

REPORT ON

GEOLOGICAL AND GEOCHEMICAL PROSPECTING ON

THE NAH CLAIM GROUPS

WATSON LAKE MINING DISTRICT

YUKON TERRITORY

CLAIM SHEET 105 - I -5, -6,

Latitude 62° 30'

Longitude 129° 30'

FOR

DASSON COPPER CORPORATION

BY

S.C. FARQUHARSON, MINING ENGINEER

FIELD WORK: August 10 - August 30, 1973

REPORT: September, 1973



This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of \$ 8800.00

D.B. Craig
 Resident Geologist or
 Resident Mining Engineer

~~is~~ considered as representation work under Section 53 (4) Yukon Quartz Mining Act

[Signature]
 Commissioner of Yukon Territory

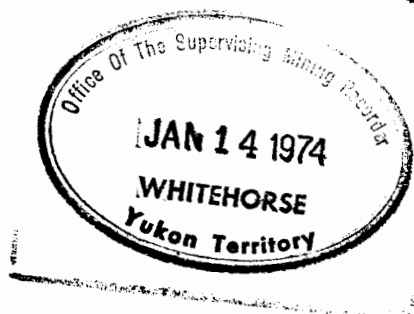
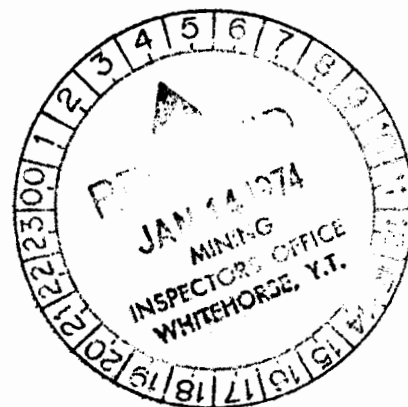


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In Pocket:

Plan E-1 Geochemistry-Geology, East Block

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Sketch: Showing Claim Numbers and Groups

Sketch: Showing Location of Property

INTRODUCTION

During the period August 10 - 30, 1973, a reconnaissance exploration program was carried out on the NAH mineral claims. The 88 claims which form this group are divided into an east block of 40 claims and a west block of 48 claims. There is about two miles between the blocks.

The type of program selected for the exploration of the property consisted of some geological investigations together with geochemical tests on the stream sediments and some areas were soil sampled. Zinc-lead mineralization had been exposed by exploration on the nearby property of Canex Ltd. It was considered that the type of program selected could provide preliminary information on the potential of the NAH claims. At least if there were no indications of mineralization from the geochemical tests and the prospecting, then the geological work might indicate the possible location of the favourable zinc-lead bearing formation on the NAH claims.

Observations on the geological features examined on the NAH claims have been plotted on plans together with the location of the geochemical surveys. All geochemical soil tests were not available at time of writing this report.

DESCRIPTION OF PROPERTY

The NAH claim groups held by Dason Copper Corp. lie within the Watson Lake Mining District, Yukon Territory, and the Nahanni Topographic Sheet 105 - I. The claims are located about 100 miles east of Ross River, Y.T., or about 130 miles north from Watson Lake, Y.T., and helicopter service is usually available from both these points. The property covers the common corner of the four claims sheets 105 - I -5, -6, -11, -12. The claims may be described as follows:

EAST BLOCK NAH CLAIMS

Claim Grant Nos.	Name of Claims	Total	Claim Sheet
Y-71595 to 71610 incl.	NAH-1 to 16 incl.	16	105-I-6,11
Y-71611 to 71616 incl.	NAH-17 to 22 incl.	6	#6
Y-71645 to 71650 incl.	NAH-51 to 56 incl.	6	-6
Y-71679 to 71682 incl.	NAH-85 to 88 incl.	4	-6
Y-71683 to 71684 incl.	NAH-89 to 90 incl.	2	-6
Y-71713 to 71718 incl.	NAH-119 to 124 incl.	<u>6</u>	40 -6

WEST BLOCK NAH CLAIMS

Y-71633 to 71644 incl.	NAH-39 to 50 incl.	12	#11,12
Y-71667 to 71670 incl.	NAH-73 to 76 incl.	4	-11,12
Y-71671 to 71678 incl.	NAH-77 to 84 incl.	8	-11
Y-71705 to 71712 incl.	NAH-111 to 118 incl.	8	12
Y-71701 to 71704 incl.	NAH-107 to 110 incl.	4	-5,6,11,12
Y-71735 to 71746 incl.	NAH-141 to 152 incl.	<u>12</u>	48 -5,6,11,12

Physiography

On the EAST BLOCK the boundaries enclose a section of topography with elevations between 4800 and 6000 feet; in several areas the ridges consist of barren rock exposures or talus slopes, with some moss. Below the 4500 elevation, balsam and alders may occur where there is sufficient soil .

About 75% of the WEST BLOCK has an elevation between 5000 and 5500 feet., however the southern section does have elevations of 4300 to 4800 feet. Numerous streams drain the area flowing westerly and others northerly. The sides of the ridges have talus in abundance and the valley floors are filled with glacial deposits. The rock exposures while present on ridges are not sufficient to determine structures clearly and contacts.

LOCAL GEOLOGY

The G.S.C. Nahanni Geology Map No. 8-1967 provides the regional geological information. In the area of immediate interest, the predominant rocks are indicated to be Devonian and Mississippian, Unit 18b, which are sedimentary. Also present are the shales and conglomerates of Cambrian age, Unit 7B. However the important rock is apparently Unit 10 which is host to the zinc-lead zones of mineralization located on the property of Canex Ltd to the north of the NAH EAST GROUP.

An examination was made of the large discovery of zinc-lead which Canex have opened up by bulldozing. The deposit is of the syngenetic stratigraphic type. The mineralization is confined to an horizon within Unit 10 which may be described as a black graptolitic graphitic calcareous shale. The mineralization is rather difficult to spot in the broken rock as the grain is very fine.

