GEOLOGICAL AND GEOCHEMICAL REPORT

- on the -

BIG CLAIM

Lillooet Mining Division

British Columbia

- for -

DUPONT OF CANADA EXPLORATION LTD.

Suite 102 - 1550 Alberni Street

Vancouver, B. C..

V6G 1A5

COVERING:

Big Claim (20 Units)

WORK PERFORMED:

June 15, 1982 to November 30, 1982

GEOLOGICAL BORATION CH ASSESSMENT REPORT

- (1). 51°02'N; 122°39'W
- (2). NTS Map 920/2E
- (3). 30 km NNE of Bralorne, B.C.

10,925 Pepared by:

KERR, DAWSON AND ASSOCIATES LTD.

#206 - 310 Nicola Street

Kamloops, B. C. V2C 2P5

J. M. Dawson, P. Eng.

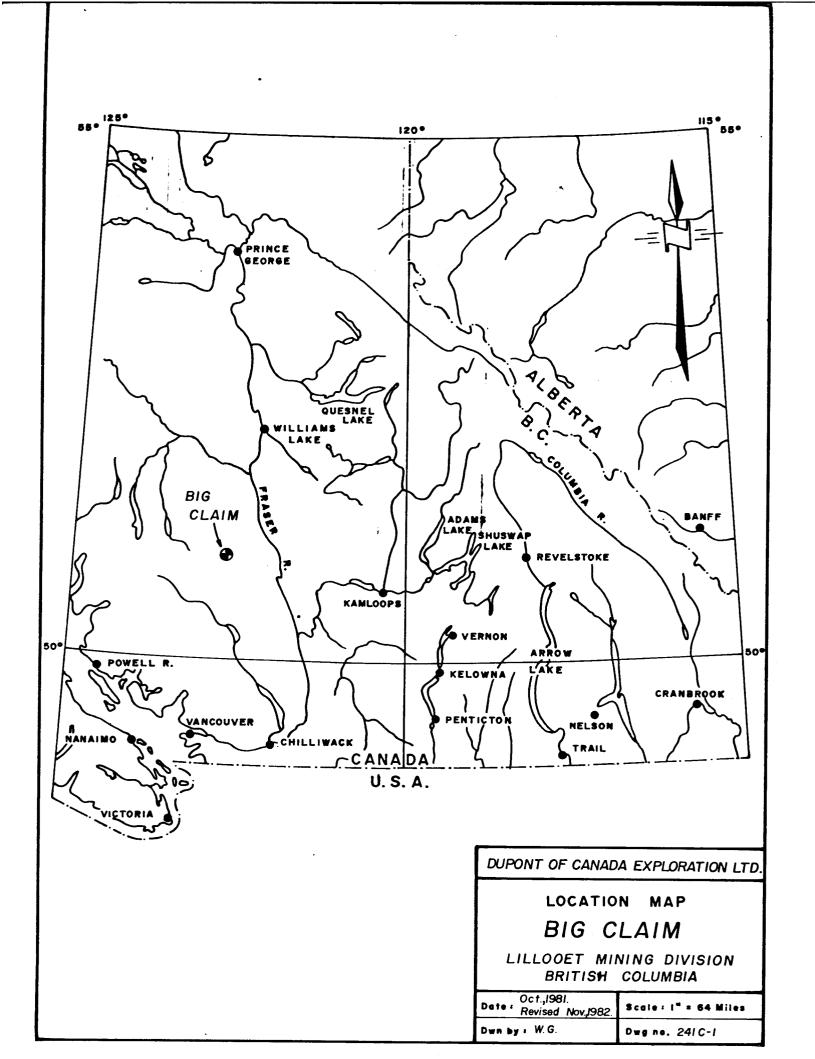
November 30, 1982

TABLE OF CONTENTS

	Page No.
INTRODUCTION	1.
SUMMARY AND CONCLUSIONS	1.
PROPERTY	2.
LOCATION AND ACCESS	2.
PHYSIOGRAPHY AND VEGETATION	3.
HISTORY	4.
GEOLOGY	4.
MINERALIZATION	7.
GEOCHEMISTY	8.
ECONOMIC POTENTIAL	10.

