GEOLOGICAL, GEOCHEMICAL REPORT

ON THE

KNIGHT CLAIMS

KNIGHT 1	301572	KNIGHT 3	301574
KNIGHT 2	301573	KNIGHT 4	301575

Lillooet Mining Division
N.T.S. 92O/3
Latitude 51°05'50", Longitude 123°01'35"

Owner and Operator: Noranda Exploration Company, Limited (no personal liability)

Author: J. McCorquodale
Date : October, 1991

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SUMMARY

The Knight property is situated within the Coast Mountain range on NTS map sheet 920/3. It is comprised of four claims (Knight 1-4) totalling 50 units. The property is located within the Tyaughton Trough and is underlain by Upper Triassic to Middle Jurassic sediments which have been intruded by an alkalic stock.

Twenty man days were spent, soil and rock sampling, mapping, prospecting, and establishing a 10.6 line km grid. This field survey covers a 2 km^2 area within the southern third of the property.

The grid soil survey confirmed a previously reported Cu, Au soil anomaly (Assessment Reports #9196 & 9753). The northwest half of the soil survey outlines a coincident anomalous Cu, Au soil response, while the southeast portion of the grid is dominated by a Au soil anomaly.

The limited mapping, prospecting and rock sampling of the grid area did not fully explain the source of these highly elevated and widespread soil anomalies.

1.0 INTRODUCTION

1.1 Property Location

The Knight property is located within the Coast Mountain Range (N.T.S. Map Sheet 920/3E), north of Tyaughton Creek. The property is situated 33 km NNW of Gold Bridge, B.C. at 51°05'50" latitude, 123°01'35" longitude (Figure 1).

1.2 Access

Access to the property is by helicopter either from Gold Bridge, 33 km to the SSE, or from Pemberton 90 km to the south.

1.3 Physiography

Topographic relief is quite severe. The elevation varies between 1800 m to 2440 m giving a local relief of about 640 m.

The southern third of the claim group is below treeline. The mature forest cover is generally open with moderate underbrush. The northern two thirds is alpine, predominantly talus and scree slopes with rock outcrops generally limited to ridge tops.

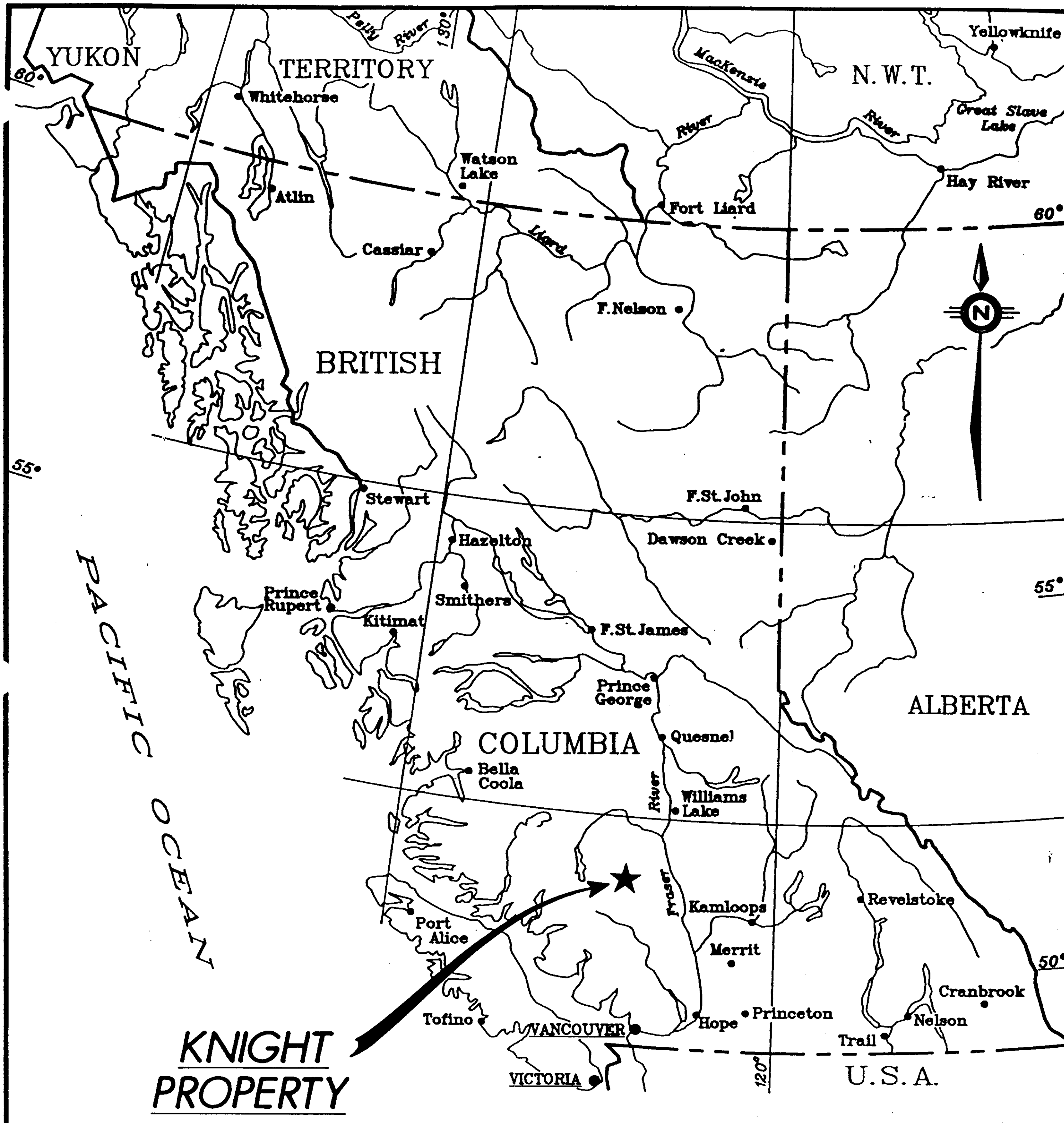
Several small creeks drain the property to the southwest and empty into Tyaughton Creek.

1.4 Ownership - Property Status

The Knight claim group consists of 4 claims totalling 50 units and are owned by Noranda Exploration (Figure 2). The following is a list of all claims and to which assessment will be applied.

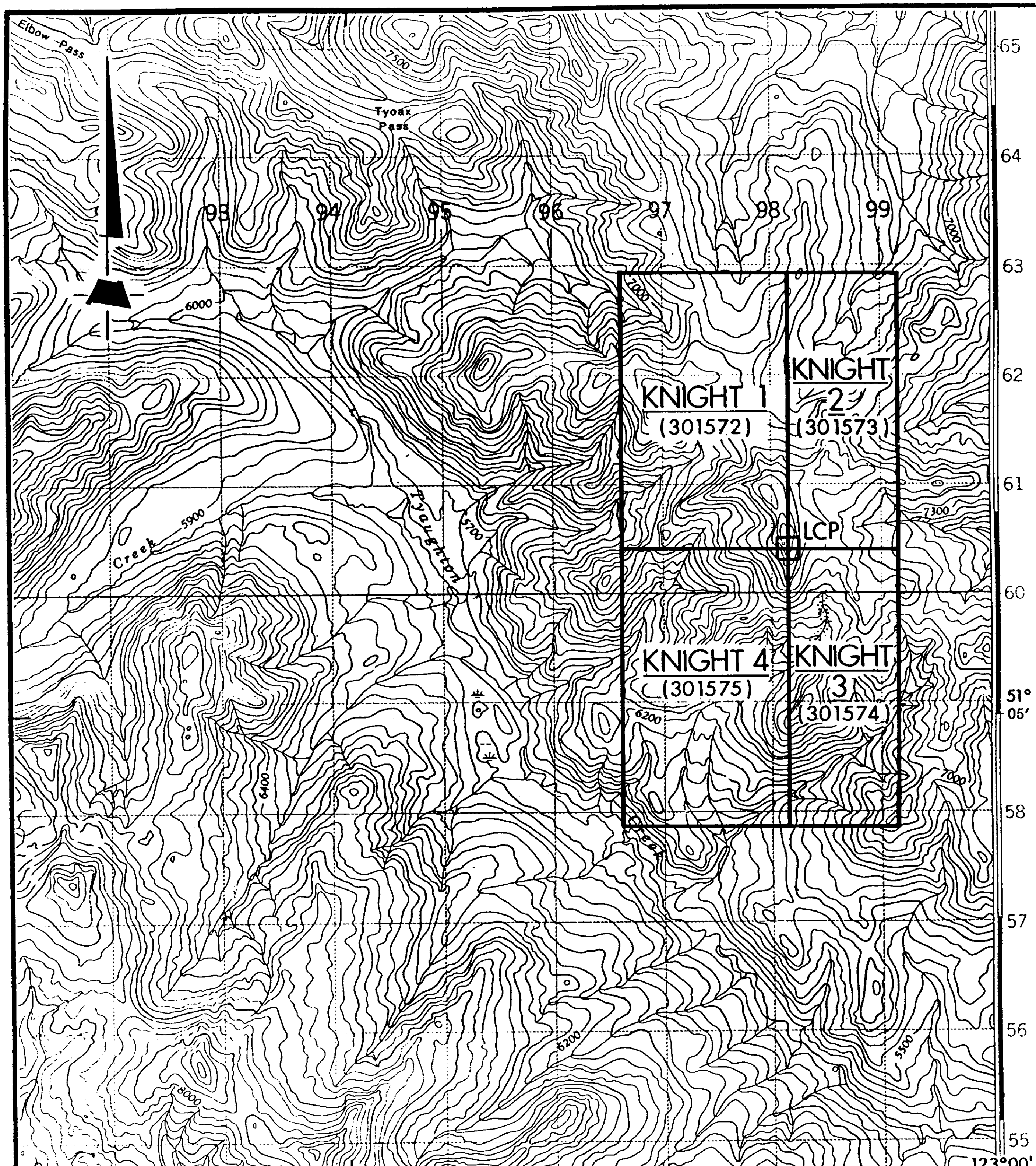
Claim	Record #	Units	Record Date	Expiry Date *
Knight 1	301572	15	June 10/91	June 10/94
Knight 2	301573	10	June 10/91	June 10/94
Knight 3	301574	10	June 10/91	June 10/94
Knight 4	301575	15	June 11/91	June 11/94
	TOTAL	50 Units		

