

FROM: Mining Recorder at Watson Lake

Supervising Mining Recorder at Whitehorse, Y.T.



FOR ACTION ARE:

NEW APPL'N for PLACER LEASE to PROSPECT: Name:

RENEWAL APPL'N PLACER LEASE to PROSPECT: Name:

AFFIDAVIT of EXPENDITURE on PLACER LEASE. Name:

ASSIGNMENT of PLACER LEASE No _____

From: _____ To: _____

GROUPING APPL'N UNDER SEC. 52(2) PLACER MINING ACT.

Owner: _____

DIAMOND DRILL LOGS.

Claims: _____ Claim sheet no. _____

QUARTZ ASSESSMENT REPORT

Claims: FIN Claim sheet no. 105-14-12

Type of report: Geological, Geochemical

Submitted by: Corninco Ltd.

Cls. work performed on:

FIN 269-455

\$ Req. for ren. application

\$23,375.00

[Signature]
Signature

REPLY ACTION:

Date Ret. _____

090877

Signature _____

COMINCO LTD.

EXPLORATION
NTS: 105H/12

WESTERN DISTRICT



ASSESSMENT REPORT
GEOLOGY, GEOCHEMISTRY
FIN PROPERTY

WATSON LAKE M.D., YUKON TERRITORY

LATITUDE: 61°40'N; LONGITUDE: 129°50'W

WORK PERIOD: JULY 12 TO AUGUST 11, 1981



090877

This report has been examined by
the Geological Evaluation Unit
under Section 53 (4) Yukon Quartz
Mining Act and is allowed as
representation work to the amount
of \$ 23,375.00.

for *Ruth Dibicki*
Regional Manager, Exploration and
Geological Services for Commissioner
of Yukon Territory.

7-18-00

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ATTACHMENTS

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Plate 2 - Claim Map	1: 31,686
Plate 3 - Geology	1: 10,000
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ASSESSMENT REPORT

GEOLOGY, GEOCHEMISTRY

FIN PROPERTY

WATSON LAKE M.D., YUKON TERRITORY

I. SUMMARY

The Fin property is located in the Watson Lake Mining District, 180 km northwest of Watson Lake, Yukon Territory. This property comprised of 469 claims is 100% owned by Cominco Ltd. and was staked between 1978 and 1980.

The 1981 exploration program consisted of geological mapping and soil and rock geochemistry. Geological mapping showed the claims to be underlain by shallow water clastics which give way to deeper water fine sediments towards the center of the property. These sediments are considered to be part of the Lower to Upper Devonian Besa River Formation.

Soil sample results reveal a large lead-zinc anomaly in the Yusezyu River Valley which reflects the downstream transportation of known mineralization on Fin Creek. A small coincident lead-zinc-silver anomaly on the western end of line 250N may represent the eastern edge of the Fin mineralization.

II. INTRODUCTION

A. Location

The Fin property is situated within the Watson Lake Mining District 180 km northwest of Watson Lake, Yukon Territory (Plate 1). Access to the property is by helicopter either from Watson Lake or Ross River or by boat via Frances Lake and the Yusezyu River.

Latitude: 61°40'N
Longitude: 129°50'W
NTS: 105H/12

Generally, the topography is flat to gently rolling either covered by forests of spruce and poplar or extensive swamps. Outcrop exposures are confined to creek and river cuts and are very limited within the property boundaries (<1% outcrop).

B. History and Previous Exploration

Cominco Ltd. first acquired the Fin Property in 1978 by staking 56 claims to cover black shales which yielded high grade Pb-Zn-Ag-Cd float. An additional 222 claims were staked in 1979 in response to favourable results from that years mapping and soil geochemistry program. A further 187 claims were then added as a result of the 1980 drill program to bring the total to its present 469 claims.

C. Ownership

The Fin property consists of 469 claims, 100% owned by Cominco Ltd. (Plate 2).

<u>Claim</u>	<u>Date Recorded</u>	<u>Assessment Work Done</u>
Fin 1-56	Sept. 1, 1978	Dec. 1, 1987
Fin 57-268	Sept. 14, 1979	Dec. 1, 1984
Fin 269-282 (Grant #YA45955 - YA45968)	Sept. 14, 1979	Dec. 1, 1984
Fin 269-282 (Grant #YA55961 - YA55974)	Aug. 11, 1980	Aug. 11, 1981 *
Fin 283-455	Aug. 11, 1980	Aug. 11, 1981 *

* 1981 assessment work to be applied.

III. EXPLORATION

The 1981 exploration program consisted of geological mapping at 1:10,000 scale plus soil and rock geochemistry and was conducted during the period July 12 to August 11, 1981. This program was carried out by T.W. Hodson, B.Sc. 1980, assisted by B. Crich, M. Serack, and J. Sewell.

IV. GEOLOGY

Situated in the southwest portion of the Selwyn Basin, the Fin property is underlain by turbiditic sediments of postulated Ordovician to Devonian Age. The property lies in a transition zone which separates shallow water clastics and carbonates from deeper water fine sediments. From the east and southeast the transition into the property is from a carbonate reef complex into coarse clastics which give way to deep water cherts, mudstones, and siltstones. Carbonate rocks are also located to the northwest which places the Fin property in a basin between the two carbonate complexes.

