

LOG NO: 0104	RD.
ACTION:	
FILE NO:	

GEOCHEMICAL REPORT FOR

BIG ONION PROPERTY

N. T. S. 93 L/15

Situated at Co-ordinates: 54° 49'  
127° 53'

OMINECA MINING DIVISION

NORANDA EXPLORATION COMPANY, LIMITED  
(NO PERSONAL LIABILITY)

FILMED

16,784

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

By: R. MacArthur

December, 1987

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INTRODUCTION:

General:

This report describes the results of a brief rock geochem sampling program carried out on the Big Onion Property near Smithers, B. C. The program was intended to test for the possibility of economic gold mineralization associated with extensive pyritized and altered rocks forming part of the Big Onion porphyry system.

Location & Access:

The property is located on the southeast side of Astlais Mtn. approximately 20 km east of Smithers, B. C. Good all-weather roads provide access to the lowermost (southern) part of the property. A 4-wheel drive exploration road and series of cat trails along Astlais Creek provides access on the property.

Claims & Ownership:

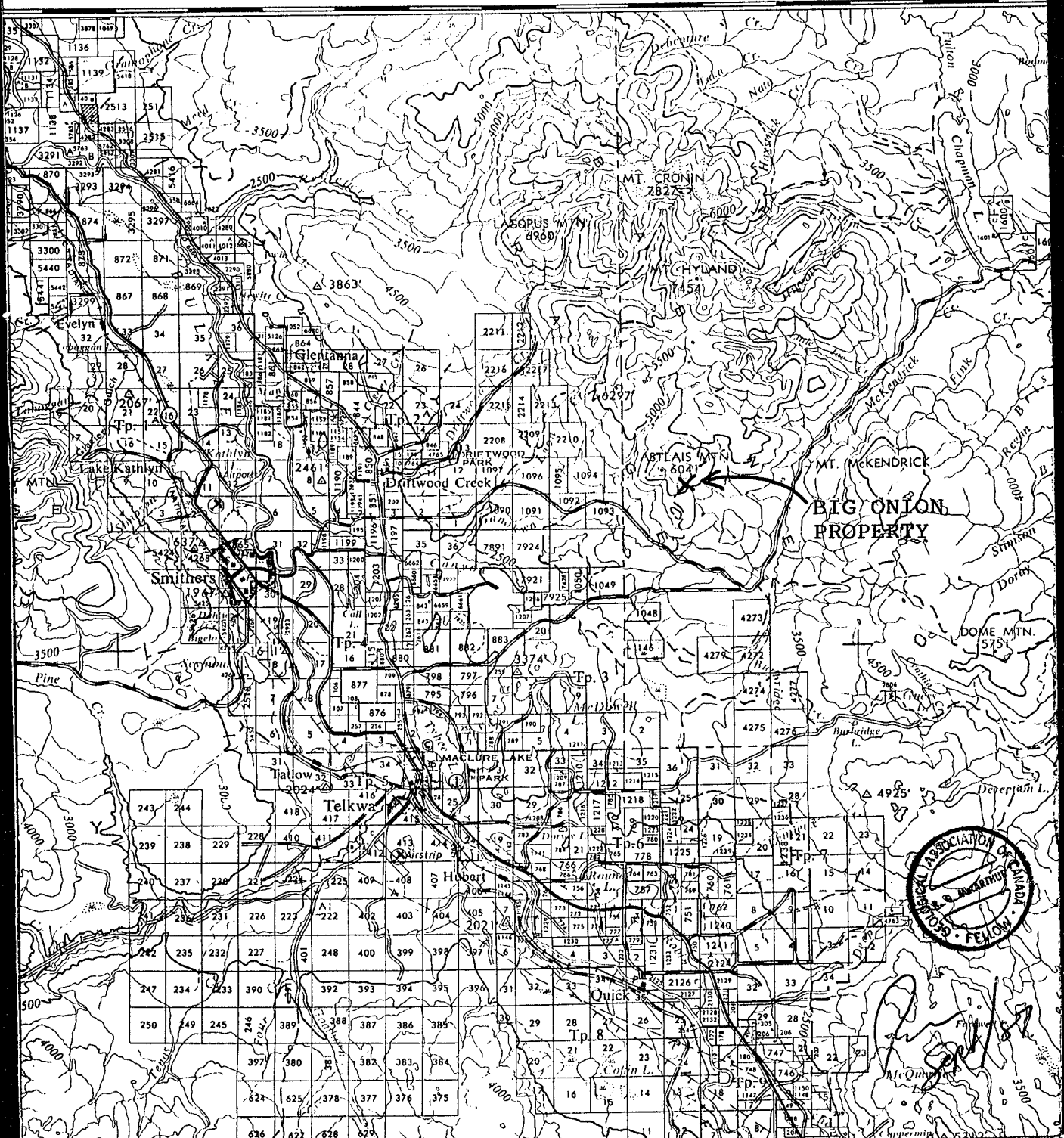
The property consists of the following claims owned by Jack Hemelspeck of Smithers, B. C.

