LOG NOD CT 9 1 1001	RĐ.
ACTION.	
1	
FILE NO:	

GEOLOGICAL, PROSPECTING AND GEOCHEMICAL

ASSESSMENT REPORT

ON

THE FIRE MOUNTAIN CLAIMS

Lillooet River - Harrison Lake Area

New Westminster Mining Division

British Columbia

NTS 92G/16

NTS 92G/16

NTS 92G/16

SUB-RECORDER

RECEIVED

OF 16 1991

M.R. #

LTD VANCOUVER, B.C.

VANCOUVER, B.C.

VANCOUVER, B.C.

VANCOUVER, B.C.

NOEL O' KEEFFE, B.Sc.

KOENRAAD M. VERBRUGGEN, M.Sc.

October 10,1991

Field Work in September/October 1990 and July 1991

## GEOLOGACAL BRANCH ASSESSMENT REPORT

# 21,735

## TABLE OF CONTENTS

	Page
List of Maps and Tables	i
Summary	ii
1. Introduction	1
2. Location and Access	2
3. Physiography	3
4. Property status and ownership	4
5. Exploration History	5
6. Regional Geology	6
7. Property Geology	6
8. Field Procedures	7
9. Discussion of results	8
10. Conclusions and Reccomendations	12
11.Proposed Budget	14
12.References	15
APPENDICES	
1 Statements of Qualifications. 2 Statement of costs of Exploration Programme. 3 Exploration Personnel and Dates worked. 4 Rock Sample Descriptions. 5 Assay Cortificator and Applytical Programmes	

## LIST OF MAPS AND TABLES.

Figure	<u>Title</u>	<u>Scale</u>	Following Page
1	General Location Map.	1:500,000	1
2	Claim Location Map.	1: 50,000	3
3	Regional Geological Setting.	1:400,000	5
4	Property Geology.	1: 10,000	Backpocket.
5	Rock Soil and Stream Geochemistry.	1: 10,000	Backpocket.
6	Snow Showing, Geology	1: 500	8

## TABLES

Table.	<u>Title</u>	Page.
1	Claim Status	3

#### SUMMARY.

- 1. The Fire Mountain claims are situated approximately 108 km northeast of Vancouver, B.C.
- 2. The property consists of 10 claims totalling 194 units held under option by Aranlee Resources Ltd. of Vancouver.
- 3. Access to the property is by logging road from either Pemberton or Harrison Mills.
- 4. The area is underlain by volcanics, volcanoclastics and sediments of the Cretaceous Fire Lake Group. The property surrounds a number of crown granted claims containing hydrothermal Cu/Au mineralised quartz veins with small historical gold production.
- 5. A follow up prospecting and geochemical program, completed in two stages, has carried out work on a showing located during the first 1990 program and outlined other areas for more detailed follow up work.
- 6. Work in future is recommended to include additional mapping, soil sampling and geophysics, with initial diamond drilling if warranted.

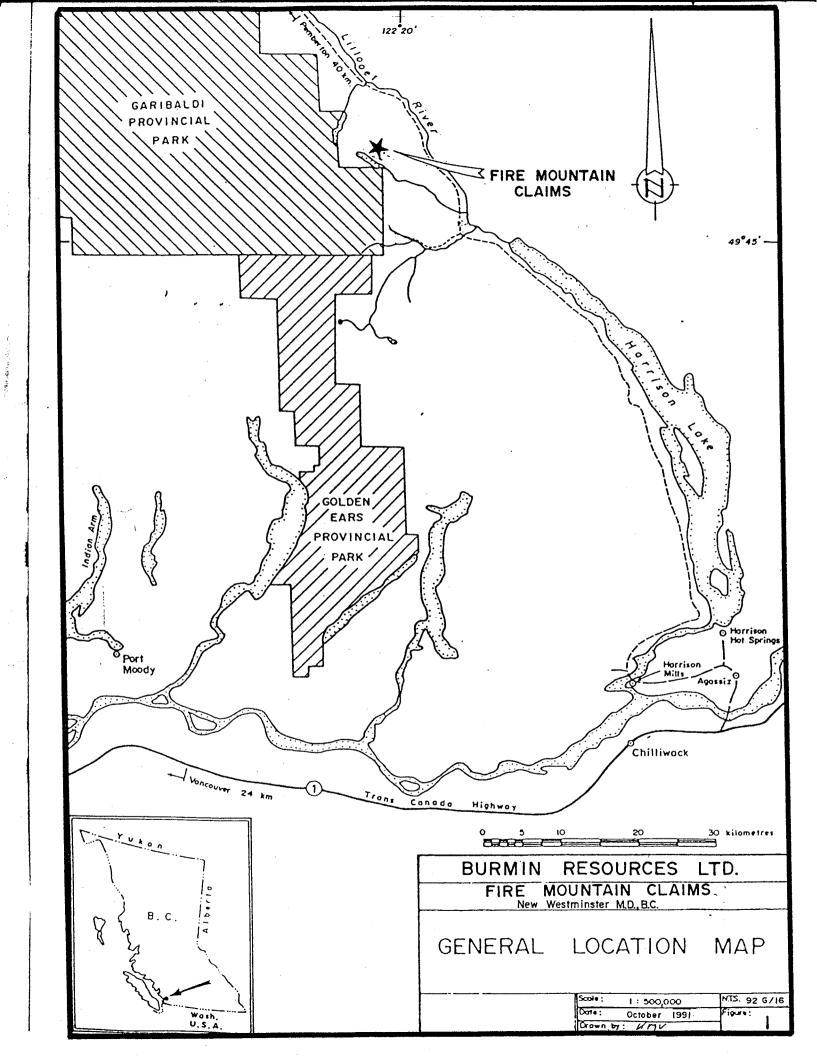
#### 1. INTRODUCTION.

This report documents the completion of a Phase II reconnaissance geological, prospecting and geochemical survey on the Fire Mountain mineral claims and proposes a follow up Phase III program to further assess the precious and base metal potential of the property.

The Phase II program was part of that recommended in the company's previous report (O' Keeffe & Verbruggen, 1990), and was carried out mainly in October 1990 with the majority of the work accomplished during a seven day program from 13 to 19 Oct 1990. Additional work was carried out in July 1991.

The exploration program consisted of;

- a) A detailed examination, with trenching, mapping and sampling of a showing discovered during the company's phase I program.
- b) Prospecting and rock geochemical sampling both in areas not previously explored by the company and as follow up to anomalous results from previous programs. A total of 28 rock samples were taken for precious and base metal analysis.



## 2. LOCATION AND ACCESS.

The Fire Mountain claims are located at 122 24 W and 49 52 N in the New Westminster Mining Division, approximately 108 km northeast of Vancouver and 18 km northwest of Spring Creek logging camp at the north end of Harrison Lake (Figure 1). The claims cover an area of approx. 47 square kilometres centred on Fire Mountain (2119 m a.m.s.l.).

The property is accessible by logging roads south along the Lillooet River from Pemberton or north along Harrison Lake from the community of Harrison Mills. A 20 km section of the Harrison Lake road from Doctors Point to Spring Creek logging camp is extremely rough and is limited to four wheel drive vehicles.