Mapping was done on a scale of 1:10,000 using the geochemistry grid lines for control. Major areas of exposure were limited to the valleys of Fin Creek and Yusezyu River and totalled <1% of the area mapped (Plate 3). This limited exposure and hence lack of a good stratigraphic section has made correlation between outcrops difficult. To somewhat overcome this the area was mapped using the outline for the Devonian Besa River Formation

for the Howards Pass Area.

A. Besa River Formation

1. Siliceous Mudstone Member

This unit is only seen in a westerly flowing tributary of the Yusezyu River, located just off the southeast boundary of the Fin claims. The outcrop consists of a dark grey to light green, fine-grained, laminated to bedded siltstone with minor associated black, foliated mudstone. Further up the creek black limestone is found.

2. Lower Laminite Member

This is the most widespread of the Fin rock units with occurrences on both sides of the Yusezyu River. A good stratigraphic section is exposed on a westerly flowing tributary of the Yusezyu River located on the northeast edge of the Fin claims. This unit consists of interbedded and laminated mudstones, siltstones and sandstones. Mudstone is black, strongly foliated, rust stained and contains the occasional trace of disseminated pyrite. Siltstone is grey and fine-grained. Sandstone is grey, weathers grey, medium-grained (average 0.5 mm), and contains the occasional mudstone rock fragment. This sandstone could possibly be classified as a quartz arenite. These units are interpreted as turbidite flows, as are most of the other rock units on the Fin claims.

3. Conglomerate Member

Found mainly in the southeast section of the property as well as along Fin Creek, this unit is composed of a chert pebble conglomerate and a very coarse-grained quartz arenite. The chert pebble conglomerate is dark grey to black with chert pebbles to 4 cm set in a siliceous coarse-grained matrix. Chert pebbles are white, grey, green, black, and turquoise and are matrix supported. The quartz arenite is grey, weathering grey, very coarse-grained, with quartz and chert grains and rock fragments cemented by silica and calcite. Rock fragments are mostly mudstone.

4. Chert Member

No chert member was described in the outline for the Besa River Formation in the Howard's Pass area and they are believed to be limited to the Fin property area. This member contains varied coloured cherts plus minor mudstone, siltstone and limestone and is found along a tributary of Fin Creek. This easterly flowing tributary is located 1500 meters up Fin Creek from its confluence with the Yusezyu River.

Chert is the most abundant rock type of this unit and is white, grey, green and black in colour with minor interbedded siltstone and mudstone. Occasional pyrite and barite nodules and lenses

are found within the thin bedded cherts. A minor grey to black, buff weathered limestone bed was found in one location near this members eastern contact. Most outcrops are rust stained which may be the result of minor disseminated pyrite found within the siltstone units.

One large mudstone-siltstone outcrop found along Fin Creek just south of the above tributary is also considered to be part of this unit. This outcrop contains black, fine-grained, soft mudstones laminated with grey, fine-grained siltstones. A calcareous or gypsiferous coating is sometimes seen on this outcrop.

5. Tom Member

This unit contains the main Fin showing on Fin Creek and mainly consists of laminated black carbonaceous mudstones and grey siltstones. The outcrops are coated with hydrozincite or gypsum and are strongly foliated. Galena and sphalerite lenses are found within this unit and are commonly associated with limy lenses. No mineralized outcrops of this type were found during the 1981 exploration program.

V. STRUCTURE

The structure of the Fin property is relatively simple with the beds largely striking to the northwest and dipping gently to moderately to the southwest. Foliation mostly parallels bedding and the whole sequence of beds is folded into gentle east-west trending folds. Faults are abundant in the area, but most have been interpreted from airphoto linears.

VI. MINERALIZATION

Galena and sphalerite have only been found in the area of the main Fin showing to-date. Outside of this area the Chert Member is the only unit in which any significant minerals were found. This unit contains minor disseminated pyrite, pyrite and barite nodules, and barite lenses. One barite lens measured 15 cm wide by 3 m long. Table 1 shows the results for four rock analyses for this unit.

VII. GEOCHEMISTRY

A. Analytical Procedure

The 1981 Fin geochemical program consisted of soil sampling (50 m spacing on 2 km lines spaced 500 m apart), silt sampling and rock chip sampling. All samples were shipped to Cominco Exploration Research Laboratory in Vancouver, B.C. for analyses. In total, 859 soil, 36 silt and 92 rock samples were analysed. Copper, lead, zinc, and silver were determined by aqua regia digestion followed by atomic absorption. Barite was determined by x-ray fluorescence.

TABLE 1

Chert Member Rock Analyses

	<u>Cu</u> ppm	<u>Pb</u> ppm	<u>Zn</u> ppm	<u>Ag</u> ppm	<u>Ba</u> %	<u>Outcrop Type</u>
TF-11	96	7	164	<.4	10.67	Siltstone-chert-mudstone
TF-12	31	<4	30	0.7	20.91	Siltstone-chert-mudstone
TF-18	60	<4	83	1.5	4.04	Chert-mudstone-siltstone
TF-20	15	<4	26	<.4	42.33	Chert-siltstone-mudstone

B. Results

Sampling difficulties encountered during the 1981 exploration program were extensive swamps, a volcanic ash layer, permafrost and the Yusezyu River flood plain. These factors should be kept in mind when reviewing the results as they may have caused the suppression or omission of some anomalies.

