

GEOLOGICAL REPORT ON THE MASTT PROPERTY,
CARIBOO MINING DIVISION, NTS 93G/1E

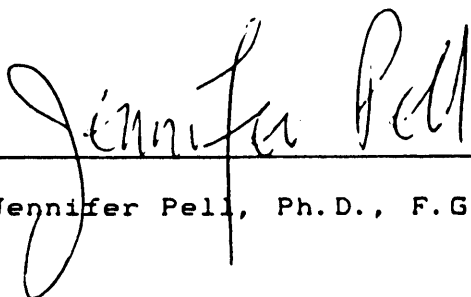
by
Jennifer Pell, Ph.D., F.G.A.C.

1. SUMMARY AND RECOMMENDATIONS

The Mastt property is located 26 kilometres east of Quesnel in the Cariboo Mining Division. The property is located in the Quesnel Trough, a belt of Lower Mesozoic rocks which hosts two important gold deposits and numerous other significant gold occurrences.

Work on the property has revealed a number of unmapped exposures of syenite, volcanic and associated sedimentary rocks. In addition, a fault zone has been located through preliminary rotary drilling.

On the basis of geology and results of the preliminary drilling program a two phase exploration program is recommended. This program is designed to test for precious metals in the vein, porphyry and massive sulphide environments. The program should include airborne magnetometer and VLF-EM surveys over the entire MASTT RESOURCES INC. holdings to outline the geology of the bedrock units and faults in drift covered areas, and to test for potential massive sulphide conductors. A preliminary IP survey should be run in the vicinity of the old highways pit to test for areas of disseminated sulphide enrichment and to test the feasibility of running such a survey in the prevailing winter conditions. If there is good response in the IP test survey, a more extensive IP program should be undertaken in the vicinity of the recognized syenite bodies. The second phase of the project should involve a more extensive drill program. Additional rotary drilling should be begun to examine any geophysical anomalies and to better define the main syenite target on Mastt 18. Diamond drilling is necessary to better understand the geology in the pit area, where visible gold has been encountered in rotary drill cuttings and should be used as follow-up to any mineralized areas located by rotary drilling. The total cost on this project is \$719,070.



Jennifer Pell, Ph.D., F.G.A.C.

2. INTRODUCTION

From September 1986 until the present, the author has been involved in mapping, prospecting and supervision of a preliminary drill program on the MASTT RESOURCES INC. properties. Previous visits to the properties were made in the fall of 1984. This report is based on field examination, and a study of the available literature.

3. PROPERTY, LOCATION AND ACCESS

The MASTT RESOURCES INC. mineral property consists of 330 non-overlapping units (Table 1) located approximately 26 kilometres east of Quesnel, British Columbia, in the Cottonwood area, Cariboo Mining Division (Figure 1). The claims are traversed by Highway 26 and numerous logging roads. All parts of the claims are easily accessible. Elevations on the property range from 760 to 1000 metres and the terrain is gently sloped to rolling.

The area is predominantly underlain by a sequence of mixed volcanic and sedimentary rocks of Upper Triassic and possibly Lower Jurassic age, which strike northwesterly (Tipper, et. al., 1979). In simplified terms, the area can be broken into three lithologic belts. On the western half of the claims volcanic rocks predominate, with minor sedimentary strata present (Figure 2). Two syenite porphyry intrusions crop out in this area. On the eastern half of the claim Triassic sedimentary rocks, dominantly black argillites, are predominant. These rocks occur in a northwest trending belt known as the Quesnel Trough (Campbell and Tipper, 1970), and are separated from metamorphosed Paleozoic strata, which crop out in the northeastern corner of the MASTT property, by a major thrust fault.

In addition to MASTT's mineral properties, the company holds 11 placer leases in the Cottonwood area and three placer leases in the Wells/Barkerville area.

4. REGIONAL ECONOMIC GEOLOGY

Exploration has been active in the Quesnel Trough for the last few years and has resulted in a number of interesting finds. DOME'S Quesnel River (QR) property, located near Likely, approximately 50 kilometres southeast of the MASTT property, contains a potential large tonnage - low grade deposit. Pittable reserves, as of March 1985 were estimated at 862,000 tonnes grading 6.8 grams gold per tonne (0.21 oz/ton) (The Northern Miner, March 7, 1985, p. B28-29). Mineralization occurs in altered Upper Triassic volcanic rocks near a zoned alkaline (syenite) porphyry; ie. in rocks equivalent to those on the western part of the MASTT claims.

