

DICTATOR MINES LTD. (N.P.L.)

NADIRA COPPER PROPERTY - ROB CLAIMS

REPORT OF 1972 DRILL PROGRAM

Latitude $48^{\circ} 55'N$ Longitude $124^{\circ} 35'W$

AUTHOR: A. M. Homenuke, Geologist

P. ENGINEER: W. G. Stevenson

DATE OF WORK: October 15 - December 8, 1972

DATE OF REPORT: March 22, 1973

22034

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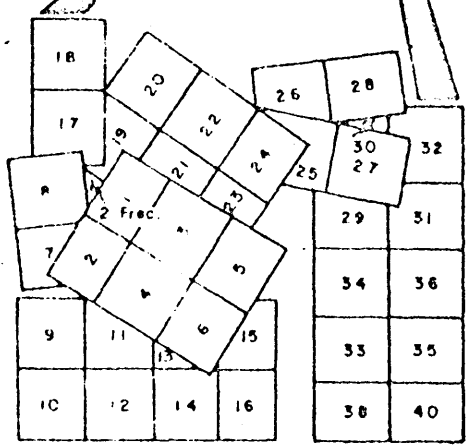
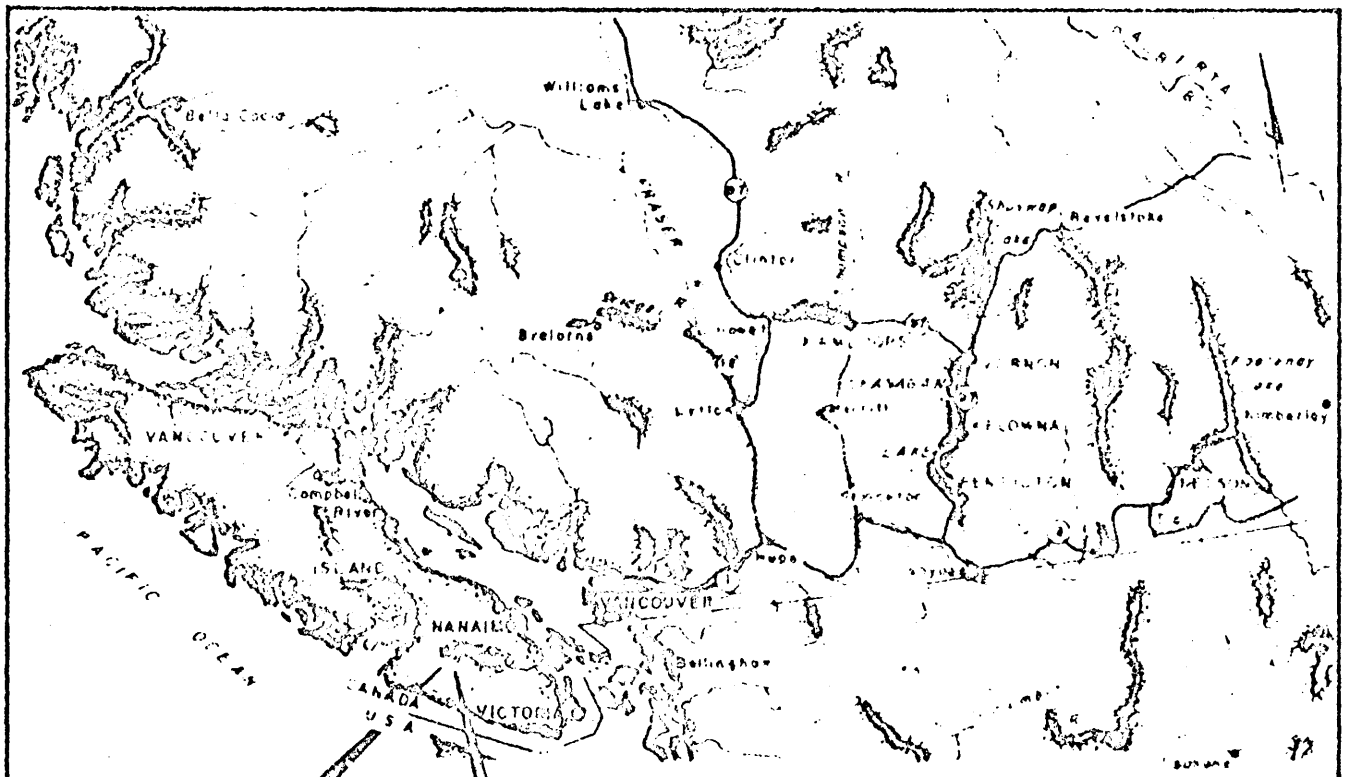
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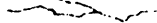

