COMINCO LTD.

EXPLORATION
NTS: 82E/10&11

WESTERN DISTRICT

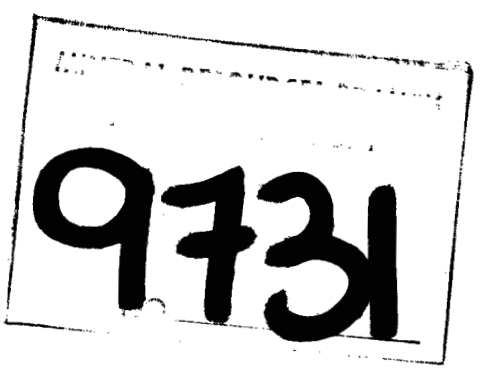
GEOCHEMICAL AND GEOLOGICAL ASSESSMENT REPORT

GOLDIE MINERAL CLAIMS
GREENWOOD MINING DIVISION

LATITUDE: 49°33'N; LONGITUDE: 119°00'W

OWNER AND OPERATOR: COMINCO LTD.

WORK PERFORMED: OCTOBER 6, 1980
SEPTEMBER 17-18,
AND 23-25, 1981



NOVEMBER 1981

B.L. COUSENS

TABLE OF CONTENTS

* * *

APPENDICES

* * *

LIST OF PLATES

COMINCO LTD.

EXPLORATION
NTS: 82E/10&11

WESTERN DISTRICT
5 November 1981

GEOCHEMICAL AND GEOLOGICAL ASSESSMENT REPORT GOLDIE MINERAL CLAIMS GREENWOOD MINING DIVISION

I. INTRODUCTION (Plate 1)

The Goldie #1 and Goldie #2 mineral claims, totalling 22 units, are located 11 km northeast of Beaverdell, in the Greenwood Mining Division. The claims lie on a gently sloping plateau east of the Kettle River, between Mullins Hill and Buck Lake. Plate 1 is a 1:50,000 scale location map of the Goldie Property.

II. PROPERTY AND ACCESS

The Goldie #1 claim comprises 18 units and was staked by M. Morrison for Cominco Ltd., on October 1-4, 1980. Goldie #2 was staked between October 7-8, 1980, also by M. Morrison for Cominco Ltd., and comprises 4 units. Both claims were recorded October 16, 1980, in the Greenwood Mining Division. It is suspected, Lot 3291s falls within the claim boundaries, and is owned by Mrs. Rosaline J. Marson, of R.R. #3, North Lakeside, Williams Lake, B.C. However, its location relative to the Goldie claims is not known.

Access to the property is via the Beaver Creek logging road for 5.5 km, then by the Buck Lake Road for an additional 9.5 km. The Buck Lake Road cuts diagonally through the property. Many old foot-trails traverse the south end of the property, leading to several old, small trenches which probably date back to the early days of mineral exploration in the area.

III. HISTORY

The Goldie property is 11 km northeast of Teck Corporation's Beaverdell silver mine, which has been producing ore since 1900 on a continuous basis. Another nearby gold-silver prospect was the Rosemont Mine, originally staked in 1937, with its location defined by Lot 3291s, in the vicinity of Cominco's Goldie claims.

Prior to 1939, 41 tons of ore were shipped from the Rosemont Mine, yielding 26 ounces of gold and 28 ounces of silver. Highland Bell Ltd. optioned the property in 1939, and shipped an additional 22 tons of ore, yielding 10 ounces of gold and 4 ounces of silver. After further drifting and cross-cutting, the option was dropped in 1941, and the property has received little further attention.

. . ./2

On the Goldie property, many small, shallow trenches are found throughout the south end of the property. Two adjacent adits have also been driven into the slope in the south end. All these appear to be fairly old. A flagged grid has been established over the south-central part of the property, probably within the last 5 years.

IV. SUMMARY OF WORK

Preliminary geological mapping and rock chip sampling was carried out by M. Morrison in late September and early October, 1980.

Twelve (12) man-days (R.J. Nicholson, B.L. Cousens, R.A. Ryziuk) were spent on the property on September 17, 18, 23, 24 and 25, 1981. A flagged, 1 km by 1 km soil survey grid was established, consisting of 1 km of baseline and 4.7 km of crosslines at 200 m spacing. A total of 102 soil samples, 2 rock samples, and one stream silt sample, were collected.

The property was geologically mapped at a scale of 1:10,000, along existing roads, pace-and-compass grid lines, and pace-and-compass claim lines.

V. GEOLOGY (Plate 2)

The Goldie property overlies the contact between Permian and/or Triassic Anarchist Group, and Cretaceous Nelson Plutonic Rocks. Here, the Anarchist Group is mostly argillite, with minor limestone. The argillites vary from light grey-green to black in colour, and are well bedded, with beds about 1 cm in thickness. Near the argillite-intrusive contact, the argillites are hornfelsed. In the southern part of the property, the argillites are cut by narrow, mineralized quartz veins up to 15 cm thick, dipping gently southward. Quartz veins are also found to the north, but are barren. The limestones are crystalline, with grain size between 0.5 and 2.0 mm, and are probably recrystallized due to contact metamorphism.

