DIAMOND DRILLING REPORT

ON THE

HOT SPRING PROPERTY

SLOQUET CREEK AREA

HARRISON LAKE REGION

NEW WESTMINSTER MINING DIVISION

BRITISH COLUMBIA

L L 122°21'W / 49°45'N NTS 92G/16W, 92G/9W

FEB ? 3 1998

Gold Connetoritory of Office -V/ 2000 Connetoritory

FOR

MOUNT HOPE RESOURCES CORPORATION

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BY

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Fieldwork completed between August 20 and October 24, 1997

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SUMMARY

- Mount Hope Resources Corp. owns 92 units, in 8 modified grid claims, which cover a precious and base metal prospect in the Sloquet Creek area of the south-western British Columbia. The property is situated 95 kilometres north-east of Vancouver and is accessible by logging road from either Pemberton or Harrison Mills.
- 2) Cominco Ltd staked the ground in 1944 and again in 1979 (now covered by the Hot Spring claims) and discovered several moderate to high base-metal soil anomalies. The anomalous zones received only limited follow-up evaluation. Aranlee Resources Ltd. carried out a program of geological mapping and geochemical sampling in 1987. This program was successful in extending the largest and most intense soil anomalies located by the previous operators. A grab sample of altered volcanics exposed on the south side of Simpson Creek returned 2560 ppb gold.
- 3) The property is underlain by a sequence of pyritic, felsic tuff and coarse fragmental rocks capped by ferruginous chert which totals more than 400 m thick. This lithological assemblage is correlative with the Gambier Group hosting the Britannia Copper Deposits, suggesting a favourable environment for exhalative massive sulphide deposits and related precious metal enriched stockworks and breccias. The Britannia Polymetallic Deposits are located 70 km to the west of the Hot Spring Claims.
- 4) The general area is characterised by north-westerly trending Tertiary age faults associated with gold mineralization. The Doctors Point and the RN gold deposit at the south-end of Harrison Lake are the most important nearby gold zones.
- 5) Follow-up geochemical and geological investigations were carried out in 1988 on the anomalous zones, as well as checking the more eastern and largely untested areas of the claims (Shearer, 1988). Two new showings containing galena and sphalerite mineralization were discovered. The 1988 work located soil anomalies that carried up to 180 ppb Au and 15.5 ppm Ag. Rock chip samples returned values up to 0.238 oz/ton gold and 15.73 oz/ton silver.
- 6) One of the most important mineralized area found in 1988, called Dan's Showing, is hosted by very altered cherty tuffite. This zone outcrops over a horizontal area of 55 metres by 35 metres and is covered on all sides. Vertically it is exposed through a height of 25 metres on the steep hillside. Hand trenching gave values of up to 0.238 oz/ton Au over 1 metre and 0.174 oz/ton over 2 metres. In a different area, one part of a trench gave 8 metres averaging 0.052 oz/ton Au. Narrow galena-sphalerite filled fault zones give up to 15 oz/ton Ag and 25% combined Pb/Zn over 1 metre (Shearer, 1988).
- 7) Aranlee optioned the property to Noranda in 1989. Work in 1990 consisted of 7 NQ diamond drillholes totalling 1251.9 metres of drilling on the southridge part of the Property. Hole NQ90-2 collared at 30+012N and 30+886E intersected 119m averaging 584 ppb Au. NQ90-4 intersected 615 ppb Au over 66.0 metres (Wilson, 1991). Only one hole (NQ90-7) tested the possible down dip extension of the mineralized zone but if encountered an up-faulted block of lower nodular dacite. Airborne geophysics (EM & Magnetics) and follow-up soil geochemistry were also completed (Wilson and Wong, 1990).

- 8) Mount Hope Resources Corp. carried out limited geological mapping, relogging of the 1990 core and diamond drilling in 1997 of 11 holes totalling 6,507.43 feet (1,983.49m) oriented at 060° Az and from -57° to -90° dips. The total drilling on the property (1990 & 1997) is now 3,235.39m (10,614.66 ft).
- 9) 1997 drill results suggest a partly intrusive-related mineralizing event as indicated by abundant epidote and molybdenum. The precious metal system, although low-grade as presently known is increasing in thickness (holes HS97-9 & 10) to the west. Elevated gold/silver values were encountered over a core length of 144 metres.
- 10) A large low-grade gold-bearing hydrothermal system is hosted by highly altered felsic volcanics on the Hot Spring Property. Anomalous values in gold in rock and soil have been found concentrated on the southridge area, and other zones throughout the Property. A systematic exploration program of continued petrology, road building, trenching and diamond drilling is recommended at a cost of \$440,000.00 to follow up targets west and south of the 1997 drillholes.

Respectfully submitted,

J.T. Shearer, M.Sc., P.Geo. January 26, 1998

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INTRODUCTION

This report has been commissioned by S. E. Angus, President of Mount Hope Resources Corp. to summarize all available data on the Hot Spring Mineral Claims, document the 1997 drilling phase and propose an exploration program to further assess the base and precious metal potential of the property. A large amount of previous work has been carried out in the past by various operators

The large volcanogenic copper-gold deposits of the Britannia Camp which produced 55 million tons grading 1.1% Copper and 0.02 oz/ton gold (Payne et al, 1980) are hosted in Gambier group rocks 70 km directly west of the Hot Spring Property. The Hot Spring area is underlain by altered volcanics and metasediments of the Gambier Group.

The claim area has been explored for precious metal (MacKay, 1944) and base metal potential (Wojdak, 1980a), since the early 1940's. Detailed panning during 1944 and 1997 demonstrated that Sloquet Creek contains plentiful coarse, angular placer gold and that 75% of the placer gold can be traced to Simpson Creek (MacKay, 1944). Stream sediment, soil and rock sampling led to the discovery of several gold, lead, copper and zinc soil anomalies by Cominco (Freeze, A. C., 1986). A field program by Aranlee Resources Ltd. conducted in 1987 relocated those anomalies and was successful in extending the most intense anomaly previously located by Cominco Ltd. Prospecting in 1988 discovered two new important pyrite-sphalerite alteration zones high in gold values south of the previous work on Southridge. Subsequent trenching in November 1988 on this showing south of North Sloquet Creek (Dan's Showing) revealed an extensive area carrying important gold values (up to 0.276 oz/ton) in a wide area extending over 1000 metres to the east. Preliminary detailed mapping and sampling suggested a possible stratabound nature to the mineralization. Limited shallow diamond drilling conducted in 1990 by Noranda intersected 119m averaging 584 ppb gold in Hole NO90-2 and NO90-4 averaged 615 ppb gold over 66m., demonstrating that the zone enriched in gold is between 70 to 100 metres in true thickness. Only one hole (NQ90-7) tested the possible downdip extension of this lowgrade mineralized zone but an up faulted section of the lower andesite was encountered in this hole.

Diamond drilling in 1997 was oriented at 060° to more thoroughly investigate the northwesterly-southeasterly structures which on relogging the 1990 drill core appeared to be important. The results of the 1997 diamond drilling indicate much higher grade values in gold and silver. An abundance of epidote and molybdenum was also encountered in the 1997 drilling.

Gold mineralization is related to Tertiary-age major faulting along the Harrison Lake Fracture Zone similar to the RN gold deposit at the south end of Harrison Lake and Doctors Point gold deposit.



LOCATION AND ACCESS

The Hot Spring claims are located at 122° 21'W longitude and 49° 45'N latitude in the New Westminster Mining Division, approximately 95 air kilometres northeast of Vancouver and 15 kilometres west of the northern end of Harrison Lake (Figure 1). Garibaldi Provincial Park borders the property a short distance to the west.

The property is accessible by logging roads via either Pemberton and south along the Lillooet River Valley Road, or by road up the west side of Harrison Lake from Harrison Mills (at the Sasquatch Inn turn-off). A 9 kilometer two-wheel drive road accesses the east central boundary of the property by traveling from the Lillooet River westward along the north side of Sloquet Creek Valley. Access to the claims, from this point is by 4x4 truck on the logging road. Helicopter services are available at Agassiz or Pemberton.

Elevations on the property range from 1,500 to 4,500 feet above mean sea level (460m to 1,480m a.s.l.) (Figure 2). Slopes are steep with avalanche chutes and hazardous steep cliff areas. Thick growth of alder, devils club and alpine fir occur below altitudes of 4,500 feet (1,372m). Above this elevation the vegetation thins, and where the terrain flattens, ponds and swampy areas have developed.

The access road is currently variably maintained up to the bridge over Simpson Creek. Active logging and road building was taking place during 1997 on the lower southwest side of Sloquet Creek. Harvesting plans call for a new road up to the general area of the mineralized showings in preparation of future helicopter logging. A cut block of about 4,000 cubic metres of timber was felled in September/October 1997 immediately east of the drill area, but weather and market conditions precluded flying the timber out to the Simpson Creek Bridge staging area. The fallers for the logging company used the drill tote road put in by Mount Hope Resources Corp. for access to the cut block.

Locals refer to Sloquet Creek as "Spring Creek" since high temperature hotsprings occur south of the claims on South Sloquet Creek which attracts determined visitors throughout the year. A major new, permanent steel and concrete bridge across Sloquet Creek giving access to the hotsprings and South Sloquet was completed by Forestry in July 1997. This road could, in the future, give access to mineralized zones south of the 1997 drilling area.

Full bunk facilities and meals are available at the Lineham Logging Camp at the head of Harrison lake at a rate of \$50 per day. The Lineham crew is presently on a 10 day in/4 day out schedule. Lineham tracked hoe-excavator and dump trucks were used to open the old logging road on the claims.

CLAIM STATUS

The property consists of eight contiguous Modified Grid System mineral claims held by location by the Mount Hope Resources Corp. as tabulated in Table I and illustrated on Figure 3.

TABLE I							
List of Claims							
Number Current Claim Tenure of Size of Location Expiry Registered Name Number Units Units Date Date Owner							
Hot Springs 1	336395	6	3Nx2W	May 22, 1995	May 22, 2008 *	S. E. Angus **	
Hot Springs 2	338135	12	3Sx4W	July 28, 1995	July 28, 2008 *	S. E. Angus	
Hot Springs 3	338136	15	3Sx5W	July 28, 1995	July 28, 2008 *	J. T. Shearer	
Hot Springs 4	347137	18	3Sx6W	May 22, 1996	May 22, 200 8 *	J. T. Shearer	
Hot Springs 5	346138	18	3Nx6W	May 22, 1996	May 22, 2008 *	S. E. Angus	
Hot Springs 6	346139	12	2SxбW	May 23, 1996	May 23, 2008 *	S. E. Angus	
Hot Springs 7	349209	9	4Sx4W	Aug. 7, 1996	Aug. 7, 2008 *	S. E. Angus	
Hot Springs 8	358340	2	1Sx2W	Aug. 11, 1997	Aug. 11, 2008 *	J.T. Shearer	
	Total	92 units				·	

* with assessment work documented in this report.

** Bill of sale executed in favour of Mount Hope Resources Corp.

Mineral title in British Columbia is acquired by locating claims in the proscribed manner as outlined in the MINERAL ACT and regulations. Title is maintained by filing appropriate assessment work in the amount of \$100 per unit for the first 3 years and \$200 per unit thereafter.

The Hot Spring Property was staked over a period of 3 years since the previous claims (Quet Claims) lapsed at differing times.

The main logging road along South Sloquet Creek is scheduled to be re-constructed in 1997 by the B.C. Forest Service. This will open access to the southern part of the claim block and may allow access to the ridge top from the south. Logging in the past has taken place right up to the park boundary west of the Southridge showings.

The lower reaches of Sloquet Creek are Salmon-bearing, however, sampling by Wildlife officials in 1996 failed to indicate any salmon upstream from the eastern claim boundary. Two environmental reports were completed by SRR Consultants in 1997 to facilitate obtaining permits to re-open the old logging road.

FIELD PROCEDURES

Prospecting and geological mapping was carried out over a part of the central ridge area with several days spent south of North Sloquet Creek. Several days were spent building trails through slide and washed out sections of the road. Diamond drilling was completed using a Boyles 37A mounted on skids. Core was logged and stored at a location 60 metres east of the collars of holes HS97-01,02 & 03. Drill logs (Appendix IV) were constructed by J. T. Shearer, M.Sc., P.Geo. and W. B. Lennan, P. Geo. Results were digitized and entered into the Gemcom P.C. Explore computer program.



EXPLORATION HISTORY

Recorded exploration activity within the immediate area has been conducted intermittently since the mid 1940's. North of Sloquet Creek in the Fire Lake-Fire Mountain Area, small scale gold production occurred in the 1920's and 1930's.

In 1944, the area was staked by prospectors working for Cominco Ltd. (MacKay, J. M., 1944). Their attention was focused towards this area after obtaining good gold indications from pannings of Sloquet Creek gravels. Over 75% of the gold was determined to be from gossanous cliffs in the Simpson Creek area. Prospecting in this area produced a chip sample of pyrite, galena and sphalerite bearing tuff that contained 0.16 oz/ton gold over six feet (1.8 metres) and also yielded a float rock sample containing quartz-sulfide stringers which assayed 0.94 oz/ton gold (MacKay, J. M., 1944). No further work was done at that time.

In 1975, the CL claim was located in the area north of Simpson Creek and was geologically mapped and sampled by M. McClaren and R. Dickinson. This work was performed for the Cyprus Anvil Corporation during 1976. The purpose of the exploration program was to assess the massive sulfide potential of the area. A pencil manuscript map at a scale of 1:1200 was constructed and was also used in the 1988 program.

In 1979, Cominco Ltd. staked the SLO claim group in the area now occupied by the Hot Spring claim group. Silt samples from this area gave anomalous precious and base metal values (Wojdak, P. J., 1980a). Cominco Ltd. completed a soil sampling survey in 1981 and located several precious and base metal soil anomalies. The best developed anomaly yielded values of up to 488 ppm Cu, 3600 ppm Pb, 3300 ppm Zn and extended 500 metres in length being open towards the west (Wojdak, P. J., 1980b).

In 1985, Cominco Ltd. attempted chip sampling traverses across a portion of cliffs located above and to the south of the best developed soil anomaly on the south side of Simpson Creek. This program employed experienced rock climbers and had a duration of three days. Thirty-five rock chip samples were collected; at least eight samples were anomalous in either copper, lead or zinc. Fourteen samples yielded silver values exceeding 7 ppm. Five samples yielded gold values exceeding 100 ppb. Best results were received from sample S-85-3 (155 ppm Cu, 12800 ppm Pb, 8440 ppm Zn, 162 ppm Ag, 392 ppb Au) and S857 (244 ppm Cu, 1186 ppm Pb, 578 ppm Zn, 17.6 ppm Ag, and 856 ppb Au)(Freeze, A. C., 1986).

The SLO claim group was allowed to lapse in October 1986. The area was partially restaked as the Quet 1 and 2 mineral claims on May, 1987 by W. Chase. Aranlee Resources Ltd. optioned the Quet 1 and 2 mineral claims in October, 1987 and staked the contiguous Quet 3 and 4 mineral claims in November, 1987. A small exploration program was conducted during November of 1987 by Aranlee Resources. This work confirmed the presence of the Cominco soil anomalies and extended some of the more significant ones (McClaren and Hill, 1987). In 1988, follow-up sampling, prospecting and geological mapping was completed. Cobra drilling and blasting was used to trench the most promising showings (Shearer, 1988).

The claim situation was complicated with overlaps in the area since some previous claims were removed from the Government maps while they were still in good standing.



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Aranlee Resources Ltd. optioned the property to Noranda in 1989. Work in 1990 consisted of 7 NQ diamond drillholes totalling 1251.9 metres on the Southridge part of the property. Hole NQ90-2 intersected 119m averaging 584 ppb Au, NQ90-4 intersected 615 ppb Au (Wilson, 1991). Only one hole (NQ90-7) tested the possible down drop extension of the mineralized zones but it encountered an up-faulted block of lower andesite. Airborne geophysics and follow-up soil geochemistry were also completed (Wilson and Wong, 1990).

In 1995 and 1996, the area was acquired by S.E. Angus, J. T. Shearer and A. E. Angus. Mount Hope Resources Corp. purchased the claims and completed follow-up geological mapping, relogging of the 1990 drillcore, extensive stream sediment panning, prospecting and diamond drilling 11 holes totalling 6,001 feet (m). The access road from the new concrete bridge over Sloquet Creek was rehabilitated in close consultation with the Ministry of Environment and Forest Service.

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REGIONAL GEOLOGY

The earliest reported geological mapping of the North Harrison Lake area was of the Vancouver North Map Area by J. E. Armstrong and J. A. Roddick contained in G.S.C. Memoir 335: Vancouver North, Coquitlam, and Pitt Lake Map Areas, B.C., (Figure 4). More recent mapping by J. M. Journeay, L. Csontos and J.V.G. Lynch from 1988 to 1989 have detailed the geology of North Harrison Lake area which includes the Hot Spring Property. A recently published Open File (O.F. #2203) by the British Columbia Department of Mines summarizes the results of that mapping, (Figure 5).

The Coast Belt of Southern British Columbia records a complex history of deformation, metamorphism and igneous activity that can be linked, in part, to progressive shortening and transcurrent displacements along the continental margin of North America since Early Cretaceous time that may be associated with eastward subduction of oceanic lithosphere.

Gambier Group rocks underlie the Hot Spring property and represent an island arc depositional environment. Included is the Peninsula Formation, a basal, fining upward sedimentary sequence of subaqueous autoclastic and epiclastic rocks which are mainly intermediate in composition (Roddick, J. A., 1965). These rocks are correlative on a lithological basis with the Gambier Group that lies 40 air miles (70 kilometres) to the west of the Hot Spring property. The argillaceous middle member along Harrison Lake is equivalent to the Britannia Formation of the Gambier Group (Roddick, J. A., 1965, pg. 42). The Britannia Formation hosts the Britannia Mine, a copper-zinc-gold felsic volcanogenic massive sulfide deposit of the Kuroko-type (55 million tons grading 1.1% Cu, 0.65% Zn, 0.2 oz/ton Ag and 0.02 oz/ton Au) (Payne et. al., 1980).

Two phases of thrusting related to Late Cretaceous oblique convergence along the continental margin and Tertiary dextral/normal dip-slip faulting are the major structural events. Metamorphism to greenschist grade or lower has also occurred within the Gambier Group rocks. The metamorphic grade of the Gambier Group rocks seldom exceeds lower greenschist facies, except in the vicinity of intrusions, where migmatization occurs.

The Harrison Lake Shear Zone is recognized (Journeay, 1989) (Ray, 1986) to be an important structure in localizing economic gold deposits within Southwest British Columbia. This gold belt, which includes the Hot Spring property is associated primarily with brittle fault systems along the western margin of the Shear zone, and is offset to the north by younger northeast-striking transcurrent faults. These northeast-striking transcurrent faults may also be important structures in controlling the emplacement of epizonal Late Tertiary plutons and in tapping associated hydrothermal systems. These transcurrent faults may be providing the necessary structural control for localizing economic concentrations of both base and precious metals within the region.



PROPERTY GEOLOGY and MINERALIZATION

The geology of the central portion of the Hot Spring property is shown on Figure 6. The area is predominantly underlain by a mixed assemblage of felsic tuffaceous and fragmental rocks which display evidence of explosive felsic volcanism and contain clasts of laminated pyrite. These rocks interfinger with andesite flows and dykes.

Past geological mapping at the scales of 1:1,000 for the detailed grid and 1:2,500 for the reconnaissance grid was completed on the area referred to as the "Southridge Zone". The following is a summary of the lithological units noted during the course of prospecting and mapping in 1997.

Unit 6: Biotite-Hornblende Diorite

An unaltered, medium to fine grained, equigranular rock containing 10-15% biotitehomblende crystals, 57-80% plagioclase crystals and 10% anhedral quartz. The rock has a light grey salt and pepper appearance and often has xenoliths of andesite near it's contacts.

This intrusive is extensively exposed in the southwest of the Southridge map area (Figure 8) together with a small stock mapped in the area 31+100E to 31+400E from 29+600N to 29+800N. Airborne magnetometer results suggest a larger near surface component to the stock than actually mapped on surface.

Unit 5A: Andesite Dykes/Sills?

A dark green to greenish black rock, variably porphyritic with feldspar phenocrysts, massive, undifferentiated with extensive chlorite alteration and lesser epidote alteration. The dykes cut all lithologies (except diorite) at a north to north-west direction with mainly sharp contacts.

Pyrite is ubiquitous, occurring as fine disseminations from 1 to 15%, and often coats fracture surfaces. The rock is moderately to strongly magnetic. At some locations it is possible that these andesites (or intermediate tuffs) are conformable to bedding and may be sills. This unit is seen commonly throughout the property.

Unit 5B consists of andesitic flows and tuffs probably belonging to the Peninsula Formation. It occurs east of L31+500E and forms the easterly extent of the ridge between the North Sloquet and Sloquet Creek.

Unit 4: Dacitic to Andesitic Lapilli (Nodular) Tuffs

Characterized by a dark grey to brown matrix of abundant secondary biotite with subrounded 1 to 10 mm nodules of light green associated with variable concentrations of felsic angular fragments. This unit contains variable to pervasive silicification and has been shown by petrographic studies to be altered by potassium feldspar.

This unit is common along the northern border of the detailed grid over a slope distance of 300m and is in gradational (due to intensity of alteration) contact with unit 3. Relict textures in Unit 3 suggest that at least part of Unit 3 is intensely altered unit 4.





Unit 3: Siliceous Felsic Tuff

A light blue grey, fine grained to very fine grained highly silicified and potassic altered and massive rock. The rock appears to have been bleached and weathered surfaces have a distinctive yellow-brown gossanous appearance due to oxidation of finely disseminated pyrite.

This unit is often mineralized with sphalerite \pm galena and lesser chalcopyrite and produced the bulk of the gold and silver rock sample anomalies during Aranlee's 1989 field program. It is situated immediately south of Unit 4 in an east-west band on the detailed grid and occurs over a slope distance of 200m. Since unit 3 may be essentially an alteration feature, futre mapping should concentrate on defining the contact relationships between unit 3 and 4.

A similar lithological unit occurs on the south facing slope of Southridge which may, in part, be the down-dip extension of Unit 3. It occurs over a much wider slope distance, however, and a steepening dip would be required to account for the additional area of the outerop, unless this exporsure is related to buried, presently unknown intrusive. The unit is fairly massive and dip measurements can not be made. <u>More detailed mapping from closer spaced lines would be necessary to more fully understand the geometry of Unit 3</u>.

Unit 2: Siliceous (Sugary Textured) Felsic Tuff

A white, fine to medium grained sugary textured, very siliceous felsic tuff. As with Unit 3, into which this unit is gradational, the protolith is not clear but is thought to be the dacite nodular tuff. Quartz eyes have not been recognized in hand specimens. Silicification has obliterated most original texture and the unit appears as a massive, non-bedded volcanic. Ghosted white tuff fragments (feldspar?) are sometimes observed.

A distinctive red (hematite?) colouration on weathered surfaces is common within this unit. The pyrite content is very low (<<1%) and the rock appears to have been bleached. This unit outcrops in an east-west band south of Unit 3 just on the south facing slope from the ridge forming the topographic high on the detailed and reconnaissance grids.

Unit 1: Boulder Conglomerate

Well rounded granitic boulders occur within a (matrix supported) dark green, chloritized andesitic matrix. This unit is only seen on the reconnaissance grid on the east and north-east sides and likely represents a lower portion of the Peninsula Formation within the gridded area.



LEGEND

<u> </u>	ANDESITE TUFFS
لگ	- MEDIUM GREEN FINE GRAINED SILICIFIED MATRIX
	- ADUNUARI FELDOFAN INFRACEOUS FRAGMENTS - O-SX FINE GRAINED WAFIC TUFFACEOUS FRAGMENTS
7	PALE GREEN TUFF
	- YERY FINE GRAINED WITH GHOST FELDSPAR TUFFACEOUS FRAGMENTS
	- NAT BE BANUED - NOT MAPPED IN SURFACE EXPOSURE
	BIOTITE - HORNBLENDE DIORITE
	XENOLITHIC BLOCKS OF ANDESITE NEAR CONTACT.
5	A - ANDESITE FLOWS / HIGH LEVEL INTRUSIVES
	- GREY BLACK TO GREENISH BLACK IN COLOUR.
	- EXTENSIVE CHLORITE ALTERATION, LESSER EPIDOTE ALTERATION - PYPHTE ALMOST UNIVERSALLY PRESENT, 1-15% DISSEMINATED
	AND LOCALLY RICHER ON FRACTURE SURFACES.
	- SAME LITHOLOGY AS "54"
	- COMMONLY PORPHYRITIC - "FELDSPAR PORPHYRYS" - CONTACT VARY BETWEEN DIFFUSE GRADATIONAL
	TO SHARP AND OFTEN SHEARED - CUTS ALL OTHER LITHOLOGIES (EXCEPT DIORITE?)
	DACITIC - ANDESITIC LAPILLI TUFFS
· · · · ·	- COARSE DARK GREY TO PURPLISH IN COLOUR - NODULAR FORM COMMON IN BRILL CORE.
	OFTEN LOGGED AS NODULAR TUFF - SECONDARY BIOTIFE COMMON, GIVING WELL DEVELOPED FABRICS
	- GENERALLY SHOW PERVASSIVE SILICIFICATION, PYRITIZATION AND LESSER KFELDSPAR ALTERATION
3	SILICEOUS FELSIC TUFFS
	- MAY INCLUDE MINOR HIGHLY ALTERED SEDIMENTS? - GENERALLY PERYASSIVE SULCIFICATION, PYRITIZATION
	AND KFELDSPAR ALTERATION - STRONGLY BLEACHED, LEACHED, WITH DISTINCTIVE YELLOW
[<u> </u>	BROWN GOSSANOUS WEATHERED SKIN IN STRONGLY ALTERED AREAS SILICEOUS (SUGARY TEXTURED) FELSIC TUFFS
L	- VERY SILICEOUS, WHITE SUGARY TEXTURED
	- SERVICE COMMON - PINK FA-DATOR STAIN DISTINCTIVE ON WEATHERED SURFACE
	- GRADATIONAL WITH (3) IN SOME AREAS
لنا	- WELL ROUNDED GRANITIC BOULDERS FLOATING
	IN DARK CHLURIIZED ANDESIIC MAIRIA
	SYMBOLS
\sim	0 001CR0P
=	SNOW CHUTE / TOPOGRAPHIC DEPRESSION
	- BOAD LITHOLOGIC CONTACT
	~ FAULT
	ALTERATION
	MINOR PYRITE, 1% MINOR TO MODERATE SULCIFICATION
I	MODERATE PYRTE 1-4%, WINOR TO MODERATE SILICHTCATION
•	E ABUNDANT PTRITE 4-SUX, MODERATE TO STNONG SUSCINCATION
	MINERALIZED OUTCROP AREAS
	ABUNDANT SPHALERITE AND/OR GALENA
	- PTRILE > 10% - STRONG SILICIFICATION, OFTEN WITH QUARTZ-VEINLET FLOODING
	- STRONG K-FELDSPAR ALTERATION
	Fis FUCHITE
	up unallur (Riiz
	MH HORE RESOURCES ITD
	HOT SPRING PROPERTY
	SOUTHRIDGE AREA
	LDOILMALE LOCATIONS
	PROJECT NO: SCALE. DATE. FIGURE:

DEC. 1996

AS SHOWN

H254101

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Alteration

The volcanic package consisting of Units 2, 3 and 4 display the strongest alteration of all rocks mapped. Unit 5 displays strong local orthoclase alteration while Unit 3 contains both orthoclase and intense silica alteration. The silicification becomes stronger and orthoclase weaker towards the south (up stratigraphy) until in Unit 2 the rock is totally silicified and most of original textures destroyed. Silicification, as with orthoclase alteration, is pervasive with gradational contacts.

The origin of the alteration may, in part, be related to the intrusion of the Coast Plutonic complex diorites or unrecognized younger intrusives with the gradational change from one alteration type to the next related to the contact aureoles. Other volcanics on the property show minor to moderate silicification but nowhere near the intensity of Unit 2, 3 and 4.

STRUCTURE

The volcano-sedimentary sequence has been metamorphosed to biotite metamorphic grade with variable development of a tectonic fabric. Where recognizable, bedding is sub-parallel to or shallower than the fabric, dipping at 30-50° to the SSW or SSE. There is no evidence of major tight fold repetition within the map area.

Late-stage faulting is important, probably largely of post-plutonic, Tertiary age. Gold mineralization elsewhere in the Harrison Lake Area is related to this Tertiary Event. A major dextral northeast-trending fault controls the orientation of Sloquet Creek and cuts the nose of the ridge between North Sloquet and Simpson Creeks. Hot springs in Sloquet Creek may be related to this fault. Several sub-parallel northeast to north-trending faults may control the line of snow chutes to the west. One such structure exposed by trenching near 30+125N and 30+305E is strongly altered and mineralized. Several southwest dipping structures have also been recognized in the area and may bear a close relationship to mineralized zones.

The Southridge Zone west of Line 31+500E is underlain by an east-west striking, moderately south dipping sequence of intermediate to felsic volcanic tuffs to lapilli tuffs. These volcanics have been pervasively silicified and orthoclase altered and are cut by numerous and esitic porphyry dykes trending north to northwest. Steeply dipping north-south trending faults have displaced some lithologies by a few tens of metres. A blue-grey silicified felsic tuff unit (Unit 3) has been shown by past surveys to contain sphalerite-galena showings. Present mapping assigns the gold showings to this unit and defines it to be the most potentially economic horizon on the Southridge.

East of Line 31+500E and separated by a major north - south gulley is a massive andesitic flow/tuff unit which is underlain by a boulder conglomerate. No structural measurements were recovered from these units. This area represents a significant faulted uplift within the Gambier Group with subsequent erosion of the Brokenback Hill Formation and exposing the underlying Peninsula Formation. These rocks are not as altered as those west of Line 31+500E indicating the uplift and erosion to be a late stage event. No mineralization except minor pyrite was seen within this package of rocks.



TRENCHING (IN 1988 & 1989)

Mineralization and Lithogeochemistry

A high proportion of the volcanic rocks in the claim area are pyritic with variable enrichment in base and precious metals. The property geology indicates major potential for volcanogenic massive sulfide or stockwork base metal-gold mineralization (comparable to some of the zones at the Britannia Mine) and for structurally controlled mesothermal or epithermal gold mineralization related to the Late Cretaceous or Tertiary structures.

Exploration by Cominco and Aranlee prior to 1989 identified widespread base and precious metal enrichment in the pyritic felsic volcanics on the ridge between Simpson and North Sloquet Creeks. Several sphalerite-galena showings were located on this ridge and north of Simpson Creek, some with significant gold values (max. 392 ppb Au). Higher gold values in Dan's Showing south of North Sloquet Creek focused follow-up work in this area. This led in 1989 and 1990 to the outlining of an extensive, discontinuous, mineralized zone extending at least 1.5 km east-west along strike and up to 100m across strike. This area is referred to as the North Sloquet Creek Prospect.

North Sloquet Creek Prospect, Figure 8

Dan's Showing (30+000N + 30+050E)

Five trenches were blasted across the showing in 1988. This zone outcrops over a horizontal area of 55 by 35 metres and is covered on all sides. Vertically it is exposed through a height of 25 metres on the steep hillside. Hand trenching gave values of up to 0.238 oz/ton Au over 1m (0.174 oz/ton over 2m). In a different area, one part of a trench gave 8 metres averaging 0.052 oz/ton Au. Narrow galena-sphalerite fault zones give up to 15 oz/ton Ag and 25% combined Pb/Zn over 1 metre (Shearer, 1988). The host rock is Unit 3a altered rhyolitic tuff cut by an intense millimetre scale quartz veining network. Sulfides occur as disseminations and within veins, averaging 5-10% but with local zones of up to 40-60% sulfide. The richest mineralization occurs in a shallow (35°) south-dipping 0.2 to 1m breccia zone.

The extent of the mineralized area is uncertain. Disseminated sphalerite-galena mineralization occurs in outcrop along strike to the east for 130m, with grab samples assaying up to 3.37 g/t Au (0.098 oz/ton Au). Mineralized float occurs 150m west of the showing, where outcrop is absent. Exposure is also absent downhill to the north. To the south, the zone passes up into unmineralized andesite.

The evidence suggests a primary stratabound metal enrichment concentrated into later structurally controlled zones. The disposition of higher grade samples within the trenched area may reflect a 150-160° mineralized zone strike related to 140-150° shear zones exposed in the trenches. The relative importance of structural and stratigraphic controls requires additional investigation.

Lower Zone (30+100N + 30+035E)

The 'Lower Showing' lies 100m north-northwest and downhill from Dan's Showing. Abundant pyrite, galena and sphalerite occur as disseminations and in irregular massive zones and veins in silicified dacitic tuff. Grab samples assay up to 1.26 g/tAu (0.037 oz/ton). A strike of 160-170° would link the zone with Dan's Showing through intervening soil anomalies (up to 155 ppb Au). Prospecting along strike to the east from the lower showing has established an extensive stratabound zone (250 x 50m) of variably silicified tuffs with widespread pyrite-galena-sphalerite mineralization, concentrated in northwest-trending shear zones. Grab samples assay up to 0.7 g/t Au (0.02 oz/ton).

The Lower Zone continues east into the 350 E showing and probably continues along strike through the 600 E, 900 E, 1150 E and 1400 E Showings (below).

<u>350 E Showing</u> (30+125N + 30+350E)

Excavator trenching of a northwest-trending Au soil anomaly (to a maximum of 420 ppb Au) revealed a fault zone of intensely sericitic and argillic altered pyritic tuff at least 13m across. Maximum gold values in 1 metre channel samples were 0.068 g/t (0.002 oz/ton). This passes east into 9m of silicified tuff with up to 30% pyrite-chalcopyrite-sphalerite. Maximum 1 metre channel sample assays from the zone were 0.48 g/t Au (0.014 oz/ton), 26.7 g/t Ag (0.78 oz/ton), 1.04% Cu, 1.35% Zn and 0.14% Pb, A 4m zone assayed at 0.39 oz/ton Au, 18.3 g/t Ag, 0.62% Cu, 0.64% Zn, 0.11% Pb.

A 30 metre section of variably silicified sphalerite-bearing pyritic tuffs was exposed east of this Cu-Zn zone. This mineralization represents the eastward extension of the Lower Zone, with up to 20 metres dextral offset across the fault. Maximum values from 1 metre channel samples were 0.206 g/t Au (0.006 oz/ton) with 22.7 g/t Ag (0.66 oz/ton) and 2.0% Zn.

600 E Showing (30+170N + 30+600E)

This showing occurs on the eastward extension of the Lower Zone and marks the start of richer gold mineralization within the zone. Grab samples of pyrite-galena-sphalerite mineralization in silicified dacitic tuffs assay up to 4.2 g/t Au (0.122 oz/ton). Recent channel sampling across the zone indicated 7 metres assaying 2.4 g/t Au (0.07 oz/ton) with 2 metres at 4.56 g/t (0.134 oz/ton). Trenching is required to establish the continuity of the mineralization.

900 E Showing (30+110N + 30+905E)

The main mineralized zone at 900 E is 3-5m across and exposed over 15m of strike at about 145° Az. It contains abundant (10-40%) pyrite, galena and sphalerite, disseminated within quartz vein networks hosted by silicified dacitic tuff. Mineralization is extensive but its continuity is uncertain due to deep oxidation and leaching.

Twelve grab samples from the 15 x 20 metre outcrop area average 2.45 g/t Au (0.071 oz/ton) and 33.16 g/t Ag (0.967 oz/ton). The maximum assay was 6..88 g/t Au (0.201 oz/ton) with 68 g/t Ag (1.983 oz/ton) and more than 1% Pb. Limited channel samples have been taken across the main zone. The best intersections were 1 metre at 6.38 a/t Au (0.186 oz/ton) and 2 metres at 2.76 g/t Au (0.805 oz/ton). Eight samples across the zone average 2.74 g/t Au (0.080 oz/ton) and 60.7 g/t Ag (1.769 oz/ton), excluding samples of an unmineralized 0.5m andesitic dyke cutting the zone.

The area is presently inaccessible to the excavator so that blast trenching and channel sampling are required to establish continuity and grade mineralization. The outcrop is deeply leached and grades may increase in fresh rock as was the case at Dan's Showing.

Exposure is absent along strike from the main zone. Its projected extension to the northwest is marked by a strong topographic break in craggy outcrops to the southwest. These comprise variably silicified pyritic tuff with common galena-sphalerite mineralization, forming part of the stratabound Lower Zone extending west to the 600 E Showing. Preliminary grab samples assay up to 2.9 g/t Au (0.08 oz/ton). Continuity of mineralization is difficult to establish due to deep oxidation and leaching. None of this area is accessible to tracked excavator and should be further explored by hand trenching, channel sampling and drilling.

1300 - 1500 E Showing Figure 9 (30+150N and 31+300E to 31+500E)

Mineralization in the eastern grid area was discovered as a follow-up to highly anomalous soil geochemistry on the 30+000N line from 30+750E to 31+500E. Chip samples from sub-outcrop at 31+500E assayed 3840 ppb Au. Follow-up prospecting revealed pyritic silicified tuff with extensive sphalerite-galena. Mineralization in the vicinity at 1100 and 1400E returned values of 4.35 g/t (0.127 oz/ton) and 12.59 g/t (0.367 oz/ton) Au. Five grab samples from the 20 x 30m outcrop area at 1400E averaged 5.71 g/t (0.149 oz/ton) Au.

A tote road was constructed to the ridge top at 31+400E by tracked excavator and the area between 31+100E and 31+500E was trenched at this level. In total, 550m of trenching was completed with channel chip samples taken at 1 m intervals (in most cases). The trenching successfully delineated an apparently northeast trending zone, 40 m x 150 m, of intensely silicified pyritized rhyolitic tuff breccia with pervasive quartz veinlet flooding and alteration and disseminated and veinlet sphalerite-galena. Assay results (Table 2, Figure 9) were in the general range 0.02 to 0.1 oz/ton Au, 0.1 - 2 oz/ton Ag and 0.01 - 1% Pb and Zn through the zone.

The western and southern extensions of this mineralized area were not accessible to the excavator and will require blast trenching. Grab samples from the area west of 1300 E have assayed up to 12.07 g/t (0.352 oz/ton) Au with broad coincident soil geochemical anomalies.

A trench was dug further west on the ridge between 30+750E and 30+920E south of the main mineralized zone (900 E Showing), along the soil anomaly on the 30+000N line (up to a maximum of 750 ppb Au). This exposed a continuous zone of silicified pyritized tuffs with local minor sphalerite-galena. Grab samples assay up to 0.82 g/t (0.024 oz/ton) Au with chip samples up to 0.48 g/t (0.014 oz/ton) Au over 3 metres.

Controls on Mineralization in the Sloquet Area

Exploration to date has established an apparently stratabound zone of gold and base metal mineralization in intensely altered volcanic rocks south of North Sloquet Creek. North to northwest-trending structures within the zone are associated with higher grade mineralization. Some of these structures are obviously late, such as the fault zone at 350 E, but some may be significantly earlier.

The mineralization observed to date is not volcanogenic-exhalative but is of replacement stockwork type. If the mineralization is related to submarine volcanism, the observed enrichment may be peripheral to higher grade massive sulfide zones which may be amenable to geophysical detection. Recent soil and lithogeochemistry show increasing gold enrichment east of the 900 E Showing, indicating a higher grade section of the stratabound zone.

			TABLE 2
3	1 + 300 to 31 + 5	00 E	Showing Au/Ag Trench Intersections
Trench	Intersection		
T2	19m	(<i>a</i>)	0.046 oz/ton (1.57g/t) Au
		0	1.132 oz/ton (38.8 g/t) Ag
			includes: $6m$ at 0.096 oz/ton (3.29 g/t) Au
			2.48 oz/ton (85.35 g/t) Ag
Т3	12m	a	0.023 oz/ton (0.78 g/t) Au
		-	0.257 oz/ton (8.80 g/t) Ag
	19m	@	0.039 oz/ton (1.33 g/t) Au
		-	0.543 oz/ton (18.30 g/t) Ag
			includes: $4m$ at 0.065 oz/ton (2.2 g/t) Au
			0.541 oz/ton (18.56 g/t) Ag
T4	$7 \mathrm{m}$	@	0.016 oz/ton (0.54 g/t) Au
			0.629 oz/ton (21.56 g/t) Ag
Т5	20m	@	0.063 oz/ton (2.16 g/t) Au
		_	2.31 oz/ton (79.18 g/t) Ag
			includes: 5m at 0.106 oz/ton (3.63 g/t) Au
			3.430 oz/ton (116.5 g/t) Ag
T6	20m	@	0.029 oz/ton (0.99 g/t) Au
			1.37 oz/ton (46.96 g/t) Ag
			includes: 13m@ 0.035 oz/ton (1.2 g/t) Au
			1.37 oz/ton (46.96 g/t) Ag
ľ7	15 m	@	0.032 oz/ton (1.09 g/t) Au
			1.9 oz/ton (65.1 g/t) Ag
Г8	Grab samples		0.092 oz/ton (3.15 g/t) Au) over
			6.57 oz/ton (225.2 g/t) Ag) 90 cm
			0.142 oz/ton (4.867 g/t) Au) over
			13.4 oz/ton (459.3 g/t) Ag) 75 cm
			0.230 oz/ton (7.88 g/t) Au) over
			8.96 oz/ton (307.4 g/t) Ag) 65 cm
19	7m	@	0.061 oz/ton (2.09 g/t) Au
			3.207 oz/ton (45.9 g/t) Ag
۲10	Grab sample		0.048 oz/ton (7.88 g/t) Au
	-		1.34 oz/ton (45.9 g/t) Ag
Г11	4m	@	0.026 oz/ton (0.891 g/t) Au
			1.632 oz/ton (55.94 g/t) Ag
Refer to Figure	9 for details of trend	ching	

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DIAMOND DRILLING (1990 & 1997)

TABLE 3							
Drill Hole Co-ordinates							
DDH#	Latitude	Departure	Elevation	Azimuth	Dip	Total Length (m)	
NQ90-1	30+335N	31+083E	746 m	360°	-85°	160.60	
NQ90-2	30+012N	30+886E	950 m	360°	-45°	218.20	
NQ90-3	30+038N	31+101E	882 m	360°	-50°	276.50	
NQ90-4	30+106N	31+400E	833 m	360°	-52°	133.20	
NQ90-5	29 + 971N	30+809E	970 m	360°	-60°	215.20	
NQ90-6	30+010N	30+884E	950 m	-	-90°	54.00	
NQ90-7	30+013N	30 +88 9E	950 m	-	-90°	<u>194.20</u>	
	Subtotal 1990 1,251.90						
						(4,107.23 ft)	
HS97-01	30163.00	31410.00	858m	050°	-57	144.60	
HS97-02	30163.00	31410.00	858m	230°	-55	148.13	
HS97-03	30163.00	31410.00	858m	050°	-90	127.00	
HS97-04	30191.00	31307.00	872m	050°	-57	163.32	
HS97-05	30091.00	31307.00	872m	050°	-90	160.32	
HS97-06	30038.00	31101.00	881m	050°	-57	227.69	
HS97-07	30038.00	31101.00	881m	050°	-90	175.76	
HS97-08	30012.00	30882.00	943m	050°	-55	104.24	
HS97-09	29970.00	30774.00	975m	050°	-57	231.65	
HS97-10	29970.00	30774.00	975m	060°	-90	270.05	
HS97-11	30050.00	31020.00	906m	050°	-60	230.73	
					Total 1997	1,983.49	
						(6,507.43 ft)	
					Grand Total	3,235.39	
			······································			(10,614.66 ft)	

Table 3 lists the drill collar co-ordinates and final hole depths for the 1990 drilling:

Drill collar locations and surface projections are shown on Figure 8 and 9.

<u>NQ90-1:</u>

DDH NQ90-1 was drilled from the access road at 30+335N on Section 31+100E (Figure 8). The target was a combined I.P. and Zn-Au soil geochemical anomaly. No outcrop had been mapped in this area.

The drill hole intersected a sequence of intermediate (dacitic) lapilli (nodular) tuffs crosscut by several large andesitic dykes. The lapilli tuffs are highly pyritic (5 - 12%) and correlate well with the I.P. responses. The soil geochemical anomaly could not be explained by results of NQ90-1 hence a larger downslope dispersion pattern than previously believed is suggested, with the source of the anomalous Zn-Au response uphill of NQ90-1.

<u>NQ90-2</u>

DDH NQ90-2 was drilled from the spine of Southridge at 30+012N on Section 30+900E (Figure 8 and 10) to test rock and soil geochemical anomalies coincident with I.P. highs. It intersected a sequence of highly siliceous, felsic, tuffs cross-cut by numerous andesitic dykes and an andesitic nodular tuff (Figure 10). Alteration is intense, pervasive silicification and is common to all holes. Mineralization consists of disseminated pyrite throughout and sphalerite and galena contained within pervasive quartz and veinlet zones. Au and Ag values are generally coincident with the Zn and Pb. Highest values (in separate samples) were 5.06% Zn over 1.5m, 0.92% Pb over 1.5m, 131.0 g Ag over 1.5m and 3.6 g Au over 1.5m. The best sustained intersection was 839 ppb Au over 57.7m within a 119m section averaging 584 ppb Au. The hole was stopped short of it's planned depth due to continuous losses of downhole water pressure and a broken bit at the bottom of the hole (Wilson, 1991).

<u>NQ90-3</u>

DDH NQ90-3 was also drilled from the spine of Southridge at 30+038N on Section 31+100E (Figure 8). It tested coincident soil and rock geochemical anomalies with I.P. chargeability highs. It was extended to test a second I.P. anomaly with coincident Pb-Zn soil geochemical highs.

The drill hole intersected a sequence of siliceous felsic tiffs, and esitic dykes and "upper" and esitic nodular tuffs. The drill hole bottomed in and esitic lapilli (nodular) tuff not seen in NQ90-2.

Mineralization in this hole is principally sphalerite-galena in pervasive quartz and vein zones seen mainly at the top of the hole. Best results in a single sample ran 2.32% Zn, 0.41% Pb, 0.47% Cu, 46.2 g Ag and 2.25 g Au over 1.5m. The best sustained intersection was 776 ppb Au over 25.2m.

The target I.P. anomalies were explained by this hole as was the upper soil and rock geochemical anomaly. The lower soil anomaly centred on 30+325N was not explained by drilling and is now thought to be caused by down slope movement.

<u>NQ90-4</u>

DDH NQ90-4 was drilled at 30+106N on Section 31+400E (Figure 9) from the widest part of the Southridge spine under the 31+500E trenched area to test highly anomalous trench rock results in the 1989 work program. Also tested was a coincident I.P. chargeability zone flanking the area of known mineralization.

The drill hole intersected similar lithology to Holes NQ90-2 and 3 with a siliceous felsic tuff intruded by andesitic dykes and interbedded with an andesitic lapilli (nodular) tuff. Sphalerite and galena are present from trace to 1% over 1.5m lengths occurring mainly within quartz flood/veinlet zones, especially from 78.3m to 91.2m. Gold values are associated with the quartz zones as are silver values. Best results for individual elements are 2.65% Zn over 0.3m, 0.45% Pb over 0.3m, 0.25% Cu over 0.3m, 161.8 g Ag over 0.3m (Zn, Pb, Cu and Ag from same sample) and 1.55 g Au over 1.5m. The best sustained result for gold was 615 ppb Au over 66 m.

All I.P. and geochemical targets were explained by this hole, however, the stratigraphic similarities in Holes NQ90-2, 3 and 4 indicate that a second lesser mineralized horizon would have been potentially intersected by an extension of NQ90-4 to 200 m depth.

<u>NQ90-5</u>

DDH NQ90-5 was drilled at 29+971N on Section 30+800N (Figure 8), to undercut anomalous soil geochemistry on strike with a favourable intersection in NQ90-2. No I.P. surveying was completed on this section.

The drill hole intersected uphole sections of fine grained siliceous felsic tuffs which were finer grained than in NQ90-2. Below are sections of siliceous, felsic tuff cross-cut by post mineral andesitic dykes and interbedded with an andesitic lapilli (nodular) tuff.

Pyrite is ubiquitous from 1 to 5% and sphalerite (• galena) is present in quartz vein and flood zones from trace to 3% over sample widths to 1.5m. Best results for individual elements (in separate samples) are 1.83% Zn over 1.5m, 0.83% Pb over 1.5m, 0.17% Cu over 1.5m, 22.1 g Ag over 1.5m and 870 ppb Au over 1.5m. The best sustained Au results are 343 ppb Au over 13.5m.

The mineralized zone in NQ90-5 is weak in comparison to NQ90-2 but does occur at the same physical (downdip) location as Hole #2. By comparing Au results in these two holes it is apparent that the potential mineralized horizon should continue in NQ90-5 to approximately 245m down hole, another 30m beyond the present end of hole.

<u>NQ90-6</u>

DDH NQ90-6 was drilled vertically beneath NQ90-2 at 30+010N on Section 30+900E (Figure 8 and 10) to test the downdip extension of Hole #2's mineralized horizon. The hole was abandoned at 54 m after a fault zone at 34 m caused excessive squeezing on the rods. Several attempts to wash the hole were unsuccessful and two bits were destroyed trying to re-penetrate the fault zone.

The hole was drilled along the contact of siliceous felsic tuffs with a near vertically dipping andesite dyke. No mineralization was encountered throughout it's length.

<u>NQ90-7</u>

DDH NQ90-7 was a re-drill of NQ90-6 at 30+013N on Section 30+900E (Figure 8 and 10) in an attempt to penetrate the fault zone in order to test NQ90-2's downdip extension of mineralization. Although the fault zone was intersected no problems were encountered coring through it.

The drill hole intersected similar lithology as the top of NQ90-2, of siliceous, felsic tuff down as far as 105m. At 105m a quartz-carbonate fracture fault zone separates felsic lithology from andesitic lapilli (nodular) tuff just above the anticipated intersection of the mineralized horizon. No mineralization was found and it is felt that a block of the basal tuff was faulted in, disrupting the mineralized sequence (Figure 10).

The hole was terminated once the projected downdip extension of the mineralized horizon had been penetrated. In other holes the mineralized horizon cross-cut several lithologies (except andesite dykes) hence it was anticipated that the horizon would be cored in Hole #7. A fault disruption is therefore suspected for the absence of the expected mineralization.

Diamond drilling in 1997 was successful in discovering several new, extensive mineralized zones of highly silicified, epidotized and potassic altered rock as follows:

TABLE IV

Results of 1997 Diamond Drilling

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	meacs				
	from	to	length (m)	Au g/tonne	Ag g/tonne
HS97-01	3.05	38.01	34.96	1.290	42.26
including	30.49	36,52	6.03	2.660	43.16
HS97-01	94.77	97.53	2.76	1.300	37.40
HS97-02	3.05	27.88	24.83	0.900	16.22
HS97-02	47.89	52,65	4.76	0.660	8.63
HS97-03	3.66	-26,00	22.34	1.163	32.96
HS97-03	34.85	51.40	16.55	1.305	14.81
HS97-03	73.50	110.00	36.50	0.575	10.87
HS97-04	3.55	22,05	18.50	0.206	8.80
HS97-04	110.25	119.08	8.33	0.603	8.81
HS97-04	145.70	153.00	7.30	0.889	11.08
HS97-06	65.00	68.44	3.44	1.091	8.23
HS97-07	46.00	49,00	3.00	1.660	12.03
HS97-09	29.00	59.00	30.00	0.237	20.69
HS97-10	61.00	103.00	42.00	0.509	10.06
HS97-10	109.52	113.00	3.48	0.572	22,91
HS97-10	135.00	142.50	7.50	0.510	12.60
HS97-11	71.00	74.00	3.00	1.378	9.60
HS97-11	92.00	103.00	11.00	2.13	8.31*

*2.24% Zn

Diamond drillholes HS97-01 to HS97-05 are plotted on Figure 11 (in pocket). Hole HS97-03 (-90°) shows elevated gold values down to a depth of below 750m elevation contained in the dacitic nodular tuff. The higher gold values in Hole HS97-04 (-57°) suggest that the mineralized horizon is not simply a south dipping sheet. Vein orientation and sections of barren andesite dyke/sills are important considerations. the elevated precious metal values in Hole HS97-05 (-90°) has split into an upper zone 0-60m and then 103-133. The lower zone is mainly within the dacitic nodular tuff and not the intensely altered siliceous felsic tuff. A conclusion of the 1997 program is that the Unit 3 and Unit 4 are in fact the same unit only exhibiting different intensities of alteration. There are at least 3 phases of quartz veining and mineralization.

Epidote and MoS_2 mineralization was noted in most holes drilled in 1997. The largest section of silicification and associated molybdenite mineralization is in hole HS97-06 (Figure 12) between 186m to 210m in an altered hornfels unit with slightly elevated silver values, suggestive of a nearby hidden intrusive body. The precious metal zone in hole HS97-06 (Figure 12) is roughly between 58m and 68m in dacitic nodular tuff which contrasts to the precious metal zone in HS97-07 between 40m and 54m in siliceous felsic tuff.

The elevated gold/silver values in holes HS97-9 and HS97-10 (Figure 14) are slightly off-set by faulting and extend in hole HS97-10 from approximately surface to 144m but higher grade between 60m to 144m. There is a smaller elevated gold zone in HS97-10 225m to 232m. Since holes HS97-9 and HS97-10 are the farthest west holes drilled to date, it appears that the precious metal system, although very low grade as presently known, is increasing in thickness to the west and south.

Drill Summary

Drill hole NQ90-4, 3, 2 and 5 (east to west) showed similar stratigraphic sequences of silicified felsic tuffs of probable dacitic to rhyolitic origin, interbedded with and floored by an andesitic lapilli (nodular) tuff. All rocks are cut by numerous andesitic dykes. A few intervals of andesitic tuff are recognized but it is not a common rock type. All rocks are moderately to highly silicified, and fracturing/faulting is relatively common. Frequent open spaces not easily evident in drill core was noted due to downhole losses of water pressure during drilling. All significant mineralization is found in these four holes.

Drill hole NQ90-1 tested down-stratigraphy from Holes #2 to 5 and found andesitic lapilli (nodular) tuffs with large andesitic dyke intervals. No economic mineralization was encountered. Drill holes NQ90-6 and 7 tested downdip of Hole #2 and cored a top section of felsic tuffs and a faulted in section of nodular tuffs which displaces the expected mineralized horizon.

The diamond drill program tested downdip projections of coincident soil geochemical anomalies/mineralized outcrop exposures and I.P. chargeability anomalies between Sections 30+800E and 31+400E. The best Au results were obtained in Holes NQ90-2 (839 ppb Au over 57.5m), NQ90-3 (776 ppb Au over 25.2m) and NQ90-4 (615 ppb Au over 66m) on Sections 30+900E, 31+100E and 31+400E respectively.

Gold mineralized zones, recognized by the presence of sphalerite and galena, are found within quartz flooded and veined drill core. This quartz alteration is seen in both siliceous felsic tuffs and andesitic lapilli (nodular) tuffs but is not seen in the numerous andesitic dykes. The mineralization is not diminished by the extensive, pervasive silicification hence is felt to be contemporaneous with or post silicic alteration, and pre-volcanic dyking. The source area of the mineralization, however, was not discovered in drill core.

Mineralization was thought by Wilson (1991) to be related to hydrothermal activity associated with the igneous intrusions. His model envisioned circulating hydrothermal fluids peripheral to igneous bodies producing pervasive silica • potassium feldspar alteration. Additional silica infusion caused quartz veinlets and quarts flood zones to form specific zones which are more common within the felsic tuffs. Numerous fracture zones were noted in drill core which may be related to mineralization although no specific relations could be drawn from this initial drill program. Future drilling should concentrate on structural logging of the core.

Drill targeting of north to northwest trending structural zones is also recommended to ascertain if smaller zones of higher grade mineralization exists within these major plumbing systems. These structural zones may be a late stage feature. Correlating the relative timing of these features should be a priority in future geological mapping.

SOIL GEOCHEMISTRY (Figure 16)

Soil samples were taken on east-west grid lines initially at 10m intervals and later at 20m intervals (Figure 18). Samples were taken on lines 30+300N, 30+250N, 30+200N, 30+150N, 30+100N, 30+000N from 30+000E to 32+000E. Difficult access, poor soil development and other logistical problems prevented complete sampling on these lines. Samples were also taken on a diagonal line from near 30+000N at 30+550E to 30+180N at 31+500E; and along the old logging roads and from 30+000E to 29+500E along line 30+100N.

