

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**11,715**

DIAMOND DRILL ASSESSMENT REPORT

ON THE

SHASTA GROUP, OMINECA M.D.

N.T.S. 94E/2W, 7W, 3E, 6E

Latitude  $57^{\circ}14'N$  Longitude  $126^{\circ}53'W$

OWNER: International Shasta Resources Limited

OPERATOR: Newmont Exploration of Canada Limited

By: Bruce Downing  
November 8, 1983

TABLE OF CONTENTS

1.	INTRODUCTION . . . . .	1
1.1	Location . . . . .	1
1.2	Topography/Access . . . . .	1
2.	GEOLOGY . . . . .	4
2.1	Regional Geology . . . . .	4
2.2	Property Geology . . . . .	5
3.	DRILL SURVEY . . . . .	6
4.	MINERALIZATION . . . . .	6
5.	CONCLUSIONS . . . . .	7

FIGURES

FIGURE 1	LOCATION MAP . . . . .	2
FIGURE 2	DIAMOND DRILL LOCATION MAP . . . . .	3

APPENDIX

APPENDIX I	DRILL LOGS . . . . .	8
APPENDIX II	STATEMENT OF EXPENSES . . . . .	44
APPENDIX III	STATEMENT OF QUALIFICATIONS . . . . .	45

## 1. INTRODUCTION

The Shasta Property consists of twelve claims comprising the Shasta Group, (Shas 31, 33, 35, 36, 37 & 38; Sha 1 & 2; Silver Reef; Silver Reef 3; Shasta 3 & 4). The work was done on Shas 35 & 36.

A drilling program to test areas of gold and silver mineralization below surface was carried out between August 17 and September 8, in which 674 metres (2211 feet) of BQ core were drilled from nine holes. The drilling was contracted to D. J. Drilling Co. Ltd., 13135-20th Avenue, Surrey, B.C. Most of the core was split with half being sent to Chemex Labs, North Vancouver for fire assay (Au & Ag) and the remainder labelled and stored in core boxes on the property at the campsite. The program was supervised and core logged by B. W. Downing for Newmont Exploration of Canada.

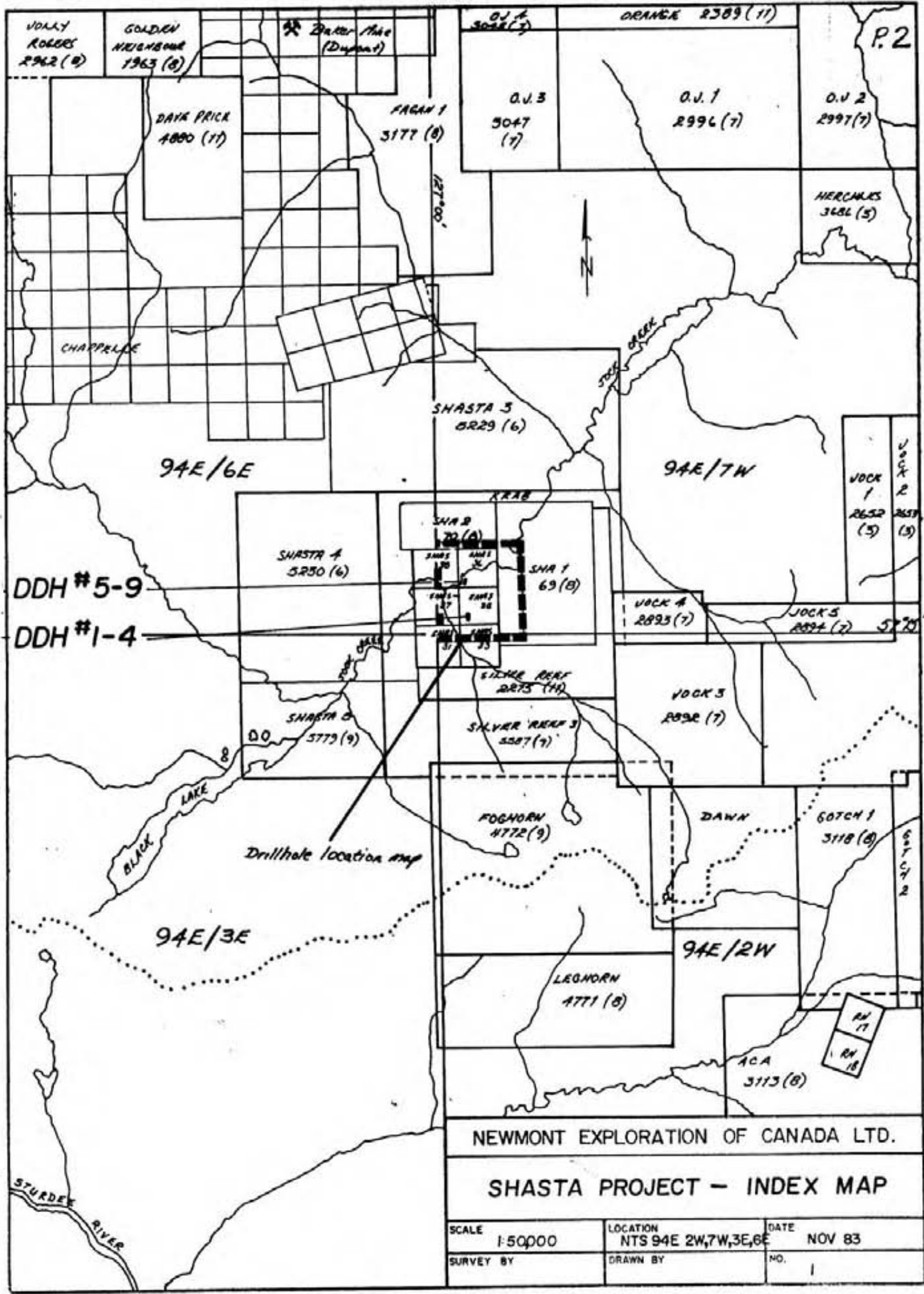
The Shasta group of claims were originally staked in 1972 and since then various surveys (geology, geochemistry) have been carried out on the property. An option was signed in April 1983 between Newmont and International Shasta.

### 1.1 Location

The Shasta Group is located approximately 290 km north of Smithers in the Omineca Mining Division at the junction of four map sheets (94E/2W, 7W, 3E, 6E), Figure 1.

### 1.2 Topography/Access

The property occurs in the moderately rugged Toodoggone area of B.C. between the 1245 and 1700 metre elevations. It is located approximately two kilometres northeast of Black Lake which is accessible by float plane and wheel plane (abandoned 1000 metre dirt airstrip). The property is drained by Jock Creek (headwaters at Black Lake).



P.2

VOLLY ROBERTS 2962 (9)

GOLDEN NEIGHBOR 1963 (8)

DATA PRICK (Drillhole)

V.J. 3 3047 (7)

ORANGE 2389 (11)

DATA PRICK 4800 (17)

FAGAN 1 3177 (8)

V.J. 3 3047 (7)

V.J. 1 2996 (7)

V.J. 2 2997 (7)

MERCURY 3686 (5)

CHAPPELLE

SHASTA 3 8229 (6)

94E/6E

94E/7W

JOCK 1 2652 (5)  
JOCK 2 2653 (5)

DDH #5-9

DDH #1-4

SHASTA 4 5230 (6)

SNA 2 70 (4)

SNA 1 69 (8)

JOCK 4 2893 (7)

JOCK 5 2894 (7)

SILVER REEF 2875 (14)

JOCK 3 2892 (7)

SHASTA 5 5779 (9)

SILVER REEF 3 5587 (9)

BLACK LAKE

Drillhole location map

FOGHORN 4772 (9)

DAWN

GOTCH 1 3118 (8)