The Nelson diorite grades from fine-grain diorite to a medium-grain, equigranular diorite, away from the contact. Thirty-five to fifty percent (35-50%) of the rock is subhedral to euhedral hornblende, ranging from 0.5 to 4.0 mm in size. Hornblende shows varying degrees of alteration to biotite. The hornblende crystals are generally aligned, giving the diorite a foliated texture. Plagioclase occupies 50-65% of the rock, is subhedral to euhedral, and varies form 0.5 - 2.0 mm in size. Quartz is usually present in minor amounts, and at rare localities constitutes as much as 5% of the rock. Minor interstitial potassium feldspar is also present.

The Anarchist rocks are moderately to well fractured. Shearing is rarely present, and does not appear to be a major factor in mineralization. The Nelson intrusive is weakly to moderately fractured.

VI. MINERALIZATION

The best mineralization is seen in the southeast part of the property, and consists of pyrrhotite, pyrite, and minor chalcopyrite, in quartz veins intruding the Anarchist argillites. Sample G82, taken from float outside

one of the adits, contains 40% pyrrhotite, 10% pyrite, 0.5% chalcopyrite, more than 16000 ppb Au and 1.1 ppm Ag. Pyrite and pyrrhotite also occur along fractures in this area.

Quartz veins are common elsewhere in the argillites, but are not mineralized. Pyrite is common along fractures.

The Nelson Diorite contains only minor amounts of medium-grain, disseminated pyrite.

VII. GEOCHEMISTRY (Plates 3 - 4)

A pace-and-compass grid was established on the property, consisting of a 600 m baseline, and 4 - 1 km crosslines at 200 m intervals. Soil samples were collected at 50 m spacing along the crosslines, and at 100 m spacing on the baseline. As well, a 700 metre east-west soil line was established 400 metres north of the grid (line 10N). One stream silt sample, S-2, was collected on line 4N at +336 m. Two rock samples were collected (GR-1, GR-9) in the south part of the Goldie #1 claim.

A total of 102 soil samples were collected, and were analysed for copper, lead, zinc, silver, and gold at Cominco's Exploration Research Lab in Vancouver, B.C. The results are plotted on Plate 3 (Cu/Ag/Au) and Plate 4 (Pb, Zn) and the values are tabulated in Appendix I. No area of anomalous metal values can be outlined since, with only one exception (00+250), all values are at background levels or below detection limit. Silver and gold concentrations are extremely low. The single anomalous copper value lies in an area known to have thin, mineralized fractures (pyrite-pyrrhotite), and may be a result of the presence of such a fracture nearby. The results do not reflect any change in lithology.

Analytical Procedure: The -80 mesh fraction of the soil and silt samples was analysed for Cu, Pb, Zn, and Ag by hot nitric acid digestion and atomic absorption. Au was determined by aqua regia digestion and atomic absorption. Rocks were analysed for Cu, Pb, Zn, and Ag by hot aqua regia digestion and atomic absorption, after grinding in a mill to a fine powder. Au was determined by solvent extraction and atomic absorption.

VIII. CONCLUSIONS

Mineralization appears to be controlled by quartz veins in the Anarchist rocks. Gold has probably been introduced with pyrite and pyrrhotite in these quartz veins, and along nearby fractures.

The soil geochemical survey fails to outline any area of anomalous gold values, or any anomalous concentrations of lead, zinc, copper or silver.

. . ./4

Report by: Brian Cousens.

B.L. Cousens, Geologist

Endorsed by: F D Gill

F.D. Gill, Assistant Manager

Approved for Release by: for F D Gill

G. Harden, Manager
Exploration
Western District

BLC/vmk

Distribution:

APPENDIX I

GOLDIE PROPERTY

Table of Soil, Silt and Rock Geochemistry Values

(i) Soil Values

JOB VB1 — 11045

SAMPLE NUMBER	TYPE	MAP	E/W	N/S	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Au PPB
SB1 49203	S	82E 11-1	-600	+0	18	<4	64	<.4	<10
SB1 49204	S	82E 11-1	-550	+0	26	<4	58	<.4	<10
SB1 49205	S	82E 11-1	-500	+0	16	<4	68	<.4	<10
SB1 49206	S	82E 11-1	-450	+0	20	<4	37	<.4	<10
SB1 49207	S	82E 11-1	-400	+0	10	<4	83	<.4	<10
SB1 49208	S	82E 11-1	-350	+0	9	<4	50	<.4	<10
SB1 49209	S	82E 11-1	-300	+0	10	<4	42	<.4	<10
SB1 49210	S	82E 11-1	-250	+0	16	<4	44	<.4	<10
SB1 49211	S	82E 11-1	-200	+0	25	<4	55	<.4	<10
SB1 49212	S	82E 11-1	-150	+0	13	<4	32	<.4	<10
SB1 49213	S	82E 11-1	-100	+0	16	<4	38	<.4	<10
SB1 49214	S	82E 11-1	-50	+0	12	<4	37	<.4	<10
SB1 49215	S	82E 11-1	+0	+0	17	<4	37	<.4	<10
SB1 49216	S	82E 11-1	+50	+0	20	<4	43	<.4	<10
SB1 49217	S	82E 11-1	+100	+0	24	<4	48	<.4	<10
SB1 49218	S	82E 11-1	+150	+0	26	<4	56	<.4	<10
SB1 49219	S	82E 11-1	+200	+0	42	<4	61	<.4	<10
SB1 49220	S	82E 11-1	+250	+0	171	<4	80	<.4	<10
SB1 49221	S	82E 11-1	+300	+0	22	<4	79	<.4	<10
SB1 49222	S	82E 11-1	+350	+0	15	<4	62	<.4	<10
SB1 49223	S	82E 11-1	+400	+0	1	<4	44	<.4	<10
SB1 49224	S	82E 11-1	-600	+200	6	<4	35	<.4	<10
SB1 49225	S	82E 11-1	-550	+200	11	<4	37	<.4	<10
SB1 49226	S	82E 11-1	-500	+200	12	<4	48	<.4	<10
SB1 49227	S	82E 11-1	-450	+200	20	<4	45	<.4	<10
SB1 49228	S	82E 11-1	-400	+200	32	<4	23	<.4	<10
SB1 49229	S	82E 11-1	-350	+200	15	<4	51	<.4	<10