Samples were analyzed for Au, Ag, Pb, and Zn. Extensive Au anomalies showing close correlation with Ag and Pb, Zn values, define a stratabound mineralized zone. This zone is approximately bounded by the 30+200N to 30+100 N lines and runs from 30+000E to 31+500E. Frequent north to northeasterly trending Au anomalies are also well developed and suggest similar trending structurally controlled potential mineralized zones. The best anomalies are developed over the eastern half of the grid with some values greater than 1000 ppb Au.

During May 1990, a soil geochemical survey was completed on both the detailed and reconnaissance grids at 25 and 50m station spacings respectively. Fill-in sampling on the anomalous reconnaissance lines during early June 1990 followed up the earlier sampling.

Results of sampling together with contoured interpretation are presented on Figure 18 for Au. Determination of threshold levels for contouring were by inspection. Very high backgrounds in specific areas of the entire grid masked the centres of mineralization if thresholds are based on the entire population. Selection of a subset of geochemical data is recommended for additional geostatistical study. ICP 30 element analysis was completed on all samples and this data should be acquired for additional study.

Four areas are recognized as anomalous and worthy of follow-up study. They are the (1) Southridge Anomaly, (2) the J.A.D.S. Anomaly, (3) the Danbus Anomaly, and (4) the Northridge Anomaly as shown on Figure 18.

Southridge Anomaly

The east end of the Southridge Anomaly was trenched by Aranlee Resources and a limited amount of diamond drilling was conducted by Noranda. It is a combined Au, Ag, Pb, An, Cu anomaly occurring in an east-west direction from Line 30+100E to 31+500E between 30+000N and 30+500N. The Anomaly is most broadly seen as a Pb anomaly and most narrowly as a Cu anomaly. Pb values reach a high of 3390 ppm with seven other stations above 1000 ppm Pb. Ag values show the second strongest anomaly and closely track high Pb values. Results to 102.5 ppm Ag are seen with eighteen other results above 10 ppm. Although there is a suggestion of downslope dispersion with some of the highest Ag results, the strongest trend is across slope on an E-W direction.

Gold has the third strongest response with highest values of 1690 and 1100 ppb Au. The bulk of the anomaly which extends from 30+500E to 31+500E is above 100 ppb Au with large areas above 200 ppb Au. The anomaly has two centres defined by:

1) 30+900E to 31+200E from 30+000N to 30+250N and in an east - west direction; and

2) 31+200E to 31+400E from 30+300N to 30+600N with a northeast azimuth. The later centre is also seen as a Ag anomaly but not in Pb, Zn, Cu values.



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	GEOCHEMICAL RESU GOLD - IN - SOIL	LTS
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Zinc and Cu results, while anomalous, form much narrower bands than Pb, Ag, and Au. Zinc values to 1589 ppm and 1949 ppm are seen along a 100m wide ENE belt from 30+100E, 30+200N to 30+300N to 31+200E, 30+500N to 30+600N and open to the north across the creek. Cu results follow the familiar east-west band from 30+100N to 31+000N from 30+100E to 30+300E but is more sinuous and erratic. It does, however, follow the highs of all other elements.

The best values generally track Unit 3: blue-grey siliceous felsic tuff. This unit also has the highest number of sphalerite-galena-chalcopyrite showings with corresponding anomalous gold-silver rock sample results from the 1989 Aranlee survey.

Some of the anomalies are seen within Unit 4: purple and esitic lapilli tuff, however, downslope dispersion on the 30-50° hillside may tend to extend the anomaly beyond the source area. This area also corresponds to a quiet ground magnetometer response and a high background I.P. response.

The geochemical survey has shown that Unit 3 is the primary unit of interest and that attention should be directed to the area between 30+100E and 31+500E from 30+000N to 30+300N. The second gold anomaly in the 31+200N to 31+400N area is within a no outcrop zone in deep overburden. Detailed studies will be required in this thickly treed area to determine if this is a transported anomaly.

J.A.D.S. Anomaly

The J.A.D.S. Anomaly is roughly situated between 30+600E and 31+000E from 29+350N to 29+700N and is a Au, Ag, Pb, Zn anomaly with spotty Cu values. Au highs to 1550 ppb, Ag highs to 30.9 ppm, Pb highs to 816 ppm and Zn highs to 701 ppm define a northeast trending anomaly centred within felsic tuffs showing minor pyrite. This area has been assigned a Unit 3 rock unit although further mapping is required to determine it's relation to the Southridge Unit 3.

Geological mapping to date has only been on the even numbered 200m spaced lines. Additional detailed mapping and prospecting are required over this zone which shows a quiet magnetometer signature similar to Unit 3 on the Southridge Anomaly.

Danbus Anomaly

The Danbus Anomaly occurs between 32+000E and 32+400E from 29+500N to 29+700N and is primarily a Zn anomaly with spotty, low level Au values. It occurs within intermediate volcanics believed to be related to the Peninsula Formation. The area is of secondary importance and is mentioned only for completeness.

Northridge Anomaly

Three lines extending north across North Sloquet Creek to near the crest of the Northridge encountered spotty but anomalous Au results to 400 ppb. It occurs within a pyritic felsic tuff which should be investigated further. No additional sampling occurred over these lines which were sampled as part of a preliminary follow-up to the airborne geophysics survey.
The soil geochemical survey has shown that a fine grained blue-grey coloured felsic tuff occurring within a low magnetic susceptibility zone is the primary geochemical target on both the Southridge and J.A.D.S. Anomalies. Multi-element signatures demonstrate the target to be 100 to 300 metres wide along the slope and parallel to stratigraphy. The boundaries of the zone(s) for follow-up have been well defined by soil geochemistry.

GEOPHYSICS (Figure 17)

VLF-EM and magnetic surveys were carried out over the Southridge grid area. Readings were taken at 25m intervals on lines 30+000N and 30+050 N from 30+000E to 31+800E, on 30+100N and 30+200N from 30+000E - 32+000E, and on line 30+000N from 30+000E - 30+500E. Readings were also taken along the main logging road.

Anomalies correlate well with both the geology and the geochemical anomalies. Mapped north-south structures show strong EM signatures in many instances with coincident magnetic highs. Of particular interest is a very strong EM anomaly 50m south of the 900E showing, indicating a potentially well mineralized extension to this area.

During June, 1990, geophysical surveys consisting of Total Field Magnetics, Electromagnetics, and Induced Polarization were carried out on the area now covered by the Hot Spring Property. The purpose of the surveys was to aid in mapping of the local geology as well as the identification of potential economic mineral deposits.

The magnetometer and electromagnetic surveys were carried out by Peter E. Walcott and Associates Ltd. of Coquitlam, B.C. while the I.P. survey was contracted to Pacific Geophysical of Vancouver, B.C.

The magnetometer survey utilized EDA Omni 4 magnetometers with readings corrected for diurnal drift by the use of a recording magnetic base station. The EDA system records the Total Magnetic Field with an accuracy of within 1 nanoTesla. Readings were taken every 12.5m.

Horizontal Loop Electromagnetic System

The HLEM survey, performed on selected lines, utilized the Scintrex SE-88 frequency EM system. This system is similar to conventional HLEM systems such as the MaxMin II except that the per-cent ration response of a transmitted and a reference frequency as compared to the usual in-phase and out-phase components is measured. Three transmitted frequencies, 337 Hz., 1012 Hz., and 3037 Hz., were used with a reference frequency of 112 Hz. To maximize the signal level the ratio response is integrated over a time period (usually less than 20 seconds), depending upon local noise levels. Coil spacing between receiver and transmitter was kept at 100m with a station interval of 25m.

Induced Polarization System

The time-domain I.P. survey utilized a Phoenix IPT-1 powered by a Phoenix MG-1 motor generator capable of producing 1.2 kW of power. The receiver unit was an EDA IP-6 unit. The transmitted signal had a period of 8 seconds, 50% duty. The double dipole electrode array was used with dipole spacing of 25m and n=1 to n=6 being recorded. Chargeability was measured in units of mV/V.

Total Field Magnetics

The total field magnetics survey has delineated 7 magnetic terrains, T.1 - T.7. The boundaries of these magnetic lithologies matches the inferred geologic boundaries to a fair degree.



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Two rock units of high magnetic susceptibility are found on the grid. Unit T.3, corresponding to a biotite-hornblende diorite unit, is more active and intense than the other high terrain, T.4, which is interpreted to be an andesite unit. A diorite plug feature is found within T.4.

Unit T.1 exhibits a quiet and low magnetic susceptibility and is speculated to represent either a felsic volcanic or sedimentary unit. T.1 appears to sandwich the diorite unit at the grid's east side. A unit of slightly higher susceptibility, T.2, interpreted to represent rhyolite lies on the east flank of T.1.

The contact between T.5 and T.7 is well defined by the southern extent of the anomalous I.P. zone. Both these units are mapped as felsic tuffs with T.7 more siliceous than T.5. The I.P. pseudo-sections show Unit T.7 to be highly resistive (as expected) and overlying less resistive bedrock. The north flank of T.5 is interpreted to be in contact with another distinct unit, T.6, which corresponds to a mapped dacite-andesite unit.

Two long conjugate faults have been interpreted from the magnetics, with the SW - NE fault defining the western extent of Unit T.5. A short NW - SE fault appears to cut Unit T.4 on its east side.

A N-S trending fault has been interpreted at the grid's south and corroborates better with a mapped fault than the short north - south faults inferred from geology found near the baseline at L. 30+000E and L. 30+200E.

Several interpreted dykes are shown on the basis of the known geology.

SURVEY RESULTS

HLEM Survey

The HLEM survey profiles show a resistive subsurface with no significant variations in conductance with the possible exception of the south end of L30+800E which has a slight increase in sub-surface conductance.

I.P. Survey

The I.P. survey was performed on four lines: L. 30+600E, L. 30+900E, L. 31+100E, and L. 31+400E and the interpretation is shown on the geophysical compilation map (Figure 19). Background chargeability values are considered to be 20 mV/V and less. All four lines yield significant responses over a wide extent within magnetic units T.5 and T.6. Good continuity from line to line of the anomalies is exhibited with sharp termination of the anomalous responses at the contact between Units T.4 and T.5.

The most attractive response is found at near surface on L 31+400E/30+450N. Other attractive targets appear at: L 31+100E/30+262.5N, d= $60m.^1$, L. 30+900E/30+350N, d=10m., and L. 30+600E/30+150N, d=25m.

Hot Spring Property

 $^{^{1}}$ d=60m represents the depth to the top of the target in a direction perpendicular to average topographic slope.

Conclusions

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The ground magnetics survey show good corroboration with the known geology. The HLEM survey has been shown ineffective in delineating conductive zones within bedrock which may host mineralization. Structures control the extent of the lithologic units to a certain degree. More magnetics and I.P. surveys may be done to better define the extent of magnetics units T.5 and T.6 which appear to host the significant I.P. responses.

CONCLUSIONS AND RECOMMENDATIONS

Work to date has resulted in several areas being discovered with gold values greater than 2 g/t (0.06 oz/ton) over widths between 60 to 110 metres. Grades and continuity of mineralization increase toward the eastern grid area on the Southridge part of the property. Diamond drilling indicates that the true thickness of the gold enriched altered volcanics is over 150 metres in thickness as indicated by drillhole HS97-10.

Base metal mineralization with significant gold grades occurs throughout the stratabound Lower Zone from 30+600E to 31+500E and from 50 to 100 metres across strike. The continuity of mineralization is yet to be outlined but there are strong indications of a persistent mineralized area carrying potentially economic gold grades. The extension of the zone south of 29+700N has not been investigated to date but there are deeply oxidized outcrops of silicified tuffs at least as far as 29+650N. The 30°S dip of the stratabound zone projects southward down the south slope of the ridge to Sloquet Creek close to the topographic surface.

Given the extent of the mineralized zone on surface (up to 70,000 square metres from 30+600E to 31+500E) there is major potential for establishment of a high tonnage, low grade gold deposit. The steepness of the terrain and the deep oxidation and leaching widespread in surface outcrops mean that surface trenching is difficult over much of the area and the extent and grade of the zone will only be established by drilling. The limited diamond drilling conducted in 1990 intersected low-grade mineralization over true thicknesses of up to 100 metres.

The rest of the claim area also holds considerable untested potential. In particular, several mineralized showings in Simpson Creek remain to be followed up by trenching and diamond drilling.

An airborne magnetometer and HLEM survey flown over the entire property showed the Southridge Zone to be a highly resistive rock package containing two highly magnetic areas representing the eastern edge of the Pemberton Diorite and a nearby related stock. The airborne magnetometer survey further showed the magnetic intrusives to be more extensive than ground mapping indicated, perhaps due to a thin veneer of volcanic rock with intrusive rock below. The airborne survey further indicated that zones of low resistivity, roughly correlatable with creek beds are present over much of the property. There are some locations though where low resistive zones are not directly related to known creeks and these areas should be followed up further with prospecting, geological mapping and sampling and I.P. geophysics.

Geological mapping on one small portion of the property, the Southridge Zone, indicated the area to be a moderately south dipping package of silicified, felsic, fine to lapilli tuffs, overlying intermediate lapilli tuffs. Au, Ag, Zn and Pb mineralization is seen to be confined to the blue-grey, silicified felsic tuffs. Soil geochemical surveying further indicated this unit to be the most anomalous unit geochemically while I.P. geophysics demonstrated that the unit has a high sulfide background but does not generate the highest I.P. responses. The Southridge Zone represents a prime drilling target and was tested in 1990 by seven short holes and eleven holes in 1997 on sections between L30+774E and L31+410E. Hole NQ90-1 was collared too low in the sequence to test the mineralized horizon. Hole NQ90-4 intersected 615 ppb Au over 66 metres and NQ90-2 returned a 57.7 metre interval averaging 839 ppb Au. Hole 97-1 gave 34.96 metres averaging 1.290g/tonne gold and 42.26g/tonne silver including 6.03 metres which averaged 2.66g/tonne Au and 42.16g/tonne Ag. The drilling campaign by Noranda did not adequately test the western targets that were identified.

After proposed trenching and geological mapping to the west of 30+800E, additional drilling may be required to adequately test the area around Dan's Showing and the Lower Showing. The precious metal system although low grade as presently known, is increasing in thickness (holes HS96-9 & 10) to the west. Elevated gold/silver values were encountered over a core length (-90°) of 144 metres.

Three soil geochemically anomalous areas, the J.A.D.S., Danbus and Northridge Zones should be followed up with additional ground surveys including detailed geological mapping, rock sampling and I.P. geophysics. Ground HLEM geophysical surveying was seen to be an ineffective exploration tool and should be avoided in other parts of the property.

Additional detailed geological mapping and trenching are warranted before further drilling is undertaken to continue exploring this promising prospect. As access is opened by new logging roads along South Sloquet Creek scheduled for early 1998 and in the future for small business program Licenses from Forestry, the J.A.D.S. and Danbus gold-in-soil anomalies should be mapped and trenched. A three phase budget for future exploration is recommended in the next section for a total of \$440,000.00.

Respectfully submitted,

J. T. Shearer, M.Sc., P.Geo. January 26, 1998

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PROPOSED BUDGET 1998 HOT SPRINGS CLAIMS

Phase III: follow-up diamond drilling, ground geophysics, detail geology, trenching (excavator), contract diamond drilling, senior geologist, helper, geologist, prospector, cook.

Contract diamond drilling, 10,000 ft at \$23 per foot	\$	231,000
Support personnel		
Senior geologist, 90 days at \$300 per day		31,500
Assistant - core splitter, 90 days at \$175 per day		15,750
Cook, 90 days at \$140 per day		12,600
Transportation		
Truck rental, 90 days at \$60 per day		5,400
Fuel		800
Transportation (Air Southwest)		1,200
Survey control		8,000
Ground geophysics		12,000
Helicopter, 3.8 hrs at \$850/hr		3,230
Cat for drill, 50 hours at \$75/hr		3,750
Food, 8 persons at 90 days at \$25 per man day		7,875
Camp supplies		8,000
Office supplies		1,000
Geological mapping and prospecting, 40 days at \$700 per day		28,000
Analytical		
600 drill core at \$25 per sample		15,000
300 rock samples at \$18.50 per sample		5,550
400 soil samples at \$16.50 per sample		6,600
Drafting, 80 hours at \$25 per hour		2,000
Computer Cast		10,000
Report preparation	_	4,000
Environmental Reclamation		36,745
	.	440.000

Total Phase III

<u>\$ 440,000</u>

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APPENDIX I

STATEMENT OF COSTS 1997

January 26, 1998

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Appendix I STATEMENT OF COSTS 1997 DIAMOND DRILL PROGRAM HOT SPRING PROJECT

Wages & Benefits

W. B. Lennan, B.Sc., P.Geo., Geologist August 20 - November 1, 1997 61 days @ \$350 per day \$ 18,337.00 Peter Slinn, Coresplitter August 28 - September 10, 1997 11 days @ \$150 per day \$ 1,750.00 Dave A. Heino, Prospector August 20 - November 1, 1997 60 days @ \$250 per day \$ 14,850.00 S. L. Shearer, Coresplitter September 10 - October 30, 1997 39.5 days @ \$150 per day \$ 5,925.00 GST on Wages \$ 4,477.34 Subtotal \$ 68,439.34 Contract Diamond Drilling F. Boisvenu Drilling Ltd. including 6001 feet of NQ core & Mob & demob @ \$19.50/ft \$ 181,424.70 Analytical (Chemex Labs) \$ 26,525.00 Transportation Ford 4x4 Trucks, Fully equipped \$ 5,245.00 Gas \$ 63,000 Helicopter, AirSouthwest Freight & Passengers \$ 1,832.78 Camp Rental, (Lineham Logging) \$ 1,587.19 Camp Supplies, Propane, Food, etc. Environmental Reports (SRK Consultants) (required by Forestry & Environment for road rehabilitation) Excavator - Dump truck (Lineham Logging) \$ 1,200.00 Report Processing and Reproduction TOTAL \$ 311.500.00	J. T. Shearer, M.Sc., P.Geo., Geologist August 20 - November 25, 1997 66 days@\$350 per day		\$	23,100.00
Peter Slinn, Coresplitter August 28 - September 10, 1997 11 days @ \$150 per day \$ 1,750.00 Dave A. Heino, Prospector August 20 - November 1, 1997 60 days @ \$250 per day \$ 14,850.00 S. L. Shearer, Coresplitter September 10 - October 30, 1997 39.5 days @ \$150 per day \$ 5,925.00 GST on Wages \$ 4,477.34 Subtotal \$ 68,439.34 Contract Diamond Drilling F. Boisvenu Drilling Ltd. including 6001 feet of NQ core & Mob & demob @ \$19.50/ft \$ 181,424.70 Analytical (Chemex Labs) \$ 26,525.00 Transportation Ford 4x4 Trucks, Fully equipped \$ 5,245.00 Gas \$ 1,832.78 Camp Rental, (Lincham Logging) \$ 1,587.19 (required by Forestry & Environment for road rehabilitation) Excavator - Dump truck (Lincham Logging) \$ 1,587.00 (required by Forestry & Environment for road rehabilitation) Excavator - Dump truck (Lincham Logging) \$ 1,587.00 Meioronertal Reports (SRK Consultants) (required by Forestry & Environment for road rehabilitation) Excavator - Dump truck (Lincham Logging) \$ 1,587.00 Report Preparation \$ 1,500.00 Word Processing and Reproduction \$ 1,500.00 Extended to the series and the series an	W. B. Lennan, B.Sc., P.Geo., Geologist August 20 - November 1, 1997 61 days @ \$350 per day		\$	18,337.00
Dave A. Heino, Prospector August 20 - November 1, 1997 60 days @ \$250 per day \$ 14,850.00 S. L. Shearer, Coresplitter September 10 - October 30, 1997 39.5 days @ \$150 per day \$ 5,925.00 \$ 63,962.00 GST on Wages \$ 4,477.34 Subtotal \$ 68,439.34 Contract Diamond Drilling F. Boisvenu Drilling Ltd. including 6001 feet of NQ core & Mob & demob @ \$19.50/ft \$ 181,424.70 Analytical (Chemex Labs) \$ 26,525.00 Transportation Ford 4x4 Trucks, Fully equipped \$ 5,245.00 Gas \$ 653.00 Helicopter, AirSouthwest Freight & Passengers \$ 1,832.78 Camp Rental, (Lineham Logging) \$ 1,587.19 Camp Supplies, Propane, Food, etc. \$ 2,249.88 Environmental Reports (SRK Consultants) (required by Forestry & Environment for road rehabilitation) \$ 9,500.00 Excavator - Dump truck (Lineham Logging) \$ 8,808.48 Computer Processing \$ 1,200.00 Word Processing and Reproduction \$ 1,500.00 Word Processing and Reproduction \$ 1,500.00 TOTAL \$ 311.500.00	Peter Slinn, Coresplitter August 28 - September 10, 1997 11 days @ \$150 per day		\$	1,750.00
S. L. Shearer, Coresplitter September 10 - October 30, 1997 39.5 days @ \$150 per day GST on Wages Subtotal Contract Diamond Drilling F. Boisvenu Drilling Ltd. including 6001 feet of NQ core & Mob & demob @ \$19.50/ft Analytical (Chemex Labs) Transportation Ford 4x4 Trucks, Fully equipped Gas Helicopter, AirSouthwest Freight & Passengers Camp Rental, (Lineham Logging) Camp Supplies, Propane, Food, etc. Environmental Reports (SRK Consultants) (required by Forestry & Environment for road rehabilitation) Excavator - Dump truck (Lineham Logging) Subtotal	Dave A. Heino, Prospector August 20 - November 1, 1997 60 days @ \$250 per day		\$	14,850.00
Contract Diamond Drilling F. Boisvenu Drilling Ltd. including 6001 feet of NQ core & Mob & demob @ \$19.50/ft \$181,424.70 Analytical (Chemex Labs) \$26,525.00 Transportation Ford 4x4 Trucks, Fully equipped \$5,245.00 Gas \$653.00 Helicopter, AirSouthwest Freight & Passengers \$1,832.78 Camp Rental, (Lineham Logging) \$1,587.19 Camp Supplies, Propane, Food, etc. \$2,249.88 Environmental Reports (SRK Consultants) (required by Forestry & Environment for road rehabilitation) Excavator - Dump truck (Lineham Logging) \$1,580.00 Report Preparation \$1,200.00 Word Processing and Reproduction \$1,500.00 TOTAL \$311,500.00	S. L. Shearer, Coresplitter September 10 - October 30, 1997 39.5 days @ \$150 per day		\$	5.925.00
GST on Wages <u>\$ 4,477.34</u> Subtotal <u>\$ 68,439.34</u> Contract Diamond Drilling F. Boisvenu Drilling Ltd. including 6001 feet of NQ core & Mob & demob @ \$19.50/ft <u>\$ 181,424.70</u> Analytical (Chemex Labs) <u>\$ 26,525.00</u> Transportation Ford 4x4 Trucks, Fully equipped <u>\$ 5,245.00</u> Gas <u>\$ 653.00</u> Helicopter, AirSouthwest Freight & Passengers <u>\$ 1,832.78</u> Camp Rental, (Lineham Logging) <u>\$ 1,587.19</u> Camp Supplies, Propane, Food, etc. <u>\$ 2,249.88</u> Environmental Reports (SRK Consultants) (required by Forestry & Environment for road rehabilitation) <u>\$ 9,500.00</u> Excavator - Dump truck (Lineham Logging) <u>\$ 8,808.48</u> Computer Processing <u>\$ 1,200.00</u> Word Processing and Reproduction <u>\$ 1,500.00</u>	03.0 auj 6 (g \$100 per auj		<u>.</u>	62,000,00
GST on Wages <u>\$ 4,477.34</u> Subtotal \$ 68,439.34 Contract Diamond Drilling F. Boisvenu Drilling Ltd. including 6001 feet of NQ core & Mob & demob @ \$19.50/ft \$ 181,424.70 Analytical (Chemex Labs) \$ 26,525.00 Transportation Ford 4x4 Trucks, Fully equipped \$ 5,245.00 Gas \$ 653.00 Helicopter, AirSouthwest Freight & Passengers \$ 1,832.78 Camp Rental, (Lineham Logging) \$ 1,587.19 Camp Supplies, Propane, Food, etc. \$ 2,249.88 Environmental Reports (SRK Consultants) (required by Forestry & Environment for road rehabilitation) \$ 9,500.00 Excavator - Dump truck (Lineham Logging) \$ 8,808.48 Computer Processing \$ 1,200.00 Report Preparation \$ 1,500.00 Word Processing and Reproduction \$ 11,500.00 TOTAL \$ 311,500.00			\$	03,962.00
Subtotal\$ 68,439.34Contract Diamond Drilling F. Boisvenu Drilling Ltd. including 6001 feet of NQ core & Mob & demob @ \$19.50/ft\$ 181,424.70Analytical (Chemex Labs)\$ 26,525.00Transportation Ford 4x4 Trucks, Fully equipped Gas\$ 5,245.00Gas\$ 653.00Helicopter, AirSouthwest Freight & Passengers\$ 1,832.78Camp Rental, (Lineham Logging)\$ 1,587.19Camp Supplies, Propane, Food, etc.\$ 2,249.88Environmental Reports (SRK Consultants) (required by Forestry & Environment for road rehabilitation)\$ 9,500.00Excavator - Dump truck (Lineham Logging)\$ 1,200.00Report Preparation\$ 1,200.00Word Processing and Reproduction\$ 1,050.00TOTAL\$ 311.500.00		GST on Wages	<u>\$</u>	<u>4,477.34</u>
Contract Diamond Drilling F. Boisvenu Drilling Ltd. including 6001 feet of NQ core & Mob & demob @ \$19.50/ft \$ 181,424.70 Analytical (Chemex Labs) \$ 26,525.00 Transportation Ford 4x4 Trucks, Fully equipped \$ 5,245.00 Gas \$ 653.00 Helicopter, AirSouthwest Freight & Passengers \$ 1,832.78 Camp Rental, (Lineham Logging) \$ 1,587.19 Camp Supplies, Propane, Food, etc. \$ 2,249.88 Environmental Reports (SRK Consultants) (required by Forestry & Environment for road rehabilitation) \$ 9,500.00 Excavator - Dump truck (Lineham Logging) \$ 1,200.00 Report Preparation \$ 1,200.00 Word Processing and Reproduction \$ 1,050.00 TOTAL \$ 311.500.00		Subtotal	\$	68,439.34
F. Boisvenu Drilling Ltd. including 6001 feet of NQ core & Mob & demob @ \$19.50/ft\$ 181,424.70Analytical (Chemex Labs)\$ 26,525.00Transportation\$ 5,245.00Gas\$ 653.00Helicopter, AirSouthwest Freight & Passengers\$ 1,832.78Camp Rental, (Lineham Logging)\$ 1,587.19Camp Supplies, Propane, Food, etc.\$ 2,249.88Environmental Reports (SRK Consultants) (required by Forestry & Environment for road rehabilitation)\$ 9,500.00Excavator - Dump truck (Lineham Logging)\$ 8,808.48Computer Processing\$ 1,200.00Report Preparation\$ 1,500.00Word Processing and Reproduction\$ 1,050.00TOTAL	Contract Diamond Drilling			
Mob & demob @ \$19.50/ft\$ 181,424.70Analytical (Chemex Labs)\$ 26,525.00Transportation\$ 26,525.00Gas\$ 5,245.00Gas\$ 653.00Helicopter, AirSouthwest Freight & Passengers\$ 1,832.78Camp Rental, (Lineham Logging)\$ 1,587.19Camp Supplies, Propane, Food, etc.\$ 2,249.88Environmental Reports (SRK Consultants) (required by Forestry & Environment for road rehabilitation)\$ 9,500.00Excavator - Dump truck (Lineham Logging)\$ 8,808.48Computer Processing\$ 1,200.00Report Preparation\$ 1,500.00Word Processing and Reproduction\$ 1,050.00TOTAL	F. Boisvenu Drilling Ltd. including 6001	feet of NQ core &		
Analytical (Chemex Labs)\$ 26,325.00Transportation\$ 5,245.00Gas\$ 5,245.00Gas\$ 653.00Helicopter, AirSouthwest Freight & Passengers\$ 1,832.78Camp Rental, (Lineham Logging)\$ 1,587.19Camp Supplies, Propane, Food, etc.\$ 2,249.88Environmental Reports (SRK Consultants) (required by Forestry & Environment for road rehabilitation)\$ 9,500.00Excavator - Dump truck (Lineham Logging)\$ 8,808.48Computer Processing\$ 1,200.00Report Preparation\$ 1,500.00Word Processing and Reproduction\$ 1,050.00TOTAL	Mob & demob $@$ \$19.50/ft		\$	181,424.70
Fraisportation\$ 5,245.00Gas\$ 653.00Helicopter, AirSouthwest Freight & Passengers\$ 1,832.78Camp Rental, (Lineham Logging)\$ 1,587.19Camp Supplies, Propane, Food, etc.\$ 2,249.88Environmental Reports (SRK Consultants) (required by Forestry & Environment for road rehabilitation)\$ 9,500.00Excavator - Dump truck (Lineham Logging)\$ 8,808.48Computer Processing\$ 1,200.00Report Preparation\$ 1,500.00Word Processing and Reproduction\$ 1,050.00TOTAL	Analytical (Chemex Labs)		Þ	20,325.00
GasGasGas\$ 653.00Helicopter, AirSouthwest Freight & Passengers\$ 1,832.78Camp Rental, (Lineham Logging)\$ 1,587.19Camp Supplies, Propane, Food, etc.\$ 2,249.88Environmental Reports (SRK Consultants) (required by Forestry & Environment for road rehabilitation)\$ 9,500.00Excavator - Dump truck (Lineham Logging)\$ 8,808.48Computer Processing\$ 1,200.00Report Preparation\$ 1,500.00Word Processing and Reproduction\$ 1,050.00TOTAL	Ford 4x4 Trucks Fully equipped		\$	5.245.00
Helicopter, AirSouthwest Freight & Passengers\$ 1,832.78Camp Rental, (Lineham Logging)\$ 1,587.19Camp Supplies, Propane, Food, etc.\$ 2,249.88Environmental Reports (SRK Consultants) (required by Forestry & Environment for road rehabilitation)\$ 9,500.00Excavator - Dump truck (Lineham Logging)\$ 8,808.48Computer Processing\$ 1,200.00Report Preparation\$ 1,500.00Word Processing and Reproduction\$ 1,050.00TOTAL	Gas		š	653.00
Camp Rental, (Lineham Logging)\$ 1,587.19Camp Supplies, Propane, Food, etc.\$ 2,249.88Environmental Reports (SRK Consultants) (required by Forestry & Environment for road rehabilitation)\$ 9,500.00Excavator - Dump truck (Lineham Logging)\$ 8,808.48Computer Processing Report Preparation\$ 1,200.00Word Processing and Reproduction\$ 1,500.00TOTALTOTAL	Helicopter, AirSouthwest Freight & Passengers		\$	1,832.78
Camp Supplies, Propane, Food, etc.\$ 2,249.88Environmental Reports (SRK Consultants) (required by Forestry & Environment for road rehabilitation)\$ 9,500.00Excavator - Dump truck (Lineham Logging)\$ 8,808.48Computer Processing Report Preparation\$ 1,200.00Word Processing and Reproduction\$ 1,050.00TOTAL* 311.500.00	Camp Rental, (Lineham Logging)		\$	1,587.19
Environmental Reports (SRK Consultants) (required by Forestry & Environment for road rehabilitation)\$ 9,500.00Excavator - Dump truck (Lineham Logging)\$ 8,808.48Computer Processing Report Preparation\$ 1,200.00Word Processing and Reproduction\$ 1,500.00TOTAL\$ 311.500.00	Camp Supplies, Propane, Food, etc.		\$	2,249.88
(required by Forestry & Environment for road rehabilitation)\$ 9,500.00Excavator - Dump truck (Lineham Logging)\$ 8,808.48Computer Processing\$ 1,200.00Report Preparation\$ 1,500.00Word Processing and Reproduction\$ 1,050.00TOTAL\$ 311.500.00	Environmental Reports (SRK Consultants)			
Excavator - Dump truck (Lineham Logging)\$ 8,808.48Computer Processing\$ 1,200.00Report Preparation\$ 1,500.00Word Processing and Reproduction\$ 1,050.00TOTAL\$ 311.500.00	(required by Forestry & Environment for	road rehabilitation)	\$	9,500.00
Computer Processing\$ 1,200.00Report Preparation\$ 1,500.00Word Processing and Reproduction\$ 1,050.00TOTAL\$ 311.500.00	Excavator - Dump truck (Lineham Logging)		\$	8,808.48
Report Preparation\$ 1,500.00Word Processing and Reproduction\$ 1,050.00TOTAL\$ 311.500.00	Computer Processing		\$ \$	1,200.00
word Processing and Reproduction 5 1,000.00TOTAL\$ 311.500.00	Report Preparation		\$ \$	1,500.00
	word Processing and Reproduction	TOTAL	9 5 3	311.500.00

APPENDIX II

STATEMENT OF QUALIFICATIONS

January 26, 1998

APPENDIX II

Statement of Qualifications

I, Johan T. Shearer of 1817 Greenmount Avenue, in the City of Port Coquitlam in the Province of British Columbia, do hereby certify:

- 1. I am a graduate of the University of British Columbia (B.Sc., 1973) in Honours Geology, and the University of London, Imperial College (M.Sc., 1977).
- 2. I have practiced my profession as an Exploration Geologist, continuously since graduation, for more than 25 years, and have been employed by such mining companies and McIntyre Mines Ltd., J. C. Stephen Explorations Ltd., Carolin Mines Ltd. and TRM Engineering Ltd. I am presently employed by Homegold Resources Ltd.
- 3. I am a fellow of the Geological Association of Canada (Fellow No. F439). I am also a member of the Canadian Institute of Mining and Metallurgy and the Geological Society of London. I am a member in good standing with the Association of Professional Engineers and Geoscientists of British Columbia (P.Geo., Member No. 19,279).
- 4. I am an independent consulting geologist employed since December 1986 by Homegold Resources Ltd. at #5-2330 Tyner St., Port Coquitlam B. C. V3C 2Z1.
- 5. I am the author of a report entitled "Diamond Drilling Report on the Hot Spring Property." dated January 26, 1998.
- 6. I have visited the area numerous times since 1987 and carried out geological mapping, drill core logging and sample collection. I supervised the 1997 diamond drill program between August 20 and October 24, 1997. I am familiar with the regional geology and geology of nearby properties. I have become familiar with the previous work conducted on the Hot Spring Property by examining in detail the available reports, plans and sections, and have discussed previous work with persons knowledgeable of the area.
- 7. I have a share position in Mount Hope Resources Corp. and I am a director of the company.

Dated at Port Coquitlam, British Columbia, this 26th day of January 1998.

J. T. Shearer, M.Sc., F.G.A.C., P.Geo.

APPENDIX III

ASSAY CERTIFICATES

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January 26, 1998

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Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers 212 Brooksbank Ave., British Columbia, Canada_ North Vancouver V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218

To: MOUNT HOPE RESOURCES CORP.

1918 - 925 W. GEORGIA ST. VANCOUVER, BC V6C 3L2

Page Number :1 Total Pages :2 Certificate Date: 24-OCT-97 Invoice No. :19746863 P.O. Number : PIX Account

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Project :

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Comments: ATTN: SCOTT ANGUS

						CERTIFIC	ATE OF A	NALYSIS	A974	6863	
SAMPLE	PREP CODE	Au g/t FA+AA	Pb ppm	Zn ppm	Ag ppm Aqua R						
N302700	205 294	0.130	23	284	0.5						
N302701	205 294	0.085	44	890	0.3						
N302702	205 294	0.210	110	1800	1.0						
N302703	205 294	0.075	40	1650	< 0.2						
N302704		1.160	<u>614</u>	1930	1.7						
N302705	205 294	0.315	42	354	1.1					1	
N302706	205 294	0.065	8	820	0.2						
N302707	205 294	0.045	4	259	< 0.2						
N302708	205 294	0.020	3	130	0.3						
N302709	205 294	0.010	< T	84	0.2						
N302710	205 294	0.010	2	113	0.5		-		1		
N302711	205 294	0.040	3	53	0.8						
N302712	205 294	0.050	3	421	1.4						
N302713	205 294	0.055	0 4	357	1 0						
N3U2/14	203 234	0.035	U U	337	1.0						
N302715	205 294	0.020	2	115	0.5						
N302716	205 294	0.010	< 1	93	0.2						
N302717	205 294	0.020		126	- 0.2				F		
N302718	205 294		1 10	120	0.3				1		
N302713	203 235	0.010									
N302720	205 294	0.050	2	131	0.5						
N302721	205 294	< 0.005	3	62	0.3						
N302722	205 294	< 0.005		48	0.4						1
N302723		< 0.005		62	0.2						
N302724	205 294	< 0.005	<u> </u>		··· ·						
N302725	205 294	< 0.005	< 1	46	0.2						
N302726	205 294	< 0.005	2	3/	< 0.2						
N302727	205 294		37	37	< 0.2						
N302729	205 294	< 0.005	4	56	0.3						
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N302730	205 294	0.025	'	1/9	0.4]					
N302731 N302733	205 204	× 0,005	5	160	0.4	1			•		
N302733	205 294	< 0.005	7	116	< 0.2			1 1			
N302734	205 294	< 0.005	12	98	< 0.2						
N202725	205 204	C 0 005	2	54	< 0.2	1		+	· · · · · · · · · · · · · · · · · · ·		
N302736	205 294	2 0.005	1 2	48	< 0.2						
N302737	205 294	< 0.005	6	51	< 0.2						ļ
N302738	205 294	< 0.005	4	81	< 0.2						
N302739	205 294	< 0.005	6	63	< 0.2		{				
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Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers 212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218

Au g/t

FA+AA

Pb

ppm

Zn

ppm

PREP

CODE

To:	MOUNT	HOPE	RESOUR	RCES	CORP

1918 - 925 W. GEORGIA ST. VANCOUVER, BC V6C 3L2

Ag ppm Aqua R Page Number : 2 Total Pages :2 Certificate Date: 24-OCT-97 Invoice No. :19746863 P.O. Number Account PIX

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Project :			
Comments	ATTN:	SCOTT	ANGUS

CERTIFICATE OF ANALYSIS A9746863

N302740 N302741 N302742 N302743 N302744	205 205 205 205 205	294 294 294 294 294	< 0.005 < 0.005 < 0.005 < 0.005 < 0.005 < 0.005	3 4 3 2 3	46 67 68 71 97	< 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2					
N302745 N302746 N302747 N302748 N302748 N302758	205 205 205 205 	294 294 294 294 294	< 0.005 < 0.005 < 0.005 0.010 NotRed	3 10 2 8 NotRed	96 79 73 68 NotRed	< 0.2 < 0.2 < 0.2 < 0.2 0.2 NotRed					
N302759 N302760 N302761 N302762 N302763	205 205 205 205 205 205	294 294 294 294 294	0.005 0.025 0.080 0.015 0.155	12 11 28 15 25	100 206 169 200 275	0.2 0.3 0.2 < 0.2 2.2					
N302764 N302765	205 205	294 294	0.010 < 0.005	10 8	268 113	< 0.2 < 0.2					
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Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers 212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE; 604-984-0221 FAX; 604-984-0218

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To:	MOUNT HOPE RESOURCES CORP.

1918 - 925 W. GEORGIA ST. VANCOUVER, BC V6C 3L2

Project : HOTSPRING Comments: ATTN: SCOTT ANGUS Page Number :1 Total Pages :2 Certificate Date: 24-OCT-97 Invoice No. :19747077 P.O. Number : Account :PIX

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						CERTIFICA	TE OF A	NALYSIS	A97	47077	
SAMPLE	PREP CODE	Au g/t FA+AA	Ag ppm Aqua R	Pb ppm	Zn ppm						
302766	205 226	0.015	0.2	7	105						
302767	205 226	0.005	0.2	5	142						
302768	205 226	0.010	< 0.2	40	221						
302770	205 226	0.010		6	113						
304/10				Ŭ I	113						
302771	205 226	< 0.005	< 0.2	4	192						
302772	205 226	< 0.005	0.3	26	208						
302773	205 226	< 0.005	0.2	9	145					1	
302774	205 226	< 0.005	< 0.2	9	169						
302775		NotRed	NotRed	NotRed	NotRad						
303776	205 226	< 0 005	¢ 0 2	9	115						
302777	205 226	0.020		7	155						
302778	205 226	0.090	0.8	14	610						
302779	205 226	0.070	0.4	6	190						
302780	205 226	0.110	6.3	75	66						
302781	205 226	0.090	7.0	78	340						
302782	205 226	0.095	7.0	77	77						
302783	205 226	0.145	9.0	82	68						
302784	205 226	0.080	3.2	50	20						
302785	205 226	0.045	1.8	22	146						
302786	205 226	0.095	2.6	44	36				· · · · · · · · · · · · · · · · · · ·		
302787	205 226	0.045	1.1	18	105						
302788		NotRed	NotRed	NotRed	NotRed						
302789	205 226	0.040	1.7	22	24						
302790	205 226	0.035	1.7	33	16						
302791	205 226	0.035	3.2	22	6						
302792	205 226	0.110	8.8	102	37						
302793	205 226	0.095	5.4	50	148						
302794	205 226	0.120	8.3	75	31					l	
302795	205 226	0.255	20.8	205	28	1					
200706	205 226		1 11 4	126	3.3	┥───┼					
304/96	205 226	0.210		440	44						
304/27	205 224	0.305	26.0	175	24						
302799	205 224	0_165	10.5	73	14						
302800	205 226	0.145	11.7	62	38						
				Į]							
302801	205 226	0.255	26.0	100	78						
302802	205 226	0.145	12.0		9						
302803	205 226	0.575	44.0	82	27						
302804		0.4/0	16.0		33						
302803		1 v.143	1 10.0	30	'*	1]	
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CERTIFICATION:_

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Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers 212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218 To: MOUNT HOPE RESOURCES CORP.

1918 - 925 W. GEORGIA ST. VANCOUVER, BC V6C 3L2

Project : HOTSPRING Comments: ATTN: SCOTT ANGUS Page Number :2 Total Pages :2 Certificate Date: 24-OCT-97 Invoice No. :19747077 P.O. Number : Account :PIX

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						CERTIFIC	ATE OF A	NALYSIS	A97	47077	
SAMPLE	PREP CODE	Au g/t FA+AA	Ag ppm Aqua R	Pb 7 ppm 1	Zn opm		-				
302806 302807 302808 302809 302810	205 220 205 220 205 220 205 220 205 220	5 0.180 5 0.210 6 0.350 5 0.195 5 0.125	22.2 34.5 56.0 18.5 7.0	72 140 75 88 43	27 42 41 47 42						
302811 302812 302813 302814 302815	205 22 205 22 205 22 205 22 205 22	5 0.070 5 0.250 5 0.070 5 0.070 5 0.115 5 0.075	6.6 18.0 6.2 7.6 5.5	42 105 142 200 100	21 31 42 80 101						
302816 302817 302818 302819 302820	205 22 205 22 205 22 205 22 205 22	$ \begin{array}{c cccc} 5 & 0.010 \\ 5 & 0.005 \\ 5 & 0.005 \\ 6 & 0.295 \\ 6 & 0.125 \\ \end{array} $	1.0 0.5 0.6 17.5 6.8	25 11 24 58 28	129 104 133 148 89						
302821 302822 302823 302824 302825	205 22 205 22 205 22 205 22 205 22 205 22	6 0.090 6 0.065 6 0.020 6 0.125 6 0.190	4.0 4.2 1.4 3.3 7.7	13 16 33 9 21	82 154 144 81 141						
302826 302827 302828 302829 302830	205 22 205 22 205 22 205 22 205 22 205 22	6 0.140 6 0.295 6 0.105 6 0.130 6 0.045	8.0 20.0 7.3 8.4 4.0	15 30 25 14 5	115 263 136 47 83						
302831 302832 302833 302833 302834 302835	205 22 205 22 205 22 205 22 205 22 205 22	6 0.090 6 0.040 6 0.025 6 0.020 6 0.020 6 0.030	10.5 2.3 3.0 2.8 3.1	13 7 4 8 6	121 278 93 108 114						

CERTIFICATION:_

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Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218 To: MOUNT HOPE RESOURCES CORP.

1918 - 925 W. GEORGIA ST. VANCOUVER, BC V6C 3L2

Project : Comments: ATTN: SCOTT ANGUS Page Number : 1 Total Pages :2 Certificate Date: 30-OCT-97 Invoice No. :19747911 P.O. Number : PIX Account

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CERTIFICATE OF ANALYSIS A9747911 PREP Au g/t Pb zn Ag ppm ppm SAMPLE CODE FA+AA Aqua R DDW N302844 205 226 0.020 2 270 0.6 N302845 205 226 0.065 18 169 5.4 0.010 0.7 N302846 205 226 2 420 7.2 N302847 205 226 0.045 12 132 375 N302848 205 226 0.085 33 15.5 10.8 0.085 27 345 N302849 205 226 0.025 98 3.0 205 226 N302859 11 205 226 0.030 7 29 3.2 N302860 205 226 0.030 6 88 3.4 N302861 N302862 205 226 0.020 8 112 1.6 N302863 205 226 0.020 7 81 1.2 205 0.050 9 84 10.2 N302864 226 205 0.040 9 395 1.4 N302873 226 205 226 0.340 30 420 2.5 N302874 205 1.7 N302875 205 226 0.100 40 N302876 205 226 0.030 9 154 0.3 205 0.090 90 860 2.6 N302877 226 0.035 10 230 0.8 205 226 N302878 0.030 350 1.3 205 226 58 N302879 205 226 0.060 52 81 2.2 N302880 0.070 1500 3.5 N302881 205 226 210 0.030 260 1.0 N302882 205 226 21 N302883 205 226 0.035 27 760 1.5 226 0.095 170 172 4.0 N302884 205 300 1.2 N302885 205 226 0.040 51 158 О.В 0.040 40 N302886 205 226 0.6 0.055 15 104 205 N302887 226 640 1.2 0.080 10 N302888 205 226 0.045 12 68 0.8 N302889 -205 226 205 226 0.020 105 330 0.4 N303003 0.010 148 205 226 52 0.6 N303004 0.030 25 198 1.1 N303005 205 226 0.035 56 245 0.7 N303006 205 226 205 226 0.090 160 560 1.5 N303007 155 645 1.7 N303008 205 226 0.440 205 0.185 212 2150 2.1 N303009 226 0.245 302 1500 3.6 N303010 205 226 0.230 390 2800 3.8 N303011 205 226 0.050 26 78 1.7 226 N303035 205 0.035 22 86 1.0 205 226 N303036 Jant Brehler

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Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers 212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218 To: MOUNT HOPE RESOURCES CORP.

1918 - 925 W. GEORGIA ST. VANCOUVER, BC V6C 3L2 Page Number :2 Total Pages :2 Certificate Date: 30-OCT-97 Invoice No. : 19747911 P.O. Number : Account :PIX

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Project : Comments: ATTN: SCOTT ANGUS

CERTIFICATE OF ANALYSIS A9747911

SAMPLE	PI Ci	REP ODE	Au g/t FA+AA	Pb ppm	Zn ppm	Ag ppm Aqua R		ł	
N303037 N303038 N303039	205 205 205	226 226 226	0.030 0.030 0.050	18 27 20	3 B 7 6 6 9	1.2 0.8 1.7			
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CERTIFICATION:



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218 To: MOUNT HOPE RESOURCES CORP.

1918 - 925 W. GEORGIA ST. VANCOUVER, BC V6C 3L2

Project : HOTSPRING Comments: ATTN: SCOTT ANGUS

Page Number :5 Total Pages :5 Certificate Date: 10-NOV-97 Invoice No. : 19748779 P.O. Number PIX Account

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						CERTIFICATE OF ANALYSIS A9748779
SAMPLE	Prep Code	Au g/t FA+AA	Pb ppm	Zn ppm	Ag ppm Aqua R	a R
N303764 N303765 N303766 N303766 N303767 N303768	205 294 205 294 205 294	0.035 0.030 NotRed NotRed 0.305	85 90 NotRed NotRed 225	405 420 NotRcđ NotRcđ 2100	0.4 0.2 NotRcđ NotRcđ 1.6	.4 .2 2d 2d .6
N303769 N303770 N303771 N303772 N303773	205 294 205 294 205 294 205 294 205 294 205 294	1.620 2.18 2.32 3.80 1.220	550 1050 1500 3250 980	4300 3700 >10000 >10000 >10000	5.2 11.5 13.4 18.2 7.0	.2 .5 .4 .2 .0
N303774 N303775 N303776 N303777 N303777 N303778	205 294 205 294 205 294 205 294 205 294 205 294	0.325 1.140 1.315 0.635 0.920	200 750 780 380 395	1630 4700 3600 1750 2400	4.7 6.3 8.2 4.4	.7 .3 .2 .4
N303779 N303780 N303781 N303782 N303783	205 294 205 294 205 294 205 294 205 294 205 294	7.76 0.635 0.590 0.720 0.595	950 880 600 475 900	2800 2100 >10000 6900 6500	9.0 4.5 9.8 12.5 11.2	.0 .5 .8 .5 .2
N303784 N303785 N303786 N303787 N303787 N303788	205 294 205 294 205 294 205 294 205 294 205 294	0.205 0.165 0.260 0.220 0.185	600 58 80 110 230	5000 620 5900 1810 1190	3.6 0.4 1.5 1.5 1.8	.6 .4 .5 .5 .8
N303789 N303838 N303839 N303840 N303841	205 294 205 294 205 294 205 294 205 294 205 294	0.230 0.255 0.030 0.020 0.150	160 2200 80 49 70	850 3400 620 195 382	1.9 6.0 0.4 < 0.2 1.2	.9 .0 .4 .2 .2
N303842 N303843 N303844 N303845 N303845 N303846	205 294 205 294 205 294 	0.070 0.070 0.055 NotRcd 0.050	90 95 72 NotRed 200	710 220 290 NotRcd 760	0.4 0.3 0.2 NotRcd 0.4	.4 .3 .2 cd .4
N303847 N303848 N303849 N303850	205 294 205 294 205 294 205 294	0.080 0.750 0.350 0.245	156 270 980 900	1120 1470 2600 3500	0.3 2.0 3.1 2.9	.3 .0 .1 .9
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Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers 212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218

To:	MOUNT	HOPE	RESOL	IRCES	CORF

1918 - 925 W. GEORGIA ST. VANCOUVER, BC V6C 3L2

Project : HOTSPRING Comments: ATTN: SCOTT ANGUS Page Number : 1 Total Pages :6 Certificate Date: 23-OCT-97 Invoice No. : 19746734 P.O. Number : :PIX Account

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						CERTIFICATE OF ANALYSIS	A97	'46734	
SAMPLE	PREP CODE	Au g/t FA+AA	Ag ppm Aqua R	Ър Ърш	Zn ppm				
65812 65813 65814 65815 65816	205 226 205 226 205 226 205 226 205 226 205 226	0.335 0.065 0.080 0.075 0.280	2.0 1.4 0.8 0.3 3.3	225 122 190 106 276	630 168 405 199 680				
65817 65819 65820 65821 65822	205 226 205 226 205 226 205 226 205 226 205 226	0.080 0.020 0.030 0.015 0.010	1.7 < 0.2 < 0.2 3.3 0.5	155 18 23 650 98	84 272 1530 159 301				
65823 65824 65825 65826 65827	205 226 205 226 205 226 205 226 205 226 205 226	0.615 0.810 0.395 0.025 0.270	7.5 13.7 8.5 1.6 2.5	830 620 215 115 465	2300 3500 1260 1210 >10000				
65828 65829 65830 65831 65832	205 226 205 226 205 226 205 226 205 226 205 226	0.160 0.095 0.050 0.005 0.055	1.6 0.7 0.6 0.3 0.7	350 132 64 28 40	>10000 1590 448 96 720				
65833 65834 65835 65836 65837	205 226 205 226 205 226 205 226 205 226 205 226	0.015 < 0.005 < 0.005 < 0.005 < 0.005	0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2	32 19 7 15 14	121 60 71 32 54				
65838 65839 65840 65841 302501	205 226 205 226 205 226 205 226 205 226 205 226	< 0.005 < 0.005 < 0.005 < 0.005 < 0.005 < 0.005	< 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2	40 48 23 34 36	80 109 124 391 155				
302502 302503 302504 302505 302506	205 226 205 226 205 226 205 226 205 226 205 226	0.005 < 0.005 < 0.005 < 0.005 < 0.005	< 0.2 0.5 0.5 < 0.2 < 0.2	15 116 160 13 5	103 281 285 112 57				
302507 302508 302509 302510 302511	205 226 205 226 205 226 205 226 205 226 205 226	0.250 0.020 0.015 0.010 0.005	0.5 < 0.2 0.5 0.3 0.2	18 8 62 23 15	270 124 195 159 98			-	
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Chemex Labs Ltd.

Analytical Chemists " Geochemists " Registered Assayers 212 Brocksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218 To: MOUNT HOPE RESOURCES CORP.

1918 - 925 W. GEORGIA ST. VANCOUVER, BC V6C 3L2

Project : HOTSPRING Comments: ATTN: SCOTT ANGUS Page Number :2 Total Pages :6 Certificate Date: 23-OCT-97 Invoice No. :19746734 P.O. Number : Account :PIX

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						CERTIFIC	ATE OF A	NALYSIS	A97	46734	
SAMPLE	PREP CODE	Au g/t FA+AA	Ag ppm Aqua R	Pb ppm	Zn ppm						
302512	205 226	0.005	< 0.2	23	135						
302513	205 226	0.280	4.4	340	3100						
302514	205 226	0.440	4.2	355	2700						
302515	205 226	0.480	3.5	95	159						
302516	205 226	0.280	1.6	102	340						
302517	205 226	0.190	1.9	134	220						
302518	205 226	0.155	2.3	55	178						
302519	205 226	0.700	8.0	250	1540						
302520	205 226	0.980	8.5	305	498						
302521	205 226	1.440	8.2	258	1110						
302522	205 226	0.040	0.5	29	125						
302523	205 226	0.010	0.2	17	99						
302524	205 226	0.010	0.3	26	119						
302525	205 226	< 0.005	< 0.2	38	64						
302526	205 226	< 0.005	< 0.2	54	92						
302527	205 226	0.010	< 0.2	22	117		··· <u>-</u>			•	
302528	205 226	0.055	0.4	33	147						
302529	205 226	0.070	0.3	26	190						
302530	205 226	0.390	2.7	206	3600				1		
302531	205 226	0.240	1.3	76	238						
302532	205 226	0.340	2.3	66	590						
302533	205 226	0.045	0.5	35	161			+			
302534	205 226	0.230	1.2	27	312						
302535	205 226	0.250	2.9	175	800						
302536	205 226	0.140	1.0	14	130						-
302537	205 226	0.150	1.5	32	234						
302538	205 226	0.050	0.6	35	141						
302539	205 226	0.020	< 0.2	6	118						
302540	205 226	< 0.005	< 0.2	17	108						
302541	205 226	< 0.005	< 0.2	17	RA						
302542	205 226	< 0.005	< 0.2	< 1	83						
302543	205 226	0.005	< 0.2	< 1	109						
302544	205 226	0.020	< 0.2	270	185						
302545	205 226	0.045	1.9	1/0	150						
302546	205 226	0.045	0.7	/8	101						
302547	205 226	0.075	0.7	5	181						
302546	205 226	0.040	2.5	1 10	T08						
302549		0.410	2.0	462	930						
302550			1 1.0	45	212						
304951	205 226	1 0.050	0.0	▲ ▲	14/	1					
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CERTIFICATION:_

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Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

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212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218

To: MOUNT HOPE RESOURCES CORP.

