

GETTY CANADIAN METALS, LIMITED



MACMILLAN JOINT VENTURE
ASSESSMENT REPORT

Title: Geology, Soil Geochemistry & Geophysics - Grid 11 East

Author: C. W. Payne

Date: August, 1981

Commodities: Lead, Zinc, Silver

Location: Name of Claim Group - Sue Claims
Claim Sheet Numbers - 105L, ~~10~~, 15
Co-ordinates - Latitude 62°49'N
Longitude 135°00'W

Date Work Was Done: May - June, 1981

090853

This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of

\$ 5,184.80

~~Resident Geologist or
Resident Mining Engineer~~

~~Considered as representation work under
Section 53 (4) Yukon Quartz Mining Act.~~

Ruth Debicki *Oct 18/1*
Commissioner of Yukon Territory
for

Mining Recorder at WHITEHORSE

Supervising Mining Recorder at Whitehorse, Y.T.



FOR ACTION ARE:

- NEW APPL'N for PLACER LEASE to PROSPECT: Name: _____ Lease No.
- RENEWAL APPL'N PLACER LEASE to PROSPECT: Name: _____ Lease No.
- AFFIDAVIT of EXPENDITURE on PLACER LEASE. Name: _____ Lease No.
- ASSIGNMENT of PLACER LEASE No.
From: _____ To: _____
- GROUPING APPL'N UNDER SEC. 52(2) PLACER MINING ACT.
Owner: _____
- DIAMOND DRILL LOGS:
Claims: _____ Claim sheet no: _____
- QUARTZ ASSESSMENT REPORT:
Claims: SUE Claim sheet no. 105-L-10715
Type of report. GEOLOGY, GEO-CHEMISTRY & GEOPHYSICS Submitted by: GETTY CANADIAN METALS, LIMITED
Cls. work performed on: SUE 389-394 \$ Req. for ren. application \$5,148.80

Signature [Signature] Date Rec. 18 Aug 1981

REPLY ACTION.

090853

Signature _____

TABLE OF CONTENTS

	<u>Page</u>
List of SUE claims	1
Summary and Conclusions	2
Recommendations	3
Introduction	4
Location and Access	4
Physiography and Climate	5
General Geology	6
Geology of Grid 11 East	7
Structure	8
Mineralization	8
Geochemical Soil Survey - Grid 11 East	8
Results	9
Lead	9
Zinc	9
Silver	9
Discussion of Results	9
Magnetometer Survey	10
Description of Method and Equipment	10
Discusson of Results	10
References	11

APPENDICES

	<u>Page</u>
Appendix I: Analytical Procedures	12
Appendix II: Geometrics-Portable Proton Magnetometer Specifications	13
Appendix III: Personnel	14
Appendix IV: Linecutting, Chaining & Geophysical Work	15
Appendix V: Statement of Expenditures	16
Appendix VI: Certificate of Author	17

LIST OF FIGURES

Figure 1: MacMillan Joint Venture - Location Scale 1:6,336,000	after page 5
Figure 2: Geology Map - Grid 11 East Scale 1" to 500'	back pocket
Figure 3: Lead in Soils Scale 1" to 200'	back pocket
Figure 4: Zinc in Soils Scale 1" to 200'	back pocket
Figure 5: Silver in Soils Scale 1" to 200'	back pocket
Figure 6: Proton Magnetometer Survey Scale 1" to 200'	back pocket

LIST OF SUE CLAIMS ON WHICH GEOPHYSICAL
SURVEY WAS CARRIED OUT - MAY-JUNE, 1981

<u>Grant No.</u>	<u>Sue No.</u>	
Y 81039	389	} holder of claims - Getty Canadian Metals, Limited
Y 81040	390	
Y 81041	391	
Y 81042	392	
Y 81043	393	
Y 81044	394	

SUMMARY AND CONCLUSIONS

This report describes the results of geology, soil geochemistry and proton magnetometer surveys completed on Grid 11 East to investigate an electromagnetic conductor. This work was carried out during May-June, 1981.

Grid 11 East area is underlain by chlorite-muscovite phyllite, chlorite phyllite and intermediate-mafic volcanic rocks that have been folded into an anticline-syncline sequence.

No mineralization was reported during mapping and prospecting.