SAMPLE NUMBER	TYPE	MAP	E/W	N/S	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Au PPB
SB1 49230	S	82E 11-1	-300	+200	16	<4	21	<.4	<10
SB1 49231	S	82E 11-1	-250	+200	16	<4	49	<.4	<10
SB1 49232	S	82E 11-1	-200	+200	12	<4	34	<.4	<10
SB1 49233	S	82E 11-1	-150	+200	5	<4	28	<.4	<10
SB1 49234	S	82E 11-1	-100	+200	4	<4	23	<.4	<10
SB1 49235	S	82E 11-1	-50	+200	8	<4	43	<.4	<10
SB1 49236	S	82E 11-1	+0	+200	13	<4	52	<.4	<10
SB1 49237	S	82E 11-1	+50	+200	24	<4	56	<.4	<10
SB1 49238	S	82E 11-1	+100	+200	24	4	57	<.4	<10
SB1 49239	S	82E 11-1	+150	+200	45	4	65	<.4	<10
SB1 49240	S	82E 11-1	+200	+200	16	<4	57	<.4	<10
SB1 49241	S	82E 11-1	+250	+200	16	4	98	<.4	<10
SB1 49242	S	82E 11-1	+300	+200	20	7	137	<.4	<10
SB1 49243	S	82E 11-1	+350	+200	9	5	125	<.4	<10
SB1 49244	S	82E 11-1	+400	+200	10	4	124	<.4	100
SB1 49245	S	82E 11-1	-600	+400	28	5	101	<.4	<10
SB1 49246	S	82E 11-1	-550	+400	11	<4	65	<.4	<10
SB1 49247	S	82E 11-1	-500	+400	5	4	39	<.4	<10
SB1 49248	S	82E 11-1	-450	+400	4	4	76	<.4	<10
SB1 49249	S	82E 11-1	-400	+400	9	4	23	<.4	<10
SB1 49250	S	82E 11-1	-350	+400	<1	5	21	<.4	<10
SB1 49251	S	82E 11-1	-300	+400	2	5	23	<.4	<10
SB1 49252	S	82E 11-1	-250	+400	1	5	47	<.4	<10
SB1 49253	S	82E 11-1	-200	+400	1	5	42	<.4	10
SB1 49254	S	82E 11-1	-150	+400	10	<4	95	<.4	<10
SB1 49255	S	82E 11-1	-100	+400	15	<4	52	<.4	<10
SB1 49256	S	82E 11-1	-50	+400	11	4	50	<.4	<10
SB1 49257	S	82E 11-1	+0	+400	22	4	55	<.4	<10
SB1 49258	S	82E 11-1	+50	+400	3	<4	38	<.4	<10
SB1 49259	S	82E 11-1	+100	+400	4	4	45	<.4	<10
SB1 49260	S	82E 11-1	+150	+400	2	<4	57	<.4	<10
SB1 49261	S	82E 11-1	+200	+400	4	<4	68	<.4	<10
SB1 49262	S	82E 11-1	+250	+400	<1	<4	40	<.4	<10
SB1 49263	S	82E 11-1	+300	+400	1	<4	49	<.4	<10
SB1 49264	S	82E 11-1	+350	+400	30	4	56	<.4	<10

