

84-1305-13266
10/85

PHOTOINTERPRETATION, GEOCHEMICAL SURVEY & TRENCHING
ON THE
FRENCH PEAK SILVER PROPERTY

Silverado Group: Silverado, Eldorado, Mag Hi,
FP-1, 3, 4, 6

Tsezakwa Group: Silver Iron, FP-2, 5

Omineca Mining Division
93M/7W

55° 21' N 126° 48' W

OWNER & OPERATOR: Silverado Mines Ltd.

AUTHOR: A.M. Homenuke, P.Eng. (Geol.)

SUBMITTED: January 9, 1985

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

13,266

Tri-con Mining Ltd.

VANCOUVER, B.C. CANADA

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6.	" " - Copper	" " "
7.	" " - Iron	" " "
8.	" " - Lead	" " "
9.	" " - Silver	" " "
10.	" " - Zinc	" " "
11.	Backhoe trenching	

I. INTRODUCTORY NOTES

LOCATION AND ACCESS

The claims are located southeast of French Peak, 10 km. (6 mi.) west of the north end of Babine Lake and 65 km (40 mi.) northeast of Smithers, B.C., in the Omineca Mining Division (Fig. 1).

The property is reached by gravel roads from Smithers along the route to Smithers Landing, the Nilkitkwa Forest Access Road and a mine road constructed in 1976, a total distance of 120 km. (75 mi.).

PHYSICAL FEATURES

Elevation on the property ranges between 975 metres and 1,200 metres (3,200 - 5,600 ft.). On the north and south the terrain is mountainous with more moderate slopes towards Tsezakwa Creek which flows easterly across the centre part.

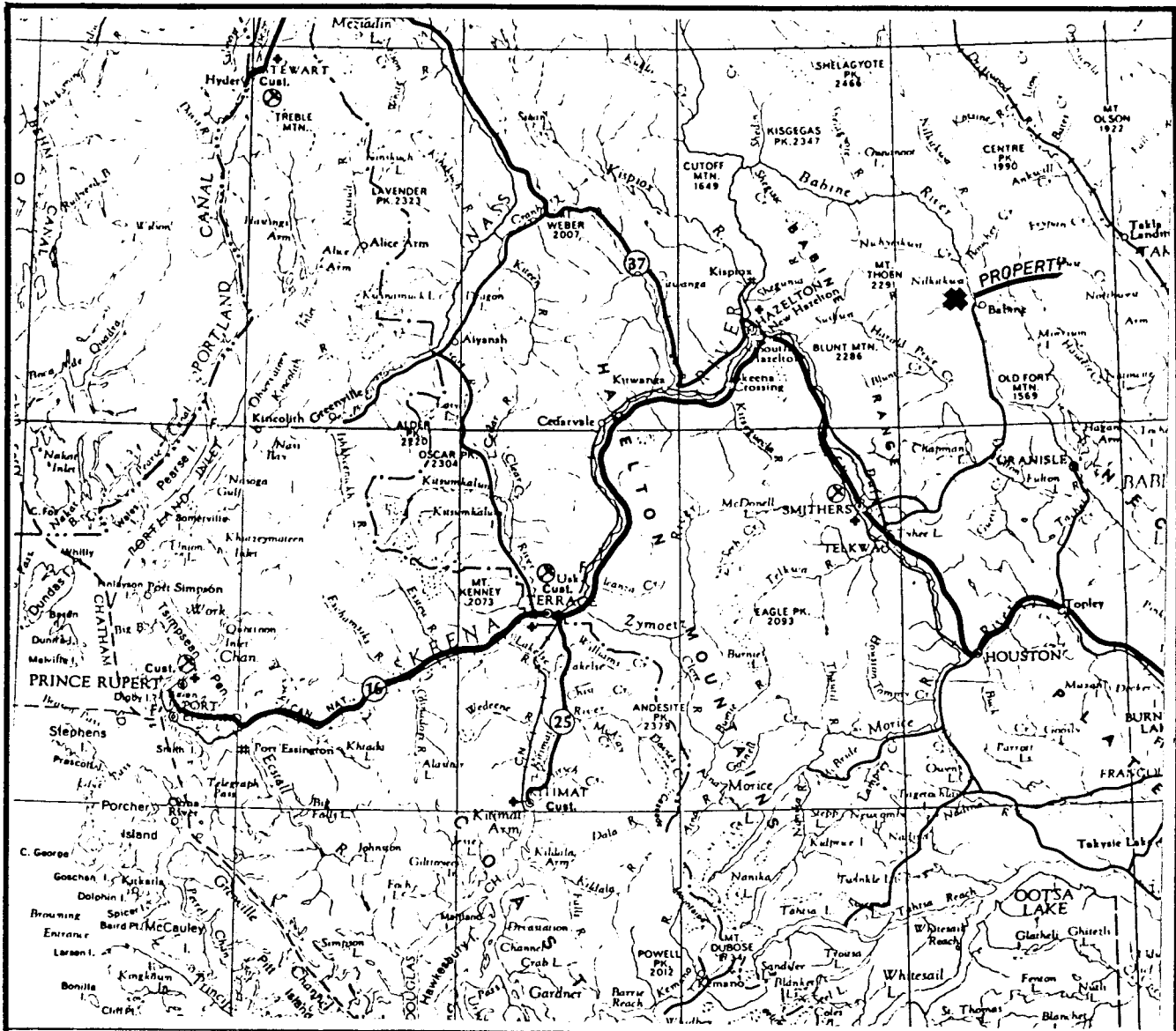
Outcrop is generally scarce, with the major exposures being in creek banks and topographic highs. Further exposures have been provided by trenching.

Rainfall is relatively low, but snowfall exceeds 1.5 metres most years and last from late October until May.

Vegetation consists mainly of sub-alpine fir, with spruce in flatter areas and poplar and alder near the main creeks. Old burnt areas are presently covered with a dense regrowth.

CLAIMS AND OWNERSHIP

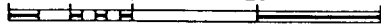
The French Peak Silver Property consists of 10 claims, totalling 112 units. The property was expanded from 30 to 112 units in the Fall of 1983. The following table lists the claim data.



Kilometres 20 0 20 40 60 80



Miles 20 10 0 20 40



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FRENCH PEAK SILVER PROPERTY

OMINECA MINING DIVISION, B.C.

LOCATION MAP

FIGURE 1

Table 1 - Claims

<u>NAME</u>	<u>RECORD #</u>	<u>UNITS</u>	<u>RECORD DATE</u>	<u>YEAR OF LOCATION</u>
Silverado	298	9	May 26	1976
Eldorado	299	9	May 26	1976
Mag Hi	348	6	July 9	1976
Silver Iron	349	6	July 9	1976
FP-1	5862	10	Oct 6	1983
FP-2	5863	20	Oct 6	1983
FP-3	5864	15	Oct 6	1983
FP-4	5865	10	Oct 6	1983
FP-5	5866	15	Oct 6	1983
FP-6	5867	12	Oct 6	1983

The claims are shown on Fig. 2 and were regrouped in 1984 as follows:

Silverado Group - Silverado, Eldorado, Mag Hi, FP-1,
FP-3, FP-4, FP-6

Tsezakwa Group - Silver Iron, FP-2, FP-5

These claims are owned by Silverado Mines Ltd.

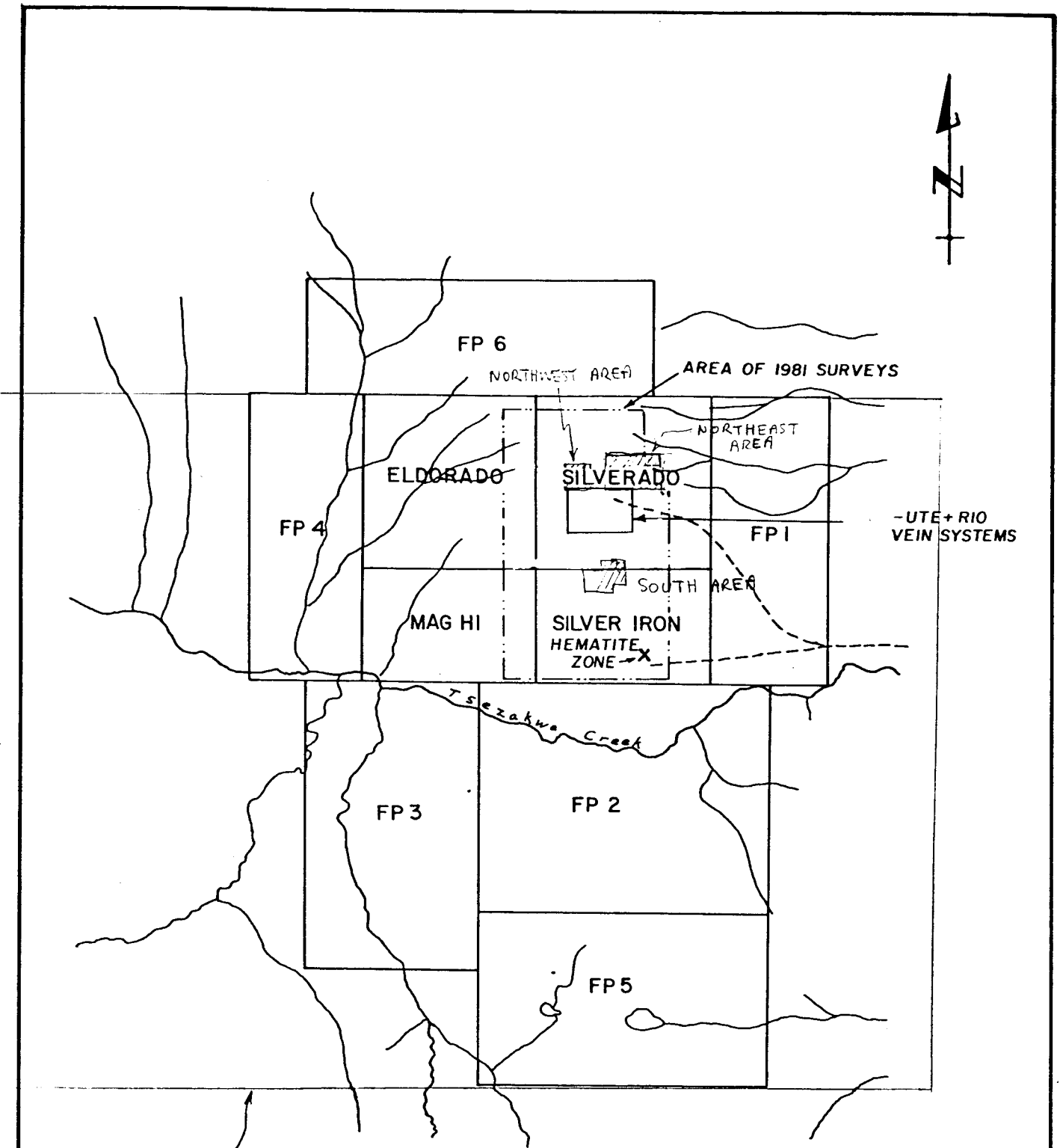
HISTORY

The first mineralization was discovered by a Rio Tinto exploration party in 1955. In 1956, they explored the area of the Ute and Rio Vein Systems with trenching, 1722 feet of diamond drilling in 12 holes, mapping and surface sampling.

Sometime in the 1960's, cat trenching to the south led to the discovery of the Hematite Zone.

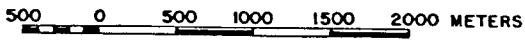
In 1964, S. Homenuke and H. Gilleland leased the property and shipped a total of 24 tons of hand-sorted ore. In 1974, S. Homenuke and J. Sargent, having purchased the property, shipped a further 28.4 tons. The 52.4 total tons yielded over 10,500 ounces of silver, plus copper, lead, zinc and gold.

Renniks Resources Ltd. optioned the property in 1974 and carried out a program of mapping, sampling, trenching and electromagnetic surveying (Hogan & Homenuke, 1975). Renniks allowed the option to lapse, due to commitments elsewhere.



AREA of PHOTOINTERPRETATION
FIG 3 & 4

Part of 93M/7W



SILVERADO MINES LTD.
FRENCH PEAK SILVER PROPERTY
CLAIM & INDEX MAP

FIG. 2

In 1976, Silverado Mines Ltd. optioned the property and commenced a drilling program recommended by M.K. Lorimer, P.Eng. (1976a). Thirty (30) holes were drilled, totalling 2,646 feet. Lorimer (1976b) reported on the progress of this drilling. Work also included construction of an access road, trenching, detailed mapping and magnetometer surveying and minor reconnaissance. All work to the end of 1976 was summarized by the writer (Homenuke, 1977).

