

**GEOLOGICAL AND GEOCHEMICAL REPORT**

**on the**

**AR 1-61 MINERAL CLAIMS  
Whitehorse Mining District  
NTS 115 G-5, G 12  
UTM 571500E/6820500N**

**for**

**Auterra Ventures Inc.  
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**Compiled By**

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**January 25, 2002**

2001-036

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## SUMMARY

The AR Claims consist of 61 claim units located on the Eastern slopes of the Kluane Range, in Southwestern Yukon, 320 km Northwest of Whitehorse.

The Property is located within the Wrangellia accreted Terrane which runs along the western coastal areas from Alaska to Southern Vancouver Island, B.C. The Wrangellia Terrane, known as the Kluane Mafic – Ultramafic Belt, is known to contain mafic-ultramafic intrusions which are known to contain Platinum Group Elements (PGE), copper and nickel mineralization.

Historically exploration in the area, since the early 1950's, has located deposits such as the Airways showing on the Neighboring ground ( up to 41 metres, grading 0.15 % Cu, 0.29% Ni, 0.41 g/t Pt and 0.45 g/t Pd, including 10.8 metres grading 0.28% Cu, 0.35% Ni, 0.7 g/t Pt and 0.8 g/t Pd in drill holes).

The Wellgreen and the Linda PGE-Ni-Cu deposit are situated within the Kluane Mafic-Ultramafic Belt. The Wellgreen deposit was discovered in 1952 and subsequent exploration delineated 669,150 tonnes grading 0.038 oz/ton Pt, 0.027 oz/ton Pd, 2.04% Ni, 1.42 % Cu and 0.005 oz/ton Au. The deposit was mined in 1972-73 with total production amounting to 189,211 tons of ore. The Wellgreen property, owned by Northern Platinum Ltd., has a geological resource of 50.03 million tonnes, grading 0.35% Cu, 0.36% Ni, 0.54 g/t Pt and 0.34 g/t Pd ( Yukon Mineral Update 2000). A preliminary feasibility study was finished in 1989 for a proposed open pit mine at 10,000 tonnes per day.

Auterra Ventures Inc. and Cabin Creek Resources Management Inc. conducted a Joint Venture exploration project on the Arch Creek property during the 2000 field season. The property was acquired to test the area for platinum group elements (PGE), similar to known PGE deposits in the area.

A total of 68 mandays were spent on the claims during the 2001 field program between Oct 16 to Dec 10. Work was focused within the area of the Teck showing and a diamond drill hole drilled by Arthur, Cathro (Eaton, 1988). Work done consisted of further sampling and a ground VLF geophysical survey to further identify areas of potential mineralization and to identify subsurface extensions of units with mineralized potential. A total of 5 rock samples were collected, returning values up to 0.147 g/t Pt and 0.190 g/t Pd and one sample taken returned up to 0.17 % Cu.

The author was responsible only for the description of the samples that were sent via bus by Tom Morgan and the compilation of data in report form. Tom Morgan supervised and conducted the collection of samples, their preliminary description and sample location as well as conducting the VLF survey on the AR Property. All data received to date has been compiled by the author at the request of Morgan and Auterra Ventures Inc.

Work on the property during the 2000 and 2001 season has indicated the potential for the property to contain notable PGE mineralization. Current exploration combined with previous work supports this theory. Previous trenching and chip sampling in the Tech showing peridotite, returned encouraging geochemical assays for Pt, Pd, Cu, Ni and Au. Mapping and sampling of the Conwest showing, as well as a mapped Magnetometer anomaly indicate the potential of peridotite sills and possible related marginal gabbros and high grade PGE zones towards the Southeast.

Following the compilation and interpretation of the VLF EM ground survey an IP geophysical surveys, blast trenching, reconnaissance drilling with a semi portable drill and further chip sampling is recommended.



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## **INTRODUCTION**

The Arch Property was staked in September 1999 by Cabin Creek Resources Management Inc. Auterra Ventures Inc. entered into an option agreement with Cabin Creek in October 2000, for the acquisition of a 70% interest in the property, in which Auterra must make cash payments totalling \$185,000 over 5 years, issue 100,000 shares and spend \$250,000 on exploration over 5 years.

The author of this report was commissioned on behalf of both Auterra and Cabin Creek where the author's objective is to compile the results of the 2001 exploration program, overseen and conducted by Tom Morgan, with previous work on the property. It is important to note that the author has not visited the property and all recommendations are based on interpretation of data provided, previous recommendations by Marcus Vanwermenskerkan (2001) and recommendations by Tom Morgan.

The field program has been partially financed by the federal government through a Mining Incentives Program.

## **LOCATION AND ACCESS**

The Arch property is located on the Eastern slopes of the Kluane Range, in Southwestern Yukon, 320 km Northwest of Whitehorse at Latitude 60°27' N and longitude 139°25' W on NTS map 115G/5 and 115G/12 in the Whitehorse Mining Division (figure 1). The centre of the property is at UTM coordinates: 571500E/6820500N.

The property is accessible by road, 4 hours from Whitehorse, by driving northwest along the Alaska Highway (year-round access), turning west at mile post 1118 onto the Quill Creek gravel road past the Wellgreen mine site for 18 km to the Arch Creek camp. Four-wheel drive vehicles are recommended for this gravel road.

Alternatively, helicopter charters are available at both Whitehorse and Haines Junction.

## **PROPERTY DESCRIPTION**

The property lies along the southwestern slopes of the main ridge dividing the Donjek River and the Shakwak Trench (Kluane River Valley). Topographic relief ranges from 1070 metres at Arch Creek to 2050 metres on the ridge crest. Topography is moderate to steep, with outcrops best developed on north facing slopes, ridge crests and creek cuts. The Arch Creek vicinity is covered by a thick succession of glacio-fluvial gravels up to 40 metres thick. This hampers mapping or trenching of the lower (Teck) showing and related peridotite dykes.

Soil development is poor, and vegetation is limited to black spruce and poplar at lower elevations. The higher slopes are overgrown with alder, buckbrush and moss.

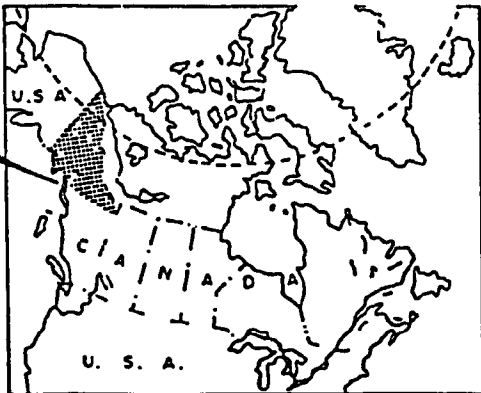
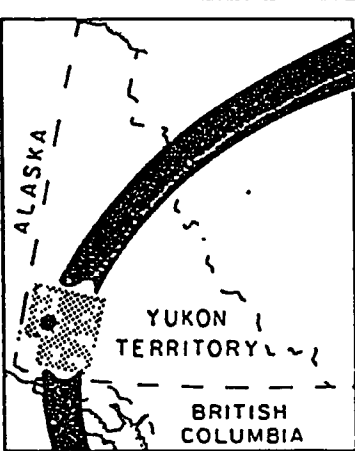
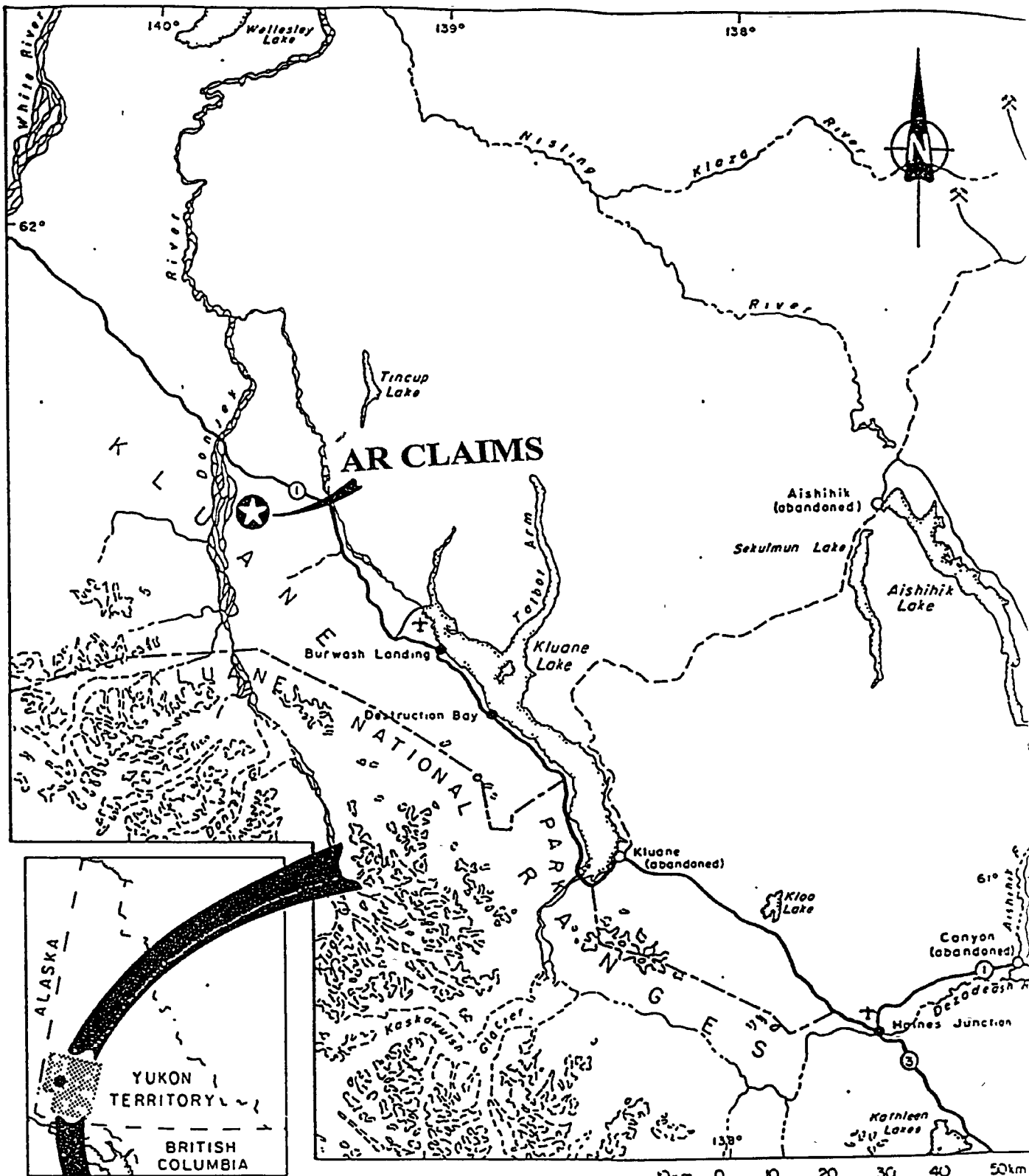


Fig. 1 Location of Arch Creek property

The climate is sub-arctic, with temperatures ranging from 20°C in summer to -70°C in winter. The property is covered with snow between October and June. Road access is limited to the snow-free months only.

