6255

REPORT OF WORK RED RIVER CLAIM UNUK RIVER,

SKEENA M.D., BRITISH COLUMBIA

56° 28' N, 130° 10' W, Map Sheet M104B/8E

Prepared by:

Ed Kruchkowski
Erik A. Ostensoe

GRANDUC MINES, LIMITED (N.P.L.)

January 13, 1977

CONTENTS

ILLUSTRATIONS

PART 1.

GENERAL INFORMATION

Location

The Red River mineral claim (Skeena Mining Division, record number: 314, record date: September 15, 1976) consists of 14 units in a 2 unit wide (east-west) by 7 unit long (north-south) configuration (figure 1) and is located near Brucejack Lake at the headwaters of Sulphurets Creek, a tributary of Unuk River. The legal corner post is located at elevation 1550 metres on a high upland terrain that lies just west of Brucejack Lake. The claim tag number is 26562.

Most of the ground covered by the Red River claim is tundra with moss and grass cover. A few small evergreen trees are present and small streams and ponds are numerous. Rock outcrop is from 5 to 20% with large areas of more than 50% bedrock exposure.

Access

Access to the Red River claim is by helicopter from Stewart, B.C., the nearest town. There are no feasible overland access routes due to glaciers.

Personnel

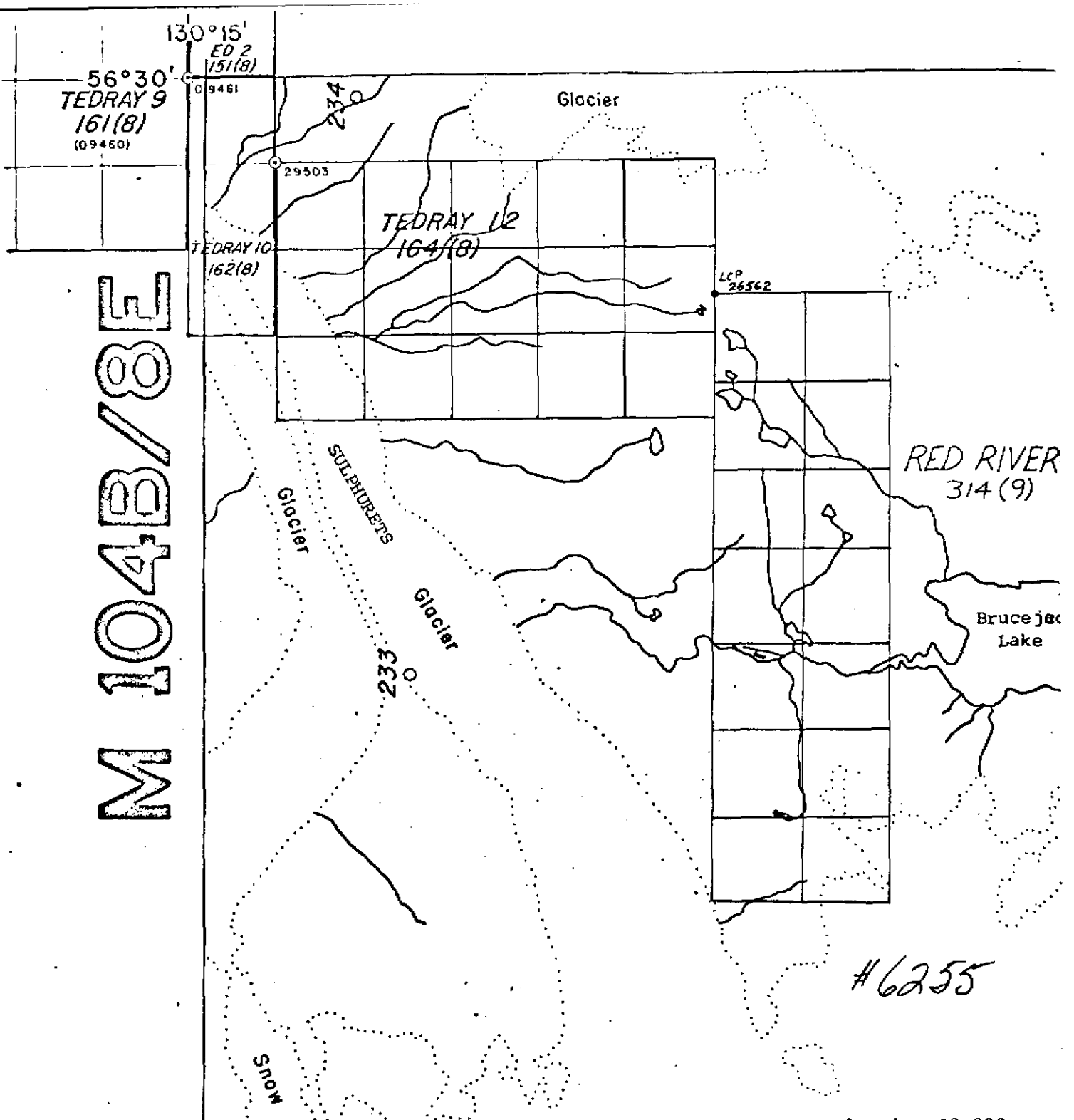
The work described in this report was done by Erik Ostensoe and Ed. Kruchkowski, geologists, and Chris Hrkac, helper, employees of Granduc Mines, Limited (N.P.L.). The dates of the work are as follows:

Erik Ostensoe - August 18 - 29, 1976;
Ed Kruchkowski - August 18 - 29, 1976;
Chris Hrkac - August 18 - 29, 1976.

Qualifications of the above are detailed in Appendix I.

Camp Facilities

No permanent camp facilities are available in the vicinity of the Red River claim. A simple portable wood and plywood tent frame was used for accommodation. It was located at an elevation 1520 metres approximately 830 metres south of the legal corner post of the Red River claim. For safety and convenience daily radiotelephone communication was maintained with a station at Stewart, B.C.



Scale: 1 : 30,000

FIGURE 1. Location Map

RED RIVER CLAIM - based on Dept. of Mines Claim Map

Sulphurets Creek Area, Unuk River, Skeena M.D., BC

To accompany Report for Granduc Mines I by Ed Kruchkowski and E. Ostensoe January 13, 1977.

PART 2.

GEOLOGY

Regional Geology

The geology of the Stewart and Unuk River areas was intensively restudied by E. W. Grove of the B.C. Department of Mines and Petroleum Resources in the period 1966 - 1971. Only a small portion of Grove's work has been published: in the 1968 Minister of Mines Report and in Bulletin 58, Geology and Mineral Deposits of the Stewart Area. However, Grove's Ph.D thesis, accepted by McGill University and incorporating the results of much of his field work, was made available to the writers, and, pending publication of Bulletin 60 - Geology of the Unuk - Salmon River - Anyox Area, B.C., has been used as a valuable aid in relating field data from the Sulphurets Creek area to broader regional geological patterns of the so-called "Stewart Complex". In particular Grove has proposed an extensive nomenclature to facilitate discussion of particular parts of the Stewart area and has almost completely revised the rather crude geological maps previously available.

Grove defined his study areas as follows: "The Stewart Complex lies along the contact between the Coast Plutonic Complex on the west, the Bowser Basin on the east, Alice Arm on the south, and the Iskut River on the north". The Sulphurets Creek project area, which includes the Red River claim, lies close to the north edge of the Stewart Complex as defined by Dr. Grove. The Complex is described by Grove as having been "---essentially frozen to the east margin of the Coast Plutonic Complex---" and as such it was involved in development of the major Coast Geanticline whereas adjacent areas were separated from the Complex by normal faults, lagged behind during uplift and formed fragments of the Bowser Basin. In general and as suggested by the terminology, geology within the Complex is more elaborate than in the relatively uncomplicated Basin. Rocks have been folded, thrust and sheared with the added complications of numerous and varied intrusions and the presence of several disconformities, of erosional and of tectonic origin.

According to Grove the Sulphurets Creek project area occurs in the mid-part of a broad regional dome that extends northwesterly from Bowser River to Sam Coulter Creek, north of Unuk River. Despite a somewhat narrower and more superficial exposure to the regional geological setting, the present writers do not fully concur with Grove's dome theory and suggest that if present its dimensions are somewhat smaller than Grove believes. Regardless of its structure, the area at the headwaters of Sulphurets Creek has been very extensively unroofed by erosion to expose a geological section from Lower Jurassic age Unuk River formation rocks through to Upper Jurassic age Nass formation rocks. The northwesterly - striking formational trend is oblique to the northerly trend of the Sulphurets Creek mineral zone which

is comprised of strongly sheared and altered rocks and the Sulphurets Fault zone. These cataclastic features are indicative of strong compressional stresses that were relieved by shearing and by thrust faulting.

The Sulphurets Creek project area is bounded on the west by clastic sedimentary rocks of the Salmon River formation of Upper Middle Jurassic age. The contact is thought to be a fault structure butthis is still open to confirmation. The eastern side of the project area is formed by the Brucejack Fault, a steep north - striking structure that has at least 1000 metres of vertical displacement and places pre-Salmon River formation Middle Jurassic age Betty Creek formation rocks in conjunction with Lower Jurassic age Unuk River formation rocks. It is not apparent whether the cataclasite zone and the various related faults join and have a common origin at depth. Nor is it apparent why Betty Creek formation is apparently totally absent west of Sulphurets Creek mineral zone; for example: immediately north of Mitchell Glacier 1000 metres of Betty Creek formation exposed in continuous outcrop 1 kilometre to the east is missing between the top of the Sulphurets mineral zone (presumed to be part of the Unuk River formation) and the exposed base of the Salmon River formation.

