

ARIS SUMMARY SHEET

District Geologist, Nelson

Off Confidential: 90.05.01

ASSESSMENT REPORT 18798

MINING DIVISION: Greenwood

PROPERTY: Tam O'Shanter
LOCATION: LAT 49 06 00 LONG 118 43 00
UTM 11 5439772 374688
NTS 082E02E

CAMP: 008 Greenwood Camp

CLAIM(S): Shanter
OPERATOR(S): Houston Metals
AUTHOR(S): Arnold, R.R.
REPORT YEAR: 1989, 119 Pages

COMMODITIES

SEARCHED FOR: Gold

KEYWORDS: Carboniferous, Eocene, Knob Hill Group, Marron Formation, Andesites
Tuffs, Grand Forks Group, Diorites, Gold

WORK

DONE: Drilling, Geochemical
DIAD 806.2 m 3 hole(s); NQ
Map(s) - 1; Scale(s) - 1:5000
SAMP 513 sample(s); AU, AG, AS, CU, PB, ZN, SB
MILE: 082ESE130

LOG NO: 0502

RD.

ACTION:

FILE NO:

DIAMOND DRILLING REPORT
 ON THE
 TAM O'SHANTER PROPERTY
 GREENWOOD AREA
 GREENWOOD MINING DIVISION

NTS : 82 - E / 2

W.Longitude 118⁰ 43'

N.Latitude 49⁰ 06'

FOR

HOUSTON METALS CORP.
 910-800 West Pender Street
 Vancouver, B.C.
 V6C 2V6

BY

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HI-TEC RESOURCE MANAGEMENT LTD.
 1500-609 Granville Street
 Vancouver, B.C.
 V7Y 1G5

MARCH 15, 1989

GEOLOGICAL BRANCH
 ASSOCIATED REPORT

18,798

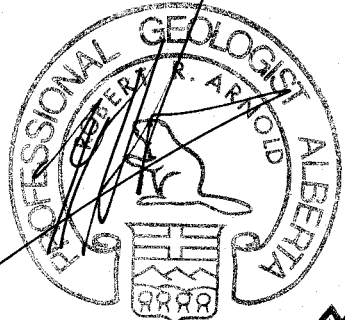


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1.0 SUMMARY

Pursuant to a request by the Directors of Houston Metals Corp., a diamond drilling program was carried out over selected areas of the Tam O'Shanter property to test an Induced Polarization anomaly delineated during the month of November 1988. The drilling program took place during the month of December 1988 and was conducted under the supervision of Hi-Tec Resource Management Ltd.

The property is located approximately 3.5 kilometers west of the town of Greenwood, British Columbia. Easy access by four-wheel drive vehicle to the central claim area is provided by the Deadwood Flat and Mother Lode Creek road, then along a good logging road which leads to the central claims area. Travel distance to the drill sites is about 11.5 kilometers from Greenwood, British Columbia.

The general property area has been explored since 1891 when several prospects were recorded (Mother Lode, Crown Silver, Idaho, Knob Hill...). Production in the area was stimulated at the turn of the century by the completion of branch lines of the Canadian Pacific Railway to Phoenix, Deadwood and other mining camps. Production in the Phoenix district reached a peak in 1913 and sporadic mining activity has been recorded in the area till the present time. The Tam O'Shanter property itself was worked from the 1890's when copper was found in the Nelson intrusives. During 1921-22, underground work was carried out on the Tam O'Shanter claim on a small high grade silver vein. Prospecting, trenching, ground geophysical surveying (magnetometer, IP and resistivity) and geological mapping were conducted on the property between 1964-1974 by various



companies. In 1988, an extensive IP anomaly was delineated in the vicinity of the Bengal Shaft and the present drill program was designed to test this anomalous zone.

The Tam O'Shanter property is underlain by four main formations. The oldest rocks are an assemblage of silicified rock including chert and cherty tuffs, and andesite tuffs. These rocks have been intruded by a stock of diorite and quartz diorite related to the Nelson intrusions. The western part of the property is underlain by units of the Marron volcanic sequence and a small crescent shaped body of the Kettle River Formation sediments occurs between the Marron and older rocks.

Three holes were drilled during the present program for a total of 806.2 meters and five hundred and fourteen core samples were collected and analyzed for gold, silver, arsenic, copper, lead, zinc and antimony. Although low precious metal values were detected in the core samples, the geological setting of the claims, enhanced by the large IP anomaly detected in the Bengal Shaft area warrants further exploration work.

An Induced Polarization geophysical survey should be carried out towards the southwest in order to delineate additional drilling targets. Depending upon positive results from the above exploration program and upon a review of the data, a systematic diamond drilling program should be conducted to determine the source and extent of the geophysical anomalies and to define the geometry and grade characteristics of any identified mineralized zones.



2.0 INTRODUCTION

2.1 Objectives

Pursuant to a request by the Directors of Houston Metals Corp., a diamond drilling program was carried out on the Tam O'Shanter property during the month of December 1988, under the supervision of Hi-Tec Resource Management Ltd.

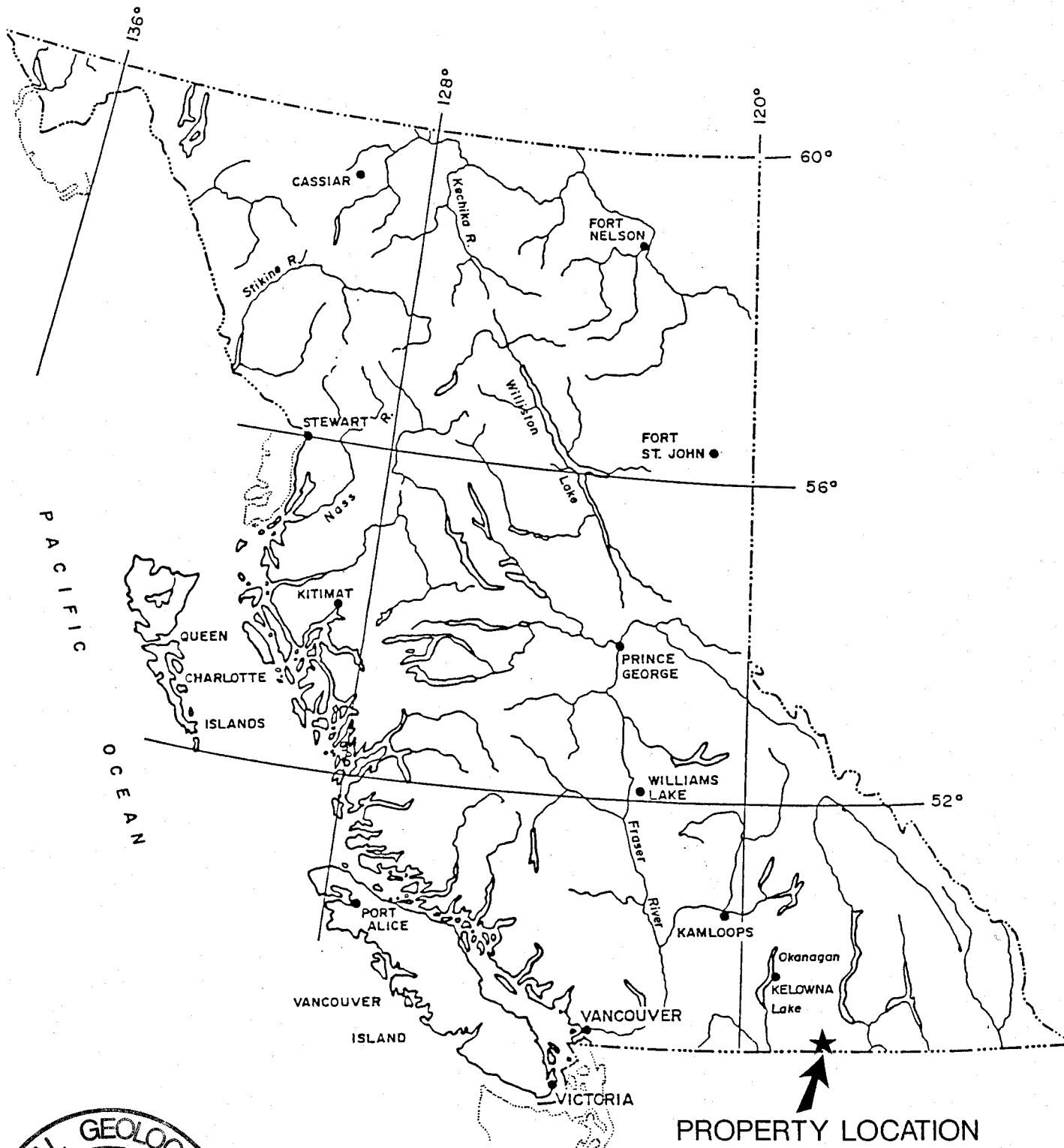
The purpose of the diamond drilling program was to test an important induced polarization anomaly located south of the Bengal Shaft and to evaluate the precious metal and/or base metal potential of this geophysical anomaly. In addition, the drilling program was designed to confirm the presence of an epithermal gold-silver system which is believed to be underlying the Bengal Shaft area.

This report is based on the present drilling program, the results of the previous exploration work carried out on the subject claims and on the available literature pertaining to the area. The writer supervised the 1988 drilling program.

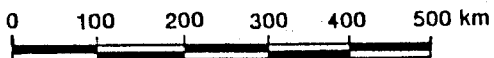
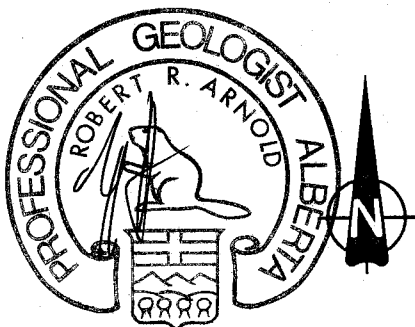
2.2 Location and Access

Province:	British Columbia
Area:	Greenwood
Mining Division:	Greenwood
NTS:	82 - E / 2
Longitude:	49 degrees 06' West
Latitude:	118 degrees 43' North
Size of Area:	1,376 hectares (3,400 acres)
Disposition Holders:	Houston Metals Corp.





PROPERTY LOCATION



HOUSTON METALS CORP.

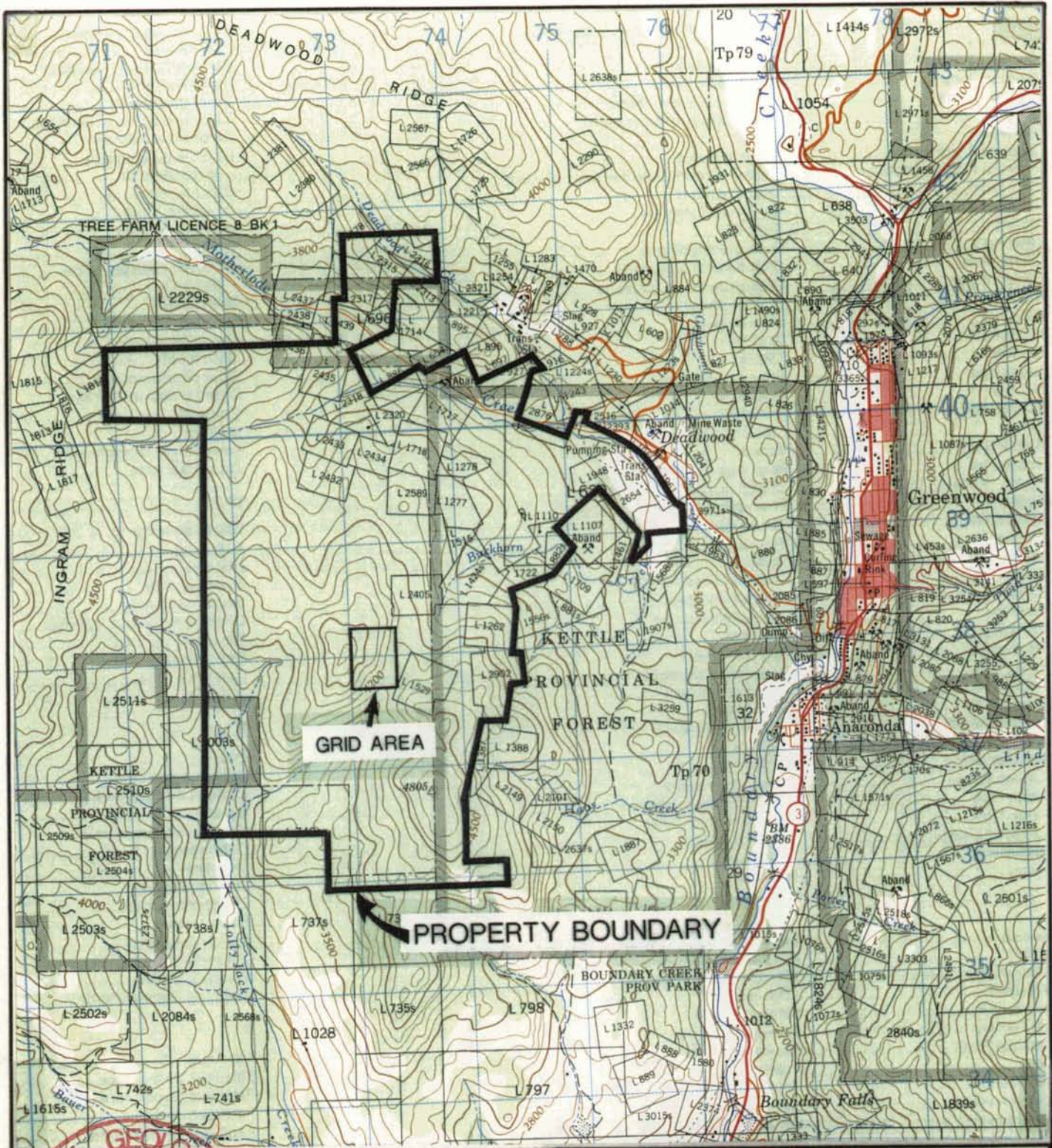
TAM O'SHANTER PROPERTY

GENERAL LOCATION MAP



HI-TEC
RESOURCE MANAGEMENT LTD.

SCALE: As shown	N.T.S. 82E/2E	FIGURE No. 1
OWN. BY: H.V.	DATE: March/1989	
CHKD. BY: R. Arnold	PROJECT No: 88BC 053	FILE No:



HOUSTON METALS CORP.		
TAM O'SHANTER PROPERTY		
TOPOGRAPHIC MAP		
SCALE: 1 : 50,000	N.T.S.: 82E/2E	FIGURE No.: 2
OWN. BY: H.V.	DATE: March/1989	FILE No.:
CHKD. BY: R. Arnold	PROJECT No.: 88BC 053	



HI-TEC
RESOURCE MANAGEMENT LTD.

The Houston Metals Corp. property is located approximately 3.5 kilometers west of the town of Greenwood, British Columbia (Figures 1 & 2). Easy access by four-wheel drive vehicle to the central claim area is provided by the Deadwood Flat and Mother Lode Creek road, then along a good logging road which leads to the central claims area. Travel distance to the drill sites is about 11.5 kilometers from Greenwood, British Columbia.

2.3 Operations and Communications

Field work was carried out during the month of December 1988. The field crews were based in Greenwood, British Columbia, and commuted daily to the property. Telephone communications were maintained with the office in Vancouver, British Columbia, on a regular basis.

A four-wheel drive pick-up truck was rented from RedHawk Rentals Ltd., in Vancouver, British Columbia, and was used to reach the property and carry the core back to Greenwood.

All of the core was logged on the premises of Mr. Bergeron, in Greenwood, and is now stored on Mr. Bergeron's property.

2.4 Physiography

Local topographic relief is moderate with some steep slopes. Topography in the area is fairly mature and most peaks are rounded by glacial action. During the Pleistocene epoch the Cordilleran ice mass covered even



the highest peaks. This ice mass receded about 10,500 to 11,500 years ago. Elevations within the property range from about 853 meters (2,800 feet) A.S.L. near Deadwood Flat to 1,465 meters (4,805 feet) A.S.L. in the south central part of the subject property.

Vegetation consists mainly of fir, larch and lodge pole and underbrush is relatively light. Precipitation is generally moderate with snow cover generally not exceeding 100 cm.

2.5 Property Status

The property is recorded in the Vancouver Mining Recorder's office as follows:

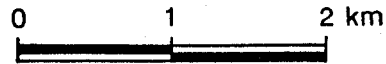
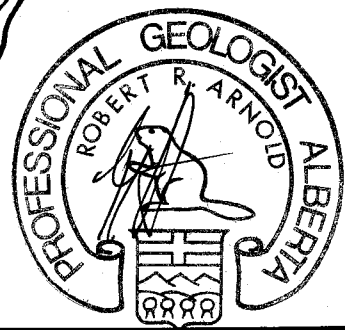
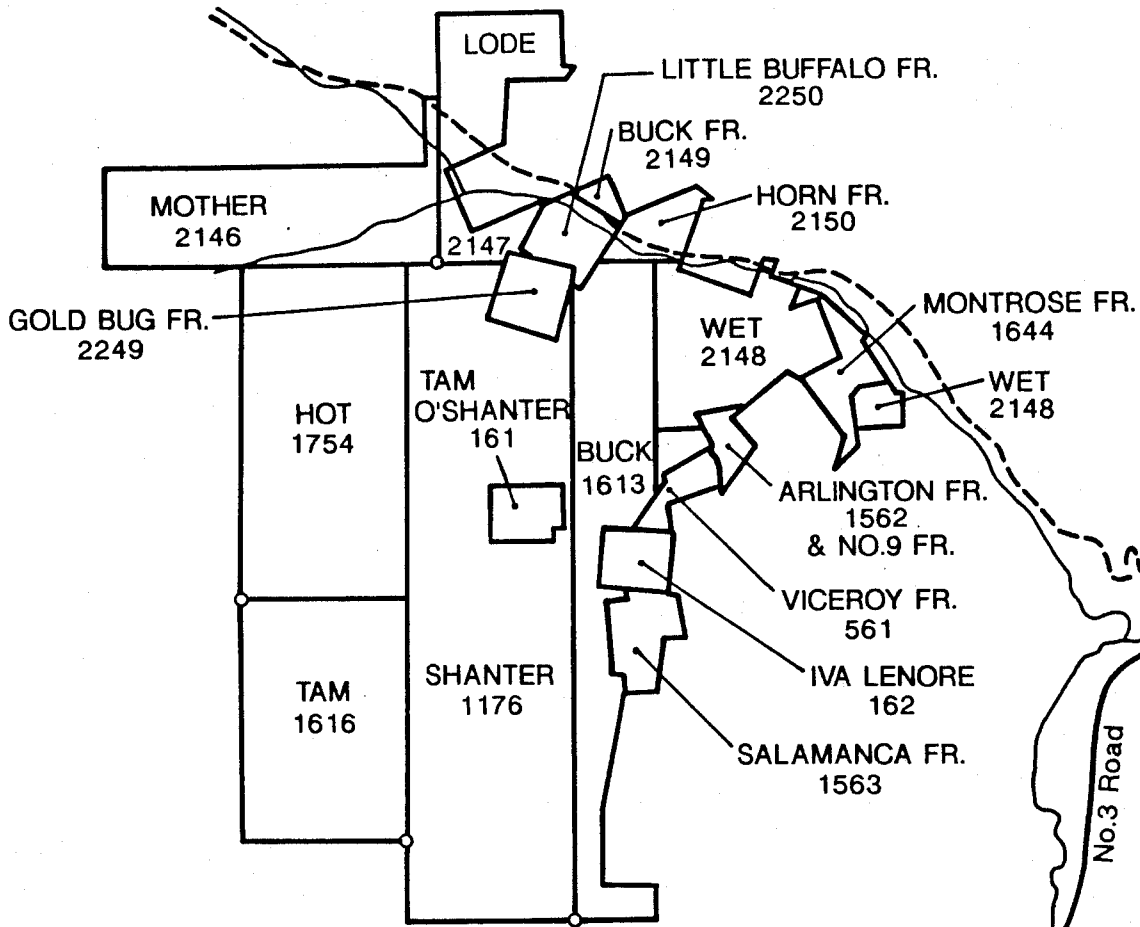
Reverted Crown Grant Mineral Claims:


<u>Claim Name</u>	<u>Record No.</u>	<u>Lot No.</u>	<u>Expiry Date</u>
Tam O'Shanter	161 (11)	2405	Nov. 20, 1989
Iva Lenore	162 (11)	1262	Nov. 20, 1989
Viceroy Fr.	1561 (6)	1722	June 11, 1992
Arlington Fr. and No. 9 Fr.	1562 (6)	1110 882s	June 11, 1992
Salamanca Fr.	1563 (6)	2902	June 11, 1992
Montrose Fr.	1644 (7)	2654	July 9, 1992
Gold Bug No. 2	2249 (6)	1718	June 5, 1993
Little Buffalo Fr.	2250 (6)	1717	June 5, 1992

Located Claims and Fractions:

<u>Claim Name</u>	<u>Record No.</u>	<u>Units</u>	<u>Expiry Date</u>
Shanter	1176 (7)	16	July 7, 1989
Buck	1613 (6)	8	June 28, 1992
Tam	1616 (6)	6	June 28, 1991
Hot	1754 (8)	8	Aug. 29, 1993
Mother	2146 (4)	8	Apr. 29, 1990
Lode	2147 (4)	6	Apr. 29, 1993
Wet	2148 (4)	6	Apr. 29, 1989
Buck Fr.	2149 (4)	1	Apr. 29, 1992
Horn Fr.	2150 (4)	1	Apr. 29, 1992





HOUSTON METALS CORP.			
TAM O'SHANTER PROPERTY			
CLAIM MAP			
 M-TEC RESOURCE MANAGEMENT LTD.	SCALE: 1 : 50,000	N.T.S.: 82E/2E	FIGURE No: 3
	OWN. BY: H.V.	DATE: March/1989	
	CHKD. BY: R. Arnold	PROJECT No: 88BC 053	FILE No:

The entire property is shown on the Mineral Claim Map 82 - E / 2 E and on Figure 3 of the present report.

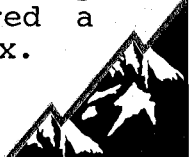
3.0 HISTORY AND PREVIOUS WORK

Previous work in the Tam O'Shanter property area has been described in detail by H.W. Little (GSC Paper 79-29, 1983) as follows:

"[...] Prospectors began to turn their attention to lode deposits after discoveries along Kootenay Lake in 1882 and 1883 and near Nelson in 1885. The first claims located within the area in 1884 were the Rocky Bar (later the Tunnel), and the Non-such, both near Boundary Falls.

In 1891 prospecting activity accelerated in Greenwood map area and the Mother Lode, Crown Silver, Sunset, Knob Hill, Old Ironsides, Stemwinder, Brooklyn, Idaho, and War Eagle claims were recorded (LeRoy, 1912, p.14, 15). During the next few years numerous claims were located and by 1900 all the important mines had been developed (McNaughton, 1945, p.1). Production was stimulated by the completion of branch lines of the Canadian Pacific Railway to Phoenix, Deadwood, and other mining camps in 1898 to 1900, and later by a branch line of the Great Northern Railroad in 1904. The Granby smelter at Grand Forks, which became the largest nonferrous smelter in the British Empire, was "blown in" in August 1900, with self-fluxing ore from Phoenix. In February 1901, the British Columbia Copper Company's smelter at Greenwood began treating ore from the Mother Lode deposit. The Pyrite smelter at Boundary Falls, about 5 kilometers south of Greenwood, was completed in 1901 but remained idle (Brock, 1903, p.137A), until taken over the following year by the Montreal and Boston Copper Company.

According to McNaughton, "production from the Phoenix district reached a peak in 1913, when 1,250,000 tons of ore were mined and shipped, and slowly decreased thereafter. In 1919, when [known] available ore reserves were approaching exhaustion, labour strike in the Crowsnest coalfield cut off the supply of coke for the Granby smelter and forced the operators at Phoenix to abandon the mines". Ore production from Boundary district as a whole in 1913 by far exceeded that of any other district in British Columbia, but suffered a parallel decline in production with that of Phoenix.



Development work on the mineral deposits was desultory thereafter for many years. The rise in the price of gold in 1933 resulted in renewed activity on some of the gold and silver deposits. Direct shipping ores were dispatched to the smelters from several of the properties, and small mills were erected at the Providence, Dentonia, and North Star properties from which concentrates were shipped. The renewed activity was, however, comparatively small and decreased early in World War II as a result of shortages of machinery and labour.

Favourable prices for copper in the early 1950's led to further exploration and development in the Greenwood area. Granby Consolidated Mining, Smelting and Power Company (more recently called the Granby Mining Corporation) again acquired the Knob Hill-Old Ironsides property, the Idaho, Brooklyn, and Snowshoe properties, and, lastly, in 1976, the Ore Denoro. These were operated by a subsidiary company, Phoenix Copper Company Limited, and the ore was treated at a mill which commenced operation at Phoenix in 1959, as well as custom ore from the Stemwinder and Rawhide mines. The mill capacity was increased from 900 to 2,750 tons per day in 1972. The ore from all those properties was exhausted in 1976, and since then, only ore from the Morning Star mine, immediately south of the International Boundary in the State of Washington, has been treated.

In 1957, a 1000-ton mill built on the Motherlode property in Deadwood camp was opened, but the owners, Woodgreen Copper Corporation Ltd. were forced to close a few months later, due to the falling copper prices and mining problems, which caused bankruptcy. In 1959, the company was reorganised and named Consolidated Woodgreen Mines Limited. The mill was reopened, operating at about half capacity until it was again closed in 1962 and was moved to Mount Washington. The Mother Lode and the adjoining Sunset and Greyhound properties were acquired by Aabro Mining and Oils Limited in 1968, and a new 1500-ton mill was completed early in 1970, which began treating ore from the Greyhound in September. The owner at that time was Greyhound Mines Limited, which went into liquidation in 1971, having ceased operations in January."

Previous working on the property was very well described by H.H. Shear (Private Report for Bulkley Silver Resources Inc., 1984) as follows:

"A body of Nelson quartz diorite occurs on the Tam O'Shanter property which is weakly but pervasively mineralized with chalcopyrite and pyrite along



scattered fractures. This body trends off the property to the east and disappears under the west edge of Deadwood Flat to the east. From the 1890's this zone has received much attention and numerous prospect pits have been dug literally throughout this intrusive. In a few areas of more intense alteration and mineralization, shallow shafts and short adits have been driven. All of the eastern portion of the property lying east of the overlying tertiary rocks was solidly crown granted by the early 1900's.

The most extensive workings on this large, very low grade copper zone occur on the Buckhorn claim, not part of the subject property, which lies between Bulkley Silver's Arlington Fr.-No.9 Fr. Claim and the Montrose Fr. Claim. On the Buckhorn a 200' shaft was sunk with levels driven at 100' and 200' depths. Two car loads of ore were reported to have been shipped. This work was completed from 1899-1901.

