



TRANSMITTAL FORM

M.R. file no.
R.M.M.R. file no.
Date forwarded 13 March 95

From Mining Recorder at: **Whitehorse**

To Regional Manager, Mineral Rights at Whitehorse, Y.T.

For action are:

<input type="checkbox"/> NEW APPLICATION FOR PLACER LEASE TO PROSPECT	Name
<input type="checkbox"/> RENEWAL APPLICATION PLACER LEASE TO PROSPECT	Name
<input type="checkbox"/> AFFIDAVIT OF EXPENDITURE ON PLACER LEASE	Name
<input type="checkbox"/> SECURITY DEPOSIT	
<input type="checkbox"/> FINANCIAL ABILITY	
<input type="checkbox"/> ASSIGNMENT OF PLACER LEASE NO.	From To
<input type="checkbox"/> GROUPING APPLICATION UNDER SEC. 52(2) PLACER MINING ACT.	Owner
<input type="checkbox"/> DIAMOND DRILL LOGS	Claims
<input checked="" type="checkbox"/> QUARTZ ASSESSMENT REPORT	Claims
	Type of report
	Submitted by
	Cls. work performed on
	\$ req. for ren. application

Stamp: OFFICE OF THE REGIONAL MANAGER, MINERAL RIGHTS, WHITEHORSE, Y.T. MAR 14 1995

Signature:

REPLY ACTION

Date returned

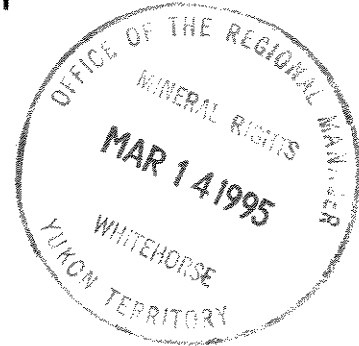
Signature



093257

MOUNTAIN HIGHGRADE MINES LTD.

**GEOPHYSICAL SURVEYS, TRENCHING
AND UNDERGROUND REHABILITATION PROGRAM
ON THE BUFFALO HUMP PROPERTY,
WHEATON RIVER DISTRICT,
SOUTHERN YUKON TERRITORY**



M.A. Power M.Sc.

QUARTZ CLAIMS

TEMPUS FUGIT 1-4	YB46407-YB46410
TEMPUS FUGIT 6-16	YB46411-YB46423

YMIP No.: 94-012

Work performed: February 7 - December 23, 1994

Mining District: Whitehorse

NTS: 105 D 3

Location: 60° 14' N 134° 39' W

January 15, 1995

SUMMARY

A program of total magnetic field and VLF-EM surveys, excavator trenching and underground rehabilitation was conducted on the Buffalo Hump Property on Mt. Stevens from February to December, 1994. Geophysical surveys were useful in mapping rhyolite dikes and alteration zones surrounding mineralized veins on the property. The mineralization identified to date occurs in the Stevens Vein below the summit of Mt. Stevens and the Sunrise Vein approximately 350 m to the north. Gold mineralization identified to date consists of galena with minor chalcopyrite, pyrite and chalcopyrite in limonitic quartz veins. Gold is intimately associated with galena and gold grades are proportional to galena content. Best assays returned from the Stevens Vein were 1.437 OPT Au and 16.74 OPT Ag.

TABLE OF CONTENTS

INTRODUCTION	1
PROPERTY	1
LOCATION AND ACCESS	2
PHYSIOGRAPHY	2
REGIONAL GEOLOGY	2
PREVIOUS EXPLORATION	5
PROPERTY GEOLOGY	6
GEOPHYSICAL SURVEYS	7
TRENCHING	8
MINERALIZATION	9
UNDERGROUND REHABILITATION	9
CONCLUSIONS	10
RECOMMENDATIONS	11
References cited	12
APPENDIX A. STATEMENT OF QUALIFICATIONS	A-1
APPENDIX B. PROJECT LOG	B-1
APPENDIX C. STATEMENT OF EXPENSES	C-1
APPENDIX D. SAMPLE DESCRIPTIONS AND ASSAY CERTIFICATES	D-1

INTRODUCTION

This report describes a program of geophysical and geological surveys, trenching, road construction and underground rehabilitation on the Buffalo Hump Property, Wheaton River area, southern Yukon Territory between February and December 1994.

PROPERTY

The Buffalo Hump Property consists of the following Quartz Claims staked under the Yukon Quartz Mining Act and recorded in the Whitehorse Mining District:

<u>Claims</u>	<u>Grant Number</u>	<u>Expiry Date¹</u>
Tempus Fugit 1-4	YB46407-YB46410	September 16, 2000
Tempus Fugit 6-16	YB46411-YB46423	September 16, 2000

and the following Crown Grants:

<u>Name</u>	<u>Lot Number</u>	<u>Owner</u>
Wheaton	Lot 256	Main Street Mining Ltd.
Golden Slipper	Lot 257	Main Street Mining Ltd.
Sunrise	Lot 258	Main Street Mining Ltd.

The Quartz Claims are owned by the following parties:

<u>Name / address</u>	<u>Percentage ownership</u>
Mountain Highgrade Mines Ltd. Site 6 Comp 11 Whitehorse, Y.T. Y1A 5V8	50%
Main Street Mining Ltd. 200 - 100 Main Street Whitehorse, Y.T. Y1A 1L5	50%

¹Expiry dates based on acceptance of the work described herein for assessment credit.

LOCATION AND ACCESS

The Buffalo Hump Property is located at 60° 14' N 134° 39' W on Mt. Stevens in the Wheaton River area, Whitehorse Mining District, Yukon Territory (Figure 1). The property is approximately 65 km from Whitehorse by air and 90 km by road. The route to the property is as follows:

<u>Section</u>	<u>Distance (km)</u>
Alaska Highway to Carcross Cutoff	20
Carcross Cutoff to Annie Lake Road	17
Annie Lake Road to Wheaton River Bridge	26
Wheaton River Bridge to Partridge Creek Road	11
Partridge Creek Road to Property	16

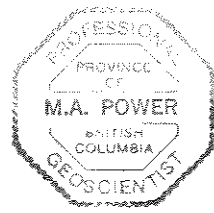
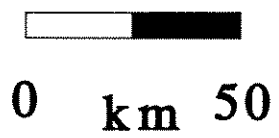
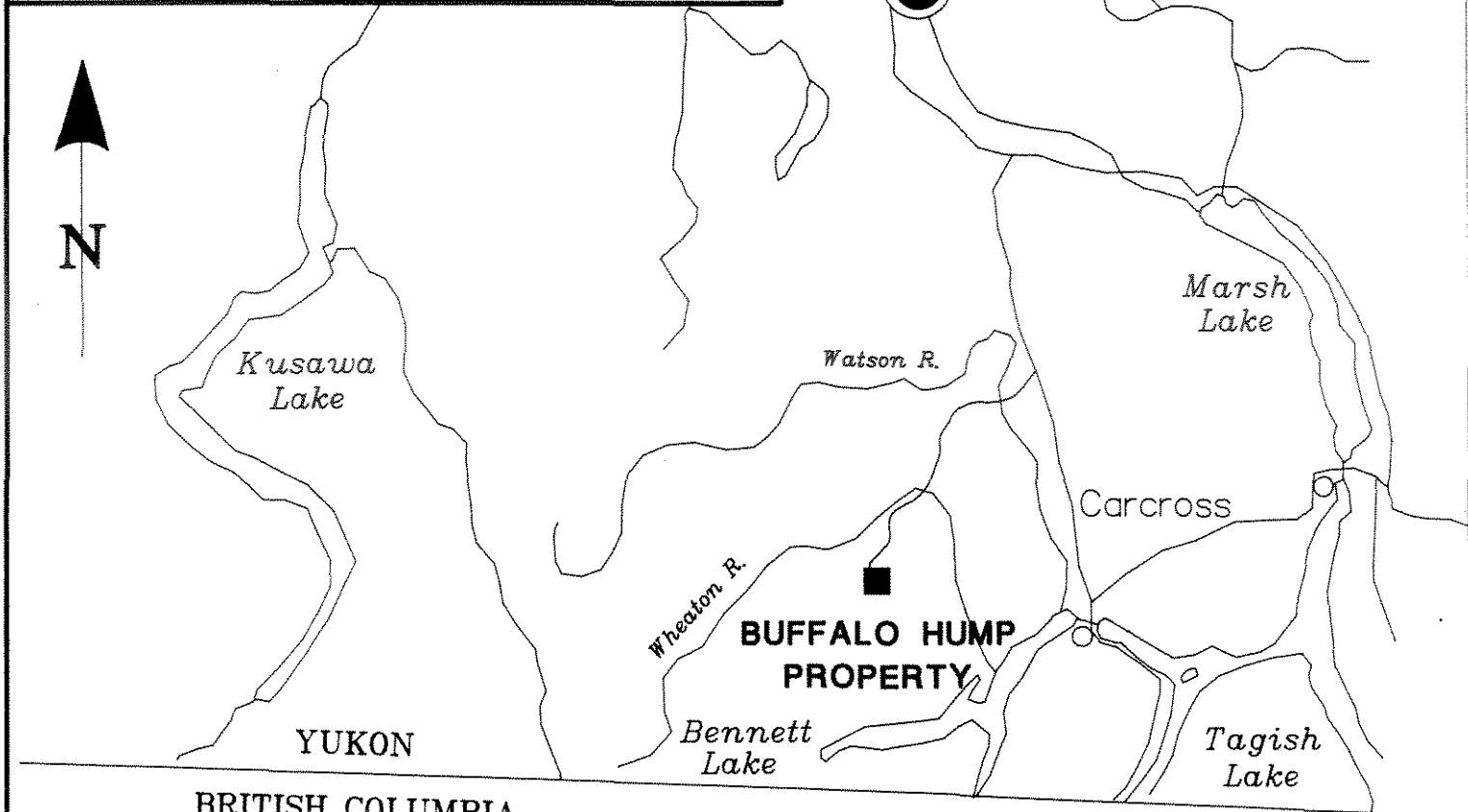
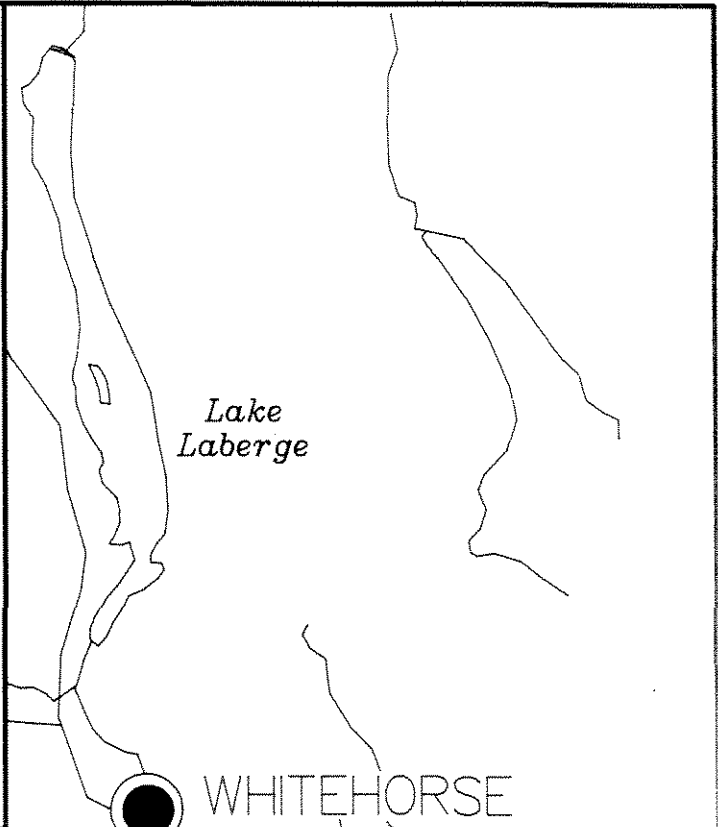
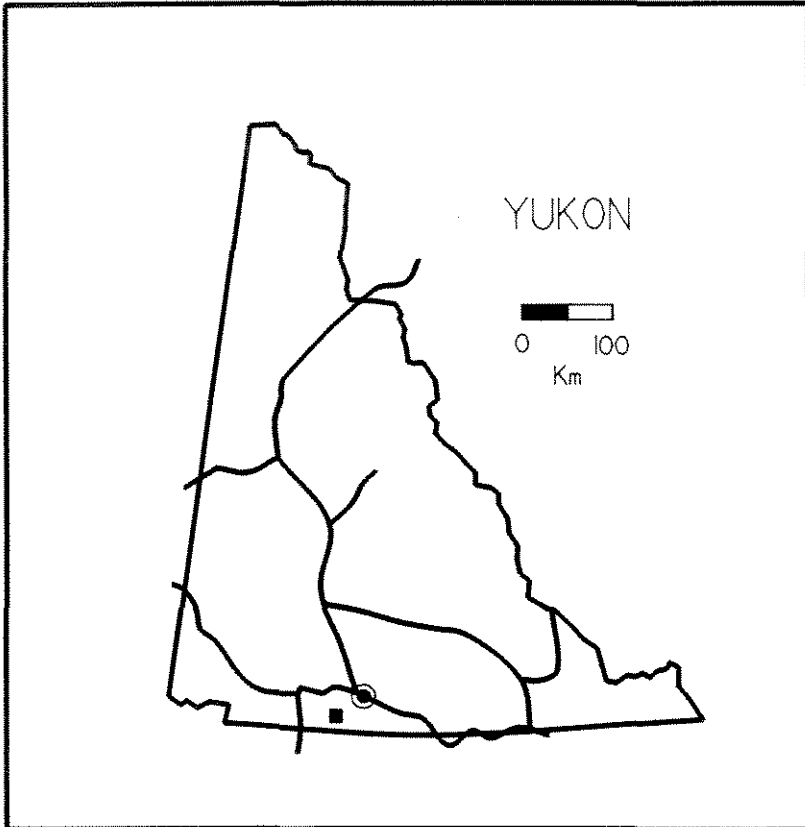
A four wheel drive vehicle is required on the Partridge Creek Road. During the winter months, the route is ploughed from Whitehorse to the Wheaton River Bridge.