Results for copper, lead and zinc are shown on Plate 4, 5 and 6, respectively with any anomalous silver values being added to the lead values. For copper, the top five percent of values are marked by a threshold of 30 ppm which is considered to be too low to be of significance. No useful pattern is developed at all using this threshold as copper is evidently depressed within the sampled area.

For lead, an anomalous threshold of 30 was used to contour the soil results. This results in an anomaly 3000 m long by up to 1500 m wide. This anomaly is found overlying river silts of the Yusezyu River Valley and is traceable to and up Fin Creek where there is known mineralization.

Zinc soil results show the same pattern as lead and are also believed to reflect the known mineralization on Fin Creek. There is one small three sample open anomaly on the western end of lines 250⁰N which is not a transported anomaly. Also in this same area are anomalous rock samples and an anomalous silt sample from a tributary of Fin Creek (969 ppm Zn). There are also a few anomalous lead values in both soils and rocks in this area and along with the zinc anomalies may be reflecting the eastern boundary of the Fin mineralization.

For silver there are only two areas where any significant values are found. One is overlying chert pebble conglomerates and coarse-grained quartz arenites at about 1050 m west on line 50N. The other silver anomaly is coincident with the above mentioned lead-zinc anomaly found in the vicinity of the western end of line 250N.

VIII. CONCLUSION

The Fin claims are underlain by shallow water clastics and deeper water turbiditic sequences of the Lower to Upper Devonian Besa River Formation.

A coincident lead-zinc anomaly in the Yusezyu River flood plain is a transported anomaly and reflects known mineralization on Fin Creek. Another minor coincident lead-zinc-silver anomaly at the western end of line 250 N possibly reflects the extension of this mineralization and further work in the form of geophysical surveys should be conducted to determine this.

Report by: T.W. Hodson
T.W. Hodson,
Geologist

Endorsed by: A.B. Mawer
A.B. Mawer,
Senior Geologist

Approved for
Release by: G. Harden
G. Harden, Manager
Exploration
Western District

Distribution:
Mining Recorder (2)
Western District (1)
TWH (1)

TWH/vmk

APPENDIX A

STATEMENT OF EXPENDITURES

FIN CLAIMS

JULY 12 TO AUGUST 11, 1981

Salaries - T.W. Hodson - 21 days @ \$156.93/day	\$ 3,295.00
M.L. Serack - 26 days @ \$124.08/day	3,226.00
B.L. Crich - 21 days @ \$ 87.12/day	1,829.00
N.R. Sewell - 24 days @ \$ 80.96/day	1,943.00
Equipment	4,484.00
Geochemistry - Soil and silts @ \$3.50/sample	3,132.00
92 rocks @ \$5.00/sample	460.00
Transportation - fixed wing	2,663.00
- helicopter	1,300.00
- truck	831.00
- freight	45.00
- fuel	487.00
Domicile - 92 man days @ \$24.48/day	2,252.00
Yukon Expediting	<u>605.00</u>
	<u>\$26,552.00</u>




T.W. Hodson
Geologist

APPENDIX B

A F F I D A V I T

I, Terence W. Hodson, of the Municipality of Surrey in the Province of British Columbia, make oath and say:

1. That I am employed as a geologist by Cominco Ltd., and as have a personal knowledge of the facts to which I hereinafter depose;
2. That annexed hereto and marked as Appendix A to this, my Affidavit is a true copy of expenditures incurred in connection with a geological and geochemical program carried out on the Fin mineral claims;
3. That said expenditures were incurred between the 12th day of July and the 11th day of August, 1981 for the purpose of mineral exploration on the above noted claims.



