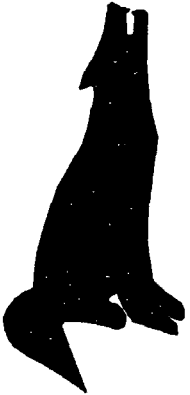


YEIP
96-050
1996



IM

AMEROK GEOSCIENCES LTD.

MOUNTAIN HIGHGRADE MINES LTD.

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

Carmen C. Lee, B.Sc.

QUARTZ CLAIMS

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

96-050
YMIP No.: ~~97-018~~

Work performed: July 31, 1996 - February 28, 1997

Mining District: Whitehorse

NTS: 105 D/3

Location: 60°14'N 134°39'W

Date: February 28, 1997

SUMMARY

A underground rehabilitation program was conducted on the Buffalo Hump Property on Mount Stevens from July 31, 1996 to February 28, 1997. Continued blasting, drilling, and mucking of Stevens No. 1 Drift resulted in the discovery of a new mineralized quartz vein along with a mineralized rhyolitic unit. Mineralization consists of galena, pyrite, and chalcopyrite associated with limonitic quartz, chloritic schist, and metamorphosed granodiorite.

TABLE OF CONTENTS

INTRODUCTION	1
PROPERTY	1
LOCATION AND ACCESS	2
PHYSIOGRAPHY	2
REGIONAL GEOLOGY	2
UNDERGROUND REHABILITATION	4
CONCLUSIONS	4
RECOMMENDATIONS	5
REFERENCES CITED	6
APPENDIX A. STATEMENT OF QUALIFICATIONS	7
APPENDIX B. PROJECT LOG	8
APPENDIX C. SAMPLE DESCRIPTIONS	10

1.0 INTRODUCTION

This report describes a program of underground rehabilitation on the Buffalo Hump Property, Wheaton River area, southern Yukon Territory between July 31, 1996 to February 28, 1997.

2.0 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 (Figure 2):

<u>Claims</u>	<u>Grant Number</u>	<u>Expiry Date</u> ¹
Tempus Fugit 1-4	YB46407-YB46410	September 16, 2004
Tempus Fugit 6-16	YB46411-YB46423	September 16, 2004

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, YT Y1A-5V8	50%
Main Street Mining Ltd. #11&12, 4078-4th Ave. Whitehorse, YT	50%

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

3.0 LOCATION AND ACCESS

The Buffalo hump Property is located at 60°14 N 134°39' W on Mount 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