PROPERTY GEOLOGY

The major part of the NAH EAST GROUP consists of Devonian-Mississippian rocks (Unit 18B) and it is only on the most northerly claims that the underlying units are exposed. Most of the claim group area is either outcrop or talus derived very locally which reflects the underlying rock. However due to the nature of the members of Unit 18b it is impractical to define all contacts within the unit.

The oldest rocks exposed in the NAH EAST BLOCK occur at the northern section where they dip steeply southward. These are Upper Cambrian and Ordovician limestone with sandy and dolomitic interbeds (Unit 7b). These rocks are distinctive from the overlying units due to their appearance. They are generally irregularly banded with the topmost

members having wavy and finally lensoid interbeds (scruffy limestone).

The component limestone and dolomite weathers a blue grey and a buff colour respectively and are in general fine grained. No fragments of fossils are visible in these members. Near the contact with overlying Upper Ordovician and Silurian shales (Unit 10 - Road River formation) is a distinct bed of a siliceous dolomite, even textured and fine grained with scattered blebs of pyrite. This unit averages about 50 feet in thickness and being observed near the top of 7b, may be considered a marker horizon.

Immediately overlying the limestones is a band of variable thickness and discontinuous exposure, are members of Unit 10, a suite of Upper Ordovician and Silurian shales interbedded with minor amounts of chert, argillaceous limestones, argillite and dolomite. This is the so-called Road River formation which is host to the zinc-lead deposits on the nearby property of M Canax Ltd. The presence of this unit was not known prior to the present activity in the area. The geologists for Canax have mapped the unit as projected along the valley just north of the NAH EAST BLOCK. The Road River formation while distinct from the rocks of 7b, contains members very similar to those of 18b and the upper contact is virtually indeterminate. It appears however that the unit varies from 10 to 150 feet thick on the NAH EAST BLOCK. The distinguishing feature of Unit 10 (and one which may be used for absolute identification) is the presence of graptolites in the band of black graphitic schisted shale. This shale is also calcareous, unlike most of those in the overlying Devonian Rocks but this is not a dependable identifying feature. A typical section of Unit 10 is described below, measured at "Y" on plan.

- 7b 15' coarse nodular "scruffy" limestone
- 10 16' black shale with well developed cleavage, silver graptolitic impressions on the bedding planes.
- 5' massive silty (porous) dolomite

NAH GROUP REPORT

- 11' medium fine grained massive grey limestone
- 5' Shales with siliceous silty interbeds, more graptolites.
- 8' black cherty limestone with malachite stains
- 9' brown to black graphitic dolomite with warps and minor folds.
includes some shale
- 34' brown, alternating fissile and massive shales

18b Shales and argillites

Unfortunately even where Unit 10 is present, the identification is difficult due to the well developed cleavage of the graphitic schisted shales which make it very difficult to expose graptolites which are only visible on the bedding planes.

Overlying Unit 10 with a virtually indeterminable contact are the members of Unit 18b which cover the remainder of the NAH EAST BLOCK. This unit is Devonian in age and is entirely a clastic suite with members varying from shale to conglomerate. Individual members vary in thickness from inches to hundreds of feet in the map area. The central portion of the NAH EAST GROUP is dominantly grit and conglomerate. Folding in the area is isoclinal and as the exposed outcrop is nearly always on fold limbs rather than crests, fold axis are next to impossible to determine. The only method of determining tops is by use of graded bedding but some members are generally well sorted and this method could only be applied in two places. A major anticlinal axis trending at approximately 100° azimuth and dipping gently eastward, passes through the southern half of the map area. Folding is asymmetric with the north limb dipping steeply while the southern limb rolls off more gently, dipping approximately 30° towards the southern boundary, of the claim group. Thus the oldest rocks exposed in this area lie where the anticlinal axis passes through the valley,

NAH GROUP REPORT

near the site of sediment sample No. M74 (see plan) and these rocks are graphitic shales of lower Unit 18, similar to the shales overlying Unit 10 at the northern part of the map area. These shale units are fine grained, sooty in some cases, generally calcareous and sometimes cherty. Fracture varies from flaggy to conchoidal. The rocks weather a blue grey. Nowhere in this area were the lower units identified. In brief except for the north part of the claim group, the rocks on the NAH EAST BLOCK are too young to contain the mineralized horizon in which Canex have found zinc-lead mineralization. The desired horizon of course could occur at an indeterminate and possibly deep horizon.

THE NAH WEST BLOCK geology is essentially a repetition of the features, stratigraphy, and lithology as described for the EAST BLOCK except that there is no evidence of the older units 7b or 10. The block is more or less the strike extension of the southern half of the EAST BLOCK, and thus as fold axis plunges are regionally gentle, again contains dominantly rocks of upper Unit 18. Interbedded clastics of variable grain size, each member relatively well sorted, tops not generally evident, undeterminable fold axes, isoclinal local folding on fold limbs, well developed cleavage in shales with graphitic and cherty members, etc sum up the picture. Also present are sulphide pebble conglomerates from higher Unit 18. Isolated crystals of honey coloured sphalerite (?) were observed in similar rocks outside the east boundary of the NAH EAST BLOCK but this is not highly significant and stream sediment sampling across the units did not show significant anomalous zinc values. In any case this mineralization(?) is unrelated to that found on the Canex property within Unit 10.

GEOCHEMISTRYSAMPLING

On the NAH EAST and WEST BLOCKS stream sampling of the active sediments was carried out on all streams where it was possible to collect suitable material. The samples were taken at intervals of 300 to 500 feet and at the intersection of streams. The sample was collected and placed in kraft envelope on which the identification number was marked. At camp the samples were dried then sieved through an 80 mesh screen. The analysis for zinc was determined by the dithizone method of extraction as recommended by the Barringer Company.

