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**GEOLOGICAL REPORT**  
on the  
**97 BEV GROUP**  
(97 Bev, 99 N Star, 99 Pictou)

**CARMELIA PROJECT**

**Greenwood Mining Division**  
**British Columbia**

**North Latitude 49 08' 30"      West Longitude 119 10'**

**NTS 082E /3E**  
**Greenwood Mining Division**

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**GOVERNMENT AGENT**  
**GRAND FORKS**

**Prepared for**  
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**GEOLOGICAL SURVEY BRANCH**  
**ASSESSMENT REPORT**

**December 1999**

26.133

BEV 1997 REPORT  
1998

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## **97 BEV GROUP**

### **SUMMARY**

This report pertains to the 1999 reconnaissance exploration program to partially assess the precious and base metal potential of the 97 Bev Group area, located in south-central British Columbia. The 97 Bev Group is located near 49° 08' 30" Latitude and 119° 10' Longitude and is part of Big Blackfoot Resources Caramelia Project. The 97 Bev Group underlain by Anarchist Series rocks and proximal to the historical McKinney Mines to the south which also fall within the Caramelia Project, represents a favourable location for gold exploration. Gold targets include quartz veins, shear zones and skarns.

Historical records indicate that from 1894 to 1962 the Cariboo-Amelia Mine at Camp McKinney, which is located approximately 1500 metres to the south of the 97 Bev Group, produced 124,452 tonnes grading 20.39 gm/tonne gold with credits for silver, lead, zinc, and silica, from a mesothermal quartz vein hosted by metasedimentary rocks. This production data includes 6,094 tonnes of ore averaging 36.41 gm/tonne gold from a fault-offset portion of the vein.

Continued exploration efforts should include investigating the lateral and downdip extent of the quartz vein showings many of which have not been adequately explored. The gold skarn potential of the area should be investigated as the Anarchist series metasedimentary rocks near the 97 Bev Group are similar to the host rocks at the Crown Jewel gold skarn deposit located approximately 22 km to the south in the State of Washington.

## 1.0 INTRODUCTION

### 1.1 LOCATION, ACCESS and PHYSIOGRAPHY

The 97 Bev Group property is located in the Okanagan Highlands of south-central British Columbia. The claim is centered 22 km northeast of Osoyoos and 12 km north of the Canada-USA border (Figure #1). It is found on NTS mapsheet 82E/3E at 49° 08' 30" Latitude and 119° 10' west Longitude in the Greenwood Mining Division.

The property is accessible along the Wapiti Creek road via the all-weather Mt. Baldy road or the little Fish Lake road, both of which connect with B.C. Highway #3 approximately 11 km to the south near Bridesville on either end of the Rock Creek Canyon Bridge. Bridesville is approximately 35 km east of Osoyoos on Highway #3. On-site access is provided by limited roads and trails.

Elevation in the region averages 1340 metres. Topography consists of gently rolling hills covered with sparse coniferous-deciduous forest, some of which has been harvested. Outcrop is uncommon as the area is generally covered by a thin veneer of till.

### 1.2 LAND STATUS

The 97 Bev Group lies to the north of Camp McKinney (Figure #2). It is comprised of 20 units covering an area of 500 hectares. Records show that this claim group is held 100% by the Bill Kure of Calgary, Alberta and has been assigned to the Sherman Whatley group of Osoyoos B.C. and in turn has been optioned to Big Blackfoot Resources Ltd. of Calgary, Alberta subject to certain cash payments, the issuance of shares and the completion of certain work commitments. Upon satisfying the terms of the agreement, Big Blackfoot Resources Ltd. will be deemed to own 100% of the 97 Bev Group property subject to a 3% NSR to the Sherman Whatley Group.

The following table lists the pertinent data concerning the 97 Bev Group:

CLAIM NAME	TENURE NO	UNITS	EXPIRY DATE*
97 Bev	359678	18	October 2, 2000
99N Star	367767	1	
99 Pictou	367768	1	