A total of 104 soil samples were obtained from Grid 11 East and analysed for Pb, Zn, and Ag. Soil geochemical analyses show only isolated one sample anomalies which suggest that the overburden is too thick a sampling medium or that no mineralization is at depth.

The proton magnetometer survey carried out on Grid 11 East outlined a 500'-900' wide, 3,000' southwesterly trending magnetic feature with a magnetic relief of 100 gammas above the regional magnetic field. The anomaly is possibly caused by underlying intermediate-mafic volcanic rocks.

RECOMMENDATIONS

No further exploration is warranted.

INTRODUCTION

The SUE claims are currently held by Getty Canadian Metals, Limited and Essex Minerals Canada for the MacMillan Joint Venture.

The claims are located to cover geological formations believed to be similar to those at Vangorda Creek, sixty miles to the southeast.

During May-June, 1981, geology, soil geochemistry and proton magnetometer surveys were carried out on part of the SUE claims group as a follow-up to an airborne input EM survey and Max Min EM survey which outlined conductors on Grid 11 East.

A total of 6.5 miles of picket lines, including baselines and tie lines, were cut and chained to establish Grid 11 East.

The work described herein was conducted by and under the direct supervision of C.W. Payne. The writer laid out the programme and evaluated the results based on the data presented herein.

Location and Access

The MacMillan Joint Venture claim group, centered at

62°49'N latitude, 135°05'W longitude, is located east of the confluence of the MacMillan and Pelly Rivers, central Yukon (see figure 1). Access can be gained in three ways:-

- i) via fixed-wing aircraft from Whitehorse or Pelly Crossing, distances of 160 and 40 miles respectively. A dirt airstrip, 150' wide and 3,000' long, situated immediately west of the Clear Lake deposit, can accommodate planes up to a DC-3.
- ii) via helicopter from a base in Carmacks, a distance of 50 miles.
- iii) via winter tote road from Pelly Crossing, road distance of approximately 40 miles.

Access during the 1981 summer exploration programme was via fixed-wing aircraft and helicopter.

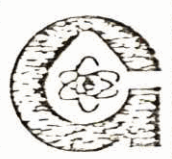
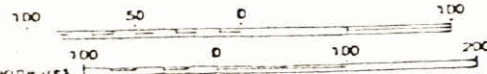
Physiography and Climate

The Venture area covers a series of gently rolling hills and ridges referred to as the Tummel Basin. Elevations range from 1,760' ASL at Pelly River to 2,400' ASL on the hill tops.



MACMILLAN JOINT VENTURE
LOCATION

SCALE 1:6,336,000



DRAWN BY:	DATE:
CHECK'D BY:	DRAW'G No: 1
N.T.S.:	SCALE:

Getty Mines, Limited

The climate is sub-arctic with long cold winters and short cool summers. Temperatures range from -40° F to 80° F. Annual precipitation is 20-30 inches.

The Joint Venture claims area is underlain by numerous small lakes and swamps which make line-controlled ground geophysical surveys very difficult in summer, therefore, most geophysical surveys have been carried out during the winter months.

GENERAL GEOLOGY

The area of interest comprises a belt of Paleozoic metasedimentary and metavolcanic rocks which are similar to and along strike to the northwest of the Anvil mining district. The favourable horizon is a series of Cambrian-Ordovician aged phyllites which are locally, strongly graphitic. The latter rocks have been observed on the Sue claims both in outcrop and drilling.

Reconnaissance mapping of the Sue claims indicates very little outcrop is present and locally, overburden depths may exceed 100'.

Earlier mapping in the Sue claims area (105L) was done by R.B. Campbell (1967). Further mapping to the east and south-east was done by Roddick and Green (1961) and Templeton-Kluit (1972).

GEOLOGY OF GRID 11 EAST

Very little outcrop is exposed on Grid 11 East (fig. 2). The area of mapping and prospecting was therefore expanded so that outcrop could be found to determine what lithologies surrounding the grid area and the cause of the conductors seen on the AEM and Max Min II surveys (Payne, 1981).

The area surrounding the grid is underlain by chlorite-muscovite phyllite, chlorite phyllite and intermediate-mafic volcanic rocks.

Unit 3a is chlorite-muscovite phyllite. The rock is greenish-grey in colour, non-calcareous and locally contains graphite.