MOUNT CALVERY RES. and their affiliate TECK CORP. have outlined a number of gold targets on their Spanish Lake property, located a few kilometres east of the QR property. Two main northwest trending belts of mineralization have been discovered

approximately one kilometre north of the first discovery (Figure 2). As at the first locality, the syenite has intruded andesitic volcanic rocks which have been slightly altered and contain some pyrite mineralization. A large syenite porphyry stock crops out in the southwest corner of the Mastt 18 claim, to the south of the syenite dyke (Figure 2). The stock has intruded intermediate to mafic volcanic rocks and argillites. Visible sulphide mineralization and weak alteration occurs both within the margins of the syenite stock and in the surrounding volcanic rocks. The potential for QR-type mineralization is high in both these two areas.

A third target area occurs centred on an infilled Highways pit, located south of the Cottonwood bridge, on the Henric 3124 2 post claim. Prospector H. Marthinsen obtained a sample of mineralized quartz vein from the pit while it was being worked by the Highways Department in 1980. This sample assayed 59.16 grams per tonne gold (1.42 oz/ton) and 393.27 grams per tonne silver (9.44 oz/ton). This site has been reclaimed by the Highways Department and the only evidence of the bedrock geology exists in the large tonnage of road ballast dumped in the terraces below Highway 26 at the approach to the new Cottonwood River bridge. A variety of rock types exist in this ballast, primarily argillites, tuffaceous argillites, and intermediate volcanics. Two varieties of quartz veining exist. One is narrow, white quartz veins and the second is chalcedonic quartz and carbonate cutting altered, brecciated andesitic volcanic rocks.

The eastern portion of the area is underlain predominantly by argillitic rocks. The similarity in geological environment to the MOUNT CALVERY Spanish Lake property suggests that this area should be examined for Madre-type sediment hosted gold mineralization. The MASTT claims surround the PUNDATA discovery and the rich Toop Nugget Mine (Figure 2). Strong geophysical anomalies associated with the PUNDATA discovery trend towards the Mastt 10 and 12 claims, which suggests that mineralization may extend on to these properties.

6. PROPERTY EXPLORATION

Prior to September of 1986, exploration of the MASTT Property had been limited to minor geological mapping, prospecting, some trenching and two exploratory cable-tool drill holes, on Mastt 13. On October 14, 1986 a major rotary drilling program of over 1500 metres was begun to test the currently recognized geological targets. This program is now near completion, with approximately 1200 metres having been drilled. The first hole, on Mastt 12, north of the Toop Nugget mine, intersected black argillites with zones of pyritization and abundant quartz veining. Holes 2 to 5 were drilled east of the Cottonwood River, on the Henric 2 post claims, along the syenite dyke. All intersected volcanic rocks containing zones of intense silicification, argillic alteration and pyrite mineralization. Three holes were spotted on the old Highways pit (Henric claim), south of the Cottonwood River, and a fourth is currently being drilled in that area. The holes encountered altered dark grey, green and black volcanic rocks and

argillites with sulphide rich zones and zones of stockwork chalcedonic quartz veining. Visible gold was observed in six ten foot intersections in one of the holes, and in one ten foot intersection in each of the other two holes in that area. Additional holes are planned in the pit area (Henric claim). Three holes were drilled in the vicinity of the syenite stock (on Mastt 18). One of these holes encountered mineralized syenite with thick (2 metres) quartz veins; the other two holes intersected pyritized and altered volcanic and clastic rocks. Assaying and bulk cyanide leach tests are currently underway to assess the precious metal potential of the area.

7. CONCLUSIONS

Examination of the MASTT properties revealed the occurrence of sedimentary and volcanic rocks of the Upper Triassic to Lower Jurassic Takla Group. Two syenite intrusions, which do not appear on the government maps (Tipper, et. al., 1979) were observed on the claims.

Precious metal mineralization is not observable on the surface; however, several features of the geology, anomalous geochemical response from altered volcanic rocks and results of the preliminary drilling program (visible gold in drill cuttings) suggests the potential for gold to occur in a number of environments. Favourable geology and lack of previous extensive exploration suggests that considerable work is warranted of the property.

8. REFERENCES

- Campbell, R.B. and Tipper, H.W. (1970) Geology and mineral exploration potential of the Quesnel Trough, B.C.; CIM Bulletin 63, pp. 785-790.
- Schmidt, U. and Copeland, D. (1984) Geologic Report on the Mastt, Henric and Osa Claims; Company Report.
- Schmidt, U. and Copeland, D. (1986) Report on the Mastt Property, Cariboo Mining Division; Company Report.
- Tipper, H.W. et. al. (1979) Parsnip River, British Columbia; Geological Survey of Canada Map 1424A.

