Aug 1+2 Aug/87 Aug 1+2, Aug 3 det/81. D.M. Paulter J.C. Stephen Exploration Std. 842413

## GEOLOGICAL AND GEOCHEMICAL REPORT

### ON THE

## GRIZ 1 AND 2 MINERAL CLAIMS

RECORD NO'S 1411 and 1412 NTS 104K/10E

#### Latitude: 58°37'N

Longitude: 132°35"W

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# ATLIN MINING DIVISION B.C.

by

J.M. PAUTLER SEPTEMBER 30, 1982

WORK DONE: AUGUST 8 to AUGUST 20, 1982 BY; J.C. STEPHEN EXPLORATIONS LTD. FUNDED BY: NEWEX SYNDICATE

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# Map

I	GRIZ CLAIMS, GEOLOGY	In Pocket of Report
II	GRIZ CLAIMS, GEOCHEMISTRY (Ag, As, Au)	In Pocket of Report
III	GRIZ CLAIMS, GEOCHEMISTRY (Pb, Zn)	In Pocket of Report
IV	GRIZ 1, SE GRID, SOIL GEOCHEMISTRY	In Pocket of Report
۷	GRIZ 1, NW GRID, SOIL GEOCHEMISTRY	In Pocket of Report

## SUMMARY AND CONCLUSIONS

- 1. GRIZ 1 and 2 consist of 24 units and are located 120 kms southeast of Atlin, B.C.
- The claim group was staked in 1981 to cover several small occurrences of galena-sphalerite mineralization with associated silver values.
- 3. A crew of 2 to 4 people spent 42 man days on the property between August 8 and August 21, 1982.
- 4. The claims are occupied by a large Tertiary feldspar porphyry body with various phases which intrudes Jurassic and Triassic sedimentary rocks.
- 5. The property was mapped at a scale of 1:8,000 on an air photo enlargement.
- A soil grid was established in the southwest part of the property. No significant results were obtained.
- 7. A 1981 soil grid was extended in the northwest section of GRIZ 1 to define the limits of an anomaly. The anomaly was found to continue and is of substantial size.
- 8. It is recommended that blasting and trenching be conducted within the area of anomalous soil values.
- 9. A large part of GRIZ 2 claim overlaps earlier staking by Chevron Minerals and it is recommended this claim be dropped.

#### INTRODUCTION

The 20 unit GRIZ 1 claim and 4 unit GRIZ 2 claim were staked in August, 1981 on the basis of several small occurrences of gold, silver, lead and zinc mineralization.

Work conducted in 1981 consisted of detailed geological mapping of four trenches at a scale of 1:50, limited geological mapping of the property at 1:31,680 and prospecting on the northwest side of the property. A soil/talus grid was established in the area around the trenches and a highly anomalous area was indicated.

The 1982 program involved detailed mapping of the property at a scale of 1:8,000 on an air photo enlargement, additional hand trenching between the four 1981 trenches and the extension of the 1981 soil/talus grid to define the extent of the anomaly. Another soil grid was also established on the southeast part of the property. This grid consisted of 137 samples. Forty-seven soil samples were added to the 1981 grid. Reconnaissance sampling across the property totalled 4 talus 35 soil and 30 rock samples.

The topography of the claims consists of a plateau area at 4,500 - 5000 feet in the northwest section and a large ridge at 4,000 feet with several smaller ridges, in the southeast sections. A smaller northeast trending valley cuts through the GRIZ 2 claim.

- 2 -

Vegetation on the plateau area and on the highest part of the large ridge is sparse. It consists of grass, moss and some patches of thick balsam trees and shrubs. Most of the southeastern part of the large ridge and the smaller ridges have been burnt about 10 years ago and are covered by second growth. The sides of the main valley and the southern part of the ridge are covered by a thick balsam and spruce forest.

Drainage on the claim group is provided by numerous creeks which drain into the main valley and also the smaller valley. Both valleys contain swampy southwesterly flowing creeks. The drainage of the plateau area is generally poor with many swampy areas.

- 3 -

# CLAIMS REGISTER

<u>Claim</u>	Record Number	<u>Record Date</u>
GRIZ Group One		
Griz l	1411	Aug 14, 1981
Griz 2 ·	1412	Aug 14, 1981

Griz 1, consisting of 20 units, has been grouped with the 4-unit Griz 2 claim for assessment purposes.

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## LOCATION AND ACCESS

The Griz 1 and 2 claims, (map sheet 104K/10E), are located approximately 15 kms north of Trapper Lake, which is 132 kms southeast of Atlin, B.C. (Refer to Figure 1), Latitude and longitude are  $58^{0}37'N$  and  $132^{0}35'W$ .

Adjoining the claims on the north side is Chevron's 20 unit EMU claim. Much of the Griz 2 claim overlaps Chevron's 20 unit Way 5 claim. (Figure 2).

Access to the property is by helicopter from Atlin or Dease Lake.





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#### REGIONAL GEOLOGY

The regional geology has been mapped by the GSC at a scale of 1:250,000 and is published as Tulsequah-Juneau map sheet 104K.

GRIZ 1 and 2 are situated in the area of a Late Cretaceous to Early Tertiary quartz feldspar porphyry intrusion which is one of many that form a west-northwesterly trending belt from Trapper Lake to Yonakina Mountain. These intrusive bodies are in close spatial association with the Sloko volcanic rocks of the same age which are limited to a larger northwesterly trending belt along the eastern edge of the Coast Mountains. The Sloko volcanic rocks are of interest due to the number of gold occurrences found associated with them.

#### PROPERTY GEOLOGY

#### ROCK TYPES

Mapping at a scale of 1:8,000 was carried out on an air photo enlargement, (MapI). The rock types are discussed below.

#### Unit 3 - Feldspar Porphyry

Almost the entire GRIZ 1 and 2 properties consist of feldspar porphyry of which various phases are present.

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#### Unit 3a - Unaltered Effusive Feldspar Porphyry

This phase of the unaltered porphyry is aphanitic to fine-grained, greenish-grey to pinkish in colour and contains white to pink feldspar phenocrysts. Biotite and hornblende phenocrysts can be present. This phase appears to be an effusive variety of the porphyry.

#### Unit 3B - Altered Silicified Porphyry

Unit 3a contains zones on the outcrop scale of altered, silicified porphyry with remnant feldspar phenocrysts evident. Minor pyrite is common and very minor disseminated galena and sphalerite have been observed in this rock type.

#### Unit 3c - Very Silicified Porphyry

This unit is very similar to unit 3b except it is more extensively silicified. Feldspar phenocrysts are difficult to discern. Quartz stringers a few millimeters in size are common and a few larger quartz veins up to 20 centimeters wide have been

observed. Pyrite is common and is sometines abundant in these silicified areas. Minor galena and sphalerite are rarely present. A pattern to the silicification is not evident.

#### Unit 3d - Quartz Breccia

This unit is actually a siliceous to cherty rock with rusty feldspar porphyry fragments. Manganese staining is common in this rock type when disseminated galena, sphalerite and pyrite are present.

#### Unit 3e - Hypabyssal Feldspar Porphyry

This phase of the porphyry is fine grained, green in colour and contains few feldspar phenocrysts. Some biotite phenocrysts are present. No silicified equivalents of this unit were observed. The hypabyssal phase is generally restricted to the northwest part of GRIZ 1 but a small amount was also found on the adjoining GRIZ 2 claim.

#### <u>Unit 2 - Takwahoni Black Shale</u>

Two outcrops of fine grained black shale of the Takwahoni Formation were observed in the centre of the GRIZ 1 claim. The black shale occurred below the feldspar porphyry.

#### Unit 1 - Stuhini Group Andesite

This unit was not observed on GRIZ 1 or 2.

#### MINERALIZATION

Several small occurrences of galena and sphalerite mineralization have been found on the GRIZ 1 property. In addition to these found in 1981, a small zone with very disseminated galena and sphalerite was located just east of the GRIZ 1, NW soil grid.

Further hand trenching on the four trenches discovered in 1981 was not very promising. Trenching proved to be difficult due to the abundance of highly altered and weathered rock in the vicinity. Some additional galena-sphalerite mineralization was noted along the extension of Trenches 2 and 3.



## GEOCHEMISTRY

#### SOIL AND TALUS

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A topochain and compass soil grid was established on the southeast section of GRIZ 1. Refer to Map I, II or III for location. A few small galena-sphalerite occurrences had been found in this area as well as one low anomalous silver value. It was hoped that the grid would define any anomaly that may exist. Samples were taken at 20 metres apart. A total of 137 samples were collected and analyzed for Au, As, Ag, Pb and Zn. The soil grid and results are shown on Map IV.

The 1981 soil/talus grid on the northwest part of GRIZ 1 (Map I, II or III), was extended. An additional 47 samples were added to the grid to determine the extent of a Pb-Zn anomaly found in 1981. All samples were geochemically analyzed for Au, Ag, Pb and Zn. The 1981 and 1982 results are shown on Map V.

Reconnaissance soil and talus samples were also collected throughout the claims.

#### METHOD

The soil samples were collected from the 'B' horizon at depths of 2 to 30 cm using a grubhoe or rock hammer. Occasionally the 'A' or 'C' horizon had to be used. Samples were placed placed in water-proof Kraft paper bags and sent to base camp where they were dried and sifted to -35 mesh. The samples were then sent to Chemex Labs, North Vancouver for analysis. In the lab the soils were first pulverized to -100 mesh. The gold content in ppb was determined by aqua-regia digestion and chemical extraction followed by atomic absorption. Silver and arsenic in ppm were determined by perchloric-nitric acid degestion and atomic absorption analysis.

#### RESULTS

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The GRIZ 1, SE grid did not return promising results The contour map prepared from the results, (Map IV), shows only isolated high Pb-Zn values. Two Pb values of 213 and 220 ppm were the highest obtained. There were only four isolated Zn values above 250 ppm Zn ranging up to  $480^{\circ}$  ppm Sn.

The extention of the GRIZ 1, NW grid was more promising. (Map V). The limits of the anomaly have still not been entirely defined. An area approximately 120 m wide by 300 m long falls above the coincident 100 ppm Pb and 200 ppm Zn contours. The trenches dug in 1981 fall into very narrow similarly anomalous zones bordering the main anomaly. The lower part of the anomalous zone may be a result of soil slippage from the upper part of the anomaly. Values range up to 800 ppm Pb and 1100 ppm Zn.

Interesting results were not obtained from the reconnaissance soil and talus samples. Results are plotted on Maps II and III.

#### ROCK SAMPLING

Due to the fifficulty of hand trenching along the extent of the 1981 trenches, mapping and detailed sampling could not be undertaken. Two samples along the western extent of Trench 2 were taken where mineralization was visible, and 3 samples were collected

along the extent of Trench 3.

One of the samples west of Trench 2 ran 3.08 ounces per ton Ag, 3.08% Pb and 2.60% Zn. The northern extent of Trench 3 contained a value which ran 0.60 ounces per ton Ag, 0.44% Pb and 0.59% Zn which is slightly better than the 1981 values for the trench.

The reconnaissance rock samples were not interesting except for a 16.5 ppm Ag value to the north of the GRIZ 1, NW soil grid. The rock was silicified feldspar porphyry with pyritiferous surfaces. All results are plotted on Maps II and III.

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#### CONCLUSIONS AND RECOMMENDATIONS

Detailed geological mapping of the property, additional hand trenching between and around 1981 trenches, the establishment of a soil grid on GRIZ 1, SE and the extension of the GRIZ 1, NW soil/talus grid were all completed in 1982. A total of \$6,677.00 was spent on this program.

A significant Pb-Zn soil anomaly on the GRIZ 1, NW grid was further outlined in the 1982 season. Additional anomalous results were obtained from rock samples along the extent of the 1981 trenches.

Future work should concentrate on the main soil anomaly. The outcrop appears to be close to the surface but is too weathered for hand trenching. Therefore, blasting is recommended in this area in order to find the source of the anomaly.

The southeast part of the GRIZ 1 claim and the GRIZ 2 claim are relatively uninteresting areas. It is recommended that the 4 unit GRIZ 2 claim be dropped on this basis and because Chevron's WAY 5 claim overlaps most of the claim.

Respectfully submitted, J.C. Stephen Explorations Ltd.

J.M. Pautler

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# STATEMENT OF EXPENDITURES

## WAGES AND BENEFITS

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J.M. Pautler	Geologist	Aug. 8-17,1982	1950.+15%	\$723.	
S. Kay	Assistant	Aug. 8-17	1750.+15%	714.	
N. Silins	Assistant	Aug. 10-19	1400.+15%	519.	
A. Candy	Assistant	Aug. 10-20	1200.+15%	490.	
					\$2426.00

FOOD AND CAMP SUPPLIES

42 man days @ \$14.

\$ 588.00

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## GEOCHEMISTRY

4	talus	s samples	s for Au	J Ag F	⁰b Zn 0	\$11.65	\$ 46.
45	soil	samples	for Au	Ag Pl	o Zn Q	\$8.40	378.
145	soil	samples	for Au	Ag Pl	o Zn As	@ \$11.65	1689.
30	rock	samples	for Au	Ag As	6 @ \$12	.65	380.

\$2493.00

TRANSPORTATION Keystone Helicopters

Ticket No.		<u>Hours</u>	
3679		0.9	
3688		0.9	
3697		0.5	
	Total	2.3 hours @ \$500.	\$1150.00
		TOTAL EXPENDITURE	\$6677.00

# APPENDIX I

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# SAMPLE DATA SHEETS

# J.C. ST PHEN EXPLORATIONS LTD.

GEOCHEMICAL DATA .... ET - STREAM SILTS

SOIL SAMPLES

SYNDICATE

CREEK- SY-indich of G' Grid

104 K /10E

AIR PHOTO NO. BC 5614 075

NTS

SAMPLER Norman Silins, Elson CandyROJECT Newer - GRIZI

DATE

SAMPLE		EMAE	SLOPE		VEG	COLOUR	grain Size	%	PETROLOGY			AS	SAYS	
82- NXG-B	Width	Depth	VELOCITY	Ph	SAMPLE	COLOON	TEXTORE	MATERIAL	AND/OR FLOAT	ADDITIONAL OBSERVATIONS OR REMARKS	Pb	Zn	Ag	Au
25/1+20W	B	IC	sterp	-	grass	lt br.	silty	mod	feldopar	just east of Trench 2.	10	182	01	210
25/1+40W	в	14	steep	-	grass	dkbr	loamy	high	"	0	11	133	01	<10
25/1+60W	в	10	6	-	n	br.	fine	mod	ų		16	126	01	<10
25/1+80W	-	-	-	-	-	" <u>-</u>	-	-	ъ. <sup>1</sup>	no sample taken				
25/2+00W	В	4	steep	-	grass	dkbr	loamy	high	17	taken 20m 5 of line	13	165	01	<10
-	-	-	-	-	-	-	-	-	2					
25/2+20E	A,B	5	mod	-	mosses	med	silty	high	в		19	135	0.2	<10
25/2+40E	A,B	8	flat	1	moss	dkpr.	п	"	$H_{\pm}$		12	100	0.2	<10
25/2+60E	A,B	5	flat	-	IJ	ы	i1	med	"		17	115	0.1	<10
25/2+80E	в	2	flat	-	υ	br	pebb	med	l,		13	100	0.1	<10
25/3+00E	A	2	gentle	-	moss	med br.	day silt	med			13	113	01	<10
25/3+20E	A	8	gentle	. <b>.</b>	moss	br.	silty	med			16	62	0.2	<10
25/3+40E	A,B	12	gentle	-	moss	br.	1	high			9	87	0.3	<10
25/3+60E	в	8	h	-	balsam	med br.	<i>י</i> י	med			10	108	0.2	<10
25/3+80E	в	6	-   <sub>1</sub> , -		grass	grey brown	silty	med	en jula j	그는 바람이 아이는 것은 것이라.	7	88	02	<10
				-	0									
				-										
				-			14							
				-				2						
				~										

# J.C. SIEPHEN EXPLORATIONS LTD.

GEOCHEMICAL DATA STEET - STREAM SHETS

SYNDICATE

NTS 104K/IDE

CREEK

SAMPLER Norman Silins, Alison CandyROJECT NEWEX- GRIZ 1

DATE

AIR PHOTO NO. BC 5614 075

VEG. Grain Size TEXTURE ASSAYS VOLUME % PETROLOGY SAMPLE SLOPE COLOUR ORGANIC OF BEDROCK HCRIZ Depth ADDITIONAL OBSERVATIONS OR REMARKS VELOCITY Ph SAMPLE MATERIAL AND/OR FLOAT 82-NXG-B Pb Zn Ag Au fine gray 35/0+20W BC 3 steep none low talus slope 170 0.1 <10 -11 dk br 5 35/0+40W grass steep sandy med 64 335 03 40 fine fir br. 10 steep 35/0+60W low <10 43 160 0.1 gray 35/2+20E 8 steep low 193 488 0.2 grass <10 coarse pebbly . . 35/2+40E 8 br. <10 47 225 0.2 11 grass sandy brown 35/2+60E grass 10 low 98 253 04 <10 11 gray fine Sandy fine silly 35/2+80E 3 low 12 450 0.3 tan gass <10 11 et 35/3+00E med 5 61 200 0.7 <10 11 11 pr. 9.Fp low 35/3+20E fine balson tan 25 133 0.2 410 3 mod med med-Righ grass br 119 263 03 35/3+40E 5 steep <10 et. 35/3+60E sandy low 20 150 0.2 5 410 " .. grass low 36 170 01 35/3+80E tan fine 2 <10 1, --•

## **GEOCHEMICAL DATA SHEET - STREAM SILTS**

SYNDICATE

J.C. STEPHEN EXPLORATIONS LTD.

DATE

104 K / 10E NTS

SAMPLER Norman Silins, Alison Candy ROJECT NEWEX-GRIZI

CREEK

AIR PHOTO NO. BC 5614 075

SAMPLE	VOT	OWE-	SUDPE		VEG	COLOUR	9 BIZE	%	PETROLOGY			AS	ASSAYS		
82- NXG-B	HORIZ	Depth (m)	VELOCITY	Ph	SAMPLE	0020011		MATERIAL	AND/OR FLOAT	ADDITIONAL OBSERVATIONS OF REMARKS	Pb	Zn	Ag	Au	
45/0+40W		6	gentl	r -	fir	br	fine	med			16	185	0.1	410	
45/0+60W	-	-	-	-	-	-	-	-	-	no sample taken	-				
45/0+80W	-	-	_	-	-	-			-	no sample taken	-				
45/1+00W		6	mod.	-	fir	br.	fine	med			11	102	01	<10	
45/1+20W		10	gentle		U.	br.	pebb.	high			20	95	0.1	<10	
45/1+40W		5		-		Itpr.	sandy	med- high			37	93	01	<10	
45/1+60W	-	-	-	-	_	-	-	-	-	no sample taken	-				
45/1+80W		6	mod	da ni Le da	fir	br	piety	high			11	93	0.1	410	
45/2+00W	1	10	mod	•	fir	black	silty	high			10	88	01	210.	
-	_	-	-	_	-	-	-	-	-						
45/0+20E	-	8-	gende		moss	et	fine	high		taken 20m 5 of line; talus		  -			
45/0+40E	-	-	-	-		-		-		no sample taken	-	-	-	6	
45/0+60E	в	7	mod	-	fir	med br.	fine sandy	med			11	123	01	<10	
45/0+80E	в	8	gente	, .	giass	med br.	sandy	low			10	102	01	<10	
45/1+00E		5	steep	-	gidos deadfall	gray	fine	low			9	108	0.1	<10	
45/1+20E		8	steep		grass	lt.	fine	med.			15	145	02	<10	
45/1+40E		4	41		"	tan	fine	low			161	215	03.	<10	
45/1+60E		3	steep	-	12	tan	fine	low			116	383	04	<10	
45/1+ 8CE	•	1	11		SI .	tan	fine	"			72	290	01	<10	
45/12+00E		2	н	-	b	ii.	fine	11			73	320	02	<10	

# J.C. STEPHEN EXPLORATIONS LTD.

GEOCHEMICAL DATA SHEET - STREAM SHETS

SOIL SAMPLES

SYNDICATE

NTS IO4K/IDE

CREEK

SAMPLER Norman Silins, Alison Candyproject NEWEX- GRIZI

DATE

COLOUR TEXTURE ORGANIC VEG . VOLUME ASSAYS PETROLOGY SAMPLE SUDPE OF BEDROCK Ph ADDITIONAL OBSERVATIONS OR REMARKS VELOCITY SAMPLE 82-NXG-B HORZ (10) MATERIAL AND/OR FLOAT Pb Zn Ag Au fine steep 45/2+20E 3 tan low 10 310 960 1.6 grass med 6 moss fine 48 263 05 45/2+40E <10 11 br. grass fine 45/2+60E 6 11 198 570 05 med <10 grass .. grass 45/2+80E low 4 tan 10 11 107 400 0.5 20 fine low 45/3+00E 5 fire br 38 188 0.2 <10 11 It/med fine br. sandy fir the shall be 45/3+20E 5 low mod <10 13 115 01 med for 45/3+40E 5 fine mod -11 br.

