

ROUGH

006708

PROPOSAL

for the

Won Property

Black Creek Area, Dawson Mining District

Yukon Territory

by

Kerr Addison Mines Ltd.

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Vancouver, B.C.

March 1, 1980

J. T. Neelands

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PROPOSAL

The Won Property is underlain by a Triassic batholith and a mineralized stock that intrude Upper Triassic mafic volcanics and sediments. The stock, the Won Stock, is composed of biotite granodiorite and quartz-feldspar porphyry dykes; and the batholith, the Yukon Batholith, is composed of hornblende granodiorite. Both the granitic rocks and the volcanics are mineralized with molybdenite and traces of chalcopyrite. Diamond drill holes 2 and 4 contain 0.25% MoS_2 over 12.0 feet and 0.29% MoS_2 over 11.4 feet respectively.

Since the drilling was completed an I.P. survey has delimited 50% P.F.E. (Percent Frequency Effect) anomalies over areas which are interpreted to be the mineralized and altered boundary between the Won Stock and the meta-volcanics.

A strong similarity exists between the geology of the Won Property and the Casino Deposit which favours the occurrence of a large tonnage low grade molybdenite deposit.

Geophysics, geochemistry and drilling are recommended in the area outlined by the Won Stock at an estimated cost of \$158,400. It is recommended that detailed geophysics and geochemistry be carried out over the known geochemical and geophysical anomalies, and that drilling be initiated over the geochemically anomalous part of the Won Stock.

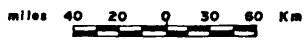
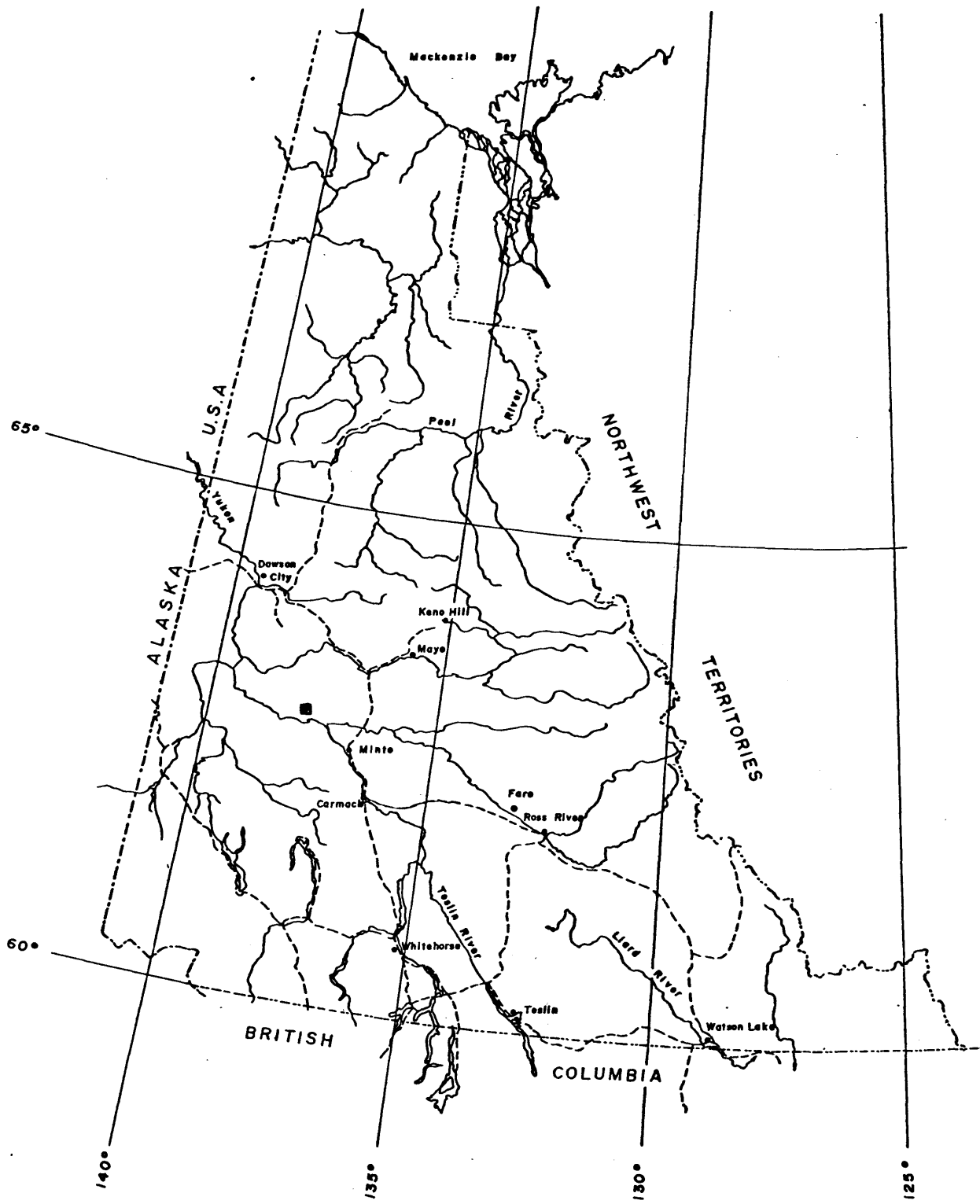
On April 30, 1980, twenty-one of the Won claims will be due. Since additional work is recommended near these claims, all claims should be retained.

INTRODUCTION

The Won Property was staked to cover coincident favourable geology and aeromagnetics. Drilling to date, of a molybdenum geochemical anomaly has intersected less than 0.30% MoS_2 over 10 feet in two separate holes drilled from the same set-up. The geochemical and I.P. surveys indicate northerly, southerly and westerly trends for mineralization which have not been tested.

LOCATION AND ACCESS

The Won Property is situated 18 miles west northwest of Fort Selkirk and 38 miles northwest of Minto, Fig. 1. It occurs at latitude $62^{\circ}53'$ and longitude $137^{\circ}57'$. Access is by helicopter from Minto or by float plane from Whitehorse to the Yukon River and from there to the property by helicopter.