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1918 - 925 W. GEORGIA ST. VANCOUVER, BC V6C 3L2

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Project : HOTSPRING Comments: ATTN: SCOTT ANGUS

Page Number :3 Total Pages :6 Certificate Date:23-OCT-97 Invoice No. :19746734 P.O. Number : PIX Account

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						CERTIFICATE OF ANALYSIS A9746734				
SAMPLE	PREP CODE	Au g/t FA+AA	Ag ppm Aqua R	Pb ppm	Zn ppm					
302552 302553 302554 302555 302555 302556	205 226 205 226 205 226 205 226 205 226 205 226	0.010 0.010 0.025 0.035 0.010	0.3 0.4 0.7 0.5 < 0.2	3 < 1 4 < 1 < 1	136 169 442 217 97					
302557 302558 302559 302560 302561	205 226 205 226 205 226 205 226 205 226 205 226	0.010 0.010 0.005 < 0.005 0.005	< 0.2 0.2 < 0.2 < 0.2 < 0.2 < 0.2	<pre>< 1 < 1 < 1 < 1 < 1 < 7</pre>	103 75 85 120 75					
302562 302563 302564 302565 302566	205 226 205 226 205 226 205 226 205 226 205 226	< 0.005 < 0.005 < 0.005 0.015 0.010	< 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2	8 9 4 7 6	89 86 110 154 124					
302567 302568 302569 302570 302571	205 226 205 226 205 226 205 226 205 226 205 226	0.015 0.010 0.015 0.165 0.155	< 0.2 < 0.2 < 0.2 1.4 1.5	9 6 14 72 44	122 142 134 137 157					
302572 302573 302574 302575 302576	205 226 205 226 205 226 205 226 205 226 205 226	0.090 0.045 0.050 0.070 0.025	1.0 0.2 0.3 0.4 0.3	29 20 32 35 23	166 147 160 148 137					
302577 302578 302579 302580 302581	205 226 205 226 205 226 205 226 205 226 205 226	0.025 0.075 0.015 < 0.005 0.010	0.2 1.1 0.2 < 0.2 0.2	25 90 2 < 1 9	104 155 147 163 131					
302582 302583 302584 302589 302589	205 226 205 226 205 226 205 226 205 226 205 226	0.215 0.020 0.080 0.020 0.030	1.0 0.2 0.4 0.2 0.5	42 2 15 20 34	237 95 190 86 84					
302592 302593 302594 302598 302598 302599	205 226 205 226 205 226 205 226 205 226 205 226	0.140 0.080 0.080 0.055 0.040	9.0 2.6 2.9 1.0 0.8	4000 800 960 135 100	5600 1270 1530 474 460					
L			<u> </u>	<u> </u>		<u> </u>	CERTIFICATION	ista	ABid	ler



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Chemex Labs L .td. Analytical Chemists " Geochemists " Registered Assayers

212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218

To: MOUNT HOPE RESOURCES CORP.

1918 - 925 W. GEORGIA ST. VANCOUVER, BC V6C 3L2

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Project : HOTSPRING Comments: ATTN: SCOTT ANGUS

Page Number :4 Total Pages :6 Certificate Date: 23-OCT-97 Invoice No. :19746734 P.O. Number :PIX Account

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						CERTIFIC	ATE OF A	NALYSIS	A97	46734	
SAMPLE	PREP CODE	Au g/t FA+AA	Ag ppm Aqua R	Pb ppm	Zn ppm						
302600 302601 302603 302604 302605	205 226 205 226 205 226 205 226 205 226 205 226	0.030 0.035 0.030 0.020 0.015	0.8 0.4 0.9 0.4 0.4	12 7 112 9 21	8 4 59 8 14	3 2 0 0 6					
302607 302608 302609 302611 302612	205 226 205 226 205 226 205 226 205 226 205 226	0.060 0.115 0.015 < 0.005 < 0.005	1.0 0.4 0.3 0.2 < 0.2	83 50 7 12 6	24 18 6 5	15555					
302613 302614 302615 302616 302616 302617	205 226 205 226 205 226 205 226 205 226 205 226	< 0.005 < 0.005 < 0.005 0.015 0.030	< 0.2 < 0.2 < 0.2 0.3 0.3	2 7 8 12 3	19	1 5 00 4					
302618 302619 302620 302621 302622	205 226 205 226 205 226 205 226 205 226 205 226	0.015 0.010 0.005 < 0.005 < 0.005	0.3 0.3 < 0.2 < 0.2 < 0.2	10 6 < 1 13 12		1 98 22 25					
302623 302624 302625 302625 302626 302627	205 226 205 226 205 226 205 226 205 226 205 226	< 0.005 < 0.005 < 0.005 < 0.005 < 0.005 < 0.005	< 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2	28 25 28 13 22	1: 1: 1: 1:	14 14 15 15 10					
302628 302629 302630 302631 302631	205 226 205 226 205 226 205 226 205 226 205 226	< 0.005 < 0.005 < 0.005 0.020 0.030	< 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2	10 50 9 40 35	1: 2: 2: 3: 19:	16 70 01 19 10					
302633 302634 302635 302635 302636 302637	205 226 205 226 205 226 205 226 205 226 205 226	0.100 0.140 0.065 < 0.005 0.010	1.5 1.7 0.3 < 0.2 0.2	50 45 42 11 19	69 90 21 11	90 50 59 18 02					
302638 302639 302640 302641 302642	205 226 205 226 205 226 205 226 205 226 205 226 205 226	0.400 0.060 0.050 0.015 0.010	3.9 0.7 0.5 < 0.2 < 0.2	620 120 31 18 14	530 56 81 23	20 50 20 38 11				•	
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To: MOUNT HOPE RESOURCES CORP. 1918 - 925 W. GEORGIA ST.



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Chemex Labs Ltd. Analytical Chemists * Geochemists * Registered Assayers

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212 Brooksbank Ave., British Columbia, Canada North Vancouver V7J 2C1

PHONE: 604-984-0221 FAX: 604-984-0218

V6C 3L2 HOTSPRING Project : Comments: ATTN: SCOTT ANGUS

VANCOUVER, BC

Page Number :5 Total Pages :6 Certificate Date: 23-OCT-97 Invoice No. :19746734 P.O. Number : :PIX Account

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						CERTIFICATE OF ANALYSIS A9746734	
SAMPLE	PREP CODE	Au g/t FA+AA	Ag ppm Aqua R	Pb ppm	Zn ppm		
302643 302644 302646 302647 302649	205 226 205 226 205 226 205 226 205 226 205 226	0.020 0.240 0.590 1.070 0.840	0.4 3.3 2.4 12.8 9.7	84 550 170 1500 1650	373 3900 1770 4200 7000		
302650 302651 302652 302655 302655 302657	205 226 205 226 205 226 205 226 205 226 205 226	1.300 2.84 0.535 0.245 0.290	6.4 20.0 4.4 5.3 4.2	1550 2900 490 2300 450	4500 8100 1220 2400 2200		
302658 302661 302662 302665 302665 302666	205 226 205 226 205 226 205 226 205 226 205 226	0.025 0.435 0.310 0.365 0.015	0.7 10.9 4.1 3.4 0.2	146 1500 415 1000 56	485 6200 3600 2200 103		
302667 302669 302669 302670 302671	205 226 205 226 205 226 205 226 205 226 205 226	0.020 < 0.005 < 0.005 < 0.005 < 0.005 < 0.005	0.4 0.2 0.2 < 0.2 0.2	54 50 80 12 34	1740 159 153 117 202		
302672 302673 302674 302675 302675 302676	205 226 205 226 205 226 205 226 205 226 205 226	0.175 0.060 < 0.005 0.250 0.495	3.8 1.4 < 0.2 3.0 3.0 3.0	16 17 35 23 315	135 120 113 2500 1880		
302677 302678 302679 302680 302681	205 226 205 226 205 226 205 226 205 226 205 226	0.050 0.070 0.030 0.110 0.035	0.4 < 0.2 0.3 0.7 0.3	22 15 25 8 10	630 106 132 223 85		
302682 302683 302684 302685 302685 302686	205 226 205 226 205 226 205 226 205 226 205 226	0.370 0.290 0.335 0.200 1.540	0.5 0.6 0.7 0.5 2.7	18 9 14 45 202	89 124(182(368 240(
302687 302688 302689 302699 302690 302691	205 226 205 226 205 226 205 226 205 226 205 226	0.255 0.015 < 0.005 < 0.005 0.070	0.9 < 0.2 < 0.2 < 0.2 < 0.2 0.3	64 28 9 21 48	260 144 101 100 940		
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212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218

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To:	MOUNT	HOPE	RESOUR	CES CORP

1918 - 925 W. GEORGIA ST. VANCOUVER, BC V6C 3L2

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Project : HOTSPRING Comments: ATTN: SCOTT ANGUS

Page Number :6 Total Pages :6 Certificate Date: 23-OCT-97 Invoice No. : 19746734 P.O. Number : : PIX Account

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		_				CERTIFIC	ATE OF A	NALYSIS	A97	46734	
SAMPLE	PREP CODE	Au g/t FA+AA	Ag ppm Aqua R	bb bp	Zn ppm						
302692 302693 302694 302695 302695 302696	205 226 205 226 205 226 205 226 205 226 205 226	0.020 0.100 0.015 0.085 0.330	0.2 1.0 0.2 1.0 3.8	38 88 38 60 750	199 1900 160 1500 272						
302697 302698 302699 / 511575 / 511576 /	205 226 205 226 205 226 205 226 205 226 205 226	0.020 0.250 0.290 0.150 0.370	0.4 2.1 1.7 4.9 6.6	56 90 200 105 175	300 1560 431 480 570						
511577 J 511578 J 511580 J 511587 J 511587 J 511595	205 226 205 226 205 226 205 226 205 226 205 226	0.120 0.010 0.030 0.035 0.020	9.0 0.6 0.8 0.4 0.4	72 21 66 73 13	820 120 760 188 161						
511596 511597 511598 511599	205 226 205 226 205 226 205 226	0.015 < 0.005 < 0.005 < 0.005	0.8 < 0.2 0.3 0.2	13 18 40 10	96 129 267 126						
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212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218

To: MOUNT HOPE RESOURCES CORP.

1918 - 925 W. GEORGIA ST. VANCOUVER, BC V6C 3L2

Project : HOTSPRING Comments: ATTN: SCOTT ANGUS

Page Number :1 Total Pages :5 Certificate Date: 10-NOV-97 Invoice No. :19748779 P.O. Number : Account PIX

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						CERTIFICATE OF ANALYSIS	A9748779		
SAMPLE	PREP CODE	Au g/t FA+AA	bb bp	Zn ppm	Ag ppm Aqua R				
N302890 N302891 N302892 N302893 N302893 N302894	205 294 205 294 205 294 205 294 205 294 205 294	0.030 0.060 0.025 0.045 0.040	6 14 16 38 60	53 39 60 480 430	0.9 2.4 0.6 1.1 2.0				
N302895 N302896 N302897 N302898 N302898 N302899	205 294 205 294 205 294 205 294 205 294 205 294	0.030 0.025 0.080 0.060 0.050	13 28 34 37 27	182 159 750 260 240	0.4 0.6 1.4 0.8 0.8				
N302900 N303001 N303002 N303012 N303013	205 294 205 294 205 294 205 294 205 294 205 294	< 0.005 < 0.005 0.020 0.095 0.180	11 2 21 640 390	100 138 120 3200 1960	 < 0.2 < 0.2 0.5 2.2 2.8 				
N303014 N303015 N303016 N303017 N303018	205 294 205 294 205 294 205 294 205 294 205 294	0.115 0.155 0.100 0.090 0.165	355 1000 560 268 540	490 5300 1400 3800 3400	2.6 3.8 2.5 1.5 3.0				
N303019 N303020 N303021 N303022 N303022 N303023	205 294 205 294 205 294 205 294 205 294 205 294	0.470 0.150 0.290 0.110 0.040	1100 820 190 88 17	>10000 >10000 850 1550 280	6.6 5.0 2.4 1.1 0.9				
N303024 N303025 N303026 N303027 N303028	205 294 205 294 205 294 205 294 205 294 205 294	0.095 0.025 0.045 0.205 0.035	32 28 22 2150 40	630 260 500 5600 350	1.4 0.3 0.4 4.9 0.5				
N303029 N303030 N303031 N303032 N303033	205 294 205 294 205 294 205 294 205 294 205 294 205 294	0.010 0.115 0.090 0.215 0.820	78 58 166 900 124	750 88 250 360 144	0.5 3.5 7.5 10.0 15.0				
N303034 V N303040 N303041 N303042 N303043	205 294 205 294 205 294 205 294 205 294 205 294	0.120 0.055 0.095 0.065 0.095	80 32 20 15 20	128 45 42 42 41	5.0 1.5 2.0 2.6 1.8				
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Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218 To: MOUNT HOPE RESOURCES CORP.

1918 - 925 W. GEORGIA ST. VANCOUVER, BC V6C 3L2

Project : HOTSPRING Comments: ATTN: SCOTT ANGUS

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						CERTIFICATE OF ANALYSIS	A9748779
SAMPLE	PREP CODB	Au g/t FA+AA	Pb ppm	Zn ppm	Ag ppm Aqua R		
N303044	205 294	0.080	20	29	1.7		
N303045	205 294	0.100	27	32	6.7		
N303046	205 294	0.180	22	12	9.0		
N303047	205 294	0.160	22	20	9.5		
N3U3048	205 294	0.180	34	120	5.2		
N303049	205 294	0.190	21	64	2.2		
N303050	205 294	0.190	22	52	5.2		
N303051	205 294	0.145	21	22	2.2		
N303052	205 294	0.070	23	62	1.6		
N303053	205 294	0.040	49	28	1.1		
N303054	205 294	0.055	76	86	1.9		
N303055	205 294	0.030	24	62	1.5		
N303056	205 294	0.020	28	86	1.7		
N303057	205 294	0.050	45	430	2.1		
N303058	205 294	0.030	86	160	1.9		
N303059	205 294	0.100	365	1630	6.5		
N303060	205 294	< 0.005	100	82	5.2		
N303061	205 294	0.085	88	260	5.2		
N303062	205 294	0.080	78	610	4.3		
N303063	205 294	0.100	205	4700	9.0		
N303064	205 294	0.290	140	2900	15.2		
N303065	205 294	0.575	65	142	11.0		
N303066	205 294	0.425	202	400	18.4		
N303067	205 294	1.800	68	140	25.5		
N303068	205 294	0.720	32	136	6.4		
N303069	205 294	0.335	45	380	3.6		
N303070	205 294	0.495	87	800	10.8		
N303071	205 294	0.040	30	162	1.0		
N303072	205 294	0.070	54	310	2.0		
N303073	205 294	0.200	38	156	3.8		
N303074	205 294	0.680	76	280	9.9		
N303075	205 294	0.495	75	380	13.2		
N303076	205 294	0.680	20	112	7.8		
N303077	205 294	0.450	32	160	6.2		
N303078	205 294	0.535	25	18	5.2		
N303079	205 294	1.055	32	174	15.2		
N303080	205 294	0.815	25	87	13.7		
N303081	205 294	0.640	82	370	34.0		
N303082	205 294	0.250	53	160	6.4		
N303083	205 294	0.195	00	1 196	4.6		
						CERTIFICATION	HartBuchler
						OLITINI VATION.	



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Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., British Columbia, Canada North Vancouver V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218 To: MOUNT HOPE RESOURCES CORP.

1918 - 925 W. GEORGIA ST. VANCOUVER, BC V6C 3L2

HOTSPRING Project : Comments: ATTN: SCOTT ANGUS Page Number :3 Total Pages :5 Certificate Date: 10-NOV-97 Invoice No. : 19748779 P.O. Number : : PIX Account

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						CERTIFICATE OF ANALYSIS	A9748779	
SAMPLE	PREP CODE	Au g/t FA+AA	Pb ppm	Zn ppm	Ag ppm Aqua R			
N303084 N303085 N303086 N303086 N303087 N303088	205 294 205 294 205 294 205 294 205 294	0.195 0.220 0.940 0.495 0.605	84 80 85 44 70	310 160 375 115 185	4.0 3.5 16.4 4.7 11.4			
N303089 N303090 N303091 N303092 N303093	205 294 205 294 205 294 205 294 205 294 205 294	0.290 0.725 < 0.005 0.575 0.570	36 100 < 1 85 62	180 620 179 2300 880	2.4 9.0 < 0.2 23.6 22.4			
N303094 N303095 N303096 N303097 N303098	205 294 205 294 205 294 205 294 205 294 205 294	0.385 0.130 0.010 0.090 0.050	33 25 5 37 50	95 65 650 450 291	6.8 2.2 < 0.2 0.8 1.0			
N303099 N303100 N303701 N303702 N303703	205 294 205 294 205 294 205 294 205 294	0.105 0.080 0.020 0.010 < 0.005	28 25 8 8 8	52 73 104 146 40	0.7 0.2 < 0.2 < 0.2 < 0.2			
N303704 N303705 N303706 N303707 N303708	205 294 205 294 205 294 205 294 205 294 205 294	< 0.005 < 0.005 < 0.005 < 0.005 < 0.005 < 0.005	8 10 13 9 21	69 50 73 55 60	< 0.2 1.6 < 0.2 < 0.2 < 0.2			
N303709 N303710 N303711 N303712 N303713	205 294 205 294 205 294 205 294 205 294 205 294	< 0.005 < 0.005 < 0.005 < 0.005 < 0.005	12 8 9 7 7	73 50 50 52 55	< 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2			
N303714 N303715 N303716 N303717 N303718	205 294 205 294 205 294 205 294 205 294 205 294	< 0.005 < 0.005 0.030 < 0.005 < 0.005	23 18 13 5 18	79 69 66 71 109	< 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2			
N303719 N303720 N303721 N303722 N303722 N303723	205 294 205 294 205 294 205 294 205 294 205 294	< 0.005 0.010 < 0.005 < 0.005 0.080	18 11 21 14 75	153 106 129 217 4300	< 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2			
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1918 - 925 W. GEORGIA ST, VANCOUVER, BC V6C 3L2

Project : HOTSPRING Comments: ATTN: SCOTT ANGUS Page Number :4 Total Pages :5 Certificate Date: 10-NOV-97 Invoice No. :19748779 P.O. Number : PIX Account

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		_				CERTIFICATE OF ANALYSIS		A97	48779		
SAMPLE	PREP CODE	Au g/t FA+AA	Pb ppm	Zn ppm	Ag ppm Aqua R						
N303724 N303725 N303726 N303727 N303728	205 294 205 294 205 294 205 294 205 294	0.015 0.060 0.050 0.040 0.030	31 22 24 16 7	175 202 148 209 115	0.2 1.0 0.2 0.2						
N303729 N303730 N303731 N303732 N303733	205 294 205 294 205 294 205 294 205 294 205 294	0.030 0.250 0.040 0.190 0.065	19 60 65 85	124 2000 1600 970 530	0.2 3.4 0.7 2.8 1.5	2 1 7 3 L					
N303734 N303735 N303736 N303737 N303737 N303738	205 294 205 294 205 294 205 294 205 294 205 294	0.090 0.060 0.070 0.035 0.170	30 50 125 40 27	710 225 340 147 610	0.0 0.0 0.1 0.1 3.1	7 5 7 3 2					
N303739 N303740 N303741 N303742 N303743	205 294 205 294 205 294 205 294 205 294	0.135 0.135 0.045 0.105 0.225	40 26 36 34 38	407 1320 103 182 299	1.4 2.0 0.0 2.3	1 5 5 2 7					
N303744 N303745 N303746 N303747 N303748	205 294 205 294 205 294 205 294 205 294	0.200 0.020 0.020 0.020 0.020 0.020	19 27 38 68 85	176 530 240 200 168	2.4 0.: < 0.: < 0.: 0.:	4 2 2 2 2					
N303749 N303750 N303751 N303752 N303753	205 294 205 294 205 294 205 294 205 294 205 294	0.490 1.205 1.900 1.030 0.215	230 420 1150 700 200	690 910 5100 4000 405	3.: 5.(14.) 8.(1.)	2 6 6 6 0					
N303754 N303755 N303756 N303757 N303758	205 294 205 294 205 294 205 294 205 294 205 294	0.260 0.155 0.035 0.135 0.090	282 230 53 56 29	1620 1660 840 5200 2500	1. 1. < 0. 1. 0.	3 3 2 0 5					
N303759 N303760 N303761 N303762 N303763	205 294 205 294 205 294 205 294 205 294 205 294	0.065 0.025 0.055 0.430 0.250	15 6 165 2250 2800	4500 282 322 6300 ≻10000	 0. 0. 5. 5. 	7 2 7 7 7 7 2 7 7 7 7 7 7 7 7 7 7 7 7 7				•	
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To: MOUNT HOPE RESOURCES CORP.

1918 - 925 W. GEORGIA ST. VANCOUVER, BC V6C 3L2

Project : HS97-01 Comments: CC: J.T. SHEARER

Page Number :1 Total Pages :2 Certificate Date: 26-SEP-97 Invoice No. :19742826 P.O. Number : PIX Account

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						CERTIFICATE OF ANALYSIS			42826	
SAMPLE	PREP CODE	Au g/t FA+AA	Cu ppm	Pb ppm	Zn ppm	Ag ppm Aqua R				
M604012 M604051 M604052 M604053 M604054	205 294 205 294 205 294 205 294 205 294	0.030 0.930 0.575 1.360 1.040	14 265 169 510 162	80 900 780 4100 380	375 900 480 8000 600	$ \begin{array}{r} 1.5\\ 26.0\\ 16.0\\ 46.0\\ 43.0\end{array} $	-,),A~C			
M604055 M604056 M604057 M604058 M604059	205 294 205 294 205 294 205 294 205 294 205 294	1.685 1.520 1.640 1.140 1.055	650 465 71 166 280	2200 1850 580 470 1500	6300 4500 107 520 3000	66.0 76.0 67.0 98.0 56.0				
M604060 M604061 M604062 M604063 M604064	205 294 205 294 205 294 205 294 205 294 205 294	2.20 0.840 1.880 0.730 1.350	690 335 590 225 360	2200 1300 1750 1400 2250	2800 1250 1700 3450 4250	90.0 28.0 83.0 46.5 43.5				
M604065 M604066 M604067 M604068 M604068	205 294 205 294 205 294 205 294 205 294 205 294	0.630 1.520 0.940 2.82 0.890	385 335 325 580 440	430 2750 2000 1300 540	2000 7400 3250 2450 1400	19.4 60.0 42.0 75.0 37.0	5 HSG7-01 3.05 - 24 14			
M604070 M604071 M604072 M604073 M604074	205 294 205 294 205 294 205 294 205 294 205 294	0.345 0.015 0.020 1.620 4.80	101 53 31 178 210	600 168 22 400 1150	610 440 275 1700 1700	11.2 0.8 0.5 14.0 76.0	150	pre .		
M604075 M604076 M604077 M604078 M604079	205 294 205 294 205 294 205 294 205 294 205 294	2.98 1.260 0.825 0.690 0.720	145 163 240 167 166	1450 700 1050 560 800	2050 1400 1400 1100 1250	60.0 23.2 22.4 21.0 20.5	1.50	-		
M604080 M604081 M604082 M604083 M604083	205 294 205 294 205 294 205 294 205 294 205 294	0.030 0.045 0.025 0.040 0.120	98 77 90 89 131	17 28 15 34 29	194 186 195 250 111	0.6 0.3 0.5 0.6 1.2				
M604085 M604086 M604087 M604088 M604088	205 294 205 294 205 294 205 294 205 294 205 294	0.040 0.390 0.320 0.355 0.300	138 116 200 108 62	22 44 4900 650 225	550 245 7900 1050 380	0.8 1.2 10.5 5.5 6.0				9974 - 9.0
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212 Brooksbank Ave.,North VancouverBritish Columbia, CanadaV7J 2C1PHONE: 604-984-0221FAX: 604-984-0218

To: MOUNT HOPE RESOURCES CORP.

1918 - 925 W, GEORGIA ST. VANCOUVER, BC V6C 3L2

Project : HS97-01 Comments: CC: J.T. SHEARER Page Number :2 Total Pages :2 Certificate Date: 26-SEP-97 Invoice No. : 19742826 P.O. Number : Account : PIX

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						CERTIFIC	CATE OF ANALYSIS A9742826
Sample	PREP CODE	Au g/t FA+AA	Cu ppm	Pb ppm	Zn ppm	Ag ppm Aqua R	
M604090 M604091 M604092 M604093 M604094	205 294 205 294 205 294 205 294 205 294 205 294	0.580 0.060 0.035 0.050 0.035	118 122 102 105 98	460 200 165 175 200	800 365 330 280 405	9.6 2.1 1.4 2.2 0.8	
M604095 M604096 M604097 M604098 M604098 M604099	205 294 205 294 205 294 205 294 205 294 205 294	0.030 0.060 0.020 0.035 0.010	96 134 126 86 87	44 64 122 22 20	305 215 1300 550 215	0.5 1.5 0.5 0.6 0.3	
M604100 M604101 M604102 M604103 M604104	205 294 205 294 205 294 205 294 205 294 205 294	0.080 0.160 0.015 0.030 0.065	61 69 87 111 137	11 20 12 95 115	119 151 235 650 760	1.1 2.3 0.2 1.1 1.5	14.87.01
M604105 M604106 M604107 M604108 M604109	205 294 205 294 205 294 205 294 205 294 205 294	0.030 0.015 0.015 0.030 0.050	126 105 78 67 71	15 16 4 2 15	610 540 225 265 205	0.6 0.4 < 0.2 0.8 - 0.6	
M604110 M604111 M604112 M604113 M604113	205 294 205 294 205 294 205 294 205 294 205 294	0.040 0.025 0.045 0.040 0.045	72 81 105 66 65	6 2 12 6 6	134 155 103 135 151	1.4 0.8 1.1 0.8 0.7	
M604115 M604116 M604117 M604118 M604119	205 294 205 294 205 294 205 294 205 294 205 294	0.065 0.070 0.030 0.225 0.070	67 45 50 430 114	2 2 1 < 1 55	146 430 149 305 235	0.8 0.4 0.4 5.8 3.9	
M604120 M604121 M604122 M604123 M604124	205 294 205 294 205 294 205 294 205 294 205 294	0.050 0.415 2.76 0.270 0.170	137 285 1900 310 78	46 290 10000 340 90	119 570 >10000 1700 460	2.0 10.4 82.04 6.9 2.8	96.44 - 97.53(104-)
M604125 M604126 M604127	205 294 205 294 205 294	0.620 0.200 0.160	900 59 55	395 76 200	1350 320 225	11.4 2.0 2.8	
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212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218 To: MOUNT HOPE RESOURCES CORP.

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1918 - 925 W. GEORGIA ST. VANCOUVER, BC V6C 3L2

Project : HS97-02 Comments: CC: J.T. SHEARER Page Number :1 Total Pages :2 Certificate Date: 26-SEP-97 Invoice No. : 19742827 P.O. Number : Account :PIX

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					1	CERTIFICATE OF ANALYSIS A9742827						
SAMPLE	PREP CODE	Au g/t FA+AA	Cu ppm	Pb ppm	Zn ppm	Ag ppm Aqua R						
M604137 M604138 M604139 M604140 M604141	205 294 205 294 205 294 205 294 205 294 205 294	0.845 0.980 1.450 0.695 0.740	142 405 375 245 830	450 900 2600 1500 8200	290 1650 5300 2850 >10000	18.5 28.4 33.5 33.5 21 ⁷ 36.0			1	3.05		
M604142 M604143 M604144 M604145 M604146	205 294 205 294 205 294 205 294 205 294 205 294	0.725 0.495 0.570 1.130 0.900	220 67 155 280 330	1150 370 1050 1100 1350	1600 173 1050 2950 1950	16.4 14.0 8.2 27.0 19.8						
M604147 M604148 M604149 M604150 M604151	205 294 205 294 205 294 205 294 205 294 205 294	0.715 1.300 0.150 1.085 0.310	199 235 52 95 280	1100 1250 240 305 1150	3000 2400 112 335 2100	15.5 23.5 3.4 10.4 7.3	4.5 3.	، ۹7 ترن	02 - 44.≯7			
M604152 M604153 M604154 M604155 M604156	205 294 205 294 205 294 205 294 205 294 205 294	0.785 0.610 0.520 0.910 0.980	485 440 193 340 350	2600 1950 1000 1550 1600	1900 2000 2850 2150 3500	29.5 18.0 15.6 17.8 14.0				·····		
M604157 M604158 M604159 M604160 M604161	205 294 205 294 205 294 205 294 205 294	1.215 1.620 0.350 0.250	178 148 70 69 50	800 580 200 185 200	740 1100 158 510 415	12.4 13.2 8.0 4.5 3.4			_ 2	7.88		
M604162 M604163 M604164 M604165 M604166	205 294 205 294 205 294 205 294 205 294 205 294	0.445 0.630 0.535 0.675 0.335	20 74 62 70 89	340 330 335 900 520	64 860 520 930 1450	9.2 8.6 5.4 12.0 6.2						
M604167 M604168 M604169 M604170 M604171	205 294 205 294 205 294 205 294 205 294 205 294	0.640 0.715 0.530 0.645 0.645	101 66 80 142 126	820 400 480 1150 300	1950 1000 1100 2850 800	16.8 8.3 5.5 16.0 9.2						
M604172 M604173 M604174 M604175 M604176	205 294 205 294 205 294 205 294 205 294 205 294	0.450 0.450 0.280 1.515 0.455	80 61 53 690 88	195 215 155 950 480	490 650 610 4300 1350	4.7 4.2 3.4 28.8 6.5						
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212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218 To: MOUNT HOPE RESOURCES CORP.

1918 - 925 W. GEORGIA ST. VANCOUVER, BC V6C 3L2

Project : HS97-02 Comments: CC: J.T. SHEARER Page Number :2 Total Pages :2 Certificate Date: 26-SEP-97 Invoice No. :19742827 P.O. Number : Account :PIX

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						CERTIFICATE OF ANALYSIS				742827	
SAMPLE	PREP CODE	Au g/t FA+AA	Cu ppm	Pb ppm	Zn ppm	Ag ppm Aqua R					
M604177 M604178 M604179 M604180 M604181	205 294 205 294 205 294 205 294 205 294 205 294	0.250 0.865 1.080 0.190 0.305	77 260 405 31 31	130 700 1850 400 105	290 2600 5500 123 157	2.5 9.6 14.0 3.2 2.3					
M604182 M604183 M604184 M604185 M604185 M604186	205 294 205 294 205 294 205 294 205 294 205 294	0.475 0.400 0.015 0.010 0.010	66 60 34 33 59	410 146 54 105 18	1400 530 167 118 205	8.0 3.2 0.4 0.3 < 0.2					
M604187 M604188 M604189 M604190 M604191	205 294 205 294 205 294 205 294 205 294 205 294	0.010 0.010 0.010 0.035 0.085	105 66 30 48 20	42 28 22 35 62	125 320 310 175 285	< 0.2 < 0.2 < 0.2 0.2 1.7	45	7 - 112.00			
M604192 M604193 M604194 M604195 M604195 M604196	205 294 205 294 205 294 205 294 205 294 205 294	0.190 0.320 0.280 0.505 0.110	34 52 58 163 24	84 220 150 205 46	250 880 540 1050 99	2.5 5.2 4.4 6.9 0.9					
M604197 M604198 M604199 M604200 M604201	205 294 205 294 205 294 205 294 205 294 205 294	0.125 0.215 0.110 0.040 0.050	72 74 80 55 80	78 225 750 60 45	370 1050 580 75 83	2.5 3.0 3.8 0.5 1.0					
M604202 M604203 M604204 M604205 M604205 M604206	205 294 205 294 205 294 205 294 205 294 205 294	0.090 0.025 0.090 0.230 0.035	47 56 130 176 77	74 90 800 1400 48	147 620 5900 7000 178	1.5 0.9 4.8 10.4 0.8					
M604207 M604208 M604209 M604210 M604211	205 294 205 294 205 294 205 294 205 294 205 294	0.145 0.060 0.050 0.030 0.030	116 66 118 197 86	180 64 33 24 20	690 255 265 590 66	2.8 0.7 1.0 0.7 0.2					
M604212 M604213 M604214 M604215 M604216	205 294 205 294 205 294 205 294 205 294 205 294	0.080 0.035 0.040 0.025 0.050	163 205 196 140 134	116 72 120 35 100	380 235 660 74 160	0.7 0.8 0.6 0.5 0.6					

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1918 - 925 W. GEORGIA ST. VANCOUVER, BC V6C 3L2

Project : HOT SPRING Comments: CC: J. T. SHEARER Page Number :1 Total Pages :4 Certificate Date: 02-OCT-97 Invoice No. :19744067 P.O. Number : Account :PIX

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						CERTIFIC	ATE OF ANALYSIS	A9744067
SAMPLE	PREP CODE	Au g/t FA+AA	Ag ppm Aqua R	Cu ppm	Pb ppm	Zn ppm		
M604128 M604129 M604130 M604131 M604217	205 294 205 294 205 294 205 294 205 294 205 294	0.285 0.430 0.130 0.110 0.620	3.6 7.7 2.1 2.3 8.2	118 136 48 117 275	115 58 25 30 600	600 930 140 220 2500	HS97-11 102.36 - 106.96	
M604218 M604219 M604220 M604221 M604222	205 294 205 294 205 294 205 294 205 294 205 294	0.160 0.035 0.115 0.260 0.100	2.6 0.8 1.5 2.6 1.0	107 24 116 108 149	185 42 90 265 92	560 240 360 1060 500	Sec	
M604223 M604224 M604225 M604226 M604227	205 294 205 294 205 294 205 294 205 294 205 294	0.055 0.030 < 0.005 < 0.005 < 0.005 < 0.005	1.1 0.5 0.3 0.2 0.4	130 127 179 41 162	156 76 34 10 68	1000 500 210 130 200	HS 97. DL 112 - 143 J	
M604228 M604229 M604230 M604231 M604232	205 294 205 294 205 294 205 294 205 294 205 294	< 0.005 < 0.005 < 0.005 < 0.020 < 0.005	< 0.2 0.2 0.4 0.5 0.4	17 200 158 186 134	12 12 28 68 15	148 220 420 1380 152		
M604233 M604234 M604235 M604236 M604236 M604237	205 294 205 294 205 294 205 294 205 294 205 294	0.040 0.040 0.200 0.045 0.015	0.7 0.7 4.4 0.8 1.0	112 93 305 240 126	40 48 600 70 110	170 220 2600 460 390		
M604238 M604239 M604240 M604241 M604242	205 294 205 294 205 294 205 294 205 294 205 294	0.025 1.105 1.260 1.455 1.415	1.4 35.8 31.2 56.0 68.0	375 380 370 960 880	96 2300 1000 3250 1550	480 2800 2700 8300 4000		
M604243 M604244 M604245 M604246 M604246 M604247	205 294 205 294 205 294 205 294 205 294 205 294	1.310 1.840 0.550 0.690 1.160	41.8 32.8 19.8 19.0 22.8	620 400 185 290 300	2550 1150 1250 1850 2000	3900 2300 2000 3100 2800	3.66 - 27.50	
M604248 M604249 M604250 M604251 M604252	205 294 205 294 205 294 205 294 205 294 205 294	1.225 1.240 0.955 0.770 0.640	23.5 27.2 20.4 12.8 12.0	225 340 360 163 104	1150 1950 1200 320 800	2300 4500 2100 1680 260		

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212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218 To: MOUNT HOPE RESOURCES CORP.

1918 - 925 W. GEORGIA ST. VANCOUVER, BC V6C 3L2

Project : HOT SPRING Comments: CC; J. T. SHEARER Page Number :2 Total Pages :4 Certificate Date: 02-OCT-97 Invoice No. :19744067 P.O. Number : Account :PIX

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						CERTIFIC	ATE	OF A	NALYSIS	A97	44067	
Sample	PREP CODE	Au g/t FA+AA	Ag ppm Aqua R	Cu ppm	Ър Брш	Zn ppm						
M604253 M604254 M604255 M604256 M604257	205 294 205 294 205 294 205 294 205 294 205 294	0.480 0.030 0.120 < 0.005 1.270	7.0 0.7 4.0 0.2 9.0	149 36 76 71 145	475 176 620 600 500	2000 1980 530 340 1960						
M604258 M604259 M604260 M604261 M604261 M604262	205 294 205 294 205 294 205 294 205 294 205 294	0.985 0.975 0.970 0.770 1.840	11.2 15.0 21.8 8.6 17.7	275 215 265 96 365	750 1450 500 650 3150	2200 4800 1860 1340 >10000						
M604263 M604264 M604265 M604266 M604266 M604267	205 294 205 294 205 294 205 294 205 294 205 294	2.78 1.015 0.810 0.550 3.26	20.8 8.0 8.0 16.0 47.2	315 78 79 96 910	2400 700 600 560 4100	5900 570 260 450 900		I 5	47-03	39.02	54 AU	
M604268 M604269 M604270 M604271 M604272	205 294 205 294 205 294 205 294 205 294 205 294	0.580 0.260 1.450 2.06 0.085	5.5 3.0 17.4 24.5 0.9	111 74 415 760 64	720 348 1900 2700 155	1200 860 9200 >10000 470		27 50	- 90.00	/	· · · · · · · · · · · · · · · · · · ·	
M604273 M604274 M604275 M604276 M604276 M604277	205 294 205 294 205 294 205 294 205 294 205 294	0.350 0.145 0.150 0.275 0.030	1.8 0.6 0.3 0.3 < 0.2	84 152 103 132 50	240 155 28 11 15	530 2000 540 210 188						
M604278 M604279 M604280 M604281 M604282	205 294 205 294 205 294 205 294 205 294 205 294	0.010 0.020 0.010 < 0.005 0.100	< 0.2 0.2 < 0.2 0.2 1.2	57 119 117 186 91	5 23 24 32 38	90 200 180 180 180 190						
M604283 M604284 M604285 M604286 M604286 M604287	205 294 205 294 205 294 205 294 205 294 205 294	0.640 < 0.005 0.105 0.075 0.595	11.6 0.2 1.3 0.9 10.2	100 122 63 32 335	220 26 84 150 2200	300 350 490 62 4700						
M604288 M604289 M604290 M604291 M604291 M604292	205 294 205 294 205 294 205 294 205 294	0,850 0,390 0,470 0,460 0,645	10.0 6.2 7.8 22.0 10.2	325 126 134 300 83	1150 430 950 4900 1850	1540 940 2000 >10000 2100						

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Analytical Chemists * Geochemists * Registered Assayers 212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218 To: MOUNT HOPE RESOURCES CORP.

1918 - 925 W. GEORGIA ST. VANCOUVER, BC V6C 3L2

Project : HOT SPRING Comments: CC: J. T. SHEARER Page Number :3 Total Pages :4 Certificate Date: 02-0CT-97 Invoice No. :19744067 P.O. Number : Account :PIX

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					(CERTIFIC	ATE OF ANALYSIS	A9744067
SAMPLE	PREP CODE	Au g/t FA+AA	Ag ppm Aqua R	Cu ppm	Pb ppm	Zn ppm		
M604293 M604294 M604295 M604296 M604297	205 294 205 294 205 294 205 294 205 294 205 294	0.470 0.600 0.920 1.060 0.135	10.4 9.6 22.5 19.8 3.0	245 190 174 151 52	680 378 900 800 110	2100 1160 1960 2300 260		
M604298 M604299 M604300 M604301 M604302	205 294 205 294 205 294 205 294 205 294 205 294	0.360 0.060 0.725 0.875 0.475	8.5 1.7 12.8 16.0 10.5	82 370 365 176 151	340 132 1050 1050 540	1300 330 3700 1220 820		
M604303 M604304 M604305 M604306 M604307	205 294 205 294 205 294 205 294 205 294 205 294	$\begin{array}{r} 0.540 \\ 0.710 \\ 0.610 \\ 0.160 \\ 0.265 \end{array}$	9.2 11.6 13.4 3.1 6.6	132 98 44 100 205	300 415 250 62 155	780 1400 570 160 580		
M604308 M604309 M604310 M604311 M604312	205 294 205 294 205 294 205 294 205 294 205 294	0.365 0.820 0.110 0.720 0.480	8.6 10.4 3.7 14.2 10.5	179 158 52 380 151	235 155 92 455 368	450 940 370 1400 2000	HS 47 - 03 80.00 - 127 10	
M604313 M604314 M604315 M604316 M604317	205 294 205 294 205 294 205 294 205 294 205 294	0.640 0.670 0.510 0.600 1.470	15.2 12.0 8.2 8.0 25.2	149 169 260 188 370	630 450 1050 275 1300	1440 1420 3600 1700 2900		
M604318 M604319 M604320 M604321 M604322	205 294 205 294 205 294 205 294 205 294 205 294	0.170 0.020 0.040 0.030 0.160	2.8 0.6 0.9 0.5 1.0	157 58 71 114 245	90 46 36 36 64	380 140 300 150 1000		
M604323 M604324 M604325 M604326 M604326 M604327	205 294 205 294 205 294 205 294 205 294 205 294	0.015 0.010 0.050 0.010 0.020	0.4 0.2 0.2 < 0.2 < 0.5	102 76 54 99 74	30 10 3 16 32	260 200 120 100 250		
M604328 M604329 M604330 M604331 M604332	205 29 205 29 205 29 205 29 205 29 205 29	0.055 0.030 0.025 (0.005 0.265	0.4 0.5 0.6 0.2 13.0	71 93 58 87 440	8 2 3 5 222	190 130 150 80 1660	3.05-5.0	



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1918 - 925 W. GEORGIA ST. VANCOUVER, BC V6C 3L2

Project : HOT SPRING Comments: CC: J. T. SHEARER Page Number :4 Total Pages :4 Certificate Date: 02-OCT-97 Invoice No. :19744067 P.O. Number : Account :PIX

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					(CERTIFIC	ATE OF AN		A974	4067	
SAMPLE	PREP CODE	Au g/t FA+AA	Ag ppm Aqua R	Cu ppm	Pb ppm	Zn ppm					
M604333 M604334 M604335 M604336 M604337	205 294 205 294 205 294 205 294 205 294 205 294	0.115 0.085 0.120 0.165 0.060	5.0 3.2 4.4 2.7 1.0	315 124 56 57 19	85 72 100 145 126	150 160 38 30 11					
M604338 M604339 M604340 M604341 M604342	205 294 205 294 205 294 205 294 205 294 205 294	0.355 0.210 0.620 0.305 0.445	21.68.029.413.222.2	380 30 200 265 340	355 440 1150 480 1350	920 38 780 230 630					
M604343 M604344 M604345 M604346 M604347	205 294 205 294 205 294 205 294 205 294 205 294	0.050 0.320 0.060 0.105 0.495	3.7 14.2 2.2 5.6 22.6	36 158 78 157 840	400 450 155 290 700	30 142 270 148 1140	1459	۲.07 58 م م			
M604348 M604349 M604350 M604351 M604352	205 294 205 294 205 294 205 294 205 294 205 294	0.265 0.010 0.035 0.280 0.085	10.0 0.3 1.5 5.7 4.5	220 125 46 58 62	385 66 55 155 130	550 290 540 220 240					
M604353 M604354 M604355 M604355 M604356 M604357	205 294 205 294 205 294 205 294 205 294 205 294	0.060 0.015 0.005 0.005 0.005 0.005	5.6 0.7 0.3 < 0.2 < 0.2	78 102 94 65 87	70 10 16 22 30	340 158 122 152 154					
M604358 M604359 M604360 M604361 M604362	205 294 205 294 205 294 205 294 205 294 205 294	<pre>< 0.005 < 0.005 < 0.005 < 0.005 < 0.005 < 0.005</pre>	0.2 0.2 1.0 0.3 0.4	31 33 35 63 145	36 75 80 60 30	58 36 52 54 58					
M604363 M604364 M604365 M604366 M604367	205 29 205 29 205 29 205 29 205 29 205 29	4 < 0.005 4 0.010 4 0.545 5 0.620 4 0.110	0.5 1.2 19.5 22.2 5.8	225 184 161 153 126	13 62 380 1500 225	150 142 1390 2000 640					
M604368	205 29	4 0.460	15.0	131	285	1220					



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To: MOUNT HOPE RESOURCES CORP.

1918 - 925 W. GEORGIA ST. VANCOUVER, BC V6C 3L2

Project : Comments: ATTN: J.T. SHEARER

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Page Number 1 Total Pages 2 Certificate Date: 08-OCT-97 Invoice No. P.O. Number :19745089 Account ΞPtX

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						CERTIFIC	ATE OF AN	NALYSIS	A974	15089	
SAMPLE	PREP CODE	Au g/t FA+AA	Cu ppm	Pb ppm	Zn ppm	Ag ppm Aqua R					
M604369 M604370 M604371 M604372 M604373	205 226 205 226 205 226 205 226 205 226 205 226	0.260 0.920 0.195 0.175 0.185	140 145 70 160 242	110 245 44 105 750	335 1600 215 340 3100	4.4 7.3 1.4 2.2 6.6					
M604374 M604375 M604376 M604377 M604378	205 226 205 226 205 226 205 226 205 226 205 226	0.060 0.030 0.285 0.080 0.255	60 370 112 235 150	82 245 190 74 165	114 1050 290 850 260	1.0 < 0.2 2.6 0.6 1.1					
M604379 M604380 M604381 M604382 M604383	205 226 205 226 205 226 205 226 205 226 205 226	0.130 0.100 0.010 0.015 0.090	400 130 260 155 120	140 90 40 13 21	1650 173 195 168 240	0.3 1.2 0.3 < 0.2 0.4					
M604384 M604385 M604386 M604387 M604388	205 226 205 226 205 226 205 226 205 226 205 226	0.015 0.015 0.045 < 0.005 0.020	198 74 50 66 122	17 70 46 10 15	267 250 250 120 177	<pre> < 0,2 0,6 1,5 0,2 0,4</pre>					
M604389 M604390 M604391 M604392 M604393	205 226 205 226 205 226 205 226 205 226 205 226	0.020 0.010 0.005 < 0.005 < 0.005	36 28 60 67 100	32 31 12 9 14	69 85 76 90 88	0.5 1.0 < 0.2 < 0.2 < 0.2			-		
M604394 M604395 M604396 M604397 M604398	205 226 205 226 205 226 205 226 205 226 205 226	<pre>< 0.005 < 0.005 < 0.005 0.005 < 0.005</pre>	90 100 220 72 54	7 20 58 50 40	77 90 68 89 101	<pre>< 9.2 < 0.2 < 0.9 < 0.2 < 0.2 < 0.2 < 0.2</pre>					
M604399 M604400 M604401 M604402 M604403	205 226 205 226 205 226 205 226 205 226 205 226	<pre>< 0.005 < 0.005 < 0.005 0.535 0.330</pre>	45 57 46 210 105	26 34 40 162 322	91 91 124 2300 2000	< 0.2 < 0.2 < 0.2 < 0.2 6.9 5.3					
M604404 M604405 M604406 M604407 M604408	205 226 205 226 205 226 205 226 205 226 205 226	0.555 1.385 0.125 0.595 0.510	320 435 40 50 165	500 1100 27 104 280	2700 3000 65 395 1650	13.0 20.0 1.0 4.6 6.5					
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212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218 To: MOUNT HOPE RESOURCES CORP.

1918 - 925 W. GEORGIA ST. VANCOUVER, BC V6C 3L2 Page Number :2 Total Pages :2 Certificate Date: 08-OCT-97 Invoice No. :19745089 P.O. Number : Account :PIX

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Project : Comments: ATTN: J.T. SHEARER

						CERTIFIC	ATE OF ANAL	1515	A974	5089	
SAMPLE	PREP CODE	Au g/t FA+AA	Cu ppm	Ър Брш	Zn ppm	Ag ppm Aqua R					
M604409 M604410 M604411 M604412 M604413	205 226 205 226 205 226 205 226 205 226 205 226	0,345 0.470 1.135 0.205 0,145	85 250 700 310 265	96 800 2150 340 110	335 1250 >10000 670 235	2.4 9.5 21.5 2.9 1.2					
M604414 M604415 M604416 M604417 M604418	205 226 205 226 205 226 205 226 205 226 205 226	0.175 1.135 0.765 0.270 0.200	140 1850 375 355 220	66 355 360 350 72	325 3550 810 1350 800	1.3 19.5 6.5 4.7 1.7					
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1918 - 925 W. GEORGIA ST. VANCOUVER, BC V6C 3L2 Page Number :1 Total Pages :3 Certificate Date:07-0CT-97 Invoice No. :19744675 P.O. Number : Account :PIX

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Project : Comments: ATTN: J.T. SHEARER

						CERTIFIC	ATE OF A	NALYSIS	A97	44675	
SAMPLE	PREP CODE	Au g/t FA+AA	Cu ppm	Pb ppm	Zn ppm	Ag ppm Aqua R					
511560H 511561H 511562H 511563H 511563H	205 294 205 294 205 294 205 294 205 294	< 0.005 < 0.005 0.010 0.015 0.205	70 46 9 62 168	6 6 42 48 272	90 111 111 127 1350	< 0.2 < 0.2 0.2 0.2 2.5					
511565H 511566H 511567H 511568H 511569H	205 294 205 294 205 294 205 294 205 294 205 294	1.310 0.120 0.435 0.040 0.030	800 320 500 400 610	950 168 405 170 75	1950 395 2450 220 168	13.4 1.7 6.2 0.6 0.8					
511570H 511571H 511572H 511573H 511573H	205 294 205 294 205 294 205 294 205 294	0.085 0.155 0.275 0.270 0.195	220 230 290 164 192	80 128 400 650 225	335 790 910 1650 1500	1.2 2.0 3.5 5.5 2.7					
511582H 511583H 511584H 511585H 511585H 511586H	205 294 205 294 205 294 205 294 205 294 205 294	0.055 0.335 0.035 0.135 0.035	250 650 150 630 260	52 64 73 132 96	1550 1250 220 1500 365	1.1 4.5 1.3 3.4 0.7					
511590H 511591H 511593H 511594H M604419	205 294 205 294 205 294 205 294 205 294 205 294	$\begin{array}{c} 0.040\\ 0.010\\ 0.010\\ 0.020\\ 0.300 \end{array}$	260 200 188 280 230	18 55 6 13 410	79 147 161 156 1450	0.3 0.6 0.8 1.5 6.0					
M604420 M604421 M604422 M604423 M604423	205 294 205 294 205 294 205 294 205 294 205 294	0.520 0.945 0.345 0.020 < 0.005	192 116 150 154 129	550 395 52 16 6	1900 1100 800 142 112	7.4 8.0 1.7 0.6 0.2					
M604425 M604426 M604427 M604428 M604429	205 294 205 294 205 294 205 294 205 294 205 294	< 0.005 < 0.005 < 0.005 < 0.005 < 0.005 0.160	79 166 132 170 148	8 23 15 8 92	92 88 158 96 590	< 0.2 0.2 0.2 0.4 1.9					
M604430 M604431 M604432 M604433 M604434	205 294 205 294 205 294 205 294 205 294 205 294	0.600 0.620 0.290 2.50 0.550	240 194 300 340 310	355 435 310 2400 650	1300 1600 370 >10000 1950	7.7 9.5 3.5 26.5 9.6					
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British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218

To: MOUNT HOPE RESOURCES CORP.

1918 - 925 W. GEORGIA ST. VANCOUVER, BC V6C 3L2

Page Number :2 Total Pages :3 Certificate Date: 07-OCT-97 Invoice No. : 19744675 P.O. Number : Account :PIX

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Project : Comments: ATTN: J.T. SHEARER

CERTIFICATE OF ANALYSIS

SAMPLE	PREP CODE	Au g/t FA+AA	Cu ppm	Pb ppm	Zn ppm	Ag ppm Aqua R				
M604435 M604436 M604437 M604438 M604438 M604439	205 294 205 294 205 294 205 294 205 294 205 294	0.210 0.415 0.050 0.040 0.020	250 192 64 70 73	255 245 20 55 18	3500 3700 345 280 187	4.2 5.6 1.3 0.9 0.5				
M604440 M604441 M604442 M604443 M604444	205 294 205 294 205 294 205 294 205 294 205 294	<pre>< 0.005 < 0.005 0.065 < 0.005 < 0.005 < 0.005</pre>	105 88 104 38 67	18 8 72 2 7	125 205 103 60 245	0.2 < 0.2 3.8 < 0.2 < 0.2				
M604445 M604446 M604447 M604448 M604448 M604449	205 294 205 294 205 294 205 294 205 294 205 294	0.015 0.080 0.120 0.120 0.040	70 56 25 53 62	100 155 122 140 185	65 49 53 280 48	1.7 3.7 4.0 3.4 1.4				
M604450 M604451 M604452 M604453 M604453 M604454	205 294 205 294 205 294 205 294 205 294	0.045 0.180 0.200 0.150 0.210	68 52 128 61 220	185 235 620 380 315	109 71 1600 126 740	0.7 4.7 10.5 4.3 5.6		· · · · · · · · · · · · · · · · · · ·		
M604455 M604456 M604457 M604458 M604458 M604459	205 294 205 294 205 294 205 294 205 294 205 294	0.080 0.130 0.120 0.065 0.160	89 98 124 74 85	138 195 490 255 220	139 410 1250 640 710	2.3 2.6 5.6 3.4 3.6	· · ·	+		
M604460 M604461 M604462 M604463 M604463	205 294 205 294 205 294 205 294 205 294 205 294	0.125 0.040 0.075 0.085 0.120	62 88 61 80 67	220 102 122 130 215	650 225 560 530 840	3.6 1.2 2.2 2.8 4.5				
M604465 M604466 M604467 M604468 M604468	205 294 205 294 205 294 205 294 205 294 205 294	0.045 0.030 0.800 0.015 < 0.005	48 40 350 81 510	45 28 1200 64 350	200 66 3500 270 1350	1.2 1.1 16.8 0.3 1.0			-	
M604470 M604471 M604472 M604473 M604473	205 294 205 294 205 294 205 294 205 294 205 294	< 0.005 < 0.005 < 0.005 0.040 0.015	172 82 61 81 270	53 9 3 28 315	380 57 110 117 290	0.3 0.3 0.3 1.2 2.2				



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212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218

To: MOUNT HOPE RESOURCES CORP.

1918 - 925 W. GEORGIA ST. VANCOUVER, BC V6C 3L2

Page Number :3 Total Pages :3 Certificate Date: 07-0CT-97 Invoice No. :19744675 P.O. Number : Account :PIX

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Project : Comments: ATTN: J.T. SHEARER

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CERTIFICATE OF ANALYSIS

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SAMPLE	PREP CODE	Au g/t FA+AA	Cu ppm	Pb ppm	Zn ppm	Ag ppm Aqua R		
M604475 M604476 M604477 M604478 M604479	205 294 205 294 205 294 205 294 205 294 205 294	0.310 0.075 0.500 0.195 0.180	116 48 84 88 90	235 52 172 45 30	1450 168 540 70 205	9.7 3.0 11.8 4.6 2.6		
M604480 M604481 M604482 M604483 M604484	205 294 205 294 205 294 205 294 205 294 205 294	0.005 < 0.005 < 0.005 < 0.005 < 0.005	110 87 67 94 137	5 3 4 2 4 4	145 136 82 96 116	0.4 0.2 < 0.2 < 0.2 < 0.2 < 0.2		
M604485 M604486 M604487 M604488 M604489	205 294 205 294 205 294 205 294 205 294 205 294	< 0.005 < 0.005 < 0.005 0.010 < 0.005	72 68 154 200 120	< 1 2 2 4 < 1	117 105 190 191 194	< 0.2 < 0.2 < 0.2 < 0.2 0.2 0.2		
M604490 M604491 M604492 M604493 M604494	205 294 205 294 205 294 205 294 205 294 205 294	0.010 < 0.005 < 0.005 < 0.005 < 0.005	142 78 47 118 134	16 32 16 15 29	165 315 167 112 260	0.3 0.3 0.2 0.2 0.2 V V V		
M604495 M604496 M604497 M604498 M604499	205 294 205 294 205 294 205 294 205 294 205 294	< 0.005 < 0.005 < 0.005 < 0.005 < 0.005	43 71 54 32 39	20 12 25 11 7	88 76 123 93 104	< 0.2 < 0.2 < 0.2 < 0.2 < 0.2		
M604500	205 294	< 0.005	28	12	120	< 0.2		

To: MOUNT HOPE RESOURCES CORP.