The Coast Plutonic Complex lies 30 kilometres west of the Sulphurets Creek project area. Other closer intrusive rocks include the Twin John Peaks gabbroic intrusion and the Lee Brant granodiorite stock. Smaller crystalline bodies occur within the Sulphurets Creek mineral zone and southeast of the area, near the Bowser River.

Regional structural tendancies in Sulphurets Creek - Unuk River area are northwesterly but locally become strongly northeasterly a few kilometres north of Sulphurets Creek project area, perhaps reflecting the doming referred to by Grove.

Local Geology

The detailed geology of the Red River claim area is poorly defined. Little geological work has been done in the vicinity although prospectors have examined the area numerous times. Figure 2 depicts the geology as proposed by E. W. Grove (Minister of Mines Report, 1968, page 45) and of necessity simplifies the actual patterns. Our work on the Red River claim during 1976 was primarily directed to prospecting, soil sampling and rock geochemical sampling; insufficient geological data was gathered to justify preparation of a geological map.

The dominant geological features are: the Brucejack Fault lineament that passes through the Red River claim; a second fault lineament that passes at an oblique angle from the legal corner post southeasterly to Brucejack Lake, and a broad area west of Brucejack Lake that is strongly silicified and pyritized and is somewhat resistant to weathering and erosion. On the basis of observations a few kilometres north of the Red River claim, the Brucejack Fault has a substantial vertical component

with the east side depressed relative to the west side. The Betty Creek formation (Middle Jurassic age) may be present on both sides of the fault in the Red River claim area: a very basal portion may be present west of the fault forming a thin "skin" above the Unuk River formation, whereas on the east side of the fault the Betty Creek formation rocks are some hundreds of metres from the formational base. Alternatively, the rocks exposed west of Brucejack Fault may be an upper most portion of the Unuk River formation.

In the vicinity of the Red River claim legal corner post the rocks are strongly foliated and are altered to sericite and sericite-pyrite schists with varying quantities of stringers of vein quartz. Weathering has produced a dull yellow - orange gossan which may be alteration of minerals derived from hydrothermal solutions introduced along the Brucejack Fault or of minerals that have emanated from a non-outcropping intrusion. Several smaller zones of similar foliation and alteration have been found elsewhere on the Red River claim, in particular in the vicinity of the campsite. These zones are typically aligned almost at right angles to the trace of Brucejack Fault and vary in length and width from a few feet to a few tens of feet. Traces of an unidentified black metallic mineral were noted along with pyrite in the lenses.

In the vicinity of Brucejack Creek which crosses the Red River claim about 2000 metres south of the legal corner post, rocks are largely black shales and argillites and they belong to either the Unuk River or the Betty Creek formation. Moderate to intense quartz veining was noted in several locations and pervasive dark red gossaning is obvious. Although topographic relief is generally subdued, topographically "high" ground is usually gossaned apparently reflecting a more resistant rock formed by silicification, pyritization and sericitization.

Trenching

Bedrock trenches totalling 13 1/2 metres in length were excavated in the vicinity of "Ptarmigan Lake", near the campsite. Locations are indicated by a solid black bar symbol on figures 3, 4 and 5 that accompany this report.

Trenches were excavated using a cobra drill, dynamite and hand tools. The objective of trenching was to investigate occurrences of minor amounts of a dark grey to black colored sulfide or sulphosalt mineral that was noted in the quartz vein rubble along with pyrite and sericite.

Trenching north of Ptarmigan Lake was specifically directed to the vicinity of a rock geochemical sample that was routinely collected in 1975 and which upon analysis revealed unsuspected abnormal amounts of silver. Re-examination of this sample site during the 1976 field season revealed the quartz-black mineral association. A series of pits and trenches extended the occurrence for a strike distance of approximately 40 to 50 metres but did not indicate the presence of concentrations of

black mineral nor of significant amounts of the quartz vein structure. It is assumed that the black mineral is an argentiferous tetrahedrite or, possibly, argentite.

A second trench was excavated 250 metres south of the campsite. This trench has dimensions about 3 1/2 metres by 1 1/2 metres by 1 1/2 metres and also explores a quartz-pyrite-sericite lense that occurs close to the west side of the Brucejack Fault. Only trace amounts of the black sulphide/sulphosalt were found and none of the pieces containing it were definitely shown to be in situ.

Prospecting

The 1976 work on the Red River claim included much prospecting. Although soil and rock geochemical surveys were successfully applied, it is recognized that the "prospecting" that accompanied the sampling was of similar or greater value in helping us to recognize areas of immediate interest. Several occurrences of lead and zinc sulphides were found and many small quartz-pyrite-sericite shear zones were examined.

PART 3.

GEOCHEMICAL SOIL SURVEY

Introduction

A detailed geochemical soil survey was conducted over part of the northwestern portion of the Red River claim. Sampling was carried out during the period August 20th to 24th inclusive and on August 26, 1976. 296 soil samples were collected from an area 300 metres by 1100 metres (figures 3, 4 and 5).

A base line was established with bearing 135°, using a Brunton compass and chain. Cross lines were established at 30 metre intervals along the base line.

Where soil conditions permitted soil samples were taken at 30 metre intervals on all grid lines. An attempt was made to collect "B" horizon soils, but soils are generally thin and poorly developed and frequently contain a high proportion of talus fines and rock debris. Samples were taken using standard techniques; a mattock was used to scrape away organic material to expose the "B" soil horizon, a reddish brown granular textured layer generally from seven to ten centimetres below surface and generally only a few centimetres thick. A few ccs. of "B" horizon soil were placed in a numbered kraft paper envelope which was subsequently

thoroughly air dried in a heated indoor location and the -80 mesh portion of each sample was separated from coarser material by passing it through a nylon screen.

Geochemical analyses were performed by Chemex Labs Limited of North Vancouver, B.C. 296 samples were submitted and separate and specific tests for gold, silver and arsenic were performed on each sample. The atomic absorption method was used for silver determinations, a combination of fire assay and atomic absorption methods was used for gold determinations and a colorimetric method was used for arsenic. Quality control in the laboratory was ensured by reference to standard solutions prepared for that purpose.

Silver

A 0.5 gram sample was ashed at 550° C then twice evaporated to dryness in aqua regia. The resulting residue was dissolved in 25% hydrochloric acid solution and asperated through a Varian Techtron Atomic Absorption Spectrophotometer. Two readings were obtained: one for silver (Ag++) and the other for the interference factor which was then subtracted from the first quantity to give a net corrected value for silver content.

Gold

For each gold determination an average sample of approximately 15 grams was fire assayed to obtain a precious metal bead. This bead was dissolved in aqua regia and heated to dryness. The residue was dissolved in 25% hydrochloric acid solution and asperated through a Varian Techtron Atomic Absorption Spectrophotometer. The reading gave a value for $AuCl_3$ in the solution, and gold content was then obtained.