* Upon approval/acceptance of the work provided within this report.



REVISED	KNIGHT PROPERTY
	LOCATION MAP
PROJ.No. 136	SURVEY BY: DATE: OCT./1991
N.T.S.	DRAWN BY: J.SERWIN (ACAD) SCALE:
DWG.No. 1	NORANDA EXPLORATION
	OFFICE: VANCOUVER

Miles 0 50 100 150 Miles



SCALE

1 : 50,000

Metres 1000 500 0 1000 2000 Metres

REVISED	KNIGHT PROPERTY
	CLAIMS LOCATION
PROJ.No. 136	SURVEY BY: J. McC. DATE: Oct./1991
N.T.S. 92-O/3	DRAWN BY: J. Serwin SCALE: 1 : 50,000
DWG. No. 2	NORANDA EXPLORATION OFFICE: VANCOUVER

NCI-774

1.5 Previous Work

The only previous work reported within the area, is that of Prism Resources Ltd., 1980 and 1981 field programmes. The work consisted of a soil grid survey covering an area of 2 km^2, and 126 rock samples were collected from the grid and surrounding area. The soil survey outlined good Cu anomalies with partially coincident Au anomalies. Rock geochemical results were fairly disappointing.

1.6 Project Objective

Noranda Exploration's 1991 objectives were to confirm the previously reported Cu-Au soil anomalies and attempt to explain the source of the soil anomaly using rock geochemistry, prospecting and geological mapping.

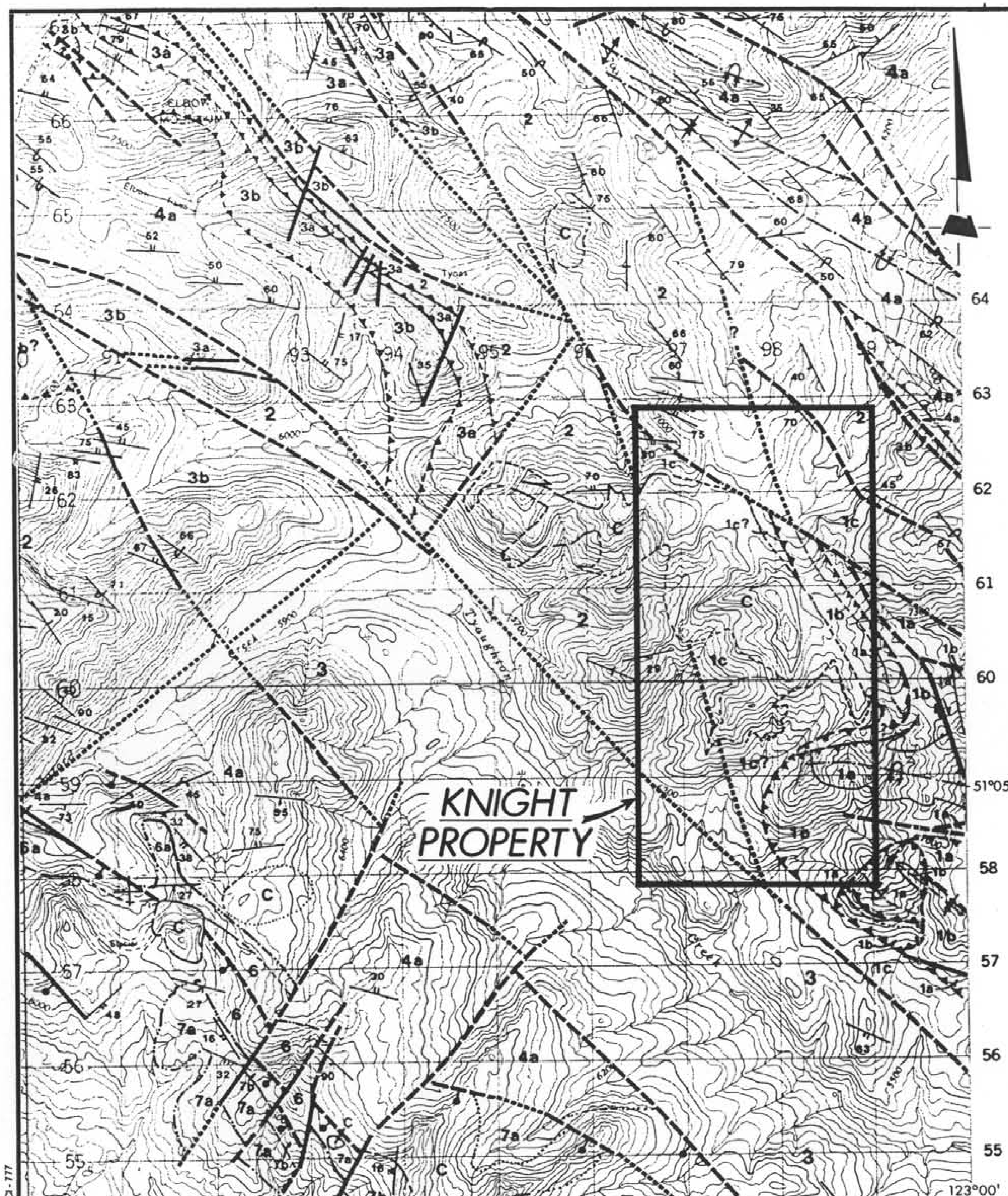
2.0 GEOLOGY

2.1 Regional Geology

The claims are located within the Tyaughton Trough and are underlain by trough related sediments which are divided into two groups, the Tyaughton and Relay Mountain groups. The sediments were subsequently intruded by an unnamed alkalic porphyry, (Figure 4).

The oldest sediments are of the Tyaughton Group and are Upper Triassic to Middle Jurassic in age. They range from dark grey, black calcareous shale, greywacke, to green and grey sandstone, shale, conglomerate and conglomeritic sandstone, through to massive limestone and limestone conglomerate. These sediments are in fault contact with the Relay Mountain Group of Middle Jurassic to Lower Cretaceous Age. The Relay Mountain Group is comprised of dark grey siliceous shale, interbedded with siltstone and calcarenite; greywacke, grit and volcanic conglomerate.

An alkalic porphyry of Upper Cretaceous-Eocene Age intrudes the sediments. Regionally it is described as a hornblende, plagioclase, biotite porphyry with accessory quartz.



LEGEND

PLEISTOCENE AND RECENT

- [Qal] Alluvium

STRATIFIED ROCKS

MIOCENE AND/OR PLIOCENE

- [8] Plateau lava, basalt flows

EOCENE (?)

