GEOCHEMICAL AND GEOLOGICAL SURVEY REPORT

ON THE

COT 2 MINERAL CLAIM

CARIBOO MINING DIVISION

NTS LOCATION 93-G-1W

AT LATITUDE 53°~~02'~~ 00'54" N, LONGITUDE 122°~~21'~~ 20'12" E

OWNED AND OPERATED BY

FIRST NUCLEAR CORPORATION LTD.

By: J.A. Climie (P. Geol.)
Consultant

August 10, 1987

I/01/AU17

TABLE OF CONTENTS

LIST OF DRAWINGS

August 10, 1987

1. INTRODUCTION

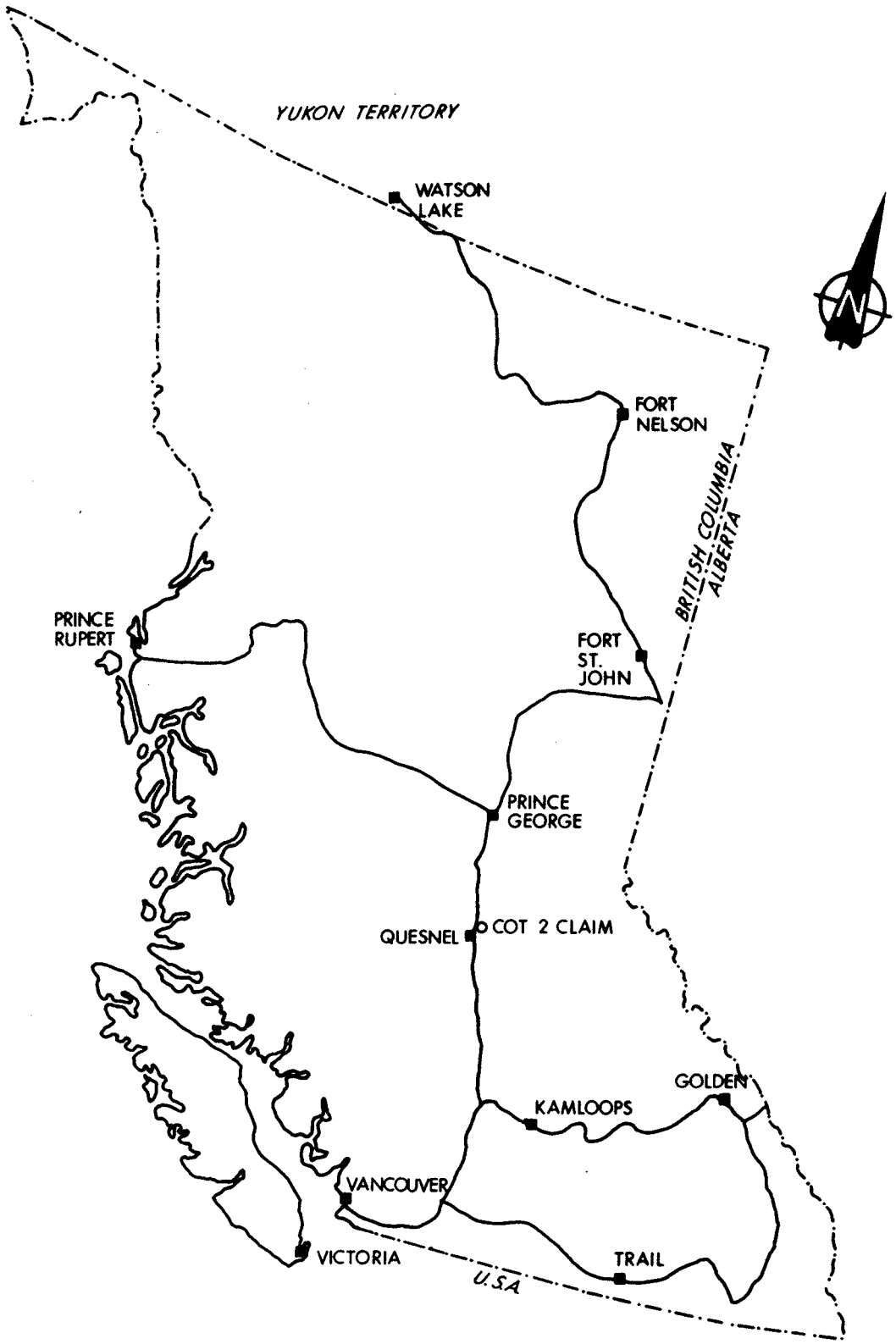
1.1 LOCATION AND ACCESS

The Cot 2 claim is located on NTS Map Sheet 93 G/1 and is situated 12 kilometres from the town of Quesnel, British Columbia along Highway 26 (Drawings 87-1 and 2). The property is immediately adjacent to, and extends south of, the highway and can be accessed by several rough trails which can be utilized by four-wheel drive vehicle (Drawing 87-2).

1.2 TOPOGRAPHY AND VEGETATION

The property is situated within the extensive interior physiographic plateau known as the Fraser Basin. The topography of the claim area is a glaciated and stream eroded plateau which displays a gentle relief, situated between the Cottonwood and Quesnel Rivers. Steep slopes flank a deeply incised ravine in the centre of the property. Maximum relief is about 150 metres, from the highest to lowest points on the property. The average elevation on the Cot 2 claim is about 900 metres.

Vegetation consists of a mixture of coniferous and deciduous trees. The coniferous stands are dominated by spruce, fir and