PHYSIOGRAPHY

The Buffalo Hump Property is in the Boundary Ranges of the Coast Mountain Range. In this area, the topography is transitional between the rugged mountains of the Coast Range and the dissected uplands of the Yukon Plateau. The property is centred on Mt. Stevens, a rounded, north trending ridge on the west side of the Wheaton River valley. Elevations on the property range from 4300 at Stevens Creek on the west side of Mt. Stevens to 5500 feet at the summit. The property is drained by Stevens Creek to the west and by the Wheaton River to the east with intermittent creeks found in gullies on the flanks of the mountain. Several small ponds located at the height of land between Stevens and Partridge creeks in the southwest corner of the property are suitable water sources for diamond drilling and small ponds occasionally develop near the summit of Mt. Stevens. Snowfields on north facing slopes persist until the end of July and permafrost was encountered in trenches near the summit of the mountain. The property is above tree line with scrub willow and alder at lower elevations and grass and moss at higher elevations.

REGIONAL GEOLOGY

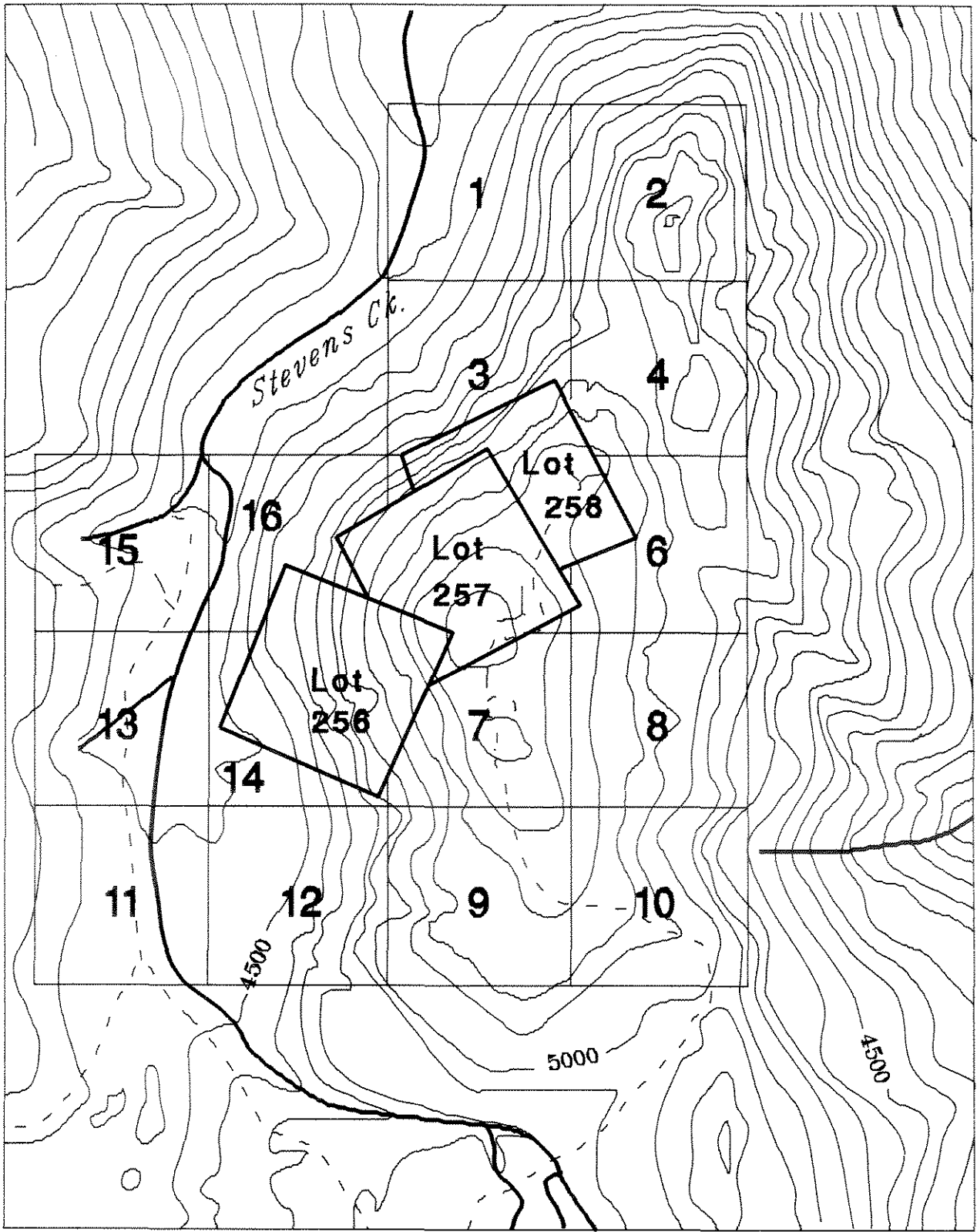
The geology of the Wheaton River district is well documented by Doherty and Hart (1989). The region lies near the boundary between the Nisling Terrane and the Whitehorse Trough. The Nisling Terrane is a belt of metamorphic and intrusive rocks that includes the Coast Plutonic Complex and the Yukon Crystalline Terrane (Wheeler



Buffalo Hump Property

Figure 1. Location Map

MOUNTAIN HIGHGRADE MINES LTD.



--- Road

BUFFALO HUMP PROPERTY	Claims: Tempus Fugit 1-4.6-16
PROPERTY LOCATION MAP	Mining District: Whitehorse
	NTS: 105 D 3 Scale: 1:50,000
	Drawn By: M.A.P.
MOUNTAIN HIGHGRADE MINES LTD	DATE: 06 JAN 95 Figure: 2

and McFeely 1987). The Whitehorse Trough is a relict fore-arc basin with clastic sediments derived from an uplifted core (LaBerge Group) being deposited over older andesitic volcanic rocks flooring the basin (Lewes River Volcanics). The Tally Ho Shear Zone, west of the property, forms the boundary between the Whitehorse Trough and the Nisling Terrane. Following the mid-Jurassic amalgamation of the Nisling Terrane with the Whitehorse Trough, an overlap succession of clastic rocks was deposited and the region was affected by a later episode of Eocene volcanism. During this latter event, high level alaskite and bimodal calc-alkaline felsic to intermediate volcanic rocks were emplaced throughout the Wheaton River District.