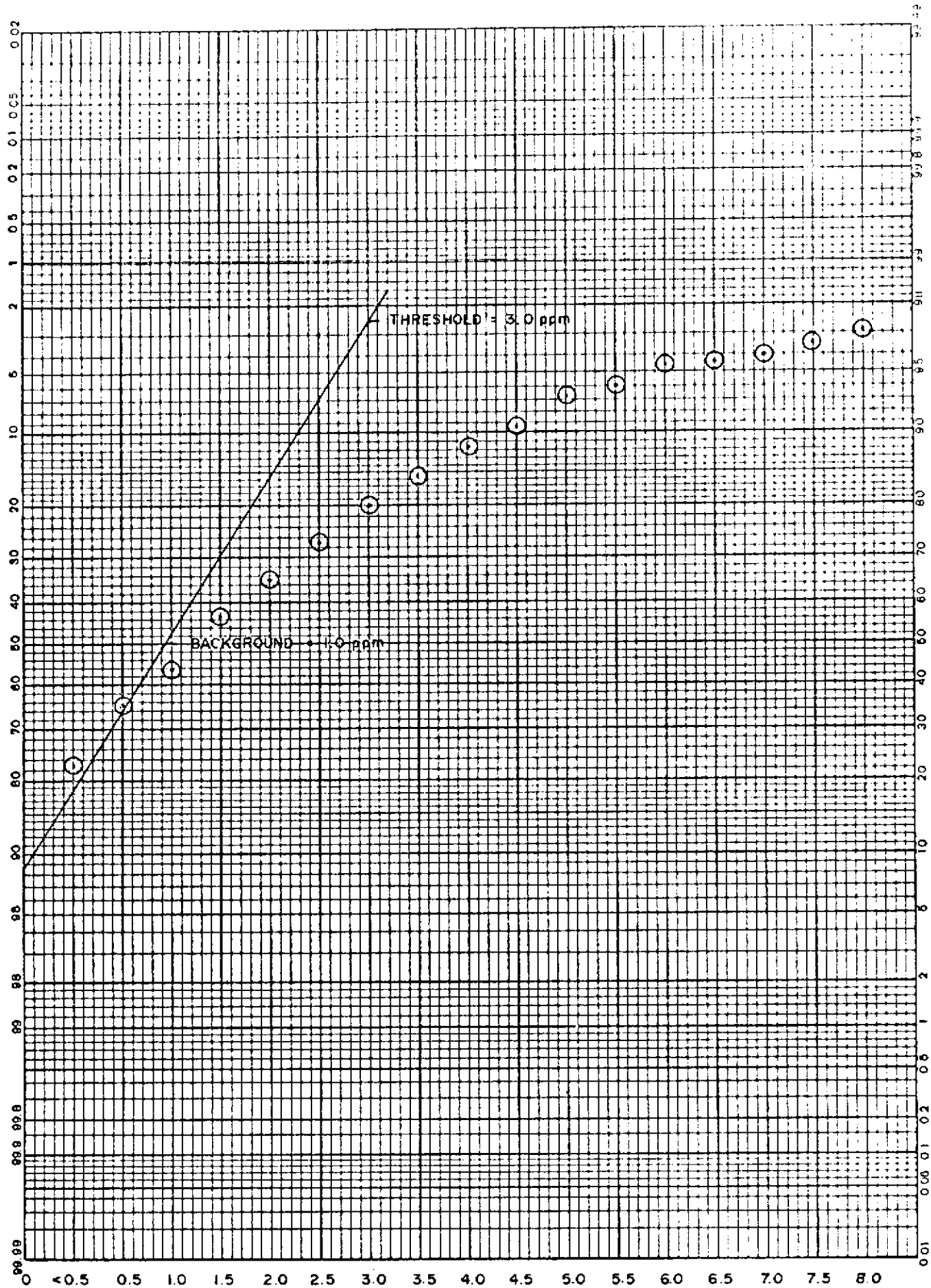
Arsenic

For the arsenic determinations a Bausch and Lomb Spectronic 20 colorimeter was employed. A weighed quantity of soil was heated to evolve arsenic gas which was collected in an organic solvent. The solvent reacted with the arsenic gas and formed a red colored solution the intensity of which varied with the arsenic content. The color was then compared to a set of standard solutions as a measure of the arsenic content of the soil.

Treatment of Analytical Data

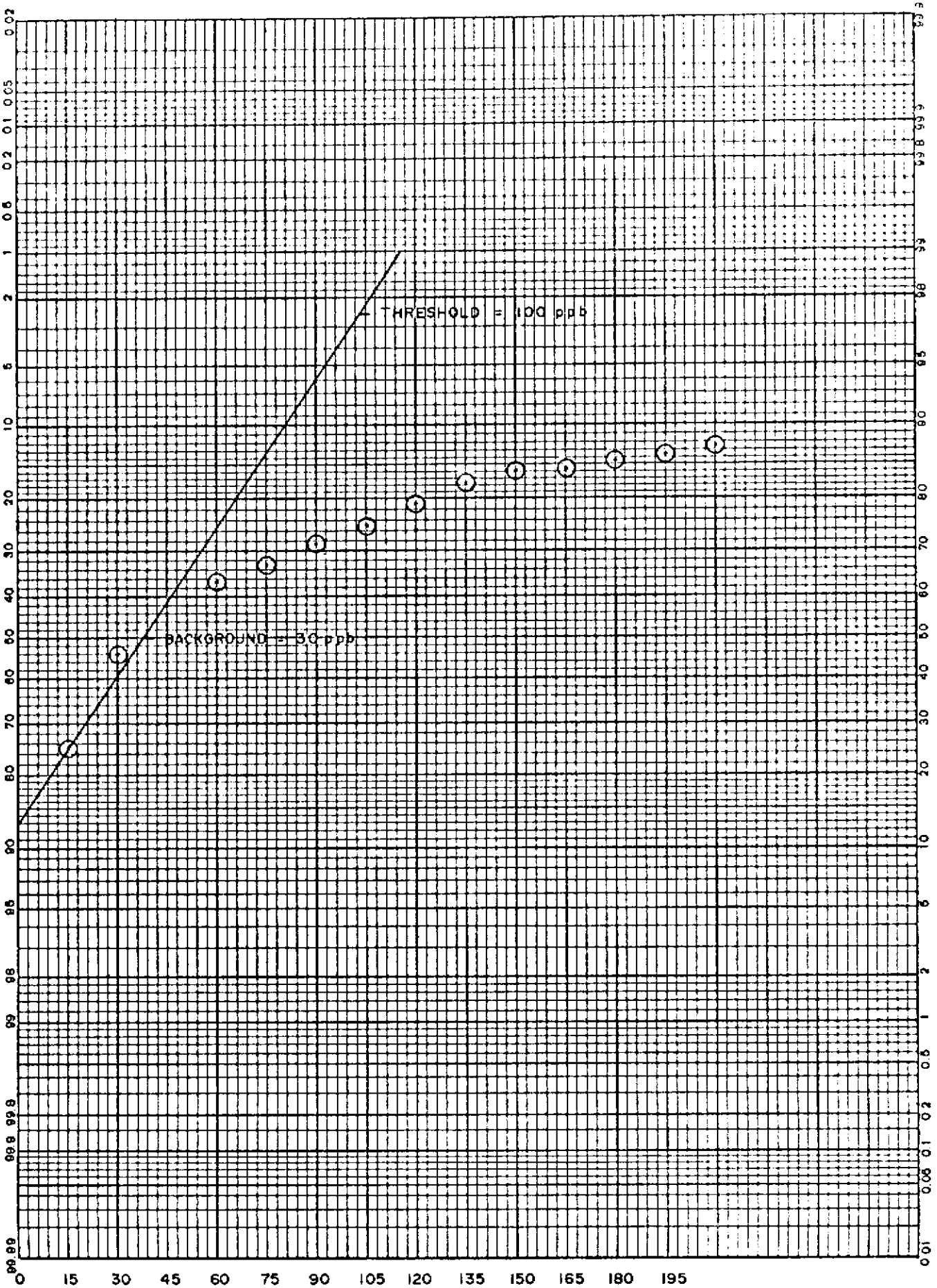
1. Silver

A cumulative frequency plot of silver content of soils from the Red River claim indicated a background of 1 ppm silver (See figure 6). Values



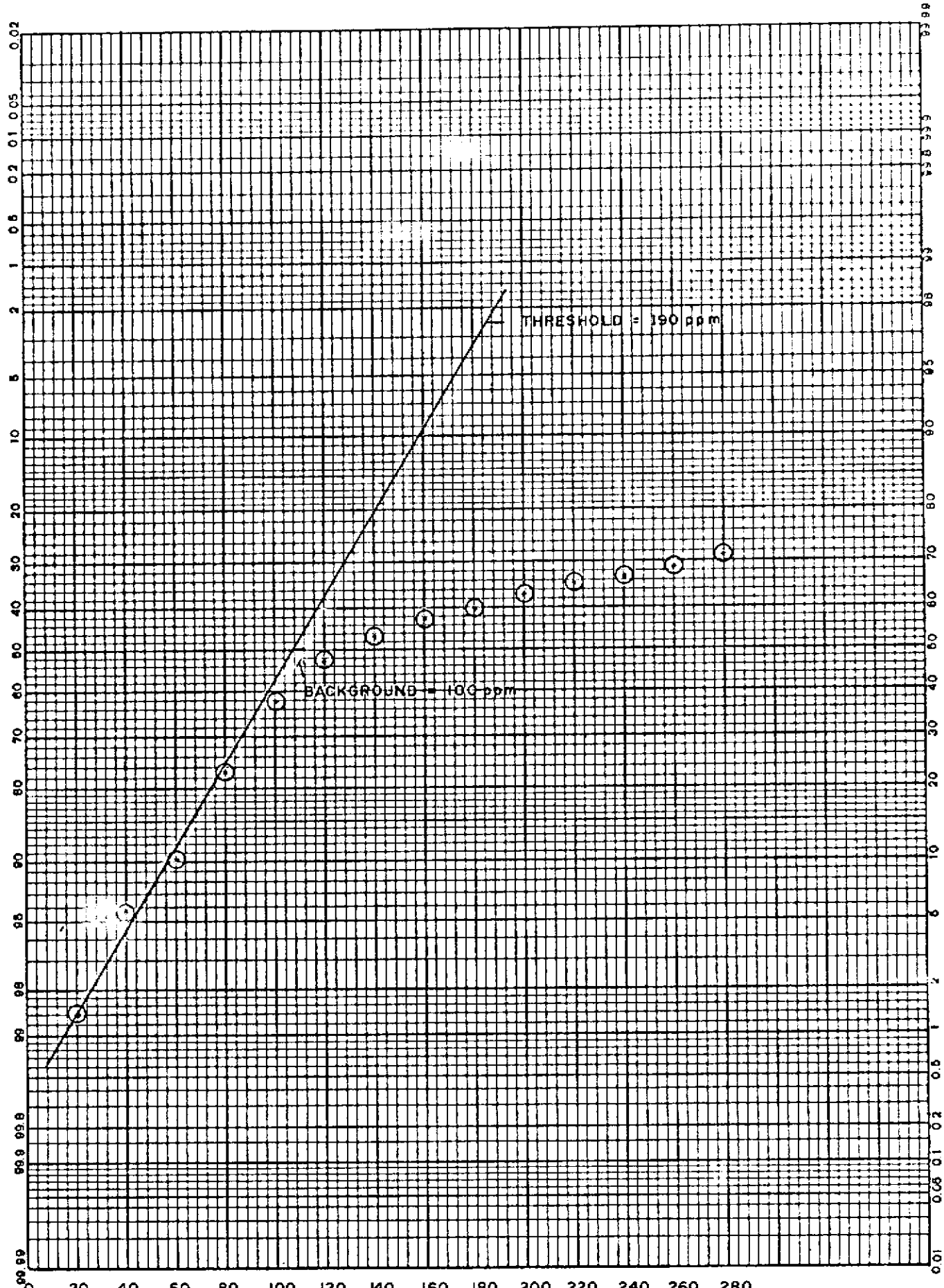
To accompany Report for
Granduc Mines Limited
by Ed Kruchkowski
Erik Ostensoe
January 13, 1977.

