12188

GEOLOGICAL AND GEOCHEMICAL REPORT

ON THE IAN 6 AND 8 CLAIMS

ISKUT RIVER AREA,

LIARD MINING DIVISION, B.C.

NTS 104-B 10/W
Latitude 56° 43'N
Longitude 130° 53'W

FOR

Vanstates Resources Ltd.
1590 - 609 Granville Street
Vancouver, B.C.
V7Y 1C6

GEOLOGICAL BRANCH
ASSESSMENT REPORT

BY

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November, 1987

HI-TEC
RESOURCE
MANAGEMENT
LIMITED

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1.0 SUMMARY

Pursuant to a request by the directors of Vanstates Resources Ltd., an exploration program involving prospecting, geological mapping, and geochemical sampling was carried out on the Ian 6 and Ian 8 mineral claims. The author was active in this program in the capacity of project geologist, and has researched the literature pertaining to this area.

The property is located in the western Iskut River area of northwestern British Columbia, roughly 110 kilometers northwest of Stewart and 80 kilometers east of Wrangell, Alaska. This area has been the focus of intense mining exploration activity in recent years which has resulted in several discoveries.

The property lies within the westernmost part of the Intermontane Tectonic Belt, close to its boundary with the Coast Crystalline Tectonic Belt. The Ian claims are underlain by a sequence of volcanic and sedimentary rocks which is intruded by a major stock of granitic to granodioritic composition, and by at least two minor igneous bodies.

Three favourable areas for mineralization were found during the 1987 exploration program: an altered zone in andesitic volcanics in the northwest corner of the Ian 6 claim which has yielded several elevated gold and silver assays; an area with several minor showings adjacent to a distinct hornblende granodiorite intrusive body, in the vicinity of the legal corner post; and an area near the center of the Ian 6 claim with quartz veins associated with brecciation in argillites. Highly anomalous base metal assays were obtained in samples from the two latter areas.

Further exploration work will be required in order to fully evaluate the mineral potential of the Ian claims. Special attention should be paid to the area adjacent to the center of the property and also to the northeastern part of the Ian 6 claim, as these areas received less coverage during the 1987 program. Soil geochemistry should be conducted, along with further geological mapping and prospecting on geologically favourable areas of the property. One or more landing pads should be cleared in order to facilitate practical helicopter access. A program of airborne geophysics should also be considered for the entire property.

2.0 INTRODUCTION

Pursuant to a request by the directors of Vanstates Resources Ltd., an exploration program involving geological mapping, prospecting, and soil and stream sediment geochemistry, was carried out on the Ian 6 and 8 claims by Hi-Tec Resource Management Ltd. in August, 1987. The purpose of this program was to evaluate the precious metal and/or base metal potential of the property to the fullest extent possible within the given time constraint and budget allowances.

2.1 Property and Ownership

The property is recorded as follows:

Claim Name	Record No.	No. Units	Record Date	Mining Div.	Recorded Owner
Ian 6	3737	20	9/02/87	Liard	I. Hagemoen
Ian 8	3739	20	9/02/87	Liard	I. Hagemoen
	Total:	**40**			

BRITISH COLUMBIA

Scale 1 : 7,500,000 approx.

VANSTATES RESOURCES LTD.		
IAN 6 & 8 CLAIMS LIARD M.D., B.C.		
GENERAL LOCATION MAP		
HI-TEC RESOURCE MANAGEMENT LIMITED	By:	Date: Nov '87
	N.T.S. 104 B/10 W	Figure: 1
	Scale: see above	

The Ian claim group consists of 2 contiguous claims totalling 40 units, and both of the claims are subject to an option agreement between I. Hagemoen and Vanstates Resources Ltd.

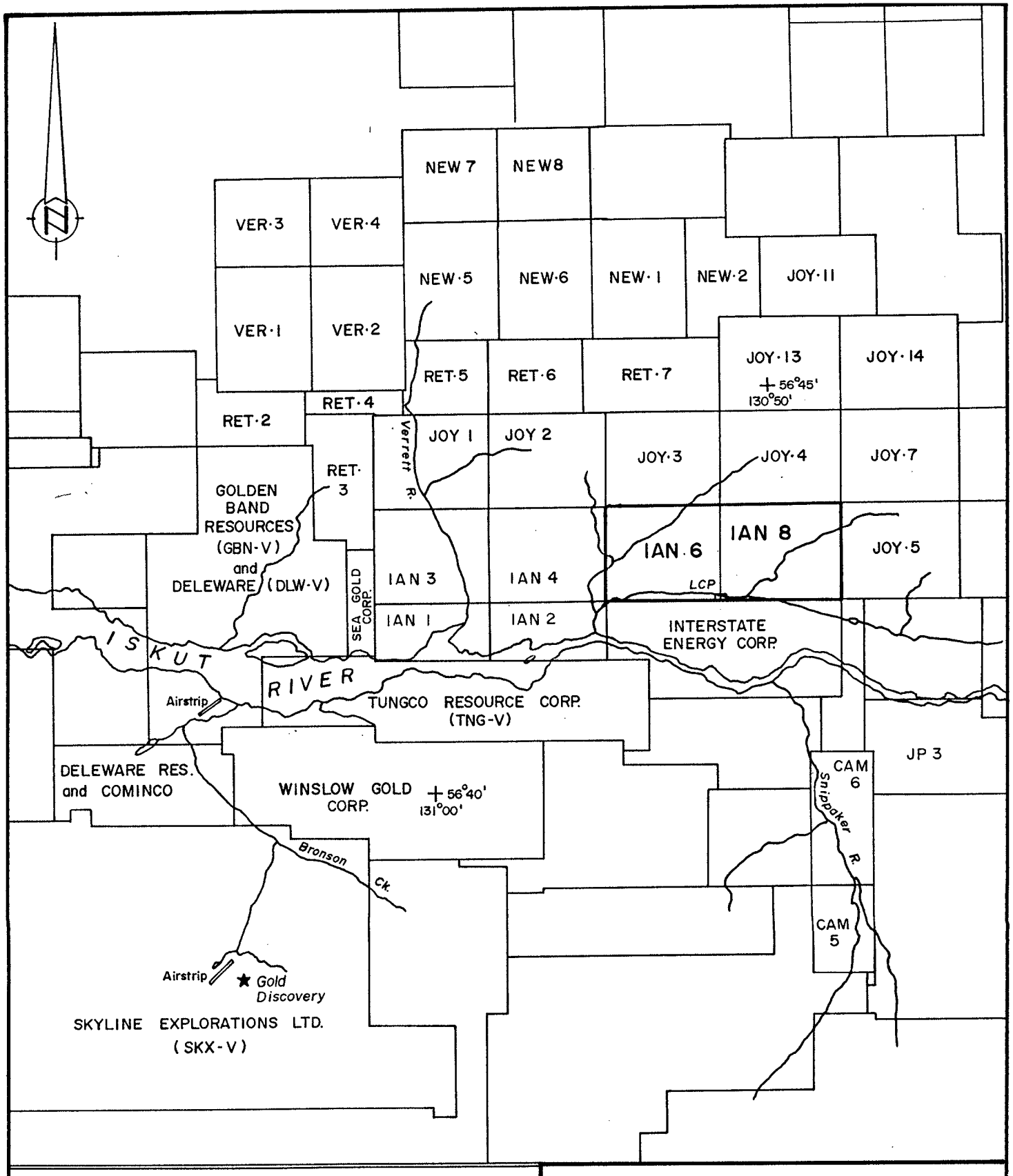
2.2 Location and Access

The Ian 6 and Ian 8 mineral claims are located in the western Iskut River area of northwestern British Columbia. The property is approximately 110 air kilometers northwest of Stewart, B.C., 80 air kilometers east of Wrangell, Alaska and 10 air kilometers east-northeast from the Bronson Creek air strip. The southern boundary of the claims is about one kilometer north of the Iskut River (see Figure 2). The Ian claims are located in NTS map area 104B/10W at latitude 56°43'N and longitude 130°53'W.

The area is accessible by air from Smithers, Wrangell, Terrace or Stewart to gravel air strips at Bronson Creek, Snippaker Creek or Johnny Mountain. The nearest road is Highway 37, which is 40 miles to the northeast of Bob Quinn Lake. The most practical means of access to the Ian claims is by helicopter from Bronson Creek airstrip. As a result of the rather rigorous forest and topographic regime on the property, convenient landing sites for helicopter are not plentiful. However, access may be achieved at various swampy areas at lower elevation, and at some clearings at higher elevations.

2.3 Physiography

Topographic relief on the Ian 6 and Ian 8 mineral claims ranges from relatively gentle to very steep. Some of the creeks cut very deep gorges. Elevation on the Ian claims ranges from 110 meters (350 feet) in the south-



0 1 2 3 4 5 6

kilometres

VANSTATES RESOURCES LTD.

IAN 6 & 8 CLAIMS

LIARD M.D., B.C.

CLAIM LOCATION MAP

HI-TEC RESOURCE MANAGEMENT LIMITED

By: G. KING	Date: Nov '87
N.T.S. 104 B/10 W	Figure: 2
Scale: 1:110,000	

west corner of the Ian 6 claim to over 975 meters (3,200 feet) in the northeast corner of the Ian 8 claim.

Much of the Ian property supports a mature forest of spruce, fir and hemlock. There are sizeable alder thickets along many of the creeks. The higher elevations support a rather modest undergrowth, which consists mainly of blueberries, with occasional patches of devil's club. However, at lower elevations, there is a luxuriant undergrowth of devil's club, huckleberry, and various other varieties of shrubbery and greenery. In the southwest corner of the Ian 6 claim, a profusion of deadfall has resulted from insect damage to the forest. This situation makes traversing in that part of the property especially difficult.

The western Iskut River region lies within the coastal wet belt. Hence, rainfall and snowfall tend to range from heavy to extreme. Winter snowpack at higher elevations is commonly several meters deep. In 1987, the higher elevations on the Ian claims were snow free from late June to mid-October.

2.4 History and Previous Work

Although the Stikine River served as the access route to the placer deposits of the Cassiar area which were discovered in 1873, there is no record of any prospecting activity in the lower Iskut River area until 1907. In that year, F.E. Bronson and Associates of Wrangell, Alaska staked nine claims on the lower reaches of Bronson Creek, to the north of Johnny Mountain. The Iskut Mining Company was incorporated in 1910, and in 1911 it undertook a program of trenching and drifting on the Iskoot and Red Bluff claims. A report from that program states that a ton of ore from one cut yielded

$1.20 in gold, 44.2 ounces of silver and 12.45% of copper.

The Iskut Mining Company's claims were subsequently crown granted in 1914 and 1915 and by 1920, numerous trenches had been dug on these claims, along with a 30 foot adit. The latter revealed a number of veins and stringers hosting galena and gold-silver mineralization.

In 1929, Consolidated Mining and Smelting staked 48 claims on Johnny Mountain. There is no record of any further work on these properties until 1954. In that year, prospectors from Hudson's Bay Mining and Smelting located the Pickaxe showing, and found high grade gold-silver-lead-zinc float on the open, upper slopes of Johnny Mountain. Today, these showings are part of Skyline Exploration's Reg property. Hudson's Bay Mining and Smelting allowed these claims to lapse after performing exploration work on them in the mid-1950's.

In the 1960's a number of major mining companies conducted helicopter borne reconnaissance surveys for potential porphyry copper-molybdenum deposits. Several new claims were staked on Johnny Mountain and along Sulphurets Creek in that period, while Kennco and Noranda investigated the original showings on Johnny Mountain. The original crown grants and surrounding claims were explored in 1965 by a consortium of Cominco, Copper Soo Mining Ltd., and Tuksi Mining and Development Ltd. in 1965. Some 1,800 feet of diamond drilling in 10 holes was completed by this group. Further geological work was done on these properties in 1968.

Texas Gulf Inc. investigated the porphyry copper potential of Johnny Mountain in 1974. Numerous mining companies conducted exploration work elsewhere in the

Iskut River area in the 1960's and 1970's. Among these were Iskut Silver Mines, which conducted programs involving geological and geochemical surveys, trenching and packsack drilling on a property located north of the Iskut River and between the Twin and Verrett Rivers.

On various occasions between 1962 and 1972, Newmont Exploration of Canada Ltd. conducted exploration programs involving geological mapping, geophysics and limited diamond drilling on several prospects in an area near the headwaters of Forrest Kerr Creek.

In 1965, Silver Standard Mines commenced work on the E & L prospect, a nickel-copper deposit on Nickel Mountain near the headwaters of Snippaker Creek. This prospect was later optioned by Sumitomo Metal Mining, and by the end of 1971, 1,500 feet of underground work had been completed in addition to extensive trenching, and surface and underground drilling programs.

In 1969, Skyline Explorations Ltd. restaked the Inel property, after having discovered massive sulfide float originating from the head of Bronson Glacier. The Reg property was restaked by Skyline in 1980, and in 1981, a program of trenching and limited diamond drilling was carried out on this property. The Reg property was optioned to Placer Developments Ltd. in 1982, which formed a joint venture program with Anaconda Canada Ltd. to carry out various surveys in addition to trenching and diamond drilling in 1983. Exploration was continued on the property by Anaconda in 1984, after which it reverted to Skyline Explorations Ltd.

By the end of 1986, Skyline had completed 1,500 feet of underground cross-cutting and drifting in addition to extensive drilling on the Stonehouse Gold Zone. This

work confirmed the presence of high grade gold mineralization in addition to silver and copper with good lateral and depth continuity over mineable widths.

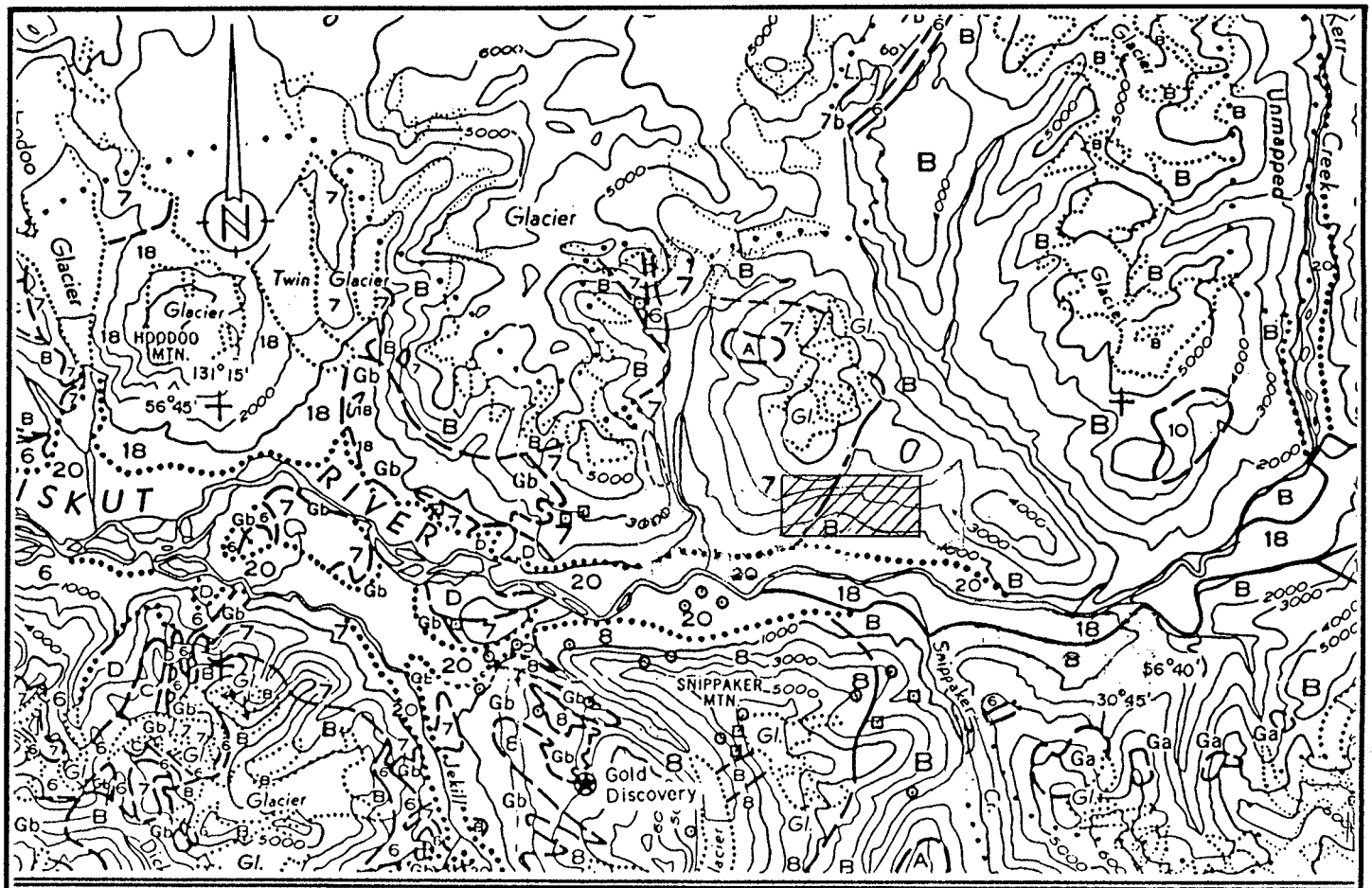
Further exploration and development work has been carried out in 1987, as Skyline prepares to bring the Reg Deposit into production. The success of Skyline's program has provided the impetus for an extremely active mining exploration scene in the Iskut River area over the past few years. In 1987, companies such as Western Canadian Mining Corporation, Gulf International Minerals Ltd., Tungco Resources, and Newhawk Gold Mines among others, have carried out extensive drilling programs in the area. Delaware Resources Corporation, in joint venture with Cominco, has carried out a major drilling program on the Snip Property near Bronson Creek, and a production decision is believed to be imminent.