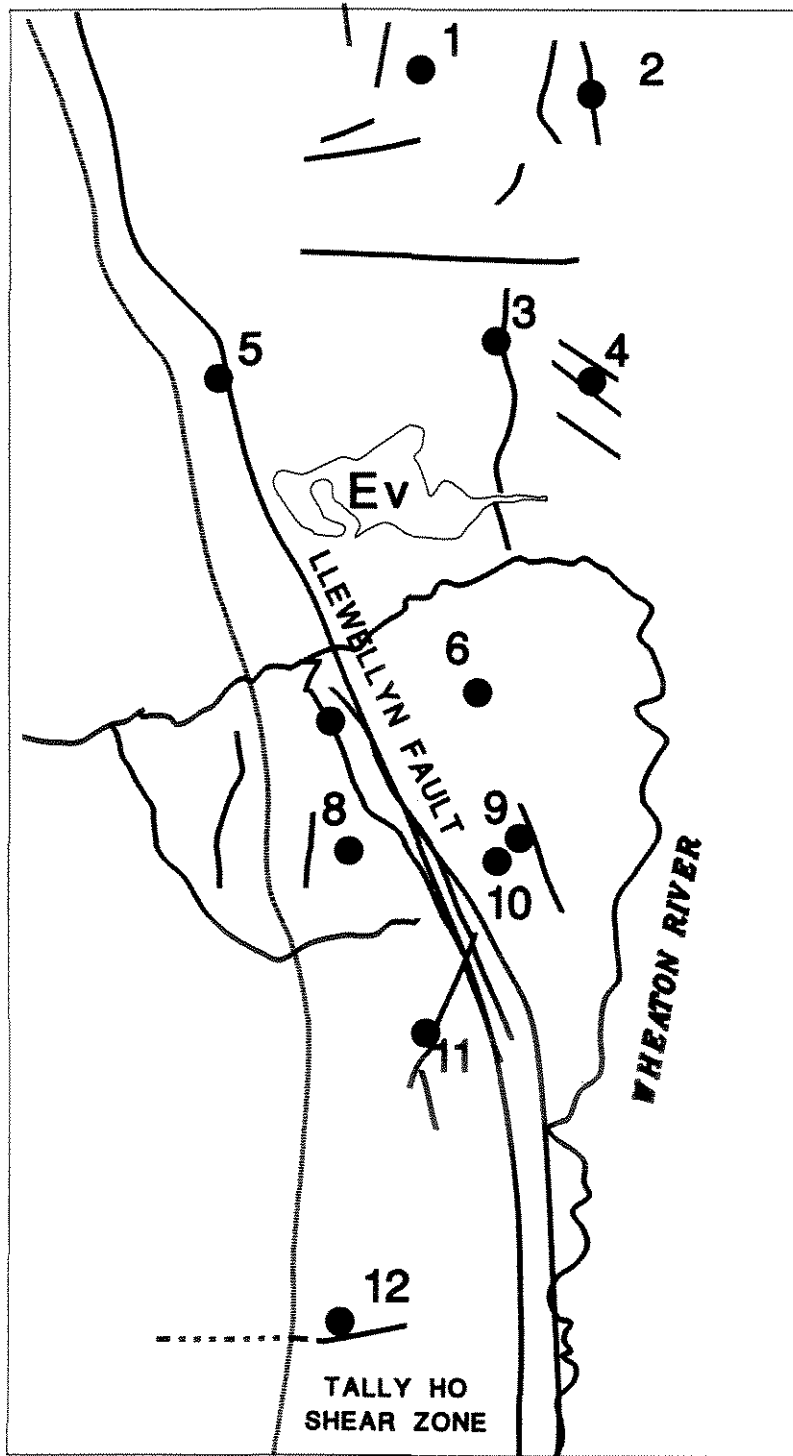
The structural geology and distribution of showings in the area surrounding the Buffalo Hump Property is shown in Figure 3 and the local stratigraphy is listed in Table 1. Regional mapping indicates that the Mt. Stevens area is underlain by Lewes River Group basic volcanics and their metamorphosed equivalents, overlain locally by the Millhaven Conglomerate and Wheaton River Volcanics and intruded by the Wheaton River Granodiorite. The property is near the Llewellyn Fault on the east side of the Tally Ho Shear Zone. Both the Llewellyn Fault and older Tally Ho Shear Zone appear to exert strong control on the location of precious metal occurrences in northern B.C. and the southern Yukon (Hart and Radloff 1991, Mihalynuk and Mountjoy 1991). This is apparent in the distribution of showings north and south of the property. The Tally Ho Shear Zone is a deep crustal structure extending from Lake Bennett 40 km north to the Mt. McIntyre area. Near the Buffalo Hump Property, the zone is up to 4 km wide, strikes 145° and dips 40° to 70° southwest. Early ductile deformation resulted in development of a penetrative fabric as the entrained rocks were metamorphosed to greenschist facies. During a later (Late Cretaceous - Early Tertiary) stage of brittle deformation, quartz veins developed in extensional fractures. Later Eocene deformation resulted from doming and subsequent crustal collapse in the Bennett Lake Caldera Complex.

The Mt. Stevens area hosts a number of significant precious metal occurrences. Hart and Radloff (1991) subdivided these showings into the following four types:

- a. Magmatic veins (Mt. Wheaton)
- b. Metamorphic veins (Odd Vein)
- c. Mesothermal veins (Mt. Stevens, Tally Ho, Legal Tender)
- d. High Level Quartz-rich Epithermal (Silver Queen)

These are discussed in turn.

The sole example of a magmatic vein in the Wheaton River district is the occurrence on Mt. Wheaton. This consists of a quartz stockwork in silicified Wheaton

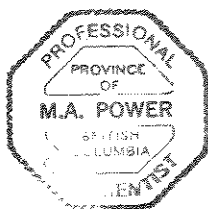


SHOWINGS

- 1 Red Ridge (Au.Ag)
- 2 INCO (Cu.Mo)
- 3 Union Mines (Ag.Au)
- 4 Mt. Bush (Coal)
- 5 Legal Tender (Au.Ag)
- 6 Mt. Wheaton (Au.Ag)
- 7 Tally Ho (Au.Ag)
- 8 Silver Queen (Ag)
- 9 Acme (Au.Ag)
- 10 Buffalo Hump (Au.Ag)
- 11 Odd Vein (Au.Ag)
- 12 Opulence (Sb.Ba)

Ev Mt. Skukum Volcanics

 Fault



BUFFALO HUMP PROPERTY	Claims: TEMPUS FUGIT 1-4,6-16
REGIONAL GEOLOGY AND MINERAL SHOWINGS	Mining District: Whitehorse
	NTS: 105 D 3 Scale: 1: N/A
	DRAWN BY: M.A.P.
MOUNTAIN HIGHGRADE MINES LTD.	DATE: 15 JAN 95 Figure: 3

River volcanics adjacent to its contact with a late Cretaceous intrusion. Approximately equal concentrations of gold and silver are found in thin white quartz veins with a few percent galena and chalcopyrite.

Table I. Stratigraphy - Mt. Stevens area

Age	Formation	Lithology
Early Eocene	Mount Skukum Complex	Felsic dykes, laccoliths or plugs; mostly aphanitic, porphyritic rhyolite
Late Cretaceous	Wheaton River Granodiorite	medium-grained, hornblende diorite, quartz diorite and lesser granodiorite; locally foliated
Late-Cretaceous	Wheaton River Volcanics	aphanitic and porphyritic andesite to dacite flows, heterolithic breccia, agglomerate and associated epiclastic rocks
Jurassic or Cretaceous	Millhaven Conglomerate	Polymictic conglomerate with minor sandstone, greywacke and shale.
Late Triassic	Lewes River Group	Coarse grained, variably altered augite porphyritic basalt and breccia commonly with coeval(?) hornblende and its metamorphic equivalents.
Paleozoic and older (?)	Nisling Assemblage	Biotite-muscovite-quartz-feldspar schist, quartzite

Metamorphic veins are composed of white to grey waxy quartz with disseminated chalcopyrite and lesser galena. These veins are concordant with little

adjacent wall rock alteration indicating that they are probably the result of metamorphic dehydration accompanying the development of the Tally Ho Shear Zone. The high concentration of copper in the veins is probably derived from the basic Lewes River Volcanics. The Odd vein on Dickson Hill is the only metamorphic vein mapped in the Mt. Stevens area.

Most of the veins in the Mt. Stevens area are galena-rich mesothermal quartz sulphide veins. These include the showings on Mt. Stevens proper (Acme, Buffalo Hump, Midnight) as well as others to the south and north (Tally Ho, Legal Tender, Mt. Anderson). The majority of these veins dip steeply and trend northwest. The veins consist of massive coarse grained quartz with thin bands or pods of sulphides up to 40 cm thick. On Mt. Stevens, massive galena with pyrite, chalcopyrite and occasional visible gold occurs in pods 5-50 cm thick. Tellurides have also been reported in these veins (MacLean 1914).

PREVIOUS EXPLORATION

Mining exploration in the Mt. Wheaton district began in the 1890's with the arrival of prospectors from the Alaska panhandle. Mining near Juneau attracted many prospectors and small miners and provided them an opportunity to earn a grubstake through winter employment in the mines. A number of these individuals began to move north and found the first hardrock and placer occurrences in the southern Yukon. Frank Corwin and Thomas Rickman were the first recorded prospectors in the region; they reportedly staked ground on Carbon Hill, Chieftain Hill and Idaho Mountain before returning to Juneau with high-grade gold samples. Probably because of uncertainties related to mineral tenure, they died without disclosing the location of their claims. Another prospector, Thomas Kerwin, reportedly staked near Idaho Hill in 1893 and returned with high grade gold samples; he too refused to disclose his claim location. During the Klondike Gold Rush, several occurrences were staked and recorded in Dawson but the first big rush to the area occurred in 1906 with the discovery of high grade gold at Tally Ho and Mt. Anderson. Both of these properties became small producers and numerous other showings were staked and explored. Activity in the area declined to a virtual standstill by the 1950's and the area remained dormant until the discovery of a bonanza epithermal gold-silver deposit at Mt. Skukum in the early 1980's. The district was restaked and extensively explored through the late 1980's. With the rescission of favourable tax incentives for mineral exploration in 1989 and a decline in the gold price, exploration activity in the area has once again declined.