- A. Drill Hole Plans and Sections.
- B. Drill Hole Logs.
- C. Assay Data
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Figure 3	Drill Hole Sections	Appendix A



L E G E N D

-  *Outline of Claims*
-  *Highway*
-  *Shore Line*
-  *Creeks & Rivers*
-  *Area Surveyed*

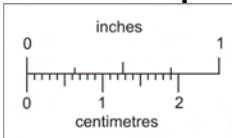
Dictator MINES LTD. (N.P.L.)

ROB CLAIMS

NADIRA COPPER PROPERTY

LOCATION AND CLAIMS MAP

SCALE: LOCATION MAP 1" = 80 MILES APPROX - CLAIMS MAP 1" = 4000 FEET APPROX



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



Fig 1
File: D8

Anthony N Schampl

1972

SUMMARY

During the fall of 1972, Tri-con Exploration Surveys Ltd. carried out an exploration program on the Nadira Copper Property of Dictator Mines Ltd. (N.P.L.). A detailed report of this work was submitted in December 1972 (Homenuke and Stevenson, 1972). A diamond drill program was initiated by Dictator in October. Tri-con was retained to manage this program. Three holes totalling 1010 feet were drilled. Several chalcopryite bearing skarn bodies were intersected, the best of which assayed 1.09% copper over 30 feet. The drilling was suspended due to weather.

Upon examination of the results of the above and of previous work, I have recommended an exploration program to further investigate the economic potential of the skarnified area.

CONCLUSIONS

In 1972, 1010 feet of diamond drilling was done in three holes on the Nadira Copper Property of Dictator Mines Ltd., (N.P.L.).

Several chalcopryite bearing skarns were intersected, the best of which assayed 1.09% over 30 feet. The geology ranged from relatively simple to very complex, with complexity probably proportional to faulting.

The exploratory work recommended consists of preparation of topographic and geologic maps by plane table, investigation and correlation of earlier data, an induced polarization survey, and diamond drilling in conjunction with the results of these surveys.

LOCATION AND ACCESS

The Nadira Copper Property of Dictator Mines Ltd. (N.P.L.) is located 6 miles due west of Cowichan Lake on the west side of the Parker Creek - Tuck Lake Valley. The property may be reached by restricted access logging roads from either Youbou or Port Alberni. The last couple of miles of road is relatively poor and a four-wheel drive vehicle is recommended, especially in wet weather. The location of the claim group is shown on Figure 1.

PROPERTY

The property consists of the following claims. (See Figure 1.)

<u>Claim Name</u>	<u>Record Number</u>
Rob 1 - 24 inclusive	13470 - 13493 inclusive
Rob 25	15036
Rob 26 - 36 inclusive	15019 - 15029 inclusive
Rob 37	15160
Rob 38	15030
Rob 39	15161
Rob 40 - 44 inclusive	15031 - 15035 inclusive
Rob 45 - 48 inclusive	16379 - 16382 inclusive

The claims are owned by Amax Exploration Inc. and are under option to Dictator Mines Ltd. (N.P.L.).

PHYSICAL FEATURES

The area worked is on the east slope of a north-south ridge. The ridge is cut by several deep creek gullies. Slope angles are commonly 20° - 30° and in some cases even steeper. Elevation ranges from 800 feet to 2500 feet on the gridded area.

Vegetation is typical of virgin timber of the Coastal Western Hemlock zone - large diameter hemlock, fir and cedar with the undergrowth of salal, huckleberry, blackberry and devil's club concentrated in the gullies and open areas.

HISTORY

Since it was first located in 1930, the Nadira Copper Property (or Southern Cross, as it was earlier known) has received attention from various sources.

During the 1940's and 1950's both surface and underground exploration was carried out. This work included approximately 14,000 feet of diamond drilling. In 1960 Nadira Mines Ltd. (N.P.L.) mined over 5,000 tons of ore, which was shipped to the Cowichan Copper Company's mill on Cowichan Lake.

The claims lapsed in 1968 and were restaked by Amax Exploration Inc., who carried out a reconnaissance program over the property and recommended that further work be done.