\*Pending acceptance of this report

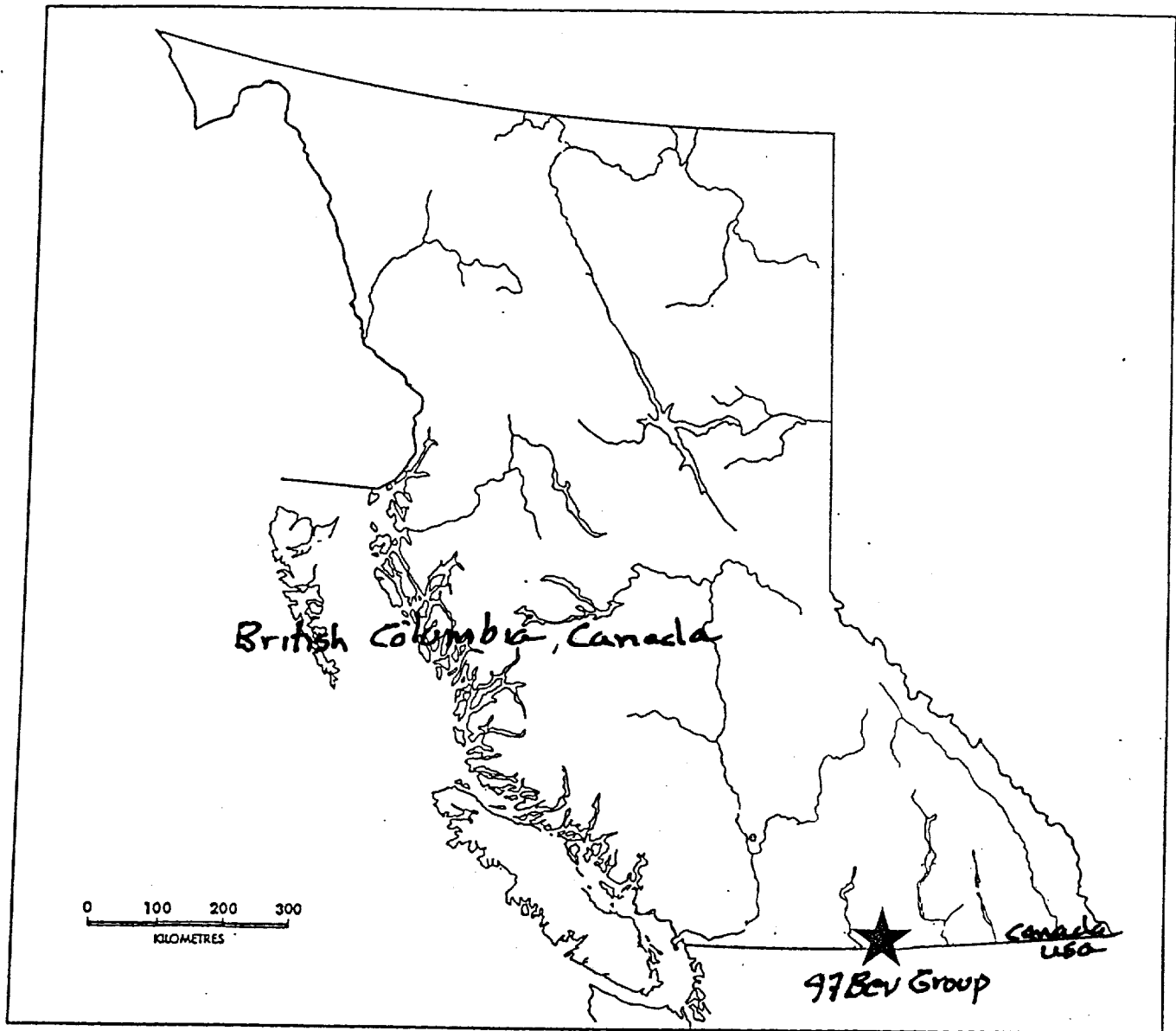


FIGURE 1. Location Map

MINERAL & PLACER RESERVE  
 B.C. REG 397/94  
 1994 OCT 31  
 NO STAKING



MINISTRY OF EMPLOYMENT  
 AND INVESTMENT

ENERGY AND MINERALS DIVISION

MINERAL TITLES BRANCH

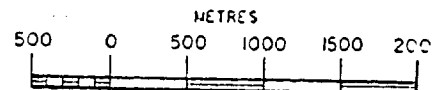
MINERAL TITLES REFERENCE

MAP 082E03E

U.T.M. ZONE II

LAST MAP UPDATE: 1997 MAR 04

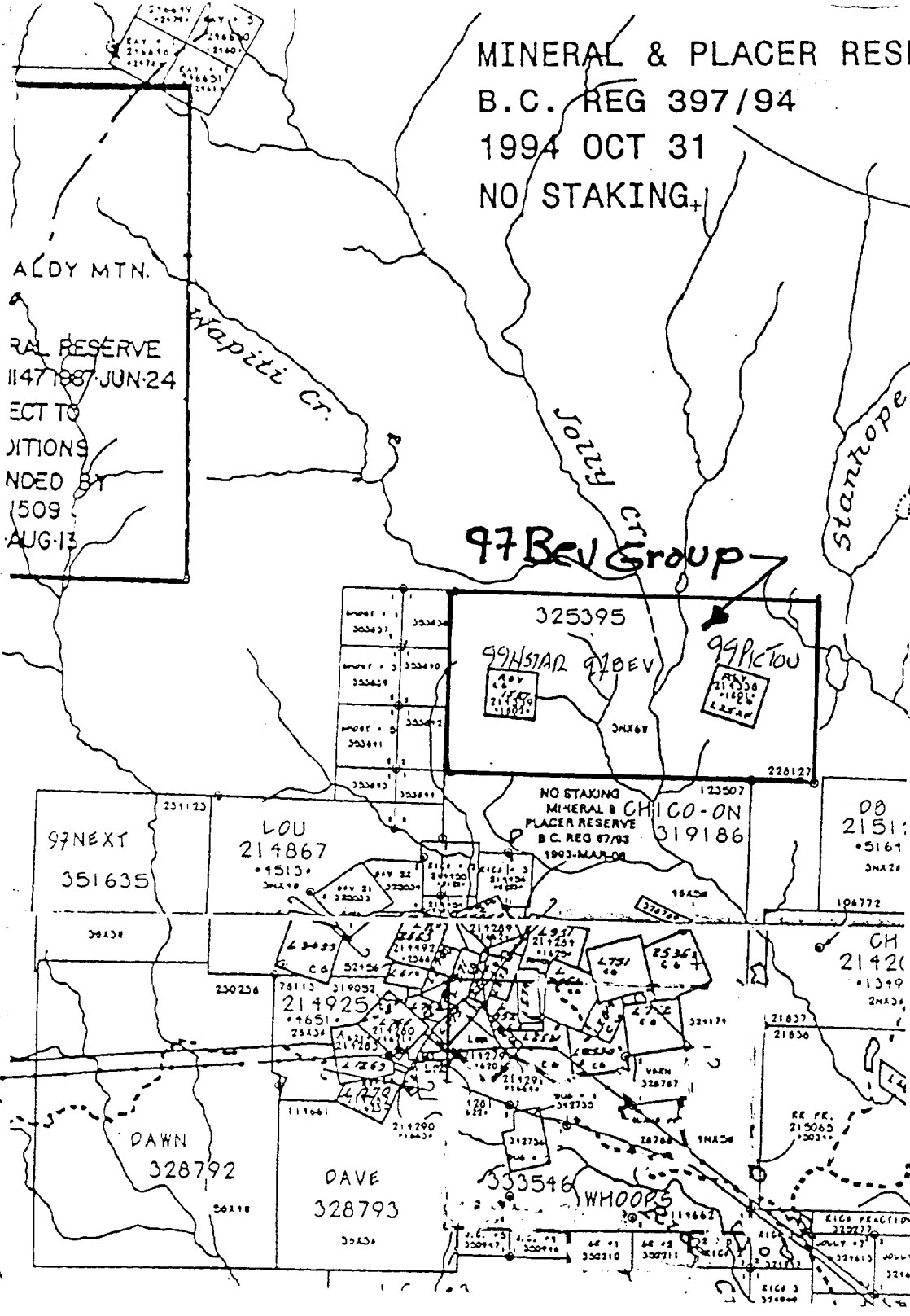
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ADMINISTRATIVE AREAS

MINING DIVISIONS: GREENWOOD,

OSOYOOS



BIG BLACKFOOT RESOURCES LTD.

CAMELIA PROJECT

British Columbia, Canada

CLAIMS DISPOSITION

NTS 82E\03 E

Greenwood  
 Mining Division

Scale 1 : 50,000

Figure 2

### **1.3 HISTORY**

Exploration in the area dates back to 1860 with the discovery of placer gold in Rock Creek and its tributaries; McKinney and Rice Creeks. The Cariboo-Amelia vein was discovered in 1887 and was put into production in 1894 by Cariboo Mining and Milling Co. By 1904, when the eastern extension of the vein was lost beyond a fault, the Cariboo-Amelia Mine had produced 110,229 tonnes of quartz ore containing 19.30 gm/tonne gold and similar quantities of silver. Mining of the crown pillars by local lessees in 1943-46 totalled 1,400 tonnes yielding 22.40 gm/tonne gold. W.E. McArthur discovered the SE fault-offset extension of the Cariboo-Amelia vein in 1957 resulting in the mining of 6,094 T of silica ore by Giant Mascot Mines Ltd. during 1960-62. This ore, which contained 36.34 gm/tonne gold and 43.20 gm/tonne silver, was direct-shipped to Cominco's smelter in Trail.

Exploration efforts on the Pictou and North Star reverted Crown Grants that lie within the 97 Bev Group were directed towards the discovery of Camp McKinney style veins apparently without success. Available data on the Pictou shows that very little mineralization has been discovered and there was very little encouragement to continue further exploration. The writer was not able to obtain any information on the North Star or any of the Crown Grants adjacent to the North Star that have since been completely reverted. Consequently it appears that most of the 97 Bev Group has never been explored beyond basic outcrop prospecting stage which has been hampered by limited outcrop within the claim area.

### **1.4 1999 WORK PROGRAM**

Four days were spent on the claim locating corner posts, old workings, general access, collecting samples and establishing a 0.5 km reference line for control. This work program included re-defining the boundaries of the Pictou and North Star reverted Crown Grants which had been re-staked as the 99 Pictou and the 99 NStar which are now included in the 97 Bev Group. Following the initial orientation survey, rock chip samples were collected from old workings and altered areas that were found to lie within the 97 Bev Group including the 99 Pictou and 99 NStar. The total program, including the initial survey, took four days and resulted in the collection of 17 rock chip samples, 13 of which were submitted for assay.