Soil sampling was carried out only on selected areas, the selection of the areas was usually based on some favourable geology or on the readings obtained from the stream sampling analyses. In establishing a grid for the soil sampling, the procedure was to set out a base line which was tied in with some marker plotted on the map, then to run lines at some desirable interval from the base line. Samples would be taken at 100 or 200 spacings along the lines and station numbers marked on the envelopes used for collecting the samples. The samples were taken from the B horizon but this was not always possible due to the poor development of the soils in many areas.

RESULTS

It was not possible to complete in the field the analyses of all the samples collected. These were shipped to Toronto for processing but at time of writing some results were still awaited.

On Plan E-1 of the NAH - EAST BLOCK the sampling stations of the streams have been indicated and the zinc values plotted in p.p.m. The results of the stream sampling appear to be rather inconclusive with two areas of possible minor interest indicated. Also on Plan E-1 two grids are shown where soil sampling was carried out but the

NAH GROUP REPORT

only the analyses for the grid at the north boundary were available at writing. The results do not indicate any large area of zinc mineralization close to surface within the grid at the north end.

however this grid does cover a geological formation considered as favourable, Unit 10, and thus more sampling might be warranted.

Plan No. W-1 and W-2 show the location of the geochemical surveys carried out on the NAH-WEST BLOCK. The stream system covering a considerable portion of the south part of the group does show zinc to be greater than 100 p.p.m. Grids "A" and "B" were laid out and samples of soils taken. When the analyses have been received on these soil samples it will probably indicate that the shales in the area have a high background count in zinc. The prospecting and geological studies did not indicate any zones of mineralization, in the areas of interest indicated by the stream samples.

SUMMARY OF RESULTS OF WORK PROGRAM

The work program carried out on the NAH Claim Group might be considered reconnaissance prospecting. It was adopted to try and get as much information as possible of the potential of the property where both the length of suitable weather and budget limits had to be considered.

The work involved a program of : (a).

- (a) breaking rocks for close inspection of any mineralization
- (b) geological studies with emphasis on the search for Unit 10
- (c) stream sediment sampling for zinc content in all streams.
- (d) soil sampling for geochemical analyses of minerals
in selected areas.

While the results from the geochemical work may not have pointed as yet to a highly anomalous zone of zinc values, the final conclusion will have to await the receipt of the analyses not received at this time.

REPORT

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NAH CLAIM GROUP

The prospecting of the shale outcrops for signs of mineralization or graptolites and the geological detailed work in such zones has not turned up any important zone of zinc mineralization . However the finding and tracing of the River Road formation of Unit 10, could be of importance in further exploration of the NAH claim group, since the zinc-lead deposits on the Canex property lie within this formation.

Signed



S.C. Farquharson,
Mining Engineer

Montreal, P.Q.

September, 1973

C E R T I F I C A T E

I, STANLEY C. FARQUHARSON, of 842 McEachran Avenue, in the City of Montreal in the Province of Quebec, do hereby declare:

THAT I am a graduate in Mining Engineering from McGill University(1938)

THAT I have been practising my profession continuously since that time

THAT since 1958 I have been acting as a consultant for mineral

exploration throughout Canada and from 1952 to 1958 I was involved in the initial discoveries of the major zinc-lead discoveries in N.B. as field manager.

THAT I am a member of the Engineers Associations of Ontario and Quebec

THAT I personally managed the exploration program and participated in field work and assessment of the exploration data resulting from the work outlined in this report

Montreal, P.Q.

September, 1973

Signed



S.C. Farquharson

Mining Engineer

Names and addresses of all persons employed in performing
the work program covered by this report

Position	Name	Address	
Geologist	Robin S. Doak	19 Applehill Road	Basie D'Urfe, P.Q.
Geologist Assistant	Ernest Roeder	169 Cure Roy Street	Val D'or, P.Q.
Geochem & Camp Foreman	Arthur Fleming Mining Engineer	34 Ellerslie Ave.	Willowdale, Ont
Prospector	Adelard Trepanier	5923 Hutchison Street	Montreal, P.Q.
Prospector	Lyle Hartwig	324 Sanatorium Road	Hamilton, Ont.
Prospector	David Zgozinski	5229 Ponsard Ave	Montreal, P.Q.
Prospector	Maxwell Juby		Gowanda, Ont.
Manager & Consultant	S.C. Farquharson	842 McEachran Ave.	Montreal, P.Q.

I declare the above to be a true statement

Signed 
S.C. Farquharson
Mining Engineer

S T A T E M E N T - "NAH" CLAIMS

Re: Exploration Costs on work performed under supervision of
S.C. Farquharson, 842 McEachran Ave, Montreal, P.Q.

During the period- July to September, 1973

Property held by: Dasso Copper Corp., Montreal, P.Q.

Location of Property: Watson Lake Mining District, Y.T.
Claim Sheets 105-I-5,6,11,12

Cost Data: Note that the work was performed as part of the program on the exploration of several groups in the area totalling 177 claims for which costs are shown on the attached statement. On each group, or portion of group, the costs have been proportioned on the basis of the amount of man-days on the group to the total on the 177 claims.

Distribution of Costs on the NAH Claim Group is given herewith:

<u>EAST BLOCK</u>				
No.	Cl Grant Claim Nos.	Name of Claims	Total Costs	Yuken Portien
\$	Y71595-71602	NAH 1 to 8	\$3,726.	\$3,275.
16	Y71603-71616 Y71645-71646	NAH 9 to 22 NAH 51 & 52	2,623	2,306
16	Y71647-71650 Y71679-71684 Y71713-71718	NAH 53 to 56 NAH 85 to 90 NAH 119 to 124	2,623	2,306
<u>WEST BLOCK</u>				
16	Y71633-71644 Y71667-71670	NAH 39 to 50 NAH 73 to 76	2,384	2,096
16	Y71671-71678 Y71701-71708	NAH 77 to 84 NAH 107 to 114	2,384	2,096
16	Y71709-71712 Y71735-71746	NAH 115 to 118 NAH 141 to 152	2,384	2,096
			<u>\$16,124.</u>	<u>\$14,175</u>

Sworn to at Montreal, Quebec
this 4th day of January, 1974

... *Boris Carrière* ...

