# 1999 GEOLOGICAL and GEOCHEMICAL ASSESSMENT REPORT ON THE KLONDIKE PROPERTY

**Quartz Claims:**

**IDA 1-14 YA89419-432**
**IDA 17-23 YA89435-441**
**ORO 1-21 YA88924-944**
**ORO 25-28 YA88948-951**

Dawson Mining District
NTS Sheet 116-A/4

Latitude 64°09'
Longitude 137°35'

May 2, 2000

**NovaGold Resources Inc.**

Authors: Carl Schulze and Greg Johnson

Date of Work: August-Sept. 1999

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## SUMMARY

The Klondike Property, 100% owned by NovaGold Resources Inc, consists of 46 Yukon quartz mining claims covering 2375 acres (960 hectares). It is located within the Tintina Gold Belt 90 kilometers east of Dawson City, central Yukon Territory.

The Klondike property is located within the Selwyn Basin, which consists of a broad package of Paleozoic sediments extending ESE from northwest of Dawson City to the Yukon-NWT border north of the 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 northeast. The Mid-Cretaceous Tombstone-Tungsten Intrusive Suite has been emplaced within the Selwyn Basin. Monzonitic to quartz monzonitic members of this suite occur along an ESE trending belt extending for over 500 kilometres from northwest of Dawson City to the Yukon-NWT border. The property itself is underlain by three major sedimentary sequences of the Road River Group: a Lower Silurian turbidite sequence consisting of sandstone, siltstone and quartzite; a middle unit consisting of Duo Lake Formation chert with minor siliceous shale, and an upper unit of non-siliceous siltstone, mudstone, shale and minor limestone, possibly of the Steel Formation. Three Cretaceous quartz monzonite stocks, less than 600 metres in diameter, and several east-west trending dikes have been emplaced into this sequence, causing localized hornfelsing of country rock. A suite of late stage bleached, argillically altered quartz porphyritic dikes less than two metres wide has been emplaced along east-west trending fault zones.

Exploration by Riocanex defined two major zones: a 600m x 500m zone of anomalous gold values in rock to 3.28 gpt Au/ 5m across the central area; a 500m x 300m area of rock samples exceeding 0.5 gpt Au in the northern area. Exploration by Noranda Exploration Company Ltd. focused on the intrusive-sedimentary contact zones, returning values to 1.82 gpt Au/ 3m and 5.08 gpt/ 1.0 m, showing a strong correlation of arsenic and antimony to gold. Exploration by Orinoco Gold Inc. in 1995 defined three main areas of interest. The largest is an 800 by 300 metre zone returning abundant values from 1.0 to 4.05 gpt Au from intrusive and contact zone sediments. A second 600 by 300 m zone of anomalous gold values, extending from just south of the northern stock to the central stock, returned values to 3.28 gpt Au/ 5m and 1.15 gpt Au/ 10m. A reconnaissance traverse across the southern intrusive yielded values from 2.07 to 9.27 gpt Au.

Re-sampling of ridgeline trenches and showings by NovaGold Resources Inc. within brecciated Road River Group sediments with abundant tourmaline +/- arsenopyrite veining returned anomalous gold values to 256 ppb Au. Re-sampling of a trench previously returning 1 gpt Au/ 8 metres returned 531 ppb Au/ 8 metres. A sample of a "punky, sheared arsenopyrite vein" returned 417 ppb Au, with 180.3 gpt Ag; elevated lead and antimony values indicate a separate pulse of fluid emplacement. Sampling of strongly deformed arsenical tourmaline-rich sediments to the northwest, uphill of the pronounced northwest boundary soil anomaly identified in 1995, returned gold values to 1.65 gpt Au and silver values to 26 gpt Ag. Two other samples returned gram-plus gold values. Pathfinder mineralization again suggests either the presence of property-scale zonation, or of a separate fairly widespread mineralizing episode. This style of mineralization, also recognized by Aurum, may represent a significant exploration target.

A total of $6,400 in applicable assessment expenditures was incurred in 1999.

The widespread nature of mineralization combined with a favourable structural and stratigraphic setting indicate that the Klondike Property has excellent potential to host large intrusive and sediment-hosted gold deposits. Several targets remain under-explored. The 2000 exploration program will consist of continued detailed geological and structural assessment of known mineralized zones to determine controls and settings of potential economically viable mineralization. This is designed to delineate diamond drill exploration targets for testing later in the 2000 field season.

# CHAPTER 1: INTRODUCTION

## 1.1 Introductory Statement

The Klondike Property, 100% owned by NovaGold Resources Inc., is located 90 kilometers east of Dawson City within the Tintina Gold Belt of the Yukon Territory (Figure 1). The property covers significant gold geochemical anomalies along an east-west structural extension of the "Reserve Trend gold deposits of the Brewery Creek Mine held by Viceroy Resource Corporation (Viceroy) 30 kilometers to the west. The Klondike property consists of 46 Yukon quartz mining claims covering 960 hectares (Figure 2).

This report describes the 1999 exploration program by NovaGold Resources Inc. between August 14 and September 19, 1999, and includes descriptions of past exploration results.

Field work completed by NovaGold Inc. on the Klondike property in 1999 included mapping and soil and rock sampling to confirm and further define the extent of anomalous gold in rock samples reported by Rio Tinto Canadian Exploration Ltd. (Riocanex) and Noranda Exploration Company Ltd, and Orinoco Gold Inc.

The 1999 program was designed to re-evaluate the property based on recent discoveries and geological information within the Tintina Gold Belt, including intrusive hosted gold deposits such as Pogo, Fort Knox and Donlin Creek. Potential also exists for Carlin-type sediment hosted deposits, and to identify areas that required additional trenching and diamond drilling.

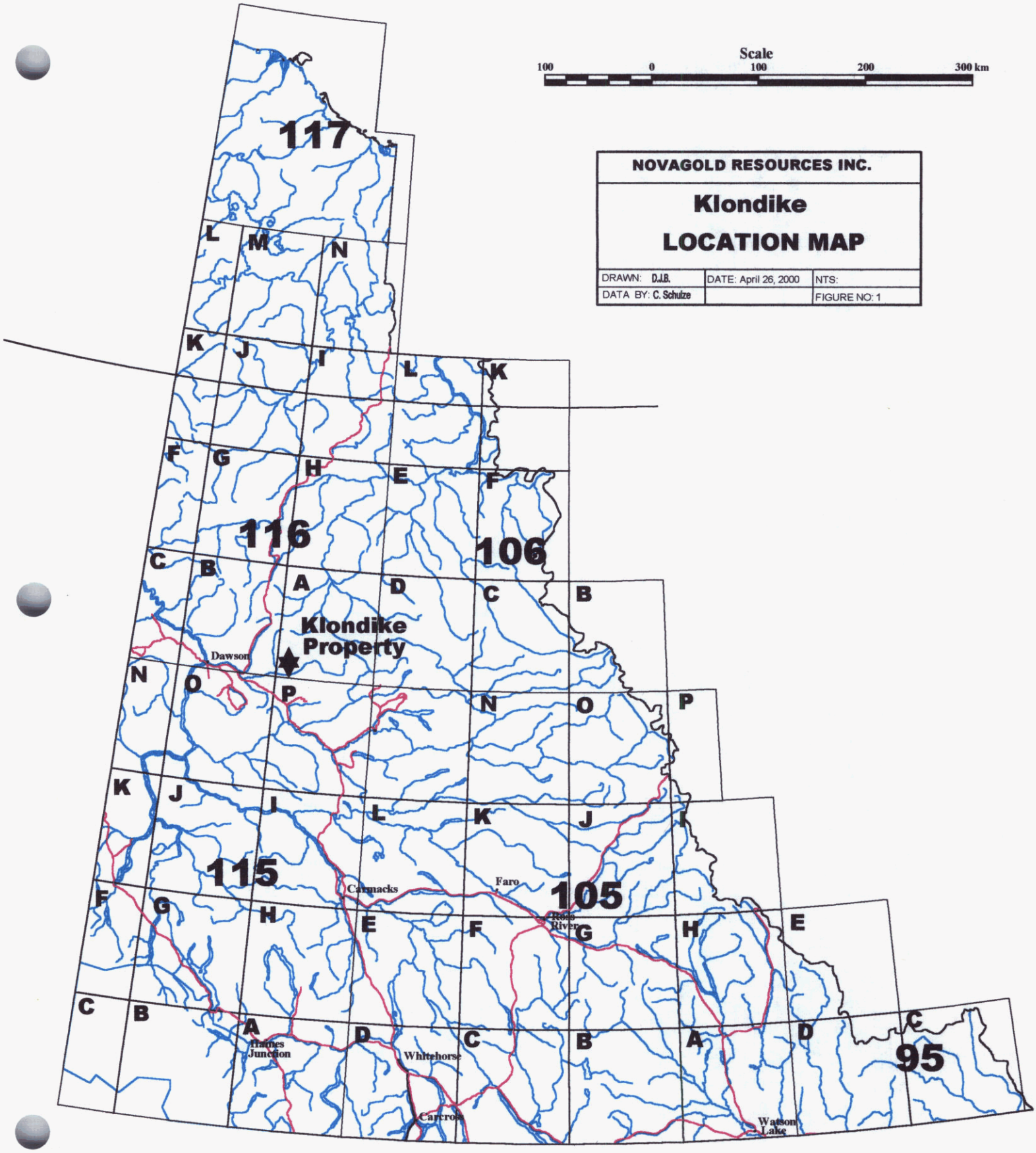
## 1.2: Location and Access

The Klondike property is located 90 kilometres east of Dawson City, central Yukon Territory, Canada, at 64 °09' North latitude, 137° 35' West longitude on NTS Map Sheet 116A/4. It occurs thirty kilometres east of the Brewery Creek Gold Mine, slightly northeast of the Tintina Fault Zone in the southern foothills of the Ogilvie Mountains.