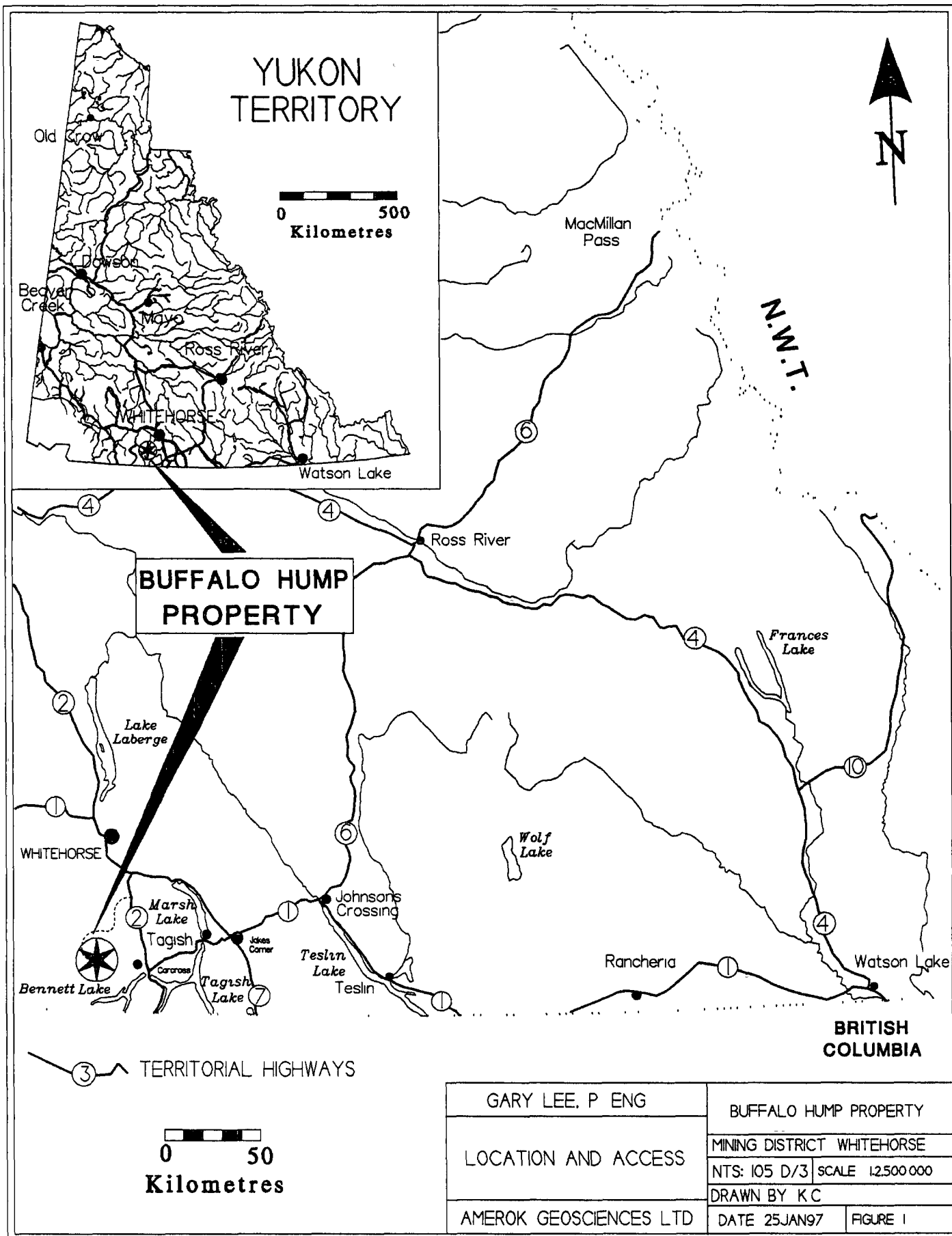
A four wheel drive vehicle is required on the Partridge Creek Road. During the winter months, the route is ploughed from Whitehorse to the Wheaton River Bridge.

4.0 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 Mount Stevens, a rounded, north trending ridge on the west side of the Wheaton River valley. Elevations on the property range from 4300 feet at Stevens Creek on the west side of Mount 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 mount Stevens. Snowfields on the 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.

