



**1999 GEOLOGICAL and GEOCHEMICAL  
ASSESSMENT REPORT  
ON THE BEETHOVEN PROPERTY**

**Quartz Claims**

**Beethoven 001-096 YB99893-988**

March 18, 2000

Mayo Mining District  
N.T.S. 105J/15

Latitude: 62°57' North  
Longitude: 130°50' West

Owner: NovaGold Resources Inc.

Author: Carl M. Schulze

Date of work: July, 1999

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This report has been examined by  
the Geological Evaluation Unit  
under Section 53 (4) Yukon Quartz  
Mining Act and is allowed as  
representation work in the amount  
of \$ 9200.

*M. B. h*

*Sc* Regional Manager, Exploration and  
Geological Services for Commissioner  
of Yukon Territory.

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## SUMMARY

The Beethoven Property, consisting of the Beethoven 1-96 Claims, is located in Central Yukon on NTS Sheet 105 J/15. It was staked in 1997 by Viceroy Exploration (Canada), Inc. In 1999 Viceroy transferred its 100% interest in the property to NovaGold Resources Inc.

The Beethoven Property is located within the Selwyn Basin which consists of a broad package of Paleozoic sediments extending ESE from north-west of Dawson City to the Yukon-NWT border north of the major NW-SE trending Tintina Fault Zone. This stratigraphy consists of shallow shelf to off-shelf marine clastic and chemical sediments, as well as basinal clastic sediments derived from the Ancient North American Platform to the north-east. Age of deposition ranges from Late Precambrian to Permian. The Mid-Cretaceous Tombstone-Tungsten Intrusive Suite (95-89Ma) has been emplaced within the Selwyn Basin. Members of this suite occur along an ESE trending belt extending for over 500 kilometres from north-west of Dawson City to the Yukon-NWT border. Tombstone Suite intrusives, predominantly monzonites and quartz monzonites, control much of the economic gold mineralization within the Selwyn Basin.

Extensive thrust faulting across the Selwyn Basin began during Late Jurassic time, resulting in creation of a compressional regime. Most thrust faults are oriented roughly ESE, and dip to the south-west, subparallel to the overall ESE trend of stratigraphy. This regional lineation has been overprinted by a slightly less pronounced NE-SW lineation, marked by high angle orthogonal faults suggesting the compressional regime was followed by an extensional tectonic regime. The Beethoven Property occurs towards the eastern limit of a broad deformation belt unofficially called the "Gold River Fold Belt" extending along the south side of the Hess River. Several WNW trending thrust faults, re-activated as strike-slip faults associated with fairly intense folding, extend across this belt. The property itself is underlain by several alternating chert and shale members of Road River Group sediments intruded by a Tombstone Suite biotite granite stock and associated dykes.

Exploration indicates that auriferous mineralization occurs within argillically altered marginal portions of the stock, as well as arsenopyrite veining up to 300 metres outbound in adjacent country rock. Soil sampling returned two strongly anomalous values to 570 ppb Au with 22.4 gpt Ag from a north-south lineament 100-200 metres south of the stock. This is associated with elevated gold values from 1998 silt sampling to 75 ppb Au, with 3.6 gpt Ag.

The 1999 exploration program focused on marginal regions within the central stock and adjacent Road River Group chert and shale. Weakly anomalous gold values to 30 ppb Au were returned from rock sampling of strongly altered quartz-biotite monzonite along the south flank of the stock. A chip sample of brecciated chert country rock returned 657 ppb Au/ 2.0 metres with anomalous silver, lead and antimony values. A coincident gold in soil and silt anomaly occurs roughly two kilometres east of the brecciated chert occurrence. Soil sampling returned values to 27 ppb Au, with weakly anomalous copper, zinc, and silver. A silt sample taken just downstream returned 227 ppb Au with comparable pathfinder values.

Anomalous geochemical values occur across three square kilometres. Minor unexplained gold anomalies from soil and silt sampling occur up to three kilometres east of the stock along the north flank of the ridge.

Gold and associated pathfinder element signatures, particularly copper and silver, suggest mineralization typical of mid-levels of intrusive emplacement, rather than upper level epithermal assemblages. Outlying soil anomalies may reflect outlying zones of more evolved epithermal mineralization.

Exploration expenditures for 1999 total \$9,207.

The 2000 exploration program will consist of detailed surface exploration aimed at delineation of drill targets, if warranted, to delineate zones of economically viable mineralization. This program shall include detailed geological mapping, prospecting and systematic B-horizon soil sampling along the south flank of the central ridge centered at the quartz biotite stock. The weak soil anomaly associated with the silt sample returning 227 ppb Au will be the focus of a similar detailed surface exploration program.

## **CHAPTER 1: INTRODUCTION**

### **1.1 Introductory Statement**

The Beethoven Property consists of 96 contiguous quartz mining claims (Beethoven 1-96 Claims) covering a 21 square kilometre area measuring seven by three kilometres within NTS Sheet 105 J/15, in the Mayo Mining District (Figure 2).

The 1999 exploration program involved geological mapping and rock, soil and silt sampling.

### **1.2 Location and Access**

The Beethoven Property is located 130 kilometres north-east of Ross River, Yukon, and 15 kilometres northwest of the Canol Road. It is centered at 62° 57' North latitude, 130° 50' West longitude on NTS Map Sheet 105 J/15. (Figure 1). Access is by helicopter from the North Canol Road.

### **1.3 Physiography and Vegetation**

The property extends along an ESE trending ridge attaining 5,600 feet of elevation. Topography is fairly rugged, with small areas of high elevation inaccessible to exploration. Typical northern boreal spruce forest covers lower elevations, grading to subalpine fir forests towards the tree line. Higher elevations are covered by typical tundra vegetation, with steep north facing zones barren of vegetation.

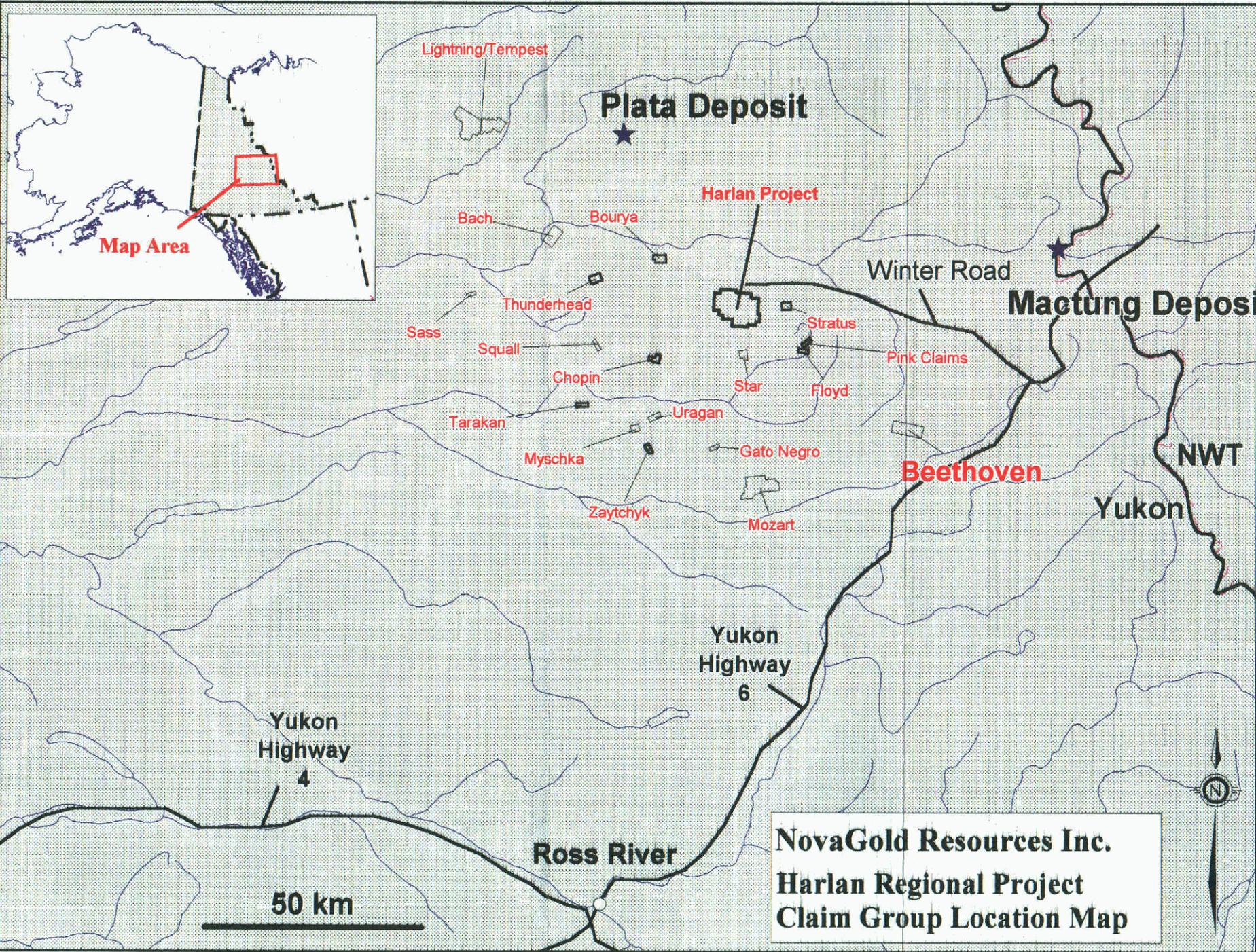
### **1.4 Regional Exploration History and Competitor Activity**

Limited exploration has occurred in the immediate Beethoven Property vicinity. The JET Claims held by the Archer-Cathro Group located roughly thirty kilometres north-west overlie barite occurrences within Earn Group sediments. Several claim blocks overlie Tombstone Suite stocks and associated gold mineralization and gold in silt anomalies. These include the YZ, NID, EM and CYP Claims, held by Alliance Pacific Gold Ltd., which added the WEAS Claims to the CYP Claims in 1997; and the NUG Claims held by Mr. B. Kreft. The PLATA lead-zinc-silver prospect is located roughly eighty kilometres to the north-west. The TOM and JASON lead-zinc-silver Sedex style deposits, held by Cominco, occur roughly forty kilometres to the north-east. The BRICK-NEVE Claims, held by Cameco, located roughly thirty kilometres to the north, overlie sediment and dyke hosted gold mineralization.

