

MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT

10,179

A Geological Report  
on the  
Trenching & Drilling Program  
of  
CYCLONE DEVELOPMENTS LTD  
on the Company's  
RUFF Claim  
situated  
17 km north & 10 km east of Atlin  
in the  
Atlin Mining Division  
N.T.S. 104-N/12(E) & 11(W)  
Lat:  $59^{\circ}43'$  N Long:  $133^{\circ}30'$  W  
by  
D.R. Morgan, P. Eng.  
Dates of Work: 18 August - 14 October 1981  
Date of Report: 22 January 1982

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Maps Accompanying this Report:

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Appendix: Logs of Drill Holes 81-1 to 81-9

**BRITISH  
COLUMBIA**

CYCLONE DEVELOPMENTS LTD

Scale: 1" - 150 miles

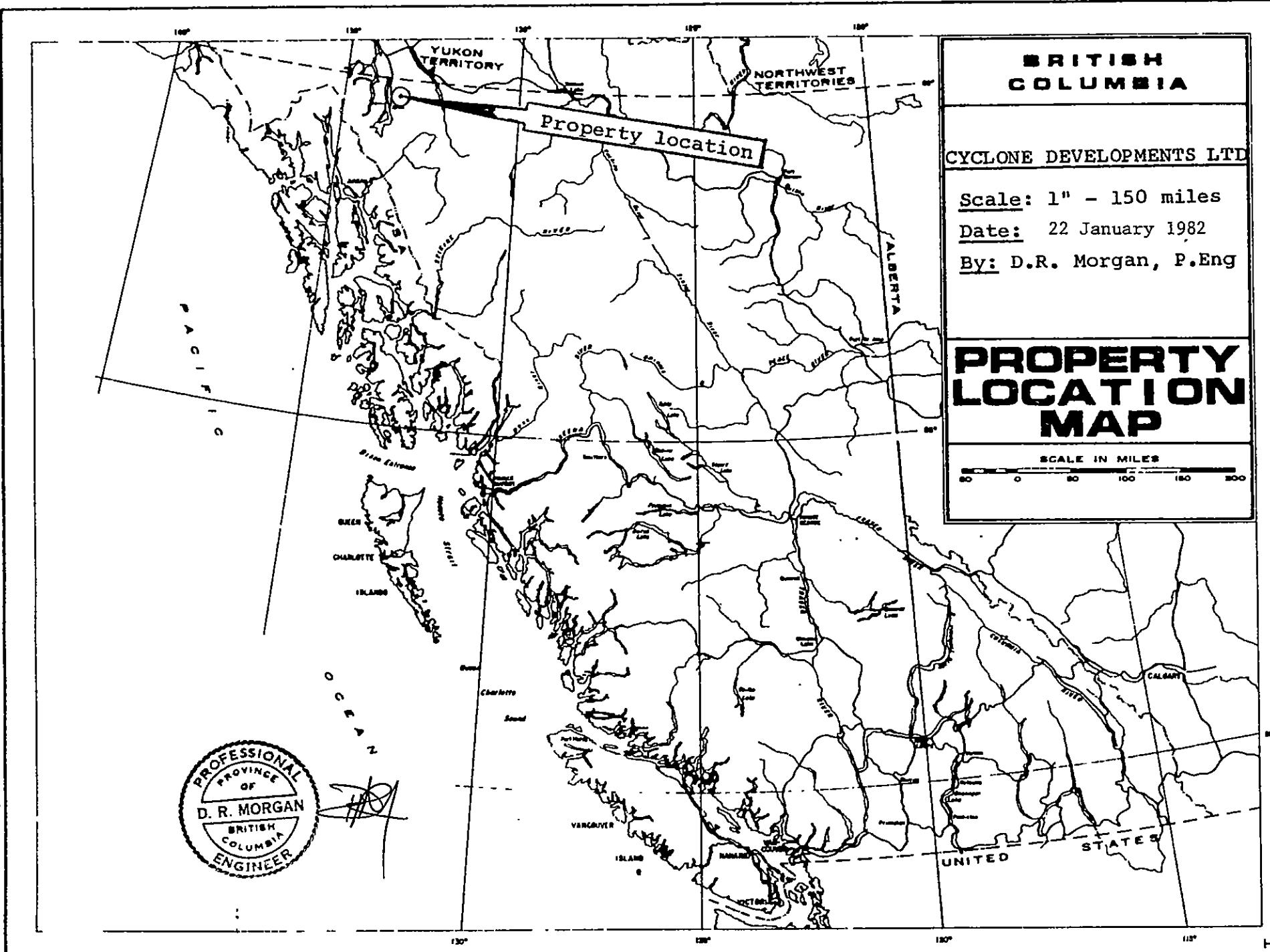
Date: 22 January 1982

By: D.R. Morgan, P.Eng

**PROPERTY  
LOCATION  
MAP**



Property location



1 - 0 SUMMARY (Fact):

1. Between 18 August and 14 October 1981 a program of trenching, sampling and diamond drilling was carried out on the Ruff and Vulcan veins of Cyclone Developments Ltd near Atlin, B.C.
2. A total of 38 samples cut in 9 trenches along a strike length of 90 m on the Ruff vein assayed as follows:

<u>Width</u>	<u>Pb</u>	<u>Zn</u>	<u>Ag</u>	<u>Au</u>
178 cm	.26%	.37%	3.65 ozs/ton	0.02 ozs/ton

3. Four N.Q. holes drilled through the Ruff vein assayed as follows:

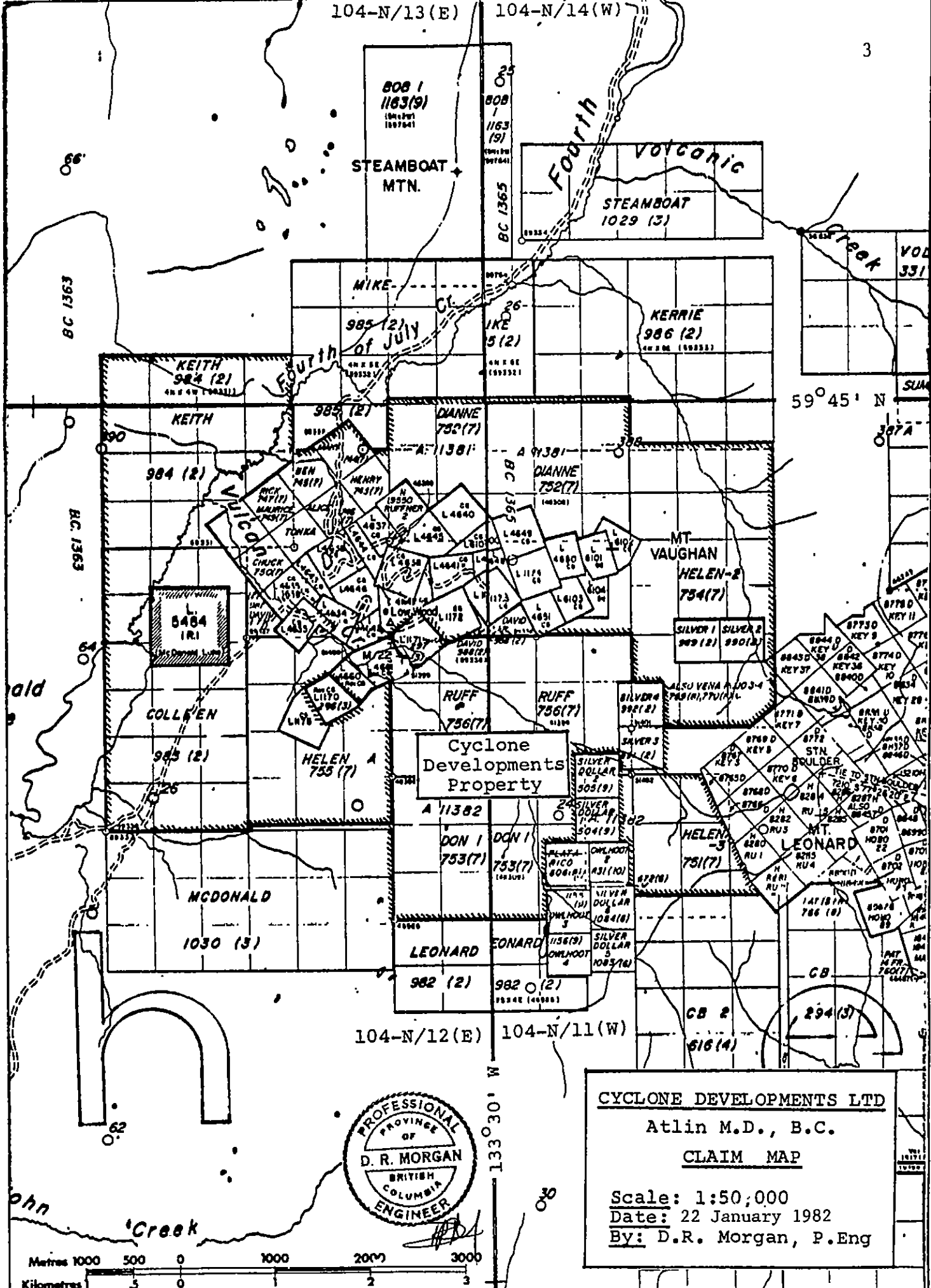
<u>Width</u>	<u>Mo</u>	<u>Pb</u>	<u>Zn</u>	<u>Ag</u>	<u>Au</u>
220 cm	.215%	.46	1.58	3.06 ozs/ton	.032 ozs/ton