T.W. Hodson
Geologist

Dated this 29th day of September, 1981
at Vancouver, British Columbia

APPENDIX C

STATEMENT OF QUALIFICATIONS

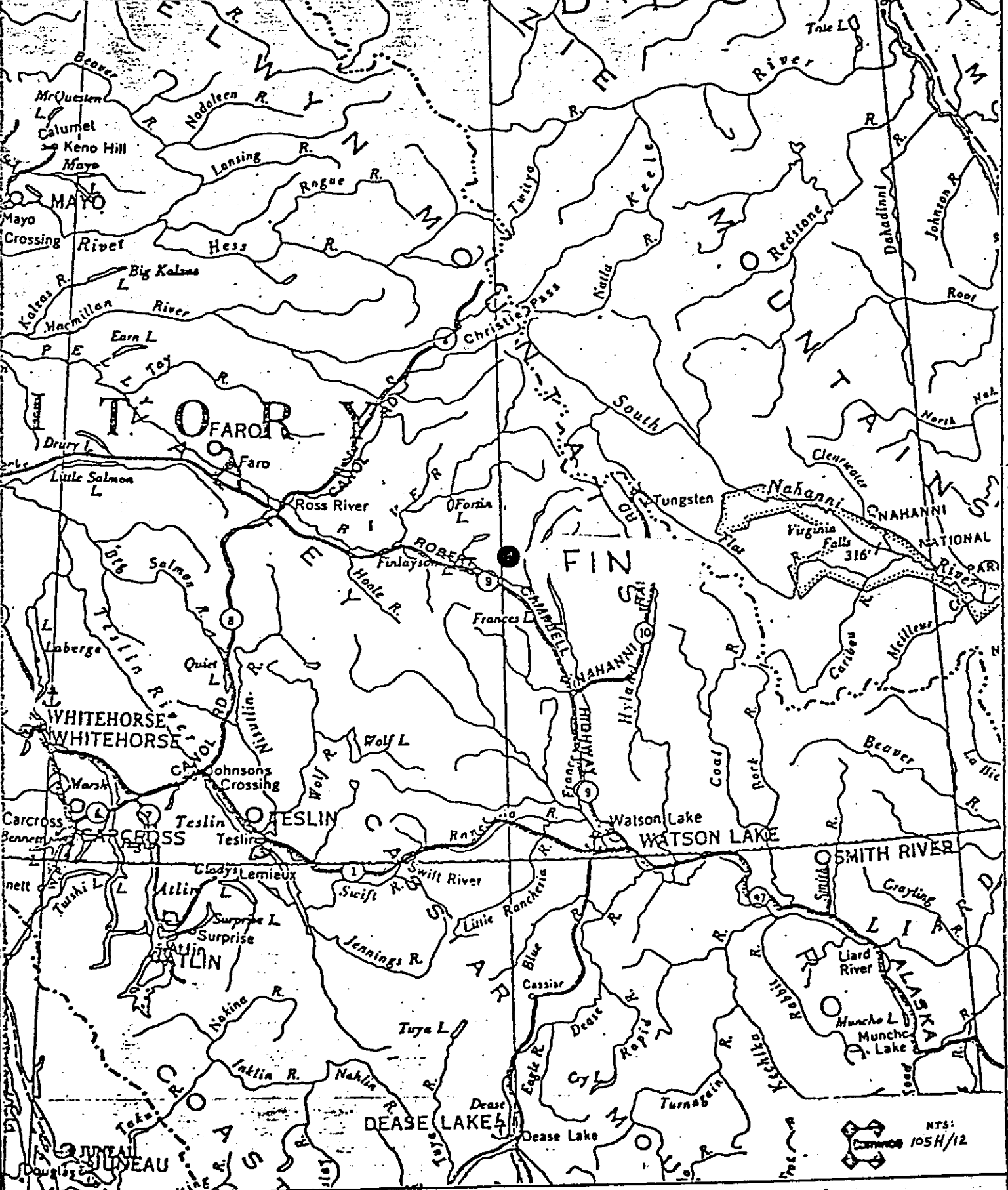
I, Terence W. Hodson, of the Municipality of Surrey in the Province of British Columbia, hereby certify:

1. That I am a geologist residing at 1773 Southmere Crescent, Surrey, British Columbia, with a business address at 700 - 409 Granville Street, Vancouver, British Columbia.
2. That I graduated with a B.Sc., in geology from the University of British Columbia in 1980.
3. That I have practised geology with Cominco Ltd. from May, 1980 to the present.



T.W. Hodson
Geologist

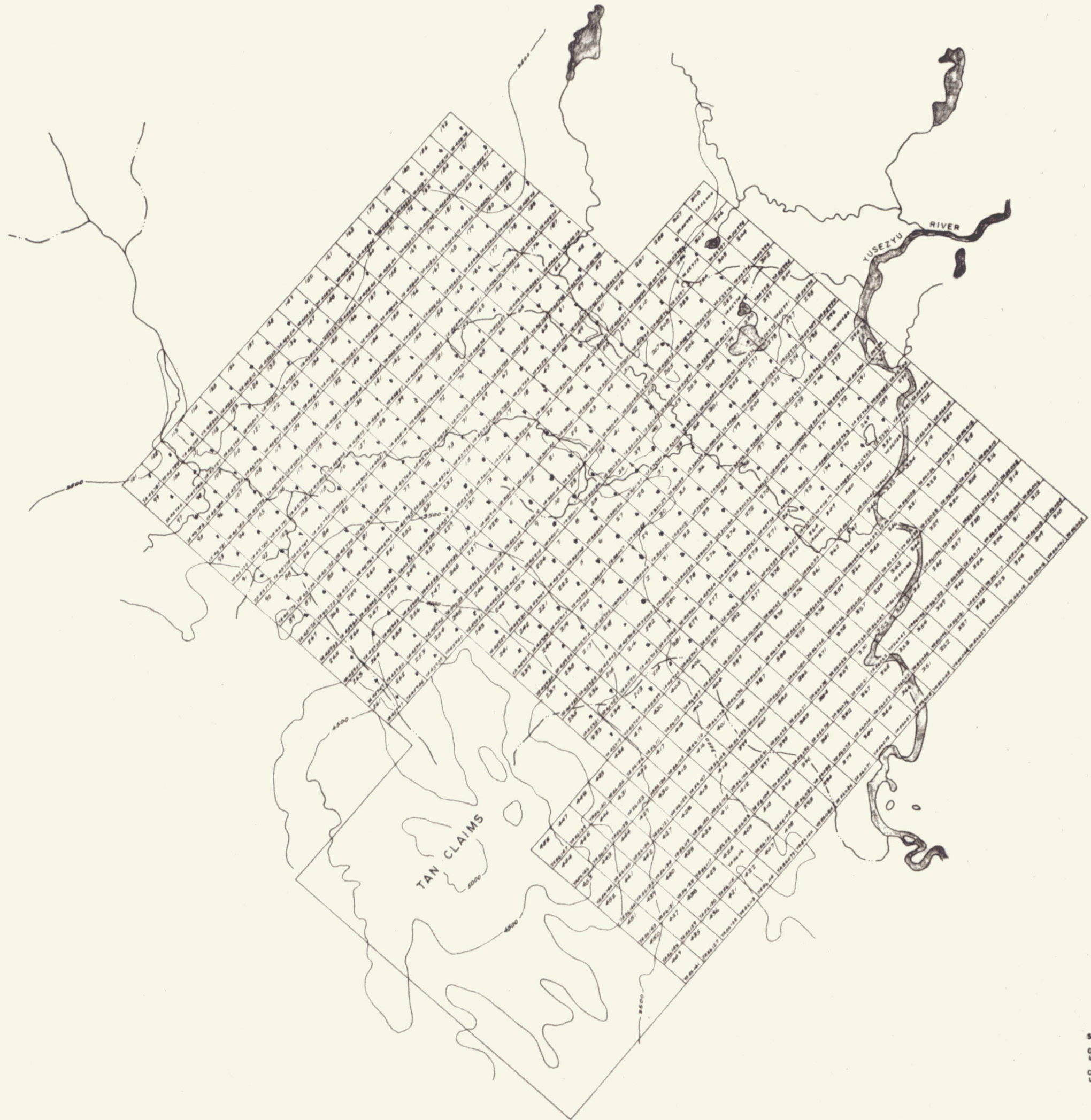
Dated this 29th day of September, 1981
at Vancouver, British Columbia.