During 1921-22, several hundred feet of underground development was carried out on the Tam O'Shanter claim on a small high grade silver vein which also carried significant credits in gold and copper. According to the report of the Minister of Mines - 1923, three tons grading 0.40 oz/ton gold and 66.0 oz/ton silver was shipped from these workings. The writer inspected these workings in 1965 and suspects from the size of the old stopes that additional unreported production occurred. The Tam O'Shanter workings occur near the western edge of the mineralized diorite and are on strike, to the northeast, of Bulkley Silver's current zone of interest at the Bengal shaft area.

No work is reported on the property in the old records from the mid 1920's to the mid 1950's.

In 1952 Attwood Copper did some exploration centered around the Greyhound claim on the east side of Deadwood Flat. This claim produced briefly during 1970 from an open pit but the zone was known from the early 1900's. From 1955-1957 Salmo Prince Mines Ltd. and Meta Uranium Ltd. conducted work programs, using Salmey Mines Ltd. as their operating company, around the Greyhound claim, Deadwood Flats and the Buckhorn claim. These programs from 1952-1957 were primarily done to search for the typical skarn hosted ores which accounted for the main production tonnage from the Greenwood district.

From 1964 through 1974, a number of companies in succession concentrated their attention on the wide spread, low grade copper mineralization in the small stock of Nelson diorite lying from the middle of the Tam O'Shanter property at Deadwood Flat, and including the Buckhorn, Moreen Fr. and XLCR crown grants adjoining the subject property on its east side. Since no economic zones were disclosed by this work, a detailed description of the very large quantity of exploration work done is unwarranted. Work completed



during these years would amount close to \$1,000,000.00 in 1984 dollars. This work consisted of extensive line cutting, geochemical surveying, magnetometer surveying, I.P. and resistivity surveying and geological mapping. It is estimated that some 17 kilometers (10 miles) of road building and some 6,000 meters (20,000') of bulldozer trenching was completed from 1964-1968. From 1964 through 1974, 43 diamond drill holes totalling roughly 12,500 feet and 63 percussion drill holes totalling roughly 10,000 feet were completed. The results of this work were that a medium sized zone of .3% copper was found on the Buckhorn claim associated with the old workings. A zone 1,000 feet long and 200-400 feet wide with intercepts ranging from .15-.3% copper was found on the Iva Lenore claim. Several other zones were exposed which appeared interesting but drill results were poor (in the range of 0.1% copper). The companies that were active on the Tam O'Shanter property and adjoining Buckhorn group from 1964-1974 are:

Silver Dome Mines Ltd.	1964
Crown Silver Development Co. Ltd.	1965
Utah Mining and Construction Co. Ltd.	1966-67
San Jacinto Explorations Ltd.	1965-69
Siniloops Syndicate (Nippon)	1969
Perry, Knox, and Kaufmann (Sun Oil)	1971
Mapletree Exploration Corp. (Cyprus)	1973
Mascot Mines and Petroleums Ltd. (Giant Mascot)	1973-74

In 1975, Mr. George O.M. Stewart became interested and involved in the property. From 1975-1978 he made detailed studies of alteration and fracture patterns along with geological mapping as an aid to designing an additional exploration program. As a result of this study, an area of intense silicification was disclosed adjacent to the Bengal shaft. The zone also contained abundant limonite. At the end of this period the property was transferred to Oneida Resources Ltd.

In 1979, Oneida Resources Ltd. completed 8.2 km of grid centered around the Bengal shaft zone and drilled 3 diamond drill holes totalling 658 m (2,160') to test the zone. In May, 1980, a 200' long backhoe trench was completed across a portion of the Bengal shaft zone. At the same time the backhoe was used to clean out several old workings elsewhere on the property.

In May 1981, Mr. G.H. Rayner, P.Eng., completed a detailed geological study centered around the Bengal shaft area covering an area of approximately 1500 x 2000 meters. This work is described in a report dated May 24, 1982.

In January 1982, Oneida was amalgamated with three other companies which became New Frontier Petroleum Corporation and it became the owner of the Tam O'Shanter property.

In October 1983, some 200 lineal feet of trenching was completed with a large backhoe near the Bengal shaft to accumulate more geologic information. At the same time approximately 100 feet of trenching was completed about 1,500 meters to the north where copper staining was uncovered on a new logging road.

On December 16, 1983, New Frontier transferred the title of the Tam O'Shanter property to it's subsidiary, Bulkley Silver Resources, Inc."

In November 1988, Hi-Tec Resource Management Ltd. conducted a Time Domain Induced Polarization Survey over a selected area of the Tam O'Shanter property. A very significant IP anomaly, trending south-southwest, was recorded between lines 800N/100E and 300N/300W. This zone of anomalous chargeability trends off the grid to the southwest with no sign of weakening and the present diamond drilling program was designed to test this geophysical IP anomaly.

4.0 GEOLOGY

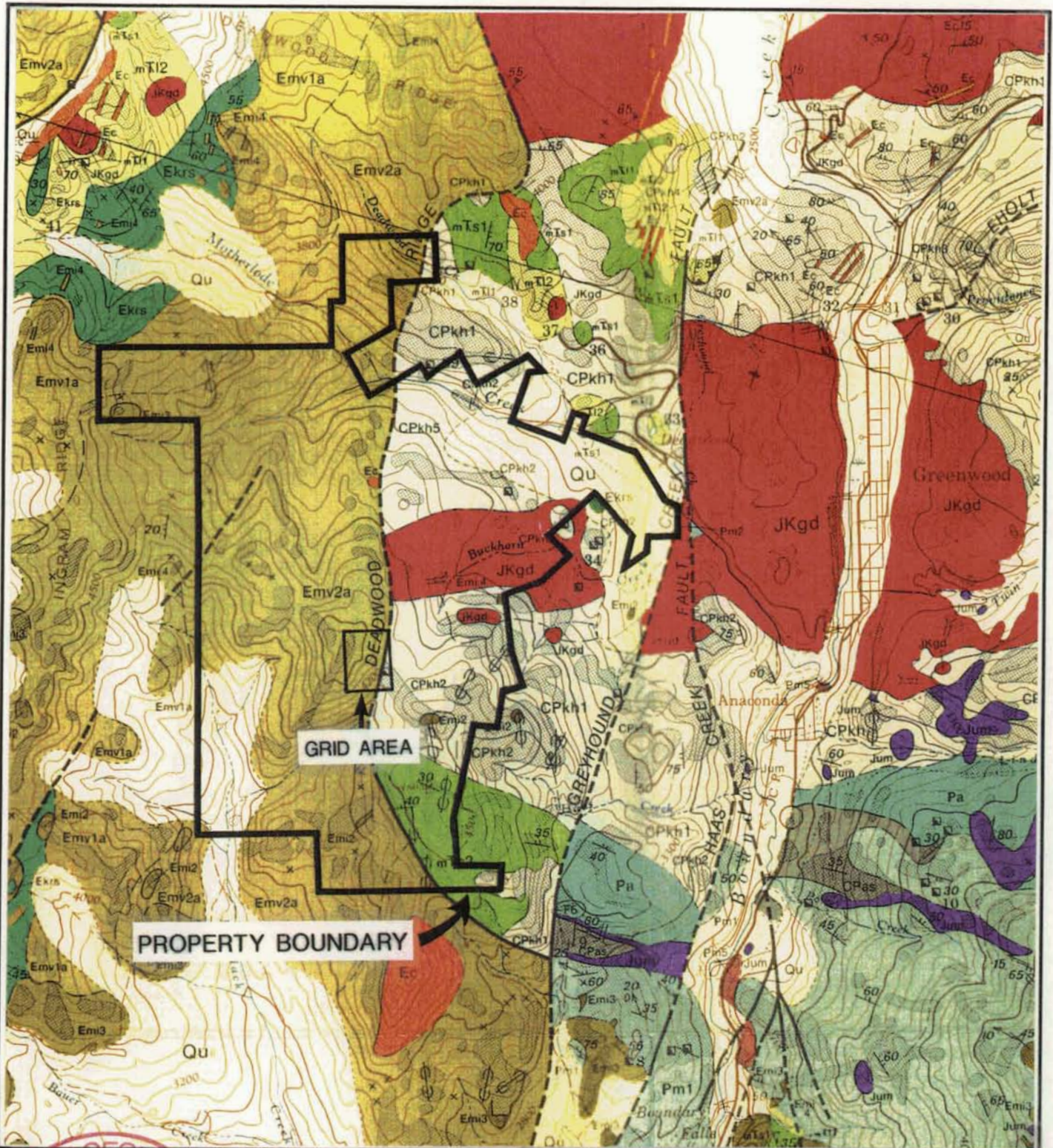
4.1 Regional Geology and Mineralization

Previous geological work and geological setting is summarized by H.W. Little (Geology of the Greenwood Map-Area, 1983) in the following terms:

"The first geological report of that region was that of Bauerman (1885) who accompanied the Boundary Commission Expedition of 1859-61. A geological cross-section adjacent to the Forty-ninth Parallel accompanied the report.

In 1901, Brock (1902), having in 1900 completed field work in the West Kootenay area immediately to the east, began, late in the summer, a reconnaissance of the adjoining Okanagan map-sheet. The following year, despite illness following sunstroke, he (Brock, 1903, 1905a, b) mapped the Boundary Creek sheet, on a topographical base provided by W.H. Miller, on a scale of 1 inch to 1 mile.





HOUSTON METALS CORP.

TAM O'SHANTER PROPERTY

REGIONAL GEOLOGY



SCALE: 1 : 50,000	N.T.S.: 82E/2E	FIGURE No.: 4
DWN. BY: H.V.	DATE: March/1989	
CHKD. BY: R. Arnold.	PROJECT No.: 88BC 053	FILE No.:

A survey of the geology adjacent to, and mainly north of the International Boundary was made in 1901-06 by Daly (1912), who, as Brock's map was already published, confined himself to two rapid traverses across the mountains between Midway and Grand Forks, but did more detailed studies of an 8 km wide belt west of Midway.

In 1908, LeRoy (1912) carried out detailed mapping (1 inch to 400 feet) of the Phoenix mining camp, followed by short visits in 1909 and 1910. In the latter year he (LeRoy, 1913) studied the Deadwood camp, the areal and detailed, geological mapping, being done by C.W. Drysdale. McNaughton (1945) in 1936 extended LeRoy's mapping at Phoenix, especially to the west, and his work was published on a scale of 1 inch to 800 feet.

In 1951 Seraphim (1956), together with the late W.H. White, began a program of geological mapping and exploration for Attwood Copper Mines Limited and published a sketch map on a scale of about 1 inch to 1400 feet of the Phoenix area, in which new interpretations of the geology were presented. He also prepared unpublished maps of the B.C. basin camp to the northeast, and of Deadwood camp. The geology of the adjacent Summit camp was mapped at 1 inch to 1000 feet by the late H.T. Carswell (1957) for Noranda Mines Limited.

Reinsbakken (1970) prepared a geological map at 1 inch to 2000 feet of the Grand Forks-Eholt area, which lies between July Creek and Grandby River, between the International Boundary and Brown Creek. This was based on field work done the previous year for Texas Gulf Sulphur Company.

Detailed mapping of small areas adjacent to the major mines has been done over a period of many years by geologists of the British Columbia Ministry of Mines and Petroleum Resources. The largest areas thus mapped, the McCarren-Goosmus Creek area, was published by Church (1970).

Metamorphic, sedimentary, and intrusive and extrusive igneous rock units, ranging in age from possibly late Proterozoic to Middle Eocene are summarized in the Table of Formations. They can be grouped into seven assemblages, separated by intervals of deformation and/or regional metamorphism. The oldest (?) of these is the granitoid gneiss unit Pm^1 of which part may represent the widespread late Proterozoic-early Paleozoic succession of southeastern British Columbia, but some gneissic rocks may be as late as Permian,



TABLE OF FORMATIONS

ERA	PERIOD OR EPOCH	GROUP OR FORMATION	MAP UNIT SYMBOL	LITHOLOGY	THICKNESS (metres)	
CENOZOIC	PLEISTOCENE AND RECENT			Till, sand, gravel, silt		
	EOCENE Middle	Klondike Mountain Formation	Ekm	Heterogeneous epiclastic breccia of pre-Permian to Middle Eocene rocks	900+	
		NON-EROSIONAL UNCONFORMITY WITH MARRON FORMATION				
		Coryell Intrusions	Ec	Syenite, quartz monzonite; minor granite and plaskite		
		Intrusive equivalents of Marron Formation	Emi	Alkaline syenite, syenite, diorite, and diorite porphyry		
		INTRUSIVE CONTACT				
		Marron Formation	Emv	Soda trachyte, andesite, trachyandesite; minor phonolite and tuff	1525 ±	
		Kettle River Formation	Ekrs	Feldspathic volcanic sandstone, lithic volcanic sandstone, shale, conglomerate	90 to 1200	
	UNCONFORMITY					
	MESOZOIC	CRETACEOUS OR TERTIARY	Map-unit KTi	KTi	Quartz-feldspar porphyry, quartz porphyry, felsite	
RELATIONSHIP UNKNOWN						
CRETACEOUS (?)		Valhalla Intrusions	Kvqm	Granite and quartz monzonite, mainly porphyritic; some pegmatite		
		INTRUSIVE CONTACT				
JURASSIC AND/OR CRETACEOUS		Nelson Intrusions	JKgd	Granodiorite; minor quartz diorite and diorite		
		INTRUSIVE CONTACT (?)				
JURASSIC (?)		Ultramafic Intrusions	Jum	Peridotite, pyroxenite, dunite, serpentinite		
		INTRUSIVE CONTACT WITH MAP UNIT Jv (?)				
		Map-unit Js	Js	Siltstone; minor phyllite, sandstone, and conglomerate	300-	
		Map-unit Jph	Jph	Black phyllite	500-	
TRIASSIC	Upper	Map-unit UTsv	UTsv	White limestone, black limestone, grey, black, and buff shale, limestone breccia, purple to maroon agglomerate, minor green cherty argillite	330+	
		UNCONFORMITY				
	Middle	Brooklyn Formation	MTI	Limestone, containing some chert grains, skarn; minor chert and sharpstone conglomerate, siltstone, and shale	660	
			MTs	Sharpstone conglomerate with mainly chert clasts; local chert sandstone; minor black argillite and green argillite	760	
	INTERBEDDED WITH RAWHIDE FORMATION; UNCONFORMABLE WITH KNOB HILL GROUP					
	Middle	Rawhide Formation	MTr	Black siltstone; minor black argillite and chert sharpstone conglomerate	120-	
PALEOZOIC	CARBONIFEROUS OR PERMIAN	Knob Hill Group	CPkh	Massive chert, greenstone, and amphibolite; minor limestone or marble; locally tan or black argillite, fine grained quartzite, conglomerate	?	
		Attwood Formation	CPa	Black to grey bedded argillite; locally some grey chert and cherty siltstone; minor chert sharpstone conglomerate; limestone, with some thin chert interbeds	1000+	
	UNCONFORMITY (?)					
	PRE-CARBONIFEROUS (?)	Map-unit Pm	Pm	Quartz-chlorite schist, quartz-biotite-muscovite schist, greenstone, bedded chert with argillaceous partings; minor limestone or marble	?	
		RELATIONSHIPS UNKNOWN				
		Map-unit Pa	Pa	Amphibolite; minor greenstone, and bedded chert	?	
RELATIONSHIPS UNKNOWN						
PRECAMBRIAN		Map-unit Pm	Pm	Paragneiss, migmatite; some amphibolite with pegmatite or aplite	?	

GSC

metamorphosed by granitic intrusions of Jura-Cretaceous age.

The relationship of the granitoid gneisses to the amphibolite unit Pa and the schist unit Pm is not known. These units differ lithologically and are in general more highly metamorphosed than the Attwood Formation and Knob Hill Group. The metamorphism and deformation of map units Pa and Pm is believed to predate the Attwood and Knob Hill; it is, however, possible that units Pa and Pm, though more highly metamorphosed, are different facies of the Knob Hill Group.

The second assemblage comprises the Attwood Formation and the Knob Hill Group, both of which have yielded fossils of Carboniferous or Permian age. It may contain disrupted ophiolite suite with which some or all of the ultramafic rocks may be associated. This assemblage was deformed and apparently eroded before deposition of Early Mesozoic rocks.

The third assemblage, the Brooklyn Formation, rests unconformably upon the Knob Hill Group. The lower part consists of the sharpstone and Rawhide members, of Middle, and possibly Lower, Triassic age. The underlying unconformity is widespread in the Western Cordillera.

The fourth assemblage, map unit UTsv, is limited in extent and includes limestone, shale, and some pyroclastic rocks of Upper Triassic age. It is believed to overlie unconformably the Brooklyn Formation.

The fifth assemblage, the volcanic map unit Jv, is correlated lithologically with the Jurassic Rosslund Group to the east. It rests upon the other units ranging from pre-Permo-Carboniferous (?) to Upper Triassic.

All these assemblages were affected by the widespread Jura-Cretaceous orogeny during which ultramafic, and Nelson and Valhalla intrusions were emplaced. It is possible that the ultramafic bodies were emplaced by a process of cold intrusion.

The sixth assemblage clearly rests unconformably upon Mesozoic and older formations. It consists of the basal Kettle River and the Marron formations of Middle Eocene age. Contemporaneous intrusions include numerous small bodies of syenitic to dioritic composition and plutonic bodies of the Coryell.

The youngest assemblage is of limited extent within the map area. It is an epiclastic breccia (recently defined in the literature as an "olistostrome") resulting from a landslide, it rests upon the Marron Formation and is also of Middle Eocene age.

All the rocks, Middle Eocene and older, have been affected by block faulting that resulted from crustal tension, and by arching over Middle Eocene intrusive bodies.


Deposits of Pleistocene age consist mainly of till, which is spread widely over the area. In the larger valleys outwash sand, silt, and gravel, and a few kames, eskers, and drumlinoid moraines were noted."

4.2 Property Geology

A concise and precise description of the property geology is given by H.H. Shear (private report on the Tam O'Shanter Property, 1984) as follows:

"The Tam O'Shanter property is underlain by four main formations. The oldest rocks are an assemblage of silicified rock, chert and cherty tuffs, and andesite tuffs. These rocks have been intruded by a stock of diorite and quartz diorite related to the Nelson intrusions. The western part of the property is underlain by units of the Marron volcanic sequence and a small crescent shaped body of the Kettle River Formation sediments occurs between the Marron and older rocks. [...].

The oldest rocks on the Tam O'Shanter property as mapped by Rayner are silicified rock, chert and cherty tuffs, and andesite tuffs. In the past, these rocks have been considered part of the Knob Hill Formation. The writer has been told that this term is now out of date and that many of the older rocks in the district are, in fact, less metamorphosed units of the Grand Forks Group (Dr. Neil Church - verbal communication). There is no known exposure on the property of the more readily identifiable units of the Brooklyn formation such as the sharpstone conglomerate, argillite, or the Brooklyn limestone. There are a few small skarny zones on the property with massive magnetite in two spots which may suggest that some very small remnants of the Brooklyn Formation are present. Some of the andesite occurring on the property could belong to the basal andesite unit of the Brooklyn. The highly siliceous



rocks as described under the General Geology section of this report. These rocks underlie the northeast and southeast portions of the property.

The body of Nelson diorite and quartz diorite underlies an area of 3000-3500 feet wide (north-south) and trends off the property under Deadwood Flat to the east, approximately 6500 feet from its western contact with the Kettle River Formation. This intrusive is characterized by pervasive low grade propylitization and chalcopyrite mineralization, and was the focus of most of the work and drilling completed on the property in the past. Drilling by Mascot Mines and Petroleum Ltd. in 1974 on the northwest and north edge of the Grand Forks rocks as shown on Figure 3 disclosed that the diorite shallowly underlies the older rocks there. The Kettle River Formation had only one natural outcrop, prior to exploration work, at the Bengal shaft area near its western contact. The best exposure is in a 1964 bulldozer cut which opened up its eastern border where it is in fault contact with mineralized Nelson diorite. Oneida's drill holes 79-1 to 3 and Mascot's holes G-16 and 17 cut Kettle River rocks. Surface exposures consist of basal conglomerate and tuffaceous sandstone (arkose) while the drill holes cut dacite in addition to tuffaceous sediments. The Kettle River Formation is in fault contact on its west border with Marron rocks.

The Marron Formation, as mapped by Rayner, consists of a volcanic pile from bottom to top of basalt and basaltic andesite, massive trachyandesite porphyry, fine platy tuff, platy trachyandesite porphyry, and scoriaceous andesite porphyry. This formation underlies all of the western third of the Tam O'Shanter Group. It covers a broad area to the north, west, and south of the property and its eastern boundary has marked the limit of past exploration interest.

Structure: The Toroda Creek Fault, where it forms the contact between the Kettle River and Marron Formations, is the structural feature of current interest on the property. The area underlain by Kettle River rocks has very few outcrops, so that the current knowledge on this area is quite limited. Available data suggest that the area from the Bengal shaft to the south for some 400 meters is the focus of intense structural movement and cross faulting."

Alteration and Mineralization: [...] The current area of interest is the Bengal shaft zone which is associated with the Toroda Creek fault. The zone is exposed in two outcrops, one containing the Bengal shaft and the other 400 meters to the south. [...] On the surface at the Bengal shaft the zone consists of intensely brecciated, silicified and pyritized Kettle

River rocks. Some clay minerals are also present. The Bengal shaft has been sunk on a breccia zone in which the matrix is almost 100% quartz. Minor molybdenum values occur here and some yellow molybdenite stain is present. There are no other values occurring in any of the surface exposures. The zone abuts against the Toroda Creek fault 50 meters to the west of the shaft and grades to rather weak alteration at the collars of DDH 79-1 and 2. The exposure 400 meters to the south was opened by old pits and recent trenching. A 60 meter wide section of intensely argillized Kettle River rocks is exposed. Adjacent to this and on the west side of this alteration zone Oneida's trenching has exposed a 3 meter section of solid quartz. No additional work has yet been done in this area. [...]"

5.0 DIAMOND DRILLING PROGRAM

The drilling contractors were Bergeron Drilling and Exploration Ltd. of Greenwood, British Columbia. This company drilled through the overburden using a NQ tricone. The bedrock was then cored with a NQ diamond bit.

Three holes were drilled on the Houston Metals Corp. property (See Figure 5: DDH Holes Location Map) to test a significant Induced Polarization anomaly delineated during the 1988 ground geophysical survey.

A total of 806.2 meters (2,645 feet) were drilled on the Shanter claim, consisting of 50.6 meters (166 feet) of overburden and 755.6 meters (2,479 feet) of drilled core. All of the core boxes are stored on Mr. Bergeron's property in Greenwood, British Columbia.

Five hundred and fourteen core samples were collected and all of the samples were submitted to Min-En Laboratories Ltd., in North Vancouver, British Columbia, for Ag, As, Cu, Pb, Zn and Sb analysis by the Induced Coupled Plasma (ICP) method. Gold was



determined by the Fire Assay (FA) method. Analytical procedures are reported in Appendix I and Analytical Data for the core samples can be found in Appendix II.

Statistical treatment of data was possible for each analyzed element. Statistical data, histograms and correlation coefficients are listed in Appendix IV.

Each diamond drill hole is summarized below and diamond drill logs are presented in Appendix III.

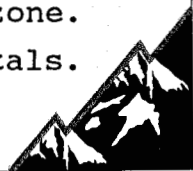
Hole 88-01:

This hole, located on line 5+50N at station 0+35W on the geophysical grid, was drilled to a depth of 299.9 meters (984 feet) with a angle of -60° and an azimuth of $N135^{\circ}$. Overburden was 16.8 meters (55 feet) and bedrock consisted of sedimentary rocks and intercalated volcanic tuffs for the first part of the hole. These units were followed by brecciated silicified andesitic flows and tuffs.

A total of 195 core samples were collected in hole 88-1. The best gold results recorded in this hole are 0.054 oz/t over 1.5 meter (sample 159); 0.019 oz/t over 1.1 meter (sample 170); 0.018 oz/t over 1.0 meter (sample 23) and 0.014 oz/t over 1.6 meter.

A 49.2 feet (15 meters) zone of relatively high anomalous Zinc (72-411 ppm) and Lead (111-1143 ppm) is found between 28.5 meters to 43.5 meters. These samples were taken in a clay and feldspar altered conglomerate displaying disseminated pyrite (up to 3% in places) and minor chalcopyrite.

A 24.6 feet zone of high copper values was found between 124.5 meters and 132.0 meters. Values recorded were between 687 ppm and 2201 ppm. These samples were collected in a brecciated, highly silicified zone. Pyrite and chalcopyrite occur as disseminated crystals.



Presence of randomly distributed quartz-carbonate veinlets.

Hole 88-02:

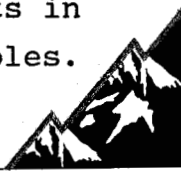
DDH 88-2 was positioned at the same location than the first hole but was drilled with an azimuth of N1800 at an angle of -60° . Total depth was 248.1 meters (814 feet) and overburden was 16.8 meters (55 feet). Bedrock composition was similar to the one found in hole DDH-88-01, although the silicified horizons appear to be thinner than in hole 88-01.

The best gold values recorded in hole 88-02 were 0.058 oz/t over 0.6 meter (sample 172), 0.048 oz/t over 1.0 meter (sample 173) and 0.025 oz/t over 1.0 meter (sample 165). These three samples were collected randomly in a relatively silicified and serpentized andesitic rock displaying blebs of chalcopyrite. Several very high copper results were also obtained from this unit (up to 28,850 ppm in sample 172 and 14,367 ppm in sample 173). High silver values seem to correlate with the high copper in samples 172 and 173 (30.8 ppm and 13.0 ppm respectively).

Hole 88-03:

This hole is located on line 6+10N at station 0+10E and was drilled to a depth of 258.2 meters (847 feet) with an azimuth of N135⁰ and an angle of -60° . Overburden was 17.1 meters (56 feet) and bedrock was similar in composition to the one of holes 88-01 and 88-02. A total of 143 core samples were collected in hole 88-03. Only one interesting gold value was recorded in this hole (sample 115: 0.038 oz/t over 1.0 meter). Sample 115 was collected in a silicified andesite breccia.

In a general sense, results of the analyzed elements in hole 88-03 are lower than in the first two holes.



Several one point anomalies could be seen for copper (2828 ppm-sample 123) and zinc (109 ppm-sample 30).