APPENDICES

Appendix	A:	Perso	onnel			
Appendix	B:	State	ement of	Expendit	ure	es
Appendix	C:	Write	er's Cert	ificate		
Appendix	D:	Maps	_			
			-Figure	241C-1		Location Map
			-Figure	241C-2	-	Claim Map
			-Figure	241C-4	-	Geochemical Plan - Gold l:5000
			-Figure	241C-5	-	Geochemical Plan - Silver 1:5000
			-Figure	241C-6	-	Geology Map of Grid Area l:1000
			-Figure	241C-7	-	Gold Geochemistry of Grid Area 1:1000
			-Figure	241C-8	-	Silver Geochemistry of Grid Area 1:1000



Introduction

This report describes the results of a detailed exploration programme on the Big Claim, Lillooet Mining Division, British Columbia.

Geological and geochemical surveys were performed during the 1982 field season, the results were interpreted and are detailed on a series of maps accompanying this report.

Summary and Conclusions

- (1). The Big property consists of one 20 unit metric claim located in relatively steep terrain in the Shulaps or Yalakom district of southwestern British Columbia. Access is by helicopter from either Goldbridge or Lillooet although rough logging roads now exist to within 3 km of the claim.
- (2). Dupont acquired the property by staking in June 1980 and did follow-up exploration programmes consisting of geological and geochemical surveys in 1980, 1981, and 1982.
- (3). The property is underlain by detrital sediments of Bridge River and Kingsvale groups in fault contact with eachother. The Bridge River rocks are intruded by a number of small, serpent-inized ultrabasic bodies. The Kingsvale sediments are cut by a number of 'Bendor' porphyry sills and dikes as well as a distinctive, pipe-like body of altered rhyolite porphyry.
- (4). Soil geochemistry has delineated several, coincident, gold-silver anomalies which trend north-northwesterly and are centered around the younger, rhyolite porphyry intrusion. Precious metal mineralization is associated with very narrow, vuggy quartz stringers and limonite coated fractures primarily within argillically altered rhyolite porphyry.

(5). The setting of the gold-silver mineralization is typical of many epithermal occurrences in subaerial, volcanic rocks, however to date exploration had not shown any areas of sufficient grade to warrant further detailed testing at this time.

Property

The property consists of one 20 unit metric claim as follows:

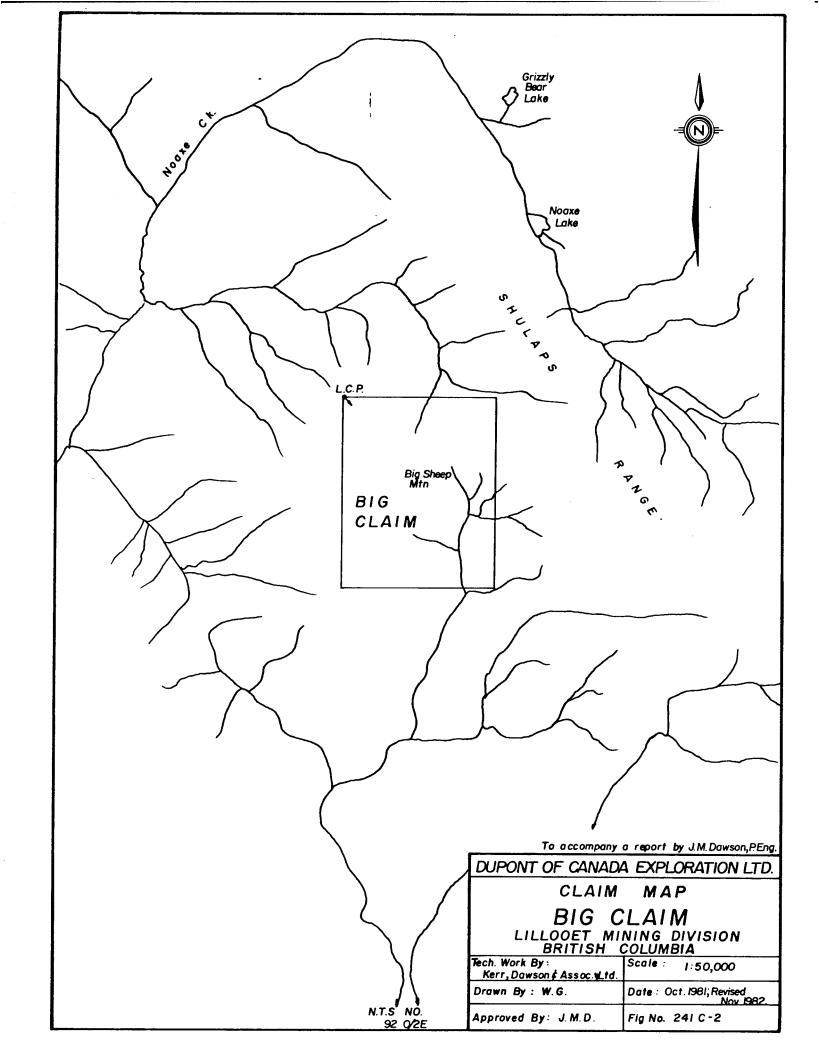
Claim Name	Record No.	Tag No.	Expiry Date
Big	1367	62586	June 11, 1985

