86-001

HUDSON BAY EXPLORATION AND DEVELOPMENT COMPANY LIMITED

KREFT - TAKACS PROPERTY

JACKSON CREEK

WHITEHORSE, Y. T.

105-D-11

A HUREAU

9 July'82

With Addition of 1983 drill sections & logs for bore holes (M 1-3)

LIST OF PLANS AND SECTIONS

		SCALE	FIG
REGIONAL GEOLOGY		1"=400'	1
GEOLOGY AND DRILL PLAN		1"=100'	2
MAGNETIC SURVEY		1"=400'	3
MAGNETIC SURVEY		1"=100'	4
DRILL SECTIONS -	Sect 456E	1"=40'	5
	Sect 542E	1"=40'	6
	Sect 650E	1"=40'	7
	Sect 700E	1"=40'	8
	Sect 800E	1"=40'	9 & 9a
	Sect 800E	1"=100'	10
	Sect 900E	1"=40'	11
	Sect 1265E	1"=40'	12
	Sect 1400E	1"=40'	13
	Sect 2100E	1"=40'	14
LONG SECT.		1"=100'	15

Added
(1983 Drill Holes M-1103)

Sect. 8+75E	1"=40'
Sect. 10+00E	1"=40'
Long Section	1"=100'

TABLE OF CONTENTS

SUMMARY AND RECOMMENDATIONS

The Kreft-Takacs copper-gold-silver occurrence, at Jackson Creek, fourteen miles west of Whitehorse, is in skarn, developed near the contact of Upper Triassic Lewes River clastic sediments and carbonates with an Eocene quartz monzonite pluton. Two good grade intersections (20.6' at 5.6% Cu and 15' @ 0.29 gold) at depths of 110' have not been adequately tested along strike to the east. The intersected mineralization is 180' horizontally from the surface of the hill slope.

The skarn zones at Jackson Creek are similar to those on the Whitehorse Copper Belt and should be reassessed with them if exploration activity on the Copper Belt is revived.* A proton magnetic survey to better delineate the contacts, followed by drilling, is recommended to determine the extent of the high grade mineralization.

The existence of an untested skarn zone is postulated at a depth of 900' where limestone which outcrops above the known zone, may be in contact with the intrusive.

An area from which copper mineralization has been reported, on the south side of Jackson Creek, at the east end of the pluton, should be prospected and possibly followed up by a magnetic survey.

* On 23 July'82 an option agreement to develop the property was signed by the owners with Mike Nichiporek (Former president New Ridge Mines). Nichiporek plans to drive an adit to intersect the high grade gold mineralization. 3 WINKIE HOLES M-1-3 (305') JUNE 1983. M-1 .36 opt Au over 3 feet.

INTRODUCTION

Copper, gold, silver bearing calc-silicate and magnetite skarn zones occur north of Jackson Creek at the contact of Upper Triassic Lewes River clastic sediments and carbonates with quartz-monzonite and granodiorite of the Eocene suite of volcano-plutonic rocks, at the east margin of the Coast Plutonic Complex.

The skarn zones at Jackson Creek, are outside the Whitehorse Copper Belt, which is along the contact of the mid-Cretaceous Whitehorse batholith with Lewes River rocks, similar to those at Jackson Creek. The mineralogy and setting of the skarn zones are similar.

This report is a review of work done on the property from 1972 to 1982. A report by N. Reid on the Whitehorse Copper exploration on the property in 1976 is available at W. C. M. and H.B.E.D. Whitehorse. Coloured prints of geological and geophysical maps and drill sections are on file

at HBED Whitehorse. Originals of maps and sections are in files of WCM.

LOCATION, ACCESS AND TOPOGRAPHY

The main showings are located on the north side of Jackson Creek at 60°41'20"N, 135°21'45"W on NTS sheet 105 D 11W (801280) eleven miles WNW of the Little Chief Mine.

Slopes on the hillside are in the order of 30° rising from 3300' in the valley floor to 5454' above the main showings which are at an elevation of 4100'.

From June to November the showings are accessible by a fairly good four wheel drive road from the west end of Franklin Lake two miles east. A cat trail was put in along the valley floor to a point on the creek south of the showings, to provide access to a water pump used for drilling. A two inch steel pipe laid by WCM from the showings to the Creek was left intact. A four wheel drive road from west of Franklin Lake along the north side of the mountain put in by Zelon Inc. and E. Kreft in 1981 provides access to showings on the west end of the property.

OWNERSHIP

Fifty one claims are held jointly by E. Kreft (Takhini Hot Springs) and S. Takacs (Whitehorse). An option agreement entered into with Zelon in 1981 has been terminated by the failure of Zelon to meet the obligations of the agreement.

HISTORY

The showings were found by the present owners in 1970-71. New Jersey Zinc optioned the property in 1972 and completed a program of geological mapping, a magnetometer survey and six diamond drill holes with an aggregate footage of 1459'. N. J. Z. geologists apparently assumed that the dip of the mineralized zones was at a shallow angle to the north i.e. conformable to that of the sediments above the showings; their holes failed to intersect any significant skarn or mineralization and the option was dropped.

WCM optioned the property in late 1974 and in 1975 extended the geological mapping and magnetometer surveys, trenched one of the larger magnetic anomalies, improved access roads and drilled six holes with an aggregate footage of 1401'. All holes except KT5 (drilled 700' east of the most easterly showings) and KT6 (not completed) intersected generally low grade copper mineralized skarn in the order of 40 to 80' thick while hole KT3

on sect 8E intersected 20.1' at 5.6% Cu 7.9 oz/ton Ag and 0.03 oz/ton Au. Hole KT4, drilled to intersect the high grade mineralization 100' down dip, intersected 60' of magnetite skarn with low copper values.

Four holes (aggregate of 1550') were drilled by WCM in 1976. KT6A and KT7 were drilled to test along strike the mineralization intersected in KT3. KT6A 100'W of KT3 intersected 28' of weakly mineralized skarn. KT7, 100'E of KT3 intersected high gold and bismuth values with assays of 1.3' @ 2.55 oz/ton Au and 5.8% Bi (re assay 3.90 oz/ton Au) or 15' @ 0.29 oz/ton Au. The high grade zone like that in KT3 was at a vertical depth of 110' and was 180' horizontally from the hill slope below the showings. The high gold values were in actinolite skarn in a grey metallic mineral believed to be bismuthinite (appendix 1).

At the completion of the '76 program it was decided by WCM (Memo D. Tenney Nov/76) that the potential tonnage was too small and the option was dropped.

Several short holes have been drilled by the owners since 1976. No good grade mineralization was intersected. Exact locations of these holes are unknown to the writer. The holes are believed to be too short to have tested the zones intersected by WCM. The owners also had EM 16 surveys done over areas near the east end of the property.

The property was optioned by Zelon in 1981. Zelon carried out a soil sampling program on the north side of the mountain and put in a four wheel drive road to reach showings at the west end of the property. Zelon failed to meet other obligations stated in the agreement and the option has been terminated.

GENERAL GEOLOGY

The property is located in the northwest margin of the Intermontaine Belt of the Canadian Cordillera in the western part of the Whitehorse Trough. The Western belt of the Whitehorse Trough consists of an island arc assemblage of mafic volcanic and volcano sedimentary rocks grading upward and basinward into greywacke, siltstone and minor conglomerate capped by carbonate reef complexes. The island arc assemblage is overlain by a successor basin assemblage of Jurassic-Cretaceous conglomerate,greywacke, siltsone and sandstone (Laberge group).

The volcano-sedimentary rocks of the Whitehorse Trough are intruded by quartz diorite plutons of mid Cretaceous to Eocene ages which are part

of the Coast Intrusive Complex. Calc silicate and magnetite skarn zones occur near the contact of Lewes River carbonate rocks with these intrusions.

Triassic and Jurassic volcano-sedimentary rocks, Coast Intrusions and skarn zones are all cut by dykes related to Coast Intrusions and Quarternary Miles Canyon Basalt.

LOCAL GEOLOGY

Lewes River Group

Siltstone greywacke and fragmental rocks (unit 4 on map) are overlain by several hundred feet of white and grey limestone, dolomitic limestone and black carbonaceous limestone (Unit 5 on map). The carbonate units are irregular and form discontinuous lenses which grade out into interbedded siltstone, tuff and calcareous siltsone. The carbonate units are overlain by greywacke, sandstone and conglomerate which are probably correlative with Laberge rocks. In the area of the main showings, where drilling was done, the clastic rocks underlying the carbonate units appear to be in an asymetrical antiform with the upper limb dipping at approximately 30° to the NE and the lower limb being near vertical.

Coast Intrusions

Lewes River rocks are intruded by an Eocene (55 My) quartz monzonite granodiorite pluton. It is coarse grained leucocratic, weakly porphyritic and shows only weak argillic alteration near the contact. Drilling in the area of the showings indicates that the pluton there is dipping at a shallow angle ($+-30^{\circ}$) to the N.E. At the time drilling was done it was believed to be the same age as the Whitehorse Batholith and is shown as unit 7b on maps.

An irregular plug of rusty weathering dark grey diorite (Appendix 2) intrudes the sediments above the main showings. It contains approximately 2% pyrrhotite with traces of CP. This intrusion (unit 8 on maps) is considered to be a phase of the Jackson Creek pluton.

Skarn Zones

Erratic skarn zones to 100' thick (garnet, epidote, actinolite diopside and magnetite with minor serpentine) occur at the carbonate-intrusive, carbonate-siltsone and siltstone intrusive contacts. The siltstone-greywacke is locally skarnified and is locally recrystallized to dioritic texture. Copper mineralization (chalcopyrite, bornite with magnetite and pyrrhotite) distribution within the skarns is erratic with the best copper,

gold and silver intersections associated with actinolite, diopside, magnetite skarn. Oxidation of the sulphide and magnetite zones extends only a few feet below surface.

Little work has been done on the large skarn zones at the west end of the property. The calc-silicate skarns there contain little copper mineralization. The occurrence of erythrite has been reported there by the owners. The contact between the west showings and the main showings is well exposed and little mineralization has been found along it.

Faults

Several north and northeast trending gullies probably reflect faults. In a gully on the south side of Jackson Creek limestone and dolomite on the east side of the creek are in fault contact with siltsone and greywacke on the west side of the creek for nearly a mile.

No major faults were intersected in the drilling; ground conditions were excellent.

GEOCHEMICAL RESULTS

Soil sampling done by WCM east of the main showing did not indicate any significantly anomalous areas. Coverage of the area was imcomplete. Results of soil samples taken on the north side of the mountain by Zelon in 1981 are not available

GEOPHYSICAL RESULTS

Magnetic surveys using a vertical field Sharp MF. 1 magnetometer outlined the magnetite bearing skarns. Both the quartz-monzonite and diorite intrusions have a higher magnetic intensity than the limestone and siltsone so that the intrusive contacts can be delineated easily. Since some of the better grade copper-gold mineralization was associated with skarn that has little magnetite and the near massive magnetite skarns were generally low grade, a magnetometer survey, using a proton mag, may better delineate the trends of weakly magnetic skarn zones to assist in drilling. The diorite above the showings is variably magnetic and while the MF-1 survey generally outlines the intrusive a proton mag survey would probably define the contacts more accurately.

The G.S.C. aeromagnetic map 105-O-11 gives a general outline of the Jackson Creek intrusion. Chalcopyrite has been reported(G. Morrison) in the sediments near the south east end of this intrusion south of Jackson Creek and in float in a creek draining this area (E. Kreft). A reconnaissance

magnetic survey in this area may detect magnetic skarns near the contact.

A test survey over the high grade intersection in KT3 (20' @ 5.6% Cu) using a Crone"Shootback"instrument gave a very weak anomalous response. EM16 surveys north west of Franklin Lake yielded several anomalies the strongest of which gave a very low response using EM 17 and Crone instruments. Trenching of the anomaly uncovered pyritic greywacke at bedrock

DRILLING RESULTS

The good grade intersections in KT3 (Sect 8E) and KT7 (9E) have not been cutoff to the east. Drilling on section 14E tested a magnetite skarn zone on the north side of the lower limestone while the good grade intersections are on the south side of the lower limestone near the intrusive contact. The skarnified greywacke (4g/3) intersected in KT3 below the high grade zone was not intersected in KT4, KT7, or KT6. Presumably it was cutoff by the intrusive in these holes. This unit may correlate with the greywacke mapped along the intrusive contact at 25E and 45E. The skarnified greywacke in KT3 may be compared to the "footwall quartzite" whose contact with dolomitic limestone, near the intrusive, is considered to be the most favourable locus for ore deposition on the Whitehorse Copper Belt.

The mineralization is controlled by contacts, the projection of which, considering the depositional setting of the limestones, the possible variations in the dip of the intrusive, and the limited amount of drilling done, is speculative. This consideration and the possible strike length extension of mineralization to the east, make a limitation of potential tonnage to the order of 10,000 tons premature. Any steepening of the intrusive contact would increase the potential depth dimension of the skarn zone shown on the long section.

Hole KT8 (Sect 8E) was drilled to test the projected contact of the limestone above the showings with the diorite. The diorite was not reached and hole KT9 drilled to the south intersected the limestone - greywacke contact nearly 400' from the quartz monzonite. A favourable contact, more extensive than that associated with the main showings, is indicated where the limestone drilled in KT 8 and 9 approaches the projected intrusive - greywacke contact of KT 4 and KT 9. Two or three holes would probably be required to establish the trend of projected contacts; deepening of KT8 may be considered as a first step. While locating drill targets based on these projections may appear conjectural, good grade mineralization has been intersected on the Whitehorse Copper Belt by projecting contacts

to a favourable confluence. Hole KT5 drilled to test a magnetic anomaly on section 21E intersected pyrrhotite in clastic sediments which was considered to explain the anomaly. The owners have reported finding magnetite skarn in this area and the location should be rechecked.

REFERENCES

MORRISON, G. W.	1981	Setting and Origin of Skarn Deposits in the Whitehorse Copper Belt. PH.D Thesis University of Western Ontario.
REID, R. E.	1975	Kreft-Takacs - Summary Report Whitehorse Copper Mines
SINCLAIR ET AL	1976	M. I. R. Yukon Territory P 101-104
TENNEY, D.	1976	Whitehorse Copper Mines Company Correspondence
WHEELER, J. O.	1953	WHITEHORSE Map Area G. S. C. Mem. 312

Appendix 1

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE 985 0648
AREA CODE 604
TELEX 043 52597

CHEMEX LABS LTD.

August 19, 1976.

Mr. Rod Samuels
Whitehorse Copper Mines Ltd.,
P. O. Box 4280
Whitehorse, Y. T.

Dear Rod:

The silver-grey mineral is not translucent (green) but opaque metallic. I agree with you that it is not tetrahedrite or stibnite. Who does your Te analysis? Better try someone else. I can only give you a general idea but the material is a telluride (we dissolved a chip and got high Te - 15 ug/ml) and bismuth; lead and gold also kicked. The cleavage color, crystals, hardness (1-2) and Pb, Au, Bi indicate it could be either a bismuth telluride containing gold or a Au, Pb telluride. It may even be a mixture of both Bi-telluride and another mineral - I can't see any free gold in the telluride. Bi tellurides contain normally native gold as inclusions. Your thin section people should have been able to identify it as a telluride. Can't think of anything with similar optical properties.

Your wasting your money on the Pt & Pd. However, if you can come up with another specimen - the bigger the better - we'll even assay it for you for anything you want.

I broke off as pure a chip as I could which under the microscope proved to be a mixture of at least two minerals:
(1) silver white to grey metallic with real pronounced cleavage and hardness of 1-2
(2) a steel grey to black mineral, hardness greater than 2 - about 4-5, a pronounced conchoidal fracture which tarnishes iridescent and magnetic-magnetite.

. . . 2

Howard will do a spec on half the chip, the other half I digested up to do a more quantitative run for Au, Pb, Bi, Te & Sb. The Bi run 60%; the Au & Pb were low. Unfortunately the digestion baked so I lost most of the Te but it still kicked. Sb was definitely not present in any great amount.

Be - tellurides are quite common (usually joseite or tetradymite), also tellurides are found together so you could easily have a mixture.

Hope this is of some help. I will hold onto the rock until I hear from you.

Sincerely yours,

Hart H. Bichler,

HHB/gr

Sample: Whitehorse a

Sample description: polished section mottled very dark green and light greenish grey. Two metallic minerals occur in the section; the first and most abundant (this sample) occurs as large, irregular bright grey blebs.

Sample preparation: blebs of the bright grey metallic were hand-picked from the section. Cleavage fragments were separated from the gangue under a binocular microscope and the resultant concentrate was ground in an agate morter to -50 mesh.

X-ray procedure: conventional acetone smear run from $2\theta = 70$ to $2\theta = 2$, inclusive, with $\lambda =$ CuKα radiation.

X-ray results: the peaks of highest intensity are in excellent agreement with ASTM card 17-320 for bismuthinite (Bi_2S_3). Several lower order peaks conform to ASTM card 6-474 for stibnite (Sb_2S_3). The bright grey metallic blebs are almost certainly primarily bismuthinite.

Remarks: Bismuthinite (Bi_2S_3) and stibnite (Sb_2S_3) are isostructural and may be expected to form a continuous solid solution series between the two stoichiometric end members. The position of the powder patterns is variable between the positions of the peaks for the end member compositions. The peaks from this pattern indicate a high content of bismuthinite with minor stibnite. Such a pattern lends itself either to hypogene hydrothermal deposition of the sulfide by aqueous solutions or to magmatic deposition with subsequent exsolution of stibnite from bismuthinite. The silicate mineralogy observed in the polished section is compatible with the former interpretation.

Mark S. Bloom

Sample: Whitehorse b

Sample description: polished section as in Whitehorse a. Dull, fine-grained metallic mineral randomly disseminated throughout the section. Properties in refelcted light are sufficiently distinct from the sulfide of Whitehorse a to warrant consideration as a separate mineral.

Sample preparation: local concentration of the fine-grained sulfide was hand-picked from the polished section. Care was taken to remove fragments of the previously described sulfide in Whitehorse "a" as well as silicate fragments; however, the fine grain size precluded a pure separate. The concentrate was ground to -100 mesh in an agate morter.

X-ray procedure: conventional acetone smear with 2θ = 70 to 2θ = 10, inclusive, with λ= CuKα radiation.

X-ray results: high intensity peaks are in agreement with ASTM cards 17-320/6-474, 5-0592 and 10-436 for the sulfides bismuthinite/stibnite, galena and enargite, respectively. Minor contaminants from the groundmass in the form of quartz (ASTM card 5-0490) is also present. The disseminated sulfide described herein is an intimate mixture of bismuthinite/stibnite solid solution and galena in subequal proportions with some minor enargite.

Remarks: Original communication with J. Vinnel (Vancouver Petrographics) indicates that anomalous Au values are suspected. Checks against the peaks for native Au and various gold selenides and tellurides were negative.

Mark S. Bloom

Appendix 2

Vancouver Petrographics Ltd.

JAMES ZINNEL
JOHN G PAYNE

VANCOUVER, B.C. V5V 3M1

Report for: Whitehorse Copper

Sample: Altered Diorite

The rock is a medium to coarse grained massive diorite. It has been altered with addition of pyrrhotite and minor chalcopyrite accompanying alteration; alteration is mainly confined to the mafic minerals.

Plagioclase (75%) forms laths 0.5-2.0 mm long which have annedral interlocking borders. Albite twins and lesser Carsbad twins are present. Crystals are strongly zoned from cores of An_{55} to rims of An_{26} (average composition An_{35-40}). About 5% of the plagioclase grains are slightly altered to sericite, and one grain is strongly altered to sericite.

Amphibole (10-15%) forms light green grains up to 2 mm long with irregular borders and interstitial to plagioclase. Original grains (hornblende ?) are altered in patches to fine grained, commonly feathery actinolite, whose color is slightly darker than the original amphibole. Alteration is also to biotite and chlorite, and much of the sulfides has preferentially replaced amphibole (relative to plagioclase). The alteration has affected about half the original amphibole.

Biotite (2-3%) forms ragged books to 0.4 mm thick. It has pleochroism from straw to deep red-brown, and occurs with oxide and sulfide minerals as an alteration product of amphibole. Some contains chlorite intergrown along borders and cleavage planes.

Chlorite (1-2%) occurs surrounding sulfide and oxide minerals and as alteration of amphibole with biotite or by itself.

Quartz (2-3%) forms scattered interstitial grains around plagioclase and locally intergrown with sulfides.

Apatite (0.5-1.0%) forms scattered subhedral to euhedral grains up to 0.1 mm across.

Zircon (trace) forms a few subhedral grains to 0.05 mm across with biotite.

Opaque minerals (3%) include ilmenite and sulfides. Ilmenite (0.5-1) forms irregular grains and patches of grains scattered through the rock. Sulfides (2-2.5%) are mainly pyrrhotite with very minor chalcopyrite. Pyrrhotite is generally slightly to strongly altered along concentric zones to pyrite (after marcasite ?) and non-reflective material. Alteration begins along grain borders and less commonly along fractures, and works inwards. About 30% of the pyrrhotite is intergrown with ilmenite; pyrrhotite may have formed by partial replacement of ilmenite. Chalcopyrite forms a few very fine grains and aggregates with pyrrhotite and alone.

Limonite (0.1-0.2%) occurs on one edge of the section and in the hand sample, probably as an alteration of pyrrhotite-pyrite.

John Payne
October, 1976

IBEFT - TAHLACS 105 P11W

Results of Sampling 9 = "Gabbro"
(qtz-diorite) above Snow
Showing on Ag Claims 23/7/81

#11147 - 600' SW along rd from
Stn B 33 rusty weathered
qtz diorite non magnetic
tr cp + po VLS
.06 oz/ton Ag, 30 PPb Au,
Pt < 50 PPb Pd < 50 PPb

#11148 mag magnetic qtz diorite
dk grey not rusty 580' SW
of B 33 (± 5E 7N,
.56 oz/ton Ag, 30 PPb Au
Pt < 50 PPb Pd < 50 PPb

#11149 mag magnetic qtz diorite
dk grey not rusty ± 9E 8+60N
.10 oz/ton Ag, 15 PPb Au,
Pt < 50 PPb Pd < 50 PPb

#11150, Rusty magnetic qtz diorite
200' E of sampling rd from B 33
(± 1050E 10N)
.06 Ag, 15 PPb Au, < 50 PPb Pt < 50 PPb

A. Hurdon
3/9/81

CHEMEX LABS LTD.

