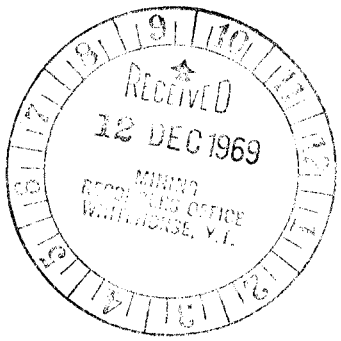

BONNET PLUME RIVER MINES LTD.
Geological Report - Key Claims Property
Mayo Mining District, Y. T.
August - September, 1969

ALRAE ENGINEERING LTD.

October 28, 1969

This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of $ 12,600

Resident Geologist or
Resident Mining Engineer

Considered as representation work under Section 53 (4) Yukon Quartz Mining Act.

Commissioner of Yukon Territory

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INTRODUCTION

The 56 claim Key group (Claim Sheet 106E-1) is situated on the east bank of the Bonnet Plume River, some one hundred air miles east-northeast of Mayo (grid reference 134°15'W, 65°5'N). The property was taken on option by the company in July 1969 and a program of geological mapping, prospecting and diamond drilling was carried out between August 1, 1969 and September 15, 1969.

The initial work indicated a 700 foot wide zone of significant copper mineralization in acid volcanics and volcanic breccia over a northwesterly trending strike of about 6,000 feet (Map 2). Four sites within this zone, where secondary concentration of copper sulphides has taken place along fault planes and in carbonate vein systems, were selected for further investigation.

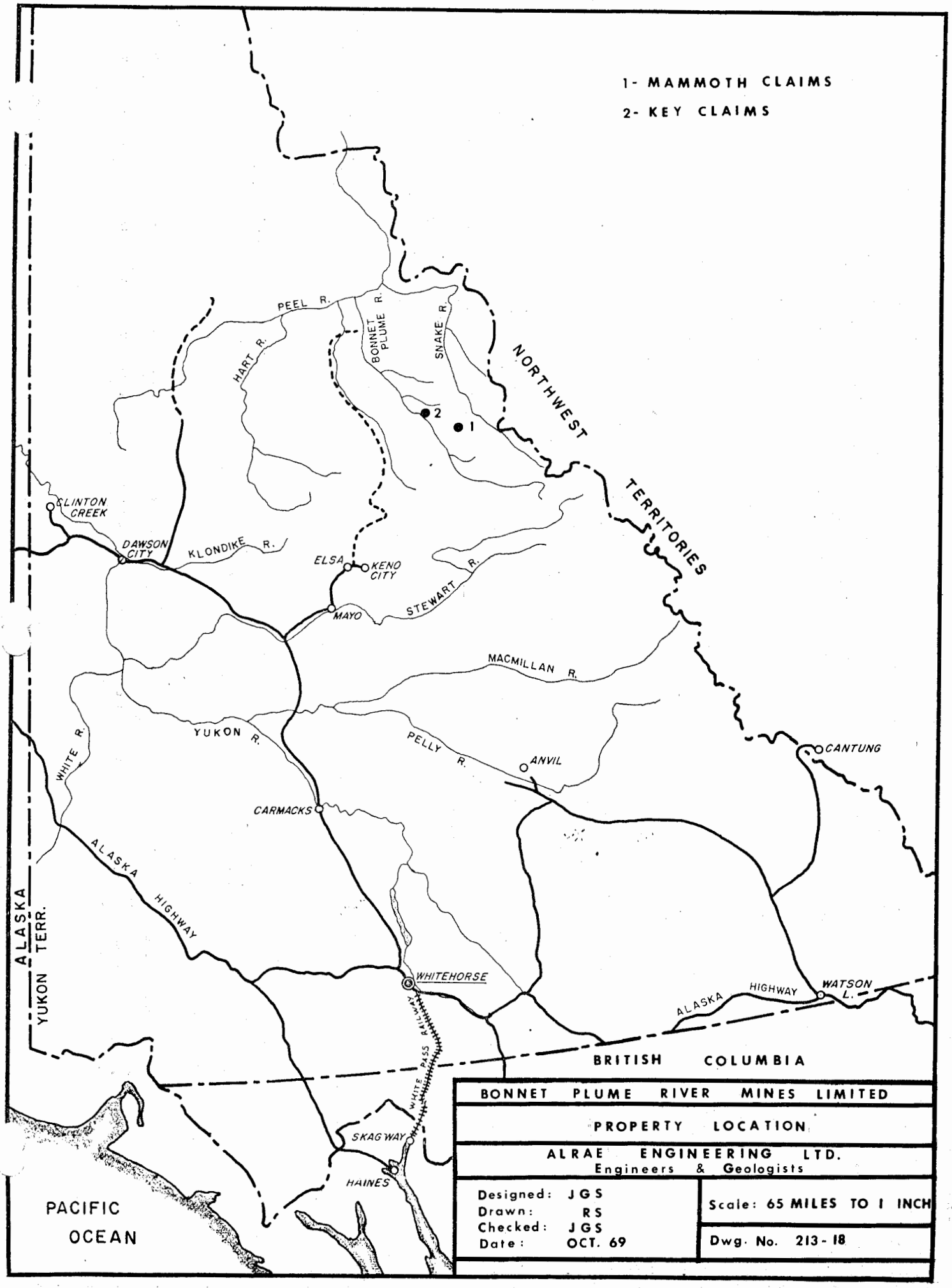
In the short time available before freeze-up, reconnaissance diamond drilling was carried out at the two most accessible sites, some 4,000 feet apart. This drilling totalled 1,424 feet and comprised eight short holes, five of which were drilled on a mineralized fault zone designated Site #1, and three in a zone of ramifying vein type mineralization known as Site #4.

Access to the claims was improved by the construction of a short air strip in river gravels on the north bank of the Bonnet Plume river, and access roads to the two drilling sites.

PROPERTY AND OWNERSHIP

The Key claims property comprises 56 mineral claims recorded and held in the names of:

George Vanbibber
Pat Vanbibber
Alan McDiarmid
John Thomas
Fred Caley
Stanley Johnathon
Harry Baum



BONNET PLUME RIVER MINES LIMITED	
PROPERTY LOCATION	
ALRAE ENGINEERING LTD. Engineers & Geologists	
Designed: J G S Drawn: R S Checked: J G S Date: OCT. 69	Scale: 65 MILES TO 1 INCH Dwg. No. 213-18

The property list of claims is as follows:

Claim Name	Date Recorded	Record Numbers	Expiry Date
Key 1 - 56	June 30, 1969	Y32539 - Y32594 inclusive	June 30, 1970

All work done on these claims as described in this report was carried out by Alrae Engineering Ltd. of 844 W. Hastings Street, Vancouver 1, B.C., on behalf of Bonnet Plume River Mines Ltd. of 625-695 W. Georgia Street, Vancouver 1, B.C., who are the option holders of the above property. Application is herewith made to the Mining Recorder to record this work as representing assessment work on the claims as grouped to a common anniversary expiry date as indicated on the accompanying forms.

LOCATION AND ACCESS

The Key claims are indicated on the official claim map (Claim Sheet 106E-1) as comprising 56 claims in a single block four claims wide by 14 long (grid reference 134°15'W, 65°5'N), extending from the east bank of the Bonnet Plume river in a north-northwest direction toward Rapitan Creek. The claims are 20 miles east of the Wind River Trail and are accessible by caterpillar track and a winter road connecting the Wind River Trail to the Mammoth claims on Dolores Creek, some 20 air miles southeast of the property. Access to the claims was improved by the construction of a short air strip on river gravels on the east bank of the Bonnet Plume River and roads to the drilling sites as indicated on the accompanying map.

TOPOGRAPHY AND WATER SUPPLY

The northeast section of the claim block covers the side hills flanking the Bonnet Plume valley and rise to peaks of 5,500 feet, the river itself being at a little under 2,000 feet. Within this section the terrain is very rugged, with extensive developments of talus on the lower slopes.

All major creeks contain abundant flowing water throughout the summer months and the valley floor is extremely swampy with a number of small lakes and ice ponds.

Small stands of poorly developed conifers are available in the Bonnet Plume valley, some of which could be used in timbering and general prospecting operations.

NAMES AND ADDRESSES OF PERSONNEL

The following persons took part in the development and exploration programs on the Key claims property of the Bonnet Plume River Mines Ltd. during 1969.

J.G. Simpson, B.Sc., Ph.D.	720 Anderson Cres., West Vancouver, B.C.
J.F. Pagella, M.A., M.Sc. D.I.C.	" "
G. Jilson (student U.B.C.)	410 St. James Circle, Piedmont, Calif.
H. Kabanak	P.O. Box 2349, Whitehorse, Y. T.
D. McLaughlan	P.O. Box 235, Rutland, B. C.
L.I. Proctor	P.O. Box 827, Whitehorse, Y. T.
C.D.N. Taylor, P. Eng.	2420 Queenswood Dr., Victoria, B. C.
E. Smith	P.O. Box 827, Whitehorse, Y. T.
C.E. Ford	P.O. Box 2080, Whitehorse, Y. T.

The diamond drilling was carried out under contract by Coates Enterprises Ltd., of 1668 West First Avenue, Vancouver 9, B.C. and full invoices for this work are attached to the appendix on costs and disbursements.

GEOLOGY

Introduction

No previous detailed work has been carried out on the Key claims and apart from very broad scale indications, no published work is available on the immediate area, as far as is known to the present

authors. In the absence of suitable topographic maps, geological data was plotted on air photograph enlargements (Photograph No. A 12247-76) on a scale of approximately 1" = 850'.

Geological Sequence and Table of Formations

From the base of the hills flanking the main valley, a sequence of banded acid volcanics, massive volcanics, volcanic breccia, shales and interbanded tuffs, thin limestones and a thick sequence of argillites and black slates roughly parallel the valley contours and dip generally to the northeast (Map 1). On high peaks, at the crest of the valley ridge, elements of the volcanic sequence reappear, which have apparently overridden the shale-limestone sequence on flat thrusts derived from the northeast. The strata of economic interest within this sequence are the banded and massive acid volcanics and volcanic breccias which carry intermittent copper and iron mineralization along the visible strike of approximately 6,000 feet; the lower boundary of the volcanic breccia being perhaps more mineralized than other sections of the volcanic sequence. The breccia dies out laterally to the southeast and is replaced by more massive tuffs and flow-banded lavas. In the complete absence of geological data from adjacent areas no specific correlation of the rock units is possible, although, in general terms, it is held that the metasediments are probably related to the Katherine Group of possible Precambrian age and the volcanics to the Rapitan Group which is of somewhat nebulous age from Upper Precambrian to Cambrian.

Lithological units, in decreasing order of age as indicated by the major structures seen on the Key claims property, are as follows:

Table of Formations

Lithological Sequence	Possible Equivalents
Banded acid volcanics and tuffs) Volcanic breccia)	Rapitan Group (Cambrian?)
Shales and interbedded tuffs) Grey limestones and shaley) limestones) Black shales and slates)	Katherine Group (Upper Pre-Cambrian?)

STRUCTURE

Although diagnostic way-up features were not readily available, the general structural picture evolved from the field work is that of a huge, recumbent antiform plunging gently north-northeast with a vergance from the east. This is concluded from the apparent tendency to closure toward the north and the plunge of minor folds and bedding-foliation intersections. This infers that the remnant volcanic rocks on the high peaks are a fold repetition of those seen on the lower slopes. The absence of a tuff-shale sequence with a distinctive limestone marker horizon in the repeated beds being due to overriding by the slate-argillite beds. This also implies that the lower slope sequence is reversed, i.e.: the oldest rocks being the argillite-slate group, the youngest being the acid volcanics. Cross-sections of the volcanic sequence and the pattern of banding attitudes in these rocks indicate fold deformation and thrusting paralleling the major structure.

A close pattern of normal faults with north and northeast trends is readily apparent, with a major east-west fracture affecting all structural elements.

MINERALIZATION

Mineralization is restricted to the acid volcanics and volcanic breccia horizons outcropping along the base of the main valley

ridge. All other lithologies are completely barren, except for minor disseminations of syngenetic pyrite in the argillites and slates. No significant mineralization was noted in either outcrop or talus slopes from the isolated exposures of volcanics on the high ridge which is, in fact, outside the claim area.

In the lower slope volcanics the mineralization includes both primary sulphides and secondary sulphides associated with faults and carbonate vein systems. There also appears to be two mineral environments, one in which hematite, in the form of specularite, is predominant and copper either subordinant or absent, and one in which copper is dominant. In general terms, copper mineralization tends to be reduced from north to south along strike and vice-versa for iron.

Primary Sulphides

Throughout the strike length of exposed volcanics, finely disseminated pyrite and chalcopyrite is found in flow-banded volcanics and occasionally in massive tuff and breccia zones. The overall percentage of sulphides in these rocks is very low and long stretches of volcanics are barren. While this type of mineralization would not be of economic significance in itself, it points to the volcanics as being the sulphide host rock for the richer secondary mineralization seen along fault lines and in rocks affected by calcite and quartz vein systems.

Secondary Mineralization

The so-called showings on the property are all restricted to the volcanic sequence and are of two main types, both of which are associated with carbonate veining. The most impressive of these is a fault environment where copper occurs in quartz and calcite filled fractures associated with the fault and in minor cross-fractures and tension veins. The second type is a system of ramifying copper

bearing carbonate veins filling fractures in the axial zones of tight folds or in zones of shearing and general brecciation. In both cases mineralization takes the form of blebs and streaks of chalcopyrite and pyrite and very rarely a little bornite in the calcite and quartz veins. In the brecciated volcanics fine stringers of sulphides occur with only minor amounts of secondary carbonate, although the breccia matrix is invariably quite rich in lime. Malachite staining is widespread in areas of chalcopyrite mineralization, although this is often more readily apparent when the rocks are broken open, and its absence cannot be taken to indicate barren material.

SHOWINGS

No. 1

The most prominant showing is described as the main showing and is located near a minor northeasterly trending fault at the boundary between volcanic breccia and banded acid volcanics and tuff, now largely made over to flaggy micaceous quartzite. At this point carbonate veins near parallel to banding vary from one half inch to two feet in width and together with associated quartz veins are strongly mineralized with chalcopyrite and pyrite in blebs and stringers over a zone some 15 feet wide. Uphill from the showings small cross-fractures are filled with calcite containing blebs of chalcopyrite and the zone, much diminished in width and mineral content, can be traced for about 200 feet. Some 200 feet downslope of the showing a possible outcrop is similarly mineralized.

No. 2

A second area of notable mineralization occurs some 1,000 feet to the south-southeast, again near the contact of breccia and banded volcanics where a small fault trending at 110° azimuth has been mineralized with pyrite and chalcopyrite together with minor carbonate filled cross-fractures. The whole makes up a rusty

malachite stained zone some 10 to 15 feet wide. The scree overburden in this locality prevents tracing of the showing uphill, but little mineralized scree was noted above the showing.

No. 3

Further to the west and forming a bald hillside at the junction of the First Gulley with the main valley floor, ramifying calcite veins in badly fractured volcanic breccia contains chalcopyrite and pyrite resulting in a large surface area of sparsely mineralized material. Northwards, the veining coalesces to a single calcite vein from six feet to 18 inches in width containing scattered blobs of chalcopyrite and roughly paralleling the banding in adjacent rocks. From structural data and observations of the gulley wall, the zone is one of intense folding and thrusting; the copper bearing calcite veins in-filling fractures in the competent breccia horizons.

No. 4

The fourth notable showing occurs some 2,000 feet to the southeast of this again, with chalcopyrite concentrated in blebs in calcite and quartz veins near a gullied fault zone. The result is a broken mineralized zone up to 20 feet wide containing blebs of chalcopyrite up to two feet in diameter. Again, due to scree developments, it is impossible to trace this feature uphill from its location.

