



MAP NO.:  
105 J 11

ASSESSMENT REPORT X  
PROSPECTUS  
CONFIDENTIAL X  
OPEN FILE

DOCUMENT NO: 093063  
MINING DISTRICT: WHITEHORSE  
TYPE OF WORK: GEOLOGY, GEOCHEMISTRY

Your file    Votre référence

REPORT FILED UNDER:    KOKANEE EXPLORATIONS LTD

Our file    Notre référence

DATE PERFORMED:    OCTOBER 23, 1992

DATE FILED:    JANUARY 6, 1992

LOCATION:    LAT.: 62°43'N

AREA: MOUNT SHELDON

LONG.: 131°05'W

VALUE \$: 4,800

CLAIM NAME & NO.:    SHELDON 1-48 (YB36641-YB36688)

WORK DONE BY:    R. HULSTEIN, AURUM GEOLOGICAL

WORK DONE FOR:    KOKANEE EXPLORATIONS LTD

DATE TO GOOD STANDING:


REMARKS: GEOCHEM DONE 29 ROCKS ANALYSED. LOOKING FOR FORT KNOX  
TYPE OF EXPLORATION



**REPORT ON THE 1992  
GEOLOGICAL AND GEOCHEMICAL  
ASSESSMENT WORK ON THE  
MOUNT SHELDON PROPERTY**

Whitehorse Mining District, Yukon  
October 23, 1992

093063

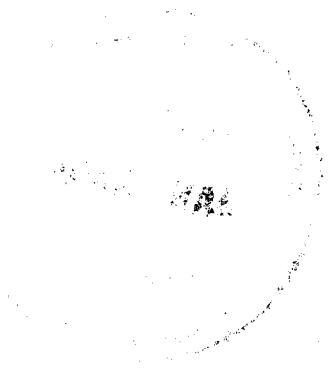
**Claims:** Sheldon 1-48 (YB36641-688)

**Location:** 1. 305 km NE of Whitehorse, Yukon  
2. 105 J/11  
3. Latitude: 62° 43'N  
Longitude: 131° 05'W

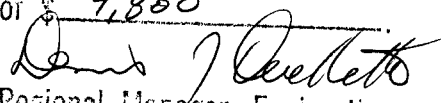
**For:** **KOKANEE EXPLORATIONS LTD.**  
1440 - 625 Howe Street  
Vancouver, B.C.,  
V6C 2T6

**By:** R.Hulstein, B.Sc., P.Geo, FGAC  
**Aurum Geological Consultants Inc.**  
205-100 Main Street  
P.O. Box 4367  
Whitehorse, Yukon  
Y1A 3T5

November 16, 1992



This report has been examined by  
the Geological Evaluation Unit  
under Section 53 (1) Yukon Quartz  
Mining Act and is allowed as  
representation work in the amount  
of \$ 4,800

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

## SUMMARY

The Mount Sheldon property consists of 48 contiguous mineral claims centered on Mount Sheldon, Sheldon Lake map area, Yukon. They are accessible by helicopter, based out of Ross River (105 km to the SW) or the Canol Road which abuts the southeast corner of the claim block.

The claims lie within the Selwyn Basin, part of the Ominica Belt. The Selwyn Basin consists of a prism of sedimentary rocks of Precambrian to Jurassic age deposited along the western margin of ancient North America.

A suite of Cretaceous granitoid intrusions intrude the Selwyn Basin as plugs, plutons and batholiths. One such pluton is found on the property intruding along the fault contact between sedimentary rocks of the Road River Group, underling the southern half of the property, and Hyland Group rocks to the north.

Interest in the ground developed in 1991 when significant gold mineralization was discovered at Dublin Gulch, Yukon using the Fort Knox, Alaska deposit model. The Dublin Gulch deposit is hosted by a pluton of the Selwyn Plutonic Suite.