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• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO CP 1182

TO Whitehorse, Copper Mines Ltd.,
P. O. Box 4280
Whitehorse, Y. T.
Y1A 3T3

ATTN

INVOICE NO 18474

RECEIVED Sept. 30/76

ANALYSED Oct. 6/76

SAMPLE NO	Lower Concentration Limit (PPM)	Spectro
Antimony	50	bcl
Arsenic	50	bcl
Barium	5	700
Beryllium	5	bcl
Bismuth	5	bcl
Boron	20	bcl
Cadmium	20	bcl
Calcium	0 05%	5%
Chromium	10	50
Cobalt	10	bcl
Copper	1	50
Gallium	2	20
Germanium	20	bcl
Iron	0 05%	10%
Lead	5	7
Magnesium	0 02%	1.5%
Manganese	5	1000
Molybdenum	10	bcl
Nickel	5	bcl
Niobium	50	bcl
Silver	1	bcl
Strontium	20	300
Tantalum	200	100
Tellurium	200	bcl
Thorium	100	bcl
Tin	10	bcl
Titanium	5	10,000
Vanadium	10	300
Zinc	50	70
Zirconium	20	70

SEMI QUANTITATIVE SPECTROGRAPHIC ANALYSES

>5000 ppm	=> 5000 ppm	50 ppm	= 25–100 ppm
5000 ppm	= 2500–10000 ppm	20 ppm	= 10–50 ppm
2000 ppm	= 1000–4000 ppm	10 ppm	= 5–20 ppm
1000 ppm	= 500–2000 ppm	5 ppm	= 2–10 ppm
500 ppm	= 250–1000 ppm	2 ppm	= 1–4 ppm
200 ppm	= 100–400 ppm	1 ppm	= 0.5–2 ppm
100 ppm	= 50–200 ppm	bcl	= below concentration limit

Ranges for Iron, Calcium & Magnesium are reported in %

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY A.B. Chapman

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
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AREA CODE 604
TELEX 043 52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

CERTIFICATE NO 31823

INVOICE NO 18474

RECEIVED Sept. 30/76

ANALYSED Oct. 4/76

TO Whitehorse Copper Mines Ltd.,
P. O. Box 4280
Whitehorse, Y. T.
Y1A 3T3

ATTN Andrew Mureau

SAMPLE NO	Oz/Ton Pt	Oz/Ton Au
Spectro	0.01	0.007

MEMBER CANADIAN TESTING ASSOCIATION

REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA

4000'

4000

3000'

2000'

1000'

3800'

BASELINE

7b
8a
7b
8b
8a/4y
7g
8a/4y
7g
7g
7/4y
3dc/4y
9a
3dc/4y
7g
0.11 3sIM
5/3M
0.06 5/3Me
5
7g
9a
7g
9a
3M
7g
L-1

binding 15°

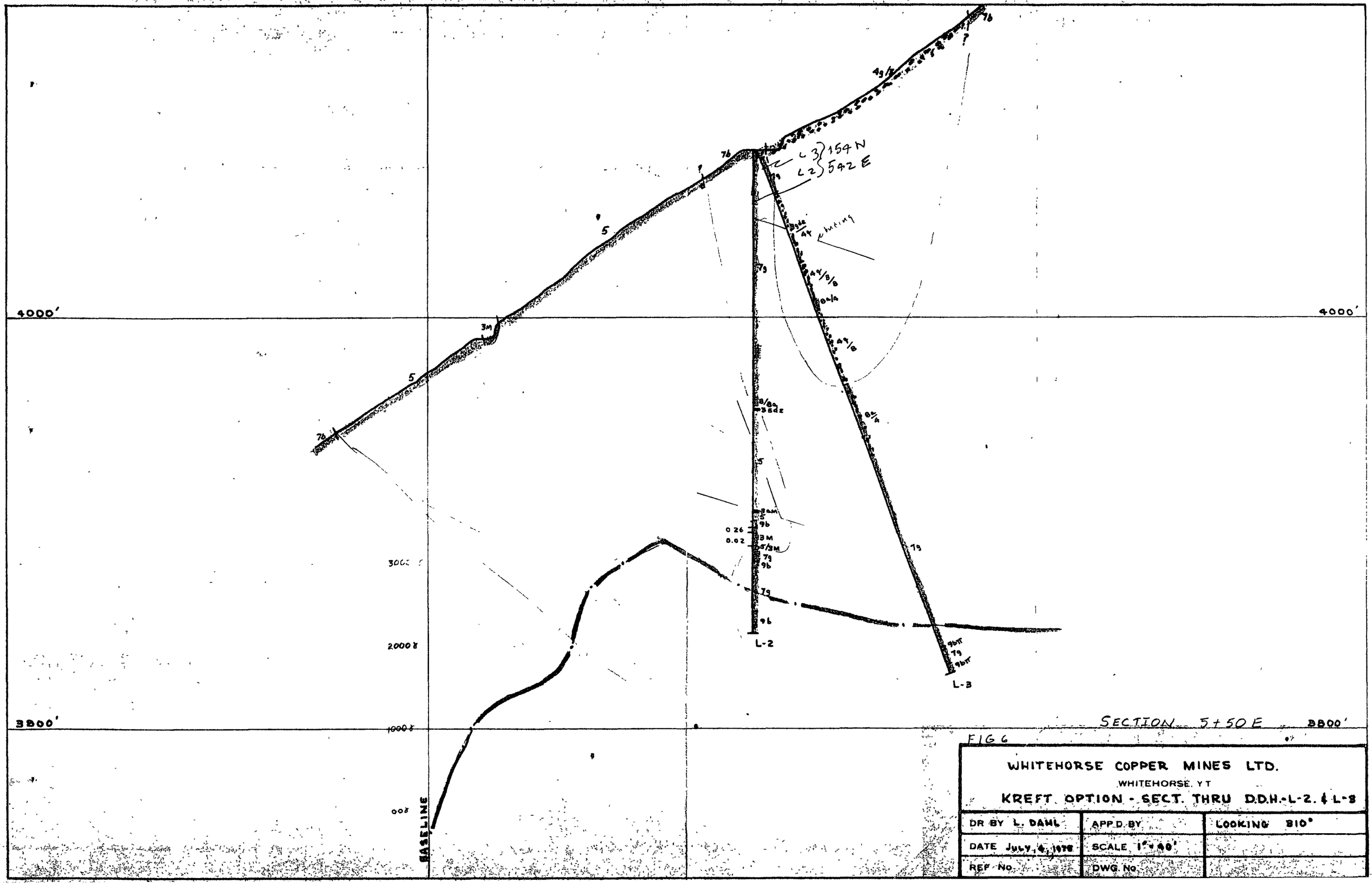
?

456E 152N

FIG 5

WHITEHORSE COPPER MINES LTD.
WHITEHORSE, Y T
KREFT OPTION - SECT. THRU D.D.H.-L-1

DR BY L. DAHL	APP'D. BY	LOOKING S10°
DATE JULY 4, 1975	SCALE 1"=40'	
REF No	DWG No	



SECTION 5+50 E

FIG 6

WHITEHORSE COPPER MINES LTD.

WHITEHORSE, Y T

KREFT OPTION - SECT. THRU D.D.H.-L-2. & L-3

DR BY L. DAHL	APP'D BY	LOOKING 310°
DATE JULY, 4, 1978	SCALE 1" = 40'	
REF No.	DWG No.	

± 650 E
190 N

4000'

3800'

3000 ft

2000 ft

1000 ft

00 ft

BASELINE

L-4

F267

WHITEHORSE COPPER MINES LTD.		
WHITEHORSE, Y T		650E
KREFT OPTION - SECT. THRU D.D.H. - L-4		
DR BY L. DAHL	APP'D. BY	LOOKING 310°
DATE July 4, 75	SCALE 1" = 40'	
REF. No	DWG. No	

8000 ft

6000 ft

3000 ft

1000 ft

-1000 ft

00N BASELINE

4200

4000

KT6A 70°

Collar KT6
(-55°)

L4 50' W of sect

MAG

FIG 8

WHITEHORSE COPPER MINES LTD. KREFT - TAKACS OPTION — SECTION 7E JACKSON LAKES AREA		
DR BY: R.E.R.	HOLE: KT 6	LOOKING: GRID WEST
DATE: OCT. 16/75	SCALE: 1"= 40'	

8000 ϑ

7000 ϑ

6000 ϑ

4100

4100'

5000 ϑ

4000 ϑ

3000 ϑ

2000 ϑ

3900'

3900'

Vertical Ct based on results L1 to L4 & Sect 19E

FIG 9

WHITEHORSE COPPER MINES LTD

KREFT OPTION - SECT 8E KT 3 & 4

DRN BY - R.E.R.		
DATE : OCT 7, 1975	SCALE · 1" = 40'	LOOKING 310°

4000

3500

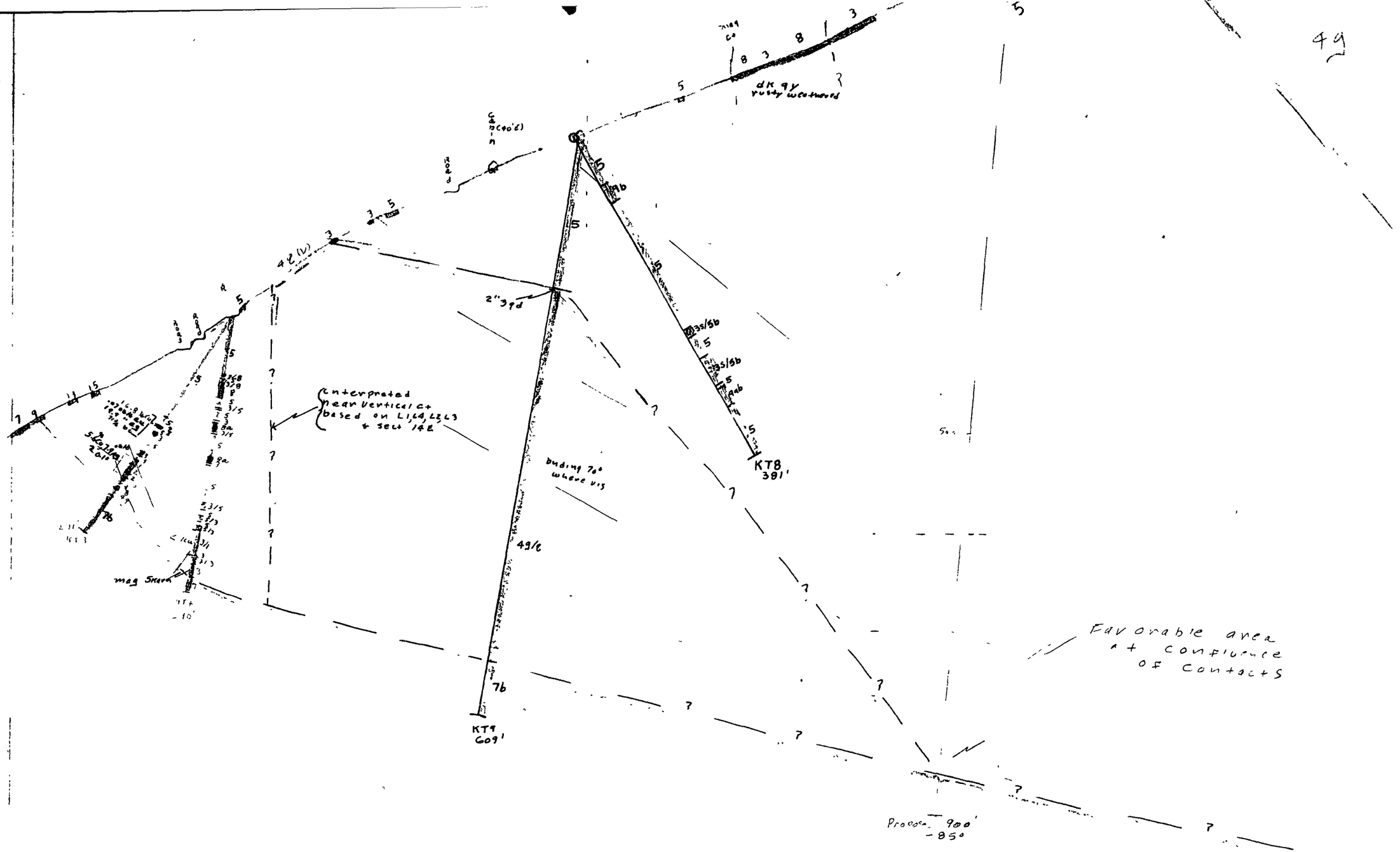
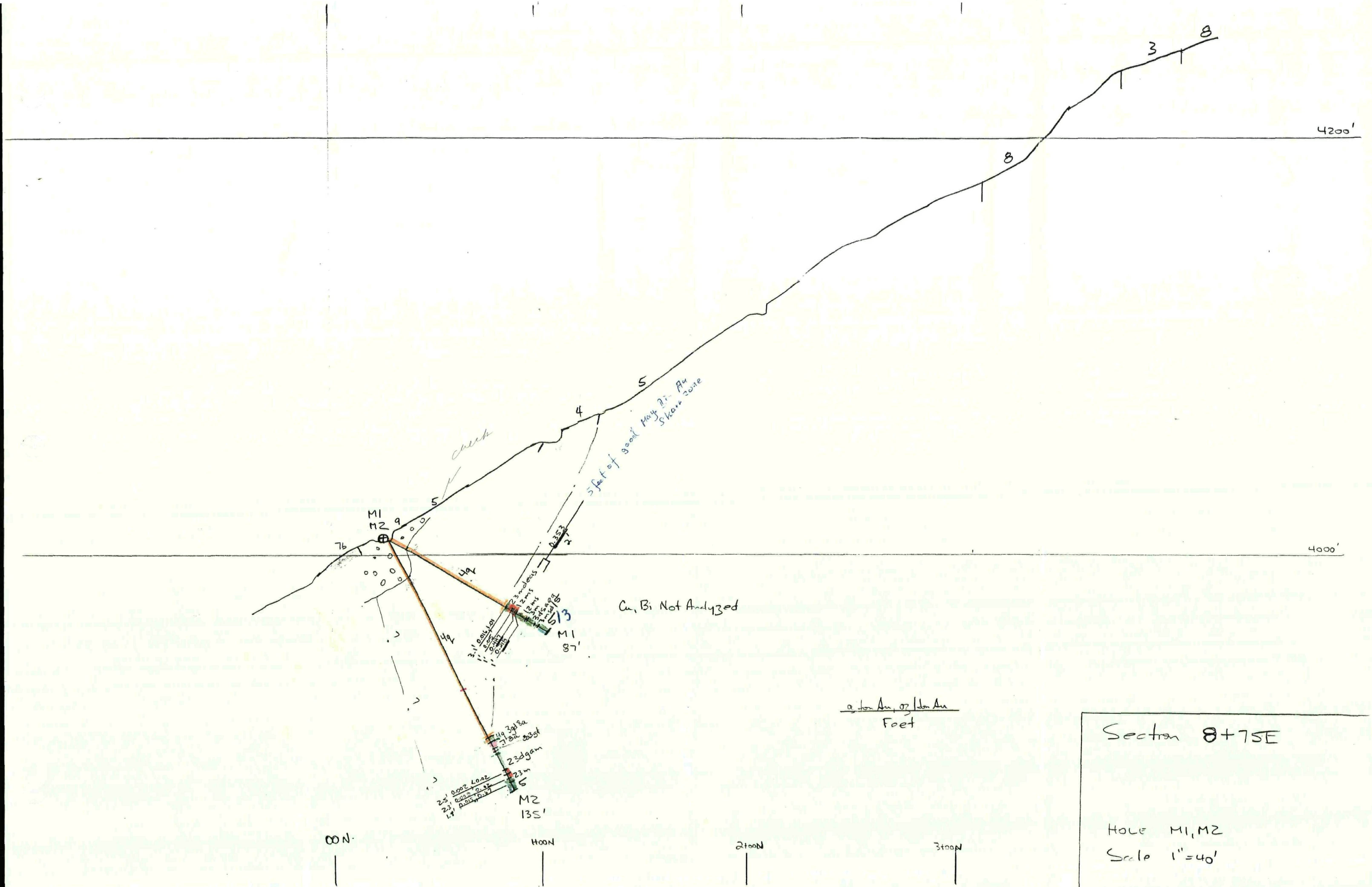


FIG 10 SECTION 8E
KREFT-TAKACS OPTION
JACKSON CREEK



Section 8+75E

Hole M1, M2

Scale 1"=40'

4200

4000

49

KT7

.09 Au .14 Ag .12 Bi
6.5'

.15 Au Tr Ag .68 Bi
5'

.07 Au .13 Ag .38 Bi
11.2'

.05 Au 1.34 Ag 1.15 Cu
5'

2.55 Au .62 Ag .13 W03 5.90 Bi
1.3'

-65°
±400'

FIG 11

WHITEHORSE COPPER MINES LTD. KREFT - TAKACS OPTION — SECTION 9E		
DR BY: R.E.R.	HOLE: KT 7	LOOKING: GRID WEST
DATE: JUNE 1976	SCALE: 1"=40'	

4200'

4000'

M3 5' West of Section

M3
82.5'
(Section 9+95E)

Not Assayed for Cu, Bi

Entire Skarn Not Assayed.

oz/ton Ag, oz/ton Au
Feet

00 1+00N 2+00N 3+00N

Section 10+00E

Hole: M3
Scale 1"=40'

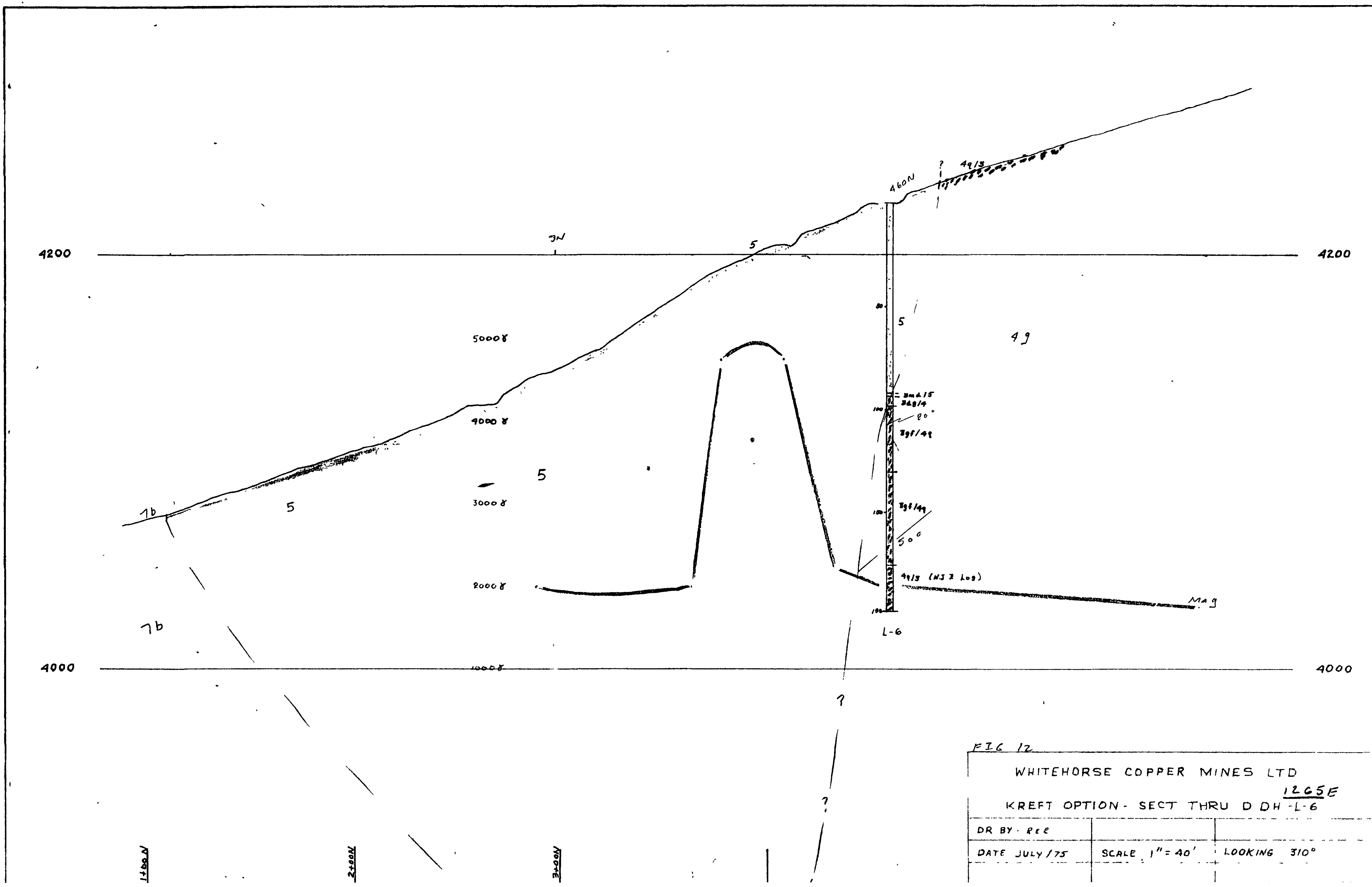


FIG 12

WHITEHORSE COPPER MINES LTD

KREFT OPTION - SECT THRU DDH 1265E L-6

DR BY - REE		
DATE JULY/75	SCALE 1" = 40'	LOOKING 310°

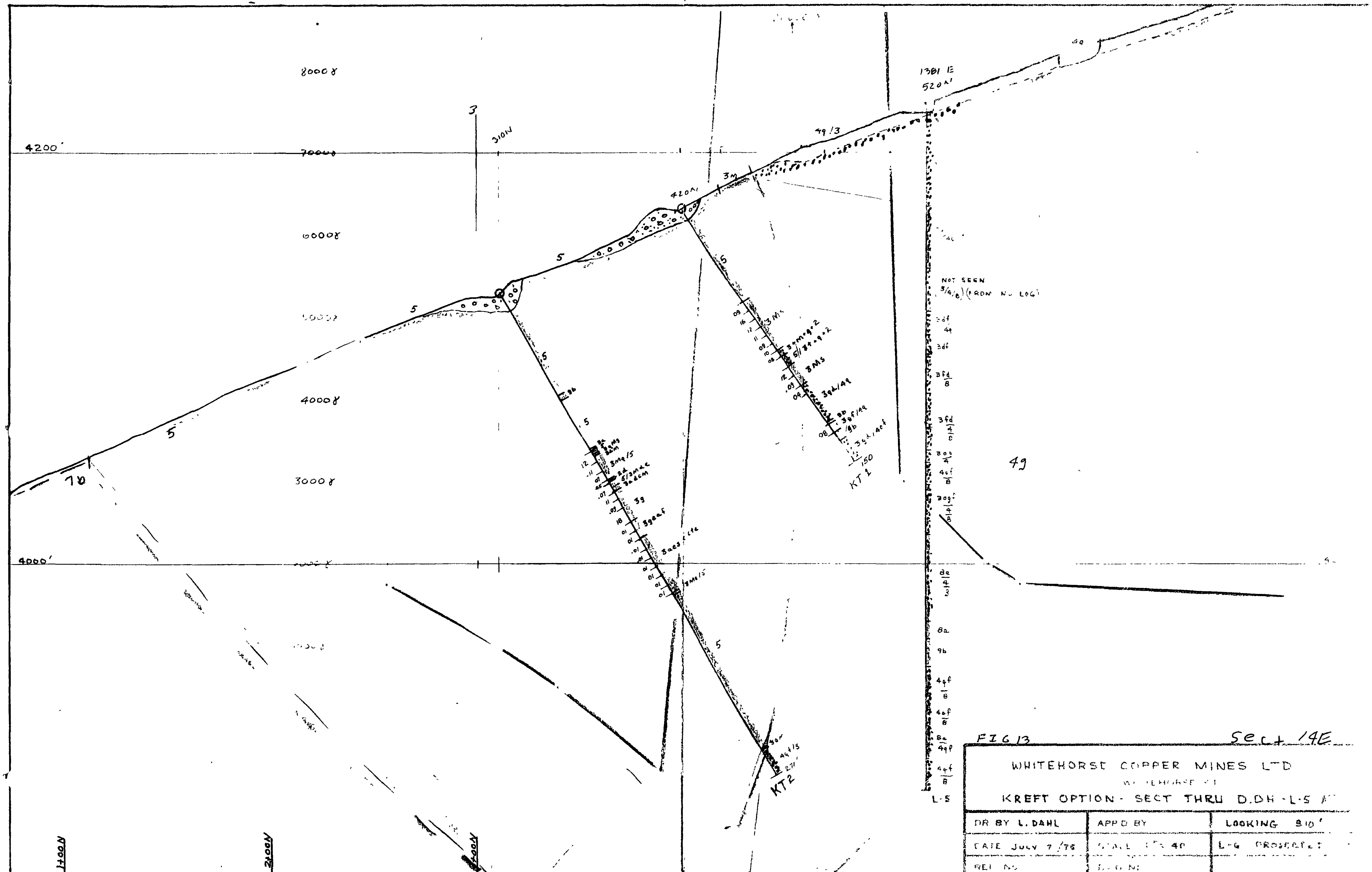


FIG 13 Sect 14E

WHITEHORSE COPPER MINES LTD		
KREFT OPTION - SECT THRU D.DH - L-5		
DR BY L. DAHL	APP'D BY	LOOKING 310'
DATE JULY 7/78	SCALE 1" = 40'	L-6 PROSPECT
REF NO		

0

3N

5N

4200

Collar KT5
(-55°)

7000 E

7b

56 (Argillite)

4200

C+e 15°

5000 Y

4000 Y

49 (Limestone)
R.i.B

7b

3000 Y

2000 Y

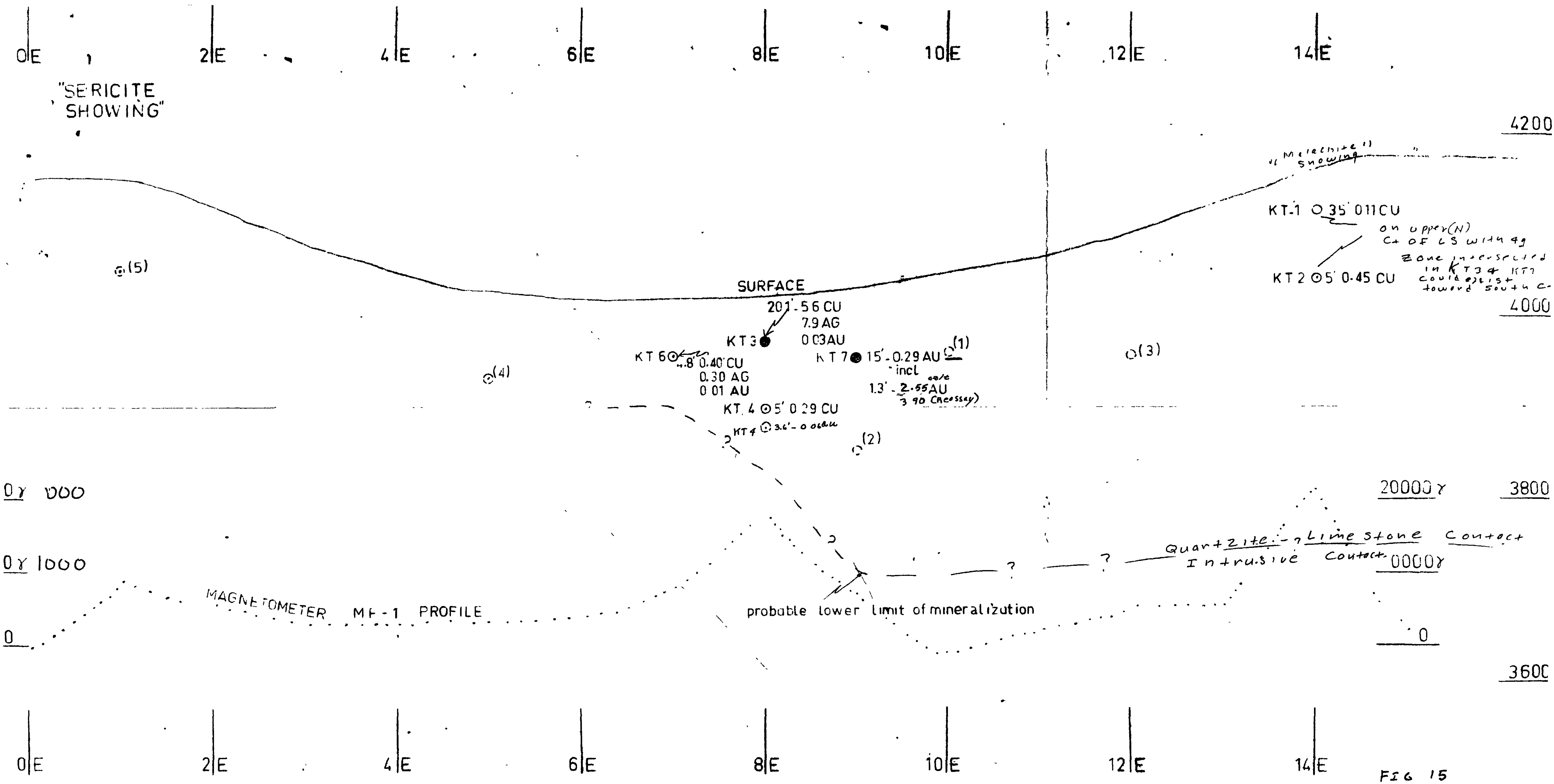
FIG 14

WHITEHORSE COPPER MINES LTD.