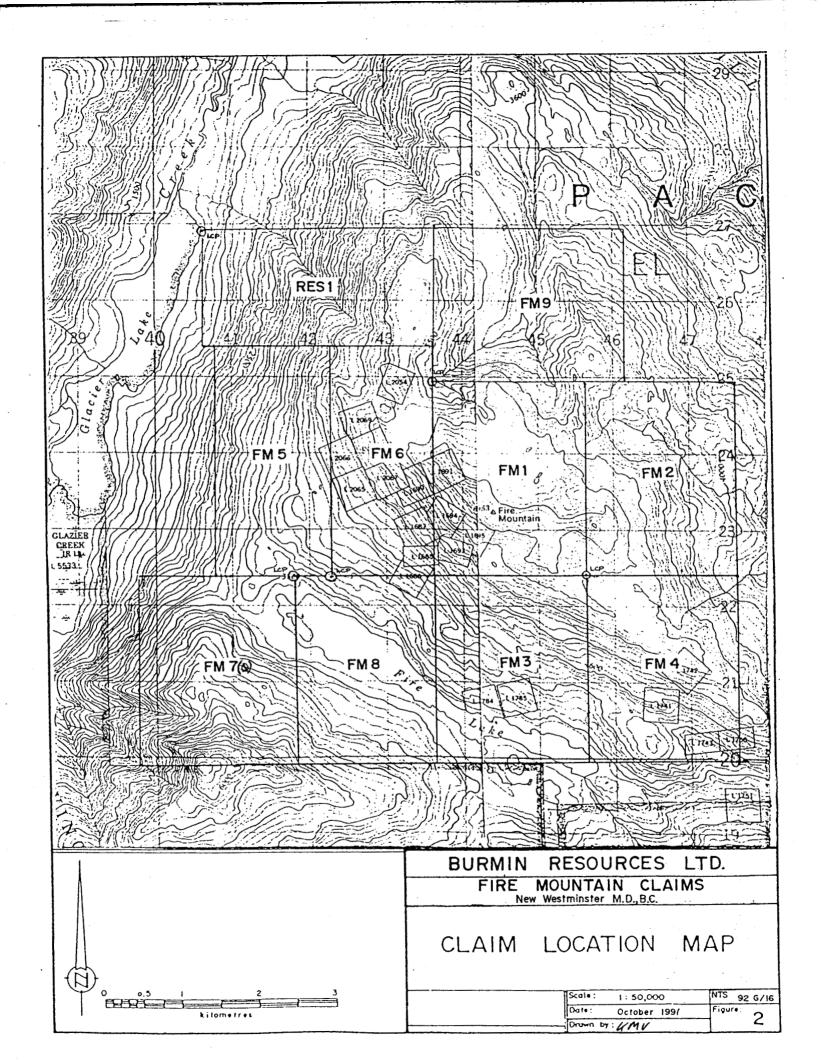
An old logging road in to Fire Lake accesses the southern boundary of the claims and provides 4WD vehicular access. This road was improved by the company in 1990, by clearing slide alder and birch and repairing some washouts. Presently however two washouts on the road require further repair for safe crossing. A logging road in good repair provides access to the western boundary of the claims near Glacier Lake.

The lower slopes of Fire Mountain and of the ridge further south (Red Mountain), can be readily accessed utilizing a boat on Fire Lake, and hiking up from the lake edge. Access to the higher ground within the claims, and the northern part of the claim group, presently requires the use a helicopter; available from Pemberton (Pemberton Helicopters Ltd.), Hope (Valley Helicopters) or Agassiz (Highland Helicopters Ltd.). Radio telephone and accommodation are available at Spring Creek logging camp by prior arrangement (Lineham Logging). The logging camp also has a fair weather air strip with frequent service flights from Chilliwack (Air Southwest).

## 3. PHYSIOGRAPHY

The claims lie in an area of steep forested mountainous terrain between elevations of 300 m (100 feet) and 2120 m (6950 feet). Approximately 20% of the ground lies above tree line c.1768 m (5800 feet). Outcrop is generally common on steeper slopes and higher ground but limited in areas of tree cover.

In summer snow is slow to melt on higher elevations particularly north facing slopes. Exploration in these areas is generally not possible until late June.



## 4. PROPERTY STATUS AND OWNERSHIP

The property consists of ten contiguous Modified Grid System mineral claims held under option by the company (Table 1, Figure 2.) giving a total of 194 claim units.

		TABLE 1		
Claim name	Record No.	No of units	Recorded	Expiry*
FM 0^	4302	20	Oct 15/91	Oct 15/92
FM l	3712	20	Aug 18/89	Aug 18/92
FM 2	3713	20	Aug 18/89	Aug 18/92
FM 3	3714	20	Aug 18/89	Aug 18/92
FM 4	3715	20	Aug 18/89	Aug 18/92
FM 5	3716	18	Aug 18/89	Aug 18/92
FM 6	3717	18	Aug 18/89	Aug 18/92
FM 8	3719	20	Aug 18/89	Aug 18/92
FM 9	3725	20	Sept 1/89	Sept 1/92
Res l	3698	18	July 17/89	July 17/92
	m _ i _ 1	104		

Total 194

Under an option agreement with Plaskey Development Enterprises, Aranlee can earn an 80% interest in the claims over a five year period, begun in Feb. 90. The option was assigned to Aranlee by a related company, Burmin Resources for costs incurred to date.

<sup>\*</sup> With application of assessment documented in this report.

<sup>^</sup> Claim FM O was staked by the company to cover the area of previous optioned claim FM 7 (Rec 3718), which was partially overstaked and is currently contested by a third party.

#### 5. EXPLORATION HISTORY

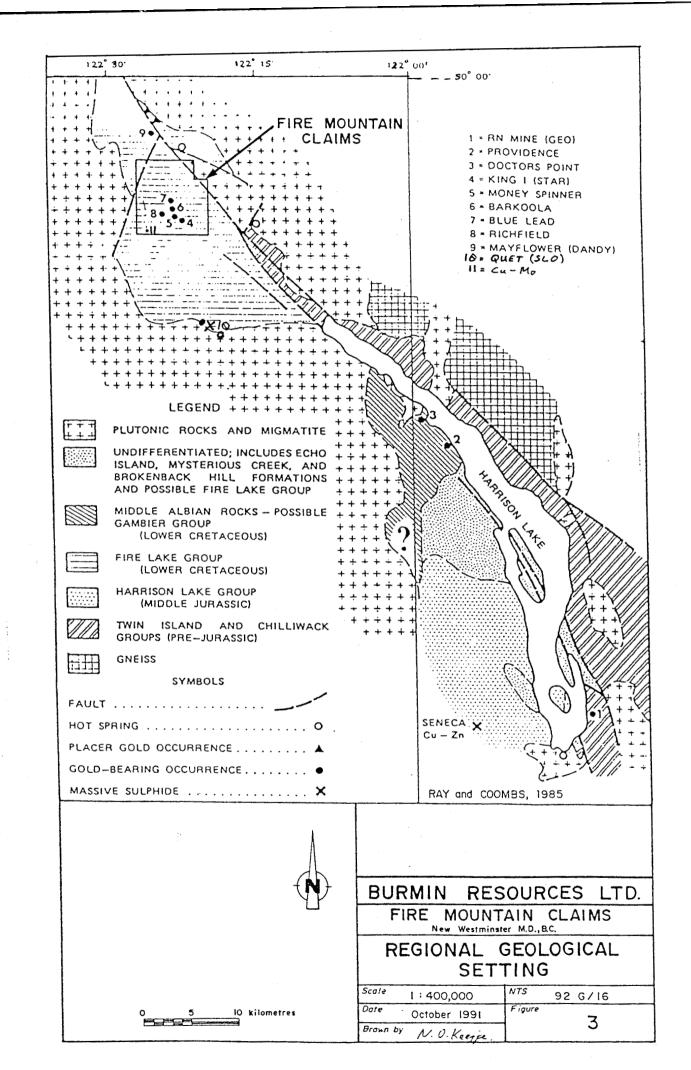
The claims surround a number of reverted crown-granted claims which contain hydrothermal copper-gold mineralised quartz veins. The most important of these contains the Money Spinner Prospect, a four feet wide quartz vein from which fifty tons of ore was mined in the 1890's (BCDM, MMAR's; G.S.C. Memoir 335). The remains of the old mill and tram line still exist on the claims. In addition to the Money Spinner a number of other gold bearing quartz veins were mined. The Barkoola and Blue Lead were the most significant but gold production was minimal. Additional reverted crown grants on the property cover the former King and Richfield prospects (Fig. 3).

