

4792

92C/9u

GEOLOGICAL, GEOCHEMICAL AND GEOPHYSICAL SURVEYS

on the

DL CLAIM GROUP, PORT RENFREW-COWICHAN LAKE AREA, B.C.

VICTORIA MINING DIVISION

LATITUDE 48° 45' N; LONGITUDE 124° 20' W N.T.S. 92C/9

92C/9W

on behalf of

NEW COSMIC INDUSTRIES LTD.

Claim Name

Record Number

Anniversary

DL #1 - #10

17538H-17546H

July 4

by

G.C. GUTRATH, B.Sc., P. Eng. - Geologist
P.P. NIELSEN, B.Sc. - Geophysicist

ATLED EXPLORATION MANAGEMENT LTD.
Vancouver, B.C.

October 1973

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 4792 MAP

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INTRODUCTION

During the period from October 11 to October 17, 1973 a geological, geochemical and geophysical program was executed on the DL Claim Group in the Port Renfrew - Cowichan Lake Area, B.C. on behalf of New Cosmic Industries Ltd.

The purpose of the work was to explore for skarn-type mineralization indicated by previous examinations and to determine if any potential for a porphyry-type copper environment exists within or adjacent to the claims area.

A previous established grid was geologically mapped, soil sampled and magnetically surveyed by a two man crew under the employ of Atled Exploration Management Ltd. The crew was lodged at Cowichan Lake and travelled to and from the property over logging roads using a 4-wheel drive truck.

SUMMARY

The DL Claim Group is located on southwestern Vancouver Island 15 miles northeast of Port Renfrew and 40 miles northwest of Victoria.

Access to the property is by a good gravel-logging road from Port Renfrew.

The claim group is underlain by a series of volcanics and intercalated sediments of Triassic and Jurassic age. This series is intruded by a number of dikes and stocks of diorite composition.

The volcanics have undergone varying degrees of alteration, shearing and fracturing. Secondary magnetite and pyrite with minor chalcopyrite and pyrrhotite are commonly found in the more altered zones.

Narrow interbedded bands of limestone have skarn zones developed along their contact with the diorite intrusive. Where observed in outcrops these zones were only weakly mineralized with pyrite, magnetite and lesser chalcopyrite. Massive magnetite has been found on the property as float. It is probably related to a skarn zone although not necessarily on this claim group.

The geochemical soil sampling survey located a number of small anomalous zones of relatively low amplitude and of limited areal extent. The highest value of 175 ppm copper was located in an area of weakly pyritized andesite volcanics. One anomaly, 600 feet long by 200 feet wide is coincident with a diorite-limestone-skarn contact. The most extensive anomaly, 1200 feet by 200 feet, is directly coincident with a continuous andesite outcrop that is pyritized, fractured and weakly sheared. Minor chalcopyrite has been observed in two locations in this outcrop area.

The magnetometer survey has failed to detect or to outline any areas which might contain economically significant skarn-type mineralization within the survey area. There is also no indication from the magnetics of a porphyry-type copper deposit. The survey did, however, assist in the mapping of rock-types and in the evaluation of the few small copper geochemical anomalies.

CONCLUSIONS AND RECOMMENDATIONS

The geological, geophysical and geochemical surveys completed on the DL Claim Group have located areas of minor copper mineralization in altered andesite volcanics and in skarn zones.

The property is located in a geological belt favourable for copper mineralization. However, the results of the completed exploration program did not establish any significant exploration targets within the survey grid warranting further exploration.