9. ESTIMATE OF COSTS

PHASE 1

Airborne Mag and VLF-EM Survey	\$ 70,000
IP Test Survey	\$ 7,500
Follow-up IP Survey (dependant on test results)	\$ 30,000

PHASE 2

Rotary Drilling (5000 feet at \$21 per foot)	\$ 105,000
Diamond Drilling (NQ, 7500 feet at \$28 per foot)	\$ 210,000
Cat and Trucking (D7, \$85 per hour, for road building, drill pads, drill moves etc.)	\$ 55,000
Line cutting, falling for road preparation etc.	\$ 15,000
Core Bagger (with rotary drill) for 2 months	\$ 5,000
Core Shack Rental and Utilities (\$650/month)	\$ 1,300
Field Supervisor Wages (2 months)	\$ 9,000
Geologist (2 months)	\$ 9,000
Geologists Assistant (2 months)	\$ 5,000
4x4 Pick Up Rental and Fuel	\$ 4,500
Accommodations	\$ 2,560
Board (3 people \$25 per day)	\$ 4,500
Travel	\$ 2,080
Small Equipment Purchases and Rental	\$ 3,000
Assaying	\$ 5,000
Rock Geochemistry	\$ 5,000
Bulk Cyanide Leach Tests	\$ 10,000
Other Metallurgical Testing	\$ 5,000
Shipping	\$ 5,000
	<hr/>
	\$ 568,440
Contingency 10%	<hr/>
	\$ 56,840
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	\$ 625,280
Administration 15%	<hr/>
	\$ 93,790
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TOTAL	\$ 719,070


APPENDIX A

CERTIFICATE OF QUALIFICATIONS

I, Jennifer A. Pell, of #4, 1719 Yew Street, Vancouver, British Columbia, do hereby certify that:

1. I am a graduate of the University of Ottawa with a Bachelor of Science Honours degree in Geology, 1979.
2. I am a graduate of the University of Calgary with a Doctorate of Philosophy degree in Geology, 1984.
3. I am a Fellow of the Geological Association of Canada.
4. I was employed as an Assistant Professor in the Department of Geology, University of Windsor, teaching Economic Geology and Structural Geology from July, 1985 to July, 1986
5. I have been engaged in mineral exploration and geologic mapping in the Northwest Territories, Manitoba and British Columbia periodically since 1977.
6. My experience in the Cariboo Mining Division dates back to 1982 and includes a four month period during 1983 engaged in bedrock mapping and mineral exploration in the Cottonwood area.
7. This report is based on my knowledge of the properties and local geology as well as a study of available literature.

Vancouver, B.C.
Dec. 8, 1986


Jennifer Pell, Ph.D.

- 733-1278



MASTT RESOURCES INC.			
MASTT PROPERTY		CARIBOO M.D.	
LOCATION			
SCALE	DATE	N.T.S.	FIG. NO
1:7,000,000	FEB '86	93G/1	1

CALB...

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Table 1 MASTT MINERAL CLAIMS

CLAIM	TYPE	# OF UNITS	RECORD NO.
ORIGINAL HOLDINGS			
<u>Block 1</u>			
Mastt 6	mineral	9	5917
Mastt 7	mineral	16	5919
Mastt 17	mineral	12	5928
Mastt 18	mineral	15	5929
Mastt 19-23	2- post	5	5930-34
Mastt 24-25	fraction		5935-36
Mastt 26	mineral	16	5993
Mastt 27	mineral	20	5994
Henric	mineral	16	5548
Henric	2- post	10	3124-25; 3132-39
Osa	2- post	6	5251-56

Total Units 125
 minus intentional overstaking (-16)
109

PROPERTIES ACQUIRED SEPTEMBER 1985

<u>Block 1</u>			
Mastt 1	mineral	20	5912
Mastt 2	mineral	20	5913
Mastt 3	mineral	20	5914
Mastt 4	mineral	20	5915
Mastt 5	mineral	20	5916
Mastt 8	mineral	16	5919
Mastt 9	mineral	20	5920
Mastt 16	mineral	4	5927
<u>Block 2</u>			
Mastt 12	mineral	20	5923
Mastt 13	mineral	20	5924
<u>Block 3</u>			
Mastt 10	mineral	20	5921