### **1.5 Property Exploration History**

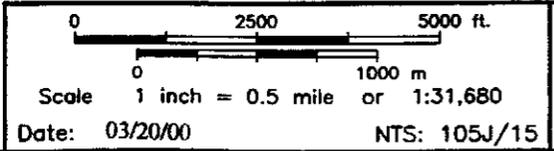
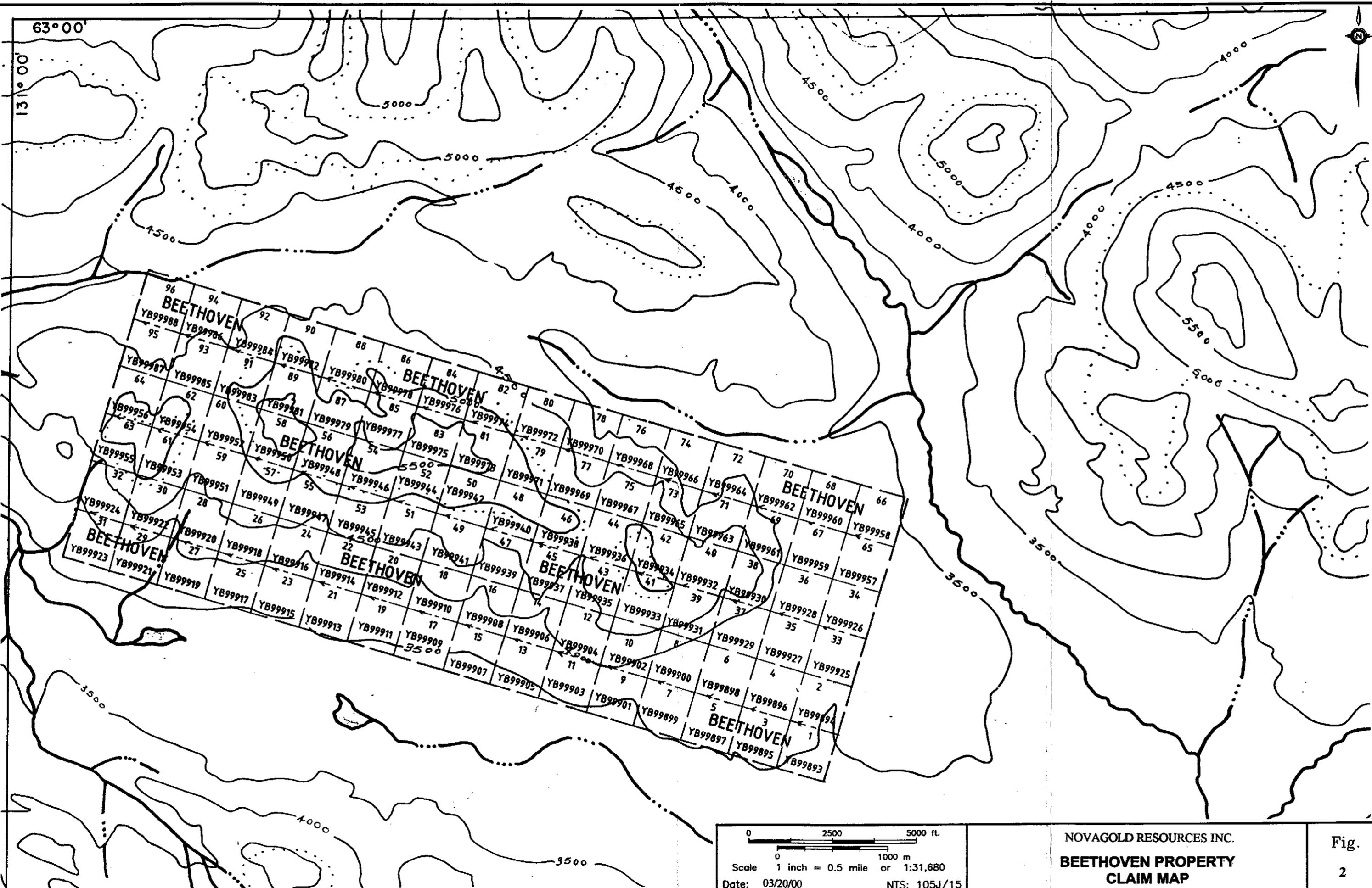
The present Beethoven Property was visited in 1996 by Hemlo Gold Mines Inc., which obtained favorable gold results from rock and soil sampling. The Beethoven 1-96 claims were staked in 1997 by Viceroy Exploration (Canada) Inc. (Viceroy) to cover anomalous gold values returned from soil and rock sampling in Road River Group sediments near a biotite granite stock. The original target was selected due to a combination of coincident gold-arsenic-mercury-antimony anomalies from RGS silt sampling, favorable Road River stratigraphy and proximity to a Tombstone Suite pluton. The 1998 exploration program returned favorable results across the southern flank of the stock.

In 1999 Viceroy transferred its 100% interest in the property to NovaGold Resources Inc. which subsequently performed further geological mapping and rock, soil and silt sampling.



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**NovaGold Resources Inc.**  
**Harlan Regional Project**  
**Claim Group Location Map**



NOVAGOLD RESOURCES INC.  
**BEETHOVEN PROPERTY CLAIM MAP**  
 Fig. 2

Table 1 below lists detailed claim status, including assessment status and expiry dates following the 1998 filing.

<i>Claim Name</i>	<i>Grant No.</i>	<i>Owner</i>	<i>New expiry date</i>	<i>Work completed By</i>
Beethoven 001-022 Beethoven 023 Beethoven 025-052 Beethoven 054 Beethoven 056-096	YB99893-99913 YB99915 YB99917-99944 YB99946 YB99948-88	NovaGold Resources Inc.	October 27, 2000	NovaGold
Beethoven 022 Beethoven 024 Beethoven 053 Beethoven 054	YB99914 YB99916 YB99945 YB99947	NovaGold Resources Inc.	October 27, 2000	Viceroy

## 1.6 Work Program

Several reconnaissance traverses involving systematic soil sampling, silt and rock sampling and geological mapping were conducted across central and eastern portions of the Beethoven Property in 1999. A total of 38 rock, 93 soil and 5 silt samples were obtained.

### 1.6.1 Sample Preparation and Assay Procedure

Samples taken in 1999 were sent to NAL Laboratories of Whitehorse for gold fire assay analysis, then sent to IPL Laboratories in Vancouver for 30-element ICP analysis. At NAL, samples were pulverized to -100 mesh, then subject to 30 gram fire assay analysis with AA (atomic absorption) finish.

All rock, soil and silt sampling was quantifiably recorded in the field to ensure a high degree of quality control, and entered into standardized spreadsheet programs. Criteria for each sample included: sample type, width of chip sampling, lithology, alteration and mineralization, and "UTM" location. All sample locations have been tied into UTM co-ordinates and have been plotted. A sample database in Microsoft Excel format is included and can be interfaced with Autocad Map or MapInfo software programs.

### 1.6.2 Personnel

All applicable assessment work was done by Carl Schulze, Project Manager, Serguei Soloviev, Geologist, and Stephen Erdman, Field Technician.

Fireweed Helicopters of Dawson City, Yukon provided helicopter services.

## CHAPTER 2: GEOLOGY

### 2.1 Regional Geology

The Beethoven Property is located within the Selwyn Basin which consists of a broad package of Paleozoic sediments extending ESE from north-west of Dawson City to the Yukon-NWT border north of the major NW-SE trending Tintina Fault Zone. This stratigraphy consists of shallow shelf to off-shelf marine clastic and chemical sediments, as well as basinal clastic sediments derived from the Ancient North American Platform to the north-east. Age of deposition ranges from Late Precambrian to Permian. At least two major episodes of rifting have occurred: the first during deposition of the Late Precambrian Hyland Group sediments, and the second during deposition of the Devono-Mississippian Earn Group sediments (Table 2, Figure 3). These major rift zones often host poorly sorted coarse clastic sediments, such as debris flows or turbidite horizons. Several episodes of continental uplift have led to periods of increased erosion and resulting continental margin or miogeosynclinal deposition, resulting in the creation of sequences of comparatively high energy, shallow water sediments, often coarsely grained and variably calcareous. These are separated by strata formed under deeper, quieter water conditions, resulting in formation of fine clastic sediments and chert. The Mid-Cretaceous Tombstone-Tungsten Intrusive Suite (95-89Ma) consisting primarily of monzonitic to quartz-monzonitic intrusive structures, has been emplaced within the Selwyn Basin. Members of this suite occur along an ESE trending belt extending for over 500 kilometres from north-west of Dawson City to the Yukon-NWT border. Tombstone Suite intrusives are believed to control much of the economic gold mineralization within the Selwyn Basin.

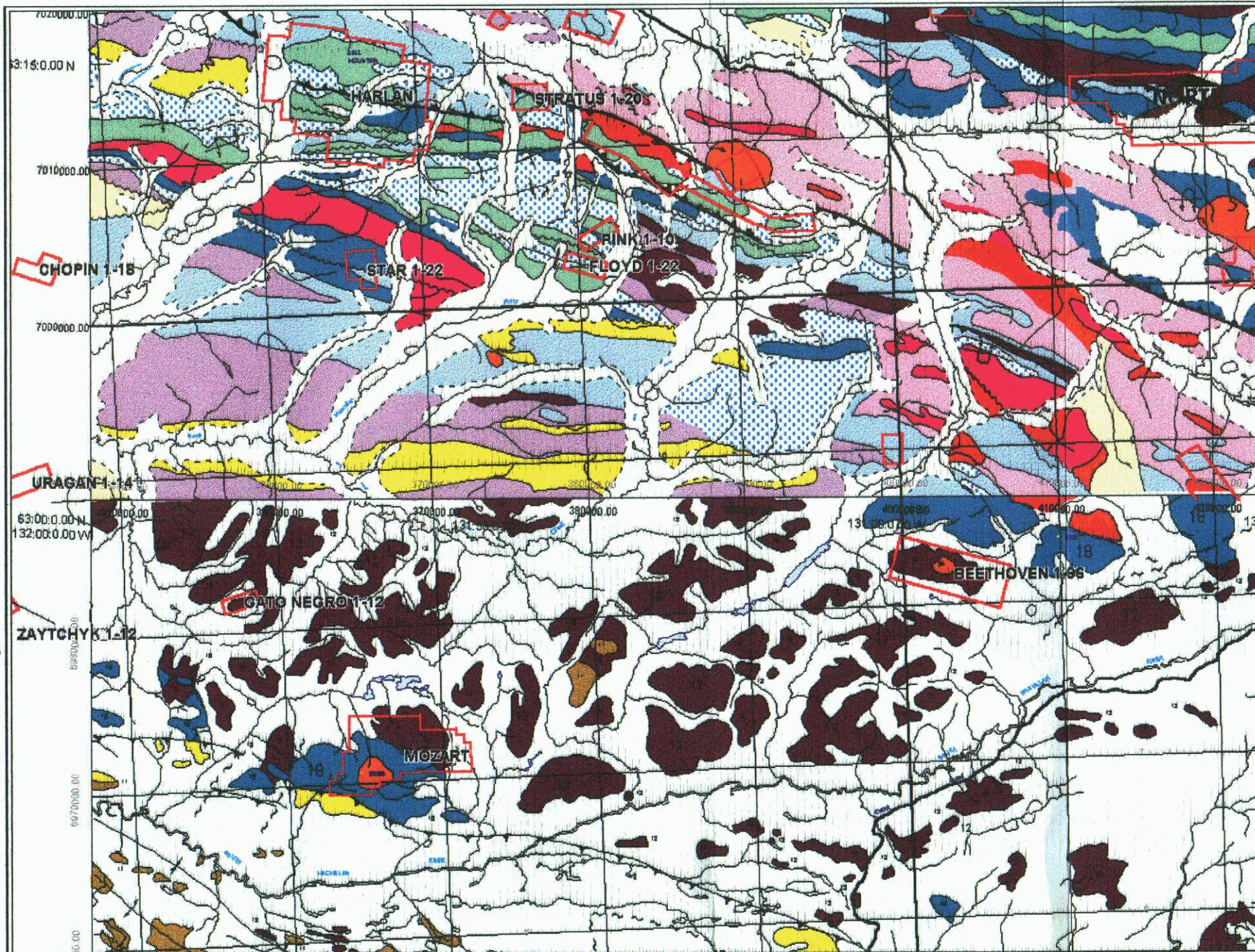
Extensive thrust faulting along the entire extent of the Selwyn Basin began during Late Jurassic time, resulting in creation of a compressional regime. Most thrust faults are oriented roughly ESE, and dip to the south-west, subparallel to the overall ESE trend of stratigraphy. Several major regional thrust faults were formed including the Dawson Thrust, Tombstone Thrust, and Robert Service Thrust. This regional lineation has been overprinted by a slightly less pronounced NE-SW lineation, marked by high angle orthogonal faults suggesting the compressional regime was followed by an extensional tectonic regime.

The Beethoven Property occurs towards the eastern limit of a broad deformation belt unofficially called the "Gold River Fold Belt" extending along the south side of the Hess River. Several WNW trending thrust faults, re-activated as strike-slip faults associated with fairly intense folding, extend across this belt. Tombstone Suite intrusives occur within the belt, particularly along the north and south flanks, and are common in the Beethoven Property area.

### 2.2 Property Geology

Several members of Road River Group sediments (Figure 4) underlie the entire property. The west-central area, the focus of most exploration to date, is underlain by a south-east trending package of chert and shale. This lies in contact with a package of shale and minor chert to the west, and siltstone to the east; another chert and shale member underlies extreme eastern areas. Contacts are interpreted as extending SSE. A Tombstone Suite quartz biotite monzonite stock and associated dykes and apophyses have intruded the central chert and shale package, and a smaller stock occurs within siltstone to the east. Marginal areas of the main stock have undergone moderate to strong argillic alteration, particularly along the south flank of the central ridge, where advanced argillic alteration and strongly limonitic zones occur. Propylitic alteration and hornfelsing, resulting in limonitic staining, has occurred in sediments near the stock.