For a more detailed account of the exploration history of the area the reader is referred to the company's previous report (O'Keeffe and Verbruggen, op.cit).

In summary some attempts at further production were made in the 1930's, and in the 1970's and 80's the area was looked at for its base metal potential (Price, B.J. 1987).

Of particular significance from earlier work are;

- i). A number of northwesterly trending VLF anomalies and a zone of high magnetic intensity were outlined over Fire Mountain. Ten areas of interest were isolated but no follow up work is recorded (White, 1983)
- ii) In the SW of the project area, Kidd Creek Mines outlined a number of anomalies from stream pan concentrates and rock chip sampling but no follow up work is recorded (Boronowski, 1983).
- iii) Plaskey Development Enterprises conducted a reconnaissance prospecting program over part of the property and discovered a strongly altered gossanous zone in the southeastern part of the claim block. Blast trenching returned assay values up to 19 grams/ton Ag, 0.91% Cu, 1400 ppb Au and 1.97% Zn (Price, 1987).



## 6. REGIONAL GEOLOGY

The Fire Mountain claims occur within the Fire Lake Group, a Lower Cretaceous submarine volcano-sedimentary sequence consisting of conglomerate, arkose, slate and andesitic volcanoclastics (Roddick, 1965; Ray and Coombes, 1984). The Group is surrounded by rocks of the Coast Range Complex, except in the southeast where it is in fault contact with pre Jurassic rocks of the Twin Island and Chilliwack groups.

The Lillooet River Valley east of the claims is occupied by a major fault system which is believed to represent the continuation of a palaeo crustal suture along Harrison Lake (Harrison Lake Shear Zone). Hot spring activity is common both along this linear trend and in splays off of it. The Harrison Lake Shear Zone and related structures may be important in controlling gold mineralisation, both vein hosted in the Fire Mountain area and that related to Tertiary granitic stocks at Doctors Point and Harrison Hot Springs, and possibly also the recently discovered Quet property of Aranlee Resources (Figure 3).

### 7. PROPERTY GEOLOGY

Recent mapping by the Geological Survey Of Canada (Lynch,1990) has outlined the large scale lithology and structure of the property. Two divisions of the Fire Lake Group, the Peninsula and Brokenback Hill Formations are recognised in the area.

The Peninsula Formation comprises two members. The lower is a conglomerate and the upper consists of interbedded arkose and pyritic slate.

The Brokenback Hill Formation is subdivided in to four members, these are mostly volcanic and distinct from the sedimentary succession of the underlying Peninsula Formation. The lowest member consists of interbedded feldspar crystal tuff with slate or phyllite. The second member consists of andesite and intermediate volcanic rocks and is followed by a third member of coarse grained volcanoclastic sandstone. The fourth member consists of pyroclastic volcanic rocks dominated by lapilli tuff.

Three phases of deformation are recognised. The first consists of shallow angle thrusts and associated moderate scale folding. The second consists of steep angle thrusting and tight large amplitude non cylindrical northeast trending folds. The third consists of steep dipping northeast striking faults of Tertiary age (Fig 3).

#### 8. FIELD PROCEDURES

## 8.1 October 90 Program

Five days were spent on the Fire Mountain property between Oct. 13 and Oct. 19 1990 by a three man exploration crew comprising two geologists, Noel O'Keeffe and Brendan Murphy, and one prospector Dan Perrrett (O' Keeffe, 1990). A day was spent driving to the property and a day spent returning to Vancouver.

A camp was set up at the eastern end of the Fire Lake 4WD trail, approximately 300m from the eastern end of the lake. A small inflatable boat equipped with an outboard motor provided lake access to the southern part of the claim block. Weather conditions were extremely bad with continuous snow fall, poor visibility and freezing temperatures for the duration of the trip.

The purpose of the program was to:

- A. Further evaluate the showing discovered during the June/July 1990 exploration program from which samples FDF 120 (3910 ppb Au, 10.8ppm Ag, 1610 ppm Cu, 1.19% Pb, 3.47%Zn) and FDR 121 (140 ppb Au, 4.4 ppm Ag, 2000 ppm Cu, 5000 ppm Pb, 1.58% Zn) were taken. The showing was relocated, hand trenched, mapped and chip sampled.
- B. Follow up areas of anomalous soil, stream sediment and rock samples from previous program with prospecting and rock sampling
- C. Prospect and map in SW area to relocate and examine historic copper and copper-moly showings.

## 8.2 July 91 Program

On July 9th 1991 the availability of a helicopter in the Fire Mountain area presented an opportunity to carry out some additional follow up work on the project area. Geologist Koenraad Verbruggen was able to visit, examine and sample several sites of interest including showings discovered by Plaskey and earlier workers and areas of anomalous results from the company's 1990 programs. The following day new logging roads in the area were prospected.

In both cases, a 1:10,000 enlargement of the relevant part of NTS map 92G/16 was used for reconnaissance geological mapping and plotting sample locations. Air photographs, clinometers, hipchains and altimeters were used for orientation. Rock sample locations were marked on the ground with flagging tape. From both programs, a total of 28 rock samples collected during the program were submitted to Chemex Laboratories in North Vancouver for Au, Ag, Cu, Pb, and Zn analysis. (Appendix 5). Sample locations and results are plotted on the enclosed maps (Figures 5 and 6).

## 9. DISCUSSION OF RESULTS

## 9.1 October 90 Program

9.1.A. Snow Showing

The "Snow Showing" was the appropriate name given to the gold/base metal prospect relocated from the Phase I program (Samples FDF 120, FDR 121), the showing is located within timber cover at 4,300ft asl. A detailed 1:500 scale map is included in this report (Fig. 6). It comprises a 5m wide shear zone, with disseminated pyrite, galena, sphalerite and chalcopyrite. Total sulphide content averages 5 to 10%, mostly pyrite and galena, lesser sphalerite and minor chalcopyrite. Strong shear textures including intense fabric development, boudinaging, quartz - carbonate flooding and brecciation are present within the shear zone. The host rock is a green very chloritic fine grained tuff. The undeformed rock is unremarkable in outcrop and the transition to the shear zone is sharp and well defined.

The shear zone is exposed along strike for only 2m, but from topography, mineralised rubble and sub outcrop down strike (to the NW), it is undoubtedly continuous for several hundred metres.

Hand trenching exposed a continuous section across the shear zone. A chip sampling section with samples over every 0.5 metres was carried out across the shear zone and adjacent wall rock, assay results are plotted on Fig.6, assay certificates are also attached (Appendix 5).

#### Results

Au results within the shear zone occur in the range 100 to 1000 ppb with a max of 965 ppb.