- [7] Rhyolite, dacite flows, pyroclastic rocks and volcanic sediments (7a); basalt flows and flow breccias (7b)

UPPER CRETACEOUS (CENOMANIAN AND (?) YOUNGER

- [6c] Bedded lanaric andesitic breccia and epiclastic sediments
- [6b] Andesitic breccia, lapilli tuff, crystal tuff, with minor andesitic to basaltic flows
- [6a] Volcanic sandstone and conglomerate; polymict conglomerate
- [6] Undivided; mostly Unit 6b with minor epiclastic sediments
- [5] Micaceous sandstone, shale and polymict conglomerate

LOWER CRETACEOUS (APTIAN AND ALBIAN)

TAYLOR CREEK GROUP

- [4] Argillite, siltstone, sandstone, chert pebble conglomerate (4a); dacitic to andesitic flows and volcaniclastic rocks, interbedded with shale and siltstone (4b)

MIDDLE JURASSIC TO LOWER CRETACEOUS

RELAY MOUNTAIN GROUP

(BERRIASIAN TO BARREMIAN)

- [3b] Interbedded grey to greenish grey siltstone, shale, greywacke; minor cobble conglomerate and limestone

(U. OXFORDIAN TO U. TITHONIAN)

- [3a] Dark grey to green greywacke, siltstone, shale and minor conglomerate
- [3] Undivided

(CALLOVIAN AND L. OXFORDIAN)

- [2] Dark grey siliceous shale interbedded with siltstone and calcarenite; greywacke, grit and volcanic conglomerate

UPPER TRIASSIC TO MIDDLE JURASSIC

TYAUGHTON GROUP

(SINEMURIAN TO M. BAJOCIAN)

- [1c] Dark grey to black calcareous shale and argillite, grey greywacke

(U. NORIAN TO L. SINEMURIAN)

- [1b] Green and grey sandstone, shale, conglomerate and conglomeratic sandstone

(M. AND U. NORIAN)

- [1a] Red conglomerate and conglomeratic sandstone, massive limestone and limestone conglomerate

INTRUSIVE ROCKS

- [D] Equigranular quartz monzonite to granodiorite
- [C] Hornblende plagioclase biotite porphyries with accessory quartz
- [B] COAST PLUTONIC COMPLEX: quartz diorite to quartz monzonite
- [A] Hornblende plagioclase porphyries; minor diorite

SYMBOLS

Geologic contact (defined, approximate, assumed)

Unconformity (defined, assumed)

Bedding, tops known (horizontal, inclined, vertical overturned)

Bedding, tops unknown (horizontal, inclined, vertical)

Anticline, syncline: upright

Anticline, syncline: overturned

Thrust fault (defined, approximate, assumed) (teeth in direction of dip and indicate upthrust side)

High angle fault (defined, approximate, assumed)

Normal fault (defined, approximate, assumed) (solid circle indicates down-thrown side)

Strike-slip fault (defined, approximate, assumed) (arrows indicate relative sense of movement)

Metres 1000 500 0 1000 Metres

Geology from;
Open File Map 1987/3
"3A. Geology of the Warner Pass Area", N.T.S. 92 O/3

REVISED	
	KNIGHT PROPERTY
	REGIONAL GEOLOGY
PROJ.No. 136	SURVEY BY: J. McC. DATE: Oct./1991
N.T.S. 92 O/3	DRAWN BY: J. Serwin SCALE: 1:50,000
DWG. No. 3	NORANDA EXPLORATION OFFICE: VANCOUVER

P.J.A.

The dominant structural trend of the region displays a number of NW trending high angle faults of undetermined displacement.

Within the Tyaughton Group sediments, thrust faulting and folding are prevalent. Thrust faults and right lateral strike-slip faults are truncated by regional high angle faults. The axial traces of the folded sediments trends in a WNW direction.

2.2 Property Geology

The field survey was limited to the southern third of the Knight claim group. Geological mapping was confined to the grid area (Figure 4). Rock outcroppings occur primarily along the ridge tops with heavy talus cover on the slopes.

The mapped area is underlain by Tyaughton Group sediments, consisting of grey siltstone, dark grey to black argillite, conglomeritic sandstone and red greywacke. These sediments have synclinal and anticlinal folding with axial traces trending east-west, and are cut by shear zones trending NE.

To the north is a mesocratic plagioclase, hornblende ± biotite porphyry stock. The stock occupies the central third of the property. Porphyritic dykes observed south of the stock trend in a NE direction. Another intrusive unit, seen only in talus float is a fine grained leucocratic aplite, with quartz eyes. The orientation and abrupt change in the talus suggests that this aplite cross-cuts the Tyaughton Group sediments.

Alteration within the sediments is weak to moderate and localized. Overall, there is a slight clay (argillic) alteration throughout the sediments. Locally, more intense argillic and phyllic alteration occurs proximal to small (3-7 cm wide) quartz-carbonate veinlets. Mineralization in the form of malachite and chalcopyrite are associated with the quartz carbonate veins and is seen to extend into the bounding wallrock up to 0.75 m. Best exposures reflecting this style of mineralization has to date been recognized on the west ridge within the gridded area at approximately L.114+00N, 105+00W.

The plagioclase hornblende porphyry is mostly unaltered and exhibits only minor metasomatic alteration with the bounding country rock.

3.0 GEOCHEMICAL SURVEY

3.1 Soil Geochemistry

A compass and chain soil grid was established to evaluate an area reported to contain a large Cu-Au soil geochemical anomaly (Prism Resources 1982). The grid covers the southern third of the claim group (Figures 4 & 5).

The baseline was established at 315° azimuth over a distance of 2.0 km with crosslines established at 200 m centres. Stations along the survey lines were picketed at 25 m intervals with soil samples collected at 50 m intervals. To better define historical anomalous soil results, soil samples were locally collected at 25 m intervals.

Soil samples were taken from the B horizon, generally 15-20 cm in depth. In areas of heavy talus cover, talus fines were collected. Soil and talus fines were placed in a brown 8.9 cm x 15.5 cm open ended Kraft envelope for storage and shipment to Noranda's geochemical laboratories in Vancouver. Full description of the method of analysis is in Appendix II.

A total of 117 soil samples were collected and analyzed using 30 element ICP plus Atomic Absorption for gold. For results see Figure 5 and Appendix III.

3.2 Rock Geochemistry

A total of 10 rock samples were collected from the grid area. Chip sampling of both vein and wall rock exposures were completed to determine the extent and tenor of mineralization.

All rock samples were analyzed using 30 element ICP plus Atomic Absorption for gold. Figure 4 shows the rock sample locations and values, and Appendix IV contains the rock sample descriptions.

4.0 DISCUSSION OF RESULTS

A soil geochemical contour map for Cu & Au is shown on Figure 5. Copper in soils have been contoured at 300 ppm Cu and 900 ppm Cu. Gold in soils have been contoured at 50 ppb Au and 200 ppb Au. The soil contour map shows two anomalous zones. The northwest half of the grid is dominantly Cu, while the southeast is dominated by Au.

Within the northwest portion of the grid the highest Cu soil anomaly is defined by the $\geq$900 ppm Cu contour and contains spot highs up to 2567 ppm Cu. A coincident Au soil anomaly ($\geq$50 ppb Au) is enveloped within the 900 ppm Cu contour. The $\geq$300 ppm Cu contour encircling both the 900 ppm Cu and 50 ppb Au contours is open to the northwest.

Within the southeast half of the grid the $\geq$50 ppb Au soil contour defines an area of approximately 500 m x 800 m, and contains two elongated $\geq$200 ppb Au soil zones. A zone 300 x 400 m containing Cu $\geq$100 ppm in soils has only two results >300 ppm Cu and lies totally within the >50 ppb Au contour.

The results of the rock geochemistry were inconclusive with regards to explaining the gold soil anomaly. Significant Cu values were however returned from rocks collected within the northwest portion of the grid.

Two contiguous samples collected from limited outcrop on the north-west ridge with approximate grid co-ordinates of L114+00N/ 102+00W (Figure 4) returned the following Cu, Au values:

SAMPLE NO.	Cu (ppm)	Au (ppb)	WIDTH (m)
R115145	3177	143	0.01
R115146	3671	87	1.0

R115145 is a sample of a 1 cm wide mineralized (malachite, chalcopyrite) quartz-carbonate veinlet. R115146 is a 1 metre chip sample from the veinlets' hangingwall and footwall. The host rock is a poorly sorted red coloured greywacke with chalcopyrite and malachite proximal to the veinlet. The presence of these quartz-carbonate veinlets appears to be essential with regards to Cu mineralization of the greywacke.

Rock sample R114686 collected at approximately L110+00N, 106+00W consists of medium to dark grey pyritic laminated siltstone. Sulphide mineralization (pyrite and chalcopyrite) is very finely disseminated throughout the rock, and along hairline fractures. This sample returned values of 4678 ppm Cu and 18 ppb Au over 1 m.

5.0 CONCLUSIONS

The soil geochemical survey has defined anomalous Cu and Au zones. Coincidental Cu & Au is seen on the northwest half of the grid, while on the southeast portion of the grid, anomalous Au in soils is prevalent with less strongly anomalous but coincidental Cu values. The soil anomalies are large in size and are moderately to strongly anomalous. Surface mapping, prospecting and rock sampling has not adequately explained this large soil anomaly. It should be noted that because soil development was poor, talus fines were often collected instead of soil samples. This may have lead to the large and widespread anomalies, as talus fines tend to report higher level trace metal values.

STATEMENT OF QUALIFICATIONS

****

I, Joan E. McCorquodale, of the City of Vancouver, Province of British Columbia do hereby certify that:

1. I am a geologist residing at 127 West 21st Avenue, Vancouver, B.C.

2. I graduated from the University of Alberta in 1988 with a BSc. degree (specialization) in Geology.

3. I have worked in mineral exploration and government geology since 1985.

4. I am presently a Contract Geologist with Noranda Exploration Company, Limited.

Joan E. McCorquodale

REFERENCES

Denwonck, B. (1981): Geological and Geochemical Report, Tyon Claim. Assessment Report 9196.

