GEOLOGICAL BRANCH ASSESSMENT REPORT

11,407

DIAMOND DRILLING REPORT



on the

SWAMP SHOWING; CLIFF CLAIMS

LOCATED NEAR PORT HARDY

NANAIMO MINING DIVISION, B.C.

NTS - 92 L/11 W

50° 38' N. Latitude

127° 28' W. Longitude

for

ENERGEX MINERALS LTD.

by

R. J. DARNEY, GEOLOGIST

D. A. CAULFIELD, GEOLOGIST

C. K. IKONA, P. ENG.

PAMICON DEVELOPMENTS LIMITED.

May, 1983

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1.0 INTRODUCTION

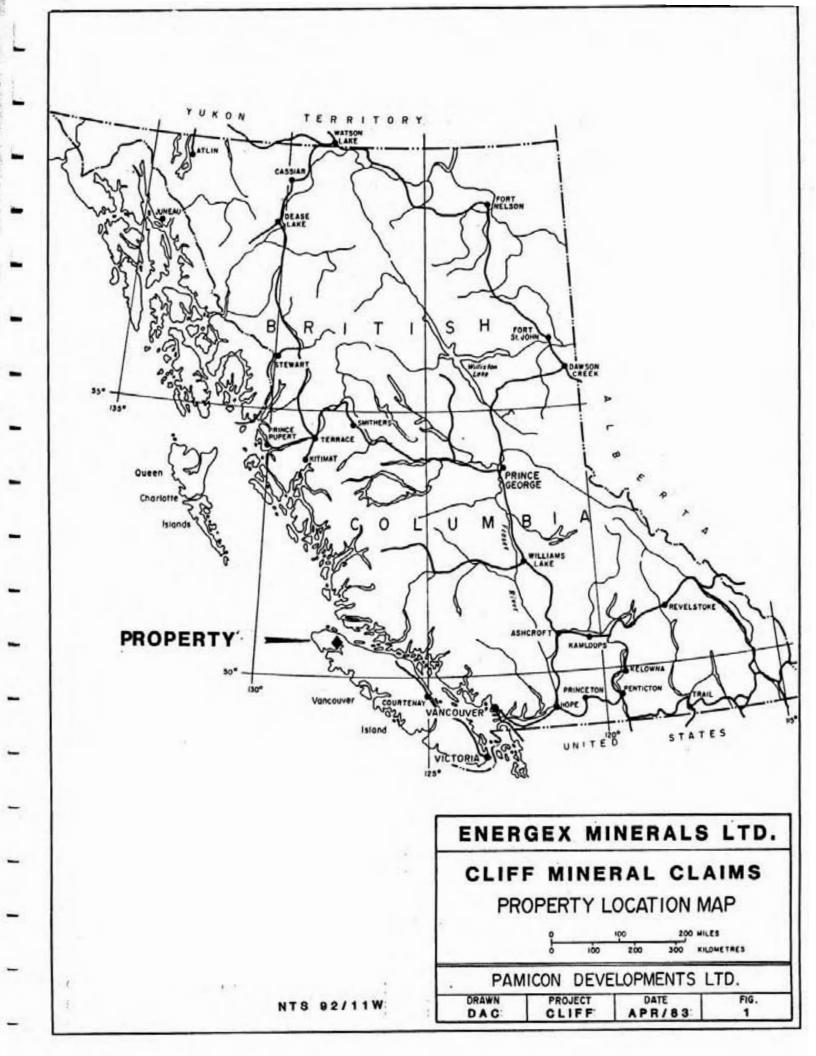
The Cliff property is located just south of Port Hardy on the north end of Vancouver Island, British Columbia. The Cliff property consists of a number of massive sulphide skarn showings with significant precious metals. In light of the surge in gold and silver prices since any concrete exploration has taken place on the property, re-evaluation of the property became warranted.

Pamicon Developments Ltd. was requested by Energex Minerals Ltd. to conduct a small program consisting of detailed mapping and diamond drilling on the Swamp showing. A plane table map at a scale of 1:200 was constructed and based on this geological map, eight BQ diamond drill holes, totalling 232.4 m were drilled. In order to obtain access to the showing, an old skid trail was re-opened using a D6 tractor. All mineralized intersections were sampled (44 samples) as well as one showing for Cu, Pb, Zn, Ag and Au.

The writers were retained by Energex Minerals Ltd. to assimilate all new data and to set forth recommendations on which a constructive, organized exploration program may be instituted.

2.0 LIST OF CLAIMS

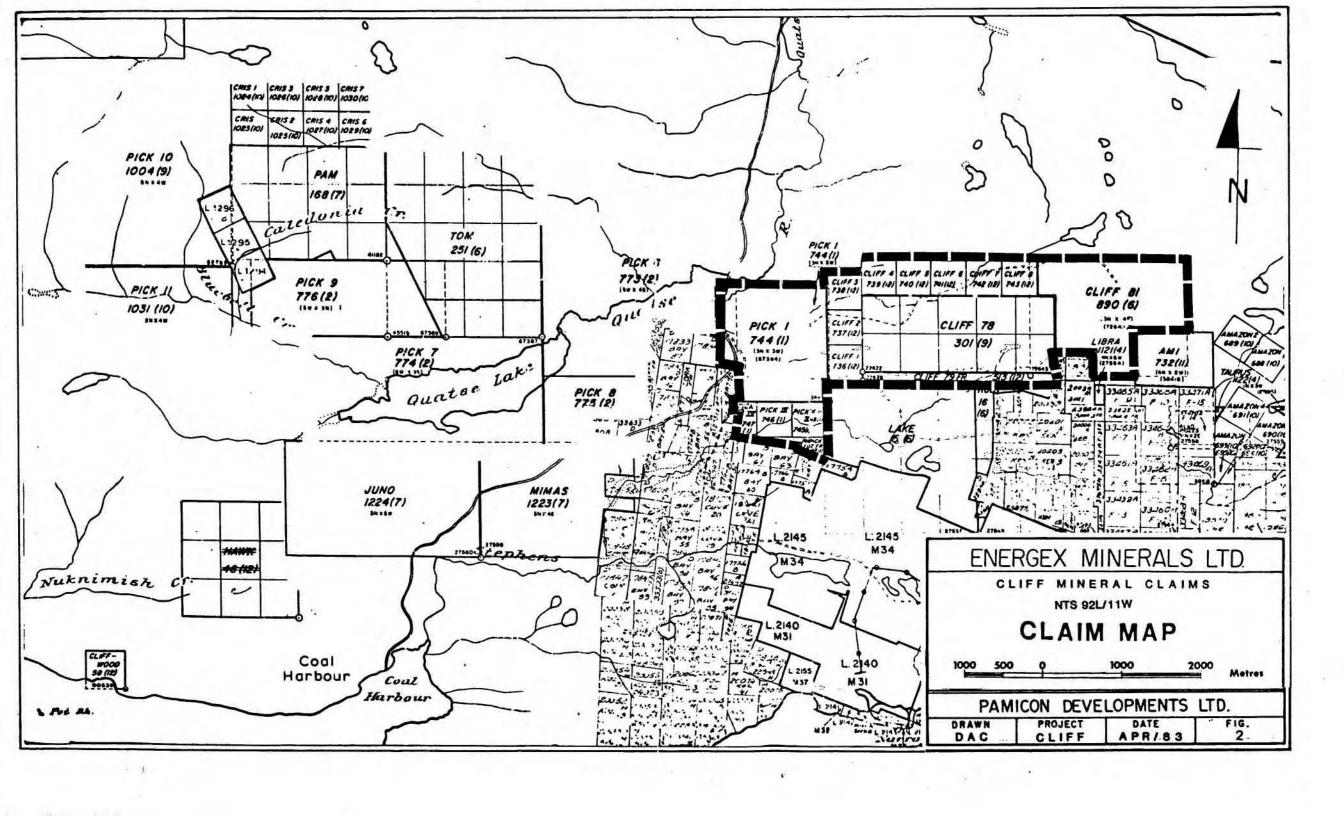
The B.C. Ministry of Mines, Energy and Petroleum Resources indicates that the following claims (Fig. 2) are included within the Cliff property:

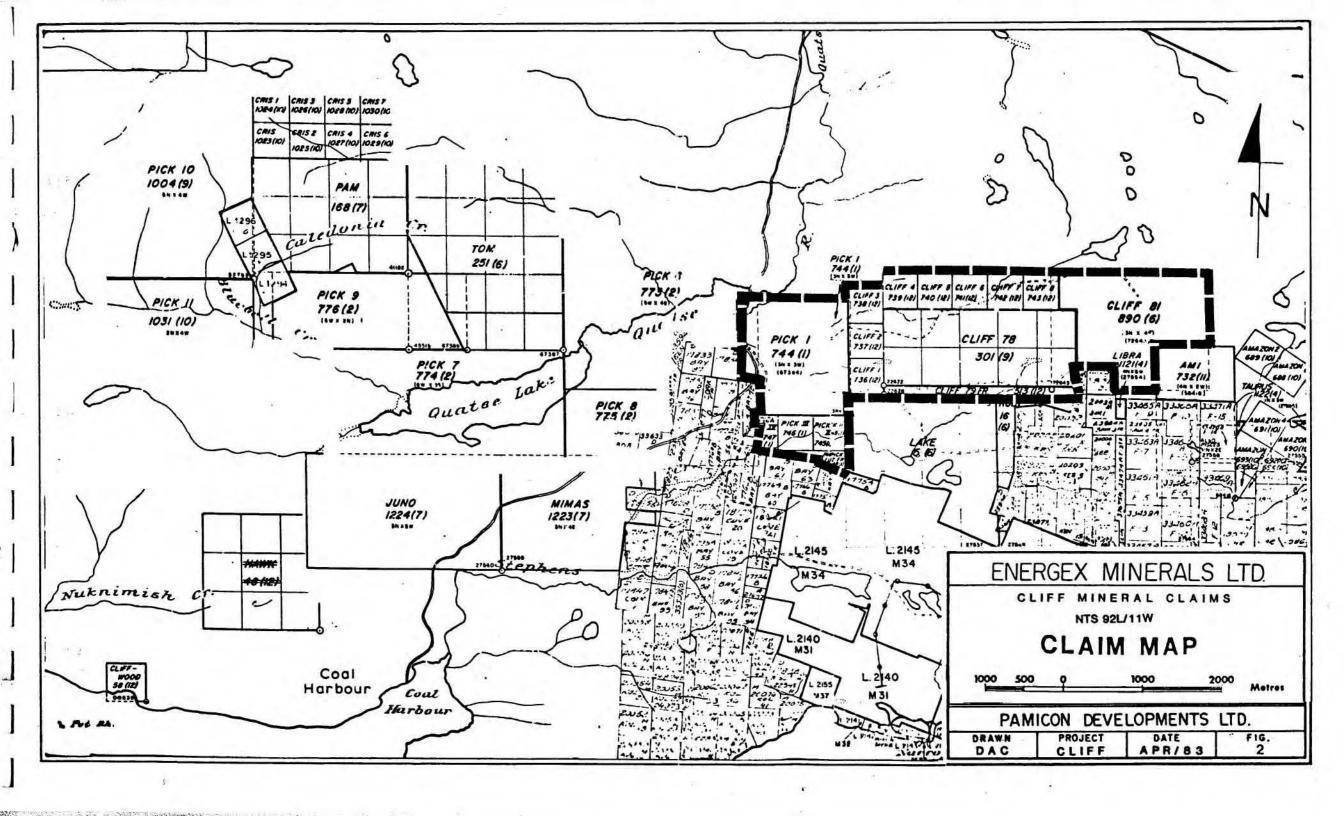


Total =

CLAIM NAME	RECORD #	UNITS	RECORD DATE
Cliff 78	301	10	Sept. 21, 1978
Cliff 79 Fr.	513	1	Dec. 19, 1979
Cliff 1 - 8	736-743	8	Dec. 15, 1980
Cliff 81	890	12	June 2, 1981
Pick 1 - 4	744-747	12	Jan. 9, 1981
Pick 5 Fr.	748	1	Jan. 9, 1981