94E/3E

94E/2W

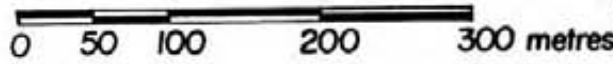
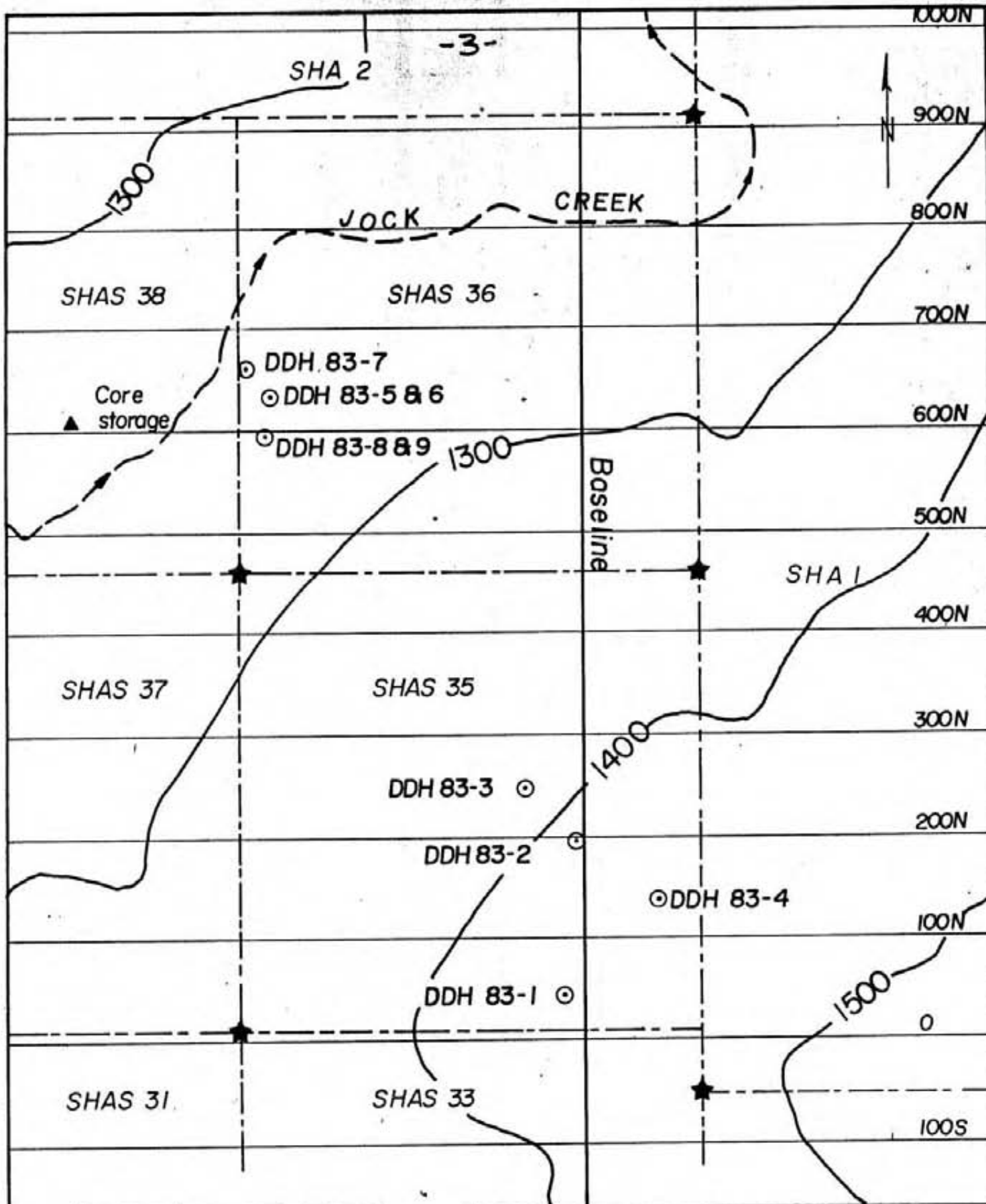
LEGHORN 4771 (8)

ACA 3113 (8)

NEWMONT EXPLORATION OF CANADA LTD.

SHASTA PROJECT - INDEX MAP

SCALE	1:50,000	LOCATION	NTS 94E 2W,7W,3E,6E	DATE	NOV 83
SURVEY BY		DRAWN BY		NO.	1



★ - Claim posts located by chain and compass

NEWMONT EXPLORATION OF CANADA LTD.		
<b>DRILLHOLE LOCATION MAP</b>		
SCALE 1:5000	LOCATION NTS 94E/7W	DATE DEC.83
SURVEY BY	DRAWN BY	NO. 2

Access to the property is by fixed wing aircraft from Smithers to the Sturdee River all weather airstrip (1600 metres in length) located about five kilometres to the southwest; followed by a five minute helicopter trip. This airstrip serves both Dupont's Baker Mine and Serem's property.

## 2. GEOLOGY

### 2.1 Regional Geology

The Shasta property occurs near the eastern margin of the Intermontane Belt in the Cassiar-Omineca Mountains. The oldest rock exposed are wedges of crystalline limestone correlatable with the Asitka Group (Permian) in thrust fault contact with the Takla Group (middle Triassic age). The Takla Group consists of andesitic flows and pyroclastic rocks including augite-tremolite andesite porphyries and crystal and lapilli tuffs. The Takla is intruded by the Black Lake intrusive, a relatively unaltered granodiorite to quartz monzonite and part of the Omineca Intrusions. Takla rocks are overlain by the Toodoggone volcanics (lower Jurassic age) in which the Shasta property occurs. The Toodoggone volcanics consist of tuff, flow and pyroclastic breccias, volcanic sediments, andesitic flows and grey dacite, the latter being the most widespread and continuous rock type in the area. A distinctive characteristic of many of these units is the presence of quartz eyes. The Shasta property occurs within a quartz-eye feldspar crystal tuff (field name), a rock type similar to that at Serem's deposit (field name being quartz andesite). The Baker Mine occurs within the Takla Group; however, all three properties have similar style of mineralization (quartz veins, silicified breccia zones).

The Toodoggone Group rocks are unconformably overlain by relatively flat lying Sustut Group sediments of Upper Cretaceous to Tertiary age which outcrop along the eastern margin of the Spatzizi Plateau, several kilometres to the west.

Structurally, the Toodoggone area has undergone several periods of faulting, (thrust, normal, strike-slip) and folding. In the northwest portion of the area (Claw Mtn.), the Toodoggone rocks are apparently in fault contact (northwest trending) with the Takla. Many of the valleys display block faulting, associated with graben structures.

## 2.2 Property Geology

The Shasta Property comprises of three zones (Main, Creek and Jock) within a quartz-eye feldspar crystal tuff, and a fourth zone (Upper zone) in a feldspar crystal tuff. These units have a characteristic orange weathering surface due to fine hematite within the albite producing orange coloured feldspars. Bedding was recognized within the quartz-eye unit in several places. Mafic rich fiamme ranging from a few millimetres up to several centimetres occur in both units and vary from scattered to numerous, the long axes of which are subparallel indicating bedding attitudes. The quartz eyes decrease in frequency towards the feldspar crystal tuff unit and the contact is gradational. The feldspar unit is characterized by more epidote alteration and epidote-rich fractures. The upper part of the quartz-eye unit is fragmental (breccia) and is overlain by a purple tuff-tuff breccia unit. Contacts are poorly exposed due to faulting and overburden.

The northwest portion of the map-area consists of tuff-tuff breccias to lahars, and volcanic conglomerate and wackes (some of which show reworking) all of which range in colour from grey, green and maroon-purple.

The four potential mineralized zones (Upper, Main, Creek, and Jock) are areas that have undergone faulting and shearing resulting in localized fracturing and brecciation with the formation of dilatant zones, a favourable area for mineralization. The first stage of deformation was responsible for development of unmineralized drusy quartz veins up to a centimetre across as parallel veins and/

or stockwork. A second deformational period caused rebrecciation with introduction of mineralized quartz veins. The last stage of mineralization resulted in many of the quartz vein cavities being filled with calcite and mineralized calcite veins coincident with the stockwork, with unmineralized calcite veins occurring in the periphery of the zones. Silicification and propylitic alteration (chlorite, epidote) are associated with the mineralized zones.

Structurally, the map-area is extensively faulted forming part of a graben structure. Poles to bedding are scattered resulting from a combination of folding and faulting, the latter causing large blocks to be displaced. Numerous small faults are recognized in the field by slip planes and topographic depressions. Major orientations of faults/fractures/joints are north-northeast and southwest trending. A major northeast-southwest lineament observed from aerial photographs transects the property and may be a major source regarding mineralization.

### 3. DRILL SURVEY

Results of the drilling program (drill logs and assays) for holes 83-1 to 83-9 are shown in Appendix 1 and summarized in Table I. The drill holes were not surveyed, hence the locations are approximate with reference to flagged grid lines and elevations estimated from topographic maps.

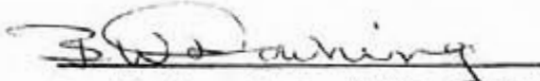
### 4. MINERALIZATION

The visible mineralization consists of disseminated cubic pyrite and fine-grained pyrite to pyrite blebs, disseminated argentite, specks of electrum and/or native silver, chalcopyrite and galena in quartz veins and silicified breccia zones with minor amounts in calcite veins. The better grades of mineralization occur at the intersection of major silicified (quartz-rich) zones.



5. CONCLUSIONS

The areas drilled resulted from observation of mineralization in outcrop. Several interesting zones were encountered which indicate the presence of widespread gold and silver mineralization. Drilling results indicate the continuity of surface mineralization at depth. However, much of the property is overlain by glacial material which would necessitate several drill holes to fully evaluate the potential of the mineralized zones.