## **2.0 GENERAL GEOLOGY and MINERALIZATION**

### **2.1 GENERAL GEOLOGY**

Anarchist Group metasediments and metavolcanic are intruded by small bodies of ultramafic and mafic rocks as well as large bodies of diorite and granodiorite of Mesozoic age. In turn the older rocks are overlain unconformably by Tertiary age

sediments and volcanic flows and the anarchist and Tertiary rocks are intruded by younger dark fine crystalline diorites and light coloured syenites.

## **2.2 LOCAL GEOLOGY**

Anarchist Group rocks of Carboniferous age including banded and massive light coloured quartzites as well as chert and minor altered greenstone, outcrop in the northwest part of the 97 Bev claim. These rocks strike north of west and on a regional basis dip north east. Within the south west part of the claim the Anarchist Group rocks appear to have been intruded by ultra mafic and mafic rocks. Where the ultra basic and basic rocks are exposed in outcrop they are completely serpentinitized and are traceable for approximately 1000 metres over widths up to 100 metres along a north west strike similar to the Anarchist Group rocks. Within the serpentinite, the lithological character varies depending upon it's relationship to the younger intrusive bodies that cut it or lie adjacent to the serpentinite. It is common to find greenish black hard dense pods as well as light to pale green sheared lenses of serpentine within the serpentinite. It appears that near the contact between the serpentinite and younger feldspar porphyry intrusives, the serpentinite is weakly silicified, brecciated and ankeritic with disseminated euhedral pyrite. The bulk of the serpentinite consists of colourless to light brown antigorite, talc, small amounts of magnetite, brownish carbonate, and possibly some chromite. Quartz feldspar porphyry appears to intrude the serpentine body near the magnetite chalcopyrite occurrence related to the rock ship sample 99 Bev #13 R.

Glacial deposits cover a good portion of the area, but near Mount Baldy in the Camp McKinney area, rock exposures are numerous. Rocks in the area belong to the Anarchist series. The Osoyoos granodiorite batholith intrudes the formations to the west and south-west of Camp McKinney(Figure #3).

## **2.3 GENERAL MINERALILZATION MODELS**

Review of documentation describing mineral deposits at Camp McKinney and within the Anarchist-Nelson rocks suggest that three types of mineralization could occur on the 97 Bev Group:

- i. Mesothermal Veins: East-trending, near-vertical, high-grade auriferous quartz veins. These occur as undulating zones developed within fault fissures where they penetrate competent strata such as quartzite. The vein consists of mesothermal white quartz with minor amounts of base-metal sulphides. Wallrocks are moderately silicified and calcified. The vein is difficult to trace because of the many faults.
- ii. Epithermal veins: North-trending, steeply dipping, low to medium grade auriferous/argentiferous quartz veins within the Nelson intrusives may eventually be classed in this group, although they are currently grouped with the

















Map 1736A

Geology Penticton Scale 1:250,000

FIG. 3

LEGEND

<b>QUATERNARY</b>	
<b>PLEISTOCENE</b>	
 QPI	<b>LAMBLY CREEK BASALT:</b> rusty weathering black basalt, with hornblende, biotite and pyroxene phenocrysts to 5 mm in an aphanitic black matrix; occurs as columnar jointed flows, a few metres thick above Mesozoic strata. K-Ar age of 0.762 Ma determined by Church, 1981
<b>TERTIARY</b>	
<b>MIOCENE</b>	
	<b>PLATEAU BASALT:</b> andesite and basalt with augite and hornblende phenocrysts to 5 mm in a black aphanitic matrix; forms massive flows to 20 m thick; locally underlain by poorly sorted boulder conglomerate and pebbly sandstone. K-Ar cooling ages of 2.9 and 14.9 Ma; includes Daves Creek Basalt (14.9 Ma) and Carrot Mountain alkali basalt (11.8 Ma)
<b>Eocene</b>	
 Eor	<b>QUALLA RHYOLITE:</b> rhyolite breccia, massive obsidian and related dykes
 Ema	<b>MARRON GROUP:</b> Undifferentiated andesite, dacite and trachyte of the Marron Group; may include minor epiclasts; rocks equivalent to Ewl and Est.
	<b>SKAMA FORMATION:</b> brecciated greenstone (Old Tom Formation), brecciated chert (Shoemaker Formation, Est), and brecciated granite (Oliver Granite, Est) resting as fault slices hundreds of metres across, above the White Lake Formation on gently dipping faults; includes undifferentiated polymictic tuff conglomerate and arkose resting unconformably on these; brecciated rocks near Rock Creek includes heterogeneous epiclastic breccia (Klondike Mountain Formation)
 Ewl	<b>WHITE LAKE FORMATION:</b> massive to thick bedded volcanic breccia and pyroclastic rocks with clasts of Trepanier Rhyolite and Kitlay Lake and Yellow Lake formations; includes interbedded medium and thin beds of brown sandstone and clayey siltstone, minor carbonaceous seams; includes minor trachyte and andesite. Palynomorphs from Powers Creek indicate a Middle Eocene or older age
	<b>MARAMA FORMATION:</b> medium brownish grey, flow banded dacite with subhedral plagioclase, hornblende and biotite phenocrysts to 5 mm in an aphanitic ground; forms the top of Black Knight Mountain, Mount Bouchere, Aeneas Butte, Mount Law
 En	<b>MARAMA FORMATION - HIMPIT LAKE MEMBER:</b> recessive, reddish weathering, amygdaloidal, trachyandesite with minor intercalated pyroclastic deposits; includes undifferentiated intrusive equivalents
 Ek	<b>KITLEY LAKE FORMATION:</b> massive, yellowish to buff, trachyte to trachyandesite; plagioclase and biotite glomerophenocrysts to 3 cm (10% of the rock) in a finely crystalline groundmass; includes ash flow tuff and minor mudstone; includes undifferentiated intrusive equivalents; Church determined K-Ar ages between 52.9 (biotite) and 44.2 Ma (whole-rocks)
 Eyl	<b>YELLOW LAKE FORMATION:</b> massive to thick, tabular flows of buff to light tan pyroxene-rich, mafic phonolite locally with rhomb anorthoclase phenocrysts and primary analcite, abundant zeolite fills cracks and amygdalae; includes undifferentiated intrusive equivalents
 Etr	<b>TREPANIER RHYOLITE:</b> white and locally pink, greenish or light grey, flow banded rhyolite with subhedral quartz, hornblende and biotite phenocrysts to 3 mm in an aphanitic matrix. K-Ar ages of 47.7 and 46 ± 2 Ma were determined by Church (1981) west of Trepanier
	<b>SPRINGSBROOK FORMATION:</b> poorly sorted, massive to thick bedded, immature, coarse boulder and pebble conglomerate. Clasts to 50 cm are rounded, but of low sphericity and are locally derived (chert, greenstone, granite, and other pre-Eocene rocks with fewer Marron Group clasts, mainly Yellow Lake and Kitlay formations). Near Rock Creek this unit consists of white to light grey, medium bedded, mesoarkic sandstone and shale with coaly partings. Named by Kenna River Formation