### Claim Status

The Arch Creek property (fig 2) consists 2 separate blocks, comprising a total of 61 claims (AR 1-61) with the following status:

<u>Claim name</u>	<u>Grant #</u>	<u>Claim sheet #</u>	<u>Owned by</u>	<u>Expiry date</u>
AR 1-16	YC18359-YC18374	115G05	Cabin Creek Res. Mgmt. Inc.	14-02-2002
AR17-58	YC18375-YC18416	115G12	Cabin Creek Res. Mgmt. Inc.	14-02-2002
AR59-60	YC18417-YC18418	115G05	Cabin Creek Res. Mgmt. Inc.	14-02-2002
AR61	YC18892	115G05	Cabin Creek Res. Mgmt. Inc.	20-09-2002

### WORK HISTORY

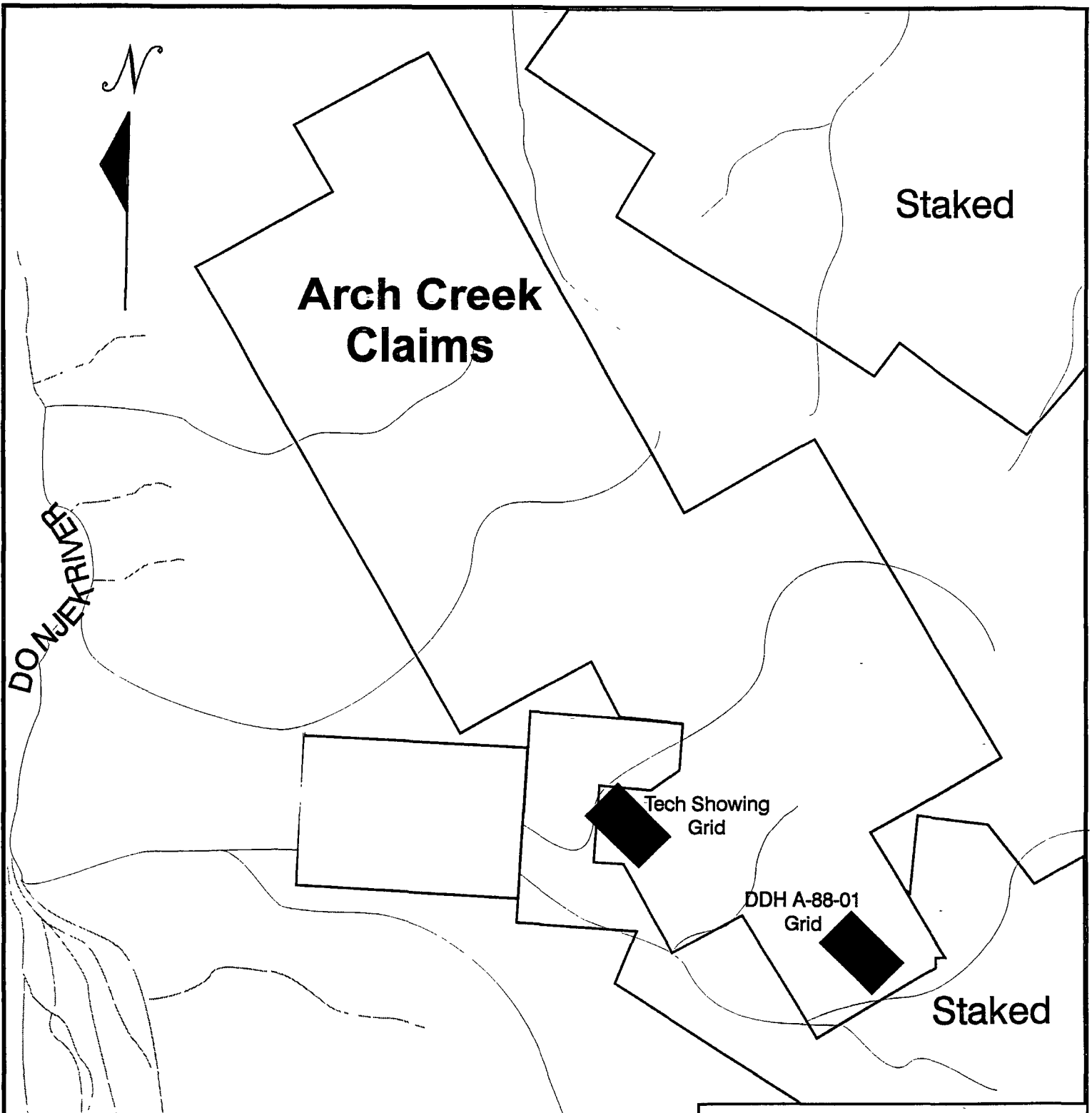
The work history is described by Vanwermeskerken (2001) as:

*“The area of the current Arch Creek property was staked at the time of the discovery of the nearby Wellgreen deposit in 1952, by the Yukon Mining Corporation. This deposit was optioned to Hudson Bay Mining and Smelting Ltd. After extensive drifting and underground drilling the property was transferred to Hudson Bay Mining. From May 1972 to July 1973, 171,652 tonnes of ore were treated, producing 33,853 tonnes of concentrate grading 7.4 % nickel and 6.6% copper.*

*The area of the Musketeer and Conwest showings were originally staked in 1952 as the Musketeer claims by Teck Exploratin Company Ltd. and the Donjek claims by Conwest Exploration Ltd. Both companies performed mapping and prospecting in 1953. Teck continued exploration in 1955 with magnetic, EM and resistively surveys.*

*The area was restaked as the Legacy and Sue claims in 1967-1968 by P. Verslucce and C. Gibbons, who carried out road building and trenching in 1968. This property was explored by the Nickel syndicate (Canadian Superior Exploration Ltd., Aquitane Co. Canada Ltd., Home Oil Ltd. And Getty Mines Ltd.), in 1972 in conjunction with the neighboring Airways showing, conducting mapping, geochemical surveys and trenching.*

*In June 1986, Kluane JV (All North Res. Ltd. And Chevron Minerals Ltd.) restaked the area, carrying out geochemical surveys. The claim block was then expanded towards the North (ORO claims) by E. Parmentier in October 1986, which was sold to Fred Minerals Ltd. In 1987. Other adjoining staking included the ‘Missy’ and SF*



**Legend**

AR Claims



Staked Claims



VLF Survey Locations



**Scale**



0 m 500 m

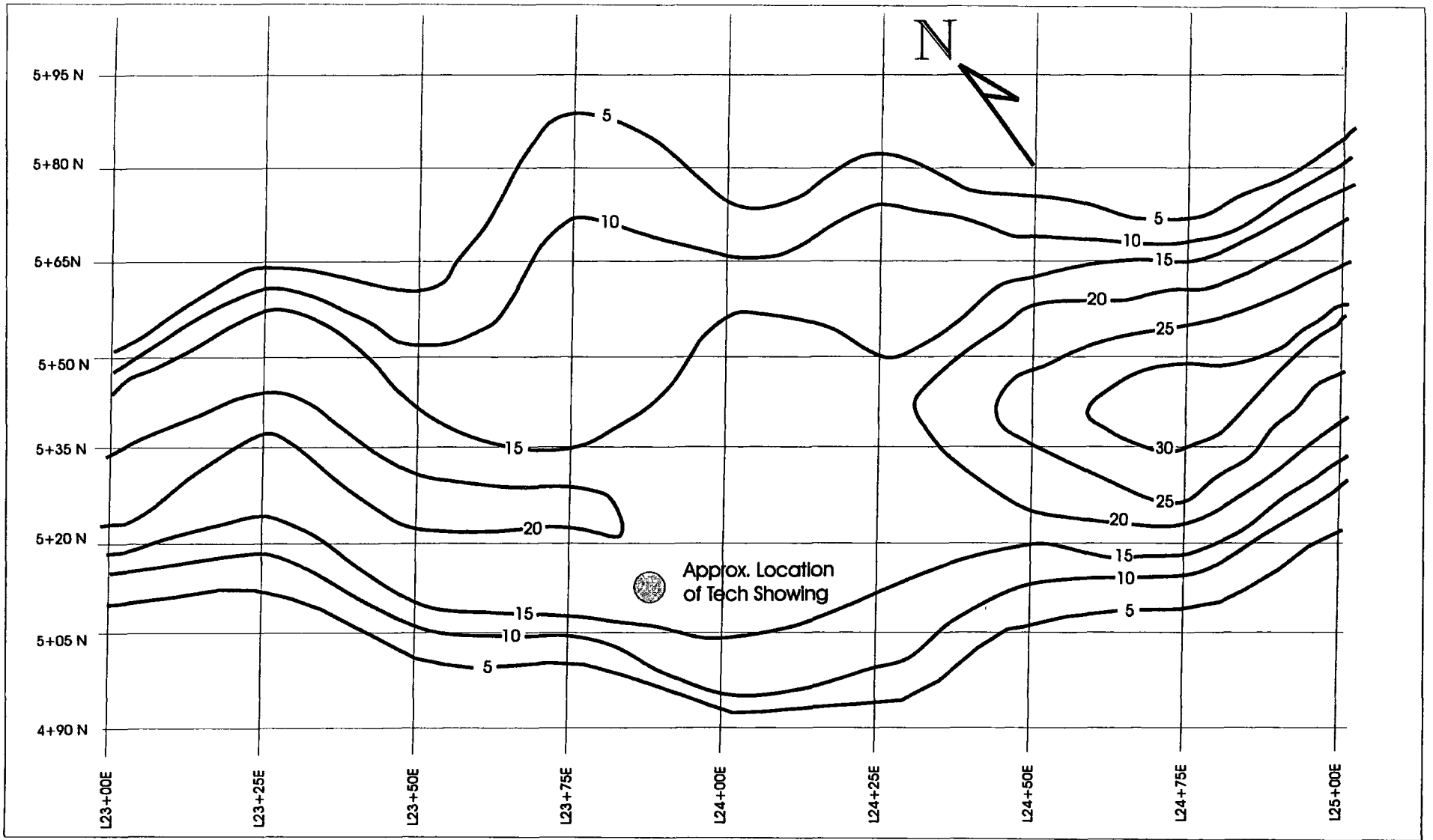
**Auterra Ventures Inc.**

**Arch Creek  
Claim Map with  
VLF Survey Locations**  
Kluane Range, Yukon Territory

Date:  
Feb. 2002

Digitized by:  
Renee Brickner

Figure 2

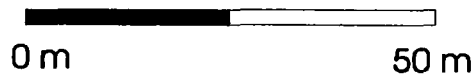


Legend

Contour Intervals      5

Grid Lines              

Scale



**Auterra Ventures Inc.**

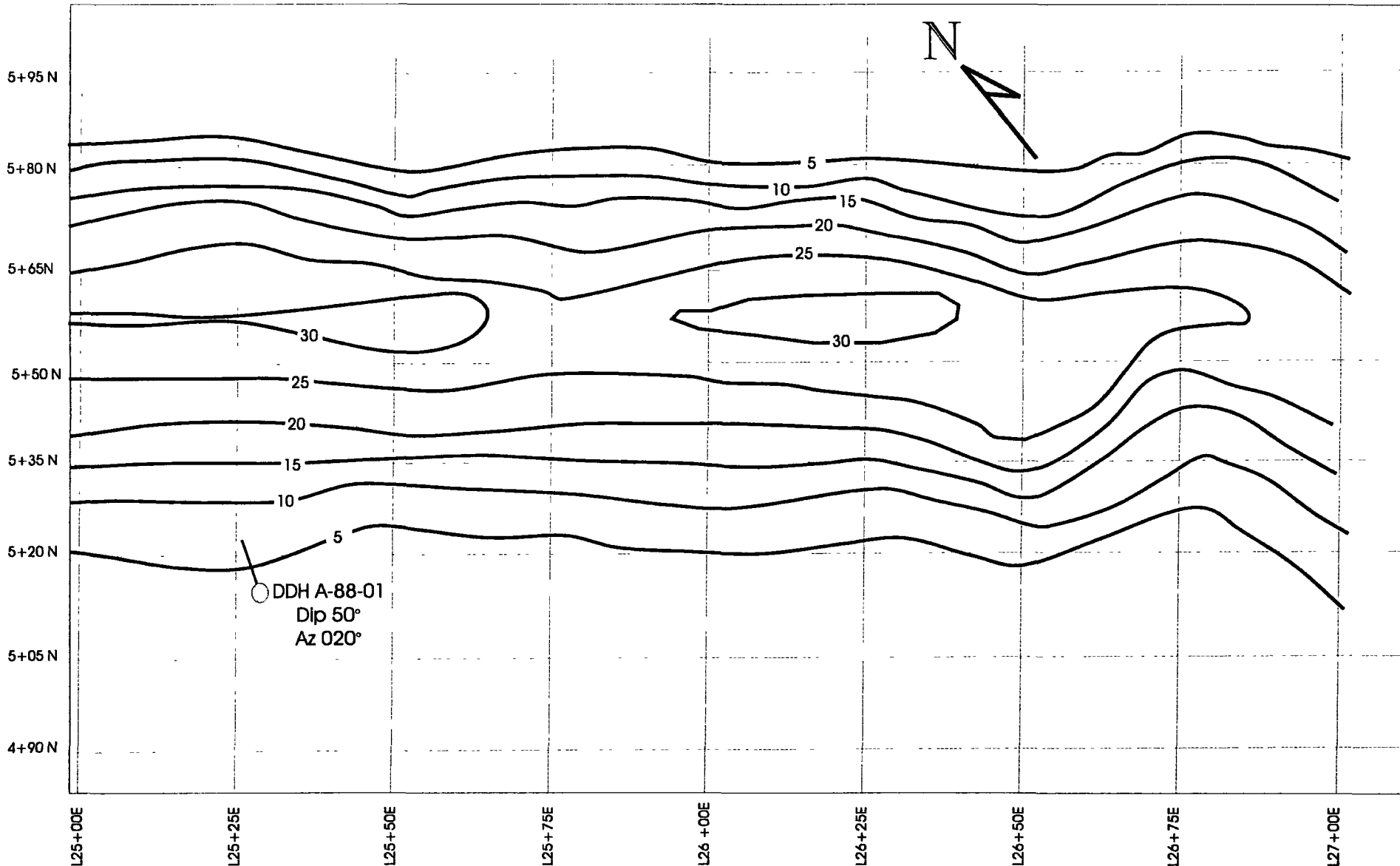
**AR Claims**

VLF Survey Tech Showing Grid  
Kluane Range, Yukon Territory

Date:  
February 2002

Digitized By:  
Renee Brickner

Figure: 3a



Legend

Contour Intervals 5

Drill Hole



Grid Lines



Scale



Auterra Ventures Inc.