Dictator Mines Ltd. (N.P.L.) optioned the property from Amax in 1971 and initiated an exploration program. During the fall of 1972 Tri-con Exploration Surveys Ltd. continued this program of detailed exploration. The program was restricted to the northwest section of the property and the results delimited an area of interest for further exploration. (For details of this work refer to Homenuke and Stevenson, 1972). The outlined area encompassed the known skarn deposits and a drilling program was initiated in November of 1972. Drilling was suspended due to weather in mid-December after completion of 1010 feet in 3 holes.

INTERPRETATION OF PREVIOUS DATA

Drill logs are available for most of the earlier diamond drilling. They lack detail and uniformity, but provide enough information when correlated with surface mapping to at least indicate some of the geological parameters to be further investigated.

The areal extent of copper mineralization has been fairly well outlined by geological mapping and geochemical sampling.

A study of information from this zone indicates that skarn bodies have been formed within a lenticular, stratigraphically controlled horizon which contains limestones and limey volcanic rocks. The skarns appear to be formed where feldspar porphyry dykes have cut this zone.

Further investigation should concentrate on the following problems:

1. What is the exact nature and extent of the faulting?
2. What is the form and extent of the limestone formations?
3. What are the chemical and physical conditions required for formation of these skarns?
4. Determine the possibility of there being more pervasive copper mineralization in the zone than has been observed to date.

When the above information has been obtained it will be possible to infer the economic potential of this portion of the property.

GEOLOGY

General

The geology of the property and the general area are discussed in detail in Christofferson and Mustard (1969) and Homenuke and Stevenson (1972). Briefly, the area consists of uptilted volcanic and sedimentary formations of the Triassic-Jurassic Vancouver Group. To the north of the property these formations are intruded by intermediate rocks of Jurassic Age belonging to the Island Intrusions.

On the property, intrusions are in the form of feldspar porphyry dykes. Where these dykes contact limestones and limey volcanic rocks, calc-silicate skarn bodies containing chalcopyrite have been formed.

Summary of Lithologies

- Unit 1: ANDESITE: Flows and probably some fragmental rocks. Generally porphyritic.
- Unit 2: LIMESTONE: Dense recrystallized limestone, minor argillaceous rocks.
- Unit 3: FELDSPAR PORPHYRY DYKES: Waxy, light green intermediate groundmass with white plagioclase phenocrysts.
- Unit 4: LEUCODIORITE DYKE: Similar to Unit 3, but with a fine grained phaneritic groundmass.
- Unit 5: CALC-SILICATE SKARN: Ilvaite-epidote-garnet-actinolite-magnetite-chalcopyrite assemblages.

Structure

Following uplift of formations and intrusion of the dykes the area was heavily faulted in northwest-southeast and northeast-southwest directions. The faulting was accompanied by much minor shearing which has obscured many of the intrusive relationships.

Copper Mineralization

Copper occurs as chalcopyrite in patches, disseminations and along fractures in the calc-silicate skarn bodies. In sections of economic interest copper values are generally 1-2%, but higher assays have been recorded. Minor chalcopyrite also occurs in vesicles and occasionally in fractures in the volcanic rocks.

From this variation in complexity it becomes obvious that any further drilling will have to be located in relation to geology rather than on a grid basis in order to obtain optimum results.

RECOMMENDATIONS

To carry out ideas proposed in preceding sections, the following program will be necessary.

First of all, a geologic base should be prepared at a scale of 1" - 50'. As vegetation cover is tall and thick, present topographic maps prepared from airphotos are too "smooth" to be entirely suitable. Therefore, preparation of a topographic base by plane table is suggested. This would be carried out in conjunction with geological mapping.

Surface trenching by bulldozer, or even by hand would considerably enhance the geology. However, if the area is logged off in the near future (program underway by MacMillan Bloedel) trenching may not be necessary.

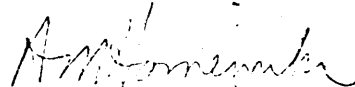
Diamond drilling as a continuation of the 1972 program, which was designed to delineate the zone of interest in a third dimension, could be continued coincident with the above surveys. An induced polarization survey would enhance the specific placement of these drill holes.

A slightly different approach would be to spot these holes with reference to surface skarn outcrops in order to obtain early information on economic potential.

Preliminary to the above, sections should be prepared from the old drill hole logs and interpreted to conform with more recent drilling. However, as assaying was not done on much of this core, information will be mainly geological rather than economic.

Respectfully submitted,

TRI-CON EXPLORATION SURVEYS LTD.