There is no record of past exploration work on the area within the present Ian 6 and Van 8 claim boundaries. However, Dupont of Canada Explorations Ltd. conducted geochemical sampling and a minor geological examination in an area immediately to the west in 1980.

3.0 GEOLOGY

3.1 Regional Geology and Mineralization

The subject property lies within the western most part of the Intermontane Tectonic Belt, close to the boundary of the Coastal Crystalline Tectonic Belt. As a result of the proximity of this area to a regional tectonic boundary, geologic relationships tend to be quite complex. The geology of this area has been studied by Kerr (1930, 1948), and by Grove (1986), and is represented in Geological Survey of Canada Maps 9-1957, 1418A



SEDIMENTARY and VOLCANIC ROCKS

QUATERNARY RECENT

- 20 — Unconsolidated glacial and fluvial clay, silt, sand, gravel; till; peat, muskeg.
- 18 — Olivine basalt, ash, cinders

UPPER JURASSIC and LOWER CRETACEOUS

- 12 — Argillite, greywacke, conglomerate, coal.

JURASSIC and/or EARLIER PRE-UPPER JURASSIC

- 10 — Mainly sedimentary rocks
- 9 — Mainly volcanic rocks; minor conglomerate; greywacke, argillite.

TRIASSIC

- 8 — Tuff, siltstone, limestone, conglomerate, breccia

PERMIAN and/or TRIASSIC

- 7 — Volcanic and sedimentary rocks undivided; 7b) mainly greywacke, siltstone, conglomerate

PERMIAN and (?) EARLIER

- 6 — Limestone, greenstone, chert, argillite, phyllitic quartzite, greywacke; meta-andesite and meta-diorite locally abundant near ultramafic bodies. May include younger greenstone.

INTRUSIVE ROCKS

- A — Felsite, felsite porphyry
- B — Mainly quartz monzonite, granodiorite, granite
- C — Mainly diorite; minor gabbro
- D — Granite porphyry, granophyre, syenite and related rocks

METAMORPHIC ROCKS

PERMIAN and/or EARLIER PRE MIDDLE PERMIAN

- G — Ga) Gneiss Gb) phyllite, quartzite, minor crystalline limestone, highly altered and sheared greywacke and volcanic rock.

Geological boundary (defined, approximate, assumed)

Bedding (inclined)

Heavy mineral concentrate

Mineral occurrence

0 5 10 15
kilometres

from GSC map 9-1957 w

VANSTATES RESOURCES LTD.

IAN 6 & 8 CLAIMS

LIARD M.D. ; B.C.

REGIONAL GEOLOGY

HI-TEC RESOURCE MANAGEMENT LIMITED

By: G. KING		Date: Nov '87
N.T.S. 104 B/10 W		Figure: 3
Scale: 1 : 250,000		

and 1505A. Figure 3 in this report is a generalized map of regional geology for the area.

The oldest rocks in the area are complexly folded and metamorphosed schists and gneisses of probable mid-Paleozoic age. Metamorphism occurs predominantly within and adjacent to plutonic systems. The metamorphic rock is commonly overlain by a white to grey crystalline limestone which is believed to belong to a Late Paleozoic sedimentary sequence that includes some minor greenstone units. This oceanic assemblage is part of the Stewart Complex, a tectonic unit which has been correlated with the Cache Creek Group.

The principal component of the Intermontane Tectonic Belt in the Iskut River area is Mesozoic volcanic and sedimentary sequence. This was originally regarded as a Late Triassic sequence, co-relative with the time equivalent Stuhini Volcanics; a theory which is supported by the presence of Monotis fossils on the north slope of Snippaker Peak and to the west of Newmont Lake. Grove (1986), however, correlates this unit with the Middle Jurassic Unuk River Formation of the Stewart Complex.

On the north slopes of Johnny Mountain and Snippaker Peak, Paleozoic metasedimentary rocks are found to overlie the Mesozoic sequence. These apparently represent the upper plate of a regional, east-west trending thrust fault, which pushed up and over to the south in a manner similar to that of the King Salmon Thrust Fault.

In the Coast Crystalline Tectonic Belt, Paleozoic and Mesozoic sequences are commonly intruded by plutonic rocks of quartz monzonite to quartz diorite composition. These intrusions are Late Cretaceous to Early Tertiary

in age. To the east of the main intrusive complex, smaller granitic plugs and stocks are prevalent.

Quaternary flows and ash deposits of olivine basalt are the youngest rocks in the area. Hoodoo Mountain is underlain by this unit, which also occurs in parts of the valleys of the Iskut River and Snippaker Creek.

The first mineral showing to be discovered in the western Iskut River area was located on Bronson Creek, two miles upstream from its confluence with the Iskut River. This is in the vicinity of the property currently being explored by the Delaware Resources-Cominco joint venture. The original showing was marked by a prominent zone of gossan and extensive alteration peripheral to an orthoclase porphyry intrusion. In this vicinity, there is a zone of sheared and altered volcanic and sedimentary rocks which is two miles long by 300 to 600 meters wide. In this alteration zone, pyrite abundances vary from fracture fillings and disseminations to nearly massive pyrite. Other sulfides which occur in lesser abundance include arsenopyrite, chalcopyrite, galena, sphalerite, tetrahedrite and molybdenite in fractures and quartz veinlets within and adjacent to the intrusion. Significant values of gold, copper and silver were revealed by early work on this zone.

Numerous quartz-sulfide veins and skarn deposits have been reported from various locations along the Iskut River. Low gold values, and good grades of silver, copper, lead and zinc have been reported from these locations. Mineralized float has been observed below several glaciers in the area.

Near the headwaters of Snippaker Creek, Silver Standard Mines Ltd. and later Sumitomo Metal Mining did extensive surface and underground work on a copper and nickel bearing gabbro intrusion. A total of 3.2 million tons of 0.80% nickel and 0.60% copper have been confirmed in this deposit. However, this has been a low priority target over the past several years, as a result of depressed base metal prices and the relative remoteness of the location.

The two most significant mineral deposits subject to current investigation in the Iskut River area are the Skyline Explorations Ltd. Reg property on the north slope of Johnny Mountain and the Delaware Resources-Cominco Ltd. joint venture Snip property near Bronson Creek. These properties are only five kilometers apart and appear to be similar in nature.

At least seven auriferous, mineral rich quartz veins are known to occur on Skyline's Reg property. These are collectively known as the Stonehouse Gold Zone. This zone is hosted in an east-west striking, northerly dipping sequence of Jurassic volcaniclastics and porphyritic flows. A sequence of Middle Jurassic volcanic breccias and well stratified volcanic tuffs and sediments unconformably overlie the mineralized unit. Steeply dipping northeast trending fractures are the only known mineralization environment in the Stonehouse Gold Zone. These are developed in a zone some 1,430 meters (4,700 feet) long and 275 meters (900 feet) wide. The mineralized zones consist of pods, lenses and quartz veins which contain a variety of sulphide and sulfosalt mineralization in addition to native gold and electrum. Adjacent to the zones, extensive K-feldspar alteration occurs in the wallrock.

In addition to gold, copper and silver also occur in significant quantities. Grove (1986) estimated the known reserves at that time to be 938,446 tons grading 0.73 oz Au/ton, 0.85 oz Ag/ton and 0.76% Cu.

On the Delaware-Cominco joint venture's Snip property, four quartz-carbonate-pyrite shear veins with high gold values have been discovered. These strike 110° to 120° and dip 65° to the southwest, and occur in Mesozoic tuffs and arenites that have been intruded by a dike-like orthoclase porphyry. Extensive K-feldspar, silica, and pyrite alteration is associated with these zones.

3.2 Property Geology

Mapping by the author on the Ian claims has delineated a sequence of sedimentary and volcanic rocks which have been intruded by at least three kinds of plutonic rock. Volcanics and sediments outcrop in the western and southern parts of the Ian 6 claim, and in the southwestern part of the Ian 8 claim. There are also some minor outcroppings of argillaceous sediments in the north central part of the Ian 8 claim.

Bedding is seldom well defined in the sedimentary rocks, and is virtually indistinguishable in the volcanics. There appears to be no evidence of any features which could serve to indicate the stratigraphic facing of the sequence. These conditions, in addition to the irregular and discontinuous occurrence of outcrop on the Ian claims, have prevented a clear and detailed picture of the stratigraphy on the property. The prevalent orientation for bedding appears to be striking at 070° to 095°, and dipping at 20° to 35° north. However, there are several exceptions to this generalization, particularly in outcrops which are located close to intrusions.

Volcanic rocks of probable andesitic composition are exposed in a canyon in the northwestern part of the Ian 6 claim. These are greyish green in colour, and have a slightly phyllitic appearance. There are a few rounded inclusions of plagioclase porphyry material within these rocks. This distinctive feature has been observed in similar volcanics elsewhere in the region. Thus, it is apparent that the andesitic volcanics of the Ian 6 claim are part of extensive regional unit. The abundance of magnetite in these rocks, and the lack of any semblance of volcanic textures has led to the suggestion that this, in fact, a doleritic unit. The author, however, is of the opinion that this lithology represents the hypabyssal components of an extensive flow sequence.

In addition to a pervasive, mild propylitic alteration in this unit, silicification, epidotization and pyritization are locally intense. Prominent zones of gossan occupy much of the exposure in the canyon.

Outcrops in much of the southwestern part of the Ian 6 claim have been designated as argillites and metaargillites in the accompanying map (see figure 4). They are essentially devoid of any textural or bedding features. A moderate to strong degree of propylitic alteration is pervasive in this part of the property, and weathered surfaces tend to be highly bleached. These latter features have led the author to conclude that these rocks are either volcanically derived sediments, or actually volcanic rock of intermediate composition.

The argillites which outcrop in the area immediately north of the legal corner post are, for the most part, relatively unaltered. Pyrite occurs in much of this

rock as a primary mineral. The argillites are inter-bedded with buff-coloured, crystalline limestones. Bedding planes in the sediments are rarely well defined, although the contacts between argillites and limestones are generally prominent. Bleaching, silicification, and oxidation are observed in a few argillite outcrops in this vicinity. There is also a minor development of epidote-garnet-wollastonite skarn in a limestone outcrop adjacent to an intrusive (Figure 4).

Much of the Ian 8 claim, in addition to a large part of the east central area of the Ian 6 claim, is occupied by the oucropping of an intrusive stock of granite to granodiorite composition. This intrusive material is of medium to coarse texture. Crystal development is exceedingly poor in the peripheral areas of the stock, especially in the northeast corner of the property. Some of that material was intially described as an arkosic wacke, and petrographic work would be required to make a property distinction. In the central part of the stock, crystalline texture is well developed, and feldspar crystals of up to 3 cm in length are observed. Many of these feldspars display a distinct zonation, with the peripheral part of the crystal pink in color, and the central part being white. These central parts of the crystals are often epidotized, and epidote alteration is widely observed in this intrusion.

There is a very distinctive hornblende granodiorite intrusive which occurs in the southwestern part of the Ian 6 claim. This lithology is readily identified by its large and well developed hornblende crystals. The color index of this material is variable, but is generally whitish-pink in color. This intrusive is of special interest, because it is spatially associated

with mineralized skarns here and elsewhere in the region.

A pyritic intrusion of probable granodiorite composition intrudes the volcanics in the northwesternmost part of the property. Intense pyritization and silicification is observed at the intrusive contact. Elsewhere in that vicinity, there is a dioritic intrusion which appears to grade into the hypabyssal volcanics immediately east of the canyon.

Dykes are not especially common on the Ian mineral claims. However, there are some very small mafic dykes in the southern part of the property near the edge of the granite stock. Minor felsic porphyry and aplite dykes are also found near the periphery of that stock.

As a result of the paucity and irregularity of outcrop on much of the Ian claims, it is extremely difficult to present a comprehensive picture of the structural geology. However, it is the author's opinion that one or more of the creeks on the property may follow major fault zones. This is almost certainly the case with the creek which runs sub parallel to the southern boundary of the claims, as obvious lithological inconsistencies occur across that creek.

Small shear zones of various orientations occur in many parts of the property. Quartz veins and stringers, commonly hosting sulfide mineralization, are often associated with these.

There appears to be a good deal of structural complexity in the sedimentary rocks adjacent to the granite. An upright, anticlinal fold with an axis which strikes 156^{o}

and dips 80°W was found near that contact in the north central part of the Ian 8 claim.

3.3 Mineralization

Sulfide mineralization occurs in several areas of the Ian claims, and is frequently found on the property in volcanic and sedimentary rocks that are spatially associated with intrusions. Sulphides are especially abundant in the volcanic rocks which are exposed in the northwestern part of the Ian 6 claim. Pyritization is ubiquitous in these rocks, and chalcopyrite and arsenopyrite occur occasionally in quartz veins or stringers. Anomalous assay values of gold, silver and copper were obtained from several rock grab samples taken in this vicinity. Sample 87-VGR-028, which was taken from a pyrite-rich quartz stringer, yielded a gold assay of 2100 ppb Au/ton.

In general, anomalous gold values in the volcanics were obtained from samples of mineralized quartz veins and stringers, and from silicified and pyritized shear zones. Significantly, samples taken from mineralized quartz veins in a zone of strong epidote alteration yielded gold assays which were only slightly above background levels.

Anomalous copper and silver values were obtained from samples taken of quartz vein material from meta-argillites near the center of the Ian 6 claim. These showings were described as vuggy, brecciated quartz veins with pyrite, chalcopyrite and pyrrhotite mineralization. Sample 87-VSR-020 from this zone yielded values of 2.74% copper and 21.1 ppm silver.

A number of minor showings were located in the southern part of the Ian 8 claim, near a creek which flows approximately due west and appears to follow a major fault zone. Several rock grab samples taken from this area yielded enhanced values of gold, silver, copper and zinc. These showings are located in close proximity with a distinctive hornblende granodiorite intrusion. A grab sample taken from an intensely silicified contact zone of this intrusion with argillite yielded an assay value of 163 ppb Au. Elsewhere in the vicinity, enhanced values of copper and silver were obtained from a large quartz vein in limestone very close to the intrusive contact. Chalcopyrite occurs abundantly in this vein, along with minor molybdenite. Assay values from grab samples of this vein yielded up to 1.29% copper and 11.4 ppm silver.

An assay value of 2.22% zinc was obtained from a sample of epidote rich, manganese stained skarn material from outcrop immediately to the north of the legal corner post. This showing, which has significant pyrite and sphalerite mineralization, is located in close proximity to the intrusive contact.

4.0 PROPERTY GEOCHEMISTRY

The objective of the 1987 program was to identify areas of interest on the property on which to focus future exploration efforts. A total of 117 rock grab samples, 41 soil samples, 30 stream sediment samples and 1 pan concentrate stream sediment sample were taken on the Ian 6 and 8 mineral properties.

The soil sampling program involved the establishment of a single kilometer long flagged soil line. This line is situated in the central part of the Ian 6 claim at a

bearing of 045°. Samples were taken at 25 meter intervals, and red-brown colored B horizon material was obtained wherever possible.

An effort was made during the 1987 field season to collect stream sediment samples from all drainages on the property. These samples generally consisted of silt and/or fine sand taken from stream beds. Pan concentrates were taken in situations where sediment volume was sufficient to make panning practical.

Rock grab samples were taken in the course of the prospecting and geological mapping program. These samples generally contained sulphide mineralization and a majority of them were procured from quartz veins and stringers.

All samples collected were analyzed for gold, copper, lead, zinc, silver, arsenic and antimony at Min-En Laboratories Ltd. of 705 West 15th Street, North Vancouver, B.C.

All geochemistry results are presented in Appendix I. Sample locations and assay values are shown in Figures 4, 5 and 6.

4.1 Discussion of Geochemical Results

4.1.1 Rock Geochemistry

Anomalous precious and base metal assay values were obtained from some of the rock grab samples on the Ian claims. Results for each analyzed element are discussed below:

Gold: Seventeen anomalous gold values exceeding 40 ppb were recorded. The highest value was 2100 ppb in sample 87-VGR-28. Several of these samples contained poly-metallic anomalies.

Silver: Twelve anomalous silver values were recorded. These values range from 3.7 ppm to 24.9 ppm.

Arsenic: Anomalous arsenic values exceeding 25 ppm were recorded for nine samples. The highest value was 91 ppm in 87-VKR-014.

Copper: Thirty-five samples yielded anomalous copper values exceeding 200 ppm. Five of these exceed 10,000 ppm (1%). The highest value is from 87-VSR-020, with 27,399 ppm copper.

Lead: Anomalous lead values exceeding 30 ppm were recorded in eighteen samples. An exceptionally high value of 46,297 ppm (4.63%) was recorded in sample 87-VGR-38.

Antimony: Fifteen samples yielded slightly anomalous antimony values exceeding 8 ppm. The highest value was 47 ppm in 87-VSR-020.

Zinc: Anomalous zinc values exceeding 150 ppm were recorded in sixteen samples. Two of these were exceptionally high: 87-VGR-038 with 28,604 ppm (2.86%) and 87-VKR-030, with 22,206 ppm (2.22%) zinc.

