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REPORT ON THE 1984 EXPLORATION PROGRAM

SHASTA PROJECT

OMINECA MINING DIVISION

BRITISH COLUMBIA

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

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B. W. Downing  
Newmont Exploration of Canada  
Vancouver, B.C.

## SUMMARY

The SHASTA gold-silver property was optioned from International Shasta Resources Ltd. in April, 1983. The work carried out in May to June, 1984 included a detail VLF-EMR survey, trenching and surveying in conjunction with a drilling program, in which a total of 2003.2 metres (6572 feet) were drilled in 19 holes. The combined 1983-84 drilling totals 2676 metres (8780 feet) in 28 holes.

Shasta is an epithermal gold-silver vein type deposit occurring in Jurassic Toadoggone volcanics within a graben structure. The property comprises two mineralized zones (Creek and Main) within a characteristic orange weathering quartz-eye feldspar crystal tuff. Mineralization consists of pyrite, electrum, acanthite (a form of argentite) and native silver with minor amounts of native gold, chalcopryrite, galena and sphalerite in chalcedony and quartz. This forms fracture fillings as stockwork veins and as the matrix within breccia zones. Significance of the wide extent of alteration in outcrop and drill holes suggests a large hydrothermal system was active and that the mineralized breccias and associated alteration zones occur near the top of a large epithermal system.

The better grades of mineralization in both zones occur in silicified breccia at the junction of intersecting fractures and faults.

From drilling and trench results, geological mapping and soil and VLF-resistivity data, dimensions of the mineralized area (Creek and Main Zones) are 1000 x 300 metres over an elevation range of 375 metres.

Preliminary estimates of the reserves in the Creek Zone were made on the basis of the grade cut off of .02, .05 and .10 ounces per ton gold equivalent. These reserves are summarized as follows:

Au equivalent oz/ton cutoff	Tonnes	Grade in oz/t Au equivalent
.02	2,374,000	.079
.05	703,000	.145
.10	517,000	.172

A program of at least 2500 metres of diamond drilling is recommended to delineate the extent of the gold and silver mineralization on the Main and Creek zones. The gold mineralization is structurally controlled, and therefore close spacing of drill holes is strongly recommended. Follow-up work consisting of trenching, geophysics and soil sampling is recommended to test and define new areas found in 1983 and 1984.

The Shasta property appears to have many similarities to Serem's gold-silver deposit at Lawyer's Creek and to the former producing Baker Mine (Dupont). Both deposits occur within 16 km northwest of Shasta.

## TABLE OF CONTENTS

1.	INTRODUCTION	1
1.1	Location	1
1.2	Metals	1
1.3	Claims	1
1.4	Topography/Access	1
1.5	History	4
2.	GEOLOGY	7
2.1	Regional	7
2.2	Property (detail)	9
3.	GEOCHEMISTRY	13
3.1	Soil Geochemical Survey	14
3.2	Rock Geochemical Survey	14
4.	GEOPHYSICS	18
5.	TRENCHING	19
6.	DIAMOND DRILLING	21
7.	MINERALIZATION	21
8.	RESERVE ESTIMATES	29
9.	CONCLUSIONS	29
10.	RECOMMENDATIONS	32
11.	REFERENCES	37
APPENDIX	I TRENCH AND ROCK CHIP RESULTS	39
	II GEOLOGICAL OBSERVATIONS ON THE SHA CLAIMS, M. VULIMIRI, 1984	42
	III LOGISTICS	46
	IV DIAMOND DRILL LOGS AND ASSAY RESULTS	48



## LIST OF FIGURES

FIGURE	1	LOCATION MAP	2
	2	CLAIM MAP	3
	3	GEOLOGY - REGIONAL	8
	4	GEOLOGY - PROPERTY	in back pocket
	5	GEOLOGY - CREEK ZONE	" " "
	6	GEOCHEMISTRY - SOIL SURVEY SHASTA 3 (AU, AG)	15
	7	GEOCHEMISTRY - SOIL SURVEY SHASTA 3 (CU, PB, ZN)	16
	8	SOIL PROFILE L500N	17
	9	GEOPHYSICS - COMPILATION MAP	in back pocket
	10	DRILL HOLE LOCATION MAP 1984	22
	11	DRILLING - CROSS SECTION OF LINE 500N	in back pocket
	12	DRILLING - CROSS SECTION OF LINE 550N	in back pocket
	13	DRILLING - CROSS SECTION OF LINE 640N	in back pocket
	14	DRILLING - CROSS SECTION OF LINE 800N	in back pocket

## LIST OF TABLES

TABLE	1	SIGNIFICANT CHIP SAMPLE RESULTS FROM OUTCROP	20
	2	DRILL SUMMARY RESULTS	23
	3	RESERVE ESTIMATES	30

## LIST OF PLATES

PLATE	1	SHASTA PROPERTY	10
	2	DRILLED AREA, CREEK ZONE	10



NEWMONT EXPLORATION OF CANADA LTD.		
LOCATION MAP		
SCALE 1:8,000,000	LOCATION	DATE FEB. 1964
SURVEY BY	DRAWN BY I.C.	NO. 1



plane (abandoned 1000 metre dirt airstrip). The property is drained by Jock Creek (headwaters at Black Lake), a non-fish spawning creek with apparent minimal ecological importance.

Access to the property was 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 Serem's deposit and the now closed Dupont's Baker Mine.

#### 1.5 History:

The earliest mining and prospecting in the Toodoggone area was associated with the placer gold deposits on the Toodoggone River in the early 1930's. Several base-metal showings were discovered and worked on, however, no economic deposit was delineated. During the late 1960's, the area was again active with several companies exploring for porphyry copper and molybdenum mineralization. It was during this follow-up of geochemical anomalies by Kennco that gold and silver were discovered. This subsequently resulted in the 100 tpd Baker Mine being established by Dupont in 1981 on reserves of 100,000 tons of 0.82 oz/t Au and 18.7 oz/t Ag. The Lawyers property was also found by Kennco's stream sediment geochemistry, but it was not until 1980-84 that its gold-silver potential was realized through drilling by Serem. Their reserves prior to 1984 work were stated to be 735,000 tons of .212 oz/ton Au and 7.46 oz/ton Ag, and it is understood that their 1984 drilling has doubled this amount. Gold-silver mineralization was discovered on the Shasta property by prospecting in 1973, but no drilling was done until Newmont's program in 1983. Other companies are quite active in the Toodoggone area locating several important showings, however, no tonnages have been announced.

The Baker Mine closed in December 1983 due to depletion of mineable reserves. Serem is hopeful of going into production in the near future.

History of the Shasta property is tabulated as follows:

1984 (May 16-July 5) - diamond drilling program (19 holes totalling 2002 metres; radem and detail VLF-EMR surveys, reconnaissance soil sampling on the Shasta 5 claim for assessment work; soil sampling over 2000 m on Shasta 3 claim, minor trenching, surveying. B. W. Downing project geologist, I. Casidy assistant.

1983 (June 5-Sept 11) - soil geochemical, geophysical (IP, VLF-EMR, mag) and geological surveys; resampling of old trenches, 20 new trenches blasted, diamond drilling program (9 holes totalling 674 metres) completed by N.E.C.L. B.W. Downing project geologist, I. Casidy assistant.

(March - May) - negotiations culminating in an option agreement on the Sha and Shas claims from International Shasta Resources to Newmont Mines Limited. Purchase of Silver Reef claim from C. Kowall.

1981 (Nov) - report on proposed exploration program by R. E. Spencer (Trenamen, Spencer & Associates).

1981 (Sept - Oct) - 15 trenches were blasted and sampled on the main zone (Shas 35 claim) by J. N. Schindler (Trenamen, Spencer and Associates Ltd).

1981 (Jan) - report compilation of the Shasta property by T. E. Lisle, consultant, no field work done.

1978 (Nov) - 9 trenches were blasted and sampled by Asarco on the main zone, report by R. E. Gale; low values reported, property returned.

1978 (Mar) - property optioned by Asarco.

1977 (Aug) - 10 trenches (July 1977) were resampled by Asarco.

1977 (July) - 10 trenches were blasted and sampled by W. Meyer based on anomalous rock samples taken in 1975.

1975 (July) - geological and rock geochemical surveys were conducted by P. Folk (W. Meyer & Associates Ltd) for International Shasta.

1974 - named changed to International Shasta Resources Ltd.

1974 (July) - detail soil geochemical survey was carried out by W. Meyer (W. Meyer & Associates Ltd) for Shasta Mines and Oil Ltd as delineated by the reconnaissance survey in 1973.

1973 (July) - geological, soil geochemical (76 miles) and magnetometer (32 miles) surveys were carried out over a large area (several Sha claims) by W. Meyers and Associates Ltd for Shasta Mines. Main zone found by prospecting.

1972 (July) - geological reconnaissance carried out on three properties including the Sha area by D. Arscott for Shasta Mines and Oil Ltd.

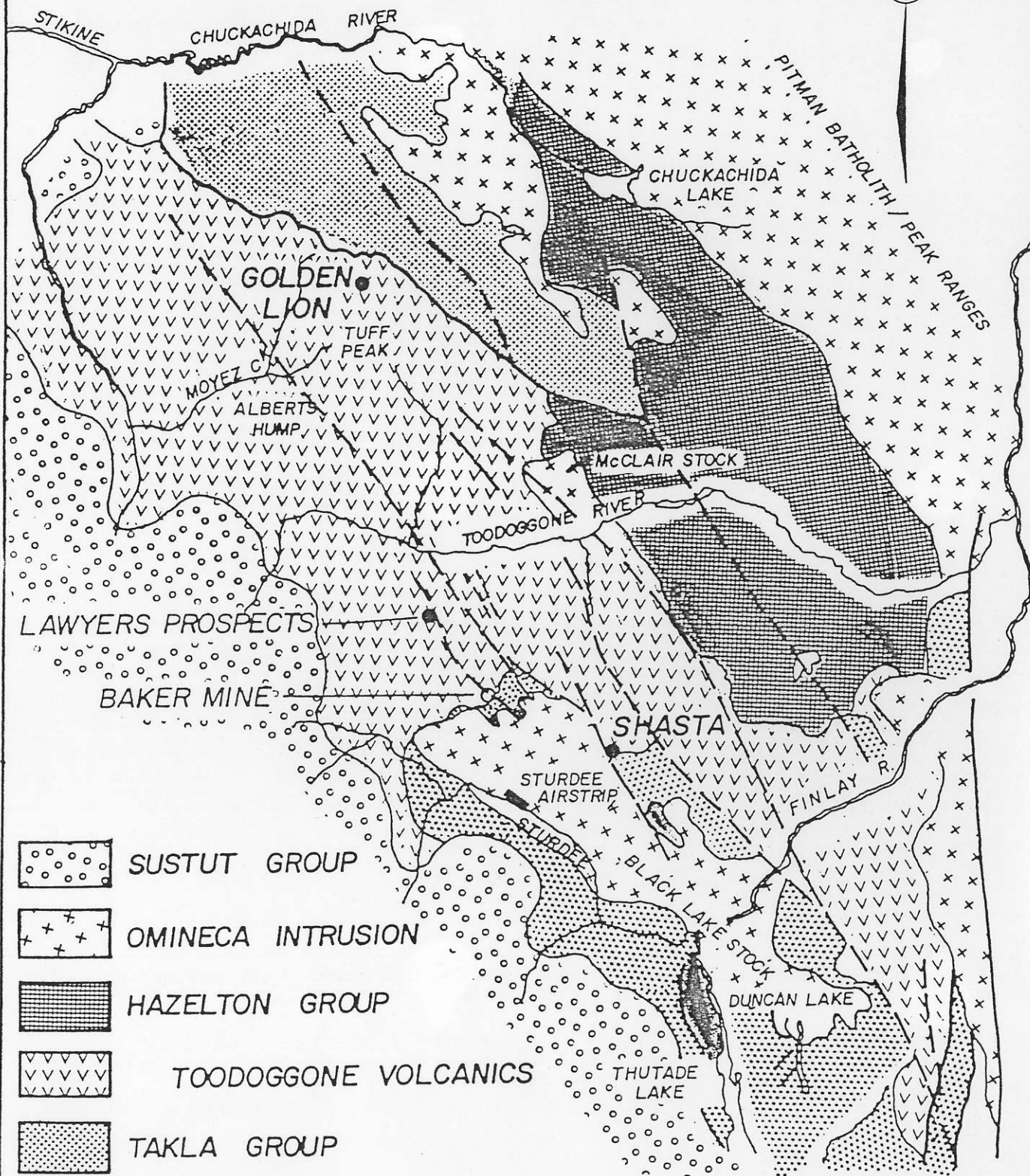
1972 - claims staked.

## 2.0 GEOLOGY

### 2.1 Regional Geology: (Figure 3)

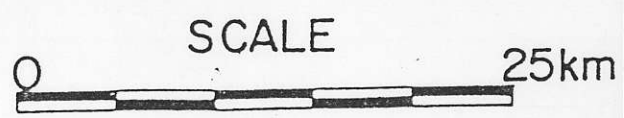
The Shasta property occurs near the eastern margin of the Intermontane Belt in the Cassiar-Omineca Mountains. The oldest rocks exposed in the Toodoggone area are wedges of crystalline limestone correlatable with the Asitka Group (Permian) in thrust fault contact with the Takla Group (middle Triassic 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 to the south 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 (early to middle Jurassic age) in which the Shasta property occurs. The Toodoggone volcanics, which are considered to be chrono-stratigraphically correlative with lower Hazelton Group rocks, 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 (pers. comm., A. Panteleyev). 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, a rock unit similar to that at Serem's deposit (quartz andesite). The Baker Mine occurs within the Takla Group. However, all three properties have a similar style of mineralization.

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



-  SUSTUT GROUP
-  OMINECA INTRUSION
-  HAZELTON GROUP
-  TOODOGGONE VOLCANICS
-  TAKLA GROUP
-  ASITKA GROUP

FAULT 



NEWMONT EXPLORATION OF CANADA LTD.		
REGIONAL GEOLOGY		
SCALE	LOCATION	DATE
1:400,000	94 E, D	JAN. 17, 1985
SURVEY BY	DRAWN BY	NO.
		3



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

## 2.2 Property Geology: (Figures 4 to 5)

The Shasta Property (Plate 1) comprises two mineralized zones (Main, Creek) within a quartz-eye feldspar crystal tuff, (QFT) and a third zone (Upper) in a feldspar crystal tuff (FT). An interesting showing (East zone) also occurs in the feldspar tuff unit. From the 1984 work, the Jock Zone appears to be a northerly extension of the Creek Zone and will be included as part of it. These units have a characteristic orange weathering surface due to fine hematite within plagioclase producing orange coloured feldspars. Bedding was recognized within the quartz-eye unit in several places as well as the overlying tuffs. Mafic rich lenses (fiamme), ranging from a few millimeters to several centimetres in length occur in both units and vary from scattered to numerous. The long axes of the fiamme are subparallel indicating bedding attitudes and/or compression normal to the direction of maximum strain. The quartz eyes appear to decrease in frequency towards the feldspar crystal tuff unit and the contact is gradational. The feldspar unit is characterized by more epidote and chlorite alteration and epidote-rich fractures, less indigenously pyrite (0-2% vs 1-5% in the quartz-eye unit) and more phlogopite especially occurring as small booklets. The upper part of the quartz-eye unit is fragmental (breccia) and is overlain by a purple tuff-tuff breccia unit in the 'Jock' zone and by a sooty grey friable feldspar tuff in the Main zone. Contacts are poorly exposed due to faulting and overburden cover.

The northwest portion of the map-area consists of tuff-tuff breccias to lahars (debris flows), and volcanic conglomerate and wackes (some of which show reworking), all of which range in colour from grey, green (chlorite, epidote) to maroon-purple (hematite-rich). The upper part of the grey tuff is fiamme-rich and the relationships of the various rock types is not apparent due to faulting. The volcanic conglomerate (mud flow?) is monolithic containing pebbles to boulders of a maroon feldspar porphyry, a rock type also occurring in the purple tuff. Drill hole intersections indicate a thickening of the units to the west. Stratigraphically, the Toodoggone volcanics have a northwesterly strike and west dip.

Fine-grained, subvertical northwesterly trending andesitic dykes up to one metre wide were observed in outcrop and drill core intruding the QFT unit in the Creek Zone near Jock Creek. The wider dykes appear to be zoned (DDH 84-9), with a baked edge and grading from plagioclase-pyrite edges to augite-rich centre. Contacts are generally sheared with calcite veins along the contacts. Most of the dykes have undergone faulting by their fractured and disrupted structure.

The southeast portion of the map-area consists of grey-green to black tuff-tuff breccia, and dacitic flow/breccia with possible pillow structures at one site. This unit is more mafic and is generally devoid of quartz shards as in the mapped Toodoggone Formation. These volcanics form the magnetic high in the map area and are essentially part of the Takla Formation.

On a regional scale, there appears to be no distinct alteration halo around the Shasta property. A study done by G. Goodall (B.Sc. Thesis) of scattered samples from the property indicates three alteration facies 1) propylitic to argillic, 2) argillic to advanced phyllic and 3) potassic to silicic. The QFT and FT units on the whole range from propylitic to argillic

alteration (epidote and chlorite) which may be more of a low grade (green schist facies) regional metamorphic effect rather than strictly due to mineralization indicating two periods of alteration - regional and mineralization. The second and third facies of alteration occur in conjunction with mineralization. The argillic to phyllic alteration is evident by orange-brown subhedral to anhedral feldspars, veinlets of quartz (0.5-1.5 mm), and increase in amount of sericite and clay replacement of feldspars. Potassic to silicic alteration is distinguished in hand sample by quartz flooding, disseminated coarse-grained pyrite and chlorite, pink (k-feldspar) selvages along quartz veinlets and in thin section by subrounded grains of K-feldspar. The quartz-eyes are still distinguishable which are indicative of the QFT unit. In thin section, there is less sericite, increase in sulphides and the dominant increase in quartz content. These same alteration facies are recognized in all drill holes. A continuous gradational change of alteration facies occurs from the propylitized host rock into the silicified mineralization zones.