Access to the property is by helicopter from the "Ditch Road" extending from the Dempster Highway to the Brewery Creek mine. A winter access road extending along the north flank of the Klondike River valley and the Aussie Creek valley to the property could be constructed fairly easily. Lodging and limited services are provided at "Klondike Corner", located at the intersection of Klondike Highway (Yukon Highway #2) and the Dempster Highway (Highway #5) sixty kilometres to the west.

## 1.3 Physiography, Climate, and Vegetation

The Klondike property is situated on a prominent set of ridges within the largely unglaciated southern foothills of the Ogilvie Mountains, between Brewery Creek to the west, and Hamilton Creek to the east. Topography consists of steep terrain in central areas with abundant outcrop and talus exposure, with local inaccessible areas, flanked by more moderate east-west trending ridges. Elevations range from 3,500 to 5,800 feet.


Scale
100 0 100 200 300 km
NOVAGOLD RESOURCES INC.
Klondike
LOCATION MAP
DRAWN: D.J.B.
DATE: April 26, 2000
NTS:
DATA BY: C. Schulze
FIGURE NO: 1
117
116
106
115
105
95
Klondike Property
Dawson
Carmacks
Faro
Ross River
Haines Junction
Whitehorse
Carcross
Watson Lake

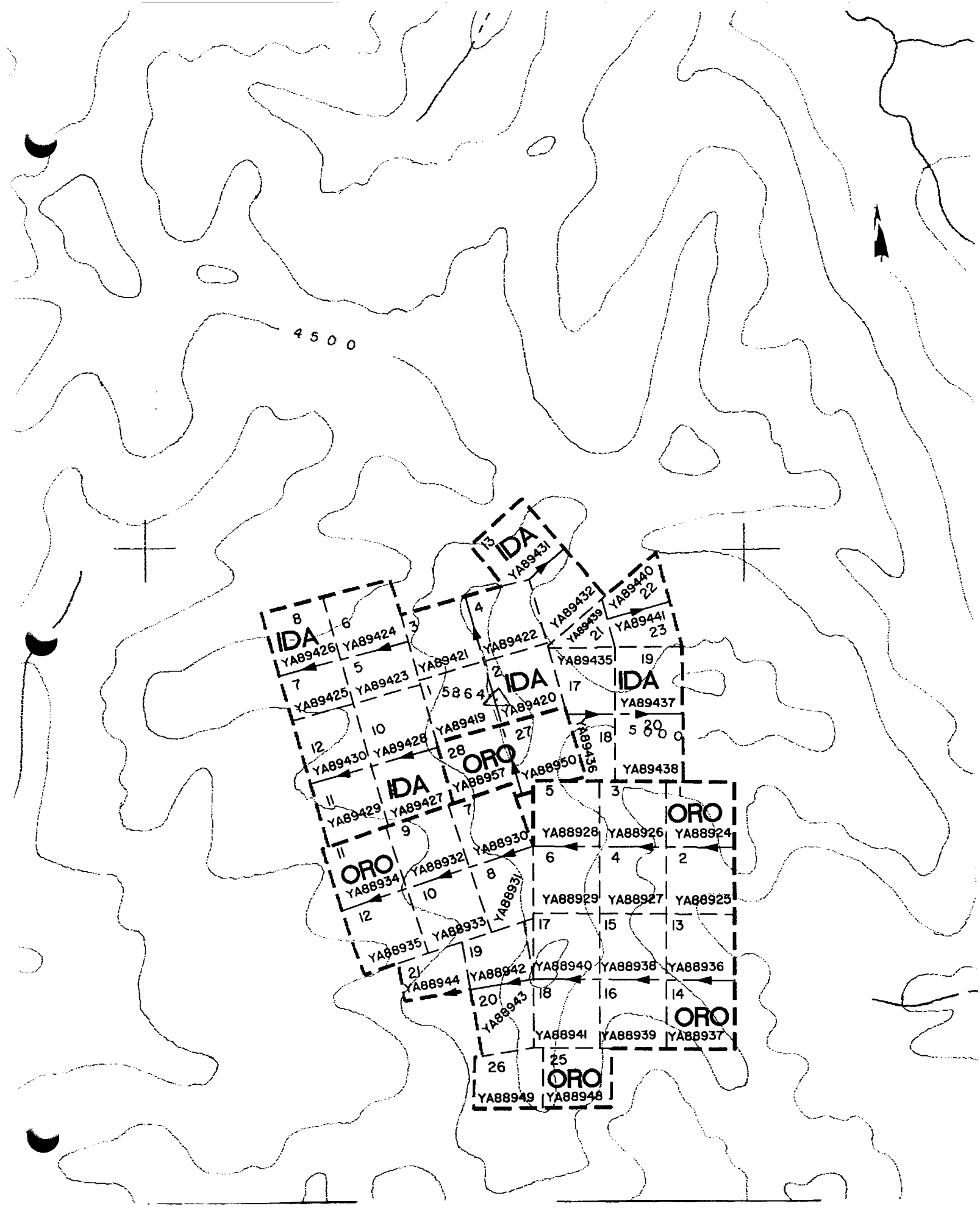



Fig. 2: Government Claim Map

NovaGold Resources Inc.

Klondike Project, Selwyn Basin, Yukon

NTS Sheet: 116A/4 May 5, 2000

An interior continental climate with fairly low precipitation (40 cm annually), warm summers and cold winters typifies the area. Permafrost is discontinuous, present only on the steeper north and east facing slopes and low, marshy, forested areas. The property is normally snow free from mid June to late September.

Most of the Klondike property is above tree line. Vegetation along lower elevations consists of black spruce, poplar, alder and willow; areas above 4,000 feet are typified by alpine vegetation and talus cover. Glaciation affected only the larger stream valleys such as Hamilton and Brewery Creeks, bypassing areas of higher elevation. As a result outcrop exposure is poor (~5%) except on ridge tops and incised drainage channels and gullies. A large portion of the Klondike property is covered by felsenmeer and talus fines.

### 1.4 Regional Exploration History

Limited exploration was conducted across the Klondike property area prior to staking by Rio Tinto Canadian Exploration Ltd. (Riocanex) in 1979. Interest in the area increased in the late 1980s following discovery of significant gold mineralization in 1987 by Noranda Exploration Co. Ltd. (Noranda) on its Brewery Creek property currently held by Viceroy. Noranda staked the AUS 1-55 claims located between the present Brewery Creek and Klondike properties later in 1987, and continues to hold the property. Several smaller properties were staked along the projected southeast extension of the Brewery Creek trend in the mid-1990s. In 1996, International Kodiak Minerals staked the OKI-DOKI property surrounding the Brewery Creek property to the east, north and west; however, this block does not extend near the Klondike property.

### 1.5 Property History and Claim Status

The Klondike property was originally staked as the IDA 1-120 claims by Rio Tinto Canadian Exploration Ltd. (Riocanex) in 1979. It was staked to cover an arsenic, mercury, and antimony silt anomaly detected during the "Aurora Gold Project" which followed up regional stream sediment mercury anomalies reported by the Geological Survey of Canada. Riocanex conducted exploration from 1979 to 1981 with programs of rock and soil sampling, geological mapping, followed by blast trenching. During the 1979 program, Riocanex conducted a regional silt sample survey, collected 68 soil and 44 rock samples. This program identified a broad area of anomalous gold, arsenic (As), antimony (Sb), and mercury (Hg) on the property. The best result was 4,485 ppb Au in rock from a silicified fault zone. In 1980, Riocanex conducted geological mapping and collected 3200 soil and 450 10-metre rock chip samples. The soil samples were analysed for the pathfinder elements As, Sb, and Hg, but not for gold. Rock chip samples returned values up to 3820 ppb Au/ 5 metres and outlined a 500 metre by 600 metre zone of anomalous gold in rock across the central portion of the property. In 1981 Riocanex excavated 51 blast trenches and obtained 486 rock samples, leading to definition of a newly recognized 300 metre by 800 metre zone averaging 500 ppb Au in rock across the northern portion of the property. Trench sampling returned results to 10.6 g/t Au (McClintock, 1979, 1981a, 1981b). The claims were dropped by Rio Algom Ltd. in 1986 when the company decided to focus exclusively on base metal mining and exploration.

In 1987 Noranda Exploration Company Ltd. staked the IDA 1-23 and ORO 1-28 claims in 1987 and conducted surface exploration from 1987 to 1989. A total of 97 soil and 141 rock samples were collected by Noranda in 1987. Soil results indicate a strong correlation between arsenic, antimony and gold; rock sampling returned values to 1,820 ppb Au/ 3 metres, 5,060 ppb Au/ 1 metre, and up to 13,400 ppb Au from grab sampling. In 1988, Noranda conducted a program of geological mapping, soil, and rock sampling across the claim block. The 1,500 soil samples and 183 rock samples collected returned highly anomalous Au values. In 1989 Noranda performed a 10-day trenching and rock chip-sampling program. A total of 115 rock trench samples from 10

hand trenches were taken, as well as125 rock samples obtained elsewhere. These returned values to 4,902 and 3,820 ppb Au respectively (Duke, 1990; MacKay, 1989; Copland, 1988). The property was transferred to Hemlo Gold Mines Inc. (Hemlo) in early 1995.