  
B. W. Downing, B.Sc., M.Sc.  
November 8, 1983

SHASTA 1983 DRILL SUMMARY

<u>DDH</u>	<u>Lat. metres</u>	<u>Dep. metres</u>	<u>Elev. metres</u>	<u>Brg.</u>	<u>Dip</u>	<u>Length metres</u>	<u>From</u>	<u>To</u>	<u>Length metres</u>	<u>oz/t Au</u>	<u>oz/t Ag</u>
1	043N	020W	1425	270°	-50°	91.8	9.4	10.3	0.9	0.050	0.96
							41.8	43.0	1.2	0.070	4.36
							57.3	62.2	4.9	0.040	2.70
							71.9	74.9	2.8	0.042	2.88
2	198N	009W	1405	270°	-55°	83.5	66.0	67.1	1.1	0.012	0.30
3	251N	057W	1380	120°	-50°	92.7	21.0	26.2	5.2	0.153	1.69
							(includes a section of:	25.0	26.2	1.2	0.208
4	139N	072E	1425	090°	-50°	82.3	12.2	14.9	2.7	0.003	0.12
5	635N	305W	1260	090°	-45°	84.1	12.2	13.1	0.9	0.078	0.18
							14.6	19.6	5.0	0.659	7.63
							17.5	19.6	2.1	0.726	13.00)
							OR 12.2	19.6	7.4	0.403	4.07
6	635N	305W	1260	090°	-70°	60.0	16.5	27.7	11.2	0.209	4.47
							18.6	19.8	1.2	0.610	11.23)
							OR 16.5	34.1	17.6	0.155	3.03
7	660N	330W	1245	090°	-45°	57.3	20.0	24.7	4.7	0.077	1.06
							28.0	29.6	1.6	0.078	0.68
							36.9	43.0	6.1	0.056	4.65
							OR 32.0	45.7	13.7	0.037	2.60
8	596N	310W	1280	090°	-45°	56.7	32.0	32.5	0.5	0.150	13.14
9	596N	310W	1280	060°	-70°	64.6	25.3	25.9	0.4	0.046	1.32
							47.5	58.1	10.6	0.110	3.84
							(includes a section of:	52.7	54.3	1.6	0.270

- 8 -

APPENDIX 1 DRILL LOGS

DRILL LOG

PROJECT SHASTA	GROUND ELEV. 1425 m																																																							
HOLE NO. SH-83-1	BEARING 270°																																																							
LOCATION Main Zone (surface)	DIP -50°																																																							
	TOTAL LENGTH 91.8 m (301 ft)																																																							
LOGGED BY B.W. Downing <i>B.W. Downing</i>	HORIZONTAL PROJECT 043N																																																							
DATE	VERTICAL PROJECT 020W																																																							
CONTRACTOR D.J. Drilling Co. 13135 - 20th Avenue Surrey, B.C. V4A 1Z1	<b>ALTERATION SCALE</b> 																																																							
CORE SIZE BQ																																																								
DATE STARTED August 21, 1983	<b>TOTAL SULPHIDE SCALE</b> 																																																							
DATE COMPLETED August 23, 1983																																																								
DIP TESTS None																																																								
COMMENTS	LEGEND																																																							
<u>Mineralization</u>  <table border="1"> <thead> <tr> <th>from</th> <th>to</th> <th>length</th> <th>Au oz/t</th> <th>Ag oz/t</th> </tr> </thead> <tbody> <tr> <td>9.4 - 10.3 m</td> <td></td> <td>0.9 m</td> <td>0.050</td> <td>0.96</td> </tr> <tr> <td>41.8 - 43.0 m</td> <td></td> <td>1.5 m</td> <td>0.070</td> <td>4.36</td> </tr> <tr> <td>57.3 - 62.2 m</td> <td></td> <td>4.9 m</td> <td>0.040</td> <td>2.70</td> </tr> <tr> <td>71.9 - 74.7 m</td> <td></td> <td>2.8 m</td> <td>0.042</td> <td>2.88</td> </tr> </tbody> </table> Purpose: To test trench 83-5 (8 m 0.043 oz/t Au, 1.70 oz/t Ag)  Claim: Sha # 35  TS - thin section PTS- polish thin section	from	to	length	Au oz/t	Ag oz/t	9.4 - 10.3 m		0.9 m	0.050	0.96	41.8 - 43.0 m		1.5 m	0.070	4.36	57.3 - 62.2 m		4.9 m	0.040	2.70	71.9 - 74.7 m		2.8 m	0.042	2.88	<b>Specimens</b> <table border="1"> <thead> <tr> <th>ft</th> <th>m</th> <th></th> </tr> </thead> <tbody> <tr> <td>( 85)</td> <td>25.9</td> <td>TS</td> </tr> <tr> <td>(106)</td> <td>32.3</td> <td></td> </tr> <tr> <td>(128)</td> <td>39.0</td> <td>TS</td> </tr> <tr> <td>(138)</td> <td>42.1</td> <td>PTS</td> </tr> <tr> <td>(160)</td> <td>48.8</td> <td></td> </tr> <tr> <td>(203.5)</td> <td>62.0</td> <td>PTS</td> </tr> <tr> <td>(230)</td> <td>70.1</td> <td></td> </tr> <tr> <td>(231)</td> <td>70.4</td> <td>TS</td> </tr> <tr> <td>(301)</td> <td>91.7</td> <td>TS</td> </tr> </tbody> </table> qft-quartz eye feldspar tuff by - breccia qtz - quartz diss'd - dissiminated	ft	m		( 85)	25.9	TS	(106)	32.3		(128)	39.0	TS	(138)	42.1	PTS	(160)	48.8		(203.5)	62.0	PTS	(230)	70.1		(231)	70.4	TS	(301)	91.7	TS
from	to	length	Au oz/t	Ag oz/t																																																				
9.4 - 10.3 m		0.9 m	0.050	0.96																																																				
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(301)	91.7	TS																																																						

PAGE 1 OF 3		PROJECT: SHASTA		HOLE NO. 83-1							
DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ.	
				A	B chlorite	C	D	E			
0	0										
	75										
	100										
	56										
10	80										
	86										
	87										
	100										
20											
30											
40											
50											
60											
70											
80											
90											

0 - 3.0 CASING  
3.8 - 9.8 casing, blocky, caving

3.0 - 20.1 quartz-eye feldspar tuff (qft),  
dark orange feldspars; disseminated  
f. gr. py 2-3%; quartz-calcite  
stockwork, chloritic alteration of  
matrices

4.1-4.3: qtz vein at 60°, open cavities  
with qtz stals, silicified qft frags.  
greenish quartz streaks, specks py.

7.8: qtz vein breccia 1.5cm wide, 60°  
10.4-11.0: silicified bx zone 2cm wide,  
calcite blebs (1cm) zone at 60°; vuggy,  
diss'd py 2-3% greenish alteration  
as scattered blebs.

14.0-14.3: qtz-cal vein at 80° 2cm;  
chlorite patches along vein.

15.4-15.5: blocky, py, greyish qtz.  
19.2-19.3: calcite blebs, py, epy specks,  
20.1-21.1: silicified zone @ 70°;  
greenish qtz streaks; py 1-2%;  
dark grey qtz; f. gr. sulphides

20.1 - 22.9 silicified breccia zone; very  
broken core

22.9-23.0 calcite vein @ 60°, 3cm wide,  
no mineralization

23.0-23.1 qtz stockwork, bx zone, 1st  
generation qtz.

23.1-30.0 qtz stockwork; diss'd py 5-10%  
chloritic matrix

24.4-24.5: silicified zone @ 25°;  
diss'd py; specks galena.

30.0-30.8 strong to intense silicification,  
stockwork

30.8-43.3 qft; pale orange feldspars;  
strong to intense silicification;

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES			SAMPLE NUMBER	ASSAYS	
		FROM	TO	WIDTH		oz/t	oz/t
		m	m	m		Ag	Ag
		3.0	5.5	2.5	60	0.003	0.22
		5.5	7.0	1.5	61	0.003	0.35
		7.0	9.4	2.4	62	0.005	0.12
		9.4	10.4	1.0	63	0.050	0.42
		10.4	11.0	0.6	64	0.022	0.42
		11.0	14.0	3.0	65	0.007	0.24
		14.0	15.5	1.5	66	0.004	0.24
		15.5	19.1	3.6	67	0.003	0.12
		19.1	19.4	0.3	68	0.012	0.74
		19.4	20.1	0.7	69	0.014	0.20
		20.1	21.1	1.0	70	0.010	0.13
		21.1	22.9	1.8	71	0.022	0.22
		22.9	24.3	1.4	72	0.004	0.12
		24.3	24.5	0.2	73	0.020	0.14
		24.5	29.0	4.5	74	0.023	0.41
		29.0	30.8	1.8	75	0.003	0.12
		30.8	32.3	1.5	76	0.010	0.33
		32.3	35.1	2.8	77	0.010	0.22
		35.1	39.6	4.5	78	0.010	0.25
		39.6	41.8	2.2	79	0.012	0.25
		41.8	43.0	1.2	80	0.070	4.32
		43.0	46.0	3.0	81	0.004	0.3
		46.0	48.8	2.8	82	0.003	0.3
		48.8	52.1	3.3	83	0.006	0.54
		52.1	57.3	5.2	84	0.004	0.35
		57.3	62.2	4.9	85	0.040	2.70
		62.2	65.8	3.6	86	0.006	0.17
		65.8	68.9	3.1	87	0.003	0.25
		68.9	71.9	3.0	88	0.012	0.50
		71.9	74.7	2.8	89	0.062	2.52
		74.7	77.7	3.0	90	0.003	0.07
		77.7	82.3	4.6	91	0.008	0.13
		82.3	86.9	4.6	92	0.003	0.01
		86.9	91.8	4.9	0593	0.003	0.02