Property location ■

KERR ADDISON MINES LTD	
WON PROPERTY	
YUKON TERRITORY	
LOCATION SKETCH	
Feb., 1980	FIG. No. 1

THE PROPERTY

The property consists of 60 claims, Fig. 2. The claims were initially staked in early October of 1973 to cover interesting aeromagnetics and geology. Later in April of 1974 an additional 18 claims were staked to cover a copper-molybdenum anomaly. Since then claims have been dropped and new claims staked. The present status of the claims are listed in Table I.

Table I Claim Status

<u>Licence Numbers</u>	<u>Won Claim Numbers</u>	<u>Due Date</u>
Y82324-Y82326	79-81	April 30, 1980
Y82328	83	" " "
Y82332	87	" " "
Y82334-Y82335	89-90	" " "
Y82969-Y82972	103-106	" " "
Y82975-Y82984	109-117	" " "
<hr/>		
Y2586-Y2609	1-24	Sept.5, 1980
Y2610-Y2615	69-74	" " "
<hr/>		
Y82327	82	April 30, 1981
Y82329-Y82331	84-86	" " "
Y82333	88	" " "
Y82967-Y82968	101-102	" " "

PHYSIOGRAPHY AND VEGETATION

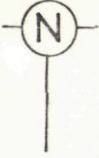
The property which occurs in the Cordilleran Region of the Yukon Plateau is drained to the east by a tributary of the Black Creek. Elevation varies between 2000 and 3000 feet and steep slopes of 30° occur along the south bank of the Black Creek tributary.

Approximately 75% of the claim block is covered by charred "dead fall", young birch and alder growth. Permafrost covers most of the claim block and is predominant on north slopes.

PREVIOUS WORK

The Won Property was staked in 1973 to cover favourable geology and aeromagnetics. During the course of the Yukon Project which included airborne combined VLF and magnetic surveys and reconnaissance silt sampling the Won and other properties were explored.

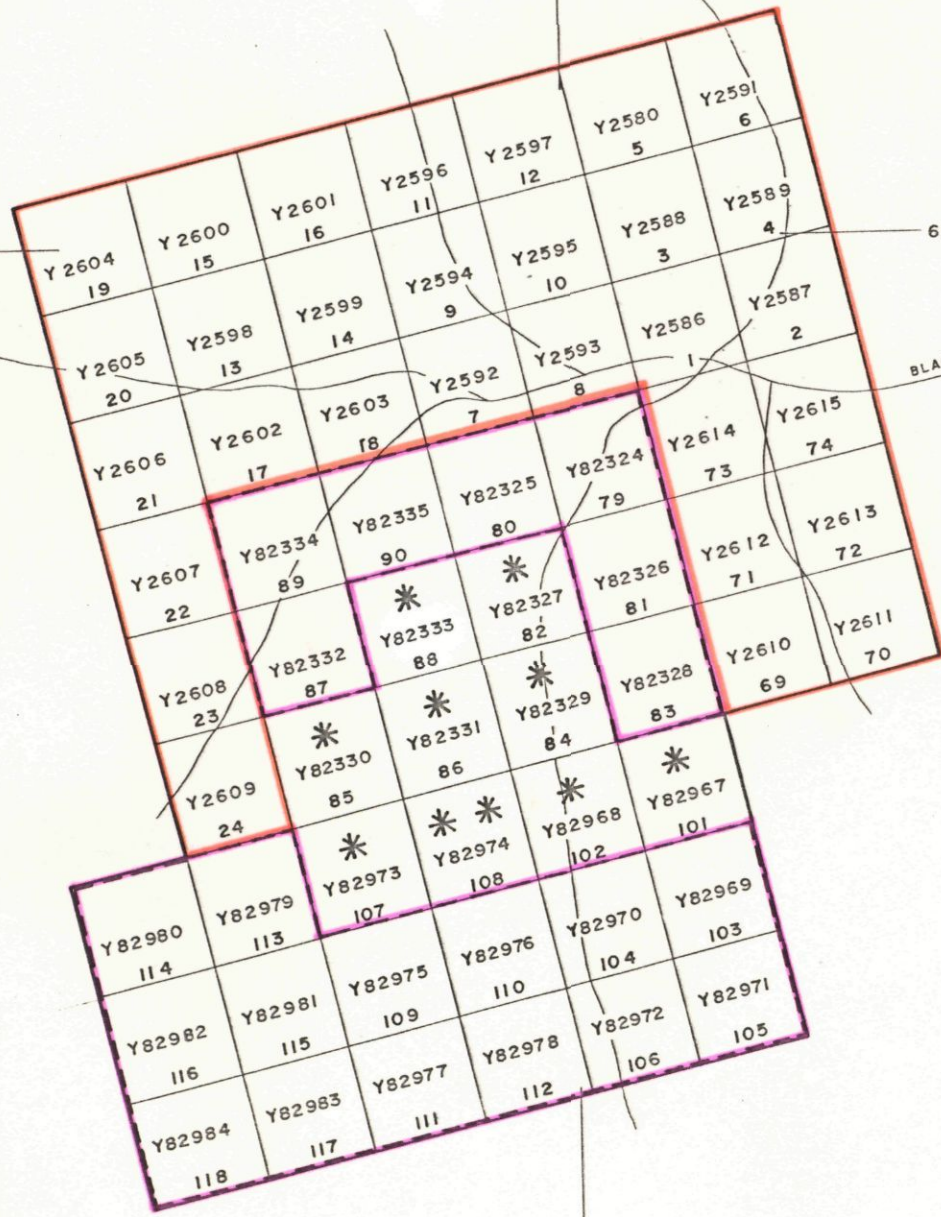
Kerr 81



137° 55' 00"

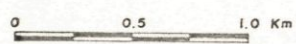
62° 53' 00"

BLACK CREEK TRIBUTARY



Due Dates

- April, 30, 1980
- September, 5, 1980
- * April, 30, 1981
- ** April, 30, 1982



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WON PROPERTY	
YUKON TERRITORY	
PROPERTY MAP	
N.T.S - 115-I-13	FIG. No. 2
Feb., 1980	

In June, 1974 geochemical and geological reconnaissance surveys were carried out and a copper-molybdenum anomaly was located. Further work on the anomaly consisted of detailed soil sampling, magnetometer surveys and geological mapping. Test pits were dug in interesting areas.

