86-897-15558

N.T.S. 104 P/6W Latitude 59°18% Longitude 129°24'N 23.9'

REPORT ON TRENCHING

JUDO CLAIM GROUP

LIARD MINING DIVISION, BRITISH COLUMBIA

GEOLOGICAL BRANCH ASSESSMENT REPORT

MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES
Rec'd DEC 24 1986
SUBJECT
FILE
VANCOUVER, B.C.

Colony Pacific Explorations Ltd. (Owner/Operator) #800 - 601 West Hastings Street Vancouver, B.C. V6B 5A6

Brian V. Hall, M.Sc. December 16, 1986

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1. INTRODUCTION

At the request of Colony Pacific Explorations Ltd. a program of road building and trenching was carried out on the Judo 1 mineral claim. In addition, four soil samples were collected from the northeastern portion of the grid, plus a limited amount of prospecting and rock sampling was carried out on the southern portion of both the Judo 1 and Judo 2 claims. The target was manto type Pb-Zn-Ag mineralization similar to the Midway deposit of Regional Resources.

The purpose of the trenching was to expose the source of the anomalous geochemistry outlined during the 1985 field season (Hall, B.V. 1986). In total, 2,015 cubic metres of material was moved during the excavation of eight trenches. In addition, over 5 km access road was established.

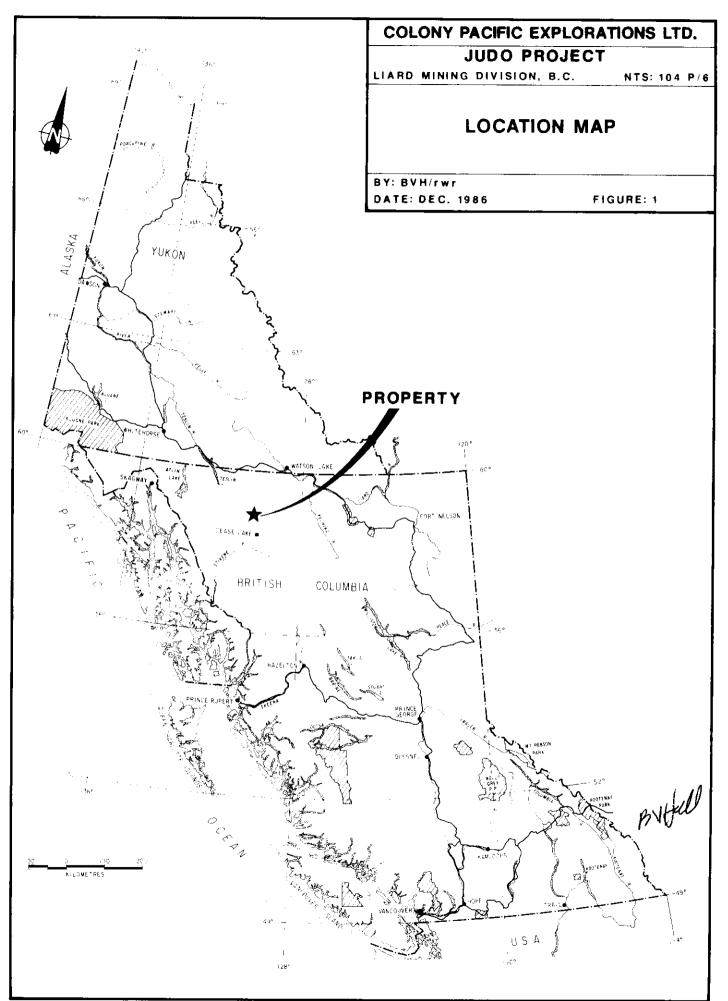
In the vicinity of the main showing one trench was excavated to intercept an extension of the main zone mineralization to the southeast. Three other trenches were dug north of Judo Creek to expose the source of a large multi-element soil anomaly. Four additional trenches were excavated in the vicinity of L12+00W 49+00N to examine the cause of a coincident VLF and soil anomaly.

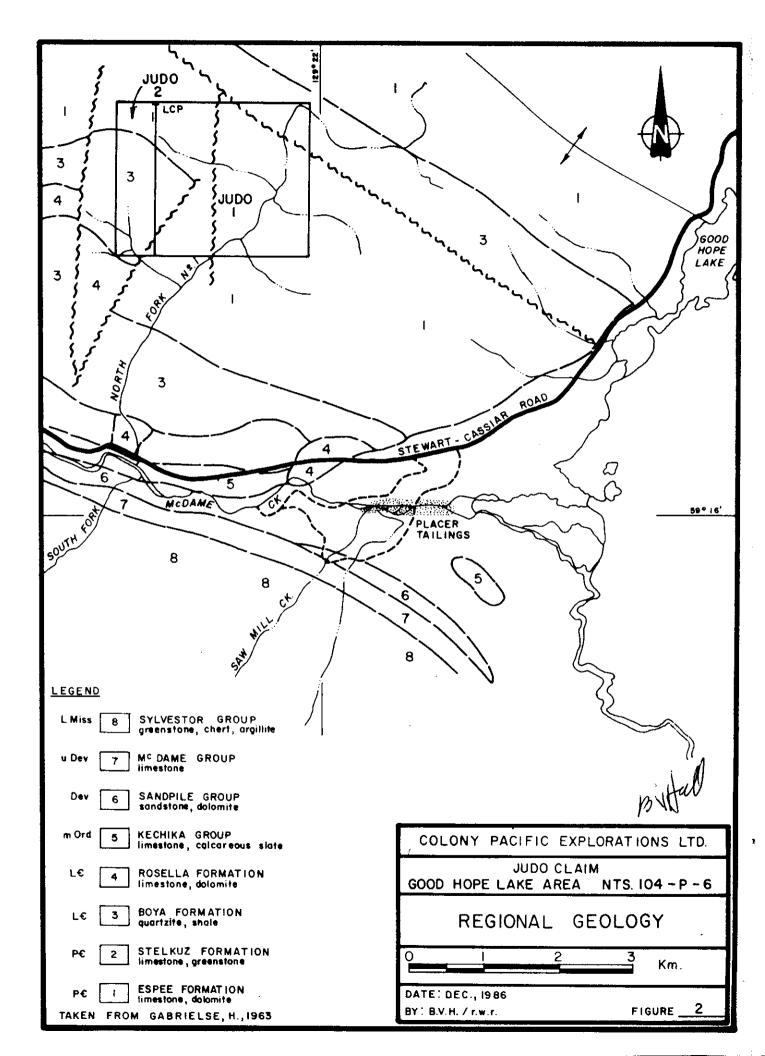
Although a number of interesting values were obtained as a result of the trenching, the widths were rather narrow. Consequently, further interest on the property will have to wait until economic conditions dictate.

1.1 LOCATION AND ACCESS

The Judo claim group is located approximately 10 km northeast of the town of Cassiar, in north central British Columbia. The legal corner posts for both the Judo 1 and Judo 2 claim block are located 4.5 km north of Highway 37 (Stewart-Cassiar Highway) and 8.5 km west of Good Hope Lake (Figures 1 and 2). North Fork #1 Creek or Centreville Creek, as it is now named, flows through the eastern portion of the Judo 1 claim block.

Access to the property is provided by a four wheel drive road which originates off the access road to the Joe Reed Vein. This road terminates in the centre of the Judo 1 claim block.





1.2 PHYSIOGRAPHY

The area encompassed by the Judo claims lies within the eastern side of the Cassiar Mountains. Alpine conditions dominate the property although the eastern portion of the claim group is below tree line. Elevations range from just under 4,000 to over 6,000 feet. Outcrop at the higher elevations is abundant, whereas, in the wooded, lower elevations it is scarce.

1.3 CLAIM INFORMAION

The property presently consists of the Judo 1 and 2 claim blocks, which have been grouped to form the Judo Claim Group. Assessment work filed in 1984 on the Judo 1 claim block has these claims valid until 1986. Work filed on the Judo 2 claim puts these claims in good standing until 1992. Pending assessment credits based upon this year's trenching program both claim blocks should be in good standing until 1993. At present a 'Statement of Exploration and Development' and Cost Statement for this work has been accepted by the government.

TABLE 1 - CLAIM INFORMATION

<u>Claim Name</u>	Record Number	No. of Units	Staking Date	Expirty Date
Judo 1	3206 (10)	16	Sept. 24/84	Oct. 11/93 *
Judo 2	3426 (10)	8	Sept. 28/85	Oct. 18/93 *

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* Pending acceptance of this year's work.

1.4 PROPERTY HISTORY

The first recorded work on the property was in 1965 when Ventures Mining Ltd. gave the property a cursory examination (Hawley, R.G. 1965). Representing this work is a brief description of the main showing which included six assay samples (analyzed for Au, Ag, Cu, Pb and Zn). These claims were allowed to lapse and until Colony Pacific restaked the ground the area remained open.

In 1984 the main showing area was resampled and geologically mapped. In addition, 14 silt samples were collected over the bulk of the Judo 1 claim block. These produced anomalous values from immediately downstream of the main showing plus an area 1.5 km to the west. Mineralized float was also found in a number of locations, and the style of mineralization was recognized as being similar to the Miday deposit of Regional Resources (Hall, B.V. 1984).

During the 1985 field season a more extensive program of soil geochemistry, geological mapping, line cutting, VLF and magnetometer was conducted over the property. A total of 274 soil samples, two silt samples and 14 rock samples were collected, plus 11.7 km of flagged line was established. The soil geochemistry was most successful in outlining a number of areas of interest. High values ranged up to 9,432 ppm Zn, 11,365 ppm Pb, 48.9 ppm Ag and 10,085 ppm As. In total, five distinct anomalies were outlined for further work (Hall, B.V. 1986).

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2. GEOLOGY

Since this year's work concentrated on a very small portion of the property the overall geological interpretation for the property has changed little. Some check mapping was conducted in possible "problem" areas, and this tended to confirm the present geological interpretation. (Hall, B.V. 1986).

However, over the last few years certain revisions have been made to the Cambrian to pre-Cambrian strata in the Cassiar Mountains. This revised nomenclature will now be used in describing the rocks of the Judo Claim Group. In particular, the name Good Hope Group has now been abandoned in favour of the redefined Ingenika Group (Mansy, J.L. and Gabrielse, H. 1978). This group contains four formations (Swannell, Tsaydiz, Espee and Stelkuz), all of which are interpreted to be pre-Cambrian in age (Fritz, W.H. and Crimes, T.P. 1985). Conformably overlying the Ingenka Group is the lower Cambrian Atan Group, which has been subdivided in the Boya and Rosella Formations (Fritz, W.H. 1980). Shown on Figure 2 is the general distribution of these units according to the mapping of the Geological Survey of Canada (Gabrielse, H. 1963).

For the most part the property is underlain by carbonates of the Espee and Stelkuz Formations, although at the western extremity of the Judo 1 claim argillaceous sediments of Boya Formation are present. The more massive carbonates which occur over the eastern half of the Judo 1 claim appear to belong to the Espee Formation, although the exact stratigraphic position has not been identified. Whereas the presence of a distinctive red bed unit near the top of the Stelkuz Formation (Mansy, J.L. and Gabrielse, H. 1978) strongly suggest the more variable thinly bedded units west of L10+00W belong to this formation. Conformably overlying the Stelkuz Formation are argillaceous sediments of the lower Cambrian Boya Formation. Separating the Stelkuz Formation from the Espee Formation in the vicinity of L10+002 is a northerly trending high angle fault (Hall, B.V., 1986).

