

**ASSESSMENT REPORT FOR AURCHEM EXPLORATION LTD.**

**MOUNT NANSEN PROPERTIES, WHITEHORSE DISTRICT**

**YUKON TERRITORY, CANADA. N.T.S. 115I/3**

**SUMMARY REPORT ON THE TRENCHING PROGRAM  
WITH MAPPING AND SAMPLING  
FROM JULY 1996 TO DECEMBER 1996  
CARRIED OUT ON THE CLAIMS OF  
BULL-2, JBF-1F, JON-WEDGE-3, AND LCGS-1.**

**LATITUDE 62 DEGREES, 12 MINUTES.  
LONGITUDE 137 DEGREES, 12 MINUTES.**

**093520**

By Mark Langdon, Geologist.  
BYG Natural Resources Ltd.  
January 1997.

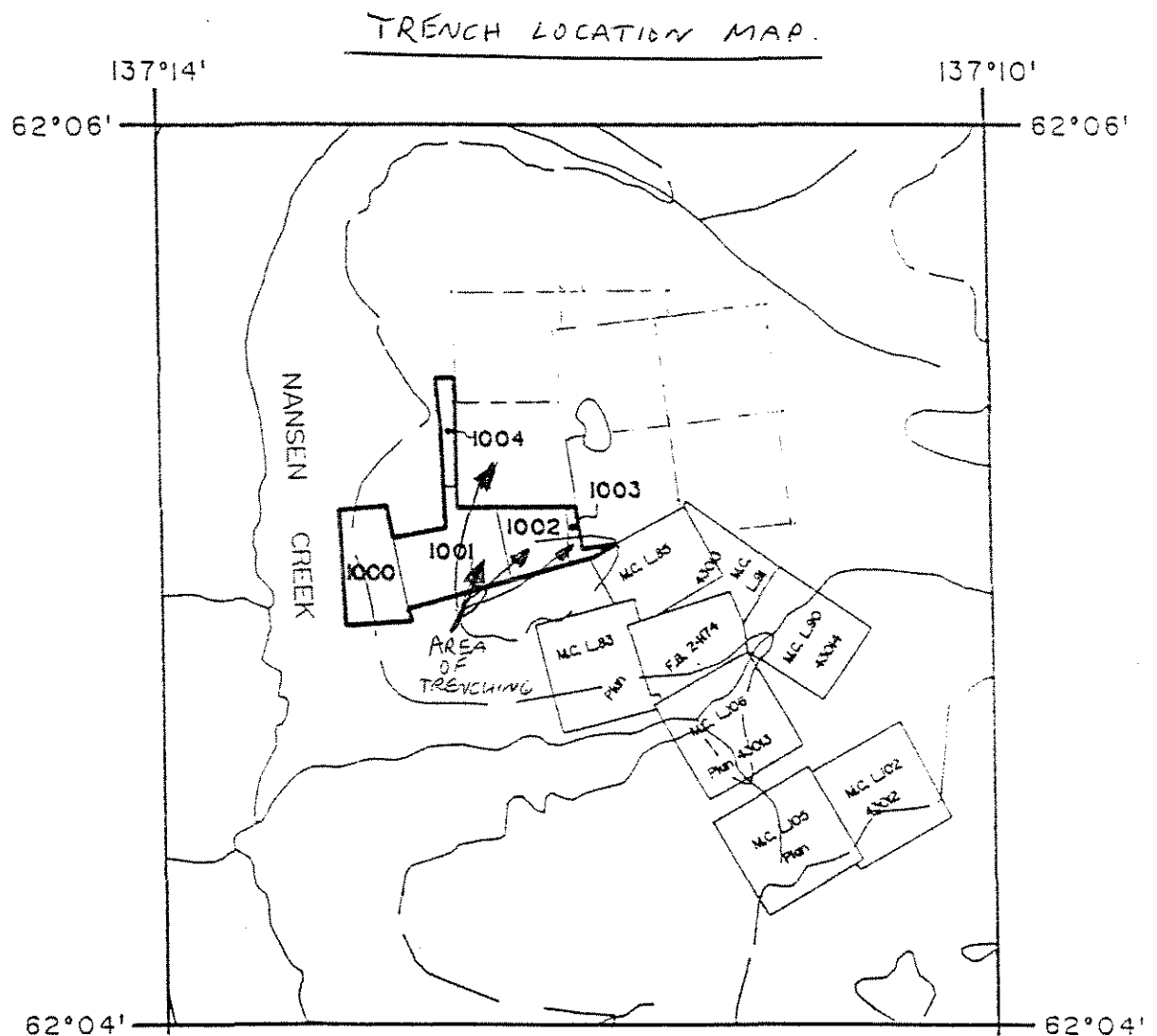
*Mark Langdon*

## TABLE OF CONTENTS

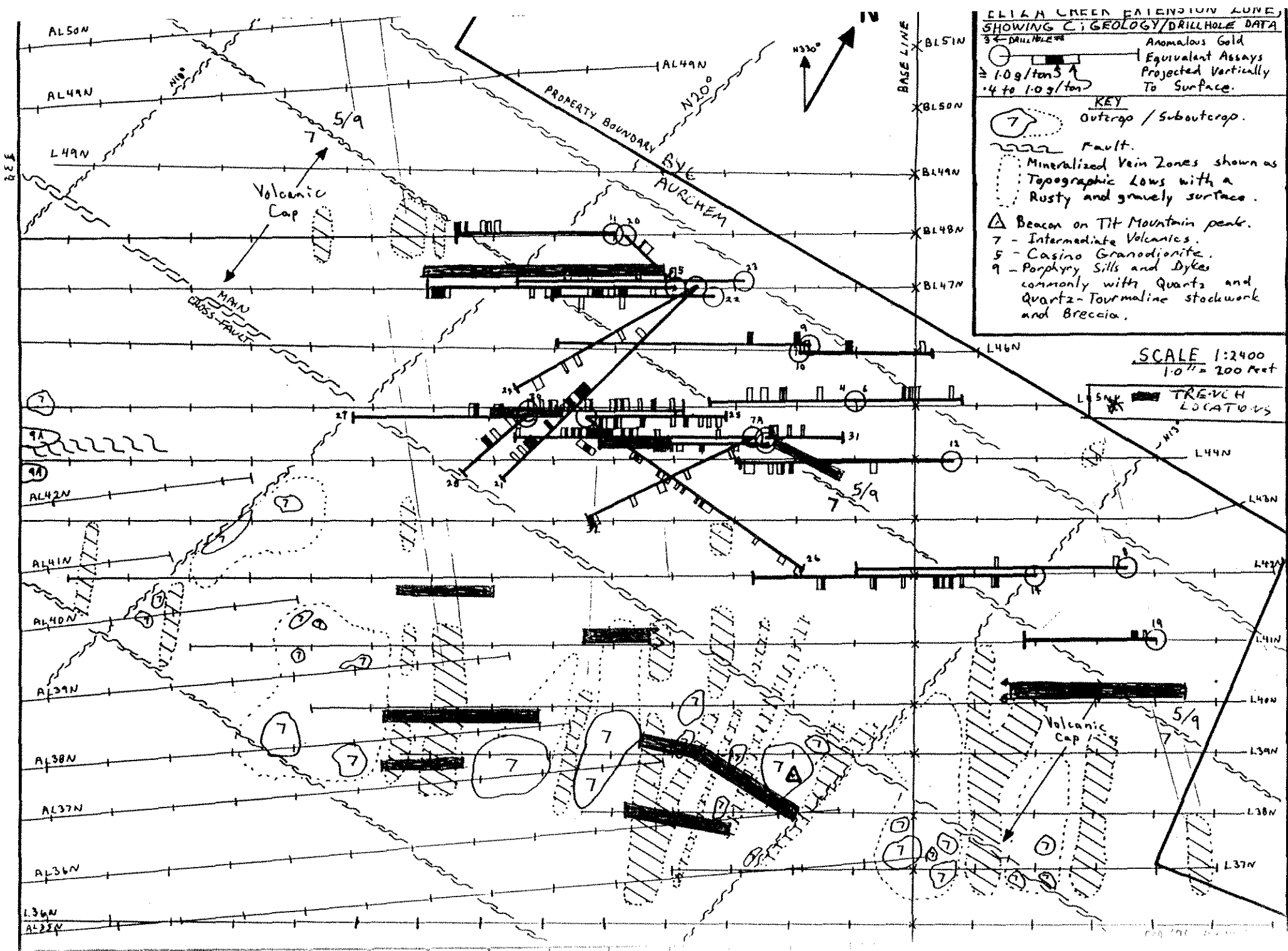
<b>ITEM</b>	<b>PAGE #</b>
Title Page	1
Introduction	3
Trench Location Map	4
Property Location and Access	5
General Property Description	5
Location Map	6
General Geological Description	7
Lithology and Alteration Descriptions	8
Mount Nansen Suite Porphyry (9)	8
Mount Nansen Suite Volcanics(7)	8
Casino Granodiorite (5)	9
Quartz Diorite (4)	9
Yukon Metamorphic Group (1)	10
Alteration	11
Geological Description With Assay Results of the Trenching	11
Trench L4700N	11
Trench L7401	13
Trench L4480/650W	13
Trench L4400W/150W	15
Trench L4435N/450W	18
Trench L4435N	19
Trenches on top of Tit Mountain	20
Conclusions and Recommendations	23
Statement of Qualifications	24

## INTRODUCTION;

The Mount Nansen Properties are located about 60 kilometers west of Carmacks in the Whitehorse Mining District. During the period of July to December, 1996, BYG Natural Resources Ltd. conducted exploration on the properties on behalf of Aurchem Exploration Ltd. as part of an option/buy Agreement. Trenching in July, August, September and October was followed with limited geological mapping and sampling. Although the geological mapping and sampling is reported here, only the trenching portion of the work has been used for expenditures in this filing for assessment.



A total of twelve trenches were dug with seven completed to a point where the bedrock could be mapped and/or sampled. The trenches were dug using a D8K Cat with ripper and a Hitachi Excavator. The trenching work, under the



**ELIZA CREEK EXTENSION ZONE**  
**SHOWING GEOLOGY/DRILLHOLE DATA**

34 DRILLHOLES