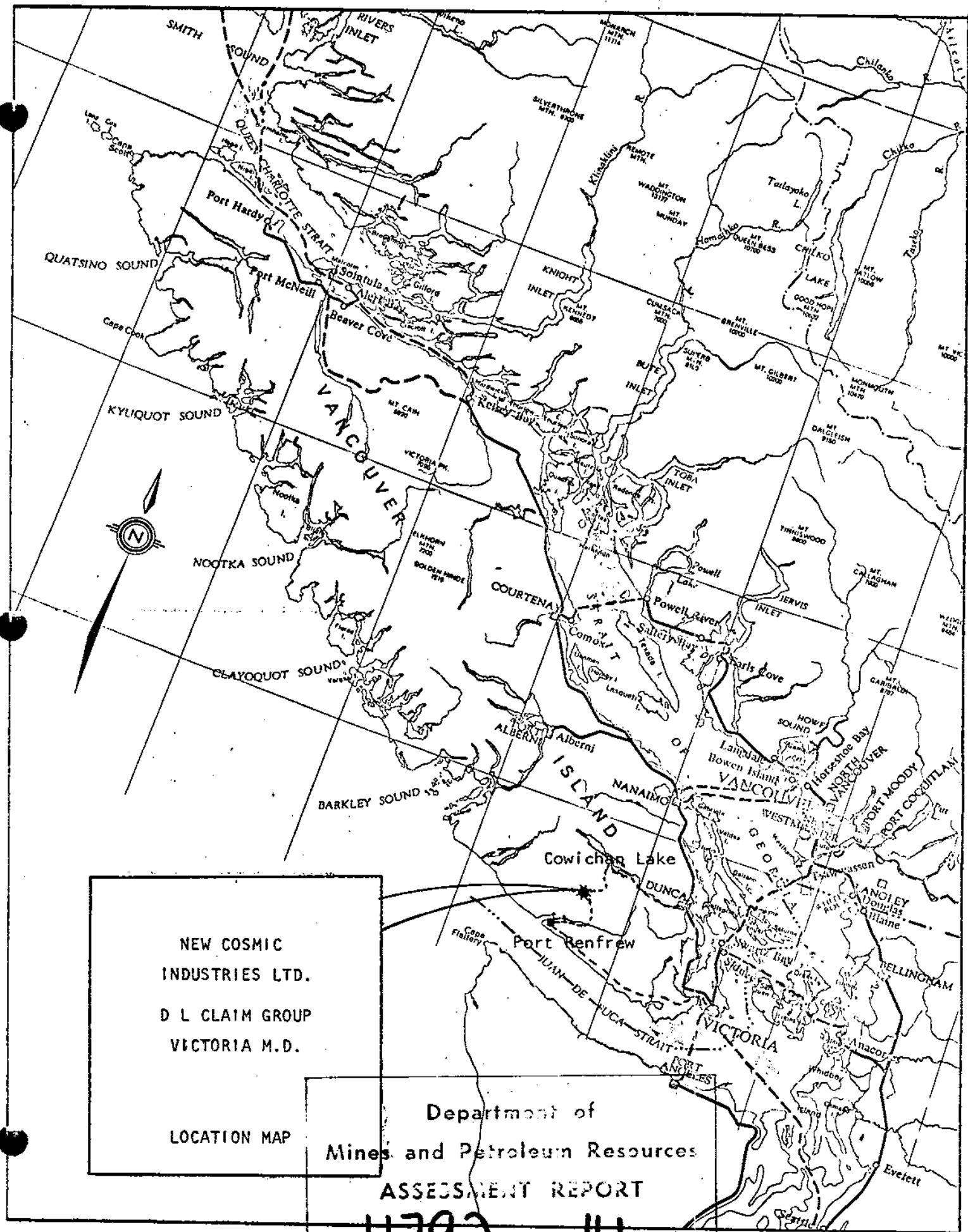
It is recommended that the remainder of the claim block be prospected to determine if there are any copper mineralized zones outside of the survey area that would deserve more detailed exploration.

GEOGRAPHY

Location

The claim group is located approximately 15 miles northeast of Port Renfrew on southwestern Vancouver Island.

Co-ordinates of the property are 48°45' North latitude and 124°20' West longitude.



NEW COSMIC
INDUSTRIES LTD.
D L CLAIM GROUP
VICTORIA M.D.

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Mines and Petroleum Resources
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NO. 4792 MAP #1

LOCATION MAP

Access

A good public road follows the west coast of Vancouver Island from Victoria to Port Renfrew. From Port Renfrew private logging roads of B.C. Forest Products are available to give good access to the property. The property can also be reached from Duncan to Cowichan Lake and thence by the Missachi Lake private logging road to the claims area.

Topography

The topography is mountainous and particularly steep along the creek beds with maximum relief of 2,500 feet. There are numerous cliffs and sharp ridges resulting in difficult road building although there are numerous logging roads throughout the area.

Timber

The area is heavily timbered with cedar, fir, spruce and hemlock typical of the west coast marine environment.

A portion of the claim group has been logged off.

Climate

The area is in the West Coast Marine climate zone with approximately 150 inches of rain per year and usually a light winter snow fall at the lower elevations. Deep snow stays at the higher elevations until late spring.

Water

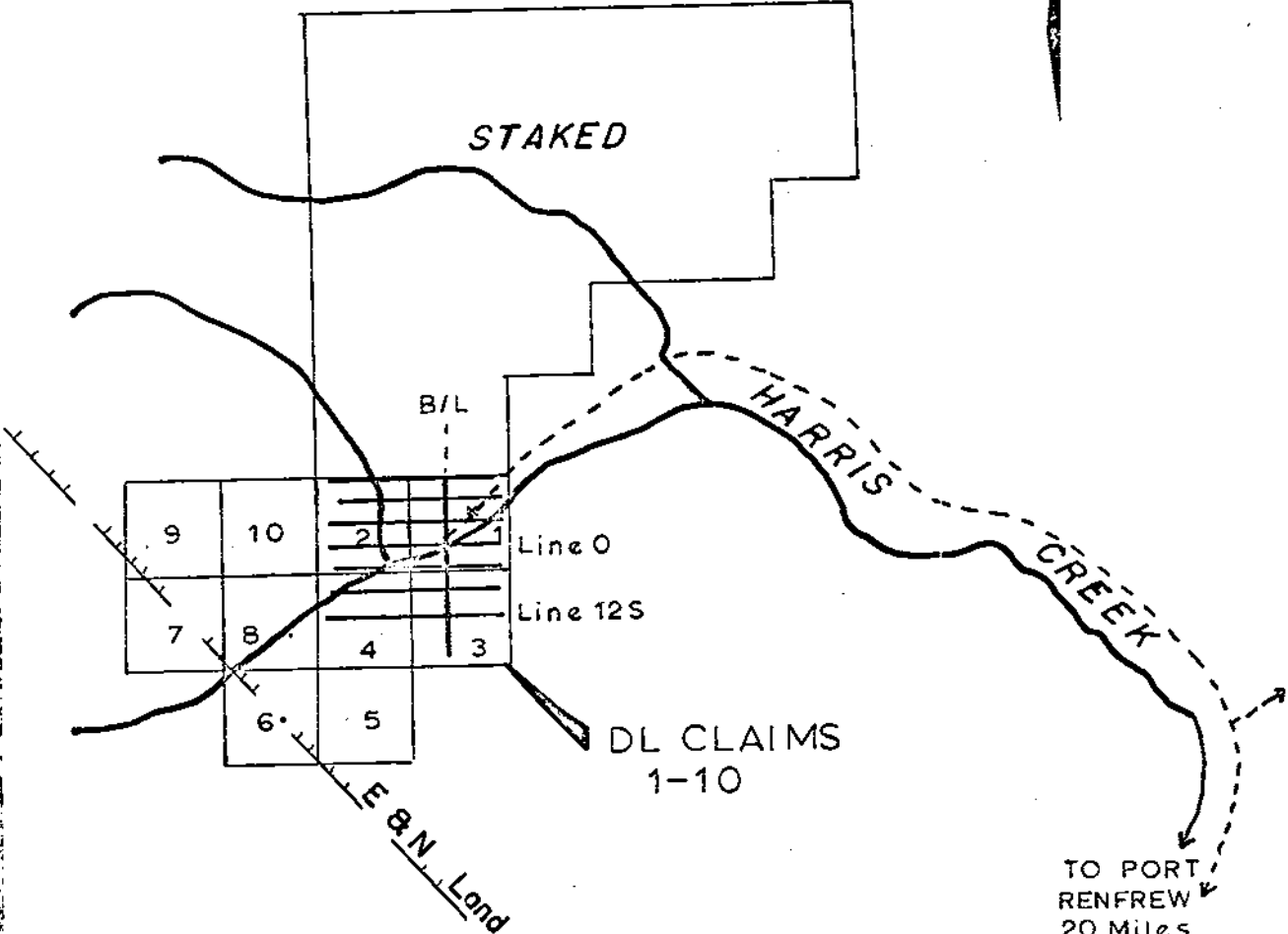
There is ample water on the property for drilling purposes.