AIR PHOTO NO. BC 5614 075

# **J.C.** STEPHEN EXPLORATIONS LTD.

DATE

## GEOCHEMICAL DATA SHEET - SOIL SAMPLING

SYNDICATE

LINE 15+00N and 12+00E

SAMPLER D. Cundy N. Silins

PROJECT	Nexeur - Krig 1	
	A second se	_

AIR PHOTO NO.

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DESCRIPTION ASSAYS SAMPLE LOCATION Depth Hori ADDITIONAL OBSERVATIONS OR REMARKS SLOPE VEG. NO. ED Zo Ag As AL Part Size % ORG. Colour Ph 15.00N TE SEL NXG 6" med br. 5 210 08 25 20 gr. by edge of lake fine 100 no d. 4" mod 51 148 03 79 20 OE br. fine med 87 01 12 20 7 g" red/br Sl. 9E gr/Rize low silog. mmd 6 163 01 9 KIL A1/52. 6" dk.br med 10E 10" Pine rocko/roots v high mod. br. gr/fl. 53 410 01 32 <10 IIE fine mord dead a red/br. 7 90 01 10 KIC 7' high IDE 200 12+00E 14:+8N fine SA NXH 刑分. a steep tan sandy low sleep\_ 14+60N od bo fine med mad br. fine med 14+40N steep ge-14 + DUN pri tappi 14-100N 13 180N

# J.C. SIEPHEN EXPLORATIONS LTD.

#### GEOCHEMICAL DATA SheET - SOIL SAMPLING

SYNDICATE

SAMPLER D. Silins / A. Candy

PROJECT Newex Sup. Griz claim I

7F LINE AIR PHOTO NO.

NTS

DATE

DESCRIPTION ASSAYS SAMPLE LOCATION Depth Horiz ADDITIONAL OBSERVATIONS OR REMARKS SLOPE VEG. NO. Pb, Zn Ag As A Part Size % ORG. Ph Colour K2-DinG-B 7E 17+001 8" mad mousers l'une br 17 82 0219 P-bbley dark BING TE ILLASON 10" Hoard 21 68 05 15 20 high black mad Sruza Fubbley dork dight FE IL+LON 8" high 17 75 01 16 410 black sand dark pine Q bioles Poor profile Gentle B high 58 118 01 14 KIL TE ILHON 6 mass stones prown 7E 16+2010 101 med - 11 () fine 15810417KIL br gentle ves poor development TE IGtoon 6 B ÷ 22 85 05 15 10 high prown TE ISTON 5 med 17 87 0.3 16 20 in. 1. 1: Light frost boil 7E 15+60N 2"-3" 18 120 01 19 10 Low mod none brown pebleby mosac TE ISTYON 5' mod. br. 100 21 123 07 19 10 frees 507 pine nod 11 100 0.2 16 10 mod TE ISTRON 10 benesin moss 5 210 0 2 25 20 IF. 15+00 Ping 11 sportle mosses 12 70 02 14 20 Nebr line 7E 14450E 6 100 pino B brown 9 80 05 11 <1L confle mosx. TE 14HLOE 6 mod pine line. 10 90 01 11 <10 7E 14440E 5" 11 1000 br. MOON med. pine+ Good Drofile B brown 7E 14+20E 5 hiel 11.15502 14 10 MOSSER hick TE 14HOUE 3" L. br 40 23 203 05 11 10 \_ 11 mod red. mosses -46 130 01 20 410 TE BISON 6-10 B Brown hist mod 1010 7E 13+60N 8 3 Ak br. b med 3721702 16 KIL red. seass TE 13+40N 8"+0" B boown 15 102 01 12 10 good development mod SIGWER Low

high

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1.

7'3

7E 131200

met br.

7E 13+00N

no sample at

21 105 61 24 24

#### GEOCHEMICAL DATA S. . eT - SOIL SAMPLING

NTS

SAMPLER N. C. JIRS/A. Condig

J.C. S'A PHEN EXPLORATIONS LTD.

DATE

PROJECT MOLEX SUR GRIZ CLAIMINIL

AIR PHOTO NO

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DESCRIPTION ASSAYS SAMPLE ADDITIONAL OBSERVATIONS OR REMARKS LOCATION SLOPE VEG. Depth Horiz NO. Pb Zn Ag Part Size % ORG. Ph Colour As AL CL. UND.B 13.00 N 211 h. brown V.Steep PE HER ----no protile 72 med 200 0 3 81 KIC tine L grosser 10" gr/br J.ne 1. elegy mich 8 172 04 <10 10 EE 1342UN no profile 2"-3 fing RE 13HUN Libr 220 310 04 22 10 V.steep low 4 ملعه 11 33 138 02 1 E 13+14 low 10 11 n red. Brasses BE 13+80 2"-3" steep mod 22 410 148 01 14 proup pell V.II gresses 4" 8E 19400 n low villy nosses mod benering poor development 8E 14720 15 102 01 12 10 sand Low proven 6" fine ned 34 br Ø mosses 5E 19440 113 05 15 20 red. 3" B 8 83 0.1 14 20 SE 14460 sondy mod mod becun mosses red/or fine 3 med 8" ; 18 92 8E 14450 02 16 10 51 148 0.3 79 20 . SE 15400 GTUN B L.Becur 8 88 0 2 16 contle masser 0,E 15+26 6 10 port mond 1.80 4 10 110 0 2 14 100 10 KE 15thu Fuch cample #28367R OFASSEL 8" 25 92 05 14 410 steep RE ISHO parmu now mosi DOOR DEAL Hag of pravious year found have \$283688 yood, a 137601 med 11 9 mil 12 10 JE 15490 silty PINE 107 Gentle 8E 16400 12" <11 29 125 04 11 B Low brown and 312212 10" slight 3690 03 9 20 en. & 11 62 lev? 25 11 +7.13 . gilty 8" pine B Gentle 16 68 04 12 20 SE ILIUIS mod brown sand mass Josep br pebbly 13 slight 8 97 02 16 20 SE ILLO 100 11 1) PINE 10" medium good profile B Gentle mossie SE !! or YI)

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J.C. S PHEN EXPLORATIONS LTD.

GEOCHEMICAL DATA S. T - SOIL SAMPLING

NTS

SAMPLER A. Candy N. Silins

DATE

PROJECT NEWEX SYA GRIZI claim

LINE 8E

AIR PHOTO NO.

SAMPLE				DESCRIPTION				ADDITIONAL OPSERVATIONS OF REMARKS			1				
NO.	LOCATION	Depth	Horiz	Colour	Part Size	% ORG.	Ph	SLOPE	VEG.	ADDITIONAL OBJERVATIONS ON REMARKS	P	zr	Ag	As	A
85N×Q-K	000+F1 33	13	10	Ne br	line	low		st.ght			13	75	02	12	<10
T.	DE 17120W	3"	ß	brown	<ilty =and</ilty 	high	1	coentle	pine	a cod profile Dead full	82	207	01	32	<10
	SE 17440N	4"	•	Libr	Pine	0/		mod-st.	1-200		30	93	01	15	KIL
- The	BE HILLON	3"	B	Light	sandy	hub	1. 2.1	steen		mage peofile at autoria	115	184	01	33	KIC.
	RE IZTRONO	4"	1	fan	gine	inus		steep			213	190	06	19	< R
	BE 184000	8"	R	dack	Pelder	mad		mad	mosses		11	61	01	11	KIL
	8F 181200	1011	·	60	Jine.	high		et.ght	2.~ 1 2.~ 1		13	66	03	12	KIL
	PE 101400	16"	B	De 41	sondy	1-110		dee	hone	and anatile	9	64	01	11	KIC
	RF 1944	3		Sk.br.	coaraa blad	high		steep	noscer		72	152	03	12	<10
	RE IDIAN	511	R	\	Sand	h. 1		stare	Srassen	Facts Datiful in willow	20	100	01	iO	KIG
	DE IQUOR	5		Jan	survey	Ach	1	alight	. H	100'S PERMITCH, IN CAMPY	10	.75	0.1	9	20
••••••	DE MILON	QII	A		(k) 1	h. 1	lur -	- 0	\$1 ouvers	Dave Sanda DE					
	DE DUU	13"		ned/br	pine	high		no	562762	poor sample 12.1.	6	73	0.1	14	10
	CE 101440	ru	R	Light		1		-	Plower	NE	a	70	0.1	14	<1C
	SE INTERN	6	4	brown	pebbly	mod		mod.	Graues	0.1.	7	7/2		17	<1C
	DE 19+800	2		red		1			Q.		-	90		12	<1
	BE COTOG N			prown	sandy	Low		Gentle	TIOWER	-good protile	<u></u>		-	16	
					-									15	

## GEOCHEMICAL DATA S. . ET - SOIL SAMPLING

TC	S. PHEN	
J. U.	EXPLORATIONS	LTD.

DATE

104K/10E NTS

LINE

SAMPLER Jean Pautler, Susan Kay PROJECT Newex-Griz I

AIR PHOTO NO. BC 5614 025

SAMPLE		Death	Hari		DESCRIPTION		CL 085	VEC	ADDITIONAL ORSERVATIONS OF REMARKS		
NO. 82-NXG-B	LUCATION	(cm)		Colour	Part Size	% ORG.	Ph	32072	VEG.	Pb. Zn. Ag As	A
9E, 17+00r		10	В	on. br.	fine	few	·	flat	pine meso	9 84 01 14	10
16+80n		7	"	med.	fine	mod		"		7 147 01 14	<1
16+60N		10	>,	dk br.	silty sand	loto		"	grass	7 74 01 14	210
16+40N		7		med br.	fine	mod		υ	pine mos	e 93 02 12	IC
16+20N		10	"		11	"	1	11	meadow	8 86 01 12	zi
16+00N		15	1/	11	11	'n		n	ч	7 85 02 12	< 10
15+80n		7	4	11	н	4		gentle	71	7 90 0 2 11	10
15+60N	2										
15+40n	7	n		amp	le						
15+20N	)	ul r									
						•					
		- 1		i. E set si		1	1				
	T			1							
	1							2 - S 2			
						1 - 11					
							Ľ.				
14 - 14				- 1.0.191	Post of the					G - G - G - Lo - Restricter and a tor to all	
					e differenti				n le s	이 것은 것은 것은 것은 것을 다 가지 않는 것을 하는 것을 수 있는 것을 수 있다. 것을 것 같이 같이 것을 것 같이 않는 것을 수 있는 것을 수 있는 것을 수 있는 것 같이 않았다. 것 같이 것 같이 않았다. 것 같이 않았다. 것 않았다. 않았다. 것 않았다. 것 않았다. 않았다. 않았다. 않았다. 않았다. 않았다. 않았다. 않았다.	1

# GEOCHEMICAL DATA SI. 2T - SOIL SAMPLING

104 K / 10E NTS

LINE

SAMPLER Jean Pautler, Susan Kay " Newex - Griz I

J.C. ST. PHEN EXPLORATIONS LTD.

DATE

BC 5614 025 AIR PHOTO NO.

SAMPLE					DESCRIP	TION						AS	SAYS		1
NO. 82-NXG-B	LOCATION	(cm)	Horiz	Colour	Part Size	% ORG.	Ph	SLOPE	VEG.	ADDITIONAL OBJERVATIONS ON NEWARKS	Pb	Zn	Aa	AS	Au
10E, 19+30A		15	в	orange	fine	moo	4	(main)	meado		5	80	01	12	KIC
19+40N		20		brown	fine Silty sa	deto		,,	"		5	90	03	9	40
19+60N		7	u	lt or.	fine sandy	mod			"		6	84	0.1	12	10
19+80N		10		bioun	fine	a "		ь	,,		6	83	0.1	10	10
20+00N		15	μ	ttpr.	med silty sand	loto	-	,,		south edge of 3rd valley	7	55	0.1	6	<10
9E, 20100N		7	11	br.	fine silty	mod		11	"		21	103	6.1	85	10
A+BON		20	"	med br.	fine	mod			"		8	71	01	12	< K
19+60N		15	11	4	4	и		11			8	70	0.1	10	10
19+40N		20	L	"	fine sulty san	d "		gentle	, ,,		10	89	0.1	15	<10
19+20N		10	,,	"	1,	lots	- E.	flat	11		10	71	0.1	12	10
19+00N		10	"	u	pebbly	mod		1,		qfp, py otc	10	75	01	11	20
18+80N		7	ч	or. br	fine silt sand		- 1	"	"	top of ridge before first valley	11	87	01	16	<10
18+60N		15	,,	med	n	lots		gentle	Piness	in first valley	6	83	01	12	10
18+40N		NO		SAMPL	E -										
18+20N		15	B	med	fine	lots		mod	spruce pine, n	675	8	51	01	10	< IL
18+00N		20	н	dk br.	n	mod	j.	flat		edge of forest/burnout to E	6	60	01	10	<10
17+80N		10	"	med br.	med sandy silt	loto		gentle		bottom of slope of rusty ridge	23	75	0.2	11	<10
17+60N				NO	SAM	PLE								_	-
17+40N		15	B	med br.	tine Elayey sudd	lots		mod	piness		22	60	01	12	<10
17+20N		5		10	fine	mod		mod	sprice,	sine bare patch, above trees	17	78	ΟZ	14	<10

# J.C. STEPHEN EXPLORATIONS LTD.

## GEOCHEMICAL DATA SHEET - SOIL SAMPLING

SYNDICATE

SAMPLER	a.	Ceril	41	N.	51.05
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DATE

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PROJECT

NTS

LINE 9E and IDE

Ners	Neweri	/ Bris
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AIR	PHO	TO	NO.	

SAMPLE	LOCATION		I		DESCRIPTION			SLOPE V	VEG.	ADDITIONAL OBSERVATIONS OF REMARKS		ASS	ASSAYS		
NO.	LOCATION	Depth	Horiz	Colour	Part Size	% ORG.	Ph	SLOPE	VEG.	ADDITIONAL OBSERVATIONS ON REMARKS	Pb	Zn	Ag	As	A
SA NXE	13+0.0N	h	6	+0	o org	mic	÷	tak	e sa	mple	-	-	-	-	7
	13+20N	4"		nod/b-		Imas		queto	none	doudfall	3	81	01	7	<
	13+40N	3"	١.	dt.br	fine	med.		resta 1	66/21		19	142	01	11	2
	13+60N	6"	ах 	rog/pr.	S.H. vy	med		atel	or/fl.		16	120	01	7	<
	13490N	1"	ß	lgt br	fine	iow		V. sterp	roctor: grades		32	162	01	17	20
	14 +00N		•	100	organ	t si	o to	ke	com	2la_	9	HO	04	12	IC
	14+80N		<u>.</u>			11					-	-	-	-	
5 B.	14+402		、			11					-	-	-	-	
	A+60N					11					-	-	-	-	
	14+80N	5'	B	black	me	high		mo	fico		7	88	02	10	1
	10 E 14 + 8 Or J	5		ы.	Pine	100		geeto			5	98	0.1	10	kı
	14+60N	10"	9	Not	fine	med		mont	8/21.		6	116	01	11	1
	14-140N	4.	÷	br	gine	me	-	mod	none		5	97	01	11	<
	14-120N	10"	**	red.	ومسزا	mod		slight	8791.	1	6	116	0.1	11	20
	14+00rJ	10.	- 2	dlk br	.pine	nach		. جعفت	8/21	deadfall	6	34	01	11	<1
	13+800	<i>oj</i>	ø	dkin		Ngh		gester	gr/ft		31	113	01	10	<1
	13+60N	.3'	y.	drb.	J.re	1000	ų.	1. cteep	rocky gr.		28	i18	02	16	K1
	13140N	65	Ϋ́.	Akion.		tell		geets	gr 171		17	132	01	9	<1
	13+200	4	1	med lon.		med		mord.	gr/.21		20	209	0.2	9	<1
	13400N		1	bons:	1. The									1.11	

J.C. S. PHEN EXPLORATIONS LTD. GEOCHEMICAL DATA S. \_cT - SOIL SAMPLING NTS 104K/10E SAMPLER Jean Rautler, Susan Kay PROJECT Newex - Griz I LINE AIR PHOTO NO. BC5614/025 DATE DESCRIPTION ASSAYS SAMPLE ADDITIONAL OBSERVATIONS OR REMARKS LOCATION Depth Horiz SLOPE VEG. NO. PE In Ag. As AL Part Size % ORG. Colour Ph (cm) 82-NXG-B fine sarlyself meadow dk br 10E, 15+20A lots 7 A.B med 9 97 01 11 11: A.B debr 15+40N 15 " " 6 <10 111 0.1 10 b fine selly meadaw edge of trees 12 B 1 11 85 01 N 15+60N 11 spruce 10 mod 6 sand med. flat B 92 6 15+80N 10 1, IU <10 moss 01 mod sand moss 15 B 16+00N 5 88 11 11 ,, 0.1 KK 4 11 sprice med h 60 9 15 7 16+20N 11 11 01 KIC 11 11 br ..... gentle spruce 2 75 01 <1C 10 10 16+40N 11 11 11 11 pine fine -10 13 83 01 12 11 11 ZC 16+60N 11 11 Sandy U spruce B 11 11 11 9 11 290 01 ÍÙ 16+80N 16 mas flat med 20 6 94 01 9 IC 23 11 17+00N 11 11 sand ltbr med 11 10 76 01 11 KIC 17+20N IJ daysand 7 11 11 fine day sand med med 15 11 10/69 7 KIU 17+40N 11 01 h 11 br mon edge of trees / burnout; 2nd ridge 5 17+60N 11 6 102 01 10 20 11 11 sandy 11 fine sulty sand moss orange 7 11 102 01 11 15 17+80N KIC 11 11 grass gentle 5 93 0212 15 <1C 18+00N ų 11 11 11 fine mod 92 0.1 9 1/ 6 20 18+20N 15 11 11 11 sand brown moss bushes in first valley 14301 9 KIU 11 flat 37 18+40N 20 mod N 11 orange moss 1<1C 18+60N 7 7 10501 10 11 11 # 11 brown grass itter. 61 10 95 01 10 20 18+80N gentle 15 11 11 h maidon orange 5 8501 19+00N flat 1<10 11 15 11 11 brown

# J.C. ST PHEN EXPLORATIONS LTD.

DATE

## GEOCHEMICAL DATA SI ET - SOIL SAMPLING

N	TS	
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SAMPLER F Condy/10.51 ns

PROJECT LOOWER SUP (STIZ CLAITING ]

NE LINE

AIR PHOTO NO.

