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REPORT  
 ON A  
 VLF-EM SURVEY AND  
 GEOLOGICAL MAPPING  
 OVER THE  
 PERRY GROUP  
 PERRY CREEK, CRANBROOK AREA  
 FORT STEELE MINING DIVISION  
 BRITISH COLUMBIA

PROPERTY : 15 km west of Cranbrook, B.C. on Perry Creek.  
 : 49° 116° SE  
 : N.T.S. 82F/9E, 82G/12W

OWNED BY : TRANS-ARCTIC EXPLORATIONS LTD.  
 815-850 West Hastings Street  
 Vancouver, B.C., V6C 1E2

SURVEY BY : TRANS-ARCTIC EXPLORATI  
 815-850 West Hastings  
 Vancouver, B.C., V6C 1

WRITTEN BY : David G. Mark, Geophys  
 GEOTRONICS SURVEYS LTD  
 403-750 West Pender St  
 Vancouver, B.C., V6C 2

DATED : November 23rd, 1984

12981



GEOTRONICS SURVEYS LTD.  
 Engineering & Mining Geophysicists  
 VANCOUVER, CANADA

84-1107-12981

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**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**12,981**

### SUMMARY

A VLF-EM survey and geological mapping were carried out over a portion of the Perry Claim Group during the summer of 1984. The property is located 15 km west of Cranbrook, British Columbia on Perry Creek. Access to the property is easily gained by a two-wheel drive vehicle. The terrain consists of moderate to mostly steep slopes covered with light to moderately dense coniferous trees as well as alpine meadow. The purpose of the work was to locate probable areas of gold-sulphide mineralization as is found on the nearby Leader A Claim. Of particular interest were intrusive porphyries known to be associated with gold deposits in the area.

The property occurs on the contact between the Creston Formation and the Kitchener-Siyeh Formation, the contact of which occurs along Perry Creek. Covering most of the property southeast of Perry Creek is the Creston Formation, which is composed mostly of argillites and quartzites. Northwest of Perry Creek is the Kitchener-Siyeh Formation which is composed of impure magnesium limestone, argillites, and calcareous quartzites. On the nearby Leader A Claim occurs an auriferous quartz vein returning assays up to 0.598 oz gold/ton and 10.56 oz silver/ton across 0.58 m.

The VLF-EM readings were taken every 20 meters on 40-meter separated east-west lines within the southwest corner of the claim group. The data was then reduced, plotted and contoured. Prospecting, trenching and geological mapping were done as well.

### CONCLUSIONS

1. The Perry Claim Group is located in an area of numerous gold deposits. The most well-known is the Wellington on nearby Angus Creek. Other in close proximity to the property are the n Rome and Valley deposit and the Running Wolf deposit.
2. Bulk sluice sampling revealed an anomalous zone in gold that was then trenched and because known as the Lower Shear. No porphyritic intrusive was located. The Lower Upper Shear was also trenched with no porphyritic intrusives located as well.
3. Geological mapping done to date shows the property to be underlain by a series of sediments, all probably of the Creston Formation. The rocks consist of argillites, quartzites, mica schists, and carbonates (could be limestone or dolomite). The strike of the bedding planes as well as that of the shear zones were all found to strike northeasterly.
4. The VLF-EM survey revealed stronger conductors striking northeasterly and weaker ones striking northerly. Conductors are indicative of geological structure such as fault, shear and contact zones.
5. One northeasterly-striking conductor runs across the survey area and therefore probably reflects a fault or shear. One part of it is high conductive suggesting the possibility of a mineral deposit.

### RECOMENDATIONS

- 1) The property should be soil sampled on a 50 meter by a 100 meter grid. In the laboratory, the whole soil sample should be pulverized, screened for metalics and then fire-assayed with an AA finish for gold. It would also be useful to test for lead, zinc, silver, and copper. Any anomalies discovered should then be detailed on a 10 meter by 10 meter grid and the same lab procedure followed.
- 2) The VLF-EM survey and geological mapping should be extended over the whole property.
- 3) As an aid to the geological mapping, a magnetometer survey should be carried out with stations every 25 m on the same soil sample lines. Magnetics should be able to map intrusives such as the 'miners porphyry' as well as geological structure.
- 4) Soil anomalies should be tested by resistivity-IP sections to optimize the locations and angles of diamond drill holes.

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INTRODUCTION AND GENERAL REMARKS

This report discusses the survey procedure, compilation of data and the interpretation of a VLF-EM survey as well as trenching and geological mapping carried out over a portion of the Perry Claim Group during the period of July 31st, 1983 to June 15th, 1984. Within this period much prospecting was also done, a report of which forms an addendum to this report.

The surveys were carried out by Trans-Arctic Explorations Ltd. under the field supervision of Guy Royer, geologist, with the aid of Dean Bowra. A total of 28.8 line km of VLF-EM survey were done. The prospecting and trenching were carried out and supervised by E.A. Dodd.

The primary purpose of the exploration program was to look for gold deposits such as are common in this area, as, for example, the auriferous quartz veins containing sulphides on the nearby Leader A Claim (Wellington). Of particular interest were porphyritic intrusives (flows?) commonly known as 'miner's porphyries'

which in this area frequently occur with gold deposits. The VLF-EM survey was carried out to delineate geological structure such as fault and shear zones or sulphide deposits either of which could be related to gold deposits.

#### PROPERTY AND OWNERSHIP

The property consists of six claims totalling 80 units staked within the Fort Steele Mining Division as shown on Map 2 and as described below:

<u>Claim Name</u>	<u>No. Units</u>	<u>Record No.</u>	<u>Expiry Date</u>
Perry 1	20	1911	Aug. 29, 1987
Perry 2	12	1912	Aug. 29, 1987
Perry 3	4	1913	Aug. 29, 1984
Lynx	15	2038	Dec. 29, 1987
Cozy	9	2039	Dec. 29, 1987
Staples	<u>20</u>	2082	Feb. 21, 1987
	80		

The expiry date shown takes into account the survey under discussion as being accepted for assessment credits.

The claims are owned by Trans-Arctic Explorations Ltd. of Vancouver, British Columbia.

#### LOCATION AND ACCESS

The property is located 15 km west of Cranbrook on Perry Creek at its intersections with Rome Creek and Lisbon Creek.

The geographical coordinates are 49°31.5.'N latitude and 116°01'W longitude.

done.

The history of the area goes back to the 1880's when prospectors working the Perry Creek placers discovered the vein now covered by the adjoining Leader A Claim. Little ore has been shipped from this vein, even though assays have run as high as 4.8 oz/ton Au and 6.8 oz/ton Ag. There are also high values in lead, zinc and copper.

#### GEOLOGY OF AREA

The following is quoted from L. Sookochoff's 1983 Geological Evaluation Report on the adjoining Leader 2 Claim:

"The general geological setting of the area is of the Proterozoic Lower Purcell Group which is divided into three Formations. In the Hellroaring Creek - Angus Creek - Perry Creek area the Creston and Kitchener Formation predominate and are lenticularly northeasterly trending, commonly in a fault contact and bounded to the north and south by the Aldridge Formation.

"The basal Aldridge Formation - the oldest formation known to occur in the area - is composed mainly of grey to brownish grey, rusty weathering argillite and argillaceous quartzite.

"The Creston Formation is transitional from the Aldridge Formation and embraces that succession of greyish argillaceous quartzites which is included between the dark rusty weathering, argillaceous quartzites of the lower Aldridge Formation and the thin bedded, calcereous rocks of the upper Kitchener Formation. In general, the Creston Formation consists of argillaceous quartzites, purer quartzites and argillites whose beds average about one foot in thickness. Narrow beds, pods, and lenses of calcereous rocks



Access is easily gained by travelling north from Cranbrook on Highway #95A for 15 km to Wycliffe. One then turns south and travels southwesterly along the Perry Creek access road to the northeast boundary of the property about 2 km past Old Town, a distance of about 11 km.

### PHYSIOGRAPHY

The property lies to the west of the Rocky Mountain trench within the Purcell Mountains which are physiographic divisions of the Columbia Mountain System. The terrain consists of steep, partially logged slopes throughout most of the property. It lies on the southeast side of the northeasterly-trending valley of Perry Creek.

Elevations vary from about 1,070 meters a.s.l. on Perry Creek on the eastern boundary of the Lynx claim, to 2,200 meters a.s.l. within the southeast corner of the Perry 1 claim to give an elevation difference of 1,130 meters.

The main water sources would be Perry Creek as well as northerly-flowing and northwesterly-flowing tributaries of Perry Creek (France, Rome, Staples creeks).

The forest cover consists of fir, spruce and hemlock(?) and varies from closely growing, immature stands to more widely spaced, mature stands. The upper elevations are covered by alpine meadow.