CLAIMS

The claims in the DL Group are as follows:

<u>Name</u>	<u>Record Number</u>	<u>Expiry Date</u>
DL #1 to #10	17538H-17546H	July 4, 1974

Department of
 Mines and Petroleum Resources
ASSESSMENT REPORT
 NO. **4792** MAP **#2**



NEW COSMIC INDUSTRIES LTD.	
CLAIM & GRID LOCATION MAP	
VICTORIA MINING DIVISION	N.T.S. 92C/9W
ATLED EXPLORATION MANAGEMENT LTD.	
DATE: 1973	DRAWN: P.H.

GEOLOGY

General

The DL Claim Group is located in a volcanic belt, with minor intercalated sediments. This series is Upper Triassic to Jurassic in age and is divided into a number of groups. The oldest is the Karmutsen volcanics that is composed of a series of basalt flows and related pyroclastics and is overlain, or interbedded with Quatsino limestone and Parson Bay sediments. The younger Bonanza volcanics consist of a series of andesite to rhyolite tuffs and breccias with minor interbedded greywacke and argillite. Intruding this volcanic assemblage is Upper Jurassic Island intrusions of monzonite to diorite composition.

The general area is cut by a number of east-west and north-westerly faults.

Property

The DL Claim Group is underlain by Triassic Karmutsen volcanics and interbedded limestone and argillites that have been intruded by diorite dikes and stocks of Jurassic age.

The volcanic series is composed of tuffs, fragmentals and breccias of andesite composition. The volcanics have been chloritized and epidotized with the introduction of from 1% to 5% fine grained pyrite and from 2% to 6% magnetite. Minor pyrrhotite and chalcopyrite is also found in the more altered and highly sheared fracture zones.

The diabase dikes that cut the andesites along the road on the east side of the property are believed to be the same age as the andesites and directly related to the volcanic activity.

The andesite flows are interbedded with tuffaceous, argillaceous sediments that strike in a general northwesterly direction and dip steeply.

The limestone is grey to white in colour, crystalline, and the original bedding is masked by the alteration. In the creek between lines 4+00N and 8+00N the limestone is a relatively narrow bed 10 to 40 feet wide and is believed to be striking in a north to northwesterly direction and dipping steeply. The limestone near the diorite contact has been altered to a garnet skarn. The limestone band on line 0+00 stn. 21+00W also appears to be striking in a northerly direction but the contacts are not exposed in this area.

The diorite intrusives occur as dikes and as small stocks. They are medium grained, and often appear gabbroic. This very basic appearance probably results from large xenoliths of andesite and basalt volcanics in the diorite.

GEOCHEMICAL SURVEY

Survey Performed

A total of 220 samples, 213 soil samples and 7 silt samples were collected on the DL Claim Group. The soil samples were taken at 100 foot intervals on the crosslines. The samples were collected from the top of the "B" soil horizon, where ever possible, and were placed in kraft paper bags and labelled. The samples were partially dried in the field before shipment to Vancouver for analysis for total copper.

The method of the sample analyses is as follows:

1. Sample sifted to -80 mesh.
2. Weight used 0.50 g.
3. Final Volume 10 ml.
4. Method - Instrumental - Atomic Absorption.
5. Extraction HClO_4 - HNO_3 digestion.
6. Tectron AA5.
7. Analyst - L. Nicol.

