

AMENDMENT NUMBER ONE  
Dated December 8, 1988

EFFECTIVE DATE: FEBRUARY 7, 1989

TO A PROSPECTUS DATED SEPTEMBER 30, 1988  
EFFECTIVE DATE: OCTOBER 28, 1988

DIGGER RESOURCES INC.  
1801 - 738 3rd Avenue S.W.  
Calgary, Alberta  
T2P 0G7

PROSPECTUS IS AMENDED AS FOLLOWS:

- 1 Page 4 is hereby amended by deleting the first paragraph under the heading "The Property" and substituting therefor the following:

"By an agreement dated April 25, 1986, as amended June 23, July 4 and November 14, 1988 between the Company and BP Resources Canada Limited, ("BP") 600 - 890 West Pender Street, Vancouver, B.C., the Company was granted the right to earn a 50% interest in the Chuchi Property by spending \$140,000 by August 31, 1989 of which \$50,000 had to be spent by July 1, 1987. This expenditure has been made and accepted by BP. When the Company has spent an additional \$90,000, it shall have earned its 50% interest. Thereafter the Company and BP shall bear all costs and liabilities and own the Property, assets and any mine in proportion to their respective interests."

2. Pages 11 and 12 are hereby amended by deleting the three paragraphs under the heading "Promoters" and substituting therefor the following:

"By virtue of the definition of a "promoter" set forth in section 1(1) of the Securities Act (British Columbia) Sheela R. Suse was the Company's promoter during the period from December 31, 1985 to April 25, 1988 while she was a director and president of the Company. Ms. Suse had purchased 750,000 principal's shares at \$0.01 per share which shares were transferred to Daniel G. McGee and thence to William A. Scott and Norman B. Yeo as to 375,000 shares each. Ms. Suse holds 148,600 shares directly and 20,000 shares indirectly, all purchased at \$0.25 per share.

Ms. Suse was the Company's original promoter in that she took the initiative in founding the business of the Company.

Upon the resignation of Ms. Suse on April 28, 1988 and the appointment of Mr. McGee to the board of directors and the transfer of all 750,000 escrowed shares to Mr. McGee, Mr. McGee was deemed to be the Company's promoter. Since becoming

PROPERTY FILE T.F.  
Chuchi 93N 141

Warrants to purchase 150,000 shares of the Company are held pursuant to the Agency Agreement dated May 25, 1988. Refer to "Plan of Distribution" on page 1 herein for further details.

#### **NAME AND INCORPORATION OF COMPANY**

Digger Resources Inc. (the "Company") was incorporated on December 31, 1985 under the Company Act of the Province of British Columbia by registration of its Memorandum and Articles.

The address of the head office of the Company is 200-675 West Hastings Street, Vancouver, B.C., V6B 4Z1

The address of the registered and records office of the Company is 500-789 West Pender Street, Vancouver, B.C., V6C 1H2.

#### **DESCRIPTION OF BUSINESS**

##### **Business**

The Company is a natural resource company engaged in the acquisition, exploration and development of mineral properties. The Company has interests in the properties described under the heading "The Property" and intends to seek and acquire additional properties worthy of exploration and development.

##### **The Property**

##### **Chuchi Property Omineca Mining Divisions British Columbia**

By an agreement dated April 25, 1986, as amended June 23 and July 4, 1988, between the Company and BP Resources Canada Limited, ("BP") 600-890 West Pender Street, Vancouver, B.C., the Company was granted the right to earn a 50% interest in the Chuchi Property by spending \$140,000 by October 31, 1988 of which \$50,000 had to be spent by July 1, 1987. This expenditure has been made and accepted by BP. When the Company has spent an additional \$90,000, it shall have earned its 50% interest. Thereafter the Company and BP shall bear all costs and liabilities and own the Property, assets and any mine in proportion to their respective interests.

BP will be the operator under the agreement which provides that if a party elects not to contribute to the

exploration costs of any program the interest of that party shall be decreased and the interest of the party contributing in excess of its proportionate share of the costs shall be increased so that the interest of each party during the period of exploration work on the Property shall be:

Exploration Costs of party  
Exploration Costs of all parties

A party whose interest has been reduced may still contribute to future programs to the extent of its then interest. If a party's interest is reduced to less than 15%, that party shall forfeit its interest in the Property.

In the event that a decision is reached to bring a mine into commercial production, each party may, within 60 days of receipt of the Production Notice, give the Operator notice committing to contribute its proportionate share of the Construction Costs or give the Operator notice committing to contribute an amount less than its proportionate share, provided that this lesser amount committed may not be less than 15% of the Construction Costs.

If party fails to give notice committing to an amount less than its proportionate share, that party shall forfeit the right to contribute to Construction Costs and shall suffer dilution and conversion of its interest. The party which elected to contribute may thereupon elect to increase its contribution to the Construction Costs by the amount which the other party has declined to contribute. If elections are made so that Construction Costs are fully committed:

the interest of each Participant shall be adjusted and that of each non-Participant shall be decreased so that the Interest of each party at all times is that percentage which is equivalent to:

- (i) the sum of its Exploration Costs and its contribution to Construction Costs

divided by

- (ii) the sum of the total Exploration Costs and the total Construction Costs of all parties.

multiplied by

- (iii) 100;

The agreement with BP does not provide for calculations made pursuant to the agreement to be verified by an independent consultant acceptable to both parties. However,

the agreement contains an arbitration clause which provides that in the event of any dispute the matter will be referred to an arbitrator appointed pursuant to the provisions of the Arbitration Act of British Columbia. The costs of such arbitration will be shared by the parties in proportion to their interest.

The Chuchi Property consists of the following:

<b>Claim</b>	<b>Record #</b>	<b>Expiry Date</b>
Phil 13	6035 (12)	Dec. 29, 1990
Phil 14	6036 (12)	Dec. 29, 1990
Chuchi 1	7085 ( 6)	June 13, 1989
Chuchi 2	7086 ( 6)	June 13, 1989

None of the directors or officers of the Company has any interest in any claims contiguous to the Chuchi Property.

Reference is made to a letter agreement dated April 8, 1986 wherein it is acknowledged by Lorne H. Spence, a former director of the Company, that in consideration of the introduction of the Company to B.P. Resources Canada Limited by Rebagliati Geological Consulting Ltd. the Company shall pay to Rebagliati:

- (a) \$5,000 forthwith upon execution and delivery of a property agreement (paid);
- (b) 5% of all expenditures made with respect to the Property, payable annually on or before January 15th every year for expenditures made during the calendar year immediately preceding until a total of \$500,000 is paid.

#### **Location and Access**

The Chuchi property is situated 90 km north of the village of Fort St. James and 90 km west of the village of Mackenzie, in the Omineca Mining Division of central B. C.

The property is readily accessible from Fort St. James by logging roads which pass through the area. Access to the core of the property is by a 4x4 road which extends 5 km beyond the end of the north branch of the Germanson-Indata logging road. This branch of the road is approximately 16 km west of mile 65.1 on the Manson Creek Highway.

The terrain comprises rounded mountains and U-shaped valleys. Elevations range from 1225m to 1654m. Ridge tops are recessive and slopes rarely exceed 30 degrees. The area is drained by north and south flowing streams which are

adequate sources for drill water. Forest cover consists of spruce, balsam, jackpine and brush at lower elevations giving way to scrubby jackpine, balsam and brush at higher elevations.

### History

The following information is from the report on the Chuchi Property dated February 29, 1988 by J.S. Kermeen, M.Sc. P.Eng., a copy of which is attached hereto and forms part of this Prospectus:

"In the area of the Phil-Chuchi claim group, no exploration is recorded in the assessment files until the period 1967-72 when porphyry copper-molybdenum exploration was active around the southern end of the Hogem Batholith. After this period, activity waned and no further exploration was recorded until the location of the Phil-Chuchi claim group.

The Jay claims, located south of the Chuchi claims, were staked in 1967 by Tro Buttle Mines Ltd. A soil grid located a few spotty anomalies (Assessment Report 1215). The claims were allowed to expire. In 1970 the LSD claims, staked by Hudson Bay Exploration and Development Co. Ltd., covered most of the Phil-Chuchi claim group. During the period 1970-72 Hudson Bay covered the claims with Cu-Mo soil geochemical grid and in part by geological and IP surveys. A few moderate to low contrast anomalies were identified; no trenching or drilling is reported (Assessment reports 3218, 3862 and 3863). The claims were allowed to lapse. Serem, in 1972, staked the SRM claims covering the southern portion of the Phil claims and the ground to the immediate south. A property wide Cu-Mo-Zn soil survey was not followed by any further exploration and the claims were allowed to expire (Assessment Report 3720). The Dingle claims which extended over the present Chuchi claims, were staked in 1972 by Noranda, and were covered with a Cu-Mo-Zn soil grid (Assessment Report 4099). No additional work was recorded and the claims were allowed to expire.

The Phil 13 and 14 claims were staked by BP Resources Canada Limited in 1983 to cover an area where reconnaissance soil samples were geochemically enhanced in gold. In June of 1985 BP added the Chuchi 1 and 2 claims to the south and east sides of the Phil claims to cover the projected extension of a multi-element silver anomaly."

## Mineralization

The following information is from the Kermeen report:

"Backhoe trenching in the southeast portion of the gold soil anomaly on the Phil 14 claim (where a biotite-actinolite hornfels aureole developed around the small diorite pluton) exposed fracture controlled gold-copper mineralization hosted by all volcanic, sedimentary and intrusive units. The ash tuff and tuffaceous siltstone are the least altered, having minor chlorite and sericite and a few scattered cross-cutting pyrite veinlets. Sections adjacent to diorite contacts are weakly silicified and more pyritic. Andesite and augite porphyry basalt display localized potassium feldspar-quartz-epidote and magnetite alteration, pervasive sericite-chlorite-quartz-iron carbonate alteration and irregularly distributed fracture controlled multi-directional pyrite veinlets. Pervasive sericite and patchy potassium feldspar and carbonate alteration affect the diorite.

Superimposed on the widespread pervasive alteration assemblage is a zone of highly fractured and intensely altered rocks. The 10-30m wide zone is oriented east-west and is open along strike in both directions. Quartz, iron carbonate and calcite form strong to intense pervasive alteration and veining. Variable amounts of disseminated and vein controlled pyrite and chalcopyrite occur within and adjacent to the zone. Magnetite, potassium feldspar, epidote and secondary biotite are associated with the mineralization.

Elevated gold values (50-600 ppb) are widely distributed in all units and occur in the less altered rocks well beyond the intensely altered iron-carbonate zone. Copper in the 250-2200 ppm range accompanies the gold. Within the intensely fractured and iron-carbonate altered zone in trench 85-2, grades are generally in the order of 100 to 1000 ppb gold and 100 to 4000 ppm copper. Selected sulphide rich samples collected by BP geologists grade up to 0.35 oz/ton gold and 2% copper. Gold content, while spatially associated with the copper, is not dependent on the amount of copper present. This variable relationship implies that, in addition to chalcopyrite, some of the gold is associated with pyrite."

## Work Done

In his February 29, 1988 J.S. Kermeen states that "The five diamond drill holes drilled in 1987 did not test the most prospective portions of the multi-element silver soil geochemical anomaly. The 20 to 30 m deep overburden encountered in the drill holes conclusively proves that the northwestern portion of the multi-element silver anomaly has been glacially transported from its source. The gold-copper mineralization encountered in DDH 2 is not reflected by the near surface soil geochemistry; conversely the highly anomalous silver, lead, zinc and barium concentrations in the soil are not explained by the mineralization found in the core.