### HISTORY OF PREVIOUS WORK

Since the six claims have been staked, no previous work has been

occur in the upper part of the formation. These are more numerous toward the top of the Creston and where they are abundant, the strata are considered to belong to the overlying Kitchener Formation.

"The Creston Formation is host to gold quartz veins on Perry Creek, a northeasterly flowing tributary of the St. Mary River with the confluence 13 km northwest of Cranbrook. The deposits occur in the argillaceous quartzites which are well bedded in beds '2 inches to 2 feet' in thickness, the latter separates by thin beds of meta-argillites.

"The deposits occur as true fissure veins averaging about '8 feet' with some as wide as '20 feet'. They can be traced for long distances along strike. The gold values occur as native in the outcrops and with pyrite at depth.

"The Kitchener Formation consists predominantly of impure, magnesium limestone, argillite and calcereous quartzite. Limestone and calcereous rocks compose the bulk of the formation and serve to distinguish it from the underlying formations. The upper part is generally argillaceous. Due to the formation containing easily deformed rocks, great stretches of it have been altered to chlorite and talc-carbonate schist.

"A small stock of porphyritic granite within one km west of the property intrudes sediments of the Creston Formation. The granite contains large idiomorphic crystals of orthoclase in an isometric groundmass of plagioclase, quartz and hornblende.

#### STRUCTURE

"The general structure of the area is of a broad, northerly striking anticline exposing the core of the Proterozoic rocks with

younger rocks to the west and east. The regional St. Mary's fault trends east northeast to the north of the property area and creates a fault contact with the Aldridge and younger formations.

"Faults extending from the south generally terminate or trend into the St. Mary's fault and commonly indicate contacts between the Creston and Kitchener formations.

"One of the fault contacts referred to as the Sawmill Creek Fault determines a Creston-Kirchener Formation contact which trends through the Leader A Claim. The St. Mary's fault is within two km north.

#### MINERALIZATION

"On the adjacent Leader A Claim a mineralized quartz vein follows a strong fissure with varying strike from nearly north-south to north 35-50° with a dip of from 68° to 80° east. The vein varying from 'a few inches to three feet wide' can be traced along a length of '2,000 feet'. The vein is composed of white banded quartz containing galena, pyrite and locally chalcopyrite with tungsten reported in the adit at the southernmost extension of the vein.

"Assays from the Leader A vein reportedly returned up to .598 oz Au/ton and 10.56 oz Ag/ton across '1.9 feet' with a reported assay of 4.80 oz Au/ton. A reported 1720 tons of possible ore were calculated on the vein."

#### PROPERTY GEOLOGY

Rice's G.S.C. map shows the Perry Claim Group is almost entirely underlain by the Creston Formation which trends northeasterly

through the property. To the northwest and across Perry Creek the claims are underlain by the Kitchener Formation.

Guy Royer, geologist, has done prospecting and geological mapping over portions of the property. The geology is shown on Map 3 and is described as follows by Royer.

The rocks on the Perry Claim Group are sedimentary and can be described as interbedded layers of quartzites and argillites with carbonates sometimes present. Most of the quartzites are quite argillaceous and frequently in the field the contacts between them are quite arbitrary since the two types may be interbedded within one outcrop.

All the carbonates noted were on the north edge of the claims with much of the quartzites obviously containing significant quantities. The quartzites vary in colour from grey to green or purplish and where heavily iron stained, is brick red. The argillites are quite variable, certain layers are very slaty and schistose and in the latter types are significant amounts of chlorite. The colour varies from grey to green with some layers rather iron stained. The slaty and schistose layers are very transitional to each other and to quartzite. Within any single outcrop it is rare for all layers to conform to one single rock type. Most of the outcrops visited are along road cuts because a layer of overburden conceals most of the rocks. Groups of trenches have recently been excavated along a couple roads to expose more outcrop. Much of this exhumed rock is intensely fractured and iron stained. But no visible sulphides were noted by the author. Neither were any glimpsed in the quartz veins which are quite erratically distributed. Most of these veins are only a few cm wide, though some are as much as 20 cm.

The dominant strike of the sediments are approximate-

ly N30°E which corresponds with the other strata in the area. The dips are moderately steep averaging 060° with almost all measurable ones dipping southeast. Several sedimentary structures are often discernable. Those include cross-bedding and ripple marks on the quartzites. Some liesegang rings may also be present, these are particularly prominent in the mica schist. Some of the quartzites are extremely well banded with most layers being 4 - 7 mm wide. No microscopic fossils were noted which is to be expected of Pre-Cambrian rocks. There were no discernable features in the outcrops to suggest faulting. Some of the slates show almost perfect cleavage.

Some pyrite and traces of galena are present in the quartzites where quartz bedding is particularly prominent. There are prodigious amounts of iron staining in some of the sedimentary beds. Pyrite, however, was not noted in the argillites and argillaceous quartzite beds, neither was it common in the purer quartzites. Most of the pyrite and all the galena noted in hand specimens are found on the north edge of the claims, but never were these minerals noted in anything more than trace amounts. But judging by the iron content, many sulphides may occur microscopically.

There is evidence of placer workings on Perry Creek adjacent to the Perry claims. Despite the scarcity of visible sulphides on most of these, the prodigious amount of iron staining may be quite significant. And the trace amounts of galena are more common within these claims than within the surrounding area.

#### MINERAL DEPOSITS IN CLOSE PROXIMITY

The following is a description of two deposits occurring along the Old Baldy Fault and is taken from Rice's Memoir 228, dated 1941. The Rome and Valley group occurs within the claim bound-

aries but may be occurring within 2-post claims located on the property but owned by others. The Running Wolf deposit occurs to the immediate south.

#### Rome and Valley Group

"The Rome and Valley group consists of twenty-three claims held by location, controlled by J.M. Baird and associates of Cranbrook, B.C. It is located near the head of Rome Creek, a tributary of Perry Creek, about a mile from the Perry Creek road near Sawmill Creek.

"The deposits consist of two or more large and persistent quartz veins apparently occupying fissures in a fault zone. In a few places the contain small amounts of pyrite and galena. Crystals of pyromorphite (lead phosphate) were seen in one open-cut. Assays from samples taken by the owners are reported to range from \$1.10 to \$19.95 a ton in gold (gold at \$35 an ounce).

"The main workings consist of thirteen open-cuts, ten of which expose a vein striking north 15 degrees east and dipping 35 derees to 50 degrees southeast. The vein has been traced for 1,550 feet and probably continues for at least another 1,000 feet to the north. It varies in width from 2 to 25 feet and averages about 9 feet. The remaining open-cuts are located on a parallel vein of the same type and apparently comparable in size with the first described.

#### Running Wolf Group

"The Running Wolf group is located on French Creek, a

tributary of Perry Creek, and is reached by a trail about a mile long from the Perry Creek road.

"The deposit consists of a number of quartz veins occupying fissures in greatly altered Creston argillaceous quartzite. The workings consist of five adits, three of which are now caved. The main adit exposes three veins, each about 30 feet wide. Two of these veins occupy fissures striking in the same direction as the fault zone on the Rome and Valley group and approximately in line with it. The third vein is in a cross fracture. A few hundred feet down the hill another adit has been driven along a vein that parallels the main veins above. The veins are composed of massive quartz with occasional specks of pyrite and are reported to carry gold. They have been fractured by post-mineral movements along the original faults.

"The Rome and Valley and the Running Wolf groups are apparently on the same zone of fracturing and faulting, and this zone probably continues south across the ridge between Perry Creek and Moyie River at Old Baldy Mountain. Exposed on the Ridge at this point is a strong fracture zone that is occupied by a large quartz vein."

#### TRENCHING

Two trenches were dug out by 'cat', and the geology mapped and samples taken by Guy Royer.

The first trench, as shown on Map 4, was done on what is called the Lower Shear which occurs on the Perry 1 Claim, as is seen on Map 3. The purpose of the trench was to hopefully expose mineralized rock containing gold values as a follow-up to bulk sluice sampling done along the roads. Here the panned concentrate re-

turned a value of 5,900 ppb (0.17 oz/ton) gold. The trenching exposed 2 parallel quartz beds occurring within a sequence of sediments composed mostly of impure quartzites, some argillites, and a soft schist-like material.

Four samples were taken; one consisted of milky quartz and calcite with hematite, another of quartz and calcite with some sphalerite, and the remaining two of argillite. It was decided to test none of the samples for gold since experience elsewhere (e.g. Lower Upper Shear) had shown the quartz did not contain gold and none was expected to occur on the argillites.

It was anticipated for the occurrence of gold that a 'miners porphyry' had to occur adjacent to the quartz and none was located within this zone. However, it is expected that gold could well occur within 500 m on strike of the quartz in either direction or within 250 m on either side normal to bedding. (as per a certain geological model).