44 Units





3.0 LOCATION AND ACCESS

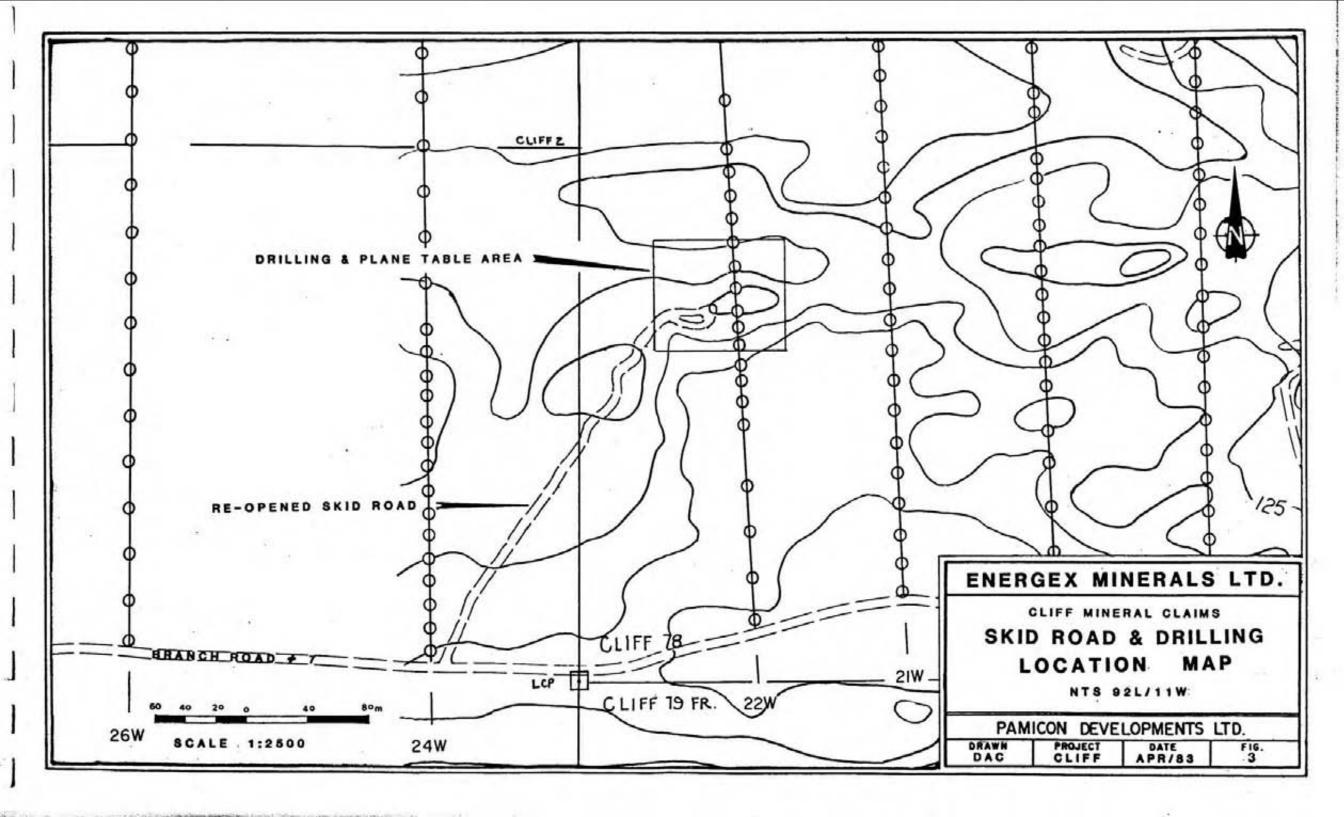
The Cliff claims are 9.5 km due south of Port Hardy, Vancouver Island, British Columbia in the Nanaimo Mining Division. The claims are located along the northern boundary of Island Copper Ltd., a major coppermolybdenum - gold producer for Utah Mines Ltd.

Access to the property is made via logging road (Branch 7) which departs the paved highway from Port Hardy to Coal Harbour on Rupert Inlet. A four-wheel drive vehicle is not needed to negotiate the gravel logging roads. Port Hardy, itself, may be reached by driving up the paved Island Highway from the ferry terminal in Naniamo or by making a direct flight from Vancouver. Air service is available on a daily basis to Port Hardy via Pacific Western Airlines or Air B.C.

To obtain access to the Swamp showing, an old tote road was re-opened using a D6 tractor (Fig. 3). The skid road departs Branch #7 approximately 10 m east of line 24W (1981 grid). The skid road which is 270 m in length branches off in a northeasterly direction. Tractor equipment is required to travel the new skid road.

4.0 PHYSIOGRAPHY

The claims generally cover a rolling area with minimal relief except along the western edge of the property where steeper slopes exist. Elevations range from 122m to 213m. In the vicinity of the drilling project, the lowest elevations are occupied by swampy terrain. Outcrop availability is poor but exposures may be found along resistant ridges or beside old logging road cuts.



4.0 PHYSIOGRAPHY CONTINUED

Vegetation is typical of west coast British Columbia. First growth timber was removed years ago by logging and second growth evergreen regeneration is dominated by a cedar population. The undergrowth of salal and berry bushes is very thick and combined with logging debris makes traversing on the property extremely difficult. Although the old logging roads are passable, the sides are overgrown with alder and may require some minor clearing to make access more manageable.

Heavy rainfall may be expected year round with brief periods of snowfall during the winter months. Work activity on the property could be pursued twelve months of the year without much difficulty.

5.0 HISTORY

Before the acquisition of the property by Energex Minerals Ltd. in 1981 from John M. McAndrew, P. Eng., several major and junior companies have operated on the property. A summary of past and present operators include:

1963 - Port Hardy Copper Mines Ltd.

1964 - Anaconda American Brass Ltd.

1968 - Goldfields Corporation

1970

1971 - Yellowknife Bear & Ram Petroleum Ltd.

1978

1980 - John M. McAndrew

1981 - Energex Minerals Ltd.

5.0 HISTORY CONTINUED

Although considerable time and expense has been spent on the prospect, this does not detract from its overall value. Large areas of the claims have yet to have been mapped and extensive anomalous geochemical and geophysical zones have not been tested. In light of the recent surge (i.e. since 1971) in precious metal prices, exploration is fully warranted at this time.

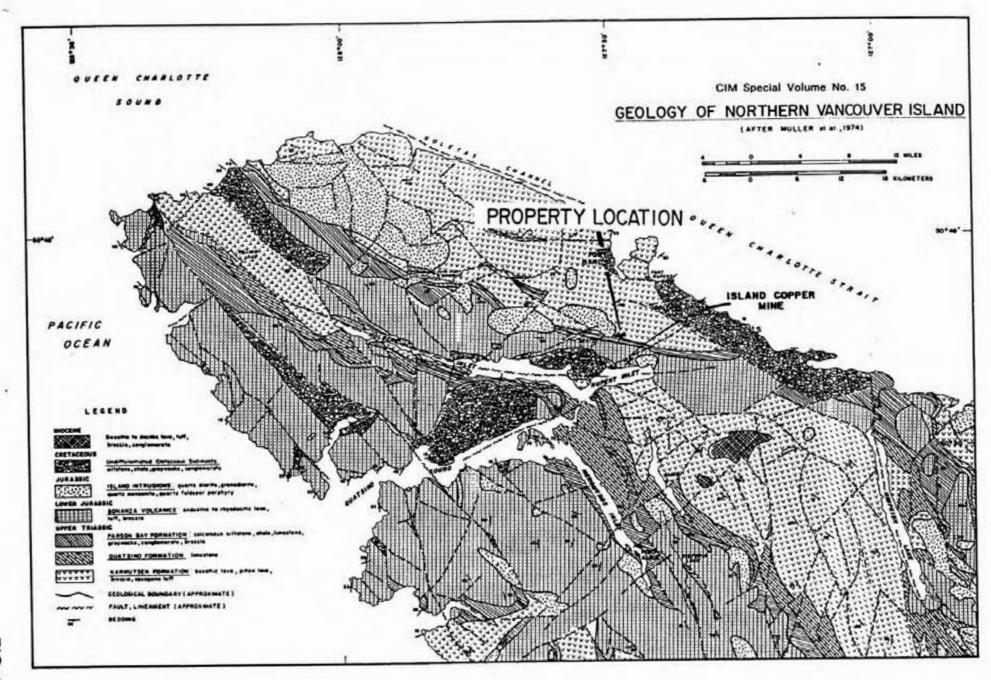
6.0 GEOLOGY

6.1 Regional Geology

The geology of the area was adequately described by K. E. Northcote (1968, 1971), formerly of the B.C. Dept. of Mines, Energy and Petroleum Resources, and J. E. Muller (1977; O.F. 463) of the Geological Survey of Canada. The area is situated within the Insular Belt, the western most major tectonic belt of the Canadian Cordillera. The geology as extracted from the Summary Report (1981) by J. Chapman of Garratt Geoservices Ltd. is as follows:

The Cliff property lies within a series of Upper Triassic to Lower
Jurassic eugeosynclinal rocks consisting of the Karmutsen and Quatsino
formations and Bonanza Subgroup of the Vancouver Group. These rocks
have been intruded by late Jurassic to Cretaceous predominately granodiorite and diorite plutons. The intrusions follows a northwest-southeast
trend across the north end of Vancouver Island.

Rocks of the Karmutsen Formation consist largely of massive basalt and andesite flows, some fragmental volcanic beds, a few poorly developed pillow lavas and some thin argillaceous limestone beds at the top of the sequence.



6.1 Regional Geology continued

Conformably overlying the Karmutsen in the property area is approximately 150 metres of Quatsino limestone; however, south of the Rupert Inlet this thickens to almost 1000 metres (Northcote 1970). This dark grey weathering massive limestone exhibits skarnification, recrystalization to marble or silicification in the vicinity of some intrusive rocks and along Karmutsen contacts. Copper, lead, zinc, silver, gold and magnetite mineralization commonly occur in these skarn zones. The limestone beds within the upper part of the Karmutsen may, in fact, belong to the similar overlying Quatsino Formation.

The Bonanza Subgroup can be subdivided into a lower sedimentary unit and an upper volcanic unit (Northcote 1970). The sedimentary section, also referred to as the Parsons Bay unit, consists of thin bedded black argillaceous and carbonaceous limestones, calcareous shales, siltstones and greywackes. Basaltic and andesitic breccias and flows, tuffs and tuff breccias comprise the bulk of the upper part of the Bonanza Subgroup. Basalt and andesite dykes and sills are commonly found cutting Bonanza rocks and may have been feeders for flows higher in the section.

Intrusive rocks in the region form a trend extending from Rupert Inlet in the southeast to Christensen Point in the northwest. This consists of a belt of quartz diorite to granodiorite stocks with a mid-late Jurassic to early Cretaceous age.

Hydrothermal activity from shallow underlying intrusives is probably responsible for the skarn zones developed in Quatisno limestone, and the propylitic and argillic alteration of Bonanza rocks. Extensively altered and pyritized quartz feldspar porphyry dykes are commonly found cutting Bonanza rocks, as at Island Copper. A low grade of regional metamorphism is evident by the pervasive chloritization and epidotization exhibited by the basalts of the Karmutsen Formation.

6.1 Regional Geology continued

Structurally, this is a region of block faulting with northwesterly and northeasterly trends being the most prominent (Muller, Northcote, Carlisle 1974). Folding appears to be minimal, although bedding is generally inconspicuous and often covered by vegetation. Repetition and loss of sections of the stratigraphy has occurred through faulting which in general has a strike approximately parallel to that of bedding. This makes lateral movement along these faults difficult to detect; vertical displacement is thought to be on the order of hundreds of metres The regional strike is northwest-southeast with a gentle to moderate southwest dip.

6.2 Property Showings

Nine showings have been located on the property to date:

- Rainbow Showings
- Cranberry Showings
- 3. Branch 7 Showing
- 4. South Showing
- 5. East Showing
- 6. Drillsite Showing
- 7. Magnetite Showing
- 8. West Showing
- 9. Swamp Showings

These skarn showings exhibit considerable variation in size, mineral content, attitudes and locations. Gangue mineralization includes diopside calcite, quartz, tremolite, amphiboles and two different types of garnet. Metallic minerals associated with the skarn zones are pyrite, chalcopyrite, magnetite, sphalerite, galena, specularite, and bornite. Most of the skarns are located along either volcanic - limestone contacts (i.e. Rainbow Showings) or intrusive - limestone contact (i.e. Swamp Showings) but some skarns are located entirely within the limestone or are occuring within the intrusive - as replacements of limestone inclusions.

6.2 Property Showings continued

The skarns located within the limestone are probably the result of structural breaks which provided channelways for mineralizing fluids. The limestone provides an excellent host for the chemical exchange of ions from the mineralizing fluids which are thermally driven by a nearby cooling intrusive. Banding of the skarn minerals is a common occurrence; probably a result of a number of factors:

- (1) Succeeding waves of ascending fluids.
- (2) Different pressure and temperature conditions in relation to geothermal gradients.
- (3) Diffusion rates of the mineralizing components from structural channelways.

The 1983 investigation was initiated to test only the Swamp Showing due to time and budget restraints but this should not detract from the encouraging results that have been encountered at the other areas throughout the property.

6.2.1 Detailed Geology of the Swamp Showings

Four different rock types were recognized through detailed surface mapping and diamond drilling and they include: 1) marblized limestone, 2) skarn 3) hornblende granodiorite (with its well altered border phase) and 4) andesite dike. The normally grey, fine-grained Quatsino limestone has been recrystallized to a very coarse grained, white marble by the nearby intrusive. This limestone forms the resistant weathering eastwest ridge at the showing (Fig. 5). The intrusive is best described as a medium grained equigranular hornblende granodiorite with the following visible components: quartz, plagioclase, potassium feldspar and hornblende.

6.2.1 Detailed Geology of the Swamp Showings continued

Alteration of this intrusive consists of guartz-chlorite-carbonate fractures with minor sulphides enveloped by potassium feldspar distinguished by its strong salmon pink coloration. Grading out from these envelopes, the alteration changes into pervasive phyllic alteration. That is, the feldspar grains are altered to pale, apple-green sericite and the mafic grains are replaced by chlorite and epidote. In the eight holes drilled, none of the economic mineralization has been associated with these above alteration assemblages. The border phase of the intrusive appears as a mottled, light-dark green, fine-grained rock with a variable sulphide content. In DDH83-7 the border phase is spotted with 2-3 mm chloritic clots which contain either pyrite, chalcopyrite, or pyrrhotite. Furthermore, it is now believed that the outcrops of what was assumed to be a volcanic dike or flow at plane table station 44 is in fact also the border phase. Texturally and mineralogically, the intercept in DDH83-7 and the surface exposure are very similar. The only rock type which can be truly classified as a separate volcanic identity is the hard, dark green andesite intersected at the top of DDH83-5 and 6. This basic volcanic dike (or sill) exhibits chilled upper and lower boundaries.

Economically, the most important rock type is the skarn which has been exposed as far north and south as plane table stations 6 and 44 respectively. The skarn is a chemical replacement of the limestone along the limestone's contact with the intrusive. The skarn limestone contact is sharp whereas the contact with the border phase of the hornblende granodiorite is more gradual. The major gangue constituents are red (grossularite) and pale yellow (Andradite) garnets, calcite, chlorite, quartz and magnetite. Andradite garnet is most easily identifiable when it occurs in its crystal form. Occasionally, one finds reaction rims of the red garnet around euhedral crystals of the pale yellow garnet.