Figure 6. Cumulative Frequency Plot
SILVER IN SOILS
- Red River Claim -



To accompany Report for
Granduc Mines, Limited
by Ed Kruchkowski and E. Ostensoe
January 13, 1977.

Figure 7. Cumulative Frequency Curve
Gold in Soils
Red River Claim
Sulphurets Creek Project - 1976



To accompany Report for
Granduc Mines Limited
by E. Kruchkowski and E. Ostensoe
January 13, 1977.

Figure 8. Cumulative Frequency Curve
ARSENIC in Soils
Red River Claim

above 3 ppm were considered anomalous. Figure 3 on scale 1:1200 (1 cm = 1200 cm) (or 1" = 100') shows group concentration ranges for silver in soils. Contour intervals are arithmetic intervals of 2; i.e. 3, 5, 7, 9 ppm. Silver concentrations vary from less than 0.5 ppm to a high of 24 ppm.

2. Gold

A cumulative frequency plot of gold content of soils from the Red River claim indicated a background of 30 ppb (see figure 7). Values above 100 ppb were considered anomalous. Figure 4 on scale 1:1200 (1" = 100') shows group concentration ranges for gold in soils. Contour intervals are at arithmetic intervals of 200; i.e. 100,300, 500 and 700 ppb. Gold concentrations vary from less than 15 ppb to a high of 1925 ppb.

3. Arsenic

Arsenic was selected for analysis as a possible pathfinder element for precious metal occurrences. A cumulative frequency plot of arsenic analyses from the Red River claim indicated a background of 100 ppm with values above 190 ppm being anomalous (see figure 8). Figure 5 on scale 1:1200 (1" = 100') illustrates the contoured plot for arsenic in soils. Contour intervals are at arithmetic intervals of 100; i.e. 200, 300, 400 and 500 ppm. Arsenic concentrations were not determined above 500 ppm, the upper detection limit of the colorimetric process.

Conclusions

A large number of silver analyses are weakly anomalous but only a very few are strongly anomalous. Silver shows broad, weakly to moderately anomalous trends adjacent to the Brucejack Fault lineament and two samples at the southwest end of line 35 east are strongly anomalous in silver. Further sampling and prospecting in this area is required.

Gold values in soils from the northwest and the south portions of the grid are moderately to strongly anomalous. Higher values are closely related to areas of quartz veining within pyrite-quartz-sericite alteration zones. Contouring has outlined two anomalous areas that should be sampled in more detail: northeast of the baseline between lines 1 east and 7 east; and at the southeastern extremity of the grid between lines 21 east and 35 east. Soil sampling should be extended to more completely delineate the anomaly in the southern portion of the grid. The sampling gap between lines 29 east and 34 east should be sampled to further define possible trends across and near the Brucejack Fault trace.

Contouring of arsenic values outlined several broad trends of anomalous arsenic concentrations. One trend is located northwest of the so called Goldpan Lake (see figure 5) and encompasses the area of a gold - silver anomaly. The second trend is located along the southern edge of the grid

and, including the sampling gap between lines 29 E and 34 E, extends from line 18 east to line 35 east. The silver anomaly at lines 12 to 13 east has a coincident arsenic anomaly. The source of the anomalous amounts of arsenic in soils is assumed to be arsenopyrite associated with pyrite, quartz and sericite in alteration zones. However, arsenopyrite was not identified in the alteration zones on the Red River claim. Results obtained for arsenic indicate that it has good reliability as a pathfinder element in the search for precious metals in this area, but it should be noted that many geochemists have concluded that gold is the best pathfinder to gold mineralization. The great Muruntau gold deposit in the USSR, though found by geochemical methods, using arsenic as a pathfinder element, may have been better and faster located using gold (this seemingly trivial after-the-fact observation is quoted from a Russian source by R. W. Boyle, Journal of Geochemical Expl. Vol.6, No.3, 1976).

PART 4.

ROCK GEOCHEMICAL SURVEY

Introduction

A reconnaissance rock geochemical survey was conducted in the south-eastern corner of the Red River claim. This area was selected due to the presence of a quartz-pyrite-sericite alteration zone. Sampling was conducted on August 26, 1976 and 21 samples, numbered 1177 to 1197 inclusive, were obtained. Samples consisted of two to three pounds of fresh bedrock material gathered at 120 metre intervals on two north-south grid lines which were spaced 120 metres apart. Sample sites are shown on figure 2. Bedrock samples were analysed for gold, silver, copper, lead and molybdenum.

Analytical Procedures

Samples were submitted to Chemex Labs Limited, North Vancouver. After being passed through a jaw crusher and a gyratory crusher, the sample was reduced in bulk by using a "Jones" splitter to obtain about 250 grams of material. The latter quantity was pulverized in a contamination-free ring pulverizer to - 100 mesh size. Accurately weighed 10 gram and 0.5 gram portions were then prepared and digested.

The 10 gram sample was ashed at 550°C then twice heated to dryness in aqua regia. The resulting residue was dissolved in 25% hydrochloric acid and aspirated through a Varian Techtron Atomic Absorption Spectrophotometer. In the first stage two readings were obtained: one for silver (Ag++) and the other for an interference factor which was then subtracted from the first quantity to give a net corrected value for silver content. Gold was then extracted from the solution into

hydrobromic acid and MIBK, an organic complex. Gold was determined by passing the resulting gold organic extract through the atomic absorption unit.

The 0.5 gram sample was digested in a solution consisting of 3 ml. of 70% perchloric acid and 2 ml. of concentrated nitric acid for 2 1/2 hours at 203°C. The solution was then diluted with distilled water to 25 ml. volume and heavy particles were allowed to settle out. The clear solution was processed through the atomic absorption unit and readings were obtained for copper, molybdenum and lead.

Treatment of Data

Geochemical data were plotted on base maps prepared on scale of 1:9600 (approximately 1" = 800'). On the base maps each sample site was identified by a small numbered circle and the particular geochemical value was plotted nearby using a slightly larger italicized script. Suitable contour intervals were chosen, largely by reference to data from a very large rock geochemical survey completed in a nearby area in 1974 - 1975.

Conclusions

The geochemical rock survey failed to indicate any significant values for copper and molybdenum in the southeast portion of the Red River claim (see figures 9 and 10 respectively). Lead values were generally of the same order of magnitude as those obtained in 1974 and 1975 from the rock geochemical sampling program on the nearby Tedray claims. Contouring the lead values (figure 11) produced inconclusive data due to the limited number of samples. A significant number of silver and gold values that were obtained may be considered anomalous. Contouring silver and gold (figures 12 and 13 respectively) failed to delineate any definite trends. This failure is attributed to the very small number of samples that were taken and may also be in part due to the large distance between sample points. More sampling and closer spacing of samples should reveal anomalous areas if any are present.

PART 5.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The Red River claim, consisting of 14 units and located northwest of Brucejack Lake, has been explored by soil and rock sampling, trenching, prospecting and geological mapping. This work has indicated a complex geological environment of clastic sedimentary rocks and volcaniclastic

rocks, unconformities and major faults. Zones of shearing and sericite-pyrite-quartz alteration have been shown to contain anomalous quantities of metals, particularly of silver and gold. It is recommended that further geological and geochemical work, prospecting and trenching be applied to the Red River claim.