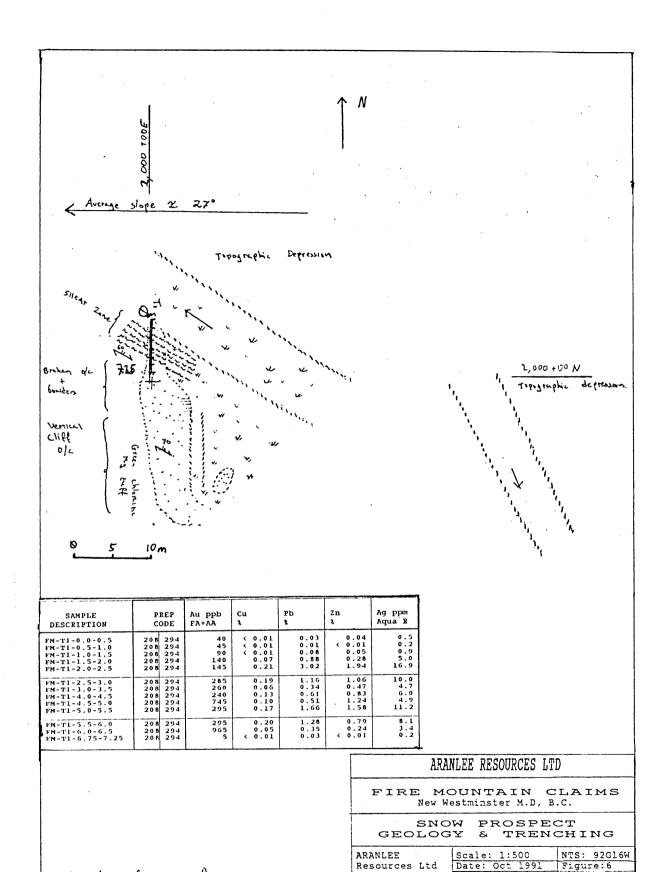
Ag values occur in the range 0.9 to 16 ppm.

Cu values occur in the range 0.06 to 0.2% with most values greater than 0.1%.

Pb values occur in the range 0.1 to 3%

In values occur in the range 0.1 to 2%

The most significant intersection is in the central part of the shear zone where assays average 3.59% combined Pb and Zn over lm associated with high silver values (average 13.45 ppm ). Interestingly Au values show no correlation with base metals while Ag values show a strong association. Both Au/Ag and base metal values fall to background levels in the wall rock.



Resources Ltd

NO'K, KMV

See Appendix for Descriptions

Figure:6

Drawn by NO'K

### 9.1.B. Follow Up

Attempts to follow up anomalous results from the Phase I program elsewhere on the property met with only mixed success. However minor geological mapping and prospecting was also carried out during the program. Results are plotted on the enclosed map Fig 6). A total of five rock samples were taken and submitted for Au, Ag, Cu, Pb and Zn analysis. The only significant result was from sample 505411 H which returned assay values of 1720 ppb Au, 7750 ppm Cu and 6.5 ppm Ag. This sample was from a malachite stained quartz vein occurring above an Au soil anomaly (105 ppb).

Prospecting in the SW area of the project failed to relocate copper showings referred to by previous workers (see 10.2.D), only one sample taken in the area did return anomalous values. FD-141 was a sample of angular float quartz vein material which was malachite stained and contained finely disseminated and rare blebs of chalcopyrite (1450 ppm Cu and 40 ppb Au). A major factor work was the weather which was bad enough to limit light and visibility, preventing helicopter use and cutting short useful working days.

## 9.2 July 91 Program

As stated a one day helicopter supported sampling/field examination program, followed by one day of road traverses was carried out in July 1991 on the following sites;

- 9.2.A. Gossan Zone/Crater Lake. This gossanous area at the eastern end of the Fire Mountain Ridge (c.6,000ft asl) was first located and was blast trenched by Plaskey in 1987 (see Exploration History, above). However on examination of the prospect it would appear that gossan/alteration development is related to N-S faulting, forming the prominent escarpment face. The alteration does not appear to extend in width beyond 2-3m and quartz stockwork and breccia development, such as those that returned anomalous values previously, appear rare in outcrop. Two samples of the gossanous alteration zone, with minor quartz veining were taken (505701 and 702), one of which returned some slightly anomalous base metal values (Pb 130 ppm, Ni 56 ppm) but also elevated iron and manganese indicating possible oxidation and scavenging.
- 9.2.B. Central Zone/Cu-Au Veins. This area of elevated copper and gold values associated with quartz veining and shearing was discovered by the company in 1990 and is located on the north facing slope at the centre of the Fire Mountain Ridge. Unfortunately unseasonably late snow cover and steep slopes prevented additional sampling in the area. Additionally no upslope outcropping source for mineralized quartz float could be seen.

9.2.C. Money Spinner Area. Although this historic prospect is not included within the currently optioned area the former producer is important as an example of known mineralization style in the area. The 1.5m vein outcropping above the collapsed main adit consists of sheeted quartz (5-10cm wide) of differing compositions varying from clean "milky" varieties to blue chlorite, malachite and carbonate/dolomite rich 'sheets'. Vein and sheet margins are strongly slickensided giving the impression that the vein is a fracture or shear-fill. Two samples of different "vein sheets" were taken in an attempt to evaluate the importance of the chlorite versus malachite association, as several instances in the literature relate the chlorite presence to gold enrichment.

505703 Blue Chlorite Rich 30ppb Au, < 0.5ppm Ag, 11ppm Cu 505704 Malachite stained 210ppb Au, 2.5ppm Ag, 3500ppm Cu

While two samples do not constitute a tenable statistical group, work by the company to date would tend to substantiate this finding, particularly low values returned from chloritic Blue Lead showing and common Cu-Au association in Central Zone.

9.2.D. Red Mountain Area. The ridge south of Fire Lake, unofficially known as Red Mountain contains a minfile recorded Cu-Mo showing (No. 92GNE030) and has previously recorded copper occurrences from early prospecting reports (G. Salazar , pers comm.) and work by Kidd Creek Mines (Boronowski, op. cit). To date the company have had little encouragement in this area albeit from limited work. The exact location of the recorded Cu-Mo showing is not known, but is described as being 2.2km southwest of Fire Lake at an elevation of 1795m, and to consist of "molybdenite in a stockwork of veinlets hosted by a garnet bearing granite". Using these guidelines an attempt was made to relocate the showing during this program, and access was gained to an iron stained section of the intrusive, 2-300m wide, close to the contact zone, at c 1800m Lithologies here consisted mainly of medium grained granodiorite, with rare fine garnets, which was hornfelsed and silicified close to prominent narrow N-S fracture zones. Hornfelsed samples contained up to 10% pyrite and were strongly iron stained while the fresh rock showed no sign of alteration other than minor oxide staining and rare fine pyrite. Assays were;

505705 Pyritic Hornfels <5 ppb Au, 18 ppm Cu, lppm Mo, 3.5% Fe 505706 Intrusive 40 ppb Au, 12lppm Cu, lppm Mo, 5.2% Fe

Interestingly the fresh rock returned higher values despite appearances, however these values are still not significant.

9.2.E. Road Traverse. Existing and new logging roads within and around the project area were examined, both for potential roadcuts and showings and to ascertain their condition for future programs (see 2. Location and Access). While the majority of exposures have been included in previous mapping by the company and earlier workers, two new areas of alteration were discovered. Both are located in the east of the project area, north of the Fire Lake access road. The lithologies are tuffaceous siltstones and fine sandstones with rusty areas of pyrite and pyrrhotite banding and pyrite rich quartz veinlets. The outcrops show signs of minor deformation with finer sediments developing a highly fissile fracture cleavage. Grab samples (505707/8) returned high iron contents with anomalous copper values (426/107ppm). While veining probably relates to the fracturing event the presence of bedding parallel banded sulphides is considered noteworthy.

## 10. CONCLUSIONS AND RECCOMENDATIONS

The Phase II exploration program has been partially successful in following up on previously generated targets and isolating some target areas within the property for more detailed work.