SAMPLE			Horiz		DESCRIPTION			SLOPE		ADDITIONAL OBSERVATIONS OF REMARKS					
NO.	LOCATION	Depth	Horiz	Colour	Part Size	% ORG.	Ph	SLOPE	VEG.	ADDITIONAL OBSERVATIONS OF HEMAHKS		20	Ag	As	An
52 Nab.6	RE 1340CN	15	B	L'ar	line	low		ateep	8-121	Dead Jali	8	115	01	15	<1.
r	11E 13+208	11"	B	L. Brawn	finesand	mod		steed	1	D.F.	10	140	01	12	<1
n.	ITE 13thon	4	B	ыл.	Jine	mod		1 a Je		deadfall D.F.	11	164	02	9	10
1.	ILE ISHON	9"-10"	B	L. Browin	sands silt	mad		steep		F.J. slipping 2000	4	113	01	10	kin
(1	ILE 134900	5"	i	ned bi	1 1y	low	pi pi	15	masses	D.F.	23	490	0.1	23	20
() <sub>1</sub>	HE HALDON	2"-3"	A	LBrown	some	mid		teen	none	expased sail D.F.	18	172	02	19	<"
11	ILE IN+2CN	5	B	gribr.	احمر ( معلادات	11		11	-	D.F.	22	134	0.1	35	10
	IF ILLIGIN	8"	R	red		med		mad	Stass	DF	24	228	01	14	kic
10	NE IMHIN	3		L. br	sandy	med		11	1		6	104	01	10	210
1.7. 11	1 E 14+ 4W														1
14 <sup>1</sup>	IF MACON		, Ц	1 (19)		1	1			set of the state of the set of the set	53	410	01	32	<10
<u>transferra</u>	112 147 (A)		- 6		414.1	g b		1	angen 1997 - Salar		21	115	0.1	50	<11
ie d	11= 15+HOD	A"	B	br	fine	red		geela	-		15	107	01	14	<1
1.	NE ISTIAN	4"-1"	B	bennia	Frand	Low	1	aphtle			13	90	01	16	<10
1	ILE ISAGON	14	B	L.br	50mbury 1	tow		slight	RIDE		7	78	01	12	<10
	HE LLADON	811	R	-	course band	mad		Lonte		sliford book	4	75	0.1	9	KIC
	HE ILDON	1	1	tan	2ms	1000		"	gi. etc.	sample taken from roods of upturned	8	90	0.1	9	210
. ( <i>r</i>	IE ILHHON	1X"	B	benun	sandy	med	1	neitle	PINE	maint	6	72	01	9	<10
							$+\frac{1}{2} [\frac{2}{2}]$		128.27						0
										2012年1月1日中国的中国中国的中国					

TC	SIEPHEN	
J. U.	EXPLORATIONS	LTD.

## GEOCHEMICAL DATA SHLET - SOIL SAMPLING

SYNDICATE

SAMPLER D. Silins A. Candy

PROJECT Newex Syn. Griziclaims

NTS

LINE 12E

DATE

AIR PHOTO NO.

SAMPLE					DESCRIP	TION	ł.			ADDITIONAL OBSERVATIONS OF REMARKS		ASS	AYS		
NO.	LOCATION	Depth	Horiz	Colour	Part Size	% ORG.	Ph	SLOPE	VEG.		Pb	2n	Ag	As	An
92 WXG-0	12E THEOR	6"	B	L. beaun	f. sond	mod		Steep		D.F.					
	IZE 14450N	2"	B	ton	Frond	Low		sterp.	Alchiers	D'E	6	85	01	14	KIU
	12E 14+401	3"	B	brown	Sand	Low.		steep	Les	D.F.	28	138	0.1	39	<10
	12E 14+200	8"	B	d. brown	Frand	high		steep	- 1	D.F.	20	193	01	17	<16
	IZE 144001	5"	B	promu	fine	med		steep	SLUTTES	D.F.	10	248	01	15	KIU
	12E 13+101	si0"	B	hired brown	F. cond	mod.	<u> </u>	mod.	-	D.F.	12	180	01	19	CIU
	DE 15460	N3"	B	brown	sand	med		steep	JOOLSES	D.F.	7	98	01	10	<1
	12E 13440	N4"	B	prown	sand	mod	11-	med.	flowers	D,F.	5	106	01	IU	<11
	12E 13+20	05"	B	brown	sand	mad		mod	grasses	? D.F	45	300	02	41	KIG
	12E 13+00	oll"	B	brown	silty	med.		mod	Grasses	P.F.	8	195	01	9	10
														1	
		1													
					1										
		1													
		1			£										
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					I.										
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		Ť			1. J			2	1	이 사람이 이 집에서 이 집에서 나는 것이 없다.	4	119		9	*
						PROJECT		Vewex	- Griz	I AIR PHOTO NO. BC 50	014	025			
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SAMPLE	LOCATION	Depth	Horiz		DESCRIPT	NON	1.1	SLOPE	VEG.	ADDITIONAL OBSERVATIONS OR REMARKS		ASS	AYS		
	ridge NE	(cm)		Colour	Part Size	% ORG.	Ph		spruce		Ph	Ln	Ag.	As	
×G-BT-512	of camp.	5	C	br.	med	moa	<u>- 14</u>	moa	pine	overlying rusty porph. OTC	- 62	103	01	14	
				nietzi	Mud TY		. <b>.</b>		( ] .						
ST 104		=			pard. d	med		moq	Cushes		34	123	6-1	4	
T 105		3	C_	1)	11	lifs		11	12705.5	pyritic tp otc.	38	126	0.1	41	
35 100							24				116	140	0.1	17	
							1				T			-	
	655 E			sil-, hi				1							
		9		4 Alera			a. H	1.1							
ti di di				1111											
											-				
	1	J. P. L	- 14	E L E H		19	, d -								
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12 - 12 - 12 - 13 - 1					19		- 1 - 1 - 1 - 1								
			- 1.1										-+		
			<u></u>				1						<u> </u>		
		10					<u></u>								
				1.10	110.00	1., . 	1.5								
				막다.		1.1		1.12		그는 것은 것이 같은 물을 맞는 것이 같이 많이 많이 했다.		1			

# J.C. STL. HEN EXPLORATIONS LTD.

DATE

GEOCHEMICAL DATA SHL\_T - ROCK GEOCHEM SAMPLING

SYNDICATE

IC E

	· · · · ·
SAMPLER	 1201+1-1

5 Kay

PROJECT A LAY - CRIZI, SE

LINE

1.3.4

AIR PHOTO No.

NTS

BC 5614 25

	SAMPLE	LOCATION	ROCK	ALTERATION	N MINERALIZATION STRIKE ADDITIONAL APPARENT		WIDTH TRUE		ASSAYS				
	NUMBER		TYPE	· · · · · · · · · · · · · · · · · · ·		DIP	REMARKS		WIDTH	Ag	As	Au	Pb
(1)	28440B	in quely we	Keidsper	the site	24					e.z	210	210	æ
(2)	38441 B	SKIZ 1	9,7 z hreccia	Mosting			rusty Relappa.			0.1	15	c10	
3)	28442B	GRIZI	silicit. Z.f. p.	Silicified.	RY .					0.2	12	210	·
(4)	28443B	E Z camp	2+2 by			*	angular plags of		la mi	0.1	9	210	
(5)	28444 B	W07, 43.	f p.	silicified	FY			4154		0.1	9	410	
(6.)	28445B	W0644		V. silicified	lots py					0.1	4	410	
(7)	28446B	in gully	1.	silcified	. <u>((</u> ()	Į.	用的原始的目的原则。			0-1	35	20	
(,	384473	top of sully	esil Br.	silicified, l bleached	PY		te warry git inters.			0.9	355	10	
(9)	28448B	NW OU camp	217-raib	rusty.			talus below frote	Zan		0.1	11	410	
(10)	284498	in bottom	silicified fp	rusty silicified	Py lots		small zone 2 im Ione frenchine 2 N.		1. 1914	0.8	41	20	
(11)	28450B	8=/17+60N	• •	11	PY		J	P.G.S.	Alla	0.3	9	-10	
(12)													
(13)										1 di			
(14)	28367B	ridge behind camp	lt blue-gray feldspar porph	silicified	seams of f.g gal., py					1.1	5	10	40 1
(15)	28368B	NE of 28367			dissem f.gr.					0.6	6	10	
(16)	28369B	ridge NE of Ramp	gtz-vein	rusty weath.	-	100%/90:	sugary + drusy gtz.		2.00	D.1	7	210	
(17)	28370B	beside B-517	gtz bx.	rusty weath	f.gr. dissem Sulphides				(1) (2) (2)	0.2	65	<i>210</i>	
(18)	28371B	gully behind	altered f.	rusty weath silicified	f.gr. blebo + dissem sulph					0.1	94	210	
(19)	28372B	beside B-518	lt. blue gray feldspar porp	silicified	f.gr. dissem i veinlets of py			$\left  b \right _{1} = \left  b \right _{1}$		0.3	5	L]C	
(20)	28373B	east of 72B	"	IJ	,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		pink weathing and			0.1	5	<10	

## J.C. STL. HEN EXPLORATIONS LTD.

## GEOCHEMICAL DATA SHL\_ - ROCK GEOCHEM SAMPLING

SYNDICATE

SAMPLER J Pautler

DATE

PROJECT NQUEX - GRIZI, 2, 3

AIR PHOTO NO. BC 5614 075

104KLIDE

NTS

LINE

	SAMPLE	LOCATION	ROCK	ALTERATION	MINERALIZATION	STRIKE	ADDITIONAL	WIDTH	INT	AS	SAYS	^		1
	NUMBER		TYPE			DIP	REMARKS	1.0	WIDTH	Au.	As.	Hg	16	Z
1)	2-8451B	Trench 3 GRIZI	silica rich		fy cte, sp, minor og		2x4nsion of Trench3			100	Tarc	6.2	5000	4i2
2)	28452	EOTT. 2	silica rich	very affered	prown altoled		heavy			-10	65	1.2		
3)	28453	E of 28452	Silicious - Churty Ivin	rusty weath	Py, U. Min or ga	100°	bucciaked in spots	1		-10	150	0.1	248	22
4)	28454	NE 7, 19e quely (G-1)	silicibus vern,	Mr staining V. rusty weath	Minor Py	4	same as rock around	11		<1c	5.3	0.1		
(5)	28455	Eside Big RK	V. silicified f.p.		ГY		above 28375B			-10	11	0.1	1	
6.)	2.8456	GRIZ-1	gtz-carb vein	vory rusty	cte veins.		heavy breccipted in places		-	-10	11	0.1		
7)	2.8457 B	EMU	cherty-sil-	Mn staining			partly bucciated.			<10	5	c.i		
8)	2-8458	Not rider with showing (G-3)	silicifisid rk.	rusty weath	cte creins.		some buckiehen		1	-10	3	0.2		
9)	2-8459	with showing(G-3)	gtz-cte precia	the rusty weath			V. rusty f.p.? frags			-10	3	0.1		
:10)	28460	GRIZ 3	g+z-cte preccia				rusty fo frags			-16	2	0.1		
90	2.8461	10	Cherty vein	Mn stained			0.0			-10	30	c.i		
12)	2.8462B	12.8461	Siliciousuein		minorche		Leavy			-10	14	0.1	-	
13)	2 8 4 6 3 B	GRIZ 3	silica replaced	Mn staining	РЧ					×10	30	0.2		
(14)	284648	ACT28463B	11	rusty Mrst	Рч, д9, sp.			1		0:005		7.01	1.03%	1.82
(15)	28465B	Woy 464	silicified zone			284°				-10	65	c.2		
(16)	28466	2 9, 465	1 1(	mn staining		'240°				\$10	19	0.1		
(17)	28467B	further W.	chert- by Silica vun	Mn staining		-				40	19	0.7		
(18)				l	×					1				
(19)					1			1				÷		
(20)	327520	Extended trench & West	Silicified Qte vien	rusty weather.	EY, sphalerite, Salenals		V. rusty (no bread)		,	-10	145	10.7	2-130	Sea

# J.C. STL. HEN EXPLORATIONS LTD.

## GEOCHEMICAL DATA SHLLI - ROCK GEOCHEM SAMPLING

SYNDICATE

Susan Kay

PROJECT NEWER - GRIZ 1,2,3

ð

BUDTO No BC 5614 075

104 K/10E

NTS

LINE

B-525 B-525 C2 Lk. O51C D52C NN A Fe	rype feidspar scrphyry buartz breccia " " " " " " " " " " " " " " " " " " "	silicified silicified nisty weath. rusty weath. rusty weath. fristy weath. silicified; nisty weathering silicified; nisty weath; Ho-strd.	f gr dissem. f gr dissem. pyilifsinfaces ind f. gr dissen f.g. bubs ga., py. py., ga, f.g. b gr ga, py, spl seams of ga.	· 76°/40°/	REMARKS pink weath. rind rusty weath. rusty weath frags V cherty appearance. dk. rusty br. weath ctr velow. float; south of 41053C extended NEV end of Trench 2 extended W end of Therch 3 extended E end of Therch 3.			Au. 	A. 5 48 30 225 15	A9 0.1 1.5 2.5 C.1 C.3 1.0 3.6 0.12 9 0.12 9 0.12 9	Рь 42 51 3.0% 2.136
B-525 P B-525 V2 Lk. O51C D52C WH Fe NN OS	keldspar porphyry wartz breccia " " " " " " " " " " " " " " " " " " "	silicified silicified rusty weath n rusty weath. rusty weath. fristy weath. silicified; nusty weathering silicified; nusty weath; HA-strd.	f gr. dissem. gr. beebs py. pyritifsinfaces ind f. gr. dissen f.gr. beebs ga., py. py. ga, f.gr. f.gr. ga, py, spl. seams of ga. " "	*76°/40°1 &, Y	pink weath. rind rusty weath rusty weath frags V cherty appearance dk. rusty br. weath ctz velos float; South of 41053C extended Nev end of Thench 2 extended W end of Thench 3 extended E end of Thench 3			×10 ×10 ×10 ×10 ×10 ×10 ×10 ×10	48 30 225 15	0.1 16.5 2.5 C.1 C.3 1.0 3.06	42 51 3.0% 2.136 2.136
B-525 22 Lk. 051C 052C White 052C	" " " " " " " " " " " " " " " " " "	silicified rusty weath. ru rusty weath. rusty weath. fusty weath. selicified; rusty weathering selicified; rusty weath; Hn-strd.	pynitifsinfaces ind f. gr. dusen f.gr. beebs ga., py. py. ga, f.gr. f.gr. ga, py, spli seams of ga. " "	·76°/40°9 &, Y	rusty weath rusty weath frags N cherty appearance dk. rusty br. weath ctz veins float; South of 41053C extended Nev end of Trench 2 extended W end of Therch 3 extended E end of Thench 3.	•		< 10 <10 <10 <10 <10 <0.003 <0.003 <0.003	5 48 30 225 15	16.5 2.5 C.1 C.3 J.C 3.CE 3.CE 3.CE 3.CE	3.0%
DSIC DSIC NN as	vell selicifier elds. porph eldspar poph eldspar poph "	rusty weath. rusty weath frusty weath. selicified; nusty weathering selicified; nusty weath; Hn-strd.	f.g. bub ga., py. py.,ga, f.g. f.g. ga,py,spl seams of ga. neams of ga.p "	76°/40°) Q., Y	Misty weath frags N cherty appearance dk. Misty br. weath cte veils float; South of 41053C extended Nev end of Trench 2 extended W end of Therch 3 extended E end of Thench 3.	•		<10 <10 <10 <10 <0.003 <0.003 0.003	48 30 225 15	2.5 C.1 C.3 J.C 3.C 3.C 3.C 3.C 3.C 3.C 3.C 3	3.01 2.13 2.44
051C D52C WN ak	" vell suliafies elits. porph eltered eldspar poph "	rusty weath rusty weath. silicified; rusty weathering silicified; rusty weath; Hn-strd.	py,ga, f.g. B gr ga,py,spl seams of ga. " " "	*76°/40°) Q2, Y	N cherty appearance. dk. rusty br. weath ctr veitrs float; south of 41053C extended Nev end of Trench 2 extended W end of Therch 3 extended E end of Therch 3.	•		<10 <10 <10 <0.003 <0.003 0.003	30 225 /5	C.1 C.3 J.C 3.CE 0.120 0.120 0.120 0.120	3.21
DS2C un fe NN al fe	" rell sulicifies elds. porph eldspar porph " "	rusty weath rusty weath. silicified; rusty weathering silicified; rusty weath; Hn-strd.	ß gr ga, py, sph seams of ga. Aeams of ga.p "	بو, ۲	dk. Musty br. weath cta velts float; south of 41053C extended Nev end of Trench 2 extended W end of Therch 3 extended E end of Thench 3	•		< 10 <10 <0.003 <0.003 0.003	225	C.3 j.C 3.CE 0.120	3.c. 2.13 2.44
NN al	vell schafter elds.porph eldspar poph "	fusty weath. selicified; rusty weathering selicified; rusty weath; Hn-strd.	seams of ga. Seams of ga.p " "	¥	float; south of 41053C extended Nev end of Trench 2 extended W end of Therch 3 extended E end of Therch 3			<10 <0.003 <0.003 0.003	/5	1.0 3.05 0.120 0.120	3.0 0.13 0.44
NN aft	eltered eldspar poph "	selicified; nusty weathering selicified; nisty weath; Hn-strd.	) seams of ga.p " "	<b>y</b>	extended Nev end of Trench 2 extended W end of Therch 3 extended E end of Thench 3	•		<0.003 <0.003 0.003		3.08 0.120 0.120	3.2 2.13 2.44
	u 1	selectfied; risty weath; Hn-strid.	11 17	9	extended W end of Therch 3 extended E end of Thench 3			<u>*0.003</u> 0.003		0.120 0.6000	0.13 1.44
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# J.C. S'. PHEN EXPLORATIONS LTD.

DATE

GEOCHEMICAL DATA SI ... T - SOIL SAMPLING

104K /10E NTS

LINE

SAMPLER Jean Pautler, Susan Kay PROJECT Newex- GRIZ I, SE

BC 5614 025 AIR PHOTO NO.