In 1995, Orinoco Gold (Orinoco) optioned the property from Hemlo and completed a brief work program during August and September of 1995. A total of 218 rock and 53 soil samples were collected during a 13-day program. All of the samples were analysed at Min-En Laboratories for gold plus 31-element ICP analysis. Contour soil lines completed in 1995 returned several sequential values exceeding 500 ppb Au with individual values to 1,250 ppb Au. Orinoco also repeated many anomalous values obtained from previous rock sampling achieving numerous multi-gram gold values from altered intrusive rocks, sedimentary rocks along intrusive contact zones, and sediment-hosted structural zones. Sampling within central areas returned values as high as 13.5 g/t Au. Reconnaissance rock sampling along southern areas returned encouraging gold values to 9.3 g/t within weakly veined quartz monzonite.

In mid-1999 NovaGold Resources Inc. acquired at 100% interest in the property, with no underlying royalties. Table 1 below describes current claim status.

**TABLE I - Claim Status after 1999 Filing**

| Claim Name | Grant number | No. of Claims | Expiry Date |
|---|---|---|---|
| IDA 7,8 | YA89425, 426 | 2 | Feb. 20, 2001 |
| IDA 11-12 | YA89429, 430 | 2 | |
| IDA 19, 20 | YA89437, 438 | 2 | |
| IDA 22, 23 | YA89440, 441 | 2 | |
| ORO 1-4 | YA88924-927 | 4 | |
| ORO 8-21 | YA88931-944 | 14 | |
| ORO 25, 26 | YA88948, 949 | 2 | |
| IDA 1-6 | YA89419-424 | 6 | Feb. 20, 2002 |
| IDA 9, 10 | YA89427, 428 | 2 | |
| IDA 13, 14 | YA89431, 432 | 2 | |
| IDA 17, 18 | YA89435-436 | 2 | |
| IDA 21 | YA89439 | 1 | |
| ORO 5-7 | YA88928-930 | 3 | |
| ORO 27, 28 | YA88950-951 | 2 | |
| | Total: | 46 | |

### 1.6 1999 NovaGold Exploration Program

In August and September, 1999 NovaGold Resources Inc. conducted a program of surface geological mapping and evaluation and rock geochemical sampling focussing on delineation of diamond drill targets. A total of 48 rock samples were obtained.

All applicable assessment work was conducted by: Rick VanNieuwenhuyse, President; Greg Johnson, North American Manager, and Carl Schulze, Project Manager. Helicopter services were provided by Fireweed

Helicopters of Dawson City, Yukon.

### 1.6.1 Sample Preparation and Assay Procedure

Samples taken in 1999 were sent to NAL Laboratories of Whitehorse for gold fire assay analysis, and then sent to IPL Laboratories in Vancouver for 30-element ICP analysis. At NAL, samples were pulverized to -100 mesh, and 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.

# CHAPTER 2: GEOLOGY

## 2.1 Regional Geology

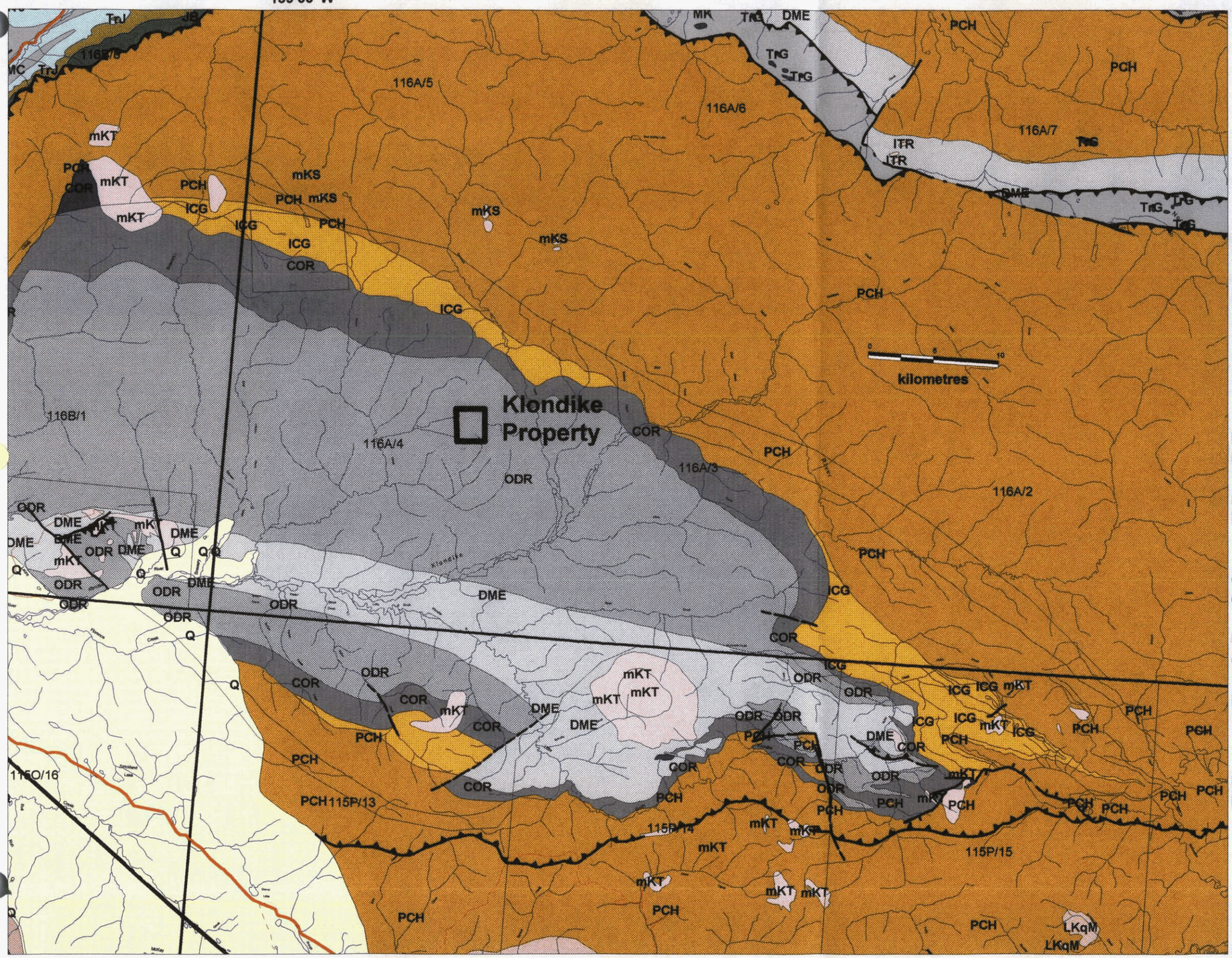
The Klondike property is situated within the western portion of the Selwyn Basin, part of the Ominica Belt (Wheeler, et al., 1991; Murphy, et al., 1993) as shown on Figure 3. The regional geology of this area of the Yukon has been mapped by Green (1972), at 1:250,000 scale. More detailed 1:50,000 scale mapping has been completed on the map sheets to the southeast of the Klondike property (Murphy, et al., 1993; Murphy and Heon, 1994).

The Klondike 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 northeast. 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 northwest of Dawson City to the Yukon-NWT border.

Felsic Cretaceous intrusive bodies of the 89-105 Ma Tombstone Suite are known to host low grade Fort Knox style intrusive hosted gold mineralization at Fort Knox, Dublin Gulch, Clear Creek, Red Mountain, and Scheelite Dome. Intrusive bodies range in size from meter-scale dikes to stocks several square kilometres in area (Murphy, et al., 1993).

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 southwest, 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 Robert Service Thrust underlies and defines one of the largest thrust sheets in the Canadian Cordillera (Murphy et al., 1993). It extends eastward from Dawson City area through the Keno Hill area into the Lansing region. The Robert Service thrust typically juxtaposes Upper Proterozoic Hyland Group rocks (PCH) on the upper plate over Mississippian Keno Hill Quartzite and Triassic-Jurassic schist (TrJs) on the lower plate. The Tombstone Thrust typically juxtaposes Proterozoic and Paleozoic Selwyn Basin rocks over Devonian to Late Jurassic footwall sediments (Murphy, et al, 1993, Abbott, 1993). Structural evidence suggests early north-west movement, followed by north-east translation of the Tombstone thrust sheet and underlying Paleozoic rocks along the Tombstone Thrust plane (Roots, 1993: Murphy and Heon, 1994).




Derived from Yukon Digital Geology

# NovaGold Resources Inc.

## Regional Geology

## Klondike Property

### LEGEND

**Quaternary**
Q unconsolidated material

**Lower Tertiary**
ITR Ross mixed bimodal volcanics

**Mid Cretaceous**
mKS Selwyn Suite intermediate intrusives
mKT Tombstone Suite felsic intrusives

**Triassic**
TrG Galena Suite medium grained diorite, gabbro sills & greenstone

**Mississippian**
MK Keno Hill massive quartz arenite

**Devonian and Mississippian**
DME Earn Group submarine fans and channel deposits, shale, chert

**Ordovician to Lower Deveonian**
ODR Road River-Selwyn shale, chert

**Upper Cambrian and Ordovician**
COR Rabbitkettle basinal limestone

**Lower Cambrian**
ICG Gull Lake fine clastics with volcanic units

**Upper Proterozoic to Lower Cambrian**
PCH Hyland clastics and limestone siltstone, limestone

Faults

Thrust Faults

N
W E
S

Produced by Blackfox Minerals Ltd.
August 10, 2000

Regional metamorphism has imprinted a greenschist facies metamorphic mineral assemblage on rocks of the Hyland Group and Road River Group. Contact metamorphic aureoles consist of biotite hornfels enriched in iron and, locally, precious and base metals. Often the larger intrusions have a low magnetic signature surrounded by an area of high magnetic relief related to the hornfelsed zone.

## 2.2 Property Geology

The Klondike property was mapped in detail by geologists with Rio Tinto Canadian Exploration Ltd. The following report draws heavily on the referenced reports, as well as the 1995 Orinoco exploration Inc. report conducted by Aurum Geological Consultants Inc.