<u>CLAIM</u>	<u>UNITS</u>	<u>RECORD #</u>
JB	4	127
JC	4	128
JD	4	129
JE	1	130
JF	4	131
JG	2	132

Topography & Vegetation:

The property covers the southeast side of Astlais Mtn. with elevations ranging from 1,000 meters at the Babine Lake Road to 1841 meters at the top of Astlais Mtn.

Vegetation ranges from mixed spruce, balsam and pine on the lower slopes, gradually thinning to sub-alpine and alpine vegetation at the top of Astlais Creek, near the northwest boundary of the property.



**BIG ONION  
PROPERTY**

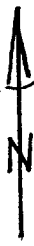


REVISED	Big Onion Property	
	Location Map	
PROJ.No. _____	SURVEY BY: _____	DATE: _____
N.T.S.	DRAWN BY: _____	SCALE: _____
DWG.No.	<b>NORANDA EXPLORATION</b>	
1	OFFICE: <u>Prince George</u>	

RANGE

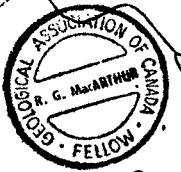
Iyon Creek

Creek



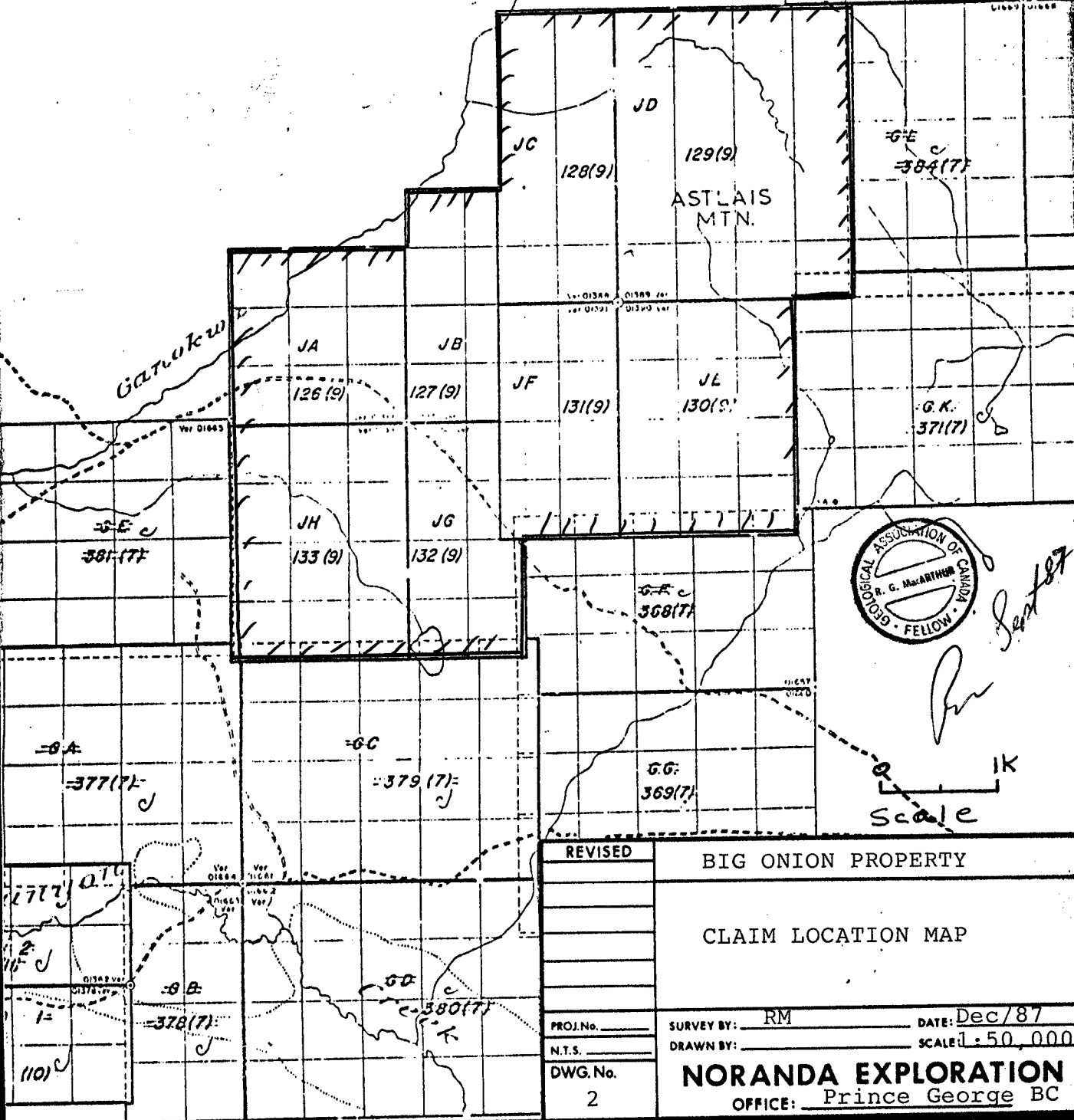
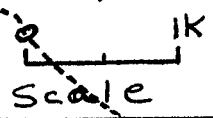
Ganokw