KREFT - TAKACS OPTION — SECTION 21E

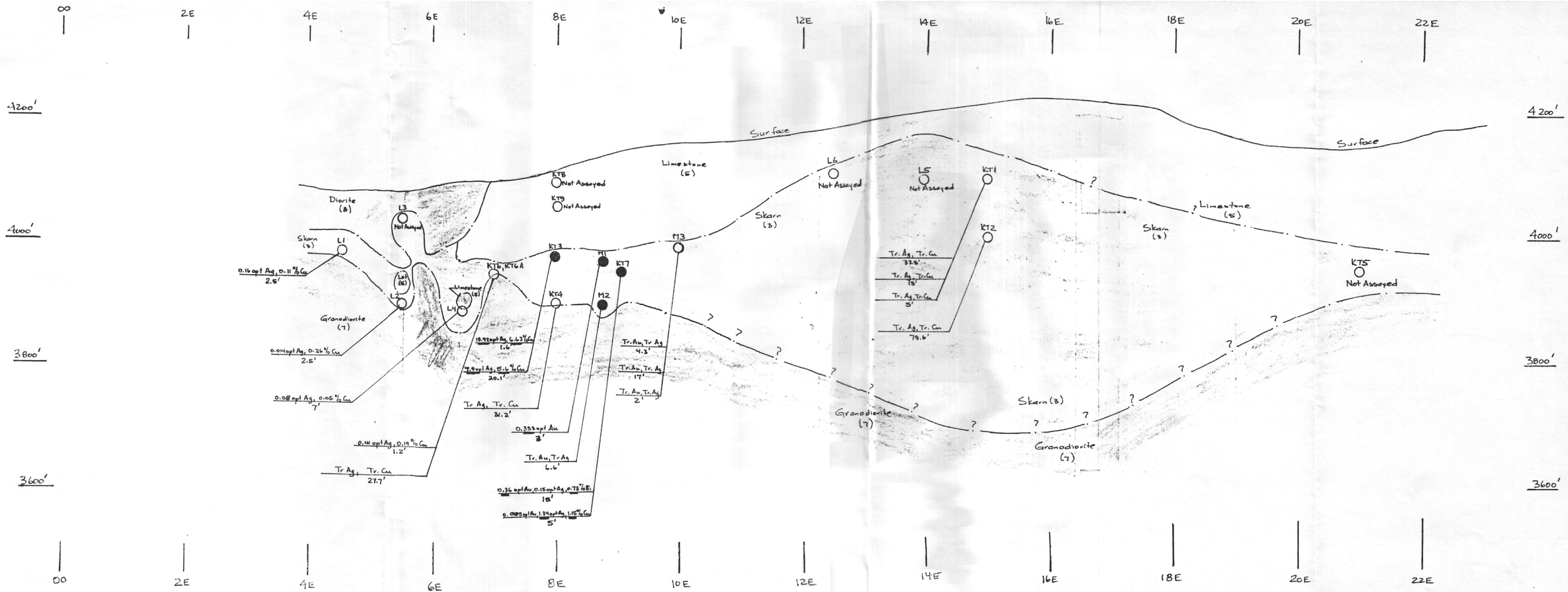
JACKSON LAKES AREA

DR BY R E R	HOLE · KT 5	LOOKING · GRID WEST
DATE · OCT. 11/75	SCALE · 1"= 40'	



O( ) Proposed Holes
Location of subsequent holes contingent on hole no. 1

FIG 15
WHITEHORSE COPPER MINES L
KREFT TAKACS OPTION
Jackson Creek Y.T.
105 D 11
VERTICAL LONG SECTION
1" = 100' A.H. JULY '76



Longitudinal Section
Looking North
Jackson Creek, Yukon NTS: 105-D-11

Scale 1" = 100' (Horizontal & Vertical)

EJD Oct '85

GEOLOGICAL LEGEND

CENOZOIC

QUATERNARY

PLEISTOCENE & RECENT

735 Q — ALLUVIUM, GLACIAL DRIFT

746 10 — MILES CANYON BASALT

POST CRETACEOUS

INTRUSIVE DYKES OR SILLS

755 9a — ACIDIC GRANITIC, APLITE, FELSITE, 9a - may predate skarn

734½ 9b — BASIC ANDESITE, DIORITE, POST-ORE, 9b-porphyry

MESOZOIC

CRETACEOUS

COAST INTRUSIVES

752 8 — DIORITE — 8a ALTERED (ENDOSKARN); 8l MINERALIZED ENDOSKARN, MALACHITE, CHALCOPYRITE, BORNITE

752 7 — 7g GRANITE, 7b GRANODIORITE, 7m QUARTZ-MONZONITE

LOWER JURASSIC & LATER

746½ 5 — LABERGE GROUP

UPPER TRIASSIC

LEWES RIVER GROUP (METAMORPHOSED)

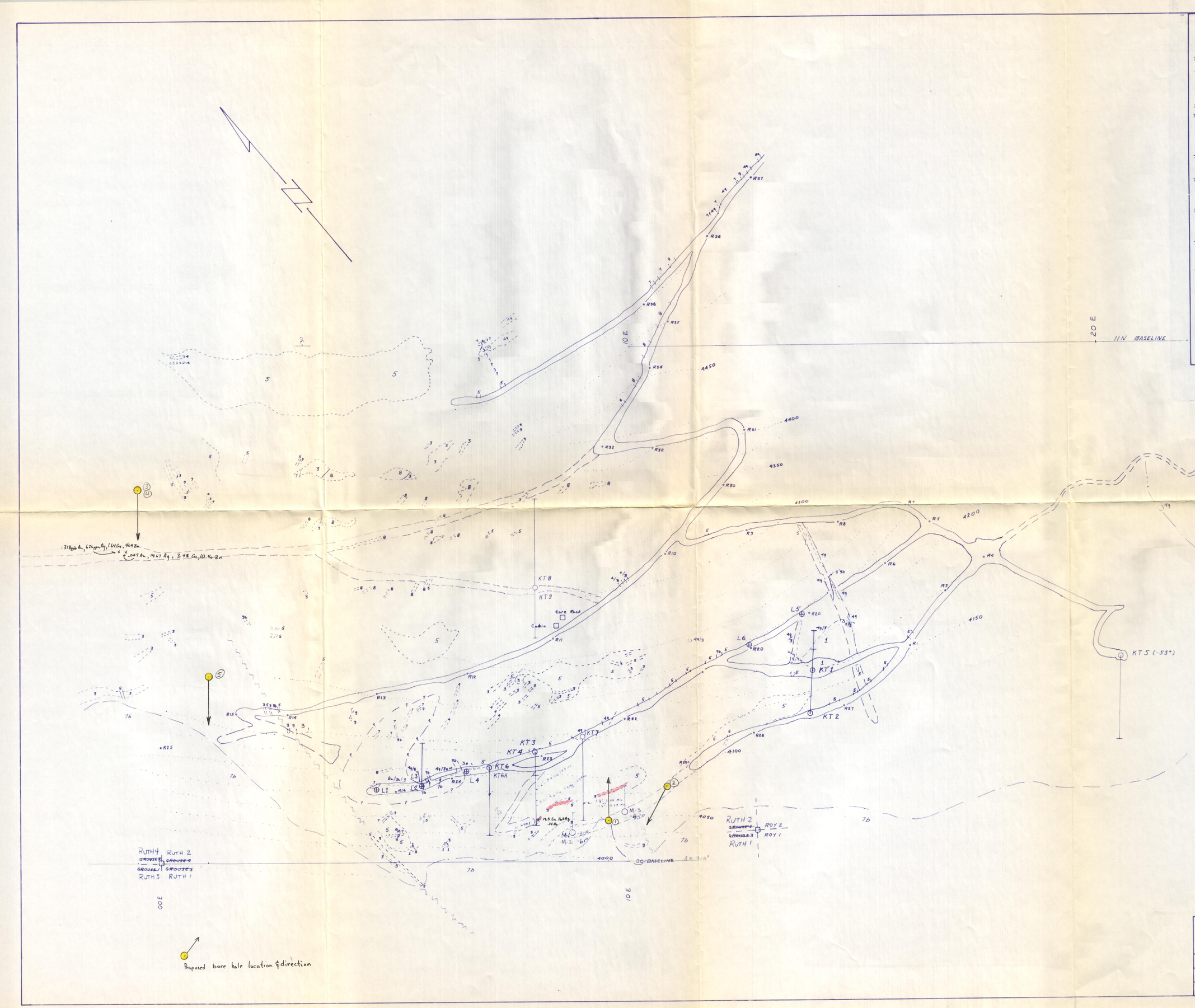
740½ 5 — LIMESTONE AND/OR DOLOMITE, 5b-CARBONACEOUS LIMESTONE

736½ 4 — QUARTZITE, GREYWACKE, ARGILLITE, ARKOSE — 4q QUARTZITE; 4g GREYWACKE; 4k ARKOSE

738 3 — SKARN BARREN, WITH ····· g-ACTINOLITE, c-CHLORITE, d-DIOPSIDE, e-EPIDOTE, f-FELDSPAR, g-GARNET, s-SERPENTINE, t-TREMOLITE, w-WOLLASTONITE, z-ZOISITE

745 2 — SKARN MINERALIZED, BORNITE, CHALCOPYRITE, COPPER OXIDES, WITH ·····

745 1 — SKARN MAGNETITE, BORNITE, CPY, VALERIITE, COPPER OXIDES, WITH ·····



Proposed bore hole location & direction

FIG 2

WHITEHORSE COPPER MINES LTD. KREFT – TAKACS OPTION		
GEOLOGY & D.D.H. PLAN		
DR BY: R.E.R.	SCALE: 1" = 100'	MAP No.: 105 D/11 W
DATE: OCT. 11 1975		
GEOLOGY BY: G. B. (NJZ) 1972 & R.E.R. 1975		


GEOLOGICAL LEGEND
CENOZOIC
QUATERNARY
PLEISTOCENE & RECENT
735 Q ALLUVIUM, GLACIAL DRIFT
746 10 MILES CANYON BASALT
POST CRETACEOUS
INTRUSIVE DYKES OR SILLS
755 9a ACIDIC GRANITIC, APLITE, FELSITE,
9a- may predate skarn
734½ 9b BASIC ANDESITE, DIORITE, POST-ORE,
9b*-porphyry
MESOZOIC
CRETACEOUS
COAST INTRUSIVES
752 8 DIORITE
8a ALTERED (ENDOSKARN)
8b MINERALIZED ENDOSKARN, MALACHITE, CHALCOPYRITE, BORNITE
752 7 7g GRANITE, 7b GRANODIORITE, 7m QUARTZ-MONZONITE
LOWER JURASSIC & LATER
746½ 6 LABERGE GROUP
UPPER TRIASSIC
LEWES RIVER GROUP (METAMORPHOSED)
740½ 5 LIMESTONE AND/OR DOLOMITE, 5b-CARBONACEOUS LIMESTONE
736½ 4 SEDIMENTS - NON - CALCEREOUS
4q QUARTZITE
4g GREYWACKE
4k ARKOSE
738 3 SKARN BARREN, WITH
745 2 MINERALISED SILICATE SKARN
745 1 MINERALISED MAGNETITE SKARN
a-ACTINOLITE
c-CHLORITE
d-DIOPSIDE
e-EPIDOTE
f-FELDSPAR
g-GARNET
s-SERPENTINE
t-TREMOLITE
w-WOLLASTONITE
b-BORNITE
m-MAGNETITE
z-ZOISITE
h-HEMATITE
INTERBANDED 5.4g.3
A/Volc.
A/Sed
11N BASELINE
ON BL.
FIG 1
WHITEHORSE COPPER MINES LTD.
KREFT-TAKACS OPTION
REGIONAL GEOLOGY
JACKSON LAKES AREA
DRAWN BY: R.E.R
GEOLOGY BY: R.E.R., A.N., G.B., G.M.
PROJ. No.:
DATE: OCT. 1975
SCALE: 1" = 400'
MAP: 105 D11W
REVISED:
REVISED BY:

FIG 4

KREFT OPTION

MAGNETOMETER SURVEY

SCALE 1"= 100'

JULY 1975

R.E.R.

LINE 10E

LINE 16E

LINE 20E

LINE 24E

11N BL

35 TL

00N BL

00E

4E

8E

10E

16E

20E

24E

KT1

KT2

KT3

KT4

KT5

KT6

DDH L-1

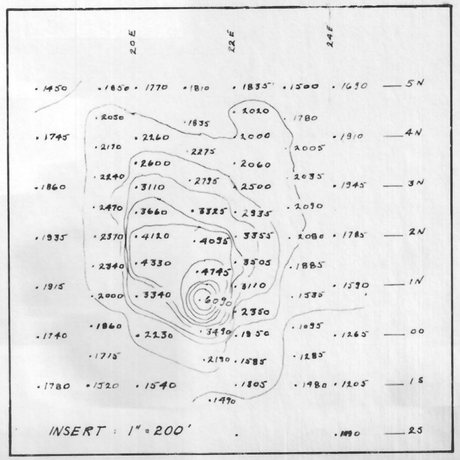
DDH L-2

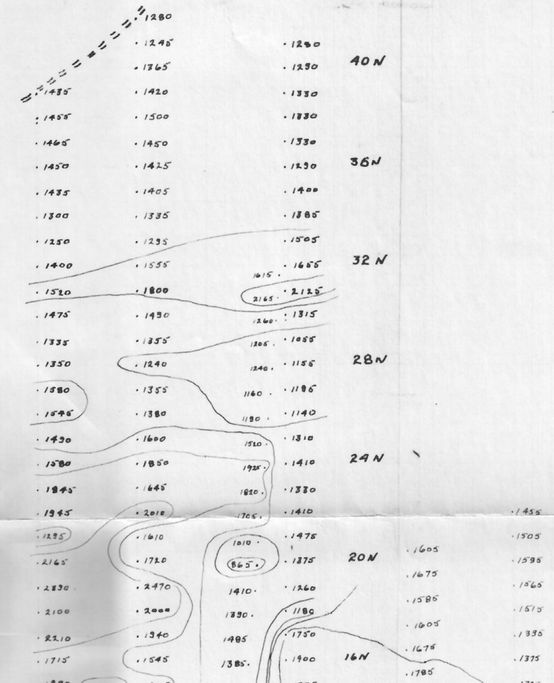
DDH L-3

DDH L-4

DDH L-5

DDH L-6





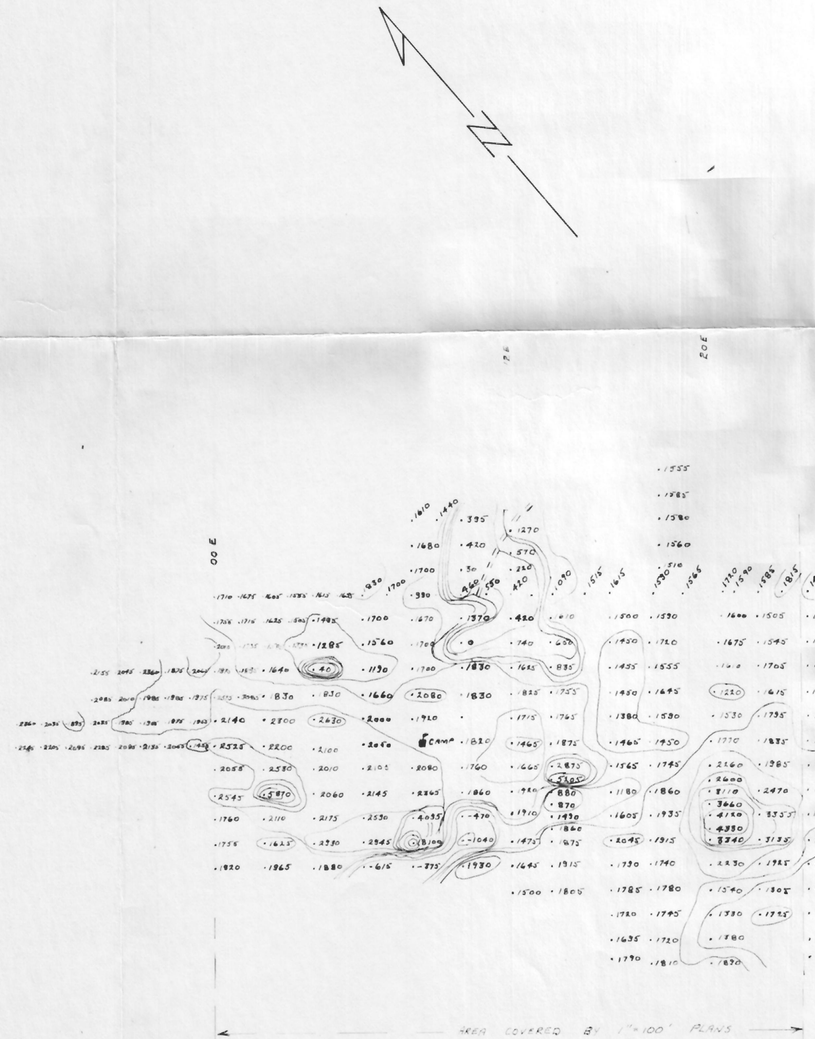


FIG 3

WHITEHORSE COPPER MINES LTD.
KREFT - TAKACS OPTION

MAGNETOMETER SURVEY

DR. BY: R.E.R.	SCALE: 1" = 400'	OPER.: R.E.R.
DATE: JULY 75		INSTR: SCINTREX MF 1.

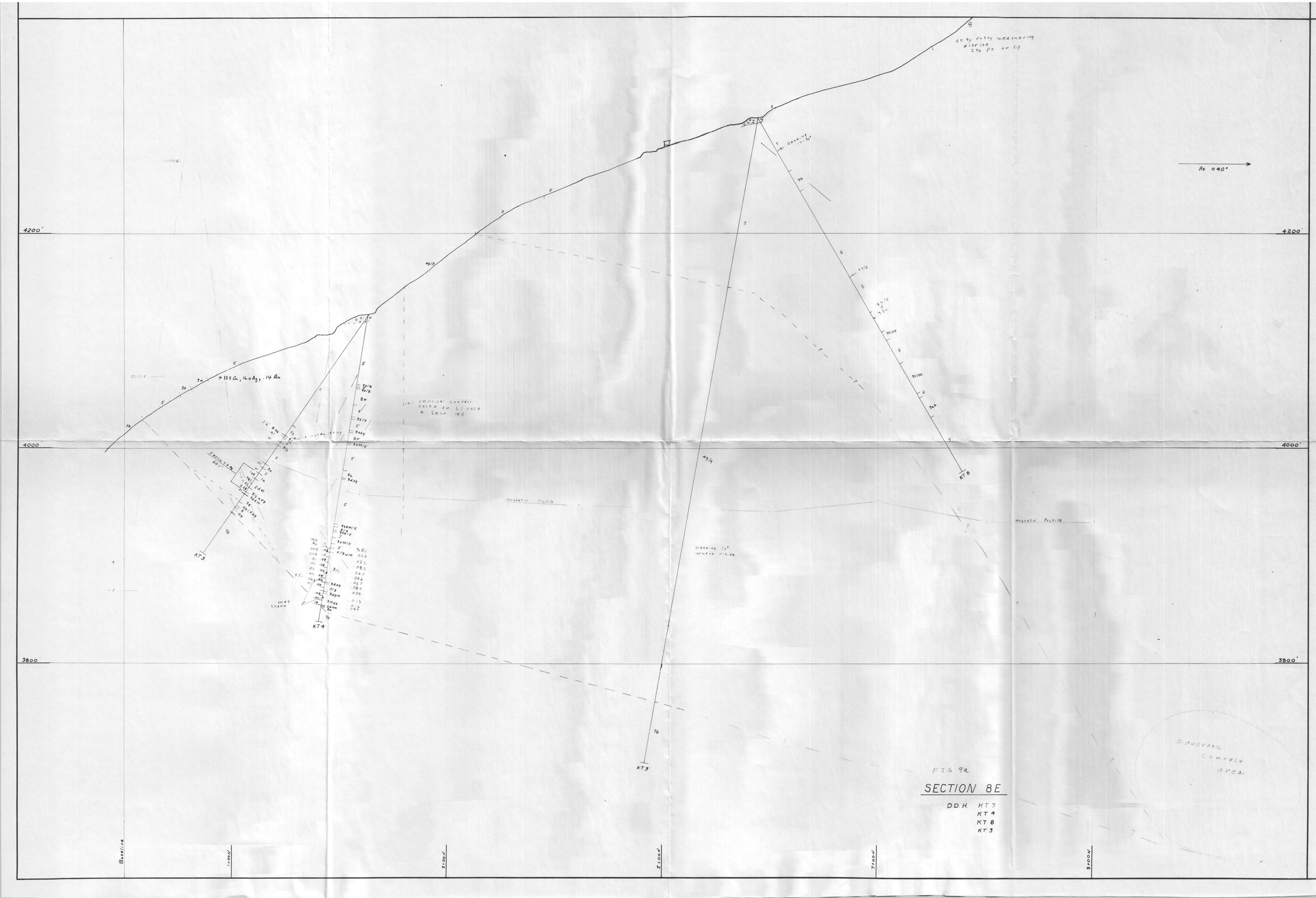


FIG 9a

SECTION 8E

DDH KT 3
KT 4
KT 8
KT 9

M1

Whitehorse Copper Mines Ltd.