3. SOIL GEOCHEMISTRY

Four additional soil samples were collected extending lines 1+00W and 1+50W to the northeast 50 m. These samples were intended to further delineate a multi-element anomaly which extends outside the grid area. Of the four samples only KL-653 is of interest, containing above "background values" in Pb and Zn, and values which are considered to be "possibly anomalous" in Ag and Mo. This year's sampling suggests either an end to this anomalous zone or a source which passes downhill to the southeast of this year's sampling. Maps portraying the values of this year's sampling are to be found in Appendix D.

4. ROCK GEOCHEMISTRY

A total of five rock samples were collected outside the immediate area of the trenching for analyses. Three of these came from southern portion of the Judo 2 claim (Figure 3) near the contact of the Boya and Stelkuz Formations (KR-659, KR-660 and BR-700). All three represented hornfelsed argillaceous sediments of the Boya Formation which contained up to 1% disseminated and finely laminated pyrite. Sample BR-700 was the most significant containing 2,603 ppm Zn, the remaining samples returned values, which, although elevated are not considered to be significant.

One sample (KR-651) was collected from a gossanous zone within the Stelkuz Formation, at the southern extremity of the Judo 1 claim block. Disseminated pyrite was found over an area of 200 m² in quantities up to 2%. The remaining sample (KR-652) represents a boulder of hemitite/goethite which was found in a creekbed immediately downstream from the Judo 2 claim block, near the vicinity of sample KR-651. Unfortunately neither of these samples returned any values of interest.

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5. TRENCHING

Using a track-mounted backhoe a total of eight trenches were excavated. In addition, some 4 km of access road was established to the property, plus 1.5 additional kilometres on the property.

Trenches 1 a,b,c and 2 were intended to expose the cause of a coincident soil and VLF anomaly located in the vicinity of L12+00W, 48+00N. The remaining trenches 3-6 were to test soil anomalies located to the north and east of the main showing (Figure 3). Deep overburden precluded the possibility of trenching the downdip extensions of the main showing, which occur south of Judo Creek.

Overburden in the vicinity of trenches 1 a,b,c and 2 was in general deep (greater than 3m) consisting for the most part of soliflucted colluvium. Whereas in the vicinity of trenches 3 to 6 bedrock was generally less than 1 m deep with the overburden again consisted of colluvium.

5.1 TRENCH la

This trench was intended to crosscut the source of a coincident VLF and soil geochemistry anomaly located in the vicinity of L12+00W, 48+75N. A total of 240 cubic metres of material was excavated during the trenching, with an additional 1,000 cubic metres for road building in the immediate vicinity.

The geology within this trench consists of mixture of carbonates and argillaceous sediments of the Stelkuz Formation (Figure 4). At the south end of this trench is a bed of colitic limestone, which is variably altered to dolomite. An east-west trending shear zone juxteposes this unit against a red-brown stained sparry dolomite. Channel sampling of oxide material across this shear zone (KR 664) produced values of 14,185 ppm Pb, 4,870 ppm Zn and 41.5 ppm Ag over 30 cm. Sb (322 ppm), As (5,888 ppm) and Cd (13 ppm) were also found to be significantly enriched. Underlying the sparry dolomite is an colitic limestone similar in appearance to the limestone at the south end of the trench. The direction of movement for this shear zone would appear to be either right lateral or reverse based upon the sense of offset for the colitic limestones.

A second shear zone underlies the colitic limestones at the north end of the trench. This shear zone trends north-south and has been emplaced along the hanging wall of an argillite. A 20 cm thick channel sample across this shear zone produced values of 1,150 ppm Zn, 1,228 ppm Pb, 7.3 ppm Ag, and 767 ppm As. Below this shear zone the argillites grade into a calcareous siltstone.

5.1 TRENCH 1b

This trench was centered over the site of 85 KL-243 one of the highest soil samples collected during the 1985 program. Approximately 300 cubic metres of material was excavated from this trench. Additional material was removed during the construction of the access road (Figure 4).

Bedrock consisted predominately of a green-gray coarse grained sparry dolomite, although a 40cm thick northwesterly trending shear zone is present at the top of this trench. Enveloping this shear zone is a 1.0 m thick oxide zone containing goethite and hemitite. Within this oxidized zone is a 10 cm thick bright green zone containing the oxide mineral scorodite, plus galena and tetrahedrite. A number of samples were taken along this zone. The highest of which assayed 71.20% Pb, 0.95% Zn and 55.83 oz/ton Ag (sample KR-671). This sample was collected from the centre of the oxide zone and represents a 10 cm thick channel across the best mineralization. Other interesting samples include KR-667, KR-669a and KR670a. All of which represent channel samples across this mineralized zone. In particular, sample KR-670a contained in excess of 20,353 ppm Pb, 61,428 ppm Zn, 330.7 ppm Ag and 97,714 ppm As. Two other samples of interest include KS-669, a soil sample collected 1.0 m above the main zone of mineralization, and KR-672, a mineralized grab sample also collected above the main shear zone. The anomalous nature of sample KS-669 (2,417 ppm Pb, 6,251 ppm Zn, 7,318 ppm As and 106 ppm Sb) may be reflecting either the background mineralization present in sample KR-672 or mineralization uphill such as what is present in trench la. Samples taken below the mineralized zone (KR-669b and KR-670b) were only of background values.

The structural control for the galena-tetrahedrite present in this trench (samples KR-671, KR-667, KR-669a and KR-670a) is somewhat ambiguous. Although a shear zone appears to host the mineralization, this shear zone appears to have been preferentially emplaced along an argillite - limestone contact. Since the mineralization appears to have been deformed, it appears likely the movement along this shear zone was in part post-mineralization with this contact acting as a zone of weakness.

Sample KR-675a, located 25 m to the southeast, appears to represent an extension of the mineralization encountered in trench la. In addition to Pb (20,899 ppm), Zn (4,193 ppm), Ag (324.0 ppm) and As (53,018 ppm) which were quite high, Bi appears to be inordinately high (2,346 ppm).

5.3 TRENCH 1c

The purpose in excavating this trench was to further evaluate the nature of mineralization present in trench 1b (Figure 4). Approximately 315 cubic metres of material was excavated in this crosscut.

The geology of this trench was quite similar to Trench lb. Again the dominant lithology was a green-gray sparry dolomite; however towards the hanging wall or southwest this unit becomes increasingly argillaceous. Minor amounts of disseminated pyrite, sphalerite and galena were observed, but not in significant quantities.

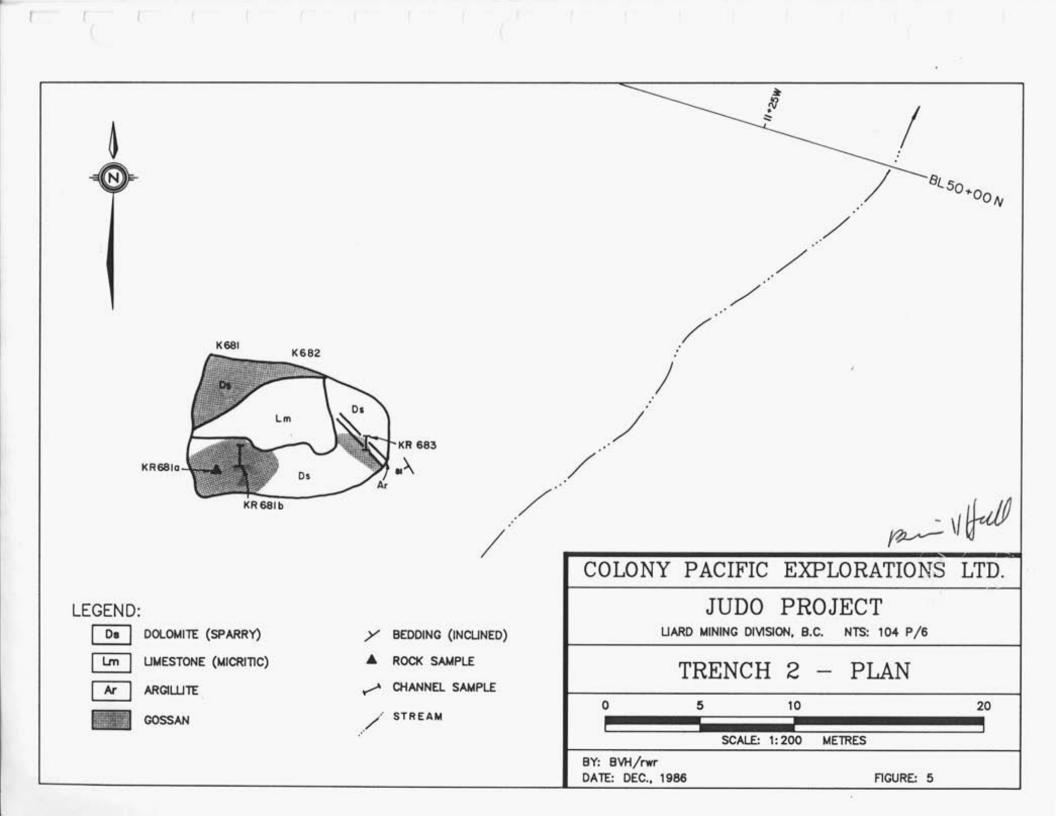
5.4 TRENCH 2

Located approximately 100 m downhill of trench 1c, this trench was intended to evaluate the nature of a conspicuous gossan (Figures 3 and 5). Associated with this gossan were some of the highest soil sample values generated during the 1985 field program (Hall, B.V. 1986). Values obtained from samples 85-BL-1112 and 1113 range up to 4,289 ppm Zn, 1,613 ppm Pb, 7.2 ppm Ag, 2,805 ppm As and 456 ppm Sb.

Only about 150 cubic metres of material was excavated in this trench. The geology consisted of a reasonably fresh micritic limestone which is surrounded by a light gray variably altered sparry dolomite.

Within the sparry dolomite several patchy zones of gossanous oxide material are present. In appearance these oxide zones appear to be associated with shear zones which may represent thin argillite bands within the carbonates.

Three samples were collected from this trench (KR-681a,b and KR-683). Sample KR-683, a 10 cm thick channel sample through a bright yellow-green oxide zone was the highest containing values of 21,879 ppm Pb, 8,485 ppm Zn, 351 ppm Cu, 150.2 ppm Ag, 53,459 ppm As and 12,388 ppm Sb. Sample KR-681a, a grab sample through some oxide material was also distinctly anomalous containing values of up to 3,755 ppm Pb, 3,783 ppm Zn, 23.9 ppm Ag and 6,758 ppm As. Also anomalous was sample KR-681b, a 1.0 m vertical channel through the sparry dolomites. This sample contained 1,937 ppm Zn, 1,456 ppm As and 434 ppm Pb. Unfortunately, no mineralization was observed in place within this trench.



5.5 TRENCH 3

Trench 3, located north of the main showing and Judo Creek in the northeastern portion of the grid was both the longest and largest of the trenches (Figure 6). The purpose of this trench was to evaluate a portion of a multi-element soil sample anomaly which trends northeasterly through this portion of the grid (Hall, B.V. 1986).

The lithologies exposed within this trench consist of a series of thick bedded variably colitic limestones. Underlying these are a variety of dolomites, all of which appear to be members of the Espee Formation. Characteristic of this trench and the Espee Formation in general is a relative absence of argillaceous material plus the relatively thick bedding. One somewhat distinctive unit is a sequence of dolomites which have a pronounced dark and light banding which is not bedding. In the Gilman Camp of Colorado this feature is usually found in close association with the ore (Lovering, T.S.; Tweto, O. and Lovering, T.G., 1978) which is in turn found to be associated with karsting (DeVoto, R.H., 1983). At the northern end of this trench two 1.0 m thick mafic dykes are present. These appear to line up with the mafic dykes observed in the creekbed of Judo Creek in the vicinity of L1+50W, 50+00N.