ASTLAIS MTN.



*Sept 87*

*Rm*



REVISED	BIG ONION PROPERTY	
	CLAIM LOCATION MAP	
PROJ. No. _____	SURVEY BY: <u>RM</u>	DATE: <u>Dec/87</u>
N.T.S. _____	DRAWN BY: _____	SCALE: <u>1:50,000</u>
DWG. No. <u>2</u>	<b>NORANDA EXPLORATION</b>	
	OFFICE: <u>Prince George BC</u>	

### Regional Geology:

The general area is underlain by volcanic and sedimentary rocks of the Jurassic age, Hazelton and Bowser Groups. Cretaceous intrusives with a wide range of compositions cut the Jurassic rocks. Some occurrences of copper, molybdenum, gold, silver and other mineralizations are thought to be related to the emplacement of the intrusives in the area.

### Property Geology:

On the Big Onion property, a complex zone of (Cretaceous) quartz diorite porphyry and quartz feldspar porphyry cuts the Jurassic volcanics and sediments. The intrusives form a northeast elongate mass in and around which an extensive alteration and mineralized system has developed. Copper molybdenum mineralization is best developed along the sheared southeastern contact between the quartz diorite porphyry and the andesite. An extensive pyrite halo has developed in and along the trend of the intrusive bodies. Surface oxidization and leaching is quite intense and giving most of the rocks, within the main pyrite halo zone, a rusty appearance. The strong shearing, intense leaching, steep topography and ground water movement have produced extensive deposits of ferricrete or exotic gossan.

### Previous Work:

The property appears to have received some attention by prospectors as far back as 1924. More recent exploration began in the early 1960's, when Mr. Jack Hemelspeck Sr. staked the claims and subsequently optioned the property to a number of companies in turn. Noranda, Texas Gulf Sulfur, Blue Rock Mining and Canadian Superior Exploration carried out work on the property; the most comprehensive program being completed by Canadian Superior in the late 1970's. Assessment Report #'s 2752, 2753, 5576, 5966, 6363, 6364, 6423 all describe work on the property and area.

### GEOCHEMISTRY:

#### Sample Collection:

The sampling program described here was intended to provide an initial indication of the amount of gold-silver mineralization within the pyrite halo on the property. To facilitate this, sample sites were selected along the rock cuts and trenches developed during the previous exploration. Rock chip samples of approximately 3-6 kilograms were collected at the sites shown in Figure #3. These were shipped in heavy plastic bags to Bondar-Clegg in Vancouver for analysis. The sample sites were flagged with orange and blue ribbon on which the sample number was marked.