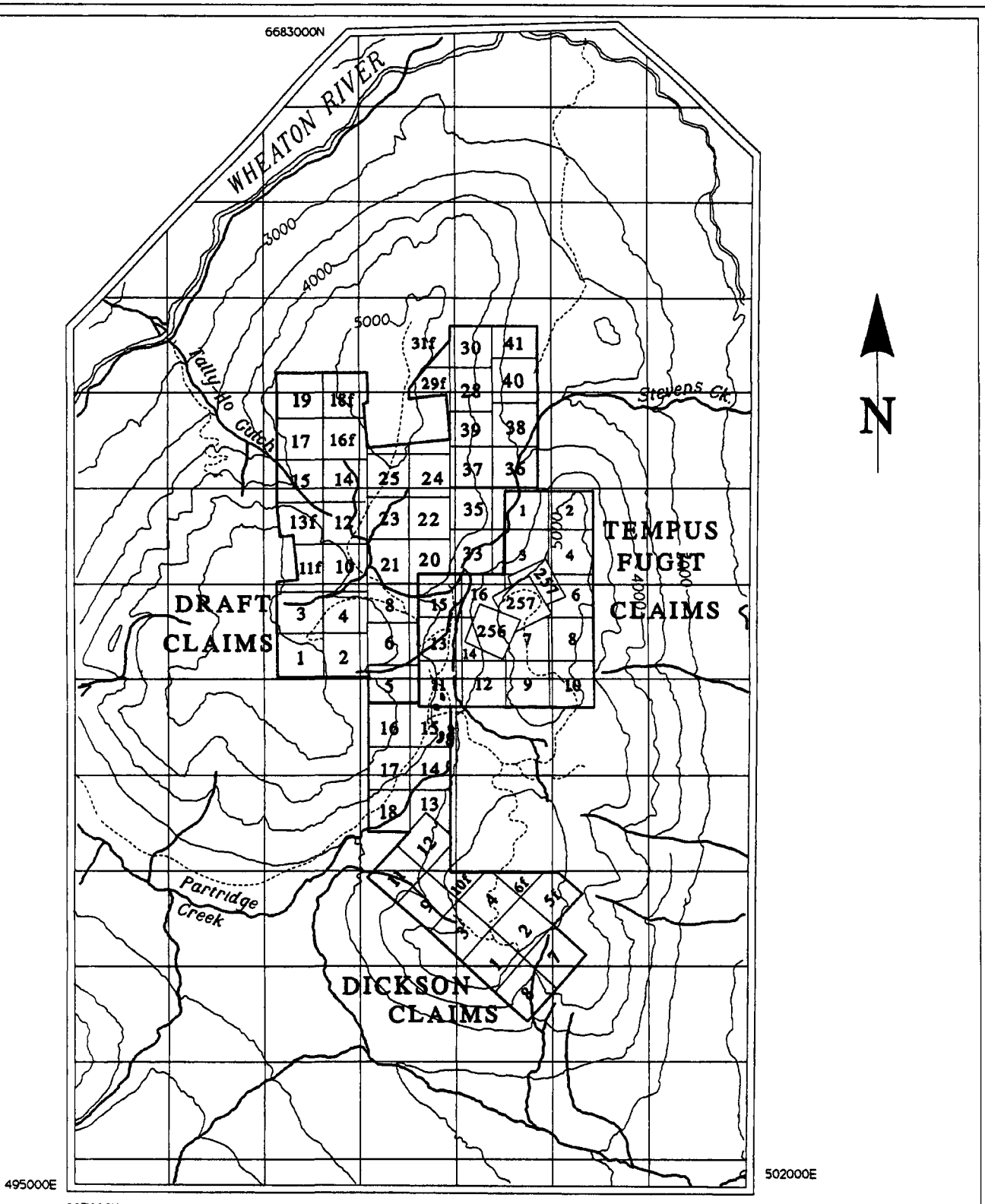
5.0 REGIONAL GEOLOGY

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 and McFeely, 1987). The Whitehorse trough is a relict fore-arc basin with clastic



BUFFALO HUMP PROPERTY

GARY LEE, P ENG	BUFFALO HUMP PROPERTY	
LOCATION AND ACCESS	MINING DISTRICT WHITEHORSE	
	NTS: 105 D/3	SCALE 1:2,500,000
AMEROK GEOSCIENCES LTD	DRAWN BY KC	
	DATE 25JAN97	FIGURE 1



ELEVATIONS IN FEET

GARY LEE. PENG		CLAIMS DICKSON, DRAFT TEMPUS FUGIT	
TALLY-HO PROPERTY LOCATION MAP		MINING DISTRICT WHITEHORSE	
		NTS 105D3	SCALE 160 000
		DRAWN BY	
AMEROK GEOSCIENCES LTD		DATE 27JAN97	FIGURE 2

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.

Regional mapping indicates that the Mount 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 BC 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 Mount McIntyre area. Near the Buffalo Hump Property, the zone is up to 4 km wide, strikes 145°, and dips 40° to 70° to the 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 Mount 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 (Mount Wheaton)
- b. Metamorphic veins (Odd Vein)
- c. Mesothermal veins (Mount Stevens, Tally-Ho, Legal Tender)
- d. High Level Quartz-rich Epithermal veins (Silver Queen)

Most of the veins in the Mount Stevens area are galena-rich mesothermal quartz sulphide veins. These include the showings on Mount Stevens proper (Acme, Buffalo Hump, Midnight) as well as others to the south and north (Tally-Ho, Legal Tender, Mount 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 Mount 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).