SAMPLE					DESCRIPT	TION				ADDITIONAL ORSERVATIONS OF REMARKS	
NO.	LOCATION	(Cm)	Horiz	Colour	Part Size	% ORG.	Ph	SLOPE	VEG.	ADDITIONAL OBSERVATIONS OF HEMATIKS PE IN AG AS	14
xG-B-516	beside 28,443	5	в	dkbr.	med	few		mod	grass bushes	rusty paph. OTC 7710.19	- 1
B.517	-	5	B	or.br.	clayey	loto		mod	meadou	15 132 0.1 16	1.
B-518	in valley NW of camp	7	в	dk br.	clayey sill	mod		mod	sprice	15 100 0.1 15	4
	ht i s										
B-48		3	в	rusty	fine	mad		flat	grass moss	noverlying unaltered f. p. ote. 6 ez o.1 12	6
B-49		5	B	rusty	fine	few		gentle	grass, m burn	os out · · · · · · · · · · · · · · · · · · ·	۱.
B-50		2	B	Slisty Bisty	fine si sand	nod.		mod.	11	(1) 11 4 100 0.1 10	Z.
B-51		5	ß	ii	med s. Ity	1		11	/1	altered, 511. I. p. 04. 6630.17	12
B-52		4	B	Or-Br	fine	few		gintle.	halan hughe	21 128 0.1 10	10
6-53		10	B	med br.	tingy sit	lots	i.	17	Calsa mas	Saub 30 143 01 25	1.
B-54		7	ß	1+. br.	fine silty	mad		mod	и К	10 95 0.1 24	Z
B-55		7	B	11	11	11	a.	, p	1/	bisde gully 15/20 0.1 22	10
B-56		Ю	ß	ned	11	11	-	gentle	balsam scurb	above sil 2p ote. 15 106 01 19	~1
8.57		2	ß	histy	11	11	5. 1	mad.	1	65 270 0.1 94	41.
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GEOCHEMICAL DATA SHEET - STREAM SILTS

NTS 104 K/10E

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SAMPLER \_ tean - Pountier, Susan Kay

PROJECT Newer - GRIZ 1, 2, 3

DATE

AIR PHOTO NO. BC 5614 HE 075

SAMPLE	VOL	WME-	stope		TYPEOF	COLOUR	TEXTURE	%	PETROLOGY			AS	SSAYS	
NO.	HOT IZG	Depth (cm)	VELOCITY	Ph	SAMPLE			MATERIAL	AND/OR FLOAT	ADDITIONAL OBSERVATIONS OR REMARKS	Pb	Zn	Ag	Aυ
G-B-519	в	2	gentle	12	spruce	brown	surg	abund	feidspar		7	80	01	<10
B-520	в	10	flat	'	moss grass	dk br.	1,	mod			14	85	0.1	<10
B-521	B	15	flat	-	11	dt red brown	τυ i	mod.	"	west of B-520	7	93	01	<10
B-522	в	5	"	-	moss	med br.	, <b>п</b>	mod		west of B-521	13	92	0.1	<10
B-523	в	7	gentle	-	none		pebb sand	few	17	west of B.523	11	88	0.1	<10
B-524	B	7	u .	-	11	lt. rusty	11	abund.	1,		10	98	0.1	10
B-525	в	5	IJ	-	n -	med br.	warse	feur	"		181	210	01	10
B-526	B	7	mod	-	grass	et or br.	sand	mod			124	155	0.1	40
B-527	B	10	gentle	-	spruce	or. bioun	silly	mod	"		27	123	0.1	20
B-528	в	10	mod	-	giass moss	or-yell brown	pebb	mod	· 11		29	63	01	<10
B-529	в	7	(flat)	-	mass	med or.	clayey sand	(	"		6	87	01	10
B-530	в	5	flat	-	4	11	sandy	abund	"		34	96	0.6	10
B-531	в	5	flat		none	lt or proun	pebb	none	17		19	103	0.4	10
B-532	в	5	gently	-	none	med br.	clayey sand	none.	mineralized gtz bx	beside 41051C	21	135	0.2	10
				1.5										

SYNDICATE

## J.C. STEPHEN EXPLORATIONS LTD.

GEOCHEMICAL DATA STEET - STREAM-SILTS

SYNDICATE

L DATA SITELT - OTHERMOLETS

NTS INAK/ICL

AIR PHOTO NO. BC 5614 075

SAMPLER Jean Pautles

PROJECT NEWEX- GRIZ 1,2 3

CREEK

DATE \_\_\_\_\_

SAMPLE	vet	UME	SUPE		VEG	COLOUR	Grain Size	%	PETROLOGY			A	SSAYS	
NO.	HUEIZ Width	Depti	VELACITA	Ph	SAMPLE	COLOUR	TEXTORE	MATERIAL	AND/OR FLOAT	ADDITIONAL OBSERVATIONS OR REMARKS	Pb	IZn	Ag	Au
×G- B-58	в	ю	flat	-	moss balsam	pr.	fine sandy	feu-			10	90	0.1	10
8-59	в	io	flat	-	moss	rusty	fine	lots	feldspar		4	80	01	<10
B-60	в	5	flat	-	moss	dk br	fine	few			5	93	0.1	<10
B-61	B	5	11		moss	Fusty	fine	mod			8	87	04	<10
B-62	в	2		-	moss	v. rusty	fine	few		near B-115 from 1981	15	50	0.1	<10
B-63	в	3	gente	-	u (	rusty or by	med	mod	Fip. ii py	near B-62	31	55	0.1	10
B-64	в	10	"	-	bailsim scrup	med dk br	fine sandy	mod	1 13.		9	95	0.1	<10
B-65	B	2	feat		moss	med bi	cearse sardy	med	rusty fp.		5	42	oz	<10
B-64	GB	3	gentle		moss	rusty	coarse	11	f.p.ote	₽.	21	108	0.1	<10
B-67	B	7	1	世内	11	medbe	fine		11 12		8	85	0.1	<10
B-68	B	5	<i>Clat</i>	-	hess balsom	rusty	<i>C</i>	4	real fip ctc	Asa	12	77	0.1	10
B-69	в	10	flat	1	mass	rusty		11	fp ote.		10	112	0.1	<10
		2.2		नेव हो	5									
				6 <sup>84</sup>		- 1 - <sup>1</sup>		같은						
			- 41											
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						- 10								
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## A P P E N D I X II

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## STATEMENT OF QUALIFICATIONS

#### STATEMENT OF QUALIFICATIONS

I, Jean Pautler, am a graduate of the Honours Bachelor of Science program at Laurentian University, Sudbury, Ontario, 1980.

I have the following employment experience:-

April 1981 to present Geologist with J.C. Stephen Explorations Ltd. North Vancouver, B.C.
May to October 1980 Geologist with J.C. Stephen Explorations Ltd.
May to August 1979 Assistant geologist with Kelvin Energy Ltd. Calgary Alberta.

May to September 1978 Assistant geologist with the Ontario Geological Survey, Toronto, Ontario

NOVEMBER 1981

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JEAN PAUTLER

GEOLOGICAL AND GEOCHEMICAL REPORT on the GRIZ 1 and 2 MINERAL CLAIMS Record Nos.1411 and 1412 Map Sheet 104K/10E

Latitude: 58<sup>0</sup>37'N

Longitude: 132<sup>0</sup>35!W

المالكي مر

ATLIN MINING DIVISION

B.C.

bу

J.M. Pautler

October, 1981

Work done: August 5-15, 1981 By: J.C. STEPHEN EXPLORATIONS LTD. Funded by: Newex Syndicate

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# MAP

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Ι	GRIZ	1 & 2	GEOLOGY AND GEOCHEMISTRY Scale 1:2500	IN POCKET
II	GRIZ	1	GEOLOGY AND GEOCHEMISTRY Scale 1:2500	IN POCKET

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#### SUMMARY

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GRIZ Group One consists of 24 units and is
 located 120 kms. southeast of Atlin, B.C.

(2) The claim group was staked to cover an anomalous gold value and several occurrences of galena-sphalerite mineraliz - ation with associated silver values.

(3) A crew of 2 to 4 people spent 15 mandays on the property beween August 5 and 15, 1981.

(4) The claims are occupied by a large Tertiary feldspar porphyry body which intrudes Jurassic and possibly Triassic sediments.

(5) Property mapping was at a scale of 1:31,680 using air photos. Four trenches containing mineralization were mapped at a scale of 1:50.

(6) Nine selected chip samples were taken from the trenches. Gold values of 0.138 and 0.038 oz/ton were obtained. Silver values were up to 2.23 and 3.38 oz/ton; zinc values were up to 0.77 and 3.05%; lead values were 0.48 and 1.78%.

(7) A soil/talus grid providing 62 samples was established on GRIZ 1. A strongly anomalous area is indicated. A few of the reconnaissance soil and rock samples are also anomalous.

(8) Geological mapping at 1:2,500, extension of the soil sample grid and additional trenching are recommended for the 1982 program.

#### INTRODUCTION

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Griz Group One constitutes the 20 unit Griz l claim and the 4-unit Griz 2 claim, which were staked in early August, 1981. Griz l was staked to cover a number of small occurrences of gold, silver, lead and zinc lithogeochemical results. The Griz 2 claim was staked to cover a fault contact that extends through Griz 2 and 3 which may be important in the mineralizing process.

Field work carried out in August, 1981, involved detailed geological mapping at a scale of 1:50 of four trenches which were dug. Limited geological mapping of the property at a scale of 1:31,680 was also conducted and further prospecting on the northwest side of the property was carried out. A total of 21 rock, and 102 soil and talus samples were collected for analysis.

The claim group is immediately south of the Taku Plateaù within the Coast Mountains.

The topography of the claims consists of a plateau area at 4,500 - 5000' in the northwest section and a large ridge at 4,000' with several smaller ridges, in the southeast part. A large valley separates the northwest and southeast sections. A smaller northeast trending valley cuts through the Griz 2 claim.

Vegetation on the plateau area and on the highest part of the large ridge is sparse. It consists of grass, moss and some patches of thick talsam trees and shrubs. Most of the southeastern part of the large ridge and the smaller ridges have been burnt about 10 years ago and are covered by second growth. The sides of the main valley and the southern part of the ridge are covered by a thick balsam and spruce forest.

Drainage on the claim group is provided by numerous creeks which drain into the main valley and also the smaller valley. Both valleys contain swampy southwesterly flowing creeks. The drainage of the plateau area is generally poor with many swampy areas.

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## CLAIMS REGISTER

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Claim	Record Number	Record Date
GRIZ Group One		
Griz l	1411	Aug 14, 1981
Griz 2	1412	Aug 14, 1981

Griz 1, consisting of 20 units, has been grouped with the 4-unit Griz 2 claim for assessment purposes.

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#### LOCATION AND ACCESS

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The Griz 1 and 2 claims, (map sheet 104K/10E), are located approximately 15 kms north of Trapper Lake, which is 132 kms southeast of Atlin, B.C. (Refer to Figure 1), Latitude and longitude are 58°37'N and 132°35'W.

Adjoining the claims on the north side is Chevron's 20 unit EMU claim. Much of the Griz 2 claim overlaps Chevron's 20 unit Way 5 claim. (Figure 2).

Access to the property is by helicopter from Atlin or Dease Lake.



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FIGURE 2

#### REGIONAL GEOLOGY

The regional geology has been mapped by the G.S.C. at a scale of 1:250,000 and is published as Tulsequah - Juneau map sheet 104K.

Griz Group One is situated in the area of a Late Cretaceous to Early Tertiary quartz feldspar porphyry intrusion which is one of many that form a west northwesterly trending belt from Trapper Lake to Yonakina Mountain. These intrusive bodies are in close spatial association with the Sloko volcanic rocks of the same age which are limited to a larger northwesterly trending belt along the eastern edge of the Coast Mountains. Figure 3 shows the distribution of the Sloko volcanic rocks and related intrusions within the Tulsequah map area. The Sloko volcanic rocks are of interest due to the number of gold occurrences found associated with them.



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#### PROPERTY GEOLOGY

### MAPS I , II

#### Rock Types

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The limited geological mapping conducted on Griz Group One indicated the existence of various phases of the quartz feldspar porphyry. The southwestern fault contact with the Takwahoni sedimentary rocks present on GRIZ 3 was not observed on GRIZ 1 and 2. This is due to the presence of thick bush in the area of occurrence of the sedimentary rocks. Outcrop of Takwahoni Formation bedded shales and siltstones is present: in the creek southwest of the claim group. Mapping was conducted in conjunction with that on GRIZ 3 thus the quartz feldspar porphyry is Unit 3.

#### Unit 3 - Quartz Feldspar Porphyry

Both effusive and hypabyssal varieties of what the G.S.C. refer to as a quartz feldspar porphyry, are present on the property. The porphyry would more properly be termed a feldspar porphyry in this area since quartz phenocrysts are not common. The rock varies from aphanitic to fine and rarely medium grained, contains feldspar phenocrysts of varying sizes, occurs with or without biotite and hornblende phenocrysts. Colour ranges from pinkish through to pinkish grey and commonly green. Minor pyrite is common. Small quartz veins, commonly drusy and up to 1 cm wide cut the porphyry. Larger quartz veins are also present.

A thin section of a phase of the feldspar porphyry was prepared by Vancouver Petrographics Ltd., Fort Langley, B.C. The specimen, (J.P.-1), was classified as a hypabyssal trachyandesite. The petrographic description is available in Appendix II. A thin section of the same porphyry body was prepared for a specimen from the GRIZ 3 claim, northwest of GRIZ Group One. This sample was also trachyandesitic in composition suggesting a uniform composition for the feldspar porphyry body although various phases are evident.

#### Structure

The G.S.C. shows a fault contact between the feldspar porphyry and the Takwahoni sedimentary unit. Although a contact must exist in this area, it has not as yet been observed.

The feldspar porphyry is cut by several small vertical joint sets. The most common of these trend  $80-90^{\circ}$  and  $5-20^{\circ}$ . Others trend  $160^{\circ}$  and  $40^{\circ}$ .

#### Mineralization

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Several occurrences of galena and sphalerite were found throughout the GRIZ 1 property. On the south-east side of the main valley that cuts the claim, there are two outcrops in which galena mineralization occurs as small blebs, (from 1-5 mm in size), in a highly silicified feldspar porphyry host rock. The silica is almost black in the best mineralized areas. Rusty, calcite-sphalerite veins, quartz veinlets and Mn staining appear to be associated with the mineralization.

The southernmost of the 2 occurrences mentioned

above also contain a pyritic quartz breocia and abundant pyritic seams.

Veinlets of galena and sphalerite up to 8 mm in width were found on the northwest bank of the main valley. Abundant pyritic and silicified zones and calcite veins were associated with the mineralization. Mn staining was also evident. Along this same ridge, several zones of silica replacement with disseminated pyrite were observed. Several small calcite-sphalerite veins a few centimetres wide were also noted.

A trench was established where the galena veinlets were found and two more similar zones were discovered in the process. Trenching was also undertaken in these areas. Small silicified veins containing galena, sphalerite and calcite lenses and with Mn staining were exposed within a silicified feldspar porphyry host rock. Two of the veins had a trend of about  $60^{\circ}$  while the strike of the third was  $83^{\circ}$ . All the dips were almost vertical. The geology and geochemistry of the trenches are illustrated in Figures 5 to 7.

A silicified zone that ran 1700 ppb gold was also trenched. The zone consists of silicified, Mn stained material with rusty feldspar porphyry fragments within a silicified, altered porphyry host. This trench is shown in Figure 4.



-13 -

677168 (- 0.003, 0.34, 0.3, 0.63) 677188 (0.003, 2.23, 1.78, 5.05) 410550 (40.003, 3.08, 3.0, 2 67717 (-0.003, 0.24, 0.19, 0.50) 32752 10.7 14 (~10, #, 2430, 5000) PPB PPM PPM LEGEND: SILICIFIED QUARTZ FELDSPAR PORPHYRY VEIN with SILICIFICATION, GALENA, SPHAL., CALCITE LENSES, Mn STAINING J.C. STEPHEN EXPLORATION LTD. RUBBLE NEWEX SYNDICATE GRIZ | CLAIM ROCK SAMPLE (Au, Ag, Pb, Zn) NTS IO4K/IOE GTTIT GEOLOGY & GEOCHEMISTRY **TRENCH 2** DATE : AUG, 1981 SCALE :1:50 METRES

\_ 15 \_ 6 (100,0,2,5000,4800) (100,0,2,5000,4800) \* 41057 - (0.003,0.60,0.44,0.59) 67720 (0.004, 0.18, 0.16, 0.25) 67719 8 ( = 0.003, 0.16, 0.15, 0.15) · · · 41056 c (60.003, 0.0, 0.136 0.14) STEPHEN EXPLORATION LTD. J.C. LEGEND: NEWEX SYNDICATE SEE FIG. 5 Galana, sphalerite, calcite vein. GRIZ I CLAIM NTS 104K/IOE GEOLOGY & GEOCHEMISTRY TRENCH 3 DATE: AUG, 1981 SCALE: 1:50 METRES FIG.<sup>6</sup>



#### GEOCHEMISTRY

#### Soil and Talus

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A topochain and compass soil and talus grid was established on GRIZ 1 on the top of the ridge forming the northwest bank of the **main valley**. The purpose of this grid was to determine the extent of the mineralization found in the area. Samples were taken at 20 metre intervals along cross lines 100 metres apart. A total of 62 samples were collected and analyzed for Au, Ag, As, Pb and Zn.

A soil-grid-consisting of 16 samples was established along the claim line between GRIZ 1 and 2 and continued along the northern boundary of GRIZ 2. The samples were analyzed for the same five elements.

Reconnaissance soil and talus samples were collected throughout the claims.

#### Method

The soil samples were collected mainly from the 'B' horizon and occasionally from the 'A' horizon, at depths of 5 to 40 cm. using a grubhoe. Samples were placed in waterproof kraft paper bags and sent to base camp where they were dried and sifted to -35 mesh. The samples were then sent to Chemex Labs, North Vancouver for analysis.

In the lab the soils were first pulverized to -100 mesh. The gold content in ppb was determined by aqua-regia digestion and chemical extraction followed by atomic absorption. Silver and arsenic in ppm, were determined by perchloric-nitric acid digestion and atomic absorption analysis.

#### Results

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Several anomalous soil results were returned from the sampling on GRIZ 1 and 2. Arsenic, zinc and lead histograms were prepared and are shown in Figures 8 to 10. Arsenic and zinc show similar patterns for the 99 samples taken. There are five anomalous arsenic values and another nine possibly anomalous values from 50 to 90 ppm. The threshold from the zinc histogram appears to be 135 ppm. Ther are 35 values out of 99 samples that are above this level. The lead histogram shows 18 anomalous values.

Tha anomalous arsenic, zinc and lead results were almost entirely confined to the soil/talus grid on GRIZ 1. The samples taken around the four trenches were anomalous as well as the samples along the entire 3+00S line. Nine anomalous silver results from 0.5 to 3.8 ppm were also returned.

One slightly anomalous soil value came from the claim line between GRIZ 1 and 2 which ran 20 ppb Au, 0.1 ppm Ag, 20 ppm As, 190 ppm Zn and 144 ppm Pb at 800 metres south.

In the reconnaissance soil program one sample was anomalous and ran 20 ppb Au, 0.3 ppm Ag, 9 ppm As, 750 ppm Pb and 245 ppm Zn.

All results are plotted on Maps I and II in the pocket of this report.







#### Rock Sampling

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A total of nine selected chip samples were collected from four hand dug trenches. Sample locations and assay results are shown on Figures 4 to 7.

Two of the three samples. from Trench 1 were anomalous in gold. The values were 0.038 and 0.138 oz/ton.

Trenches 2 and 4 returned anomalous silver, lead and zinc values of 2.23 oz; 1.78%; 3.05% and 3.38 oz; 0.48%; 0.77% respectively. Gold values do not appear to be associated with the galena-sphalerite mineralization.

In the reconnaissance program two samples of quartz veins (one with drusy quartz and pyrite) ran 50 ppb gold. The latter was associated with 0.5 ppm silver. Both samples were from a large outcrop of feldspar porphyry in the northwest corner of GRIZ 1. Another sample near 1S on GRIZ 1 ran 110 ppb gold. This sample consisted of a quartz carbonate vein with rusty breccia fragments of feldspar porphyry.

All results are plotted on Maps I and II in the back of this report.

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#### CONCLUSIONS AND RECOMMENDATIONS

Property and detailed geological mapping of the trenches, chip sampling of the trenches and general prospecting were carried out in 1981. A total of \$ 3530 was spent on this program.

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Significant gold results were returned from the silicified zone in Trench 1 and interesting silver, zinc and lead mineralization was exposed in Trenches 2, 3 and 4. The soil/talus grid on GRIZ 1 showed significantly anomalous silver, lead and zinc results and a few reconnaissance samples were also anomalous.

Future work should include detailed mapping of the property at a scale of 1:2,500. Since the soil/talus grid on GRIZ 1 has not defined the limits of the anomaly this grid should be extended. Trenching should be conducted on this anomaly and Trenches 2, 3 and 4 might be extended to explore the area further. Additional prospecting and sampling on the property would be of value especially as little work has been done in the southeast section of the claims.

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Respectfully submitted, J.C. Stephen Explorations Ltd.

j.m. pantler. J.M. PAUTLER, GEOLOGIST.

# STATEMENT OF EXPENDITURES

WAGES AND BENEFITS

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J.M. PAUTLER	AUG 5,13,14 @ \$1950/m + 15%	\$224.25
M: HUGHES	AUG 5,7,13-15 @ \$1750/m + 15%	335.42
E. SIDEY	AUG 13-15 @ \$1750/m + 15%	201.25
D. KAPICKI	AUG 13-15 @ \$1400/m + 15%	161.00
D. GUGLIELMIN	AUG 5 @ \$1750/m + 15%	67.08
R. CAMPBELL	AUG 5 @ \$1400/m + 15%	53.67
	TOTAL 15 MANDAYS	\$1042.67
FOOD AND CAMP	SUPPLIES	
	15 MANDAYS @ \$14	210.00
GEOCHEMISTRY	· · ·	
INVOICE 18299	3 soils for Au,Ag,As,Zn @ \$10.25	30.75
13581	78 soils for Au,Ag,As,Pb,Zn, @ \$11.00	858.00
13350	12 rocks for Au,Ag,As, @ \$9.50	114.00
13351	9 rocks for Au,Ag,Pb,Zn, @ \$24.50 (ass	ay) <u>220.50</u>
•	TOTAL	\$1223.25
PETROGRAPHIC ANALYSIS		
INVOICE 2857	l thin section @ \$6	
	l reject slice @ \$0.75	
	l k-spar stain @ \$1	
	Petrographic report @ \$44 TOTAL	\$ 51.75
	i corogi apirio i cipor o e tri i conta	+ • • • • • •
TRANSPORTATION		
TRANSPORTATION KEYSTONE HELIC	OPTERS ATLIN B.C.	
TRANSPORTATION KEYSTONE HELIC FLIGHT REPORT	OPTERS ATLIN B.C. 3528 0.7 hours August 7	
TRANSPORTATION KEYSTONE HELIC FLIGHT REPORT	OPTERS ATLIN B.C. 3528 0.7 hours August 7 3540 0.8 10	
TRANSPORTATION KEYSTONE HELIC FLIGHT REPORT	OPTERS ATLIN B.C.         3528       0.7 hours         August 7         3540       0.8         10         3561       0.7	
TRANSPORTATION KEYSTONE HELIC FLIGHT REPORT	OPTERS ATLIN B.C.         3528       0.7 hours         August 7         3540       0.8         10         3561       0.7         2.2 hours @ \$400/hour	\$880.00
TRANSPORTATION KEYSTONE HELIC FLIGHT REPORT FLYING FUEL	OPTERS ATLIN B.C.         3528       0.7 hours       August 7         3540       0.8       10         3561       0.7       16         2.2 hours @ \$400/hour       2.2 hours @ \$56/hour	\$880.00
TRANSPORTATION KEYSTONE HELIC FLIGHT REPORT FLYING FUEL	OPTERS ATLIN B.C.         3528       0.7 hours       August 7         3540       0.8       10         3561       0.7       16         2.2 hours @ \$400/hour       2.2 hours @ \$56/hour         TOTAL	\$880.00 <u>123.20</u> \$1003.20

TOTAL EXPENDITURE

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\$3530.87

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APPENDIX I

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I.