Unit 3b is chlorite phyllite. The rock is grey-green in colour, non-calcareous and locally quartz lenses are present. The quartz lenses are 1-10 cm long and 1-4 cm thick. The foliation wraps around the quartz lenses.

Unit 3c is chlorite-muscovite phyllite. The rock is grey in colour, non-calcareous and quartz rich.

Unit 3d is intermediate-mafic volcanic rock. The rock is green in colour, calcareous and locally sheared. The rock contains <1% disseminated pyrite. Intercalated with the volcanic rock is tuff horizons.

Unit 3e is chlorite-muscovite phyllite. The rock is grey-green in colour, non-calcareous and contains chlorite rich lenses.

Structure

Structural information in the area suggests a tightly folded sequence of rocks.

Anticline-syncline structure is defined by the S_2 foliation while the S_1 foliation more closely follows bedding except in the hinge area of folds where the S_1 foliation has been rotated into the fold axial plane. The anticline and syncline appear to plunge to the southeast as denoted by drag folding on the limbs.

Mineralization

No mineralization was observed in the area mapped and prospected.

GEOCHEMICAL SOIL SURVEY - GRID 11 EAST

A reconnaissance soil geochemical survey was carried out on Grid 11 East. Samples were taken every 200' along crosslines spaced 500' apart.

The objective of the survey was to determine the presence and extent of anomalous metal content that could be inferred as being derived from massive sulphides.

A total of 104 soil samples were collected from the B horizon and analysed for Pb, Zn and Ag by Acme Labs, Vancouver, Analytical

procedures are given in Appendix I.

RESULTS

Lead

Lead values range from 1 to 42 ppm (see fig. 3). Statistical treatment (second standard deviation) of the data suggests:-

- i) Background population is 1-24 ppm
- ii) Only one anomalous sample, 42 ppm, is present.

Zinc

Zinc values in the area sampled range from 9 to 160 ppm (see fig. 4). Statistical treatment of the data suggests:-

- i) Background population is 1-58 ppm
- ii) Two samples were anomalous, 132 and 160 ppm.

Silver

Silver values range from 0.1 to 0.4 ppm (see fig. 5). Statistical treatment of the data suggests:

- i) Background population is 0.1-0.2 ppm.
- ii) Four anomalous samples range from 0.3 to 0.4 ppm.

Discussion of Results

The anomalous Pb, Zn and Ag soil samples occur as isolated one sample anomalies which suggest that the overburden may be too thick to allow metals to reach surface or that no significant metal concentrations are at depth.

PROTON MAGNETOMETER SURVEY - GRID 11 EASTDescription of Method and Equipment

The survey was completed using a Geometrics G816 Proton Magnetometer (instrument specifications Appendix II). Readings were obtained at 100' station intervals along picket lines. Corrections for the data were done automatically by a base station recorder at the camp site.

Discussion of Results

The magnetic relief of the grid area ranges from 58,265 to 58,420 g. A positive mag. expression with a relief of 100 g above the regional magnetic field trends in a southeasterly direction for 3,000'. The positive mag. feature widens from 500' (L290 W, Stn 685) to 900' (L260W, Stn 675) and is open to the east.

The cause of the positive magnetic relief could be intermediate-mafic volcanic rocks underlying the area.

REFERENCES

1. Campbell, R.B. (1967), Geology of Glenlyon Map Area. Yukon Territory (105L); Geol. Survey of Canada, Memoir 352.
2. Payne, C.W. (1981), Geophysical Survey - Grid 11 East. Assessment Report, Getty Mines, Ltd.
3. Roddick, J.A. & Green, L.H. (1961), Tay River, Yukon Territory; Geol. Survey of Canada, Map 13-1961.
4. Templeman-Kluit, D.J., (1972), Geology and Origin of the Faro, Vangorda and Swim Concordant Zinc-Lead Deposits, Central Yukon Territory; Geol. Survey of Canada Bulletin 208.

APPENDIX IACME ANALYTICAL LABORATORYCu, Pb, Zn, Ag*Sample Preparation

Soil samples are dried at 75°C and sieved to -80 mesh.

Rock samples are ground to -100 mesh.

Digestion

A .50 gram sample is digested with dilute aqua regia in a boiling water bath and diluted to 10 mls with demineralized water.

Determination

All the above elements are determined by Atomic Absorption from the solution.