4. Molybdenite occurs in narrow (1-5 mm) silicified fractures in the hanging wall intrusives of the Ruff vein.
5. Five N.Q. holes drilled through the Vulcan vein assayed as follows:

<u>Width</u>	<u>Pb</u>	<u>Zn</u>	<u>Ag</u>	<u>Au</u>
195 cm	.30%	1.64%	1.43 ozs/ton	.005 ozs/ton

2 - 0 CONCLUSIONS (Opinion):

1. Grades in the tested sections of both veins are sub economic, but the molybdenum values encountered in the Ruff vein and its hanging wall deserve further investigation.
2. The dips of the Ruff and Vulcan veins indicate that they may join on strike or at depth. This possibility too deserves further investigation.



808 1  
1163(9)  
(40 300)  
1007641

STEAMBOAT  
MTN.

Fourth  
Creek

Volcanic

STEAMBOAT  
1029 (3)

Fourth  
Creek  
VOL  
331

MIKE  
of July

985 (2)

IKR  
5 (2)

KERRIE  
986 (2)  
(40 300) (100333)

59° 45' N

KEITH  
984 (2)  
(40 300) (100331)

KEITH

985 (2)

DIANNE  
752 (7)

DIANNE  
752 (7)  
(40 300)

BC 1363

984 (2)

TONKA

HENRY  
743 (7)

RUFF  
756 (7)

RUFF  
756 (7)

MT  
VAUGHAN

HELEN-2  
754 (7)

5484  
IRI

COLLEEN

985 (2)

HELEN  
755 (7)

Cyclone  
Developments  
Property

DON 1  
753 (7)

DON 1  
753 (7)

MCDONALD

1030 (3)

LEONARD

LEONARD

982 (2)

982 (2)

104-N/12(E)

104-N/11(W)

133° 30' W

CYCLONE DEVELOPMENTS LTD

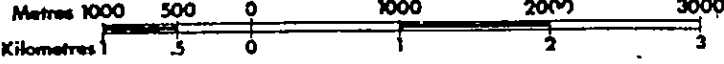
Atlin M.D., B.C.

CLAIM MAP

Scale: 1:50,000

Date: 22 January 1982

By: D.R. Morgan, P.Eng



3 - 0

INTRODUCTION:

3 - 1 Scope and Dates of Report: At the request of Mr. Ron Philp, President of Cyclone Developments Ltd, 1458 - 409 Granville Street., Vancouver, B.C., V6C 1T2, the writer supervised a program of hand trenching, sampling and diamond drilling on the Company's Ruff claim near Atlin, B.C. between 18 August and 14 October 1981.

This report describes the program and its results.

3 - 2 Title: The property consists of 2 Crown Granted mineral claims and 5 located mineral claims (35 units) as follows:

Crown Granted Mineral Claims (Reverted)

<u>Name</u>	<u>Lot#</u>	<u>Hectares</u>
Big Canyon Extension	1170	15.78
Big Canyon Extension No.2	1171	19.48

Located Mineral Claims

<u>Units</u>	<u>Name of Claim</u>	<u>Record #</u>	<u>Date Recorded</u>
15	Ruff	756	24 July 1979
12	Don	753	"
6	Helen	751	"
1	Silver 3	991	21 February 1980
<u>1</u>	Silver 4	992	"
Total	<u>35</u>		

More than sufficient work has been done on the property to keep these claims in good standing for a year beyond their anniversary dates.

4 - 0

GEOGRAPHY:

4 - 1 Location: The property lies 17 km north and 10 km east of Atlin, B.C. It has a latitude of  $59^{\circ}43'$  north, a longitude of  $133^{\circ}30'$  west, straddles National Topographic System areas 104-N/12(E) and 104-N/11(W) and is in the Atlin Mining Division.

4 - 2 Access: The property is accessible by 35 km (21 miles) of dirt road from Atlin, B.C.

4 - 3 Topography: The property lies on the bare, north west slopes of Mount Leonard, in which northwest flowing Vulcan and Crater Creeks have incised narrow canyons. Elevations range from 3000 to 5000 feet.

5 - 0

GEOLOGY OF THE PROPERTY:

5 - 1 General: The geology of the Cyclone Atlin-Vulcan property is similar to that of the Trident Resources Inc, Atlin Ruffner property to the north. On both properties quartz monzonite intrusive country rock has been cut by fault shear zones with steep northerly dips which have been occupied by lamprophyre dykes, re-fractured and mineralized with silver-lead-zinc.

The two main veins found to date on the Cyclone property are the "Vulcan" and the "Ruff" veins. (see "Vein Systems" map). As indicated on the map, the Vulcan is the easterly extension of the Big Canyon or No.1 vein the parallel No.2 vein.

5 - 2 Ruff Vein: This vein was detected by a geochemical Survey and exposed by trenching in 1980. The vein strikes  $085^{\circ}$  and dips  $81^{\circ}$  N (mean of 7 dips measured in trench). Drilling indicated that the vein has a steep northerly dip where it is cut by DDH 81-4, and 81-3, a vertical dip

9000 N

TRIDENT RESOURCES  
MILL

3900 Level  
Long x-cut

9000 E

No.2 Vein

No.4 Vein

L.C.P.

Lot 1171

Plan of 1981  
Drilling Program

Ruff

Vulcan Vein

Vulcan Creek

No.2 Vein

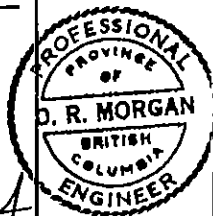
No.1 Vein  
(Big Canyon)

Crater Creek

Vulcan Creek

RUFF CLAIM  
(15 units)

Source: Air photo enlargement



CYCLONE DEVELOPMENTS LTD

Atlin M.D., B.C.

ATLIN RUFFNER CAMP

VEIN SYSTEMS

Scale: 1:10,000 (1 cm: 100 m)

Date: 22 January 1982

By: D.R. Morgan, P. Eng.



Where it is cut by 81-1. The vein, typically 2 m wide, consists of a dark green andesite dyke which has been fractured and mineralized with quartz, pyrite, sphalerite, molybdenite, arsenopyrite and less commonly chalcopyrite.

An interesting feature of this vein is the presence of molybdenite in narrow (1-5 mm) silicified fractures in the intrusive rocks of the hanging wall (see drill log).

5 - 3     Vulcan Vein: This vein was exposed by trenching and blasting following its discovery in 1951. An old diamond drill set-up with fragments of drill core scattered about lies south of the road near holes 81-8 and 9. The details of this earlier drilling are not available to the writer.

The vein strikes  $075^{\circ}$ , dips north at  $75^{\circ}$  and is typically 2 m wide also. The fractured andesite vein filling is brecciated in places, in places sheared, chloritic and crumbly and in other places silicified and massive. It is mineralized with pyrite, sphalerite, arsenopyrite and minor chalcopyrite.

Molybdenite was not seen either in vein intersections or in the hanging wall intrusives of the Vulcan Vein.