I, S.C. Farquharson, do hereby declare that the cost information in this statement is considered to be reliable.

... *S.C. Farquharson* ...
S.C. Farquharson, Mining Engineer

STATEMENT - EXPLORATION EXPENDITURES

RE: Work carried out by S.C. Farquharson of 842 McEachran Ave., Montreal

During the Period: July to September, 1973

On Joint Operation on the 177 claims described herewith:

<u>Property Held By</u>	<u>Claim Group Name</u>	<u>No. of Claims</u>		<u>Mining District</u>
Dasson Copper Corp Montreal	MAN	88		Watson Lake, Y.T.
Dasson Copper Corp	HYL (in part)	32	120	Nahanni, N.W.T.
D.J. Kennedy et al	HYL (in part)	39		Nahanni, N.W.T.
D.J. Kennedy et al	DAL (in part)	18	57	Nahanni, N.W.T.
			<u>177</u>	

COST DATA:

<u>Description</u>	<u>Total</u>	<u>Portion Yukon-N.W.T.</u>
Mobilization and Demobilization	\$4,533.94	\$1,719.91
Payroll	15,720.00	15,020.00
Assays and supplies	840.03	840.03
Camp Supplies	2,207.25	2,207.25
Rentals Equipment	303.41	303.41
Transportation- Field Support		
Fixed Wing	2,020.60	
Rotary	<u>3,994.97</u>	
	6,015.57	6,015.57
Engineering Supplies	75.87	75.87
Telephone	<u>115.89</u>	<u>25.10</u>
	\$29,811.96	\$26,207.14

Sworn to at Montreal, Quebec,
this ^{4th} of January, 1974

.. *Pois* ..

I hereby declare that the cost information declared in the above statement is true.

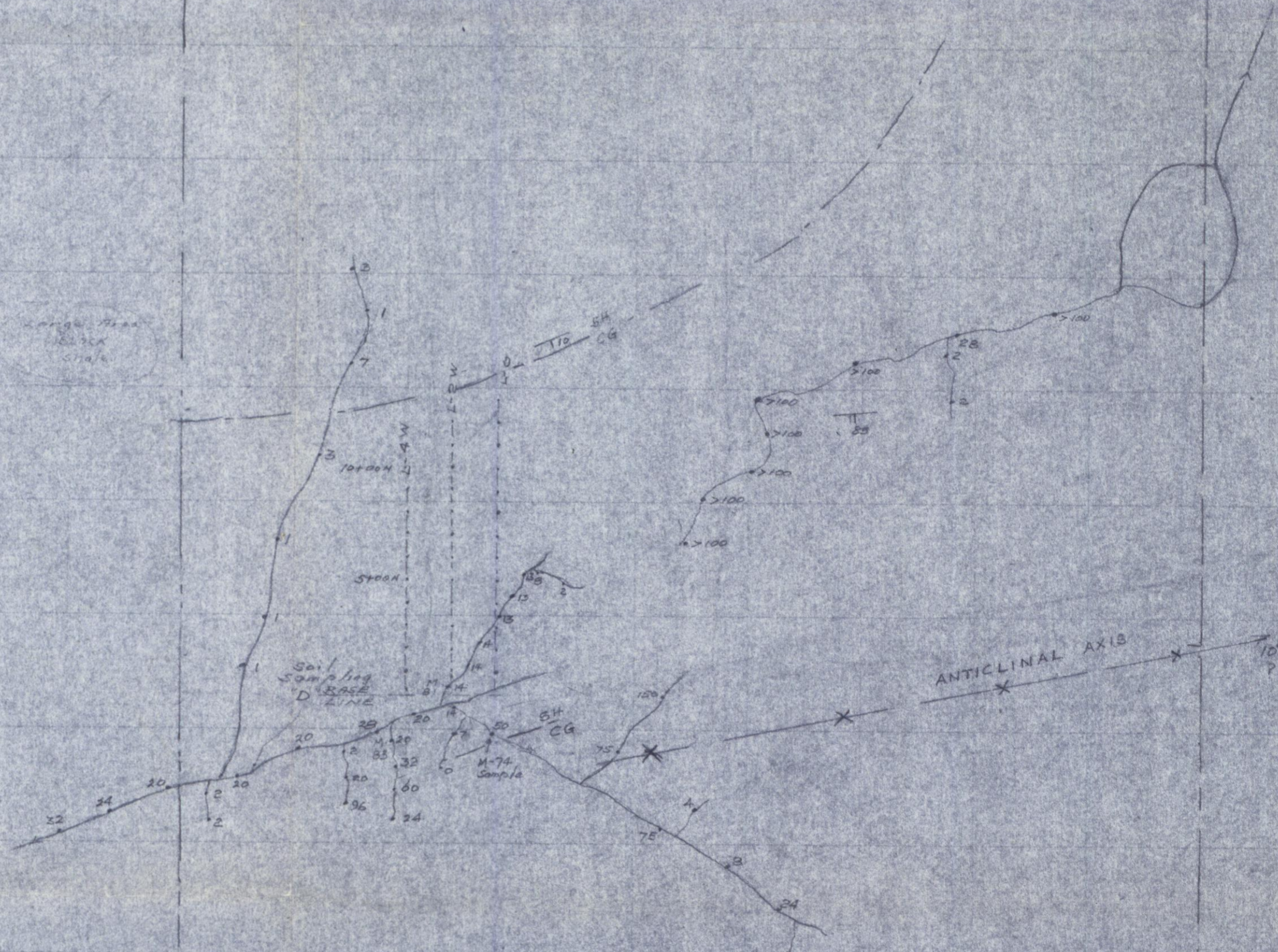
S.C. Farquharson
S.C. Farquharson
Mining Engineer



LEGEND

- SH SHALE
- CG CONGLOMERATE
- SS SANDSTONE
- BEDDING
- SCHISTOSITY
- FAULT ASSUMED
- GEOLOGICAL CONTACT
- ROCK OUTCROP

NOTE: DITHIZONE EXTRACTION METHOD USED ON STREAM SEDIMENTS AND SOILS



DASSON COPPER CORP.