0 100 200 300

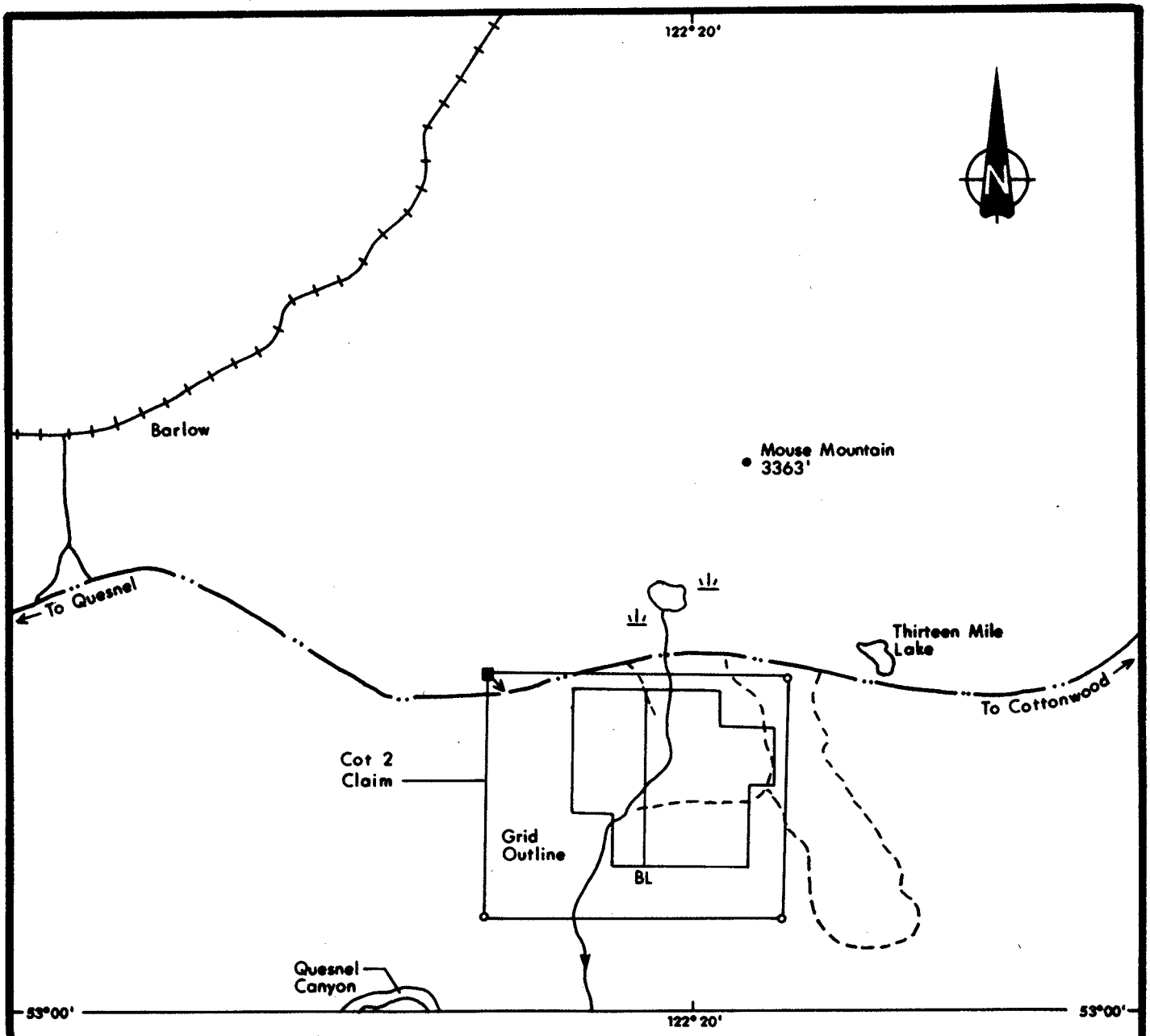
KILOMETRES

FIRST NUCLEAR CORP.

COT 2 CLAIM

REGIONAL LOCATION MAP

SCALE	1 : 7,500,000	AUTHOR	J. A. CLIMIE
		MAP Nº	87 - 01



LEGEND

HIGHWAY 26

RAILWAY

BUSH TRAIL

STREAM

CLAIM BOUNDARY / CORNER POST

0 1000 2000 3000

METRES

FIRST NUCLEAR CORP.

COT 2 CLAIM

LOCATION MAP

SCALE	1:50000	AUTHOR	J. A. CLIMIE
NTS	93G - 1W	MAP Nº	87 - 02

cedar while birch and poplar dominate the lower lying, wetter areas.

1.3 HISTORY OF THE PROPERTY

The history of the property is sketchy and incomplete as few records were kept and little assessment work has been recorded. Interest in the area probably started in the early 1950's when copper minerals were noted in outcrop along the edge of the old Barkerville Highway, a few hundred metres north of the Cot 2 claim. There is evidence of some hand pits and prospecting shafts near this showing. The exact age of this work is unknown.

The property has been staked by numerous companies and individuals over the last thirty years. Most of the work was carried out on the copper showing and this included investigations by Euclid Mining Corporation (1967), Dupont of Canada (1975) and more recently, by Canadian Superior.

The Cot 2 claim was part of larger claim holdings acquired by First Nuclear Corporation Ltd. between July 1980 and February 1984, and which included the MM 1-5, Cot 1-6 and Jess 2 claims. All claims except Cot 2 have been allowed to lapse.

During 1981, First Nuclear carried out gridding, a ground magnetic survey and a reconnaissance soil geochemical survey. Since exploration emphasis at that time was on base metals, only molybdenum, lead, zinc and copper were analysed. As described in an assessment report by R.A. Tilsley dated November 1981, weakly anomalous soil geochemical results were defined on the Cot 2 claim for copper, lead and zinc. Maximum copper value was 52 ppm (threshold 30 ppm), for lead 33 ppm (threshold 16 ppm), for zinc 400 ppm (threshold 100 ppm) and for molybdenum 5 ppm (threshold 4 ppm).

The ground magnetic anomaly defined a strong, thumbprint positive magnetic anomaly within the Cot 2 claim having a maximum relief of approximately 2,500 grammas. Due to a shift in exploration emphasis systematic follow-up of the anomalies was not undertaken.

During 1984, as part of a more extensive survey over the entire claim group, First Nuclear Corporation completed a reconnaissance grid over the Cot 2 claim. Line spacing was 250 metres and stations were flagged at 50 metre intervals. This work is described in an assessment report by J.P. Stewart, dated July 15th, 1985.

During 1985, First Nuclear Corporation undertook a reconnaissance soil geochemical survey covering the MM 1, 4, 5 and Cot 2 mineral claims. Results of this survey were described in an assessment report by J.A. Climie, dated September 23rd, 1985. Samples were collected at 50 metre intervals along the 250 metre spaced lines. Elements analyzed were gold and silver. Significant gold anomalies were not defined on the MM 1, 4 and 5 claims and these were allowed subsequently to lapse. Anomalous gold values were, however, obtained from several widely dispersed parts of the Cot 2 claim.

Six values regarded as strongly anomalous (greater than 100 ppb) gold values were defined. Maximum value obtained was 630 ppb gold. A number of other weakly and moderately anomalous values were obtained. No well-defined trend could be defined on the sample spacing utilized. No significantly anomalous silver values were obtained on the Cot 2 claim.

It was considered that the gold soil anomalies were significant and further work was recommended.

1.4 WORK PERFORMED

This report describes the results of a more detailed soil geochemical survey, a stream sediment survey and geological mapping performed on the Cot 2 claim and carried out by the writer in June, 1987. A total of 423 soil samples and 14 sediment samples were collected. Geological mapping over the grid was carried out at a scale of 1:2,500.

As control for the geochemical and geological surveys, 21.8 kilometres of grid were surveyed.

1.5 MINERAL CLAIM

The work was completed on the Cot 2 mineral claim, record number 3908, situated in the Cariboo Mining District, B.C.

2. REGIONAL GEOLOGY

The property is situated within an irregularly shaped area of low relief known as the Fraser Basin, a sub-division of the very extensive interior plateau physiographic division of British Columbia. The surface of the basin, which is gently rolling and poorly drained, lies below the 3000 foot (914 m) contour and is

deeply incised by the Fraser River and its tributaries. Glacial deposits mantle much of the basin and as a consequence outcrop is scarce.

Panteleyev (1987) describes regional geology as lying within the Quesnel terrane, an allochthonous belt of predominantly Upper Triassic - Lower Jurassic basic to intermediate volcanic rocks that lies along the eastern margin of the Intermontane Belt. Quesnel terrane can be followed as a disrupted but nearly continuous narrow belt, from the southern to northern provincial boundaries. The belt includes rocks of the Quesnel River, Nicola, Takla, Stuhini and Rossland Groups.

Quesnel terrane in the project area is a fault-bounded region that is flanked to the east by Precambrian to Paleozoic rocks of the Barkerville and Slide Mountain terrains and to the west by Paleozoic rocks of the Cache Creek terrain.

The Takla Group, which encompasses the Cot 2 claim, comprises andesite, basalt, tuff, breccia, conglomerate, greywacke, shale and limestone. Plutons, believed to be coeval with the volcanics, intrude the package.

The alkaline nature of the volcanic rocks and related plutons in the Quesnel terrane became evident during the 1970's and has been the

subject of considerable study, both from an academic point of view and because of its economic implications. An association between sub-alkaline or alkaline igneous rocks, especially potassic ones, and gold mineralization is evident.

Younger, Cretaceous plutons were emplaced. Tertiary rocks are extensive and may be divided into two distinct units, a Lower Tertiary (Eocene) sedimentary and volcanic group and an Upper Tertiary (Miocene) division consisting of basaltic plateau lavas.

The dominant structural features of the area are northwest trending faults and fractures. These faults, many of which are strands of the much larger Pinchi Fault, both bound and occur within the trough.

Panteleyev (1987) has described mineral history of the region:

> Placer gold in the Quesnel River drainage system has been historically important. Bedrock exploration in Quesnel River area was active during the late 1960's and throughout the 1970's, first for copper and copper-gold porphyry deposits and more recently for gold deposits. Exploration activity peaked in the early 1980's after release of the 1980 Regional Geochemical Survey and recognition of the significance of the Quesnel River (QR) deposit. There Dome Exploration

(Canada) Ltd. has discovered about one million tonnes of near-surface mineralization in altered basalts grading approximately 0.2 oz. gold per tonne.