In 1975 the property was expanded and 24 miles of line were surveyed by magnetometer. Drilling of coincident geochemical and magnetometer anomalies encountered mineralization in all of the holes. Encouraged by grades of 0.25% MoS₂ over 12 feet (DDH-2) 21.5 miles of I.P. were carried out over most of the property.

In 1976 the I.P. grid was extended to cover open I.P. anomalies.

GEOLOGY

Introduction

The property is underlain by Upper Triassic mafic volcanics which have been intruded by Triassic hornblende granodiorite called the Yukon River Batholith. These rocks were then intruded by biotite granodiorite and quartz feldspar porphyry of the Won Stock.

Geological Setting

The area is underlain by a northwest trending belt of early Paleozoic metamorphic rocks, Fig. 3. This basement is intruded and overlain by Mesozoic and Tertiary intrusive and extrusive rocks.

Black Creek Regional Geology

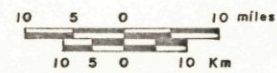
The Black Creek area (N.T.S. 115-I-13) is dominated by mafic volcanics of the Eocene Carmacks Group, the Pleistocene Selkirk Series and Triassic volcanics similar to the Mt. Nansen Group, Fig. 4. Underlying these volcanics is an early Paleozoic metamorphic basement of sediments, volcanics and intrusive rocks commonly known as the Yukon Group. The late Triassic and Tertiary volcanics consist mainly of mafic volcanics.

Exploration Target

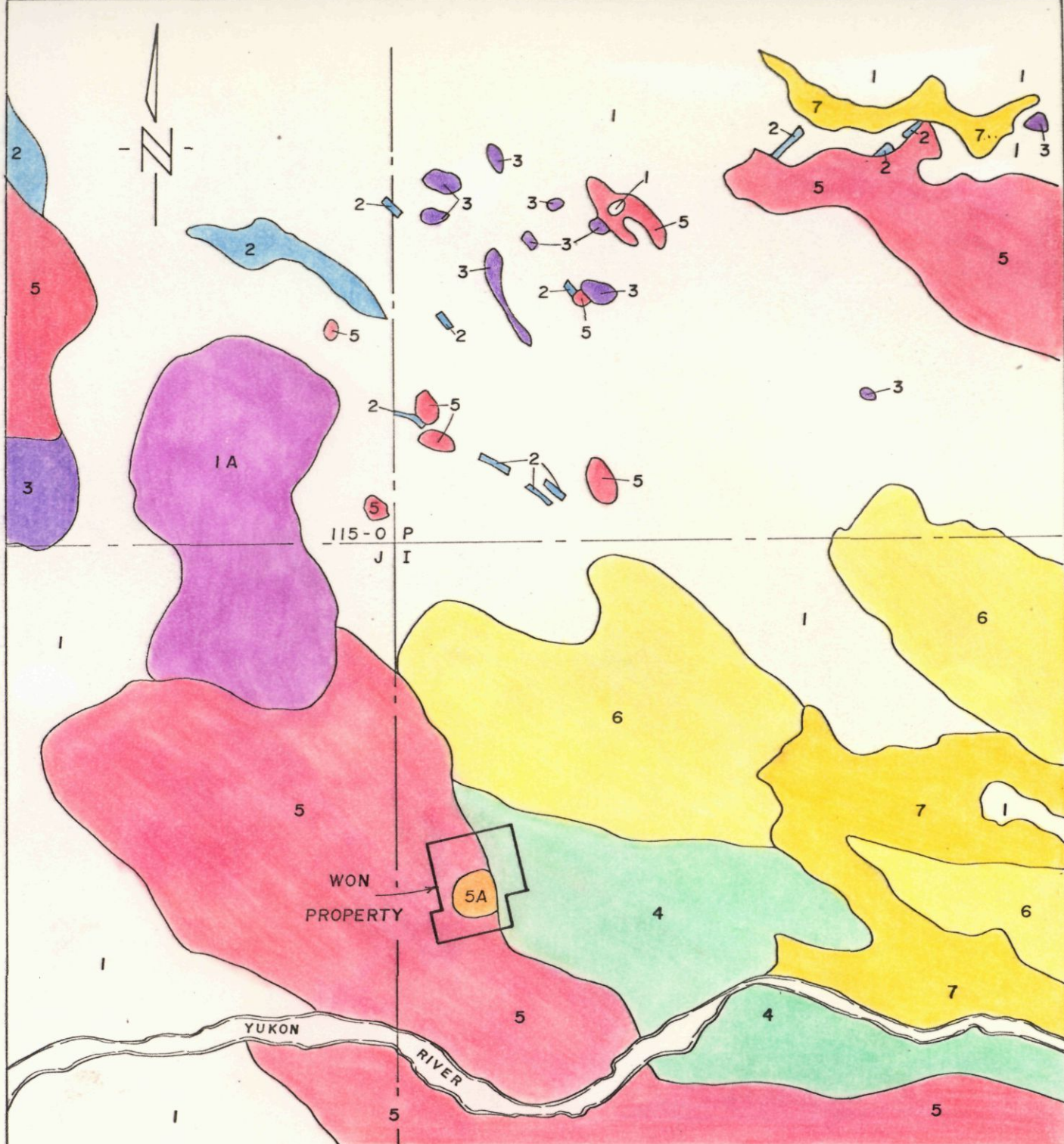
Interest in the Yukon-Minto areas was generated as a result of the development of the Casino and Minto deposits. The Minto deposit occurs 28 miles to the southeast and the Casino deposit, which is more comparable to the Won Property, occurs 30 miles to the southwest, Fig. 3. Like the Won Property, both deposits occur in Triassic hornblende granodiorite. The Minto, owned jointly by Silver Standard - Asarco and United Keno Hill - Falconbridge, contains 3.5 million tons of readily open-pittable ore grading 2.12% copper with recoverable precious metal values.