The second trench, as shown on Map 5, was put in across the Old Baldy Fault. The purpose of this trench was to expose the fault since certain gold deposits are known to occur along strike both to the southwest (e.g., Running Wolf) and the the northeast (e.g. Rome and Valley Group).

This trench also exposed quartz beds, four of them, parallel and sub-parallel to the strike of the fault within a series of sediments, namely schists and argillites. Samples were taken from the quartz bedding and tested for gold, silver, lead and zinc, but, as indicated in the table below, there were no significant assay returns on any of the samples.



Sample	Au oz/ton	Ag oz/ton	Pb%	Zn%
10349	<0.003	0.06	0.01	<0.01
10350	<0.003	0.05	0.06	0.01
15601	<0.003	0.04	<0.01	<0.01
15602	<0.003	0.02	<0.01	<0.015
15603	<0.003	0.04	<0.01	<0.01

Quartz bedding with a width of 8 to 16 cm, was newly discovered in a road cut south of the property (Map 6). It occurs between a quartz-rich argillite and a slatey argillite. A sample was taken of the quartz and returned a value of only 0.007 oz/ton gold.

### VLF-EM SURVEY

#### 1. Instrumentation and Theory

A VLF-EM receiver, Model 27, manufactured by Sabre Electronic Instruments Ltd. of Burnaby, B.C. was used for the VLF-EM survey. This instrument is designed to measure the electromagnetic component of the very low frequency field (VLF-EM), which for this survey is transmitted at 24.8 KHz from Seattle, Washington.

In all electromagnetic prospecting, a transmitter produces an alternating magnetic field (primary) by a strong alternating current usually through a coil of wire. If a conductive mass such as a sulphide body is within this magnetic field, a secondary alternating current is induced within it which in turn induces a secondary magnetic field that distorts the primary magnetic field. It is this distortion that the EM receiver measures. The VLF-EM uses a frequency range from 16 to 24 KHz, whereas most EM instruments use frequencies ranging from a few hundred to a few thousand

and Hz. Because of its relatively high frequency, the VLF-EM can pick up bodies of a much lower conductivity and therefore is more susceptible to clay beds, electrolyte-filling fault or shear zones and porous horizons, graphite, carbonaceous sediments, lithological contacts as well as sulphide bodies of too low a conductivity for other EM methods to pick up. Consequently the VLF-EM has additional uses in mapping structure and in picking up sulphide bodies of too low a conductivity for conventional EM methods and too small for induced polarization. (In places it can be used instead of I.P.). However, its susceptibility to lower conductive bodies results in a number of anomalies, many of them difficult to explain and, thus, VLF-EM preferably should not be interpreted without a good geological knowledge of the property and/or other geophysical and geochemical surveys.

## 2. Survey Procedure

The survey consisted of 28.8 line km of VLF-EM survey of the property as shown on Maps 7 and 8.

The base line, on a bearing of due north, was extended for 920 m being well flagged with survey flagging. The survey lines were run perpendicular to the base line (east-west) at 40 m spacings. The instrument readings were taken every 20 m along the survey lines facing towards the transmitter at Seattle.

## 3. Compilation of Data

The VLF-EM field results were plotted on Map 7 at a scale of 1:2,000. They were then reduced by applying the Fraser-filter. The filtered results were subsequently plotted on Map 8, at the same scale. The filtered data were plotted between actual reading stations. The positive dip-angle readings were then contoured at an interval of 4°.

The Fraser-filter is essentially a 4-point difference operator, which transforms zero crossings into peaks, and a low pass smoothing operator which induces the inherent high frequency noise in the data. Therefore, the noisy, non-contourable data are transformed into less noisy, contourable data. Another advantage of this filter is that a conductor that does not show up as a crossover on the unfiltered data quite often shows up on the filtered data.

#### 4. Discussion of Results

The major cause of the VLF-EM anomalies, as a rule, are geologic structures such as fault, shear and breccia zones. It is therefore logical to interpret VLF-EM anomalies to likely be caused by these structural zones. Of course, sulphides may also be a causative source. But when VLF-EM anomalies correlate with sulphide mineralization, the anomalies are often reflecting the structure associated with the mineralization rather than the mineralization itself.

There is some variation in intensity from one VLF-EM anomaly to the next. This is not only due to the conductivity of a causative source, but also the direction it strikes relative to the direction to the transmitter. In other words, those conductors lying parallel or sub-parallel to the direction of the transmitter (S55W in this case), can be picked up easier than those that are lying at a greater angle. Depending upon its conductivity, a conductor may not be picked up at all if it is at too great an angle.

VLF-EM highs are of particular economic interest since they may be reflecting sulphides, fracturing and/or alteration any of which could be associated with gold mineralization. The highs often are at points of intersection of two or three conductors

striking in two or three different directions. If the conductors are in fact geological structures, then the points of intersection represent areas that could be amenable to mineralizing fluids.

From the Fraser-filtered data, the writer has attempted to draw in the conductors that the contouring is trying to outline. The results are plotted on Map 7 with the raw data. A word of caution is that the results may not be strictly correct since the contouring is quite complex. It was not always obvious where the conductor was situated or which direction it trended.

From the plot of the conductors it would appear that the primary direction of structure on this property is northerly with the secondary direction being northeasterly. However, so far the geological mapping indicates that fault and shear zones as well as bedding planes strike northeasterly. The geological mapping, nevertheless, is quite preliminary and further work may determine the reason for the northerly strike of so many of the conductors. However, the northeasterly conductors are much stronger and the northerly conductors, much weaker.

The most persistent conductor is a northerly-striking one that is labelled 'a' on Maps 7 and 8. It sub-parallel the Old Baldy Fault strongly indicating, therefore, that the causative source is a fault or shear zone. Of particular interest is that part of the conductor on lines 10 to 12N. Here the conductor has much greater conductivity indicating, perhaps, a zone of mineralization. The greater conductivity could be due to sulphides, alteration, and/or fracturing, all of which can be associated with gold deposits.

The trench on the Lower Shear as well as the one on the Lower Upper Shear both correlate with VLF-EM conductors. So far minimal

gold has been discovered within the trenches. However, this does not preclude gold occurring elsewhere along the VLF-EM conductor.

The geological mapping done to date indicates the trench on the Lower Upper Shear occurs on the Old Baldy Fault which is not clearly outlined by the VLF-EM survey. However, extension of the survey to the east may much more clearly map the fault. It is also quite possible that the Old Baldy Fault which therefore may occur further to the southeast.

Respectfully submitted,  
GEOTRONICS SURVEYS LTD.



David G. Mark,  
Geophysicist

November 23, 1984

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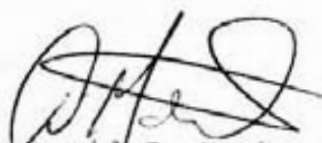
GEOPHYSICIST'S CERTIFICATE

I, DAVID G. MARK, of the City of Vancouver, in the Province of British Columbia, do hereby certify:

That I am a Consulting Geophysicist of Geotronics Surveys Ltd., with offices located at #403-750 West Pender Street, Vancouver, British Columbia.

I further certify:

1. I am a graduate of the University of British Columbia (1968) and hold a B.Sc. degree in Geophysics.
2. I have been practising my profession for the past 16 years and have been active in the mining industry for the past 19 years.
3. I am an active member of the Society of Exploration Geophysicists and a member of the European Association for Exploration Geophysicists.
4. This report is compiled from data obtained from a VLF-EM survey and geological mapping carried out by Trans-Arctic Explorations Ltd., under the field supervision of geologist, Guy Royer, and trenching carried out by Trans-Arctic Explorations Ltd. under the supervision of E.A. Dodd. All work was done in the period of July 31, 1983 to June 15, 1984.
5. I do not hold any interest in Trans-Arctic Explorations Ltd. nor in any of the claims of the Perry Claim Group, nor will I receive any interest as a result of writing this report.

  
David G. Mark  
Geophysicist

November 23rd, 1984

A D D E N D U M

PROSPECTING REPORT



PROSPECTING REPORT

Perry Claim Group,  
Cranbrook Area, Port Steele M..D., B.C.

Trans-Arctic initial interest in the vicinity of the Perry 1, 2 and 3 claims was caused by a write-up in the Minister of Mines report for the year 1898 pp. 1041 to 1017 inclusive with phrases such as "These ledges and the accompanying porphyry will give gold colours at almost any point where tried.", "On this property both the big ledge and the 8 foot ledge show up, the former, here 40 feet wide being accompanied by a porphyry some 200 feet wide as indicated by small pits." and "Assays from solid quartz are reported to have given values of some \$8.00 in gold, the porphyry near the quartz giving \$16.00."

Although information was sketchy a detailed examination was conducted to try and locate the 200' porphyry which by todays standards would carry a phenominal 3/4 oz Au per ton across 200 feet going for a strike length of perhaps 2 or 3 thousand feet or more.