SAMPLE NUMBER	TYPE	MAP	E/W	N/S	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Au PPB
SB1 49265	S	82E 11-1	+400	+600	3	<4	51	<.4	<10
SB1 49266	S	82E 11-1	-600	+600	11	4	27	<.4	<10
SB1 49267	S	82E 11-1	-550	+600	6	8	40	<.4	<10
SB1 49268	S	82E 11-1	-500	+600	<1	7	41	<.4	<10
SB1 49269	S	82E 11-1	-450	+600	4	5	40	<.4	<10
SB1 49270	S	82E 11-1	-400	+600	8	6	56	<.4	<10
SB1 49271	S	82E 11-1	-350	+600	3	<4	21	<.4	<10
SB1 49272	S	82E 11-1	-300	+600	1	5	35	<.4	<10
SB1 49273	S	82E 11-1	-250	+600	2	5	34	<.4	<10
SB1 49274	S	82E 11-1	-200	+600	<1	<4	19	<.4	<10
SB1 49275	S	82E 11-1	-150	+600	4	5	58	<.4	<10
SB1 49276	S	82E 11-1	-100	+600	4	<4	35	<.4	<10
SB1 49277	S	82E 11-1	-50	+600	4	<4	42	<.4	<10
SB1 49278	S	82E 11-1	+0	+600	4	4	67	<.4	10
SB1 49279	S	82E 11-1	+50	+600	3	4	45	<.4	<10
SB1 49280	S	82E 11-1	+100	+600	3	4	71	<.4	<10
SB1 49281	S	82E 11-1	+150	+600	10	5	83	<.4	<10
SB1 49282	S	82E 11-1	+200	+600	9	<4	88	<.4	<10
SB1 49283	S	82E 11-1	+250	+600	19	<4	229	<.4	<10
SB1 49284	S	82E 11-1	+300	+600	19	<4	193	<.4	<10
SB1 49285	S	82E 11-1	+350	+600	22	<4	136	<.4	<10
SB1 49286	S	82E 11-1	+400	+600	20	<4	136	<.4	<10
SB1 49287	S	82E 11-1	-300	+10	10	<4	56	<.4	<10
SB1 49288	S	82E 11-1	-250	+10	14	4	30	<.4	<10
SB1 49289	S	82E 11-1	-200	+10	24	<4	31	<.4	<10
SB1 49290	S	82E 11-1	-150	+10	14	4	34	<.4	<10
SB1 49291	S	82E 11-1	-100	+10	19	6	52	<.4	<10
SB1 49292	S	82E 11-1	-50	+10	11	5	43	<.4	<10
SB1 49293	S	82E 11-1	+0	+10	10	4	34	<.4	<10
SB1 49294	S	82E 11-1	+50	+10	14	<4	42	<.4	<10
SB1 49295	S	82E 11-1	+100	+10	14	6	23	<.4	<10
SB1 49296	S	82E 11-1	+150	+10	14	4	82	<.4	<10
SB1 49297	S	82E 11-1	+200	+10	10	4	56	<.4	<10
SB1 49298	S	82E 11-1	+250	+10	16	4	89	<.4	<10
SB1 49299	S	82E 11-1	+300	+10	11	4	40	<.4	<10

SAMPLE NUMBER	TYPE	MAP	E/W	N/S	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Au PPB
SB1 49300	S	02E 11-1	+350	+10	9	<4	57	<.4	<10
SB1 49301	S	02E 11-1	+400	+10	14	7	90	<.4	<10
SB1 49302	S	02E 11-1	+0	+100	73	5	20	<.4	<10
SB1 49303	S	02E 11-1	+0	+300	17	4	51	<.4	<10
SB1 49304	S	02E 11-1	+0	+500	8	4	152	<.4	<10

ANALYTICAL METHODS

CU PB ZN AG 20% HNO3 DIGESTION / AA

AU AQUA REGIA DIGESTION / SOLVENT EXTRACTION / AA

DETECTION LIMITS

Cu - 2 ppm
Pb - 4 ppm
Zn - 2 ppm
Ag - 0.4 ppm
Au - 10 ppb
As - 2 ppm

(ii) Stream Silt Values

JOE VB1 — 11045

SAMPLE NUMBER	FIELD NUMBER	TYPE	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Au PPB
981 49305	St 2	St	22	5	46	<.4	<10

ANALYTICAL METHODS

Cu Pb Zn Ag 20% HNO3 DIGESTION / AA

Au AQUA REGIA DIGESTION / SOLVENT EXTRACTION / AA

(iii) Rock Values

SAMPLE NUMBER	FIELD NUMBER	TYPE	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Au PPB	As PPM
G57	G57	R				2	2880	
G82	G82	R				1.1	E16000	4
R81 17517	GR-1	R	944	<4	31	1.1	E25000	
R81 17518	GR-9	R	832	<4	4	1.5	2950	

APPENDIX II

LIST OF EXPENDITURES
GOLDIE PROPERTY

A. Salaries		
B.L. Cousens - 5 man-days, September 17, 18, 23 to 25, 1981 @ $124.08/day	$620.40	
R. Ryziuk - 5 man-days, September 17, 18, 23 to 25, 1981 @ $126.13/day	630.65	
R.J. Nicholson - 2 man-days, September 17 to 18, 1981 @ $195.00/day	390.00	
M. Morrison - 1 man-day, October 6, 1980 @ $190.00/day under property contract	190.00	$1,831.05
B. Geochemical Analyses		
102 soil sample @ $7.50/sample (Cu, Pb, Zn, Ag, Au)	$765.00	
1 stream silt sample @ $12.40/sample (Cu, Pb, Zn, Ag, Au, As, Mo)	12.40	
2 rock samples @ $11.00/sample (Cu, Pb, Zn, Ag, Au)	22.00	
1 rock sample @ $9.00/sample (Ag, Au, As)	9.00	$ 808.40
C. Food and Accommodation		
12 man-days @ $25.50/day (September 17, 18, 23 to 25, 1981)	$ 306.00	$ 306.00
D. Transportation		
Truck Rental - 5 days @ $40.00/day (includes gasoline)	$ 200.00	$ 200.00
E. Equipment		
Flagging, soil bags, topofil thread, etc.	$ 25.00	
Base Map	23.69	$ 48.69

