ARIS SUMMARY SHEET

District Geologist, Smithers Off Confidential: 89.06.10

ASSESSMENT REPORT 17513 MINING DIVISION: Atlin

PROPERTY: Mount Eaton
LOCATION: LAT 58 47 04 LONG 133 33 13
UTM 08 6516743 583616
NTS 104K13E
CLAIM(S): Goat 1-2,Canyon,Bear
OPERATOR(S): Tymar Management
AUTHOR(S): Mark, D.G.
REPORT YEAR: 1987, 23 Pages
GEOLOGICAL SUMMARY: The northeastern two-thirds of the property is underlain by Upper Cretaceous Coast Plutonic Complex quartz monzonite. Bordering the quartz monzonite to the southwest is a pre-Upper Triassic group of sediments and intercalated volcanics that are mostly altered. The southwestern corner of the property is within the Upper Triassic Stuhini Group of volcanics consisting of andesitic to basaltic flows and a variety of sedimentary rocks.
WORK DONE: Geophysical
EMAB 127.5 km;VLF
MAGA 127.5 km
Map(s) - 1; Scale(s) - 1:10 000
MFILE: 104K 055

GEOPHYSICAL REPORT

ON

AIRBORNE MAGNETIC AND VLF-EM SURVEYS

OVER THE

GOAT 1, 2, CANYON AND BEAR CLAIMS

SHAZAH CREEK, TULSEQUAH AREA

ATLIN MINING DIVISION, BRITISH COLUMBIA

PROPERTY : On Mount Eaton 13.2 km N05°W of Tulsequah

: 58° 51' North Latitude
: 133° 34' West Longitude
: NTS - 104K/13

WRITTEN FOR : MEGA STAR VENTURES LTD. AND RUSTY RESOURCES LTD.
#803-470 Granville Street
Vancouver, B.C., V6C 1V5

SURVEYED BY : COLUMBIA AIRBORNE GEOPHYSICAL SERVICES (1984) LTD.
#1016-470 Granville Street
Vancouver, B.C. V6C 1V5

WRITTEN BY : David G. Mark, Geophysicist
GEOTRONICS SURVEYS LTD.
#530-800 West Pender Street
Vancouver, B.C., V6C 2V6

DATED : October 30, 1987

GEOTRONICS SURVEYS LTD.
Engineering & Mining Geophysicists
VANCOUVER, CANADA

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SUMMARY

Airborne magnetic and VLF-EM surveys were carried out over the Mount Eaton property owned by Mega Star Ventures and Kristy Resources both of Vancouver, B.C. on Sept. 6 1987. The center of the property is located 13.2 km N05°W of the Tulsequah, B.C. Access is best by helicopter out of Atlin. The terrain consists of steep to precipitous slopes with much of the property above timberline and some of it covered by ice. The purpose of the surveys was to aid in the mapping of geology as well as to locate probable areas for exploration of gold mineralization.

The northeastern two-thirds of the property is underlain by Coast Plutonic quartz monzonite of Cretaceous and Early Teriary age. Bordering the quartz monzonite to the southwest is a Pre-upper Triassic group of sediments and intercalated volcanics that are mostly altered. The southwestern corner of the property is within the Upper Triassic Stuhini group of volcanics; underlain by andesitic to basaltic flows and a variety of sedimentary rocks. Apparently mineralization occurs on the property but to date it hasn't been located.

The airborne surveys over the property were flown at about a 50-meter terrain clearance on contour lines with a separation averaging 50 meters. The instruments used were a Sabre Electronics proton precession magnetometer and a Sabre Electronics VLF-EM receiver. The magnetic data were picked from the strip charts and hand contoured. The contours were drawn on a survey plan on which the VLF-EM anomalies were plotted as well.

CONCLUSIONS

1. The magnetic survey over the Mount Eaton property has mapped the three rock units that occur on the property since each has a distinct magnetic signature.

2. The VLF-EM survey has revealed several conductors, labelled 'a' to 'f', some of which are closely associated with magnetic lows and thus indicate geological structure such as faults or shear zones that may host sulphides.

3. The geophysical surveys revealed lineations that may be reflecting geological structure.

RECOMMENDATIONS

1. The VLF-EM conductors labelled 'a' to 'f' should be located on the ground by VLF-EM surveying. Local grids should be established and follow-up work should include soil sampling, magnetic surveying and geological mapping. (It is understood this recommendation has been partly done).

2. Carry out prospecting and geological mapping at a scale of 1:10,000.

3. Conduct heavy mineral concentrate and silt sampling at 500-m intervals of all drainages on the property. Visually inspect and fire assay the concentrates for gold and analyse for silver, lead, zinc and copper.