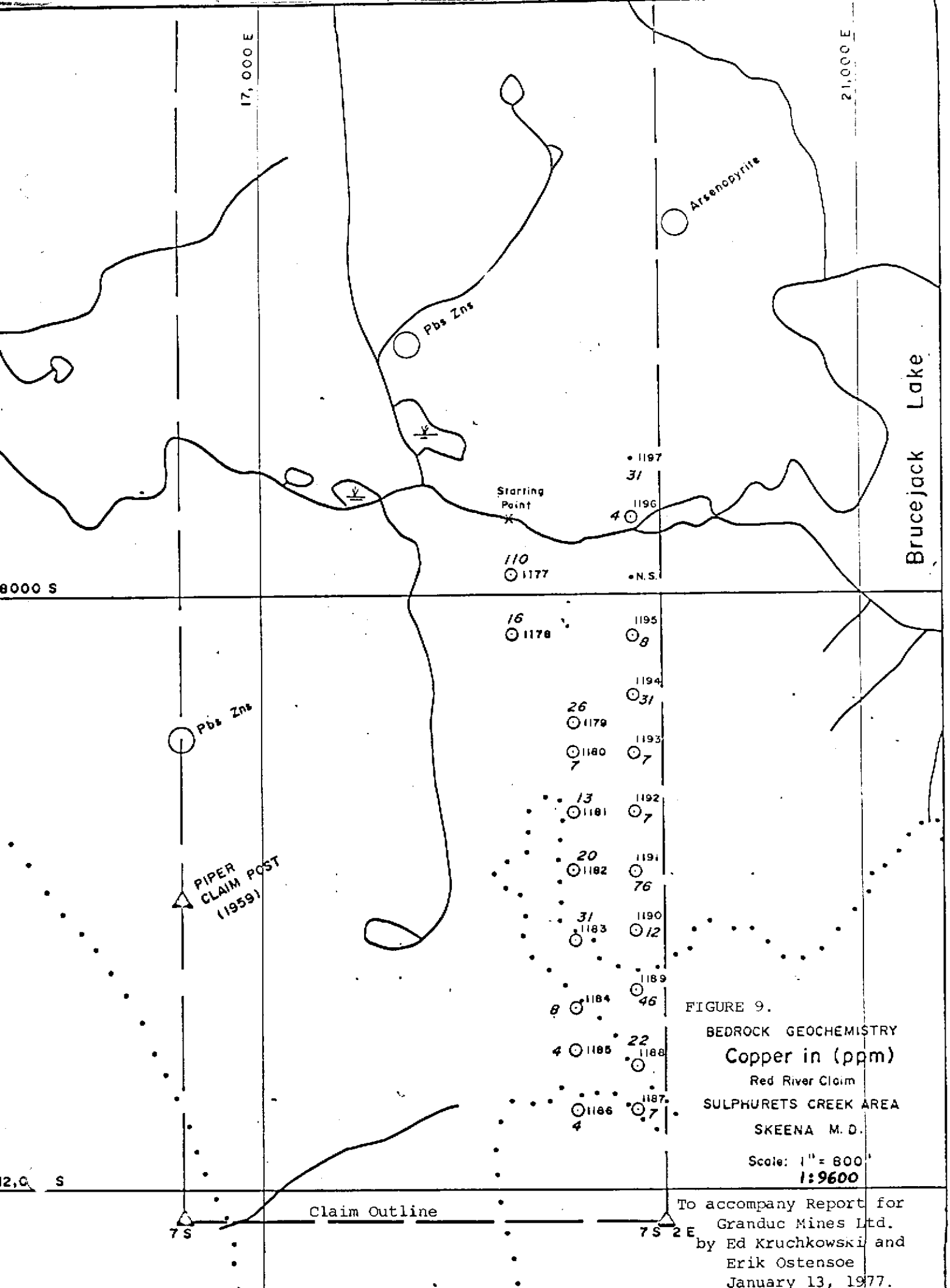


FIGURE 9.

BEDROCK GEOCHEMISTRY

Copper in (ppm)

Red River Claim

SULPHURETS CREEK AREA

SKEENA M. D.

Scale: 1" = 800'

1:9600

To accompany Report for Granduc Mines Ltd. by Ed Kruchkowski and Erik Ostensoe January 13, 1977.

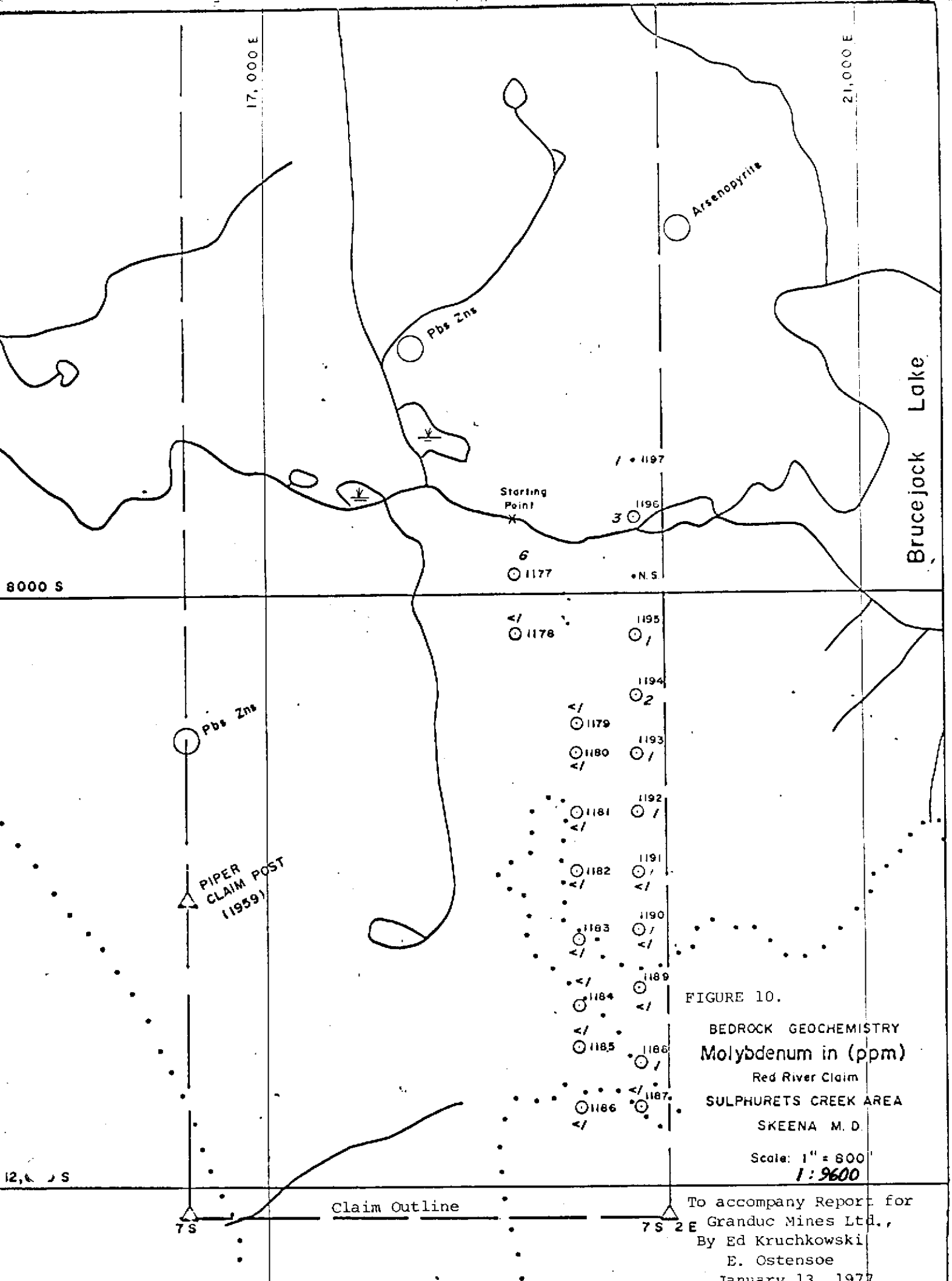


FIGURE 10.

BEDROCK GEOCHEMISTRY

Molybdenum in (ppm)

Red River Claim

SULPHURETS CREEK AREA

SKEENA M. D.

Scale: 1" = 800'

1:9600

To accompany Report for Granduc Mines Ltd.,

By Ed Kruchkowski

E. Ostensoe

January 13, 1977

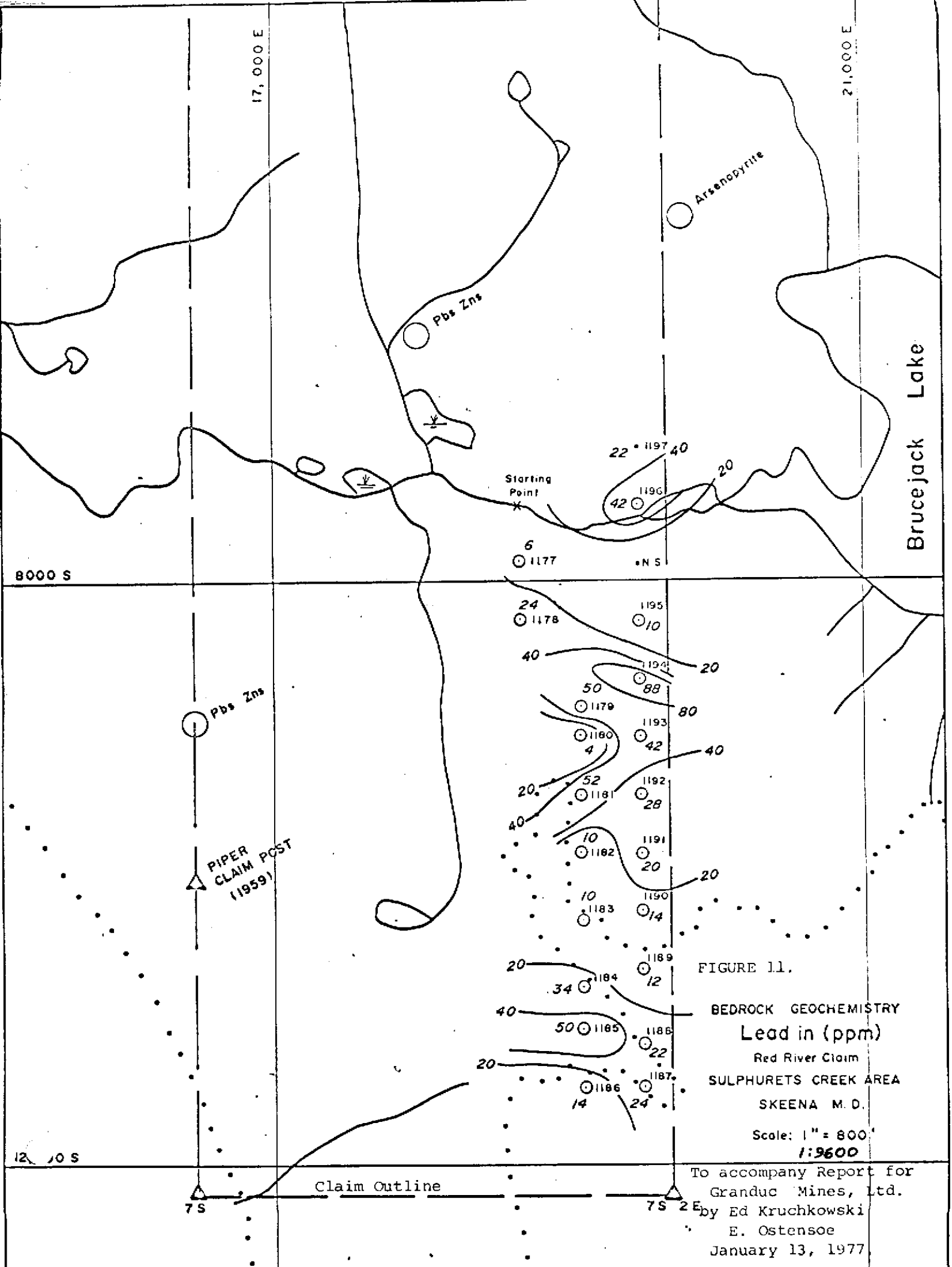


FIGURE 11.