. . ./2

F. Report Preparation

B.L. Cousens - 2 days writing @ $124.08/day	$ 248.16	
B.L. Cousens - 1 day drafting @ $124.08/day	124.08	$ 372.24
Total Expenditures		$3,566.38

BLC/vmk

APPENDIX III

IN THE MATTER OF THE B.C. MINERAL ACT AND IN THE MATTER OF A GEOLOGICAL AND GEOCHEMICAL PROGRAM CARRIED OUT ON THE GOLDIE MINERAL CLAIMS, LOCATED IN THE GREENWOOD MINING DIVISION OF THE PROVINCE OF BRITISH COLUMBIA. NTS: 82E/10&11.

A F F I D A V I T

I, BRIAN L. COUSENS OF THE MUNICIPALITY OF VANCOUVER IN THE PROVINCE OF BRITISH COLUMBIA, MAKE OATH AND SAY:

1. THAT I am employed as a Geologist by Cominco Ltd., and as such have a personal knowledge of the facts to which I hereinafter depose;

2. THAT annexed hereto and marked as Appendix II to this may affidavit is a true copy of expenditures on a geological and geochemical program carried out on the Goldie Mineral Claims.

3. THAT the said expenditures were incurred on the sixth day of October, 1980 and on the seventeenth, eighteenth, twenty-third, twenty-fourther and twenty-fifth day of September, 1981, for the purpose of mineral exploration on the above noted claims.

Signed: Brian Cousens.
B.L. Cousens, Geologist

Dated this 5th day of November, 1981
at Vancouver, British Columbia.

BLC/vmk

APPENDIX IV

STATEMENT OF QUALIFICATIONS

I, BRIAN L. COUSENS, OF THE MUNICIPALITY OF VANCOUVER IN THE PROVINCE OF BRITISH COLUMBIA, HEREBY CERTIFY:

1. THAT I am a Geologist residing at 3163 W. 3rd Avenue, Vancouver, British Columbia with a business address at 700 - 409 Granville Street, Vancouver, British Columbia.

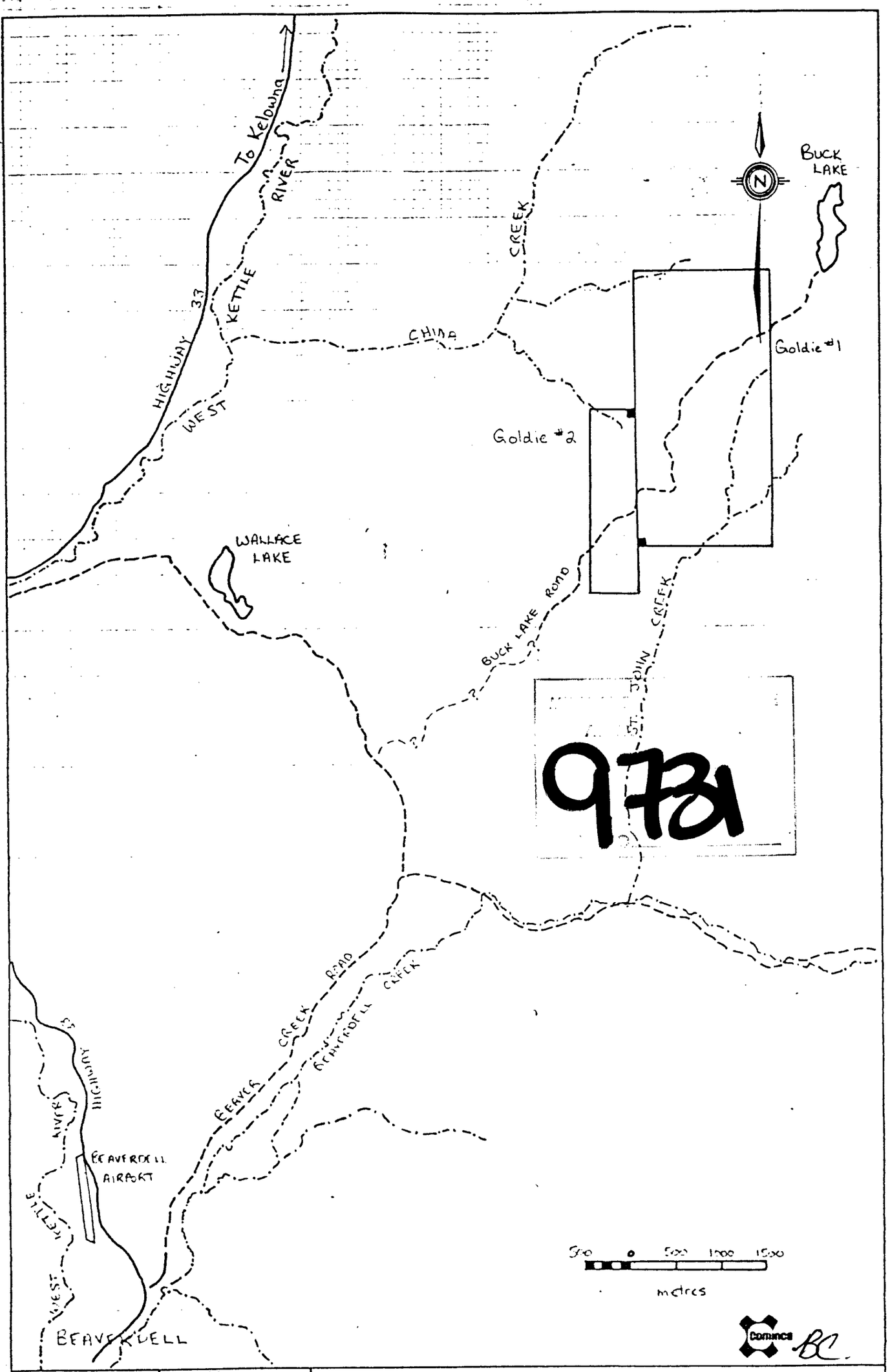
2. THAT I graduated with a B.Sc. in Geology from McGill University, Montreal, Quebec in 1979.