AR Claims  
VLF Survey DDH-88-01 Grid  
Kluane Range, Yukon Territory

Date:  
February 2002

Digitized By:  
Renee Brickner

Figure: 3b

*claims to the Southwest in June 1987 by Harjay ECL and the 'JEK' claims by Kluane JV. To the West, Silverquest Resources Ltd. And Pak Man Resources Inc. staked more ground in 1987, and performed mapping and geochemical sampling later in the year. Towards the South, S. Ridgeway staked the PC claims in May 1987.*

*In 1987 the Kluane JV claims were optioned by Rockridge Mining Corp and Pak Man Resources Inc., which explored with mapping, geochemical sampling and magnetometer- VLF-EM surveys later that year. The PC claims were transferred to Gold City Resources Inc. in June 1988 and a 50% interest in the Oro claims was transferred to A-X Minerals in October 1988. Harjay explored the SF and Missy claims with magnetic and soil geochemical surveys in June 1988 and June 1989. The claim area did not see any further work until the claims were allowed to lapse and got re-staked as the AR 1-61 claims by Cabin Creek Resources Management Inc."*

Work conducted by Vanwermeskerken (2001) at the request of both Auterra and Cabin Creek was completed in the fall 2000. The program included mapping, sampling, road rehabilitation, blast trenching and additional staking with a focus on the Conwest and Tech showings. Although the 2000 exploration work program failed to identify new areas of mineralization on the property the levels of Pt, Pd, Cu, Ni and Au were encouraging in locating potential high grade PGE zones

## **REGIONAL GEOLOGY**

The regional geology has been described by Vanwermeskerken (2001) as:

*"The claim area is located near the eastern margin of the Wrangellia accreted Terrane (Fig 3b), which runs along the Western coastal areas from Alaska to Southern Vancouver Island, BC. Rocks are comprised of Permian to Triassic volcanic and volcanoclastic rocks, intruded by Triassic diabase and gabbro dykes, presumed to be feeder dykes to the Nikolai Basalts. The stratigraphy of the region is summarized by W.D. Eaton (1988) as follows:*

*Oldest exposed bedrock is Pennsylvanian to Permian Skolai Group andesitic volcanic and Volcanoclastic rocks (Station Creek Formation), grading upward to clastic sedimentary rocks and limestone (Hasen Creek Fm.). These rocks are unconformably overlain by Upper Triassic Nikolai Group basalt and Limestone, with infrequent gypsum horizons.*

*Two types of mafic and Ultramafic intrusions are present:*

*1) The White River, Quill Creek and Tatamagouche Creek Ultramafic complexes are differentiated Lower Triassic sills which intrude Station Creek and Hasen Creek Fm. sedimentary and volcanoclastic rocks. They typically consist of strongly serpentinized dunite, peridotite and lesser marginal facies of gabbro and/or clinopyroxinite. These complexes are folded and dismembered by faults, reaching maximum thicknesses of approximately 250 metres and up to 25 km strike length. Mineral constituents in this*





## LEGEND

### COVER ROCKS

Tertiary

Tvs

nonmarine volcanics and sediments  
(mostly Wrangell Lava).

Cretaceous

Ks

shallow marine sediments.

Upper Jurassic-Lower Cretaceous

JKs

flysch, local volcanics (Gravina-Nutzotin).

JKm

metasediments ("Kluane schist", and older rocks).

### TERRANES

YA

YAKUTAT (local Prince William).

CG

CHUGACH.

W1,W2

WRANGELLIA (W1, W2).

W3,TU

WRANGELLIA (W3), TAKU.

W1?

WRANGELLIA (W1)?

WM

WINDY-MCKINLEY.

NS

NISLING (local undivided rocks).

AX

ALEXANDER.

### PLUTONIC ROCKS

Tertiary

Mg

Wrangell suite (6-16 Ma):  
subvolcanics and granitoids.

Og

Tkope suite & others (23-33 Ma):  
granitoids and subvolcanics.

Eg

Seward suite (41-52 Ma).

Cretaceous-Tertiary

KTg

Coast Plutonic Complex (undivided).

KTb

gabbro-dabase plutons.

Late Early Cretaceous

Kg

Kluane Ranges suite (106-121 Ma),  
& Alaskan-type mafic-ultramafics.

Late Jurassic-earliest Cretaceous.

JKg

Saint Elias suite (130-160 Ma).

Late Pennsylvanian-Early Permian

PPg

Icefield Ranges suite (270-290 Ma).

### MAJOR FAULTS

- |          |   |                                 |
|----------|---|---------------------------------|
| T.F.S.   | - | Transition Fault System.        |
| C.F.S.   | - | Contact Fault System.           |
| C.S.F.S. | - | Chugach-St. Elias fault system. |
| F.F.     | - | Fairweather Fault.              |
| B.R.F.S. | - | Border Ranges Fault System.     |
| C.F.     | - | Chitina Fault.                  |
| H.F.     | - | Hubbard Fault.                  |
| D.R.F.   | - | Duke River Fault.               |
| T.F.     | - | Totschunda Fault.               |
| D.F.S.   | - | Denali Fault System.            |
| C.S.F.   | - | Chatham Strait Fault.           |

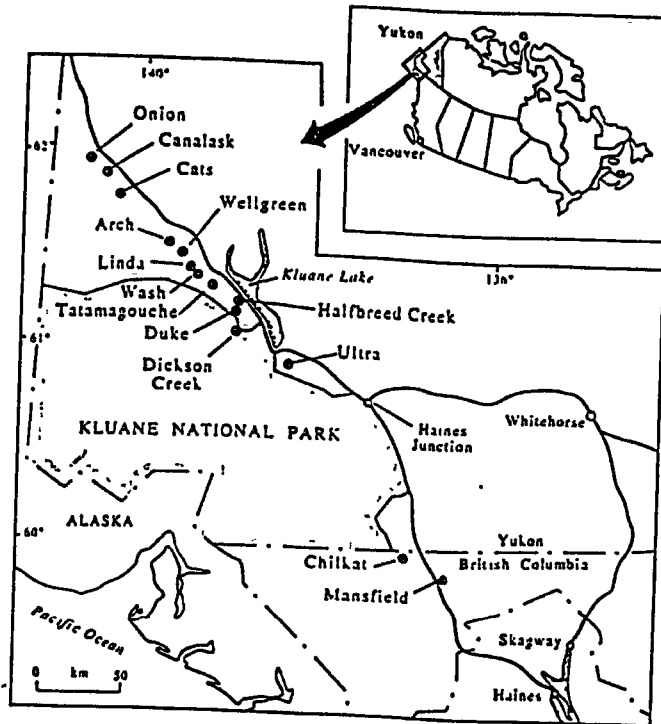


Figure 3b Map showing the location of some of the better known mafic-ultramafic intrusive complexes in the Yukon and northern British Columbia.

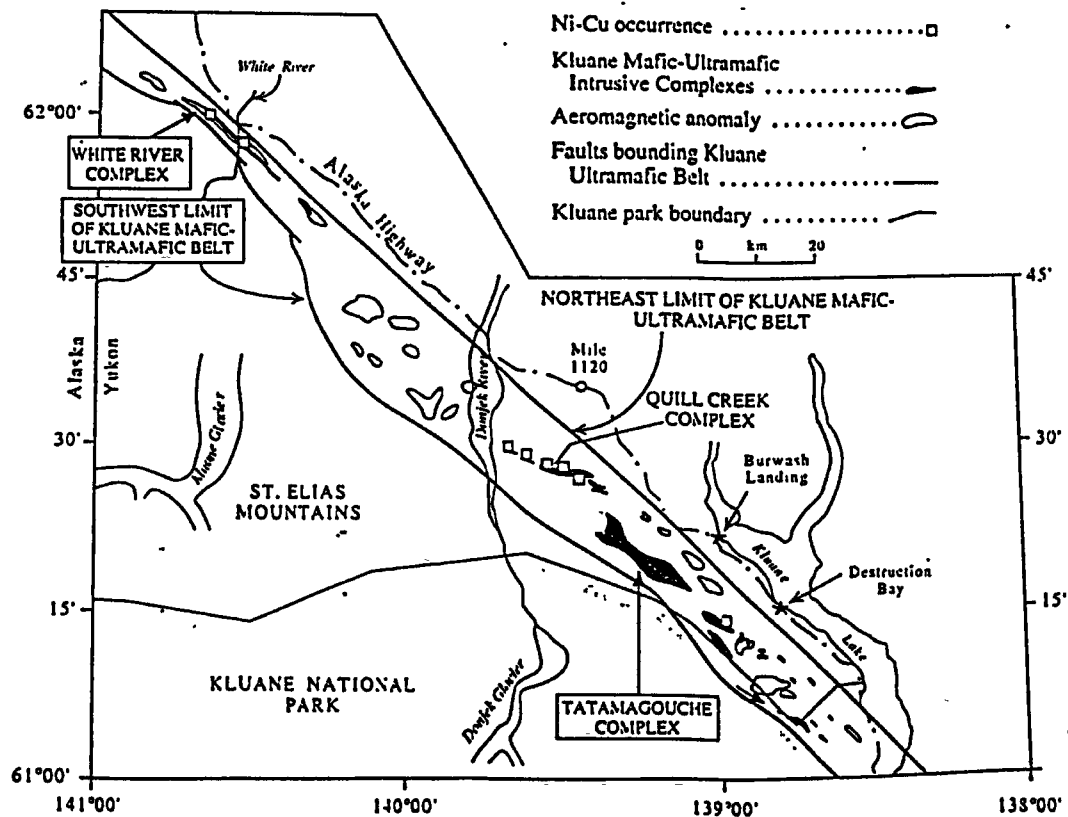


Figure 3c Map showing the distribution and size of known Triassic intrusions, and the outlines of similar bodies inferred from aeromagnetic anomalies, within the Kluane Mafic-Ultramafic Belt in the central and northern portion of the Kluane Ranges, Yukon.

*ultramafic complex are olivine, clinopyroxene, orthopyroxene, biotite, plagioclase and amphibole, with minor magnetite and sulphides. The gabbro phases consist of clinopyroxene and plagioclase with minor olivine and amphibole and trace amounts of magnetite and sulphides. Cumulate textures are common in the dunite and peridotite, while gabbro and clinopyroxinite phases are generally compact and massive. Most Ni-Cu-PGE occurrences in the Kluane Belt are spatially associated with the marginal facies of the intrusions. Chemically, the mafic-ultramafic sills have high TiO<sub>2</sub>:MgO ratios, low Fe/Mg ratios and anomalously high MgO, Ni, Cr and PGE backgrounds.*

*2) Dykes and small stocks of medium grained diabasic Maple Creek Gabbro occur throughout the Station Creek Formation, Hasen Creek Fm. and the Nikolai group. These consist of augite and plagioclase with minor orthopyroxene, hornblende and magnetite. Field evidence supports an Upper Triassic age for the gabbros as remnants of feeder systems for the Nikolai Group basaltic flows. No known nickel or PGE mineralization is associated with the younger gabbros, but they do host numerous small copper occurrences.*

*All above mentioned units are locally intruded by Cretaceous granodiorite plutons and oligocene porphyritic latite to trachyte dykes and small stocks.*

*The Denali Fault forms the Eastern margin of the Wrangellia terrane. The Eastern part of this terrane, with the Station Creek- Hasen Creek formations and Nikolai group basalts, and related intrusions, has been identified as a Ni-Cu-PGE Metallogenic Terrane which can be traced for more than 600 kilometres, and is referred to as the Kluane Mafic-Ultramafic Belt.*

*The Kluane Ni-Cu-PGE belt is bounded on the Northeast by the Shakwak Fault, a major terrane boundary with latest movement in a right lateral sense. The Southeast boundary of the terrane is formed by the sinusoidal trace of a series of interconnected faults, which roughly parallels the Shakwak fault. All known ultramafic bodies in the Kluane Range lie within this 10 – 17 km wide belt. See fig 3a,b.”*

## **ECONOMIC MINERALIZATION/ DEPOSIT MODEL**

An economic mineralization/deposit model has been compiled by Vanwermeskerken (2001):

*“Mineral deposits of economic interest in the area are mostly Ni-Cu-PGE prospects and mines, located within the above mentioned Kluane Ni-Cu-PGE belt, both Northwest and Southeast of the Arch Creek claims.*