1918 - 925 W. GEORGIA ST. VANCOUVER, BC V6C 3L2

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Project : Comments: ATTN: J.T. SHEARER Page Number : 1 Total Pages : 1 Certificate Date: 08-OCT-97 Invoice No. : 19745091 P.O. Number : Account : PIX

					(CERTIFIC	ATE OF A	NALYSIS	A97	45091	
SAMPLE	PREP CODE	Au g/t FA+AA	Cu ppm	Pb ppm	Zn ppm	Ag ppm Aqua R					
M604021 M604022 M604023 M604024 M604025	205 226 205 226 205 226 205 226 205 226	0.025 0.225 0.615 0.050 0.325	22 54 28 61 8	7 18 245 18 35	33 43 47 650 20	0.5 2.7 11.8 34.5 7.0					
M604026 N604027 M604028 M604029 M604030	205 226 205 226 205 226 205 226 205 226 205 226	0.065 0.815 0.250 0.235 0.015	35 5 31 32 11	3 25 360 720 30	53 19 70 161 59	2.2 42.5 6.6 8.0 2.1					
M604031 M604032 M604033	205 226 205 226 205 226	0.010 0.060 0.005	20 177 50	5 < 1 10	70 28 56	< 0.2 1.2 0.2					



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Project : HOT SPRING Comments: CC: J. T. SHEARER Page Number : 1 Total Pages : 1 Certificate Date: 02-OCT-97 Invoice No. : 19744070 P.O. Number : Account : PIX

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SAMPLE	PREP CODE	Au g/t FA+AA	Ag ppm Aqua R	Cu ppm	Pb ppm	Zn ppm			
M604013 M604014 M604015 M604016 M604017	205 294 205 294 205 294 205 294 205 294 205 294	0.025 0.010 0.020 < 0.005 < 0.005	0.6 < 0.2 5.7 < 0.2 < 0.2	52 19 41 25 22	142 34 14 3 3	690 156 52 102 36	Dove		
M604018 M604019 M604020	205 294 205 294 205 294	0.015 0.050 0.200	0.4 4.9 4.2	62 27 18	9 18 6	18 32 19			

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1918 - 925 W. GEORGIA ST. VANCOUVER, BC V6C 3L2

Project : HOTSPRING Comments: ATTN: SCOTT ANGUS Page Number :1 Total Pages :4 Certificate Date:08-NOV-97 Invoice No. :19748778 P.O. Number : Account :PIX

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					(CERTIFIC	ATE OF A	NALYSIS	A97	48778	
SAMPLE	PREP CODE	Au g/t FA+AA	Pb ppm	Zn ppm	Ag ppm Aqua R						
M266401 M266402 M266403 M266404 M266405	205 294 205 294 205 294 205 294 205 294 205 294	0.040 0.310 0.225 0.220 0.260	58 88 230 275 168	258 336 520 1500 376	1.3 4.2 8.2 8.5 5.7						
M266406 M266407 M266408 M266409 M266410	205 294 205 294 205 294 205 294 205 294 205 294	0.375 0.560 0.365 0.665 0.280	248 375 260 680 320	845 745 640 2000 790	6.8 12.0 9.0 16.6 7.4						
M266411 M266412 M266413 M266414 M266415	205 294 205 294 205 294 205 294 205 294 205 294	0.300 0.800 0.570 0.200 0.025	700 1050 850 308 50	400 2700 2400 480 280	14.0 17.5 12.0 4.9 1.0						
M266416 M266417 M266418 M266419 M266420	205 294 205 294 205 294 205 294 205 294 205 294	0.065 0.120 0.035 0.055 0.085	23 70 43 62 20	250 325 230 144 166	0.8 1.3 0.8 1.2 1.4					•	
M266421 M266422 M266423 M266424 M266425	205 294 205 294 205 294 205 294 205 294 205 294	0.080 0.050 0.020 0.025 0.055	25 21 9 8 92	750 124 137 110 510	1.0 1.0 0.7 0.6 1.8						
M266426 M266427 M266428 M266429 M266430	205 294 205 294 205 294 205 294 205 294 205 294	0.025 0.025 0.055 0.060 0.060	17 10 22 42 78	560 580 274 94 730	1.1 0.8 1.0 1.7 2.3					i	
M266431 M266432 M266433 M266434 M266435	205 294 205 294 205 294 205 294 205 294 205 294	0.180 0.160 0.085 0.070 0.060	140 190 120 195 105	2700 540 450 700 2200	7.0 7.5 2.1 2.1 1.9						
M266436 M266437 M266438 M266439 M266440	205 294 205 294 205 294 205 294 205 294 205 294	0.020 0.010 0.035 0.040 0.090	30 6 105 78 145	750 236 490 285 184	0.8 0.3 1.1 1.7 3.1						

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To: MOUNT HOPE RESOURCES CORP.

1918 - 925 W. GEORGIA ST. VANCOUVER, BC V6C 3L2



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Project : HOTSPRING Comments: ATTN: SCOTT ANGUS

Page Number :2 Total Pages :4 Certificate Date: 08-NOV-97 Invoice No. :19748778 P.O. Number : PIX Account

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PREI CODE 205 22 205 23 205 23 205 23 205 23 205 23	Au g/t FA+AA 4 0.040 4 0.040 4 0.010 4 0.010	Pb ppm 98 60	Zn ppm 540	Ag ppm Aqua R						
205 29 205 29 205 29 205 29 205 29 205 29	4 0.040 4 0.040 4 0.010 4 0.010	98 60 89	540	2.1				1		
205 29 205 29 205 29 205 29	0.010 0.010	60 20		1 0		,				
205 29 205 29 205 29	0.010		1700	2.5						
205 29	A 0.000	1050	2400	2.7						
205 29	• 0.040	485	4000	3.4						
고 주 관 고 가	4 0.015	110	1400	1.2						
205 25			550	1.4					1	
205 20		37	490	0.6		1				
205 29	4 < 0.005	22	88	0.3						
205 29	4 0.010	152	233	0.6						
205 29	4 0.015	360	1200						1	
		42	2300	1.1						1
205 29	0.015	75	3600	1.4						
205 29	4 0.010	98	1700	2.0					1	
205 29	4 < 0.005	11	330	< 0.2	i	1				
205 2		14	1160							
205 2	0.035	55	510	0.9						
205 2	4 0.030	30	240	0.7						-
205 23	4 0.375	36	330	0.8						1
205 2	4 0.935	60	196	2.8					1	
205 2	4 0.125	33	32	1.0						
205 2	4 0.365	50	47	1.6						
205 2	4 1.410	62	570	6.0						
205 2	4 0.280	66	4400	3.9	1					
205 2	4 0.195	22	49	0.8						
205 2	4 0.060	40	112	1.6						1
205 2	4 0.055	43	70	1.9						
205 2	4 0.160	62	3900	5.4				1		
1 205 2	4 0.110	84	1160	2.1	1					
205 2	0.025	17	104	0.3	1					
205 2	4 0.025	19	1000	0.5						
205 2		79	610 po	3.6	1					
205 2		24	103	3.7	1				ļ	
205 2	4 0.050	16	200	1.3			1		1	
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	205 29 205 29 205 29 205	205 294 $<$ 0.005 205 294 $<$ 0.005 205 294 $<$ 0.005 205 294 0.010 205 294 0.015 205 294 0.015 205 294 0.015 205 294 0.015 205 294 0.010 205 294 0.015 205 294 0.005 205 294 0.035 205 294 0.035 205 294 0.030 205 294 0.030 205 294 0.030 205 294 0.125 205 294 0.125 205 294 0.125 205 294 0.045 205 294 0.060 205 294 0.025 205 294 0.025 205 294 0.025 205 294 0.025 205 294 0.025 205 294 0.025 205 294 0.025 205 294 0.025 205 294 0.025 205 294 0.025 205 294 0.025 205 294 0.025 205 294 0.025 205 294 0.025 205 294 0.025 205 294 0.025 205 294 0.0	205 294 < 0.005 37 205 294 < 0.005 22 205 294 0.015 360 205 294 0.015 360 205 294 0.015 42 205 294 0.015 42 205 294 0.015 42 205 294 0.015 42 205 294 0.015 42 205 294 0.015 42 205 294 0.015 46 205 294 0.005 11 205 294 0.030 30 205 294 0.030 30 205 294 0.030 30 205 294 0.030 30 205 294 0.365 50 205 294 0.365 50 205 294 0.365 50 205 294 0.365 50 205 294 0.365 50 205 294 0.365 43 205 294 0.045 22 205 294 0.060 40 205 294 0.025 17 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Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218

To: MOUNT HOPE RESOURCES CORP.

1918 - 925 W. GEORGIA ST. VANCOUVER, BC V6C 3L2

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Project : HOTSPRING Comments: ATTN: SCOTT ANGUS

Page Number :3 Total Pages :4 Certificate Date: 08-NOV-97 Invoice No. :19748778 P.O. Number : Account :PIX

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						CERTIFICATE OF ANALYSIS	A9748778
SAMPLE	PREP COD E	Au g/t FA+AA	Pb ppm	Zn ppm	Ag ppm Aqua R		
M266481 M266482	205 294 205 294	0.080 0.010	11 16	90 172	0.9		
M266483 M266484 M266485	205 294 205 294 205 294	0.040 0.050 0.110	18 20 18	260 990 220	0.9 0.8 2.8		
N266486 N266487	205 294 205 294	0.105	12 14	82 220	1.6		
M266488 M266489 M266490	205 294 205 294 205 294	0.130 0.100 0.070	9 5 7	106 21 30	1.1 0.5 0.4		
M266491 M266492	205 294 205 294	0.020	20 23	139 100	0.3		
M266494 M266495	205 294 205 294	0.035	6 21	56 44	0.6		
M266496 N302836 N302837	205 294 205 294 205 294	0.050 0.020 0.015	19 5 8	72 190 73	0.5		
N302838 N302839	205 294 205 294	0.040	8 7	92 66	5.3 7.4		
N302840 N302841 N302842	205 294 205 294 205 294	0.030 0.055 0.045	6 10 9	52 108 149	3.0 7.9 6.0		
N302843 N302844		NotRed	NotRed	NotRed	NotRed		
N302845 N302850 N302851	205 294 205 294 205 294	0.045	30 11 30	133 94 126	< 0.2 2.0 6.1		
N302852 N302853	205 294 205 294	0.015 0.010	12 6	98 92	2.0		
N302854 N302855 N302856	205 294 205 294 205 294	0.010 0.010 < 0.005	4	36 250 118	0.9		
N302857 N302858	205 294 205 294	0.015	8 11	156 270	3.0		
N302865 N302866 N302867 N302868	205 294 205 294 205 294 205 294 205 294	0.030 0.070 0.020 0.010	9 6 13 5	360 76 480 240	2.0 19.7 1.8 0.5		
N302869	205 294	0.010	14	510	0.8		tre to Secho.

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212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218 To: MOUNT HOPE RESOURCES CORP.

1918 - 925 W. GEORGIA ST. VANCOUVER, BC V6C 3L2

Project : HOTSPRING Comments: ATTN: SCOTT ANGUS Page Number :4 Total Pages :4 Certificate Date: 08-NOV-97 Invoice No. :19748778 P.O. Number : Account :PIX

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					(CERTIFICATE OF ANALYSIS		A97	A9748778		
SAMPLE	PREP CODE	Au g/t FA+AA	Pb ppm	Zn 1 ppm 1	Ag ppm Aqua R						
N302870 N302871 N302872	205 294 205 294 205 294	0.040 0.025 < 0.005	14 10 7	149 106 110	0.8 0.6 0.3						
										•	

CERTIFICATION: Hart Buchler

To: MOUNT HOPE RESOURCES CORP.

1918 - 925 W. GEORGIA ST. VANCOUVER, BC V6C 3L2

Project : HOT SPRINGS Comments: CC:J.T. SHEARER

CERTIFICATE OF ANALYSIS

P.O. Number Account PIX

					CERTIFICATE OF ANALYSIS				A9745466		
SAMPLE	PREP CODE	Au g/t FA+AA	Ag ppm Aqua R	Cu ppm	Pb ppm	Zn ppm					
N65918E N302585 N302586 N302587 N302588	205 294 205 294 205 294 205 294 205 294	0.100 0.120 0.050 0.010 0.010	7.7 0.7 0.3 0.2 0.4	62 80 70 50 62	100 138 33 82 58	260 265 156 265 148	r.		, , , , , , , , , , , , , , , , , , , 		
N302591 N302595 N302596 N302597 N302602	205 294 205 294 205 294 205 294 205 294 205 294	0.060 0.030 0.030 0.030 0.030 0.020	4.0 0.6 0.9 0.7 < 0.2	185 50 116 30 60	1780 138 33 9 28	3900 215 162 61 181			i		
N302606 N302610 N302645 N302648 N302653	205 294 205 294 205 294 205 294 205 294 205 294	0.060 0.020 0.530 1.060 1.095	1.3 < 0.2 4.1 7.0 5.9	196 26 750 422 700	108 18 322 1150 700	200 44 2650 6400 1900					
N302654 N302656 N302659 N302660 N302663	205 294 205 294 205 294 205 294 205 294	0.580 0.140 0.750 0.060 1.190	5.4 2.0 11.0 1.7 9.3	600 240 670 370 850	950 66 1500 365 1250	3400 750 8300 3000 >10000					
N302664 N511579H N511581H N511588H N511588H	205 294 205 294 205 294 205 294 205 294 205 294	0.610 0.075 0.095 0.030 0.020	5-4 0-7 0.8 0.2 < 0.2	335 360 168 175 170	920 92 36 29 21	2500 460 1000 131 83					
N511592H N511600H	205 294 205 294	0.015 0.005	1.3 < 0.2	1000 135	4 5	137 188					





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Page Number : 1 Total Pages : 1 Certificate Date: 14-OCT-97 Invoice No. : [9745466

APPENDIX IV

DIAMOND DRILL LOGS

January 26, 1998

1918-925 West Georgia St., Vancouver, B.C., V6C 3L2

SECTION:	30163N	Diamond Drill Lo	g
Northing: Easting: Elevation:	301+63N 314+10E 858m	Drill Hole survey Method: <u>Acid</u> Azimuth Dip	
Azimuth:	050°	050 -57	
Inclination:	-57°	050 -60	
Grid:	Aranlee	050 -60	
Length (m):	114.60	050 -60	
Core size:	<u>N.Q.</u>		
Contractor:	F. Boisvenu		
Drill Type:	Boyles 37		

Drill Hole survey											
Method: <u>/</u>	Acid										
Azimuth	Dip	Depth									
050	-57	0									
050	-60	32.31									
050	-60	60.96									
050	-60	93.27									
	-1										

Property: Hotsprings NTS: 92B/9,16 Claim: Hotspring 7 Date Started: Sept. 7, '97/2:10p.m. Date Completed:Sept.10,'97/10p.m. W.B. Lennan & Logged by: J.T. Shearer

DDH#: HS97-01

from to (m) (m)	Code	Description	sampl e No.	from/to	width (m)	Au (g/t)
0 3.05	9	CASING - Boulder rubble with pieces cream coloured siliceous tuff (lapilli) of unit 3 and 6				
5 15.60	314	SILICEOUS LAPILLI TUFF - Light bluish	604051	3.05-4.40	1.40	0.830
		grey with ghost fragments up to 3 cm in diameter. White feldspar phenocrysts and	6040 52	4.40-6.10	1.70	0.575
		fragments dominant fracturing 60° and 25° to core axis. Heavy rusting on fracture surfaces.	604053	6.10-6.95	0.85	1.360
		4.39-4.88m - Shear zone with intense rusting 25° to C.A.	604054	6.95-7.85	0.90	1.040
		5.6m - 1 cm wide rusty quartz vein 25° to C.A. Tension vugs with coarse pyrite cubes	604055	7.85-9.35	1.50	1.685
		3.05-5.36m - Pyrite dominates at 2 to 3% with sphalerite and minor galena found along the rims of quartz veins	604056	9.35-10.97	1.62	1.520
		5.36-6.12m - Mineralization weakens 6.12-6.95m Intensely silicified with	604057	10.97-12.47	1.50	1.640
		bleaching along fractures 40° and 18° to C.A. Pyrite, sphalerite and minor chalcopyrite and galena are strong in this zone. 2mm vugs occur along silicified fractures 6.95-7.85m - Very intense silicification with rusted fracture. Sulfides drop off significantly 7.85-10.92m - Dark blue grey siliceous tuff cont'd but intensely silicified in veins and	604058	12.47-13.80	1.33	1.140

1918-925 West Georgia St., Vancouver, B.C., V6C 3L2

SECTION:	30163N
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Page: <u>2</u>

from (m)	to (m)	Code	Description	sample No	from/to	width (m)	Au (a/t)
			8.74-9.24m - Intensely pyritized with moderate sphalerite mineralization along veins 10-15% C.A. This appears to cut mineralized veins at 40° to C.A. 10.97-11.40m- Broken core with some loss 12.30-12.75m- Broken core with some loss 10.97-13.80m- Intensely fractured and rusted and silicified section of silicified lapilli tuffs. Textures are mostly bleached out except for patches showing fragments containing feldspar phenocrysts or crystal fragments. Mineralization drops off. 13.8014 50m - Silicified Lapilli Tuff	604059	13 80-14 50	0.70	1.055
			continues. Massive bleached with		10.00 1 1.00	0.70	1.000
14.50	15.60		sphalerite along fractures. FAULT ZONE or open fracture 0.91m of				
15.60	25.29	312	SILICEOUS LAPILLI TUFF - cream grey to dark blue grey massive with pervasive quartz flooding in addition to veins & veinlets	604060	15.60-16.23	0.63	2.200
			16.06-16.22m - Quartz veining with 2% pyrite and sphalerite along vein margins. Upper vein contacts 50° to C.A. Lower contact roughly parallels core axis. 17.07m - Rusty shear or fracture 30° to C.A quartz vein material also occurs along fracture	604061	16.23-17.07	0.84	0.840
			17.07-17.65m - Intensely fractured and quartz veined tuff. Dark grey green fragments may contain sphalerite. Vuggy areas along fractures. 17.65-18.30m - Fracturing continues with rusty surfaces - 2 dominant sets (conjugate) 45° to C A	604062	17.07-18.40	1.33	1.880
			18.30-25.29m - Massive light grey siliceous Lapilli Tuff continues. Fracturing at 65 to 85° to C.A. and vein filled fractures primarily at 25° to C.A.	604063	18.40-19.90	1.50	0.730
			20.50m - 3 cm wide quartz vein 25° to C.A. Sphalerite specks along vein margins. Pyrite generally >1.5% but occasional fracture core remains pyrite.	604064	19.90-20.90	1.00	1.350
			20.90-21.29m - Strong pyrite	609065	20.90-21.29	0.39	0.630
			 mineralization along irregular 3-10mm vein. <u>Epidote alteration</u>. Minor sphalerite possibly secondary biotite. healed breccia texture mineralized veining primarily on 20° to C.A. 21.46m - 1 cm gouge with quartz vein 22° to C.A. 	604066	21.29-22.79	1.50	1.520
			21.46-22.25m - Pyrite & Sphalerite • galena in veinlets.				

SECTION: 30163N			Page: <u>3</u>	DDH#: <u>HS97-01</u>				
from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)	
			22.25-23.16m - Veining decreases and Lapilli texture is more apparent with lapilli and crystal fragments to 1cm diameter.					
			23.16-25.29m - Fracturing, veining and	604067	22.79-23.97	1.18	0.940	
			mineralization increases. At 23.97m a 1	604068	23.97-24.64	0.67	2.820	
			an intensely fractured vein system at 30° to	604069	24.64-25.29	0.65	0.890	
			C.A. This well mineralized zone extends to 24.64m. Specks of galena are observed along with up to 5% pyrite and <0.5% sphalerite. <u>Epidote alteration is strong from 24.46 to 24.64m</u> . Veining and					
			mineralization decreases from 24.64-					
25.29	30.49	701	DACITIC? TUFF - Pale green, very	604070	25.29-27.29	2.00	0.345	
			siliceous. upper contact sharp at 40 to 45°	604071	27.29-29.29	2.00	0.015	
			ntense limonite alteration along fractures 604		29.29-30.49	1.20	0.020	
			gives rusty appearance. Some fracture surfaces coated with black manganese staining. Ghosts of feldspar phenocrysts and chloritized mafics? 28.00-28.35m - Pinkish tinge due to Fe staining. Also from 28.90-29.29 - Minor disseminated pyrite <0.5%. Some pyrite occupies sites of altered mafics?					
30.49	40.38	314	SILICEOUS LAPILLI TUFF - From 30.49 to	604073	30.49-31.99	1.50	1.620	
			40.38m the unit is intensely silicified and veined. Veining is often contorted giving a	604074	31.99-33.49	1.50	4.800	
			brecciated appearance to the tuff although	604075	33.49-34.99	1.50	2.980	
			angular lapilli and feldspar crystal fragments are distinct throughout. Fragments 3-5 cm across are not uncommon and are often cut by glue-grey quartz veins. Epidote alteration occurs from 30.49m to 31m but is weakly distributed throughout unit over irregular		604076	34.99-36.51	1.52	1.260
			The most severely rusted and pyritized	604077	36.51-38.01	1.50	0.825	
			vuggy fractures are primarily 15 to 20° to C.A. particularly from 31.50-31.90m and 32.31m-34.56m. Pyrite is finely disseminated throughout as well as along fracture and quartz veins	6040 78	38.01-39.51	1.50	0.690	
			From 33.30-33.80m pyrite mineralization in veining approx. 40° to C.A. imparting a banded fabric to the unit. Sphalerite occurs along vein margins. Minor malachite occurs along a 55° to C.A. Fracture surface at 33.60m. Coarse pyrite occurs along a 2mm wide silicified fracture 50° to C.A. at 35.75m.	604079	39.51-40.38	0.87	0.720	

1918-925 West Georgia St., Vancouver, B.C., V6C 3L2

SECTION: 30163N

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Page: <u>4</u>

from	to (m)	Code	Description	sample	from/to	width (m)	Au (g (t)
(111)	(111)		From 35.75-38.5m - fracturing and veining changes angle to core axis slightly with dominant angles ranging from 30° to 60° to C.A. Well mineralized with up to 5% pyrite and speckles of fine grained sphalerite along vein margins. From 39.20-39.75m along rusted & pyritized fractures runs in undulating fashion roughly parallel to the core axis From 39.75-40.38m low angle to core axis fractures diminish. At 39.95m a silicified 2mm wide fracture at 43° to C.A. is coated in coarse pyrite grains. At 40.38m siliceous lapilli tuff contacts andesite at 60° to C.A. Contact is sharm			(114)	(87 4)
40.38	50.80	522	ANDESITE DYKE - Dark green, moderate	604080	40.38-42.38	2.00	0.030
			to strongly magnetic. Fine grained	604081	42.38-44.38	2.00	0.045
			to the fine grained feldspar phenocrysts.	604082	44.38-46.38	2.00	0.025
			Pervasive chlorite alteration and patchy epidote alteration occurring as 1.2 cm	604083	46.38-48.38	2.00	0.040
			diameter patches and in veins as at 41.15m at 80° to the C.A. and 46.86m at 40° to C.A. Pyrite is disseminated throughout unit but coarser grained pyrite coasts 1-2mm wide fractures as at 40.7m at 55° to C.A., 40.85m at 30° to C.A., 45.06m at both 80° to C.A. and 18° to C.A. Cave at 43.28m. Note core left in box hole continued with little loss in core 45.42-45.70m - blocky core 47.65-47.90m - very rusted (limonitic) fracture roughly parallel to core axis	604084	48.38-49.22	0.84	0.120
	FAULT ZO	ONE	49.22-49.80m - FAULT ZONE - with black core and clay rich gouge at 55-60° to C.A. Lower fault contact 35-40° to C.A.>	604085	49.22-49.80	0.54	0.040
			49.80-50.80m - dyke material is very broken up & blocky with strong limonite staining.	604086	49.80-50.80	1.00	0.390
50.80	57.06	312	SILICEOUS LAPILLI (Fragmental) TUFF -	604087	50.80-52.30	1.50	0.320
			Cream to light and dark grey unit. Intensely silicified and fractured which imparts a brecciated texture to the unit, however, lapilli and crystal fragments are clearly visible to 4 cm in diameter. Pyrite is generally 1 to 2% and occurs primarily along fractures, veinlets and as	604088	52.30-53.80	1.50	0.355
			rims around lapilli fragments. At least 2 generations of quartz veining is evident, coarse pyrite occurs in veins to 2mm thick.				

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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
			From 55.34-57.06m unit changes to a purplish brown colour due to moderate <u>secondary biotite</u> . This alteration imparts a weak fabric to the unit running approx. 50° to C.A. Pyrite content increases to approx. 5%. At 51.28m limonite stained weakly gougy fractures at 25° to 30° to C.A. From 52.0-53.5m rusted fractures at 25 to 30° to C.A. and 50 to 70° to C.A. show brittle fracturing with vuggy texture. 53.30m - Fault Slip coated with graphite at	604089	53.80-54.94	1.14	0.300
			53.50m - Fault Slip with 0.5 cm limonitic gouge at 70° to C.A. Pyrite occurs along this surface	604090	54.94-55.98	1.04	0.580
57.06	59.74	412	55.98m - <u>Fault Gouge</u> (2 cm) limonitic clay core very rusty and broken to 65.90m. More fracturing 10 - 15°to C.A. FAULT CONTACT WITH DACITIC- ANDESITIC NODULAR TUFF	604091	55.94-57.06	1.08	0.060
			At 57.06m - Fault Gouge (3 to 4 cm) 43° to C.A. At 57.43m - Fault Gouge (5 cm) at approx.				
		25° to C.A. Nodular Tuff - is purplish brown in colour with strong biotite alteration. From 57.06-57.75m - light coloured round nodules are generally less than 6mm in diameter. At 57.75m nodules are fine grained and unit appears to be more of a crystal (?) tuff. Pyrite is disseminated throughout unit as well as along fractures ranging from fine to coarse grained coatings. Fabric of unit is approx. 50° to	604092	57.06-58.56	1.50	0.035	
			C.A. 58.59m - Fault Gouge - (5 cm) limonitic clay at 70° to C.A. 59. 20-59.40m - Strong silicification with quartz veining ranging from 25° to 40° to C.A. Weak epidote alteration. At approx. 59.55m - 3mm thick massive pyrite vein at 10° to C.A. At 59.74m contact with andesitic dyke. Broken core obscures nature and orientation of contact.	604093	58.56-59.74m	1.18	0.050
59.74	63.71?	522	ANDESITE DYKE or FLOW?	604094	59.74-61.74	2.00	0.035
			Massive dark green very fine grained volcanic. Weakly to moderately magnetic. Core very broken up. Strong limonite rusting on fractures. Pyrite is found throughout section but platey thin coating dominate fractures not exposed to oxidation. Pyrite content 2-6%. Strong	604095	61.74-63.71	1.97	0.030
			chlorite alteration throughout.				

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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
. ,	. ,		Two dominant fracture sets at 65 to 75° to C.A. and 15 to 30° to C.A. Both carry pyrite mineralization. At approx. $60.96m - Fault Zone$? at 42° to C.A. Core very broken up $62.65-62.85m - Fault Zone - limoniticgouge on fracture surfaces at \cdot 20° to C.A.Core completely broken up to 63.71m(approx.) where dyke contacts Nodular Tuffat 57° to C.A.$				
63.71?	64.39	412	DACITIC-ANDESITIC NODULAR TUFF - Dark purplish grey. Possibly a sliver included in fault zone in Andesite Dyke. Strong limonite coatings on all fractures. From 63.95m to 64.20m fracture 15° to C.A. and 60° to C.A. Pyrite occurs as dissemination and as coating on micro fractures generally <3% At 14.39m - Nodular Tuff contacts Andesite Dyke along a fault cutting C.A. at 65° to 70°. Tension yugs occur in rock.	604096	63.71-64.39	0.68	0.060
64.39	66.45	521	ANDESITE DYKE - In fault zone - core very broken up - Lower contact depth uncertain as one 0.61 interval recovered no core (65.84-66.45m) Core material in hole. Core at 66.45m changes to Nodular Tuff. Andesite Dyke is strongly fractured and limonite coated. Weakly magnetic. Pyrite along fractures and disseminated.	604097	64.39-66.45	2.06	0.020
66.45	68.23	412	DACITIC-ANDESITIC NODULAR TUFF - Dark purplish grey fine grained nodular lapilli tuff. Small nodules <5mm diameter are rarely seen. Strongly silicified and chlorite altered in area where greenish andesitic tuff occur. Hole experiencing cave sections. Intensely fractured with 1- 4% pyrite along fracture planes. Knots of biotite alteration from 64.75 to 68.23m. Core broken mainly due to fracturing 10- 15° to C.A.	604098	66.45-68.23	1.78	0.035
68.23	69.04	522	ANDESITE DYKE - Dark grey green broken core. Strong chlorite alteration along fracture planes. Disseminated pyrite and mainly fracture controlled pyrite throughout dyke. At 68.70m a 0.5 cm thick quartz vein with strong pyrite mineralization cuts core axis at 40°. At 69.04m contacts unit 3 siliceous lapilli tuff adjacent to a 2.5 cm thick strongly pyritic quartz vein at 63° to C.A. Contact is sharp.	604099	68.23-69.04	0.81	0.010

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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
69.04	71.33	312	SILICEOUS LAPILLI TUFF - Massive light	604100	69.04-70.04	1.00	0.080
			grey unit with angular lapilli fragments to 2 cm diameter. Abundant ghosts of crystal fragments. Well mineralized with fine grained disseminated pyrite and fracture controlled pyrite. From 69.04-69.06m at the upper contact with the andesite dyke, a 2.5 cm quartz vein with massive pyrite cuts C.A. at 63°. From 69.06-69.54m a conjugate set of low angle to C.A. fractures forms a network through the core. Onset is at 15° to C.A. and the other approx. 30° to C.A. Epidote? alteration occurs in these fractures. At 71.33m unit contacts dark green fine grained Andesite Dyke at 80° to C.A. Contact is slickensided with strong chlorite	604101	70.04-71.33	1.29	0.160
71.33	72.85	522	alteration. ANDESITE DYKE - Dark green, massive fined grained, weakly magnetic. Strong chlorite alteration particularly along fractures. Pyrite mineralization is moderate at 1-3% with some disseminated and most along fracture as a thin coating. Epidote alteration is generally weak to non existent, however, several epidote veinlets occur from 71.93-72.05m. Dominant fracturing is at 20-30° to C.A. Lower contact at 72.85m is along a fault with 0.5 cm of gouge at 18° to C.A.	604102	71.33-72.85	1.52	0.015
72.85	74.70	312	SILICEOUS LAPILLI TUFF - Possibly altered version of Nodular Tuff with biotite. Dark grey intensely silicified tuff but not bleached as in material at top of hole. 1 to 3m quartz veins (2 periods) cross core at various angles. Chlorite alteration is prevalent along a fracture roughly parallel to core axis from 74.60-74.70m. Pyrite mineralization is abundant ranging from 10% and occurs as disseminations throughout unit but is primarily found along veinlets and hairline fractures and microveinlets particularly from 74.10- 74.70m. At 74.70m unit has slickensided chloritic altered contact with an Andesite Dyke at 73° to C A	604103 604104	72.85-73.85 73.85-74.70	1.00 0.85	0.030
74.70	78.64	522	ANDESITE DYKE - Dark green, massive, fine grained unit core is blocky in this unit. Weak to moderately magnetic. Strong chlorite alteration particularly along fractures. 2mm quartz vein at 75.63m approx. 33° to C.A.	604105	74.70-76.70	2.00	0.030

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from	to (m)	Code	Description	sample	from/to	width	Au (g(t)
()	()		At 78.60-78.64m epidote occurs in veins. Pyrite is finely disseminated throughout unit but is primarily found along fracture planes where it occurs as a thin coating, coarse crystals and fine grains 78.64m - Possible gradational contact of unknown orientation to core axis with Dacitic-Andesitic Nodular Tuff.	604106	76.70-7 8 .64	1.97	0.015
78.64	114.60	412	DACITIC-ANDESITIC NODULAR & LAPILLI TUFF - Dark purplish green grey colour. Biotite rich matrix. Silicified.	604107	78.64-80.14	1.50	0.015
			 78.64-78.97m - Fine grained nodular tuff with nodules <2mm diameter, disseminated pyrite @ 2% in fabric plane and along hairline silicified fracture @ 50° to C.A. 78.97-79.00m - Intensely pyritized and silicified zone (not a true vein) occurs at 50° to C.A. 79.00-81.96m - Nodular Tuff becomes much coarser grained grey green nodules to 1 cm diameter. Nodules have reaction rims. Fracturing primarily at 75° to C.A. and 20-25° to C.A. Fractures have bleached narrow (1-2mm) envelopes. Faults occur from 79.71-79.95m with broken core and minor gouge (orientation unknown), from 80.16-80.22m with 3 cm gouge at approx. 40° to C.A. at 80.47 with 0.5 cm of gouge and slickensides at 70° to 75° to C.A. 	604108	80.14-81.96	1.82	0.030
			81.96-82.49m - Nodular tuff grades abruptly to a fine grained ash? tuff of the same colour and composition as coarse grained variety. Weak banding is evident that may reflect bedding. Banding is oriented at approx. 50-60° to C.A. 82.49-82.55m - Contorted white quartz vein with clay on contacts. Upper contact @ 30° to C.A. Lower contact approx. 65- 70° to C.A.	604109	81.96-82.55	0.59	0.050
			82.55-86.57m - Coarse Grained Nodular	604110	82.55-84.55	2.00	0.040
			Tuff. Abrupt change to coarse grained varied on lower quartz vein contact. Much coarser grained nodules than previous modules with diameters to 1.5 cm. At 86.34m one elongate nodule oriented 52° to C.A. is 4 cm long x 2 cm wide. Pyrite is concentrated around the rim of the nodules and within the nodules. Light coloured crystal shards(?) 1mmx4mm long impart a fabric to the rock oriented at approx. 50° to C.A. Pyrite is disseminated throughout to 1-2%. Minor fracturing.	604111	84.55-86.57	2.02	0.025

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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
	(- <i>1</i>		84.65m - Fault Zone - with 5 cm of brown clay rich gouge. Orientation is varied but approx. 45° to C.A.			(,	, 10 , -)
			86.57-87.17m - Fine Grained Ash Tuff of same composition and colour as coarse grained Nodular Tuff. Some greenish chlorite alteration. At 86.85m 2.2-4m thick quartz veins cut	604112	86.57-87.17	0.60	0.045
			unit at 20-25° to core axis. 87.17-87.98m - Coarse Grained Nodular Tuff - Same as coarse grained variety described from 82.55-86.57m. Finely disseminated and fracture controlled pyrite	604113	87.17-87.98	0.81	0.040
			 @ 1%. More prominent light coloured elongate light grey coloured shards? (1mm by 1 cm) oriented at approx. 55° to C.A. 				
		·	87.98-88.53 <i>m</i> - Fine Grained Ash? Tuff Dark grey green coloured with moderate chlorite alteration. Remnants of small mafic and feldspar phenocrysts are also found. Core broken up with clay and limonite occurring on fractures 20° to C.A.	604114	87.98-88.53	0.55	0.045
			88.53-89.24m - Coarse Grained Nodular Tuff - As from 87.17-87.98m but more crowded texture with nodules in much closer proximity to each other, sometimes touching each other. Minor fracturing. Pyrite is disseminated throughout at approx. 1%. At 88.65m coarse pyrite found along a fracture at $@$ 15° to C A	604115	88.53-89.24	0.71	0.065
			89.24-90.22 (approx.) - Fault Zone with minimum 30 cm core loss with possible orientation 60° to C.A.	604116	89.24-90.22	0.98	0.070
			90.22-93.27m - Coarse Grained Nodular	604117	90.22-91.35	1.13	0.030
			<u>Tuff</u> - Textures less crowded and slightly	604118	91.35-91.53	0.18	0.225
			89.24m. More intensely fractured. Shear zone from 91.35-91.53m at 45-50° to C.A. Increased pyrite content to 3-5% in this section. Pyrite is more prevalent along low angle fractures from 91.53-93.27m. Nodules become more diffused and less	604119	91.53-93.27	1.74	0.070
			prominent due to increased silicification.	604120	93 97-94 77	1.50	0.050
			Tuff - Purplish to pinkish tinged lapilli tuff. Bleaching due to quartz veining and moderate silica flooding has obscured the	604121	94.77-96.49	1.72	0.415
			various angles to core axis lend a slight brecciated appearance to the unit.				
			Dominant fracturing at 60-65° to C.A. and 30-35° to C.A. Chlorite alteration forms sporadic green patches along fractures and				
			quartz vein & veinlet margins.				

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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/ti
			At 93.54m - 0.5 cm quartz vein cuts C.A. at approx. 30°. Chlorite alteration on margins. 1-3m wide pyrite veins at 93.60m (10° to C.A.) and at 93.90m (37° to C.A.). Pyrite is disseminated throughout unit at 1-3% At 94.08 a 1 to 1.5 cm thick quartz vein with same coarse pyrite crystals and epidote? crystals cuts C.A. at 30°. Core is very black to 96.44m			()	
			96.49-97.53m - The unit is intensely silicified with pervasive silica flooding and at least 2 generations of quartz veining. Sulfide mineralization increases to 5%. Chlorite alteration along quartz vein margins and fracture surfaces lend green streaky tinge to the unit that is otherwise a creamy pink colour. Epidote is also found along some of the veins. Dominant mineralization veining is at 30-35° to C.A. and 10-17° to C.A. 97.16-97.30m - well mineralized vein with 2% sphalerite and 5% pyrite-galena- chalcopyrite	604122	96.44-97.53	1.04	2.760
			97.53-98.23 - is less well mineralized, fine grained massive. Sulfide mineralization is pyrite & sphalerite along quartz vein (2mm) from 98.17-98.23 at 13° to C.A. 98.23-107.10m - Coarse Grained Lapilli Tuff - Massive purplish brown, much less silicified, biotite altered Lapilli Tuff.	604123	97.53-98.23	0.70	0.270
			This unit is a variation of the Nodular Tuff unit with the same colour and composition. Fragments and crystal fragments are angular set in a matrix of biotite. Silicification lessens progressively down hole from 98.23m. Fragments to 3 cm diameter.	604124	98.23-98.90	0.67	0.170
			Pyrite mineralization follows a veined fracture from 98.90-99.36m at 10-15° to C.A. Pyrite is disseminated and fracture and vein controlled.	604125	98.90-99.36	0.46	0.620
			Quartz vein with pyrite at 99.82m 30-35°	604126	99.36-100.86	1.50	0.200
			to C.A. Two generations of veining evident. Quartz vein from 103.00-103.20m with bleached envelope. Hairline veins carry abundant pyrite 20° to C.A.	604127	100.86-102.36	1.50	0.160
			From 103.80-104.48 more intensely	604128	102.36-103.80	1.44	0.285
			silicified and pyritized. Pyrite to 3%. 1- 2mm wide quartz veins running 40° and 15° to 20° to C.A. are dominant.	604129	103.80-104,48	0.6 8	0.430
			105.45m - 4 cm gray green fault gouge	604130	104.48-105.46	0.98	0.130
			orientation unknown. Caving in hole core is blocky to 107.10m with limonite staining.	604131	105.46-106.96	1.50	0.110

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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
			At 107.10m gradational contact,Nodular Tuff at approx. 45° to C.A.				
			107.10-114.60m - Coarse Grained Nodular Tuff - Dark purple brown to greenish.	604132	106.96-107.70	0.74	Not sampled
			From 107.10-108.60m - Stronger chlorite alteration imparts green colour. Fracturing is generally weak in this section.	604133	107.70-108.60	0.90	Not sampled
			107.70-108.60m - Zone of increased mineralization with fine grained pyrite outlining a fabric to the rock at 45-50° to C.A. Very sparse pyrite.	604134	108.60-110.60	2.00	Not sampled
			108.00m - 1 cm thick massive pyrite vein with sphalerite 40° to C.A.				
			108.10m - Quartz vein 3mm to 5mm thick carriès pyrite and sphalerite at 35° to C.A.	604135	110.60-112.60	2.00	Not sampled
			111.06m - 1 cm wide Fault Gouge 50° to C.A. 114.60: End of Hole (E.O.H.)	6041 36	112.60-114.60	2.00	Not sampled

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SECTION:	<u>30163N</u>	D
Northing:	301+63N	D
Easting:	314+10E	Μ
Elevation:	858m	A
Azimuth:	230	2
Inclination:	-55°	2
Grid:	Aranleee	
Length (m):	148.13m	
Core size:	N.O.2	
Contractor:	F. Boisvenu	
Drill Type:	Boyle 37	

Diamond	Drill	Log
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Drill Hole s	survey	
Method:	Acid	_
Azimuth	Dip	Depth
230°	-55	0
230°		30.48
	1	
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Property:	<u>Hotspring</u>
NTS:	<u>97G/9+16</u>
Claim:	Hotspring 7
Date Started:	Sept.10/97 3:00p.m.
Date Complete	d: <u>Sept.14/97 5:00p.m.</u>
Logged by:	W. B. Lennan &
	<u>J. T. Shearer</u>

pose:	To test	zone at t	rench T-10 to the southeast			<u></u>	
rom (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
,	3.05	9	CASING - Overburden				
	58.22	314	SILICEOUS LAPILLI (Fragmental) TUFF -				
			White to grey fine grained siliceous matrix with coarse lapilli fragments and altered	604137	3.05-4.05	1.00	0.84
			feldspar phenocrysts or crystal fragments and quartz eyes? Near surface oxidation gives strong limonitic staining along fractures. Fragments up to 2 - 3 cm diameter.	604138	4.05-4.55	1.00	0.98
			The unit is highly silicified with at least 2 phases of veining as at 5.05-5.15m. Pyrite is disseminated throughout unit and is also strong controlled by fracture quartz veins and veinlets. Pyrite is 1-2%				
			Sphalerite is primarily found along vein margins. 8.90-9.90m - more "porphyritic" section				
			with small <3mm feldspar phenocrysts. 3.23-3.37m - White quartz vein 55° to C.A. with pyrite. Fracturing 75° to C.A.				
			3.80-4.00m - Broken core of quartz vein. Quartz veining with sphalerite & pyrite from 3.70-3.80m, 5.11-5.60 at 20-25° to	604139	5.11-5.80	0.69	1.45
			$C.A.$ and 60° to $C.A.$ at 5.80m, 6.32-6.73m - Faulted quartz vein with	604140	5.80-6.32	0.52	0.69
			sphalerite & minor chalcopyrite with pyrite	604141	6.32-6.73	0.41	0.74
			at 60-65° to C.A. Fault Gouge with fuchite at 6.48m at 45°- 50° to C.A. Lower contact of Fault Gouge	604142	6.73-8.23	1.50	0.72
			Zone at 6.73m at approx. 55° to C.A. 6.95-7.05m - 1.5 cm wide quartz vein and alteration envelope at 25-30° to C.A.	604143	8.23-9.73	1.50	0.49
			7.80-7.92 - 0.5 to 1.0 cm wide quartz vein with sphalerite along margins at $\approx 10^{\circ}$ to	604144	9.73-10.97	1.24	0.57

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from	to	Code	Description	sample	from/to	width	Au
(m)	(m)		7.92-8.03m - An approximately 10 cm thick quartz vein (white) cuts core axis at unknown orientation.	No. 604145	10.97-12.00	(m) 1.03	(g/t) 1.130
			Core is very broken & blocky and limonite stained at 14.02m.	604146	12.00-13.50	1.50	0.900
			11.00-15.63m - Strong quartz flooding by pervasive silicification and quartz veining primarily at 30-35° to C.A. and lesser amounts at 20° to C.A. Strong veining from 11.00-11.65m 12.10-12.30m 12.35-12.55m > core loss just before 13.35m 14.23 14.65m	604147	13.50-14.65	1.15	0.715
		→	14.65-15.63m - Quartz flooding with major 2.5 cm quartz vein from 15.35-15.63m at 10-15° to C.A. Strong pyrite and sphalerite (2-4% Py) (2% Sph.) Galena?	604148	14.65-15.63	0.98	1.300
			15.63-16.33m - More massive and less veined section showing "porphyritic" texture with white 1-3mm altered feldspar phenos and small mafic phenocrysts replaced with pyrite.	604149	15.63-16.33	0.70	0.900
			 16.35-16.45m - 4 cm well mineralized quartz vein with fine grained pyrite and minor sphalerite. 16.45-23.02m - Strong silica flooding with at least two phases evident. Pyrite mineralization is strong throughout this section while sphalerite is strong along low angle to C.A. (20°) vein margins. Unit appears to have been brecciated and healed with quartz, however, it may be original angular lapilli fragments. Large fragments to 3 cm x 5 cm are seen from 18.30 to m. Quartz veining is contorted in this section. 	604150	16.33-17.83	1.50	0.715
			Large quartz veins are observed at 18.11-	604151	17.83-18.64	0.81	0.310
			18.22m - 2 cm thick at 35° to C.A. 18.64- 18.87m - 8 cm thick at 33° to C.A. At 18.50m - 0.5 cm vein carries specks of sphalerite at 50° to C.A.	604152	18.64-18.87	0.23	0.785
			19.80-19.90m - Sphalerite occurs along quartz vein at 15-20° ? to C.A. 20.12-20.22m - 6-7 cm thick quartz vein with sphalerite at 40-45° to C.A. 20.50-20.67m - 0.5 cm thick quartz vein with coarse sphalerite grains along vein margins at 15-20° C.A. Unit has brecciated appearance in this section.	604153	18.87-20.37	1.50	0.610

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from	to	Code	Description	sample	from/to	width	Au
(111)	(***)		Silicification and quartz flooding remain intense with 2-5% pyrite as disseminations and along veins, veinlets and fractures. Pyrite and sphalerite on fine veinlets at 70° to C.A. from 20.80-21.10m gives a banded appearance to unit. Light to dark grey (darker grey with increased sulfide content). Fracturing at 23-25° to C.A. "Fuchite" ? at 20.94m. 21.0m - Sphalerite specks along vein margins	604154	20.37-21.40	1.03	0.520
			21.40-22.04m - 1-2% sphalerite and pyrite along 0.2 cm to 3 cm quartz veins at 35° to C.A.	604155	21.40-22.04	0.64	0.910
			22.37-22.50m - Sphalerite along quartz vein (0.5 cm) 10° to C.A. 22.80-23.02m - Cream coloured quartz veining system at 45° to C.A. with fine pyrite and sphalerite (<0.5%) mineralization.	604156	22.04-23.02	0.98	0.980
			23.02-27.88m - Silica flooding and quartz	604157	23.02-24.52	1.50	1.215
			vein diminishes, however, unit is well silicified. Fragmental texture is more prominent due to less silicification. Angular fragments to 2 cm diameter are observed. Patchy sphalerite at 24.0m.	604158	24.52-26.02	1.50	1.620
			24.80-24.85m - 5 cm thick quartz vein at 75° to C.A. 26.21m - Drill problems: loss 0.74m of core.	604159	26.02-27.88	1.86	0.965
			27.88 - Light grey siliceous fragmental tuff	604160	27.88-29.38	1.50	0.350
			 quartz flooding. Fragmental edges blend in more with grey siliceous matrix. 1 large fragment with a 10 cm ? diameter is at 28.80m. 1-2% pyrite. 28.53-29.00m - Core is blocky due to limonite stained fractures 35° and 70° to C.A Pyrite coats most of these fractures. At 29.56m tuff exhibits a porphyritic texture with ghosts of phenocrysts or crystal fragments. 29.70-30.57m - Quartz matrix around fragments increases. 	604161	29.38-30.57	1.19	0.260
			30.57-32.06m - Quartz Vein System - blocky core - very broken up. Strong limonite staining. Upper contact 25° to C.A. Lower contact approx. 50° to C.A.	604162	30.57-32.06	1.49	0.445
			From 32.06m the unit takes on a more amorphous grey colour with original texture being "bleached" out. Sphalerite is more prevalent in quartz veins with pyrite in this section.	604163	32.06-33.56	1.50	0.630

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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
	. ,		32.82m - Quartz vein with sphalerite and pyrite at \approx 20° to C.A.	604164	33.56-35.06	1.50	0.535
			33.95-34.17m - Quartz vein as above at an irregular angle.	604165	35.06-36.56	1.50	0.675
			 35.60m - 1 cm quartz vein with sphalerite and pyrite at 15° ? to C.A. contorted. 36.15m - 1 cm quartz vein with sphalerite and pyrite. 37.07m - 2 cm quartz vein with sphalerite 	604166	36.56-38.06	1.50	0.335
			and pyrite - 75° to C.A. 37.55-37.74m - 2 cm quartz vein with sphalerite and pyrite 10-15° to C.A. 37.80-38.90m - Moderate sphalerite (1%) throughout section in network of quartz veins. 38.90-38.97m - Large 6 cm diameter	604167	38.06-39.56	1.50	0.640
			rusted fragments (angular). 38.40-43.40m - Fragmental texture is more prominent while quartz flooding and veining is intense. Pyrite mineralization is disseminated throughout and is also concentrated along vein margins and on fracture coating (often as coarse crystals). Sphalerite mineralization is primarily	6041 68	39.55-41.06	1.50	0.715
			confined to greyish quartz vein margins. Experiment $\sim 20^{\circ}$ to C A is not intense	604160	41.06.42.56	1.50	0.530
			but stands out due to strong limonite	004109	41.00-42.00	1.50	0.550
		÷	 staining. One of these fractures extends along the core from 40.68 to 41.30m at 10° to C.A. At least 2 stages of mineralized quartz veining are evident particularly at 41.01m and at 41.62m. More phases may exist. In this area, mineralized veining cuts core axis between 45-55° indicating near vertical or flat lying vein trends. Several quartz veins at 20-25° to C.A. are also present. Major quartz vein intersections are at: 30.98m - 2.5 cm wide vein at 55° to C.A. 	001170	12.00 10.10		
		·	with 3-4% pyrite and 1% sphalerite. 40.76m - 1 cm wide quartz vein with coarse pyrite and sphalerite on vein margins at 25° to C.A. 41.45m-41.57m - 10 to 11 cm wide well mineralized quartz vein at 50-55° to C.A. with 1-2% sphalerite and 3-4% pyrite. A small vein (1 cm) cuts the main vein. 422.26m - 5 cm wide mineralized quartz vein 55-60° to C.A. with 0.5 cm thick cross cutting vein at \approx 15° to C.A. 44.33m - 1 cm mineralized vein at 45° to C.A.				

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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g / t)
(III)	()		43.40-45.04m - Fragmental texture 6 becomes obliterated by pervasive quartz flooding. Dominant fronturing 45° to C A	604171	43.40-45.04	1.64	0.645
			45.04-48.08m - Fragmental textures of	604172	45.04-45.90	0.86	0.450
			siliceous tuff is more evident although often with ghostly outlines of fragments due to the pervasive silicification. Light purplish colour to unit due to weak secondary biotite alteration. Stronger biotite alteration patches from 45.90-47.20m. Pyrite 1-2% as dissemination and fracture	604173	45.90-47.20	1.90	0.450
			46.10-46.28m - Quartz vein with strong biotite alteration and pyrite mineralization approx. 25° to C.A.	604174	47.20-47.84	0.64	0.280
			47.84-48.07m - Well mineralized quartz vein with 5 to 8% pyrite and <1% sphalerite. Magnetic. Poorly defined orientation but ≈45-50° to C.A. is apparent.	604175	47.84-48.07	0.23	1.515
			48.08-50.08m - Fragmental texture becomes less well defined as pervasive silicification increases. Bluish grey quartz veins increase in number with a greater amount of sphalerite mineralization. 48.72-48.80m - 6.5 cm bluish grey quartz vein with pyrite and sphalerite at 75° to C.A. 49.10-49.42m - Several contorted 0.5 cm to 1 cm bluish grey quartz veins occur with sphalerite grains on vein margins.	604176	48.07-49.57	1.50	0.455
			50.20-53.30m - Quartz veining increases	604177	49.57-50.20	0.63	0.250
			dramatically. Secondary biolite patches within the veins lend a purplish colouration to some of the veins. Pyrite locally up to 5% in veins and 1% in fragmental host unit. Mineralized Quartz Veins. -50.21-50.24m - 3 to 4 cm thick, 62° to C.A. with specks of sphalerite (<1%). Minor pyrite. 50.36-50.50m - 6.0 to 10 cm thick with coarse pyrite and abundant secondary biotite. 0.5 cm patch of fuchite ? Vein at 55° to C.A. Rusted sphalerite ? grains. Pyrite = 5%, Sphalerite = 1%. Specks of chalcopyrite. 50.67 - Quartz filling patch well pyritized 5- 7% and minor sphalerite specks.	604178	50.20-51.60	1.40	0.865
			51.10-51.23m - Blue grey pyritized quartz vein approx. 8 cm thick at 25-30° to C.A. 51.62-52.10m - Quartz vein flooding with fragmental host fragments "floating" within vein system. Vein is 50-60° to C.A. Coarse sphalerite grains occur sporadically along vein margins and fractures within vein.	60417 9	51.60-52.65	1.05	1.080

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from	to	Code	Description	sample	from/to	width	Au (a (t)
(111)	(111)		52.65-53.15m - White quartz vein, heavily limonite stained and very broken up. Blocky core. Minor sulfide mineralization. Upper & lower contacts 27-30° to C.A.	604180	52.65-53.15	(m) 0.50	(87 <i>4</i>) 0.190
			Silicified Fragmental (Lapilli Tuff) 53.330-58.22?m - Silicification is still intense, however, the frequency of quartz veining is reduced from the area described above.	604181	53.15-54.65	1.50	0.305
			From 54.94-55.60m - Core very broken and blocky - limonite stained due to fracturing parallel to core axis and at 15- 20° to C.A.	604182	54.65-56.15	1.50	0.475
			Significant mineralized quartz veins at $55.94m$ and $56.10m$ - both 2 to 4 cm thick and at 40° to C.A. and 55° to C.A. Pyrite and sphalerite mineralization occur in both veins.	604183	56.15-58.22	2.07	0.400
			58.22m - Siliceous lapilli (Fragmental) Tuff Unit contacts Pale Green Tuff of Unit 7 or possibly Unit 8 Andesite Tuff. The contact				·
58.22	71.86	711	to C.A. PALE GREEN TUFF				
00.22	. 1.00		Light grey green, siliceous and massive	604184	58.22-60.22	2.00	0.015
			tuff. Very fine grained with ghost feldspar crystal fragments and mafic ? crystal fragments.	604185	60.22-62.22	2.00	0.010
			Blocky core - very broken up due to low	604186	62.22-64.22	2.00	0.010
			angle fracturing 20-25° to C.A. Pyrite is very fine grained and disseminated throughout unit but <0.5%. Coarser pyrite concentrated on fracture surfaces. Very minor quartz veining. Clay and chlorite alteration selvages along vein margins. unit is pervasively silicified and argillically altered. At 63.52m 3mm thick quartz vein 65° to C.A. carries pyrite, galena and sphalerite. At 64.54m - two 2-3mm thick veins at 75- 80° to C.A. and one 3mm thick vein at 30° to C.A. carry pyrite, sphalerite and galena? Clay and chlorite core at 65.4m 65.84-66.21m - narrow quartz veins as above continue with mineralization and alteration as above. 66.30-66.73m - Blocky core with strong limonite coating on fracture surfaces 25-	604187 604188 604189	64.22-66.22 66.22-68.22 68.22-70.22	2.00 2.00 2.00	0.010 0.010 0.010
			50° to C.A. Pyrite & sphalerite ? on hairline quartz veins.	604189	70.22-72.41	2.00	0.035
			Coarse pyrite along centre of vein. Bleached 0.5 cm alteration envelope along vein margins.	004130	, U.22-12.71	2.17	0.000

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from	to (m)	Code	Description	sample No.	from/to	width	Au (ø / t)
()	()		1% pyrite finely disseminated throughout unit. 66.73-71.86 - Pale green tuff unit continues with mottled (weak) appearance with darker green section and a lacework of creamy green alteration envelopes along fractures and quartz veins particularly from 68.10-68.80m and 69.30-69.70m. Also from 69.30-69.70m - 102mm long remnants of mafic crystals replaced with pyrite. Pyritized and limonite stained fractures 15° to C.A. 70.55-71.62m - Core very broken and blocky. Limonite and argillic ? alteration is strong as fracturing at 15-20° is close space 71.74 - Strongly mineralized quartz vein at 32° to C.A. Vein is approx. 1.30 cm thick with pyritized core approx. 1mm thick.			(,	
71.86	72.41	314	Pyrite, sphalerite, galena and chalcopyrite. 71.86-72.41m - CONTACT ZONE with				
			SILICEOUS LAPILLI (Fragmental) TUFF - Very irregular contact with contact running roughly parallel to core axis at $\approx 15-20^{\circ}$ then 30° to C.A. at 72.41. At 72.41m - 2 phases of quartz veining evident with 1 cm thick early phase at 20° to C.A. with pyrite cut by a later stage maakly purified 1 cm thick usin 75° to C.A.				
72.41		314	SILICEOUS LAPILLI to FRAGMENTAL TUFF - Massive light grey with white	604191	72.41-73.91	1.50	0.085
			altered angular fragments. Some large fragments to 6 cm diameter but most <1 cm diameter, Main oxidized (limonite coated) fractures 15-20° to C.A. and 75° to C.A. Weak secondary biotite alteration. Pyrite is finely disseminated throughout (<1%) as well as occurring in hairline fractures and veins and on rims around lapilli fragments. From 72.41-78.00m pyrite and sphalerite mineralized vein are not closely spaced. The main veins are at 70-75° C.A. 73.98m - 1 cm poorly mineralized bluish grey quartz vein. 74.08m - 2 cm thick bluish grey quartz vein at 45° to C.A. (approx.) with fine grained pyrite and sphalerite. 75 50m - 1 0 1 5cm thick bluich grey	604192	73.91-75.41	1.50	0.190
			75.50m - 1.0-1.5cm thick bluish grey quartz vein with contorted boundaries at	604193	75.41-76.91	1.50	0.320
			approx. 25° to C.A. 1-2% sphalerite grains along vein margins and within vein core in patches. Pyrite \approx 2-3% sphalerite.	604194	76,91-78.00	1.09	0.280

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from (m)	to (m)	Code	Description	sample No	from/to	width (m)	Au (g.(t)
(111) (111)	(***)		$75.90 \text{m} \approx 1.0 \text{ cm}$ vein at approx. 40° to C.A. 76.00-76.25m - Patches to 1 cm long of pyrite around fragments and 1-2 mm thick pyritized \pm sphalerite contorted veinlets 10- 15° to C A			(***)	(67 -)
			77.05m - 1.0-1.5 cm thick bluish grey quartz vein at 33-35° to C.A. with fine				
	*	grained pyrite and sphalerite 78.0-83.77m - Silicification and quartz veining increases in intensity. Sulfide mineralization (both pyrite & sphalerite)					
		+	78.0-79.34m - A 4-5 cm thick quartz vein	604195	78.00-79.34	1.34	0.505
			runs roughly parallel to the core axis although it is very contorted from 78.0-	604196	79.34-80.03	0.69	0.110
			78.35m. The vein & core are broken up	604197	80.03-81.69	1.66	0.125
		and limonite stained. Pyrite mineralization is strong in the vein at 5% in areas. Sphalerite is scattered throughout vein in trains along vein margins and along internal vein growth boundaries.					
		. *	80.13m - Massive pyrite vein 0.3-1 cm thick cuts C.A. at 20-30° 80.95m - 1.5 cm quartz vein at 82° to C.A. cuts all adjacent veins (mostly	604198	81.69-82.69	1.00	0.215
			unmineralized) 81.0m - Coarse pyrite on quartz vein	604199	82.69-83.77	1.08	0.110
			 81.41m - Bluish grey quartz vein 3-4 cm 81.41m - Bluish grey quartz vein 3-4 cm thick ? with contorted ≈15-20° angle to C.A. 1% sphalerite, 2-3% pyrite 83.77-89.68m - Light Grey Siliceous Lapilli (Fragmental) Tuff - continues with a lesser frequency of significant quartz veining. Distinct lapilli fragments generally <1 cm in 	604200	83.77-85.27	1.50	0.040
				604201	85.27-86.77	1.50	0.050
				604202	86.77-88.27	1.50	0.090
				604203	88.27-89.68	1.41	0.025
			diameter. Micro veining and fractures at 30-35° to C.A. and 75° to C.A.				
			84.45-85.0m - Broken core, strong limonite staining on dominant intersecting low angle				
			15-20° to C.A. fracture. 85.05m - Pyrite mineralization along				
			contorted veinlets at 20° and 75° to C.A. Weak chlorite alteration along some				
			veinlets. 85.66m - as above at 85.05m				
			85.85-86.12m - 2 cm wide open space Fault Zone with "nodule shaped" druzy				
			quartz cemented fault fragments at 15-20° to C.A.				
			87.10-87.80m - Blocky core with limonite				
			Increased pyrite content along hairline				
			veins and fractures 30° to C.A. and 65° to C.A.				
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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)	
			87.80-89.68m - Section is silicified but not intensely veined. <1% pyrite as disseminations with most mineralization confined to veinlets and fracture planes. 89.30m - 0.5 cm quartz vein with sphalerite			()		
			Lapilli Tuff - more intensely silicified with obliteration of fragments. Chlorite and talc? alteration along some fractures.	604204	89.68-91.00	1.32	0.090	
			Fracturing and veining increases At 91.45m - 3 cm quartz veins 65° to C.A. contorted boundaries with pyrite and sphalerite (brown & yellow) At 91.60m - 20° to C.A. pyrite filled fracture or veinlet	604205	91.00-91.80	0.80	0.230	
			91.75-91.80m - Sericite altered shear ? zone 20° to C.A.					
			Not as intensely veined and fragments distinct with sharp outlines	604206	91.80-93.27	1.47	0.035	
			92.04m - 4 cm quartz vein 35° to C.A. with	604207	93.27-95.00	1.73	0.145	
			chlorite alteration. Pyrite is finely disseminated (<1%) but mainly on hairline fractures.	604208	95.00-97.00	2.00	0.060	
			92.85-93.27m - 1-2 m thick pyrite vein 5° to C.A. Core is blocky in this section.	604209	97.00-99.00	2.00	0.050	
			93.27-115.40m - uniformly highly silicified	604210	99.00-101.00	2.00	0.030	
			moderate wispy chlorite with pyrite along quartz veins and veinlets and chlorite fractures	604211	101.00-103.00	2.00	0.005	
			Mottled wispy pattern with chloritic matrix around fragments.	604212	103.00-105.00	2.00	0.080	
			Pyritic veinlets at 97.85m at 75° and 30° to C.A.	604213	105.00-107.00	2.00	0.035	
			99.46m at 25° to C.A. and at 103.77m with strong chlorite at 25° to C.A.	604214	107.00-109.00	2.00	0.040	
			From 105.0m - Pyrite content increases in	604215	109.00-110.50	1.50	0.025	
			content along fractures and around lapilli	604216	110.50-112.00	1.50	0.050	
			At 107.25 - Sphalerite in 1 cm wide quartz vein contorted 30-50° to C.A.	604217	112.00-113.50	1.50	0.620	
			Pyrite and sphalerite in quartz vein at 113.30m.	604218	113.50-115.40	1.90	0.160	
115.40	117.90		SILICEOUS FELSIC TUFF - Massive fine grained. No distinct lapilli fragments. Pervasively silicified but only minor quartz veining. Sericite alteration of feldsparand along hairline fractures. Weak chlorite alteration along fracture and veinlet margins. Fracturing primarily at 30-35° to C.A. and 80° to C.A. 115.76m - 3 cm veinlet carrying sphalerite					
			& pyrite at 55° to C.A.					