 $\label{eq:theorem} \mbox{The registered owner of this claim is Dupont of Canada} \mbox{ Exploration Ltd.}$

Location and Access

The claim is located in southwestern British Columbia, approximately 30 km north-northeast of Bralorne and about 62 km northwest of Lillooet. Approximate geographic center of the property is at $51^{\circ}02'$ north latitude and $122^{\circ}39'$ west longitude.

Access is gained by helicopter from either Goldbridge or Lillooet. A recent logging road has been pioneered as far as Noaxe Creek, approximately 3 km west of the property.



Physiography and Vegetation

The claim encompasses the upper slopes and crest of Big Sheep Mountain. Tributaries of the headwaters of Noaxe and Lisa Creeks drain several cirque-like basins below the main ridge tops. Elevations vary from 8000 feet a.s.l. at the crest down to about 6200 feet a.s.l. in the creeks at the north and south property boundaries. Slopes are steep to precipitous especially on the north side of the ridge containing the main peak.

The property is essentially barren of vegetation except for a few stands of scrubby alpine fir at the headwaters of creeks draining north and south. Extensive talus debris mantles most slopes so that most outcrops are on the ridges and cliffs facing the north cirque.

History

The claim was staked in June, 1980 as a result of regional geochemical prospecting carried out by Dupont during the 1970's.

Reconnaissance geological and geochemical surveys were performed during 1980 and 1981 and outlined coincident silver and gold anomalies roughly corresponding with the outcrop area of a body of rhyolite porphyry.

The present programme consisted of detailed geological mapping and prospecting and the collection of rock samples. A grid was laid out and east-west crosslines run at 100 meters apart where topography permitted. Soil and talus fines samples were collected at 25 meter intervals on these lines. A total of 396 samples were collected. The data was plotted on 1:1000 scale base maps.

Geology

The geology of the Big Sheep property can be divided into five distinct units. The oldest rocks exposed on the property are representative of the Bridge River Group of Lower Mesozoic age. The Bridge River rocks are comprised of argillites, cherts, conglomerates, recrystallized limestone and metavolcanics. These rocks are present in the northeastern third of the claim and are thus not shown on the present detailed geological plan (fig. 241C-6).

Found immediately west of the Bridge River rocks is a narrow, northerly trending fault sliver(s) of ultramafic rocks (unit1). These rocks which are undoubtedly related to the nearby Shulap Ultramafic complex are represented by orange-brown to dark green weathering harzburgites, peridotites and serpentine.

In fault contact and immediately west of the ultrabasic rocks are sedimentary rocks of the middle to upper Cretaceous Kingsvale Group (unit 2). On the property this unit is characterized by dark gray to black shales, argillites, siltstones, graywaches and conglomerates. Individual beds range from 0.1 to over 5 meters in thickness. The majority of these sediments strike northwesterly and dip from 55° to 70° to the southwest. The largest exposure of the Kingsvale sediments is found on the north side of Big Sheep Mountain where they stand as crumbly rusty black cliffs and scattered ridges and outcrops. Fine grained pebble conglomerate, siltstone and related clastic sediments of the Kingsvale Group are also present near the eastern extremities of $L-1^N$, 2^N , and 3^N .