The calculated correlation coefficients for the analyzed elements show that gold is not associated with any of the other elements. Silver, on the other hand appears to have a moderate correlation with copper and weak correlations with antimony, arsenic and zinc.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The general property area has been explored since the 1890's and several important mining camps (Phoenix, Deadwood,...) have been developed. The Tam O'Shanter property itself was worked from the 1890's when copper was found in the Nelson intrusives. During 1921-22, underground work was carried out on the Tam O'Shanter claim on a small high grade silver vein. Prospecting, trenching, ground geophysical surveying (magnetometer, IP and resistivity) and geological mapping were conducted on the property between 1964-1974 by various companies. In 1988, an extensive IP anomaly was delineated in the vicinity of the Bengal Shaft and the present drill program was designed to test this anomalous zone.

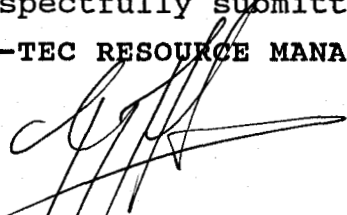
The subject property is underlain by four main rock units. The oldest formation is an assemblage of silicified cherts, cherty tuffs and andesitic tuffs. This unit has been intruded by a stock of diorite and quartz diorite related to the Nelson intrusions. The western property area is underlain by volcanics of the Marron Formation and sediments of the Kettle River Formation.



During the present diamond drilling program three holes were drilled to test an important time domain Induced Polarization anomaly detected in the vicinity of the Bengal shaft. This IP anomaly was interpreted as the signature of an epithermal gold-silver deposit. A total of 806.2 meters (2,645 feet) were drilled to test selected areas of this geophysically anomalous zone which appears to be open to the southwest. Although relatively low precious metal values were recorded in the core samples, the geological setting of the claims as well as the large IP anomaly detected on the Shanter Claim warrant additional exploration work on the Houston Metals Corp. property.

Further work should consist of an extension of the grid to the southwest, Induced Polarization survey on the above extension in order to delineate additional drill targets and a diamond drilling program to test the best IP anomalies. Depending upon positive results from the above program and upon a review of data, a systematic diamond drilling program should be design to determine the source and extent of the geophysical and mineralogical anomalies and to define the geometry and grade characteristics of any identified mineralized zones.

Respectfully submitted
HI-TEC RESOURCE MANAGEMENT LTD.



Robert R. Arnold, M.Sc., P.Geol., FGAC
March 15, 1989



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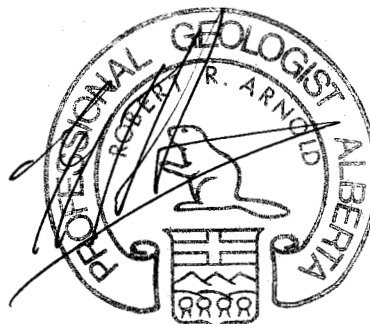


8.0 STATEMENT OF QUALIFICATIONS

I, ROBERT R. ARNOLD, of 1227 Caledonia Avenue, in the District of North Vancouver, in the Province of British Columbia, hereby certify:

1. THAT I am a geologist employed by Hi-Tec Resource Management Ltd. My office is at Suite 1500 - 609 Granville Street, Vancouver, B.C., V7Y 1G5, Canada.
2. THAT I obtained a Bachelor of Science degree in Geology from the University of Geneva, in the City of Geneva, Switzerland, in 1976 and a Master of Science degree in Geological Engineering, from the same university in 1978.
3. THAT I am a Registered Professional Geologist, in good standing, of the Association of Professional Engineers, Geologists and Geophysicists of Alberta since 1981.
4. THAT I am a Fellow Member of the Geological Association of Canada, in good standing since 1985. That I am an associate member of the Mineralogical Association of Canada and of the Society of Economic Geologists.
5. THAT I have been practising my profession as a geologist in Western Europe, West Africa, Southeast Asia and North America, both permanently since 1978 and seasonally since 1971.
6. THAT I have not received, nor do I expect to receive any interests, direct or indirect, or contingent in the securities or properties of Houston Metals Corp. and that I am not an insider of any company having interest in the Mineral Claims which are the subject of this report, or any other claims within a radius of 10 kilometers.

Dated in Vancouver, British Columbia, this 15th day of January 1989.



APPENDIX I

GEOCHEMICAL PREPARATION AND ANALYTICAL PROCEDURES



**GEOCHEMICAL RESULTS AND
LABORATORY ANALYTICAL METHODS**

After initial preparation, all samples were analyzed by the Inductively Coupled Plasma (ICP) method for Ag, As, Cu, Pb, Sb and Zn. Gold was determined by the fire assay and atomic absorption method.

After drying soil and stream sediment samples at 95°C, they were screened with an 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. For some of the silt samples, 40 mesh or 20 mesh sieves were used. Rock samples were put through a jaw crusher and a ceramic-plotted pulverizer.

For ICP analyses, 1.0 gram of sample material was digested for 6 hours with a hot HNO₃ - HClO₄ mixture. After cooling, samples were diluted to a standard volume. The solutions were then analyzed by a computer-operated Jarrell Ash ICP Analyzer. Reports are formatted by a route computer dotline printout.

For Au analyses, a suitable sample weight of 15 or 30 grams was fire assay preconcentrated. Samples were then digested with an Aqua Regia solution and then taken up to suitable volume by adding a 25% HCl solution. Further oxidation and treatment of at least 75% of the original sample solutions are made suitable for extraction of gold with methyl isobutyl ketone. Gold is analyzed by Atomic Absorption instruments using a suitable standard solution. The detection limit is 1 ppb.

MIN-EN Laboratories Ltd.

Specialists in Mineral Environments

Corner 15th Street and Bewicke
705 WEST 15TH STREET
NORTH VANCOUVER, B.C.
CANADA V7M 1T2

FIRE GOLD GEOCHEMICAL ANALYSIS BY MIN-EN LABORATORIES LTD.

Geochemical samples for Fire Gold processed by Min-En Laboratories Ltd., at 705 W. 15th St., North Vancouver Laboratory employing the following procedures.

After drying the samples at 95^oC soil and stream sediment samples are screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed and pulverized by ceramic plated pulverizer.

A suitable sample weight 15.00 or 30.00 grams are fire assay preconcentrated.

After pretreatments the samples are digested with Aqua Regia solution, and after digestion the samples are taken up with 25% HCl to suitable volume.

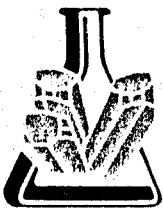
Further oxidation and treatment of at least 75% of the original sample solutions are made suitable for extraction of gold with Methyl Iso-Butyl Ketone.

With a set of suitable standard solution gold is analysed by Atomic Absorption instruments. The obtained detection limit is 1 ppb.

APPENDIX II

ANALYTICAL DATA FOR CORE SAMPLES





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P.O. BOX 867
TIMMINS, ONTARIO CANADA P4N 7G7
TELEPHONE: (705) 264-9996

Certificate of ASSAY

Company: HI TEC RES. MNG. LTD.
Project: 88 BC 053
Attention: V KURAN/J BARBARA/B. ARNOLD

File: 8-2201/P1
Date: DEC 16/88
Type: ROCK ASSAY

We hereby certify the following results for samples submitted.

Sample Number	AU G/TONNE	AU OZ/TON
88HD 1001	.01	0.001
88HD 1002	.01	0.001
88HD 1003	.01	0.001
88HD 1004	.01	0.001
88HD 1005	.02	0.001

88HD 1006	.02	0.001
88HD 1007	.01	0.001
88HD 1008	.01	0.001
88HD 1009	.01	0.001
88HD 1010	.03	0.001

88HD 1011	.02	0.001
88HD 1012	.03	0.001
88HD 1013	.10	0.003
88HD 1014	.06	0.002
88HD 1015	.15	0.004

88HD 1016	.13	0.004
88HD 1017	.16	0.005
88HD 1018	.03	0.001
88HD 1019	.05	0.001
88HD 1020	.01	0.001

88HD 1021	.04	0.001
88HD 1022	.24	0.007
88HD 1023	.62	0.018
88HD 1024	.01	0.001
88HD 1025	.01	0.001

88HD 1026	.01	0.001
88HD 1027	.01	0.001
88HD 1028	.04	0.001
88HD 1029	.02	0.001
88HD 1030	.01	0.001

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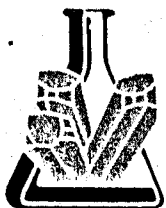
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Date: DEC 16/88
Type: ROCK ASSAY

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Sample Number	AU G/TONNE	AU OZ/TON
88HD 1031	.03	0.001
88HD 1032	.01	0.001
88HD 1033	.01	0.001
88HD 1034	.02	0.001
88HD 1035	.01	0.001
88HD 1036	.01	0.001
88HD 1037	.06	0.002
88HD 1038	.14	0.004
88HD 1039	.01	0.001
88HD 1040	.02	0.001
88HD 1041	.02	0.001
88HD 1042	.01	0.001
88HD 1043	.03	0.001
88HD 1044	.04	0.001
88HD 1045	.03	0.001
88HD 1046	.05	0.001
88HD 1047	.06	0.002
88HD 1048	.05	0.001
88HD 1049	.03	0.001
88HD 1050	.08	0.002
88HD 1051	.04	0.001
88HD 1052	.02	0.001
88HD 1053	.01	0.001
88HD 1052	.01	0.001
88HD 1055	.01	0.001
88HD 1056	.14	0.004
88HD 1057	.02	0.001
88HD 1058	.01	0.001
88HD 1059	.02	0.001
88HD 1060	.01	0.001

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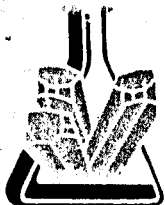
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Date: DEC 16/88
Type: ROCK ASSAY

We hereby certify the following results for samples submitted.

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88HD 1062	.03	0.001
88HD 1063	.06	0.002
88HD 1064	.11	0.003
88HD 1065	.10	0.003
88HD 1066	.02	0.001
88HD 1067	.02	0.001
88HD 1068	.04	0.001
88HD 1069	.05	0.001
88HD 1070	.02	0.001
88HD 1071	.01	0.001
88HD 1072	.01	0.001
88HD 1073	.02	0.001
88HD 1074	.01	0.001
88HD 1075	.01	0.001
88HD 1076	.02	0.001
88HD 1077	.02	0.001
88HD 1078	.01	0.001
88HD 1079	.02	0.001
88HD 1080	.01	0.001
88HD 1081	.01	0.001
88HD 1082	.01	0.001
88HD 1083	.02	0.001
88HD 1084	.01	0.001
88HD 1085	.01	0.001
88HD 1086	.02	0.001
88HD 1087	.02	0.001
88HD 1088	.04	0.001
88HD 1089	.04	0.001
88HD 1090	.02	0.001

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Certificate of Assay

Company: HI TEC RES. MNG. LTD.
Project: 88 BC 053
Attention: V KURAN/J SORBARA/B ARNOLD

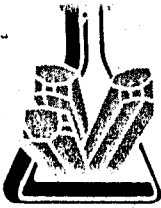
File: 8-2201/P4
Date: DEC 16/88
Type: ROCK ASSAY

We hereby certify the following results for samples submitted.

Sample Number	AU G/TONNE	AU OZ/TON
88HD 1091	.01	0.001
88HD 1092	.01	0.001
88HD 1093	.01	0.001
88HD 1094	.01	0.001
88HD 1095	.01	0.001
88HD 1096	.08	0.002
88HD 1097	.04	0.001
88HD 1098	.01	0.001
88HD 1099	.02	0.001
88HD 1100	.02	0.001
88HD 1101	.01	0.001
88HD 1102	.01	0.001
88HD 1103	.01	0.001
88HD 1104	.01	0.001
88HD 1105	.03	0.001
88HD 1106	.01	0.001
88HD 1107	.01	0.001
88HD 1108	.06	0.002
88HD 1109	.02	0.001
88HD 1110	.01	0.001
88HD 1111	.05	0.001
88HD 1112	.01	0.001
88HD 1113	.01	0.001
88HD 1114	.01	0.001
88HD 1115	.03	0.001
88HD 1116	.02	0.001
88HD 1117	.01	0.001
88HD 1118	.01	0.001
88HD 1119	.02	0.001
88HD 1120	.01	0.001

Certified by

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TELEX: VIA U.S.A. 7601067 • FAX (604) 980-9621

TIMMINS OFFICE:
33 EAST IROQUOIS ROAD
P.O. BOX 867
TIMMINS, ONTARIO CANADA P4N 7G7
TELEPHONE: (705) 264-9996

Certificate of Assay

Company: HI TEC RES. MNG. LTD.
Project: BB BC 053
Attention: V KURAN/J SORBARA/B ARNOLD

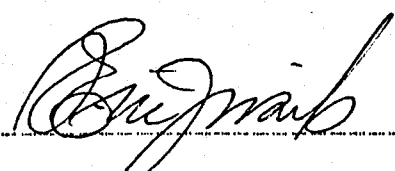
File: B-2201/P5
Date: DEC 16/88
Type: ROCK ASSAY

We hereby certify the following results for samples submitted.

Sample Number	AU G/TONNE	AU OZ/TON
88HD 1121	.02	0.001
88HD 1122	.01	0.001
88HD 1123	.01	0.001
88HD 1124	.02	0.001
88HD 1125	.01	0.001

88HD 1126	.03	0.001
88HD 1127	.03	0.001
88HD 1128	.01	0.001
88HD 1129	.02	0.001
88HD 1130	.01	0.001

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TIMMINS, ONTARIO CANADA P4N 7G7
TELEPHONE: (705) 264-9996

Certificate of ASSAY

Company: HI-TEC RESOURCE MANAGEMENT LTD.
Project: 88 BC 053
Attention: R. ARNOLD/V. KURAN

File: 8-2214/P1
Date: DEC 18/88
Type: ROCK ASSAY

We hereby certify the following results for samples submitted.

Sample Number	AU G/TONNE	AU OZ/TON
88 H01131	.02	0.001
88 H01132	.01	0.001
88 H01133	.01	0.001
88 H01134	.03	0.001
88 H01135	.06	0.002

88 H01136	.08	0.002
88 H01137	.13	0.004
88 H01138	.10	0.003
88 H01139	.05	0.001
88 H01140	.08	0.002

88 H01141	.01	0.001
88 H01142	.01	0.001
88 H01143	.01	0.001
88 H01144	.02	0.001
88 H01145	.01	0.001

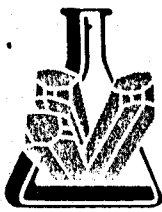
88 H01146	.02	0.001
88 H01147	.01	0.001
88 H01148	.01	0.001
88 H01149	.02	0.001
88 H01150	.01	0.001

88 H01151	.01	0.001
88 H01152	.02	0.001
88 H01153	.01	0.001
88 H01154	.02	0.001
88 H01155	.03	0.001

88 H01156	.01	0.001
88 H01157	.02	0.001
88 H01158	.01	0.001
88 H01159	1.85	0.054
88 H01160	.03	0.001

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TELEPHONE: (705) 264-9996

Certificate of Assay

Company: HI-TEC RESOURCE MANAGEMENT LTD.
Project: 88 BC 053
Attention: R. ARNOLD/V. KURAN

File: 8-2214/P2
Date: DEC 18/88
Type: ROCK ASSAY

We hereby certify the following results for samples submitted.

Sample Number	AU G/TONNE	AU OZ/TON
88 H01161	.01	0.001
88 H01162	.03	0.001
88 H01163	.47	0.014
88 H01164	.02	0.001
88 H01165	.01	0.001

88 H01166	.01	0.001
88 H01167	.02	0.001
88 H01168	.01	0.001
88 H01169	.02	0.001
88 H01170	.64	0.019

88 H01171	.09	0.003
88 H01172	.31	0.009
88 H01173	.01	0.001
88 H01174	.01	0.001
88 H01175	.02	0.001

88 H01176	.02	0.001
88 H01177	.01	0.001
88 H01178	.03	0.001
88 H01179	.06	0.002
88 H01180	.02	0.001

88 H01181	.01	0.001
88 H01182	.01	0.001
88 H01183	.03	0.001
88 H01184	.02	0.001
88 H01185	.01	0.001

88 H01186	.02	0.001
88 H01187	.01	0.001
88 H01188	.01	0.001
88 H01189	.01	0.001
88 H01190	.01	0.001

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TELEPHONE: (705) 264-9996

Certificate of Assay

Company: HI-TEC RESOURCE MANAGEMENT
Project: 88 BC 053
Attention: R. ARNOLD/V. KURAN

File: 8-2214/P3
Date: DEC 16/88
Type: ROCK ASSAY

We hereby certify the following results for samples submitted.

Sample Number	AU G/TONNE	AU OZ/TON
88 H01191	.01	0.001
88 H01192	.01	0.001
88 H01193	.02	0.001
88 H01194	.01	0.001
88 H01195	.03	0.001

Certified by _____

[Handwritten Signature]

MIN-EN LABORATORIES LTD.

(VALUES IN PPM)	AG	AS	CU	PB	SB	ZN
88H01001	.3	1	7	24	1	75
88H01002	.8	19	14	23	2	44
88H01003	.9	12	15	35	1	54
88H01004	.7	22	7	31	2	42
88H01005	.7	1	37	20	1	78
88H01006	.5	5	5	21	1	76
88H01007	1.5	17	351	111	2	97
88H01008	1.3	11	5	224	1	152
88H01009	1.2	9	68	271	2	81
88H01010	1.2	15	32	179	2	88
88H01011	1.5	21	15	338	1	145
88H01012	1.8	33	34	1143	3	121
88H01013	2.4	10	486	1131	2	411
88H01014	1.9	21	236	484	3	259
88H01015	2.0	16	310	387	2	196
88H01016	1.5	21	286	111	4	149
88H01017	1.2	19	97	37	1	72
88H01018	1.5	17	338	263	1	133
88H01019	1.4	7	276	341	1	167
88H01020	1.1	1	98	349	1	196
88H01021	1.5	12	321	330	2	165
88H01022	3.0	13	1020	35	2	71
88H01023	7.0	18	3169	70	4	69
88H01024	1.1	20	135	20	1	41
88H01025	1.2	25	97	19	1	36
88H01026	1.4	23	67	16	2	31
88H01027	1.1	30	54	15	1	32
88H01028	1.1	21	49	16	2	36
88H01029	3.2	37	97	62	6	85
88H01030	1.0	19	232	16	2	40
88H01031	.4	13	253	25	1	54
88H01032	1.0	24	132	17	1	37
88H01033	.1	60	162	14	1	57
88H01034	.7	6	159	25	1	37
88H01035	1.0	8	209	13	1	72
88H01036	.8	9	179	27	3	79
88H01037	1.0	13	397	18	1	50
88H01038	1.3	3	31	20	1	35
88H01039	1.5	10	20	24	2	27
88H01040	2.0	32	319	26	4	75
88H01041	.5	29	235	27	1	107
88H01042	1.3	14	197	21	1	41
88H01043	2.3	47	825	22	3	52
88H01044	.4	7	103	22	1	66
88H01045	1.4	1	220	11	1	74
88H01046	.5	3	62	19	1	54
88H01047	1.6	23	360	19	1	48
88H01048	.7	25	175	18	2	53
88H01049	1.4	25	85	23	2	36
88H01050	2.1	27	697	22	1	23
88H01051	1.0	18	387	23	1	35
88H01052	1.9	2	601	22	2	42
88H01053	1.6	20	1027	21	2	22
88H01054	1.0	35	111	17	2	40
88H01055	1.2	20	56	17	1	30
88H01056	1.0	33	447	24	1	56
88H01057	.7	37	105	19	2	59
88H01058	.8	32	100	20	2	50
88H01059	1.4	20	238	23	1	41
88H01060	2.2	20	837	20	2	24

(VALUES IN PPM)	AG	AS	CU	PB	SB	ZN
88HQ1061	2.5	1	955	34	2	52
88HQ1062	1.4	11	338	106	9	107
88HQ1063	2.1	1	610	19	2	55
88HQ1064	1.9	9	258	29	3	38
88HQ1065	1.6	2	673	26	3	31
88HQ1066	1.0	13	292	14	2	18
88HQ1067	1.0	17	89	17	3	18
88HQ1068	1.4	18	432	20	3	19
88HQ1069	1.2	22	560	13	1	18
88HQ1070	.9	31	150	14	2	17
88HQ1071	1.4	24	294	19	2	18
88HQ1072	1.4	28	146	20	2	18
88HQ1073	1.3	16	218	16	1	20
88HQ1074	1.2	11	153	17	2	22
88HQ1075	1.2	4	419	17	2	25
88HQ1076	.9	7	63	19	1	26
88HQ1077	1.0	17	97	19	2	25
88HQ1078	1.1	15	129	16	2	20
88HQ1079	1.2	14	242	16	1	24
88HQ1080	.8	10	173	15	1	25
88HQ1081	.9	3	125	20	1	21
88HQ1082	.9	1	91	19	2	21
88HQ1083	1.0	14	112	18	2	21
88HQ1084	1.1	20	65	17	2	22
88HQ1085	.7	7	63	17	1	36
88HQ1086	1.1	23	129	18	1	25
88HQ1087	.8	3	37	32	2	65
88HQ1088	.9	10	91	13	2	28
88HQ1089	1.0	19	130	18	2	39
88HQ1090	.8	8	81	17	1	35
88HQ1091	1.3	7	216	16	2	28
88HQ1092	1.2	14	162	18	2	32
88HQ1093	1.5	14	376	12	1	22
88HQ1094	2.4	17	667	16	2	21
88HQ1095	1.4	20	220	14	1	18
88HQ1096	1.7	28	466	14	1	17
88HQ1097	2.3	22	922	15	1	18
88HQ1098	1.7	15	395	22	1	18
88HQ1099	2.1	8	979	24	3	24
88HQ1100	2.9	18	1151	19	2	20
88HQ1101	2.5	17	613	17	2	20
88HQ1102	2.1	20	370	16	1	18
88HQ1103	1.9	4	174	19	1	19
88HQ1104	1.9	11	481	15	2	20
88HQ1105	2.7	12	1176	17	3	23
88HQ1106	2.5	13	1000	20	2	25
88HQ1107	1.5	1	687	14	1	23
88HQ1108	2.3	20	1212	17	2	27
88HQ1109	3.4	14	2201	17	3	23
88HQ1110	2.4	19	1023	19	2	21
88HQ1111	3.0	12	1896	21	2	24
88HQ1112	1.1	14	119	20	1	22
88HQ1113	1.1	13	143	17	1	22
88HQ1114	.6	26	154	22	2	51
88HQ1115	.6	32	87	20	3	42
88HQ1116	.9	33	34	24	2	41
88HQ1117	.5	1	47	20	1	57
88HQ1118	.4	31	135	19	1	55
88HQ1119	.4	36	98	17	2	49
88HQ1120	1.0	5	12	17	2	37

COMPANY: HI-TEC RES.MNG.LTD.

MIN-EN LABS ICP REPORT

(ACT:F31) PAGE 1 OF 1

PROJECT NO: 88 BC 053

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

FILE NO: 8-2201/P5

ATTENTION: V.KURAN J.SORBARA B.ARNOLD

(604)980-5814 DR (604)988-4524

* TYPE ROCK GEOCHEM *

DATE: DECEMBER 16, 1988

(VALUES IN PPM)	AG	AS	CU	PB	SB	ZN
88HD1121	.9	5	6	17	1	31
88HD1122	.9	17	29	14	1	29
88HD1123	1.0	17	37	15	1	25
88HD1124	1.0	11	90	20	2	28
88HD1125	1.0	4	121	20	2	27
88HD1126	.8	8	112	20	1	29
88HD1127	.9	6	62	15	2	30
88HD1128	.9	10	87	20	2	30
88HD1129	1.2	1	56	15	1	38
88HD1130	1.5	1	76	17	4	43

(VALUES IN PPM)	AG	AS	CU	PB	SB	ZN
88H01131	1.2	16	135	18	1	44
88H01132	2.1	29	49	9	2	48
88H01133	1.3	6	6	24	1	68
88H01134	1.5	31	6	26	1	112
88H01135	2.0	45	77	9	3	50
88H01136	2.3	18	252	17	4	52
88H01137	2.8	9	128	11	2	55
88H01138	3.6	34	205	16	4	42
88H01139	.5	20	111	11	1	63
88H01140	5.0	1	166	19	5	37
88H01141	5.1	2	187	22	3	38
88H01142	3.1	24	83	16	3	55
88H01143	4.3	51	272	13	4	53
88H01144	.4	1	74	19	1	46
88H01145	1.8	8	108	21	2	51
88H01146	2.1	32	99	15	2	48
88H01147	.4	34	57	16	1	53
88H01148	3.5	29	112	20	3	39
88H01149	4.2	42	292	22	4	53
88H01150	2.2	9	75	20	3	35
88H01151	.5	45	139	22	1	44
88H01152	.5	1	157	19	1	46
88H01153	.4	34	56	18	1	38
88H01154	2.5	30	58	14	3	41
88H01155	.4	52	13	11	1	41
88H01156	.4	35	194	14	4	46
88H01157	.3	40	83	25	1	54
88H01158	.5	25	135	28	2	63
88H01159	.7	37	175	17	1	47
88H01160	.8	1	74	13	1	35
88H01161	2.6	1	169	10	3	36
88H01162	1.2	1	46	21	1	33
88H01163	4.2	26	79	228	4	317
88H01164	3.6	8	182	16	1	40
88H01165	.6	36	61	13	1	49
88H01166	.6	32	240	23	1	52
88H01167	1.2	10	30	20	1	27
88H01168	1.2	3	75	20	1	29
88H01169	.9	41	39	18	1	42
88H01170	1.6	68	537	23	1	60
88H01171	.5	46	137	20	1	45
88H01172	2.9	36	224	17	2	40
88H01173	.3	31	97	19	1	43
88H01174	.8	22	185	15	3	43
88H01175	1.7	34	160	21	1	39
88H01176	.6	56	148	22	2	58
88H01177	.6	43	32	19	1	56
88H01178	1.0	49	51	14	1	39
88H01179	.8	57	146	13	1	67
88H01180	.9	34	80	19	1	48
88H01181	.9	1	124	21	1	47
88H01182	1.2	42	263	18	1	40
88H01183	1.1	1	243	13	2	47
88H01184	1.6	9	385	17	1	33
88H01185	1.3	16	68	16	1	25
88H01186	1.4	15	103	21	1	24
88H01187	1.4	36	333	15	3	21
88H01188	1.2	22	279	20	2	26
88H01189	.7	44	209	20	1	39
88H01190	.6	36	198	22	2	44

COMPANY: HI-TEC RESOURCE MANAGEMENT LTD.

