

GEOCHEMICAL SOIL SAMPLING SURVEY

NAR MINERAL CLAIM GROUP

SHELDON LAKE AREA

Watson Lake Mining Division

Yukon Territory

Long. 62 deg. 1' West

Lat. 129 deg. 52' North

Claim Sheet 105 I 4

by

John S. Brock

Atlas Explorations Limited

June 22 - July 23, 1967

GEOCHEMICAL SOIL SAMPLING SURVEY

NAR MINERAL CLAIMS

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LIST OF CLAIMS

Claim No.

Grant Nos.

Date Recorded

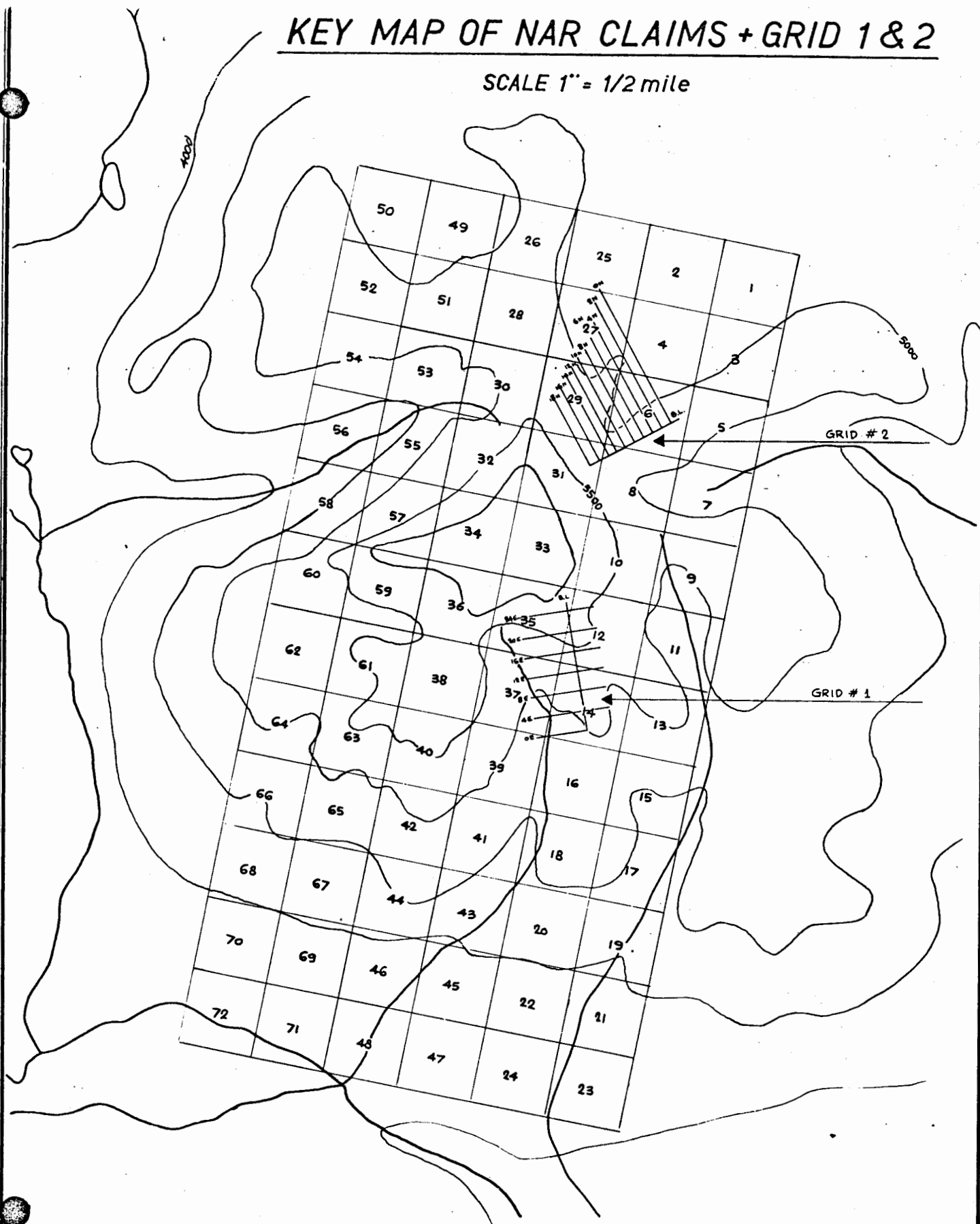
NAR 1 - 72

Y 16294 - Y 16365

September 21, 1966

# KEY MAP OF NAR CLAIMS + GRID 1 & 2

SCALE 1" = 1/2 mile



**ATLAS EXPLORATIONS LIMITED**

ROSS RIVER (Y.T.)

DRAWN BY: PY

# ATLAS EXPLORATIONS LIMITED

(N. P. L.)

330 MARINE BUILDING  
355 BURRARD STREET  
VANCOUVER 1, B.C.

## INTRODUCTION

Through a prospecting program conducted by Atlas Explorations during the late summer and fall of 1966, numerous lead, zinc and copper showings were discovered and staked. One of these claim groups, the Nar Mineral Claims, is located some 12-1/2 miles east-southeast of the Pelly Lakes Trading Post and covers all known mineral occurrences in that area. Follow-up prospecting revealed sulphides of high silver assay as well as encouraging geochemical soil sample results over areas related to known mineral occurrences.

From June 22 to July 23, 1967, a crew consisting of linecutters, prospectors, geologists and technical field operators, conducted geological, geophysical and geochemical surveys over the Nar Mineral Claims in order to further determine its economic potential.

## LOCATION AND ACCESS

The NAR Mineral Claims are located approximately 12-1/2 miles east-southeast of the Pelly Lake Trading Post on Pelly Lakes. The location of the Claim Group may be found at 129 deg. 52' North Latitude and 62 deg. 1' West Longitude on mineral claim sheet 105 I 4. The central portion of the NAR Group is

located on the peak of a mountain southeast of Ptarmigan Lake. Elevations rise to 6,000 feet above sea level, treeline is at approximately 4,800 feet.

