Office

GEOLOGICAL AND GEOCHEMICAL REPORT
ON THE
IGLE CLAIM GROUP

Watson Lake Mining District N.T.S. 105 F - 9

Latitude: 61° 37' N Longitude: 132° 13' W

CYPRUS ANVIL MINING CORPORATION

By: P. M. Dean
July 10, 1978.

Field Work Done During the Period: June 24-June 27, 1978

GEOLOGICAL AND GEOCHEMICAL REPORT

on the

014405

IGLE CLAIM GROUP

Watson Lake Mining District

N. T. S. 105 F - 9

Latitude: 61° 37' N

Longitude: 132° 13' W

By

P. M. DEAN

CYPRUS ANVIL MINING CORPORATION

July 10, 1978.

Field Work Done During the Period: June 24 - June 27, 1978.

TABLE OF CONTENTS

ILLUSTRATIONS

APPENDICES

LIST OF CLAIMS

Claims	Grant Nos.	Due Date
IGLE 1 - 8	YA21791-YA21798	August 24, 1978
IGLE 9 - 16	YA21799-YA21806	August 24, 1978

Cyprus Anvil Mining Corporation

330, 355 Burrard Street
Vancouver, British Columbia
V6C 2G8
Telephone (604) 687-2586

Telex 04508594

GEOLOGICAL AND GEOCHEMICAL REPORT

on the

IGLE CLAIM GROUP

INTRODUCTION

The IGLE Claim Group, consisting of 16 contiguous mineral claims, was staked in August of 1977, when galena-bearing float and geochemical anomalies were discovered in an overburden covered area within the Ketza River Valley. The claims lie on the east side of the Ketza River at approximately 61° 37' N x 132° 13' W, and they are traversed from end to end by the Ketza River summer road to the Iona Silver mining camp. This road provides good access to the claims during the summer months. The regional exploration which led to the staking of the IGLE claims was carried out by Cyprus Anvil Mining Corporation and Hudson's Bay Oil and Gas under a joint venture agreement known as the Pelly Project.

Exploration carried out on the claim group during 1978 consisted of geologic mapping at a scale of 1":1320', and soil sampling for geochemical analysis, carried out on chained compass lines. This work was carried out by two geologists and one sampler, and was done between the dates of 24 June and 27 June.

.... 2

SUMMARY AND CONCLUSIONS

No significant new base metal mineralization was discovered during the geologic mapping on the IGLE Claim Group. The soil sampling survey indicates that the source of the anomalous base metal values lies within a thick quartzite formation of Silurian to Devonian age. This formation contains widespread but very small brecciated zones with traces of disseminated sphalerite and galena. These small sporadic showings contain enough lead and zinc to account for the anomalous soil geochemistry. Occurrences of synsedimentary pyrite within Mississippian black shales, which regionally are an important associate of significant base metal deposits, on the IGLE Claims appear to have no associated lead-zinc mineralization.

We therefore recommend that no additional work be done on the claim group and that it be allowed to lapse in August, 1978.

GEOCHEMICAL SURVEY

A total of 142 soil samples were taken on the geochemical survey, with samples spaced at 100 meter intervals on lines which are approximately 200 meters apart. The lines were established by using a compass and "Hip-chain", with sample sites being flagged. Because of the heavy brush and numerous cross-cutting gulleys the accuracy of the lines is not as good as might be expected in more open and level terrain, but nevertheless it is acceptable for the purposes of this survey.

The samples were analyzed for Cu, Pb and Zn by Acme Analytical Laboratories Ltd. at their laboratory in Ross River. The following standard analytic procedure was followed:

1) drying and screening to -80 mesh,
2) digestion using nitric-perchloric acid ("total extraction"),
3) analysis on an atomic absorption instrument. The oversize material is discarded and the unused portion of the -80 mesh material is retained for additional analyses if needed.

.... 3

Results have been plotted at 1":1320' scale, with a separate map for each metal (Figures 2, 3 and 4). When these maps are overlain on the geology map it becomes clear that the scattered anomalous values are related to the sandstone formation SDq. This formation contains small and scattered occurrences of disseminated galena and sphalerite, which adequately explains the soil geochemical pattern.

GEOLOGY

The geology underlying and surrounding the IGLE Claims includes formations ranging in age from Upper Cambrian to Triassic. These sedimentary and volcanic rocks have been openly folded on NW-SE trending axis and have been subjected to thrust faulting with movement to the northeast. Portions of the above stratigraphic section have been repeated at least three times by thrust faults in the area of the IGLE property.