GEOCHEMISTRY - GEOLOGY SURVEY

NAH CLAIMS - EAST GROUP

WATSON LAKE MINING DIST.

SCALE: 1" = 500'

SEPTEMBER, 1973

REF: MAP SHEETS

PLAN No. E-1

108-1-6

-11-

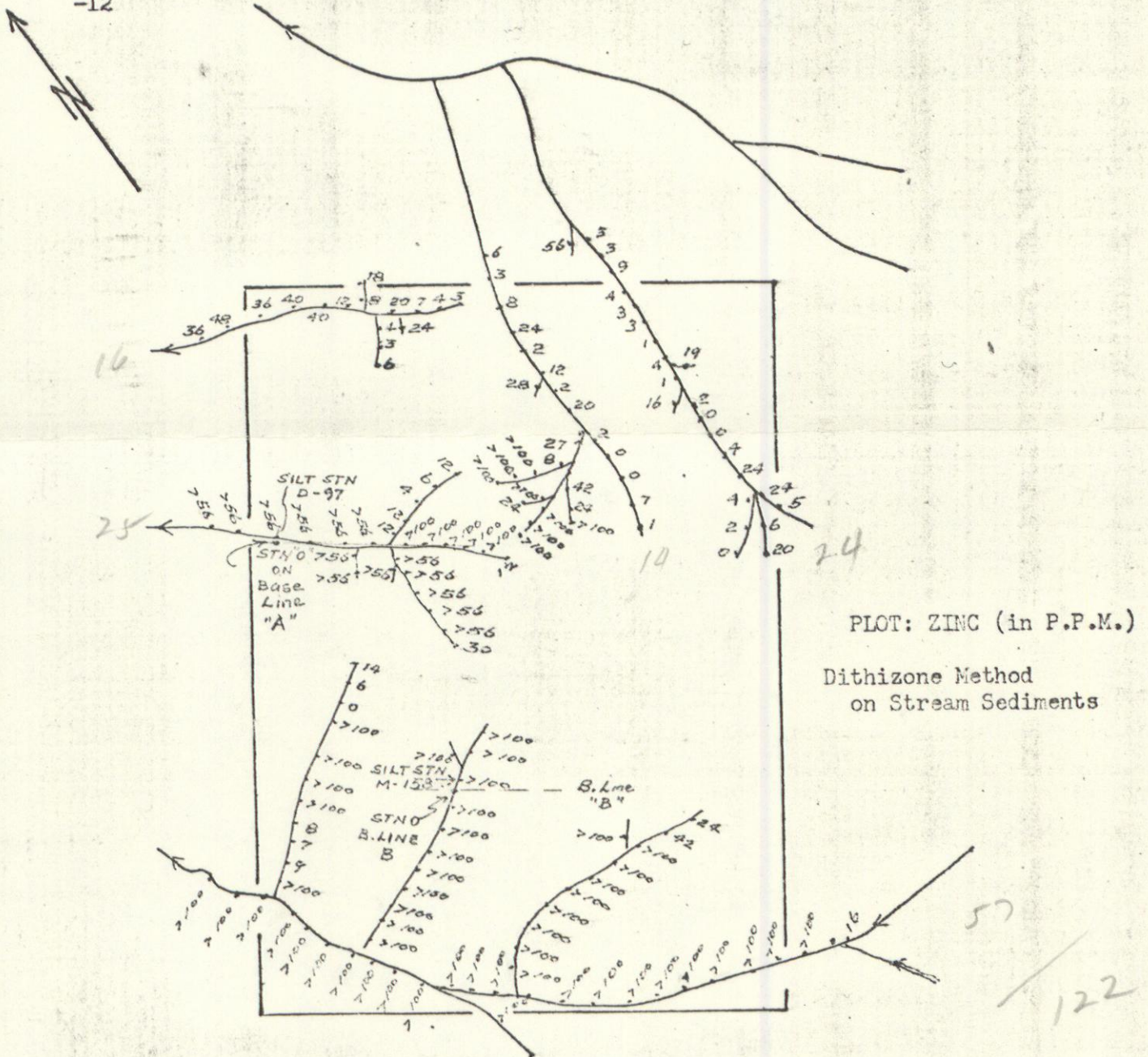
NAH - WEST CLAIM GROUP
WATSON LAKE MINING DISTRICT, Y.T.

