TELEPHONE: 681-7493

MacDONALD CONSULTANTS LTD.

SUITE 11 • 425 HOWE STREET, VANCOUVER 1, B.C.

REPORT ON THE

AM 1 - 20

GROUP OF MINERAL CLAIMS

OF

ALTAIR MINING CORPORATION LTD. (N. P. L.)

in the

ANVIL DISTRICT

YUKON TERRITORY

August 25, 1967.

TABLE OF CONTENTS

Introduction

This report is an evaluation of the mineral claims AM #1 - 20 inclusive located in the Whitehorse Mining District, 10 miles northeast of the Anvil Mine Camp, Yukon Territory.

The report is based on the study of maps and information published by the Geological Survey of Canada, the study of airphotographs and literature published on the geology of the Anvil Mining District and last but not least, on the results of exploration work carried out by MacDonald Consultants Ltd. under the field supervision of Mr. C.V. Dyson, geologist.

The writer is familiar with the geology of the Anvil Mining District through his work for other companies in the area, but has not visited the AM #1 - 20 claims to date.

Property

The claim group is located in the Whitehorse Mining District. The claims are recorded at the office of the Mining Recorder in Whitehorse as follows:

Claim Name	Grant Number	Recorded Owner	Recording Date
AM #1 - 8 incl.	Y10929 - Y10936 incl.	(Altair Mining (Corporation	Nov. 4, 1966
AM #9 - 16 incl.	Y10937 - Y10944 incl.	(Ltd. (N. P. L.)	Nov. 4, 1966
AM #17 - 20 incl.	pending	(Application (pending.	Aug. 31, 1967

Location and Access

The claim group is located at a latitude of 62° 26' N and a longitude of 133°12' N in the area which has become known as the Anvil Mining District Yukon Territory.

The distance from the Anvil Camp and the Faro ore deposit is approximately 10 miles in a northeasterly direction.

Access into the mining camp is gained by the Canol Road, which is an all weather gravel road. The Canol Road starts from the Alaska Highway at Johnson's Crossing and leads to Ross River. The total distance by road from Whitehorse to Ross River is 240 miles. Last year part of the road link between Ross River and Carmacks was completed which can be used to reach the government operated ferry, crossing the Pelly River at Blind Creek. From there a road leads into the Anvil Mining Camp and to the Faro deposit which is now being kept open on a year round basis. Therefore road access from Whitehorse and the head of the railway line to tidewater is provided to within approximately 10 miles of the property.

A helicopter was used for transportation when the initial exploration programme was carried out.

HISTORY

Apart from early prospecting for placer gold early in the century and reconnaissance work done by the Geological Survey of Canada in the thirties (J.R. Johnston, G.S.C. Memoir 200, 1936) the area was dormant until the Canol Road, built during World War II, provided better access to the district. No significant mineralization was found in the Ross River district until 1953 when Prospectors Airways found, and in the following two years proved up the Vangorda deposit of 9,400,000 tons of ore grading 3.16% lead, 4.96% zinc, 0.27% copper and 1.76 ounces of silver per ton.

No additional tonnage or better grade ore was found during the following

period. Further exploration seemed not to be feasible due to the low metal prices in the following years.

The above mentioned deposit is now controlled by Kerr Addison Mines Ltd.

Kerr Addison Mines Ltd. caused new interest in the district when it staked claims in the Swim Lake area and carried out a program of geophysical surveys in the fall of 1963.

Dynasty Exploration, formed in early 1964, and Kerr Addison conducted an extensive staking and exploration program during 1964. The results gained by Dynasty during the 1964 exploration season were encouraging enough to provide further financing to Dynasty by Cyprus Mines Corporation of Los Angeles in early 1965. Future joint operations by Dynasty and Cyprus became known as the Anvil project. Anvil Mining Corporation Ltd. was formed in December, 1965.

The combined efforts led to the discovery of the Faro No. 1 and Faro No. 2 ore bodies.

Also Kerr Addison obtained encouraging results in 1965 and discovered "what appears to be a sizeable lead-zinc deposit by drilling a magnetic, EM and gravity anomaly zone west of Swim Lakes." (Dr. A.E. Aho, paper presented to the Second Natural Resources Conference, Whitehorse, Y.T. March 1966).

The year 1967 brought the announcement of Anvil to bring its property into production. The company announcement states: "Drilling to date indicates an excess of 50 million tons in the Faro No. 1 and in two adjacent deposits. The Faro No. 1 ore body averages in excess of 10% combined lead and zinc with somewhat more than one ounce of silver per ton."

Well over 10,000 claims have been staked in the Anvil Mining District to date.

Geology

1) General Geology

The regional geology of the Anvil district has been mapped and published by the Geological Survey of Canada on preliminary maps at a scale of one inch to four miles. (See G.S.C. maps No. 13-1961, sheet 105K Tay River).

The granitic core of the Anvil batholith has intruded a series of banded quartzose granulites, green and purplish banded skarn, quartz-sericite-schist, hornfels and phyliite, chlorite schist and some graphitic schist members, all of Mississipian age (map unit 7).

The regional trend of the formations is NW - SE following the trend of the Tintina Trench.

The intrusion caused an uplift of the above formations which now, after erosion has taken place, flank the sides of the granitic core.