*On a North American scale, this (Ni-Cu-PGE) belt is second only, in size, to the nickeliferous Circum Superior Belt (CSB) of Canada, and has many similar*

*features with respect to lithological zonation, silicate mineralogy, distribution of ores and Ni-Cu-PGE grades. The Kluane Belt intrusive complexes are clearly younger in age, tholeiitic in origin and generally much larger than deposits found in the Circum Superior Belt.*

*Mining of the Wellgreen deposit has demonstrated that basal accumulations of massive sulphides are generally up to 60 metres in length, less than 20 metres in thickness, and have average mill feed grades as follows: 2.23% Ni, 1.39% Cu, 1300 ppb Pt, 920 ppb Pd, 171 ppb Au, 400 ppb Rh, 420 ppb Ru, 250 ppb Ir, 200 ppb Os and 200 ppb Re.*

*These zoned bodies are sills, lens-like in form and are believed to represent subvolcanic magma chambers that fed overlying Triassic Nikolai Basalts. On a regional scale, these bodies preferentially intrude the Pennsylvanian to Permian country rock sequence at or near the contact between the Station Creek and Hasen Creek Formations. This level marks an important litho-stratigraphic break from the predominantly volcanic and volcanoclastic rocks, argillite, chert and carbonate strata. Field relationships, geochemical and isotopic studies also suggest that the volatile, sulphur and barium-rich Permian strata acted as an important source of magma contamination that initiated sulphide immiscibility with successive incursions of olivine charged magma.*

*The best mineralization appears to be concentrated as a result of riffling of sulphide bearing magmas flowing over irregularities at the base of the intrusion. Other styles of mineralization such as the Ni-rich "offset" occur well within the footwall strata of the White River Complex, skarn ores juxtaposed the Permian Carbonates at the Quill Creek complex, disseminated sulphides within or above the gabbro-ultramafic zone contact in most intrusions and PGE +/- Au rich zones associated with hydrothermal (metasomatic) quartz-carbonate alteration that envelope the extremities of many intrusions, are also important reserves. The ultramafic zones of the Kluane intrusions should be re-examined for it is only now appreciated that sizeable Ni-Cu-PGE massive sulphide concentrations can be contained within this belt. (L.Hulbert and Carne, 1996)*

*Results from other similar targets in the immediate vicinity include those of the Klu property, the Wellgreen property and the Airways deposit, adjacent to the Arch Creek property.*

*Results reported in 1997 from Inco Ltd.'s Klu property returned values from grab samples up to 3.1% Ni, 10.4 % Cu, 0.19% Co, 75.8 g/t Pt, 20.6 % Pd and 7.0 g/t Au (Yukon Expl. And Geol. 1999)*

*The Wellgreen property, owned by Northern Platinum Ltd., has a geological resource of 50.03 million tonnes, grading 0.35% Cu, 0.36% Ni, 0.54 g/t Pt and 0.34 g/t Pd ( Yukon Mineral Update 2000). A preliminary feasibility study was finished in 1989 for a proposed open pit mine at 10,000 tonnes per day.*

*Drilling on the adjacent Airways property in 1988 by Pak-Man Resources, intersected disseminated sulphides. They got returns of 41 metres, grading 0.15 % Cu., 0.29% Ni, 0.41 g/t Pt and 0.45 g/t Pd, including 10.8 metres grading 0.28% Cu, 0.35% Ni, 0.7 g/t Pt and 0.8 g/t Pd. A Gabbroic chilled margin to a peridotite sill, containing disseminated sulphides, returned 0.75% Cu, 1.44% Ni, 0.65 g/t Pt and 1.6 g/t Pd over 2.6 metres (Yukon Expl. 1988)."*

## **2001 WORK PROGRAM**

Exploration carried out by Auterra, consisted of a program of sampling and ground geophysics. A crew of 2 men spent a total of 68 mandays on the claims. Sampling was focused in the areas of the Teck showings and Archer Cathro drill hole. Work was focused within the area of the Teck showing located along grid line 9+20 N and 8+25 E and a diamond drill holes drilled by Arthor Cathro DD – A-88-01 (Eaton, 1988) located approximately on 5+20 N and 25+25 E.

A grid system was emplaced on the property to be used in conjunction with the ground geophysics. Two closely spaced grids were cut and surveyed on both the Tech Showing Grid (AR#61 & AR #8) and on the DDH A-88-01 Grid (AR #9 to AR #12). Both grids consist of lines spaced every 25 m and reading stations every 15 m along the lines.

The Tech showing grid is 400m long (base line) by 300m wide (cross line length). A total length of 5.5 km x 2 grids = 11 km was slashed in and surveyed with magnetometer and VLF instruments.

## **Geochemical Sampling**

A total of 5 rock samples were collected during the program. Sample descriptions and assay certificates are located in Appendix I and Appendix II respectively. Samples were collected within the vicinity of the Tech Showing and beyond. The samples ranged from 140.5 ppm to 377 ppb PGE's + Au along the edge of the ultramafic in the Arch Cr. Canyon exposure on AR #1 and #2 claims. Preliminary sample descriptions were provided by Tom Morgan and were further described by the author. Only three samples were assayed with follow-up assaying anticipated upon receiving the first set of results. Low assay results from the three samples discouraged further sampling due to the nature of the program. It is hoped that a more extensive and representative sampling program will be conducted by a geologist where better onsite descriptions and correlations can be made.

Rock samples collected from the property further confirmed anomalous PGE mineralization on the property but to date no new areas of mineralization were identified nor was significant mineralization encountered.

Three of the five samples were sent to ALS Chemex in North Vancouver to be assayed for a gold, platinum, palladium plus 32 element ICP package including copper and nickel. Samples were assayed by standard ICP geochemical procedures.

## Geophysical Survey

A total of approximately 11 km of VLF EM ground geophysics was conducted between the Tech Showing Grid and the DDH A-88-01 Grid with the intention of tracing the conductive edges of the peridotite body at depth. A total of approximately 38 lines were surveyed (including the base line) with line spacing of 25 m. Reading stations along the lines were 15 m apart. Lines and readings were taken at a bearing of 045° on the horizontal using the Seattle Jim Creek Station. The transmitter frequency was set at 20,000 Hz using a Sabre Model 27 VLF-EM.

## PROPERTY GEOLOGY

The property geology has been described by Vanwermeskerken (2001) as:

*“The claims are underlain by a Northwesterly trending sequence of Pennsylvanian to Upper Triassic sedimentary and intermediate volcanic rocks (Fig 4). The upper slopes are almost exclusively intermediate to mafic volcanic flows and volcanoclastics. Sedimentary layers were only observed at lower elevations near Arch Creek. These sedimentary rocks consist of argillite and siltstone, with minor fine grained quartzite. Eaton (1988) states that:*

*The main sill dips steeply to moderately Southwest and appears to have intruded a conformable contact between the Station Creek and Hason Creek Formations. On the Neighboring [Airways and] Wellgreen property, the ultramafic sills usually exhibit steep North or South dips and appear to be sub-vertical bodies with occasional rolls or gentle folds. Stratigraphic evidence suggests that the Southwest dip on the Arch property represents a right side up sequence with enclosing strata becoming younger in a downhill direction. The host rocks in the footwall of the sill are Hason Creek Formation siliceous sedimentary rocks, which include argillite, mudstone and quartzite. The argillite displays alternating grey and black layers of variable thickness, while the mudstone is finely layered with a light green-brown colour on fresh broken surfaces. Quartzite tends to be dark green to light brown and is often tuffaceous. Station Creek Fm rocks comprise the hanging-wall of the main sill and consist of andesite and agglomerate. The andesite varies from light to dark green and is composed of a chloritized matrix with chlorite pseudomorphs after hornblende. The agglomerate is also green and is made up of subangular to subrounded chert fragments in a laminated volcanic matrix.*

*The Station Creek and Hason Creek rocks have been intruded by a series of fairly conformable mafic and ultramafic sills. These sills form the western end of the 16 km. Long Quill Creek Ultramafic complex. These sills appear to trend East-West along the Southern part of the claim group. An East-West trending Conductor/EM anomaly indicated by geophysical surveys by Teck Explorations, Pak Man Resources and Klwane JV verify this trend.*

*Magnetometer and EM geophysical surveys, performed by Teck Exploration have been used to delineate the extent of the ultramafic sills, which are mostly buried under dozens of metres of glacio-fluvial gravels. The magnetic anomaly has been used to define the extent of this sill, although this should be interpreted only as a generalization, as rare outcrop areas within the magnetic anomaly are often intermediate to basic volcanics.*

*The sills are predominantly composed of strong magnetic, dark greenish black, medium to fine grained locally serpentinitized, feldspathic peridotite. These rocks weather dark green, greasy (serpentinite) with limonite and calcite. Slickensides are common on weathered and fracture surfaces.*

*Olivine-gabbro occurs as a chilled phase of these sills, and has been observed only at the Conwest showing. The gabbro is very limonitic when weathered, and is mineralized with disseminated and interstitial pyrite, chalcopyrite, pyrrhotite and pentlandite.*

*The main peridotite sill is situated in the Southwesterly limb of a northwesterly trending anticline, indicating that the footwall of the sill is the yet unexposed Northeasterly contact.*

*Geophysical surveys (Mag-EM) by Pak-Man Resources and Kluane JV in 1981 over the area of the current AR claims, as well as part of the adjacent Airways property, indicated a northwesterly trending magnetic anomaly more than 2 kilometres in length and up to 500 metres wide. This trend includes one of the Airways drill targets as well as the known peridotite exposures on the AR claims and the Musketeer showing. Numerous parallel VLF conductors are located within and to the North of this magnetic anomaly. Two VLF conductors, each approximately 500 metres by 50 metres straddle the magnetic anomaly over the area of the Musketeer (Teck) showing. This 1981 survey did not include the area of the Conwest showing.*

*A significant east-west trending lineament occurs high up above and northeast of the Conwest showing. This lineament is associated with intense fracturing, carbonate alteration zones, quartz-calcite stringer stockwork zones, minor gouge zones, orange soil gossans and minor pyrite mineralization.*

*A series of subvertical faults trend northwesterly across the property, and cut all units. Although the Conwest showing is situated along the Northeastern side of one of these faults, these faults are still believed to be post Ni-Cu-PGE mineralization. Some of these are reported to host minor copper mineralization. These faults typically result in linear gullies, with carbonate alteration zones and minor calcite +/- quartz stringer zones.*

*All units have locally been overlain with pleistocene glacio-fluvial gravels ranging in thickness to 40 metres or more in the vicinity of Arch Creek."*



## MINERALIZATION AND ALTERATION

Observed mineralization on the property, by Vanwermeskerken (2001), consisting of two types were reported as follows:

### *1) Disseminated pyrite / pyrrhotite*

*Mineralization of this type occurs in isolated areas of carbonate alteration, usually in the vicinity of fault zones. Pyrite and/ or pyrrhotite in these zones range to 3% as disseminations, interstitially, or as small 'blebs' up to 5 mm. These zones commonly result as weak gossans in soil or weathered outcrop areas.*

### *2) Disseminated Py/Po/Cpy +/- pentlandite*

*Mineralization of this type is common in the ultramafic intrusions. Disseminated and interstitial sulphides (up to 3% pyrite, 2% chalcopyrite, 2% pyrrhotite and minor pentlandite) have been noted throughout the pyroxenite intrusion and within the gabbro of the Conwest showing. The Conwest showing mineralization is associated with several quartz/calcite veins up to 30 cm wide and stockwork veins. Mineralization in these intrusions does not appear to extend outside into the host rocks.*

*Significant alteration on the claims consists of serpentinization of the ultramafic intrusions, and carbonate alteration zones near faults. Weak chloritic (and propylitic) alteration is prevalent throughout much of the andesitic volcanics.*

### **Teck showing**

*The Teck showing consists of a small exposure of a 1 metre wide fault zone, trending approximately 140/71 NE mineralized with pyrite. This fault is located within a felsic to intermediate feldspathic porphyry, a few metres south of a peridotite sill. The rocks on each side of the fault are variably calcareous, with calcite stringers +/- ankerite. The fault zone itself contains no carbonates, and is mineralized with (quartz-) pyrite 'balls' up to 5 cm, consisting of approximately 70% pyrite and 30% quartz. These 'balls' are typically leached, resulting in brittle, porous grey pods. Oxide minerals include limonite, jarosite and melanterite (?)*

*Trenching by Auterra has exposed the hanging-wall porphyry of this fault, as well as the Southern contact of the Peridotite sill. The peridotite is shattered, with many calcite stringers, locally serpentinized, and variably mineralized with fine disseminated pyrite, magnetite and pyrrhotite. These rocks are highly magnetic. The peridotite unit can now be traced for more than 120 metres towards the north, where it continues under overburden. A strong carbonate alteration zone, more than 15 metres in extent, is located 15 metres northeast of the fault.*

### **Conwest Showing**

*The area of the Conwest showing consists of 90 metres of oxidized, medium grained gabbro, immediately East, and subparallel to a fault trending approximately 160 degrees. This gabbroic intrusion occurs as two separate bodies 15 metres wide or more. The fault is not exposed at the gabbro intrusion, so the structural relationship between the intrusion and the fault is unknown at this time. The intrusion trends southeast under overburden.*

*The gabbro is flanked by parallel quartz +/- calcite stringer stockwork zones within the andesitic to basaltic host rocks. Both the gabbro, and the stockwork zones are mineralized with up to 3% cpy, 3% py, trace of chalcocite (?) and stained with malachite and limonite. Massive pyrite 'blebs', up to 2 cm in size, have been noted locally within the gabbro.*

### **DISCUSSION OF RESULTS**

It is important to note that the author of this report has not been to the property. The samples collected for this report and the geophysical survey were not taken by or under supervision of the author therefore the author is unable to confirm their validity or accuracy. In addition, the information provided to the author is second hand and has been compiled by a variety of individuals thus limiting the author in their interpretation and recommendation.