Exploration in the Mt. Stevens area is documented in the Yukon Minfile and by MacLean (1914). The first recorded exploration in the Mt. Stevens area was in 1906 when the Sunrise, Wheaton and Golden Slipper claims, covering the crest of the ridge, were staked by G.M. Stevens. Southeast of the summit, the Acme Claim was staked

by Mr. Stevens and others and the Hawkeye Group was staked by G. E. Burnside in the same year. A pod of auriferous quartz was found near the summit on the Golden Slipper Claim and explored with an 85 foot drift and 20 foot cross-cut. These failed to locate the vein and Cairnes (1909) suggested that the material may not have been in-place. A second showing consisting of a quartz vein carrying galena and native gold, 2 to 7 feet wide, striking northwest and dipping northeast was found north of the summit on the Sunrise Claim. This was reportedly explored with an open cut near the summit and by a drift and three cross cuts further downslope to the northwest. On the Acme Claim, a large quartz pod 100 feet long and 30 feet wide carrying disseminated galena and pyrite was located. This vein was reportedly explored with three short adits and several trenches. At the saddle between the headwaters of Stevens Creek and the Wheaton River drainage on the south side of Mt. Stevens, quartz veins bearing galena and chalcopyrite were located but not extensively explored. To further development, a wagon road was constructed up Stevens Creek and the west side of Mt. Stevens to the summit and several cabins constructed at the mouth of Stevens Creek and the base of Mt. Stevens. A camp also appears to have been constructed north of the showings on the Sunrise Claim.

Following the initial exploration, approximately 50 feet of drifting on quartz veins north west of the summit was performed between 1923 and 1927 and the three claims on the summit - Wheaton, Golden Slipper and Sunrise - were taken to lease in 1930. The showings southeast of the summit were restaked as the Midnight and Hidden Ore group and explored with drifting and trenching until 1940. Following the war, the showings were repeatedly restaked and allowed to lapse with little work being done on them until the 1980's. In 1983, Tally-Ho Exploration acquired claims covering the summit and in Inco staked ground covering the old Midnight Group. These two companies performed sampling, mapping, geochemistry, bull dozer trenching and drilling on their respective claims in the period 1985-1987. The claims covering the summit of Mt. Stevens lapsed and were restaked by Mountain Highgrade Mines Ltd. in 1993. Currently, the Buffalo Hump Property covers the Golden Slipper (summit), Sunrise and Acme showings and abuts the Midnight showing in the southeast corner of the claim block.

PROPERTY GEOLOGY

The Buffalo Hump Property is underlain by Jurassic granodiorite and Lewes River Group schist and volcanic rocks intruded by Eocene rhyolite porphyry ring dykes associated with Mt. Skukum volcanism. Several bands of older quartz-chlorite schist are found in the granodiorite. Structurally the area is crossed by north west-southeast trending faults and Mt. Stevens lies just to the east of the regionally significant Lewellyn Fault. Splays from this fault host mineralized quartz vein; these often have a rhyolite dyke in the footwall or hanging wall. The geology of the Buffalo Hump Property as mapped by G. Davidson, P.Geol. during a visit in September 1994 and

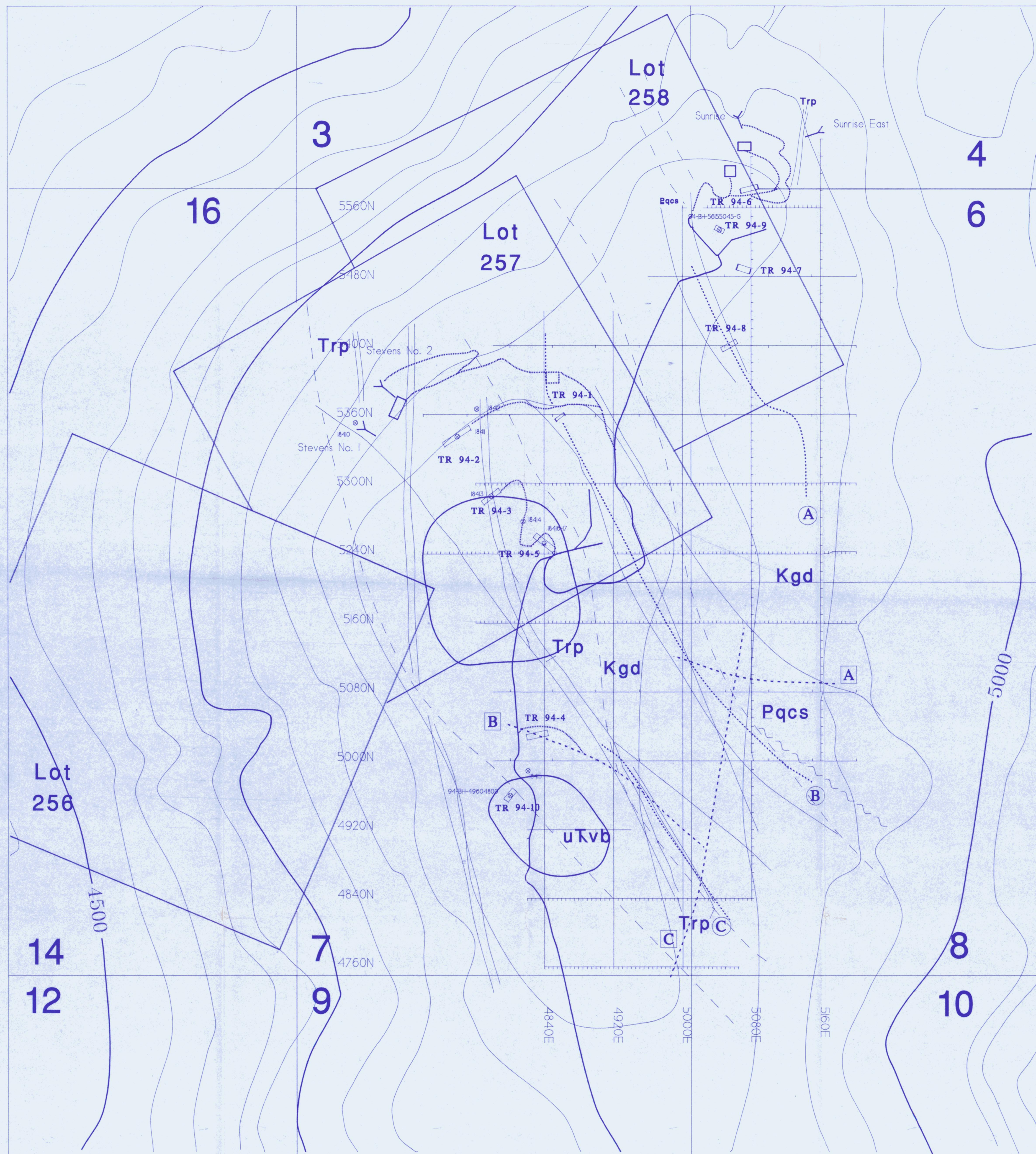
based on earlier work conducted in 1985 is shown in Figure 4 together with the location of trenches, roads, compressor stations, adits and other workings on the property. This diagram also displays the location of claim and crown grant posts based on known claim post locations and crown grant post locations as plotted on survey plans. The field crew was able to locate only one of the original crown grant boundary posts during the 1994 field season.

GEOPHYSICAL SURVEYS

Total magnetic field and VLF-EM surveys were conducted over a grid centred on the summit of Mt. Stevens. The grid baseline trends 2° and the origin is at 5000N, 5000E (Figure 5). Lines were picketed at 80 m intervals and stations at 20 m intervals. In addition to the survey lines, a number of orthogonal cross lines were also put in and surveyed. The purpose of the cross-lines was to permit detection of east-west trending structures in the VLF data. All stations were picketed with half length wooden pickets and scribed metal tags.

The total magnetic field survey was conducted with a synchronized pair of Omni IV proton precession magnetometers using a base station at approximately 5000N, 5000E and a base station cycling interval of 20 s. Measurements were taken at 5 m intervals along the survey lines. Figure 6 is a contour map of the total magnetic field readings. Magnetic lows are considered to be significant targets in this area as they may be caused by hydrothermal alteration surrounding quartz veins. Three prominent lows were detected during the survey; these are labelled **A** through **C**. Magnetic lows **A** and **B** map the location of Paleozoic Nisling Assemblage metasediments which occur in north-trending slices within the overlying Lewes River Group. Magnetic low **C** occurs near the mapped location of an Eocene rhyolite porphyry dike. Unfortunately, the magnetic field survey had to be confined to the relative gentle topography near the summit of Mt. Stevens because of snow conditions at the time of the survey. During the trenching program, several test lines were run over quartz veins near the Stevens No. 1 drift. These indicated that magnetic field lows were also associated with quartz veins on the property.

The VLF-EM survey was conducted with a Geonics EM-16 VLF receiver over both the survey and cross lines. The Lualualei, Ha. (Station NPM) and Jim Creek, Wa. (Station NLK) transmitters were used on the E-W trending survey lines to locate N-S trending principle structures and the Cutler, Me. (Station NAA) transmitter was used in the surveys along N-S trending cross-lines to locate E-W striking cross-faults. Readings of the in-phase and quadrature tilt-angle were taken at 10 m intervals along the survey lines. The data is shown in stacked profile format in Figure 7. In-phase profiles are solid lines and quadrature profiles are dashed lines while the location of conductor axes are indicated by thick dashed lines. Four conductors labelled **A** through **D** are shown in this diagram. Conductors **A** and **B** are probably cross-faults;



LEGEND

Trp

Tertiary Skukum Group
Rhyolite porphyry

Kgd

Cretaceous Biotite-hornblende
Granodiorite

uKvb

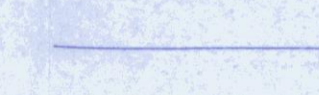
Upper Triassic Lewes River Group
Basalt and basaltic andesite flows
and flow breccias

Pqcs

Upper Proterozoic - Lower Paleozoic
Yukon Group quartz-mica schist and
minor amphibolite



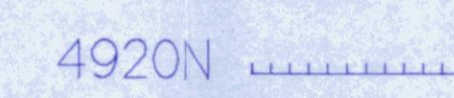
Fault



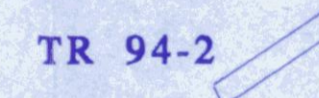
Geological contact



Rock sample location and number
Gold/silver in OPT



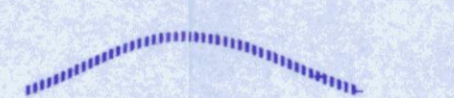
Geophysical survey grid line



Trench location and number



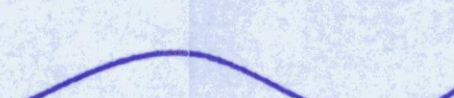
Adit



Axis of magnetic field low



VLF conductor axis



Road constructed prior to 1994



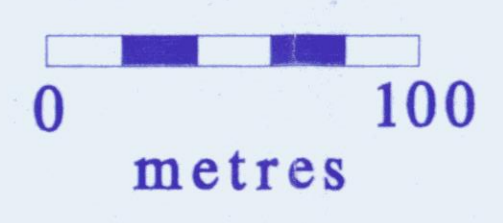
Road constructed in 1994

6

Claim number or Crown Grant number
(all claims are in the Tempus Fugit block)