The G.S.C. report states referring to this series: "unit 7 (see above) is several thousand feet thick. Near the granitic rocks the unit locally contains sulfide minerals. Unit 7 grades upward into material that is increasingly volcanic." Map unit 8, --"altered dark green andesitic and basaltic flows and tuffs, commonly schistose," -- flanks the outside of the limbs of the regional anticline formed by unit 7. It is interesting to observe that this unit is represented strongest southwest as well as northeast of the Anvil batholith and unit 7 along the extension of the mineralized belt between the Faro and Vangorda deposits.

Both the Tintina Fault with its parallel subsidiaries and the uplift by the intrusions caused a system of structural features which have a certain influence on the control of the mineral deposits, although only a part of these structures

and their influence have been established to date.

Apart from the higher, granitic regions little outcrop is to be seen in the area which was heavily glaciated at pleistocene time, the slopes of the hills are covered by overburden and the valleys are filled with river gravel and/or assorted glacial material.

2). Economic Geology

Certain horizons of map unit 7 (G.S.C. map 13-1961) domed up to an anticlinal structure have been considered to be the favourable host rock for massive sulfide deposits, but mineralization of all kinds has been found in other formations in the area and those cannot, therefore, be excluded from exploration, especially if the composition and other ore controlling features of the district indicate a certain potential for economic mineral deposits.

The main deposits discovered and explored to date are massive sulphide replacement bodies containing various amounts of pyrite, pyrrhotite, galena, sphalerite and chalcopyrite with minor amounts of silver.

The controlling factors were summarized by Dr. A.E. Aho in a paper presented at the Second Resources Conference in Whitehorse in March, 1966, as follows:

"(1) Favourable horizons usually graphitic, in schist. (no known depth limitations)

(2) Possible NW-faults subsidiary to the main regional Tintina fault zone.

(3) N-S to NNW fault and porphyry dike zones.

(4) Proximity to NE striking fault zones.

(5) General association with granitic porphyry, and perhaps the Anvil batholith (granitic)."

The area is most susceptible to a combination of several exploration methods such as:

Conventional prospecting and geological mapping.

Geochemical surveys (soil sampling and stream silt sampling) on a regional and local basis.

Airborne EM and Mag Surveys.

Ground EM and Mag Surveys.

Gravimetric Surveys.

Induced polarization surveys.

Diamond drilling.

Any combination of these methods should be modified according to the local conditions and based on the information as it emerges during an exploration program.

3) The Geology of the Claim Group

The AM 1 - 20 claims are located on a fairly flat plateau at an elevation of approximately 5500'. Almost the entire claim group is above timberline. Deep cutting creeks drain the plateau to the north and south.

Little outcrop can be found on the claim group, specifically on the flat parts of the plateau.

According to the G.S.C. map, unit 8 prevails in the area of the claims, consisting of "altered, dark green andesite and basalt flows and tuffs, commonly schistose, rarely porphyritic; minor phyllite, dark argillite, and light grey

quartzite. This, of course, is based on large scale regional mapping.

Detailed mapping by Mr. C.V. Dyson over the property and the linegrid cut on the ground revealed mainly sericite schist, chlorite schist bands of greenstone and minor dolomite, indicating that unit 7 which contains the Faro and Vangorda deposits on the southwestern flank of the Anvil batholith, prevails in the area of the claim group which is geologically located on the northeastern flank of the Anvil batholith.

Strike and dipdirections taken from small outcrops in the grid area indicate a gentle syncline-anticline-syncline structure striking a little north or south of E-W.

A N-S to NNE striking fault pattern was observed in the eastern half of the grid area, almost paralleling the trend of the NE striking fault close to the Faro deposit which finds its expression on the northeastern flank of the Anvil batholith in a bend of upper Anvil creek. It passes the boundary of the AM group about 1.1/2 miles to the west.

The granite contact is obscured by unconsolidated glacial and alluvial deposits, but by interpretation is to be found not more than 1.1/2 miles to the southwest of the claim group.

Exploration work carried out to date:

Between July 21st and August 7th, 1967, Mr. C.V. Dyson, one geophysical operator and one student carried out a program of:

geological mapping

picketing and, where required, line cutting

soil sampling and stream silt sampling

and an electromagnetic survey with a Crone, dual frequency, instrument.

An area of 3000 x 4000' was covered by a linegrid with baseline, crosslines and tielines. Crosslines were established at 400' spacing and picketed stations put in at 100' intervals along all lines.

Soil samples were taken at each station and shipped to Bondar, Clegg and Company, 1500 Pemberton Avenue, North Vancouver, to be assayed for lead, zinc and copper by the hot aqua regia extraction and atomic absorption method. 546 soil samples and two to three silt samples out of every creek draining the property were taken and shipped for assaying.

The ground EM survey was carried out over 5.6 line miles with a coil separation of 200'. Low frequency readings were taken in addition to the high frequency readings over the strongest parts of the anomaly.

No diamond drill holes, trenches, stripped areas or underground workings are on the property.

Results.

A) EM-Survey

An interpretation of the EM-survey by Mr. R.K. Watson, of Huntec Ltd. is attached to this report.

The significant discontinuity between lines 28 and 32 is most probably caused by a NNE striking fault, which appears to offset the conductor for approximately 1000' to the north. A fault pattern with this strike-direction was noticed in the eastern part of the property by geological mapping and is one of the typical features of the area which are related to mineral deposits.

The EM-anomoly was traced on the ground for a strike length of 3000' from line O to halfway between line 28 and 32, considering resultant dipangles of -20^{o} and more. The width of the anomoly ranges between 200' and 750'.