Stream drainages suggest a north-south trending lineation, as well as a NE-SW trending lineation within eastern areas. A north-south trending fault occurs just south of the stock. A NNE trending fault extends across west-central areas and a north-west trending fault just south of this has been inferred. Bedding trends ESE, dipping steeply to the south, roughly parallel to subvertical foliation trends.



**GEOLOGICAL LEGEND**

**MESOZOIC**

**Cretaceous**

24 Granite, quartz monzonite, syenite

**Triassic**

JONES LAKE FORMATION: calcareous sandstone, siltstone, shale, slate, minor limestone

**PALEOZOIC**

**Permian**

MOUNT CHRISTIE FORMATION: Argillite, siltstone, sandstone and dolostone

**Carboniferous to Permian**

23 Thin bedded limestone, black shale, chert, chert pebble conglomerate

**Mississippian**

19 Keno Hill quartzite: Massive quartzite, slate phyllite, argillaceous quartzite.

**Devonian to Mississippian**

18 EARN GROUP, Prevost Formation: slate phyllite, calcareous siltstone, sandstone

17 Prevost Formation chert pebble conglomerate interbedded graywacke, slate

EARN GROUP, Portrait Lake Formation: siltstone, shale and chert.

16 Felsic metavolcanics, quartz porphyry

**Ordovician to Early Devonian**

ROAD RIVER GROUP, Steel Formation: dolomitic mudstone to siltstone

ROAD RIVER GROUP, Duo Formation: chert, and black shale

**RABBITKETTLE FORMATION**

Basalt, tuff, tuff breccia

Limestone and dolomite

11

**Early to Mid-Cambrian**

GULL LAKE FORMATION: siliceous siltstone

SEKWI FORMATION: Limestone, silty limestone, siltstone and black shale

**PROTEROZOIC**

**Late Hadrynian to Early Cambrian**

HYLAND GROUP, Narchilia Formation: Argillite, shale, limestone, chert pebble cong grit

**Late Hadrynian**

YUSEZYU FORMATION: limestone, quartzite, calcareous quartzite

YUSEZYU FORMATION: Argillite, quartzite, calcareous quartzite, argillaceous limestone

0 5 10  
Kilometres

**NOVAGOLD RESOURCES INC.**

**BEETHOVEN PROPERTY**

**REGIONAL GEOLOGY AND CLAIMS**

DATE:	Mar. 00	N°:	105J15
SCALE:	FIGURE NO.		

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**TABLE 2: STRATIGRAPHIC COLUMN, BEETHOVEN PROPERTY**

Age	Group	Formation (Lithology)	Geology Map Designation	Rock Code	Description
Mid-Late Cretaceous (95-89 Ma)	Tombstone-Tungsten Plutonic Suite	Diorite through Granite (Most commonly Quartz Monzonite), minor Syenite	Kg, Kqm, Ks	QBM	Felsic to intermediate dioritic to granitic intrusives, most commonly monzonitic, quartz monzonitic to quartz dioritic, Commonly feldspar to quartz-feldspar porphyritic within upper emplacement levels and dykes. Quartz biotite monzonite within central stock on property
Devonian - Mississippian	Earn Group	<b>Prevost Formation</b>	Dmp (Dme)	CPC, GW	Grey chert-pebble-conglomerate to greywacke, locally fairly large clasts.
Devonian - Mississippian	Earn Group	<b>Portrait Lake Formation</b>	Dme	SH, CH	Black shale, minor chert.
Ordovician - Early Devonian	Road River Group	<b>Steel Formation</b>	SS (OSDr)		Siltstone to mudstone, commonly weakly to moderately calcareous, lesser sandstone to calcareous sandstone, all members commonly limonitic; minor limestone
Ordovician - Early Devonian	Road River Group	<b>Duo Lake Formation</b>	OSDr	CH	Thin bedded light grey chert, minor shale horizons. Weakly to moderately limonitic near intrusive contacts; local weak argillic alteration, silicification.
Ordovician - Early Devonian	Road River Group	<b>Duo Lake Formation</b>	OSDr	SH	Grey shale to siltstone, minor chert horizons.

## CHAPTER 3: MINERALIZATION

### 3.1 Property Mineralization

Exploration to date indicates most auriferous mineralization occurs within argillically altered marginal portions of the stock, and adjacent chert and shale country rock, with minor gold bearing arsenopyrite veins and vein breccias occurring up to 300 metres from the stock. Grab sampling of widespread narrow quartz-arsenopyrite veins and vein breccias 100 - 300 metres north-west of the stock returned values to 6.8 gpt Au. Exploration in 1998 revealed fairly abundant intrusive hosted arsenical mineralization, together with moderate argillic and phyllic alteration, along western margins of the stock. A value of 890 ppb Au, 116 gpt Ag, and 1.29% Cu was returned from strongly arsenical talus material along the western margin.

Soil sampling in 1998 returned two strongly anomalous values, including 570 ppb Au with 22.4 gpt Ag from the north-south lineament 100 - 200 metres south of the stock. This is associated with several elevated gold values from silt sampling to 75 ppb Au, with 3.6 gpt Ag, 16 ppm Bi, and 30 ppm Sb. This suggests a partial structural control to mineralization. Contour soil sampling in 1998 returned a value of 30 ppb Au/ 600 metres, extending west from the lineament. This extends across a separate interval returning 42 ppb Au/ 150 metres (50 metre sample spacing). Weak gold in soil anomalies were also delineated across other parts of the stock, and small dykes and apophyses to the west.

The 1999 exploration program focused on marginal regions within the central stock and adjacent Road River Group chert and shale. Sampling in 1999 of strongly argillically altered quartz-biotite monzonite within the south flank of the stock returned weakly anomalous gold values to 30 ppb Au, with pathfinder values to 6.6 gpt Ag, 0.14% Pb, 518 ppm Zn, 0.24% As, and 79 ppm Sb. A chip sample of pervasively fractured chert country rock returned 657 ppb Au/ 2.0 metres with 1.5 gpt Ag, 278 ppm Pb, and 8 ppm Sb.

An occurrence of abundant arsenical fractured to brecciated chert in rubblecrop was located 200 metres to the northwest. Composite grab sampling returned gold values to 570 ppb Au, with consistently strongly anomalous silver values to 128.7 gpt Ag, and pathfinder values to 557 ppm Cu, 1.71% Pb, 524 ppm Zn, 4.03% As, 0.26% Sb and 82 ppm Bi. This is coincident with a soil anomaly delineated in 1999 returning 45 ppb Au/ 600 metres just downhill of the occurrence, and with much higher values to 570 ppb Au obtained nearby in 1997. The surface extent of this anomaly has not been determined. Eastern portions of this soil anomaly, with values to 61 ppb Au, have also not been explained.

A value of 43 ppb Au/ 800 metres was returned from soil sampling along the north ridge flank extending across the intrusive stock - chert country rock contact. Values obtained from soil sampling across the stock returned slightly higher lead, bismuth and antimony values than sediment-associated samples; all samples returned weakly anomalous copper and arsenic values to 245 ppm Cu and 977 ppm As respectively.

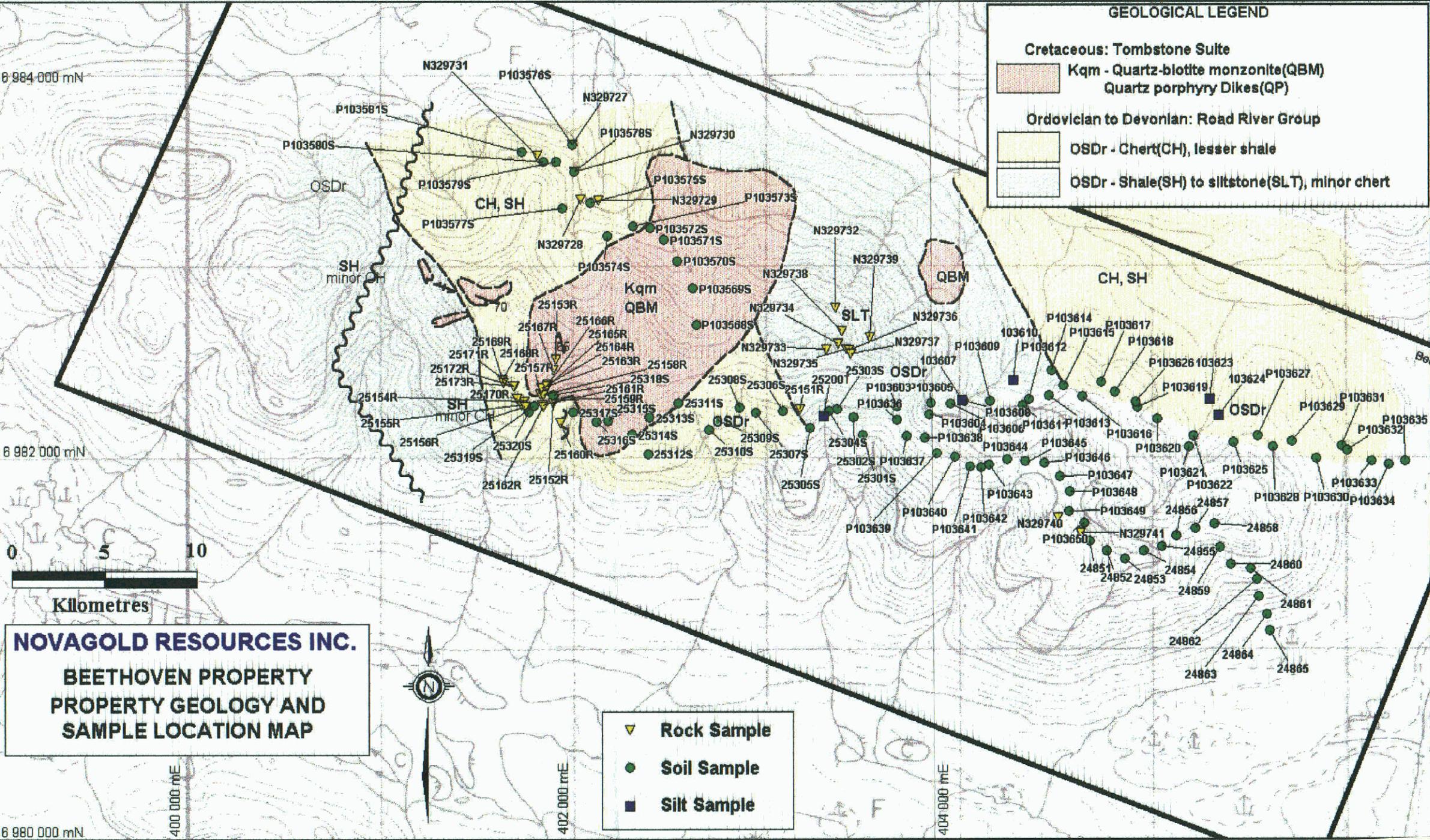
A coincident gold in soil and silt anomaly occurs roughly two kilometres east of the brecciated chert occurrence. Soil sampling returned values to 27 ppb Au, with up to 1.5 ppb Ag, 135 ppm Cu and 613 ppm Zn. A silt sample taken just downstream returned 227 ppb Au with comparable pathfinder values. This anomaly has not been explained by rock sampling.

Anomalous geochemical values occur across three square kilometres. Minor unexplained gold anomalies from soil and silt sampling occur up to three kilometres east of the stock along the north flank of the ridge.

Gold and associated pathfinder element signatures, particularly copper and silver, suggest mineralization typical of mid-levels of intrusive emplacement, rather than upper level epithermal assemblages. Outlying soil anomalies, including the occurrence returning 42 ppb Au/ 150 metres, may reflect outlying zones of more evolved epithermal mineralization. Much of the eastern extension of the north flank of the ridge, as well as a southward extension of the lineament south of the stock, remains untested.