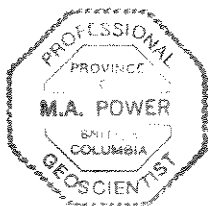
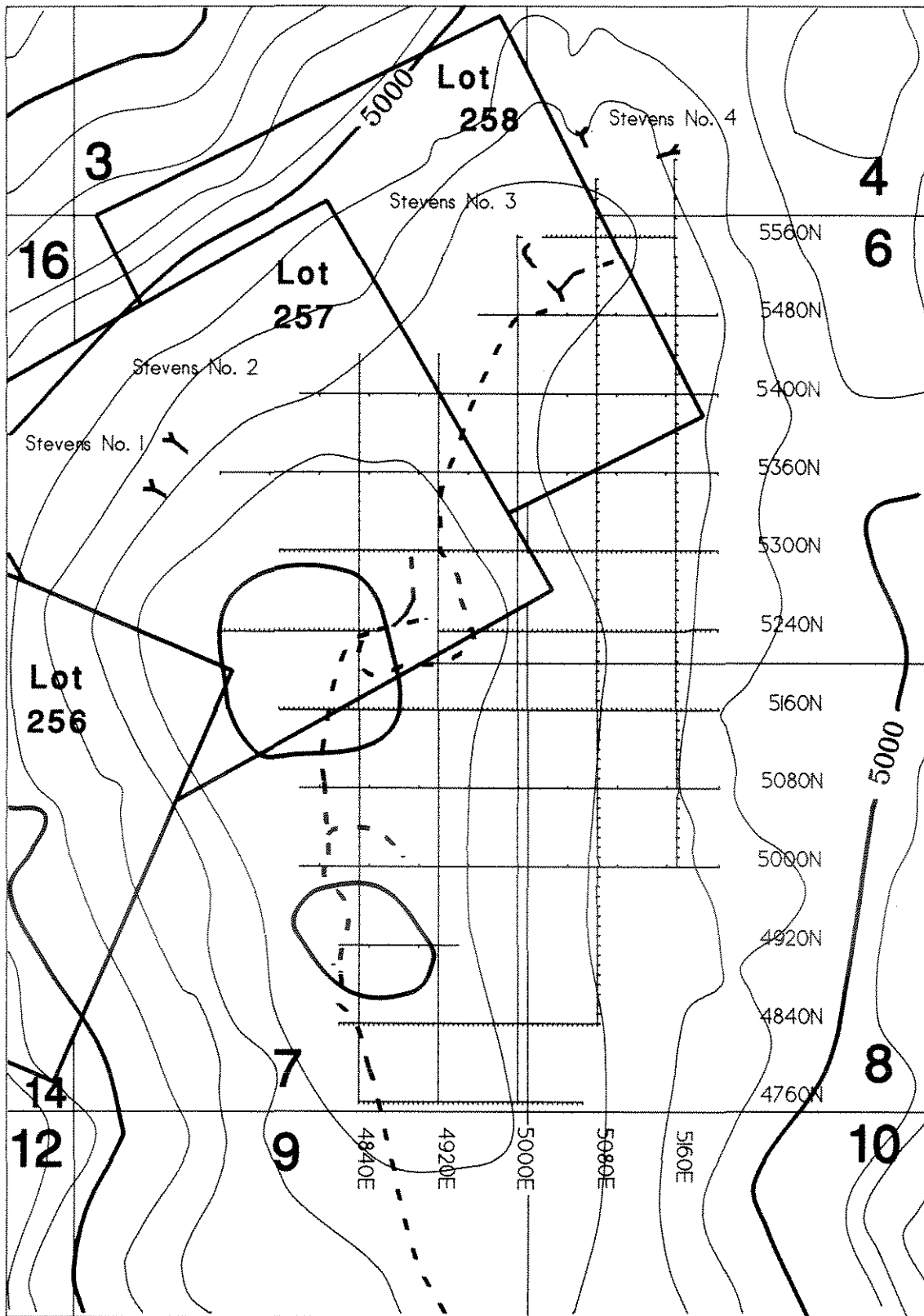
Elevations in feet above mean sea level

BUFFALO HUMP PROPERTY	Claims: TEMPUS FUGIT 1-4, 5-16
Geological and Geophysical Compilation Map - 1994	Mining District: Whitehorse NTS: 105 D 2 & 3 Scale: 1:2,000 Drawn by: M.P.
MOUNTAIN HIGH-GRADE MINES LTD.	DATE: 15 JAN 95 Figure: 4



093257

109/3 D06/3

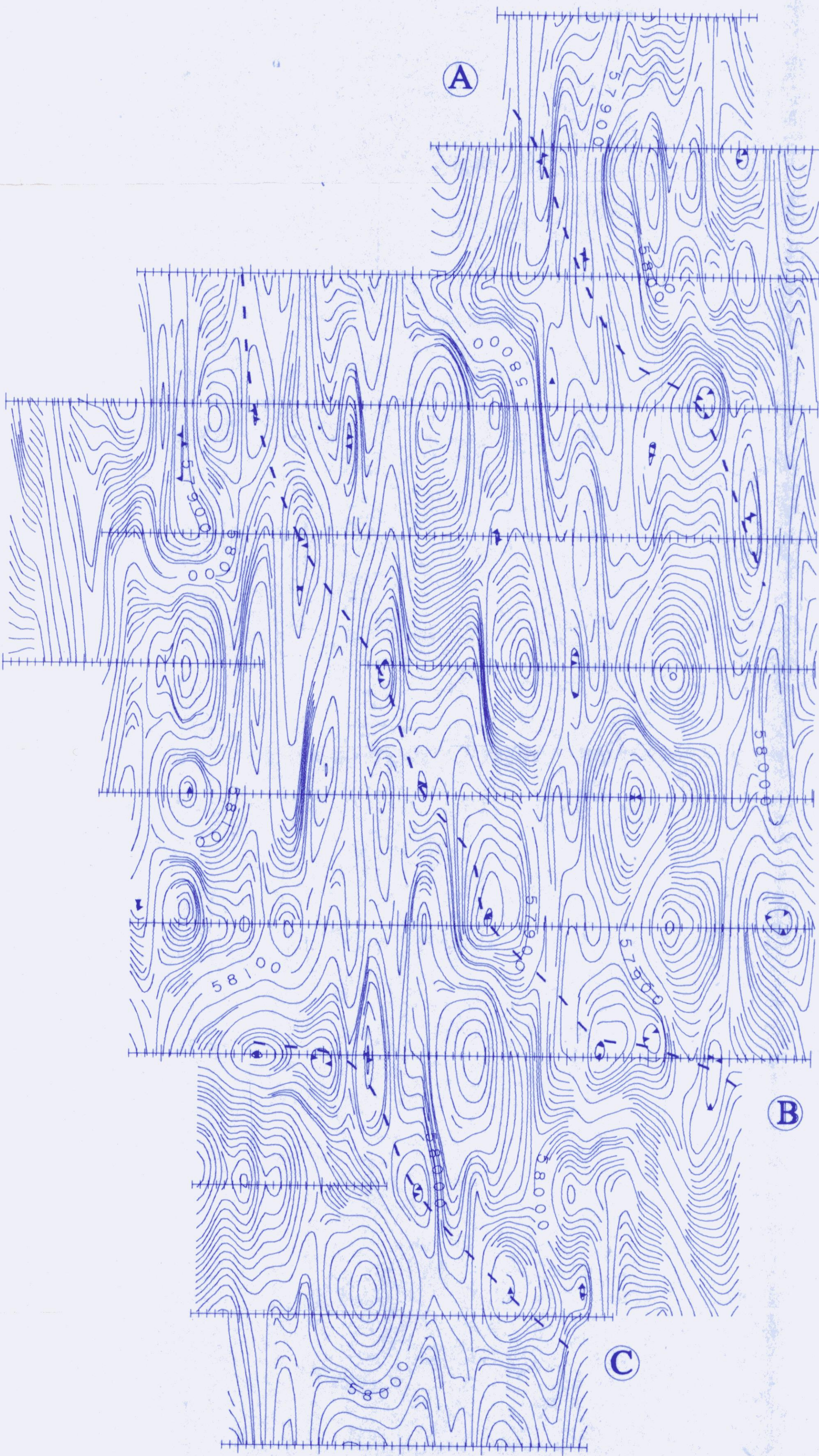


----- Old Road

BUFFALO HUMP PROPERTY	Claims: Tempus Fugit I-4,6-16
GRID LOCATION	Mining District: Whitehorse
	NTS: 105 D 3 Scale: 1:6,250
MOUNTAIN HIGHGRADE MINES LTD.	Drawn By: M.A.P.
	DATE: 06 JAN 95 Figure: 5