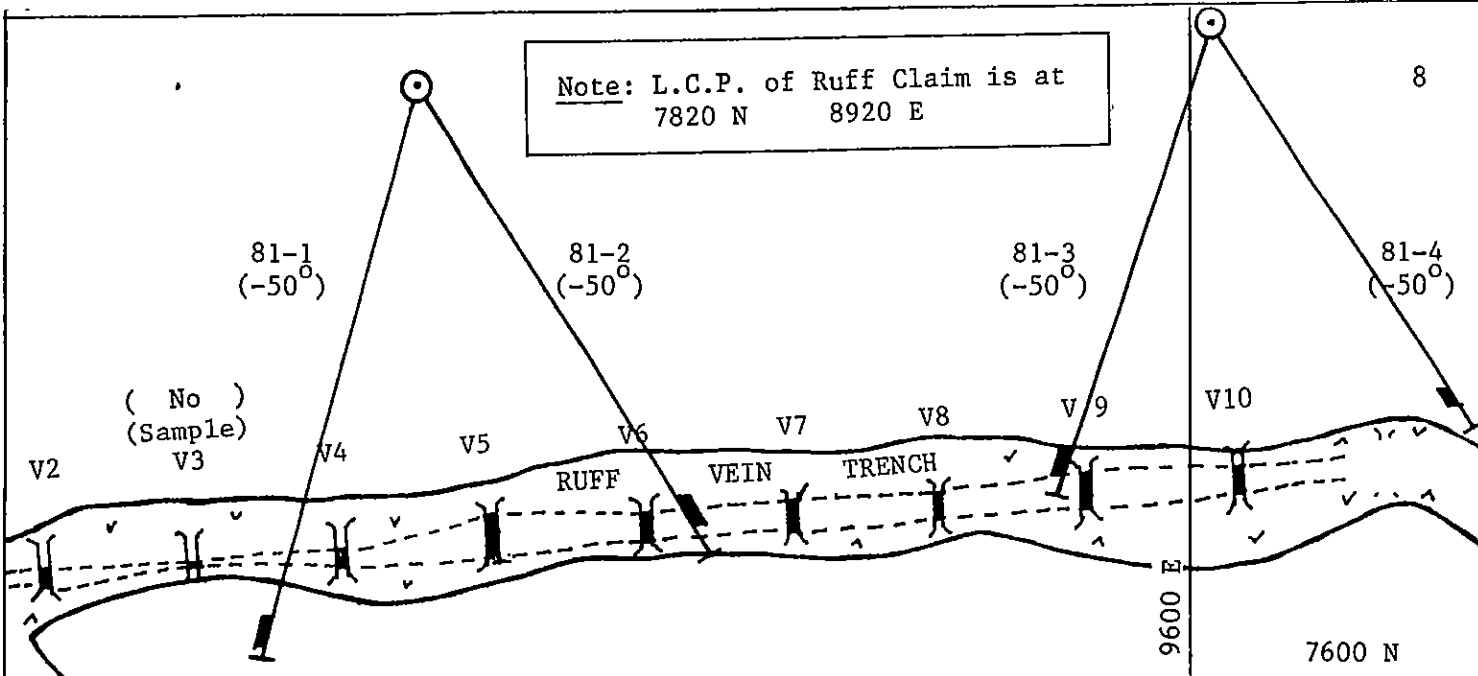
6 - 0

TRENCHING AND SAMPLING:

To permit sampling of the RUFF vein, hand trenches were dug in the floor of the bulldozer trench excavated in 1980. The trenches were geologically mapped and the various vein components (dyke, quartz, mineralization etc) were sampled separately. The assay values appearing on the assay plan accompanying this report represent weighted averages across full vein width.

Note: L.C.P. of Ruff Claim is at  
7820 N 8920 E

8



	V2	81-1	V4	V5	V6	81-2	V7	V8	81-3	V9	V10	81-4
Cm	145	274	155	289	204	213	200	168	244	243	202	168
Mo	/	.252	/	/	/	.010	/	/	.343	/	/	.230
Cu	.03	.05	.04	.19	.09	.02	.06	.02	.08	.03	.01	.09
Pb	.22	.57	.42	.38	.37	.30	.14	.05	.29	.18	.30	.72
Zn	.08	2.04	.50	.33	.74	1.39	.50	.13	.53	.14	.48	2.62
Ag	3.61	5.02	5.40	5.67	7.08	1.12	2.46	.65	2.80	2.23	1.38	2.68
Au	.01	.053	.05	.023	.044	.011	.011	.003	.013	.003	.017	.050

	81-9	81-8	81-6	81-5	81-7
cm	218	61	198	165	335
Mo	.005	.017	.002	.002	.004
Cu	.01	.01	.04	.03	.04
Pb	.18	.20	.20	.03	.58
Zn	.46	.43	1.52	.15	3.40
Ag	.61	.57	2.74	.25	1.91
Au	.004	.009	.006	.001	.007



CYCLONE DEVELOPMENTS LTD

Ruff Claim, Atlin M.D.

1981 DRILL PROGRAM

Scale: 1:500 (1 cm - 5 m)

Date: 22 January 1982

By: D.R. Morgan, P.Eng.

7 - 0

DIAMOND DRILLING:

Between 21 September and 14 October 1981, Globe Drilling of 801 - 510 West Hastings Street., Vancouver, B.C. V6B 1L8, drilled 9 N.Q. drill holes for a total of, 1554 ft (474 m) with a Hydra Wink drill on Cyclone Development's Ruff and Vulcan veins. Overall recovery was 87.8%.

The locations of these drill holes appear on a map accompanying this report. Their coordinates, elevations, azimuths and dips appear on the drill logs that form part of this report.

Up to 9 inches (23 cm) of snow fell during the program but lines did not freeze and calcium chloride was not required. No permafrost was encountered.

The drill core is stored at the Trident Resources mill site on raised timbers on the north side of the office trailer.

8 - 0

SURVEY CONTROL:

Coordinates of drill holes etc, are tied in to the Trident Resources survey (metric) grid. The coordinates of the L.C.P. of the RUFF claim which is at the same location as the west corner of Lot 1171 were scaled off a 1:50,000 topographic map. The drill holes were tied in to this post by hip chain and Brunton.

All drill hole sites were clearly marked with 6 foot poles or 2 x 4 s rammed into the drill holes.

All dimensions given in this report are metric with the exception of the drill logs which are in feet.

9 - 0

STATEMENT OF QUALIFICATIONS:

I, David R. Morgan of 1458 - 409 Granville Street.,  
Vancouver, B.C., do hereby certify that:

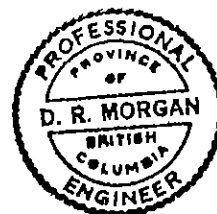
1. I am a 1954 graduate of McGill University with  
a B.Sc. in honours Geology.
2. Since graduation I have engaged in mining  
exploration in Canada, the western U.S.A.,  
Mexico and Haiti.
3. I am a registered member in good standing  
of the Association of Professional Engineers  
of the Province of British Columbia.
4. I supervised the work described in this  
report between 18 August and 14 October  
1981.

Signed,



David R. Morgan, P. Eng.

22 January 1982



DOMINION OF CANADA:  
 PROVINCE OF BRITISH COLUMBIA.

To Wit:

In the Matter of the trenching sampling and diamond drilling program on the Ruff claim of Cyclone-Developments Ltd near Atlin, B.C.

I, David R. Morgan

of 1458 - 409 Granville Street, Vancouver, B.C.

in the Province of British Columbia, do solemnly declare that the following personnel were employed and costs incurred in carrying out this work, - 14 October, 1981.

PERSONNEL:

R. Philp	- Geologist	- 6 days @ \$200/day =	1,200.00
D. Morgan	- Geologist	- 5 days @ \$200/day =	1,000.00
D. Hammer	- Party Chief	-11 days @ \$170.46/day =	1,875.06
M. Adock	- Surveying, sampling	-11 days @ \$88.64/day =	975.04
P. Ellickson	- Surveying, sampling	- 7 days @ \$81.82/day =	572.74
C. Boyd	- Helper	- 2 days @ \$68.18/day =	136.36
			<u>5,759.20</u>

DISBURSEMENTS:

Travel Expenses	943.57	
Vehicle Rental	597.54	
Supplies	141.58	
Groceries	465.00	
Assays	<u>818.20</u>	
		<u>2,965.89</u>
Total for trenching and sampling		<u>8,725.09</u>

DIAMOND DRILLING: (18 September - 14 October 1981)

Globe Diamond Drilling	49,673.73	
David R. Morgan - Geologist: 28 days @ \$200/day =		5,600.00

DISBURSEMENTS:

Room and b  
 Vehicle R  
 Gas:  
 Assays

the

GLOBE DRILLING (1981) LTD.  
 #801 - 510 West Hastings St.  
 Vancouver, B.C.  
 V6B 1L8

Oct. 19, 1981

Cyclone Developments Ltd.  
 #1458-409 Granville St.  
 Vancouver, B.C.