Numerous other gold showings have been found in the Quesnel terrane and the region is presently undergoing intensive exploration activity.

3. PROPERTY GEOLOGY

Due to the extreme paucity of the outcrop in the area, geology of the area covering the Cot 2 claim is poorly understood. The most detailed mapping of the area is dated, 1:250,000 mapping by Tipper (1961). In Tipper's map, the Cot 2 claim lies within unit 6A which is described as consisting of argillite, greywacke, plus green, grey black and purple andesite and basalt and related tuffs and breccias. Minor conglomerate and limestones are included in this group. The age of these rocks is described (Tipper, 1961) as Triassic to Jurassic.

Later regional 1:1,000,000 mapping by Tipper et. al. (1979) place the sequence within the upper Triassic to lower Jurassic Takla Group (described in section 2).

The property is masked by a variable, almost continuous sheet of glacial till of variable thickness.

The last ice movement direction is reported (J.P. Stewart pers. comm.) as being from the south.

4. PHYSICAL WORK

4.1 General

Physical work undertaken on the Cot 2 claim consisted of the establishment of a grid in preparation for the soil geochemical and geological surveys.

The previous grid on the property, surveyed by Amex Exploration Services Ltd. in 1984 was a reconnaissance grid with 250 metre line spacings. A more detailed grid was required for the follow-up surveys.

Specifications for the new grid are as follows:

4.2 Grid Specifications

Orientation - grid lines	090° true
- base line	360° true
Line Spacing	100 metres
Station Spacing	50 metres
Marking	Red/blue flagging tape
Control	Topofil and compass
Line Kilometres Established	21.8

Contractor : J.A. Climie, Calgary, Alberta

Location of the grid with respect to the claim boundary and topographic features is shown on Drawings 87-2 and 87-3. The grid was tied into the northern claim boundary and northern access trail by means of a compass and topofil survey.

5. SOIL GEOCHEMICAL SURVEY

5.1 Purpose of the Survey

The previous soil geochemical survey in 1985 had been carried out on 250 metre spaced lines, with sample stations at 50 metre intervals. Approximately 15 anomalous values were outlined in the north-central part of the Cot 2 grid on line 97+50 N (see assessment report by J.A. Climie, dated September 23, 1985). However, significantly anomalous results were not defined on adjacent lines 250 metres to the north and south. Additionally, a number of other sporadic anomalies, lacking continuity or adjacent lines, were defined on other parts of the Cot 2 claim.

Purpose of the current survey was, then, to survey that part of the claim containing the 1985 soil gold anomalies in more detail to better define the anomalies for further evaluation.

5.2 Procedure

Samples were collected at 50 metre intervals along the 100 metre spaced lines. Consideration had been given to a 25 metre sample interval, however, in the interests of economy, 50 metre intervals were decided upon.

Samples were collected, using a mattock, from the B1 horizon at a depth ranging from 20-25 centimetres.

Sampling medium is predominantly glacial till of unknown thickness. Typical soil profile developed on the till consists of:

0 - 10 cm	:	organic litter
10 - 15 cm	:	black, organic-rich A horizon
15 - 30 cm	:	dark brown-grey B1 horizon consisting of variable-sized boulders in a clay-silt-sand matrix
30 - 50 cm	:	yellow-brown to grey B2 horizon consisting of boulders in a clay-silt-sand matrix
50 cm and deeper	:	grey to light brown, unweathered till

For the purposes of sample identification, each sample line was designated by a letter as follows:

Line	3 N	Sample Series	L
	2 N		P
	1 N		N
	0 N		A
Line	1 S	Sample Series	B
	2 S		C
	3 S		D
	4 S		E
	5 S		F
	6 S		G
	7 S		H
	8 S		J
	9 S		K
	10 S		L
	11 S		M

On each line, individual sample numbers commence at 1 (A1 etc.) on the western extremity, increasing systematically (A2, A3 etc.) at the 50 metre sample sites to the eastern extremity of the line.

Samples were submitted to Loring Laboratories Ltd. of Calgary. The samples were dried and sieved to minus 80 mesh. The oversize fraction has been retained in storage for possible future work. The minus 80 mesh fraction was analyzed for gold.

Fire assay solvent extraction was utilized, consisting of digestion in hot aqua-regia followed by an atomic absorption analysis. Detection limit is 5 ppb.

5.3 Results

The gold soil geochemical results appear in Drawing 87-03 at a scale of 1:2,500. The analytical results are listed in Appendix 1.

The gold values ranged from 0 to 85 ppb. Background is in the order of 0-10 ppb gold.

Values from 11 to 49 ppb gold are considered weakly anomalous and those between 50 and 99 ppb as moderately anomalous.

23 weakly anomalous and 4 moderately anomalous values were defined, mostly in the northwestern quadrant of the grid, between the ravine and the northern claim boundary. While a contourable, well-defined anomalous trend could not be discerned, there is a general clustering of anomalies in the northwestern quadrant, particularly on line 3+00 N in proximity to the baseline and on line 3+00 S, in proximity to, and west of, the base line. Line 97+50 N on the old reconnaissance grid (1985) and the line along which approximately 15 anomalous values were obtained, lies between lines 1+00 N and 2+00 N (present survey).

Although significant anomalies were not outlined on lines 1+00 N and 2+00 N, the anomalies defined on 3+00N do occur in proximity, and confirm a general anomaly clustering in the northwestern quadrant.

It is noted that, while the anomalies are roughly coincident in location, values from the present survey are lower than those obtained in 1985. This could be due to inconsistencies related to glacial till dispersion, which is often a poor sampling medium, or laboratory procedures. Some checking of laboratory procedures and results is proposed.

It is noteworthy that there is a correlation between the 1985 and 1987 anomalies in the northwestern quadrant and the very strong, thumbprint magnetic anomaly, which is apparent on government aeromagnetic maps.

6. STREAM SEDIMENT GEOCHEMICAL SURVEY

6.1 Purpose of the Survey

Since a well-defined stream drains through the centre of the grid, at the base of the ravine, a sediment sampling traverse was made along this. Stream sediment geochemistry has been demonstrated as being an effective means of defining gold

mineralization in the western Cordillera (e.g. Mt. Skukum Mine discovery, Yukon Territory).

6.2 Procedure

The stream was traversed and sediment samples collected at approximately 100 metre intervals. 14 samples were collected within the area of interest. There are identified as sample numbers Sd 1 through 14 from south to north (updrainage).

Samples were sieved to minus 80 mesh and the fine fraction analyzed for gold by Loring Laboratories Ltd. of Calgary. Procedures are as outlined in section 5.2

6.3 Results

Results appear in Drawing 87-03 together with the soil geochemical values. A list of sample results appears in Appendix 1.

Values ranged from 0 to 65 ppb gold. Background is in the range of 0 to 10 ppb gold.

A single anomalous value of 65 ppb gold was outlined. It is considered significant that this anomaly was defined in

proximity to a zone of intense metasomatism and skarn development observed in outcrop (see section 7).

7. GEOLOGICAL SURVEY

7.1 Purpose of the Survey

Purpose of the geological survey was to gain an understanding of the geology of the property, to establish whether the environment is favourable for gold mineralization, especially skarn mineralization of the Dome Mine QR deposit-type, and to explain the cause of previously detected gold soil anomalies.

7.2 Procedure

Three days were spent traversing the grid, trails within the Cot 2 claim and the ravine.

Outcrop data were tied into the grid by compass and topofil survey. Three samples were collected for petrographic examination.

7.3 Results

7.3.1 Stratigraphy

Data were plotted at a scale of 1:2,500 in Drawing 87-04.

Most of the Cot 2 claim is mantled by a veneer of till of unknown thickness and outcrop is restricted to a 300 metre section of the ravine bottom. Access is difficult along the ravine due to steep slopes, log fall and devil's club. Exposure, however, is semi-continuous along the stream between lines 5 S and 7 S.

The geological units will be described in order of interpreted, decreasing age. Petrographic examination of rock specimens was carried out by Dr. A. Farkas, consulting petrologist of Toronto. Location of the three specimens, designated C1 to C3, appears on Drawing 87-94 and the petrographic report in Appendix 2.