5200 E
5100 E
5000 E
4900 E
4800 E
4700 E



5640 N

5560 N

5480 N

5400 N

5320 N

5240 N

5160 N

5080 N

5000 N

4920 N

4840 N

4760 N

5200 E
5100 E
5000 E
4900 E
4800 E
4700 E

093257



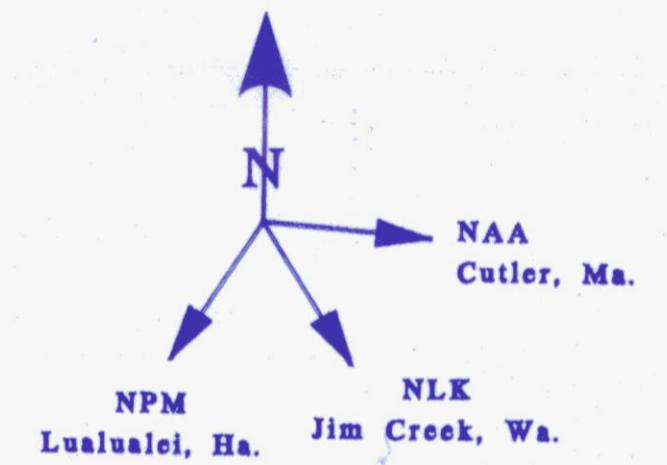
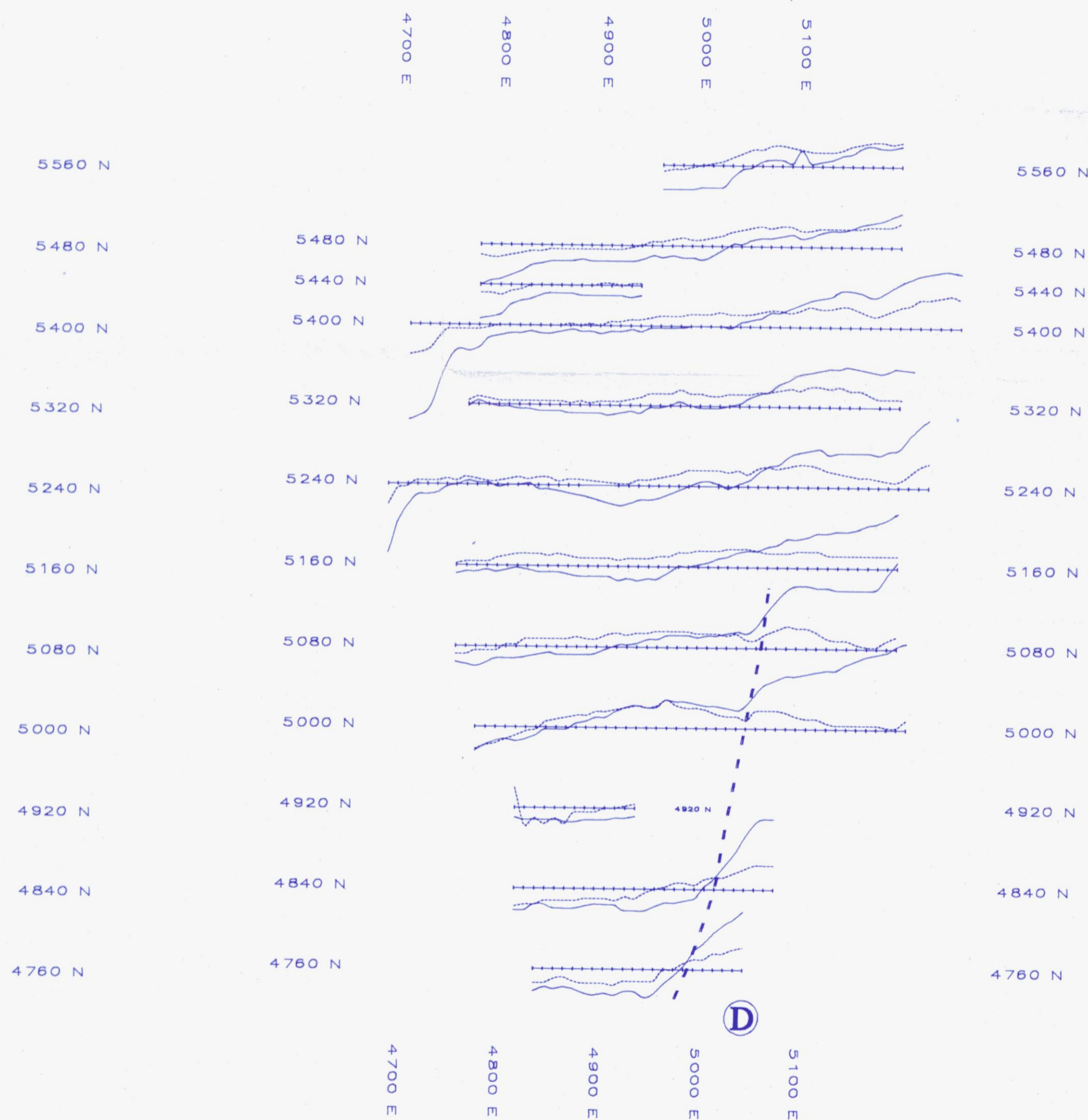
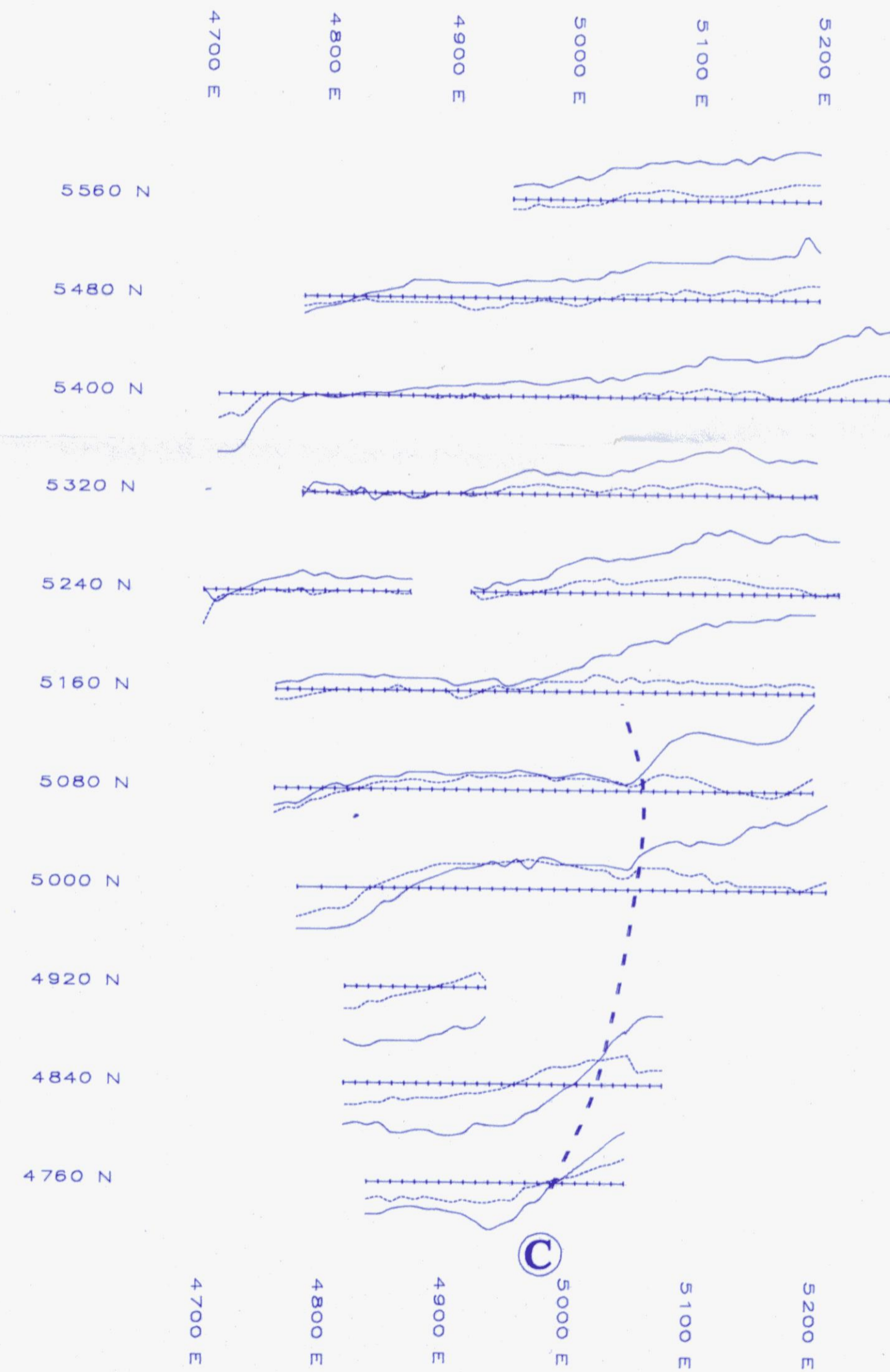
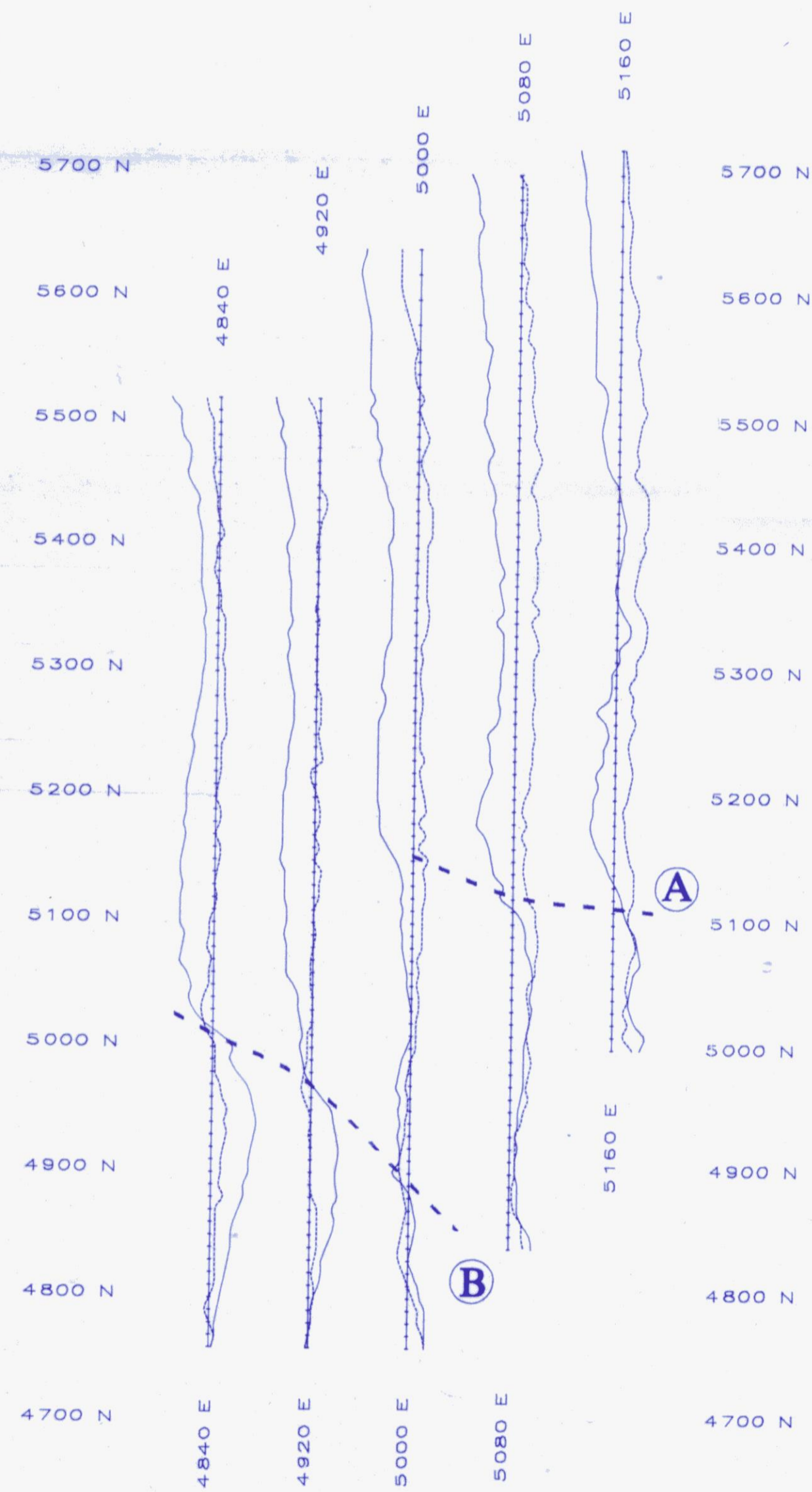
(A) - - - - - Magnetic field low
Contour interval: 10, 50, 100 nT