From 1977 to 1980, the property was optioned from Silverado to Mohawk Oil Co. Ltd. To cover assessment requirements, some linecutting and a petrographic study (Homenuke, 1979) were done. In 1980, by agreement, Mohawk was required to have the property in production, at least on a limited basis. To this end, metallurgical testing (Dawson, 1980; McElroy, 1980), a preliminary environmental analysis (Jenkins, 1980), and a preliminary feasibility analysis (Homenuke, 1980) were done. The project had reached the point of initial government permit applications when Mohawk, due to other commitments, returned the property to Silverado.

During the 1981 field season, Silverado, through Tri-Con Mining Ltd., and under the writer's direction, carried out a program of geochemical sampling and geophysical surveying (Homenuke, 1981a). Following interpretation of this data an updated compilation report was prepared (Homenuke, 1981b).

In 1983, a diamond drill hole and backhoe trenching were completed.

GEOLOGY

Over the past few years, the geology of the French Peak area has been variously interpreted. The most recently published information is on G.S.C. Open File Map No. 720 (Richards, 1980). French Peak is shown to be underlain by Hazelton Volcanics of Jurassic Age on the southeast, by

Brian Boru Volcanics of Cretaceous Age on the northeast, by Bowser Group sediments of Upper Jurassic to Lower Cretaceous Age in the northwest, and by Bulkley Intrusions of Late Cretaceous Age in the central part. The Babine Graben, with its porphyry copper deposits, lies a few kilometers to the east.

The primary deformation is by block faulting, oriented northerly, westerly and northwesterly. Four of the five known sulfide mineral occurrences in the area are along one of the northwesterly trending faults. These include the Ute and Rio Vein Systems and the Hematite Zone of the French Peak Silver Property, and an occurrence of silver-bearing veins in sediments on the northwest slope of French Peak (Richards, 1965; Baker, 1974). The fifth occurrence is located near the top of French Peak and consists of chalcopyrite, sphalerite, galena, and tetrahedrite in a multi-phase porphyry intrusion (G.E.M., 1971). Several other porphyry-type occurrences have been noted in the general area (G.E.M., various).

ECONOMIC ASSESSMENT

The production record and drilling results indicate that the French Peak Silver Property has potential as a high-grade silver producer. Some of the drilling and mapping indicates possibilities for larger tonnage, lower grade mineralized zones.

PRESENT WORK AND DISTRIBUTION

During the 1984 field season, detailed geochemical sampling was carried out to fill in areas of interest indicated by the 1981 program. A total of 154 samples were taken on the Silverado and Mag Hi claims. Backhoe trenches were dug to test some of the anomalies outlined and also to gain further information on the Hematite zone. Several samples were taken for

assay. A fracture analysis based on photointerpretation was done over the area of all but the FP-6 claim.

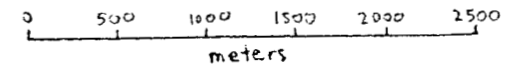
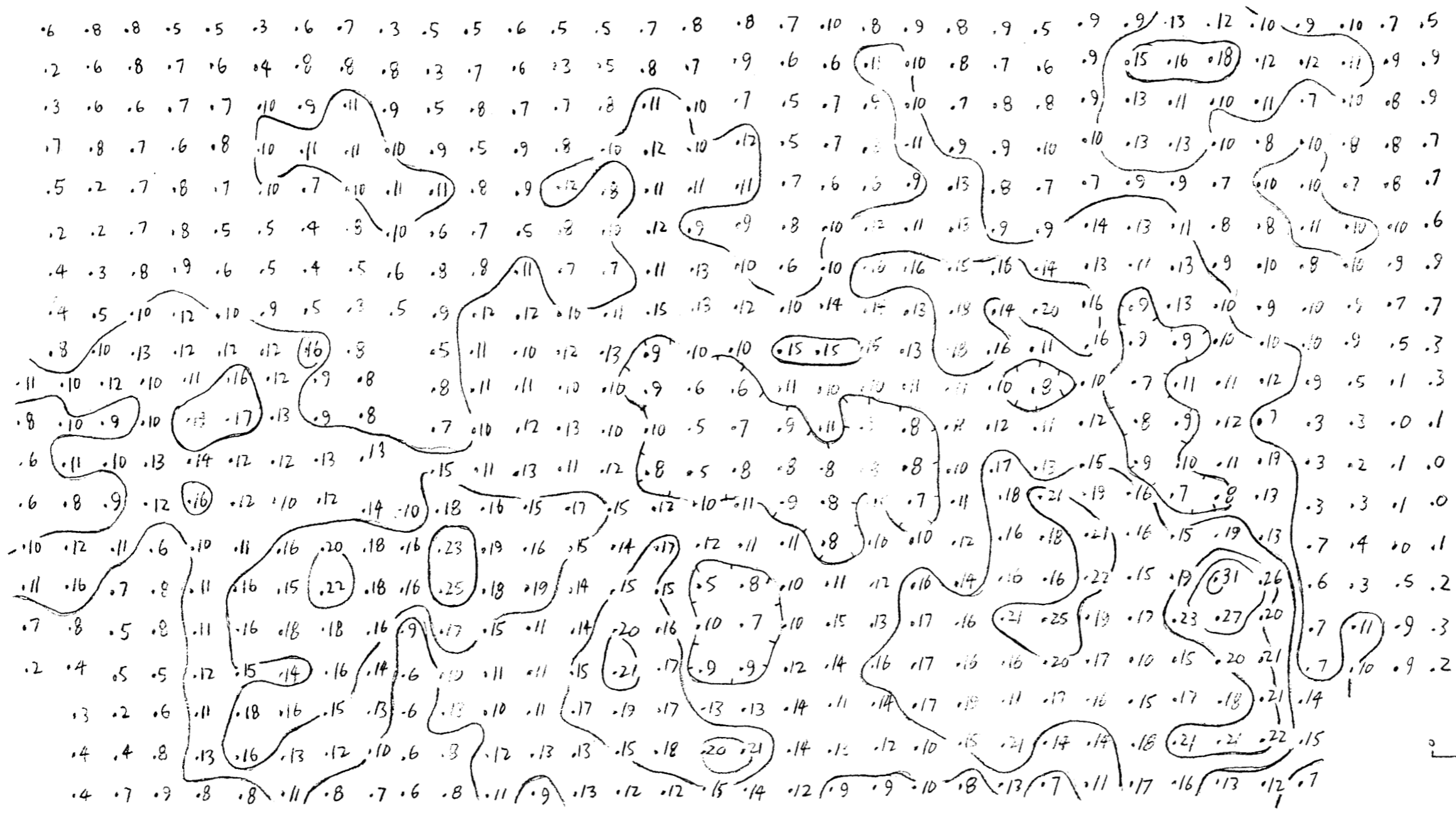
II. PHOTOINTERPRETATION

PROCEDURE

A series of B.C. Government airphotos were selected to cover most of the property with coverage east and west of the claims. The area covered is shown on Fig. 2 and the photos are indexed on Fig. 4. Linear features representing possible fractures were marked on a clear overlay. A regular grid consisting of squares about 1000 feet on a side (300 metres) was laid over the photo. The grid was smaller than the photo by the approximate amount of the side lap between the photos surveyed. A circle of the same radius as sides of the square was then centered on each grid point and all the fractures entering the circle and within the grid were counted. This number was plotted at the center point on a reduced copy of the same grid. This technique provides a smoothed plot of fracture density (moving average). The smaller grids were then mosaiced to provide a plan for contouring. Adjoining side members were added together and factored downwards intuitively to avoid photo joint anomalies. The numbers around the edge of the plan were factored upwards to allow contouring of the total area. The contoured data are shown on Fig. 3. The fracture patterns for each photo are shown in Appendix I.

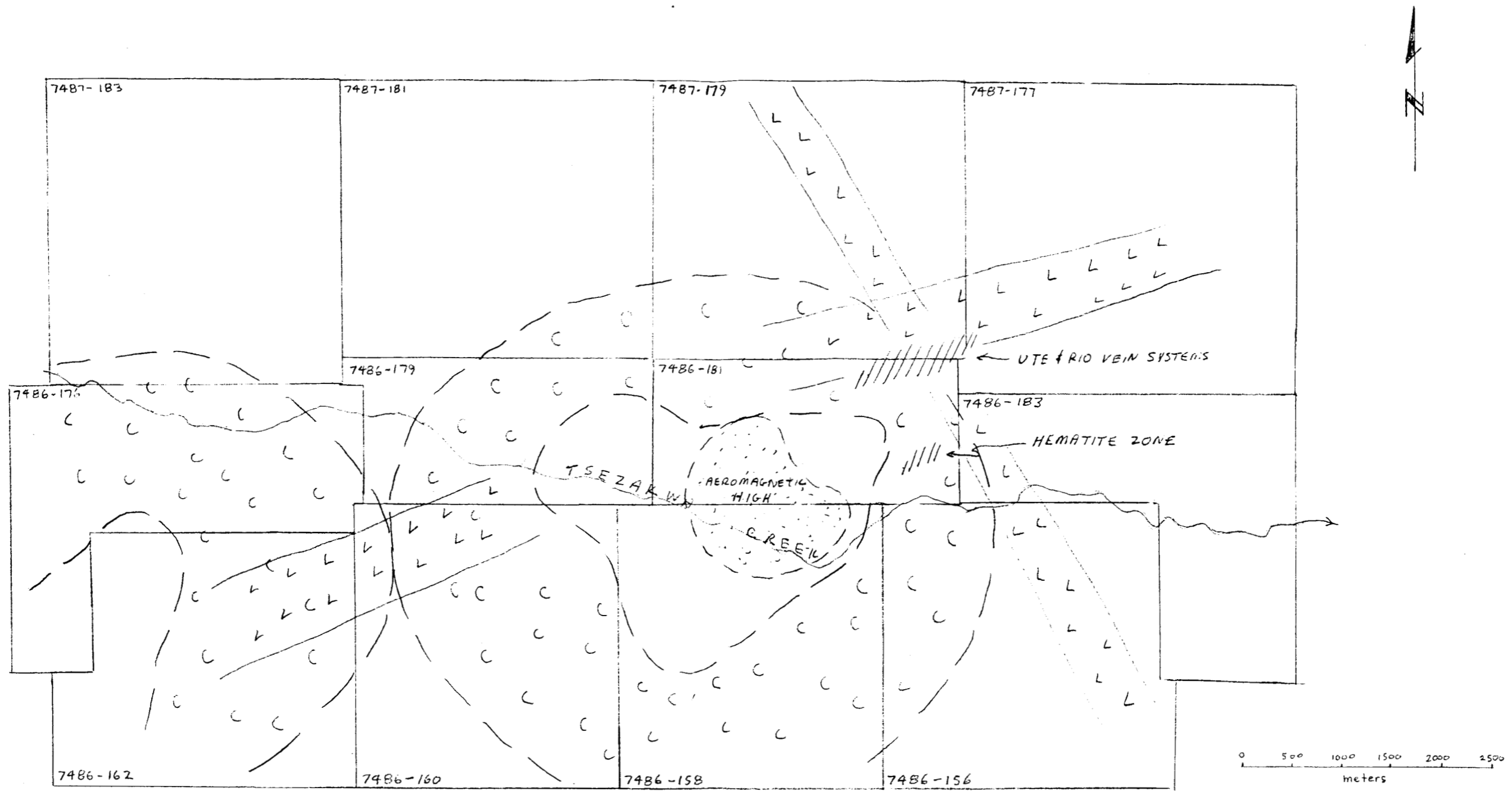
DISCUSSION OF RESULTS

The most prominent features are two strong linear fracture density highs crossing in the area of the Ute and Rio Vein Systems and one and possibly two doughnut shaped high fracture density areas. The Hematite Zone is along one of the same lines as the two veins. The complete circular high (See Fig. 4) near the center of the map area surrounds an aeromagnetic high and possibly represents fracturing related to an intrusive and provides a target for further exploration.



•16 No. of fractures in unit area
 Contour Intervals
 30 ———
 25 ———
 20 ———
 15 ———
 10 ———

SILVERADO MINES LTD.
 FRENCH PEAK SILVER PROPERTY
 PHOTO INTERPRETATION
 CONTOURED PLAN
 of
 FRACTURE DENSITY
 Prepared by: A.M. Homenuke, P.Eng.
 TRI-CON MINING LTD. OCT. 1984 FIG. 3



7487-179 Airphoto number
 C C C Circular trend of high density
 L L L Linear trend of high density

SILVERADO MINES LTD.
 FRENCH PEAK SILVER PROPERTY
 PHOTO INDEX SKETCH
 &
 PRELIMINARY INTERPRETATION
 of
 FRACTURE DENSITY
 Prepared by: A.M. Homelake, P.Eng.
 TRI-CON mining LTD. OCT 1989 FIG.4

The second partial circular feature on the southwest part of the map may represent a similar situation and as it is partially off the claims should be investigated before this report becomes public.