Three samples were collected for analyses (KR-691a, KR692 and KR694). All three of these samples returned values of background levels, although minor disseminated pyrite was observed in the vicinity of KR-691a. Associated with this mineralization is a minor amount of oxide staining in the form of goethite and hemitite. Located in the vicinity of L1+00W, 51+50W this trench was intended to evaluate the same soil anomaly as trench 3. Since trench 3 was aligned almost parallel to bedding this trench was orientated such that bedding would be perpendicular (Figure 7). Upon completion, over 200 cubic metres of material was removed, with bed rock being only 1.0 m deep.

Bed rock again consisted of thick bedded carbonates of the Espee Formation with limestones predominating over dolomites. However, in the eastern portion of the trench the carbonates become increasingly dolomite and argillaceous. Based upon bedding attitudes one fold has been recognized in the eastern half of this trench. A second dip reversal occurs towards the centre of the trench, however, in this case a shear zone appears to have juxtoposed stratigraphy from different structural domains. Crosscutting the carbonates in the western extremity of this trench is a mafic dyke. This dyke appears to be an extension of the more southeasterly dyke exposed in trench 3.

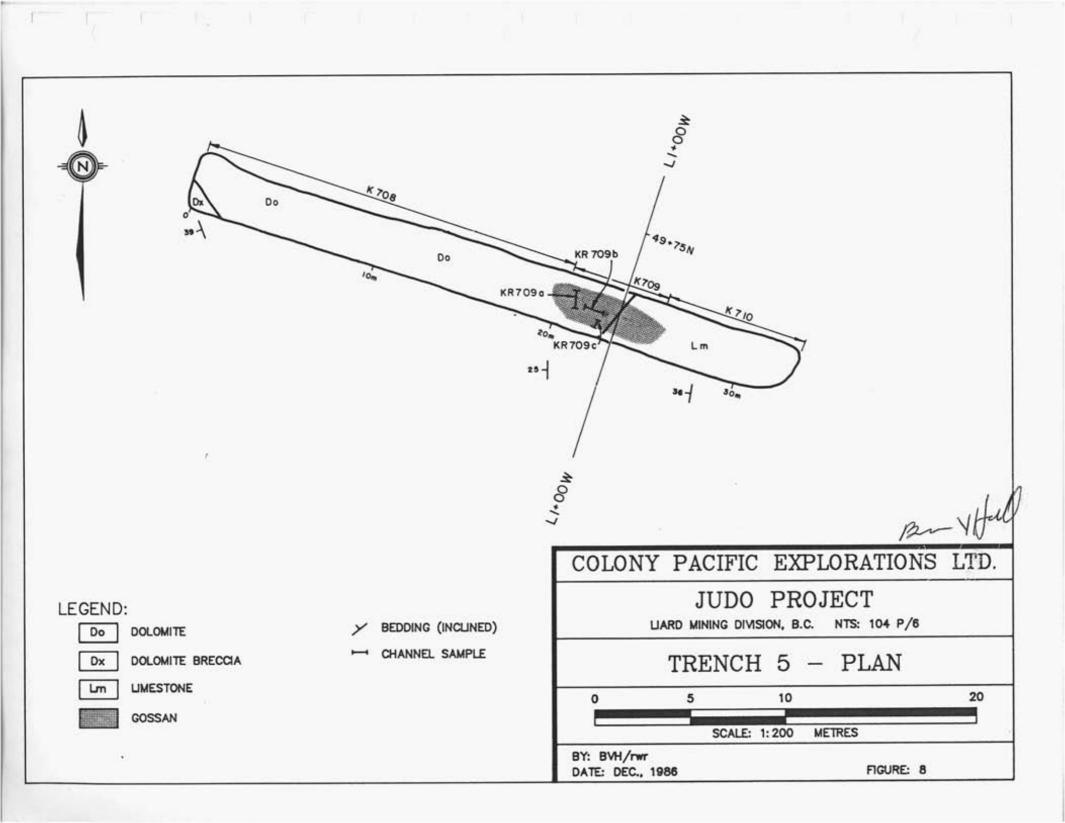
Three samples were collected, all of which come from a gossanous zone located near the centre of this trench (KR-698a; KR-669a and b). Sample KR-698a collected from an oxidized shear zone containing minor amounts of disseminated pyrite produced only background values. Samples KR-699a and b produced values of 1,597 ppm Pb, 11,246 ppm Zn and 8.1 ppm Ag; and 12,163 ppm Pb, 1,643 ppm Zn and 64.3 ppm Ag respectively. Both samples came from a zone of anatomizing calcite veins which contain variable amounts of sphalerite, galena and pyrite. Associated with calcite veining is a minor amount of shearing which is evident in the argillaceous layers. The style of the mineralization represented by samples Kr-699a and b appears to be similar to the mineralization encountered immediately north of Judo Creek in the vicinity of the main showing during 1985 (Hall, B.V., 1986).

5.7 TRENCH 5

The purpose of this trench was to extend the mineralization of the main showing along strike to the southeast. Approximately 120 cubic metres of material was excavated as a result of this trench.

Bed rock consists of a micritic limestone which is overlain by a very coarse grained greenish-gray sparry dolomite (Figure 8). At the western end of this trench a dolomite breccia of undetermined thickness is present. Associated with this breccia is a banded dolomite similar in appearance to the banded dolomites of trench 3.

The mineralization occurs at the contact between the limestone and dolomites. Three channel samples were collected (KR-709a,b and c), representing a total width of 70 cm. Sample KR-709 a, uppermost of the three samples, returned the best values (70,503 ppm Zn, 16,146 ppm Pb and 230.4 ppm Ag). The remaining two samples were hosted in the underlying rubble breccia and were not expected to be high. However, values of 5,292 ppm Pb, 24,070 ppm Zn and 26.1 ppm Ag were returned from sample Kr-709b and 11,966 ppm Pb, 17,963 ppm Zn and 33.0 ppm Ag from sample KR-709c.



5.8 TRENCH 6

As with trenches 3 and 4 this trench was also intended to cross cut the elongate soil sample anomaly which passes through the northeastern corner of the grid. In total, approximately 340 cubic metres of material was removed.

The geology of this trench is relatively simple, consisting predominately of dolomite, although one minor interval of limestone was present (Figure 9). Also present was two 1.0 m thick mafic dykes, plus minor bands of argillite.

A total of four samples were collected for assay (KR-703a; KR-704a, b and KR-705). All four produced anomalously high values for Cu, Pb, Zn, Ag, As and Sb. The two highest samples (KR-704 a and KR-704 b) represent a 10 to 30 cm thick band of oxidized material which contains minor veins of massive galena. Values across this zone ranged from 15,039 to 19,200 ppm Pb; 6,608 to 7,742 ppm Zn; and 72.2 to 265.0 ppm with sample KR-704a in all cases representing the larger number. The other samples represent a 50 cm thick channel across the contact of a limestone and mafic dyke in the case of sample KR-705 and a 70 cm thick vertical channel through a sparry dolomite which was oxidized to goethite and hematite. Both of these samples returned only minor values.

6. CONCLUSIONS AND RECOMMENDATIONS

Based upon the coincident VLF and soil geochemistry anomaly in the vicinity of L12+00W, 49+00N, plus the presence of a pronounced gossan with sulphide float downhill it was hoped this area would yield a Pb-Zn-Ag manto-type deposit of reasonable size. Especially considering the depth of overburden which exceeds 3m. Unfortunately, the results did not substantiate this expectation. Although high grade Pb-Ag mineralization was exposed, the thickness at best was less than 10 cm. Minor amounts of disseminated Pb-Zn mineralization was present in the surrounding rocks which may in part influence the soil geochemical response. The sheared argillite beds to which the mineralization is associated may have caused the VLF anomaly.

In the northeastern portion of the grid, north of the main showing, again the geochnical response appears much larger than would be anticipated by the mineralization which was exposed. Where present, the mineralization was mostly in the form of small galena-calcite veins which were encased in a well developed zone of oxide minerals. In general, this mineralization was less than 10 cm in thickness and sporadic.

Channel sampling 25 m along strike to southeast of the main showing indicated little change in the grade or thickness of this zone (trench 5). Although the geological setting, style and grades for the mineralization is interesting, the thickness would have to improve significantly. Unfortunately, thick overburden precluded any attempt to expose this zone downdip to the southwest. At present no further work is recommended for this property. With the money expended this year going towards assessment work the claims should be valid until 1993. Drilling would be the next stage, a program of 6 to 7 short holes to test the downdip extensions of the main zone mineralization, plus the mineralization exposed this year in the vicinity of L12+00W, 49+00N should be considered. Perhaps 1,000 ft in total should suffice. Consideration should also be given to this program if there is a significant improvement in the price of Ag, Pb and/or Zn. One characteristic of manto-type deposits in general is their relative high grades. This makes them attractive targets for small high grade operations. The property has so far demonstrated the presence of this form of deposit. Potential therefore still exists for a discovery of significant size, however this would have to be a blind discovery.

Respectfully submitted,

Bi VHall

JUDO#1(report) 22/12/86

BIBLIOGRAPHY

- De Voto, R.H. 1983. Central Colorado karst-controlled lead-zinc-silver deposits (Leadville, Gilman, Aspen and others), a late Paleozoic Mississippi Valley-type district. International conference on Mississippi Valley Type Lead-Zinc Deposits, proceedings volume, University of Missouri-Rolla, Rolla Missouri, 1983, pp. 450-485.
- Fritz, W.H. 1980. Two new formations in the Lower Cambrian Atan Group, Cassiar Mountains, north-central British Columbia; in Current Research, Part B, Geological Survey of Canada, Paper 80-1B, pp. 217-225.
- Fritz, W.H. and Crimes, T.P. 1985. Lithology, trace fossils and correlation of pre-Cambrian - Cambrian boundary beds, Cassiar Mountains, north-central British Columbia; Geological Survey of Canada, Paper 83-13.
- Gabrielse, H. 1963. McDame map area, Cassiar district, British Columbia; Geological Survey of Canada, Memoir 319.
- Hall, B.V. 1984. Preliminary geological and geochemical report on the Judo 1 claim (3206-10) Liard Mining Division. Colony Pacific Explorations Ltd., company report.
- Hall, B.V. 1986. Geological, Geophysical and Geochemical Report on the Judo Claim Group, Liard Mining Division, British Columbia. Colony Pacific Explorations Ltd., company report.
- Howley, R.G. 1965. Second summary report on the Bartle Silver Project of Ventures Mining, Cassiar, B.C. Colony Pacific Explorations Ltd., company report.
- Lovering, T.S., Tweto, O. and Lovering, T.G. 1978. Ore deposits of the Gilman District, Eagle County, Colorado. United States Geological Survey, Professional Paper 1017.
- Mansy, J.L. and Gabrielse, H. 1978. Stratigraphy, terminology and correlation of upper Proterozoic rocks in Omenica and Cassiar Mountains, north-central British Columbia; Geological Survey of Canada, Paper 77-19.

APPENDIX A

ANALYTICAL METHODS

SOIL GEOCHMISTRY

Using a mattock the samples were collected from the B horizon. On average the samples weighed between 0.5 and 1.0 kilograms. Upon collection they were placed in kraft high-strength paper envelopes and field dried for one week. The samples were subsequently delivered to Acme Analytical Laboratories of 852 East Hastings Street, Vancouver, B.C. for analyses.

