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5423

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EXAMINATION AND SAMPLE REPORT

ON THE

SUSIE CLAIMS  
SUSIE 47

94C/5W

OMINECA MINING DIVISION

56° 30'N, 125° 50'W

94C/5W

FOR

DOUGLAS STELLING

GERMANSEN LANDING, B.C.

BY

L.W. SALEKEN, B.Sc.

SENIOR GEOLOGIST

BRASCAN RESOURCES LIMITED

March 1, 1975

Filmed

<p>Department of Mines and Petroleum Resources</p>	
<p>ASSESSMENT REPORT</p>	
<p>NO. 5423</p>	<p>MAP _____</p>

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Department of  
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ASSESSMENT REPORT

NO. 5423 MAP

## SUMMARY AND RECOMMENDATIONS

Douglas Stelling holds 13 mineral claims in the Omineca Mining Division, B.C. The property is located approximately six miles northwest of Aiken Lake, NTS sheet 94-C-5W. Access to the property is by helicopter or by walking from Aiken Lake.

The property was visited by Brascan personnel on August 18th and 19th, 1974. An evaluation program consisting of detailed chip sampling, rock and soil geochemistry and claim surveying was conducted. The purpose of the investigation was to determine the economic potential of the gold-silver shear zones previously reported on the property.

The mineralized shear zones reported by E. Bronlund were located and sampled. Mineralization was found to be discontinuous and not easily traced on surface. The best gold-silver assays were located on Shear Zone No. 1 where a five foot width chip sample returned 0.289 oz. per ton Au and 0.69 oz. per ton Ag. The twenty-five foot width sample on the same zone averaged 0.093 oz./ton Au and 0.34 oz./ton Ag.

Further work on the property is warranted, mainly detailed sampling and trenching. An extensive exploration program of the claims should be instigated.

Brascan Resources Limited expresses no further interest in the property at this time.

## INTRODUCTION

The Susie Claims were examined by L.W. Saleken, G. Crooker, and A. Zimmerman on August 18-19, 1974 by flying from Johansen Lake to the claims by helicopter. Two days were spent on the property. The investigation consisted of detailed chip sampling of known mineralized shears, prospecting and geochemical soil sampling along the claim line to check previous soil sample results. The purpose of the examination was to evaluate the gold-silver potential of the property.

As a consideration for visiting the property and conducting useful work on the claims, Brascan agreed to submit its findings in report form and to apply the monies spent on the investigation towards assessment work. The owner, Mr. Douglas Stelling agreed to file the report and pay all fees connected with filing.

## PROPERTY

The Susie claims consist of a contiguous group of 11 full-sized claims and three fraction claims in the Omineca Mining Division:

<u>Name</u>	<u>Record No.</u>	<u>Recording Date</u>
Susie 1-6 (inclusive)	113402-113407	July 17, 1972
Susie 8	113409	July 17, 1972
Susie 15	121910	April 3, 1973
Susie 17-20 (inclusive)	121912-121915	April 3, 1973
Susie Fractions 21, 22, 23	121916, 17, 18	April 3, 1973

The claims are held in the name of Douglas Stelling, Germansen Landing, B.C.

## LOCATION, ACCESS AND PHYSIOGRAPHY

The property is located some six miles northwest of Aiken Lake in the Omineca Mining Division (NTS sheet 94-C-5W). Approximate geographical coordinates are: 56° 30' N, 125° 50' W. It covers steep terrain on the south side of Lay Creek valley between elevations 4,000 and 6,000 feet above sea level.

Access is gained by about three miles of low gradient horse trail from the Omineca road or by helicopter to a relatively flat cirque bottom at an elevation of 5000 feet.

The topography of the claims is rugged and steep. There is a constant danger of rock slides. The talus slope is unstable making working conditions hazardous.

## HISTORY

Significant work on what is now the Susie group was carried out by the Consolidated Mining and Smelting Company in the 1930's. The property was then known as the Granite Basin Group. Work done included surface trenching and a reported 379 feet of subsurface workings at two levels. The portals to the two adits have since caved, but these workings may possibly be rendered accessible by a minimum amount of retimbering.

The work conducted by Consolidated Mining and Smelting was under the direction of E. Bronlund. Communication between Mr. Stelling and Mr. E. Bronlund, as quoted below, give a detailed account of work and the results obtained:

"I have now had a chance to re-locate and look thru reports, notes and other data relating to our initial work on the Granite Basin property from 1935 to

1938. Some data were lost in the Aiken Lake fire of 1938 but are not too important. I thought a summary of this information might be of some help to you.