On July 20, 1983, the Perry 1, 2 and 3 were located and on July 31 to August 3, 1983, C. Sywulsky, Lloyd Brewer, Steve Bishop and myself conducted a thorough search of the property for anything resembling a 200' wide miners porphyry. Much of the claim group was found to be covered by a thin layer of overburden. Most of the visable outcrops were confined to road cuts or occasionally on creek walls. Little attention was paid to sedimentary rocks at the time as we were after a porphyry.

Road sections were bulk sampled into approximately 50 kg samples, by driving along the road with a pick-up truck, stopping very 30 to 60 m where two shovels full of soil from as close to bedrock as possible were taken. After gathering the 50 kg sample it was run slowly through a sluice box then panned for colours. None of the samples revealed a significant number of colours except sample No. 15604D. This pan concentrate was then sent to Chemex Labs for fire assay, the result was 5,900 ppb. The Old Baldy Fault was located as was another shear zone which we named the Lower Upper Shear and the Lower Shear respectively.

In December of 1983 a bulldozing and mapping program was carried out. Prospecting was limited to road cuts. The Lower Shear was located and much trenching was done to expose quartz beds in the hopes that the miners porphyry which is supposed to be immediately adjacent to the quartz beds would be found. No igneous rocks of any description were located on the Lower Shear.

The Old Baldy Fault which consists of two major northeast trending shears traverse the Perry Claims. The lower of these was located by prospecting and then trenched with the cat. When exposed the Lower Upper Shear revealed large quartz beds or veins but again no miners porphyry.

To the southwest of the Lower Upper Shear on strike is the Elkhorn and Running Wolf claims which carry free gold in quartz veins and to the northeast from the Lower Upper Shear in the other direction along the Old Baldy Fault or shear lies the Rome and Valley group deposits which also carry free gold in quartz veins. The prospecting and trenching did not uncover or reveal any porphyritic rock which is what we were looking for. The only igneous material at all discovered to date were fragments of Purcell Sill material. It was a refreshing sight amongst all the sediments, but it was not the porphyry we were looking for.

The stage has however been set for a comprehensive geochemical survey in an attempt to locate any porphyry gold deposit. Of particular interest in my opinion is the interesting ground between the Running Wolf and the Rome-Valley groups, which were probably discovered because the two creeks cut through the overburden exposing the quartz beds.

Overburden in the area is usually about 1 or 2 m deep making geochemical prospecting attractive.

Respectfully submitted  
TRANS-ARCTIC EXPLORATIONS LTD.

E.A. Dodd,  
President

AFFIDAVIT OF EXPENSES

The VLF-EM survey, geological mapping, trenching and prospecting were carried out during the period of July 31, 1983 to June 15, 1984 on the Perry Claim Group, in the Cranbrook Area, Fort Steele Mining Division, B.C., to the value of the following:

PROSPECTING - July 31 to August 3, 1983

E.A. Dodd, 4 days at \$175/day	\$ 700
L. Brewer, 3 days at \$125/day	375
S. Bushop, 3 days at \$100/day	300
C. Cywulsky, 4 days at \$100/day	400
4X4 truck rental, (inlc. gas and oil), 4 days at \$110/day	440
Room and board, 14 man-days at \$50/man/day	700

December 4 and 5, 1983

E.A. Dodd, 2 days at \$175/day	350
F. Myberg, 2 days at \$100/day	200
Room and board, 2 man-days at \$50/man/day	100
Sample bags, flagging and analysis for all 3 stages	75

May 7, 8 and 10, 1984

E.A. Dodd, 3 days at \$175/day	525
4X4 truck rental, (incl. gas and oil), 3 days at \$110/day	330
Room and board, 3 days at \$50/day	150
	<u>\$ 4,645</u>

TRENCHING:

Bulldozing, trenching, stripping, reclamation, D-6 cat and operator, 78 hours at \$68.50/hour	\$ 5,343
Lo-bed rental	275
Swamper, 12 days at \$100/day	1,200
4X4 truck rental, (incl. gas and oil), 15 days at \$110/day	1,650
Room and board, 15 days at \$50/man/day	1,500
	<u>\$ 9,968</u>

VLF-EM SURVEY AND GEOLOGICAL MAPPING

Supervisor, 2 day at \$200/day	\$ 400
Geologist/Instrument operator, 9 days at \$200/day	1,800
Surveyor's helper, 2 days at \$125/day	250
4 X 4, 3/4 ton truck, 11 days at \$110/day (includes oil and gas)	1,210
Room and board, 22 man-days at \$50/man/day	1,100
Instrument rental (VLF-EM), 14 days at \$25/day	350
Survey supplies	150
	<u>\$5,260</u>

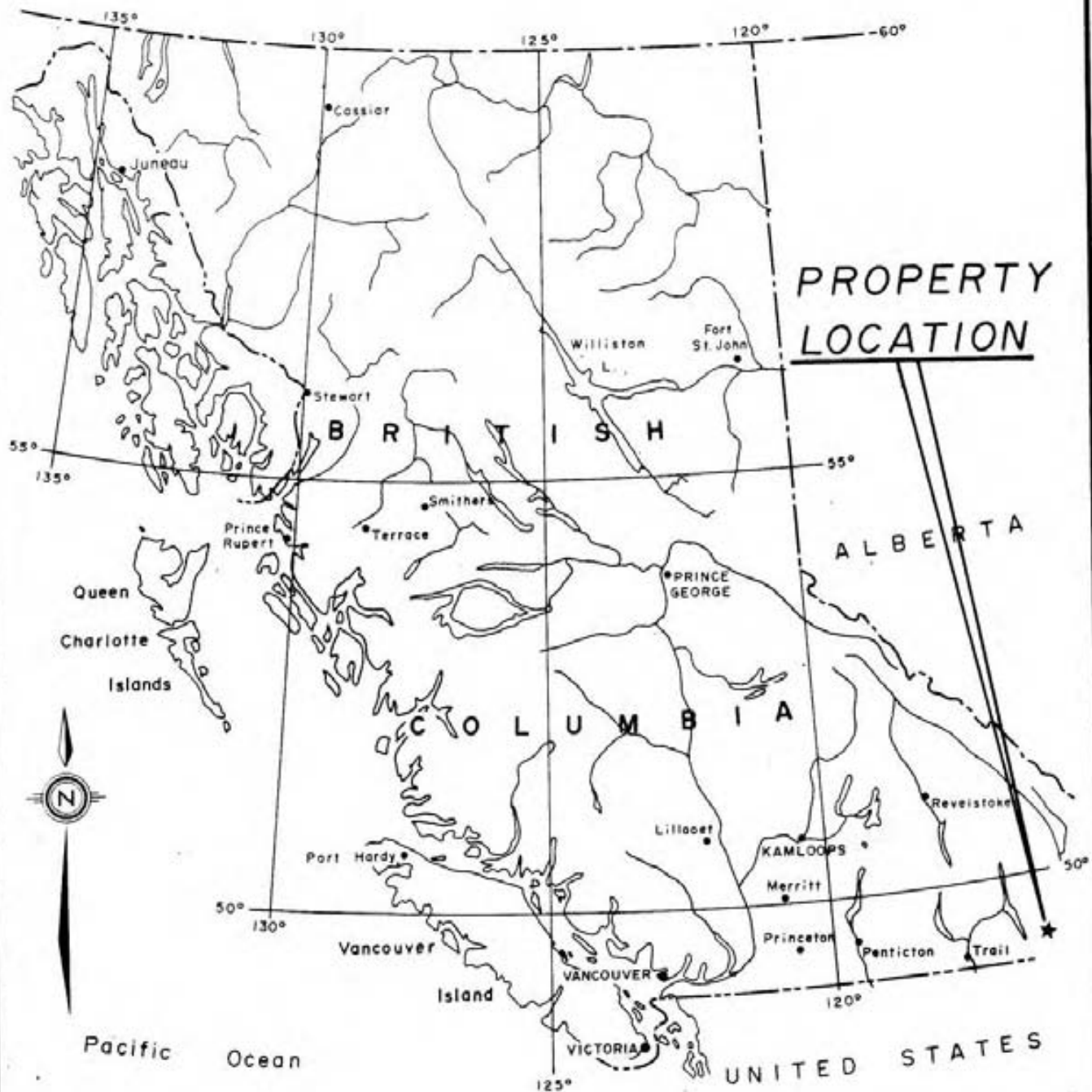
REPORT:

Geophysicist, 20 hours at \$40/hr	\$ 800
Geophysical technician, 25 hours at \$25/hr	625
Drafting and printing	1,000
Typing, compilation and photocopying	200
	<u>\$2,625</u>

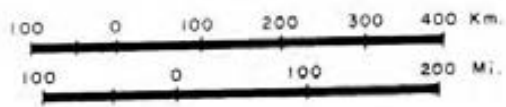
GRAND TOTAL	<u>\$22,498</u>
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Respectfully submitted,  
TRANS-ARCTIC EXPLORATIONS LTD.