4.1.2 Soil Geochemistry

Some slightly elevated levels of base metals were recorded in the soil samples taken on the Ian 1 claim. Results for each analyzed element are described below:

Gold: There were no significant gold anomalies. Thirty-one of the samples assayed at 5 ppb, nine of them assayed at 10 ppb, and one of them assayed at 15 ppb.

Silver: There were no significant silver anomalies. Recorded silver values for the samples ranged from .5 ppm to 2.2 ppm.

Arsenic: Slightly anomalous arsenic values were recorded for two samples: 87-VGS-73, 48 ppm; and 87-VGS-75, 51 ppm.

Copper: There was one anomalous copper value recorded. This was a value of 146 ppm in 87-VGS-77. This sample is a multi-element base metal anomaly.

Lead: An anomalous lead value of 208 ppm was recorded for sample 87-VGS-077.

Antimony: There were no significant antimony anomalies. Antimony values range from 2 ppm to 9 ppm.

Zinc: An anomalous zinc value of 918 ppm was recorded for sample 87-VGS-077.

4.1.3 Stream Sediment Geochemistry

Gold: One anomalous gold value was recorded: 340 ppb in sample 87-VGL-102.

Silver: There were no anomalous silver values. Recorded assay values for silver range from .4 ppm to 1.4 ppm.

Arsenic: Two samples show slightly anomalous arsenic values: 87-VSL-17, and 87-VML-14 show values of 21 ppm and 22 ppm respectively.

Copper: Three samples show slightly anomalous copper values: 87-VKL-24, 148 ppm; 87-VML-14, 134 ppm; 87-VSL-3, 107 ppm.

Lead: There was one anomalous lead value. A value of 86 ppm lead was recorded in sample 87-VSL-3.

Antimony: There were no antimony anomalies. Antimony values vary from 1 ppm to 6 ppm.

Zinc: Values exceeding 200 ppm zinc were recorded for four samples. The highest value was 278 ppm for sample 87-VML-9.

5.0 CONCLUSIONS

The Ian 6 and 8 claims are underlain by a volcanic and sedimentary sequence which is intruded by a major stock of granite to granodiorite composition in addition to at least two other minor intrusions. Three favourable areas for mineralization were located on the property during the course of the 1987 exploration program. These include a unit of andesitic volcanics with widespread silicification and epidotization and well developed gossan zones; sedimentary rocks in proximity to a distinct hornblende granodiorite intrusion, with mineralization occurring in quartz veins and localized zones of skarnificiation; and from a zone of quartz veining in meta-argillite. High base metal values, and anomalous gold values of up to 2100 ppb were recorded in rock grab samples taken from these zones.

In light of these encouraging findings, further exploration work is recommended.

6.0 RECOMMENDATIONS

In order to more clearly investigate the mineral potential of the Ian mineral claims, a program of airborne and ground geophysics, further geological mapping and prospecting, and soil geochemistry should be undertaken.

An airborne Mag and EM survey should be considered for the property in order to identify plausible exploration targets and to delineate any significant structures.

A second program of mapping and prospecting, with emphasis on the northeastern and east-central portions of the Ian 6 claim should be carried out.

An extensive grid should be established in the northwestern part of the Ian 6 claim, and geological mapping, prospecting, soil geochemistry, and ground mag and VLF-EM should be carried out on this grid. The choice of orientation for such a grid might be augmented by the results of the airborne geophysical survey.

In order to facilitate property access to the area of the property for surface exploration purposes, an area should be cleared for helicopter access at approximately the 1700 foot elevation level in the central part of the Ian 6 claim. The services of an experienced faller should for this purpose, as the size of the timber in this area is considerable.

Respectfully submitted,

George R. King

George R. King, B.Sc.,
Geologist
Hi-Tec Resource Management Ltd.

APPENDIX I

References

REFERENCES

Carter, N.C. (1987). Geological Report on the Ian 1-4 Mineral Claims, Iskut River Area, Liard Mining Division, British Columbia, Private Report for Ashburton Oil Ltd.

Carter, N.C. (1987). Geological Report on the Ian 6 and 8 Mineral Claims, Iskut River Area, Liard Mining Division, British Columbia. Private Report for Vanstates Resources Ltd.

Caulfield, David A. and Ikona, Charles K. (1987). Geological report on the New 7 & 8 Mineral Claims, Iskut River area, Liard Mining Division. Private Report for Ticker Tape Resources Ltd.

Grove, E.W. (1986). Geological Report, Exploration and Development Prospect on the Skyline Explorations Ltd. Rey Property, Iskut River Area, Northwestern, B.C., Liard Mining Division. Private Report for Skyline Explorations Ltd.

Geological Survey of Canada (1957). Stikine River area, Cassiar District, British Columbia, Map 9-1957.

Kerr, F.A. (1930). Preliminary Report on the Iskut River Area, B.C. GSC Summary Report, 1929, Part A, pp. 30-61.

Kerr, F.A. (1948). Lower Stikine and Western Iskut Rivers Area, B.C., GSC Memoir 246.

Poloni, John R. (1987). Report on the Hag 2, 4, and 8 Mineral Claims, Iskut River area, Liard Mining Division, British Columbia, Private Report for Cove Energy Corporation.

Sorbara, J.P. & Associates (1987). Geological Report on the Joy 1 & 2 Mineral Claims, Liard Mining Division, British Columbia. Private Report for Brenwest Mining Limited.

Strain, D.M. (1981). Geological and Geochemical Report on the Bax Claims, Liard Mining Division, British Columbia. BCMEMPR Assessment Report, 1188.

Toduruk, S.L. and Ikona, C.K. (1987). Geological Report on the CAM 5 and 6 Mineral Claims, Iskut River area, Liard Mining Division. Private Report for Gigi Resources Ltd.

Toduruk, S.L. and Ikona, C.K. (1987). Geological Report on the JP 3 and 4 and Cam 9 & 10 Mineral Claims, Iskut River Area, Liard Mining Division. Private Report for Norman Resources Ltd.

APPENDIX II

Statement of Qualifications

STATEMENT OF QUALIFICATIONS

I, GEORGE R. KING, of Suite 5, 736 West 14th Avenue, Vancouver, British Columbia, do hereby certify:

1. That I am a geologist in the employment of Hi-Tec Resource Management Ltd., with offices at Suite 1500 - 609 Granville Street, Vancouver, British Columbia.

2. That I am a graduate from the University of Saskatchewan in Saskatoon (1985) with a Bachelor of Science Degree in Geology.

3. That my primary employment since 1981 has been in the field of mineral exploration.

4. That my experience has encompassed a wide range of geologic environments, and has allowed considerable familiarization with geological mapping, prospecting, geochemical and geophysical techniques.

5. That I have no interest in the property described herein, nor in securities of any company associated with the property, nor do I expect to receive any such interest.

6) That I hereby grant permission to Vanstates Resources Ltd. for the use of this report in any prospectus or other documentation required for any regulatory authority.

Dated at Vancouver, British Columbia this 21st day of December, 1987.

George R. King

George R. King, B.Sc.,
Geologist

APPENDIX III

Geochem Results and Laboratory Analytical Methods

GEOCHEM RESULTS AND LABORATORY ANALYTICAL METHODS

After intial 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. A 40 mesh sieve was used for some of the silt samples. 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 HNO_3 - $HClO_4$ 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 formated 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 iso-butyl ketone. Gold is analyzed by Atomic Absorption instruments using a suitable standard solution. The detection limit is 1 ppb.

(VALUES IN PPM)	AG	AS	CU	PB	SB	ZN	AU-PPB
87VGR1	1.1	12	511	10	2	75	2
87VGR2	1.7	10	322	11	3	198	3
87VGR3	.7	13	72	10	1	12	5
87VGR4	1.4	1	529	7	1	68	2
87VGR6	.8	2	86	7	1	49	10
87VGR7	.7	8	11	6	1	80	2
87VGR9	1.2	8	61	11	2	82	1
87VGR10	1.2	8	124	9	1	27	6
87VGR11	1.0	19	46	16	2	67	2
87VGR12	1.9	25	145	10	4	138	3
87VGR13	1.0	1	36	15	2	44	1
87VGR15	2.4	27	755	9	4	54	39
87VGR16	1.7	4	121	14	2	22	34
87VGR17	2.2	15	367	11	2	58	21
87VGR18	2.1	10	352	6	3	79	34
87VGR20	.5	3	16	6	1	22	20
87VGR21	2.3	24	92	16	4	60	3
87VGR22	.7	1	11	4	1	28	4
87VGR23	1.8	16	420	4	2	26	88
87VGR24	1.4	14	144	9	3	39	4
87VGR25	1.8	19	166	13	3	45	27
87VGR26	1.1	4	20	8	5	55	96
87VGR27	1.2	7	10	8	4	36	95
87VGR28	6.1	17	105	3	6	129	2100
87VGR29	2.0	2	43	6	6	53	38
87VGR30	2.7	14	222	8	7	101	80
87VGR31	2.3	9	11	236	4	166	20
87VGR32	2.3	19	225	36	6	111	29
87VGR33	1.0	8	20	14	3	76	73
87VGR34	2.1	23	101	18	9	91	3
87VGR35	2.5	6	160	269	8	442	7
87VGR36	2.2	26	116	11	10	124	4
87VGR37	1.0	7	12	14	5	60	3
87VGR38	21.5	22	737	46297	38	28604	58
87VGR39	3.9	7	731	1500	3	577	1
87VGR40	1.8	6	131	478	1	551	2
87VGR 100	2.0	35	125	23	8	122	
87VGR 101	1.3	11	46	17	4	25	
87VGR 103	2.9	11	77	55	7	162	
87VGR 104	1.3	27	63	24	2	13	
87VGR 105	1.6	2	299	10	5	89	
87VGR 106	2.6	12	59	345	5	165	
87VGR 107	2.2	9	100	21	6	47	
87VGR 108	.9	8	27	10	3	41	
87VGR 109	3.7	37	226	34	13	133	

(VALUES IN PPM)	AG	AS	CU	PB	SB	ZN	AU-PPB
87VKR1	2.0	14	551	7	4	326	2
87VKR2	3.1	2	2223	7	4	764	23
87VKR4	1.4	7	14	8	3	80	2
87VKR6	1.9	19	96	10	2	90	2
87VKR7	.9	7	160	4	1	28	1
87VKR8	.7	7	56	8	1	22	3
87VKR9	1.3	9	109	10	4	65	2
87VKR10	.9	15	36	11	2	38	2
87VKR11	.9	6	119	12	3	33	1
87VKR12	2.5	13	211	4	2	68	163
87VKR13	1.5	26	37	16	3	62	2
87VKR14	1.3	91	23	33	4	40	2
87VKR15	1.6	78	60	15	3	21	3
87VKR16	.9	13	57	12	1	45	2
87VKR17	8.0	4	9447	14	12	24	65
87VKR18	11.4	7	12941	24	19	22	14
87VKR19	4.8	16	2794	55	2	9	6
87VKR20	2.3	21	663	20	6	37	1
87VKR21	1.7	13	40	27	7	51	2
87VKR22	1.9	15	493	12	2	202	29
87VKR23	.9	3	9	6	3	39	1
87VKR25	1.3	14	268	17	8	31	15
87VKR26	1.4	10	184	12	5	62	6
87VKR27	1.8	10	74	17	6	108	2
87VKR28	.7	16	9	10	4	58	8
87VKR29	.5	2	12	8	5	22	5
87VKR30	4.3	54	70	110	13	22206	7
87VKR31	1.7	21	1244	9	7	137	4
87VKR32	24.9	5	22735	111	23	628	1500
87VKR33	1.1	1	201	11	5	58	8
87VKR34	1.4	13	73	5	4	59	66
87VKR 35	1.1	2	20	20	3	125	
87VKR 36	1.5	1	56	20	1	15	
87VKR 37	3.5	6	81	23	4	40	
87VKR 38	11.1	23	14224	28	34	172	
87VKR 39	6.6	15	533	123	3	64	

(VALUES IN PPM)	AG	AS	CU	PB	SB	ZN	AU-PPB
~~87VMR6~~	2.5	2	48	17	7	134	10
87VMR15	.4	13	40	5	2	124	12
87VMR16	.8	1	38	15	3	93	6
87VMR17	.7	10	50	14	3	97	3
87VMR18	.6	1	5	8	1	14	8
87VMR19	.5	14	15	13	1	19	6
87VMR21	.6	11	11	4	2	23	18
87VMR22	1.2	17	5	14	1	17	2
87VMR23	1.2	21	36	11	2	22	40
87VMR24	1.3	15	21	11	3	21	21
87VMR25	1.1	11	8	9	2	10	5
87VMR26	1.3	13	10	18	2	20	8
87VMR27	.8	9	7	5	1	17	1
87VMR28	1.4	3	9	15	4	32	6
87VMR29	1.4	8	7	9	5	25	8
87VMR30	1.2	21	8	21	3	28	4
87VMR31	1.7	17	10	9	4	96	13

(VALUES IN PPM)	AG	AS	CU	PB	SB	ZN	AU-PPB
87VSR5	.8	2	26	9	1	45	2
87VSR6	1.0	13	45	8	4	227	20
87VSR7	.8	20	42	8	1	112	18
87VSR8	.3	12	10	10	1	76	2
87VSR9	.7	8	38	5	1	7	2
87VSR15	.8	2	80	46	5	388	16
87VSR16	1.2	14	62	6	3	50	2
87VSR 18	1.8	19	86	13	8	73	
87VSR 19	7.9	16	6316	32	15	72	
87VSR 20	21.1	8	27399	68	47	30	
87VSR 22	13.5	4	14886	34	28	24	
87VSR 23	13.0	13	16028	39	28	26	
87VSR 24	1.0	8	902	19	15	90	
87VSR 25	1.1	13	279	14	3	9	
87VSR 26	1.4	3	82	10	7	40	
87VSR 27	1.6	21	145	12	10	71	

(PPM)	87VSP-1
AG	1.2
AS	1
CU	60
PB	7
SB	3
ZN	120
AU-PPB	3

(PPM)	87VML 1	87VML 2	87VML 3	87VML 4	87VML 5	87VML 7	87VSL 2	87VGL 5	87VGL 8
AG	1.4	1.0	.4	.7	1.2	1.3	.7	.6	1.0
AS	1	14	1	13	13	9	1	1	13
CU	74	14	11	15	22	11	24	74	54
PB	4	3	9	11	10	7	7	11	4
SB	3	2	1	2	2	2	1	2	2
ZN	93	130	100	106	137	82	138	148	180
AU-PPB	5	5	5	10	5	5	5	5	10

(VALUES IN PPM)	AG	AS	CU	PB	SB	ZN	AU-PPB
87VGL14	.6	14	29	14	3	123	5
87VGL19	.7	1	38	5	3	108	5
87VGL 102	1.0	10	97	25	7	179	340
87VKL3 40M	.6	9	8	7	1	101	5
87VKL5	.8	17	27	8	3	165	5
87VKL 24	.7	1	148	19	2	143	10
87VML8 40M	.7	9	8	7	3	107	5
87VML9	1.2	8	26	13	3	278	5
87VML10 40M	.8	14	53	21	3	201	10
87VML11	1.0	6	26	13	4	197	5
87VML12 40M	.8	17	24	17	3	167	5
87VML13	1.1	18	45	7	4	135	5
87VML14	1.4	22	139	21	5	107	20
87VML20	1.1	13	35	7	1	245	5
87VSL3 40M	.9	4	107	86	4	122	5
87VSL4	1.0	12	38	3	3	142	5
87VSL10	1.2	4	68	12	1	77	10
87VSL11	1.1	12	29	13	1	243	5
87VSL 17	.4	21	31	6	3	94	5
87VSL 21 40M	.7	15	46	6	4	120	5
87VSL 28	.5	16	58	16	6	170	5

(VALUES IN PPM)	AG	AS	CU	PB	SB	ZN	AU-FF3
87VBS 41	1.3	4	23	10	5	89	5
87VBS 42	1.0	15	32	12	6	106	5
87VBS 43	.8	9	22	8	5	60	5
87VBS 44	.5	7	27	15	2	60	10/
87VBS 45	1.3	20	18	13	4	103	5
87VBS 46	.7	25	18	15	5	70	5
87VBS 47	1.3	5	20	20	5	89	5
87VBS 48	1.0	19	23	11	4	111	5
87VBS 49	1.4	17	14	13	8	111	5
87VBS 50	.8	3	15	8	5	62	10
87VBS 51	1.5	6	16	13	8	149	5
87VBS 52	1.2	17	20	15	6	88	10
87VBS 53	1.3	21	18	11	4	86	5
87VBS 54	1.3	8	16	20	7	163/	5
87VBS 55	.6	1	18	6	5	114	5
87VBS 56	1.2	25	16	6	6	187/	10
87VBS 57	.5	6	17	12	4	96	5
87VBS 58	.8	36/	17	19	5	165/	5
87VBS 59	.8	4	20	13	5	174/	5
87VBS 60	1.0	7	17	11	5	114	5
87VBS 61	.6	14	27	5	5	131	5
87VBS 62	1.2	18	19	13	6	148	10
87VBS 63	1.4	12	32	18	8	214/	5
87VBS 64	1.3	27/	12	17	6	98	5
87VBS 65	1.1	1	38	9	4	206/	15
87VBS 66	.7	1	20	9	4	102	5
87VBS 67	1.2	10	16	14	6	115	5
87VBS 68	.8	9	18	11	8	145	5
87VBS 69	1.7	22	20	22	9	227/	5
87VBS 70	1.2	16	24	18	6	118	10/
87VBS 71	1.9	11	20	24	6	170/	5
87VBS 72	1.3	12	16	3	4	106	5
87VBS 73	1.9	48/	18	6	7	75	10/
87VBS 74	1.9	14	20	16	8	208/	5
87VBS 75	1.5	51/	16	9	7	123	5
87VBS 76	1.2	9	18	5	6	192	5
87VBS 77	1.6	23	146	206	8	916/	5
87VBS 78	1.6	16	23	7	9	145	10/
87VBS 79	2.2	6	17	13	9	117	5
87VBS 80	1.5	22	21	11	6	138	10/
87VBS 81	1.6	13	33	24	7	133	5

APPENDIX IV

Statistical Analysis of Data for Soil Geochem Survey

MIN-EN LABORATORIES LTD.