A. M. Homenuke,
Geologist

REFERENCES

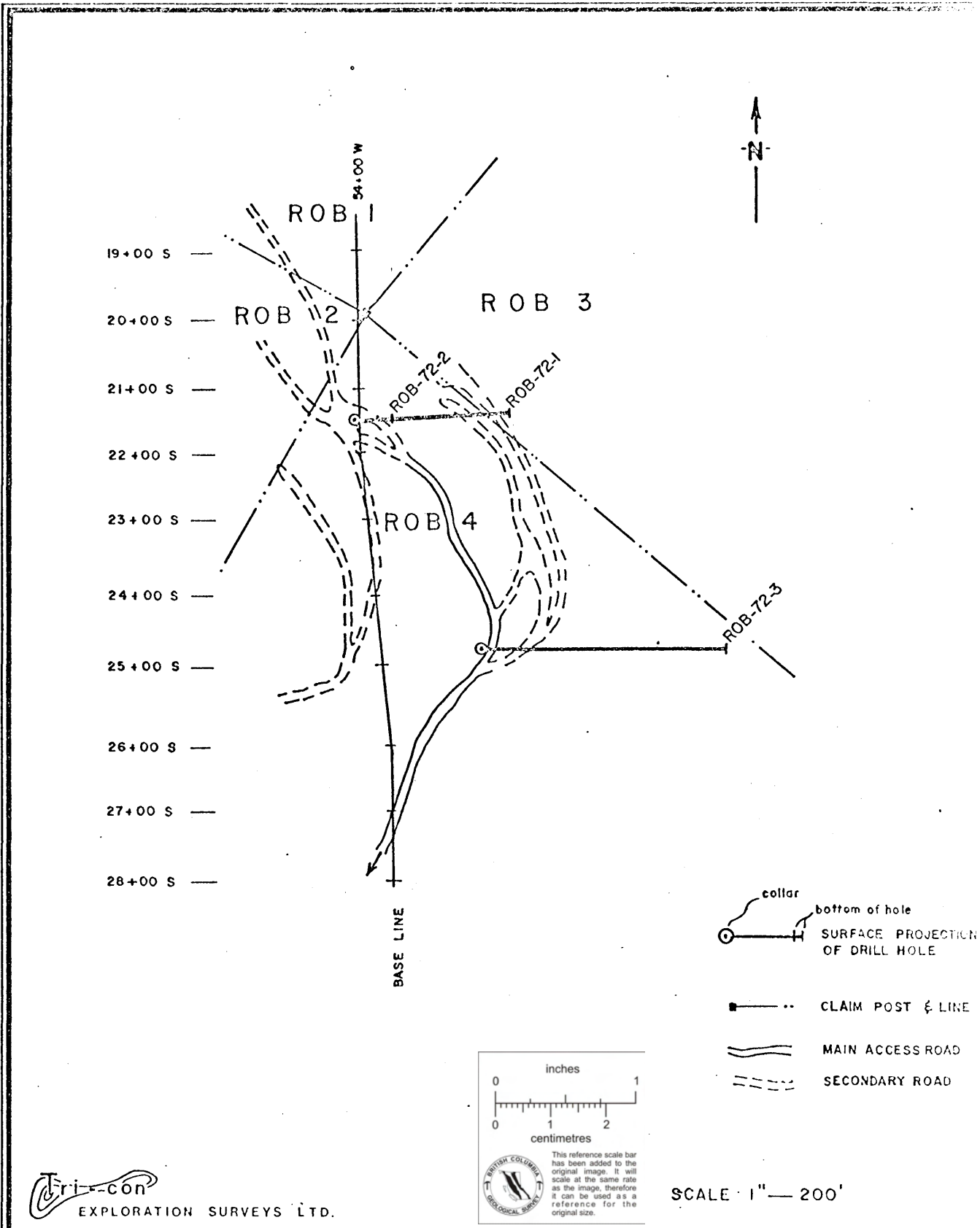
Christofferson, J. E., and D. K. Mustard, 1969, Geological report on the Rob Claims - Nadira Copper Property (Private report to Amax Exploration Inc.)

Dawson, J. M., 1972, report on the Nadira Copper Property (for Dictator Mines Ltd. (N.P.L.))

Homenuke, A.M. and W. G. Stevenson, 1972, Geological, geochemical and geophysical report, Rob Claims - Nadira Copper Property (Assessment report for Dictator Mines Ltd. (N.P.L.))

Private files of Amax Exploration Inc.

Drill hole plans and sections.



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DICTATOR MINES LTD. (N.P.L.)