Elsewhere along the strike of the volcanic horizon, blebs and stringers of chalcopyrite are not uncommon, but in no sense can these be regarded as mineral showings and would, in fact, form part of the normal mineral assemblage of a deformed volcanic sequence, while areas to the south of No. 4 showing tend to show a redistribution of iron in the form of specularite rather than copper.

SAMPLING AND ASSAY RESULTS

In all cases the shows are badly weathered and both pyrite and chalcopyrite have been extensively oxidized. Five chip samples were taken across three of the better showings while a sixth sample was made up of a random selection of volcanics containing disseminated sulphides. These samples were forwarded for assay and the location, width, etc. are given together with assay results in Table 1.

DIAMOND DRILL PROGRAM

Four sites within the general zone of copper mineralization were selected for further investigation where secondary concentration of copper sulphides had taken place along fault planes and in carbonate vein systems in fractured zones. In the short time available reconnaissance diamond drilling was carried out at the two most accessible sites, some 4,000 feet apart. This drilling totalled 1,424 feet and comprised eight short holes, five of which were drilled on a mineralized fault designated Site #1 and three in a zone of ramifying vein type mineralization known as Site #4. These sites are identified on the accompanying geological map and detailed site plans of the two locations.

Drilling was carried out using AQ wireline equipment with a Boyles BB5 #1 drill. Minor drill moves of a few tens of feet were necessary at each site between holes, and at Site #1 a move of 200 feet was completed to drill hole #8 on an outcrop opened by bulldozing scree at the foot of the cliff. Statistical data for the completed drilling program is summarized in a separate table and assay results are tabulated on the appropriate site plans. Although drilling results were generally good, it is felt that utilization of BQ equipment would give a better sample in vein and brecciated zones.

Site #1

Four holes totalling 575 feet were drilled in the vicinity of the prominent fault outcrop and a final hole of 168 feet was drilled at the base of the scree. The assay values in the country rock are of little economic interest, DDH #3 averaging 0.04% copper over 68 feet and DDH #2 averaging 0.06% copper over 42 feet. These would appear to be general averages outside the fault zone. Holes No's. 1, 2 and 3 all intersected the prominent fault visible in outcrop, but have insufficient spread to give much information as to strike continuity. Thicknesses and assay values for these intersections are tabulated below:

DDH No.	Corrected Thickness Ft.	Assay Value Cu. %	Remarks
1	7.0	3.30	Fault zone
2	9.25	4.80	Fault zone
2	15.80	3.16	Includes foot wall rocks
2	22.75	2.30	Includes wall rocks
3	7.0	5.00	Fault zone
3	33.0	1.07	Includes wall rocks
Average Values	7.75	4.4	Fault zone only
	10.2	3.6	With some wall rock

All core recovered from the fault intersections so far drilled has been completely altered and assay results may be unreliable due to leaching and weathering processes. No information is available as to the type of mineralization in unaltered material.

The fault zone has a measured dip of 55° to 65° towards the northwest and strikes generally north at outcrop but its attitude away from the drill site is not known. The nature of the mineralization and continuity of the zone cannot be predicted from the

available evidence. However, it is likely to be extremely variable in width and show minor irregularity with regard to dip and strike.

Site #4

Three holes were drilled in a region where large cobbles of chalcopyrite and pyrite occur in an area of minor fractures and general brecciation where the country rock exhibits traces of disseminated chalcopyrite and small malachite showings. No large fault zones were intersected although the average background grade of copper in this section is much higher than at Site #1, as indicated in the following table:

DDH No.	Corrected Thickness Ft.	Assay Value Cu. %	Remarks
5	11.5	0.90	Includes a small fault zone
5	21.5	0.58	
5	213.0	0.23	
6	6.5	2.4	Includes a small fault zone
6	76.0	0.20	

Diamond drill hole #6 intersected a weathered, vuggy fault zone at a depth of 106 feet and remained in this material until the hole terminated at 185 feet. Recovery in this section was very low and unreliable, hence the assay value can only be applied to a short footage. It is interesting to note that values in fault material are similar to those shown at Site #1. However, the thickness figures are unreliable and it appears likely that this section of the drill hole was diverted to run down a minor fault plane which may only be a few inches thick.

Diamond drill hole #5 intersected a small fault zone between 36 feet and 39 feet and this more than likely indicates the true thickness of the enriched zone intersected in diamond drill hole #6.

GENERAL ASSESSMENT OF DIAMOND DRILLING

A marked difference exists in the type of mineralization and country rock at the two drill locations. At Site #1 the drill sections cut a green-grey, cleaved and occasionally schistose to slightly siliceous rock which is provisionally described as of metavolcanic origin, possibly water lain tuff. The rock is metamorphosed and veined by quartz and calcite with the development of chloritic material at vein margins. Copper mineralization is largely secondary and associated with vein systems. At surface, malachite and traces of azurite can be found on partings but on breaking the rocks sulphides can easily be observed. The background value of copper is remarkably consistent over sections drilled outside the fault zone and is between .04 and .06 percent. Surface chip samples at Hole #8 showed 0.14% copper which is probably too high by a factor of 2 when compared with assays of drill core. Sulphide mineralization is undoubtedly concentrated in the vein systems but isolated, small disseminated blebs are common over much of the rock mass and probably represent redistribution syngenetic material. Significant concentrations of copper in this area occur only in the zone of prominant faulting. The surface expressions of which are usually heavily stained with malachite and limonitic rust. In the drill core these zones are represented by corroded, ferruginous, brecciated material giving an average assay of 4.4% copper over widths of 7.75 feet. Hanging and footwall rocks carry a slight concentration of copper above background but this is usually insufficient to increase the significant mineralized zone by more than a few feet.

South of the First Gulley, generally, and more particularly at Site #4, the country rocks appear to be less schistose and consist of homogeneous grey banded volcanics cut by frequent minor faults and veins. Impressive thicknesses of secondary calcite concentration occur within the general vein system and reach six to eight feet in

width in some cases. Malachite staining is more limited in these rocks and chalcopyrite and pyrite on fresh surfaces. The drilling indicates that the rock mass has been completely ramified by a complex network of quartz and calcite veins accompanied by brecciation and the rock could be described as a partially recrystallized volcanic breccia. Over much of the core recovered the original rock textures and structures in the volcanics have been completely destroyed.

Considerable concentrations of copper sulphide are associated with a secondary recrystallization in the vein systems and background values are four or five times higher than those described from Site #1 averaging 0.23% copper over considerable widths. Surface chip samples indicated 0.43% copper which again reflects an error of 50% in surface sampling.

Copper concentrations of chalcopyrite in minor fault zones has occurred but no discrete fault zone as at Site #1 was intersected by the drilling. Occasional sections of core showed thick lenses of sulphide, but mostly the width of mineralized veins was from one to two inches only. In the absence of planer structures and marker horizons no orientation was discernable in the drilled sections.

CONCLUSIONS AND RECOMMENDATIONS

Results to date, although inconclusive, indicate a potential for small tonnages of relatively high-grade material concentrated in fault zones. On the basis of results at Site #4 there is also a possibility that larger tonnages of lower grade material may exist, although material intersected to date is of sub-economic grade. A program of closely controlled diamond drilling at the sites shown on the map utilizing a wireline drill with modifications for sub-horizontal holes is indicated. This will require considerable access construction in difficult terrain, but this is not unfeasible. The

possibility of combining diamond drilling at these sites with an exploration adit drifting along the fault zone at Site #1 may be considered. This should not be too difficult, technically, as there is sufficient room, with some blasting, to open a portal from the site of drill hole #4. Roof support and portal stability may present a problem but the permafrozen ground should stabilize the area once away from the portal. No obvious alternative portal position is available. Alternatively, further exploration by diamond drilling could be considered, although the topography is somewhat steep and difficult of access. An effort would be required to get a stable cat road a few hundred feet vertically above Site #1 and this would also be necessary to provide access to suggested Sites #2 and #3. It should be possible to get the bulldozer to these locations by contouring sufficiently far northward from the camp as the topography is less steep in this sector. Further diamond drilling in the general vicinity of Site #4, both north and south of the Second Gulley is also indicated.

The points mitigating against an adit at this stage are the lack of information on the continuity of the fault plane and the fact that underground work would be less flexible than diamond drilling. It would seem preferable at this point in development to explore the sites indicated more thoroughly by diamond drilling, this to be followed by a program of adit development, if results warrant.

The ground is considered unsuitable for either generally acceptible geophysical methods or geochemical prospecting. The opening up of access roads and drill sites with caterpillar and blasting may well reveal further showings of interest and any drill program should be under the close supervision of a qualified geologist.

As no accurate maps are available of the property, the early preparation of a contoured topographic map is essential for the

interpretation of drilling results and other data.

FUTURE PROGRAM AND COST ESTIMATES

Preparation of contoured topographic map	$ 1,000.00
Diamond drilling up to 4,000 ft. @ $15/ft.	60,000.00
or	
Alternative 500 ft. drifting 5' x 7' at total cost of $80/ft. and 3,000 ft. of diamond drilling at $15/ft. Estimated costs - $85,000.00	
Sampling and supervision	5,000.00
Camp expenses and air support for six weeks	15,000.00
Equipment hire	12,000.00
Travel expenses other than above	1,000.00
Consultants fees, preparation of reports	2,000.00
Contingencies	14,000.00
TOTAL	$ 110,000.00

Respectfully submitted:

J.F. Pagella, M.A., M.Sc., D.I.C.

J.G. Simpson, B.Sc., Ph.D.

ASSAY RESULTS

Key Claims

Field No.	Assay No.	Location	Type	Au	Ag	Cu	Pb	Sampler
1	16898	*Site #1	15' chip	0.02	0.1	2.16	0.12	J.G. Simpson
2	16899	500' SE of Site #1	Character diss. sulphides	--	-	0.52	--	J.G. Simpson
3	16900	Site #2	15' chip	--	Tr.	1.50	--	J.G. Simpson
4	10501	Site #4	20' chip	--	-	0.98	--	J.F. Pagella
5	10502	Site #4	20' chip	--	-	0.43	--	J.F. Pagella
6	10808	Site #1	25' chip	--	-	0.14	--	J.F. Pagella

* Actual sample line shown on accompanying drill site plans.

CERTIFICATE

I, John Glenn Simpson, residing at 720 Anderson Crescent, West Vancouver, B.C., do hereby certify that:

1. I am a consulting geologist.

2. I graduated from Kings College, London University, U.K., in 1958 with a B.Sc., honours degree in Geology.

3. I was awarded a Ph.D. in geological studies as an external graduate of London University in 1968.

4. I have recently applied for membership to the Association of Professional Engineers of the Province of British Columbia.

5. I have practised my profession since 1958 in Africa and Canada in the employ of the Geological Survey of Zambia (Northern Rhodesia) and Alrae Engineering Ltd. of Vancouver, B.C.

6. I personally planned and directed the exploration program carried out by Alrae Engineering Ltd. on behalf of Bonnet Plume River Mines Ltd. during the field season of 1969.

I have known Mr. J.F. Pagella for five years and can vouch for his competency and professional standing. Neither myself or Mr. Pagella have any interest, either direct or indirect, in the properties of Bonnet Plume River Mines Ltd. or any associated companies or securities pertaining thereto.

DATED AT VANCOUVER, this 28th day of October, A.D. 1969.

J. G. Simpson, B.Sc., Ph.D.

TIME AND COST DISTRIBUTION

Geology and Diamond Drilling - Costs

Personnel

J.G. Simpson	Geologist	$ 1,550.00
J. Pagella	Geologist	2,307.00
G.A. Jilson	Geologist	650.00
E. Robbins	Draftswoman	32.50
D. McLaughlin	Cook	1,462.50
H. Kabanak	Cat Operator	2,812.50
Alrae Consultants Fee		1,050.00
		$ 9,864.50

Camp Costs and Transportation

Aircraft	$ 13,786.80
Camp Supplies	1,379.46
	$ 15,166.26

Assays $ 308.20

Miscellaneous Disbursements

(as per Alrae invoices) $ 1,631.56

Diamond Drilling

Drilling	$ 7,646.38
Access and Drill Sites (Cat Rental)	12,000.00
	$ 19,646.38
Total	$ 46,616.90
Direct Work Costs	$ 40,709.00

KEY CLAIMS

Diamond Drilling (1,424 ft.)	$ 7,646.38
Drill Access (Cat and Operator)	14,812.50
Camp and Transportation Costs 60%	9,099.73
Assaying	308.60
	$ 31,867.21

48 Claims - $22.38/ft. of drilling

Geology - Wages	$ 6,775.31
Camp Costs and Transportation 40%	6,066.48
	$ 12,841.79

56 claims @ $229.28/claim.

Camp Costs and Transportation (applied above)		
	Aircraft	$ 13,786.80
	Camp Supplies (billing Aug 21-Sept 15)	1,379.46
		$ 15,166.26

Group 1	Geology @ $229.28/claim
Group 2	Geology @ $229.28/claim 737 feet diamond drilling @ $22.38 = $1,038.88/claim
Group 3	Geology @ $229.28/claim 434 feet diamond drilling @ $22.38 = $607.06/claim
Group 4	Geology @ 229.28/claim 253 feet diamond drilling @ $22.38 = $353.88/claim

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the city of Vancouver, in the Province of British Columbia, this 28th day of November 1969, A.D.

~~*A Commissioner for taking Affidavits within British Columbia* or~~
A Notary Public in and for the Province of British Columbia.

COLLAR

North
East
Elevation
Azimuth 085° M (111° T)
Dip 45°
Logged By J. Pagelia

ALRAE ENGINEERING LTD.

BONNET PLUME RIVER MINES LTD.
KEY CLAIMS

Final depth = 38' **% Recovery = 75%**

DIAMOND DRILL RECORD

Hole No. 1
Commenced 26 August, 1969
Finished 30 August, 1969 - abandoned
Purpose Of Hole

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU			ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W		% Recovery
0.0'	13.6'	No recovery. In compacted & frozen scree.														
13.6'	15.0'	Slightly schistose grey argillite, or resedimented pyroclastic.														39
15.0'	17.0'	Light grey argillites with fine dark banding dipping 20° to core. Black speckled - often with finely disseminated sulphides and rare thin sulphide veins.	15.0	18.0	3.0'	10829			T					T		100
17.0'	22.0'	As above - core becomes broken with evidence of small scale shear and secondary calcite on partings, and more siliceous.														20
22.0'	23.0'	Light grey siliceous argillite with sulphides on vein and shear surfaces.	22.0	29.9	7.75'	10830			0.04					0.31		100
23.0'	24.6'	As above, but with more frequent thin sulphide veins to the banding.														100
24.6'	27.0'	Grey speckled siliceous argillite with small quartz veins carrying chalcopyrite, malachite appearing on slip surfaces.														70

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	CORE LENGTH ACC WIDTH	CORE LENGTH SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU	ASSAYS	ASSAYS	ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W	ACCUMULATIVE AVERAGES	% Recovery
27.0'	29.0'	Grey occasionally banded speckled argillite with finely disseminated sulphide and occasional concentrations in veins. Partings show malachite staining.														83
29.0'	31.0'	As above. Vuggy secondary calcite vein with Fe,Sulphides and malachite. Speckled grey siliceous argillite as above. Brown/buff argillaceous quartzite with siderite (?), malachite and sulphides.														91
31.0'	38.0'	Massive fractured buff quartzite (?). Fractures stained with iron, and carrying malachite and sulphides. Friable ferruginous shatter zone with abundant sulphides in zones up to 2" thick. Fractured and vuggy quartz breccia with abundant sulphides. Fractured mottled black and white quartz breccia. Sulphides less common and more concentrated into isolated blebs.	31.0	38.0	14.75	10831			3.3					23.41		100
		Hole abandoned due to freezing. Loss of core barrel, bit etc.														

COLLAR

North
East
Elevation Unknown:Approx. 2000
Azimuth 0.85° M (111° T)
Dip 70°
Logged By J.F. Pagelia

ALRAE ENGINEERING LTD.

BONNET PLUME RIVER MINES LTD.