The gold-copper mineralization and the associated chlorite-carbonate-potash feldspar alteration in the brecciated volcanic and plutonic rocks are favourable geological features which are compatible with the periphery of a major zone of mineralization. Similarly, the anomalous concentrations of arsenic, barium, manganese and potassium are compatible with a mesothermal depositional environment.

The high iron content of the soils anomalous in silver, lead and zinc suggest that a relatively high concentration of iron sulphides is associated with the mineralization. If this association exists, an induced polarization survey should accurately define the location of the main mineralized zone at a relatively low cost.

J.S. Kermeen has concluded that an aggressive exploration program involving an induced polarization survey is warranted.

## Conclusions and Recommendations

He has recommended a two phase success-contingent exploration program of work, the first phase consisting of magnetic and IP surveyings, trenching and diamond drilling at an estimated cost of \$90,000 and, contingent upon the successful results of the first phase, a second phase is recommended to assess the extensive gold and silver anomalies at an estimated cost of \$150,000.

BP will be the operator in carrying out the above work.

THERE IS NO SURFACE OR UNDERGROUND PLANT OR EQUIPMENT ON THE PROPERTY. THE PROPERTY IS WITHOUT A KNOWN BODY OF COMMERCIAL ORE AND THE PROPOSED PROGRAM IS AN EXPLORATORY SEARCH FOR ORE.

**DIGGER RESOURCES LTD.**

**SUMMARY REPORT**

**CHUCHI PROJECT**

**Omineca Mining Division**

**British Columbia**

**N.T.S. 93N/6**

**Latitude 55° 16'N**

**Longitude 124° 33'W**

**By**

**J.S. KERMEEN M.Sc. P. Eng.**

**February 29, 1988**



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## SUMMARY

The Chuchi property, comprising 58 units, is located in East Central British Columbia, 90 km north of Fort St. James. An extensive network of good quality logging roads link the property with the British Columbia Railway at Fort St. James and with the Yellowhead Highway and the Canadian National Railway's northern main line at Vanderhoof.

No exploration is documented within the claim area until the period 1967 - 1972 when the region was actively explored by several companies for porphyry copper-molybdenum deposits. Results were negative and the region remained inactive until the Selco Division of BP Resources Canada Ltd. staked the Phil and Chuchi claims in 1983 and 1985, respectively. BP's work was directed towards precious metal deposits associated with alkaline intrusives. The extensive utilization of high density multi-element soil geochemistry led to the discovery of two pronounced soil geochemical anomalies. In 1986 Digger Resources Inc. optioned the claims and in 1987 drilled five diamond drill holes totalling 223 metres.

The gold anomaly on the Phil 14 claim is caused by gold and copper mineralization in alkaline volcanic rocks and interbedded sediments enclosing a small alkaline diorite intrusion. Mineralization in the 150 x 250 m trenched area grades in the range of 50 to 1,850 ppb gold and 300 to 3,000 ppm copper. Selected samples of sulphide-rich iron carbonate altered material grade up to 0.35 oz./ton gold. Continued work is proposed to explore this extensive area of potassic and pyrolytic altered and biotite hornfelsed volcanic rocks for zones of higher grade gold mineralization.

A high contrast silver-lead-zinc-arsenic-barium soil geochemical anomaly with a strong association of enhanced concentrations of gold, copper, iron, manganese and potassium is located at the boundary between the Chuchi and Phil claims. The 1,500 m long, crescent-shaped, multi-element silver anomaly occurs in a recessive area devoid of outcrop.

The five diamond drill holes sunk by Digger Resources Inc. on the down-slope, northwestern edge of the silver anomaly encountered deep overburden. Geochemically anomalous metal concentrations in surface soils in this area of deep overburden are displaced from their source, therefore the most prospective up-slope high contrast areas of the anomaly remain unexplored. Because only two of the holes intersected bedrock and because they are not located favorably with respect to the anomaly the anomaly certainly cannot be considered adequately tested. Nonetheless the bedrock recovered indicates that the underlying volcanic and intrusive rocks are brecciated, pyritic, pervasively chlorite-carbonate-sericite altered and are geochemically enriched in gold, copper and arsenic. These features are characteristic of the margins of many important precious metal deposits. The multi-element silver anomaly is an outstanding exploration target and an aggressive exploration program is warranted.

A two phase, success-contingent exploration program comprising magnetic and induced polarization surveys, trenching and diamond drilling budgeted at \$90,000 and \$150,000, respectively, is recommended to assess the extensive gold and silver anomalies.

## INTRODUCTION

In February, 1988 J.S. Kermeen, P.Eng. was commissioned by Digger Resources to review the available data and appraise the 58 unit Chuchi property, situated within the Quesnel Trough near Chuchi Lake, B.C.

This report is based upon a study of all available data, including government publications, BP Resources Canada Ltd. reports, and other reports pertinent to the Chuchi property. Adverse snow conditions at the time of writing precluded a meaningful examination of the property.

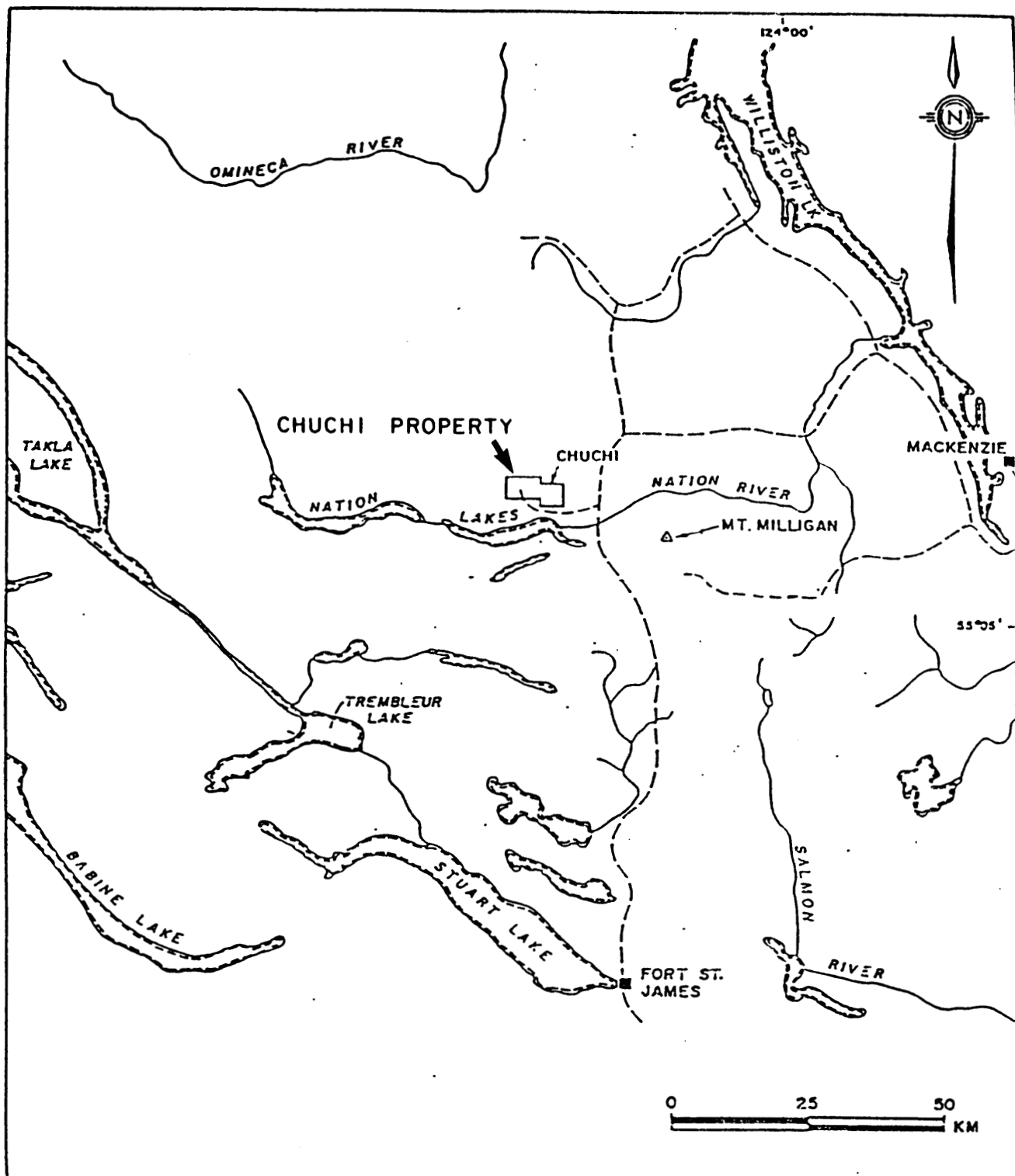
## LOCATION AND ACCESS

The Chuchi property is situated 90 km north of the village of Fort St. James and 90 km west of the village of Mackenzie in the Omineca Mining District of central B.C. (Figure 1). The claims are centred at 55° 16'N latitude and 124° 33'W longitude and lie within NTS map areas 93N/1, 2, 7 and 8.

The property is readily accessible from Fort St. James by logging roads. Access to the core of the property is by a 4 x 4 road which extends 5 km beyond the end of the north branch of the Germanson-Indata logging road. This branch of the road is approximately 16 km west of mile 65.1 on the Manson Creek Highway.

The Terrain comprises rounded mountains and U-shaped valleys. Elevations range from 1,225 m to 1,654 m. Ridge tops are recessive and slopes rarely exceed 30°. The area is drained by north and south flowing streams which are adequate sources for drill water. Forest cover consists of spruce, balsam, jackpine and brush at lower elevations giving way to scrubby jackpine, balsam and brush at higher elevations.

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*J. Kermeen*

<b>J. S. KERMEEN M.Sc., P.Eng. Consulting Geological Engineer</b>		
CLIENT: <b>DIGGER RESOURCES INC.</b>		
PROJECT: <b>CHUCHI PROJECT</b>		
TITLE: <b>LOCATION MAP</b>		
WORK BY: <b>C. M. R.</b>	DRAWN BY: <b>D. M. C.</b>	N.T.S. <b>93 N/2</b>
DATE: <b>FEB., 88</b>	REVISED:	FIG. NO. <b>1</b>

**CLAIMS**

The following information was obtained from government and company records. The writer has not examined the claim posts and can pass no opinion on the manner of staking nor can he verify the position of the claims as depicted on the accompanying plan (Figure 2).

The Chuchi property consists of four claims containing a total of 58 units.

Essential claim data are listed as follows:

<u>Claim Name</u>	<u>Record No.</u>	<u>Tag No.</u>	<u>Units</u>	<u>Staking Date</u>	<u>Expiry Date</u>
Phil 13	6035 (12)	83000	12	Dec. 18/83	Dec. 29/90
Phil 14	6036 (12)	83001	20	Dec. 18/83	Dec. 29/90
Chuchi 1	7085 (6)	93413	8	June 10/85	June 13/89
Chuchi 2	7086 (6)	93415	18	June 9/85	June 13/89

**EXPLORATION HISTORY**

The following summary of exploration activity has been extracted from the report written by Rebagliati (1987).