Unit 1

Unit 1 is fine-grained syenite, and consists, typically, of plagioclase (70-85%), biotite (5-15%) and contains minor chlorite, pyroxene, epidote, carbonate, magnetite and sulphide. Specimen C3 is typical of the Unit. The pyroxene is probably of metasomatic origin.

Alteration is characterized by minor to moderate amounts of sericite, minor epidote and carbonate.

Plagioclase appears to be sodic plagioclase or albite and consequently the rock is probably not shoshonitic in character.

Due to intense metasomatism, the syenite is uncommon, mostly having been metasomatized to Unit 2 or skarn (Unit 3).

Unit 2

Unit 2 is the predominant lithology exposed and consists of moderately to intensely metasomatised intrusive, believed to have been diorite or, more

likely syenite (Unit 1). It consists of plagioclase (40-50%), diopside (10-70% but averaging about 30%), biotite (5-20%) and magnetite (10-15%). It also contains carbonate veins and veinlets along fractures, and quartz veining.

From trace to minor pyrite and chalcopyrite is present. Malachite was observed in several places.

Moderate to intense sericitisation of plagioclase has occurred.

Although superficially resembling gabbro, the rock is interpreted to be metasomatised syenite (Unit 1). It grades to skarn with increasing metasomatism.

Specimen C1 is typical of Unit 2.

Unit 3

Unit 3 is skarn and occurs associated with Unit 2. Specimen C2 is typical, consisting of diopside (78%), magnetite (20%) and minor to trace biotite, plagioclase, epidote, chlorite, hematite, chalcopyrite and pyrite. Minor carbonate, quartz

chlorite and epidote veins and veinlets occur, sometimes associated with sulphide mineralization.

Unit 4

Unit 4 is quartz monzonite and consists of quartz (30-45%), plagioclase (30-40%), K-feldspar (10-20%) and hornblende (5-15%). When seen as outcrop or in till, it is moderately to strongly altered. Plagioclase is sericitised and the hornblende chloritised.

The most abundant float seen on the property is basaltic andesite or andesite, commonly with carbonate veinlets, minor epidote and chlorite. Minor syenite (or diorite) was observed and quartz-monzonite is quite common in the southern part of the claim.

7.3.2 Structure

Almost all outcrops are strongly fractured and shearing is common, sometimes accompanied by chlorite or serpentine.

The drainage system, or ravine, is interpreted as being controlled by a sinuous northeast to north-northeast trending fault.

7.3.3 Interpretation

A few kilometres to the north and northeast, in proximity to Mouse Mountain, there are a number of exposures of basaltic andesite or andesite of the Triassic-Jurassic Takla Group. These are flanked further to the east, within the old MM3 claim, by carbonaceous phyllite of similar age.

The syenite (or diorite) is interpreted to be coeval and comagmatic with the Takla Group volcanics, part of an extensive belt of sub-alkaline to alkaline igneous rocks within the Quesnel terrane. These are considered to be highly favourable for the occurrence of gold mineralization.

Takla andesite probably underlies the northern part of the Cot 2 claim. Emplacement of the syenite (or diorite) resulted in intense metasomatism and skarn development, accompanied by magnetite and iron/copper mineralization. The volcanics may have been

carbonatized, explaining development of the abundant diopside.

Youngest igneous event is considered to have been the emplacement of the quartz-monzonite, interpreted as Cretaceous in age.

The circular magnetic anomaly in the northwestern part of the Cot 2 claim represents the high level syenite intrusive and associated magnetite mineralization. Sulphide-rich zones within the contact aureole would be considered favourable for the occurrence of gold mineralization of the Dome QR - type. The coincidence of the gold soil anomalies in the northwestern part of the claim, as well as the stream sediment anomaly, supports this possibility.

Shear-controlled gold mineralization might also be anticipated on the property.

8. CONCLUSIONS

Weak to moderate gold soil geochemical anomalies were defined in the northwestern quadrant of the Cot 2 claim. These are roughly

coincident with anomalies delineated by a previous reconnaissance soil survey.

The soil anomalies occur in proximity to a strong, circular, magnetic anomaly within the northwestern part of the claim. A gold stream sediment was also defined nearby.

Geology of the property is interpreted to consist of Takla Group volcanics intruded by a syenite (or diorite) intrusive with accompanying moderate to intense metasomatism and skarn development. Youngest intrusive event was emplacement of quartz-monzonite, believed to be of Cretaceous age.

Abundant magnetite and minor iron/copper sulphide mineralization was observed within the very rare outcrop on the property. More sulphide-rich zones may be present and these would have excellent gold potential.

The coincidence of gold soil anomalies with the magnetic anomaly, representing emplacement of the syenite and accompanying metasomatism/skarn development, is considered significant and may indicate gold mineralization in close proximity.

9. RECOMMENDATIONS

Additional work is recommended to evaluate the coincident soil anomalies/skarn development and associated magnetic anomaly. Investigations should include:

- a ground magnetic survey to more precisely define the location of the very strong magnetic anomaly;

- tighter soil geochemical sampling on 25 metre spacings in proximity to the magnetic anomaly;

- consideration should be given to carrying out a resistivity survey in the area of the magnetic anomaly;

- trenching of overburden in proximity to the strongest soil anomalies;

- given encouraging results from the above work, a drilling program to evaluate selected targets;

- additional analytical work should be carried out on soil samples from both the 1985 and current surveys to explain discrepancies in order of magnitude of anomalous values;

- additional geological work, and Quantenary geology studies are also proposed.

August 10, 1987

Cost Assessment Allocation

Total cost of physical/survey work $10 168.87

Claim	No. of Units	Assessment Allocation	Period
Cot 2	20	$10 168.87	3 Years

The shortfall of $1,831.13 is to be withdrawn from the First Nuclear Corporation P.A.C. account.

11. AUTHOR'S QUALIFICATIONS

Statement of Qualifications of J.A. Climie, Author

Education

B.Sc. (Geology) conveyed 1966 by University of Wellington, New Zealand.

B.Sc. Honours (Geology) conveyed 1968 by University of Wellington, New Zealand.

Professional Experience

1968-1969	Government of New Zealand Scientist, geological mapping in various parts of New Zealand.
1969-1970	Noranda Australia Ltd. Geologist, mineral exploration in Australia, discovery and initial evaluation Koongarra uranium deposit.
1970-1971	Consolidated Silver Mining Co. N.Z. Ltd. Geologist, mineral exploration and property evaluation throughout N.Z.
1971-1974	Noranda Australia Ltd. Geologist, mineral exploration, property and mine evaluation throughout Australia.
1974-1977	Noranda Exploration Geologist, District Geologist, mineral exploration property evaluation in various regions of Canada.
1977-1984	AGIP Canada Ltd. Chief Geologist, Exploration Manager. Set up mineral division and directed Canada-wide exploration programs, discovery through to pre-feasibility Mt. Skukum gold deposit. Consulted to AGIP programs in Italy, Zambia and Australia.
1984-Present	C.E.G.B. Exploration Exploration Manager. Technical direction of programs throughout Canada. Additional consulting activities in U.S. and Canada.

Memberships

- Society of Economic Geologists
- Canadian Institute of Mining and Metallurgy
- Australasian Institute of Mining and Metallurgy
- Prospectors and Developers Association
- Registered Professional Geologist, Province of Alberta (APEGGA)

12. REFERENCES

Panteleyev, A., 1986, Paper 1987-1, Quesnel Fold Belt, Alkalic Volcanic Terrane Between Horsefly and Quesnel Lakes. B.C. Ministry of Energy, Mines and Petroleum Resources.

Tipper, H.W., 1960, Map 49-1960, 1:250,000 scale, Geology. Prince George, B.C.

Tipper, H.W., et.al., 1979, Map 1424A, 1:1,000,000 scale, Geology, Parsnip River, B.C.