- 36 Surficial deposits
- Tertiary and Quaternary
- 35 Selkirk Group
- 34 Carmacks Group
- Paleozoic and/or Mesozoic
- 26 Volcanic rocks
- Paleozoic, late Cambrian
- 6 Paragneiss, quartz-mica, chlorite schist
- 4 Acidic intrusions and associated extrusions
- 3 Acidic intrusions
- 2 Basic rocks
- 1 Ultrabasic rocks
- kg Granite, orthogneiss
- Property location
- Teslin fault zone



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WON PROPERTY	
YUKON TERRITORY	
GEOLOGICAL SETTING	
Feb., 1980	FIG. No. 3



- | | | |
|--|-----|---|
| | 7 | Pleistocene - Selkirk series: Basalt, andesite |
| | 6 | Eocene - Carmacks group: Basalt, andesite, rhyolite |
| | 5 A | Mesozoic Intrusives - Won Stock: Biotite granodiorite, quartz-feldspar porphyry |
| | 5 | -Yukon River Batholith: Granite, granodiorite, diorite |
| | 4 | Mesozoic - Basalt, argillite, tuff, schist. |
| | 3 | Palaeozoic - Gabbro, pyroxenite, peridotite |
| | 2 | - Yukon group: Schist, quartzite, limestone |
| | 1 | - Paragneiss, schist, slate, phyllite, gneiss |
| | 1 A | - chiefly gneissic granite |



KERR ADDISON MINES LTD	
WON PROPERTY	
YUKON TERRITORY	
REGIONAL GEOLOGY	
N.T.S - 115 - I, J, O, P	FIG. No. 4
Feb., 1980	

(Adapted from G.S.C maps 711A, 1143A and G.S.C Open File 161)

The mineralization, which consists of chalcopyrite, bornite, and some pyrite and magnetite, occurs in biotitic gneisses in a migmatite complex. The Casino deposit, owned by Teck Corporation, contains 179,000,000 tons averaging 0.37% Cu and 0.039% MoS₂. The deposit occurs in the Casino Stock, a biotite granodiorite which intrudes the Klotassin Batholith - a hornblende biotite granodiorite.

The strong similarities between the Won Property and the Casino Deposit favours the latter as an exploration model. Both properties have late granitic phases of similar compositions and age, roof pendants which suggests peripheral or subvolcanic intrusives, and extensive alteration. The higher grade of MoS₂ encountered in the Won drill holes favours the presence of a large tonnage, predominantly molybdenite deposit. The following is a geological description of the Casino deposit by Archer & Main (1970):

The major part of the Casino property is underlain by granodiorite of the Klotassin Batholith. Several small, highly altered roof pendants of the Yukon Group quartzite are found near the headwaters of Canadian Creek. Mineralization is associated with the Casino Stock which has been potassium-argon dated at 70 m.y., or early Tertiary, at the University of British Columbia (C. I. Godwin, personal communication). The stock has been intensely hydrothermally altered and this alteration extends at least 2000 feet into the surrounding granodiorite. The pattern shows classical porphyry copper zoning with a central core of K-feldspar and biotite alteration surrounded successively by argillic, quartz-sericite-pyrite and chloritic zones. The stock is about 2000 feet wide and 5000 feet long with the long axis trending west. The eastern half is mainly feldspar porphyry. A quartz diorite phase of the Klotassin Batholith is found as a rim about 1000 feet wide on the northern side of the stock.

Geology of the Won Property

The contact between the mafic volcanics and the Yukon River Batholith traverses the property in a northwest direction, Fig. 4 and Dwg. 1. Both the Batholith and the volcanics are intruded by the Won Stock which consists of biotite granodiorite and quartz-feldspar porphyry. It is not yet known whether the relationship between the intrusives and the volcanics are comagmatic. Within the intrusives the meta-volcanic sequence of meta-andesite and argillite form roof pendants west of the faulted northwest contact. The steep dips of the schistosity within the volcanics parallels the schistosity of the main body of the volcanics to the east which dip to the east and west at angles between 65° and 75° and strike to the northwest

A compilation of the geology and geophysics was employed to establish the geological picture of the Won property. During the field mapping a distinction was made between granodiorite and quartz porphyry, but not between the biotite granodiorite and hornblende granodiorite. Biotite granodiorite was identified only in the drilling.

Cross Section A-B

The cross-sections between DDH-5 and 6 suggest that the contact between the biotite granodiorite of the Won Stock and the meta-andesite is vertical as DDH-6 was still in meta-andesite at 536 feet, Fig. 5. Considerable alteration fracturing and caving was encountered in DDH's 2, 3, 4 and 6. Alteration consists of silification, kaolinization and carbonitization.

MINERALIZATION

No mineralization was located in any of the test pits or during the course of the surveys. Drilling of 6 holes encountered low grade mineralization in all holes. From the geochemical pattern and drill hole data, mineralization is mainly confined to the biotite granodiorite and the meta-volcanics. A summary of the logs by Glen Tetu is as follows:

DDH-1

The drill holes intersected black chlorite schist and rare carbonate alteration zones. Approximately 20 feet of rhyo-dacite (quartz feldspar porphyry) occurs near the bottom of the hole. Five per cent of the core is composed of quartz-carbonate veins.

Chalcopyrite, pyrite and molybdenite compose 0.5% of the quartz-carbonate veins. Pyrite occurs as stringers and pyrrhotite is disseminated throughout the schist.