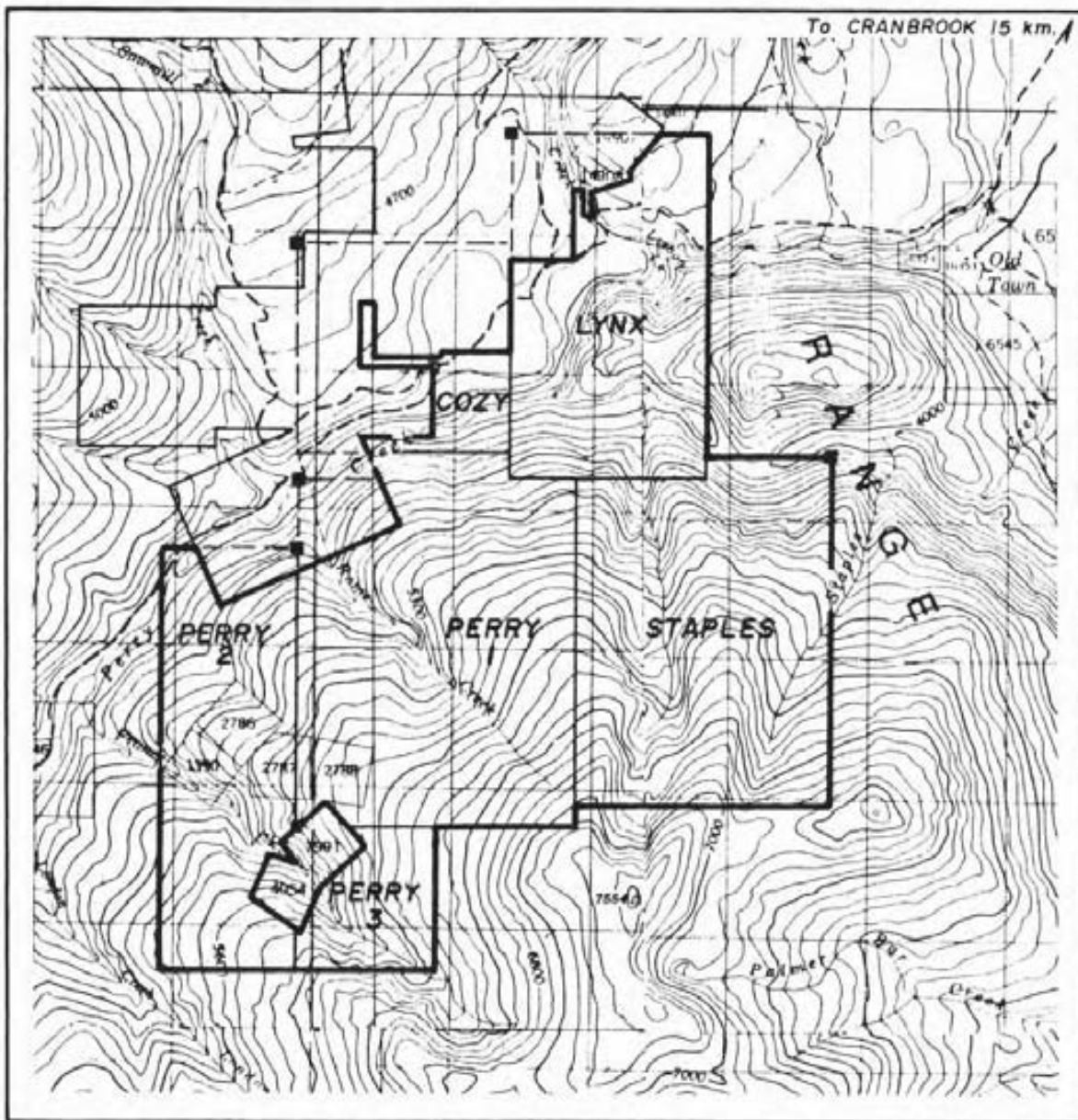
E.A. Dodd,  
President



PERRY CLAIM GROUP



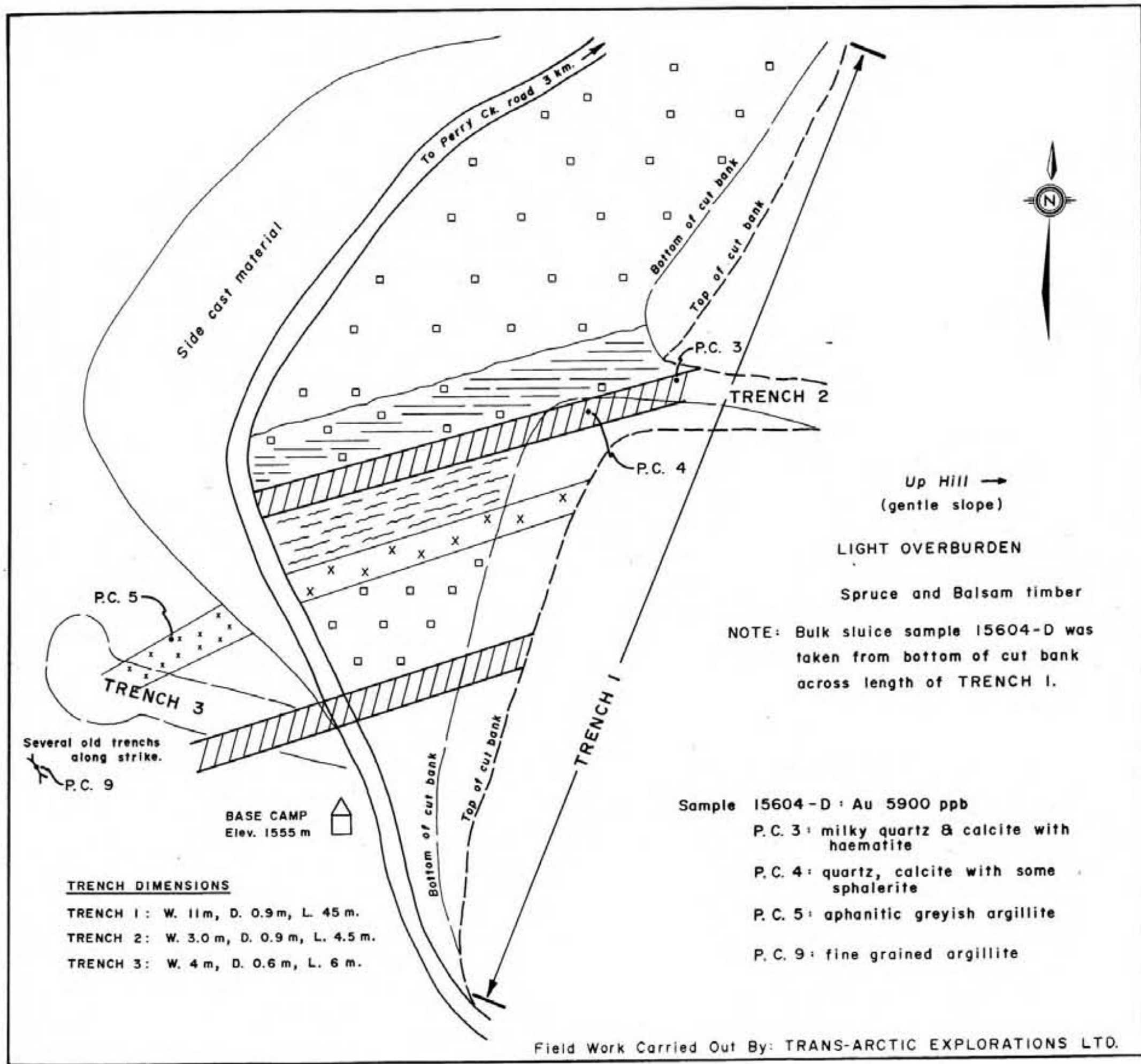
116° 01'



49° 32'



<b>TRANS-ARCTIC EXPL. LTD.</b>			
PERRY CLAIM GROUP			
FRANCE CREEK, PERRY CREEK, CRANBROOK AREA, BC			
FORT STEELE M.D.			
<b>CLAIM LOCATION MAP</b>			
SCALE: 1:50,000	DATE: Nov. 84.	MAP: 2	N.T.S. 82 P/9 E-82 G/12W