Access to the property was made by helicopter from the Atlas Exploration field base at Pelly Lakes, however, float-equipped aircraft may land with ease on Ptarmigan Lake. A winter tote road was constructed from Finlayson Lake on the Ross River - Watson Lake Highway to Pelly Lake in order that bulk supplies could be brought within close proximity to the NAR Claims.

### GEOLOGY

Outcrop is abundant in cirque walls on the west, north and east sides of NAR Mountain where a fairly reliable geologic picture has been developed. The south slope of the mountain is covered with a thick blanket of talus at a repose angle of about 30 degrees.

Seven stratigraphic units have been distinguished. The older five units are complex, consisting of varying thicknesses of quartzite, chert, rhyolite and dolomite; the two younger units consist of limestone with local skarn and fresh dolomite. The sediments are cut by a small granite body west of the mountain peak. Structure is simple, consisting of a moderately tight, gently plunging, east-west trending anticline. Along the north, limb dips are steep and locally recumbent, gentle dips prevail over the crest, the south limb is not exposed.

Two varieties of mineralization have been noted, - lead, zinc, copper replacement in diopside-pyrrhotite skarn and lead-zinc replacement and fillings in quartz veins and quartzite breccia. Mineralization appears to be generally related to the axis of the anticline.

A narrow (up to 2 feet wide) band of diopside-pyrrhotite skarn interbedded in a steeply dipping, east-west striking succession of chert, limestone, dolomite and skarn, contains massive copper, lead, and zinc mineralization. Float occurs westerly from the area of exposure over a distance of about 1,000 feet. Marginal to the band is a 15 foot by 200 foot lense of low grade chalcapyrite-bearing crystalline limestone..

## SURVEY TECHNIQUES

### Linecutting

The soil sampling survey was conducted over the same grids as used for the geophysical surveys, no extra linecutting was required other than that done for the magnetic and electromagnetic work.<sup>1</sup>

### Soil Sampling

The soil sampling survey was carried out in conjunction with the electromagnetic and magnetic survey. One soil sampler was employed for the entire survey.