DDH-2

The main rock type encountered in this hole is a pale green porphyritic biotite granodiorite. Approximately 0.5% pyrite, pyrrhotite and traces of chalcopyrite occur as disseminations. The quartz veins constitute about 2% of the hole and contain molybdenite, pyrite, chalcopyrite, magnetite, epidote, sericite and carbonate.

DDH-3

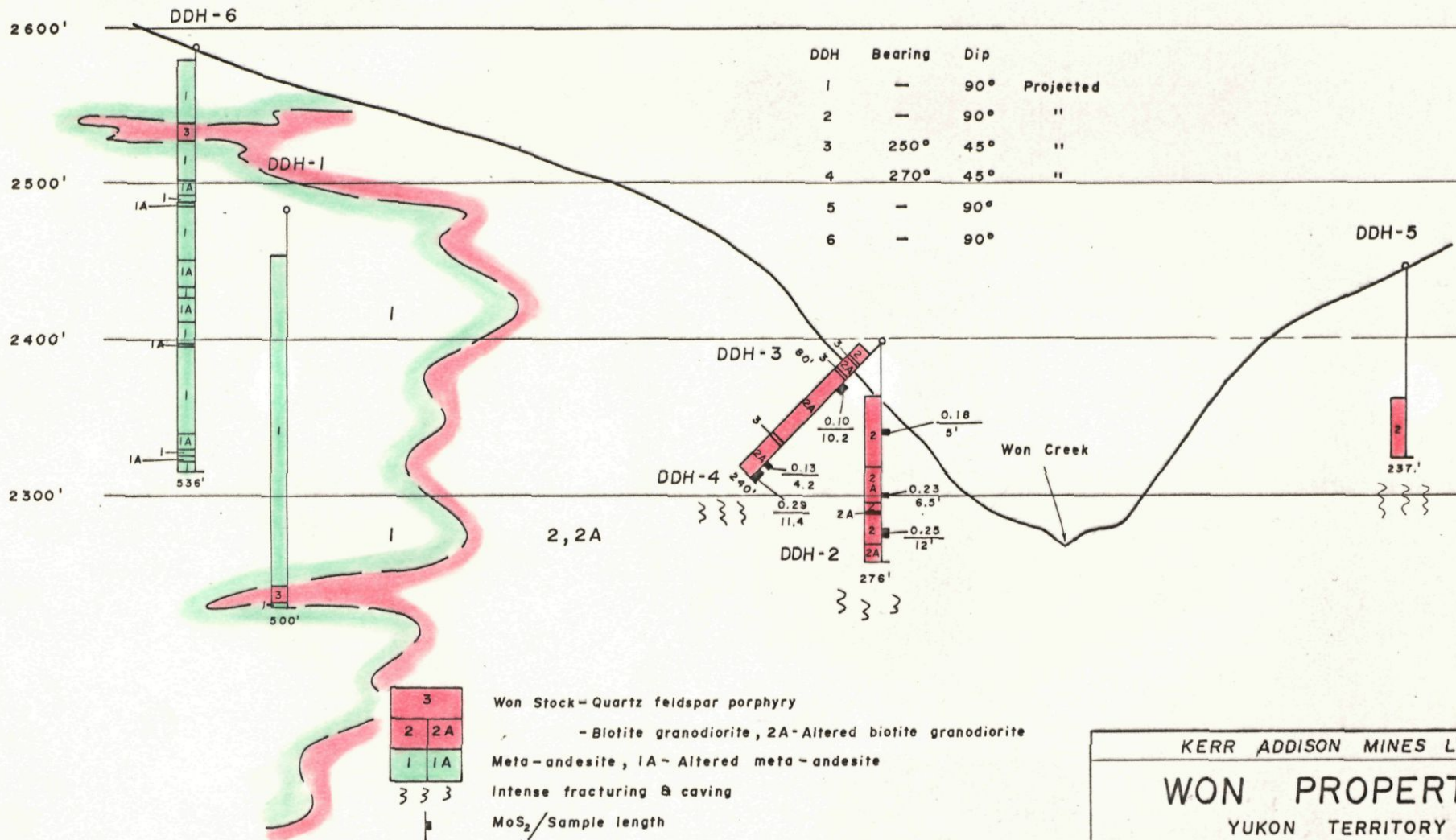
Biotite granodiorite encountered in this hole exhibited rusty weathering on fractures. Two narrow black feldspar porphyry dykes were intersected. Molybdenite mineralization is restricted to quartz veins.

DDH-4

Though the rocks are similar to those of DDH-2, kaolinization is more common. Mineralization is confined to quartz veins and hair line fractures. The highest percentage of MoS_2 occurs in the last 20 feet of the hole.

A

B



3 Won Stock = Quartz feldspar porphyry

2 2A - Biotite granodiorite, 2A - Altered biotite granodiorite

1 1A Meta-andesite, 1A - Altered meta-andesite

3 3 3 Intense fracturing & caving

MoS₂/Sample length

Note: If copper assays are less than 0.1%,

The average equals 0.05%

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WON PROPERTY

YUKON TERRITORY

SECTION A-B
At 120°, LOOKING NORTHWEST

SCALE - 1" = 20' (horz = vert.)

FIG. No. 5

Feb., 1980

DDH-5

The biotite granodiorite contains less alteration and quartz veins. Less mineralization was logged in this hole.

DDH-6

The meta-andesite in this hole exhibits a moderate to poor foliation. Argillic and kaolin zones are common. Mineralization occurs within quartz veins and along fracture planes.

In Table 2, some of the better assay results are recorded. In holes 2 and 4 the highest grades of MoS₂ occur at the bottom of the hole.