SPECIALISTS IN MINERAL ENVIRONMENTS

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

TELEX: 04-352828 PHONE:(604)980-5814 OR (604)988-4524

CORRELATION COEFFICIENTS

COMPANY:HI-TEC RESOURCES
ATTN:GEORGE KING
PROJECT:87BC021
FILE#:

DATE:NOV 13/87
SAMPLE TYPE:SOIL
ANALYSIS TYPE:ICP

THE TABLE BELOW REPRESENTS THE PEARSON CORRELATION MATRIX, SHOWING THE INTER-ELEMENT CORRELATION COEFFICIENTS. THOSE VALUES THAT EXCEED THEIR CRITICAL VALUE FOR .01 LEVEL OF SIGNIFICANCE ARE SHOWN IN DARKER PRINT AND UNDERLINED.

	AG	AS	CU	PB	SB	ZN	AU
AG	1.000	.272	.117	.176	**.653**	.260	-.030
AS		1.000	.064	.114	.238	.103	.047
CU			1.000	**.964**	.188	**.927**	-.040
PB				1.000	.245	**.942**	-.120
SB					1.000	**.355**	-.122
ZN						1.000	-.070
AU							1.000

MIN-EN LABORATORIES LTD.

SPECIALISTS IN MINERAL ENVIRONMENTS

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

TELEX: 04-352828 PHONE:(604)980-5814 OR (604)988-4524

STATISTICAL SUMMARY ON AG

COMPANY:HI-TEC RESOURCES
ATTN:GEORGE KING
PROJECT:87BC021
FILE#:

DATE:NOV 13/87
SAMPLE TYPE:SOIL
ANALYSIS TYPE:ICP

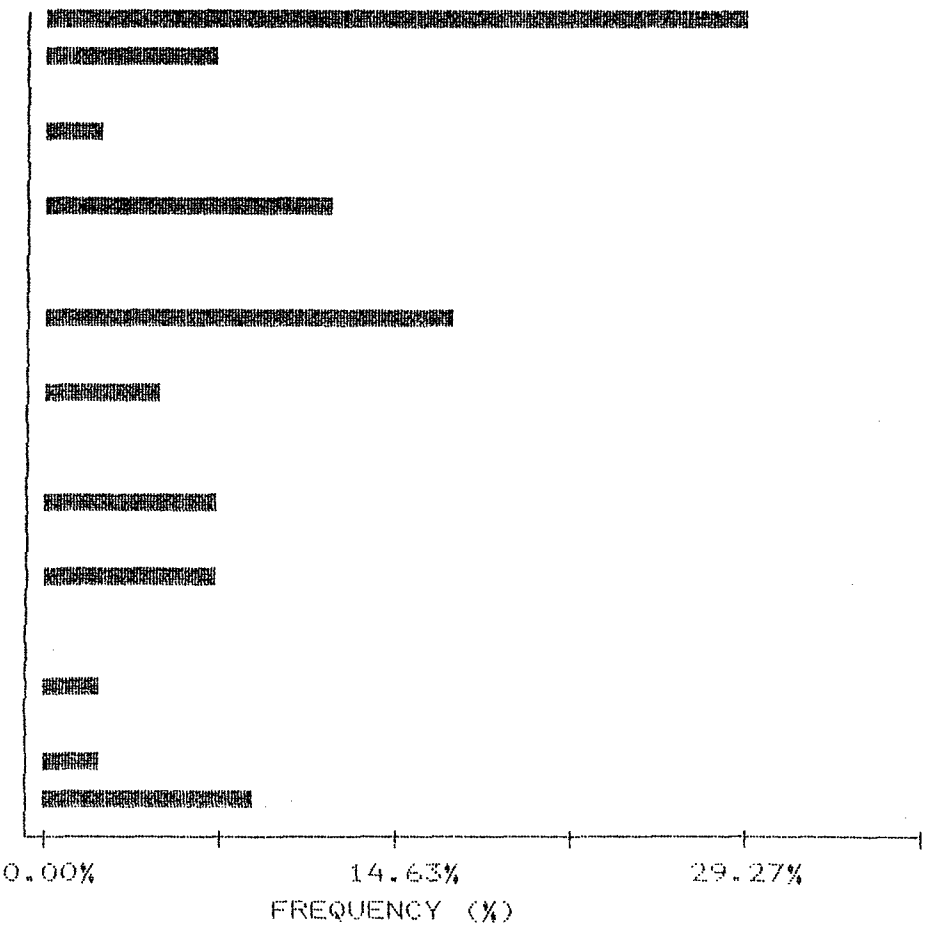
NUMBER OF SAMPLES:	41
MAXIMUM VALUE:	2.20 PPM
MINIMUM VALUE:	.50 PPM
MEAN:	1.23 PPM
STD. DEVIATION:	.41 PPM
COEFF. OF VARIATION:	.33

5 HIGHEST AG VALUES:

87V6S 79	2.2 PPM
87V6S 71	1.9 PPM
87V6S 73	1.9 PPM
87V6S 74	1.9 PPM
87V6S 76	1.8 PPM

HISTOGRAM FOR AG CLASS INTERVAL = .04

MID CLASS PPM	CLASS %
< 1.00	29.27
1.02	7.32
1.06	0.00
1.10	2.44
1.14	0.00
1.18	12.20
1.22	0.00
1.26	0.00
1.30	17.07
1.34	0.00
1.38	4.88
1.42	0.00
1.46	0.00
1.50	7.32
1.54	0.00
1.58	7.32
1.62	0.00
1.66	0.00
1.70	2.44
1.74	0.00
1.78	2.44
> 1.90	8.78



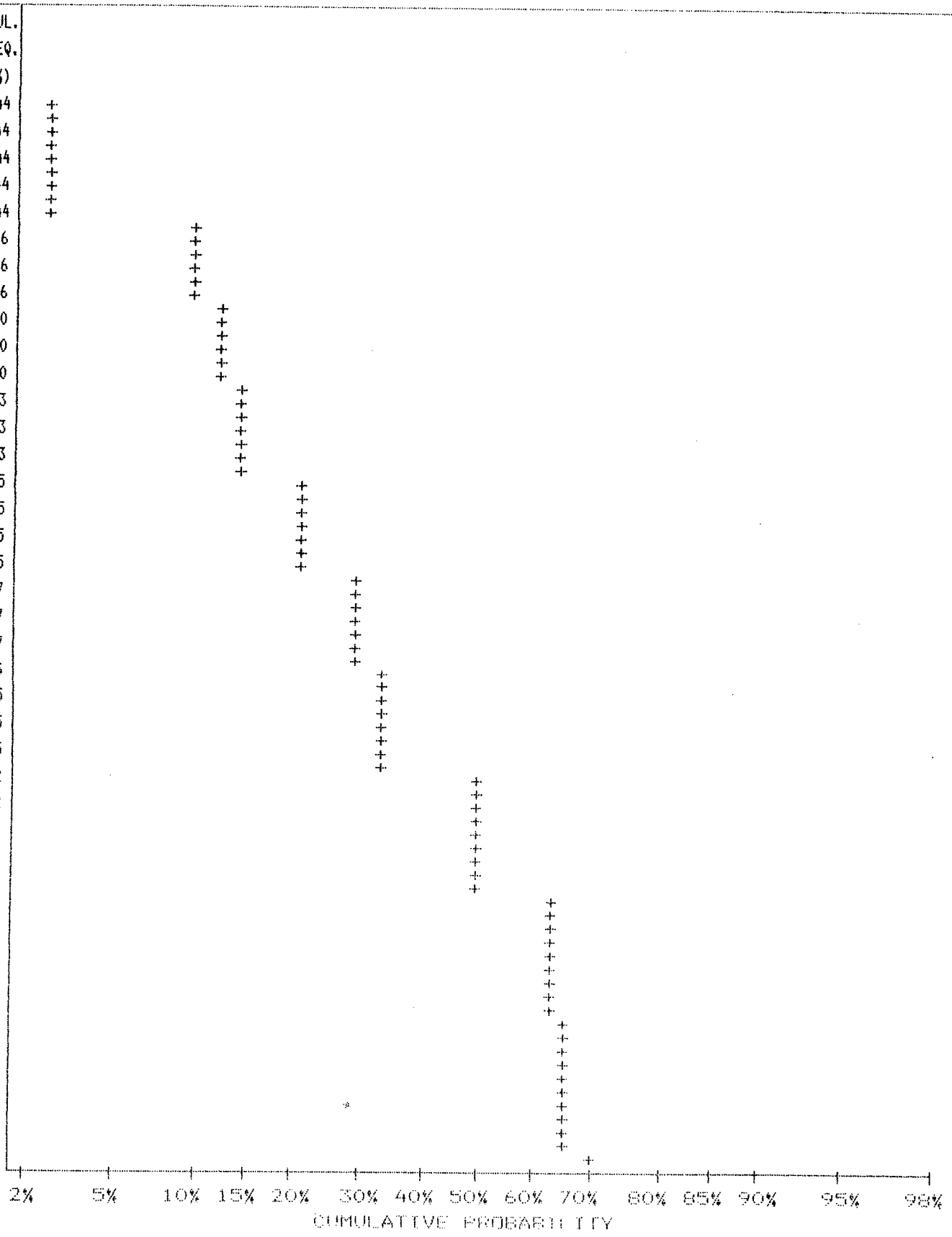
MIN-EN LABORATORIES LTD.
SPECIALISTS IN MINERAL ENVIRONMENTS
705 WEST 15TH STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2
TELEX: 04-352828 PHONE:(604)980-5814 OR (604)988-4524

CUMMULATIVE PROBABILITY PLOT ON AG

COMPANY:HI-TEC RESOURCES
ATTN:GEORGE KING
PROJECT:87BC021
FILE#:

DATE:NOV 13/87
SAMPLE TYPE:SOIL
ANALYSIS TYPE:ICP

UPPER LIMIT (PPM)	CUMMUL. FREQ. (%)
2.05	2.44
2.01	2.44
1.98	2.44
1.94	2.44
1.90	2.44
1.87	9.76
1.84	9.76
1.80	9.76
1.77	12.20
1.74	12.20
1.71	12.20
1.67	14.63
1.64	14.63
1.61	14.63
1.58	21.95
1.56	21.95
1.53	21.95
1.50	21.95
1.47	29.27
1.44	29.27
1.42	29.27
1.39	34.15
1.37	34.15
1.34	34.15
1.32	34.15
1.29	51.22
1.27	51.22
1.25	51.22
1.23	51.22
1.20	51.22
1.18	63.41
1.16	63.41
1.14	63.41
1.12	63.41
1.10	65.85
1.08	65.85
1.06	65.85
1.04	65.85
1.02	65.85
1.00	70.73



MIN-EN LABORATORIES LTD.
SPECIALISTS IN MINERAL ENVIRONMENTS
705 WEST 15TH STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2
TELEX: 04-352828 PHONE:(604)980-5814 OR (604)988-4524

STATISTICAL SUMMARY ON AS

COMPANY:HI-TEC RESOURCES
ATTN:GEORGE KING
PROJECT:87BC021
FILE#:

DATE:NOV 13/87
SAMPLE TYPE:SOIL
ANALYSIS TYPE:ICP

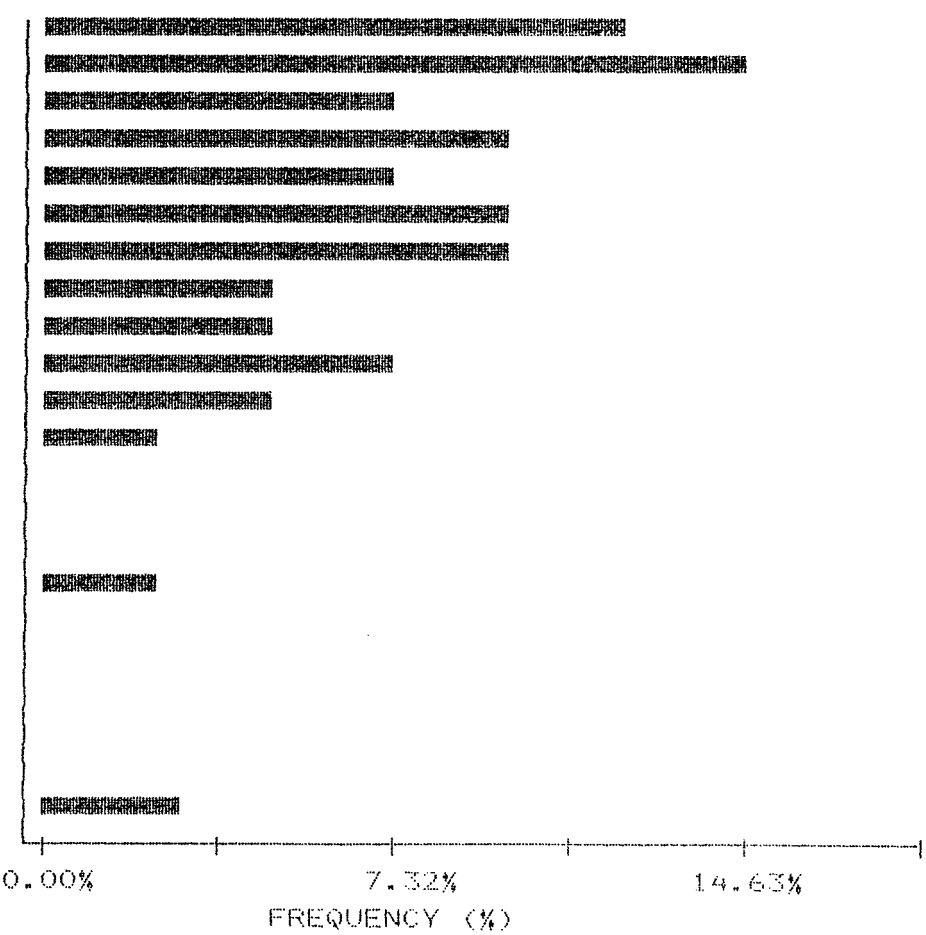
NUMBER OF SAMPLES:	41
MAXIMUM VALUE:	51.00 PPM
MINIMUM VALUE:	0.00 PPM
MEAN:	14.85 PPM
STD. DEVIATION:	11.32 PPM
COEFF. OF VARIATION:	.76

5 HIGHEST AS VALUES:

87VGS 75	51 PPM
87VGS 73	48 PPM
87VGS 58	36 PPM
87VGS 64	27 PPM
87VGS 46	25 PPM

HISTOGRAM FOR AS CLASS INTERVAL = 2.2

MID CLASS PPM	CLASS %
< 4.00	12.20
5.10	14.63
7.30	7.32
9.50	9.76
11.70	7.32
13.90	9.76
16.10	9.76
18.30	4.88
20.50	4.88
22.70	7.32
24.90	4.88
27.10	2.44
29.30	0.00
31.50	0.00
33.70	0.00
35.90	2.44
38.10	0.00
40.30	0.00
42.50	0.00
44.70	0.00
46.90	0.00
> 48.00	2.93