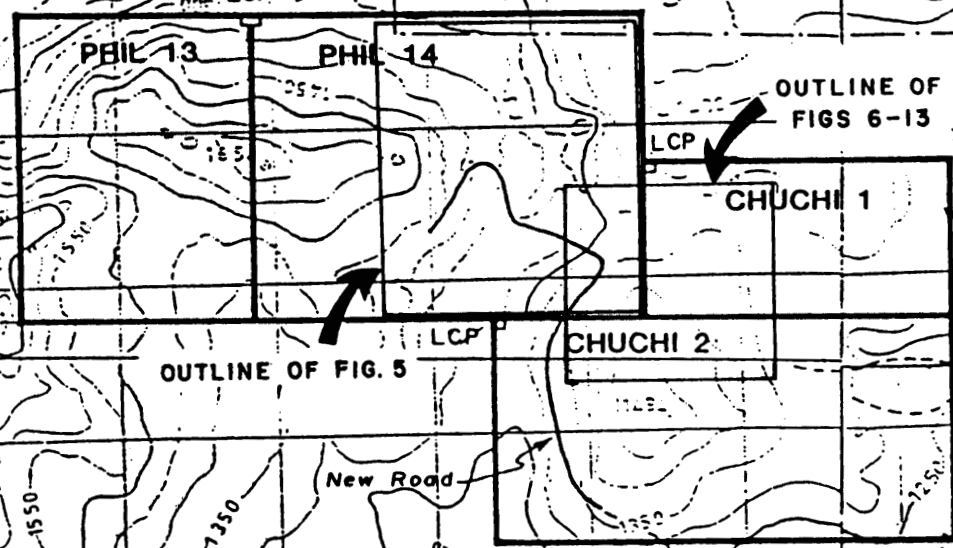
"In the area of the Phil-Chuchi claim group, no exploration is recorded in the assessment files until the period 1967-72 when porphyry copper-molybdenum exploration was active around the southern end of the Hogem Batholith. After this period, activity waned and no further exploration was recorded until the location of the Phil-Chuchi claim group.

The Jay claims, located immediately to the south of the Chuchi claims, were staked in 1967 by Tro Buttle Mines Ltd. A soil grid located a few spotty anomalies (Assessment Report 1215). The claims were allowed to expire. In 1970 the LSD claims, staked by Hudson Bay Exploration and Development Co. Ltd., covered most of the Phil-Chuchi claim group. During the period 1970-72 Hudson Bay covered the claims with a Cu-Mo soil geochemical grid and in part

124°30'

KLAWDETELLE LAKE

CREEK



55°15'

New Road

Old Road



KILOMETRES

CHUCHI LAKE

<b>J. S. KERMEEN M.Sc., P.Eng. Consulting Geological Engineer</b>		
CLIENT:	<b>DIGGER RESOURCES INC.</b>	
PROJECT:	<b>CHUCHI PROJECT</b>	
TITLE:	<b>CLAIM MAP</b>	
WORK BY: C. M. R.	DRAWN BY: D. M. C.	N.T.S. 93 N/2
DATE: FEB., 88	REVISED:	FIG. NO. 2



by geological and IP surveys. A few moderate to low contrast anomalies were identified; no trenching or drilling is reported (Assessment Reports 3218, 3862 and 3863). The claims were allowed to lapse. Serem, in 1972, staked the SRM claims covering the southern portion of the Phil claims and the ground to the immediate south. A property wide Cu-Mo-Zn soil survey was not followed by any further exploration and the claims were allowed to expire (Assessment Report 3720). The Dingle claims, which extended over the present Chuchi claims, were staked in 1972 by Noranda and were covered with a Cu-Mo-Zn soil grid (Assessment Report 4099). No additional work was recorded and the claims were allowed to expire.

The Phil 13 and 14 claims were staked by BP Resources Canada Limited in 1983 to cover an area where reconnaissance soil samples were geochemically enhanced in gold. In June of 1985 BP added the Chuchi 1 and 2 claims to the south and east sides of the Phil 14 claim to cover the projected extension of a multi-element silver anomaly. Digger Resources Inc. optioned the property in 1986 and in July 1987 sunk five NQ diamond drill holes totalling 223 m to test a portion of the multi-element silver anomaly. This program was carried out at a cost of \$80,354."

### REGIONAL GEOLOGICAL SETTING

The Chuchi property is situated within the central portion of the Quesnel Trough of the Intermontane Belt (Figure 3). The Quesnel Trough forms a 30 to 60 km wide northwesterly trending assemblage of alkaline and calc-alkaline volcanic and sedimentary rocks of Upper Triassic to Jurassic age extending from the U.S.A. border to the Stikine River.

The assemblage of Takla Group volcanics is predominantly marine and alkaline. It is composed of a large component of pyroxene-rich flows and volcanoclastics with interbedded volcanic derived greywacke, siltstone and minor limestone and conglomerate. Upwards there is an increase in the sedimentary component, and subaerial accumulations may be present (Ney, Hollister, 1976).

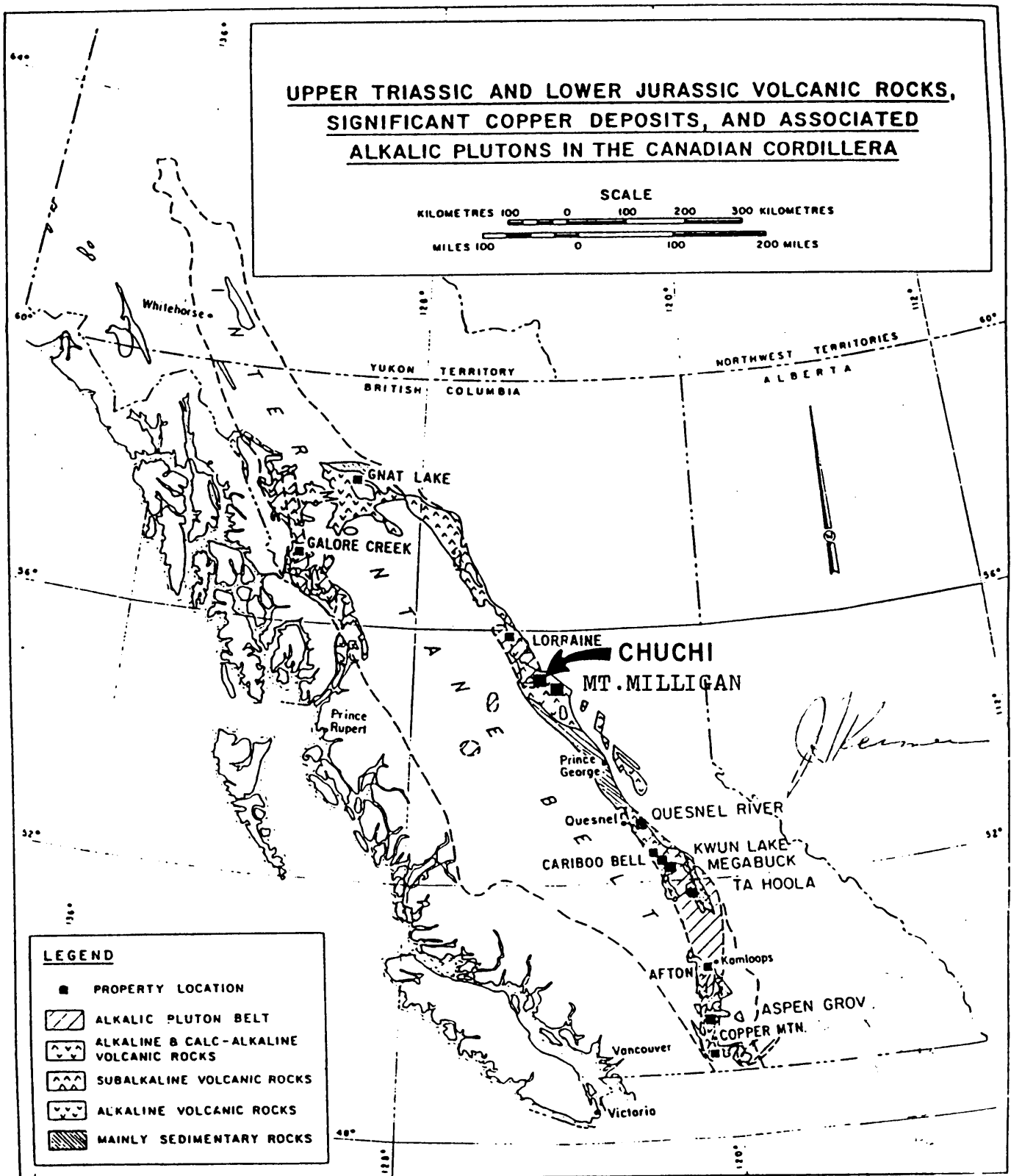


FIGURE 1 — Upper Triassic and Lower Jurassic volcanic rocks, significant copper deposits and associated alkalic plutons in the Canadian Cordillera. AFTER BARR ET AL

The assemblage is intruded by comagmatic, frequently zoned alkaline plutons. These plutons are most frequently diorite but range from syenogabbro to syenite. The chemical composition of the plutons are similar to the volcanics they intrude. The plutons occur along linear trends and appear to be controlled by major faults. The size of the plutons varies from small dykes and plugs to batholiths.

The Chuchi property is underlain by alkaline Takla Group volcanics and sediments at the southeastern end of the alkaline-to-calc-alkaline Jura-Cretaceous Hogem Batholith. A number of small alkaline plugs also intrude the supracrustal rocks (Heberlein et. al. 1984).

### ALKALINE INTRUSIVE ASSOCIATED DEPOSITS

A suite of important mineral deposits in the Quesnel Trough are associated with comagmatic alkaline plutons and their extrusive volcanic equivalents.

Alkaline porphyry copper deposits such as Copper Mountain, Ingerbelle, Afton and Cariboo Bell are characterized by their relatively high gold contents and low molybdenum concentrations. The porphyry copper-gold mineralization is hosted by highly fractured and/or brecciated high level intrusive bodies or, more commonly, by stockwork fractured volcanic units enclosing the plutons. A potassic feldspar and/or biotite hydrothermal alteration is succeeded outwards by propylitic alteration comprised of chlorite, carbonate and epidote. Pyrite, chalcopyrite and minor bornite occur in either or both of the alteration zones. Pyrite is abundant within and beyond the copper zone.

Gold deposits occur associated with the alkaline intrusions in the same geological environment as the gold-rich porphyry copper deposits and the same exploration techniques are applicable. A significant difference from the porphyry-type deposits is that gold is not necessarily restricted to the zone of copper mineralization. No important concentrations of copper may be present in the auriferous sulphide system; the gold zone may overlap the copper zone, or it may lie outside the area of copper mineralization but within the overall zone of pyritic rocks. At the QR and the Mt. Milligan deposits important concentrations

of gold occur in volcanic rocks adjacent to tuffaceous siltstones, argillite and/or calcareous sediments interbedded within the volcanic units. Multiple gold zones are common (Rebagliati personal communication).