TABLE 2

Sample Assays

<u>Diamond Drill Hole Number</u>	<u>From</u>	<u>To</u>	<u>Sample Length</u>	<u>Assay</u>	
				<u>Cu%</u>	<u>MoS₂%</u>
2	66.0 ft.	74.0 ft.	8.0 ft.	0.4	0.017
	88.0	94.5	6.5	0.04	0.58
	111.0	116.0	5.0	0.04	0.184
	181.0	191.5	10.5	0.4	0.012
	191.5	198.0	6.5	0.03	0.234
3	22.0	28.0	6.0	0.03	0.048
	42.2	52.5	10.3	0.05	0.038
4	17.0	25.0	7.0	0.04	0.08
	25.0	31.0	6.0	0.03	0.073
	72.0	82.2	10.2	0.05	0.107
	227.8	234.0	6.2	0.04	0.443
	234.0	239.2	5.2	0.04	0.10
	239.2	240.0	0.8	0.02	0.06

STRUCTURE

Regionally, geological contacts and structure favour a northwest trend, Fig. 3. The Teslin Fault Zone intersects the junction of the Pelly and Yukon rivers and passes to the east of the property. On the property the contact between the granodiorite and the meta-volcanics parallels the Teslin Fault, and is therefore assumed to be fault controlled, Dwg. 1. Since drill holes 2, 3 and 4 encountered considerable caving and a northeast linear feature is outlined by the creeks, a northeast fault through Won Creek is interpreted. Most of the quartz-carbonate veining in the core varies between 10 and 30 degrees to the vertical.

GEOCHEMISTRY

Initially, sampling of the B horizon was carried out at 200 foot spacings along the claim lines, Dwg. 2. After the geochemical anomaly in claims 82, 84, 86 and 88 was located, detailed sampling on flagged lines delimited an anomalous molybdenum and copper area. This area trends strongly north-south and weakly east-west. The north-south trend parallels the west bank of Won Creek and covers an area 3600 feet long and 2300 feet wide. The east-west trend is outlined mainly by copper values and extends across claims 85 and 86. Pits dug over anomalous samples did not contain visible mineralization. Background values for copper, zinc and molybdenum values are approximately 80, 55 and 2 ppm respectively. The five highest copper and molybdenum values are respectively 460, 395, 390, 350 and 340 ppm; and 100, 96, 58, 54 and 50 ppm.

GEOPHYSICS

Geophysical surveys consisted of airborne VLF and Mag., ground mag. and I.P.. Regionally the G.S.C. aeromagnetics indicates a north-west trend that in the vicinity of the Won Property changes to east-west and north-south, Fig. 6. On the property the regional aeromagnetic survey indicates a four line 120 gamma anomaly. This anomaly, as well as a parallel anomaly to the south, was duplicated by the combined airborne VLF and Mag. survey, Fig. 7. No VLF cross-overs were recorded. These aeromagnetic anomalies were duplicated by the ground follow-up which located a 500 gamma anomaly in claims 86 and 88, and a 200 gamma anomaly in claim 111, Dwg. 3. The 500 gamma anomaly trends to the east and is immediately southwest of all the diamond drill holes and the geochemical anomaly. The 200 gamma anomaly is open to the west. The Mag. anomaly is interpreted as remnant magnetics within the volcanics.

The I.P. survey located a large P.F.E. anomaly that extends from 92+00 south to 26+00 north over a distance of 11,800 feet. This large anomaly contains three 50 percent anomalies which trend southeast. the most northerly of these occurs within the main geochemical anomaly and was drilled by DDH-6. The P.F.E. and resistivity were used to interpret geological contacts and the north-south P.F.E. anomaly is interpreted as the mineralized and altered boundary between the Won Stock and the meta-volcanic roof pendants.

COMPILATION

A compilation of all the previous data outlines an area of interest enclosed by the edge of the Won Stock, Fig. 8. To date drilling of an area equal to one claim has been successful in intersecting mineralization where anomalous geochemical values overlap P.F.E. anomalies.

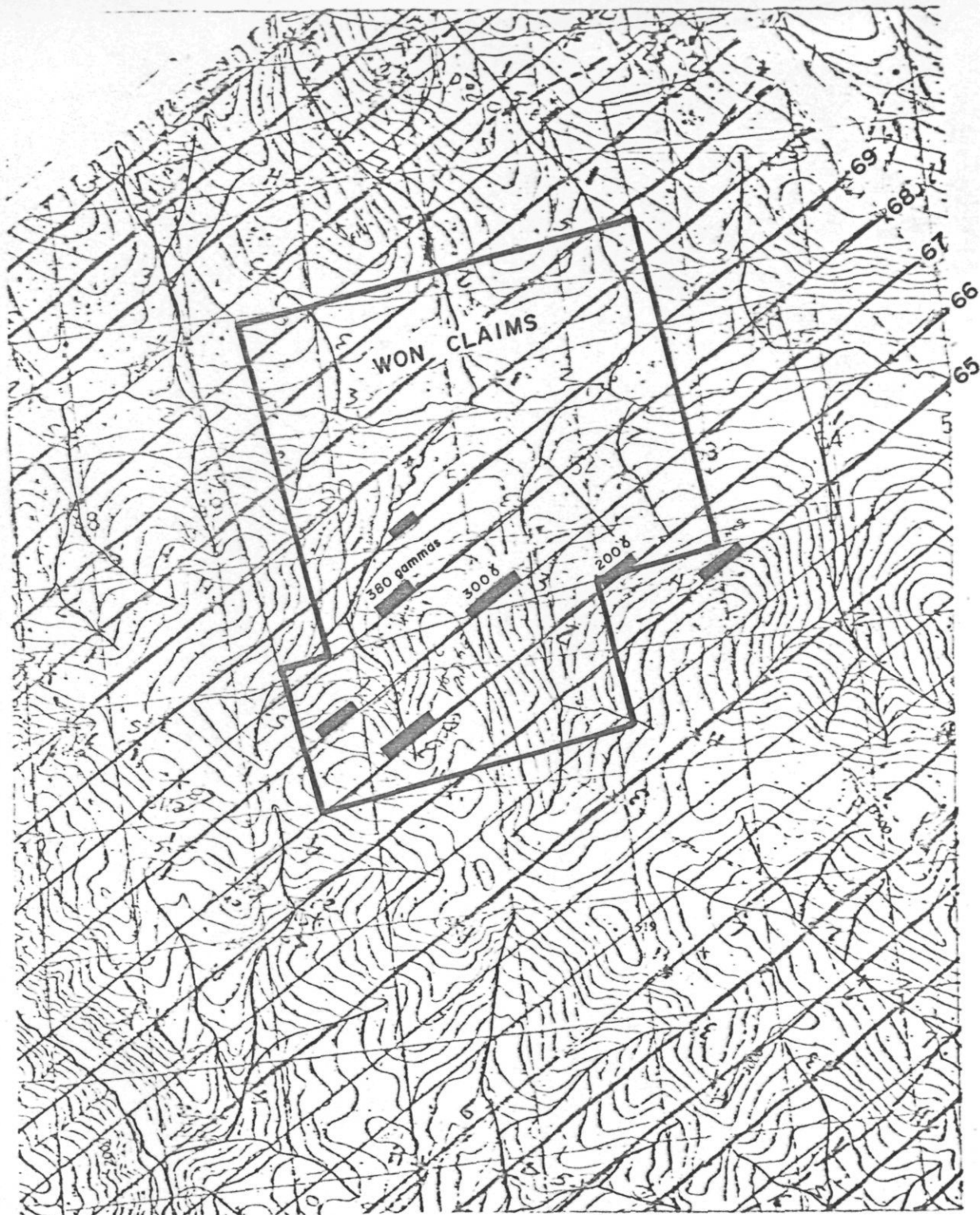
In order to isolate targets within the limits of the Won Stock, it is recommended that additional lines be cut and surveyed in the vicinity of claims 80, 85, 89, 90, 109, 110 and 111; and that drilling be carried out initially within the limits of the north-south and east-west geochemical anomalies and then extended to the P.F.E. anomaly.