The Klondike Property is underlain by three major sedimentary sequences of the Ordovician to early Devonian Road River Group: a Lower Silurian turbidite sequence consisting of sandstone, siltstone, quartzite with minor chert and black shale; a middle unit up to 150 metres thick consisting of Duo Lake Formation chert with minor siliceous shale, and a 50m to 100m thick unit of non-siliceous siltstone, mudstone, shale and minor limestone (Doherty, 1995, after Riocanex report), which may belong to the Steel Formation. This sedimentary package has been asymmetrically folded into a series of syncline/anticlines oriented along a northwest trending axis (Figure 4).

Three Cretaceous quartz monzonite stocks and several east-west trending dikes have been emplaced into this sequence, causing localized hornfelsing of country rock. All stocks are less than 600 meters in diameter, and display a progression from an equigranular fabric in core areas towards increasingly porphyritic phases towards contact zones. The intrusives contain 5-10% mafic minerals, predominantly biotite with local areas of hornblende. Feldspar phenocrysts up to 2 cm compose 10 to 20% of the intrusive unit. Areas of tightly spaced joint sets oriented at 080°-170° and 030°-070° respectively, and rare quartz veining up to 2 cm in width occur within the stocks. A suite of late stage bleached, argillically altered quartz porphyritic dikes less than two metres wide has been emplaced along east-west trending fault zones. Thermal metamorphism of adjacent country rock has occurred, with fine grained biotite hornfelsing associated with up to 5% pyrrhotite, lesser arsenopyrite and rare chalcopyrite. Areas of tourmaline breccia at the intrusion margin are common and pink axinite has been noted locally. Both the tourmaline and axinite reflect the primary high boron content of the intrusion.

The stocks and dikes exposed on the Klondike property display a strong east west (90° - 110°) lineation, similar to that of the structural setting and mineralized trend at the Brewery Creek property. Both properties lie along a 070° trend that extends from Brewery Creek to the Klondike property. The Clear Creek, Red mountain and Dublin Gulch properties lie along a parallel 070° trend to the south. Murphy and Heon, 1994 discuss an ENE trending fracture zone that hosts mineralized breccia zones parallel to, and along strike of, the McQuesten Antiform which defines the McQuesten Mineral Belt.

## TABLE 2: KLONDIKE PROPERTY STRATIGRAPHIC COLUMN

| Age | Group | Formation (Lithology) | Geology Map Designation | Rock Code | Description |
|---|---|---|---|---|---|
| | | | | | |
| Mid-Cretaceous | Tombstone-Tungsten Plutonic Suite (Selwyn Plutonic Suite) | Monzonite, Quartz Monzonite coeval South Fork Volcanics | Kqm, Kg | QM, MO | Felsic to intermediate quartz monzonitic, monzonitic, to quartz dioritic intrusives. The name "Selwyn Suite" often applies to eastern portion of the suite. Anvil Intrusives and coeval South Fork Volcanics now considered part of Tombstone Suite; varying phases due to different fractionation states rather than a separate major intrusive event. |
| Ordovician-Early Devonian | Road River Group | Steel Formation | (OSDr) | SS | Weakly to moderately calcareous orange weathering mudstone to siltstone, often bioturbated reflecting oxygenated bottom water conditions. Baritic horizons often form distinctive upper members near top of formation. |
| Ordovician-Early Devonian | Road River Group | Duo Lake Formation | Osd (OSDr) | CH, SLT, ARG | Thin to medium bedded chert, weathers blue-grey to buff, often limonitic; lesser siltstone to mudstone, fractured to brecciated |

## CHAPTER 3: MINERALIZATION

### 3.1 Regional Deposit Metallogeny

The Klondike property is located on the northern side of the McQuesten Mineral Belt, described by Aho (1962) as a 30-50 km wide, 40 km long east-west trending belt consisting of a major transverse zone of east-northeast trending folds, Cretaceous felsic intrusions, and related Au, Sn, W and Ag mineralization. The Klondike property shares many similarities with active exploration targets in that belt, including the Dublin Gulch deposit and the Clear Creek, Scheelite Dome and Red Mountain prospects, as well as with Viceroy's Brewery Creek Reserve Trend. All bulk mineable gold targets in this belt are related to the 89-105 Ma Tombstone Suite intrusives. Intrusion of alkaline felsic stocks parallel to the fold axis has resulted in fault-controlled mineralization spatially related to the stocks. Mineralization consists of: Fort Knox style gold-bismuth and arsenopyrite in sheeted veins and disseminations within the intrusions, tin-tungsten and gold skarns, silver-lead-zinc veins, and silver-lead-antimony veins. Mineralization associated with felsic stocks occurs at Clear Creek, Red Mountain, Dublin Gulch, and Scheelite Dome (Aho, 1963; Emond, et al., 1992; Emond, 1992) and at the Brewery Creek, Panorama Ridge, Klondike, Antimony Mountain and Lorrie properties along the northern flank of the McQuesten Mineral Belt. Geochemically, the intrusions, and proximal reactive or porous sedimentary units show a strong Au, As, Bi, Sb, +/- Hg and Pb geochemical signature.

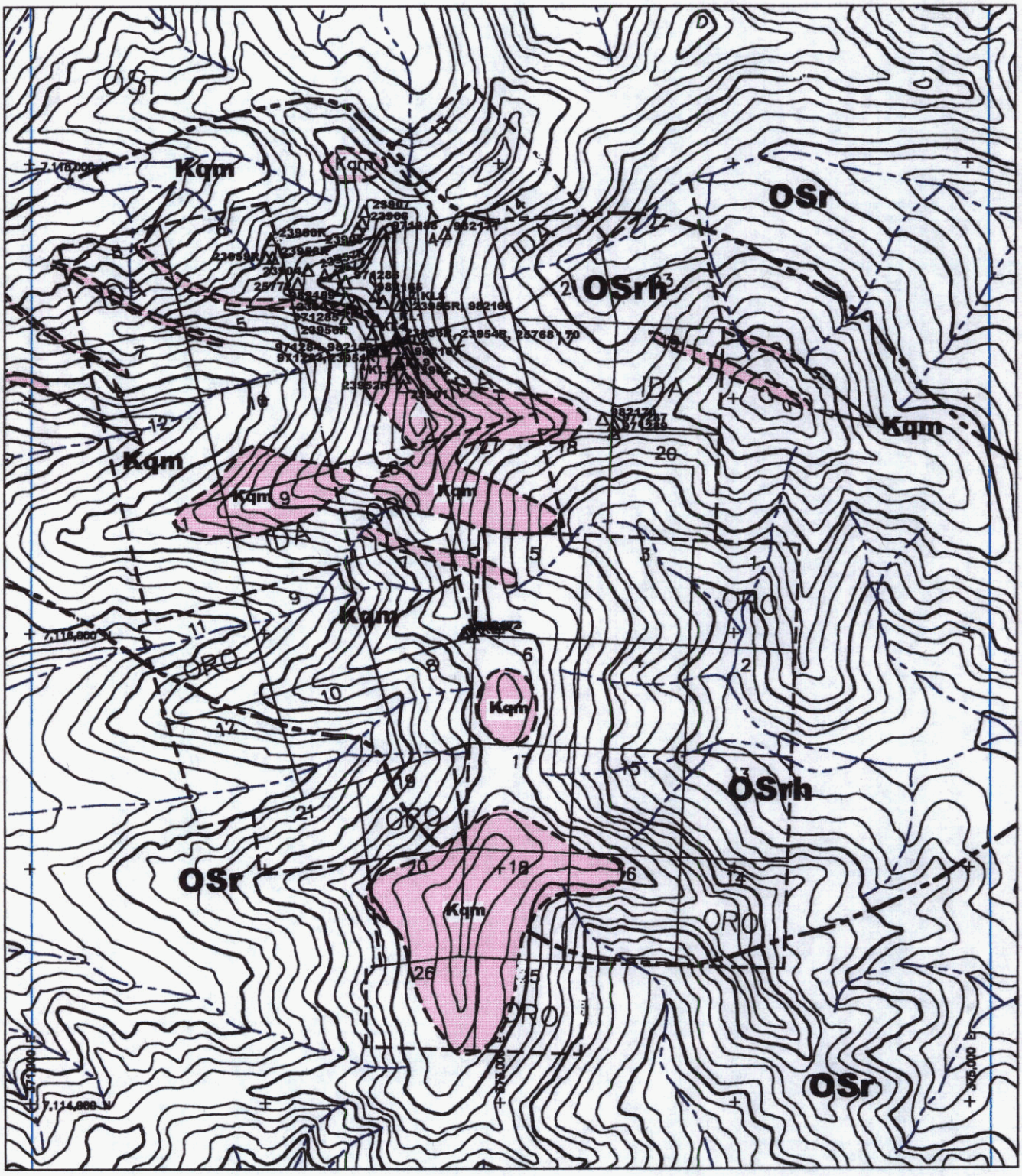
### 3.2 Exploration Results

Exploration by Riocanex in 1980 defined a 600m x 500m zone of anomalous gold values in rock, including a value of 3.28 gpt Au/ 5m across the central area. In 1981, Riocanex defined a 500m x 300m area of rock samples exceeding 0.5 gpt Au in the northern area. Exploration by Noranda focused on the intrusive-sedimentary contact zones, largely ignoring the intrusives themselves. Sampling in 1987 returned values to 1.82 gpt Au/ 3m and 5.08 gpt/ 1.0m, and showed a strong correlation of arsenic and antimony to gold. Trench sampling in 1989 returned values to 4.90 gpt Au and 3.82 gpt Au.