DASSON COPPER CORPORATION

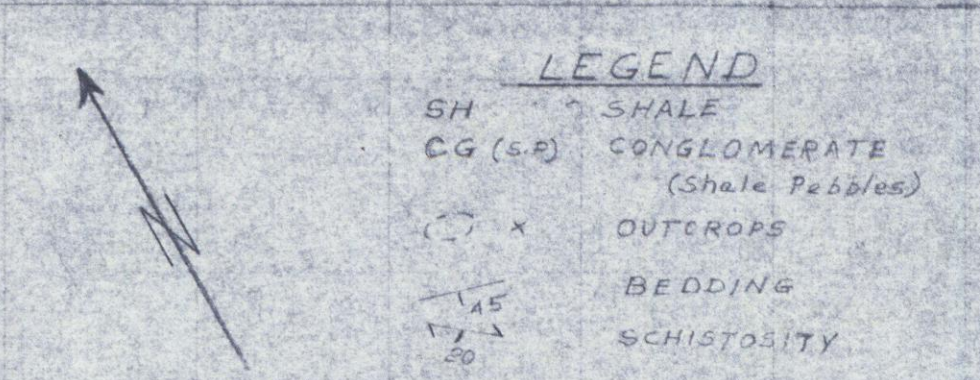
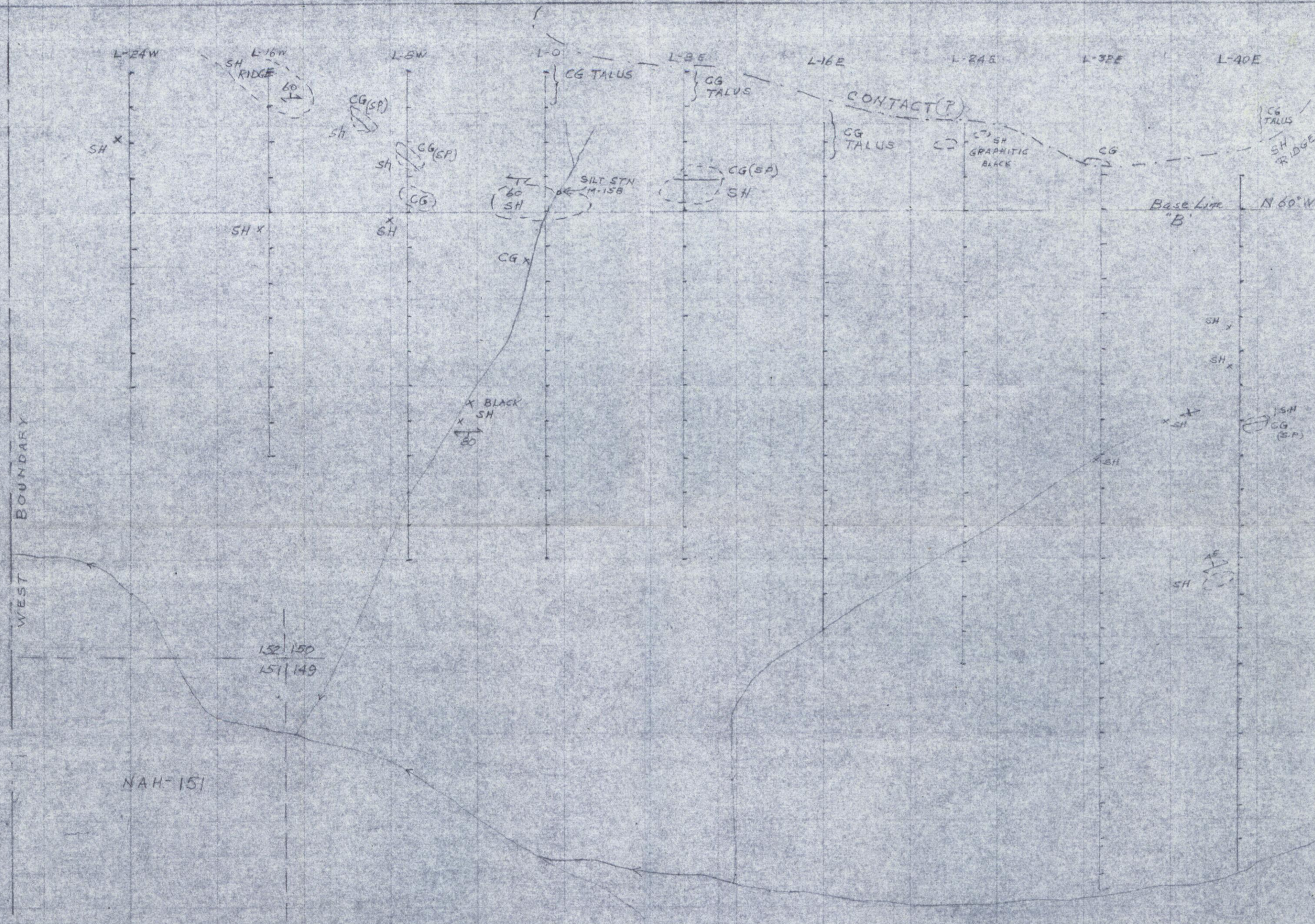
Ref: Map Sheets

105-I-5
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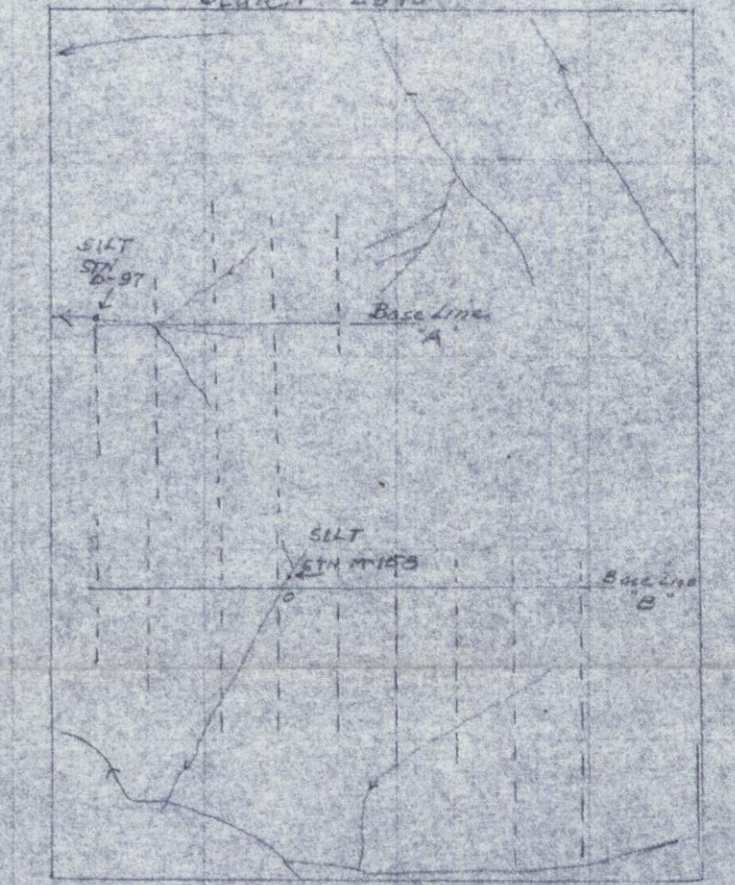
Scale: 1" = 2640' September, 1973