Aeromagnetic lineament 

0 2 4 miles

KERR · ADDISON MINES LTD	
WON PROPERTY	
YUKON TERRITORY	
REGIONAL AEROMAGNETIC	
N.T.S - 115-I, J, O, P	FIG. No. 6
Feb., 1980	

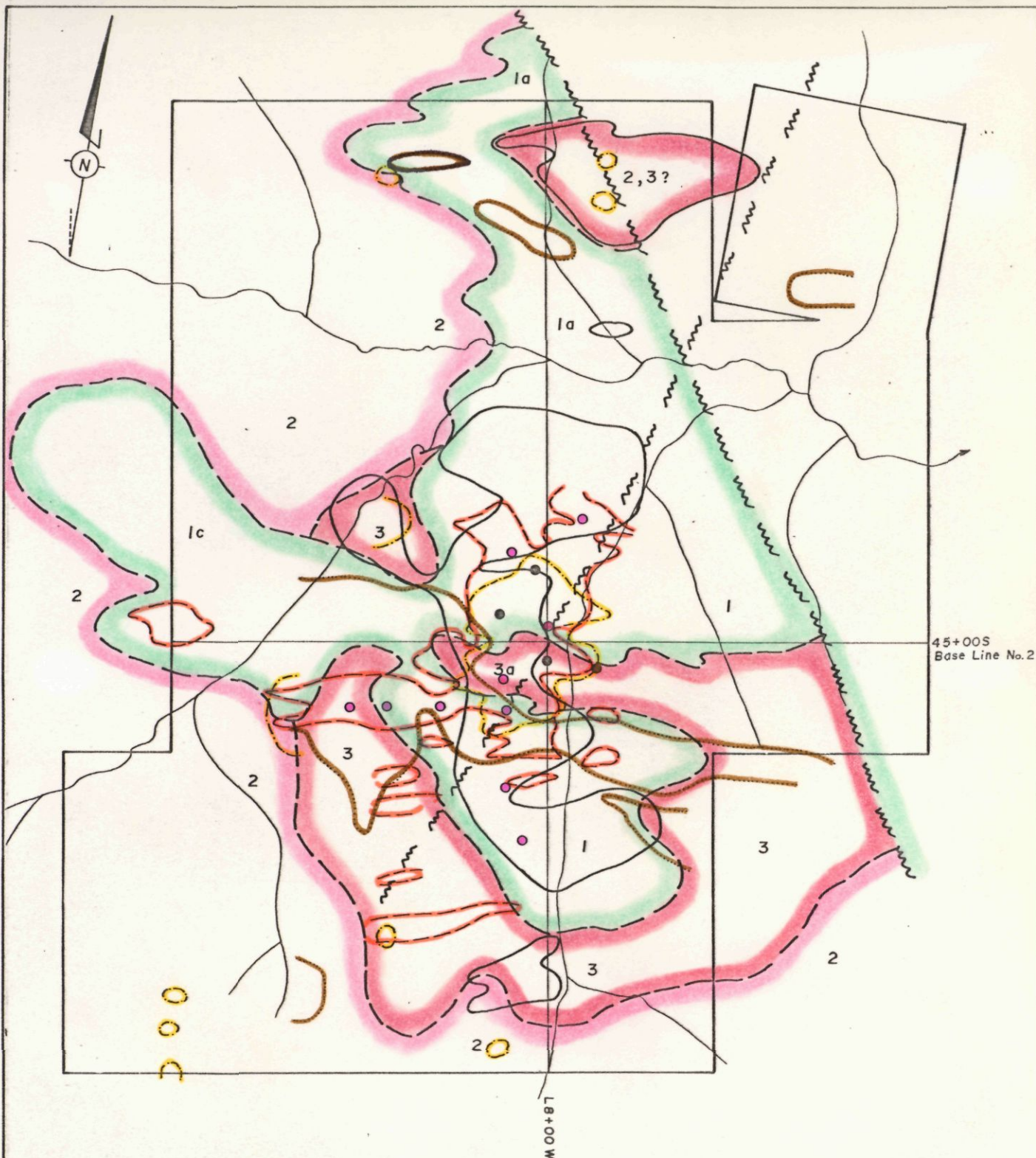


0 500 1000 2000 metres



Mag response on flight line

KERR ADDISON MINES LTD	
WON PROPERTY	
AEROMAGNETIC SURVEY	
N.T.S - 115-I-13	FIG. No. 7
Feb., 1980	



Geology

- 3 Won Stock
- 2 Yukon River Batholith
- 1 Meta-Volcanics & Meta-Sediments

Geochemistry

- Cu - 80 ppm contour line
- Mo - 4 ppm " "

Geophysics


- Mag - 1000 gammas contour line
- Induced Polarization - Frequency Effect (%)
- DDH Location (drilled in 1975)
- Proposed DDH.