Denwonck, B. (1981): Geological and Geochemical Report, Tyon Claim. Assessment Report 9753.

Glover, J.K., et al (1987): 3A. Geology of the Warner Pass Area. N.T.S. 920/3. Open File Map 1987/3.

APPENDIX I

STATEMENT OF COSTS

STATEMENT OF COSTS

a) **Wages:**

No. of Days :	20 man days	
Rate per Day:	$140/man day	
Dates From :	August 27-31, 1991	
Total Wages :	20 x $140.00	$2,800.00

b) **Food & Accommodation:**

No. of Days :	5 days food, 1 night accommodation	
Rate per Day:	$140.80/day ÷ 4 crew = $35.20/manday	
Dates From :	August 27-31, 1991	
Total Cost :	20 man days x $35.20/day	$ 704.00

c) **Transportation:**

Helicopter

No. of Hours :	2.16 hours	
Rate per Hour:	$750/hour	
Total Cost :	2.16 hrs. x $750/hr.	$1,622.00

Truck

No. of Days :	5 days	
Rate per day :	$41.60/day	
Dates From :	August 27-31, 1991	
Total Cost :	$41.60/day x 5 days	$ 208.00

e) **Analysis:**

Soil

117 samples analyzed for ICP 30 element plus AA gold.
Average cost for samples: $17.49/sample

Total Cost :	117 samples x $17.49	$2,046.33

Rock

10 samples analyzed by rock geochemistry ICP 30 element plus AA gold.
Average cost for samples: $17.49/sample

Total Cost :	10 samples x $17.49	$ 174.90

d) <u>Report:</u>

Author	$320.00		
Drafting	$240.00		
Typing	$240.00		
Total Costs		$800.00	
		TOTAL COSTS	$8,355.23

APPENDIX II

DETAILED DESCRIPTION OF METHOD OF ANALYSIS

ANALYTICAL METHOD DESCRIPTIONS FOR GEOCHEMICAL ASSESSMENT REPORTS

The methods listed are presently applied to analyse geological materials by the Noranda Geochemical Laboratory at Vancouver.

Preparation of Samples:

Sediments and soils are dried at approximately 80°C and sieved with a 80 mesh nylon screen. The -80 mesh (0.18 mm) fraction is used for geochemical analysis.

Rock specimens are pulverized to -120 mesh (0.13 mm). Heavy mineral fractions (panned samples * from constant volume), are analysed in its entirety, when it is to be determined for gold without further sample preparation.

Analysis of Samples:

Decomposition of a 0.200 g sample is done with concentrated perchloric and nitric acid (3:1), digested for 5 hours at reflux temperature. Pulps of rock or core are weighed out at 0.4 g and chemical quantities are doubled relative to the above noted method for digestion.

The concentrations of Ag, Cd, Co, Cu, Fe, Mn, Mo, Ni, Pb, V and Zn can be determined directly from the digest (dissolution) with a conventional atomic absorption spectrometric procedure. A Varian-Techtron, Model AA-5 or Model AA-475 is used to measure elemental concentrations.

Elements Requiring Specific Decomposition Method:

Antimony - Sb: 0.2 g sample is attacked with 3.3 ml of 6% tartaric acid, 1.5 ml conc. hydrochloric acid and 0.5 ml of conc. nitric acid, then heated in a water bath for 3 hours at 95°C. Sb is determined directly from the dissolution with an AA-475 equipped with electrodeless discharge lamp (EDL).

Arsenic - As: 0.2 - 0.3 g sample is digested with 1.5 ml of perchloric 70% and 0.5 ml of conc. nitric acid. A Varian AA-475 equipped with an As-EDL is used to measure arsenic content in the digest.

Barium - Ba: 0.1 g sample digested overnight with conc. perchloric, nitric and hydrofluoric acid; Potassium chloride added to prevent ionization. Atomic absorption using a nitrous oxide-acetylene flame determines Ba from the aqueous solution.

Bismuth - Bi: 0.2 - 0.3 g is digested with 2.0 ml of perchloric 70% and 1.0 ml of conc. nitric acid. Bismuth is determined directly from the digest with an AA-475 complete with EDL.

Gold - Au: 10.0 g sample is digested with aqua regia (1 part nitric and 3 parts hydrochloric acid). Gold is extracted with MIBK from the aqueous solution. AA is used to determine Au.

Magnesium - Mg: 0.05 - 0.10 g sample is digested with 4 ml perchloric/nitric acid (3:1). An aliquot is taken to reduce the concentration to within the range of atomic absorption. The AA-475 with the use of a nitrous oxide flame determines Mg from the aqueous solution.

Tungsten - W: 1.0 g sample sintered with a carbonate flux and thereafter leached with water. The leachate is treated with potassium thiocyanate. The yellow tungsten thiocyanate is extracted into tri-n-butyl phosphate. This permits colourimetric comparison with standards to measure tungsten concentration.

Uranium - U: An aliquot from a perchloric-nitric decomposition, usually from the multi-element digestion, is buffered. The aqueous solution is exposed to laser light, and the luminescence of the uranyl ion is quantitatively measured on the UA-3 (Scintrex).

N.B.: If additional elemental determinations are required on panned samples, state this at the time of sample submission. Requests after gold determinations would be futile.

LOWEST VALUES REPORTED IN PPM:

Ag - 0.2	Mn - 20	Zn - 1	Au - 0.01
Cd - 0.2	Mo - 1	Sb - 1	W - 2
Co - 1	Ni - 1	As - 1	U - 0.1
Cu - 1	Pb - 1	Ba - 10	
Fe - 100	V - 10	Bi - 1	

APPENDIX III

GEOCHEMICAL CERTIFICATES OF ANALYSIS

NORANDA VANCOUVER LABORATORY
Geochemical Analysis

Project Name & No.: TYAUGHTON (KNIGHT) – 136 Geol.: J.MC. Date received: SEP. 03 **LAB CODE:** 9109–028
Material: 128 SOILS Sheet: 1 of 3 Date completed: SEP. 20
Remarks: * Sample screened @ –35 MESH (0.5 mm)
¤ Organic, Δ Humus, S Sulfide Au – 10.0 g sample digested with aqua-regia and determined by A.A. (D.L. 5 PPB)
ICP – 0.2 g sample digested with 3 ml $HClO_4/HNO_3$ (4:1) at 203 °C for 4 hours diluted to 11 ml with water. Leeman PS3000 ICP determined elemental contents.
N.B. The major oxide elements and Ba, Be, Ce, La, Li, Ga are rarely dissolved completely from geological materials with this acid dissolution method. *Sb – Aqua Regia/Tartaric acid /AA