The samples were obtained by use of a prospector's grub hoe which was found adequate as a tool for cutting through heavy layers of organic material overlying the soil. Samples were taken at 100 foot stations over the same grid area as geophysical data was obtained from.

Due to the inconsistency of specific soil horizons as well as variable depths to favorable horizons, samples were taken from an average depth of approximately one and one-half feet. Soils of the upper B horizon were usually encountered except in areas of much glacial till and overburden. Soils of large organic content were not sampled, in areas of immature soils the C horizon was sampled. Approximately 100 grams of soil from each sample site were placed in Kraft bags which were then periodically shipped to the soil testing laboratory at Ross River.

1. See Report "Magnetic & Electromagnetic Geophysical Surveys, DUB and ZOT Mineral Claim Groups."

## Method of Analysis

All samples were analysed at a complete testing laboratory at Ross River. When the samples were received, each was dried while in its Kraft bag, then screened to 80 mesh, weighed out to 0.5 grams and digested in hot aqua regia. Samples were then diluted, clarified for 20 hours and then tested for copper, lead and zinc content on an atomic absorption spectrophotometer. The 'AA' unit used was a Perkins Elmer Model 290 and accuracy of the instrument ideally is 1% of the amount of metal present. Individual cathode lamps were used for each element determination, a direct readout is given of the element being tested and two determinations per minute can be made with ease.

## Treatment of Data

All results of geochemical tests were returned to the field as soon as possible. Results in parts per million (ppm) were plotted on field data sheets kept by the field soil sampler. The field data sheets were kept as a record of each sample taken, noting particulars concerning drainage, topography, physiography, soil type and depth of sample. This information was compiled for use in further detailed geochemical studies.

Separate maps were prepared<sup>1</sup> using a scale of 1":200', as was used for geophysical data, showing values obtained for copper, lead and zinc, profiles of values and contoured values.

1. See Appendix: Map File

Contour intervals varied according to results obtained in parts per million. Maps for each element were compiled separately in order to aid in comparative study of geophysical, geologic and geochemical results. A development map for each area has also been prepared showing general compilation of geochemical-geophysical data.

#### GEOCHEMICAL OBSERVATIONS

A distinct northwest trending coincident lead and zinc geochemical anomaly occurs upslope from the 'French' showing for a distance of over 400 feet and with a gradient of approximately 500 ppm. lead per 100 feet. Peak values for lead and zinc are 6,000 and 5,000 parts per million respectively.

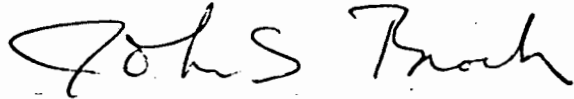
The 'Risby' and 'Waugh' float locations lie on opposite sides of a more broad and less well-defined coincident lead and zinc anomaly. This anomaly is over 1,000 feet long and strikes in a northwesterly direction. Its width varies from 200 to 600 feet between 1,000 ppm. lead contours. Peak values are over 4,000 ppm. lead and 5,000 ppm. zinc. The anomaly is open at its northwest end due to further sampling being prevented by a steep cliff, however, examination of outcrop in the cliff face failed to locate further mineralization.

#### CONCLUSIONS

The two anomalies described are elongate in a downslope direction to the southeast and would appear to reflect a downslope movement of mineralized material. It is not possible therefore to accurately locate the source of lead and zinc mineralization and further, to predict its dimensions. It is

notable that parts of the anomalous trends are generally sub-parallel to strike of rock units in nearby exposures.

Respectfully submitted,

A handwritten signature in cursive script that reads "John S. Brock". The signature is written in dark ink and is positioned centrally below the typed name.

John S. Brock,  
Assistant Exploration Manager,  
Atlas Explorations Limited.