III. GEOCHEMICAL SURVEY

PROCEDURE

154 soil samples were taken from the "B" horizon at 25-metre intervals on a fill-in basis in three areas selected from the 1981 survey. These areas are northwest, northeast and south of the Ute and Rio Vein Systems. The samples were placed in kraft envelopes and delivered to Acme Labs in Vancouver, B.C. At the lab they were dried at 60°C and sieved to -80 mesh. 0.5 gram of sample was digested in hot aqua regia for one hour, then diluted to 10 ml. with water. Analysis was by ICP for 30 elements of which the results for the following 10 were purchased - copper, lead, zinc, silver, arsenic, iron, antimony, uranium, molybdenum and manganese. Only the first six were plotted (Fig. 5 - 10) together with previous sample results in the three areas.

DISCUSSION OF RESULTS

Northwest Area - A sharply defined multielement anomaly trends westnorthwesterly across this area with a single very high sample near the southwest corner. Trenching in this area yielded the following results:

	<u>Cu%</u>	<u>Pb%</u>	<u>Zn%</u>	<u>Ag oz/t</u>	<u>Au oz/t</u>
10 cm. Massive chalcopryrite	7.31	.83	.11	17.83	2.020
Hematite gouge	1.22	.16	.06	3.04	.235

Northeast Area - Multielement anomalies in this area indicate a continuation of the Ute Vein System to the northeast and the possible presence of further mineralization. Some trenching was done but bedrock could not be reached in the areas of interest.

South Area - This area shows a multielement anomalous trend 500 meters long which parallels the Ute Vein System and a 150 meter square anomaly in the center of the area which is very high in zinc, lead, silver and copper and moderately high in arsenic and iron. This may represent something other than vein type mineralization. Due to snow conditions time did not permit trenching this season.

IV. BACKHOE TRENCHING

Fig. 11 shows the location of backhoe trenches and the sizes of the trenches. The results from the northwest and northeast areas were discussed in the previous section. Trenching around an existing cat trench on the Hematite Zone expanded the known mineralization to an area over 10 meters wide. A random chip sample from this area assayed as follows:

<u>Cu%</u>	<u>Pb%</u>	<u>Zn%</u>	<u>Ag oz/t</u>	<u>Au oz/t</u>
.43	.05	.02	1.24	.046

V. CONCLUSIONS

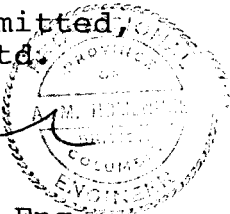
Photointerpretation has shown that mineralization occurs in areas of high fracture density, and that there is a possible intrusive represented by a doughnut-shaped fracture density high surrounding an aeromagnetic high.

Follow-up geochemical sampling delineated several anomalies for further exploration. Trenching on one of these yielded an assay over 2 ounces gold per ton indicating that the property has significant gold as well as silver potential. Trenching on the Hematite Zone indicated that more widespread low-grade mineralization may occur in this area.

Respectfully submitted,
Tri-Con Mining Ltd.



A.M. Homenuke, P.Eng.
Senior Vice-President



COST STATEMENT

Geochemical Sampling August 22 - 24, 1984

Party Chief	3 Days @ 175	475.00
Helper	3 days @ 80	240.00
A. Homenuke, P.Eng.	1 day site examination	
	1½ days report, maps	
	2½ days @ 400	1,000.00
Analysis	154 samples, 10 element ICP	
	@ 5.60	862.40
Room & board	7 man days @ 35	245.00
Vehicle	4 days @ 50	200.00
Miscellaneous supplies, secretarial, copying		<u>125.00</u>
		\$3,147.40

Photointerpretation During odd hours from July to Sept, 1984

A. Homenuke, P.Eng	4½ days @ 400	1,800.00
Photo purchase & stereoscope rental		<u>150.00</u>
		\$1,950.00
	TOTAL	\$5,097.40
		=====

This has been split as follows:

Silverado Group	75% of the Geochem.	
	63% of the Photointerp.	3,589.05
Tsezakwa Group	25% of the Geochem.	
	37% of the Photointerp.	1,508.35

REFERENCES


- Homenuke, A.M., 1977, Compilation Report on the French Peak Silver Property (Private Report)
- 1979, Petrographics Study, French Peak Silver Property (Assessment Report)
- 1981, Geochemical and Electromagnetic Survey in the French Peak Silver Property (assessment Report)
- Richards, T.A., 1980, Geology of Hazelton Map Area, Geol. Sur. of Canada, Open File 72C (Map)

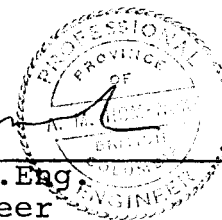
CERTIFICATE OF QUALIFICATION

I, ALEXANDER M. HOMENUKE, do hereby certify:

1. THAT I am a member in good standing of the Association of Professional Engineers of British Columbia.
2. THAT I received the Degree of Bachelor of Science in Geological Engineering from the Colorado School of Mines in 1974.
3. THAT I received a Diploma of Technology in Mining from the B.C. Institute of Technology in 1969.
4. THAT I have been employed in various aspects of mining exploration for 15 years and am presently employed by Tri-Con Mining Ltd. of #2580 - 1066 West Hastings Street, Vancouver, British Columbia.
5. THAT I presently reside at 29825 Harris Road, Mt. Lehman, British Columbia.
6. THAT this Report is based on work supervised or conducted by myself.

DATED at Vancouver, British Columbia, this 9th day of January, 1985.


A.M. HOMENUKE, P.Eng
Geological Engineer

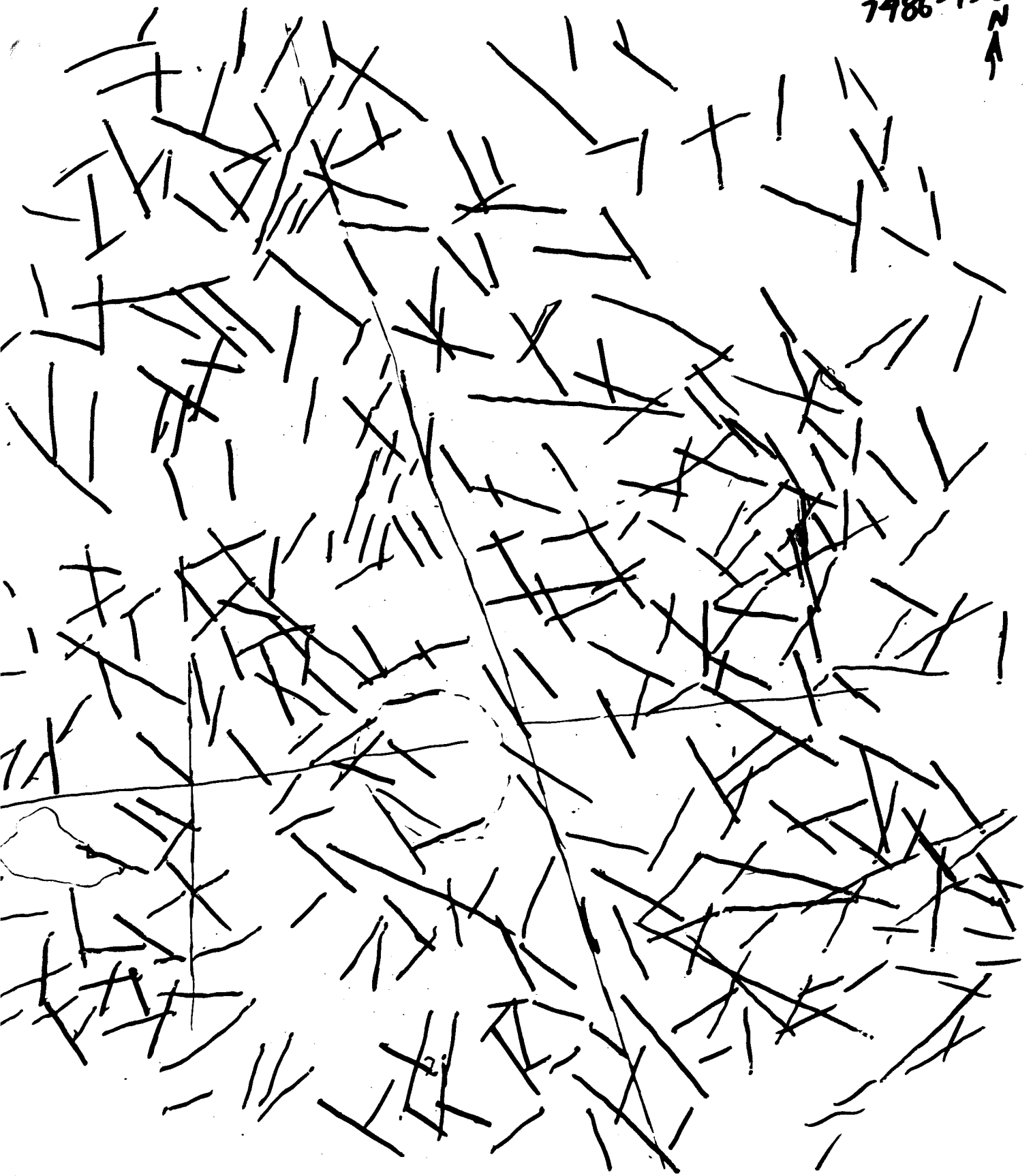


APPENDIX

worksheets

Fracture Patterns from Airphotos

7486-156
N
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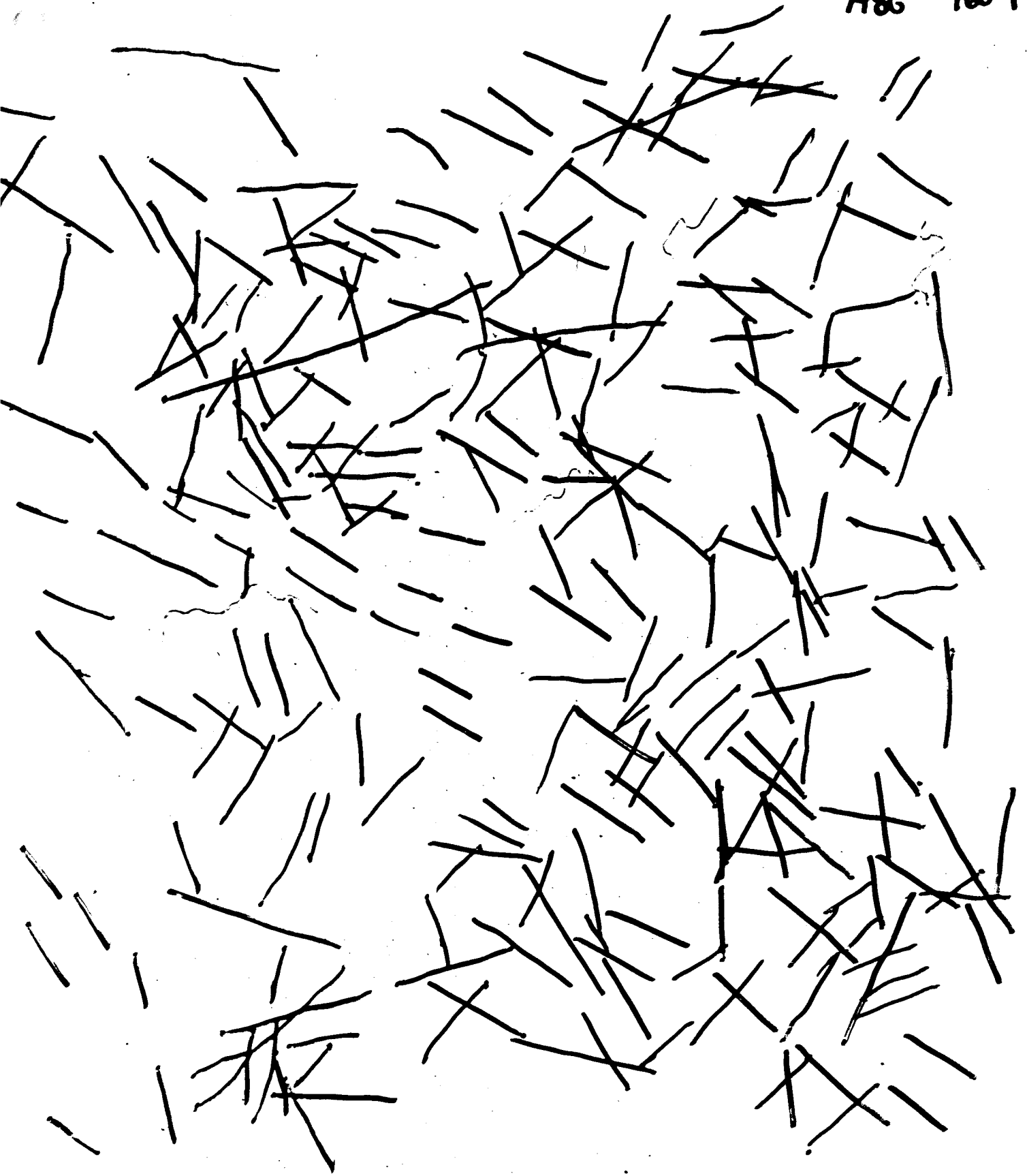
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7486