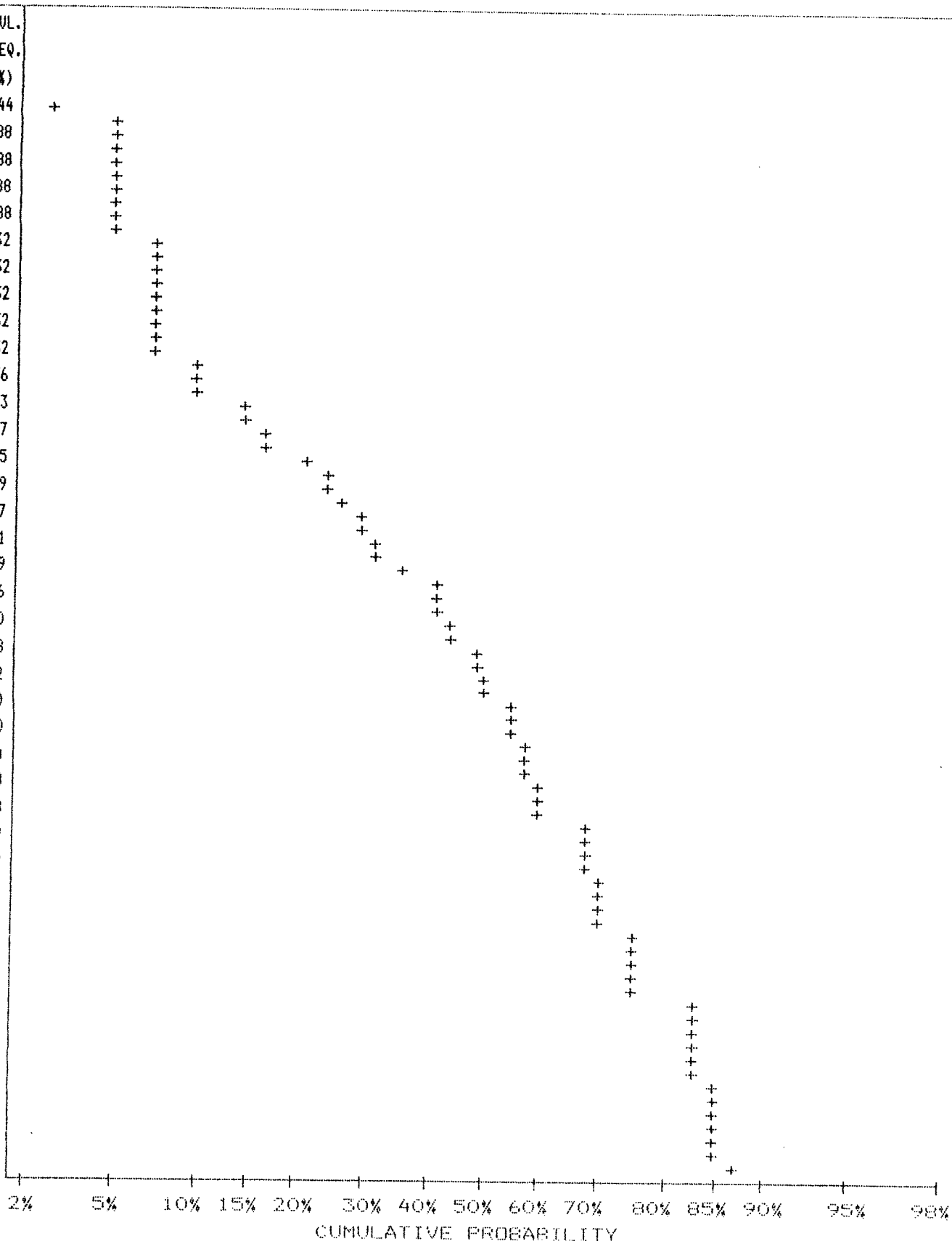
MIN-EN LABORATORIES LTD.
SPECIALISTS IN MINERAL ENVIRONMENTS
705 WEST 15TH STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2
TELEX: 04-352828 PHONE:(604)980-5814 OR (604)988-4524

CUMMULATIVE PROBABILITY PLOT ON AS

COMPANY:HI-TEC RESOURCES
ATTN:GEORGE KING
PROJECT:87BC021
FILE#:

DATE:NOV 13/87
SAMPLE TYPE:SOIL
ANALYSIS TYPE:ICP

UPPER LIMIT (PPM)	CUMMUL. FREQ. (%)
49.44	2.44
46.35	4.88
43.46	4.88
40.74	4.88
38.20	4.88
35.82	7.32
33.58	7.32
31.48	7.32
29.52	7.32
27.67	7.32
25.94	9.76
24.32	14.63
22.81	17.07
21.38	21.95
20.05	24.39
18.80	29.27
17.62	31.71
16.52	36.59
15.49	41.46
14.52	43.90
13.62	48.78
12.77	51.22
11.97	56.10
11.22	56.10
10.52	58.54
9.86	60.98
9.25	60.98
8.67	68.29
8.13	68.29
7.62	70.73
7.14	70.73
6.70	75.61
6.28	75.61
5.89	82.93
5.52	82.93
5.18	82.93
4.85	85.37
4.55	85.37
4.27	85.37
4.00	87.80



MIN-EN LABORATORIES LTD.
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705 WEST 15TH STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2
TELEX: 04-352828 PHONE:(604)980-5814 OR (604)988-4524

STATISTICAL SUMMARY ON CU

COMPANY:HI-TEC RESOURCES
ATTN:GEORGE KING
PROJECT:87BC021
FILE#:

DATE:NOV 13/87
SAMPLE TYPE:SOIL
ANALYSIS TYPE:ICP

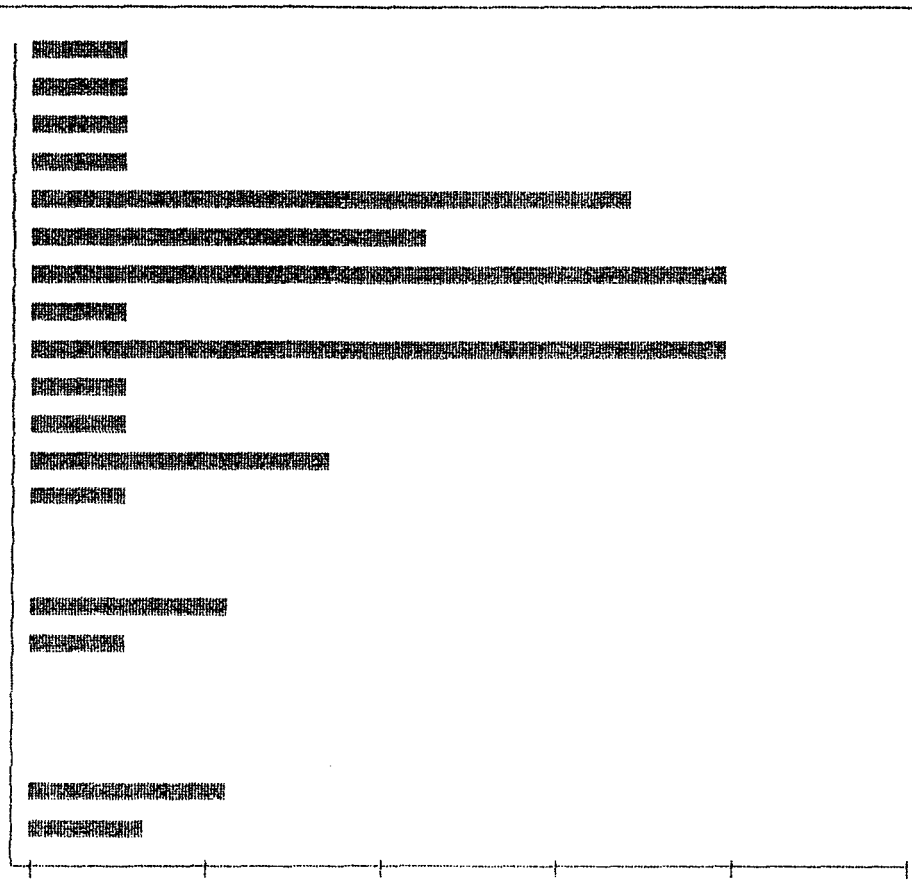
NUMBER OF SAMPLES:	41
MAXIMUM VALUE:	146.00 PPM
MINIMUM VALUE:	12.00 PPM
MEAN:	23.20 PPM
STD. DEVIATION:	20.25 PPM
COEFF. OF VARIATION:	.87

5 HIGHEST CU VALUES:

87V6S 77	146 PPM
87V6S 81	33 PPM
87V6S 42	32 PPM
87V6S 63	32 PPM
87V6S 65	28 PPM

HISTOGRAM FOR CU CLASS INTERVAL = 1.05

MID CLASS PPM	CLASS %
< 12.00	2.44
12.52	2.44
13.57	2.44
14.62	2.44
15.67	14.63
16.72	9.76
17.77	17.07
18.82	2.44
19.87	17.07
20.92	2.44
21.97	2.44
23.02	7.32
24.07	2.44
25.12	0.00
26.17	0.00
27.22	4.88
28.27	2.44
29.32	0.00
30.37	0.00
31.42	0.00
32.47	4.88
> 33.00	2.93



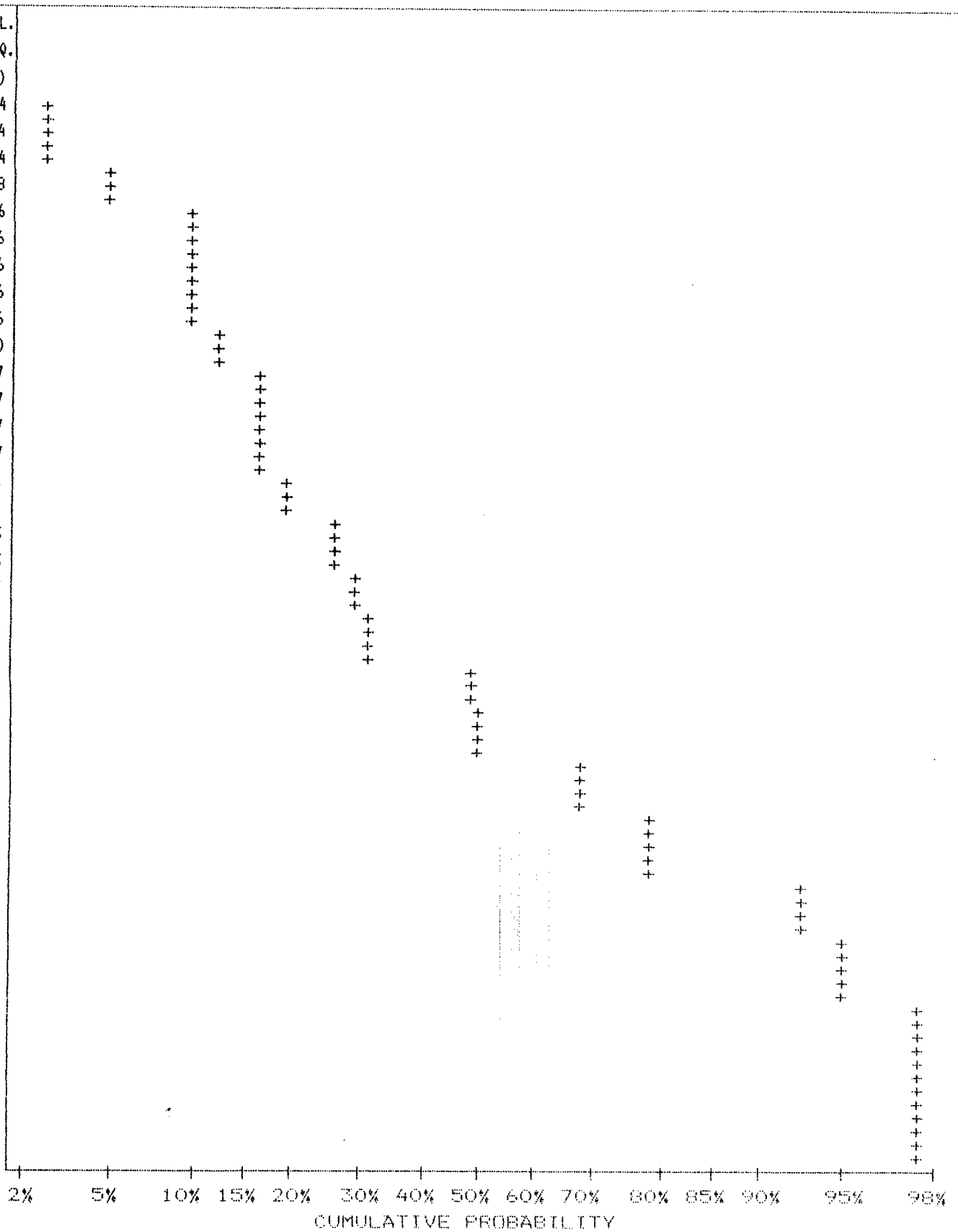
MIN-EN LABORATORIES LTD.
SPECIALISTS IN MINERAL ENVIRONMENTS
705 WEST 15TH STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2
TELEX: 04-352828 PHONE: (604)980-5814 OR (604)988-4524

CUMMULATIVE PROBABILITY PLOT ON CU

COMPANY: HI-TEC RESOURCES
ATTN: GEORGE KING
PROJECT: 87BC021
FILE#:

DATE: NOV 13/87
SAMPLE TYPE: SOIL
ANALYSIS TYPE: ICP

UPPER LIMIT (PPM)	CUMMUL. FREQ. (%)
35.26	2.44
34.30	2.44
33.36	2.44
32.45	4.88
31.56	9.76
30.71	9.76
29.87	9.76
29.05	9.76
28.26	9.76
27.49	12.20
26.74	17.07
26.02	17.07
25.31	17.07
24.61	17.07
23.94	19.51
23.29	19.51
22.66	26.83
22.04	26.83
21.43	29.27
20.86	31.71
20.28	31.71
19.73	48.78
19.20	48.78
18.67	51.22
18.17	51.22
17.66	68.29
17.18	68.29
16.72	78.05
16.26	78.05
15.82	92.68
15.38	92.68
14.96	95.12
14.56	95.12
14.16	95.12
13.78	97.56
13.40	97.56
13.03	97.56
12.68	97.56
12.34	97.56
12.00	97.56



MIN-EN LABORATORIES LTD.
SPECIALISTS IN MINERAL ENVIRONMENTS
705 WEST 15TH STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2
TELEX: 04-352828 PHONE:(604)980-5814 OR (604)988-4524

STATISTICAL SUMMARY ON PB

COMPANY:HI-TEC RESOURCES
ATTN:GEORGE KING
PROJECT:87BC021
FILE#:

DATE:NOV 13/87
SAMPLE TYPE:SOIL
ANALYSIS TYPE:ICP

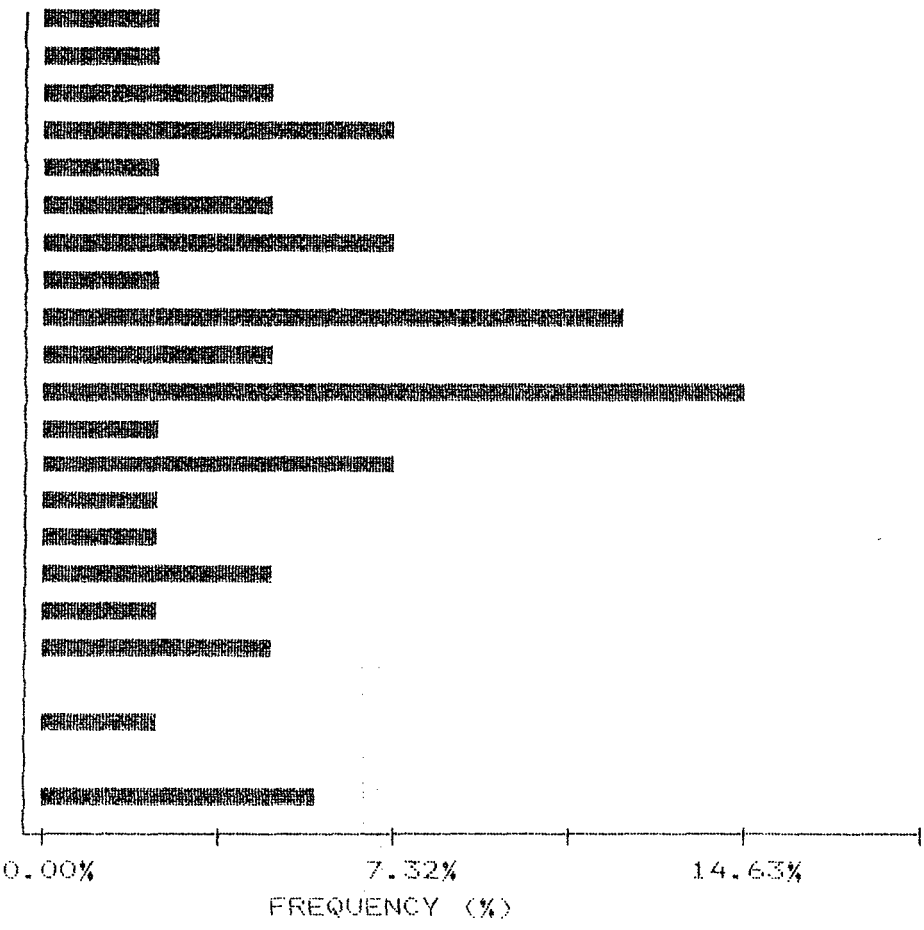
NUMBER OF SAMPLES:	41
MAXIMUM VALUE:	208.00 PPM
MINIMUM VALUE:	3.00 PPM
MEAN:	17.39 PPM
STD. DEVIATION:	30.95 PPM
COEFF. OF VARIATION:	1.78

5 HIGHEST PB VALUES:

87V6S 77	208 PPM
87V6S 71	24 PPM
87V6S 81	24 PPM
87V6S 69	22 PPM
87V6S 47	20 PPM

HISTOGRAM FOR PB CLASS INTERVAL = 1.05

MID CLASS PPM	CLASS %
< 3.00	2.44
3.53	2.44
4.58	4.88
5.63	7.32
6.68	2.44
7.73	4.88
8.78	7.32
9.83	2.44
10.88	12.20
11.93	4.88
12.98	14.63
14.03	2.44
15.08	7.32
16.13	2.44
17.18	2.44
18.23	4.88
19.28	2.44
20.33	4.88
21.38	0.00
22.43	2.44
23.48	0.00
> 24.00	5.85



MIN-EN LABORATORIES LTD.