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from	to	Code	Description	sample	from/to	width	Au	
(111)	(111)		116.0-116.40m - Broken core - limonite	604219	115.40-116.40	1.00	0.035	
			Much more intense pyrite and increase in sphalerite in 5 to 15mm quartz veins at 60-65° to C.A., 45° to C.A. and 15° to C.A.	604220	116.40-117.90	1.50	0.115	
117.90	127.00	412	DACITIC ANDESITIC LAPILLI TUFFS - Coarse grained with crystal and lithic fragments to 3 cm diameter. Strongly silicified and pyritized. Purple colour due to secondary biotite. Chlorite alteration is strong around fragments and along vein margins and fracture planes.					
			Strongly silicified with bleaching of biotite to give unit a light pinkish grey colour. Fragments appear as "ghost" outlines. Pyrite and sphalerite on 10mm veins at 118.00m and 118.36m at 60° to C.A.	604221	117.90-119.30	1.40	0.260	
			Return to purple biotite rich lapilli tuff. Coarse grained, silicified. Several grey- white quartz veins with strong pyrite mineralization & 2 varieties of sphalerite and minor galena specks. Overall pyrite 5-7% disseminated and along veins and fractures.	604222	119.30-121.00	1.70	0.100	
			 C.A. 1.0 cm quartz vein at 121.35-121.55m at 15° to C.A. with pyrite and chlorite alteration. 121.77m - 5 cm thick quartz vein with pyrite and sphalerite. From 122.07 to 123.0m core is blocky due to strong fracturing 15 20° to C A. 	604223	121.00-123.00	2.00	0.055	
			As above but pyrite content and chlorite alteration is stronger. Pyrite 1-3%, chlorite alteration strongest along low angle to C.A. fractures and around fragments and vein margins. Core remains blocky with limonite stained low angle (15-20° to C.A.) fracturing. Sphalerite is minor	604224	123.00-125.00	2.00	0.030	
			This appears to grade to a pink colour. Very fine grained siliceous "porphyritic" version of similar composition.	604225	125.00-127.00	2.00	<0.005	
127.00	128.60	212	SILICEOUS FELSIC TUFF - Massive very fine grained, pink colour with "ghost" outlines of feldspar phenocrysts or crystal fragments. Orientation of upper contact unknown. Mafic? crystals appear to be replaced with pyrite. Hairline fractures at all angles to C.A. show very distinctive "bleached"	604226	127.00-128.60	1.60	<0.005	

alteration envelopes.

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from (m)	to (m)	Code	Description	sample No.	from/to	width	Au (g / t)
(,	(,		Very fine grained pyrite (dusty pyrite) forms narrow dendritic shaped selvages along fractures and blotches to 3mm in diameter at hairline fracture intersection. This is particularly evident at 128m. At 128.6m - Contact with Purple Dacitic Andesitic Lapilli Tuffs at 26° to C.A.			()	(67 *7
128.60	129.44	412	DACITIC ANDESITIC LAPILLI TUFF - Dark purple coarse grained with angular fragments to 20mm diameter. Laced with 1-2mm thick quartz veins with pyrite. Strong chlorite alteration imparts greenish patchy coloration in place of purple biotitic alteration At 129.44m - The unit is in contact with a fine grained grey Siliceous Felsic Tuff at 40° to C.A.	60422 7	128.60-129.44	0.84	<0.005
129.44	130.50	711	PALE GREEN GREY TUFF - Very fine grained with ghost feldspar crystal fragments or phenocrysts. Strong limonite staining on oxidized fractures at 5-10° to C.A. Minor finely disseminated pyrite throughout.	604228	129.44-130.50	1.06	<0.005
130.50	148.13	412	DACITIC ANDESITIC NODULAR TUFF - Dark purplish grey, coarse grained unit with light grey green subrounded nodules and fragments to 20mm diameter.				
			Moderate to strong pyrite mineralization 3-5% as disseminations around lapilli fragment rims and along fractures and veins particularly at 131.3m Chlorite alteration forms grey green patches and occurs primarily as fracture coatings.	604229	130.50-132.00	1.50	<0.005
			Angular lapilli fragments to 2 cm diameter occur with nodules.	604230	132.00-134.00	2.00	<0.005
			From 134.4-134.8m - Light grey siliceous quartz flooding bleaching of unit leaves patches of biotite alteration.	604231	134.00-136.00	2.00	0.020
			Massive Nodular Tuff - With angular fragments to 3 cm diameter. Pyrite zone from 136.48-136.61, 137.2- 137.4m and 137.5-137.8m.	604232	136.00-138.00	2.00	<0.005
			A 6 cm thick white quartz vein with some sericite alteration occurs from 137.10- 137.16m at 47° to C.A. 5% Pyrite at 329.1 and 139.60-139.65m	604233	138.00-140.00	2.00	0.040
			Nodular and fragmental tuff continues with fragments to 20mm diameter. Strong pyrite (5-8%) and chlorite alteration along fragments rims and contorted veining from 140.32-140.46m. 1.5 cm quartz vein at 140.85m at 60° to C.A.	604234	140.00-141.40	1.40	0.040

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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
			At 141.40m - Strongly silicified chlorite altered and veined Nodular Tuff continues to 144.0m. Purplish biotite alteration is bleached to pinkish colour mixed with green chlorite alteration. 12 cm thick quartz vein from 141.94- 142.08m with upper contact at 40-45° to C.A. Lower contact is not distinct. Minor - sphalerite and 5% pyrite.	604235	141.40-143.00	1.60	0.200
			Bleaching is reduced with less veining and silicification. Purplish biotite alteration increases. Small chlorite altered, bleached and veined (quartz) area from 143.40-143.63m at 30° to C.A.	604236	143.00-144.00	1.00	0.045
			Coarse grained nodular tuff with 3-5%	604237	144.00-146.00	2.00	0.015
			pyrite in veinlets and around rims of nodules and fragments. Small veined and chlorite altered pyritized section from 146.67-147.95m.	604238	146.00-148.13	2.13	0.025

148.13m: End of Hole (E.O.H.)

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SECTION. 20162M

SECTION: 30163N			Page: <u>3</u>			DDH#: <u>HS97-03</u>	
from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
()	()		LAPILLI FRAGMENTS - more prominent to 3 cm diameter angular, 2% pyrite as disseminations and along fractures. Sphalerite in quartz veins at 19.10-19.21m at 42° to C.A. and at 19.70m (2 cm thick) at 58° to C.A.	604247	19.00-21.10	2.10	1.160
			STRONG PYRITIC ZONE - Quartz veining (at least 2 stages) at 22° to C.A. and 45° to C.A. Pyrite 5%. Sphalerite along vein margins to 2% in places.	604248	21.10-21.67	0.57	1.225
			COARSE FELSIC LAPILLI TUFF - With angular fragments to 5 cm diameter. Quartz veining with irregular orientation to core axis. Most prominent fracturing at 65° to C.A. Broken core in quartz vein from 22.70- 23.00m at 40° to C.A. with minor sphalerite and pyrite.	604249	21.67-23.00	1.33	1.240
			As above but becoming progressively more silicified, well pyritized section from 23.80- 23.90m. 1 cm thick bluish grey quartz vein running roughly parallel to C.A. (5°) from 23.90 to 24.16m with sphalerite grains along vein margins. Patch of fuchite? at 24.29m From 24.32-24.85m - limonite stained fracturing at 20° and 55° to C A	604250	23.00-25.00	2.00	0.955
			Strongly silicified SILICEOUS LAPILLI TUFF continues as above. Elongate angular fragments lend a fabric to the unit at approximately 56° to C.A.	604251	25.00-26.00	1.00	0.770
			FELSIC LAPILLI TUFF - Is less silicified and exhibits white argillically altered fragments. Core is very broken up with fracturing (limonite stained) paralleling the core axis for most of this interval. Shear Zone - 10 cm core loss.	604252	26.00-27.50	1.50	0.640
			Argillically altered very coarse FELSIC LAPILLI TUFF becomes progressively silicified towards 28.0m. Fragments to 2 cm x 4 cm occur. Pyrite mineralization as dusty grains increases to $\approx 2\%$ along hairline fractures and as rims around fragments. From 28.88-29.10m - White mottled quartz vein with strong chlorite alteration along vein contacts and fractures within vein. Purplish patches within vein may be manganese? staining. Upper contact at 45° to C.A. Lower contact is at 60° to C.A.	604253	27.50-29.10	1.60	0.480
29.10	34.85	711	PALE GREEN SILICEOUS TUFF - Creamy pale green, very fine grained unit, very silicified.				

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DDH#: HS97-03

SECTION: 30163N

from (m)	to (m)	Code	Description	sample No.	from/to	widt h	Au (g/t)
			The unit occasionally exhibits a weak porphyritic texture with relic mafic? and feldspar crystal fragments. Patchy chlorite alteration along fractures. invasive limonite staining permeating into unit from fractures cast a patchy purplish brown tinge to unit. Small 1-3mm quartz veins with pyrite have 1-2mm wide bleached alteration envelopes. Core is blocky and some core loss from 31.15-31.30m.			(111)	
			hairline and 1-2mm thick pyritized quartz with primarily $65,85^{\circ}$ to C A	604254	29.10-31.00	1.90	0.030
		*	From 31.10m - TUFF unit is very broken up. Blocky core and difficult drilling. Strong limonite alteration, possible large fault zone, 65% core recovery.	604255	31.00-33.00	2.00	0.120
34.85	53.90	314	As above - very broken, blocky core continued FAULT ZONE ? in Tuff unit. Core recover 70% Heavy limonite staining and black coating on fractures. At 34.85m - Assumed lower contact SILICEOUS FELSIC LAPILLI	604256	33.00-34.85	1.85	<0.005
			(FRAGMENTAL) TUFF Some very silicified grey to greenish grey unit with Lapilli fragments to 20mm diameter. Moderately well quartz veined with at least 2 stages of veining. Pyrite is generally 1% with 1% sphalerite along vein margins.				
			30mm thick sphalerite quartz vein at 32.27m at 45° to 50° to C.A. From 38.80-36.0m - 20 to 30mm thick irregular bluish grey quartz vein runs roughly parallel to the C.A. It carries pyrite and minor sphalerite.	604257	34.85-36.00	1.15	1.270
			Quartz veining with sphalerite and pyrite. From $36.8-36.97m$ - Strongly pyritized vein at 15° to 20° to C 4	604258	36.00-37.00	1.00	0.985
			Quartz vein with +2% sphalerite ≈60° to	604259	37.00-37.85	0.85	0.975
			C.A. and dusty pyrite strongly silicified FELSIC LAPILLI TUFF with specks of sphalarite on usin marring	604260	37.85-38.07	0.22	0.970
			As above but veining appears to be at 15°	604261	38.07-39.00	0.93	0.770
			to C.A. Carries sphalerite and pyrite. Secondary biotite and chlorite alteration particularly at 39.7m.	604262	39.00-40.00	1.00	1.840
			More pervasive silicification and less	604263	40.00-41.00	1.00	2.780
			Heavily limonite stained and broken blocky core. Fracturing is parallel to or 15-20° to C.A. Small core loss (<10 cm).	604 264	41.00-42.00	1.00	1.015
			As above.	604265	42.00-44.00	2.00	0.810

SECTION: <u>30163N</u>			Page: <u>5</u>			DDH#:	HS97-03
from	to	Code	Description	sample	from/to	width	Au
(mj	(m)		As above with strong limonite and fracturing 35° to C Å	604266	44.00-44.81	0.81	(g/ y) 0.550
		*	Strongly veined and silicified with good mineralized section with sphalerite and pyrite. Galena is observed at 44.91m and	604267	44.81-46.00	1.19	3.260
			Pervasively silicified FELSIC LAPILLI	60426 8	46.00-48.00	2.00	0.580
			TUFF. Veining and mineralization much less intense. Good sphalerite in vein at 46.80m. Very irregular orientation. As above but minor sulfides.	604269	48.00-48.95	0.95	0.260
		·	FELSIC LAPILLI TUFF - changes abruptly to a dark grey, intensely silicified and quartz veined with fine grained pyrite, sphalerite and minor galena. Most lapilli fragments are obliterated by silicification however, from 49.75-49.90m large fragments to 10 cm diameter occur. Veining appears to be 15-20° to C.A. but is convoluted.	604270	48.95-50.00	1.05	1.450
		*	As above but with specks of galena with pyrite and sphalerite at 50.73m and 51.06m.	604271	50.00-51.40	1.40	2.060
			Strongly bleached and silicified. Only ghost outlines of crystal and lapilli fragments remain. From 51.7-50.04m - Is a shear zone with brittle fracture fragments of the unit. Clay alteration occurs on some shear planes. Shearing is at approx. 65-70° to C.A. Weak sulfide mineralization (pyrite). Patchy, weak chlorite alteration along some fracture planes. From 52.2-53.0m - Core is blocky due to	604272	51.40-53.00	1.60	0.085
			fracturing 5-15° to C.A. and 30° to C.A. As above but very broken and blocky core. intense limonite staining. At 53.90m - Lower contacts at 35° to C.A. Clay gouge material occurs along contact plane.	604273	53.00-53.90	0.90	0.350
53.90	67.20	522	AN DESITE DYKE Dark green to nearly black intensely dioritized dyke. Slightly porphyritic with small feldspar phenocrysts (<2mm diameter). Fracture surfaces coated with coarse pyrite weakly magnetic. From the contact at 53.9m to 56.8m the unit is intensely oxidized with strong limonite crusts on fractures of all angles to core axis. Core is very blocky due to the dominance of fractures at 10-15° to C.A. Chlorite alteration is concentrated on fracture planes. Epidote occurs as veinlets from 55,80-56.00m.	604274	53.90-56.00	2.10	0.145

SECTION: <u>30163N</u>			Page: <u>6</u>			DDH#:	<u>HS97-03</u>	
from (m)	to (m)	Code	Description	sample No.	from/to	widt h (m)	Au (g/t)	
			Coarse pyrite is found primarily along fracture planes while fine grained pyrite is mainly found as disseminations throughout unit.			()		
			As above but fracturing less intense and less limonite staining. Epidote veinlets from 65.80-57.00m.	604275	56.00-57.00	1.00	0.150	
			More massive dark green fine grained andesite dyke. Narrow fault gouge zone (10mm) at 58.3m and 58.48m at 40° to C.A. approximately	604276	57.00-59.00	2.00	0.275	
			Fracturing mainly at 55° to C.A. and 25-30° to C.A. Strong chlorite alteration. Epidote vein 10 to 15mm thick at 61.52m at 43° to C.A. Weak porphyritic texture with ghostly outline of feldspar phenocrysts.	604277	59.00-61.00	2.00	0.030	
			Pyritized fractures. Massive dark green andesite dyke as above. At 63.13m - 120mm thick quartz vein with coarse pyrite in the core of the vein. Vein is at 80° to C.A.	604278.	61.00-63.00	2.00	0.010	
			Caved material at 63.09m. finer grained than above. Strong limonite and coarse pyrite coatings on all fractures. Epidote veins	604279	63.00-65.00	2.00	0.020	
			Massive dark green andesite dyke as previously described, however, it is now very fine grained. Chill zone? Very intense coarse pyrite mineralization along all fractures, notably 65° to C.A., 5-15° to C.A. and 35-40° to C.A.	604280	65.00-67.20	2.20	0.010	
67.20	67.50		FAULT ZONE (Contact With Siliceous Felsic Lapilli Tuff) Clay gouge and silicified tuff fragments.					
67.50	69.78	311	Upper contact 55-60° to C.A. Lower Fault contact 35° to C.A. SILICEOUS FELSIC LAPILLI TUFF	604 281	67.20-67.50	0.30	<0.005	
			Light grey slightly mottled appearance due to ghostly outlines of crystal and lapilli fragments. Intensely micro fractured from 67.50-68.80m at various angles (no dominant set)					
			Light grey intensely bleached and silicified.	6042 8 2	67.50-69.00	1.50	0.100	
			siliceous felsic Lapilli TUFF. <1% pyrite. Light greenish tinge to rock (chlorite alteration?). At 69.78m - Contacts very fine grained dark greenish grey andesite dyke at 30° to C.A.	604283	69.00-69.78	0.78	0.640	
69.78	71.30 ?	521	ANDESITE DYKE - Dark greenish grey, very fine grained equigranular. Coarse pyrite on 1mm quartz veins and silicified fractures. Minor disseminate pyrite, chloritized.					

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from (m)	to (m)	Code	Description	sample No.	from/to	widt h	Au (g/t)
F 1 00		214	Core is very broken up and blocky from 70.93m to lower contact at 71.30m Broken core obscures contact so no precise measurement available.	604284	69.78-71.30	(III) 1.52	<0.005
71.03		314	SILICEOUS FELSIC LAPILLI TUFF - Very light grey, almost white with slight greenish tinge. <u>very intensely</u> silicified and massive. Lapilli fragments to 1 cm are visible but blend into matrix on margins. Silicification is pervasive with a few contorted white quartz veins blending into matrix colour. Weak to				
			moderate chlorite alteration throughout particularly along fracture and vein margins and lapilli fragment rims. Pyrite content is				
			1 cm quartz vein with pyrite from 73.00-	604285	71.30-73.00	1.70	0.105
	·		73.36m at 15° to C.A.	604286	73.00-73.50	0.50	0.075
			Quartz veining along with pyrite and sphalerite mineralization increase significantly. Veining is very convoluted with irregular orientations to C.A. From 74.50- 75.00m a thick (+30mm) white quartz vein with sphalerite roughly parallels core axis to 74.85m where the vein makes up all of the	604287	73.50-75.20	1.70	0.595
			core.				
			Veined section as above continues	604288	75.20-76.00	0.80	0.850
			veins running approximately parallel to C.A.	604289	76.00-77.00	1.00	0.390
		*	Quartz vein flooded section with diffuse contact well mineralized with Pyrite 1-3%, sphalerite 2% and galena. At least 2 phases of veining are present, one at approx. 35° to C A	604290	77.00-78.00	1.00	0.470
				604291	78.00-78.56	0.56	0.460
		314	Returns to same as from 73.50-78.00m Coarse grained FELSIC LAPILLI TUFF continues with less intense silicification. Grey blue quartz veining at 10-15° to C.A. Pyrite veining 1-2mm thick at 55° to C.A. Core loss and blocky core from 80.45-80.80m (approx. 20 cm lost) At 81.11-81.18m - 7 cm thick white quartz vein with pyrite, specks of sphalerite and patchy, secondary biotite. Contorted contact at 35°? to C.A. One patch of fuchsite. From 81.00-82.28m - purplish tinge to unit with increased secondary biotite.	604292 604293	78.56-80.00 80.00-82.00	1.44 2.00	0.645 0.470
			Pyrite 1-2% Weakly chlorite and biotite altered siliceous felsic lapilli tuff. Increase in pyrite veining with 1-3mm thick pyritic veinlets at 20-30° to C.A. and 50° to C.A. The 50° to C.A. vein cuts the 20-30° to C.A. veining. Sphalerite?	604294	82.00-82.60	0.60	0.600

specks at 82.50m.

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fro m (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (σ/t)
,,	()		Blocky core with heavy limonite coating on fractures 10-20° to C.A. and 35-50° to C.A. Increase quartz veining with at least 2 stages present. Veinlets at 15-330° to C.A. cut by veins 75-85° to C.A.	604295	82.60-84.00	1.40	0.920
			Same as above from 82.6-87m. From 84.90-85.35m a 1 cm thick quartz vein runs in undulating fashion roughly parallel to C.A. It carries specks of sphalerite along the margins.	604296	84.00-85.70	1.70	1.060
			Fine grained granular crystal or ash tuff unit within the coarse siliceous felsic lapilli tuff. Weakly veined with minor sulfides.	604297	85.70-86.24	0.54	0.135
			Very homogeneous section of well defined SILICEOUS FELSIC LAPILLI TUFF with clear lapilli and crystal fragments to 3-4 cm diameter. Fragments predominantly less	604298	86.24-88.00	1.76	0.360
			than 1 cm diameter.				
			Weak chlorite alteration gives greenish tinge to unit. <1% pyrite confined mainly to veinlets and fractures.				
			From 88-10-88.54m - Fracturing parallel to	604299	88.00-88.72	0.72	0.060
			LAPILLI TUFF unit is more altered with chlorite and brownish secondary biotite. Quartz veining is increased from 89.48- 90.0m at approx. 35° to C.A. 3% pyrite, 1-	604300	88.72-90.00	1.28	0.725
			2% sphalerite and rare specks of galena. Returns to homogeneous section of siliceous felsic lapilli tuff as from 86.24- 88.77. Lacy network of pyrite veinlets. Minor quartz veining	604301	90.00-92.00	2.00	0.875
			As above, light grey, siliceous felsic lapilli tuff. Long ghosts of fragments to 5 cm in diameter. Slight fabric to unit caused by close network of fractures and veinlets at 5-15° to C.A. They are cut by a second stage narrow vein set at approximately 30° to C.A. 1% Pyrite	604302	92.00-94.00	2.00	0.475
			As above- From 94.45-94.80m - Quartz veining increases with pyrite and chlorite on vein margins. Minor sphalerite (a few specks) and possibly galena (very small specks) veining is contorted but roughly 40° to C.A.	604303	94.00-96.00	2.00	0.540
			Quartz vein system in siliceous felsic lapilli	604304	96.00-96.37	0.37	0.710
			tuff. Veins are convoluted with general orientations of 35° to C.A. and 60° to C.A. mineralized with pyrite and honey coloured sphalerite	604305	96.37-97.00	0.63	0.610
			Same as above from 94.00-96.00	604306	97.00-98.70	1.70	0.160

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from (m)	to (m)	Code	Description	sample	from/to	width	Au (a.(t)
98.70 111.25	111.25	414	DACITIC ANDESITIC LAPILLI (to Nodular) TUFF - A 2 cm quartz vein at 98.70 with gougy clay material at 43° to C.A. marks a change in the Felsic Tuff. The unit is intensely silicified and quartz veined and shows a <u>coarse</u> fragmental texture. Angular stressed fragments appear to be more breccia fragments in a veined matrix. Vein orientation is highly variable with at least 2 stages clearly visible. Brown secondary biotite alteration is variable in intensity with strong alteration evident from 99.62-100.10m. Chlorite alteration is present throughout along fractures and vein and fragment margins. Locally, fragments >6 cm diameter are common. Pyrite mineralization is increased to 2-5% and up to 8%. Minor fuchite patches.	604307	98.70-100.00	1.30	0.265
			As above. Moderate brown biotite alteration throughout. More intensely pyritized from 100.0 to 100.40m and 100.77-101.00m.	604308	100.00-101.00	1.00	0.365
			As above. Biotite alteration weakens	604309	101.00-102.00	1.00	0.820
			gradually. As above. Very minor biotite, chlorite alteration remains constant at a weak to	604310	102.00-103.00	1.00	0.110
			As above but a 25 cm thick pyritized vein system carries approx. 5-8% pyrite and sphalerite. The pyrite is very fine grained for the most part.	604311	103.00-103.34	0.34	0.720
			Darker grey, brecciated appearance. Moderate (2-3%) pyrite content. Minor sphalerite at 104.10. 104.85m - Purplish biotite alteration to	604312	103.34-105.00	1.66	0.480
			At 105.45m - Contacts well mineralized quartz vein.	604313	105.00-105.45	0.45	0.640
			Convoluted quartz vein system with orientation approx. 30° to C.A. Coarse pyrite patches and brown sphalerite crystals up to 0.5 cm by 0.8 cm across. Specks of galena?	604314	105.45-105.70	0.25	0.670
			Light purplish tinge to silicified & bleached fragmental tuff unit at 107m. Fragments have rounded ghostly outline as in Nodular Tuff.	604315	105.70-107.00	1.30	0.510
			Intensely silicified and quartz veined. Bleached with alteration envelopes along vein margins. Pyrite and sphalerite in veins at 107.52m & 107.66m. 5% pyrite (coarse) along fractures from 108.50-109m	604316	107.00-109.00	2.00	0.600

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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
()	()		Coarse pyrite filling cavity in quartz vein (2-	604317	109.00-110.00	1.00	1.470
			4 cm thick) running parallel to or 5-10° to C.A. from 110.00-110.63m. Some chlorite alteration but overall light purplish brown tinge due to secondary biotite. Nodular Tuff texture from 110.90-110.05m. At 111.25m sharp contact with dark grey green Andesite Dyke at 50° to C A	604318	110.00-111.25	1.25	0.170
111.25	111.86	521	ANDESITE DYKE Dark grey green, very fine grained, massive. Very minor pyrite. 1 cm quartz vein at 111.36 at 60° to C.A.	604319	111.25-111.86	0.61	0.020
111.86	113.15	411	 DACITIC-ANDESITIC LAPILLI (NODULAR) TUFF - Mottled purplish grey with grey nodules to 1.5 cm diameter. 4 cm thick quartz vein 87° to core axis with MOLYBDENITE along lower margin. 3-5% pyrite in silicified and bleached section of Tuff from 112.54-112.60m. 	604320	111.86-113.15	1.29	0.040
113.15	113.63	521	ANDESITE DYKE Dark green grey, massive, very fine grained. Upper contact 40° to C.A., lower contact 30° to C.A. Several fine pyritized fractures.	604321	113.15-113.63	0.48	0.030
113.63	114.15	412	DACITIC-ANDESITIC LAPILLI (NODULAR) TUFF - Light grey greenish tinged, chlorite altered and intensely silicified 1-3% Pyrite in veinlets and rimming fragments. Minor sphalerite? at 113.63m.	604322	113.63-114.15	0.52	0.160
114.15	117.30	412	MAJOR FAULT ZONE IN DACITIC ANDESITIC NODULAR (LAPILLI) TUFF Fault gouge and fragment of Nodular and Fragmental Tuff. Brownish clay rich gouge with pyrite cubes in ground up quartz vein material. Upper fault contact is at 35-40° to C.A. From 114.91-115.94m - Core very rubbly, broken up pieces of Dacitic Andesitic Purplish Lapilli Nodular Tuff - Recovery 65%. Fault zoned possibly roughly parallel to C.A.	604323	114.15-115.00	0.85	0.015
			115.94-117.04m - 3 cm of sand, no recovered core. Hit an open fracture filled with sand?	604324	115.00-116.12	1.12	0.010
			contacts dark green andesite dyke Broken	no core	110.13-117.04		
117.30	119.30	521	core obscures orientation to C.A. angle Quartz veining with pyrite at 40-45° to C.A. ANDESITE DYKE - Dark grey green, very fine grained with slight porphyritic texture with 1-2mm mafic laths or phenocrysts. Very minor pyrite. Strong chlorite alteration along fractures.	604325	117.04-117.30	0.26	0.050

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SECTIC	N: <u>30163N</u>		Page: <u>11</u>			DDH#:	<u>HS97-03</u>
from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
			From 119.220-119.30m - Fault Zone at contact with Dacitic Andesitic Nodular (Lapilli) Tuff. Clay rich gouge contact at 55- 60° to C.A.	604326	117.30-119.30	2.00	0.010
119.30	127.10	412	DACITIC ANDESITIC NODULAR (LAPILLI) TUFF - Dark purplish grey, massive, with grey rounded nodules. Silicified and strong biotite alteration give purplish colour to unit. Weak fracturing and veining at 35° to C.A. Pyritized hairline veinlets & fractures. Pyrite content approximately 1%. Nodules range to 1.5 cm diameter.	604327	119.30-121.00	1.70	0.020
			1 cm wide bleached alteration envelope along pyritized fracture and vein at 30° to C.A. from 121.65-121.81m. A second fracture at 5° to C.A. from 122.10 to 122.33m is silicified and weakly pyritized.	604328	121.00-123.00	2.00	0.055
			Pyritic and clay gouge material from 123.30-123.45m. Grey silicified fragments of tuff incorporated into gouge material. Faulting appears to be at approx. 5° to C.A. The intersection of several low angle to core axis fractures (5-15°_ has cause very broken core. Broken core continues to 124.50m.	6043 <u>29</u>	123.00-125.00	2.00	0.030
			Massive Purplish Nodular Tuff as above <1% pyrite. From 126.91-126.96 a 4.5 cm vuggy quartz vein with crystal termination cuts C.A. at 70°. The vein carries a few coarse crystals of pyrite and molybdenite along its lower contact margin. 127.10m: End of Hole (E.O.H.)	604330	125.00-127.10	2.10	0.025

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Depth

163.68

0 81.38

SECTION:	30091N				
_	-				
Northing:	<u>30091N</u>				
Easting:	31307E				
Elevation:	827m				
Azimuth:	050°				
Inclination:	<u>-</u> 57°				
Grid:	Aranlee				
Length (m):	163.68m				
Core size:	NQ-2				
Contractor:	F. Boisvenu				
Drill Type:	Boyles 37				

Diamond Drill Log

Drill Hole survey

Method: <u>Acid</u>

Dip

-57°

Azimuth

050

050

Property:	Hotspring
NTS:	92 <u>G9+16</u>
Claim:	Hotspring 7
Date Started:	Sept19/97 8:00p.m.
Date Completed	:Sept22/97 12:20p.m.
Logged by:	W. B. Lennan &
	J. T. Shearer

Purpose:							
from (m)	- to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
0.00	3.05	9	CASING/OVERBURDEN				
3.05	3.55	511	ANDESITE DYKE - Blocky rubble at start of hole. Massive dark greenish black, minor disseminated pyrite. Contact with Siliceous Felsic Lapilli Tuff estimated at 3.55m. No orientation available.	604331	3.05-3.55	0.50	<0.005
3.55	22.05	312	SILICEOUS FELSIC LAPILLI TUFF - Light blue grey coloured with creamy white angular lapilli fragments to 1 cm diameter. Lost core from 3.66-4.0m 10-15% recovery from 8-9m 85° recovery 10.30-11.10 30% recovery.				
			Pyritic fracture from 4.30-4.60m running roughly parallel to C.A. ≈5° approx. 2mm thick.	604332	3,55-5.00	1.45	0.26 5
			Homogeneous light blue grey lapilli tuff with 2 pyritic quartz veins at 5.17m and 5.21m <1 cm thick at 25° to C.A. Crystalline pyrite in yeins.	604333	5.00-6.00	1.00	0.115
			As above, no significant veining. Argillic altered lapilli and feldspar phenocrysts give a porphyritic texture to unit.	604334	6.00-7,00	1.00	0.085
			As above but brownish rust colour persists along fractures 30° to C.A. and 40° to C.A. causing rusted envelopes along fractures.	604335	7.00-8.00	1.00	0.120
			Core is very broken and blocky. Strong limonite staining. Unit is more pervasively silicified giving a white colour to the core. Slight increase in quartz veining with pyrite. Veins tend to be convoluted with no clear orientation. Broadly veining is at 15- 25° to C.A. and 60-65° to C.A.	604336	8.00-10.00	2.00	0.165
			As from 8-10m - The true position of the 11.0m break is uncertain due to continued, very broken and limonite stained core.	604337	10.00-11.00	1.00	0.060

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from (m)	to (m)	Code	Description	sample	from/to	width	Au (a (t)
(,	()		As above but intense quartz veining. Textures in matrix indistinct. Veining is strongest from 11.40-11.84m. Brecciation with quartz vein matrix is observed. A 6 cm vein from 11.44-11.449m cuts C.A. at 65°. The vein is mineralized with both coarse and dusty grain sized pyrite. Sphalerite2 if present is very fine grained	604338	11.00-12.00	1.00	0.335
			Veining has decreased in intensity but pervasive silicification gives a cream colour to unit and original textures are obliterated. May be a fine grained version of the normally coarse grained tuff.	604339	12.00-13.00	1.00	0.210
			Approx. 30 cm thick, dark grey quartz vein with dusty pyrite. Upper and lower contacts at 30-35° to C.A.	604340	13.00-13.35	0.35	0.620
			Same as 12.0-113.0m - White bleach and silicified section. Significantly more fine pyritized fractures and hairline veinlets than 12.0-13.0m section. Alteration envelopes occur along some veins. Limonite staining along the fine fractures lend a lacy rust brown network to core.	604341	13.37-14.00	0.65	0.305
			Quartz vein within tuff. Main vein is from 14.00-14.14m with coarse pyrite and a vuggy texture along both contacts. Upper contact $\approx 80^{\circ}$ to C.A. Lower contact is 60° to C.A.	604342	14.00-14.33	0.33	0.445
			Same rusted and silicified as from 13.35- 14.00m	604343	14.33-15.00	0.67	0.050
			Light grey silicified Felsic Lapilli Tuff. Fragments are observed as "ghost" outlines. Pervasive silicification. Well pyritized vein (7-10%) at 15.47m at 60° to C.A. White quartz veined section with intense limonite rusting on fractures 30° and 85° to C.A. from 15.65 to 16.40m. Shearing 16.5m at 35° to C.A. From 16.80-17.00m the Lapilli texture becomes clearly visible again.	604344	15.00-17.00	2.00	0.320
			As above. Pyritic quartz veining from 17.60-17.70m at 75° to C.A. carries dust sized pyrite and possibly sphalerite. 0.5 cm coarse grained pyrite vein at 18.36m at 85° to C.A.	604345	17.00-19.00	2.00	0.060
		`	Highly fractured and broken quartz vein core from 19.20-19.85m. Strong limonite alteration along all fractures. Gougy material in vein at 1985m indicates a small shear?	604346	19.00-19.85	0.85	0.105
		-7	Rusty white to dark grey quartz veining with 5-8% pyrite and strong epidote alteration in veins.	604347	19.85-20.42	0.57	0.495

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from (m)	to (mi	Code	Description	sample No.	from/to	width	Au (g /t)
()	,		SILICEOUS FELSIC LAPILLI TUFF - Light blue grey showing very coarse fragments up to 4 cm diameter from 20.90-21.60m. Contorted quartz veining with 1-2% pyrite. Several 3-6 cm wide altered or bleached envelopes along fractures with lacy network of rusty (limonite stained) hairline fractures. The reddish brown limonite contrasts sharply against the white bleached alteration envelopes. Dominant fracturing 45-50° to C.A.	604348	20.42-22.05	1.63	0.265
22.05	22.11		ANDESITE DYKE				
22.11	23.95?	521	ANDESITE DYKE - Massive, dark green, very fined grained. Upper contact fault zone at 35-40° to C.A. Lower contact estimated at 23.95m. Core is very broken and exact contact position of Fault uncertain. Pyrite, both fine and coarse grained is primarily confined to hairline fractures and silicified veinlets. Core is broken due to fracturing at 5-15° to C.A. intersecting fractures at various angles to C.A.	604349	22.05-23.95	1.90	0.010
23.95	31.82	311	SILICEOUS FELSIC LAPILLI TUFF - Massive light blue grey with coarse lapilli fragments to 3 cm diameter. Fragments are a slightly lighter creamy colour compared to the greyer siliceous matrix. Quartz veining is <u>not</u> intense and silicification is a more pervasive flooding. Limonite rusting on fractures primarily at 30-35° to C.A. and 60-75° to C.A.	601050		0.05	0.005
			As above - shearing from 27.95-28.0m at 25° to C.A.	604350 604351	25.95-26.00	2.05	0.035
			Light grey lapilli tuff cont Bull quartz vein 2.5 cm thick with molybdenite mineralization. Vein is 30° to C.A. and goes from 29.02-29.20 As above with \approx 1% disseminated and fracture controlled pyrite mineralization. At 31.82 - Contacts ANDESITE DYKE at 60° to C.A. Sheared? Contact with minor clay gouge.	604352	28.00-30.00	2.00	0.085
31.82	38.78	521	ANDESITE DYKE - Dark grey green to black, massive with intense chlorite alteration. Ghostly porphyritic textures. Strongly altered fracture zone from 33.00- 33.30m. Some core loss. Some sericite and clay alteration on fracture at 20° to C.A. Minor hairline silicified fractures throughout with pyrite mineralization and 1-2mm bleached alteration envelopes.				

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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (e/t)
(/	()		From 86.00-36.27m - 1 cm quartz vein 23°	604354	31.82-33.00	1.18	0.015
			to C.A. with chlorite alteration and	604355	33.00-35.00	2.00	<0.005
			38.40 core is very broken up and blocky	604356	35.00-37.00	2.00	<0.005
			with losses. Strongly limonitic along	604357	37 00-38 78	1 78	<0.005
			fractures ≈10° to C.A. Lower contact with Siliceous Felsic Lapilli Tuff at 38.78m at 80° to C A	001001	07.00-00.70	1.10	-0.000
38.78	47.00	311	SILICEOUS FELSIC LAPILLI TUFF - Light				
			creamy grey colour with mottled				
			appearance due to smaller homogeneous				
			an ash layer in with lapilli. This lends a				
			fabric to the core at approx. 50° to C.A.				
			Weak pyrite mineralization as				
			disseminations and continued around the				
			fragments. Broken core with strong				
			limonite from 28.78-44.50m.				
			Small Fault Zone from 43.80-43.90m at	604358	38.78-40.00	1.22	<0.005
			53° to C.A. Very minor quartz veining throughout.	604359	40.00-42.00	2.00	<0.005
			Core is very broken up with fracturing 5- 10° to C.A. Pervasive silicification to	604360	42.00-43.00	1.00	<0.005
			43.00m Massive, fine grained, banded ash + lapilli tuff as described above	604361	43.00-45.00	2.00	<0.005
			As above, 1.5 cm thick quartz vein from	604362	45.00-47.00	2.00	<0.005
			46.00-46.30m with only minor pyrite				
			mineralization. Silicification and chlorite alteration				
			increase slightly from 45.45-47.00m				
			lending a slight greenish grey tinge to the rock. Pyrite ≈1%				
47.00	66.82	314	Progressively more strongly silicified.	604363.	47.00-49.00	2.00	<0.005
			diameter. Moderate sericite alteration of				
			lapilli fragment and weak to moderate				
			chlorite alteration. Disseminated pyrite				
			<1% with rare specks of sphalerite at 49m.	604364	49.00-51.00	2.00	0.010
			50.60m at 30° to C.A. weak pyrite	004004	19.00-01.00	1.00	0.010
			alteration along vein margins. 1-2% pyrite				
			and sphalerite? specks from 50.60-50.90m		E1 00 E0 00	0.00	0.545
			As above, increased quartz veining with pyrite 1-2% and sphalerite (<1%) from 51.10-52.00m. Limonite stained envelopes along fractures 15-20° to C.A. from 52.00-	604365	51.00-53.00	2.00	0.545
			52.40m				
			Pervasively silicified darker grey colour with pyritic veining at 60° to C.A. with sphalerite specks.	604366	53.00-53.95	0.95	0.620

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from	to	Code	Description	sample	from/to	width	Au (c.(t)
(111)	(111)		Medium bluish grey Siliceous Felsic Lapilli Tuff as from 53.00-53.95. Rock fabric (alignment of lapilli fragments) at 55-60° to C.A. Felsic fragments are sericitized. Pervasive weak to moderate chlorite alteration. At 54.10m - 4 cm thick white quartz vein 55° to C.A. Sphalerite at 55.52m.	604367	53.95-56.00	2.05	0.110
			Silicification and quartz vein intensity toward 58.00m. Quartz Vein Zone with sphalerite and limonite stained fractures at 40° to C.A. from 56.30-56.60m Moderate chlorite alteration and small patches of epidote.	604368	56.00-58.00	2.00	0.460
			Dark grey greenish intensely silicified and veined. Felsic Lapilli Tuff. Most veins at 40-50° to C.A. and a lesser number at 30° to C.A. Pyrite and sphalerite mainly at 58.47-58.63m	604369	58.00-59.00	1.00	0.260
			As above. Strong veining from 59.15- 59.50m with pyrite and fine grained sphalerite on vein margins. 2 stages of veining evident, 45° to C.A. is cut by 70° to C.A. veining.	604370	59.00-60.00	1.00	0.920
			Silicification and veining decrease significantly. Moderate chlorite and sericite alteration throughout. Pyrite is disseminated throughout and also along vein margins (<1%).	604371	60.00-62.00	2.00	0.195
			As above.	604372	62.00-64.00	2.00	0.175
			Small section of increased quartz veining with pyrite and sphalerite. The vein runs from 64.20 to 64.60 at 10-15° to C.A.	604373	64.00-65.00	1.00	0.185
			Whitish grey pervasively silicified. Fragments blend into matrix. Minor vein, chlorite and sericite alteration. At 66.82m contact with Andesite Dyke at 75-80° to C.A. Core very broken up.	604374	65.00-66.82	1.82	0.060
66.82	67.90	521	ANDESITE DYKE - Grey black to dark greenish grey, very fine grained, massive unit. Laced with microfractures at 50-60° to C.A. and 70-80° to C.A. Pyrite coatings on some fractures.				
67.06	67.17		FAULT ZONE - from 67.06-67.17m within andesite dyke. Grey clay gouge with pyrite on margins. Fault is approx. 85-88° to C.A. A smaller fault structure is at 67.54m at 60-70° to C.A. Lower contact is sharp at 67.90m at 65-70° to C.A.	604375	66.82-67.90	1.08	0.030
67.90	68.70	311	SILICEOUS FELSIC LAPILLI TUFF - Very broken up, blocky core of this unit. It is bleached to almost white but features obscured by black coatings on low angle fractures.	604376	67.90-68.70	0.80	0.285

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from (m)	to (m)	Code	Description	sample	from/to	width (m)	Au (g/t)
()	()		Because of broken core, no orientation of contact with lower andesite dyke could be	110.		(***)	(67 4
68.70	69.00	521	ANDESITE DYKE - Broken up core and rotted rock material. Block very finely grained andesitic dyke. Lower contact at 69.00m with Siliceous Felsic lapilli tuff is at	604377	68.70-69,00	0.30	0.080
69.00	69.72	314	65° to C.A. SILICEOUS FELSIC LAPILLI TUFF - As from 67.90-68.70m. Contact with Andesite Dyke is approximately at 69.72m.	604378	69.00-69.72	0.72	0.255
69.72	70.80	522	ANDESITE DYKE - Dark greenish grey to black - small dyke. Fine grained with slight porphyritic texture. Moderate pyrite mineralization (1-2%) as coatings on fractures. Very broken core with fracturing 20-25° to C.A. Significant core loss. 65% recovery. Lower contact with Siliceous Falsie Tuff at 30° to C.A.	604379	69.72-70.80	1.08	0.130
70.80	72.24	312	SILICEOUS FELSIC LAPILLI TUFF - Creamy grey white with relict "porphyritic" textures due to clay alteration of crystal and lapilli fragments. <1% pyrite. At 72.24m approximately (broken core) a	604380	70.80-72.24	1.44	0.100
			pyritized Fault Zone with gouge and quartz veining cuts C.A. at 40°. This fault zone and crushed rock extends from 72.24- 72.55m.				
72.24 72.55 72.55 73.22	 521	Fault Zone ANDESITE DYKE - Dark charcoal grey with hairline pyritic silicified fractures 65° to C.A.	604381	72.24-72.55	0.31	0.010	
			At 73.00m - some crushing due to shearing at 45° to C.A. Bleached envelopes along hairline silicified & pyritized fractures.	604382	72.55-73.22	0.67	0.015
73.22	75.60	312	SILICEOUS FELSIC LAPILLI TUFF - Medium blue grey with coarse ghost outlines of lapilli fragments. Moderate chlorite alteration along quartz vein and fracture margins. Pyrite is disseminated and is mainly found as fracture coatings and on veinlet margins. Invasive limonite staining along low angle 5-10° to C.A. fractures. From 75.33-75.60m purplish tinge to rock due to biotite alteration. At 75.60m contact with Pyritic Andesite Dyke at 87-90° to C.A.	604383	73.22-75.60	2.38	0.090
75.60	77.20	521	ANDESITE DYKE - Massive greenish dark charcoal grey with minor pyrite. Lower contact 80° to C.A.	604 384	75.60-77.20	1.60	0.015
77.20	83.08	312	SILICEOUS FELSIC LAPILLI TUFF - Light bluish grey, pervasively silicified. Chlorite alteration and patchy secondary biotite.	604385	77.20-79.00	1.80	0.015

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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (a/t)
()	(,		Pervasive silicification diminishes slightly from 80.0-81.0m. Approx. 1% pyrite as disseminations and along fractures.	604386	79.00-81.00	2.00	0.045
			Very homogeneous section of Siliceous Felsic Lapilli Tuff. Minor veining and fracturing. Purplish secondary biotite from 81.90-82.40m. At 83.08, contact with narrow andesite dyke at approx. 75° to C.A. Pvritic contact zone.	604387	81.00-83.08	208	<0.005
83.08	83.36	521	ANDESITE DYKE - Dark greenish charcoal grey, very fine grained, massive. Pyrite coating on fractures. Clay rich contact at 83.36m at 85° to C.A.	604388	83.08-83.36	0.28	0.020
83.36	93.00	312	SILICEOUS FELSIC LAPILLI TUFF - Light bluish grey with obscure fragment boundaries. Pervasive silicification with chlorite alteration along fracture, vein margins and lapilli fragment rims. Veining is not intense but cuts C.A. at 30-40°.				
			1-2% pyrite along vein margins. Specks of sphalerite? at 84.95m.	604389	83.36-85.00	1.64	0.020
			Limonite coated fractures at 30° and 75° to C.A. between 86.9m and 87.0m.	604390	85.00-87.00	2.00	0.010
			As above but purplish coloured biotite altered quartz veined sections at 87.8m at 40-45° to C.A. and from 88.33-89.40m	604391	87.00-89.00	2.00	0.005
			Biotite alteration weakens and light	604392	89.00-91.00	2.00	<0.005
			greenish tinge returns with chlorite alteration. Fragments are only ghostly outlines. Minor veining. Fracturing primarily 30° to C.A. and 55-65° to C.A.	604393	91.00-93.00	2.00	<0.005
93.00	97.04	313	SILICEOUS FELSIC LAPILLI TUFF - as	604394	93.00-95.00	2.00	<0.005
			above but quartz veining and pyrite mineralization; have increased. Fragments	604395	95.00-96.00	1.00	<0.005
			are cloudy ghost-like features in a siliceous matrix of the same colour. Moderate chlorite alteration lends a greenish tinge to the unit. 1mm to 10mm quartz veins carrying coarse and fine grained pyrite are more frequent with an orientation of 35-40° to C.A. At 96.06m a 10mm thick vein is 80% coarse pyrite. At 97.04m Tuff contacts a very fine grained pale green siliceous tuff at approx. 50° to C.A.	604396	96.00-97.04	1.04	<0.005
97.04	104.16	712	PALE GREEN TUFF - Very siliceous and very fine grained pale creamy green coloured. Thin quartz veins (1mm - 5mm thick) continue from the above described lapilli tuff into this unit. Pyrite content is disseminated and along fracture and veinlets. The veins have 1mm to 7mm wide bleached silicified alteration envelopes parallel to the vein margins.				