PAGE 3 OF 3		PROJECT: SHASTA			HOLE NO. 33-1						
DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION						
					A	B chlorite	C	D	E	FRACTURE INTENSITY	% VEIN QTZ
				31.1: dk. grey qtz 1cm wide @ 030°							
				31.2-31.4: grey-black sulphides along fractures at 065°							
				36.4-36.6: greyish qtz; calcite vein @ 030°							
				36.9: calcite vein 1cm @ 065° cuts intense silicified zone							
				41.8-43.0: intense silicified breccia zone grey-black qtz; wuggy; fragments 90% altered, some fragments still show qtz, stockwork, diss'd py 1-2%, specks cpy; greenish qtz, streaks.							
				42.9-43.0: fault gouge							
				43.0-43.3: bleach gouge (mod.)							
				33.3-52.1 qtz; dk orange feldspars; qtz stockwork							
				50.4: cal. vein 1cm @ 030°							
				52.1-57.3 qtz; pale orange feldspars; strong to intense silicification.							
				57.3-62.2 intense silicification zone; greyish coloured frags (50-100% altered) diss'd py 1-2%; specks cpy; calcite blebs (cavity fillings) throughout; py blebs; f. g. py associated with grey qtz.							
				62.2-74.7 qtz; greenish to green-orange colour due to chlorite; fiamme (lithic fragments) 100% chloritized;							
				69.1: rhodochrosite in qtz vein, chl along vein edges							
				70.4-71.0: mod-strong bleaching							
				74.7-91.8 qtz, dk orange feldspars; scattered qtz veins, specks py							
				91.8 END OF HOLE							

**DRILL LOG**

<b>PROJECT</b> SHASTA	<b>GROUND ELEV.</b> 1405 m.																																																							
<b>HOLE NO.</b> SH-83-2	<b>BEARING</b> 270°																																																							
<b>LOCATION</b> MAIN ZONE (surface)	<b>DIP</b> -55°																																																							
	<b>TOTAL LENGTH</b> 83.5 m (274 ft.)																																																							
<b>LOGGED BY</b> B. W. Downing <i>B.W. Downing</i>	<b>HORIZONTAL PROJECT</b> 198N																																																							
<b>DATE</b>	<b>VERTICAL PROJECT</b> 09W																																																							
<b>CONTRACTOR</b> D. J. Drilling Co.	<b>ALTERATION SCALE</b> 																																																							
<b>CORE SIZE</b> BQ																																																								
<b>DATE STARTED</b> August 24, 1983	<b>TOTAL SULPHIDE SCALE</b> 																																																							
<b>DATE COMPLETED</b> August 25, 1983																																																								
<b>DIP TESTS</b> None																																																								
<b>COMMENTS</b> <u>Purpose:</u> To test trench 83-7 (2.5 m 0.300 oz/t Au, 10.27 oz/tAg)  <u>Mineralization</u>  <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>from</th> <th>to</th> <th>length</th> <th>Au</th> <th>Ag</th> </tr> <tr> <th>m</th> <th>m</th> <th>m</th> <th>oz/ton</th> <th>oz/ton</th> </tr> </thead> <tbody> <tr> <td>66.0</td> <td>67.1</td> <td>1.1</td> <td>0.012</td> <td>0.30</td> </tr> </tbody> </table>	from	to	length	Au	Ag	m	m	m	oz/ton	oz/ton	66.0	67.1	1.1	0.012	0.30	<b>LEGEND</b>  <b>Specimens</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>ft</th> <th>m</th> <th>ft</th> <th>m</th> </tr> </thead> <tbody> <tr> <td>( 40)</td> <td>12.2</td> <td></td> <td>(257)</td> <td>78.3</td> </tr> <tr> <td>( 86)</td> <td>26.2</td> <td></td> <td>(271)</td> <td>82.6</td> </tr> <tr> <td>(95.5)</td> <td>29.1</td> <td></td> <td></td> <td></td> </tr> <tr> <td>(112)</td> <td>34.1</td> <td></td> <td></td> <td></td> </tr> <tr> <td>(203)</td> <td>61.9</td> <td></td> <td></td> <td></td> </tr> <tr> <td>(221)</td> <td>67.4</td> <td></td> <td></td> <td></td> </tr> <tr> <td>(236)</td> <td>71.9</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		ft	m	ft	m	( 40)	12.2		(257)	78.3	( 86)	26.2		(271)	82.6	(95.5)	29.1				(112)	34.1				(203)	61.9				(221)	67.4				(236)	71.9			
	from	to	length	Au	Ag																																																			
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(236)	71.9																																																							
<b>CLAIM:</b> SHA #35	qft-quartz eye feldspar tuff by-breccia qtz-quartz diss'd-disseminated																																																							


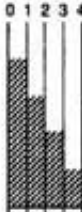
PAGE		OF		PROJECT: SHASTA			HOLE NO. 83-2				
DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION						
					A	B <sup>chlorite</sup>	C	D	E	FRACTURE INTENSITY	% VEIN QTZ
0	0			0-3.0 casing							
10	80		~	3.0-46.3 quartz-feldspar tuff (qft); dk. orange feldspars; scattered quartz-calcite/calcite veins at 030-060°; f.g.v. disseminated py 3-5%; patches of stockwork up to 0.3 m; small patches of breccia up to 2 cm wide.		■					
20	90		~	13.1-15.5: light orange feldspar associated with several narrow fault zones with fault gouge, diss'd py in gouge 3-5% (14.9-15.8 - fault zone).							
30	100		~	14.0: 1 cm silicified zone, grey qtz; @ 030°							
40	100			24.7-28.3: mafics more chloritic		■					
				27.1-27.3: fault zone.							
				27.4-27.5: " "							
50				29.3-29.4: silicified breccia zone; streaks grey qtz; light apple green alteration as blebs/streaks-soft							
				29.5-29.6: calcite vein @ 015°							
			~	34.5, 34.7, 34.8: narrow siliceous-calcite brecciated qft zones at 015° ≤ 2 cm wide, streaks grey qtz, chlorite selvages; rhodochrosite?							
60	63			37.1, 45.6, 45.8: faults, minor gouge; @ 065°; 1-2 cm wide, serpentine(?) along fault							
70	100			46.3-47.5 qft; light orange feldspar f.g.v. diss'd py 5-10%							
80				47.5-52.1 qft; dk orange feldspar; f.g.v. diss'd py 3-4%, odd qtz-calcite vein							
				52.1-53.0 fault zone; qft fragments + gouge, specks py							
				53.0-55.6 qft; light orange feldspars; highly fractured, numerous fr's with serpentine; numerous qtz veinlets to hairline veins							



MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES			SAMPLE NUMBER	ASSAYS	
		FROM m	TO m	WIDTH m		Au g/t	Ag g/t
		3.0	6.7	3.7	0594	0.003	0.01
		6.7	9.4	2.7	95	0.003	0.04
		9.1	13.1	4.0	96	0.003	0.04
		13.1	15.5	2.4	97	0.003	0.12
		15.5	19.2	3.7	98	0.003	0.14
		19.2	22.3	3.1	99	0.003	0.04
		22.3	25.3	3.0	0600	0.003	0.26
		25.3	28.3	3.0	0901	0.003	0.32
		28.3	29.3	1.0	02	0.003	0.20
		29.3	29.6	0.3	03	0.003	0.26
		29.6	31.7	2.1	04	0.003	0.16
		31.7	34.4	2.7	05	0.003	0.14
		34.4	34.9	0.5	06	0.003	0.26
		34.9	38.4	3.5	07	0.003	0.18
		38.4	40.8	2.4	08	0.003	0.18
		40.8	44.8	4.0	09	0.003	0.08
		44.8	46.3	1.5	10	0.003	0.06
		46.3	47.5	1.2	11	0.007	0.18
		47.5	52.1	4.6	12	0.005	0.24
		52.1	53.0	0.9	13	0.008	0.28
		53.0	55.8	2.8	14	0.003	0.16
		55.8	61.4	5.6	15	0.003	0.18
		61.4	62.8	1.4	16	0.008	0.18
		62.8	63.4	0.6	17	0.010	0.26
		63.4	65.5	2.1	18	0.006	0.16
		65.5	66.0	0.5	19	0.008	0.18
		66.0	67.1	1.1	20	0.012	0.30
		67.1	69.6	2.5	21	0.003	1.00
		69.6	70.7	1.1	22	0.003	0.40
		70.7	72.2	1.5	23	0.003	0.20
		72.2	73.8	1.6	24	0.008	0.32
		73.8	74.1	0.3	25	0.003	0.18
		74.1	75.6	1.5	26	0.003	0.06
		75.6	78.0	2.4	27	0.003	0.22
		78.0	81.1	3.1	28	0.003	0.22
		81.1	83.5	2.4	0929	0.003	0.10