"We took many hundreds of samples, most of which were moiled channel samples in 5 ft. sections across solid outcrops and were carefully taken. We found the assay results quite confusing in that there was no correlation of gold and silver values with apparent mineralization. Most of our samples showed only trace or very low gold values (.02 to .03) but there were certain areas of marginal values (.10 to .35) and it was decided to investigate one of these (No. 1 zone) by driving an adit tunnel to intersect the zone some 90 feet below the surface trench. This was the No. 1 tunnel (upper adit) which was 158 feet long with two crosscuts 66 ft. and 10 ft. long, for a total underground footage of 234 feet, completed in October 1937. It cut a sheared zone containing pyrite and small amounts of chalcopyrite, tetrahedrite and galena, and gave a weighted average assay of .117 oz. Au across a true width of 40 feet, with the best sections showing .335 oz. Au across 10 feet. (Douglas Lay sampled the tunnel in 1939 and reported .20 oz. across 40 feet). The surface trench some 90 feet directly above, gave a weighted average of .17 oz. Au across 60 feet with the best section showing .355 oz. across 20 feet. The surface trench cut across the zone at an angle and the widths therefore greater than true.

"We considered this a satisfactory check for this particular show but it did not account for the erratic results of our sampling elsewhere which had assumed that the gold and silver values were associated with the 4 or 5 pyritized bands of porphyritic diorite referred to in Root's reports (G.S.C. Mem. 274). These bands are from 50 to 150 feet thick and show a sub-parallel north-

westerly strike from the crest of the mountain ridge down the steep slopes towards the basin valley. They are for the most part heavily pyritized and contain no other visible sulphides.

Some years later I had the opportunity to visit the property a couple of times. A few check samples were taken and a number of specimens for petrographic work. Some detailed mapping of contacts, shears and other structures was also done. As a result of this work we came to a quite different interpretation of the geology. It appears the gold and silver values are associated with a pattern of shearing which cuts across all rock types and contacts and is later than the pyritic zones and probably the latest structural event. The zones of shearing are from 10 to 50 feet wide, have an east - west strike with steep, northerly dips and trend parallel to the Basin valley axis. There are 3 of these zones presently known and they look like gneissic bands and contain quartz, sericite, chlorite and carbonates. Sulphide content, mainly pyrite, is quite low. Being scantily mineralized in relation to the general country rock, these shear zones are easily overlooked and it is my feeling that sampling in recent years has missed this point and could account for the negative results reported.

"No. 1 Shear Zone is the most easterly and on which the tunnel was driven. Its width was about 40 feet in the tunnel, with the best values towards the footwall. Little is known of the length because of talus cover in both strike directions.

"No. 2 Shear Zone outcrops at a point 600 feet southwest (bearing 230°) from the upper tunnel portal and 280 feet higher elevation. It shows a width of about 40 feet of which the

hanging wall section assayed .275 oz. Au and 12.83 oz. Ag across 10 feet, and the foot wall section .03 oz. Au and 3.68 oz. Ag across 15 feet. The 15 ft. intervening section showed only very low values. To the east of this outcrop are steep, inaccessible bluffs, to the west the zone is covered by talus for about 400 feet and then outcrops on a ridge where it crosses one of the pyritized bands of porphyritic diorite. It shows here a width of 10 feet assaying .22 oz. Au and 7.9 oz. Ag.

"No. 3 Shear Zone lies about 500 feet further southwest and at an elevation about 600 feet above the tunnel. It is a broad zone which may actually comprise two or more shears. The area is steep and under constant bombardment from rockbluffs above. Our samples indicate one shear which was sampled at 50 ft. intervals for 150 feet along strike as follows: .30 oz. Au across 7 feet (top, east), .52 oz. Au across 5 feet, .16 oz. Au across 7 feet and .18 oz. Au across 5 feet. Another parallel shear higher up, 100 feet slope distance shows .18 oz. Au across 5 feet (top exp.), .15 oz. Au across 5 feet, .12 oz Au across 15 feet, .152 oz. Au across 20 feet and .063 oz. Au across 15 feet for a sampled length of 140 feet. Silver contents were less than one ounce but could have been leached out partially.