6.0 UNDERGROUND REHABILITATION

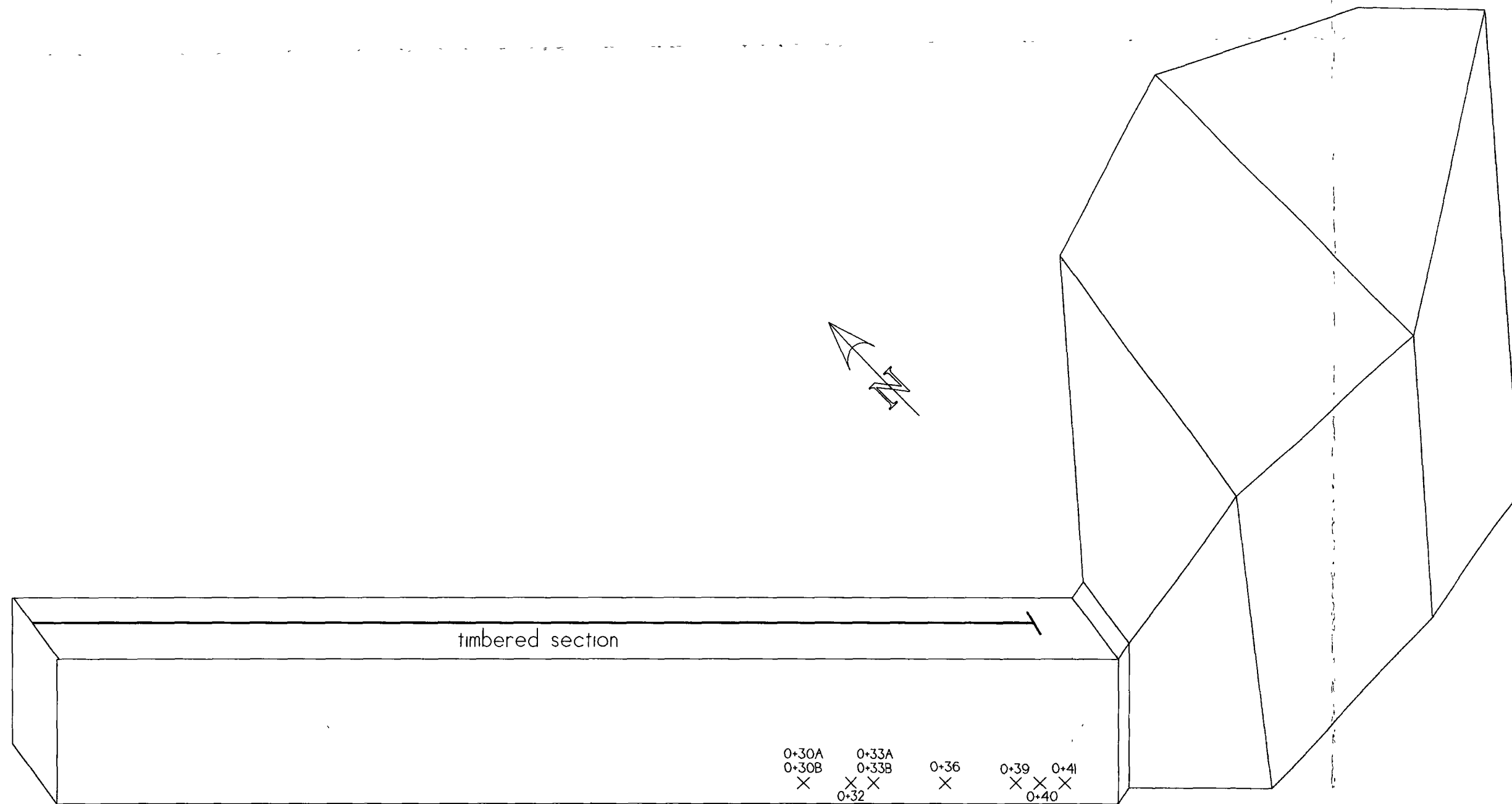
A program of underground rehabilitation and exploration was initiated in the fall of 1994. Access roads to the Stevens No. 1 and 2 drifts below the summit and to the Sunrise drift north of the summit were constructed together with compressor stations and camp (trailer) pads.