Total Units 200
 minus overstaking (-23)
177

PROPERTIES ADDED NOVEMBER 1985

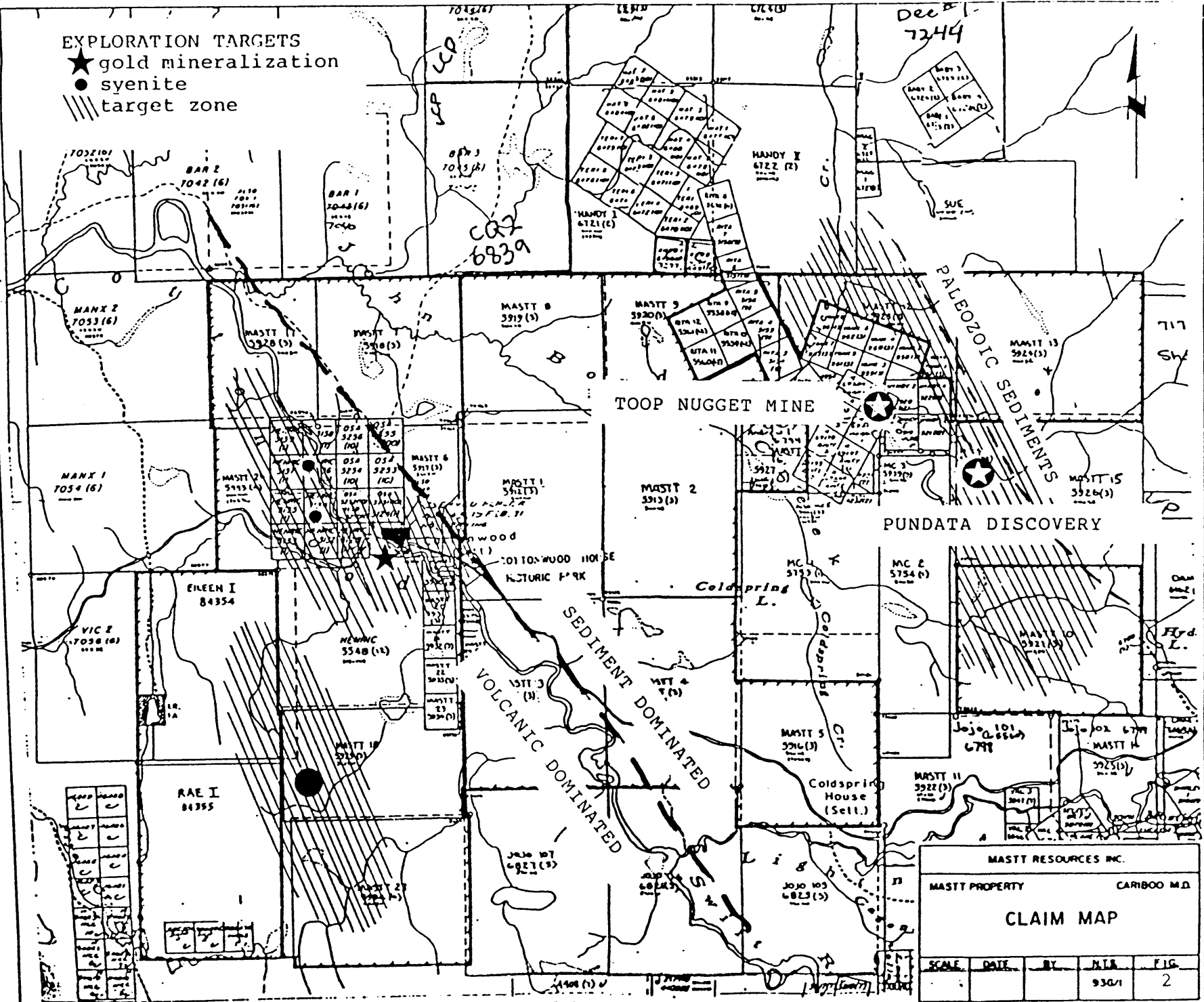
<u>Block 1</u>			
Eileen 1	mineral	20	
Rae	mineral	20	