Exploration by Aurum focused primarily on potential for intrusive hosted, bulk tonnage gold mineralization, and defined three main areas of interest. The largest is an 800 metre by 300 metre zone hosting abundant rock samples with gold values exceeding 1.0 gpt Au, extending along the central ridge in north-central areas. This area includes values obtained by Riocanex and Noranda of 3.08 gpt Au/ 10m, 1.98 gpt Au/ 6m, 1.65 gpt Au/ 5m, and 1.0 gpt Au/ 8m (Doherty, 1995). Aurum collected six samples from this area, which returned values from 1.14 gpt Au to 4.05 gpt Au from intrusive and contact zone sediments. A second zone of anomalous gold values in rock measuring 600m x 300m, extending from just south of the northern stock to the central stock, returned values to 3.28 gpt Au/ 5m and 1.15 gpt Au/ 10m. A single reconnaissance traverse across the southern intrusive yielded values from 2.07 to 9.27 gpt Au from three of four rock samples collected.

The 1995 program also defined the presence of significant gold mineralization within the central stock. Values of 1.43 and 4.84 gpt Au were returned from arsenopyrite-enriched equigranular monzonite with narrow quartz veins (Doherty, 1995).

A "contour traverse" in 1995,involving systematic soil sampling at 50 metre intervals along the northwest property margin, returned an interval with four samples exceeding 500 ppb Au, with a maximum value of 1,250 ppb Au.




LEGEND ▲ Rock Sample Site

CRETACEOUS

Kqm biotite quartz monzonite

ORDOVICIAN–SILURIAN

ROAD RIVER GROUP

OSr chert, argillite, quartzite, conglomerate

OSrh hornfelsed chert, argillite, quartzite, conglomerate

limit of hornfels

Survey Monument

UTM N/A tTN mN

0 250 500 750

METRES

NOVAGOLD RESOURCES INC.

IDA-ORO CLAIMS

PROPERTY GEOLOGY
Sample Location

SCALE: 1 : 25,000 DATE: August 2000

N.T.S.: 116 A/4 DRAWN: Figure 4

The 1999 NovaGold exploration program across the Klondike Project focused on surface rock sampling across sediment-hosted mineralization north of the northern stock, with lesser exploration across trenches within the central area and trenches across an eastern spur ridge. A brief visit was made to the south-eastern area where high values were reported from 1995 exploration; however, significant mineralization was not noted in 1999.

Re-sampling of ridgeline trenches and showings within brecciated deformed chert to fine clastic Road River Group sediments with abundant tourmaline +/- arsenopyrite veining returned anomalous gold values to 256 ppb Au. These are associated with background silver values, moderately anomalous arsenic values to 0.45% As, and weakly elevated antimony values to 31 ppm Sb. Samples returning near-background gold values returned higher arsenic, silver, copper, bismuth, and antimony values. Re-sampling of a trench previously returning 1 gpt Au/ 8m returned 531 ppb Au/ 8 metres. A sample of a "punky, sheared arsenopyrite vein" returned 417 ppb Au, with 180.3 gpt Ag, 2.06% Pb, and 0.56% Sb, indicating a separate pulse of fluid emplacement. A small limonitic skarn occurrence returned 645 ppb Au with 0.23% Cu and >1.0% As.

Although many trenches were re-sampled and select grab samples taken, most samples failed to repeat high rock values returned from previous exploration.

Sampling of strongly deformed arsenical tourmaline-rich sediments to the northwest, uphill of the pronounced north-west boundary soil anomaly identified in 1995, returned gold values to 1.65 gpt Au, with three values exceeding 1.0 gpt Au. Gold is associated with anomalous silver to 26 gpt Ag, weakly anomalous copper to 195 ppm Cu, moderately anomalous lead to 462 ppm Pb, and strongly anomalous arsenic, antimony and bismuth to 2.94% As, 477 ppm Sb, and 180 ppm Bi respectively. This suggests either the presence of property-scale zonation, or of a separate fairly widespread mineralizing episode. These samples were obtained from near the north property boundary. This style of mineralization, also recognized by Aurum, may represent a significant exploration target.

Re-sampling of a trench within the central area returned a value of 1.68 gpt Au/ 7 metres, with a similar pathfinder element signature to that of most of the ridgeline sampling. A select grab sample of tourmaline breccia within a trench roughly one kilometre south-east of the ridgeline sampling returned 2.27 gpt Au, with strongly anomalous arsenic, bismuth, and antimony values, suggesting the presence of an arsenic vein.

Although significant areas of the property have undergone intense surface exploration, several targets, including the central and southern stocks themselves, remain under-explored. No drilling or advanced exploration has been done. The tourmaline breccia zones may extend beyond presently recognized north-western limits, enlarging the known mineralized area. The widespread nature of mineralization combined with a favourable structural and stratigraphic setting indicate that the Klondike Property has excellent potential to host large intrusive and sediment-hosted gold deposits.

# CHAPTER 4: CONCLUSION

The Klondike 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 northeast. The Mid-Cretaceous Tombstone-Tungsten Intrusive Suite (95-89Ma) has been emplaced within the Selwyn Basin. Monzonitic to quartz monzonitic members of this suite occur along an ESE trending belt extending for over 500 kilometres from northwest of Dawson City to the Yukon-NWT border.

The Klondike Property is underlain by three major sedimentary sequences of the Road River Group: a Lower Silurian turbidite sequence consisting of sandstone, siltstone and quartzite; a middle unit consisting of Duo Lake Formation chert with minor siliceous shale, and an upper unit of non-siliceous siltstone, mudstone, shale and minor limestone, possibly of the Steel Formation. Three Cretaceous quartz monzonite stocks, less than 600 metres in diameter, and several east-west trending dikes have been emplaced into this sequence, causing localized hornfelsing of country rock. A suite of late stage bleached, argillically altered quartz porphyritic dikes less than two metres wide has been emplaced along east-west trending fault zones.

Exploration by Riocanex defined two major zones: a 600m x 500m zone of anomalous gold values in rock to 3.28 gpt Au/ 5m across the central area; a 500m x 300m area of rock samples exceeding 0.5 gpt Au in the northern area. Exploration by Noranda Exploration Company Ltd. focused on the intrusive-sedimentary contact zones, returning values to 1.82 gpt Au/ 3m and 5.08 gpt/ 1.0 m, showing a strong correlation of arsenic and antimony to gold. Exploration by Orinoco Gold Inc. in 1995 defined three main areas of interest. The largest is an 800 by 300 metre zone returning abundant values from 1.0 to 4.05 gpt Au from intrusive and contact zone sediments. A second 600 by 300 m zone of anomalous gold values, extending from just south of the northern stock to the central stock, returned values to 3.28 gpt Au/ 5m and 1.15 gpt Au/ 10m. A single reconnaissance traverse across the southern intrusive yielded values from 2.07 to 9.27 gpt Au.

Re-sampling of ridgeline trenches and showings by NovaGold Resources Inc. within brecciated Road River Group sediments with abundant tourmaline +/- arsenopyrite veining returned anomalous gold values to 256 ppb Au. Re-sampling of a trench previously returning 1 gpt Au/ 8 metres returned 531 ppb Au/ 8 metres. A sample of a "punky, sheared arsenopyrite vein" returned 417 ppb Au, with 180.3 gpt Ag; elevated lead and antimony values indicate a separate pulse of fluid emplacement. Sampling of strongly deformed arsenical tourmaline-rich sediments to the northwest, uphill of the pronounced northwest boundary soil anomaly identified in 1995, returned gold values to 1.65 gpt Au and silver values to 26 gpt Ag. Two other samples returned gram-plus gold values. Pathfinder mineralization suggests either the presence of property-scale zonation, or of a separate fairly widespread mineralizing episode. This style of mineralization, also recognized by Aurum, may represent a significant exploration target.

A total of $6,400 in applicable assessment expenditures was spent in 1999.

Although significant areas of the property have undergone intense surface exploration, several targets, remain under-explored. The widespread nature of mineralization combined with a favourable structural and stratigraphic setting indicate that the Klondike Property has excellent potential to host large intrusive and sediment-hosted gold deposits.

# CHAPTER 5: RECOMMENDATIONS

The 2000 exploration program will consist of continued detailed geological and structural assessment of known mineralised zones, to determine controls and settings of potential economically viable mineralization. A similar detailed assessment will be done across the newly recognised area of auriferous tourmaline and arsenopyrite veining uphill of the pronounced northwest boundary soil anomaly discovered in 1995. Geochemical assessment of all sampling to date will be done to determine presence of mineral zonation and/ or multiple episodic fluid emplacement within the Klondike area mineralising system.

The above program shall delineate diamond drill targets for testing later in the 2000 field season. This phase shall consist of exploration-style drilling to test for significant mineralization at depth, and to determine whether further drilling is warranted.

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# STATEMENT OF QUALIFICATIONS

I, Carl M. 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 1999 exploration program and continue to function as agent for NovaGold through my consulting firm, Wolf Star Resources.

2) I graduated from Lakehead University with a Bachelor of Science Degree in Geology in 1984.

3) I have been practising my profession as a geologist 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 am a member of the Yukon Prospectors Association.

Carl M. Schulze
Consulting Geologist
Wolf Star Resources

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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 1999 exploration and remain as agent for NovaGold 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.