MIN-EN LABS ICP REPORT

(ACT:F31) PAGE 1 OF 1

PROJECT NO: 88 BC 053

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

FILE NO: 8-2214R/P3

ATTENTION: R.ARNOLD/V.KURAN

(604)980-5814 OR (604)988-4524

* TYPE ROCK GEOCHEM *

DATE: DECEMBER 20, 1988

(VALUES IN PPM)	AG	AS	CU	PB	SB	ZN
88HD1191	.6	22	33	20	2	61
88HD1192	.5	14	29	23	1	58
88HD1193	1.1	19	25	29	1	59
88HD1194	.5	20	24	31	2	65
88HD1195	1.2	19	195	15	1	28



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TELEX: VIA U.S.A. 7601067 • FAX (604) 980-9621

TIMMINS OFFICE:
33 EAST IROQUOIS ROAD
P.O. BOX 867
TIMMINS, ONTARIO CANADA P4N 7G7
TELEPHONE: (705) 264-9996

Certificate of ASSAY

Company: HI-TEC RES. MANAGE. LTD.
Project: 88 BC 053
Attention: V. KURAN/R. ARNOLD

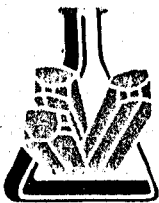
File: 8-2228/P1
Date: DEC. 23/88
Type: ROCK ASSAY

We hereby certify the following results for samples submitted.

Sample Number	AU G/TONNE	AU OZ/TON
88H02 001	.04	0.001
88H02 002	.04	0.001
88H02 003	.02	0.001
88H02 004	.04	0.001
88H02 005	.05	0.001
88H02 006	.02	0.001
88H02 007	.03	0.001
88H02 008	.02	0.001
88H02 009	.01	0.001
88H02 010	.02	0.001
88H02 011	.01	0.001
88H02 012	.03	0.001
88H02 013	.01	0.001
88H02 014	.01	0.001
88H02 015	.04	0.001
88H02 016	.02	0.001
88H02 017	.03	0.001
88H02 018	.01	0.001
88H02 019	.06	0.002
88H02 020	.03	0.001
88H02 021	.03	0.001
88H02 022	.01	0.001
88H02 023	.01	0.001
88H02 024	.01	0.001
88H02 025	.04	0.001
88H02 026	.07	0.002
88H02 027	.19	0.006
88H02 028	.13	0.004
88H02 029	.04	0.001
88H02 030	.09	0.003

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VANCOUVER OFFICE:
705 WEST 15TH STREET
NORTH VANCOUVER, B.C. CANADA V7M 1T2
TELEPHONE (604) 980-5814 OR (604) 988-4524
TELEX: VIA U.S.A. 7601067 • FAX (604) 980-9621

TIMMINS OFFICE:
33 EAST IROQUOIS ROAD
P.O. BOX 867
TIMMINS, ONTARIO CANADA P4N 7G7
TELEPHONE: (705) 264-9996

Certificate of Assay

Company: HI-TEC RES. MANAGE. LTD.
Project: BB BC 053
Attention: V. KURAN/R. ARNOLD

File: 8-2228/P2
Date: DEC. 23/88
Type: ROCK ASSAY

We hereby certify the following results for samples submitted.

Sample Number	AU G/TONNE	AU OZ/TON
BBH02 031	.07	0.002
BBH02 032	.04	0.001
BBH02 033	.05	0.001
BBH02 034	.01	0.001
BBH02 035	.02	0.001
BBH02 036	.01	0.001
BBH02 037	.02	0.001
BBH02 038	.02	0.001
BBH02 039	.03	0.001
BBH02 040	.01	0.001
BBH02 041	.01	0.001
BBH02 042	.04	0.001
BBH02 043	.02	0.001
BBH02 044	.01	0.001
BBH02 045	.02	0.001
BBH02 046	.02	0.001
BBH02 047	.01	0.001
BBH02 048	.01	0.001
BBH02 049	.05	0.001
BBH02 050	.01	0.001
BBH02 051	.01	0.001
BBH02 052	.01	0.001
BBH02 053	.02	0.001
BBH02 054	.04	0.001
BBH02 055	.03	0.001
BBH02 056	.06	0.002
BBH02 057	.10	0.003
BBH02 058	.08	0.002
BBH02 059	.02	0.001
BBH02 060	.05	0.001

Certified by _____

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P.O. BOX 867
TIMMINS, ONTARIO CANADA P4N 7G7
TELEPHONE: (705) 264-9996

Certificate of Assay

Company: HI-TEC RES. MANAGE. LTD.
Project: 88 BC 053
Attention: V. KURAN/R. ARNOLD

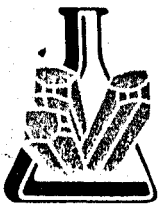
File: 8-2228/P3
Date: DEC. 23/88
Type: ROCK ASSAY

We hereby certify the following results for samples submitted.

Sample Number	AU G/TONNE	AU OZ/TON
88H02 061	.06	0.002
88H02 062	.02	0.001
88H02 063	.01	0.001
88H02 064	.01	0.001
88H02 065	.02	0.001
88H02 066	.05	0.001
88H02 067	.02	0.001
88H02 068	.03	0.001
88H02 069	.04	0.001
88H02 070	.02	0.001
88H02 071	.17	0.005
88H02 072	.02	0.001
88H02 073	.05	0.001
88H02 074	.01	0.001
88H02 075	.01	0.001
88H02 076	.07	0.002
88H02 077	.02	0.001
88H02 078	.01	0.001
88H02 079	.08	0.002
88H02 080	.01	0.001
88H02 081	.07	0.002
88H02 082	.01	0.001
88H02 083	.10	0.003
88H02 084	.02	0.001
88H02 085	.05	0.001
88H02 086	.04	0.001
88H02 087	.02	0.001
88H02 088	.03	0.001
88H02 089	.02	0.001
88H02 090	.04	0.001

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NORTH VANCOUVER, B.C. CANADA V7M 1T2
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TELEX: VIA U.S.A. 7601067 • FAX (604) 980-9621

TIMMINS OFFICE:
33 EAST IROQUOIS ROAD
P.O. BOX 867
TIMMINS, ONTARIO CANADA P4N 7G7
TELEPHONE: (705) 264-8996

Certificate of Assay

Company: HI-TEC RES. MANAGE. LTD.
Project: 88 BC 053
Attention: V. KURAN/R. ARNOLD

File: 8-2228/P4
Date: DEC. 23/88
Type: ROCK ASSAY

We hereby certify the following results for samples submitted.

Sample Number	AU G/TONNE	AU OZ/TON
88H02 091	.04	0.001
88H02 092	.01	0.001
88H02 093	.02	0.001
88H02 094	.05	0.001
88H02 095	.02	0.001
88H02 096	.05	0.001
88H02 097	.01	0.001
88H02 098	.02	0.001
88H02 099	.01	0.001
88H02 100	.01	0.001
88H02 101	.01	0.001
88H02 102	.03	0.001
88H02 103	.10	0.003
88H02 104	.12	0.004
88H02 105	.17	0.005
88H02 106	.02	0.001
88H02 107	.01	0.001
88H02 108	.02	0.001
88H02 109	.03	0.001
88H02 110	.08	0.002
88H02 111	.01	0.001
88H02 112	.01	0.001
88H02 113	.03	0.001
88H02 114	.01	0.001
88H02 115	.01	0.001

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SPECIALISTS IN MINERAL ENVIRONMENTS
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VANCOUVER OFFICE:
705 WEST 15TH STREET
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TIMMINS OFFICE:
33 EAST IROQUOIS ROAD
P.O. BOX 867
TIMMINS, ONTARIO CANADA P4N 7G7
TELEPHONE: (705) 264-9996

Certificate of ASSAY

Company: HI-TEC RES. MANAGE. LTD.
Project: 88 BC 053
Attention: V. KURAN/R. ARNOLD

File: 8-2227/P1
Date: DEC. 23/88
Type: ROCK ASSAY

We hereby certify the following results for samples submitted.

Sample Number	AU G/TONNE	AU OZ/TON
88H02 116	.01	0.001
88H02 117	.04	0.001
88H02 118	.01	0.001
88H02 119	.03	0.001
88H02 120	.03	0.001

88H02 121	.04	0.001
88H02 121	.01	0.001
88H02 123	.03	0.001
88H02 124	.01	0.001
88H02 125	.02	0.001

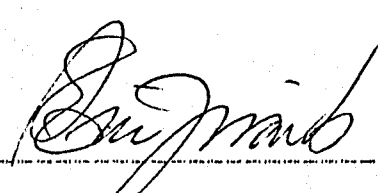
88H02 126	.02	0.001
88H02 127	.01	0.001
88H02 128	.04	0.001
88H02 129	.02	0.001
88H02 130	.01	0.001

88H02 131	.03	0.001
88H02 132	.25	0.007
88H02 133	.02	0.001
88H02 134	.08	0.002
88H02 135	.08	0.002

88H02 136	.02	0.001
88H02 137	.01	0.001
88H02 138	.06	0.002
88H02 139	.09	0.003
88H02 140	.10	0.003

88H02 141	.02	0.001
88H02 142	.03	0.001
88H02 143	.02	0.001
88H02 144	.01	0.001
88H02 145	.03	0.001

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TIMMINS, ONTARIO CANADA P4N 7G7
TELEPHONE: (705) 264-9996

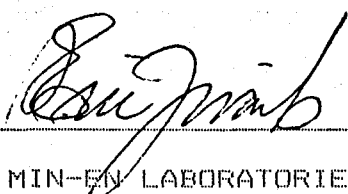
Certificate of Assay

Company: HI-TEC RES. MANAGE. LTD.
Project: 88 BC 053
Attention: V. KURAN/R. ARNOLD

File: B-2227/P2
Date: DEC. 23/88
Type: ROCK ASSAY

We hereby certify the following results for samples submitted.

Sample Number	AU G/TONNE	AU OZ/TON
88H02 146	.02	0.001
88H02 147	.01	0.001
88H02 148	.01	0.001
88H02 149	.03	0.001
88H02 150	.02	0.001
88H02 151	.01	0.001
88H02 152	.01	0.001
88H02 153	.07	0.002
88H02 154	.03	0.001
88H02 155	.01	0.001
88H02 156	.02	0.001
88H02 157	.18	0.005
88H02 158	.01	0.001
88H02 159	.01	0.001
88H02 160	.02	0.001
88H02 161	.01	0.001
88H02 162	.01	0.001
88H02 163	.01	0.001
88H02 164	.01	0.001
88H02 165	.86	0.025
88H02 166	.02	0.001
88H02 167	.03	0.001
88H02 168	.02	0.001
88H02 169	.20	0.006
88H02 170	.20	0.006
88H02 171	.04	0.001
88H02 172	2.00	0.058
88H02 173	1.63	0.048
88H02 174	.20	0.006
88H02 175	.02	0.001
88H02 176	.02	0.001

Certified by 
MIN-EN LABORATORIES LTD.

(VALUES IN PPM)	AG	AS	CU	PB	SB	ZN
88H02001	.7	4	16	33	1	61
88H02002	.6	11	76	28	2	57
88H02003	1.1	14	73	23	2	52
88H02004	.8	10	111	20	1	34
88H02005	1.2	26	227	23	2	36
88H02006	1.5	25	339	31	2	38
88H02007	1.5	46	244	37	2	61
88H02008	1.5	35	175	44	3	54
88H02009	1.3	12	92	38	1	54
88H02010	1.8	21	202	150	2	166
88H02011	1.6	22	170	71	5	85
88H02012	1.9	24	274	145	3	68
88H02013	1.5	7	128	169	4	96
88H02014	1.4	10	144	86	1	124
88H02015	1.1	13	122	57	1	77
88H02016	1.5	21	57	105	3	85
88H02017	1.6	27	126	72	4	65
88H02018	1.3	31	82	89	2	77
88H02019	1.3	24	58	129	4	87
88H02020	.7	1	141	20	1	56
88H02021	1.2	3	169	124	3	240
88H02022	.8	5	206	24	1	44
88H02023	.5	27	104	29	1	66
88H02024	.7	32	113	17	1	42
88H02025	.7	1	109	14	2	40
88H02026	.8	31	89	20	1	33
88H02027	.7	1	176	15	4	29
88H02028	.9	8	90	19	3	28
88H02029	.8	23	133	12	4	39
88H02030	1.0	4	151	15	7	48
88H02031	1.1	20	148	11	3	41
88H02032	1.8	36	169	19	1	20
88H02033	1.6	32	56	21	3	31
88H02034	1.2	26	48	19	1	26
88H02035	1.4	20	82	22	2	21
88H02036	1.0	17	34	18	1	34
88H02037	1.7	9	46	20	5	40
88H02038	1.6	23	71	25	1	24
88H02039	1.6	24	373	19	1	20
88H02040	1.1	19	92	24	1	20
88H02041	1.5	30	68	22	1	13
88H02042	1.0	1	87	21	3	38
88H02043	1.2	35	112	27	6	50
88H02044	.6	18	78	20	4	52
88H02045	1.4	21	48	18	2	21
88H02046	1.2	12	68	19	2	26
88H02047	1.0	38	61	18	8	46
88H02048	1.0	27	233	20	3	37
88H02049	1.5	1	226	27	5	47
88H02050	.5	23	75	28	7	67
88H02051	1.2	33	153	18	6	56
88H02052	.5	34	120	31	5	64
88H02053	.3	20	58	34	9	105
88H02054	.6	12	231	32	9	87
88H02055	.5	28	226	29	7	73
88H02056	.6	17	221	30	8	74
88H02057	2.0	11	190	32	7	112
88H02058	1.4	26	46	23	1	18
88H02059	1.1	24	20	19	1	85
88H02060	1.2	24	29	15	1	18

(VALUES IN PPM)	AG	AS	CU	PB	SB	ZN
88H02061	.9	13	60	18	1	9
88H02062	1.2	28	66	19	1	8
88H02063	1.1	12	93	19	1	8
88H02064	1.2	29	113	19	1	8
88H02065	1.0	17	186	20	2	14
88H02066	1.2	27	110	19	1	7
88H02067	1.3	26	109	16	1	8
88H02068	1.0	20	144	15	1	8
88H02069	1.2	28	179	16	1	8
88H02070	1.0	12	254	15	1	10
88H02071	1.1	21	118	20	1	13
88H02072	1.7	1	683	26	6	47
88H02073	1.0	1	499	28	7	31
88H02074	1.3	9	462	25	5	28
88H02075	1.0	19	256	30	5	46
88H02076	.8	24	28	29	7	74
88H02077	.7	11	18	28	4	64
88H02078	.7	22	89	40	4	61
88H02079	.7	21	48	36	6	83
88H02080	.7	17	16	38	3	66
88H02081	1.1	4	107	32	2	35
88H02082	1.1	1	121	22	2	36
88H02083	1.6	26	673	14	2	12
88H02084	1.6	30	517	17	2	12
88H02085	1.9	26	193	31	8	31
88H02086	1.1	15	210	24	3	16
88H02087	.8	12	179	21	3	20
88H02088	1.0	12	197	20	2	19
88H02089	1.0	1	144	20	3	27
88H02090	1.3	28	304	15	8	34
88H02091	1.3	22	207	13	2	35
88H02092	.8	11	140	20	1	14
88H02093	1.0	17	84	20	1	11
88H02094	.9	19	76	18	1	9
88H02095	1.1	10	116	16	1	13
88H02096	.6	7	36	17	1	23
88H02097	1.3	26	33	18	1	8
88H02098	1.3	21	61	20	2	14
88H02099	1.2	17	109	20	1	12
88H02100	1.1	1	122	17	2	21
88H02101	1.0	1	223	18	2	18
88H02102	.5	1	96	23	10	87
88H02103	1.0	17	106	13	3	35
88H02104	.8	6	96	13	5	46
88H02105	.5	44	497	10	8	66
88H02106	.5	60	114	17	7	66
88H02107	.4	52	91	14	6	55
88H02108	.4	58	138	17	6	48
88H02109	.7	1	326	11	7	43
88H02110	.9	63	146	18	8	60
88H02111	1.2	25	49	12	2	29
88H02112	.9	21	51	12	2	34
88H02113	1.0	12	47	14	1	27
88H02114	1.4	11	49	20	4	25
88H02115	1.4	1	157	20	2	27

(VALUES IN PPM)	AG	AS	CU	FB	SB	ZN
88H02116	5.2	14	120	69	5	1433
88H02117	4.0	29	219	31	1	1091
88H02118	1.2	27	255	19	1	132
88H02119	1.2	27	166	14	1	47
88H02120	1.1	24	95	16	3	40
88H02121	.5	44	689	11	1	65
88H02122	.9	25	310	22	1	60
88H02123	1.0	6	83	13	3	139
88H02124	.8	1	48	12	1	51
88H02125	1.3	6	104	14	2	37
88H02126	1.0	1	65	14	2	38
88H02127	.9	38	332	11	2	62
88H02128	.3	20	76	10	2	60
88H02129	1.2	1	109	12	4	54
88H02130	1.1	21	56	17	3	59
88H02131	1.0	18	373	21	1	75
88H02132	11.1	49	80	430	5	1960
88H02133	.7	34	113	12	1	146
88H02134	1.0	15	332	26	2	89
88H02135	.8	47	492	25	1	63
88H02136	.7	42	141	12	2	60
88H02137	.6	1	74	9	2	39
88H02138	.7	7	56	20	1	49
88H02139	.7	45	202	11	1	72
88H02140	1.2	10	274	14	3	49
88H02141	1.1	28	306	312	1	88
88H02142	.2	38	224	10	2	53
88H02143	.4	11	119	19	1	42
88H02144	.7	45	221	19	1	52
88H02145	.3	33	81	20	1	53

COMPANY: HI-TEC RESOURCE MANAGEMENT LTD.

MIN-EN LABS ICP REPORT

(ACT:F31) PAGE 1 OF 1

PROJECT NO: 88 BC 053

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

FILE NO: 8-2227R/P2

ATTENTION: V.KURAN

(604)980-5814 OR (604)988-4524 * TYPE ROCK GEOCHEM * DATE: DECEMBER 24, 1988

(VALUES IN PPM)	AG	AS	CU	PB	SB	ZN
88H02146	.7	33	44	17	1	75
88H02147	.4	33	98	17	1	67
88H02148	2.3	1	129	13	3	30
88H02149	1.7	44	88	9	3	31
88H02150	1.6	35	578	14	6	23
88H02151	.4	6	269	14	5	43
88H02152	1.1	1	366	11	7	45
88H02153	4.9	1	785	38	5	318
88H02154	.9	16	162	11	2	43
88H02155	.7	21	212	19	1	33
88H02156	1.2	11	247	10	4	23
88H02157	3.4	19	3147	18	7	26
88H02158	1.7	15	921	8	2	20
88H02159	.6	7	54	17	3	18
88H02160	.9	7	27	15	2	17
88H02161	.9	1	46	14	2	14
88H02162	.6	1	7	14	3	28
88H02163	1.1	32	47	10	4	23
88H02164	1.0	21	59	17	4	22
88H02165	8.0	53	5000	12	11	67
88H02166	1.4	13	163	21	1	21
88H02167	1.7	35	179	18	2	18
88H02168	1.8	7	286	17	4	16
88H02169	2.9	8	1571	14	4	24
88H02170	3.8	47	2129	9	7	20
88H02171	1.5	7	99	10	1	18
88H02172	30.8	39	28850	81	30	271
88H02173	13.0	192	14367	24	24	122
88H02174	6.6	25	4829	16	8	40
88H02175	2.5	1	1940	8	6	23
88H02176	1.2	33	832	10	3	27



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705 WEST 15TH STREET
NORTH VANCOUVER, B.C. CANADA V7M 1T2
TELEPHONE (604) 980-5814 OR (604) 988-4524
TELEX: VIA U.S.A. 7601067 • FAX (604) 980-9621

TIMMINS OFFICE:
33 EAST IROQUOIS ROAD
P.O. BOX 867
TIMMINS, ONTARIO CANADA P4N 7G7
TELEPHONE: (705) 264-9996

Certificate of ASSAY

Company: HI-TEC RESOURCE MANAGEMENT LTD.
Project: 88 BC 053
Attention: V KURAN

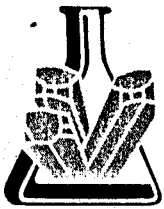
File: 8-2229/P1
Date: DEC 24/88
Type: ROCK ASSAY

We hereby certify the following results for samples submitted.

Sample Number	AU G/TONNE	AU OZ/TON
88 HO 3001	.02	0.001
88 HO 3002	.04	0.001
88 HO 3003	.01	0.001
88 HO 3004	.03	0.001
88 HO 3005	.10	0.003
88 HO 3006	.05	0.001
88 HO 3007	.02	0.001
88 HO 3008	.01	0.001
88 HO 3009	.01	0.001
88 HO 3010	.01	0.001
88 HO 3011	.02	0.001
88 HO 3012	.01	0.001
88 HO 3013	.02	0.001
88 HO 3014	.04	0.001
88 HO 3015	.02	0.001
88 HO 3016	.01	0.001
88 HO 3017	.01	0.001
88 HO 3018	.01	0.001
88 HO 3019	.02	0.001
88 HO 3020	.03	0.001
88 HO 3021	.02	0.001
88 HO 3022	.04	0.001
88 HO 3023	.01	0.001
88 HO 3024	.01	0.001
88 HO 3025	.02	0.001
88 HO 3026	.01	0.001
88 HO 3027	.01	0.001
88 HO 3028	.01	0.001
88 HO 3029	.04	0.001
88 HO 3030	.01	0.001

Certified by

MIN-EN LABORATORIES LTD.



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SPECIALISTS IN MINERAL ENVIRONMENTS
CHEMISTS • ASSAYERS • ANALYSTS • GEOCHEMISTS

VANCOUVER OFFICE:
705 WEST 15TH STREET
NORTH VANCOUVER, B.C. CANADA V7M 1T2
TELEPHONE (604) 980-5814 OR (604) 988-4524
TELEX: VIA U.S.A. 7601067 • FAX (604) 980-9621

TIMMINS OFFICE:
33 EAST IROQUOIS ROAD
P.O. BOX 867
TIMMINS, ONTARIO CANADA P4N 7G7
TELEPHONE: (705) 264-9996

Certificate of Assay

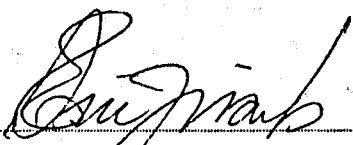
Company: HI TEC RESOURCE MANAGEMENT LTD.
Project: 88 BC 053
Attention: V. KURAN

File: 8-2229/P2
Date: DEC 24/88
Type: ROCK ASSAY

We hereby certify the following results for samples submitted.

Sample Number	AU G/TONNE	AU OZ/TON
88 HO 3031	.04	0.001
88 HO 3032	.02	0.001
88 HO 3033	.01	0.001
88 HO 3034	.01	0.001
88 HO 3035	.02	0.001
88 HO 3036	.08	0.002
88 HO 3037	.01	0.001
88 HO 3038	.01	0.001
88 HO 3039	.02	0.001
88 HO 3040	.01	0.001
88 HO 3041	.01	0.001
88 HO 3042	.06	0.002
88 HO 3043	.05	0.001
88 HO 3044	.07	0.002
88 HO 3045	.03	0.001
88 HO 3046	.05	0.001
88 HO 3047	.02	0.001
88 HO 3048	.04	0.001
88 HO 3049	.02	0.001
88 HO 3050	.05	0.001
88 HO 3051	.01	0.001
88 HO 3052	.02	0.001
88 HO 3053	.01	0.001
88 HO 3054	.05	0.001
88 HO 3055	.01	0.001
88 HO 3056	.02	0.001
88 HO 3057	.07	0.002
88 HO 3058	.02	0.001
88 HO 3059	.01	0.001
88 HO 3060	.01	0.001

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TELEPHONE: (705) 264-9996

Certificate of Assay

Company: HI-TEC RESOURCE MANAGEMENT LTD.
Project: 88 BC 053
Attention: V KURAN

File: 8-2229/P3
Date: DEC 24/88
Type: ROCK ASSAY

We hereby certify the following results for samples submitted.

Sample Number	AU G/TONNE	AU OZ/TON
88 HO 3061	.02	0.001
88 HO 3062	.01	0.001
88 HO 3063	.07	0.002
88 HO 3064	.08	0.002
88 HO 3065	.02	0.001
88 HO 3066	.10	0.003
88 HO 3067	.06	0.002
88 HO 3068	.02	0.001
88 HO 3069	.01	0.001
88 HO 3070	.03	0.001
88 HO 3071	.01	0.001
88 HO 3072	.01	0.001
88 HO 3073	.02	0.001
88 HO 3074	.06	0.002
88 HO 3075	.05	0.001
88 HO 3076	.01	0.001
88 HO 3077	.02	0.001
88 HO 3078	.03	0.001
88 HO 3079	.04	0.001
88 HO 3080	.01	0.001
88 HO 3081	.02	0.001
88 HO 3082	.01	0.001
88 HO 3083	.01	0.001
88 HO 3084	.05	0.001
88 HO 3085	.04	0.001
88 HO 3086	.02	0.001
88 HO 3087	.06	0.002
88 HO 3088	.10	0.003
88 HO 3089	.05	0.001
88 HO 3090	.01	0.001

Certified by _____

[Signature]
MIN-EN LABORATORIES LTD.



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TELEPHONE: (705) 264-9996

Certificate of Assay

Company: HI TEC RESOURCE MANAGEMENT LTD.
Project: 88 BC 053
Attention: V KURAN

File: 8-2229/P4
Date: DEC 24/88
Type: ROCK ASSAY

We hereby certify the following results for samples submitted.

Sample Number	AU G/TONNE	AU OZ/TON
88 HD 3091	.02	0.001
88 HD 3092	.01	0.001
88 HD 3093	.01	0.001
88 HD 3094	.01	0.001
88 HD 3095	.01	0.001
88 HD 3096	.01	0.001
88 HD 3097	.02	0.001
88 HD 3098	.01	0.001
88 HD 3099	.02	0.001
88 HD 3100	.01	0.001
88 HD 3101	.02	0.001
88 HD 3102	.01	0.001
88 HD 3103	.01	0.001
88 HD 3104	.01	0.001
88 HD 3105	.01	0.001
88 HD 3106	.01	0.001
88 HD 3107	.03	0.001
88 HD 3108	.01	0.001
88 HD 3109	.02	0.001
88 HD 3110	.19	0.006
88 HD 3111	.03	0.001
88 HD 3112	.01	0.001
88 HD 3113	.01	0.001
88 HD 3114	.02	0.001
88 HD 3115	1.31	0.038
88 HD 3116	.02	0.001
88 HD 3117	.03	0.001
88 HD 3118	.01	0.001
88 HD 3119	.01	0.001
88 HD 3120	.01	0.001

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P.O. BOX 867
TIMMINS, ONTARIO CANADA P4N 7G7
TELEPHONE: (705) 264-9996

Certificate of Assay

Company: HI TEC RESOURCE MANAGEMENT LTD.
Project: 88 BC 053
Attention: V. KURAN

File: 8-2229/P5
Date: DEC 24/88
Type: ROCK ASSAY

We hereby certify the following results for samples submitted.