PLAN No W - 1



KEY MAP SHOWING GRID LOCATION and PROPERTY OUTLINE
Scale: 1" = 2640'



DASSON COPPER CORP.

GEOLOGY-GEOCHEMISTRY SURVEY (SHOWING SOIL SAMPLING GRIDS)

NAH CLAIMS - WEST GROUP

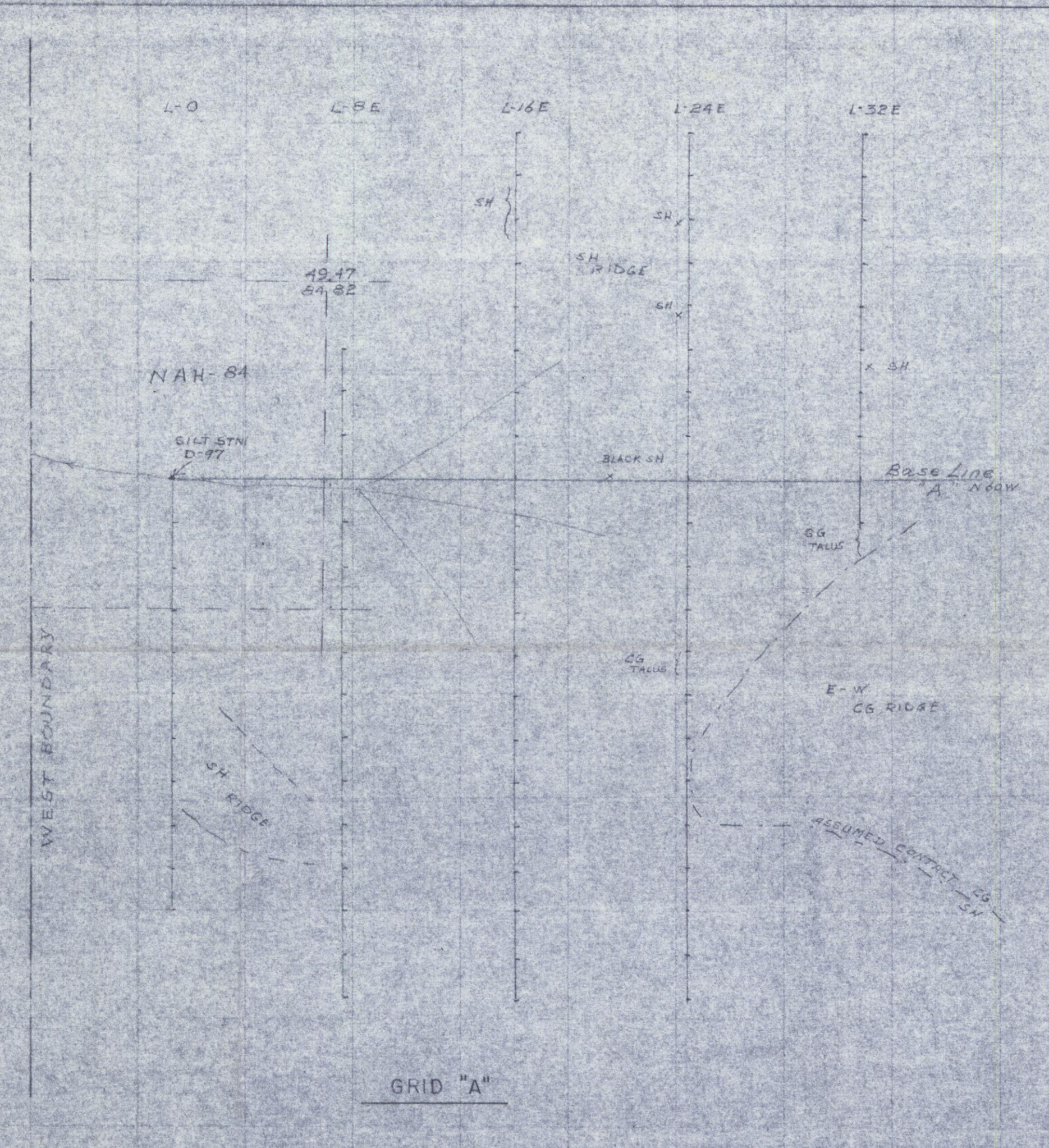
WATSON LAKE MINING DISTRICT

SCALE: 1" = 500' SEPTEMBER, 1973

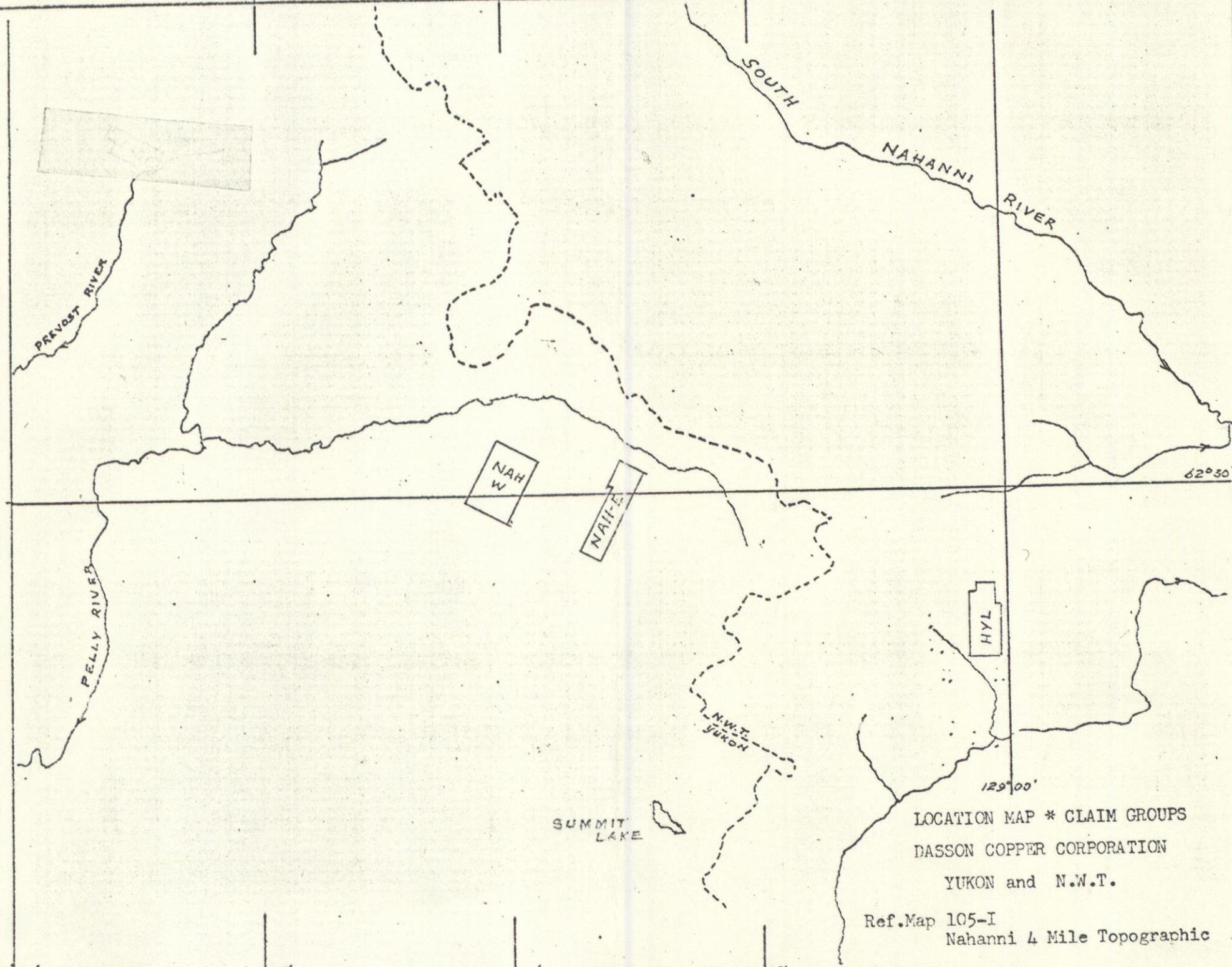
REF. MAP SHEETS: 105-1-5

6
11
12

PLAN No. W-2



GRID 'A'



PREVOST RIVER

SOUTH NAHANNI RIVER

PELLY RIVER

NAH W

NAH E

HYL

N.W.T.
YUKON

SUMMIT
LAKE

LOCATION MAP * CLAIM GROUPS
DASSON COPPER CORPORATION
YUKON and N.W.T.

Ref. Map 105-I
Nahanni 4 Mile Topographic

132°00'

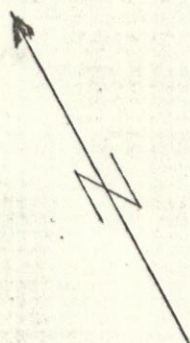
45'

30'

15'

62°30'

129°00'



129°30'
105-I-11
105-I-12

NAH-50	48	46	44	42	40
Y71644	Y71642	Y71640	Y71638	Y71636	Y71634
49	47	45	43	41	39
Y71643	Y71641	Y71639	Y71637	Y71635	Y71633
84	82	80	78	76	74
Y71678	Y71676	Y71674	Y71672	Y71670	Y71668
83	81	79	77	75	73
