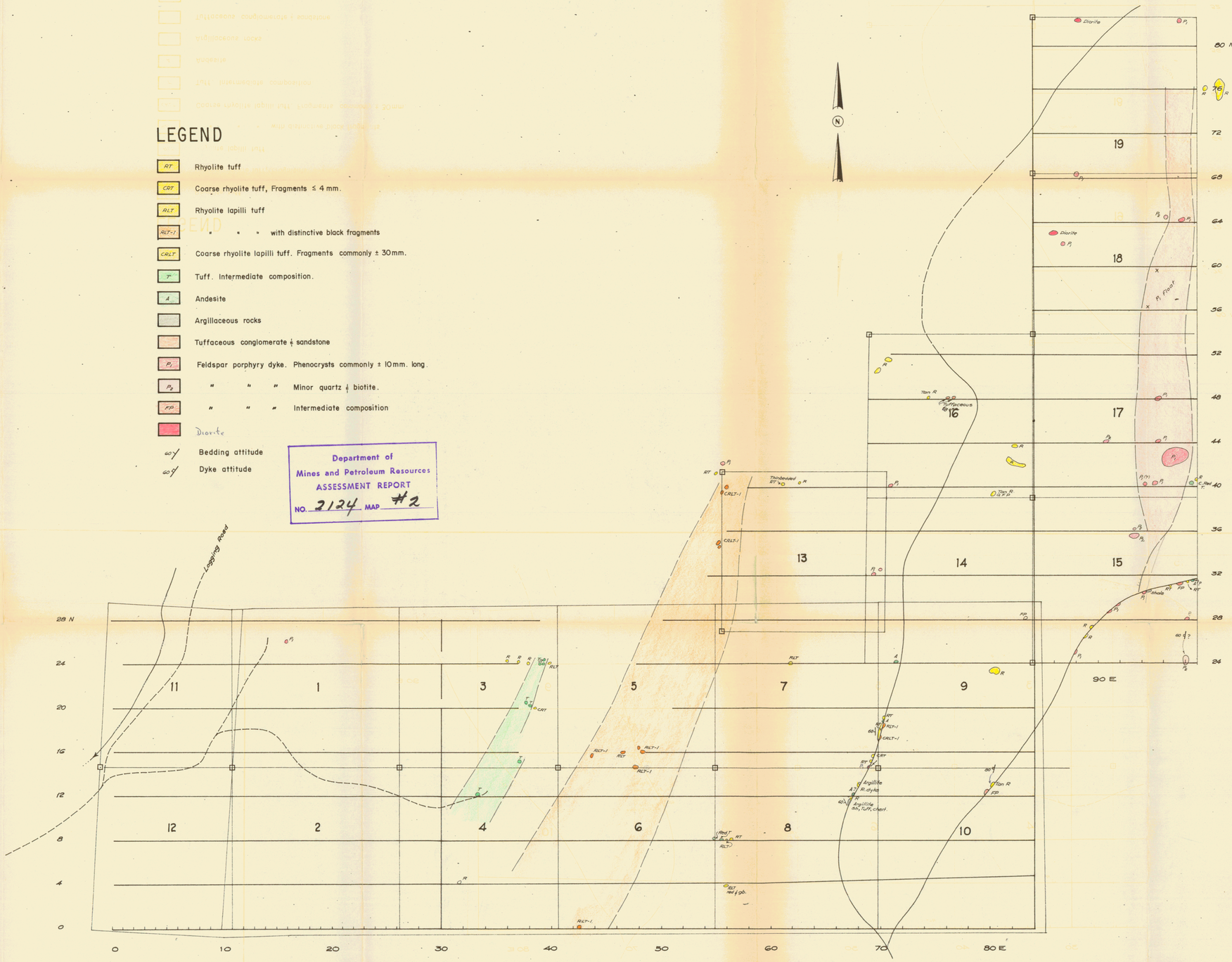
A.L'O

To accompany geochemical report ;
by A. L'Orsa SAM GROUP, Goosly Lake,
Omineca Mining Division. 10 November 1969

Approved
D.M. Daughtry

LEGEND

- RT — Rhyolite tuff
- CRT — Coarse rhyolite tuff, Fragments ≤ 4 mm.
- RLT — Rhyolite lapilli tuff
- RLT-1 — " " " with distinctive black fragments
- CRLT — Coarse rhyolite lapilli tuff. Fragments commonly ± 30mm.
- T — Tuff. Intermediate composition.
- A — Andesite
- Argillaceous rocks
- Tuffaceous conglomerate ∔ sandstone
- P_1 — Feldspar porphyry dyke. Phenocrysts commonly ± 10mm. long.
- P_2 — " " " Minor quartz ∔ biotite.
- FP — " " " Intermediate composition
- Diorite
- 60/ — Bedding attitude
- 60/ — Dyke attitude



2124

MAVERICK MOUNTAIN RESOURCES LTD.

SAM CLAIMS

PRELIMINARY GEOLOGY

GOOSLY LAKE — BRITISH COLUMBIA

SCALE : 1" = 400'

Work by : A. L'ORSA	Drawn by : C.D	10 November 1969

To accompany geochemical report ;
by A. L'Orsa SAM GROUP, Goosly Lake,
Omineca Mining Division 10 November 1969

A. L'O

Approved