NADIRA COPPER PROPERTY—ROB CLAIMS

ALBERNI MINING DIVISION B.C.

1972 PROGRAM—DIAMOND DRILL HOLE PLAN

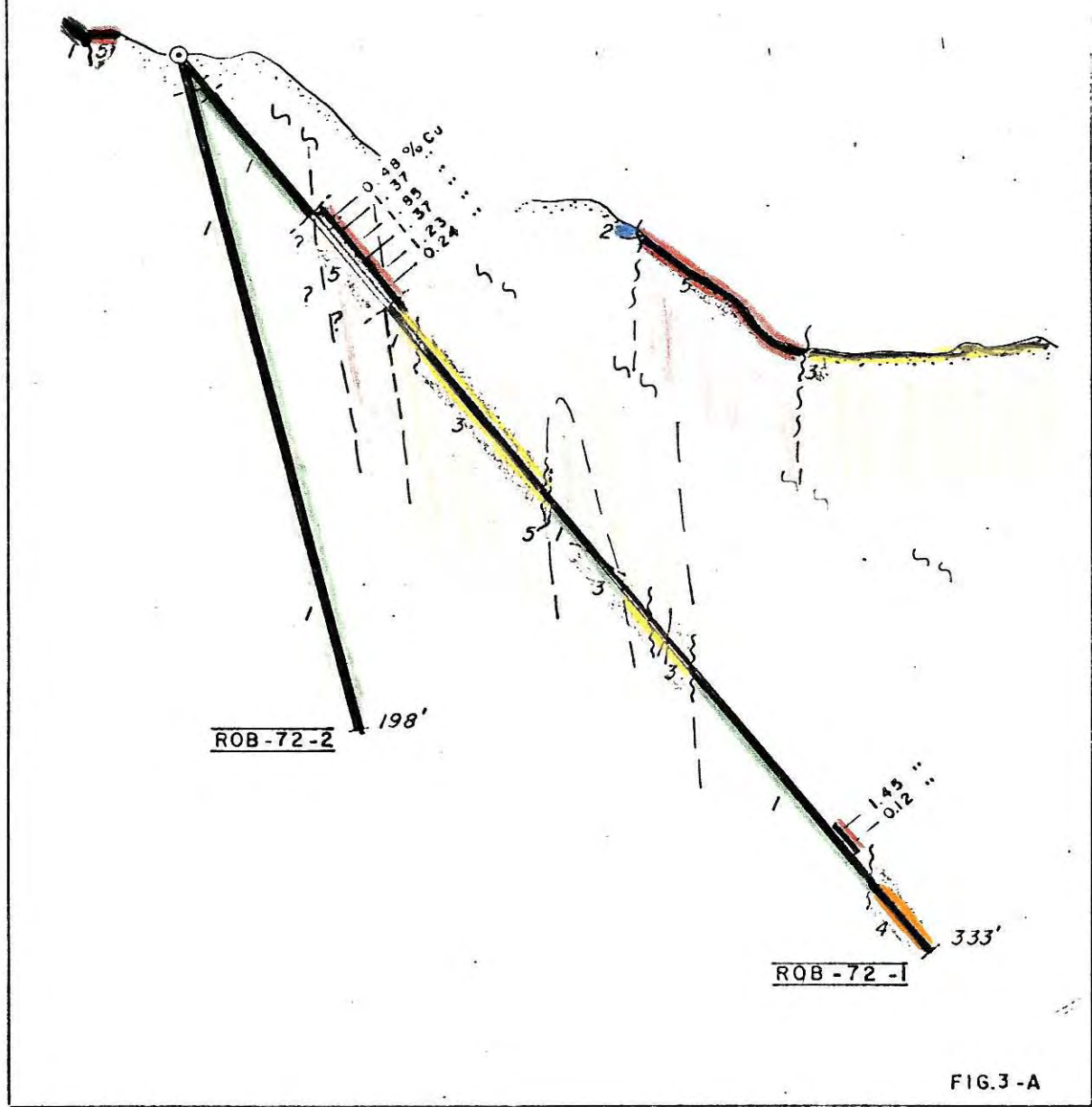


FIG.3-A

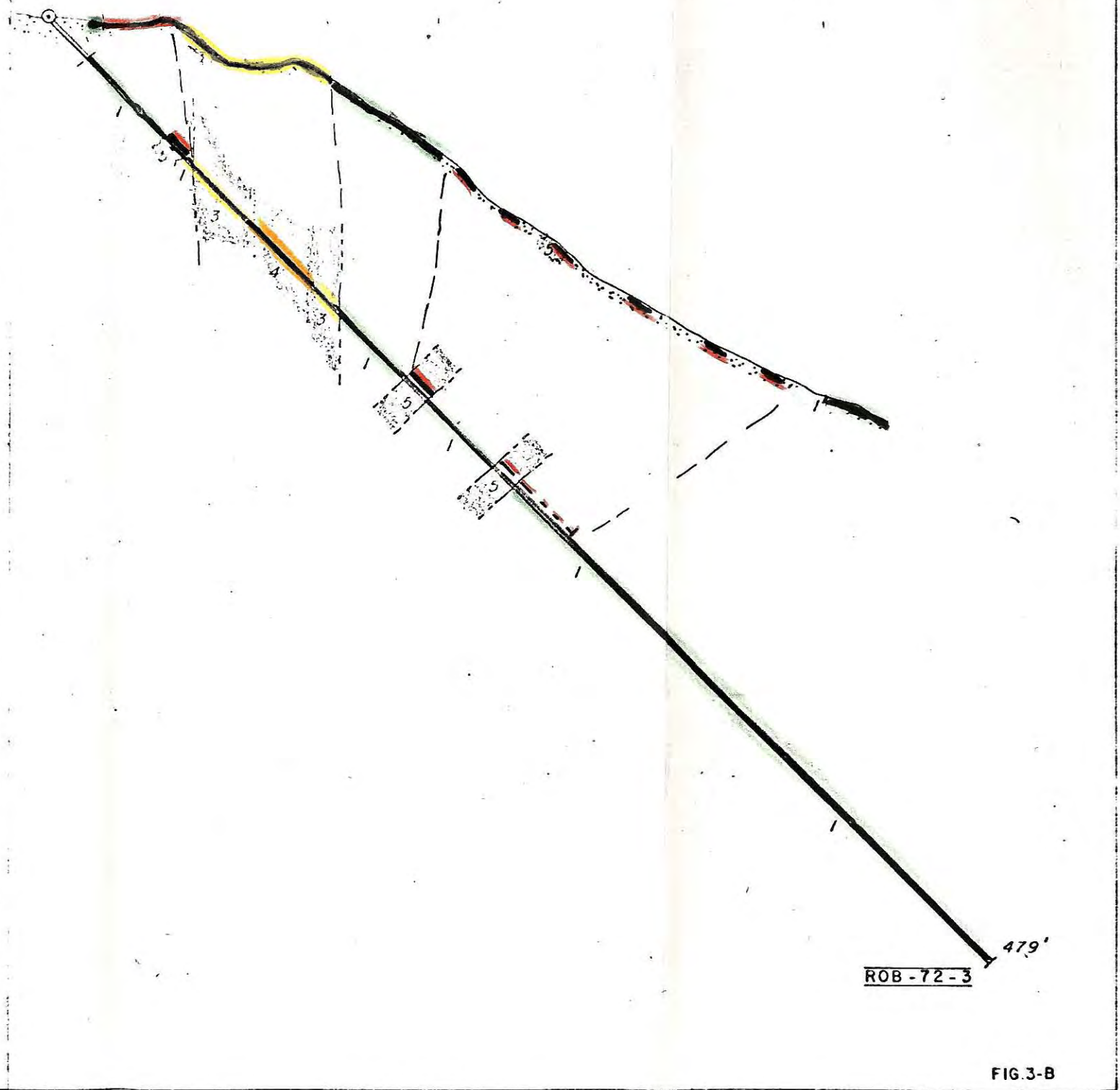
















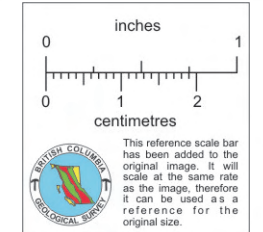


FIG.3-B

LEGEND

-  SKARN
 -  LEUCODIORITE DYKE
 -  FELDSPAR PORPHYRY DYKE
 -  LIMESTONE
 -  ANDESITE
-
-  collar
 -  end of casing
 -  bottom of hole
 -  overburden
 -  outcrop
 -  surface
-
- GEOLOGIC CONTACT**
-  intrusive
 -  sheared
 -  intrusive-gradational
 -  altitude uncertain
 -  assay sample (5ft. interval)

SCALE: 1" = 50'



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Dictator Mines Ltd. (N.P.L.)
NADIRA COPPER PROPERTY—ROB CLAIMS
 ALBERNI MINING DIVISION B.C.