**LEGEND**

- □ □ Impure quartzite
- ==== Slaty-bed
- ~~~~ Soft schist
- x x x Aphanitic argillites
- . . . Fine-grained dark argillite
- |||| Quartz bed

GEOLOGY BY GUY ROYER, Geologist  
E. DODD, Assistant

approx. 4m 0 8m

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**TRANS-ARCTIC EXPLORATIONS LTD.**

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**PERRY CLAIM GROUP**  
PERRY CREEK, FRANCE CREEK AREA  
FORT STEELE M.D., B.C.

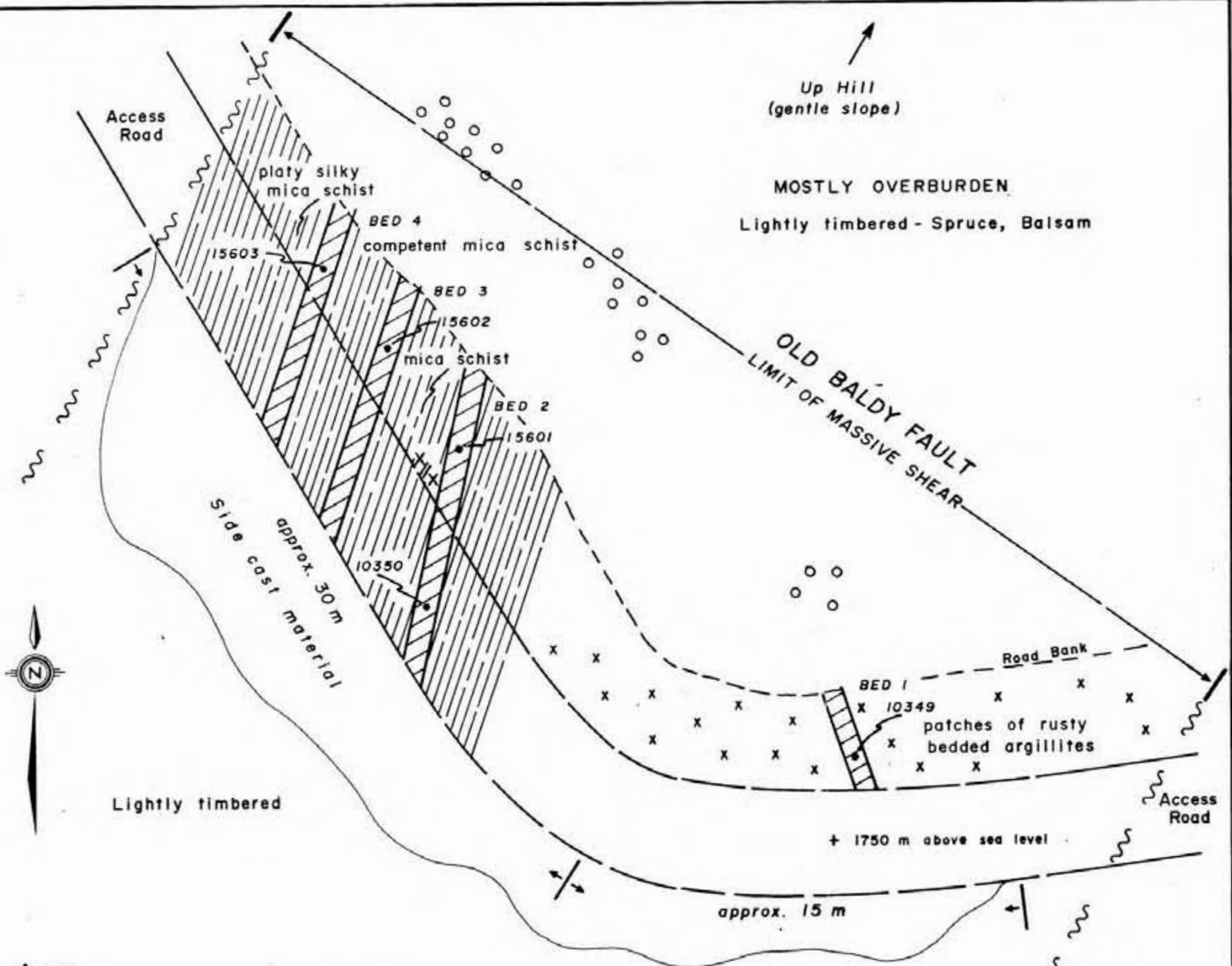
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**TRENCHING & SAMPLING**  
LOWER SHEAR

SCALE APPROX. 1:200	DATE Nov. 84	MAP 4	DRAWN BY B. D.S.
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**TRENCH DIMENSIONS**  
 TRENCH 1: W. 11m, D. 0.9m, L. 45m.  
 TRENCH 2: W. 3.0m, D. 0.9m, L. 4.5m.  
 TRENCH 3: W. 4m, D. 0.6m, L. 6m.

Sample 15604-D: Au 5900 ppb  
 P.C. 3: milky quartz & calcite with haematite  
 P.C. 4: quartz, calcite with some sphalerite  
 P.C. 5: aphanitic greyish argillite  
 P.C. 9: fine grained argillite



**Assay**

SAMPLE	Pb %	Zn %	Ag oz/T	Au oz/T
10349	0.01	< 0.01	0.06	< 0.003
50	0.06	0.01	0.05	"
15601	< 0.01	< 0.01	0.04	"
02	"	"	0.02	"
03	"	"	0.04	"

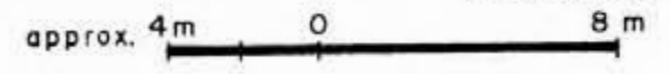
Dimensions of Trench  
 depth - approx. 0.7 to 0.9 m  
 width - approx. 4.5 m  
 length - approx. 45 m

Field Work Carried Out By: TRANS-ARCTIC EXPLORATIONS LTD.

**LEGEND**

- Sample location
- ○ ○ Quartz rubble
- X//X Slaty argillite
- ||||| Mica schist greenstone
- x x x Argillite
- ~~~~~ Shear
- A Quartz bed

Geology mapped by: GUY ROYER, Geologist.  
 E. DODD, Assistant.



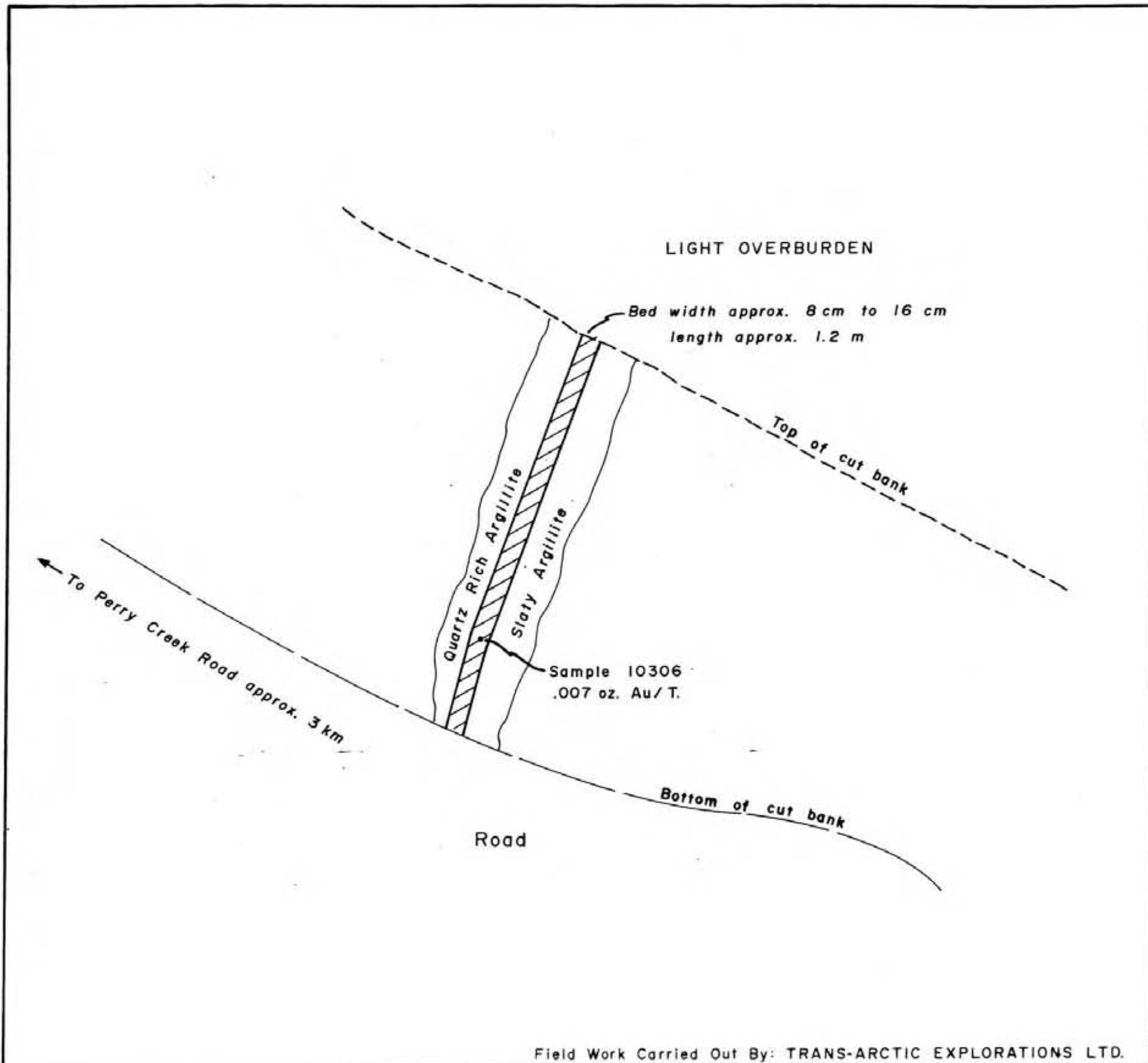
**TRANS-ARCTIC EXPLORATIONS LTD.**

PERRY CLAIM GROUP  
 PERRY CREEK, FRANCE CREEK AREA  
 FORT STEELE M.D., B.C.