Anomalous Gold  
 Equivalent Assays  
 Projected Vertically  
 To Surface.

**KEY**

- (7) Outcrop / Suboutcrop.
- ~ Fault.
- Mineralized Vein Zones shown as Topographic Lows with a Rusty and gravelly surface.
- △ Beacon on Tit Mountain peak.
- 7 - Intermediate Volcanics.
- 5 - Casino Granodiorite.
- 9 - Porphyry Sills and Dikes commonly with Quartz and Quartz-Tourmaline stockwork and Breccia.

**SCALE 1:2400**  
 1.0" = 200 Feet

5m TRENCH LOCATIONS

32

supervision of Mark Langdon-Geologist for BYG Natural Resources Ltd.,  
was done by;

I-CAN-DIG-IT  
RR 1 SITE 20 COMP 79  
WHITEHORSE, YUKON  
Y1A 4Z6

### **PROPERTY LOCATION AND ACCESS;**

The location map on the next page shows the Mount Nansen Properties can be reached by road from Whitehorse by travelling north on the Klondike Highway to the Village of Carmacks and then west on the gravel Mount Nansen Road to the Mine. The area of the trenching is assessable by road being about 20 minutes drive further past the Mine Site.

### **GENERAL PROPERTY DESCRIPTION:**

The terrain consists of rounded hills and shallow valleys with a light cover of grasses, buck-brush and the occasional stunted spruce tree in the area of the trenching. Permafrost is quite extensive in this area ranging from within a foot of surface to depths of about 150 feet. The trenching in this area is severely hampered by the extent of this permafrost. Traveling just a few kilometers to the south at the Mine Site displays a great change in the permafrost nature, likely a feature of lower elevations.

Average monthly temperatures range at the Mine Site from -15 degrees C in January to 15 degrees C in July. In the area of the trenching, the average temperature is about 5 degrees colder than at the Mine Site.

The Mount Nansen Mine went into production during the month of October, 1996. The current trenching exploration program was in follow-up to geochemical, geophysical and RC drilling previously conducted. The goal of the trenching was to better delineate targets for future drilling. The program was a partial success in this aspect and a 6,000 foot diamond drill program is about to start as of January 15, 1997.