Intruding the Kingsvale Group rocks are several bodies of middle to early Tertiary feldspar porphyry ('Bendor' type) and rhyolite porphyry. The former rock type is typically a brown to green-gray, fine to medium grained, massive feldspar or feldspar-hornblende porphyry (unit 3). This rock is generally unaltered, however near contacts it sometimes exhibits weak to moderate chloritic and/or limonitic alteration. Compositionally these rocks are relatively uniform even though considerable variations in textures and phenocryst size exist. The main mass of this intrusive extends from the baseline at L-1^S and 2^S to the legal corner post in the northwest corner of the Big claim. In addition there are numerous dykes, sills and apophyses of feldspar porphyry found south, southeast and north of the peak of Big Sheep Mountain.

Closely associated with and probably slightly younger than the feldspar porphyry, is a pluglike body of rhyolite porphyry (unit4). The main rhyolite porphyry body is found from the baseline to the east straddling $L-2^N$ through to $L-5^N$. Dimensions of this intrusive are approximately 450 meters in an east-west direction and 100 to 300 meters in a north-south direction. Spatially separate but likey related to the main rhyolite porphyry body are smaller plugs(?) and dykes of rhyolitic rocks. These are found both south and north of the main body (see fig. 241C-6).

The rhyolite porphyry is typically white to yellowish brown, fine grained, fractured and almost invariably limonite stained. Argillic alteration is almost always seen and varies from moderate to intense. This alteration affects both the feldspar phenocrysts as well as the groundmass giving the rock a chalky appearance and texture. Mafic minerals are no longer present having been altered along with the rest of the rock through intense fracturing and hydrothermal activity. Fine quartz veinlets, veins and local stockworks and druses appear to be remnants of a once active hydrothermal system that pervaded parts of this rhyolite porphyry intrusive.

Locally the rhyolite porphyry is autobrecciated, a feature that may indicate that the intrusion was at least in part forceful or explosive. Such an event would most likely have taken place in or near a volcanic vent.

Found immediately to the east of the main rhyolite porphyry body is a sequence of gray, fine grained platy fractured rhyolitic tuffs and/or ignimbrites (unit 4a). These rocks are in contact with and likely overlie the clastic sediments of the Kingsvale Group. This proximity to the rhyolite porphyry plug suggest that these platy beds represent volcaniclastics deposited prior to and during the emplacement of the rhyolite porphyry plug.

The youngest rocks observed on the property are two narrow dykes of brown, fine grained feldspar porphyritic, basic rock (unit 5). These dykes were observed to cut both the feldspar porphry and the rhyolite porphry.

Mineralization

Minor fine grained pyrite and/or pyrrhotite was observed in shales, argillites and related fine grained clastics of the Kingsvale Group. Limonite - manganese staining and fracture coatings are relatively common. Scattered patches of sphalerite, pyrite and chalcopyrite were found in a narrow conglomeratic bed within finer grained sediments on the northern slope of Big Sheep Mountain (sample 82 BS-32).

The feldspar porphyry (unit 3) almost always contains some fine grained pyrrhotite and/or pyrite. On the average the sulphide content is less than 1% however, local concentrations exceeding 1-2% were observed and these rocks were invariably limonite stained.

The rhyolote porphyry (unit 4) seldom contains any visible sulphides even though limonite staining and limonitic fracture coatings are quite common. When pyrite was seen it was generally fine grained and often weathered. Numerous cube-like cavities attest to the fact that pyrite may once have been quite common in this rock.

At least three occurrences of vuggy or crystalline quartz containing disseminated to semi massive tetrahedrite were found. The most notable occurrence of tetrahedrite was found approximately 60 meters east-southeast of the summit of Big Sheep Mountain (sample 82 BS-24). This occurrence is the only one that is thought to be in or nearly in place. The remaining two are strictly talus float occurrences whose origin is likely the summit area.

Fractures coated with manganiferous limonite are commonly seen especially near the summit area and the cliffs on the north face of Big Sheep Mountain. These coatings which attain thicknesses up to 1.5 cm probably host a significant amount of the gold-silver mineralization. Quartz veinlets ranging from hairline to 2 cm thick, and drusy cavities and veinlets undoubtedly host a significant portion of the gold and silver mineralization. These quartz veinlets and druses, as with the limonite-manganese fractures are most common in the area of the Big

Sheep summit and the cliff edge to the immediate north. Vein and fracture densities can each locally exceed ten per meter however, one to three per meter is more likely the norm.