PERSONNEL

SHELDON LAKE GEOLOGICAL, GEOPHYSICAL,  
GEOCHEMICAL CREW

SURVEYS: NAR Mineral Claim

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BIBLIOGRAPHY

SUMMARY REPORT SHELDON PROJECT

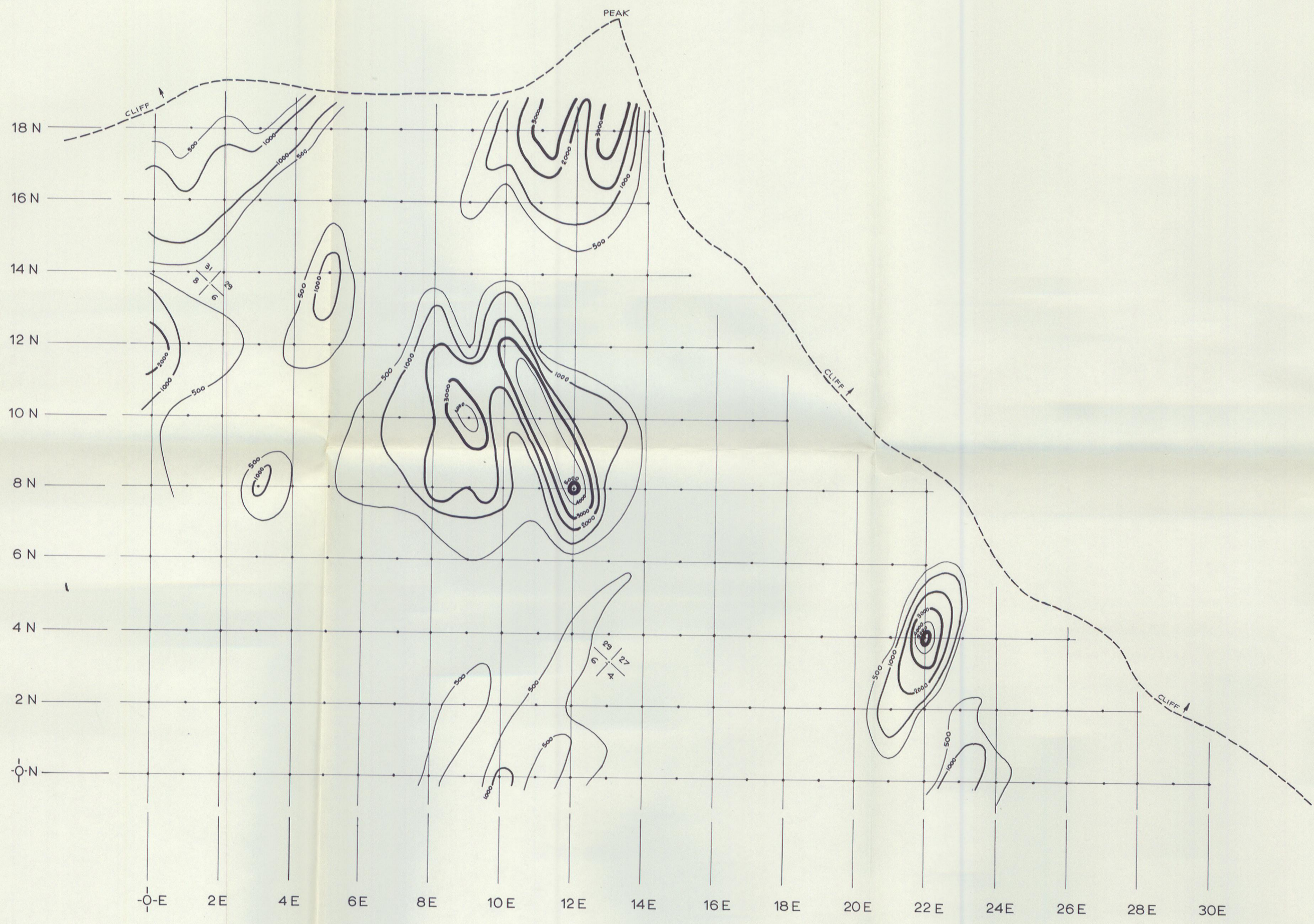
by

Clyde L. Smith

Atlas Explorations Limited

January, 1967

(A private report on Atlas Explorations)