**GEOLOGICAL LEGEND**

- Cretaceous: Tombstone Suite**
  - Kqm - Quartz-biotite monzonite(QBM)
  - Quartz porphyry Dikes(QP)
- Ordovician to Devonian: Road River Group**
  - OSDr - Chert(CH), lesser shale
  - OSDr - Shale(SH) to siltstone(SLT), minor chert



**NOVAGOLD RESOURCES INC.**  
**BEETHOVEN PROPERTY**  
**PROPERTY GEOLOGY AND**  
**SAMPLE LOCATION MAP**

- Rock Sample
- Soil Sample
- Silt Sample

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## CHAPTER 4: CONCLUSIONS

The Beethoven Property is located within the Selwyn Basin which consists of a broad package of Paleozoic sediments extending ESE from north-west of Dawson City to the Yukon-NWT border north of the major NW-SE trending Tintina Fault Zone. This stratigraphy consists of shallow shelf to off-shelf marine clastic and chemical sediments, as well as basinal clastic sediments derived from the Ancient North American Platform to the north-east. Age of deposition ranges from Late Precambrian to Permian. Several episodes of continental uplift have led to periods of increased erosion and resulting continental margin or miogeosynclinal deposition, resulting in the creation of sequences of comparatively high energy, shallow water sediments, often coarsely grained and variably calcareous. These are separated by strata formed under deeper, quieter water conditions, resulting in formation of fine clastic sediments and chert. The Mid-Cretaceous Tombstone-Tungsten Intrusive Suite (95-89Ma), consisting primarily of monzonitic to quartz monzonitic intrusive structures, has been emplaced within the Selwyn Basin. Members of this suite occur along an ESE trending belt extending for over 500 kilometres from north-west of Dawson City to the Yukon-NWT border. Tombstone Suite intrusives are believed to control much of the economic gold mineralization within the Selwyn Basin.

Extensive thrust faulting along the entire extent of the Selwyn Basin began during Late Jurassic time, resulting in creation of a compressional regime. Most thrust faults are oriented roughly ESE, and dip to the south-west, subparallel to the overall ESE trend of stratigraphy. This regional lineation has been overprinted by a slightly less pronounced NE-SW lineation, marked by high angle orthogonal faults suggesting the compressional regime was followed by an extensional tectonic regime.

The Beethoven Property occurs towards the eastern limit of a broad deformation belt unofficially called the "Gold River Fold Belt" extending along the south side of the Hess River. Several WNW trending thrust faults, re-activated as strike-slip faults associated with fairly intense folding, extend across this belt. The property itself is underlain by several alternating chert and shale members of Road River Group sediments intruded by a biotite granite stock with associated dykes.

Exploration indicates that auriferous mineralization occurs within argillically altered marginal portions of the stock, as well as arsenopyrite veining up to 300 metres outbound in adjacent country rock. Soil sampling returned two strongly anomalous values to 570 ppb Au with 22.4 gpt Ag from a north-south lineament 100-200 metres south of the stock. This is associated with elevated gold values from 1998 silt sampling to 75 ppb Au, with 3.6 gpt Ag.

The 1999 exploration program focused on marginal regions within the central stock and adjacent Road River Group chert and shale. Weakly anomalous gold values to 30 ppb Au were returned from rock sampling of strongly altered quartz-biotite monzonite along the south flank of the stock. A chip sample of pervasively fractured chert country rock returned 657 ppb Au/ 2.0 metres with anomalous silver, lead and antimony values. A value of 43 ppb Au/ 800 metres was returned from soil sampling along the north ridge flank extending across the intrusive stock - chert country rock contact.

A coincident gold in soil and silt anomaly occurs roughly two kilometres east of the brecciated chert occurrence. Soil sampling returned values to 27 ppb Au, with weakly anomalous copper, zinc, and silver values. A silt sample taken just downstream returned 227 ppb Au with comparable pathfinder values. This anomaly has not been explained by rock sampling.

Anomalous geochemical values occur across three square kilometres. Minor unexplained gold anomalies from soil and silt sampling occur up to three kilometres east of the stock along the north flank of the ridge.

Gold and associated pathfinder element signatures, particularly copper and silver, suggest mineralization typical of mid-levels of intrusive emplacement, rather than upper level epithermal assemblages. Outlying soil anomalies may reflect outlying zones of more evolved epithermal mineralization.

## CHAPTER 5: RECOMMENDATIONS

The 2000 exploration program will consist of detailed surface exploration aimed at delineation of drill targets, if warranted. This program shall include detailed geological mapping, prospecting and systematic B-horizon soil sampling along the south flank of the quartz biotite stock. The south extension of the lineament, and the chert-hosted gold-arsenic-lead anomaly to the west will be the particular focus of detailed exploration to determine extent and setting of mineralization. The weak soil anomaly associated with the silt sample returning 227 ppb Au will be the focus of a similar detailed surface exploration program. Other targets will include the gold-in-soil anomalies west of the lineament. Grid control may be warranted following return of favorable results.

Several contour soil profile traverses combined with geological mapping and rock chip sampling are recommended for eastern areas, particularly along the north flank of the ridge. Detailed surface exploration shall occur upstream of drainages returning anomalous gold values.

This program is designed to delineate zones of economically viable mineralization. Systematic chip and channel sampling will be employed to ensure sample quality control, and to determine presence of mineralization across mineable width. If the property is deemed unlikely to host favourable settings for economically viable mineralization, further exploration will be discontinued.

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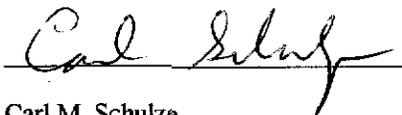
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Schulze, C. 1999: 1998 Geological and Geochemical Progress Report on the Beethoven Property; In-house report, Viceroy Exploration (Canada) Inc.

## STATEMENT OF QUALIFICATIONS

I, Carl Schulze, of the City of Whitehorse, Yukon Territory, Canada, do hereby certify that:

- 1) I held the position of Project manager with NovaGold Resources Inc. during the exploration program described in this report, and currently act as agent for NovaGold Resources Inc through Wolf Star Resources.
- 2) I graduated from Lakehead University with a Bachelor of Science Degree in Geology in 1984.
- 3) I have been continually active in mineral exploration since 1984.
- 4) I supervised the exploration program and performed part of the work described in this report.
- 5) I am the immediate past president of the Yukon Chamber of Mines and a member of the Yukon Prospectors' Association.



Carl M. Schulze  
Consulting Geologist  
Wolf Star Resources

**APPENDIX 1**

**APPLICABLE EXPENDITURES FOR ASSESSMENT CREDITS**

<b>Beethoven Property Expenditures</b>	
<b>Description</b>	<b>Expenditure</b>
Labor	\$ 2,400
Helicopter support (up to 25%)	1,841
Geochemical Analyses	2,486
Pre-project compilation, preparation	880
Compilation, Report Writing	1,600
<b>Total</b>	<b>\$9,207</b>

## APPENDIX 2: ROCK SAMPLE GEOCHEMICAL RESULTS

### 2a) ROCK SAMPLE DESCRIPTION SHEET

Sample No.	Traverse	Easting	Northing	Zone	Sample Type	Width (m)	Sample Descr.	Form.	Lithology	Modifier	Colour	Carb. Presence	Silicification	Argill. Alk.	Potassic Alk.	Phyllic Alk.	Limonic	Mineral #1	Amount %	Mineral #2	Amount %	Other Mineral	Amount %	Date	Sampler	Comments	
25151R	99B7	403171	6982255	9	CG		Ta	OSDr	CH	Fractured	buff		S3	A1			wk	Py		2			30/7/99	C.S.	frac. reconstituted; Py at fractures		
25152R	99B7	401892	6982288	9	CG		Ta	Kqm	OPM	Fractured	lgn		S1	A1				scor	tr				30/7/99	C.S.	Select composite gneiss		
25153R	99B7	401906	6982518	9	C		2	Oc	OSDr	CH	breciated	tan	S2	A2			mod	Py	tr				30/7/99	C.S.	Variable argill. lamorphic sh.		
25154R	99B7	401741	6982298	9	C	1.3	Oc	OSDr	CH	stwk	lk. gy		S3	A1			wk	Py	tr	scor	tr		31/7/99	C.S.	Mod. frac. scori. lim. after sulphides		
25155R	99B7	401726	6982277	9	C	1.2	Oc	OSDr	CH	stwk	lk. gy		S2	A1			wk	Py	tr	<1	scor	<1	31/7/99	C.S.	Py, scor. sh. fract. post v. fine disse Py		
25156R	99B7	401746	6982269	9	CG		Ta	OSDr	CH	stwk	lk. gy		S2	A1		Ph1	wk	scor					31/7/99	C.S.	Scori(?) in vugs, along fractures		
25157R	99B7	401825	6982335	9	CG		Ta	Kqm	OPM	Fractured	tan		S1	A1		Ph2	wk	Cpy	tr		Py	tr	31/7/99	C.S.	Mod. lim. after Py in rockwork		
25158R	99B7	401841	6982332	9	C	2	Oc	OSDr	CH	breciated	tan		S2	A1			mod							31/7/99	C.S.	lim. after sulphides; 50% vns	
25159R	99B7	401896	6982309	9	CG		Ta	Kqm	QBM	Fractured	tan		S1	A1		Ph2	str	Py		<1				31/7/99	C.S.	lim. after sulphides; 50% vns	
25160R	99B7	401928	6982183	9	CG		Ta	Kqm	QBM	Fractured	tan		S1	A1		Ph2	str	Py		<1				31/7/99	C.S.	Sel. s. gy; Vns and disse. Py	
25161R	99B7	401835	6982178	9	C	2	Oc	OSDr	CH	Fractured	tan		S1	A1			mod							31/7/99	C.S.	Local brecc. areas + Qz veins	
25162R	99B7	401841	6982271	9	C	2	Oc	OSDr	CH	Fractured	buff		S2	A2			wk							31/7/99	C.S.	Local brecc. areas + Qz veins, "shattered"	
25163R	99B7	401811	6982369	9	CG		Ta	Kqm	QBM	stwk	buff		S2	A2			wk							31/7/99	C.S.	Local brecc. areas + Qz veins, "shattered"	
25164R	99B7	401866	6982384	9	C	2	Oc	Kqm	QBM	gouge	tan		S1	A1		Ph2	str	Py						31/7/99	C.S.	Dissect + stwk. cont. sulphides	
25165R	99B7	401862	6982377	9	C	1	Oc	Kqm	QBM	gouge	tan		S1	A3		Ph2	str	Mn		5				31/7/99	C.S.	Wall dev. foliation @ 220 - 80	
25166R	99B7	401858	6982375	9	C	1.2	Oc	Kqm	QBM	infused	brn		S2	A2		Ph1	str	Mn		<1				31/7/99	C.S.	Strong lim. after Py, Po	
25167R	99B7	401893	6982461	9	C	2	Oc	Kqm	QBM	gouge	brn		S2	A1		Ph2	str	Py		2				31/7/99	C.S.	Gouge, sil. calc. at sections	
25168R	99B7	401631	6982410	9	CG		Ta	Kqm	OPM	mod. ss	rd		S1	A1		Ph3	wk	Hem	30	Py		2		31/7/99	C.S.	Hem. after fapar; Py from phylite alt	
25169R	99B7	401637	6982385	9	CG		Ta	Kqm	OPM	mod. ss	rd		S2	A1			wk	As	7	scor		15		31/7/99	C.S.	As, scor. veins in chert; sparse float	
25170R	99B7	401786	6982310	9	C	1.3	Oc	Kqm	QBM	Fractured	tan		S2	A2		Ph1	wk	As	5	Py	tr			31/7/99	C.S.	As stringers	
25171R	99B7	401686	6982376	9	C		Ta	OSDr	CH	breciated	grn		S1	A1			wk	As	5					31/7/99	C.S.	As veins, stringers in chert	
25172R	99B7	401689	6982376	9	CG		Ra	OSDr	CH	breciated	rd		S2	A2			wk	As	4	scor		8		31/7/99	C.S.	Fairly sh. sh. As stringers	
25173R	99B7	401686	6982376	9	CG		Ra	OSDr	CH	breciated	grn		S2	A1			As	6	scor		12			31/7/99	C.S.	Brecc. partial sil. infilling	
N329727	99B7	401991	6983631	CG	Ta		CH	hem	tan	tan			S1	A1			mod/str	scor	2					30/7/99	SS	phylon contact zone	
N329728	99B7	402031	6983150	CG	Ta		CH	hem	tan	tan			S1	A1			mod/str	scor	2					30/7/99	SS	phylon contact zone	
N329729	99B7	402125	6983344	CG	Ta		CH	hem	tan	tan			S1	A1			mod/str	Py	3	scor		2		30/7/99	SS	phylon contact zone	
N329730	99B7	402000	6983491	CG	Ta		CH	Fractured	tan	tan			S1	A1			mod/str	scor	2					30/7/99	SS	alterations along fractures	
N329731	99B7	401907	6983577	CG	Ta		CH	Fractured	tan	tan			S1	A1			mod/str	scor	2	Py		2		30/7/99	SS	alterations along fractures	
N329732	99B7	403153	6982782	CG	Ta		CH	Fractured	tan	tan	Cl		S2	A1			mod	Cpy	5					31/7/99	SS	contact zone	
N329733	99B7	401908	6982608	CG	Ta		CH	Fractured	tan	tan			S2	A1			mod	Py	3	Py		5		31/7/99	SS	contact zone	
N329734	99B7	403267	6982595	CG	Ta		CH	Fractured	tan	tan			S2	A1			mod	scor							31/7/99	SS	hornified/skarned
N329735	99B7	403412	6982571	CG	Ta		CH	breciated	tan	tan			S2	A1			mod	scor	3						31/7/99	SS	breciation zones along faults
N329736	99B7	403424	6982562	CG	Ta		CH	Fractured	tan	tan			S2	A1			mod	scor	5						31/7/99	SS	breciation zones along faults
N329737	99B7	403432	6982544	CG	Ta		CH	breciated	tan	tan			S2	A1			mod	scor	5						31/7/99	SS	breciation zones along faults
N329738	99B7	403388	6982663	CG	Ta		CH	breciated	tan	tan			S2	A1			mod	scor	3						31/7/99	SS	breciation zones along faults
N329739	99B7	403533	6982629	CG	Ta		CH	breciated	tan	tan			S2	A1			mod	scor	5						31/7/99	SS	breciation zones along faults
N329740	99B7	404509	6981689	CG	Rc		CH	Fractured	tan	tan			S2	A1			mod	scor	tr						31/7/99	SS	breciation zones along faults
N329741	99B7	404626	6981608	CG	Rc		CH	Fractured	tan	tan			S2	A1			mod	scor	tr						31/7/99	SS	breciation zones along faults