TABLE OF FORMATIONS

AGE	GSC DESIGNATION	DESCRIPTION
Upper Triassic	~~U~~R	dark grey, buff to medium grey weathering silty limestones.
Carboniferous	Csl	dark brown to dark grey, dark weathering bioturbated siltstones and argillites.
Upper Devonian to Mississippian	Mvt	pale coloured, variable unit consisting of a variety of felsic tuffs, brown to green cherts, and minor shales. Tends to overlie uDMs shales on a regional scale but contacts are gradational and arbitrary.
	uDMs	Black to dark grey shales with variable amounts of interbedded felsic tuffs, chert sandstone and siltstone.
Silurian to Devonian	SDq SDd	medium bedded to massive light grey or buff weathering sandy dolomite (SDd) and dolomitic sandstone (SDq).
Ordovician to Silurian	OSsl	Black graphitic shales with calcareous and silty sections.
Upper Cambrian to Ordovician	u~~C~~Oslv	Phyllitic rocks of variable origin, which can be divided into two major units: u~~C~~Oslv, which consists of light grey to silvery weathering limy phyllites with lesser buff weathering limestone with phyllitic partings, derived from shallow water calcareous mudstones or silty limestones, and,
	u~~C~~Ovb	u~~C~~Ovb, which consists of a variety of chloritized and sheared tuffs and flows of intermediate to basic composition.

Discussion of Rock Units

u€Oslv, u€Ovb: These rock formations are involved in two major thrust plates in the vicinity of the IGLE Claims, and have been structurally emplaced on top of Mississippian formations in both cases. The division into volcanic (u€Ovb) and limy phyllite (u€Oslv) members is somewhat artificial in that u€Ovb represents only a local abundance of volcanic material within the regionally extensive u€Oslv phyllite formation. The amount of volcanic material decreases as one goes in a southwesterly direction, and the contact between u€Ovb and u€Oslv is completely arbitrary. The division is useful nevertheless on the local scale, since the dominantly volcanic formation is restricted to the upper thrust plate, while the exposures of limy phyllites are mainly restricted to a thrust slice lower in the structural pile.

These formations do not appear to have any economic significance on the IGLE Claim Group.

OSsl: Black calcareous slates and minor dark grey weathering silty limestone make up this formation. It is underlain on the IGLE Claims by a thrust fault and its relationship to the u€O formations in this area is unknown. It is overlain, apparently conformably, by quartzites of Upper Silurian to Devonian age. In Selwyn Basin black shales of about this age host the very important Pb-Zn mineralization at Howard's Pass, but the shales on the IGLE do not appear to be mineralized.

SDd, SDq: These formations consist of shallow water sandstones and carbonates, and represent an abrupt change to shelf-type depositional conditions. The division into SDd and SDq is made for descriptive convenience in separating on the map those areas where carbonate or quartz sand content dominates in determining the general appearance of the formation. In general the areas which are dominantly quartzite weather buff to somewhat rusty and are prominently medium to thick bedded, while areas with a high carbonate content, while still very sandy, weather light grey and are very thick bedded to massive in appearance.

The quartzite member of this formation (SDq) appears to be the host for the galena-sphalerite mineralization on the IGLE Claims, as is discussed in more detail under "Economic Geology".

uDMs, Mvt: The shelf carbonates and sandstones are overlain conformably by several hundred feet of shales, cherts and volcanics, indicating a return to a deeper water depositional environment. The volcanics and cherts appear to be concentrated in the upper portion of this formation and are distinguished where possible by the designation Mvt.

The shales vary from dark grey to black in colour, are variably pyritic, are generally siliceous, very rarely are calcareous, and often weather whitish. Tuffaceous bands are often present, and these occasionally weather bright red, orange or white because of their abundant pyrite content. More usually they are coloured in various shades of brown or olive green, and are drab, variable and undistinguished in appearance. The thickness and appearance of these volcanics and of the associated cherts is extremely variable, and no recognizable volcanic bed appears to have much lateral extent. Work elsewhere in the Pelly Mountains suggests that the composition is rhyolitic to trachytic, and suggests also that the volcanics have been ejected from a number of different centers within the Pelly's. Chert sandstones typically occur within the Devonian to Mississippian pile in most places, but never make up a large proportion of the formation. The source of the chert is presumably within Unit OSsl, although no chert occurs in this unit on the IGLE Claim Group.