"Rock specimens from these 3 shear zones show a white to light blueish colored aphanitic groundmass with thin, closely spaced ribbon-like, wavy bands of pyrite, patches of carbonates, some vugs and crossfractures. Thin



sections show a schistose, gneissic, banded aggregate of quartz, sericite chlorite and hydromicas with some carbonates. Mariposite is present. There are two generations of pyrite, an early fine-grained variety randomly dispersed in part as a film along shear planes. This is quite noticeable where the country rock is a pyritized diorite. The late pyrite is coarser grained, darker yellow and occurs as irregular pods, in small cross-fractures and as beaded ribbons along the foliations, generally accompanied by very fine-grained chalcopyrite, tetrahedrite and galena which are the latest sulphides. Much of the gold is associated with the base-metal sulphides but some can be seen as extremely fine, dust-like particles in the siliceous matrix. The silver values are all with tetrahedrite..."

Stellac Explorations acquired the property in 1972. Following the recommendations of Dr. D.L. Cooke, P.Eng., Stellac carried out a program of rock chip sampling and soil geochemistry over selected parts of the property.

#### GEOLOGY

The property is underlain by volcanic flows and clastics and fine sediments of the Takla group and by small dioritic bodies of the Omineca intrusions. The rocks are well exposed on a steep cirque face above timberline. Figure 3 which is taken from G.S.C. Memoir 274, shows the approximate distribution of lithologic units present in this area. It also shows the spatial distribution of roughly conformable mineralized zones which carry up to several percent of fine disseminated pyrite. The pyritized zones carry gold values which reach as high as 1/3 ounce per ton in parts of the subsurface workings.

### SAMPLING PROGRAM

The evaluation procedure was to locate and chip sample the shear zones as described by E. Bronlund by chain and compass. The claim posts of Susie 1,2,3 and 4 were surveyed and tie into the adits for control. A base line was carried from Adit 2 to the showings for control. The chip sampling was conducted at 5 foot intervals at right angles to the shears after a fresh surface was prepared. Rock geochemical chip samples were taken at 10 foot intervals to try and extend the mineralized widths. The samples were assayed for Au, Ag and As for the chip samples and Cu, Au, Ag, Pb, Zn and As for rock geochemical samples. The soil samples collected along the chain line between Susie 3,4 and Susie 5 and 6 were analyzed for Au, Ag and Cu. All the analysis were conducted by Min-En Laboratories Ltd., 705 West 15th Street, North Vancouver, B.C. using standard analytical methods. The results are part of the appendix. The sample plan is located on Figure 4.

## CONCLUSIONS

1. The mineralized pyritic shear zones as described by E. Bronlund were located and chip sampled.

2. The gold and silver mineralization is associated with the shear zones and not with the over-all gossan. Arsenic is a good pathfinder for locating other mineralized shears. The shear zones examined and sampled were discontinuous and poddy on surface and could not be traced for any great strike length. The shears are steeply dipping to the east and strike in a northwesterly direction.

3. The best gold and silver values were taken across Shear Zone No. 1.

	<u>Sample Width (Feet)</u>			
	<u>5</u>	<u>10</u>	<u>15</u>	<u>25</u>
Au (oz./t)	0.289	0.193	0.138	.093
Ag (oz./t)	0.69	0.52	0.42	.34

4. The other two shear zones returned negligible values in gold and silver.

5. Soil geochemistry appears to be a useful tool for prospecting covered areas. The samples taken reflect known mineralization with the exception of values located near claim posts Susie F.P. 3,4 and I.P. 5,6.

RECOMMENDATIONS

The property warrants further exploration work to determine the economic gold-silver potential of the claims, mainly Shear Zone No. 1. A program of detailed geologic mappings, prospecting, rock sampling and soil geochemistry (where possible) should be conducted over the entire claims. Shear Zone No. 1 and possibly Adit 1 should be opened up and carefully sampled.

Although Shear Zone No. 1 returned potentially economic gold-silver values, Brascan has decided not to participate in further evaluation or exploration of the property at this time.

Respectfully submitted,



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L.W. SALEKEN, B.Sc.  
SENIOR GEOLOGIST  
BRASCAN RESOURCES LIMITED  
VANCOUVER, B.C.

APPENDIX



MIN-EN LABORATORIES LTD.

705 WEST 15TH STREET  
 NORTH VANCOUVER, B.C.  
 Phone: 980-5814

Certificate of Assay

TO: Brascan Resources Ltd.

PROJECT No. Salaken

502-1155 W. Pender St.