<b>MESOZOIC</b>		<b>UPPER TRIASSIC AND/OR LOWER JURASSIC</b> <b>ROSSLAND AND NICOLLA GROUPS</b> Massive greenstone, andesite, talite, agglomerate and volcanic breccia of greenstone fragments locally with limestone clasts; minor greywacke; minor interbedded limestone; includes lenses of silicified equivalents; may include undifferentiated Lower Jurassic volcanics of similar lithology
		Rusty weathering, black pyritic slate, phyllite and argillite, locally silicified or "cherty"; minor quartzite; minor interbedded argillaceous limestone; includes undifferentiated greenstone lenses
	 uTrot	<b>ORDOVICIAN TO UPPER TRIASSIC</b> <b>OLD TOM FORMATION:</b> massive andesitic greenstone and greenstone breccia; locally includes large, extensive, strongly silicified equivalents in irregular bodies and lenses with gradational boundaries, which are undifferentiated; includes a few small lenses of undifferentiated limestone; minor diorite; unit is poorly understood; known to contain Ordovician, Carboniferous and Triassic fossils; undifferentiated; relations to Shoemaker Formation are gradational
<b>PALEOZOIC TO MESOZOIC</b>	 uTra	<b>SHOEMAKER FORMATION:</b> massive, greyish green silicified volcanic rocks, including "cherty" tuff and breccia; includes undifferentiated massive greenstone; may include chert; generally fractured and broken by irregular spaced cleavage; may be largely the silicified equivalent of the Old Tom Formation
	 uTri	<b>INDEPENDENCE FORMATION:</b> massive greenstone, volcanic breccia with greenstone fragments; includes large undifferentiated limestone lenses; includes lenses of undifferentiated limestone; resembles the Old Tom and Shoemaker formations
<b>MESOZOIC</b>		<b>MIDDLE AND LOWER TRIASSIC (?)</b> <b>BROOKLYN LIMESTONE AND "SHARPSTONE CONGLOMERATE":</b> white weathering, thick bedded, light grey limestone concretion with rounded to angular dentinal "chert" grains; minor greenish siltstone and massive, resistant, breccia with angular, roughly equal, clasts to 10 cm across, of "chert" and greenstone and locally limestone in a matrix of coarse sand and grit of the same material; grades to "chert" sandstone and "chert" grit by decrease in grain size; minor green and black argillite, partly a fine grained tuff; grains and matrix strongly silicified; "chert" and andesitic greenstone fragments derived mainly from the Knob Hill Group; limestone mostly from the Brooklyn Formation, and locally from the Atwood Group; limestone contains Middle Triassic fossils
		<b>CARBONIFEROUS OR PERMIAN</b> <b>Knob Hill Group:</b> massive "chert" (largely silicified greenstone), greenstone and amphibolite; minor limestone or marble; minor "sharpstone"; age unknown
<b>PALEOZOIC</b>		<b>ATTWOOD GROUP:</b> light grey limestone with minor interbedded chert; contains Carboniferous fossils
		<b>CARBONIFEROUS</b> <b>BLUND CREEK FORMATION:</b> medium bedded grey limestone and calcareous argillite; lacks penetrative fabrics; low greenschist facies metamorphism
		<b>BARSLAW FORMATION:</b> thin bedded, brown silty slate and argillaceous siltstone; lacks penetrative fabrics; low greenschist facies metamorphism
	<b>CARBONIFEROUS OR OLDER</b> <b>ANARCHIST GROUP:</b> dark grey weathering, recessive, amphibolite, greenstone, quartz-chlorite schist, quartz-biotite schist; minor serpenitized peridotite; "chert" breccia that resembles Triassic; locally included; CPsp - peridotite and serpenitized equivalents; Crz - amphibolite; age unknown	

FIG. 3b

**CORYELL SYENITE:** alkalic to calc-alkalic, high level, pink and buff syenite and quartz monzonite and trachytic pink feldspar porphyry dykes: plutonic equivalent of the Marron Group especially the Kitley Lake Formation; gradational to pulaskite and to Shingle Creek Porphyry; probably includes JKg undifferentiated in East half of map area; poorly dated

**SHINGLE CREEK PORPHYRY:** massive, buff and pink, fine grained porphyritic granite and felsite with subhedral phenocrysts of K-feldspar to 10 cm across; occurs as dykes under, and feeders to, the volcanic rocks of the Marron Group, especially the Kitley Lake Formation; a shallow level equivalent of the Coryell Syenite; includes rhomb porphyries and related rocks

**Egn "OKANAGAN GNEISS":** massive, medium grey weathering, resistant hornblende-biotite granodiorite orthogneiss; strongly foliated; grades to mylonitic gneiss, mylonite and biotomylonite; minor amphibolite and paragneiss; minor schist; minor pegmatite and apfite; strongly chloritized along Okanagan Fault; grades eastward (and up the structural succession) to JKg, MJg and Pm units of which it is presumed as to the sheared equivalent; probably also includes sheared equivalents of the Ashcroft Group; presumed sheared and thermally overprinted during the Eocene; Egn1-quartz chlorite microbreccia and related altered rocks close to the Okanagan Fault

**Massive, light grey weathering, biotite granite gneiss and granodiorite gneiss with pegmatite veins and sills**

**Hornblende granodiorite:** massive, resistant, grey weathering, coarse grained, equigranular to asocratic with subhedral fresh black hornblende crystals; locally weakly dated; age poorly constrained

**RETACEOUS AND/OR JURASSIC**

**OKANAGAN BATHOLIT:** massive, light grey weathering, medium- to coarse-grained, equigranular to porphyritic, unfoliated to weakly foliated, fresh biotite granodiorite and granite; includes undifferentiated granodiorite of the Nelson suite; age poorly constrained

**OLIVER PLUTON:** massive, unfoliated, medium grained porphyritic biotite granite with weakly foliated, equigranular hornblende granodiorite along the southern border; includes Jcb, biotite-hornblende diorite agmatite and Jcg, massive garnet-muscovite granite; age poorly constrained

**OSOYOOS GRANODIORITE:** recessive, pesty greenish, hornblende granodiorite; pervasive; saussuritized, chloritized, sheared and fractured; age unknown

**MIDDLE JURASSIC**

**NELSON PLUTONIC ROCKS:** massive, generally moderately foliated, medium grey weathering, medium- to coarse-grained, equigranular, hornblende-biotite granodiorite, quartz diorite and granite; includes undifferentiated biotite granite of the Valhalla suite; age poorly constrained

**OLALLA PYROXENITE:** black, fresh, massive, medium- to coarse-grained pyroxenite, hornblende, serpeninitite and peridotite

**KRUGER SYENITE:** massive, medium grained, biotite hornblende granodiorite with a marginal zone of megacrystic, mesocratic coarse grained hornblende syenite

**CPko KOBAY GROUP:** undivided amphibolite, greenschist, quartzite, mica schist, greenstone; minor marble; strongly foliated with penetrative *Rasch* fabrics; age unknown

**ORDOVICIAN (?) TO DEVONIAN (?)**  
Schist, thin bedded argillaceous limestone, slate and limestone includes metamorphosed equivalents mostly biotite-dioptase-quartz schist and marble; age unknown