Total Units 40

Cumulative Total 326 Units

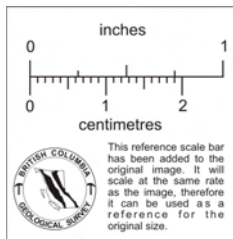
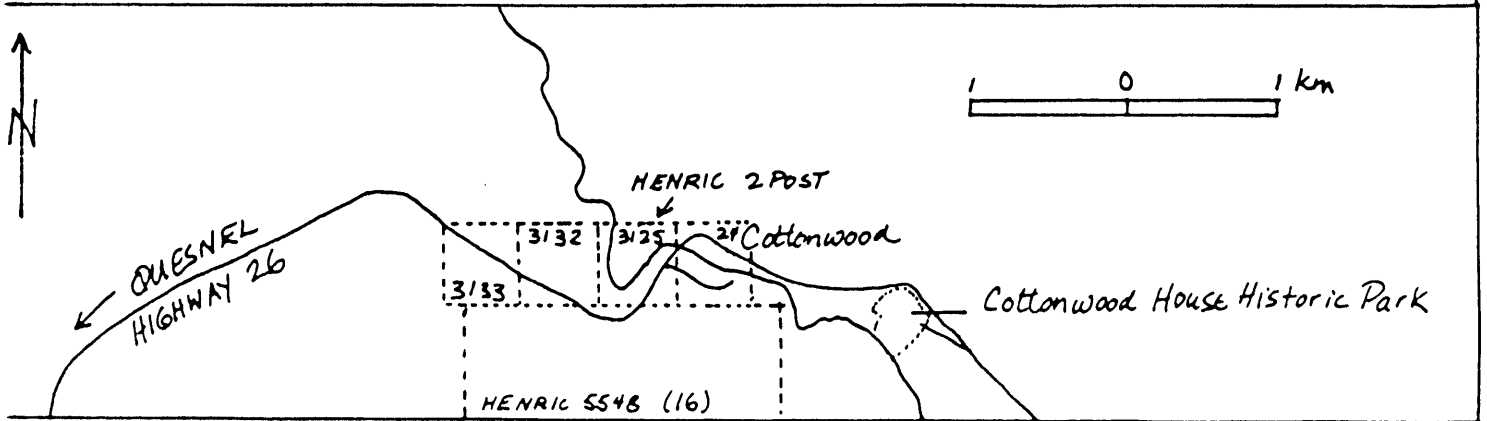
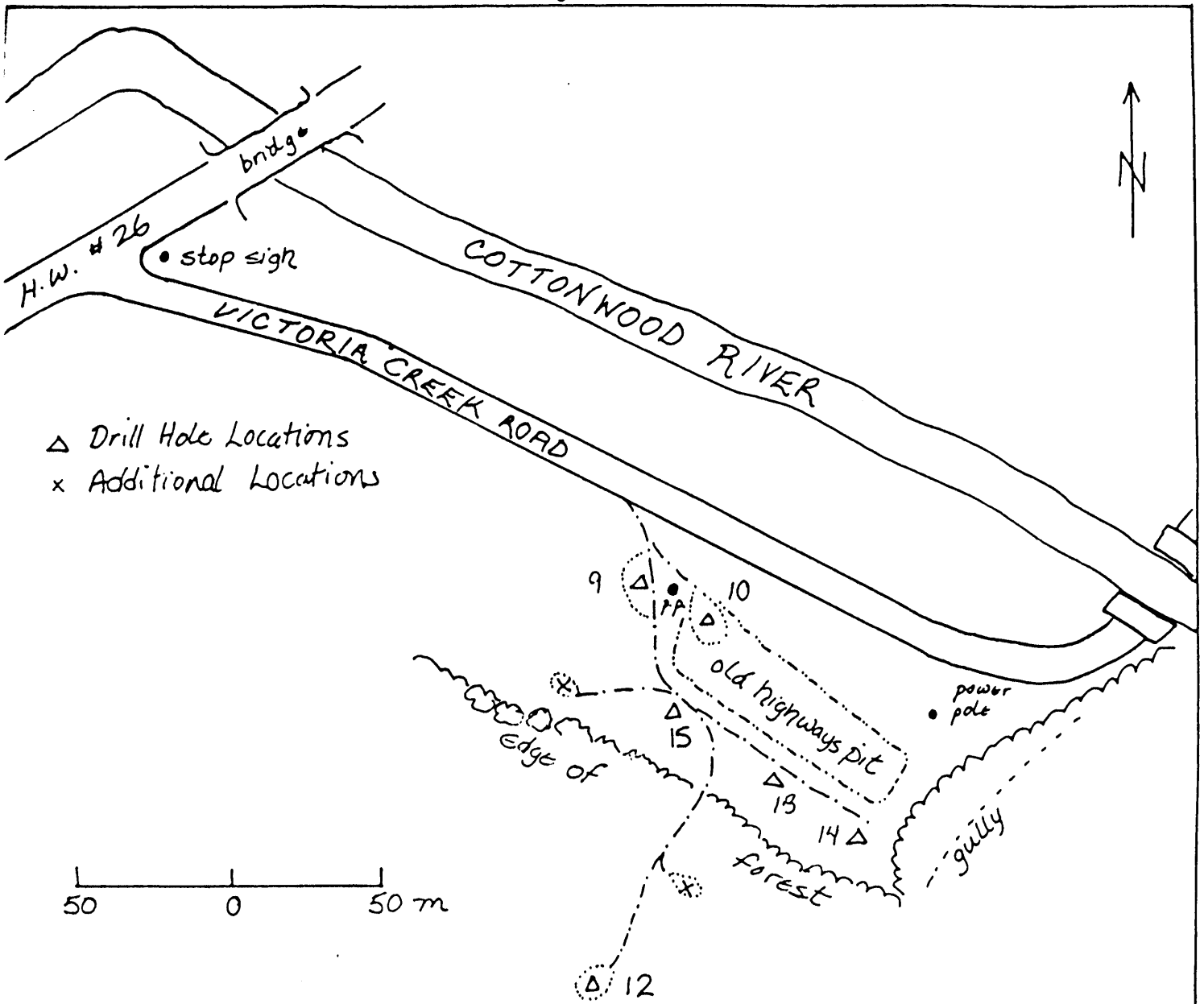
Modified from Schmidt and Copeland 1984;1986