### PROPERTY GEOLOGY

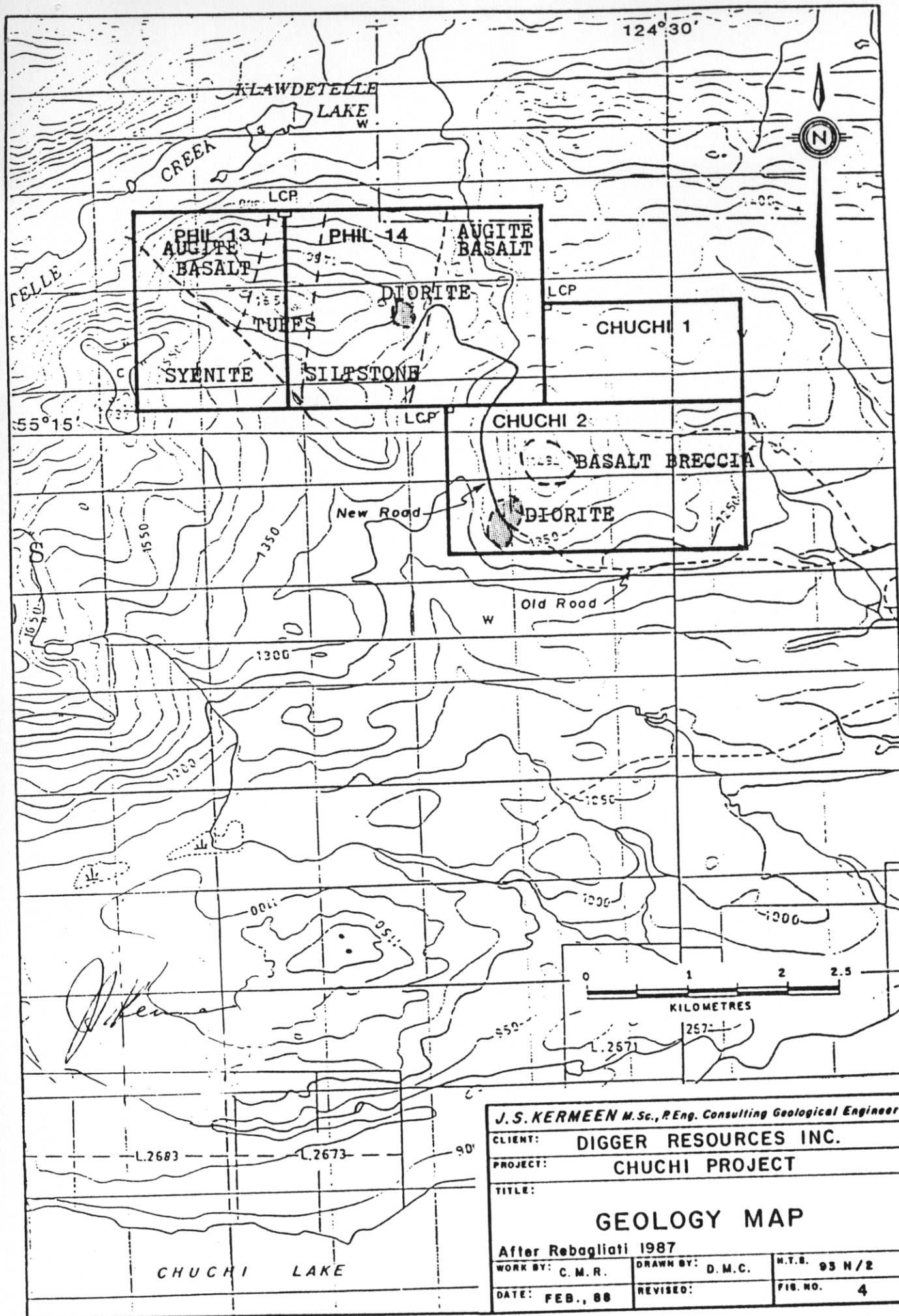
Figure 4 is a geological sketch plan of the property made from preliminary mapping carried out by the Selco Division of BP Resources Canada Limited in 1984 and 1985. Interpretation is restricted by the reconnaissance nature of the mapping and by poor exposure.

The property, situated at the southeastern tip of the Hogen Batholith, is underlain by a sequence of northerly trending basic alkaline flows, breccias, tuffaceous argillites and siltstones. The batholith, where it underlies the southwestern part of the claims, is of syenitic composition. Small alkaline diorite, monzonite and syenite stocks also intrude the volcanic sequence and are similar to the intrusives with which gold and copper mineralization is associated elsewhere in the Quesnel Trough.

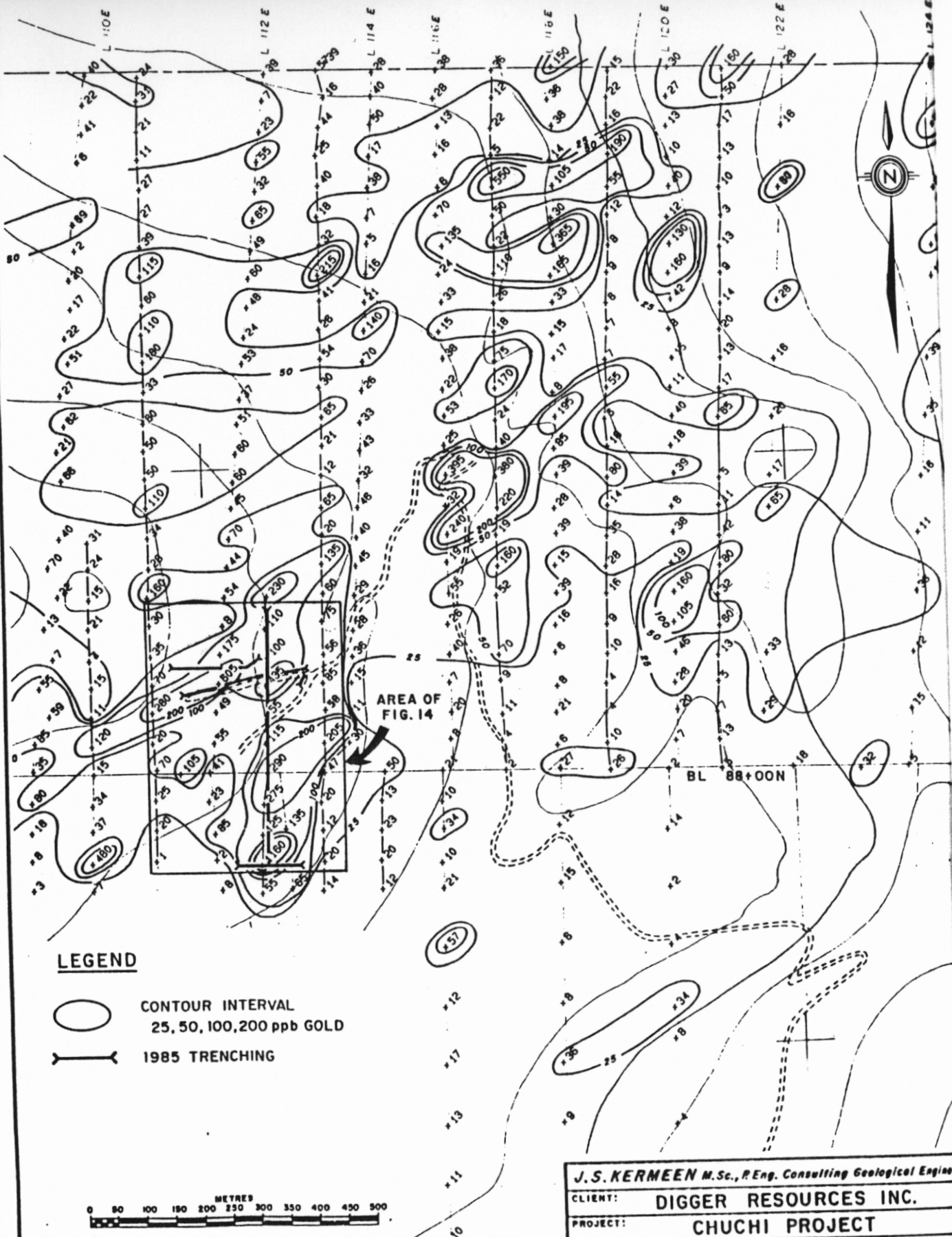
### GEOCHEMISTRY

Two substantial soil geochemical anomalies are situated within the Chuchi claim group.



- a) **Gold** - The gold anomaly on the Phil 14 claim, extends over approximately 1.5 square kilometres (Figure 5). Peak values range from 205 to 1,160 ppb. Within the core of the anomaly, copper concentrations show a strong correlation with gold. Moderately enhanced silver and arsenic values accompany the gold and copper. The core of the gold-copper-silver-arsenic anomaly encloses a small diorite stock and related dykes which are situated at the contact between tuffaceous siltstones and augite porphyry flows and breccias.



<b>J. S. KERMEEN M.Sc., P.Eng. Consulting Geological Engineer</b>		
CLIENT:	<b>DIGGER RESOURCES INC.</b>	
PROJECT:	<b>CHUCHI PROJECT</b>	
TITLE:	<b>GEOLOGY MAP</b>	
After Rebagliati 1987		
WORK BY: C. M. R.	DRAWN BY: D. M. C.	N.T.S. 93 N/2
DATE: FEB., 88	REVISED:	FIG. NO. 4



**LEGEND**

-  CONTOUR INTERVAL  
25, 50, 100, 200 ppb GOLD
-  1985 TRENCHING



*J. Kermeen*

J. S. KERMEEN M.Sc., P.Eng. Consulting Geological Engineer		
CLIENT:	DIGGER RESOURCES INC.	
PROJECT:	CHUCHI PROJECT	
TITLE:	SOIL GEOCHEMISTRY PHIL 14 CLAIM GOLD	
WORK BY:	C. M. R.	DRAWN BY: D. M. C.
DATE:	FEB., 88	REVISED:
		N.T.S. 93 N/2
		FIG. NO. 5

This setting represents a geological environment similar to that at the QR and Mt. Milligan gold deposits (Meyers, et. al. 1985).

- b) **Silver** - A pronounced, high contrast multi-element silver anomaly straddles the boundary between the Phil 14 and the Chuchi claims (Figures 2 and 6). The anomaly, as delineated by the 1.0 ppm silver contour, extends for 1,000 m and is 400 m wide. In addition to the main anomaly, there is a southern lobe which measures 150 m x 500 m. Peak silver values within the several core areas of the anomaly range from 3 to 16 ppm (Figure 6). Background silver concentrations over the entire grid are generally less than 0.5 ppm. The most striking feature of this large high contrast anomaly is the close spatial correlation of other anomalous elements with silver.

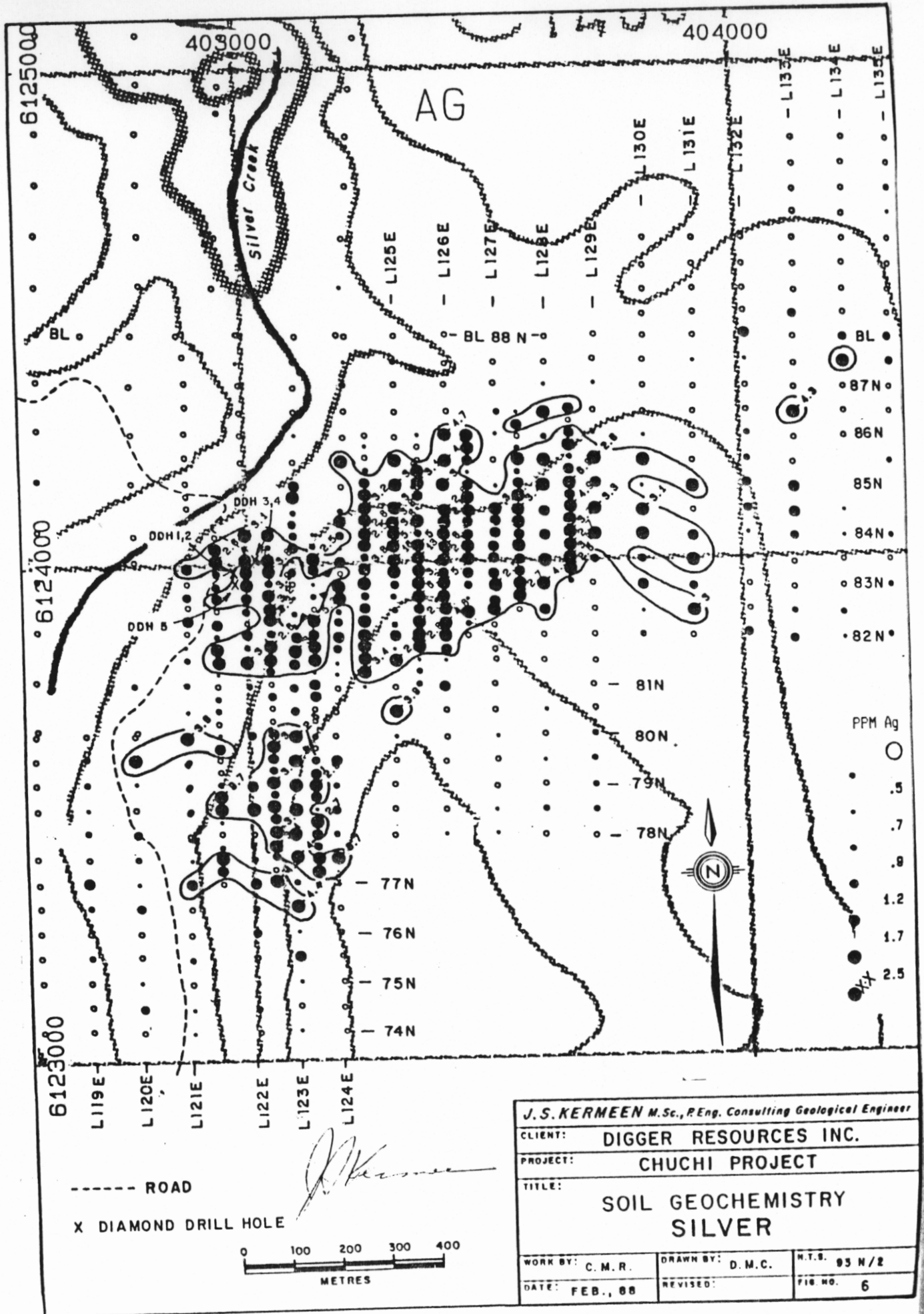
Lead, zinc, and the indicator elements arsenic and barium (Figures 7, 8, 9 and 10) show coincident high contrast anomalies. Iron, copper and cobalt are enriched indicating a strong iron sulphide association. Gold concentrations, although of low contrast in relation to the main gold anomaly in the central part of the Phil 14 claim, are definitely anomalous (Figure 11). Anomalous concentrations of potassium and manganese (Figures 12 and 13) indicate an extensive zone of intense hydrothermal alteration is associated with the precious and base metal mineralization.