## DRILL LOG

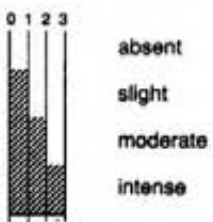
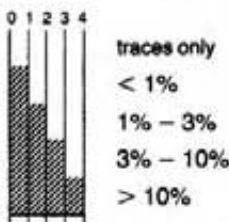
PROJECT SHASTA	GROUND ELEV. 1380 m.																								
HOLE NO. SH-83-3	BEARING 120°																								
LOCATION MAIN ZONE (surface)	DIP -50°																								
	TOTAL LENGTH 92.7 m (304 ft)																								
LOGGED BY B. W. Downing <i>B. W. Downing</i>	HORIZONTAL PROJECT 251N																								
DATE	VERTICAL PROJECT 057W																								
CONTRACTOR D. J. Drilling Co.	<b>ALTERATION SCALE</b>  absent slight moderate intense																								
CORE SIZE BQ																									
DATE STARTED August 26, 1983	<b>TOTAL SULPHIDE SCALE</b>  traces only < 1% 1% - 3% 3% - 10% > 10%																								
DATE COMPLETED August 28, 1983																									
DIP TESTS None																									
COMMENTS	LEGEND																								
<u>Purpose:</u> To test trench 83-11 (1 metre 0.668 oz/t Au, 5.33 oz/t Ag)	<b>Specimens</b> <table border="1"> <thead> <tr> <th>ft</th> <th>m</th> </tr> </thead> <tbody> <tr><td>( 34)</td><td>10.4</td></tr> <tr><td>(54.9)</td><td>16.7</td></tr> <tr><td>( 56)</td><td>17.1</td></tr> <tr><td>( 70)</td><td>21.3</td></tr> <tr><td>(102)</td><td>31.1</td></tr> <tr><td>(112)</td><td>34.1</td></tr> <tr><td>(149)</td><td>45.4</td></tr> <tr><td>(206)</td><td>62.8</td></tr> <tr><td>(256)</td><td>78.0</td></tr> <tr><td>(275)</td><td>83.8</td></tr> <tr><td>(364)</td><td>92.7</td></tr> </tbody> </table>	ft	m	( 34)	10.4	(54.9)	16.7	( 56)	17.1	( 70)	21.3	(102)	31.1	(112)	34.1	(149)	45.4	(206)	62.8	(256)	78.0	(275)	83.8	(364)	92.7
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<u>Mineralization</u> <table border="1"> <thead> <tr> <th>from</th> <th>to</th> <th>width</th> <th>Au oz/t</th> <th>Ag oz/t</th> </tr> </thead> <tbody> <tr> <td>21.0</td> <td>26.2</td> <td>5.2</td> <td>0.153</td> <td>1.69</td> </tr> <tr> <td colspan="5">(includes a section of</td> </tr> <tr> <td>25.0</td> <td>26.2</td> <td>1.2</td> <td>0.208</td> <td>2.83)</td> </tr> </tbody> </table>	from	to	width	Au oz/t	Ag oz/t	21.0	26.2	5.2	0.153	1.69	(includes a section of					25.0	26.2	1.2	0.208	2.83)					
from	to	width	Au oz/t	Ag oz/t																					
21.0	26.2	5.2	0.153	1.69																					
(includes a section of																									
25.0	26.2	1.2	0.208	2.83)																					
CLAIM: SHA #35																									

PAGE 1 OF		PROJECT: SHASTA		HOLE NO. 03-1												
DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION					ALTERATION							
				A	B chlorite	C epidote	D	E	FRACTURE INTENSITY	% VEIN QTZ						
0	0			0-3.7	CASING											
10	75			3.7-18.6	quartz-eye feldspar tuff (qft) scattered quartz-calcite & calcite veins at 025-035°, few at 065°; f.g.v. disseminated by 5-10% 3.7-16.8: dk orange feldspars 16.8-18.6: light orange feldspars, rock is generally grey-orange colour											
20				18.6-18.9	qft; orange-brown colour rock, silicified											
30				18.9-22.4	qft, light orange colour, silicified breccia zone. 19.5-19.8: fault, gouge, broken rock											
40				22.4-22.9	qft; grey-orange colour											
50	100			22.9-27.7	silicified by zone; pale orange colour; malpaisite; diss'd by 5-10%, specks cpy, gal; diss'd argentite (0-.5%) 23.8-24.1: grey orange colour, large, by fragment 24.4-26.8: dk grey qtz 25.3-25.6: frags. 100% altered; bleached to dirty grey colour 24.5: argentite occurs along vein edges.											
60	95			27.7-48.2	qft; greenish orange; flame rich; qtz-calc. stockwork, reddish selvages along most veins 43.5: fault zone 1cm @ 065°, gouge, serpentine											
70				48.2-48.6	pre mineralized fault zone; qtz vein intact in fault at 045°, no mineralization, rock sheared & cemented with gouge, serpentine along fractures											
80				48.6-64.9	qft; dk orange; light yellow-green flecks throughout (epidote), scattered qtz-calcite veins 53.5-64.9: numerous flecks and blebs (alteration of flame, mafics) of epidote											
90																

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES			SAMPLE NUMBER	ASSAYS	
		FROM	TO	WIDTH		Au	Ag
		m	m	m		oz/t	oz/t
		3.7	7.6	3.9	0930	0.003	0.01
		7.6	10.7	3.1	31	0.003	0.16
		10.7	13.7	3.0	32	0.003	0.06
		13.7	16.8	3.1	33	0.003	0.16
		16.8	18.6	1.8	34	0.003	0.12
		18.6	21.0	2.4	35	0.003	0.30
		21.0	22.4	1.4	36	0.146	0.12
		22.4	22.9	0.5	37	0.003	0.12
		22.9	24.4	1.5	38	0.142	1.80
		24.4	25.0	0.6	39	0.196	3.20
		25.0	26.2	1.2	40	0.208	2.83
		26.2	27.7	1.5	41	0.004	0.36
		27.7	29.0	1.3	42	0.003	0.14
		29.0	30.5	1.5	43	0.003	0.18
		30.5	33.5	3.0	44	0.003	0.20
		33.5	36.6	3.1	45	0.003	0.10
		36.6	39.6	3.0	46	0.003	0.14
		39.6	42.7	3.1	47	0.003	0.14
		42.7	45.7	3.0	48	0.003	0.14
		45.7	48.8	3.1	49	0.003	0.04
		48.8	51.8	3.0	50	0.003	0.08
		51.8	54.9	3.1	51	0.003	0.14
		54.9	57.9	3.0	52	0.003	0.16
		57.9	61.0	3.1	53	0.003	0.20
		61.0	64.9	3.9	54	0.003	0.04
		64.9	66.4	1.5	55	0.008	0.16
		66.4	67.8	1.4	56	0.006	0.30
		67.8	69.8	2.0	57	0.003	0.12
		69.8	70.4	0.6	58	0.003	0.52
		70.4	71.9	1.5	59	0.007	0.24
		71.9	72.8	0.9	60	0.005	0.18
		72.8	74.4	1.6	61	0.010	0.20
		74.4	76.5	2.1	62	0.006	0.10
		76.5	78.0	1.5	63	0.003	0.04
		78.0	79.9	1.9	64	0.004	0.12
		79.9	83.5	3.6	65	0.003	0.06
		83.5	86.6	3.1	66	0.003	0.06
		86.6	89.6	3.0	67	0.003	0.03
		89.6	92.7	3.1	0968	0.002	0.01

PAGE 3 OF 3		PROJECT: SHASTA		HOLE NO. 83-3							
DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ	
				A	B chlorite	C epidote	D	E			
				634-649: very broken core due to faulting.							
				649-65.4 calcite vein (2cm) @ 075° changing to 90°, cuts qtz vein stockwork diss'd py 2-3%							
				65.4-66.4 v. broken core, fault zone							
				66.4-92.7 qtz; dk orange; qtz-cal stockwork core quite blocky							
				66.4-66.7: cal-qtz vein @ 070°: rhombohedral							
				calcite grains; diss'd py 3-5%, argentite (0-1%), gal 0-5%, specks electrum or native silver							
				66.4-67.8: mod. bleaching							
				67.4-67.6: cal-qtz bx zone py 1-2%							
				67.6-69.5: light yellow green flame throughout, epidote							
				69.8: amethystine quartz							
				70.0-70.4: dk grey bx zone with grains rhombohedral calcite, diss'd py 5-8%, argentite 0.5-1%							
				70.4-71.9: blocky, fault zone.							
				73.0-73.2: cal-qtz bx zone, few grains rhombohedral calcite; diss'd py 2-3%, argentite 0.5-1%							
				73.5-73.6: mod bleached fragments							
				74.1-74.4: broken core, calcite							
				74.4-74.7: silicified bx. zone, grey qtz							
				78.0-78.3: silicified bx zone, green qtz with flecks hematite imparting a reddish hue to quartz.							
				80.1-81.7: v. blocky core, fault zone							
				88.1-88.5: silicified bx zone, moderate bleaching greenish-grey qtz.							
				90.2-92.9: yellow-green flame few calcite-epidote fractures.							
				92.5-92.7: very blocky core, fault zone.							
				92.7							
				END OF HOLE							