DATE Aug 26/74.

Vancouver, B.C.

File No. 931

SAMPLE No.	Ag	Au		As
	oz/ton	oz/ton		ppm
1451	.05	.001		9
52	.08	.008		12
55	.02	<.001		13
56	.16	.014		50
57	.69	.289		150
58	.35	.097		79
59	.23	.030		81
60	.30	.039		110
61	.08	.026		3
1462	.09	.008		17

SUSIE CLAIMS  
 2/2

MIN-EN Laboratories Ltd.  
 CERTIFIED BY *Filbert V. Hennessey*





CERTIFICATE OF QUALIFICATIONS

I, Leonard W. Saleken, B.Sc., Geology, of  
6976 Laburnum Street, Vancouver, B.C. state as follows:

- 1] That I graduated from the University of British Columbia in 1968 with a Bachelor of Science Degree in Geology.
- 2] That I have prospected and actively pursued geology prior to my graduation and have practised my profession since 1968.
- 3] That I am a member of the Canadian Institute of Mining and Metallurgy and the Geological Association of Canada.
- 4] That I am presently employed as a Senior Geologist with Brascan Resources Limited, Suite 502, 1155 West Pender Street, Vancouver, B.C.
- 5] That I examined the Susie Claims of Douglas Stelling on August 18 and 19, 1974.

DATED at Vancouver, British Columbia this 1st  
day of March, 1975.



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L.W. SALEKEN, B.Sc.