Statement

09/14/81	deposit	(\$ 5,000.00)
10/19/81	In.#29775	9,901.00 ✓
10/19/81	In.#29776	29,405.00 ✓
10/19/81	In.#29777	10,700.00
10/19/81	In.#29778	5,000.00 ✓
10/19/81	In.#29779	1,842.73 ✓
10/19/81	In.#29780Cr.	( 2,175.00) ✓

Balance \$ 49,673.73 ✓

1,200.00  
 ✓ 48,473.73

**PAID**

CH. #319

DATE Oct 26/81

Company: CYCLONE DEVELOPMENTS	NTS: 104N/12E
Property: ATLIN-VULCAN	Lat: 59°43'N
Claim: RUFF	Long: 133°30'

## DIAMOND DRILL LOG

HOLE #: 81-1

SHEET  
1  
of 6

LOCATION	BEARING	200°
DATE COLLARED 21 SEPT 1981	LENGTH	203 ft
DATE COMPLETED 23 SEPT 1981	DIP	-52°

LATITUDE	7640 N
DEPARTURE	9548 E
ELEVATION	{ 4700 ft 11432.6m

CORE SIZE	NQ	LOGGED BY	D.R. MORGAN
SCALE OF LOG	1"-5 ft	DATE	23 SEPT 81
REMARKS	OVERALL RECOVERY 89.7%		

Company: CYCLONE DEVELOPMENTSNTS: 104N/12E

DIAMOND DRILL LOG

SHEET 1

Property: ATHIN-VULCANLat: 59°43'NHOLE #: 81-1

of 6

Claim: RUFFLong: 133°30'LOCATION \_\_\_\_\_ BEARING 200°DATE COLLARED 21 SEPT 1991 LENGTH 2.03 ftDATE COMPLETED 23 SEPT 1991 DIP -52°LATITUDE 7640 NDEPARTURE 9548 EELEVATION 4700 ft  
(1432.6m)CORE SIZE NQ LOGGED BY D.R. MORGANSCALE OF LOG 1"-5 ft DATE 23 SEPT 81REMARKS OVERALL RECOVERY 89.7%

ROCK TYPES AND ALTERATION	GRAPHIC LOG		MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	FOOTAGE BLOCKS	RECOVERY		ASSAY RESULTS				
	ROCK TYPE ALTERATION	FOOTAGE				WT. IN GRAMS		SAMPLE No.		CORE	SLUDGE	Sample length
						CORE	SLUDGE	CORE	SLUDGE			
CASING		0										
QUARTZ MONZONITE Coarse grained (crystals 3-5 mm) 15-20% Hornblende		8 10	30° Fractures									
"		15				64%						
"		20				65%						
"		25				28%						
"		30				50%						
"		35	30° Silicified across 5mm			80%						



CYCLONE  
Company: DEVELOPMENTS LTD

Property: RUFF

DIA Drill

QJ8

HOLE #: 81-1

SHEET

# 2

ROCK TYPES AND ALTERATION	GRAPHIC LOG		MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	FOOTAGE BLOCKS	RECOVERY		ASSAY RESULTS				Sampl Lengt		
	ROCK TYPE ALTERATION	FOOTAGE				WT. IN GRAMS		SAMPLE No.		CORE	SLUDGE		CORE	SLUDGE
						CORE %	SLUDGE %	COMBINED						
QUARTZ MONZONITE (Gmt)		35				92%								
"		40												
"		45				94%								
"		50				86%								
"		55				86%								
"		60	1/20° Silicified .Dissem <u>MoS<sub>2</sub></u>			90%								
"		65				86%								
"		70	1/40° Silicified 20mm Dissem <u>MoS<sub>2</sub></u>			100%								

Company: CYCLONE  
 Property: RUFF

Dia 2 1/8 Drill

HOLE #: 81-1

SHEET  
# 3

ROCK TYPES AND ALTERATION	GRAPHIC LOG		MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	FOOTAGE BLOCKS	RECOVERY		ASSAY RESULTS				Sample length		
	ROCK TYPE ALTERATION	FOOTAGE				WT. IN GRAMS		SAMPLE No.		CORE	SLUDGE		CORE	SLUDGE
						CORE %	SLUDGE %	COMBINED						
QUARTZ MONZONITE (cont)		70				96%								
"		75												
"		80	1/4			96%								
"		85	1/4 5mm Silicified (No visible MoS <sub>2</sub> )			90%								
"		90	1/20 5mm Silicified Dissem MoS <sub>2</sub>			94%								
"		95	1/20 3mm Silicified Dissem MoS <sub>2</sub>			98%								
ARGILLIC ALTERATION ↓		100	1/15 10mm crumbly calcite stringer gougy & with some rust.			94%								
"		105	1/30 5mm silicified Dissem <sup>MoS<sub>2</sub></sup> in xteals up to 7mm			94%								
"		105	1/80 MoS <sub>2</sub> in dry fracture			94%								

Company: *CYCLONE*  
 Property: *RUFF*

DISCOVERY DRILL  
 -JG

HOLE #: *81-1*

SHEET  
 # *4*

ROCK TYPES AND ALTERATION	GRAPHIC LOG		MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	FOOTAGE BLOCKS	RECOVERY		ASSAY RESULTS			Sample length		
	ROCK TYPE ALTERATION	FOOTAGE				WT. IN GRAMS		SAMPLE No.		CORE		SLUDGE	COMBINED
						CORE %	SLUDGE %	CORE	SLUDGE				
<i>QUARTZ MONZONITE (cont)</i>		<i>105</i>											
"		<i>110</i>				<i>93%</i>							
"		<i>115</i>	<i>125° MoS<sub>2</sub> in 2mm xtals in healed fracture. No qtz.</i>			<i>99%</i>							
"		<i>120</i>				<i>100%</i>							
"		<i>125</i>				<i>100%</i>							
"		<i>130</i>	<i>130°</i>			<i>98%</i>							
<i>END of Argillic alteration</i>		<i>135</i>	<i>130° MoS<sub>2</sub> in 2 hairline fractures</i>			<i>100%</i>							
"		<i>140</i>	<i>125° MoS<sub>2</sub> in hairline fracture</i>			<i>96%</i>							



Company: **CYCLONE**  
 Property: **RUFF**

Drill  
 LOG

HOLE #: **81-1**

SHEET  
 # **5**

ROCK TYPES AND ALTERATION	GRAPHIC LOG		MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	FOOTAGE BLOCKS	RECOVERY		ASSAY RESULTS			Sample length		
	ROCK TYPE ALTERATION	FOOTAGE				WT. IN GRAMS		SAMPLE No.		CORE		SLUDGE	COMBINED
						%	%	CORE	SLUDGE				
QUARTZ MONZONITE		140											
(DIKELET - Dark green, feldspar phenox)			80° 1cm			100%							
(DIKELET)		145	40° 2cm										
Q.M.		150				94%							
"		155	35° 5mm silicified fracture			100%							
"		160	40° 20mm silicified fracture			100%							
"		165	25° 3mm silicified fracture one bleb of MoS <sub>2</sub>			100%							
Decayed & kaolinized	.....	166											
"	.....	168				100%							
"		170											
Andesite DIKELET		175	45° 3cm			90%							

Company: <u>CYCLONE</u>	NTS: <u>104N/12E</u>
Property: <u>ATLIN-VULCAN</u>	Lat: <u>59°43'N</u>
Claim: <u>RUFF</u>	Long: <u>133°30'W</u>

## DIAMOND DRILL LOG

HOLE #: 81-2SHEET  
of 6

LOCATION _____	BEARING <u>152°</u>	LATITUDE <u>7640 N</u>	CORE SIZE <u>N.Q.</u>	LOGGED BY <u>D.R. MORGAN</u>
DATE COLLARED <u>24 SEPT 81</u>	LENGTH <u>188 ft</u>	DEPARTURE <u>9548 E</u>	SCALE OF LOG <u>1"-5 ft</u>	DATE <u>25 Sept 81</u>
DATE COMPLETED <u>25 Sept 81</u>	DIP <u>-50°</u>	ELEVATION <u>4700 feet</u> <u>1432.6 m</u>	REMARKS <u>OVERALL RECOVERY: 84.4%</u>	



Company: CYCLONE  
 Property: RUFF

Diamc  $\phi$  111  
 8

HOLE #: 81-2

SHEET  
 # 2

ROCK TYPES AND ALTERATION	GRAPHIC LOG		MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	FOOTAGE BLOCKS	RECOVERY		ASSAY RESULTS				Sample length		
	ROCK TYPE ALTERATION	FOOTAGE				WT. IN GRAMS		SAMPLE No.		CORE	SLUDGE		CORE	SLUDGE
						CORE	SLUDGE	CORE	SLUDGE					
QUARTZ MONZONITE		35												
		40				72%								
"		45	45° 3mm silicified stringer			94%								
"		50	45° 3mm " "			94%								
"		55				94%								
"		60				96%								
"		65	45° silicified fracture 2mm, <u>MoS<sub>2</sub></u>			98%								
"		70				86%								