Structurally, the general trend of the rock units and major lineaments is north to northwesterly, however there are numerous northeasterly trending faults subparallel to Jock Creek. Poles to bedding are scattered resulting from a combination of folding and faulting, the latter causing large blocks to be displaced. Bedding was not observed in the area of the Main zone. Numerous small faults are recognized in the field by slip planes and/or topographic depressions. Major orientations of faults/fractures/joints are north to northwest with minor sets at north to northeast trending. Gently dipping low angle fractures and quartz veins are prevalent in the Jock zone, whereas they are generally absent in the Main zone. If these gently dipping fractures/veins are a result of tectonics at a higher elevation, then the Jock zone is higher stratigraphically than the Main zone.

Results from the radem geophysical survey indicate several north to northwesterly trending lineaments which are probably fault structures. An apparent major structural break occurs at L450N/0-400W as indicated by the VLF-resistivity survey.

From drilling the Creek Zone, a major fault occurs at the tuff-quartz eye feldspar crystal tuff contact. A fine grained tuff unit generally occurs at this contact.

Structural contours show a north-south strike from lines 500 to 700 N (Creek Zone) changing to a northwesterly strike at 300 N and 800 N, forming a sigmoidal pattern. South of 300 N, this fault has sigmoidal shape through the Main Zone as mapped on surface. Several splay faults appear to originate from this major fault termed the Shasta fault. At the Creek Zone, the fault has a dip of 60° west (as determined from the structural contours). The sense and amount of displacement along this fault is not known, however, the apparent sense is west side down.

Observation of aerial photographs show that the dominant northwest-southeast lineaments are transected by the major northeast-southwest lineament which forms the graben structures underlying the valley of Jock Creek. Numerous northeast-southwest faults occur along the valley sides. Creeks and seepages draining the property south of Jock Creek are northwest trending reflecting the major structural fabric. A peculiar northeast-southwest lineament transects the property which when checked in the field occurs in areas of deep v-shaped gulleys in glacial material, which may reflect underlying structures.

### 3.0 Geochemistry

No major geochemical surveys were conducted on the property itself in 1984. Selected areas were covered by minor soil and rock sampling surveys to test for mineralization.

### 3.1 Soil Survey

A reconnaissance soil survey was carried out around the perimeter of the Shasta 5 claim for assessment work purpose, a report of which was submitted (Aug. 1984). No significant anomalous values were obtained.

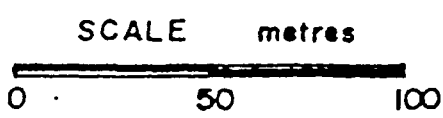
A soil survey (chain and compass grid 2000 metres) was conducted over an area of anomalous soil samples taken in 1983 on the Shasta 3 claim, (Figures 6 and 7) and anomalous rock samples, table 1. A total of 76 samples from the B horizon were taken and sent to Chemex Labs for Cu, Pb, Zn, Ag and Au analysis. Several multielement and base metal (Pb,Zn) anomalous samples are present.

A soil profile (80 cm) was sampled at L 500N/200W to test for vertical element variation over mineralized rock. Results indicate the lower part of the B horizon to be significantly anomalous, together with the C horizon, Figure 8. The anomalous Au and Ag values would not have been detected in a conventional soil and geochemical survey sampling at a .1 to .2 m depth due to depth of glacial material overlying a mineralized zone. In order to sample such areas, either a soil auger or overburden drill (portable unit) should be used. The glacial masking effect would imply that the low Au and Ag soil geochemical values detected in areas of glacial overburden should be re-examined and possibly trenched or sampled at depth.

### 3.2 Rock Geochemical Survey

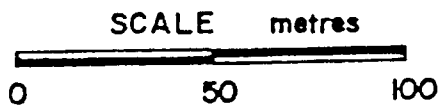
Several lines of continuous rock chip sampling were conducted in the Creek Zone Figure 6. The chip sampling was confined to hand dug trenches using mattock and water pump. New zones were found and mapped. The results, table 1, indicate the anomalous nature of gold and silver in the quartz-eye feldspar tuff unit.

	200 W	150 W	100 W	50 W	0
BL	0.4, 10	0.3, 10	0.2, 10	0.4, 10	17.0, 140
	0.3, 10	0.1, 10	0.2, 10	0.2, 10	7.0, 200
50S	1.2, 10	0.2, 10	0.2, 10	0.9, 10	2.1, 30
	0.2, 10	0.2, 10	0.9, 10	0.7, 10	2.1, 10
100S	0.3, 10	0.2, 10	0.3, 10	1.2, 10	1.3, 300
	0.3, 10	0.4, 10	0.4, 10	0.5, 10	8.0, 20
150S	0.4, 10	0.2, 10	1.0, 10	2.2, 10	1.6, 10
	1.0, 10	0.9, 40	0.3, 10	7.8, 160	1.4, 30
200S	1.2, 10	0.3, 20	1.2, 100	1.0, 10	1.0, 10
	0.6, 10	7.8, 20	0.3, 10	0.1, 10	0.4, 10
250S	0.4, 10	0.7, 10	7.5, 220	0.3, 50	1.3, 10
	0.2, 40	0.5, 10	0.5, 10	2.9, 50	2.0, 10
300S	0.3, 10	1.7, 10	3.0, 50	0.8, 10	
	0.4, 10	0.4, 10	1.6, 20	2.6, 10	Ag, Au ppm, ppb
350S	0.2, 10	1.7, 30	0.1, 10	5.2, 20	
	0.2, 30	7.4, 20			
400S	0.2, 10	1.3, 10			



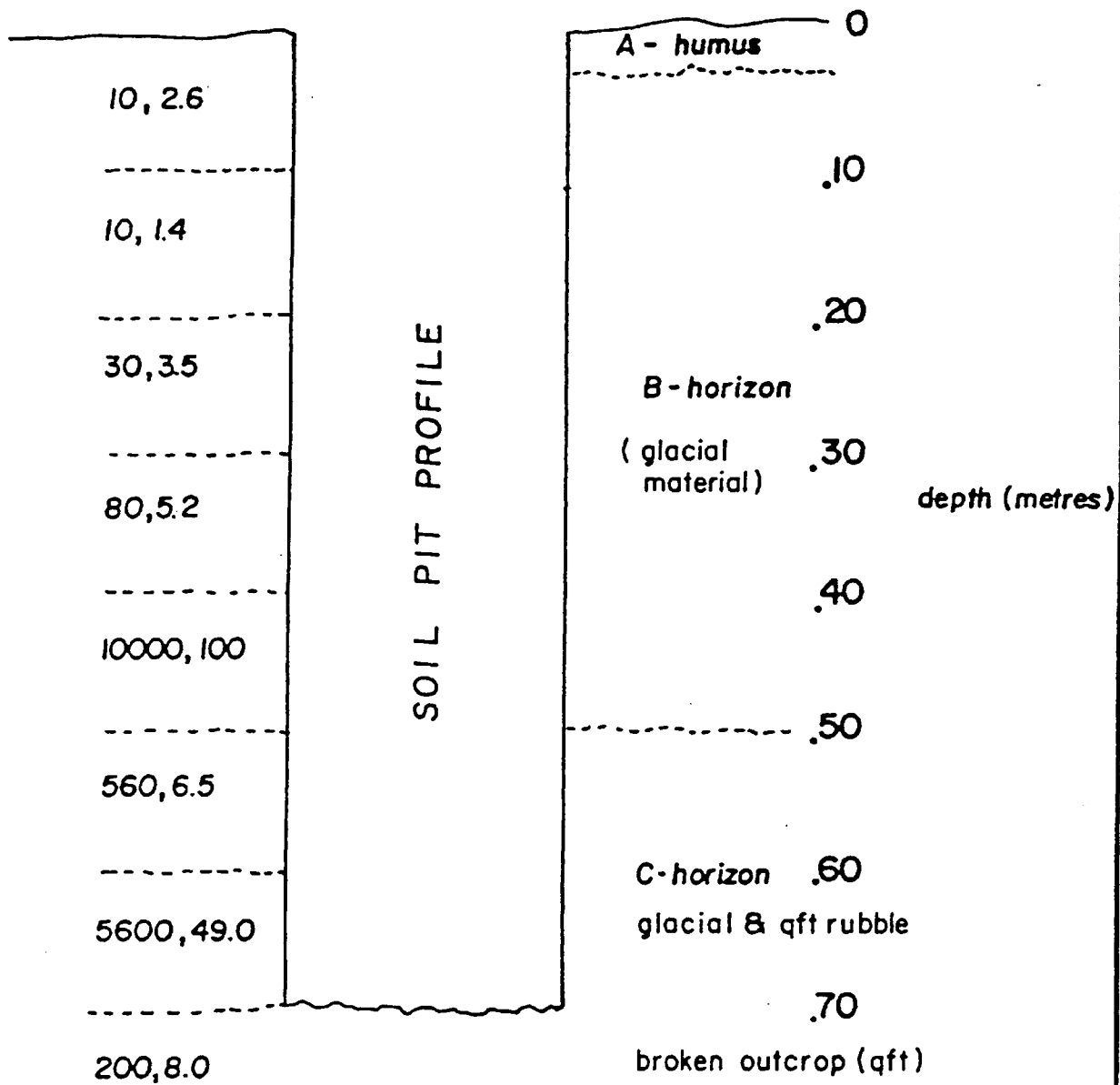
NEWMONT EXPLORATION OF CANADA LTD.		
SHASTA 3 SOIL GEOCHEMISTRY Ag, Au		
SCALE 1:2000	LOCATION 94 E 6	DATE JAN. 10, 1985
SURVEY BY I.C.	DRAWN BY I.C.	NO. 6

	200 W	150 W	100 W	50 W	0
BL	16 10 89	13 10 100	15 10 117	13 12 73	178 930 1500
	12 9 61	11 10 91	14 11 94	10 11 106	30 358 720
50S	14 9 53	11 11 105	10 10 86	20 146 476	28 302 420
	7 10 86	10 11 102	18 12 96	27 145 370	40 223 292
100S	12 8 75	8 11 95	9 16 132	24 308 308	29 405 530
	12 7 67	14 17 77	13 18 144	18 88 231	54 595 640
150S	13 9 73	11 13 93	28 43 150	35 325 388	22 80 346
	19 48 160	20 63 186	10 38 198	55 403 465	39 108 176
200S	10 26 100	19 35 200	110 478 1300	21 660 550	43 28 111
	17 59 290	58 650 680	6 12 157	14 33 219	18 80 143
250S	16 64 368	29 105 213	75 580 720	16 44 170	52 475 500
	14 73 282	16 93 300	22 46 162	32 37 109	36 220 271
300S	16 31 166	27 95 232	28 70 162	22 20 106	
	11 14 85	16 32 131	24 65 226	42 65 146	
350S	16 20 122	61 34 202	10 7 113	85 63 411	
	15 20 112	75 50 200			
400S	20 27 140	31 68 160			



NEWMONT EXPLORATION OF CANADA LTD.		
SHASTA 3 SOIL GEOCHEMISTRY Cu, Pb, Zn		
SCALE 1:2000	LOCATION 94 E 6	DATE JAN 10, 1985
SURVEY BY I.C.	DRAWN BY I.C.	NO. 7

Cu | Pb  
| Zn  
ppm



**LEGEND**

200, 8.0      Au (ppb), Ag (ppm)  
 qft          quartz feldspar tuff

NEWMONT EXPLORATION OF CANADA LTD.		
SHASTA PROJECT		
Soil profile - L 500 N / 200 W		
SCALE	1:5	DATE NOV. 22 / 84
SURVEY BY	BWD	NO. 8
LOCATION	NTS 94 E	DRAWN BY IC



Grab samples taken during prospecting of the Shasta 3 claim are shown in Table 1.

Results for all samples are tabulated in Appendix 1 (Cu, Pb, Zn, Ag, Au).

#### 4.0 Geophysics

Geophysical surveys conducted were 1) detail VLF-Resistivity over selected areas -21.2 km, 2) radem over the entire grid -37.7 km and 3) magnetometer on a few lines -8050 m. A geophysical compilation map is shown in Figure 9.

Objectives of the surveys were to 1) delineate in detail the nature of the mineralized zones using the VLF-R method, and 2) delineate geological structures. A report by H. Limion details the geophysical surveys.

The VLF-Resistivity surveys conducted in 1983-1984 have shown that the mineralized zones are associated with high resistivities due to quartz veining and pervasive silicification.

The principle station used in the VLF-R survey was Jim Creek, Washington (NLK) as this was the strongest signal and best suited for defining NE-SW structures. Contouring of 2000 ohm-metre readings shows a disrupted pattern which maybe related to the actual style of silicification and mineralization together with poor coupling due to station orientation. Signal strength from the Hawaii station (NPM) was quite weak and at times inaudible, thus the whole grid was not covered. This station is best suited for defining NW-SE structures and does show a prominent northwesterly trending pattern. The VLF-R survey indicates two major resistivity zones - Creek and Main with a possible major east-west break occurring at the south end of the Creek and splitting the Main Zone. (L450N). Narrow northerly

trending resistivity zones were also outlined east of the Creek Zone. The resistivity areas generally coincide with anomalous soil samples (Au & Ag). Note that the VLF-R method is generally good to a depth of 20-30 metres and cannot be used for defining zones at 30 metres, whereas IP would be an advantage. A new zone was discovered in outcrop partially covered by glacial material as a direct result of the VLF-R survey and subsequently drilled (DDH 18 & 19)

Results of the radem survey indicate numerous major fault zones, some of which coincide with and are extensions of mapped faults. There is no apparent correlation of radem and VLF-R anomalous zones.

The overall magnetic trend is northwest-southeast and appears to outline the extent of the moderately magnetic Takla rocks to the southeast of the map area. A magnetic low correlates with the areas of silicification/mineralization which is probably indicative of the destruction of magnetite during silicification and mineralization.

## 5.0 Trenching

The amount of trenching totalled 200 metres by cat and 50 metres by hand (mattock and water pump). The trenches were selected to test geologically favourable zones outlined by the VLF-R survey. All trench results are shown in Appendix I, and summarized in Table 1. Locations are shown in Figure 5.

Cat trenching over lines 500N and 550N uncovered the possible extension of the mineralized zone located by trenching on line 640N in 1983. During the course of putting in drill roads, three new areas of mineralization were found and subsequently sampled, results of which are shown in Table 1.

TABLE 1: SIGNIFICANT CHIP SAMPLE RESULTS FROM OUTCROP

LOCATION	ZONE	WIDTH (metres)	Au (oz/ton)	Ag (oz/ton)
725N/255W - line A	Creek	5.5	.050	1.40
B		3.2	.018	0.44
C		10.5	.030	1.76
750N/300W - line F (along Jock Cr.)	Creek	56.2	.014	0.37
line F1 (across outcrop face)	Creek	36.0	.014	0.89
775N/300W - line G	Jock	7.0	.018	1.04
800N/300W - line H	Jock	5.0	.015	0.32
500N/219LW - cat trench	Creek	random chips over 2.0	1.077	32.58
500N/223W - cat trench		1.0	.046	0.83
500N/226W - cat trench		1.0	.018	0.90
550N/223W - cat trench		9.5	.055	1.00
	includes a section of	0.5	.482	1.10
675N/220W - road cut	Creek	grab	.040	2.82
635N/190W - road cut	Creek	grab	.018	0.20
640N/210W - road cut	Creek	grab	.016	0.34
SHASTA 3 CLAIM		bld.	.048	1.23
		chalcedony veins	.003	0.06
		grab	.050	3.05
		grab	.066	4.36
		grab	.062	0.86

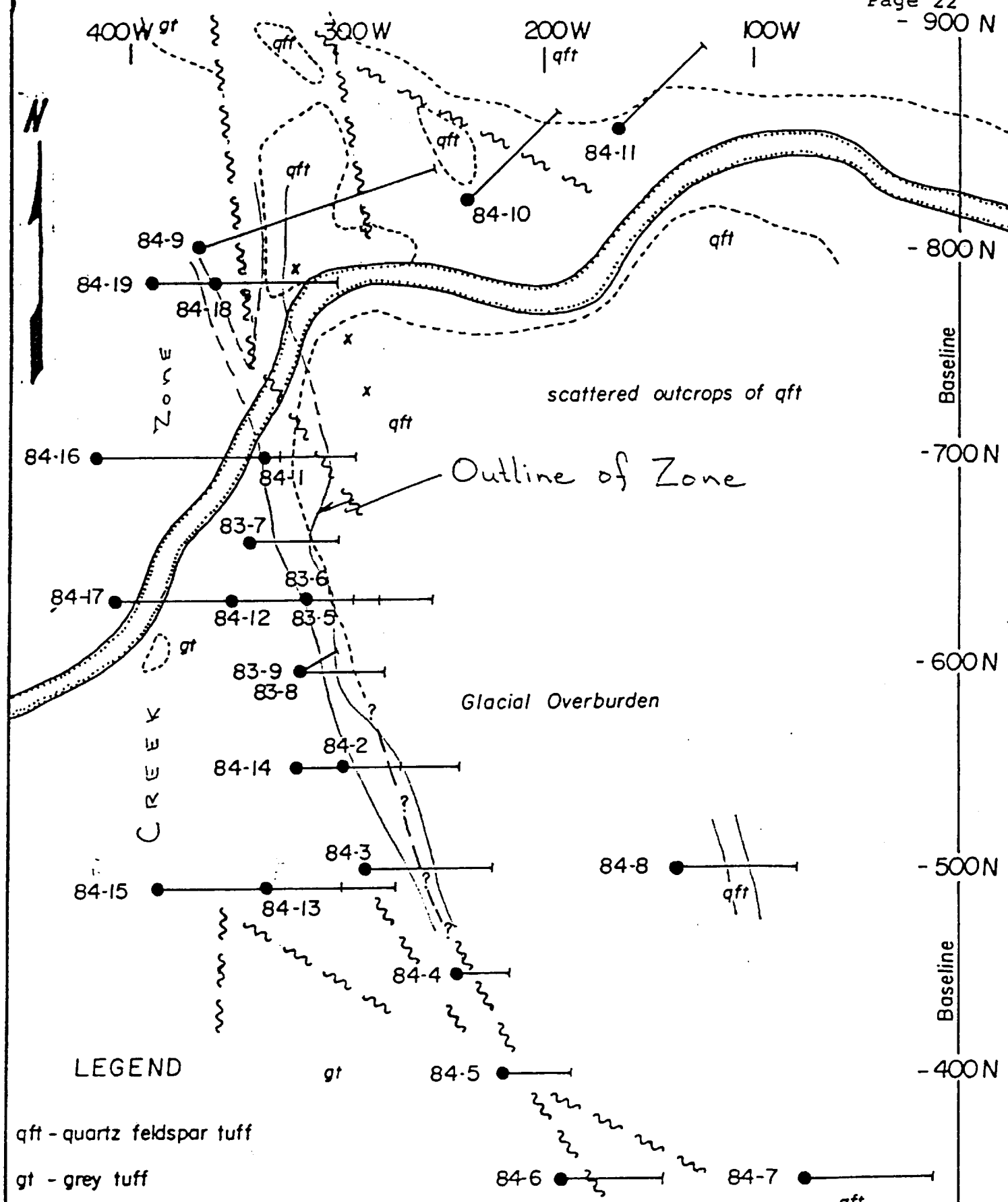
## 6.0 Diamond Drilling

A total of 2003 metres (6572 feet) from nineteen holes were drilled to test geologically favourable and mineralized areas and to delineate the mineralized zone encountered in DDH 5 & 6 (1983), Figure 10. Holes 1 to 8 were collared based on the VLF-R data from the 1983 geophysical survey. The majority of holes this year (17) were drilled in the vicinity of the Creek and Jock zones, with 2 holes to test the extension of mineralization in the Main zone. Results of the drilling program are shown in Appendix IV and summarized in Table 2. All drill holes (1983 & 84) were surveyed and topographic profiles taken over them using theodolite and stadia rod.