1972 PROGRAM-DIAMOND DRILL HOLE SECTIONS

PROJECT: 7214 A
FILE: D-10

INTERPRETED BY: A.M. HOMENUKE
MARCH 1973

FIG.3

Drill hole Logs.

DRILL HOLE RECORD

HOLE NUMBER

ROB-72-1



EXPLORATION SURVEYS LTD

COMPANY DICTATOR MINES LTD.

CO-ORDINATES 21 + 49 S; 54 + 05 W

TESTS -

DATE DRILLED from Nov./72
to

PROPERTY NADIRA COPPER

TOTAL LENGTH 333

LOCATION Parker Ck. Van. Is.

EL. of COLLAR 1590 a.s.l.

BRG. 087° CORRECTED -

LOGGED BY A. Homenuke

JOB NO. 7214 - A

CORE SIZE BQ

DIP -50° CORRECTED -

DATE Nov./72

FOOTAGE		RECOV. %	DESCRIPTION	SAMPLE NUMBER	Length	ANALYSIS			
from	to					Cu	Zn	Ag	
						%	%	oz/ton	
0	13	0	casing						
13	58.5	13'-28'	ANDESITE: med. grey-green, plagioclase/augite porphyritic; plag. laths ~20%, 1 - 3 m.m.; augite clots to 4 m.m., chloritically altered; minor shearing and fracturing at any angle, calcite and occasionally epidote and quartz fillings.						
			42 - 45: grades to massive andesite (may be chill zone)	Box 1	13 - 44.5				
			45-58.5: massive andesite; past 50' - minor chalcopyrite and epidote indicate skarn formation along fractures.	Box 2	44.5 - 64				
58.5	91		SKARN: 58.5-63.5: light green, epidote; 5-10% CaCO ₃ ; 1-5% disseminated chalcopyrite and pyrite, occasional veinlets; tr. magnetite; tr. malachite; (some of section only slightly altered andesite) calcite - epidote banding 75° C.A.						
			63.5-67: Massive volcanic; up to 10% pyrite; tr. chalcopyrite; (may be recrystallized andesite)	Box 3	64-87				
			67 - 89: ilvaite - epidote - magnetite-chalcopyrite assemblage; chalcopyrite often replaces ilvaite; occurs as blebs and disseminations to 2 cm.; up to 10% cp.; magnetite up to 20%,	Box 4	87-109				
						5651	60-		
							65	0.48	0.06
						5652	65-		
							70	1.37	0.10
						5653	70-		
							75	1.85	<0.01
						5654	75-		
							80	1.37	0.03
						5655	80-		
							85	1.28	0.04
						5656	85-		
							90	0.24	0.01

DRILL HOLE RECORD

HOLE NUMBER ROB-72-3

 **EXPLORATION SURVEYS LTD**

COMPANY _____
 PROPERTY _____
 LOCATION _____
 JOB NO. _____

CO-ORDINATES _____
 TOTAL LENGTH _____
 EL. of COLLAR _____
 CORE SIZE _____

TESTS _____
 BRG. _____ CORRECTED _____
 DIP _____ CORRECTED _____

DATE DRILLED from _____ to _____
 LOGGED BY _____
 DATE _____

FOOTAGE		RECOV. %	DESCRIPTION	SAMPLE NUMBER	Length	ANALYSIS			
from	to								
161	179.5		ANDESITE(?): lighter groundmass than above; plagioclase - augite porphyritic; chloritic alteration; pinhole vesicles with glassy rims; (tuffaceous?)	Box 7	163-186.5				
79.5	190		SKARN: epidote - garnet - ilvaite; 5% calcite; minor magnetite and chalcopryrite associated with ilvaite; ilvaite in(?) cavity fillings to 1/2" and patches to a few inches. 181-183: massive fine-grained epidote. 183-184: only slightly altered andesite.						
190	224		ANDESITE: medium grey; up to 25% feldspar phenocrysts 190-208: skarnified; epidote blobs, disseminations and fracture fillings. 217-218: amygdaloidal	Box 8	186.5-210				
224	234		SKARN: epidote - garnet - actinolite: grades to epidotized volcanic; minor magnetite, ilvaite, calcite, trace of chalcopryrite.	Box 9	210-232				
234	479		ANDESITE: various textures (and phases or flows) from dense grey aphanitic to altered porphyritic; pervasive epidote. (some of rock may be agglomeratic or tuffaceous) Well fractured and generally limey.	Box 10	232-254				