## 10.1 Snow Showing

While mineralization observed at this showing to date is not of economic widths or grades the importance of the occurrence is that it represents a mineralized structure, possibly one which acted as a conduit for mineralizing fluids. The structure forms a topographic depression and break in slope, which is evident on both contour maps and air photographs and is sub parallel to a number of similar features on the same slope. Some of these features correspond to mapped lithological changes and formation boundaries (Lynch, op. cit.), while the most northerly corresponds to the mapped Fire Creek Thrust Fault. The possibility exists that many of these zones host similar structural zones, some of which may be also mineralized. These structures and in particular the shear zone exposed at the showing may be important as former conduits of mineralizing fluids, and areas of oblique crossfaulting or "jogs" along the shear plane may have resulted in the development of mineralized dilational zones.

Specific follow up work on this prospect and setting should include

- l. Detailed air photo/contour study should be undertaken to outline the trace of the Snow shear and any others evident.
- 2. Detailed close spaced soil sampling along the unexposed strike extension of the shear zone.
- 3. A vlf em survey should be carried out simultaneous with soil sampling and over the same grid orientation. This survey should prove effective in mapping out the extent of the shear zone.
- 4. Further trenching and chip sampling should be carried out guided by the results of 2 and 3 above.
- 5. Prospecting and mapping should be carried out along the trace of other shears (from 1.), with follow up as for the Snow showing if warranted.

- 10.2 Central Zone/Cu-Au Veins. Follow up recommended after Phase I is still to be carried out here. This should consist of further mapping and rock sampling in the area which has returned encouraging copper and gold values. If warranted an IP survey may be useful in defining drill targets within the mineralized zone. This area covers very steep and rugged terrain and may require the use of abseiling equipment for a full evaluation, in addition this area is generally above 6000ft in elevation and follow up must be carried out during the summer weather window.
- 10.3 Red Mountain Area-SW of Project. Copper and Moly showings discussed above, remain to be relocated and evaluated in this area. Once found historic showings should be mapped and sampled in detail and both showings and potential areas of extensions of mineralization surveyed with soil geochemistry and ground geophysics (IP).
- 10.4 Other Areas. Prospecting and geological mapping is recommended in areas of this large project not covered to date i.e. NW and W area, in addition follow up of anomalous geochemical results from the first two phases of work is also warranted.
- 10.5 Conclusions. Observations made during prospecting and geological recconnaissance have indicated strong structural control on mineralisation. Further work will attempt to clarify this control and establish the significance of mineralisation discovered to date. While vein and shear hosted styles of mineralization have been observed, many of the aspects of the project indicate the potential for porphyry style disseminated mineralization. It is possible that much of the veining and base metal mineralization seen may represent higher or peripheral levels of a volcanic style porphyry system (McMillan, 1991) and that a major deposit hosting body is present at depth or distal to what has been observed to date. This is also the belief of several previous workers in the area (Price, pers comm), it is hoped that the next phases of the program will resolve this issue.

Proposed Phase III and IV programmes are outlined and budgeted overleaf. Given the scope of the project and varying terrain it may be more appropriate to carry out the next phase in stages each dealing with one of the target areas outlined above.

## 11. PROPOSED BUDGETS.

## Phase III

1 month field program.	\$
Three camp locations; Central Zone, Shear Zones, Red	Mountain
Three geologists, two prospectors Camp and food supplies Assay: 250 rocks @ \$17 per sample	29,000 3,000 4,250 14,000 10,000 3,000 3,000 ==================================
Total	90,000
Phase IV. (contingent on successful results from Phase	e III )
Map preparation (ortho photo ) Detail geological, geochemical	5,000
and geophysical surveys Helicopter support	50,000 20,000
Preliminary diamond drilling 600 metres (2000 feet) @ \$75 per metre Total	45,000 ======== 120,000 =======
Total Phase III & IV	210,000

#### REFERENCES.

British Columbia Dept. of Mines; ministry of mines annual reports, 1897(578), 1900(220), 1930(314), 1934(F 15).

Boronowski, A. J.(1983); Geological and Geochemical report on the Lilabet 1 claim, Assessment report no. 11,638.

Geological Survey of Canada; Memoir no. 335, pp42 to 44, 192.

Lynch, J.V.G.(1990); Geology of the Fire Lake Group, southeast Coast Mountains, British columbia; in Current Research, Part E, Geological Survey of Canada, Paper 90 lE, p. 197 to 204.

McMillan, W.J.(1991); Porphyry Deposits in the Canadian Cordillera: in Ore Deposits, Tectonics and Metallogeny in the Canadian Cordillera, MDRU Short Course #3.

- O' Keeffe, N. (1990); Fire Mountain Exploration, October 1990. Internal Report for Aranlee Resources Ltd.
- O' Keeffe, N. and Verbruggen, K.M. (1990); Geological, Prospecting and Geochemical Report on the Fire Mountain Claims, for Burmin Resources Ltd. Assessment Report, British Columbia Ministry of Energy, Mines and Petroleum Resources.
- Price, B.J. (1987); Geological Report, Fire Mountain Gold Property; private report for Plaskey Development Enterprises Ltd., dated Nov. 25, 1987.
- Ray, G.E. and Coombes, S. (1984); Geology of the Fire Mountain and Fire Lake Area, Harrison Lake Project. In: Geological Fieldwork 1984. MEMPR Paper 1985 1.
- Roddick, J.A. (1965); Vancouver North, Coquitlam and Pitt Lake Map Areas, British Columbia, Geological Survey of Canada, Memoir no. 335
- White, Glen E. (1983); Geophysical Report on an Airborne Magnetometer and VLF Electromagnetic Survey. Inferno 1 to X11 claims, Fire Mountain, New Westminster M.D. Assessment report no. 11,796, for Rhyolite Resources Inc.

APPENDIX 1.

STATEMENT OF QUALIFICATION.

## STATEMENT OF QUALIFICATION.

- I, Noel F. O'Keeffe of Kilmaley Ennis, Co. Clare, Republic of Ireland do hereby certify:
- 1. I graduated in Honours Geology, (B.Sc. 1985) from University College Galway, Ireland.
- 2. I have practised my profession as an Exploration Geologist continuously since graduation. I have formerly worked in Europe, Australia and Canada. I am currently employed by Burmin Exploration and Development P.L.C., Clifton House, Lower Fitzwilliam Street, Dublin 2, Ireland.
- I carried out the work described in this report while on secondment from Burmin to Aranlee Resources Ltd.
- 4. I have carried out prospecting, mapping and sampling on the area referred to in this report.

DATED at Vancouver, British Columbia.

Noel F.O'Keeffe, B.Sc.

Roef & Keeffe

October 10th, 1991

## STATEMENT OF QUALIFICATIONS

- I, Koenraad M. Verbruggen of White Rock in the Province of British Columbia do hereby certify:
- 1. I graduated in Honours Geology, B.Sc. 1984 and M.Sc. Geology 1985 from the National University of Ireland, at University College Dublin, Republic of Ireland.
- I have practised my profession as an Exploration Geologist continuously since graduation. I have formerly been employed by Britoil Plc., of Glasgow, Scotland, Burmin Exploration and Development Plc., in Ireland and Canada and Ashling Resources N.L. in Western Australia.
- I am presently employed as Exploration Director by Aranlee Resources Ltd.
- I have prospected, sampled and mapped parts of the property referred to in this report and have jointly supervised all other exploration activities outlined herein.

Dated at Vancouver, British Columbia

K M Verbruggen, M.Sc.

October 10th, 1991

APPENDIX 2.

STATEMENT OF COSTS OF PROGRAM.