The 1996-1997 program completed drilling and blasting to 0+42 feet through a frozen cave of ice, muck, rock, and old timber. The adit was also timbered to 0+40 feet. At 0+42 feet, a upper level room (20 feet high by 8 feet wide and 20 feet long) was broken in to (Figure 3). This room trends at approximately right angles to the drift and seems to follow possibly a quartz vein and/or a rhyolitic unit containing specks of galena. The room has been mined by old time miners and is presently coated with ice crystals. Muck samples were collected at 3 feet intervals and are currently being assayed (see Appendix D. for sample descriptions). This room will have to thaw out this summer before further sampling and take place (see following page page for photographs from the 1996-1997 program).

7.0 CONCLUSIONS

The results of the 1996-1997 exploration program accomplished the following:

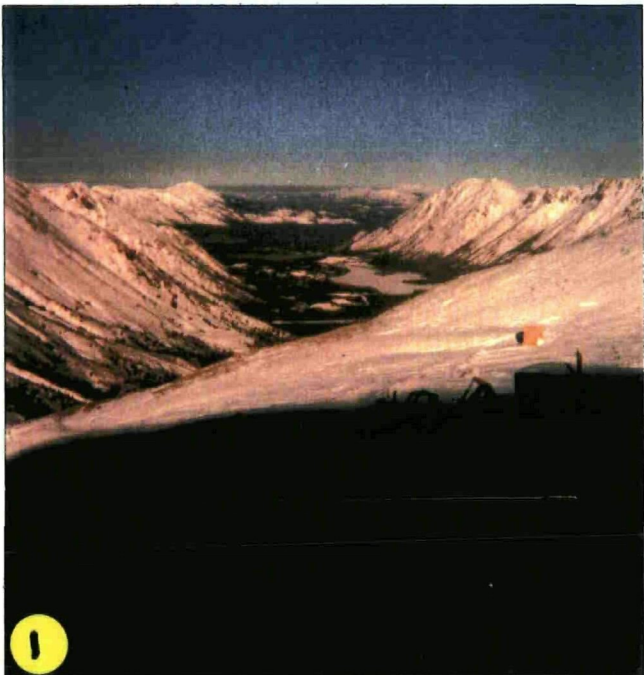
- a. Discovery of a new mineralized vein trending approximately north to northeast at the end of the underground adit.



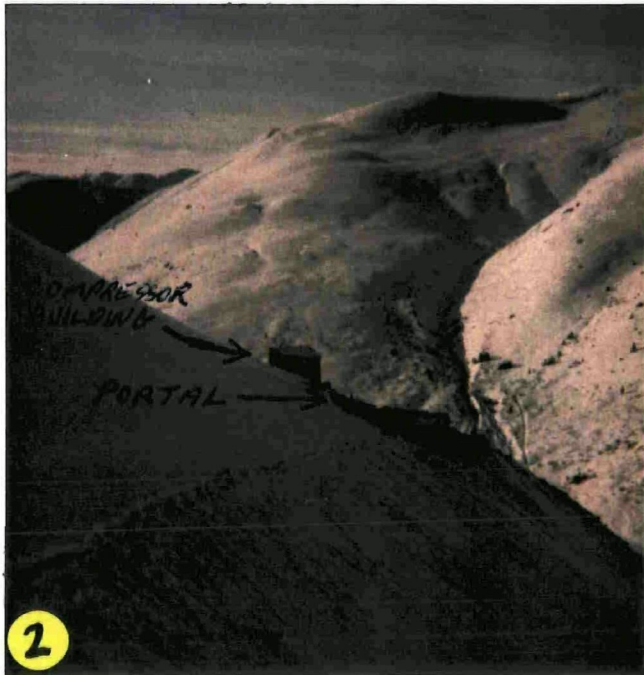
portal 0+00'



BUFFALO HUMP PROPERTY	CLAIMS TEMPUS FUGIT
UNDERGROUND SURVEY	MINING DISTRICT WHITEHORSE
3-D DRIFT PLAN	NTS 105 D/3 SCALE 1:60
AMEROK GEOSCIENCES LTD.	OPERATOR. G Lee/R Stack
	DATE 28FEB97 FIGURE 3