6.2.2. Mineralization of the Swamp Showings

All important sulphide mineralization is contained within skarn zones located along the intrusive - limestone contact. Sulphide mineralogy, in order of abundance, consists of pyrite, sphalerite, chalcopyrite, galena and bornite. Texturally, the sulphides occur in a variety of forms from discrete diseminated grains to massive bands. As is the case with most skarn mineralization, the grade and thickness of intersections may be very irregular. The zone at the Swamp showing is near vertical at surface but flattens out abruptly at depth to form an L - shape body (Fig. 6,8). So far the drilling has shown that the best intersections occur either at the flexure of the mineralized body or along its more vertical extensions. At the flexure in DDH83-2 an intersection 8.4 m long indicated values of 1.26 % Cu, 0.28 % Pb, 7.72 % Zn, 1.67 oz/T Ag and 0.005 oz/T Au.

Only as a point of interest, the presence must be mentioned of a black sooty material which may be found either coating the recrystallized carbonate grains in the limestone particularily near the contact with the skarn or in late stage fractures in the intrusive. This material which was first identified in the area at Island Copper Mines Ltd. is likely gilsonite or pyrobitumen, a hydrocarbon that probably originated from the underlying Parsons Bay Formation. Positive identification of this material may be made by detecting its diagnostic tar odour upon exposure to flame.

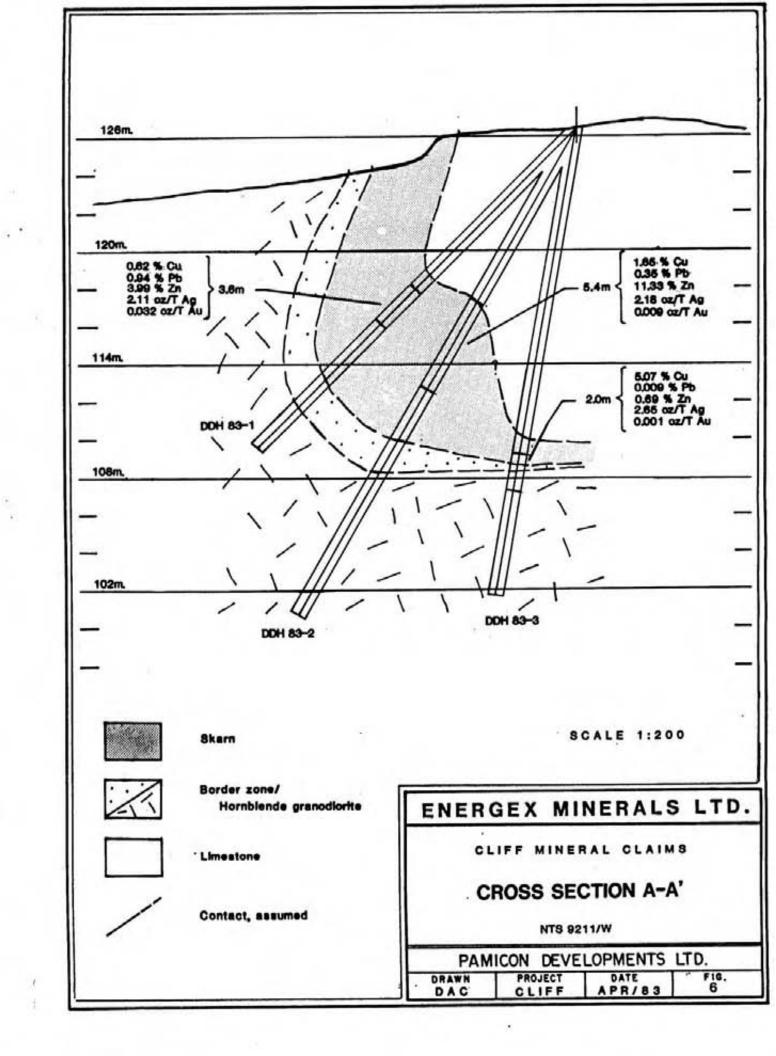
7.0 DIAMOND DRILLING

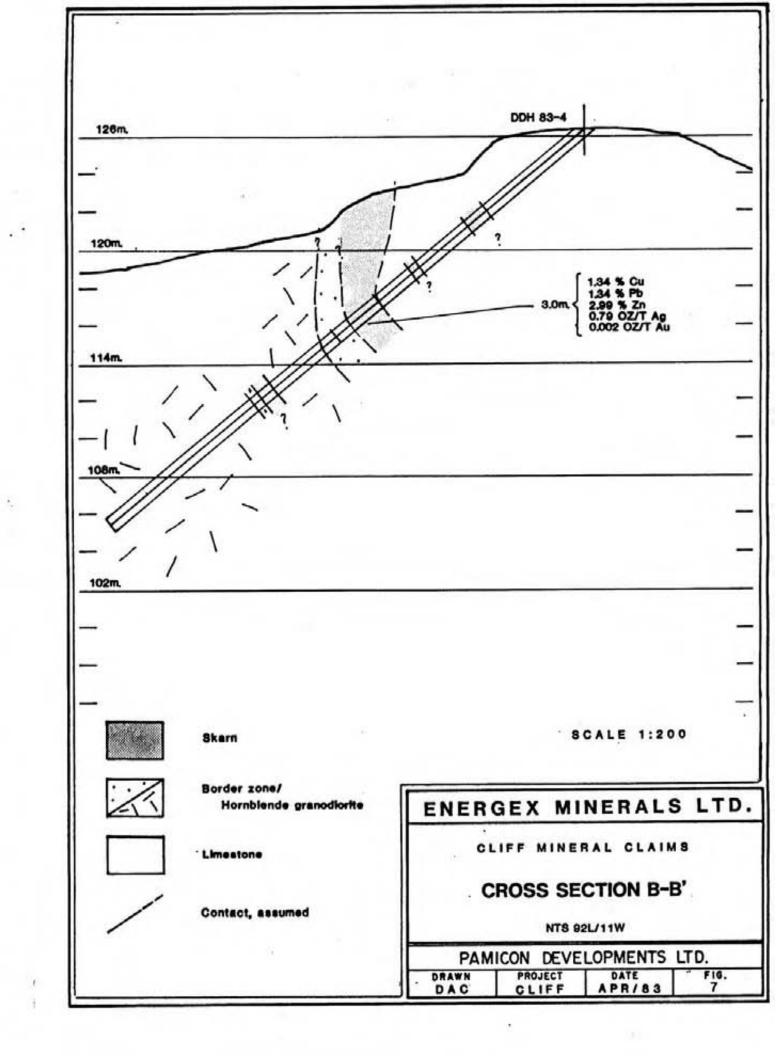
The 1983 drilling program consisted of eight BQ diamond drill holes totalling 232.4 m. On arrival at the property, a plane table map at a scale of 1:200 was constructed and based on this information, a fan of three diamond drill holes were drilled. A summary of all the holes is as follows:

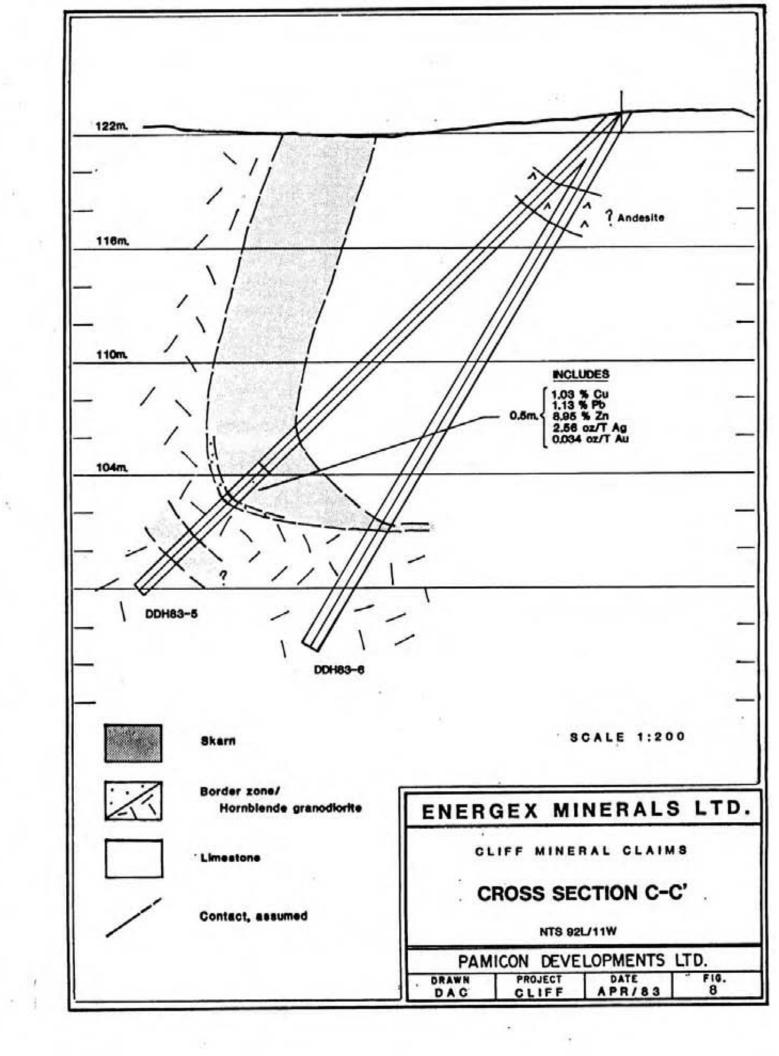
1

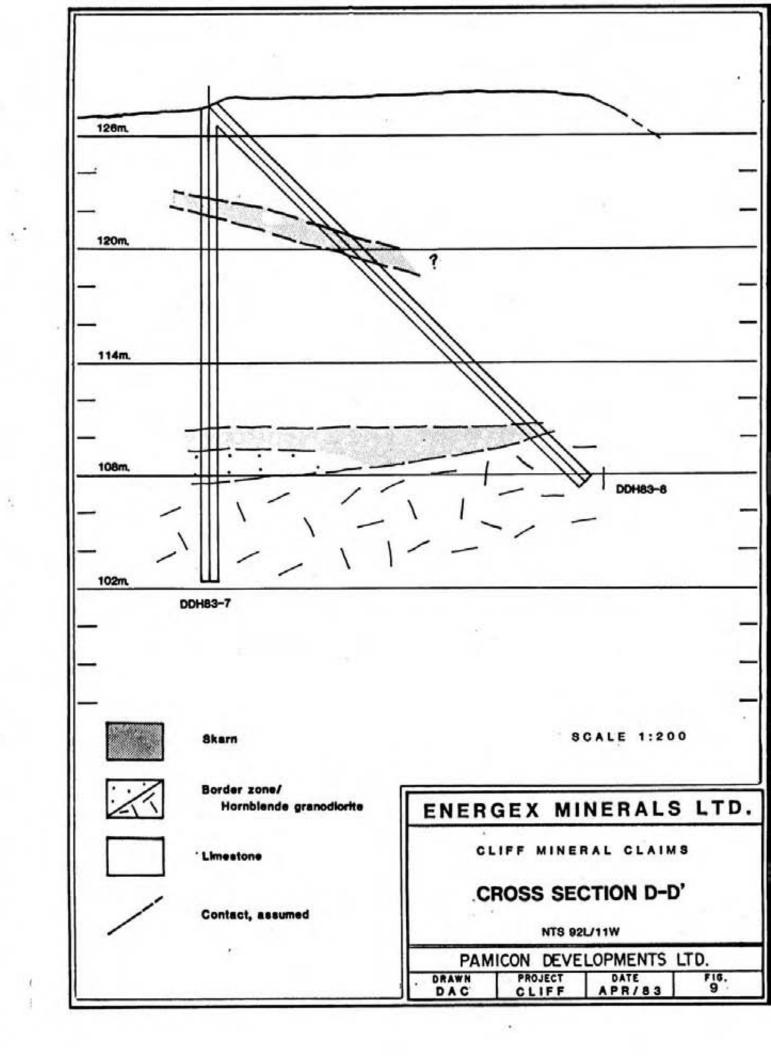
HOLE	LOCATION	AZIMUTH	DIP	DEPTH	INTERSECTION (M)	%Cu	%РЪ	%Zn	oz/T Ag.	oz/T Au.
DDH83-1	STN.18	292 ⁰	-045°	23.8m	11.0-14.6 m 11.0-18.8 m	0.62	0.94	3.99	2.11	0.032 0.016
DDH83-2	STN 18	292°	-060°	29.7m	10.5-15.9 m 10.5-18.9 m	1.65 1.26	0.35 0.28	11.33 7.72	2.18	0.009 0.005
DDH83-3	STN 18	292°	-080°	25.0m	17.5-18.1 m 17.5-19.5 m	16.60 5.07	0.03	2.26	8.66 2.65	0.005 0.001
DDH83-4	2 m E of STN 18	345°	-050°	32.6m	14.0-17.0 m	1.34	1.34	2.99	0.79	0.002
DDH83-5	2 m N of STN 36 between STN 36 & 37	292 ⁰	-045°	35.7m	27.5-28.0 m 26.6-28.9 m	1.03	1.13 0.53	8.95	2.56	0.034
DDH83-6	п	292°	-060°	32.6m	25.0-25.4 m	0.28	0.08	0.08	0.40	0.003
DDH83-7	STN 40	N/A	-090°	25.0m	17.7-18.1 m	1.01	0.01	0.03	0.30	0.003
DDH83-8	STN 40	074°	-045°	28.0m						

_Pamicon Developments Ltd.