Sample Number	AU G/TONNE	AU OZ/TON
88 HO 3121	.02	0.001
88 HO 3122	.01	0.001
88 HO 3123	.04	0.001
88 HO 3124	.01	0.001
88 HO 3125	.01	0.001
88 HO 3126	.01	0.001
88 HO 3127	.02	0.001
88 HO 3128	.01	0.001
88 HO 3129	.02	0.001
88 HO 3130	.01	0.001
88 HO 3131	.01	0.001
88 HO 3132	.01	0.001
88 HO 3133	.02	0.001
88 HO 3134	.03	0.001
88 HO 3135	.01	0.001
88 HO 3136	.01	0.001
88 HO 3137	.02	0.001
88 HO 3138	.03	0.001
88 HO 3139	.03	0.001
88 HO 3140	.01	0.001
88 HO 3141	.04	0.001
88 HO 3142	.02	0.001

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(VALUES IN PPM)	AG	AS	CU	PB	SB	ZN
88H03001	1.3	31	15	16	1	22
88H03002	1.1	34	15	30	2	80
88H03003	1.1	42	14	22	1	33
88H03004	.4	44	10	51	6	104
88H03005	.7	34	14	43	1	74
88H03006	1.0	26	20	47	1	40
88H03007	1.1	26	31	25	2	36
88H03008	.9	14	71	21	1	40
88H03009	1.0	10	119	16	2	41
88H03010	1.7	43	227	12	1	42
88H03011	1.3	22	179	12	2	50
88H03012	.7	24	205	18	3	50
88H03013	1.3	21	159	13	3	47
88H03014	1.4	24	199	14	2	45
88H03015	1.3	25	103	20	2	65
88H03016	1.2	29	34	22	1	40
88H03017	.8	15	42	30	3	51
88H03018	.7	18	32	28	2	51
88H03019	.5	7	36	23	5	60
88H03020	1.0	19	60	26	3	54
88H03021	1.0	14	70	17	4	58
88H03022	.7	13	33	18	4	47
88H03023	.8	1	118	23	5	67
88H03024	.5	18	50	19	4	63
88H03025	.7	10	27	18	2	40
88H03026	.9	1	117	21	7	61
88H03027	2.5	20	649	46	5	56
88H03028	1.3	9	352	41	3	60
88H03029	1.4	6	400	47	2	95
88H03030	2.2	19	748	28	4	109
88H03031	1.6	10	144	33	1	53
88H03032	1.1	10	70	20	3	43
88H03033	1.2	4	58	58	1	61
88H03034	.7	25	38	18	1	22
88H03035	1.5	19	60	31	2	33
88H03036	.9	3	70	20	1	31
88H03037	1.1	4	55	28	1	29
88H03038	1.0	1	147	17	1	31
88H03039	1.0	20	79	19	2	27
88H03040	.8	3	117	18	1	32
88H03041	1.2	33	97	17	4	35
88H03042	.5	48	369	10	4	63
88H03043	1.0	20	474	10	3	79
88H03044	.8	20	156	15	5	65
88H03045	.5	12	128	14	4	61
88H03046	.6	8	150	13	4	60
88H03047	.5	9	64	12	5	58
88H03048	.4	1	76	23	6	59
88H03049	.3	5	79	28	3	71
88H03050	.7	46	208	22	5	80
88H03051	1.4	3	117	18	5	72
88H03052	1.0	10	185	19	5	77
88H03053	.7	23	141	24	6	78
88H03054	.9	31	282	23	5	65
88H03055	.9	19	93	25	3	39
88H03056	1.2	23	25	23	2	24
88H03057	.4	8	41	33	3	40
88H03058	1.0	17	104	20	3	27
88H03059	1.2	11	132	17	1	29
88H03060	1.1	29	70	19	1	14

(VALUES IN PPM)	AG	AS	CU	PB	SB	ZN
88HD3061	1.0	29	54	18	1	14
88HD3062	.8	18	11	16	1	20
88HD3063	.9	7	56	17	1	20
88HD3064	1.0	16	42	13	1	22
88HD3065	.8	13	54	17	1	23
88HD3066	.8	24	37	17	1	22
88HD3067	.9	13	37	31	2	53
88HD3068	.8	16	75	17	1	27
88HD3069	1.0	13	102	18	1	23
88HD3070	1.1	11	156	20	1	22
88HD3071	.7	7	32	15	2	31
88HD3072	.5	42	82	14	2	47
88HD3073	1.9	26	639	23	1	18
88HD3074	.7	17	61	18	1	28
88HD3075	1.7	23	567	21	3	30
88HD3076	.8	36	119	18	3	40
88HD3077	.8	17	66	24	2	34
88HD3078	.6	10	93	17	3	31
88HD3079	.7	1	59	15	1	37
88HD3080	.6	16	73	13	1	25
88HD3081	.4	33	74	20	5	53
88HD3082	.4	42	49	16	5	69
88HD3083	.8	11	107	10	2	35
88HD3084	1.2	12	163	15	1	26
88HD3085	.6	10	71	10	1	25
88HD3086	.6	1	55	16	1	32
88HD3087	.5	6	79	15	6	77
88HD3088	.5	12	108	20	4	87
88HD3089	1.5	7	337	24	5	51
88HD3090	.8	35	66	13	2	45
88HD3091	.4	22	34	17	3	40
88HD3092	.5	2	168	16	4	61
88HD3093	.5	10	119	18	1	70
88HD3094	.5	37	65	13	4	47
88HD3095	.7	9	30	8	3	73
88HD3096	.9	1	267	55	7	92
88HD3097	.5	68	205	23	3	80
88HD3098	1.0	3	346	16	3	67
88HD3099	1.2	22	240	20	5	62
88HD3100	.6	6	73	20	3	65
88HD3101	.5	1	176	11	3	63
88HD3102	.6	13	229	22	2	53
88HD3103	.3	41	112	25	5	84
88HD3104	.9	47	369	19	8	70
88HD3105	.6	38	211	24	5	73
88HD3106	1.2	11	281	25	3	38
88HD3107	1.3	36	223	19	1	19
88HD3108	2.7	39	1022	21	1	24
88HD3109	1.5	27	447	37	1	36
88HD3110	.8	38	117	21	3	56
88HD3111	.5	29	37	27	6	67
88HD3112	1.1	12	166	26	2	33
88HD3113	.9	37	88	25	1	17
88HD3114	1.0	22	197	26	4	39
88HD3115	1.8	28	212	18	2	34
88HD3116	.8	17	181	15	1	28
88HD3117	.5	24	197	18	7	61
88HD3118	.5	1	89	16	1	11
88HD3119	.1	20	242	25	4	49
88HD3120	.9	1	439	18	3	25

COMPANY: HI-TEC RESOURCE MANAGEMENT LTD.

MIN-EN LABS ICP REPORT

(ACT:F31) PAGE 1 OF 1

PROJECT NO: 88 BC 053

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

FILE NO: 8-2229/P5

ATTENTION: V.KURAN

(604)980-5814 OR (604)988-4524 * TYPE ROCK GEOCHEM * DATE: DECEMBER 24, 1988

(VALUES IN PPM)	AG	AS	CU	PB	SB	ZN
88H03121	.7	1	419	10	3	25
88H03122	1.0	37	197	18	2	28
88H03123	4.2	30	2828	18	5	43
88H03124	.8	27	416	9	1	33
88H03125	.5	20	525	14	4	43
88H03126	.8	25	258	16	1	32
88H03127	1.1	16	495	21	4	43
88H03128	1.5	1	660	19	4	34
88H03129	.5	28	400	11	1	40
88H03130	2.2	25	90	11	3	60
88H03131	.7	13	113	19	1	21
88H03132	1.7	42	45	17	1	11
88H03133	.5	4	331	19	2	41
88H03134	.9	1	102	22	1	25
88H03135	1.2	23	326	20	4	37
88H03136	1.3	21	93	17	2	38
88H03137	2.6	39	240	18	6	50
88H03138	4.1	27	262	23	6	50
88H03139	1.8	1	386	20	6	38
88H03140	.7	18	30	8	5	60
88H03141	.5	40	110	12	5	45
88H03142	1.6	34	145	10	3	36

APPENDIX III

DIAMOND DRILL LOGS





HI-TEC
RESOURCE MANAGEMENT LTD.

DRILL HOLE LOG SUMMARY

Comments:

Company	HOUSTON METALS CORP.
Project No.	88BC 053
Drill hole no.	88-01
Area/Township	GREENWOOD AREA
Mining Division	GREENWOOD M.D.
Claim Name	SHANTER
N.T.S.	82-E/2
Grid Reference	L5+50N @ 0+35W
Angle/Orientation	-60° /N 135°
Length	299.9m (984')
Core size	NQ
% Recovery	95% - 100 %
Depth to Bedrock	16.8m (55')
Lithology Fm Top	CONGLOMERATE
Lithology Fm Base	SILICIFIED VOLCANICS
Date collared	Dec. 4/88
Date completed	Dec. 12/88
Dip Tests	121.9m (-60°); 299.9m (-56°)
No. of Samples	195
Sample Interval	0.3m to 2.0m
Sample No's	From: 1001 To: 1195
Drilling Company	BERGERON DRILLING
Logged by	R. Arnold / W. Kushner

	Overburden
	Conglomerate
	Andesitic tuff
	Andesitic breccia
	Andesitic flow
	Andesitic tuff highly silicified
	Andesitic tuff
	Andesitic flow with brecciated and silicified zones

Scale of Summary log	N/A
----------------------	-----



Graphic log Scale Symbol	Depth	Description	C/A	Tectonic Structures	% Rec.	Sample no.	Interval		Mineralization & Alteration					ASSAY RESULTS																				
							from	to	General						Au (g/t)	Ag (ppm)	As (ppm)	Cu (ppm)	Pb (ppm)	Sb (ppm)	Zn (ppm)													
	16.8	Base of casing/Overburden																																
	16.8	Relatively coarse conglomerate with medium to fine grained volcanic tuff matrix. Subangular to well rounded clasts up to 5cm in diameter. (Clasts comp: volcanic tuffs, sediments) Medium greenish grey. Small randomly oriented Qz veinlets and slight felds. alteration of clasts. Minor limonite and clay alt., mainly along fractures (@ 20°-35° to CA.). Presence of disseminated Py, mainly in matrix (small crystals up to 5mm in diameter). <u>19.25-19.5</u> :high clay alt.			100	1001	18.7	19.7																			0.01	0.3	1	7	24	1	75	
	19.7	Medium grained, greenish volcanic tuff with aphanitic matrix and angular clasts (1-3mm in diameter) Minor andesitic clasts up to 1.5cm in cross-section. Slightly bedded @ 55°-65° to CA. 1% disseminated Py as small crystals (0.5-1mm in diameter). Clay alt. on some of the fractures. <u>20.2</u> :5cm graphitic zone <u>20.3</u> :3cm graphitic zone			100	1002	19.7	20.7																				0.01	0.8	19	14	23	2	44
	21.2	Volcanic tuff, pale greyish green. Finer grained, less bedding features.No visible sulfide mineralization. <u>21.6</u> :50cm gouge zone with			100	1003	21.6	22.1																				0.01	0.9	12	15	35	1	54



PROJECT 88BC 053

DRILL HOLE LOG NO. 88-01

SCALE: N/A

Sheet 2 of 9

Graphic log		Depth	Description	C/A	Tectonic Structures	% Rec.	Sample no.	Interval		Mineralization & Alteration					ASSAY RESULTS						
Scale	Symbol							from	to	General						Au (g/t)	Ag(ppm)	As(ppm)	Cu(ppm)	Pb(ppm)	Sb(ppm)
			high clay and graphite alt. <u>22.7:30cm</u> gauge zone, same as above, @ 42° to CA.																		
		23.0	Volcanic tuff, same as above with minor disseminated Py and randomly oriented Qz-Carb veinlets and stringers			100	1004	23.0	23.9					0.01	0.7	22	7	31	2	42	
		24.3	Dark green-grey conglomerate with subangular-well rounded clasts up to 5cm in diameter. Clasts generally approximately 0.5-1.0 cm. Clasts composition: andesite, dacite, sediments, quartz. Matrix consists of medium to fine grained volcanic tuff. Py present (1-3%) in clusters and disseminated <u>24.7-25.0</u> : Aphanitic tuff with small Qz veinlets randomly distributed. <u>25.6-25.7</u> : Fault gouge, highly clay altered. <u>26.7-27.1</u> : Shattered, clay altered, presence of serpentine and chlorite. Increase of feldspar alt. and Qz content with depth. Presence of minor chalco. <u>50.2</u> : Dark grey-green basal conglomerate at 32° to CA. contact with highly silicified andesitic flow with some clasts and Py seams. highly clay and serpentine altered. <u>51.4</u> : 30 cm wide fault gouge with high argillite, clay			99	1005	25.7	26.7					0.02	0.7	1	37	20	1	78	
								1006	26.7	27.1					0.02	0.5	5	5	21	1	76
								1007	28.5	29.5					0.01	1.5	17	351	111	2	97
								1008	29.5	30.5					0.01	1.3	11	5	224	1	152
								1009	30.5	31.5					0.01	1.2	9	68	271	2	81
								1010	31.5	32.5					0.03	1.2	15	32	179	2	88
								1011	32.5	33.5					0.02	1.5	21	15	338	1	145
								1012	33.5	34.5					0.03	1.8	33	34	1148	3	121
								1013	34.5	35.5					0.10	2.4	10	486	1131	2	411
								1014	35.5	36.5					0.06	1.9	21	236	484	3	259
								1015	36.5	37.5					0.15	2.0	16	310	387	2	196
								1016	37.5	38.5					0.13	1.5	21	286	111	4	149
								1017	38.5	39.5					0.16	1.2	19	97	37	1	72
								1018	39.5	40.5					0.03	1.5	17	338	263	1	133
								1019	40.5	41.5					0.05	1.4	7	276	341	1	167
								1020	41.5	42.5					0.01	1.1	1	98	349	1	196
							1021	42.5	43.5					0.04	1.5	12	321	330	2	165	
							1022	43.5	44.5					0.24	3.0	13	1020	35	2	71	
							1023	44.5	45.5					0.62	7.0	18	3169	70	4	69	
							1024	45.5	46.5					0.01	1.1	20	135	20	1	41	
							1025	46.5	47.5					0.01	1.2	25	97	19	1	36	
							1026	47.5	48.5					0.01	1.4	23	67	16	2	31	
							1027	48.5	49.5					0.01	1.1	30	54	15	1	32	
							1028	49.5	50.2					0.04	1.1	21	49	16	2	36	
							1029	50.2	50.5					0.02	3.2	37	97	62	6	85	
							1030	50.5	51.4					0.01	1.0	19	232	16	2	40	
							1031	51.4	51.7					0.03	0.4	13	253	25	1	54	



HI-TEC
RESOURCE MANAGEMENT LTD.

PROJECT 88BC 053

DRILL HOLE LOG NO. 88-01

SCALE: N/A

Sheet 5 of 9

Graphic log		Depth	Description	C/A	Tectonic Structures	% Rec.	Sample no.	Interval		Mineralization & Alteration					ASSAY RESULTS										
Scale	Symbol							from	to	General						Au (g/t)	Ag (ppm)	As (ppm)	Cu (ppm)	Pb (ppm)	Sb (ppm)	Zn (ppm)			
		73.5	Andesitic flow, dark green fine to medium grained, highly clay and felds altered with presence of minor epidote 74.4-75.1:Qz vein, slightly brecciated. 78.9-79.3:Qz vein partially brecciated @ 800 to CA.				1054	73.5	74.4									0.01	1.0	35	111	17	2	40	
							1055	74.4	75.1										0.01	1.2	20	56	17	1	30
							1056	75.1	76.1										0.14	1.0	33	447	24	1	56
							1057	76.1	77.0										0.02	0.7	37	105	19	2	59
							1058	77.0	78.0										0.01	0.8	32	100	20	2	50
							1059	78.0	78.9										0.02	1.4	20	238	23	1	41
							1060	78.9	79.3										0.01	2.2	20	837	20	2	24
							1061	79.3	80.5										0.12	2.5	1	955	34	2	52
							1062	80.5	81.5										0.03	1.4	11	338	106	9	107
							1063	81.5	82.5										0.06	2.1	1	610	19	2	55
							1064	82.5	83.5										0.11	1.9	9	258	29	3	38
		83.5		Qz breccia zone, greyish vuggy, highly fractured with finely disseminated Py and minor Chalco. Numerous Qz-Carb veinlets, randomly oriented generally slightly felds and clay altered.				1065	83.5	84.5									0.10	1.6	2	673	26	3	31
								1066	84.5	85.5										0.02	1.0	13	292	14	2
							1067	85.5	86.5										0.02	1.0	17	88	17	3	18
							1068	86.5	87.5										0.04	1.4	18	432	20	3	19
							1069	87.5	88.5										0.05	1.2	22	560	13	1	18
							1070	88.5	89.5										0.02	0.9	31	150	14	2	17
							1071	89.5	90.5										0.01	1.4	24	294	19	2	18
							1072	90.5	91.5										0.01	1.4	28	146	20	2	18
							1073	91.5	92.5										0.02	1.3	16	218	16	1	20
							1074	92.5	93.5										0.01	1.2	11	153	17	2	22
							1075	93.5	94.5										0.01	1.2	4	419	17	2	25
							1076	94.5	95.5										0.02	0.9	7	63	19	1	26
							1077	95.5	96.5										0.02	1.0	17	97	19	2	25
						1078	96.5	97.5										0.01	1.1	15	129	16	2	20	
						1079	97.5	98.5										0.02	1.2	14	242	16	1	24	
						1080	98.5	99.5										0.01	0.8	10	173	15	1	25	
						1081	99.5	100.5										0.01	0.9	3	125	20	1	21	
						1082	100.5	101.5										0.01	0.9	1	91	19	2	21	
						1083	101.5	102.5										0.02	1.0	14	112	18	2	21	
						1084	102.5	103.5										0.01	1.1	20	65	17	2	22	
						1085	103.5	104.5										0.01	0.7	7	63	17	1	36	
						1086	104.5	105.5										0.02	1.1	23	129	18	1	25	
		105.5	Highly silicified andesitic tuff, brecciated in places. Andesitic matrix Approximately 80% Qz in				1087	105.5	107.0									0.02	0.8	3	37	32	2	65	
							1088	107.0	107.9										0.04	0.9	10	91	13	2	28
							1089	107.9	108.9										0.04	1.0	19	130	18	2	39
							1090	108.9	109.7										0.02	0.8	8	81	17	1	35



HI-TEC
RESOURCE MANAGEMENT LTD.

PROJECT 88BC 053

DRILL HOLE LOG NO. 88-01

SCALE: N/A

Sheet 7 of 9

Graphic log		Depth	Description	C/A	Tectonic Structures	% Rec.	Sample no.	Interval		Mineralization & Alteration					ASSAY RESULTS									
Scale	Symbol							from	to	General						Au (g/t)	Ag (ppm)	As (ppm)	Cu (ppm)	Pb (ppm)	Sb (ppm)	Zn (ppm)		
		139.2	Andesitic flow, dark green fine to medium grained, minor hematite and chlorite along fractures. Pervasive clay alteration fading out with increase of depth.				1120	139.2	140.3									0.01	1.0	5	12	17	2	37
							1121	140.3	141.2									0.02	0.9	5	6	17	1	31
							1122	141.2	142.3									0.01	0.9	17	29	14	1	29
							1123	142.3	143.4									0.01	1.0	17	37	15	1	25
							1124	143.4	144.5									0.02	1.0	11	90	20	2	28
							1125	144.5	145.6									0.01	1.0	4	121	20	2	27
			140.5-140.9:brecciated				1126	145.6	146.7									0.03	0.8	8	112	20	1	29
			141.3-142.3:brecciated				1127	146.7	147.5									0.03	0.9	6	62	15	2	30
			From 159.0:increase of py content; pervasive and in clusters along fractures.				1128	147.5	148.1									0.01	0.9	10	87	20	2	30
							1129	148.1	149.7									0.02	1.2	1	56	15	1	38
			166.4-167.3:medium green andesite breccia.				1130	149.7	150.8									0.01	1.5	1	76	17	4	43
							1131	150.8	152.3									0.02	1.2	16	135	18	1	44
							1132	152.3	153.3									0.01	2.1	29	49	9	2	48
			168.0-169.2:same as above with calcite in fractures				1133	153.3	154.3									0.01	1.3	6	6	24	1	68
							1134	154.3	155.4									0.03	1.5	31	6	26	1	112
			176.1-176.7:altered zone presence of chlorite, epidote and calcite in fractures.				1135	155.4	156.7									0.06	2.0	45	77	9	3	50
							1136	163.3	164.3									0.08	2.3	18	252	17	4	52
							1137	168.0	169.2									0.13	2.8	9	128	11	2	55
							1138	173.4	174.5									0.10	3.6	34	205	16	4	42
			181.4-181.7:high pyrite mineralization				1139	176.1	176.7									0.05	0.5	20	111	11	1	63
							1140	180.8	181.2									0.08	5.0	1	166	19	5	37
			189.0-190.2:heavy hematite and epidote alteration				1141	181.4	181.7									0.01	5.1	2	187	22	3	38
							1142	189.0	190.2									0.01	3.1	24	83	16	3	55
			194.6-195.8:bleached zone				1143	192.6	193.8									0.01	4.3	51	272	13	4	53
			197.4-206.4:bleached zone with small brecciated areas pyrite up to 3% in bands, generally decreases with increase of alteration.				1144	194.6	195.8									0.02	0.4	1	74	19	1	46
							1145	196.3	197.4									0.01	1.8	8	108	21	2	51
							1146	202.0	203.0									0.02	2.1	31	99	15	2	48
							1147	203.3	204.4									0.01	0.4	34	57	16	1	53
							1148	208.9	210.5									0.01	3.5	29	112	20	3	39
			216.4-217.0:bleached brecciated zone with pyrite and calcite present in fractures				1149	216.4	217.0									0.02	4.2	42	292	22	4	53
							1150	217.3	218.4									0.01	2.2	9	75	20	3	35
							1151	219.1	220.7									0.01	0.5	45	139	22	1	44
			minor chalcopyrite				1152	221.9	223.7									0.02	0.5	1	157	19	1	46
			230.0-235.0:bleached brecciated zone with up to 50% calcite filling fractures parallel to CA. Common hematite and epidote alteration. Py content varies from trace to minor.				1153	223.7	225.4									0.01	0.4	34	56	18	1	38
							1154	225.4	226.8									0.02	2.5	30	58	14	3	41
							1155	230.0	231.4									0.03	0.4	52	13	11	1	41
							1156	231.4	232.9									0.01	0.4	35	194	14	4	46
							1157	232.9	234.6									0.02	0.3	40	83	25	1	54
							1158	238.2	239.0									0.01	0.5	25	135	28	2	63
							1159	239.3	240.6									1.85	0.7	37	175	17	1	47



Graphic log		Depth	Description	C/A	Tectonic Structures	% Rec.	Sample no.	Interval		Mineralization & Alteration						ASSAY RESULTS								
Scale	Symbol							from	to	General							Au(g/t)	Ag(ppm)	As(ppm)	Cu(ppm)	Pb(ppm)	Sb(ppm)	Zn(ppm)	
			257.3:5 cm gouge @ 45° to CA.				1160	240.6	241.6									0.03	0.8	1	74	13	1	35
			1161	242.3	243.6													0.01	2.6	1	169	10	3	36
			261.5-263.0:highly silicified in places. Hem + epid.				1162	244.2	245.9									0.03	1.2	1	46	21	1	33
			1163	246.9	248.5													0.47	4.2	26	79	228	4	317
			calcite and pyrite present.				1164	249.1	250.2									0.02	3.6	8	182	16	1	40
			267.0-268.5:altered,bleached				1165	251.1	252.2									0.01	0.6	36	61	13	1	49
			and slightly brecciated.Clay				1166	253.4	254.6									0.01	0.6	32	240	23	1	52
			alteration pervasive, pyrite				1167	255.5	256.5									0.02	1.2	10	30	20	1	27
			only in traces. (Fault ?)				1168	256.5	257.4									0.01	1.2	3	75	20	1	29
			277.4:3 cm gouge				1169	260.6	261.5									0.02	0.9	41	39	18	1	42
			278.2-279.3:Fault gouge,				1170	261.8	262.9									0.64	1.6	68	537	23	1	60
			milky green-grey,soft,highly				1171	263.6	264.7									0.09	0.5	46	137	20	1	45
			clay altered. Upper contact				1172	264.7	265.8									0.31	2.9	36	224	17	2	40
			perpendicular to CA, lower				1173	267.0	268.2									0.01	0.3	31	97	19	1	43
			contact @ 55° to CA.Heavily				1174	269.4	270.4									0.01	0.8	22	185	15	3	43
			broken up,pyrite present in				1175	272.5	273.4									0.02	1.7	34	160	21	1	39
			small amounts.				1176	275.5	276.5									0.02	0.6	56	148	22	2	58
			289.6-291.6:Quartz vein with				1177	276.8	277.6									0.01	0.6	43	32	19	1	56
			some bleached andesite zones				1178	278.2	279.3									0.03	1.0	49	51	14	1	39
			Pyrite present as traces.				1179	279.3	280.1									0.06	0.8	57	146	13	1	67
			1180	280.1	281.2													0.02	0.9	34	80	19	1	48
			1181	281.2	282.3													0.01	0.9	1	124	21	1	47
			1182	284.2	285.4													0.01	1.2	42	263	18	1	40
			1183	286.4	287.2													0.03	1.1	1	243	13	2	47
			1184	287.2	288.2													0.02	1.6	9	385	17	1	33
			1185	288.2	289.6													0.01	1.3	16	68	16	1	25
			1186	289.6	290.4													0.02	1.4	15	103	21	1	24
			1187	290.4	291.6													0.01	1.4	36	333	15	3	21
			1188	281.6	292.3													0.01	1.2	22	279	20	2	26
			1189	292.3	293.2													0.01	0.7	44	209	20	1	39
			1190	293.2	294.2													0.01	0.6	36	198	22	2	44
		294.2	Fine to medium grained,				1191	294.2	295.1									0.01	0.6	22	33	20	2	61
			grey-black to grey,highly				1192	295.1	296.1									0.01	0.5	14	29	23	1	58
			silicified volcanics				1193	296.1	297.1									0.02	1.1	19	25	29	1	59
			(andesitic composition?)				1194	298.4	298.9									0.01	0.5	20	24	31	2	65
			1195	298.9	299.9													0.03	1.2	19	195	15	1	28

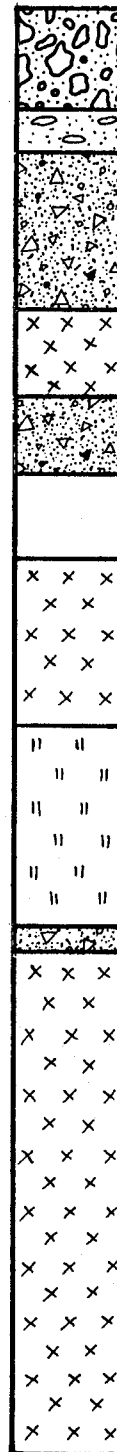


HI-TEC
RESOURCE MANAGEMENT LTD.