At Acme Analytical Laboratories the samples were dried overnight, then sieved to minus 80 mesh. For the analyses of Mo, Cu, Pb, Zn, Ag, As, Cd, Sb, Bi and Ca a 0.500 gm portion of the -80 mesh fraction was dissolved in a hot (95°c) 3 ml solution of aqua-regia (3-1-3 HCl - HNO_3 - H_2O) for one hour. The resulting solution was then diluted to a volume of 10 mls with distilled water and analyzed using Inductivity Coupled Argon Plasma (ICP). The results were then compared to prepared standards for the determination of the absolute amounts.

To determine the threshold values for any anomalous populations a statistical approach was used whereby cumulative frequency plots were constructed. Since this year's sampling represents an extension to the sampling carried out in the 1985 field season, it was decided to use the same threshold values as previously determined (Hall, B.V. 1986).

ROCK GEOCHMISTRY

Once collected, the samples were placed in plastic sample bags and shipped to Acme Analytical Laboratories at 852 East Hastings Street, Vancouver, B.C. On average the samples weighed between 1.0 and 2.0 kilograms.

At Acme Analytical the samples were first crushed to minus 150 mesh. Then with the exception of one high grade sample, the samples were analyzed for Mo, Cu, Pb, Zn, Ag, As, Cd, Sb, Bi and Ca using Inductivity Coupled Argon Plasma (ICP). In this method a 0.500 gm portion of the sample is dissolved in a 3 ml solution of aqua-regia (3-1-3 HCl - $HNO_3 - H_2O$) for one hour at 95° C. The resulting solution is then diluted to 10 mls with distilled water and analyzed using ICP. The results are then compared to prepared standards for the determination of the absolute amounts.

Since sample KR-671 was expected to be too high grade for standard ICP methods to work effectively, it was decided to have this sample assayed. In this method, a 1.00 gm portion of the minus 150 mesh fraction was digested in 50 mls of aqua-regia $(3-1-2 \text{ HCl} - \text{HNO}_3 - \text{H}_20)$ at 95° for one hour. This solution was then diluted to 100 mls with distilled water. The resulting solution was then assayed for Ag, As, Pb and Zn using ICP. The results were then compared to prepared standards for the determination of the absolute amounts.

Several of the samples were found to be above the limit of reliability for certain elements (Pb 10,000 ppm; Zn 20,000 ppm; Ag 34 ppm; As 10,000 ppm and Sb 1,000 ppm). For these samples an assay is required to determine the absolute

amounts, however, in view of the relatively small sample intervals involved it was decided not to proceed with assaying. As a general rule, assaying usually gives a higher number for samples which exceed the upper limit of reliability for geochemical methods.

APPENDIX B

ASSAY SAMPLE DESCRIPTIONS

Sample Number	Location	Description
86 KR 651	South Judo 1 claim	Grab sample of disseminated pyrite hosted in a buff coloured sparry dolomite of the Stelkuz Fm.
86 KR 652	Immediately south of Judo 1 claim	Grab sample of small heavily oxidized boulder found in creek bed.
86 KR 659	South Judo 2 claim	Grab sample of heavily oxidized green-gray siltstone of the Boya Fm, containing up to 1% disseminated pyrite.
86 KR 659	South Judo 2 claim	Grab sample of hornfelsed siltstone of the Boya Fm containing up to 1% disseminated and laminated pyrite.
86 KR 664	Trench la	30 cm channel sample over a gossanous gouge zone, which separates a medium bedded limestone from coarse grained sparry dolomite.
86 KR 666	40 m north of Trench la	Chip samples of finely disseminated pyrite and sphalerite hosted in a fine grained dolomite.
86 KR 667	Trench lb	5 cm channel sample of heavily oxidized galena mineralization, hosted in a 10cm thick zone of red and green oxide minerals.
86 KR 668	Trench lb	50 cm vertical channel of oxidized coarse sparry dolomite.
86 KR 669a	Trench la	10 cm thick channel sample of a bright yellow green oxide zone associated with massive galena mineralization.
86 KR 669b	Trench lb	30 cm thick channel sample of oxidized rock immediately below sample 86 KR 669a.

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- 86 KS 669Trench 1bSoil sample taken 2 m above sample 86 KR
669a.86 KR 670aTrench 1b10 cm thick channel sample of a heavily
- 86 KR 670b Trench lb 50 cm thick channel through altered sparry dolomite immediately below the mineralized zone.
- 86 KR 671 Trench la 10 cm thick channel sample of an oxide zone containing scorodite and galena.
- 86 KR 672 Trench 1b Grab sample of sparry dolomite from above a mineralized shear zone, sample contained disseminated sphalerite and pyrite.

86 KR 673

Trench la

20 cm vertical channel of oxidized yellow-brown clay altered argillite.

oxidized mineralized band.

- 86 KR 674a 30m east of 5 cm thick channel of oxidized galena trench la mineralization.
- 86 KR 681a Trench 2 Grab sample of subhorizontal red-brown oxidized material.
- 86 KR 681b Trench 2 1.0 m vertical channel of oxidized dolomite.
- 86 KR 683 Trench 2 10 cm thick channel of bright yellow green and dark red-brown oxide material, which appears to be associated with a thin argillite band.
- 86 KR 685 Trench 3 Grab sample of rusty orange to red-brown clay material.
- 86 KR 691a Trench 3 1.0 m vertical channel of dolomite with interbedded argillite containing 1-2% disseminated pyrite.
- 86 KR 692 Trench 3 Chip sample of sparry dolomite containing trace disseminated pyrite.
- 86 KR 694 Trench 3 Grab sample from several oxidized argillite layers hosted in a gray sparry dolomite.

86 KR 698a Trench 4 Chip sample of a heavily oxidized sparry dolomite.

- 2 -

- 86 KR 699a Trench 4 Grab sample of a 5 cm thick vein of sphalerite, pyrite and calcite hosted in a thick bedded dolomite. 86 KR 699b Trench 4 0.5 т vertical channel through а stockwork of calcite veins containing disseminated sphalecite, qalena and pyrite. 86 KR 703a Trench 6 70 cm vertical channel through a sparry dolomite which has been oxidized to a dark reddish brown material. 86 KR 704a Grab sample of thein oxidized argillite Trench 6 beds containing thin stringers of galena and sphalerite. 86 KR 704b Trench 6 20 cm channel sample across oxidized band containing minor intervals of massive galena and pyrite. 86 KR 705 Trench 6 50 cm horizontal channel across the oxidized eastern portion of a mafic dyke. 86 KR 709a Trench 5 20 cm channel sample over top portion of mineralized zone, which contains semi-massive pyrite and galena associated with calcite veins hosted by a sparry dolomite. 86 KR 709b Trench 5 1.0 m channel sample along strike of mineralization consisting of galena and sphalerite hosted by a rubble breccia within a sparry dolomite. 86 KR 709c Trench 5 30 cm channel sample over bottom portion galena-sphalerite mineralization, of (total mineralized zone is 70 cm thick). 86 BR 700 South Judo 2 claim Chip sample of hornfelsed oxidized argillite of the Boya Fm, containing 1-2% disseminated pyrite.
- 3 -

APPENDIX C

GEOCHEMICAL DATA

TE ANALYTICAL LABORATORIES LTD. 32 E.HASTINGS ST.VANCOUVER B.C. V6A 1R6 PHONE 253-3158 DATA LINE 251-1011 DATE RECEIVED: SEPT 17 1986

Sept 24/86

DATE REPORT MAILED:

GEOCHEMICAL ICP ANALYSIS

.500 GRAM SAMPLE IS DIGESTED WITH JHL J-I-2 HCL-HNOJ-H20 AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN.FE.CA.P.CR.MG.BA.TI.B.AL.NA.K.W.SI.IR.CE.SN.Y.NB AND TA. AU DETECTION LINIT BY ICP IS 3 PPN. - SAMPLE TYPE: PI-SOILS P2&3 ROCKS

	ASSAYER:	N. A.	ADEAN	TOYE.	CERTI	FIED B.	.C. ASS	SAYER.			
	COLC	INY PAC	IFIC	PRO	JECT-6	1102 F	ILE # 8	36-2693	7	PAGE	1
SAMF'LE	t Mo PPM	Cu PPM	РЬ РРМ	Zn PPM	Ag PPM	As FPM	Cd PPM	S6 PPM	Bi PPM	Ca %	
86-KL-0 86-KL-0 86-KL-0 86-KL-0 86-KL-0	554 1 555 1 556 1	12 14 10 13 42	497 221 170 124 2417	468 306 292 237 6251	2.6 .8 .9 .5 8.5	123 60 54 47 7318	2 1 1 1 36	6 3 3 4 106	242 84	7.33 2.64 2.00 2.01 7.71	

	COLO	DNY PA	ACIFIC	PRO	DJECT-4	51102 F	ILE #	86-269	7	FA	۱G
SAMPLE#	Mo FFM	Cu PPM	Fb PFM	Zn PFM	Aq PPM	As FFM	Cd PPM	SD FFM	Bi PPM	Ca %	
86-KR-651	6	8	154	99	.3	117	1	.67	7	17.18	
86-KR-652	8	3	75	18	2.1	815	1	204	. 2	.10	
85-KR-659	1	132	183	56	3.2	17	1	2	174	.15	
86-KR-660	1	271	41	585	.3	43	4	4	25	1.07	
86-KR-664	5	32	14185	4870	41.5	5888	13	322	4	7.92	
86-KR-666	7	10	219	1078	.9	69	13	17	6	17.14	
86-KR-667	4	40	17386	2977	99.8		32	321	6	1.20	
86-KR-668	6	2	.216	160	.7	1837	1	11	4	16.76	
86-KR-669A	7	98	22346	7356		82,397	29	736	10	.32	
86-KR-669B	6	4	457	409	2.0	340	3	30	5	16.69	
86-KR-670A	29	472	20353		330.7		605	370	2	3.67	
86-KR-670B	6	4	116	243	. 1	271	3	13	6	16.78	
86-KR-672	6	6	1308	845	5.0	1812	10	7	5	16.52	
86-KR-673	1	35	1228	1150	7.3	767	4		4	3.82	
86-KR-674A	10	77	20899	4193	324.0	53018	41	4017	2346	3.11	
86-KR-681A	6	105	3775	3783	23.9	6758	7	197	24	12.13	
₂ 86-KR-6818	5	21	434	1937	2.8	1456	3	63	3	15.41	
36-KR-683	8	351	21879	8485	150.2	53459	178	12388	11	.16	
86-KR-685	1	28		399	1.3	516	2	52	7	10.28	
86-KR-691A	5	5	166	56	.5	96	1	7	3	16.09	
86-KR-692	6	2	52	58	.3	33	1	4	5	18.45	
86-KR-694	4	9	56	27	.2	60	1	6		12.77	
86-KR-698A	6	3		58	.8	23	1	3		17.28	
86-KR-699A	11	119	1597	11246	8.1	127	34	10		19.43	
86-KR-699B	8	48	12163	1643	64.3	582	5	.39	10	15.62	
86-KR-703A	6	6		603	1.6	79	4	4	4	15.49	
86-KR-704A	Ģ	391		7742	265.0	4404	20	500	7	4.99	
86-KR-7048	8		15039	6608	72.2	4737	24	315	5	7.29	
86-KR-705	2	60	641	1433	3.0	273	2	23	4	2.52	
86-KR-709A	34	176	16146	70503	230.4	2508	242	382	2	9.38	
86-KR-7098	17	51		24070	26.1	585	75	29	4	16.36	
86-KR-709C	13	51	11966	17963	33.0	1016	56	32	Ģ	20.76	
86-BR-700	2	16	230	2603	• ?	713	20	- 2	10	1.76	
STD C	21	58	43	125	7.1	41	17	15	21	. 47	
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							\$b	121000	PAM	1	
								~ ~ \ \ \ Y			

AGE 2

... CME ANALYTICAL LABORATORIES LTD. 852 E.HASTINGS ST.VANCOUVER B.C. V6A 1R6 PHONE 253-3158 DATA LINE: 251-1011 DATE RECEIVED: SEPT 17 1986

DATE REPORT MAILED:

kp1.24/86.