An extensive blanket of glacial till covers the recessive multi-element silver anomaly and, as a result, the nature of the mineralization is not known.

## **MINERALIZATION**

### **Gold Zone**

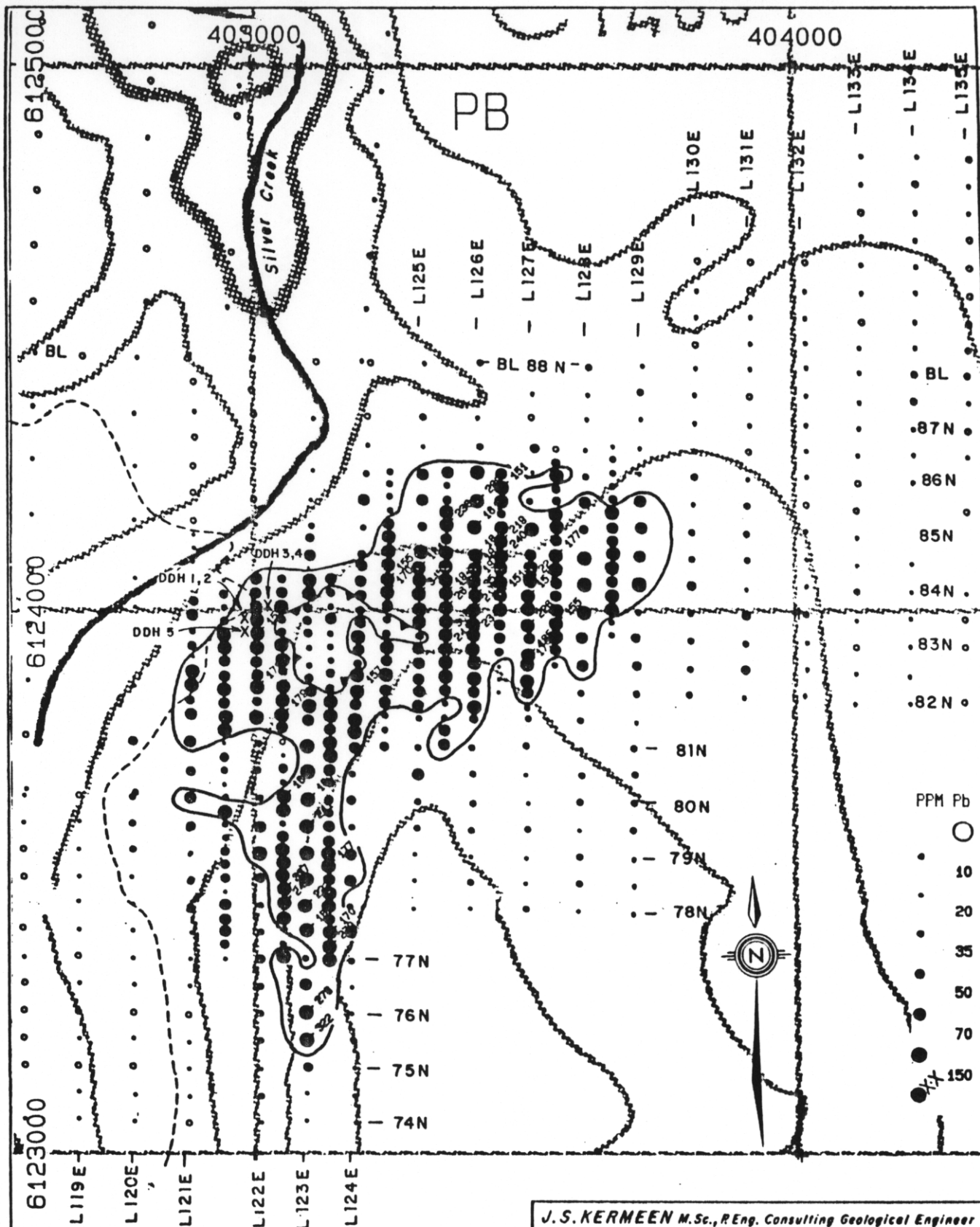
Backhoe trenching in the southeast portion of the gold soil anomaly on the Phil 14 claim (where a biotite-actinolite hornfels aureole developed around the small diorite pluton) exposed fracture controlled gold-copper mineralization hosted by volcanic, sedimentary and intrusive units (Meyers et. al. 1985). The



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CLIENT:	DIGGER RESOURCES INC.	
PROJECT:	CHUCHI PROJECT	
TITLE:	SOIL GEOCHEMISTRY SILVER	
WORK BY: C. M. R.	DRAWN BY: D. M. C.	N.T.S. 95 N/2
DATE: FEB., 88	REVISED:	FIG. NO. 6

*J. S. Kermeen*

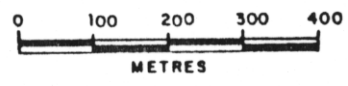


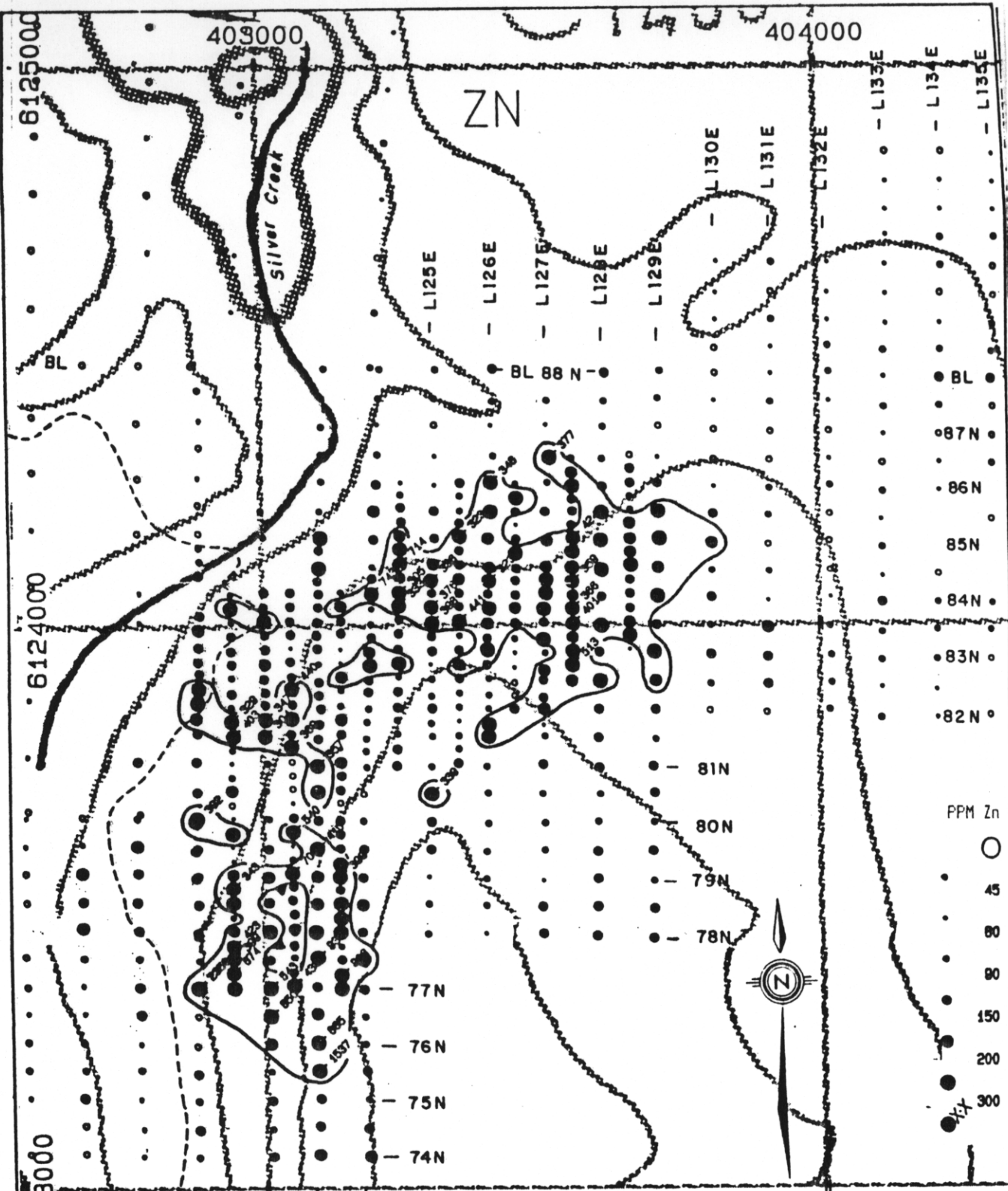


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CLIENT: DIGGER RESOURCES INC.		
PROJECT: CHUCHI PROJECT		
TITLE: SOIL GEOCHEMISTRY LEAD		
WORK BY: C. M. R.	DRAWN BY: D. M. C.	N.T.S. 95 N/2
DATE: FEB., 88	REVISED:	FIG. NO. 7