Shales and volcanics of this age host a number of significant Pb-Zn deposits elsewhere in the Pelly Mountains and in Selwyn Basin, and it was hoped that this formation might prove to be mineralized on the IGLE property. Interesting bedded synsedimentary pyrite does occur within black shales of this age on the IGLE, but unfortunately careful geologic examination and soil sampling has failed to indicate any associated base metals at this location.

Csl and UR: These formations, of carboniferous and upper Triassic age, appear elsewhere in the Pelly Mountains to overlie formation Mvt conformably. In the vicinity of the IGLE they are fault bounded against SDd on the southwest and probably overlie Mvt on the northeast, although exposures are not good and the relationships are somewhat obscure. They have no significance economically and need not be discussed further.

ECONOMIC GEOLOGY

The IGLE Claim Group was staked mainly on the basis of anomalous geochemical values in silt and seepage samples. These anomalous values were thought to arise from either black shale hosted mineralization in Mississippian rocks or from galena and sphalerite disseminations in Silurian-Devonian quartzites.

On the adjacent HOWRU claim group, 6 km SE, galena is disseminated in a 45 meter thick stratigraphic section of medium-bedded SDq. The galena grains range in size from about 0.5 mm to 5 mm, and are evenly distributed throughout the sandstone beds. Fracture controlled galena and sphalerite mineralization also occurs on the HOWRU claim group, within brecciated areas of SDq related to faulting. Similar types of mineralization occur as float on the IGLE, and the association of the soil geochemical anomalies exclusively with outcrops of this rock type indicated that these are the only type of mineral occurence on the claims.

These occurences of galena and sphalerite within SDq sandstones would appear to be small in extent, of low grade, and erratically distributed, characteristics which are supported by the spotty distribution of the anomalous soil geochemical values. There seems to be little potential for them ever to have economic value on the IGLE Claims, therefore, and no further exploration is justified.

Respectfully submitted,

P. M. DEAN.

July 10, 1978

STATEMENT OF QUALIFICATIONS

I, PETER DEAN, of 965 Lillooet Road, North Vancouver, British Columbia, state that:

1) I received a BSc degree from the University of British Columbia in 1967;

2) Since 1966 I have been continuously employed by mining companies in the Field of Mineral Exploration, in Canada and in South America;

3) Since 1975 I have been employed by Cyprus Anvil Mining Corporation as a Staff Geologist in charge of various base metal exploration projects in Western Canada;

4) I am a Fellow of the Geological Association of Canada.

PETER DEAN.

APPENDIX I

LIST OF PERSONNEL AND DATES WORKED ON THE CLAIMS

P. M. Dean	Geologist	965 Lillooet Road North Vancouver, B. C.	June 24 - 27/78	
		4 days @ $122.08		$ 488.32
J. Mortenson	Geologist	Smithers, B. C.	June 24 - 27/78	
		4 days @ $ 69.00		276.00
R. Fretwell	Sampler	RR #4, Avery Road Kelowna, B. C.	June 24 - 27/78	
		4 days @ $53.08		212.32
				$ 976.64

SERVICE COMPANIES

Trans-North Turbo Air	Helicopter Charter	Ross River, Y. T.
Acme Analytical Laboratories	Asseyors	Ross River, Y. T

APPENDIX II

SUMMARY OF COSTS

CYPRUS ANVIL MINING CORPORATION

IGLE CLAIM GROUP Expenditure Summary to July 5, 1978.

SALARIES AND WAGES		$ 976.64
ASSAYS AND GEOCHEMICAL ANALYSIS		365.70
CAMP MAINTENANCE		
12 man days @ $11.17/man/day		134.05
ROTARY WING		
1 hour @ $295.00/hour		295.00
FUEL		
1 hour @ 20/gal/hour/.96/gal		19.20
MISCELLANEOUS TRANSPORTATION		
Truck		250.00
REPORT WRITING		
P. M. Dean - geologist - 1 day @ $122.08/day		122.08
		$ 2,162.67
Administration	10%	216.27
TOTAL EXPENDITURE		$ 2,378.94

* Invoices for amounts over $300.00 are enclosed and other invoices will be provided upon request.

APPENDIX III

AFFIDAVIT SUPPORTING SUMMARY OF COSTS

I, PETER DEAN, geologist, Cyprus Anvil Mining Corporation, of Vancouver, British Columbia, do hereby state that, to the best of my knowledge and belief, the Statement of Costs presented in this report (GEOLOGICAL AND GEOCHEMICAL REPORT on the IGLE CLAIM GROUP) is both correct and true.