APPENDIX 1

LIST OF GEOCHEMICAL RESULTS

To: Mr. J.A. Climie
2419 Deerside Drive S.E.
Calgary, Alberta
T2J 5L7

File No. 29961
Date July 10th, 1987
Samples Soil

Certificate of ASSAY

LORING LABORATORIES LTD.

SAMPLE No.	Au ppb
GEOCHEMICAL ANALYSES	
A-1	15
A-2	Nil
A-3	Nil
A-4	Nil
A-5	Nil
A-6	5
A-7	5
A-8	15
A-9	Nil
A-10	5
A-11	Nil
A-12	Nil
A-13	Nil
A-14	Nil
A-15	5
A-16	10
A-17	10
A-18	5
A-19	Nil
A-20	Nil

I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES . . . .

Rejects Retained one month.

Pulps Retained one month unless specific arrangements made in advance.

Assayer

To: Mr. J.A. Climie
2419 Deerside Drive S.E.
Calgary, Alberta
T2J 5L7

File No. 29961
Date July 10th, 1987
Samples Soil

Certificate of ASSAY

LORING LABORATORIES LTD.

SAMPLE No.	Au ppb
GEOCHEMICAL ANALYSES	
A-21	5
A-22	Nil
A-23	Nil
A-24	Nil
A-25	Nil
A-26	Nil
A-27	5
A-28	Nil
A-29	Nil
A-30	5
A-31	10
A-32	Nil
A-33	5
B-1	5
B-2	Nil
B-3	5
B-4	10
B-5	Nil
B-6	Nil

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SAMPLE No.	Au ppb
GEOCHEMICAL ANALYSES	
B-7	Nil
B-8	Nil
B-9	5
B-10	Nil
B-11	5
B-12	Nil
B-13	10
B-14	Nil
B-15	5
B-16	5
B-17	10
B-18	Nil
B-19	Nil
B-20	Nil
B-21	5
B-22	Nil
B-23	35
B-24	5
B-25	Nil
B-26	5

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LORING LABORATORIES LTD.

SAMPLE No.	Au ppb
GEOCHEMICAL ANALYSES	
B-27	10
B-28	Nil
B-29	5
B-30	Nil
B-31	Nil
B-32	5
B-33	25
C-1	5
C-2	15
C-3	5
C-4	Nil
C-5	10
C-6	Nil
C-7	30
C-8	5
C-9	80
C-10	15
C-11	5
C-12	10

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Samples Soil

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LORING LABORATORIES LTD.

SAMPLE No.	Au ppb
GEOCHEMICAL ANALYSES	
C-13	85
C-14	15
C-15	5
C-16	10
C-17	5
C-18	Nil
C-19	Nil
C-20	Nil
C-21	5
C-22	Nil
C-23	5
C-24	Nil
C-25	5
C-26	10
C-27	Nil
C-28	Nil
C-29	Nil
C-30	5
C-31	10
C-32	Nil

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File No. 29961
Date July 10th, 1987
Samples Soil

Certificate of ASSAY

LORING LABORATORIES LTD.

SAMPLE No.	Au ppb
GEOCHEMICAL ANALYSES	
C-33	5
D-1	Nil
D-2	Nil
D-3	Nil
D-4	Nil
D-5	5
D-6	Nil
D-7	5
D-8	Nil
D-9	15
D-10	Nil
D-11	5
D-12	Nil
D-13	Nil
D-14	Nil
D-15	5
D-16	5
D-17	Nil
D-18	Nil

I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES . . . .

Rejects Retained one month.

Pulps Retained one month unless specific arrangements made in advance.

Assayer

To: Mr. J.A. Climie
2419 Deerside Drive S.E.
Calgary, Alberta
T2J 5L7

File No. 29961
Date July 10th, 1987
Samples Soil

Certificate of ASSAY

LORING LABORATORIES LTD.

SAMPLE No.	Au ppb
GEOCHEMICAL ANALYSES	
D-19	Nil
D-20	Nil
D-21	Nil
D-22	5
D-23	5
D-24	5
D-25	Nil
D-26	Nil
D-27	Nil
D-28	10
D-29	Nil
D-30	Nil
D-31	Nil
D-32	Nil
D-33	Nil
E-1	5
E-2	5
E-3	Nil
E-4	Nil

I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES . . . .

Rejects Retained one month.

Pulps Retained one month unless specific arrangements made in advance.

Bob Beran
Assayer

To: Mr. J.A. Climie
2419 Deerside Drive S.E.
Calgary, Alberta
T2J 5L7

File No. 29961
Date July 10th, 1987
Samples Soil

Certificate of ASSAY

LORING LABORATORIES LTD.

SAMPLE No.	Au ppb
GEOCHEMICAL ANALYSES	
E-5	Nil
E-6	Nil
E-7	10
E-8	5
E-9	10
E-10	Nil
E-11	5
E-12	Nil
E-13	Nil
E-14	5
E-15	10
E-16	Nil
E-17	Nil
E-18	5
E-19	Nil
E-20	Nil
E-21	Nil
E-22	Nil
E-23	Nil
E-24	5

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Assayer

To: Mr. J.A. Climie
2419 Deerside Drive S.E.
Calgary, Alberta
T2J 5L7

File No. 29961
Date July 10th, 1987
Samples Soil

Certificate of ASSAY

LORING LABORATORIES LTD.

SAMPLE No.	Au ppb
GEOCHEMICAL ANALYSES	
E-25	15
E-26	Nil
E-27	5
E-28	Nil
E-29	Nil
E-30	Nil
E-31	Nil
E-32	Nil
E-33	Nil
F-1	5
F-2	5
F-3	Nil
F-4	Nil
F-5	5
F-6	5
F-7	5
F-8	10
F-9	5
F-10	10

I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES . . . .

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Pulps Retained one month unless specific arrangements made in advance.

Assayer

To: Mr. J.A. Climie
2419 Deerside Drive S.E.
Calgary, Alberta
T2J 5L7

File No. 29961
Date July 10th, 1987
Samples Soil

Certificate of ASSAY

LORING LABORATORIES LTD.

SAMPLE No.	Au ppb
GEOCHEMICAL ANALYSES	
F-11	5
F-12	Nil
F-13	5
F-14	15
F-15	10
F-16	5
F-17	5
F-18	Nil
F-19	Nil
F-20	Nil
F-21	Nil
F-22	5
F-23	10
F-24	5
F-25	Nil
F-26	10
F-27	5
F-28	5
F-29	Nil
F-30	Nil

I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES . . . .

Rejects Retained one month.

Pulps Retained one month unless specific arrangements made in advance.

Assayer

To: Mr. J.A. Climie
2419 Deerside Drive S.E.
Calgary, Alberta
T2J 5L7

File No. 29961
Date July 10th, 1987
Samples Soil

Certificate of ASSAY

LORING LABORATORIES LTD.

SAMPLE No.	Au ppb
GEOCHEMICAL ANALYSES	
F-31	Nil
F-32	5
F-33	Nil
G-1	10
G-2	5
G-3	Nil
G-4	Nil
G-5	Nil
G-6	Nil
G-7	Nil
G-8	Nil
G-9	Nil
G-10	Nil
G-11	5
G-12	Nil
G-13	5
G-14	Nil
G-15	Nil
G-16	Nil

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Pulps Retained one month unless specific arrangements made in advance.

Assayer

To: Mr. J.A. Climie
2419 Deerside Drive S.E.
Calgary, Alberta
T2J 5L7

File No. 29961
Date July 10th, 1987
Samples Soil

Certificate of ASSAY

LORING LABORATORIES LTD.

SAMPLE No.	Au ppb
GEOCHEMICAL ANALYSES	
G-17	Nil
G-18	Nil
G-19	Nil
G-20	Nil
G-21	Nil
G-22	Nil
G-23	Nil
G-24	Nil
G-25	Nil
G-26	Nil
G-27	Nil
G-28	Nil
G-29	Nil
H-1	Nil
H-2	Nil
H-3	Nil
H-4	5
H-5	Nil
H-6	Nil

I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES . . . .

Rejects Retained one month.

Pulps Retained one month unless specific arrangements made in advance.

Assayer

To: Mr. J.A. Climie
2419 Deerside Drive S.E.
Calgary, Alberta
T2J 5L7

File No. 29961
Date July 10th, 1987
Samples Soil

Certificate of ASSAY

LORING LABORATORIES LTD.

SAMPLE No.	Au ppb
GEOCHEMICAL ANALYSES	
H-7	Nil
H-8	Nil
H-9	Nil
H-10	Nil
H-11	Nil
H-12	Nil
H-13	Nil
H-14	Nil
H-15	Nil
H-16	Nil
H-17	Nil
H-18	Nil
H-19	Nil
H-20	Nil
H-21	Nil
H-22	Nil
H-23	Nil
H-24	5
H-25	Nil
H-26	10

I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES . . . .

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Pulps Retained one month unless specific arrangements made in advance.

Assayer

To: Mr. J.A. Climie
2419 Deerside Drive S.E.
Calgary, Alberta
T2J 5L7

File No. 29961
Date July 10th, 1987
Samples Soil

Certificate of ASSAY

LORING LABORATORIES LTD.

SAMPLE No.	Au ppb
GEOCHEMICAL ANALYSES	
H-27	Nil
H-28	Nil
H-29	10

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Rejects Retained one month.

Pulps Retained one month unless specific arrangements made in advance.

Rod Beaver
Assayer

To: Mr. J.A. Climie
2419 Deerside Drive S.E.
Calgary, Alberta
T2J 5L7

File No. 29962
Date July 10th, 1987
Samples Soil

Certificate of ASSAY

LORING LABORATORIES LTD.

SAMPLE No.	Au ppb
GEOCHEMICAL ANALYSES	
J-1	Nil
J-2	10
J-3	Nil
J-4	5
J-5	5
J-6	5
J-7	Nil
J-8	10
J-9	Nil
J-10	5
J-11	Nil
J-12	Nil
J-13	10
J-14	Nil
J-15	Nil
J-16	Nil
J-17	5
J-18	Nil
J-19	5
J-20	Nil

I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES . . . .

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Assayer

To: Mr. J.A. Climie
2419 Deerside Drive S.E.
Calgary, Alberta
T2J 5L7

File No. 29962
Date July 10th, 1987
Samples Soil

Certificate of ASSAY

LORING LABORATORIES LTD.

SAMPLE No.	Au ppb
GEOCHEMICAL ANALYSES	
J-21	5
J-22	Nil
J-23	Nil
K-1	Nil
K-2	5
K-3	5
K-4	15
K-5	10
K-6	15
K-7	Nil
K-8	5
K-9	Nil
K-10	10
K-11	5
K-12	15
K-13	10
K-14	Nil
K-15	Nil
K-16	Nil

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Assayer

To: Mr. J.A. Climie
2419 Deerside Drive S.E.
Calgary, Alberta
T2J 5L7

File No. 29962
Date July 10th, 1987
Samples Soil

Certificate of ASSAY

LORING LABORATORIES LTD.

SAMPLE No.	Au ppb
GEOCHEMICAL ANALYSES	
K-17	Nil
K-18	Nil
K-19	Nil
K-20	5
K-21	Nil
K-22	Nil
K-23	Nil
L-1	Nil
L-2	5
L-3	5
L-4	5
L-5	Nil
L-6	Nil
L-7	Nil
L-8	Nil
L-9	10
L-10	Nil
L-11	Nil
L-12	Nil

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Pulps Retained one month unless specific arrangements made in advance.

Assayer

To: Mr. J.A. Climie
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Calgary, Alberta
T2J 5L7

File No. 29962
Date July 10th, 1987
Samples Soil

Certificate of ASSAY

LORING LABORATORIES LTD.

SAMPLE No.	Au ppb
GEOCHEMICAL ANALYSES	
L-13	Nil
L-14	Nil
L-15	Nil
L-16	Nil
L-17	Nil
L-18	Nil
L-19	Nil
L-20	Nil
L-21	Nil
L-22	Nil
L-23	15
M-1	Nil
M-2	Nil
M-3	Nil
M-4	25
M-5	Nil
M-6	Nil
M-7	Nil
M-8	Nil

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Calgary, Alberta
T2J 5L7

File No. 29962
Date July 10th, 1987
Samples Soil

Certificate of ASSAY

LORING LABORATORIES LTD.

SAMPLE No.	Au ppb
GEOCHEMICAL ANALYSES	
M-9	5
M-10	10
M-11	Nil
M-12	5
M-13	5
M-14	Nil
M-15	5
M-16	5
M-17	Nil
M-18	5
M-19	5
M-20	Nil
M-21	Nil
M-22	10
M-23	15
N-1	10
N-2	15
N-3	30
N-4	Nil

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T2J 5L7

File No. 29962
Date July 10th, 1987
Samples Soil

Certificate of ASSAY

LORING LABORATORIES LTD.

SAMPLE No.	Au ppb
GEOCHEMICAL ANALYSES	
N-5	20
N-6	Nil
N-7	5
N-8	10
N-9	25
N-10	5
N-11	5
N-12	5
N-13	10
N-14	Nil
N-15	Nil
N-16	Nil
N-17	5
N-18	5
N-19	Nil
N-20	5
N-21	5
N-22	Nil
N-23	Nil
N-24	5

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Calgary, Alberta
T2J 5L7

File No. 29962
Date July 10th, 1987
Samples Soil

Certificate of ASSAY

LORING LABORATORIES LTD.

SAMPLE No.	Au ppb
GEOCHEMICAL ANALYSES	
N-25	10
P-1	Nil
P-2	Nil
P-3	Nil
P-4	Nil
P-5	5
P-6	5
P-7	20
P-8	15
P-9	10
P-10	10
P-11	Nil
P-12	5
P-13	Nil
P-14	Nil
P-15	Nil
P-16	Nil
P-17	25
P-18	Nil

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To: Mr. J.A. Climie
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Calgary, Alberta
T2J 5L7

File No. 29962
Date July 10th, 1987
Samples Soil

Certificate of ASSAY

LORING LABORATORIES LTD.

SAMPLE No.	Au ppb
GEOCHEMICAL ANALYSES	
P-19	5
P-20	Nil
P-21	Nil
P-22	35
P-23	Nil
P-24	Nil
P-25	5
Q-1	10
Q-2	10
Q-3	15
Q-4	Nil
Q-5	5
Q-6	Nil
Q-7	10
Q-8	5
Q-9	5
Q-10	Nil
Q-11	Nil
Q-12	35

I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES . . . .

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Pulps Retained one month unless specific arrangements made in advance.

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Calgary, Alberta
T2J 5L7

File No. 29962
Date July 10th, 1987
Samples Soil

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LORING LABORATORIES LTD.

SAMPLE No.	Au ppb
GEOCHEMICAL ANALYSES	
Q-13	75
Q-14	60
Q-15	Nil
Q-16	5
Q-17	10
Q-18	10
Q-19	Nil
Q-20	Nil
Q-21	Nil
Q-22	Nil
Q-23	Nil
Q-24	Nil
Q-25	10
Sd-1	5
Sd-2	5
Sd-3	Nil
Sd-4	Nil
Sd-5	65
Sd-6	10

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Rejects Retained one month.

Pulps Retained one month unless specific arrangements made in advance.

Bodi Beran
Assayer

To: Mr. J.A. Climie
2419 Deerside Drive S.E.
Calgary, Alberta
T2J 5L7

File No. 29962
Date July 10th, 1987
Samples Soil

Certificate of ASSAY

LORING LABORATORIES LTD.

SAMPLE No.	Au ppb
GEOCHEMICAL ANALYSES	
Sd-7	Nil
Sd-8	5
Sd-9	Nil
Sd-10	Nil
Sd-11	5
Sd-12	Nil
Sd-13	Nil
Sd-14	5

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Bodi Beran
Assayer

APPENDIX 2

PETROGRAPHIC REPORT

Petrographic description of three rock samples

from Takla Group rocks in central British Columbia

Arpad Farkas

Arpad Farkas, Ph.D.