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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
ζ)	()		Limonite staining permeates into the rock along fractures to leave rusty brown wide envelopes.			()	127 7
			As described above.	604397	97.04-98.00	0.96	0.005
			Very broken core with 18 cm loss from 94.67-100.28m.	604398	98.00-100.00	2.00	<0.005
			Pale green tuff is very consistently veined	604399	100.00-102.00	2.00	<0.005
			with quartz and pyrite as noted above. Occasional porphyritic appearance with altered feldspar fragments	604400	102.00-104.00	2.00	<0.005
104.16	104.46	712	FAULT ZONE in Pale Green Tuff. Broken core and some gouge. Black staining on fracture surfaces. Fault at 50° to C.A. PALE GREEN TUFF - as described above				
101.10	100.20	1 + 2	Contact with light grey siliceous Felsic Tuff at 105.20m at 15-20° to C.A.	604401	104.00-105.20	1.20	<0.005
105.20	110.25	314	SILICEOUS FELSIC LAPILLI TUFF - Intensely quartz veined light bluish grey section of lapilli tuff. When not obscured by quartz vein flooding, lapilli fragments are sericitized and chlorite altered.				·
			As above at 105.80 - 5 cm thick quartz vein with coarse pyrite and fine specks of sphalerite and biotite along vein margins. Pyritic vein 50° to C.A. At 106.18m a 3 cm thick quartz vein cuts C.A. at approx. 15°. Very contorted, minor sphalerite.	604402	405.20-107.00	1.80	0.535
			Felsic tuff unit with much less veining than above.	604403	107.00-107.70	0.70	0.330
			Intensely silicified with bluish grey quartz veins with coarse and dusty grained pyrite and fine specks of sphalerite. Veins appear to run roughly parallel to C.A. Contacts are very irregular. Estimated angle to C.A. = $10-20^\circ$.	604404	107.70-109.20	1.50	0.555
			Large quartz vein system over most of this interval. It appears that two phases of 2 larger veins have intersected each other. The convoluted nature of contacts suggest that a major vein + 100mm thick at 15-20° to C.A. extends from 109.30-109.80m and intersects a 35-40° to C.A. vein from 109.80-109.90m. Pyrite, secondary biotite and very fine grained sphalerite? are found in this vein system.	604405	109.20-110.25	1.05	1.385
110.25	115.00	312	SILICEOUS FELSIC TUFF - as above but veining diminishes to a lacy network of narrow (1-3mm wide) veinlets.	60440 6	110.25-112.00	1.75	0.125
			As above, however, quartz veining is increasing from 113.0-114.0m.	604407	112.00-114.00	2.00	0.595

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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)	
()	(From 114.07-114.30m - A 1.5 cm thick quartz vein with pyrite, biotite and sphalerite undulate across core averaging 8° to C.A. a second mineralized 1.5 cm thick vein cuts core at 30° to C.A. from 114.6-116.75m.	604408	114.00-115.00	1.00	0.510	
115.00	116.80	311	SILICEOUS FELSIC LAPILLI TUFF - continues. Quartz veining and pyrite mineralization diminishes. FAILT ZONE - Rusty flaky & rotted Lapilli	604409	115.00-117.00	2.00	0.345	
110.00	110.60		Tuff of above unit 20-25° to C.A.					
116.80	117.60	311	SILICEOUS FELSIC LAPILLI TUFF - as noted from 115.0-116.80m.	604410	117.00-117.60	0.60	0.470	
117.60	134.10	314	Intensely silicified and quartz veined section. Moderate pyrite (2-3%) and sphalerite along vein margins. A large vein roughly parallels the C.A. at approx. 5-10° to C.A. in an undulating fashion from 118.0-119.08m. Speckles of brown secondary biotite in vein.	604411	117.60-118.08	1.48	1.135	
			Silicified Felsic Tuff as above but veins are smaller and form along network with 2 phases of veining. a low angle (10-15° to C.A.) and higher angle veins (40-70° to C.A.).	604412	119.08-121.00	1.92	0.205	
			Same as from 199.08-121.00m. Abundant pyrite in veins and fractures and around lapilli fragments. (2-3%)	604413	121.00-123.00	2.00	0.145	
			Continued as above. Weak to moderate chlorite alteration. Patches of minor fuchite. Crystalline pyrite in a 0.5 cm thick quartz vein at 10° to C.A. from 123.10- 123.25m.	604414	123.00-124.00	1.00	0.175	
			Large, well mineralized vein system from 124.25-124.80m. 1% sphalerite and 2-3% pyrite. Core very broken up from 124.5- 124.8m. Vein cuts C.A. at 25°.	604415	124.00-125.00	1.00	1.135	
			A second large quartz vein system with 1- 3% pyrite and 1% sphalerite extends from 125.36-126.0m at 25° to C.A. but undulates down core length as if roughly parallel to axis.	604416	125.00-126.00	1.00	0.765	
			Quartz veining continues in Siliceous Felsic lapilli Tuff with a large convoluted vein from 126.35-126.85m. Orientation to C.A. is approx. 15-25° to C.A.	604417	126.00-127.00	1.00	0.270	
			Large veins diminish. Large fragments to 5 cm diameter are grey brown in colour and appear to be altered with secondary biotite. Quartz veins are generally <1cm thick and are convoluted and of no particular orientation to C.A. Pyrite mineralization is moderate (1-3%)	604418	127.00-129.00	2.00	0.200	

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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
. ,			Larger quartz veins with pyrite and sphalerite mineralization increase again. Strong pyrite mineralization (8%) from 129.10-129.25m. Quartz veining dominates core from 129.60-130.0m.	604419	129.00-130.00	1.00	0.300
			Same as from 129.0-130.0m with pyrite and sphalerite.	604420	130.00-131.00	1.00	0.520
			As above but from 132.02-133.30m - purplish brown biotite alteration becomes more intense. Quartz vein acts as a matrix around angular fragments. Pyrite and sphalerite mineralization decrease significantly. Pyrite $\approx 1\%$.	604421	131.00-133.00	2.00	0.945
134.10	138.16	521	As above with a decrease in biotite alteration. PORPHYRITIC ANDESITE DYKE -	604422	133.00-134.10	1.10	0.345
			Sheared contact with above noted Lapilli	604423	134.10-136.00	1,90	0.020
			massive dark green with an intermittent porphyritic texture. Feldspar phenocrysts are small, usually less than 2mm across and have indistinct boundaries. The unit is moderately to strongly magnetic and is chlorite altered. Veining and fracturing is very weak for the most part. Pyrite is mainly confined to fracture planes. Dominant fracturing at 45-60° to C.A.	604424	136.00-138.00	2.00	<0.005
138.16	143.84	521	From 1338.16m on the Andesite Dyke becomes non-porphyritic and is a massive, very fine grained dark grey green colour. magnetic and strongly chloritized upper contact with porphyritic variety is at 35° to C.A. Silicified hairline fractures are intensely pyritized.	604425	138.00-140.00	2.00	<0.005
			As above, but from 140.33-140.63m a barren, vuggy white quartz vein (crystal terminations) cuts core axis at 15°. Contact varies from parallel to 20° to core axis. Vein is unmineralized and is 4 cm thick. 141.40-141.60 gougy shear 10° to C.A.	604426	140.00-142.00	2.00	<0.005
143.84	144.73	521	Grades to a porphyritic texture again at	604427	142.00-144.00	2.00	<0.005
			Porphyritic Andesite Dyke contacts Silicified Felsic Lapilli Tuff along a fault at 144.73m at 70° to C.A.	6044 28	144.00-144.73	0.73	<0.005
144.73	144.79		FAULT ZONE with grey clay gouge at 70° to C.A.				
144.79	156.00	314	SILICIFIED FELSIC LAPILLI TUFF - Medium grey to purplish grey lapilli (fragmental) tuff. Fragments are obscured by pervasive grey coloured silicification of matrix and dusty pyritic mineralization. Purplish colour is intermittent and reflects areas of secondary biotite alteration.				

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SECTION:	30091N
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from	to	Code	Description	sample	from/to	width	Au
(m)	(m)		Biotite altered section of unit. Minor	No. 604429	144.73-145.70	(m) 0.97	(g/t) 0.160
			Strongly silicified and veined section. Biotite is mostly bleached out. Veining is very convoluted. Patchy chlorite alteration and moderate (3-5%) pyrite and sphalerite mineralization from 146.60-146.8m.	604430	145.70-147.00	1.30	0.600
			Medium cream grey, intensely silicified section with moderate to abundant (3-55%) pyrite mineralization. Small 1-3mm veinlets at 50-60° to C.A. carry most of the mineralization.	604431	147.00-149.00	2.00	0.620
			As above. Chlorite alteration stronger on fracture surfaces and veinlet margins. Fragments are outlined by chlorite and fine grained pyrite.	604432	149.00-150.62	1.62	0.290
			Quartz veining intensifies with one vein parallel to C.A. from 150.62-151.0m with pyrite and sphalerite on vein margins. Pervasive convoluted veining from 151.0- 152.0m. From 151.76-152.0m pyrite mineralization is intense with coarse and fine grained pyrite throughout veins. Specks of sphalerite are scattered throughout veinlets.	604433	150.62-152.00	1.38	2.500
			Intense convoluted quartz veining	604434	152.00-153.00	1.00	0.550
			The veining intensity diminishes significantly with 2% pyrite along hairline fractures and veinlets and fragments. Sphalerite occurs in a 1 cm thick quartz vein at 50° to C.A. at 153.95m.	604435	153.00-154.00	1.00	0.210
156.00	161.77	412	Homogeneous grey, almost featureless Felsic Lapilli Tuff. Very minor veining. Coarse pyrite on fractures and along veinlets and lapilli fragments. At 156.0m gradational? contact with Dacitic-Andesitic lapilli (Nodular) Tuff at 45°? to C.A. DACITIC-ANDESITIC LAPILLI (NODULAR)	604436	154.00-156.00	2.00	0.415
			TUFF - Dark purplish grey mottled appearance due to light grey nodular to 2 cm diameter set in a purplish biotite rich matrix. Pyrite content ranges from 1-3% disseminated throughout unit, as rims around nodules and along veinlets and hairline fractures. Areas of increased silicification cause the biotite to be bleached out of the matrix.				
			Small shear at 156.95m at 35° to C.A. Nodular Tuff as above. Greyish silicified	604437	156.00-158.00	2.00	0.050
			mostly removed. 2-3% pyrite along veinlets at 65° to C.A.	604438	158.00-160.00	2.00	0.040

SECTION: <u>30091N</u>			Page: <u>12</u>			Page: <u>12</u> DDH#: <u>HS97</u>				
from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)			
			Purplish grey Nodular Tuff continues. Minor quartz veining at 160.8m at 50° to C.A. Some slickensides along vein margin. At 161.77m unit contacts an Andesite Dyke at 55° to C.A. This contact zone is fine grained purplish coloured with biotite in matrix.	604439	160.00-161.77	1.77	0.020			
161.77	162.52	521	ANDESITE DYKE - A small very fine grained dark greenish charcoal grey with . white hairline veinlets cutting core axis at an average 75-80°.	604440	161.77-162.52	0.75	<0.005			
162.52	162.80	412	DACITIC-ANDESITIC LAPILLI (NODULAR) TUFF - Fine grained section with minor nodules present. Dark purplish grey 2 cm clay rich fault gouge at 162.8-162.82m at 60° to C.A.							
162.80	162.82		FAULT ZONE (small) at 60° to C.A.							
162.82	163.68	412	DACITIC-ANDESITIC LAPILLI (NODULAR) TUFF - Purplish to lighter grey as core is very broken. Bleaching due to silicification from approx. 163.45m to end of hole. Pyrite and some sericite on fracture planes along with chlorite alteration. 163.68m: End of Hole (E.O.H.)	604441	162.52-163.68	1.16	<0.005			

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SECTION: _____

Diamond Drill Log

DDH#: <u>H897-05</u>

Northing: Easting:	<u>30091N</u> 31307 E	Drill Hole s Method:	urvey Acid
Elevation:	872m	Azimuth	Dip
Azimuth:	0	060	-90
Inclination:	-90°		
Grid:	Aranlee		1
Length (m):	160. 32m		+
Core size:	NQ-2		
Contractor:	F. Boisvenu		
Drill Type:	Boyles 37		+
			+

Drift Hole S	urvey		
Method:	Acid		
Azimuth	Dip	Depth	_
060	-90	Collar	
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Property:	Hotspring
NTS:	<u>92G/9 & 16</u>
Claim:	Hotspring 7
Date Started:	Sept.22/97 3p.m.
Date Completed	I:Sept.24/97 1:20p.m.
Logged by:	W. B. Lennan &
	<u>J. T. Shearer</u>

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Purpose:	Test do	wn dip e	xtension of mineralized zones found in HS97-0	01, HS97-0	3 & HS97-04		
	L		······································		· · · · · · · · · · · · · · · · · · ·		
from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
0.00	3.05	9	Casing/Overburden - no core				
3.05	4.88	311	SILICEOUS FELSIC LAPILLI TUFF - Near surface, very weathered and broken core. Limonite on fracturing 5-15% to C.A. Fresher surfaces are rusty white coloured. Very minor pyrite.	604442	3.05-5.02	1.97	0.065
4.88	5.02		FAULT GOUGE - Brown sandy clay-gouge at contact of andesite dyke at 70° to C.A.				
5.02	5.50	521	ANDESITE DYKE - Medium grey coloured with very fine grained matrix and scattered white feldspar phenocrysts to 2mm diameter. weak chlorite alteration. Contacts fault zone at 5.50m at 43° to C.A.	604443	5.02-5.50	0.48	<0.005
5.50	5.90 9.00	312	FAULT ZONE - With brown sandy clay- gouge changing to a pinkish sandy clay. Contacts Felsic Tuff at approx. 50° to C.A. SILICEOUS FELSIC LAPILLI TUFF - Core	604444	5.50-5.90	0.40	<0.005
0.50			is very broken and weathered with strong limonite staining to 17m where it gradually diminishes to unweathered rock. Where unweathered unit slight bluish grey and shows distinct lapilli and crystal fragments. Fracturing at 5-15% to C.A. and at 50° to 60° to C.A. are most prominent.	604445	5,90-7.90	2.00	0.015
			Very intense limonite stained core. Felsic Tuff unit still strongly weathered and fractured. Small unweathered sections show lapilli texture and pyrite disseminations. Low angle to C.A. fractures are most predominately weathered and to a lesser extent fractures greater than 50° to C.A.	604446	7.90-9.00	1.10	0.080
9.00	14.12	314	SILICEOUS FELSIC LAPILLI TUFF - as described above but pyrite and minor sphalerite are observed in quartz vein material	604447	9.00-11.00	2.00	0.120

MOUNT HOPE RESOURCES CORPORATION 1918-925 West Georgia St., Vancouver, B.C., V6C 3L2

SECTION:			- Page: <u>2</u>			DDH#: _	HS97-05	
from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)	
()	()		Very brittle cross fracturing in pervasively silicified section from 11.30-11.80m Quartz veining with pyrite and sphalerite at 11.80m. From 11.90m to approx. 12.25m a very fine grained sandy texture brown coloured section occurs. Possible Fault Zone	604448	11.00-13.00	2.00	0.120	
			Argillically altered feldspar crystal fragments lend a pocked porphyritic texture to unit. Pervasively silicified. Contact at 14.12m within fault zone with associated quartz vein at 50° to C.A.	604449	13.00-14.12	1.12	0.040	
14.12	14.35		FAULT ZONE - Limonite altered broken flakey Felsic Tuff material and clay gouge. Lower contact with felsic tuff at 30° to C.A.	. 604450	14.12-14.35	0.23	0.045	
14.35	29.00	314	SILICEOUS FELSIC LAPILLI TUFF - Light bluish grey as previously described. Porphyritic texture due to altered crystal fragments as from 13.00-14.12m.	604451	14.35-15.35	1.00	0.180	
			Intense pervasive silicification and quartz veining. Limonite stained fractures 10-20° to C.A. from 16.40-16.90m. Pyrite and sphalerite along veins at 16.30m at 45° to C.A. Mineralized veining (contorted) at 15.44m.	604452	15.35-17.00	1.65	0.200	
			Minor veining but pervasive silicification.	604453	17.00-19.00	2.00	0.150	
			Quartz (blue grey) veining with pyrite and sphalerite mineralization increase significantly. Limonite staining on weathered fracture mainly 45° to C.A. Veins are convoluted. Well mineralized quartz vein at 19.15m at 45° to C.A.	604454	19.00-20.00	1.00	0.210	
			Sphalerite at 22.77m - 1 cm quartz vein at	604455	20.00-21.00	1.00	0.080	
			55° to C.A. Very homogeneous light bluish	604456	21.00-22.00	1.00	0.130	
			grey lapilli tuff. Veining is diminished from section above but remains pervasively	604457	22.00-23.00	1.00	0.120	
			silicified and weakly chlorite altered fragment rims are at times partially assimilated into the quartz rich matrix. Minor fracturing 10-20° to C.A. and 45-50°	604458	23.00-25.00	2.00	0.065	
			to C.A. As above.	604459	25.00-27.00	2.00	0.160	
		-	Fracturing at 50° to C.A. and 30° to C.A. is a quartz flooded zone has a light brown colour due to permeation of limonite staining. Chlorite alteration along fracture and fragments. 1% pyrite mineralization as dissemination and along fractures and around fragments.	604460	27.00-29.00	2.00	0.125	
29.00	37.00	311	As above from 29.0-29.4m - Heavy limonite coating on major fracturing system at 5-10° to C.A. and 30° to C.A. Possible shear zone.	604461	29.00-31.00	2.00	0.040	

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SECTION	N:		Page: <u>3</u>			DDH#:	<u>HS97-05</u>
from (m)	to (m)	Code	Description	sample No	from/to	width (m)	Au (a/t)
(,	(,		Light glue grey silicified felsic lapilli tuff. Very coarse grained with fragments to 3 cm diameter. Light greenish tinge to fragments due to weak to moderate pervasive chlorite alteration of matrix material around fragments and along fractures etc. Pyrite is weak, generally <1%. Crystal fragments are white and soft, due to argillic alteration.	604462	31.00-33.00	2.00	0.075
			Limonite coats fractures at 34.0m. Fracturing is not well developed. Increased quartz flooding from 34.80-35.10m. sphalerite? at 34.80m.	604463	33.00-35.00	2.00	0.085
			Very Massive homogeneous pervasively silicified felsic lapilli tuff continues weakly fractured and mineralized.	604464	35.00-37.00	2.00	0.120
37.00	42.37	312	As above with increasing sulfide content and quartz veining. From 37.05m to 37.80m a 3mm thick quartz vein with coarse pyrite runs roughly parallel to C.A. (2-4°d to C.A.) From 38.0-38.23m a second pyritized quartz vein similar to the above noted one arcs along core axis at 20° to	604465	37.00-39.00	2.00	0.045
			C.A. As above but no veining.	604466	39.00-40.00	1.00	0.030
			Moderately veined lapilli tuff section with increased pyrite (2-3%) and quartz veining. From 40.30-40.35m vein carries pyrite and very fine grained sphalerite. Chlorite alteration is also more intense.	604467	40.00-41.00	1.00	0.800
			Quartz veining and mineralization diminish from 40.0-41.0m. At 42.37 Fault contact with Andesite dyke at 30°d to C.A.	6 0446 8	41.00-42.37	1.37	0.015
42.37	43.00		FAULT ZONE - Intensely altered Andesite Dyke is soft and clay-like. Very rusty. At 43.0m contacts Andesite Dyke at 40° to C.A.	604469	42.37-43.00	0.63	<0.005
43.00	44.64	522	ANDESITE DYKE - Very fine grained greenish black, weakly magnetic and moderate pyrite (2-3%) on fracture planes. Shearing in the vicinity of 43.50-43.65m. Broken core with clay on fracture faces. At 44.64m contacts felsic lapilli tuff at 42° to C.A.	604470	43.00-44.64	1.64	<0.005
44.6 4	46.60	311	SILICEOUS FELSIC LAPILLI TUFF Darker grey greenish with chlorite alteration. Minor veining and <1% pyrite. At 46.60m - contacts a purplish section of Nodular Tuff at 50° to C.A.	604471	44.64-46.60	1.96	<0.005
46.60	47.10	411	DACITIC-ANDESITIC LAPILLI (NODULAR) TUFF - Purplish brown, mottled, very small section appears similar to previously intersected Nodular Tuffs. At 47.00m - nodular texture disappears and purplish biotite alteration blends into pervasive grey coloured alteration of Felsic Tuffs.	604472	46.60-47.10	0.50	<0.005

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SECTION	r:		Page: <u>4</u>			DDH#:	<u>HS97-05</u>
from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
47.10	49.15	312	SILICEOUS FELSIC LAPILLI TUFF - Medium grey coarse grained with lapilli fragments to 2 cm diameter. Silicification is pervasive with 1-2% pyrite on fracture planes and around lapilli fragments. Chlorite alteration is moderate and occurs along fractures and as rims around some lapilli fragments.			. ,	
			Small shear? zone at 25° to C.A. from 47.74-47.85m. Ground up rock and rusty clay material.	604473	47.10-49.15	2.05	0.040
49.15	49.40		FAULT ZONE - Dark reddish brown granulated rock with clay and limonite. Some pyrite crystals. Upper contact 75° to C.A. Lower contact at 20° to C.A.	604474	49.15-49.40	0.25	0.015
49.40	48.44	312	SILICEOUS FELSIC LAPILLI TUFF - Same unit as described from 47.10-49.15m.	604475	49.40-51.00	1.60	0.310
			Coarse grained Siliceous Felsic Lapilli Tuff. Medium grey with pervasive silicification and chlorite alteration. Pyrite throughout 0.5% to 2%.	604476	51.00-53.00	2.00	0.075
			As above, fragment size becomes	604477	53.00-55.00	2.00	0.500
			progressively larger. Crowded fragments to 2 cm diameter common with some ranging to 4 cm diameter. Minor veining or fracturing.	604478	55.00- 57 .00	2.00	0.195
50.44			Siliceous felsic lapilli tuff contacts fine grained Andesite Tuff at 58.44 at 40° to C.A.	604479	57.00-58.44	1.44	0.180
58.44	76.60	821	ANDESITE TUFFS - Fine to medium grained, equigranular for the most part. Medium greenish grey massive unit. Has a slight porphyritic appearance but are feldspar tuffaceous fragments. Approx. 5% mafic crystal fragments which are usually obscure but do show up as distinct fragments in various sections of core. The unit is moderately magnetic. Chlorite alteration is pervasive but is exposed mainly on fracture planes and along quartz vein margins. Fracturing and veining is very weak. Coarse pyrite crystals on silicified fracture	604480	58.44-60.00	1.56	0.005
			at 58.82-58.92m. Pyritized and chloritized vuggy 1 cm quartz	604481	60.00-62.00	2.00	<0.005
			vein at 60.10m at 90° to C.A. A 1.5cm silicified envelope on either side of the small vein has bleached the tuff unit. Very massive for the most part. Epidote on fracture 25-330° to C.A. from 60.0-66.02m.	604482	62.00-64.00	2.00	<0.005
			Small silicified fractures 75-85° to C.A. have mottled white alteration envelopes along the margins which extend up to 1 cm away from the fracture.	604483	64.00-66.00	2.00	<0.005

SECTIC	DN:		Page: <u>5</u>			DDH#: _	<u>HS97-05</u>
from	to	Code	Description	sample	from/to	width	Au
(m)	(m)		Pyrite is found on all fractures although fracturing and veining are not numerous. Chlorite alteration is intense along the fractures and veinlets.	NO.		(m)	(g/t)
			A 2.5 cm thick quartz vein cuts core axis at approx. 20° to C.A. and a 2.5 cm wide silicified fracture at 67.40m cuts C.A. at 35°. Minor epidote occurs on this silicified fracture.	604484	66.00-68.00	2.00	<0.005
			Massive Andesitic Tuff ;unit continues without change. Very uniform fine to medium grained texture with minor veining.	604485	68.00-70.00	2.00	<0.005
			At 71.11m and 17.19m, two 2 cm wide quartz veins cut C.A. at 78° and 65° respectively. Pyrite and strong chlorite alteration are found in the cores and along the margins of the veins.	604486	70.00-72.00	2.00	<0.005
			As above from 72.80-74.0m. Larger matic fragments to 1 cm diameter occur as dark phenocryst-like features, however, crystal boundaries are diffuse.	604487	72.00-74.00	2.00	<0.005
			Andesite Tuff as above becoming more fractured at 5-15° to C.A. from 74.82- 75.0m. Moderate chlorite alteration and pyrite mineralization along fractures. Quartz carbonate veining.	604488	74.00-76.00	2.00	0.010
			Fracturing roughly parallel to core axis continues with 0.5 cm quartz carbonate veining 5-10° to C.A. to 76.3m. Lower contact with Siliceous Felsic Lapilli Tuff at 76.6m at 40°d to C.A.	604489	76.00-76.60	0.60	<0.005
76.60	83.38	312	SILICEOUS FELSIC LAPILLI TUFF - Light bluish grey, fine to coarse sized lapilli fragments to 2 cm diameter. Pervasive silicification lends a very homogeneous appearance to unit. Weak Chlorite alteration around fragments and along				
			Patchy purplish secondary biotite alteration from 76.60-76.80m.	604490	76.60-78.00	1.40	0.010
			3mm pyritic silicified fractures at 49.77 at 30° to C.A.	604491	78.00-80.00	2.00	<0.005
			Fine grained section with fabric of unit oriented to 70° to C.A. Stronger chlorite alteration.	604492	80.00-82.00	2.00	<0.005
			1-3mm coarse pyrite in quartz veinlet at 82.40-82.44m. At 83.38m unit contacts fined grained Andesite Tuff at 40° to C.A. Coarse pyrite on contact.	604493	82.00-83.38	1.38	<0.005
83.38	84.75	822	ANDESITE TUFF - Dark green, charcoal grey, very fine grained massive unit. Coarse pyrite coatings on fracture planes. Strongly chloritized. Lower contact with Siliceous Felsic Lapilli Tuff at 84.75m at 40° to C.A.	604494	83.38-84.75	1.37	<0.005

SECTION	1: <u> </u>		Page: <u>6</u>			DDH#: _	<u>HS97-05</u>
from (m)	to (m)	Code	Description	sample No	from/to	width (m)	Au
84.75	99.00	311	SILICEOUS FELSIC LAPILLI TUFF - Light greenish grey, strongly silicified, medium grained tuff. Moderate to strong chlorite alteration. Minor veining and weak to moderate pyrite mineralization (0.5-1.5%).	110.		(111)	(B 7 4)
			As above, very homogeneous section. From 85.50-86.1m - limonite stained fractures run parallel to or 5° to C.A.	604495	84.75- 8 6.00	1.25	<0.005
			As above, moderate to strong chlorite alteration along microfractures and fragments. A 1mm pyritic quartz vein runs along core axis from 86.0-86.55m at 3-5° to C.A. At 86.88m a white, 3 cm thick quartz vein cuts C.A. at 85°.	604496	86.00-88.00	2.00	<0.005
			Continuing as above. From 88.0-88.0m fracturing from 5-20° to C.A. along entire section have resulted in blocky core. Black MnO and reddish limonite staining coat all fractures. From $89.11-89.17m = 6 \text{ cm}$ thick white unmineralized quartz vein cuts C.A. at 70°.	604497	88.00-90.00	2.00	<0.005
			As above, fracturing diminishes with very minor veining, mottled appearance due to chlorite alteration lends a banded fabric to unit at 50° to C.A.	604498	90.00-92.00	2.00	<0.005
			Small 0.5cm thick barren quartz vein at 93.98m at 45° to C.A.	604499	92.00-94.00	2.00	<0.005
			Homogeneous, silicified felsic tuff continues. From 95.5 to 95.87m a pyritic veinlet (2mm thick) runs along core axis at 3°-5°. Strong chlorite rich knot in vuggy fractured section of veinlet at 95.82m.	604500	94.00-96.00	2.00	<0.005
			As above but gradually becoming coarser grained with lapilli fragments to 2 to 3 cm diameter. Pinkish tinge to matrix due to weak secondary biotite and K-spar?	511560	96.00-98.00	2.00	<0.005
99.00	104.50	312	SILICEOUS FELSIC LAPILLI TUFF Same as above but intense pervasive silicification due to quartz flooding. The lapilli fragment boundaries are more obscure blending in with quartz rich matrix. Pyrite has increased slightly primarily along silicified fractures and around the rims of fragments. Weakly veined and fractured.	311301	90.00-99.00	1.00	~0.005
			As described above.	511562	99.00-101.00	2.00	0.010
			Quartz flood zone continues with a weak lacy network of pyritic silicified fractures	511563	101.00-103.00	2.00	0.015
			As above but quartz flood zone weakens in intensity. Fracturing from 103.50- 103.80m is 20-25° to C.A.	511564	103.00-104.50	1.50	0.205

SECTION	:		Page: <u></u>			DDH#:	HS97-05
from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	а Ац (g/t)
()	()		1-2 cm wide quartz vein with pyrite and sphalerite? cut C.A. at 50-65° respectively at 104.04 and 104.11m				
104.50	10 8.41	314	Biotite chlorite alteration increase along with pyrite and minor sphalerite particularly at 105.20m in a contorted 2-	511565	104.50-105.20	0.70	1.310
			4cm thick quarz ven. Increase quartz veining with weak biotite and chlorite alteration. Fine and coarse grained pyrite along 1- 2mm thick veinlets at 20° to C.A.	511566	105.20-107.00	1.80	0.120
			Unit becoming darker grey to light purplish coloured due to secondary biotite. At 108.22m a small silicified fracture carries pyrite, sphalerite and galena specks. At 108.41m contacts Dacitic- Andesitic Lapilli & Nodular Tuff at 35-40° to C A	511567	107.00-108.41	1.41	0.435
108.41	115.00	412	DACITIC-ANDESITIC FRAGMENTAL TO NODULAR TUFF - Very coarse grained lapilli to nodular tuff with fragments to 6 cm diameter and nodular to 3 cm diameter. The unit alters from coarse lapilli fragmental textures to nodular form in a gradational manner. No abrupt contacts. The unit varies from medium brownish grey when strongly silicified and bleached to dark purplish grey where a biotite rich matrix is present. Biotite is removed with silicification, leaving a remnant pinkish to brownish grey colour to the unit as mentioned above. Overall unit is well mineralized with pyrite throughout (1-3%). Pyrite occurs as disseminations, fracture coatings, rims around fragments and in				
			quartz veniets. Intensely silicified and bleached with relict biotite. Chlorite alteration is strong. Unit is well veined with abundant pyrite (5%) veining from 109.00-110.00m is at 5-15° to	511568	108.41-110.00	1.59	0.040
			As from 108.41 - 110.00m.	511569	110.00-111.00	1.00	0.030
			Dark purplish coloured biotite rich section with Nodular Tuff texture. Heavily pyritized along veins at 10-20° to C.A. from 11.00 to 111.60m	511570	111.00-113.00	2.00	0.085
		-	Bleached & silicified grey sections alternate with purplish biotite rich zone. Lacy convoluted quartz veinlets run roughly parallel to core axis ranging up to 15°. At 114.30m a 1 cm thick convoluted quartz vein carries sphalerite.	511571	113.00-115.00	2.00	0.155

SECTION:	Page: <u>8</u>		I	DDH#:	HS97-05
from to Code (m) (m)	Description	sample No.	from/to	width (m)	t Au (⊊/t)
115.00 118.00 414	Intensely quartz veined and pervasively silicified section. Some chlorite alteration along vein margins. Nodular Texture from 115.60-115.85. Coarse pyrite in quartz vein at 115.4m and pyrite and sphalerite along 1 cm thick quartz vein margins from 115.70-115.85m.	511572	115.00-116.00	1.00	0.275
	More biotite rich purplish zone with lacy network of quartz veinlets running 3-10° to C.A. At 117.75 - brownish sphalerite? in 1 cm thick quartz vein.	511573	116.00-118.00	2.00	0.270
118.00 153.67 412	As above but minor veining until 119.60m where more pervasive silicification partially bleaches unit. Dominant fracturing at 35° ànd 55° to C.A. Fragments in bleached area become more indistinct as their boundaries blend into matrix	511574	118.00-120.00	2.00	0.195
	 Pinkish grey silicified zone continues. A 4 cm thick white quartz vein with molybdenite on the vein margins occurs from 120.14m to 120.18m at 85° to C.A. 2-5% pyrite in veined section from 120.60 to 120.95m. Quartz vein at 121.59m at 40° to C.A. carries fine grained sphalerite. 	511575	120.00-122.00	2.00	0.150
	From 122.0m unit is less pervasively silicified and dark purple biotite rich matrix returns. Two phases of quartz veining are indicated at 122.73m. The unit is more chloritized and silicified (bleached) from 123.30 to 124.0m with increased quartz veining. Coarse pyrite occurs on some fractures within veins.	511576	122.00-124.00	2.00	0.370
	Bleaching of purple biotite alteration with increased silicification. Nodular texture is exposed in the more purple biotite rich sections from 124 to 125.10m and from 125.6 to 126.0m.	511577	124.00-126.00	2.00	0.120
	Narrow pyritized vein (3mm) with bleached narrow alteration envelope cuts C.A. at 3-5° and run the length of core from 125.10 to 126.70m	511578	126.00-126.80	0.80	0.010
	Intensely silicified and veined section of Nodular Tuff. From 126.90 to 127.0m a strongly pyritized 8 cm thick quartz vein with fine specks of sphalerite? cuts C.A. at 55°. Narrow veinlets run primarily at 10°- 20° to C.A.	511579	126.80-128.00	1.20	
	Same as from 126.80128.00	511580	128.00-130.00	2.00	0.030
	Uniformly grey coloured, pervasively silicified dacitic-andesitic lapilli (nodular) tuff. Original texture is virtually obscured by silicification. Nodular more biotite rich sections at 131.0-131.10m and 131.25- 131.32m.	511581	130.00-132.00	2.00	

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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/ t)
			dissemination's and along hairline				
			As above - 1 cm thick bluish grey quartz vein at 132.41m at 37° to C.A. carries	511582	132.00-133.34	1.34	0.055
			coarse pyrite and sphalerite. Very intensely silicified by vuggy quartz veining cutting C.A. at 35° Very well mineralized with <u>up to 10% pyrite</u> throughout and minor sphalerite mineralization scattered at random	511583	133.34-134.67	1.33	0.335
			Nodular tuff is less intensely bleached out and silicified to 136.0m then silicification, bleaching and chlorite alteration increase again. A 2mm to 5mm thick quartz carbonate vein runs down the centre of the core or at 3° to C.A. from 136.00m to 136.72m. At 136.4m very intense	511584	134.67-136.40	1.73	0.035
			sincincation and pyrite mineralization occur. Light grey intensely silicified Nodular to Lapilli Tuff. Pyrite mineralization is very strong at approx. 10% as both coarse crystalline and fine grained particles. A very minor amount of sphalerite is	511585	136.40-137.20	0.80	0.135
			observed (<0.5%) As above with quartz-carbonate on fractures. Pyrite content is less at 3-5%. From 138.07 to 139.14m a 2mm to 1 cm thick quartz carbonate vein runs down the centre of the core until 138.70m where it	511586	137.20-139.00	1.80	0.035
			Silicification decreases dramatically and purple biotite altered Nodular Tuff texture returns. Weaker irregular orientated quartz carbonate veining cuts core axis at	511587	139.00-141.00	2.00	0.035
			approx 35°. Pyrite content is 1-2% As above. At 141.70m massive pyrite veinlet (3mm thick) cuts C.A. at 20°. From 142.00 to 142.10m - 1 cm thick moderately pyritized quartz vein at 25° to 30° to C.A. Slightly increased pyrite (2-3%) and greyish silicification from 142.23 to 142.63m.	511588	141.00-143.00	2.00	
			More fragmental (lapilli) textured. As above, with increased quartz veining (2 phases). White bleached and argillic altered shear zone at 144.65m at 20° to C.A. Purplish biotite alteration remains throughout but increased chlorite alteration in more intensely silicified sections.	511589	143.00-144.50	1.50	
			Intensely silicified and quartz veined	511590	144.50-145.27	0.77	0.040

section with bluish grey colour to the unit.

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from	to (m)	Code	Description	sample	from/to	width	Au
(***)	(111)		Purplish, less bleached colour returns from 144.90-145.27. Moderate chlorite alteration and 3-5% pyrite in veins, fractures and around the rims of lapilli fragments	NO.		(m)	(g/ t)
			Dark purplish grey nodular textured tuff alternates with coarse grained lapilli (fragmental) tuff. 10 cm thick white (unmineralized for the most part) quartz vein at 75° to C.A.	511591	145.27-147.00	0 1.73	0.010
			Purplish Nodular Tuff - Dark purplish grey with greyish nodules to 2 cm diameter. From 147.27 to 148.54m a 1 to 1.5 cm intensely pyritized (coarse grained) quartz vein runs down the centre of the core. it cuts core axis at 0-5° and undulates down the length of core. Strong chlorite alteration is associated with this vein. From 148.59 to 148.63m a white 5 cm quartz vein with coarse pyrite in the centre of the vein cuts C.A. at 65°.	511592	147.00-148.64	1.64	
			Homogeneous silicified dark purple grey Nodular Tuff. Minor veining and pervasive silicification. 1-2% pyrite as disseminations and around rims of nodules and fragments. Greenish chlorite altered section with 2-3% pyrite from 149.95 to 150.05m	511593	148.64-150.00	1.36	0.010
			As above but fewer scattered nodules. From 150.60 to 151.05m a 2-3mm thick pyritized and intensely chloritized quartz yein runs parallel to core axis (2-3% pyrite)	511594	150.00-152.00	2.00	0.020
153.67	153.80		Purplish nodular to lapilli (fragmental) Dacitic-Andesitic Tuff continues. From 153.0 to 153.47m core is very broken up with strong quartz carbonate veining and 27° to 30° to C.A. and at 10° to 15° to C.A 2-4% pyrite. At 153.67 unit contacts Fault Zone along contact with Andesite Dyke. FAULT ZONE - with brown clay seam contact is 45° to 50° to C.A.	511595	152.00-153.67	1.67	0.020
153.80	157.26	521	ANDESITE DYKE	511596	153.67-155.00	1.33	0.015
			Dark grey green very fine grained and strongly chlorite altered. Core very broken up with 20cm lost between 154 and 156m and 30-40 cm lost between 156 and 158m. Carbonate veining is moderate with minor pyrite (<1%)	511597	155.00-157.26	2.20	<0.005
157.26	157.80		MAJOR FAULT ZONE - Brown grey clay rich mud and fragments of andesite dyke. At 157.80m contacts Nodular Tuff at approximately 20-25° to C.A.	511598	157.26-157.80	0.54	<0.005

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from (m)	to (m)	Code	Description	sampl e No.	from/to	width (m)	Au (g/t)
157.8Ó	160.32	412	DACITIC-ANDESITIC LAPILLI (NODULAR) TUFF. More massive section of finer grained nodular tuff with most nodules, crystal fragments and lapilli <0.5 cm diameter. Larger nodules are rare and scattered at random throughout. Dark purple to purplish grey. Carbonate with quartz in veins is much less intense than in above noted dyke and fault zone sections.			()	(3) -7
			As above. At 158.95 a 1 cm thick quartz carbonate vein at 45° to C.A. carries a 3mm wide band of massive pyrite.	511599	157.80-159.00	1.20	<0.005
			Dark purple massive section of Nodular Tuff with pyritized carbonate veins with pyrite and strong chlorite alteration at 48° and 75° to C.A. at 159.85m and 159.9m.	511600	159.00-160.32	1.32	

160.32m: End of Hole (E.O.H.)
SECTION: <u>30038N</u> Diamond	Drill Log		DDH#: <u>HS97-06</u>		
Northing:30038.00NDrill HoleEasting:21101.00EMethod:Elevation:882AzimuthAzimuth:050°050Inclination:-57050Grid:Aranlee1000000000000000000000000000000000000	survey Acid Test Dip -57°	Depth 0	Property: NTS: Claim: Date Started: Date Complete Logged by:	Hotspring 92G/9+16 Hotspring 7 Sept.24/97 9p.m. d:Sept.26/97 W.B.Lennon & J.T.Shearer	

Purpose:		<u> </u>					
from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
0.00	3.05	9	Casing/Overburden				
3.05	6.50?	312	SILICEOUS FELSIC LAPILLI TUFF - Core very weathered and broken. Contact measurements are approximated in upper part. Medium grey, pervasively silicified. Pyrite is found along quartz vein margins and around lapilli fragments. Veining overall is weak. Chlorite alteration is weak to moderate and give a greenish tinge to unit. Small sections show a mottled				
			alteration. Very broken and covered with rusty surface mud. Recovery is ≈95%. Abundant pyrite in quartz vein from 2.05 to	65811	3.05-5.00	1.95	
			Approx. 35% core recovered. Siliceous Felsic Lapilli Tuff. At an estimated contact with Andesite dyke	65812	5.00-6.50	1.50	0.335
6.50?	7.00	522	ANDESITE DYKE - Dark green to almost black, very fine grained, weakly magnetic. Very broken core. Dyke material mostly	65813	6.50-7.00	0.50	0.065
7.00	12.80	312	SILICEOUS FELSIC LAPILLI TUFF - Same	65814	7.00-9.00	2.00	0.080
1.00	12:00	as described from 3.05-6.50m. Core remains very broken and weathered from	65815	9.00-11.00	2.00	0.075	
			Possible Fault Zone at 12.80m. Rusty sandy to clay textured gouge. Possibly a fracture filling with surface material. Broken rubbly siliceous felsic lapilli tuff.	65816	11.00-12.80	1.80	0.280
12.80	13.00		Possible Fault Zone - roughly at 28° to C.A.	65817	12.80-13,00	0.20	0.080

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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
13.00	14.35	312	SILICEOUS FELSIC LAPILLI TUFF - Fine grained greenish grey, with creamy coloured fragments to 1.5 cm diameter. Moderate chlorite alteration and 1-2% pyrite.			()	
			At 14.35m contacts an Andesite Dyke with some clay gouge (brown) at 47° to C.A.	65818	13.00-14.35	1.35	
14.35	15.44	522	ANDESITE DYKE - Dark green to almost black. Minor veining and intense chlorite alteration particularly on fracture surfaces. a 1-3mm thick coarse grained pyritic vein at 15.15m at 30° to C.A. Slightly altered almost gradational contact with Siliceous Felsic Lapilli Tuff at 15.44m at 45°2 to C.A.	65819	14.35-15.44	1.09	0.020
15.44	16.50	312	Attitude uncertain. SILICEOUS FELSIC LAPILLI TUFF - Light grey greenish pervasively silicified lapilli tuff. Fragment boundaries are obliterated for the most part by the alteration. Stress fracturing in several directions have caused	65820	15.44-16.50	1.06	0.030
16.50	18.91	811	vuggy fractures. ANDESITIC TUFF - (possibly dyke) - Dark green, very fine grained and massive minor patches of scattered feldspar fragments gives weak porphyritic appearance. Moderately magnetic. Silicified fractures. Very abundant coarse pyrite. main fracturing 75° & 40° to C A	65821	16.50-18.00	1.50	0.015
			At 18.91 sharp contact with well mineralized section of siliceous Felsic Lapilli Tuff at 50° to C.A	65822	18.00-18.91	0.91	0.010
18.91	20.85	314	SILICEOUS FELSIC LAPILLI TUFF - Dark	65823	18,91-19.51	0.60	0.615
			bluish grey, intensely silicified and quartz	65824	19.51-20.42	0.91	0.810
			veined. Very <u>intense pyrite</u> throughout ranging up to <u>10-15%</u> . Brown sphalerite mineralization is approx. 1% but is more visible in the veined section from 19.90- 20.42m. Large amounts of quartz flooding in and around darker ghostly fragments give the unit a mottled brecciated appearance. From 20.50 to 20.85m the unit is fractured due to shearing near its contact with a small andesitic dyke. Pyrite is very heavy running up to 20%. Moderate chlorite alteration. Sheared contact with dyke at 20.85m at approx. 20° to C.A.	65825	20.42-20.85	0.43	0.395
20.85	21.40	522	ANDESITE DYKE - Greenish charcoal grey, very fine grained, chlorite altered and weakly magnetic. Minor pyrite. Dyke contacts Siliceous Felsic Tuff along a small	65826	20.85-21.45	0.60	0.025
21.40	21.45		FAULT CONTACT ZONE				

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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (a/t)
21.45	21.95	412	DACITIC-ANDESITIC LAPILLI TUFF (NODULAR) - Dark purplish grey Nodular Tuff. silicified and biotite altered. Contains ghostly grey green nodules to 1 cm diameter. 1% pyrite. At 21.95m contacts Siliceous Felsic Lapilli Tuff at 50° to C.A.	65827	21.4 5- 21.95	0.50	0.270
21.95	26.52	312	SILICEOUS FELSIC LAPILLI TUFF - Light to medium bluish grey to greenish grey where chlorite alteration is prevalent.				
			Pervasively silicified and weakly veined. Strong limonite alteration on fractures mainly at 65° to 70° to C.A. and at 30° to C.A. Pyrite mainly 1% or less.	65828	21.95-23.00	1.05	0.160
			As above.	65829	23.00-25.00	2.00	0.095
			Light greenish grey and finer grained than above, very homogeneous section with minor veining. Limonite coating on	65830	25.00-26.52	1.52	0.050
			weathered fractures. At 26.52 a fault zone occurs at \approx 70° to C.A. White quartz vein material and talc-like gouge and limonite				
26.52	26.80		FAULT ZONE - Sheared quartz vein and felsic tuff material with clay, sericite?	65831	26.52-26.80	0.28	0.005
26.80	27.55	312	SILICEOUS FELSIC LAPILLI TUFF - Medium greenish grey silicified with contorted quartz veining. Pyrite has not increased to any great degree. Fragments stand out as creamy coloured angular pieces in a quartz rich matrix. Fragments	65832	26.80-27.55	0.75	0.055
27.55	27.88		FAULT ZONE - in Siliceous Felsic Lapilli Tuff. Broken and ground core. Limonite stained. Lower contact with Felsic Lapilli Tuff is at 50-55° to C.A.	65833	27.55-27.88	0.33	0.015
27.88	37.00	311	SILICEOUS FELSIC LAPILLI TUFF - Light	65834	27.88-28.84	0.96	<0.005
			blue grey coarse grained (lapilli) fragments	65835	28.84-29.46	0.62	<0.005
			pyrite throughout, also along fractures and	65836	29.46-31.00	1.54	<0.005
			around fragment rims. no veins of significant size, other than from 28.89 to 29.46m where a white quartz vein or flood zone cut C.A. at 20° at its upper contact and at 40° along its lower contact. This vein is vuggy but poorly mineralized. Overall pervasive weak to moderate chlorite alteration.	65837	31.00-33.00	2.00	<0.005
			Small Shear zone at 34.60m at approx. 30° to C.A. 2 cm thick white quartz vein and related small shear from 33.4 to 33.55m at 50° to C.A.	65838	33.00-35.00	2.00	<0.005
			Broken core with ilmonite and clay alteration on fractures. Most rock breakage due to fractures at 5-15° to C.A.	65839	35.00-35.66	0.66	<0.005

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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
(,	()		As from 33.00-35.00m At 37.00m unit contact at 25-35° to C.A. a brownish to greenish grey brown andesite dyke.	65840	35.66-37.00	1.34	<0.005
37.00	38.15	521	ANDESITE DYKE - Massive, very fine grained greenish charcoal grey. Pyrite coats hairline fractures and is also disseminated. The unit is very weakly magnetic. lower contact with Siliceous	65841	37.00-38.15	1.15	<0.005
38.15	39.05	311	Felsic Lapilli tuff at 38.15m is at 30° to C.A. SILICEOUS FELSIC LAPILLI TUFF - Light grey-green, abundant wisps of chlorite throughout. Rusty fractures at 75° to C.A. Minor disseminated pyrite. Chlorite also along fractures, somewhat issemilar shout 20° to C.A.	302501	38.15-39.05	0.90	<0.005
39.05	40.32	521	slightly brecciated at 80° to C.A. Minor calcite coated slickensides + pyrite smears. ANDESITE DYKE - Dark uniform green, fine grained, massive appearance. Minor pyrite along fractures at 35° to C.A. Slightly bleached along fractures. Lower contact sharp at 85° to C.A. for 10mm	302502	39.05-40.32	1.27	0.005
40.32	46.68	411	DACITIC LAPILLI TUFF - Distinctly	302503	40.32-42.00	1.68	<0.005
			brownish matrix, angular to well rounded	302504	42.00-43.50	1.50	<0.005
			aligned. Section entirely bleached (perhaps	302505	43.50-45.00	1.50	<0.005
			321) down to lower contact at 46.68m. Highly chloritic with chlorite replacing matrix. Minor disseminated pyrite.	302506	45.00-46.68	1.68	<0.005
46.68	49.04	521	ANDESITIC DYKE - Dark green, fine grained, slightly for fracture controlled pyrite at 65° to C.A. At 47.95 some lapilli fragments have been incorporated into the dyke as inclusions? narrow quartz vein 5mm wide subparallel to C.A. with pyrite	302507	46.68-49.04	2.36	0.250
49.04	52.02	498	Bleached and shattered DACITIC LAPILLI	302508	49.04-50.40	1.36	0.020
FAULT		198	TUFF - Light greenish grey, core very fractured subparallel to C.A. Gouge between 51.10-51.32m at 58° to	302509	50.40-52.02	1.62	0.015
			C.A.	000510	50.00 54.00	1.00	0.010
52.02	58.30	522	grained, slightly more fracture filling pyrite	302510	52.02-54.00	1.90	0.010
			fractures mainly at 65° to C.A. Minor	302511	54.00-56.00	2.00	0.005
			bleaching on quartz veinlets also at 65° to C.A. More pyrite toward lower contact in veinlets at 5° to C.A. Lower contact slightly brecciated and bleached	302512	56.00-58.30	2.30	0.005
58.30	68.44	412	HIGHLY SILICEOUS DACITIC(?) LAPILLI TUFF - Light greyish-green highly altered by chlorite, silica and K-spar (?)	302513	58.30-59.50	1.20	0.280

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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
, ,			Several directions of quartz veinlets 20° +	302514	59.50-61.00	1.50	0.440
			fractures from 59.40m to end of interval at	302515	61.00-62.00	1.00	0.480
			68.44m. Short altered dyke 59.96-60.70m	302516	62.00-63.00	100	0.280
			bleached and pyritized.	302517	63.00-64.00	1.00	0.190
			irregular lenses throughout. Highly	302518	64.00-65.00	1.00	0.155
			siliceous, quartz veining at 61.80 is 45° to	302519	65.00-66.00	1.00	0.700
			Convoluted texture.	302520	66.00-67.00	1.00	0.980
			Short sections of brownish matrix common	302521	67.00-68.44	1.44	1.440
69 14	77.00	500	from 63.00-65.20m. BLEACHED & PYRITIZED ANDESITIC	302522	68 44-70 00	1.56	0.040
00.44	77.00	022	DYKE-SILL - Dark to light green, silicified	2005022	70.00.70.00	0.00	0.010
			sections more pyritized than fresh sections.	302523	70.00-72.00	2.00	0.010
			short sericitized intervals common. Fractures mainly at 40° to C.A. Sparse	302524	72.00-73.00	1.00	0.010
			plagioclase phenocrysts throughout.	302525	73.00-74.00	1.00	<0.005
			Relatively uniform below 72.00m.	302526	74.00-75.00	1.00	<0.005
			Lower contact brecciated between 76.85-	302527	75.00-77.00	2.00	0.010
77.00 8	81.90	452	BLEACHED & PYRITIZED DACITIC	302528	77.00-78.00	1.00	0.055
			LAPILLI TUFF - Abundant sericite and	302529	78.00-79.00	1.00	0.070
			silica within bleached areas. Shear zone at 70° to C.A. at 77.15m.	302530	79.00-80.00	1.00	0.390
			Matrix mainly brown when not bleached	302531	80.00-81.00	1.00	0.240
			greenish-grey. Black hairlines at 81.70m at 35° to C.A. associated with bluish grey	200520	81.00.81.00	0.00	0.240
			duartz.	302532	81.00-81.90	0.90	0.340
81.90	84.01	522	PYRITIZED & ALTERED ANDESITIC	302533	81.90-84.01	2.11	0.045
			DYKE - pyrite disseminated throughout				
			10mm wide at 80° to C.A. Minor				
			brecciation at 82.80m by cherty silica.				
84.01	94.35	421	NODULAR DACITIC TUFF - Brown matrix	302534	84.01-86.00	1.99	0.230
			to >20mm. Irregular chlorite lenses cored	302535	86.00-88.00	2.00	0.250
			by pyrite veinlets are common. Chloritic	302536	88.00-90.00	2.00	0.140
			envelopes up to 30mm wide. Entire	302537	90.00-92.00	2.00	0.150
			Slightly more disseminated pyrite from	302538	92.00-94,35	2.35	0.050
			91.14-93.40m. White to light grey				
04 35	05 70	501	bleaching form 65mm at lower contact.	302539	94.35-95 70	1.35	0.020
54.00	50.10	021	grained, cut by 2 quartz veinlets containing	002003			
			pyrite and chalcopyrite at 75° to C.A. at				
			95.10m. Quartz vein at lower contact				
			C.A. Minor green gouge along lower				
			contact at 80° to C.A.				

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SECTION	: <u>30038N</u>		Page: <u>6</u>			DDH#: _	HS97-06
from	to (m)	Code	Description	sample	from/to	width	Au
95.70	98.03	531	HIGHLY BLEACHED CARBONATIZED	302540	95.70-97.10	1.40	<0.005
			ANDESITE DYKE - Light green, fine grained, cut by numerous low angle calcite stringers, minor gouge along fracture surfaces at 25° to C.A.	302541	97.10-98.03	0.93	<0.005
98.03	99.85	111	Lower contact chilled margin at 54° to C.A. BASALTIC DYKE - Fine grained, dark grey characterized by thin wispy lenses and highly chloritized mafics. Dyke has many small cavities. Lower contact shows wide chilled margin up to 22mm wide. Irregular chloritized, rounded, plagioclase phenocrysts up to 3mm are common in the	302542	98.03-99.85	1.82	<0.005
			lower part of the dyke.				
99.85	105.01	431	HIGHLY ALTERED (Bleached) &	302543	99.85-102.00	2.15	0.005
			SHEARED NODULAR TUFF - Light grey- brownish colour, network of white calcite	302544	102.00-103.50	1.50	0.020
			veinlets abundant down to 102.70. Main shear direction subparallel up to 20° to C.A. minor pyrite along fractures. More siliceous in appearance below 102.70m. Quartz vein at 103.61 is 25mm	302545	103.50-105.01	1.51	0.095
105.01	109.67	401	wide at 86° to C.A.	302546	105.01-107.00	2.00	0.045
103.01	109.07	741	Distinctive brown (biotitic) matrix with light	302040	100.01-107.00	2.00	0.040
			grey rounded to angular fragments. Minor	302547	107.00-108.00	1.00	0.075
			disseminated pyrite <1%. Chlorite intensity associated with pyrite-calcite	302548	108.00-109.67	1.67	0.040
109.67	110.40	412	HIGHLY SILICEOUS & PYRITIZED NODULAR DACITIC LAPILLI TUFF - Abundant, disseminated pyrite at top of interval. Light grey, no brown matrix	302549	109.67-110.40	0.73	0.410
110.40	129.41	421	although texture remains. CHLORITIC DACITIC NODULAR LAPILLI	302550	110.40-112.00	1.60	0.070
			TUFF - Typical brown matrix (biotitic)	302551	112.00-114.00	2.00	0.050
			fragments.	302552	114.00-116.00	2.00	0.010
			Minor disseminated pyrite throughout. Traces of pyrite on calcite coated fractures	302553	116.00-118.00	2.00	0.010
			at 113.20m 80° to C.A. Quartz vein 2.4mm	302554	118.00-120.00	2.00	0.025
			wide at 114.93m at 75° to C.A. Core fractured and sheared 116.69-	302555	120.00-122.00	2.00	0.035
			121.02m at various angles but mainly	302556	122.00-124.00	2.00	0.010
			between 10-25° to C.A. Nodules very distinct 121 54-121 70m -	302557	124.00-126.00	2.00	0.010
			perhaps a bed contact or pyroclastic "flow"	302558	126.00-127.00	1.00	0.010
			more typical diffuse-irregular nodules and finer grained sections where nodules	302559	127.00-128.00	1.00	0.005
			average 3mm in diameter. More siliceous toward lower contact. Narrow quartz veining 127.95m 2 cm wide, disseminated pyrite. Lower contact sheared at 70° to C.A.	302560	128.00-129.41	1.41	<0.005

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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g / t)
129.41	135.51	521	ANDESITE DYKE - Dark green, fine	302561	129.41-131.00	1.59	0.005
			controlled pyrite throughout.	302562	131.00-132.50	1.50	<0.005
			Brownish bleaching centred around	302563	132.50-134.00	1.50	<0.005
			pyrite on fractures at <25° to C.A.	302564	134.00-135.51	1.51	<0.005
			Lower contact moderately sheared at 38° to C.A.				
135.51	137.62	411	Fine grained DACITIC TUFF brown matrix	302565	135.51-137.62	2.11	0.015
			rounded quartz lapilli fragments. Minor				
			more typical nodular pattern at 136.50m.				
			C.A.				
137.62	140.80	521	ANDESITE DYKE - Dark green, very fine grained highly shattered - fractured at	302566	137.62-139.00	1.38	0.010
			upper contact at 25° to C.A. Possible	302567	139.00-140.80	1.80	0.015
			dacitic digested fragment around 139.00 -				
			Lower contact quite broken and fractured -				
140.80	154.67	421	faulted. DACITIC NODULAR TUFF - Typical	302568	140.80-142.34	1.54	0.010
			brownish matrix with light grey diffuse	302569	142.34-144.00	1.66	0.015
			nodules up to 20mm. Abundant chlorite throughout.	302570	144.00-145.50	1.50	0.165
			Disseminated pyrite increases in	302571	145.50-147.00	1.50	0.155
			lower contact at 154.67m.	302572	147.00-148.50	1.50	0.090
			Quartz vein at 141.19m, 2 cm wide,	302573	148.50-150.00	1.50	0.045
			MOLYBDENITE, drusy quartz lined cavities.	302574	150.00-151.50	1.50	0.050
				302575	151.50-153.00	1.50	0.070
				302576	153.00-154.00	1.00	0.025
154.67	157.08	531	VERY BLEACHED ANDESITE DYKE -	302577	154.00-155.00	1.00	0.025
			Light green, mottled texture due to bleaching around close spaced quartz				
			hairlines only minor disseminated pyrite.				0.075
			Sampled interval covers upper contact and lower contact.	302578	156.75-157.75	1.00	0.075
			Lower contact slightly brecciated at 64° to				
157.08	163.51	421	C.A. DACITIC NODULAR LAPILLI TUFF -				
			Typical with fine grained brown with diffuse				
			Short sections up to 10 cm long which are				
			highly siliceous. Quartz veinlet 159.76-				
			3.5 cm wide at 56° to C.A.				
			Very well defined nodules from 159.81				
			down to lower contact at 153.51m. Minor shearing along lower contact at 68° to C.A.				
			with traces of gouge, chlorite & bleaching				

common.