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# SAMPLE DATA SHEETS

#### GEOCHEMICAL DATA SHEET - ROCK GEOCHEM SAMPLING

B.C. GOLD SYNDICATE

NTS 104K/10.E

SAMPLEN NMULS Grit 1 LINE NEWEN SYNDICATE PROJECT DATE AND. 15/81 HUMADE S.C. RC 5614 AIR PHOTO No. 025 APPARENT HOST SAMPLE STRIKE ADDITIONAL ASSAYS MINERALIZATION WIDTH ALTERATION LOCATION ROCK TRUE NUMBER DIP REMARKS Ps TYPE Au. Aq Z. WIDTH - sugary, shice replacement - altered GRIZI 67713 QFP (1) TRENCH#1 rusty breeces frage-colloform quarty ough 6.003 0.30 GRIZ1 11 - similar to sample 67713 (2) 67714 TRENCH#1 0.038 0.03 11 11 67715 - similar to sample 67714 (3) 0.138 0.03 - calcit verning, menor pyrit GRIZI + fine grainest aparty - carbonate - celete " 11 (4) 0.003 0.34 0.30 0.6 67716 TRENCH#2 - manganese sta cacement with clear quarty blebba GRIZ 1 - fine It grey sugar silica rep 11 (5) 67717 bleblastankediologyst - minor aplal. 6.003 6.24 0.19 0.5 TRENCH #2 lenses of greys brown at replacement - 1 an velis of cular GRIZI - It grey fine sugar quarty-carbo 14 or calcut - Mrstaming - collotorm qtz 67718 (6.) lina, 0.003 2.23 1.78 3.0 TRENCH #2 de pron ite and ate to - Cartonate represent between veine (1cm) with black - fine ongoing quar GRIZ 1 IL 67719 (7) 0.003 0.16 0.15 12.1 TRENCH#3 en blebboard 0.5 - rusty whit fine sugary silica conversed blk calena and GRIZ 1 11 67720 (8) lena and brown 0.004 0.18 0.16 0.2 TRENCH#3 invite a menute (?) - hu stammere - whit to visit y sugar at the presence of sofiel - - at any very of pik galina and bro sometime due to the presence of sofiel - - at any very of pik galina and bro sophat - lenses of calcut - colloptim at 2 vight - Ha staming GRIZI 11 (9) 67721 10.003 3.38 0.43 TRENCH #4 (10) (11) As SW, 3N, GRIZ 3. gtz by with 83 (12) 67710 8 61 410 PY. sil. narc. py NWgGnit3 • (13) 67711 0.1 7500 410 sil. marc. (?) py NW 7 Griz3 (14) 245 67712 0.1 410 (15) (16) (17) (18) (19) 2. (20)

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GEOCHEMICAL DATA SHEET - ROCK GEOCHEM SAMPLING

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B.C. GOLD SYNDICATE

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						<i>e</i> :	NTS	_104	K/10	E		
	SAMPLER	1. raytler	. 14	PROJECT	Newey			Gria	2 cêa	claims and		
	SAMPLE LOCATION ROCK			ALTERATION	MINERALIZATION	STRIKE	ADDITIONAL REMARKS	APPARI	ENT TRUE WIDTH	As	SAYS PA	
(1)	77 <del>4</del> 93B	rusty cirque GRIZ 3	actered off?	Silicification	×		1			210	0.3	
(2)	77494	NE side of Frozen Lake	silicified zone in off	minor cte,			GRIZ3	i		415	0.1	
(3)	77495	NW of Grit3	abtered off.	V. rusty   Silicification	abundant py especially on fact	ine				410	0.1	
(4)	77496	Near 15 on GRIZ 1	altered 8 fp.	V. (Woty	dieben . py	5				=10	0.1	
(5)	77497	just cast of 15, GRIZI	gte-carb	rusty						110	0.2	
(6.)	77498	900 m. Sog LCP GRIZZ	altered of p	rbesty	PY					=10	0.1	
(7)	77499	SUM W CHOS	aphalitic V.	silicious, lt.	Mr staining	a.c.				<10	0.4	
(8)	77500 B	GEIZ 1 4005/100E	altered interac	e-rusty minor silicitic.	minor py Mn stouring	1				20	0.6	
(9)	25720C	GRIZI	V. Silica-rich	, aphanitic,	PY					= 10	0.7	
(10)	25721	GRIEI	gtz vein	Fusty weath		67%E	10m above B-127 10 cm 4, ide. In exposure			20	0.4	
(11)	25722	GRIZI	milky gtz	few moty spots		8	ploat in falus angular			=10	0.1	
(12)	25723	GRIZI, W Side O	silica, cte veins	rusty valtered						50	0.1	
(13)	25724	GRIZI	ofp, dury	V. rusty altered	abundant py,	hardness	stived sh - specularite	us ou	۴.	50	0.5	
(14)	25725	GRIZI Near topofise. Sully	Sil. St.P. gtz starts 5m	V. ruoty		9 2°/80 N		r		-10	0.1	
(15)	25726	4m. " sbove 25725	oftevens +	". musty		76/900			•	10	0.1	
(16)	25727	GEIZI Astriamin 192	Blue-gling gte	rusty-yellow Surpace	lots py		floot, angular in stream	726.		=/0	0.1	
(17)		gully		6	- 11							
(18,)												
								1	1 1	4	1	

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(20)

(19)

## **GEOCHEMICAL DATA SHEET - SOIL SAMPLING**

B.C. GOLD SYNDICATE

SAMPLER J. Pautler

Newey PROJECT

NTS 104 K/10E W. side Griz LINE

AIR PHOTO NO. BC 56 025

DATE	Aug	13	10, -	14/81	
		,		- / ·	

	SAMPLE	MPLE LOCATION Depth Horis		10N				ADDITIONAL OBSERVATIONS OF REMARKS		ASSAYS						
NO.		LOCATION	(cm)	Horiz	Colour	Part Size	% ORG.	Ph	SLOPE .	VEG.	ADDITIONAL OBSERVATIONS OF REMARKS	Au	As	Az	F6	Z,
81-	NKG B-117	Grizl	5	B	dk bi st. custy	tine silty sand	high		mod.	mass	above intr. otc.	<10	10	0.1	18	85
	B -118		16	в	rusty'	sifty	few		flat	-	intu ofe rear	13	15	0.1	3	71
	B-119		5	в	rusty.	Sinedy	mod.		gentle		en in te -	20	9	s./	5	7:
	B-120		7	B-C	V. Or - rusty	sandy,	rone			_	rusty sil, cte, Mn, py intusive	20	15	0.1	15	6
	B-121		3	в	at bl	fine sandy	few		gentle			10	9	σ.;	t,J	7;
	BT- 122		10	С	v	fine - coaise	V. Çew		flat	_	pyritic intr. flogt	20	4	0.5	75,	2.
	BT-123		15	C	rusty Or-br.	med -	few		mod	ness		-10	1-1	0.1	72.	12
	B-124	.00 g	7	B	med be	fine	· P	,	gentle	ĸ		2/0	9	2.1	2	Ŧ
	B-125		3	в	bright Or	fine	V. few		flat	mass	above inte. ote.	210	16	o . i	1	9.
	BT-126		8	B	ss. rusty med be	pebbly met-fine	11		mad	-		-16	7	3.1	11	8
	8-127		15	в	lt or- Br.	sandy	few		п	shubs,	di	-10	9	0.1	26	1ċ
2	B-128		7	B	heddish br.	fine sebbing -sau	mod.		mad.		-rusty ofp + ggp talus, one small piece	410	20	u. 1	34	14
	B-129		10	в	rusty dk-bi	v. fine	few		flat		rusty M.P. Heat.	213	17	0.1	15	81
8	BT - 130		8	B	rusty	fine	mod.		gerthe	moss	silicious of p float	<10	57	0.1	ÿ	9:
	B -131		7	B	med bi	fine	med		p	1	6tw LCP+ IE	410	17	<i>:</i> .1	10	92
	BT-132		_	в	ч.:	medy			mad.	-	diabase flost	470	97	5 1	17	15
	BT-133		-	ß	rusty tr.	fine	few		gentle		above gfp ste.		17	.1	7	3
8	B-134		3	B	deep be	11	ů.		flat			<1û	28	0.1	6	80
e.	B-135		-	в	rusty med bi	11	mod		mod	grass	·· · · · · · · · · · · · · · · · · · ·	-15	<u>7</u> ]	z.1	4	62
•	B-136	1 9	5	в	deep.	fine silty sand	few		gentle	noss	at top of ge gully	~10	19	0.1	5	7=
	B-137		-	в	rusty due br	fine	med		med		niar zifp ote.	<10	29	0.1	9	'n

B dupper



## GEOCHEMICAL DATA SHEET - SOIL SAMPLING

Newex

B.C. GOLD SYNDICATE

NTS 104 K /10E

SAMPLER D. KAPICKI F. SIDEY DATE AUG 14 / 1981

PROJECT GRIZ 1 SOIL GRID.

LINE

AIR PHOTO NO. BC 5614 625

SAMPLE	LOCATION	Denth	Lunia	DESCRIPTION			SI ORE	VEC	ADDITIONAL OBSERVATIONS OR REMARKS			AYS		1	
NO.	LUCATION			Colour	Part Size	% ORG.	Ph	, score	VEG.		Au	Aq	As	Pb	Zn
BI-NXG'	0+005 0+20E	25	A	med. brown	silty Sand.	mod.		steep down.	-	gfp. talus	20	0.1	A	42	142
B	0+405	10	A	brown	sand	high		•(	grassy				. :	•	1.5
B B	0+005 0+60E	15	A	brown		mod.		mod.	moss	qfp. float around:	20	0.1	15	31	242
B B	0180 E	15	A	brown	silly	high		level	flower	ji 65	10	0.1	14	22	365
B	0 +00 5	>	7	ro _	Sam	per	Ł			Los Organic.	50				
BI-NXG". B	0+00 S 1+20E	15	A	brown	successions	mod		level	pineo	plateau	<10	0.1	"	22	76
BI-NYC:	01005	18	A	hed.	granular sarid	mod.		level	"	off float in trale.	10	01	77	52	90
B	01005 1160E	20	A	brown	silt	high		gunte slipe.	14		10	0.1	19	20	15;
BI-NXG- B	0 +00 5 1 + 80 E	20	B	brown	granula	high			<u> </u>		10	0.1	14	10	92
B	0+005 2+00E	18	B	brown black	sandy	mod.		Ň	<b>"</b> .		<10	01	19	10	10:
		1		in la constante de											
81-NX62 B-1	B-1 100 M INT.	25 cm.	A	brown	silty surid	mod.		mod. slogae	grussy	glos float in hale . - at Corner Post 25 Griz 2 Claim.	10	0.1	12	r	12:
81-10×C2- B-2	B-2 V	20	A	brown	silty sand.	mod		gentle	pine s	may be frost boil with gop float	10	0.1	14	14	8
81-NKG= B-3	1B-3	20	A	brown	silty : sand	high		steps	4		20	0.1	20	144	19
81-NXC2 R-1	13-4	15	A	brown	silty . sand	high	-	gentle slope	u	wlight ridge above gfp tulus slope.	10	0.1	12	58	11%
81-N'XG . B-5	B.5	16	A	brown	granular sand	high		gentle	4		410	0.1	12	17	9.
81-10x62 B-6	B-6	20	A	prown	sand	uniozl.		gentli		uncar post 15	-10	0.1	14	14	7
81-NXC-2 B-7	B-7.	30	B	brown	fine	mort.		slope	"	· · · · · · · · · · · · · · · · · · ·	10	0.1	15	23	8
81-10×6= B-8	B-8.	25	B	brende- shit	Dandy Silty.	mod.		gen Cl	"		·10	0.1	12	2	10.
81-NIXC 2 B-9	B-9	25	A	brown	granular Sand	mod.		"			10	0.1	15	10	7:

## GEOCHEMICAL DATA SHEET - SOIL SAMPLING

Neiver

B.C. GOLD SYNDICATE

NTS 104 K /10E

SAMPLER ESIDEY D. KAPICKI DATE AUG 14 / 1981

PROJECT Griz 1 Soul Grid

LINE

AIR PHOTO NO. BC 5614 025

SAMPLE LOCATION Depth Hor			DESCRIPTION					-	ADDITIONAL OBSERVATIONS OF REMARKS		ASS				
NO.	LOCATION	Depth	HOFIZ	Colour	Part Size	% ORG.	Ph	SLOPE .	VEG.	ADDITIONAL OBSERVATIONS OF REMARKS	Au	14	AS	Pb.	Zn
BI-NXG- B	1+00 S 0+20E	15	B	darte	granular sand	mod.		gentle	spruce	down hill towards M. Hughes Pb-2n showing	<10	0.1	17	12	10
ei-nxc: B	Itoos OttoE	16	A	prown	sandy	low		"	"	"	20	0.1	25	2	8
81-NXG'- B	1+00 5 Ot60E	12	A	dark brown	granular sand	mod.		slope on side	"	rusty float with pyrite.	10	0.1	16	23	11.
B.	1+005 0+80E	20	A	brown	sandy clay	low		top of gully	. //		<10	0.1	41	9	41
BI-NYG'-	1005 100E	10	R	brown	sand	low		gentle slope.	buck brosh	side of slope to gully, app float. pelow is M. Hughes Cold Showing.	10	3.8	79	230	17.
B-NXC'	11005 1120E	15	A	bioun	sand fine	high		11	moss pines	unay be fost boil.	-10	0.1	15	13	10
81-NXG'- B	1+00 S 1+40 E	15	B	brown	granular	must.		level	ĸ	affs float in chole.	410	0.1	12	5	7
BI-NKG:	10005 1+605	25	ß	brown	sand	high		guntle	41	4 "	10	0.1	14	A	71
el-NXG'. B	Itoos Itboe	10	R	med. brown	sand	mod.		mod:	"	directly above galera showing	-10	0.1	15	7	10:
81-NXG: B	11005 2.100E	10	A	brown,	silly	low		guentle	moss	v. , "	=10	0.1	27	14	102
BI-NXC: B	1+00 5 2+20 F	20	A	med. brown	u	mod.		"	11	imosay plateau (extension from galena' showing)	-10	0.1	23	8	8
BI-WYG' B	11005 2140E	40.	ß	darb brown	"	low		11	10	й и .	-10	0.1	23	8	10:
81-NXG: 13	11005 2+60E	20	A	brown	# ·•	11	•	n	"	и <b>н</b>	10	0-1	22	10	8;
81-NXG'- B	1+005 2+80 E	20	ß	golden bacours	fine. sand	Low		11	"	" .	10	0.1	22	16	98
81-N'XG'. B	0 +00 F 0 +00 S	10	A	golden brown	bine sand	high		eliff	unoss balsamo	- by takes at edge of offs outerop	-10	0.1	20	19	11.
8-NXG'. B	0+20W	5-	R	brown	granular	Low		mod. slope	/	upward on suge offs outoop	10	0.1	12	54	12
B	0+005 0140W	8	A	brown	н	mud.		stup		11 91	410	0.1	10	21	24
BI-NXG' B	OFGOW	10	A	med. brown	"	stop.		steep	grassy	11 le	10	01	36	11	8
															1



## **GEOCHEMICAL DATA SHEET - SOIL SAMPLING** Newer ..

B.C. GOLD SYNDICATE

NTS 104K/10E

SAMPLER DKAPICKI /E. SIDEY

PROJECT GRIZ I - Soil Grid

UNE

BC 5614 025 AIR PHOTO NO.

DATE AUG. 13 /14

SAMPLE	LOCATION			DESCRIPTION			SLOPE VEG.	-	G. ADDITIONAL OBSERVATIONS OR REMARKS						
NO.	LOCATION	Depth	Horiz	Colour	Part Size	% ORG.	Ph	SLOPE ,	VEG.	ADDITIONAL OBSERVATIONS OF REMARKS	Au	MAG	As	DB	Zn
El- N'XC -	51005	10	0	dank	frank with	and		290	Carl Carl	quart fields, par - porphory boulders		0	1		
BT	Ztco+	.cit.		Dreat	pr DDMs	11.000	<u> </u>		91005515		<10	0.2	63	202	45
B	5+005	15	14	bro s	11	heary	1	1 N			1.	2	140	110	19
RI- MY.C	54004		·	uned.						t in the second s	-10	0.5	140	Ked_	62
BT	1-605	15	17	browse							110	1.6	500	810	110
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## GEOCHEMICAL DATA SHEET - SOIL SAMPLING

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B.C.-GOLD-SYNDICATE

J.C. STEPHEN EXPLORATIONS LTD.

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PROJECT GRIZI - SOIL GRID

AIR PHOTO NO.

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TONO. BC 5614 025

DATE AUG 13. /1961

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NO.	LOCATION	Depth	Horiz	Colour	Part Size	% ORG.	Ph	SLOPE .	VEG.			19	Aş	P6	ZN
BI- NXG- BT	2+005 0+40E	15 cm.	A	grey, brown	Sandy	high		Hat of	grassy	glp float flows around.	10	1.3	100	325	50
ei-NIC'- B	2+005 0+20E	10	A	black	rebbles	4 5		stup	<i>n</i>	ground baleon, patches of frost boils.	10	0.9	39	135	65.
BI-NXG- BT	2+00 S D+20 W	ว้	A	light brown	peubly	n		" <i>39</i> "		glp talus.	20	0.4	85	205	49:
BI-WAGE	2+005 0+40W	10	A	prown-	sandy silt	mod.		11	"	··· · · ·	10	0.5	35	54	23:
BI-NXC'- BT	2+005 0760W	5	A	light brown	pebblo Sand	low			.,	r. 17	20	0-1	12	33	17.
BI-NXG BT	2+00 S 0+80 W	10	A	dart brown	fine : sand	Ngh			is .	taken from ole of QFP.	=10	0.1	14	14	12:
BI-NIG'. B	2 too 5 Itoo W	5	A	brey	silty soud	mod.		"·· ··	pine balsom.	top of glp outerop.	10	0.1	15	14	14
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BI-NIG - B	1+00 S 0720 W	20	A	brown	sand	mod.		plateau flat	moss grusses fines	960 flaat abundent and foost boils.	10	0.1	12	1	8
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BI-NGC	1+005 1100W	16	A	"	11 1			11	<i>u</i> .	near Mikes gold showing.	10	1.6	63	162	24.
B-NXO'- B	112063	12	A	"	grunita	· "		gully	grany		10	0.4	38	80	27.
BI-NURG". B	11005 1140W	25	A	brown	silty	high		other side it	grassy	-taken from top of outing	10	0.1	12	10	92
B	1160 W	20	£	darê broum	silly	mool.		uphil	grany	taken from poor of gfp outerop.	10	0.1	12	5	10
B	Ireow	n	0	San	ple					large takes and abandon ty					
B	2+0003	20	B	brown	silty	anod		ofc.	grassy	30 M. from NXC B 118 sample.	20	0.1	9	5	90
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	EXPLORATIONS LTD.
	D. KAPICKI
SAMPLER	E. SIDEY
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## **GEOCHEMICAL DATA SHEET - SOIL SAMPLING**

B.C. GOLD SYNDICATE

NTS

PROJECT SOIL LINE / GRIZZ

LINE

DATE AUG. 14/1981

AIR PHOTO NO.