2b) ROCK SAMPLE GEOCHEMICAL RESULTS

Sample No.	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Al ppm	Sb ppm	Hg ppm	Mo ppm	Tl ppm	Bi ppm	Ca ppm	Co ppm	Ni ppm	Ba ppm	W ppm	Ce ppm	V ppm	Mn ppm	La ppm	Sr ppm	Zr ppm	Sc ppm	Ti %	Al %	Ca %	Fe %	Mg %	K %	Na %	P %	
25151K	8	<0.1	48	7	99	45	<5	<3	<1	<10	<2	<0.1	9	40	172	12	74	25	217	8	12	3	4	0.02	1.27	0.06	1.5	0.11	0.14	0.02	0.01	
25152R	20	<0.1	30	17	35	61	<5	<3	<1	<10	<2	<0.1	3	2	34	<5	52	9	336	10	50	3	3	0.01	0.89	3.05	0.9	0.21	0.08	0.06	0.02	
25153R	<5	5	41	1206	34	42	10	<3	<1	<10	<2	<0.1	1	8	83	<5	73	10	89	8	3	2	2	0.02	0.43	0.04	1.2	0.11	0.18	0.01	0.02	
25154R	9	<0.1	37	31	53	24	8	<3	1	<10	<2	<0.1	2	16	128	<5	117	11	63	5	5	2	2	0.01	0.36	0.02	1.73	0.06	0.07	0.01	0.02	
25155R	7	<0.1	21	29	43	12	9	<3	<1	<10	<2	<0.1	2	8	147	<5	134	15	81	7	4	2	1	<0.01	0.36	0.02	1.73	0.06	0.07	0.01	0.02	
25156R	9	<0.1	75	20	77	60	6	<3	1	<10	<2	<0.1	4	30	42	<5	148	34	85	10	4	2	1	<0.01	0.87	0.01	2.59	0.22	0.06	0.01	0.02	
25157R	6	<0.1	102	83	141	103	6	<3	<1	<10	<2	2.2	4	6	222	<5	44	6	305	34	19	14	1	<0.01	0.87	0.08	1.84	0.26	0.2	0.04	0.01	
25158R	657	1.5	111	278	38	220	8	<3	8	<10	<2	<0.1	2	13	83	<5	89	45	83	29	4	6	3	0.01	0.53	0.08	3.18	0.15	0.18	0.01	0.02	
25159R	21	6.8	63	490	68	197	38	<3	2	<10	<2	<0.1	1	6	39	<5	73	17	45	30	5	3	1	<0.01	0.15	0.03	2.19	0.01	0.06	0.01	0.02	
25160R	3	0.5	98	92	117	241	5	<3	2	<10	<2	<0.1	12	9	24	<5	49	10	50	8	9	5	2	<0.01	0.85	0.15	3.14	0.06	0.12	0.02	0.04	
25161R	30	1.9	76	373	81	502	36	<3	3	<10	<2	<0.1	3	12	49	<5	87	19	60	44	4	3	1	<0.01	0.25	0.03	3.36	0.03	0.1	0.01	0.02	
25162R	25	6	68	1176	53	402	14	<3	2	<10	<2	<0.1	1	7	108	<5	56	12	38	9	4	2	1	<0.01	0.72	0.02	2.11	0.02	0.14	0.02	0.01	
25163R	6	0.2	76	41	118	91	<5	<3	1	<10	<2	1.8	4	14	18	<5	65	4	74	5	8	8	3	<0.01	0.72	0.27	3	0.01	0.11	0.02	0.03	
25164R	7	2	112	382	509	861	7	<3	<1	<10	<2	4.8	12	4	59	<5	44	7	205	12	17	7	4	0.01	1.22	0.43	2.14	0.18	0.18	0.03	0.02	
25165R	30	6.6	110	1887	153	1302	10	<3	5	<10	<2	3.3	28	6	44	<5	39	11	390	12	22	8	4	<0.01	1.21	0.79	2.55	0.34	0.23	0.03	0.08	
25166R	5	0.1	101	190	518	2365	<5	<3	<1	<10	<2	4	19	3	56	<5	52	3	239	13	11	5	2	<0.01	0.63	0.36	2.24	0.04	0.17	0.02	0.01	
25167R	16	1.3	85	386	75	138	79	<3	2	<10	<2	<0.1	2	11	37	<5	46	23	77	6	13	3	3	<0.01	0.87	0.19	4.6	0.15	0.17	0.02	0.04	
25168R	<5	<0.1	46	32	188	125	<5	<3	<1	<10	<2	<0.1	5	19	86	6	39	6	279	26	4	9	2	<0.01	0.44	0.03	1.83	0.03	0.19	0.02	0.04	
25169R	182	112	557	10798	188	28660	186	<3	<1	<10	82	3	6	8	8	86	<5	87	5	37	7	19	3	1	<0.01	0.19	0.01	3.39	0.01	0.09	0.01	0.02
25170R	124	<0.1	220	60	95	16240	16	<3	1	<10	49	<0.1	13	46	219	9	38	31	199	20	15	11	4	0.03	1.79	0.07	3.66	0.48	0.32	0.03	0.05	
25171R	409	128.7	513	17141	150	40327	2563	<3	1	<10	37	10.2	12	27	<3	<5	89	10	57	5	2	3	4	<0.01	0.14	0.01	4.14	0.01	0.04	0.01	0.02	
25172R	28	92.2	195	10590	524	5717	242	<3	<1	<10	<2	3.2	3	14	37	<5	70	20	210	9	5	4	2	<0.01	0.21	0.03	6.71	0.05	0.12	0.01	0.05	
25173R	570	49.5	143	10886	176	11269	494	<3	1	<10	30	3.3	2	9	32	5	100	7	48	27	4	4	2	<0.01	0.2	<0.01	2.42	0.01	0.08	0.02	0.01	
N329727	10	<0.1	113	34	170	27	<5	<3	2	<10	<2	<0.1	2	13	8	6	23	17	150	6	4	6	1	0.02	0.7	0.17	6.2	0.99	0.01	0.01	0.06	
N329728	5	0.1	78	17	49	94	<5	<3	1	<10	<2	<0.1	2	8	5	<5	102	18	142	4	3	1	2	0.03	0.59	0.08	2.19	0.83	0.01	0.01	0.01	
N329729	13	<0.1	98	11	130	22	<5	<3	<1	<10	<2	<0.1	3	7	117	<5	36	17	97	3	2	9	1	0.01	0.72	0.13	3.25	0.74	0.09	0.01	0.02	
N329730	<5	<0.1	275	42	226	41	5	<3	1	<10	<2	<0.1	4	39	91	<5	8	64	1129	11	3	4	5	<0.01	2.04	0.01	4.89	0.18	0.14	0.01	0.03	
N329731	<5	<0.1	63	44	304	37	<5	<3	<1	<10	<2	<0.1	9	32	386	<5	19	61	461	10	11	6	8	<0.01	1.7	0.07	5.86	0.7	0.18	0.01	0.04	
N329732	16	1.5	466	16	37	604	5	<3	1	<10	<2	<0.1	12	13	49	13	84	18	278	9	14	16	3	0.02	0.79	0.91	1.99	0.4	0.1	0.03	0.02	
N329733	7	0.5	177	18	83	92	10	<3	3	<10	<2	<0.1	14	10	222	<5	88	50	1280	6	9	5	2	0.01	0.32	0.03	6.24	0.11	0.12	0.02	0.03	
N329734	30	1	138	31	124	108	<5	<3	4	<10	<2	<0.1	34	77	43	7	98	112	2213	7	94	3	9	0.21	3.45	1.52	6.59	1.25	0.88	0.11	0.11	
N329735	8	<0.1	138	18	245	75	5	<3	2	<10	<2	<0.1	11	60	76	<5	83	48	338	3	4	3	2	0.01	0.49	0.01	5.12	0.13	0.07	0.03	0.06	
N329736	8	<0.1	65	11	204	102	<5	<3	<1	<10	<2	<0.1	3	25	79	<5	51	30	176	4	4	4	2	2	0.01	0.61	0.36	2.12	0.31	0.07	0.03	0.24
N329737	16	0.5	132	28	245	150	<5	<3	24	<10	<2	<0.1	5	28	290	<5	63	380	543	23	97	3	4	0.03	1.73	3.57	4.95	0.82	0.38	0.02	1.9	
N329738	28	<0.1	105	21	263	84	<5	<3	4	<10	<2	0.3	4	24	354	<5	69	83	399	9	17	3	3	0.03	1.34	0.86	2.39	0.32	0.09	0.01	0.58	
N329739	56	<0.1	345	12	316	43	<5	<3	<1	<10	<2	<0.1	17	68	94	9	35	21	2154	6	31	1	2	0.03	0.82	0.38	2.92	0.17	0.02	0.01	0.03	
N329740	<5	<0.1	72	6	85	22	<5	<3	2	<10	<2	<0.1	5	24	485	<5	22	21	154	7	9	6	3	<0.01	1.17	0.01	2.91	0.4	0.15	0.01	0.03	
N329741	19	<0.1	88	11	259	21	<5	<3	2	<10	<2	<0.1	28	47	262	5	52	22	1056	6	10	6	4	<0.01	0.95	0.01	5.95	0.23	0.15	0.01	0.03	