KEY CLAIMS

Final depth = 148' % Recovery = 88%

DIAMOND DRILL RECORD

Hole No. 2
Commenced 27th August, 1969
Finished 29th August, 1969
Purpose Of Hole

DESCRIPTION FROM	TO	DESCRIPTION	CORE LENGTH FROM	TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	AG OZ.	% CU			ACCUMULATIVE AVERAGES AU W	AG W	CU W		% recover
0'	13.0'	No recovery : Broken & Frozen Serve														0
13.0'	15.0'	Broken grey argillite with rare malachite staining on parting.	13.0	15.0												100
15.0'	19.0'	Variable grey and light grey speckled argillite with traces of specular iron.Banding / parting dip 40° to core. Some calcite secondary.														52
19.0'	22.0'	Grey and Dark grey variable siliceous argillites showing micro faulting and sedimentary features. Some finely disseminated sulphides.	20.8	31.6	10.8	10832			0.01							44
22.0'	27.0'	Banded grey and light grey siliceous argillite with micro faults. Some malachite on partings. Sulphide mineralization in rare blebs and on slip planes.														93
27.0'	29.0'	As above. Some malachite on parting surfaces.														92
29.0'	32.0'	Variable occasionally banded light grey siliceous speckled argillite. Sulphide is														100

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	CORE LENGTH ACC WIDTH	CORE LENGTH SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU	ASSAYS	ASSAYS	ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W	ACCUMULATIVE AVERAGES	% recovery
		finely disseminated in specks and concentrated on thin veins and fault surfaces.														
32.0'	33.0'	As above. Malachite more common on parting surfaces.	32.0'	38.3	17.05	10834			0.15					1.05		100
33.0'	34.0'	Light-grey speckled siliceous argillite. May have some siderite. Malachite on partings, rare disseminated sulphides. Plenty of micro faulting and brecciation.														100
34.0'	39.0'	Light-grey speckled argillite or weathered volcanic-indeterminate. Dip 30° to core. Micro faulting. Some malachite on slip surfaces. Sulphides in movement surfaces.														85
39.0'	41.6	Mottled siliceous argillite showing signs of micro faulting etc. Secondary quartz, malachite and some sulphides.	39.9	50.0	27.3	10835			4.80					50.05		70
41.6'	45.0'	Mottled grey and brown quartzite breccia. Traces of calcite and ankerite. Much malachite. Sulphides in nodules and in brecciation parting. Friable ferruginous fault zone with malachite														100

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU			ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W		% recove
		and sulphide mineralization.														
45.0'	50.0'	As above - just slightly less corroded, and with thick concentration of sulphides. Very broken fault brecciated quartzite with vugs filled with sulphides and some malachite. Shattered mottled grey and white quartzite. Sulphides in vugs and broken nodules. Last 6" becomes less broken.														100
50.0'	54.0'	Mottled dark grey siliceous argillite with frequent shear zones often filled with secondary pink quartz. Malachite common, Sulphides in veins and isolated crystals.	50.0'	59.0'	36.3	10836			0.93					58.42		100
54.0'	56.6'	Mottled pink quartzite and siliceous dark grey argillite - both interbrecciated. Rare traces of malachite. Sulphides much less common and associated with movement planes.														100
56.6'	59.0'	Mottled siliceous material as above. Malachite common on parting. Sulphide much less common.														100
59.0'	65.0'	More homogenous less shattered grey (light)	59.0'	71.6'	48.8'	10837			0.08					59.42		100

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	AG OZ.	% CU	Pb	Zn	ACCUMULATIVE AVERAGES AU W	AG W	CU W		% recove
		quartzite with some siderite? Sulphide mineralization is moderately common but very fine on veins // to the banding: Here 66° to core. Malachite rare.														
65.0'	70.6'	Broken grey siliceous argillite / tuff with occasional thin mineralized sulphide veins on the banding.														100
70.6'	72.0'	As above - some signs of malachite on the parting - mostly along the banding.														33
72.0'	76.0'	As above - only rare sulphide grey banded sediments - heavily mineralized with irregular veins and lenses of specular iron, siderite(?) and minor amounts of copper sulphides some secondary quartz (pink) veining.	72.10'	76.0'	52.0	10838		0.02		T	T			59.42		
76.0'	81.0'	Soft grey banded slightly schistose argillite or resedimented tuff. Banding at 32° to core. Rare mineralization on hair veins and rare concentrations of sulphide in blebs.	76.11'	81.0'		-										82
81.0'	82.0'	As above.	81.0'	82.0'		-										100

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU			ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W		% recover
82.0'	84.0'	Soft light grey slightly schistose banded sediments with rare traces of Cu and Fe mineralization.	82.0	84.0												100
84.0'	89.0'	As above.	84.0	85.6												100
		Banded green slightly micaceous sediments showing micro faulting, brecciation, and secondary pink quartz, associated with some sulphide mineralization. Finely banded grey sediments showing irregular brecciation but little mineralization.	85.6	87.6												
			87.6	89.0												
89.0'	92.0'	Mostly evenly banded grey green sediments (44° to core). Some irregular lensing. Little mineralization.														83
92.0'	96.0'	As above														58
96.0'	97.0'	Speckled grey finely banded soft sediments showing secondary quartz and small scale disturbances on banding. Little signs of mineralization.	96.0	97.0												100
97.0'	100.6'	Finely banded grey green sediments with rare Fe and Cu mineralization as sulphides	97.0'	107.1'	10.1	10839			0.03					0.30		90

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	CORE LENGTH ACC WIDTH	CORE LENGTH SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU	ASSAYS	ASSAYS	ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W	ACCUMULATIVE AVERAGES	% recover
		in thin veinlets. Micro faulting and sedi-														
		mentary disturbances.														
100.6	102.6	As above. Minor amounts of calcite on par-														100
		ting surfaces.														
102.6	104.0	Dark grey shaley or micaceous sediments														44
		mineralized along the banding.														
104.0	105.6	Dark grey shaley or micaceous sediments.														50
105.6	109.0	Grey green shaley or micaceous sediments,														100
		mostly even bedded but with zones of micro														
		faulting and disturbances common small														
		scale mineralisation.														
109.0	110.0	Dark grey shales.														17
110.0	112.0	As above. Micro faulted.														67
112.0	116.0	Slightly more massive grey sediments.	112'	121'	9.0'	10840			0.03					0.27		100
		Traces of malachite on parting, and some														
		Fe and Cu in blebs, lenses and on the ban-														
		ding. Some large zones of secondary quartz														
		undoubtedly associated with mineralization-														
		hydrothermal(?).														

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU			ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W		% recovery
116.0	118.0	As above. Banding at 30° to core. Rock is more massive, but with pronounced parting on the banding.														100
118.0	121.0	As above. Rock type is more homogenous. Traces of Fe and Cu minerals are small but persistent. Rare malachite on parting. Mineralisation associated with quartz (not always).														100
121.0	125.0	As above. Quartz rich ;vuggy zone - Ferruginous-friable and weathered. Probable fault area. Some trace of sulphides.														90
125.0	127.0	Speckled grey slightly siliceous sheared or schistose sediments. Traces of mineralisation.														50
127.0	128.0	As above														83
128.0	131.0	Moderately even banded green and grey sediments (banding at 30° to core). Rare small concentration of Cu sulphides.	128.0	131.0												100
131.0	134.0	Green and grey speckled slightly siliceous banded sediments. Rare very small sulphide	131.0	139.0	8.0	10841			0.10					0.80		100

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	CORE LENGTH ACC WIDTH	CORE LENGTH SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU	ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W	% recover
		shows except at 132.3 where 3/4" zone of sulphide is impregnated along banding.											
134.0	139.0	As above - persistant but small sulphide shows.											100
139.0	142.0	Speckled grey green sediments as above with occasional thin sulphide mineralization on banding.											75
142.0	147.0	As above, but with moderately coarse grained mottled siliceous and banded sediments interspersed with black siliceous and possibly mineralized bands. Grey green sediments with occasional sulphide mineral veins along the banding.	139.6	148.0	16.5	10842			0.07			1.40	100
147.0	148.0	Variably coloured green and grey banded sediments with sulphide minerals along the banding.											100
		END OF HOLE: 148 ft.											
		1) Problems encountered due to freezing in the hole every time rods were pulled. Now using Ca Cl.2.											
		2) Unsatisfactory dip for initial prospecting. Initial Hole No. 1 which was approximately at right angles to banding is now being continued.											

COLLAR

North
East
Elevation (?)
Azimuth 075° M
Dip 45°
Logged By J.F. Pagella

ALRAE ENGINEERING LTD.

BONNET PLUME RIVER MINES LTD.
KEY CLAIMS
Final Depth: 168 ft. % Recovery = 96%

Hole No. 3
Commenced 29 August, 1969
Finished 31 August, 1969
Purpose Of Hole

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	AG OZ.	% CU			ACCUMULATIVE AVERAGES AU W	AG W	CU W		% recover
1.0	38.0	As for log of D.D.H. 1a	This is a redrill of hole 1a and shows no important discrepancies over first 38'.													
		Sample check assay:														
15.0	31.0	As for D.D.H. 1	16.0	27.0	11.0	10843	T	0.02	0.11					1.21		
31.0	38.0	As for D.D.H. 1	31.0	38.0	18.0	10844			5.00					36.21		
38.0	40.0	Irregular shattered grey siliceous sediment/ volcanics with secondary quartz. Malachite on partings and some sulphides.														100
			39.0	46.4	25.3	10845			0.10					36.94		
40.0	43.6	Shattered mottled grey and pink quartzite some malachite and sulphide ore on many joints and parting.														71
43.6	45.6	As above. Occasional isolated blebs of sulphides in addition to secondary vein material.														92
45.6	48.0	Speckled grey siliceous sediments/volcanics with some indication of banding at 30° to core. Small amounts of sulphide on joints and isolated blebs and some malachite.														80
48.0	52.0	As above. Most samples carry traces of														100

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	CORE LENGTH ACC WIDTH	CORE LENGTH SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU	ASSAYS Pb	ASSAYS Zn	ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W		% recover
		sulphides and indication of malachite.	48.0	56.6	33.8	10846			0.07					37.54		
52.0	55.0	Less siliceous grey speckled sediments/														83
		volcanic becoming darker. No malachite or														
		traces of sulphides obvious.														
55.0	57.0	Grey sediments as above. Some sulphides														100
		in veinlets. Light grey siliceous speckled														
		rock with traces of sulphides.														
57.0	60.0	Speckled dark grey banded sediments ini-	57.0	58.6												50
		tially dipping 20° to core, but reducing to														
		10° in lighter material at 58' onwards. Some														
		minor amounts of sulphides.														
60.0	67.0	Moderately finely banded hence fissile grey/														80
		green sediments/volcanics with traces of	60.0	68.8	8.7	10847			0.02	T	T			0.17		
		malachite and sulphides. Disturbed green														
		zone with recrystallised quartz carrying														
		specular iron but little trace of Cu minerals.														
		More homogenous fine banded grey sedi-														
		ments.														
67.0	70.0	Moderately finely banded speckled grey														89
		sediments/volcanics with occasional thin														

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	AG OZ.	% CU	Pb		ACCUMULATIVE AVERAGES AU W	AG W	CU W		% recover
		sulphide mineralised veins on banding. Mottled recrystallised green quartz rich disturbed zone with specular iron.														
70.0	74.0	Finely banded grey green sediments. Banding shows disturbances. Variable banded grey rocks with one or two recrystallised quartz rich green (chlorite?) zones carrying specular iron and some sulphides.	70.0	70.8												100
			70.8	74.0												
74.0	76.0	Banded moderately fissile green sediments/ volcanics showing minor sedimentary disturbances. May have rare traces of sulphides.	74.0	76.0												100
76.0	78.0	As above. Banding at 12° to core. Some thin mottled disturbed bands with Fe.	76.0	78.0												100
78.0	82.6	Homogenous banded light grey sediments/ volcanics with rare thin traces of sulphide mineralisation along occasional bands.														100
			78.0	85.0	7.0	10848			0.02	T				0.14		
82.6	85.0	As above. Less homogenous zone including some recrystallised quartz veins carrying Fe.														100
85.0	89.0	Monotonous grey finely banded sediments/	85.0	89.0												100

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	CORE LENGTH ACC WIDTH	CORE LENGTH SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU	ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W	% recovery
		volcanics with minor sedimentary disturbances. Little signs of mineralisation.											
89.0	92.6	As above.	89.0	92.6									100
92.6	95.0	Homogenous grey banded sediments/volcanics.											
		At 94' a 2" replacement zone with much calco-	92.6	103.0	10.5	10849			0.06			0.63	100
		pyrite. Banding now at 5°-8° to core.											
95.0	98.0	As above. Traces of sulphides on partings and											100
		banding. Coarse grained speckled green and											
		brown zone, banded. Could be metasomatic											
		replacement. Fissile homogenous grey banded											
		material.											
98.0	103.0	Monotonous grey sediments with more frequent											100
		zones of coarse grained speckled rock and oc-											
		casional replacement zones carrying some											
		sulphides.											
103.0	108.0	As above. Rare traces of sulphides an occas-	103.0	108.0									100
		sional banding at 18° to core axis.											
108.0	109.0	Speckled fine grey sediments with disturbed											100
		coarse grained green replacement band car-											
		rying considerable chalcopyrite and some	108.0	119.0	11.0	10850	T	0.02	0.04			0.44	
		specular iron?											

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU	ASSAYS Pb	ASSAYS Zn	ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W		% recover
109.0	114.0	Monotonous grey regularly banded sediments/ volcanics with some sulphide and occasional quartz rich replacement zones with Fe & Cu.														100
114.0	119.0	Massive green chlorite? band. Grey finely banded homogenous sediments occasionally with speckled greenish bands which occasionally carry sulphides and specular iron.														100
119.0	124.0	Grey banded sediments/volcanics with moderately common chlorite? rich green zones often slightly more mineralized. Traces of sulphides persist-no concentrations.	119.0	124.0												100
124.0	125.6	As above. Some signs of Fe ore in addition.	124.0	135.6	11.5	10801			0.04	T	T			0.46		100
125.0	130.3	Grey rocks as above. Zones of quartz enriched green disturbed replacement material carrying copper sulphides and some iron - also occasional mineralised veinlets as replacement along banding.														
130.3	135.6	Evenly banded grey and green bands as before - the latter persistently showing small but regular sign of copper and iron minerals.														100

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU			ACCUMULATIVE AVERAGES AU W	AG W	CU W		% recover
		These green zones often show minor dis-														
		turbances.														
135.6	139.6	As above. Becomes lighter and with slightly														100
		less frequent greenish bands towards base.	135.6	145.0	21.0	10802			0.02					0.75		
139.6	145.0	As above. Minor amounts of copper and Fe														100
		mineralization persist through the core.														
145.0	149.6	As above. Occasional disturbed quartz rich														100
		replacement zones carrying Fe and Cu (less)	145.0	149.0												
		over 1"-2". May include siderite.														
149.6	154.9	Brecciated and disturbed zone with quartz	149.6	152.0												100
		veining in green chlorite? rock faintly														
		mineralized. Less regularly banded green	152.0	154.9												
		chlorite? rock. Little sign of mineralization														
		except some specular iron at 154.7 in quartz														
		replacement zone - with Cu sulphide.														
154.9	160.0	Faulted (micro) and disturbed chlorite rock														100
		with grey banded less disturbed zones.	154.9	168.0	13.25	10803			0.03					0.40		
		General impression is a more green unit.														
		Some secondary quartz but very sparse														
		mineralization. Less disturbed rocks but														

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	CORE LENGTH ACC WIDTH	CORE LENGTH SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU	ASSAYS	ASSAYS	ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W	ACCUMULATIVE AVERAGES	% recove
		as described as above.														
160.0	165.5	Micro faulted green/grey banded material														100
		with some mineralization. Moderately even														
		banded grey/green sediments/volcanics with														
		occasional quartz rich replacement zones,														
		showing Fe and Cu mineralization.														
165.5	168.0	As above. Quartz rich zone at 167' carrying														
		much chalcopyrite and specular Fe.														