APPENDIX V

QVB	-	Overburden
LST	-	Limestone
HBGR	-	Hornblende granodiorite
c.a	-	Core axis
Py	-	Pyrite
CP	-	chalcopyrite
GL	150	galena
SP	-	Sphalerite
PR	-	pyrrhotite
CL	-	chlorite
CA	-	calcite
GA	-	garnet
QZ	-	quartz
MG	-	magnetite
Во		bornite
HE	-	hematite
EP	-	epidote
SE	-	sericite
CY	. =	clay
НВ	220	hornblende
KF	-	potassium feldspar

LOCATION:	Plane	Table Map A18		n	RIII	HOLE L	OG.					10.000	E No. DH 83-1		AGE NO.
	2020	306 (3	1		MILL	HOLLE	u		PROPER	TV.					1/3
AZIM:	2920	ELEV: 126.43 m	Si .		DI	P TEST			PROPER		Croup -	Stramo	Showing		-
DIP: _(145°	LENGTH: 23.8 m					-1	Leonorez	CLAIM		Oloup -	Swamp	Showing		
		CORE SIZE: BQ	FOOTAGE	READING	CORREC	FOOTAG	READING	CORRECT	-			_			
STARTED:		ch 22/83					-	-	SECTIO				16/ 1		-
COMPLETE	D: Marc	th 23/83									Darney	D.A. C	Caulfiel	d	_
PURPOSE:	To tes	st mineralized skarn zone						-		OGGED:					
						1							rilling	Ltd.	
CORE RECO	OVERY:	>90%							ASSAY	ED BY: Ch	nemex La	bs Ltd.			
F00	TAGE	DESCRIPTION				SAMPLE	F00	TAGE	LENGTH			AS	SAYS		
FROM	то	DESCRIPTION	N.			NO.	FROM	TO	LENGIII	Cu %	РЬ %	Zn %	Ag/T	Au oz/T	
0	2.0 m	OUR (Broken ICT)												The state of the s	
2.0	11.0 m	OVB (Broken LST) LST - Coarsely grained light g	row marks	Idead 14	-						1				
2.0	11.0 11	stone - calcite grains up to		rrsed r	me-								6		
					-			7.77							
		Grain boundaries accentuated b			. †	_					1			1	
	-	pyrobitumen: black coatings; mo skarn contact.	re pronou	nced to	ards						-	1			
	-	No original bedding features			-			-			1		1		
	1.0.0			-	-						1				-
11.0	18.8 m		-			-			-		-	_	-		
	-	lower contact obscurred				_	-			-	+	+	-	-	-
		11.0-13.2 Dark green - black, sulphides:	massive s	ulphide	scarn		_	-	-	-	-	-	-	-	-
	-				-			-	-	-	-	-	+	-	-
	-	PY:strong euhedral habit grai	ns up to	.5 cm, mc	re			-		-	-	+	-	-	+
	-	obvious at skarn contact			-			-		0.52	0.14	2.77	1.04	0.090	-
•		CP: interstial Pyrite diss. +	Blebs.			Control of the second	11.0	12.1	1.1-m	_		_		_	-
					3	7813	12.1	13.2	1.1 m	0.79	0.79	6.94	3.80	0.012	-
		SP: Dark Red Brown Diss.								-	-	-		-	-
		GL:minor, Diss.									-	-	-	-	-
		Crude banding in sulphides -	45° to c.	а.				-		-	_	-		-	-
		* Magnetite throughout but a	trong fro	m 12 3-1	3 2m					-	-				-
		Gangue: includes CL, CA, QZ, R	ed & Gree	n GA	2000000					_				-	-
		11.3-11.5 m broken w/ 30 c.a	. breccia	ted sulp	hide					-					-
		vein.													
	1	13.2 - 13.7 m strong GA/CL sk	arn w/ an	pearance	of			de la lace							
7.56		skarn as a crackle zone with				9/1307/A30	0.5	100000						1	
	(17)	sulphide matrix		N-V-D				3	V		e li est				
		13.7-14.2 m-Remnant LST, mode	rately al	tered wi	th									A	
		minor sulphides				37814	13.2	14.2	1.0 m	0.23	0.62	1.15	0.72	(0.003	
		upper contact @ 55° to c.a.			3 1				-					1 - 00	
		Lower Boundary @ 45° to c.a.													
	-	Band of coarsely xtalline PY	Fax 2 am	9 1		WORKS TO THE REAL PROPERTY.		_		_	_				

LOCATION:		Table Map A18	_	D	RILL H	OLE L	OG						E No. 183-1		PAGE NO 2/3
	92°	ELEV: 126.43 m			DIR	TEST			PROPER		Cma	C	Charat		2/3
DIP: -0	450	LENGTH: 23.8 m			January Company	100000	1		1		Group .	- Swamp	Showing		
		CORE SIZE: BQ	FOOTAGE	READING	CORRECT	FOOTAG	EREADING	CORRECT	CLAIM	1771					
STARTED:	March	22/83	_					-	SECTIO		_				25-5
COMPLETED		23/83					-		-		.Darney	, D.A. (Caulfiel	.d	
PURPOSE:	To test	mineralized skarn zone							_	OGGED:					_
100									DRILLI	NG CO:	Globe D	Lamond I	rilling	Ltd.	
CORE RECO	VERY:	90%							ASSAY	ED BY: C	hemex La				
FOOT	TAGE	DESCRIP	TION				F001	AGE	LENGTH				SAYS	- 4	
FROM	то	DESCRIP	6.1	NO.	FROM	TO		Cu %	РЬ %	Zn %	ô2/T	Au oz/T	_		
11.0	18.8m	continued													
- 3		14.2-14.6 m PY Zone, strong Lower Boundary 45 to c.a.	MG Minor GI	. & CP	3	7815	14.2	14.6	D-4 m	1.48	4.40	6.41	3.95	0.010	
		14.6-15.5 m Lost core in br	Alexan amount		3	7816	14.6	15.5	0.9 m	0.21	0.66	0.70	0.12	0.003	
-		15.5 - 18.8m- strong garnet			2210										
		green GA, reticulately fract													
		CA,CL, QZ to 16.3	area and re-	LLCG WIL		7817	15.5	16.9	L.4 m	0.17	0.06	0.56	0.16	0.005	
- Y-1		16.3 - 16.9 weakly skarnifi	ed IST												
		16.9 - 18.8 strong garnet s		re Red (A 878	818	16.9	8.8	1.9 m	0.96	0.20	0.15	1.28	0.003	
		than previous section; Mod	mineralized	through	nout	+:					- 11		100-		9
		Up to 15-20% sulphide: PY,0	P,BO,SP W/ n	minor GI					7.1.						
		Gangue: CA, CL, two species	of GA, red	GA appe	ears	Track -									
		to rim green GA.			0.00										_
•		Sulphides occur interstitia			. @								1		
		100,300,450 to c.a.; banding	@ 45° to c.	a.	14 3-50-										
		red mineral coating fract.	- HE?	55-67						_		-	-		
										-	-			-	-
18.8	20.8 _m	Dark greenish mottled intr	usive border	zone:	37	7819	18.8	20.8	2.0 m	0.04	0.01	0.03	0.02	0.003	+
		extremely well altered - ve	ry minor PY				LIE SES			_			-	,	-
		alteration includes strong	CL, EP, CA,	SE	100				_	-	-				-
SCHALL ACC		Feldspars gone to SE, CY -	Hornblende	to CL	EP ;					1		1			-
		Feldspars gone to SE, CY - 10 cm QZ vein @ 75° to c.a	. at lower b	oundary	,										
										-		-		-	-
									-	-		-			
				9.00				4	-	-			-	1	_
									-						-
															-

AZIM: 292° FLEV: 126.43 m							D	RILL H	OLE L	OG		anadaa				E No. H83-1		PAGE NO. 3/3
AZIM: 29	020		ELEV:	126.43				DIP	TEST			PROPER		Croun	- Swamp	Chand-		
DIP: -()45°		LENGTH:	23.8 m	1	[=======				Lacronic	connect	CLAIM		Group	- swamp	Showin	g	
			CORE SIZE:	BQ		FOOTAGE	READING	CORRECT	FOOTAGE	READING	CORRECT	SECTIO						
STARTED:		22/83								-				Dave	D 1 (151		
COMPLETE	D: March	23/83									-	-		. Darney	, D.A. (aultie	ra	
PURPOSE:	To test	miner	alized sl	carn zon	e						_	-	OGGED:					
												DRILLI	NG CO:	Globe D	iamond I	rilling	g Ltd.	
CORE REC	RE RECOVERY:								L			ASSAY	ED BY: C	hemex L	abs Ltd.			
FOO	TAGE			DE	SCRIPTIO	N		s	AMPLE	FOOT		LENGTH			AS			
FROM	то			UL	SCHIF I IO				NO.	FROM	TO		Cu %	Pb %	2n %	Ag/T	Au oz/T	
					7.41.51.55						- 10							
20.8	23.8 -	HBDR:	nod. alte	ered: alt	eration -	consist	s of	37	7820	20_8	21.8	1.0 m (0.01	40.01	0.01	0.04	₹0.003	Mil -
		envelo	es of KI	Faround	fracture	s of CA,	EP,CL,		150			Contraction of						
		sulphi	les - PY															
												- AL -	Reposed					
		Pervas	ive weak	SE fel	.! CL	alterat	ion+HB					-11-55-						
	Pervasive weak SE f Fracture @ 0°, 45° t				c.a.		STOLL SALE I STORY											1
	12000000															6		
	1																	
	1						7/4		100									
								4								-		
	-	_									1-11-			-				
•	-	_													-	1	-	
	_	-													_	-	_	1
_		-						-					_				-	
-	-	-					_							1		1	1	_
		-							-			-	-		-		1	1
-	-	-		_				_		-	-	-		-		-		
	-	-					-	-				-	1	+	-		-	-
		-										_	+	_	_	-	_	_
	-	-						-			-		-	-				_
	-	-											-		-	-	_	-
	-	-					- 115 - 1						-		-		-	
-	-	-								-		-		-	-	1 27	-	
	-							-					-		-	-	-	-
	Lacore L	-			- 10 - V					1112-04		-	-					-
		-											-		-	-		-
													-	-	-	_		
													-					-

·

LOCATION	A Table Table ATV			D	RILL H	OLE	LOG					DDH	No. 83-2		PAGE NO. 1/2			
AZIM:	292°	120.43 m			DIP	TEST			PROPER		Crous	Creama 6	Short					
DIP: .	-060°	LENGTH: 29.7 m	FOOTAGE	I DC ADING			ne seus	I mener	CLAIM		Group -	Swamp S	onowing					
		CORE SIZE: BQ	FOOTAGE	HEADING	CORRECT	FOOTAG	SE READING	CORRECT	SECTIO				_					
STARTED:		ch 24/83		-		_					Darney	D.A. Ca	m164-1	4				
COMPLETE		ch 25/83		-	-		-	-	-		barney,	D.A. C.	dillel	<u>. a</u>	-			
PURPOSE:		ot down Dip extension of zone	-			-	-	-	-	OGGED:		N/1 N-/11/						
	sected in	DDH83-1					_	-				Diamond Drilling Ltd.						
CORE RECO		> 95%					1	1	ASSAY	ED BY: Chemex Labs Ltd.								
	TAGE	DESCRIPTION	ON		S	AMPLE		AGE	LENGTH		_		AYS	T Air	_			
FROM	то			1930-71		NO.	FROM	то		Cu %	РЬ %	Zn Z	82/T	oz/T				
0	2.3 m	QVB - LST rubble									-			-				
2.3	10.5 m	Massive coarse grained marbli	zed LST A	s in hol	le #1						-							
				- 15 EUI									28					
10.5	15.9 m	Skarn - massive sulphide zone																
		10.5 - 11.2 m - massive, coars	ely euhed	ral PY,	37	821	10.5	11.2	0.7 m	1.32	0.58	9.39	3.23	0.022				
		is strong for 20 cm near upper	contact	then CP											1 1			
		increases down the hole wherea	s MG cont	ent														
		decreases.																
		Crude banding @ 50° to c.a.																
		PY > SP 7 CP 7 GL																
		paragenesis finds PY-SP-CP																
		Gangue _ CA/CL			- 63								-					
- 5 - 5		Sulphide: 80-90% (includes MG	()															
•		11.2 - 12.9 m strong CP and S	P zone	11/2/5-2	37	822	11.2	12.4	1.2 m	3.60	0.22	9.79	2.57	0.006				
		with lower MG content						The second of					1.020.0					
		CA.CL - gangue									1							
		12.4 - 15.9 m - massive sulph	ides with	strong	MG, 37	823	12.4	14.1	1.7 m	0.78	0.15	10.70	1.45	0.010				
		less CP than above section			37	824	14.1	15.9	1.8 m	1.32	0.55	13.70	2.20	0.006	,			
		Coarsely xtalline PY for 10 c	m on lowe	er contac	·t								1	1				
		lower contact @ 40° to c.a.		CHARLES VICTOR VICTOR														
15.9	17.6 m	weakly altered LST section; tr	ace sulph	ides	37	825	15.9	17.6	1.7 m	0.15	0.03	0.41	0.02	<0.003	3			
		E	10.00.00 - 1-00 ex						Land of									
	4						1								-			
									Date:			1		3	2			
										1				12-				
									1									
						-100									500			
								12.						1				
													1					
													4505					