MINING DIVISION – WHITEHORSE
YUKON TERRITORY

PROPERTY JACKSON CREEK (KREFT/TAKACS)	Claim No.	Strike N. 40°E (Compass)	Lat.	Hole No. M#1
Date June 15 19 83	Section No.	Dip −30°	Dep.	Total Depth 87'
Logged By P.W. PERCIVAL	Plan No.	Level Surface	Elev.	Page No. 1/4

FOOTAGE From	FOOTAGE To	ROCK CLASSIFICATION (Epid Diop Garn Serp Qtz Sil Actino Tremo Chlo; Crystalline Shearing Veins Fracturing Foliation Grain Size Texture)	MINERALIZATION TYPE	%	ASSAY DATA Sample No	Width	Recov	%Cu	%Fe	Moly	Au/Ag	Insol
0.0	7.0'	Casing; poor recovery, only 1.5 ft of what appears to be small pieces of broken & highly fractured 9b (Basic Dyke Rx) and dark grey-green 9q (Quartzite)										
7.0'	9.0'	Altered 9q (Quartzite) dark grey-green with a purple tinge. Only 1.3 ft. of core recovered.										
9.0'	25.5'	9q (Quartzite) dark grey to black with some light green patches – mottled 14.4 ft of core recovered, minor pyrite as scattered grains throughout. Core 0 to approx. 18.6 EXT size Core 18.6 on TEX size	Loc well bedded 40° –									
		Broken Core @ 9.0'; 11.0' to 11.5'; 14.0'; 15.0' to 19.0'										
25.5'	27.0'	9q (Quartzite) mottled light green & black shows banding, some magnetite in core, very good recovery, minor pyrite as scattered grains.	40° banding									

WHITEHORSE COPPER MINES LTD.
P.O. BOX 4280
YUKON TERRITORY

Hole No. M#1 Page No. 2/4

FOOTAGE From	FOOTAGE To	ROCK CLASSIFICATION Epid, Diop, Garn, Serp, Qtz/Sil, Actino, Tremo, Chlo, Crystalline, Shearing, Veins, Fracturing, Foliation, Grain Size, Texture	MINERALIZATION TYPE	MINERALIZATION %	ASSAY DATA Sample No.	Width	Recov.	% Cu	% Fe	Moly	Au/Ag	Insol
27.0'	32.5'	4q (Quartzite) dark grey with some light green bands and patches fine grained generally not magnetic, good core recovery (5.5'). Broken core @ 29.5' to 30.0'. Scattered pyrite grains; thin pyrite stringer 1/8" to 1/4" wide @ 29.0'.										
32.5'	35.0'	4q (Quartzite) similar to above but shows a purple-brown hue maybe due to garnet very fine grained. Contains pyrite as scattered grains plus a few small blebs of pyrite. Good core recovery (2.5')										
35.0'	63.5'	4q (Quartzite) altered much the same as above but in places appears mottled with patches with characteristics similar to a partially assimilated rehealed breccia. Good core recovery (26.7ft.) A few scattered pyrite grains Broken core @ 56.0'; 61.5'	@ 40'	0.[illegible]	[illegible]	qtz, Chl	3%	3y	+v	CF		
			@ 60'	banding 60°								
63.5'	66.6'	2/3 mdeas (Magnetite/Diopside/Epidote/Actinolite/Serpentine) Skarn. Dark grey to black; epidote 65 to 66.6 Fine grained pyrite scattered throughout Contains small bladed crystals of Bismuthinite (Bi_2S_3)?? This is a magnetite skarn zone	Skarn									

WHITEHORSE COPPER MINES LTD.
P.O. BOX 4280
YUKON TERRITORY

Hole No. M#1 Page No. 3/4

FOOTAGE From	FOOTAGE To	ROCK CLASSIFICATION Epid, Diop, Garn, Serp, Qtz/Sil, Actino, Tremo, Chlo, Crystalline, Shearing, Veins, Fracturing, Foliation, Grain Size, Texture	MINERALIZATION TYPE	MINERALIZATION %	ASSAY DATA Sample No.	Width	Recov.	%Cu	% Fe	OZ/Ton ~~Assay~~ Au	Au/Ag	Insol
63.5'	66.6'	(Continued)	Mag.	≈10%						Au	Ag	
		Sample 63.5'-66.6' = 3.1'	Pyrite	<¼%	7501	3.1	3.0			0.016	1.01	
		To be assayed for gold & silver	Bi_2S_3	<¼%								
66.6'	69.0'	Pre split core, 1/2 ms(da) Massive magnetite skarn with both Chalcopyrite and pyrite as fine grains, well developed crystals and small blebs. Bi_2S_3 crystals as small metallic (luster) blades are closely associated with the Chalcopyrite crystals. Some crystals and crystal aggregations of scheelite $CaWO_4$ detected by black light. Colour of coved "rock" is black.	Skarn									
		Previous Samples 66.0' to 68.0' = 2.0'; Au. A.A. = 0.050 oz/T. F.A. =										
		68'-69' = 1.0'; Au. A.A. = 0.423 oz/T. F.A. = 0.550 oz/T.										
		69'-70' = 1.0'; Au. A.A. = 0.280 oz/T F.A. = 0.155 oz/T.										
		Assayed by N. Nichoporak before P. Pascucci logged; sampled hole?										
69.0'	74.5'	Pre split core 1/2ms Skarn but with less magnetite, lighter in colour — more pyrite as blebs and less chalcopyrite much less Bi_2S_3 visible	Skarn									

WHITEHORSE COPPER MINES LTD.
P.O. BOX 4280
YUKON TERRITORY

Hole No. M#1 Page No. 4/4

FOOTAGE From	FOOTAGE To		ROCK CLASSIFICATION Epid, Diop, Garn, Serp, Qtz/Sil, Actino, Tremo, Chlo, Crystalline, Shearing, Veins, Fracturing, Foliation, Grain Size, Texture	MINERALIZATION TYPE	%	ASSAY DATA Sample No.	Width	Recov.	%Cu	%Fe	~~Moly~~ (OZ/Ton)	~~Au/Ag~~	Insol
71.5′	76.0′		1/2ms.(d.a) Massive magnetite skarn, black to dark grey, fine grained; very few sulfides visible; good recovery.	Skarn							Au	Ag	
			Sample 71.5 to 76.0 = 4.5′ To be assayed for gold & silver			7502	4.5′	4.5′			0.010	0.02	
76.0′	77.0′		3m Massive magnetite skarn, black to dark green										
77.0′	81.1′		3 ds,a,e,g Skarn containing some magnetite in a few scattered patches. Mottled green & redish brown few visible sulfides (some scattered pyrite)										
81.1′	82.7′		3msd/5 Transition zone; skarnified limestone										
82.7′	87.0′		5 (Limestone) dark grey brecciated limestone	Still partially skarnified serp, occ act blades (5/3a,5)								1/2	Lime 1/2 Skar
			End of hole 87.0′										
			Broken core @ 86′ Core recovery generally very good ≃90 to 95%										

WHITEHORSE COPPER MINES
Whitehorse

EXPLORATION ASSAY DATA

Property JACKSON CREEK (KREFT/TAKACS)

Oz/Ton Au Ag

Date JUNE 29/83
Page No. 1/2

Sample No.	Hole No.	Footage From	Footage To	Length	Rec.	%Cu	~~%Moly~~	~~Au/Ag~~	%Fe	Remarks
7501	M#1	63.5'	66.1'	3.1'	3.0'		0.016	1.01		
7502	M#1	71.5'	76.0'	4.5'	4.5'		0.010	0.02		
7503	M#2	123.7'	126.2'	2.5'	2.5'		0.002	<0.02		
7504	M#2	126.2'	128.5'	2.3	2.0		0.006	0.02		
7505	M#2	128.5'	130.4	1.9'	1.8		0.015	0.67		
7506	M#3	39.3'	43.6'	4.3'	4.2'		0.002	009		
7507	M#3	52.5	57.5	5.0'	5.0'		0.002	0.02		
7508	M#3	57.5'	62.5'	5.0'	5.0'		0.010	0.02		
7509	M#3	62.5'	67.5'	5.0'	5.0'		0.002	0.02		

WHITEHORSE COPPER MINES
Whitehorse

EXPLORATION ASSAY DATA

Property JACKSON CREEK (KREFT/TAKACS) oz/ton Au Ag Date JUNE 29/83 Page No. 2/2

Sample No.	Hole No.	Footage From	Footage To	Length	Rec.	%Cu	~~%Moly~~	~~Au/Ag~~	%Fe	Remarks
7510	M#3	67.5	69.5	2.0'	2.0'	<	0.002	0.02		
7511	M#3	72.5	75.5	3.0'	3.0'		0.002	0.02		
~~M1 6466~~	~~M1~~	~~*69~~	~~66~~	~~2.0~~	~~2.0~~					
~~M1 6667~~	~~M1~~	~~66~~	~~67~~	~~1.0~~	~~1.0~~					
~~M1 6768~~		~~67~~	~~68~~	~~1.0~~						68 = 67.5' measured back from 68' +eq
~~M1 6869~~		~~68~~	~~69~~	~~1.0~~						
~~M1 6970~~		~~69~~	~~70~~	~~1.0~~						
~~M1 7071~~		~~70~~	~~71~~	~~1.0~~						
Feb.						oz Au	oz Ag	% Cu	% Bi	% WO_3
M1 63-65	M1	63	65	2.0	2.0	.010	1.20			
M1 65-66		65	66	1.0	1.0	.008	.40			
M1 66-67		66	67	1.0	1.0	.121	1.43	.76	.11	.13
M1 67-68		67	68	1.0	1.0	.198	2.46	1.26	.53	.14
M1 6869		68	69	1.0	1.0	.750	2.42	0.53	1.60	.30
M1 6970		69	70	1.0	1.0	.057	0.81	0.10	0.40	.03
M1 7071		70	71	1.0	1.0	.080	0.40	0.02	0.90	.02
M1 7172		71	72	1.0	1.0	.010	0.04			

over 5 feet

M2

Whitehorse Copper Mines Ltd.

MINING DIVISION – WHITEHORSE
YUKON TERRITORY

PROPERTY JACKSON CREEK (KREFT/TAKACS)	Claim No.	Strike N. 40°E. (Compass)	Lat.	Hole No. M #2
Date JUNE 15 19 63	Section No.	Dip −61°	Dep.	Total Depth 135'
Logged By P. W. PERCIVAL	Plan No.	Level Surface	Elev.	Page No. 1/3

FOOTAGE From	FOOTAGE To	ROCK CLASSIFICATION Epid Diop Garn Serp Qtz Sil Actino Tremo Chlo Crystalline Shearing Veins Fracturing Foliation Grain Size · Texture	MINERALIZATION TYPE	%	ASSAY DATA Sample No	Width	Recov	%Cu	%Fe	Moly	Au/Ag	Insol
0'	18'	Casing										
0.0'	11.5'	4g (Quartzite) Light grey green, fine grained.										
11.5'	17.2'	9b (Basic Dyke) dark grey-green with small light coloured (white) subrounded phenocrysts.										
17.2'	84.1'	4g (Quartzite) Grey to dark grey with greenish hue, fine grained, appears mottled & banded (patches of what appears to be partially assimilated rebealed breccia) a few scattered grains of fine pycite.										
84.1'	89.7'	8/7 (Granodiorite) fresh, medium to fine grained, unaltered.										
89.7'	106'	4g (Quartzite) Dark grey-green with a purple tinge, fine grained; — some scattered grains of pyrite.										

WHITEHORSE COPPER MINES LTD.
P.O. BOX 4280
YUKON TERRITORY

Hole No. M#2 Page No. 2/3

FOOTAGE From	FOOTAGE To	ROCK CLASSIFICATION Epid, Diop, Garn, Serp, Qtz/Sil, Actino, Tremo, Chlo, Crystalline, Shearing, Veins, Fracturing, Foliation, Grain Size, Texture	MINERALIZATION TYPE	MINERALIZATION %	ASSAY DATA Sample No.	Width	Recov.	% Cu	% Fe	Moly	Au/Ag	Insol
106.0'	108.4	4q/3gd/8a Mottled, altered transition zone (of Quartzite/Garnet-Diopside (Actinolite?) Skarn/ /Altered Diorite) light green, dark green to black and reddish brown.										
108.4'	112.2'	7/8a Slightly altered medium grained grano-diorite.										
112.2'	113.9'	8q/3gd altered contact zone - dioritic crystaline texture still evident (Skarnified Diorite)										
113.9'	123.7'	3/3 d.g.a?.m (Skarn, diopside, garnet, actinolite? and magnetite) ~~mottled~~ patches of mottled black (mag), green (diop), Lt green (actino.?) and reddish brown (garn.) approx. 10% magnetite, No visible sulfides										
123.7'	126.2'	2/3 d.g.a?.m as above										
126.2'	130.4'	2/3 m Black massive fine grained magnetite skarn containing scattered pyrite and chalcopyrite as fine grains and small aggregations.										

WHITEHORSE COPPER MINES LTD.
P.O. BOX 4280
YUKON TERRITORY

Hole No. M#2 Page No. 3/3

FOOTAGE From	FOOTAGE To		ROCK CLASSIFICATION Epid, Diop, Garn, Serp, Qtz/Sil, Actino, Tremo, Chlo, Crystalline, Shearing, Veins, Fracturing, Foliation, Grain Size, Texture	MINERALIZATION TYPE	MINERALIZATION %	ASSAY DATA Sample No.	Width	Recov.	%Cu	% Fe	oz./Ton Au	oz./Ton Ag	Insol
123.7'	130.4'		SAMPLE 123.7' to 126.2'			7503	2.5'	2.5'			0.002	<0.02	
			SAMPLE 126.2' to 128.5'			7504	2.3'	2.3'			0.008	0.02	
			SAMPLE 128.5' to 130.4'			7505	1.9'	1.6' ~~1.6~~			0015	0.67	
			Above sampled for gold & silver only										
			Broken Core @ 128.0' to 128.5'										
130.4'	135.0'		5 (Limestone) Banded medium grey limestone some brecciation evident										
			Breccia @ 134' – 135'										
			Broken Core @ 21'; 28'; 36.5' to 37.0'; 48.0'-50.0'; 60.0' to 60.5'; 63'; 84'; 100.5'; 111'; 118'.										
			TEX Core 0.0' to 113'										
			EXT Core 113 to 135'										
			Recovery good > 85%										

WHITEHORSE COPPER MINES
Whitehorse

EXPLORATION ASSAY DATA

Property JACKSON CREEK (KREFT/TAKACS) Oz/Ton Au Ag Date JUNE 29/63 Page No. 1/2

Sample No.	Hole No.	Footage From	Footage To	Length	Rec.	%Cu	%Moly	Au/Ag	%Fe	Remarks
7501	M#1	63.5'	66.1'	3.1'	3.0'		0.016	1.01		
7502	M#1	71.5'	76.0'	4.5'	4.5'		0.010	0.02		
7503	M#2	123.7'	126.2'	2.5'	2.5'		0.002	<0.02		
7504	M#2	126.2'	128.5'	2.3	2.0		0.006	0.02		
7505	M#2	128.5'	130.4	1.9'	1.8		0.015	0.67		
7506	M#3	39.3'	43.6'	4.3'	4.2'		0.002	009		
7507	M#3	52.5	57.5	5.0'	5.0'		0.002	0.02		
7508	M#3	57.5'	62.5	5.0'	5.0'		0.010	0.02		
7509	M#3	62.5'	67.5	5.0'	5.0'		0.002	0.02		

WHITEHORSE COPPER MINES
Whitehorse

EXPLORATION ASSAY DATA

Property JACKSON CREEK (KREFT/TAKACS) oz/ton Au Ag Date JUNE 29/83 Page No. 2/2

Sample No.	Hole No.	Footage From	Footage To	Length	Rec.	%Cu	~~%Moly~~	~~Au/Ag~~	%Fe	Remarks
7510	M#3	67.5'	69.5	2.0'	2.0'	<	0.002	0.02		
7511	M#3	72.5'	75.5	3.0'	3.0'		0.002	0.02		

M3

Whitehorse Copper Mines Ltd.

MINING DIVISION – WHITEHORSE
YUKON TERRITORY

PROPERTY JACKSON CREEK (KREFT / TAKACS)	Claim No.	Strike N. 40°E (Compass)	Lot.	Hole No. M #3
Date JUNE 15th 19 83	Section No.	Dip -45°	Dep.	Total Depth 82.5'
Logged By P. W. PERCIVAL	Plan No.	Level Surface	Elev.	Page No. 1/3

FOOTAGE From	FOOTAGE To	ROCK CLASSIFICATION Epid Diop Garn Serp Qtz Sil Actino Tremo Chlo Crystalline Shearing Veins Fracturing Foliation Grain Size Texture	MINERALIZATION TYPE	%	ASSAY DATA Sample No	Width	Recov	%Cu	%Fe	Moly	Au/Ag	Insol
0.0'	8.0'	Casing										
0.0'	27.6'	4g (Quartzite) A Dark grey-green with purplish tinge, slightly mottled in appearance fine grained Fine grained pyrite crystals scattered through-out. A few tiny veinlets of pyrite. Broken Core @: 9.0'; 8'6 9'; 16.0' to 16.5'; 22.5' to 23.5'; 25' to 27'										
27.6'	31.2'	5 (Limestone) White crystaline limestone, unbanded.	✓									
31.2'	33.0'	5alt (Limestone) Slightly altered grey-green banded limestone.	Skarn									
33.0'	34.5'	3/g,e, a? Barren skarn, brecciated mottled light brown to dark redish brown with White (actinolite?) patches. Rose/red coloured rounded small clusters of rhodochrosite??	Skarn									

WHITEHORSE COPPER MINES LTD.
P.O. BOX 4280
YUKON TERRITORY

Hole No. M #3 Page No. 2/3

FOOTAGE From	FOOTAGE To	ROCK CLASSIFICATION Epid, Diop, Garn, Serp, Qtz/Sil, Actino, Treme, Chlo, Crystalline, Shearing, Veins, Fracturing, Foliation, Grain Size, Texture	MINERALIZATION TYPE	MINERALIZATION %	ASSAY DATA Sample No.	Width	Recov.	% Cu	% Fe	Au Metr	Ag Au/Ag	Insol
34.5'	35.2'	3m (Magnetite Skarn) barren, black, massive, containing minor pyrite as grains and tiny veinlets, a few small subspheroidal clusters of rose/red rhodochrosite?? crystals.	Mag Skarn							0z/Ton		
35.2'	39.3'	3ge, a? as per 33.0' to 34.5'	Skarn some Cu									
39.3'	43.6'	3/2m g:e?a? (Skarn) magnetic brecciated mottled black/rose-purple/white with small veinlets of ~~pyrite~~ Cu scattered through out.	Skarn Cu	2-3%	over 5 feet							
		SAMPLE 39.3' - 43.6' To be assayed for gold & silver			7506	4.3'	4.2'			0.012	0.09	
43.6'	49.9'	3ge a? as per 33.0' to 34.5' & 35.2' to 39.3' contains some scattered ~~pyrite~~ Cu crystals and a few ~~pyrite~~ Cu blebs. ~~Some~~ pyrite	Skarn with less Cu									
49.9'	69.5'	2/3mg (Magnetite Skarn) with garnet appears as partially recealed breccia throughout black/dark grey to rose, mottled rose colour probably due to the presence of rhodochrosite?? No visible sulfides.	Skarn except Cu									
69.5'	72.5'	5 (Limestone) light to dark grey slightly banded (appears as a relealed brecuit)										

WHITEHORSE COPPER MINES LTD.
P.O. BOX 4280
YUKON TERRITORY

Hole No. M#3 Page No. 3/3

FOOTAGE From	FOOTAGE To	ROCK CLASSIFICATION Epid, Diop, Garn, Serp, Qtz/Sil, Actino, Tremo, Chlo, Crystalline, Shearing, Veins, Fracturing, Foliation, Grain Size, Texture	MINERALIZATION TYPE	MINERALIZATION %	ASSAY DATA Sample No.	Width	Recov.	%Cu	% Fe	oz/Ton ~~Moly~~	oz/Ton ~~Au/Ag~~	Insol
69.5'	72.5'	No visible sulfides.								Au	Ag	
72.5'	75.5'	3/2g, e, a, m. (Skarn) with garnet, epidote and actinolite ??+ minor magnetite. Section is leached and brecciated similar in appearance to setion 39.3' to 43.6' Contains scattered fine grained pyrite crystals are Cu										
75.5'	82.5'	5 (Limestone) Dark grey brecciated										
		END OF HOLE @ 82.5'										
		Core Recovery Generally Good to Very Good										
		Broken Core @: 32'-32.5'; 37' (lt. brown, leached?); 70'; 72.5'-75.5'										
		SAMPLES 52.5 - 57.5			7507	5.0'	5.0'			0.002	0.02	
		57.5 - 62.5			7508	5.0'	5.0'			0.010	0.02	
		62.5 - 67.5			7509	5.0'	5.0'			0.002	0.02	
		67.5 - 69.5			7510	2.0'	2.0'			<0.002	0.02	
		72.5 - 75.5			7511	3.0'	3.0'			0.002	0.02	
		To be assayed for gold & silver										

WHITEHORSE COPPER MINES
Whitehorse

EXPLORATION ASSAY DATA

Property JACKSON CREEK (KREFT/TAKACS) Oz/Ton Au Ag Date JUNE 29/83 Page No. 1/2

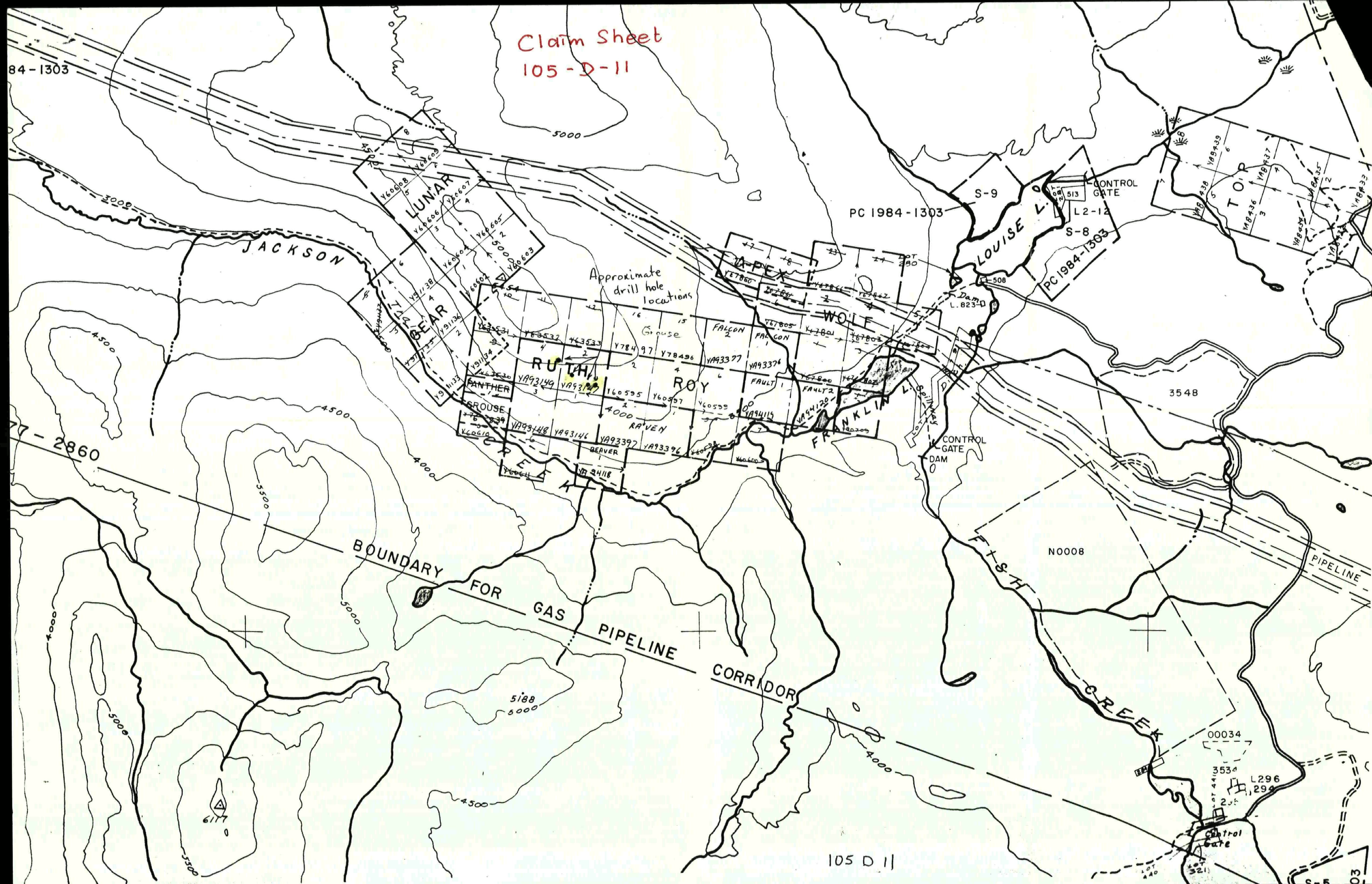
Sample No.	Hole No.	Footage From	Footage To	Length	Rec.	%Cu	%Moly	Au/Ag	%Fe	Remarks
7501	M#1	63.5'	66.1'	3.1'	3.0'		0.016	1.01		
7502	M#1	71.5'	76.0'	4.5'	4.5'		0.010	0.02		
7503	M#2	123.7'	126.2'	2.5'	2.5'		0.002	<0.02		
7504	M#2	126.2'	128.5'	2.3	2.0		0.008	0.02		
7505	M#2	128.5'	130.4	1.9'	1.8		0.015	0.67		
7506	M#3	39.3'	43.6'	4.3'	4.2'		0.002	009		
7507	M#3	52.5	57.5	5.0'	5.0'		0.002	0.02		
7508	M#3	57.5'	62.5'	5.0'	5.0'		0.010	0.02		
7509	M#3	62.5'	67.5	5.0'	5.0'		0.002	0.02		

WHITEHORSE COPPER MINES
Whitehorse

EXPLORATION ASSAY DATA

Property JACKSON CREEK (KREFT/TAKACS) oz/ton Au Ag Date JUNE 29/83
Page No. 2/2

Sample No.	Hole No.	Footage From	Footage To	Length	Rec.	%Cu	%Moly	Au/Ag	%Fe	Remarks
7510	M#3	67.5'	69.5	2.0'	2.0'	<	0.002	0.02		
7511	M#3	72.5'	75.5	3.0'	3.0'		0.002	0.02		



Claim Sheet
105-D-11
84-1303
JACKSON
LUNAR
GEAR
RUTH
ROY
PANTHER
GROUSE
RAVEN
BEAVER
FALCON
FAULT
APEX
WOLF
FRANKLIN L.
LOUISE L.
Approximate drill hole locations
Grouse
CONTROL GATE
DAM
S-9
S-8
L2-12
PC 1984-1303
PC1984-1303
Dam
TOM
3548
N0008
FISH CREEK
PIPELINE
BOUNDARY FOR GAS PIPELINE CORRIDOR
77-2860
CREEK
5000
4500
4000
3000
5500
5188
6117
00034
L296
Control Gate
105 D 11