4. Carry out a 'B' horizon soil sampling in areas of interest determined from steps 1 to 4. Analyse these samples for gold, silver, copper, lead and zinc, re-analysing the anomalous zones for gold and silver.

If positive results are obtained, then further work may include trenching (if possible), MaxMin EM, induced polarization and finally diamond drilling.

GEOPHYSICAL REPORT

ON

AIRBORNE MAGNETIC AND VLF-EM SURVEYS

OVER THE

GOAT 1, 2, CANYON AND BEAR CLAIMS

SHAZAH CREEK, TULSEQUAH AREA

ATLIN MINING DIVISION, BRITISH COLUMBIA

INTRODUCTION AND GENERAL REMARKS

This report discusses the survey procedure, compilation of data and the interpretation of low-level airborne magnetic and VLF-EM surveys carried out over the Mount Eaton property within the Tulsequah area on Sept. 6th, 1987. The surveys were carried out by Lloyd Brewer, instrument operator and project manager, and D.A. Aaron, navigator, both of whom are of Columbia Airborne Geophysical Services (1984) Ltd. A total of 127.5 line km of airborne surveys were done over the property.

The object of the two surveys was to aid in the geological mapping of lithology and structure for the purpose of exploration of the type of gold mineralization as is found in the Tulsequah area. Magnetic surveys have especially been proven to be a good geological mapping tool. It is also expected that the VLF-EM may respond directly to mineralization.

PROPERTY AND OWNERSHIP

The property consists of four claims containing 66 units as shown in Fig. 2 and as described below:

Claim Name	No. Units	Record No.	Expiry Date
Goat 1	18	2983	June 29, 1988
Goat 2	18	2984	June 29, 1988
Bear	15	2956	June 12, 1988
Canyon	15	2958	June 12, 1988
	66		

The expiry dates shown do not take into account the surveys under discussion as being accepted for assessment credits.

The Goat 1 and 2 claims are owned by Mega Star Ventures Ltd., and the Canyon and Bear claims are owned by Kristy Resources Ltd. Both companies are of Vancouver, B.C.

LOCATION AND ACCESS

The southern border of the property is located 13.2 km N05°W of Tulsequah, B.C. Most of the property occurs on the northern part of Mount Eaton. Shazah Creek flows southwesterly through the northern part.

The geographical coordinates for the center are 58° 51' north latitude and 133° 34' west longitude.

Access to the property is best gained by helicopter out of Atlin, which is a village located 87 km almost due north.

PHYSIOGRAPHY

The property is located within the Boundary Ranges which is a physiographic division of the Coast Mountains. The terrain varies from steep to precipitous over most of the property and is moderate along the valley bottoms.

Elevations vary from 140 meters a.s.l. on Shazah Creek on the western edge of the property, to 1,680 meters a.s.l. within the southwestern corner of the Goat 2 claim, to give a relief of 1,540 meters.

The property is mainly drained by the southwesterly-flowing Shazah Creek and one of its major tributaries, a creek which flows northwesterly.

Timberline occurs at about the 800 m level and therefore about half of the property is forested and the other half is alpine. Below the timberline along the valleys, it is heavily forested with fir, cedar and spruce. The underbrush is dense.

HISTORY

The writer is unaware of any previous work being done on the property. However, ground magnetic, VLF-EM and geological mapping was done immediately after the airborne survey.

GEOLOGY

The geological description of the property is taken from the G.S.C. mapping of the area by Souther.

The general trend of the rock units within the regional area is northesterly.

The oldest rocks on the property are a Pre-upper Triassic group of fine-grained, clastic sediments and intercalated volcanic rocks, largely altered to greenstone and phyllite. Other rocks are chert, jasper, graywacke, and limestone. This group is two km wide and trends northwesterly through the southern portion of the property. In the general area, some mineral occurrences are found in this group.

The next oldest is the Upper Triassic Stuhini group which borders the group mentioned above to the southwest and occurs within the southwestern corner of the property. This group consists mainly of volcanic rocks being andesite and basalt flows, pillow lava, volcanic breccia and agglomerate as well as lapilli tuff. Other rocks are minor volcanic sandstone, greywacke and siltstone. The Stuhini group is the favoured host-rock in the area since it hosts most of the main mineral deposits.

The northeastern two-thirds of the property is covered by a medium- to coarse-grained, pink, biotite-hornblende, quartz monzonite of the Coast Plutonic rocks of Cretaceous and Early Tertiary age. Some economic mineralization, more notably to the south, occur within this group.