T.T. No.	SAMPLE No.	Au ppb	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	La ppm	Li ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	Sr ppm	Ti %	V ppm	Zn ppm
2	10000N–10000W	5	0.4	6.58	228	289	0.9	5	0.19	0.6	25	18	29	74	5.83	0.74	14	40	0.53	775	5	0.17	23	0.12	20	121	0.10	140	214
3	10100	5	0.2	5.54	218	266	0.8	5	0.35	0.8	29	20	22	62	5.41	0.64	13	35	0.54	1117	4	0.14	21	0.10	15	91	0.13	133	221
4	10200	10	0.2	5.65	215	220	0.9	5	0.29	0.5	28	22	20	62	5.66	0.79	13	36	0.72	646	2	0.08	21	0.07	16	58	0.14	129	184
5	10300	10	0.2	6.24	205	257	0.8	5	0.29	0.6	24	16	21	47	5.15	1.09	10	35	0.76	607	2	0.07	17	0.07	11	56	0.11	132	137
6	10000N–10400W	10	0.2	5.22	229	184	0.8	5	0.36	0.8	31	22	24	71	5.38	0.50	13	31	0.64	788	4	0.09	28	0.09	18	56	0.16	116	220
7	10000N–10500W	5	0.2	4.15	128	158	0.6	5	0.32	1.4	28	16	21	44	4.37	0.31	12	27	0.49	802	5	0.10	22	0.09	15	56	0.16	103	223
8	10600	15	0.2	5.08	254	232	0.8	5	0.33	1.2	33	19	18	89	5.62	0.55	14	26	0.57	646	9	0.09	25	0.11	18	84	0.14	133	175
9	10700	20	0.2	4.87	144	236	0.8	5	0.29	0.9	31	18	21	53	5.01	0.50	13	27	0.62	941	5	0.08	24	0.07	13	56	0.14	130	178
10	10800	15	0.2	4.22	141	159	0.7	5	0.36	1.5	31	19	25	64	4.92	0.39	13	22	0.53	776	8	0.11	26	0.10	14	62	0.17	108	208
11	10000N–10900W	35	0.4	3.15	310	92	0.5	5	0.38	0.8	23	15	18	103	4.36	0.28	10	13	0.38	500	9	0.11	20	0.12	26	48	0.12	74	135
12	10200N–10000W	30	0.6	5.19	185	167	0.7	5	1.91	1.0	38	13	23	54	4.08	0.57	13	30	0.48	650	4	0.10	21	0.13	16	162	0.11	128	143
13	10100 •	50	0.4	4.99	363	214	0.6	5	0.35	0.7	28	21	14	54	5.61	0.64	12	27	0.46	979	4	0.07	18	0.08	19	55	0.09	120	184
14	10200	65	0.2	5.45	782	162	0.6	5	0.19	0.2	21	19	9	48	5.71	0.67	10	35	0.35	818	2	0.08	17	0.07	18	45	0.08	124	143
15	10300	185	0.4	5.20	730	110	0.6	5	0.23	0.9	22	22	12	67	5.88	0.53	10	35	0.38	739	4	0.04	18	0.07	37	46	0.10	117	162
16	10200N–10400W •	75	0.4	3.75	428	136	0.5	5	0.41	1.3	26	24	10	66	5.47	0.47	10	19	0.48	927	3	0.05	19	0.07	29	40	0.10	103	210
17	10200N–10500W	30	0.4	4.72	303	149	0.7	5	0.29	0.7	27	17	22	278	6.29	0.28	14	22	0.68	470	19	0.07	38	0.12	31	58	0.18	140	158
18	10600	95	0.4	4.62	604	120	0.6	5	0.32	0.6	27	15	23	232	8.86	0.31	14	21	0.66	492	24	0.05	39	0.14	56	53	0.18	152	138
19	10700	240	0.6	4.60	704	89	0.5	10	0.24	1.1	25	9	22	308	13.27	0.23	16	20	0.57	232	33	0.05	23	0.17	50	87	0.17	123	96
20	10800	140	0.8	6.18	493	192	0.9	6	0.36	1.4	40	22	20	125	8.87	0.49	21	22	0.68	592	16	0.07	42	0.14	25	77	0.18	118	234
21	10200N–10900W	70	0.2	4.81	376	194	0.9	5	0.49	1.1	41	40	24	92	5.90	0.67	17	23	0.55	1727	4	0.07	27	0.14	24	85	0.14	115	160
22	10400N–10000W	35	1.2	5.79	78	116	0.6	5	4.48	0.5	37	15	12	60	3.88	0.91	9	31	0.31	821	7	0.11	15	0.06	14	269	0.06	146	84
23	10100	60	0.4	5.31	373	172	0.6	5	0.48	0.7	35	17	17	77	5.05	0.61	13	29	0.44	789	4	0.09	17	0.10	36	107	0.11	126	155
24	10200	530	1.4	5.53	2565	169	0.8	6	0.24	3.6	32	38	14	102	9.60	0.69	15	27	0.27	2103	4	0.06	28	0.11	183	68	0.07	138	518
25	10300	260	0.2	6.76	530	141	0.5	5	0.04	0.2	19	3	6	33	3.98	0.65	10	27	0.27	75	1	0.05	3	0.05	16	21	0.11	151	65
26	10400N–10400W •	110	0.8	3.83	874	161	0.5	5	0.10	0.6	22	12	23	142	6.60	0.42	13	18	0.60	432	10	0.09	18	0.13	66	72	0.15	125	129
27	10400N–10500W	170	0.8	3.61	1172	158	0.6	5	0.28	1.1	32	22	26	256	6.24	0.41	15	21	0.89	807	5	0.06	25	0.11	72	50	0.24	142	232
28	10600 •	65	0.2	3.20	424	132	0.5	5	0.33	0.4	27	15	17	96	6.79	0.28	12	16	0.60	421	6	0.06	17	0.11	23	68	0.18	98	88
29	10700	320	1.0	5.66	1306	115	0.7	9	0.29	0.6	29	14	19	240	11.72	0.37	15	21	0.56	449	9	0.07	18	0.18	116	76	0.17	132	136
30	10800	100	0.8	6.68	815	131	0.9	11	0.23	0.6	36	20	21	168	10.74	0.56	21	18	0.60	792	15	0.11	29	0.19	25	115	0.19	113	219
31	10400N–10900W	40	0.2	5.44	394	182	0.9	5	0.31	1.5	31	21	27	98	7.83	0.47	17	22	0.60	1022	17	0.09	37	0.15	21	80	0.16	137	246
32	10600N–10000W	80	3.0	5.15	41	85	1.2	5	8.19	0.2	28	9	8	55	4.23	0.60	5	35	0.29	610	3	0.07	9	0.07	28	433	0.04	165	74
33	10100	5	0.2	2.68	17	29	0.6	5	20.64	0.2	8	7	13	41	1.22	0.09	1	20	0.19	370	4	0.04	10	0.05	5	144	0.10	113	37
34	10200	370	1.4	6.19	1381	188	0.7	5	0.21	0.4	21	17	17	112	9.89	0.84	12	26	0.35	547	4	0.05	14	0.14	73	41	0.08	167	224
35	10300	510	1.4	5.40	2190	190	0.8	5	0.26	1.1	24	44	20	242	12.56	0.49	14	25	0.69	1672	7	0.06	35	0.15	181	76	0.13	122	233
36	10600N–10400W	55	0.4	3.07	279	267	0.4	5	0.08	0.3	27	13	15	333	6.65	0.60	14	17	1.16	437	4	0.08	14	0.12	24	61	0.19	137	121