EXPLORATION TARGETS
 ★ gold mineralization
 ● syenite
 /// target zone



MASTI RESOURCES INC.				
MASTI PROPERTY			CARIBOO M.D.	
CLAIM MAP				
SCALE	DATE	BY	M.R.	FIG.
			930/1	2

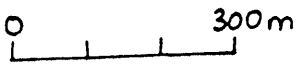
Drill Sites - Old Highways Pit Area



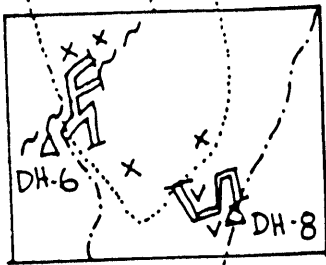
Trenches and Drill Sites Syenite Mountain

Trenches \equiv completed fall of 1984
 Grab samples • S-01
 Δ Drill Holes, fall and winter 1986
 x syenite outcrop location
 v volcanic and/or sedimentary rock outcrop

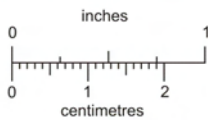
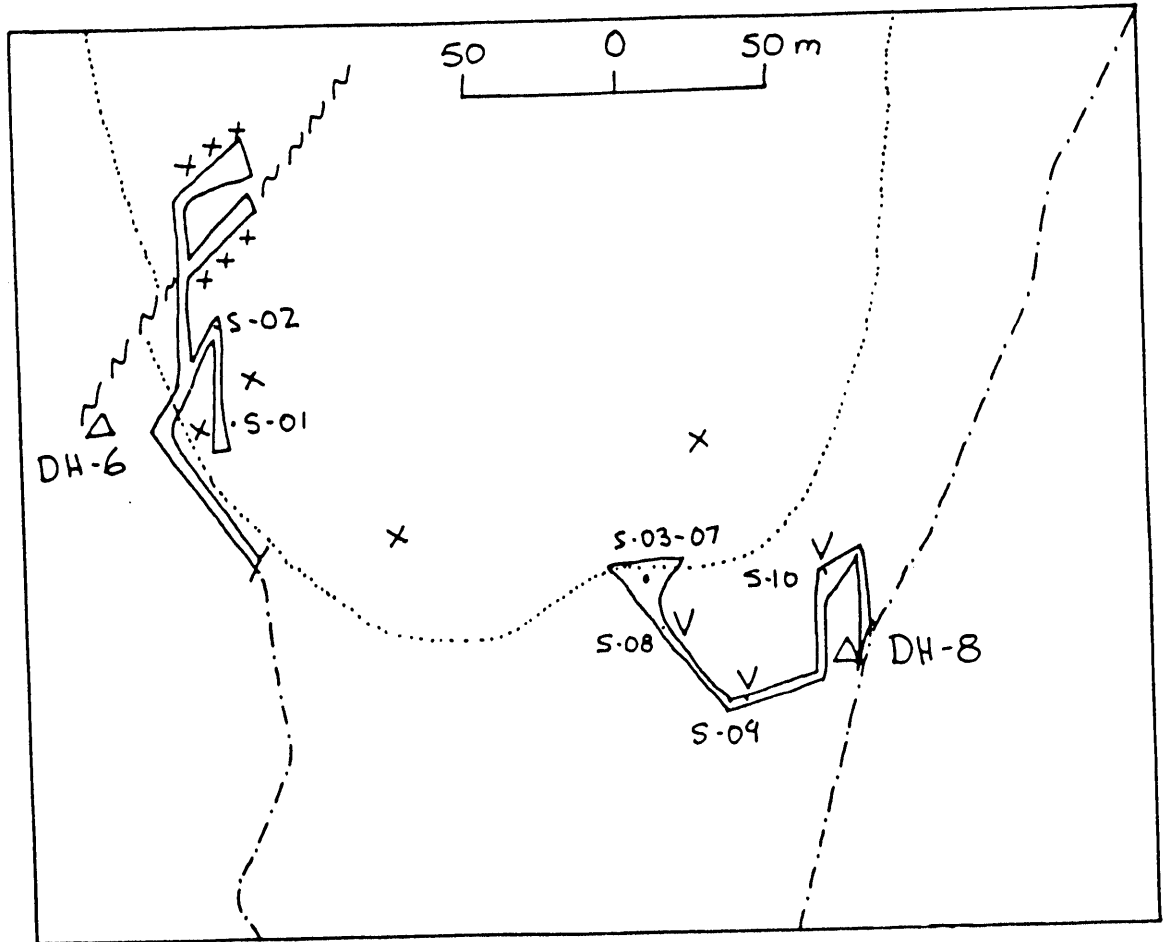
assumed boundary of syenite outcrop