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Prepared by	Date	Revised by	Date

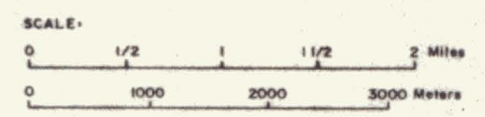
Location Map FIN Property

Scale: 1:3,000,000 Date: Sept., 1961 Plate: 81-1



TAN CLAIMS

090877



Note repeat of claim names FIN 269 - FIN 282. These claims have been accepted in this form by the Watson Lake mining recorder, Patty McCloud, and are considered valid. Oct 15, 1980.

FIN PROPERTY		105H/12
Drawn by:	Traced by: <i>Ag</i>	FIN CLAIMS 1-455
Checked by:	Indexed by:	
		Scale: 1" = 1 mile Date: October, 1980 Plate: B1-2



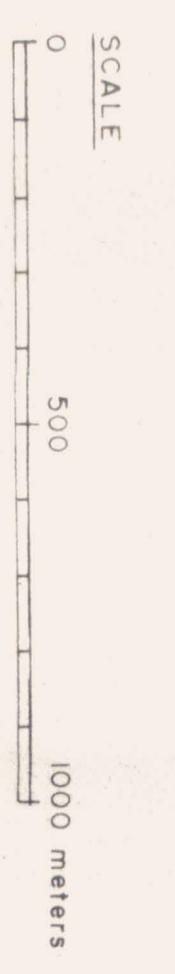
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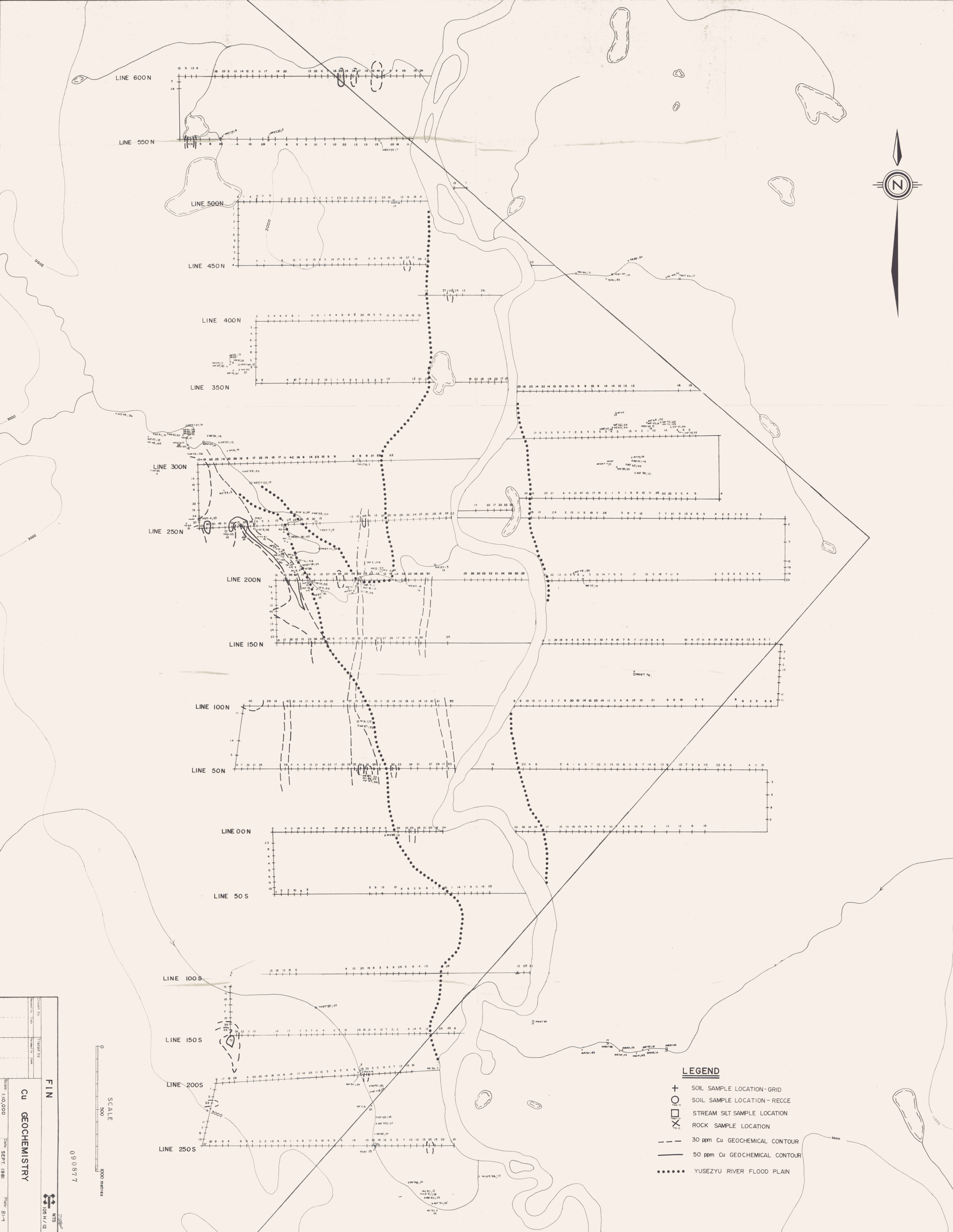
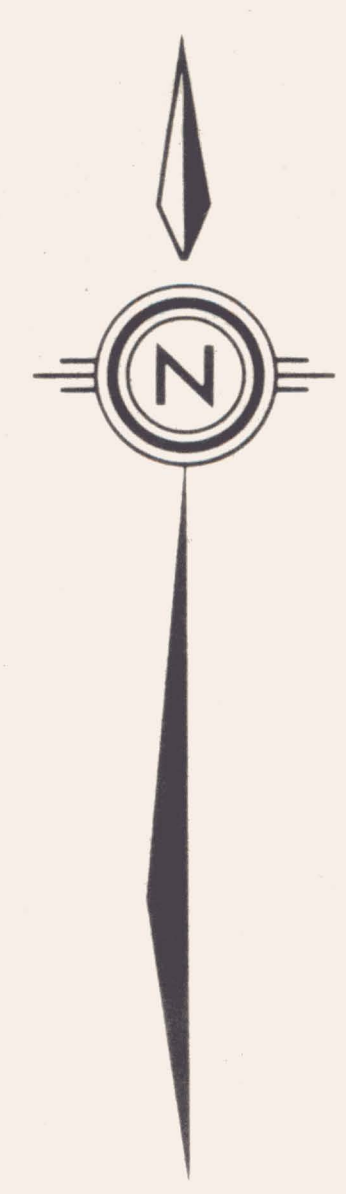
BESA RIVER FORMATION