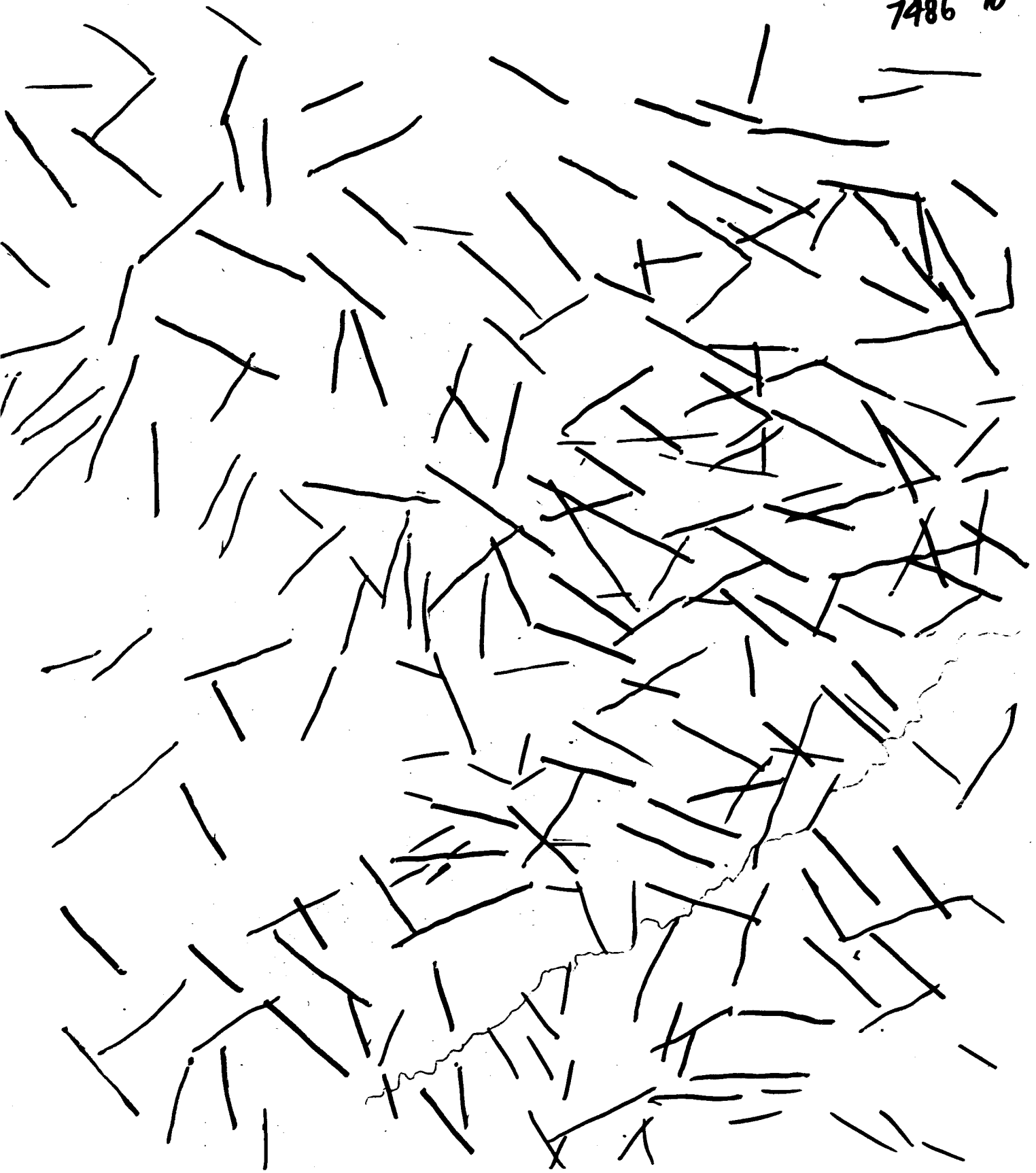
158



7986 160 ↑ N



7486 #162 ↑ N



7486 #171



N
↑

7486 #171

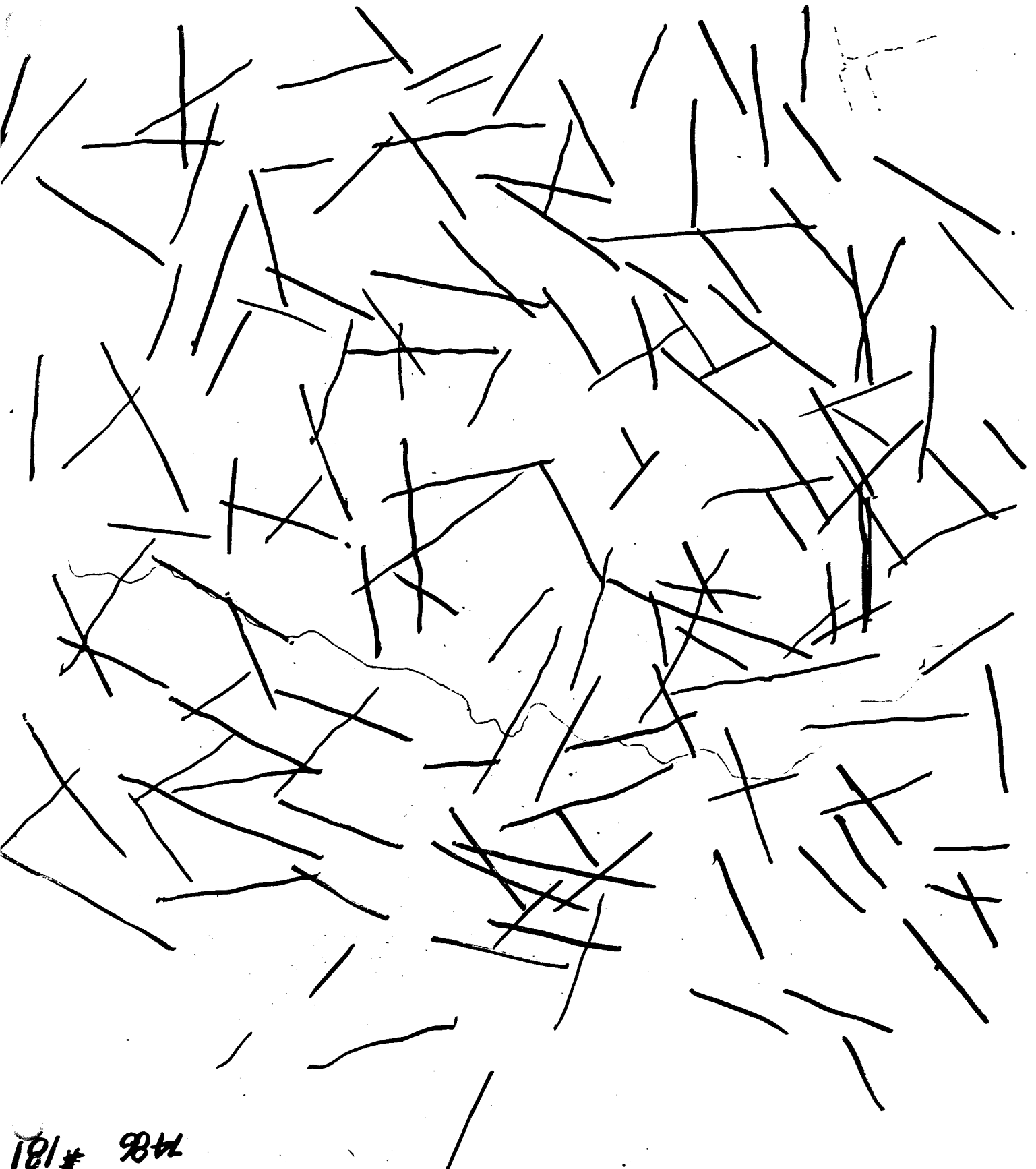
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2
→