Apparently some mineralization (type?) has been found on the property by early prospectors, but the present owners have yet to locate it.

Three former-producing mines occur in fairly close proximity to the property. These are (1) the Polaris-Taku which occurs six km to the south-southwest, (2) the Tulsequah Chief which occurs 2.5 km to the south, and (3) the Big Bull which occurs ten km to the south.

A brief description of the three mines by Souther is as follows:

1. Polaris Taku Mine:

"The Polaris Taku mine was in operation from 1937 until 1951 with the exception of the war years, 1942 to 1946, when production was suspended. It is a gold property, the gold occurring in fine needles of arsenopyrite disseminated in a fault-bounded wedge of Stuhini volcanic rocks. The deposits are shear zones containing numerous replacement veins adjacent to which the wall-rock is carbonatized and locally albitized."

2. Tulsequah Chief Mine

"The Tulsequah Chief mine was operated by the Consolidated Mining and Smelting Company of Canada Limited from 1951 until 1957. The ore deposits occupy shear zones in altered Stuhini volcanic rocks. The alteration is associated with large felsic dykes and northeasterly trending faults. Ore minerals consist of massive, fine-grained, pyrite and chalcopyrite in lenses, and sphalerite, pyrite, and galena in a dense quartz-carbonite-barite gangue. Metals produced were copper, lead, zinc, gold, silver, and cadmium."

3. Big Bull Mine

"The Big Bull mine was operated during the same period as the Tulsequah Chief, and ore from both mines was concentrated at the same mill. Mineralization at the Big Bull is similar to that of the Tulsequah Chief, comprising mixed sulphide replacement of sheared and highly altered Stuhini volcanic rocks. As at the Tulsequah Chief the alteration is related to dykes and northerly trending faults."

INSTRUMENTATION AND THEORY

A. Magnetic Survey

The magnetic data are detected using a nuclear free precession proton magnetometer, manufactured by Sabre Electronic Instruments Ltd. of Burnaby, B.C. The magnetometer measures the total count of the earth's magnetic field intensity with a sen-

sitivity of one gamma. The data are recorded on magnetic tape and 12 cm analog strip chart.

The magnetic patterns obtained from a regional airborne survey are directly related to the distribution of magnetite in the survey area. However, the geology cannot be deduced from isomagnetic maps by simply assuming that all magnetic highs are underlain by gabbro or ultramafic rocks, and that all magnetic lows are caused by limestone or chert. The problem with such a simplistic approach is that magnetite is not uniformly distributed in any type of rock. Other problems arise from the fact that most geologic terrains have rocks of high susceptibility superimposed on less 'magnetic' rocks, and vice versa. Cultural features such as powerlines, pipelines and railways also complicate matters. So many variables can be involved that it may be impossible to make a strictly accurate analysis of the geology of an area from magnetic data alone. It is preferable to use other information such as geological, photogeological and electromagnetic in combination with magnetic data to obtain a more accurate geological analysis.

B. VLF-EM Survey

A two-frequency omni-directional receiver unit, manufactured by Sabre Electronic Instruments Ltd., of Burnaby, B.C., was used for the VLF-EM survey. The transmitters used are NLK Arlington (Seattle), Washington, operating on 24.8 KHz, and Annapolis, Maryland, transmitting at 21.4 KHz. These signals are used due to their ideal orientation with respect to easterly and northwesterly geological structures, and their good signal strengths.

The VLF (Very Low Frequency) method uses powerful radio transmitters set up in various parts of the world for military communications. These powerful transmitters can induce electric

currents in conductive bodies thousands of kilometers away from the radio source. The induced currents set up secondary magnetic fields which can be detected at surface through deviations in the normal VLF field. The VLF method is inexpensive and can be a useful initial tool for mapping structure and prospecting. Successful use of the VLF requires that the strike of the conductor be in the direction of the transmitting station so that the lines of magnetic field from the transmitter cut the conductor. Thus, conductors with northeasterly to southeasterly strikes should respond to Annapolis transmissions, while conductors with northwesterly to southerly strikes should respond to Seattle transmissions. Some conductors will respond to both stations, giving coincident field strength peaks.

It is impossible to determine the quality of conductors with any reliability, using field strength data alone. The question of linearity is in doubt if the conductor does not appear to cross the adjacent flight lines. The relatively high frequency results in a multitude of anomalies from unwanted sources such as swamps, creeks and cultural debris. However, the same characteristic also results in the detection of poor conductors such as faults, shear zones, and rock contacts, making the VLF-EM a powerful mapping tool.