20 of RK RH JMc bP

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T.T. No.	SAMPLE No.	Au ppb	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	La ppm	Li ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	Sr ppm	Ti %	V ppm	Zn ppm
37	10600N-10500W	120	0.8	3.55	596	163	0.5	5	0.32	0.4	35	22	16	200	7.39	0.38	17	17	0.83	769	8	0.05	19	0.12	65	56	0.20	143	126
38	10600 *	330	2.0	5.59	1292	204	0.7	5	0.33	0.4	28	17	11	281	9.93	0.59	15	31	0.59	572	4	0.11	16	0.11	63	107	0.17	147	157
39	10700	310	1.0	7.10	1139	205	1.0	5	0.26	0.6	33	19	19	206	9.48	0.48	18	32	0.67	660	13	0.09	24	0.17	53	152	0.16	140	149
40	10800	25	0.2	6.41	684	198	1.0	5	0.35	1.8	35	22	24	115	7.50	0.39	19	31	0.61	581	18	0.07	48	0.13	22	94	0.14	152	266
41	10600N-10900W	10	0.2	6.84	334	211	0.9	5	0.33	1.3	33	27	21	93	6.58	0.41	16	37	0.52	621	9	0.17	47	0.11	11	127	0.10	137	341
42	11000N-10000W	10	0.2	5.25	54	236	0.7	5	0.20	0.2	28	15	27	110	5.30	0.33	14	26	0.67	643	8	0.08	24	0.15	9	61	0.16	142	137
43	10100	20	0.2	6.22	77	226	0.8	5	0.20	0.2	29	16	27	115	5.82	0.37	15	30	0.72	351	9	0.10	30	0.13	10	69	0.17	155	136
44	10200	10	0.2	5.68	87	208	0.8	5	0.23	0.3	33	16	23	132	6.11	0.42	18	22	0.87	390	11	0.07	30	0.12	11	57	0.16	162	105
45	10300	170	0.2	8.69	84	193	0.8	5	0.24	0.2	28	15	6	116	11.73	0.58	14	31	0.42	337	3	0.20	19	0.17	6	207	0.08	89	71
46	11000N-10400W	20	0.2	4.11	32	236	0.6	5	0.19	0.3	29	18	24	615	5.34	0.41	14	25	1.01	437	19	0.04	35	0.11	6	42	0.22	155	108
47	11000N-10500W	20	0.2	4.97	43	226	0.7	5	0.29	0.4	29	21	21	399	6.46	0.29	14	22	0.54	843	14	0.06	27	0.16	16	69	0.15	159	128
48	10600	5	0.2	6.57	221	327	1.0	5	0.26	1.1	34	17	13	110	6.02	0.60	17	37	0.45	417	11	0.11	35	0.12	29	98	0.15	167	244
49	10700	10	0.2	5.63	27	230	0.7	5	0.47	1.0	34	15	19	239	5.10	0.45	14	38	0.69	544	12	0.19	39	0.13	8	132	0.16	152	143
51	10800 *	15	0.2	5.69	87	283	0.7	5	0.86	0.3	33	12	16	63	4.59	0.51	12	44	0.52	543	6	0.22	21	0.06	7	134	0.12	144	115
52	11000N-10900W	5	0.2	6.49	39	252	0.7	5	0.37	0.2	26	14	17	43	5.15	0.54	11	52	0.59	316	6	0.25	18	0.07	7	153	0.13	167	126
53	11000N-11000W	5	0.2	6.61	40	288	0.8	5	0.38	0.2	27	12	21	43	4.89	0.55	12	56	0.66	195	11	0.27	28	0.07	5	169	0.16	197	136
54	11200N-10000W	90	0.4	3.85	315	144	0.4	5	0.06	0.2	20	6	13	193	8.01	0.47	12	16	1.15	196	25	0.05	8	0.12	3	30	0.14	169	43
55	10100	25	0.6	3.53	55	216	0.5	5	0.16	0.2	28	18	18	671	5.05	0.45	13	18	0.83	416	17	0.03	21	0.10	4	26	0.19	144	75
56	10150	30	0.6	3.66	21	387	0.6	5	0.49	0.5	40	22	25	967	5.36	0.54	18	18	1.23	504	19	0.03	30	0.13	5	35	0.25	163	114
57	11200N-10200W	20	0.2	4.27	24	259	0.6	5	0.19	0.3	26	17	20	697	5.51	0.31	12	21	0.75	431	27	0.06	36	0.12	5	44	0.19	159	93
58	11200N-10250W	5	0.2	1.44	8	88	0.2	5	0.08	0.2	14	6	10	190	1.97	0.19	6	7	0.20	163	7	0.02	9	0.05	2	14	0.07	60	31
59	10300	10	0.4	4.33	14	300	0.6	5	0.18	0.2	26	16	18	450	6.50	0.24	13	20	0.71	434	29	0.06	32	0.12	5	44	0.17	198	96
60	10350	10	0.2	6.11	5	260	0.6	5	0.06	0.2	34	19	13	253	10.24	0.45	20	19	0.74	463	42	0.25	35	0.13	4	153	0.11	183	119
61	10400	50	1.4	3.73	3	199	0.6	5	0.32	0.2	37	22	29	1066	5.82	0.35	16	16	0.57	612	10	0.02	30	0.13	18	65	0.13	159	116
62	11200N-10500W	15	0.4	6.03	17	102	1.0	5	0.19	0.2	42	31	20	248	7.80	0.23	19	30	0.33	775	6	0.04	39	0.14	14	49	0.12	174	148
63	11200N-10600W	10	0.8	7.53	10	160	1.0	5	0.33	0.3	42	24	16	240	6.77	0.30	23	37	0.45	753	5	0.07	35	0.12	13	62	0.15	186	134
64	10700	5	0.4	5.95	65	241	0.9	6	0.41	0.5	38	21	20	191	5.97	0.47	19	29	0.48	956	16	0.08	41	0.15	10	73	0.15	183	121
65	10800	5	0.2	5.61	56	385	0.9	5	0.32	0.7	35	17	17	149	5.39	0.71	16	28	0.41	676	8	0.11	23	0.15	9	86	0.15	139	146
66	10900	40	0.2	7.41	49	943	1.5	6	0.35	1.7	51	27	13	104	7.08	1.13	27	35	0.58	736	7	0.08	29	0.13	10	62	0.23	148	245
67	11200N-11000W	5	0.2	5.11	45	367	0.8	5	0.74	3.9	40	19	19	87	4.57	0.72	16	35	0.42	1049	5	0.11	19	0.18	11	83	0.17	119	200
68	11400N-10000W	15	0.4	3.14	60	224	0.5	5	0.30	0.2	34	15	16	435	4.48	0.40	14	18	0.89	439	10	0.03	19	0.10	13	25	0.17	119	95
69	10100	30	1.0	3.62	18	278	0.6	6	0.37	0.6	37	20	20	831	5.00	0.50	16	17	1.05	514	18	0.02	28	0.11	12	35	0.20	142	136
70	10150	100	2.0	5.80	7	166	0.9	8	0.42	0.2	45	33	11	2553	7.37	0.59	20	25	0.72	763	60	0.02	40	0.12	24	95	0.11	153	91
71	10200	110	1.8	4.02	12	236	0.7	5	0.30	0.6	37	31	29	2567	7.80	0.64	20	19	0.99	630	30	0.02	34	0.13	38	26	0.17	153	127
72	11400N-10250W	55	1.4	4.26	6	242	0.6	5	0.26	0.4	34	22	21	1232	6.41	0.49	16	20	0.69	555	21	0.02	29	0.12	41	75	0.14	151	139
73	11400N-10300W *	30	1.2	3.15	15	161	0.5	5	0.24	0.2	29	17	13	651	4.77	0.33	13	14	0.33	446	10	0.02	21	0.10	17	51	0.10	109	100
74	10350	15	0.6	4.46	5	247	0.7	5	0.49	0.4	41	27	22	909	6.25	0.49	16	22	0.59	947	13	0.03	34	0.16	18	75	0.16	174	147
75	10400	65	1.0	6.33	2	281	1.1	5	0.39	0.2	49	35	20	1464	8.95	0.32	23	30	0.43	1107	32	0.03	47	0.13	8	72	0.12	283	157
76	10450	40	0.6	5.10	2	146	0.8	5	0.29	0.2	40	33	17	1040	6.70	0.29	18	25	0.46	760	25	0.03	40	0.14	5	74	0.15	193	121
77	11400N-10500W	50	0.6	4.72	10	106	0.9	5	0.22	0.2	49	44	20	970	8.31	0.28	21	23	0.40	962	95	0.03	45	0.16	10	51	0.14	210	144
78	11400N-10550W	30	0.4	6.29	2	113	0.8	5	0.29	0.2	41	37	9	272	6.74	0.20	18	36	0.25	986	71	0.04	43	0.11	13	94	0.12	169	137
79	10600	35	0.8	4.94	4	200	0.9	5	0.41	0.3	47	38	23	1270	7.89	0.35	21	27	0.78	914	38	0.04	47	0.13	10	65	0.18	214	141
80	10700	40	0.4	5.77	38	220	0.8	5	0.06	0.2	37	23	16	434	9.02	0.41	23	25	0.54	471	22	0.13	27	0.17	9	86	0.16	174	115
81	10800	120	0.4	5.84	204	258	1.0	8	0.18	0.2	41	27	22	208	8.40	0.45	21	26	0.49	802	11	0.09	26	0.16	8	92	0.13	155	123
82	11400N-10900W	75	0.4	5.84	572	333	1.0	5	0.16	0.6	36	27	14	126	8.21	0.70	18	26	0.43	935	7	0.08	23	0.13	8	53	0.13	147	193