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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
163.51	167.86	521	Sampled area covers lower contact shearing and alteration ANDESITE DYKE : MEDIUM CRYSTALLINE - not fine grained. 1-2mm plagioclase crystals abundant throughout. minor pyrite along fractures at 50° to C.A. 2mm wide. Bleaching common - occasionally concentrated as between 164.39-164.49m. Lighter coloured zone appears to be related to chlorite coated fractures central to the bleached zone.	302579	162.60-163.60	1.00	0.015
			Gradational change to fine grained aphanitic at 166.60m. Sample is fractured fine grained dyke and Fault gauge	302580	167.50-168.50	1.00	<0.005
167.86	168.43	198	FAULT GOUGE - Alternating white and green, very calcite rich zone 57 cm wide, 58° to C.A. at bottom of gouge is 7 cm wide slice of Nodular Dacitic Tuff.	302580	167.86-168.43	0.57	·
168.43	169.34		BASALTIC DYKE - Dark grey-black mafic phenocrysts very abundant, very chloritic. Lower contact at 86° to C.A., distinctly chilled margin over 8mm.				
169. 34	177.30	421	ALTERED DACITIC NODULAR LAPILLI	302581	171.00-172.34	1.34	0.010
177 20	190.10	501	slightly lighter grey lapilli fragments. Slightly sheared section from 171.00- 172.34m shearing at 85° to C.A. Minor gouge and calcite films. Shattering at 25° to C.A. starting at 175.50-176.20m. Slightly more pyrite content 176.20-177.30m. Narrow quartz veinlets at 167.90m, 20mm wide pyrite traces.	302582	175.50-177.30	1.80	0.215
177.30	180.10	521	grained, minor pyrite on fracture surfaces. Low angle fracturing common. Minor bleaching.				
180.10	181.00		ALTERED ZONE Dark brown-fine grained matrix. highly siliceous, traces of pyrite. Probably dacitic tuff slice. Lower contact at 50°	302583	180.10-181.00	0.90	0.020
181.00	183.90	521	ANDESITE DYKE - dark green, fine grained. Minor pyrite along 30° fractures. Fracture density increases toward lower contact. Lower contact gradational over 10-15 cm at high angle.				
183.90	186.27	421	DACITIC NODULAR LAPILLI TUFF - Typical fine grained brown matrix with	302584	183.50-185.00	1.50	0.080
			small rounded lighter grey nodules. Narrow dyke 186.19-186.26m - altered basaltic. Lower contact at 35-40°.	302363	100.00-100.27	£.21	

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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
186.27	210.00	(alter	SILICEOUS STOCKWORKS-HORNFELS -	302586	186.27-187.50	1.23	057 9
		ed)	Developed in Dacitic Tuff. Light grey	302587	187.50-189.00	1.50	
			sections. upper contact marked by bright	302588	189.00-190.50	1.50	
			green epidote and chlorite to 186.40m.	302589	190.50-192.00	1.50	0.020
			Many orientation of quartz hairlines, some containing fine grained pyrite are parallel to	302590	192 00-193 50	1.50	0.030
			C.A. Other wider veinlets at 65° to C.A.	302591	193 50-194 00	0.50	0.000
			contain pyrite and molybdenite. Epidote is	202502	104.00.105.00	1.00	0.140
			in veinlets at 80° to C.A.	302592	194.00-195.00	1.00	0.140
			The abundance of epidote suggests the	302593	195.00-196.00	1.00	0.080
			presence of an intrusive nearby. Epidote	302594	196.00-197.00	1.00	0.080
			apart. This interval should be assayed for	302595	197.00-198.00	1.00	
			MoS_2 . Abundant MoS_2 and sphalerite and	302596	198.00-199.50	1.50	
			pyrite in veinlets at 194.50 at 28° to C.A.	302597	199.50-201.00	1.50	
			crystalline MoS ₂ on epidote in the vugs	302598	201.00-202.50	1.50	0.055
			associated with dark brown sphalerite,	302599	202.50-204.00	1.50	0.040
			sphalerite up to 3 cm long lenses, Epidote	302600	204.00-205.50	1 50	0.030
			Highly fractured at 25°-40° to C.A. at	302601	205 50 207 00	1.50	0.035
			197.30-197.60m.	302001	200.00-201.00	1.00	0.000
			204.00-205.80m.	302002	207.00-208.00	1.00	
			Lenses of dark brown garnet 207.47-	302603	208.00-209.00	1.00	0.030
			$207.78 \text{ at } 80-90^{\circ} \text{ to core axis.}$	302604	209.00-210.00	1.00	0.020
			209.40m.				
			Gradational lower contact over about 1.00				
			metres. Lenses of altered material gradually becoming parrower and Dacitic				
			Nodular Tuff less altered.				
210.00	215.00	411	Altered siliceous DACITIC NODULAR	302605	210.00-211.00	1.00	0.015
			LAPILLI TUFF - Gradational contacts above and below more fine grained brown	302606	211.00-212.00	1.00	
			matrix with lighter grey diffuse lapilli	302607	212.00-213.00	1.00	0.060
			fragments.	302608	213.00-214.00	1.00	0.115
			Narrow irregular quartz veining widely spaced throughout grev-blue quartz with	302609	214.00-215.00	1.00	0.115
			minor pyrite, at 212.81-212.85m at 87° to	•••			
			core axis.				
			Other quartz veins at 211.12m, 211.50m, 211.70m, 213.39m.				
215.00	217.48		SILICEOUS STOCKWORKS-HORNFELS -				
			Light grey, bleached, minor chlorite				
			throughout. Quartz veining mainly at 42°				
			to C.A.				
			This alteration is developed in Dacitic Nodular Tuff and the fragments are still	302610	215.00-216.00	1.00	
			clearly visible. Lower contact sharp at 80°	302611	216.00-217.48	1.48	<0.005
			to C.A.				

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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
217.46	222.63	521	ANDESITIC DYKE - Dark green, fine	302612	217.48-219.00	1.52	<0.005
			grained, however, white plagioclase	302613	219.00-220.50	1.50	<0.005
			short sections giving a speckled	302614	220.50-221.50	1.00	<0.005
			appearance. Core quite fractured from 220.25-221.80m. Fractures are coated with minor calcite. Narrow quartz-epidote ± brown garnet occur at 221.46 at 70° to C.A.	302615	221.50-222.63	1.13	<0.005
222.63	224.28	411	Altered SILICEOUS DACITIC NODULAR LAPILLI TUFF - Brown fine grained matrix with variable intensity of diffuse lighter grey nodules. Relatively sharp lower contact at 60° to C.A.	302616	222.63-224.00	1.37	0.015
224.28	226.36		SILICEOUS STOCKWORKS-HORNFELS -	302617	224.00-225.00	1.00	0.030
			Light grey, fine grained alteration and	302618	225.00-226.00	1.00	0.015
			Tuff. quartz hairlines at 60-70° to C.A. Larger vuggy quartz vein at 226.38 at 80°	302619	226.00-226.69	0.69	0.010
226.36	227.69	411	Altered SILICEOUS DACITIC NODULAR LAPILLI TUFF - Brown fine grained matrix with lighter grey nodules and lapilli fragments. Minor gouge on fractures at 226.69 at 54° to C.A. Minor euhedral pyrite.				<0.005

END OF HOLE 227.69M (747 ft)

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SECTION	:3	0038 <u>N</u>	Diamond Drill Log		I	DDH#: <u>H89</u>	7-07
Northing: Easting: Elevation: Azimuth: Inclination Grid: Length (m Core size: Contracto: Drill Type:		30038.00N 21101.00E 882m 060° -90° (vertic Aranlee 175.76m NQ F. Boisven Super 37	Drill Hole survey Method: Degree Rule Azimuth Dip Depth 060 -90 collar cal) u		Property: NTS: Claim: Date Started: Date Completed Logged by:	Hotspring 92G/1ZW HOTSPRIN Sept. 27/9 I: Sept. /97 J. T. Shea	1G 7 97 7 rer
Purpose:	To pr	ovide down	dip information from Hole NQ-90-3 and HS	5-97-06			
from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
0.00	3.02	900	Casing - Rubble	302621	3.05-5.00	1.95	<0.005
3.05	11.40	521	medium grey, very chloritic, highly	202622	5 00 7 92	2 92	<0.005
			altered, rounded light grey fragments up	302022	5.00-7.92	0.09	<0.005
			to 25mm, crude lamination at 52° to	302623	7.92-10.00	2.00	-0.000
11.45	12.80	521	Core recovery 2.05-4.88m ≈30%, 4.88- 7.92m ≈50%. Recovery below 7.92 is good (>95%) minor dissemianted pyrite throughout. Lower contact roughly 50° ANDESITIC DYKE - Dark green, fine grained. Lower contact relatively sharp at 67° to C.A. Minor bleaching around pyrite filled fractures	302625	11.45-12.80	1.35	<0.005
12.80	14.02	321	SILICEOUS FELSIC TUFF - Light grey with minor brownish mottling. Interval	302626	12.80-14.02	1.22	<0.005
14.02	15.24	521	ANDESITIC DYKE - Dark green, fine grained pyrite & quartz along fractures, minor bleaching. Contacts relatively sharp at about 55°.	302627	14.02-15.24	1.22	<0.005
15.24	27.30	321	SILICEOUS FELSIC TUFF - Medium to	302628	15.24-17.00	1.76	<0.005
			light grey for the most part highly fractured, small pyrite lenses 5mm in	302629	17.00-18.50	1.50	<0.005
		→	FAULT GOUGE 20.27-20.70m approx.	302630	18.50-20.00	1.50	<0.005
			Light grey gouge with 1-4 cm long rock	302631	20.00-21.64	1.64	0.020
			chips. Gouge coated fractures farther down hole are at 59° to C.A. Core	302632	21.64-23.16	1.52	0.030
			broken and rubbly 20.27≅24.55 with	302633	23,16-24.75	1.59	0.100
			pyritized fractures. Irregular pyrite	302634	24.75-26.21	1.46	0.140
			associated with narrow 15mm wide	00200+	04 01 07 90	1.00	0.065
			quartz veins at 50° to C.A. Some brownish mottling at 25.00-26.21	302635	20.21-27.30	1.07	0.000

Lapilli Tuff. Fault gouge and rubble 26.21-27.30m.

suggesting small slice of Dacitic Nodular

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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
27.30	32.00	521	ANDESITIC DYKE - Dark green, fine	302636	27.30-29.30	2.00	<0.005
		grained pyrite on fractures associated with bleaching at 85° to C.A. Minor chlorite lenses along carbonate filled fractures at 31° to C.A. Short section of rubble of nodular Tuff 29.38-29.60m Fault slice or cave? Highly fractured, by low angle fractures below 21.00 to contact	302637	29.30-21.00	2.70	0.010	
32.00	35.50	322	PYRITIC SILICEOUS FELSIC TUFF -	302638	32.00-33.00	1.00	0.400
			Light grey, fine grained, minor ghosts of	302639	33.00-34.00	1.00	0.060
		•	lapilli fragments. Mainly fracture	302640	34 00-35 50	1.50	0.050
			semi-massive concentrations over short intervals.	302040	34.00-00.00	1.50	0.000
			Minor dark brown sphalerite associated with pyrite veinlets at 80° to C.A. Lesser pyrite is along 30° fractures ± chlorite. Gouge filled fractures subparallel to core axis between 34.19- 34.58m. Lower contact brecciated over 12 cm,				
35.50	36.88	521	contact at 71° to C.A. ANDESITIC DYKE - Dark grey but slightly more bleached than usual, fine to medium crystalline, indistinct mottled appearance. Lower contact sharp along strongly corbonation of traction zone	302641	35.50-36.88	1.38	0.015
36.88	39.40		HIGHLY ALTERED DACITIC TUFF -	302642	36.88-38.00	1.12	0.010
			relict brown fine grained matrix, Highly Siliceous. Minor pyrite along 20° fractures	302643	38.00-39.40	1.40	0.020
39.40	41.55	521	ANDESITIC DYKE - Dark green, fine grained, very fractured and broken, main fracture direction is subparallel to core axis. lower contact sharp at gougy fracture at 75° to C.A.	302644	39.40-41.55	2.15	0.240
41.55	54.45	322	HIGHLY ALTERED SILICEOUS	302645	41.55-43.00	1.45	
			STOCKWORK-BRECCIA, Very Pyritic Throughout - appears to be very altered	302646	43.00-44.00	1.00	0.590
			Dacitic Tuff. Chlorite and silica main	302647	44.00-45.00	1.00	1.070
			alteration materials	302648	45.00-46.00	1.00	
				302649	46.00-47.00	1.00	0.840
				302650	47.00-48.00	1.00	1.300
				302651	48.00-49.00	1.00	2.840
				302652	49.00-50.00	1.00	0.535
				302653	50.00-51.00	1.00	

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SECTION	N: <u>30038N</u>		Page: <u>3</u>			DDH#:	<u>HS97-07</u>	
from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)	
			Pyrite lenses have a variety of 3 orientations. minor galena and brown sphalerite are 3	302654	51.00-52.00	1.00		
				302655	52.00-53.00	1.00	0.245	
		common accessory minerals associated 30	302656	53.00-54.00	1.00			
			Gouge filled fractures at 43.24m are at 50° to C.A. generally the breccia fragments are aligned between 50-65° to	302657	54.00-54.95	0.95	0.290	
			C.A. However, some silica bands are subparallel to C.A. Pyrite lenses are commonly 60° to C.A.					
			Galena at 44.50m, gouge filled zone 47.85-47.90m. Quartz veining					
54.95	55,88	521	ANDESITE DYKE - Dark green, fine	302658	54.995-55.88	0.93	0.025	
			quartz veining at 70° to C.A.					
			Lower contact highly broken-gouge at about 30° to C.A.					
55.88	62.75		HIGHLY ALTERED SILICEOUS	302659	55.88-57.00	1.12		
			STOCKWORK-BRECCIA - Darker brown in upper part down to 56.80m, brown fine grained matrix persists to 58.33m. Highly siliceous with variable amounts of pyrite ± sphalerite to lower contact. Sphalerite most abundant 58.33-	302660	57.00-58.33	1.33		
				302661	58.33-59.00	0.67	0.435	
				302662	59.00-60.00	1.00	0.310	
				302663	60.00-61.00	1.00		
				302664	61.00-62.00	1.00		
			59.00m and 60.00-61.00m, seam of ZnS at 62.05m is at 28° to C A 10mm	302665	62.00.62.75	0.75	0 265	
			wide.	302003	02.00-02.75	0.75	0.305	
62.75	76.45	521	ANDESITIC DYKE - Dark green, mainly	302666	62.75-65.00	2.25	0.015	
			calc-silicates in bands at 44° at 67.12-	302667	65.00-67.00	2.00	0.020	
			6	67.23m. Abundant chlorite on fractures	302668	67.00-69.00	2.00	<0.005
			mainly at 30° to C.A. minor pyrite-	302669	69.00-71.00	2.00	<0.005	
			40° fractures 69.41-69.53m, wider quartz veins below 71.50m up to 5.5	302670	71.00-72.60	1.60	<0.005	
			cm.					
			General pervasive bleaching starts at	302671	72.60-74.34	1.74	<0.005	
			between 74.34-75.80m associated with	302672	74.34-75.00	0.66	0.175	
			abundant pyrite. Interval 75.80-76.45m	302673	75.00-75.80	0.80	0.060	
			more typical barren fine grained dark green andesite.	302674	75.80-76.45	0.65	<0.005	
76.45	78.85		Lower contact sharp at 66° to C.A. HIGHLY SILICEOUS STOCKWORK- BRECCIA - Light grey, very silica-rich, semi-massive pyrite within a lens	302675	76.45-77.25	0.80	0.250	
				302676	77.25-48.00	0.75	0.495	
			running 10-15° to C.A. Fine grained brown matrix increasing	302677	78.00-78.85	0.85	0.050	
			highly brecciated pattern.					

SECTION	N: <u>30038N</u>		Page: <u>4</u>			DDH#:	<u>HS97-07</u>
from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
78.85	82.55	521	ANDESITE DYKE - Dark green, fine	302678	78.85-80.85	2.00	0.070
			grained, minor quartz-pyrite veinlets at 85° and 10° to C.A. Calcite coated fractures are common at	302679	80.85-82.55	1.70	0.030
82.55	88.65		HIGHLY SILICEOUS STOCKWORK-	302680	82.55-84.00	1.45	0.110
			grained brown matrix common for first	302681	84.00-85.50	1.50	0.035
			60 cm. irregular pyrite lenses common,	302682	85.50-87.00	1.50	0.370
			however, pyrite content is less than similar intervals above. Highly fractured between 84.00-	302683	87.00-88.65	1.65	0.290
			88.00m, fractures mainly low angle. Gouge on fractures at 87.50 at 10° to				
			C.A. Lower contact gradational over about 30 cm.				
88.65	96.58	411	ALTERED DACITIC LAPILLI TUFF -	302684	88.65-90.22	1.57	0.335
			Brown mottled, fine grained, brown	302685	90.22-93.00	1.78	0.200
			up to 3 cm in length. Quartz flooding	302686	93.00-95.00	2.00	1.540
			common, minor disseminated pyrite. Highly fractured by mainly low angle	302687	95.00-96.58	1.58	0.255
			contact marked by 3 cm of gouge at 65° to C.A.				
96.58	107.02	521	ANDESITE DYKE - Mainly dark green,	302688	96.58-98.00	1.42	0.015
			stringers subparallel to core axis and	302689	98.00-100.00	2.00	<0.005
			to C.A. Numerous fractures coated with calcite at various angles to C.A. Highly fractured at 103.24-103.32m, gougy		awh		
107.02	108.70	511	iractures. ALTERED ANDESITE DYKE -		start		
10,.02			Bleached, silicified, through-going pyritic fractures at subparallel to core axis. Lower contact gradational over 10	302690	107.02-108.70	1.68	<0.005
108.70	110.20		SILICEOUS STOCKWORK-BRECCIA - Light grey, numerous relict fragments. Mineralized with pyrite and brown sphalerite. White quartz veinlets at 80° to C.A. throughout. Relatively sharp	302691	108.70-110.20	1.50	0.070
110.20	113.70	521	ANDESITIC DYKE - Dark green, fine	302692	110.20-111.00	0.80	0.020
			grained, some bleaching & narrow pyrite	302693	111.00-111.90	0.90	0.100
			at 111.85m are at 62° to C.A. Barren	302694	111.90-113.70	1.80	0.015
			white quartz vein at 111.02-111.18m at 85° to C.A. Abundant sphalerite below				
113.70	116.10	411	ALTERED DACITIC TUFF - Light	302695	113.70-115.00	1.30	0.085
		_	brown, fine grained matrix with lighter grey lapilli fragments. Lower contact gradational over about 15 cm.	302696	115.00-116.10	1.10	0.330

SECTION	I: <u>30038N</u>		Page: <u>5</u>			DDH#:	<u>HS97-07</u>
from (m)	to (m)	Code	Description	sample	from/to	width (m)	Au (a.(t)
116.10	() 117.92	521	ANDESITIC DYKE - Dark green, fine grained, highly fractured between 116.87-117.14m, 30° to C.A. White calcite. Minor 11mm wide quartz veinlets at 87° to C.A. Lower contact sharp along gougy calcite filled fractures at 58° to core axis	302697	116.10-117.92	1.82	0.020
117.92	122.20	412	MODERATELY ALTERED DACITIC	302698	117.92-119.50	1.58	0.250
			LAPILLI TUFF - Fine grained brownish matrix common throughout between	302699	119.50-121.00	1.50	0.290
			light grey diffuse fragments. Irregular pyrite lenses and stringers common which increase toward lower contact. Lower contact gradational over 20 cm.	302700	121.00-122.20	1.20	0.130
122.20	129.50		SILICEOUS STOCKWORK-BRECCIA -	302701	122.20-123.75	1.55	0.085
			Intensely altered, quartz stringers, hairlines and yeins common. White	302702	123.75-125.00	1.25	0.210
			quartz veins, for example, 123.92-	302703	125.00-126.50	1.50	0.075
			123.97m is at 87° to C.A. and contains	302704	126.50-128.00	1.50	1.160
		•	Sphalerite is common along quartz-	302705	128.00-129.00	1.00	0.315
			chlorite veinlets at about 60° to C.A. Sphalerite is also contained in irregular veinlets at 15° to C.A. at 126.80. Gradual lower contact over about 1 metre.	302706	129.00-130.00	1.00	0.065
129.50	138.40	421	DACITIC NODULAR LAPILLI TUFF - Dark brown fine grained matrix with light grey 1-2 cm rounded nodules. Larger fragments become more common, but still rare, below 133m up to >10 cm in length. These larger fragments contain disseminated pyrite. (The larger fragments appear to have been altered more readily than the matrix, nodules or smaller fragments.) Lower contact slightly chilled and sharp				
138.40	145.37	521	at 50° to C.A. ANDESITIC TUFF - Dark green, fine grained, upper contact is chilled margin for 10 cm which is highly fractured. Pyrite-chlorite veinlets with biotite margins at 65° and subparallel to core axis. Very uniform throughout. Lower contact also chilled margin for 8 cm. Contact sharp at 25° to C.A.	·		·	
145.37	170.52	421	DACITIC NODULAR LAPILLI TUFF - Dark grey matrix (not biotitic) with small uniform nodules averaging about 1 cm in diameter, occasionally lapilli fragment up to 6 cm in length. Minor bleaching and epidote clots at 155.30m. Matrix 154.25-160.30m is distinctly brown (biotite alteration.)				

SECTION	: <u>30038N</u>		Page: <u>6</u>			DDH#: _	<u>HS97-07</u>
from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
	. ,		Minor quartz veinlets with pyrite at 40° to C.A. Gougy fractures at 169.10- 169.21m at 25° to C.A. Quartz veinlet with minor sphalerite at 169.98, 2 cm wide at 85° to C.A. Lower contact sharp at 70° to C.A.				
170.52	171.29	521	ANDESITIC DYKE - Dark green, fine grained but also contains abundant hornblende phenocrysts. Chlorite veinlets common at 36° to C.A. more basaltic than andesitic.				
171.29	175.76	421	DACITIC NODULAR LAPILLI TUFF - Dark brown biotitic, fine grained matrix with regular rounded nodules and less common elongate fragments. Fragment elongation at 70° to C.A. Core faulted and broken 175.20- 175.50m with quartz veinlets at 15° to C.A. Traces of pyrite with quartz veining. END OF HOLE 175.76m (576 ft)				

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SECTION:	<u>30012N</u>
Northing:	30012.00N
Easting:	30882.00E
Elevation:	943m
Azimuth:	050°
Inclination:	-55°
Grid:	Aranlee
Length (m):	104.24m
Core size:	NQ-2
Contractor:	F. Boisvenu
Drill Type:	Boyle 37

	Drill Hole s	urvey	
	Method: _	Acid	_
	Azimuth	Dip	Depth
	050°	-55°	
Γ			
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Γ			1 1
		1	

Property: <u>Hotspring</u> NTS: <u>92G9+16</u>

DDH#: <u>H897-08</u>

NTS:	<u>_92G9+16</u>
Claim:	Hotspring 7
Date Started:	Sept.30/97 NS 9:30pm
Date Complete	d: <u>Oct.4/97 NS_10pm</u>
Logged by:	W.B.Lennan &
	J. T. Shearer

Purpose:			· · · · · · · · · · · · · · · · · · ·				
from (m)	to (m)	Code	Description	sampl e No.	from/to	width (m)	Au (g/t)
0.00	3.05	9	Casing/Andesitic Dyke rubble				
3.05	7.70	521	ANDESITE DYKE - Massive, very fine	302708	3.05-5.00	1.95	0.020
			grained with epidote patches and veining. Fracturing primarily 15-20° to C.A. and 35-	302709	5.00-6.50	1.50	0.010
			40°. Strong limonite on fracture and coarse pyrite coatings on unweathered fracture.	302710	6.50-7.70	1.20	0.010
7.65	7.70	008	FAULT CONTACT - between Andesite Dyke and Siliceous Felsic Lapilli (Fragmental) Tuff. Fault at 65° to C.A.				
7.70	13.12	314	SILICEOUS FELSIC LAPILLI	302711	7.70-9.00	1.30	0.040
			(FRAGMENTAL) TUFF - Grey to bluish grey, pervasively silicified. Appears to be fine grained with ghosts of larger fragments	302712	9.00-10.50	1.50	0.050
				302713	10.50-12.00	1.50	0.055
			mainly from 10.50m on. From 9.90-10.0m unit has a slight banded appearance at 60- 65° to C.A. Silicified & pyritized hairline fractures mainly parallel to fabric. Dark coloured mineral (sphalerite?) along with pyrite form dendritic patterns along some fractures. From 10.75-11.08m a 3.0-3.5 cm thick white quartz vein cut C.A. at 15- 18°. Lower contact at 13.12m at 45° to C.A.	302714	12.00-13.12	1.12	0.035
13.12	20.60	521	ANDESITE DYKE - Dark green, very fine	302715	13.12-14.50	1.38	0.020
			grained to weakly porphyritic. Strongly chlorite altered and moderately to strongly	302716	14.50-15.30	0.80	0.010
			magnetic. Epidote occurs as 1 cm to 2 cm	302717	15.30-15.75	0.45	0.020
			diameter patches (rare) and in veinlets. Coarse pyrite as fracture coatings, minor disseminated pyrite	302718	15.75-17.75	2.00	0.020
			Two 1.5 cm thick quartz veins 15.30-	302719	17.75-19.00	1.25	0.010
			15.75m. At 15.5m at 80° to C.A. and at 15.70m at 80° to C.A. with very coarse crystalline pyrite (cubes to 5mm across).	302720	19.00-20.60	1.60	0.050

SECTION	: _3001	<u>2N</u>	Page: <u>2</u>			DDH#:	HS97-08
from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
1- 7	• •		Lower contact with at approx. 30° to C.A.			()	437 7
			contorted contact zone.				
20.60	24.60	312	SILICEOUS FELSIC FRAGMENTAL	302721	20.60-22.00	1.40	<0.005
			(LAPILLI) I UFF - Light grey, massive,	302722	22.00-23.50	1.50	<0.005
			veining. Fine grained pyrite along	302723	23.50-24.60	1.10	<0.005
			fractures and as rims around "ghostly"				
	•		fragments. Brownish colour with pyrite				
			along hairline fractures appear to be				
			secondary pionte. Possible sphalerite at 24 50m – Lower				
			contact at 24.50 at 55-60° to C.A.				
24.60	25.64	521	FELDSPAR PORPHYRITIC ANDESITE	302724	24.60-25.64	1.05	<0.005
			DYKE - Dark grey to greenish grey				
			porphyritic texture with white feldspar				
			phenocrysts to 2mm diameter. Very				
			silicified fractures with pyrite				
			Lower contact with Siliceous Felsic Tuff at				
			25.60m at 35° to C.A.				
25.64	28.50	312	SILICEOUS FELSIC FRAGMENTAL	302725	24.64-27.00	1.36	<0.005
			(LAPILLI) TUFF - From 25.64 to 27.00m	302726	27.00-29.00	2.00	<0.005
			pervasively silicified and veined with				
			pyritic veins to 2mm thick mainly at 5-25°				
			to C.A. From 27.00m on, fragmental				
			texture is more prominent but fragments				
			remain as ghostly outlines. Two primary				
			sets of pyrigzed veins at $10-25^{\circ}$ to C.A. at 60° to C.A.				
			Fracturing becomes more strongly				
			weathered with limonite staining				
			permeating fracture walls leaving rust				
		202	stained envelopes.				
28.50	28.70	398	Faulted and brecclated Succous				
28.70	37.70	312	SILICEOUS FELSIC FRAGMENTAL	302727	29.00-31.00	2.00	<0,005
	-		(LAPILLI) TUFF - Well pyritized along	200708	31.00.33.00	2.00	0.010
			fractures as from 25.64-28.50m. Still	302120	31.00-33.00	2.00	0.010
			strongly weathered with limonite staining	302729	33.00-34.70	1.70	<0.005
			on most iractures. weak chlorite				
			showing secondary biotite.				
			From 34.00-34.70m unit takes on a				
			mottled appearance with purplish brown				
			nodules? with secondary biotite.				
			Rapid gradational contact with Andesite				
34.70	35.66	521	ANDESITE DYKE - Dark grev green, fine				
		-	grained crystalline, strongly fractured at				
			65° to C.A. Epidote and pyrite along				
			fractures.				

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SECTION	I: <u>30012N</u>		Page: <u>3</u>			DDH#: _	<u>HS97-08</u>
from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
35.66	37.50	598	FAULT ZONE in Andesite Dyke. Very	302730	34.70-35.66	0.96	0.025
			limonite stained and broken core. Dyke material is crusted and soft throughout. Faulting possibly 5-10° to C.A. Orientation is uncertain	302731	35.66-37.50	1.84	0.010
37.50	41.78	521	ANDESITE DYKE - As described from	302732	37.50-39.00	1.50	<0.005
			34.70-35.66m. From 40.0-41.0m core	302733	39.00-41.00	2.00	<0.005
			to C.A.	302734	41.00-41.70	0.78	<0.005
			Epidote and pyrite on fractures.				
41.78	46.80	411	DACITIC-ANDESITIC LAPILLI TUFF -	302735	41.78-43.50	1.72	<0.005
			Dark grey to purplish grey coarse grained lapilli to fragmental tuff. Pervasively silicified. Lapilli and/or fragments to 2 cm diameter. Moderately chloritized and brownish secondary biotite impart greenish to brownish purple patches throughout section. Relict banding at 65° to C.A.				
			Purplish, slightly finer grained. Becoming	302736	43.50-45.50	2.00	<0.005
			much coarser grained with fragments to 2 cm diameter. Weak nodular texture from 46.00-46,80m. Increased silicification & veining. contact with small andesite dyke at 46.80m at 50° to C.A.	302737	45.50-46.80	1.30	<0.005
46.80	46.97	521	ANDESITE DYKE - Small, very fined grained, dark charcoal grey green. Lower contact at 50° to C.A.	302738	46.80-46.97	0.17	<0.005
46.97	49.45	411	DACITIC-ANDESITIC LAPILLI TUFF - Mottled greenish to purplish grey with white quartz flooding. Very coarse grained with fragments to 3 cm x 2 cm. Strong quartz flooding and veining. No strong mineralization is associated with this flooding.				
			Strong chlorite alteration within quartz	302739	46.97-48.50	1.53	<0.005
			veins and of fragments surrounded by a quartz matrix. Purplish biotite alteration intermixed with chlorite alteration. Lower contact with Andesite Dyke at 70° to C A	302740	48.50- 49.4 5	0.95	<0.005
49.45	50.15	521	ANDESITE DYKE - Small dyke - Greenish charcoal grey, very fine grained to a weakly developed porphyritic texture with clouded feldspar phenocrysts. Lower contact at 65° to C A	302741	49.45-50.15	0.70	<0.005
50.15	52.70	411	DACITIC-ANDESITIC LAPILLI TUFF -	302742	50.15-51.50	1.35	<0.005
			Dark grey to purplish grey. Quartz zone from $50.15-50.25m$ and $52.50-52.70m$. Coarse grained for the most part with finer grained section from $51.50-52.10m$. Lower contact with andesite dyke at $52.70m$ at 80° to C A	302743	51.50-52.70	1.20	<0.005

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SECTIO:	N: <u>30012N</u>		Page: <u>4</u>			DDH#:	<u>HS97-08</u>
from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
52.70	53.07	521	ANDESITE DYKE - Dark greenish charcoal grey. Very fine grained massive. Lower contact at 53.07m at 15° to C.A.	302744	52.7053.07	0.37	<0.005
53.07	53.58	421	DACITIC-ANDESITIC LAPILLI TUFF - Dark grey greenish to purplish. Coarse grained. Strong chlorite alteration. Lower contact at 53.58m with Andesite Dyke at 65° to C.A.	302745	53.07-53.58	0.51	<0.005
53.58	54.42	521	ANDESITE DYKE - Same as from 52.70- 53.07m. Lower contact at 75° to C.A.	302746	53.58-54.42	0.84	<0.005
54.42	54. 78	411	DACITIC-ANDESITIC LAPILLI TUFF - Small slice caught up in dyke? Dark purplish grey, coarse grained with light grey fragments. Lower contact with Andesitic Dyke at 85°? to C.A.	302747	54.42-54.78	0.36	<0.005
54.78	79.30	521	ANDESITE DYKE - Dark charcoal grey to	302748	54.78-57.00	2.22	0.010
			greenish, massive with textures verging from fine grained, weakly porphyritic with	302749	57.00-59.00	2.00	
			white cloudy feldspar phenocrysts (1-2mm	302750	59.00-61.00	2.00	
			diameter) to line grained crystalline.	302751	61.00-63.00	2.00	
			Very minor veining with very weak, if any	302752	63.00-65.00	2.00	
			silicification. Fracturing is generally weak and primarily at 15-25° to C.A. and 55° to C.A. 2mm thick epidote veinlet running length of core at 3-5° to C.A. from 58.20- 59.00m. Pyrite coats most fracture planes. Strong epidote patch at 67.30m. Small pyritized section from 64.10- 64.50m.	302753	65.00-67.00	2.00	
			From 66.58-66.80m, grade into a small	302754	67.00-69.00	2.00	
			section of nodular tuff. Epidote from 67 30-67 60m Epidote and	302755	69.00-71.00	2.00	
			pyrite vein at 3° to C.A. from 72.00-	302756	71.00-73.00	2.00	
			72.08m.	302757	73.00-75.00	2.00	
			77.70-77.80m at 45° to C.A. At 77.30m.	302758	75.00-77.00	2.00	
79.30	81.94	432	green to purplish biotite altered Dacitic Tuff. No sharp contact. DACITIC-ANDESITIC LAPILLI TUFF -	302759	77.00-79.30	2.30	0.005
			From 79.30-79.80m - unit has a purplish colour and Nodular Tuff texture. From 79.80m the unit grades to creamy grey colour. The core is very broken up due to fractures at 3-10° to C.A. with quartz and some carbonate coating. Silicification is moderate with 2-3% pyrite along vein and fragment margins. Possibly sphalerite at 79.90m. Lower contact with Andesite Dyke at	302760	79.30-81.00	1.70	0.025
			81.94m at 40° to C.A.	302701	01.00-01.94	0.94	0.080

	SECTION	: <u>30012N</u>		Page: <u>5</u>			DDH#:	<u>HS97-08</u>
•	from	to (m)	Code	Description	sample	from/to	width	Au (~(t)
	81.94	82.37	521	ANDESITE DYKE - Dark greenish charcoal grey, very fine grained. hairline silicified fractures with 1-2mm bleached alteration envelopes. Weakly magnetic and strongly chloritized. Lower contact at 60° to C.A. (sharp). Contact pyritized.	302762	81.94-82.37	0.43	0.015
	82.37	83.10	412	DACITIC-ANDESITIC LAPILLI TUFF - Fine to medium grained equigranular with mostly crystal fragments. Grey with white argillic altered crystals (feldspar?). Chlorite alteration on fracture surfaces. From 82.55-82.62m a 4 to 6 cm wide quartz vein with pyrite, epidote, chlorite and specks of sphalerite? cuts C.A. at 60°. lower contact is sharp at 75° to C.A.	302763	82.37-83.10	0.73	0.155
	83.10	94.40	521	ANDESITE DYKE - Dark charcoal grey to dark greenish grey. weak to moderately magnetic. Strong chlorite alteration. From 83.10-84.70m quartz and quartz epidote veining mainly 70-75° to C.A. At 84.43m a 2 cm thick quartz vein at 65° to C.A. carries coarse crystalline pyrite in the centre of the vein. Crystals to 3mm across occur in the vein	302764	83.10-84.70	1.60	0.010
				From 84.70 onwards, veining and	302765	84.70-86.00	1.30	<0.005
				mineralization drops off significantly. an epidote value at $85,18m$ cuts C A at 50°	302766	86.00-88.00	2.00	0.015
				and at 87.48-87.52m occur as a large	302767	88.00-89.40	1.40	0.005
				patch. From 89.70-90.41m, Andesite Dyke is intensely quartz carbonate veined with the colour changing to a bleached light grey green. Veining and fracturing primarily 60° to C.A. Coarse pyrite and chlorite alteration on fractures as described above	302768	89.40-90.41	1.01	0.010
				Altered zone stops abruptly, returns to	302769	90.41-92.00	1.59	0.010
				dark greenish charcoal grey, massive Andesite Dyke. At 91.50m a 3 cm thick quartz vein at 85° to C.A. has a 0.5 cm thick corn of coarse crystelline sprite	302770	92.00-94.00	2.00	<0.005
				A second 3 cm thick quartz vein with 1.0- 1.5 cm thick coarse pyrite core at 93.19m. epidote patches from 93.45-94.00m.	302771	94.00-94.90	0.90	<0.005
	94.90	95.56?	598	MAJOR FAULT ZONE - In Andesite Dyke - Very broken core with clay gouge incorporating brecciated dyke fragments. upper contact orientation unknown. Lower contact sharp at 40° to C.A. Small cubic pyrite crystal in gouge. Measurements estimated as significant lost core.	302772	94.90-95.56	0.66	<0.005

SECTION: <u>30012N</u>				Page: <u>6</u>	DDH#:	HS97-08		
	from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
	95.56	102.50	521	ANDESITE DYKE - Very broken core as	302773	95.56-97.00	1.44	<0.005
				influenced by major faulting. Recovery approx. 60%. Measurements are	302774	97.00-99.00	2.00	<0.005
				estimated. Strong chlorite alteration, coarse pyrite in quartz carbonate, veined rubble. 1 cm thick quartz carbonate vein with chlorite at 30° to C.A.	302776	99.00-101.00	2.00	<0.005
	102.50	104.24	498	From 101.35-102.50m, dyke rocks shows open shear stress fractures. From 102.10m, core is very broken up Drilling is very difficult. Rock chips indicate contact of Andesite Dyke with purplish brown Dacitic-andesitic lapilli tuff is at approx. 102.50m. rubbly core. No orientation with C.A. APPARENT. MAJOR FAULT ZONE IN Dacitic- Andesitic Lapilli tuff - Typical purplish brown biotite altered and silicified tuff. pervasive silicification with 1-3% pyrite along fractures and veinlets. Core is mostly angular, gravelly textured with clay-carbonate coating. Abundant slickensides on fracture surfaces. 65% recovery in sampled interval.	302777	101.00-102.50?	0.50	0.020
				65% recovery in sampled interval.	302779	103.00-104.24	1.24	0.070
				104.24m: End of Hole (E.O.H.)				

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SECTION	N:	29970N	Diamond Drill Log		I	DDH#: <u>H89</u>	97-09
Northing Easting: Elevation Azimuth: Inclinatio Grid: Length (r Core size Contracte Drill Type	: : : : : : : : : : : :	29970.001 30774.00F 975m 0 -57° Aranlee 231.65m NQ-2 F. Boisver Boyle 37	N Drill Hole survey E Method: Acid Tube Azimuth Dip Depth 050 -57° 0 050 231.6 nu	32	Property: NTS: Claim: Date Started: Date Completed Logged by:	Hotspring 92G9116 Hotspring Oct. 6/97 i:Oct. 12/97 W.B.Lenn J. T. Shear	7 9 р. <u>т.</u> NS 3 а.т. an & rer
Purpose	:	<u> </u>]
from (m)	to (m) Code	Description	sample No.	from/to	width (m)	Au (g/t)
0.00 3.05	3.05	9 0 319	Casing/Overburden SILICEOUS FELSIC LAPILLI TUFF -	302780	3.05-4.00	0.95	0.110
0.00	11.00	0 012	Medium bluish grey, fine to very fine	302781	4 00-6 00	2.00	0.090
			grained with isolated angular fragments.	300790	6.00.8.00	2.00	0.025
			light grey to cream coloured bleached	200702	8.00-10.00	2.00	0.145
			sections of darker grey rock along	302783	8,00-10,00	2.00	0.145
11.80	13.80) 521	numerous envelopes coalesce. Strong limonite alteration along fractures primarily parallel to or 15° to C.A. The limonite permeates fracture walls and forms rusty envelopes overprinting bleached patches. Minor veining carries 1% pyrite and <0.5% sphalerite? in places. (at start of hole from 3.05m to 4m only 45% recovery) From 10.10-11.30m unit is intensely fractured at various angles and bleached due to coalescing alteration envelopes. Overprinted with beige limonite stained. Lower contact at 20- 25° to C.A. ANDESITE DYKE - Dark greenish grey,	302785	11.80-13.80	2.00	0.045
			fine grained to weakly porphyritic. From 12.70-13.10m quartz veining, with specks of sphalerite?, at 13.00m at 30° to C.A. At 13.80m contacts Siliceous Felsic Tuff at 33° to C.A.				
13.80	15.40) 312	SILICEOUS FELSIC LAPILLI TUFF - Bluish grey to creamy white in strongly silicified and bleached sections. Strong limonite staining on weathered fractures. Very fine grained pyrite disseminated throughout but generally <1%. Pyrite mainly concentrated along fractures.	302786	13.80-15.40	1.60	0.095

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SECTION:	29970	<u>N</u>	Page: <u>2</u>			DDH#:	<u>HS97-09</u>
from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g / t)
15.40	17.42	822	ANDESITE TUFF - Dark brownish grey with porphyritic texture. Texture is due to abundance of angular feldspar fragments which rarely exceed 2mm diameter. Weakly magnetic. Pyrite is weakly disseminated throughout but is primarily observed as flat coatings on fracture planes. At 17.42m contacts Siliceous Felsic Tuff at 35° to C.A.	302787	15.40-17.42	2.02	0.045
17.42	41.76	311	SILICEOUS FELSIC LAPILLI TUFF	302789	17.42-19.00	1.58	0.040
			Bluish grey to patchy bleached creamy coloured unit as from 13.80-15.40m. Very fine grained, pervasively silicified and bleached to creamy white where alteration envelopes along zones of fracturing coalesce. Pyrite is fine	302790	19.00-21.00	2.00	0.035
			grained and is confined mainly to fractures but is also disseminated throughout unit (although weakly - <1%). Strong bleaching and limonite				
			from 20.00-20.80m. Dominant				
			fracturing at 62° to C.A. Intense cream coloured bleaching from 21.00-22.45m with limonite along weathered fractured.	302791	21.00-23.00	2.00	0.035
			Bleached zones decrease significantly with only narrow 1-3mm alteration envelopes along silicified fractures. At 24m 1 cm wide vuggy, pyritized quartz yein at approx. 45° to C.A.	302792	23.00-25.00	2.00	0.110
			Strongly bleached and limonite stained	302793	25.00-27.00	2.00	0.095
			section of unit from 25.15-25.65m.	302794	27.00-29.00	2.00	0.120
			veinlets.	302795	29.00-31.00	2.00	0.255
			Fine specks of sphalerite? at 31.00m.	302796	31.00-32.00	1.00	0.210
			intensely bleached sections overprinted with limonite staining. Broken core with 5% core loss. Pervasive silicification.	302797	32.00-33.50	1.50	0.220
			Same as from 32.00-33.50m	302798	33.50-34.60	1.10	0.395
			Returns to bluish grey pervasively Silicified Felsic Tuff. Most original textures are obliterated. Creamy coloured bleached patches from 35.33-	302799	34.60-36.00	1.40	0.165
			Alternating sections of bluish grev tuff	302800	36,00-38.00	2.00	0.145
			with cream coloured bleached sections, weak chlorite alteration on fractures from 37.70-38.10m. Possible minor sphalerite in 2.5 cm	302801	38.00-40.00	2.00	0.255
			quartz vein at 39.26m				

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from (m)	to (m)	Code	Description	sample No	from/to	width (m)	Au (g/t)
(111)	()		As from 36.00-40.00m. At 41.76m unit subtly changes to more prevalent bluish grey fine grained tuff with an increase in quartz veining and	302802	40.00-41.76	1.76	0.145
41.76	64.87	312	with a slight increase in pyrite content. SILICEOUS FELSIC LAPILLI TUFF -	302803	41.76-43.00	1.24	0.575
	01107	•••	Bluish grey, fine grained. Most original	302804	43.00-45.00	2.00	0.470
			textures have been obscured by pervasive silicification and modest quartz veining. Pyrite content is weak but is greater than in previously described section of this unit. Pyrite is found as both coarse and fine grained patches within narrow quartz veins and as fracture coatings. Chlorite alteration is weak and occurs primarily as fracture coatings. Broken limonite stained core and			2.00	
			bleached section from 44.07-44.70m.				·
			Small "ghostly" veined section from	302805	45.00-47.00	2.00	0.145
			46.06-46.50m. Pyrite in 2mm thick	302806	47.00-49.00	2.00	0.180
			Dominant fracturing 70°-85° to C.A.	302807	49.00-51.00	2.00	0.210
			Pyrite mineralization along vein 3mm	302808	51.00-53.00	2.00	0.350
			thick at 25-30° to C.A. at 52.42m. At 52.95m - unit is bleached and intensely fractured with strong limonite staining.	302809	53.00-53.95	0.95	0.195
			Bleached & broken felsic lapilli tuff	302810	53 .95-56 .00	2.05	0.125
			continues with strong fracturing 5-10° to C.A. Less broken sections of bleached tuff. Moderate chlorite alteration along fractures. Bleached and limonite stained alteration envelopes along fractures.	302811	56.00-57.60	1.60	0.070
			Return of bluish grey siliceous felsic tuff	302812	57.60-59.00	1.40	0.250
			along fractures. Fine grained pyrite	302813	59.00-61.00	2.00	0.070
			<1% as disseminations and along fractures. Patch of veining and bleaching from 58.40-58.73m with pyrite or sphalerite?	302814	61.00-63.00	2.00	0.115
			Fine grained amorphous grey, pervasively silicified felsic tuff. Slight "porphyritic" texture with scattered 2- 3mm diameter sericite altered feldspar crystal fragments. Subtle wavy banding with 1.0-1.5% very fine grained pyrite as disseminations, along banding planes and fractures oriented at 35-45° to C.A. From 64.70-64.87m, bleached quartz flood zone with pyrite and possibly very fine grained sphalerite. Sharp lower contact at 67° to C.A.	302815	63.00-64.87	1.87	0.075

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from (m)	to (m)	Code	Description	sample No	from/to	width (m)	Au (a/t)
64.87	68.30	521	ANDESITE FELDSPAR PORPHYRY DYKE - Dark greenish grey massive porphyritic dyke with altered feldspar phenocrysts to 3mm diameter. Moderate chlorite altered and weakly silicified. Weakly magnetic. Thin & scattered 1-2mm bleached alteration envelopes along silicified fractures. Pyrite coatings on most fractures.			(,	(67 °/
			Broke core from 65.50-56.84m. 90%	302816	64.84-66.00	1.13	0.010
			core recovery. From 66.30-66.80m feldspar	302817	66.00-67.00	1.00	0.005
68.30	73.46	312	phenocrysts occur as "ghostly" features with indistinct crystal edges. Lower contact at 68.30m at 55° to C.A. SILICEOUS FELSIC LAPILLI TUFF - darker bluish grey, fine grained, slightly wavy banded texture. Pervasive intense silicification and weak chlorite alteration. Some sericitic alteration of	302818	67.00-68.30	1.30	<0.005
			felsic "feldspar" crystal fragments. Quartz veining with increased pyrite and minor sphalerite mineralization particularly from 68.88-69.00m at 45- 50° to C.A.	302819	68.30-69.00	0.70	0.295
			Quartz flooding from 69.27-69.85m. Coarse pyrite mineralization at 69.30m in quartz vein. Bleached zones with strong limonite overprinting from 70.00- 70.50m.	302820	69.00-71.00	2.00	0.125
			More pervasive silicification and less	302821	71.00-72.00	1.00	0.090
			bleaching. As above. Possible sphalerite mineralization at 73.30m in quartz veined area at 35° to C.A. at 73.46 contact with chlorite and epidote altered Andesite Tuff.	302822	72.00-73.46	1.46	0.065
73,46	74.64	821	ANDESITE TUFF? - Dark mottled greenish grey. Cream coloured stretched? feldspar fragments are strongly altered and give a banded appearance to unit at 70-75° to C.A. Strong chlorite alteration. Chlorite altered mafic laths oriented along banding as noted above. Strongly magnetic. Minor epidote as replacements around rims of mafic fragments. Lower contact at 74.65m oriented at approx. 75° to C.A.	302823	73.46-74.64	1.18	0.020

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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
74.64	87 86	312	SILICEOUS FELSIC TUFF - Pervasively	302824	74.64-76.00	1.36	0.125
			silicified unit which is medium bluish grey in colour. Fine grained. Most	302825	76.00-78.00	2.00	0.190
			fragments are obliterated by the strong silicification. Fracturing and veining is not intense and is primarily oriented at 45° to C.A. Fine grained pyrite is disseminated throughout but coarser grained pyrite occurs on veinlet margins and along silicified fractures. Weak chlorite alteration and rare small patches of epidote. Bleached zoned	302826	78.00-79.80	1.80	0.140
			overprinted with limonite staining from 77.44-77.85m. Some core loss from				
			78.00-78.50m.				
			Darker grey with increased pyrite	302827	79.80-80.40	0.60	0.295
			Banded texture more prominent at 40° to C.A. Pyrite diminishes to <1%.	302828	80.40-82.00	1.60	0.105
			Core more broken on small cream coloured bleached sections with limonite staining.	302829	82.00-84.00	2.00	0.130
			From 84.90-85.10m slight porphyritic texture with white argillic altered feldspar? crystal fragments.	302830	84.00-86.00	2.00	0.045
			Coarse pyrite on fractures from 86.47- 87.02m and from 87.70-87.81m. Possible sphalerite mineralization as black patches of dust sized pyrite grain clusters. At 87.86m contact at 60° to C.A.	302831	86.00-87.86	1.86	0.090
87.86	89.56	521	ANDESITE DYKE - Dark green-grey fine grained crystalline with small weakly porphyritic sections. Strongly magnetic and intensely chloritized. Minor fracturing. Small quartz flood zone or a slice of Siliceous Felsic Tuff from 89.21- 89.37m.	302832	87.86-89.56	1.70	0.040
89.56	94.40	311	SILICEOUS FELSIC TUFF - Light blue	302833	89.56-91.00	1.44	0.025
			grey, very fine grained with "porphyritic" texture with sericite altered feldspar	302834	91.00-93.00	2.00	0.020
			crystal fragments. Pervasive silicification with minor veining. Banded texture from 92.20-92.40m. From approx. 92.80-93.30m core is broken due to shearing. shear zone at 93.23m at 25° to C.A. Limonite stained and with wavy epidote and chlorite. Lower contact at 94.40m at 37° to C.A.	302835	93.00-94.40	1.40	0.030

SECTION	I: <u>29970N</u>		Раде: <u>б</u>			DDH#:	<u>HS97-09</u>
from (m)	to (m)	Code	Description	sample	from/to	width	Au (g(t)
94.40	95.05	521	ANDESITE DYKE - Sharp contact. Dark green grey, very fine grained crystalline. Small weakly porphyritic sections. Quartz flooded bleached zone or a slice of Siliceous Felsic Tuff from 94.71-94.84m. Minor pyrite. Lower contact at 95.05m at 45° to C.A.	302836	94.40-95.05	0.65	(87 4
95.05	106.10	311	SILICEOUS FELSIC TUFF - Massive	302837	95.05-96.00	0.95	
			appearance, light bluish grey,	302838	96.00-98.00	2.00	
			"porphyritic" texture showing widely	302839	98.00-100.00	2.00	
			spaced altered feldspar crystal fragments in white against the grey amorphous matrix. minor pyrite mineralization. Alteration of "phenocrysts" is sericite	302840	100.00-102.00	2.00	
			and K-spar? Coarse pyrite on 2-3mm wide veinlet	302841	102 00-104 00	2.00	
			Banding at 103.50m at 53° to C.A.	200840	104.00.105.00	1.00	
			Increased pyrite mineralization along	200042	105.00-105.00	1.00	
			envelopes along fracture edges. As from 104.00-105.00m Lower contact at 40° to C.A.	302843	105.00-106.10	1.10	
106.10	106.55	521	ANDESITE DYKE - Dark charcoal grey with sparse porphyritic texture in a fine grained crystalline matrix. phenocrysts are ghosts of feldspar crystals that have been argillically and chlorite altered. Silicification has occurred along fractures leaving bleached narrow (1mm) envelopes. Lower contact at 40° to C.A.	302844	106.10-106.55	0.45	0.020
106.55	108.00	312	SILICEOUS FELSIC TUFF - Light bluish grey as in previous section. More intensely fractured and quartz flooded, particularly from 107.20-108.00m. 1- 2% pyrite and dark specks of sphalerite? - shear - small shear at 15° to C.A. at 107.56m. Broken core and possible Fault Zone from 107.82- 108.00m.	302845	106.55-108.00	1.45	0.065
108.00	108.42	521	ANDESITE DYKE - Small dark greenish grey fine grained weakly porphyritic dyke. Ghostly feldspar phenocrysts are widely spaced. Moderately magnetic with strong chlorite alteration. Minor pyrite. At 108.42m contacts Siliceous Felsic Tuff at 40° to C.A. Sharp contact.	302846	108.00-108.42	0.42	0.010

SECTION: <u>29970N</u>			Page: <u>7</u>					
from (m) 108.42	to (m) 122.00	Code 312	Description SILICEOUS FELSIC TUFF - Medium bluish grey, fine grained and pervasively silicified. Chlorite alteration along pyritized fractures. Sericitic alteration along some fractures and of falsic	sample No.	from/to	width (m)	Au (g/t)	
			fragments (feldspar?). Well mineralized section with pyrite 2- 3% along fractures running roughly parallel to C.A. (3-10°) and at 40° to C.A.	302847	108.42-110.00	1.58	0.045	
			Well mineralized as above. More pervasive quartz flooding from 111.00-	302848	110.00-112.00	2.00	0.085	
			Mineralization diminishes to 1-1.5% pyrite. Quartz flooding is gone.	302849	112.00-114.00	2.00	0.085	
			"Porphyritic" like texture returns with sericite and argillic altered feldspar? crystal fragments. Pyrite is commonly found as replacements? in the altered fragments.	302850	114.00-116.00	2.00		
			As from 114.00-116.00m.	302851	116.00-118.00	2.00		
				302852	118.00-120.00	2.00		
				302853	120.00-122.00	2.00		
122.00	104 55	313	Marked increase in surite content ~3%	202954	122.00 122.00	1.00		
142.00	124.00	515	although patchy. coarse granular pyrite	002004	122.00-123.00	1.00		
			in quartz veins to 1 cm thick. No visible sphalerite.	302855 302856	123.00-124.00 124.00-125.00	1.00		
124.55	124.60	398	As above. Small Fault Zone - White clay gouge with fragments of siliceous tuff at 80° to					
124.60	128.50	313	SILICEOUS FELSIC TUFF - As previously described. Strongly pyritized (5%). Contorted veins from 125.43- 125.88m.	302857	125.00-125.00	1.00		
			Coarse veinlets to 1.5 cm across from	302858	126.00-127.00	1.00		
			Pyrite content gradually decreases in	302859	127.00-128.50	1.50	0.025	
			intensity. Less veining and veining carries slightly finer grained pyrite. (1- 2% pyrite)					
128.50	131.00	311	SILICEOUS FELSIC TUFF - Same	302860	128.50-130.00	1.50	0.030	
			bluish grey unit and texture as previously described. Pyrite content has decreased to an average of 1-2%	302861	130.00-131.00	1.00	0.030	
131.00	135.58	312	SILICEOUS FELSIC TUFF - Light bluish	302862	131.00-132.50	1.50	0.020	
			grey with increased fracturing. Pyrite	302863	132.50-134.00	1.50	0.020	
			fractures at 40-45° to C.A. Pyrite is coarse grained along the veinlets. Weak	302864	134.00-135.58	1.58	0.050	
			Lower contact at 135.58m at 60° to C.A.					