LOCATION:		Table A18	-	D	RILL H	OLE L	OG			HOLE No. DDH83-2								
and the state of t	920	ELEV: 126.43 m			DIB	TEST			PROPER	1.1								
DIP: -	060	LENGTH: 29.7 m							. —		Group -	Swamp	Showing					
		CORE SIZE: BQ	FOOTAGE	READING	CORRECT	FOOTAG	E READING	CORRECT	CLAIM									
STARTED:		h 24/83	_						SECTIO									
COMPLETE		h 25/83									Darney,	D.A. C	aulfiel	d				
PURPOSE:	Interce	pt down Dip extension of zone							-	OGGED:								
	ected in	DDH83-1										amond Drilling Ltd.						
CORE RECO	OVERY:	7 95%							ASSAY	ED BY: Ch	nemex La	bs Ltd.						
F00	TAGE	DESCRIPTI	ON		S	AMPLE	FOOT	AGE	LENGTH			AS	ASSAYS					
FROM	то	DESCRIPTI	ON			NO.	FROM	TO	LLINGIII	Cu %	Pb %	Zn %	Ag/T	Au oz/T				
													-	-	_			
17.6	18.9 m	Garnet skarn - both red & gre	en GA -		37	828	17.6	18.9	1.3 m	1.07	0.29	2.26	1.70	₹0.003	_			
		other gangue minerals include	CL, CA, QZ.	sulphi	de -										_			
		weak to mod. with PY>CP > BO	(Minor) MG	; locall	у													
		strong. Lower contact broken	n and mark	ed by			Burger - cons			0								
	-	colloform fracture filling par consisting of CA,CL,GA.	rallel to	c.a.	-								-		-			
		VEAT SECTION AND ADDRESS OF THE PARTY OF THE								-		1			1			
18.9	20. 9 m	Dark green extremely well al	tered intr	usive	37	827	18.9	20.9	2.0 m	0.04	0.02	0.36	0.02	<0.003				
		alteration; CL,EP,CY; minor	sulphides-	mainly I	PY													
								G-1-27-2				V- cas						
20.9	29.7 m	HBGR				-711												
•	The state of the s	Upper contact marked by 20 cm	n of salmo	n pink	fg.													
		aplite - sugary texture;contac	rt @ 40° t	о с.а.								-	-	-	+			
		alteration of intrusive is as	describe	d in DDI	183-1													
-23		Minor PY on fractures						Ser periors	L-72	6								
		Common Fractures:										- 1997a-	1					
	1	40-45 to c.a. offsetting fra	act.@ 30°	to c.a.							E 20 SE							
			Devilence - 1					Variation I						16				
															T			
									- Souce	o Lessin								
-9-11-						P 2000 - 1700												
						59.55		1										
- 0																		

LOCATION				D	RILL H	OLE L	OG		022424			DDI	E No. 183-3	P	PAGE NO.
AZIM:					DIP	TEST			PROPER		0	Course	Charden		
DIP:	-080	LENGTH: 25 m	F007:07	Toc	37682	2.5	-l accour	CORRECT	CLAIM		- croup	Swamp	Showing		
	numerican	CORE SIZE: BQ	FOOTAGE	READING	CORRECT	FOOTAG	READING	CORRECT	SECTIO			-			
STARTED:		1 25/83	-	K174-		-	-	-			Dame are	D 4 6	nu164-1	7	-
COMPLETE	D: Marc	1 26/83	-			_	-				Darney,	D.A. C	aulilei	.a	
PURPOSE:	Inte	rsect Zone under DDH83-1,2					-			OGGED:					
		0.5%					-					amond D		Ltd.	-
CORE REC		> 95%					FOOTAGE		ASSAYED BY: Chemex Labs Ltd.					-	
	TAGE	DESCRIPTION	N		s	AMPLE			LENGTH				SAYS	T AIL.	_
FROM	то		100			NO.	FROM	то		Cu %	РЬ %	Zn %	82/T	Au oz/T	-
0	1.8 m	OVB (LST)												-	-
1.8	16.6 m	Coarse x-alline LST - as desc Lower contact @ 75° to c.a.	ribed in	holes 1	& 2										
16.6	16.7 m	Skarn					A THE OW			losson.					
16.7	17.1 m	Gouge zone - pale green clay		# 91	37	828	16.6	17.5	0.9 m	0.05	0.02	0.11	0.10	0.003	
17.1	17.5 m	Skarn - Dense dark green, fig. Banding @ 30° to c.a.						74 = 1		70.00	77 - 12 - 12				in the
	Company and	Banding @ 30 to c.a.								_					
17.5	7.5 18.1 m Massive sulphide zone - consist some euhedral PY grains, Pyrite		ts of mas	sive CP	with										
			e increas	es near	37	829	17.5	18.1	0.6 m	16.60	0.03	2.26	8.66	0.005	
	b	bottom of section	Sulphide banding @ 55° to c.a.												
		Sulphide banding @ 55° to c.a.												-	
		Gangue - CA, CI., QZ	Carried Process												
		hottom	100						*						
			100]										9		_
		700'	-												_
		PY CP SP	5P+PY		- 200						1			1	-
		17.6 m broken rubble							-		-	-	-		-
18.1	18.4 m	Well altered border zone											-		
		Fine PY, light green EP or GA			37	830	18.1	19.5	1.4 m	0.13	40.01	0.03	0.08	0.003	_
- L-11		Mainly CL , SE , CA alteration							-			_			-
18.4	25.0 m	Med. grained HBGR		- U.S D C	0	rate W		1		-	-				-
		18.8 - 1 cm CA, CL fracture @	20							-	-				-
7	STATE OF STREET	to c.a. Enveloped by KF grad	ing to SE	-CL							-	-	-	-	-
		pervasive alteration - fracts	. also @	50° to	c.a.					-	-	-			-
										-	-		-	-	-
							10 resul			-			-		-
										-			-		1
	200									-	-			1	-
												100000			

	LOCATION: 2 mE of A18			DRILL HOLE LOG								DDH83-4			1/2			
AZIM:	345°	ELEV: 126.43 m			DIP	TEST			Cliff Group - Swamp Showing									
DIP: -(050	CORE SIZE: BQ	FOOTAGE READING CORRECT FOOTAGE READING CORRECT															
STARTED:			FOOTAGE	READING	CONNECT	FOOTAG	SE NEADIN	COMMECT	SECTION:									
	March D: March		—	-			-	-	DATE LOGGED: DRILLING CO: Globe Diamond Drilling Ltd.									
PURPOSE:		t strike extension of the zone	-	-	-			-										
PUNPOSE.	10 tes	t strike extension of the zone	-	-	-	-	-	+										
CORE REC	OVERY.	> 95%	-				-	_	ASSAY	¿ LLu.								
	TAGE	> 95%				SAMPLE	FOOTAGE					ASSAYS						
FROM	TO	DESCRIPTION					FROM TO		LENGTH	Cu %	РЬ %	Zn %	Ag/T	Au /T	1			
		D. 1.1			_	NO.	rnom			Cu A	10 A	LII A	02/1	02/1	+			
6.7	6.7 m	Rubble - mainly LST Green mottled skarn - EP,SE,CL,						-			-	-	+	+	-			
0.7	0.0 m										0.04	0.10	(0.01	(0.003				
	-	green GA (-andradite)		-	37	831	6.7	8.0	1.3 m	0.04	7.04	10.10	70.01	10.003				
	-	Fractured & broken					-				-	-	+	+	+			
	_	Sulphides: CP As fine diss. a					-				1	-	+		-			
		with PY enveloped by G A fract			.8.		-	_	_		1 2	-	+	+	-			
8.0	11.3 m	Some fracture surfaces are slic Coarse xtalline LST with blacki			-1		-	-	_	_	-	_	+	-	_			
0.0	11.5 m			iai rim	ming		-	-		-	-	-	+-	-	-			
		grains - Pyrobitumen. No sulph	_		-	-		-	-	-	+		_					
11.3	11.8 m	dark green skarn; CL, green & r		832	11.3	11.8		0.00	1	+	+		_					
	-	finely diss. PY with minor CP							0.5 m	0.02	70.06	7.0.05	T0.01	₹0_003	-			
11.0	11.0	slightly broken core - poor rec			-	-		-	_	1		+	-					
11.8	14.0 m	12.6 -13.5 m - coarse xtalline	-+			_	_	-	_	1	1	+-	+					
	+	lower contact with skarn @ appr			27	839	14.0	15.0	1.0 m	1.12	3.26	3.72	1.00	₹0.003	_			
14.0								_		1.26	0.74	2.74	1.00	₹0.003				
: EXWINEX	16.0 m				arse 37	833	15.0	16.0	1.0 m	1.20	10.74	12.77	1.00	10.005	-			
	-	PY followed by 6 cm c.e. LST th	en into	coarse	-		-	-		-	1		1000	+				
	-	Skarn pale green colour consist	ine of G	A. CL. CA	& EP		-			-	1	1	1	1	_			
		crude banding at 70° to c.a.		,,,			_	1			1		+	-				
mires e	1	Sulphide: PY, CP, SP, GL & MG in s	trong ab	undance		_	-	-				1	+					
	-						-	1			3000		1	1				
	-	MG content,	section	is t	he		-	1			·	-	-	-				
		MG only locally strong in dies	rete han	ds rimm	ed by			1			-	1						
		MG only locally strong in d/sc CP in lower meter. Bands norma	lly at 9	0 to c	.a.		17											
	1	Garnets are locally euhedral w	ith sulp	hides i	n													
	1	matrix.				1995		1					1					
								7	-		-	1						
	-			-			-		1			-	1					
					-	-		1					1	_				

OCATION:	2 m	E of 18		D	RILL H	OLE L	0 G					1000	L E No. DH83-4		PAGE NO. 2/2				
ZIM: 3	450	ELEV: 126.43 m						14	PROPER	TY:		The second		71	A SHOOT S				
	-050	LENGTH: 32.6 m			DIP	TEST			Cliff Group - Swamp Showing										
		CORE SIZE: BQ	FOOTAGE	READING	CORRECT	FOOTAGE	READING	CORRECT	CLAIM	VO:	- E								
TARTED:	March	26/83				-			SECTION:										
OMPLETED		27/83							LOGGED BY: R.Darney, D.A. Caulfield										
URPOSE:		strike extension of the zone					-			OGGED:									
									DRILLI	NG CO: (Clobe D	iamond	Drillin	g Ltd.					
ORE RECO	VERY:	95%										abs Ltd		S DEUI					
	AGE		_		1.	AAADI E	FOOT	AGE					SSAYS						
FROM	TO	DESCRIPTION	N		1 ,	NO. FF		FROM TO		ENGTH Cu % Pb % Zn % OZ/T OZ/T					r T				
16.0	18.0 m			_	27		16.0		1.0 m		0.04	2.50	0.36		_				
10.0	10.0 m				17.0			0.07	0.01	0.10	<0.01	0.003 <0.003	+						
		Dark green mottled border phase				000	17.0	10.0	1.0 u	0.07	0.01	0.10	10.01	10.003	-				
		finely diss. PY with minor CP t	hroughou	t; 16.8	-				-		-	-	-	-	-				
12020020		17.2 m - clay gouge	Tools as		27	836	18.0	21.3	3.3 m «	0.01	0.01	0.02	0 01	0 002	-				
18.0	21.3 m	M.g. HBGR with typical KF,CL,SF	und	636	18.0	21.3	3.3 m «	0.01	0.01	0.02	50.01	<0.003	-						
		OZ ,CA, minor sulphide fracture	s @ 10-3	0 to c	.a.	-					_	-	-	-	-				
		Very pervasive pale green SE.CI out. Latest CA fractures @ 65°	alterat	ion thr	ough-	_			-		+	+	-		+				
		out. Latest CA fractures @ 65	to c.a.	cuts a	11				-	-		+	-	-	-				
		other fractures									-		-	-					
21.3	22.2 m	Skarn in upper contact @ 30° to	c.a.,						9	-	1 1 1		-						
		Skarn consists of C ,CA, QZ als	o a blac	k miner	al 37	837	21.3	22.2	0.9 m	0.32	0.05	0.77	0.08	40.003					
		sooty - pyrobitumen; lower conta	ct @ 45°	to c.a	.,						-	-	4	-					
		sheared and gouged		Portugation					•	_	-	-	-	-					
	00.7	Sulphides: PY, CP				000	00.0	00.7	0.5		10.00			-	-				
22.2	22.7 m	Mottled green border phase int	rusive		37	838	22.2	22.7	0.5 m	0.01	0.01	0.04	(0.01	0.003	-				
June 1	70/02 0000000	Control of the contro								-	-	-	_	-					
22.7	32.6 m	HBGR - many fractures have bla				- 1		-	-	-	-	-	+	_	-				
		at 28.4 m,1 cm wide; black mine	ral (pyr	obitume	n)		-		-	-	-	-	-	_	-				
		in fracture @ 15° to c.a.								-	-	-	-	-	_				
		Alteration is typical of the o	ther hol	es						-	-	-	+-	-	-				
										1		-	_						
										_			-	-	-				
									-	-	-	-			_				
										-		-			-				
									1		-	-			-				
							-			-	-		-	-					
										_	-	-	-		-				
uese Views																			
5-15-3						73	E. Santa	1	2.2					12	1				