SAMPLE	LOCATION	Denth		DESCRIPTION		SLOPE VEG		ADDITIONAL OBSERVATIONS OF REMARKS							
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81-NKG2- B-10	B-10 100 M.Int.	20	till A	med. brown	sandy	mod.		gentle	moss		4/0	0-1	17	11	10
81-WXGE B-11	B-11	25	B	brown	sandy	mod.		guenthe			<10	0.1	14	4	9
81-NXC2 B-12	B-12	20	A	brown:	sand	mod.		gentie		start of line going Non Griz 2 and (Emu Posts)	410	0.1	24	13	108
81-NXG* B-13	13-13	20	A	brown	silty Sand	high		level	grass	south side of lake by comp.	4/0	0.1	20	5	12.
B-14	B-14	25	A	brown	к	"		scope	4	swampy surrounds.	40	0.1	14	Z	71
81-00×62 B-15	B-15	30	A	brown					"		410	0.1	11		6
81-NXG2 B-14	B-16	25	A	brown	granular	tow		"			KAD	0.1	19	10	9
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# APPENDIX II

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# PETROGRAPHIC DESCRIPTIONS

Specimen : JP-1 FELDSPAR PORPHYRY - GRIZ ,

Classification : Trachyandesite (hypabyssal)

Mode :

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Plagioclase	65-70%
K-spar	10-15%
Quartz	5-10%
Biotite	2%
Chlorite & carbonate	5%
Zircon and apatite	tr
Opaques	5%

Handspecimen : Massive, holocrystalline, grey, medium to fine grained volcanic or hypabyssal rock. The stained block indicates a trachyandesitic to dacitic composition. Small flakes of biotite are macroscopically visible. Small blebs of disseminated pyrite are locally present.

Thin section : Texture : intergranular, medium grained.

Plagioclase occurs as abundant, subhedral to euhedral, randomly oriented laths and a few phenocrysts up to 2.5 mms. long. Carlsbad, albite and periclin twinning are all present. Many crystals are zoned, with compositions ranging from albite (rims) to andesine (cores). The plagioclase is locally a bit altered to saussurite.

K-spar is rather hard to distinguish from quartz in thin section. Both occur as anhedral grains occupying the interstices between plagioclase laths. Quartz locally contains euhedral apatite inclusions.

Biotite forms subhedral to anhedral flakes up to .8 mms. in size. It is brown pleochroic, locally a bit chloritized and sometimes associated with granular opaques.

Carbonate and chlorite occur together in fine grained, irregular patches of up to 1.5 mms. in size, scattered throughout the rock. These are most likely altered amphiboles. Locally the patches are pseudomorphs after amphibole.

Apatite is present in small amounts, as accessory microlites. Zircon occurs in trace amounts as small, euhedral microlites (.1 mm. size). Opaques are present as euhedral granules and aggregates up to .5 mms. Much of this is probably pyrite, which can locally be seen in handspecimen.

# APPENDIX III

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# STATEMENT OF QUALIFICATIONS

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#### STATEMENT OF QUALIFICATIONS

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I, Jean Pautler, am a graduate of the Honours Bachelor of Science program at Laurentian University, Sudbury, Ontario, 1980.

I have the following employment experience:-

April 1981 to present Geologist with J.C. Stephen Explorations Ltd. North Vancouver, B.C.

May to October 1980 Geologist with J.C. Stephen Explorations Ltd.

May to August 1979 Assistant geologist with Kelvin Energy Ltd. Calgary Alberta.

May to September 1978 Assistant geologist with the Ontario Geological Survey, Toronto, Ontario

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بالمتحاف المتحا

NOVEMBER 1981

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JEAN PAUTLER

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## GEOLOGICAL AND GEOCHEMICAL REPORT on the

GRIZ 3 MINERAL CLAIM

Map Sheet 104K/10E

, Record No. 1413

Latitude: 58<sup>0</sup>37'N Longitude: 132<sup>0</sup>38'W

1

## ATLIN MINING DIVISION ·B.C.

By

J.M. Pautler October, 1981

Work done: August 1-15, 1981 By: J.C. STEPHEN EXPLORATIONS LTD. Funded by: Newex Syndicate

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#### SUMMARY AND CONCLUSIONS

- The GRIZ 3 claim consists of 12 units and is located 120 kms southeast of Atlin, B.C.
- (2) The claim was staked this year to cover galena-sphalerite mineralization found in silicious veins. Gold and silver values were associated with the Pb-Zn veins.
- (3) A crew of two to four people spent 25 man days on the property between July 30 and August 15, 1981.
- (4) The claim consists of a large Tertiary quartz feldspar porphyry body which intrudes sediments of Jurassic age. The property has been mapped at a scale of 1:31,680 on an air photo.
- (5) Detailed mapping of the mineralized outcrop was conducted at a scale of 1:300 and individual vein zones were mapped at 1:50.

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- (6) A total of 69 chip samples were taken across the zones and all were analyzed for Au and Ag and also for Pb and Zn where galena and sphalerite were visible. Anomalous results ranging up to 0.194 oz/ton Au, 16.97 oz/ton Ag, 8.29% Pb and 6.72% Zn were obtained.
- (7) A soil/talus grid consisting of 41 samples was established to trace the extent of the veins. Two anomalous samples were returned. A talus line at the base of the showing and adjacent outcrop area returned no significant values.

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- (8) The prospecting and reconnaissance sampling program was limited this year and was so far unsuccessful. The only even slightly anomalous sample was from the far west part of the same northwest striking ridge which contains the mineralization. A total of 6 soils and 3 rocks were collected in this program.
- (9) Enlargement of the present soil/talus grid and an E.M.-16 survey on this grid is proposed for the 1982 program in an attempt to determine the actual extent of the veins. Additional talus lines at the base of the ridge are also recommended. Detailed mapping of the property at 1:2500 and additional prospecting and sampling should be conducted. Trenching of the highly anomalous soil sample at 2+00E,0+20S. is warranted.

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#### INTRODUCTION

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The GRIZ 3 claim consists of 12 units. It was staked in July, 1981 on the basis of anomalous silver, lead and zinc lithogeochemical results in samples taken earlier in the season. The silver results were obtained from galena-sphalerite veins in a large outcrop in the southeast section of the property. Thus, subsequent field work, carried out in August, 1981, involved detailed geological mapping of the outcrop and veins, at a scale of 1:300 and 1:50 respectively. Geological mapping of the property at a scale of 1:31,680 was also conducted and further prospecting was carried out on the entire property. A total of 42 soil, 23 talus, and 72 rock samples were collected for geochemical analysis.

The claim is immediately south of the Taku Plateau within the Coast Mountains.

The topography of the claims themselves consists of a large plateau area with scattered outcrop at an elevation of approximately 5,000 feet. Three steep ridges and a large cirque, on the property, provide good rock exposure. A northwest trending valley cuts the southwest portion of the claim.

Vegetation is sparse on the plateau region and consists entirely of grass and moss. The southwest corner is covered by patches of thick balsam trees and shrubs.

Drainage on the claim is generally poor. The northwest trending valley is extremely swampy and is fed by a few small creeks. Small snow-fed creeks and ponds on the plateau dry up in mid-summer. There are two well developed easterly draining creeks that drain this area.

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# CLAIMS REGISTER

Claim	Record Number	Record Date
GRIZ 3	1413	Aug. 14, 1981

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## LOCATION AND ACCESS

The GRIZ 3 claim, (Tulsequah-Juneau map sheet 104K/10E), is located approximately 15 kms north of Trapper Lake, which is 132 kms southeast of Atlin, B.C. (Refer to Figure 1). Latitude and longitude are  $58^{O}37'N$  and  $132^{O}38'W$ .

Adjoining the GRIZ 3 claim on the east side is Chevron's 20 unit EMU claim which was staked two weeks prior to GRIZ 3. (Figure 2 ).

Access to the property is by helicopter from Atlin or Dease Lake.



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FIGURE 1



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#### REGIONAL GEOLOGY

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The Geological Survey of Canada has mapped the geology of the Tulsequah area at a scale of 1:250,000. This mapping is published as Map 1262 A, Tulsequah and Juneau map sheet 104K.

The GRIZ 3 claim is situated in an area of a late Cretaceous to early Tertiary quartz feldspar porphyry intrusion which is one of many that form a west-northwesterly trending belt extending from Trapper Lake to Yonakina Mountain. These intrusive bodies are in close spatial association with the Sloko volcanic rocks of the same age, which are limited to a larger northwesterly trending belt along the eastern edge of the Coast Mountains. Figure 3 shows the distribution of the Sloko volcanic rocks and related intrusions within the Tulsequah map area. The Sloko Group volcanic rocks are of interest due to the number of Au occurrences found associated with them. Of additional interest is the major fault which truncates the southwestern part of the GRIZ 3 intrusion.

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#### PROPERTY GEOLOGY

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Geological mapping of the GRIZ 3 property, shown in the back pocket on Map I, revealed three rock units.

#### Rock Types

#### Unit 3 - Quartz Feldspar Porphyry

Almost the entire property consists of the late Cretaceous to early Tertiary quartz feldspar porphyry body which is extremely variable in compostion. It is finegrained to aphanitic, porphyritic with mainly plagioclase phenocrysts and less commonly quartz phenocrysts and occurs with or without biotite and hornblende. On the GRIZ 3 property, the quartz feldspar porphyry would be more properly designated a feldspar porphyry. The colour varies from light grey to mauve and pink, but is most commonly green, Minor pyrite is common.

A thin section of the quartz feldspar porphyry was prepared and petrographically analyzed by Vancouver Petrographics Ltd., Fort Langley, B.C. The specimen, (JP-2), was found to be of trachyandesitic composition and of effusive nature, although field relationships suggest a hypabyssal origin. The petrographic description is provided in Appendix II.

#### Unit 2 - Diabase Dykes

Diabase dykes up to a few metres across cut the feldspar porphyry. The diabase is fine grained and green in colour. Minor pyrite is sometimes present.

#### Unit 1 - Sedimentary Rocks

The southwestern part of the intrusion appears to be in fault contact with a chert pebble conglomerate of the lower and/or middle Jurassic Takwahoni Formation. The conglomerate is green, chloritic and has chert pebbles from a few millimetres to 10 millimetres in size. A small outcrop of Takwahoni Formation black, rusty shale is also present in the centre of the claim.

#### Structure

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As already mentioned, a major northwest trending fault truncates the southwestern edge of the quartz feldspar porphyry. Three sets of air photo linears, which trend northerly, northwesterly and easterly, are also evident throughout the intrusion and may represent minor fault and fracture systems. A fault, represented by a northerly striking gully, appears to offset the mineralized veins which trend easterly to northeasterly.

### Mineralization

As illustrated in Figure 4, six vein zones have been outlined that contain veins of galena-sphalerite mineralization. The zones are defined by an altered recessive area, containing mineralized veins, between relatively unaltered walls of the feldspar porphyry host rock. This is illustrated in Photo 1 which shows part of Zone 5.



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PHOTO 1: GRIZ 3 CLAIM ZONE 5

The zones appear to be offset by a left-lateral fault. However, since it is difficult to directly correlate them, each will be referred to as a distinct zone.

The outcrop in which the veins occur is strongly fractured with many faults and joints. (Photo 1) The feldspar porphyry is rusty in the general area of mineralization but is altered almost beyong recognition within the vein zones themselves. Sphalerite-calcite veins are abundant throughout the outcrop, especially in the vicinity of the mineralized zones. Generally, the zones trend  $75 - 90^{\circ}$  and dip  $85^{\circ}S$  to  $85^{\circ}N$ . On the west side of the gully, they extend for approximately 5-8 m before being covered by overburden after which the veins could not be traced despite good rock exposure less than 20 m away. On the east side of the fault gully, the veins continue for about 20 m before they disappear beneath overburden. Although the zones do not entirely match, minor vertical displacement along the fault would account for any discrepancies. The left-lateral movement appears to be approximately 12 m.

Each zone contains at least one larger vein, usually on the hanging wall side, and often another vein along the footwall side. Smaller veins and veinlets, from a few millimetres to 10 cms cut the very altered quartz feldspar porphyry that lies in the centre of the zone. The galena-sphalerite mineralization occurs as bands and disseminations and is generally restricted to that part of the vein immediately adjacent to the wall of the zone. Minor pyrite and arsenopyrite are also present and are spatially associated with the galena and sphalerite.

## Alteration

Most of the rock within the zones is Mn stained. The veins themselves exhibit more intense Mn staining and the smaller veins and veinlets in the central region of the zones are so extensively altered and Mn stained that only a black, extremely soft 'clayey' material remains. Rusty remnant fragments of quartz feldspar porphyry are contained within this black material.

The altered feldspar porphyry exhibits limonitic and calcarious alteration. Plagioclase biotite and amphibole

phenocrysts have been altered to clay minerals, white mica, limonitic calcite and opaque minerals. A petrographic description of this rock (JP-3) is provided in Appendix II.

The veins themselves also show limonitic and calcareous alteration and silicification. Remnants of an original porphyritic texture are evident in thin section. Several stages of deformation have occurred which include an early stage of brecciation and mylonitization followed by several periods of fracturing. The petrographic analysis outlined the following events:

- early quartz veining and probably silicification as well as introduction of ore minerals
- 2. calcite veinlets which remobilized some of ore minerals
- 3. late chalcedony veinlets and some brecciation and fracturing resulting in an almost cataclastic fabric
- 4. late fracturing offsetting stage 3 structures.

From field observation as well as petrographic analysis, it appears that the sphalerite was commonly remobilized in stage 2 resulting in the abundant calcitesphalerite veins proximal to the vein zones and mineralization.

The petrographic descriptions of the vern material is outlined in Appendix II. Specimen numbers are JP-5, JP-6, G-1, G-2. Both G-1 and G-2 are highly mineralized samples.

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# Please inserf Embedded Map(s) Here.

## Description of Veins - GRIZ 3 Showing

The following is a description of individual veins as numbered in Figure 4:

- 1. barren coarse-grained calcite vein 1 cm wide
- 2. barren coarse-grained calcite vein 2 cm wide
- 3. barren coarse-grained calcite vein 3 cm wide
- 4. barren coarse-grained calcite vein 3.5 cm wide
- 5. calcite vein 1/4 cm wide
- 6. calcite vein 2 cm wide, 3-4' long
- 7. Calcite vein, exact orientation unknown
- 8. rusty calcite vein 1 cm wide
- 9. vein Zone 1; 75-90 cm wide; 20 cm of abundant galena on footwall side with minor sphalerite, silicification, followed by 50 cm of highly altered 'gungy' black Mn stained and rusty orange vein material towards hanging wall side; last rock adjacent to footwall of vein is slightly Mn stained and rusty guartz feldspar porphyry fragments
- 10. quartz-calcite vein 1 cm wide
- 11. silicious vein material, some calcite, Mn stained, rusty quartz-feldspar porphyry fragments, 30 cm wide
- 12. Mn-quartz feldspar porphyry breccia vein 15 to 18 cm wide with small calcite vein in centre; maximum width of vein 40 cm with less Mn breccia and more calcite
- 13. same as 12. only 15 cm wide
- 14. vein material with heavy Mn staining, rusty quartz feldspar porphyry fragments, associated with silicification, some irregular calcite veins
- 15. same as 14., 50 cm wide
- 16. 3 cm wide calcite vein surrounded by silicified, Mn stained, rusty vein material
- 17. footwall vein in vein Zone 4; 30 cm wide, very silicious, Mn stained, rusty quartz feldspar porphyry fragments
- 18. rusty sphalerite vein 2 cm wide
- 19. sphal-calcite vein 3 cm wide
- 20. vein zone about 3 m wide (refer to sketch of Zone 5)

- hanging wall vein of Zone 5; 40-45 cm wide at base, heavily Mn stained, rusty quartz feldspar porphyry fragments, 2.5 cm of quartz rich vein material towards centre; minor quartz-carbonate veining, calcite veins
- 22. vein from footwall to hanging wall; 15 cm of black Mn stained breccia, rusty quartz feldspar porphyry fragments, very altered followed by 30 cm quartz-calcite vein, heavily Mn stained, buff weathering, resistant, with 5 cm quartz feldspar porphyry in centre of vein, followed by 5 cm of black Mn stained breccia
- 23. rusty calcite vein 15 cm wide with Mn-silica vein material
- 24. two veins; north vein 4 cm wide surrounded by Mn staining; south vein 15 cm wide Mn-silica, minor calcite in centre
- 25. rusty, Mn-breccia veins.

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Legend for Figures 5 to 10



Quartz Feldspar Porphyry

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Mn staining

Silicification



vein with rusty quartz feldspar porphyry fragments



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galena, sphalerite mineralization

S calcite stingers

Symbols

27760, 761	- chip sample locations
(~10,8.1)	- Au ppb, Ag ppm, rock geochemistry results

(0.010, 1.46, 0.54, 1.22) (Au, Ag oz/ton; Pb,Zn%) assay results



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FIGURE 5 ....




7 FIGURE

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FIGURE 8



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FIGURE 10

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#### GEOCHEMISTRY

#### Soil and Talus:

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A topochain and compass grid was established on the east side of the showing in an attempt to determine the extent of the mineralized veins. The baseline was run parallel to the majority of the veins. Samples were taken at 20 m intervals along crosslines 100 m apart. A total of 36 soil samples and 5 talus samples were collected on the grid. All samples were analyzed for Au, Ag, As and Zn and some were also analyzed for Pb.

A talus line was run at the base of the outcrop in which the showing is located. Eighteen samples were taken at intervals of 25 m, where possible, and analyzed for Au, Ag, As, Pb and Zn.

Reconnaissance soil and talus samples were collected throughout the claims.

#### Method

The soil samples were collected from the 'B' horizon at depths of 3 to 32 cm, using a grubhoe or rock hammer. Samples were placed in waterproof Kraft bags and sent to base camp where they were dried and sifted to 35 mesh. The samples were then sent to Chemex Labs, 212 Brooksbank Avenue, North Vancouver, B.C. for analysis. In the lab, the soils were first pulverized to 100 mesh. The gold content in ppb was determined by aquaregia digestion and chemical extraction followed by atomic absorption. Ppm, Ag and As were determined by perchloricnitric acid digestion and atomic absorption analyses.

#### Results

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One highly anomalous soil result was obtained from the soil/talus grid east of the showing. The results were 80 ppb Au, 42.0 ppm Ag, >1000 ppm As, 3000 ppm Pb and 1900 ppm Zn. The sample is 200 m east of the showing along the trend of the exposed veins. No other Au results greater than 20 ppb were returned from the grid. A 250 ppm Zn value was associated with a high As value of 405 ppm. This sample was taken at 0+00E/0+20N on the soil/talus grid and is directly above the galena-sphalerite veins in the showing.

A histogram of As results is illustrated in Figure 11 The distribution does not indicate any further anomalous values.

The distribution of Zn results in the histogram shown in Figure 12, indicates another anomalous Zn value. The sample ran 198 ppm Zn, 21 ppm Pb and 25 ppm As and was taken below the rock exposure on the far west part of the northwest striking ridge which contains the mineral showing.

No anomalous results were obtained from the talus line. All sample results are plotted on Map I in the back pocket of this report.

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#### Rock

A total of 69 chip samples were taken across the galena-sphalerite veins in the showing. The samples included the relatively fresh wallrock, the altered host rock and the vein material. The sample locations and geochemistry and assay results are shown in Figures 5 to 10. Chip samples, showing no mineralization, were geochemically analyzed for Au and Ag: Those which showed galena-sphalerite mineralization were assayed for Au, Ag, Pb and Zn.