Company: **CYCLONE**  
 Property: **RUFF**

118" Drill  
 0-28

HOLE #: **81-2**

SHEET  
 # **3**

ROCK TYPES AND ALTERATION	GRAPHIC LOG		MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	FOOTAGE BLOCKS	RECOVERY		ASSAY RESULTS				Sampl length		
	ROCK TYPE ALTERATION	FOOTAGE				WT. IN GRAMS		SAMPLE No.		CORE	SLUDGE		CORE	SLUDGE
						CORE	SLUDGE	CORE	SLUDGE					
						%	%			COMBINED				
QUARTZ MONZONITE		70												
		75	140° 10mm s. leafed fracture, dissem <u>MoS<sub>2</sub></u>			86%								
"		80	140° 4mm qtz stringer			86%								
"		85				100%								
"		90				90%								
"		95	60° 4mm qtz stringer			100%								
"		100	45° 3mm gouge seam			94%								
"		105				98%								

Company: CYCLONE  
 Property: RUFF

112' Drill  
 LOG

HOLE #: 81-1

SHEET  
 # 4

ROCK TYPES AND ALTERATION	GRAPHIC LOG		MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	FOOTAGE BLOCKS	RECOVERY		ASSAY RESULTS				Sampl length.		
	ROCK TYPE ALTERATION	FOOTAGE				WT. IN GRAMS		SAMPLE No.		CORE	SLUDGE		CORE	SLUDGE
						CORE %	SLUDGE %	COMBINED						
QUARTZ MONZONITE		105				100%								
		110												
"		115				94%								
"		120				92%								
"		125	15° Chloritic fracture			92%								
"		130	70° 1mm siliceous stringers			100%								
"		135	50° 1mm gouge 40° 10mm gouge & similar adjoining fracture with <u>MoS<sub>2</sub></u>			96%								
"		140				94%								

Company: **CYCLONE**  
 Property: **RUFF**

DIP **0**° DRILL  
 LOG

HOLE #: **81-2**

SHEET  
 # **5**

ROCK TYPES AND ALTERATION	GRAPHIC LOG		MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	FOOTAGE BLOCKS	RECOVERY		ASSAY RESULTS				Sampl length
	ROCK TYPE ALTERATION	FOOTAGE				WT. IN GRAMS		SAMPLE No.				
						CORE %	SLUDGE %	CORE	Ag 0.35	Zn %	Mo %	
Increasing chlorite epidote alteration from 140 to vein of QUARTZ } MONZONITE	TC	140				95%						
"		145										
"		150				100%						
"		155				100%						
"		160				98%						
Mafics bleached 160-161.5			135° Gouge, below which gougy fractured section with rusty planes									
"		165	End of gougy section. Contact unclear			74%						
"	AA		150° Gougy broken section									
Bleached & decayed intrusive	AA	40°	Note: From 162 - 169 (vein) Ground is fractured & gougy. A bad hanging wall (if this is the hanging wall of the vein)			78%						
ANDESITE DYKE: Fractured silicified & mineralized	AA	170					170'	229	0.73	0.86	0.014	2 f
"		173	Silicified section with pyrite & dissem. MoS <sub>2</sub> & ZnS			80%		230	1.28	1.61	0.009	5.0
"		175	135° Lower CONTACT of vein				175'					



Company: <u>CYCLONE</u>	NTS: <u>104N/12E 1</u>
Property: <u>ATLIN-VULCAN</u>	Lat: <u>59°43'N</u>
Claim: <u>RUFF</u>	Long: <u>133°30'W</u>

## DIAMOND DRILL LOG

HOLE #: 81-3SHEET 1  
of 5

LOCATION _____	BEARING <u>199°</u>	LATITUDE <u>7643 N</u>	CORE SIZE <u>N.Q.</u>	LOGGED BY <u>D.R. MORGAN</u>
DATE COLLARED <u>27 Sept 81</u>	LENGTH <u>168 ft</u>	DEPARTURE <u>9601 E</u>	SCALE OF LOG <u>1"-5 ft</u>	DATE <u>29 SEPT 81</u>
DATE COMPLETED <u>29 Sept 81</u>	DIP <u>-50°</u>	ELEVATION <u>4732 ft</u> <u>1442.3m</u>	REMARKS <u>OVERALL RECOVERY: 81.7%</u>	

Company: CYCLONEProperty: ATLIN-VULCANClaim: RUFFNTS: 104N/12ELat: 59°43'NLong: 133°30'W

DIAMOND DRILL LOG

HOLE #: 81-3

SHEET 1

of 5

LOCATION \_\_\_\_\_ BEARING 199° LATITUDE 7643 N CORE SIZE N.Q. LOGGED BY DR. MORGAN  
 DATE COLLARED 27 Sept 81 LENGTH 168 ft DEPARTURE 9601 E SCALE OF LOG 1"-5 ft DATE 29 SEPT 81  
 DATE COMPLETED 29 Sept 81 DIP -50° ELEVATION 4732 ft REMARKS OVERALL RECOVERY: 81.7%  
1442.3m

ROCK TYPES AND ALTERATION	GRAPHIC LOG		MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	FOOTAGE BLOCKS	RECOVERY		ASSAY RESULTS				Sample length		
	ROCK TYPE ALTERATION	FOOTAGE				WT. IN GRAMS		SAMPLE No.		CORE	SLUDGE		CORE	SLUDGE
						CORE	SLUDGE	CORE	SLUDGE					
<u>CASING</u>		<u>0</u>												
<u>QUARTZ MONZONITE</u> <u>Decayed &amp; oxidized</u> <u>down to 40ft.</u>		<u>7</u>	<u>-----</u>											
"		<u>10</u>												
"		<u>15</u>					<u>28%</u>							
"		<u>20</u>					<u>70%</u>							
"		<u>25</u>					<u>68%</u>							
"		<u>30</u>					<u>34%</u>							
"		<u>35</u>					<u>1.1%</u>							

Company: CYCLONE  
 Property: RUFF

Diam 2 1/8 Drill

HOLE #: 81-3

SHEET  
# 2

ROCK TYPES AND ALTERATION	GRAPHIC LOG		MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	FOOTAGE BLOCKS	RECOVERY		ASSAY RESULTS				Sample length		
	ROCK TYPE ALTERATION	FOOTAGE				WT. IN GRAMS		SAMPLE No.		CORE	SLUDGE		CORE	SLUDGE
						CORE	SLUDGE	COMBINED						
						%	%							
QUARTZ MONZONITE		35					24%							
"		40												
"		45					76%							
"		50					96%							
<i>Rounded 7cm xenolith of fg DIORITE</i>		55					96%							
"		60	<i>45° imm siliceous stringer</i>				92%							
"		65	<i>35° 3mm siliceous &amp; chloritic stringer with dissem MoS<sub>2</sub></i>				94%							
<i>Sericitic alt 64-80</i>		70					70%							

Company: CYCLONE  
 Property: ROFF

Dia 0.7 Drill  
QJG

HOLE #: 81-3

SHEET  
 # 3

ROCK TYPES AND ALTERATION	GRAPHIC LOG		MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	FOOTAGE BLOCKS	RECOVERY		ASSAY RESULTS				Sample length		
	ROCK TYPE ALTERATION	FOOTAGE				WT. IN GRAMS		SAMPLE No.		CORE	SLUDGE		CORE	SLUDGE
						CORE	SLUDGE	COMBINED						
						%	%							
QUARTZ MONZONITE		70	45° irregular rusty fracture			92								
		75												
"		80				94%								
"		85				98%								
"		90				92%								
"		95				98%								
"		100				96%								
"		105				98%								



Company: **CYCLONE**  
 Property: **RUFF**

Diam **2 1/8** Drill

HOLE #: **81-3**

SHEET  
# **4**

ROCK TYPES AND ALTERATION	GRAPHIC LOG		MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	FOOTAGE BLOCKS	RECOVERY		ASSAY RESULTS				Sample length		
	ROCK TYPE ALTERATION	FOOTAGE				WT. IN GRAMS		SAMPLE No.		CORE	SLUDGE		CORE	SLUDGE
						CORE %	SLUDGE %	COMBINED						
QUARTZ MONZONITE		105												
sericitic alteration		108				96%								
"		110												
		115				90%								
Intense argillic & sericitic alteration		117				90%								
QUARTZ MONZONITE (cont)		120												
"		125				92%								
"		130	35° siliceous & argillic stringer			99%								
"		135	45° 10mm siliceous stringer with pyrite & dissem. <u>MoS<sub>2</sub></u>			100%								
"		140				97%								