The interpretive technique requires information from magnetic surveys, air photo analyses, and ground traverses to aid in discrimination between important and unwanted anomalies. Even armed with this information the interpreter can easily be misled.

SURVEY PROCEDURE

A two-meter bird was fitted with a magnetometer coil and two omni-directional EM receivers and towed beneath the helicopter on a 10-meter cable. The terrain clearance for the bird was 50 meters.

The survey was straight-line flown (east-west) with a line spacing of 50 meters. Navigation was visual, using 1:50,000 scale maps blown up to 1:10,000.

The aircraft used to conduct this survey was a Bell 206B Jet Ranger helicopter operated by Capital Helicopters Inc. Airspeed was a constant 60 KPH so that creek valleys and canyons were penetrated thoroughly. The slow airspeed provided safety, detailed coverage of boxed-in areas, and consistency of data retrieval, which is critical in rugged terrain, such as within this survey.

The number of line km flown on the property as shown on Fig. 3 is 127.5.

The project supervisor, Mr. L. Brewer, has over 7 years of experience in conducting aerial magnetic and electromagnetic surveys from rotary-wing aircraft, under all types of terrain conditions.

DATA REDUCTION AND COMPILATION

The observed magnetic total field was recorded on analogue strip charts. These were played-back together with audio recordings containing fiducial markers, and the fiducial markers were transferred to the strip charts. The fiducial markers were identified with topographic features along the flight lines.

The magnetic data were taken from the strip charts and plotted at a scale of 1:10,000 (1 cm = 100 m) onto Fig. 3. The data were then contoured at a 100-gamma interval. The background is 55,900 gammas so that a 1500-gamma contour reads 57,400 gammas.

The VLF-EM survey measured the field strength. The resulting anomalies were taken from the strip charts and plotted on the sheet with the magnetics. A distinction has been made on the map between weaker and stronger anomalies.

DISCUSSION OF RESULTS

A. Magnetics

The magnetic field over the property varies from a low of 200 (56,100) gammas to a high of 1,900 (57,800) gammas to give a range of 1,700 gammas. The general trend of the magnetic field is northwesterly which is as expected since it is the same as that of the lithology.

The magnetic survey has mapped each of the three rock groups described under geology. Each has their own distinct magnetic signature. As a result, the magnetic survey has mapped the three groups similar to the G.S.C. map (Souther) but probably more accurately.

The quartz monzonite occurs on the northeastern half of the property. It's southwestern contact appears to be delineated approximately by the 800-gamma contour. The probable contact as delineated by the magnetics is drawn on map 3. The quartz monzonite is characterized by a magnetic signature that is fairly quiet with a field varying from less than 600 to 800 gammas. However, on the two northeastern corners of the property, the

magnetic field is above 900 and 1,000 gammas, respectively. This may simply be a result of a more magnetic phase of the quartz monzonite. Or, perhaps the underlying rock-type may be volcanics of the Pre-upper Triassic age group.

The Pre-upper Triassic sedimentary and volcanic rock group occurs to the southwest of the quartz monzonite and is characterized by a magnetic field that for the most part varies from less than 800 gammas to more than 1,200 gammas and is moderately noisy. This suggests that the underlying rock-types are principally volcanics.

The southwestern corner of the property is underlain by volcanics of the Stuhini group. The magnetic field of this group is the noisiest of the three and by and large varies from 1,000 to 1,900 gammas. This same type of magnetic response occurs on the northwestern edge of the survey area suggesting it to be underlain by Stuhini volcanics as well. Two other small areas to the southeast as marked on the map could also be underlain by Stuhini volcanics.

Magnetic lows often occur along creek valleys, and/or areas of low topography. The reasons for this are as follows:

1. Valleys almost always contain deeper overburden which means the detecting element is further from the bedrock causing the magnetic field.

2. If the survey is flown across the valley or gulley, then the detecting element is also further from the bedrock.

3. Gulleys and valleys are often caused by faults or shear zones which are often reflected by magnetic lows.

B. VLF-EM

The major cause of VLF-EM anomalies, as a rule, are geologic structure such as fault, shear and breccia zones. It is therefore logical to interpret VLF-EM anomalies to likely be caused by these structural zones. Of course, sulphides may also be a causative source. But in the writer's experience, when VLF-EM anomalies correlate with sulphide mineralization, the anomalies are usually reflecting the structure associated with the mineralization rather than the mineralization itself.