The core of the anomoly - with resultant dipangles of -24° and more is approximately 1500' long and from 100 to 300' wide.

The plotted profile of the dipangle readings indicate a flat lying conductor with an east-westerly strike direction and gentle northerly dip, coinciding with the strike and dip readings taken from the few outcrops in the area. In addition to this significant main conductor, two other conductive zones were detected.

One anomaly finds its expression on lines 32 and 36. Flatter dipangles, a narrow peak, a low ratio between low and high frequency readings and float of graphitic schist and gouge make this conductor less significant.

The second additional conductor was found on the southern part of lines 40, 44 and 48. This conductor was not covered entirely by the survey, the zone is still open to the west and to the south. A high ratio of low to high frequency readings of 0.87 close to the peak of the anomaly on line 48 and anomalous copper-values of the geochemical survey make further exploration work in this area necessary.

B) Geochemical Survey

The most significant result of the geochemical survey is the coincidence of anomalous assay values of all three metals assayed (copper, lead and zinc) in the area and slightly downhill from the strong conductive zone encountered by the EM-survey. The copper, lead and zinc anomalies are also terminated to the west a short distance beyond the discontinuity of the EM anomaly.

The anomalous copper values are widest spread and also find an expression in the northeastern part of the linegrid and in the area of the EM anomaly on lines 40, 44 and 48. Slight undulations in the almost flat EM profile in the northeastern part of the grid suggest the presence of maybe low grade

disseminated mineralization or mineralization at greater depth. The lead and zinc anomalies are much smaller and localized in this area.

The strongest and most consistent lead and zinc anomalies are again found in the area of the EM anomaly on lines 0 to 28 inclusive. (See attached maps Nos. 219 - 4 - 6 inclusive.

Reconnaissance soil sampling along the claim location lines indicates a further extension of this zone to the east for several hundred feet beyond the first grid line No. O.

In short, there are all indications that the conductive zone found by the EM-survey is mineralized with copper, lead and zinc to some degree.

Low to high frequency ratios between dipangles at the peaks of the anomaly ranging from 0.69 to 0.83 suggest the possibility of the presence of massive sulphides.

Recommendations

1) Extend lines 40, 44, and 48 to the south and establish additional lines to the west until the full extension of the conductor is covered.

The Crone EM instrument can be used for reconnaissance without established lines to delimit this conductive zone initially before a detailed survey is carried out over the extended grid.

2) Diamond drilling of the main conductive zone coinciding with the copper-lead-zinc anomaly on lines 16, 20, 24 and 28 and in between lines at 200' intervals, with further holes to be laid out after the results of the first holes are available. The initial program would require 3000' of AQ, wireline drilling.

3) A Gravimetric survey over all conductive zones is recommended to be started a short time before or at the same time as the beginning of the drill program in order to aid the planning and layout of the further drilling.

Cost Estimate

1) Extension of Linegrid, picketing, soil sampling, ground EM (Crone dual Frequency)	$ 1,500.00
2) Diamond drilling: 3000' AQ wireline	$30,000.00
3) Gravity survey	$ 2,000.00
Geology and engineering, supervision	$ 2,500.00
Assaying	$ 600.00
Helicopter	$ 2,800.00
Camp and food	$ 2,400.00
Mobilization, demobilization, freight	$ 2,000.00
(Consultants fees and expenses (Compilation of results and final report	$ 2,200.00
Contingencies	$ 2,000.00
Total	$48,000.00

Summary and Conclusion

The AM 1 - 20 group of mineral claims is well located with regard to the regional ore controls of the Anvil district.

The exploration work carried out to date, namely ground EM and geochemistry, indicates a zone with coinciding strong conductivity and copper-lead-zine anomalies.

Further exploration work by diamond drilling is warranted on the primary target.

Additional ground EM and geochemical work should be carried out over secondary targets.

Respectfully submitted,

MACDONALD CONSULTANTS LTD.

H. Wober, P.Eng.

HW/st

HUNTEC LIMITED
West Coast Branch

837 W. Hastings Street, Vancouver 1, B.C., Canada
Suite 606, Tel: 604-684-3618
Cables: Questvan

PH-690/67

August 31, 1967

Altair Mining Corporation Ltd.,
#440 - 890 West Pender Street,
VANCOUVER 1, B.C.

Attention: Mr. J. M. O'Brien
President

Dear Mr. O'Brien:

This letter is to report the results of an evaluation of a geophysical survey carried out on the AM group in the Whitehorse Mining District, Yukon Territory, by MacDonald Consultants Ltd. The survey was made using a Crone JEM electromagnetic prospecting instrument on lines 400 feet apart with a station interval of 100 feet. The so-called "shoot-back" method was employed in which the receiver and transmitter move along the survey line in tandem and each unit acts as transmitter and then receiver alternately. The interval between transmitter and receiver was 200 feet and the station was plotted half-way between the two units.

The results of the survey are shown in profile form on the attached drawing. The whole line grid was surveyed using the high frequency of 1800 cycles per second and several profiles were surveyed over anomalous zones using the additional frequency of 480 cycles per second.

The survey detected a strong electromagnetic anomaly which is continuous from line 0 to line 28 and then appears to be offset to the North at line 28, and then possibly again offset to the South between lines 36 and 40. These offsets may be caused by faults and these are shown on the survey map. The anomalies are characteristic of a flat lying conductive body, the top of which is deeper than 75 feet from the ground surface. Its conductivity, as indicated

...../2

by the ratio of the low frequency response to the high frequency response, is good and is within the range which includes sulphides and graphite. The highest conductivity is shown at the extreme western end of line 48 where the ratio of low frequency to high frequency response reaches 0.87.