### **SAMPLE RESULTS**

The 2001 exploration program continued to returned sub economic results from the property. No economic mineralization was identified during follow-up sampling of the Arch Creek by Tom Morgan. However, anomalous levels of Pt, Pd, Cu, Ni and Au are encouraging as they indicate the system carries PGE mineralization with the potential for locating a high grade PGE zone. The samples ranged from 140.5 ppm to 377 ppb PGE's + Au along the edge of the ultramafic in the Arch Cr. Canyon exposure on AR #1 and #2 claims. Much of the favourable PGE bearing units have limited exposure. It has been interpreted by Morgan and Vanwermeskerken (2001) that the peridotite footwall contact of the targeted ultramafic unit is covered by overburden. It is this footwall contact that is the target horizon for high grade mineralization.

### **GEOPHYSICS**

Approximately 11 km of VLF EM grid line cutting and ground geophysics was conducted between the Tech Showing Grid and the DDH A-88-01 Grid with the intention of tracing the conductive edges of the peridotite body at depth. A total of approximately 38 lines were surveyed (including the base line) with line spacing of 25 m. Reading stations along the lines were 15 m apart. Lines and readings were taken at a bearing of 045° on the horizontal using the Seattle Jim Creek Station. The transmitter frequency was set at 20,000 Hz using a Sabre Model 27 VLF-EM.

The geophysics outlined two anomalies in an areas covered by overburden, both trending northwest. One anomalous zone is within the Tech Showing Grid along the edge of the peridotite unit from 9+70 N to 9+85 N on lines 7+75E, 8+00E & 8+25E containing the Tech Showing. This anomaly measures approximately 200 m along strike, open to the northwest and southeast, and is approximately 50 m in width.

The second anomalous zone is within the DDH A-88-01 Grid down-slope west-north-west from DDH A-88-01(DDH - Dip 50° AZ 020°) along L 25+25E and L 5+05N to L 23+00E and L 4+90. The DDH A-88-01 anomaly is approximately 200 m long, open to the northwest and tapering off to the southeast, and 50 m in width. The magnetic readings increase and correlate with the contact of the ultramafic body in a west-north-west direction. The VLF readings were observed to be strong in one direction but no cross over is observed along this 200m of ultramafic magnetic signature. This could be due to increasing overburden thickness in this direction or because the response is due to a nonmetallic conductor.

## **CONCLUSIONS AND RECOMMENDATIONS**

Auterra Ventures and Cabin Creek Resources Management conducted a Joint Venture exploration project on the Arch Creek (AR1-61) claim block, investigating it for PGE potential. Though further analysis of the data is required to tie in previous and current work with the pending VLF EM geophysical survey, two main exploration targets remain for the 2002 exploration season.

Based on compiled data the author recommends a trenching and chip/channel sampling program in the Teck showing peridotite with a focus on exposing the footwall contact of the peridotite unit. Previous work shows the target footwall contact to correlate with Mag-VLF conductors from previous geophysical surveys. This Footwall contact zone is buried under several tens of metres of glacio-fluvial gravels. A focus should be made to either expose the area with trenching (where possible) or test by drilling (X-ray, Winky or other portable drill equipment) to locate the footwall trend. The previously identified 300 metre by 70 metre VLF conductor in the area of the projected contact is a recommended drill target. In addition to the 2001 VLF EM geophysical survey an IP (resistivity-chargeability) surveys is recommended to help delineate a more detailed outline of a drill target for follow-up work.

Previous mapping and sampling of the Conwest showing, as well as a mapped Magnetometer anomaly indicate the potential for the area to contain peridotite sills and possible related marginal gabbros and high-grade PGE zones to the southeast of the showing. This showing contains significant mineralization but is not spatially related to any notable peridotite. This sill is truncated by a fault towards the west, and trends under overburden towards the Southeast. A strong East-Southeasterly trending magnetic anomaly indicates a possible peridotite under overburden. This potential peridotite sill could be related with other buried marginal gabbros with or without high grade PGE horizons, and will make another exploration target (Vanwermeskerken, 2001). This trend is considered a future exploration target and should be blast trenched along the projected strike of the zone.

The geophysics outlined two anomalous areas within the Tech Showing Grid and the DDH A-88-01 Grid. Both anomalies are approximately 50 m wide and 200 m long and remain open to the northwest and southeast.

A strong correlation exists between these anomalous areas and the underlying ultramafic units. Additional geophysical surveys are recommended excluding an IP survey due to the high content of magnetite within the rock units.

A max-min survey combined with a larger VLF-Em survey is recommended, as it would be beneficial in differentiating between a clay and graphic reading.

Trenching in areas underlying an anomaly and covered by overburden is strongly recommended to try to trace the continuation of the peridotite units on surface.

In particular, one area nearby the Tech showing along the edge of the peridotite unit from 9+70 N to 9+85 N on lines 7+75E, 8+00E & 8+25E. This is where previously decided trenching would occur during the 2000 Exploration Program and where continuation of the trench during the 2001 Exploration Program would have occurred. Emplacement of mechanical equipment is mandatory prior to the hard frost of early winter for mobilization purposes is necessary.

Previous work conducted by Vanwermeskerken (2001) identified two bright orange gossans approximately 1 kilometre west-northwest of the Conwest showing. These gossans were not included in the 2001 exploration program and it is recommended that these areas be mapped and sampled during subsequent exploration work programs.

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**Yukon Exploration and Geology**, 1999, p.5

## STATEMENT OF QUALIFICATIONS

I, **Renee D. Brickner**, of 307-2555 Vancouver, British Columbia, hereby certify that:

I am a graduate of the University of Saskatchewan with a Bachelor of Science degree (1999) in geology with Honors.

I have practiced my profession as a geologist in Canada, full time since graduation.

I am a consulting geologist with offices at 501-905 West Pender St. Vancouver, British Columbia.

I am a registered member in good standing of the Association of Professional Engineers and Geoscientists of British Columbia as a G.I.T. (reg # 132038).

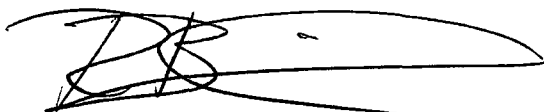
The information in this report is based on a review of reports on the area and on information obtained in the field by individuals other than myself.

I did not personally supervised the work undertaken on the Arch Creek claims during the 2000 field program but have reviewed all data provided for the compilation of this report.

I have no interest, direct or indirect, in the subject property, or any surrounding ground.

I consent to, and authorize the use of this report in any prospectus, state of material facts, or other public document.

**DATED, in Vancouver, British Columbia, this 27 day of February, 2002.**



**Renee D. Brickner, G.I.T.**

**APPENDIX I**

**Rock sample descriptions**

## APPENDIX I

5 samples were sent via bus by Tom Morgan from his work on the AR and Ultra Claims

AR Claims	ALS #	Au ppb	Pt ppb	Pd ppb	Cu ppm	Zn ppm	
AR-21-R-001	629335	13	71	87	419	60	Fine grained – ultramafic rock, peridotite– 90 % pyroxenite (olivine) with 8 % feldspar, homogeneous equigranular texture. Sample contains about 2% sulphides mainly pyrrhotite Varying weak to mod. mag. associated with the presence of pyrrhotite. No sulphide pitting. Fresh surface is dark green with a dark green-grey weathered surface.
AR-21-R-002	629336						Sample contains argillicious shale components (stockwork) with disseminated Py. Within fine grained peridotite, black fresh surface...rusty weathering along fractures. Rock is highly fractured with quartz veins associated with fracturing. Segregated areas containing v. fine grain semi-massive sulphides where weathering has caused crumbling and some sulphide blebs, essentially pyrite. Non-magnetic.
AR-21-R-003	629337						Fine grained olivine (pyroxenite) dunite peridotite. looks to have striations (slickensides). Trace py as fine blebs. Variably low mag. Fresh surface is dk. Green with a light grey-green chalky buff weathered surface. (carbonate alt.)
AR-21-R-004	629338	11	61.5	68	469	48	Appears to be collected from Skree material. Fine grained peridotite (pyroxenite) with



							<p>minor amounts of biotite. Described by Morgan as marginal gabbro along NE extension of peridotite. Fresh surface – v.dk green, weathered surface buff grey-green, carbonate alt. Very minor local rusty weathering spots. Samples contain 2% sulphides mostly pyrrhotite. Locally, mod – strong mag.</p>
AR-21-R-005	629339	40	147	190	1695	80	<p>Fine grained pyroxenite with minor biotite, containing ~1% sulphides – pyrrhotite, chalcopyrite +/- pentlandite. Locally mod mag. Sulphides are seen as c.g. blebs. Fresh surface is dk green with fine grained locally rusty weathering. Weathered surface is buff chalky rusty and variable pitting.</p>

## **APPENDIX II**

### **Assay Results**



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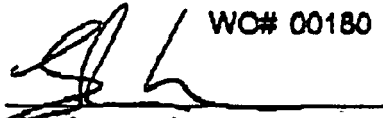
19/07/2001

Certificate of Analysis

# of pages (not including this page): 1

16406 Yukon Ltd, Tom Morgan

WO# 00180

Certified by   
 Justin Lemphers (Senior Assayer)

Date Received: 10/07/01

SAMPLE PREPARATION:						
Code	# of Samples	Type	Preparation Description (All wet samples are dried first.)			
r	2	rock	Crush to -10 mesh; riffle split 200g; pulverize to -100 mesh			
s	27	soil	Screen -80 mesh			

ANALYTICAL METHODS SUMMARY:						
Symbol	Units	Element	Method (A:assay) (G:geochem)	Fusion/D'gestion	Lower Limit	Upper Limit

$$1000\text{ppb} = 1\text{ppm} = 1\text{g/mt} = 0.0001\% = 0.029166\text{oz/ton}$$

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(874516:14:08:10072301)

Northern Analytical Laboratories

Project : M0900188  
Shipper : Norm Smith  
Shipment : PO#: 568117  
Analysis:  
As/PTs(FA/AAS 10)  
ICP(AAS)30  
Comment:

29 Samples

Out: Jul 23, 2001 In: Jul 17, 2001

CODE	AMOUNT	TYPE	PREPARATION DESCRIPTION	PULP	REJECT		
B31100	29	Pulp	Pulp received as it is, no sample prep.	12H/Dis	00M/Dis		
<b>Analytical Summary</b>							
#	Code	Method	Units	Description	Element	Limit Low	Limit High
01	0368	FA/AAS	g/mt	Au (FA/AAS 30g) g/mt	Gold	0.01	9999.00
02	0331	FA/AAS	g/mt	Pt FA/AAS finish in g/mt	Platinum	0.01	99999.00
03	0341	FA/AAS	g/mt	Pd FA/AAS finish g/mt	Palladium	0.01	9999.00
04	0721	ICP	ppm	Ag ICP	Silver	0.1	100.0
05	0711	ICP	ppm	Cu ICP	Copper	1	20000
06	0714	ICP	ppm	Pb ICP	Lead	2	20000
07	0730	ICP	ppm	Zn ICP	Zinc	1	20000
08	0703	ICP	ppm	As ICP	Arsenic	5	10000
09	0702	ICP	ppm	Sb ICP	Antimony	5	1000
10	0732	ICP	ppm	Hg ICP	Mercury	3	10000
11	0717	ICP	ppm	Mo ICP	Molybdenum	1	1000
12	0747	ICP	ppm	Tl ICP (Incomplete Digestion)	Thallium	10	1000
13	0705	ICP	ppm	Bi ICP	Bismuth	2	10000
14	0707	ICP	ppm	Cd ICP	Cadmium	0.1	100.0
15	0710	ICP	ppm	Co ICP	Cobalt	1	10000
16	0718	ICP	ppm	Ni ICP	Nickel	1	10000
17	0704	ICP	ppm	Ba ICP (Incomplete Digestion)	Barium	2	10000
18	0727	ICP	ppm	W ICP (Incomplete Digestion)	Tungsten	5	1000
19	0709	ICP	ppm	Cr ICP (Incomplete Digestion)	Chromium	1	10000
20	0729	ICP	ppm	V ICP	Vanadium	2	10000
21	0716	ICP	ppm	Mn ICP	Manganese	1	10000
22	0713	ICP	ppm	La ICP (Incomplete Digestion)	Lanthanum	2	10000
23	0723	ICP	ppm	Sr ICP (Incomplete Digestion)	Strontium	1	10000
24	0731	ICP	ppm	Zr ICP	Zirconium	1	10000
25	0736	ICP	ppm	Sc ICP	Scandium	1	10000
26	0726	ICP	x	Ti ICP (Incomplete Digestion)	Titanium	0.01	1.00
27	0701	ICP	x	Al ICP (Incomplete Digestion)	Aluminum	0.01	10.00
28	0708	ICP	x	Ca ICP (Incomplete Digestion)	Calcium	0.01	10.00
29	0712	ICP	x	Fe ICP	Iron	0.01	10.00
30	0715	ICP	x	Mg ICP (Incomplete Digestion)	Magnesium	0.01	10.00
31	0720	ICP	x	K ICP (Incomplete Digestion)	Potassium	0.01	10.00
32	0722	ICP	x	Na ICP (Incomplete Digestion)	Sodium	0.01	5.00
33	0719	ICP	x	P ICP	Phosphorus	0.01	5.00

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Client : Northern Analytical Laboratories  
Project : MD00180

29 Samples  
29-Pulp

[074516:14:08:10072301]

Out: Jul 23, 2001  
In : Jul 17, 2001

Page 1 of 1  
Section 1 of 2

Sample Name	Type	Au g/ml	Pt g/ml	Pd g/ml	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Hg ppm	Mo ppm	Tl ppm	Bi ppm	Cd ppm	Co ppm	Mn ppm	Ba ppm	H ppm
GAB-21-R001	Pulp	0.01	<0.01	<0.01	<0.1	482	8	37	<5	<5	<5	4	<10	<5	<0.1	44	20	14	<5
GAB-21-R004	Pulp	0.01	0.01	0.02	<0.1	97	5	45	16	<5	<5	11	<10	<5	<0.1	19	34	29	<5
ULT-21-R001	Pulp	0.01	<0.01	<0.01	<0.1	25	8	28	<5	<5	<5	4	<10	<5	<0.1	12	8	110	<5
ULT-21-R002	Pulp	0.01	<0.01	<0.01	<0.1	13	<2	54	<5	<5	<5	3	<10	<5	<0.1	18	29	114	<5
ULT-21-R003	Pulp	0.01	0.01	0.01	<0.1	46	4	31	<5	<5	<5	5	<10	<5	<0.1	37	73	102	<5
ULT-21-R004	Pulp	0.01	0.01	0.02	0.1	394	3	36	<5	<5	<5	3	<10	<5	<0.1	39	42	117	<5
ULT-21-R005	Pulp	0.04	0.11	0.23	23.5	6676	22	87	1.5x	27	<5	2	<10	<5	0.6	285	8255	20	<5
ULT-21-R006	Pulp	0.01	<0.01	<0.01	<0.1	33	2	12	<5	<5	<5	2	<10	<5	<0.1	6	39	36	<5
ULT-21-R007	Pulp	0.03	<0.01	<0.01	<0.1	81	7	26	<5	<5	<5	3	<10	<5	<0.1	26	80	25	<5
ULT-21-R008	Pulp	0.02	0.01	<0.01	0.2	120	8	74	<5	<5	<5	4	<10	<5	<0.1	33	33	104	<5
ULT-21-R009	Pulp	0.19	0.01	0.13	12.9	2.1x	5	102	<5	<5	<5	2	<10	<5	0.7	77	29	44	5
ULT-21-R010	Pulp	0.01	<0.01	<0.01	0.3	63	3	61	<5	<5	<5	3	<10	<5	<0.1	34	44	27	<5
ULT-21-R011	Pulp	0.02	0.03	0.05	<0.1	348	11	14	<5	<5	<5	3	<10	<5	<0.1	77	657	29	<5
ULT-21-R012	Pulp	0.03	0.05	0.06	<0.1	150	6	25	<5	<5	<5	3	<10	<5	<0.1	112	1072	41	<5
ULT-21-R013	Pulp	0.01	0.02	<0.01	<0.1	37	4	8	<5	<5	<5	2	<10	<5	<0.1	7	21	19	<5
ULT-21-R014	Pulp	0.02	<0.01	<0.01	0.5	121	11	71	<5	<5	<5	3	<10	<5	<0.1	23	146	81	<5
ULT-21-R015	Pulp	0.01	<0.01	<0.01	<0.1	83	9	46	<5	<5	<5	3	<10	<5	<0.1	45	287	20	<5
ULT-21-R016	Pulp	0.02	0.01	0.05	0.1	147	7	43	<5	<5	<5	5	<10	<5	<0.1	108	1005	38	<5
ULT-21-R017	Pulp	0.03	<0.01	<0.01	<0.1	127	8	74	<5	<5	<5	2	<10	<5	<0.1	55	387	40	<5
ULT-21-R018	Pulp	0.02	0.01	0.01	<0.1	131	6	50	<5	<5	<5	4	<10	<5	0.7	23	50	164	<5
ULT-21-R019	Pulp	<0.01	0.01	0.01	0.1	147	6	26	<5	<5	<5	2	<10	<5	<0.1	90	1124	12	<5
ULT-21-R020	Pulp	0.01	0.01	0.03	0.2	189	6	29	<5	<5	<5	3	<10	<5	<0.1	106	1548	4	<5
ULT-21-R021	Pulp	0.01	0.01	0.01	0.2	465	12	43	<5	<5	<5	4	<10	<5	<0.1	114	982	22	<5
ULT-21-R022	Pulp	0.02	0.01	0.02	0.2	306	7	32	<5	<5	<5	3	<10	<5	<0.1	105	1575	34	<5
ULT-21-R023	Pulp	0.01	0.01	0.03	0.2	185	5	24	<5	<5	<5	4	<10	<5	<0.1	94	1269	5	<5
ULT-21-R024	Pulp	<0.01	0.01	0.01	<0.1	104	8	39	<5	<5	<5	1	<10	<5	<0.1	33	41	132	<5
ULT-21-R025	Pulp	0.01	0.05	0.10	<0.1	38	10	116	<5	<5	<5	3	<10	<5	<0.1	65	98	42	<5
GAB-21-X002	Pulp	<0.01	<0.01	<0.01	<0.1	38	2	56	<5	<5	<5	1	<10	<5	<0.1	13	10	115	<5
GAB-21-X003	Pulp	0.02	0.01	0.01	0.5	61	5	19	326	<5	<5	6	<10	<5	<0.1	4	8	28	<5

Minimum Detection 0.01 0.01 0.01 0.1 1 2 1 5 5 3 1 10 2 0.1 1 1 2 5  
 Maximum Detection 9999.00 99999.00 9999.00 100.0 20000 20000 20000 10000 10000 10000 10000 10000 10000 100.0 10000 10000 10000 10000  
 Method FA/AAS FA/AAS FA/AAS ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP ICP

— No Test Ins=Insufficient Sample Del=Delay Max=No Estimate Rec=ReCheck m=x1000 %=Estimate % NS=No Sample

NO. 187

NORTHERN ANALYTICAL → 152-46-9588

14:46

09/02/2001



INTERNATIONAL PLASMA LABORATORY LTD.

CERTIFICATE OF ANALYSIS  
IPL 01G0745



2038 Columbia Street  
Vancouver, B.C.  
Canada V5Y 3E1  
Phone (604) 879-7878  
Fax (604) 879-7898  
Email ip@direct.ca

Client : Northern Analytical Laboratories  
Project: M000180

29 Samples  
29-Pulp

[074516:14:08:10072301]

Out: Jul 23, 2001  
In: Jul 17, 2001

Page 1 of 1  
Section 2 of 2

Sample Name	Cr ppm	V ppm	Mn ppm	La ppm	Sr ppm	Zr ppm	Sc ppm	Ti %	Al %	Ca %	Fe %	Hg %	K %	Na %	P %
GAB-21-R001	25	224	512	<2	85	4	9	0.11	3.21	2.58	5.36	1.83	0.05	0.15	0.05
GAB-21-R004	71	87	262	6	47	4	3	0.07	1.23	1.00	2.67	0.95	0.07	0.07	0.17
ULT-21-R001	41	37	2193	6	671	1	13	<0.01	1.08	18x	3.41	2.61	0.02	0.01	<0.01
ULT-21-R002	79	48	1446	3	279	2	3	0.05	1.66	15x	2.77	1.79	0.10	0.02	0.05
ULT-21-R003	193	90	396	7	77	5	4	0.18	2.05	1.57	3.05	2.14	0.95	0.08	0.17
ULT-21-R004	130	90	408	7	136	6	3	0.20	1.63	2.71	3.13	1.70	1.02	0.04	0.18
ULT-21-R005	198	75	839	3	158	2	8	<0.01	0.74	4.51	5.81	2.02	0.06	0.02	0.04
ULT-21-R006	48	28	392	<2	42	2	<1	0.01	0.41	6.61	8.64	0.40	0.38	0.01	0.04
ULT-21-R007	251	67	439	<2	112	3	6	0.12	1.07	6.16	2.38	2.31	0.12	0.06	0.03
ULT-21-R008	80	148	849	8	483	9	9	0.26	2.74	5.39	3.93	2.88	2.08	0.04	0.24
ULT-21-R009	98	56	446	<2	24	1	3	0.08	1.74	7.44	3.72	1.30	0.20	0.02	0.03
ULT-21-R010	68	67	1272	2	166	2	18	0.01	0.53	9.64	5.31	4.11	0.05	0.03	0.07
ULT-21-R011	1024	44	250	<2	5	2	2	0.03	1.60	0.2x	4.62	6.69	0.01	0.01	0.02
ULT-21-R012	538	44	479	<2	7	2	3	0.04	1.56	0.27	5.45	10x	0.04	0.02	0.03
ULT-21-R013	74	24	203	<2	9	3	<1	0.01	0.09	1.74	12x	0.08	0.01	0.02	0.05
ULT-21-R014	164	142	366	9	35	4	9	0.12	2.68	1.30	6.32	2.20	0.05	0.03	0.18
ULT-21-R015	533	109	602	6	91	2	7	0.08	2.36	1.84	4.61	5.08	0.07	0.02	0.03
ULT-21-R016	271	30	792	<2	9	3	4	0.03	1.02	0.13	5.56	12x	0.08	0.01	0.02
ULT-21-R017	248	71	586	4	52	9	4	0.28	1.87	1.25	4.36	4.94	0.01	0.02	0.13
ULT-21-R018	76	58	846	4	739	7	14	0.03	1.25	10x	3.48	1.77	0.14	0.04	0.07
ULT-21-R019	229	20	537	<2	29	2	4	0.01	1.41	0.27	4.71	11x	0.04	0.01	0.01
ULT-21-R020	469	46	951	<2	56	1	11	0.01	1.41	2.03	5.51	12x	0.01	0.01	0.01
ULT-21-R021	185	18	644	<2	8	2	3	0.02	1.46	0.13	6.57	11x	0.05	0.01	0.01
ULT-21-R022	226	24	599	2	8	7	4	0.02	1.75	0.15	5.17	12x	0.06	0.01	0.01
ULT-21-R023	712	42	857	<2	81	1	9	0.02	1.62	1.96	5.65	11x	0.01	0.01	0.02
ULT-21-R024	31	123	277	6	28	7	3	0.33	1.57	0.76	3.60	1.30	0.60	0.04	0.08
ULT-21-R025	44	100	2115	9	78	7	13	0.05	1.36	2.17	11x	2.08	0.11	0.11	0.10
GAB-21-X002	9	28	1537	9	101	3	5	<0.01	1.51	6.66	3.14	0.98	0.03	0.02	0.16
GAB-21-X003	7	84	76	9	129	4	2	0.01	0.40	4.26	9.91	0.07	0.16	0.20	0.17

Minimum Detection	1	2	1	2	1	1	1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Maximum Detection	10000	10000	10000	10000	10000	10000	10000	1.00	10.00	10.00	10.00	10.00	10.00	10.00	5.00
Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP

— No Test Ins=Insufficient Sample Del=Delay Max=No Estimate Rec=ReCheck m=x 1000 %=Estimate % NS=No Sample