**PROTEROZOIC (?) AND PALEOZOIC (?)**  
GRAND FORKS GNEISS

**Pgfm Mylonitic biotite leucogranodiorite:** Preto unit X

**Pgfo Medium crystalline, well foliated biotite hornblende granodiorite orthogneiss:** Preto unit IX

**Pgfa Amphibolite, amphibolitic gneiss, minor marble:** Preto unit IV

**Coarsely crystalline garnet-biotite schist, interfoliated quartzite, minor marble, abundant pegmatite and leucogneiss:** Preto unit III

**Coarsely crystalline, thick layered quartzite, minor marble and pegmatite:** Preto unit II

**Pgfg Sillimanite-biotite-quartz paragneiss, amphibolite and amphibolitic gneiss, marble, biotite schist and gneiss, garnet-biotite-quartz schist, micaceous quartzite:** includes minor leuco-orthogneiss; Preto unit I

**Pm MONASHEE GNEISS:** grey, massive, biotite granodiorite gneiss; gradational westward with Egn, but not overprinted by the Eocene event that affected the rocks nearer the Okanagan Fault; may be equivalent or related to Pgl; may include equivalents of ODs; age unknown

PROTEROZOIC AND PALEOZOIC

- Outcrop boundary. ....
- Probable stratigraphic contact, location approximate. ....
- Geological contact, relations unknown, possibly faulted. ....
- Strike and dip of bedding. ....
- Strike and dip of foliation. ....
- Trend and plunge of lineation and minor folds. ....
- Inferred fault, age and displacement unknown. ....
- Inferred normal fault, age unknown, circle on downthrown side. ....
- Inferred Eocene normal fault, circle on downthrown side. ....
- Slide-inferred fault in metamorphosed rocks, roughly parallel to foliation. ....

Recommended citation:  
Templeman-Kluit, D.J.  
1989: Geology, Pentton, British Columbia; Geological Survey of Canada, Map 1736A, scale 1:250 000

mesothermal veins. The veins post-date Nelson intrusive activity and may therefore be related to Tertiary volcanism as are the epithermal Dusty and Vault properties located north west of Camp McKinney.

- iii. Auriferous Skarns: Gold skarn mineralization is exemplified by the 1.8 million ounce Crown Jewel gold deposit located 8 km south of the Canada-USA border in Washington State. The Crown Jewel skarn/replacement ore bodies are hosted by Anarchist Group rocks near their contact with Nelson intrusives? The mineralization forms tabular bodies in both garnet-pyroxene-magnetite skarns and quartz-pyroxene hornfels within calcareous formations near their contact with the intrusive.
- iv. Serpentinites: Numerous mines in the Phoenix Camp area with gold and silver values that are associated with copper and hosted by serpentinites, may be the model type of interest within the 97 Bev and the Chico-On mineral claims. A list of the Phoenix Camp mines would include the Athelstan Jackpot, City of Paris, Lexington, and the No. 7. The extension of the City of Paris serpentinite southward would include the Lone Star Mine in Washington State.

## **2.4 OBSERVATION**

It is likely that the build up of magnetite as observed in rock sample 99 Bev #13R is related to the serpentinization of the ultra basic rocks and may not provide a direct connection to the economic mineralization. In this case chalcopyrite which is the economic mineral of interest, has been observed cross cutting the magnetite in veinlets and may be strongly associated with fractures within the magnetite zone. In places intrusive rocks proximal to the serpentinite are highly propylized or have been propylitically altered and may be the source of the copper.

## **3.0 DISCUSSION OF RESULTS**

### **3.1 PROCEDURE (Figure #4)**

All surveys and locations were accomplished by hip chain and compass traverse from the second west post of the 97Bev claim. Rock chip samples were collected and sent Acme Analytical Laboratories Vancouver, B.C. for geochemical analysis.

## **3.2 ROCK CHIP GEOCHEMISTRY**

The highest gold value of the 99 rock chip sample program was 202 ppb which was associated with an elevated arsenic value of 196 ppm. These results were from 99 Bev #1R a rock chip sample taken from a quartz vein located along the western side of 97 Bev. High copper values were found in 99 Bev #11, #12 and #13 R. Silver, manganese, iron, vanadium, calcium and barium results were also elevated in these rocks when compared to the suite of rocks sampled on the property. Gold values from 99 Bev #11, #12 and #13R were weakly anomalous and ranged from 14 to 38 ppb. Assay results from 99 Bev #9R and #10 R were slightly elevated in nickel, manganese, calcium, chrome and magnesium which is typical of the signatures of serpentinitic rocks.

## **4.0 CONCLUSIONS AND RECOMMENDATIONS**

### **4.1 CONCLUSIONS**

Although the current program did not identify specific drill targets the reconnaissance style exploration of the 97 Bev Group was successful in developing a target for additional detailed exploration. The target area includes the southern contact of the ultramafic body specifically along the south western side of the NStar claim.

### **4.2 RECOMMENDED EXPLORATION TECHNIQUE**

Surface plowing has been part of the program to reclaim the clear cut areas in which the magnetite, chalcopyrite bearing rocks occur. Soil sampling geochemistry is not an appropriate exploration tool in these areas because the insitu soils have been badly disturbed by the reclamation technique and results would be skewed but soil sampling could be utilized in undisturbed areas. Enzyme leach analytical techniques could be used in these undisturbed areas.

It is recommended that ground magnetometry accompanied by an Induced Polarization/Resistivity geophysical program be used to investigate the source of the copper chalcopyrite veinlets. Due to the unevenness of the surface in the clear cut it would be advisable to do some portions of this survey in the winter when wires and manpower could be above the deadfall and debris.

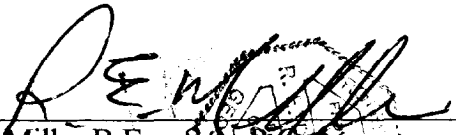
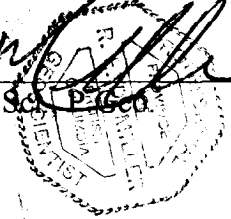
### **4.3 GENERAL RECOMMENDATIONS**

Develop reconnaissance grid across the whole claim for detailed data collection and geologic mapping.

#### 4.4 LOCAL RECOMMENDATIONS

Collect additional rock chip samples central to the area around 99 Bev #13R and 98Bev #13R, #14R and #15R.

Respectfully submitted by

  
R.E. Miller B.Eng. Sc. P.Eng.  


**APPENDIX A**  
**EXPENDITURES**

**97 BEV GROUP**

**EXPENDITURES**

Consulting 2 days @\$200.00/day	\$ 800.00
Field Help	
1 man x 4 days @ \$125.00/day	\$ 500.00
1 man x 1 day @ \$ 75.00/day	\$ 75.00
Field Vehicle	
4 days x \$65.00/day	\$ 260.00
Field Expenses	\$ 197.00
Assays \$28.00 x 13 samples	\$ 364.00
Drafting	\$ 100.00
Report	\$ 300.00
	<hr/>
Total	\$2596.00



**APPENDIX B**  
**STATEMENT OF QUALIFICATIONS**

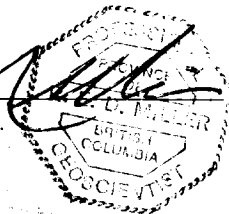
STATEMENT OF QUALIFICATIONS

I ROBERT E. MILLER, of Spokane, Washington U.S.A. DO HEREBY CERTIFY:

1. THAT I am a Geological Engineer with a business address of P.O. Box 2941, Grand Forks, British Columbia. V0H 1H0.
2. THAT I am a graduate from Brigham Young University with a Bachelor of Science in Geological Engineering (1969).
3. THAT I have practiced my profession continuously since graduation.
4. THAT I personally supervised the 1999 exploration program discussed in this report.
5. THAT I do not own or expect to receive any interest in the property described herein, or in any securities of any company rendered in the preparation of this report.