PAGE 1

ASSAY CERTIFICATE

1.00 GRAM SAMPLE IS DIGESTED WITH 50HL OF 3-1-2 OF HCL-HN03-H2D AT 95 DEG. C FOR DNE HOUR. AND IS DILUTED TO 100HL WITH WATER. DETECTION FOR BASE METAL IS .01%. - SAMPLE TYPE: ROCK CHIPS

- SHAPLE TIPE: NUCK CHIPS

ASSAYER: M. ALT. DEAN TOYE. CERTIFIED B.C. ASSAYER.

COLONY PACIFIC PROJECT-61102 FILE#86-2697A

SAMPLE# Pb Zn Ag As % % OZ/T %

86-KR-671 71.20 .95 56.83 5.47

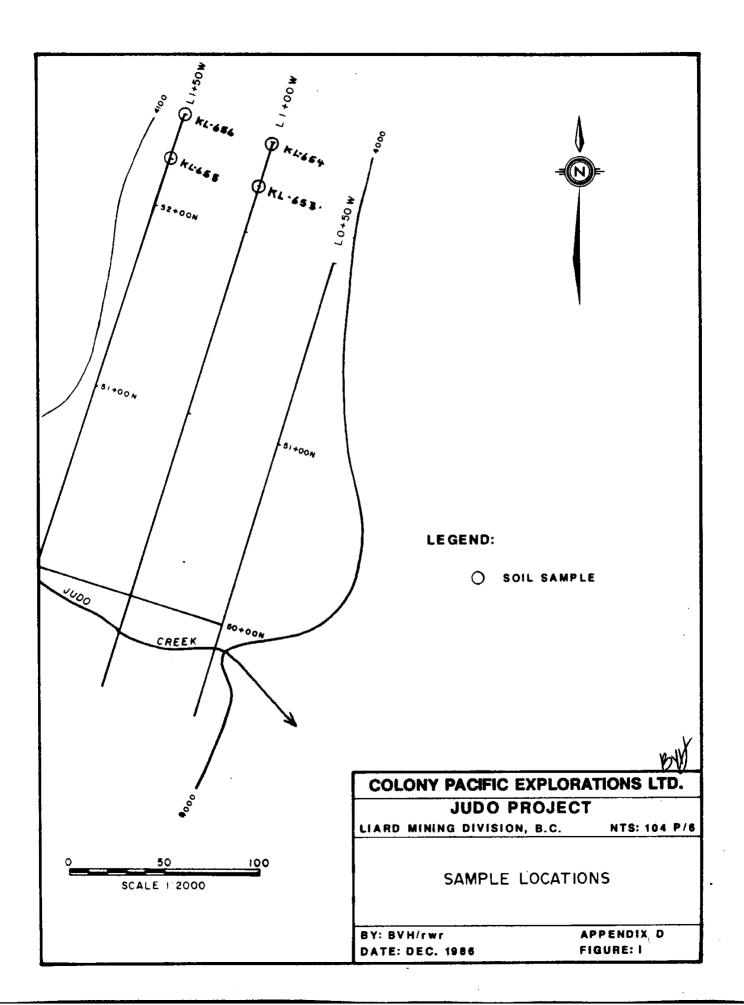
APPENDIX D

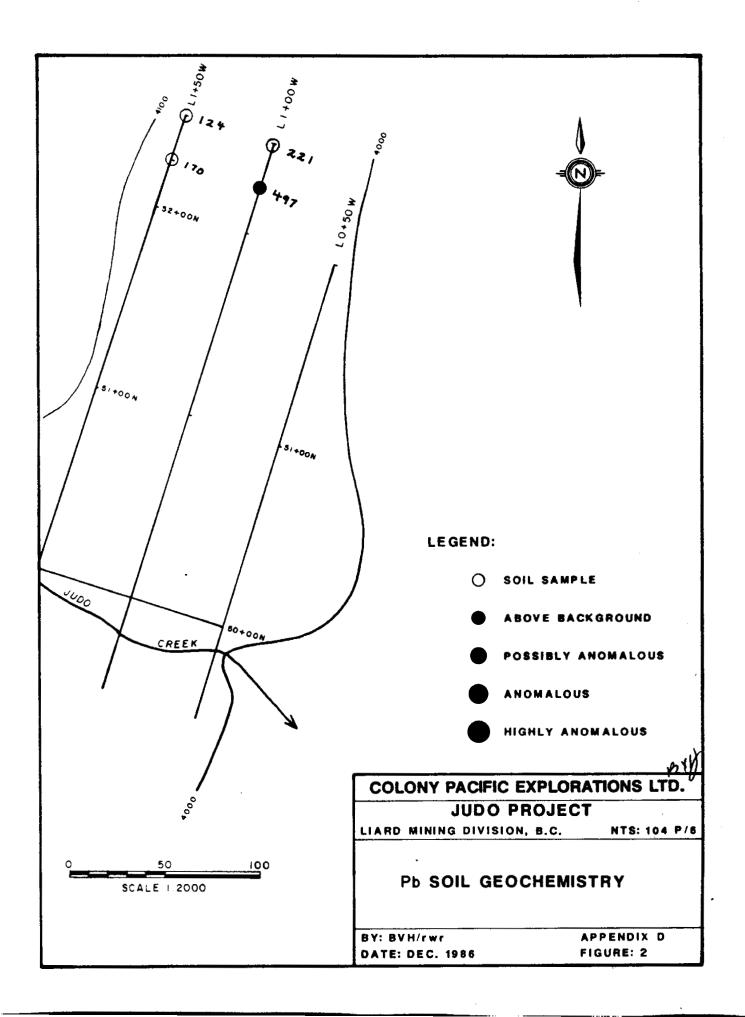
SOIL SAMPLE MAPS

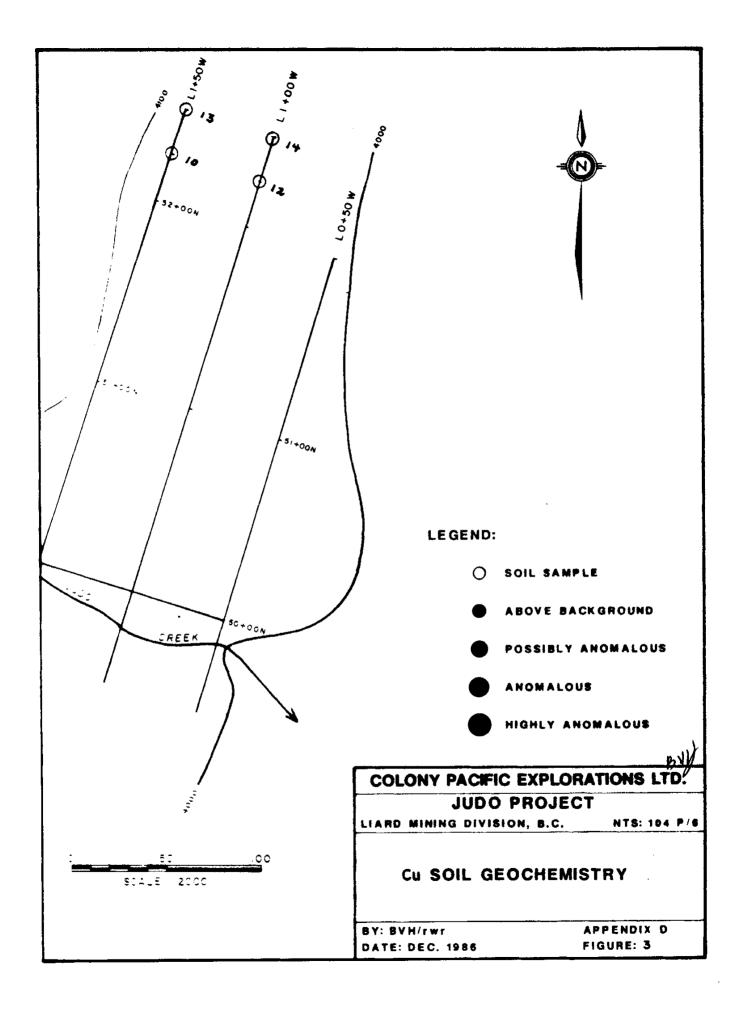
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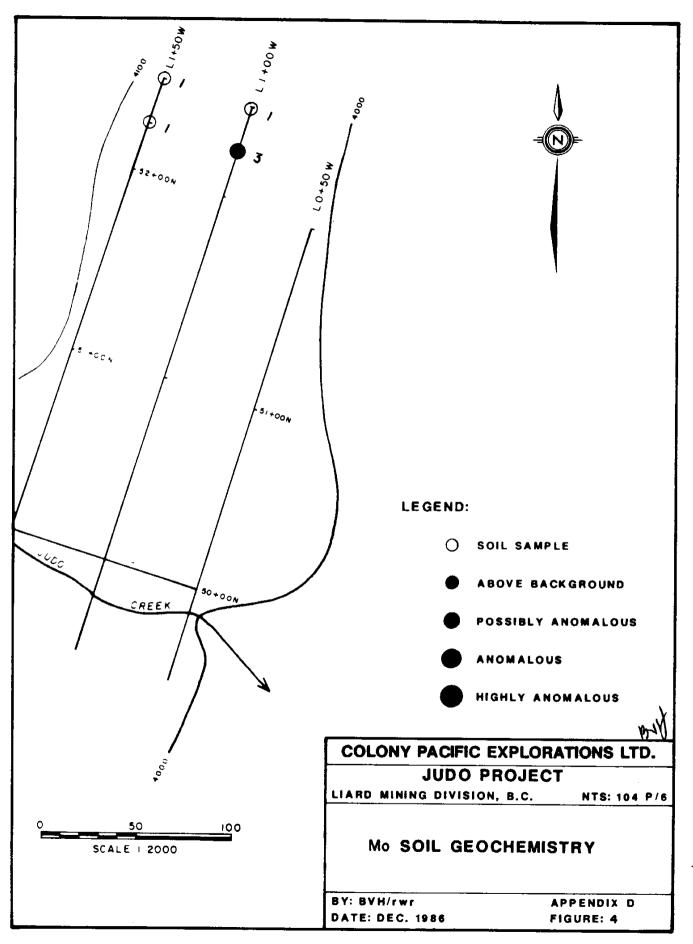
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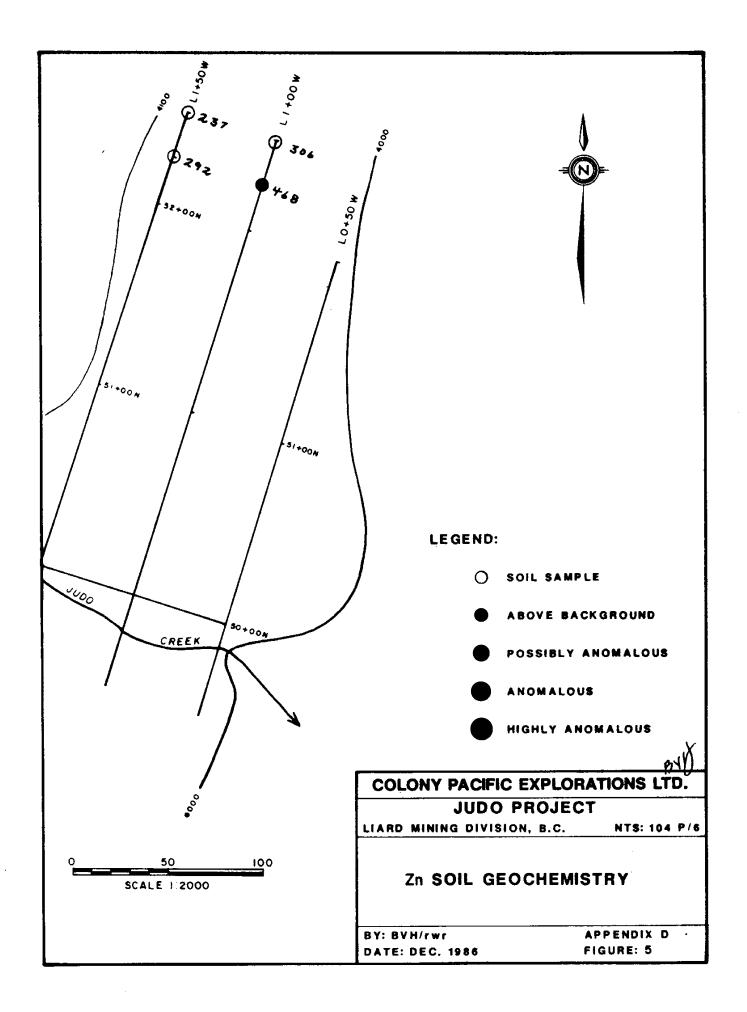