BUFFALO HUMP PROPERTY	Claims: TEMPUS FUGIT I-6
Total Magnetic Field Contour Map	Mining District: Whitehorse
	NTS: I05 D 3 Scale: 1:2000
MOUNTAIN HIGHGRADE MINES	OPERATOR: G. Lee / M. Power
	DATE: 07JAN94 Figure: 6

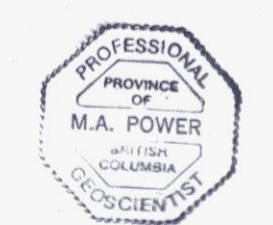
MAINE - NAA

SEATTLE - NLK

HAWAII - NPM



Quadrature ⊕
 In-phase ⊖
 (5% per cm)



093257



Ⓐ --- Conductor axis

BUFFALO HUMP PROPERTY	Claims: TEMPUS FUGIT H6
VLF-EM Survey	Mining District: Whitehorse
Stacked Profile Map	NTS: 105 D 3 Scale: 1:4,000
MOUNTAIN HIGHGRADE MINES	OPERATOR: G. Lee / M. Power
	DATE: 22 JUL 94 Figure

trenching of conductor **A** unearthed bull quartz in a clay gouge. Conductors **C** and **D** are basically the same and roughly follow the margins of a package of Nisling Assemblage rocks; they too are probably faults. None of these conductors can be directly linked to known quartz veins on the property suggesting that the veins are associated with zones of dilation rather than fault zones. Both the VLF conductors and the magnetic field lows are shown together with the geology in Figure 4.

TRENCHING

Ten excavator trenches totaling 220 meters in length, averaging 2 meters in width and 2.5 meters in depth were excavated (1100cu.m) on the summit of Mt. Stevens. A John Deere 450 equipped with a quick-detachable back hoe was used in the excavation. Trench targets were quartz float trains, linear magnetic lows and VLF-EM anomalies. In addition approximately 750 meters of road was constructed to access the portals of two old adits. Trenches were excavated to bedrock or permafrost except on the east side where one trench (94-8) bottomed in overburden. Trench locations are shown on Figure 4 and trench dimensions are listed in Table II.

Table II. Trench Locations and Dimensions

Trench	Line	Station	Length (m)	Width (m)	Depth (m)
94-1	5400N	4855E	12.5	1.5	3
94-2	5375N	4740E	35	2	2
94-3	5310N	4780E	25	2	2.5
94-4	5030N	4830E	25	2	2.5
94-5	5250N	4840E	28	4	2
94-6	5662N	5080E	20	2	2.5
94-7	5573N	5070E	15	2	2.5
94-8	5480N	5055E	20	2	3
94-9	5615N	5045E	10	2	2.5
94-10	4960N	4800E	10	2	2.5

MINERALIZATION

Samples were collected from several of the trenches, from Stevens No. 1 drift and dump during the 1994 exploration program. Quartz veins are best exposed in Trench 94-5, several old pits and in adit 1. The quartz veins range in width from 5-40 cm, strike southeasterly and dip 30-40° northeast. Typically the veins consist of massive fine grained white quartz with a few narrow coxcomb veins and open vugs. Sulphide minerals have weathered out, leaving open casts and limonite. Narrow limonitic clay gouge seams occur along the margins of the veins.

In Trench 94-5, on the summit of Mt. Stevens, the main quartz occurrence is well exposed. One vein widens to approx. 40 cm along the trench floor. It contains patches, bands and disseminated grains of galena and arsenopyrite. Total sulphide content averages 5 %. A second vein 15 cm wide contains minor galena. Samples from this showing and other locations are listed in Appendix D. Fire assays for Au and Ag were performed by Acme Analytical Labs of Vancouver and Northern Analytical Laboratories of Whitehorse.

Vein quartz samples collected from the 1994 trenches and adit 1 were strongly weathered, exhibiting open casts and limonitic vugs where sulphide minerals had been. Low gold and silver values are attributed to the highly weathered nature of the quartz and the limited scope of the sampling program. Samples from the Stevens No. 1 adit were collected during the underground rehabilitation program. The quartz veins are massive, fine grained, golden yellow to white in color, with some drusy cavities and patches and bands of galena and arsenopyrite. The veins pinch and swell along strike and are associated with rhyolitic dykes. Earlier sampling by G. Davidson in 1985 returned values of 1.612 OPT Au / 34.6 OPT Ag from the Sunrise adit and 1.21 OPT Au / 35.0 OPT Ag from the Stevens No. 1 adit dumps.

UNDERGROUND REHABILITATION

A program of underground rehabilitation and exploration was initiated in the fall of 1994. Access roads to the Stevens No. 1 and 2 drifts below the summit and to the Sunrise drift north of the summit were constructed together with compressor stations and camp (trailer) pads. The portals of all three adits were mucked out but, unfortunately, the Stevens No. 2 portal sloughed in. Approximately 24 cu. m. of timber was cut and stationed at the two sites together with wedges, spikes, wire, propane and other material prior to freeze up. In addition, a portable 8x20 shack was transported to a camp just below the summit of Mt. Stevens and assembled in December. In December, a two-man crew retimbered and sampled the Stevens No. 1 drift and began excavating the Stevens No. 2 drift. The work was hampered by strong winds and continual drifting snow; over 40 feet of drifting through snow was required

(a)



(b)



Figure 8. (a) Road construction to Sunrise adit (next to CAT) (b) Trenching T94-1.

BEST ATTAINABLE
IMAGE

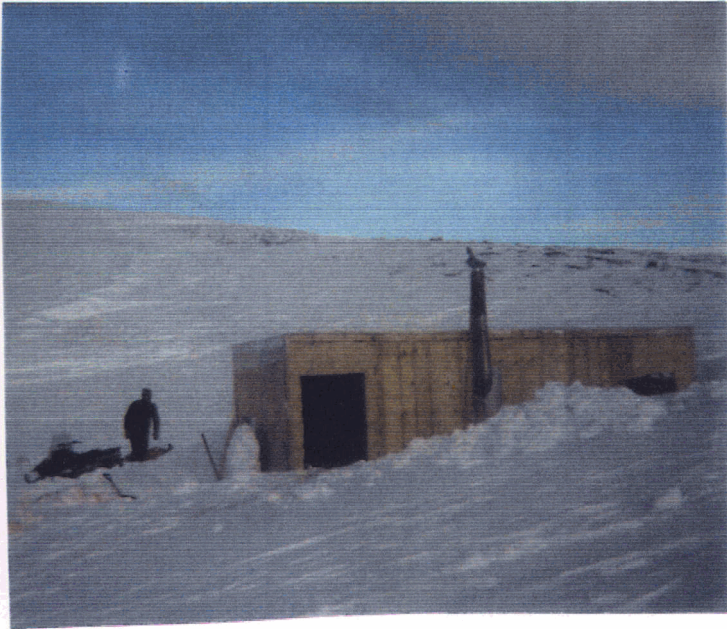


Figure 9. (Clockwise from top left) Camp on property - Dec 1994, Collaring portal - Stevens No. 2 drift, Stevens No. 1 drift showing caved section at face, Stevens No. 1 drift after retimbering.

BEST ATTAINABLE
IMAGE

to reach the collars of the two adits. The Stevens No. 2 adit has caved badly and may not be recoverable. The crew hand-steeped in approximately 10 feet from the toe of the slide in an attempt to recollar the portal. The portal of the Stevens No. 1 drift was boarded up in accordance with mine safety regulations and both "snow drifts" were sealed in anticipation of further work in April 1995.

CONCLUSIONS

The results of the 1994 exploration program accomplished the following:

- a. Two high grade gold veins were relocated and the underground workings which were originally excavated to test them are being prepared for further exploration.
- b. Road access to the old workings and the construction of compressor station at the old workings are complete. Timber and mining supplies sufficient to completely retimber the existing workings and begin a further advance has been cached at both sites.
- c. Trenching of several geophysical anomalies was completed.

and the results of this work lead to the following conclusions:

- a. Magnetometer and VLF-EM survey are of limited use in directly locating quartz veins on the property. Gold bearing quartz veins are mesothermal in character and show limited wall rock alteration. In addition, they appear to be dilational rather than directly fault bounded and thus are poor VLF targets. The known association of magnetic field lows and rhyolite dikes is useful however and could be used to map the location of these units to the south of Mt. Stevens.
- b. Gold mineralization is strongly associated with galena concentration. Silver gold ratios vary from 100:1 or more in low grade samples to around 30:1 in high grade samples.
- c. Successful location of additional high grade gold occurrences will require very careful surface prospecting and/or underground exploration on existing quartz veins.