Sworn before me at _____)
this _____ day of _____, 1978)

_____
PETER DEAN

_____
Notary Public in and for the
Province of British Columbia.

APPENDIX IV

VOUCHERS SUPPORTING SUMMARY OF COSTS

TRANS NORTH TURBO AIR LTD.

BOX 4338, WHITEHORSE, YUKON Y1A 3T6

TELEPHONE (403)668-2177 • TELEX 036-8-290

CHARTERER: Cyprus - Anvil

BILLING ADDRESS

ACCOUNT NUMBER: 740

31086

INVOICE DATE: 15 17 78

AREA: B.C. ☐ YUKON ☐ NWT ☐ ALTA. ☐

A/C TYPE: 500D

AIRCRAFT REGISTRATION C: CFTWK

FLIGHT DATE: DAY 24 MONTH 06 YEAR 78

PURCHASE ORDER NO.

FUEL TNTA	OIL-X TNTA	CUST.	TNTA FUEL USED	HRS	GALS.	FROM
✓			JP-4	1.0		FR-B.C.

FROM	TO	MILES	HOURS	ZONE	REMARKS - NO. OF PASS - FREIGHT LBS.
FR	Mount Camp		1.0	B	P. Dean
	Keza Area				J. Masterson
	2512-15	3/4 20			
	ICE				
		3/4 20			
					VOK per letter

SUB	G.L.		AMOUNT				
6	014	5102	0	295	00	1.0 @ 295.00	295 00
6	014	5111	0	21	12	@	
						@	
						@	

WAITING TIME	@	/HR.	
FUEL:	@	/GAL.	
FUEL: 20	@ .96	/GAL.	19 20
MEALS & LODGING			
OTHER			
OTHER			

TOTAL $ 314 20

TERMS: EIGHTEEN PERCENT INTEREST PER ANNUM WILL BE CHARGED ON ALL INVOICES NOT PAID WITHIN 30 DAYS OF DATE ISSUED.

L. L. Sills

CHARTERER'S SIGNATURE

PILOT'S SIGNATURE ☐

LINEMAN ☐

ENGINEER'S NAME

△ Casual Rate

FLIGHT REPORT

INVOICE

ACME ANALYTICAL LABORATORIES LTD.

6455 LAUREL STREET., BURNABY, B.C. V5B 3B4
PHONE: 299-5242

File # R-8026
July 5, 1978

Cyprus Anvil Mining Corp.,
330-355 Burrard St.,
Vancouver, B.C. V6C 2G8

TERMS:
NET TWO WEEKS INTEREST AT 1½% PER MONTH CHARGED ON OVERDUE ACCOUNTS.

NUMBER	ASSAY	PRICE	AMOUNT
141	soil preparations	$ .25	$ 35.25
28	rock preparations	$ 1.50	42.00
141	Cu, Pb, Zn geochemical analysis	$ 2.20	310.20
28	Cu, Pb, Zn, Ag geochemical analysis	$ 2.55	71.40
			$ 458.85

Ogfe
35.25
310.20
20.25
365.70
$28 × 42.00
$24 × 71.40
SHIPPING CHARGES
141 Kelly - Ogfe
5 " "
23

PLEASE PAY LAST AMOUNT

132° 13'

61° 39'

61° 39'

3600

3500

5300'

N

IGLE 15
YA 21805

IGLE 16
YA 21806

IGLE 13
YA 21803

IGLE 14
YA 21804

IGLE 12
YA 21802

IGLE 11
YA 21801

IGLE 10
YA 21800

IGLE 9
YA 21799

IGLE 8
YA 21798

IGLE 7
YA 21797

IGLE 6
YA 21796

IGLE 5
YA 21795

IGLE 4
YA 21794

IGLE 3
YA 21793

IGLE 2
YA 21792

IGLE 1
YA 21791

33

34

112

129

130

P18F 142

136

137

121

120

96

95

P18F

CAMP

4200

111

76

77

4500

5000

5000

KETZA

4500

132° 13'

inches
0 1 2
0 1 2 3 4 5
centimetres

This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

YUKON GEOLOGICAL SURVEY

PELLY PROJECT

IGLE CLAIMS

WATSON LAKE MINING DISTRICT Y.T.