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Carl M. Schulze
Consulting Geologist
Wolf Star Resources

## APPENDIX 1

## APPLICABLE EXPENDITURES FOR ASSESSMENT CREDITS

| Klondike Property Expenditures | |
|---|---|
| **Description** | **Expenditure** |
| Labour | $ 3,900 |
| Helicopter | 720 |
| Geochemical Analyses | 912 |
| Comp, Map Prep. | 300 |
| Report Writing | 568 |
| | |
| **Total** | **$6,400** |

**ROCK SAMPLE DESCRIPTION SHEET**

| Sample No. | Au | Ag | Cu | Pb | Zn | As | Sb | Hg | Mo | Tl | Bi | Cd | Co | Ni | Ba | W | Cr | V | Mn | La | Sr | Zr | Sc | Ti | Al | Ca | Fe | 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 | % | % | % | % | % | % | % | % |
| 23901 | 11 | <0.1 | 32 | 31 | 76 | 718 | 20 | <3 | 3 | <10 | <2 | <0.1 | 7 | 4 | 303 | <5 | 54 | 19 | 402 | 35 | 167 | 23 | 4 | 0.11 | 1.97 | 1.5 | 3.06 | 0.52 | 0.36 | 0.09 | 0.06 |
| 23902 | 56 | <0.1 | 16 | 10 | 38 | 74 | 9 | <3 | 33 | <10 | <2 | <0.1 | 7 | 8 | 233 | <5 | 97 | 33 | 221 | 18 | 39 | 11 | 2 | 0.1 | 0.89 | 0.83 | 1.13 | 0.45 | 0.3 | 0.09 | 0.08 |
| 23903 | 246 | 1.8 | 1190 | 19 | 26 | 7256 | 86 | <3 | 12 | <10 | 6 | <0.1 | 33 | 31 | 198 | <5 | 111 | 37 | 182 | 18 | 23 | 5 | 3 | 0.03 | 0.9 | 0.17 | 2.56 | 0.37 | 0.23 | 0.07 | 0.03 |
| 23904 | 5 | <0.1 | 98 | 12 | 55 | 137 | 9 | <3 | 3 | <10 | <2 | <0.1 | 16 | 116 | 45 | <5 | 184 | 129 | 203 | 8 | 97 | 12 | 5 | 0.1 | 3.37 | 1.59 | 3.61 | 1.08 | 0.74 | 0.41 | 0.06 |
| 23905 | 7 | 0.5 | 80 | 49 | 45 | 415 | 24 | <3 | 4 | <10 | <2 | <0.1 | 3 | 21 | 503 | <5 | 74 | 76 | 51 | 27 | 288 | 7 | 6 | <0.01 | 1.22 | 0.12 | 2.05 | 0.03 | 0.14 | 0.02 | 0.09 |
| 23906 | 56 | 1.2 | 212 | <2 | 291 | 4872 | 123 | 4 | 17 | <10 | <2 | <0.1 | 8 | 23 | 260 | <5 | 85 | 179 | 190 | <2 | 14 | 6 | 1 | <0.01 | 0.44 | 0.06 | 20.43 | 0.01 | 0.03 | 0.02 | 0.28 |
| 23907 | 6 | 0.1 | 129 | 29 | 247 | 1724 | 55 | <3 | 5 | <10 | <2 | <0.1 | 3 | 26 | 614 | <5 | 81 | 158 | 142 | 9 | 105 | 6 | 15 | <0.01 | 1.15 | 0.03 | 16.49 | 0.02 | 0.02 | 0.02 | 0.13 |
| 23908 | 498 | 0.7 | 854 | 8 | 37 | 807 | 14 | <3 | 3 | <10 | 3 | <0.1 | 6 | 19 | 39 | <5 | 72 | 12 | 105 | 34 | 73 | 4 | <1 | 0.05 | 1.58 | 1.4 | 0.61 | 0.09 | 0.01 | 0.26 | 0.06 |
| 25768 | 9 | 0.3 | 17 | 44 | 7 | 148 | 10 | <3 | 2 | <10 | <2 | <0.1 | 1 | 2 | 37 | <5 | 36 | <2 | 11 | 2 | 8 | 22 | <1 | <0.01 | 0.45 | 0.04 | 0.27 | 0.04 | 0.1 | 0.02 | <0.01 |
| 25769 | 212 | 0.2 | 13 | 19 | 5 | 1318 | 13 | <3 | 4 | <10 | <2 | <0.1 | 1 | 2 | 938 | <5 | 66 | 12 | 10 | 9 | 213 | 5 | 1 | <0.01 | 0.2 | 0.02 | 0.34 | 0.01 | 0.05 | 0.02 | 0.06 |
| 25770 | 318 | 0.4 | 137 | 23 | 5 | 4452 | 14 | <3 | 8 | <10 | <2 | <0.1 | 2 | 6 | 386 | <5 | 85 | 8 | 17 | 10 | 58 | 2 | 1 | <0.01 | 0.2 | 0.01 | 0.6 | 0.02 | 0.05 | 0.02 | 0.02 |
| 25771 | 37 | 1.6 | 25 | 697 | 11 | 1856 | 70 | <3 | 20 | <10 | 31 | <0.1 | 1 | 3 | 1122 | <5 | 81 | 32 | 19 | 19 | 142 | 5 | 1 | <0.01 | 0.17 | 0.01 | 0.99 | 0.01 | 0.04 | 0.04 | 0.16 |
| 25772 | 8 | 1.2 | 106 | 26 | 14 | 8333 | 120 | <3 | 3 | <10 | 13 | <0.1 | 3 | 7 | 163 | <5 | 173 | 8 | 73 | 3 | 10 | 1 | 2 | <0.01 | 0.15 | 0.01 | 1.68 | 0.02 | 0.05 | 0.03 | 0.03 |
| 23951R | 247 | 0.3 | 32 | 10 | 7 | 533 | 20 | <3 | 9 | <10 | <2 | <0.1 | 2 | 3 | 233 | <5 | 54 | 11 | 15 | 8 | 47 | 4 | 1 | <0.01 | 0.21 | 0.01 | 0.64 | 0.02 | 0.08 | 0.02 | 0.02 |
| 23952R | 189 | 0.1 | 73 | 25 | 56 | 196 | 31 | <3 | 1 | <10 | <2 | <0.1 | 5 | 7 | 278 | <5 | 15 | 23 | 607 | 42 | 51 | 6 | 3 | <0.01 | 0.6 | 1.37 | 3.17 | 0.13 | 0.18 | 0.04 | 0.09 |
| 23953R | 256 | 0.2 | 17 | 3 | 8 | 1890 | 10 | <3 | 3 | <10 | <2 | <0.1 | 1 | 4 | 260 | <5 | 123 | 7 | 66 | 3 | 30 | 1 | 1 | <0.01 | 0.14 | 0.02 | 0.45 | 0.02 | 0.05 | 0.02 | 0.02 |
| 23954R | 234 | 0.4 | 26 | 5 | 11 | 1010 | 11 | <3 | 4 | <10 | <2 | <0.1 | 1 | 3 | 314 | <5 | 94 | 7 | 27 | 4 | 38 | 2 | 1 | <0.01 | 0.17 | 0.02 | 0.31 | 0.02 | 0.05 | 0.02 | 0.02 |
| 23955R | 23 | 3.5 | 36 | 553 | 11 | 7810 | 185 | <3 | 2 | <10 | 5 | <0.1 | 1 | 2 | 320 | <5 | 39 | 4 | 11 | 19 | 36 | 16 | 1 | <0.01 | 0.3 | 0.01 | 1.37 | 0.01 | 0.22 | 0.02 | 0.04 |
| 23956R | 140 | 1.7 | 33 | 53 | 7 | 4103 | 30 | <3 | 2 | <10 | 7 | <0.1 | 1 | 4 | 97 | <5 | 76 | 8 | 19 | 2 | 6 | 5 | 1 | 0.01 | 0.2 | 0.03 | 0.54 | 0.06 | 0.08 | 0.02 | 0.01 |
| 23957R | 1026 | 3.4 | 72 | 160 | 13 | 22234 | 240 | <3 | 56 | <10 | 72 | <0.1 | 8 | 18 | 41 | <5 | 80 | 35 | 22 | 7 | 6 | 5 | 3 | <0.01 | 0.08 | 0.01 | 2.01 | 0.01 | 0.02 | 0.02 | 0.14 |
| 23958R | 1647 | 26 | 195 | 462 | 15 | 29441 | 477 | <3 | 13 | <10 | 180 | <0.1 | 9 | 16 | 147 | <5 | 95 | 17 | 34 | <2 | 4 | 3 | 2 | <0.01 | 0.06 | 0.01 | 2.79 | 0.01 | <0.01 | 0.02 | 0.26 |