DATED this 3rd day of September 1999

  
Robert E. Miller P. Geo.  
Geological Engineer



**APPENDIX C**  
**GEOCHEMICAL ASSAY RESULTS AND ROCK CHIP SAMPLE SHEET**

# ROCK SAMPLE SHEET

Sampler R.E.M  
 Date Sept 1994

Property 97 Bev

1 of 2  
 NTS \_\_\_\_\_

SAMPLE NO.	Sample Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS				
		Rock Type	Alteration	Mineralization						
99Bev 1R	C	qtz vln	Feox	Pyrite	Pyrite euhedral, bright Aspy?					
99Bev 2R	C	feld. psm	argillac	fine pyrite	vln qtz-py vlns along fractures					
99Bev 3R	C	Basalt qtz	chlorite fract	tr py?	Massive					
99Bev 4R	C	quartzite	argillac	tr <sup>+</sup> py	Sheared w/ qtz-py vlns & cuttings					
99Bev 5R	C	Serp	Feox	py	Relic xlns texture mafic intrusive?					
99Bev 6R	C	Serp	propylitic	tr py	Altered diorite? Cr. texture.					
99Bev 7R	C	qtzite	Silie	tr py?	No biotite - chert, hornbls?					
99Bev 8R	C	Serp	argillac	tr py?	Altered in xlns diorite					
99Bev 9R	C	Serp	propylitic	tr py	qtz veining, sheared, calc. vlns.					
99Bev 10R	C	Serp	Feox	py?	Argillac, sheared, chlorite.					
99Bev 11R	C	hornbls	Mylonitic	tr py	biotite, Feox, massive vlns qtzite?					
99Bev 12R	C	Serp	Feox	tr py, tr <sup>+</sup> chalc	Copper sulfide, Fe sulfide, magnetite?					
99Bev 13R	C	?	Massive Sulfide	chalc, magnetite	Py, copper py, hematite, qtz streaks					
99Bev 14R	C	diorite	Argillac	tr Sulfide	vln xlns biotite druse w/ qtz vlns	-	-	-	-	-
99Bev 15R	C	chert	Feox	tr py?	white, sheared, massive qtzite?	-	-	-	-	-

C-CHIP 6-GRAB F-FLOAT

# ROCK SAMPLE SHEET

Sampler R.E.M.  
Date Sept/99

Property 97Bev

NTS 2 of 2

SAMPLE NO.	Sample Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS				
		Rock Type	Alteration	Miscralization						
99Bev/len	c	Serp	Silic	chalcopyrite Magnetite	* Massive vln xlleni magnetite w/chalco.	-	-	-	-	-
99Bev/An	c	feld-popy.	Argillie	Tr p & py	dense, An Keritic vlnlet w/py.	-	-	-	-	-
					* vln Magnetite is vln xlleni					
					andes cut by chalcopyrite					
					vlnlets. very little silic. fractures					
					of the matrix.					

ACME ANALYTICAL LABORATORIES LTD.  
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852 E. HASTINGS ST. VANCOUVER BC V6A 1R6

PHONE (604) 253-3158 FAX (604) 253-1716



GEOCHEMICAL ANALYSIS CERTIFICATE

Miller, Bob File # 9903879

200 - N. 10015 Division, Spokane WA U.S.A. 99218 Submitted by: Bob Miller

\*\* TOTAL PAGE.002 \*\*

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Yb	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Tl	Hg	Au*	
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	%	ppm	ppm	ppm	ppb
99-BEV-1R	3	23	6	74	<.3	9	11	84	5.49	196	<8	<2	2	44	<.2	<3	4	25	.10	.049	2	17	.18	21	.03	<3	.53	.04	.35	5	<5	1	202	
99-BEV-2R	2	81	6	226	<.3	10	11	412	3.18	62	<8	<2	3	49	1.1	4	<3	48	.71	.064	3	16	.75	65	.06	3	1.37	.07	.24	<2	<5	1	37	
99-BEV-3R	4	23	<3	61	<.3	11	3	424	.74	2	<8	<2	<2	36	.6	<3	<3	6	1.22	.007	1	32	.20	20	<.01	<3	.21	.01	.03	8	<5	1	6	
99-BEV-4R	7	80	27	164	1.2	14	5	162	3.41	123	<8	<2	3	11	.9	<3	<3	39	.34	.210	7	22	.21	71	.03	<3	.48	.01	.18	5	<5	1	9	
99-BEV-5R	<1	<1	9	42	<.3	206	44	359	3.44	<2	<8	<2	<2	11	.2	<3	<3	81	.79	.011	<1	70	9.37	2	.01	<3	4.60	.01	<.01	<2	<5	<1	2	
99-BEV-6R	<1	7	<3	58	<.3	34	23	464	2.94	<2	<8	<2	<2	13	<.2	<3	<3	108	.49	.005	<1	21	2.09	96	.10	<3	2.18	.06	.25	<2	<5	1	7	
99-BEV-7R	3	40	48	.94	.6	14	9	457	1.07	16	<8	<2	<2	2	.2	<3	3	4	.03	.015	2	23	.13	40	<.01	<3	.20	.01	.06	5	<5	1	9	
99-BEV-8R	2	10	10	66	<.3	25	11	512	2.90	<2	<8	<2	14	12	<.2	<3	<3	40	.23	.045	32	52	.88	173	.10	<3	1.74	.06	.74	2	<5	1	5	
99-BEV-9R	<1	1	4	51	<.3	395	21	587	2.06	<2	<8	<2	<2	26	.2	3	<3	67	1.99	.007	<1	64	2.28	87	.06	<3	2.11	.11	.19	<2	<5	1	5	
99-BEV-10R	<1	1	5	7	<.3	437	47	635	3.28	<2	<8	<2	<2	6	<.2	<3	<3	28	.50	.005	<1	826	8.27	8	<.01	<3	.38	.01	<.01	<2	<5	<1	<1	
RE 99-BEV-10R	1	<1	9	6	<.3	413	46	598	3.12	<2	<8	<2	<2	6	<.2	<3	<3	26	.48	.005	<1	774	7.74	8	<.01	<3	.35	.01	<.01	<2	<5	<1	<1	
99-BEV-11R	5	103	11	114	<.3	102	20	358	3.30	<2	<8	<2	2	38	.5	<3	<3	115	1.40	.459	7	189	1.56	184	.14	<3	1.92	.07	.98	2	<5	1	14	
99-BEV-12R	9	376	10	6	1.8	56	22	2226	4.54	5	<8	<2	<2	143	<.2	<3	5	20	7.29	.026	2	34	1.45	80	.01	<3	.21	.01	.13	2	<5	<1	38	
99-BEV-13R	<1	916	12	78	<.3	65	40	1631	24.32	2	<8	<2	<2	13	.2	<3	<3	121	1.04	.282	10	23	.48	13	.07	<3	1.34	.02	.47	<2	<5	1	27	
STANDARD C3/AU-R	26	65	37	169	6.2	38	13	815	3.47	57	23	3	21	31	23.2	14	24	82	.61	.093	19	178	.64	154	.09	23	2.05	.05	.18	16	<5	2	539	
STANDARD G-2	2	3	<3	42	<.3	9	5	573	2.12	<2	<8	<2	5	76	<.2	<3	<3	41	.69	.103	8	84	.63	232	.13	<3	1.03	.08	.51	2	<5	<1	<1	