③ -60°
④ -80°

1318ppb Au, 626ppm Ag, 1.64% Cu, 4.49 Zn

.047 Au, 14.67 Ag, 3.48 Cu, 10.40 Zn

⑤ -60°

KT8

KT9

Core Rock

Cabin

KT3

KT4

KT7

KT6

KT6A

L1 L2 L3 L4

L6

M-1 -300°

M-2 -610

M-3 -450

1.3' 2.55 Au 15° 0.29 Au

3.0' .36 Au

13.5 Cu, 16.0 Ag .14 Au

R10 R11 R12 R13 R14 R15 R16 R17 R20 R22 R23 R24 R25 R26 R30

RUTH 4 | RUTH 2
GROUSE 2 | GROUSE 4
GROUSE 1 | GROUSE 3
RUTH 3 | RUTH 1

RUTH 2
GROUSE 4
GROUSE 3-3
RUTH 1
ROY 2
ROY 1

4000 00/BASELINE AZ 310°

4100

4050

00E

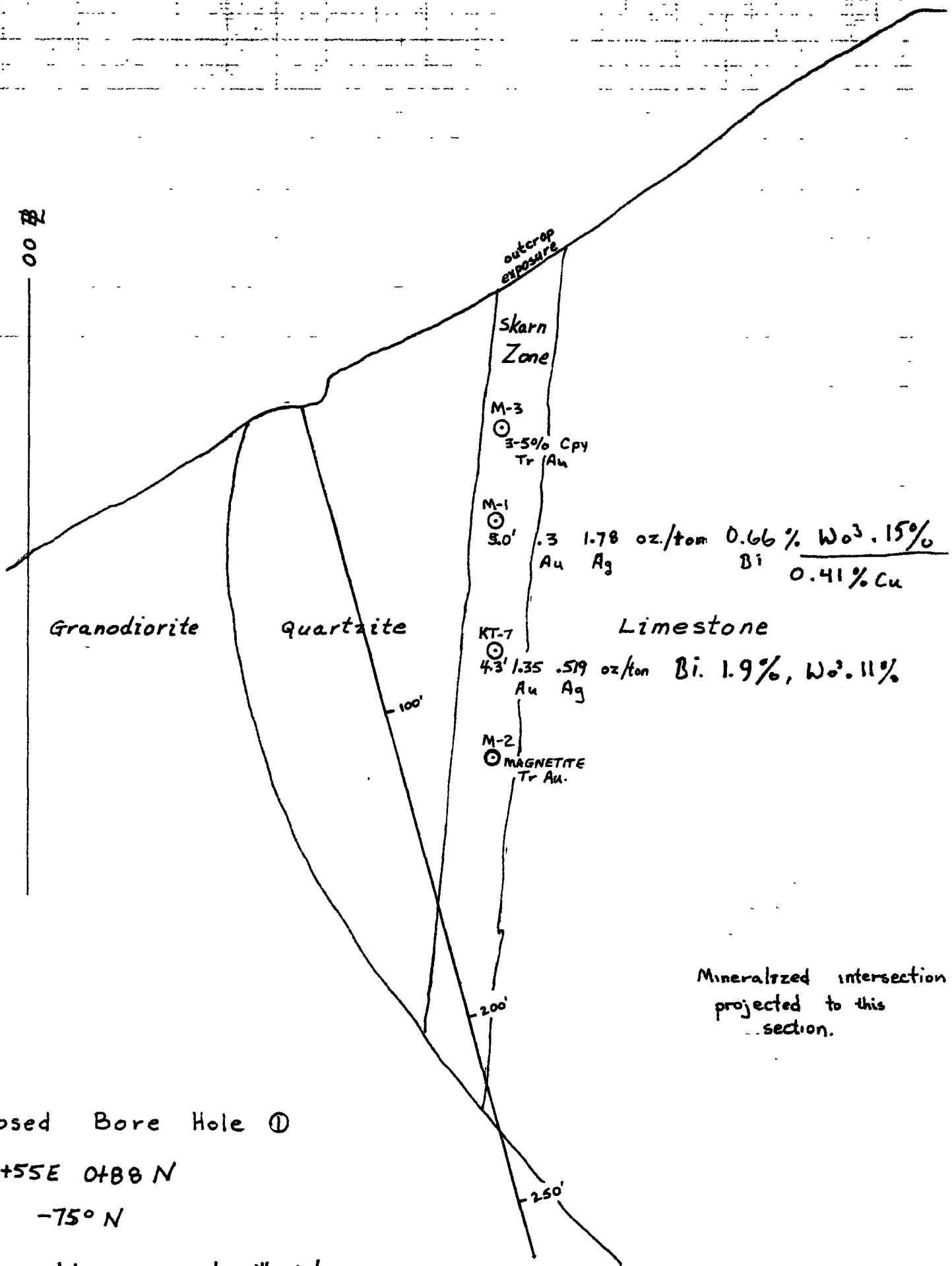
10E

Proposed bore hole location & direction

Scale 1" = 100'

JACKSON CREEK PROPERTY

105 D 11



Mineralized intersection projected to this section.

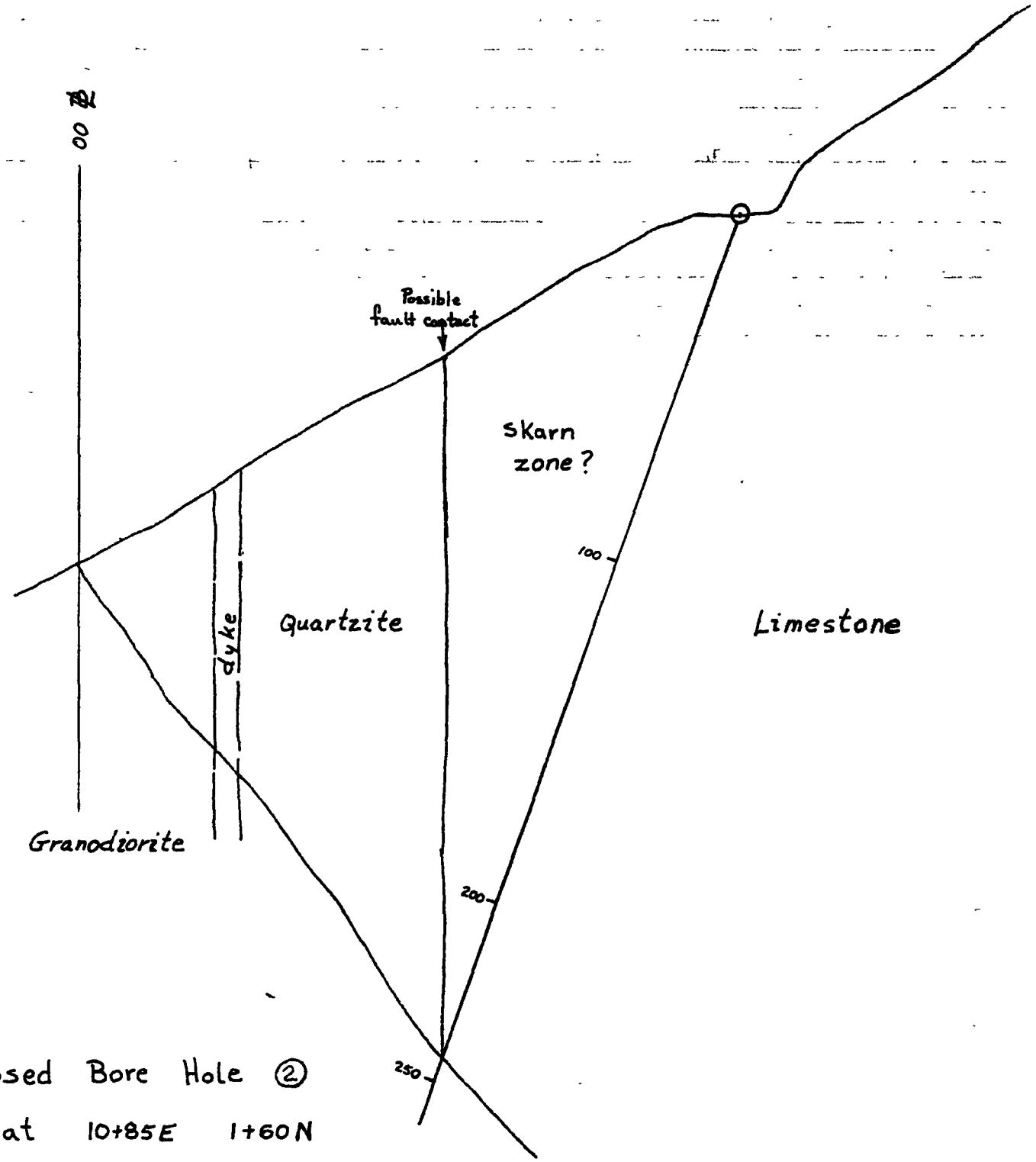
Proposed Bore Hole ①

9+55E 0+88 N

-75° N

Looking West scale 1"=40'

March 19/86



Proposed Bore Hole ②

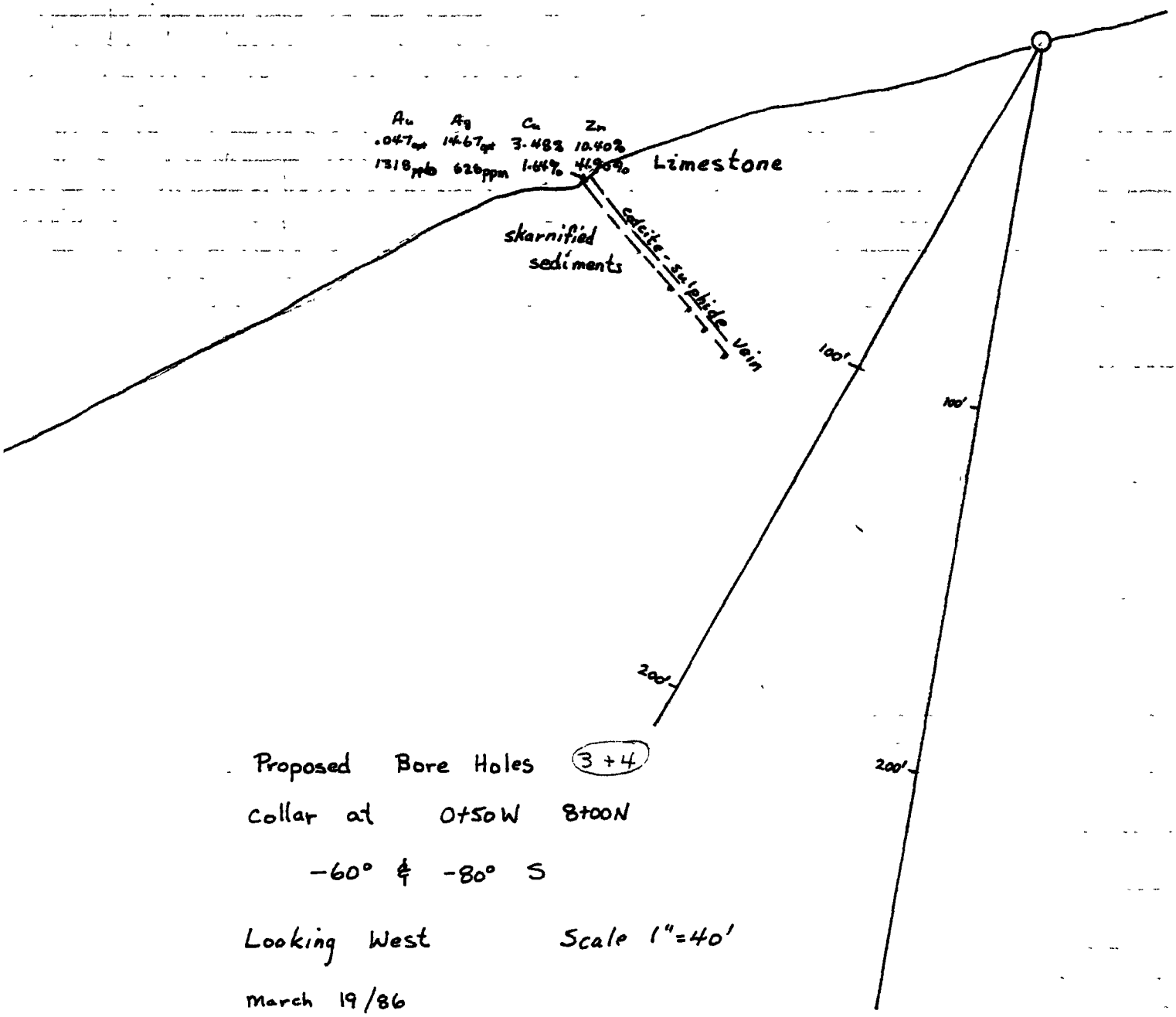
collar at 10+85E 1+60N

-70° SW

bearing of bore hole 250°

LOOKING 340° Scale 1"=40'

March 18/84



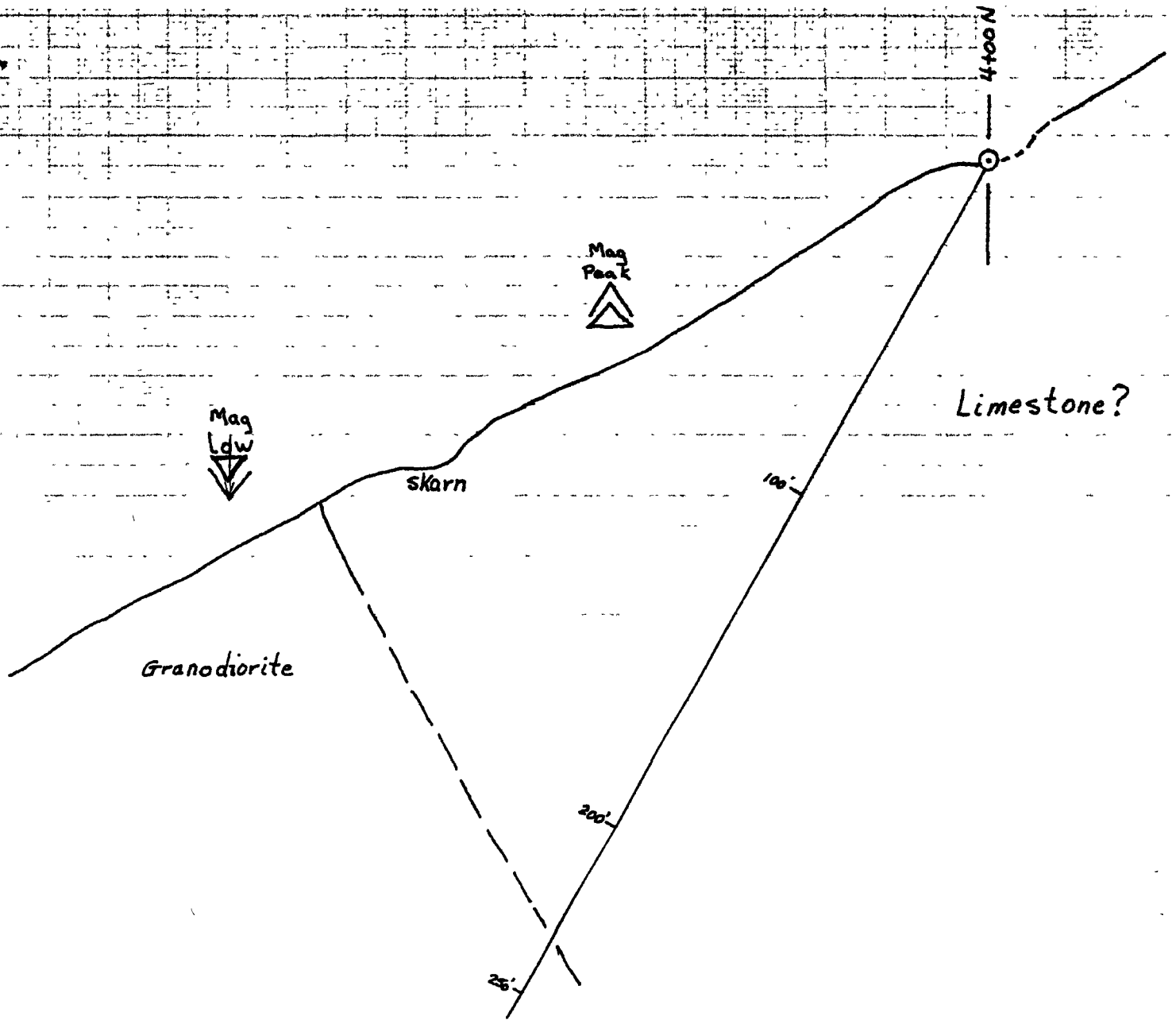
Proposed Bore Holes (3+4)

Collar at 0+50W 8+00N

-60° & -80° S

Looking West Scale 1"=40'

March 19/86



Proposed Bore Hole (5)

collar at 1+00E 4+00N

-60° S

Looking West scale 1"=40'

March 19/86

EIP 86 - 001

DIAMOND DRILLING REPORT

RUTH 1-4 CLAIMS (YA 93146 - YA 93149)

NTS 105 D 11 W ($60^{o}41'20"N$, $135^{o}21'45"E$)

by

A. HUREAU

for

E. KREFT

4 JUNE 86 to 19 AUG. 86

TABLE OF CONTENTS

LIST OF PLANS & SECTIONS

SUMMARY AND RECOMMENDATIONS

Four holes with an aggregate footage of 1494' were drilled in June and July '86 on the Jackson Creek property 8 miles west of Whitehorse. Drilling was done to follow up gold mineralization in skarn intersected in previous drilling, Vis. 1.3' @ 2.55 opt (15' @ 0.29) in KT 7, 1976 and 3' @ 0.356 opt in M1, 1983. Holes K 86-01, 02, 03 drilled below and east of the above intersections encountered only low gold values in the skarn. Previous drilling in 1975-1976 west of KT 7 also failed to intersect significant gold values. The zone of gold mineralization is now considered to be too small to warrant further work.

The wide skarn zone (160') intersected in K 86-03, 350' east of KT 7 proves the continuity of the skarn zone to the east and the favourable sediments-intrusive contact east of K 86-03 for two miles to Franklin Lake is largely overburden covered and remains relatively unexplored. Detailed magnetometer and soil sampling surveys on this contact may detect anomalies resulting from mineralization in the skarn.

A mapping and sampling program sponsored by DINA, currently in progress, may also reveal areas requiring further work west of the zone drilled.

Hole K 86-04, drilled to test a small magnetic anomaly, failed to intersect magnetic skarn. The skarn zone is small and apparently does not persist to the depth of the hole.

Trenching was done east of KT-7 to reveal the extent and attitude of dykes before locating K 86-03. Trenching was also carried out to reveal bedrock in an area 500' NW of K 86-04 where grab samples ran 0.04 gold and to 14 oz silver. The owner plans to drill this showing with a Winkie drill.

INTRODUCTION

Copper, gold, silver bearing calc-silicate and magnetite skarn zones occur north of Jackson Creek at the contact of Upper Triassic Lewes River clastic sediments and carbonates with quartz-monzonite and granodiorite of the Eocene suite of volcano-plutonic rocks, at the east margin of the Coast Plutonic Complex.

The skarn zones at Jackson Creek, are outside the Whitehorse Copper Belt, which is along the contact of the mid-Cretaceous Whitehorse Batholith with Lewes River rocks, similar to those at Jackson Creek. The mineralogy and setting of the skarn zones are similar.

LOCATION, ACCESS AND TOPOGRAPHY

The main showings are located on the north side of Jackson Creek at 60°41'20"N, 135°21'45"W on NTS sheet 105 D 11W, 8 miles west of Whitehorse.

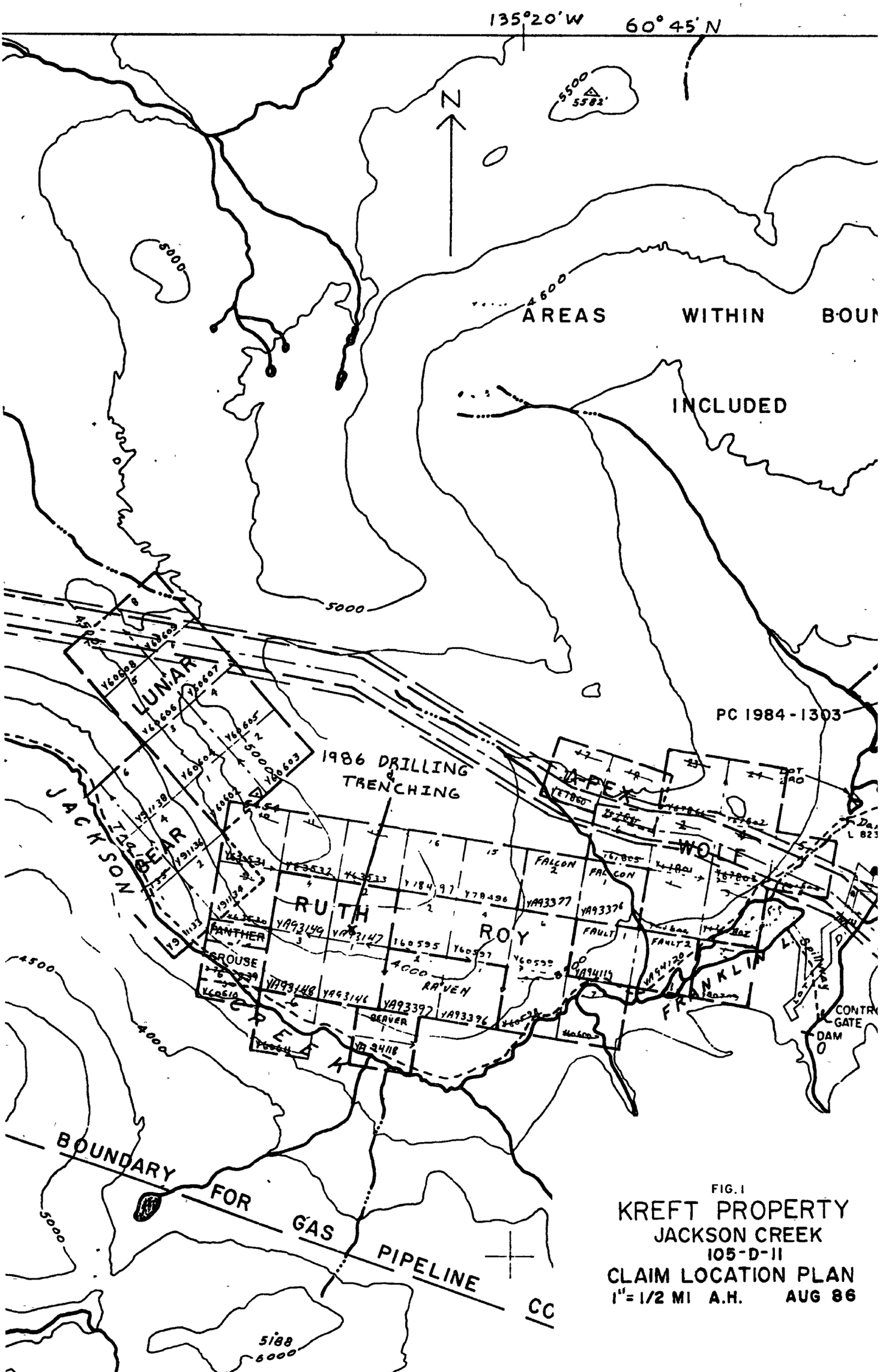


FIG. 1

KREFT PROPERTY

JACKSON CREEK

105-D-11

CLAIM LOCATION PLAN

1"= 1/2 MI A.H. AUG 86

Slopes on the hillside are in the order of 30° rising from 3300' in the valley floor to 5454' above the main showings which are at an elevation of 4100'.

From June to November the showings are accessible by a farily good four wheel drive road from the west end of Franklin Lake two miles east. A cat trail was put in along the valley floor to a point on the creek south of the showings, to provide access to a water pump used for drilling. A four wheel drive road from west of Franklin Lake along the north side of the mountain put in by Zelon Inc. and E. Kreft in 1981 provides access to showings on the west end of the property.

OWNERSHIP

Twenty eight claims are held by E. Kreft (Takhini Hot Springs). A list of claims is attached as Appendix A.

HISTORY

The showings were found by E. Kreft and S. Takacs in 1970-71. New Jersey Zinc optioned the property in 1972 and completed a program of geological mapping, a magnetometer survey and six diamond drill holes with an ggregate footage of 1459'. N. J. Z. geologists apparently assumed that the dip of the mineralized zones was at a shallow angle to the north i.e. conformable to that of the sediments above the showings; their holes failed to intersect any significant skarn or mineralization and the option was dropped.