Several small occurrences of amethyst veinlets were observed in the platy rhyolitic tuff(?) beds near the eastern portion of L-1 . Such occurrences have reportedly been found to be associated with epithermal gold-silver deposits and may therefore be of some significance.

In summary, it would appear that the rhyolite porphyry, especially the fracture coatings, veinlets and tetrahedrite mineralization are responsible for the anomalous gold-silver values encountered on the Big Sheep property. The most promising area, near the summit is quite small however, the presence of scattered mineralized float and the extensive geochemical anomaly may indicate a considerably larger mineralized zone.

Geochemistry

Soil sampling in 1981 outlined a coincident area of anomalous silver and gold values corresponding approximately to the outcrop area of a small body of intrusive rhyolite porphyry.

To better define the extent and trends of mineralization a grid was established over the main area of interest. Talus fines samples were collected at 25 meter intervals on grid lines located 100 meters apart. In some areas topography did not allow grid establishment. Sample stations were marked by pickets bearing the appropriate grid co-ordinates. After collection samples were stored and shipped in waterproof kraft envelopes.

All samples were analysed for gold and silver in the Vancouver laboratories of Acme Analytical Ltd. For gold laboratory methodology involved fire assay extraction with analysis by atomic absorption. For silver, extraction was by hot dilute aqua regia with analysis by atomic absorption.

Statistical analyses for both metals were performed similarly by calculating the mean and standard deviation and classifying the data into the following categories:

Background 0 - Mean

Possibly Anomalous Mean - (Mean + 1 Std. Dev.)

Probably Anomalous (Mean + 1 Std. Dev.) - (Mean + 2 Std. Dev.)

Definitely Anomalous > (Mean + 2 Std. Dev.)

The values were plotted on 1:1000 scale basemaps and appropriate categories of anomalous results were outlined.

The data outlines several, coincident north-northwesterly trending linear zones of anomalous gold-silver values centered about the peak of Big Sheep mountain and paralleling the main direction of fracture orientation within the rhyolite porphyry body and adjacent feldspar porphyry sills and dikes.

Economic Potential

Gold-silver mineralization is associated with very narrow vuggy quartz seams and limonitic pitch-coated fractures primarily located within and adjacent to the rhyolite porphyry intrusion.

Selected samples of material from these veinlets and fractures give ore grade assays, however, the density of such fractures is not sufficient to permit bulk mining of the mineralized zones.

It is possible that better mineralized sections exist at depth because of surface leaching, however, the presently known surface values do not justify drilling to test this potential.

respectfully submitted:

KERR, DAWSON AND ASSOCIATES LTD.

J. M. Dawson, P. Eng.

GEOLOGIST

Kamloops, B. C.

November 30, 1982

J. M. DAWSON

APPENDIX A

Rock Sample Description

Rock Sample Description

Sample No.	Description	Ass Gold (ppb)	say Silver (ppm)
82 BS-1	-intensely limonitic rhyolite porphyry		
	-minor fine grained pyrite and cubic		
	voids	105	
	-across 4 meters	105	1.2
82 BS-2	-across 5 meters of rhyolite porphyry		
	-moderate to strong argillic alteration	n	
	1-5 qtz. veinlets/meter	90	7.2
82 BS-3	-across 2 m of limonitic rhyolite		
02 DO 0	porphyry		
	-highly weathered, crumbly	5	1.5
00 70 /			
82 BS-4	-across 5 m of crumbly, fractured,		
	limonitic rhyolite porphyry		
	-locally autobrecciated, few qtz. vein		5.0
	2-3/meter	20	5.9
82 BS-5	-across 1.5 m of crumbly feldspar		
	porphyry near contact with rhyolite		
	porphyry	50	3.5
82 BS-6	-across 5-6 m of feldspar porphyry		
	-highly weathered, few quartz veinlets	10	0.4
	, ,		
82 BS-7	-sample (chip) of massive weakly		
	limonitic feldspar porphyry	5	0.2
82 BS-8	-rock chips of fs porphyry near contact		
	with Kingsvale sediments. Not on		
	geological plan	5	0.2