## STATEMENT OF COSTS, Phase II PROGRAM, FIRE MOUNTAIN CLAIMS.

\$	<u>Total</u>	Group 1	Group 2
October Program			
K. Verbruggen 4 days @ \$350 per day	1,400	700	700
N. O' Keeffe 10 days @ \$300 per day	3,000	1,000	2,000
B. Murphy 9 days @ \$300 per day	2,700	1,000	1,700
D. Perrett 7 days @ \$200 per day		500	900
Sub Total	8,500	3,200	5,300
Rental/Mileage 4WD Truck	845	400	445
Fuel (Truck/Boat/Gen.)	402	200	202
Boat & motor rntl/l wk	302	150	152
Generator rental/1 week	150	50	100
Radio rental/l week	212	100	112
Camp rental/l week Food:	250	100	150
21 man days @ \$50 pd	1,050	500	550
Geological supplies	400	200	200
Aerial Photographs	420	200	220
Analytical: 20 rocks @ \$17.25/ rock	350	150	200
Report Preparation and drafting	1,500	500	1,000
Word processing and reproduction	600 ======	200	400
Total	14,981	5,950 ======	9,031

## July Program

K. Verbruggen 5 days @ \$350 per day	1,750	850	900
Helicopter 4 Hours & Fuel	3,150	1,450	1,700
4WD Truck Rental/Mileage/Fuel	350	170	180
Food/Accom/Logging Camp	200	100	100
Geological supplies	156	70	86
Analytical: 8 rocks @ \$17.25	140	70	70
Report Preparation and drafting	500	240	260
Word processing and reproduction	200	100	100
Total	6,446	3,050	3,396
Grand Totals	21,427	9,000	12,427

## PHASE II TOTALS (as per Statements of Work)

Res l				1,400
Balance of	Fire	Group	I	7,600
Fire Group	ΙΙ			12,427
				21,427

## APPENDIX 3.

STATEMENT OF DAYS WORKED BY EXPLORATION PERSONNEL

## STATEMENT OF FIELD DAYS WORKED BY EXPLORATION PERSONNEL

<u>Name</u>	Position	<u>Address</u>	Dates worked
N O'Keeffe	Geologist	548, Beatty St. Vancouver B.C. V6B 2L3.	Oct 13-19
K Verbruggen	Geologist	15815 Russell Ave White Rock B.C. V4B 2S5	July 8-11
B. Murphy	Geologist	Apt. # 105 2263 Queens St.E Toronto, Ont. M4E 1G3	Oct 13-19
D Perrett	Prospector	6697 Arcola St. Burnaby, B.C. V5E 1H2	Oct 13-19

APPENDIX 4.

ROCK SAMPLE DESCRIPTIONS

Fire Mountain 90

# ROCK SAMPLE DESCRIPTIONS. (Grab samples unless otherwise indicated)

## CODE : FN

## October Program

- R25 Green Feldspar Crystal tuff, finely disseminated silvergrey pyrite, outcrop rusty weathering.
- R26 Green chloritic Lapilli Tuff, sheared with white carbonate alteration, minor silicification.
- Green Lapilli Tuff, medium to coarse grained and unsorted, massively bedded with finely disseminated pyrite in matrix.

#### CODE : FD

141 Float, quartz vein material from upslope outcrop, malachite stained with minor chalcopyrite as fine disseminations and occasional larger blebs, also minor pyrite.

#### OTHER SAMPLES

- 505410 Float, fine grained tuff, with strong iron and manganese staining, grab sample from scree slope.
- 505411 H Quartz Vein, 30cm wide with malachite staining, hosted by chloritic lapilli tuff.
- 505412 Chloritic lapilli tuff, rusty weathering and vuggy appearance, wallrock to quartz vein (505411).

## Fire Mountain 90. SNOW SHOWING TRENCH-ROCK CHIP SAMPLES

CODE : FM-T1-

### Sample Interval (metres)

- 0.0-0.5 Dark blue-green Tuff, fine grained, strongly chloritic, rare dissem. py (pyrite) (<1%), trace galena and cpy (chalcopyrite) in quartz veinlets.
- 0.5-1.0 As above, slightly more dissem. py, mild carbonate alteration.
- 1.0-1.5 As above, 1-5% py.
- 1.5-2.0 Start of Shear Zone at 1.7m.
  Strongly sheared rock with extensive carbonate and up to 7% sulphide. Galena occurs as SZ parallel pody veinlets up to 0.5cm wide and as disseminations. Minor cpy.
- 2.0-2.5 As above, strongly sheared, extensive development of carbonate, chlorite and py. Moderate sulphides c.10%, mainly galena-sphalerite (>3%), minor cpy.
- 2.5-3.0 As above, rock shows brecciated texture with carbonate matrix. Galena, sphalerite and cpy c.7%
- 3.0-3.5 As above, strong shearing, sulphides less obvious and present as dissems. rather than veinlets. Mostly galena lesser sphalerite and cpy.
- 3.5-4.0 No Sample. Timber obstruction.
- 4.0-4.5 Strongly brecciated rock, greater silicification than seen previously with quartz veinlets. Decrease in sulphides, present as dissems.
- 4.5-5.0 Green chloritic Tuff, less strongly sheared. Minor quartz veinlets with rare galena, sphalerite, py and py (2-3% sulphides).
- 5.0-5.5 As above, minor sulphides.
- 5.5-6.0 As above
- 6.0-6.5 As above
- 6.5-6.75 No Sample, obstruction.
- 6.75-7.25 Green chloritic Tuff, medium grained, no evident shear alteration.

## Fire Mountain. 91

## ROCK SAMPLE DESCRIPTIONS.

Code : FM.

505708

July 1991.

505701	Gossanous silicified tuff, narrow quartz veins 3-5cm, relict py. Crater Lake area
505702	As above, iron stained pyritic tuff, partly silicified.
505703	Quartz vein, chip sample across section rich in blue chlorite (cl0-20cm), doth disseminated and along slickenside margins. Money spinner Vein.
505704	Locality as above, but sample of malachite stained material, minor dissem. cpy.
505705	Granodiorite, minor garnets, hornfelsed/silicified and pyritic (10%) close to fractures, iron oxide staining. Red Mountain Area.
505706	As above, less altered sampled, pyrite <5%
505707	Blue-grey tuffaceous siltstone, pyrite and minor pyrrhotite in bands (1-3cm), parallel to bedding. Logging road-cut, rusty over 10m.

Tuffaceous sandstone, quartz/feldspars in finer grained matrix, minor pyrite in veinlets and along fractures. Locality as above.

## APPENDIX 5.

ASSAY RESULTS AND ANALYTICAL PROCEDURES

#### SAMPLE PREPARATION

We emphasize the importance of properly preparing a sample for analysis. For most types of analytical determinations only a small fraction of the sample is utilized. The analytical result must be valid for the entire sample and not just for this subsample. In effect, a poorly prepared sample is not worth analyzing.

Routine sample preparation procedures are listed below. Sample preparation procedures can be customized for any project. Please call for details.

#### **ROCK AND DRILL SAMPLES**

Note: codes in parentheses refer to procedures for geochem (trace level) samples rather than ore-grade material. Separate facilities are used to avoid contamination.

Chemex code	Procedure	Price per sample
208 (205)	Multiple stage crushing of up to 10 pounds of sample; riffle split and pulverize to approximately -150 mesh.	\$ 3.50
207 (212)	For samples with suspected nugget or free gold effects. Procedure as per 208, then sieve pulp through a -150 mesh screen. Examine + 150 mesh fraction for metalics. If present, save + 150 mesh fraction; if not, + 150 mesh fraction is hand pulverized and homogenized with original sample.	\$ 5.00 ,
219	Drying charge Applied to samples too wet to be crushed.	\$ 2.00
251	Overweight charge Charged on samples over 10 pounds.	\$ 0.35/lb

#### PRECIOUS METAL ANALYSIS

#### **ORE-GRADE ANALYSIS**

If metric units (g/tonne) are preferred, use the codes in parentheses.