COLLAR
North
East
Elevation
Azimuth 360° M
Dip 55°
Logged By J.F. Pagella

ALRAE ENGINEERING LTD.

BONNET PLUME RIVER MINES LTD.(NPL)

KEY CLAIMS

Total length = 221' **% Recovery = 89**

DIAMOND DRILL RECORD

Hole No. 4
Commenced 31 August, 1969
Finished 3 September, 1969
Purpose Of Hole

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	CORE LENGTH ACC WIDTH	CORE LENGTH SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU	ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W	% recovery
0.0	2.0	No recovery.											
2.0	18.0	Broken fragments of slightly schistose grey green volcanics/sediments, with occasional more massive siliceous parts. Malachite staining but little unweathered sulphide.											
18.0	19.0	Grey green more massive banded siliceous argillite/volcanics with malachite staining and some thin sulphide veinlets Calcite on joint surfaces. Banding at 60° to core and trace of azurite.	19.0	23.1	4.1	10804			0.05			0.21	100
19.0	21.0	Less siliceous grey green schistose argillite. Little trace of mineralization.											100
21.0	22.0	Fragments of dark rock as above.											33
22.0	23.0	Speckled green/grey banded and slightly schistose or siliceous volcanics. Traces of malachite.											75
23.0	24.0	As above, becoming more massive and siliceous? No worthwhile mineral shows.											100

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	CORE LENGTH ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU	ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W	% recover
24.0	25.0	Grey slightly schistose disturbed volcanics with replacement brecciated? some, secondary quartz, malachite and some sulphides.	24.0	36.11	12.0	10805			0.05			0.61	100
25.0	26.0	Green banded schistose volcanics with disturbed and recrystallized some as above. Some Fe mineralization.											100
26.0	27.0	Green dark schistose rock. No minerals.											100
27.0	28.6	Sheared green schistose volcanics, traces of malachite.											100
28.6	29.0	As above.											
29.0	30.0	Speckled banded green grey schistose volcanics. Traces of malachite.											100
30.0	32.0	As above. Fragments recovered.											17
32.0	34.0	As above. Fragment recovered.											17
34.0	36.0	Grey volcanics, with fracture zones enriched with secondary quartz, faintly mineralized. Traces of malachite.											62

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU			ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W		% recovery
36.0	37.0	As above : traces of malachite.														75
37.0	37.6	Platy schistose dark grey/green volcanics. No mineralization.														100
37.6	39.0	Variable partly siliceous grey green material. Distortion illustrated by flexures in the schistosity? Some traces of Fe minerals.														66
39.0	40.6	As above.														100
40.6	42.0	Blocky dark grey disturbed volcanics. Some sulphide mineralization.	40.6	49.7	9.1	10806		0.08	0.02					0.18		39
42.0	44.0	Banded grey schistose material. Dip to core 60°. No mineralization.														100
44.0	46.3	As above.														70
46.3	49.0	Banded moderately undisturbed grey siliceous volcanics with some green massive bands. Traces of mineralization.														100
49.0	51.0	As above.														100

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	CORE LENGTH ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU	ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W	% recovery
51.0	52.0	Fractured and blocky material as above.											100
52.0	53.0	Dark grey smooth more even shaly looking material. No minerals obvious.	52.0	53.0									100
53.0	55.0	As above, becoming dark green. Quartz rich replacement zone. Possibly mylonitized flour, chlorite, some calcite but little sign of economic minerals.	53.0	54.3									
			54.3	55.0									100
55.0	57.0	Dark grey banded shaly volcanics. Dip at 60o to core. Traces of malachite.	55.0	63.3	8.25	10807			0.04			0.33	100
57.0	59.0	As above. May be faint traces of siderite/ hematite on veins? Quartz rich brecciated zone with traces of malachite.											100
59.0	60.0	As above, but becoming dark grey shaly material.											90
60.0	61.6	Dark grey banded shaly volcanics? with some quartz rich zones - little trace of mineralization.											70
61.6	64.0	Green finely banded shaly material with											100

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU			ACCUMULATIVE AVERAGES AU W	AG W	CU W		% Recover
		Mainly mineralized quartz rich brecciation and replacement lenses.														
64.0	67.6	Banded dark grey green volcanics. Traces of Bornite? Fe mineralized hair veins occasionally. Banding dips 72° to core. Disturbed zone with quartz rich breccia and some sulphides.	64.0	65.9												100
			65.9	67.6												
67.6	68.0	Banded dark grey volcanics as above.	67.6	68.0												100
68.0	72.6	Moderately uniform grey banded volcanics	68.0	69.4												100
		Dark green coarse grained band band. Dip at 60° to core. Uniform grey banded volcanics - mostly unmineralized.	69.4	69.7												
			69.7	72.6												
72.6	74.0	As above.	72.6	73.6												100
		Quartz rich replacement brecciated zone with sulphide mineralization and metamorphic minerals - chlorite, serpentine etc?														
74.0	77.0	Uniform speckled grey banded volcanics	74.0	77.0												100
		with occasional coarse green thin hard replacement? zones. Mostly apparently unmineralized.														

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU			ACCUMULATIVE AVERAGES AU W	AG W	CU W		% recovery
77.0	81.0	As above. Occasional small scale sedimentary &r flow disturbances.	77.0	81.0												100
81.0	84.0	As above - still largely unmineralised.	81.0	84.0												100
84.0	89.0	Less evenly banded speckled, fairly coarse grained siliceous volcanics. Traces of Cu & Fe. Sulphides and secondary quartz.	84.0	89.0												
89.0	91.6	Moderately homogeneous hard occasionally banded coarse grained speckled grey volcanics with traces of sulphide (rare).	89.0	91.6												100
91.6	94.0	As above. Rare traces of sulphides can be seen. Not worth sampling.														100
94.0	96.0	As above. Monotonous grey banded sequence.	94.0	96.0												100
96.0	98.0	Grey evenly banded sequence as above.	96.0	97.3												100
		Some calcite on banding/parting. Quartz rich disturbed replacement zone with some Cu sulphides.	97.3	97.7												
		Grey even siliceous unmineralised volcanics.	97.7	98.0												
98.0	101.0	Grey siliceous banded unmineralised volcanics with occasional quartz rich chlorite replacement zones. No apparent sulphides.	98.0	101.0												100

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU			ACCUMULATIVE AVERAGES AU W	AG W	CU W		% recovery
101.0	102.0	As above. Quartz rich replacement zone with	101.0	101.6												100
		rare traces of sulphides.	101.6	102.0												
102.0	103.0	Grey banded unmineralised sediments/?	102.0	103.0												100
		volcanics.														
103.0	105.0	Grey banded monotonous siliceous volcanics	103.0	105.0												100
		as above. Banding at 50° to core. Thin quartz	105.0													
		replacement zone mx with sulphides at 105.0	105.0													
105.0	107.0	Blocky grey variable volcanics, less evenly														88
		banded. Some coarse harder zones. No ap-														
		parent economic minerals.														
107.0	108.6	As above some siliceous material lensing														55
		into volcanics.														
108.6	110.0	Coarse grained grey and brown speckled	108.6	110.6												110
		more massive hard siliceous volcanics. May														
		be recrystallised or metasomatic zone.														
		Grey banded softer volcanics as usual.	110.6	110.0												
111.0	112.0	Grey siliceous banded volcanics.	111.0	112.0												100
112.0	115.6	Grey siliceous banded volcanics with some	112.0	115.6												100

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU			ACCUMULATIVE AVERAGES AU W	AG W	CU W		% recover
		thin quartz rich replacement zones showing traces of Cu and Fe sulphides.														
115.6	117.0	Grey more massive siliceous banded volcanics.	115.6	117.0												100
117.0	122.0	Massive speckled brown and grey hard ferruginous? volcanics as per 111.0 above, with some more banded softer units and two thin quartz rich chlorite replacement zones, both carrying sulphide. At 119.3 heavily mineralized over 1".	117.0	124.0	7.0	10809			0.02					0.14		100
122.0	124.0	As above. Little trace of sulphides.														100
124.0	127.6	As above. Homogeneous grey more massive banded speckled volcanics with some micro faulting. Banding at 52°.	124.0	124.9												100
			124.9	127.0												
127.6	128.0	Hard cumree brown and grey massive speckled metasomatic ferruginous? zones.	127.6	128.0												100
128.0	130.0	Usual grey siliceous banded volcanics. Hard cumree brown ferruginous band. Grey siliceous banded volcanics.	128.0	129.0												100
			129.0	129.9												
			129.9	130.0												

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU			ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W		% recovery
130.0	132.0	Grey slightly biotitybanded volcanics.	130.0	131.0												61
132.0	134.0	Green and grey banded volcanics with minor disturbances and traces of mineralisation.	132.0	140.1	8.1	10810			0.06					0.49		91
134.0	137.0	As above : minor micro faulting and disturbances and rare traces of sulphides.														72
137.0	138.0	Dark grey biotyvolcanics/argillites.														25
138.0	139.3	Banded speckled grey/green volcanics with more massive zones and occasional quartz rich replacement zones. Persistent traces of sulphides.														87
142.0	143.6	Dark grey banded volcanics-apparently unmineralised.	142.0	143.4												89
143.6	148.0	Moderately evenly banded grey volcanics with occasional thin dense green bands. Banding at 60° to core. Some thin quartz rich replacement zones carrying minor sulphides.	143.6	148.0												100
148.0	149.0	Brecciated and partially replaced green zone with some mineralisation. Mostly Fe.	148.0	156.6	8.5	10811			0.02					0.17		100

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU			ACCUMULATIVE AVERAGES AU W	AG W	CU W		% recovery
149.0	152.0	As above. Small specks of Sulphide (Cu). Homogeneous silty slightly less banded grey volcanics.														100
152.0	154.0	Homogeneous siliceous grey volcanics with some banding and traces of minerals often in veinlets.														75
154.0	156.0	As above.														100
156.0	158.0	Dark grey more homogenous volcanics with some sulphide on banding.														50
158.0	160.0	Grey banded volcanics with traces of sulphides in banding and some thin quartz rich brecciated chloritic zones.														88
160.0	161.0	Grey siliceous banded volcanics with traces of sulphides on banding.														88
161.0	162.0	Blocky dark grey siliceous slightly schistose argillite.														84
162.0	166.0	Siliceous light grey volcanics with dark green bands. Coarse grained speckled	162.0	162.9												100

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	CORE LENGTH ACC WIDTH	CORE LENGTH SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU	ASSAYS	ASSAYS	ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W	ACCUMULATIVE AVERAGES	% recover
		hard massive dark green "doleritic"? intrusive band. Moderately homogeneous massive or partially banded light grey volcanics with traces of sulphide, some fracturing, and some green banding.	162.9	163.3												
			163.3	166.0												
166.0	170.0	Variable bands of schistose grey or green siliceous volcanics with some quartz rich replacement bands with sulphides. Coarse grained fine bands of chloritic and siderite? quartz rich bands - may be faintly mineralised.	166.6	169.3												88
			169.3	170.0												
170.0	172.0	As above.	170.0	172.00												100
172.0	174.0	Fragments of dark grey slightly schistose argillite with some more siliceous bands. No apparent mineralisation.														
174.0	175.0	Grey siliceous banded volcanics with thin chloritic sideritic and quartzose replacement band with sulphides.	174.0	175.0												100
175.0	177.0	Banded grey volcanics as above with faintly mineralised green zones.	175.0	176.6												88

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU			ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W		% recover
177.0	178.0	Quartz and chlorite rich replacement zones in grey volcanics - faintly mineralized.	177.0	178.0												100
178.0	182.0	As above. Alternating zones of variable grain size. All are faintly schistose, most appear siliceous to some extent. Some 3" disturbed quartz - rich replacement bands with sulphides - particularly at 179.6.	178.0	182.0												100
182.0	183.0	Green doleritic? intrusive band in grey volcanics with some recrystallized hair veins.	182.0	183.0												100
183.0	186.0	Coarse grained chloritic and siliceous bands faintly mineralized. Broken fragments of grey homogeneous siliceous argillite.	183.0	183.6												40
186.0	189.6	Grey banded siliceous volcanics with some thin green chloritic hard bands and occasional quartz rich replacement zones and occasional traces of sulphides.	186.2	189.6												95
189.6	191.6	As above. Core broken into fragments.	189.6	190.6												50
191.6	193.0	Grey banded volcanics with some disturbances - unmineralized.	191.6	193.0												100

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU			ACCUMULATIVE AVERAGES AU W	AG W	CU W		% recovery
193.0	194.0	Grey banded volcanics with some thin green dolcritic bands and rare traces of quartz rich mineralized zones.	193.0	194.0												100
194.0	196.0	Moderately homogeneous banded siliceous? volcanics with occasional sulphide rich bands and mineralized veins cutting across banding.	194.0	196.0												100
196.0	198.0	As above. Core becomes blocky dark grey fragments.	196.0	197.0												50
198.0	201.0	Grey siliceous rare homogeneous banded volcanics with some sulphides in very thin veins and traces of malachite on partings.														66
201.0	202.0	Blocky fragments as above. No mineralization.	201.0	202.0												100
202.0	204.0	Homogeneous grey siliceous volcanics with rare sulphide shears. Moderately heavily mineralized banded green chloritic and siliceous zone.	202.0	212.0	10.0	10812			0.02					0.20		100
204.0	206.0	More homogeneous siliceous volcanics with some disturbed chloritic bands and traces of sulphides.														100

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	AG OZ.	% CU			ACCUMULATIVE AVERAGES AU W	AG W	CU W		% recovered
206.0	207.6	Grey banded volcanics with some more siliceous lighter bands.														100
207.6	209.0	Massive grey siliceous volcanics with rare traces of sulphide mineralization.														100
209.0	212.0	Banded but blocky slightly specked ferruginous grey volcanics. Unmineralized.														100
212.0	214.0	Banded grey and green alternate chloritic and quartz rich bands quite heavily mineralized with Cu sulphides over about 212.6-217.3	212.0	219.0	17.0	10813			0.13					1.11		100
214.0	217.0	Dark grey blocky volcanics becoming lighter. Traces of sulphides and malachite.														33
217.0	219.6	Grey banded volcanics with occasional siliceous very thin bands. Persistent traces of malachite and sulphides.														100
219.6	221.0	Banded grey material becoming harder with bands of pink quartz. Persistent traces of malachite and rare sulphide specks. Appears as a siliceous metasomatic or intrusive phase.							Hole finished 221'							100

COLLAR

North Site 4
East
Elevation
Azimuth 283° M
Dip 040°
Logged By J.F. Pagella

ALRAE ENGINEERING LTD.

BONNET PLUME RIVER MINES LTD. (N.P.L.