Survey Results

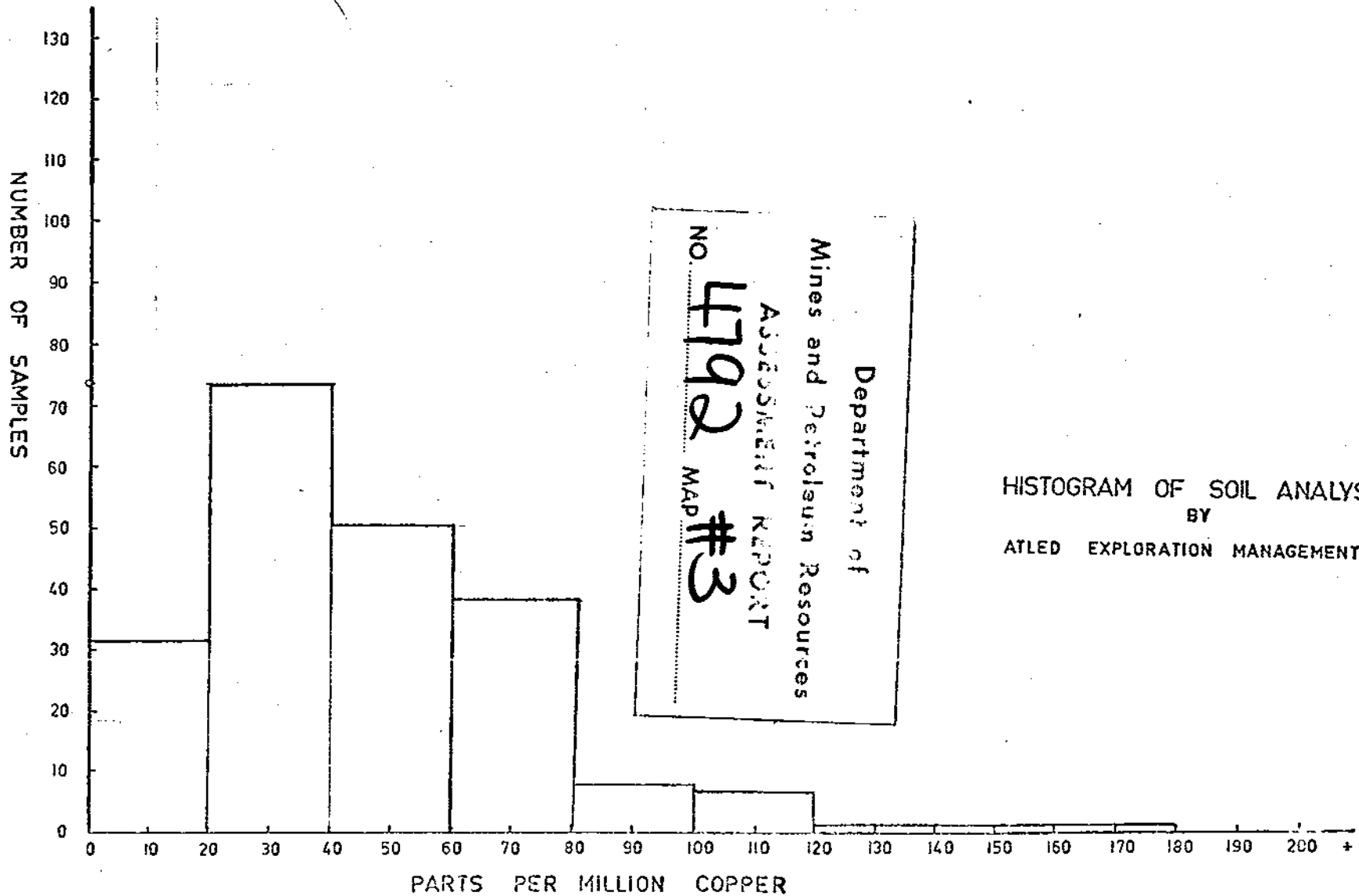
Copper

The Histogram of the soil analyses is interpreted as follows:

- less 75 ppm - background
- 75 to 100 ppm - threshold
- plus 100 ppm - anomalous

NEW COSMIC INDUSTRIES LTD.

DL CLAIM GROUP



There are 11 samples over 100 ppm copper and the highest value of 175 ppm is at station 12N - 16W. The values on both sides of this high are less than 25 ppm. There is andesite volcanics mapped 100 feet to the north and south of this point. Only minor amounts of chalcopyrite mineralization was found in these outcrops so it appears that the anomaly is very localized and is possibly related to a small copper mineralized zone cutting pyritized andesites.

The second highest value of 148 ppm copper is at 8N - 10W and this point is 550 feet to the southwest of the anomalous zone on 12N. This is a north-south anomaly that extends to the 115 ppm value on line 4N - station 11W.

This anomalous zone appears to be directly related to the limestone - andesite - diorite contact and the associated skarn mineralization and shearing.

There are three anomalous areas in the eastern portion of the grid. The most anomalous zone is linear shaped, approximately 800 feet long and up to 300 feet wide, with a high of 145 ppm. It subparallels the road in a southwesterly direction and appears to be directly related to the weakly pyritized and altered andesites that outcrop along the road. There are two minor occurrences of chalcopyrite mineralization in these outcrops.

THE GROUND MAGNETOMETER SURVEY

A. Comment

A total of 4.5 line miles (including the baseline) was magnetically surveyed over lines spaced 400 feet apart using station intervals of 25, 50, and 100 feet.

B. Method

The instrument used was a vertical force fluxgate magnetometer which is hand held and levelled using a bubble-level on the face of the instrument.