It has been reported that the main part of the anomaly south of line 32 coincides closely with a large well-defined geochemical anomaly showing good values in copper, lead and zinc. This unquestionably enhances the possibility of this anomaly being caused by economic sulphides and it is strongly recommended that the anomaly warrants further development work. It is, however, most likely that an anomaly of this size and in this particular geological setting, is due in some part to banded graphite formation. Therefore it would be well to consider examining the EM anomaly by a gravity survey in order to distinguish between conductive sulphides and conductive graphite. Graphite has a significantly lower specific gravity than sulphides and this method has been used with moderate success in the general Vangorda area to make this distinction. If this plan were adopted, it is recommended that the gravity survey be carried out on lines at a separation of 200 feet with stations taken every 100 ft. A survey of this type would probably cost less than $2,000.00 which is about the cost of one drill hole.

Both the east and west ends of the anomaly were left open, and it is recommended that further geophysical work be done using either an EM or gravity method in order to determine its full extent. The readings taken at the extreme western end of line 48 showed the highest conductivity of anywhere in the property, and so should receive a high priority for further investigation.

It may be desired to start a drilling program before carrying out a gravity survey. If so, it is suggested that the optimum pattern would be a line of vertical drill holes along the centre of the conductor between lines 28 and 4 at 200 ft. or 400 ft. intervals.

Summary

1. The electromagnetic survey revealed a large well-defined anomaly the cause of which is interpreted as a strong bedrock

...../3

conducter probably consisting of metallic sulphides, or banded graphite or a mixture of both. It is noted that a strong, coincident geochemical anomaly enhances the possibility that economic sulphides are part of the conductor.

2. A gravity survey is recommended as the next development step as an attempt to distinguish between metallic sulphides and graphite.

3. The gravity survey stage could be by-passed if it was desired to start an immediate drilling program. If this were the case the first hole should be collared on line 28 at about 11+00S. Subsequent holes should be made at 200 ft. or 400 ft. intervals following the anomaly peak to the East.

Yours very truly,

HUNTEC LIMITED

R. K. Watson

R. K. Watson, B.A.Sc., P.Eng.

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
R. K. WATSON

RKW:mv

Encl.

CERTIFICATE

I, Helmut Wober, with business and residential address in Vancouver, B. C. do hereby declare:

1. I am a consulting mining engineer.
2. I am a graduate of the Montanistische Hochschule Leoben, Austria, 1963.
3. I am a registered professional engineer in the Yukon and British Columbia.
4. I have gained experience in mining and exploration geology in positions of responsibility with Nordisk Mineselskab A/S in East Greenland and in 1961 and 1962, with United Keno Hill Mines from 1964 to 1966. I held the position of chief Mine Geologist with United Keno Hill Mines when I resigned to join MacDonald Consultants Limited, in May 1966.
5. I have personally studied all available information on the geology of the area described.
6. I am a shareholder of Altair Mining Corporation Ltd. (N.P.L.) in that I have purchased shares of the capital stock of the Company and I was a member of the original syndicate that acquired the claims AM 1 - 16 by location and for which I received Vendors shares in the capital stock of the Company.

Respectfully submitted,

H. Wober

H. Wober, P. Eng. (Yukon and B. C.)

ALTAIR MINING CORP. LTD.

PELLY RIVER

Faro Deposit

Vangorda Deposit

KERR ADDISON

62°15'

133°00'

N

Source of Information:
Goverment Claim maps.
individual ownership not certified.

Association of Professional Engineers of the Yukon Territory
HELMUT WOBER
MINING
ENGINEER

H. Wober

ALTAIR MINING CORP. LTD.(N.P.L.)

Swim Lake Mines

Anvil

Kerr Addison

Giant Yellowknife

Other Interests

MacDonald Consultants Ltd.

ALTAIR MINING CORP. LTD. (N.P.L.)