LOCATION:	DRILL HOLE LOG									HOLE No. DDH83-5			PAGE NO.					
36 & AZIM: 292	37		DVILL HOLE FOR									Don	-		113			
AZIM: 292		ELEV: ~ 123.06 m	DIDTER							PROPERTY:								
DIP: -0	45	LENGTH: 35.7 m	FOOTAGE READING CORRECT FOOTAGE READING CORRECT							Cliff Group - Swamp Showing								
		CORE SIZE: BQ	FOOTAGE	READING	CORRECT	FOOTAG	READING	CORRECT	CLAIM	NO:	Company of the Company							
STARTED:	March	28/83				3100			SECTION:									
COMPLETED	March	1 29/83			W				LOGGED BY: R.Darney, D.A. Caulfield									
PURPOSE:	To test s	strike extension of zone							DATE L	OGGED:								
				(4)	(T-1)				DRILLING CO: Globe Diamond Drilling Ltd.									
CORE RECOV	VERY:	> 95%							ASSAYED BY: Chemex Labs Ltd.									
FOOT	FOOTAGE						FOOT	AGE				AS						
FROM TO DESCRIPTION			V		1 "	SAMPLE NO.	FROM TO		LENGTH	NGTH Cu % Pb %			AZ/T	Au/T				
0	1.9 m	Ovb.					1110			Cu n	10 %	Zn %	102/1	02/1				
	3656 00	L/C/T-1010/Z-	KI-00/20/2004			_					+	-	-	1	-			
1.9	5.2 m	Marbilized LST, light grey, co								_		_	-	-	-			
		ed grains up to 1.5cmcharacter black grain coatings on CA gra	ristic in	crease	in	_			-		-	-			-			
	-	w/dike, poor rec. from 3./ -	5.7 m.	Concac	-	_				_	+	-	-	+	+			
				_				-	-	-		+•	+					
		@ 2.6m @ 45 to c.a. 1.5 cm b	and of GA	(green	1)					-	-	-	-	-	+			
	skarn w/ copper metallization				_						-		-	-	+			
	green G,A euhedral up to 7.5 mm			_					_	-	-	-	-	-				
		5": BO = CP, PY			_						-	-		-	-			
		oxides: malachite								-	-		-	-	-			
										-	-		-	-	-			
5.2	7.1 m	dark green basic dike: massiv												-	-			
		appearance v.f.g dike; broken						-					-					
	8	stained fracture surfaces tr.	ctures										1					
		@ 40° to c.a. lower boundary	marked by	a pare						-					-			
		60° to a a	lower con	Lact e														
		00 00 0141																
7.1	24.0 m	marbilized as above									0				-			
and the second		21.1 - 21.4 m: band of euhedr	al green	GA up t	:0													
	No merce	3 mm (over 2 mm)																
			100 0					19-35										
24.0	28.9 m	light to dark green skarn, ve	ined, mo	ttled &	banded				100									
		textures; sharp upper contact	@ 40° to	c.a.	3	7840	24.0	25.0	1.0 m	0.23	0.42	0.33	0.26	0.003				
					3	7841	25-0	25.6	0.8 m	0.12	0.50	0.43	0.08	(0.003	1			
		24.0 - 27.5 m: strong skarnif	ication c	haracte			25.6	26.6	1.0 m	0.03	0.32	0.30	0.10	0.003				
		by abundant pale green & red	dish brow	n GA	3	7843	26.6	27.5	0.9 m	0.08	0.50	1.48	0.16	0.003				
		other gangue minerals includ-	e CL,CA,Q	z; sulph					energy.									
		as diss., blebs, fracture filli	ngs: GL,C	P,Py,SI	7						A.C.							
		w/GL appearing in greatest pr examined to date.	oportions	or the	holes			- 1 O 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1							James Comment			
		examined to date.							_	_				_				

	36 & 37				DRILL HOLE LOG							HOLE No. DDH83-5			PAGE NO. 2/3	
AZIM: -2	92°	ELEV: - 123.06 m	7.1													
	-045°	LENGTH: 35.7 m	DIP TEST						PROPERTY: Cliff Group - Swamp Showing							
_	043	CORE SIZE: BQ	FOOTAGE	READING	CORRECT	FOOTAG	READING	CORRECT	CLAIM							
STARTED:	Marc	ch 28/83	-			1.001			SECTIO			-			-	
COMPLETED			-						LOGGE	DBY: R.	Darney.	D.A. C	Caulfiel	d		
PURPOSE:	Hall	ch 29/83					_			OGGED:						
	To test	strike extension of zone				_					laba Di	amond D	-4114	7+4		
CORE RECO	VERV.	95%	-		-	-	-	-	ASSAVI	n ev. Ch	emey I	bs Ltd.	rilling	Ltd.	-	
		75%		1	1.		FOOTAGE		ASSATI	0 87. CI	lemen La					
	AGE	DESCRIPT	ON		1 5	AMPLE	FOOTAGE		LENGTH	ASSAYS						
FROM	то				_	NO.	FROM	то		Cu %	Pb %	Zn Z	Åg∕T	Au oz/T	+-	
		* No appreciable MG									-		-	_	-	
7500000		- banding at the zone is qu	ite irregu	lar w/ t	he							-		-	-	
		bands being swirled & conto								23000	-			_	-	
		pale greeng, A, also 45 -50	CL,CP,PY e	nveloped	by	-									₩	
		pale greenG,A, also 45 -50	,75° 90° t	o c.a.											-	
		e 25.5m	1117-9	reen GA e	nV .					_						
			(111)													
		pervasive rig Gd -	CL, PY, C	P,CL fract		0.2	1000							1		
		- 27.5 - 28.0 m dark green	skarn w/ a	more ma	ssive 3	7844	27.5	28.0	0.5 m	1.03	1.13	8.95	2.56	0.034		
		sulphide content								1000						
		skarn minerals consist of G	A,CL,CA &	CY?												
-		5": 60% w PY,GL,SP,CP (PY>G	CTSP,CP)									1				
5 55 ==		5": 60% w PY,GL,SP,CP (PY>G lower contact @ 70° to c.a.				150									-	
- 2		- 28.0 to 28.9 m - back inte		CA	3	7845	28.0	28.9	0.9 m	0.14	0.22	1.22	0.48	0.003		
	N	red & pale green) skarn w/o			es l	1 31	6 33 7 75									
		Qz.CL.														
		Minor sulphides except for	LO cm @ 28	.4 m whe	re											
Lorenza de		coarse PY occurs (30%)														
													1	U Luca-Tu		
															- 60	
								P 4					1			
									1		-	1				
											1					
								5							1 30	
- 20				7	-							1				
	-				_	2007 - 14		CO CINS	1	-	-		1		F 12 1 2 2 1	
		The state of the s			_					-	1		1	-	1	
						_			_	-	_	-	_		_	

LOCATION:		n Plane Table Points	-	D	RILL	HOLE L	OG						E No. 0H83-5		PAGE NO. 3/3				
36 & AZIM: 2	920	ELEV: ~ 123.06 m	-	PRILL HALL LOU							STATE OF THE STATE								
DIP: -045	92	LENGTH: 35.7 m	-	DIP TEST							PROPERTY: Cliff Group - Swamp Showing								
DIF043		CORE SIZE: BQ	FOOTAGE	READING	CORREC	TEOOTAG	E READING	CORRECT	CLAIM		oroup	owacip	onowing	h					
STARTED:			- ITOUTAGE	THE ADMIN	00	FOOTAG	E READING	Commedi	SECTION:										
COMPLETED		h 28/83 h 29/83	-								LOGGED BY: R.Darney, D.A. Caulfield								
PURPOSE:	Harc	11 29/03	-		-	-	-	_	DATE LOGGED:										
PUNPUSE.			-			-	-	-			1 - 1 - D			*	_				
CORE RECOV	EDV.			-	-	_	-	-				bs Ltd.	rilling	Ltd.	_				
	FOOTAGE			N			FOOTAGE		ASSATE	D BY: CII	emex La		ASSAYS						
DESCRIPTION			ON				FOOTAGE		LENGTH	. "	In		CONTRACTOR OF THE PARTY OF THE	I Au ,_	_				
FROM 28.9	ΤΟ 29.3 π			oon harder phase			FROM	то	De la realisea	Cu %	РЬ %	Zn %	ôž/T	Au oz/T					
28.9	29.3 m	well altered, dark mottled										-	-		1				
		of intrusive HBGR; alteration								COLUMN CONTRACTOR		-							
		CL, green GA; possibly EP.C					28.9	29.3	0.4 m	<0.01	0.02	0.05	<0.01	<0.003					
		disseminated sulphides (PY)	, lower co	ntact @	45								W. A	-	-				
		to c.a. (gradual change in	to fresh i	ntrusiv	e)						-	-	-						
29.3	31.6m	moderately altered HBGR, two	most comm	on fract	ture						-								
		directions - 80°-90°, 40°-50°	- CT. CA T	n Kf en	,														
		w/pervasive CL,SE alteration																	
	* - 30			- 33									2.10						
31.6	33.4m	Skarn of LST fragment trapport consists of:	-	37847	31.6	33.6	2.0 M	0.07	0.11	0.09	0.05	K0.003							
		red, green GA, CL								1									
		CP_GL,PY 5% occur along ha	0					-		-	-	+-	-						
		lower contact @ 20 to_c.a.		- 17															
		upper contact @ 15°-20° to	c.a.																
33.4	35.7m	HBGR with small skarnified	section (6 cm @	34.0)						-			+	+				
		with minor CP, PY (CP> PY)																	
		moderately altered with same CL fractures in KF env 30	characte	ristic c.a.	CA.														
									Sauce and		-		-	-	-				
							1	-				-	10-0	1					
								-			-	1000	-		-				
											-	-	-		-				
														21					

. 4

-36	36 + 37			DRII L HOLE LOG							900000	E No. H83-6	P	AGE NO. 1/2		
AZIM:	2920	ELEV: 123.06 m		DIF	TEST		G.	Cliff Group - Swamp Showing								
DIP:	-060 ^o	LENGTH: 32.6 m	FOOTAGE READ			e peaning	Meescr	The state of the s								
*******	-	CORE SIZE: BQ	POUTAGE READ	ING CONNEC	POUTAG	READING	WHEEL									
STARTED:		rch 29/83			1	-	-		LOGGED BY: R.Darney, D.A. Caulfield							
COMPLETE		rch 30/83			+-	-	-	DATE LOGGED: DRILLING CO: Globe Diamond Drilling Ltd.								
PURPOSE:		ole extension of intersection		_	1	-										
in DDE	the live is not a second to th				-	-										
CORE REC	OVERY:	7 95%						ASSAYED BY: Chemex Labs Ltd.								
FOO	TAGE	DESCRIPTIO	IN		SAMPLE	FOOTAGE		LENGTH	2000			SAYS	1 40			
FROM	то	DESCRIPTION	NO. FRO				FROM TO		Cu %	Pb %	Zn %	ôž/T	Au oz/T	-		
0	2.3 m	QVB					1 4									
	-									-		-		-		
2.3	4.5 m	marbilized LST; coarse crystal	lline, white,	tr.						-		-		-		
		malachite @ 2.5 m								-	-	-	-	-		
4.5	6 0 -	1-1									-	-		-		
4.5	6.8 m	dark green dike; upper; lower appear to be quite sharp - the						_	_	_	-	+	_			
	-	chilled characteristics - much			-		-	-	-	-	-		-			
-	-	colour as one approaches conta			1000		-			-		-		1		
	-								_	-	-	_		-		
	-	ninor throughout but definitely content on contacts; green GA a			-		_		-		1					
	-						1000			1		-				
	_	rock w/ chloritic clots of fra								_		1				
•		TOCK W/ CHIOTICIC CIDES OF ITS	agments: pheno	CLYSTS		-						1				
6.8	25.0 m	marbilized LST, med, coarse gr	rained calcite	grains												
		up to 2.5 m in width; grains a						fig.					1			
		pyrobitumen near contact w/ sl	karn (30cm) a	and												
		lower contact of dike as well	as other loca	alized						1	In-Section 1					
		sections														
25.0	25.4 m	skarn, not well developed as i	far S" content	В:	7848	25.0	25.4	0.4 m	0.28	0.08	0.08	0.40	0.003			
		is concerned but gangue minera	alogy is stron	ng.				-								
4		gangue: red GA - grossularite	2,	В	7849	25.4	26.4	1.0 m	0.01	0.01	0.01	0.02	b.003			
		green GA - andradite, QZ, CL				Styletters and St	STREET, THE WAY	MARKS START	0.0000000000000000000000000000000000000	0.00000	15 (61/1-12-16-16-16-16-16-16-16-16-16-16-16-16-16-	- 1 C/8000-	A TOTAL SERVICE	-		
		S": PY>CP, <5% v. minor G L												-		
		upper contact @ 50% to c.a.							-					-		
		lower contact @ 50% to c.a.											1			
	1 C - 7 - 7 - 7 - 7 - 7 - 7 - 7 - 7 - 7 -	- skarn has crushed appearance		culate			1									
		pattern of fine CL, CA, Sulphic	de, hair line					DEVENOUS TO		1						
		fractures; most prominent dire	ect. @ 45 -50	to c.a.				1.00450			11 (-27) 1-10	11				

LOCATION:	Betwe 37	en Pla	ne Table	Points		n	RILLE	OLE L	ng					HOL	H83-6	- 1'	PAGE N
AZIM:	292	_	ELEV: 123	3.06 m	2		RILL I	OLL L	Ju		PROPER	TY:					
The second second	060°		LENGTH:	32 6 m			DIP	TEST			-	Cliff	Group -	Swamp	Showing		
			CORE SIZE:	BQ	FOOTAGE	READING	CORRECT	FOOTAGE	READING	CORRECT	CLAIM	NO:					
STARTED:	Marc	h 29/8	33								SECTIO	N:		-		10.5	
COMPLETED	: Marc	h 30/8	33								LOGGE	BY: R.	Darney,	D.A. C	aulfiel	d ·	
PURPOSE:	Down hol			intersection				1			DATE L	OGGED:					
	H83-5														rilling	Ltd.	
ORE RECO		95%											nemex La				
FOOT				DESCRIPTIO	N		s	AMPLE	FOOT	AGE	LENGTH		_		SAYS	T A11	
FROM	то			D 2001111 110	* x			NO.	FROM	то		Cu %	РЬ %	Zn Z	ô2/T	Au oz/T	-
													-		-		-
		- the	lower co	ontact is marked pebbles.	1 by 1.5	cm of C		_					-	-	-	-	-
		gangi	e +oroken	bennies.									-	-		-	-
25.4	32.6 m	meder	entals: ale	ared upon		frantur	_	-				-		-	-	-	-
25.4	32.0 m	dire	ctions @ O	ered HBGR, most	- 50°	LIACLUIC	-			- 1	_	_	1	-	+	+-	-
	_	- 20	9250		-		-				_		+	+	-	-	+
		:29.	o - 625 E	co c.a. GA env.	9 5° to	C. 8	_	_						1	+	_	1
		-	de by qu	on ob it trace		c.a							1	1	1		_
		tuni	cal altera	tion is	ch,QZ,CL,	nin. PY fra	et.										
		CYPI	ar artera	CION 18		CL BAY.											
			. 7	The state of the s	L necve	sive SE,CL	alte				7-4				1		
				A	/									A F			
		* PY	is the ma	in S" in HBGR	5" % < 1%												
		400														1	
			- 200											2.73.74	1		\perp
															-		+
			4									-	+		-	-	+
				140 Miles			-					_	-		-	-	+
-					V- Trumbra					-	_		-		-	-	+
					-	774				0.480-77-76		-	-	-	-	-	-
	-											-		+	-	+	+
-	-				_			-			-	-		-		1 7/20	+
												1		+			+
													-	1		-	
	-																1
									A COMP					1		1	
												777		-			
400		_			_										_		