KEY CLAIMS

Mag variation 35° E Total depth = 249' % Recovery = 98

DIAMOND DRILL RECORD

Hole No. 5
Commenced 3 September, 1969
Finished 6 September, 1969
Purpose Of Hole Grade exploration

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	CORE LENGTH ACC WIDTH	CORE LENGTH SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU	ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W	% recovery
0.0	7.6	Siliceous grey brecciated fragments with some malachite.											
7.6	8.6	Grey siliceous volcanics ?undergoing fault and possibly volcanic brecciation and metasomatism. Some malachite and Cu sulphides.	7.6	15.2	7.7	10814			0.39			3.00	84
8.6	10.0	Quartz rich breccia or brecciated zone in grey volcanics - probably underground igneous intrusive or metasomatic effects. Persistent sulphide shows and malachite smears.											100
10.0	11.0	As above: No orientation left from original volcanic banding. Traces of malachite and sulphides.											100
11.0	12.6	Grey brecciated quartz rich zones as above. Regular sulphide shows.											89
12.6	14.6	Coarse siliceous brecciated volcanics with traces of original banding. Rare traces of sulphides.											75
.6	16.0	Quartz rich volcanic breccia with some											100

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	CORE LENGTH ACC WIDTH	CORE LENGTH SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU	ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W	% recovery
		secondary quartz veins. Persistent sulphides											
		and some malachite.											
16.0	19.6	Brecciated and siliceous grey volcanics,											100
		completely impregnated with secondary	16.0	24.6	16.2	10815			0.14			4.19	
		quartz veinlets. Persistent malachite and											
		some sulphides.											
19.6	22.0	Grey banded partially metamorphosed vol-											90
		canics with quartz veins. Banding at 50° to											
		core. Becomes brecciated and fragmented to-											
		wards base. Traces of malachite and sulphides.											
22.0	23.0	Fragments as above with some sulphides											50
		and malachite.											
23.0	24.0	Grey blocky siliceous volcanics. Secondary											100
		quartz veining and partially fragmented.											
		Traces of Cu minerals.											
24.0	25.3	Green and grey brecciated volcanics showing											100
		remnant banding. Abundant malachite but lit-											
		tle sulphides left.											
25.3	28.0	Sequence of shattered and intruded grey	25.3	36.6	27.45	10817			0.12			5.54	100

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU			ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W		% recover
		siliceous volcanics. Some additional quartz														
		veining and volcanic brecciation. Persistant														
		traces of Cu minerals.														
28.30	30.0	Volcanic flow banded sequence brecciated														100
		and intruded by siliceous and mineralized me-														
		tasomatic solutions. Traces of Cu minerals.														
30.0	33.0	Grey volcanic breccia with high percentage of														100
		replacement quartz and some sulphide -epi-														
		genetic for sure.														
33.0	36.6	Brecciated volcanic material -less secondary														100
		silica. Quartz rich metasomatised volcanics														
		with sulphide and malachite.														
36.6	39.6	Shattered fault zone - Slickensided and sheared														100
		fragments - vuggy quartz with some Cu.														
		More homogeneous speckled massive dark grey														
		volcanic or intrusive. Some malachite.														
39.6	41.0	As above, but becoming less homogeneous														100
41.0	46.6	As above, but showing signs of intrusive														100
		brecciation and secondary mineralisation.	41.0	51.6	10.5	10817			0.13					1.37		

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	CORE LENGTH ACC WIDTH	CORE LENGTH SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU	ASSAYS	ASSAYS	ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W	ACCUMULATIVE AVERAGES	% recovery
		More Cu minerals. Mineralized grey volcanic breccia. This appears as a patchwork of grey volcanic xenolith (almost)completely and intimately intruded on all scalesby siliceous and copper bearing material - either hydrothermal or pneumatolytic in origin. Micro faulting is additional to the intrusive brecciation. This description applies to much of the underlying rock, and reference will be made to this description.														
Description "A"																
46.6	47.6	As above: less SiO2, Less Cu.														100
47.6	51.6	Description as above "A". Remeenble grade of Cu sulphide over much of core.														
51.6	55.0	As above "A". Copper sulphide mineralization is nicely illustrated following secondary quartz veining. Apparently some earlier? siliceous recrystallization bands follow the original bedding-appear less mineralized.	51.6	62.0	21.0	10818			0.24					3.89		100
55.0	58.0	As above. Considerable sulphide-particularly over lower 18".														100
58.0	62.0	As above. Excellent core! Illustrates less														100

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU			ACCUMULATIVE AVERAGES AU W	AG W	CU W		% recover
		violent phase of quartz metasomatic or pneu-														
		matolytic intimate intrusion. Original banding														
		not too disturbed.														
62.0	67.0	Quartz rich volcanic breccia as above "A".														100
		Less complete brecciation and original lava	62.0	73.0	32.0	10819			0.13					5.32		
		banding is often clear. Some sulphides and malachite.														
67.0	72.0	As above. Brecciation more complete.														100
		Persistant concentrations of epigenetic quartz														
		and copper sulphides-traces of malachite.														
72.0	73.0	As above.														100
73.0	78.3	As above. Some malachite on weathered	73.0	83.0	42.0	10820			0.33					8.62		100
		shear surfaces														
78.3	83.0	As above. Description "A". Rock is altered														100
		to appearance of acidic intrusive. Fairly														
		high grade ore.														
83.0	88.9	As above. Identical rock in all respects -	83.0	97.0	56.0	10821			0.37					13.80		100
		moderate high grade Cu Sulphide.														
88.9	93.9	As above. Less high percentage of sulphide														100
		shows in breaks over last 3 feet.														

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU			ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W		% recover
94.9	99.6	As above. Higher grade epigenetic sulphides in completely intruded and metasomatised volcanic breccia.	97.0	103.6	62.5	10822			0.19					15.04		100
99.6	103.6	As above. Noticeably less mineralisation in the lower 2'.														100
103.6	108.9	As above. Completely brecciated and metasomatised material. Grade at top may be less but lower 3' is high.	103.6	114.0	73.0	10823			0.17					16.83		100
108.9	114.0	As above. Grade varies.														100
114.0	116.6	As above : Less High grade??	114.0	121.6	78.5	10824			0.13					17.81		100
116.6	121.6	Grey completely metasomatised recrystallised material as above. Original volcanics exist as completely disjointed grey xenoliths. Some quarts veining, with some chlorite or biotite appearing. Less copper sulphides apparent.														100
121.6	124.6	Partially fragmented siliceous rocks as above. May be fault zone. Little obvious signs of minerals.														84

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	CORE LENGTH ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU			ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W		% recover
124.6	129.6	Grey recrystallised metasomatised volcanic														
		breccia as per description "A" above. Fre-	124.6	135.0	10.5	10825			0.27					2.84		100
		quent sulphide concentration, but grade may														
		be low.														
129.6	134.0	As above. Less violently metasomatised zone														100
		over top 14". Continuous reasonable grade														
		sulphide shows.														
134.0	139.0	As above. Siliceous only partly intruded,														100
		partly brecciated banded volcanics. Obvious	135.0	144.0	19.5	10825	A		0.13					4.01		
		epigenetic sulphide in quartz rich intrusive														
		veins and veinlets but some additional fine														
		dissemination visible in breaks. Partial re-														
		crystallisation - may be more marginal to														
		vent or to metasomatic front.														
139.0	144.0	As above. Much detail visible of method														100
		of siliceous intrusion etc. Instructive core.														
		However it appears less mineralised.														
144.0	147.0	Partly silicified banded grey and pinkish vol-														100
		canics. Moderately intimate quartz veining.	144.0	155.0	30.5	10825	D		0.23					6.54		
		Sulphides appear mostly restricted to some														
		veining, but fine disseminations exist through														

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	CORE LENGTH ACC WIDTH	CORE LENGTH SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU	ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W	% recover
		much of the material in places.											
147.0	150.0	As above. Some malachite on shear faces.											100
150.0	155.0	Partially brecciated and intruded banded volcanics with more brecciated zones. Frequent persistant small concentration of sulphides-often apparently along restricted bands. Trace of hematite?											100
155.0	160.0	As above. Occasional thick sulphide with veins (1/4"), but otherwise irregular though persistant small concentration through rock mass.	155.0	165.0	40.5	10825 G			0.12			7.74	100
160.0	165.0	Grey banded volcanics, brecciated, intruded and metasomatised with siliceous sulphide bearing material. Calcite recrystallisation with biotite mica and quartz. Persistant sulphides.											100
165.0	169.0	Pink and grey banded volcanics, comparatively undisturbed, but with intrusive veins and recrystallisation zones of quartz and some calcite. Cu sulphides becoming more	165.0	169.0	44.5	10825 B			0.15			8.34	100

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU			ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W		% recovery
		scattered - traces of malachite common.														
169.0	172.0	Cavity. Malachite stained fragments in grey banded volcanics. Little mineralization. May be fault.														39
172.0	176.6	Partially brecciated grey volcanics with veins of calcite, quartz and rare biotite. Some malachite but little mineralization.	172.0	176.0												89
176.6	180.0	Banded grey volcanics. Rare traces of sulphide minerals.	176.6	179.6												86
180.0	185.0	Grey partially intruded banded grey and reddish volcanics. Persistant traces of sulphides.	180.0	191.0	11.0	10825 H			0.07					0.77		100
185.0	186.0	Banded grey, green and reddish volcanics. Frequent traces of malachite but little sulphides.														100
186.0	191.0	As above. Considerable examples of micro faulting and tectonic disturbance. Persistant small traces of sulphides and malachite.														100
191.0	196.0	Grey banded volcanics and breccia becoming														100

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU			ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W		%
		more intimately intruded with siliceous ma-	191.0	201.0	21.0	10825H			0.14					2.17		100
		terial. Fine sulphides disseminated through														
		rock and some large sulphide concentrations.														
		Becoming more brecciated.														
196.0	201.0	Intruded grey volcanics and volcanic breccia.														100
		Calcite, quartz, some Ferromags, Malachite														
		and sulphides. Irregular concentrations,														
		but persistant.														
201.0	206.0	As above. Persistant malachite and sulphide														100
		shows, particularly in secondary quartz and	201.0	206.0												
		calcite veins, but little concentration.														
206.0	211.0	Volcanic breccia completely intruded by sil-	206.0	214.6	8.5	10825 G			0.14					1.19		100
		iceous material with some calcite. Frequent														
		sulphide shows and concentrations. Good grade.														
211.0	213.6	Banded grey green volcanics with secondary														100
		calcite and quartz veining. Some sulphides														
		and malachite on banding. Less disseminated														
		crystals.														
213.6	214.6	As above. Some drusy cavities														

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	CORE LENGTH ACC WIDTH	CORE LENGTH SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU	ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W	% recovery
214.6	219.6	Upper foot in intruded grey banded volcanics, then in completely metasomatised calcite quartz rich volcanic breccia. Sulphide concentration varies some rich bands but mostly isolated concentrations.	214.6	224.9	18.75	10825 J			0.16			2.83	100
219.6	224.9	Completely altered almost granitised breccia. Quartz, Calcite, Mica and some sulphides. Little trace of original structures left. This is almost pegmatite. Little concentration of economic minerals.											100
224.9	230.0	As above, slightly less completely metamorphosed, and carrying considerably more sulphides.	224.9	234.9	28.75	10825 F			0.22			5.03	100
230.0	235.6	As above. Regular sulphide shows. Shattered vuggy fault zone with sulphides and abundant malachite - derived from what was once a heavily mineralised plane.	234.9	246.3	40.25	10825 K			0.90			15.38	100
235.6	241.0	Fault zone as above. Vuggy. Intimately intruded and replaced grey volcanics and volcanic breccia. Secondary Quartz, Calcite and frequent sulphides.											100

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	CORE LENGTH ACC WIDTH	CORE LENGTH SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU	ASSAYS	ASSAYS	ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W	ACCUMULATIVE AVERAGES	% recovery
241.0	246.3	Completely recrystallized calcite and quartz matrix with xenolith of banded volcanics. Upper 2'6" is not obviously mineralized, but frequent shows in lower 2'.														100
246.3	249.0	White calcite rock. Recrystallized coarse grained calcite - may have some quartz. No sulphides. Calcite rich grey intrusive breccia as before.	246.3	247.3												100
			247.3	249.0												
		END OF HOLE 249' 0".														

COLLAR

North
East
Elevation
Azimuth 295° M - (330° T)
Dip 55°
Logged By J.F. Pagella

ALRAE ENGINEERING LTD.

BONNET PLUME RIVER MINES LTD. (N.P.L.)
KEY CLAIMS

Total length = 185' **% Recovery = 56%**

DIAMOND DRILL RECORD

Hole No. 6
Commenced 6 September, 1969
Finished 8 September, 1969
Purpose Of Hole

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	CORE LENGTH ACC WIDTH	CORE LENGTH SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU	ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W	% recover
0.0	10.0	No recovery											
10.0	11.0	Fragments of grey and brown volcanic breccia undergoing metasomatic alteration and intrusion.	10.0	11.0									100
11.0	13.0	Volcanic breccia, broken by faulting, and intrusion brecciation. Some sulphides mostly in secondary siliceous veins.	11.6	22.0	10.5	10825 L			0.35			3.68	87
13.0	15.0	Grey blocky and partially eroded volcanic breccia as above. Considerable sulphide in veins.											87
15.0	17.6	Weathered blocky brown and grey intruded volcanic breccia. Traces of sulphides and frequent malachite staining. Core is vuggy and friable in places with secondary calcite common.											100
17.6	22.0	Grey weathered breccia as above becoming less weathered grey volcanics completely broken up by network of siliceous and calcitic sulphide bearing veins. Sulphide often in vugs.											100

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	CORE LENGTH ACC WIDTH	CORE LENGTH SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU	ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W	% recovery
22.0	27.0	As above. Irregular but persistant minor concentrations of sulphides.	22.0	31.6	20.0	10825 M			0.23			5.87	100
27.0	31.6	Shattered and vuggy quartz rich iron bearing zone as above. Grey breccinted intruded volcanic breccia with Cu.											100
31.6	33.0	Broken and brecciated volcanics as above. Little trace of copper mineralization.	31.6	33.0									100
32.0	36.6	Grey and brown siliceous partially breccia-ted banded volcanics with malachite on shear or parting and frequent thin sulphide shows in veinlets.	33.2	40.0	6.8	10825 O			0.14			0.95	76
36.6	38.0	As above. Same vuggy veins with quartz/ calcite. Volcanics become more completely metasomatised.											100
38.0	40.0	As above. Small shows of sulphides and malachite staining.											100
40.0	45.0	Grey breccinted and intruded banded volcan-ics. Calcite and quartz recrystallising in veinlets. Nice evidence of epigenetic sulphides	40.0	50.6	17.3	10825 N			0.33			4.42	100

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU			ACCUMULATIVE AVERAGES AU W	AG W	CU W		% recovery
		following secondary veinlets. Regular sulphide shows. Some micro faulting.														
45.0	48.0	As above. Regular but slightly less common sulphide shows.														100
48.0	52.0	As above. Grey and green (chlorite?) volcanic breccia. More homogenous than usual, thus little veining and no apparent mineralisation.	50.0	52.0												100
52.0	57.0	Partially brecciated and intruded calcite and quartz veined banded grey volcanics. Some sulphide shows, but less than in sample 40'-45' above. Some schistose development in shear surfaces.														86
57.0	62.0	"Homogenous" grey volcanic breccia with sporadic but persistant sulphide shows and some malachite.														100
62.0	64.0	Brecciated metasomatised volcanic breccia. Some malachite but little sulphides.														84
64.0	66.0	Fragments of grey volcanics. Considerable malachite shows and traces of sulphides. Cavity??														75

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	CORE LENGTH ACC WIDTH	CORE LENGTH SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU	ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W	% recovery
66.0	67.6	Grey intimately intruded and brecciated grey volcanics. Rare traces of copper sulphides.	66.0	67.6									100
67.6	70.0	Indistinct brecciated and intruded grey banded volcanics. Some vein sulphides.	67.6	72.6	5.0	10825 Q			0.20			1.00	100
70.0	72.6	As above. Core has a broken and weathered appearance - but not noticeably so. Malachite is common.											100
72.6	74.0	As above.											100
74.0	77.0	Brecciated chloritised grey volcanics with secondary quartz and calcite veining. Some slightly vuggy weathered zones with malachite. Lower few inches is more solid with some sulphides shows.	74.0	77.0									100
77.0	81.0	More solid grey siliceous and calcite banded (flow banding well illustrated) volcanics and volcanic breccia. Moderately common small sulphide shows.	77.0	87.6	10.5	10825 R			0.19			2.00	100
81.0	83.6	Fragmented sheared core. Grey volcanics abundant malachite traces.											100

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU			ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W		% recovery
83.6	87.6	More solid banded grey volcanic breccia with occasional small sulphide shows. Fragmented and chloritic fragments and core with much malachite.														100
87.6	90.6	Cavity: Same vuggy grey volcanic fragments and some malachite.														25
90.6	93.6	Cavity: A few grey volcanic chips with malachite. Both these cavity chippings are surprisingly sound!!														6
93.6	98.0	Blocky and fragmented core. Grey volcanics largely metamorphosed into volcanic breccia with occasional sulphide shows and some malachite. Very low grade.	93.6	98.0												100
98.0	100.6	As above.	98.0	100.6												100
100.6	103.0	Slightly more solid grey brecciated volcanics with some small sulphide shows. Weathered, vuggy corroded volcanics with some sulphides. Weathered vuggy fault replacement zone with some sulphide and abundant malachite.	100.6	106.0	5.5	10825 S			2.30					12.65		100

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	CORE LENGTH ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU			ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W		% recovery
103.0	105.0	As above. Even more corroded friable iron stained fault breccia with much malachite.														75
105.0	107.0	Vuggy fault breccia as above. Abundant malachite.														
107.0	112.0	Rolled nodules of dark grey volcanics.														75
112.0	146.0	No recovery.														1
146.0	151.0	Malachite stained ferruginous friable chips.														
151.0	154.0	No recovery.														
154.0	158.0	Grey volcanic breccia chips with some malachite.				10824 A	Assay: 4.80									
										No meaningful thickness values						
158.0	163.0	As above.														
163.0	165.0	Friable corroded ferruginous fault breccia breaking down into quartz iron sand - some malachite.														
165.0	168.0	As above.														