# ALS Chemex

Aurora Laboratory Services Ltd.  
 Analytical Chemists \* Geochemists \* Registered Assayers  
 212 Brooksbank Ave., North Vancouver  
 British Columbia, Canada V7J 2C1  
 PHONE: 604-984-0221

501 - 905 W. PENDER ST.  
 VANCOUVER, BC  
 V6C 1L6

**INVOICE NUMBER****I 0 1 2 7 7 0 3****BILLING INFORMATION**

Date: 07-NOV-2001  
 Project:  
 P.O. No.:  
 Account: SXL

Comments: AAV121ROE.00Q

Billing: For analysis performed on  
 Certificate A0127703

Terms: Payment due on receipt of invoice  
 1.25% per month (15% per annum)  
 charged on overdue accounts

Please Remit Payments to:

**ALS CHEMEX**  
 212 Brooksbank Ave.,  
 North Vancouver, B.C.  
 Canada V7J 2C1

# OF SAMPLES	ANALYSED FOR CODE - DESCRIPTION	UNIT PRICE	SAMPLE PRICE	AMOUNT
14	- PGM-MS23	15.00		
	- ME-ICP41	8.00		
	- PREP-31	6.00		
	WEI-21 - Weight of received sample	0.00	29.00	406.00
1	- PGM-MS23	15.00		
	- ME-ICP41	8.00		
	- PREP-31	6.00		
	WEI-21 - Weight of received sample	0.00		
	8290 - ICP-MS Dilution Charge	4.00	33.00	33.00
Additional charges:				
1	BAT-01 - Batch processing fee	30.00		30.00
26	CRU-31 - Crush to 70% -2mm per kg charge	0.20		5.20
26	SPL-21 - Riffle splitting charge per kg	0.05		1.30
				Total Cost \$ 475.50
				Client Discount ( 30%) \$ <u>-142.65</u>
				Net Cost \$ 332.85
(Reg# R100938885 )				GST \$ <u>23.30</u>
				<b>TOTAL PAYABLE (CDN) \$ 356.15</b>



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10. GOLD BRICK ENTERPRISES LTD

501 - 905 W. PENDER ST.  
 VANCOUVER, BC  
 V6C 1L6

A0127703

Comments: ATTN: RENEE BRICKNER

CERTIFICATE

A0127703

(SXL) - GOLD BRICK ENTERPRISES LTD.

Project:  
 P.O. #:

Samples submitted to our lab in Vancouver, BC.  
 is report was printed on 07-NOV-2001.

## SAMPLE PREPARATION

METHOD CODE	NUMBER SAMPLES	DESCRIPTION
PUL-31	15	Pulv. <250g to >85%/-75 micron
STO-21	15	Reject Storage-First 90 Days
LOG-22	15	Samples received without barcode
CRU-31	15	Crush to 70% minus 2mm
SPL-21	15	Splitting Charge
229	15	ICP - AQ Digestion charge

\* NOTE 1:

The 32 element ICP package is suitable for trace metals in soil and rock samples. Elements for which the nitric-aqua regia digestion is possibly incomplete are: Al, Ba, Be, Ca, Cr, Ga, K, La, Mg, Na, Sr, Ti, Tl, W.

## ANALYTICAL PROCEDURES 1 of 2

METHOD CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
WEI-21	15	Weight of received sample	BALANCE	0.01	1000.0
Au-MS23	15	Au ppb: Fuse 30g - ICPMS Finish	FA-ICPMS	1	1000
Pt-MS23	15	Pt ppb: Fuse 30g - ICPMS Finish	FA-ICPMS	0.5	1000
Pd-MS23	15	Pd ppb: Fuse 30g - ICPMS Finish	FA-ICPMS	1	1000
Ag-ICP41	15	Ag ppm: 32 element, soil & rock	ICP-AES	0.2	100.0
Al-ICP41	15	Al %: 32 element, soil & rock	ICP-AES	0.01	15.00
As-ICP41	15	As ppm: 32 element, soil & rock	ICP-AES	2	10000
B-ICP41	15	B ppm: 32 element, rock & soil	ICP-AES	10	10000
Ba-ICP41	15	Ba ppm: 32 element, soil & rock	ICP-AES	10	10000
Be-ICP41	15	Be ppm: 32 element, soil & rock	ICP-AES	0.5	100.0
Bi-ICP41	15	Bi ppm: 32 element, soil & rock	ICP-AES	2	10000
Ca-ICP41	15	Ca %: 32 element, soil & rock	ICP-AES	0.01	15.00
Cd-ICP41	15	Cd ppm: 32 element, soil & rock	ICP-AES	0.5	500
Co-ICP41	15	Co ppm: 32 element, soil & rock	ICP-AES	1	10000
Cr-ICP41	15	Cr ppm: 32 element, soil & rock	ICP-AES	1	10000
Cu-ICP41	15	Cu ppm: 32 element, soil & rock	ICP-AES	1	10000
Fe-ICP41	15	Fe %: 32 element, soil & rock	ICP-AES	0.01	15.00
Ga-ICP41	15	Ga ppm: 32 element, soil & rock	ICP-AES	10	10000
Hg-ICP41	15	Hg ppm: 32 element, soil & rock	ICP-AES	1	10000
K-ICP41	15	K %: 32 element, soil & rock	ICP-AES	0.01	10.00
La-ICP41	15	La ppm: 32 element, soil & rock	ICP-AES	10	10000
Mg-ICP41	15	Mg %: 32 element, soil & rock	ICP-AES	0.01	15.00
Mn-ICP41	15	Mn ppm: 32 element, soil & rock	ICP-AES	5	10000
Mo-ICP41	15	Mo ppm: 32 element, soil & rock	ICP-AES	1	10000
Na-ICP41	15	Na %: 32 element, soil & rock	ICP-AES	0.01	10.00
Ni-ICP41	15	Ni ppm: 32 element, soil & rock	ICP-AES	1	10000
P-ICP41	15	P ppm: 32 element, soil & rock	ICP-AES	10	10000
Pb-ICP41	15	Pb ppm: 32 element, soil & rock	ICP-AES	2	10000
S-ICP41	15	S %: 32 element, rock & soil	ICP-AES	0.01	10.00
Sb-ICP41	15	Sb ppm: 32 element, soil & rock	ICP-AES	2	10000
Sc-ICP41	15	Sc ppm: 32 elements, soil & rock	ICP-AES	1	10000
Sr-ICP41	15	Sr ppm: 32 element, soil & rock	ICP-AES	1	10000
Ti-ICP41	15	Ti %: 32 element, soil & rock	ICP-AES	0.01	10.00
Tl-ICP41	15	Tl ppm: 32 element, soil & rock	ICP-AES	10	10000





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 212 Brooksbank Ave., North Vancouver  
 British Columbia, Canada V7J 2C1  
 PHONE: 604-984-0221 FAX: 604-984-0218

501 - 905 W. PENDER ST.  
 VANCOUVER, BC  
 V6C 1L6

A0127703

Comments: ATTN: RENEE BRICKNER

CERTIFICATE

A0127703

(SXL) - GOLD BRICK ENTERPRISES LTD.

Project:  
 P.O. #:

Samples submitted to our lab in Vancouver, BC.  
 is report was printed on 07-NOV-2001.

### SAMPLE PREPARATION

METHOD CODE	NUMBER SAMPLES	DESCRIPTION
PUL-31	15	Pulv. <250g to >85%/-75 micron
STO-21	15	Reject Storage-First 90 Days
LOG-22	15	Samples received without barcode
CRU-31	15	Crush to 70% minus 2mm
SPL-21	15	Splitting Charge
229	15	ICP - AQ Digestion charge

\* NOTE 1:

The 32 element ICP package is suitable for trace metals in soil and rock samples. Elements for which the nitric-aqua regia digestion is possibly incomplete are: Al, Ba, Be, Ca, Cr, Ga, K, La, Mg, Na, Sr, Ti, Tl, W.

### ANALYTICAL PROCEDURES 2 of 2

METHOD CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
U-ICP41	15	U ppm: 32 element, soil & rock	ICP-AES	10	10000
V-ICP41	15	V ppm: 32 element, soil & rock	ICP-AES	1	10000
W-ICP41	15	W ppm: 32 element, soil & rock	ICP-AES	10	10000
Zn-ICP41	15	Zn ppm: 32 element, soil & rock	ICP-AES	2	10000



# ALS Chemex

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 Analytical Chemists \* Geochemists \* Registered Assayers  
 212 Brooksbank Ave., North Vancouver  
 British Columbia, Canada V7J 2C1  
 PHONE: 604-984-0221 FAX: 604-984-0218

To: GOLD BRICK ENTERPRISES LTD.

501 - 905 W. PENDER ST. #1  
 VANCOUVER, BC  
 V6C 1L6

Page Number : 1  
 Total Pages : 1  
 Certificate Date: 07-NOV-2001  
 Invoice No. : 10127703  
 P.O. Number :  
 Account : SXL

Project :  
 Comments: ATTN: RENEE BRICKNER

## CERTIFICATE OF ANALYSIS

A0127703

SAMPLE	PREP CODE	Weight Kg	Au ppb ICP-MS	Pt ppb ICP-MS	Pd ppb ICP-MS	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm
AR ← N629335	94139402	1.26	13	71.0	87	1.0	1.32	< 2	20	50	< 0.5	4	0.51	< 0.5	116	238	419	7.76	10	< 1
N629338	94139402	2.18	11	61.5	68	< 0.2	2.57	< 2	40	40	< 0.5	< 2	0.74	< 0.5	93	239	469	6.63	10	< 1
N629339	94139402	1.84	40	147.0	190	2.6	2.91	< 2	< 10	10	< 0.5	6	0.36	< 0.5	133	331	1695	7.47	< 10	< 1
N629340	94139402	1.42	185	4.5	2	10.2	< 0.01	40	< 10	< 10	0.5	< 2	0.01	14.5	72	42	6840	>15.00	< 10	1
N629341	94139402	1.44	89	90.5	650	9.0	0.74	16	< 10	50	< 0.5	2	2.39	2.0	53	138	8830	3.80	< 10	< 1
N629343	94139402	1.18	30	263	850	2.8	0.32	< 2	160	130	< 0.5	4	1.37	< 0.5	44	56	900	10.90	< 10	2
N629346	94139402	3.30	69	4.0	2	43.2	0.02	146	< 10	< 10	1.5	< 2	4.99	114.5	284	3	>10000	>15.00	< 10	3
N629348	94139402	1.94	1	< 0.5	< 1	1.2	1.88	2	< 10	< 10	< 0.5	4	1.62	< 0.5	38	10	237	7.18	< 10	< 1
N629349	94139402	1.38	2	14.5	49	1.8	1.86	6	80	40	< 0.5	< 2	1.07	< 0.5	116	720	400	7.82	< 10	< 1
N629350	94139402	2.02	29	1.0	1	10.6	0.03	18	< 10	< 10	0.5	< 2	0.09	< 0.5	24	114	2760	>15.00	< 10	< 1
N629351	94139402	1.98	155	3.0	1	8.8	0.01	44	< 10	< 10	0.5	6	0.97	29.5	44	39	5490	>15.00	< 10	< 1
N629352	94139402	1.72	26	< 0.5	< 1	2.8	2.69	64	< 10	< 10	< 0.5	6	0.85	< 0.5	31	96	129	9.30	< 10	< 1
N629354	94139402	2.28	240	203	1970	7.8	0.37	12	1260	10	< 0.5	< 2	1.14	< 0.5	383	79	>10000	8.77	< 10	< 1
N629357	94139402	1.06	1	< 0.5	2	1.4	2.15	2	10	30	0.5	6	1.24	< 0.5	44	51	65	6.75	< 10	< 1
N629358	94139402	0.92	100	< 0.5	4	0.8	0.73	2	< 10	70	< 0.5	6	0.28	< 0.5	3	85	40	1.66	< 10	< 1

CERTIFICATION: \_\_\_\_\_



# ALS Chemex

Aurora Laboratory Services Ltd.  
 Analytical Chemists \* Geochemists \* Registered Assayers  
 212 Brooksbank Ave., North Vancouver  
 British Columbia, Canada V7J 2C1  
 PHONE: 604-984-0221 FAX: 604-984-0218

To: GOLD BRICK ENTERPRISES LTD.