**DRILL LOG**

<p><b>PROJECT</b> SHASTA</p>	<p><b>GROUND ELEV.</b> 1425 m.</p>																																		
<p><b>HOLE NO.</b> SH-83-4</p>	<p><b>BEARING</b> 090°</p>																																		
<p><b>LOCATION</b> EAST MAIN ZONE (geological-surface)</p>	<p><b>DIP</b> -50°</p>																																		
	<p><b>TOTAL LENGTH</b> 82.3 m (270 ft)</p>																																		
<p><b>LOGGED BY</b> B. W. Downing <i>B.W. Downing</i></p>	<p><b>HORIZONTAL PROJECT</b> 139N</p>																																		
<p><b>DATE</b></p>	<p><b>VERTICAL PROJECT</b> 72E</p>																																		
<p><b>CONTRACTOR</b> D. J. Drilling</p>	<p style="text-align: center;"><b>ALTERATION SCALE</b></p>  <p style="text-align: center;"><b>TOTAL SULPHIDE SCALE</b></p> 																																		
<p><b>CORE SIZE</b> BQ</p>																																			
<p><b>DATE STARTED</b> August 29, 1983</p>																																			
<p><b>DATE COMPLETED</b> August 30, 1983</p>																																			
<p><b>DIP TESTS</b> None</p>																																			
<p><b>COMMENTS</b> <u>Purpose:</u> To test trenches 83-16 &amp; 17 and two intersecting veins on surface  <u>Mineralization</u>   <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">from</th> <th style="text-align: left;">to</th> <th style="text-align: left;">width</th> <th style="text-align: left;">Au oz/t</th> <th style="text-align: left;">Ag oz/t</th> </tr> </thead> <tbody> <tr> <td>12.2</td> <td>14.9</td> <td>2.7</td> <td>0.003</td> <td>0.12</td> </tr> </tbody> </table>   <p>CLAIM: SHA #35</p> </p>	from	to	width	Au oz/t	Ag oz/t	12.2	14.9	2.7	0.003	0.12	<p><b>LEGEND</b> <u>Specimens</u></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">ft</th> <th style="text-align: left;">m</th> </tr> </thead> <tbody> <tr><td>( 26)</td><td>7.9</td></tr> <tr><td>( 40)</td><td>12.2</td></tr> <tr><td>( 50)</td><td>15.2</td></tr> <tr><td>( 64)</td><td>19.5</td></tr> <tr><td>( 68)</td><td>20.7</td></tr> <tr><td>( 93)</td><td>28.3</td></tr> <tr><td>(121)</td><td>36.9</td></tr> <tr><td>(131)</td><td>39.9</td></tr> <tr><td>(159)</td><td>48.5</td></tr> <tr><td>(212)</td><td>64.6</td></tr> <tr><td>(270)</td><td>82.3</td></tr> </tbody> </table>	ft	m	( 26)	7.9	( 40)	12.2	( 50)	15.2	( 64)	19.5	( 68)	20.7	( 93)	28.3	(121)	36.9	(131)	39.9	(159)	48.5	(212)	64.6	(270)	82.3
from	to	width	Au oz/t	Ag oz/t																															
12.2	14.9	2.7	0.003	0.12																															
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(270)	82.3																																		





PAGE 2 OF 3		PROJECT: SNASTA				HOLE NO. 83-4	
MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES			SAMPLE NUMBER	ASSAYS	
		FROM m	TO m	WIDTH m		Au oz/t	Ag oz/t
		7.9	8.8	0.9	0969	0.003	0.02
		8.8	10.4	1.6	70	0.003	0.01
		10.4	12.2	1.8	71	0.003	0.08
		12.2	13.7	1.5	72	0.003	0.12
		13.7	14.9	1.2	73	0.003	0.12
		14.9	16.8	1.9	74	0.003	0.08
		16.8	18.9	2.1	75	0.003	0.04
		18.9	20.4	1.5	76	0.003	0.10
		20.4	21.8	1.8	77	0.003	0.02
		21.8	23.8	2.0	78	0.003	0.01
		64.0	65.8	1.8	0979	0.003	0.10



**DRILL LOG**

<b>PROJECT</b> SHASTA	<b>GROUND ELEV.</b> 1260 m.																																																	
<b>HOLE NO.</b> SH-83-5	<b>BEARING</b> 090°																																																	
<b>LOCATION</b> CREEK ZONE (surface)	<b>DIP</b> -45°																																																	
	<b>TOTAL LENGTH</b> 84.1 m (276 ft)																																																	
<b>LOGGED BY</b> B. W. Downing <i>B.W. Downing</i>	<b>HORIZONTAL PROJECT</b> 635N																																																	
<b>DATE</b>	<b>VERTICAL PROJECT</b> 305W																																																	
<b>CONTRACTOR</b> D. J. Drilling	<b>ALTERATION SCALE</b> 																																																	
<b>CORE SIZE</b> BQ																																																		
<b>DATE STARTED</b> August 31, 1983	<b>TOTAL SULPHIDE SCALE</b> 																																																	
<b>DATE COMPLETED</b> September 1, 1983																																																		
<b>DIP TESTS</b> None																																																		
<b>COMMENTS</b> <u>Purpose:</u> To test new trenches at depth.  <u>Mineralization</u>  <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">from</th> <th style="text-align: left;">to</th> <th style="text-align: left;">width</th> <th style="text-align: left;">Au oz/t</th> <th style="text-align: left;">Ag oz/t</th> </tr> </thead> <tbody> <tr> <td>12.2</td> <td>13.1</td> <td>0.9</td> <td>0.078</td> <td>0.18</td> </tr> <tr> <td>14.6</td> <td>19.6</td> <td>1.2</td> <td>0.659</td> <td>7.63</td> </tr> <tr> <td>17.5</td> <td>19.6</td> <td>4.9</td> <td>0.776</td> <td>13.00</td> </tr> <tr> <td>12.2</td> <td>19.6</td> <td>2.8</td> <td>0.403</td> <td>4.07</td> </tr> </tbody> </table> <b>CLAIM:</b> SHA # 36	from	to	width	Au oz/t	Ag oz/t	12.2	13.1	0.9	0.078	0.18	14.6	19.6	1.2	0.659	7.63	17.5	19.6	4.9	0.776	13.00	12.2	19.6	2.8	0.403	4.07	<b>LEGEND</b> <u>Specimens</u> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">ft.</th> <th style="text-align: left;">m</th> </tr> </thead> <tbody> <tr><td>( 33)</td><td>10.1</td></tr> <tr><td>( 52)</td><td>15.8</td></tr> <tr><td>( 60)</td><td>18.3</td></tr> <tr><td>( 81)</td><td>24.7</td></tr> <tr><td>(100)</td><td>30.5</td></tr> <tr><td>(127)</td><td>38.7</td></tr> <tr><td>(136)</td><td>41.5</td></tr> <tr><td>(174.5)</td><td>53.2</td></tr> <tr><td>(224)</td><td>68.3</td></tr> <tr><td>(255)</td><td>77.7</td></tr> <tr><td>(276)</td><td>84.1</td></tr> </tbody> </table>	ft.	m	( 33)	10.1	( 52)	15.8	( 60)	18.3	( 81)	24.7	(100)	30.5	(127)	38.7	(136)	41.5	(174.5)	53.2	(224)	68.3	(255)	77.7	(276)	84.1
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PAGE 1 OF 3		PROJECT: SHASTA		HOLE NO. 83-5							
DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION						
					A	B chlorite	C epidote	D	E	FRACTURE INTENSITY	% VEIN QTZ
0	0			0 - 3.7 Casing							
	90			3.7 - 5.8 maroon tuff 5.3 - 5.5: maroon sediments							
10				5.8 - 12.2 grey tuff							
				12.2 - 14.6 silicified grey tuff; sharp contact at 12.2 due to a slip plane; diss'd py 5-10%							
20				14.6 - 14.9 quartz-eye feldspar tuff breccia; silicified, dk orange fragments, gradational contact with grey tuff							
30	100			14.9 - 15.7 silicified qft breccia, pale orange frags.							
40				15.7 - 17.5 silicified by zone; dirty pale green frags; chlorite							
				14.6 - 17.0; diss'd py 10-15%, argentite 0-1%							
50				17.0 - 17.5; diss'd py 5-10%, argentite 2-3%							
				17.4 - 17.5; hematite associated with fractures.							
60	35			17.5 - 19.7 calcite-rich silicified by zone sharp contacts; py 1-3%, argentite (0.5-1%)							
				19.5 - 19.7: streaks argentite, specks native silver and/or electrum							
				19.7: slip plane							
70	100			19.7 - 50.3 qft; wk to strongly silicified; orange to green-orange colour; patches mod. bleaching, qtz-calcite / calcite stockwork.							
80				50.3 - 62.5 qft br; light orange colour; qtz-calcite stockwork; wkly bleached.							
90				57 - 62.5; lost core, blocky, pebbles faulting							