Company: CYCLONE	NIS: 104N/12E
Property: ATLUN-VULCAN	Lat: 59°48'N
Claim: RUFF	Long: 133°30'W

## DIAMOND DRILL LOG

HOLE #: 81-4

SHEET 1  
of 5

LOCATION	BEARING <u>148°</u>	LATITUDE <u>7643 N</u>	CORE SIZE <u>N.Q.</u>	LOGGED BY <u>DR MORGAN</u>
DATE COLLARED <u>30 Sept 81</u>	LENGTH <u>163 ft</u>	DEPARTURE <u>9601 E</u>	SCALE OF LOG <u>1"-5 ft</u>	DATE <u>1 OCT 81</u>
DATE COMPLETED <u>1 Oct 81</u>	DIP <u>-50°</u>	ELEVATION <u>4732 ft</u> <u>1442.3 m</u>	REMARKS <u>OVERALL RECOVERY: 88.7%</u>	



Company: CYCLONE  
Property: RUFF

Dia Drill  
2 1/8

HOLE #: 81-4

SHEET  
# 2

ROCK TYPES AND ALTERATION	GRAPHIC LOG		MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	FOOTAGE BLOCKS	RECOVERY		ASSAY RESULTS				Sample Length		
	ROCK TYPE ALTERATION	FOOTAGE				WT. IN GRAMS		SAMPLE No.		CORE	SLUDGE		CORE	SLUDGE
						CORE	SLUDGE	CORE	SLUDGE					
						%	%							
QUARTZ MONZONITE		35												
		40												
"		45				96%								
"		50				80%								
"		55				91%								
"		60				60%								
"		65				100%								
"		70				96%								



Company: **CYCLONE**Property: **RUFF**Diam **2 1/8** DrillHOLE #: **81-4**

SHEET

# **4**

ROCK TYPES AND ALTERATION	GRAPHIC LOG		MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	FOOTAGE BLOCKS	RECOVERY		ASSAY RESULTS				Sample length		
	ROCK TYPE ALTERATION	FOOTAGE				WT IN GRAMS		SAMPLE No.		CORE	SLUDGE		CORE	SLUDGE
						CORE	SLUDGE	CORE	SLUDGE					
						%	%			COMBINED				
QUARTZ MONZONITE		105	20° Argillic shears across 5cm			94%								
"		110												
"		115				96%								
Argillic & chlorite alt		116												
"		118				100%								
"		120												
"		125				90%								
"		130				82%								
"		135				100%								
"		140				84%								





Company: <u>CYCLONE</u>	NTS: <u>104N/12E</u>
Property: <u>ATLIN-VULCAN</u>	Lat: <u>59°43N</u>
Claim: <u>RUFF</u>	Long: <u>133°30W</u>

## DIAMOND DRILL LOG

HOLE #: 81-5SHEET 1  
of 6

LOCATION _____	BEARING <u>170°</u>	LATITUDE <u>7550 N</u>	CORE SIZE <u>N.Q.</u>	LOGGED BY <u>D.R. MORGAN</u>
DATE COLLARED <u>3 OCT 81</u>	LENGTH <u>188</u>	DEPARTURE <u>9580 E</u>	SCALE OF LOG <u>1"-5 ft</u>	DATE <u>7 OCT 81</u>
DATE COMPLETED <u>7 OCT 81</u>	DIP <u>-73°</u>	ELEVATION <u>4727 ft</u> <u>1440.8 m</u>	REMARKS <u>OVERALL RECOVERY: 90.1%</u>	

Company: CYCLONENTS: 104N/12E

DIAMOND DRILL LOG

SHEET 1

Property: ATLIN-VULCANLat: 59°43'NHOLE #: 81-5

of 6

Claim: RUFFLong: 133°30'W
 LOCATION \_\_\_\_\_ BEARING 170°  
 DATE COLLARED 3 OCT 81 LENGTH 188  
 DATE COMPLETED 7 OCT 81 DIP -73°

 LATITUDE 7550 N  
 DEPARTURE 9500 E  
 ELEVATION 4727 ft  
1440.8 m

 CORE SIZE N.Q. LOGGED BY D.R. MORGAN  
 SCALE OF LOG 1"-5 ft DATE 7 OCT 81  
 REMARKS OVERALL RECOVERY: 90.1%

ROCK TYPES AND ALTERATION	GRAPHIC LOG		MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	FOOTAGE BLOCKS	RECOVERY		ASSAY RESULTS			Sample length		
	ROCK TYPE ALTERATION	FOOTAGE				WT. IN GRAMS		SAMPLE No.		CORE		SLUDGE	COMBINED
						CORE	SLUDGE	CORE	SLUDGE				
			%	%									
<u>CASING</u>													
<u>QUARTZ MONZONITE</u>		<u>80.</u>											
<u>(Oxidized &amp; decayed to 30 ft)</u>		<u>10</u>											
"		<u>15</u>				<u>48%</u>							
"		<u>20</u>				<u>38%</u>							
"		<u>25</u>				<u>60%</u>							
"		<u>30</u>				<u>100%</u>							
"		<u>35</u>				<u>100%</u>							

Company: **CYCLONE**  
 Property: **RUFF**

Diameter Drill  
 88

HOLE #: **81-S**

SHEET  
 # **2**

ROCK TYPES AND ALTERATION	GRAPHIC LOG		MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	FOOTAGE BLOCKS	RECOVERY		ASSAY RESULTS				Sample length		
	ROCK TYPE ALTERATION	FOOTAGE				WT. IN GRAMS		SAMPLE No.		CORE	SLUDGE		CORE	SLUDGE
						CORE %	SLUDGE %	COMBINED						
QUARTZ MONZONITE		35	Massive ↓			100%								
"		40												
"		45				100%								
"		50				100%								
"		55	130° Rusty fracture			90%								
"		60				100%								
"		65				99%								
"		70	160° Rusty fracture			92%								

Company: CYCLONE  
 Property: RUFF

Diam 8 Drill

HOLE #: 81-5

SHEET  
# 3

ROCK TYPES AND ALTERATION	GRAPHIC LOG		MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	FOOTAGE BLOCKS	RECOVERY		ASSAY RESULTS			Sample length		
	ROCK TYPE ALTERATION	FOOTAGE				WT. IN GRAMS		SAMPLE No.		CORE		SLUDGE	COMBINED
						CORE %	SLUDGE %	CORE	SLUDGE				
QUARTZ MONZONITE		70											
"		75	35° Rusty fracture			98%							
"		80				92%							
"		85	45° lens qtz veinlet with dissemin ZnS & Chalcopyrite			86%							
"		90				96%							
"		95				94%							
"		100	35° 2cm massive ARSENOPYRITE			100%							
"		105				94%							

Company: **CYCLONE**  
 Property: **RUFF**

Diam  $\varnothing$  1 1/8 Drill

HOLE #: **81-5**

SHEET  
# **4**

ROCK TYPES AND ALTERATION	GRAPHIC LOG		MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	FOOTAGE BLOCKS	RECOVERY		ASSAY RESULTS				Sample length		
	ROCK TYPE ALTERATION	FOOTAGE				WT. IN GRAMS		SAMPLE No.		CORE	SLUDGE		CORE	SLUDGE
						CORE	SLUDGE	CORE	SLUDGE					
						%	%			COMBINED				
QUARTZ MONZONITE		105				100%								
Argillie & chloritic alt		110	130° 3cm Qtz veinlet with pyrite											
"		115				94%								
"		120	140° Chloritic & MnO <sub>2</sub> stained shear across 12 cms. Rusty			86%								
"		125	145° chloritic & argillie shear 15cms.			88%								
"		130	130° 1cm Qtz veinlet pyritic			96%								
"		135	135° Chloritic argillie fracture coating 135° Chloritic argillie fracture coating			96%								
"		140				96%								