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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au
135.58	135.86	521	ANDESITE DYKE - Dark green, fine grained, crystalline, small dyke. Magnetic with strong chlorite alteration 2-3% pyrite mainly as fracture coatings. At 135.86 lower contact at 80° to C.A.	302865	165.58-165.86	0.28	\ 67 *1
135.86	136.40	313	SILICEOUS FELSIC TUFF - Dark bluish grey, very will mineralized with pyrite and magnetic pyrrhotite ≈10% in contort vein network. No visible sphalerite. At 136.40m contacts Andesite Dyke at 45- 50° to C.A. unit has moderate <u>epidote</u> throughout.	302866	135.86-136.40	0.54	
136.40	141.00	521	ANDESITE DYKE - Fine grained	320867	136.40-138.00	1.60	
			crystalline with a weak porphyritic	302868	138.00-140.00	2.00	
			phenocrysts. Strong chlorite alteration along veins & fractures and throughout unit. Epidote occurs along veins and forms speckled alteration envelopes	302869	140.00-141.00	1.00	
			along fractures. coarse pyrite coating along fracture planes. Weak to moderate strength magnetism. Lower				
141.00	14 3.74	312	contact at 80° to C.A. SILICEOUS FELSIC TUFF - Medium bluish to mottled purplish grey unit. Purplish colouration due to secondary biotite. Intensely fractured and quartz veined. Coarse pyrite and epidote are				
			Dominant fracture orientations to C.A.	302870	141.00-142.50	1.50	
			are 43° and 70°. Quartz flooding imparts a banded appearance to unit at $\approx 55^\circ$ to C.A. Lower contact at 65° to C.A.	302871	142.50-143.74	1.24	
143.74	144.52	521	ANDESITE DYKE - Dark green-grey, fine grained crystalline o weakly porphyritic with very small mafic laths as phenocrysts. Intensely chloritized and moderately magnetic. Minor epidote.	302872	143.74-144.52	0.78	
144.52	150.12	311	SILICEOUS FELSIC TUFF - Light bluish	302873	144.52-146.00	1.48	0.040
			grey, fine grained with alternating	302874	146.00-148.00	2.00	0.340
			sections of banded textured rock to weakly "porphyritic" with widely spaced argillically altered feldspar? crystal fragments. Clay alteration along some fracture surfaces. Pyrite is less than 1%. Pervasively silicified and minor veining. Some epidote along silicified and pyritized fractures from 149.60- 150.12m. At 150.12m, contacts Andesite Dyke at 28° to C.A.	302 875	148.00-150.12	2.12	0.100

SECTION	I: <u>29970N</u>		Page: _ 9			DDH#:	<u>HS97-09</u>
from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
150.12	151.43	511	SILICIFIED ANDESITE - Very fine	302876	150.12-150.72	0.60	0.030
		grained with bleached silicified fractures imparting sections of lighter green	302877	150.72-150.93	0.21	0.090	
			colour rather than normal dark green grey colour. From 150.72-150.93m a grey quartz vein or slice of Siliceous Felsic Tuff is incorporated into Dyke. Contacts are 30° to C.A. Quartz zone.	302878	150.93-151.43	0.50	0.035
151.43	156.80	312	SILICEOUS FELSIC TUFF TO LAPILLI	302879	151.43-153.00	1.57	0.030
			TUFF - Light bluish grey, fine grained,	302880	153.00-155.00	2.00	0.060
			fracturing with quartz-carbonate fillings. Ghostly porphyritic texture with white argillically altered feldspar? fragments. lapilli fragments are observed again as ghostly grey fragments set in the grey siliceous matrix. Fragments are generally small (<1 cm diameter). Pyrite is primarily confined to fractures or coatings but content generally <1%. Minor epidote on fractures. Lower contact at 83° to C A	302881	155.00-156.80	1.80	0.070
156.80	157.32	521	PORPHYRITIC ANDESITIC DYKE - Dark green-grey with ghostly porphyritic texture. Slightly lighter coloured feldspar phenocrysts. Minor bleached envelopes along silicified fractures. Intense chlorite alteration. minor pyrite. Lower contact with Siliceous Felsic Tuff at 80° to C.A.	302882	156.80-157.32	0.52	0.030
157.32	162.42	312	SILICEOUS FELSIC LAPILLI TUFF -	302883	157.32-159.00	1.68	0.035
			Light bluish grey coloured. Lapilli	302884	159.00-160.00	1.00	0.095
			most are ghostly outlines in the grey	302885	160.00-161.00	1.00	0.040
			siliceous matrix. Scattered occurrences	302886	161.00-162.00	1.00	0.040
			along fractures. Pyrite is generally approx. 1% but from 159.00m coarse pyrite occurs in vein systems approximately 50-70 cm apart. Rare green patches of Fuchite. Lower contact at 48° to C.A.	302887	162.00-162.42	0.42	0.055
162.42	169.40	412	DACITIC-ANDESITIC LAPILLI TUFF - Light bluish grey, intensely silicified with coarse ghosts of lapilli fragments to 1.5 cm diameter. Small zones of purplish brown colour indicating secondary biotite patches. Patches of epidote at 162.51m and 167.90m. Purplish biotite altered zone from 163.30-163.70m.	302888	162.42-163.70	1.28	0.080

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from	to (m)	Code	Description	sample No.	from/to	width	Au (g/t)
()	(,		Quartz flood zone from 163.70-166.0m with creamy white quartz matrix with pyrite, biotite and chlorite along fractures and around relic lapilli fragments. This gives unit a mottled banded appearance.	302889	163.70-165.00	1.30	0.045
			At 166.0m quartz flooding diminishes.	302890	165.00-166.00	1.00	0.030
			less quartz flooding but more intense	302891	166.00-168.00	2.00	0.060
			micro fracturing with increase in pyrite mineralization. Pyrite is medium to coarse grained along fractures and dusty sized around lapilli fragments	302892	168.00-169.40	1.40	0.025
169.40	171.00	413	DACITIC-ANDESITIC LAPILLI TUFF - Same units as above but with changes to darker grey wit intense pyrite	302893	169.40-171.00	1.60	0.045
171.00	174.14 174.72	412	mineralization to 5%. Dust pyrite mineralization to 5%. Dust pyrite gives the dark grey colour. Pervasive silicification leaves only ghostly remnants of lapilli fragments. Argillic alteration along fractures. DACITIC-ANDESITIC LAPILLI (Nodular) TUFF - Unit grade to a dark purplish colour. Lapilli fragments (angular) dominate over nodular fragments but subtle Nodular Texture persists. 2-3% pyrite around fragment rims. Grades to a dark purple, fine grained equigranular tuff. At 174.14 strong bands of epidote occur at contact with Andesite Dyke at 73° to C.A. ANDESITE DYKE - Dark greenish grey, fine grained with "ghostly" porphyritic texture with faint feldspar phenocrysts to 2mm diameter. Minor veining and	302894 302895	171.00-173.00 173.00-174.14	2.00 1.14	0.040 0.030
			fracturing but epidote occurs on fractures that are present. Strongly magnetic. Minor pyrite. Lower at 174.72m at 70° to C.A.	302896	174.14-174.72	0.58	0.025
174.72	179.66	412	DACITIC-ANDESITIC LAPILLI TUFF -	302897	174.72-176.00	1.28	0.080
			Medium grey coloured. No biotite	302898	176.00-178.00	2.00	0.060
			primarily crystal fragments and small lapilli fragments (<1 cm diameter). Unit has a slightly banded porphyritic texture. Minor veining and fracturing. slightly increased sulphide (pyrite) content from 178.60-179.66m. Lower contact at approx. 65° to C.A.	302899	178.00-179.66	1.66	0.050

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from (m)	to (m)	Code	Description	sample No.	from/to	width (mi	Au (g/t)
179.66	201.77	521	MODERATELY SILICIFIED ANDESITE DYKE - Dark green-charcoal grey. Fine grained crystalline with small sections where weak porphyritic texture is visible. Fractures are silicified and have bleached (narrow) alteration envelopes along the margins. Coarser crystalline pyrite occurs in the cores of some of the vuggy quartz veins. Epidote alteration is patchy as well as being along many fractures. Chlorite alteration is strong and pervasive.			()	1157 4)
			Pyrite, chalcopyrite, galena and	302900	179.66-181.00	1.34	<0.005
			sphalerite. Epidote alteration and	303001	181.00-183.00	2.00	<0.005
			towards 186.00m.	303002	183.00-185.00	2.00	0.020
			Dark green grey unit continues to	303003	185.00-186.00	1.00	0.020
			pyrite mineralization return. Mainly	303004	193.00-194.00	1.00	0.010
			veining at 10-15° to C.A. From 194.61-194.77m, small slice of purplish lapilli tuff incorporated into dyke. Upper contact at 85° to C.A., lower contact is 85° to C.A. From 195.06-195.11m epidote fine with pyrite at 85° to C.A. Weak quartz- carbonate veining (hairline veinlets) with pyrite coatings throughout. Alteration (silicification) increases towards lower contact with Dacitic Tuff.				
			Shear at 90° to C.A. at 200.75m. From 200.75-201.77m dyke is altered and	303005	200.00-201.00	1.00	0.030
			takes on sections of purplish colour similar to Dacitic Tuff unit then grades back to dark green colour. Lower contact at 60° to C.A.	303006	201.00-201.77	0.77	0.035
201.77	206.00	412	DACITIC-ANDESITIC-LAPILLI TUFF	303007	201,77-203.00	1.23	0.090
			undertone. Fine grained to 202.90m	303008	203.00-204.50	1.50	0.440
			then coarse grained lapilli fragments to 2 cm diameter appear. Pervasive silicification throughout. Occasional 10 cm sections form purplish biotite altered unit exhibit nodular texture. Pyrite is primarily found along veinlet margins as fracture coatings and around the rims of fragments. Content of pyrite is 1-2%.	303009	20450-206.00	1.50	0.185
206.00	225.37	413	DACITIC-ANDESITIC LAPILLI TUFF - Same unit as described above but with increased pyrite content from 2-4% primarily along banding planes, in veinlets and fractures and around angular lapilli fragments.				

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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
· · /	、 ,		Most purplish biotite alteration has been	303010	206.00-207.00	1.00	0.245
		veining and argillic alteration. Weak chlorite alteration.	303011	207.00-208.00	1.00	0.230	
		Sphalerite with pyrite along quartz veins	303012	208.00-209.50	1.50	0.095	
			at 207.04 at 37° to C.A. and at 207.42m at 35-40° to C.A. Pervasive grey	303013	209.50-211.00	1.50	0.180
			silicification. Lapilli textures obliterated	303014	211.00-212.40	1.40	0.115
			for the most part. Two phases of quartz veining at 213.25m, both with mineralization. dominant fracturing and	303015	212.40-213.60	1.20	0.155
			veining at 25° and 15° to C.A. Very intensely pyritized with crystalline	303016	213.60-214.60	1.00	0.100
			granular pyrite. Intense sulphite	202017	214 60 215 60	1.00	0.000
			mineralization continues with intense	303017	214.00-213.00	1.00	0.090
			quartz veining and argillic alteration as fracture and of lanilli fragments. Minor	303018	215.60-217.00	1.40	0.165
			specks of sphalerite. intense quartz	303019	217.00-218.00	1.00	0.470
			flooding via veins continues. Large white angular lapilli fragments appear as breccia fragments but they are not. Argillic and sericitic? alteration along fractures and throughout the fragments. Strong coarse pyrite mineralization with	303020	218.00-219.60	1.60	0.150
			veinlet margins. Pyrite to 1%. Unit becomes darker purplish grey with decrease in quartz veining and flooding. Biotite alteration returns. Pyrite content decreases to 2-3%	303021	219.60-221.00	1.40	0.290
			Quartz veining and flooding returns abruptly. Purple biotite alteration is no longer present. Argillic alteration of lapilli fragments leaves a distinct white colour against a grey quartz rich matrix.	303022	221.00-222.00	1.00	0.110
			Slightly less quartz veining and flooding than from 221.0-222.0m. Purplish biotite rich patch from 22.85-223.00m and from 223.60-223.70m.	303023	222.00-224.00	2.00	0.040
	·		Quartz veining and flooding gradually diminishes from 224.00m and purple biotite content increases steadily from 224.14m. Fracturing roughly parallel to core axis (3-5°) carries white argillic clay and pyrite. Lower contacts at 56° to C.A.	303024	224.00-225.37	1.37	0.095
225.37	226.95	522	ANDESITE DYKE - Dark greenish charcoal grey. Very fine grained crystalline. Slightly ghostly porphyritic texture in sections with cloudy white feldspar phenocrysts. A network of quartz-carbonate veins cuts this dyke.	303025	225.37-226.95	1.58	0.025

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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
			pyrite mineralization cut the C.A. at 25°- 30° from 225.60-226.10m. Lower contact at 47° to C.A.				
226.95	229.00	412	DACITIC-ANDESITIC LAPILLI TUFF -	303026	226.95-228.00	1.05	0.045
			Medium purplish grey, finer grained than previously. Lapilli fragments are much smaller (<0.5 cm diameter). Appears to be closer to ash rich tuff. silicification is very much diminished from previous sections. 1-3mm thick quartz carbonate veins. Pyrite content also has diminished significantly to approx. 1% Gradational lower contact at approx. 45°	303027	228.00-229.00	1.00	0.205
229.00	230.82	512	ANDESITE DYKE - Dark greenish charcoal grey to light greenish grey in intensely altered and bleached section from 230.0-230.73m. Moderate intensity of quartz-carbonate veining ± pyrite at 15-25° to C.A. and 65° to C.A.	303028	229.00-230.82	1.82	0.035
230.82	231.65	598	MAJOR FAULT ZONE - Upper contact with Andesite Dyke at 40° to C.A. Brecciated and altered dyke rock in a grey clay gouge matrix. Some free pyrite cubes (1mmx1mm). Drill not able to penetrate. Fault Zone goes beyond 231.65m Hole stopped. Only 50% recovery. 231.65m: End of Hole (E.O.H.)	303029	230.82-231.65	0.83	0.010

SECTION:	29970N	Diamond Drill Log	DDH#: <u>HS97-10</u>
Northing: Easting: Elevation: Azimuth: Inclination: Grid: Length (m): Core size: Contractor: Drill Type:	29970.00N 30774.00E 975m 060 -90° Aranlee 270.05m NQ-2 F. Boisvenu Boyles 37	Drill Hole survey Method: <u>Acid Tube</u> Azimuth Dip Depth 06090	Property:HotspringNTS:92G9+16Claim:Hotspring 7Date Started:Oct.13/97 DS9:30amDate Completed:October 16, 1997Logged by:W. B. Lennan &J. T. Shearer

Purpose:							
from	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
(m)	3 66	000	Casing Overburden				
2.66	10.00	314	SILICEOUS FELSIC LAPILLI TUFF -				
3.00	10.00	014	Light to medium bluish grev. Most				
			fragments only ghostly outlines. Very				
			intensely silicified with pervasive quartz				
			flooding. Epidote veining and K-spar				
			alteration is common but occurs in				
			discrete zones as opposed to occurring				
			pervasively throughout core. Pyrite				
			ranges from 1-3% and occurs as dark				
			grey patches of dusty material to				
			coarser gramed crystals found along				
			rims of fragments Sphalerite occurs in				
			minor amounts throughout unit and is				
			found mainly along vein and fragment				
			margins.				
			Epidote vein (0.5 cm) at 4.66m.	303030	3.66-5.00	1.34	0.115
			Patchy epidote veining throughout.	303031	5.00-6.00	1.00	0.090
			K-spar alteration from 5.40-5.60m.				
			Quartz flooded. 1-2% pyrite. Specks of				
			black sphalerite? (0.5%).	000000	6 00 7 00	1.00	0.215
			Strong k-spar and epidote veining	303034	0.00-7.00	1.00	0,210
			(vuggy) at approx. 20° to C.A. Knots of				
			pyrite in vein. Description at 3.5° to C A with	303033	7.00-8.00	1.00	0.820
			strong epidote veining with up to 5%	000000	1.00 0.00		
			purite and minor sphalerite.				
			From 7.40-8.00m k-spar alteration is	303034	8.00-10.00	2.00	0.120
			associated with the quartz flooding and				
			epidote veining. All limonite stained k-				
			spar alteration occurs in brecciated				
			vines from 8.08.50m.				
			Epidote & pyrite veining 30° to C.A. from				
			8.60-8.80m. From 8.80-10.00m white				
			to bluish white quartz flood zone.				
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from	to (m)	Code	Description	sample	from/to	width	Au
10.00	47.80	312	SILICEOUS FELSIC LAPILLI TUFF - Pervasively silicified by quartz flooding. Patches of fragmental to "porphyritic" texture show through intensive silicification. Limonite permeates fracture walls leaving a creamy brown contacted alteration envelope	303035	10.00-12.00	(<i>m</i>) 2.00	(8/1) 0.050
			Same as 10.00-12.00m.	302036	12.00-14.00	2.00	0.035
			Light bluish grey colour dominates with no epidote or k-spar alteration. Ghost lapilli fragments to 1.5 cm diameter are observed.	302037	14.00-16.00	2.00	0.030
			From 16.43-18.50m quartz veining and open fracturing at 10-15° to C.A. (roughly parallel to C.A.) has caused very blocky core. Weathered and limonite stained fracture surfaces. Pyrite mineralization is much weaker than previous section at <1%.	303038	16.00-18.00	2.00	0.030
			From 18.50-19.00m the low angle to core axis is replaced by fracturing at 45- 50°. From 19.00-19.35m low angle fracturing returns at 15-20° to C.A.	303039	18.00-20.00	2.00	0.050
			Unit becomes flooded with a pervasive	303040	20.00-21.30	1.30	0.055
			creamy white cherty type quartz. This has been overprinted by a pinkish brown limonite staining that has permeated rock along fractures. Fracturing roughly parallel to C.A. (3-7°) coated with black MnO ₂ cases blocky core in this section.	303041	21.30-23.00	1.70	0.095
			As above but core less broken. Low	303042	23.00-25.00	2.00	0.065
			Quartz flooded bleached zoned gradually diminish towards 27.00m. At 25.95m, dark grey patches in quartz vein may be sphalerite (very fine grained specks). White argillically altered felsic fragments (feldspar crystal fragments?) give a "porphyritic" appearance to unit over small 10 cm sections.	303043	25.00-27.00	2.00	0.095
			Light green colour along fractures 5° to	303044	27.00-29.00	2.00	0.080
			Light greenish cream bleached zone	303045	29.00-31.00	2.00	0.100
			from 29.00-29.50m with strong rusty red limonite stain overprinted. From 29.50-31.00m returns to alternating bands of dark grey and light grey silicified tuff.	303046	31.00-33.00	2.00	0.180
			Core is very broken throughout this	303047	33.00-34.00	1.00	0.160
			fracturing from 34.20-36.00m at 40-60° to C.A. and 10-20° to C.A. Limonite staining permeates bleached zones. Possible specks of sphalerite at 36.00m	303048	34.00-36.00	2.00	0.180

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from	to	Code	Description	sample	from/to	width	Au
(111)			At 36.25m large fragments to 3 cm diameter visible. From 37.05-37.36m an intensely fractured and bleached zone with limonite staining occurs. 2- 3mm thick <u>epidote</u> veins also occur at 25-30° to C.A. White argillic alteration is also found along the veins. Epidote veining also occurs from 37.93-38.08m	No. 303049	36.00-38.00	(m) 2.00	(g/ t) 0.190
			From 38.40-38.80m clay coated <u>shear</u> cross fractures occur. fractures at 35° and 20° to C.A.	303050	38.00-39.00	1.00	0.190
	·		Homogeneous section of grey finer grained tuff with white argillically altered feldspar? fragments, lending a porphyritic texture to rock. From 39.70-40.00m quartz & epidote veinlets occur at 30° to C.A.	303051	39.00-41.00	2.00	0.145
			Epidote and k-spar (pink) veining from 41.80-42.00m at 25-30° to C.A. Small shear? zone (broken core) from 42.80- 43.00m.	303052	41.00-43.00	2.00	0.070
			1 cm wide epidote at 43.10m at 33° to C.A. as well as at 43.50m and 43.82m. K-spar accompanies the epidote. Pyrite epidote veinlet at 45.00m.	303053	43.00-45.00	2.00	0.040
			Shear zone from 46.35-46.70m approx. Broken core impairs measurement accuracy. Zone undulates for 5-30° to C.A.	303054	45.00-47.00	2.00	0.055
			Black colour to quartz veining from 47.70-47.80m - sphalerite?	303055	47.00-47.80	0.80	0.030
47.80	48.40	198	FAULT ZONE in Bleached and Epidote Stained SILICEOUS FELSIC LAPILLI TUFF - Core very broken up. minor gouge but intensely limonite stained. Fault approx 40° to C.A. with veining	303056	47.80-48.40	0.60	0.020
48.40	69.35	312	Light bluish grey SILICEOUS FELSIC LAPILLI TUFF with widely spaced pyritic quartz and epidote veins at 30° to C.A.	303057	48.40-50.00	1.60	0.050
			Quartz vein flooding from 50.55-51.10m at 45° to C.A. Rotted and vuggy vein at 50.80m. From 51.05-51.66m unit is intensely quartz and epidote veined at approx. 15° to C.A.	303058	50.00-52.00	2.00	0.030
			Strong k-spar alteration in quartz epidote vein system from 52.20-52.75m. Pinkish k-spar and light green epidote.	303059	52.00-54.00	2.00	0.100
			Epidote and k-spar alteration decreases significantly. Unit shows rough "porphyritic" texture due to argillic alteration of felsic fragments reach 0.5 cm diameter.	303060	54.00-56.00	2.00	<0.005

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from (m)	to (m)	Code	Description	sample No.	from/to	width (<i>m</i>)	Au (g/t)
,	()		Core is very broken & blocky from 54.30-56.10m with intense limonite alteration permeating into the unit along fractures leaving rusted envelopes.	303061	56.00-58.00	2.00	0.085
			Darker bluish grey with pervasive silicification Fracturing at 10° to C.A. At 59.80m, small 1.5 cm patch of pyrite with chlorite and minor epidote.	303062	58.00-60.00	2.00	0.080
			Intensely fractured but healed with quartz. Minor specks of sphalerite at 60.78m.	. 303063	60.00-61.00	1.00	0.100
			Pyrite more common veining as from 61.50-64.75m and 62.43-62.64m. Core very broken and rusted from 62.35- 63.40m due to fracturing at 5° to C.A. at 55° to C.A.	303064	61.00-63.00	2.00	0.290
			Minor sphalerite in chlorite-epidote				
			py.	303065	63.00-64.00	1.00	0.575
			ру	303066	64.00-65.00	1.00	0.425
			py.	303067	65.00-66.00	1.00	1.800
			py.	303068	66.00-67.00	1.00	0.720
			epidote:	303069	67.00-68.00	1.00	0.335
			Brecciated appearance more common below 63.50 due o silicification and bleaching. Chlorite zone (small dyke?) 63.88-64.12m. Abundant chlorite- epidote brecciation 67.00-67.34m. Sharp lower contact at 68° to C.A.	303070	68.00-69.35	1.35	0.495
69.35	76.15	512	ANDESITE DYKE - White plagioclase	303071	69.35-71.00	1.65	0.040
			phenocrysts up to 5mm in length within a dark green fine grained matrix.	303072	71.00-73.00	2.00	0.070
			Bleaching common along fractures at	303073	73.00-75.00	2.00	0.200
			75° to C.A. and 10° to C.A. Minor pyrite along fractures 10° to C.A. Lower contact very gradational, dark green matrix bleached at 73.80m. Minor epidote throughout down to contact. Contact defined at end of plagioclase phenocrysts. Minor fault at 22° to C.A.	303074	75.00-76.15	1.15	0.680
76.15	92.52	392	Highly Brecciated SILICEOUS FELSIC	303075	76.15-78.15	2.00	0.495
			TUFF - Moderate pyrite content throughout as irregular veinlets and	303076	78.15-80.00	1.85	0.680
			coarse disseminated patches. Pyrite	303077	80.00-82.00	2.00	0.450
			associated with chlorite and epidote.	303078	82.00-84.00	2.00	0.535

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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
	`		Pyrite-epidote-chlorite.	303079	84.00-86.00	2.00	1.055
			More intense epidote-chlorite stockwork breccia between 85.20-86.70m, abundant pyrite to about 10°. <u>Pink</u> scapolite alteration of coarse fragments also pink calcite.	303080	86.00-88.00	2.00	0.815
			Oxidized white quartz veinlets up to 12	303081	88.00-90.00	2.00	0.640
	00.50 00.44 50		mm wide at 24° to C.A. These quartz veins are not pyritic (the surrounding fragments are pyritic). Minor epidote along fractures at 38° to C.A. Lower contact broken at \approx 45° to C.A.	303082	90.00-92.52	2.52	0.250
92.52	93.44	521	Altered ANDESITE DYKE - Dark green, fine grained, fractures are very rusty. Rubbly core. Lower contact broken ≈55° to C.A.	303083	92.52-93.44	0.92	0.195
93.44	106.49	311	SILICEOUS FELSIC TUFF - Light to	303084	93.44-95.00	1.56	0.195
			rare pyrite. Very rusty fractures and	303085	95.00-97.00	2.00	0.220
			broken core 101.20-106.49m	303086	97.00-99.00	2.00	0.940
			FAULT Fractures mainly subparallel to core	303087	99.00-101.00	2.00	0.495
			axis. Slightly more chloritic below	303088	101.00-103.00	2.00	0.605
			101.20m. Short pyrite zone 105.42-	303089	103.00-105.00	2.00	0.290
			106.49m Probably washing away of Fault Gouge. 20% core loss. Trace of pink calcite 98.95m on fracture 70° to C.A. Lower contact on fracture at 22° to C.A.	303090	105.00-106.49	1.49	0.725
106.49	109.22	521	ANDESITIC DYKE - Dark green, fine grained very sparse pyrite. minor rounded plagioclase phenocrysts up to 7mm in length.	303091	106.49-109.22	3.03	<0.005
109.22	117.67	311	SILICEOUS FELSIC TUFF Mainly dark	303092	109.52-111.00	1.48	0.575
			areas. Minor epidote veining at 30° to	303093	111.00-113.00	2.00	0.570
	i.		C.A. Pyrite forms narrow irregular	303094	113.00-115.00-	2.00	0.385
			lenses and veinlets at 70° to C.A. Core highly fractured 115.80 to lower contact mostly subparallel to core axis.	303095	115.00-117.65	2.65	0.130
117.67	118.41	521	ALTERED ANDESITE DYKE - Dark to light green, fine grained shore pyritized and bleached zone, very rusty fractures. Lower contact at 65° to C.A. Bleached zone at 118.00m is at 40° to C.A.	303096	117.65-118.41	0.76	0.010
118.41	126.35	312	EPIDOTIZED SILICEOUS FELSIC TUFF	303097	118.41-120.50	2.09	0.090
			- Abundant epidote in narrow quartz veinlets commonly at 21° to C.A. Close	303098	120.50-122.00	2.00	0.050
			spaced fractures common. Minor	303099	122.00-124.00	1.50	0.105
			disseminated pyrite, pyrite also coating fractures. Lower contact sharp at 51° to C.A.	303100	124.00-126.35	2.35	0.080

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SECTION	SECTION: <u>29970N</u>		Page: <u>6</u>			DDH#:	HS97-10
from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (a/t)
126.35	127.48	521	BLEACHED ANDESITE DYKE - Dark green, fine grained, narrow 1-4mm wide bleached zones around fractures at 74° to C.A. Lower contact at 60° to C.A not as sharp as upper contact	266401	126.35-127.48	1.13	0.040
127.48	143.70	322	Weakly Mineralized SILICEOUS	266402	127.48-129.00	1.52	0.310
			FELSIC TUFF - minor brown sphalerite	266403	129.00-131.00	2.00	0.225
			pyrite in fracture filling and veinlets at	266404	131.00-133.00	2.00	0.220
			mainly 45-60° to C.A. Gouge coated fractures 130 70m 30° to C.A. Slight	266405	133.00-134.00	1.00	0.260
			increase in sphalerite content below	266406	134.00-135.00	1.00	0.375
			133.00m.	266407	135.00-136.00	1.00	0.560
				266408	136.00-137.00	1.00	0.365
				266409	137.00-138.00	1.00	0.665
				260410	138.00-139.00	1.00	0.280
				266411	139.00-140.00	1.00	0.300
			Veinlet at 137.21m is typical up to 8mm	266412	140.00-141.00	1.00	0.800
			wide with chlorite-quartz-pyrite-quartz	266413	141.00-142.50	1.50	0.570
			to C.A. Highly broken core 140.30-	266414	142.50-143.70	1.20	0.200
			parallel to core axis. More broken - fractured core 142.60 to lower contact. Lower contact is sheared and sharp, gougy at 56° to C.A.				
143.70	150.07	521	DYKE - Dark green mainly, calcite gougy	266415	143.70-145.00	1.30	0.025
			common.	266416	145.00-146.50	1.50	0.065
			Short pyritized-epidotized tuff zone 147.05-147.80m.	266417	146.50-148.00	1.50	0.120
			Lower contact somewhat convoluted at approx. 14° to C.A. Slickensides abundant.	266418	148.00-150.07	2.07	0.035
150.07	156.30	321	SILICEOUS FELSIC TUFF - Light grey	266419	150.07-152.00	1.93	0.055
			porphyroblasts common throughout.	266420	152.00-154.00	2.00	0.085
			Highly fractured near lower contact. Very sparse pyrite, traces of disseminated pyrite, epidote occurs as veinlets at 48° to C.A. More mottled texture below 154.00m.	266421	154.00-156.30	2.30	0.080
156.30	164.50	521	ALTERED ANDESITE DYKE - Dark	266422	156.30-157.50	1.20	0.050
			green, fine grained, small 1-2mm white plagioclase porphyroblasts common	266423	157.50-159.00	1.50	0.020
			throughout. Epidote abundant in	422624	159.00-160.00	1.00	0.025
			veinlets 160.2-161m at 10° to C.A. & 50°. Minor pyrite along fractures and	266425	160.00-161.00	1.00	0.055
			trace disseminated pyrite. Short, barren	266426	161.00-163.00	2.00	0.025
			felsic tuff section 157.04-157.5m. Lower contact at 29° along sharp fractures.	266427	163.00-164.50	1.50	0.025

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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
164.50	176.80	311	SILICEOUS FELSIC TUFF - Light to	266428	164.50-166.00	1.50	0.055
			medium grey trace of disseminated	266429	166.00-168.00	2.00	0.060
			suggestive of devitrification texture.	266430	168.00-170.00	2.00	0.060
			Trace of epidote on 70° fractures, main fractures at 10-20° to C.A. Relatively	266431	170.00-171.50	1.50	0.180
		312	Pyrite veinlets up to 2.5 cm at 15-20° to	266432	171.50-173.00	1.50	0.160
			C.A. Pyrite content 169.50m and down	266433	173.00-174.50	1.50	0.085
			Lower content highly brecciated brown	266434	174.50-176.00	1.50	0.070
			alteration (intrusive breccia)	266435	176.00-176.80	0.80	0.060
176.90	190.30	521	ANDESITE DVKES - Dark green fine	266436	176 80-177 78	0.98	0.020
	551	grained, plagioclase phenocryst. Upper part of interval 176.80-177.78m highly	266437	177.78-180.32	2.54	0.010	
		brecciated, bleached fragments, minor pyrite. Lower part uniform, unmineralized dyke. Lower contact at 4° to C.A.					
180.32	187.43	311	SILICEOUS FELSIC TUFF - Light grey,	266429	180.32-182.00	1.68	0.035
		generally fine grained, slight mottled	266439	182.00-183.50	1.50	0.040	
		appearance. pyrite	266440	183.50-184.00	0.50	0.090	
		Disseminated pyrite, finely divided throughout. Pyrite veinlet 193.70-	266441	184.00-185.50	1.50	0.040	
			183.76 at 26° to core axis.	266442	185.50-187.43	1.93	0.040
187.42	187.42 196.60 5	521	ANDESITE DYKE - Altered due to contacts being subparallel to core axis giving short section of felsic tuff, very friable. Irregular patches and veinlets of	266443	187.43-489.00	1.57	0.010
				266444	189.00-190.50	1.50	0.010
				266445	190.50-191.50	1.00	0.020
			pyrite at low angles to C.A. Short felsic	266446	191.50-192.50	1.00	0.015
			19° to C.A. minor gouge along 70°	266447	192.50-194.50	2.00	0.010
			fractures at 193.92m. Lower contact characterized by fine grained brown alteration (Biotite>?). Rubbly core at	266448	194.50-196.60	2.10	0.010
196.60	201.19	311	SILICEOUS FELSIC TUFF - Light grey,	266449	196.60-198.00	1.40	<0.005
			fine grained, with dark grey indistinct	266450	198.00-199.50	1.50	<0.005
			mottling. <u>Highly fractured and friable</u> .	266451	199.50-201.19	1.69	0.010
			Minor disseminated pyrite and pyrite coating pyrite.	200101			
201.19	202.23	521	Lower contact sharp at 22° to C.A. ANDESITE DYKE - Dark green, fine grained, highly fractured at low angle to core axis. Lower contact sharp at 34° to C.A.	266452	201.19-202.23	1.04	0.015
202.23	203.78	311	SILICEOUS FELSIC TUFF - Light grey mottled by darker grey, highly fractured at 25-30° to C.A. Minor small pyrite lenses at upper contact. Lower contact sharp at 10° to C.A., curved.	266453	202.23-203.78	1.50	0.010

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from (m)	to (m)	Code	Description	sample No,	from/to	width (m)	Au (g/t)
203.78	220.65	521	ANDESITIC DYKE - Mainly dark green,	266454	203.78-205.00	1.22	0.015
			fine grained with plagioclase phenocrysts up to 3mm in length. Pyritic sheared- fractured and altered (biotitic) from upper contact down to 206.50.	266455	205.00-206.50	1.50	0.015
			Less pyrite and alteration below except for minor epidote alteration 210.00- 211.70m. Epidote mainly fills fractures at 15° to C.A. but minor pervasive epidote occurs between 210.15-210.34m Minor fracture-fault at 211.62m at 67° to C.A. Section 211.70-218.00m is very uniform, unaltered Andesite - not sampled.	266456	210.00-212.00	2.00	0.010
			Brecciated and associated biotitic and	266457	218.00-219.00	1.00	<0.005
			A the second sec	266458	219.00-220.65	1.65	<0.005
220.65	230.00	311	SILICEOUS FELSIC TUFF - Medium to	266459	220.65-222.00	1.35	0.015
		pyritic veinlets at 15° to C.A.	266460	222.00-223.50	1.50	0.035	
			Narrow Andesitic Dyke between 224.38-	266461	223.50-225.00	1.50	0.030
			227.76m. Moderately well fractured. Main fracture direction 24° to C.A.	266462	225.00-226.50	1.50	0.035
			Pyrite gradually increasing below.	266463	226.50-228.00	1.50	0.935
				266464	228.00-229.00	1.00	0.050
				266465	229.00-230.00	1.00	0.125
230.00	233.48	312	PYRITIC SILICEOUS FELSIC TUFF - Light to medium grey, mottled texture.	266466	230.00-231.00	1.00	0.385
			abundant pyrite	266467	231.00-232.00	1.00	1.410
			abundant pyrite	266468	232.00-233.00	1.00	0.280
			abundant pyrite Numerous pyritic veinlets at approx. 10° to C.A. cut through interval. Drusy quartz veins common. minor gouge filled fractures at 230.40m. Traces of light brown sphalerite. Fractures subparallel to core axis. Pyrite abruptly decreases in abundance at 233.48m.	266469	233.00-234.00	1.00	0.195
233.48	248.30	311	SILICEOUS FELSIC TUFF - Light grey to	266470	234.00-235.50	1.50	0.045
			medium grey mottled texture, well fractured at low angle to core axis, minor	266471	235.50-237.00	1.50	0.060
			disseminated pyrite, sporadic pyrite	266472	237.00-238.50	1.50	0.055
			veinlets on fractures.	266473	238.50-240.00	1.50	0.160
			short andesite dyke	266474	240.00-241.05	1.05	0.110
			core loss	266475	241.05-242.62	1.57	0.025
				266476	242.62-244.00	1.38	0.025

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from (m)	to (m)	Code	Description	sample No.	from/to	width	Au (g / t)
()	()		Slight increase in pyrite content at	266477	244.00-245.50	1.50	0.130
			average 28° to C.A. Lower contact sharp	266478	245.50-247.00	1.50	0.105
			at 35° to C.A. marked by increase in	266479	247.00-248.30	1.30	0.160
248.30	249.20	521	ALTERED ANDESITE DYKE - Dark green, fine grained minor epidote-quartz veining at 31° to C.A. Lower contact	266480	248.30-249.20	0.90	0.050
249.20	251.15	321	sharp at 22° to C.A. SILICEOUS FELSIC TUFF - Light to medium grey, calcite films on 65° to C.A. fractures common. Uniform, biotite content much higher than previous interview.	266481	249.20-251.15	1.95	0.080
251.15	253.95	521	PORPHYRITIC ANDESITE DYKE - Light	266482	251.15-152.45	1.30	0.010
			grey-white plagioclase phenocrysts common throughout in dark grey fine grained matrix. Lower contact sheared	266483	252.45-253.95	1.50	0.040
253.95	263.20	311	at low angle to C.A. SILICEOUS FELSIC TUFF - medium	266484	253.95-255.00	1.05	0.050
			grey mottled with slightly darker grey,	266485	255.00-256.50	1.50	0.110
			parallel to core axis between 256.50-	266486	256.50-258.00	1.50	0.105
			258.00m Plagioclass ranged porphyroblasts more	266487	258.00-259.50	1.50	0.085
			common between 261.00-262.00m.	266488	259.50-261.00	1.50	0.130
			Lower part very pyritic before lower contact. Approximately 10% pyrite	266489	261.00-262.00	1.00	0.100
			between 262.00-263.20m. Lower contact at about 40° to C.A.	266490	262.00-263.20	1.20	0.070
263.20	266.08	521	indistinct. FELDSPAR PORPHYRY (Andesite	266491	263.20-264.60	1.40	0.020
			Dyke) - Very porphyritic, crowded plagioclase phenocrysts averaging about 2mm in length, in dark greenish grey groundmass. Lower contact has been	266492	264.60-266.08	1.48	0.020
266.08	270.05	312	PYRITIC SILICEOUS FELSIC TUFF -	266493	266.08-267.00	0.92	0.045
			Light grey with darker grey mottling.	266494	267.00-268.00	1.00	0.035
			parallel to C.A. at 269.00m. Uniform	2664 95	268.00-269.00	1.00	0.055
			disseminated pyrite 2-3% pyrite overall. Biotite abundant 269.80-270.05m suggestive of Dacitic Nodular relict texture.	266496	269.00-270.05	1.05	0.050

End Of Hole 270.05m (886 ft)

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SECTION:	30050N	Diamond I	orill Log					
Northing:	30050.00N	Drill Hole s	urvey					
Easting:	31020.00	Method: _	Method: <u>Degree Rule</u>					
Elevation:	906m	Azimuth	Dip	Depth				
Azimuth:	060	060	-60	0 .				
Inclination:	-60							
Grid:	Aranlee							
Length (m):	<u>230.73 (757ft)</u>							
Core size:	NQ-2							
Contractor:	F. Boisvenu			-				
Drill Type:	Boyles 37			· 				
-			1					
			<u> </u>					

Property:HotspringNTS:92G/11WClaim:Hotspring 7Date Started:Oct. 20/97Date Completed:Oct. 2/97Logged by:J.T.Shearer

Purpose:	Contin	uation of	f lost hole HS97-08, east of major fault.				
from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
0.00	3.05	900	Casing - no core recovery				
3.05	6.42	521	ANDESITE DYKE - Dark green, fine	303701	3.05-4.50	1.45	0.020
		-	grained, minor bleaching for 1-2mm around 10° to C.A. fractures. Pyritic veinlets 4.46m at 44° to C.A. Rubbly core to 3.80m. Lower contact sharp at 62° to C.A. on very rusty fracture.	303702	4.50-6. 42	1.92	0.010
6.42	10.02	312	PYRITIC SILICEOUS FELSIC TUFF -	303703	6.42-8.00	1.58	<0.005
			Light grey, fine grained mottled with slightly darker grey, pyrite-chlorite along	303704	8.00-9.00	1.00	<0.005
			aligned to irregular veinlets discontinuous at 60° to C.A. Short Andesite Dyke from 8.76-8.90m at 75° to C.A. Lower contact at 75° to C.A.	303705	9.00-10.02	1.02	<0.005
10.02	13.31	521	ANDESITE DYKE - Dark green, fined	303706	11.02-11.50	1.48	<0.005
	·		grained, upper 50 cm slightly bleached. White plagioclase phenocrysts common to 3mm in length. Minor pyrite along quartz veinlets at 64° to C.A. Lower contact faulted with white gouge at \approx 70° to C.A. Core sheared & granulated.	303707	11.50-13.21	1.71	<0.005
13.21	14.72	311	SILICEOUS FELSIC TUFF - Light grey, well mottled with biotitic lenses, upper contact Fault down to 13.45m, minor chlorite filled shearing. White is gouge at 14.00m & 14.05m 80° to C.A. Minor gouge on Lower contact at 65° to C.A.	303708	13.21-14.72	1.51	<0.005
14.72	15.51	521	ANDESITE DYKE - moderate green, fine grained, traces pyrite in 10mm quartz veinlet at 15.40 at 52° to C.A. Lower contact grey greenish gougy fractures	303709	14.72-15.51	0.79	<0.005
15.51	21.85	311	SILICEOUS FELSIC TUFF - brownish	303710	15.51-17.00	1.49	<0.005
		0 011	grey, fine grained, mottled with chloritic & biotitic lenses. Much more biotite in	303711	17.00-18.50	1.50	<0.005
			this interval - perhaps more relict dacitic	303712	18.50-20.00	1.50	<0.005
			character. Very mottled in places. Lower contact sharp at 68° to C.A.	303713	20.00-21.85	1.85	<0.005

SECTIO	N: <u>30050</u>	<u>N</u>	Page: 2			DDH#:	HS97-11
from	to	Code	Description	sample	from/to	width	Au
(m) 21.85	(m) 23.73	521	ANDESITE DYKE - Dark green, fine grained, fractures common at 5° to C.A.	No. 30 3714	21.85-23.73	(m) 1.88	(g/t) <0.005
			with minor pyrite. Lower contact fractured but appears to be 75-80° to C.A.				
23.73	29.30	311	BIOTITIC SILICEOUS FELSIC TUFF -	303715	23.73-25.00	1.27	<0.005
			Dark grey, highly mottled with dark brown fragmental texture accentuated	303716	25.00-26.50	1.50	0.030
			by replacement chlorite. minor pyrite	303717	26.50-28.00	1.50	<0.005
			veinlets such as 24.04-24.07m at 58° to	303718	28.00-29.30	1.30	<0.005
			with white gouge at 28° to C.A.				
29.30	30.69	521	ANDESITE DYKE - Dark green, fine	303719	29.30-30.69	1.69	<0.005
			fractures common. Minor rusty quartz				
			veining sub parallel to C.A. starting at				
			31.08-31.40m. Lower contact gouge coated fracture at 55° to C.A.				
30.69	31.29	331	BIOTITIC SILICEOUS TUFF - Light grey	303720	30.69-31.29	0.60	0.010
			with rounded dark brown mottling,				
			White siliceous patches common. Lower				
		501	contact, gougy fracture at 65° to C.A.	202701	21 00 22 00	171	~0.005
31.29	35.17	521	andesitic dyke - Dark green, line grained, minor bleaching along 60°	303721	31.29-33.00	1.71	<0.005
			fractures. Lower contact sharp at 55° to C.A.	303722	33.00-35.17	2.17	<0.005
35.17	36.25	331	BIOTITIC SILICEOUS TUFF - Brownish	303723	35.17-336.25	1.08	0.080
			at top but becoming light grey toward bottom of interval. Lower contact sharp at 65° to C.A.				
36.25	37.37	521	ANDESITE DYKE - Dark green, fine	303724	36.25-37.37	1.12	0.015
			grained, Lower contact medium brown "hornfels" ending in greenish white				
			gouge.				
37.37	59.50	311	SILICEOUS FELSIC TUFF - medium	303725	37.37-38.80	1.43	0.060
			sections, fragments commonly light tan	303726	38.80-40.00	1.20	0.050
			coloured, gougy fractures at 41.92-	303727	40.00-41.50	1.50	0.040
			pyrite content with depth.	303728	41.50-43.00	1.50	0.030
				303729	43.00-44.50	1.50	0.030
				303730	44.50-46.00	1.50	0.250
				303731	46.00-47.50	1.50	0.040
				303732	47.50-49.00	1.50	0.190
				303733	49.00-50.50	1.50	0.065
				303734	50.50-52.00	1.50	0.080
				303735	52.00-53.50	1.50	0.060
				303736	53.50-55.00	1.50	0.070
				303737	55.00-56.50	1.50	0.035

SECTION: <u>30050N</u>			Page: <u>3</u>			DDH#:	<u>HS97-11</u>
from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
			Quartz veinlet 54.66-54.69 at 83° to	303738	56.50-58.00	1.50	0.170
			C.A., has to 11mm as a band of pyrite. interval relatively uniform throughout. Lower contact very gradational over	303739	58.00-59.50	1.50	0.135
59.50	64.60	313	PYRITIC VERY SILICEOUS FELSIC	303740	59.50-60.50	1.00	0.135
			TUFF - Light grey, fine grained overall, highly brecciated and yeined by ailing	303741	60.50-61.50	1.00	0.045
			Veining is irregular, but mainly at 10-	303742	61.50-62.50	1.00	0.105
			20° to C.A. Lower contact Faulted, white gouge approximately 70° to C.A.	303743	62.50-63.50	1.00	0.225
			5	303744	63.50-64.60	1.10	0.200
64.60	67.77	411	DACITIC "FELSIC" TUFF - Brown, biptitic matrix and typical nodular texture immediately below fault at 65.50m. Core loss in Fault 80% recovery in Fault.	303745	64.60-66.14	2.44	0.020
			Core recovered, not mineralized. Rusty	303746	66.14-67.77	1.63	0.020
67.77	68.74	521	ANDESITE DYKE - Fine grained, dark green. Lower contact has white gouge along 47° to C.A. fracture. Minor	303746	67.77-68.74	0.97	0.020
68.74	95.50	312	disseminated pyrite. PYRITIC VERY SILICEOUS FELSIC	303748	68.74-70.00	1.26	0.020
			TUFF - Light grey, mottled appearance with abundance of lighter grey	303749	70.00-71.00	1.00	0.490
			fragments. Irregular quartz veinlets and	303750	71.00-72.00	1.00	1.205
			lenses. Minor sphalerite at 73.41- 73.72m 303751	303751	72.00-73.00	1.00	1.900
			, 4	303752	73.00-74.00	1.00	1.030
				303753	74.00-75.00	1.00	0.215
				3037554	75.00-76.00	1.00	0.260
				303755	76.00-77.00	1.00	0.155
				303756	77.00-78.00	1.00	0.035
				303757	78.00-79.00	1.00	0.135
				303758	79.00-80.00	1.00	0.090
			Minor gouge on fractures at 74.45m at	303759	80.00-81.50	1.50	0.065
			80° to C.A. most quartz veinlets between 68.74m & 80.00m contain traces of dark	303760	81.50-83.00	1.50	0.025
		b8.74m & 80.00m contain traces of dark brown sphalerite. Biotitic matrix increases slightly between 87.70-90.50m with corresponding decrease in silica content. White quartz-mottled silica flooding 93.50-94.50m. Minor light brown-boney coloured sphalerite at	303761	83.00-84.50	1.50	0.055	
			increases slightly between 87.70-90.50m with corresponding decrease in silica	303762	84.50-86.00	1.50	0.430
			content. White quartz-mottled silica flooding 93.50-94.50m. Minor light brown-honey coloured sphalerite at 93.66m.	303763	86.00-87.50	1.50	0.250
				303764	87.50-89.00	1.50	0.035
				303765	89.00-90.50	1.50	0.030
				303768	90.50-92.00	1.50	0.305
				3037 69	92.00-93.50	1.50	1.620
				303770	93.50-94.50	1.00	2.180

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SECTION	I: <u>30050N</u>		Page: <u>4</u>	•		DDH#:	<u>HS97-11</u>
from (m)	to (m)	Code	Description Dark brown almost purplish sphalerite	sample No. 303771	from/to 94.50-95.50	width (m) 1.00	Au (g/t) 2.320
			Lower contact very gradational. Determined by increase in pyrite and sphalerite content.				
95.50	106.01	313	FELSIC TUFF - Medium grey, highly	303772	95.50-96.50	1.00	3.800
			altered appearance, fragmental, quartz	303773	96.50-97.00	0.50	1.220
			verning at 100.22 is at 71° to C.A. Very abundant pyrite, abundant	303774	97.00-98.00	1.00	0.325
			sphalerite.	3030775	98.00-99.00	1.00	1.140
			Chalcopyrite present in areas of most intense pyrites minor disseminations	303776	99.00-100.00	1.00	1.315
			and small fracture controlled lenses.	303777	100.00-101.00	1.00	0.635
			Quartz veining at 101.53m is 73° to C.A.	303778	101.00-102.00	1.00	0.920
			Lower contact sheared and Faulted.	303779	102.00-103.00	1.00	7.760
			Shearing at 21° to C.A. Minor gouge along fractures.	303780	103.00-103.50	0.50	0.635
				303781	103.50-104.00	0.50	0.590
				303782	104.00-104.50	0.50	0.720
				303783	104.50-105.00	0.50	0.595
				303784	105.00-106.01	1.01	0.205
106.01	140.50	411	SILICIFIED ALTERED DACITIC	303785	106.01-107.50	1.49	0.165
			short intervals, however, abundant	303786	107.50-109.00	1.50	0.260
			brown biotitic matrix present in variable	303787	109.00-110.50	1.50	0.220
			proportion throughout. Quartz veining at 15° and 85° common throughout	303788	110.50-112.00	1.50	0.185
			carrying minor brown sphalerite and	303789	112.00-113.50	1.50	0.230
			minor pyrite. Some sphalerite lenses are up to 12mm wide as at 108 53m at 84°	303790	113.50-115.00	1.50	
			to C.A. Although this entire thick	303791	115.00-116.50	1.50	
			interval is characterized by relatively	303792	116.50-118.00	1.50	
			and sphalerite), the whole section is	303793	118.00-119.50	1.50	
			uniform. Quartz veining occurs at several different	303794	119.50-121.00	1.50	
			angles, at 108.00m veining is at 55° to	303795	121.00-122.50	1.50	
			C.A., at 108.53m at 84° to C.A., at	303796	122.50-124.00	1.50	
			40° to C.A. Sphalerite bearing veinlets	303797	124.00-125.50	1.50	
			appear to be high angle veinlets	303798	125.50-127.00	1.50	
			to C.A.	303799	127.00-128.50	1.50	
			Preserved nodular texture is apparent	303800	128.50-130.00	1.50	
			sphalerite veinlet at 127.26m is at 87° to	303801	130.00-131.50	1.50	
			C.A.	303802	131.50-133.00	1.50	
				303803	133.00-134.50	1.50	
				303804	134.50-136.00	1.50	

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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g (t)	
			Minor calcite + gouge on 15° fractures at 130.15-130.40m. Lower contact gradational over 1 metre. Core gradually	303805	136.00-137.50	1.50	187 4	
				303806	137.50-139.00	1.50		
		becomes more broken.	303807	139.00-140.50	1.50			
140.50 149.85 4	149.85	411	FAULTED SILICIFIED ALTERED DACITIC NODULAR TUFF - Core highly fractured, minor gouge on fractures.	303808	140.50-142.50	2.00		
				303809	142.50-144.50	2.00		
			Main shearing angle is 65° to C.A. Minor	303810	144.50-146.50	2.00		
			145.00-145.70m, crushed interval (very	303811	146.50-148.50	2.00		
		friable) from 146.20-147.25m. Gouge on fractures at 149.35m is at about 30° to	303812	148.50-149.85	1.35			
149.85	184.92	421	ALTERED DACITIC NODULAR TUFF -	303813	149.85-151.50	1.65		
			Dark brown matrix predominates	303814	151.50-153.00	1.50		
			fragments. Widely spaced quartz	303815	153.00-154.50	1.50		
			veinlets with minor pyrite and minor sphalerite. Veinlets at 152.80m is 51° to	303816	154.50-156.00	1.50		
			C.A. Veinlet at 154.40m is at 78° to C.A. Small Andesite Dyke 163.29-163.68m. Upper contact at 75° to C.A. Sphalerite bearing veinlet at 163.05 is 64° to C.A., quite chloritic.	303817	156.00-157.50	1.50		
				303818	157.50-159.00	1.50		
				303819	159.00-160.50	1.50		
				303820	160.50-162.00	1.50		
				303821	162.00-163.50	1.50		
				303822	163.50-165.00	1.50		
				303823	165.00-166.50	1.50		
			Sphalerite-pyrite-quartz veinlet from	303824	166.50-168.00	1.50		
			168.390168.46m at 82° to C.A., brown sphalerite. Irregular silicified zone from	303825	168.00-169.50	1.50		
				168.98-169.37m at high angle to core	303826	169.50-171.00	1.50	
			axis, minor pyrite lenses and veinlets. Pyrite-quartz veinlet, 18mm wide at	303827	171.00-172.50	1.50		
			131.98m, 85° to C.A. Gougy fault zone	303828	172.50-174.00	1.50		
			175.59-176.28m - main shear angle approx. 40° to C.A. Bands sphalerite-	303829	174.00-175.50	1.50		
			quartz veinlet at 151.08-151.18m at 25° to C.A. At lower contact - silicified zone 81° to C.A. between 184.78-184.89m. Contact at 80° to C.A.	303830	175.50-177.00	1.50		
				303831	177.00-17 8 .50	1.50		
				303832	178.50-180.00	1.50		
				303833	180.00-181.50	1.50		
				303834	181.50-183.00	1.50		
			303835	183.00-184.00	1.00			
				303836	184.00-184.92	0.92		

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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
184.92	187.79	521	ANDESITE DYKE - Dark green, fine grained minor disseminated pyrite, minor chlorite veinlets at 80° to C.A. Lower contact gradational over 10 cm. White phenocrysts of plagioclase increase as contact is approached.	303837	184.92-186.00	1.80	
187.79	188.54	401	DACITIC NODULAR TUFF - Brown biotitic fine grained matrix with irregular fragments. Gradational lower contact over 5 cm.				
188.54	188.97	521	ANDESITIC DYKE - Dark green, fine grained, minor disseminated pyrite, essentially unmineralized. Sheared lower contact at about 30° to C.A. Minor calcite along shear planes, rough slickensides.				
188.97	191.68	4.01	DACITIC NODULAR TUFF - Dark brown fine grained biotitic matrix, lighter grey nodules well preserved. Minor pyrite lenses at 189.51m. Lower contact indistinct.				
191.68	192.34	521	ANDESITIC DYKE - Dark green, fine grained, not mineralized, minor calcite along 20° fractures.				
192.34	194.08	401	DACITIC NODULAR TUFF - Dark brown, fine grained, biotitic matrix, slightly more silicified, Pyritic with traces of sphalerite. Highly shatter-gouge fault zone at lower contact 75-80° to core axis.	303838	193.00-194.08	1.08	0.255
194.08	195.95	541	HIGHLY FAULTED ANDESITE DYKE -	303839	194.08-195.00	1.42	0.030
			Highly shattered, abundant light grey gouge, main shear direction is at a high angle to core axis. Lower contact indistinct - bleached but	303840	195.00-195.95	0.95	0.020
			appears to be at a high angle.				
195.95	201.80	441	VERY ALTERED AND BLEACHED	303841	195.95-197.50	1.55	0.150
			DACITIC NODULAR TUFF - Light brown	303842	197.50-199.00	1.50	0.070
	·		chloritic bleached areas. Fragments	303843	199.00-200.50	1.50	0.070
			strongly aligned at 60° to C.A.	303844	200 50-201 80	1 30	0.055
			More regular nodular texture apparent for short intervals between 198.70- 199.60m. Lower contact siliceous, veining at 30° to C.A. but contact at high angle to C.A. (70.80°)		200.00 201.00	1.00	0.000
201.80	203.64	521	ANDESITIC DYKE - Dark green, fine grained, numerous calcite filled tension gash veins. Lower contact slightly sheared at 67° to C.A.	303 <u>8</u> 45	201.80-203.64	1.84	
203.64	223.64	411	BLEACHED and ALTERED DACITIC	303846	203.64-205.00	1.36	0.050
			NODULAR TUFF - Light greenish grey,	303847	205.00-206.50	1.50	0.080
			More typical less altered nodular texture 207.80-210.20m.	303848	206.50-208.00	1.50	0.750

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from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
			Slightly sheared bleached zone with traces of disseminated pyrite 212.00- 213.90m, quartz veining mainly at 58° to C.A. Lower contact gradational over 50 cm.	303849	212.00-213.90	1.90	0.350
223.64	230.73	401	DACITIC NODULAR TUFF - Brow, fine grained, biotitic matrix with lighter grey rounded nodular common to highly crowded in association with lighter grey angular fragments. Short bleached zone with minor fracture controlled pyrite between 226.20-227.10m, quartz veining at 30° to C.A. END of HOLE 230.70M (757 ft)	303850	226.00-227.10	1.10	0.245









	$521 - \frac{1005}{321} - \frac{1005}{37} - \frac{38}{37} - \frac{1006}{37} - \frac{37}{321} - \frac{1006}{37} - \frac{37}{37} - \frac{1006}{37} $			25,430 arm
700.00		•	710.00	10 0 10 30 50 1.500 Mt. HOPE RESOURCES CORPORATION HAPPISON LAKE PROJECT
				CROSS SECTION 6-6 DDH HS97-9,10 DRAWN BY: SCALE: DATE: FIGURE: 14