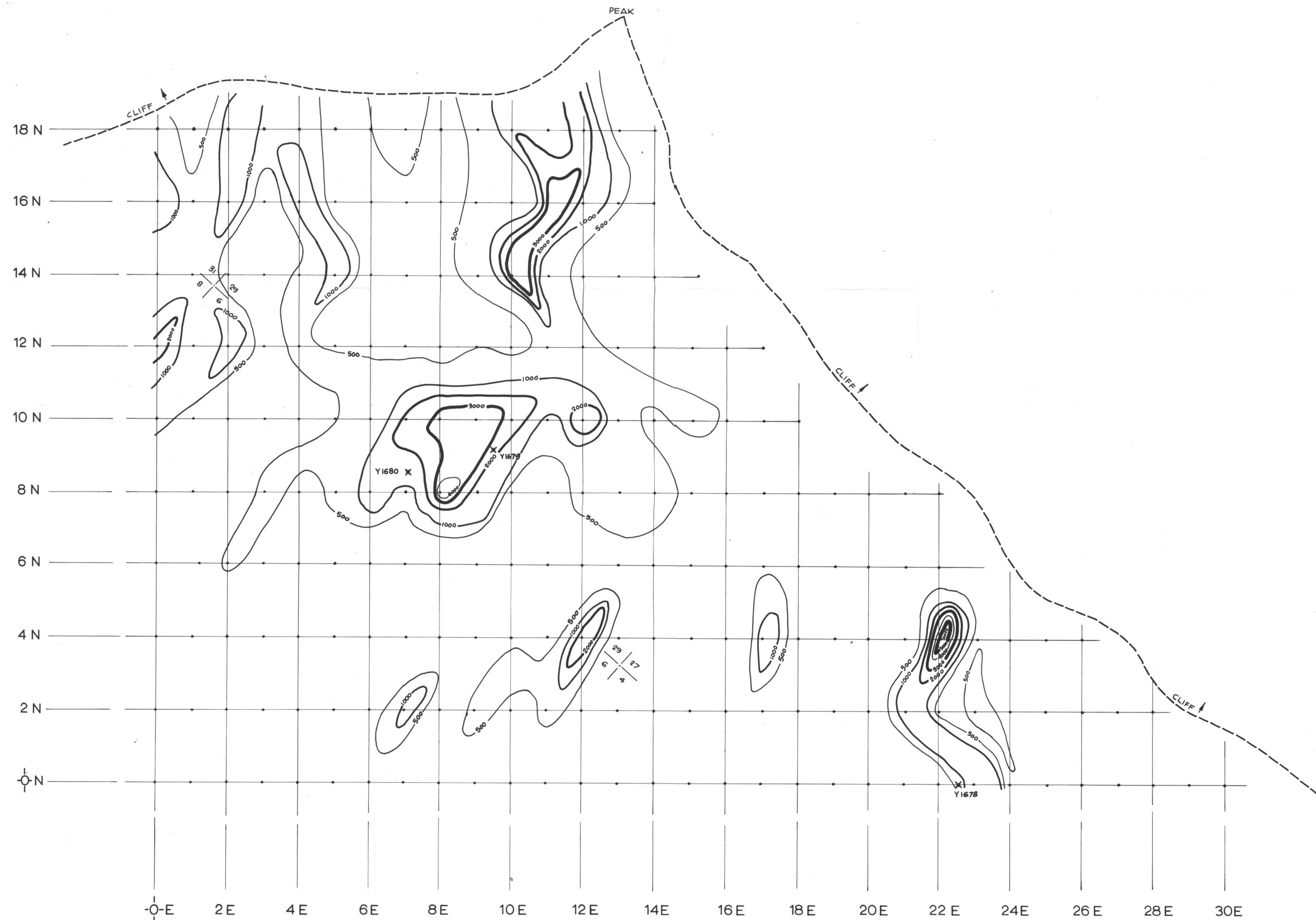


CONTOUR INTERVAL = 1000 ppm.