SPECIALISTS IN MINERAL ENVIRONMENTS

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

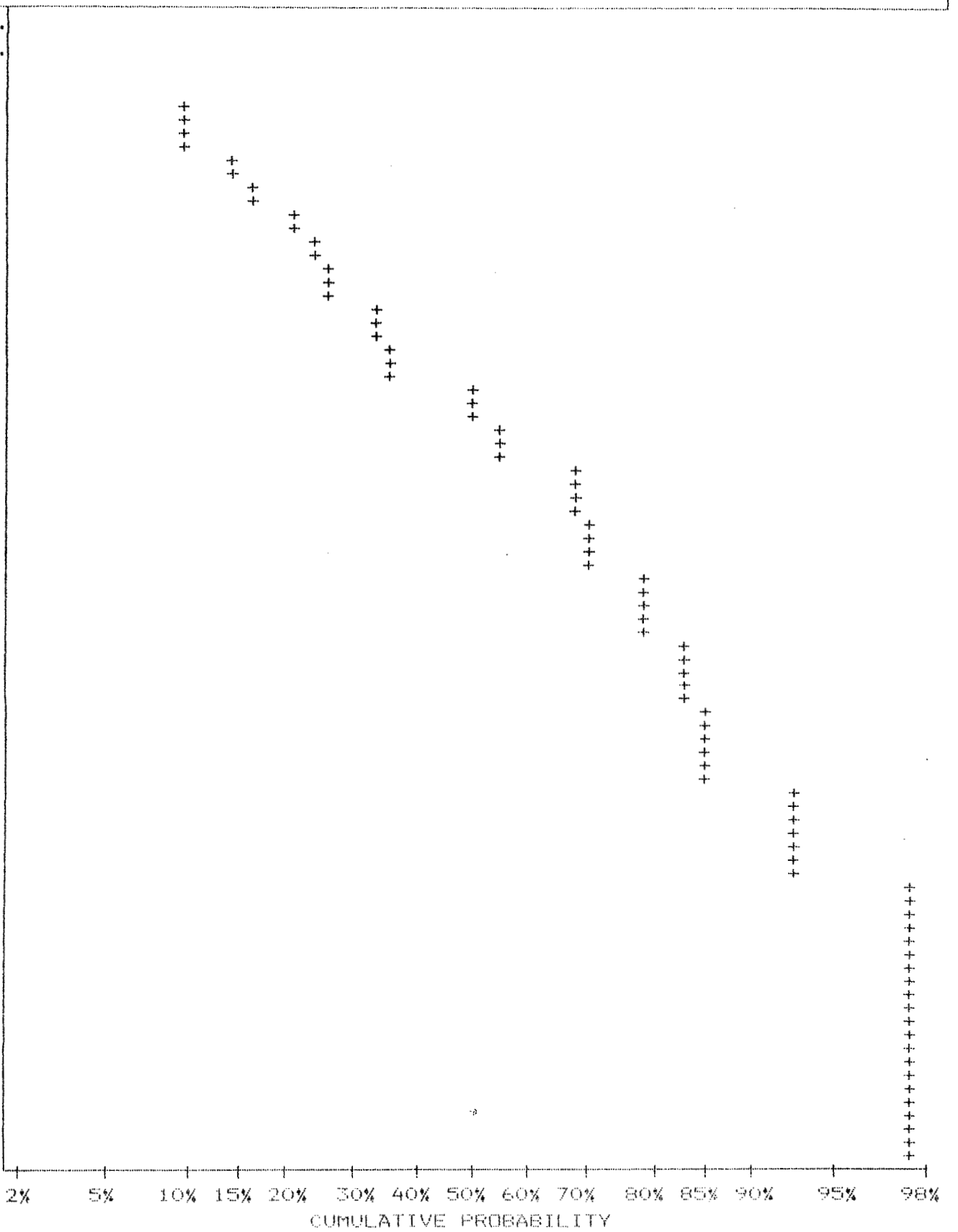
TELEX: 04-352828 PHONE:(604)980-5814 OR (604)988-4524

CUMMULATIVE PROBABILITY PLOT ON PB

COMPANY:HI-TEC RESOURCES
ATTN:GEORGE KING
PROJECT:87BC021
FILE#:

DATE:NOV 13/87
SAMPLE TYPE:SOIL
ANALYSIS TYPE:ICP

UPPER LIMIT (PPM)	CUMMUL. FREQ. (%)
21.63	9.76
20.56	9.76
19.55	14.63
18.58	17.07
17.66	21.95
16.79	24.39
15.96	26.83
15.17	26.83
14.42	34.15
13.71	36.59
13.04	36.59
12.39	51.22
11.78	56.10
11.20	56.10
10.64	68.29
10.12	68.29
9.62	70.73
9.14	70.73
8.69	78.05
8.26	78.05
7.85	82.93
7.47	82.93
7.10	82.93
6.75	85.37
6.41	85.37
6.10	85.37
5.80	92.68
5.51	92.68
5.24	92.68
4.98	97.56
4.73	97.56
4.50	97.56
4.28	97.56
4.06	97.56
3.86	97.56
3.67	97.56
3.49	97.56
3.32	97.56
3.16	97.56
3.00	97.56



ACME LABORATORIES LTD.

SPECIALISTS IN MINERAL ENVIRONMENTS

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

TELEX: 04-352828 PHONE:(604)980-5814 OR (604)988-4524

STATISTICAL SUMMARY ON SB

COMPANY:HI-TEC RESOURCES
ATTN:GEORGE KING
PROJECT:87BC021
FILE#:

DATE:NOV 13/87
SAMPLE TYPE:SOIL
ANALYSIS TYPE:ICP

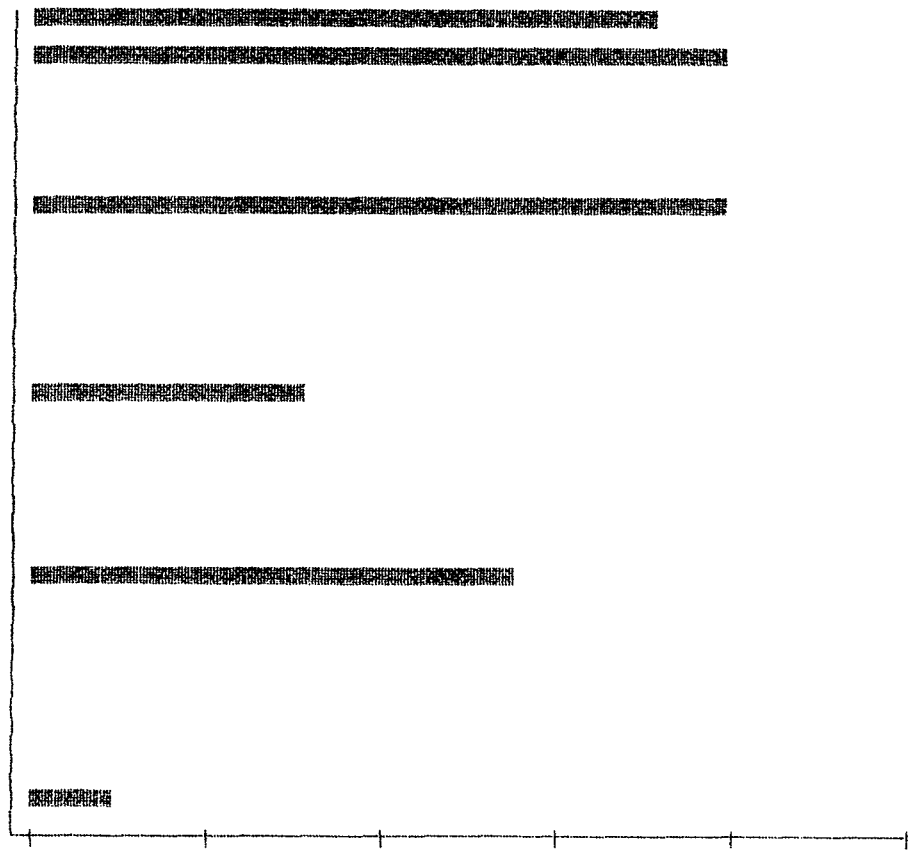
NUMBER OF SAMPLES:	41
MAXIMUM VALUE:	9.00 PPM
MINIMUM VALUE:	2.00 PPM
MEAN:	5.90 PPM
STD. DEVIATION:	1.61 PPM
COEFF. OF VARIATION:	.27

5 HIGHEST SB VALUES:

87V6S 69	9 PPM
87V6S 78	9 PPM
87V6S 49	8 PPM
87V6S 51	8 PPM
87V6S 63	8 PPM

HISTOGRAM FOR SB CLASS INTERVAL = .2

MID CLASS PPM	CLASS %
< 5.00	21.95
5.10	24.39
5.30	0.00
5.50	0.00
5.70	0.00
5.90	24.39
6.10	0.00
6.30	0.00
6.50	0.00
6.70	0.00
6.90	9.76
7.10	0.00
7.30	0.00
7.50	0.00
7.70	0.00
7.90	17.07
8.10	0.00
8.30	0.00
8.50	0.00
8.70	0.00
8.90	0.00
> 9.00	2.93



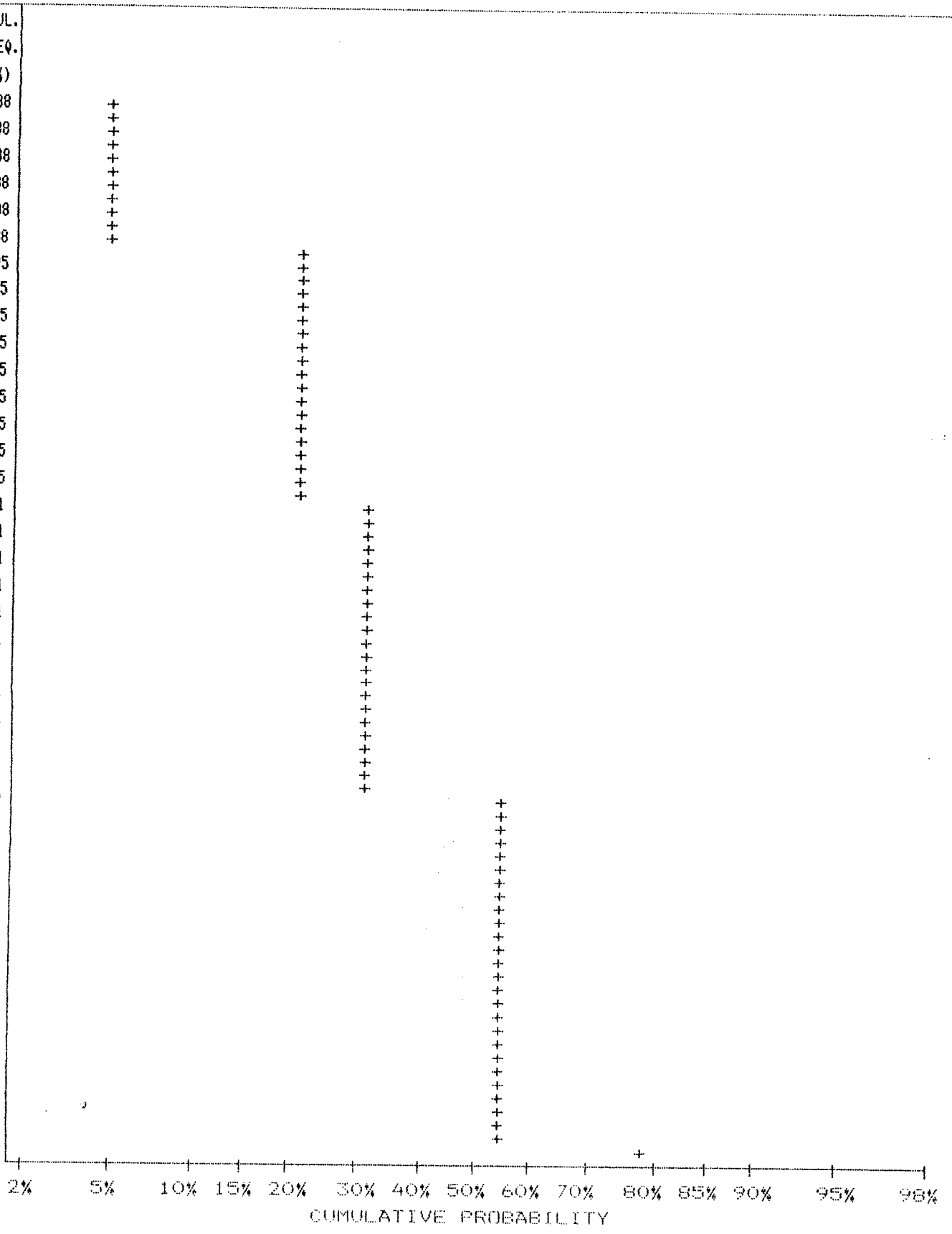
MIN-EN LABORATORIES LTD.
SPECIALISTS IN MINERAL ENVIRONMENTS
705 WEST 15TH STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2
TELEX: 04-352828 PHONE:(604)980-5814 OR (604)988-4524

CUMMULATIVE PROBABILITY PLOT ON SB

COMPANY:HI-TEC RESOURCES
ATTN:GEORGE KING
PROJECT:87BC021
FILE#:

DATE:NOV 13/87
SAMPLE TYPE:SOIL
ANALYSIS TYPE:ICP

UPPER LIMIT (PPM)	CUMMUL. FREQ. (%)
8.57	4.88
8.45	4.88
8.34	4.88
8.22	4.88
8.11	4.88
8.00	4.88
7.89	21.95
7.78	21.95
7.67	21.95
7.57	21.95
7.46	21.95
7.36	21.95
7.26	21.95
7.16	21.95
7.06	21.95
6.96	31.71
6.87	31.71
6.78	31.71
6.68	31.71
6.59	31.71
6.50	31.71
6.41	31.71
6.32	31.71
6.23	31.71
6.15	31.71
6.06	31.71
5.98	56.10
5.90	56.10
5.82	56.10
5.74	56.10
5.66	56.10
5.58	56.10
5.51	56.10
5.43	56.10
5.36	56.10
5.28	56.10
5.21	56.10
5.14	56.10
5.07	56.10
5.00	78.05



MIN-EN LABORATORIES LTD.
SPECIALISTS IN MINERAL ENVIRONMENTS
705 WEST 15TH STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2
TELEX: 04-352828 PHONE:(604)980-5814 OR (604)988-4524

STATISTICAL SUMMARY ON ZN

COMPANY:HI-TEC RESOURCES
ATTN:GEORGE KING
PROJECT:87BC021
FILE#:

DATE:NOV 13/87
SAMPLE TYPE:SOIL
ANALYSIS TYPE:ICP

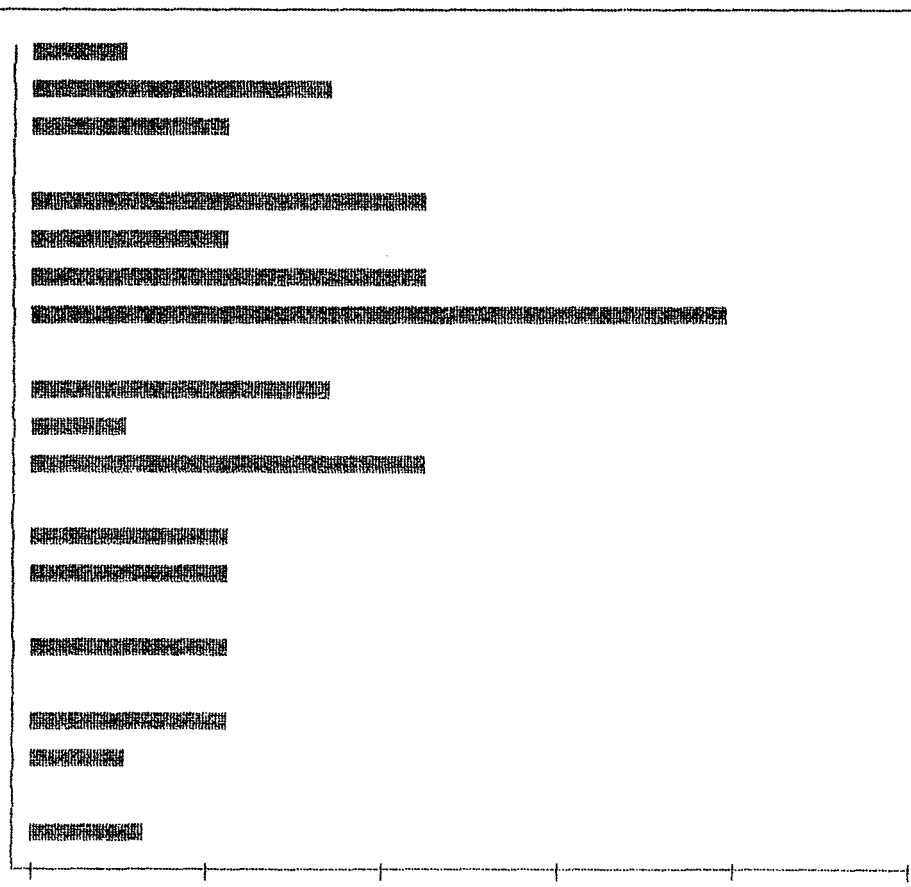
NUMBER OF SAMPLES:	41
MAXIMUM VALUE:	918.00 PPM
MINIMUM VALUE:	60.00 PPM
MEAN:	147.07 PPM
STD. DEVIATION:	130.97 PPM
COEFF. OF VARIATION:	.89