LOCATION:	Plane	Table A 40	_	D	RILLI	HOLE L	OG		147			DDH	No. 83-7		AGE NO
AZIM:	N/A	ELEV: -127.59 m			rector				PROPER	TY:				11967	
	90°	LENGTH: 25.0 m	-0.05			TEST				Cliff	Group -	Swamp	Showing		
		CORE SIZE: BQ	FOOTAGE	READING	CORRECT	FOOTAGE	READING	CORRECT	CLAIM	NO:				-14-2-00	
STARTED:	March	30/83							SECTIO	N:					
COMPLETED:	March	31/83							LOGGE	DBY: R.	Darney,	D.A. C	aulfield	1	
PURPOSE:		sect lateral extension							DATE L	OGGED:					5777
		cepted in DDH83-1,2,3,4					U.S.		DRILLI	NG CO: G	lobe Di	amond D	rilling	Ltd.	
CORE RECOV	ERY: >	95%										bs Ltd.			
FOOT		A STATE OF THE STA		•		SAMPLE	FOOT	AGE				ASS	AYS		
FROM	то	DESCRIPT	ION			NO.	FROM	то	LENGTH	Cu %	РЬ %	Zn %	8€/T	Au /T	
0	2.6 m	QVB LST rubble	-								-		1		
	2.0	Zin not toonte			- 1	8									
2.6	4.0-		land come	an door	ribed								1		
2.0	4.8 m	marbilized LST, coarse grain previous holes, black co	natings of	nyrohie	men						1				
		on calcite grain boundaries	most prev	alent fr	rom				_		1				
		2.6 - 3.0 m				-		-				1	-	-	_
		4.5 - 4.8 m							_						
-							-								
					AC WIND	_	-				100				
4.8	5.7 m	skarn - core lost in broker 5.2 - 5.7 m; upper contact	rubble se	ection to	rom	37850	4.8	5.7	0.9 m	0.01	0.01	0.03	0.04	K0.003	
		color is mottled dark to 1:				37030	4.0	3.7	0.3 m	0.01	0.01	0,03	0.04	10.003	
			But Steen,	acpenda	-0										$\overline{}$
		on CL/GA ratios									1				1
		gangue: green andradite GA- along upper contact + lower		TIY SEE	ong										
		QZ	,		-										1
-	-											_	-		1
		CA CL			-					-	-		_		
		5": 5% PY GL,CP,SP?			_								-		
					_										
		lower contact @ 45° to c.a skarn has crushed appearan	a dua ta i	ntonoo	_	-		_							1
		fracturing	ce due to 1	incense	_			-	-		1	1			1
			,	10 2 May 2 10	Date Control		-			-	-	1	1	-	+
5.7	17.0 m									\vdash	-	+	1	-	1
		of pyrobitumen coated grain 5.7 - 5.8 m, 9.8 - 10.1m,			ue:							1	-		
						70766			0.7	0.05	0.00	0 01	10.00	/0.000	
17.0	18.1 m				nter-	70796	17.0	17.7	0.7 m	0.05	0.01	0.01	K0.01	K0.003	+
		spersed w/ marbilized LST; marbilized LST, tr. sulphi		white		_	-		-		1	-	1		-
_		marbilized Lor, tr. sulphi	ues.		_					-		-	1	-	
					\rightarrow						-	1	1		+
2								_		-	-	-	-	-	-

LOCATION:	Tane	Table A 40		D	RILL #	DLE L	OG					DDH	No. 83-7	- 1	PAGE NO. 2/2
AZIM:	N/A	ELEV: 127.59 m						1.0	PROPER	RTY:					
DIP:	-90°	LENGTH: 25.0 m			DIP 1	EST				Cliff	Group -	Swamp :	Showing		
	500,00	CORE SIZE: BQ	FOOTAGE	READING	CORRECT	FOOTAG	READING	CORRECT	CLAIM	NO:					
STARTED:	Man	rch 30/83							SECTIO	N:					
COMPLETE	D: Mar	rch 31/83							LOGGE	DBY: R.	Darney,	D.A. C	aulfiel	d ·	
PURPOSE:		sect lateral extension of							DATE L	OGGED:					
		ted in DDH83-1,2,3,4				9-5-			DRILLI	NG CO: G	lobe Di	amond D	rilling	Ltd.	- 651
CORE RECO	VERY:	95%										bs Ltd.			
	TAGE				1 54	MPLE	FOOT	AGE T				ASS	AYS		
FROM	то	DESCRIPTION	N			NO.	FROM	то	LENGTH	Cu %	РЬ %	Zn %	AZ/T	Au/T	
							1								
		17.4 - 17.7 m -30%-40% green	GA w/LST	; diss.					-						
		BO,CP w/green GA,minor MG			-										1000
					70	797	17.7	18.1	0.4	1.01	0.01	0.03	0.30	<0.003	
		17.7-18.1 m massive green & r	ed GA												
		skarn + QZ, CA,CL												_	
_		The state of the s			_				-						
Sulp	ides:	banding 35% to c.a., increase	in CP.P	Y conter	nt			-							
		CP occurs as diss. signif. am												1	
		as individual discrete grains		0.00	_									_	
		locally up 10% CP tr. MG, GL.	-												
18.1	10.0 -	chilled border phase - dark g	roon don		7/	798	18.1	19.9	1.8 m	0.05	0.01	0.01	0.04	K0.003	
	17.7.1	fine-grained rock w/ discrete				17.30	_10.1	1		1	1	1	1	1	
		with sulphides being CP,PY,PR													
		rounded (2-3 mm) - possibly													
	1	- also occurence of remnant f	aldenar	lathes					7.7		1				
		sulphides = 2%	Clubpar	Tacileo.										4	
19.9	25 O m	HBGR - appears to be slightly	more ma	fic (mo	re MC						-		-	1-23	
17.7	22.0				10							1000		3	
		frac. dir 30°, 40° - 45°,	60° - to	c.a.											
51 - E		not as well altered, fracture	s have s	mall (2	mm)			The state of	la mora					1	
		env. in comparison to the fir	st 6 hol	es.									2000	4 3 4	
1-1-1														7	
														3	
							Variation (Sec.				J.		- English		4
											COUNTRIES.				
											1				4
											1				

LOCATION:	Tane	Table A 40		D	RILL H	OLEL	OG					HOLE	No. H83-8		PAGE NO 1/2
AZIM: (074	ELEV: 127.59 m	-						PROPER	TY:			VAND NY -		
DIP: _(045°	LENGTH: 28.0 m	- 64		DIP	rest				Cliff	Group -	Swamp :	Showing		
	44.1	CORE SIZE: BQ	FOOTAGE	READING	CORRECT	FOOTAGE	READING	CORRECT	CLAIM	NO:					
STARTED:	March								SECTIO	N:					
COMPLETED	o: March	31/83							LOGGE	DBY: R.	Darney,	D.A. C	aulfield	d·	
PURPOSE:		ochemical high in saddle							DATE L	OGGED:					
	een LST ri	idges							DRILLI	NG CO: G	lobe Di	amond D	rilling	Ltd.	
CORE RECO	VERY:	> 95%									emex La				
F001	TAGE			-	I SA	MPLE	FOOT	AGE -				ASS	AYS		
FROM	то	DESCRIPTION	ON		1.00	NO.	FROM	то	LENGTH	Cu %	Рь %	Zn %	Ag/T	Au oz/T	T
0	1.7 m	QVB - LST rubble				1000									
-	2., ш	The second										1100	7		
1.7	9.4 m	massive coarse xtalline mark	dligad to	T gener	011v										
1./	9.4 m	white - light grey; occasion													
		due to coatings of pyrobitum	en on gra	in surf	aces:										
_		due to coatings of pyrobitum 5.5 - 6.4 \ dark band zones	@ 60° to	c.a.											
		8.4 - 9.4				00000000000		-1772			1000			1	
		no obvious S"													
9.4	11 6 m	skarn - dark greenish w/ loc	al sectio	ne	7	0799	9.4	11.6	2.2 m	0.03	<0.01	0.04	0.06	<0.003	
7.14	TATO III	of massive light green GA, o													
		CL,CA,QZ													
		Sulphides - PY occurs as fra	ect. @ 15-	30° to	c.a.	1000				100					
		as diss.; minor CP; weakly n	agnetic.											7	
		as diss.; minor CP; weakly mupper contact@10 to c.a. Tower " - @ 25 to 30	(broken)			- N - 3									
		lower " - @ 25 to 30	to c.a.												
							Cay to								
11.6	23.9 m	marbilized LST as above; cru	ide dark b	anding	@						10000				
		60° to c.a., 35° to c.a.							7-1-0			0.000			
		zones of: 13.0 - 13.6 m											1		
		banding : 15.0 - 15.s m													
		16.4 - 10.9 m											100		
		LST becomes patchy black to	white nea	ar conta	ct	- /***	201		-						
		W/ skarn:		CONTRACTOR CONTRACTOR							-				-
		- boundary indistinct.									7 - 500				
											-	-			-
											-				
			7.00							-	4			1	
	74								1	1	W				

LOCATION:	Clans	Table A 40		D	RILLI	HOLE L	DG					HOL	E No. DH83-8		PAGE NO 2/2
AZIM:	074	ELEV: 127.59 m						•	PROPER						
DIP:	-045°	LENGTH: 28.0 m				TEST					Group -	Swamp	Showing		
		CORE SIZE: BQ	FOOTAGE	READING	CORRECT	FOOTAGE	READING	CORRECT	CLAIM	NO:					
STARTED:	March	31/83							SECTIO	N:					
COMPLETED	o: March	31/83			1				LOGGE	DBY: R.	Darney,	D.A. C	aulfiel	d '	
PURPOSE:		chemical high in sample							DATE L	OGGED:					
	een LST ri								DRILLI	NG CO: G	lobe Di	amond I	rilling	Ltd.	
CORE RECO	VERY:	7 95%									emex La				
	TAGE	or a series of the series of t	0.0			SAMPLE	FOOT	AGE				AS	SAYS	7.7	
FROM	то	DESCRIPTION	N		1	NO.	FROM	то	LENGTH	Cu %	РЬ %	Zn %	Ag/T	Au oz/T	1
					-						1	1	-	00/1	
23.9	24.6 m	Skarn - weak GA & skarn w/i	ncreasing	alterat	ion	707800	23.9	24.6	0.7 m	<0.01	0.01	<0.01	⟨0.01	<0.003	1
,		near intrusive contact. at t			ACTUAL SECTION AND ADDRESS OF THE PARTY OF T						0.7/3,1765		<u> </u>	-	
	-	0.2 m crushed zone w/promine	nt fractu	-ac @ 60	0 to			-				1		1	1
		c.a.	nt IIactu	res e oc	- 20						1			1	
		- possible fault zone, sulph	ide conte	nt							-	+	1	-	1
												_	1		1
		low - PY			-						1	1	1		_
24.6	28.0 m	HBGR - pale green w/ numerou	s dark me	dium-gra	ain	-	-								1
	7.7.7.7							-		-	_	1	_		
	-	zenoliths up to .15 m in wid alteration - pervasive SE,CL									-		1	1	1
		- KF env. is pres	ent but w	eaker th	nan				-	1	1	1	1	1	
		most holes - up to 2 mm in w									1	1	1		
	-	fract. dir.								-			1		
	-	@ 30% to c.a.	_									_			
	_	70% to c.a.								-			1		
		40% to c.a.					-	_		1	1			1	1
		- weakly magnetic, finely di	ss. PY												
		PY along a few fractures 1%	QZ CA												
	1			77.											74
	1000					-					3 2 2 2				
										1					
				-							1				CHI CHE I
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7.0 DIAMOND DRILLING CONTINUED

Each hole was logged and mineralized sections were split of which half was sent to Chemex Labs Ltd., Vancouver, for analysis. Results were obtained for %Cu, %Pb, %Zn, and oz/T (F.A.) Ag and Au. All core was brought to Vancouver for storage.

Drilling conditions on the Swamp showing are described as excellent. Overburden depths were generally restricted to less than 3.0 m and the core recovery was essentially 100% once the broken, surface weathered bedrock had been penetrated. Water for the drilling was initially obtained from a pond on site but later water requirements were gained from a small creek 275 m to the southeast. Globe Diamond Drilling Ltd. was contracted to do all the drilling. With the use of the hydraulic Hydra-Core drill, the drilling was both time and cost efficient.