#### Results

There were six samples that ran 0.010 oz/ton Au or greater. These values were 0.194, 0.118, 0.044, 0.016 and two 0.010 oz/ton Au, and were restricted to the vein material with visible galena-sphalerite mineralization.

The highest Au values correspond to high Ag results, but a direct correlation does not seem to exist. The 0.016 oz/ton Au assay was associated with 16.97 oz/ton Ag, 8.29% Pb and 6.72% Zn, whereas the sample that ran 0.194 oz/ton Au ran 1.46 oz/ton Ag, 0.54% Pb and 1.22% An. Some of the high Ag values did not have anomalous Au values associated with them at all.

The assay results from the veins are tabulated below:

	Au	Ag	РЬ	Zn
Sample	(oz/ton)	(oz/ton)	(%)	<u>(%)</u>
27767 C	0.010	5.98	3.46	4.19
27771 C	0.194	1.46	0.54	1.22
27774 C	0.010	0.10	0.07	0.05
27776 C	0.003	1.15	1.14	1.43
27778 C	0.004	1.93	0.87	4.43
27781 C	0.003	0.22	0.21	0.54
27789 C	0.118	0.18	0.91	0.26
25715 C	0.044	1.72	0.31	1.00
25717 C	0.016	16.97	8.29	6.72

Initial grab samples from the showing returned the following results:

Sample	Ag	РЬ	Zn
73845 B	14.62 oz/ton	5.64%	6.72%
78848 B	100 ppm	≻10,000 ppm	≻10,000 ppm
78847 B	8 ppm	1,800 ppm	3,800 ppm

The Au and Ag values are closely related to the Pb-Zn mineralization. The chip samples which were geochemically analyzed, (ie. had no evident galena-sphalerite mineralization), did not return any highly anomalous results. There were three anomalous gold results which were 800, 120, and 100 ppb. Ag values of 38.0, 9.8, 9.2, 9.0, 7.4, 4.5, 2.7 and 2.6 ppm include all those above 2.5 ppm. All the above samples except the 9.0 ppm Ag, were from the highly altered, Mn stained vein material with rusty quartz feldspar porphyry fragments.

No anomalous rock geochemical results were obtained from the reconnaissance sampling program.

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#### CONCLUSIONS AND RECOMMENDATIONS

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Property and detailed geological mapping of the showing, chip sampling of the veins and general prospecting and sampling were carried out in 1981. A total of \$5,266 was spent on this program, \$2,400 of which has been applied for 2 years assessment work on the GRIZ 3 claim. The remainder has been credited to a portable assessment credit account./ Significant results were returned from chip samples of the galena-sphalerite bearing veins. A few soil samples along the covered possible extent of the veins were also anomalous. Future work should involve further tracing of the veins to determine extent. This can be done by increasing the size of the present soil/talus grid and by running additional talus lines below the northwest striking ridge which contains the showing. An E.M. 16 survey on the soil grid is also recommended. Detailed mapping of the property should be conducted at a scale of 1:2500. Additional prospecting and sampling both on the property and around the property to investigate air photo linears would be beneficial.

Trenching of the high geochemical value at 2+00E, 0+20S. is warranted.

- 31 -

# STATEMENT OF EXPENDITURES

Wages and Benefits

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Name	Date	Rate	Amount	Total
J.M. Pautler	Jul <u>y 30</u> ,31 Aug 6-12,15	\$1, <u>950/</u> m+15%	\$ 747.50	
M. Hughes	July 30,31 Aug 6,8-12	\$1,750/m+15%	536.67	
D. Guglielmin	Aug 6,7	\$1,750/m+15%	134.17	
E. Sidey	Aug 11,12	\$1,750/m+15%	134.17	
D. Kapicki	Aug 11,12	\$1,400/m+15%	107.33	
R. Campbell	Aug 6	\$1,400/m+15%	53.67	
TOTAL	.: 25 man days			\$1,713.51

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350.00

Food and Camp Supplies

25	man	days	0	\$14.00	per	man					
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Geochemistry

Invoice

<pre>18113299-27 soil/talus samples analyzed for \$  Au, Ag, As, Zn @ \$10.25/sample</pre>	276.75	
2 soil samples analyzed for Au, Ag, Zn, @ \$7.00/ sample	14.00	
18113581-36 soil/talus amples analyzed for Au, Ag, As, Pb, Zn @ \$11.00/sample	396.00	
18113051-4 rock samples analyzed for Au, Ag, 18113350 As @ \$9.50/sample	38.00	
18113350-59 rock samples analyzed for Au, Ag, @ \$6.25/sample	368.75	
1811351 -9 rock samples assayed for Au, Ag, Pb, Zn @ \$24.50/sample TOTAL	220.50	1,314.00

## Petrographic Analysis

Invoice

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2857 -	3 polished sections @ \$16.00 ea.	\$ 48.00	
	3 thin sections @ \$6.00 ea.	18.00	
	6 reject slices @ \$.75 ea.	3.00	
	6 K-spar stains @ \$1.00 ea.	6.00	
	Petrographic report (6/10X440.00)	264.00	
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339.00

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Transportation

Keystone Helicopters, Atlin B.C.

Flight Ticket

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003540	0.5 hrs	Aug 10
003528	1.0 hrs	Aug 7
003513	1.2 hrs	Aug 3
003561	0.7 hrs	Aug 16

Flying:	3.4 hrs @ \$400/hr	\$1,360.00	
Fuel:	3.4 hrs @ \$56.00/hr	190.40	
		TOTAL	1,550.40

TOTAL EXPENDITURE

 \$5,266.91

Respectfully submitted, J.C. Stephen Explorations Ltd.

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for pautler.

J.M. PAUTLER, GEOLOGIST.

# APPENDIX I

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# SAMPLE DATA SHEETS

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GEOCHEMICAL DATA SHEET - ROCK GEOCHEM SAMPLING

B.C. GOLD SYNDICATE

20	EXPLO	DRATIONS I	_1 <i>D</i> .			-		NTS	10-4	K/	IDE			
	SAMPLER	i lautier +	Eleanor S	in PROJECT	Newer	·	6.	LINE	Ga	23	SI	our	ng_	
	DATE AU	e 11/19.81					4	AIR PH	OTO No.	BC	5614	0	75	
1	SAMPLE	LOCATION	BOCK	ALTERATION	MINERALIZATION	STRIKE	ADDITIONAL		WIDTH		AS	SAYS		
	NUMBER		TYPE		<i></i>	DIP	REMARKS		1.1	WIDTH	Au.	Ag	\$6	Z
(1)	27751 C	Zone 1 linel 0-45 cm	2 fp Uwallrk								210	0.8		
(2)	27752	45-87 cm	8fp	Mr altered.				2			210	0.2		
(3)	27753	87-114 cm	black with rusty gfphags.	Mn staining	V. minor sphal.			)			. 10	2.5		
(4)	27754	114 - 147cm	ofp. btw veins	).		(m					210	0.6		
(5)	27755	147-180an	attend ven naterial	leavily mn stunds, che coating							210	1.1		
(6.)	27756	180 - 208 cm	8fp	thin the coating	(						د/	0.4		
(7)	27757	208-241	of p with s wide bl. m	small 1-2 cm n stand veinte	ts with che XLS in C	ntre					210	1		
(8)	27758	241 cm - 29500	vein	mn stained silicified			entrite blebs up to pusty putches of alter	Scon cp			210	2.4		
(9)	27759	295cm - 333cm	2.5p wellrock		A					1	215	0.4		
(10)	27760	linez Zonal 0-66 cm	2 Cp wallrock								410	0.2		
(4)	27761	66cm - Skem	vein	ma stained			milite renotiths	n s feb	11		210	4.5		
(12)	27762	96cm = 243cm	gfp host .	1	•				4		210	0.3		
(13)	27763	293 cm - 269cm	vein	black Mn Stained		1 (y)		1		- 1 1 - 1	<10	2.1		
(14)	27764	268cm-303cm	afp host rock							1 9.55 1.	210	0.4		
(15)	27765	303 m- 328 m	vein asin 27763					. 1		•	20	2.7	- 1 - E	
(16)	27766	328cm-409cm	afp host	*			1				210	0.7		
(17)	27767	409cm- 500cm	ovin	Min stained silicified	gaiena		assay				0.010	5.98	3.46	4.
(18,)	07768	500cm · 533cm	gfp host rock								210	0.2		
(19)	27769	20ne 2 0-20 cm	vein	mn stained silicified			rusty gsp fragments	2			20	1.9		
(20)	27770	20cm - 10pcm	25p with			°,2,°					210	0.9		

GEOCHEMICAL DATA SHEET - ROCK GEOCHEM SAMPLING

B.C. GOLD SYNDICATE

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PROJECT

LINE Griz 3 showing

DATE Aug 11, 12/81 BC 5614 AIR PHOTO No. 075 APPARENT SAMPLE STRIKE ADDITIONAL ASSAYS WIDTH TRUE LOCATION ROCK ALTERATION **MINERALIZATION** NUMBER DIP REMARKS Pb TYPE Au. Ag Z WIDTH Zon 2 conto galana Siliceous assey (1)ma stained 0.194 1.46 0.54 spharente 27771 C 100 cm - 160 cm URIA 2 fp with veing from hew cms to my stand 1.7 (2) <10 10 cm wide 27772 160cm-233cm vein material gCp wallook 0.2 (3) 410 27773 233cm - 279cm vein above zone z some galana mm stamed assay vein (4) 27774 0.010 0.10 0.07 02 cuicite rusty zones Zone (3fine) afp wallrock (5) 210 0.2 27775 0 - brem galanc assay vein Mr stained (6.) 40.003 1.15 1.14 1. spherite 27776 66cm-116cm 962 (7) 0.5 610 27778 116cm - 196cm galena assay (8) vein Mr Stained Spheler-te 27778 1.93 0.87 4.4 0.004 146 cm - 259 cm gfp wellrock 0.2 (9) 210 27779 209 cm - 249 cm Zone3 Flinez 25p wellrock very erumbly (10) 410 0.1 27780 0. ADam garena assay Mr Stained vein (11) 10.003 0.22 0.21 0.5 3 phalante 27781 40cm-140cm 940 (12)410 0.5 27782 140cm - ZUSico vein with 1.2 (13) 410 27783 950 209-309 cm eclicite veines Biller fied vein (14) 410 0.7 27784 man Staned 309 cm - 379 cm (15) 2 fp wellovek 379-430cm Zone & line 1

0.2 410 10 0.1 410 0.1 rusty 2F13 Fragments Mr Stained 0.4 410 in poorly defined deins sphelerite assay mu staned 0.18 0.91 0.2 0.118 0.3 410 12:

# GEOCHEMICAL DATA SHEET - ROCK GEOCHEM SAMPLING

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B.C. GOLD SYNDICATE

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.J.V	-	<b>EXPLORATIONS</b>	LTD.

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	DATE	Aug 12/8	ι				AIR PI	HOTO No.	BC	561	t_o_	75	
ſ	SAMPLE	LOCATION	ROCK	ALTERATION	MINERALIZ ATION	STRIKE	ADDITIONAL	APPARI WIDTH		AS	SAYS		
	NUMBER		түре			DIP	REMARKS		WIDTH	Au,	Ag	Sb.	
(1)	377916	2012 \$ 11122 0-45 m	Jtp we lirock							~ 10	0.1		
(2)	27792	45cm - 144cm	g fp from vein zone		-	÷		i		~ 10	0.1		
(3)	27793	199cm- 2200m	minor veining eltered gep							410	0.1		
(4)	27794	220 cm - 255 cm	vein	Mn stained Silicified	pyrote					20	0.3		
(5)	27795	255 cm - 355 cm	altered gip between veing							210	9.0		
(6.)	27796	355 cm - 454 cm	vein zune	heavy Mustainin silicified	5		rusty 240 fragments			210	2.0		-
(7)	27797	A59cm-492cm	gfp we lirock							10	0.2		
(8)	89178	1	vein	tion staining	spharente					10	1.4		
(9)	27799		yein of cale.t	mn stained	sphe lerite					~ 10	9.8		
(10)	27800	2 one 5 linel 0 - 30 cm	2 5 p wallrock							~10	1.0		
αņ	35701C	Zone 633cm - line1 49cm	Silicitical zone with gfp Grainents	rusty & FD Some mon staining						20	0.6		
(12)	25702	99cm - 219cm	gip between usins							100	0.2		
(13)	29503	219 cm = 289 cm	silicitied vein	Mn staining						<10	7.4		
(14)	37304	289cm - 325cm	2 FP wallrock	•						10	0.4		
(15)	57 27505	20ne 5 line Z	2 fp wailrock	•					- <sup>20</sup>	410	0.2	£	
(16)	57 22506	43 cm = 143 cm	vein materiel	Mn stanied rusta glp						20	1.2		
(17)	57 27507	143 cm - 34 1 cm	lurge off zone							-10	0.4		
(18)	57 27508	3664 - 401	vein zone	ma stained moto q.fp fragments			some a sp interstitual			20	2.6		
(19)	2709	401cm - 465	gfp well rock	· · · · · ·						30	0.2		
(20)	57 27510		vein	Mn stained rusty gsp		7 <b>2</b> 7	7 cm wide vein			800	0.7		

# J.C. ST. ... HEN EXPLORATIONS LTD.

# GEOCHEMICAL DATA S... CET - ROCK GEOCHEM SAMPLING

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Griz 3 Abouring LINE

104K/10E

NTS

DATE August 12

(20)

AIR PHOTO NO. BC 5614 075

	SAMPLE	LOCATION		ALTERATION	MINERALIZATION	STRIKE	ADDITIONAL	WIDTH	INT	AS	SAYS		
	NUMBER	2004/10/1	TYPE			DIP	RÉMARKS		WIDTH	Au	Aly	Pb	Z.
(1)	25711C	20ne Blinel 0-55cm	gfp we wrock							<10	0.1		
(2)	25712	55cm-100cm	vein material	Min Staining Silicification			rusty gtp fragments	İ		120	9.2		
(3)	25713	1001m - 155cm	altered gfp between veins							<10	0.2		
(4)	25714	155cm . 220cm	5 4 5 4 4 4 4 Pin Ve in	wery altered Weethered Mn Stained			need demugh			<10	0.7		
(5)	25715	770cm-268cm	Veinwith Some g.fp.	silicified Mn stained	galena, sphelerike		assay			0.044	1.72	0.31	1.
(6.)	35716	Dugen - 307cm	vein material	Win stained weathered	_	1	grungy material		4	<10	0.6		
(7)	25717	30 7cm - 3 40cm	Vein "Hisyracke"	Mn staining silicified	galena sphalenite		<u>assey</u>			0.016	16.97	8,29	6:
(8)	25718	340cm - 388cm	altered well rock offp			r.	1			<10	0.4		
(9)	25719	Zone & 12m above line 1	vein	Silicified rust of gop fragment	minor galena					-10	33.0		
· (10)	257207	Griz 17	,	rusty surfaces	Parite 1	1	adaniticy /			$r < s_{\Phi} \circ s_{-} g \circ s_{-}$			
aŋ.	35721	10 maboue B-127	quertz yein	1 1			IDEM wide line expressed 670/E		I				
(12)	85722 /		quert vein fxoat	few rusty spots			talus slope with q. FP		1.1				
(13)	25773	west side of Ggiz 1		striceous fusty		/	vech a ferra						
(14)	25/734		gipwith drugg quertz	: /	sperite speriterite	·	anguter fight from	1	1		1 1 2		
(15)	25735	large gung	q fp with q tzyeins	silvertied	/ /	trend 92° N	veins Sma wide crossenttin						
(16)	257/26	Amebole 257256	gtz veins within gip			109/50	45 p breferiaved						
(17)	25727	in Stream in large guily near	atz vein	/	pyrite /	-1	rusty apellow beathered surface						
(18)							[						
(19)							*						1
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J.C. STLEHEN

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### GEOCHEMICAL DATA SIJEET - ROCK GEOCHEM SAMPLING

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B.C. GOLD SYNDICATE

104K/10E NTS

APPARENT

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	EAFLU	MATIONS 1	LID.					NTS
	sampler date	1. Pautler 19 5- Au	g14	PROJECT	Newey	<u>n</u>	<u> </u>	<u>LINE</u> <u>AIR P</u>
	SAMPLE NUMBER	LOCATION	ROCK TYPE	ALTERATION	MINERALIZATION	STRIKE	ADDITIONAL REMARKS	
(1)	77 <del>4</del> 93 B	rusty cirque GRIZ3	altered off?	Silicification				
(2)	77494	NE side of FiczenLgke	silicifiel zone in gff	minor cte,	· · ·		GRIZ3	3
(3)	77495	NW of Grizs	actued gfp.	v. rusty   silicification	abundant py especially on forct	ine		
(4)	77496	Real 15 on GRIZ 1	altered 9. fp.	v. rusty	dueben . py			
(5)	77497	just east of 15, GRIZI	gtz-carb Vein bx - fra	ruoty ST ofp				
(6.)	77498	900 m. Sof LCP GRIZZ	altered °	rbesty	PY			- 1
(7 <b>)</b>	77499	SUM W OT DOS	aphabitic v.	silicious, lt.	Mr starring			
(8)	77500 B	GEIZ 1 4005/100E	altered interac	e-rusty . - minor silicitic.	minor py Mn sterning			1
(9)	25720C	GRIZI	V. Silica-rich (usty e	, aphanitic,	PY			1 <sup>7</sup>
(10)	25721	GRIEI	gtz vein	fusty weath		67%E	10m above B-127 10 cm under In expos	sure
(11)	25722	GRIZI	milky StE vein StE	few monty spots			ploat in falus angus	las

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V. rusty altered abundant py silver-grey mineral,

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B.C. GOLD SYNDICATE J.C. STEPHEN EXPLORATIONS LTD. **GEOCHEMICAL DATA SHEET - SOIL SAMPLING** NTS 104 K/10E SAMPLER \_ 1. Payther + Don G. LINE GAZ PROJECT Heuren AIR PHOTO NO. RC 5614 Aug 6 - 7/81 DATE 075 DESCRIPTION ASSAYS SAMPLE ADDITIONAL OBSERVATIONS OR REMARKS LOCATION Depth Horiz SLOPE VEG. NO. % ORG. Colour Part Size Ph Pb Zn cm Au Ag 45 - above galena vein trending 2000 81-NKG-D Clayey sitt dark 11 Sentle grass med B 6 QTOON / OTOE 46 pr. 40 0-1 perper med 11 5 clayey Sil4 B mod 0+00 N/1-00E 82 =10 25 pr. 0.1 on top of gpp ofe. fire K 4' 11 0+00N/2+00E mod. 19 10 0.1 SAP ote dk. med Reptly 32 30cm above gertle 11 0+00E/1+ 20N silt cm 210 0.1 11 pr. cm 10 clay grass dk bi 0+00E/1+40N flat A+C () angular float of gop moss 10 410 0.1 reptly rear ate of gop, some of p float. 0+00E/1+60N 8 B 1000 11 1 9 silt 410 0.1 10" med-dk 0+00E/1+80N septily gfp angular plant B mod 11 11 bi silf. 10 -10 0.1 0+00E/0+DON above gle ote , near + above galena veins med fine SOM mod -B 7 low 40 0.1 25 405 steep grass 0+00=/0+40N Clayery Clayery Sand man gop ote gentle 8 mess 11 B mad 14 20 0-1 grass Near gfp ote + felus dk pr. O+ODE/OT WON mod-6 ictory 12 11 17 210 01 hi 51/1 above off ote. O tOOE/ TOON light Or-bi rephe mod SOME 5 B mod dayer grass 10 01 v. pebbly silf light mod grass 1+00E 0 +20 N lots angular gfp B 25 few 6à or - Br 5 steep <10 0.1 gentle nass slide +14 Sandy 1. septly few some My float. HOOE OHAON B 66 10 us fy mass 6 <10.0.1 ang. gop float, above gop of 2ebbly 1+00 E/0+ 60 N med mod B mod 72 15 Silt 10 210 0.1 121 dk M Ner off ote Alat 11 15 ,1 62 I+COE/O+BON 11 10 0.1 directly on top of the ote Bi ned be few 11 11 85 1+00E/ 1+ 00 N 7 i۱ 15 <10 0.1 in crevices of p/p ofe few Ø gentle B? 11 15 moss 1 tOOE/ + DON 11 16 40 0.1 selster 912 ofe in area

BT - 1 + 00E/1+80N

1+00E/1 40N

+00E/1+60N

56 et. br. fine

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#### **GEOCHEMICAL DATA SHEET - SOIL SAMPLING**

B.C. GOLD SYNDICATE

SAMPLER J Pautler & Don G.