5 HIGHEST ZN VALUES:

87V6S 77	918 PPM
87V6S 69	227 PPM
87V6S 63	214 PPM
87V6S 74	208 PPM
87V6S 65	206 PPM

HISTOGRAM FOR ZN CLASS INTERVAL = 8.35

MID CLASS PPM	CLASS %
< 60.00	2.44
64.18	7.32
72.53	4.88
80.88	0.00
89.23	9.76
97.58	4.88
105.93	9.76
114.28	17.07
122.63	0.00
130.98	7.32
139.33	2.44
147.68	9.76
156.03	0.00
164.38	4.88
172.73	4.88
181.08	0.00
189.43	4.88
197.78	0.00
206.13	4.88
214.48	2.44
222.83	0.00
> 227.00	2.93



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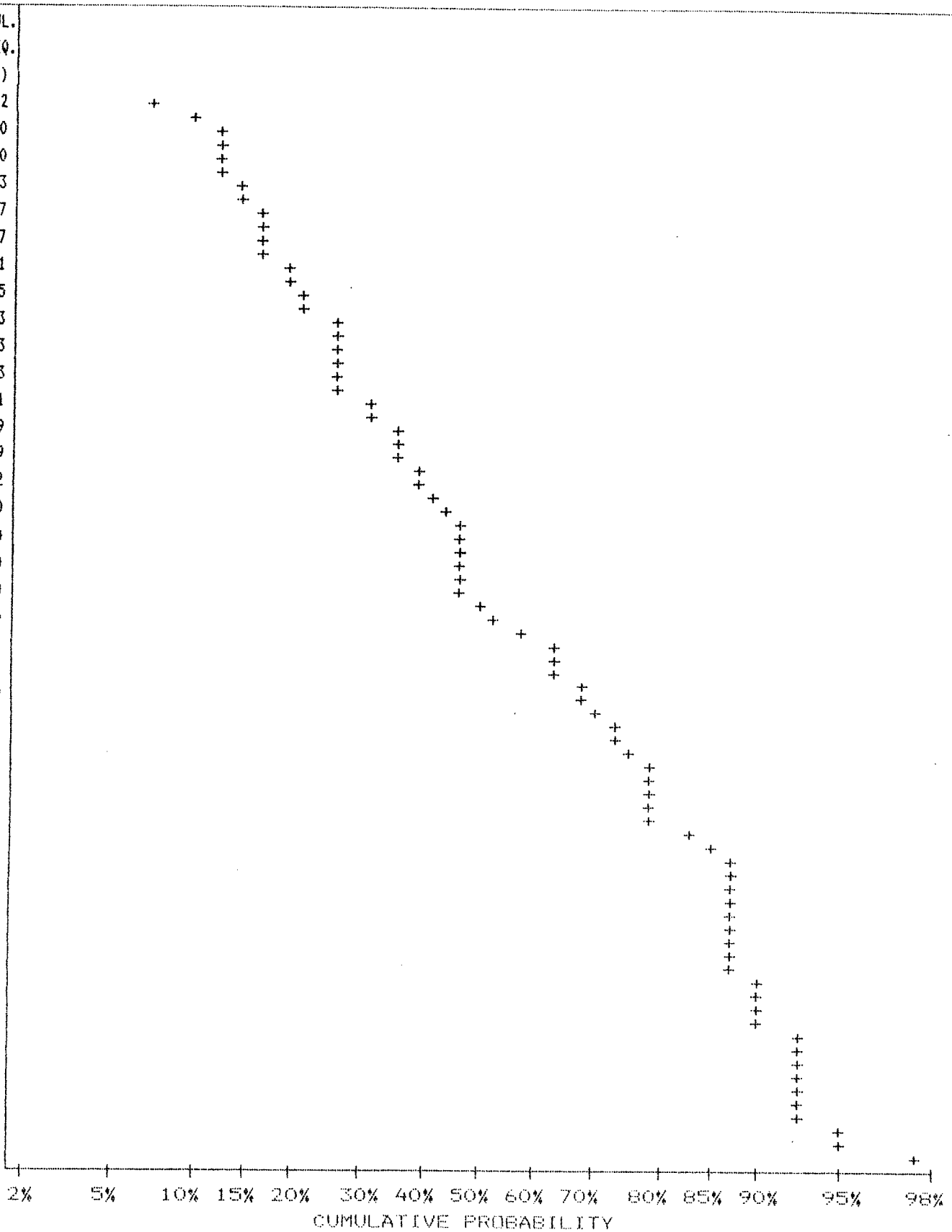
SPECIALISTS IN MINERAL ENVIRONMENTS
705 WEST 15TH STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2
TELEX: 04-352828 PHONE:(604)980-5814 OR (604)988-4524

CUMMULATIVE PROBABILITY PLOT ON ZN

COMPANY:HI-TEC RESOURCES
ATTN:GEORGE KING
PROJECT:87BC021
FILE#:

DATE:NOV 13/87
SAMPLE TYPE:SOIL
ANALYSIS TYPE:ICP

UPPER LIMIT (PPM)	CUMMUL. FREQ. (%)
210.96	7.32
204.24	12.20
197.76	12.20
191.52	14.63
185.40	17.07
179.52	17.07
173.82	19.51
168.30	21.95
162.96	26.83
157.80	26.83
152.82	26.83
147.96	31.71
143.28	36.59
138.72	36.59
134.34	39.02
130.08	43.90
125.94	46.34
121.92	46.34
118.08	46.34
114.30	53.66
110.70	63.41
107.16	63.41
103.80	68.29
100.50	73.17
97.32	75.61
94.20	78.05
91.26	78.05
88.32	82.93
85.56	87.80
82.80	87.80
80.22	87.80
77.64	87.80
75.18	87.80
72.78	90.24
70.50	90.24
68.28	92.68
66.12	92.68
64.02	92.68
61.98	95.12
60.00	97.56



MINTEN LABORATORIES LTD.

SPECIALISTS IN MINERAL ENVIRONMENTS

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

TELEX: 04-352828 PHONE:(604)980-5814 OR (604)988-4524

STATISTICAL SUMMARY ON AU

COMPANY:HI-TEC RESOURCES
ATTN:GEORGE KING
PROJECT:87BC021
FILE#:

DATE:NOV 13/87
SAMPLE TYPE:SOIL
ANALYSIS TYPE:ICP

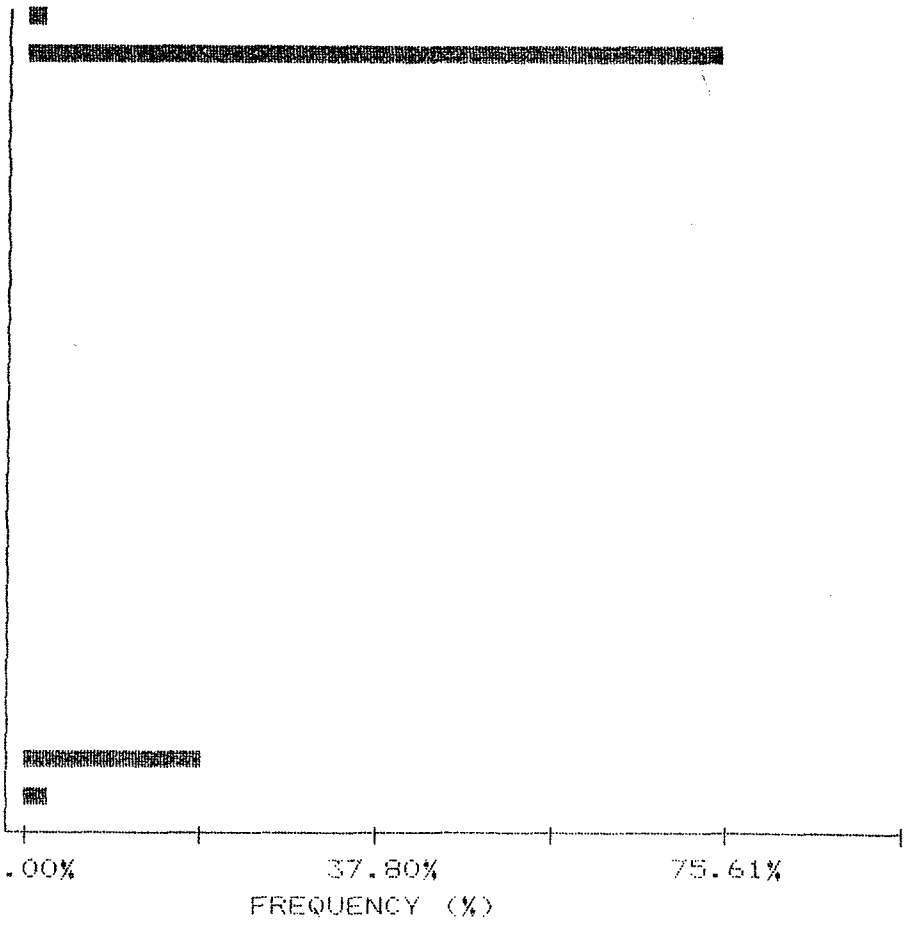
NUMBER OF SAMPLES:	41
MAXIMUM VALUE:	15.00 PPB
MINIMUM VALUE:	5.00 PPB
MEAN:	6.34 PPB
STD. DEVIATION:	2.51 PPB
COEFF. OF VARIATION:	.40

5 HIGHEST AU VALUES:

87V6S 65	15 PPB
87V6S 44	10 PPB
87V6S 50	10 PPB
87V6S 52	10 PPB
87V6S 56	10 PPB

HISTOGRAM FOR AU CLASS INTERVAL = .25

MID CLASS PPB	CLASS %
< 5.00	2.44
5.13	75.61
5.38	0.00
5.63	0.00
5.88	0.00
6.13	0.00
6.38	0.00
6.63	0.00
6.88	0.00
7.13	0.00
7.38	0.00
7.63	0.00
7.88	0.00
8.13	0.00
8.38	0.00
8.63	0.00
8.88	0.00
9.13	0.00
9.38	0.00
9.63	0.00
9.88	19.51
> 10.00	2.93



CHEMEX LABORATORIES LTD.

SPECIALISTS IN MINERAL ENVIRONMENTS

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

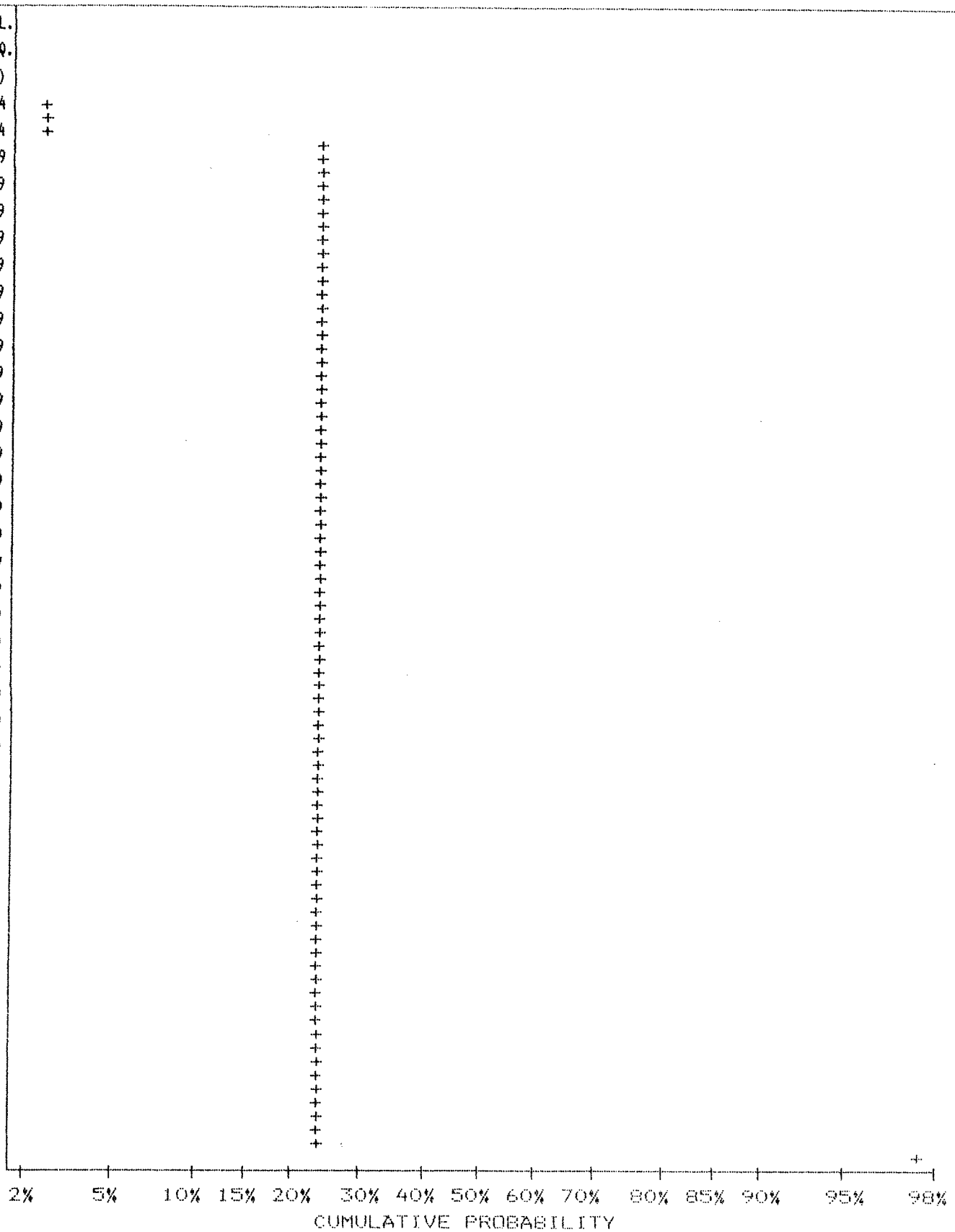
TELEX: 04-352828 PHONE:(604)980-5814 OR (604)988-4524

CUMMULATIVE PROBABILITY PLOT ON AU

COMPANY:HI-TEC RESOURCES
ATTN:GEORGE KING
PROJECT:87BC021
FILE#:

DATE:NOV 13/87
SAMPLE TYPE:SOIL
ANALYSIS TYPE:ICP

UPPER LIMIT (PPB)	CUMMUL. FREQ. (%)
10.25	2.44
10.07	2.44
9.89	24.39
9.70	24.39
9.52	24.39
9.36	24.39
9.18	24.39
9.02	24.39
8.85	24.39
8.69	24.39
8.53	24.39
8.38	24.39
8.22	24.39
8.07	24.39
7.93	24.39
7.78	24.39
7.64	24.39
7.50	24.39
7.36	24.39
7.22	24.39
7.10	24.39
6.96	24.39
6.84	24.39
6.71	24.39
6.59	24.39
6.47	24.39
6.36	24.39
6.23	24.39
6.13	24.39
6.01	24.39
5.90	24.39
5.79	24.39
5.69	24.39
5.58	24.39
5.48	24.39
5.38	24.39
5.28	24.39
5.19	24.39
5.10	24.39
5.00	97.56



APPENDIX V

Description of Rock Grab Samples

DESCRIPTION OF ROCK GRAB SAMPLES

VKR-1	Pyrite bearing argillite in close proximity to aplite dyke.
VKR-2	Small quartz-pyrite stringers in altered argillite.
VKR-4	Sample from contact between argillite and porphyritic, intermediate intrusive. Contains fine, disseminated pyrite.
VKR-6	Sample from contact between hornblende granodiorite and argillite. Minor pyrite associated with silica, epidote and calcite alteration.
VKR-7	Sample from a 5 to 10 cm wide fracture in hornblende syenite, which trends 124°, 82°NE. Contains abundant quartz with semi-massive pyrite and minor arsenopyrite.
VKR-8	Pyrite mineralized material from a sheeted quartz vein near distinctive porphyritic intrusive.
VKR-9	Quartz vein material from shear zone which trends 150°, 71°E. The host rock is hornblende granodiorite.
VKR-10	Pyrite rich quartz vein material from stockwork in altered hornblende diorite.
VKR-11	Pyrite bearing quartz vein in hornblende granodiorite (2 cm wide).
VKR-12	Sample from silicified zone at contact between intrusive and argillite
VKR-13	Siliceous, pyrite bearing argillite.
VKR-14	Siliceous, pyrite bearing argillite.
VKR-15	Siliceous, pyrite bearing argillite.
VKR-16	Pyrite from contact-altered argillite.
VKR-17	Chalcopyrite from quartz vein in limestone.
VKR-18	As above, with minor molybdenite.
VKR-19	As above.

VKR-20	Chalcopyrite, magnetite bearing skarn.
VKR-22	Pyritized quartz vein material float.
VKR-23	Sample from pyrite bearing quartz vein, and spatially related silicified zone.
VKR-25	Sample from 5 cm wide quartz vein, with strong sulfide (mainly pyrite) mineralization, in andesite.
VKR-26	Similar material to VKR-25; 7 cm wide vein.
VKR-27	Pyrite rich veinlet from fine grained, intermediate intrusive sample.
VKR-28	Pyrite mineralized contact zone between andesite and hornblende granodiorite.
VKR-29	Pyritiferous, strongly gossaned andesitic material (float).
VKR-30	Manganese stained, epidote bearing, skarn with pyrite $\pm$ galena.
VKR-31	Chalcopyrite bearing quartz vein from argillite (similar to VKR-17 to 19).
VKR-32	Sample from pyrite bearing, 1 cm wide quartz veinlet in greenish metasediment.
VKR-33	From oxidized zone in chilled margin of intrusive contact with green metasediments.
VKR-34	Pyrite rich intermediate volcanic material.
VKR-35	Pyrite bearing shear zone in metavolcanics.
VKR-36	Pyrite $\pm$ arsenopyrite from quartz, K-spar, epidote rich zone.
VKR-37	Arsenopyrite bearing quartz vein in andesitic volcanics.
VKR-38	Chalopyrite mineralization in andesitic volcanics.
VKR-39	Quartz vein material in andesitic volcanics.
VMR-6	o/c minor pyrite in argillite.
VMR-15	o/c altered intrusive/sed contact; siliceous pyrite, arsenopyrite.