ILLUSTRATIONS

MAP OF  
BRITISH COLUMBIA

SCALE IN MILES



Geographical Institute of Canada

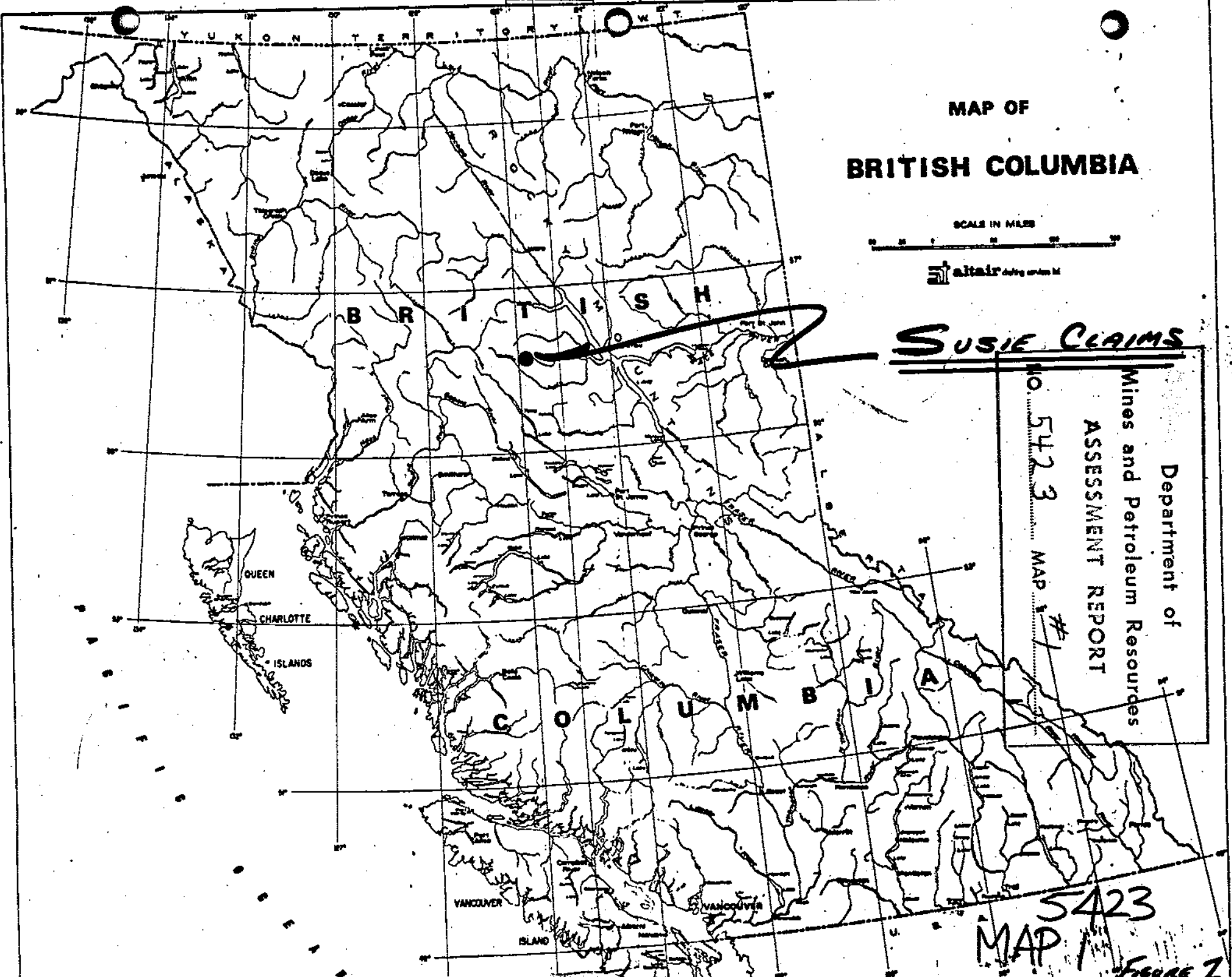