*J. S. Kermeen*

--- ROAD  
X DIAMOND DRILL HOLE





6125000  
6124000  
6123000

403000

404000

ZN

BL

BL 88 N

BL

87N

86N

85N

84N

83N

82N

81N

80N

79N

78N

PPM Zn

○

45

60

90

150

200

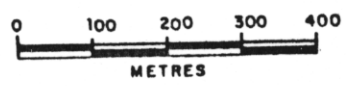
300

L119E  
L120E  
L121E  
L122E  
L123E  
L124E

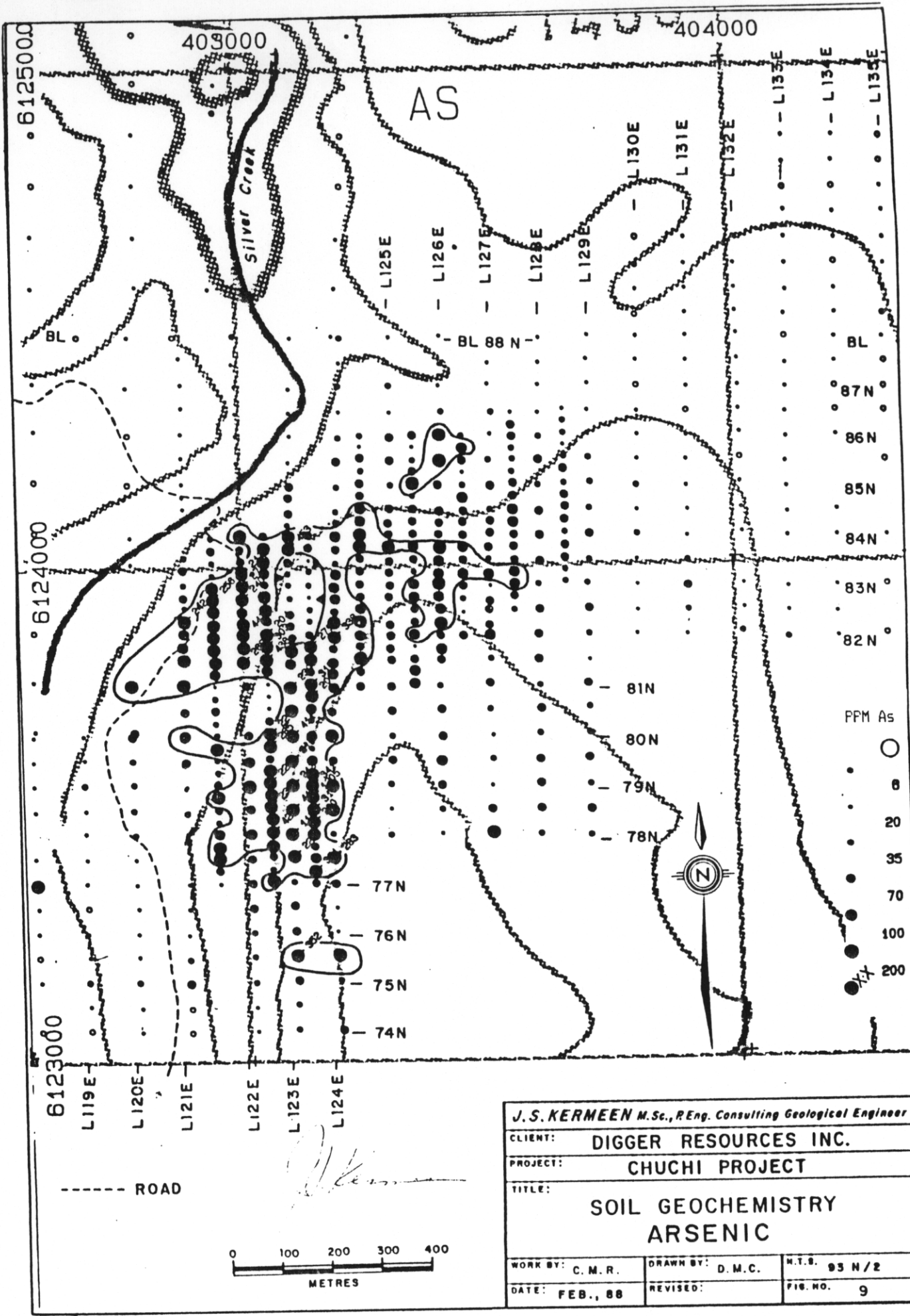
77N  
76N  
75N  
74N

ROAD

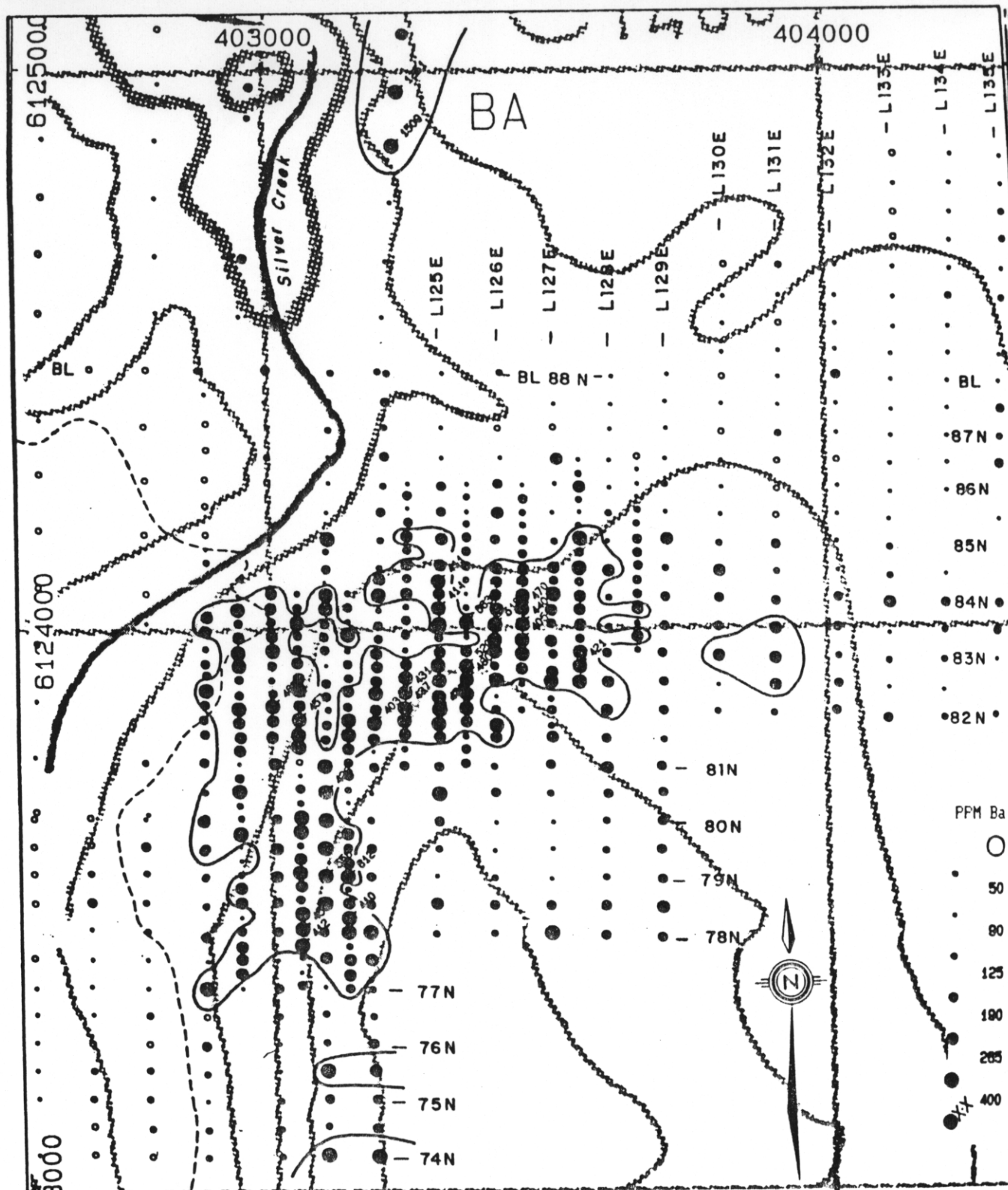
*J. Kermeen*



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CLIENT:	DIGGER RESOURCES INC.	
PROJECT:	CHUCHI PROJECT	
TITLE:	SOIL GEOCHEMISTRY ZINC	
WORK BY:	C. M. R.	DRAWN BY: D. M. C.
DATE:	FEB., 88	REVISED:
		N.T.S. 93 N/2
		FIG. NO. 8



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CLIENT:	DIGGER RESOURCES INC.	
PROJECT:	CHUCHI PROJECT	
TITLE:	SOIL GEOCHEMISTRY ARSENIC	
WORK BY: C. M. R.	DRAWN BY: D. M. C.	N.T.S. 93 N/2
DATE: FEB., 88	REVISED:	FIG. NO. 9

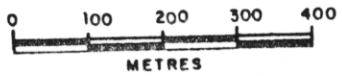


6123000

L119E  
L120E  
L121E  
L122E  
L123E  
L124E

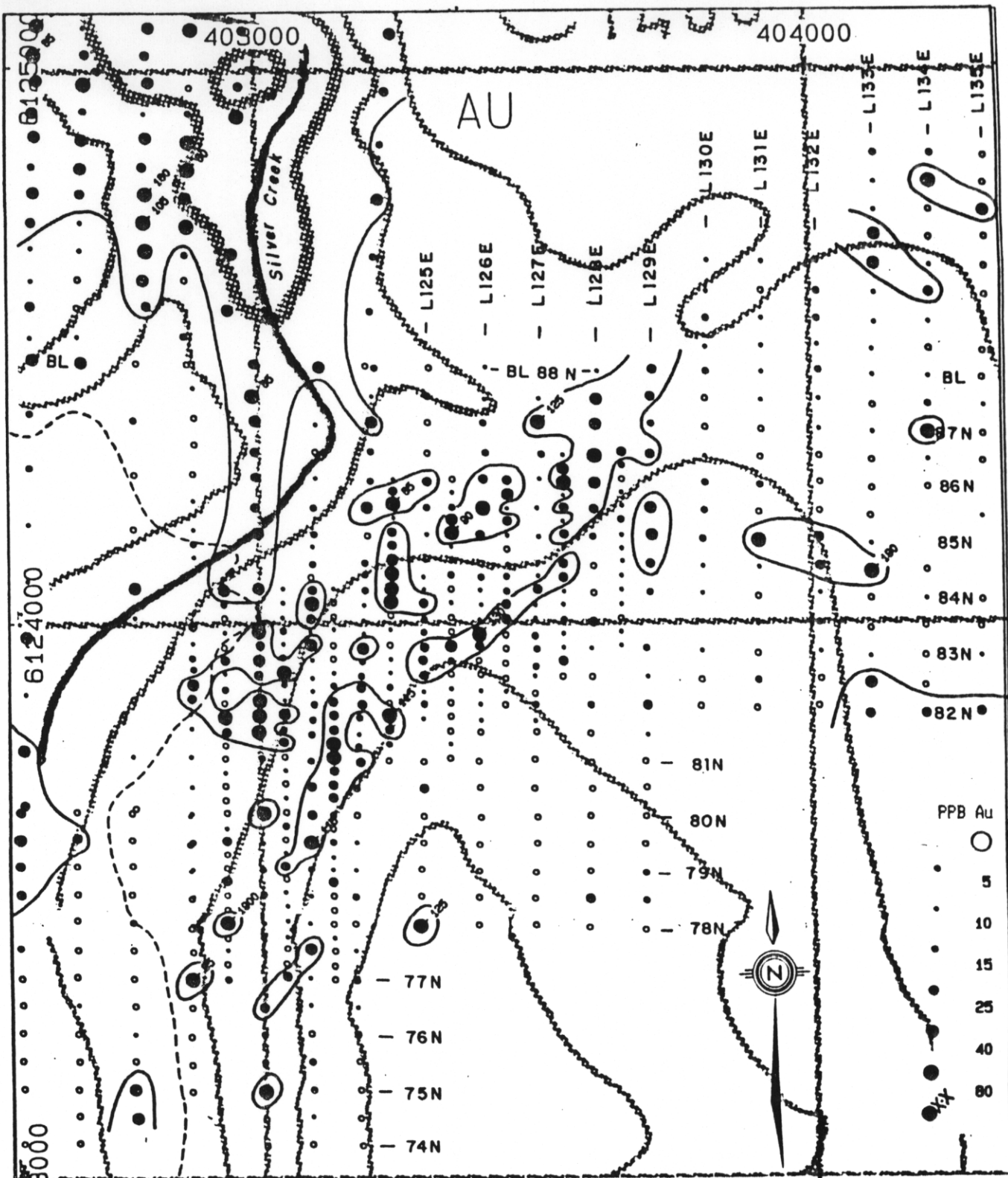
--- ROAD

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CLIENT:	DIGGER RESOURCES INC.	
PROJECT:	CHUCHI PROJECT	
TITLE:	SOIL GEOCHEMISTRY BARIUM	
WORK BY:	C. M. R.	DRAWN BY: D. M. C.
DATE:	FEB., 88	REVISED:
		N.T.S. 93 N/2
		FIG. NO. 10