There is some variation in intensity from one VLF-EM anomaly to the next. This is not only due to the conductivity of a causative source, but also the direction it strikes relative to the direction to the transmitter. In other words, those conductors lying close to the same direction as the direction to the transmitter can be picked up easier than those that are lying at a greater angle. Depending upon its conductivity, a conductor may not be picked up at all if it is at too great an angle.

The more prominent conductors have been labelled by the lower case letters 'a' to 'f', inclusive.

Conductor 'a' occurs within the central part of the survey area striking in a northeast direction. It occurs mostly within the quartz monzonite but may cross the contact into the Pre-upper Triassic sediments and volcanics. It is about 650 m long and is of medium strength. It correlates directly with a lineal magnetic low and a northeasterly flowing creek suggesting the causative source, which could be a mineral zone, is structure related.

Conductor 'b' is at least 900 m long, strikes northerly, is of medium strength and occurs within the quartz monzonite as well.

This conductor also correlates with a magnetic low, though not a lineal one as 'a' does, and a creek, therefore also suggesting the causative source is structure related.

Conductor 'c' occurs within the southern corner of the property, is 450 m long, strikes east-west, and is of medium strength. It occurs on or close to the contact between the Stuhini group volcanics to the southwest and the Pre-upper Triassic sediments and volanics to the northeast. This conductor also correlates with a creek.

Conductors 'd' and 'e' are two parallel conductors with a minimum length of 300 m, striking northeasterly and with a minimum strength of 300 m. The geological map shows the underlying rock to be quartz monzonite but the magnetics suggest it may be volcanics of the Pre-upper Triassic group.

Anomaly 'f' occurs to the east of 'b', is at least 300 m long, strikes northeasterly and is of weak to medium strength. The magnetics suggest 'f' may occur on a contact between the quartz monzonite and volcanics of the Pre-upper Triassic group.

Along with these mapped conductors are a number of smaller, one-line conductors of medium and strong VLF-EM responses. These could be reflecting narrow shear zones, or quite possibly mineralization but because they lack structural identity, it is difficult to speculate on their causative sources.

C. Lineations

Lineal trends considered to be indicative of geological structure have been drawn on Fig. 3 taking into account:

a) Magnetic lows which are often caused by the magnetite within the rocks being altered by geological structure processes.

b) VLF-EM anomalies which more often than not are reflecting structure.

c) Topographic depressions such as creek valleys which are usually caused by structure.

Several lineations that are indicative of faults and contacts have been mapped across the property striking in different directions. Most of them occur within the Stuhini group or the Pre-upper Triassic group. Some or parts of the lineations in other areas have been known to correlate directly with lithologic contacts and shear zones.

The lineations cross each other on the property in different areas. Structure is often important for the emplacement of mineralizing fluid especially where lineations intersect. Thus these areas may have greater exploration interest.

Respectfully submitted,
GEOTRONICS SURVEYS LTD.

David G. Mark,
Geophysicist

October 30, 1987
42/G408

REFERENCES

Souther, J.G., Geology and Mineral Deposits of Tulsequah Map Area, B.C., Geological Survey of Canada, Memoir 362, 1971

GEOPHYSICIST'S CERTIFICATE

I, DAVID G. MARK, of the City of Vancouver, in the Province of British Columbia, do hereby certify:

That I am a Consulting Geophysicist of Geotronics Surveys Ltd., with offices located at #530-800 West Pender Street, Vancouver, British Columbia.

I further certify:

1. That I am a graduate of the University of British Columbia (1968) and hold a B.Sc. degree in Geophysics.

2. I have been practising my profession for the past 19 years and have been active in the mining industry for the past 22 years.

3. That I am an active member of the Society of Exploration Geophysicists and a member of the European Association for Exploration Geophysicists.

4. This report is compiled from data obtained from airborne magnetic and VLF-EM surveys carried out by Columbia Airborne Geophysical Services (1984) Ltd., under the supervision of L. Brewer on Sept. 6th, 1987.

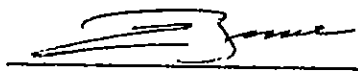
5. I have no direct or indirect interest in the properties mentioned within this report, nor in Mega Star Ventures Ltd. or Kristy Resources Ltd., nor do I expect to receive any interest as a result of writing this report.