1098 m to highway 26

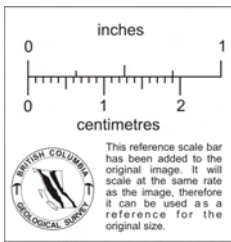
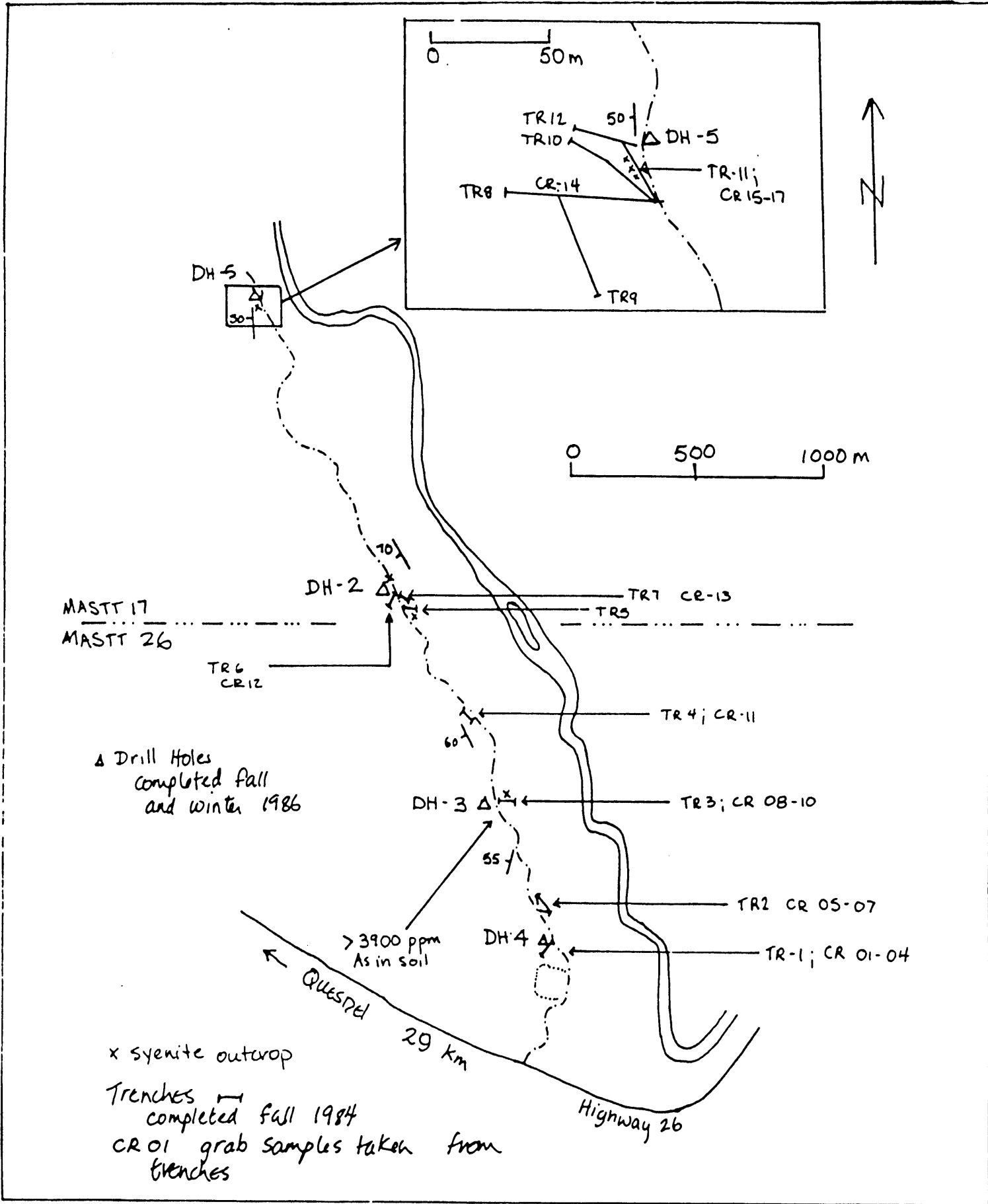