142°

138°

134°



**MOUNT NANSEN PROJECT  
LOCATION MAP**

FIGURE:

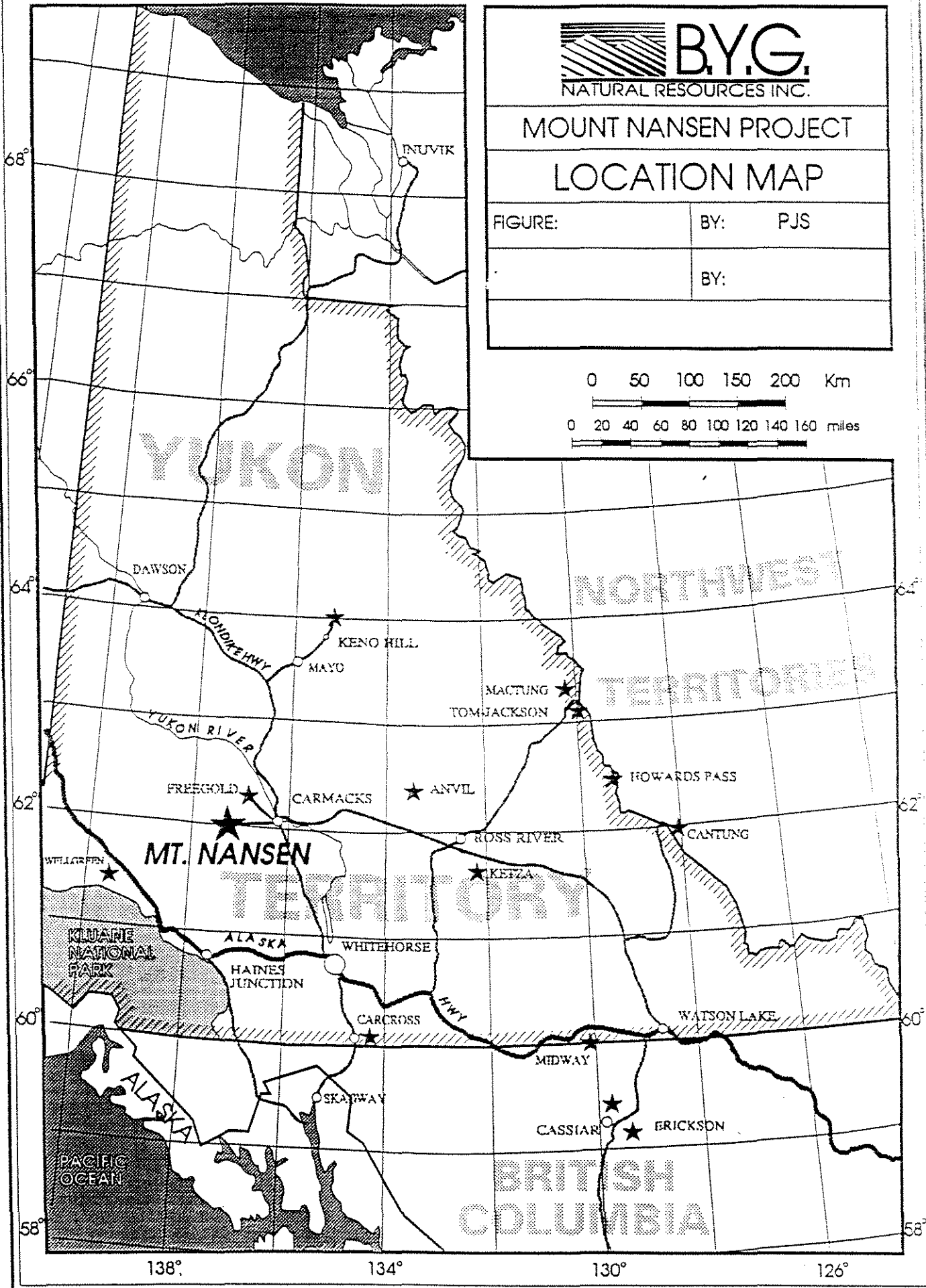
BY:

PJS

BY:

0 50 100 150 200 Km

0 20 40 60 80 100 120 140 160 miles



## GENERAL GEOLOGICAL DESCRIPTION;

Previous work has identified extensive anomalies covering property owned by all three parties. IP/Resistivity, VLF, and magnetic geophysical surveys combined with soil geochemistry, geology and geological modeling and interpretation have created a package of anomalies of exceptional potential. The area from Aurchem's Extension Zone to BYG's Tawa Property represents a very strong anomalous zone measuring 2.5 by 1.2 miles in size.

Three styles of mineralization are represented within this area as targets for drilling and trenching. The trenching program of this report was concentrated on the type (1) style of mineralization but also touched on both other styles as well. Confirmation and enhancement of the potential of each mineral style was achieved. Data of importance was gathered to help in the refinement of future drilling programs. The three target styles as confirmed are as follows;

- (1) Epithermal vein and stock work mineralization as it enters a Transitional Porphyry/Epithermal mineral environment. The Aurchem Extension Zone has shown in the 1994 RC drilling to be an area with strong potential for ore bodies. The diamond drilling hopes to confirm and expand on those earlier results.*
- (2) A large area of Porphyry Gold mineralization has been identified which has never been drill tested. A few drill holes to confirm the mineral style and identify possible grades to this large tonnage style deposit are strongly warranted.*
- (3) An extensive and very strong anomaly also exists of Porphyry Gold-Cu-Mo style. As with (2) above, this untested zone holds large tonnage ore body potential. The preliminary drill holes hope to expose the extent and grade of this style of mineralization to warrant further and more extensive exploration.*

The following is a general description of the geological lithological units and alteration styles of the area that was trenched. The units of (4) Diorite and (1) Yukon Metamorphic Group are found just south of the trenching area and so have been included.

## LITHOLOGY AND ALTERATION DESCRIPTIONS

### 9 MOUNT NANSEN SUITE; PORPHYRY DYKES, SILLS AND RELATED FEATURES;

This Porphyry Complex and outlying porphyry dike group are subdivided into the following divisions;

- 9A--- Quartz-Feldspar Porphyry;** This is your typical porphyry dike as usually found associated with the Epithermal veins. The porphyry dikes as seen at the Brown-McDade pit are of this type.
- 9B--- Hypabyssal Latite Porphyry;** This is found within the Porphyry Complex as somewhat siliceous and a fine grained lithology resembling Rhyodacite. Generally a light green color with a lack of K-feldspar but this can't usually be identified. Mostly indistinguishable from 9C below.
- 9C--- Hypabyssal Latite Porphyry;** Generally similar to above but may not be silicified. This K-feldspar rich porphyry can be found associated with higher Cu values of the Cu -Porphyry Zone. This Latite also commonly displays a Potassic Alteration with increased fluorite, pyrite and abundant biotite enrichment. ( magnetite ??) This Potassic alteration can cause the Latite to turn to a brown to black color and the resultant rock can be misinterpreted as a diorite instead of a Potassic Altered Latite.
- 9D--- Quartz Monzonite Porphyry;** Resembles a coarse grained version of the Casino Granodiorite and can be indistinguishable when Phyllic altered. Feldspar phenocrysts may be up to cm's in length. The coarser texture and a higher quartz content distinguish it from 9C above. Generally displays an argillic to phyllic alteration. A Porphyry Complex lithology.