Analysis:

Samples were shipped in two batches. The first group - 86885 to 86890 were analyzed by Bondar-Clegg Laboratories in Vancouver using fire assay method for Au, Ag, Cu, Mo. The second group of samples - 25701 to 25717, were analysed by Acme Analytical Laboratories Ltd. in Vancouver for Mo, Cu, Au using Atomic Absorption geochem techniques.

Results:

The results of analysis are indicated below and sample locations are indicated on Figure #3.

GROUP I - BONDAR-CLEGG ANALYSIS

SAMPLE #	Cu %	Mo %	Au g/T	Ag g/T	Sample Width (meters)
86885	0.04	.004	<0.07	<0.7	grab
86886	0.01	.006	0.07	<0.7	5 m
86887	0.06	.004	<0.07	<0.7	10 m
86888	0.02	.012	0.07	0.7	10 m
86889	0.01	.004	<0.07	<0.7	10 m
86890	0.01	.008	0.07	<0.7	10 m

GROUP II - ACME ANALYSIS

SAMPLE #	Cu ppm	Mo ppm	Au ppb	Ag g/T	Sample Width (meters)
25701	263	30	1		5 m
25702	153	21	15		2 m
25703	56	37	28		10 m
25704	missing				
25705	missing				
25706	140	146	1		10 m
25707	540	24	28		8 m
25708	649	35	34		5 m
25709	330	17	47		10 m
25710	245	23	21		10 m
25711	166	31	37		10 m
25712	439	26	17		10 m
25713	895	32	35		10 m
25714	250	1	28		5 m
25715	3154	14	4		5 m
25716	21	8	25		5 m
25717	32	2	6		5 m

Since the sampling was not done within the copper rich parts of the deposit, the Copper Moly values indicated agree with what was expected. Gold values on the other hand are lower than expected, considering the pyritic nature of the areas samples. None of the gold results indicate potential for economic gold mineralization.

CONCLUSIONS:

This sampling program has sampled only a very limited portion of the property for Au mineralization. Given the strong shearing, extensive mineralized system and intense alteration, a more comprehensive sampling program to test other areas on the property is warranted.

*Paul  
Sept/87.*



APPENDIX I

STATEMENT OF COSTS

PROJECT: BIG ONION  
TYPE: GEOCHEM

DATE: September, 1987

a) Wages:

3 mandays @ \$300/day	\$ 900.00	
2 mandays @ \$200/day	\$ 200.00	
	-----	
	\$1,100.00	\$1,100.00

b) Transportation & Shipping:

3 days @ \$85/day (4-wheel drive with fuel)		\$ 255.00
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c) Food & Accommodations:

3 days, 2 nites @ \$100/day		\$ 200.00
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d) Analysis:

6 assays @ \$28.00	\$ 168.00	
15 geochem @ \$10.50	\$ 157.50	
	-----	
	\$ 325.50	\$ 325.50

e) Report Preparation:

Drafting & copies	\$ 100.00	
Typing	\$ 75.00	
Author	\$ 300.00	
	-----	
	\$ 475.00	\$ 475.00
		=====
		\$2,355.50

APPENDIX II

STATEMENT OF QUALIFICATIONS

I, Ronald G. MacArthur hereby certify that:

1. I am a graduate of Dalhousie University with a Bachelor of Science Degree in Geology (1972).
2. I have been employed as a Geologist by Noranda Exploration since 1972.
3. I am a member of the Canadian Institute of Mining and Metallurgy.
4. I am a Fellow of the Geological Association of Canada.