611 # 986L

7486-#181

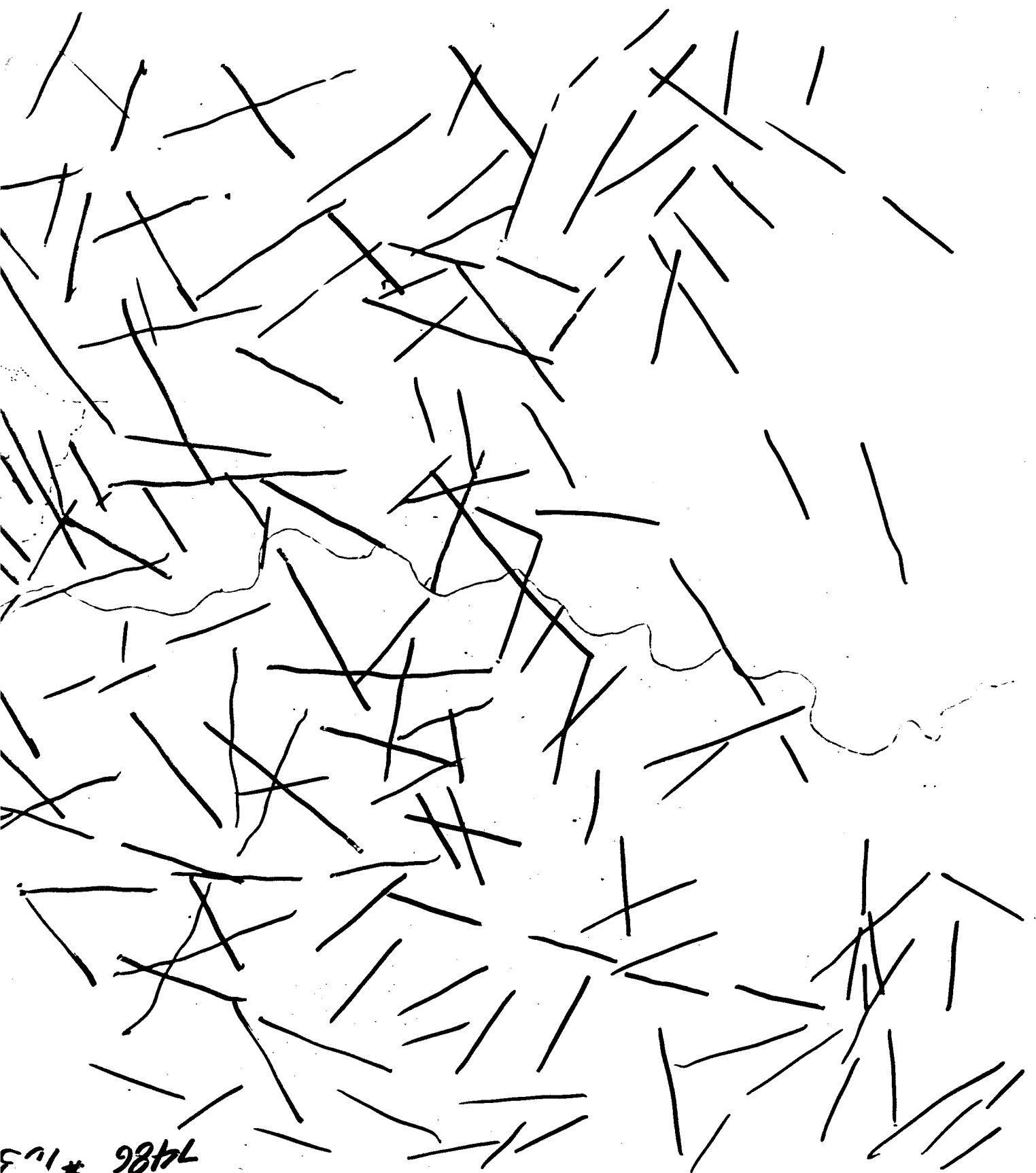


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7486 #183

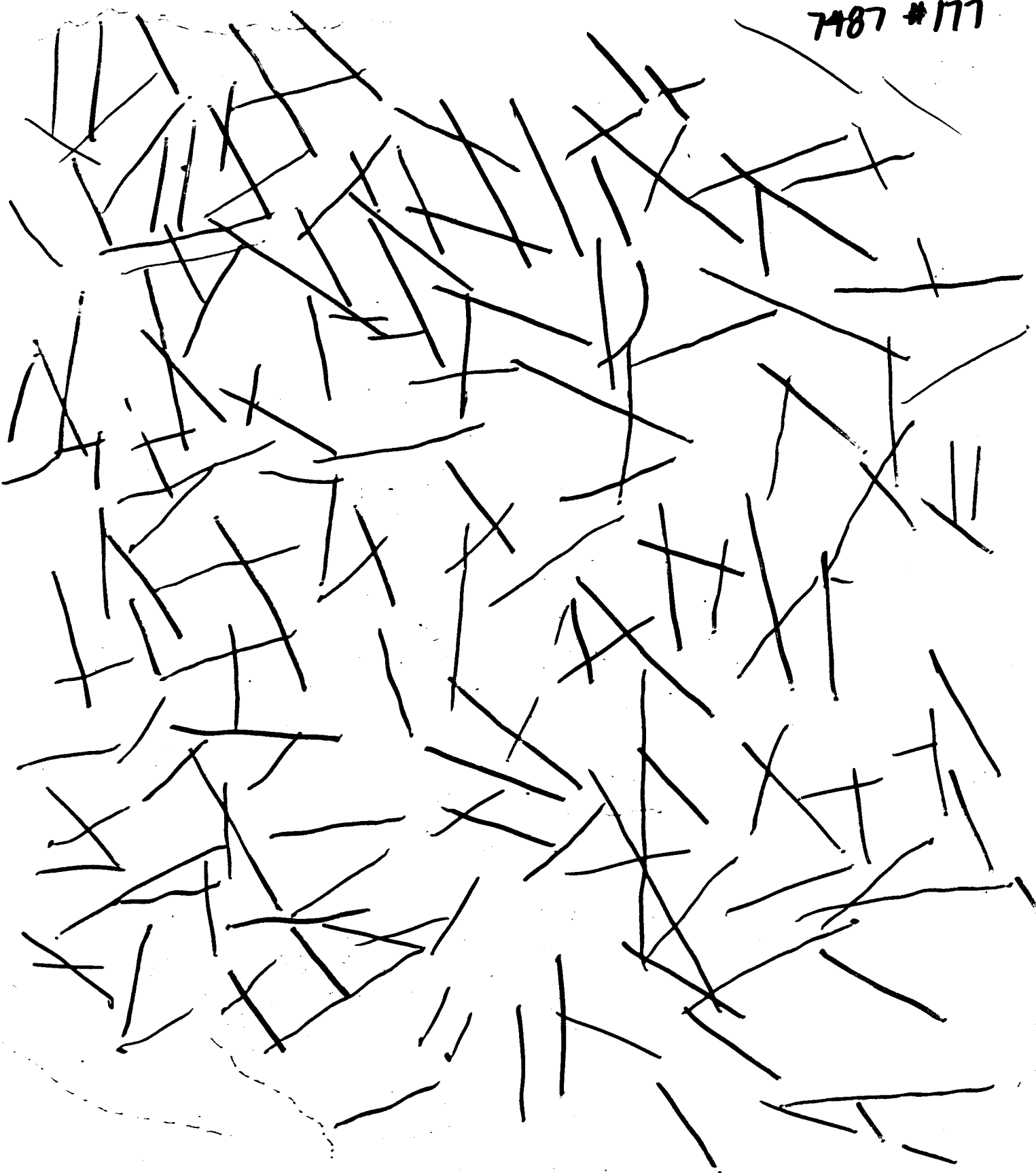
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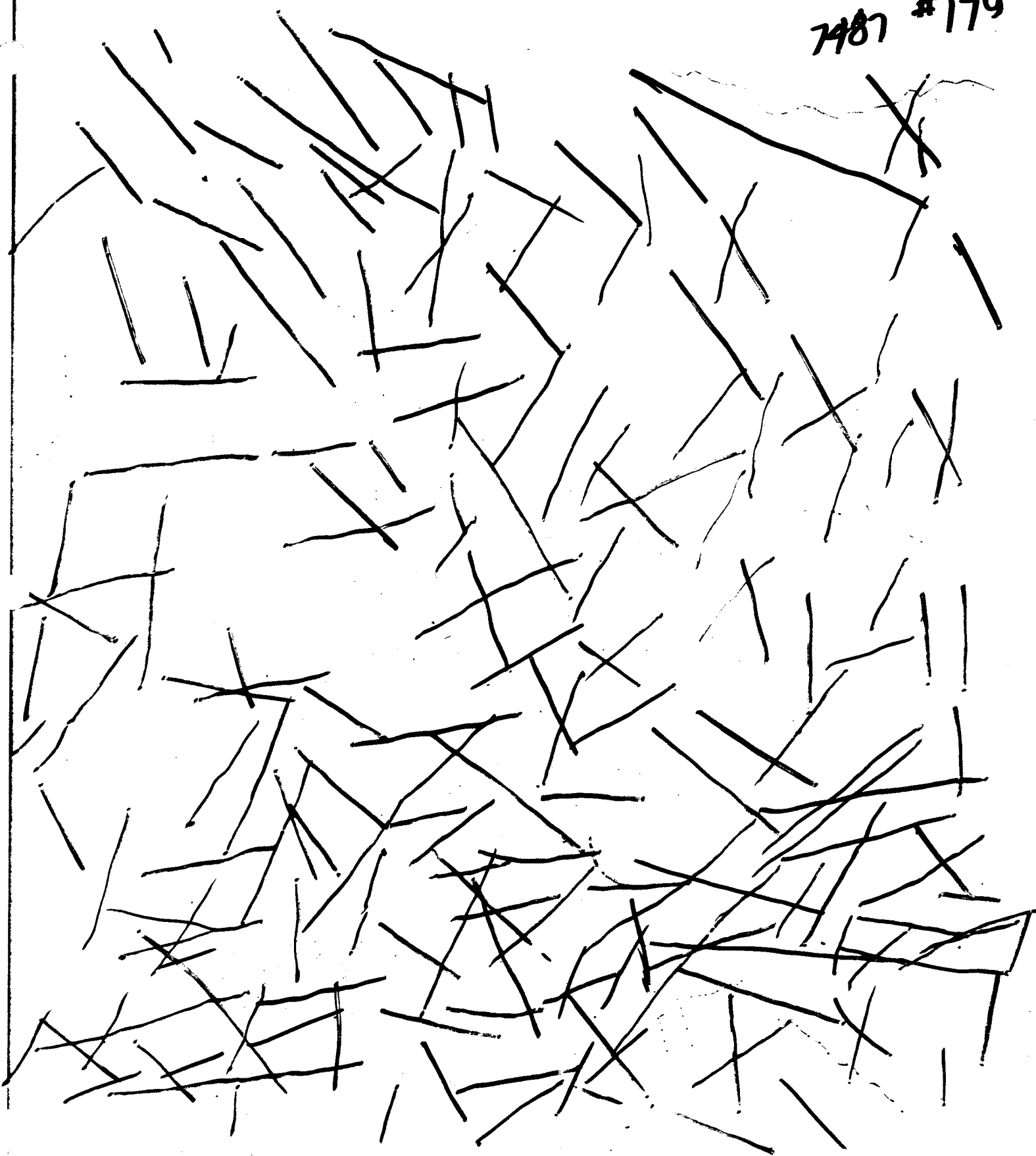
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7487 #177



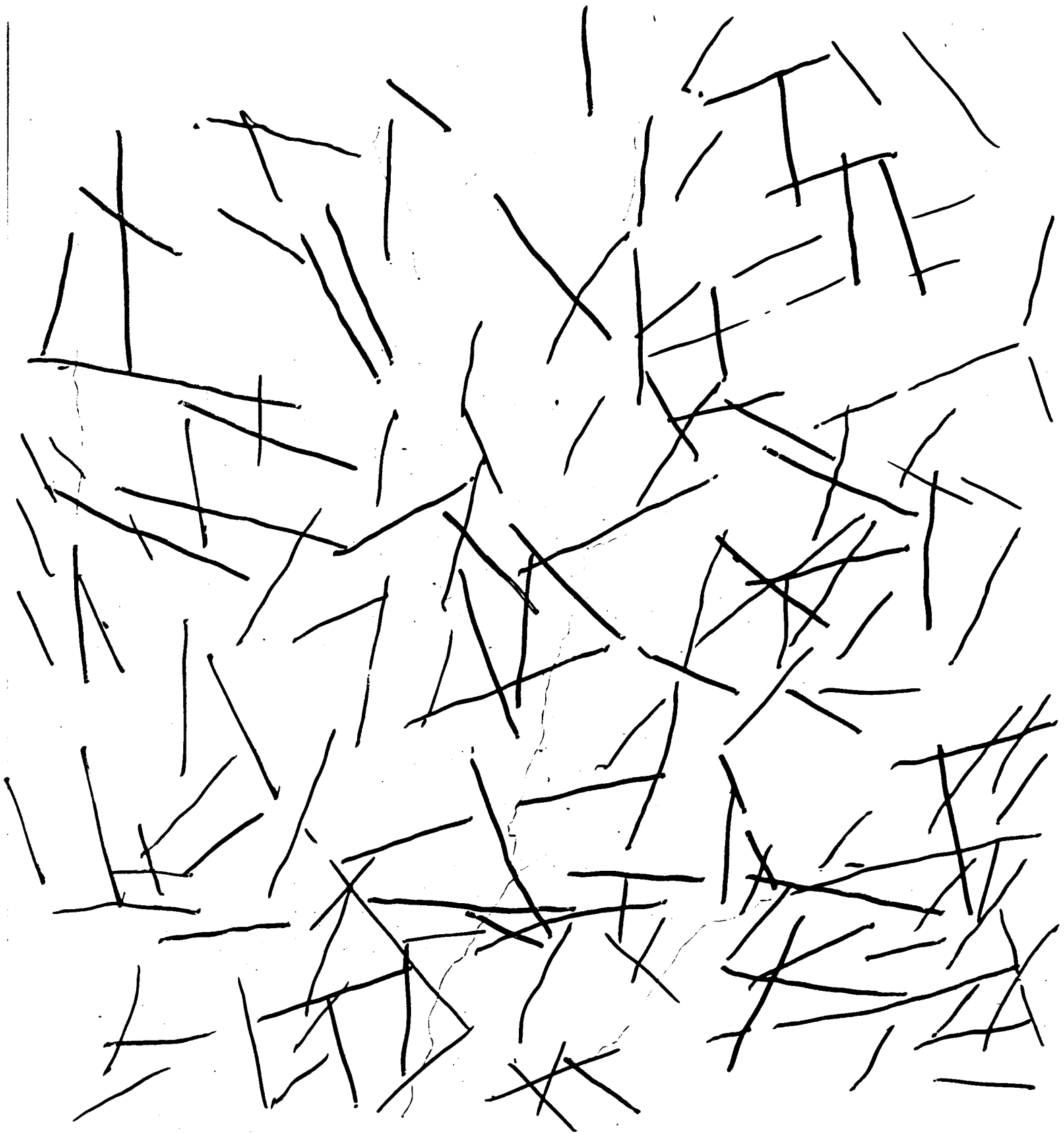
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7487 #179