PAGE 2 OF 3		PROJECT: SHASTA				HOLE NO. 83-5	
MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES			SAMPLE NUMBER	ASSAYS	
		FROM m	TO m	WIDTH m		Au oz/t	Ag oz/t
		11.0	12.2	1.2	0980	0.006	0.01
		12.2	13.1	0.9	81	0.078	0.18
		13.1	14.6	1.5	82	0.012	0.16
		14.6	15.8	1.2	83	0.592	2.60
		15.8	17.5	1.7	84	0.552	4.44
		17.5	19.6	2.1	85	0.776	13.00
		19.6	21.3	1.6	86	0.018	0.30
		21.3	22.9	1.6	87	0.022	1.34
		22.9	25.9	3.0	88	0.028	0.7
		25.9	29.0	3.1	89	0.022	0.36
		29.0	32.0	3.0	90	0.008	0.48
		32.0	35.1	3.1	91	0.010	1.00
		35.1	38.1	3.0	92	0.006	0.46
		38.1	41.1	3.0	93	0.063	0.13
		41.1	44.2	3.1	94	0.023	0.22
		44.2	47.2	3.0	95	0.029	0.18
		47.2	50.3	3.1	96	0.020	0.12
		50.3	53.3	3.0	97	0.010	0.32
		53.3	56.7	3.4	98	0.024	0.24
		56.7	59.7	3.0	99	0.026	0.25
		59.7	62.8	3.1	1000	0.006	0.16
		62.8	65.8	3.0	9901	0.003	0.28
		65.8	68.9	3.1	02	0.003	0.10
		68.9	71.9	3.0	03	0.003	0.12
		71.9	75.0	3.1	04	0.005	0.64
		75.0	77.1	2.1	05	0.003	0.28
		77.1	79.2	2.1	06	0.006	0.40
		79.2	81.7	2.5	07	0.003	0.32
		81.7	84.1	2.4	9908	0.010	0.84



**DRILL LOG**

PROJECT SHASTA	GROUND ELEV. 1260 m.																																	
HOLE NO. SH-83-6	BEARING 090 <sup>0</sup>																																	
LOCATION CREEK ZONE (surface-same setup as SH-83-5)	DIP -70 <sup>0</sup>																																	
	TOTAL LENGTH 60.0 m (197 ft)																																	
LOGGED BY B. W. Downing <i>B. W. Downing</i>	HORIZONTAL PROJECT 635N																																	
DATE	VERTICAL PROJECT 305W																																	
CONTRACTOR D. J. Drilling	<b>ALTERATION SCALE</b> 																																	
CORE SIZE BQ																																		
DATE STARTED September 1, 1983	<b>TOTAL SULPHIDE SCALE</b> 																																	
DATE COMPLETED September 1, 1983																																		
DIP TESTS None																																		
COMMENTS	<b>LEGEND</b> <b>Specimens</b> <table style="margin-left: 20px;"> <tr> <td>ft</td> <td>m</td> <td></td> </tr> <tr> <td>( 28)</td> <td>8.5</td> <td></td> </tr> <tr> <td>( 39)</td> <td>11.9</td> <td>TS</td> </tr> <tr> <td>( 57)</td> <td>17.4</td> <td>TS</td> </tr> <tr> <td>( 70)</td> <td>21.3</td> <td>PTS</td> </tr> <tr> <td>( 94)</td> <td>28.7</td> <td>TS</td> </tr> <tr> <td>(107)</td> <td>32.6</td> <td>TS</td> </tr> <tr> <td>(126)</td> <td>38.4</td> <td></td> </tr> <tr> <td>(157)</td> <td>47.9</td> <td></td> </tr> <tr> <td>(191)</td> <td>58.2</td> <td>TS</td> </tr> <tr> <td>(197)</td> <td>60.0</td> <td></td> </tr> </table>	ft	m		( 28)	8.5		( 39)	11.9	TS	( 57)	17.4	TS	( 70)	21.3	PTS	( 94)	28.7	TS	(107)	32.6	TS	(126)	38.4		(157)	47.9		(191)	58.2	TS	(197)	60.0	
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<p><u>Purpose:</u> To test trench and DDH-SH-83-5 at depth.</p> <p><u>Mineralization</u></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>from</th> <th>to</th> <th>width</th> <th>Au oz/t</th> <th>Ag oz/t</th> </tr> </thead> <tbody> <tr> <td>16.5</td> <td>27.7</td> <td>11.2</td> <td>0.209</td> <td>4.47</td> </tr> <tr> <td>18.6</td> <td>19.8</td> <td>1.2</td> <td>0.610</td> <td>11.23</td> </tr> <tr> <td colspan="5" style="text-align: center;">OR</td> </tr> <tr> <td>16.5</td> <td>34.1</td> <td>17.6</td> <td>0.155</td> <td>3.03</td> </tr> </tbody> </table> <p>* includes a section of</p> <p>CLAIM: SHA # 36</p>		from	to	width	Au oz/t	Ag oz/t	16.5	27.7	11.2	0.209	4.47	18.6	19.8	1.2	0.610	11.23	OR					16.5	34.1	17.6	0.155	3.03								
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## DRILL LOG

PROJECT SHASTA	GROUND ELEV. 1245 m.																													
HOLE NO. SH-83-7	BEARING 090°																													
LOCATION CREEK ZONE (surface)	DIP -45°																													
	TOTAL LENGTH 57.3 m (188 ft)																													
LOGGED BY B. W. Downing <i>B. W. Downing</i>	HORIZONTAL PROJECT 660 N																													
DATE	VERTICAL PROJECT 330 W																													
CONTRACTOR D. J. Drilling	<b>ALTERATION SCALE</b> 																													
CORE SIZE BQ																														
DATE STARTED September 3, 1983	<b>TOTAL SULPHIDE SCALE</b> 																													
DATE COMPLETED September 4, 1983																														
DIP TESTS None																														
COMMENTS <u>Purpose:</u> To test extension of Creek Zone.	<b>LEGEND</b> <b>Specimens</b> <table> <thead> <tr> <th>ft</th> <th>m</th> </tr> </thead> <tbody> <tr><td>( 56)</td><td>17.1</td></tr> <tr><td>( 69)</td><td>21.0</td></tr> <tr><td>( 80)</td><td>24.4</td></tr> <tr><td>( 82)</td><td>25.0</td></tr> <tr><td>(103)</td><td>31.4</td></tr> <tr><td>(111)</td><td>33.8</td></tr> <tr><td>(143)</td><td>43.6</td></tr> <tr><td>(188)</td><td>57.3</td></tr> </tbody> </table>	ft	m	( 56)	17.1	( 69)	21.0	( 80)	24.4	( 82)	25.0	(103)	31.4	(111)	33.8	(143)	43.6	(188)	57.3											
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PAGE 1 OF 3		PROJECT: SHASTA				HOLE NO. 83-7					
DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ
					A	B	C	D	E		
0	0			0-3.0 Casing							
				3.0-11.9 purplish grey tuff							
10				11.9-19.2 fragmental tuff; maroon feldspar porphyry frags., matrix becomes greenish from 13.4 to 19.2 - chloritic 15.1-15.2: minor brecciation							
20				19.2-20.0 silicified tuff; dirty green colour 19.6-19.8: fault gouge, broken core							
30				20.0-21.8 qtz; deep reddish orange; disseminated white mineral (barite or anhydrite?)							
40				21.8-26.5 silicified breccia zone, streaks grey qtz; pale orange to green-orange fragments, diss'd py 3-5%; Argentite 0.5-1%							
50				22.4-22.6: greenish grey qtz; py 3-5%, argentite band at both ends of qtz vein. 25.8-25.9: fault gouge							
60				26.5-32.0 qtz; silicified; qtz stockwork; light brown orange to green-orange colour; patches mod. to strong bleaching 29.7-30.2: grey qtz 31.5-31.7: fault gouge							
				32.0-34.4 qtz; silicified; brown orange; mod. bleaching; scattered qtz veins.							
				34.4-36.9 qtz; silicified; reddish orange patches brecciation and qtz stockwork; scattered irregular qtz-cal-chl fr's/veins 5-10cm.							
				36.9-45.7 qtz; silicified; green orange to orange; numerous short zones of qtz-cal-chl-epidote							