Cross sections of lines 500 to 800 N are shown in Figures 11 to 14.

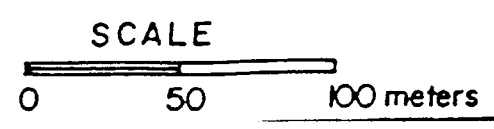
## 7.0 Mineralization

The mineralized zones, named the Main, Creek, and Upper, are areas that have undergone faulting and shearing resulting in localized fracturing and brecciation with the formation of dilatant zones. These are favourable areas for mineralization (QFT good permeability, FT fair permeability). There appear to be several periods of silica emplacement (quartz, chalcedony) and mineralization. The first stage quartz is generally milky coloured, unmineralized and drusy with small quartz crystals. The comb quartz recognizable on surface and in drilling by carbonate filling of the combs appears to decrease with depth. It occurs as parallel veins up to one centimeter wide and/or stockwork, forming sub-parallel zones up to two metres across. There is minor silicification of wall rock, however some of the breccia fragments (up to 5 cm across) are weakly to moderately silicified. The second stage quartz (chalcedonic) is grey brown to translucent, occurring as a flood of fine veinlets (capillary)



LEGEND

- qft - quartz feldspar tuff
- gt - grey tuff
- ~ fault
- x new zones, 1984



NEWMONT EXPLORATION OF CANADA LTD.		
SHASTA PROJECT DRILL HOLE PLAN - CREEK ZONE		
SCALE 1:2500	LOCATION NTS 94 E	DATE NOV. 26, 1984
SURVEY BY BWD	DRAWN BY I C	NO. 10

TABLE 2:

## SHASTA 1984 DRILL SUMMARY

SECTION	DDH	LAT. METRES	DEP. METRES	ELEV. METRES	BRG.	DIP	LENGTH METRES	FROM	TO	LENGTH METRES	OZ/T AU	OZ/T AG							
050N	83-1	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							
	(7	82	75		0.014	0.60													
200N	83-2	198N	009W	1405	270°	-55°	83.5	66.0	67.1	1.1	0.012	0.30							
								(3	74	71	0.004	0.20							
250N	83-3	251N	057W	1380.1	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	2.83)						
								(4	80	76	0.024	0.38							
	83-4	139N	072E	1425	090°	-50°	82.3	12.2	14.9	2.7	0.003	0.12							
350N	84-6	350N	193	1336.6	090°	-55°E	84.1	30.1	31.1	1.0	0.146	10.52							
								36.5	39.9	3.4	0.038	2.65							
								66.1	70.0	3.9	0.032	1.19							
	84-7	377N	117W	1355.3	090°	-55°E	103.7	38.4	39.8	1.4	0.056	2.07							
400N	84-5	416N	250W	1317.4	090°	-55°E	47.6	23.0	47.5	24.5	0.005	0.09							
450N	84-4	470N	265W	1306.4	090°	-55°E	32.6	12.0	12.6	0.6	0.040	1.56							
500N	84-15	497N	406W	1271.6	090°	-55°E	151.5	96.6	151.5	54.9	0.004	0.40							
								84-13	512N	355W	1277.8	090°	-55°E	102.7	75.3	77.9	2.6	0.010	0.61
								84-3	512N	311W	1284.7	090°	-55°	99.4	28.4	34.1	5.7	0.158	9.86
															40.0	51.1	11.1	0.038	2.60
							80.5	81.6	1.1	0.032	4.62								
							91.4	92.8	1.4	0.082	0.98								
	84-8	511N	188W	1313.7	090°	-55°E	90.5	37.4	49.0	11.6	0.035	.62							
								49.0	57.9	8.9	0.074	2.52							

SECTION	DDH	LAT. METRES	DEP. METRES	ELEV. METRES	BRC.	DIP	LENGTH METRES	FROM	TO	LENGTH METRES	OZ/T AU	OZ/T AG	
550N	84-14	558N	334W	1268.4	090°	-55°	82.9	50.3	53.3	3.0	0.071	4.11	
								53.3	57.7	4.7	0.025	1.61	
								57.7	63.6	5.9	0.076	6.46	
	84-2	557N	300W	1279.0	090°	-55°	104.2	20.3	23.0	2.7	0.029	1.74	
								34.2	41.0	6.8	0.055	2.97	
								51.8	53.8	2.0	0.046	2.47	
600N	83-8	601N	313W	1267.7	090°	-45°	56.7	32.0	32.5	0.5	0.150	13.14	
								(22	57	35	0.014	0.92	
	83-9	601N	313W	1267.7	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	12.75
								(25	65	49	0.041	1.50	
640N	84-12	639N	345W		090°	-60°	141.1	38.1	42.8	4.7	0.105	1.80	
								47.5	50.8	3.3	0.051	1.60	
								74.5	78.3	3.8	0.079	.28	
	84-17	635N	421W		090°	-65°	124.1	109.0	112.0	3.0	0.049	2.80	
	83-5	641N	310W	1256.2	090°	-45°	84.1	12.2	13.1	0.9	0.078	0.18	
								14.6	19.6	5.0	0.659	7.63	
								(includes a section of:	17.5	19.6	2.1	0.726	13.00
								(11	84	73	0.079	1.04	
	83-6	641N	310W	1256.2	090°	-70°	60.0	16.5	27.7	11.2	0.209	4.47	
(includes a section of:								18.6	19.8	1.2	0.610	11.23	
OR								16.5	34.1	17.6	0.155	3.03	
(16								60	44	0.082	1.63		
650N	83-7	666N	331W	1244.4	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
								(20	57	37	0.035	1.21	

SECTION	DDH	LAT. METRES	DEP. METRES	ELEV. METRES	BRG.	DIP	LENGTH METRES	FROM	TO	LENGTH METRES	OZ/T AU	OZ/T AG
700N	84-1	709N	336N	1240.2	090°	-45°	75.3	9.3	15.2	5.9	0.043	3.52
								15.2	27.2	12.0	0.034	1.70
								41.5	45.0	3.5	0.045	1.12
								59.8	60.3	0.5	0.172	1.46
	84-16	709N	388W	1246.1	090°	-60°	197.2	105.7	107.7	2.0	0.073	.50
800N	84-9	815N	342W	1248.5	090°	N70°E,-45°	170.0	49.6	50.1	0.5	1.028	48.37
								55.5	56.5	1.0	0.174	.20
								92.4	93.0	0.6	0.044	4.02
									84-10	823N	209W	1238.2
								75.0	75.8	0.8	0.134	3.16
	84-18	798N	339W	1246.1	090°	-55°	96.6	39.7	41.7	2.0	0.069	3.18
								54.7	60.7	6.0	0.081	2.93
	84-19	798N	368W	1248.6	090°	-55°	133.2	42.0	46.9	4.9	0.155	9.32
						(includes a section of:		42.9	43.9	1.0	0.642	40.11)
								49.7	51.0	1.3	0.164	5.43
								68.0	69.3	1.3	0.216	2.96
								77.0	82.0	5.0	0.024	.80
								91.0	95.0	4.0	0.033	.64
850N	84-11	854N	144W	1236.8	090°	N45E,-45°	81.4	NO SIGNIFICANT RESULTS				

TOTAL , 28 drill holes

2676.2 metres  
(8780 feet)

1251



cutting the first stage quartz and as banded chalcedony. The breccia fragments are 80 to 100% silicified/altere; however, the original texture of the quartz-eye feldspar tuff is still visible. The greyish chalcedonic quartz is mineralized and sulphides are generally fine grained. The silicification is pervasive into the host rock to within a few metres of the mineralized zone.

In drill intersections, the mineralized section may vary in colour from a dirty grey-white (75-100% silicification/bleaching) through pale-orange, light-orange (25-75% silicification/patchy bleaching) to orange-green/brown-orange (0-25% silicification/chlorite/epidote alteration). Some sections of the quartz-eye feldspar tuff are reddish to red-orange due to higher content of hematite which also occurs as scattered flecks in some quartz veins and/or coatings on fractures associated with chlorite-epidote. Narrow orange coloured selvages (potash feldspar) occur along the edges of some quartz veins. Streaks of greenish tinted quartz (fine quartz-sericite mixtures) are quite prominent in the mineralized sections. Banded chalcedonic quartz is sporadic throughout the mineralized drill core intersections but is associated with the mineralized grey quartz in breccia zones. Unmineralized amethystine quartz occurs in veins in a few places, specifically on the outer edges of the quartz stockwork. The last stage of mineralization resulted in many of the quartz vein cavities (comb quartz) being filled with calcite. Mineralized and often banded calcite veins transect the quartz veins. Unmineralized calcite veins occur in the periphery of the zones. The presence of mineralized calcite veins (i.e. DDH 83-8, Creek Zone - 0.5 m of 0.15 oz/t Au and 13.14 oz/t Ag) may indicate a later period of mineralization not associated with the silicification (i.e. quartz veining) since calcite is generally the last to form. Manganese staining of fractures is more prevalent in the Creek zone than the other zones. Narrow black chalcedonic breccia zones up to five centimetres wide with

subangular calcite fragments are often associated with the mineralization in the Main zone. Barite occurs as scattered grains generally associated with the calcite in the mineralized sections.

Mineralization is associated with the grey-brown chalcedony as either bands or streaks. Narrow and irregular veinlets (or stringers) of acanthite are prevalent in the north end of the Creek Zone generally cutting the chalcedonic-quartz zones. The visible mineralization consists of disseminated cubic pyrite and fine-grained pyrite to pyrite blebs, disseminated and narrow blebs of acanthite (low temperature form of argentite) and specks of electrum and native silver. Visible gold was found in DDH 84-9 associated with acanthite. Base metal mineralization consists of chalcopryite, galena and sphalerite. A few grains of bornite was recognized in one sample from the Creek Zone. An XRD analysis of a mineralized sample from the Creek Zone by A. Panteleyev (pers. comm., October 1983), indicated native silver with galena and sphalerite in a barite matrix.

Minerals identified from a polished section study by Todoruk (UBC 1983) were pyrite, galena, chalcopryite, sphalerite, acanthite, native silver, and electrum, with trace amounts of chalcocite and freibergite. Gold occurs as electrum displaying mutual boundaries with acanthite and as minute grains in quartz. Silver is present in acanthite as rims to galena and along cleavage planes within galena, sometimes as rims to chalcopryite and in association with native silver in open spaces.

The sub-vertical silicified breccia zones of mineralization are generally up to 50 metres in length and up to 10 metres wide. They are possibly tension gashes (dilatant zones) which are en echelon and sigmoidal. However, they form an

overall northwesterly trending mineralized zone up to many metres in strike length. The better grades of mineralization occur at the intersection of major silicified breccia zones.

A few scattered non-mineralized quartz and calcite veins occur in the overlying tuff-tuff breccias. Due to the incompetency (and poor permeability) of these overlying rocks, the fracturing necessary for quartz veining did not develop. The relatively flat-lying faults in Takla formation in the southeast portion of the map-area are mineralized with pyrite in scattered quartz veins; however, no gold and silver values of importance are present.

From drill core logging and outcrop mapping, several structural features are evident. Non-mineralized and silicified fault breccia and gouge, slip planes, faulted (or rebrecciated) silicified zones and scattered to pervasive fractures and joints are indicative of last stage deformation. Some fault zones are cut by non-mineralized carbonate veins while others contain broken carbonate veins. In places, a sequence of rebrecciation and silicification with mineralization and later cut by mineralized and non-mineralized carbonate veins indicates a continuous history of deformation and mineralization.

In an epithermal system, mineralization varies with depth, therefore surface showings (ie. Main Zone) should not be construed as being totally representative of mineralization. The stockwork at surface may pass into more structurally constricted veins with depth.

The lack of sulphide oxidation at surface (i.e. no limonitic gossans observed) and in drill core indicates the absence of any supergene enrichment zone.

## 8.0 Reserve Estimates

Drill-indicated geologic reserves for the Shasta property were calculated manually by G. Delane and by computer using various Newmont programmes (D. Turner, B. Downing) at the .02, .05 and .10 gold equivalent cut off values, Table 3. The manual reserve and grade cutoff values are summarized in a memo by G. Delane.

## 9.0 Conclusions

Shasta is one of the several interesting epithermal gold-silver vein-type properties in the Toodoggone area and is similar in geological setting and style of mineralization to the Lawyer's deposit.

Significant gold and silver intersections were delineated from drilling and trenching on the Main and Jock zones (the Jock is considered an extension of the Main Zone north of Jock Creek). On the Creek Zone, the best intersection was 5.7 metres of 0.158 oz/t Au and 9.9 oz/t Ag (in ddh 84-3). Higher grades occur in the Creek Zone with values up to 0.748 oz/t Au and 27.8 oz/t Ag, over 0.5 metres. In the Jock Zone, the best intersection was 1.0 metre of 0.642 oz/t Au and 40.1 oz/t Ag with the highest value being 1.028 oz/t Au and 48.4 oz/t Ag over 0.5 metre. The northerly extension to the Main zone was tested with two drill holes, the best values being 8.9 metres of 0.074 oz/t Au and 2.52 oz/t Ag.

TABLE 3: SHASTA DRILL-INDICATED GEOLOGIC RESERVES

Au equivalent cutoff (oz/ton)	tonnes	Manual grade in oz/ton Au equivalent
.02	2,374,000	.079
.05	703,000	.145
.10	517,000	.172

$$\text{oz/ton Au equivalent} = \text{oz/ton Ag} \times 0.0213 + \text{oz/ton Au}$$

Chip sampling of outcrops indicated widespread mineralization (56.2 metres of 0.014 oz/t Au and 0.4 oz/t Ag). A new zone was found by geophysics and mapping on the Creek Zone and was drilled on its projected extension on the Jock Zone (1.0 metre 0.648 oz/t Au & 40.1 oz/t Ag - DDH 84-19). A significant new zone was discovered while putting a drill road in an overburden covered area (grab, 0.040 oz/t Au & 2.8 oz/t Ag). Cat trenching on the Creek Zone yielded assay results of 9.5 metres of 0.055 oz/t Au & 1.0 oz/t Ag on line 550 N, and 1.077 oz/t Au & 32.6 oz/t Ag on line 500N.

The chip sampling results from 1983-84 indicate the favourable unit (QFT) to be quite anomalous in gold and silver. Together with the soil geochemical and VLF-R results, several new mineralized zones may exist which require further work and drilling to delineate.

The favourable QFT unit is overlain by the tuffs northwest of Jock Creek and its extent is unknown. The anomalous soil and rock values on the Shasta 3 claim approximately 1.8 km northwest of Jock Creek may be indicative of mineralization attributable to the QFT unit. It appears that the gold-silver mineralization (grades/widths) is better in the Creek (& Jock) zone than the Main Zone and that there may be more zones along strike to the north.

Mapping of outcrop indicates the mineralized zones to have a subvertical dip with a pinch and swell structure. The alignment of these zones in the Main Zone (lines 0 to 100N) has a sigmoidal pattern, somewhat similar to the Shasta fault in this area. The general strike of the Creek Zone appears to be northwesterly and dipping 50 to 60° to the west. In outcrop the silicified zones strike 150° dipping 80-60° west. Several large mineralized breccia zones comprise the Creek Zone some of which have been cut by the post mineral Shasta fault. The configuration of the

mineralized zones and Shasta fault indicate a progressive simple shear type deformation (with possible rotation) in an epithermal system which resulted in the the formation of a mineralized stockwork and en echelon dilant zones . The Shasta fault is probably a reactivated paleo-fault responsible for the control of mineralization within a graben structure.

The significance of the wide extent of alteration in outcrop and drill holes suggests a large hydrothermal system was active and that the mineralized breccias and associated alteration zones are at the top of an epithermal system.

M. Vulimiri, former geologist with Serem, was asked to examine the available data and core on the Shasta property and present his views (see Appendix II). His experience encompasses three years of drilling on Serem's Lawyers deposit.

## 10.0 Recommendations

The recommendations are based on results of the follow-up work to the 1983-84 program plus additional areas to examine.