| 23959R | 1451 | 9.2 | 139 | 239 | 41 | 22676 | 212 | <3 | 8 | <10 | 71 | <0.1 | 10 | 27 | 105 | <5 | 118 | 17 | 21 | <2 | 8 | 4 | <1 | <0.01 | 0.04 | 0.01 | 2.17 | <0.01 | 0.01 | 0.02 | 0.17 |
| 23960R | 18 | 1 | 420 | 20 | 23 | 370 | 20 | <3 | 3 | <10 | <2 | <0.1 | 20 | 85 | 34 | <5 | 49 | 35 | 129 | 10 | 394 | 7 | 3 | 0.11 | 4.71 | 3.02 | 5.17 | 0.67 | 0.04 | 0.47 | 0.12 |
| 971283 | 187 | 0.3 | 216 | 37 | 16 | 2600 | 276 | <3 | 48 | <10 | <2 | <0.1 | 9 | 10 | 11028 | <5 | 55 | 57 | 15 | 23 | 2871 | 2 | 10 | <0.01 | 1.84 | 0.15 | 3.17 | 0.02 | 0.1 | 0.02 | 0.82 |
| 971284 | 5 | <0.1 | 26 | 81 | 8 | 454 | 22 | <3 | 5 | <10 | <2 | <0.1 | 1 | 3 | 437 | <5 | 46 | 2 | 14 | 4 | 91 | 22 | 1 | <0.01 | 0.79 | 0.02 | 0.49 | 0.01 | 0.12 | 0.02 | 0.03 |
| 971285 | 417 | 180.3 | 293 | 20582 | 145 | 46533 | 5605 | <3 | 22 | <10 | 11 | <0.1 | 2 | 4 | 300 | <5 | 17 | 33 | 11 | 14 | 96 | 6 | 2 | <0.01 | 0.58 | 0.02 | 5.08 | 0.01 | 0.02 | 0.03 | 0.36 |
| 971286 | 249 | 3 | 48 | 773 | 32 | 13073 | 204 | <3 | 14 | <10 | 38 | <0.1 | 5 | 6 | 142 | <5 | 103 | 18 | 20 | 8 | 29 | 5 | 1 | <0.01 | 0.09 | 0.01 | 2.72 | 0.01 | 0.21 | 0.03 | 0.15 |
| 971287 | 61 | 2 | 83 | 338 | 16 | 1123 | 57 | <3 | 9 | <10 | <2 | <0.1 | 2 | 12 | 247 | <5 | 162 | 54 | 49 | 9 | 27 | 11 | 2 | 0.03 | 0.55 | 0.04 | 1.56 | 0.13 | 0.12 | 0.06 | 0.03 |
| 971288 | 36 | 0.6 | 352 | 44 | 25 | 565 | 12 | <3 | 21 | <10 | <2 | <0.1 | 18 | 29 | 83 | <5 | 82 | 99 | 370 | 9 | 46 | 25 | 4 | 0.16 | 1.2 | 0.56 | 4.44 | 0.77 | 0.48 | 0.13 | 0.16 |
| 971289 | 2270 | 1 | 293 | 64 | 8 | 18150 | 120 | <3 | 4 | <10 | 143 | <0.1 | 37 | 24 | 270 | <5 | 77 | 9 | 40 | 7 | 44 | 2 | 6 | <0.01 | 0.18 | 0.01 | 1.89 | 0.01 | 0.08 | 0.02 | 0.04 |
| 982165 | 175 | 0.8 | 327 | 50 | 59 | 1400 | 44 | <3 | 5 | <10 | <2 | <0.1 | 8 | 23 | 208 | <5 | 77 | 50 | 240 | 11 | 15 | 3 | 4 | 0.08 | 1.31 | 0.11 | 4.05 | 0.89 | 0.65 | 0.05 | 0.02 |
| 982166 | 48 | 13.1 | 27 | 434 | 7 | 4667 | 484 | <3 | 5 | <10 | 9 | <0.1 | <1 | 2 | 90 | <5 | 90 | 3 | 23 | <2 | 10 | 2 | <1 | <0.01 | 0.04 | 0.01 | 0.6 | 0.01 | 0.02 | 0.02 | 0.01 |
| 982167 | 218 | 0.6 | 50 | 15 | 5 | 666 | 24 | <3 | 8 | <10 | <2 | <0.1 | 1 | 6 | 248 | <5 | 49 | 10 | 13 | 7 | 60 | 3 | 1 | <0.01 | 0.17 | 0.01 | 0.75 | 0.02 | 0.06 | 0.03 | 0.02 |
| 982168 | 531 | 0.8 | 209 | 24 | 41 | 1213 | 19 | <3 | 8 | <10 | 2 | <0.1 | 7 | 41 | 136 | <5 | 88 | 91 | 85 | 10 | 86 | 4 | 1 | 0.06 | 2.47 | 2.07 | 0.78 | 0.4 | 0.19 | 0.22 | 0.26 |
| 982169 | <5 | <0.1 | 131 | 23 | 38 | 2187 | 61 | <3 | 3 | <10 | <2 | <0.1 | 10 | 34 | 205 | <5 | 26 | 4 | 214 | 47 | 106 | 15 | 1 | <0.01 | 0.69 | 1.44 | 1.86 | 0.18 | 0.14 | 0.04 | 0.04 |
| 982170 | 107 | 4.3 | 908 | 215 | 55 | 5929 | 178 | <3 | 28 | <10 | <2 | <0.1 | 6 | 18 | 268 | <5 | 65 | 114 | 32 | 33 | 37 | 9 | 3 | <0.01 | 0.37 | 0.03 | 8.8 | 0.01 | 0.02 | 0.02 | 0.06 |
| 982171 | 5 | 0.7 | 325 | 24 | 16 | 98 | 7 | <3 | 37 | <10 | <2 | <0.1 | 13 | 45 | 59 | <5 | 57 | 83 | 119 | 10 | 51 | 9 | 2 | 0.12 | 1.04 | 0.87 | 2.76 | 0.37 | 0.17 | 0.15 | 0.22 |
| 982172 | 166 | 0.8 | 227 | 32 | 66 | 1952 | 25 | <3 | 6 | <10 | <2 | <0.1 | 4 | 26 | 685 | <5 | 80 | 69 | 124 | 12 | 80 | 4 | 6 | 0.03 | 0.92 | 0.16 | 3.07 | 0.16 | 0.14 | 0.04 | 0.08 |
| 982173 | 1675 | 1 | 173 | 42 | 24 | 1601 | 45 | <3 | 7 | <10 | 23 | <0.1 | 4 | 11 | 904 | <5 | 84 | 38 | 51 | 13 | 69 | 3 | 4 | 0.04 | 0.79 | 0.08 | 2.04 | 0.2 | 0.22 | 0.04 | 0.06 |
| KL1 | 75 | 9.12 | 21 | 758 | 6 | 4470 | 564 | 0.33 | 5.6 | 0.18 | 3.27 | 0.38 | 0.2 | 2 | 60 | 0.05 | 98 | 1 | 10 | <10 | 8 | | <1 | <0.01 | 0.03 | <0.01 | 0.63 | 0.01 | 0.01 | <0.01 | 70ppm |
| KL2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| KL3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| KL4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| KL5 | 50 | 4.22 | 28 | 266 | 2 | 5940 | 121 | 0.75 | 11.2 | 2.42 | 3.48 | 0.06 | 0.6 | 1 | 240 | 0.25 | 40 | 1 | 5 | 10 | 34 | | <1 | <0.01 | 0.25 | <0.01 | 1.88 | 0.01 | 0.34 | <0.01 | 180ppm |
| KL6 | 25 | 0.78 | 10.6 | 18 | <2 | 79.4 | 45.8 | 1.84 | 2.8 | 0.3 | 1.42 | 0.02 | 0.2 | 1 | 260 | 0.05 | 74 | 3 | 5 | <10 | 19 | | <1 | <0.01 | 0.12 | <0.01 | 0.35 | 0.01 | 0.07 | <0.01 | 90ppm |
| KL7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| KL8 | 645 | 5.2 | 2340 | 6 | 40 | >10000 | 26 | <1.00 | 37 | <10.00 | 14 | <0.50 | 68 | 127 | 50 | <10.00 | 65 | 126 | 135 | 50 | 73 | | 5 | 0.04 | 1.59 | 0.71 | 10.2 | 0.4 | 0.04 | 0.16 | 0.22 |
| KL9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