The magnetometer was held by the aid of a harness to maintain constant height above ground and constant distance from the operator. Readings were taken facing one direction using the most sensitive scale possible after zeroing the instrument.

Loop times of less than 1.5 hours were encountered, resulting in good control of the diurnal corrections. A nearby base-station was read at the beginning and end of each day for the day-to-day correlation and to monitor any possible magnetic storms. Additional control was obtained from the baseline readings. No magnetic storms were encountered and diurnal variations did not exceed 40 gammas.

C. Instrumentation

A Sharp MF-1 Model Fluxgate magnetometer was used. This unit measures the vertical force variations of the earth's magnetic field, displayed in gammas, on a meter having five ranges for a total of $\pm 100,000$ gammas. The MF-1 is very light, is fully portable, has excellent temperature stability, has negligible orientation error and is of rugged construction.

D. Data Compilation and Presentation

The readings and time of readings were recorded in a metal-free field book and transferred to a planimetric map for contouring after the necessary diurnal and day-to-day corrections were made.

The scale of the values-contour map is 1" = 200 feet.

A 400 gamma contour interval was used with negative gamma contours shown "ticked" and areas in excess of +800 gammas shown "hachured".

The vertical magnetic values are of a relative nature. The datum or absolute value of the vertical component of the earth's magnetic field at the property is not known.

E. Discussion of Results and Interpretation

The relative gamma values over the survey grid vary from -540 gammas at Line 4S; station 14W to +2370 gammas at Line 4N; station 14E for a total magnetic relief of 2910 gammas.

The contours exhibit a general north to north-west trend which is due to the general strike of the rock-units, to the terrain, and, to a lesser extent, to the grid bias.

A number of small, local magnetic lows and dipolar features are observed west of the baseline which could be the geophysical expression of small pockets of skarn-type mineralization associated with steeply dipping limestone beds which have been observed in this area.

Hachured areas (> +800 gammas) are chiefly caused by andesite and magnetic values from 400 to 800 gammas appear to reflect altered contact zones. Areas below 400 gammas are believed to represent limestone and diorite.

A comparison of the magnetic results with the copper geochemical contours and outcrop geology map suggests that there is little likelihood that a skarn-deposit of economic significance exists within the magnetometer survey area.

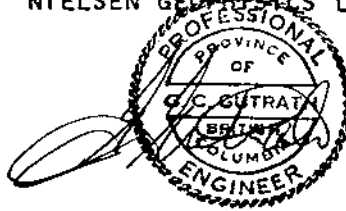
The negative magnetic anomaly centered at Line 8+00N; station 11+00W is coincident with one of the higher copper anomalies, but is not considered important due to the lack of a significant dipolar magnetic feature normally associated with skarn deposits and because the exposed rocks in this area exhibit only weak sulphide mineralization which is mainly pyrite.

All other coincident geophysical, geochemical and geological features appear to be of little economic interest.

Respectfully submitted,



P. P. Nielsen, B.Sc., Geophysicist
NIELSEN GEOPHYSICS LTD.



G. C. Gutrath, P.Eng., Geologist
ATLED EXPLORATION MANAGEMENT LTD.

ENGINEER'S CERTIFICATE

I, GORDON C. GUTRATH, of 3636 Lakedale Avenue, in the Municipality of Burnaby, in the Province of British Columbia, DO HEREBY CERTIFY:-

1. That I am a consulting geologist with a business address of #420-475 Howe Street, Vancouver 1, B. C.
2. That I am a graduate of the University of British Columbia where I obtained my B.Sc. in geological science in 1960.
3. That I am a Registered Professional Engineer in the Geological Section of the Association of Professional Engineers in the Province of British Columbia.
4. That I have practised my profession as a geologist for the past twelve years, and
5. That I have no interest in the property with which this report is concerned, nor do I expect to receive any such interest. I have no interest in the securities of New Cosmic Industries Ltd.



Gordon C. Gutrath, B.Sc., P.Eng.

DATED at the City of Vancouver, Province of British Columbia, this 15th day of October, 1973.

PERSONNEL

Atled Exploration Management Ltd.

- G. C. Gutrath - Geology, supervision and co-author of report.
 B.Sc., P.Eng.
- J. P. Henry - Magnetometer operator.
- G. Baker - Geochemical soil sampler.

Nielsen Geophysics Ltd.

- P. P. Nielsen,
 B.Sc., Geophysicist - Geophysical supervisor and co-author of report.

DOMINION OF CANADA:
PROVINCE OF BRITISH COLUMBIA.
To Wit:

In the Matter of

COSTS INCURRED IN CARRYING OUT
GEOLOGICAL, GEOCHEMICAL AND GEOPHYSICAL
SURVEY ON THE DL GROUP

By, G. C. GUTRATH

of Vancouver, B.C.

in the Province of British Columbia, do solemnly declare that the following are the minimum expenditures incurred in carrying out the exploration program.