Toronto, Ontario

July 1987

Polished thin section

Rock type: metasomatized intermediate or felsic intrusive

Mineralogy: plagioclase, diopside, biotite, sericite, carbonate

---

Plagioclase: 40-50% — subhedral grains with 0.5 to 1 mm diameter. Impregnated with very fine grained dusty opaque mineral. Light brown coloured in plane light. Partially replaced by very fine grained sericite and fine grained patchy carbonate.

Diopside: 30% — anhedral or subhedral prismatic grains interstitial between diopside. Some grains contain biotite inclusions. Locally replaces biotite along its cleavage planes. Grainsize 0.3 to 1.5 mm.

Biotite: 10% — platy crystals of 0.5 to 1 mm length interstitial between plagioclase. Locally it rims plagioclase. Some grains are intergrown with and replaced by diopside.

Carbonate: minor — occurs along hairline fractures of 1/10 mm width. Trace amount of disseminated carbonate replaces the plagioclase.

Magnetite: 10-15% — anhedral grains interstitial between feldspars. Grainsize 1/4 to 1 mm. It is often intergrown with diopside. Contains a few hematite inclusions and lamellae of hematite.

Pyrite: minor — fine grained inclusions in sericitized feldspars. The average grainsize is 20-30 micron. A few larger subhedral grains.

Chalcopyrite: trace — has the same mode of occurrence as pyrite.

Interpretation: The pyroxene is interpreted to be a late addition to the rock (i.e., the rock is not a gabbro!) Narrow, elongate, lenticular bodies of diopside replace biotite, which was probably a primary constituent. The parent rock must have been a diorite or perhaps a felsic intrusive. The moderate to fairly intensive sericitic alteration of plagioclase probably postdates the metasomatism. Minor amount of pyrite and trace amount of chalcopyrite was deposited with the sericite. There is not enough sericite, carbonate, and pyrite to suggest a significant hydrothermal activity.

Polished thin section

Rock type: diposide-magnetite skarn

Mineralogy: diopside or hedenbergite, biotite, plagioclase, carbonate, epidote, chlorite, magnetite, hematite, pyrite, chalcopyrite.

Diopside: 78% — anhedral grains with 0.3 to 1.5 mm diameter. Forms a granular mosaic. Often contains magnetite inclusions.

Biotite: minor — fine grained biotite is interstitial between diopside. Some grains are partially chloritized.

Plagioclase: 1% — occurs in 1 mm wide veinlets which cut the skarn. Clouded with fine dusty sericite or partially replaced by epidote.

Epdiote: trace — replaces plagioclase. Fine anhedral grains with a diameter of 0.01 to 0.1 mm.

Carbonate: trace — occurs in fractures with 1/4 mm width.

Chlorite: trace — fine grained chlorite interstitial between diopside. Replaces biotite and plagioclase.

Magnetite: 20%
(1) anhedral grains interstitial between diopside. Grainsize ranges from 0.1 to 0.5 mm.
(2) fine grained euhedral to anhedral inclusions in diopside. Grainsize is 0.01 to 0.05 mm.

Hematite: trace — fine anhedral inclusions in magnetite. Locally replaces the magnetite.

Chalcopyrite: trace — very fine anhedral grains in feldspar veinlet.

Pyrite: trace — has the same mode of occurrence as chalcopyrite. Very fine anhedral grains.

Interpretation: The mineralogical composition (80% diopside, 20% magnetite) and the granular texture suggests a contact metasomatic origin for the rock. The presence of magnetite indicates that the diopside is probably iron-rich, i.e., its composition could be close to that of hedenbergite. The parent rock was calcareous. Significant amount of iron was added to the rock during metasomatism. The trace amount of pyrite and pyrrhotite postdated formation of the skarn. The lack of sulfides suggests little potential for gold.

Thin section

Rock type: syenite.

Mineralogy: sodic plagioclase, orthoclase (?), biotite, chlorite, sericite, epidote, carbonate, opaque.

Plagioclase: 85% — euhedral to anhedral crystals with an average diameter of 0.3 to 0.6 mm. In plane light it is brownish coloured, impregnated with a very fine grained opaque. Moderate to fairly intensive alteration to fine grained sericite. Some zoned crystals. It is either a sodic plagioclase or albite. Minor amount of questionable orthoclase.

Biotite: 8-10% — platy crystals with 0.3 mm diameter. Few larger grains with up to 1 mm diameter. It is interstitial between feldspars. Locally replaced by chlorite.

Chlorite: minor — replaces biotite and less commonly feldspar. Fine grained disseminated chlorite replaces feldspar.

Pyroxene(?): 1% — subhedral prismatic grains with 1/2 mm length.

Epidote: 2% — often replaces feldspar. Tabular crystals and anhedral aggregates. Average grainsize is 0.3 mm.

Carbonate: 1% — fine grained disseminated carbonate replaces feldspars.

Opaque: 2-3% — subhedral cubes and anhedral grains with 0.3 to 0.5 mm diameter. (It is either pyrite or magnetite.)

Interpretation: Little or no metasomatism has affected the rock. The mineralogical composition suggests a sodic syenite (i.e., the rock is probably not shoshonitic in character). It is either a fine grained intrusive or a subvolcanic rock. The alteration is characterized by minor to fair amount of sericite and minor epidote and carbonate.