### A. Drilling

#### Proposed 1985 Program - Shasta Project

##### 1) Creek Zone

-drilling in the Creek Zone to delineate grades/zones in greater detail, to test new areas and the northern extension of the Creek Zone.

coordinates	direction azimuth	dip	length metres	purpose
500N/275W	090	-55	175	test eastward extensions of DDH-84-3 and westward (down dip) extension of DDH 84-8.
525N/310W	090°	-55	100	fill in between 500 & 550N.
525N/335W	090°	-55	100	fill in between 500 & 550N.
550N/360W	090°	-55	100	test down dip extension of DDH 84-14
575N/310W	090°	-55	100	fill in between 550 & 600N.
575N/335W	090°	-55	100	fill in between 550 & 600N.
600N/335W	090°	-55	100	test down dip extension of DDH 83-9.
725N/250W	270°	-45	75	test new zone (a possible southern extension from DDH 84-18 & 19; drill pad already made).
750N/250W	270°	-45	75	" " " "
750N/375N	090°	-45	125	fill in between 700 & 800N, drilling under Jock Creek.
800N/400W	090°	-55	150	test downdip extension of DDH 84-19
825N/375W	070°	-70	150	test downdip extension of DDH 84-9
825N/175W	270°	-45	100	test VLF-R high and area of 1983 trenching
950N/22W	090°	-45	100	test VLF-R high and northern extension of Creek Zone (helicopter move)

additional hole to test or define mineralized zone. (150 metres)

Total 1700 metres/ 15 holes



ii) Main Zone

-drilling the Main Zone to delineate mineralization along its strike.

coordinates	direction (azimuth)	dip	purpose
050N/125W	090	-45	test VLF-R high & surface showings at depth .
100N/100W	090	-45	test VLF-R high (area of glacial overburden)
350N/75W	090	-45	test VLF-R high & northern extension of DDH 83-3
350N/225W	090	-45	test for extension of mineralization at depth in DDH 84-6
500N/100W	090	-45	test VLF-R high eastward extension of DDH 84-8
600N/175W	090	-45	test VLF-R high & northern extension of DDH 84-8

Total 600 m / 6 holes

iii) Shasta 3 claim

1-2 drill holes to test for the QFT unit and mineralization.

Total 200 metres

TOTAL DRILLING 2500 metres (8200 ft)

NB: From drill and trench results, geological mapping and VLF-Resistivity data, a large stockwork system is present. This style of mineralization could be tested by percussion drilling on most of the Shasta property.

## B. Geophysics

1. VLF-EMR Resistivity survey: a) to delineate the area from Line 200 to 1000 north in more detail (12.5 m spacing) for the purpose of locating possible drill hole targets, covering an area of anomalous soil geochemical values. b) to delineate zones on the Shasta 3 claim covering an area of anomalous soil geochem values.

## C. Geochemistry

1. Soil survey: Detail grid (25 m spacing) to cover the area of anomalous samples outlined by the reconnaissance survey on Shasta 3 claim.

2. Rock chip survey of outcrops on the Shasta 3 area to help define the zone.

## D. Trenching

Several trenches should be dug using a backhoe and/or blasted and sampled to test anomalous rock and soil areas at : 1) East Zone, 2) lines 300 to 400N/500-600E and line 600N/0-750E, 3) areas of interesting Au-Ag values from drill road cuts, 4) Shasta 3 claim. Trenching should also be done to test for extension of Creek Zone on Line 600, and to test VLF-R highs on lines 200N/200W and 100N/200W (areas of glacial overburden).

## E. Geology

Further detail mapping of the mineralized zones on 1:500 scale.

F. Survey

The main purpose of an instrument survey is to accurately locate the 1983-84 drill hole collars, legal claim posts and to set up base stations for other survey controls.

G. Miscellaneous

Obtain a base topographical map at 1:2500 and 5 metre contour interval and digitized topographical data for computer usage.

B. W. Downing  
Project Geologist

January 30, 1985

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## APPENDIX I

ROCK CHIP SAMPLES OF OUTCROP

<u>Description</u>	<u>Location</u>	<u>Sample Number</u>	<u>Cu ppm</u>	<u>Pb ppm</u>	<u>Zn ppm</u>	<u>Ag oz/t</u>	<u>Au oz/t</u>	<u>Other</u>
chip 1m	Line A-725N/225W	6611	8	116	100	0.88	.028	
chip 1.0m		6612	55	381	250	6.24	.138	
chip 1m		6613	7	20	43	0.13	.062	
chip 1m		6614	11	17	75	0.14	.020	
chip 1.5m		6615	11	92	82	0.22	.016	
chip 0.6m	Line B-735N/230W	6616	16	93	118	0.15	.010	
chip 0.9m		6617	4	43	55	0.22	.014	
chip 0.8m		6618	7	35	43	0.28	.014	
chip 0.9m		6619	7	68	44	0.98	.032	
chip 0.1m	Line C	6620	16	38	80	0.25	.008	
chip 1.5m		6621	24	10	145	0.16	.008	
chip 0.1m		6622	34	88	400	5.20	.071	
chip 0.1m		6623	38	168	280	5.60	.076	
chip 0.1m		6624	20	77	168	3.20	.059	
chip 0.1m		6625	7	21	115	0.65	.014	
chip 0.1m		6626	5	59	63	0.16	.012	
chip 0.1m		6627	4	110	108	0.18	.003	
chip 0.1m		6628	11	83	185	2.47	.044	
chip 0.1m		6629	5	33	87	0.66	.014	
chip 2.0m	Line F-West-East line along JOCK CR. on Creek Zone	6631	17	75	500	.02	.004	
chip 2.3m		6632	20	30	105	.47	.028	
chip 2.7m		6633	26	52	77	.54	.020	
chip 3.0m		6634	11	11	80	.16	.003	
chip 3.0m		6635	9	13	92	.70	.028	
chip 3.0m		6636	11	6	81	.01	.003	
chip 3.0m		6637	8	4	93	.01	.003	
chip 3.0m		6638	12	85	37	.74	.040	
chip 1.5m		6639	16	42	106	.54	.012	
chip 0.9m		6640	10	50	20	.10	.006	
chip 1.3m	6641	7	14	23	.01	.003		
chip 2.0m	6642	10	75	65	1.15	.032		

<u>Description</u>	<u>Location</u>	<u>Sample Number</u>	<u>Cu ppm</u>	<u>Pb ppm</u>	<u>Zn ppm</u>	<u>Ag oz/t</u>	<u>Au oz/t</u>	<u>Other</u>	
chip 3.5m	Line F-West-East line along JOCK CR. on Creek Zone	6643	8	26	70	.55	.010		
chip 3.0m		6644	9	12	60	.18	.006		
chip 3.0m		6645	10	40	85	.60	.006		
chip 3.0m		6646	9	14	60	.20	.006		
bld. 0.8m		6647	15	190	87	4.80	.060		
bld. 1.0m		6648	7	20	95	.10	.014		
chip 0.5m		6649	93	1	103	.01	.003		
chip 1.0m		6650	12	74	90	1.62	.018		
chip 1.0m		0551	40	84	110	.34	.008		
chip 3.0m		0552	38	72	126	.62	.012		
chip 3.0m		0553	26	145	180	1.06	.020		
chip 3.0m		0554	20	38	143	.36	.018		
chip 3.0m		0555	15	14	90	.07	.010		
chip 3.0m		0556	12	4	98	.01	.010		
grab.		0557	46	325	650	3.36	.060		
chip 3.0m		Chip Line F1 North-South line along Creek Zone	00578	288	16	57	.74	.012	
chip 2.0m	00579		1330	15	58	.46	.018		
chip 4.0m	00580		140	15	75	.18	.006		
chip 4.0m	00581		95	14	42	1.11	.020		
chip 4.0m	00582		48	20	68	.23	.006		
chip 4.0m	00583		32	8	58	.34	.008		
chip 4.0m	00584		26	15	63	.19	.006		
chip 4.0m	00585		19	10	65	.97	.003		
chip 3.0m	00586		37	10	83	.16	.003		
chip 4.0m	00587		29	12	48	.62	.010		
chip 4.0m	00588		18	10	50	3.48	.008		
chip 2.0m	Line G (Jock Zone)		00592	11	22	108	.04	.003	
chip 2.0m			00593	13	138	38	.28	.006	
chip 3.0m		00594	21	845	270	1.29	.016		
grab		00595	17	120	55	2.21	.034		
chip 2.0m	Line H (Jock Zone)	00590	22	260	34	.21	.012		
chip 1.0m		00591	38	235	58	.69	.018		
chip 2.0m		00592	11	22	108	.04	.003		

<u>Description</u>	<u>Location</u>	<u>Sample Number</u>	<u>Cu ppm</u>	<u>Pb ppm</u>	<u>Zn ppm</u>	<u>Ag oz/t</u>	<u>Au oz/t</u>	<u>Other</u>
boulder chip 1.0m	L 750N/280W	6610	17	115	68	.54	.018	
boulder chip 0.5m	L 685N/255W	6630	12	128	13	1.00	.130	
chip 2.0m	Trench - 500N	00600	590	750	420	32.58	1.077	
chip 1.5m	L 500N/225W	6751	25	31	85	0.83	.046	
chip 1.0m		6752	15	22	106	0.90	.018	
	Trench - 550N							
chip 1.0m	L 550N/203W	6753	10	8	67	.04	.003	
chip 0.5m	/223W	6754	76	147	48	1.10	.482	
chip 1.0m	/223.5W	6755	21	35	57	1.42	.036	
chip 1.0m	/224.5W	6756	11	20	55	.50	.020	
chip 1.0m	/225.5W	6757	11	15	60	.59	.010	
chip 1.0m	/226.5W	6758	10	20	57	.59	.012	
chip 1.0m	/227.5W	6759	8	54	85	.99	.010	
chip 1.0m	/228.5W	6760	11	37	89	1.47	.012	
chip 1.0m	/229.5W	6761	8	31	72	.53	.010	
chip 1.0m	/230.5W	6762	16	190	58	2.28	.150	
chip 1.0m	/231.5W	6763	22	36	77	.60	.018	
chip 1.5m	/235.5W	6764	20	143	88	.24	.003	
	Road Cuts							
grab	L675N/220W	00597	18	96	63	2.82	.040	
grab	L635N/190W	00598	10	17	71	.20	.018	
grab	L640N/210W	00599	8	116	95	.34	.016	
boulder	Shasta 3 claims	00558	412	6700	10000	1.23	.048	
chal.veins (chip 1m)	(reconnaissance)	00559	58	450	630	.06	.003	
grab (talus)		00560	45	790	515	3.05	.050	
grab (talus)		00561	181	350	510	4.36	.066	
grab (talus)		00562	390	2300	10000	.86	.062	
chip 1.0m	Shasta 5 claim	00596	7	63	65	0.02	.003	



Geological Observations on the Sha claims

Mode of Occurrence of Mineralization

Mineralization consisting of electrum, argentite and minor native gold occurs in chalcedony-quartz fracture fillings and breccia zones. The veinlets and breccia zones are steep dipping and transgress the volcanic pile of a sequence of quartz andesites. Colour of chalcedony matrix within the breccias and veins varies from cream to dark grey. The veinlets also exhibit banding within the chalcedony matrix and cross-cutting features of various kinds of chalcedony. These characteristics suggest multiple periods of mineralization. Calcite is present in centres of veins and breccia zones and also is associated with mineralization.

Chalcedony Breccia and Vein-related Alteration

The most significant characteristic of the mineralized zones at the Sha claims is the association of wide argillic (bleaching+clays+sericite) and propylitic (epidote+chlorite+calcite) zones with the chalcedony veins and breccia zones. Bleaching indicates complete destruction of mafic minerals with the release of iron oxides. Though the veins and breccia zones are observed to be narrow, the extensive nature of argillic zones, on the order of tens of metres suggests a huge hydrothermal system was active. It also suggests that the mineralized breccias and associated alteration zones are at the top of an epithermal system where most of the silica in solution is depleted out due to precipitation at lower levels and the acidic low temperature fluids extensively altered the host rock to clays. Because the narrow chalcedony breccias, veins and calcite veins carry significant gold-silver values, the hydrothermal fluids must have carried high amounts of gold and silver in solution. This suggests that high amounts of silica with gold and silver have precipi-

pitated out at lower levels (relatively higher temperature and higher pH) of the hydrothermal system. Considerable effort should be spent in delineating where these zones may be present.

### Structure

Chalcedony breccia is dependent on intensity of fracturing and intersection of fractures of various orientations. The veinlets on the margins determine the dominant fracture system associated with the mineralization and breccia zones, and therefore the trend of the zones.

The chalcedony breccia zones and their host rocks are often affected by later post-mineral faults. The Creek Zone appears to be cut off in the north and in the south (around drill hole 6) by the Contact Fault.

In places, trends of both the breccia zones and post-mineral faults appear to be same and therefore these late structures can be misleading. Some breccia zones are emplaced along faults. In this case the fault gouge is completely silicified with angular chalcedony and wallrock fragments, suggesting that the hydrothermal solutions passed through active faults.

### Comparison of the Sha Deposit with the Amethyst Gold Breccia Zone, the Cliff Creek Zone and the Deposits in Nevada

The AGB Zone at the Lawyers Property is unique in that the alteration zones consisting of argillic alteration and bleaching are very subtle and occur only as envelopes (on the order of tens of centimetres) to chalcedony veinlets and breccia zones. Gold and silver mineralization (electrum, argentite and native gold) is associated with multiple periods of chalcedony veining and brecciation. The latest stage of

amethyst and calcite veinings do not appear to carry any mineralization.

In Cliff Creek the associated alteration zones are more widespread and pervasive (on the order of a few metres) than those at AGB. Unlike the wallrocks at the AGB, the rocks at Cliff Creek are indigenously rich in pyrite. Therefore, supergene alteration formed from the breakdown of pyrite is superimposed on the hypogene argillic alteration in the upper 30 metres from surface.

In Nevada (e.g. Comstock Lode) the argillic and propylitic alteration zones are in the order of tens of metres. Veining, brecciation and silicification of wallrock with some disseminated mineralization is more widespread.

The nature of mineralization in the above cases is very similar. The main differences are in the intensity of fracturing, the magnitude of hot spring activity and the bulk composition of hydrothermal fluids. The width of alteration zones, chalcedony breccia zones and veining is dependent on the intensity of structural preparation of wallrock.

The argillic alteration zones at the Sha Deposit are more pervasive and widespread than the Cliff Creek Zone. Another important point to note is that the last stages of chalcedony and calcite development is associated with gold and silver mineralization. This suggests that every stage of chalcedony precipitation is associated with gold and silver. Extensive calcite veining at Sha indicates that the host rocks (quartz andesites) are inherently rich in calcium-bearing minerals. Calcite is formed during last stages of hydrothermal activity when wallrock is altered and calcium is released. It does not have any other significance.

APPENDIX III - LOGISTICS

Project (field) dates: May 16 to July 5, 1984

Personnel: Project Geologist: B. W. Downing  
Assistant: G. McLaren  
Technician: I. Casidy  
  
Assistants: A. Forsyth, I. Leask  
P. Gill, S. Pattenden  
  
cook: J. Fink

Expediter: Joyce Warren, Smithers

Cat Operators: M. Macdonald (D J Drilling)  
D. Burnett (Smithers)

Drilling Co: D. J. Drilling Co  
13135 20th Avenue  
Surrey, B.C.  
V4A 1Z1  
PHONE: 531-4134

Helicopter : ALC Airlift Corp.  
Pit Meadows, B.C.

Fixed Wing : Central Mountain  
Smithers, B.C.

Assayer : Chemex Labs, North Vancouver

Geophysics: surveys done under supervision of H. Limion

Magnetometer	41.1 km	(total 83+84)
VLF-resistivity	54.2 km	" "
I.P.	4.5 km	" "
Radem	37.7 km	" "

Reports: Geochemical Assessment Report on the Shasta 5 Claim.  
August/84. B. W. Downing

Geological Observations on the Sha Claims, August/84, M. Vulimini

VLF and Resistivity Surveys on Shasta's Toodoggone Area Property,  
Nov/84, H. Limion & B. W. Downing

Geology: Property visits by Serem, T.Schroeter (BCDM) and J.  
Clark (as part of Ph.D thesis on Toodoggone deposits, McGill  
University.)