DRILL HOLE RECORD

HOLE NUMBER ROB-72-3

 **EXPLORATION SURVEYS LTD**

COMPANY _____
 PROPERTY _____
 LOCATION _____
 JOB NO. _____

CO-ORDINATES _____
 TOTAL LENGTH _____
 EL. at COLLAR _____
 CORE SIZE _____

TESTS _____
 BRG. _____ CORRECTED _____
 DIP _____ CORRECTED _____

DATE DRILLED from _____ to _____
 LOGGED BY _____
 DATE _____

FOOTAGE from to	RECOV. %	DESCRIPTION	SAMPLE NUMBER	Length	ANALYSIS
		252: trace of malachite			
		252.5: 2" vitrified section (or flow surface?)	Box 11	254-277.5	
		253-254: mylonitic fault zone	Box 12	277.5-300	
		255: 1/2" x 1" irregular but conformable	Box 13	300-321	
		chalcopryrite patch; traces of chalcopryrite in fractures, generally with calcite	Box 14	321-341	
			Box 15	341-364	
			Box 16	364-387	
		269-271: radiating feldspar phenocrysts	Box 17	387-411	
		(could this be the "chysanthemum stone" which marks the top of the Karmutsen?)	Box 18	411-433	
			Box 19	433-464	
		277: Calcite-filled fault 35° C.A.	Box 20	464-479	
		284: 1" epidote - quartz fracture filling 25° C.A.			
		301-312: coarser light grey porphyritic section; not easily discernible plagioclase laths (30%) in slightly vitreous groundmass.			
		330-341: Highly fractured and sheared zone; calcitic, epidotic, trace of hematite			
		339: mud seam and 3" epidote 25° C.A.			
		362-364: vitrified, brecciated (flow surface?); minor hematite in fractures.			
		383: 3" vitrified			
		383-479: lithology essentially unchanged but generally more compact (i.e. less fractured) and regular.			

APPENDIX C

ASSAY RESULTS: ROB-72-1

(all samples from 5-foot sections of core)

<u>Sample No.</u>	<u>From</u>	<u>To</u>	<u>% Copper</u>	<u>oz/ton Silver</u>	<u>% Zinc</u>
5651	60	- 65	0.48	0.06	
5652	65	- 70	1.37	0.10	
5653	70	- 75	1.85	0.12	< 0.01
5654	75	- 80	1.37	0.03	
5655	80	- 85	1.23	0.04	
5656	85	- 90	0.24	0.01	
5657	288	- 293	1.45	0.15	
5658	293	- 298	0.12	0.03	

Certificates

1. A. Homenuke, Geologist
2. W. G. Stevenson, P. Engineer

1. STATEMENT OF OPERATOR'S QUALIFICATIONS

I, Alexander M. Homenuke, DO HEREBY CERTIFY:

- That I am a graduate in Mining Technology from the British Columbia Institute of Technology.
- That I have further studied Geological Engineering at the Colorado School of Mines.
- That I have been employed by Tri-con Exploration Surveys Ltd. since June of 1969 in mineral exploration as a geochemical, geological and geophysical operator.
- That I am presently employed by Tri-con Exploration Surveys Ltd. in the capacity of Geologist.

DATED at Vancouver, British Columbia this 22nd day of March, 1973.

TRI-CON EXPLORATION SURVEYS LTD.



A. M. Homenuke,
Geologist

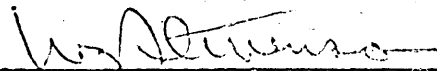
2. CERTIFICATE

I, William G. Stevenson, DO HEREBY CERTIFY:

- That I am a Consulting Geological Engineer with offices at Suite 209 Stock Exchange Building, 475 Howe Street, Vancouver 1, B.C.
- That I am a graduate of the University of Utah, 1946, with a B.Sc. Degree.
- That I am a registered Professional Engineer in the Association in British Columbia.
- That I have practised my profession for 22 years.
- That I have no direct, indirect or contingent interest in the Rob Claim Group or in the securities of Dictator Mines Ltd. (N.P.L.) nor do I intend to receive any such interest.
- That I have reviewed a report dated March 22, 1973, based on work conducted by Tri-con Exploration Surveys Ltd.

DATED at Vancouver, British Columbia, this 27th day of March, 1973

W. G. STEVENSON & ASSOCIATES LIMITED
Consulting Geologists



W. G. Stevenson, P. Engineer