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	CORE LENGTH ACC WIDTH	CORE LENGTH SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU	ASSAYS	ASSAYS	ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W	ACCUMULATIVE AVERAGES	% recovery
168.0	173.0	Fragments as above and some grey breccia fragments.														25
173.0	178.0	Corroded friable ferruginous fault zone shattered brown breccia with some malachite stained greyish fragments.														80
178.0	183.0	As above.														25
183.0	185.0	No recovery. As above.														nil
		HOLE TERMINATED: 185'														

COLLAR

North
East
Elevation
Azimuth 042° M
Dip 45°
Logged By J.F. Pagella

ALRAE ENGINEERING LTD.

BONNET PLUME RIVER MINES LTD. (N.P.L.)

KEY CLAIMS

Total depth = 253' **% Recovery = 99%**

Hole No. 7
Commenced 8 September, 1969
Finished 10 September, 1969
Purpose Of Hole Grade exploration

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU	ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W	% recovery
0.0	8.0	No recovery.											
8.0	11.0	Fragmented core : Hard grey green volcanics and volcanic breccia metasomatised by siliceous and calcite intrusions carrying copper sulphides and Fe minerals. Malachite appears on occasional slightly weathered parting. This description will apply to much of the core logged below.	8.0	13.6	5.5	10824 D			0.14			0.77	10
11.0	14.0	Banded grey volcanics as above. Core becomes less broken.											8
14.0	19.0	Featureless? grey volcanics as above. Traces of malachite and occasional small sulphide shows. Low grade but persistant.	14.0	19.0									10
19.0	24.0	Sound grey volcanics as above.	19.0	21.0									10
21.0	24.0	Less sound volcanics as above possibly mylonitized and with some slickensiding. Some malachite shows.	21.0	24.0									10
24.0	29.0	Featureless grey metamorphosed siliceous volcanics with sides of shear. Distinctive											7

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	AG OZ.	% CU			ACCUMULATIVE AVERAGES AU W	AG W	CU W		% recovery
		rough'etched' surface to core. Little traces														
		of minerals.														
29.0	33.0	Grey (darker) formless volcanic or meta-	29.0	33.0												100
		somatic material. No apparent structures.														
		Some traces of sulphides but low grade.														
33.0	38.6	As above. Siliceous volcanic breccia with	33.0	38.6												100
		some malachite on partings and rare small														
		sulphide shows.														
38.6	43.6	Grey volcanic breccia undergoing metaso-	38.6	48.6	10.0	10824	G		0.25					2.50		100
		matic or hydrothermal intrusion and deposi-														
		tion. Some vuggy bands; consistant but small														
		shows of copper sulphide.														
43.6	48.6	As above. This rock is often almost comple-														100
		tely recrystallised. Continuous small sulphide														
		shows. Rock is sound and unweathered.														
48.6	53.6	Grey brecciated metasomatised and intruded														100
		banded volcanics. Occasional green chloritic	48.6	58.6	20.0	10824	C		0.27					5.20		
		seams. Moderately frequent sulphide shows														
		larger than seen previously.														

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU			ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W		% recovery
53.6	58.6	As above. Less sulphide, less sign of original banding.														100
58.6	62.0	Grey green and pinkish volcanic breccia with calcitic and siliceous vein intrusions. Sulphide shows as above - grade ± 50%.	58.6	62.0												100
62.0	67.0	Grey green metamorphosed volcanics, mostly recrystallized into siliceous intrusion breccia material. Sulphides as below.	62.0	67.0												
67.0	72.0	Grey recrystallized volcanic breccia as above. Persistant sulphide shows. Some vuggy bands and cavities. Calcite.	67.0	77.6	10.5	10824 E			0.20					2.10		100
72.0	77.6	As above. Brecciation and degree of intrusion can be seen in several stages. Some traces of banding are still obvious. Irregular but persistant sulphides. N.B. Sample 67.0 is an 'average' sample for most of this core section.														100
77.6	82.6	Grey indistinct varied intruded and metasomatised volcanic as above. Slightly less sulphide than average.	77.6	82.0												100

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU			ACCUMULATIVE AVERAGES AU W	AG W	CU W		% recovery
82.6	87.6	Brecciated and intruded grey flow brecciated volcanics. This is a hard well cemented sound rock with regular sulphide shows. Assays as below.	82.6	87.6												100
87.6	92.0	As above. The calcite intrusions are often vuggy, and vugs sometimes are copper mineralised, but more often illustrate calcite mineral growths.	87.6	97.0	9.5	10824 J			0.23					2.19		100
92.0	97.0	Superbly illustrative core of intimate intrusion and veining with resultant brecciation of grey volcanic country rock by sulphide bearing quartzite and calcite material. Some traces of malachite. Sulphides are persistant but apparently irregular on faces shown.														100
97.0	102.0	Grey intruded volcanics as above. The volume of recrystallised calcite present is impressive. Some specular iron but only traces of Cu.	97.0	102.0												100
102.0	107.0	As above.	102.0	107.0												100
107.0	112.0	Siliceous grey breccia and banded volcanics														100

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU			ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W		% recovery
		metasomatised as above. Irregular but	107.0	118.0	11.0	10824 B			0.13					1.43		
		moderately large concentration of sulphides.														
112.0	118.0	As above. Some vuggy zones with some sul-														100
		phides mineralization in fairly thick calcite														
		rich veins.														
118.0	123.0	Grey assimilated volcanics in quartz and	118.0	123.0												100
		calcite. Intrusion brecciation and flow ban-														
		ding well illustrated. Little trace of Cu minerals.														
123.0	127.0	Recrystallised volcanic breccia as above.														100
		Some vuggy zones. Sulphides appearing in														
		banding associated with quartz and calcite	123.0	127.0	4.0	10824 E			0.14					0.56		
		veins. Occasional faint mottled green look														
		to core.														
127.0	132.0	Grey and green banded volcanics and breccia.	127.0	132.0												100
		Some malachite on partings but little sign of														
		sulphide.														
132.0	137.0	Grey green slightly darker often slightly	132.0	137.0												100
		mottled metasomatised volcanics, with com-														
		plex network of calcite veins. Fe minerali-														
		sation is now common as specular iron, with														

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	AG OZ.	% CU	Pb	P	ACCUMULATIVE AVERAGES AU W	AG W	CU W		% recover
		much less common copper shows.														
137.0	142.0	Mottled green iron rich rock, appears as a basic intrusive - completely recrystallised end product of metamorphism? Rich in Fe as acicular needles and foliated crystals with rare Cu minerals. Abundant calcite disseminated and in veins.	137.0	142.0												100
142.0	147.0	As above. Copper sulphide rare. Iron mineralisation common. Rock mass is completely broken up by indistinct calcite concentration often mineralized.	142.0	152.0	10.0	10824 H	Tr	0.02	0.04	0.01				0.40		100
147.0	152.0	As above. Towards lower end becomes more homogenous with slightly more copper sulphide shows and less Fe. Calcite common.														100
152.0	158.0	Vuggy grey volcanics, brecciated and intruded, but not completely recrystallised. Copper sulphides much more common plus some malachite.	152.0	158.0												100
158.0	162.0	Siliceous brown banded volcanics with some vuggy zones and secondary vein intrusions.	158.0	159.0												100

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU			ACCUMULATIVE AVERAGES AU W	AG W	CU W		% recover
		Banded volcanics becoming the more usual	159.0	162.0												100
		structureless intrusion breccia, some vugs,														
		malachite but little sulphide.														
162.0	164.0	Brecciated and metamorphosed banded brown														100
		volcanics (acid) with vuggy zones, secondary	162.0	164.0												
		quartz, calcite, malachite, some sulphides.														
164.0	170.0	Grey or brown banded volcanics. Recrystal-														100
		lised brecciated and intruded by siliceous														
		and calcic material. Fairly frequent vuggy	164.0	175.0	11.0	10823 F			0.13					1.43		
		zones, sometimes with sulphides. Traces of														
		malachite, Fe, frequent small sulphide shows,														
		mostly related to veining.														
170.0	175.0	As above.														
175.0	178.0	Grey fine grained to glassy banded volcanics	175.0	178.0												100
		much less metamorphosed, though with some														
		large calcite and quartz veins. Occasional														
		traces of sulphide on veining.														
178.0	183.0	Grey banded volcanics as above, but with	178.0	183.0												100
		large zones intruded and brecciated by green														
		chlorite? Calcite and quartz veins. Rare														

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU			ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W		% recovery
		traces of sulphides and occasional small														
		vuggy zones.														
183.0	188.0	Grey banded volcanics with intruded and														
		brecciated zones as above. Some sulphide	183.0	188.0												100
		shows but low grade.														
188.0	193.0	As above. Sulphide shows very rare and small.	188.	193.0												100
193.0	198.0	Banded grey volcanics, becoming increasingly														
		brecciated by calcite rich vein intrusions.	193.0	198.0												100
		Mineralisation is very limited.														
198.0	203.0	Grey banded volcanic breccia as 'xenoliths'														
		in an increasingly high concentration of re-	198.0	203.0												100
		crystallised calcite, in solid bands up to 6"														
		wide, and as completely disseminated blebs,														
		and intimately interwoven veining. Some sul														
		phide shows but low grade.														
203.0	208.0	As above. Rare traces of mineralisation as	203.0	208.0												100
		sulphides.														
208.0	213.0	As above. Rock mass is completely broken														
		up by calcite veining of all scales - though	208.0	213.0												100

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	CORE LENGTH ACC WIDTH	CORE LENGTH SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU	ASSAYS	ASSAYS	ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W	ACCUMULATIVE AVERAGES	% recovery
		not apparently associated with much mineral-														
		isation.														
213.0	218.0	Becoming more regular banded grey volcan-	213.0	218.0												100
		ics with far less calcite veins and brecciation.														
		Traces of Cu and Fe mineralisation and some														
		SiO2.														
218.0	223.0	As above. Ore band 1/4" thick of solid chal-	218.0	223.0												100
		copyrite but only traces of sulphides and														
		malachite elsewhere.														
223.0	228.0	Brown and grey banded volcanics becoming	223.0	228.0												100
		increasingly brecciated by siliceous chloritic														
		vein intrusions, with some calcite. Less														
		sign of sulphides.														
228.0	233.0	As above. The intruding and brecciating	228.0	233.0												100
		material occasionally appears to reach the														
		stage of coarse grained Fe and Cu bearing														
		diorite or similar. Regular fine traces of														
		sulphide.														
233.0	238.0	Distorted and intruded flow banded grey and	233.0	238.0												100
		and brown volcanics as above. Considerable														

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU			ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W		% recovery
		calcite. Little trace of sulphides.														
238.0	243.0	Banded disturbed and brecciated volcanics as above. Considerable calcite veining, rarely associated with concentrations of sulphides.	238.0	243.0												100
243.0	248.0	Banded volcanics as above. Micro faulting well illustrated. One calcite vein 1" thick heavily mineralized at 244'6", but otherwise only traces of sulphides in volcanics.	243.0	248.0	5.0	10823 J			1.60					8.00		100
248.0	253.0	Brecciated and vein intruded grey volcanics with abundant calcite. Some occasional vuggy zones, but little traces of sulphides.	248.0	253.0												100
		HOLE TERMINATED 253'														

COLLAR

North
East
Elevation
Azimuth 083° M
Dip 40°
Logged By J.F. Pagella

ALRAE ENGINEERING LTD.

BONNET PLUME RIVER MINES LTD. (N.P.L.)

KEY CLAIMS

Total depth = 162' **% Recovery = 82%**

DIAMOND DRILL RECORD

Hole No. 8
Commenced 10 September, 1969
Finished 12 September, 1969
Purpose Of Hole Grade exploration

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	CORE LENGTH ACC WIDTH	CORE LENGTH SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU	ASSAYS	ASSAYS	ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W	ACCUMULATIVE AVERAGES	% recover
0.0	14.0	No recovery														
14.0	15.0	Grey green siliceous faintly banded homogenous volcanic pieces and fragments. Calcite on partings and faint trace of malachite.														75
15.0	16.0	As above. Micro structure of these rocks is extremely fissile cleavage.														50
16.0	17.0	As above. No malachite. Fissibility planes are veneered in calcite.														50
17.0	20.0	Green volcanics with assimilated quartz veining associated with small shows of copper sulphide.														44
20.0	24.6	Top two feet in evenly banded green grey siliceous volcanics as above. Banding at 25° to core. Lower 1'3" is less homogenous with assimilated quartz and chlorite? veining and some small sulphide concentrations.														72
24.6	26.6	Grey green siliceous volcanics with rare traces of sulphides.														42

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU			ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W		% recovery
26.6	27.6	Grey volcanics with irregular quartz assimi-														100
		lations with traces of malachite and copper														
		sulphides.														
27.6	28.6	As above.														84
28.6	29.6	Quartz and chlorite rich zone with some														66
		green volcanics. Fairly common very small														
		sulphide shows associated with the quartz.														
29.6	34.6	Grey green siliceous moderately fissile vol-	29.6	34.6	5.0	10823 D			0.18					0.90		100
		canics with quartz rich zones. The latter are														
		sometimes vuggy and often associated with														
		small sulphide shows.														
34.6	36.6	Green grey quartz rich moderately fissile	34.6	36.6												100
		volcanics with zones of recrystallized quartz														
		and chlorite. Faint traces of sulphides														
		usually associated.														
36.6	41.6	Grey green fissile volcanics as above.	36.6	41.6			(as for 10823 D above)									100
		Traces of sulphides invariably restricted to														
		veins or quartz rich zones in the country														
		rock. Some regular banding.														