*With background correction.

GEOMETRICS

MODEL G-816/826

PORTABLE PROTON MAGNETOMETER

SPECIFICATIONS

Sensitivity:	+ 1 gamma throughout range.	
Range:	20,000 to 90,000 gammas (worldwide).	
Tuning:	Multiposition switch with signal amplitude indicator light on display.	
Gradient Tolerance:	Exceeds 800 gammas/feet.	
Sampling Rate:	Manual push button, one reading each six seconds.	
Output:	Five digit numeric display with readout directly in gammas.	
Power Requirements:	Twelve 1.5 volt "D" cell universally available flashlight-type batteries. Charge state or replacement signified by flashing indicator light on display.	
Temperature Range:	Console and sensor: -40° to +85° C. Battery pack: 0° to +50° C (limited use to -15° C; lower temperature battery belt operation - optional).	
Accuracy (Total Field):	+ 1 gamma through 0° to +50° C temperature range.	
Sensor:	High signal, noise cancelling, mounted on staff or attached to backpack.	
Size:	Console: 3.5 x 7 x 11 inches (9 x 18 x 28 cm) Sensor: 3.5 x 5 inches (9 x 13 cm) Staff: 1 inch diameter x 8 ft. length (3 cm x 2.5 m)	
Weight:	Lbs.	Kgs.
	Console (w/batteries):	5.5 2.5
	Sensor and signal cable:	4 1.8
	Aluminum staff:	2 .9
		<u>11.5</u> <u>5.2</u>

APPENDIX III

PERSONNEL

C.W. Payne	Getty Mines, Limited 509-700 West Pender St. Vancouver, B.C.
Peter Green	" "
Ed McCrossan	" "
Stan Clemmer	" "
Larry Elgert	" "

APPENDIX IV

Linecutting, Chaining, and Geophysical Work

MacMillan Joint Venture

June 1981

<u>Grid</u>	<u>Baseline</u>	<u>Tieline</u>	<u>Picket Line</u>	<u>Proton Mag. Survey</u>	<u>Mag. Survey (Dollar Value)</u>
Grid 11 East	4,000'	8,000'	22,500'	22,500'	312.00

APPENDIX IVStatement of Expenditures
MacMillan Joint Venture

Sue Claim Group

May-June, 1981

Salaries

Getty (mapping-prospecting, soil sampling, mag. survey)	\$ 1,400.96
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Soil Geochemistry Analyses (104 samples)	\$ 312.00
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Aircraft

Helicopter (4 hrs. @ \$375.00/hr.)	\$ 1,500.00
Fixed Wing (supply)	\$ 1,435.84

<u>Board Costs</u>	<u>\$ 500.00</u>
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TOTAL	<u><u>\$ 5,148.80</u></u>
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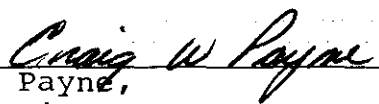
I certify the above to be a true and correct statement of costs and expenditures.

C.W. Payne
GETTY CANADIAN METALS, LIMITED

APPENDIX VCertificate of Author

I, C.W. Payne, hereby certify that:-

1. I am a geologist residing at 401-2326 Eton Street, Vancouver, B.C.
2. I received a Master of Science degree in Geological Sciences from Brock University in 1979 and have been practising my profession since that time.
3. I am the author of this report and directed the overall conduct of the programme described herein.
4. I am employed as a geologist by Getty Mines, Limited.


C.W. Payne,
Geologist



LEGEND

- LOWER PALEOZOIC
- 3e Chlorite-Muscovite Phyllite
 - 3d Intermediate-Mafic Volcanic Rocks
 - 3c Chlorite-Muscovite Phyllite
 - 3b Chlorite Phyllite
 - 3a Chlorite-Muscovite Phyllite

SYMBOLS

- S₁ Foliation
- S₂ Foliation
- Drag Fold (Arrow indicates plunge)
- Multiple Folds (Arrow indicates plunge)
- Outcrop
- Contour, Elevation in feet
Contour Interval 50 feet
- Stream Silt Sample Location
(Pb, Zn, Ag) ppm
- Geological Boundary
(Approximate, assumed)
- Syncline Axis
- Anticline Axis

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TO ACCOMPANY ASSESSMENT REPORT
Geology, Soil Geochemistry &
Geophysics - Grid 11 East
Figure 2

MACMILLAN JOINT VENTURE	
GEOLOGY MAP	
GRID 11 EAST	
DRAWN BY: CWF	DATE: July 1974
CHECK'D BY:	DRAW'G NO.:
NTS: 1" = 100'	SCALE: 1" = 500'
Getty Canadian Metals, Ltd.	