BEDROCK GEOCHEMISTRY

Lead in (ppm)

Red River Claim

SULPHURETS CREEK AREA

SKEENA M. D.

Scale: 1" = 800'

1:9600

To accompany Report for Granduc Mines, Ltd.

by Ed Kruchkowski

E. Ostensoe

January 13, 1977

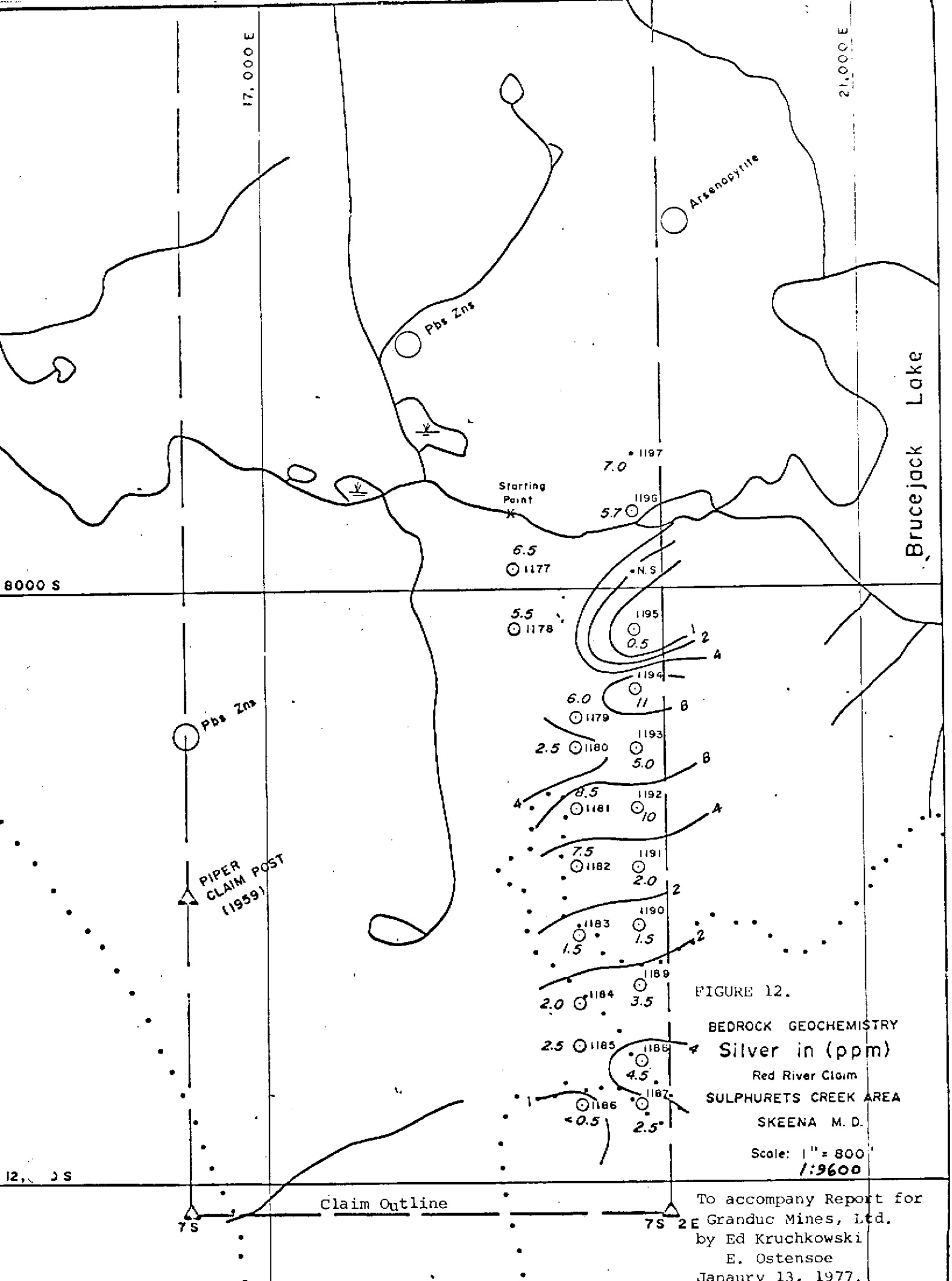


FIGURE 12.

BEDROCK GEOCHEMISTRY

Silver in (ppm)

Red River Claim

SULPHURETS CREEK AREA

SKEENA M. D.

Scale: 1" = 800'

1:9600

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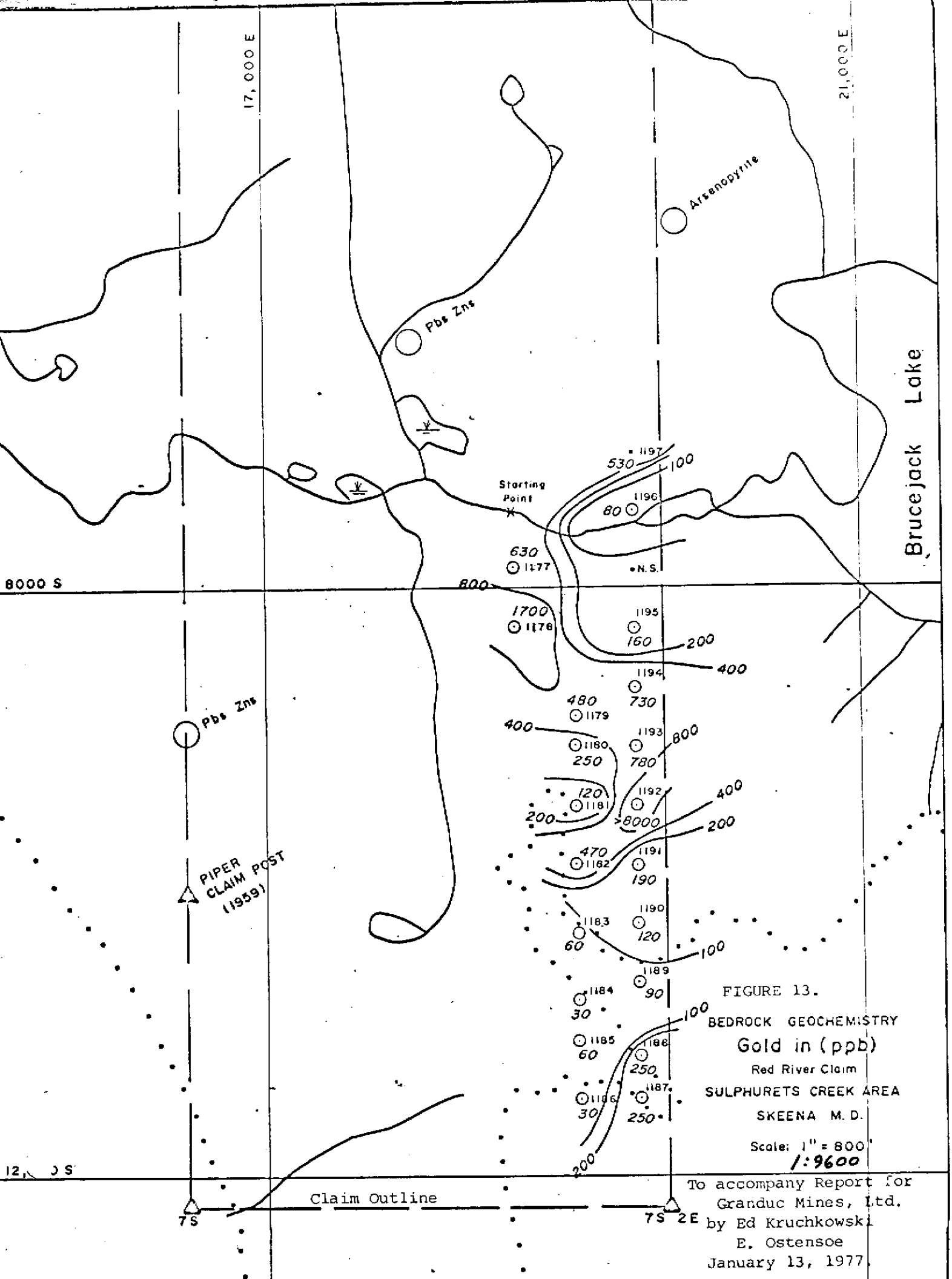

FIGURE 13.

BEDROCK GEOCHEMISTRY

Gold in (ppb)

Red River Claim

SULPHURETS CREEK AREA

SKEENA M. D.

Scale: 1" = 800'

1:9600

To accompany Report for Granduc Mines, Ltd. by Ed Kruchkowski E. Ostensoe January 13, 1977

A P P E N D I X 1

STATEMENT OF QUALIFICATIONS

APPENDIX I. Statement of Qualifications

The professional qualifications of technical personnel engaged in the work reported on herein, are detailed below:

1. Ed Kruchkowski, B.Sc., Geologist - completed B.Sc. course at University of Alberta (Edmonton) in May 1972; in summers of 1969, 1971 and 1972 employed by Hecla Operating Company in Schaft Creek area as coresplitter, soil sampler and geologist respectively. In 1970 employed by consultant and assigned to projects in southeastern British Columbia. Employed by Hecla Operating Company as geologist from May, 1973 to June, 1974 and assigned to projects at Mess Creek, B.C. and Bute Inlet, B.C. under the direction of Erik Ostensoe and P. I. Conley, P.Eng. Employed by Granduc Mines, Limited (N.P.L.) from July, 1974 to present as geologist in charge of work on Sulphurets Creek property.