8.0 CONCLUSION

The diamond drilling program on the Swamp showing has indicated both lateral and vertical continuation of the contact skarn zone. Assaying of mineralized intersections also verifies the existence of economically interesting values at depth.

The mineralized skarn zone which is controlled by the limestone-intrusive contact is arcuate in shape and is near vertical to a depth of approximately 18 meters where it abruptly flattens along the base of the limestone roof pendant.

Some thickening and increase in grade appears to be associated with this flexure.

8.0 CONCLUSION CONTINUED

As is common in skarn deposits, fluxuation in both grade and thickness must be expected within the zone.

Although the drilling has shown a local depth limitation to the mineralized zone, the surface geochemical expression indicates good strike length along the perimeter of the limestone. The overall strike length of the zone indicates good potential for the development of a small tonnage high grade base metal deposit with precious metal values. Such a zone with well defined contacts and a limestone hanging wall would readily lend itself to open cut mining methods.

The existence of good grade mineralization in the Swamp showing with favourable geological strike potential in combination with the many other property showings makes the Cliff group an excellent exploration target.

No economic sulphide mineralization was seen within the intrusive rocks. However, the locally intense alteration assemblages are suggestive of alteration patterns seen in porphyry type copper deposits. Since the property is nearby and in an identical geologic setting to that of the Island Copper deposit, care should be taken to not overlook the porphyry potential of the property while development of the skarns is being carried out.

9.0 RECOMMENDATIONS

The following program of continued exploration is hereby recommended for the Cliff Property.

(1) Re-mapping of the existing grid at 1:2500 scale with emphasis on defining the limits of the limestones and distribution of the intrusives. 9.0 RECOMMENDATIONS CONTINUED

- (2) Close spaced magnetometer surveying in the vicinity of known showings. The magnetite content in the Swamp showings indicates that the skarn zone may be definable along strike with the aid of very close spaced surveying.
- (3) Re-evaluation of present geochemical data following (1) & (2).
- (4) Fill-in geochemistry on intermediate lines to verify newly acquired data.
- (5) A diamond drilling program to further delineate the Swamp zone mineralization and preliminary drilling of other showings to obtain mineralized intersection for assay checks on previous surface results.

CHARLES IC. IKONA

Respectfully submitted,

David A. Caulfield, Geologist

Bob J Barney, Geologist

K. Ikona, P. Eng,

ITEMIZED COST STATEMENT

Pacific Western

		-		
W	2	o	0	8
**	-	•	•	•

David Yeager - Geologist Bowen Bay Road, Bowen Island B.C. Feb : 25 & 28 - ½ day x 2 @ \$250.00/day = \$250.00 March: 1,2 & 3 - 24 days @ \$250.00/day = 562.50 April : 21 - 1/2 day @ \$250.00/day \$ 875.00 = 62.50 Robert Darney - Geologist R.R. #1 Sechelt, B.C. Feb. 25 & 28 - 2 days @ \$250.00/day = 500.00 March: 15 - 31 - 14 days @ \$125.00/day =1,750.00 2 days @ \$250.00/day = 500.00 April: 1 & 2 - 2 days @ \$250.00/day \$3,250.00 David Caulfield - Geologist #208-850 W. Hastings St. Vancouver, B.C. March : 18 - 30, 12 days @ \$100.00 =1,200.00 April: 1 & 2, 2 days @ \$125.00/day = 250.00 \$1,450.00 Kevin Milledge, Accountant #208-850 W. Hastings St. Vancouver, B.C. March: 28 - 4 day @ \$150.00 = 37.50 \$ 37.50 TOTAL WAGES \$5,612.50 Communications & Telephone L. D. phone charges 7.48 Accounting K. Milledge - 1 day @ \$100.00/day 100.00 Outside Reproduction Western Reproducers 11.29 Commercial Freight

17.00

Equipment Rental

C. Philbrook - Rental D6 \$1,337.50

C. Philbrook -Removal drill equipment

t 867,25

\$2,204.75

Drill Contract

Globe Drilling -232.4 metres @ \$51.61/metre

11,993.10

1,328.75

Chemical Analayses

Chemex Labs. Ltd. 212 Brooksbank Ave. North Vancouver, B.C.

Invoice #18310800

9 samples assayed for Cu, Pb, Zn, Ag, Au.

@ \$25.00 225.00

Invoice #18310869

26 samples assayed for Cu, Pb, Zn,

Ag, Au @ \$26.25 682.50

26 samples pulverize @ 3.75 97.50

Invoice #18310956

2 samples assayed for Cu, Pb, Zn, Ag,

Au @ \$26.25 52.50

2 samples pulverize @ 3.75 7.50

Invoice #18310849

8 samples assayed for Cu, Pb, Zn,

Ag, Au @ \$25.00 200.00

8 samples pulverize @ 3.75 30.00

Miscellaneous Expense 194.28

Materials & Supplies expended

Lumber, tools, nails, fittings 256.63

Travel Expense

MacDonald Travel 172.80 MacDonald Travel 345.60 518.40

Food & Accommodation

32 man days @ \$48.53/day

1,552.84

Automotive Expense

Chevron - Fuel Truck Rental - 152,00

14 days @ \$35.00/day

490.00

642.00

Report Preparation

David Caulfield - Geologist

12 days @ \$100.00/day Typing & Reproduction

1,200.00 300.00

1,500.00

Contractors Fees

2,955.97

TOTAL PROJECT COSTS

\$28,894.99

STATEMENT OF QUALIFICATIONS

- I, ROBERT J. DARNEY of R.R. #1, Sechelt, in the Province of British Columbia, DO HEREBY CERTIFY THAT:
- I am a Geologist in the employment of Pamicon Developments Ltd. with offices at 208 - 850 West Hastings St. Vancouver, B.C.
- I am a graduate of the University of British Columbia with a Bachelor of Science Degree in Geology.
- My primary employment since 1966 has been in the field of mineral exploration.
- 4. My experience has encompassed a wide range of geological environments and has allowed considerable familiarization with geophysical, geochemical, and diamond drilling techniques.
- 5. This report is based on data generated from work done by myself and David Caulfield under the supervision of C.K. Ikona, P. Eng. I visited the property during the month of March of 1983.
- I have no interest in the property described herein, nor in securities of Energex Minerals Ltd.; nor do I expect to acquire any such interests

DATED at VANCOUVER, BRITISH COLUMBIA, this 22 of 45. 1983

R. J. Darney Geologist

Pamicon Developments Ltd.,

STATEMENT OF QUALIFICATIONS

I, DAVID A. CAULFIELD, of 3433 West 12th Street, Vancouver, in the Province of British Columbia, DO HEREBY CERTIFY THAT:

- I am a Geologist in the employment of Pamicon Developments Ltd. with offices at 208-850 West Hastings St., Vancouver, B.C.
- I am a graduate of the University of British Columbia with a Bachelor of Science Degree in Geology.
- My primary employment since 1978 has been in the field of mineral exploration.
- 4. My experience has encompassed a wide range of geological environments and has allowed considerable familiarization with geophysical, geochemical, and diamond drilling techniques.
- 5. This report is based on data generated from work done by myself and R. Darney under the supervision of C.K. Ikona, P. Eng. I visited the property during March 1983.
- I have no interest in the property described herein, nor in securities
 of Energex Minerals Ltd.; nor do I expect to acquire any such interests.

DATED at VANCOUVER, BRITISH COLUMBIA, this 9 14 day of MAY 1983

David A. Caulfield, Geologist

Dild Carlfuld

Pamicon Developments Ltd.,

ENGINEERS CERTIFICATE

I, CHARLES K. IKONA, of 5 Cowley Court, Port Moody in the Province of British Columbia, DO HEREBY CERTIFY THAT:

- I am a Consulting Mining Engineer with offices at 208 850 West Hastings Street, Vancouver, British Columbia.
- I am a graduate of the University of British Columbia with a degree in Mining Engineering.
- I am a member in good standing of the Association of Professional Engineers of the Province of British Columbia.
- This report is based on work carried out under my supervision by Robert J. Darney, Geologist and David A. Caulfield, Geologist.
- I have no interest in the property reported on.
- 6. I consent to the use by Energex Minerals Ltd. of this report in a Prospectus or Statement of Material Facts or any other such document as may be required by the Vancouver Stock Exchange or the office of the Superintendent of Brokers.

DATED at VANCOUVER, BRITISH COLUMBIA, this 15 day of Aug. 1983

Charles K. Ikona, P. Eng.

Pamicon Developments Ltd.



212 BROOKSBANK AVE. NORTH VANCOUVER, B.C. CANADA V7J 2C1

TELEPHONE: (604) 984-0221

TELEX: 043-52597

· ANALYTICAL CHEMISTS

· GEOCHEMISTS

REGISTERED ASSAYERS

CERTIFICATE UF ASSAY

TO : PAMICON DEVELOPMENTS LIMITED

208 - 850 W. HASTINGS STREET

VANCOUVER, B.C.

V6E 1E1

CERT. # : A8310800-001-A

INVOICE # : 18310800 6-APR-83 DATE

P. 0. : NONE

	Sample description	Prep	Cu %	Pb 2	Zn %	Ag FA	AU FA	
-	37812	207	0.52	0.14	2.77	1.04	0.090	
	37813	207	0.79	0.79	6.94	3.80	0.012	7.7
	37814	207	0.23	0.62	1.15	0.72	<0.003	
_	37815	207	1.48	4.40	6.41	3.95	0.010	
37	37816	207	0.21	0.66	0.70	0.12	<0.003	
	37817	207	0.17	0.06	0.56	0.16	0.005	
	37818	207	0.96	0.20	0.15	1.28	0.003	
-	37819	207	0.04	0.01	0.03	0.02	<0.003	
	37820	207	<0.01	<0.01	0.01	0.04	<0.003	





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TELEX:

043-52597

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- GEOCHEMISTS

· REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

TO : PAMICON CEVELOPMENTS LIMITED

208 - 850 W. HASTINGS STREET

VANCOUVER. B.C.

V6E 1E1

CERT. # : A8310849-001-A

INVOICE # : 18310849

DATE : 11-APR-83

P.C. # : NONE

CLIFF

250	CC: ENERGEX	MINERALS	ATTN:	A. O. BIK	RELAND			
	Sample description	Prep code	Cu *	Pb %	Zn %	Ag FA	AU FA	
	37821	207	1.32	0.58	9.39	3.23	0.022	
	37822	207	3.60	0.22	9.79	2.57	0.006	
	37823	207	0.78	0.15	10.70	1.45	0.010	
-	37824	207	1.32	0.55	13.70	2.20	0.006	
	37825	207	0.15	0.03	0.41	0.02	<0.003	
	37826	207	1.07	0.29	2.26	1.70	<0.003	
_	37827	207	0.04	0.02	0.36	0.02	<0.003	
	37828	207	0.05	0.02	0.11	0.10	0.003	





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GEOCHEMISTS

REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

TO : PAMICON DEVELOPMENTS LIMITED

208 - 850 W. HASTINGS STREET

VANCOUVER. B.C.

V6E 1E1

CERT. # : A8310869-001-A

INVOICE # : 18310869

DATE : 12-APR-83

P.O. # : CLIFF CL CLIFF CLAIMS

ATTN: D.A. CAULFIELD & B. CARNEY

	Sample description	Prep	Cu Z	Pb	Zn Ž	Ag FA	AU FA	
	37829	207	16.60	0.03	2.26	8.66	0.005	
	37830	207	0.13	<0.01	0.03	0.08	<0.003	
	37831	207	0.04	0.04	0.10	<0.01	<0.003	
_	37832	207	0.02	0.06	0.05	<0.01	<0.003	
	37833	207	1.26	0.74	2.74	1.00	<0.003	
	37834	207	1.64	0.04	2.50	0.36	0.003	
1	37835	207	0.07	0.01	0.10	<0.01	<0.003	
	37836	207	<0.01	0.01	0.02	<0.01	<0.003	
	37837	207	0.32	0.05	0.77	0.08	<0.003	
	37838	207	<0.01	0.01	0-04	<0.01	<0.003	
-	37839	207	1.12	3.26	3.72	1.00	0.003	
	37840	207	0.23	0.42	0.33	0.26	0.003	
	37841	207	0.12	0.50	0.43	0.08	<0.003	
_	37842	207	0.03	0.32	0.30	0.10	<c.003< td=""><td></td></c.003<>	
-	37843	207	0.08	0.50	1.48	0.16	<0.003	
	37844	207	1.03	1.13	8.95	2.56	C.034	
	37845	207	0.14	0.22	1.22	0.48	0.003	
-	37846	207	<0.01	0.02	0.05	<0.01	<0.003	
	37847	207	0.07	0.11	0.09	0.05	<0.003	
	37848	207	0.28	0.08	0.08	0.40	<0.003	
_	37849	207	<0.01	<0.01	0.01	0.02	<0.003	
	37850	207	0.01	0.01	0.03	0.04	<0.003	
	70796	207	0.05	0.01	0.01	<0.01	<0.003	
225	70797	207	1.01	0.01	0.03	0.30	<0.003	
_	70798	207	0.05	0.01	0.01	0.04	<0.003	
	70800	207	<0.01	0.01	<0.01	<0.01	<0.003	



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043-52597

CERTIFICATE OF ASSAY

TC : PAMICON DEVELOPMENTS LIMITED

208 - 850 W. HASTINGS STREET

VANCOUVER. 3.C.

V6E 1E1

CERT. # : A8310956-001-

INVOICE # : 18310956

DATE : 18-APR-83

P.C. # : NONE

Sample	Prep	Cu	Pb	Zn	Ag FA	Au FA	
description	code	2,	*	*	oz/T	oz/T	
66051	207	0.11	<0.01	0.06	0.14	<0.003	
70799	207	0.03	<0.01	0.04	0.06	<0.003	