Chemex code	Element(s)	Sample weight	Method	Detection limit	Price per sample
998 (999) 396 (397) 996 (997) 385 (386)	398 (399) Gold 1/2 A 998 (999) Gold 1 A.T 396 (397) Gold 1/2 A 996 (997) Gold 1 A.T 385 (386) Silver 383 (384) Silver		Fire assay, A.A. finish Fire assay, A.A. finish Fire assay, grav. finish Fire assay, grav. finish Aqua regia, A.A. finish Fire assay, grav. finish	0.002 oz/t 0.002 oz/t 0.003 oz/t 0.002 oz/t 0.01 oz/t 0.01 oz/t	8.75 9.75 10.00 11.00 8.75 8.75
303 (304)	Gold + Silver Gold + Silver Gold + Silver Gold + Silver	1/2 A.T. 1 A.T. 1/2 A.T. 1 A.T.	Fire assay / A.A. Fire assay / A.A. Fire assay - grav. finish Fire assay - grav. finish	0.01 021	11.75 12.75 13.00 14.00
479 (133) 414 (415) 420 (421)		10 grams 1/2 A.T 1/2 A.T 1/2 A.T.	Cyanide leach, A.A. finish Fire assay, A.A. finish Fire assay, A.A. finish Fire assay, A.A. finish	0.003 oz/t 0.003 oz/t 0.003 oz/t	8.75 20.00 20.00 30.00

#### **ORE-GRADE ANALYSIS — ASSAYING**

High precision analytical procedures are used to determine the following elements and physical parameters in ore and ore-grade materials. All assays are supervised and certified by government registered assayers.

Cheme	<b>(</b>	
code	Element	Price
366	Aluminum	\$ 10.00
347	Antimony	9.50
330	Arsenic	9.50
352	Barium	9.50
364	Beryllium	11.00
349	Bismuth	9.00
871	Boron	18.00
441	Bulk density	7.00
320	Cadmium	7.00
355	Calcium	7.00
367	Carbon	7.00
368	Carbon dioxide	7.00
369	Cerium	24.00
155	Chlorine	, 15.00
305	Chromium	10.00
323	Cobalt	7.00
301	Copper	6.00
346	Fluorine	10.00
370	Gallium	20.00
872	Germanium	20.00
325	Iron (total)	10.00
327	Iron (acid soluble)	8.00
451	Iron (lerrous)	7.00
372	Lanthanum	24.00
312	Lead	6.00
356	Lithium	10.00
442	Loss on ignition	5.00
357	Magnesium	9.00
328	Manganese	9.50

(	
Element	Price
Mercury	10.00
Moisture	6.00
Molybdenum	6.00
Neodymium	24.00
Nickel	7.00
Niobium	24.00
Phosphorus	10.00
Potassium	10.00
Rubidium	9.50
Selenium	9.50
Silica (insoluble)	7.00
Silica (lusion)	10.00
Sodium	10,00
Specific gravity	7.00
Strontium	10.00
Sulfur (gravimetric)	9.00
Sulfur (induction)	7.00
Sulfur (elemental)	15.00
Tantalum	9.50
Tellurium	20.00
Thorium	12.00
Tin	8.00
Titanium	12.00
Tungsten	9.50
Uranium	12.00
Vanadium	10.00
Yttrium	24.00
Zinc	6.00
Zirconium	24.00
	Mercury Moisture Molybdenum Neodymium Nickel Niobium Phosphorus Potassium Rubidium Selenium Silica (insoluble) Silica (fusion) Sodium Specific gravity Strontium Sulfur (gravimetric) Sulfur (induction) Sulfur (elemental) Tantalum Tellurium Thorium Tin Titanium Tungsten Uranium Vanadium Yttrium



Analytical Chemists \* Geochemists \* Registered Assayers

212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221

548 BEATTY ST. VANCOUVER, BC V6B 2L3

To: BURMIN RESOURCES LTD.

A9025514

Comments: ATTN: NOEL O'KEEFFE

**CERTIFICATE** 

A9025514

BURMIN RESOURCES LTD.

Project: P.O. #:

F.M.

Samples submitted to our lab in Vancouver, BC. This report was printed on 6-NoV-90.

	SAMPLE PREPARATION						
CHEMEX	NUMBER SAMPLES	DESCRIPTION					
208 294 238	13 13 13	Assay ring to approx 150 mesh Crush and split (0-10 pounds) NITRIC-AQUA REGIA DIGESTION					

	ANALYTICAL PROCEDURES									
CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT					
100 301 312 316 6	13 13 13 13 13	Au ppb: Fuse 10 g sample Cu %: HC104-HN03 digestion Pb %: HC104-HN03 digestion Zn %: HC104-HN03 digestion Ag ppm: HN03-aqua regia digest	FA-AAS AAS AAS AAS AAS-BKGD CORR	5 0.01 0.01 0.01 0.2	10000 100.0 100.0 100.0 100.0					



SAMPLE

DESCRIPTION

FM-T1-0.0-0.5

FM-T1-0.5-1.0

FM-T1-1.0-1.5

FM-T1-1.5-2.0

FM-T1-2.0-2.5

FM-T1-2.5-3.0

FM-T1-3.0-3.5

FM-T1-4.0-4.5

FM-T1-4.5-5.0 FM-T1-5.0-5.5

FM-T1-5.5-6.0

FM-T1-6.0-6.5

FM-T1-6.75-7.25

#### Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers

Au ppb

40

45

90

140

145

285

260

240

745

295

295

965

FA+AA

Cu

< 0.01

< 0.01

< 0.01

0.07

0.21

0.19

0.06

0.13

0.10

0.17

0.20

0.05

< 0.01

용

212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1

PHONE: 604-984-0221

PREP

CODE 208 294

208 294

208 294

208 294

208 294

208 294

208 294

208 294

208

208

208

208

208

294

294

294

294

294

To: BURMIN RESOURCES LTD.

548 BEATTY ST. VANCOUVER, BC V6B 2L3

Project: F.M.

Zn

ક

Pb

0.03

0.01

0.08

0.88

3.02

1.16

0.34

0.61

0.51

1.66

1.28

0.35

0.03

ક

Comments: ATTN: NOEL O'KEEFFE

Page Number : 1 Total Pages : 1

The resolution of the contribution of the cont

Invoice Date: 6-NOV-90 Invoice No.: 1-9025514

P.O. Number:

	(	CERTIFIC	ATE OF A	NALYSIS	A90	A9025514			
Zn %		Ag ppm Aqua R							
<	0.04 0.01 0.05 0.28 1.94	0.5 0.2 0.9 5.0 16.9							
	1.06 0.47 0.83 1.24 1.58	10.0 4.7 6.0 4.9 11.2							
	0.79 0.24 0.01	8.1 3.4 0.2							

**CERTIFICATION:** 



Analytical Chemists \* Geochemists \* Registered Assayers

212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221

To: BURMIN RESOURCES LTD.

548 BEATTY ST. VANCOUVER, BC V6B 2L3

A9025515

Comments: ATTN: NOEL O'KEEFFE

**CERTIFICATE** 

A9025515

BURMIN RESOURCES LTD.

Project: P.O. #:

F.M.

Samples submitted to our lab in Vancouver, BC. This report was printed on 31-OCT-90.

	SAMPLE PREPARATION					
CHEMEX	NUMBER SAMPLES	DESCRIPTION				
205 294 238	5 5 5	Geochem ring to approx 150 mesh Crush and split (0-10 pounds) NITRIC-AQUA REGIA DIGESTION				

_	
AAS 5 1 -BKGD CORR 1 1 -BKGD CORR 0.2	10000 10000 10000



Analytical Chemists \* Geochemists \* Registered Assayers 212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221

To: BURMIN RESOURCES LTD.