1. Personnel

A. Overall supervision, geological mapping and report -G.C.Gutrath, P.Eng. Geologist - 5 days @ \$150.00/day.....	\$ 750.00
B. Geophysical supervision and report -P.P.Nielsen, Geophysicist - 4 days @ \$100.00/day.....	400.00
C. J.P.Henry, technician, geological mapping, magnetometer operator, drafting - 10 days @ \$80.00/day.....	800.00
D. G.Baker, geochemical soil sampler - 7 days @ \$45.00/day.....	315.00
	<u>2,265.00</u>

2. Disbursements

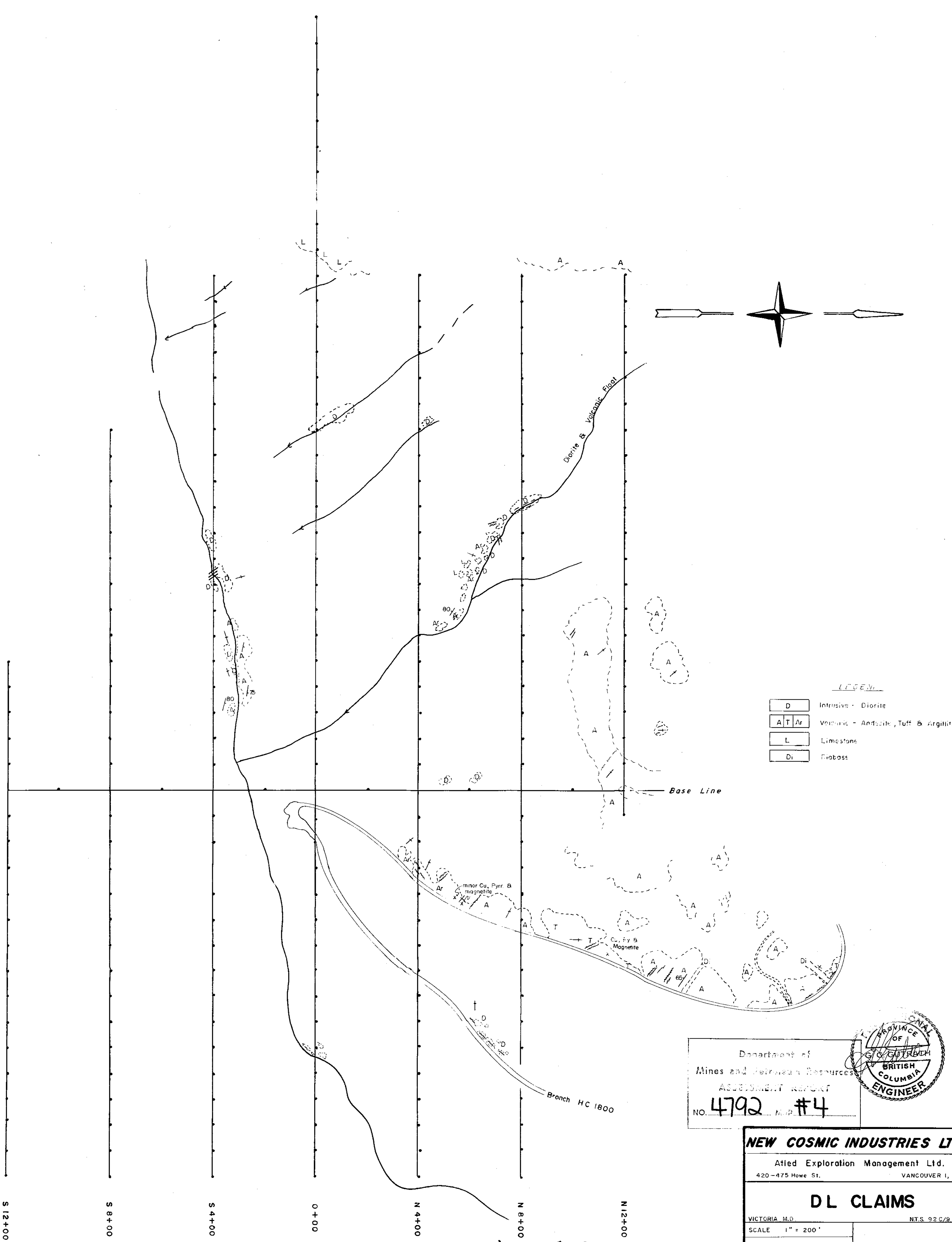
A. Geochemical analyses.....	\$ 264.00
B. Accommodation and meals - 17 man days @ \$12.00/man/day.....	204.00
C. Truck 4 x 4 - 585 miles @ 15¢/mile.....	\$ 87.75
7 days @ \$15.00/day.....	105.00..
	192.75
D. Field equipment and miscellaneous supplies - 7 days @ \$5.00/day.	35.00
E. Communication.....	21.84
F. Reproduction.(Altair).....	27.09.....
	<u>744.68</u>
	<u>\$ 3,009.68</u>

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the *City*
of *Vancouver*, in the
Province of British Columbia, this *13th*
day of *December*, 1973, A.D.



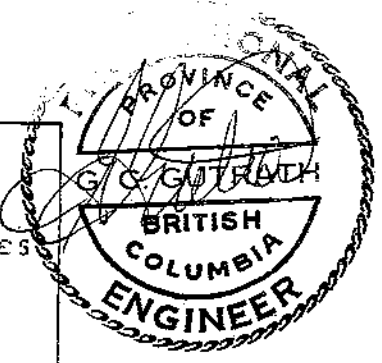
Jan Paul SUB-MINING RECORDER
A Commissioner for taking Affidavits for British Columbia or
A Notary Public in and for the Province of British Columbia.