DRILL HOLE LOG SUMMARY

Comments:

Company	HOUSTON METALS CORP.
Project No.	88BC 053
Drill hole no.	88 - 02
Area/Township	GREENWOOD AREA
Mining Division	GREENWOOD M.D.
Claim Name	SHANTER
N.T.S.	82-E/2
Grid Reference	L5+50N @ 0+35W
Angle/Orientation	-60° / N 180°
Length	248.1m (814')
Core size	NQ
% Recovery	95% - 100%
Depth to Bedrock	16.8m (55')
Lithology Fm Top	FELDSPAR PORPHYRY
Lithology Fm Base	ANDESITIC FLOW
Date collared	Dec. 13/88
Date completed	Dec. 16/88
Dip Tests	248.1m (56°)
No. of Samples	176
Sample Interval	0.5m to 1.2m
Sample No's	From: 2001 To: 2176
Drilling Company	BERGERON DRILLING
Logged by	R. Arnold / W. Kushner



Overburden

Sediments

Andesitic breccia

Andesitic flow

Andesitic breccia

Quartz vein
and highly silicified
andesite

Andesitic flow

Andesitic tuff

E.O.H. = 248.1m (814')

Scale of Summary log	N/A
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HI-TEC
RESOURCE MANAGEMENT LTD.

PROJECT 88BC 053

DRILL HOLE LOG NO. 88-02

SCALE: N/A

Sheet 1 of 8

Graphic log		Depth	Description	C/A	Tectonic Structures	% Rec.	Sample no.	Interval		Mineralization & Alteration					ASSAY RESULTS						
Scale	Symbol							from	to	General							Au (g/t)	Ag (ppm)	As (ppm)	Cu (ppm)	Pb (ppm)
		16.8	End of Casing/Overburden																		
		16.8	Medium grey conglomerate with sedimentary and volcanic subangular to rounded clasts up to 5 cm in diameter. Feldspar and quartz medium grained matrix with disseminated pyrite. Hematite and clay alteration along fracture planes, minor limonite.				2001	17.1	18.1												
		18.1	Fine to medium grained, light grey arkose. Upper contact with conglomerate @ 80° to CA. Zones highly clay altered, dark grey. No visible sulfide mineralization.																		
		22.2	Contact @ 80° to CA with medium grey, aphanitic to very fine grained siltstone No visible mineralization 22.3-22.5: Fault gouge highly clay altered.																		
		22.7	Ash flow, light grey, fine grained, no visible mineralization. Contact with siltstone @ 45° to CA.																		
		24.1	Arkose, same as above, with minor sulfide mineralization Contact with upper unit @ 80° to CA.																		
		25.1	Medium green andesitic breccia with bleached zones				2002	25.1	26.1												
							2003	26.1	27.1												
												0.04	0.6	11	76	28	2			57	
												0.02	1.1	14	73	23	2			52	



HI-TEC
RESOURCE MANAGEMENT LTD.

PROJECT 88BC 053

DRILL HOLE LOG NO. 88-02

SCALE: N/A

Sheet 2 of 8

Graphic log		Depth	Description	C/A	Tectonic Structures	% Rec.	Sample no.	Interval		Mineralization & Alteration					ASSAY RESULTS										
Scale	Symbol							from	to	General						Au(g/t)	Ag(ppm)	As(ppm)	Cu(ppm)	Pb(ppm)	Sb(ppm)	Zn(ppm)			
			Cement usually tuff and quartz, fine grained. Pervasive disseminated py mineralization. Minor hematite and chlorite alteration along fracture Contact with arkose @ 75° to CA. Minor quartz veins. Pyrite content increases with depth. 36.1-39.5:fractures @ 55° to CA. Presence of Mn staining along fracture planes.				2004	27.1	28.1									0.04	0.8	10	111	20	1	34	
				2005	28.1	29.1													0.05	1.2	26	227	23	2	36
				2006	29.1	30.1													0.02	1.5	25	339	31	2	38
				2007	30.1	31.1													0.03	1.5	46	244	37	2	61
				2008	31.1	32.1													0.02	1.5	35	175	44	3	54
				2009	32.1	33.1													0.01	1.3	12	92	38	1	54
				2010	33.1	34.1													0.02	1.8	21	202	150	2	166
				2011	34.1	35.1													0.01	1.6	22	170	71	5	85
				2012	35.1	36.1													0.03	1.9	24	274	145	3	68
				2013	36.1	37.1													0.01	1.5	7	128	169	4	96
				2014	37.1	38.1													0.01	1.4	10	144	86	1	124
				2015	38.1	39.1													0.04	1.1	13	122	57	1	77
				2016	39.1	40.1													0.02	1.5	21	57	105	3	85
				2017	40.1	40.8													0.03	1.6	27	126	72	4	65
				2018	40.8	41.8													0.01	1.3	31	82	89	2	77
				2019	41.8	42.8													0.06	1.3	24	58	129	4	87
				2020	42.8	43.8													0.03	0.7	1	141	20	1	56
				2021	43.8	44.8													0.03	1.2	3	169	124	3	240
				2022	44.8	45.8													0.01	0.8	5	206	24	1	44
				2023	45.8	46.8													0.01	0.5	27	104	29	1	66
			2024	46.8	47.6													0.01	0.7	32	113	17	1	42	
			2025	47.6	48.6													0.04	0.7	1	109	14	2	40	
			2026	48.6	49.6													0.07	0.8	31	89	20	1	33	
			2027	49.6	50.6													0.19	0.7	1	176	15	4	29	
			2028	50.6	51.6													0.13	0.9	8	90	19	3	28	
			2029	51.6	52.7													0.04	0.8	23	133	12	4	39	
		52.7	Very altered, black to dark grey andesitic flow, with 1-2 cm fault gouges at top and bottom of zone @ 90° to CA. Small hair lines fractures filled in with calcite. No visible sulfide mineralization.				2030	52.7	53.4									0.09	1.0	4	151	15	7	48	
		53.4	Medium green, fine to medium grained andesitic flow with minor pyrite mineralization				2031	53.4	53.9									0.07	1.1	20	148	11	3	41	



Graphic log		Depth	Description	C/A	Tectonic Structures	% Rec.	Sample no.	Interval		Mineralization & Alteration					ASSAY RESULTS											
Scale	Symbol							from	to	General						Au(g/t)	Ag(ppm)	As(ppm)	Cu(ppm)	Pb(ppm)	Sb(ppm)	Zn(ppm)				
		53.9	Highly silicified andesitic flow, moderately brecciated with quartz zones. Pervasive clay alteration and traces of pyrite (disseminated).				2032	53.9	55.3									0.04	1.8	36	169	19	1	20		
		55.3	Milky green, fine grained andesitic flow with minor pyrite. Pyrite increases with depth, especially located along fracture planes. Numerous quartz veinlets @ 50° to CA. Quartz veins increase with depth and are associated with carbonates. Clay alteration present along fractures. 59.8-60.1:brecciated zone.				2033	55.3	56.3									0.05	1.6	32	56	21	3	31		
				2034	56.3	57.3														0.01	1.2	26	48	19	1	26
				2035	57.3	58.3														0.02	1.4	20	82	22	2	21
				2036	58.3	59.3														0.01	1.0	17	34	18	1	34
				2037	59.3	60.2														0.02	1.7	9	46	20	5	40
		60.2	Greyish quartz breccia with remnants of andesitic silicified breccia. Pyrite present along fractures and in blebs of 1cm x 1cm. Clay alteration present mainly along fracture planes. 62.0:5 cm fault gouge. 64.2:Fault gouge @ 40° to CA.				2038	60.2	61.1									0.02	1.6	23	71	25	1	24		
				2039	61.1	62.0														0.03	1.6	24	373	19	1	20
				2040	62.0	63.0														0.01	1.1	19	92	24	1	20
				2041	63.0	64.2														0.01	1.5	30	68	22	1	13
		64.2	Milky green clay altered andesitic flow grading to a darker green, less altered andesitic flow. Minor pyrite				2042	64.2	65.0									0.04	1.0	1	87	21	3	38		
		65.0	1 meter dark grey quartz vein, highly fractured with pyrite present in fractures Top contact @ 45° to CA and				2043	65.0	66.0									0.02	1.2	35	112	27	6	50		



HI-TEC
RESOURCE MANAGEMENT LTD.

PROJECT 88BC 053

DRILL HOLE LOG NO. 88-02

SCALE: N/A

Sheet 5 of 8

Graphic log		Depth	Description	C/A	Tectonic Structures	% Rec.	Sample no.	Interval		Mineralization & Alteration					ASSAY RESULTS										
Scale	Symbol							from	to	General						Au(g/t)	Ag(ppm)	As(ppm)	Cu(ppm)	Pb(ppm)	Sb(ppm)	Zn(ppm)			
		79.4	Grey quartz vein, fractured contact with upper unit @ 25° to CA. Numerous fract. @ 50° to CA. Important py concentration near the contact. Vuggy areas in vein. Pyrite generally in fract. but also present as minor pervasive disseminated. Areas in vein consist of highly silicified andesite.				2057	79.4	80.5									0.10	2.0	11	190	32	7	112	
							2058	80.5	81.5										0.08	1.4	26	46	23	1	18
							2059	81.5	82.5										0.02	1.1	24	20	19	1	85
							2060	82.5	83.5										0.05	1.2	24	29	15	1	18
							2061	83.5	84.5										0.06	0.9	13	60	18	1	9
							2062	84.5	85.5										0.02	1.2	28	66	19	1	8
							2063	85.5	86.5										0.01	1.1	12	93	19	1	8
							2064	86.5	87.5										0.01	1.2	29	113	19	1	8
							2065	87.5	88.5										0.02	1.0	17	186	20	2	14
							2066	88.5	89.5										0.05	1.2	27	110	19	1	7
							2067	89.5	90.5										0.02	1.3	26	109	16	1	8
							2068	90.5	91.5										0.03	1.0	20	144	15	1	8
							2069	91.5	92.5										0.04	1.2	28	179	16	1	8
							2070	92.5	93.5										0.02	1.0	12	254	15	1	10
						2071	93.5	94.5										0.17	1.1	21	118	20	1	13	
		94.3	Fine-medium grained, creamy brown green andesitic tuff. Minor disseminated pyrite; Py common along fractures. Calcite and clay present on fractures. Fractures vary from 45° to 60° to CA. Contact with Qz @ 80° to CA. Bleached in several zones. 96.0:10 cm gouge highly clay altered. 97.4-99.9: presence of talc along fractures. 101.8-102.0: gouge with high pyrite content. 104.6-105.0: brecciated zone 106.6-107.7: brecciated zone with very clay altered clasts high content of fine disseminated pyrite. Small gouge at 107.1. 109.6-110.5: brecciated with numerous grey quartz blebs and high pyrite content (3%)				2072	94.3	95.3									0.02	1.7	1	683	26	6	47	
							2073	95.3	96.3										0.05	1.0	1	499	28	7	31
							2074	96.3	97.4										0.01	1.3	9	462	25	5	28
							2075	97.4	98.5										0.01	1.0	19	256	30	5	46
							2076	98.5	99.5										0.07	0.8	24	28	29	7	74
							2077	99.5	100.5										0.02	0.7	11	18	28	4	64
							2078	100.5	101.5										0.01	0.7	22	89	40	4	61
							2079	101.5	102.5										0.08	0.7	21	48	36	6	83
							2080	102.5	103.5										0.01	0.7	17	16	38	3	66
							2081	103.5	104.1										0.07	1.1	4	107	32	2	35
							2082	104.1	105.0										0.01	1.1	1	121	22	2	36
							2083	105.0	106.0										0.10	1.6	26	673	14	2	12
							2084	106.0	107.0										0.02	1.6	30	517	17	2	12
							2085	107.0	107.7										0.05	1.9	26	193	31	8	31
							2086	107.7	108.6										0.04	1.1	15	210	24	3	16
						2087	108.6	109.6										0.02	0.8	12	179	21	3	20	
						2088	109.6	110.5										0.03	1.0	12	197	20	2	19	
						2089	110.5	111.4										0.02	1.0	1	144	20	3	27	
						2090	111.4	112.4										0.04	1.3	28	304	15	8	34	
						2091	112.4	112.9										0.04	1.3	22	207	13	2	35	
						2092	112.9	113.8										0.01	0.8	11	140	20	1	14	
						2093	113.8	114.8										0.02	1.0	17	84	20	1	11	
						2094	114.8	115.8										0.05	0.9	19	76	18	1	9	
						2095	115.8	116.6										0.02	1.1	10	116	16	1	13	



HI-TEC
RESOURCE MANAGEMENT LTD.

PROJECT 88BC 053

DRILL HOLE LOG NO. 88-02

SCALE: N/A

Sheet 6 of 8

Graphic log		Depth	Description	C/A	Tectonic Structures	% Rec.	Sample no.	Interval		Mineralization & Alteration					ASSAY RESULTS									
Scale	Symbol							from	to	General						Au(g/t)	Ag(ppm)	As(ppm)	Cu(ppm)	Pb(ppm)	Sb(ppm)	Zn(ppm)		
			110.5-111.4:quartz vein @ 90° to CA.				2096	116.6	117.6									0.05	0.6	7	36	17	1	23
			112.4-112.9:quartz vein, vuggy with quartz crystals in vugs and in fractures.				2097	117.6	118.6									0.01	1.3	26	33	18	1	8
							2098	118.6	119.6									0.02	1.3	21	61	20	2	14
							2099	119.6	120.6									0.01	1.2	17	109	20	1	12
							2100	120.6	121.6									0.01	1.1	1	122	17	2	21
							2101	121.6	122.2									0.01	1.0	1	223	18	2	18
		122.2	Fine to medium grained, dark green to cream tan(bleached zones) andesitic flow. Minor quartz-carbonate filled in fractures with minor hem., chlorite and epidote stains along fracture planes. Py. occurs in blebs (fractures) and disseminated within the rock unit. Presence of few zones of breccia usually highly silicified and alt.				2102	122.2	123.1									0.03	0.5	1	96	23	10	87
			123.1-123.4:gouge zone, broken up, highly clay alt.				2103	123.1	124.1									0.10	1.0	17	106	13	3	35
			131.1:small fault @ 35° to CA. with core heavily broken up on each side of fault				2104	124.1	125.1									0.12	0.8	6	96	13	5	46
			132.4-132.8:quartz vein @ 35° to CA with moderate py content.				2105	125.1	126.1									0.17	0.5	44	497	10	8	66
			133.2-133.5:brecciated with lots of calcite along fract.				2106	126.1	127.1									0.02	0.5	60	114	17	7	66
			139.2-139.8:Highly altered soft, large clay content.				2107	127.1	128.1									0.01	0.4	52	91	14	6	55
			144.3-144.5: fault gouge @ 40° to CA. High py content in gouge.				2108	128.1	129.1									0.02	0.4	58	138	17	6	48
			150.5-150.8: fault gouge with high hematite content.				2109	129.1	129.8									0.03	0.7	1	326	11	7	43
			152.6:5 cm fault gouge				2110	129.8	130.8									0.08	0.9	63	146	18	8	60
			156.6:10 cm gouge @ 40° to CA.				2111	130.8	131.9									0.01	1.2	25	49	12	2	29
							2112	131.9	132.9									0.01	0.9	21	51	12	2	34
							2113	132.9	133.9									0.03	1.0	12	47	14	1	27
							2114	133.9	134.9									0.01	1.4	11	49	20	4	25
							2115	134.9	135.9									0.01	1.4	1	157	20	2	27
							2116	135.9	136.9									0.01	5.2	14	120	69	5	1433
							2117	136.9	137.9									0.04	4.0	29	219	31	1	1091
							2118	137.9	138.9									0.01	1.2	27	255	19	1	132
							2119	138.9	139.9									0.03	1.2	27	166	14	1	47
							2120	139.9	141.1									0.03	1.1	24	95	16	3	40
							2121	141.1	142.1									0.04	0.5	44	689	11	1	65
							2122	142.1	143.1									0.01	0.9	25	310	22	1	60
							2123	143.1	144.0									0.03	1.0	6	83	13	3	139
							2124	144.0	144.9									0.01	0.8	1	48	12	1	51
							2125	144.9	145.9									0.02	1.3	6	104	14	2	37
							2126	145.9	146.9									0.02	1.0	1	65	14	2	38
							2127	146.9	147.9									0.01	0.9	38	332	11	2	62
							2128	147.9	148.9									0.04	0.3	20	76	10	2	60
							2129	148.9	149.9									0.02	1.2	1	109	12	4	54
							2130	149.9	150.9									0.04	1.1	21	56	17	3	59
							2131	150.9	151.8									0.03	1.0	18	373	21	1	75
							2132	151.8	152.8									0.25	11.1	49	80	430	5	1960
							2133	152.8	153.8									0.02	0.7	34	113	12	1	146
							2134	153.8	154.8									0.08	1.0	15	332	26	2	89



HI-TEC
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PROJECT 88BC 053

DRILL HOLE LOG NO. 88-02

SCALE: N/A

Sheet 7 of 8

Graphic log		Depth	Description	C/A	Tectonic Structures	% Rec.	Sample no.	Interval		Mineralization & Alteration					ASSAY RESULTS										
Scale	Symbol							from	to	General						Au(g/t)	Ag(ppm)	As(ppm)	Cu(ppm)	Pb(ppm)	Sb(ppm)	Zn(ppm)			
							2135	154.8	155.8									0.08	0.8	47	492	25	1	63	
							2136	155.8	156.8									0.02	0.7	42	141	12	2	60	
		156.8	Slightly bleached andesite-qz breccia with moderate py content (1-2%). Quartz vuggy with limonite alt. along fractures. Presence of chalcopryrite. Common epidote alteration.				2137	156.8	157.8									0.01	0.6	1	74	9	2	39	
				2138	157.8	158.8													0.06	0.7	7	56	20	1	49
				2139	158.8	159.8													0.09	0.7	45	202	11	1	72
				2140	159.8	160.8													0.10	1.2	10	274	14	3	49
		160.8		Andesite flow, same as above with moderate disseminated chalcopryrite throughout the unit. Fractures generally quartz-carbonate filled. Py present (moderate) with zones of higher concentration (up to 3-5%). Flow usually dark green but presents bleached areas. Fractures vary from 25° to 45° to CA. <u>164.2</u> : fault gouge @ 30° to CA. traces of chalcopryrite <u>161.8-163.8</u> : brecciated <u>166.5</u> : 2cm fault gouge <u>186.0-195.5</u> : highly broken up, high clay, epidote and chlorite alteration. Quartz carbonate present in fract. Fractures vary from 35° to 85° to CA. Pyrite present in blebs and minor pyrite as pervasive disseminated. <u>From 214.9</u> : gradual change to highly serpentinized unit. Serpentine increases with depth. Zone of high percentage of py and chalco (up to 5%). Rock turns to dark				2141	160.8	161.8										0.02	1.1	28	306	312	1
			2142		161.8	162.8													0.03	0.2	38	224	10	2	53
			2143		162.8	163.8													0.02	0.4	11	119	19	1	42
			2144		168.2	169.2													0.01	0.7	45	221	19	1	52
			2145		169.2	170.4													0.03	0.3	33	81	20	1	53
			2146		175.9	177.1													0.02	0.7	33	44	17	1	75
			2147		177.1	178.3													0.01	0.4	33	98	17	1	67
			2148		182.9	184.1													0.01	2.3	1	129	13	3	30
			2149		184.8	185.8													0.03	1.7	44	88	9	3	31
			2150		188.5	189.2													0.02	1.6	35	578	14	6	23
			2151		189.2	190.0													0.01	0.4	6	269	14	5	43
			2152		190.0	191.0													0.01	1.1	1	366	11	7	45
			2153		191.0	192.0													0.07	4.9	1	785	38	5	318
			2154		193.6	194.6													0.03	0.9	16	162	11	2	43
			2155		197.0	198.0													0.01	0.7	21	212	19	1	33
			2156		199.1	200.3													0.02	1.2	11	247	10	4	23
			2157		200.3	201.3													0.18	3.4	19	3147	18	7	26
			2158		201.3	202.1													0.01	1.7	15	921	8	2	20
			2159		202.1	203.1													0.01	0.6	7	54	17	3	18
			2160		203.1	204.1													0.02	0.9	7	27	15	2	17
			2161		204.1	204.9													0.01	0.9	1	46	14	2	14
			2162	204.9	205.8													0.01	0.6	1	7	14	3	28	
			2163	209.1	210.1													0.01	1.1	32	47	10	4	23	
			2164	210.1	211.1													0.01	1.0	21	59	17	4	22	
			2165	214.9	215.9													0.86	8.0	53	5000	12	11	67	
			2166	215.9	216.9													0.02	1.4	13	163	21	1	21	
			2167	217.6	218.6													0.03	1.7	35	179	18	2	18	
			2168	218.9	219.9													0.02	1.8	7	286	17	4	16	
			2169	222.4	223.4													0.20	2.9	8	1571	14	4	24	



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DRILL HOLE LOG SUMMARY

Comments:

Company	HOUSTON METALS CORP.
Project No.	88BC 053
Drill hole no.	88 - 03
Area/Township	GREENWOOD AREA
Mining Division	GREENWOOD M.D.
Claim Name	SHANTER
N.T.S.	82-E/2
Grid Reference	L 6+10N @ 0+10E
Angle/Orientation	-60° / N 135°
Length	258.2m (847')
Core size	NQ
% Recovery	95% - 100%
Depth to Bedrock	17.1m (56')
Lithology Fm Top	CONGLOMERATE
Lithology Fm Base	ANDESITIC FLOW
Date collared	Dec. 16/88
Date completed	Dec. 19/88
Dip Tests	258.2m (58°)
No. of Samples	143
Sample Interval	0.4m to 1.5m
Sample No's	From: 3001 To: 3143
Drilling Company	BERGERON DRILLING
Logged by	R. Arnold / W. Kushner



Overburden

Feldspar porphyry and greywacke

Andesitic breccia

Andesitic flow

Andesitic breccia

Andesitic flow

Andesitic breccia

Andesitic flow

Scale of Summary log	N/A
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HI-TEC
RESOURCE MANAGEMENT LTD.

PROJECT 88BC 053

DRILL HOLE LOG NO. 88-03

SCALE: N/A

Sheet 1 of 5

Graphic log		Depth	Description	C/A	Tectonic Structures	% Rec.	Sample no.	Interval		Mineralization & Alteration					ASSAY RESULTS						
Scale	Symbol							from	to	General						Au(g/t)	Ag(ppm)	As(ppm)	Cu(ppm)	Pb(ppm)	Sb(ppm)
		17.1	End of Casing/Overburden																		
		17.1	Medium grained feldspar porphyry with minor muscov. and melanocrates minerals. Clay alteration on fract. Fractures @ 45° to 55° to CA. Disseminated py (1%). Quartz-carbonate in fract. <u>22.6-24.1</u> :interbedded with aphanitic to fine grained black argillites. 2% pyrite <u>32.6-35.0</u> :interbedded with and grading to a greywacke.				3001	20.0	21.0					0.02	1.3	31	15	16	1	22	
								3002	22.6	23.6					0.04	1.1	34	15	30	2	80
								3003	27.5	28.5					0.01	1.1	42	14	22	1	33
		35.0	Greyish, fine grained greywacke with occasional small zones of porphyry and ash flows. Bedding @ 75° to 85° to CA. Minor pyrite mineralization present in some areas but usually unit is barren of sulfide mineralization.				3004	37.8	39.0					0.03	0.4	44	10	51	6	104	
								3005	48.6	49.6					0.10	0.7	34	14	43	1	74
								3006	53.6	54.6					0.05	1.0	26	20	47	1	40
		54.6	Medium grey volcanic breccia in contact with upper unit @ 80° to CA. Medium to fine grain matrix with minor py disseminated (<1%). Angular to subrounded volcanic and sedimentary clasts up to 2cm in diameter (clasts size increases with depth up to 7cm in diameter). Presence of randomly distributed qz-carbonate veinlets @ 30° to 50° to CA. Pyrite content increases with depth. Minor hematite and Mn stains				3007	54.6	55.6					0.02	1.1	26	31	25	2	36	
								3008	55.6	56.6					0.01	0.9	14	71	21	1	40
								3009	56.6	57.6					0.01	1.0	10	119	16	2	41
								3010	57.6	58.6					0.01	1.7	43	227	12	1	42
								3011	58.6	59.6					0.02	1.3	22	179	12	2	50
								3012	59.6	60.6					0.01	0.7	24	205	18	3	50
								3013	60.6	61.6					0.02	1.3	21	159	13	3	47
								3014	61.6	62.6					0.04	1.4	24	199	14	2	45
								3015	62.6	63.6					0.02	1.3	25	103	20	2	65
								3016	63.6	64.6					0.01	1.2	29	34	22	1	40
								3017	64.6	65.6					0.01	0.8	15	42	30	3	51
								3018	65.6	66.6					0.01	0.7	18	32	28	2	51
								3019	66.6	67.6					0.02	0.5	7	36	23	5	60
								3020	67.6	69.1					0.03	1.0	19	60	26	3	54
								3021	69.1	70.1					0.02	1.0	14	70	17	4	58