### 7---MOUNT NANSEN SUITE VOLCANICS;

Generally found as intermediate volcanics and related volcanoclastics. This lithology is commonly medium to dark green in color and is

highly resistive to alteration. Type 7A below is by far the dominant and common type.

**7A--- Andesite Volcanics;** Rarely found as Latite . Massive flows and feeders with tuffaceous units commonly interbedded. Generally propylitically altered but may " bleach white" to an argillic alteration. Phyllic altered volcanics are almost indistinguishable from phyllic altered versions of 9 and/or 5 but small clasts of less altered volcanics within the lithology can help to discriminate. Within the Porphyry Complex it forms thin layers of propylitic to argillic alteration overlying phyllic altered rocks from the other groups.

**7B--- Felsic Lapilli Tuffs;** An outcrop of this type occurs as a dome shaped hill along the border of the Aurchem/ TBR boundary. The unit displays a strong argillic to phyllic alteration and is located within the Porphyry Complex. The Felsic Lapilli Tuffs when altered are readily confused with Porphyry related breccia (pipes) of 9 and/or 5. Occurs as a mixture of rhyodacite lapilli tuff and a vitric lapilli tuff.

**7C--- Basaltic andesite to latite volcanics.** A very inhomogenous group of multiple dikes and flows of very different composition. Not likely to be found within our area of drilling.

**7D--- Hornblende Monzonite Porphyry;** A coarse grained porphyritic lithology found as dikes within the intermediate volcanics. Appears like a plutonic lithology because of the grain size. Only one dike is presently known within the property and is found near the Old-timers Showing.

**5--- Casino Granodiorite;** Plagioclase-Quartz-Hornblende-Biotite Granodiorite; Medium to coarse grained lithology. Easily altered and is a major component of the Porphyry Complex. Phyllic altered Granodiorite is easily confused with 9 and rarely 7.

**4--- Quartz Diorite;** Quartz-Hornblende-Biotite Diorite; Medium to fine grained hypabyssal plutonic lithology. It is very unlikely that this lithology will be encountered in the drill program but

could be located at depth. This unit has been confused with Potassic altered Porphyry Latite by others.

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### 1--- Yukon Metamorphic Group;

Metamorphic equivalents of volcanic, plutonic and sedimentary origin. Generally a thinly bedded group of lithologies of high variety as gneisses and schists. A strong regional stress metamorphic lineation in the fabric is usually a dominant characteristic. Generally an easily distinguished lithology but some of the Felsic Gneiss can be confused with both quartz vein material and altered porphyry dike (9A). Some of the metamorphic lithologies are listed below;

*Biotite-Quartz Gneiss*- Biotite from 20% to 80%.

*Quartz-Eye Biotite Gneiss*- As above with "quartz eyes."

*Quartz-Feldspar Felsic Gneiss*-Pale creamy green color with rare mafic minerals usually shown as specks.

*Quartz-Eye Felsic Gneiss*-As above with "quartz-eyes".

*Banded Gneiss*- Multiple narrow bands of all of above.

*Quartz-K-spar Felsic Gneiss*-Pale red to pink in color due to the high K content.

*Quartzite*-White sugary quartzite sometimes with quartz eyes.

*Biotite-Quartz Mafic Schist*- Dark green to black color from dominant biotite partially altered to chlorite.

*Banded Quartzite Gneiss*-Alternating bands of Mafic Schist and Quartzite.

*Amphibolite/Gabbroic Gneiss*- Plutonic gabbro metamorphosed to an amphibolite. Dominant quartz, hornblende and biotite phenocrysts.

Coarse grained and medium to dark green in color.

### KEY

**QB**--- Quartz Breccia including Silicified Cryptobreccia.

**QTB**--- Quartz- Tourmaline Breccia.

--- Both of the **QB** and **QTB** can apply to any of the lithologies but is generally only found within the Porphyry Complex. It has been seen as a silica flooding to a breccia to a stringer stock work . It is commonly found within the 5 and 9 lithologies and rarely within the 7. It is

usually accompanied by phyllic alteration and is closely associated with gold mineralization from the Porphyry Gold Halo.

### **ALTERATION;**

**2---Potassic** - may appear almost unaltered and should have an addition of either biotite/tourmaline/fluorite/ magnetite/copper/ molybdenum/pyrite.

**3---Phyllic** -Most physical characteristics of the rock are obliterated and a strong clay and/or quartz content is present.

**4---Argillic** - Generally a bleached appearance to the rock and an increase in clays and pyrite due to the alteration.

**5---Strong Propylitic**- Generally a dark green color due to a strong chlorite and/or epidote enrichment.

**6---Weak Propylitic**- As above but weakly chloritized.

## **GEOLOGICAL DESCRIPTION WITH ASSAY RESULTS**

### **OF THE TRENCHING PROGRAM**

During the period from August 1, 1996 to October 4, 1996, trenching was carried out on the Aurchem Project utilizing a D8K Cat with ripper and a Hitachi Excavator. The trenching program was stopped during progress without warning on October 4, 1996 by B. Hinkurri. Therefore many of the trenches were not fully completed and most were not sampled.

The goal of the program was to follow-up the 1994 Aurchem Exploration RC drill holes with surface trenching to gain better geologic control for future drill programs. The geological setting is one of an Epithermal vein system entering the domain of a Porphyry Gold Halo. Mineralization from both systems was found in both the drilling and in this trenching program.

The attached map displays the location of the trenches. The following describes the geology and assay results if available.

### **TRENCH L4700N** ( see attached map)

The goal of this trench was in follow-up of RC94-5 which produced results of;

*160 feet of 4.25 g/t Au & 5.30 g/t Ag (Main Vein)  
and  
45 feet of 2.76 g/t Au & 17.34 g/t Ag (West Vein)*

Additional drill holes had been drilled from the east under RC94-5 which failed to intersect the mineralized zone. The trenching hoped to locate the veins at surface providing data for up-coming diamond drilling. The trenching was not overly successful.

The surface expression of the veins were anticipated to be located at about 500W and 700W. The Main Vein at 500W was found to have considerable overburden. The trench area from 675W to 400W had been re-filled to provide access to dig the trench deeper but the program was stopped before this was accomplished. A rusty oxidized zone of about 25 feet in width was starting to show near 500W within the trench which was likely the early signs of the Main vein. The RC intersection for this zone was relatively shallow (60 ft) and the possibility of open pit mill feed is good.