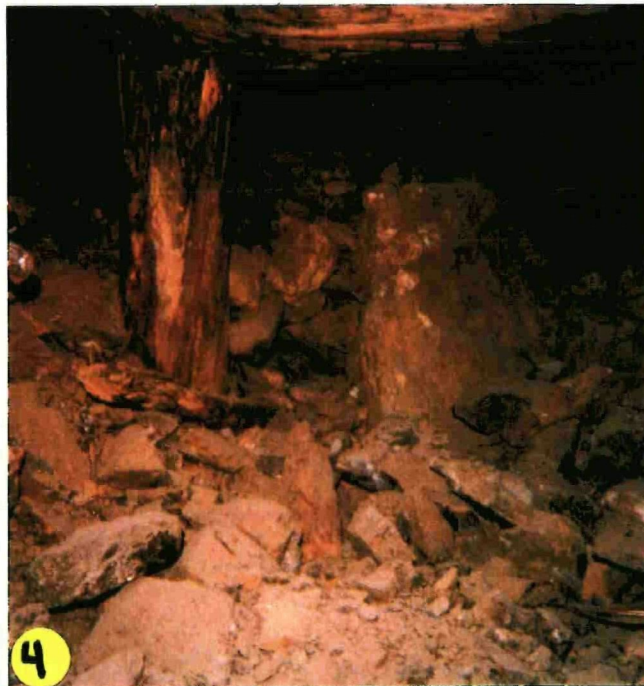
1



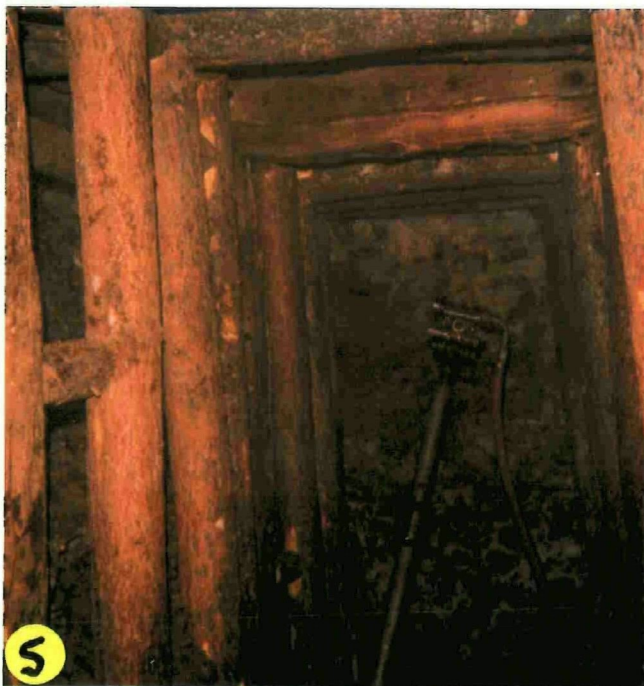
2



3



4



5



6

BUFFALO HUMP UNDERGROUND PROJECT - to FEB. 27/97. 1. Mount Stevens Camp, Annie Lake to N. 2. Looking SW to compressor shack and portal. 3. Underground portal. Mucking with wheelbarrow on timber run (2 x 10 plank). 4. Before timbering. 5. After timbering. Drilling off a blast round with jackleg at 0+37 ft. 6. Drilling and blasting floor for wheelbarrow run.

8.0 RECOMMENDATIONS

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

- a. Underground rehabilitation should be continued to determine the lateral extent of the veins and to locate additional high grade gold mineralization.

Respectfully submitted,
MOUNTAIN HIGHGRADE MINES LTD.

Carmen C. Lee, B.Sc.

References Cited

- Doherty, R.A. and C.J.R. Hart (1989) Preliminary geology of Fenwick Creek (105 D/3) and Alligator Lake (105 D/6) 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/2, 3, 6, 7, & 11) INAC Open-File 1990-4, Indian and Northern Affairs Canada.
- MacLean, T.A. (1914) Lode Mining in Yukon. Ottawa: Mines Branch.
- Mihalynuk, M.G. and K. Mountjoy (1990) Geology of the Tagish Lake Area (Edgar Lake 104 M/8 and Warm Creek 104 M/9E) in: Geological Fieldwork 1989, British Columbia Ministry of Energy, Mines and Petroleum Resources, Paper 1989-1, p. 293-310.
- 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, Carmen C. Lee of Whitehorse, Yukon Territory, certify that:

1. I obtained a Bachelor of Science Degree in Geology from the University of Calgary in 1996.
2. I have been employed in mineral exploration and geophysical research since 1996.