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PROJECT 88BC 053

DRILL HOLE LOG NO. 88-03

SCALE: N/A

Sheet 4 of 5

Graphic log		Depth	Description	C/A	Tectonic Structures	% Rec.	Sample no.	Interval		Mineralization & Alteration				ASSAY RESULTS						
Scale	Symbol							from	to	General					Au(g/t)	Ag(ppm)	As(ppm)	Cu(ppm)	Pb(ppm)	Sb(ppm)
			fracture parallel to CA. 126.8-127.4:milky grey qz vein.				8085	131.4	132.4					0.04	0.6	10	71	10	1	25
							8086	132.4	133.4					0.02	0.6	1	55	16	1	32
							8087	133.4	134.4					0.06	0.5	6	79	15	6	77
							8088	134.4	135.4					0.10	0.5	12	109	20	4	87
		135.7	Quartz-andesite breccia Same description as above Traces of chalcopryrite, 1%-3% pyrite. Epidote, hem. and chlorite alteration Fractures filled in by qz carbonate. contact with upper unit @ 20° to CA.				8089	135.4	136.4					0.05	1.5	7	337	24	5	51
							8090	136.4	137.4					0.01	0.8	35	66	13	2	45
		137.2	Andesitic flow, grey-black to pale green, fine grained, 1-3% py. Traces of chalco numerous randomly oriented quartz-carbonate filled in fractures. Extensive silice alteration in places. Chlor alteration increases with depth. 143.4-147.5:intense epidote and chlorite alteration. 3% to 5% pyrite. Fractured @ 50° to 60° to CA. 148.5-149.2:intense talc and feldspar alteration (talc up to 30%). Very soft and crumbled. 155.3-156.5pale grey quartz vein, vuggy with clay along fractures. No visible mineralization. 165.8-166.4:andesite-quartz breccia with up to 5% py. 167.6-168.7 +170.9-171.6: grey quartz veins with		3093		8091	137.4	138.4					0.02	0.4	22	34	17	3	40
							8092	138.4	139.4					0.01	0.5	2	168	16	4	61
							8093	139.4	140.4					0.01	0.5	10	119	18	1	70
							8094	140.4	141.4					0.01	0.5	37	65	13	4	47
							8095	141.4	142.4					0.01	0.7	9	30	8	3	73
							8096	142.4	143.4					0.01	0.9	1	267	55	7	92
							8097	143.4	144.5					0.02	0.5	68	205	23	3	80
							8098	144.5	145.5					0.01	1.0	3	346	16	3	67
							8099	145.5	146.5					0.02	1.2	22	240	20	5	62
							8100	146.5	147.5					0.01	0.6	6	73	20	3	65
							8101	147.5	148.5					0.02	0.5	1	176	11	3	63
							8102	148.5	149.2					0.01	0.6	13	229	22	2	53
							8103	150.9	151.9					0.01	0.3	41	112	25	5	84
							8104	152.3	153.3					0.01	0.9	47	369	19	8	70
							8105	153.6	154.6					0.01	0.6	38	211	24	5	73
							8106	154.6	155.3					0.01	1.2	11	281	25	3	38
							8107	155.3	156.5					0.03	1.3	36	223	19	1	19
							8108	156.5	157.5					0.01	2.7	39	1022	21	1	24
							8109	157.5	158.8					0.02	1.5	27	447	37	1	36
							8110	158.8	160.1					0.19	0.8	38	117	21	3	56
							8111	160.1	161.1					0.03	0.5	29	37	27	6	67
							8112	165.8	166.4					0.01	1.1	12	166	26	2	33
							8113	167.6	168.6					0.01	0.9	37	88	25	1	17
							8114	168.6	169.6					0.02	1.0	22	197	26	4	39
							8115	169.6	170.6					1.31	1.8	28	212	18	2	34

APPENDIX IV

STATISTICAL DATA FOR CORE SAMPLES



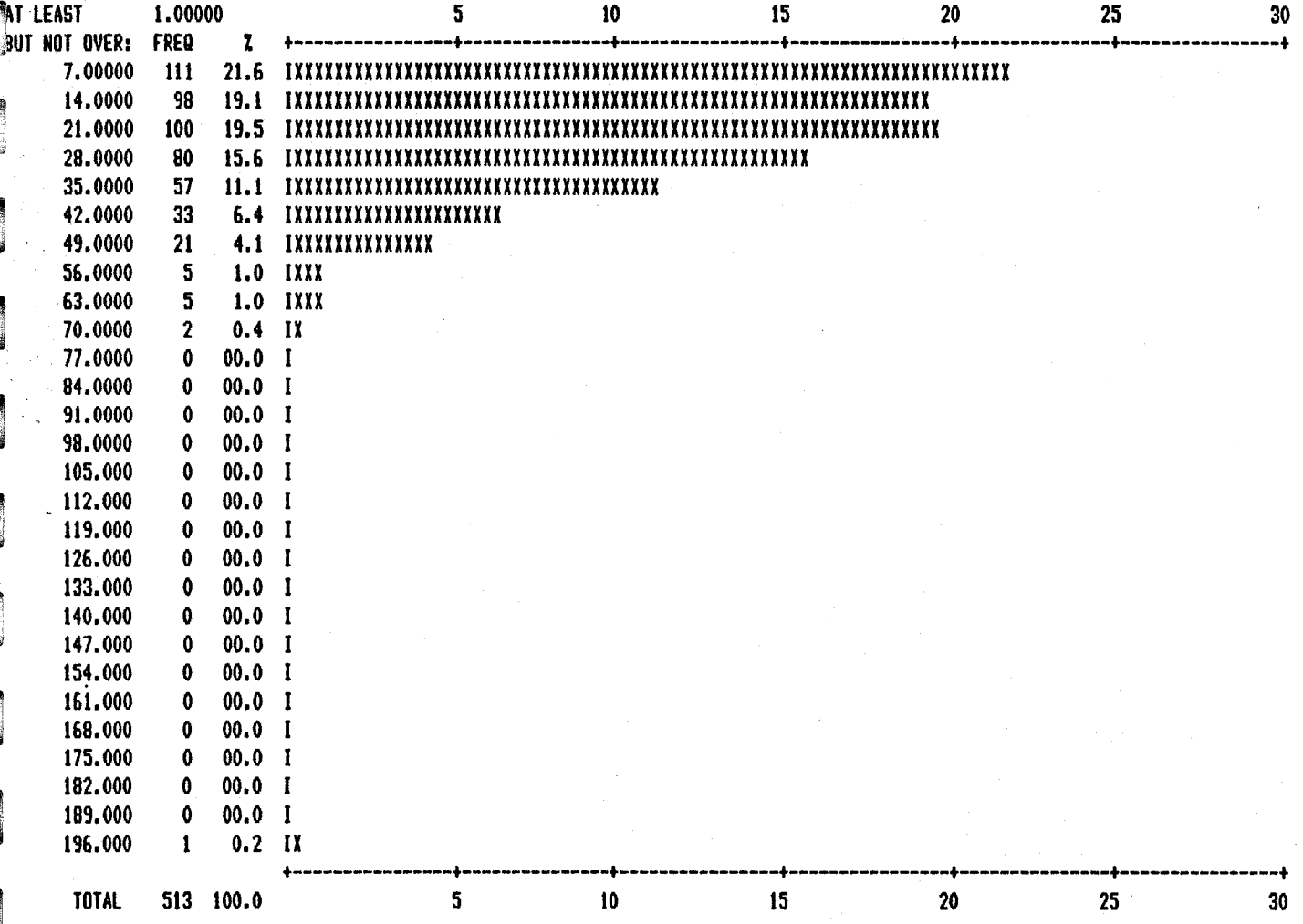
COMMAND: HIST

VARIABLE: 2 silver

AT LEAST	0.10000		10	20	30	40	50	60
BUT NOT OVER:	FREQ	Z	+-----+-----+-----+-----+-----+-----+					
1.10000	296	57.7	XX					
2.20000	168	32.7	XX					
3.30000	26	5.1	XXXXXXXXXX					
4.40000	12	2.3	XXXX					
5.50000	4	0.8	IX					
6.60000	1	0.2	I					
7.70000	1	0.2	I					
8.80000	1	0.2	I					
9.90000	0	00.0	I					
11.0000	0	00.0	I					
12.1000	1	0.2	I					
13.2000	1	0.2	I					
14.3000	0	00.0	I					
15.4000	0	00.0	I					
16.5000	0	00.0	I					
17.6000	0	00.0	I					
18.7000	0	00.0	I					
19.8000	0	00.0	I					
20.9000	0	00.0	I					
22.0000	0	00.0	I					
23.1000	0	00.0	I					
24.2000	0	00.0	I					
25.3000	0	00.0	I					
26.4000	0	00.0	I					
27.5000	0	00.0	I					
28.6000	0	00.0	I					
29.7000	0	00.0	I					
30.8000	1	0.2	I					
31.9000	1	0.2	I					
TOTAL	513	100.0	+-----+-----+-----+-----+-----+-----+					

COMMAND: HIST

VARIABLE: 3 arsenic



COMMAND: HIST

VARIABLE: 5 lead

AT LEAST	B.00000			
BUT NOT OVER:	FREQ	%	+-----+-----+-----+-----+	
18.0000	233	45.4	XX	
36.0000	231	45.0	XX	
54.0000	14	2.7	XXXXXX	
72.0000	8	1.6	XXXX	
90.0000	3	0.6	IX	
108.0000	2	0.4	IX	
126.0000	3	0.6	IX	
144.0000	1	0.2	I	
162.0000	2	0.4	IX	
180.0000	2	0.4	IX	
198.0000	0	00.0	I	
216.0000	0	00.0	I	
234.0000	2	0.4	IX	
252.0000	0	00.0	I	
270.0000	1	0.2	I	
288.0000	1	0.2	I	
306.0000	0	00.0	I	
324.0000	1	0.2	I	
342.0000	3	0.6	IX	
360.0000	1	0.2	I	
378.0000	0	00.0	I	
396.0000	1	0.2	I	
414.0000	0	00.0	I	
432.0000	1	0.2	I	
450.0000	0	00.0	I	
468.0000	0	00.0	I	
486.0000	1	0.2	I	
1150.00	2	0.4	IX	
TOTAL	513	100.0	+-----+-----+-----+-----+	

COMMAND: HIST

VARIABLE: 7 zinc

AT LEAST	7.00000								
BUT NOT OVER:	FREQ	Z							
18.0000	48	9.4	XXXXXXXXXXXXXXXXXXXXXXX						
36.0000	163	31.8	XX						
54.0000	147	28.7	XX						
72.0000	83	16.2	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX						
90.0000	37	7.2	XXXXXXXXXXXXXXXXXXXX						
108.000	8	1.6	XXXX						
126.000	6	1.2	XXX						
144.000	3	0.6	IX						
162.000	4	0.8	IXX						
180.000	3	0.6	IX						
198.000	2	0.4	IX						
216.000	0	00.0	I						
234.000	0	00.0	I						
252.000	1	0.2	I						
270.000	1	0.2	I						
288.000	1	0.2	I						
306.000	0	00.0	I						
324.000	2	0.4	IX						
342.000	0	00.0	I						
360.000	0	00.0	I						
378.000	0	00.0	I						
396.000	0	00.0	I						
414.000	1	0.2	I						
432.000	0	00.0	I						
450.000	0	00.0	I						
468.000	0	00.0	I						
486.000	0	00.0	I						
1150.00	1	0.2	I						
TOTAL	513	100.0							

COMMAND: CORR

*** CORRELATION MATRIX ***

VARIABLES:

1 gold	1.00000							
2 silver	0.00573	1.00000						
3 arsenic	-0.02024	0.21636	1.00000					
4 copper	-0.00754	0.68730	0.26877	1.00000				
5 lead	0.01791	0.08915	-0.00495	0.01432	1.00000			
6 antimony	-0.00286	0.47114	0.26876	0.66122	0.01339	1.00000		
7 zinc	-0.00091	0.26132	0.08166	0.06988	0.34593	0.14112	1.00000	
	1 gold	2 silver	3 arsenic	4 copper	5 lead	6 antimony	7 zinc	

DATA SET HAS 513 VALID CASES

COMMAND: FREQ

*** FREQUENCIES AND Z-SCORES ***

VARIABLE: 1 gold

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE
0.010000	204	204	39.8	39.8	-0.241377
0.020000	123	327	24.0	63.7	-0.179802
0.030000	51	378	9.9	73.7	-0.118228
0.040000	36	414	7.0	80.7	-0.0566534
0.050000	23	437	4.5	85.2	0.00492116
0.060000	15	452	2.9	88.1	0.0664957
0.070000	8	460	1.6	89.7	0.128070
0.080000	11	471	2.1	91.8	0.189645
0.090000	3	474	0.6	92.4	0.251219
0.100000	10	484	1.9	94.3	0.312794
0.110000	1	485	0.2	94.5	0.374368
0.120000	2	487	0.4	94.9	0.435943
0.130000	3	490	0.6	95.5	0.497517
0.140000	2	492	0.4	95.9	0.559092
0.150000	1	493	0.2	96.1	0.620666
0.160000	1	494	0.2	96.3	0.682241
0.170000	2	496	0.4	96.7	0.743815
0.180000	1	497	0.2	96.9	0.805390
0.190000	2	499	0.4	97.3	0.866964
0.200000	3	502	0.6	97.9	0.928539
0.240000	1	503	0.2	98.1	1.17484
0.250000	1	504	0.2	98.2	1.23641
0.310000	1	505	0.2	98.4	1.60586
0.470000	1	506	0.2	98.6	2.59105
0.620000	1	507	0.2	98.8	3.51467
0.640000	1	508	0.2	99.0	3.63782
0.860000	1	509	0.2	99.2	4.99246
1.310000	1	510	0.2	99.4	7.76331
1.630000	1	511	0.2	99.6	9.73369
1.850000	1	512	0.2	99.8	11.0883
2.000000	1	513	0.2	100.0	12.0120
TOTAL	513	513	100.0	100.0	

COMMAND: FREQ

*** FREQUENCIES AND Z-SCORES ***

VARIABLE: 2 silver

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE
0.100000	2	2	0.4	0.4	-0.597332
0.200000	1	3	0.2	0.6	-0.551425
0.300000	8	11	1.6	2.1	-0.505517
0.400000	20	31	3.9	6.0	-0.459610
0.500000	39	70	7.6	13.6	-0.413703
0.600000	24	94	4.7	18.3	-0.367795
0.700000	40	134	7.8	26.1	-0.321888
0.800000	36	170	7.0	33.1	-0.275981
0.900000	36	206	7.0	40.2	-0.230074
1.000000	53	259	10.3	50.5	-0.184166
1.100000	37	296	7.2	57.7	-0.138259
1.200000	46	342	9.0	66.7	-0.0923516
1.300000	24	366	4.7	71.3	-0.0464442
1.400000	22	388	4.3	75.6	-5.36928E-04
1.500000	22	410	4.3	79.9	0.0453704
1.600000	15	425	2.9	82.8	0.0912777
1.700000	10	435	1.9	84.8	0.137185
1.800000	7	442	1.4	86.2	0.183092
1.900000	8	450	1.6	87.7	0.229000
2.000000	4	454	0.8	88.5	0.274907
2.100000	6	460	1.2	89.7	0.320814
2.200000	4	464	0.8	90.4	0.366722
2.300000	5	469	1.0	91.4	0.412629
2.400000	3	472	0.6	92.0	0.458536
2.500000	6	478	1.2	93.2	0.504444
2.600000	2	480	0.4	93.6	0.550351
2.700000	2	482	0.4	94.0	0.596258
2.800000	1	483	0.2	94.2	0.642166
2.900000	3	486	0.6	94.7	0.688073
3.000000	2	488	0.4	95.1	0.733980
3.100000	1	489	0.2	95.3	0.779888
3.200000	1	490	0.2	95.5	0.825795
3.400000	2	492	0.4	95.9	0.917610
3.500000	1	493	0.2	96.1	0.963517
3.600000	2	495	0.4	96.5	1.00942
3.800000	1	496	0.2	96.7	1.10124
4.000000	1	497	0.2	96.9	1.19305
4.100000	1	498	0.2	97.1	1.23896
4.200000	3	501	0.6	97.7	1.28487
4.300000	1	502	0.2	97.9	1.33078
4.900000	1	503	0.2	98.1	1.60522
5.000000	1	504	0.2	98.2	1.65213
5.100000	1	505	0.2	98.4	1.69803
5.200000	1	506	0.2	98.6	1.74394
6.600000	1	507	0.2	98.8	2.38664
7.000000	1	508	0.2	99.0	2.57027
8.000000	1	509	0.2	99.2	3.02935
11.1000	1	510	0.2	99.4	4.45247
13.0000	1	511	0.2	99.6	5.32471

VARIABLE: 2 silver

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE
30.8000	1	512	0.2	99.8	13.4962
31.7000	1	513	0.2	100.0	13.9094
TOTAL	513	513	100.0	100.0	

COMMAND: FREQ

*** FREQUENCIES AND Z-SCORES ***

VARIABLE: 3 arsenic

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE
1.00000	57	57	11.1	11.1	-1.20822
2.00000	4	61	0.8	11.9	-1.14424
3.00000	10	71	1.9	13.8	-1.08027
4.00000	9	80	1.8	15.6	-1.01629
5.00000	5	85	1.0	16.6	-0.952311
6.00000	10	95	1.9	18.5	-0.888333
7.00000	16	111	3.1	21.6	-0.824355
8.00000	10	121	1.9	23.6	-0.760377
9.00000	11	132	2.1	25.7	-0.696399
10.0000	18	150	3.5	29.2	-0.632421
11.0000	16	166	3.1	32.4	-0.568443
12.0000	16	182	3.1	35.5	-0.504465
13.0000	15	197	2.9	38.4	-0.440487
14.0000	12	209	2.3	40.7	-0.376510
15.0000	8	217	1.6	42.3	-0.312532
16.0000	9	226	1.8	44.1	-0.248554
17.0000	19	245	3.7	47.8	-0.184576
18.0000	11	256	2.1	49.9	-0.120598
19.0000	15	271	2.9	52.8	-0.0566199
20.0000	22	293	4.3	57.1	0.00735809
21.0000	16	309	3.1	60.2	0.0713360
22.0000	13	322	2.5	62.8	0.135314
23.0000	10	332	1.9	64.7	0.199292
24.0000	14	346	2.7	67.4	0.263270
25.0000	12	358	2.3	69.8	0.327248
26.0000	12	370	2.3	72.1	0.391226
27.0000	10	380	1.9	74.1	0.455204
28.0000	9	389	1.8	75.8	0.519182
29.0000	9	398	1.8	77.6	0.583160
30.0000	5	403	1.0	78.6	0.647137
31.0000	8	411	1.6	80.1	0.711115
32.0000	8	419	1.6	81.7	0.775093
33.0000	10	429	1.9	83.6	0.839071
34.0000	10	439	1.9	85.6	0.903049
35.0000	7	446	1.4	86.9	0.967027
36.0000	8	454	1.6	88.5	1.03101
37.0000	6	460	1.2	89.7	1.09498
38.0000	5	465	1.0	90.6	1.15896
39.0000	3	468	0.6	91.2	1.22294
40.0000	2	470	0.4	91.6	1.28692
41.0000	2	472	0.4	92.0	1.35089
42.0000	7	479	1.4	93.4	1.41487
43.0000	2	481	0.4	93.8	1.47885
44.0000	5	486	1.0	94.7	1.54283
45.0000	4	490	0.8	95.5	1.60681
46.0000	3	493	0.6	96.1	1.67078
47.0000	4	497	0.8	96.9	1.73476
48.0000	1	498	0.2	97.1	1.79874
49.0000	2	500	0.4	97.5	1.86272

VARIABLE: 3 arsenic

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE
51.0000	1	501	0.2	97.7	1.99067
52.0000	2	503	0.4	98.1	2.05465
53.0000	1	504	0.2	98.2	2.11863
56.0000	1	505	0.2	98.4	2.31056
57.0000	1	506	0.2	98.6	2.37454
58.0000	1	507	0.2	98.8	2.43852
60.0000	2	509	0.4	99.2	2.56648
63.0000	1	510	0.2	99.4	2.75841
68.0000	2	512	0.4	99.8	3.07830
192.000	1	513	0.2	100.0	11.0116
TOTAL	513	513	100.0	100.0	

COMMAND: FREQ

*** FREQUENCIES AND Z-SCORES ***

VARIABLE: 4 copper

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE
5.00000	2	2	0.4	0.4	-0.217550
6.00000	3	5	0.6	1.0	-0.216873
7.00000	3	8	0.6	1.6	-0.216196
10.00000	1	9	0.2	1.8	-0.214167
11.00000	1	10	0.2	1.9	-0.213490
12.00000	1	11	0.2	2.1	-0.212813
13.00000	1	12	0.2	2.3	-0.212137
14.00000	3	15	0.6	2.9	-0.211460
15.00000	4	19	0.8	3.7	-0.210784
16.00000	2	21	0.4	4.1	-0.210107
18.00000	1	22	0.2	4.3	-0.208754
20.00000	3	25	0.6	4.9	-0.207401
24.00000	1	26	0.2	5.1	-0.204694
25.00000	2	28	0.4	5.5	-0.204018
27.00000	2	30	0.4	5.8	-0.202664
28.00000	1	31	0.2	6.0	-0.201988
29.00000	3	34	0.6	6.6	-0.201311
30.00000	3	37	0.6	7.2	-0.200635
31.00000	2	39	0.4	7.6	-0.199958
32.00000	4	43	0.8	8.4	-0.199282
33.00000	3	46	0.6	9.0	-0.198605
34.00000	5	51	1.0	9.9	-0.197928
36.00000	2	53	0.4	10.3	-0.196575
37.00000	6	59	1.2	11.5	-0.195899
38.00000	1	60	0.2	11.7	-0.195222
39.00000	1	61	0.2	11.9	-0.194545
41.00000	1	62	0.2	12.1	-0.193192
42.00000	2	64	0.4	12.5	-0.192516
44.00000	1	65	0.2	12.7	-0.191162
45.00000	1	66	0.2	12.9	-0.190486
46.00000	4	70	0.8	13.6	-0.189809
47.00000	3	73	0.6	14.2	-0.189133
48.00000	4	77	0.8	15.0	-0.188456
49.00000	5	82	1.0	16.0	-0.187779
50.00000	1	83	0.2	16.2	-0.187103
51.00000	2	85	0.4	16.6	-0.186426
54.00000	4	89	0.8	17.3	-0.184396
55.00000	2	91	0.4	17.7	-0.183720
56.00000	7	98	1.4	19.1	-0.183043
57.00000	2	100	0.4	19.5	-0.182367
58.00000	4	104	0.8	20.3	-0.181690
59.00000	2	106	0.4	20.7	-0.181013
60.00000	3	109	0.6	21.2	-0.180337
61.00000	4	113	0.8	22.0	-0.179660
62.00000	2	115	0.4	22.4	-0.178984
63.00000	2	117	0.4	22.8	-0.178307
64.00000	1	118	0.2	23.0	-0.177630
65.00000	3	121	0.6	23.6	-0.176954
66.00000	3	124	0.6	24.2	-0.176277

VARIABLE: 4 copper

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE
67.0000	1	125	0.2	24.4	-0.175601
68.0000	4	129	0.8	25.1	-0.174924
70.0000	4	133	0.8	25.9	-0.173571
71.0000	3	136	0.6	26.5	-0.172894
73.0000	3	139	0.6	27.1	-0.171541
74.0000	4	143	0.8	27.9	-0.170865
75.0000	4	147	0.8	28.7	-0.170188
76.0000	5	152	1.0	29.6	-0.169511
77.0000	1	153	0.2	29.8	-0.168835
78.0000	1	154	0.2	30.0	-0.168158
79.0000	4	158	0.8	30.8	-0.167482
80.0000	2	160	0.4	31.2	-0.166805
81.0000	2	162	0.4	31.6	-0.166128
82.0000	3	165	0.6	32.2	-0.165452
83.0000	3	168	0.6	32.7	-0.164775
84.0000	1	169	0.2	32.9	-0.164099
85.0000	1	170	0.2	33.1	-0.163422
87.0000	3	173	0.6	33.7	-0.162069
88.0000	3	176	0.6	34.3	-0.161392
89.0000	3	179	0.6	34.9	-0.160716
90.0000	3	182	0.6	35.5	-0.160039
91.0000	3	185	0.6	36.1	-0.159362
92.0000	2	187	0.4	36.5	-0.158686
93.0000	4	191	0.8	37.2	-0.158009
95.0000	1	192	0.2	37.4	-0.156656
96.0000	2	194	0.4	37.8	-0.155979
97.0000	6	200	1.2	39.0	-0.155303
98.0000	3	203	0.6	39.6	-0.154626
99.0000	2	205	0.4	40.0	-0.153950
100.000	1	206	0.2	40.2	-0.153273
102.000	2	208	0.4	40.5	-0.151920
103.000	3	211	0.6	41.1	-0.151243
104.000	3	214	0.6	41.7	-0.150567
105.000	1	215	0.2	41.9	-0.149890
106.000	1	216	0.2	42.1	-0.149214
107.000	2	218	0.4	42.5	-0.148537
108.000	2	220	0.4	42.9	-0.147860
109.000	4	224	0.8	43.7	-0.147184
110.000	2	226	0.4	44.1	-0.146507
111.000	3	229	0.6	44.6	-0.145831
112.000	5	234	1.0	45.6	-0.145154
113.000	4	238	0.8	46.4	-0.144477
114.000	1	239	0.2	46.6	-0.143801
116.000	1	240	0.2	46.8	-0.142448
117.000	4	244	0.8	47.6	-0.141771
118.000	2	246	0.4	48.0	-0.141094
119.000	5	251	1.0	48.9	-0.140418
120.000	2	253	0.4	49.3	-0.139741
121.000	2	255	0.4	49.7	-0.139065
122.000	2	257	0.4	50.1	-0.138388
124.000	1	258	0.2	50.3	-0.137035
125.000	1	259	0.2	50.5	-0.136358
126.000	1	260	0.2	50.7	-0.135682
128.000	3	263	0.6	51.3	-0.134328
129.000	3	266	0.6	51.9	-0.133652

VARIABLE: 4 copper

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE
130.000	1	267	0.2	52.0	-0.132975
132.000	2	269	0.4	52.4	-0.131622
133.000	1	270	0.2	52.6	-0.130945
135.000	4	274	0.8	53.4	-0.129592
137.000	1	275	0.2	53.6	-0.128239
138.000	1	276	0.2	53.8	-0.127562
139.000	1	277	0.2	54.0	-0.126886
140.000	1	278	0.2	54.2	-0.126209
141.000	3	281	0.6	54.8	-0.125533
143.000	1	282	0.2	55.0	-0.124180
144.000	4	286	0.8	55.8	-0.123503
145.000	1	287	0.2	55.9	-0.122826
146.000	3	290	0.6	56.5	-0.122150
147.000	1	291	0.2	56.7	-0.121473
148.000	2	293	0.4	57.1	-0.120797
150.000	2	295	0.4	57.5	-0.119443
151.000	1	296	0.2	57.7	-0.118767
153.000	2	298	0.4	58.1	-0.117414
154.000	1	299	0.2	58.3	-0.116737
156.000	2	301	0.4	58.7	-0.115384
157.000	2	303	0.4	59.1	-0.114707
159.000	2	305	0.4	59.5	-0.113354
160.000	1	306	0.2	59.6	-0.112677
162.000	3	309	0.6	60.2	-0.111324
163.000	2	311	0.4	60.6	-0.110648
166.000	3	314	0.6	61.2	-0.108618
168.000	1	315	0.2	61.4	-0.107265
169.000	3	318	0.6	62.0	-0.106588
170.000	1	319	0.2	62.2	-0.105911
173.000	1	320	0.2	62.4	-0.103882
174.000	1	321	0.2	62.6	-0.103205
175.000	3	324	0.6	63.2	-0.102528
176.000	2	326	0.4	63.5	-0.101852
179.000	5	331	1.0	64.5	-0.0998221
181.000	1	332	0.2	64.7	-0.0984689
182.000	1	333	0.2	64.9	-0.0977923
185.000	2	335	0.4	65.3	-0.0957625
186.000	1	336	0.2	65.5	-0.0950859
187.000	1	337	0.2	65.7	-0.0944093
190.000	1	338	0.2	65.9	-0.0923796
193.000	1	339	0.2	66.1	-0.0903498
194.000	1	340	0.2	66.3	-0.0896732
195.000	1	341	0.2	66.5	-0.0889966
197.000	5	346	1.0	67.4	-0.0876434
198.000	1	347	0.2	67.6	-0.0869668
199.000	1	348	0.2	67.8	-0.0862902
202.000	2	350	0.4	68.2	-0.0842604
205.000	3	353	0.6	68.8	-0.0822306
206.000	1	354	0.2	69.0	-0.0815541
207.000	1	355	0.2	69.2	-0.0808775
208.000	1	356	0.2	69.4	-0.0802009
209.000	2	358	0.4	69.8	-0.0795243
210.000	1	359	0.2	70.0	-0.0788477
211.000	1	360	0.2	70.2	-0.0781711
212.000	2	362	0.4	70.6	-0.0774945