- 5 **TOM MEMBER**
Rusty brown weathering laminated black mudstones and grey siltstones.
- 4 **CHERT MEMBER**
Rusty weathered grey, green, white and black thin bedded cherts interbedded with grey to black siltstone and black mudstone. Minor grey to black limestone. May contain pyrite nodules and barite nodules and lenses.
- 3 **CONGLOMERATE MEMBER**
Chert pebble conglomerate and grey, coarse-grained quartz arenite.
- 2 **LOWER LAMINITE MEMBER**
Interbedded and laminated mudstones, siltstones, and sandstones. Mudstones are black and rust stained, siltstones are grey, fine grained, and sometimes rust stained, and the sandstones are grey and medium grained.
- 1 **SILICEOUS MUDSTONE MEMBER**
Dark grey to light green, finely laminated to bedded siltstone with minor associated black, strongly foliated mudstone and black limestone.

- GEOLOGICAL CONTACT (defined, approximate)**
- FAULT (defined, approximate)**

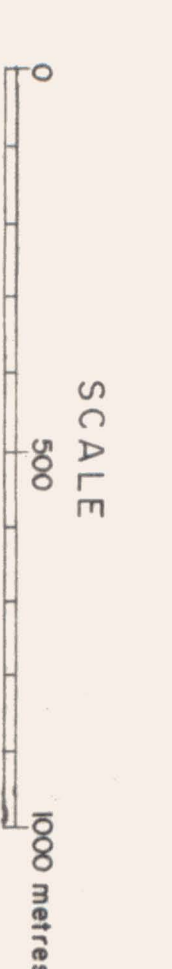
Checked By	
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Revised By	
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Date	SEPT 1981
Plate	BL-3
FIN	
GEOLOGY	
090877	