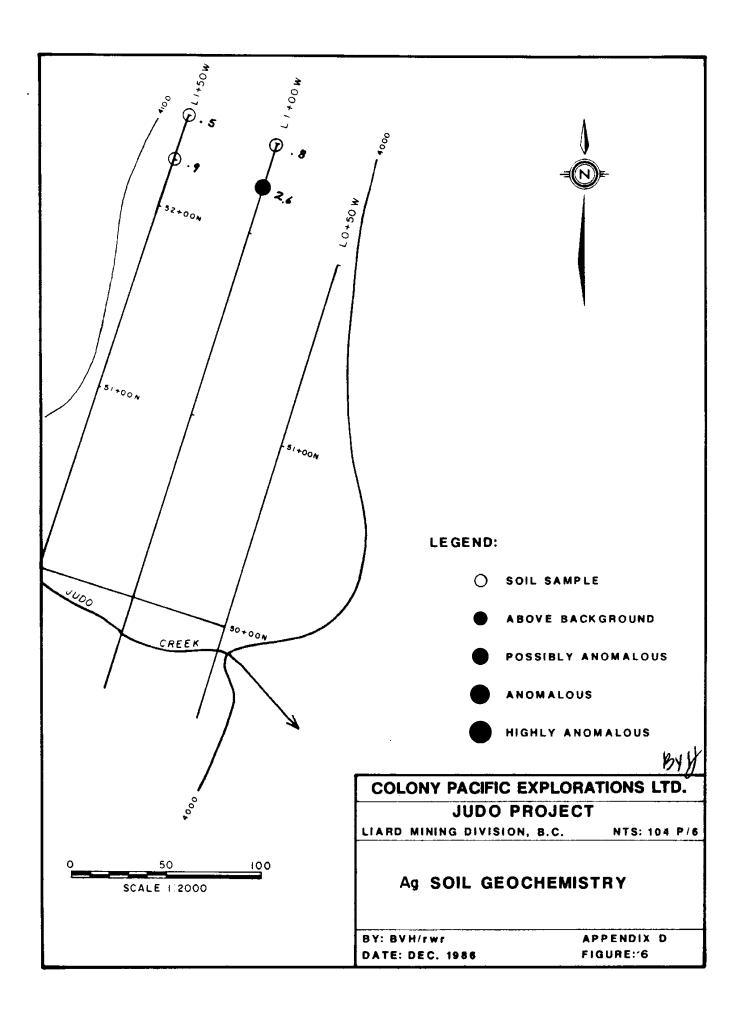


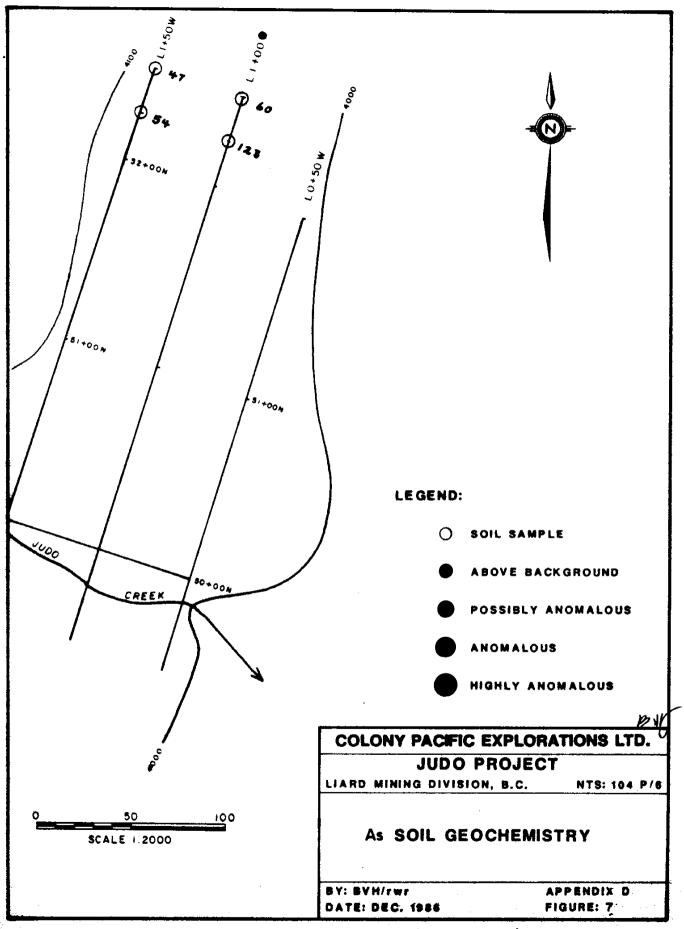


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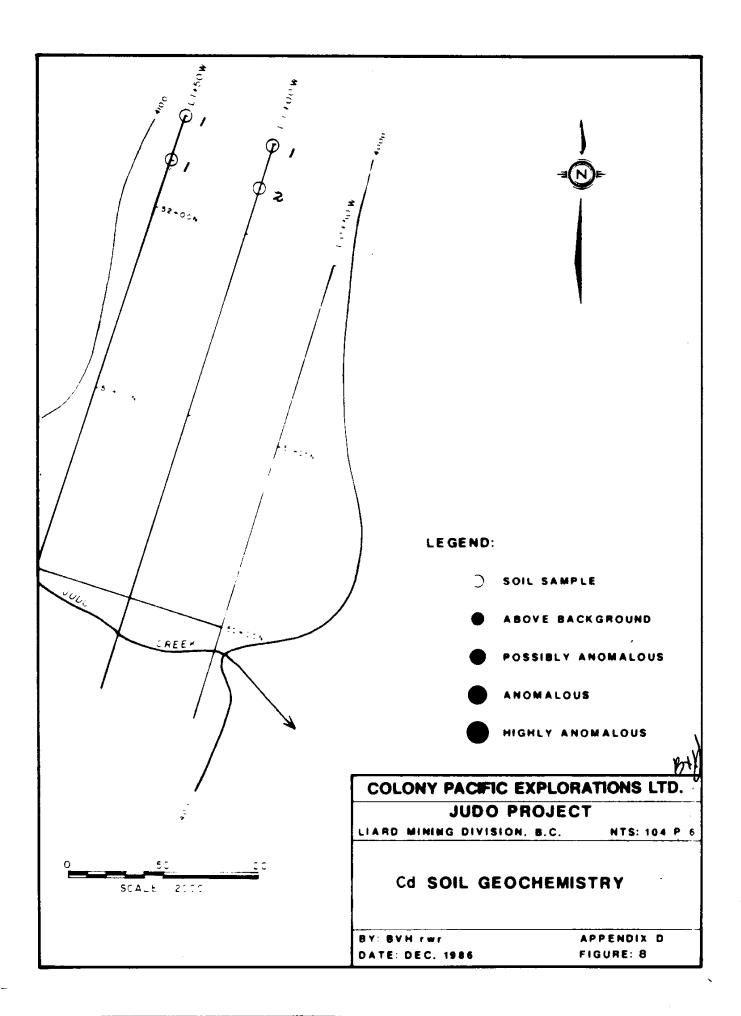