T.T. No.	SAMPLE No.	Au ppb	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	La ppm	Li ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	Sr ppm	Ti %	V ppm	Zn ppm
83	11400N–11000W	5	0.2	4.97	40	465	0.9	5	0.44	1.1	35	14	14	53	5.00	0.64	15	34	0.32	1252	4	0.10	20	0.16	8	82	0.13	108	185
84	11600N–10000W	10	0.2	5.47	26	248	0.7	5	0.10	0.2	31	16	12	302	5.27	0.49	13	26	0.59	422	16	0.07	22	0.11	5	58	0.16	135	78
85	10100	20	0.8	4.74	11	298	0.7	5	0.33	0.2	41	25	20	1195	6.88	0.50	18	18	0.73	533	35	0.05	41	0.15	5	79	0.18	248	109
86	10200	45	1.0	4.33	9	168	0.7	5	0.23	0.2	43	24	16	1305	6.47	0.41	18	18	0.47	584	17	0.03	31	0.14	8	118	0.14	161	97
87	11600N–10250W	60	1.2	6.42	2	216	0.9	7	0.31	0.3	48	30	15	1721	7.45	0.50	21	28	0.62	1018	17	0.03	41	0.15	12	170	0.15	203	198
88	11600N–10300W	60	0.4	5.87	2	55	0.7	5	0.27	0.2	31	19	6	1361	3.75	0.25	10	19	0.15	731	3	0.02	20	0.11	4	66	0.10	133	89
89	10350 •	15	0.8	4.07	2	85	0.6	5	0.15	0.2	28	18	8	920	3.80	0.20	11	20	0.20	429	9	0.03	20	0.09	4	58	0.10	107	70
90	10400 •	40	1.0	3.93	6	354	0.7	5	0.24	0.4	40	35	34	1102	6.94	0.46	17	19	0.77	952	28	0.04	51	0.14	9	83	0.19	206	134
91	10450	140	1.6	4.87	2	258	0.8	5	0.60	0.2	47	63	46	1896	8.61	0.43	19	22	0.62	1280	37	0.03	79	0.13	2	197	0.16	258	161
92	11600N–10500W	40	1.0	3.82	2	169	0.7	5	0.52	0.3	56	48	45	1253	8.68	0.44	24	24	1.46	1448	50	0.03	54	0.14	15	33	0.17	237	173
93	11600N–10600W	30	0.6	6.03	2	311	0.9	5	0.20	0.2	45	35	13	488	8.63	0.45	26	22	0.42	491	26	0.13	28	0.16	5	123	0.17	224	186
94	10700 •	25	1.0	5.48	9	240	0.8	5	0.13	0.2	39	28	15	394	8.13	0.40	22	20	0.37	696	18	0.12	24	0.17	2	95	0.17	168	123
95	10800 •	20	0.4	6.76	83	331	1.2	5	0.13	0.2	39	23	14	224	8.77	0.52	23	26	0.45	729	15	0.11	20	0.17	5	78	0.17	146	151
96	10900	10	0.2	6.11	22	310	1.0	5	0.13	0.2	28	15	16	77	6.04	0.53	16	31	0.35	965	4	0.11	22	0.18	2	54	0.17	145	168
97	10000N–11000W	5	0.2	7.98	11	373	1.2	5	0.04	0.2	22	21	3	67	7.13	0.57	12	38	0.14	836	2	0.04	44	0.12	2	72	0.08	112	304
98	11800N–10000W	30	0.6	8.47	47	392	1.0	5	0.11	0.2	35	14	9	170	10.00	0.85	21	34	0.49	287	19	0.18	30	0.19	25	134	0.13	199	91
99	10100	10	0.2	5.46	49	241	0.8	5	0.14	0.2	25	18	15	256	6.34	0.40	14	27	0.64	403	11	0.09	30	0.11	4	58	0.19	151	131
101	10200	55	1.0	4.55	12	167	0.7	5	0.17	0.2	40	31	20	1079	5.82	0.33	15	19	0.53	750	40	0.03	30	0.13	18	53	0.13	155	93
102	10300	30	0.6	5.17	14	373	0.9	5	0.24	0.2	48	40	30	1014	8.27	0.58	22	22	0.91	947	48	0.04	46	0.18	12	79	0.18	202	177
103	11800N–10400W	30	1.0	4.60	14	200	0.7	5	0.18	0.2	35	20	23	902	5.98	0.31	16	19	0.68	458	74	0.06	29	0.13	8	57	0.18	158	88
104	11800N–10500W	20	0.8	7.15	9	235	0.9	5	0.33	0.2	51	11	12	358	10.66	0.18	28	10	0.34	251	26	0.21	22	0.22	11	192	0.17	224	54
105	10600 •	40	0.6	4.51	8	190	0.7	5	0.30	0.2	44	28	25	710	6.25	0.28	18	19	0.63	759	27	0.05	41	0.14	13	50	0.16	190	122
106	10700	10	0.6	6.46	21	271	1.2	5	0.14	0.2	48	51	9	211	11.48	0.30	21	25	0.54	2559	10	0.06	24	0.17	13	82	0.13	141	162
107	10800	5	0.2	6.00	23	264	1.1	5	0.12	0.2	34	16	14	85	7.41	0.43	17	31	0.35	1320	7	0.07	19	0.18	12	44	0.15	139	129
108	11800N–10900W	5	0.4	5.25	120	271	0.8	5	0.21	0.6	28	16	13	88	5.64	0.40	13	35	0.32	879	10	0.10	27	0.18	15	84	0.14	134	153
109	11800N–11000W	5	0.2	5.63	79	204	0.8	5	0.23	0.3	28	14	18	95	5.26	0.37	12	47	0.35	595	10	0.11	27	0.13	10	66	0.15	128	124
110	12000N–10000W •	5	0.2	4.15	36	242	0.6	5	0.11	0.5	29	10	14	132	5.13	0.44	13	18	0.45	298	5	0.12	19	0.11	11	92	0.13	117	214
111	10100	5	0.4	6.19	44	346	0.8	5	0.14	0.2	27	14	17	151	5.70	0.56	15	24	0.58	278	7	0.14	24	0.12	10	111	0.14	144	227
112	10200 •	5	0.2	6.12	37	305	0.8	5	0.20	0.2	30	14	18	154	5.58	0.56	16	24	0.64	469	11	0.13	25	0.12	12	100	0.16	161	163
113	12000N–10300W	50	0.8	6.57	4	287	0.6	5	0.08	0.2	37	16	15	341	8.72	0.40	20	23	0.49	197	18	0.13	17	0.18	4	146	0.16	158	57
114	12000N–10400W	5	0.2	5.82	16	290	0.8	5	0.15	0.2	31	15	19	352	6.51	0.38	17	21	0.63	332	22	0.12	22	0.14	6	92	0.18	151	90
115	10500 •	20	0.4	6.74	23	391	0.8	5	0.08	0.2	37	7	9	330	12.69	0.52	20	18	0.58	210	25	0.15	14	0.16	7	92	0.12	121	60
116	10600	15	0.6	7.53	47	380	1.6	11	0.23	0.2	53	19	7	527	13.23	0.35	39	20	0.43	231	42	0.17	72	0.27	8	278	0.03	110	214
117	10700	10	0.4	5.07	8	187	0.7	5	0.19	0.2	35	21	22	476	5.89	0.36	17	19	0.60	717	20	0.06	32	0.15	11	53	0.15	173	113
118	12000N–10800W	5	0.2	5.46	19	276	1.0	5	0.15	0.2	24	16	11	78	6.39	0.42	13	29	0.30	895	6	0.10	18	0.13	10	56	0.13	125	120
119	12000N–10900W •	25	0.6	8.99	81	219	1.2	5	0.07	0.2	25	16	5	166	8.34	0.42	14	54	0.17	329	25	0.16	43	0.15	9	128	0.08	115	76
120	12000N–11000W	5	0.2	4.74	77	240	0.7	5	0.22	0.2	24	16	20	98	5.27	0.34	12	28	0.42	611	6	0.09	29	0.11	7	52	0.17	132	126

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

GEOCHEMICAL ANALYSIS CERTIFICATE

Tyaughton Knight (JMc)

Noranda Exploration Co. Ltd. PROJECT 9109-028 136 File # 91-4179

1050 Davie St., Vancouver BC V6E 1M4

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb
R114686	92	4678	2	35	1.6	11	7	186	2.58	89	5	ND	5	7	.8	32	3	22	.75	.025	3	11	.13	99	.01	4	.40	.01	.12	109	18
R114687	3	136	2	40	.2	17	8	228	3.67	14	5	ND	1	55	.4	2	2	88	.35	.066	2	41	1.30	37	.15	2	1.65	.10	.06	3	5
RE R115144	2	26	4	15	.1	5	1	39	.35	2	5	ND	2	26	.2	2	2	3	.13	.034	2	6	.05	43	.01	7	.37	.04	.11	1	5
R114688	1	726	2	54	.6	26	35	330	12.89	6	5	ND	1	108	1.6	2	2	58	1.90	.033	3	22	.70	28	.04	5	4.02	.36	.14	1	8
R115142	3	214	5	22	.3	14	7	109	6.60	6	5	ND	1	67	.7	2	2	67	.72	.085	4	11	.33	20	.17	3	1.83	.26	.10	1	34
R115143	30	49	2	50	.1	5	1	447	1.48	7	5	ND	1	122	.4	3	2	13	15.17	.006	2	3	7.13	45	.01	2	.14	.02	.03	1	10
R115144	2	19	4	14	.1	4	1	39	.27	2	5	ND	1	25	.2	2	2	1	.35	.030	2	4	.13	41	.01	6	.32	.04	.10	1	6
R115145	8	3177	2	39	4.5	19	11	175	3.21	4	5	ND	2	70	.6	2	2	43	.52	.053	6	15	.34	177	.04	6	.45	.05	.18	1	143
R115146	2	3671	4	40	2.2	19	10	230	2.78	6	5	ND	2	78	.6	2	2	44	1.01	.051	6	19	.56	167	.05	6	.44	.04	.22	1	87
R115147	4	565	2	41	.4	15	9	222	2.82	2	5	ND	2	129	.4	2	2	30	1.34	.042	6	10	.60	63	.01	8	.32	.04	.11	1	22
R115148	2	307	3	47	.3	18	9	315	2.28	2	5	ND	2	34	.4	2	2	47	.83	.062	6	22	.68	125	.09	4	.65	.04	.28	1	15
STANDARD C/AU-R	18	57	40	132	7.1	70	32	1034	3.95	42	19	7	38	54	18.6	16	18	56	.47	.089	38	58	.88	180	.09	34	1.90	.06	.15	12	480

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. *AU DETECTION LIMIT BY ICP IS 3 PPM.*
ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB
- SAMPLE TYPE: ROCK AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE. Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: SEP 5 1991 **DATE REPORT MAILED:** Sept 12/91. **SIGNED BY**.......... D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

APPENDIX IV

ROCK SAMPLE DESCRIPTIONS

NORANDA EXPLORATION COMPANY, LIMITED

PROJECT # 136

N.T.S. 920/3

LAB REPORT # 9109-028 136

DATE August '91

PROJECT KNIGHT

ROCK SAMPLE REPORT

SAMPLE NO.	LOCATION & DESCRIPTION	% Sulph.	TYPE	WIDTH (m)	Cu ppm	Au ppb	Mo ppm	Ag ppm	Pb ppm	Zn ppm	As ppm	SAMPLED BY
R114686	Medium to dark grey pyritic lamenated siltstone. Fine grained disseminated and fracture filling pyrite.		Chip	1	4678	18	92	1.6	2	35	89	J.M.
R114687	Hornblende, plagioclase silicified porphyry dyke. <1% pyrite.		Chip	1	136	5	3	0.2	2	40	14	T.B.
R114688	Grey calcareous shale - argillite up to 2% pyrite.		Chip	0.5	726	8	1	0.6	2	54	6	T.B.
R115142	Epidote skarn ~1% fine grained pyrite.		Chip	1	214	34	3	0.3	5	22	6	J.M.
R115143	Leucocratic fine grained aplite with quartz eyes.		Talus	-	49	10	30	0.1	2	50	7	J.M.
R115144	Same as above (R115143) hosted by greywacke.		Chip	0.2	19	6	2	0.1	4	14	2	J.M.
R115145	Quartz-carbonate filled shear zone ~10 cm wide, <1% malachite trace of chalcopyrite.		Chip	0.01	3177	143	8	4.5	2	39	4	J.M.