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU			ACCUMULATIVE AVERAGES AU W	AG W	CU W		% recovery
41.6	47.0	Fissile sometimes almost schistose grey green volcanics as above. Calcite veneers on all fissility planes. Traces of sulphides associated with siliceous zones.	41.6	47.0												100
47.0	48.0	Chips of dark grey volcanics.														17
48.0	52.0	Dark grey siliceous shales or argillite - may be volcanic? Far less siliceous and more shaly than above. Fissility now at 5° to core.														62
52.0	55.6	Grey metamorphosed volcanics/sediments. Core breaks up into thin plates. These are schistose and feel 'talcy'. Rare traces of malachite.														71
55.6	58.0	Grey green schistose sediments/volcanics. No mineralisation or redeeming features.														20
58.0	62.0	As above. Extremely thin fissile plates in core box..														60
62.0	65.0	As above. One inch band which appears as very fine quartz rich breccia.														66

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU			ACCUMULATIVE AVERAGES AU W	AG W	CU W		% recovery
65.0	67.0	As above. Occasional zones with pink red-	65.0	67.0												100
		dish thin quarts veining, much distorted														
		but roughly in banding.														
67.0	72.0	As above. Pink quarts veining at various	67.0	72.0												100
		angles often cross cutting fissility more														
		common. Micro faulting illustrated in longer														
		fragments.														
72.0	76.0	Top 9' much harder recrystallised chlorite														60
		rich material hornfelsic texture. Remainder														
		of core thin dark grey plates as above.														
76.0	82.0	Very thin plates of dark grey green sheared?	76.0	82.0												100
		schistose metamorphosed sediments or vol-														
		canics. Featureless. Becoming slightly														
		sounder towards base of run. Last foot in														
		disturbed far less fissile occasionally sili-														
		ceous material.														
82.0	84.6	Banded grey moderately homogenous volcan-	82.0	84.6												100
		canics with some micro faulting. Little														
		mineralisation.														
84.6	88.0	Core fragments. Brecciated volcanics with														

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	CORE LENGTH ACC WIDTH	CORE LENGTH SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU	ASSAYS	ASSAYS	ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W	ACCUMULATIVE AVERAGES	% recovery
		assimilated or intruded quartz rich zones.														
88.0	94.0	Less regular hard grey banded siliceous vol-														100
		canics with brecciated slightly chloritic in-	88.0	94.0												
		trusion zones usually with traces of sulphides.														
		Sulphides also in very thin veinlets.														
94.0	98.0	Grey pale green intrusion brecciated and	94.0	98.0		8:2										100
		assimilated volcanics. Original structure	94.0	98.0	4.0	10823 E			0.25					1.00		
		mostly lost. Some finely disseminated sul-														
		phide concentration, and veinlets. Con-														
		siderable calcite and quartz.														
98.0	103.6	Brecciated irregular but hard well cemented	98.0	103.6	(as for 10823 E above)											100
		volcanics as above. Large scale quartz and														
		calcite secondary recrystallization and veining.														
		Some sulphide shows.														
103.6	104.6	Grey brown siliceous volcanics with quartz	103.6	104.6												100
		rich zones carrying sulphide traces.														
104.6	110.0	Grey siliceous volcanics - almost quartzites	104.6	110.0												100
		with frequent irregular quartz enriched zones,														
		quartz veining and some sulphides.														

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU			ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W		% recovery
110.0	111.0	Hard grey brown banded siliceous quartzites	110.0	111.0												100
		as above.														
111.0	116.0	As above.	111.0	113.0												
		Much less regular quartz rich disturbed	113.0	115.0												
		sequence with zones of complex siliceous intrusion and assimilation. Regular small sulphide traces.														
116.0	117.6	Grey and black quartz veined brecciated volcanics - almost quartzites - with diffuse sulphides in fairly common quartz rich assimilation zones.	116.0	117.6												100
122.0	127.0	Fragments of grey quartzites, and quartz rich zones with sulphides.														8
127.0	129.0	Grey faintly banded siliceous volcanics - quartzites - with occasional darker quartz rich zones usually associated with minor sulphide concentration.														66
129.0	131.0	As above. Regular sequence.	129.0	131.0												100
131.0	134.0	As above.	131.0	134.0												100

DIAMOND DRILL RECORD

FROM	TO	DESCRIPTION	CORE LENGTH FROM	CORE LENGTH TO	ACC WIDTH	SAMPLE NO.	ASSAYS AU OZ.	ASSAYS AG OZ.	ASSAYS % CU	ACCUMULATIVE AVERAGES AU W	ACCUMULATIVE AVERAGES AG W	ACCUMULATIVE AVERAGES CU W	% recovery
134.0	137.0	Grey siliceous volcanics - quartzites-with occasional sulphide shows as above.	134.0	136.0									66
137.0	142.0	Calcite rich irregular intruded and brecciated zone. Banded grey volcanics with some irregular zones, becoming darker, less siliceous and more fissile towards base.	137.0 138.0	138.0 142.0									100
142.0	147.0	Dark or very dark grey speckled banded (slightly irregular) volcanics with occasional small sulphide shows.											80
147.0	151.0	Banded moderately fissile dark grey volcanics? with some sulphide traces.	147.0	151.0									100
151.0	154.0	As above. Occasional small zones with finely disseminated sulphides.	151.0	154.0									100
154.0	158.0	Core becoming more blocky and fissile. As above. but becoming lighter in colour with depth. One 3" zone of quartz and calcite veining with some sulphides.											75
158.0	162.0	Platy fragments of slightly siliceous fissile dark grey calcite volcanics.	158.0	162.0		HOLE	TERMINATED 162'						100

FIG I

LEGEND

Pale grey green or dark banded cleaved silicious volcanics. Often fissile at surface. Traces of sulphides.

Fairly massive grey or mottled white silicious volcanics or metasediments

Friable vuggy very weathered brecciated fault zone. Malachite, azurite, sulphides & fe oxides.

Scree, permafrozen beyond a few feet from the surface.

55° Approximate dip of main fault zone.

0.03 Drill hole showing assay values.

BONNET PLUME RIVER MINES

KEY CLAIMS

SITE # 1 PROJECTED SECTION OF FAULT ZONE

ALRAE ENGINEERING LTD.
GEOLOGISTS AND ENGINEERS
VANCOUVER, B. C.

DESIGNED.... J.P.	SCALE: HOR. 1" = 20'
DRAWN.... E.A.R.	VERT.
CHECKED.... J.G.S.	
DATE.... August, 1969	DWG. No. 213 — 16

FIG I

SITE 1

SITE 4

LEGEND

0.23	Assay value: % Cu
T	Assay value: Trace Cu
=	Assay value: No Cu
	No apparent mineralization
	Unreliable recovery
	No recovery

Figures are % Cu

BONNET PLUME RIVER MINES

KEY CLAIMS

DIAMOND DRILL GRAPHIC LOGS

ALRAE ENGINEERING LTD.
GEOLOGISTS AND ENGINEERS
VANCOUVER, B. C.

DESIGNED J.P.	SCALE: HOR.
DRAWN E.A.R	VERT. 1" = 10'
CHECKED J.G.S.	
DATE August, 1969	DWG. No. 213 – 17

MAP 1

LIMIT OF PHOTO COVER

5500'

5500

DECL. 36° E

N

x CAMP

LAKE

SCREE

SCREE

SCREE

44. 45.
46. 45.

48. 47.
50. 49.

54. 53.
56. 55.

LEGEND

- MUSKEG - SWAMP
- VOLCANIC BRECCIA
- FLOW BANDED and MASSIVE ACID VOLCANIC, BANDED TUFFS
- TUFFACEOUS SHALES and MICACEOUS QUARTZITE
- THIN SHALY LIMESTONE
- ARGILLITE and SLATE

SYMBOLS

- BEDDING
- BANDING (ACID VOLCANICS)
- FOLIATION (INC. SLATY CLEAVAGE)
- FOLD AXIS ANTIFORMAL
- LINEATION
- FAULT INFERRED
- THRUST INFERRED
- GEOLOGICAL BOUNDARY
- GEOLOGICAL BOUNDARY INFERRED
- 45 □ 46 / 47 48 — CLAIM POST LOCATED
- △ — MINERAL SHOWING
- Cu Fe — MINOR SHOWING

BONNET PLUME RIVER MINES LIMITED

RECONNAISSANCE GEOLOGICAL MAP of KEY CLAIMS

ALRAE ENGINEERING LTD.
GEOLOGISTS AND ENGINEERS
VANCOUVER, B. C.

DESIGNED J.G.S.	SCALE: HOR. 1" = 850' approx.
DRAWN E.R.	VERT.
CHECKED R.G.J.	DWG. No.
DATE August 1969	

4 x ENLARGMENT AIR PHOTO A 12247-76

MAP 2

KEY 9 KEY 10 KEY 16 KEY 8 KEY 23 KEY 7 KEY 41 KEY 5 KEY 6 KEY 43 KEY 4 KEY 3 KEY 44 KEY 45 KEY 2 x CAMP LAKE KEY 46 KEY 47 KEY 25 SCREE KEY 48 KEY 26 KEY 27 KEY 49 KEY 50 KEY 29 KEY 51 KEY 30 KEY 52 KEY 53 KEY 32 KEY 31 KEY 54 KEY 55 KEY 56 KEY 34 KEY 35 KEY 36 KEY 37 KEY 38 KEY 40 KEY 33

First Gully Second Gully Third Gully

LIMIT OF PHOTO COVER

5500' 5500

BONNET PLUME R.

N

DECL. 35° E

LEGEND

- MUSKEG - SWAMP
- VOLCANIC BRECCIA
- FLOW BANDED and MASSIVE ACID VOLCANIC, BANDED TUFFS
- TUFFACEOUS SHALES and MICACEOUS QUARTZITE
- THIN SHALY LIMESTONE
- ARGILLITE and SLATE
- ZONE OF SIGNIFICANT COPPER MINERALIZATION

SYMBOLS

- BEDDING
- BANDING (ACID VOLCANICS)
- FOLIATION (INC. SLATY CLEAVAGE)
- FOLD AXIS ANTIFORMAL
- LINEATION
- FAULT INFERRED
- THRUST INFERRED
- GEOLOGICAL BOUNDARY
- GEOLOGICAL BOUNDARY INFERRED
- CLAIM POST LOCATED, AND CLAIM POST ASSUMED
- MINERAL SHOWING
- Cu Fe MINOR SHOWING
- DRILL LOCATIONS 1969
- ADDITIONAL DRILL SITES 1970

BONNET PLUME RIVER MINES LIMITED

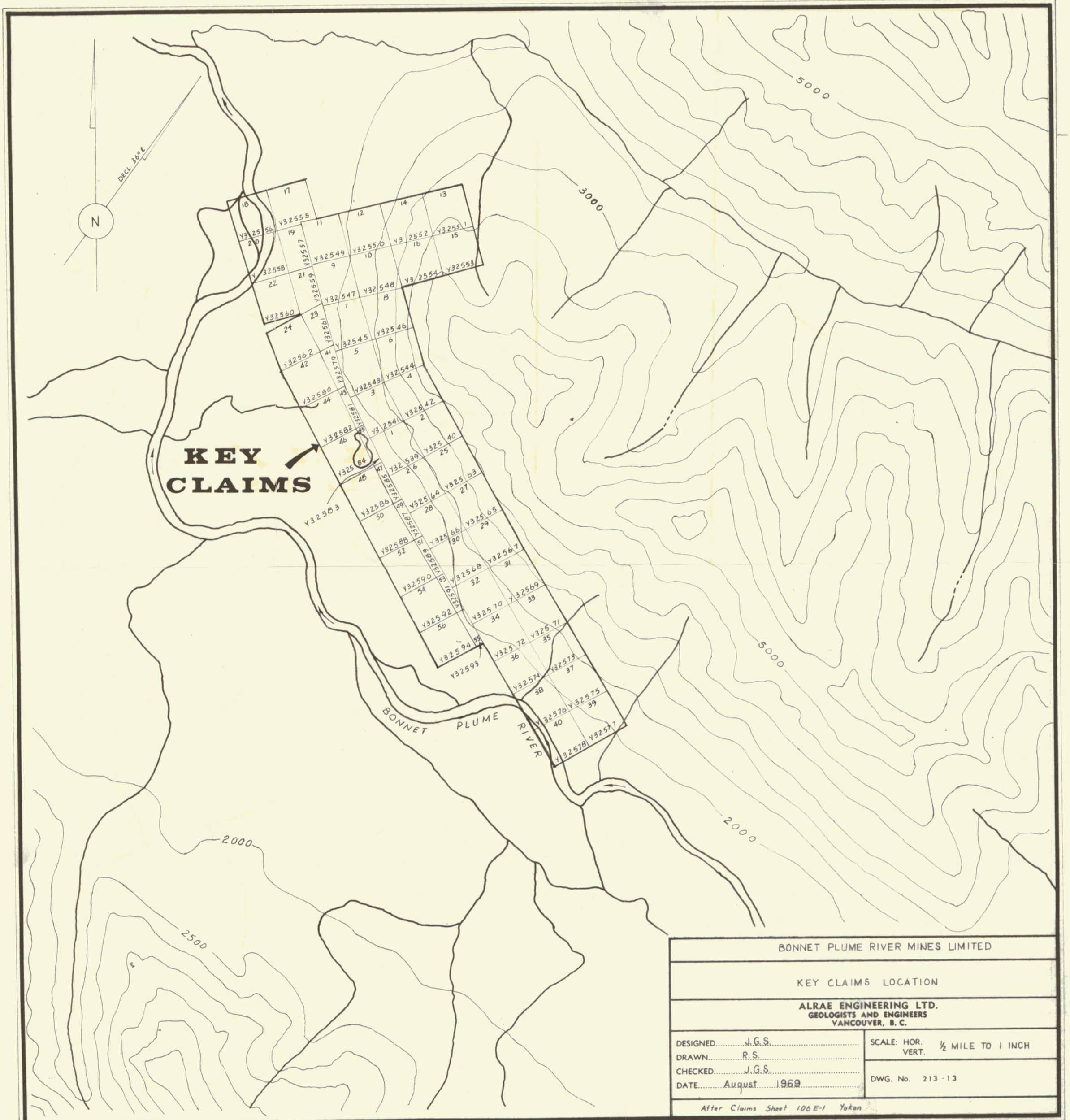
KEY CLAIMS
MINERALIZED ZONE AND DRILL SITES

ALRAE ENGINEERING LTD.
GEOLOGISTS AND ENGINEERS
VANCOUVER, B. C.

DESIGNED J.G.S.	SCALE: HOR. 1" = 850' approx.
DRAWN E.R.	VERT.
CHECKED R.G.J.	
DATE August 1969	DWG. No.