SUSIE CLAIMS

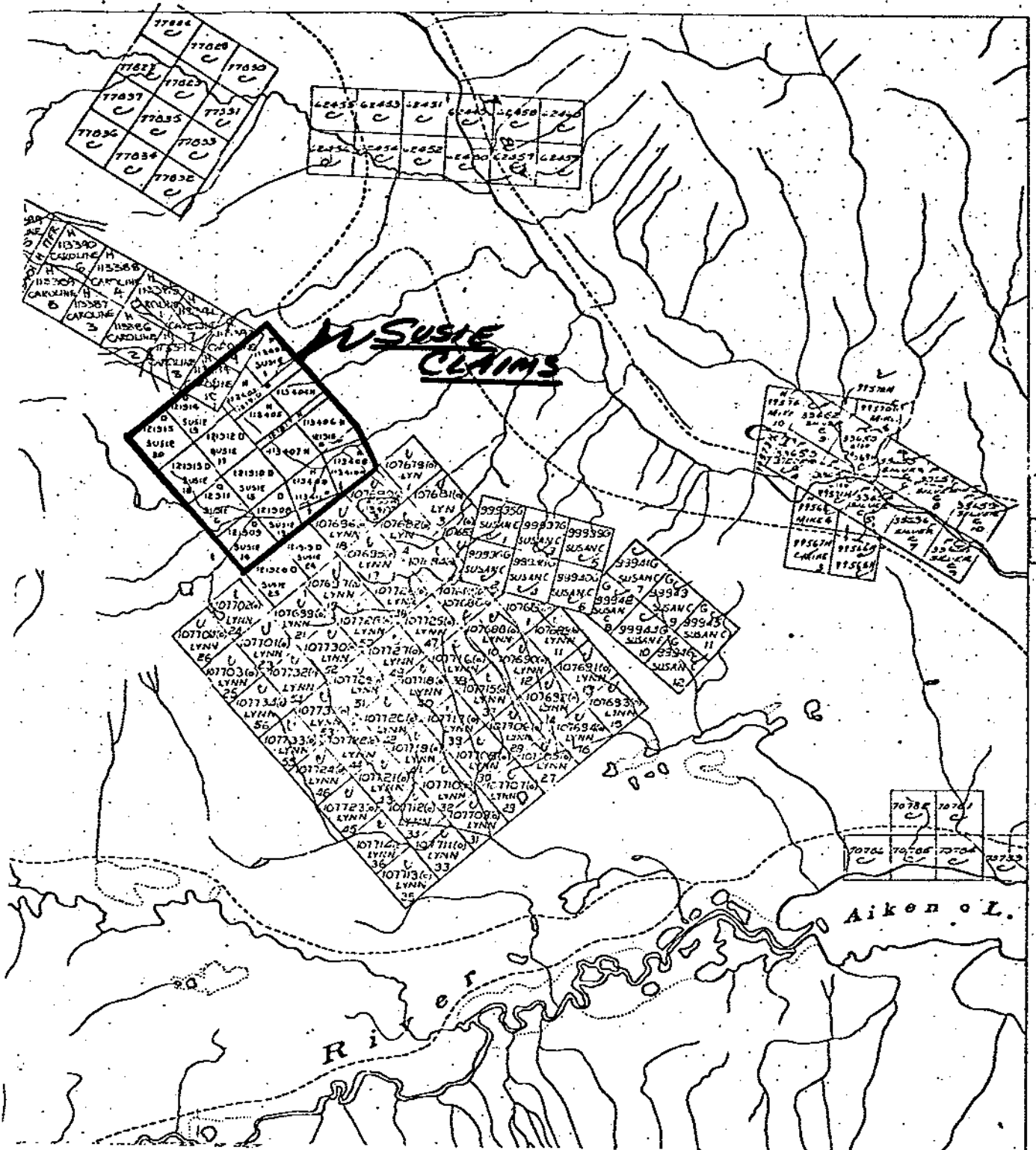
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NO. 5423 MAP #1