*Ronald G. MacArthur*  
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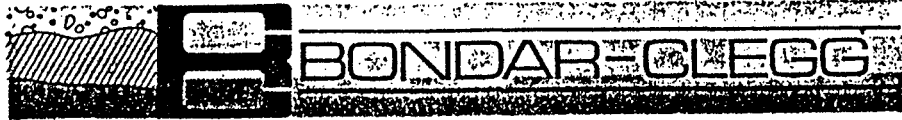
Ronald G. MacArthur  
District Geologist,  
Central Cordillera District  
NORANDA EXPLORATION COMPANY, LIMITED  
(No Personal Liability)

APPENDIX III

CERTIFICATE OF ANALYSIS

BONDAR CLEGG

g & Company Ltd.  
ation Ave.  
ancouver, B.C.  
V7P 2R5  
(604) 985-0681  
4-332667



Certificate  
of Analysis

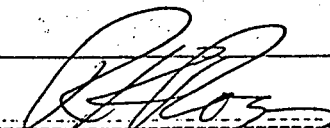
REPORT: 427-7473

PROJECT: 240

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Au GHT	Ag GHT	Cu PCT	Pb PCT	Zn PCT	Mo PCT
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R2 86885		<0.07	<0.7	0.04			0.004
R2 86886		<0.07	<0.7	0.01			0.006
R2 86887		<0.07	<0.7	0.06			0.004
R2 86888		0.07	0.7	0.02			0.012
R2 86889		<0.07	<0.7	0.01			0.004
R2 86890		0.07	<0.7	0.01			0.008

  
Bioscience Analytical Services of British Columbia

APPENDIX IV

CERTIFICATE OF ANALYSIS

ACME ANALYTICAL

Big Onion (RUC)

8711-019

ACME ANALYTICAL LABORATORIES LTD.  
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
PHONE (604) 253-3158 FAX (604) 253-1716 DATE REPORT MAILED:

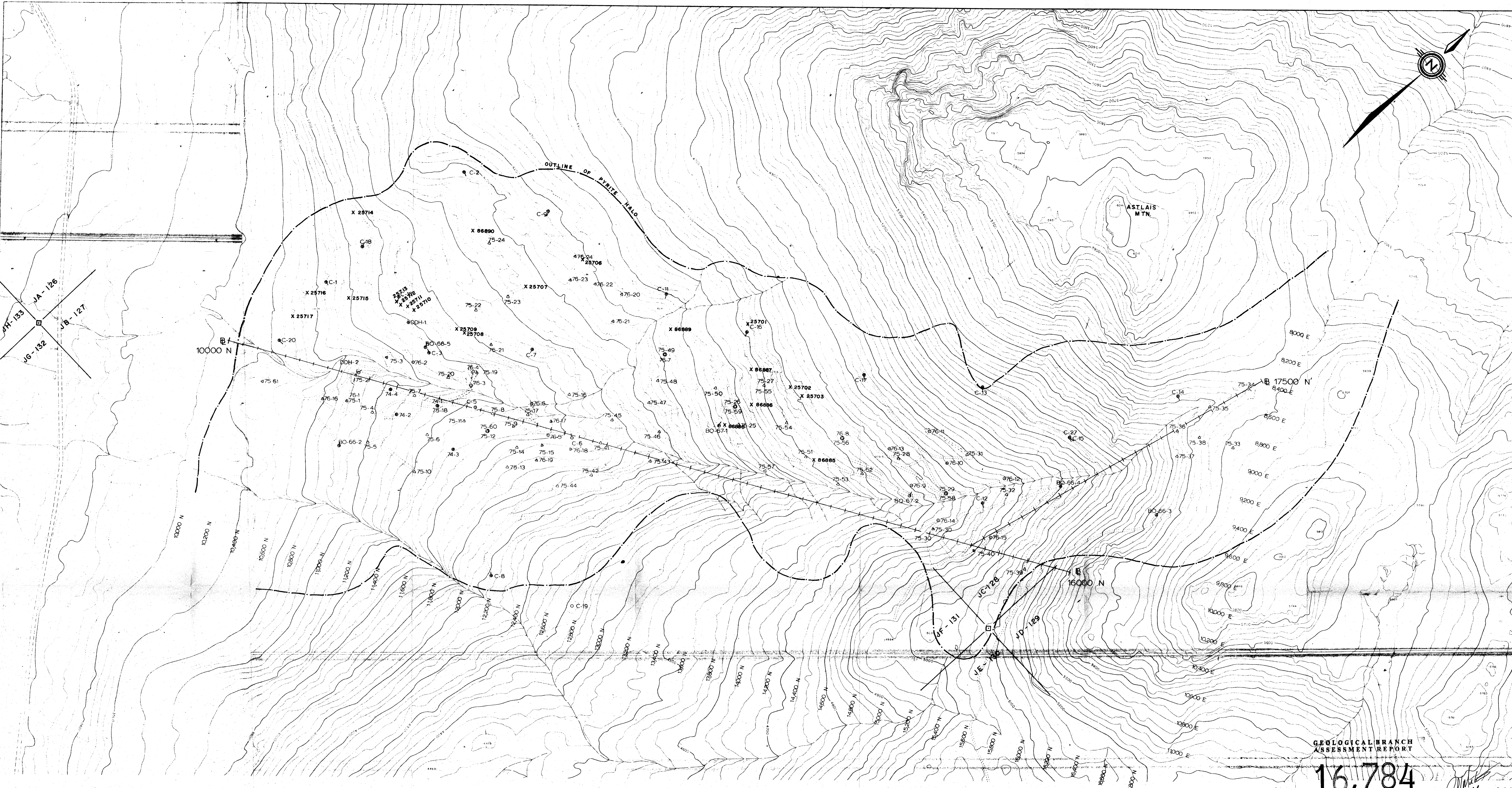
### GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEC. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.  
- SAMPLE TYPE: ROCK/CORE AU\* ANALYSIS BY AA FROM 10 GRAM SAMPLE.