0 500 1000 2000 feet

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WON PROPERTY	
YUKON TERRITORY	
COMPILATION	
N.T.S - 115-I-13	FIG. No. 8
Feb., 1980	

ESTIMATE OF EXPENDITURES

Wages: Geologist and Assistant	\$ 9,000
Live	3,000
Transportation	10,000
Drilling (3000 feet)	110,000
Geophysics	10,000
Geochemistry, Assays	2,000
Contingency	<u>14,000</u>
Total	<u>\$158,400</u>



J.T. Neelands

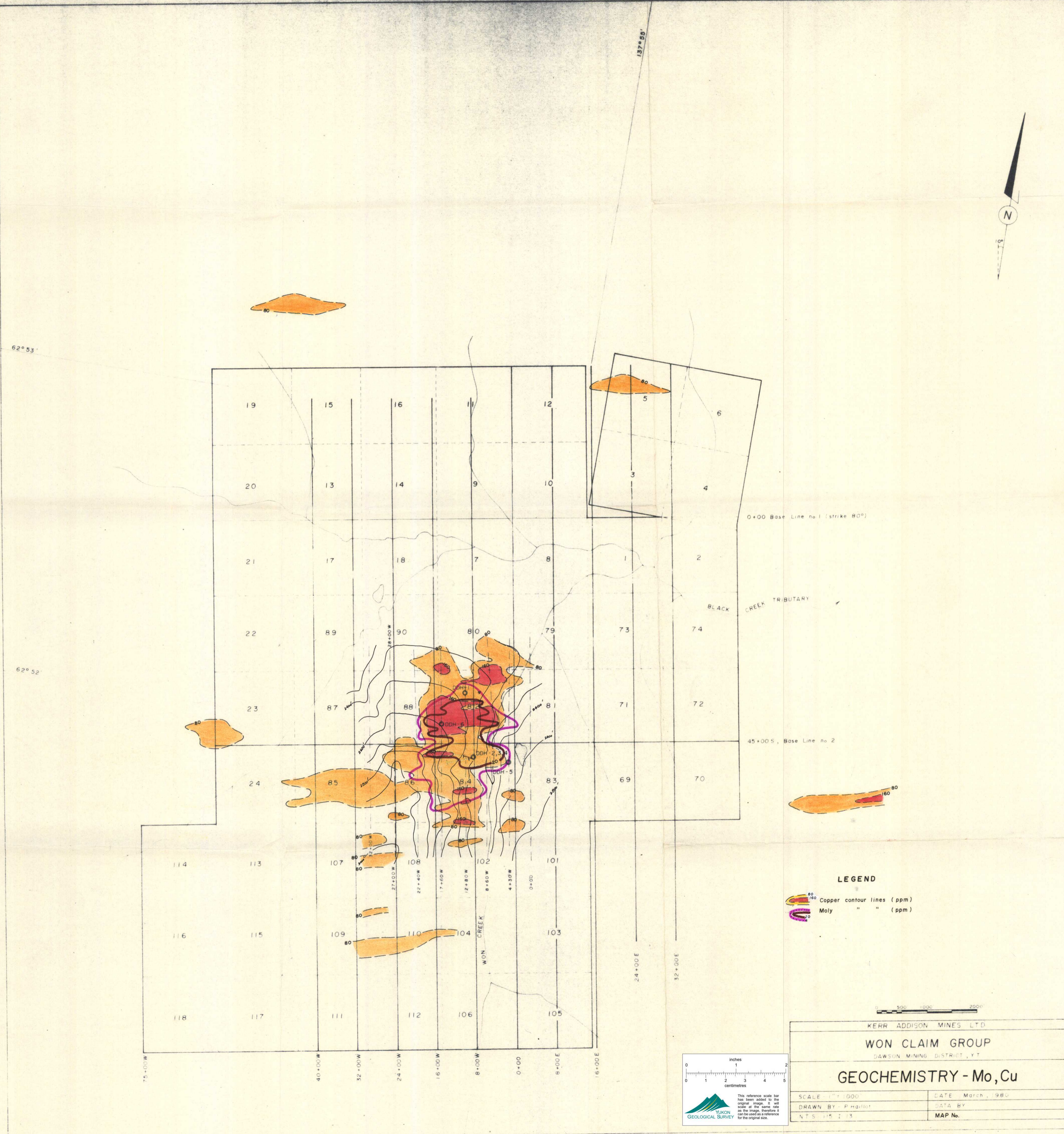
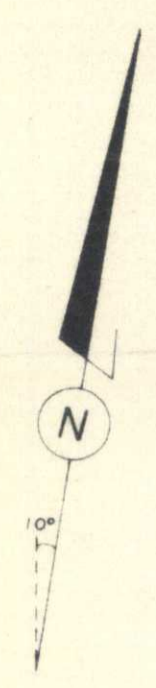
JTN/dmg

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LEGEND

-  Copper contour lines (ppm)
-  Moly " " (ppm)

0 500 1000 2000'

KERR ADDISON MINES LTD
WON CLAIM GROUP
DAWSON MINING DISTRICT, Y.T.

GEOCHEMISTRY - Mo, Cu

SCALE 1" = 1000'	DATE March, 1980
DRAWN BY P. Halliwell	DATA BY
NTS 1:5000	MAP No.