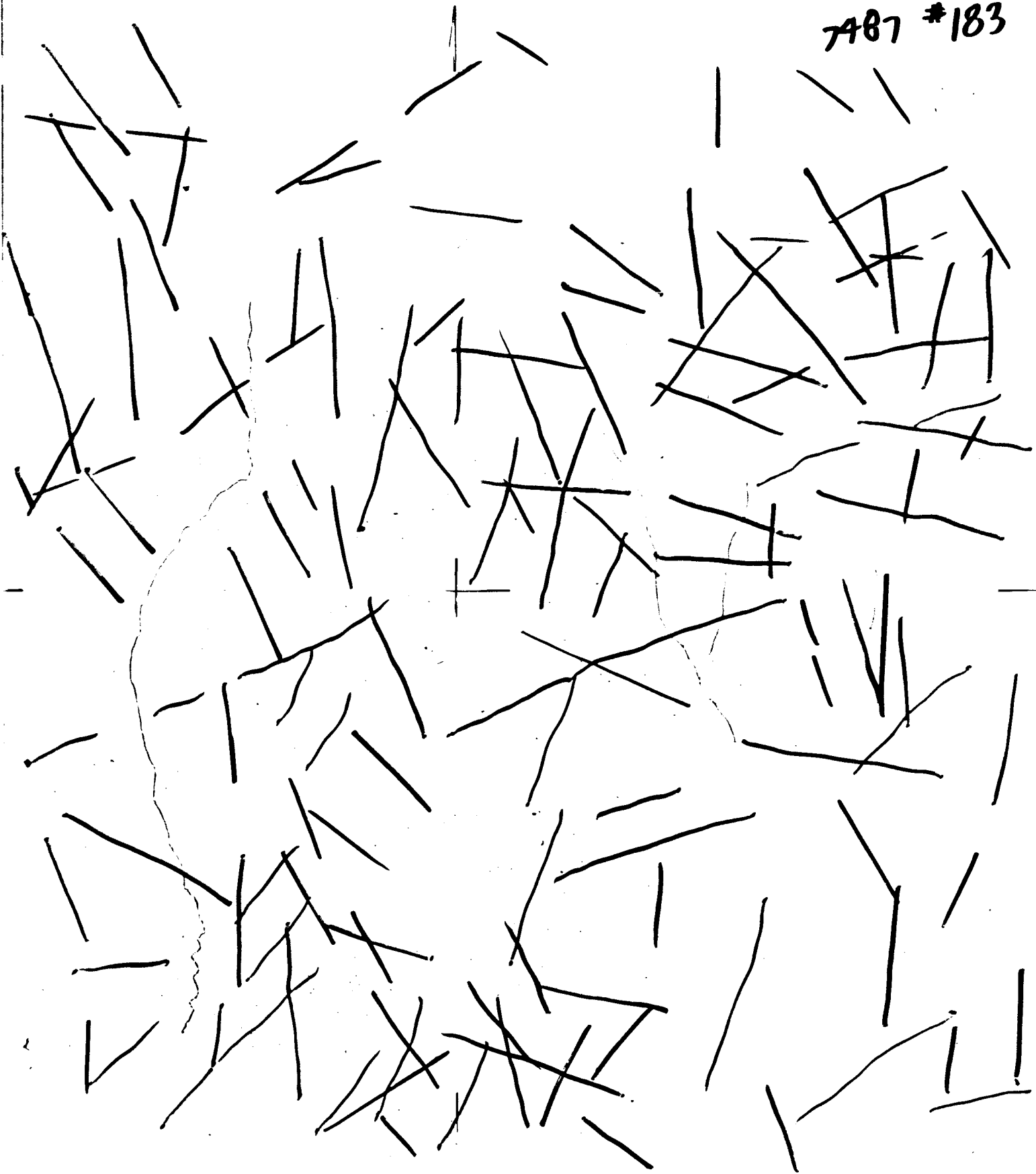
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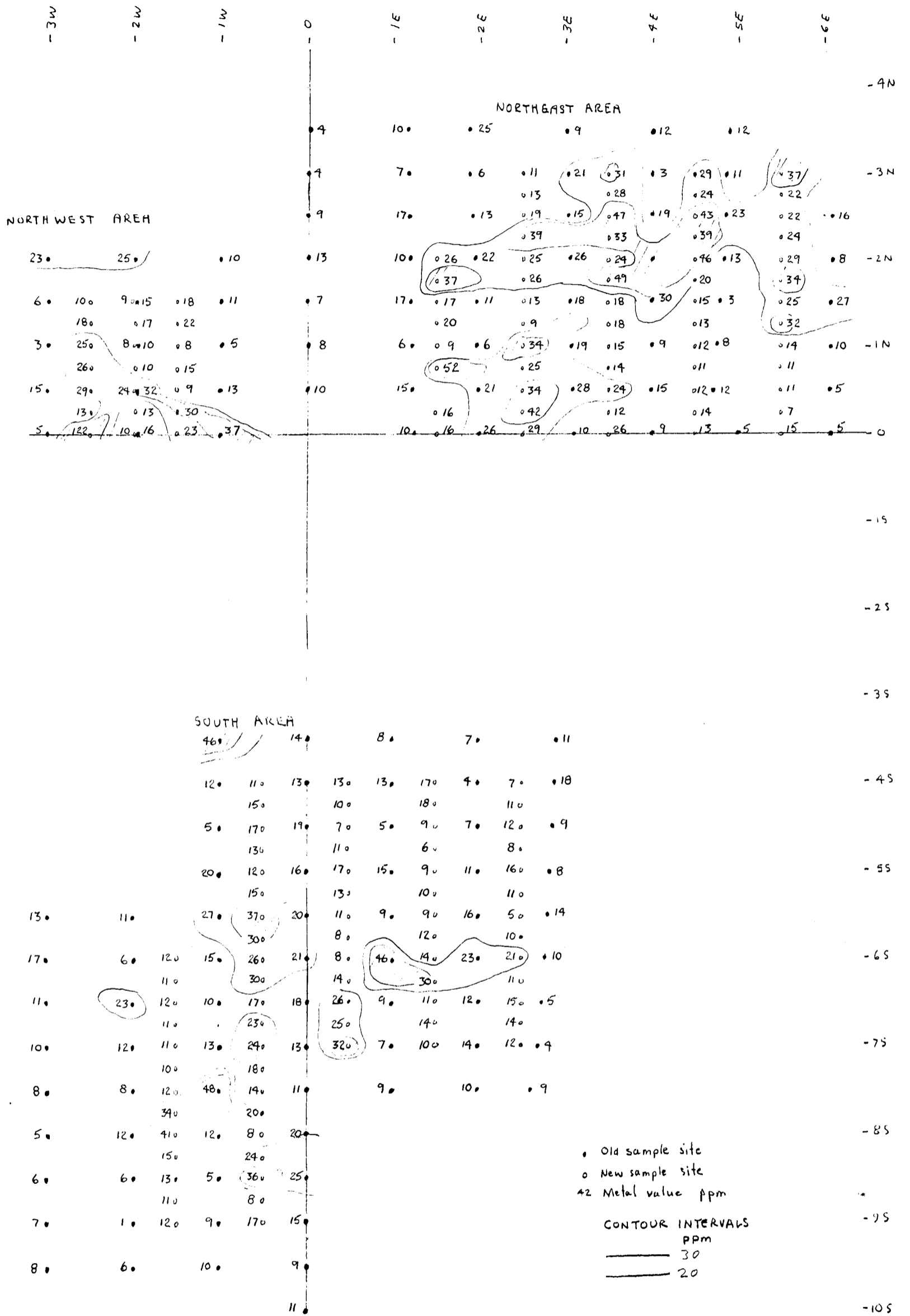
7487 #181



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7487 #183

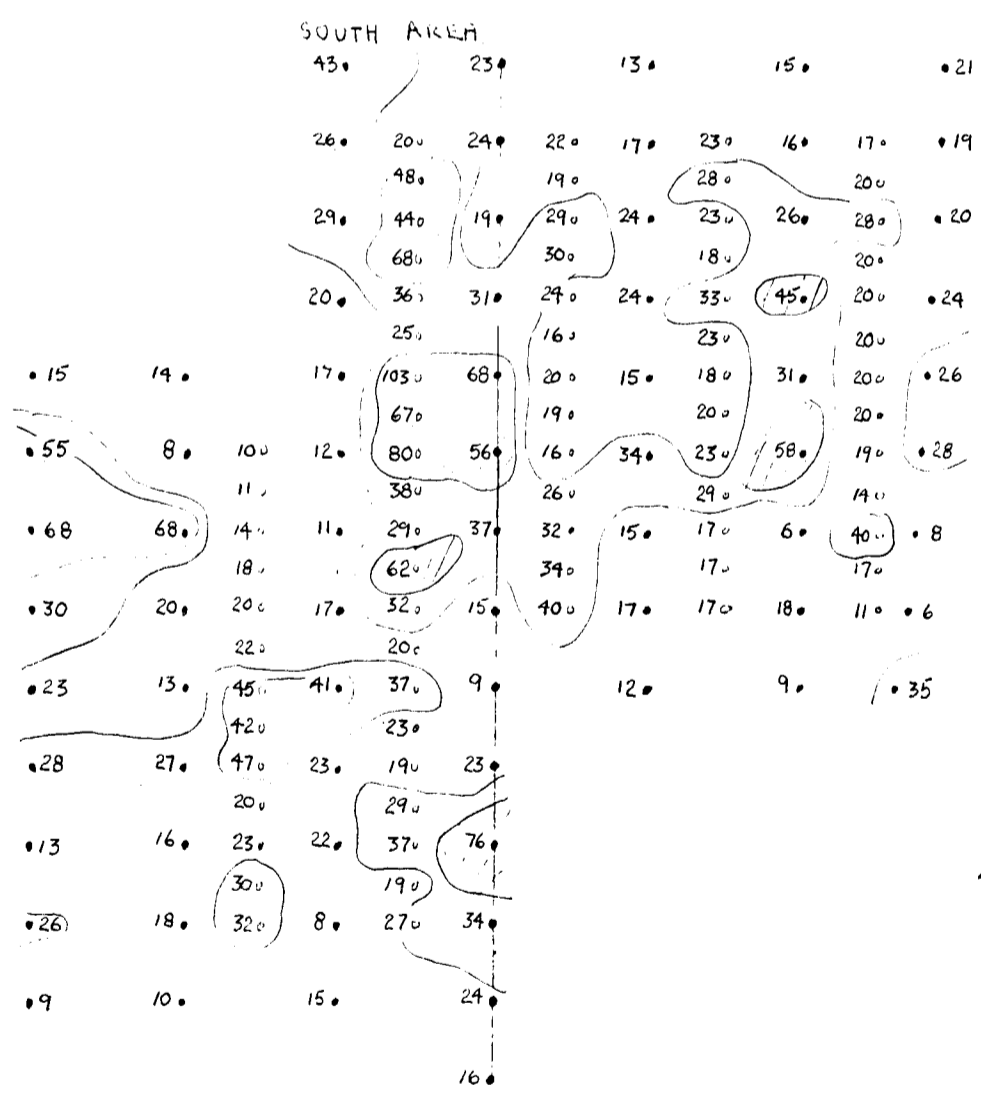
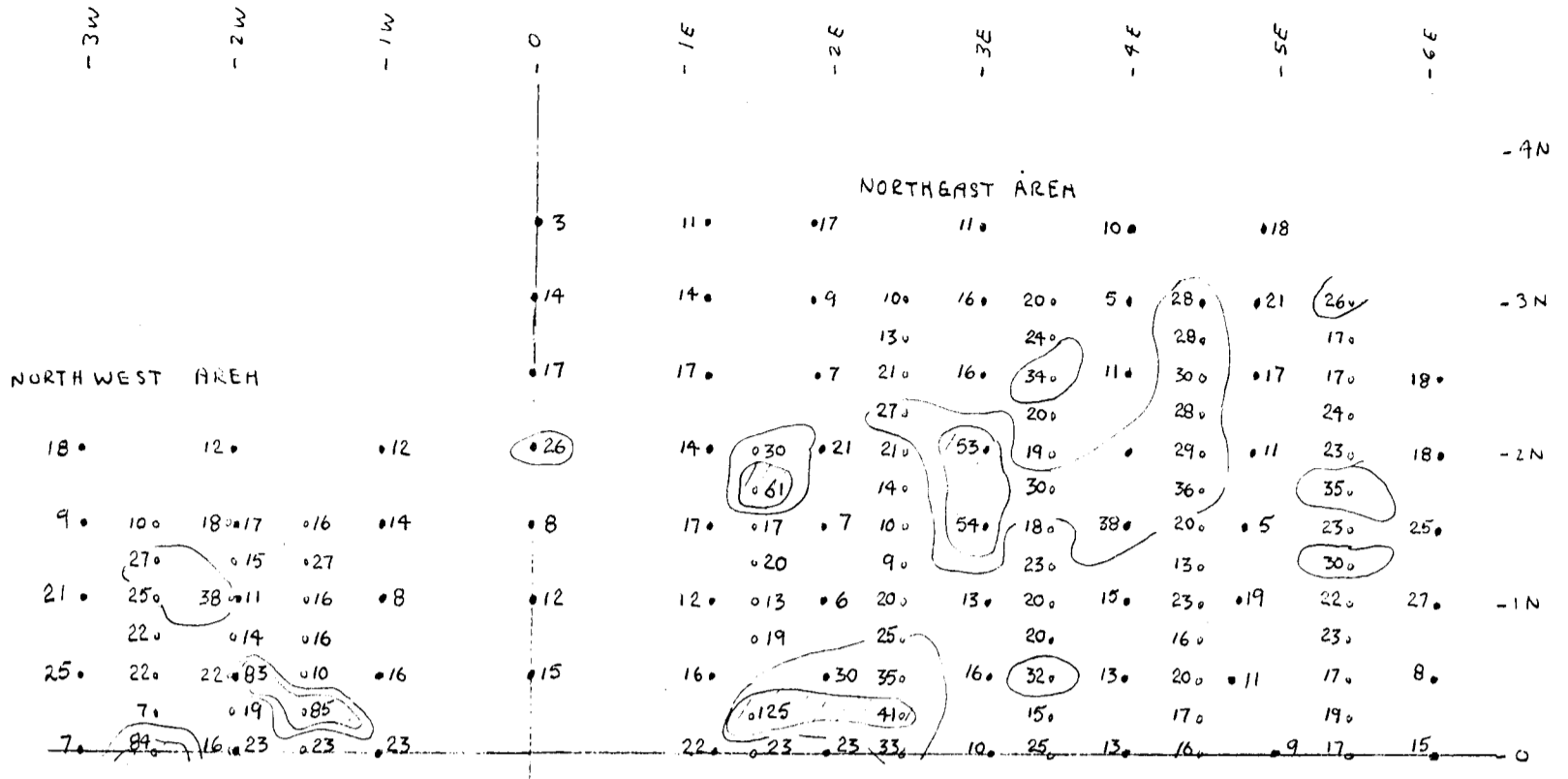




SILVERADO MINES LTD.
 FRENCH PEAK SILVER PROPERTY

DETAIL GEOCHEMISTRY
 (1984)
 ARSENIC

Prepared by: A.M. Homenuke, P.Eng.
 TRI-CON MINING LTD. Oct. 1984
 FIG. 5



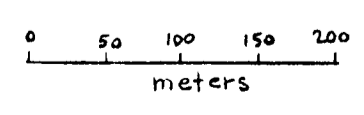
• Old sample site
 ○ New sample site
 42 Metal value ppm