VMR-16	o/c same as R-15
VMR-17	o/c same as R-15 with chalcopyrite
VMR-18	o/c vein material from above showing
VMR-19	o/c same as above.
VMR-21	o/c altered argillite with pyrite, Zn?
VMR-22	o/c same as R-21.
VMR-23	o/c altered argillite with pyrite, Zn?
VMR-24	o/c same as R-23.
VMR-25	o/c vein material, chip sample over 8"
VMR-26	o/c high grade grab, vein material
VMR-27	o/c disseminated pyrite, occasional Cu, calcareous argillite.
VMR-28	o/c intrusive contact with massive pyrite, chalco
VMR-29	o/c same as R-28, grab.
VMR-30	o/c high grade grab of R-29
VMR-31	o/c pyrite - arg.
VGR-1	outcrop, pyrite in bull quartz, especially good along contact.
VGR-2	outcrop, pyrite in quartz
VGR-3	outcrop, quartz vein (8" wide) good pyrite.
VGR-4	outcrop, marbled quartz with heavy pyrite
VGL-5	
VGR-6	outcrop, fine disseminated pyrite in intrusive
VGR-7	float, good pyrite in intrusive
VGL-8	
VGR-9	outcrop, pyrite in argillite
VGR-10	outcrop, disseminated pyrite, cubed pyrite in sediment rock

VGR-11	outcrop, disseminated pyrite in cherty rock and quartz stringers
VGR-12	outcrop, disseminated pyrite in argillite
VGR-13	outcrop, good disseminated pyrite in intrusive
VGR-15	outcrop, massive pyrite in argillite
VGR-16	outcrop, quartz vein or no. of stringers in argillite.
VGR-17	outcrop, argillite with good disseminated pyrite in large gossan
VGR-18	outcrop, argillite with disseminated pyrite.
VGR-20	Bleached argillite with pyrite. Outcrop.
VGR-21	Outcrop, pyrite in vein fill-argillite.
VGR-22	Subcrop, argillite with pyrite in quartz vein.
VGR-23	Siliceous argillite with pyrite. Outcrop.
VGR-24	Outcrop, argillite with disseminated pyrite.
VGR-25	Quartz, argillite with large no. of disseminated pyrite outcrop.
VGR-26	Outcrop, disseminated pyrite in siliceous argillite.
VGR-27	Outcrop, disseminated pyrite in siliceous argillite.
VGR-28	Outcrop, cpy in quartz stringer and argillite.
VGR-29	Outcrop, disseminated pyrite in argillite and quartz stringers.
VGR-30	Outcrop, good massive pyrite in quartz and argillite along fracture.
VGR-31	Float, pyrite in argillite and quartz veining.
VGR-32	Outcrop, pyrite in quartz cap and argillite.
VGR-33	Outcrop, quartz veinlets with pyrite and disseminated pyrite.
VGR-34	Float, argillite with disseminated pyrite and some massive pyrite.

VGR-35	Outcrop, argillite with pyrite banding and disseminated pyrite.
VGR-36	Outcrop, argillite and blended argillite with pyrite veinlets and fractures and diss.
VGR-37	Outcrop, quartz vein, some pyrite.
VGR-38	Outcrop, argillite with banded pyrite and a sample with large amount of magneite along fault.
VGR-39	Outcrop, argillite with nice bands of pyrite
VGR-40	Outcrop, argillite bleached in shear. Pyrite disseminated and fault fill. ____.
VGR-100	Outcrop, good pyrite in veinlets and massive and disseminated in volcanics.
VGR-101	Outcrop, disseminated pyrite in quartz stringers in volcanics.
VGR-103	Outcrop, massive pyrite in volcanics.
VGR-104	Outcrop, quartz vein (4-5 in. wide) with pyrite.
VGR-105	Outcrop, massive pyrite in quartz rock
VGR-106	Outcrop, volcanics with pyrite stringers and associated epidote.
VGR-107	Outcrop, pyrite in quartz veins and epidote.
VGR-108	Outcrop, quartz and argillite along fault, disseminated pyrite.
VGR-109	Outcrop, quartz, pyrite, arsenopyrite, epidote massive pyrite in volcanics.
VSR-5	o/c - orange wx, fractured argillite with small quartz veinlets and disseminated pyrite.
VSR-6	o/c - fract. and silic. argillite with 5% py-po and minor cp.
VSR-7	o/c as above
VSR-8	o/c - sheared argillite with small vuggy quartz veins.
VSR-9	o/c - bleached argillite with pyrite.

VSR-15 o/c - medium grained metasediment, mildly silic. with 1-2% pyrite.

VSR-16 o/c - metasediment with pyrite.

VSR-18 o/c - dark grey silic. argillite with minor pyrite disseminated and on fractures.

VSR-19 o/c - rusty wx argillite with fine grained disseminated pyrite.

VSR-20 o/c - 4 cm quartz vein with py-po in argillite.

VSR-22 o/c - 20 cm quartz vein in metasediment. Vein is vuggy and bx near margin. Contains 1-5% py, cp and mal-az. staining.

VSR-23 o/c - same location as 22. Sample of brecciated vein margin.

VSR-24 o/c - same location. Sample of argillite wall rock. No visible min.

VSR-25 o/c - siliceous zone 2-3 m wide no visible min.

VSR-26 o/c - siliceous argillite with pyrite and possible arsenopyrite.

VSR-27 o/c - rusty wx quartz vein and siliceous argillite 10-20 cm wide. Contains pyrite.

APPENDIX VI

Statement of Costs

STATEMENT OF COSTS

Vanstates Resources Ltd. - Project 87BC021

Personnel - Field Days			
A. Smallwood, Project Manager	12.5 days @ $250.00/day	$3,125.00	
G. King, Project Geologist	12.5 days @ $375.00/day	4,687.50	
J. McCaffrey, Prospector	12.5 days @ $250.00/day	3,125.00	
G. Mowatt, Technican	12.5 days @ $175.00/day	2,187.50	
G. Gormley, Cook	12.5 days @ $200.00/day	2,500.00	
			$15,625.00
Supervision			
J.P. Sorbara	2.0 days @ $400.00/day		800.00
Project Preparation			2,000.00
Mobilization/Demobilization			3,910.00
Geochemistry			
128 rocks	6 element ICP FA Au @ $14.25	$1,824.00	
69 soils	6 element ICP AA Au @ $ 9.90	683.00	
25 silts	6 element ICP FA Au @ $ 9.90	247.50	
52 pulps	Ag @ $ 6.00	312.00	
54 pulps	Cu, Pb, Zn @ $18.00	972.00	
Freight		125.00	
			4,163.50
Statistical Analysis			52.00
Camp Costs			
Food - 5 men x 12.5 days @ $ 25.00/day		$1,562.50	
Camp Rental 12.5 days @ $175.00/day		2,187.50	
Supplies, Fuel		1,100.00	
Freight		110.00	
Expediting and Communications		760.00	
Radio Rental		655.00	
			6,375.00
Air Support - Helicopter - 13.3 hours		$8,195.00	
- Fixed Wing		1,065.00	
			9,260.00
Office Overhead			1,165.00
Report Compilation and Drafting			4,000.00
Stand-by and Camp Days - 3 days @ $1,550.00/day			4,650.00
		TOTAL:	**$52,000.00**

IAN 6

IAN 8

ISKUT RIVER

ISKUT RIVER

GEOLOGICAL BRANCH
ASSESSMENT REPORT

17,149

LEGEND

A	felsic intrusive; granite, monzonite, syenite, etc.		shear zone
B	intermediate to mafic intrusive; diorite, etc.		fault
Aa	felsic dykes // Ap aplite		anticline
C	mafic dykes		syncline
6	rhyolite, dacite (felsic volcanics)		dip and strike
7	andesites, etc; intermediate mafic volcanics		
9	basalt		
2	limestone		
1	argillite, phyllite, siltstone, etc.		
1a	meta-argillites, etc.		
9	quartzite, arkose, etc.		
10	calc-silicate		

GEOLOGICAL BRANCH
ASSESSMENT REPORT

[redacted]

0 100 200 300 400 500
scale in metres

VANSTATES RESOURCES LTD.

IAN 6&8 CLAIMS
Liard Mining Division, B.C.

PROPERTY GEOLOGY

HI-TEC RESOURCE MANAGEMENT LIMITED	DWN. BY:	DATE: Nov. 87
	N.T.S. 104B/10W	FIGURE Nº. 4
	SCALE 1:5000	

IAN 6

IAN 8

Vanstates Soil Line

ISKUT RIVER

ISKUT RIVER

GEOLOGICAL BRANCH
ASSESSMENT REPORT
17,149

GEOLOGICAL BRANCH
ASSESSMENT REPORT
17,149

Vanstates Soil Line sample values

	Au	Ag		Au	Ag
GS41	5	1.3	GS61	5	0.6
	5	1.0		10	1.2
	5	0.8		5	1.4
	10	0.5		5	1.3
	5	1.3	GS65	15	1.1
GS46	5	0.7		5	0.7
	5	1.3		5	1.2
	5	1.0		5	0.8
	5	1.4		5	1.7
GS50	10	0.8	GS70	10	1.2
	5	1.5		5	1.9
	10	1.2		5	1.3
	5	1.3		10	1.9
	5	1.3		5	1.9
GS55	5	0.8	GS75	5	1.5
	10	1.2		5	1.8
	5	0.5		5	1.6
	5	0.8		10	1.6
	5	0.8		5	2.2
GS60	5	1.0		10	1.5
			GS81	5	1.6

GOLD(ppb)
@KR4 2/1.9
SILVER(ppm)

⊕ rock sample

○ soil sample

□ silt sample

⊞ pan sample

0 100 200 300 400 500
scale in metres

VANSTATES RESOURCES LTD.

IAN 6 & 8 CLAIMS

Liard Mining Division, B.C.

GEOCHEMISTRY

Gold (ppb) & Silver (ppm)

HI-TEC RESOURCE MANAGEMENT LIMITED	DWN. BY:	DATE Nov. 87
	N.T.S. 104B/10W	FIGURE NR. 5
	SCALE 1:5000	

IAN 6

IAN 8

Vanstates Soil Line

ISKUT RIVER

ISKUT RIVER

GEOLOGICAL BRANCH
ASSESSMENT REPORT

17,149

Vanstates Soil Line sample values

	As	Sb
GS41	4	5
	15	6
	9	5
	7	2
	20	4
GS46	25	5
	5	5
	19	4
	17	8
GS50	3	5
	6	8
	17	6
	21	4
	8	7
GS55	1	5
	25	6
	6	4
	36	5
	4	5
GS60	7	5

	As	Sb
GS61	14	5
	18	6
	12	8
	27	6
GS65	1	4
	1	4
	10	6
	9	8
	22	9
GS70	16	6
	11	6
	12	4
	48	7
	14	8
GS75	51	7
	9	6
	23	8
	16	9
	6	8
	22	6
GS81	13	7

⊕KR4 7,3 — ARSENIC(ppm) / ANTIMONY(ppm)

⊕ rock sample

○ soil sample

□ silt sample

⊞ pan sample

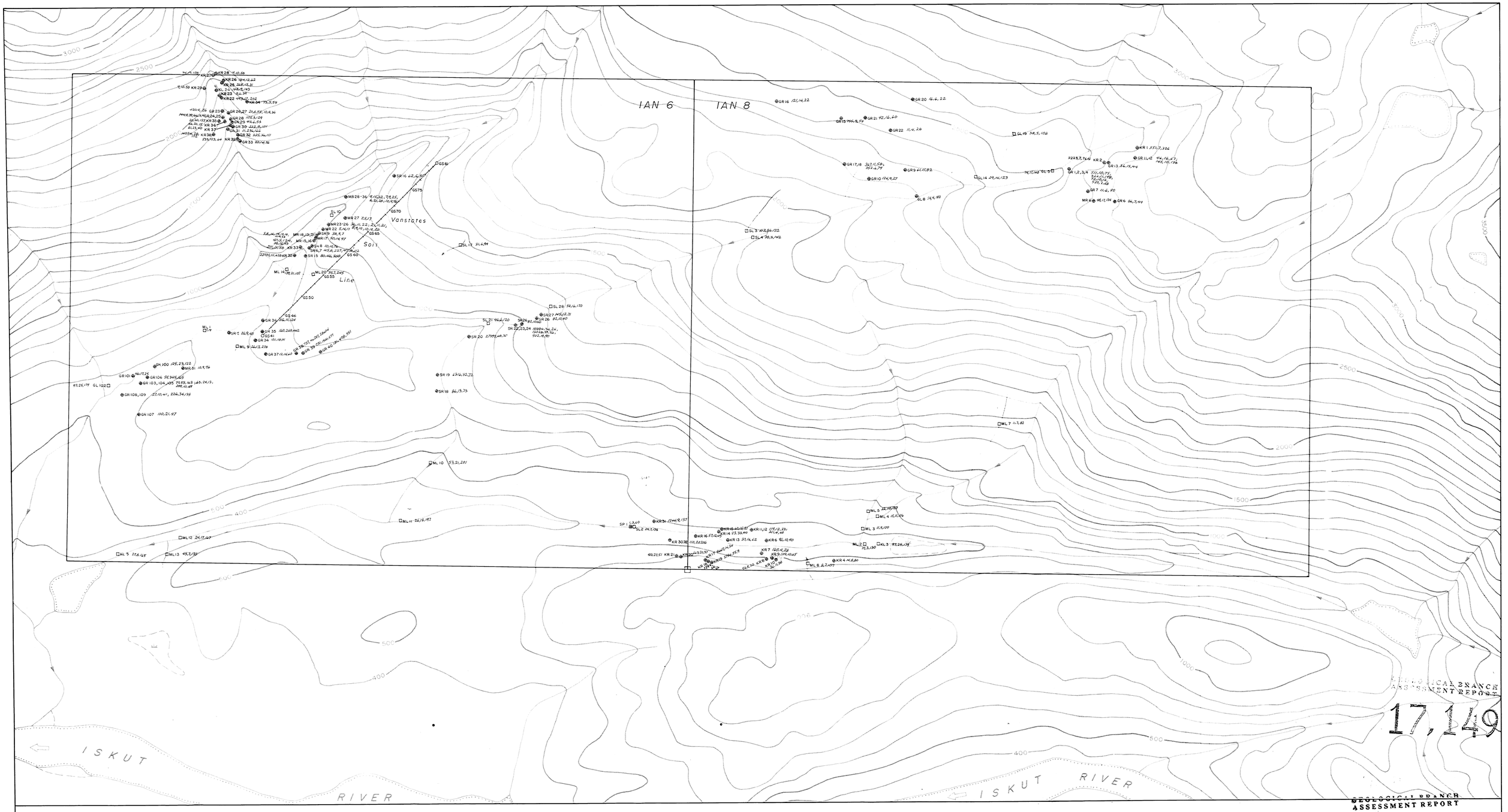
0 100 200 300 400 500
scale in metres

VANSTATES RESOURCES LTD.

IAN 6&8 CLAIMS
Liard Mining Division, B.C.

GEOCHEMISTRY
Arsenic (ppm) & Antimony (ppm)

HI-TEC RESOURCE MANAGEMENT LIMITED	DWN. BY	DATE Nov. 87
	N.T.S. 104B/10W.	FIGURE Nº 6
	SCALE 1:5000	



Vanstates Soil Line sample values

	Cu	Pb	Zn		Cu	Pb	Zn
GS 41	23	10	89	GS 61	27	5	131
	32	12	106		19	13	148
	22	8	60		32	18	214
	27	15	60		12	17	98
	18	13	103	GS 65	28	9	206
GS 46	18	15	70		20	9	102
	20	20	89		14	14	115
	23	11	111		18	11	145
	14	13	111		20	22	227
GS 50	15	8	42	GS 70	20	18	118
	14	13	148		20	24	170
	20	15	88		16	3	106
	18	11	86		18	6	75
	14	20	143		20	16	208
GS 55	18	6	114	GS 75	16	9	128
	14	6	187		18	5	192
	17	12	96		146	208	918
	17	19	165		23	7	145
	20	13	174		17	13	117
GS 60	17	11	114		21	11	138
				GS 81	33	24	133

COPPER (ppm)
KR 4 14,9,80 ZINC (ppm)
LEAD (ppm)

- ⊕ rock sample
- ○ soil sample
- □ silt sample
- ⊞ pan sample

GEOLOGICAL BRANCH
ASSESSMENT REPORT

17,149

GEOLOGICAL BRANCH
ASSESSMENT REPORT

0 100 200 300 400 500
scale in metres

VANSTATES RESOURCES LTD.

IAN 6 & 8 CLAIMS

Liard Mining Division, B.C.

GEOCHEMISTRY

Copper (ppm), Lead (ppm) & Zinc (ppm)

HI-TEC RESOURCE MANAGEMENT LIMITED	DWN. BY	DATE Nov. 87
	N.T.S. 104B/10W	FIGURE NR. 7
	SCALE 1:5000	