L135E  
 BL  
 87N  
 86N  
 85N  
 84N  
 83N  
 82N  
 PM Ba  
 50  
 80  
 125  
 190  
 265  
 400  
 Engineer  
 /2

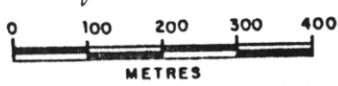


6123000

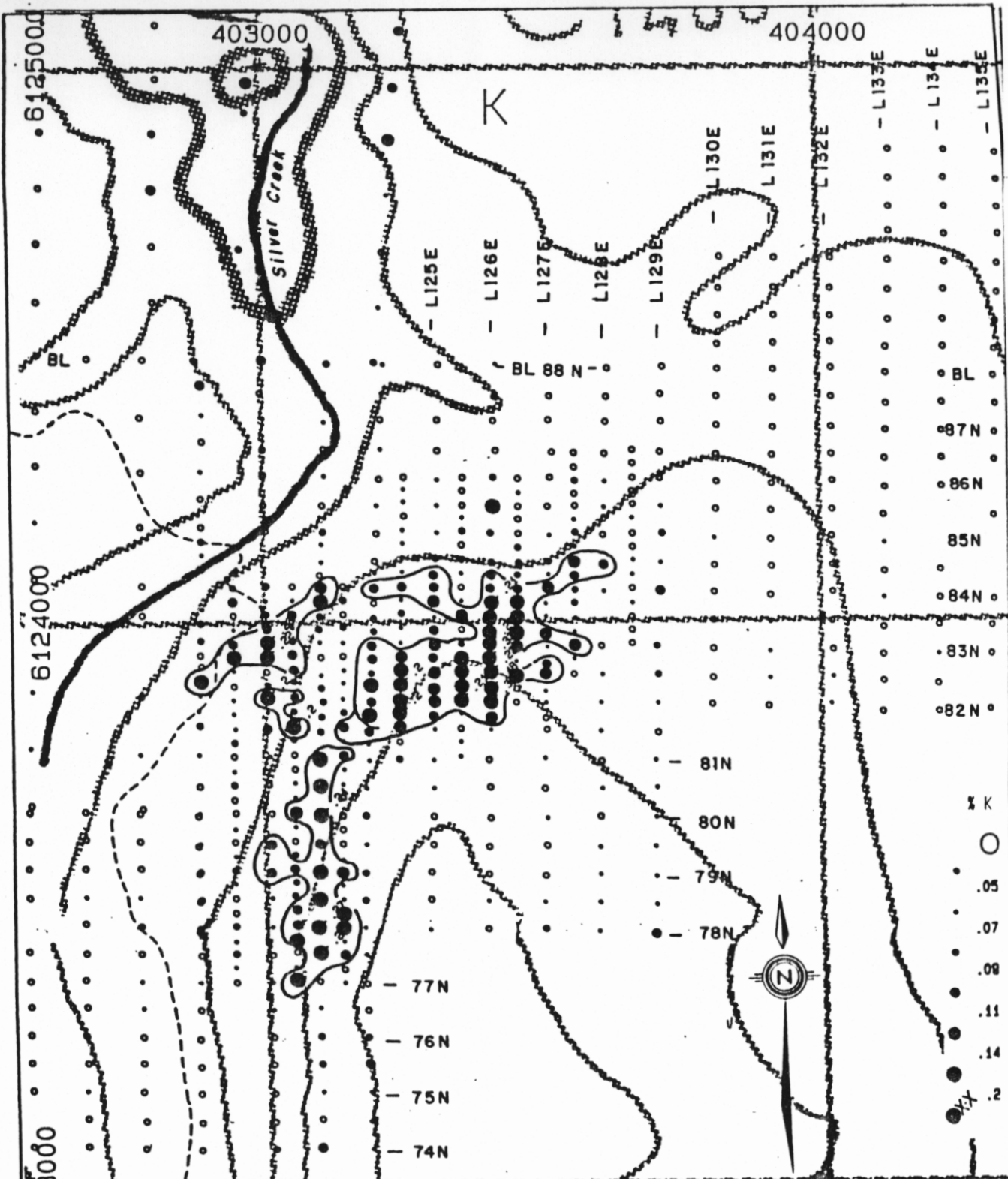
L119E L120E L121E L122E L123E L124E

--- ROAD

*J.S. Kermeen*



J. S. KERMEEN M.Sc., P.Eng. Consulting Geological Engineer		
CLIENT: DIGGER RESOURCES INC.		
PROJECT: CHUCHI PROJECT		
TITLE: SOIL GEOCHEMISTRY GOLD		
WORK BY: C. M. R.	DRAWN BY: D. M. C.	N.T.S. 95 N/2
DATE: FEB., 88	REVISED:	FIG. NO. 11



6123000  
6124000  
6125000

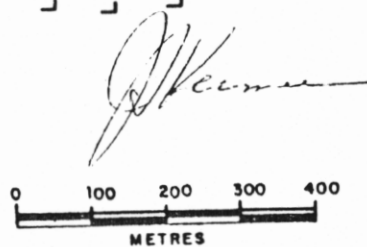
403000  
404000

L119E  
L120E  
L121E  
L122E  
L123E  
L124E

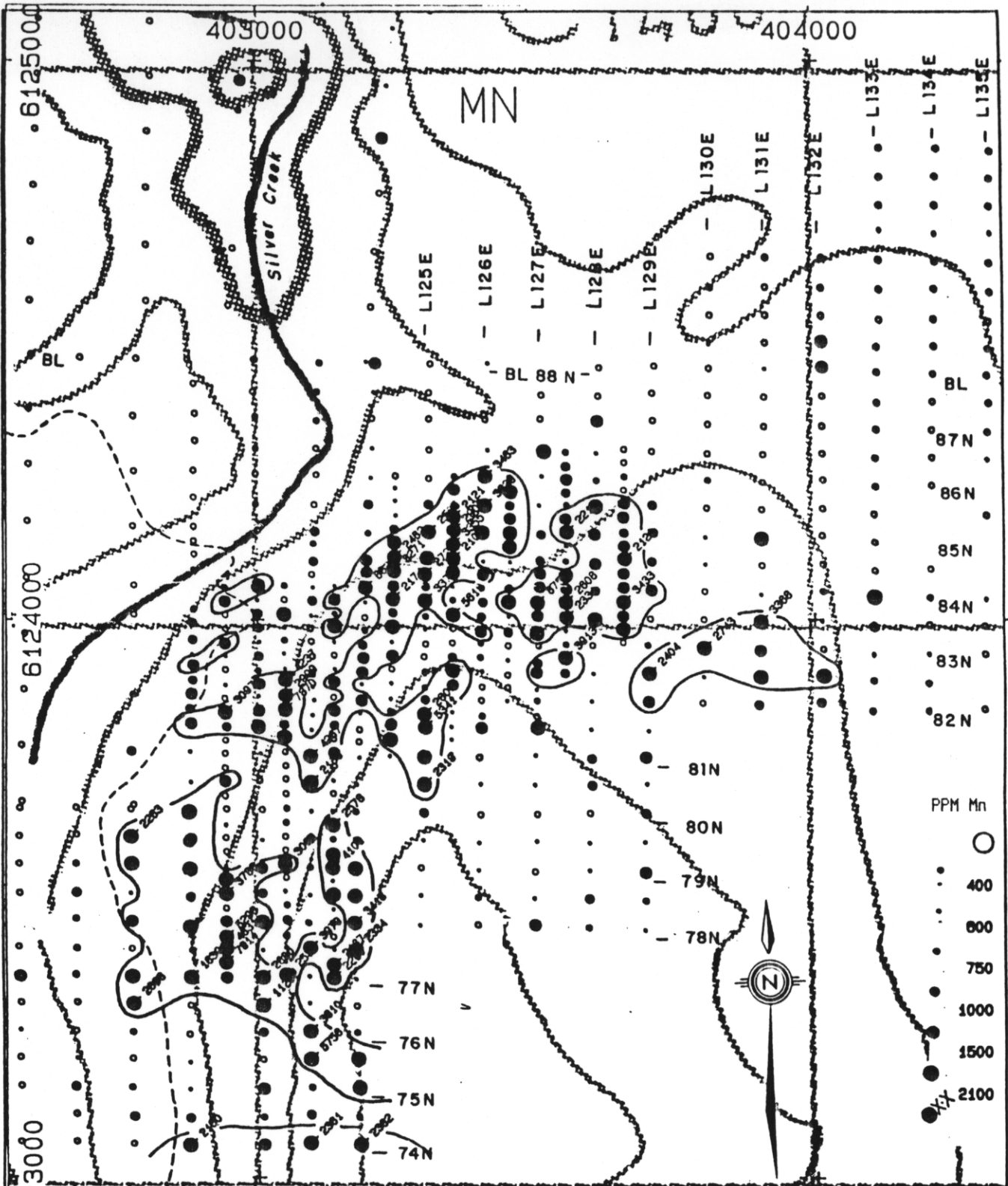
74N  
75N  
76N  
77N  
78N  
79N  
80N  
81N

L130E  
L131E  
L132E  
L133E  
L134E  
L135E

--- ROAD



J. S. KERMEEN M.Sc., P.Eng. Consulting Geological Engineer		
CLIENT:	DIGGER RESOURCES INC.	
PROJECT:	CHUCHI PROJECT	
TITLE:	SOIL GEOCHEMISTRY POTASSIUM	
WORK BY:	C. M. R.	DRAWN BY: D. M. C.
DATE:	FEB., 88	REVISED:
		N.T.S. 93 N/2
		FIG. NO. 12



6123000

6124000

6125000

L119E L120E L121E L122E L123E L124E

74N 75N 76N 77N

L125E L126E L127E L128E L129E

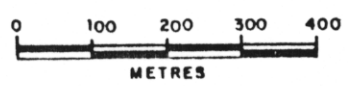
78N 79N 80N 81N

82N 83N 84N 85N 86N 87N

PPM Mn  
 400  
 600  
 750  
 1000  
 1500  
 2100

--- ROAD

*J. Kermeen*



J. S. KERMEEN M.Sc., P.Eng. Consulting Geological Engineer		
CLIENT:	DIGGER RESOURCES INC.	
PROJECT:	CHUCHI PROJECT	
TITLE:	SOIL GEOCHEMISTRY MANGANESE	
WORK BY:	C. M. R.	DRAWN BY: D. M. C.
DATE:	FEB., 88	REVISED:
		N.T.S. 93 N/2
		FIG. NO. 13

ash tuff and tuffaceous siltstone are the least altered, having minor chlorite and sericite and a few scattered cross-cutting pyrite veinlets. Sections adjacent to diorite contacts are weakly silicified and more pyritic. Andesite and augite porphyry basalt display localized potassium feldspar-quartz-epidote and magnetite alteration, pervasive sericitite-chlorite-quartz-iron carbonate alteration and irregularly distributed fracture controlled multi-directional pyrite veinlets. Pervasive sericite and patchy potassium feldspar and carbonate alteration affect the diorite.