David G. Mark
Geophysicist

October 30, 1987
42/G408

AFFIDAVIT OF COSTS

I, Lloyd Brewer, president of Columbia Airborne Geophysical Services (1984) Ltd., certify that the airborne magnetic and VLF-EM surveys were flown on Sept. 6th, 1987, and that they were flown at a cost of $120/km. The total number of km on the Mt. Eaton property was 127.5 and thus the cost was $15,300.00



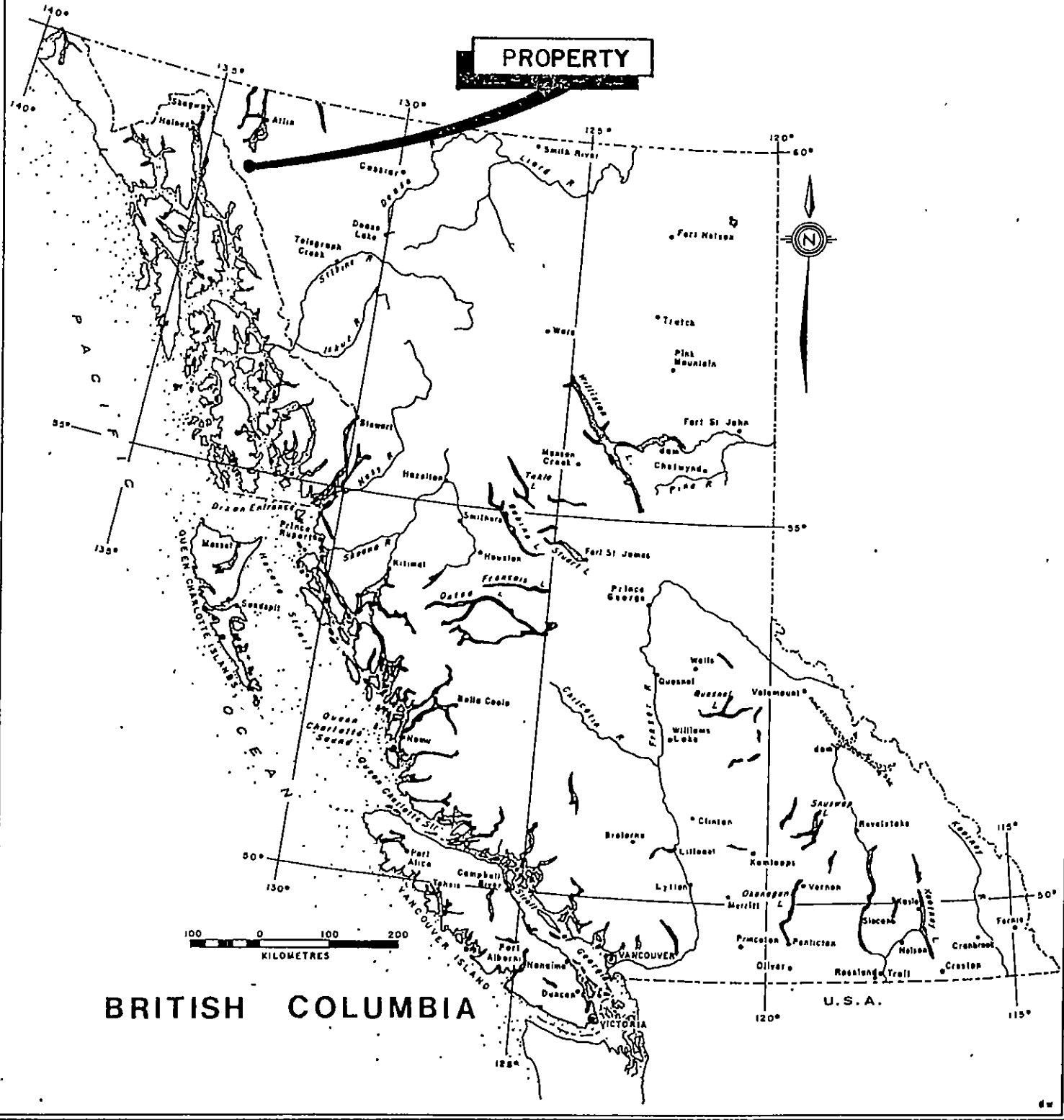
Lloyd Brewer

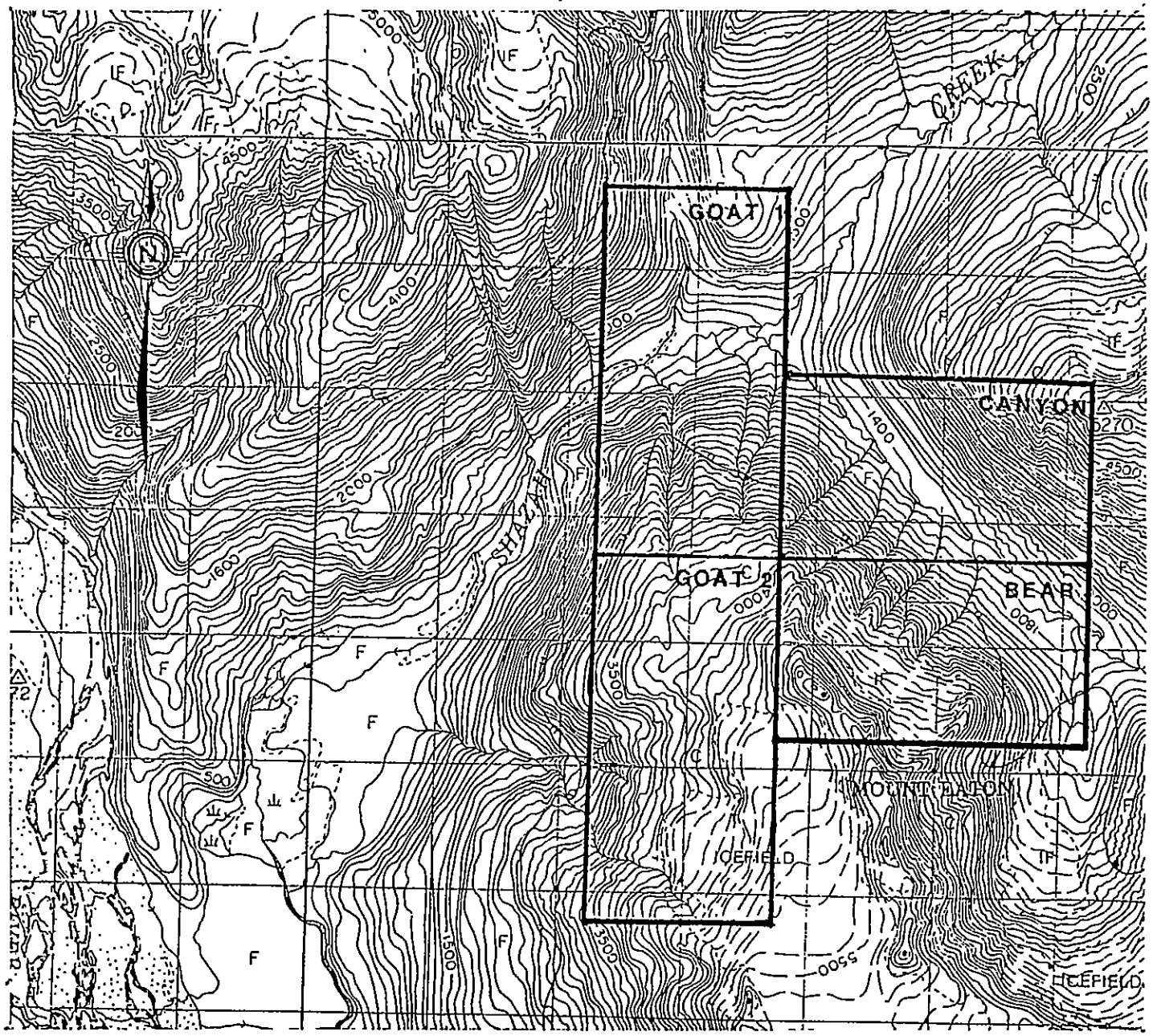
October 20, 1987

MEGASTAR VENTURES LTD. & KRISTY RESOURCE LTD.

GOAT, CANYON & BEAR PROPERTIS — SHAZAH CREEK, ATLIN M.D., B.C.