RECOMMENDATIONS

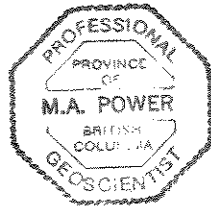
The following recommendations are made for further work on the Buffalo Hump Property:

- a. Underground rehabilitation should be completed on the Stevens No. 1 and Sunrise adits and 5x7 foot timbered exploration drifts should be driven along the veins to determine their lateral extent and to hopefully locate additional high grade gold mineralization.
- b. The existing grid should be extended south to the property boundary and a magnetometer survey conducted over it to attempt to map the southern extension of the rhyolite porphyry unit.
- c. Careful prospecting and detailed geological mapping should be conducted in the following areas:
 - * above the Stevens No. 1 and Sunrise quartz veins
 - * along the mapped length of the rhyolite porphyry dike
 - * in the area surrounding the Acme showing
 - * along magnetic field lows, particularly in the southern part of the survey grid.

Respectfully submitted,
MOUNTAIN HIGHGRADE MINES LTD.



M.A. Power M.Sc. P.Geol.



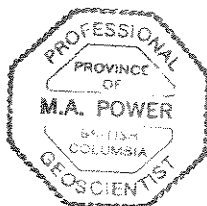
References cited

- Davidson, G. (1986) Rotary Percussion Drilling Buffalo 1-12 Mineral Claims. Whitehorse Mining Recorder: Assessment Report AR091794
- Doherty, R.A. and C.J.R. Hart (1989) Preliminary geology of Fenwick Creek (105D/3) and Alligator Lake (105D6) map areas. INAC Open File 1988-2, Indian and Northern Affairs Canada.
- Hart, C.J. and J.K. Radloff (1991) Geology of WHITEHORSE, ALLIGATOR LAKE, FENWICK CREEK, CARCROSS and part of ROBINSON MAP AREAS (105 D/11, 6, 3, 2, & 7) INAC Open File 1990-4, Indian and Northern Affairs Canada.
- MacLean, T.A. (1914) Lode Mining in Yukon. Ottawa: Mines Branch.
- McDonald, G. (1985) Geological, geochemical and geophysical surveys and trenching - Wheaton River Joint Venture. Whitehorse Mining Recorder: Assessment Report AR091626.
- Mihalynuk, M.G. and Mountjoy, K. (1990) Geology of the Tagish Lake Area (Edgar Lake 104 M/8 and Warm Creek 104M/9E) in: Geological Fieldwork 1989, British Columbia Ministry of Energy, Mines and Petroleum Resources, Paper 1989-1, p293-310.
- Wheeler, J. O. and P. McFeely (1987) Tectonic Assemblage Map of the Canadian Cordillera, Geological Survey of Canada, Open File 1565.

APPENDIX A. STATEMENT OF QUALIFICATIONS

I, Michael Allan Power of Whitehorse, Yukon Territory, certify that:

1. I obtained a Bachelor of Science Degree with First Class Honors in Geology from the University of Alberta in 1986 and a Masters Degree in Geophysics from the University of Alberta in 1988. I am a Professional Geoscientist registered in the Province of British Columbia.
2. I have been employed in mineral exploration and geophysical research since 1984.
3. I performed or supervised the geophysical survey, trenching and underground rehabilitation described in this report.
4. I am President and majority shareholder of Mountain Highgrade Mines Ltd., the minority owner of the Buffalo Hump Property.



Michael A. Power M.Sc. P. Geo.

Whitehorse, Yukon Territory
January 20, 1995

APPENDIX B. PROJECT LOG

<u>Date (1994)</u>	<u>Activity</u>
Feb 7-8	Geophysical survey crew (G. Lee / M.Power) break trail into property, haul in gear.
Feb 14-17	Establish survey grid
Feb 18-20	Establish survey grid and begin VLF-EM survey Crew driven off the property by awful weather on Feb 20.
Mar 9-12	Finish survey grid and continue VLF-EM survey.
Mar 25-27	Finish VLF and conduct magnetometer survey.
Jul 16	Demobilize winter camp
Aug 26-27	(G. Lee / M. Power) Move excavator and supplies to Property.
Aug 28 - Sept 17 (except Sept 3,4)	(G. Lee) Excavate trenches, build roads to adits, compressor stations.
Sept 18-19	(G. Davidson) Map property, sample trenches, (G. Lee) Stabilize or back fill sections of trenches where no mineralization exposed.
Sept 22-23 Sept 25, 28	Cut and haul mining timber to Stevens No. 1 and Sunrise adits. (G. Lee / D. Hall) Move heavy equipment to Whitehorse.
Dec 3,5-6	Break trail into Property; set up winter camp and start opening up Stevens No. 1 adit. (G. Lee / M. Power/ G. Davidson)
Dec 10-16, 19-23	Rehabilitation - Stevens No. 1 and 2 adits (G. Lee / M. Power)
Jan 10-17	Report preparation (M. Power)

Personnel

Mike Power
Box 5709
Whitehorse, Y.T.
Y1A 5L5

Gary Lee
Box 5348
Whitehorse, Y.T.
Y1A 5L5

Graham Davidson
1 Boswell Crescent
Whitehorse, Y.T.
Y1A 3Z2

Dan Hall
128 Douglas Street
Toronto ON
M5M 1G6

Total Man Days:

M. Power	40 days
G. Lee	57 days
G. Davidson	3 days
D. Hall	4 days

APPENDIX C. STATEMENT OF EXPENSES

GEOPHYSICAL SURVEY

G. Lee (16 days @ \$250)	\$4,000
M. Power (16 days @ \$250)	4,000
Groceries, fuel etc. (16 days @ 50)	800
Snowmobile rent (2 machines @ \$650 per wk - 2.3 wk)	2,990
EM-16 rental: 2 week @ \$80	160
Magnetometer rental: 3 days @ \$100	<u>300</u>
	\$12,250

TRENCHING

G. Lee (22 days @ \$250)	\$5,500
M. Power (2 days @ \$250)	500
G. Davidson (2 days @ \$300)	600
Equipment charges: 170 hrs @ \$60	10,200
Groceries, fuel etc. (22 days @ \$25)	550
Truck (4x4) charges: 22 days @ \$50	1,100
Assays: 15 @ \$25 (incl. air freight)	<u>375</u>
	\$18,825

UNDERGROUND REHABILITATION

G. Lee (19 days @ \$250)	\$4,750
M. Power (14 days @ \$250)	3,500
G. Davidson (1 day @ \$250)	250
D. Hall (4 days @ \$250)	1,000
Groceries, fuel, etc. (19 days @ \$50)	950
Explosives	511
Truck (4x4) charges: 19 days @ \$50	950
Snowmobile rental (2 machines @ \$650 per wk for 2 wk)	<u>2,600</u>
	\$11,911

REPORT

M. Power (8 days @ \$250)	<u>\$2000</u>
	\$2000

TOTAL PROJECT EXPENSES: \$45,236

Expense Summary

PHASE	Work on claims in assessment year ending Sept 16, 1994	Work on claims in assessment year ending Sept 16, 1995	Work on Crown Grants
Geophysics	\$12,250		
Trenching	\$2,795	\$970	\$15,060
Underground rehabilitation			\$11,911
Report	\$1000	\$1000	

Notes:

1. Trenching: 131 equipment hours used from Aug 26 - September 16, 1994.
2. Trenching cost breakdown: 80% of the physical work was done on Crown Grants; trenching costs are prorated accordingly. Other trenching costs split between assessment years (Anniversary date - September 16, 1994).

APPENDIX D. SAMPLE DESCRIPTIONS AND ASSAY CERTIFICATES

SAMPLE DESCRIPTIONS

Sample	Location	Description	Au (OPT)	Ag (OPT)
18410	Stevens No. 1 adit (dump)	golden quartz, open fractures & vugs, clots of galena	0.202	6.47
18411	subcrop, trench floor, trench 94-2	limonite stained quartz, open casts & vugs, minor galena	0.018	0.93
18412	float on roadcut, 20 m north of T94-2	foliated granodiorite cut by quartz veins	0.002	<0.01
18413	trench wall T94-3	bull white quartz, 5 cm wide, minor arsenopyrite	0.002	0.09
18414	old pit north of T94-5	blocks of golden yellow to gray quartz, minor arseno. and galena	0.002	0.19
18415	talus sample, L4960N 4800E	bull white quartz, 10% open casts, limonite in fractures	0.012	3.13
18416	trench 94-5, 40cm chip sample on main vein	vuggy white quartz vein, limonite in cavities	0.057	1.87
18417	trench 94-5, 15cm chip on second vein	glassy white quartz vein, 5% open vugs and cavities, patches of pyrite	0.019	1.99

D-3

18418	trench 94-8, float from trench floor	white to glassy fine grained quartz vein, 2% open casts	0.024	0.78
BH94SNI-1G	Sample from floor of Stevens No. 1 drift	Massive coarse grained quartz w/galena, pyrite	1.241	17.85
BH94SNI-2G	Sample from floor of Stevens No. 1 drift	Massive coarse grained quartz w/galena, pyrite	1.437	16.74
BH94SNI-3G	Sample from back of Stevens No. 1 drift in stope	Massive coarse grained quartz w/galena, minor pyrite	0.031	2.31
BH94SNI-4Q	Sample from back of Stevens No. 1 drift in stope	Quartz with minor disseminated galena and pyrite	0.013	0.26
BH94SNI-5Q	Sample from back of Stevens No. 1 drift in stope	Limonitic quartz	0.023	0.70



ASSAY CERTIFICATE



Graham S. Davidson File # 94-3740
1 Boswell Crescent, Whitehorse YT Y1A 4T2

SAMPLE#	Ag** oz/t	Au** oz/t	
18410	6.47	.202	<i>Adit #1 - dump sample, 4% arsenopyrite in gtz.</i>
18411	.93	.018	
18412	<.01	.002	
18413	.09	.002	
18414	.19	.002	
18415	3.13	.012	<i>Main vein, top branch on Mt. Stevens park 6" vein on " " " " "</i>
RE 18415	3.08	.011	
18416	1.87	.057	
18417	1.99	.019	
18418	.78	.024	

AG** & AU** BY FIRE ASSAY FROM 1 A.T. SAMPLE.

- SAMPLE TYPE: ROCK

Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: OCT 17 1994

DATE REPORT MAILED: *Oct 25/94*SIGNED BY: *C. Long* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

23/01/95

Assay Certificate

Page 1

Gary Lee

WO#27781

Sample #	Au oz/ton	Ag oz/ton
BHSNI-1G	1.241	17.85
BHSNI-2G	1.437	16.74
BHSNI-3G	0.031	2.31
BHSNI-4Q	0.013	0.26
BHSNI-5Q	0.023	0.70

Certified by