Geochemistry:	Soils:	Shasta 5 claim	80	
		Shasta 3 claim	76	
		profile	8	
		TOTAL	<u>164</u>	+ 1497 ('83) = 1661
Rock:	Shasta	5 claim	1	
		3 claim	5	
		trench	15	
		outcrop	33	
		TOTAL	<u>54</u>	+ 340 ('83) = 394
Assay:	DDH		999	+ 231 ('83) = 1230
		other	0	+ 149 ('83) = 149
		TOTAL		<u>3434</u> =====

SHASTA THIN SECTION SLIDES

DDH-1	85'
(1983)	128'
	231'
	301'
DDH-6	39'
(1983)	57'
	94'
	107'
	191'
GG-83	12, 13, 14, 15, 18, 29B, 36, 39A, 39B, 43, 46, 47, 55, 65
	(B.Sc. thesis, G.Goodall, 1983)

APPENDIX IV

NE-MONT EXPLORATION OF CANADA LTD

DRILL HOLE RECORD

PROJECT SIMSTA #318

LEVEL		DEPTH	BEARING	DIP	TYPE OF SURVEY	LENGTH	75.3m (247')	HOLE NO.	SH-84-1
LOCATION	709N/136W		090	-45°	collar	CORE SIZE	RQ	SHEET NO.	1
ELEVATION	1240.2 m					TOTAL RECOVERY	95%	LOGGED BY	B.W. Downing
LATITUDE						STARTED	May 20/84	CLAIM	Shm / 36
DEPARTURE						COMPLETED	May 21/84	PURPOSE	

DEPTH metres	GEOLOGICAL DESCRIPTION	INTERVAL		MINERALIZATION	ALT	ASSAYS					RECOVERY			
		From	To			Z	SAMPLE	FROM	TO	LENGTH (meters)	Ag oz/ton	Au oz/ton	RUN	%
	Casing	0	9.1											
	ground core, pebbles of grey tuff	9.1	9.3			19101	9.3	10.3	1.0	3.40	0.046			
	qft. local bx, qtz-carb. stockwork pink orange	9.3	18.5			02	10.3	11.0	0.7	2.28	0.032			
						03	11.0	12.2	1.2	4.86	0.058			
						04	12.2	13.2	1.0	4.04	0.044			
	qft grey orange, odd qtz vein	18.5	19.5			05	13.2	14.2	1.0	3.52	0.040			
						06	14.2	15.2	1.0	2.36	0.032			
	qft pink orange, qtz stockwork	19.5	21.8			07	15.2	16.8	1.6	1.10	0.024			
						08	16.8	18.5	1.7	1.65	0.028			
	qft, reddish orange, scattered qtz veinlets	21.8	25.0			09	18.5	19.5	1.0	1.04	0.018			
						10	19.5	21.0	1.5	1.02	0.014			
	qft, grey-pink orange	25.0	27.2			11	21.0	21.8	0.8	0.90	0.016			
						12	21.8	23.5	1.7	0.026	0.006			
	26.0-26.6: grey, st. silicification					13	23.5	25.0	1.5	0.26	0.018			
						14	25.0	26.0	1.0	10.04	0.184			
	27.0: fault, 2 cm @ 60°					15	26.0	26.5	0.5	2.02	0.062			
						16	26.5	27.2	0.7	1.00	0.032			
	qft, brown-green orange scattered qtz-carb veins	27.2	34.1			17	27.2	29.3	2.1	0.42	0.003			
						18	29.3	32.3	3.0	0.45	0.030			
	qft orange, odd qtz + carb veinlet	34.1	37.1			19	32.3	34.1	1.8	0.65	0.008			
						20	34.1	35.4	1.3	0.53	0.012			
	35.6 m slip plane @ 90°					21	35.4	37.1	1.7	1.20	0.018			
						22	37.1	39.0	1.9	1.66	0.022			
	qft, pink orange to pale green orange scattered qtz to qtz carb veins	37.1	59.8			23	39.0	39.5	0.5	1.02	0.012			
						24	39.5	41.5	2.0	0.54	0.022			
						25	41.5	44.2	2.7	0.16	0.040			
	39.9-44.3: qtz silic., mod. bleach.					26	44.2	45.0	0.8	4.36	0.062			
						27	45.0	47.5	2.5	0.56	0.006			

NEWMONT EXPLORATION OF CANADA LTD

DRILL HOLE RECORD

PROJECT

SIAMSTA #318

LEVEL	DEPTH	BEARING	DIP	TYPE OF SURVEY	LENGTH (342') 104.2m	HOLE NO.	SI-84-2
LOCATION	557N/300W	090°	-55°	collar	CORE SIZE BQ	SHEET NO.	1 OF
ELEVATION	1279.0 m				TOTAL RECOVERY 95%	LOGGED BY	B. W. Downing
LATITUDE					STARTED May 23/84	CLAIM	Sha # 36
DEPARTURE					COMPLETED May 24/84	PURPOSE	

DEPTH metres	GEOLOGICAL DESCRIPTION	MINERALIZATION %	ALT	ASSAYS					RECOVERY			
				SAMPLE	FROM	TO	LENGTH (meters)	Ag oz/ton	Au oz/ton	RUN	%	
0	4.3 casing											
4.3	18.3 grey tuff; scattered py grains			19140	17.1	18.3	1.2	0.01	<0.003			
	4.3-7.5: scattered maroon frags some frags have hem fr's giving reddish colour			41	18.3	20.3	2.0	0.02	<0.003			
	-odd carb vein			42	20.3	21.3	1.0	1.42	0.014			
				43	21.3	21.6	0.3	2.74	0.040			
				44	21.6	23.0	1.4	1.75	0.038			
				45	23.0	24.0	1.0	0.23	0.003			
	17.1-18.3: qtz eyes present 2%			46	24.0	25.0	1.0	0.42	0.022			
				47	25.0	26.5	1.5	0.19	0.006			
18.3	20.3 bx zone with carb. filling, grey tuff + qft, pebbly core, mod. silic greyish carb			48	26.5	28.0	1.5	0.67	0.018			
				49	28.0	28.5	0.5	0.09	0.006			
				50	28.5	29.0	0.5	1.43	0.018			
20.3	21.3 fault zone, gouge, bx, green sericite shear cleavage @ 30-40°			51	29.0	31.0	2.0	0.66	0.006			
				52	31.0	32.4	1.4	0.75	0.010			
				53	32.4	34.2	1.8	0.61	0.018			
21.3	23.0 qft grey, orange st. silic, chal. grey streaks, presence of white clay			54	34.2	35.2	1.0	4.24	0.060			
				55	35.2	36.2	1.0	2.48	0.046			
				56	36.2	37.2	1.0	0.82	0.024			
23.0	32.4 qft dirty green-orange colour, bleaching mod-st-silic.			57	37.2	38.2	1.0	6.21	0.075			
				58	38.2	39.0	0.8	0.98	0.024			
	23.1-23.2: fault, minor gouge			59	39.0	40.0	1.0	3.26	0.118			
				60	40.0	41.0	1.0	2.40	0.034			
	28.0-28.5: fault mod. consolidated gouge greenish -whitish clay material throughout			61	41.0	42.0	1.0	0.64	0.008			
				62	42.0	43.0	1.0	0.25	0.003			
				63	43.0	44.0	1.0	0.29	0.003			
32.4	34.2 qft orange, qtz + carb stockwork			64	44.0	45.0	1.0	0.13	0.003			
				65	45.0	46.0	1.0	0.45	0.003			
				66	46.0	47.0	1.0	1.46	0.036			





DEPTH metres	GEOLOGICAL DESCRIPTION	INTERVAL		MINERALIZATION	ALT	ASSAYS					RECOVERY							
		From	To			Z	SAMPLE	FROM	TO	LENGTH (meters)	Ag oz/ton	Au oz/ton	RUN	Z				
		34.2	39.0	bx zone, good, qtz-chal-carb, diss'd ac, py, ac, py, ac streaks, specks nat. Ag, orange frags. qtz														
		39.0	48.0	qzt green brown orange, mod-st. silic qtz-carb veins with ac, py stringers at 60-80°, scattered (2/m) up to 1 cm wide			19167	47.0	48.0	1.0	1.15	0.034						
							68	48.0	48.8	0.8	0.21	0.003						
							69	48.8	49.8	1.0	0.45	0.014						
							70	49.8	50.8	1.0	1.02	0.014						
		48.0	48.8	qzt dirty green orange, bx, possible fault zone			71	50.8	51.8	1.0	0.81	0.022						
							72	51.8	52.8	1.0	1.61	0.052						
		48.8	56.2	bx zone, grey green to pale orange frags, carb veins, cutting qtz stockwork			73	52.8	53.8	1.0	3.32	0.040						
							74	53.8	54.8	1.0	0.38	0.018						
				53.0: fault 1 cm, gouge @ 70°			75	54.8	56.2	1.4	0.28	0.016						
							76	56.2	58.0	1.8	0.30	0.012						
				56.2: fault 2 cm, gouge @ 60°			77	58.0	59.5	1.5	0.15	0.005						
							78	59.5	60.0	0.5	0.14	0.003						
							79	60.0	60.5	0.5	0.22	0.003						
		56.2	59.5	qzt bleached orange			80	60.5	61.9	1.4	0.03	0.003						
							81	61.9	63.1	1.2	0.28	0.003						
				58.2: fault @ 75° 1 cm gouge			82	63.1	66.1	3.0	0.08	0.003						
							83	66.1	69.2	3.1	0.03	0.003						
		59.5	70.6	qzt, green-brown orange scattered narrow to thin qtz. qtz-carb veins wk mod. silic.			84	69.2	70.6	1.4	0.26	0.003						
							85	70.6	72.2	1.6	0.31	0.003						
							86	72.2	73.2	1.0	0.32	0.003						
							87	73.2	74.7	1.5	0.22	0.003						
		70.6	74.7	qzt light orange qtz stockwork cut by carb + qtz veins st. silic, patches mod. bleaching			88	74.7	76.0	1.3	0.18	0.003						
							89	76.0	77.7	1.7	0.10	0.003						
							90	77.7	79.0	1.3	0.29	0.003						
		74.7	79.0	qzt dirty green orange scattered qtz-carb veins			91	79.0	80.8	1.8	0.65	0.005						
							92	80.8	81.8	1.0	0.04	0.003						
		79.0	80.0	bx-carb-bx zone			93	81.8	84.1	2.3	0.02	0.003						
							94	84.1	86.2	2.1	0.03	0.003						
				79.0-79.5: silic bx			95	86.2	87.3	1.1	0.08	0.010						
							96	87.3	88.3	1.0	0.10	0.003						
				79.5-80.0: carb vein			97	88.3	89.3	1.0	0.28	0.005						
							98	89.3	90.7	1.4	0.10	0.003						
				80.0-80.8: silic bx			99	90.7	91.9	1.2	0.21	0.005						





DEPTH metres	GEOL	INTERVAL		GEOLOGICAL DESCRIPTION	MINERALIZATION		ALT	ASSAYS					RECOVERY		
		From	To		Z			SAMPLE	FROM	TO	LENGTH (meters)	Ag oz/ton	Au oz/ton	RUN	Z
		28.4	32.8	qft. grey-white-green bx. zone st. bleached & silic, few cavities (small); good f.gr. mineralization 8-10% py. ac 3-5%, specks native Ag. whitish clay throughout.				19235	53.6	54.6	1.0	1.28	0.005		
		32.8	34.1	qft. bx, qtz stockwork, orange, minor carb, 5-7% py. diss ac. mod-st. silic wk bleaching				36	54.6	55.9	1.3	0.08	0.003		
								37	55.9	58.1	2.2	0.32	0.005		
								38	58.1	59.2	1.1	0.06	0.003		
								39	59.2	61.1	1.9	0.28	0.003		
		34.1	36.2	qft bleached orange few qtz veins, wk-mod bleaching				40	61.1	63.3	2.2	0.28	0.003		
								41	63.3	64.3	1.0	0.34	0.003		
								42	64.3	65.3	1.0	0.22	0.003		
		36.2	38.6	qft. grey orange, bx. grey mineralized streaks with ac py. minor carb.				43	65.3	66.3	1.0	0.22	0.003		
								44	66.3	67.9	1.6	0.20	0.003		
								45	67.9	68.4	0.5	0.24	0.003		
		38.6	39.3	qft orange, no qtz veins				46	68.4	69.4	1.0	0.40	0.003		
								47	69.4	70.6	1.2	0.20	0.003		
		39.3	42.3	qft, grey orange, bx grey mineralized streaks, more carb than 36.2-38.6; qtz-carb veins				48	70.6	71.2	0.6	0.26	0.003		
								49	71.2	71.8	0.6	0.16	0.003		
								50	71.8	73.8	2.0	0.30	0.003		
		42.3	43.7	qft. dull orange, few qtz + carb veins				51	73.8	75.0	1.2	0.18	0.003		
				43.7 fault or slip plane				52	75.0	76.8	1.8	0.16	0.003		
								53	76.8	77.8	1.0	0.70	0.003		
								54	77.8	78.8	1.0	0.26	0.003		
		43.7	44.4	qft.-dk gr. orange, bx @ 43.7: 1m carb veining, carb vein @ 72° with ac, py specks native Ag.				55	78.8	79.8	1.0	0.24	0.005		
								56	79.8	80.5	0.7	0.38	0.006		
								57	80.5	81.6	1.1	4.62	0.032		
		44.4	48.0	Qft. dk gr. orange scattered qtz carb to carb veins.				58	81.6	82.6	1.0	0.38	0.006		
				46.0-46.4 carb vein with ac, py. @ 80°				59	82.6	83.6	1.0	0.40	0.004		
								60	83.6	84.6	1.0	0.90	0.006		
								61	84.6	85.6	1.0	0.36	0.006		
								62	85.6	86.6	1.0	0.26	0.020		
								63	86.6	87.6	1.0	0.30	0.022		
								64	87.6	88.6	1.0	0.34	0.007		
								65	88.6	89.6	1.0	0.56	0.008		
								66	89.6	90.6	1.0	0.30	0.007		
								67	90.6	91.4	0.8	0.22	0.008		

NEWMONT EXPLORATION OF CANADA LTD

DRILL HOLE RECORD

PROJECT

SIAMTA #318

LEVEL	DEPTH	BEARING	DIP	TYPE OF SURVEY	LENGTH	HOLE NO.
LOCATION 512N/311W		090°	-55°	collar	99.4m(326')	SH-84-3
ELEVATION 1884.7m					CORE SIZE RQ	SHEET NO. 1
LATITUDE					TOTAL RECOVERY	LOGGED BY B.W. Downing
DEPARTURE					STARTED May 25	CLAIM Sha #36
					COMPLETED May 26	PURPOSE

DEPTH metres	GEOLOGICAL DESCRIPTION	INTERVAL		MINERALIZATION	ALT	ASSAYS					RECOVERY						
		From	To			SAMPLE	FROM	TO	LENGTH (meters)	Ag oz/ton	Au oz/ton	RLN	%				
	casing	0	4.3														
	grey tuff, few scattered small maroon frags. few frags with hem. staining	4.3	26.7			19208	26.7	28.4	1.7	0.08	<0.003						
	19.7 fault gouge 1cm wide					09	28.4	28.9	0.5	3.24	0.080						
	20.25-20.45 siltstone					10	28.9	29.4	0.5	27.83	0.748						
	4.3-18.0 maroon grey					11	29.4	29.9	0.5	9.44	0.154						
	18.5-24.5 greenish grey					12	29.9	30.3	0.4	2.70	0.042						
	24.5- maroon grey					13	30.3	30.8	0.5	3.29	0.056						
	26.2 fault gouge 1cm @ 20°					14	30.8	31.3	0.5	18.98	0.210						
	26.7 fault gouge 1.5cm @ 45°					15	31.3	31.8	1.5	3.69	0.048						
	27.7-27.05 several slip planes with green gouges material and carb. stringers					16	31.8	32.8	1.0	5.98	0.080						
	28.4 fault gouge 1cm. @ 70°					17	32.8	34.1	1.3	12.23	0.122						
	f.gr. volcanoclastic sediments, maroon	26.7	28.4			18	34.1	35.1	1.0	1.04	0.005						
						19	35.1	36.2	1.1	1.30	0.006						
						20	36.2	37.4	1.2	1.30	0.006						
						21	37.4	38.6	1.2	0.83	0.010						
						22	38.6	40.0	1.4	0.23	0.005						
						23	40.0	40.8	0.8	9.05	0.216						
						24	40.8	42.3	1.5	3.57	0.052						
						25	42.3	43.7	1.4	0.31	0.005						
						26	43.7	44.4	0.7	3.86	0.032						
						27	44.4	46.0	1.6	2.49	0.028						
						28	46.0	46.4	0.4	4.17	0.032						
						29	46.4	48.0	1.6	0.08	0.003						
						30	48.0	49.0	1.0	1.31	0.032						
						31	49.0	50.0	1.0	2.40	0.016						
						32	50.0	51.1	1.1	3.29	0.028						
						33	51.1	52.7	1.6	0.21	0.003						
						34	52.7	53.6	0.9	1.36	0.012						











NEWMONT EXPLORATION OF CANADA LTD

DRILL HOLE RECORD

PROJECT

SIAMSTA # 318

LEVEL		DEPTH	BEARING	DIP	TYPE OF SURVEY	LENGTH	84.1m (276')	HOLE NO.	SH-04-6
LOCATION	L350N/195W		090°	-55°	collar	CORE SIZE	BQ	SHEET NO.	1
ELEVATION	1306.6 m					TOTAL RECOVERY	95%	LOGGED BY	B. W. Downing
LATITUDE						STARTED	May 29/84	CLAIM	Shms / 36
DEPARTURE						COMPLETED	June 1/84	PURPOSE	

DEPTH metres	GEOLOGICAL DESCRIPTION	INTERVAL		MINERALIZATION %	ALT	ASSAYS					RECOVERY		
		From	To			SAMPLE	FROM	TO	LENGTH (meters)	Ag oz/ton	Au oz/ton	RUN	%
	Casing	0	3.0										
	cgr. maroon tuff, no veins	3.0	5.6			19308	16.2	17.2	1.0	0.01	0.003		
	f-gr. maroon tuff	5.6	6.7			09	17.2	19.2	2.0	0.02	0.003		
	maroon-brown tuff (sediment)	6.7	7.1			10	19.2	22.2	3.0	0.03	0.003		
	mgr. maroon tuff	7.1	8.2			11	22.2	22.7	0.5	0.03	0.003		
	maroon-brown tuff sediment bedding @ 30°	8.2	8.6			12	22.7	25.9	3.2	0.04	0.003		
	mgr. maroon tuff with odd fgr bed graded bed, tops upward	8.6	13.8			13	25.9	27.1	1.2	0.26	0.004		
	fgx maroon tuff	13.8	14.7			14	27.1	28.1	1.0	0.40	0.003		
	maroon tuff	14.7	15.15			15	28.1	29.1	1.0	0.20	0.004		
	green aphanitic siltstone (chl?)	15.15	15.2			16	29.1	30.1	1.0	0.14	0.003		
	fgx maroon tuff	15.2	15.4			17	30.1	30.6	0.5	17.08	0.232		
	greyish tuff	15.4	15.9			18	30.6	31.1	0.5	3.96	0.060		
	feldspar tuff unit, odd speck py	15.9	16.2			19	31.1	31.6	0.5	0.48	0.003		
	qft unit, no major fault at contact, no noticeable silic (no mineral/stockwork)	16.2	84.1			20	31.6	32.0	0.4	0.13	0.003		
						21	32.0	33.0	1.0	0.48	0.006		
						22	33.0	34.0	1.0	0.12	0.003		
						23	34.0	35.1	1.1	0.30	0.004		
						24	35.1	36.5	1.4	0.09	0.003		
						25	36.5	37.3	0.8	1.95	0.028		
						26	37.3	37.8	0.5	3.38	0.042		
						27	37.8	38.7	0.9	4.34	0.062		
						28	38.7	39.2	0.5	1.16	0.032		
						29	39.2	39.9	0.7	1.80	0.022		
						30	39.9	41.0	1.1	0.22	0.006		
						31	41.0	42.0	1.0	0.50	0.010		
						32	42.0	42.5	0.5	0.37	0.010		
						33	42.5	43.0	0.5	0.44	0.005		
						34	43.0	43.5	0.5	0.36	0.006		