The trench was mapped and sampled from 812W to 678W (134 feet). The "West Vein" which was intersected at depth in the hole, was not positively identified in the trench. The drill hole vein was hosted by Granodiorite and Latite Porphyry. The trench displayed the overlying Andesitic Volcanics with minor Porphyry Dikes and narrow vein. The "West Vein" was either not within the trenched interval or was significantly different at this elevation/depth. Results were as follows;

<u>FOOTAGE</u>	<u>GEOLOGY/SAMPLE#</u>	<u>ASSAYS; AU/AG opt</u>
<b>812W to 796W (16ft)</b> 812W to 804W (8ft) 804W to 800W (4ft) 800W to 796W (4ft)	(9) Porphyry; Quartz Monzonite and/or Latite, >90% oxidized. ML96-36 ML96-37 ML96-38	.001/.001 .007/.04 .019/.04
<b>796W to 780W (16ft)</b> 796W to 792W (4ft) 792W to 780W (12ft)	(7) Volcanics; argillic altered andesitic volcanic tuff. ML96-39 ML96-40	.029/.10 .014/.04
<b>780W to 778W (2ft)</b>	(7) Volcanics; dacite	
<b>778W to 756W (22ft)</b>	(7) Volcanics; andesite	
<b>756W to 751W (5ft)</b>	(7) Volcanics; rhyodacite, S&D of N310/-85W	
<b>751W to 708W (43ft)</b>	(7) Volcanics; propylitic andesite.	
<b>708W to 704W (4ft)</b>	(7) Volcanics; argillic andesite.	

704W to 701W (3ft) 704W to 701W (3ft)	Vein; oxidized vein ML96-41	.004/.03
701W to 678W (23ft)	(7) Volcanics; andesitic to dacitic volcanics.	

### TRENCH L7401N

This trench is not shown on the attached map. It was started in late September but not completed. The trench is located over the Cu-Au Porphyry zone on L7401N from 100W to 800W. Small patches of bedrock had been beginning to appear when the trenching program was stopped.

The trench outcrops and float confirmed the Cu-Au Porphyry mineral style and the presence of a correlating Porphyry Potassic alteration zone. The Potassic alteration was present throughout the trench where the associated magnetic high could be explained by the stringers of magnetite. Malachite staining on float was also seen throughout the trench in small quantities. The true extent of both the Cu and the associated Au will be better defined in preliminary diamond drill holes. Grab samples of float were taken in the early stages of the trenching and their assays are shown below. Although the gold values are very low, the samples were generally of float within the overburden and are unlikely a good representation. They do though, confirm the presence of gold in the Cu Porphyry system.

SAMPLE #	GEOLOGY	ASSAYS; Au / Ag OPT
ML96-42	-float sample of potassic altered granodiorite (5), stringers of magnetite.	.009 / .07
ML96-43	-sample of 1 inch wide stringer of magnetite	<.001 / <.01
ML96-44	-float sample of granodiorite (5) with magnetite stringers and minor staining of malachite.	<.001 / <.01
ML96-45	-granodiorite (5) float with magnetite stringers and about 4% disseminated pyrite.	.006 / .07

### TRENCH L4480N/650W

This trench was centered in the location of the Aurchem reverse circulation drill hole of RC94-30. The trace of the drill hole could be seen on the north face of the trench at 654W.

The dominant geological feature of this trench is that the trench was dug along the strike of a shear zone. This shear zone displays a strike and dip of N60 / -60N. With the trench orientated at N65 degrees, almost the entire trench displayed the same lithology of sheared intermediate volcanics of the Mount Nansen Group (7). The trench was thus sampled with large sample widths as only minor geological differences occurred.

The intermediate volcanics (7) displayed a strong shearing of argillically altered andesite. ( S & D of N60/-60N ) The volcanics were mainly reduced to small sheared “chips” of rusty orange oxide coloured material. Darker orange spots throughout originated from oxidized pyrite blebs.

A feature of geological significance seen within the shear zone was that an oxidized pyrite stockwork of random orientation was prevalent throughout the shear zone. This pyrite stringer stockwork was post- shearing in age but pre-oxidation. This is the first time any indication of gold mineralization being associated with the N65 degree set of cross-faults. The strong shearing definitely suggests that lithological movements did take place but how has this effected the NW vein structures is not known. Do the N60 degree cross-structures represent another style of possible ore-body potential?

At this time I would tentatively regard the pyrite stringer stockwork as originating as Porphyry Gold style mineralization. This would be pre-Epithermal in age. It would depend on the nature of the cross-fault to as whether any later Epithermal style mineralization also penetrated into these zones. If the epithermal controlling NW and NNE faults re-fractured after these N65 shear zones, displacement of the Epithermal vein system may not have occurred. Blow-outs of Epithermal mineralization at the cross-fault intersections are quite possible though and this possibility should be kept in mind when interpreting the results of drill holes. It definitely adds one more complication to the interpretation of mineralization in the zone of where the Epithermal veins intrude into the earlier mineralization and alteration of the Porphyry Gold Halo system.

The 1994 RC drill hole of RC94-30 was drilled under about one half of this trench. Gold grades over a wide width occurred but were generally

low in the .030 OPT range. Trench assay results as shown below averaged a little higher due to the higher result in sample ML96-53. Other than this sample the results were quite similar. The main target of the drill hole was not this shear zone but the main zone located about 75 feet to the east of here. The trench in compilation produced assay results of;

**70.0 feet of .045 OPT Au  
.33 OPT Ag**

**TRENCH L4480N**

<b>SAMPLE # and footage</b>	<b>GEOLOGY</b>	<b>ASSAYS OPT Au / Ag</b>
ML96-49 (10feet) 685W to 675W	- argillized andesitic volcanics, orange oxide color, disseminated pyrite blebs and random orientated pyrite stringer stockwork which has been oxidized, strongly sheared at N65/-60N.	.004 / .168
ML96-50 (10 feet) 675W to 665W	-same as above	.020 / .36
ML96-51 (10 feet) 665W to 655W	- as above with a 1.0 foot wide oxide vein at 659W of possible epithermal origin & a N20/verticle S & D.	.012 / .21
ML96-52 (10 feet) 655W to 645W	-same as above, on the south face at 654W can see RC94-30.	.015 / .21
ML96-53 (10 feet) 645W to 635W	-same as above	.196 / .41
ML96-54 (10 feet) 635W to 625W	-same as above	.026 / .42
ML96-55 (10 feet) 625W to 615W	-same as above	.026 / .35
ML96-56 (10 feet) 615W to 605W	-same as above, two foot wide rusty contact as described below is included in this sample.	.018 / .36
No sample 605W to 600W	-as above but 602W to 600W is rustier colored being the contact to the relatively unaltered volcanics as described below .	no sample
No sample 600W to ?	- dark green colored intermediate volcanics, propylitic altered Mount Nansen Andesite.	no sample