GROUP 10 - 0.50 GM SAMPLE LEACHED WITH 3 ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR, DILUTED TO 10 ML, ANALYSED BY ICP-ES.  
 UPPER LIMITS - AG, AU, HG, W = 100 PPM; MO, CO, CO, SB, BI, YH, U & B = 2,000 PPM; CU, PB, ZN, NI, MN, AS, V, LA, CR = 10,000 PPM.  
 ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB  
 - SAMPLE TYPE: ROCK AU\* GROUP 3A - 10.00 GM SAMPLE, AQUA-REGIA, MIBK EXTRACT, ANALYSIS BY GF/AA.  
 Samples beginning 'RE' are Retuns and 'RRE' are Reject Retuns.

DATE RECEIVED: OCT 12 1999 DATE REPORT MAILED: *Oct 22/99* SIGNED BY: *C. Leong* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

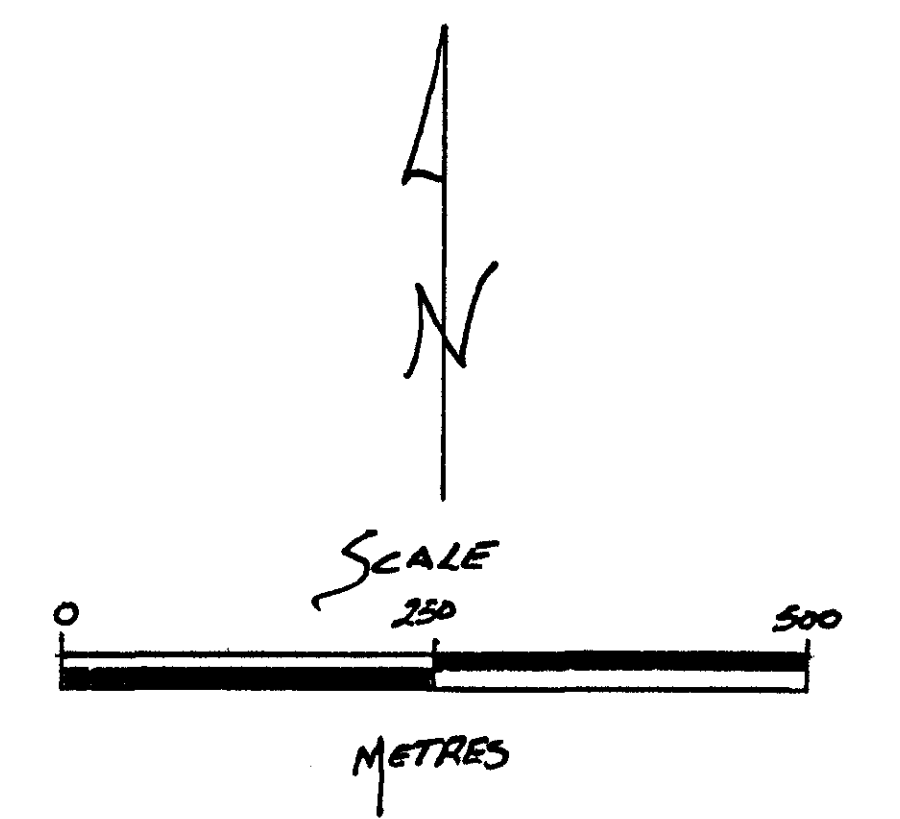
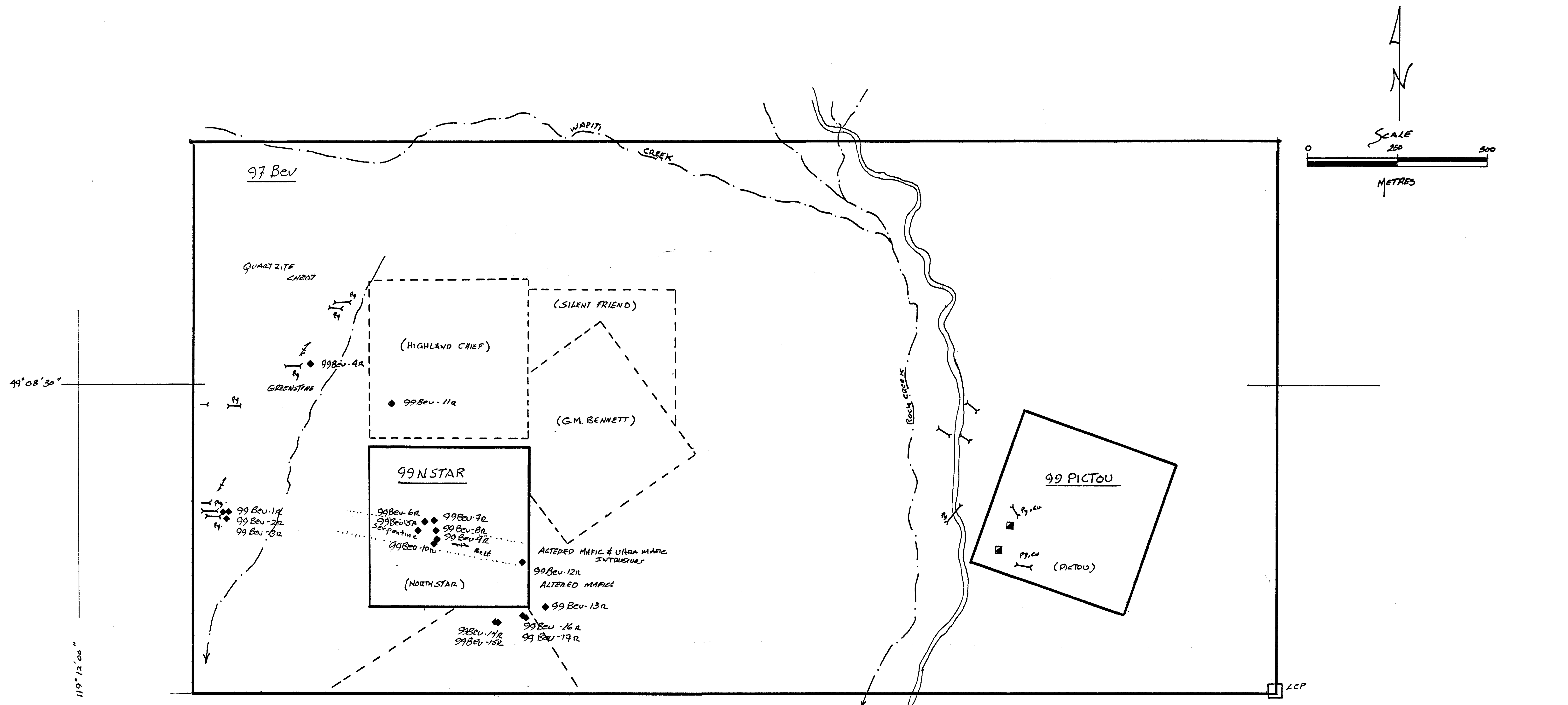
**APPENDIX D**  
**REFERENCES**