SCALE	1"=4 mi	CLAIM LOCATIONS ROSS RIVER AREA WHITEHORSE MINING DIVISION Y.T.
DRAWN		
DATE	Dec.66	
NO.	219 - 1	

GIANT Group

AM Group

8 6 4 2

7 5 3 1

16 14 12 10

15 13 11 9

290°

KD Claim Group

AC Group

DC Group

JET Group

5000

4500

5500

6000

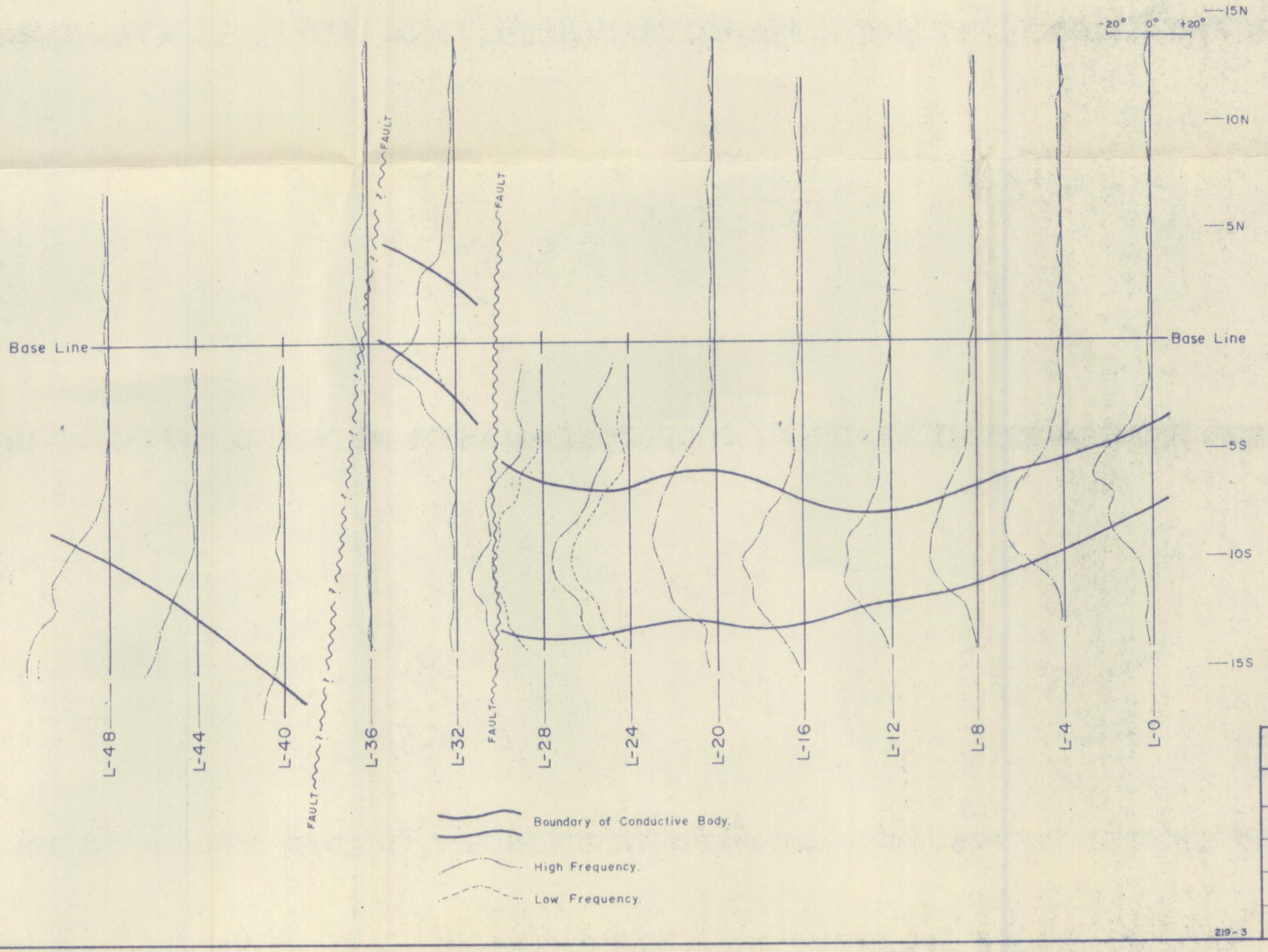
N

Association of Professional Engineers of the Yukon Territory
HELMUT WOBER
MINING
ENGINEER

MacDonald Consultants Ltd.

ALTAIR MINING CORP. LTD. (N.P.L.)

SCALE	1" = ½ mile	Ref 105K-6 'AM' CLAIM GROUP
DRAWN	C.V.D.	
DATE	FEB '77	
NO.	219-2	



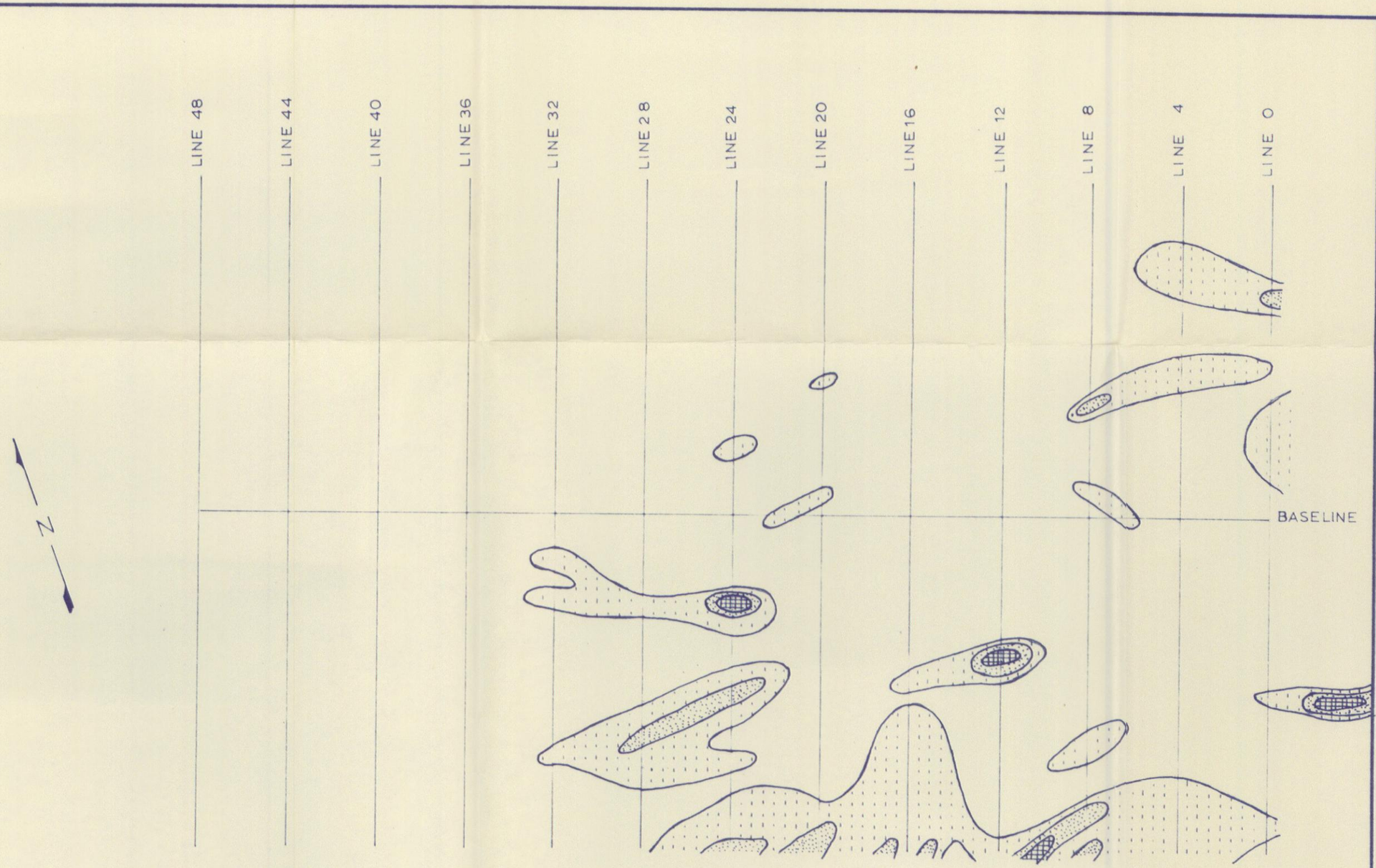
Association of Professional Engineers of the Yukon Territory
HELMUT WOBER
MINING
ENGINEER