5423  
MAP #1

FIGURE 2





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**CLAIM LOCATION** 5423  
**MAP** MAP 2  
**SUSIE CLAIMS**  
 OMINELA M. D.  
 scale 1" = 1/2 mi.  
 FIGURE 2

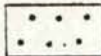

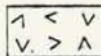
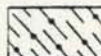
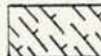
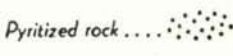



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5423  
MAP #3

G.S.C.

LEGEND

-  Feldspar porphyry
-  Porphyritic diorite, with feldspar phenocrysts
-  Diorite porphyry, with hornblende phenocrysts
-  Porphyritic andesite
-  Tuff, argillite, limestone
-  Pyritized rock
-  Bedding

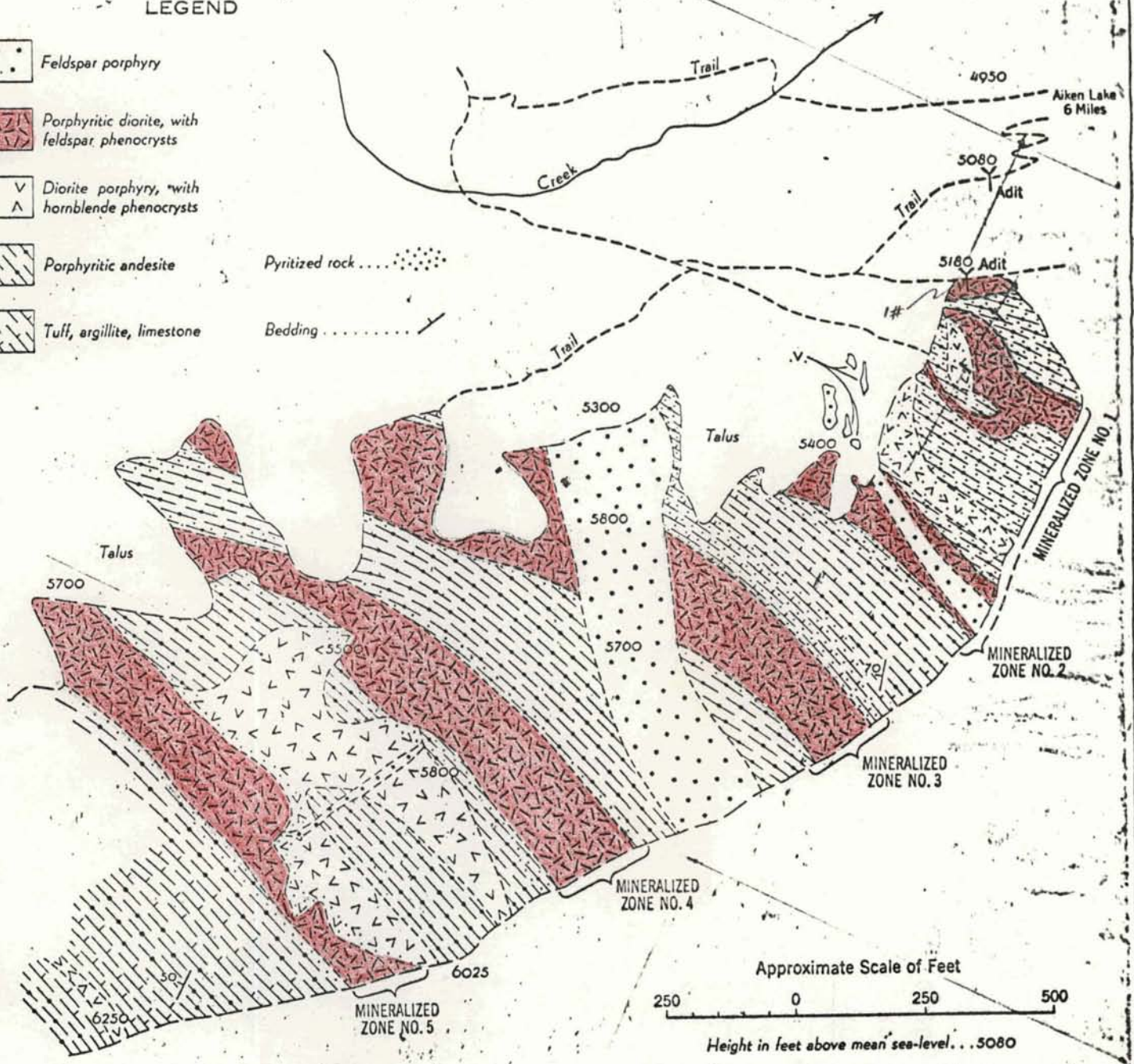


Figure 15. Sketch plan of surface geology on cirque headwall, Granite Basin mineral claim.

GEOLOGY, SUSIE CLAIMS.

STATEMENT OF EXPENDITURE

<u>Personnel</u>	<u>Dates Worked</u>	<u>Salaries</u>	
L.W. Saleken, Geologist	Aug.18,19,1974	2@\$75/day	\$150
G. Crooker, Geologist	Aug.18,19,1974	2@\$40/day	80
A. Zimmerman, Helper	Aug.18,19,1974	2@\$35/day	<u>70</u>
			\$ 300.00
Project Travel and Accommodation			
Room & Board for 3 @ Jacks Camp, Johansen Lake, 2 days @ \$100/day		\$200	
Travel to claims from Smithers and return, charter		<u>350</u>	550.00
Materials and Supplies			50.00
Helicopter Rental			
Jet Ranger, 1.5 hrs. @ \$270/hr		\$415	
Fuel 30 gals. @ \$1.30/gal.		<u>39</u>	464.00
Analysis			
Assaying 12 samples (Ag,Au,As) @ \$18/sample		\$216.00	
Soil Geochem, 1" samples (Cu, Pb,Zn,Ag,As,Au) @ \$7.85/sample		86.35	
Rock Geochem, 6 samples (Cu,Pb, Zn, Ag, As, Au) @ \$9.00/sample		<u>54.00</u>	356.35
Report Preparation, maps, drafting			
L.W. Saleken, 3 days @ \$75/day		\$225	
Report & Maps		150	
Drafting Service		<u>75</u>	450.00
TOTAL EXPENDITURE			<u>\$2,170.35</u>



# Sample Plans

## No. 1 shear zone

Hanging Wall	
pyritic rock	pyritic rock
Sample no. E 1456   1457   1458   1459   1460 W	
Au (oz/T)	0.014 0.289 0.097 0.030 0.039
Ag (oz/T)	0.16 0.69 0.35 0.23 0.30
As (ppm)	50 150 79 81 110

## No. 2 shear zone

Hanging Wall		Rock Geochemistry (ppm)	
Shear zone and Gossan		1451-A	1452-A
pyritic rock	pyritic rock	Cu	100 30
Sample no. E 1451-A   1451   1452   1452-A W		Au	0.01 0.02
Au (oz/T)	0.001 0.05	Ag	1.3 1.2
Ag (oz/T)	0.008 0.08	Pb	14 59
As (ppm)	9 12	Zn	59 65
		As	2 3