## **97 BEV GROUP REPORT**

### **REFERENCES**

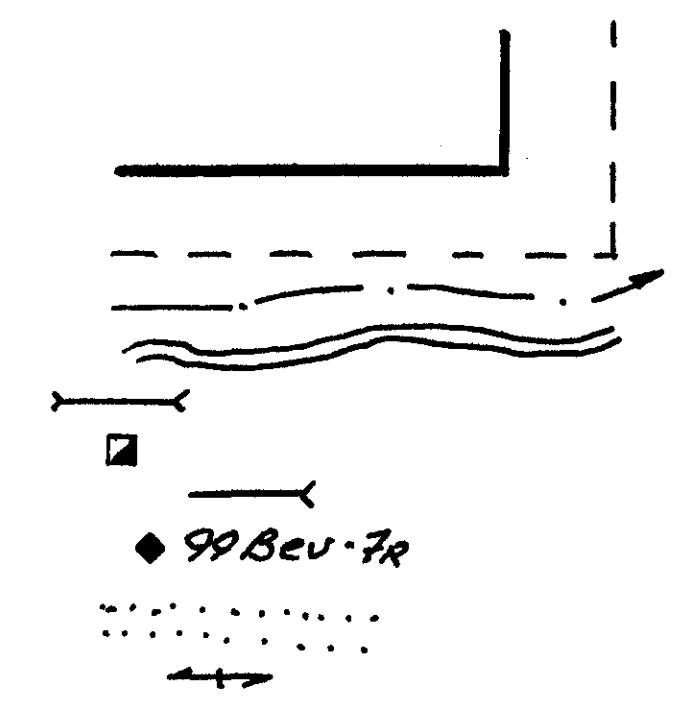
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**LEGEND**

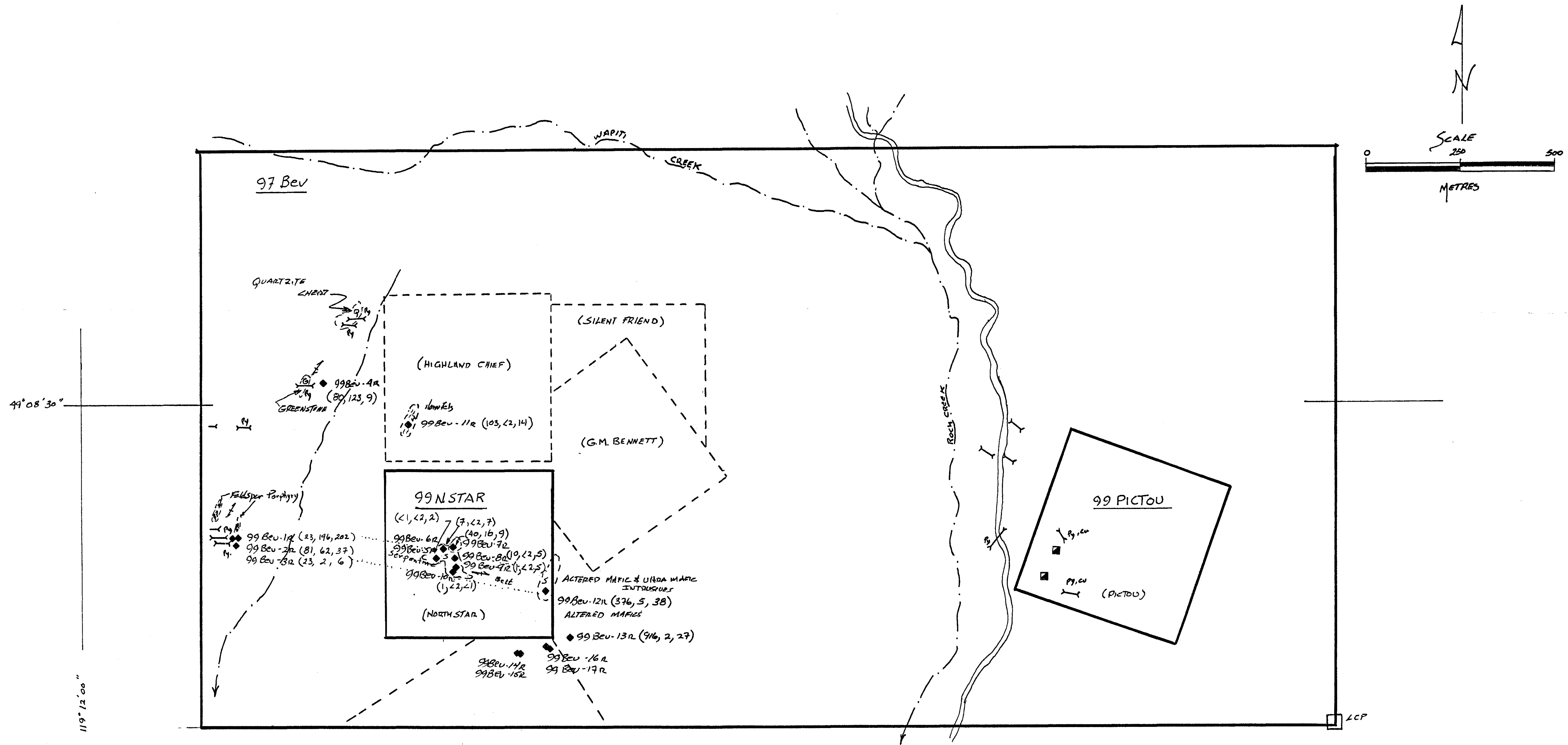
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- OLD R.C.G CLAIM BOUNDARY
- CREEK
- ROAD
- TRENCH
- SHAFT
- ADIT
- ROCK CHIP SAMPLE NUMBER & LOCATION
- SERPENTINE BELT
- STRIKE & DIP FOLIATION



GEOLOGICAL SURVEY BRANCH  
MINISTRY OF ENERGY

26,133

BIG BLACK FOOT RESOURCES		
SCALE: 1:500	APPROVED BY:	DRAWN BY:
DATE: Sept 99		REN
97 Beu GROUP CLAIMS		
ROCK CHIP SAMPLE LOCATION	DRAWING NUMBER	4



**LEGEND**

- CLAIM BOUNDARY
- OLD R.C.G CLAIM BOUNDARY
- CREEK
- ROAD
- TRENCH
- SHAFT
- ADIT
- ROCK CHIP SAMPLE NUMBER & LOCATION
- SERPENTINE BELT
- STRIKE & DIP FOLIATION
- OUT CROPS
  - Q - QUARTZITE
  - G - GREENSTONE
  - S - SERPENTINITE
- GEOCHEMICAL ASSAY RESULTS
  - (Cu, As, Au) (23, 196, 202)
  - (Ppm, PPM, PPb)

<b>BIG BLACK FOOT RESOURCES</b>		
SCALE: 1:500	APPROVED BY	DRAWN BY
DATE: Sept 99		REN
<b>97 BEU GROUP CLAIMS</b>		
ROCK CHIP SAMPLE LOCATION		DRAWING NUMBER
		4