**TRENCH L4400W / 150W**

This trench basically covers the area under RC94-31. The western end of the trench is near the collar of the drill hole but the trench and the drill hole are in different directions. The drill hole is at N60 degrees while the trench goes at N80 degrees. This may not seem very significant but it may in this case. The contact of the intermediate volcanics (7) to the granodiorite(5) / porphyry(9) lithologies is at N85/-50S. This contact is basically found along and above this trench. The drill hole RC94-31 intersected the veins of this trench at up to 200 feet away from this contact. There is a sense that the

mineralization at the contact and/or found under and/or near the volcanics displays a stronger presence.

Within this trench there was a wide zone of phyllic alteration with significant veining. Mineralization appears to be from both Porphyry and Epithermal sources. The vein structures cut through the contact displaying a narrowing of the veins and alteration in the overlying volcanics. Along the trench there is a strong display of randomly orientated veins, mostly in the overlying volcanic lithology. Farther south within the volcanics on top of the hill, the mineralization is found as structurally controlled veins only. The stockwork and extent of alteration found near the contact is absent. This fits well with the working model finding ore pods at the contact underlying the volcanics.

The mineralization within this trench is entirely oxidized. It can be generally described as a wide zone of intense alteration (phyllic) with stockwork and veins within. The veins are generally narrow but of good grade which gives the overall wider zone of lower type grade mineralization. This seems typical of this area which makes it difficult to assess as the final grade depends on nature of erratic higher grade veins within the zone. A positive feature of this zone is that it is parallel to the main zone located 200 feet to the west.

The “zero” point of this trench is located at L4435N/245W. This is about 10 feet east of drill hole RC94-31. The trench was dug along a N80 degree direction along the access road. Therefore the following results are displayed as in distances from this zero point in a N80 degree direction.

TRENCH L4400W

<b>SAMPLE # AND FOOTAGE</b>	<b>GEOLOGY</b>	<b>ASSAYS OPT Au / Ag</b>
No sample minus 10 feet	- location of RC94-7, contact of the volcanics (7) overlying the granodiorite (5) and porphyry (9) is located at minus 8 feet; S & D of contact is at N85/-50S.	
No sample 0 to 6 feet	-propylitically altered granodiorite (5) underlying dark green intermediate volcanics (5).	
ML96-57 (4 ft) 6 to 10 feet	-a very strongly argillized zone of granodiorite (5) with oxidized pyrite stringers, S & D of N330/-70W.	.008 / .05
No sample 10 to 15 feet	-weakly propylitic granodiorite (5).	
ML96-58 (2 ft)	-rusty colored argillic granodiorite (5), S & D of	<.001 / .01

15 to 17 feet	N340/-75W	
No sample 17 to 24 feet	-a 50%/50% mixture of propylitic and argillic granodiorite (5) with minor oxidized pyrite stringers.	
No sample 24 to 25 feet	-mixture of oxidized vein and phyllic altered granodiorite (vn,5), cross-cutting stringers of gypsum, S & D of N355/-75W.	
No sample 25 to 43 feet	- 70% propylitic / 30% argillic granodiorite, strongly fractured, minor pyrite stringers, contact at 43 feet of N310/steeply west.	
ML96-59 (3 ft) 43 to 46 feet	-strongly argillized granodiorite (5), strong gypsum stockwork, oxidized and crumbly, at 46 feet the volcanic contact is about 15 feet above on the south trench wall, very strong vein stockwork in this area of the volcanics.	.001 / .06
46 to 52 feet <b>(6 ft)</b> ML96-60 (3 ft) 46 to 49 feet ML96-61 (3 ft) 49 to 52 feet	-phyllic and lesser argillic granodiorite (5) with a stockwork of randomly orientated veins, 100% oxidized, at 46 feet the S & D is N310/-80W.	<b>.041 / 1.45 (composite)</b> .022 / .15 .060 / 2.75
52 to 62 feet <b>(10 feet)</b> ML96-62 (3 ft) 52 to 55 feet ML96-63 (3 ft) 55 to 58 feet ML96-64 (4 ft) 58 to 62 feet 46 to 62 feet <b>(16ft)</b>	- <b>VEIN ZONE</b> , oxidized, composite assay of samples 62, 63 and 63 is 10 feet of .158 OPT Au & 1.24 OPT Ag. -lime green colored vein mixed with quartz breccia of argillized granodiorite (5), S & D of N310/-70W. -as above with the addition of a 1.0 inch wide quartz vein at 55 ft. brownish/green colored phyllic granodiorite (5) with minor oxidized vein stockwork. <b>COMPOSITE OF ABOVE SAMPLES #60 to #64</b>	<b>.158 / 1.24 (composite)</b> .033 / .88 .452 / 2.86 .032 / .30 <b>.114 / 1.32 (composite)</b>
No sample 62 to 73 feet (10 ft)	-propylitic granodiorite, carbonate coatings.	
73 to 107 feet <b>(34 ft)</b> ML96-65 (3 ft) 73 to 76 feet ML96-66 (3 ft) 76 to 79 feet ML96-67 (2 ft) 79 to 81 feet ML96-68 (2 ft) 81 to 83 feet ML96-69 (3 ft) 83 to 86 feet ML96-70 (3 ft) 86 to 89 feet ML96-71 (3 ft) 89 to 92 feet ML96-72 (3 ft) 92 to 95 feet	<b>VEIN ZONE</b> , wide oxidized vein zone of lime green colored mud of phyllic granodiorite (5) with narrow rusty brown colored quartz/sulfide veins. - lime green mud as above with the contact at 73 ft to N310/-80W -same as above -as above with minor streaks of Pb-carbonate, S & D of N330/-85W. -brownish red colored band of oxidized quartz/sulfide vein, S & D of N330/-85W -lime green and white colored mud. -same as above -same as above -rusty red/brown colored vein material with a .5 foot core of vuggy quartz, rare specks of sulfides in the core, S & D of N320/-75W	.006 / .03 .012 / .08 .043 / .18 .397 / 2.07 .001 / .04 .001 / .04 .004 / .06 .455 / 1.51