## ROCK SAMPLE DESCRIPTION SHEET

| Sample No. | Easting | Northing | Traverse | Zone | Sample Type | Width (m) | Sample Descr. | Form. | Lithology | Modifier | Colour | Carb. Presence | Silicification | Argillic Alt. | Potassic Alt. | Phyllic Alt. | Limonite | Mineral #1 | Amount % | Mineral #2 | Amt % | Other Mineral | Amt % | Date | Sampler | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 23901 | 372593 | 7117056 | | 8 | G | | Rc | Kqm | BQMon | fresh | | | | | | | | Py | one | As | 1-2? | | | 14/8/99 | RVN | Fresh Biot-Qz-Monzonite, typical |
| 23902 | 372597 | 7117093 | | 8 | SG | | Oc? | Kqm | BQMon | | | | | | | | | Py | tr | Mo | tr | | | 14/8/99 | RVN | Biot-Qz-mon cut by Qz veins to 5 cm width |
| 23903 | 372349 | 7117430 | | 8 | SG | | Rc | OSDr | slt | hfels | | | | | | | | Py | 2 | As | 2 | Cov? | 1 | 14/8/99 | RVN | Brecciated hfelsed f. gr. seds; saccharoidal |
| 23904 | 372187 | 7117550 | | 8 | G | | | OSDr | sh-slt | | | | | | | | | Py | 2 | As | 1 | | | 14/8/99 | RVN | Very fine grained dissem sulphides |
| 23905 | 372399 | 7117724 | | 8 | G | | Rc | Kqm | QPMon | | yel | | | A2 | | Ph2 | mod | | | | | | | 14/8/99 | RVN | Limonite along fractures |
| 23906 | 372418 | 7117750 | | 8 | G? | | | OSDr | slt | brec | yel-brn | | | | | | str | | | | | | | 14/8/99 | RVN | Cataclastic breccia, lim. after sulphides |
| 23907 | 372428 | 7117800 | | 8 | | | | Kqm | | strained | | | | A2 | | Ph2 | str | | | | | | | 14/8/99 | RVN | Clay altered fine grained intrusive |
| 23908 | 372850 | 7116000? | | 8 | | | | | | | | | | | | | | | | | | | | 14/8/99 | RVN | |
| 25768 | 372559 | 7117251 | | 8 | Ch-G | | Oc | Kqm | FPMon | dyke | | | | A2 | | | | | | | | | | 09-08-99 | G.S. | GOLDFIELDS:Altered dyke |
| 25769 | 372559 | 7117251 | | 8 | Ch-G | | Oc | OSDr | Chert? | brecc | | | | | | | | Tourm | mod | | | | | 09-08-99 | G.S. | GOLDFIELDS: N. side of 25768 dyke; hfelsed |
| 25770 | 372559 | 7117251 | | 8 | Ch-G | 5m | Oc | OSDr | Qzte | brecc | white | | S1 | | | | | As | wk | tourm | wk | | | 09-08-99 | G.S. | GOLDFIELDS: hanging wall of 25768 dyke |
| 25771 | 372303 | 7117525 | | 8 | G | | Float | OSDr | Chert | veined | | | S2 | | | | | Tourm | str | | | | | 09-08-99 | G.S. | GOLDFIELDS: vein flooded breccia |
| 25772 | 372145 | 7117492 | | 8 | G | | Float | OSDr | Chert? | veined | tan | | S2 | | | | mod | As | 3 | | | | | 09-08-99 | G.S. | GOLDFIELDS: wspread limonite, scor. stain |
| 23951R | 372498 | 7117208 | | 8 | C | 0.8 | Oc | OSDr | slt | brec | buff | | S1 | A1 | | | wk | tourm | 4 | As | tr | | | 14/8/99 | C.S. | 10% qz-tourm +/- amph. veins al. fractures |
| 23952R | 372554 | 7117090 | | 8 | C | 1 | Oc | Kqm | Mon | foliated | lt. brn | C1 | | | | Ph1 | mod | Py | tr | | | | | 14/8/99 | C.S. | Dyke in E-W trending fault in seds |
| 23953R | 372565 | 7117253 | | 8 | CG | | Rc | OSDr | slt | brec | buff | | S3 | A1 | | Ph1 | tr | As | 3 | tourm | 6 | | | 14/8/99 | C.S. | As along joints, tourm. along fractures |
| 23954R | 372571 | 7117259 | | 8 | CG | | Rc | OSDr | slt | brec | buff | | S4 | A2 | | Ph2 | tr | As | <1 | tourm | 5 | | | 14/8/99 | C.S. | Deliberate low-grading of arsenic. |
| 23955R | 372579 | 7117401 | | 8 | CG | | Rc | Kqm | FPMon | Vned | lt gy | | | A2 | P2 | Ph1 | tr | As | 7 | tourm | 5 | | | 14/8/99 | C.S. | Qz-tourm vein + scorodite staining. |
| 23956R | 372348 | 7117343 | | 8 | CG | | Ta | OSDr | slt | fractured | lt grn | | S3 | A1 | | | | As | 8 | tourm | 5 | | | 14/8/99 | C.S. | As-tourm veining in silicified seds |
| 23957R | 372258 | 7117528 | | 8 | CG | | Ta | OSDr | slt | brec | gry | | S3 | A1 | | | | As | 6 | tourm | 10 | | | 14/8/99 | C.S. | Strong tourm-as veining |
| 23958R | 372038 | 7117603 | | 8 | CG | | Ta | OSDr | ch | brec | grn | | S2 | A1 | | | | As | 6 | tourm | 10 | | | 14/8/99 | C.S. | Brecciated sh-slt(?); + Qz-tourm stringers |
| 23959R | 372009 | 7117603 | | 8 | CG | | Ta | OSDr | slt | brec | grn | | S2 | A2 | | | | As | 5 | tourm | 10 | scor | 15 | 14/8/99 | C.S. | Abnt. As-tourm veining |
| 23960R | 372030 | 7117680 | | 8 | G | | Oc | OSDr | slt | calc-sil | grn | | S1 | | P1 | | str | Py | 5 | Cpy | tr | As | tr | 14/8/99 | C.S. | F. Gr. sulphides throughout. |
| 971283 | 372490 | 7117210 | | 8 | S. Gr | | Ta | Kqm | Aplite | shear | | | | | | Ph1 | | Py | tr | tourm | tr | | | 09-02-99 | H.F. | PLACER DOME: punky, tourmaline vugs |
| 971284 | 372490 | 7117210 | | 8 | S. Gr | | Rc | Kqm | Rhy | dyke | | | | | | Ph1 | | As | tr | tourm | mod | | | 09-02-99 | H.F. | PLACER DOME: Liesegang banding |
| 971285 | 372390 | 7117410 | | 8 | S. CGr | | Ta | OSDr | | veined | gr | | | | | Ph3 | | As | 3 | scor | str | | | 09-02-99 | H.F. | PLACER DOME: Punky, sheared As vein |
| 971286 | 372347 | 7117500 | | 8 | S. Gr | | Ta | OSDr | slt? | hfels | grn-gr? | | S3 | | | | | As | wk | scor | mod | | | 09-02-99 | H.F. | PLACER DOME: brecciated + tourmaline |
| 971287 | 373490 | 7116890 | | 8 | C | 3.7m | Rc | OSDr | slt? | hfels | | | S1 | | | | mod | As | <1 | tourm | wk | | | 09-02-99 | H.F. | PLACER DOME: weak tourm. Stwk |
| 971288 | 372510 | 7117710 | | 8 | C | 1.5 | Oc | OSDr | ch | hfels | | | | | | Ph1 | mod | As | <1? | tourm | mod | | | 09-02-99 | H.F. | PLACER DOME: fract, tourm + biot laminae |
| 971289 | 373490 | 7116890 | | 8 | S. Gr | | Ta | OSDr | slt | brecc | | | | | | | | As | mod | tourm | str | | | 09-02-99 | H.F. | PLACER DOME: tourm brecc, <1% of trench |
| 982165 | 372475 | 7117442 | | 8 | C | 2 | Oc | OSDr | slt | stwk | | | | | | Ph3 | | As | <1 | Py | <1 | | | 09-02-99 | H.F. | PLACER DOME: weak qz.stringers |
| 982166 | 372600 | 7117400 | | 8 | S. Gr | | Oc | OSDr | slt | stwk | | | | | | Ph3 | | As | 1 | Py | 1 | | | 09-02-99 | H.F. | PLACER DOME: Saddle, E-W structure |
| 982167 | 372610 | 7117200 | | 8 | S.G | | Oc | OSDr | slt | vned | | | S2 | | | Ph3 | | As | 1 | Py | 1 | tourm | mod | 09-02-99 | H.F. | PLACER DOME: same loc as 23951 |
| 982168 | 372490 | 7117210 | | 8 | C | 10 | Oc | OSDr | slt | Vned | | | | | | Ph3 | | Py | tr | tourm | wk | | | 09-02-99 | H.F. | PLACER DOME: 1 gr/ 8m trench |
| 982169 | 372325 | 7117467 | | 8 | S.Gr | | Float | Kqm | Mon | | grn | | S1 | | | Ph1 | | Py | <1 | As | <1 | | | 09-02-99 | H.F. | PLACER DOME: Near 3 gr/ 10m trench |
| 982170 | 373441 | 7116914 | | 8 | S. Ch | 5 | Rc | OSDr | ch | | tan | | S2 | | | Ph2 | str | | | | | | | 09-02-99 | H.F. | PLACER DOME: Gossan-like |
| 982171 | 372773 | 7117707 | | 8 | Sel. G | | Oc | OSDr | slt | fractured | | | S3 | | | | wk | Py | 3 | As | 2 | Po | <1? | 09-02-99 | D.M. | PLACER DOME: Small qz. stringers |
| 982172 | 372863 | 7116009 | | 8 | C | 5 | Tr | OSDr | slt? | stwk | | | S2 | | | | mod | Py | variable | As | variable | tourm | mod | 09-02-99 | D.M. | PLACER DOME: wk qz stwk + tourm |
| 982173 | 372868 | 7116009 | | 8 | C | 7 | Tr | OSDr | slt-mst | stwk | | | S2 | | | | str | Py | ? | As | ? | tourm | str | 09-02-99 | D.M. | PLACER DOME: wk stwk, omitted N. 3m |
| KL1 | 372542 | 7117348 | | 8 | G | | Rc | OSDr | slt | brec | lt gry | | S2 | A1 | | | | As | 3 | tourm | 6 | | | 09-02-99 | C.S. | Tourm-arseno breccia in sltstone (chert?) |
| KL2 | 372555 | 7117221 | | 8 | G | | Rc | Kqm | FPMon | | | C2 | S1 | A1 | | | | | | | | | | 09-02-99 | C.S. | Near (sharp) contact |
| KL3 | 372576 | 7117151 | | 8 | G | | Oc | Kqm | FPMon | | gry | | | | K1 | | | | | | | | | 09-02-99 | C.S. | Fair pristine F. Por megacrystic biot-mon |
| KL4 | 372463 | 7117280 | | 8 | G | | Rc | OSDr | Slt | fractured | grn | | S3 | | | | | Py | 2 | tourm | 2 | | | 09-02-99 | C.S. | Siltstone - mudstone |
| KL5 | 372482 | 7117334 | | 8 | G | | Oc | Kqm | Aplite | F.Por | yel-brn | | | A3 | | Ph3 | | As | 4 | tourm | 4 | | | 09-02-99 | C.S. | 8-10% qz-arseno veins |
| KL6 | 372888 | 7115988 | | 8 | G | | Tr | OSDr | Ch | brec | grn-tan | | S3 | A2 | | | | tourm | 4 | scor | tr | | | 09-02-99 | C.S. | Trench with 3820 ppb Au/5m |
| KL7 | 372510 | 7117413 | | 8 | G | | Rc | Kqm | Lamp | B. Por | grn-blk | | | | K2 | | | | | | | | | 09-08-99 | C.S. | Lamprophyre (?) dyke |
| KL8 | 372507 | 7117415 | | 8 | G | | Oc | OSDr | lslt | skarn | grn | | S2 | | | | str | As | 4 | Py | 3 | Cpy | 2 | 09-08-99 | C.S. | Pyrite + Cpy skarn, local |
| KL9 | 372574 | 7117162 | | 8 | G | | Rc | Kqm | FPMon | | gry | C1 | | | | | | | | | | | | 09-08-99 | C.S. | North stock |