ASSAYER: *A. Toye* DEAN TOYE, CERTIFIED B.C. ASSAYER

NORANDA EXPLORATION (VAN) PROJECT-8711-019 240 File # 87-5339

SAMPLE#	MO PPM	CU PPM	AU* PPB
25701	30	263	1
25702	21	153	15
25703	37	56	28
25705	3	213	26
25706	146	140	1
25707	24	540	28
25708	35	649	34
25709	17	330	47
25710	23	245	21
25711	31	166	37
25712	26	439	17
25713	32	895	35
25714	1	250	28
25715	14	3154	4
25716	8	21	25
25717	2	32	6
STD C/AU-R	19	59	490



JA-126  
JB-127  
JC-128  
JD-129  
JE-130  
JF-131  
JG-132

OUTLINE OF PYRITE HALO

ASTLAIS MTN.

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

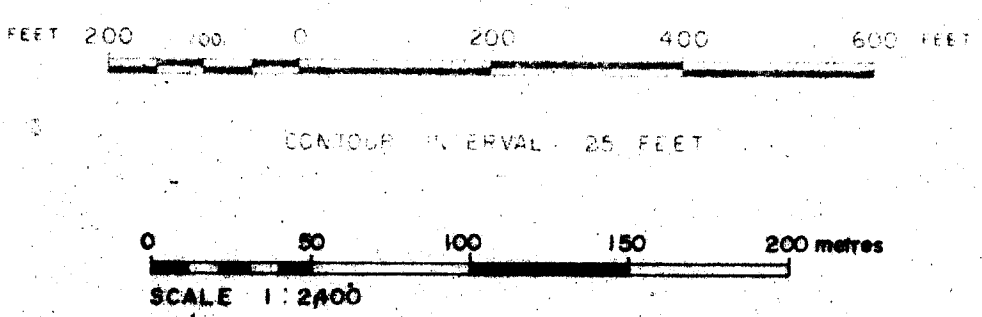
16,784

**LEGEND**

X 27708  
ROCK SAMPLE LOCATION

Legal corner post with claim name and record number

**NOTE:**  
TOPO BASE AND CLAIM LOCATIONS  
DRILL HOLE LOCATIONS  
AND PYRITE HALO  
FROM MAPS PREPARED  
BY CANADIAN SUPERIOR EXPLORATION  
LIMITED, 1976



REVISED 1/23/78	BIG ONION PROPERTY	
	ROCK SAMPLE LOCATIONS AND PLAN OF PREVIOUS DRILL HOLE LOCATIONS	
PROJ. No.	SURVEY BY: R. MacArthur	DATE: AUG., 1987
N.T.S. 93/15	DRAWN BY: S.K.B.	SCALE: 1" = 200'
DWG. No.	<b>NORANDA EXPLORATION</b>	
	OFFICE: PRINCE GEORGE, B.C.	