EMONT EXPLORATION OF CANADA LTD

RILL HOLE RECORD

PROJECT

SHASTA # 318

LEVEL	DEPTH	BEARING	DIP	TYPE OF SURVEY	LENGTH (297') 90.5 m	HOLE NO.	SH-84-8
LOCATION L51N/187W		090°	-55°	collar	CORE SIZE BQ	SHEET NO.	1
ELEVATION 1313.7 m					TOTAL RECOVERY 97%	LOGGED BY	B. W. Downing
LATITUDE					STARTED June 2/84	CLAIM	Sha / 36
DEPARTURE					COMPLETED June 3/84	PURPOSE	

DEPTH metres	GEOLOGICAL DESCRIPTION	MINERALIZATION	ALT	ASSAYS						RECOVERY		
				SAMPLE	FROM	TO	LENGTH (meters)	Ag oz/ton	Au oz/ton	R/N	%	
	0 - 4.1 casing											
4.1 - 33.5	qft, mgng., grey-green orange scattered carb veins and stringers, at 30°-45°, non mineralized			19431	4.1	5.2	1.1	0.67	0.004			
				32	5.2	8.2	3.0	0.11	0.006			
				33	8.2	11.3	3.1	0.07	0.010			
	19.6: 3 slip planes @ 65°			34	11.3	14.3	3.0	0.12	0.004			
				35	14.3	17.4	3.1	0.10	0.004			
	32.0-33.0: 4 epidote veins @ 45°			36	17.4	20.4	3.0	0.41	0.010			
				37	20.4	21.3	0.9	0.14	0.004			
33.5 - 90.5	qft, orange, light orange, local bx mod to st silic, patches mod bleaching, fair amount of carb, qtz-carb veins @ 45°			38	21.3	21.5	0.2	4.17	0.092			
				39	21.5	23.5	2.0	0.29	0.014			
				40	23.5	26.5	3.0	0.27	0.008			
	37.4-38.6: bx zone (fault?) fair amount chl.			41	26.5	29.6	3.1	0.09	0.006			
				42	29.6	32.6	3.0	0.10	0.004			
	37.4-37.9: bleach			43	32.6	33.5	0.9	0.40	0.020			
				44	33.5	35.5	2.0	0.90	0.016			
	38.3-38.6: chl-carb bx (carb frags in chl matrix)			45	35.5	37.4	1.9	0.48	0.016			
				46	37.4	38.7	1.3	0.58	0.020			
	40.0-40.5: st/ silic. carb by			47	38.7	40.0	1.3	0.18	0.020			
				48	40.0	40.5	0.5	0.48	0.020			
	39.0-.1: fault bx + gouge			49	40.5	41.8	1.3	0.16	0.020			
				50	41.8	42.7	0.9	0.29	0.034			
	43.6-44.8: chl-carb fault zone			51	42.7	43.6	0.9	0.37	0.046			
				52	43.6	44.8	1.3	0.49	0.090			
	43.9: fault zone (gouge) @ 75°			53	44.8	46.0	1.2	1.48	0.060			
				54	46.0	47.8	1.8	0.86	0.022			
	49.0-49.5: bx chalcosinic qtz carb 2-5% ac, pym + cpy			55	47.8	49.0	1.2	1.02	0.018			
				56	49.0	49.5	0.5	15.07	0.212			
				57	49.5	50.9	1.4	1.54	0.040			



NEWMONT EXPLORATION OF CANADA LTD

DRILL HOLE RECORD

PROJECT STASTA / 318

LEVEL		DEPTH	BEARING	DIP	TYPE OF SURVEY	LENGTH	170.0m (557')	HOLE NO.	SH-84-9
LOCATION	L81SN/342W		070°	-45°	collar	CORE SIZE	BQ	SHEET NO.	1
ELEVATION	1248.5 m					TOTAL RECOVERY	95%	LOGGED BY	B. W. Downing
LATITUDE						STARTED	June 5/84	CLAIM	Shn / 36
DEPARTURE						COMPLETED	June 7/84	PURPOSE	

DEPTH metres	GEOLOGICAL	INTERVAL		GEOLOGICAL DESCRIPTION	MINERALIZATION	ALT	ASSAYS					RECOVERY					
		From	To				SAMPLE	FROM	TO	LENGTH (metres)	Ag oz/ton	As oz/ton	RIH	%			
		0	6.9	casing													
		6.9	11.5	grey (orange) tuff			19490	6.9	8.5	1.6	0.02	<0.003					
				8.5-10.3: mod-st. bleach narrow py-rich bands 1/2 cm @ 10°			91	8.5	10.3	1.8	0.02	<0.003					
				10.3-11.5: flame grey tuff			92	10.3	11.5	1.2	0.02	<0.003					
				9.0-9.1: br. core fault			93	11.5	12.0	0.5	0.03	0.003					
				10.3: br core 1-2 cm fault			94	12.0	12.5	0.5	0.03	<0.003					
				11.5-11.5: qtz, local br, orange to green orange, grey orange wk shearing at contact 2 cm @ 40°			95	12.5	13.6	1.1	0.06	<0.003					
				12.0-12.8: qtz-carb stockwork			96	13.6	14.6	1.0	0.04	<0.003					
				12.8-12.9: chal + qtz + carb			97	14.6	15.6	1.0	0.03	<0.003					
				14.3: slip plane @ 55°			98	15.6	16.4	0.8	0.06	<0.003					
				16.4-19.4: st. silic, irreg. scatt, chal. veins @ 1cm @ 30 to 60°			99	16.4	17.4	1.0	0.08	<0.003					
				-odd carb vein cutting above @ 70°			500	17.4	17.9	0.5	0.10	<0.003					
				19.4-21.8: mod bl. mod silic			01	17.9	18.4	0.5	0.20	<0.003					
				43.3-43.5: carb vein @ 60° 2 cm with ac + py minor qtz			02	18.4	18.9	0.5	0.22	<0.003					
							03	18.9	19.4	0.5	0.15	<0.003					
							04	19.4	20.4	1.0	0.10	<0.003					
							05	20.4	21.4	1.0	0.06	<0.003					
							06	21.4	22.4	1.0	0.07	<0.003					
							07	22.4	23.4	1.0	0.05	<0.003					
							08	23.4	24.4	1.0	0.09	<0.003					
							09	24.4	25.0	0.6	0.03	<0.003					
							10	25.0	26.5	1.5	0.07	<0.003					
							11	26.5	27.9	1.4	0.06	<0.003					
							12	27.9	28.4	0.5	0.17	<0.003					
							13	28.4	28.9	0.5	0.20	0.003					
							14	28.9	29.4	0.5	0.40	<0.003					
							15	29.4	30.0	0.6	0.20	0.003					
							16	30.0	31.0	1.0	1.08	0.006					

DEPTH metres	GEOLOGICAL DESCRIPTION	INTERVAL		MINERALIZATION	ALT	ASSAYS					RECOVERY					
		From	To			Z	SAMPLE	FROM	TO	LENGTH (meters)	Ag oz/ton	Al oz/ton	RIN	Z		
	47.9-48.1: qtz stock by .5% ac, py															
	46.5-54.1: reddish orange qtz minor stockwork & qtz & qtz-carb						19517	31.0	32.5	1.5	0.10	0.003				
							18	32.5	34.5	2.0	0.24	<0.003				
							19	34.5	36.5	2.0	0.12	<0.003				
	49.6-49.8: irreg. qtz stringers qtz-carb vein with ac, py						20	36.5	38.7	2.2	0.46	0.005				
							21	38.7	41.0	2.3	1.14	0.024				
	54.1-56.5: bx with chl hm; st. silic						22	41.0	43.3	2.3	0.20	<0.003				
							23	43.3	43.5	0.2	3.75	0.294				
	55.3-55.45: carb-silic vein @ 65°, black chl (banding?)						24	43.5	45.0	1.5	0.13	0.003				
							25	45.0	46.5	1.5	0.31	0.003				
	56.5-59.0: qtz stockwork, ch. + hm.						26	46.5	47.7	1.2	0.92	0.018				
							27	47.7	48.1	0.4	2.47	0.074				
	60.0-70.7: qtz, qtz carb bx stockwork, mod silic						28	48.1	49.6	1.5	0.90	0.008				
							29	49.6	50.1	0.5	48.37	1.028				
	63.3-69.3: scattered qtz, qtz-carb stringers veins						30	50.1	50.6	0.5	1.77	0.054				
							31	50.6	51.0	0.4	1.78	0.064				
	67.3 to 70.7: v fr'd and bx core fault zone minor gouge						32	51.0	52.5	1.5	0.76	0.008				
							33	52.4	54.1	1.6	0.10	0.005				
	70.6 irreg qtz stringers, carb stringer qtz-carb stringers to stockwork effect						34	54.1	55.2	1.1	0.08	<0.003				
							35	55.2	55.55	0.35	0.03	<0.003				
							36	55.55	56.5	0.95	0.20	0.174				
	70.6 71.6 feldspar tuff 1% qtz eys						37	56.5	57.5	1.0	0.34	0.016				
							38	57.5	59.0	1.5	0.50	0.020				
	71.6 71.8 shaley tuff mixture, bed @ 65°						39	59.0	60.0	1.0	0.08	0.008				
							40	60.0	61.0	1.0	0.14	0.005				
	71.8 73.6 grey tuff						41	61.0	62.0	1.0	0.38	0.012				
							42	62.0	63.3	1.3	0.06	0.040				
	72.0-72.7: minor bx, mod silic						43	63.3	64.3	1.0	0.10	0.005				
							44	64.3	65.3	1.0	0.13	0.003				
	73.6 74.0 shaley black grey tuff, flame structures tops up						45	65.3	66.3	1.0	0.10	0.008				
							46	66.3	67.3	1.0	0.97	0.044				
	74.0: contact @ 70° py along fr's and up .1 m into underlying tuff						47	67.3	69.2	1.9	0.11	0.006				
							48	69.2	70.6	1.4	0.10	<0.003				
							49	70.6	71.6	1.0	0.08	<0.003				
	75.2 76.6 black tuff f-mpr (shaley)						50	71.6	73.6	2.0	0.07	0.003				

DEPTH metres	GEOL.	INTERVAL		GEOLOGICAL DESCRIPTION	MINERALIZATION	ALT	ASSAYS					RECOVERY				
		From	To				SAMPLE	FROM	TO	LENGTH (meters)	Ag oz/ton	Au oz/ton	RUN	%		
				75.2-75.9: tuff bx with carb matrix												
				75.9-76.0: st. silic tuff bx			19551	73.6	75.2	1.6	0.05	0.005				
							52	75.2	76.6	1.4	0.18	0.024				
		76.6	82.0	frag tuff f-gr, heterogeneous in composition grey to green grey-black, minor orange			53	76.6	78.0	1.4	0.28	0.005				
							54	78.0	80.0	2.0	0.13	0.003				
							55	80.0	82.5	2.5	0.20	0.005				
		82.5	92.6	tuff-tuff wackes, fragmental; bedding			56	82.5	84.0	1.5	0.25	0.003				
							57	84.0	84.8	0.8	0.34	0.003				
				84.8-86.2: sericitized carb veinlets with ac, py, (86.0 1 cm vein @ 55°)			58	84.8	85.8	1.0	0.12	0.003				
				-possible lg. tuff frags up to .2 across cgr tuff spec. 87.2			59	85.8	86.2	0.4	0.70	0.005				
							60	86.2	88.1	1.9	0.04	0.003				
							61	88.1	89.1	1.0	0.56	0.005				
		92.6	93.0	92.6-93.0: (3 cm bx, carb vein .4 m in length with irreg chl stringers .2 cm bx 2 cm silic)			62	89.1	90.2	1.1	0.52	0.003				
							63	90.2	92.4	2.2	0.12	0.003				
							64	92.4	93.0	0.6	4.02	0.044				
		93.0	170.0	qft to ft, orange			65	93.0	95.0	2.0	0.34	0.020				
				-qtz, qtz-carb veins and stringers throughout minor bx in places, @ 30° to 50° overall stockwork over large area			66	95.0	97.0	2.0	0.04	0.003				
				epidote fr's epidote + chl ass'd with some carb vein chal grey to dirty brown scattered slip planes throughout @ 55° to 75°			67	97.0	99.0	2.0	0.48	0.012				
							68	99.0	100.2	1.2	0.60	0.006				
							69	100.2	102.2	2.0	0.72	0.005				
							70	102.2	104.2	2.0	0.70	0.016				
							71	104.2	105.5	1.3	2.41	0.032				
				124.5-124.7: andesitic dyke			72	105.5	107.5	2.0	0.27	0.008				
							73	107.5	109.5	2.0	0.71	0.010				
				124.4-.5: bx, carb stringers			74	109.5	111.5	2.0	0.17	0.008				
							75	111.5	113.5	2.0	0.29	0.008				
				124.7-.8: bx, carb stringers			76	113.5	115.5	2.0	<0.01	<0.003				
				-dyke bx along contacts			77	115.5	118.0	2.5	0.15	0.008				
				-alteration envelope along fr's in dyke spec. 124.5 no mineralization			78	118.0	121.0	3.0	0.13	0.006				
							79	121.0	124.0	3.0	0.08	0.004				
							80	124.0	127.0	3.0	0.16	0.004				
				140.9 to 144.1: andesitic dyke			81	127.0	128.0	1.4	0.27	0.008				
							82	128.4	130.0	1.6	0.15	0.008				
				140.9 contact @ 62°, carb vein 1 cm along contact			83	130.0	133.0	3.0	0.19	0.006				
							84	133.0	136.0	3.0	0.16	0.003				









ELEMENT EXPLORATION OF CANADA LTD

DRILL HOLE RECORD

PROJECT

SHASTA / 318

LEVEL	DEPTH	BEARING	DIP	TYPE OF SURVEY	LENGTH	84.7m (278')	IDLE NO.	SH-04-10
LOCATION	L822N/209W	045	-045°	collar	CORE SIZE	BQ	SHEET NO.	1
ELEVATION	1238.2 m				TOTAL RECOVERY	100%	LOGGED BY	B. W. Downing
LATITUDE					STARTED	June 7/84	CLAIM	Sha / 36
DEPARTURE					COMPLETED	June	PURPOSE	

DEPTH metres	GEOLOGICAL DESCRIPTION	INTERVAL		MINERALIZATION	ALT	ASSAYS					RECOVERY		
		From	To			SAMPLE	FROM	TO	LENGTH (meters)	Ag oz/ton	Au oz/ton	RLN	%
	Casing	0	3.0										
	qtz	3.0	26.0			19601	3.0	5.2	2.2	0.02	0.003		
	3.0-5.2: br. core fr'd					02	5.2	7.6	2.4	0.03	0.003		
	5.2-9.4: fr'd core					03	7.6	9.4	1.8	0.14	0.003		
	5.2-9.4: fr'd core					04	9.4	11.3	1.9	0.02	0.003		
	5.2-12.5: epidote carb stringers and epidote fr's, diss'd epidote					05	11.3	13.2	1.9	0.24	0.005		
						06	13.2	13.9	0.7	0.05	0.005		
						07	13.9	14.4	0.5	0.23	0.050		
						08	14.4	14.9	0.5	1.94	0.226		
						09	14.9	15.4	0.5	0.26	0.042		
	13.1-13.15: andesitic dyke					10	15.4	15.9	0.5	0.34	0.080		
						11	15.9	16.4	0.5	0.41	0.148		
	13.2-13.9: mod silic, grey orange					12	16.4	16.9	0.5	0.05	0.006		
						13	16.9	17.6	0.7	0.06	0.005		
	13.9-17.0: intense silic, altered grey					14	17.6	18.6	1.0	0.06	0.004		
						15	18.6	20.0	1.4	0.04	0.003		
	17.0-17.6: mod. silic grey orange					16	20.0	21.0	1.0	0.09	0.003		
						17	21.0	23.0	2.0	0.04	0.003		
	17.6-18.6: wk. silic					18	23.0	25.0	2.0	0.09	0.016		
						19	25.0	27.4	2.4	0.09	0.008		
	18.6-25.0: grey orange					20	27.4	29.3	1.9	0.06	0.005		
						21	29.3	30.3	1.0	0.24	0.006		
	20.7-24.4: br. core, fr'd					22	30.3	32.3	2.0	0.25	0.014		
						23	32.3	34.3	2.0	0.22	0.058		
	27.2-28.0: br. core					24	34.3	35.9	1.6	0.14	0.005		
						25	35.9	38.7	2.8	0.22	0.022		
	26.0-35.7 ft epidote fr's diss'd -epidote throughout					26	38.7	41.8	3.1	0.67	0.026		
						27	41.8	44.5	2.7	0.14	0.012		

DEPTH meters	GEOLOGICAL	INTERVAL		GEOLOGICAL DESCRIPTION	MINERALIZATION		ALT	ASSAYS					RECOVERY			
		From	To		%	%		SAMPLE	FROM	TO	LENGTH (meters)	Ag oz/ton	Au oz/ton	FIN	%	
				29.3 to 30.3: qtz stockwork minor bx @ 29.8-29.9												
		35.7	56.4	qft to ft				19628	44.5	44.9	0.4	0.18	0.012			
				35.9-38.7: br core				29	44.9	47.9	3.0	0.07	0.010			
				35.9-37.4: grey green dxie to chl				30	47.9	50.8	2.9	0.10	0.024			
				37.4 to 50.0: chl				31	50.8	51.4	0.6	0.02	0.003			
				41.6-41.8: fault plane with slicken sides, lineation at 5' on plane left side down				32	51.4	52.4	1.0	0.08	0.032			
				50.0-50.8: epidote				33	52.4	53.4	1.0	0.07	0.012			
				44.5-44.9: bx, qtz-carb + chl				34	53.4	55.0	1.6	0.08	0.005			
				56.8-57.4: bx andesitic dyke minor plag, carb matrix				35	55.0	55.4	0.4	0.07	0.003			
				51.4-56.4: qft, qtz carb stockwork, minor bx				36	55.4	56.4	1.0	0.05	0.006			
				69.0-69.3: carb vein @ 75' diss'd ac, + py				37	56.4	60.0	3.6	0.03	0.003			
				70.0-75.8: qtz-carb bx zone diss'd ac 2-3X, py 1-3X (picture)				38	60.0	63.1	3.1	0.03	0.003			
				84.7 END OF HOLE				39	63.1	66.1	3.0	0.03	0.003			
								40	66.1	69.0	2.9	0.04	0.003			
								41	69.0	69.3	0.3	0.20	0.030			
								42	69.3	72.2	2.9	0.04	0.003			
								43	72.2	75.0	2.8	0.03	0.003			
								44	75.0	75.8	0.8	3.16	0.134			
								45	75.8	78.3	2.5	0.02	0.003			
								46	78.3	81.4	3.1	0.05	0.003			
								47	81.4	84.7	3.3	0.02	0.003			