16 Feet	SAMPLES ML96-67 to ML96-72 COMPOSITE	.141 / .59
38 Feet	SAMPLES ML96-60 to ML96-72 COMPOSITE	.109 / .81
ML96-73 (3 ft) 95 to 98 feet	-lime green colored argillic granodiorite (5).	.001 / .08
ML96-74 (3 ft) 98 to 101 feet	-lime green colored mud	.004 / .04
ML96-75 (3 ft) 101 to 104 feet	-same as above	.003 / .05
ML96-76 (3 ft) 104 to 107 feet	-same as above	.001 / .02
<u>107 to 113 feet (6 ft)</u>	-blocks of strongly argillized and fractured granodiorite (5) with a gypsum stockwork that are hosted within a white to lime green mud of phyllic alteration.	
ML96-77 (3 ft) 107 to 110 feet		.012 / .07
ML96-78 (3 ft) 110 to 113 feet	-at 113ft get a S & D of N330/-85W	.005 / .03

### TRENCH L4435N/450W (MAIN VEIN)

This trench was located over the surface expression of RC94-7A. This hole produced results of;

*165 feet of .049 OPT Au & .56 OPT Ag  
including  
50 feet of .105 OPT Au & 1.46 OPT Ag*

These results were at depth where shallower holes of RC94-25 and RC94-26 produced more modest results in the .060 OPT Au range over 50 feet. The surface trenching produced very low but anomalous results. A very wide zone of intense phyllic alteration exists in the trench from L4435 N/380W to 492W. (width of 112 feet.) It should be noted that the host rock in the trench is the andesitic volcanics (7) and not the granodiorite(5) as at depth in the RC94-7A drill hole.

Of significance in the trench was the obvious random orientated stockwork of quartz and quartz/tourmaline stringers. This strongly suggests that the main mineralization of the zone is Porphyry related and not of Epithermal origin. The strong Porphyry alteration/mineralization does appear though to be host to some later Epithermal veining. Low gold grades were found throughout the trench with only one narrow section displaying higher grades. Although somewhat disappointing, this vein zone has shown a good probability to host an ore deposit from earlier drilling. The trench results display the intense alteration and wide area of mineralization associated with

this northwest trending structure. The sample line of the trench starts at L4435N/380W and goes westerly down L4435N.

### TRENCH L4435N

SAMPLE# & FOOTAGE	GEOLOGY	ASSAYS: OPT AU / Ag
ML96-79 (3 ft) 380 to 383W	-Porphyry Dike (9); beige to cream colored, some possible quartz breccia.	.009 / .05
ML96-80 (3) 383 to 386W	-as above with some argillic volcanics (7) mixed, some darker brown colored patches.	.015 / .16
ML96-81 (3) 386 to 389W	-Argillic to phyllic andesite (7) with minor Porphyry Dike (9), generally dark brown in color.	.028 / .26
ML96-82 (3) 389 to 392W	-Andesite (7) as above with clasts of Porphyry Rhyodacite (9).	.003 / .05
ML96-83 (3) 392 to 395W	-Porphyry Dike with 50% Vein; oxidized to a orange/yellow/brown color.	.110 / .18
ML96-84 (3) 395 to 398W	-same as above	.011 / .09
ML96-85 (2) 398 to 400W	-as above with stringers of Quartz/Tourmaline (9)	.033 / .09
ML96-86 (3) 400 to 403W	-Phyllic altered Andesite (7); dark brown colored mud with oxidized pyrite stringers.	.001 / .06
ML96-87 (3) 403 to 406W	-same as above	.009 / .06
ML96-88 (3) 406 to 409W	-as above with 30% clasts of dark green andesite .	.022 / .43
ML96-89 (3) 409 to 412W	-Argillic Andesitic Volcanics (7); orangy brown color.	.008 / .04
ML96-90 (3) 412 to 415W	-Porphyry Rhyodacite (9), phyllic altered, reddish brown color.	<.001 / .04
ML96-91 (3) 415 to 418W	-same as above but now a yellow/beige color.	<.001 / <.01
ML96-92 (3) 418 to 421W	-as above with a stockwork of Quartz/Tourmaline (9) stringers up to 2 inches wide.	.001 / .17
ML96-93 (3) 421 to 424W	-as above; Porphyry Rhyodacite with Quartz/Tourmaline stockwork (9).	<.001 / .04
ML96-94 (3) 424 to 427W	-same as above.	.012 / .06
ML96-95 (3) 427 to 430W	-same as above.	.011 / .04
ML96-96 (3) 430 to 433W	-same as above	.006 / .06
ML96-97 (3) 433 to 436W	-same as above.	<.001 / .03
ML96-98 (3) 436 to 439W	-Argillized Andesitic Volcanics (7) with Quartz/Tourmaline stockwork, orange oxide color.	<.001 / .01
ML96-99 (3) 439 to 442W	-same as above	<.001 / .02
ML96-100 (3) 442 to 445W	-same as above	<.001 / .02

ML96-101 (3) 445 to 448W	-same as above	.005 / .06
ML96- 102 (3) 448 to 451W	-same as above	.011 / .11
ML96-103 (3) 451 to 454W	-same as above	.010 / .11
ML96-104 (3) 454 to 457W	-same as above	<.001 / .01
ML96-105 (3) 457 to 460W	-Argillic Andesitic Volcanics (7), dark rusty brown color, no quartz/tourmaline stringers.	<.001 / <.001
ML96-106 (3) 460 to 463W	-as above but 50% propylitic , dark gray color.	.010 / .02
ML96-107 (3) 463 to 466W	-Argillic Andesitic Volcanics (7), dark orangy brown color, possible strike at N355.	.016 / .08
ML96-108 (3) 466 to 469W	-Sulfide rich Andesitic Volcanics (7) with Oxidized Quartz/Sulfide Vein; very dark orangy brown colored oxide vein,	.011 / .08
ML96-109 (3) 469 to 472W	-same as above	.012 / .05
ML96-110 (3) 472 to 475W	-same as above	.009 / .09
ML96-111 (3) 475 to 478W	-same as above	.017 / .13
ML96-112 (3) 478 to 481W	-same as above	.006 / .11
ML96-113 (3) 481 to 484W	-Argillic altered Andesitic Volcanic (7), light orangy white color.	.012 / .04
ML96-114 (3) 484 to 487W	-same as above	.008 / .06
ML96-115 (3) 487 to 490W	-same as above	.006 / .06
ML96-116 (2) 490 to 492W	-same as above, end of the intense alteration/mineralized zone.	.013 / .01
No Outcrop (8) 492 to 500W	-No Outcrop/ Overburden.	
ML96-117 (3) 500 to 503W	-Vein and Phyllic altered Andesite (7), reduced to a vein of light orange colored mud, Strikes N30 degrees west.	<.001 / .11
No Samples 503 to 525W	-Propylitic Andesitic Volcanics (7), dark gray to green color.	