CLAIM & SAMPLE LOCATION MAP

SCALE IN FEET

1320 0 1320 2640 3960

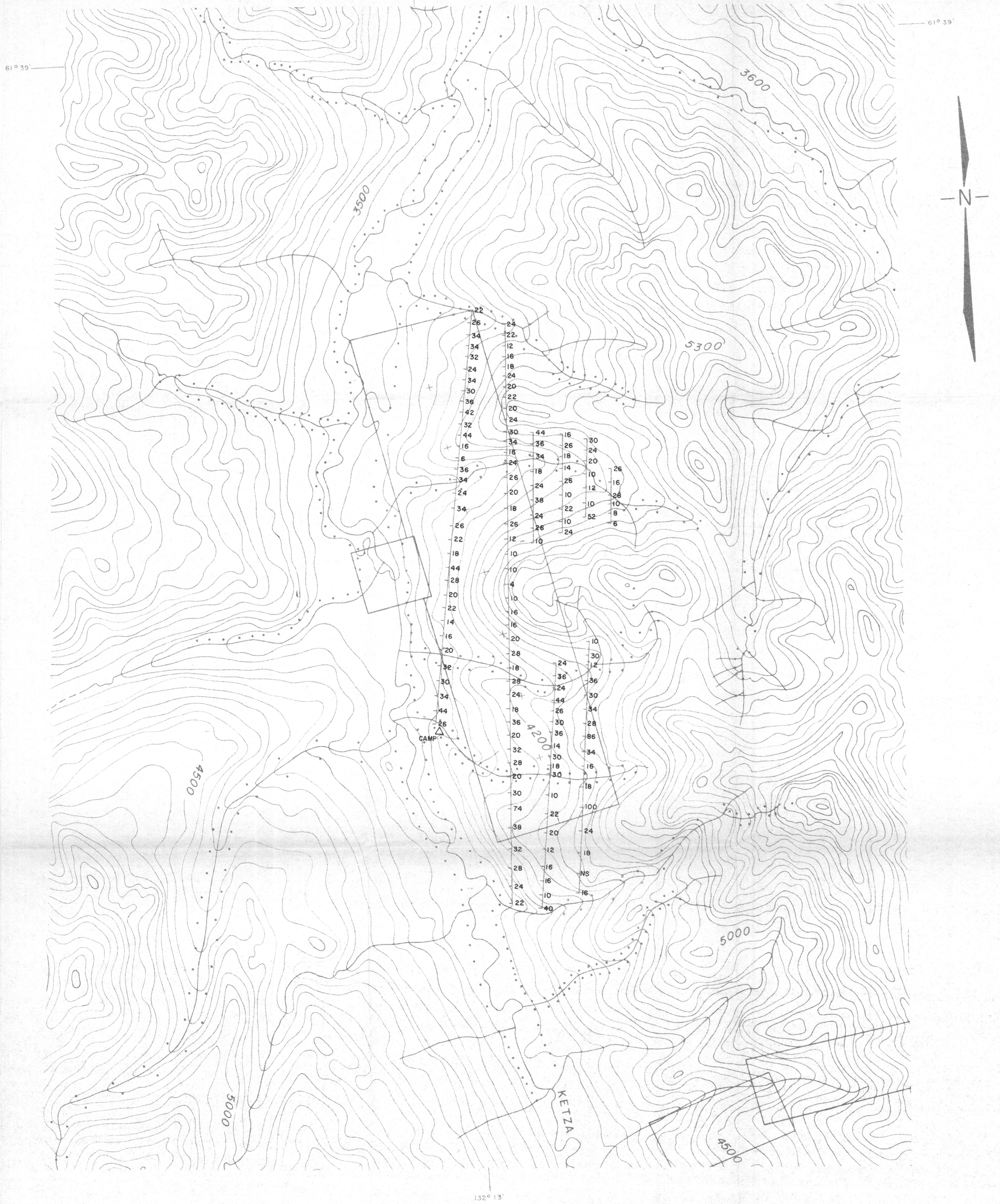
DATE: JULY 7, 1978

NTS 105-F-9

DRAWN BY: P.D./r.w.r.

REVISED:

FIGURE 1



inches
0 1 2
0 1 2 3 4 5
centimetres

This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

YUKON GEOLOGICAL SURVEY

PELLY PROJECT

IGLE CLAIMS

WATSON LAKE MINING DISTRICT Y.T.

Cu SOIL GEOCHEM RESULTS

SCALE IN FEET

1320 0 1320 2640 3960

DATE: JULY 7, 1978 NTS 105-F-9

DRAWN BY: P.D./ r.w.r.