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**NAR MINERAL CLAIMS**  
 GEOCHEMICAL SOIL SAMPLING SURVEY  
**ZINC CONTOUR MAP**

SOIL SAMPLER: CH. SCOTT  
 DRAWN BY: R.J.F. VLASVELD  
 DATE: AUGUST '67

200 0 200 400  
 scale in feet



ASSAYS:

	AU	AG	CU	PB	ZN
# 1678	.02	48.9	.11	9.5	3.8
# 1679	.02	53.8	.01	14.0	1.2
# 1680	TR.	4.56	.15	9.3	13.9

CONTOUR INTERVAL = 1000 ppm.

019797

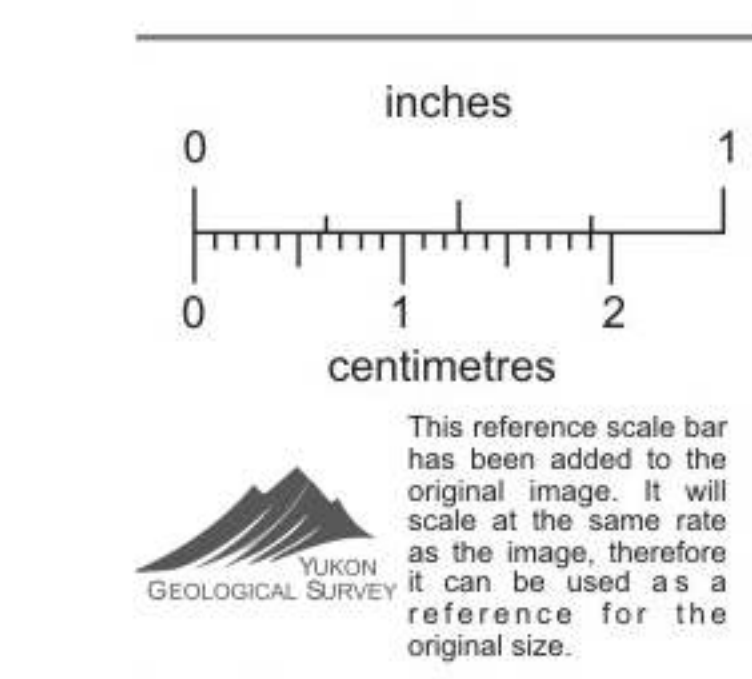
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 SHELDON REGION  
 NAR MINERAL CLAIMS  
 GEOCHEMICAL SOIL SAMPLING SURVEY  
 LEAD CONTOUR MAP