10. ITEMIZED COST STATEMENT

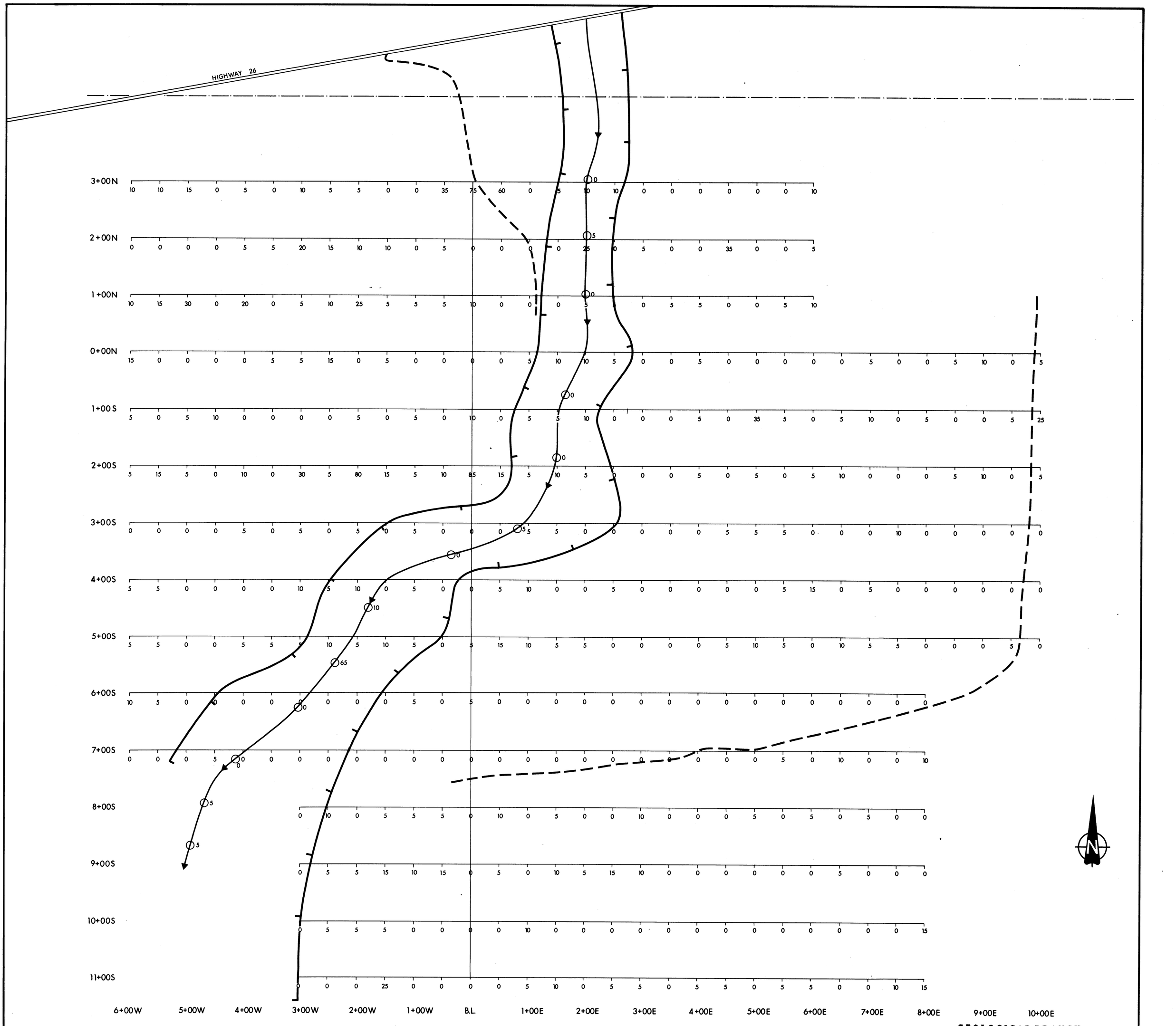
General Parameters

Operator	:	First Nuclear Corporation
Contractor	:	J.A. Climie (P. Geol.)
Field Crew	:	J.A. Climie
Time Period	:	June 17 - June 24, 1987 (Field)
		August 8-9, 15-16, 1987 (Interpretation/Report)

Cost Statement

GRIDDING	
21.8 Km @ $135/Km	$ 2 943.00
SOIL AND SEDIMENT SAMPLE COLLECTION	
437 samples @ $3.50/sample	1 529.50
ANALYSES	
437 samples @ $7.50/sample	3 277.50
PROSPECTING, GEOLOGICAL MAPPING, ROCK SAMPLING	
3 days @ $300/day	900.00
PETROGRAPHIC STUDY	180.00
DATA COMPILATION, INTERPRETATION, REPORT PREPARATION	
3 days @ $300/day	900.00
TYPING	
(Report, correspondence, exploration expenditure statement etc.	155.00
DRAFTING	
12 hours @ $17/hour	204.00
PRINTING	
Map printing	44.87
MISCELLANEOUS	
Postage, phone, stationery etc.	35.00
	$10 168.87

Continued../2



LEGEND

- HIGHWAY
- CLAIM BOUNDARY (NORTHERN)
- BUSH TRAIL / ROAD
- RAVINE / STREAM
- SOIL SAMPLE - PPB GOLD
- SEDIMENT SAMPLE - PPB GOLD

GEOLOGICAL BRANCH
ASSESSMENT REPORT

16,513

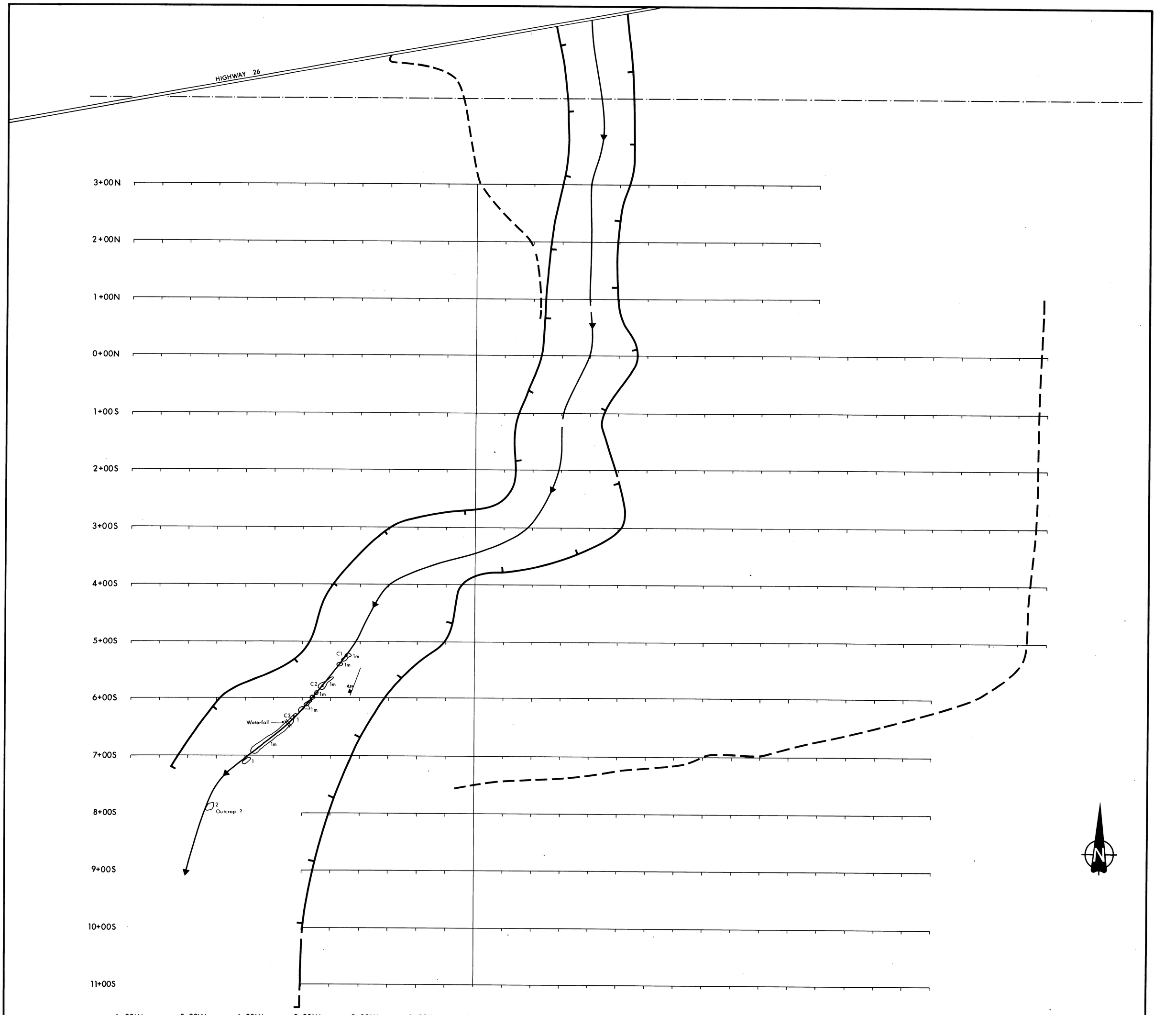
0 100 200 300
METRES

FIRST NUCLEAR CORPORATION

COT 2 CLAIM

GEOCHEMISTRY
GOLD

DRAWING Nº 87-03	SCALE 1:2500	AUTHOR J. A. CLIMIE
NTS 93 G-1W	DATE AUGUST, 1987	



LEGEND

- 2 — QUARTZ MONZONITE
- 1m — METASOMATISED SYENITE AND DIOPSIDE-MAGNETITE SKARN
- 1 — SYENITE. FINE-GRAINED, SODIC SYENITE WITH LITTLE OR NO METASOMATISM, BUT GRADING TO METASOMATIZED SYENITE AND SKARN

- HIGHWAY
- CLAIM BOUNDARY (NORTHERN)
- BUSH TRAIL / ROAD
- RAVINE / STREAM
- JOINT DIRECTION
- C1 — LOCATION OF SAMPLE FOR PETROGRAPHIC STUDY
- OUTCROP

GEOLOGICAL BRANCH
ASSESSMENT REPORT

16,513

0 100 200 300
METRES

FIRST NUCLEAR CORPORATION

COT 2 CLAIM

GEOLOGY

DRAWING Nº	SCALE	AUTHOR
87-04	1:2500	J. A. CLIMIE
NTS 93 G-1W	DATE AUGUST, 1987	