MONT EXPLORATION OF CANADA LTD

HOLE RECORD

PROJECT SHASTA #318

LEVEL	DEPTH	READING	DIP	TYPE OF SURVEY	LENGTH 141.1m(463')	HOLE NO. SH-84-12-
LOCATION 639N/345W		090	-55	collar	CORE SIZE BQ	SHEET NO. 1
ELEVATION 1249.0 m					TOTAL RECOVERY 98%	LOGGED BY B. W. Downing
LATITUDE					STARTED June 11	CLAIM Sha #36
DEPARTURE					COMPLETED June 15	PURPOSE

DEPTH meters	GEOLOGICAL DESCRIPTION	MINERALIZATION	ALT	ASSAYS					RECOVERY		
				SAMPLE	FROM	TO	LENGTH (meters)	Ag oz/ton	Au oz/ton	RIN	Z
0	3.0	Casing									
3.1	28.8	Grey tuff, odd carb stringer veinlet @ 45-55° 28.6-28.8 fault gouge zone 23.3-.8 (carb vein .1) fault @ 23.4 gouge; rock is oxidized due to water leakage along fault.									
				19652	35.7	36.7	1.0	0.06	0.003		
				53	36.7	38.1	1.4	0.64	0.018		
				54	38.1	39.3	1.2	1.16	0.060		
				55	39.3	39.8	0.5	3.94	0.102		
				56	39.8	40.6	0.8	0.81	0.212		
28.8	29.6	Fragmental microon tuff bedding @ 35°									
				57	40.6	41.2	0.6	3.33	0.168		
				58	41.2	41.8	0.6	1.40	0.062		
29.6	35.7	Frag. tuff, (specimen) bedding @ 40° 31.0-.1 fault, 1 cm gouge @ 65° 32.9-33.1 fault zone gouge 33.1-35.7 patches wk. silic 35.7-36.7 fault zone, gouge throughout bx chloritic 32.5 to 35.7 increase in carb veins									
				59	41.8	42.3	0.5	2.25	0.088		
				60	42.3	42.8	0.5	1.44	0.042		
				61	42.8	43.3	0.5	1.42	0.028		
				62	43.3	44.5	1.2	0.82	0.018		
				63	44.5	45.5	1.0	0.86	0.020		
				64	45.5	46.5	1.0	0.92	0.020		
				65	46.5	47.5	1.0	1.12	0.028		
				66	47.5	48.5	1.0	2.20	0.082		
				67	48.5	49.0	0.5	2.55	0.050		
36.7	60.1	Qft light to pale orange and grey 36.7-39.2 wk. silic. wk. bleaching 39.2 st to vst silic, patches med - st. bleaching qtz, qtz-carb stockwork 60.7 ground core, few pebbles									
				68	49.0	49.5	0.5	0.18	0.016		
				69	49.5	50.8	1.3	1.35	0.040		
				70	50.8	51.4	0.6	0.92	0.022		
				71	51.4	51.9	0.5	0.74	0.024		
				72	51.9	52.9	1.0	1.36	0.024		
				51	33.1	35.7	2.6	0.22	0.003		
				73	52.9	53.9	1.0	0.84	0.022		
				74	53.9	54.9	1.0	2.83	0.046		
				75	54.9	55.9	1.0	1.49	0.034		
				76	55.9	57.0	1.1	0.36	0.014		
				77	57.0	58.0	1.0	0.20	0.010		

DEPTH metres	GEOLOGICAL DESCRIPTION	INTERVAL		MINERALIZATION	ALT	ASSAYS					RECOVERY		
		From	To			SAMPLE	FROM	TO	LENGTH (meters)	Ag oz/ton	Au oz/ton	RLN	%
	Qft. wk. silic, patches med to st. silic patches bx qtz. qtz-carb, carb veins and stringers. specs ac ass'd with carb veins	60.1	84.0										
	chl throughout					19678	58.0	59.0	1.0	0.00	0.008		
	green orange qft					79	59.0	60.0	1.0	0.26	0.022		
						80	60.0	61.0	1.0	0.63	0.030		
						81	61.0	62.0	1.0	0.10	0.034		
	Qft med & st. silic qtz stockwork, minor bx	84.0	88.5			82	62.0	63.0	1.0	0.05	0.003		
						83	63.0	64.0	1.0	0.28	0.006		
	Light orange qft, carb zone with carb veins bx, zone med-st silic	88.5	95.5			84	64.0	66.0	2.0	2.24	0.041		
						85	66.0	68.0	2.0	0.16	0.003		
	93.6-94.1 carb vein with qft frags.					86	68.0	70.0	2.0	0.26	0.010		
						87	70.0	72.0	2.0	0.07	0.006		
						88	72.0	74.5	2.5	0.22	0.018		
	Qft light orange wk silic patches bx, odd carb veins odd scattered qtz veins wk bleach patches, sections with flamine rich qft	95.5	141.1			89	74.5	75.1	0.6	0.74	0.152		
						90	75.1	76.8	1.7	0.28	0.092		
						91	76.8	78.3	1.5	0.10	0.034		
						92	78.3	80.0	1.7	0.12	0.020		
	103.-.4 bx. st. silic, ac, py					93	80.0	82.0	2.0	0.06	0.006		
	104.5-109.0 ep + carb stringers					94	82.0	84.0	2.0	0.08	0.010		
						95	84.0	85.0	1.0	0.17	0.006		
	131.7-132.8 - bx zone, qtz					96	85.0	86.0	1.0	0.20	0.008		
	qtz-carb veins with epidote					97	86.0	87.0	1.0	0.18	0.010		
						98	87.0	88.5	1.5	0.08	0.006		
	136-141.1 - ep + carb stringers					99	88.5	89.5	1.0	0.12	0.016		
						700	89.5	90.5	1.0	0.20	0.014		
	END OF HOLE	141.1				01	90.5	91.5	1.0	0.24	0.014		
						02	91.5	92.5	1.0	0.36	0.024		
						03	92.5	93.6	1.1	0.90	0.020		
						04	93.6	95.5	1.9	1.46	0.056		
						05	95.5	96.6	1.1	0.16	0.006		
						06	96.6	97.6	1.0	0.21	0.014		
						07	97.6	99.7	2.1	0.01	0.010		
						08	99.7	103.0	3.3	<0.01	0.008		
						09	103.0	103.4	0.4	1.75	0.046		
						10	103.4	104.4	1.0	0.24	0.020		
						11	104.4	105.5	1.1	0.25	0.026		





MONT EXPLORATION OF CANADA LTD

HOLE RECORD

OBJECT SMSTA #318

LEVEL	DEPTH	BEARING	DIP	TYPE OF SURVEY	LENGTH (337') 102.7 m	HOLE NO.	SI-84-13
LOCATION 49N/35W		090	-55°	collar	CORE SIZE NQ	SHEET NO.	1 OF
ELEVATION					TOTAL RECOVERY 95%	LOGGED BY	B. W. Downing
LATITUDE					STARTED June 15	CLATH	Sha #36
DEPARTURE					COMPLETED June 17	PURPOSE	

DEPTH metres	GCOL	INTERVAL		GEOLOGICAL DESCRIPTION	MINERALIZATION		ALT	ASSAYS					RECOVERY			
		From	To		X			SAMPLE	FROM	TO	LENGTH (meters)	Ag oz/ton	Au oz/ton	RIN	X	
		0	9.1	Casing												
		9.1	12.3	grey-green tuff				19727	62.4	63.7	1.3	0.01	0.003			
				12.4-.45: fault gouge @ 35°				28	63.7	64.2	0.5	0.01	0.003			
				12.4-.5: fault gouge @ 55°				29	64.2	64.7	0.5	0.31	0.010			
				14.2: fault gouge @ 60°				30	64.7	65.2	0.5	0.51	0.006			
								31	65.2	65.6	0.4	0.15	0.010			
								32	65.6	66.1	0.5	0.09	0.008			
								33	66.1	66.55	0.45	0.12	0.004			
								34	66.55	67.2	0.65	0.14	0.003			
		12.3	17.0	maroon tuff				35	67.2	68.0	0.8	0.15	0.006			
								36	68.0	69.8	1.8	0.04	0.003			
		17.0	41.0	grey-maroon plag crystal tuff scattered carb stringer veins				37	69.8	70.3	0.5	0.12	0.003			
								38	70.3	70.8	0.5	0.08	0.003			
		41.0	42.5	mod. gr. maroon tuff				39	70.8	71.8	1.0	0.98	0.038			
								40	71.8	72.8	1.0	0.39	0.010			
		42.5	44.3	greenish wky maroon tuff				41	72.8	73.8	1.0	0.08	0.004			
								42	73.8	74.3	0.5	0.10	0.004			
				42.9-50.0: bedding graded tops up @ 20°				43	74.3	75.3	1.0	0.16	0.004			
								44	75.3	75.6	0.3	2.79	0.002			
		44.3	44.5	fine gr. tuff sedimentnt (ash flow?)				45	75.6	77.4	1.8	0.08	0.003			
								46	77.4	77.9	0.5	1.21	0.024			
				44.35: fault gouge 2 cm				47	77.9	78.4	0.5	0.35	0.008			
								48	78.4	78.9	0.5	0.93	0.010			
		44.5	45.0	maroon c. gr. tuff				49	78.9	79.4	0.5	0.35	0.008			
								50	79.4	80.4	1.0	0.28	0.003			
		45.0	50.9	c. gr. grey-maroon tuff				51	80.4	81.4	1.0	0.23	0.008			
								52	81.4	82.4	1.0	0.86	0.012			
								53	82.4	83.4	1.0	0.63	0.010			





FRONT EXPLORATION OF CANADA LTD

RILL HOLE RECORD

PROJECT SIAMTA #318

LEVEL		DEPTH	BEARING	DIP	TYPE OF SURVEY	LENGTH	82.9 m (272')	HOLE NO.	SI-84-14
LOCATION	557N/334W		090	-55°	collar	CORE SIZE	80	SHEET NO.	1 OF
ELEVATION	1268.4					TOTAL RECOVERY		LOGGED BY	G. McLaren
LATITUDE						STARTED	June 17/84	CLAIM	Sn 136
DEPARTURE						COMPLETED	June 18/84	PURPOSE	

DEPTH metres	CEIL	INTERVAL		GEOLOGICAL DESCRIPTION	MINERALIZATION	ALT	ASSAYS					RECOVERY				
		From	To				SAMPLE	FROM	TO	LENGTH (meters)	Ag oz/ton	Au oz/ton	RIN	X		
		0	3	Overburden												
		3	28.4	Pale grey-green crystal-fragmental tuff white plag xls + minor qtz. + coarse lithic frags. of maroon tuff set in a fine weakly chloritized matrix			19764	37.7	38.7	1.0	0.01	<0.003				
							65	38.7	39.9	1.2	0.23	0.003				
							66	39.9	41.3	1.4	0.36	0.008				
							67	41.3	41.8	0.5	0.28	0.010				
				13.8-14.4: broken core due to pink-white qtz vein at 80° to core			68	41.8	42.3	0.5	0.25	0.008				
							69	42.3	42.7	0.4	0.05	0.010				
							70	42.7	43.7	1.0	0.01	0.003				
				18.1-18.2: thin qtz veinlet at 80° along core			71	43.7	44.8	1.1	0.36	0.012				
							72	44.8	45.6	0.8	0.02	0.006				
				20.1: fracture minor gouge			73	45.6	46.3	0.7	0.06	<0.003				
							74	46.3	47.3	1.0	0.08	0.003				
				25.0-26.6: thin pink qtz veinlet 80-90° along core			75	47.3	48.3	1.0	0.08	0.003				
							76	48.3	49.3	1.0	0.42	0.006				
		28.4	28.6	above tuff grades into a fine grained greyish crystal tuff			77	49.3	50.3	1.0	0.04	<0.003				
							78	50.3	50.9	0.6	4.17	0.110				
		28.6	29.1	laminated grey crystal tuff and maroon crystal tuff; bedding at 45° to core thin fractures + gouge at 28.7			79	50.9	51.4	0.5	1.13	0.026				
							80	51.4	51.9	0.5	2.23	0.042				
							81	51.9	52.3	0.4	4.06	0.096				
		29.1	32.7	maroon crystal tuff, fine grained white feldspar in a fine maroon matrix, a few lithic fragmentals.			82	52.3	53.3	1.0	6.53	0.074				
							83	53.3	54.3	1.0	2.03	0.034				
							84	54.3	55.3	1.0	0.82	0.022				
				31.0: pink qtz veinlet at 60° along core			85	55.3	55.8	0.5	1.89	0.020				
							86	55.8	56.4	0.6	0.64	0.014				
		32.7	37.7	medium to coarse grained grey tuff with white pink feldspar xls intercalated with maroon tuffs of similar texture; lithic fragments locally present.			87	56.4	57.0	0.6	0.84	0.009				
							88	57.0	57.7	0.7	3.41	0.036				
							89	57.7	58.4	0.7	5.31	0.060				
							90	58.4	59.2	0.8	4.40	0.044				



MONT EXPLORATION OF CANADA LTD

HOLE RECORD

JECT SWASTA #318

LEVEL		DEPTH	BEARING	DIP	TYPE OF SURVEY	LENGTH	151.5 m (497')	HOLE NO.	84-15
LOCATION	497N/406W		090	-55°	collar	CORE SIZE	BQ	SHEET NO.	1
ELEVATION	1271.6 m		090	-69°	151.5	TOTAL RECOVERY		LOGGED BY	BMD
LATITUDE						STARTED	June 18	CLASH	SIA #36
DEPARTURE						COMPLETED	June 21	PURPOSE	

DEPTH metres	GEOLOGICAL DESCRIPTION	INTERVAL		MINERALIZATION	ALT	ASSAYS						RECOVERY			
		From	To			SAMPLE	FROM	TO	LENGTH (meters)	Ag oz/ton	Au oz/ton	RUN	%		
	casing	0	24.4												
	ground core	24.4	26.2			19823	96.6	97.6	1.0	0.24	0.003				
						24	97.6	99.5	1.9	0.03	0.003				
						25	99.5	100.4	0.9	0.02	0.003				
	maroon plag crystal tuff some feldspars light orange odd carb stringer vein c. gr.	26.2	60.0			26	100.4	102.8	2.4	0.08	0.003				
						27	102.8	103.8	1.0	0.08	0.003				
						28	103.8	105.8	2.0	0.24	0.003				
	grey c. gr. tuff, wk. chl	60.0	64.2			29	105.8	106.8	1.0	0.10	0.003				
						30	106.8	107.8	1.0	0.14	0.003				
	red-brown f. gr tuff sediment	64.2	65.9			31	107.8	108.8	1.0	0.06	0.003				
						32	108.8	109.8	1.0	0.12	0.003				
	64.7: fault gouge 2 cm					33	109.8	111.3	1.5	0.20	0.003				
						34	111.3	111.8	0.5	0.46	0.003				
	grey-maroon maroon crystal tuff	65.9	69.2			35	111.8	112.3	0.5	0.44	0.008				
						36	112.8	113.3	1.0	0.78	0.003				
	fine gr. maroon sediments (wackes)	69.2	75.7			37	113.3	114.3	1.0	1.56	0.003				
						38	114.3	116.0	1.7	0.25	0.003				
	maroon frag. tuff chl. alt of frag	75.7	76.5			39	116.0	117.0	1.0	0.40	0.003				
						40	117.0	118.0	1.0	0.20	0.003				
	grey-green tuff with maroon patches	76.5	87.5			41	118.0	119.0	1.0	0.36	0.003				
						42	119.0	120.0	1.0	0.26	0.003				
	maroon to green-grey tuff	87.5	91.4			43	120.0	121.0	1.0	3.37	0.016				
						44	121.0	122.0	1.0	0.68	0.003				
	maroon f. gr. aphanitic tuff with stringers of calcite	91.4	93.7			45	122.0	123.0	1.0	0.30	0.003				
						46	123.0	124.0	1.0	0.38	0.003				
	91.7-94.5: br. core-fault					47	124.0	125.0	1.0	0.24	0.003				
						48	125.0	126.0	1.0	0.60	0.003				
						49	126.0	128.0	2.0	1.02	0.003				
						50	128.0	130.0	2.0	0.44	0.003				







HEMONT EXPLORATION OF CANADA LTD

DRILL HOLE RECORD

PROJECT SHASTA #318

LEVEL	DEPTH	BEARING	DIP	TYPE OF SURVEY	LENGTH	197.2 (647')	HOLE NO.	SH-84-16
LOCATION	709N/388W	090	-60°	collar	CORE SIZE	RQ	SHEET NO.	1 OF
ELEVATION	1248.6 m	090	-71°	197.2	TOTAL RECOVERY		LOGGED BY	B.W. Downing
LATITUDE					STARTED	JUNE 22	CLAIM	Sha #36
DEPARTURE					COMPLETED	JUNE 25	PURPOSE	