A sample of a 2.0 inch wide quartz/tourmaline vein was taken as a separate sample to assay on its own to verify that this Porphyry related material was carrying gold. Assays gave .015 OPT Au & .13 OPT Ag.

### **TRENCHES ON TOP OF TIT MOUNTAIN**

Four trenches were completed on top of Tit Mountain and two others were started but not completed. The veins found within these completed

trenches were grid located and strikes and dips were identified where possible. The veins were not sampled (except for one grab sample) because I was told not to do so by B. Hinkurri as all work on the Aurchem Project was suspended as of October 4, 1997. By the time I was informed to continue work on the Property, it was December and the snow/weather conditions would not allow mapping and sampling.

The two vein zones of 400W (Main Zone) and the 750W (West Zone ) were the focus of the trenching. Generally, trenches at 100 foot on-strike intervals was the attempt. Some features of the veins are noted;

*(a) All of the veins found were quite similar in appearance as pale gray colored quartz veins, no sulfides (oxidized), slight vuggy texture, and sometimes had a slight lime green color overprinted (As). The vein material in many locations looked very similar to the oxidized veins of the WEBBER ZONE.*

*(b) Both zones are represented further to the north as wide alteration zones with variable mineralization. On the ridge of the hill these zones could be seen as topographic lows between Andesitic Volcanic (7) outcrops. The surface of the topographic lows displayed rusty colored oxidized rock chips of highly altered volcanics, porphyry and vein. It was assumed that a wide alteration zone with veins similar to what was found on-strike would be found. Instead, narrow to moderate width vuggy quartz veins within almost unaltered Andesitic Volcanics (7) resulted.*

*(c) In all trenches the veins got wider as the trench was deepened. The wider veins noted are directly related to the deeper areas of the trenches. The veins have considerable potential to be wider when drilled than shown on the map.*

*(d) As shown on the map, correlation of the veins between trenches with strike and dip data was excellent. Most veins displayed a near vertical to -80 W dip.*

The veins found within the trenches are listed in the following;

**TRENCH L3964N/750W**

- (a) 2.0 foot wide vein at L3964N/873W to 871W
- (b) about a 5.0 foot wide vein at L3964N/801W, trench not deep enough and the strike is uncertain.
- (c) a .5 foot wide vein at L3964N/776W is found located within a 50.0 foot wide zone of argillized Volcanics (7).
- (d) A good looking vein of lime green to gray colored vuggy quartz at L3964N/740 to 748W.
- (e) Vein zone at L3964N/661W to 655W. A .5 foot core of oxidized quartz/sulfide vein is located at 659W. Good S & D of N310/-80W. A five foot wide hanging wall of argillized and bleached Volcanics (7) was seen.

**TRENCH L3887N/750W**

- (a) A very good looking vuggy quartz vein from 759W to 771W (12.0 feet), center of vein at 762W, also from 771W to 775W is a brecciated hanging wall of argillized Volcanics (7), Good S & D of N330/80W.
- (b) At the west end of the trench is a poorly exposed quartz vein from 871W to 875.5W (4.5 feet) on the south face, on the north face this vein was 6.0 feet wide from 869W to 875W.

**TRENCH L3800N/400W**

- (a) Vein zone of a 19.0 foot width at L3790N/420W; this zone was composed from west to east of;
  - 4.0 feet of vuggy green colored quartz
  - 2.0 feet of quartz-eye Porphyry Dike (9)
  - 13.0 feet of vuggy quartz
 Possible S & D of N10/90.
- (b) An 8.0 foot wide vein at L3770N/350W, S & D of N340/80W, vein is a mixture of vuggy quartz and minor Porphyry Dike (9).
- (c) A 6.0 foot wide vein is found at L3765N/315W, this vein is very poorly exposed with the trench at a 7.0 foot depth.

**TRENCH L3900N/365W**

- (a) a 4.0 foot wide vein at L3780N/210W, light green colored vuggy quartz, a S & D of N30 degrees.
- (b) a 2.0 foot wide vein of dark red mud with minor green colored vuggy quartz is found at L3846N/300W, poor exposure due to shallow trench
- (c) a 1.5 foot wide vein of green vuggy quartz is at L3865N/325W, a S & D of N340/-80W.
- (d) the main central vein of the trench is located at L3900N/370W, the vein is poorly exposed, the vein of vuggy quartz is about 14.0 feet wide and has a 1.0 foot wide center of bright orange/red vuggy quartz, this central rusty 1.0 foot section was taken as a grab sample and gave;
- 1.0 foot of .524 OPT Au & 3.74 OPT Ag.
- This vein location was also the site of earlier grab samples at surface which assayed in the .200 to .300 OPT Au range, a S & D of N350N/ steeply west, this vein matches up with the 19.0 foot wide vein of Trench L3800N.
- (e) a 1.5 foot wide vein of green vuggy quartz at L3915N/455W, very poor exposure here with a trench depth of only 4.0 feet, S & D of N340/-80W.
- (f) at L3920N/425W is a Porphyry Dike (9) of possibly 10.0 feet wide ,the trench is very shallow in this area.

### **CONCLUSIONS AND RECOMMENDATIONS:**

The data gathered from the trenching program has and will prove useful in refining drill targets in the up-coming program. It also established the existence of the three mineral styles within a relatively small land area which will be of great value in the interpretation of the ground surveys. It was very unfortunate that the program was prematurely stopped without warning at a critical time during the trenching. A number of trenches would have yielded a much greater amount of data with only a few more days of work and/or clean-up.

**STATEMENT OF QUALIFICATIONS:**

The field work as described in this report and the written report itself was produced by Mark Langdon, Geologist for BYG Natural Resources Ltd.. Mark Langdon graduated in the year of 1979 from the University of Waterloo in Ontario with an Honors Bachelor of Science -Earth Science Major Degree. He has been working in the field of geological exploration since that time with 10 years spent in the Mount Nansen area of the Yukon. He is a member of the PDA, the Yukon Chamber of Mines and the SME. He is a resident of the Yukon at the following address;

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