Superimposed on the widespread pervasive alteration assemblage is a zone of highly fractured and intensely altered rocks. The 10 to 30 m wide zone is oriented east-west and is open along strike in both directions. Quartz, iron carbonate and calcite form strong to intense pervasive alteration and veining.

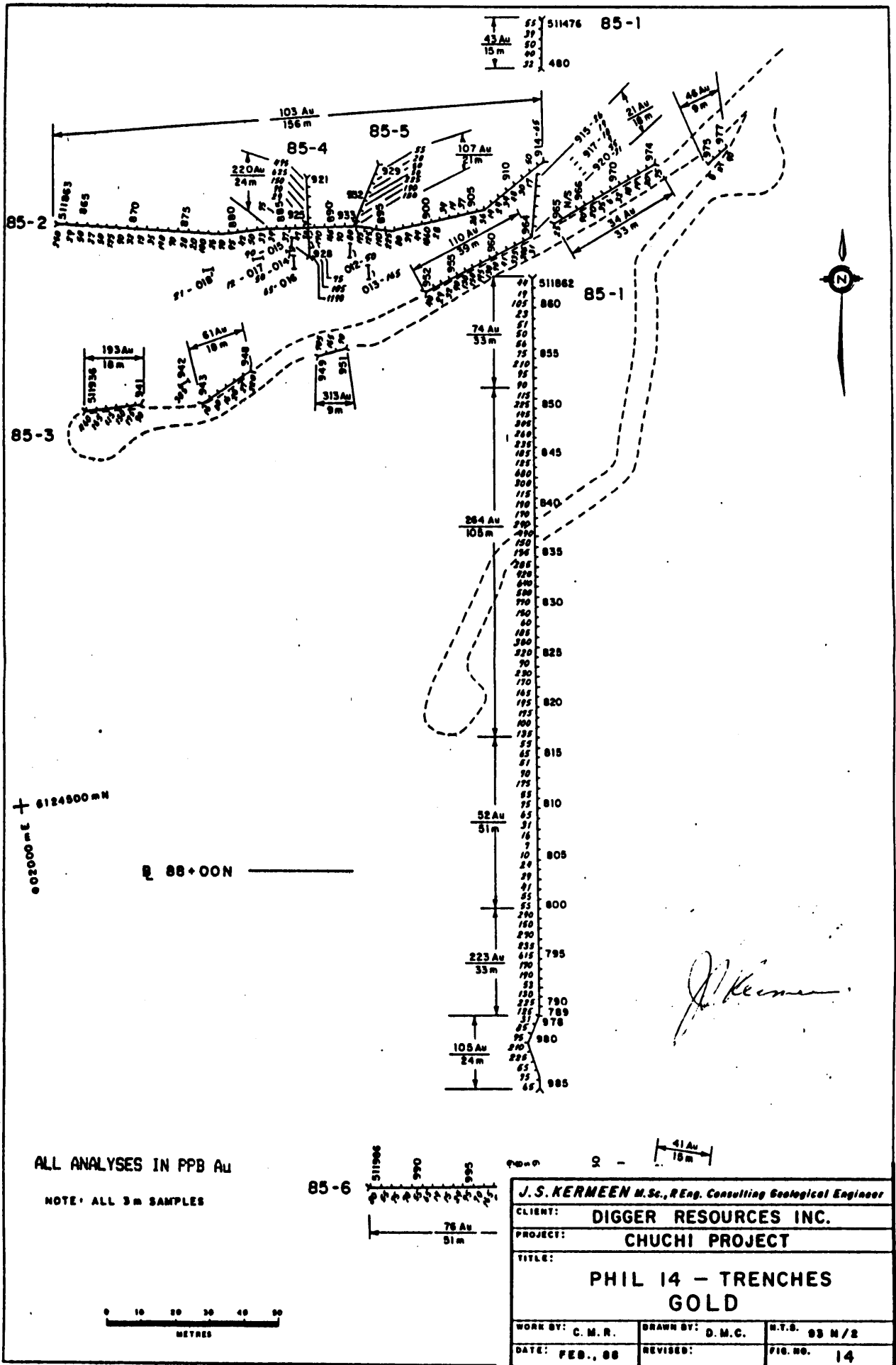
Variable amounts of disseminated and vein controlled pyrite and chalcopryite occur within and adjacent to the zone. Magnetite, potassium feldspar, epidote and secondary biotite are associated with the mineralization.

Elevated gold values (50 - 600 ppb) are widely distributed in all units and occur in the less altered rocks well beyond the intensely altered iron-carbonate zone (Figure 14). Copper in the 250 - 2,200 ppm range accompanies the gold. Within the intensely fractured and iron-carbonate altered zone in trench 85-2, grades are generally in the order of 100 to 1,000 ppb gold and 100 to 4,000 ppm copper. Selected sulphide rich samples collected by BP geologists grade up to 0.35 oz/ton gold and 2% copper. Gold content, while spatially associated with the copper, is not dependent on the amount of copper present. This variable relationship implies that, in addition to chalcopryite, some of the gold is associated with pyrite.

#### Silver Zone

Limited geological information is available concerning the area of the multi-element silver soil geochemical anomaly. No bedrock is exposed and only two of the five diamond drill holes drilled on the down-slope western flank of the



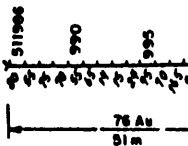


ALL ANALYSES IN PPB Au

NOTE: ALL 3m SAMPLES



85-6



J. S. KERMEEN M.Sc., R.Eng. Consulting Geological Engineer		
CLIENT: DIGGER RESOURCES INC.		
PROJECT: CHUCHI PROJECT		
TITLE: PHIL 14 - TRENCHES GOLD		
WORK BY: C. M. R.	DRAWN BY: D. M. C.	N.T.S. 93 M/2
DATE: FEB., 88	REVISED:	FIG. NO. 14

anomaly reached bedrock. In both of these holes, core recovery was exceedingly poor (Rebagliati 1987).

Rebagliati (1987) reports: "It appears from the core recovered in Holes 2 and 3 that the soil anomaly is caused by mineralization associated with a breccia developed during the intrusion of a monzonitic plug. The Takla Group augite porphyry basalt flows, tuffs and breccias are brecciated and have undergone strong, pervasive chlorite-carbonate(calcite)-sericite alteration. Intervals with a monzonitic character are variably potassium feldspar altered and plagioclase grains have been altered to calcite. Pyrite, in concentrations ranging from 2 to 10%, occurs mainly as heavy concentrations of very finely disseminated grains. Pyrite films on microfractures are subordinate. Chalcopyrite-pyrite veinlets are associated with silicified zones within the altered and brecciated volcanic and intrusive rocks."

Levels of gold, copper and arsenic in Holes 2 and 3 are low, but they are persistently anomalous. Concentrations are in the range of 50 to 320 ppb gold, 1,000 to 4,200 ppm copper and 50 to 330 ppm arsenic.

### CONCLUSIONS

Trenching in the southern portion of the gold soil geochemical anomaly on the Phil 14 claim has established the presence of persistent low grade gold and copper mineralization. This mineralization, hosted by potassic and propylitic altered volcanic and interbedded tuffaceous sedimentary rocks adjacent to a small alkaline diorite stock, substantiates the presence of the regionally favourable alkaline intrusive associated gold depositional environment on the Phil 14 claim. The extent of the gold-copper mineralization and the presence of higher grade iron-carbonate altered zones associated with magnetite veining, in which selected samples grade up to 0.35 oz./ton gold and 2.0% copper, offers sufficient encouragement to justify additional exploration. Detailed magnetic and induced polarization surveys are required to define sulphide and magnetite-rich areas within the soil geochemical anomaly. A program of trenching and/or diamond drilling would follow the identification of geophysical anomalies.

The five diamond drill holes drilled in 1987 did not test the most prospective portions of the multi-element silver soil geochemical anomaly. The 20 to 30 m deep overburden encountered in the drill holes conclusively proves that the northwestern portion of the multi-element silver anomaly has been glacially transported from its source. The gold-copper mineralization encountered in DDH 2 is not reflected by the near surface soil geochemistry; conversely the highly anomalous silver, lead, zinc and barium concentrations in the soil are not explained by the mineralization found in the core.

The gold-copper mineralization and the associated chlorite-carbonate-potash feldspar alteration in the brecciated volcanic and plutonic rocks are favourable geological features which are compatible with the periphery of a major zone of mineralization. Similarly, the anomalous concentrations of arsenic, barium, manganese and potassium are compatible with a mesothermal depositional environment.

The high iron content of the soils anomalous in silver, lead and zinc suggest that a relatively high concentration of iron sulphides is associated with the mineralization. If this association exists, an induced polarization survey should accurately define the location of the main mineralized zone at a relatively low cost.

An aggressive exploration program involving an IP survey followed by diamond drilling is warranted to explore this outstanding multi-element silver geochemical anomaly.

## **RECOMMENDATIONS**

A two-phase exploration program is recommended; implementation of Phase II is contingent upon encouraging results from Phase I.

### **Phase I:**

#### **1. Magnetometer and Induced Polarization Surveys**

- a) Conduct an IP Survey over the multi-element silver anomaly to delineate sulphide rich zones beneath the soil anomaly.
- b) Conduct magnetometer and IP Surveys over the gold-in-soil anomaly on Phil 14 claim to define: the boundaries of the diorite plug, magnetite rich zones, and the distribution and relative concentration of sulphide mineralization.

#### **2. Trenching**

Backhoe trench the anomalies identified by the geophysical surveys on the Phil 14 gold geochemical anomaly.

#### **3. Diamond Drilling**

Undertake a preliminary program of diamond drilling to test the multi-element silver soil anomaly by drilling fences of holes across the geochemical and IP trends.

The preliminary drilling program should follow the IP Survey, but the drilling program is not dependent upon the IP results because the distribution of precious and base metal mineralization may not coincide with the zones of highest sulphide concentration.

**Phase II:**

Phase II is contingent upon favourable results being obtained from the Phase I program.

1. **Diamond Drilling**

- a) Diamond drill to test the anomalies identified by the geophysical surveys on the Phil 14 gold zone.
- b) Diamond drill to delineate zones of precious and base metals in the Chuchi silver zone.

2. **Metallurgical Testing**

- a) Initiate preliminary metallurgical testing to assess the milling characteristics of the precious metal mineralization.

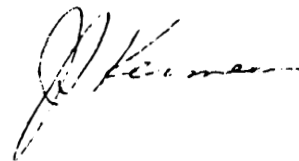
**PROPOSED BUDGET**

**Phase I: Magnetometer and IP Surveyings, Trenching and Diamond Drilling**

Salaries	\$ 4,500	
Accommodation and Travel	1,250	
Communication and Freight	250	
Vehicle Expenses	1,500	
Geophysical Surveys	20,000	
Backhoe Trenching	2,500	
Diamond Drilling 650 m @ \$84.62/m	55,000	
Assay	2,000	
Report Preparation	<u>3,000</u>	
	Subtotal	\$ 90,000

**Phase II: Diamond Drilling and Metallurgical Tests**

Salaries	\$15,000	
Accommodation and Travel	2,500	
Vehicle Expenses	3,000	
Diamond Drilling 1,400 m @ \$82.00/m	115,000	
Assays	6,000	
Metallurgical Tests	5,000	
Report Preparation	<u>3,500</u>	
	Subtotal	<u>150,000</u>
		<u>\$240,000</u>



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