Whitehorse Copper Mines optioned the property in late 1974 and in 1975 extended the geological mapping and magnetometer surveys, trenched one of the larger magnetic anomalies, improved access roads and drilled six holes with an aggregate footage of 1401'. All holes except KT 5 (drilled 700' east of the most easterly showings) and KT 6 (not completed) intersected generally low grade copper mineralization skarn in the order of 40 to 80' thick while hole KT 3 on sect 8E intersected 20.1' at 5.6% Cu 7.9 oz/ton Ag and 0.03 oz/ton Au. Hole KT 4, drilled to intersect the high grade mineralization 100' down dip, intersected 60' of magnetite skarn with low copper and gold values.

Four holes (aggregate of 1550') were drilled by Whitehorse Copper Mines in 1976. KT6A and KT7 were drilled to test along strike the mineralization intersected in KT3. KT6A 100'W of KT3 intersected 28' of weakly mineralized skarn. KT7, 100'E of KT3 intersected high gold and bismuth values with assays of 1.3' @ 2.55 oz/ton Au and 5.8% Bi (re assay 3.90 oz/ton Au) or 15' @ 0.29 oz/ton Au. The high grade zone like that in KT3 was at a vertical depth of 110' and was 180' horizontally from the hill slope below the showings. The high gold values were in actinolite skarn in a grey metallic mineral believed to be bismuthinite.

At the completion of the '76 program it was decided by WCM that the potential tonnage was too small and the option was dropped.

The property was optioned by Zelon in 1981. Zelon carried out a soil sampling program on the north side of the mountain and put in a four wheel drive road to reach showings at the west end of the property. Zelon failed to meet other obligations stated in the agreement and the option was terminated.

The property was optioned by M. Nichiporek who drilled three holes (aggregate 285'). Hole M1 intersected 3' @ .356 opt Au 40' above that in KT7. The option was subsequently dropped.

The 1986 drilling program by the owner was designed to explore the known gold mineralization down dip and to the east and to drill previously untested showings. Four holes (1494') were completed extending the skarn zones but intersected only low gold values. Logs and sections showing drilling results accompany this report.

A list of holes is attached as Appendix B.

A list of persons who worked on the property is attached as Appendix C.

A study of the property initiated by DINA in 1986 is currently in progress.

GENERAL GEOLOGY

The property is located in the northwest margin of the Intermontaine Belt of the Canadian Cordillera in the western part of the Whitehorse Trough. The Western belt of the Whitehorse Trough consists of an island arc assemblage of mafic volcanic and volcano-sedimentary rocks grading upward and basinward into greywacke, siltsone and minor conglomerate capped by carbonate reef complexes. The island arc assemblage is overlain by a successor basin assemblage of Jurassic-Cretaceous conglomerate, greywacke, siltstone and sandstone (Laberge group).

The volcano-sedimentary rocks of the Whitehorse Trough are intruded by quartz diorite plutons of mid Cretaceous to Eocene ages which are part of the Coast Intrusive Complex. Calc silicate and magnetite skarn zones occur near the contact of Lewes River carbonate rocks with these intrusions.

Triassic and Jurassic volcano-sedimentary rocks,Coast Intrusions and skarn zones are all cut by dykes related to Coast Intrusions and Quarternary Miles Canyon Basalt.

LOCAL GEOLOGY

Lewes River Group

Siltstone greywacke and fragmental rocks (unit 4 on map) are overlain by several hundred feet of white and grey limestone, dolomitic limestone and black carbonaceous limestone (Unit 5 on map). The carbonate units are irregular and form discontinuous lenses which grade out into interbedded siltstone tuff and calcareous siltstone. The carbonate units are overlain by greywacke, sandstone and conglomerate which are probably correlative with Laberge rocks. In the area of the main showings, where drilling was done, the clastic rocks underlying the carbonate units appear to be in an asymetrical antiform with the upper limb dipping at approximately 30° to the NE and the lower limb being near vertical.

Coast Intrusions

Lewes River rocks are intruded by an Eocene (55 My) quartz monzonite grandiorite pluton. It is coarse grained leucocratic, weakly porphyritic and shows only weak argillic alteration near the contact. Drilling in the area of the showings indicates that the pluton there dips from 30°+ 065°NE.

An irregular plug of rusty weathering dark grey diorite intrudes the sediments above the main showings. It contains approximately 2% pyrrhotite with traces of CP. This intrusion (unit 8 on maps) is considered to be a phase of the Jackson Creek pluton.

Skarn Zones

Erratic skarn zones to 100' thick (garnet, epidote, actinolite & diopside and magnetite with minor serpentine) occur at the carbonate-intrusive, carbonate-siltstone and siltstone intrusive contacts. The siltstone-greywacke is locally skarnified and is locally recrystallized to diotitic texture. Copper mineralization (Chalcopyrite, bornite with magnetite and pyrrhotite) distribution within the skarns is erratic with the best copper gold and silver intersections associated with actinolite diopside, magnetite skarn. Oxidation of the sulphide and magnetite zones extends only a few feet below surface.

Little work has been done on the large skarn zones at the west end of the property. The calc-silicate skarns there contain little copper mineralization. The occurrence of erythrite has been reported there by the owners. The contact between the west showings and the main showings is well exposed and little mineralization has been found along it.

Faults

Several north and northeast trending gullies probably reflect faults. In a gully on the south side of Jackson Creek limestone and dolomite on the east side of the creek are in fault contact with siltstone and greywacke on the west side of the creek for nearly a mile.

Only minor faults were encountered in drilling. Ground conditions were good.

GEOPHYSICAL RESULTS

Magnetic surveys in 1975 using a vertical field Sharp MF. 1 magnetometer outlined the magnetite bearing skarns. Both the quartz-monzonite and diorite intrusions have a higher magnetic intensity than the limestone and clastic rocks so that the intrusive contacts can be delineated easily. Since some of the better grade copper-gold mineralization was associated with skarn that has little magnetite and the near massive magnetite skarns were generally low grade, a magnetometer survey, using a proton mag, may better delineate the trends of weakly magnetic skarn zones to assist in drilling. The diorite above the showings is variably magnetic and while the MF-1 survey generally outlines the intrusive a proton mag survey would probably define the contacts more accurately.

The G.S.C. aeromagnetic map 105-O-11 gives a general outline of the Jackson Creek intrusion. Chalcopyrite has been reported (G. Morrison) in the sediments near the south east end of this intrusion south of Jackson Creek and in float in a creek draining this area (E. Kreft).

A test survey in 1976 over the high grade intersection in KT3 (20' @ 5.6% Cu) using a Crone "Shootback" instrument gave a very weak anomalous response. EM16 surveys northwest of Franklin Lake yielded several anomalies the strongest of which gave a very low response using EM 16 and Crone instruments. Trenching of the anomaly uncovered pyritic greywacke at bedrock.

1986 DRILLING RESULTS

K86-01 (Sect. 1000E) passed from hornfelsed pyroclastics to skarn at 91' indicating a steep dip to the north for the original limestone-pyroclastics contacts. The hole was in skarn and dykes to the intrusive contact at 326'. A graphite rich skarn zone at 115' is believed to correlate with the zone of gold mineralization on sect. 900E. All gold assays were low. Bismuth content with which the gold was associated in KT7 was also low. Minor copper,scheelite and zinc were present.

K86-02 (Sect. 900E) was drilled under KT7. Little skarn was encountered and gold values were low. The hole was in a dyke for approximately 43' in the projected skarn zone. The intrusive was reached without intersecting the FW pyroclastics.

K86-03 was drilled 350' east of KT7 and intersected a wide (160') skarn zone consisting mainly of garnet-epidote. The FW pyroclastics were not intersected and were probably cut off by the intrusive. They have been mapped near the intrusive contact 2000' east and where in contact there with carbonates would provide a favourable locus for mineralization.

K86-04 drilled to test a small magnetic anomaly passed through limestone, hornfels and numerous dykes before entering a strongly altered intrusive. The source of the anomaly apparently does not persist to the depth of the hole.

TRENCHING

Trenching was done east of KT7 (Fig.2) to reveal the extent and attitude of post ore dykes before hole K 86-03 could be located. Trenching was also done to expose bedrock 500' NW of K86-04 where grab samples assayed 0.04 Au and to 14 opt Ag. The proposed hole to test this zone was postponed and the owner plans to drill the showing with a Winkie drill.

REFERENCES

MORRISON, G. W.	1981	Setting and Origin of Skarn Deposits in the Whitehorse Copper Belt. PH.D. Thesis University of Western Ontario.
REID, R. E.	1975	Kreft-Takacs - Summary Report Whitehorse Copper Mines
SINCLAIR ET AL	1976	M. I. R. Yukon Territory P 101-104
TENNEY, D.	1976	Whitehorse Copper Mines Company Correspondence
WHEELER, J. O.	1953	Whitehorse Map Area G. S. C. Mem. 312

APPENDIX A

CLAIMS LIST

JACKSON CREEK (105-D-11)

LUNAR 1-8	Y60602 to Y60609
GEAR 1, 2, 4, 6	Y91133, 34, 36, 38
RUTH 1, 2, 3, 4	YA93146, 47, 48, 49
ROY 2, 4, 6, 15, 16	Y60595, 97, 99, Y78496, 97
FAULT 1, 2	YA94119, 20
FALCON 1, 2	YA 93376, 77
RAVEN 1, 2	YA 93396, YA 93397
BEAVER	YA 24118

APPENDIX B

DRILL HOLE SUMMARY

HOLE #	N	E	EL	AZ	DIP	SIZE	OB DEPTH	DEPTH	START/COMPLETE
K86-01	098	987	4059	039°	-70°	NQ	10'	334'	14/17 June/86
K86-02	259	900	4152	219°	-70°	NQ	13.5'	442'	18/22 June/86
K86-03	435	1130	4222	197°	-60°	NQ	16'	369'	24/29 June/86
K86-04	330	330	4183	301°	-70°	NQ	14	349'	30 June/ 5 July/86
							Total -	1494'	

Drilling Contractor: D. McKenna
Kluane Drilling
65 - 100 Lewes Blvd.
Whitehorse, Y. T.

Tractor Contractor: A. Fekete
112 Park Lane
Whitehorse, Y. T.

APPENDIX C

The following personnel worked on the property during the June/July 86 drilling program:

Jacques Duchaine		Takhini Hot Springs
B. Kreft		Takhini Hot Springs
E. Kreft		Takhini Hot Springs
A. Hureau		32 Stewart Rd. Whitehorse
D. McKenna	Drilling Contractor	65-100 Lewes Blvd., Whitehorse
J. Kelly	Driller	65-100 Lewes Blvd., Whitehorse
N. Grimley	Driller	65-100 Lewes Blvd., Whitehorse
A. Fekete	Tractor Contractor	112 Park Lane, Whitehorse

Report Preparation - A. Hureau - 6 days

APPENDIX D

STATEMENT OF QUALIFICATIONS

ANDREW HUREAU

ADDRESS: 32 Stewart Road
Whitehorse, Y. T.
Y1A 3S3

EDUCATION: BSc. Geology 1961

EMPLOYMENT: Employed 23 years in Mining and Exploration Geology including 12 years on Whitehorse Copper Belt. Currently employed as Senior Geologist with Terra Mines Ltd. Edmonton, Alberta.

REGISTRATION: Fellow of Geological Association of Canada

A. Hureau
14/Aug./86

EXPLORATION ASSAY DATA

Property KREFT
105D 11

Date 20/6/86
Page No. 1

Sample No.	Hole No.	Footage From	Footage To	Length	Rec.	%Cu	opt Au	opt Ag	% Bi	% WO3	% ZN
C95210	K86-01	90.5	91.6	1.1	1.1		<0.002	0.03			
211		91.6	96.0	4.4	4.4		0.002	<0.02			
212		96.0	101.0	5.0	5.0		0.003	<0.02			
213		101.0	106.0	5.0	5.0		0.007	<0.02			
214		106.0	113.4	7.2	7.2		0.003	<0.02			
215						Not	used				
216		113.4	115.0	1.6	1.6	0.02	0.002	<0.02	0.02	0.07	
217		115.0	116.2	1.2	1.2	<0.01	0.002	<0.02	0.01	0.02	
218		116.2	118.0	1.8	1.8	0.08	0.002	0.07	0.09	0.07	
219		118.0	124.0	6.0	6.0		0.003	<0.02	0.02		
220		124.0	130.3	6.3	6.3		0.002	<0.02		0.02	
221		130.3	132.5	2.3	2.3		<0.002	<0.02	0.01	0.04	
222		132.5	135.8	3.3	3.3		0.02	0.29	0.03		
223		148.3	154.0	5.7	5.7	0.290	<0.002	0.27	0.02	0.02	0.03
224		154.0	160.0	6.0	6.0		<.002	<0.02	0.03		0.03
225		160.0	166.2	6.2	6.2		<0.002	<0.02	0.03		0.02
226		171.0	175.0	4.0	4.0	0.310	0.003	0.89	0.02	0.02	
227		175.0	177.3	2.3	2.3	0.320	<0.002	0.26			
228		177.3	183.0	5.7	5.7	0.09	<0.002	0.16	0.02	0.06	
229		183.0	188.0	5.0	5.0	0.03	<0.002	0.02	0.02		
230		188.0	189.3	1.3	1.3	1.860	0.008	1.27	0.02	0.02	0.38
231		189.3	195.0	5.7	5.7		<0.002	0.02		0.01	
232		195.0	200.5	5.5	5.5	0.150	0.011	0.18	0.05	0.02	0.03
233		200.5	203.3	2.8	2.8	0.370	0.031	0.58	0.07	0.02	0.06
234		203.3	206.2	2.9	2.9		0.002	0.08	0.02		
235		224.5	229.2	4.7	4.7		0.003	<0.02			
236		231.3	235.7	4.4	4.4		0.002	0.03	0.01		
237		235.7	242.5	6.8	6.8	0.01	<0.002	<0.02	0.02		0.18
238		265.8	270.2	4.4	4.4		0.004	0.03	0.03		
239		321.4	323.0	1.6	1.6		0.005	<0.02	0.04		
C95240		323.0	325.7	2.7	2.7		<0.002	<0.02	0.01		

YUKON TERRITORY

PROPERTY E KREFT	Claim No. Ruth 2 YA 93147	Strike N (039°)	Lat. 098 N
Date 19/6/86 19	Section No. 1000 E	Dip -70°	Dep. 987 E
Logged By A. HUREAU.	Plan No.	Level Surface	Elev. 4059'

Hole No. K 86-1			
Total Depth 334			
Page No. 1			

FOOTAGE From	To		ROCK CLASSIFICATION Epid Diop Garn Serp Qtz Sil Actino Tremo Chlo Crystalline Shearing Veins Fracturing Foliation Grain Size Texture	MINERALIZATION TYPE	%	ASSAY DATA Sample No	Width	Recov	%Cu	%Fe	Moly	Au/Ag	Insol
0	11		Rubble - Casing										
11	17.2	4	Tuff - lt g dk gy/grn/brn felsed pyroclastics, bleached along fracts py in streaks & blebs	py	2								
17.2	20.8	9	dyke - med gy latite dyke phenos to 2mm altd to chl+ep Ca stks to 2mm, occ specs dissem py stks py. Contact along core	py	1								
20.8	91.6	4	Tuff - gy brn hornfelsed tuff Silt to Sand size particles, anhedral to euhedral grains to 3mm. 35' banding irreg 0-30° dissem py - po wkly magnetic throughout, blchd gy grn along fracts. 53' good banding (Sts - Sds) 20° 48'-65' blchd fracts w stks py, po. 63'-77' banding 40°-50° 84' " 30°										

FOOTAGE From	FOOTAGE To		ROCK CLASSIFICATION Epid, Diop, Garn, Serp, Qtz/Sil, Actino, Treme, Chlo, Crystalline, Shearing, Veins, Fracturing, Foliation, Grain Size, Texture	MINERALIZATION TYPE	MINERALIZATION %	ASSAY DATA Sample No.	Width	Recov.	%Cu	% Fe	Moly	Au/Ag	Insol
			In fg bio rich ground mass From 90.5' strongly bleached, silicified, minor ca, banding 20° dissem po, py, cp, 3% sil. Contact with 3g 10°										
			Sample 90.5 - 91.6	po, py, cp,	3%	C95210	1.1	1.1				<.002/.03	
91.6	111.6	3	g // ca, m, a, s, d, dominantly garnet sharn buff to red brn xtals to 1cm loc zoned replacing pyroxene occ specs mag. Vague banding @ 100' 40°, 110' - 60°, occ specs py, 2 cm ca filled	py mag	<1%								
			Fract 10° 91.6 - 92.1										
			Samples 91.6 - 96.0			C95211	4.4	4.4				.002/<.02	
			96.0 - 101.0			12	5.0	5.0				.003/<.02	
			101.0 - 106.0			13	5.0	5.0				.007/<.02	
			106.0 - 113.9			14	7.2	7.2				.003/.02	
111.6	117	3	g, a, m / ca ± s Sharn red, grn, blk, mag in bnds & patches 5%, garnet xtals to 1cm loc zoned										
			115 - 116.2 5% soft black mineral w dk grey metallic streak in bad/sg - poss bi, pb sulphide does not appear lustrous enough to be bismuthinite.	graphite									
			116.2 - 116.6 40% mag, 116.6, Specs cp, Most on Fract @ 115.5'	mag	5								
				bi pb ?	3								
				cp	<1								

FOOTAGE From	FOOTAGE To		ROCK CLASSIFICATION Epid, Diop, Garn, Serp, Qtz/Sil, Actino, Tremo, Chlo, Crystalline, Shearing, Veins, Fracturing, Foliation, Grain Size, Texture	MINERALIZATION TYPE	MINERALIZATION %	ASSAY DATA Sample No.	Width	Recov.	% Cu	% Fe	Moly	Au/Ag	Insol
	117'		Samples 113.4 – 115.0			C95216	1.6	1.6				.002 / <.02	
			115.0 – 116.2			217	1.2	1.2				.002 / <.02	
			116.2 – 118.0			218	1.8	1.8				<.002 / .07	
117	120	3	dg Smarn grn brn minor Chl, lower c+ 70°										
120	129.7	3	d,q,e,s,c, Smarn, pale – dk grn & blk lower c+ 50° no SIC seen										
			Samples 118.0 – 129.0			219	6.0	6.0				.003 / <.02	
			129 – 130.3			220	6.3	6.3				.002 / <.02	
129.7	130.3	3	dg Smarn red grn lower c+75°										
130.3	132.5	3	d,a,g,m, Smarn grn ≠3% mag garnet bnd @ 35°	mag	3%								
			Samples 130.3 – 132.5			221	2.2	2.2				<.002 / <.02	
132.5	135.8	3	s,m,d, Smarn grn blk 20% mag	mag	20								
			Strks & specs cp from 134', 1/2% cu, 70° Sample 132.5 – 135.8	cp	2	222	3.3	3.3				.02 / <.02	
135.8	148.3	5	limestone gy bnded (55°) brn pyritic (1%) bnd 138.7 – 139.5, c+ @ 135.8 80°										

FOOTAGE From	FOOTAGE To		ROCK CLASSIFICATION Epid, Diop, Garn, Serp, Qtz/Sil, Actino, Tremo, Chlo, Crystalline, Shearing, Veins, Fracturing, Foliation, Grain Size, Texture	MINERALIZATION TYPE	MINERALIZATION %	ASSAY DATA Sample No.	Width	Recov.	%Cu	% Fe	Moly	Au/Ag	Insol
148.3	166.2	3	Mas & ca Smarn grn blk banding 70°-90° lower c.t 40° strngs & blebs cp, py to 150' (1%cu) occ spec cp in remainder, radiating act xtals 151.8', py in fract fillings & occ euhedral grains from 160'										
			Samples 148.3 - 154.0			C95223	5.7	5.7				<.002 / 0.27	
			154.0 - 160.0			224	6.0	6.0				<.002 / <.02	
			160.0 - 166.2			225	6.2	6.2				<.002 / <.02	
166.2	171	5	LS wh xtalline lower ct gradational										
171	175	5	/3MS wh, gy marble with bnds & patches mag & serp, 1.5" bnd w 20% cp @ 173' banding 70° @ 173.5' patch cp w blk Sphal & mag w coarse xtalline ca xtals to 1cm										
			Sample 171 - 175			226	4.0	4.0				.003 / 0.99	
175	177.3	3	M,qs, & ca, Smarn grn blk, patches & specs cp, po (0.25% cu) lower ct gradational	cp									
			Sample 175 - 177.3			227	2.3	2.3				<.002 / 0.26	
177.3	188	3	SM/S partially Skarnified LS, occ specs cp, patches py @ 181' Sample 177.3 - 183.0			228	5.7	5.7				<.002 / 0.16	

FOOTAGE From	FOOTAGE To		ROCK CLASSIFICATION Epid, Diop, Garn, Serp, Qtz/Sil, Actino, Tremo, Chlo, Crystalline, Shearing, Veins, Fracturing, Foliation, Grain Size, Texture	MINERALIZATION TYPE	MINERALIZATION %	ASSAY DATA Sample No.	Width	Recov.	%Cu	%Fe	Moly	Au/Ag	Insol
188	189.3	3	S,m & Ca. Sharp w 10% cp Sample 188 - 189.3	cp	10	C95230	1.3	1.3				.008/1.27	
189.3	200.5	3	q,s,q,m Sharp, lt & dk grn act partially altd sericite & chl, rare specs cp. 1' mag rich bnd (20%) From 196.3, mag increasing toward lower ct Sample 189.3 - 195.0			C95231	5.7	5.7				<.002/.02	
			195.0 200.5			C95232	5.5	5.5				.011/0.18	
200.5	203.3	3	S,M, Sharp pale grn - blk, patches cp, rare po 0.5% cu Sample 200.3 - 203.3			233	2.8	2.8				0.031/0.58	
203.3	206.2	3	d,e,a, s, w, Sharp buff - lt-dk grn granitic text to 204.2'. Wollastonite (trem?) xtals to 2cm @ 205' lower ct 50°, Sample 203.3 - 206.2			234	2.9	2.9				.002/.08	
206.2	224.5	7b	Granodiorite dyke to 212' < 5% chloritized mafics, altd anhedral felds grains < 3mm From 212 relatively fresh hbds bio granodiorite, chloritized hbde xtals to 5mm, 10%, qtz on fracts to 4mm epidote, act altn From 223.5. lower ct 40°										

FOOTAGE From	FOOTAGE To		ROCK CLASSIFICATION Epid, Diop, Garn, Serp, Qtz/Sil, Actino, Tremo, Chlo, Crystalline, Shearing, Veins, Fracturing, Foliation, Grain Size, Texture	MINERALIZATION TYPE	MINERALIZATION %	ASSAY DATA Sample No.	Width	Recov.	%Cu	%Fe	Moly	Au/Ag	Insol
224.5	229.2	3	g/m,s,e,c, skarn, brn/grn, blk. mag in irreg patches & bnds replacing silicates, strongly chloritized @ lower ct Sample 224.5 - 229.2			C95235	4.7	4.7				.003/<.02	
229.2	231.3	7b	granodiorite dyke, altd (epidote chl) cts 40°										
231.3	235.7	3	ds //m pale to dk grn skarn w occ specs mag, lower ct 30°			C95236	4.4	4.4				.002/.03	
235.7	242.5	3	M/sk ca skarn blk & grn, bnding 30-40° interstital ca, brn submetallic min w brn strk sphalerite? poss vallerite, rare spec cp broken @ lower ct Sample			C95237	6.8	6.8				<.002/<.02	
242.5	265.8	5	Limestone wh-gy occ bnds & stnks serp bnding 30°, rare spec mag lower ct 35°										
265.8	270.2	3	M,sd, skarn blk-grn ITO Sic seen cts 35° - 40°			C95238	4.4	4.4				.004/.03	
270.2	321.4	9	Latite dyke brn,gy,grn 10% euhedral to anhedral saussoritized Fels phenocrysts to 3mm, 2% chloritized mafic phenocrysts 1.5" chilled ct (upper) 45° lower 80°										

Hole No 1L86-01 Page No 7

FOOTAGE			ROCK CLASSIFICATION Epid, Diop, Garn, Serp, Qtz/Sil, Actino, Tremo, Chlo, Crystalline, Shearing, Veins, Fracturing, Foliation, Grain Size, Texture	MINERALIZATION		ASSAY DATA							
From	To			TYPE	%	Sample No.	Width	Recov.	%Cu	% Fe	Moly	Au/Ag	Insol
321.4	323	3	m/sd blk-grn skarn no sulc seen										
			Sample 321.4 - 323.0			C95239	1.6	1.6					
323	325.8	3	sd/m skarn dk-lt grn loc										
			wkly magnetic			C95240	2.7	2.7					
325.8	334.	7b	Granodiorite - to 10% chloritized										
			hbde bio, anhedral to euhedral										
			felds to 1cm. Strongly altd										
			saussuritized from 327.5 - 331'										
			remainder with fresh appearance										
			occ fg hornfels inclusions.										
	334		Hole Stopped.										