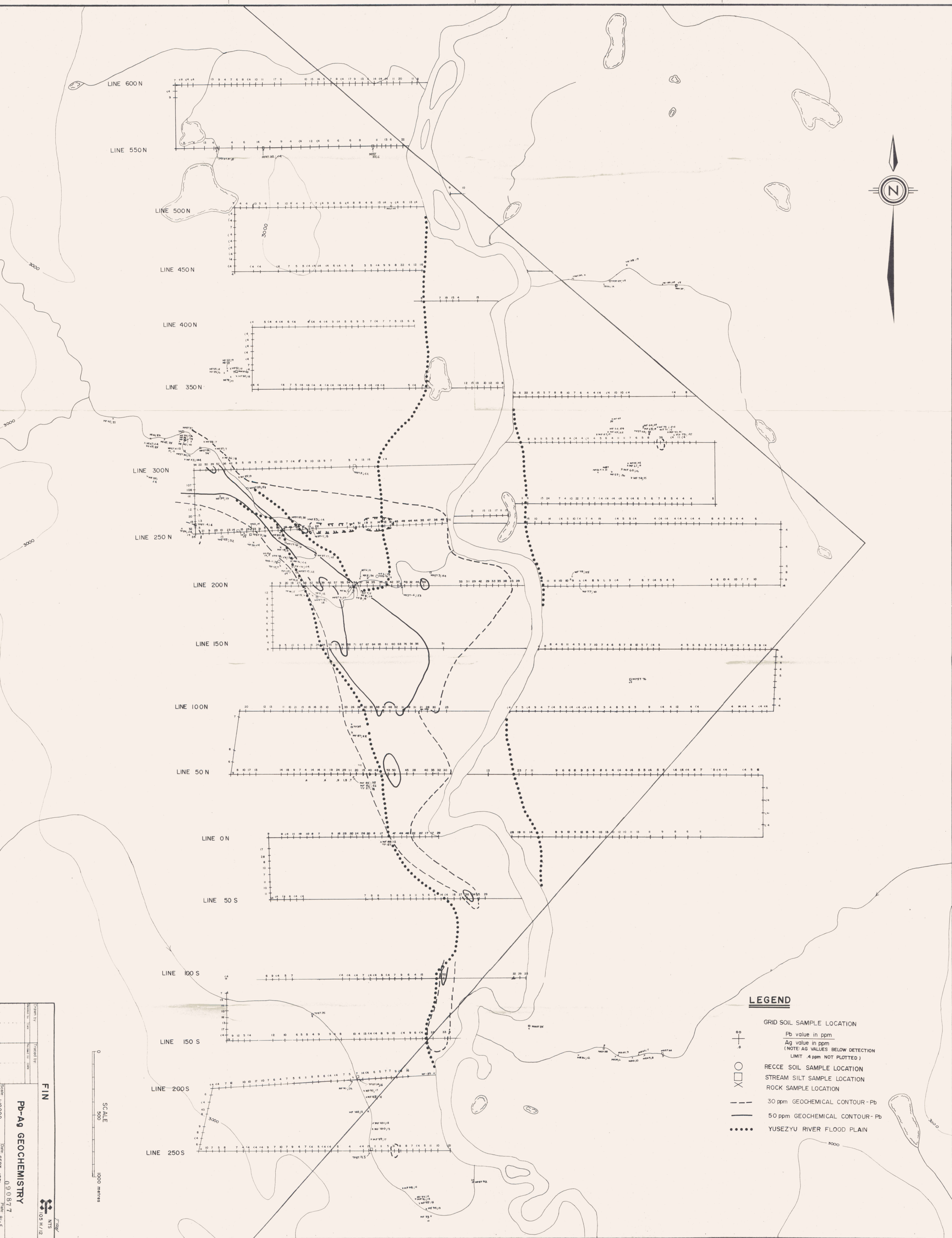
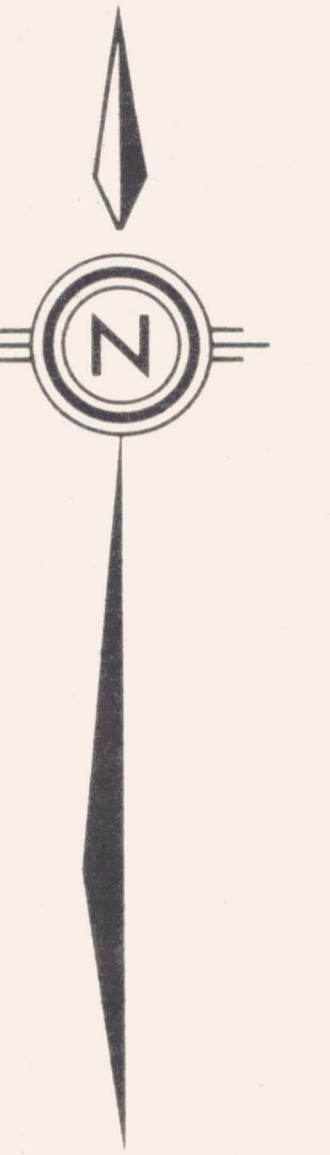


LEGEND

- + SOIL SAMPLE LOCATION - GRID
- SOIL SAMPLE LOCATION - RECCE
- STREAM SILT SAMPLE LOCATION
- X ROCK SAMPLE LOCATION
- - - 30 ppm Cu GEOCHEMICAL CONTOUR
- 50 ppm Cu GEOCHEMICAL CONTOUR
- YUSEZYU RIVER FLOOD PLAIN