DEPTH metres	GEOL.	INTERVAL		GEOLOGICAL DESCRIPTION	MINERALIZATION %	ALT	ASSAYS					RECOVERY				
		From	To				SAMPLE	FROM	TO	LENGTH (meters)	Ag oz/ton	Au oz/ton	RLN	%		
		0	21.3	casing												
		21.3	29.3	grey plag cgr crystal tuff			19865	64.9	65.9	1.0	0.06	<0.003				
		29.3	47.9	dk grey to maroon grey med gr. crystal tuff			66	65.9	66.4	0.5	1.14	0.028				
				40.1-.2: fault gouge			67	66.4	67.4	1.0	0.46	0.005				
				40.2-.35: carb vein			68	67.4	68.6	1.2	0.40	0.005				
				40.35-43.3: br. core. - fault			69	68.6	70.0	1.4	0.530	0.016				
				44.6: fault (gouge) 1 cm at 65°			70	70.0	72.0	2.0	0.36	0.020				
				47.7-.9: Irreg carb stringers			71	72.0	74.0	2.0	0.24	0.014				
				47.9	54.3	maroon c. gr. frag (1-2 cm) tuff										
				50.2-.8: carb veins @ 45-60°			72	74.0	76.0	2.0	0.15	0.014				
				50.8-60.05 carb vein no visible mineralization			73	76.0	78.0	2.0	0.350	0.005				
				60.3 fault gouge, 2 cm			74	78.0	80.0	2.0	0.22	0.005				
				54.3	60.0	green frag. tuff chl alteration wk. bleaching										
				fault zone numerous zones of fault gouge and clay from 1 cm to 30 cm across			75	80.0	82.0	2.0	0.24	0.022				
							76	82.0	84.0	2.0	0.32	0.016				
							77	84.0	86.0	2.0	0.71	0.034				
							78	86.0	87.0	1.0	0.10	0.003				
							79	87.0	88.0	1.0	0.22	0.005				
							80	88.0	89.5	1.5	0.04	0.005				
							81	89.5	90.5	1.0	0.72	0.012				
							82	90.5	92.0	1.5	0.32	0.005				
							83	92.0	94.0	2.0	0.18	0.003				
							84	94.0	96.0	2.0	0.20	0.005				
							85	96.0	98.0	2.0	0.14	0.005				
							86	98.0	100.0	2.0	0.05	0.005				
							87	100.0	101.0	1.0	0.04	0.006				
							88	101.0	103.0	2.0	0.05	0.008				
							89	103.0	103.7	0.7	0.71	0.052				
							90	103.7	104.2	0.5	0.08	0.003				
							91	104.2	105.2	1.0	0.03	<0.003				

DEPTH metres	GEOLOGICAL DESCRIPTION	INTERVAL		MINERALIZATION	ALT	ASSAYS						RECOVERY			
		From	To			Z	SAMPLE	FROM	TO	LENGTH (meters)	Ag oz/ton	Au oz/ton	RLN	Z	
	green frag. tuff qft (contact approx. 64.0)	60.0	65.9												
	64.5-65.9 fault zone, patches of fault gouge 1-2cm across					19892	105.2	105.7	0.5	0.08	0.010				
						93	105.7	106.2	0.5	0.24	0.060				
	qft	65.9	176.0			94	106.2	106.7	0.5	0.68	0.084				
						95	106.7	107.7	1.0	0.19	0.032				
	65.9-66.15 st. silic, irreg streaks-stringer of black chal, ac, minor py					96	107.7	108.7	1.0	0.13	<0.003				
						97	108.7	110.7	2.0	0.06	0.014				
						98	110.7	111.7	1.0	0.22	0.010				
	66.15-66.20 ac in carb vein @ 30°					99	111.7	114.6	2.9	0.05	0.008				
						900	114.6	115.6	1.0	0.03	<0.003				
	66.20-.25 ep zone					01	115.6	117.6	2.0	0.07	0.010				
						02	117.6	120.7	3.1	0.10	0.008				
	66.25-66.4 orange qft, qtz stockwork					03	120.7	123.7	3.0	0.04	0.022				
						04	123.7	126.7	3.0	0.04	0.008				
	66.4-164.1 orange to light orange qft with scattered zones of green orange, mod to st. bleaching, qtz, qt - carb stockwork with zones of silic bx, minor chal.					05	126.7	129.7	3.0	0.20	0.006				
						06	129.7	130.7	1.0	0.12	0.006				
						07	130.7	131.7	1.0	0.03	0.003				
						08	131.7	133.7	2.0	0.28	0.006				
	68.4 1 cm grey chal @ 000°					09	133.7	136.7	3.0	0.26	0.008				
						10	136.7	138.9	2.2	0.07	0.006				
	72.1-73.4 carb-qtz veins @ 15-30° few qtz hem-chl stringers					11	138.9	139.7	0.8	0.28	0.008				
						12	139.7	141.7	2.0	0.07	0.008				
	73.4-74.0 stockwork-bx-stockwork zone with qtz carb, chl & hem					13	141.7	142.3	0.6	0.06	0.008				
						14	142.3	143.3	1.0	0.05	0.003				
						15	143.3	144.3	1.0	0.06	0.008				
	78.0-82.3 green qft, chl fr's chl-qtz stringers					16	144.3	144.9	0.6	0.05	0.018				
						17	144.9	145.4	0.5	0.12	0.003				
	82.3-.6 chl bx zone; frags of silic bx with chl-carb in a bx zone with chl & hem matrix					18	145.4	145.9	0.5	0.10	0.022				
						19	145.9	146.9	1.0	0.15	0.046				
						20	146.9	147.9	1.0	0.12	0.028				
	87.4-.7 carb-chl bx zone, qft frags 75-100° chloritized					21	147.9	148.9	1.0	0.09	0.014				
	diss'd ac & py along contact of carb and qft minor					22	148.9	149.5	0.6	0.01	<0.003				
	ep hem along fr's					23	149.5	150.0	0.5	0.05	0.018				
						24	150.0	150.5	0.5	0.05	0.012				

















HEMONT EXPLORATION OF CANADA LTD

DRILL HOLE RECORD

PROJECT

SHASTA #318

LEVEL	DEPTH	BEARING	DIP	TYPE OF SURVEY	LENGTH (317')96.6m	HOLE NO.	SH-04-18
LOCATION 79RN/339W		090	-52°	collar	CORE SIZE BQ	SHEET NO.	1
ELEVATION 1246.1m		090	-60°	96.6	TOTAL RECOVERY	LOGGED BY	B.W. Downing
LATITUDE					STARTED	JUNE 26	CLAIM Sha #36
DEPARTURE					COMPLETED	JUNE 27	PURPOSE

DEPTH metres	GCOL	INTERVAL		GEOLOGICAL DESCRIPTION	MINERALIZATION		ALT	ASSAYS					RECOVERY				
		From	To		Z			SAMPLE	FROM	TO	LENGTH (meters)	Ag oz/ton	Au oz/ton	RUN	Z		
		0	7.3	casing													
		7.3	83.3	qtz				D19966	7.3	7.8	0.5	0.02	<0.003				
				7.3-7.8 st. silic streaks grey chal.				67	7.8	9.1	1.3	0.32	0.003				
				7.3-7.5 br. core. ac. + py				68	9.1	11.3	2.2	0.05	<0.003				
				7.8-9.1 mod-st. silic, grey-green orange wk. mod bleaching				69	11.3	14.3	3.0	0.02	<0.003				
				11.2-11.35 fault gouge				70	14.3	16.3	2.0	0.42	0.010				
				9.1-13.0 mod silic, wk bleaching grey-green orange				71	16.3	19.3	3.0	0.01	<0.003				
				13.0- wk. mod silic, mod bleaching				72	19.3	22.3	3.0	0.01	<0.003				
				15.1 qtz-carb vein @ 50° with ac, py odd qtz. qtz-carb vein/stringer				73	22.3	24.6	2.3	0.01	0.008				
				24.7 lcn chal-carb vein with py. ac @ 060°				74	24.6	24.9	0.3	0.02	0.003				
				27.0-35.8 carb-ep + chl stringers veins @ 70°, 55°, carb veins lcn @ 90°, 55°				75	24.9	26.5	1.6	0.01	0.003				
				dirty green qtz.				76	26.5	29.5	3.0	0.01	0.003				
				35.8-37.3 st. bleaching, chl, ep. (few ac. stringers?)				77	29.5	32.5	3.0	0.02	<0.003				
								78	32.5	35.5	3.0	0.01	<0.003				
								79	35.5	36.5	1.0	0.01	0.003				
								80	36.5	37.5	1.0	0.03	0.004				
								81	37.5	38.7	1.2	0.20	0.008				
								82	38.7	39.7	1.0	0.01	<0.003				
								83	39.7	40.7	1.0	1.90	0.044				
								84	40.7	41.7	1.0	4.46	0.094				
								85	41.7	42.7	1.0	0.15	0.014				
								86	42.7	43.7	1.0	0.01	0.006				
								87	43.7	44.7	1.0	0.02	0.008				
								88	44.7	45.7	1.0	0.01	0.008				
								89	45.7	47.7	2.0	0.02	0.006				
								90	47.7	50.7	3.0	0.02	<0.003				
								91	50.7	52.7	2.0	0.01	0.010				
								92	52.7	53.7	1.0	0.10	0.014				





EMMONT EXPLORATION OF CANADA LTD

RILL HOLE RECORD

PROJECT

SIAMTA #318

LEVEL		DEPTH	BEARING	DIP	TYPE OF SURVEY	LENGTH	133.2m(437')	HOLE NO.	SH-04-19
LOCATION	798N/368W		090	-55°	collar	CORE SIZE	BQ	SHEET NO.	1
ELEVATION	1248.6m		090	-65°	133.2	TOTAL RECOVERY		LOGGED BY	B.W. Downing
LATITUDE						STARTED	June 27	CLAIM	Shm /36
DEPARTURE						COMPLETED	June 29	PURPOSE	

DEPTH metres	GEOLOGICAL DESCRIPTION	MINERALIZATION %	ALT	ASSAYS					RECOVERY		
				SAMPLE	FROM	TO	LENGTH (meters)	Ag oz/ton	Au oz/ton	R/N	%
0	3.1 casing										
3.1	22.2 fragmental crystal tuff, grey, plag. crystal, altering to ep. frags 1-3cm, mixture of colours			6668	19.8	21.2	1.4	0.04	0.003		
				69	21.2	22.2	1.0	0.13	0.003		
				70	22.2	22.7	0.5	0.07	0.003		
	10.4-11.1 fault gouge bx (10.5 cm clay)			75	27.0	28.0	1.0	0.18	0.003		
				77	29.0	30.0	1.0	0.52	0.008		
	13.9-14.1 fault gouge			78	30.0	31.0	1.0	0.33	0.006		
				83	35.0	36.0	1.0	0.07	0.003		
	20.0-22.2 wk silic to mod @ 22.0			85	37.0	38.0	1.0	0.09	0.006		
				86	38.0	39.0	1.0	0.05	0.008		
22.2	26.0 altered frag. tuff., green, (chl.) to grey green			87	39.0	41.0	2.0	0.06	0.003		
				88	41.0	42.0	1.0	0.10	0.006		
	22.5- 2cm fault clay, gouge			89	42.0	42.9	0.9	0.59	0.018		
				90	42.9	43.9	1.0	40.11	0.642		
	22.5-23.5 fault zone, gouge, br. core.			91	43.9	44.9	1.0	1.19	0.022		
				92	44.9	45.9	1.0	3.18	0.056		
	22.2-22.6 st. silic, greyish streaks			93	45.9	46.9	1.0	1.10	0.022		
26.0	133.2 qtz			94	46.9	47.9	1.0	0.37	0.006		
				95	47.9	48.9	1.0	0.16	0.003		
	28.6 fault gouge 1cm @ 45°			RO6671	22.7	23.7	1.0	0.30	0.003		
				72	23.7	24.7	1.0	0.12	0.003		
	28.55 - 1cm chal + ac vein @ 40°			73	24.7	26.0	1.3	0.12	0.003		
				74	26.0	27.0	1.0	0.10	0.003		
	35.5-.7 carb qtz-carb vein at 60-75°			76	28.0	29.0	1.0	0.32	0.003		
				79	31.0	32.0	1.0	0.30	0.006		
	36.4 fault gouge, 1 cm			80	32.0	33.0	1.0	0.14	0.003		
				81	33.0	34.0	1.0	0.14	0.008		
	36.4-37.0 silic bx. zone, green-grey chal, frags 75-90X altered			82	34.0	35.0	1.0	0.06	0.044		

DEPTH metres	GEOLOGICAL DESCRIPTION	INTERVAL		MINERALIZATION	ALT	ASSAYS					RECOVERY		
		From	To			SAMPLE	FROM	TO	LENGTH (meters)	Ag oz/ton	Au oz/ton	RLN	%
	38.7-41.9 green qft. (chl)												
	42.9-43.5 chal-carb-chl-Ag-py-ac veins 1cm @ 10°30'					R06684	36.0	37.0	1.0	0.10	<0.033		
						96	48.9	49.7	0.8	0.08	0.008		
	43.5-43.9 grey-green chal-carb-chl-Ag. ac. py. bx. (42.9-43.9 nat Ag with zone)					97	49.7	50.0	0.3	21.65	0.654		
						98	50.0	51.0	1.0	0.56	0.016		
						99	51.0	52.0	1.0	0.08	0.008		
	44.0 qtz-carb + chl ac, py vein 1cm @ 035°					700	52.0	54.0	2.0	0.10	0.010		
						01	54.0	55.0	1.0	0.22	0.010		
	45.2 carb + qtz vein 1 cm @ 60° with ac, py along edges					02	55.0	56.0	1.0	0.20	0.008		
						03	56.0	57.0	1.0	0.12	0.006		
	46.3 1/2cm qtz-carb-chl-ac, py vein @ 030°					04	57.0	58.0	1.0	0.04	<0.003		
						05	58.0	59.0	1.0	0.40	0.022		
	46.7-.9 carb-chl + ac vein 1 cm with qft frags @ 090°					06	59.0	60.0	1.0	0.10	<0.003		
						07	60.0	62.0	2.0	0.14	0.006		
	48.8 qtz + carb-ac-py vein 1cm @ 055°					08	62.0	64.0	2.0	0.13	0.012		
						09	64.0	66.0	2.0	0.18	0.014		
	49.85 1 1/2cm grey chal + carb + chl-ac, py-Ag vein @ 045°					10	66.0	68.0	2.0	0.22	0.004		
						11	68.0	68.8	0.8	1.18	0.086		
	54.2 3cm chal banded zone, brown grey, black @ 045°					12	68.8	69.3	0.5	5.80	0.422		
						13	69.3	70.3	1.0	0.02	0.003		
	57.9 3cm chal bx. band zone @ 45°					14	70.3	71.3	1.0	0.18	<0.003		
						15	71.3	72.3	1.0	0.09	0.006		
	58.2 1cm carb-qtz-ac-py vein @ 035°					16	72.3	74.0	1.7	0.10	0.003		
						17	74.0	75.0	1.0	0.22	0.006		
	64.3-.5 br. core fault zone gouge, clay					18	75.0	76.0	1.0	0.10	0.006		
						19	76.0	77.0	1.0	0.09	0.003		
	68.8-69.4 qtz-ac-py rich stringers @ 60° (avg).					20	77.0	78.0	1.0	0.26	0.020		
						21	78.0	79.0	1.0	0.64	0.022		
	69.4-70.6 hem rich fr's veins with ep carb qtz					22	79.0	80.0	1.0	0.74	0.018		
						23	80.0	81.0	1.0	2.06	0.044		
	70.6-72.3 greyish chal veins @ 080°-090°, tr ac, py chl alteration					24	81.0	82.0	1.0	0.30	0.016		
						25	82.0	84.0	2.0	0.25	0.012		
						26	84.0	85.0	1.0	0.18	<0.003		
						27	85.0	86.0	1.0	0.65	0.012		

DEPTH metres	GEOLOGICAL DESCRIPTION	INTERVAL		MINERALIZATION	ALT	ASSAYS						RECOVERY		
		From	To			SAMPLE	FROM	TO	LENGTH (meters)	Ag oz/ton	Au oz/ton	RUN	%	
	74.0-75.0 int. silic bx zone, grey-green chal.			X										
	74.0-.3 hem fr's					RD6728	86.0	87.0	1.0	1.03	0.022			
	75.0-75.3 qtz-carb bx. stockwork @ 075°					29	87.0	89.0	2.0	0.06	0.003			
	75.0-80.5 irreg amyethesine qtz stringers					30	89.0	91.0	2.0	0.05	0.003			
	80.3-.6 qtz-carb bx zone diss'd ac, py					31	91.0	92.5	1.5	0.32	0.042			
	85.3-86.3 mod bleaching qft bx with grey-chal stringers					32	92.5	93.5	1.0	1.41	0.038			
	86.3-.6 qtz-carb vein lcn with ac, py @ 090°					33	93.5	95.0	1.5	0.67	0.028			
	87.2 carb vein lcn @ 045°					34	95.0	97.0	2.0	0.14	0.008			
	92.5-93.5 qtz-carb + chl + hem vein with bx frags @ 090°					35	97.0	99.0	2.0	0.12	0.012			
	tr. ac, py					36	99.0	101.0	2.0	0.14	0.020			
	64.5 3cm qtz-carb vein with ac, py @ 045°					37	101.0	103.0	2.0	0.13	0.003			
	97.2-.4 chal bx with chl. hem, carb intense fracturing of core					38	103.0	104.5	1.5	0.06	0.003			
	104.6-105.5 irreg. grey streaks st. silic					39	104.5	105.5	1.0	0.39	0.018			
	109.0-133.2 orange qft, ep fr's ep-carb stringers					40	105.5	106.5	1.0	0.36	0.014			
	130.0-.6 ep rich zone ep-carb minor qtz.					41	106.5	107.5	1.0	0.27	0.012			
	133.2 END OF HOLE					42	107.5	109.0	1.5	0.17	0.008			
						43	109.0	112.0	3.0	0.08	0.003			
						44	112.0	115.0	3.0	0.02	0.003			
						45	115.0	118.0	3.0	0.15	0.010			
						46	118.0	121.0	3.0	0.09	0.003			
						47	121.0	124.0	3.0	0.08	0.003			
						48	124.0	127.0	3.0	0.13	0.010			
						49	127.0	130.0	3.0	0.07	0.003			
						50	130.0	133.2	3.2	0.04	0.003			