REVISED:

FIGURE 2

132° 13'

61° 39'

61° 39'

N

3600

3500

5300

4200

4500

5000

5000

4500

CAMP

KETZA

44 44 34 48 34 32 68 36 38 54 38 36 72 46 74 100 106 440 180 54 178 360 42 164 72 108 152 200 72 40 40 106 36

42 48 34 130 86 60 160 124 240 48 108 72 82 44 190 62 26 54 40 28 32 52 80 26 28 22 20 28 28 32 26 18 14

52 44 52 110 80 66 64 94 186

14 26 94 140 220 112 46 101 68

36 28 152 200 250 152 450

52 180 200 56 106 90

56 76 64 26 36 32 48 52 30 86 54 18 20 28 NS 26

110 72 32 48 26 30 48 84 28 16 58 26 28 82 26 26 36 50 38

PELLY PROJECT

IGLE CLAIMS

WATSON LAKE MINING DISTRICT Y.T.

Pb SOIL GEOCHEM RESULTS

SCALE IN FEET

1320 0 1320 2640 3960

DATE: JULY 7, 1978

NTS 105-F-9

DRAWN BY: P.D./r.w.r.

REVISED:

FIGURE 3

132° 13'

61° 39'

61° 39'

3600

3500

5300

4200

4500

5000

5000

4500

KETZA

CAMP

N

240 230 420 310 220 250 260 240 530 360 300 470 300 220 122 370 550 1600 460 360 1200 1900 180 510 340 102 1200 840 270 180 200 170 160

260 250 170 260 200 230 280 230 210 320 120 290 160 450 430 370 820 490 700 230 340 220 440 310 690 120 70 510 130 70 120 110 170 160 150 70 90 110 80 80 60

190 160 250 450 620 370 450 390 680 2800

130 170 450 1600 770 510 320 770 580

250 310 580 890 1700 810 900

150 750 750 220 310 240

370 1300 100 110 90 80 40 40 120 50 110 240 70 120 NS 70

220 510 150 90 50 70 170 40 80 40 180 70 30 90 50 40 70 60 30 490

132° 13'

PELLY PROJECT

IGLE CLAIMS

WATSON LAKE MINING DISTRICT Y.T.

Zn SOIL GEOCHEM RESULTS

SCALE IN FEET

1320 0 1320 2640 3960

DATE: JULY 7, 1978

DRAWN BY: P.D./r.w.r

REVISED:

NTS 105-F-9

FIGURE 4

132° 13'

61° 39'

3600

3500

4500

4200

5000

5000

M.vt ?

SDd

Csl or uR

Csl or uR

SDd

uDMs

uDMs

OSsl

SDq

BLACK SHALE

uDMs

SDq

SDq

uDMs

BLACK SHALE

uDMs

CAMP

Mvt

Mvt

uCOvb

Mvt

uDMs

uCOslv

Mvt

uCOvb

5000

uCOslv

Mvt

uCOslv

KETZA

4500

132° 13'

LEGEND:

Upper Triassic	uTr	Dark grey silty limestone
Carboniferous	OSsl	Dark brown to black bioturbated siltstones and argillites
	Mvt	Variable colored cherts and felsic pyroclastics, minor shale
Upper Devonian to Mississippiam	uDMs	Dark grey to black siliceous shale, minor volcanics and chert sandstones
Silurian to Devonian	SDq	Medium bedded dolomictic sandstone (SDq) to sandy dolomite (SDd)
	SDd	
Ordovician to Silurian	OSsl	Black graphitic shales, variably silty and calcareous
Upper Cambrian to Ordovician	uCOslv	Silvery weathering limy phyllites with minor volcanics
	uCOvb	Sheared intermediate to basic volcanic rocks with minor limy phyllite

- Outcrop
- x — Rock sample
- Contact – defined, approximate
- Fault – defined, approximate
- Fault – down thrown block
- Thrust Fault
- Anticline, syncline
- Bedding strike & dip – inclined, vertical, horizontal
- Foliation strike & dip – inclined, vertical

inches 0 1 2

0 1 2 3 4 5 centimetres

This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

YUKON GEOLOGICAL SURVEY

PELLY PROJECT

IGLE CLAIMS

WATSON LAKE MINING DISTRICT Y.T.

GEOLOGY MAP

SCALE IN FEET

1320 0 1320 2640 3960

DATE: July 12, 1978 NTS 105-F-9

DRAWN BY: P.D./r.w.r.

REVISED:

FIGURE 5