EXPLORATION ASSAY DATA

Property KBEKT - JACKSON CREEK
105.04

Date 23/6/86
Page No. 1

Sample No.	Hole No.	Footage From	Footage To	Length	Rec.	%Cu	Au (OPT)	Ag (OPT)	Bi	Remarks
C95241	KB6-02	278	280.2	2.2	2.2		<0.002	0.03	0.01	
C95242	"	280.2	282.3	2.1	2.1		0.002	0.03	0.02	
C95243		326.5	329	2.5	2.5		<0.002	0.02	0.01	
C95244		329	331.1	2.1	2.1		<0.002	<0.02	0.01	
C95245		372.2	373	0.8	0.8		<0.002	<0.02	0.01	

PROPERTY KREFT - JACKSON CREEK | Claim No. Auth 2 VA93147 | Strike S (219°) | Lat. 2591N | Hole No. K 86-02

Date 22/6/ 19 86 | Section No. 900 E | Dip -70° | Dep. 900 E | Total Depth 442'

Logged By A. HUREAU | Plan No. | Level SURFACE | Elev. 4152 | Page No. 1

FOOTAGE From	FOOTAGE To		ROCK CLASSIFICATION (Epid Diop Garn Serp Qtz Sil Actino Tremo Chlo; Crystalline Shearing Veins Fracturing Foliation Grain Size Texture)	MINERALIZATION TYPE	%	ASSAY DATA Sample No	Width	Recov	%Cu	%Fe	Moly	Au/Ag	Insol
0	13.5	Ob	Overburden - Casing										
13.5	153.5	5	Limestone, wh, gy, rare patch Serp, occ wispy segregated graphitic patches - V broken to 24.5' broken 81-83'										
153.5	155	9b	dyke - dk grn, Chloritized, basic dyke C.t.s 35°										
155	234	5	Limestone - wh gy dappled x talline, loc vague bnding 20°. occ graphitic strks & patches.										
234	239	35/5	Skarn gy grn bnding 10° graphitic laminations from 237'										
239	275.3	5	Limestone wh/gy recrystallized Strks - Serp'd & graphitic from 267' gen 50°-20° 3" serp'd @ lower ct @ 55°										

FOOTAGE From	FOOTAGE To		ROCK CLASSIFICATION Epid, Diop, Garn, Serp, Qtz/Sil, Actino, Tremo, Chlo, Crystalline, Shearing, Veins, Fracturing, Foliation, Grain Size, Texture	MINERALIZATION TYPE	MINERALIZATION %	ASSAY DATA Sample No.	Width	Recov.	% Cu	% Fe	Moly	Au/Ag	Insol
275.3	277	3	d,s,c, /7 Skarnified dyke c+s @ 55° & 65°										
277.0	278.5	5	/35 Partially skarnified c s lower c+ 50°, 2" patch fg basic dyke @ 278'										
278.5	280.2	3	d/sc Skarn - pale grn diopside serp + chl on fracts Sample 278.5 - 280.2			C95241	1.7'	1.7				<.002/0.03	
280.2	282.3	3	m,a,s, /5 Skarn blk-grn, lower c+ gradational to Limestone Sample 280.2 - 282.3			C95242	2.1	2.1				0.002/0.03	
282.3	309.5	5	//35 Lime stone gy grn w incipient Skarn on fracts grey graphitic bnds 15° - 20°. breccia appearance resulting from distruction of graphitic laminae										
309.5	312.8	5	grey-wh re ic talline limestone lower c+ 50°										
312.8	325.7	9	dyke - pale gy latite 5% fels pheno crysts to 5mm, chilled c+s										

FOOTAGE From	FOOTAGE To		ROCK CLASSIFICATION Epid, Diop, Garn, Serp, Qtz/Sil, Actino, Tremo, Chlo, Crystalline, Shearing, Veins, Fracturing, Foliation, Grain Size, Texture	MINERALIZATION TYPE	MINERALIZATION %	ASSAY DATA Sample No.	Width	Recov.	%Cu	% Fe	Moly	Au/Ag	Insol
325.7	326	3	q Smarn - pale brn red garnet										
326	326.5	5	Limestone wh - gy										
326.5	331.1	30	//m Smarn - green act xtals radiating to 2cm occ patch mag interstitial Ca, tr dissem py (<½%) lower ct 55°.										
			Samples 326.5 - 329			C95293	2.5	2.5				<.002/.02	
			329 - 331.1			C95294	2.1	2.1				<.002/<.02	
331.1	341.3	5	Limestone wh/gy e 333' patch altd dyke (dyke ct along core)										
341.3	372.2	9	dyke gy grn altd as above ct's 55° & 30°, from 354' rusty tr dissem py, phenos largely chloritized.										
372.2	373	3	gt grn wh rusty Smarn acicular trem (wk) to 2cm occ spec mag & py ct's 30° & 80°										
			Sample 372.2 - 373			C95295	0.8	0.8				<.002/<.02	

Hole No. IC86-02 Page No. 4

FOOTAGE From	FOOTAGE To		ROCK CLASSIFICATION Epid, Diop, Garn, Serp, Qtz/Sil, Actino, Tremo, Chlo, Crystalline, Shearing, Veins, Fracturing, Foliation, Grain Size, Texture	MINERALIZATION TYPE	MINERALIZATION %	ASSAY DATA Sample No.	Width	Recov.	%Cu	% Fe	Moly	Au/Ag	Insol
373'	414'	7	b Granodiorite highly altd Sects with 40% of feldc altd to soft yellow brn serp, remainder wh-pale grn leucocratic 10%-20% Saussurite - chl. rusty fcnd Section 406 – 408.5'										
414'	442'	7	b-7m Fresh hbde. bio (5-10%) granodiorite to quartz monzonite wh Fels xtls to 2cm occ incl fg hornFels										
	442'		Hole Stopped										

EXPLORATION ASSAY DATA

Property Kreft-Jackson Creek

Date 12/8/86
Page No. ____

Sample No.	Hole No.	Footage From	Footage To	Length	Rec.	Cu PPm	PPB Au	PPm Ag	%Bi	%WO3	%ZN
C95246	K86-03	90	95	5	5	2	5	0.5			
247		95	100	5	5	1	<5	<0.5			
247A		112.1	116.1	4	4	5	(.002 OPT)	0.5			
247B		116.1	117.4	1.3	1.3	10	(.002 OPT)	0.9			
247C		117.6	127.0	9.4	9.4	11	(.002 OPT)	<0.5			
248		193.1	194	0.9	0.9	33	45	<0.5			
249		199.3	199.9	0.6	0.6	40	<5	<0.5			
250		199.9	202.5	2.6	2.6	55	"	"			
251		202.5	207	4.5	4.5	21	"	"			
252		207	212	5.0	5.0	5	"	"			
253		212	217	5.0	5.0	12	"	"			
254		217	227	10	10	4	"	"			
255		227	237	10	10	17	<5	"			
256		237	247	10	10	18	160	"			
257		247	257	10	10	15	75	"			
258		257	267	10	10	8	<5	"			
259		267	277	10	10	9	"	"			
260		277	287	10	10	5	"	"			
261		287	297	10	10	5	"	"			
262		297	305.5	8.5	8.5	7	<5	"			
263		305.5	311.5	6.0	6.0	21	10	"			
264		311.5	317.5	6.0	6.0	11	<5	"			
265		317.5	327.5	10.0	10.0	8	"	"			
266		327.5	334.0	6.5	6.5	9	"	"			
267		334.0	344.0	10	10	9	<5	"			
268		344.0	352	8	8	8	5	0.9			
269		352	360.6	8.6	8.6	6	<5	<0.5			

PROPERTY KREFT-JACKSON CREEK	Claim No. Ruth 2 YA 93147	Strike 197°	Lat. 0435 N	Hole No. K 86-03
Date 6 AUGUST 19 86	Section No. 1130E	Dip -60°	Dep. 1130 E	Total Depth 369'
Logged By A. HUBERT	Plan No.	Level Surface	Elev. 4222'	Page No. 1

FOOTAGE			ROCK CLASSIFICATION	MINERALIZATION		ASSAY DATA								
From	To		Epid Diop Garn Serp Qtz Sil Actino Tremo Chlo Crystalline Shearing Veins Fracturing Foliation Grain Size Texture	TYPE	%	Sample No	Width	Recov	%Cu	%Fe	Moly	Au/Ag	Insol
0	16	ob	overbunden										
16	38	5/4	Bubble - mainly fragments of wh gy rusty weathered limestone w occ frags gy porphyritic dykes and pyroclastics hole probably along contact										
38	47	4/3 x	lt/dk gy grn hornfelsed tuff loc bnding 53° rubble 45-47'										
47	57	4	Tuff gy brn fels frags to 3mm rare bnding 40°										
57	58	≈	rubble frags hornfels, ls and granite										
58	64.5	4	/3de gy, grn, brn silicified clastic seds remnant bnding 30°-40°										
64.5	90.5	5 ::	wh loc grey rusty marble core broken 87.5-91'										

Hole No K-86-03 Page No 2

FOOTAGE From	FOOTAGE To		ROCK CLASSIFICATION Epid, Diop, Garn, Serp, Qtz/Sil, Actino, Tremo, Chlo, Crystalline, Shearing, Veins, Fracturing, Foliation, Grain Size, Texture	MINERALIZATION TYPE	MINERALIZATION %	ASSAY DATA Sample No.	Width	Recov.	%Cu	% Fe	Moly	Au/Ag	Insol
90.5	103.5	5	AA wh ls breccia w rusty fracts occ qtz filled fracts to 4mm										
			Sample 90- 95'			95246	5	5					
			95- 100'			95247	5	5					
103.5	112	5	wh - gy bnded ls 30°										
112	128.4	5	AA gy, buff ls breccia loc vuggy vugs to 5mm graphite on slip @ 117' occ qtz veinlets Tr py	py	Tr								
			Sample 112.1 - 116.1			95247A	4.0	4.0					
			116.1 - 117.4			95247B	1.3	1.3					
			117.6 - 127.0			95247C	9.4	9.4					
128.4	193.1	5	gy, wh, ls bnding gen 40° to 160' From 189' occ fg silty bnds @ 20° lower ct irreg 50°.										
193.1	194.0	3a	ls partially silicified silty ls feathery actinolite to 3cm dissem cp 1/2%, occ brec po bnding 50°-30°										
			Sample 193.1 - 194			95248	0.9	0.9					
194.0	199.3	5	gy wh ls bnding vague 50°										

Hole No. M 86-03 Page No. 3

FOOTAGE From	FOOTAGE To		ROCK CLASSIFICATION Epid, Diop, Garn, Serp, Qtz/Sil, Actino, Treme, Chlo, Crystalline, Shearing, Veins, Fracturing, Foliation, Grain Size, Texture	MINERALIZATION TYPE	MINERALIZATION %	ASSAY DATA Sample No.	Width	Recov.	%Cu	% Fe	Moly	Au/Ag	Insol
199.3	199.9	3	a,f, M/S gy, grn, Ca rich Skarn, patches mag w blebs py Sample 199.3 – 199.9			C95249	0.6	0.6					
199.9	202.5	3S	/S black graphitic skarn w 10% relic sengentinized euhedral garnet blasts to 1cm, gen <.5mm occ py haloes to 2mm Sample 199.9 – 202.5			C95250	2.6	2.6					
202.5	217	3	a,s,m/S gy blk partially Skarnified cs, patches mag thruout, occ spec py patch cp @ 211', mag & graphite rich bnd 214' – 215', bleb cp @ 211' Sample 202.5 – 207			C95251	4.5	4.5					
			207 – 212			52	5	5					
			212 – 217			53	5	5					
217	237'	3	age/S partially Skarnified limestone as above but with no mag and increasing red brn garnet, occ spec py. Sample: 217 – 227			C95254	10	10					
			227 – 237			95255	10	10					
237	248.5	3	g/des pale grn brn garnet Skarn g xtals to 2cm, gen massive banding @ 247', 45° Sample 237 – 247			C95256	10	10					

FOOTAGE From	FOOTAGE To		ROCK CLASSIFICATION Epid, Diop, Garn, Serp, Qtz/Sil, Actino, Tremo, Chlo, Crystalline, Shearing, Veins, Fracturing, Foliation, Grain Size, Texture	MINERALIZATION TYPE	MINERALIZATION %	ASSAY DATA Sample No.	Width	Recov.	%Cu	% Fe	Moly	Au/Ag	Insol
248.5	248.9	3	m/de blk - grn Skarn 50°										
248.9	268	3	g/e,s& Ca. rcd brn Skarn w interstital Ca, occ patches & blebs serp, chl no Sic seen Sample 247 - 257			C95257	10	10					
			257 - 267			58	10	10					
268	268.5	2	rusty ichd Shear										
268.5	305.5	3	e/a,c,g, Pale - dk grn mottled Skarn with interstital Ca. From 303.5 to 305.5 patches w dioritic text. Sil c at lower ct.										
			Samples 267 - 277			C95259	10	10					
			277 - 287			60	10	10					
			287 - 297			61	10	10					
			297 - 305.5			62	8.5	8.5					
305.5	317.5	3	a,e,m, gy blk Skarn, mag dissem & in Strks 10°/o, no Sic seen										
			Sample 305.5 - 311.5			63	6.0	6.0					
317.5	360.6	3	e,c, & Ca Pale - dn grn Skarn w 5-10% interstital Ca. @ 333', 0.5' vuggy sect w patchs py & Sl py patches 351 - 351.2. Rusty broken sect										

FOOTAGE From	FOOTAGE To		ROCK CLASSIFICATION Epid, Diop, Garn, Serp, Qtz/Sil, Actino, Tremo, Chlo, Crystalline, Shearing, Veins, Fracturing, Foliation, Grain Size, Texture	MINERALIZATION TYPE	MINERALIZATION %	ASSAY DATA Sample No.	Width	Recov.	%Cu	% Fe	Moly	Au/Ag	Insol
	360.6		(Contd)										
			343 - 343.5, lower c+ @ 360.6'										
			sharp @ 55°.										
			Samples 311.5 - 317.5			C95269	6	6					
			317.5 - 327.5			65	10	10					
			327.5 - 334.0			66	6.5	6.5					
			334 - 344			67	10	10					
			344 - 352			68	8	8					
			352 - 360.6			69	8.6	8.6					
360.6	369	76	Fresh bio hbde granodiorite white rounded fels xtals to 2cm										
	369		Hole Stopped										

EXPLORATION ASSAY DATA

Property KREFT JACKSON CREEK

Date 19AUG/86
Page No.

Sample No.	Hole No.	Footage From	Footage To	Length	Rec.	%Cu	PPB Au	PPM Ag	%Bi	%WO3	%Zn
C95272	K86-04	105	110	5	5		<5	<0.5			
C95273		262.5	267.5	5	5		<5	<0.5			
C95274		274	279	5	5		<5	<0.5			

PROPERTY KREFT - JACKSON CREEK	Claim No. RUTH #2 VA 93147	Strike 301°	Lat. 330N	Hole No. K 86-04
Date 14 AUGUST 19 86	Section No.	Dip -70°	Dep. 330E	Total Depth 349'
Logged By A. HUREAU.	Plan No.	Level SURFACE	Elev. 4183'	Page No. 1

FOOTAGE From	FOOTAGE To		ROCK CLASSIFICATION Epid Diop Garn Serp Qtz Sil Actino Tremo Chlo Crystalline Shearing Veins Fracturing Foliation Grain Size Texture	MINERALIZATION TYPE	%	ASSAY DATA Sample No	Width	Recov	%Cu	%Fe	Moly	Au/Ag	Insol
0	14	OB	overburden										
14	33	5	wh-gy dolo ls occ dk gy pyritic (2%) silty bnds (17.5'-30', 22'-23' w dk grn serp on fracts. Silic @ lower ct 50°										
33	54	4/3	Hornfels, gy, grn, brn well laminated hornfelsed siltstone. Sects smarnified to garnet, diopside, epidote, bnding changes from 30° @ 40' to 65°-75° @ 47', lower ct w less smarnified seds gradational.										
54	95.3	4	Tuff - red brn pale grn pyro clastics, bleached along fracts to pale grn. From 75' clasts to 5 cm. From 90' angular wh fels grains to 5mm, From 94.5' rounded porphyritic clasts to 5cm. occ Ca veinlets thruout. @ 72' 0.5' Ca vein 30°, dissem & occ strks										

Hole No. N8609 Page No. 2

FOOTAGE From	FOOTAGE To		ROCK CLASSIFICATION Epid, Diop, Garn, Serp, Qtz/Sil, Actino, Tremo, Chlo, Crystalline, Shearing, Veins, Fracturing, Foliation, Grain Size, Texture	MINERALIZATION TYPE	MINERALIZATION %	ASSAY DATA Sample No.	Width	Recov.	%Cu	% Fe	Moly	Au/Ag	Insol
95.3	110.5	9	dk gy andesite dyke, 3% wk anhedral phenocrysts, chl specs (altd phenocrysts), 10C to 3% dissem py rusty e lower ct 30°, w 1cm ca. Sample 105-110			C95272	5	5					
110.5	122.7	4	Tuff pale grey sub rounded to angular fels clasts & rock frags in grey matrix. Clasts gen 1-3mm occ 5mm. To 111.6 gy grn hornfels, dissem fg py 1/2%										
122.7	123.5	9	gy, brn, fg dyke, chloritized phenocrysts 2% to 2mm.										
123.5	154.5	4	Silicified, pale grey tuff, gen aphanitic occ sects w clasts to 5mm @ 125' patch garnet w po py dissem & on fracts thruout, hem ca veins w frags altd wallrock core gen broken Rubble 152' to end										
154.9	159	9	dk gy grn dyke as above. Lower ct 30°										

Hole No K86-04 Page No 3

FOOTAGE From	FOOTAGE To		ROCK CLASSIFICATION Epid, Diop, Garn, Serp, Qtz/Sil, Actino, Tremo, Chlo, Crystalline, Shearing, Veins, Fracturing, Foliation, Grain Size, Texture	MINERALIZATION TYPE	MINERALIZATION %	ASSAY DATA Sample No.	Width	Recov.	% Cu	% Fe	Moly	Au / Ag	Insol
159	173.2	4	pale gy silicified tuff as above.										
		≈	@ 164' 6" rubble preceded by										
			0.2' kaolinized Ca-fels vein										
173.2	185	9	gy grn dyke as above v broken										
			179-185'. dissem py 1/2% throout.										
185	196.5	4	gy TUFF sects w 30% clasts										
			to 5mm in aphanitic matrix.										
			From 195' only relics of clasts										
			remaining.										
		9a	193.5-195 pink granitic dyke										
		9b	195.2-195.4 basic dyke as above cts 48										
		≈	core v broken 195 to end										
196.5	217	9b	gy grn basic dyke as above										
			w 10% chloritized phocrysts										
		==	v broken 204-206' & 217'										
217	225.4	4	gy TUFF anhedral to euhedral										
			Fels grains gen 3-5mm, 40%										
			in gy silic matrix. Finer grained										
			toward lower ct, chloritized										
			bnds to 1cm @ 219'										
		≈	222'-223' rubble										

Hole No M86-04 Page No 4

FOOTAGE From	To		ROCK CLASSIFICATION Epid, Diop, Garn, Serp, Qtz/Sil, Actino, Tremo, Chlo, Crystalline, Shearing, Veins, Fracturing, Foliation, Grain Size, Texture	MINERALIZATION TYPE	%	ASSAY DATA Sample No.	Width	Recov.	%Cu	% Fe	Moly	Au/Ag	Insol
225.4	267.5	9	gy grn andesite dyke 1/2% py lower ct irreg 40°										
		4	238-242 incl hornfels.										
			sample 262.5-267.5			C95273	5.0	5.0					
267.5	294	7b	extremely clay altd granodiorite ca veinlets, rusted on fracts 5% chloritized mafics. streaks & bnds clay altn. 276-280 clay w remnant qtz frags. @ 276' graphite on fract (moss?)										
			sample 274-279'			C95274	5.0	5.0					
294	311	7b	moderately altd, chl on fracts, incl rounded fg hornfels.										
311	311.9	9	gy fg andesite dyke ct 55°										
311.9	349	7c	Hode granite moderately altd mafics loc chloritized occ serpd fracts, clay on occ fracts K fels may be secondary loc sauss patches fresh from 340'.										
		9	@ 332.2 gy altd fg dyke 70°										
	349		Hole end[illegible]										

GEOLOGICAL LEGEND

CENOZOIC

QUATERNARY

PLEISTOCENE & RECENT

735 [Q] ALLUVIUM, GLACIAL DRIFT

746 [10] MILES CANYON BASALT

POST CRETACEOUS

INTRUSIVE DYKES OR SILLS

755 [9a] ACIDIC GRANITIC, APLITE, FELSITE, 9a - may predate skarn

734½ [9b] BASIC ANDESITE, DIORITE, POST-ORE, 9bx-porphyry

MESOZOIC

CRETACEOUS

COAST INTRUSIVES

758 [8] DIORITE — 8a ALTERED (ENDOSKARN); 8i MINERALIZED ENDOSKARN, MALACHITE, CHALCOPYRITE, BORNITE

752 [7] 7g GRANITE, 7b GRANODIORITE, 7m QUARTZ-MONZONITE

LOWER JURASSIC & LATER

746½ [5] LABERGE GROUP

UPPER TRIASSIC

LEWES RIVER GROUP (METAMORPHOSED)

740½ [5] LIMESTONE AND/OR DOLOMITE, 5b-CARBONACEOUS LIMESTONE

736½ [4] QUARTZITE, GREYWACKE, SILTSTONE, TUFF, ARGILLITE, ARKOSE — 4q QUARTZITE; 4g GREYWACKE; 4k ARKOSE

738 [3] SKARN BARREN, WITH — a-ACTINOLITE; c-CHLORITE; d-DIOPSIDE; e-EPIDOTE; f-FELDSPAR; g-GARNET; s-SERPENTINE; t-TREMOLITE; w-WOLLASTONITE; z-ZOISITE

745 [2] SKARN MINERALIZED, BORNITE, CHALCOPYRITE, COPPER OXIDES, WITH

745 [1] SKARN MAGNETITE, BORNITE, CPY, VALERIITE, COPPER OXIDES, WITH

JUNE 1986 TRENCHED OB 50'x12' x4' 90 CU yd3

0.09 Au, 0.02 Ag, 1.69% Cu, 41.9% Fe

0.097 Au, 16.67 Ag, 7.83% Cu, 10.9% Fe

1986 TRENCHED OB 200' x 10' x 8' 300 CU yds

KB6-01 −70°, 339'

KB6-02 −70° 462'

KB6-03 −70°, 369'

KB6-04 −70°, 349'

KT1 KT2 KT3 KT4 KT5 −55° KT6 KT7 KT8 KT9

CORE RACK

CABIN

RUTH 4 YA93149 | RUTH 2 YA93147

RUTH 3 YA93148 | RUTH 1 YA93146

RUTH 2 YA93197 | ROY 2 Y60598

RUTH 1 YA93146 | RAVEN 2 YA93397

00 E 1290 10 E 1100 N 20 E

4500 4400' 4350' 4300' 4200 4150 4200' 4150 4100' 4050' 4000'

FIG. 2
KREFT PROPERTY
JACKSON CREEK
105-D-11
GEOLOGY & DRILLING PLAN
A. HUREAU 1" = 100' AUG 86

00 N
100 N
200 N
300 N
400 N
500 N
4200'
4100'
4000'
3900'
3800'
3700'
K86-03
-60°
369'
L.a < 0.001 Au, 0.1 Ag, 0.01% Cu
017°

GEOLOGICAL LEGEND

CENOZOIC

QUATERNARY

PLEISTOCENE & RECENT

735 Q — ALLUVIUM, GLACIAL DRIFT

746 1Q — MILES CANYON BASALT

POST CRETACEOUS

INTRUSIVE DYKES OR SILLS

755 9d — ACIDIC GRANITIC, APLITE, FELSITE, 9a - may predate skarn

734½ 9b — BASIC ANDESITE, DIORITE, POST-ORE, 9bx-porphyry

MESOZOIC

CRETACEOUS

COAST INTRUSIVES

756 8 — DIORITE — 8a ALTERED (ENDOSKARN); 8l MINERALIZED ENDOSKARN, MALACHITE, CHALCOPYRITE, BORNITE

752 7 — 7g GRANITE, 7b GRANODIORITE, 7m QUARTZ-MONZONITE

LOWER JURASSIC & LATER

746½ 5 — LABERGE GROUP

UPPER TRIASSIC

LEWES RIVER GROUP (METAMORPHOSED)