# APPENDIX 3: SOIL SAMPLE GEOCHEMICAL RESULTS

## 3a) SOIL SAMPLE DESCRIPTION SHEET

Sample No.	Traverse	Easting	Northing	Zone	Horizon	Depth (cm)	Slope Angle	Colour	Permafrost (yes/no?)	% Coarse Fragments	Vegetation	Surface Geology	Frag. Lithology	% Organics	Date	Sampler	Comments
24851	99BT4	404671	6981566	9	B	40	ST	BRN	N	20	TD	TF	CH	5	3/17	SE	
24852	99BT4	404760	6981516	9	B	40	ST	BLK	N	30	TD	TF	CH	5	3/17	SE	
24853	99BT4	404852	6981475	9	B	30	RT	BRN	N	30	TD	TF	CH	5	3/17	SE	
24854	99BT4	404950	6981515	9	B	30	RT	BRN	N	30	TD	TF	CH	5	3/17	SE	
24855	99BT4	405046	6981540	9	B	30	RT	BRN	N	40	PINE	TF	CH	5	3/17	SE	
24856	99BT4	405120	6981596	9	B	20	RT	BRN	N	30	PINE	TF	CH	10	3/17	SE	
24857	99BT4	405218	6981633	9	B	30	ST	BRN	N	30	PINE	TF	CH	10	3/17	SE	
24858	99BT4	405314	6981657	9	B	40	ST	BRN	N	30	PINE	TF	CH	10	3/17	SE	
24859	99BT4	405394	6981534	9	B	40	ST	BRN	N	20	PINE	TF	CH	5	3/17	SE	
24860	99BT4	405398	6981444	9	B	30	ST	BRN	N	20	PINE	TF	CH	5	3/17	SE	
24861	99BT4	405503	6981423	9	B	20	ST	BRN	N	30	PINE	TF	CH	5	3/17	SE	
24862	99BT4	405536	6981566	9	B	20	ST	BRN	N	30	PINE	TF	CH	10	3/17	SE	
24863	99BT4	405543	6981280	9	B	30	ST	BRN	N	30	PINE	TF	CH	5	3/17	SE	
24864	99BT4	405586	6981194	9	B	30	ST	BRN	N	30	PINE	TF	CH	5	3/17	SE	
24865	99BT4	405601	6981101	9	B	10	ST	BRN	N	30	PINE	TF	CH	20	3/17	SE	
25301S	99BT2	403494	6982121	9	C	40	ST	DKBRN	N	45	SCON	TA	CH	10	3/07	C3	No distinguishable B horizon
25302S	99BT2	403460	6982215	9	C	30	ST	DKBRN	N	40	TD	TA	CH	10	3/07	C3	No distinguishable B horizon
25303S	99BT2	403362	6982257	9	B	40	ST	DKBRN	N	30	TD	TA	CH	10	3/07	C3	Mixed B + talus
25304S	99BT2	403320	6982248	9	C	30	ST	DKBRN	N	30	TD	TA	CH	5	3/07	C3	Stream cut; soil
25305S	99BT2	403224	6982159	9	C	35	ST	LTBRN	N	25	TD	TA	CH	10	3/07	C3	Scattered outcrop
25306S	99BT2	403084	6982244	9	C	30	ST	LTBRN	N	25	SCON	TA	CH	<5	3/07	C3	Underlies talus
25307S	99BT2	402943	6982235	9	C	35	ST	LTBRN	N	30	SCON	TA	CH	5	3/07	C3	CH talus, QPM talus to east
25308S	99BT2	402860	6982263	9	B	20	ST	DKBRN	N	10	SCON	TA	QPM	20	3/07	C3	"Island" in QPM talus
25309S	99BT2	402743	6982199	9	B	25	ST	DKBRN	N	40	SCON	TA	CH	10	3/07	C3	CH, rare, by QPM talus
25310S	99BT2	402702	6982149	9	C	20	ST	LTBRN	N	30	SCON	TA	QPM	10	3/07	C3	Nest in QPM talus field
25311S	99BT2	402542	6982390	9	B	15	ST	DKBRN	N	25	SCON	TA	CB/QM	5	3/07	C3	Nest in QPM talus field
25312S	99BT2	402386	6982022	9	C	35	ST	TAN	N	20	SCON	TA	QPM	5	3/07	C3	"C" STARTS AT 30 CM
25313S	99BT2	402392	6982211	9	C	25	ST	BRN	N	35	TD	TA	QPM	10	3/07	C3	"Island" in QPM talus
25314S	99BT2	402304	6982123	9	C	30	ST	BRN	N	40	SCON	TA	QPM	5	3/07	C3	Local strong red soil
25315S	99BT2	402176	6982196	9	C	25	MOD	BLK	N	45	SCON	TA	CH	5	3/07	C3	Black chert fragments
25316S	99BT2	402116	6981189	9	C	30	ST	TAN	N	40	SCON	TA/COL	CH	5	3/07	C3	Abnt chert o/crop
25317S	99BT2	401996	6982239	9	C	30	ST	TAN	N	35	CON	TA/COL	CH	10	3/07	C3	
25318S	99BT2	401890	6982130	9	C	35	ST	BLK	N	40	SCON	CV	CH	<5	3/07	C3	Blk ch; f. gr; under red layer
25319S	99BT2	401793	6982272	9	C	25	ST	BRN	N	45	SCON	CV	CH	5	3/07	C3	Mod. soil dev.
25320S	99BT2	401767	6982240	9	C	30	ST	DK GY	N	50	TD	CV	CH	5	3/07	C3	Limonite altered chert
P103568S	99BT1	402636	6982666	9	C	20	L	BROWN	N	10	N	TF	QPM	<5	3/07	SS	
P103569S	99BT1	402618	6982687	9	C	20	L	BROWN	N	5	SP	TF	QPM	5	3/07	SS	
P103570S	99BT1	402537	6983027	9	BC	20	L	BROWN	N	5	SP	TF	QPM	5	3/07	SS	
P103571S	99BT1	402469	6983137	9	BC	20	L	BROWN	N	5	SP	TF	QPM	5	3/07	SS	
P103572S	99BT1	402365	6983200	9	BC	20	L	BROWN	N	5	SP	TF	QPM	5	3/07	SS	
P103573S	99BT1	402307	6983209	9	BC	30	L	BROWN	N	5	SP	TF	QPM	10	3/07	SS	
P103574S	99BT1	402173	6983160	9	BC	20	MOD	BUFF	N	5	SP	TF	QPM	5	3/07	SS	
P103575S	99BT1	402083	6983332	9	BC	20	MOD	TAN/GR	N	5	SP	TF	HORN	5	3/07	SS	pluton contact zone + As
P103576S	99BT1	401993	6983333	9	BC	20	MOD	BUFF	N	5	SP	TF	HORN	5	3/07	SS	pluton contact zone + As
P103577S	99BT1	401941	6983301	9	BC	20	MOD	BUFF	N	10	SP	TF	HORN	10	3/07	SS	pluton contact zone + As
P103578S	99BT1	402000	6983493	9	BC	20	MOD	LTBRN	N	5	PINE	TF	HORN	5	3/07	SS	pluton contact zone + As
P103579S	99BT1	401907	6983548	9	C	30	MOD	TAN	N	5	PINE	TF	HORN	<5	3/07	SS	pluton contact zone + As
P103580S	99BT1	401840	6983548	9	BC	20	MOD	BLK	N	15	SP	TF	BLK SH	10	3/07	SS	
P103581S	99BT1	401730	6983598	9	BC	20	MOD	BROWN	N	15	SP	TF	ARG	10	3/07	SS	

P103603	99B73	403673	6982271	9	B	30	RT	ORG	N	10	TD	TF	CH	5	30/7	SE	
P103604	99B73	403841	6982228	9	B	30	ST	ORG	N	20	PINE	TF	CH	5	30/7	SE	
P103605	99B73	403849	6982285	9	B	20	ST	BRN	N	40	PINE	TF	CH	5	30/7	SE	
P103606	99B73	403950	6982284	9	B	20	ST	BRN	N	40	PINE	TF	CH	5	30/7	SE	
P103608	99B73	404022	6982296	9	B	40	ST	BRN	N	60	PINE	TF	SH	5	30/7	SE	
P103609	99B73	404155	6982299	9	B	40	ST	BRN	N	40	PINE	TF	SH	10	30/7	SE	
P103611	99B73	404326	6982273	9	B	30	ST	BRN	N	30	PINE	TF	SH	10	30/7	SE	
P103612	99B73	404356	6982307	9	B	30	ST	GRY	N	40	PINE	TF	SH	10	30/7	SE	
P103613	99B73	404462	6982326	9	B	40	ST	GRY	N	40	PINE	TF	SH	10	30/7	SE	
P103614	99B73	404473	6982437	9	B	40	ST	GRY	N	20	PINE	TF	SH	10	30/7	SE	
P103615	99B73	404537	6982377	9	B	40	ST	ORG	N	10	PINE	TF	SH	10	30/7	SE	
P103616	99B73	404634	6982319	9	B	30	ST	ORG	N	20	PINE	TF	CH	10	30/7	SE	
P103617	99B73	404730	6982396	9	B	30	ST	BLK	N	20	PINE	TF	CH	5	30/7	SE	
P103618	99B73	404804	6982344	9	B	30	HT	BLK	N	30	PINE	TF	CH	10	30/7	SE	
P103619	99B73	404918	6982264	9	B	30	ST	BLK	N	30	PINE	TF	CH	5	30/7	SE	
P103620	99B73	405019	6982204	9	B	40	ST	BLK	N	20	PINE	TF	CH	5	30/7	SE	
P103621	99B73	405183	6982057	9	B	20	ST	BRN	N	50	PINE	TF	CH	10	30/7	SE	
P103622	99B73	405209	6982113	9	B	40	ST	BRN	N	40	PINE	TF	CH	5	30/7	SE	
P103623	99B73	405415	6982084	9	B	40	ST	BRN	N	30	PINE	TF	SH	5	30/7	SE	
P103626	99B73	404909	6982292	9	B	30	ST	BRN	N	40	PINE	TF	SH	10	30/7	SE	
P103627	99B73	405338	6982116	9	B	30	MOD	BRN	N	40	PINE	TF	SH	10	30/7	SE	
P103628	99B73	405619	6982060	9	B	30	MOD	BRN	N	30	PINE	TF	SH	5	30/7	SE	
P103629	99B73	405719	6982086	9	B	40	MOD	ORG	N	40	PINE	TF	SH	5	30/7	SE	
P103630	99B73	405842	6981999	9	B	20	MOD	ORG	N	40	PINE	TF	SH	5	30/7	SE	
P103631	99B73	405972	6982063	9	B	30	MOD	ORG	N	30	PINE	TF	SH	10	30/7	SE	
P103632	99B73	406001	6982038	9	B	30	MOD	GRY	N	50	PINE	TF	SH	5	30/7	SE	
P103633	99B73	406128	6981983	9	B	50	MOD	GRY	N	40	PINE	TF	SH	5	30/7	SE	
P103634	99B73	406216	6981983	9	B	50	MOD	GRY	N	20	PINE	TF	SH	5	30/7	SE	
P103634	99B73	406299	6981983	9	B	50	MOD	GRY	N	20	PINE	TF	SH	10	30/7	SE	
P103636	99B74	403670	6982198	9	B	30	RT	BRN	N	20	TD	TF	CH	10	31/7	SE	
P103637	99B74	403721	6982114	9	B	40	RT	BRN	N	20	TD	TF	CH	5	31/7	SE	
P103638	99B74	403817	6982104	9	B	40	RT	BRN	N	10	TD	TF	CH	5	31/7	SE	
P103639	99B74	403882	6982028	9	B	20	RT	BRN	N	20	TD	TF	CH	5	31/7	SE	
P103640	99B74	403975	6982007	9	B	20	RT	BRN	N	20	TD	TF	CH	5	31/7	SE	
P103641	99B74	404053	6981954	9	B	20	RT	BRN	N	30	TD	TF	CH	5	31/7	SE	
P103642	99B74	404112	6981953	9	B	20	RT	BR/BLK	N	10	TD	TF	CB/ARG	5	31/7	SE	FAULT
P103643	99B74	404152	6981963	9	B	30	RT	BRN	N	30	TD	TF	CH	10	31/7	SE	
P103644	99B74	404245	6981992	9	B	20	RT	BLK	N	10	TD	TF	ARG	10	31/7	SE	
P103645	99B74	404330	6981983	9	B	20	RT	BRN	N	40	TD	TF	CH	5	31/7	SE	
P103646	99B74	404439	6981973	9	B	30	RT	BRN	N	30	TD	TF	CH	5	31/7	SE	
P103647	99B74	404515	6981906	9	B	10	RT	BRN	N	20	TD	TF	CH	20	31/7	SE	
P103648	99B74	404566	6981823	9	B	30	ST	BRN	N	20	TD	TF	CH	20	31/7	SE	
P103649	99B74	404563	6981722	9	B	40	ST	BRN	N	20	TD	TF	CH	10	31/7	SE	
P103650	99B74	404641	6981662	9	B	40	ST	BRN	N	20	TD	TF	CH	10	31/7	SE	