H. Wober

HUNTEC LIMITED		
ALTAIR MINING CORP. LTD. (N.P.L.)		
SCALE	1" = 500'	CRONE E.M. SURVEY.
DRAWN	E.H.	
DATE	Aug./67	AM - GROUP
Nº	PH-690	R.K. WATSON - GEOPHYSICIST. R. K. Watson

219-3

PH.-690/67



Association of Professional Engineers of the Yukon Territory
HELMUT WOBER
MINING
ENGINEER

H. Wober

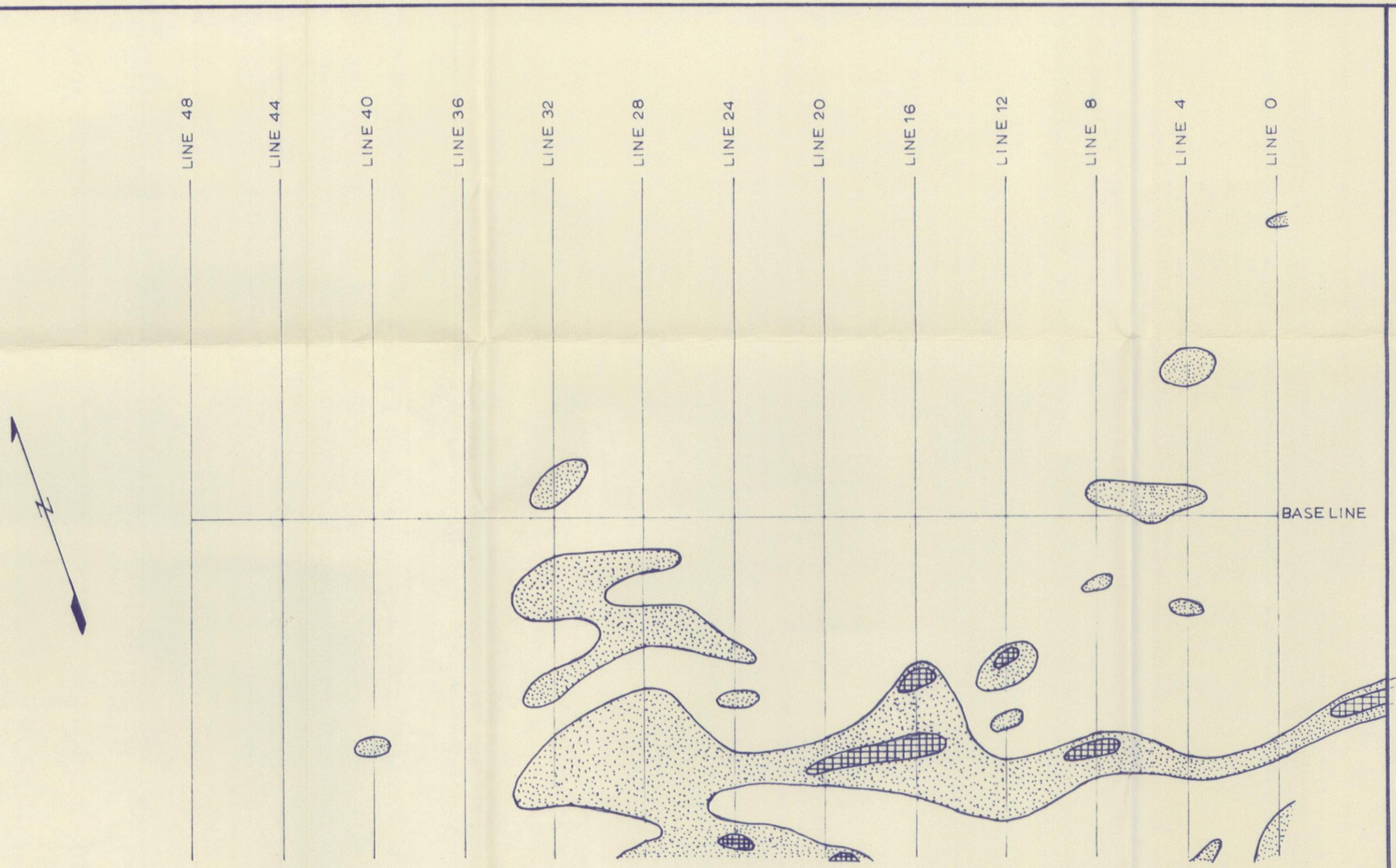
	101 – 200	PPM
	201 – 400	"
	401 –	"