to 300rd



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Cottonwood River Area



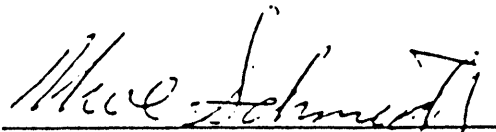
1. SUMMARY AND RECOMMENDATIONS

The Mastt property is located 26 km east of Quesnel in the Cariboo Mining Division. The property is located in Quesnel Trough, a belt of Lower Mesozoic volcanic and sedimentary rocks which host two important gold deposits and other significant gold occurrences.

An examination of the property revealed a number unmapped exposures of syenite, volcanic and associated sedimentary rocks. Limited sampling of altered rocks and nearby soils returned highly anomalous arsenic concentrations.

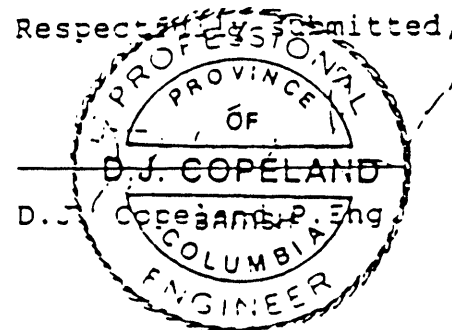
On the basis of geology, geochemistry and recent exploration activity, a two-phased exploration program is recommended. This program is designed to test for precious metals in the vein, porphyry copper, and massive sulphide environments. It should include grid geochemical surveys over previously detected anomalous geochemical sample sites. Geological mapping, grid soil sampling, magnetometer and VLF-EM surveys are recommended on Mastt 10, 12 and 13 because these claims lie on strike to Mary Creek Resources' gold discovery. Reconnaissance mapping, stream sediment geochemical sampling and prospecting are also recommended over the entire property.

The first phase is estimated to cost \$ 93,170.00 and if warranted by encouraging first phase results, a \$74,800.00 second phase program is recommended. The second phase would permit the evaluation of any anomalies by trenching. Additional funds are allotted for the selective evaluation of the remaining property area by grid geochemical sampling.

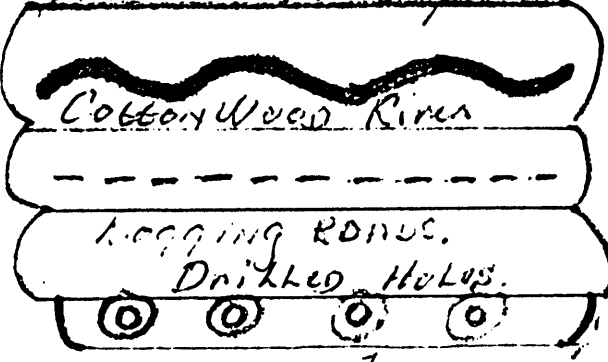


Uwe Schmidt, b.Sc., F.G.A.C.

Respectfully submitted,



BARKENVILLE H. WAY MAG



MNES.

MNES.

Henny's MNE.
Syenite MNE.

4-S

3-S

2-S

1-S

1W
11S

2W
17S

3W
11S

4W
11S

3-S
1W

Henny's CLAIM 3-2

Fault Zone

1-S

#6

#300

#13

#12

#6

#7

#4

#3

#2

#5

INIT

POST

LD BRIDGE

New Bridge & Road

Cottonwood River