**TRENCHING & SAMPLING**  
 LOWER UPPER SHEAR

SCALE: APPROX. 1:200	DATE: Nov. 84	MAP: 5	DRAWN BY: B. D.S.
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LEGEND

 Quartz bed

GEOLOGY BY GUY ROYER, Geologist  
E. DODD, Assistant

TRANS-ARCTIC EXPLORATIONS LTD.

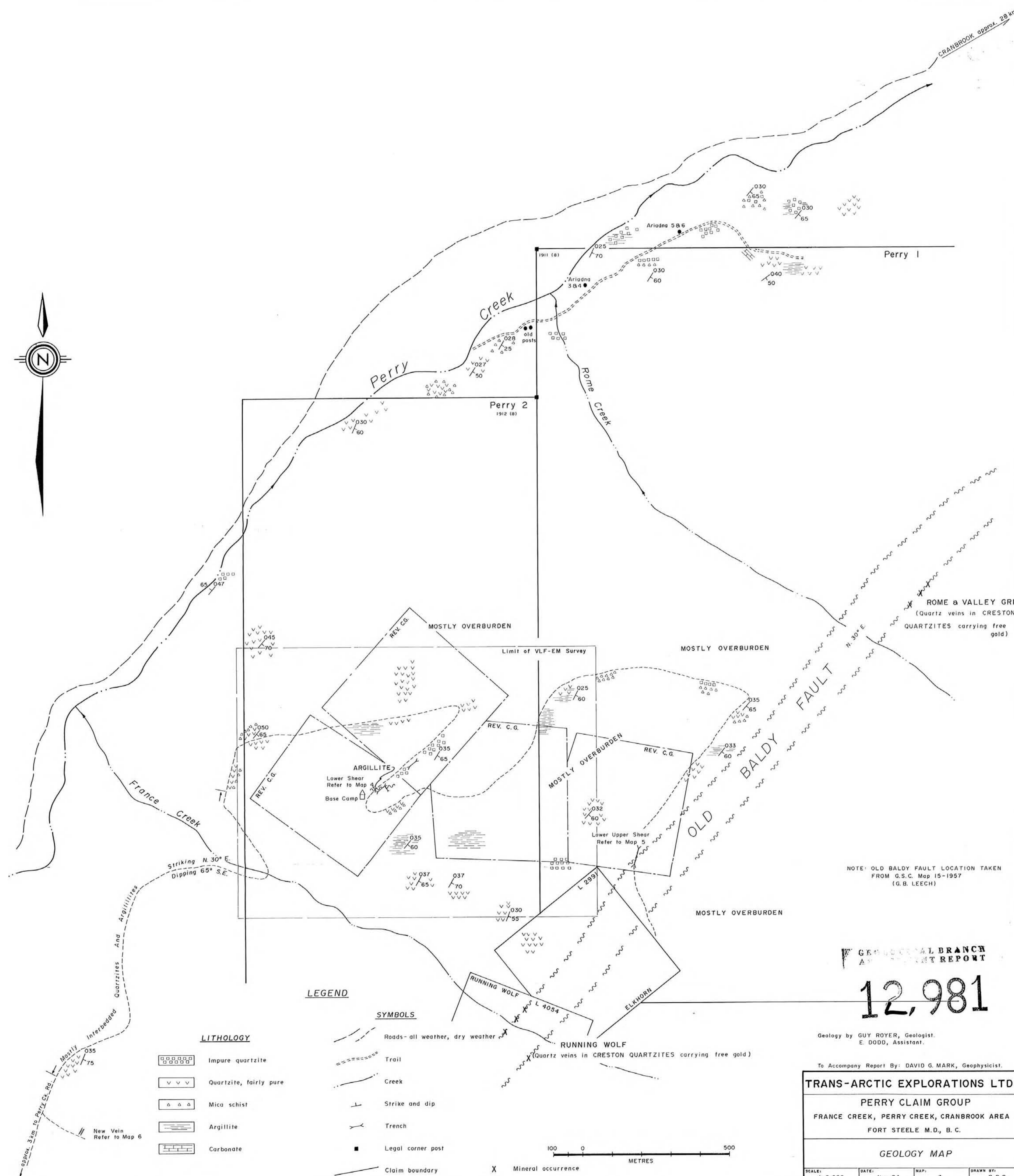
PERRY CLAIM GROUP  
PERRY CREEK, FRANCE CREEK AREA  
FORT STEELE M.D., B.C.

GEOLOGY  
NEW VEIN

Field Work Carried Out By: TRANS-ARCTIC EXPLORATIONS LTD.

SCALE: SKETCH	DATE: Nov. 84	MAP: 6	DRAWN BY: B. D.S.
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CRANBROOK approx. 28 km



ROME & VALLEY GRP.  
(Quartz veins in CRESTON  
QUARTZITES carrying free gold)

NOTE: OLD BALDY FAULT LOCATION TAKEN  
FROM G.S.C. Map 15-1957  
(G.B. LEECH)

GEOLOGICAL BRANCH  
ANNUAL REPORT

**12,981**

Geology by GUY ROYER, Geologist.  
E. DODD, Assistant.

To Accompany Report By: DAVID G. MARK, Geophysicist.

<b>TRANS-ARCTIC EXPLORATIONS LTD.</b>			
PERRY CLAIM GROUP FRANCE CREEK, PERRY CREEK, CRANBROOK AREA FORT STEELE M.D., B.C.			
GEOLOGY MAP			
SCALE: 1:5,000	DATE: Nov. 84.	MAP: 3	DRAWN BY: B.D.S.

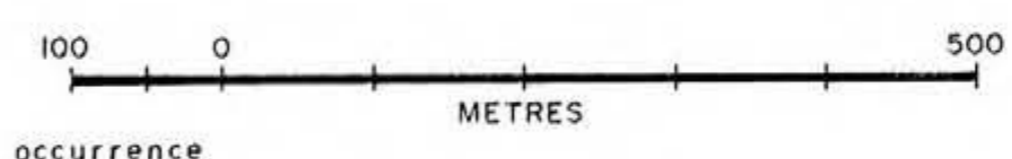
**LEGEND**

**LITHOLOGY**

	Impure quartzite
	Quartzite, fairly pure
	Mica schist
	Argillite
	Carbonate

**SYMBOLS**

	Roads- all weather, dry weather
	Trail
	Creek
	Strike and dip
	Trench
	Legal corner post
	Claim boundary
	Mineral occurrence



Striking N. 30° E.  
Dipping 65° S.E.

Quartzites And Argillites  
Interbedded

New Vein  
Refer to Map 6

approx. 3 km to Perry Cr. Rd.

MOSTLY OVERBURDEN

Limit of VLF-EM Survey

MOSTLY OVERBURDEN

ARGILLITE  
Lower Shear  
Refer to Map 4  
Base Camp

REV. C.G.

MOSTLY OVERBURDEN

REV. C.G.