2. Erik A. Ostensoe, B.Sc. (Hons.), Member: Canadian Institute of Mining and Metallurgy, Association of Exploration Geochemists; geologist - completed B.Sc. Honours course at University of British Columbia in 1960 and course requirements of M.Sc. at Queen's University in 1966; employed by Newmont Mining Corporation of Canada Ltd., under direction of Dr. G. W. H. Norman, P.Eng., from May 1960 through August 1964 as field geologist in Granduc Mine area, B.C., by Mount Billings Venture in southeastern Yukon in summer 1965, by Scud Venture (Asarco) in Iskut River area, B.C. in summer 1966 and by Granduc Mines, Limited (N.P.L.) and Hecla Mining Company of Canada Ltd. from October 1966 to present as Chief Geologist and Exploration Supervisor respectively under the direction of P. I. Conley, P.Eng.

3. Chris Hrkac, student assistant, high school student now in senior year, lieutenant in Air Cadet Corps, employed in 1976 by R. O. Crosby & Associates as geophysical lineman and instrument operator in Merritt area, B.C. and by Granduc Mines, Limited (N.P.L.) as geochemical sampler, geological assistant and labourer in Stewart area, B.C.

APPENDIX 2

GEOCHEMICAL ANALYSES - COPPER, MOLYBDENUM, LEAD, SILVER, GOLD

212 BROOKSBANK AVE
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE 985-0648
AREA CODE 604
TELEX 043-52597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 38703

TO: Granduc Mines Ltd.,
2009 - 1177 W. Hastings
Vancouver, B.C.

INVOICE NO. 18580

RECEIVED Sept. 28/76

ANALYSED Oct. 14/76

ATTN:

SAMPLE NO.	PPM Copper	PPM Molybdenum	PPM Lead	PPM Silver	PPB Gold
1176	1720	10	6	7.5	510
1177	110	6	6	6.0	630
1178	16	< 1	24	5.5	1700
1179	26	< 1	50	6.0	480
1180	7	< 1	4	2.5	250
1181	13	< 1	52	8.5	120
1182	20	< 1	10	7.5	470
1183	31	< 1	10	1.5	60
1184	8	< 1	34	2.0	30
1185	4	< 1	50	2.5	60
1186	4	< 1	14	<0.5	30
Std.	102	8	94		

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604
TELEX: 043-52597

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ATTN:

CERTIFICATE NO. 38704

INVOICE NO. 18580

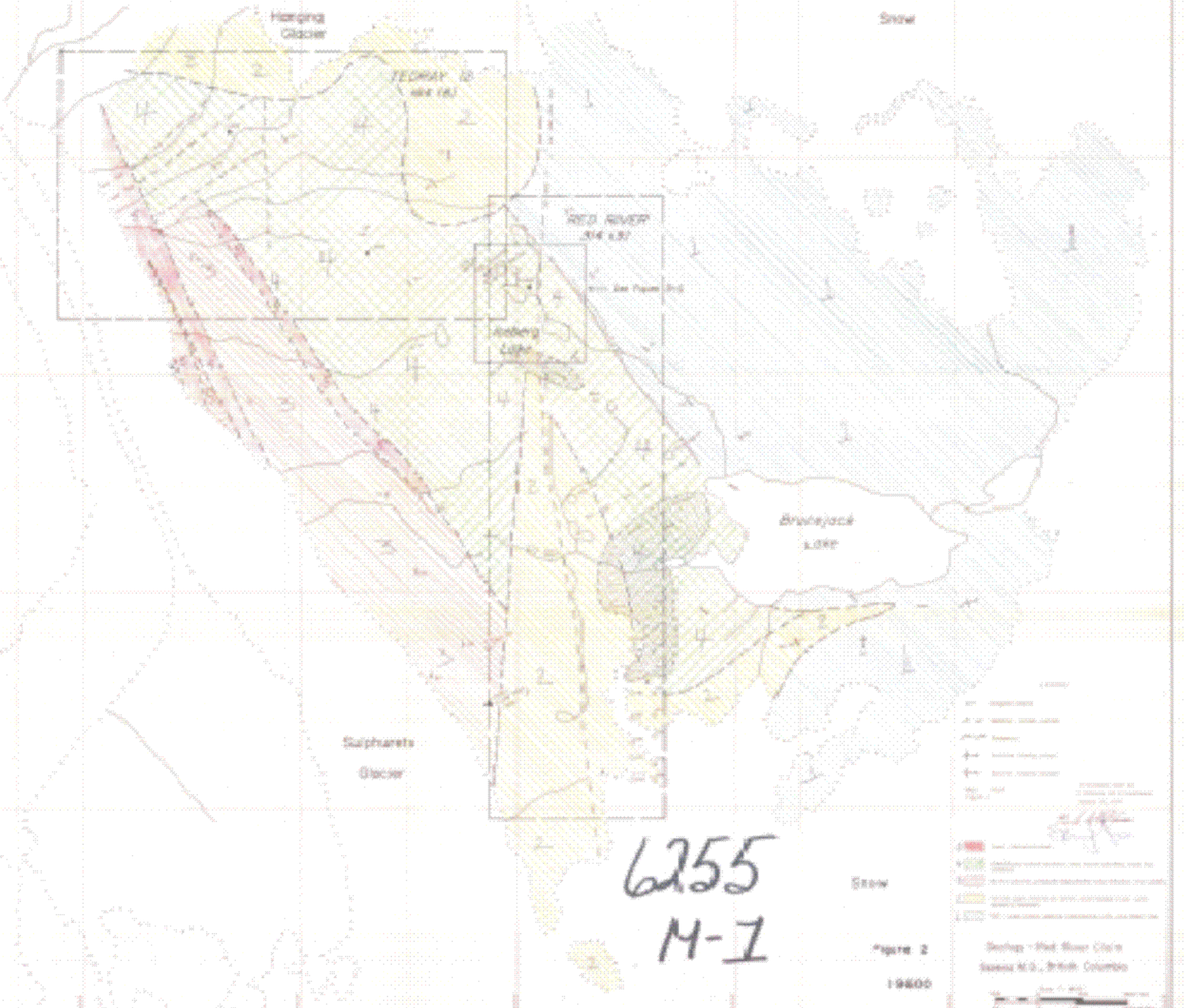
RECEIVED Sept. 28/76

ANALYSED Oct. 14/76

SAMPLE NO. :	PPM Copper	PPM Molybdenum	PPM Lead	PPM Silver	PPB Gold
1187	7	< 1	24	2.5	250
1188	22	1	22	4.5	250
1189	46	< 1	12	3.5	90
1190	12	< 1	14	1.5	120
1191	76	< 1	20	2.0	190
1192	7	1	28	10	>8000
1193	7	1	42	5.0	780
1194	31	2	88	11	730
1195	8	1	10	0.5	160
1196	4	3	42	5.0	80
1197	31	1	22	7.0	530

CTA MEMBER CANADIAN TESTING ASSOCIATION

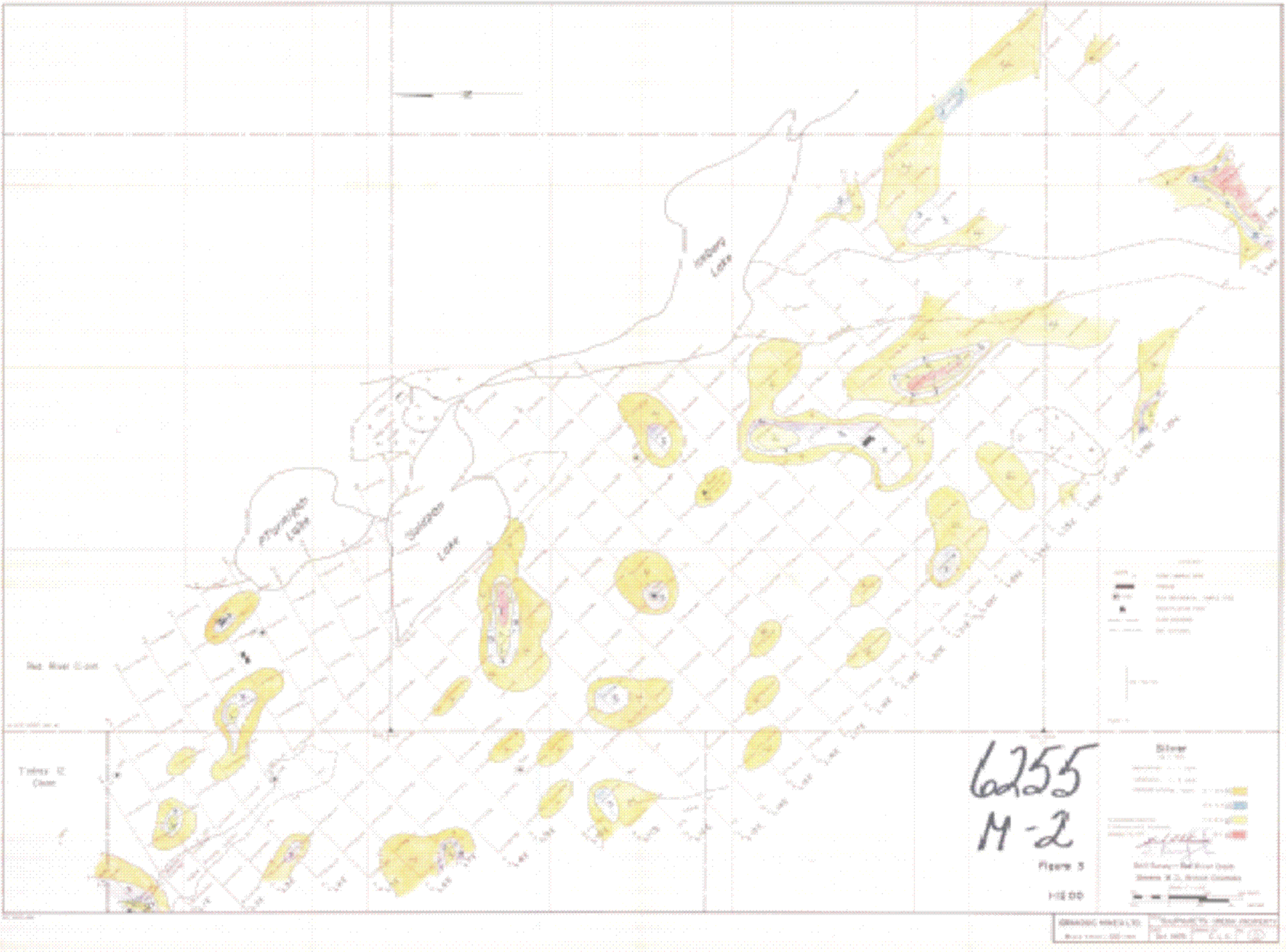
CERTIFIED BY:

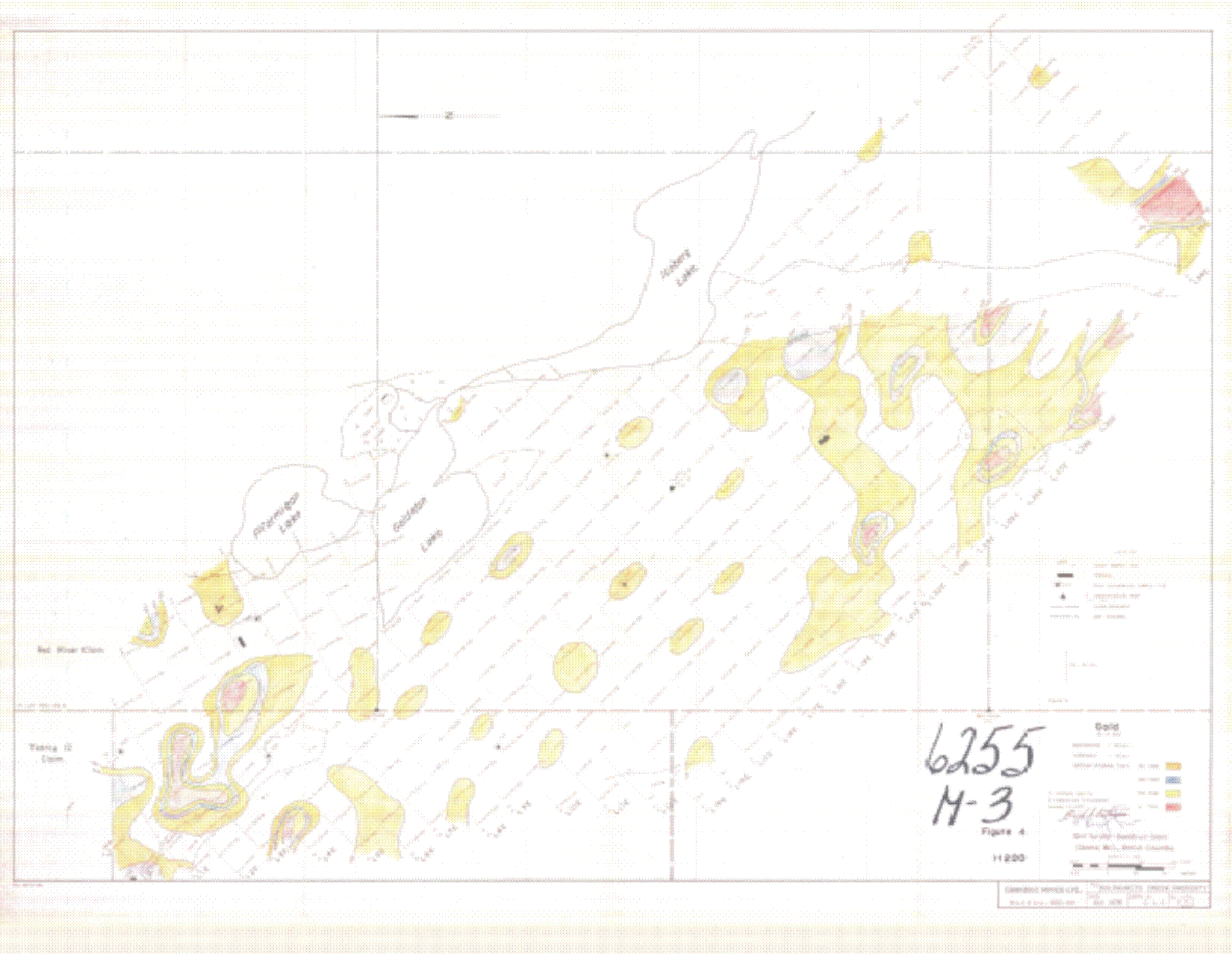


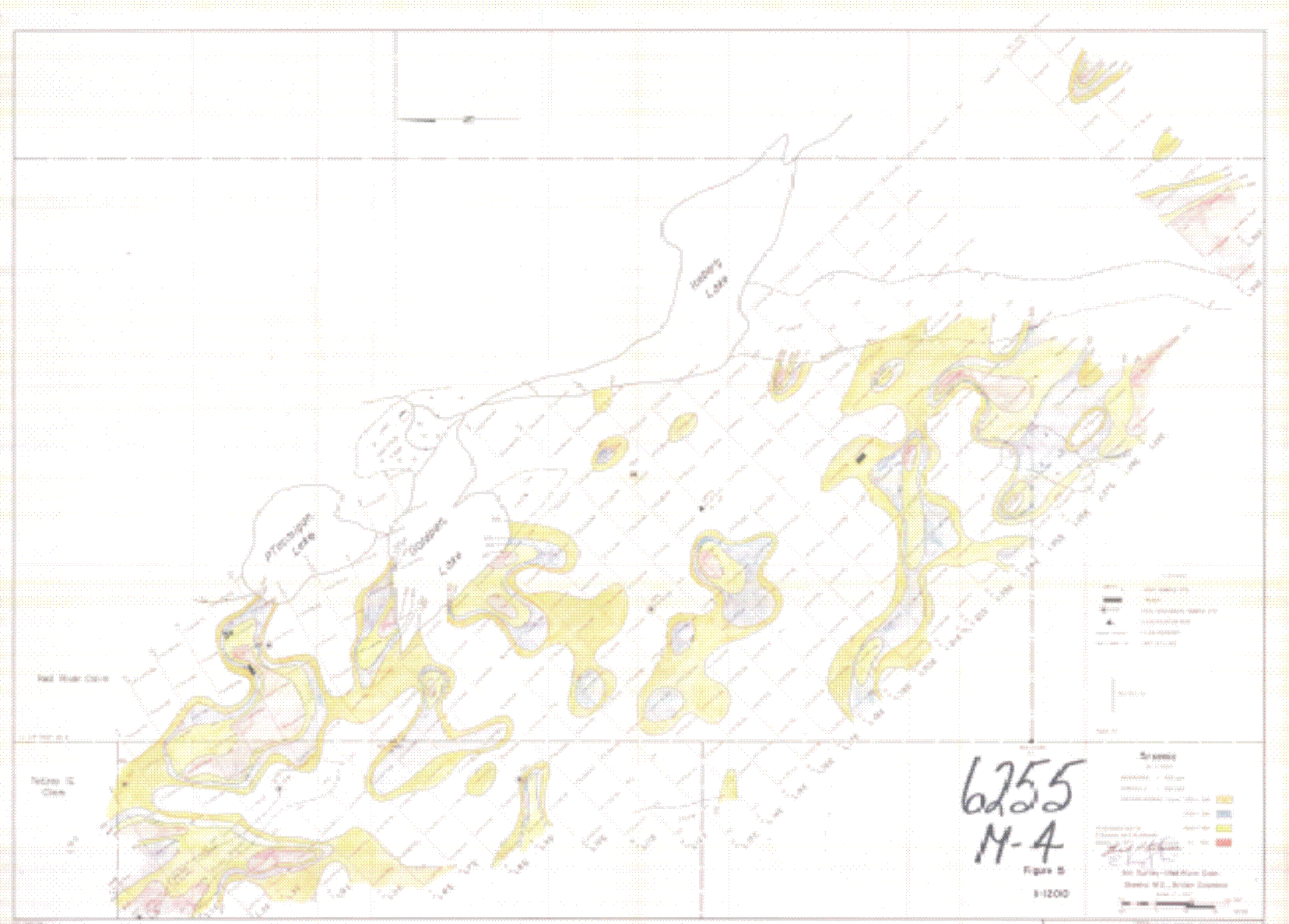
6255
M-1

Figure 2

19600


6255
M-2
Silver
Figure 5


Gold
6255
M-3
Figure 4
1:200



6255
M-4

Figure 5

1:1200