Y71677	Y71675	Y71673	Y71671	Y71669	Y71667
118	116	114	112	110	108
Y71712	Y71710	Y71708	Y71706	Y71704	Y71702
117	115	113	111	109	107
Y71711	Y71709	Y71707	Y71705	Y71703	Y71701
152	150	148	146	144	142
Y71746	Y71744	Y71742	Y71740	Y71738	Y71736
151	149	147	145	143	141
Y71795	Y71743	Y71741	Y71739	Y71737	Y71735

NAH-8	6	4	2
Y71602	Y71600	Y71598	Y71596
7	5	3	1
Y71601	Y71599	Y71597	Y71595
16	14	12	10
Y71610	Y71608	Y71606	Y71604
15	13	11	9
Y71609	Y71607	Y71605	Y71603
22	20	18	
Y71616	Y71614	Y71612	
21	19	17	
Y71615	Y71613	Y71611	
56	54	52	
Y71650	Y71648	Y71646	
55	53	51	
Y71649	Y71647	Y71645	
90	88	86	
Y71684	Y71682	Y71680	
89	87	85	
Y71683	Y71681	Y71679	
124	122	120	
Y71718	Y71716	Y71714	
123	121	119	
Y71717	Y71715	Y71713	

62°30'

DASSON COPPER CORPORATION

NAH CLAIMS

WEST GROUP ←

→ EAST GROUP

WATSON LAKE MINING DISTRICT, Y.T.

Scale 1" = 1/2 Mile

Ref: Map Sheets 105-I-5
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-12

105-I-12
105-I-5

105-I-6