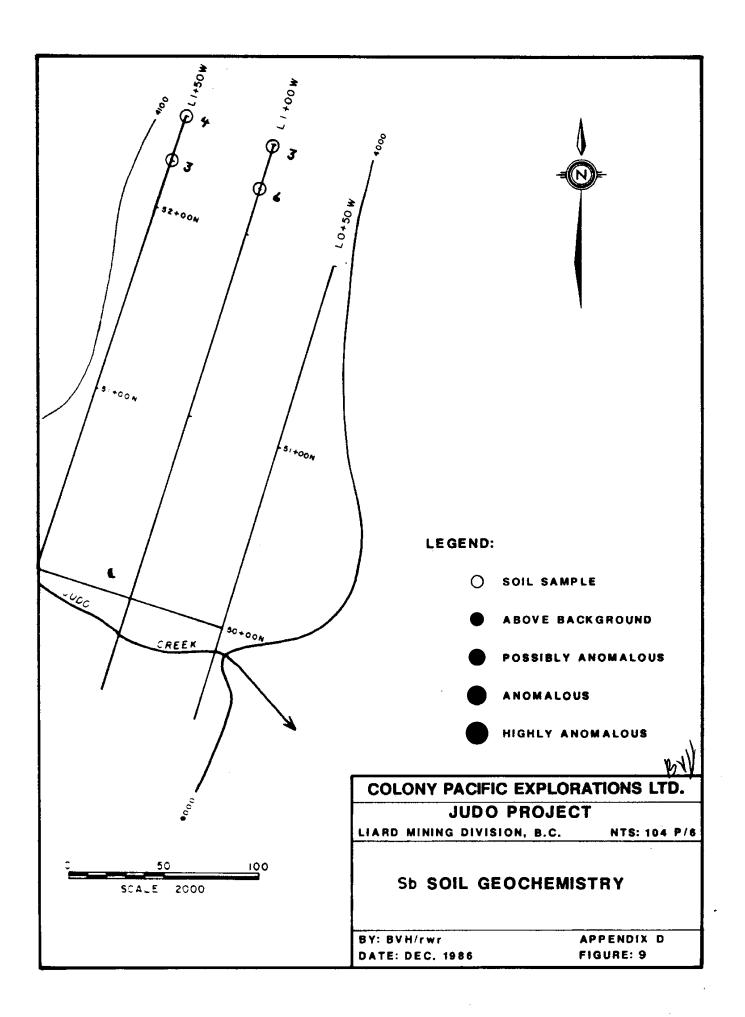


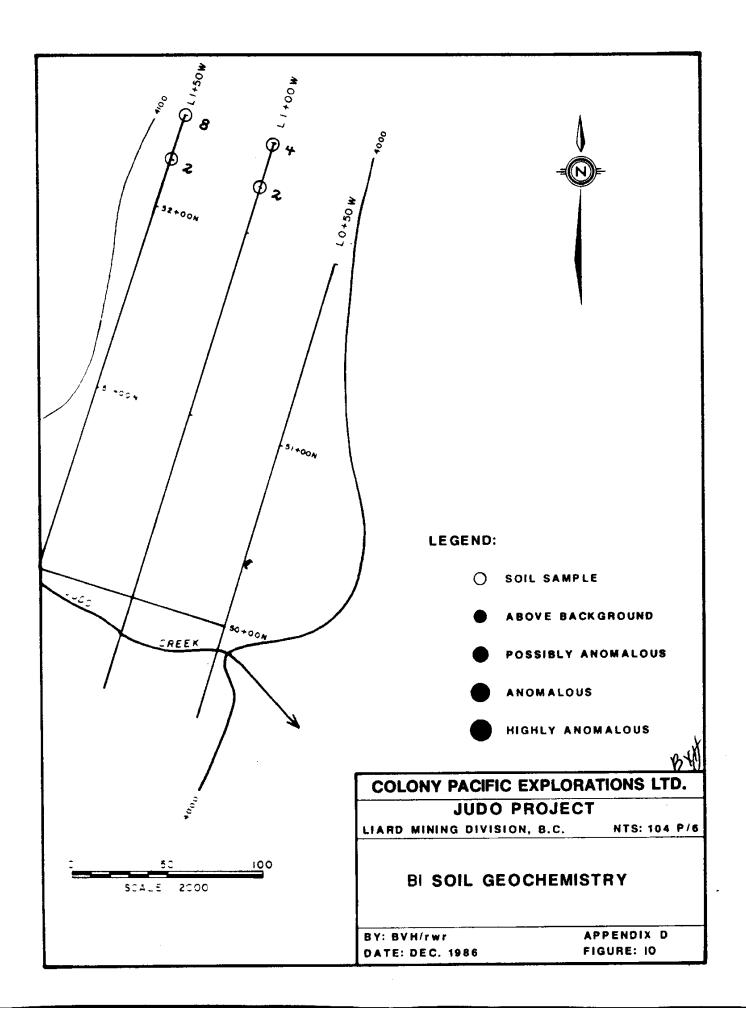


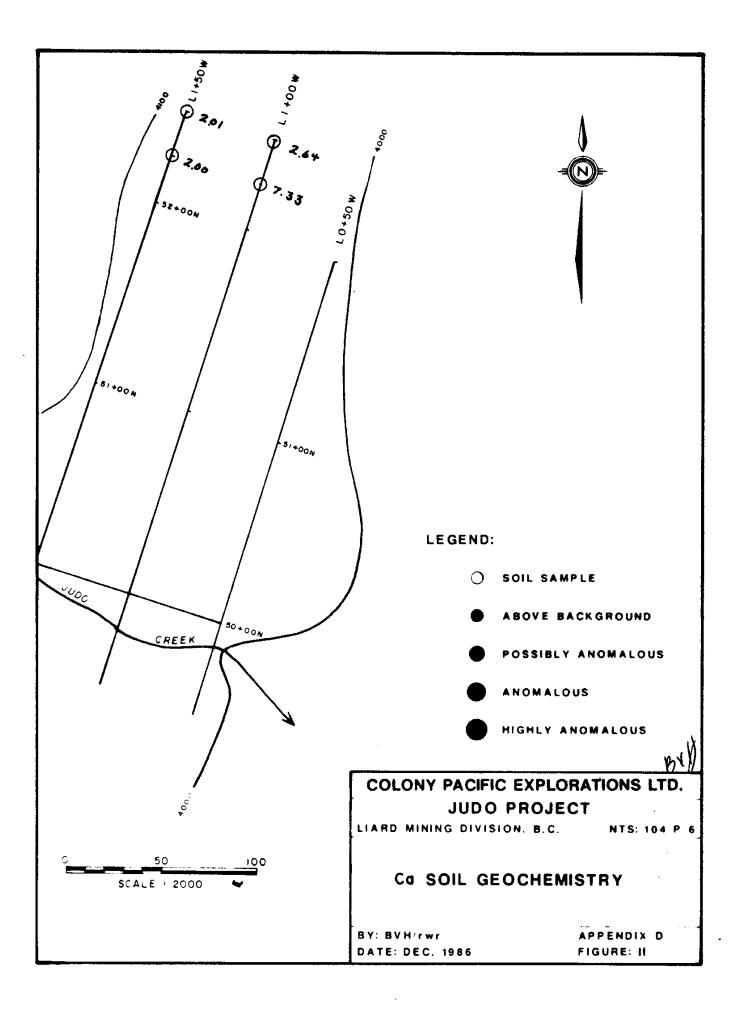
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APPENDIX E

COST STATEMENT

Wages

Brian V. Hall Mobilization and demobilization July 28 and 29, 1986 September 4 and 5, 1986 \$ 900.00 4 days @ \$225.00/day Supervision, geological August 8 - 11, 22 - 27, 28(1/2), 29(1/2)and 30, 1986 14 days @ \$225.00/day 3,150.00 Report preparation December 9(1/2), 10, 11, 13(1/2) 15, 16 1986 5 days @ \$225.00/day 1,125.00 Keith A. Pine Mobilization and demobilization July 28 and 29, 1986 September 4 and 5, 1986 4 days at \$160.00/day 640.00 Supervision, geological mapping and sampling August 8 - 30, 1986 24 days at \$160.00/day 3,840.00 \$ 9,655.00 Assays and Analysis 5 soil samples analysed for Mo, Cu, Pb, Zn, \$ 28.75 Ag, As, Cd, Sb, Bi, and Ca @ \$5.75/sample 39 rock samples analysed for Mo, Cu, Pb, Zn, Ag, As, Cd, Sb, Bi and Ca @ \$8.00/sample 312.00 1 rock sample assayed for Pb, Zn, Ag, As @ \$18.75/sample 18.75 359.50 . **Ş**

Backhoe Operation

Jedway Enterprises Ltd. 13135 - 20th Avenue Surrey, B.C.			\$26,945.00
Truck Rental			
4 weeks at \$225.00/week Repairs	\$	900.00 933.56	\$ 1,833.56
Camp Rental			
4 weeks @ \$150.00/week			600.00
Fuel			619.38
Food and Accommodation			1,079.76
<u>CP Air</u>			281.60
Drafting and Typing			975.00
Field Supplies			16.33
	TOTAL	:	\$ 42,265. 13

[] Brian V. Hall, M.Sc.