SOIL SAMPLER: CH. SCOTT

DRAWN BY: P.J.F. VLASVELD

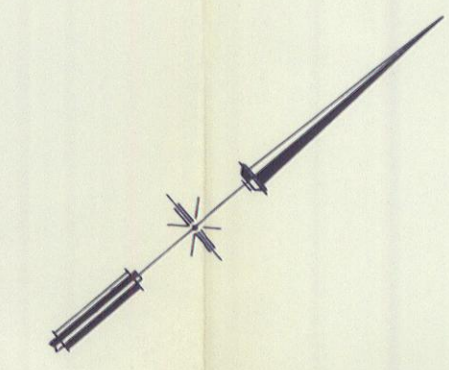
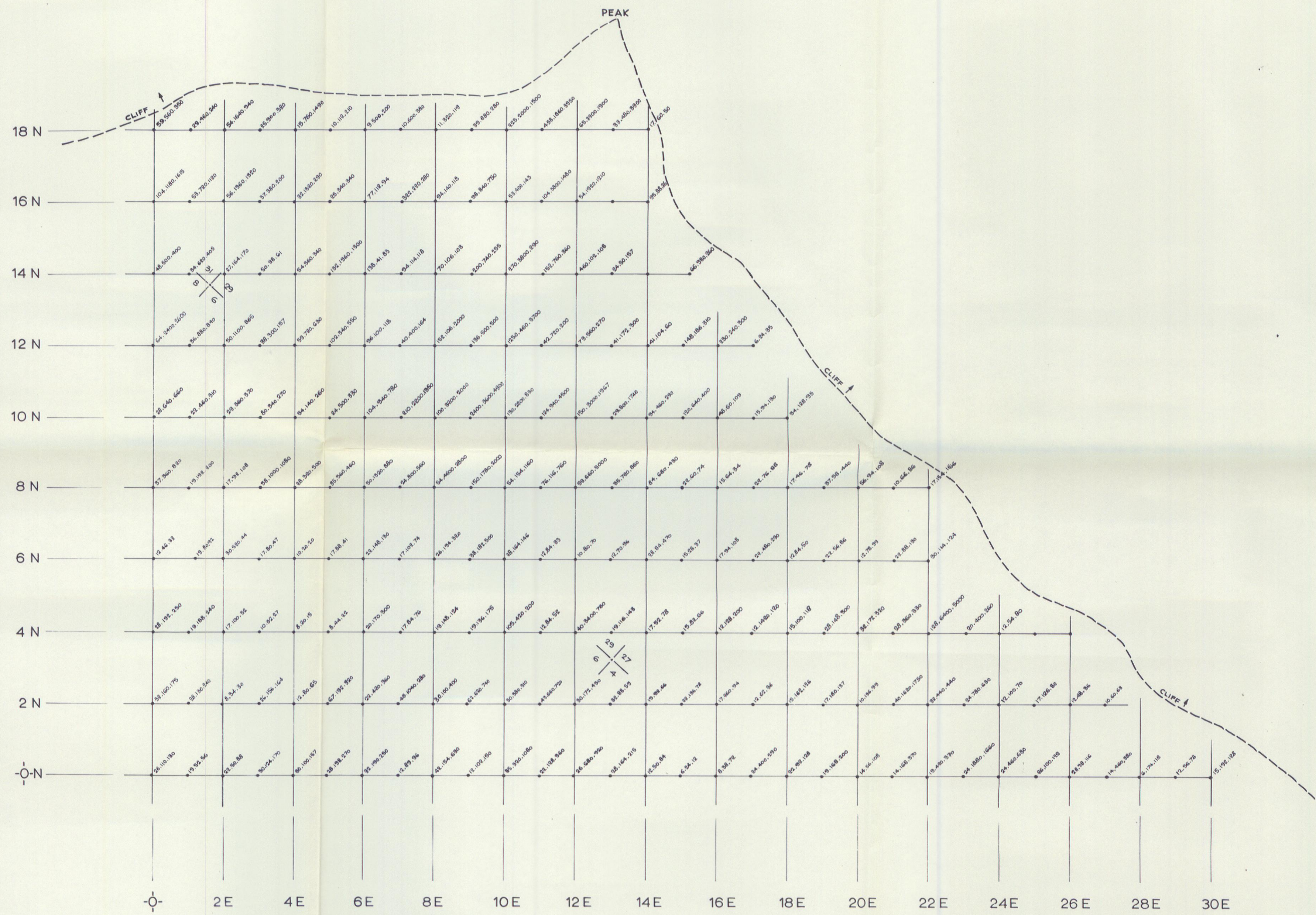


DATE: AUGUST '67



This reference scale bar has been added to the original map. It will show the same scale as the map, provided the map is printed at the original size.

27/4



**ATLAS EXPLORATIONS LIMITED**  
 ROSS RIVER (Y.T.)  
 SHELDON REGION  
**NAR MINERAL CLAIMS**  
 GEOCHEMICAL SOIL SAMPLING SURVEY, COPPER, LEAD & ZINC  
 RESULTS, BY ATOMIC ABSORPTION  
 SPECTROPHOTOMETER ANALYSIS

SOIL SAMPLER : CH. SCOTT DRAWN BY : R.J.F. VLASVELD  
DATE : JULY 1967

200 0 200 400  
 SCALE IN FEET