MOSTLY OVERBURDEN

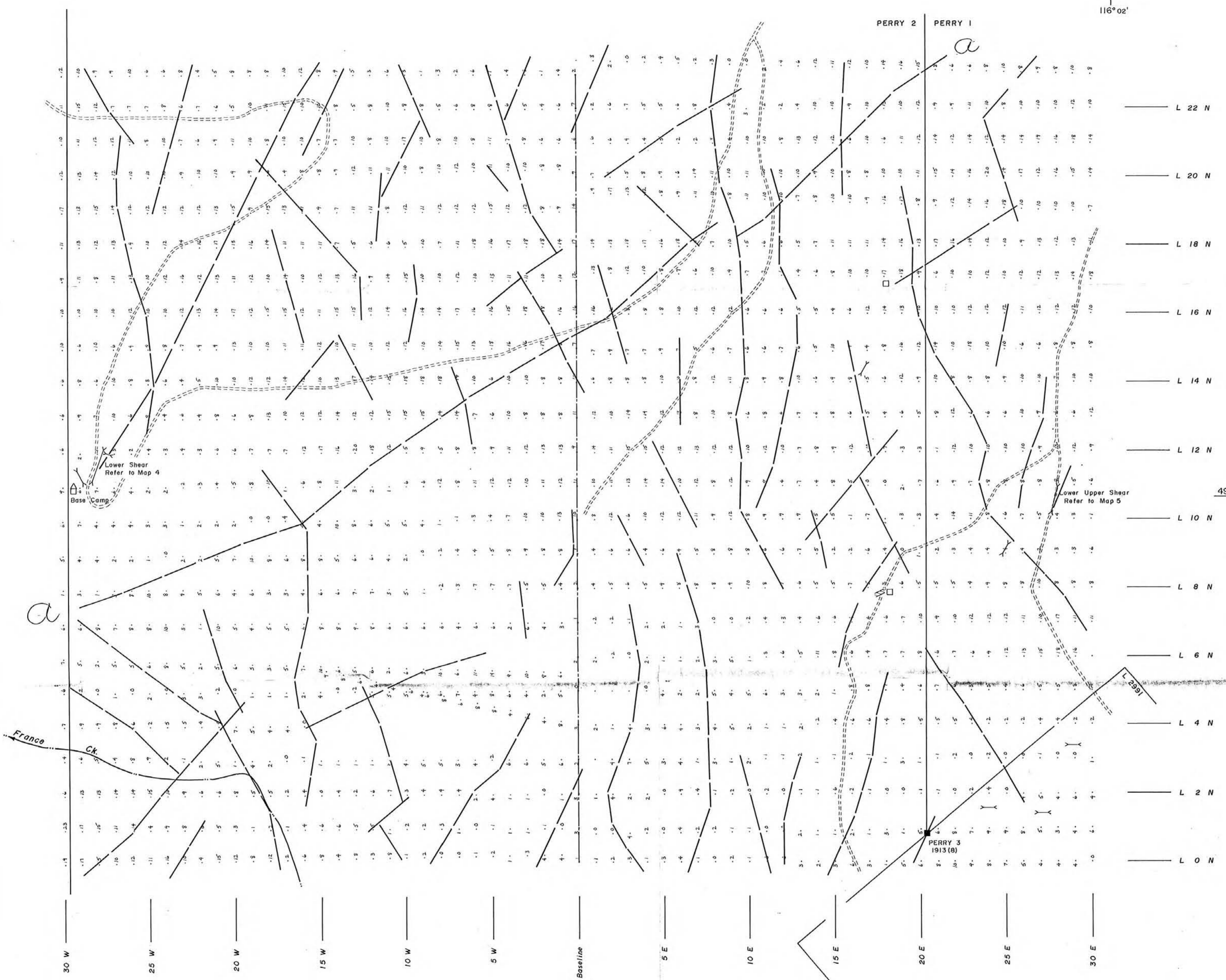
MOSTLY OVERBURDEN

RUNNING WOLF  
L 4054

ELKHORN

RUNNING WOLF  
(Quartz veins in CRESTON QUARTZITES carrying free gold)

OLD BALDY FAULT  
N. 30° E



- LEGEND**
- Survey station
  - Road
  - Creek
  - Quartz vein or bed
  - Trench
  - Legal corner post, (located)
  - Identification post, (located)
  - Claim boundary
  - Axis of VLF-EM conductor

SEATTLE TRANSMITTER  
24.9 KHz.

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**12,981**

40m 0 100m

To Accompany Report By: DAVID G. MARK, Geophysicist

**TRANS-ARCTIC EXPLORATIONS LTD.**

PERRY CLAIM GROUP  
FRANCE CREEK, PERRY CREEK, CRANBROOK AREA, B.C.  
FORT STEELE M.D.

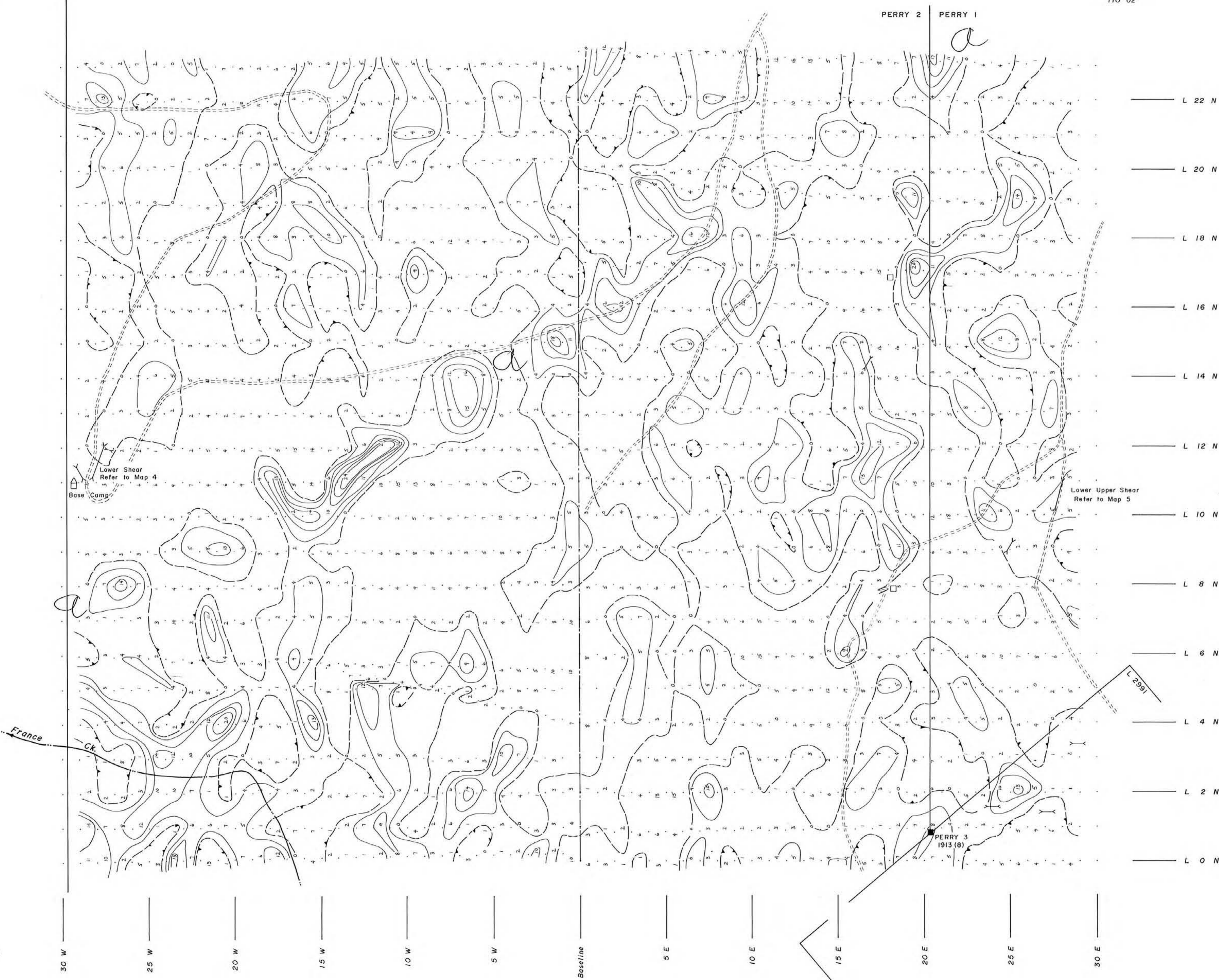
**VLF-EM SURVEY  
RAW DATA & CONDUCTORS**

Scale: 1:2,000 Date: Nov. 84. Map: 7 Drawn by: B.D.S.

116° 02'

PERRY 2 PERRY 1

a



- L 22 N
- L 20 N
- L 18 N
- L 16 N
- L 14 N
- L 12 N
- L 10 N
- L 8 N
- L 6 N
- L 4 N
- L 2 N
- L 0 N

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**12,981**  
*LEGEND*

- Survey station
  - Road
  - ~~~ Creek
  - ▨ Quartz vein or bed
  - Y Trench
  - Legal corner post, (located)
  - Identification post, (located)
  - Claim boundary
- CONTOURS**
- Interval: 4 degree
  - 0 degree contour
  - 4 degree and higher

**NOTE:**  
Only positive values are contoured.  
Positive values on north side of survey line  
while negative values on south side.



To Accompany Report By: DAVID G. MARK, Geophysicist

**TRANS-ARCTIC EXPLORATIONS LTD.**  
PERRY CLAIM GROUP  
FRANCE CREEK, PERRY CREEK, CRANBROOK AREA, B.C.  
FORT STEELE M.D.  
VLF-EM SURVEY  
FRASER FILTERED DATA & CONTOURS