MacDonald Consultants Ltd.

ALTAIR MINING CORP. LTD. (NPL).

SCALE	1"= 500'	GEOCHEM MAP
DRAWN	H W	LEAD PLOT
DATE	AUG 67	AM-GROUP
NO.	219-4	

BCIL - 2058 B - M.C.



Association of Professional Engineers of the Yukon Territory
HELMUT WOBER
MINING
ENGINEER

H. Wober

201 - 400 PPM

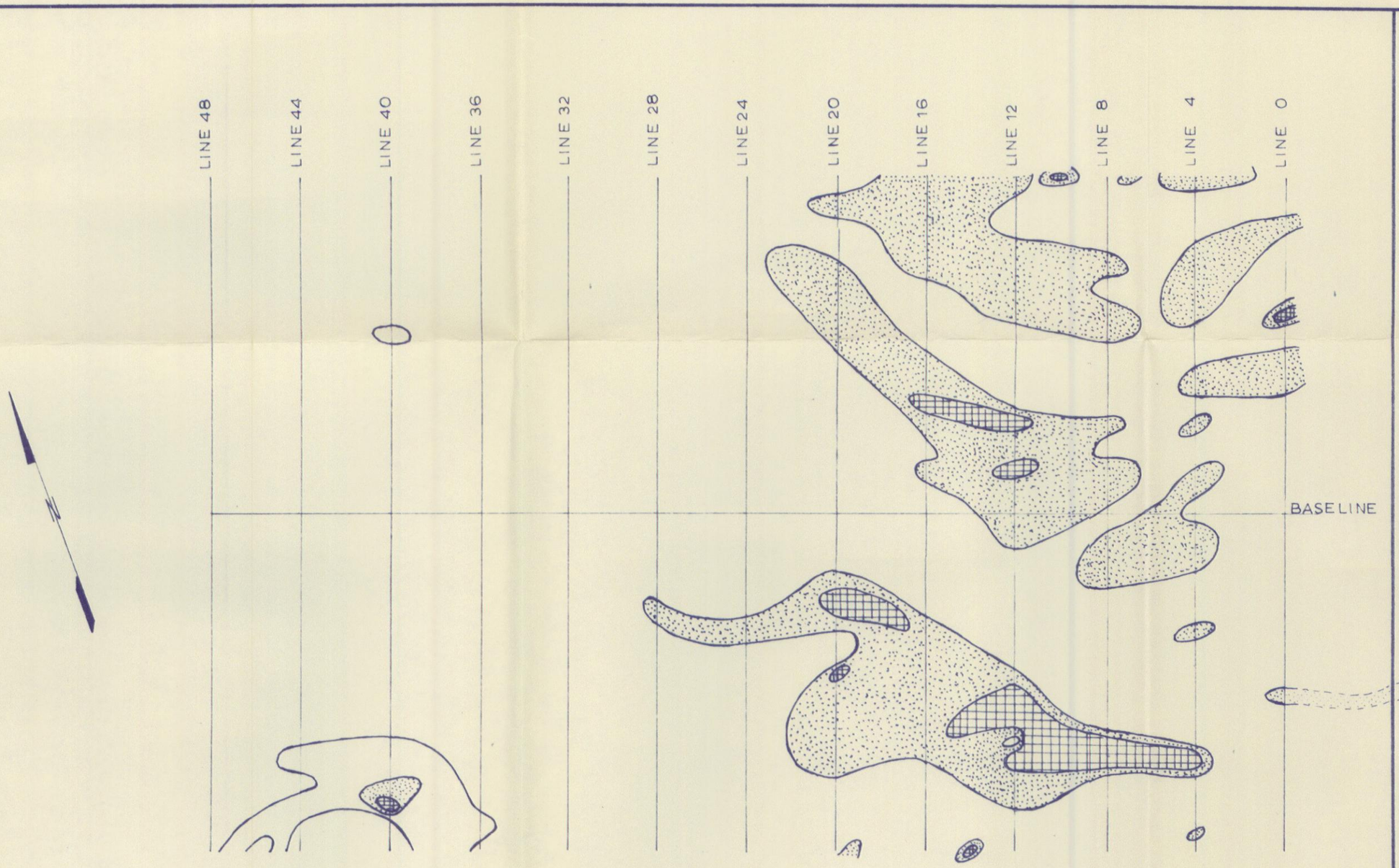
401 - "

MacDonald Consultants Ltd.