### 3b) SOIL SAMPLE GEOCHEMICAL RESULTS

Sample No.	As ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Al ppm	Sh ppm	Hg ppm	Mn ppm	Ti ppm	B ppm	Cd ppm	Co ppm	Ni ppm	Ba ppm	W ppm	Cr ppm	V ppm	Mu ppm	La ppm	Sr ppm	Zr ppm	Sc ppm	Tl %	M %	Cu %	Fe %	Mg %	K %	Na %	P %
24851	<5	0.2	84	18	155	26	<5	<3	3	<10	<2	<0.1	11	48	233	5	21	65	668	8	24	1	1	0.01	1.06	0.04	3.65	0.14	0.04	0.01	0.07
24852	33	1.3	36	40	39	41	<5	<3	13	<10	<2	<0.1	2	16	177	<5	48	133	79	11	92	2	2	0.01	0.74	0.02	3.9	0.05	0.25	0.02	0.23
24853	17	0.3	101	30	97	54	<5	<3	9	<10	<2	<0.1	9	33	293	<5	36	137	1045	11	142	2	2	0.01	0.96	0.06	3.47	0.12	0.18	0.01	0.16
24854	17	0.1	108	27	236	32	<5	<3	5	<10	<2	<0.1	27	67	274	<5	20	48	1402	8	37	2	3	0.01	1.34	0.02	4.6	0.29	0.12	0.01	0.09
24855	7	0.1	70	28	183	29	<5	<3	7	<10	<2	<0.1	9	42	218	<5	17	75	988	10	19	1	1	<0.01	1.21	0.02	3.33	0.08	0.11	0.01	0.07
24856	9	<0.1	74	20	166	38	<5	<3	3	<10	<2	<0.1	10	43	134	<5	27	69	416	10	13	1	1	0.01	1.59	0.03	4.79	0.2	0.11	0.01	0.11
24857	7	0.1	93	9	136	42	<5	<3	3	<10	<2	<0.1	14	116	150	<5	20	88	1388	9	16	1	1	0.01	0.86	0.03	2.49	0.05	0.06	0.02	0.08
24858	8	0.3	72	11	108	24	<5	<3	3	<10	<2	<0.1	6	26	122	<5	19	71	638	4	11	1	1	0.01	0.82	0.01	3	0.07	0.06	0.02	0.03
24859	6	0.1	91	9	172	16	<5	<3	2	<10	<2	<0.1	8	37	98	<5	15	90	189	10	23	1	2	0.02	0.56	0.01	3.11	0.03	0.04	0.02	0.53
24860	6	0.1	93	11	189	9	<5	<3	2	<10	<2	<0.1	9	35	138	<5	13	90	514	8	28	1	1	0.01	0.69	0.05	2.83	0.13	0.07	0.01	0.11
24861	10	0.2	69	16	176	21	<5	<3	2	<10	<2	1.9	12	32	269	<5	16	51	1407	8	22	1	1	0.01	0.67	0.03	2.66	0.1	0.06	0.01	0.09
24862	<5	0.3	62	11	154	18	<5	<3	3	<10	<2	0.8	8	28	200	<5	15	53	730	7	19	1	1	<0.01	1.4	0.03	4.4	0.06	0.07	0.01	0.11
24863	15	0.1	135	28	282	46	<5	<3	5	<10	<2	0.4	15	58	397	<5	15	65	1404	6	39	1	2	<0.01	0.89	0.1	3.08	0.12	0.11	0.01	0.17
24864	38	3.3	177	17	386	16	<5	<3	3	<10	<2	0.4	15	58	397	<5	15	65	1404	6	39	1	2	<0.01	1.38	0.22	2.95	0.08	0.09	0.01	0.23
24865	6	0.1	148	24	327	56	<5	<3	7	<10	<2	11.6	31	65	876	5	17	68	8824	10	58	2	2	0.06	2.77	0.05	5.15	0.61	0.21	0.03	0.1
25301S	11	<0.1	48	34	280	98	<5	<3	8	<10	<2	<0.1	10	62	375	<5	55	245	446	13	47	2	2	0.06	3.03	0.1	4.92	0.92	0.42	0.03	0.09
25302S	15	<0.1	98	24	258	107	<5	<3	4	<10	<2	<0.1	15	69	247	7	39	104	845	11	35	2	2	0.06	2.77	0.05	5.15	0.61	0.21	0.03	0.1
25303S	21	<0.1	183	43	240	104	<5	<3	13	<10	<2	<0.1	18	79	324	6	40	128	647	14	48	4	3	0.04	3.63	0.03	8.65	0.58	0.25	0.03	0.18
25304S	21	<0.1	118	27	217	169	<5	<3	4	<10	<2	<0.1	23	53	318	7	28	82	1339	16	41	1	4	0.05	2.68	0.26	4.92	0.73	0.22	0.02	0.08
25305S	7	0.2	142	38	164	59	<5	<3	4	<10	<2	<0.1	10	69	112	<5	32	78	482	9	13	1	2	0.04	1.88	0.04	4.42	0.24	0.07	0.03	0.07
25306S	23	<0.1	179	39	269	88	<5	<3	4	<10	<2	0.3	25	105	229	<5	49	199	1076	13	19	2	3	0.05	2.5	0.05	5.57	0.4	0.12	0.02	0.1
25307S	12	0.1	159	54	503	111	<5	<3	3	<10	<2	0.9	50	174	319	<5	49	120	4747	12	18	2	3	0.05	2.53	0.05	6.54	0.41	0.12	0.02	0.09
25308S	13	<0.1	40	34	78	252	<5	<3	1	<10	<2	0.1	7	14	330	<5	10	37	264	15	63	1	3	0.04	2.63	0.23	2.25	0.43	0.11	0.02	0.06
25309S	21	<0.1	112	26	100	109	<5	<3	7	<10	<2	<0.1	13	63	258	<5	34	184	703	16	93	1	1	0.04	2.63	0.58	3.94	0.72	0.17	0.02	0.34
25310S	7	<0.1	52	73	105	186	5	<3	2	<10	<2	<0.1	12	21	306	<5	17	60	646	28	217	2	6	0.12	2.82	0.97	3.12	0.72	0.3	0.05	0.06
25311S	11	<0.1	64	60	117	321	<5	<3	1	<10	<2	<0.1	15	31	361	<5	12	43	998	28	133	1	6	0.07	2.9	0.83	2.86	0.84	0.22	0.03	0.06
25312S	10	0.2	219	143	138	138	18	<3	5	<10	<2	0.8	12	69	407	<5	40	139	552	15	64	2	5	0.05	1.62	0.36	4.39	0.43	0.24	0.02	0.19
25313S	5	0.2	22	18	48	62	<5	<3	<1	<10	<2	0.6	4	9	124	<5	3	23	175	6	23	1	1	0.03	1.02	0.13	1.08	0.14	0.04	0.03	0.03
25314S	10	0.3	38	59	49	161	<5	<3	3	<10	<2	<0.1	4	12	117	8	14	61	137	13	20	1	<1	0.01	1.1	0.07	1.81	0.12	0.06	0.02	0.07
25315S	61	0.1	142	28	62	226	<5	<3	6	<10	<2	<0.1	4	24	303	<5	77	246	246	20	13	1	1	0.03	2.05	0.07	3.02	0.88	0.29	0.02	0.14
25316S	30	0.5	310	83	174	859	17	<3	8	<10	<2	0.7	19	53	283	<5	42	152	706	19	27	1	4	0.04	1.93	0.07	3.92	0.46	0.2	0.02	0.13
25317S	8	<0.1	72	27	106	357	<5	<3	6	<10	<2	<0.1	10	37	245	<5	36	119	340	16	63	2	2	0.04	3.05	0.19	5.79	1.05	0.25	0.03	0.08
25318S	30	1.5	198	273	427	293	19	<3	13	<10	<2	3.6	9	88	99	<5	45	111	682	20	8	6	3	0.01	0.78	0.18	7.51	0.24	0.17	0.02	0.03
25319S	88	10.9	237	2242	230	1160	93	<5	11	<10	<2	0.3	8	32	370	10	41	149	880	25	41	2	1	0.01	1.43	0.06	6.65	0.15	0.3	0.02	0.18
25320S	54	3.1	533	152	273	231	75	<5	12	<10	<2	0.4	15	66	641	<5	78	346	1707	15	72	6	9	0.15	5.93	0.13	8.1	2.23	1.33	0.03	0.31
P103568S	7	2.8	747	101	130	2638	19	<5	3	<10	<2	8	14	7	193	3	10	37	683	39	313	4	7	0.08	4.03	1.85	3.88	0.79	0.31	0.06	0.03
P103569S	<5	<0.1	7	4	12	34	<5	<3	<1	<10	<2	<0.1	2	2	46	1	2	15	39	2	17	1	1	0.02	0.63	0.09	0.53	0.05	0.04	0.04	0.03
P103570S	72	<0.1	304	51	72	977	6	<5	2	<10	<2	<0.1	11	8	185	<5	8	32	373	26	165	2	5	0.06	3.26	1.98	2.81	0.61	0.13	0.04	0.03
P103571S	28	0.1	161	122	102	762	8	<5	1	<10	<2	<0.1	11	9	196	6	8	31	484	28	257	2	6	0.03	3.76	1.35	2.84	0.67	0.11	0.05	0.03
P103572S	29	<0.1	182	111	186	869	7	<5	2	<10	<2	<0.1	10	7	196	9	8	30	398	27	240	2	5	0.03	3.8	1.23	2.79	0.65	0.11	0.05	0.03
P103573S	18	<0.1	124	131	93	927	9	<5	3	<10	<2	<0.1	7	6	219	6	9	34	265	18	92	2	3	0.02	3.5	0.43	2.87	0.5	0.09	0.03	0.06
P103574S	28	<0.1	84	13	35	272	<5	<3	1	<10	<2	<0.1	3	9	7	5	6	32	86	4	20	1	1	0.02	1.38	0.19	0.83	0.15	0.05	0.04	0.04
P103575S	88	0.1	33	13	23	90	<5	<3	1	<10	<2	<0.1	3	5	34	<5	4	22	98	3	9	1	1	0.02	0.53	0.1	0.73	0.06	0.03	0.04	0.03
P103576S	49	0.4	245	72	202	870	7	<5	6	<10	<2	0.1	15	49	242	6	31	90	591	14	22	1	2	0.04	2.36	0.11	3.85	0.66	0.18	0.02	0.07
P103577S	43	<0.1	172	31	128	488	<5	<3	5	<10	<2	<0.1	9	44	141	<5	23	91	252	9	18	1	1	0.03	1.62	0.08	3.44	0.37	0.08	0.03	0.08
P103578S	<5	<0.1	6	4	16	11	<5	<3	<1	<10	<2	<0.1	2	2	17	<5	2	19	32	<2	7	<1	1	0.03	0.24	0.04	0.57	0.02	0.02	0.04	0.02
P103579S	5	<0.1	10	<2	11	18	<5	<3	<1</																						