3. THAT I have practiced Geology with Cominco Ltd. since May, 1981. Previous experience includes two summers as a field assistant with the Geological Survey of Canada, one summer with Asamera Oil Corp., and one summer with le Ministere des Richesses Naturelles du Quebec.

Signed: Brian Cousens.
B.L. Cousens, Geologist

Dated this 5th day of November, 1981
at Vancouver, British Columbia.

BLC/vmk



Drawn by: BC.		Traced by:	
Revised by	Date	Revised by	Date

GOLDIE PROPERTY

LOCATION MAP

GREENWOOD MINING DIVISION

82E/6
82E/7
82E/10
82E/11

Scale: 1:50,000

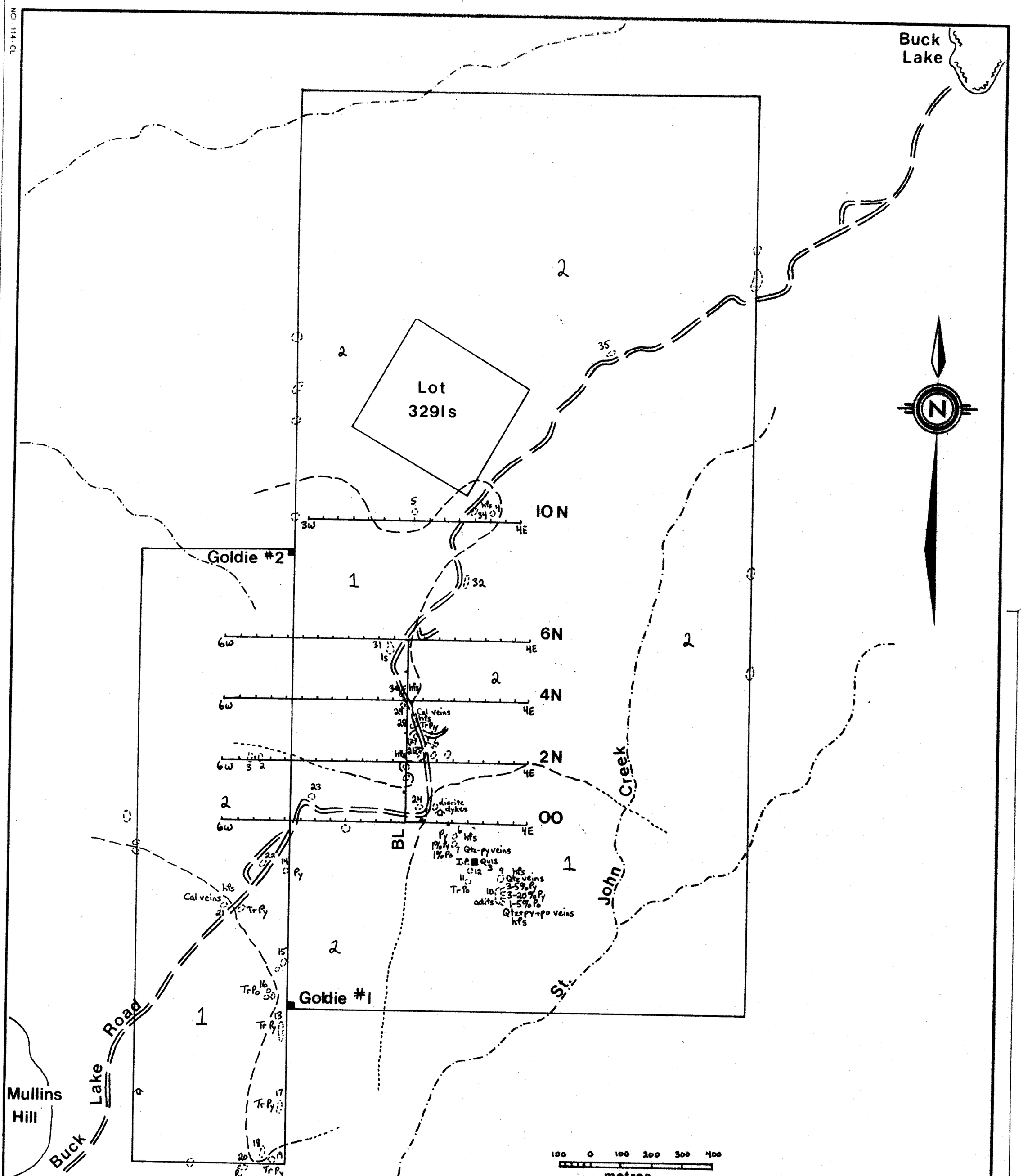
Date: September 29, 1981

Plate: 1

NCI 112A - CL

210-0610

NCI-114-CL



Drawn by: BC	Revised by	Date	
Traced by:	Revised by	Date	
Scale: 1:10,000	Date: Oct. 2/81	Plate: 2.	

Goldie Property

NTS 82E/10+11

GEOLOGY
Beaverdell Area
Greenwood Mining Division

#210-0640

0131

BC

LEGEND

ROCK TYPES

Cretaceous (?)

[2] Nelson Diorite - foliated hornblende diorite

Permean and/or Triassic

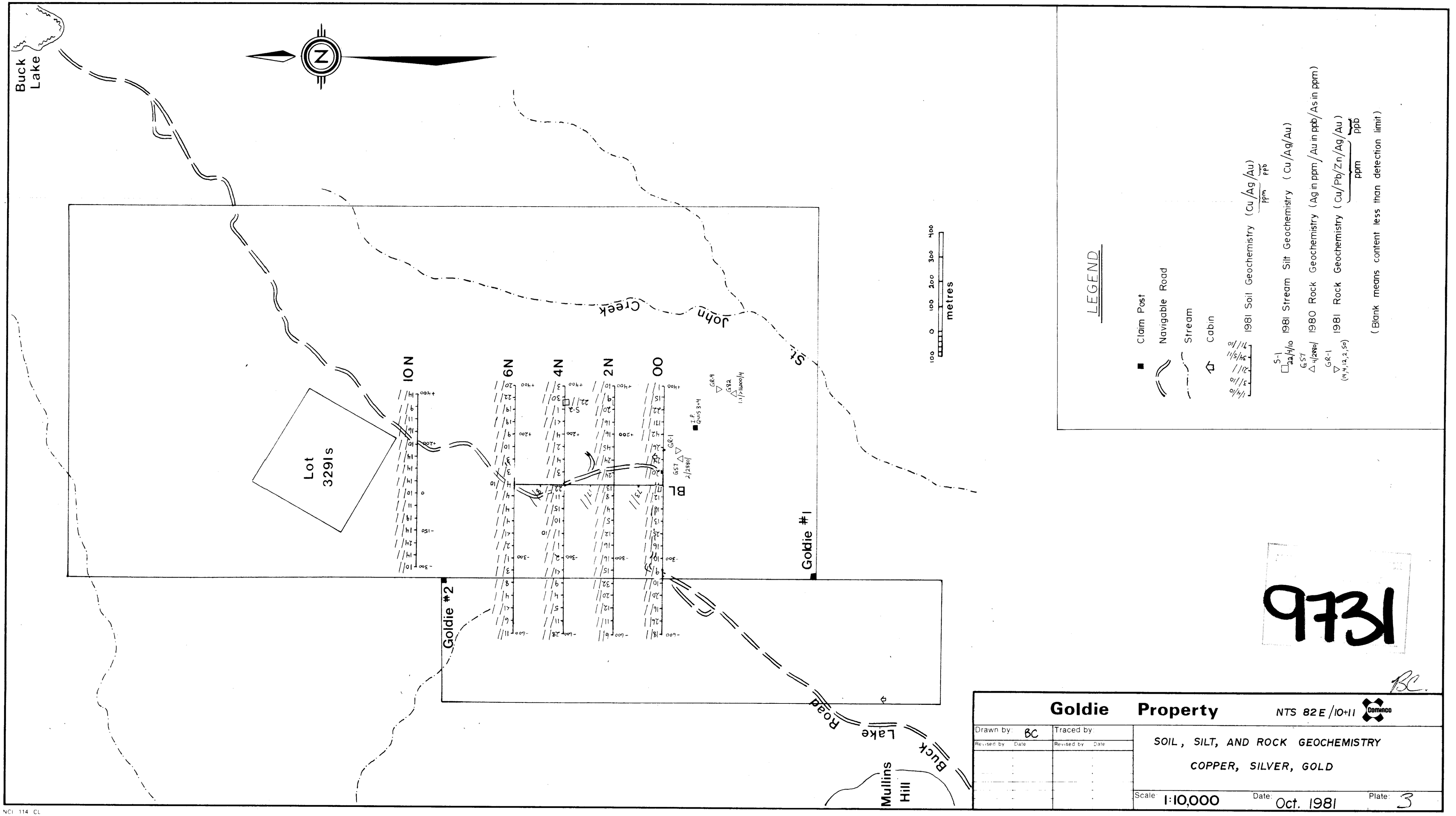
[1] Anarchist Group - argillite and minor limestone