FIN
Cu GEOCHEMISTRY
Scale: 1:10,000
Date: SEPT. 1981
File: 81-4
NTS
105 H / 12

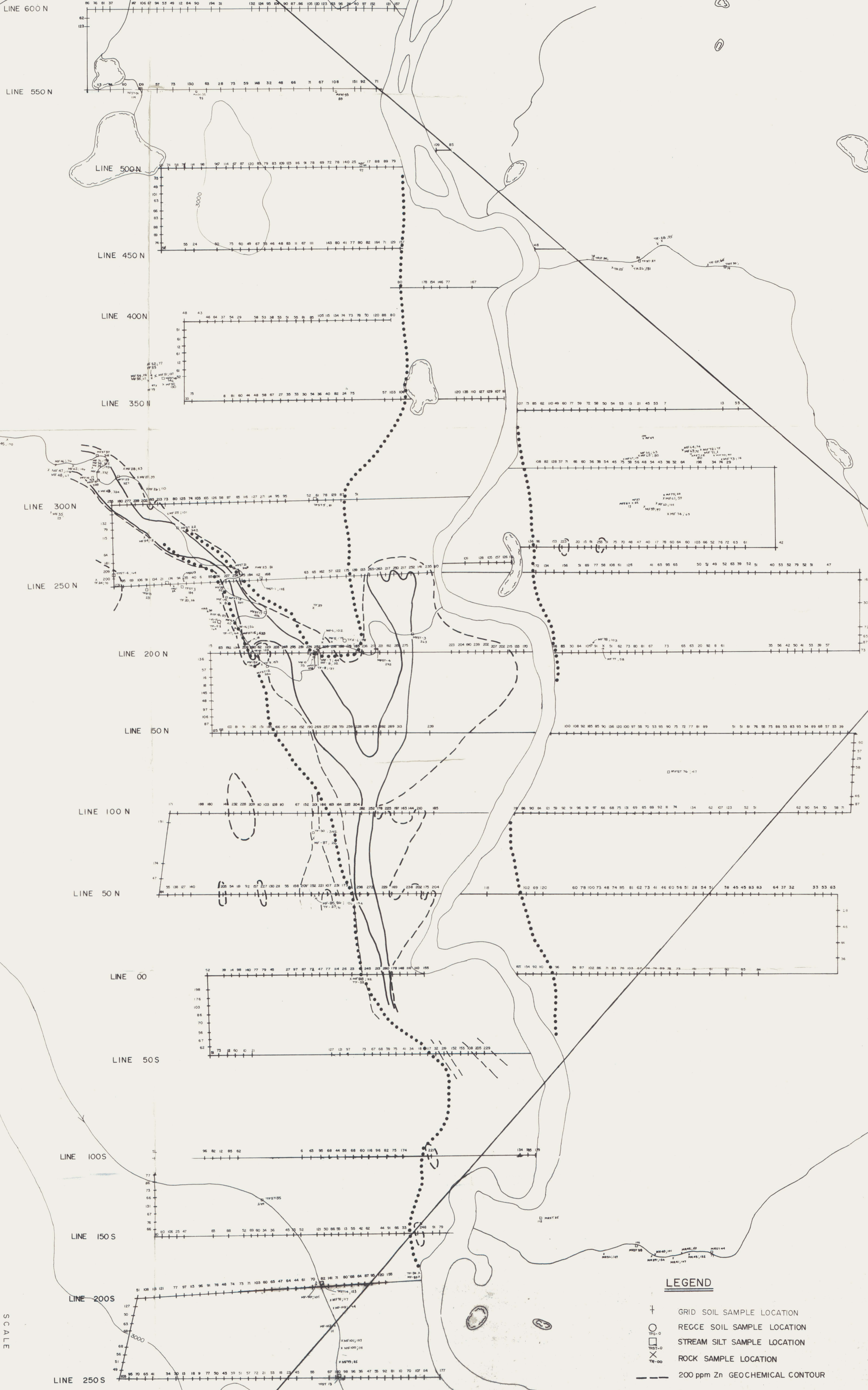


LEGEND

- GRID SOIL SAMPLE LOCATION
- Pb value in ppm
- Ag value in ppm
- (NOTE: AG VALUES BELOW DETECTION LIMIT .4 ppm NOT PLOTTED)
- RECCE SOIL SAMPLE LOCATION
- STREAM SILT SAMPLE LOCATION
- ROCK SAMPLE LOCATION
- 30 ppm GEOCHEMICAL CONTOUR - Pb
- 50 ppm GEOCHEMICAL CONTOUR - Pb
- YUSEZYU RIVER FLOOD PLAIN

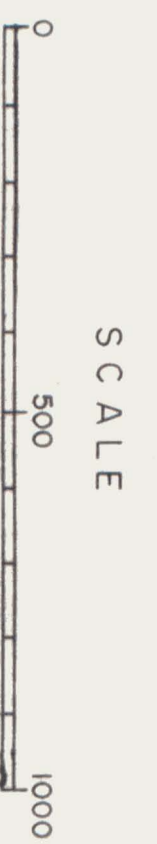
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Date of Survey 1984
Project No. 090877
Phase 2-5
FIN
Pb-Ag GEOCHEMISTRY
NTS
10/11/12

SCALE
0 500 1000 METRES



LEGEND

- + GRID SOIL SAMPLE LOCATION
- REGCE SOIL SAMPLE LOCATION
- STREAM SILT SAMPLE LOCATION
- ⊗ ROCK SAMPLE LOCATION
- - - 200 ppm Zn GEOCHEMICAL CONTOUR
- 250 ppm Zn GEOCHEMICAL CONTOUR
- YUSEZYU RIVER FLOOD PLAIN



FIN
Zn GEOCHEMISTRY
090877
NTS
1:10,000
SEPT. 1981
8/16