Carmen C. Lee, B.Sc.

Whitehorse, Yukon Territory
February 28, 1997

APPENDIX B. PROJECT LOG

<u>Date</u>	<u>Activity</u>
Jul 31	Compressor hauled to Buffalo Hump camp (G. Lee/M. Power)
Aug 1-2	Repaired road to adit, built additional 100 feet of road for compressor, set up compressor (G. Lee)
Aug 3-7	Preparation of road, camp, compressor, and portal for the winter field season (G. Lee/M. Power/ J. Boyce)
Aug 16	Preparing gear in town for underground rehab (G. Lee)
Aug 18	Gear hauled to Buffalo Hump (G. Lee)
Sept 10	Mobe to Buffalo Hump, three loads of logs were hauled to camp (G. Lee/C. Lee/ R. Kamnitzer)
Nov 7-8	Clearing out and extending portal, opened up underground and clearing out muck, snow, ice, rock (G. Lee)
Nov 10	Start up compressor, start blasting (G. Lee)
Jan 20-23, 1997	Mobe to Buffalo Hump, preparation of compressor and camp (G. Lee)
Jan 24-28	Blasting, drilling, and mucking (G. Lee)
Jan 29	Timbered caps, collar braces, and screened (G. Lee)
Jan 30	Demobe to Whitehorse to pickup supplies (G. Lee)
Feb 2	Mobe back to Buffalo Hump
Feb 3-13	Blasting, drilling, mucking, and timbering (G. Lee)
Feb 14	Demobe to Whitehorse for supplies and a helper

Feb 18	Mobe to Buffalo Hump with two snowmobiles (G. Lee/R. Stack)
Feb 19-26	Continued blasting, drilling, mucking, and timbering (G. Lee/R. Stack)
Feb 27	Demobe back to Whitehorse

Personnel

Gary Lee
 Box 5348
 Whitehorse, YT
 Y1A-5L5

Carmen Lee
 404 Hoge St.
 Whitehorse, YT
 Y1A-1W2

Ruth Kamnitzer
 74 Harrington Cres.
 Willowdale, ONT
 M2M-2Y5

Ron Stack
 Mile 2.5 Annie Lake Road
 Whitehorse, YT

Mike Power
 Site 6, Comp 11
 Whitehorse, YT
 Y1A-5V8

Jeff Boyce
 1797 West 13th Ave.
 Vancouver, BC
 V6J-2H2

Total Man Days

G. Lee	35 days	M. Power	6 days
R. Stack	10 days	R. Kamnitzer	1 day
C. Lee	3 days	J. Boyce	5 days

APPENDIX C. SAMPLE DESCRIPTIONS

SAMPLE NUMBER	DESCRIPTION
97BH-U 0+30A	rusty, vuggy yellowish-white quartz with galena and pyrite
97BH-U 0+30B	heavily weathered rusty granodiorite and quartz with minor amounts of pyrite, chalcopyrite, and galena; few vugs
97BH-U 0+32	heavily weathered reddish-orange quartz diorite with trace amounts of galena; minor amounts of oxidized minerals
97BH-U 0+33A	white massive quartz abundant galena and minor amounts of pyrite and limonite; slightly weathered and vuggy
97BH-U 0+33B	quartz and metamorphosed granodiorite with galena, pyrite, chalcopyrite, and limonite; coxcomb texture
97BH-U 0+36	rusty, vuggy white quartz with metamorphosed granodiorite and ?chlorite schist with minor amounts of limonite, galena, pyrite, and chalcopyrite;
97BH-U 0+39	dark fine grained volcanic rock with quartz veinlets; trace amounts of pyrite and possibly other sulphides; slightly weathered
97BH-U 0+40	white quartz and metamorphosed granodiorite; heavily limonitic weathered and vuggy; minor amounts of galena present
97BH-U 0+41	white quartz, limonite weathered, with galena present throughout