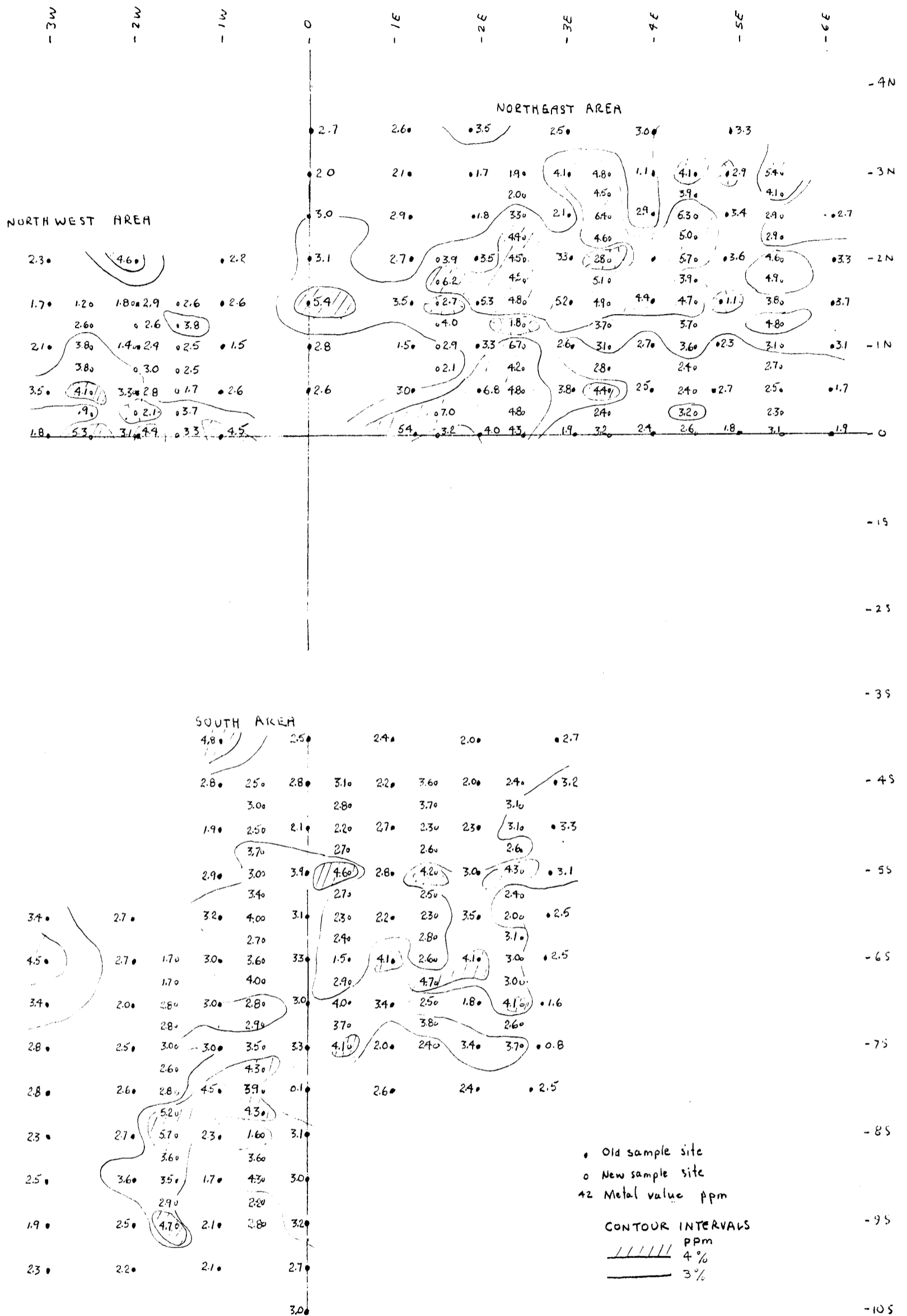
CONTOUR INTERVALS
 PPM
 / / / / / 40
 ————— 25
 Cu

SILVERADO MINES LTD.
FRENCH PEAK SILVER PROPERTY

DETAIL GEOCHEMISTRY
 (1984)
 COPPER

Prepared by: A.M. Homenuke, P.Eng.
 TRI-CON MINING LTD. Oct. 1984
 FIG. 6

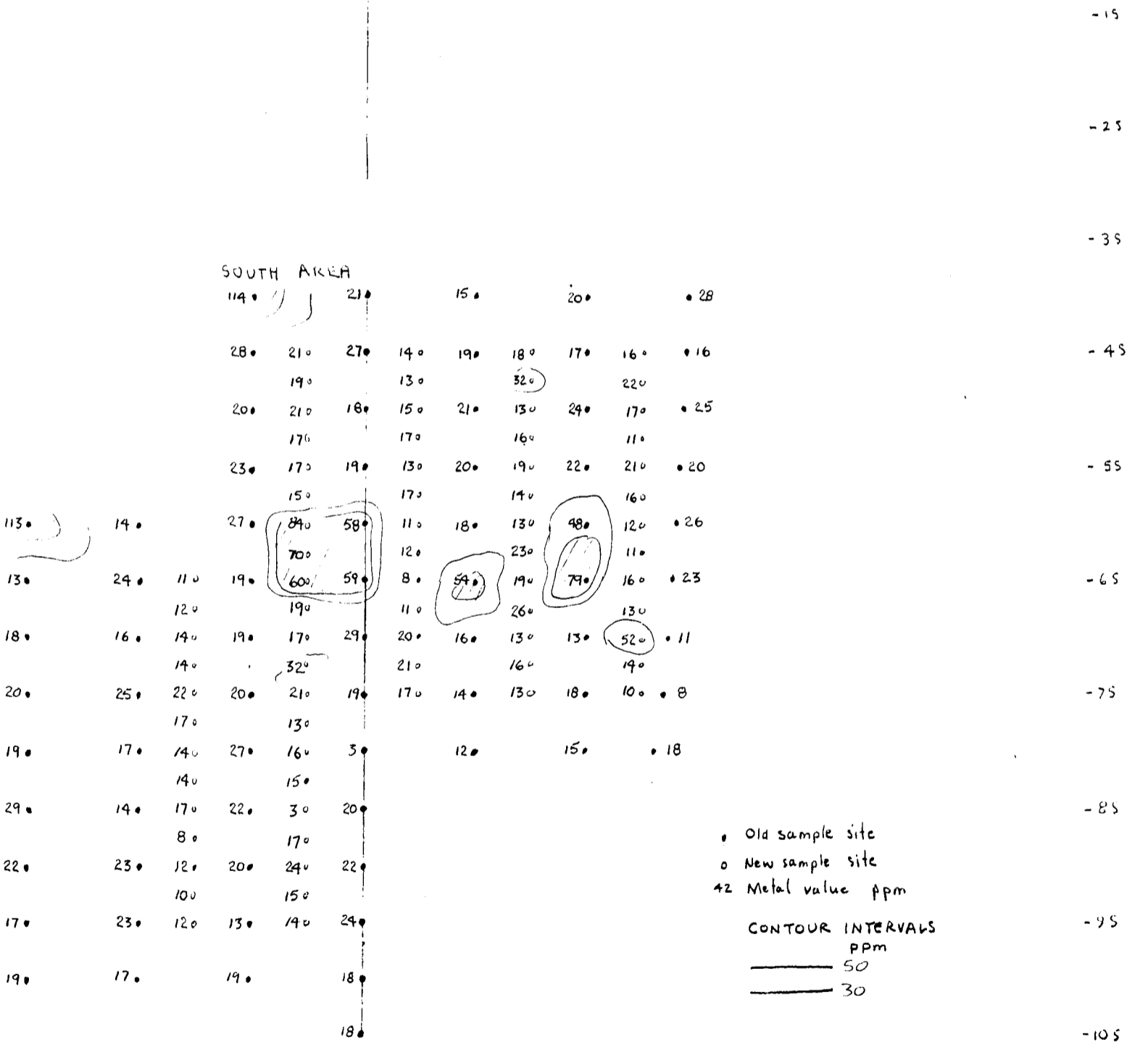
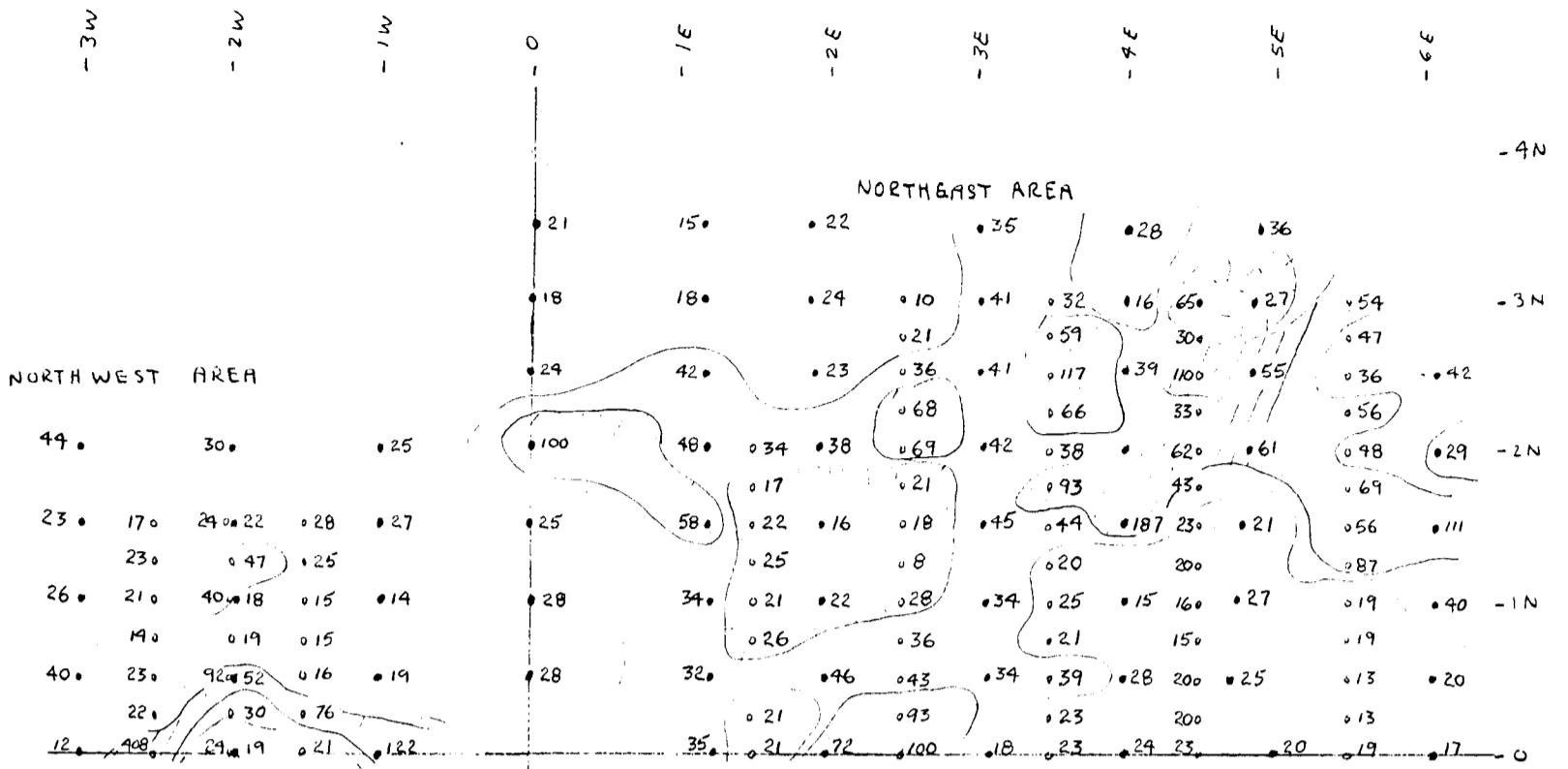