501 - 905 W. PENDER ST.  
 VANCOUVER, BC  
 V6C 1L6

Page Number : 1-1  
 Total Pages : 1  
 Certificate Date: 07-NOV-2001  
 Invoice No. : 10127703  
 P.O. Number :  
 Account : SXL

Project :  
 Comments: ATTN: RENEE BRICKNER

## CERTIFICATE OF ANALYSIS A0127703

SAMPLE	PREP CODE	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
N629335	94139402	0.06	< 10	>15.00	1025	< 1	0.03	1930	200	2	0.16	6	6	37	0.02	< 10	< 10	10	< 10	60
N629338	94139402	0.09	< 10	10.45	755	< 1	0.10	1145	180	< 2	0.45	6	4	45	0.05	< 10	< 10	20	< 10	48
N629339	94139402	0.06	< 10	7.69	615	< 1	0.02	2130	200	6	1.10	2	3	30	0.05	10	40	31	< 10	80
N629340	94139402	0.01	< 10	0.17	35	31	0.01	28	110	186	>10.00	12	< 1	106	< 0.01	20	40	< 1	10	>10000
N629341	94139402	0.08	< 10	1.19	495	2	0.02	955	370	110	1.50	< 2	3	114	0.04	10	40	19	< 10	198
N629343	94139402	0.14	< 10	0.28	215	2	0.04	1235	630	6	0.93	< 2	2	95	0.29	30	50	45	< 10	30
N629346	94139402	0.02	< 10	0.07	540	84	0.01	42	200	688	>10.00	32	1	152	0.01	10	50	20	10	>10000
N629348	94139402	0.06	< 10	1.14	600	5	0.06	14	3540	< 2	2.58	< 2	5	31	0.40	10	20	122	< 10	94
N629349	94139402	0.05	< 10	>15.00	890	< 1	0.01	1395	130	< 2	0.20	8	13	16	0.04	10	30	51	< 10	42
N629350	94139402	0.03	< 10	0.08	50	58	0.02	25	190	26	>10.00	12	< 1	110	0.03	30	30	< 1	20	1215
N629351	94139402	< 0.01	< 10	0.10	65	31	0.01	16	130	160	>10.00	12	< 1	135	< 0.01	10	30	< 1	10	>10000
N629352	94139402	0.01	< 10	2.29	990	8	0.06	41	860	< 2	4.20	2	7	27	0.45	20	30	122	10	240
N629354	94139402	< 0.01	< 10	0.15	70	9	0.04	6420	460	28	6.27	6	1	37	0.18	< 10	30	24	10	450
N629357	94139402	0.09	10	4.53	960	< 1	0.29	182	1580	< 2	0.16	6	2	116	0.23	10	10	43	< 10	98
N629358	94139402	0.19	< 10	0.32	535	< 1	0.09	19	600	6	0.03	< 2	1	24	0.06	10	10	25	< 10	66

CERTIFICATION: \_\_\_\_\_



# ALS Chemex

Aurora Laboratory Services Ltd.  
 Analytical Chemists \* Geochemists \* Registered Assayers  
 212 Brooksbank Ave., North Vancouver  
 British Columbia, Canada V7J 2C1  
 PHONE: 604-984-0221

To: GOLD BRICK ENTERPRISES LTD.

501 - 905 W. PENDER ST.  
 VANCOUVER, BC  
 V6C 1L6

INVOICE NUMBER I 0 1 2 8 1 7 9

BILLING INFORMATION	
Date:	06-NOV-2001
Project:	
P.O. No.:	
Account:	SXL
Comments:	AAV121ROE.00Q
Billing:	For analysis performed on Certificate A0128179
Terms:	Payment due on receipt of invoice 1.25% per month (15% per annum) charged on overdue accounts
Please Remit Payments to:	<p style="margin: 0;"><b>ALS CHEMEX</b>            212 Brooksbank Ave.,            North Vancouver, B.C.            Canada V7J 2C1</p>

# OF SAMPLES	ANALYSED FOR CODE - DESCRIPTION	UNIT PRICE	SAMPLE PRICE	AMOUNT
2	212 - Overlimit pulp, to be found Zn-AA46 - Zn %: Conc. Nitric-HCl dig'n	0.00 7.00	7.00	14.00
1	212 - Overlimit pulp, to be found Cu-AA46 - Cu %: Conc. Nitric-HCl dig'n Zn-AA46 - Zn %: Conc. Nitric-HCl dig'n	0.00 7.00 3.00	10.00	10.00
1	212 - Overlimit pulp, to be found Cu-AA46 - Cu %: Conc. Nitric-HCl dig'n	0.00 7.00	7.00	7.00
Total Cost \$				31.00
Client Discount ( 30%) \$				<u>-9.30</u>
Net Cost \$				21.70
(Reg# R100938885 ) GST \$				<u>1.52</u>
<b>TOTAL PAYABLE (CDN) \$</b>				<b>23.22</b>



# ALS Chemex

Aurora Laboratory Services Ltd.  
 Analytical Chemists \* Geochemists \* Registered Assayers  
 212 Brooksbank Ave., North Vancouver  
 British Columbia, Canada V7J 2C1  
 PHONE: 604-984-0221 FAX: 604-984-0218

To: GOLD BRICK ENTERPRISES LTD.

501 - 905 W. PENDER ST.  
 VANCOUVER, BC  
 V6C 1L6

A0128179

Comments: ATTN: RENEE BRICKNER

CERTIFICATE

A0128179

(SXL) - GOLD BRICK ENTERPRISES LTD.

Project:  
 P.O. #:

Files submitted to our lab in Vancouver, BC.  
 Report was printed on 06-NOV-2001.

### SAMPLE PREPARATION

METHOD CODE	NUMBER SAMPLES	DESCRIPTION
212	4	Overlimit pulp, to be found

### ANALYTICAL PROCEDURES

METHOD CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
Cu-AA46	2	Cu %: Conc. Nitric-HCl dig'n	AAS	0.01	50.0
Zn-AA46	3	Zn %: Conc. Nitric-HCl dig'n	AAS	0.01	50.0



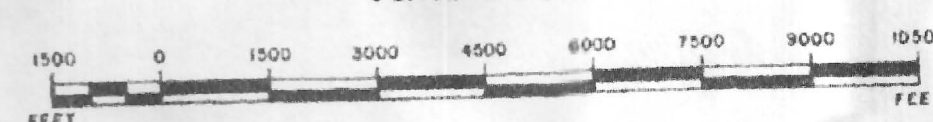
**APPENDIX III**

**Claim Status Maps**



SEE ADJACENT MAP SHEET(S) EDGES FOR ADJOINING MINERAL CLAIMS NOT SHOWN ON THIS MAP

115G-5  
**QUARTZ**  
 LATITUDE 61° 15' TO 61° 30'  
 LONGITUDE 139° 30' TO 140° 00'  
 ISSUED UNDER THE AUTHORITY OF THE MINISTER OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT  
 SCALE 1:31,680  
 NOV 20, 2000



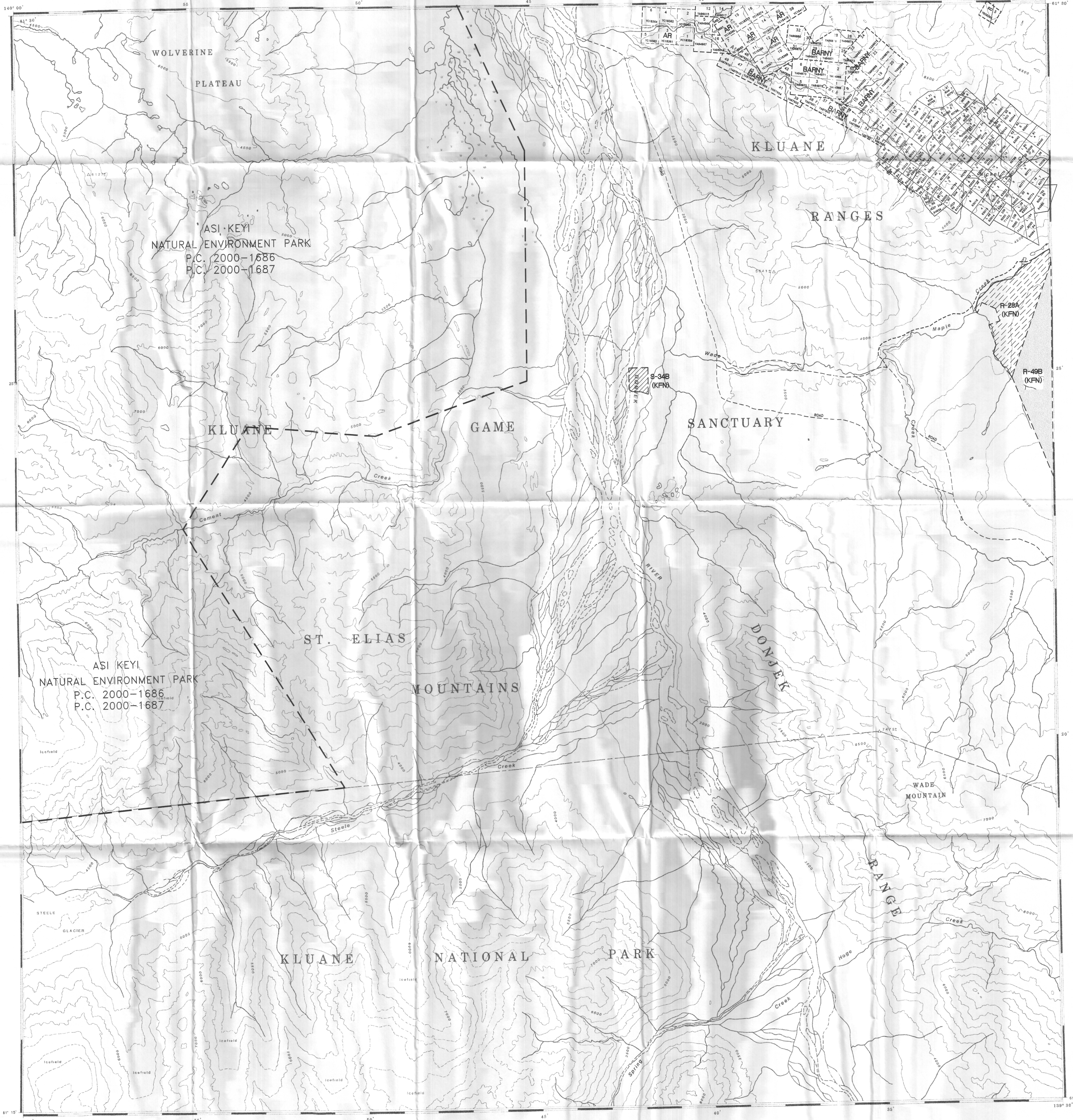

**NOTE:**  
 THIS MAP IS ISSUED AS A PRELIMINARY GUIDE FOR WHICH THE DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT WILL ACCEPT NO RESPONSIBILITY FOR ANY ERRORS, INACCURACIES OR OMISSIONS WHATSOEVER.  
 TOPOGRAPHY COPIED FROM 1:50,000 NATIONAL TOPOGRAPHIC SERIES. CONTOUR INTERVAL 500 FEET. SURVEY INFORMATION COMPILED FROM LEGAL SURVEYS, BY DRAFTING SERVICES.

115F-0	115G-13	115G-11
115F-8	115G-5	115G-6
115F-1	115G-4	115G-3

Canada WHITEHORSE MINING DISTRICT

NOV 20, 2000

Note for placer see 115G-5 placer





SEE ADJACENT MAP SHEET(S) EDGES FOR ADJOINING MINERAL CLAIMS NOT SHOWN ON THIS MAP

**115G-12 QUARTZ**

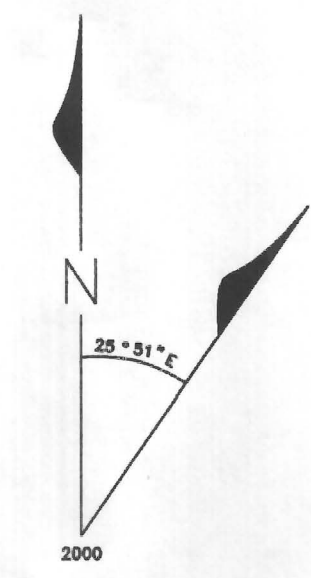
LATITUDE 61° 30' TO 61° 45'  
 LONGITUDE 139° 30' TO 140° 00'

ISSUED UNDER THE AUTHORITY OF THE MINISTER OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT

SCALE 1:50,000

1000 0 1000 2000 METERS  
 1000 0 1000 2000 4000 6000 8000 10000 FEET

NOV 20, 2000



**NOTE:**  
 THIS MAP IS ISSUED AS A PRELIMINARY GUIDE FOR WHICH THE DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT WILL ACCEPT NO RESPONSIBILITY FOR ANY ERRORS, INACCURACIES OR OMISSIONS WHATSOEVER.  
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 CONTOUR INTERVAL 500 FEET.  
 SURVEY INFORMATION COMPILED FROM LEGAL SURVEYS, BY DRAFTING SERVICES.

115F-16	116G-13	116G-14
116F-9	116G-12	116G-11
116F-8	116G-5	116G-6