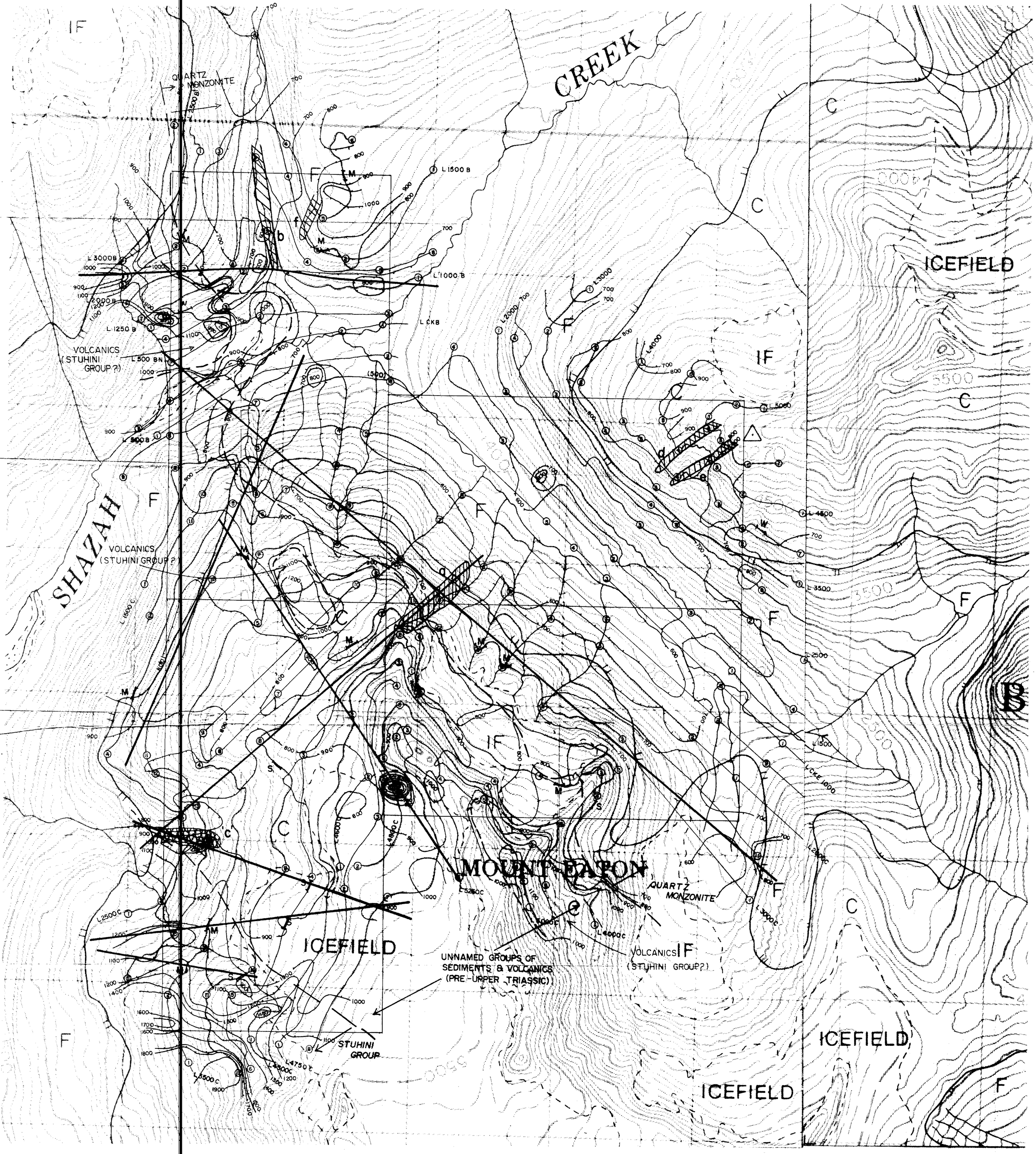
LOCATION MAP





500 0 500 1km 2 km

MEGA STAR VENTURES LTD. & KRISTY RESOURCES LTD.		
CANYON, BEAR & GOAT CLAIMS SHAZAH CREEK, ATLIN M.D., B.C.		
CLAIM LOCATION MAP		
SCALE 1:50 000	NTS 104 K 13	
DATE SEPT 1987	FIG 2	



GEOPHYSICAL INTERPRETATION

W, M, S — Single line Conductors, Weak, Medium & Strong.

Medium Conductor

Strong Conductor

Geological Boundaries Defined By Airborne

Lineation produced from magnetic and EM results suggesting geological structure.

MAGNETIC BASE 55,900 gamma

MAGNETIC CONTOURS

100 gamma

Magnetic Depression

VLF – EM TRANSMITTER DIRECTION

ANNAPOLIS 21.4 KHz

SEATTLE 24.8 KHz

LEGEND

Claim Boundary

Flight line

0 100 500 1 Km

METERS

GEOLOGICAL BRANCH
ASSESSMENT REPORT

17,513

To Accompany Report of Fred Holzl & Mark, Geophysicists

MEGASTAR VENTURES LTD.
KRISTY RESOURCES LTD.

CANYON, BEAR & GOAT CLAIMS

SHAZAH CREEK, ATLIN M.D., B.C.

AIRBORNE MAGNETOMETER & VLF-EM SURVEY

COLUMBIA AIRBORNE GEOPHYSICAL LTD.

DATE: SEPTEMBER 1987	SCALE: 1: 10,000	FIG.
N.T.S. 104 K 13	DRAWN D.A.	3