LEGEND

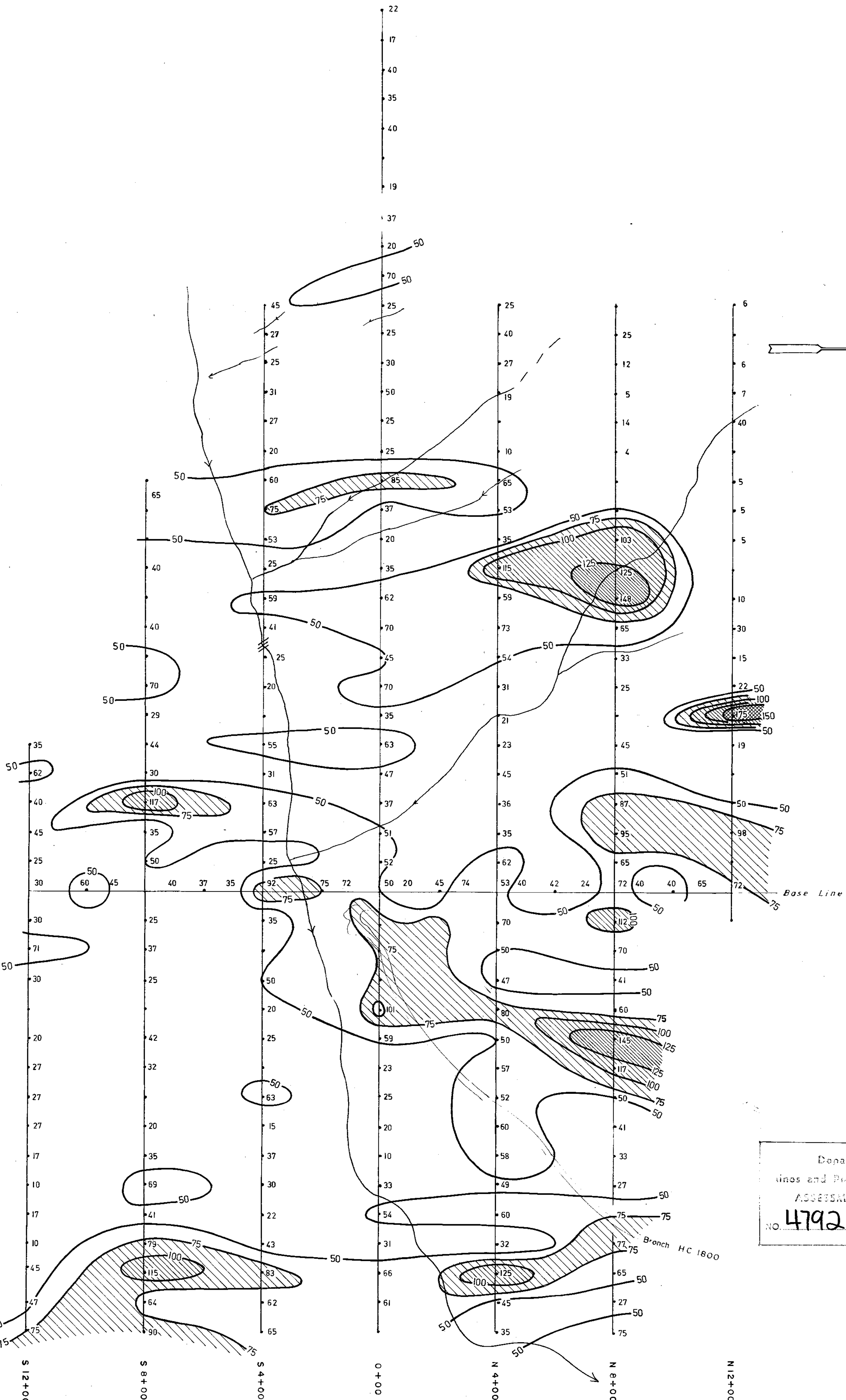
D	Intrusive - Diorite
A/T/Ar	Volcanic - Andesite, Tuff & Argillite
L	Limestone
Di	Diorite

Department of
Mines and Technical Resources
ASSESSMENT REPORT
NO. **4792** M.P. # **4**

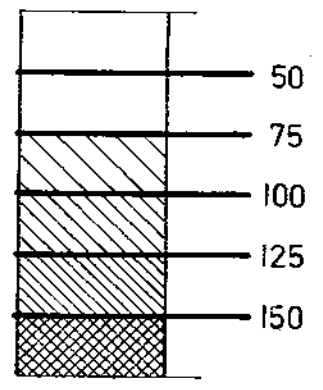


NEW COSMIC INDUSTRIES LTD.	
Atled Exploration Management Ltd. 420-475 Howe St. VANCOUVER 1, B.C.	
D L CLAIMS	
VICTORIA M.D.	NT.S. 92 C/9 W 1/2
SCALE 1" = 200'	
DRAWN Pat Henry	
DATE OCT. 1973	
	GEOLOGY

4792 M4



LEGEND



NOTE:
 Cu VALUES IN p.p.m.
 CONTOUR INTERVAL = 25 p.p.m. above 50 p.p.m.