		Ass	say
Sample No.	Description	Gold (ppb)	Silver (ppm)
82 BS-9	-across 2 m of altered feldspar		
	porphyry	5	0.5
82 BS-10	-rock chip of weakly epidotized		
	feldspar porphyry	5	0.3
82 BS-11	-across 1.5 m of feldspar porphyry		
	with 1-2% Fe sulphides	5	1.1
82 BS-12	-white blocky rhyolite porphyry		
	-chips across 2 m, weakly		·
	autobrecciated		
	-small apopyse of main mass of rhylite		
	porphyry	5	1.1
00 70 10	2 6 1:		
82 BS-13	-across 3 m of limonitic feldspar	10	10.2
	porphyry	10	10.2
82 BS-14	-rhyolite porphyry, across 4 meters	5	0.6
82 BS-15	-across 3 m of limonitic feldspar		
	porphyry	5	0.2
82 BS-16	-across 9 meters of rhyolitic ash		
	bed (?)	5	0.8
82 BS-17	-across 3 meters of moderately altered		
	feldspar porphyry		
	-1-3% disseminated pyrrhotite	5	0.1
82 BS-18	-across 5 meters of weakly brecciated		
	rhyolite porphyry		
	-few qtz. veinlets (1-2 mm wide)	5	0.1
	-		
			,

		Ass	say	
Sample No.	Description	Gold (ppb)	Silver (ppm)	
82 BS-19	-across 2 m of very rusty pyritic			
	feldspar porphyry			
	-2-3 qtz. veinlets/meter	5	0.2	
82 BS-20	-across 4 m of limonitic rhyolite			
0- 25 25	porphyry	5	0.2	
	pozp) z j			
82 BS-21	-across 2.5 m of rhyolite porphyry			
	dyke	5	0.2	
82 BS-22	-across 3 m of well altered rhyolite			
	porphyry with few drusy cavities	50	1.6	
82 BS-23	-across 7 m of rhyolite porphyry	135	0.9	
82 BS-24	-chips of semi massive tetrahedrite			
	in vuggy and crystalline quartz,			
	possibly in place	9500*	11.3	
82 BS-25	-across 3 m of well altered			
	kaolinized rhyolite porphyry			
	2-4 qtz stringers/meter	35	3.6	
82 BS-26	-across 10 meters of rhyolite			
	porphyry near summit of Big			
	Sheep Mtn. 1-2 qtz. veinlets/m	560	15.8	
		1.5	0.0	
82 BS-27	-across 1.5 m of rhyolite porphyry	15	2.8	
82 BS-28	-across 2 m of brecciated rhyolite			
	porphyry	140	4.6	
82 BS-29	-across 4 m of weakly brecciated			
G2 D0 27	rhyolite porphyry			
	-numerous voids filled with needle-			
	like quartz crystals	50	2 7	
	TIME quarte crystals	JU .	3.7	

Sample No.	Description	Ass Gold (ppb)	say Silver (ppm)
82 BS-30	-across 2 m of rhyolite porphyry	120	2.5
82 BS-31	<pre>-random rock chips of platy rhyolitic ash or ignimbrite with amethyst quart;</pre>	z	
	veinlet	5	1.9
82 BS-32	-chips of conglomerate containing limonite, sphalerite, pyrite		
	and chalcopyrite	10	23.2*
82 BS-33	-across 0.5 m of rusty conglomerate	5	3.6
	ped	J	3.0
82 BS-34	-across 2 m of altered rhyolite porphyry dyke	5	1.1
82 BS=35	-across 5-6 m of rhyolite porphyry dyko	e 5	2.0
82 BS-36	-across 1.5 m altered rusty conglomer- itic bed containing drusy cavities	30	20.6
82 BS-37	-across 8 m of highly fractured,autobrecciated rhyolite porphyry-8 qtz veinlets/meter	20	2.6
82 BS-38	-chips of rhyolite porphyry float with disseminated pyrite and unidentified		
	fine grained gray mineral	5	0.1
82 BS-39	-across 2 m of well altered rhyolite porphyry dyke in Kingsvale sediments	5	0.7
82 BS-40	-across 6 m of rhyolite porphyry with 3-5 rusty fractures/m. Near summit	165	16.8