## No. 3 shear zone

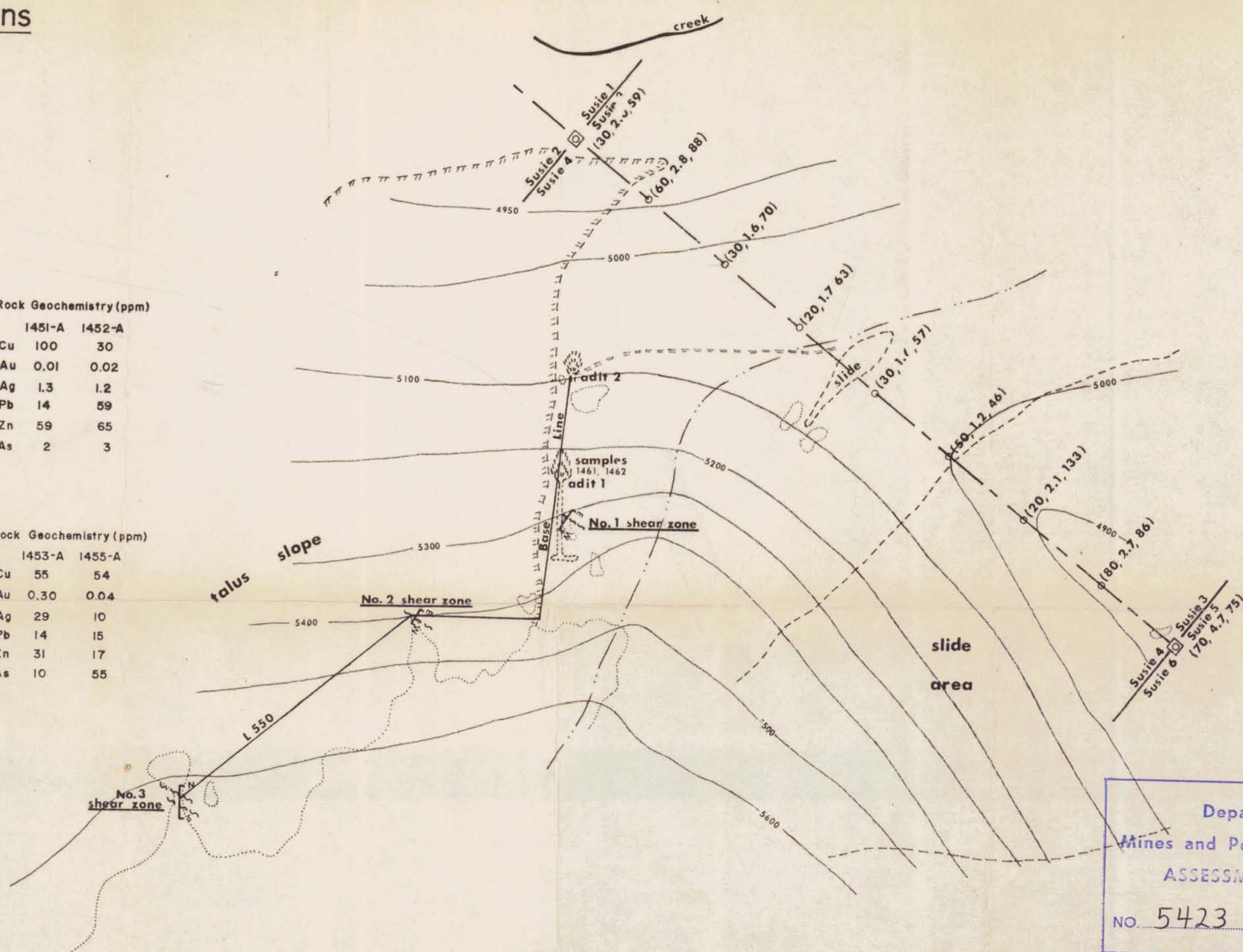
Foot Wall		Rock Geochemistry (ppm)	
Shear zone and Gossan		1453-A	1455-A
pyritic rock	pyritic rock	Cu	55 54
Sample no. N 1453-A   1453   1454   1455   1455-A		Au	0.30 0.04
Au (oz/T)	<0.001 <0.001 <0.001	Ag	29 10
Ag (oz/T)	<0.01 0.02 0.02	Pb	14 15
As (ppm)	3 2 13	Zn	31 17
		As	10 55

## Dump Samples

Adit 1	
Sample no. 1461	1462
Au (oz/T)	0.026 0.08
Ag (oz/T)	0.008 0.09
As (ppm)	3 17

## Legend

--- claim line	~ shear
— traverse line	— sample area
—5300— contour	▨ intense fracturing and shearing
— creek	□ gossan
... outcrop limit	○ soil sample location indicating
— ridge crest	(30,1.6,86) in sequence
==== trail	gold-parts per billion
----- landslide	silver-parts per million
==== talus boundary	copper-parts per million



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5423 MAP 4

**Brascan Resources Limited**

SUSIE GOLD PROSPECT (56° 30'N, 125° 50'W)  
Aiken Lake, B.C.  
Omineca Mining Division

Sample and Survey Plan

Drawn By: L.W. Saleken  
Drafted By: MLM  
Date: Oct. 1974 Revised: \_\_\_\_\_  
Scale: 1 in : 200 ft  
Contour Interval: 100 ft  
Drawing No. \_\_\_\_\_

*L.W. Saleken*  
10/15/74