740½ 5 — LIMESTONE AND/OR DOLOMITE, 5b-CARBONACEOUS LIMESTONE

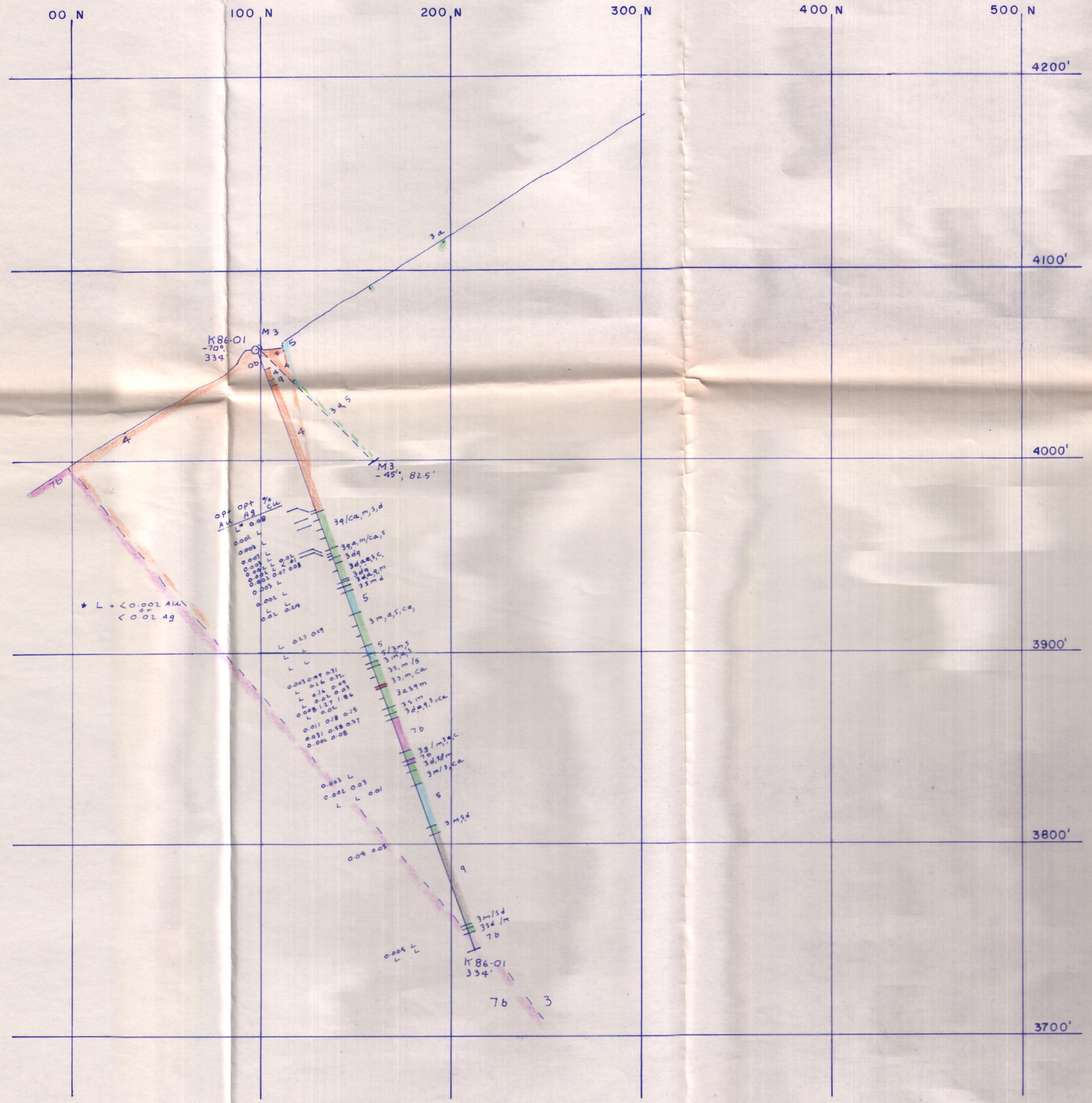
736½ 4 — QUARTZITE, GREYWACKE, SILTSTONE, TUFF, ARGILLITE, ARKOSE — 4q QUARTZITE; 4g GREYWACKE; 4k ARKOSE

738 3 — SKARN BARREN, WITH ····· a-ACTINOLITE, c-CHLORITE, d-DIOPSIDE, e-EPIDOTE, f-FELDSPAR, g-GARNET, s-SERPENTINE, t-TREMOLITE, w-WOLLASTONITE, z-ZOISITE

745 2 — SKARN MINERALIZED, BORNITE, CHALCOPYRITE, COPPER OXIDES, WITH ·····

745 1 — SKARN MAGNETITE, BORNITE, CPY, VALERIITE, COPPER OXIDES, WITH·····

JACKSON CREEK
105 D 11
DDH K86-03
(OFF SECTION)
1" = 40' A.H AUG 86



GEOLOGICAL LEGEND

CENOZOIC

QUATERNARY

PLEISTOCENE & RECENT

735 [Q] ALLUVIUM, GLACIAL DRIFT

746 [10] MILES CANYON BASALT

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734½ [9b] BASIC ANDESITE, DIORITE, POST-ORE, 9b-porphyry

MESOZOIC

CRETACEOUS

COAST INTRUSIVES

756 [8] DIORITE — 8a ALTERED (ENDOSKARN); 8l MINERALIZED ENDOSKARN, MALACHITE, CHALCOPYRITE, BORNITE

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LOWER JURASSIC & LATER

746½ [6] LABERGE GROUP

UPPER TRIASSIC

LEWES RIVER GROUP (METAMORPHOSED)

740½ [5] LIMESTONE AND/OR DOLOMITE, 5b-CARBONACEOUS LIMESTONE

736½ [4] QUARTZITE, GREYWACKE, SILTSTONE, TUFF, ARGILLITE, ARKOSE — 4q QUARTZITE; 4g GREYWACKE; 4k ARKOSE

738 [3] SKARN BARREN, WITH ……

745 [2] SKARN MINERALIZED, BORNITE, CHALCOPYRITE, COPPER OXIDES, WITH ……

745 [1] SKARN MAGNETITE, BORNITE, CPY, VALERIITE, COPPER OXIDES, WITH ……

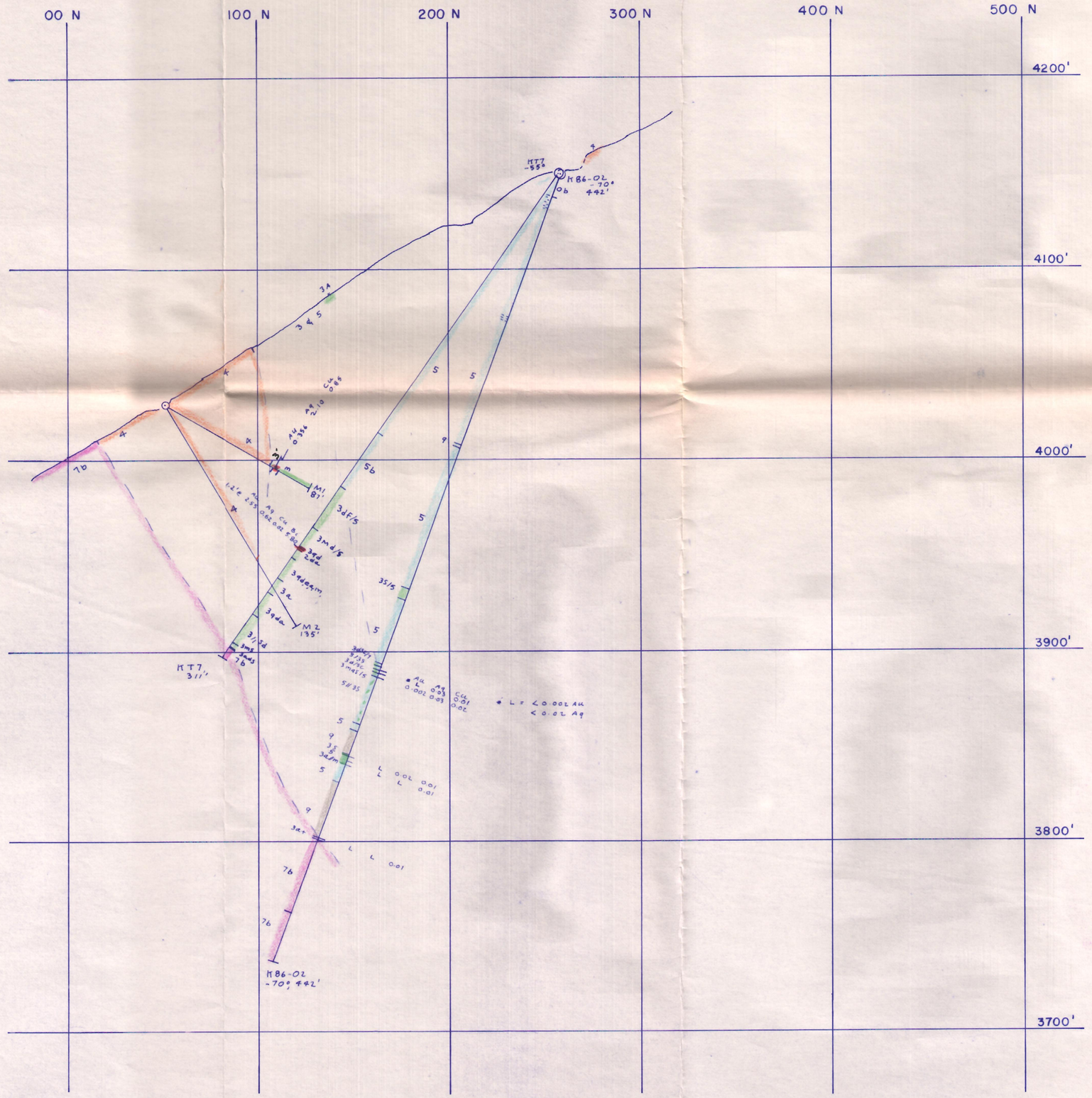
- a-ACTINOLITE
- c-CHLORITE
- d-DIOPSIDE
- e-EPIDOTE
- f-FELDSPAR
- g-GARNET
- s-SERPENTINE
- t-TREMOLITE
- w-WOLLASTONITE
- z-ZOISITE

JACKSON CREEK

105 D 11

SECT 1000 E

1"=40' A.H AUG 86



GEOLOGICAL LEGEND

CENOZOIC

QUATERNARY

PLEISTOCENE & RECENT

735 [Q] ALLUVIUM, GLACIAL DRIFT

746 [10] MILES CANYON BASALT

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MESOZOIC

CRETACEOUS

COAST INTRUSIVES

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LOWER JURASSIC & LATER

746½ [6] LABERGE GROUP

UPPER TRIASSIC

LEWES RIVER GROUP (METAMORPHOSED)

740½ [5] LIMESTONE AND/OR DOLOMITE, 5b-CARBONACEOUS LIMESTONE

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745 [2] SKARN MINERALIZED, BORNITE, CHALCOPYRITE, COPPER OXIDES, WITH .....

745 [1] SKARN MAGNETITE, BORNITE, CPY, VALERIITE, COPPER OXIDES, WITH .....

JACKSON CREEK

105 D 11

SECT 900 E

1"=40' A.H. AUG 86

100 W
00 E
100 E
200 E
300 E
400 E
4200'
4100'
4000'
3900'
3800'
3700'
MAG ANOM
7b
5
Ob
4/3
4
9
Op t Au
Op t Ag
% Cu
ND ND
7a/7b
K86-04
-70°
349'
ND = not detected
< 5 PPB
121°

GEOLOGICAL LEGEND

CENOZOIC

QUATERNARY

PLEISTOCENE & RECENT

735 Q — ALLUVIUM, GLACIAL DRIFT

746 10 — MILES CANYON BASALT

POST CRETACEOUS

INTRUSIVE DYKES OR SILLS

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MESOZOIC

CRETACEOUS

COAST INTRUSIVES

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LOWER JURASSIC & LATER

746½ 6 — LABERGE GROUP

UPPER TRIASSIC

LEWES RIVER GROUP (METAMORPHOSED)

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745 2 — SKARN MINERALIZED, BORNITE, CHALCOPYRITE, COPPER OXIDES, WITH .....

745 1 — SKARN MAGNETITE, BORNITE, CPY, VALERIITE, COPPER OXIDES, WITH .....

JACKSON CREEK

105 D 11

DDH K86-04

(OFF SECTION)

1" = 40' A.H AUG 86

Erwin & Mary-Ellen Kreft

R. R. #2, Site 19, Comp. 4

Whitehorse, Yukon Y1A 5A5

Oct. 10, 1986

Yukon Department of Economic Development

Box 2703, Whitehorse, Yukon

Re: Exploration Incentives Program

Designation # EIP86 - 001.

Statement of Expenses

Diamond Drilling, Kluane Drilling	$31,000.00
Cat Work, Building Drill Sites, etc. Whitehorse Welding	4,880.00
Geologist Consultant, Andy Hureau	3,700.00
Four-Wheel Drive Rental, from Takhini Hot Spring, (same rate as Nor-Can Leasing)	1,884.00
Assays, Bondar-Clegg	1,731.50
Core-splitting, Labelling Core Boxes, etc. Bernie Kreft.	375.00
Installing and dismantling Water Line Walter Stinson (Pipe Rental free from Caron)	800.00
On-Site Supervision and Geologist Assistant Erwin Kreft	2,500.00
TOTAL	$46,870.50

Bondar-Clegg & Company Ltd.
130 Pemberton Ave
North Vancouver, B C
Canada V7P 2R5
Phone: (604) 985-0681
Telex. 04-352667

BONDAR-CLEGG

Geochemical Lab Report

REPORT: 126-3391 (COMPLETE)

REFERENCE INFO:

CLIENT: MR. ERWIN KREFT
PROJECT: NONE GIVEN

SUBMITTED BY: D KREFT
DATE PRINTED: 22-AUG-86

ORDER		ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Cu	Copper	27	1 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
2	Pb	Lead	27	5 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
3	Zn	Zinc	27	1 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
4	Mo	Molybdenum	27	1 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
5	Co	Cobalt	27	1 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
6	Ni	Nickel	27	1 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
7	Cr	Chromium	27	1 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
8	Mn	Manganese	27	1 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
9	Cd	Cadmium	27	1 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
10	Ag	Silver	27	0.5 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
11	Tl	Thallium	27	1 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
12	V	Vanadium	27	1 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
13	As	Arsenic	27	5 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
14	Sb	Antimony	27	5 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
15	Se	Selenium	27	5 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
16	Fe	Iron	27	0.05 PCT	HNO3-HCL HOT EXTR	D.C. Plasma
17	Au	Gold - Fire Assay	27	5 PPB	FIRE-ASSAY	Fire Assay AA

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
R ROCK OR BED ROCK	27	2 -150	27	CRUSH,PULVERIZE -150	27
				OVERWEIGHT SAMPLE/LB	230

REMARKS: BCC WHSE 46-229

REPORT COPIES TO: MR. E. KREFT

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Geochemical Lab Report

DC Plasma

REPORT: 126-3391 | PROJECT: NONE GIVEN | PAGE 1A

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Pb PPM	Zn PPM	Mo PPM	Co PPM	Ni PPM	Cr PPM	Mn PPM	Cd PPM	Ag PPM	Tl PPM
R2 C 95246		2	9	24	3	2	2	<1	707	1	0.5	<1
R2 C 95247		1	<5	19	4	3	3	<1	478	<1	<0.5	<1
R2 C 95248		33	174	92	2	9	7	16	6000	<1	<0.5	<1
R2 C 95249		40	10	62	7	12	4	40	9000	3	<0.5	<1
R2 C 95250		55	7	110	29	12	11	61	13000	2	<0.5	<1
R2 C 95251		21	<5	41	3	7	<1	40	12000	1	<0.5	<1
R2 C 95252		5	<5	22	2	5	<1	27	8000	<1	<0.5	<1
R2 C 95253		12	<5	29	3	5	<1	35	7000	1	<0.5	<1
R2 C 95254		4	<5	41	2	5	<1	22	8000	<1	<0.5	<1
R2 C 95255		17	<5	17	4	3	<1	40	3000	1	<0.5	<1
R2 C 95256		18	9	11	5	4	<1	42	2544	<1	<0.5	<1
R2 C 95257	K86-03	15	<5	32	10	4	<1	40	3363	1	<0.5	<1
R2 C 95258		4	<5	38	5	6	5	56	3879	<1	<0.5	<1
R2 C 95259		4	<5	43	8	6	3	40	3891	<1	<0.5	<1
R2 C 95260		5	<5	33	16	5	3	49	3658	<1	<0.5	<1
R2 C 95261		5	<5	45	37	5	<1	30	3659	<1	<0.5	<1
R2 C 95262		7	<5	55	11	7	<1	32	3143	<1	<0.5	<1
R2 C 95263		21	<5	208	7	12	4	12	4137	2	<0.5	<1
R2 C 95264		11	<5	81	5	7	2	24	2151	1	<0.5	<1
R2 C 95265		8	<5	71	31	11	<1	26	4181	<1	<0.5	<1
R2 C 95266		9	6	67	9	18	2	42	4247	<1	<0.5	<1
R2 C 95267		9	<5	48	8	7	<1	22	3136	1	<0.5	<1
R2 C 95268		8	8	42	7	10	<1	37	2405	<1	0.9	<1
R2 C 95269		6	<5	37	2	6	<1	26	2501	<1	<0.5	<1
R2 C 95272	K86-04	36	6	130	5	20	25	76	787	1	<0.5	<1
R2 C 95273		36	11	104	4	23	45	148	1077	1	<0.5	<1
R2 C 95274		54	6	28	38	5	<1	37	452	<1	<0.5	<1

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Geochemical Lab Report

D.C. PLASMA

REPORT: 126-3391 | PROJECT: NONE GIVEN | PAGE 1B

SAMPLE NUMBER	ELEMENT UNITS	V PPM	As PPM	Sb PPM	Se PPM	Fe PCT	Au PPB
R2 C 95246		3	7	7	<5	1.30	5
R2 C 95247		6	16	<5	<5	0.92	<5
R2 C 95248		6	11	12	5	2.18	45
R2 C 95249		48	<5	9	<5	9.95	<5
R2 C 95250		141	<5	7	<5	>10.00	<5
R2 C 95251		25	20	<5	<5	4.91	<5
R2 C 95252		13	<5	<5	<5	3.66	<5
R2 C 95253		56	13	5	<5	4.62	<5
R2 C 95254		132	<5	<5	<5	2.41	<5
R2 C 95255		85	113	<5	10	5.39	<5
R2 C 95256	KB603	46	132	<5	<5	6.76	160
R2 C 95257		67	84	<5	<5	6.57	75
R2 C 95258		9	<5	<5	6	1.98	<5
R2 C 95259		4	17	5	7	1.96	<5
R2 C 95260		5	<5	10	6	1.80	<5
R2 C 95261		7	<5	7	<5	2.55	<5
R2 C 95262		13	5	<5	<5	3.29	<5
R2 C 95263		9	19	<5	<5	9.29	10
R2 C 95264		8	14	<5	<5	5.74	<5
R2 C 95265		8	8	<5	<5	3.73	<5
R2 C 95266		11	8	6	<5	3.94	<5
R2 C 95267		6	13	10	<5	3.32	<5
R2 C 95268		8	21	<5	<5	3.59	5
R2 C 95269		9	10	9	<5	2.81	<5
R2 C 95272		87	19	7	6	5.04	<5
R2 C 95273	KB604	91	10	<5	<5	5.52	<5
R2 C 95274		5	<5	<5	<5	1.37	<5

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Geochemical Lab Report

REPORT: 126-3515 (COMPLETE)

REFERENCE INFO: WHSE 46-234

CLIENT: MR. ERWIN KREFT
PROJECT: NONE GIVEN

SUBMITTED BY: E KREFT
DATE PRINTED: 28-AUG-86

ORDER	ELEMENT		NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Cu	Copper	3	1 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
2	Pb	Lead	3	5 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
3	Zn	Zinc	3	1 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
4	Mo	Molybdenum	3	1 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
5	Co	Cobalt	3	1 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
6	Ni	Nickel	3	1 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
7	Cr	Chromium	3	1 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
8	Mn	Manganese	3	1 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
9	Cd	Cadmium	3	1 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
10	Ag	Silver	3	0.5 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
11	Bi	Bismuth	3	2 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
12	Fe	Iron	3	0.05 PCT	HNO3-HCL HOT EXTR	D.C. Plasma
13	V	Vanadium	3	1 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
14	As	Arsenic	3	5 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
15	Te	Tellurium	3	10 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
16	U	Uranium	3	10 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
17	W	Tungsten	3	10 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
18	Sb	Antimony	3	5 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
19	Se	Selenium	3	5 PPM	HNO3-HCL HOT EXTR	D.C. Plasma
20	Sn	Tin	3	10 PPM	HNO3-HCL HOT EXTR	D.C. Plasma

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
R ROCK OR BED ROCK	3	2 -150	3	AS RECEIVED, NO SP	3

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Geochemical Lab Report

REPORT: 126-3515

PROJECT: NONE GIVEN PAGE 1A

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Pb PPM	Zn PPM	Mo PPM	Co PPM	Ni PPM	Cr PPM	Mn PPM	Cd PPM	Ag PPM	Bi PPM
R2 95247-A	M 86-03	5	26	21	12	<1	3	87	763	<1	0.5	3
R2 95247-B		10	34	16	50	<1	7	81	441	1	0.9	6
R2 95247-C		11	17	24	21	<1	<1	25	1402	<1	<0.5	<2

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Geochemical Lab Report

REPORT: 126-3515

PROJECT: NONE GIVEN PAGE 1B

SAMPLE NUMBER	ELEMENT UNITS	Fe PCT	V PPM	As PPM	Te PPM	U PPM	W PPM	Sb PPM	Se PPM	Sn PPM
R2 95247-A	K 86-03	1.87	12	549	<10	<10	<10	10	7	<10
R2 95247-B		1.44	17	254	<10	<10	<10	8	<5	<10
R2 95247-C		3.58	11	100	<10	<10	<10	7	9	<10

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Certificate of Analysis

REPORT: 426-2167 (COMPLETE)

REFERENCE INFO:

CLIENT: MR. ERWIN KREFT
PROJECT: NONE GIVEN

SUBMITTED BY: E KREFT
DATE PRINTED: 9-JUL-86

ORDER		ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Au	Gold - FIRE ASSAY	5	0.001 OPT		
2	Ag	Silver	5	0.01 OPT		
3	Bi	Bismuth	5	0.01 PCT		

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
R ROCK OR BED ROCK	5	2 -150	5	ASSAY PREP	5

REMARKS: BCC WHSE 46-135

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Certificate of Analysis

REPORT: 426-2167

PROJECT: NONE GIVEN PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Au OPT	Ag OPT	Bi PCT
R2 C 95241		<0.002	0.03	0.01
R2 C 95242		0.002	0.03	0.02
R2 C 95243		<0.002	0.02	0.01
R2 C 95244		<0.002	<0.02	0.01
R2 C 95245		<0.002	<0.02	0.01

H86-02

Registered Assayer, Province of British Columbia

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Certificate of Analysis

REPORT: 426-2039 (COMPLETE)

REFERENCE INFO:

CLIENT: MR. ERWIN KREFT

SUBMITTED P' : E KREFT

PROJECT: NONE GIVEN

DATE PRINTED: 7-JUL-86

ORDER	ELEMENT		NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Au	Gold - FIRE ASSAY	30	0.001 OPT		
2	Ag	Silver	30	0.01 OPT		
3	Cu	Copper	12	0.001 PCT		
4	Zn	Zinc	7	0.01 PCT		
5	W	Tungsten	12	0.01 PCT		
6	Bi	Bismuth	22	0.01 PCT		

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
R ROCK OR BED ROCK	30	2 -150	30	ASSAY PREP	30
				OTHER SAMPLE PREP 1	3

REMARKS: BCC WHSE 46-125

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REPORT: 426-2039 | PROJECT: NONE GIVEN | PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Au OPT	Ag OPT	Cu PCT	Zn PCT	W PCT	Bi PCT
R2 C 95210		<0.002	0.03				
R2 C 95211		0.002	<0.02				
R2 C 95212		0.003	<0.02				
R2 C 95213		0.007	<0.02				
R2 C 95214		0.003	<0.02				
R2 C 95216		0.002	<0.02	0.020		0.07	0.02
R2 C 95217		0.002	<0.02	<0.010		0.02	0.01
R2 C 95218		<0.002	0.07	0.080		0.02	0.04
R2 C 95219		0.003	<0.02				0.02
R2 C 95220		0.002	<0.02			0.02	
R2 C 95221		<0.002	<0.02			0.04	0.01
R2 C 95222		0.020	0.24				0.03
R2 C 95223		<0.002	0.27	0.290	0.03	0.02	0.02
R2 C 95224		<0.002	<0.02		0.03		0.03
R2 C 95225		<0.002	<0.02		0.02		0.03
R2 C 95226		0.003	0.49	0.310		0.02	0.02
R2 C 95227		<0.002	0.26	0.320			
R2 C 95228		<0.002	0.16	0.090		0.06	0.02
R2 C 95229		<0.002	0.02	0.030		0.02	0.02
R2 C 95230		0.008	1.27	1.860	0.38	0.02	0.02
R2 C 95231		<0.002	0.02				0.01
R2 C 95232		0.011	0.18	0.150	0.03	0.02	0.05
R2 C 95233		0.031	0.58	0.370	0.06	0.02	0.07
R2 C 95234		<0.002	0.08				0.02
R2 C 95235		0.003	<0.02				
R2 C 95236		0.002	0.03				0.01
R2 C 95237		<0.002	<0.02	0.010	0.18		0.02
R2 C 95238		0.004	0.03				0.03
R2 C 95239		0.005	<0.02				0.04
R2 C 95240		<0.002	<0.02				0.01

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