Company: CYCLONE  
 Property: RUFF

Diameter Drill  
 2 1/8" Jg

HOLE #: 81-5

SHEET  
 # 5

ROCK TYPES AND ALTERATION	GRAPHIC LOG			MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	FOOTAGE BLOCKS	RECOVERY		ASSAY RESULTS			Sample length
	ROCK TYPE ALTERATION	FOOTAGE	STRUCTURE				WT. IN GRAMS		SAMPLE No.			
							CORE %	SLUDGE %	Ag	Zn	Mo	
QUARTZ MONZONITE		140										
"		145					96%					
"		150					100%					
"		155					80%					
<u>ANDESITE DYKE: Fractured Brecciated &amp; mineralized as noted</u>		155		140° CONTACT Dark & chilled near contact.								
"		160		Dyke sheared & crumbly ↓ 35° 3cm Calcite veinlet			90%					
"		165		Dyke sheared & crumbly ↓			94%					
"		170		Dyke brecciated silicified pyritic & more massive ↓			92%					
"		175					72%		234	0.25	.15	.002 (5.4 f)

-169.6  
 175.0



Company: <u>CYCLONE</u>	NTS: <u>104N/12E</u>
Property: <u>ATLIN-VULCAN</u>	Lat: <u>59°43'N</u>
Claim: <u>RUFF</u>	Long: <u>133°30'W</u>

## DIAMOND DRILL LOG

SHEET 1

HOLE #: 81-6of 4

LOCATION _____	BEARING <u>170°</u>	LATITUDE <u>7550 N</u>	CORE SIZE <u>NQ</u>	LOGGED BY <u>D.R. MORGAN</u>
DATE COLLARED <u>7 OCT 81</u>	LENGTH <u>143</u>	DEPARTURE <u>9580 E</u>	SCALE OF LOG <u>1"-5 ft</u>	DATE <u>8 OCT 81</u>
DATE COMPLETED <u>8 OCT 81</u>	DIP <u>-50°</u>	ELEVATION <u>4727 ft</u> <u>1440.8 m</u>	REMARKS <u>OVERALL RECOVERY: 85.0%</u>	



Company: CYCLONE  
 Property: ATLIN-VULCAN  
 Claim: RUFF

NTS: 104N/12E  
 Lat: 59°43'N  
 Long: 133°30'W

DIAMOND DRILL LOG  
 HOLE #: 81-6

SHEET 1  
 of 4

LOCATION \_\_\_\_\_ BEARING 170° LATITUDE 7550 N  
 DATE COLLARED 7 OCT 81 LENGTH 143 DEPARTURE 9580 E  
 DATE COMPLETED 8 OCT 81 DIP -50° ELEVATION 4727 ft  
1440.8 m

CORE SIZE NQ LOGGED BY D.R. MORGAN  
 SCALE OF LOG 1"-5 ft DATE 8 OCT 81  
 REMARKS OVERALL RECOVERY: 85.0%

ROCK TYPES AND ALTERATION	GRAPHIC LOG		MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	FOOTAGE BLOCKS	RECOVERY		ASSAY RESULTS			Sample length		
	ROCK TYPE ALTERATION	FOOTAGE				STRUCTURE	WT. IN GRAMS		SAMPLE No.			CORE	SLUDGE
							CORE	SLUDGE	CORE	SLUDGE			
<u>CASING</u>													
<u>QUARTZ MONZONITE</u>		<u>33</u>											
<u>Oxidized &amp; rusty weathering</u>		<u>35</u>											
"		<u>40</u>					<u>90%</u>						
"		<u>45</u>					<u>80%</u>						
"		<u>50</u>					<u>60%</u>						
"		<u>55</u>					<u>92%</u>						



Company: **CYCLONE**  
 Property: **RUFF**

Diam **8** Drill

HOLE #: **81-6**

SHEET  
 # **3**

ROCK TYPES AND ALTERATION	GRAPHIC LOG		MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	FOOTAGE BLOCKS	RECOVERY		ASSAY RESULTS			Sample length
	ROCK TYPE ALTERATION	FOOTAGE				WT. IN GRAMS		SAMPLE No.			
						CORE %	SLUDGE %	CORE	Ag 035 %	Zn %	
QUARTZ MONZONITE		90				86%					
"		95				94%					
Argillic & chloritic ↓		100	80° Argillic gouge 4cms			70%					
ANDESITE DYKE Fractured & mineralized as noted		105	15° Chloritic fracture ZnS in qtz veinlet across 3cm			72%	238	2.02	3.55	.001	105.0- 106.0-
"		110				90%					
"		115	70° Chloritic fracture ZnS in siliceous veinlet 70°								114.5-
"		120	50° ZnS in siliceous veinlet 15° chloritic fracture Dyke brecciated & silicified			80%	239	2.74	1.52	.002	6.5R
"		125	50° CONTACT			80%					121.0



Company: <u>CYCLONE</u>	NTS: <u>104N/12E</u>
Property: <u>ATLIN-VULCAN</u>	Lat: <u>59°43'N</u>
Claim: <u>RUFF</u>	Long: <u>133°30'W</u>

## DIAMOND DRILL LOG

HOLE #: 81-7SHEET 1  
of 4

LOCATION _____	BEARING <u>140°</u>	LATITUDE <u>7550 N</u>	CORE SIZE _____	LOGGED BY <u>D. R. MORGAN</u>
DATE COLLARED <u>8 OCT 81</u>	LENGTH <u>143 ft</u>	DEPARTURE <u>9580 E</u>	SCALE OF LOG <u>1"-5 ft</u>	DATE <u>9 OCT 81</u>
DATE COMPLETED <u>9 OCT 81</u>	DIP <u>-50°</u>	ELEVATION <u>4727 ft</u> <u>1440.8 m</u>	REMARKS <u>OVERALL RECOVERY: 86.2%</u>	

Company: CYCLONENTS: 04N/12E

DIAMOND DRILL LOG

SHEET 1

Property: ATLIN-VULCANLat: 59°43'NHOLE #: 81-7of 4Claim: RUFFLong: 133°30'W

LOCATION \_\_\_\_\_ BEARING 140° LATITUDE 7550 N  
 DATE COLLARED 8 OCT 81 LENGTH 143 ft DEPARTURE 9580 E  
 DATE COMPLETED 9 OCT 81 DIP -50° ELEVATION 4727 ft  
1440.8 m

CORE SIZE \_\_\_\_\_ LOGGED BY D.R. MORGAN  
 SCALE OF LOG 1"-5 ft DATE 9 OCT 81  
 REMARKS OVERALL RECOVERY: 86.2%

ROCK TYPES AND ALTERATION	GRAPHIC LOG		MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	FOOTAGE BLOCKS	RECOVERY		ASSAY RESULTS				Sample length		
	ROCK TYPE ALTERATION	FOOTAGE				STRUCTURE	WT. IN GRAMS		SAMPLE No.		CORE		SLUDGE	COMBINED
							CORE %	SLUDGE %	CORE	SLUDGE				
<u>CASING</u>		<u>0</u>												
<u>QUARTZ MONZONITE</u>		<u>19</u> <u>20</u>												
"		<u>25</u>				<u>96%</u>								
"		<u>30</u>				<u>56%</u>								
"		<u>35</u>				<u>70%</u>								
"		<u>40</u>				<u>74%</u>								
"		<u>45</u>				<u>96%</u>								

Company: CYCLONE

Property: RUFF

Diam  $\emptyset$  Drill

HOLE #: 81-7

SHEET

# 2

ROCK TYPES AND ALTERATION	GRAPHIC LOG		MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	FOOTAGE BLOCKS	RECOVERY		ASSAY RESULTS				Sample length		
	ROCK TYPE ALTERATION	FOOTAGE				WT IN GRAMS		SAMPLE No.		CORE	SLUDGE		CORE	SLUDGE
						CORE	SLUDGE	CORE	SLUDGE					
QUARTZ MONZONITE		45												
		50												
" end of oxidized section		55												
"		60												
"		65												
" Argillie alteration		70												
"		75												
"		80												

\* Pyritic gouge 2cms altitude unclear  
 Siliceous & pyritic

96%

86%

94%

90%

93%

91%

84%

Company: CYCLONE  
Property: RUFF

Diam  $\varnothing$  8" Drill

HOLE #: 81-7

SHEET #3

ROCK TYPES AND ALTERATION	GRAPHIC LOG		MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	FOOTAGE BLOCKS	RECOVERY		ASSAY RESULTS			Sample length		
	ROCK TYPE ALTERATION	FOOTAGE				WT. IN GRAMS		SAMPLE No.		CORE		SLUDGE	COMBINED
						CORE %	SLUDGE %	CORE	SLUDGE				
QUARTZ MONZONITE		80	45° Quartz stringed; pyritic										
End of argillic alteration		85				80%							
"		90				96%							
"		95				97%							
"		100				100%							
"		105	Decayed section			92%							
Argillic & chloritic alteration		105	Hanging wall brecciated & quartz healed			99%							
"		110		CONTACT Attitude unclear									
ANDESITE DYKE		115				88%							