VARIABLE: 4 copper

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE
216.000	1	363	0.2	70.8	-0.0747881
218.000	1	364	0.2	71.0	-0.0734349
219.000	1	365	0.2	71.2	-0.0727583
220.000	2	367	0.4	71.5	-0.0720817
221.000	2	369	0.4	71.9	-0.0714051
223.000	2	371	0.4	72.3	-0.0700519
224.000	2	373	0.4	72.7	-0.0693753
226.000	2	375	0.4	73.1	-0.0680222
227.000	2	377	0.4	73.5	-0.0673456
229.000	1	378	0.2	73.7	-0.0659924
231.000	1	379	0.2	73.9	-0.0646392
232.000	1	380	0.2	74.1	-0.0639626
233.000	1	381	0.2	74.3	-0.0632860
235.000	1	382	0.2	74.5	-0.0619328
236.000	1	383	0.2	74.7	-0.0612562
238.000	1	384	0.2	74.9	-0.0599030
240.000	3	387	0.6	75.4	-0.0585498
242.000	2	389	0.4	75.8	-0.0571966
243.000	1	390	0.2	76.0	-0.0565201
244.000	1	391	0.2	76.2	-0.0558435
247.000	1	392	0.2	76.4	-0.0538137
252.000	1	393	0.2	76.6	-0.0504307
253.000	1	394	0.2	76.8	-0.0497541
254.000	1	395	0.2	77.0	-0.0490775
255.000	1	396	0.2	77.2	-0.0484009
256.000	1	397	0.2	77.4	-0.0477243
258.000	2	399	0.4	77.8	-0.0463711
262.000	1	400	0.2	78.0	-0.0436648
263.000	1	401	0.2	78.2	-0.0429882
267.000	1	402	0.2	78.4	-0.0402818
269.000	1	403	0.2	78.6	-0.0389286
272.000	1	404	0.2	78.8	-0.0368988
274.000	2	406	0.4	79.1	-0.0355456
276.000	1	407	0.2	79.3	-0.0341924
279.000	1	408	0.2	79.5	-0.0321626
281.000	1	409	0.2	79.7	-0.0308095
282.000	1	410	0.2	79.9	-0.0301329
286.000	2	412	0.4	80.3	-0.0274265
292.000	2	414	0.4	80.7	-0.0233669
294.000	1	415	0.2	80.9	-0.0220137
304.000	1	416	0.2	81.1	-0.0152478
306.000	1	417	0.2	81.3	-0.0138946
310.000	2	419	0.4	81.7	-0.0111882
319.000	1	420	0.2	81.9	-0.00509886
321.000	1	421	0.2	82.1	-0.00374567
326.000	2	423	0.4	82.5	-3.62697E-04
331.000	1	424	0.2	82.7	0.00302028
332.000	2	426	0.4	83.0	0.00369687
333.000	1	427	0.2	83.2	0.00437347
337.000	1	428	0.2	83.4	0.00707984
338.000	2	430	0.4	83.8	0.00775644
339.000	1	431	0.2	84.0	0.00843303
346.000	1	432	0.2	84.2	0.0131692
351.000	1	433	0.2	84.4	0.0165522
352.000	1	434	0.2	84.6	0.0172288

VARIABLE: 4 copper

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE
360.000	1	435	0.2	84.8	0.0226415
366.000	1	436	0.2	85.0	0.0267011
369.000	2	438	0.4	85.4	0.0287309
370.000	1	439	0.2	85.6	0.0294075
373.000	2	441	0.4	86.0	0.0314373
376.000	1	442	0.2	86.2	0.0334670
385.000	1	443	0.2	86.4	0.0395564
386.000	1	444	0.2	86.5	0.0402330
387.000	1	445	0.2	86.7	0.0409096
395.000	1	446	0.2	86.9	0.0463223
397.000	1	447	0.2	87.1	0.0476755
400.000	2	449	0.4	87.5	0.0497053
416.000	1	450	0.2	87.7	0.0605308
419.000	2	452	0.4	88.1	0.0625606
432.000	1	453	0.2	88.3	0.0713563
439.000	1	454	0.2	88.5	0.0760925
447.000	2	456	0.4	88.9	0.0815053
462.000	1	457	0.2	89.1	0.0916542
466.000	1	458	0.2	89.3	0.0943606
474.000	1	459	0.2	89.5	0.0997733
481.000	1	460	0.2	89.7	0.104509
486.000	1	461	0.2	89.9	0.107892
492.000	1	462	0.2	90.1	0.111952
495.000	1	463	0.2	90.3	0.113982
497.000	1	464	0.2	90.4	0.115335
499.000	1	465	0.2	90.6	0.116688
517.000	1	466	0.2	90.8	0.128867
525.000	1	467	0.2	91.0	0.134280
537.000	1	468	0.2	91.2	0.142399
560.000	1	469	0.2	91.4	0.157960
567.000	1	470	0.2	91.6	0.162697
578.000	1	471	0.2	91.8	0.170139
601.000	1	472	0.2	92.0	0.185701
610.000	1	473	0.2	92.2	0.191790
613.000	1	474	0.2	92.4	0.193820
639.000	1	475	0.2	92.6	0.211411
649.000	1	476	0.2	92.8	0.218177
660.000	1	477	0.2	93.0	0.225620
667.000	1	478	0.2	93.2	0.230356
673.000	2	480	0.4	93.6	0.234416
683.000	1	481	0.2	93.8	0.241182
687.000	1	482	0.2	94.0	0.243888
689.000	1	483	0.2	94.2	0.245241
697.000	1	484	0.2	94.3	0.250654
748.000	1	485	0.2	94.5	0.285160
785.000	1	486	0.2	94.7	0.310194
825.000	1	487	0.2	94.9	0.337258
832.000	1	488	0.2	95.1	0.341994
837.000	1	489	0.2	95.3	0.345377
921.000	1	490	0.2	95.5	0.402211
922.000	1	491	0.2	95.7	0.402888
955.000	1	492	0.2	95.9	0.425215
979.000	1	493	0.2	96.1	0.441454
1000.00	1	494	0.2	96.3	0.455662
1020.00	1	495	0.2	96.5	0.469194

VARIABLE: 4 copper

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE
1022.00	1	496	0.2	96.7	0.470547
1023.00	1	497	0.2	96.9	0.471224
1027.00	1	498	0.2	97.1	0.473930
1151.00	1	499	0.2	97.3	0.557828
1176.00	1	500	0.2	97.5	0.574743
1212.00	1	501	0.2	97.7	0.599100
1571.00	1	502	0.2	97.9	0.841998
1896.00	1	503	0.2	98.1	1.06189
1940.00	1	504	0.2	98.2	1.09166
2129.00	1	505	0.2	98.4	1.21954
2201.00	1	506	0.2	98.6	1.26825
2828.00	1	507	0.2	98.8	1.69248
3147.00	1	508	0.2	99.0	1.90831
3169.00	1	509	0.2	99.2	1.92320
4829.00	1	510	0.2	99.4	3.04634
5000.00	1	511	0.2	99.6	3.16204
14367.0	1	512	0.2	99.8	9.49970
28850.0	1	513	0.2	100.0	19.2988
TOTAL	513	513	100.0	100.0	

COMMAND: FREQ

*** FREQUENCIES AND Z-SCORES ***

VARIABLE: 5 lead

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE
8.00000	4	4	0.8	0.8	-0.306825
9.00000	6	10	1.2	1.9	-0.295204
10.0000	14	24	2.7	4.7	-0.283584
11.0000	14	38	2.7	7.4	-0.271963
12.0000	13	51	2.5	9.9	-0.260343
13.0000	19	70	3.7	13.6	-0.248722
14.0000	27	97	5.3	18.9	-0.237101
15.0000	24	121	4.7	23.6	-0.225481
16.0000	28	149	5.5	29.0	-0.213860
17.0000	46	195	9.0	38.0	-0.202239
18.0000	38	233	7.4	45.4	-0.190619
19.0000	42	275	8.2	53.6	-0.178998
20.0000	53	328	10.3	63.9	-0.167378
21.0000	20	348	3.9	67.8	-0.155757
22.0000	20	368	3.9	71.7	-0.144136
23.0000	19	387	3.7	75.4	-0.132516
24.0000	14	401	2.7	78.2	-0.120895
25.0000	12	413	2.3	80.5	-0.109275
26.0000	8	421	1.6	82.1	-0.0976539
27.0000	5	426	1.0	83.0	-0.0860333
28.0000	9	435	1.8	84.8	-0.0744127
29.0000	5	440	1.0	85.8	-0.0627921
30.0000	4	444	0.8	86.5	-0.0511715
31.0000	8	452	1.6	88.1	-0.0395509
32.0000	4	456	0.8	88.9	-0.0279303
33.0000	3	459	0.6	89.5	-0.0163096
34.0000	2	461	0.4	89.9	-0.00468902
35.0000	2	463	0.4	90.3	0.00693160
36.0000	1	464	0.2	90.4	0.0185522
37.0000	3	467	0.6	91.0	0.0301728
38.0000	3	470	0.6	91.6	0.0417934
40.0000	1	471	0.2	91.8	0.0650347
41.0000	1	472	0.2	92.0	0.0766553
43.0000	1	473	0.2	92.2	0.0998965
44.0000	1	474	0.2	92.4	0.111517
46.0000	1	475	0.2	92.6	0.134758
47.0000	2	477	0.4	93.0	0.146379
51.0000	1	478	0.2	93.2	0.192861
55.0000	1	479	0.2	93.4	0.239344
57.0000	1	480	0.2	93.6	0.262585
58.0000	1	481	0.2	93.8	0.274206
62.0000	1	482	0.2	94.0	0.320688
69.0000	1	483	0.2	94.2	0.402033
70.0000	1	484	0.2	94.3	0.413653
71.0000	1	485	0.2	94.5	0.425274
72.0000	1	486	0.2	94.7	0.436894
81.0000	1	487	0.2	94.9	0.541480
86.0000	1	488	0.2	95.1	0.599583
89.0000	1	489	0.2	95.3	0.634445

VARIABLE: 5 lead

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE
105.000	1	490	0.2	95.5	0.820375
106.000	1	491	0.2	95.7	0.831995
111.000	2	493	0.4	96.1	0.890098
124.000	1	494	0.2	96.3	1.04117
129.000	1	495	0.2	96.5	1.09927
145.000	1	496	0.2	96.7	1.28520
150.000	1	497	0.2	96.9	1.34330
169.000	1	498	0.2	97.1	1.56409
179.000	1	499	0.2	97.3	1.68030
224.000	1	500	0.2	97.5	2.20323
228.000	1	501	0.2	97.7	2.24971
263.000	1	502	0.2	97.9	2.65643
271.000	1	503	0.2	98.1	2.74940
312.000	1	504	0.2	98.2	3.22584
330.000	1	505	0.2	98.4	3.43501
338.000	1	506	0.2	98.6	3.52798
341.000	1	507	0.2	98.8	3.56284
349.000	1	508	0.2	99.0	3.65580
387.000	1	509	0.2	99.2	4.09739
430.000	1	510	0.2	99.4	4.59707
484.000	1	511	0.2	99.6	5.22459
1131.00	1	512	0.2	99.8	12.7431
1143.00	1	513	0.2	100.0	12.8826
TOTAL	513	513	100.0	100.0	

COMMAND: FREQ

*** FREQUENCIES AND Z-SCORES ***

VARIABLE: 6 antimony

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE
1.00000	197	197	38.4	38.4	-0.674533
2.00000	128	325	25.0	63.4	-0.259622
3.00000	70	395	13.6	77.0	0.155288
4.00000	42	437	8.2	85.2	0.570198
5.00000	30	467	5.8	91.0	0.985109
6.00000	17	484	3.3	94.3	1.40002
7.00000	14	498	2.7	97.1	1.81493
8.00000	8	506	1.6	98.6	2.22984
9.00000	3	509	0.6	99.2	2.64475
10.0000	1	510	0.2	99.4	3.05966
11.0000	1	511	0.2	99.6	3.47457
24.0000	1	512	0.2	99.8	8.86841
30.0000	1	513	0.2	100.0	11.3579
TOTAL	513	513	100.0	100.0	

COMMAND: FREQ

*** FREQUENCIES AND Z-SCORES ***

VARIABLE: 7 zinc

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE
7.00000	1	1	0.2	0.2	-0.420069
8.00000	7	8	1.4	1.6	-0.411760
9.00000	2	10	0.4	1.9	-0.403452
10.0000	1	11	0.2	2.1	-0.395144
11.0000	3	14	0.6	2.7	-0.386835
12.0000	3	17	0.6	3.3	-0.378527
13.0000	3	20	0.6	3.9	-0.370218
14.0000	6	26	1.2	5.1	-0.361910
16.0000	2	28	0.4	5.5	-0.345293
17.0000	4	32	0.8	6.2	-0.336985
18.0000	16	48	3.1	9.4	-0.328676
19.0000	4	52	0.8	10.1	-0.320368
20.0000	13	65	2.5	12.7	-0.312059
21.0000	11	76	2.1	14.8	-0.303751
22.0000	12	88	2.3	17.2	-0.295443
23.0000	11	99	2.1	19.3	-0.287134
24.0000	9	108	1.8	21.1	-0.278826
25.0000	13	121	2.5	23.6	-0.270517
26.0000	6	127	1.2	24.8	-0.262209
27.0000	11	138	2.1	26.9	-0.253901
28.0000	10	148	1.9	28.8	-0.245592
29.0000	7	155	1.4	30.2	-0.237284
30.0000	5	160	1.0	31.2	-0.228975
31.0000	11	171	2.1	33.3	-0.220667
32.0000	5	176	1.0	34.3	-0.212359
33.0000	8	184	1.6	35.9	-0.204050
34.0000	7	191	1.4	37.2	-0.195742
35.0000	10	201	1.9	39.2	-0.187433
36.0000	10	211	1.9	41.1	-0.179125
37.0000	8	219	1.6	42.7	-0.170816
38.0000	10	229	1.9	44.6	-0.162508
39.0000	9	238	1.8	46.4	-0.154200
40.0000	17	255	3.3	49.7	-0.145891
41.0000	9	264	1.8	51.5	-0.137583
42.0000	8	272	1.6	53.0	-0.129274
43.0000	10	282	1.9	55.0	-0.120966
44.0000	5	287	1.0	55.9	-0.112658
45.0000	5	292	1.0	56.9	-0.104349
46.0000	6	298	1.2	58.1	-0.0960407
47.0000	10	308	1.9	60.0	-0.0877323
48.0000	6	314	1.2	61.2	-0.0794239
49.0000	5	319	1.0	62.2	-0.0711155
50.0000	8	327	1.6	63.7	-0.0628071
51.0000	6	333	1.2	64.9	-0.0544987
52.0000	7	340	1.4	66.3	-0.0461902
53.0000	10	350	1.9	68.2	-0.0378818
54.0000	8	358	1.6	69.8	-0.0295734
55.0000	5	363	1.0	70.8	-0.0212650
56.0000	6	369	1.2	71.9	-0.0129566

VARIABLE: 7 zinc

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE
57.0000	3	372	0.6	72.5	-0.00464818
58.0000	4	376	0.8	73.3	0.00366024
59.0000	4	380	0.8	74.1	0.0119687
60.0000	10	390	1.9	76.0	0.0202771
61.0000	9	399	1.8	77.8	0.0285855
62.0000	2	401	0.4	78.2	0.0368939
63.0000	6	407	1.2	79.3	0.0452023
64.0000	2	409	0.4	79.7	0.0535107
65.0000	8	417	1.6	81.3	0.0618191
66.0000	5	422	1.0	82.3	0.0701275
67.0000	7	429	1.4	83.6	0.0784360
68.0000	2	431	0.4	84.0	0.0867444
69.0000	2	433	0.4	84.4	0.0950528
70.0000	2	435	0.4	84.8	0.103361
71.0000	2	437	0.4	85.2	0.111670
72.0000	4	441	0.8	86.0	0.119978
73.0000	3	444	0.6	86.5	0.128286
74.0000	4	448	0.8	87.3	0.136595
75.0000	4	452	0.8	88.1	0.144903
76.0000	1	453	0.2	88.3	0.153212
77.0000	4	457	0.8	89.1	0.161520
78.0000	2	459	0.4	89.5	0.169829
79.0000	2	461	0.4	89.9	0.178137
80.0000	3	464	0.6	90.4	0.186445
81.0000	1	465	0.2	90.6	0.194754
83.0000	1	466	0.2	90.8	0.211371
84.0000	1	467	0.2	91.0	0.219679
85.0000	4	471	0.8	91.8	0.227987
87.0000	4	475	0.8	92.6	0.244604
88.0000	2	477	0.4	93.0	0.252913
89.0000	1	478	0.2	93.2	0.261221
92.0000	1	479	0.2	93.4	0.286146
95.0000	1	480	0.2	93.6	0.311072
96.0000	1	481	0.2	93.8	0.319380
97.0000	1	482	0.2	94.0	0.327688
104.000	1	483	0.2	94.2	0.385847
105.000	1	484	0.2	94.3	0.394156
107.000	2	486	0.4	94.7	0.410773
109.000	1	487	0.2	94.9	0.427389
112.000	2	489	0.4	95.3	0.452315
121.000	1	490	0.2	95.5	0.527090
122.000	1	491	0.2	95.7	0.535399
124.000	1	492	0.2	95.9	0.552016
132.000	1	493	0.2	96.1	0.618483
133.000	1	494	0.2	96.3	0.626791
139.000	1	495	0.2	96.5	0.676642
145.000	1	496	0.2	96.7	0.726492
146.000	1	497	0.2	96.9	0.734801
149.000	1	498	0.2	97.1	0.759726
152.000	1	499	0.2	97.3	0.784651
165.000	1	500	0.2	97.5	0.892661
166.000	1	501	0.2	97.7	0.900969
167.000	1	502	0.2	97.9	0.909277
196.000	2	504	0.4	98.2	1.15022
240.000	1	505	0.2	98.4	1.51579

ABstat 5.00
file: D:\HOUSTON.AB6 version:4

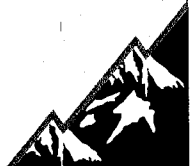
10/11/88

VARIABLE: 7 zinc

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE
259.000	1	506	0.2	98.6	1.67365
271.000	1	507	0.2	98.8	1.77335
317.000	1	508	0.2	99.0	2.15554
318.000	1	509	0.2	99.2	2.16385
411.000	1	510	0.2	99.4	2.93653
1091.00	1	511	0.2	99.6	8.58625
1433.00	1	512	0.2	99.8	11.4277
1960.00	1	513	0.2	100.0	15.8063
TOTAL	513	513	100.0	100.0	

APPENDIX V

STATEMENT OF COSTS



HOUSTON METALS CORPORATION
TAM O'SHANTER PROPERTY
PROJECT 88BC053

FIELD WORK PERIOD: December 2 - December 21, 1988

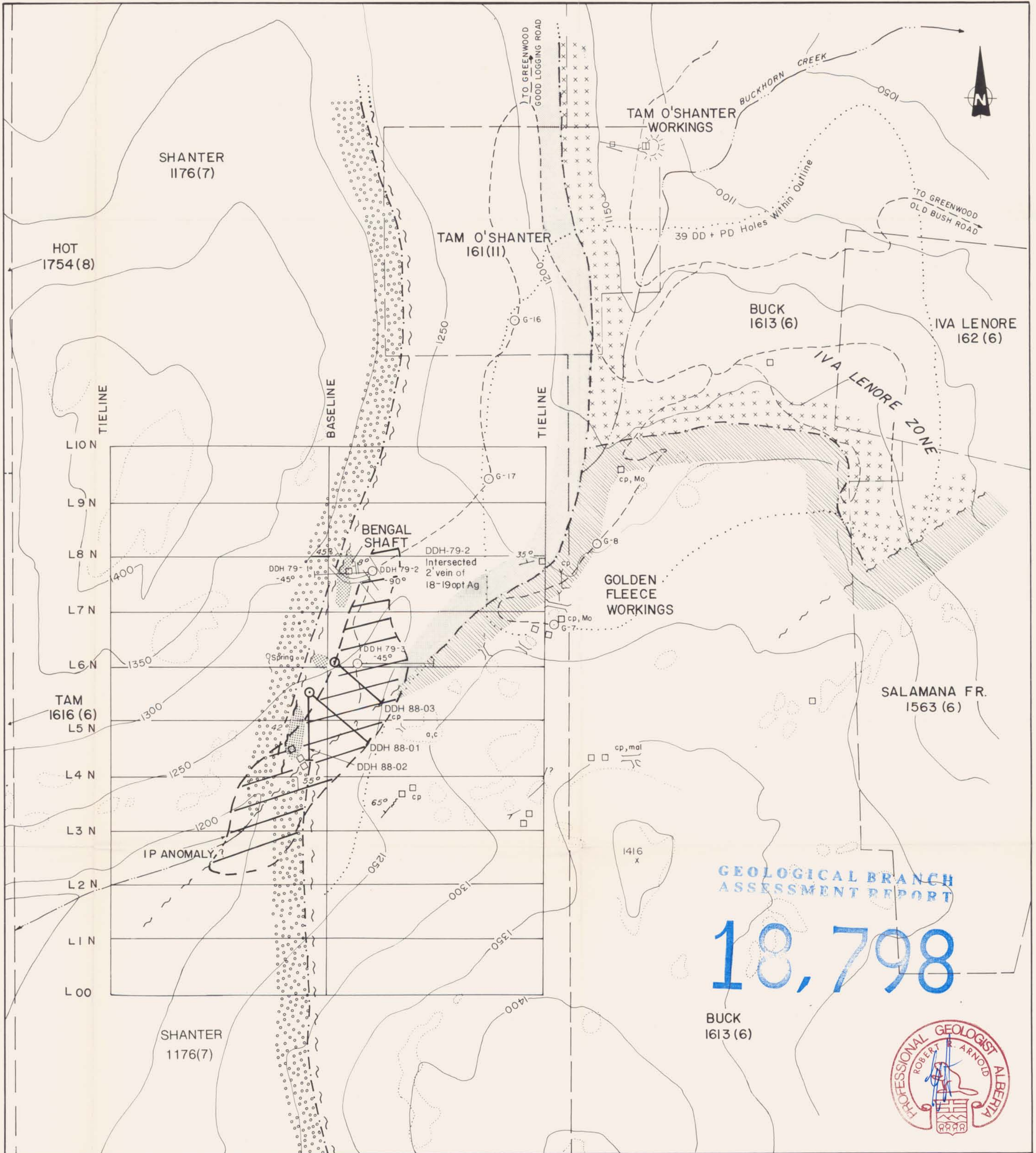
Field Salaries

B. Arnold, Geologist		
18 days @ \$350/day	\$	6,300.00
W. Kushner, Assistant		
15 days @ \$200/day		<u>3,000.00</u>
	\$	9,300.00

Project Expenses

Project Preparation		1,357.50
Mobilization/Demobilization		1,550.00
Freight		268.23
Geochemistry		
513 Core samples-sample preparation, 6 element ICP, gold assay @ \$17.25/sample	\$	8,849.25
Misc. Lab charges		<u>53.00</u>
		8,903.25
Drilling		
Acid Tests, Core boxes, supplies	\$	1,332.00
Cat Work 11.5 hours @ \$80/hr		920.00
Diamond Drilling 2,645 Feet @ \$22/ft		58,190.00
Water Truck 13 days @ \$300/day		<u>3,900.00</u>
		64,342.00
Core Splitter 18 days @ \$25/day		450.00
Truck Rental and Fuel 18 days @ \$125/day		2,250.00
Domicile 33 man days @ \$50/man/day		1,650.00
Field Equipment Rental 33 man days @ \$30/man/day		990.00
Computer Rental 20 days @ \$50/day		1,000.00
Accounting		722.50
Communication		28.13
Report and Drafting		7,500.00
Project Management Fee @ 15%		<u>13,174.74</u>
		\$113,486.35

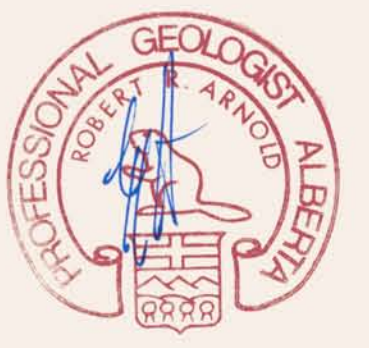




GEOLOGICAL BRANCH
ASSESSMENT REPORT

18,798

BUCK
1613(6)



LEGEND

- 79-1 Oneida DDH
- G-17 Mascot Percussion Hole
- Outcrop
- ~ Fault
- .- Contact
- - - Road
-)) Trench
- Pit or Shaft
- └ Adit
- Claim Border
- 1400— Contours in metres
- DDH 88-01 Houston DDH
- Marron Formation
- Kettle River Formation
- Nelson Diorite
- Grand Forks Group
- Bengal Shaft Zone



TAM O' SHANTER PROPERTY				
GREENWOOD MINING DIVISION BRITISH COLUMBIA, CANADA				
GRID and DRILL HOLES LOCATION MAP				
 HITEC RESOURCE MANAGEMENT LTD.	SCALE: 1: 5000	N.T.S.: 82E/2 E	FIGURE No: 6	
	DWN. BY:	DATE: March/1989	FILE No:	
	CHKD. BY: R. Arnold	PROJECT No: 88BC 053		