Sample No.	Description	As: Gold (ppb)	say Silver (ppm)
82 BS-41	-across 4 m of rhyolite porphyry		
	with drusy cavities and limonitic		
	fractures	50	9.4
82 BS-4 2	-across 7 m of rhyolite porphyry		
	with abundant druses, quartz		
	veinlets		
	3-4 ⁺ qtz veinlets/meter		
	-numerous drusy vugs - up to 2-3 cm		
	across	230	5.2
82 BS-43	-chips of rhyolite porphyry, well		
	altered	5	0.5
82 BS-44	-random chip sample of rhyolite		
	porphyry	,	
	-few qtz. veinlets ~1/meter	225	1.2
82 BS-45	-across 4 m of highly fractured		
	limonitic rhyolite prophyry		
	-thick limonitic fractures	25	1.0
82 BS-46	-across 5 m of highly fractured,		
	limonitic rhyolite porphyry		
	3-10 fractures/meter - limonite		
	coated	50	6.8
82 BS-47	-grab sample of highly oxidized,		
	fractured shale.	5	1.2

APPENDIX B

Personnel

Personne1

J. M. Dawson, P. Eng.	Geologist	June 17, 1982 July 23, 28, 1982 August 5, 1982 4 days
W. Gruenwald, B. Sc.	Geologist	July 21, 22, 23, 24, 26, 1982 July 27, 28, 29, 1982 10 days
M. Dawson	Prospector	July 21, 22, 23, 24, 26, 1982 5 days
B. Stoughton	Field Assistant	July 22, 24, 26, 27, 28, 29, 1982 6 days
B. Dawson	Field Assistant	July 21, 23, 1982 2 days
E. Yanciv	Field Assistant	July 21, 22, 23, 24, 26, 1982 5 days
M. Yanciv	Field Assistant	July 21, 1982 l day

APPENDIX C

Statement of Expenditures

Statement of Expenditures

1. PERSONNEL:

		•	
	J. M. Dawson, P. Eng. 6 Days @ \$300/day	\$1 800.00	
	W. Gruenwald 12 days @ \$240/day	2 880.00	
	M. Dawson 5 days @ \$200/day	1 000.00	
	B. Stoughton 6 days @\$130/day	780.00	
	B. Dawson 2 days @\$130/day	260.00	
	E. Yanciv 5 days @ \$130/day	650.00	
	M. Yanciv 1 day @ \$130.00/day	130.00	\$ 7 500.00
2. EXPENSE	S AND DISBURSEMENTS:		
(a).	Room and Board 21 days @ \$35.00/ man/day	735.00	
(b).	Helicipter charter 7.5 hours @ \$446.67/hr.	3 350.00	
(c).	Truck Rental	830.50	
(d).	Geochemical Analyses	2 954.30	
(e).	Field Equipment and Supplies	348.75	
(f).	Telephone, Xerox, Freight, Secretarial, Blueprints, Etc.	297.60	8 516.15
		TOTAL	\$16 016.15

APPENDIX D

Writer's Certificate

JAMES M. DAWSON, P. ENG.

Geological Engineer

#1 - 219 VICTORIA STREET • KAMLOOPS, B.C. V2C 2A1 • TELEPHONE (604) 374-0544

CERTIFICATE

I, JAMES M. DAWSON OF KAMLOOPS, BRITISH COLUMBIA DO HEREBY CERTIFY THAT:

- 1. I am a geologist employed by Kerr, Dawson and Associates Ltd., of Suite 206, 310 Nicola St., Kamloops, B. C.
- 2. I am a graduate of the Memorial University of Newfoundland-B. Sc. (1960), M. Sc. (1963), a fellow of the Geological Association of Canada, and a member of the Association of Professional Engineers of British Columbia. I have practised my profession for 19 years.
- 3. I am the author of this report which is based on an exploration programme carried out on the Big claim under my direct supervision.

J. M. DAWSON
BRITISH
COLUMBINATION
COLUMBINA

KERR, DAWSON AND ASSOCIATES LTD.

J. M.Dawson, P. Eng.

GEOLOGIST.

Kamloops, B. C. November 30, 1982