Company: CYCLONE	NTS: 104N/12E
Property: ATLIN-VULCAN	Lat: 59°43'N
Claim: RUFF	Long: 133°30'W

## DIAMOND DRILL LOG

HOLE #: 81-8

SHEET  
of 7

LOCATION _____	BEARING <u>170°</u>	LATITUDE <u>7546 N</u>	CORE SIZE <u>N.G.</u>	LOGGED BY <u>DR MORGAN</u>
DATE COLLARED <u>9 OCT 81</u>	LENGTH <u>228</u>	DEPARTURE <u>9548 E</u>	SCALE OF LOG <u>1"-5 ft</u>	DATE <u>10 OCT 81</u>
DATE COMPLETED <u>10 OCT 81</u>	DIP <u>-73°</u>	ELEVATION <u>4706 FT</u> <u>1439.4 m</u>	REMARKS <u>OVERALL RECOVERY: 92.3%</u>	

Company: CYCLONE

NTS: 10'N/12'E

DIAMOND DRILL LOG

SHEET 1

Property: ATLIN-VULCAN

Lat: 59°13'N

HOLE #: 81-8

of 7

Claim: RUFF

Long: 133°30'W

 LOCATION \_\_\_\_\_  
 DATE COLLARED 9 OCT 81  
 DATE COMPLETED 10 OCT 81

 BEARING 170°  
 LENGTH 228  
 DIP -73°

 LATITUDE 7546 N  
 DEPARTURE 9548 E  
 ELEVATION 4706 ft  
1434.4 m

 CORE SIZE N.Q. LOGGED BY DR MORGAN  
 SCALE OF LOG 1"-5 ft DATE 10 OCT 81  
 REMARKS OVERALL RECOVERY: 92.3%

ROCK TYPES AND ALTERATION	GRAPHIC LOG		MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	FOOTAGE BLOCKS	RECOVERY		ASSAY RESULTS				Sample length			
	ROCK TYPE	ALTERATION				FOOTAGE	STRUCTURE	WT. IN GRAMS		SAMPLE No.			CORE	SLUDGE	COMBINED
								CORE	SLUDGE	CORE	SLUDGE				
						%	%								
CASING															
QUARTZ MONZONITE															
"								64%							
"								78%							
End of oxidized section								80%							
"								88%							
"								92%							

20° Rusty, MnO<sub>2</sub> stained shear  
20'

35° Chlorite epidote silica fracture  
across 8mm

Company: CYCLONE  
Property: RUFF

Diam 8" Drill  
D<sub>8</sub>

HOLE #: 81-8

SHEET  
#2

ROCK TYPES AND ALTERATION	GRAPHIC LOG		MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	FOOTAGE BLOCKS	RECOVERY		ASSAY RESULTS			Sample length		
	ROCK TYPE ALTERATION	FOOTAGE				WT. IN GRAMS		SAMPLE No.		CORE		SLUDGE	COMBINED
						CORE %	SLUDGE %	CORE	SLUDGE				
QUARTZ MONZONITE		35											
"		40				96%							
"		45				98%							
"		50				94%							
"		55				96%							
"		60				100%							
"		65				90%							
"		70				94%							



Company: **CYCLONE**  
 Property: **RUFF**

Dia 7 1/2 Drill  
 JG

HOLE #: **81-8**

SHEET  
 # **4**

ROCK TYPES AND ALTERATION	GRAPHIC LOG		MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	FOOTAGE BLOCKS	RECOVERY		ASSAY RESULTS				Sample length		
	ROCK TYPE ALTERATION	FOOTAGE				WT. IN GRAMS		SAMPLE No.		CORE	SLUDGE		CORE	SLUDGE
						CORE	SLUDGE	CORE	SLUDGE					
						%	%	COMBINED						
QUARTZ MONZONITE		105				94%								
"		110				90%								
"		115				100%								
"		120	135° MnO <sub>2</sub> coated fracture			98%								
ferriatic & argillie alt	} silicified	125	140° rusty fracture			100%								
"		130	145° 1cm quartz veinlet with dissem. pyrite & ZnS			97%								
Argillie alt	} ↓	135	35° shearing			100%								
"		140				100%								

Company: *CYCLONE*  
 Property: *RUFF*

Diam *0g* Drill

HOLE #: *81-0*

SHEET  
# *5*

ROCK TYPES AND ALTERATION	GRAPHIC LOG		MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	FOOTAGE BLOCKS	RECOVERY		ASSAY RESULTS				Sample length		
	ROCK TYPE ALTERATION	FOOTAGE				WT. IN GRAMS		SAMPLE No.		CORE	SLUDGE		CORE	SLUDGE
						CORE %	SLUDGE %	COMBINED						
<i>QUARTZ MONZONITE</i>		<i>140</i>												
		<i>145</i>												
<i>Sericitic alt grades in</i>														
"		<i>150</i>	<i>70° 8mm silicified fracture with dissem pyrite</i>				<i>98%</i>							
"		<i>155</i>					<i>84%</i>							
"		<i>160</i>	<i>45° 5cm brecciated fracture with dissem. pyrite</i>  <i>Note: In this section where vein was anticipated core is massive, generally coming in 1-3 ft lengths from 140-175</i>				<i>94%</i>							
"		<i>165</i>					<i>93%</i>							
"		<i>170</i>					<i>94%</i>							
<i>Sericitic alt grades out</i>		<i>175</i>					<i>99%</i>							

Compar CYCLONE  
Property: RUFF

Diamond Drill  
08

HOLE #: 81-8

SHEET  
# 6

ROCK TYPES AND ALTERATION	GRAPHIC LOG		MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	FOOTAGE BLOCKS	RECOVERY		ASSAY RESULTS					
	ROCK TYPE ALTERATION	FOOTAGE				STRUCTURE	WT. IN GRAMS		SAMPLE No.			SAMPL length	
							CORE %	SLUDGE %	CORE	Ag %	Zn %		Mo %
QUARTZ MONZONITE		175											
"		180				92%							
"		185				100%							
----- ANDESITE DYKE Fractured & mineralized as noted Massive & dark chilled contact Soft and decayed		187	40° CONTACT			92%							
		190											
		191											
Andesite breccia		195	45°										
Andesite			45°										
Andesite breccia		200				96%							
Quartz Calcite vein white vuggy			30°										
		205				90%							
Andesite breccia			30° Chloritic, pyritic			84%							
		210						242	0.57	0.43	0.017	2.08	2.00





CYCLONE

Company: DEVELOPMENTS	NTS: 104N/12E
Property: ATZIN-VULCAN	Lat: 59°43'N
Claim: RUFF	Long: 133°30'W

DIAMOND DRILL LOG

SHEET 1  
of 4

HOLE #: 81-9

LOCATION _____	BEARING <u>170°</u>	LATITUDE <u>7546 N</u>	CORE SIZE <u>N.Q</u>	LOGGED BY <u>D.R. MORGAN</u>
DATE COLLARED <u>10 OCT 81</u>	LENGTH <u>138 ft</u>	DEPARTURE <u>9548 E</u>	SCALE OF LOG <u>1"-5 ft</u>	DATE <u>14 OCT 1981</u>
DATE COMPLETED <u>14 OCT 81</u>	DIP <u>-50°</u>	ELEVATION <u>1434.4 m</u> <u>(4706 ft)</u>	REMARKS <u>OVERALL RECOVERY: 90.3%</u>	



Company: *CYCLONE*Property: *RUFF*Diam *38* DrillHOLE #: *81-9*

SHEET

# *2*

ROCK TYPES AND ALTERATION	GRAPHIC LOG		MINERALIZATION AND STRUCTURES	SPECIFIC GRAVITY	FOOTAGE BLOCKS	RECOVERY		ASSAY RESULTS			Sample length		
	ROCK TYPE ALTERATION	FOOTAGE				WT. IN GRAMS		SAMPLE No.		CORE		SLUDGE	COMBINED
						CORE	SLUDGE	CORE	SLUDGE				
					%	%							
<i>QUARTZ MONZONITE</i>		<i>35</i>				<i>100%</i>							
"		<i>40</i>											
"		<i>45</i>				<i>95%</i>							
"		<i>50</i>				<i>100%</i>							
"		<i>55</i>				<i>100%</i>							
"		<i>60</i>				<i>94%</i>							
<i>Increasingly Argillic &amp; sericitic alteration</i>		<i>65</i>				<i>100%</i>							
		<i>70</i>				<i>85%</i>							