SILVERADO MINES LTD.
 FRENCH PEAK SILVER PROPERTY

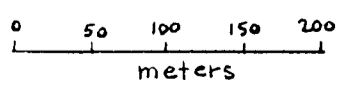
DETAIL GEOCHEMISTRY
 (1984)
 IRON

Prepared by: A. M. Homenuke, P. Eng.
 TRI-CON MINING LTD. Oct. 1984
 FIG. 7



• Old sample site
 ○ New sample site
 42 Metal value ppm

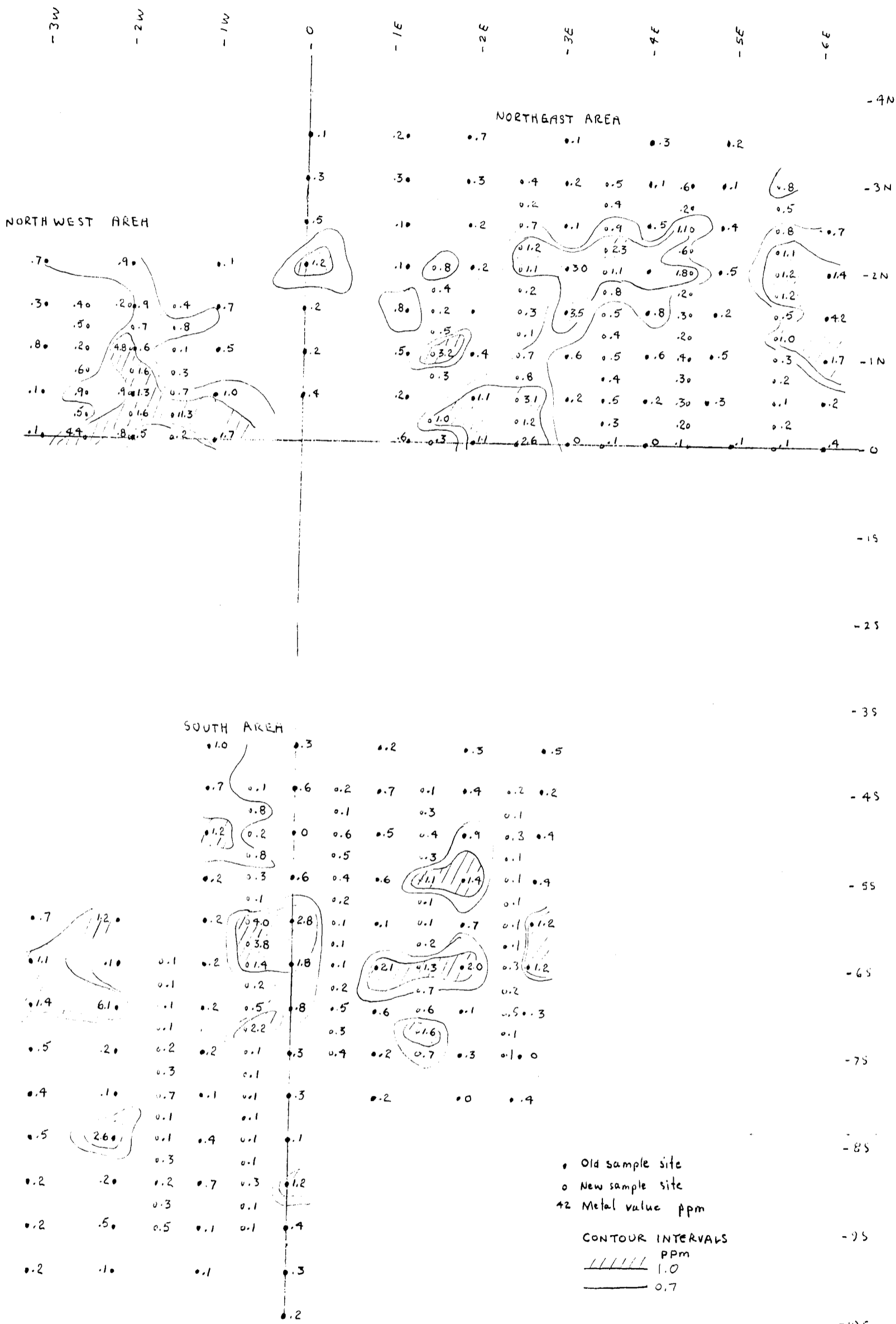
 CONTOUR INTERVALS
 ppm
 ——— 50
 ——— 30



SILVERADO MINES LTD.
 FRENCH PEAK SILVER PROPERTY

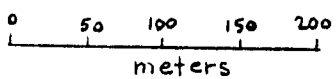
 DETAIL GEOCHEMISTRY
 (1984)
 LEAD

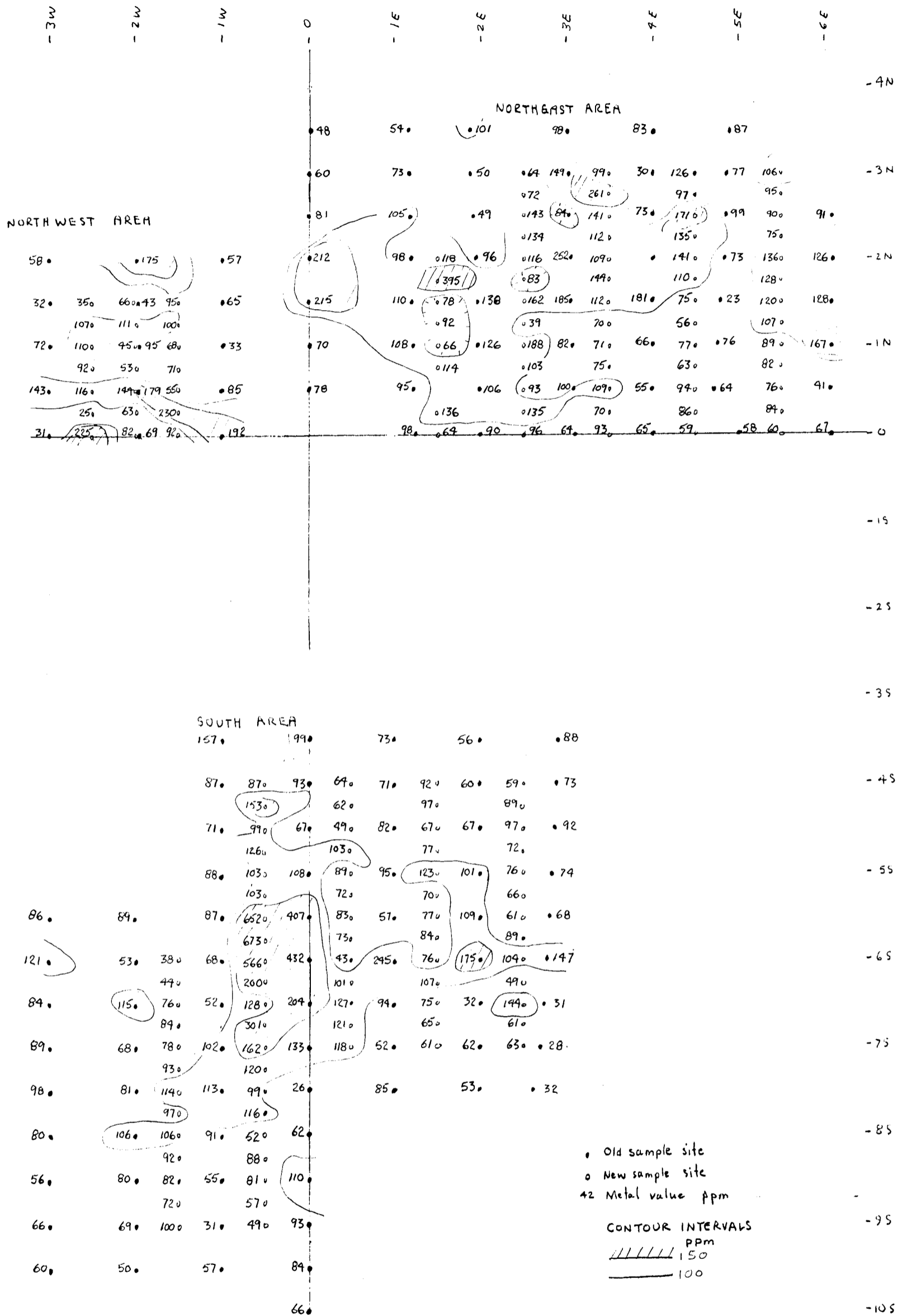
 Prepared by: A. M. Homenuke, P. Eng.
 TRI-CON MINING LTD. Oct. 1984
 FIG. 8



SILVERADO MINES LTD.
 FRENCH PEAK SILVER PROPERTY
 DETAIL GEOCHEMISTRY
 (1984)
 SILVER

Prepared by: A.M. Homenuke, P.Eng.
 TRI-CON MINING LTD. Oct. 1984
 FIG. 9

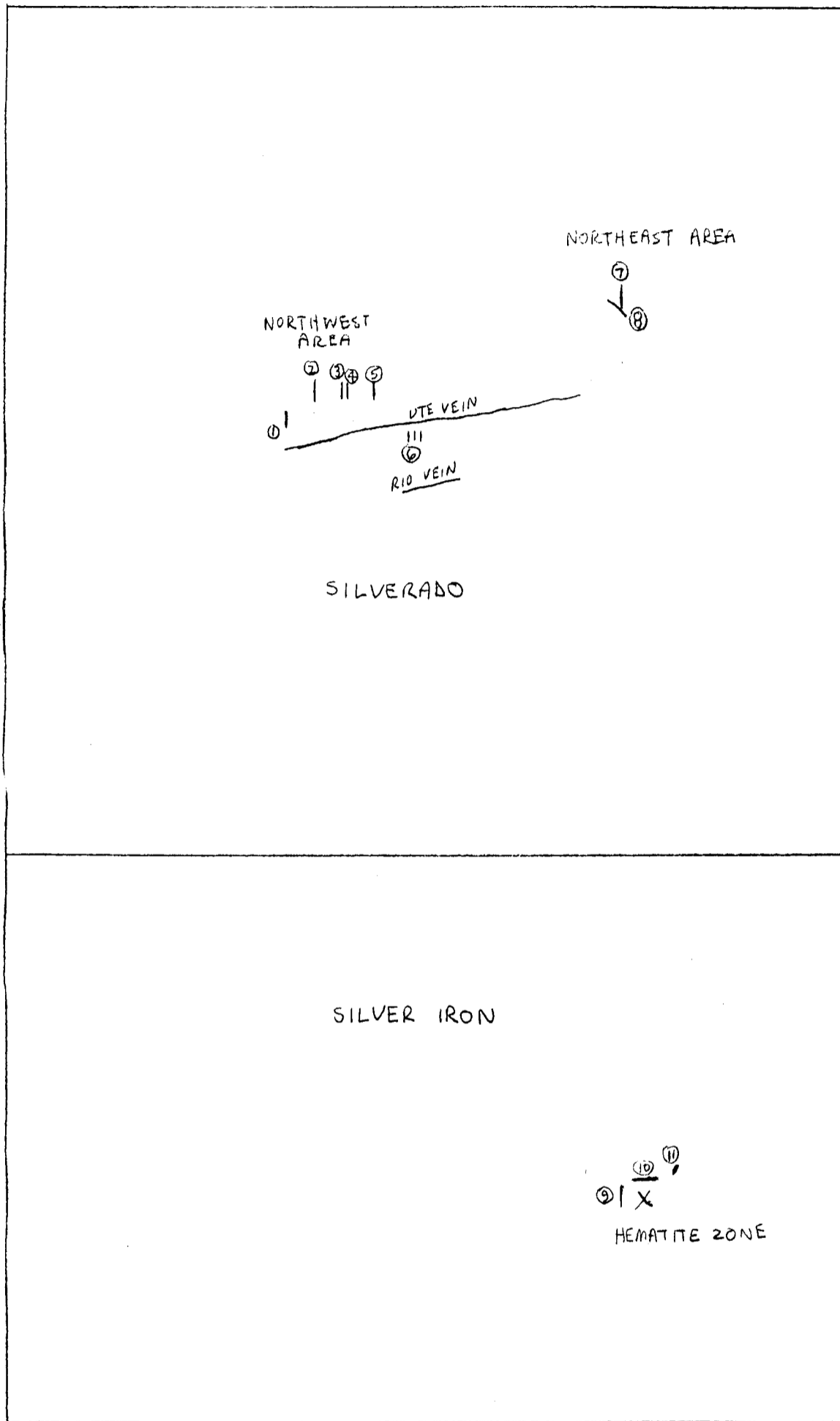




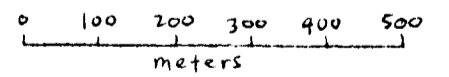
SILVERADO MINES LTD.
 FRENCH PEAK SILVER PROPERTY

DETAIL GEOCHEMISTRY
 (1984)
 ZINC

Prepared by: A. M. Homenuke, P. Eng.
 TRI-CON MINING LTD. Oct. 1984
 FIG. 10



TRENCH NO	LENGTH	WIDTH METERS	DEPTH	NOTES
1	30	.7	3	10cm massive chalcopyrite
2	40	.7	2	} hematitic gouge
3	30	.7	1.2	
4	30	.7	1.0	
5	30	.7	0.7	
6	18	.7	3	
7	40	.7	3	} 3 trenches 6m each } no bedrock - backfilled
8	40	.7	3	
9	30	1.5	2	widespread hematite & pyrite
10	20	.7	3	} no bedrock - backfilled
11	2	1.5	3	



SILVERADO MINES LTD.
 FRENCH PEAK SILVER PROPERTY
 1984 BACKHOE TRENCHING

FIG. 11