Department of
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ASSESSMENT REPORT
 NO. **4792** MAP #5



To accompany report by:
 P.P. NIELSEN, B.Sc., Geophysicist
 G.C. GUTRATH, B.Sc., P.Eng. Geologist

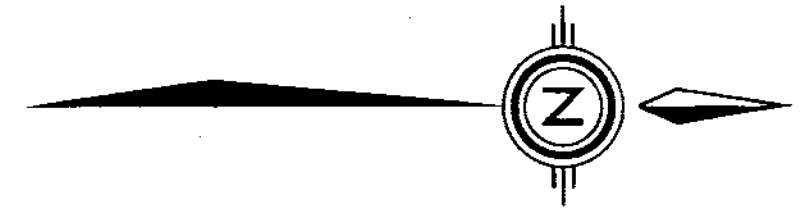
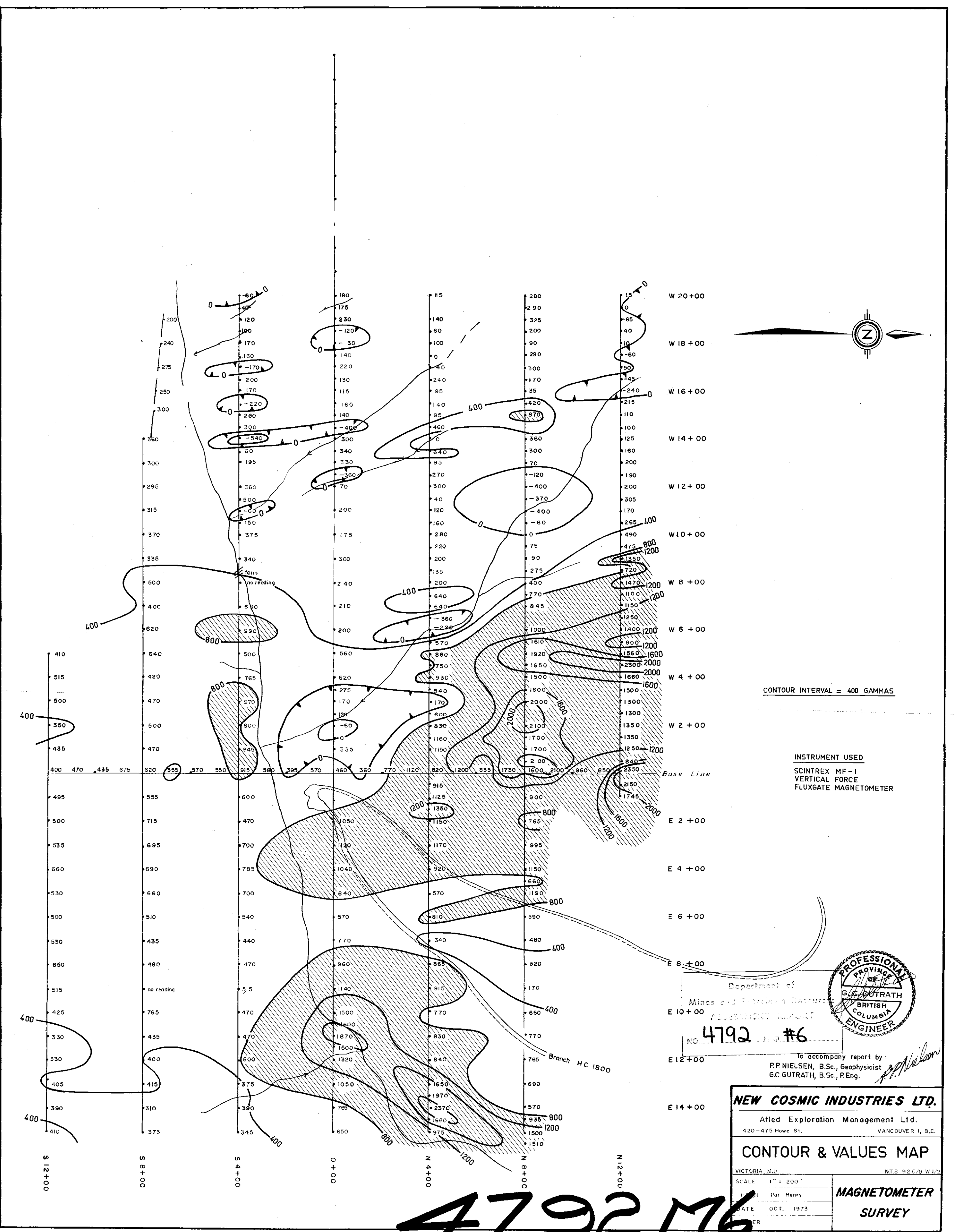
NEW COSMIC INDUSTRIES LTD.
 Affiliated Exploration Management Ltd.
 420-475 Howe St. VANCOUVER 1, B.C.

DL CLAIMS

VICTORIA 22. N.T.S. 10/22/73
 SCALE 1" = 200'
 OCT. 1973
 NUMBER

Cu GEOCHEMICAL SOIL SURVEY

4792 M5



CONTOUR INTERVAL = 400 GAMMAS

INSTRUMENT USED
 SCINTREX MF-1
 VERTICAL FORCE
 FLUXGATE MAGNETOMETER



Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 4792 #6

To accompany report by:
 P.P. NIELSEN, B.Sc., Geophysicist
 G.C. GUTRATH, B.Sc., P.Eng.

NEW COSMIC INDUSTRIES LTD.	
Atled Exploration Management Ltd.	
420-475 Howe St.	VANCOUVER 1, B.C.
CONTOUR & VALUES MAP	
VICTORIA, B.C.	NTS 92C/9 W 1/2
SCALE 1" = 200'	
DATE OCT. 1973	
MAGNETOMETER SURVEY	

4792 M6