MACMILLAN JOINT VENTURE

GRID 11 EAST

LEAD IN SOILS


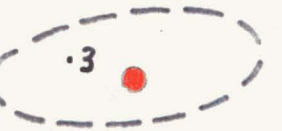

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Getty Canadian Metals, Ltd.

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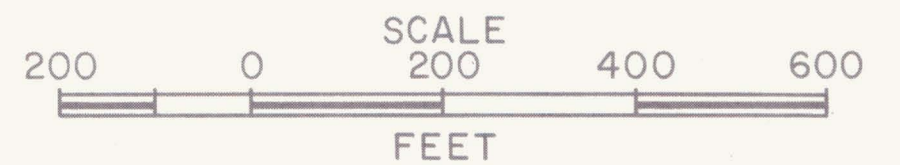
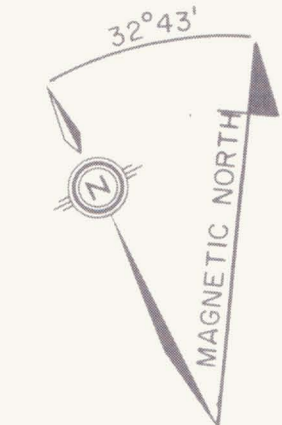


LEGEND

 Soil sample location, number, ppm Ag
 Anomalous Ag in soils
 Silver values in ppm

2642 | 2640
 2641 | 2639

Claim post location and Sue Claim Number



TO ACCOMPANY ASSESSMENT REPORT
 Geology, Soil Geochemistry &
 Geophysics - Grid II East
 Figure 5

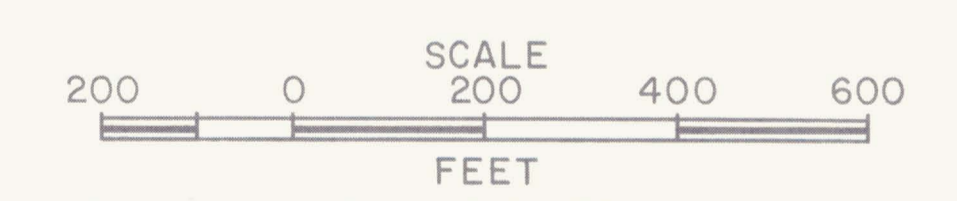
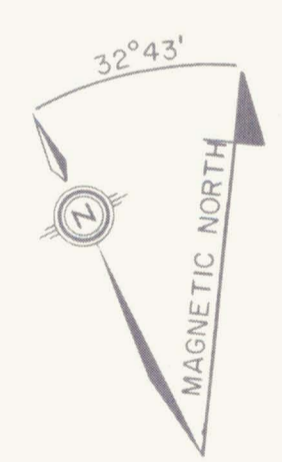
MACMILLAN JOINT VENTURE	
GRID II EAST	
SILVER IN SOILS	
DRAWN BY:	DATE: MAY, 1981
CHECK'D BY:	DRAW'G No:
N.T.S.: 105 L / 14	SCALE: 1" to 200'
 Getty Canadian Metals, Ltd.	

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LEGEND

- 58,300 Crossline Station & Mag. Reading (in gammas)
- 58,300 Mag. Contour, Contour Interval 20 gammas
- Instrument Used: Geometrics 816 Proton Magnetometer
- 2642 | 2640 Claim post location and Sue Claim Number
- 2641 | 2639



TO ACCOMPANY ASSESSMENT REPORT
 Geology, Soil Geochemistry &
 Geophysics - Grid 11 East
 Figure 6

MACMILLAN JOINT VENTURE	
GRID 11 EAST	
PROTON MAGNETOMETER SURVEY	
DRAWN BY: CHECK'D BY: N.T.S. 105 L/14	DATE: MAY, 1981 DRAW'G No: SCALE: 1" to 200'
Getty Canadian Metals, Ltd.	

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