NORANDA EXPLORATION COMPANY, LIMITED

PROJECT # 136

N.T.S. 92O/3

LAB REPORT # 9109-028 136

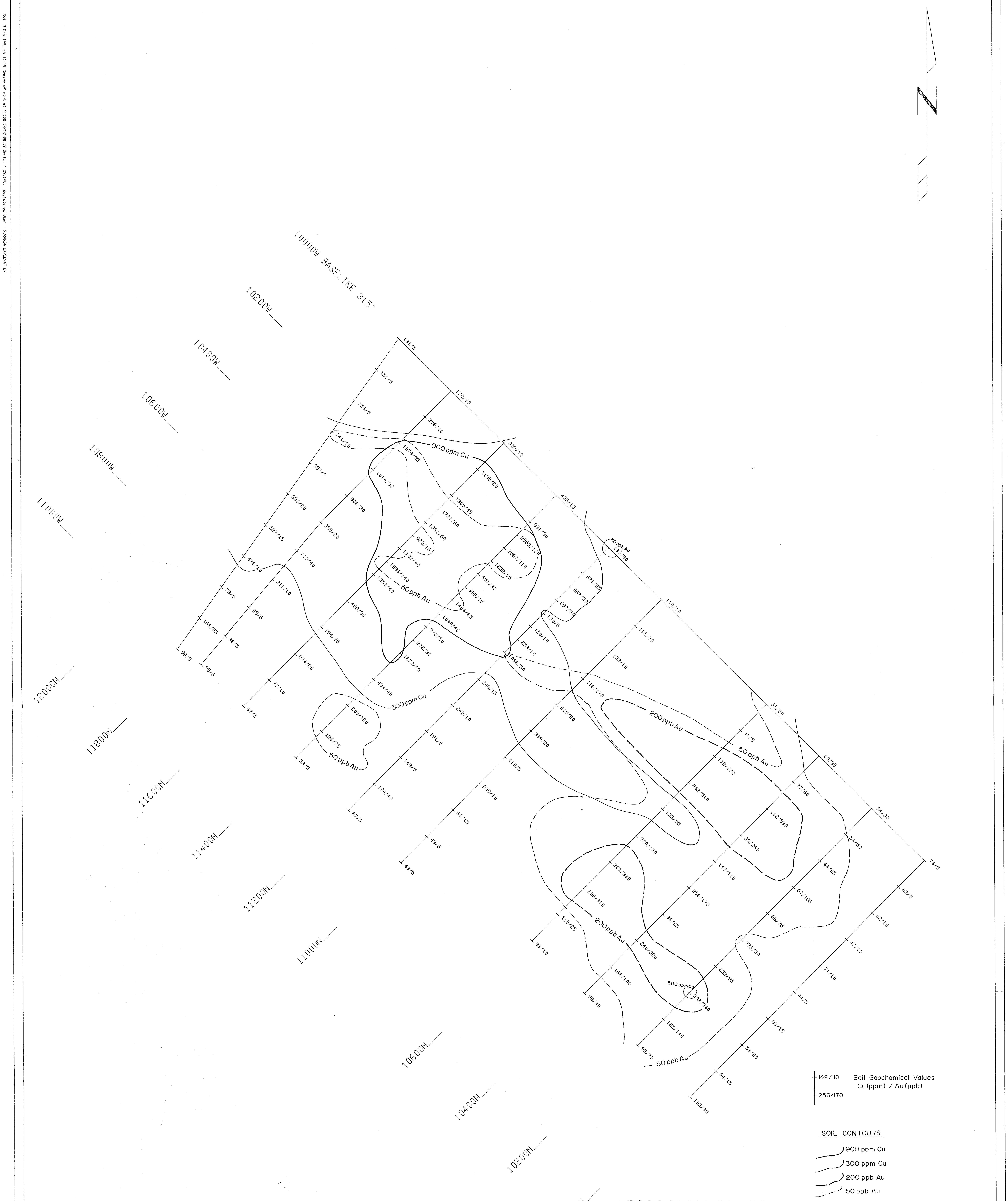
DATE August '91

PROJECT KNIGHT

ROCK SAMPLE REPORT

SAMPLE NO.	LOCATION & DESCRIPTION	% Sulph.	TYPE	WIDTH (m)	Cu ppm	Au ppb	Mo ppm	Ag ppm	Pb ppm	Zn ppm	As ppm	SAMPLED BY
R115146	Half a metre chip on both sides of shear zone (sample R115145). Metamorphosed greywacke with quartz veinlets and very fine grained chalcopyrite.		Chip	1	3671	87	2	2.2	4	40	6	J.M.
R115147	Small (1-2 mm) wide quartz veinlets within greywacke, trace of pyrite.		Chip	2	565	22	4	0.4	2	41	2	J.M.
R115148	Hornblende, plagioclase dyke ~1% fine grained disseminated pyrite.		Chip	1	307	15	2	0.3	3	47	2	J.M.

LEGEND
INTRUSIVE ROCKS (Age Unknown)
6 Plagioclase, Hornblende Porphyry ± Biotite, ± Accessory Quartz
5 Leucocratic Fine Grained Aplite with Quartz Eyes
TYAUGHTON GROUP
UPPER TRIASSIC TO MIDDLE JURASSIC
4 Medium to Dark Grey Interbedded Siltstone and Argillite, Trace of Pyrite
3 Grey Laminated Siltstone with Very Finely Dissementated Pyrite
2 Conglomeratic Sandstone, Poorly Sorted with Sandy Matrix
1 Red Greywacke, Poorly Sorted, Friable
EpSK Epidote Skarn 1% Pyrite Occurring as Agglomerophenocrysts
Geological Contact as Mapped by the B.C. & Canadian Goverment, Open File Map 1987/3 "3A. Geology of the Warner Pass Area" N.T.S. 92 O/3
Geological Contact as Mapped by Noranda (1991), Defined, Approximate, Assumed
Outcrop
Bedding, Strike Vertical Dip
Bedding, Strike and Dip
Feldspar, Hornblende Porphyry Dyke, Strike & Dip
Upright Syncline
Overturned Anticline
Fault / Shear Zone
R114688 307Cu, 15Au/1m Rock Sample Location; Sample Number, Cu (ppm), Au (ppb) / Width of Sample (Metres)
7000
7300
6200
Creek
KNIGHT 1 0301572
KNIGHT 4 0301575
LCP
0301573 KNIGHT 2
0301574 KNIGHT 3
CLAIM BOUNDARY
R115142 214Cu, 34Au/1m
EpSK
R115144 19Cu, 6Au/0.2m
R115145 - 3177Cu, 143Au/001m
R115146 3671Cu, 87Au/1m
SUBCROP
R115143 49Cu, 10Au/Talus
R115147 - 565Cu, 22Au/2m
R115148 307Cu, 15Au/1m
R114686 4678Cu, 18Au/1m
R114687 136Cu, 5Au/1m
CAMP
R114688 726 Cu, 8Au/0.5m
5660000m.N
5658000m.N
497000m.E
499000m.E
GEOLOGICAL BRANCH
ASSESSMENT REPORT
21,837
Metres 0 100 200 300 400 500 Metres
REVISED
KNIGHT CLAIMS
PROPERTY GEOLOGY AND ROCK SAMPLE LOCATIONS
PROJ. No. 136
N.T.S. 92O/3
DWG. No. 4
SURVEY BY: JMcC
DRAWN BY: GM, J.S.
DATE: Sept. 6, 1991
SCALE: 1:5000
NORANDA EXPLORATION
OFFICE: VANCOUVER



GEOLOGICAL BRANCH
ASSESSMENT REPORT

21,837

KNIGHT CLAIMS

SOIL GEOCHEMICAL SURVEY

Cu (ppm) / Au (ppb)

REVISED			
PROJ.No. 136	SURVEY BY: JMcC	DATE: October 7/91	
N.T.S. 092003	DRAWN BY: Norplot/AutoCAD (R. Fenton)	SCALE: 1:5000	
DWG.No. 5	NORANDA EXPLORATION COMPANY, LIMITED	OFFICE: Vancouver	

noranda
NORANDA EXPLORATION CO. LTD.

NOTE: See Fig. 4 for grid location relative to claim boundaries