**DRILL LOG**

<p><b>PROJECT</b> SHASTA</p>	<p><b>GROUND ELEV.</b> 1280 m</p>																														
<p><b>HOLE NO.</b> SH-83-8</p>	<p><b>BEARING</b> 090°</p>																														
<p><b>LOCATION</b>  CREEK ZONE (surface)</p>	<p><b>DIP</b> -45°</p>																														
	<p><b>TOTAL LENGTH</b> 56.7 m (186 ft)</p>																														
<p><b>LOGGED BY</b> B. W. Downing <i>B. W. Downing</i></p>	<p><b>HORIZONTAL PROJECT</b> 596 N</p>																														
<p><b>DATE</b></p>	<p><b>VERTICAL PROJECT</b> 310 W</p>																														
<p><b>CONTRACTOR</b>  D. J. Drilling</p>	<p style="text-align: center;"><b>ALTERATION SCALE</b></p> <div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> <table style="border-collapse: collapse;"> <tr><td style="border: 1px solid black; width: 10px; height: 10px;">0</td></tr> <tr><td style="border: 1px solid black; width: 10px; height: 20px;">1</td></tr> <tr><td style="border: 1px solid black; width: 10px; height: 30px;">2</td></tr> <tr><td style="border: 1px solid black; width: 10px; height: 40px;">3</td></tr> </table> </div> <div> <p>absent</p> <p>slight</p> <p>moderate</p> <p>intense</p> </div> </div>	0	1	2	3																										
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<p><b>DIP TESTS</b>  None</p>																															
<p><b>COMMENTS</b> <u>Purpose:</u> To test extension of the Creek Zone</p> <p><u>Mineralization</u></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">from</th> <th style="text-align: left;">to</th> <th style="text-align: left;">width</th> <th style="text-align: left;">Au oz/t</th> <th style="text-align: left;">Ag oz/t</th> <th style="text-align: left;">(136)</th> <th style="text-align: left;">(163)</th> <th style="text-align: left;">(186)</th> </tr> </thead> <tbody> <tr> <td>32.0</td> <td>32.0</td> <td>0.5</td> <td>0.150</td> <td>13.14</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>CLAIM: SHA # 36</p>	from	to	width	Au oz/t	Ag oz/t	(136)	(163)	(186)	32.0	32.0	0.5	0.150	13.14				<p><b>LEGEND</b> <u>Specimens</u></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">ft</th> <th style="text-align: left;">m</th> </tr> </thead> <tbody> <tr><td></td><td>14.6</td></tr> <tr><td></td><td>20.4</td></tr> <tr><td></td><td>29.9</td></tr> <tr><td></td><td>41.5</td></tr> <tr><td></td><td>49.7</td></tr> <tr><td></td><td>56.7</td></tr> </tbody> </table>	ft	m		14.6		20.4		29.9		41.5		49.7		56.7
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PAGE 1		OF 2		PROJECT: SHASTA			HOLE NO. 83-8				
DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION						
					A	B chlorite	C epidote	D	E	FRACTURE INTENSITY	% VEIN QTZ
0	0			0 - 3.7 Casing							
10	100			3.7 - 21.9 grey tuff; scattered calcite veins @ 025-030°, non-mineralized; 18.9-21.9: green-grey tuff, chlorite 20.7-21.9: tuff becomes fine-medium grained.							
20	45			21.9-22.0 silicified grey tuff; disseminated py 2-3% 22.0-22.1 fault gouge							
30	95-100			22.1-28.7 quartz eye feldspar tuff (qft); reddish orange; silicified; quartz stockwork.							
40				28.7-32.0 qft; green-brown orange colour; w/ky silicified, odd qtz-calcite vein							
50				32.0-32.5 calcite vein with qft frags. diss'd py 2-3%, argentite 1-2%; Native silver and/or electrum (flakes)							
60				32.5-38.9 qft; brownish orange, mod silicified; scattered qtz-calc veins; numerous fractures 35.4-36.1: strongly silicified, streaks grey quartz							
				38.9-41.8 qft; moderately silicified; patches qtz stockwork; calcite ± qtz + chl veins. 39.2-39.5, 40.7-41.0; calcite breccia, qft frags. altered (chl)							
				41.8-56.7 qft; green-brown orange; scattered calcite ± qtz veins 49.1-56.7: epidote associated with veins and fractures							
				56.7 END OF HOLE							







## DRILL LOG

PROJECT SHASTA	GROUND ELEV. 1280 m.																				
HOLE NO. SH-83-9	BEARING 060°																				
LOCATION CREEK ZONE (surface-same setup as DDH-8)	DIP -70°																				
	TOTAL LENGTH 64.6 m (212 ft)																				
LOGGED BY B. W. Downing <i>B. W. Downing</i>	HORIZONTAL PROJECT 596 N																				
DATE	VERTICAL PROJECT 310 W																				
CONTRACTOR D. J. Drilling	ALTERATION SCALE 																				
CORE SIZE BQ																					
DATE STARTED September 6, 1983	TOTAL SULPHIDE SCALE 																				
DATE COMPLETED September 7, 1983																					
DIP TESTS None																					
COMMENTS <p><u>Purpose:</u> To test extension of the Creek Zone</p> <p><u>Mineralization</u></p> <table border="1"> <thead> <tr> <th>from</th> <th>to</th> <th>width</th> <th>Au oz/t</th> <th>Ag oz/t</th> </tr> </thead> <tbody> <tr> <td>25.3</td> <td>25.9</td> <td>0.4</td> <td>0.046</td> <td>1.32</td> </tr> <tr> <td>47.5</td> <td>58.1</td> <td>10.6</td> <td>0.110</td> <td>3.84</td> </tr> <tr> <td>*52.7</td> <td>54.3</td> <td>1.6</td> <td>0.270</td> <td>12.75</td> </tr> </tbody> </table> <p>*includes a section of</p> <p>CLAIM: SHA # 36</p>	from	to	width	Au oz/t	Ag oz/t	25.3	25.9	0.4	0.046	1.32	47.5	58.1	10.6	0.110	3.84	*52.7	54.3	1.6	0.270	12.75	LEGEND <u>Specimens</u> m 8.5 18.6 24.1 28.0 36.6 42.7 59.1 64.6
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PAGE 1		OF 3		PROJECT: SHASTIA			HOLE NO. 83-9				
DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION						
					A	Chlorite	Epidote	D	E	FRACTURE INTENSITY	% VEIN QTZ
0	0			0-3.0 Casing							
10				3.0-25.3 grey tuff 14.9-15.0: fault gouge, 0.750 21.0-22.9: highly fractured several slip planes 26.7-25.3: green grey tuff, chlorite alteration. 24.1-25.3: f-m. gr tuff, silicified, diss'd py 2-3% 25.0, 25.5: fault gouge ≤ 2 cm. wide.							
20				25.3-25.9 quartz-eye feldspar tuff (qft) silicified; brecciated, frags 100% altered; streaks and irregular thin bands grey quartz streaks greenish qtz, diss'd py 3-5%, argentite <1%							
30				25.9-27.4 qft; highly fractured; quartz stockwork							
40				27.4-29.9 qft; orange; numerous irregular chloritic fractures; calcite / qtz-cal veins @ avg. 0.55							
50				29.9-30.5 major fault zone; sand, gouge remaining necessary, no mineralization							
60				30.5-31.7 qft, orange, similar to 27.4-29.9							
70				31.7-37.9 qft; orange to green-grey orange; silicified; patches wk-mod. bleaching; scattered qtz-cal / calcite breccia zones up to 20cm wide with py & argentite; scattered qtz veins with py & argentite 37.5-37.7: strongly bleached zone 37.5-37.6: fault gouge.							





APPENDIX IISTATEMENT OF EXPENSESLabour

B. W. Downing	(geologist)	23 days @ \$163.50/day =	\$3,760.50
P. Bohme	(assistant)	23 days @ \$ 60.00/day =	\$1,380.00
M. Schlosser	(cook)	23 days @ \$ 97.50/day =	\$2,242.50
			\$ 7,383.00

Transportation/mobilization

B. W. Downing/P. Bohme (Vancouver-camp-Vancouver)	= \$ 900.00
Helicopter 18.5 hrs @ \$540/hr	= \$9,990.00
	\$10,890.00

Drilling

D. J. Drilling Co., Surrey, B.C. (9 holes, 674 metres)	\$51,778.50
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Assays

231 assays @ \$14.25/sample	\$ 3,291.00
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Room & Board (Camp Costs)

B. W. Downing/P. Bohme/M. Schlosser 23 x 3 man/days	\$ 2,760.00
@ \$40.00 man day	
drill crew (4 men) 23 x 4 man days/\$40.00/manday	\$ 3,680.00
	\$ 6,440.00

Miscellaneous

diesel fuel 12 barrels @ \$86/barrel	\$ 1,032.00
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<u>Report Preparation</u>	\$ 490.00
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\$81,305.25

APPENDIX IIISTATEMENT OF QUALIFICATIONS

I, B. W. Downing, am a graduate of Queen's University with an honours B.Sc. in geology (1970) and a M.Sc. in geology (1973) from the University of Toronto.

I am a fellow of the Geological Association of Canada since 1978 and a member in good standing with the Canadian Institute of Mining and Metallurgy.

I have been continuously employed in mining exploration work since 1974.

  
Bruce W. Downing