APPENDIX F

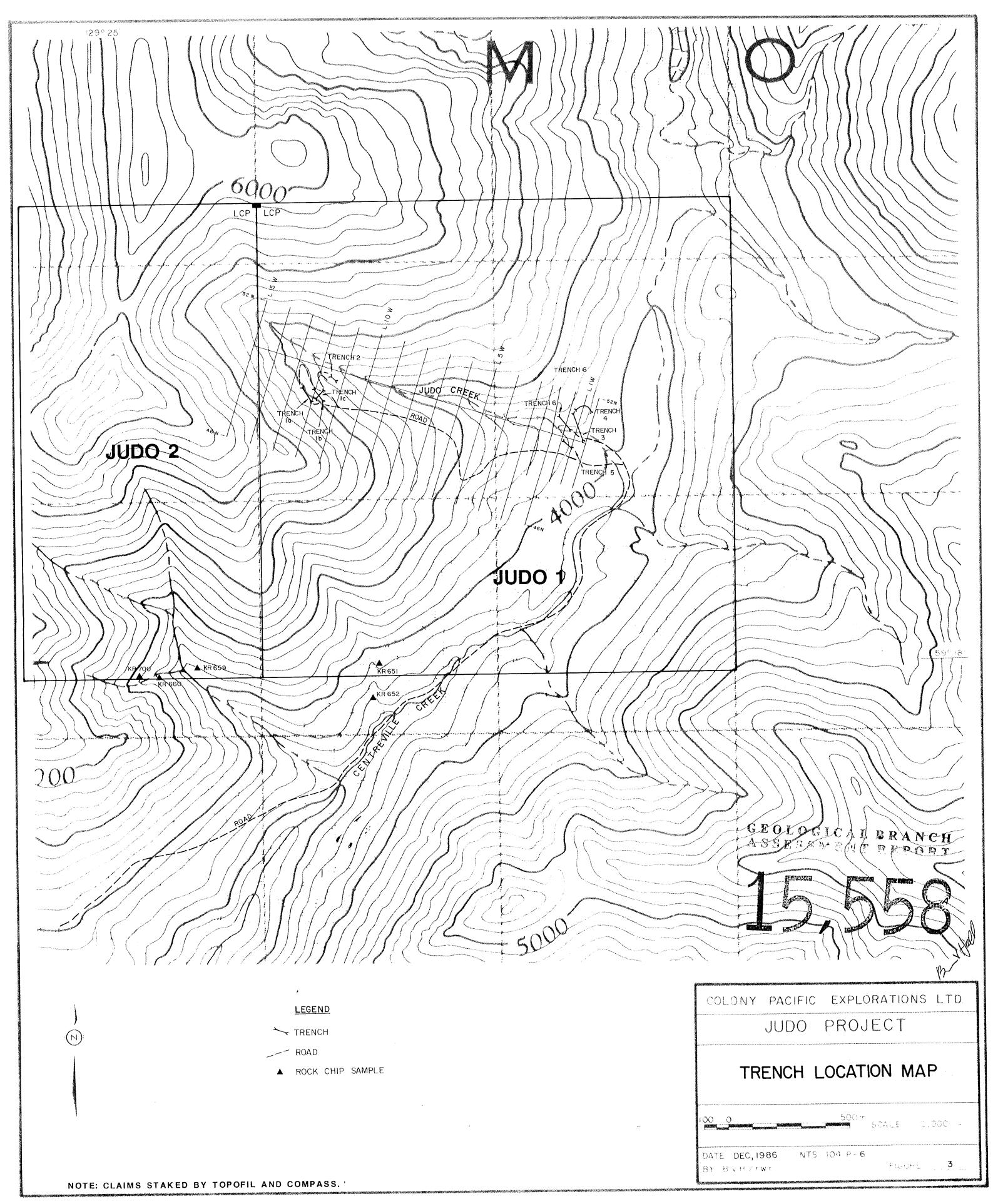
STATEMENT OF QUALIFICATIONS

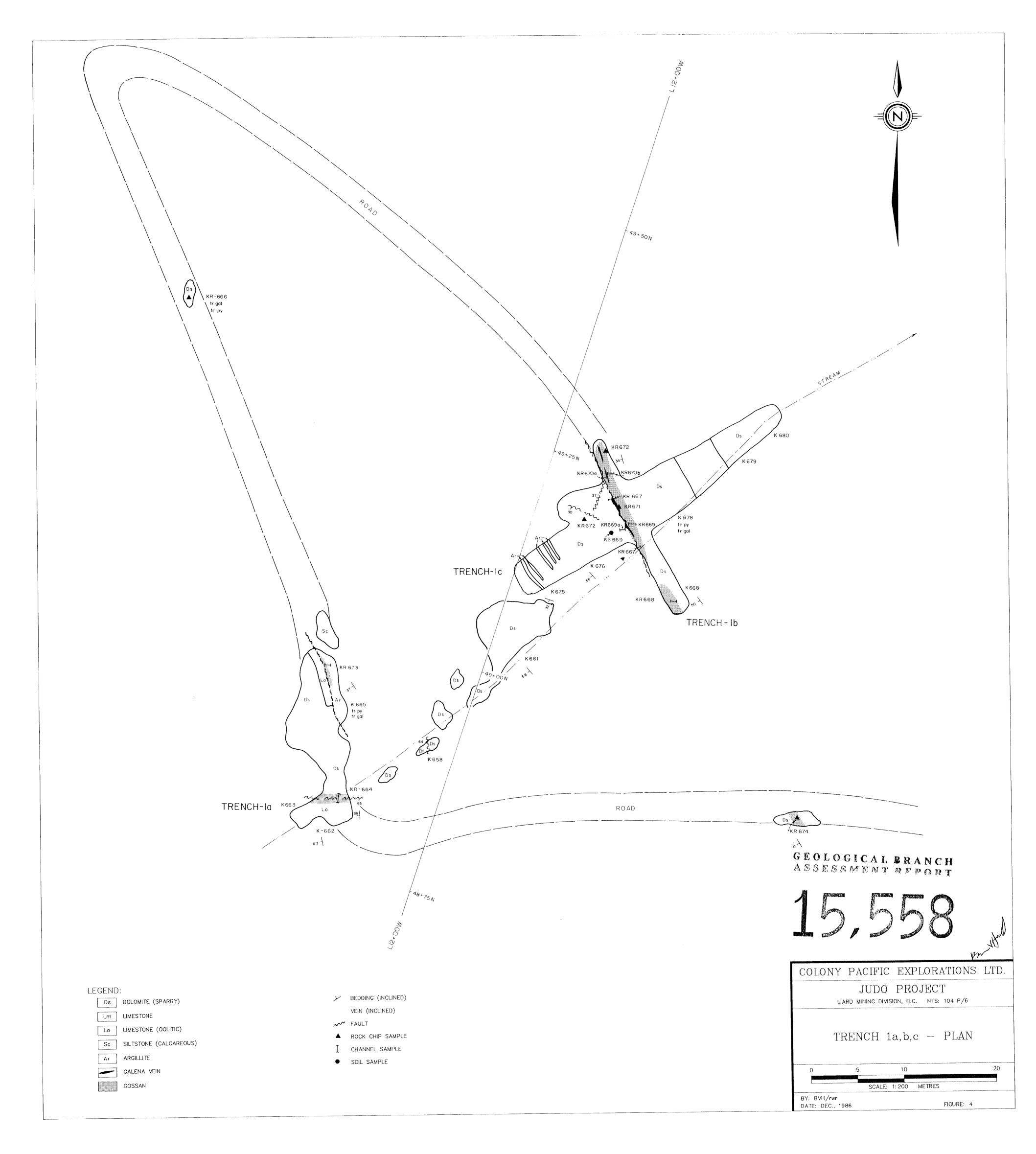
I, Brian V. Hall, of R.R.-1, Bowen Island, British Columbia, do hereby certify that:

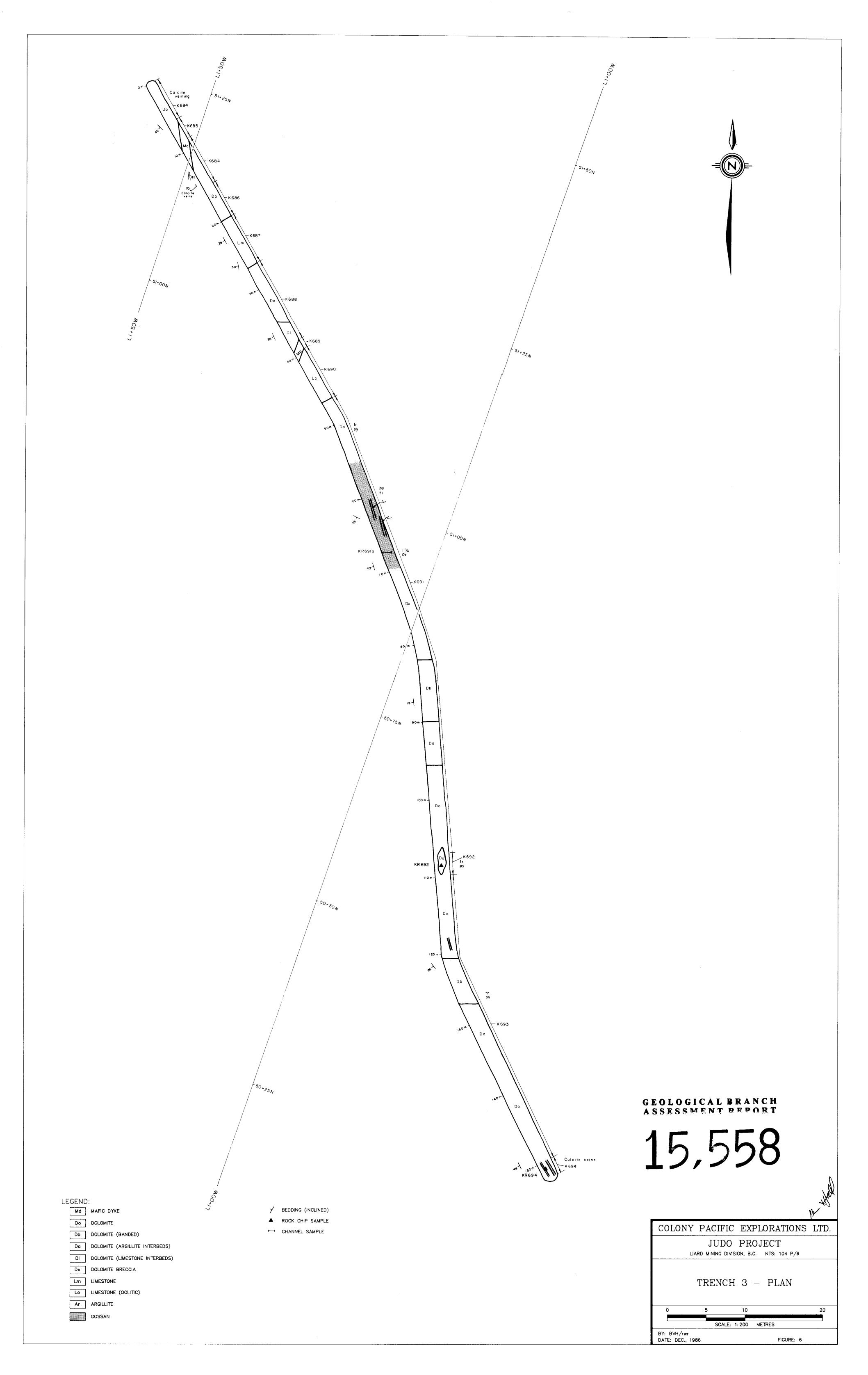
- 1. I am a graduate of the University of British Columbia (B.Sc. 1975) and the University of British Columbia (M.Sc. 1978) in geology.
- I have practiced by profession for nine years since graduation from the University of Waterloo.
- 3. I am a Fellow of the Geological Association of Canada and a Member of the Society of Economic Geologists.

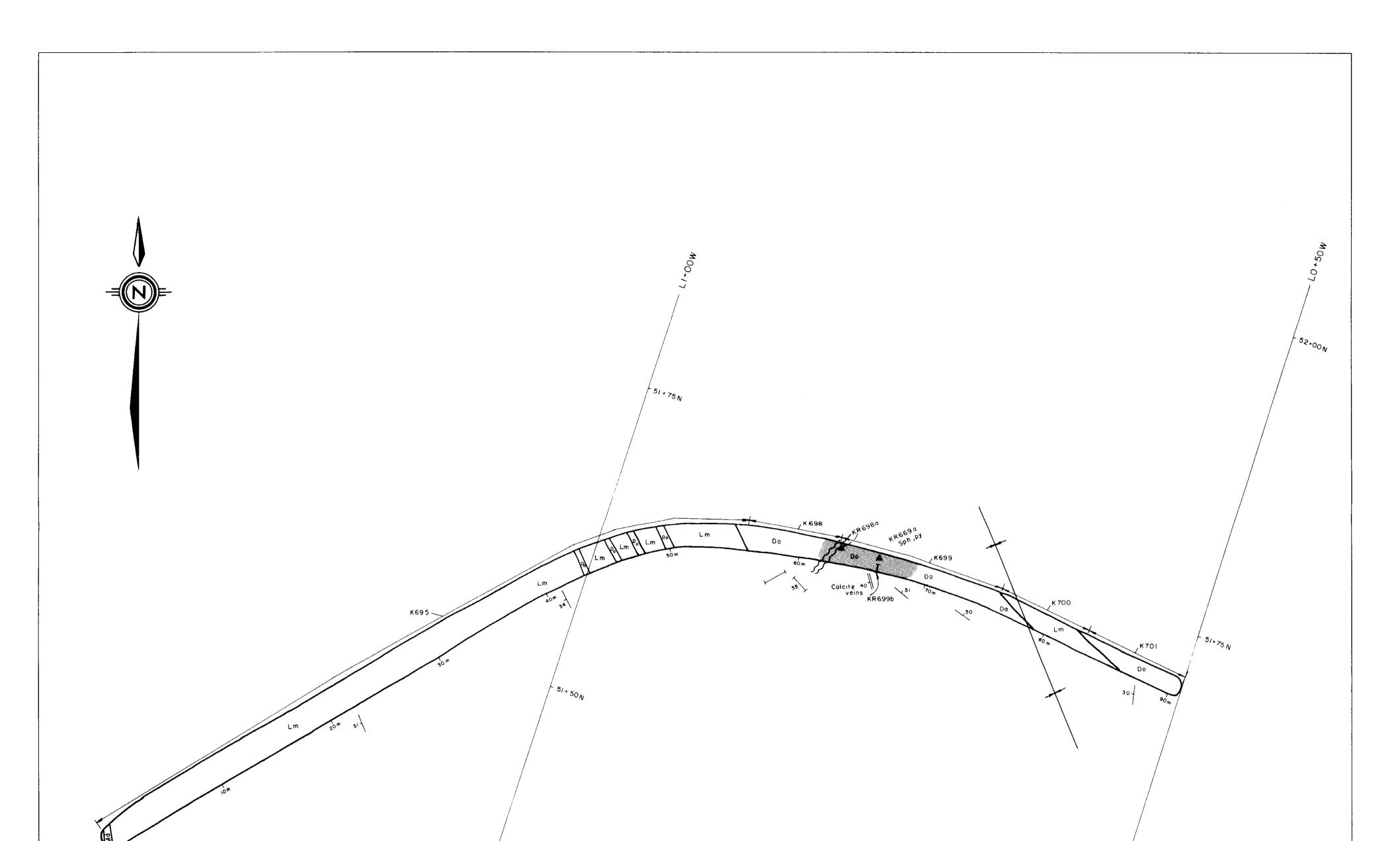
Brian

Brian V. Hall, M.S. December 22, 1986









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COLONY PA	CIFIC E	XPLORATIO	NS LTD
		ROJECT b.c. nts: 104 p,	/6
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	SCALE: 1:20	00 METRES]

LEGEND:

- Md MAFIC DYKE
- Lm LIMESTONE
- Do DOLOMITE
- Da DOLOMITE (ARGILLITE INTERBEDS)
- GOSSAN

----- FAULT

- FRACTURE (VERTICAL, INCLINED)

VEIN (INCLINED)

CHANNEL SAMPLE

ROCK CHIP SAMPLE

- BEDDING (INCLINED)
- SYNFORM

^{+ 51} + 25N

M00+17

- 40×204
- + 51+50N
- - GEOLOGICAL BRANCH ASSESSMENT PEPORT
 - 1550