4 x ENLARGMENT AIR PHOTO A 12247-76

MAP 3



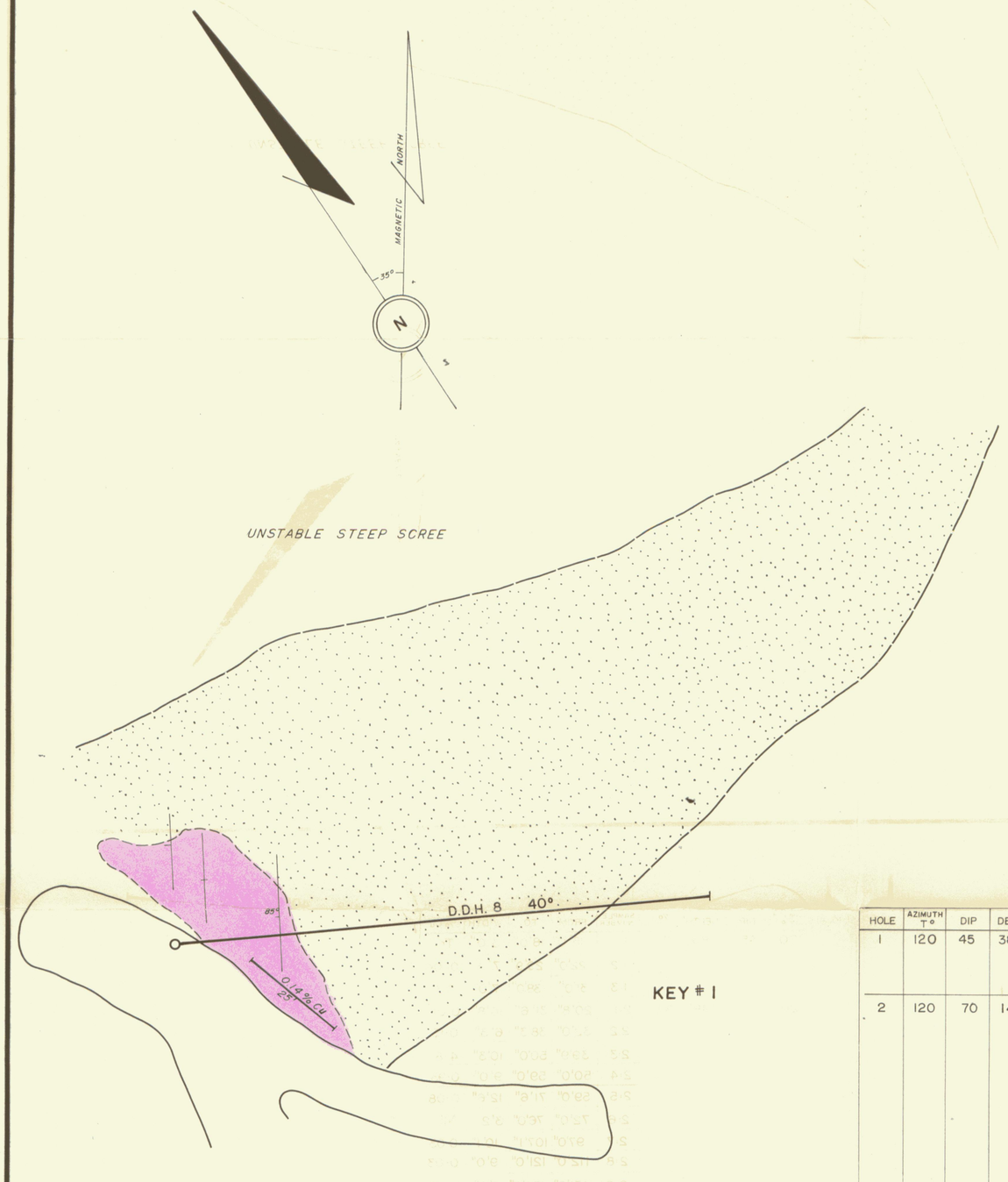
BONNET PLUME RIVER MINES LIMITED

KEY CLAIMS LOCATION

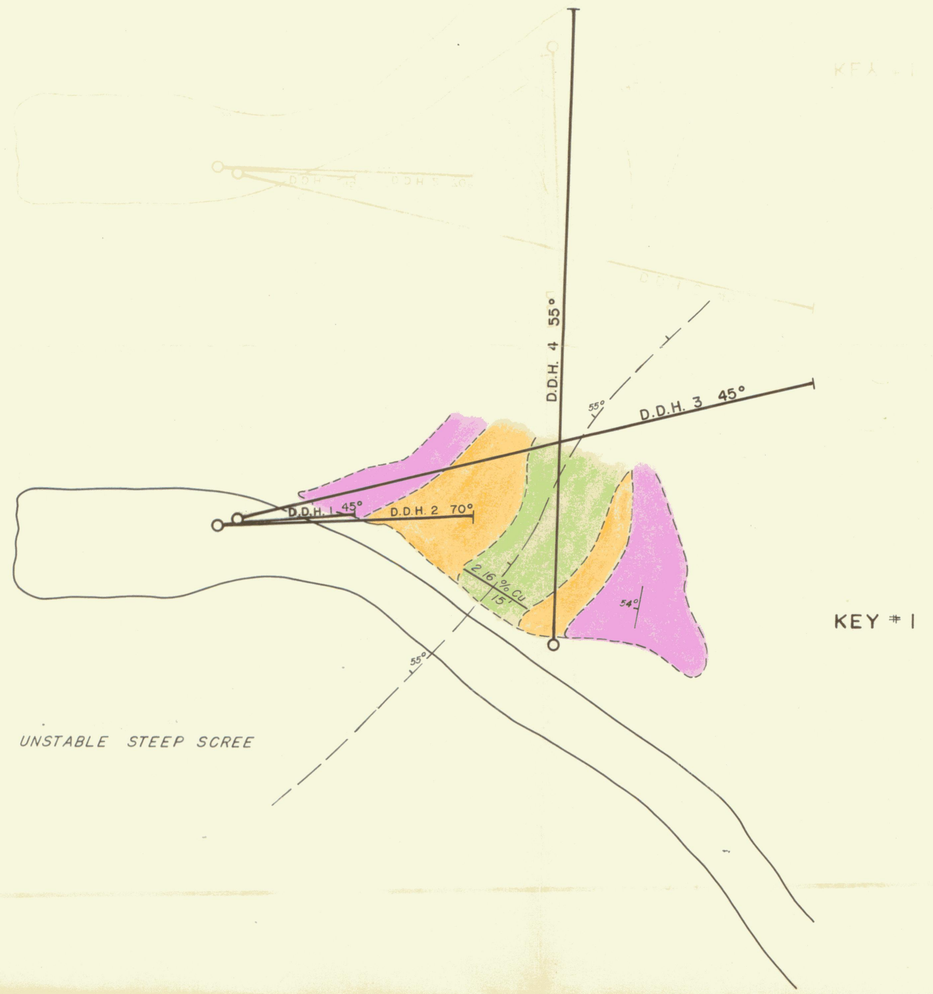
ALRAE ENGINEERING LTD.
GEOLOGISTS AND ENGINEERS
VANCOUVER, B. C.

DESIGNED J.G.S.	SCALE: HOR. ½ MILE TO 1 INCH
DRAWN R.S.	VERT.
CHECKED J.G.S.	DWG. No. 213-13
DATE August 1969	

After Claims Sheet 106 E-1 Yukon



KEY # 1



KEY # 1

HOLE	AZIMUTH T.o	DIP	DEPTH	% RECOVERY	SAMPLE NUMBER	FROM	TO	WIDTH	% Cu	OTHER
1	120	45	38'a	75	1:1	15'0"	18'0"	3'0"	Tr	
					1:2	22'0"	29'9"	7'9"	0.04	
					1:3	31'0"	38'0"	7'0"	3.3	0.04 Au 0.06 Ag
2	120	70	148'	88	2:1	20'8"	31'6"	10'8"	0.01	
					2:2	32'0"	38'3"	6'3"	0.15	
					2:3	39'9"	50'0"	10'3"	4.8	
					2:4	50'0"	59'0"	9'0"	0.93	0.18 Ag
					2:5	59'0"	71'6"	12'6"	0.08	
					2:6	72'0"	76'0"	3'2	NIL	0.02 Ag
					2:7	97'0"	107'1"	10'1"	0.03	
					2:8	112'0"	121'0"	9'0"	0.03	
					2:9	131'0"	139'0"	8'0"	0.10	
					2:10	139'6"	148'0	8'6"	0.07	
3	110	45	168'	96	3:1	16'0"	27'0"	11'0"	0.11	0.02 Ag
					3:2	31'0"	38'0"	7'0"	5.0	
					3:3	39'0"	46'4"	7'3"	0.10	
					3:4	48'0"	56'6"	8'6"	0.07	
					3:5	60'0"	68'8"	8'8"	0.02	
					3:6	78'0"	85'0"	7'0"	0.02	
					3:7	92'6"	103'0"	10'6"	0.06	
					3:8	108'0"	119'0"	11'0"	0.04	0.02 Ag
					3:9	124'0"	185'6"	11'6"	0.04	
					3:10	135'6"	145'0"	9'6"	0.02	
					3:11	154'9	168'0"	15'3"	0.03	
4	035	55	221'	89	4:1	19'0"	23'1"	4'1"	0.05	
					4:2	24'0"	31'11"	7'11"	0.05	
					4:3	40'6"	49'7"	9'1"	0.02	0.08 Ag
					4:4	55'0"	63'3"	8'3"	0.04	
					4:5	117'0"	124'0"	7'0"	0.02	
					4:6	132'0"	140'1"	8'1"	0.06	
					4:7	148'0"	156'6"	8'6"	0.02	
					4:8	202'0"	212'0"	10'0"	0.02	
					4:9	212'0"	219'0"	7'0"	0.13	
8	118	40	162'	82	8:1	29'6"	34'6"	5'0"	0.18	
					8:2	94'0"	98'0"	4'0"	0.25	

a – abandoned

LEGEND

- Fairly massive grey or mottled white silicous volcanics or metamorphosed sediments
- Friable weathered fault brecciated zone. Malachite, azurite, sulphide & ferruginous debris
- Pale grey green well cleaved slightly silicious fissile volcanics. Frequent traces of sulphides
- Scree stabilized by vegetation
- Diamond drill hole (AQ wireline)
- Fault zone with dip
- Bulldozer road
- Geological outcrop
- Geomorphological boundary
- 55° — Dip and strike of cleavage bedding or banding
- 2.16 % Cu / 20' — Chip sample

BONNET PLUME RIVER MINES

KEY CLAIMS

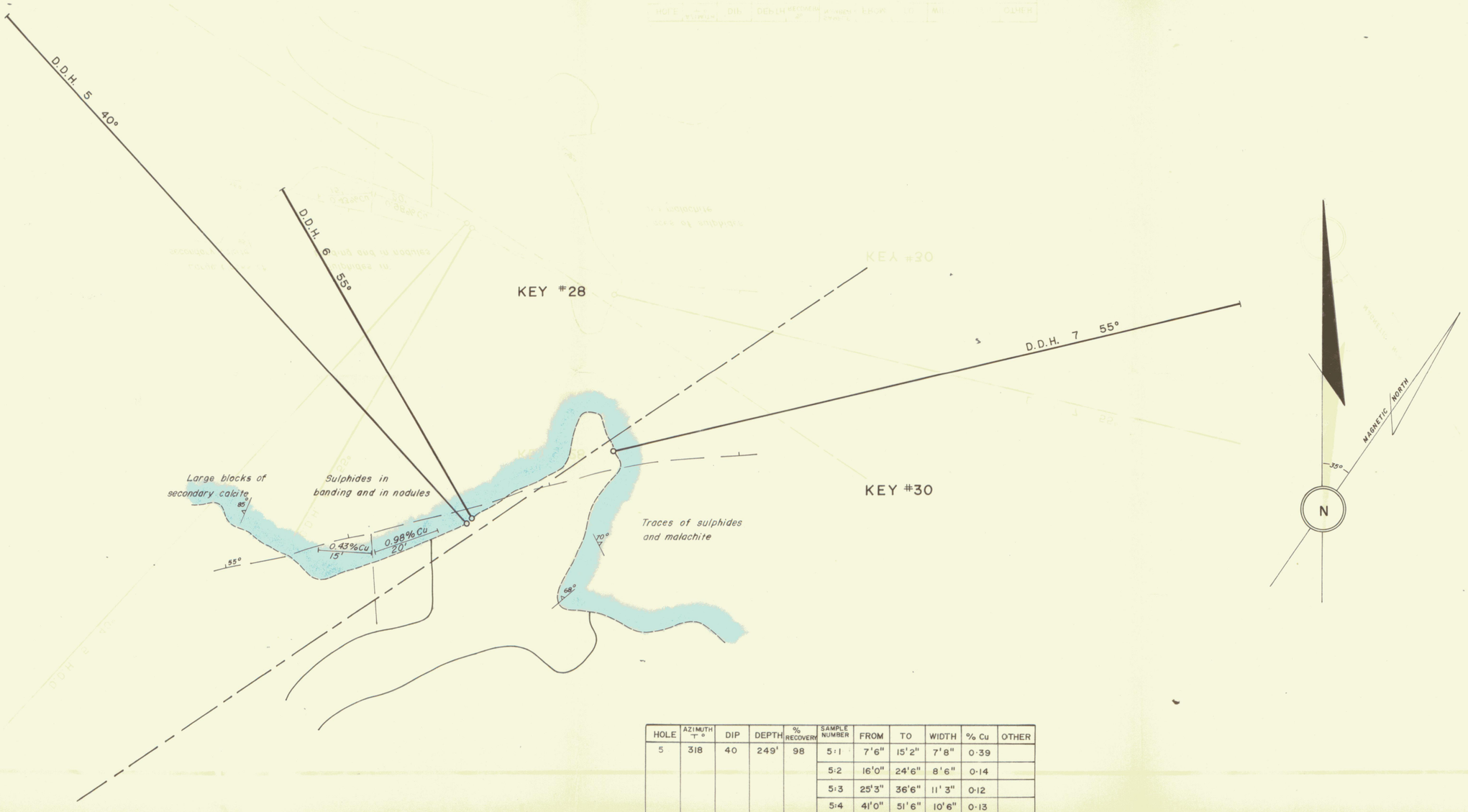
PLAN OF DRILL LOCATIONS: SITE 1

ALRAE ENGINEERING LTD.
GEOLOGISTS AND ENGINEERS
VANCOUVER, B. C.

DESIGNED J.P
DRAWN A.N.
CHECKED J.G.S.
DATE August, 1969

SCALE: HOR. 1" = 20'
VERT.

DWG. No. 213 – 14



HOLE	AZIMUTH T°	DIP	DEPTH	% RECOVERY	SAMPLE NUMBER	FROM	TO	WIDTH	% Cu	OTHER
5	318	40	249'	98	5:1	7'6"	15'2"	7'8"	0·39	
					5:2	16'0"	24'6"	8'6"	0·14	
					5:3	25'3"	36'6"	11'3"	0·12	
					5:4	41'0"	51'6"	10'6"	0·13	
					5:5	51'6"	62'0"	10'6	0·24	
					5:6	62'0"	73'0"	11'0"	0·13	
					5:7	73'0"	83'0"	10'0"	0·33	
					5:8	83'0"	97'0"	14'0"	0·37	
					5:9	97'0"	103'6"	6'6"	0·19	
					5:10	103'6"	114'0"	10'6"	0·17	
					5:11	114'0"	121'6"	7'6"	0·13	
					5:12	124'6"	135'0"	10'6"	0·27	
					5:13	135'0"	144'0"	9'0"	0·13	
					5:14	144'0"	155'0"	11'0"	0·23	
					5:15	155'0"	166'0"	10'0"	0·12	
					5:16	165'0"	169'0"	4'0"	0·15	
					5:17	180'0"	191'0"	11'0"	0·07	
					5:18	191'0"	201'0"	10'0"	0·14	
					5:19	206'0"	214'6"	8'6"	0·14	
					5:20	214'6"	224'9"	10'3"	0·16	
					5:21	224'9"	234'9"	10'0"	0·22	
					5:22	234'9"	246'3"	11'6"	0·90	
6	330	55	185	56	6:1	11'6"	22'0"	10'6"	0·35	
					6:2	22'0"	31'6"	9'6"	0·23	
					6:3	33'2"	40'0"	6'8"	0·14	
					6:4	40'0"	50'6"	10'6"	0·33	
					6:5	57'0"	63'9"	6'9"	0·10	
					6:6	67'6"	72'6"	5'0"	0·20	
					6:7	77'0"	87'6"	10'6"	0·19	
					6:8	100'6"	106'0"	5'6"	2·40	
					6:9	Fault material from zone 151' — 183'			4·80	
7	077	45	253	99	7:1	8'0"	13'6"	5'6"	0·14	
					7:2	38'6"	48'6"	10'0"	0·25	
					7:3	48'6"	58'6"	10'0"	0·27	
					7:4	67'0"	77'6"	10'6"	0·20	
					7:5	87'6"	97'0"	9'6"	0·23	
					7:6	107'0"	118'0"	11'0'	0·13	
					7:7	123'0"	127'0"	4'0"	0·14	
					7:8	142'0"	152'0"	10'0"	0·04	Au: Tr Ag: 0·02
					7:9	164'0"	175'0"	11'0"	0·13	
					7:10	243'0"	248'0"	5'0"	1·60	

LEGEND

Blocky or disturbed banded volcanics, metasomatised by silicious and calcite solutions carrying epigenetic sulphides.

Diamond drill hole (AQ wireline)

Fault zone with dip

Bulldozer road

Geological outcrop

Claim boundary

68° Flow banding orientation

1.5 % Cu / 20' Chip sample

BONNET PLUME RIVER MINES

KEY CLAIMS

PLAN OF DRILL LOCATIONS: SITE 4

ALRAE ENGINEERING LTD.
GEOLOGISTS AND ENGINEERS
VANCOUVER, B. C.

DESIGNED J.P
DRAWN E.A.R
CHECKED J.G.S.
DATE August, 1969

SCALE: HOR. 1" = 20'
VERT.

DWG. No. 213-15