Symbols

- Geological contact (inferred, assumed)
- 14 outcrop and outcrop number
- flagged grid line
- claim post
- navigable road
- stream
- cabin

hfs	hornfels		
ls	limestone		
Qtz	quartz	Po	pyrrhotite
Cal	calcite	Py	pyrite

Tr - trace



9731

BC

Goldie Property NTS 82E/10+11 Cominco

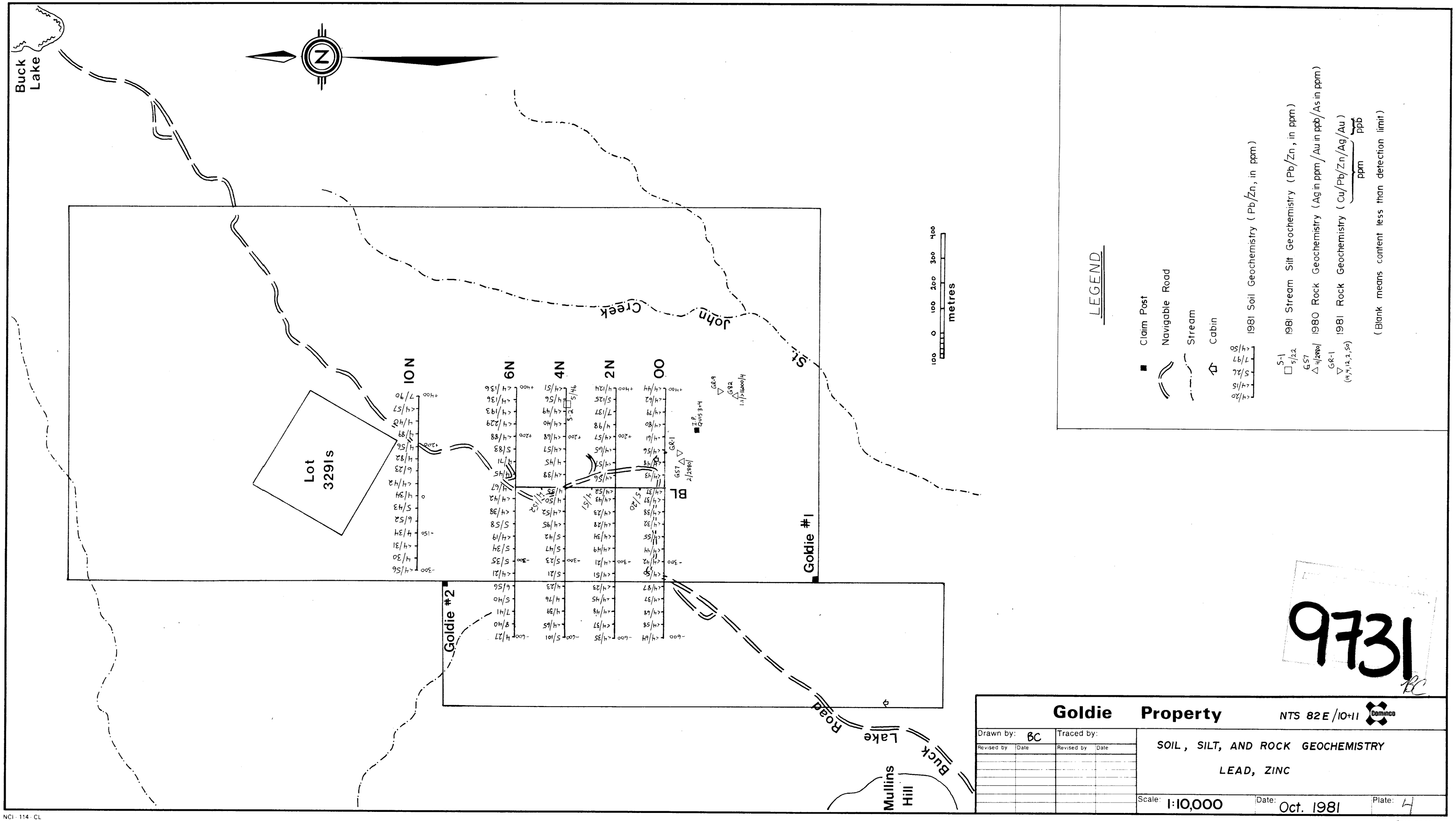
Drawn by: BC	Traced by:
Revised by: Date	Revised by: Date

SOIL, SILT, AND ROCK GEOCHEMISTRY
COPPER, SILVER, GOLD

Scale: 1:10,000 Date: Oct. 1981 Plate: 3

NCI 114 CL

#210-0640



9731

BC

Goldie Property

NTS 82E/10+11

Cominco

Drawn by: BC	Traced by:
Revised by / Date	Revised by / Date

SOIL, SILT, AND ROCK GEOCHEMISTRY

LEAD, ZINC

Scale: 1:10,000 Date: Oct. 1981 Plate: 4

NCI - 114 - CL

#210-0640