PROJECT Newex

104K/10E 500.3 LINE

NTS

AIRPHOTONO. BC 5614 075

DESCRIPTION ASSAYS SAMPLE ADDITIONAL OBSERVATIONS OR REMARKS LOCATION SLOPE VEG. Depth Horiz NO. Part Size % ORG. Ph Colour Pb AN As Z Au Cm STODE P-bbles grass near gfp outerop, many peobles of Nach 404 SINKBOR Re every Sulty mod. m055 0.1 14 82 10 O+20N brown 5-66. 2-00E pebbley dark moss directly over ofp outerop B+C 4110 84 mod. flat 10 0.1 15 10 brown Ot40N no rock in hole , near off outerop -Devobley 2+00E medium grass clay flet 12 83 B 100 20 brown moss 20 0.1 O+60N 3400E no sample due to snow Check 9: 12 10 0.1 C + BON 19 Sample. 2+00E 1+000 no sample due to snow below snow. gsp outerop and float. Chick 3+002 300 gentle 1+20N very muddy usually eovered in snow "glacial, medium pobbhy 7+00E brown Sulty VIE gentle hone 10 0.1 14 3 1+40 N sand 2Fp outerop 2+005 paper grass meduum thin Anorizon 18 flat Silvy 11 100 muss <10 0.1 16 brown 1+ KON 440 float oround groos rootlets present, off float in region medium Pebbley J+0DE B mod. flat 11. clay 5. Ht 20 moss 0.1 14 20 1780N brown "Fine G+00E Acre intrusive flyat in hole grass nigh morhanate 8 35 ×10 0.4 20 22 650000 5.144 0+205 A few peobles O+ODE orange Fine Silt 91005 moderate 10 92 high 10 В Sand 12 bian 10 0.1 07405 near intruside caterop CACOE prover talus, below ofp outerop SI NABT Dinnye mod. NUDDERUKE Grass В 9 22 9 10 Silty 10 0.1 brown 01605 stange CHUDE ma monerate grass 3- 144 mod. 20 19 10 B <10 0.1 brown 0+805 Sund OTOCE orance 91059 above gep outerup Sine 1 3 Sew 2 B 12 14 40 0.1 moss 1+005 brown senary Sine : moss 14006 necuum BINXB gonthe 10 B 5-144 moch. grass 16 8 11 10 0.1 0+205 6000 Sena 95425 tains sample coarse to I+ODE SINXBT mechum Fine med FOME K ٤ mortant 5 10 10 B </0 0.1 0+405 newse telus binst Deboly gruss 24P floct 1+00E medicam SINXB Few 9 gentle 6 8 DEPLA 10 0.1 moss B 0+605 sand mechan fine 1 FOOE slightly rusty moss flat B few 5 22 8 brown 10 0.1 04805 SULT IT ODE shrubs fine meclessom slightly rusty 13 flat 5 3 few 14 B 0.1 Sunity gruss <10 1+005 prown Fine 2+000 prange buck somewhat rusty Ferei 10 R 5.144 gentle brush 80 42.0 1000 3000 19 0+205 brown taken Am east of station Sand grass

DATE August 7/81

### GEOCHEMICAL DATA SHEET - SOIL SAMPLING

B.C. GOLD SYNDICATE

SAMPLER ] Butler

PROJECT Nowex

104 K/10E Griz 3 LINE

DATE August 7/81

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AIR PHOTO NO. BC 5614 075

SAMPLE				= 0.	DESCRIPT	TION			-	ADDITIONAL OPERDIVATIONS OF BELIARYS	
NO.	LOCATION	Cm	Horiz	Colour	Part Size	% ORG.	Ph	SLOPE .	VEG.	AUDITIONAL OBSERVATIONS OF REMARKS AU Aa As TB	Z,
EI NXB	2+00 E 0+405	-	A-B	dark brown	peobley	few		moclerute	gruss	410 0.7 39 20	15
	8+00E 0+605 8+00E		No	Sam	ple.					No sample	
	0+805	10	B	brown	Sand	Few		gentle	grass	<10 0.1 12 12	6.
	2+00E 1+00S	7	B	med br.	silty. sand	few		genfle	grass	40 0.1 9 4	4:
GRIF	3			15/81				· · · · · · · · · · · · · · · · · · ·			
			7	10/01	:						
BT - 138	showing		B	It. b1.	coarse	mod		gentle		7 m w. of top of zone 1 at showing. 40 0.1 7 7 a	85
BT - 139	Showing	-	B	lt bi	peloby	few		mod		im W. of top of vern in zone 1 410 0.1 22 33 1	118
BT-140	Showing	3	B	dt or- pr.	med	mod		gentle	moss	- above steep gully in Sprote 10 0.1 14 4	7.
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### **GEOCHEMICAL DATA SHEET - SOIL SAMPLING**

B.C. GOLD SYNDICATE

SAMPLER J. Pautler July30- Aug 8/81 DATE

Dewey PROJECT

LINE Griz claims + and AIRPHOTONO. BC 5614 075 025

NTS

104 K/10E

	SAMPLE					DESCRIPT	TION		SLOPE							
	NO.	LOCATION	(cm)	Horiz	Colour	Part Size	% ORG.	Ph	SLOPE .	VEG.	ADDITIONAL OBSERVATIONS OF REMARKS	Au	Aq	As	F6	Z
81-1	B-105	Frozen Lake	5	B	rusty dk bi.	fire	13	dy	flat	moss	gfp ok in ana, altered	<10	0.1			92
	B-106	GR123	5	B	ors bi	".	5	ч	17	11	Stp ote in area	<10	0.1			70
	B-107	GEIZ3	2	B		med	42	4	mod.		2fp ote.	10	0.1			96
	B-108	Frozen L.	-	в	V. rusty	fine	a		flat	moss	Stip float.	<10	0.1			10
r (	BT-109	NW of Froze	5	B	lt. 61.	med	2		ιć	grass	on top of glp ote. Eside of	10	0.1	12		10
	BT - 110	ų	5	B	ц		4		17	11	above the ote in contact of seds.	<10	0.1	73		21
100	B-111	1(	١	B	11	;	2		ĸ	shubs	man + as ove of p/sel contact?	<10	0.1	73		18
, (	BT-112	11		B	rusty or-bi	med	22		Steep	-	on v. pyritic ote of gfp.	10	0.1	225		15
	BT-113	GRIZ 3 1.8N/3W	2	в	Or-Br rust	med - coarse	R		gentle	-	below cliff of gor.	10	0.1	6		12
	B-114	GRIZI Near 15	~	B	n	med	2		4	grass	with gfp float, some v. moty with by	10	0.1	9		8
	B-115	- e(	2	B	ak or- Br	fine	4		flat	grass	rusty of float w/ py +	4/0	0.1	22		7:
	BT-116	GR122	6	в	ak or-Bi	Coarse	5		gentle		rusty - non rusty gfp float	20	0.1	12		10:
			1		l Miller					×			1			
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**GEOCHEMICAL DATA SHEET - SOIL SAMPLING** 

B.C. GOLD SYNDICATE

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104 K 10F NTS LINE GRIZ

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SAMPLER D. KEpicki M. HUGHES AUGUST 12 /81 DATE

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81-NXC

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PROJECT TALUS SAMPES NX

AIR PHOTO NO. BC 5614 075

DESCRIPTION ASSAYS SAMPLE ADDITIONAL OBSERVATIONS OR REMARKS LOCATION SLOPE VEG Depth Horiz NO. AS Part Size % ORG Ph Colour Pb. ZI Au Aze furthest cliff outerop, directly bottom fuce cliff wall. From OFP pock EI-NXG-370+ oalsum tul. burn 1cm Otoor fine piush 4 <10 0.1 6 Surtu 6 rusty .. Si-NXG Eulus begins in sample location from QFP sliff. 11 " 11 grassy Sim OTZOE BT 410 6.1 5 15/10 10 down slope 15 m. 81-NKG 14 " 11 Sim 11 0+35E BT ii 11 just below Mr staining on cliff 81-NXG " DISOE 10 cm A 90 7 BT 5 40 0.1 N 81-NX6 4 QFP cliffs directly above grassy 0+756 Lem talus 78 5 4 BÍ 10 0.1 8 " 11 5 70 next major takes flow lastward B " 20 0.1 EI-NXG " slight 2cm 1tooE grassy 5 8 40 0.1 3 Br 2561. below QFP ole cliff. " : sprace 4ft.tree BI-NIXC 11 ft 11255 Zem Br 40 0.1 4 72 51 1 11 Major talus flow " " Flowery -SI-NXC It SOE Scin " 73 spince 4 5 BT 10 0.1 11 4 11 11 11 11 EI-WXG 15cm 11 spaise 2tcoF 83 24 10 0.1 15 Br 2+250 ---> 11 Ti 11 taken from small gully, itop of flow 000-1 5 85 12 mod. 81-NXC 11 2+75E 5cm trees BI 0.1 5 7: 20 8 11 11 neavily 81-NXG 11 11 5+005 following edge of diff bottom. inod 10cm Br treed 7 16 8= 10 0.1 SI-NXC 11 11 11 A between 2 QFP cliffs . 11 3+506 20 mod 9 7: BT 10 0.1 7 con well sorted smedium grade SI-WIL 11 11 12 15cm 4+005 talus slight 25 BÍ 33 10 0.1 81-NXC it major tulus flow from gally .. 4+500 15 cm 11 1

# APPENDIX II

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# PETROGRAPHIC DESCRIPTIONS

Specimen : JP-2 FELDSPAR PORPHYRY - GRIZ 3 SHOWING

Classification : Trachyandesite (volcanic)

1 1	Mode :	- Plagioclase	35-40%
(,		K-spar	40%
		Calcite & other secondary	minrls.10%
		Biotite	5%
		Quartz	< 5 %
		Accessories	1%
		Opaques	18

Handspecimen : Grey, massive volcanic rock containing phenocrysts of plagioclase, altered (calcareous) amphibole and biotite. The matrix is very rich in K-spar, as indicated by the yellow colour in the stained block.

Thin section : Texture : porphyritic, holocrystalline; most likely a effusive rock.

Plagioclase occurs as euhedral and subhedral phenocrysts ranging up to 5 mms. in size. Although finely developped oscillatory zoning is present in many of the laths, the average composition appears to be An-40, andesine. (Determined by combined carlsbad/albite method). Carlsbad, albite and periodine twinning are all present. All grains contain small patches and thin veinlets of secondary carbonate.

Biotite forms brown pleochroic phenocrysts up to 2 mms. in size. These are frequently somewhat corroded and locally intergrown with plagioclase phenocrysts. Most grains are surrounded by thin rims of granular opaques. Calcite occurs in granular aggregates up to 2 mms. in size, which are clearly pseudomorphous sfter a ferro-magnesian phenocrystic phase. Frequently the carbonate surrounds cores composed of fine grained, aggregate clayminerals, white mica and feldspar. In turn, they are rimmed by fine granular opaques. Calcite occurs furthermore as irregular secondary patches throughout the remainder of the rock.

K-spar forms the bulk of the fine grained groundmass. together with lesser plagioclase and probably some quartz, secondary minerals, apatite, opaques etc.

Apatite occurs as euhedral and subhedral accessory crystals up to .25 mms. in size, scattered throughout the groundmass. A few grains of subhedral zircon are present as well.

Opaques occur as fine disseminated granular material. The coarser grains (up to .5 mm.) are subidiomorphic and tend to form aggregates.

Note : possibly this specimen is a effusive variety of spec. JP-1.

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Specimen : JP-3 ALTERED FELDSPAR PORAYRY - GRIZ 3 SHOWING

Classification : Altered feldspar porphyry

Mode	:	Quartz	40-50%
		Clayminerals	30-40%
		Limonitic calcite	10%
		White mica	5%
		Accessories	1%
		Opaques	1%

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Handspecimen : Strongly altered (limonitic & calcareous), porphyritic volcanic rock. Altered feldspar (plagioclase) and amphibole(?) phenocrysts are nacroscopically visible. The vague primary texture somewhat resembles that of specimen JP-2.

Thin section : The groundmass of this specimen appears to be composed predeminantly of fine grained, granular quartz (av. size .18 mm.), clouded by dusty secondary minerals, probably mostly clayminerals. Scattered through this matrix are abundant, irregular secondary patches of limonitic calcite, clayminerlas and a bit of white mica. Probably the quartz itself is of secondary origin, having replaced a primary volcanic groundmass. This throws considerable doubt on a rhyolitic classification for this specimen. It may be a silicified and altered version of JP-2, but is here classified as a altered feldspar porphyry.

Scattered throughout the groundmass are accessory amounts of euhedral apatite (up to .25 mm.) and subhedral zircon.

Original phenocrysts of plagioclase, amphibole and biotite are represented by pseudomorphs composed of clayminerals, white mica, limonitic calcite and opaques. These range up to 4 mms. in size and resemble those of spec. JP-2 in being frequently surrounded by rims of fine granular opaques, which are mostly altered to limonite.

Small grains of subidiomorphic opaques are scattered throughout.

Specimen : JP-5 GRIZ 3 SHOWING

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Classification : Galena & sphalerite bearing cataclastic rock

Mode	:	Quartz	60-70%
		Clayminerals & white mica	10%
		Calcite & limonite	10%
		Galena & sphalerite	10%
-		Apatite & zircon	tr

Handspecimen : Limonitic and calcareous banded breccia/protomylonite containig lenticular domains rich in galena and sphalerite. The rock is crosscut by post mylonitic fractures, some of which have been healed by carbonate.

Thin section : Irregular to lenticular, nebulous domains of very fine grained to aphanitic material (rich in clayminerals but otherwise silicified) are the only indicators of a primary lithology. Locally a faint suggestion of a original porphyritic texture is present as well, with claymineral aggregates resembling altered phenocrysts set in a fine grained, siliceous matrix. These are visible in the lower part of the section. The remainder of the specimen is composed of secondary minerals, mainly quartz carbonate, limonite, galena and sphalerite, with lesser clayminerals and whith mica. Some of the quartz forms granular textures masses rather similar to the groundmass quartz in spec. JP-3. Small, irregular patches and veinlets of lamonitic calcite and clayminerals are everywhere present. Relict zircon, apathe and altered biotite are present within these domains. The mest of the quartz is clearly of hydrothermal origin, replacing the earlier lithologys along veinlets and lenticular domains generally parallel to the cataclastic fabric. Grainsize ranges from extremely fine grained to approx. .5 mms.

Calcite forms lenticular bodies up to 3 mms. thick, parallel to the cataclastic fabric. It is also present in irregular secondary patches and in veinlets along late fractures. Cross cutting relations suggest several episedes of remobilization.

Sphalerite occurs as subhedral crystals, often faintly zoned, up to 1 mm. in size, It is clearly associated with galena within the relatively coarser graited quartz domains. Minor amounts of pyrite are present as well.

Specimen : JP-6 GRIZ 3 SHOWING

Classification : Silicified, veined and altered trachyandesite

Mode	:	Quartz 30	)-45%
		Clayminerals	25%
		Calcite 30	)-40%
		Zircon & apatite	tr
		Sphalerite	<5%
		Other opaques	1%

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Handspecimen : Light grey, siliceous and calcareous vein breccia. Angular fragments with a original porphyritic texture, very similar to spec. JP-2, are clearly visible in cut surface. This spec. is most likely a altered, silicified and veined version of JP-5. Rare, small specks of galena are visible in handspecimen.

Thin section : The above view is conclusvely verified by thin section examination. The pre vein texture is identical to thatin spec. JP-3. Abundant carbonate occurs in small secondary patches, as larger granular masses and in veinlets. As tiny euhedral crystals it is associated with chalcedony veins, which run along the length of the section and crosscut all other fabrics. Locally these veins are a bit vuggy.

Clayminerals occur as very fine grained aggregates associated with granular quartz (as in JP-3). A few relict zircon and apatite,crystals remind one of the original nature of this rock. Relict phenocrysts are not very well visible in thin section but are clearly present in handspecimen. Opaques occur as scattered, small grains and aggregates. A few small grains of sphalerite (av. size .25 mms.) are clearly associated with galena and secondary granular quartz. Specimen : G-1 GRIZ 3 SHOW NG

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Classification : Siliceous and calcareous vein-breccia + ore minerals

Mode	:	Quartz	40-50%
		Calcite	40%
		Clayminerals	10%
		Opaques	5-10%

Handspecimen : Siliceous and calcareous vein-breccia containing galena and sphalerite. Light coloured siliceous fragments are set in a dark, aphanitic siliceous vein network. Some of the veins are a bit hematitic. A few dark areas (fragments?) contain fine, yellow metallic needles.

Thin section : Texturally and mineralogically this specimen is somewhat similar to the previous two samples, combining elements of both. However, original (porphyritic?) textures are only very poorly preserved among some of the finer grained siliceous, claymineral rich domains. These are here interpreted as remnants of the primary, albeit altered, lithology. Only a few cf these are present, the remainder of the sample being composed of a complex multistage vein network. The pattern of veining is as follows:

- during which the ore minerals were introduced.
  - stage 2 : Crosscutting calcite veinlets. These are locally a bit
    hematitic and appear to have remobilized some of the ore
    minerals.
  - stage 3 : Late, very fine grained silica (chalcedony) veinlets, crosscutting the previous two stages. This stage includes some brecciation and fracturing. The resulting fabric is in part cataclastic. At least some late stage movement along fractures has occured after injection of these fine grained silica veins, juxtaposing them against earlier stage domains.

The fine grained euhedral, yellow sulfide needles are composed of pyrite. They are up to 1 mm. long and have a rhombic cross-section. Locally it is intergrown with galena. Galena locally forms feathery, anisotropic aggregates, probably due to cataclastic deformation. Sphalerite is associated with the galena and pyrite, and forms zoned, subhedral crystals up to 1 mm. in size. Specimen : G-2 GRIZ 3 SHOWING

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Classification : Siliceous and calcareous vein-breccia.

Mode :	Quartz 30%	
	Calcite 40%	
	Clayminerals/white mica	10%
	Opaques	20%

Handspecimen : Galena and sphalerite bearing vein-breccia. A distinct anisotrop:c fabric is probably the main difference with spec. G-1. Both calcite and silica veinlets are present, and any remaining original lithology is likely highly silicified and altered. Late fractures have slightly offset some of the catclastic fabric, and hence are younger in age.

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Thin section : In thin section this specimen is not significantly different from spec. G-1, at least mineralogically. Fine grained, silicified domains rich in clayminerals and a bit of white mica, probably represent the oldest phase in this rock. A crosscutting sequence of veins appears to be similar to that in spec. G-1. Spalerite occurs mainly in calcite veinlets and may have been remobilized from a original association with early quartzveins. It forms grains up to 5 mms. in size. Very fine grained siliceous veins (stage 3) which locally crosscut calcite veins, contain abundant euhedral calcite crystals, probably due to remobilization from the earlier calcite veinlets. The coarser grained calcite crystals (up to 3.5 mm.) are a bit bent, lending support to the notion of late stage cataclastic deformation as advertized under G-1. Subsequent fractures have offset the stage 3 structures somewhat. Galena, associated with spalerite, ranges up to 1 mm. in size. APPENDIX III

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# STATEMENT OF QUALIFICATIONS

#### STATEMENT OF QUALIFICATIONS

I, Jean Pautler, am a graduate of the Honours Bachelor of Science program at Laurentian University, Sudbury, Ontario, 1980.

I have the following employment experience:-

April 1981 to present Geologist with J.C. Stephen Explorations Ltd. North Vancouver, B.C.

May to October 1980 Geologist with J.C. Stephen Explorations Ltd.

May to August 1979 Assistant geologist with Kelvin Energy Ltd. Calgary Alberta.

May to September 1978 Assistant geologist with the Ontario Geological Survey, Toronto, Ontario

NOVEMBER 1981

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JEAN PAUTLER

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