548 BEATTY ST. VANCOUVER, BC V6B 2L3

Project: F.M. Comments: ATTN: NOEL O'KEEFFE

Page Number : 1 Total Pages : 1 Invoice Date: 31-OCT-90 Invoice No. : I-9025515 P.O. Number :

								CERTIFIC	ATE OF A	NALYSIS	A90	25515	
SAMPLE DESCRIPTION		REP	Au ppb FA+AA	Cu ppm	Pb ppm	Zn ppm		Ag ppm Aqua R					
FN-R 25 FN-R 26 FN-R 27 FD-141 505411 H	205 205 205		< 5 5 < 5 40 1720	25 48 180 1450 7750	1 < 1 < 1 < 1 < 1		24 60 82 72 18	< 0.2 < 0.2 < 0.2 0.3 6.5					
										CERTIFICATIO	v: Hai	t Bich	ler



Analytical Chemists \* Geochemists \* Registered Assayers

212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 To: BURMIN RESOURCES LTD.

548 BEATTY ST. VANCOUVER, BC V6B 2L3

A9025574

Comments: ATTN: K.M. VERBRUGGEN

**CERTIFICATE** 

A9025574

BURMIN RESOURCES LTD.

Project: P.O. # : FM

Samples submitted to our lab in Vancouver, BC. This report was printed on 30-OCT-90.

	SAMPLE PREPARATION							
CHEMEX	NUMBER SAMPLES	DESCRIPTION						
205 294 238	2 2 2 2	Geochem ring to approx 150 mesh Crush and split (0-10 pounds) NITRIC-AQUA REGIA DIGESTION						

				. PROCEDI	 			
HEMEX	NUMBER SAMPLES		DE	SCRIPTION	METHOD	 DETECTION LIMIT	İ	UPPEF LIMIT
100 2 4 5 6	2 2 2 2 2 2	Cu ppm:	HNO3-agua	sample regia digest regia digest regia digest regia digest	AAS-BKGD	5 1 1 0.2		10000 10000 10000 10000 100.0
-								
		•						



Analytical Chemists \* Geochemists \* Registered Assayers

212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221

To: BURMIN RESOURCES LTD

548 BEATTY ST. VANCOUVER, BC V6B 2L3

Project : FM Comments: ATTN: K.M. VERBRUGGEN

Page Number : 1 Total Pages : 1 Invoice Date: 30-OCT-90 Invoice No. : I-9025574 P.O. Number :

						CERTIFICATE OF ANALYSIS			A90	A9025574		
SAMPLE DESCRIPTION	PREP CODE	Au ppb FA+AA	Cu ppm		Zn ppm	Ag ppm Aqua R						
BM 505410 R BM 505412 R	205 294 205 294	25 15	52 164	< 1 < 1	112 132	< 0.2 < 0.2						
									·			
									•			
							:				,	
		1		1								

**CERTIFICATION:** 



Analytical Chemists \* Geochemists \* Registered Assayers 212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221

To: ARANLEE RESOURCES LTD.

548 BEATTY ST. VANCOUVER, BC V6B 2L3

A9118939

Comments: ATTN: K.M. VERBRUGGEN

**CERTIFICATE** 

A9118939

ARANLEE RESOURCES LTD.

Project: P.O. #:

FΜ

Samples submitted to our lab in Vancouver, BC. This report was printed on 7-AUG-91.

	SAMPLE PREPARATION								
CHEMEX	NUMBER SAMPLES	DESCRIPTION							
205 294 238	8 8 8	Geochem ring to approx 150 mesh Crush and split (0-10 pounds) NITRIC-AQUA REGIA DIGESTION							

ANALYTICAL PROCEDURES										
NUMBER SAMPLES		DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT					
888888888888888888888888888888888888888	Ag ppm: Co ppm: Cu ppm: Fe %: 9 Mn ppm: Mo ppm: Ni ppm: Pb ppm:	9 element, soil and rock 9 element, soil & rock 9 element, soil & rock element, soil & rock 9 element, soil & rock 9 element, soil & rock 9 element, soil & rock 9 element, soil and rock	FA-AAS ICP-AES ICP-AES ICP-AES ICP-AES ICP-AES ICP-AES ICP-AES ICP-AES ICP-AES	5 0.5 1 1 0.01 5 1 1 5 2	10000 200 10000 15.00 10000 10000 10000 10000					
	8 8 8 8 8 8 8 8	8 Au ppb: 8 Ag ppm: 8 Co ppm: 8 Cu ppm: 8 Fe %: 9 8 Mn ppm: 8 Mo ppm: 8 Ni ppm: 8 Pb ppm:	BYUMBER SAMPLES  BESCRIPTION  8 Au ppb: Fuse 10 g sample 8 Ag ppm: 9 element, soil and rock 8 Co ppm: 9 element, soil & rock 8 Cu ppm: 9 element, soil & rock 8 Fe %: 9 element, soil & rock 8 Mn ppm: 9 element, soil & rock 8 Mo ppm: 9 element, soil & rock 8 Ni ppm: 9 element, soil & rock 8 Ni ppm: 9 element, soil & rock 9 Pb ppm: 9 element, soil and rock	NUMBER SAMPLES  BESCRIPTION  BETHOD  B	DESCRIPTION METHOD LIMIT  8 Au ppb: Fuse 10 g sample FA-AAS 5 8 Ag ppm: 9 element, soil and rock ICP-AES 1 8 Cu ppm: 9 element, soil & rock ICP-AES 1 8 Fe %: 9 element, soil & rock ICP-AES 5 8 Mo ppm: 9 element, soil & rock ICP-AES 1 8 Mo ppm: 9 element, soil & rock ICP-AES 5 8 Mo ppm: 9 element, soil & rock ICP-AES 5 8 Mo ppm: 9 element, soil & rock ICP-AES 1 8 Ni ppm: 9 element, soil & rock ICP-AES 5 9 Dppm: 9 element, soil & rock ICP-AES 5 9 Dppm: 9 element, soil and rock ICP-AES 5 9 Dppm: 9 element, soil and rock ICP-AES 5 9 Dppm: 9 element, soil and rock ICP-AES 5 9 Dppm: 9 element, soil and rock ICP-AES 5					



Analytical Chemists \* Geochemists \* Registered Assayers

212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221

To: ARANLEE RESOURCES LTD.

548 BEATTY ST. VANCOUVER, BC V6B 2L3

Project: FM Comments: ATTN: K.M. VERBRUGGEN

CERTIFICATE OF ANALYSIS

Page Number :1 Total Pages :1 Certificate Date:07-AUG-91 Invoice No. :19118939 P.O. Number :

A0110020

						CERTIFIC	AIL OF A	NALYSIS	A91	118939	
SAMPLE DESCRIPTION	PREP CODE	Au ppb FA+AA	Ag ppm	Co ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Ni ppm	Pb ppm	Zn ppm
FM 505701 FM 505702 FM 505703 FM 505704 FM 505705	205 294 205 294 205 294 205 294 205 294	< 5 < 5 30 210 < 5	< 0.5 < 0.5 < 0.5 2.5 < 0.5	< 1 15 < 1 1 2	12 13 11 3500 18	1.73 5.53 0.25 0.64 3.55	115 480 120 40 185	1 2 < 1 < 1 1	1 56 1 1	16 130 < 2 44 16	10 48 < 2 12 14
FM 505706 FM 505707 FM 505708	205 294 205 294 205 294	40 < 5 < 5	0.5 < 0.5 < 0.5	6 52 13	121 426 107	5.25 4.22 4.61	405 150 525	1 1 1	2 26 8	18 8 12	128 20 74

**CERTIFICATION:** 