P103603	12	0.8	99	94	359	47	<5	<3	4	<10	<2	<0.1	13	100	267	<5	45	136	974	14	13	1	2	0.02	1.49	0.01	4.92	0.3	0.27	0.02	0.1
P103604	6	<0.1	42	35	164	33	<5	<3	7	<10	<2	<0.1	6	29	233	<5	21	120	1309	11	15	1	1	0.02	0.65	0.02	2.67	0.11	0.12	0.02	0.38
P103605	27	1.2	136	52	292	30	<5	<3	10	<10	<3	0.4	18	72	279	<5	46	174	1500	14	31	2	1	0.01	2.25	0.02	7.02	0.51	0.22	0.02	0.21
P103606	21	1.5	112	50	613	51	<5	<3	15	<10	<3	3.6	19	93	372	<5	38	238	1652	14	25	1	2	0.02	1.69	0.05	3.91	0.63	0.19	0.02	0.09
P103608	13	<0.1	81	59	233	13	<5	<3	7	<10	<2	0.2	14	47	322	<5	16	89	2138	14	18	1	1	0.01	0.75	0.01	4.3	0.65	0.13	0.02	0.13
P103609	7	<0.1	45	22	330	27	<5	<3	13	<10	<2	0.6	9	60	285	<5	30	196	451	10	40	1	2	0.01	1.43	0.03	3.96	0.38	0.1	0.02	0.09
P103611	19	0.2	136	28	221	33	<5	<3	7	<10	<2	2	25	91	420	<5	22	86	2893	17	51	1	3	0.01	1.09	0.05	4.39	0.34	0.19	0.02	0.12
P103612	10	<0.1	91	29	389	36	<5	<3	15	<10	<2	1.3	15	53	589	<5	17	92	1726	11	20	1	1	<0.01	0.93	0.05	4	0.11	0.1	0.02	0.14
P103613	34	<0.1	218	139	284	105	6	<3	16	<10	<2	0.9	87	203	303	<5	17	71	6262	27	221	1	5	<0.01	0.86	0.36	6.89	0.09	0.31	0.02	0.24
P103614	10	<0.1	143	43	223	32	<5	<3	9	<10	<2	1.2	24	97	745	<5	12	45	2632	13	44	2	5	<0.01	1.09	0.03	6.03	0.1	0.16	0.02	0.08
P103615	6	<0.1	56	9	122	24	<5	<3	4	<10	<2	<0.1	7	32	83	<5	11	61	367	13	7	1	1	0.01	0.91	0.02	3.09	0.05	0.06	0.02	0.06
P103616	6	<0.1	48	15	142	36	<5	<3	6	<10	<2	<0.1	12	34	237	<5	23	72	980	12	25	1	1	0.01	1.12	0.08	3.64	0.24	0.09	0.02	0.11
P103617	5	<0.1	59	15	206	21	<5	<3	3	<10	<2	<0.1	11	45	134	5	11	45	522	8	16	1	1	0.01	0.87	0.01	3.22	0.08	0.06	0.02	0.08
P103618	5	2.3	346	26	654	39	<5	<3	3	<10	<2	<0.1	13	193	154	<5	23	123	855	26	18	2	6	<0.01	1.71	0.01	6.17	0.08	0.07	0.01	0.09
P103619	<5	<0.1	50	24	195	30	<5	<3	7	<10	<2	<0.1	7	40	153	<5	16	112	303	12	21	1	1	0.01	0.92	0.02	3.22	0.08	0.09	0.02	0.07
P103620	<5	0.1	26	11	93	18	<5	<3	5	<10	<2	<0.1	4	16	153	<5	10	70	150	9	12	1	1	0.01	0.57	0.02	1.31	0.04	0.07	0.02	0.05
P103621	8	<0.1	89	25	251	22	<5	<3	8	<10	<2	<0.1	15	60	138	<5	15	61	683	14	17	1	3	0.01	0.89	0.03	4.5	0.14	0.09	0.02	0.08
P103622	19	<0.1	76	22	288	31	<5	<3	6	<10	<2	<0.1	14	29	256	7	22	88	684	12	36	1	2	0.02	1.2	0.09	4.66	0.25	0.1	0.02	0.11
P103625	<5	0.1	61	23	475	44	8	<3	30	<10	<2	<0.1	6	51	142	5	26	445	114	7	21	1	1	0.01	0.88	0.01	2.64	0.06	0.09	0.02	0.06
P103626	6	7.9	377	41	63	48	6	<3	43	<10	<2	1.3	2	30	488	<5	140	1156	8	5	239	2	1	0.01	0.84	0.02	2.26	0.05	0.25	0.02	0.11
P103627	15	1.7	172	13	267	40	<5	<3	8	<10	<2	0.4	3	39	277	10	28	83	62	6	49	2	3	<0.01	0.67	0.02	1.73	0.03	0.05	0.01	0.05
P103628	<5	1.5	44	30	258	19	<5	<3	11	<10	<2	<0.1	8	42	124	<5	17	171	114	9	21	1	1	0.01	0.58	0.01	2.5	0.04	0.07	0.01	0.05
P103629	<5	<0.1	76	10	548	16	<5	<3	13	<10	<2	<0.1	10	68	62	<5	7	180	237	5	5	1	1	<0.01	0.51	0.01	2.49	0.02	0.05	0.01	0.08
P103630	<5	<0.1	56	10	117	18	<5	<3	3	<10	<2	<0.1	7	24	90	<5	14	66	180	9	9	1	2	0.01	1.02	0.01	3.78	0.07	0.08	0.01	0.09
P103631	8	<0.1	83	7	192	37	<5	<3	1	<10	<2	<0.1	14	37	262	<5	16	74	827	5	13	2	5	<0.01	1.68	0.19	3.73	0.1	0.09	0.01	0.06
P103632	<5	13.3	46	186	158	24	<5	<3	22	<10	<2	0.1	2	19	278	<5	51	219	27	4	48	<1	1	0.01	0.39	0.03	2.4	0.02	0.24	0.02	0.08
P103633	<5	<0.1	43	29	269	20	<5	<3	9	<10	<2	<0.1	6	44	342	<5	23	177	120	8	62	1	2	0.01	0.84	0.09	2.75	0.11	0.09	0.02	0.12
P103634	14	2.4	66	20	302	88	<5	<3	10	<10	<2	0.5	6	49	1291	<5	51	280	331	9	70	2	3	<0.01	2.95	0.57	2.79	0.44	0.23	0.02	0.17
P103635	6	<0.1	49	17	243	37	<5	<3	8	<10	<2	<0.1	9	38	379	<5	23	139	578	11	34	1	2	0.01	1.08	0.15	2.75	0.21	0.12	0.02	0.11
P103636	20	11.3	279	154	1113	139	<5	<3	76	<10	<2	1.7	8	116	145	<5	147	1695	277	50	37	5	6	0.01	3.27	0.1	3.92	2.12	0.47	0.03	0.13
P103637	<5	<0.1	39	15	197	32	<5	<3	3	<10	<2	<0.1	11	42	123	<5	18	49	410	10	9	1	1	0.02	1.47	0.04	3.69	0.26	0.1	0.02	0.1
P103638	19	<0.1	87	32	190	33	<5	<3	6	<10	<2	<0.1	8	44	238	<5	32	115	169	16	38	1	1	0.01	1.73	0.05	5.88	0.22	0.12	0.02	0.16
P103639	6	<0.1	77	12	145	41	<5	<3	2	<10	<2	<0.1	17	60	94	<5	20	28	606	16	8	1	2	0.01	2.2	0.02	3.74	0.62	0.11	0.02	0.08
P103640	17	<0.1	81	32	346	50	<5	<3	11	<10	<2	<0.1	19	77	385	6	35	84	1428	18	43	1	1	0.01	1.85	0.06	5.93	0.49	0.09	0.02	0.12
P103641	17	<0.1	86	37	470	44	<5	<3	16	<10	<2	<0.1	25	98	328	<5	22	51	2091	15	36	3	2	0.01	1.73	0.04	5.55	0.24	0.14	0.02	0.12
P103642	5	<0.1	102	17	974	56	23	<3	56	<10	<2	5.4	9	126	501	<5	16	300	378	22	10	1	3	<0.01	1.05	0.05	2.59	0.15	0.08	0.01	0.06
P103643	13	3.4	193	39	735	34	<5	<3	4	18	<2	0.8	18	138	214	<5	23	69	1034	24	33	2	6	0.01	1.26	0.01	5.83	0.14	0.13	0.01	0.13
P103644	10	3.3	69	35	124	20	9	<3	5	<10	<2	1.3	2	25	497	<5	19	46	150	13	43	3	2	<0.01	0.38	0.02	1.6	0.04	0.08	0.02	0.03
P103645	7	<0.1	166	35	167	<5	<3	<3	3	<10	<2	<0.1	11	53	209	<5	33	68	894	11	15	2	1	0.01	1.23	0.02	11.21	0.09	0.13	0.01	0.22
P103646	19	<0.1	163	32	414	28	<5	<3	9	<10	<2	<0.1	26	108	228	<5	32	73	1175	16	34	2	4	0.01	1.76	0.03	7.81	0.24	0.18	0.02	0.14
P103647	8	4.9	75	44	256	20	<5	<3	3	<10	<2	1.2	6	36	456	<5	17	53	289	14	73	1	3	<0.01	0.88	0.09	2.82	0.08	0.19	0.03	0.09
P103648	<5	3.3	44	31	245	38	<5	<3	18	<10	<2	0.1	4	25	459	<5	38	337	92	15	72	1	1	0.01	0.98	0.02	2.8	0.09	0.17	0.02	0.11
P103649	8	<0.1	86	32	258	29	<5	<3	3	<10	<2	<0.1	17	67	216	<5	26	59	755	9	22	1	1	0.01	1.41	0.04	5.64	0.18	0.11	0.02	0.09
P103650	6	0.3	51	26	75	23	<5	<3	6	<10	<2	<0.1	6	30	629	<5	32	105	672	10	81	1	1	0.01	0.8	0.03	3.26	0.09	0.13	0.02	0.11

#### 4b) SILT SAMPLE GEOCHEMICAL RESULTS

Sample No.	Au	Ag	Cu	Pb	Zn	Al	Sb	Hg	Mn	Tl	Bi	Ca	Co	Ni	Ba	W	Cr	V	Mn	Lu	Sr	Zr	Sc	Tl	As	Ce	Te	Mg	K	Na	P
	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%	%
2520GT	6	<0.1	36	21	68	127	<5	<3	1	<10	<2	0.3	9	12	193	5	7	37	526	36	64	1	7	0.06	2.14	0.79	2.28	0.63	0.19	0.03	0.87
103607	227	1.1	159	50	1262	52	5	<3	12	<10	<2	13	29	283	664	<5	32	185	4494	15	47	1	4	0.01	3.41	0.47	3.29	0.53	0.24	0.02	0.13
103610	<5	<0.1	64	42	323	36	<5	<3	19	<10	<2	<0.1	18	47	696	<5	18	192	4751	18	23	<1	1	0.03	0.73	0.01	3.19	0.05	0.13	0.02	0.1
103623	10	0.1	68	12	830	50	<5	<3	7	<10	<2	11.4	13	225	761	<5	20	100	6703	7	65	1	1	0.01	1.16	0.82	2.74	0.27	0.14	0.02	0.21
103624	11	0.2	61	15	668	43	<5	<3	7	<10	<2	8.5	12	172	747	<5	20	116	4560	8	49	1	1	0.01	1.94	0.56	1.49	0.24	0.12	0.02	0.17

## APPENDIX 4: SILT SAMPLE GEOCHEMICAL RESULTS

### 4a) SILT SAMPLE DESCRIPTION SHEET

Sample No.	Easting	Northing	Zone	% Fines	Colour	Stream Grade	Stream Width	Date	Sampler	Comments
2500T	403291	6962219	9	90	buff	Steep	<0.5m	30/7/99	C.S.	intrusive talus nearby
101607	404011	6962101	9	80	BRN				S.E.	
101610	404278	6962405	9	80	BRN				S.E.	
101623	405290	6962306	9	30	BRN				S.E.	
101634	405341	6962223	9	40	BRN				S.E.	