ALTAIR MINING CORP. LTD.(NPL).

SCALE	1"-500'	GEOCHEM MAP
DRAWN	H.W.	ZINC PLOT
DATE	AUG 67	AM-GROUP
NO.	219-5	

BEIL - 2058B - M.C.



Association of Professional Engineers of the Yukon Territory
HELMUT WOBER
MINING
ENGINEER

H. Wober

51 – 100 PPM

101 – 150 "

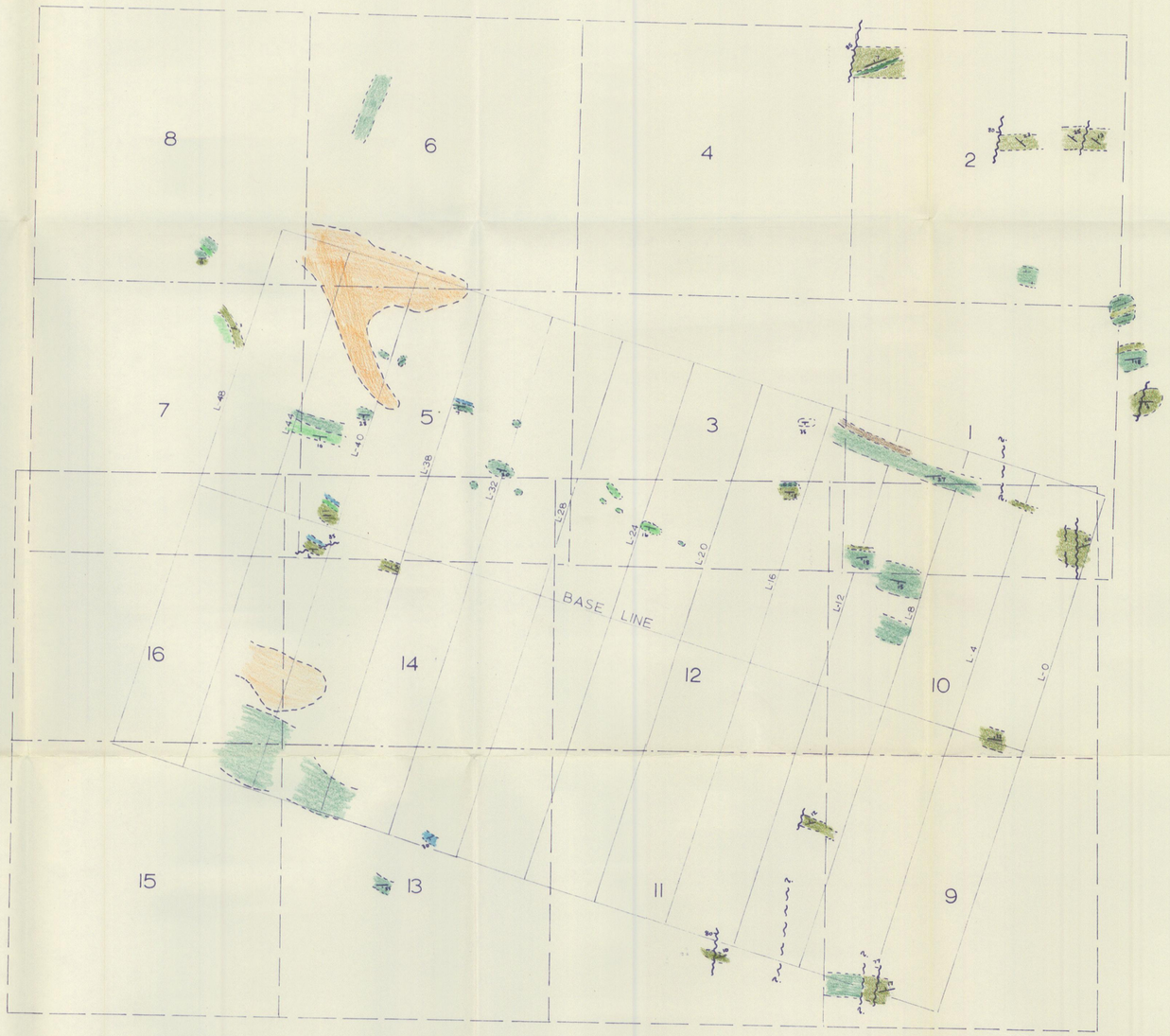
151 – "

MacDonald Consultants Ltd.

ALTAIR MINING CORP. LTD.(NPL).

SCALE	1"= 500'
DRAWN	H.W.
DATE	AUG 67
NO.	219-6

GEOCHEM MAP
COPPER PLOT
AM-GROUP



N

Association of Professional Engineers of the Yukon Territory
HELMUT WOBER
MINING
ENGINEER

H. Wober

LEGEND

- GREENSTONE
- SERICITE SCHIST
- SERICITE SCHIST & INCLUSIONS OF DOLOMITE/LIMESTONE
- CHLORITE SCHIST
- DOLOMITE
- GLACIAL TILL
- FAULTING OBSERVED
- POSSIBLE FAULTING - INFERRED FROM TOPOGRAPHY

ALTAIR MINING CORPORATION LTD

MacDONALD CONSULTANTS LIMITED
11 — 425 HOWE ST. VANCOUVER 1, B.C.

GEOLOGICAL MAP

SCALE	1"=400'
DRAWN	CVD
DATE	AUG 1967
NUMBER	219-7

AM 1-16 GROUP