Previous work in 1944 by the Geological Survey of Canada located three gold bearing quartz veins, in and near the granite, that returned 0.69 gpt gold and 0.06% tin. In 1990 the release of regional stream sediment survey results by the Geological Survey of Canada indicated a creek draining the west side of the property is anomalous in copper, molybdenite, antimony, arsenic and tungsten.

In 1992 the claims were examined by Aurum Geological Consultants Inc. to determine their economic potential with emphases on granitic associated gold mineralization. The granitic intrusive in particular was examined for associated gold mineralization. A total of 29 rock samples were collected of which seven returned gold values between 20 and 230 ppb gold. Anomalous silver, arsenic, bismuth, tungsten and, tellurium values were also returned from the same and similar megacrystic granite. Alteration ranged from a weak yellow - green staining to a moderately developed stockwork of quartz veinlets.

Based on these results, a program of prospecting, geological mapping and geochemical sampling is recommended.

## TABLE OF CONTENTS

	Page
SUMMARY	i
TABLE OF CONTENTS	ii
INTRODUCTION	1
LOCATION AND ACCESS	1
PHYSIOGRAPHY, CLIMATE AND VEGETATION	3
PROPERTY	3
HISTORY	5
GEOLOGY	5
Regional Geology	5
Geology of the Mount Sheldon Property	6
MINERALIZATION	9
GEOCHEMISTRY	10
1992 Results	10
CONCLUSIONS AND RECOMMENDATIONS	11
REFERENCES	13
STATEMENT OF QUALIFICATIONS	14
STATEMENT OF COSTS	15

### LIST OF FIGURES

Figure 1: Location Map; 1:1,000,000	2
Figure 2: Claim Map; 1:31,680	4
Figure 3: Geology & Geochemistry Map; 1:25,000	8

### LIST OF APPENDICES

Appendix A - Rock Sample Descriptions	
Appendix B - Analytical Methods and Reports	

## INTRODUCTION

This report was prepared at the request of the directors of Kokanee Explorations Ltd., owner of the Sheldon 1-48 claims, herein after called the Mount Sheldon property. Its purpose is to assess the property's economic potential and to satisfy assessment requirements through a description of exploration work carried out in 1992.

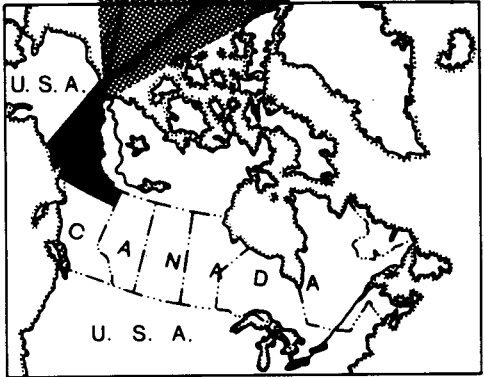
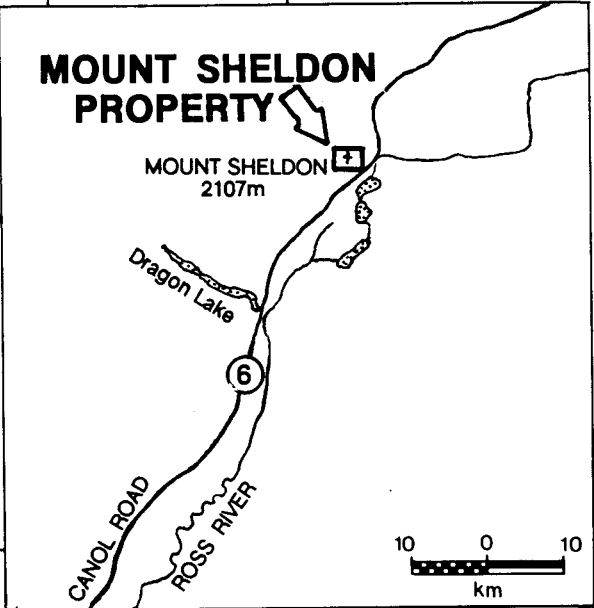
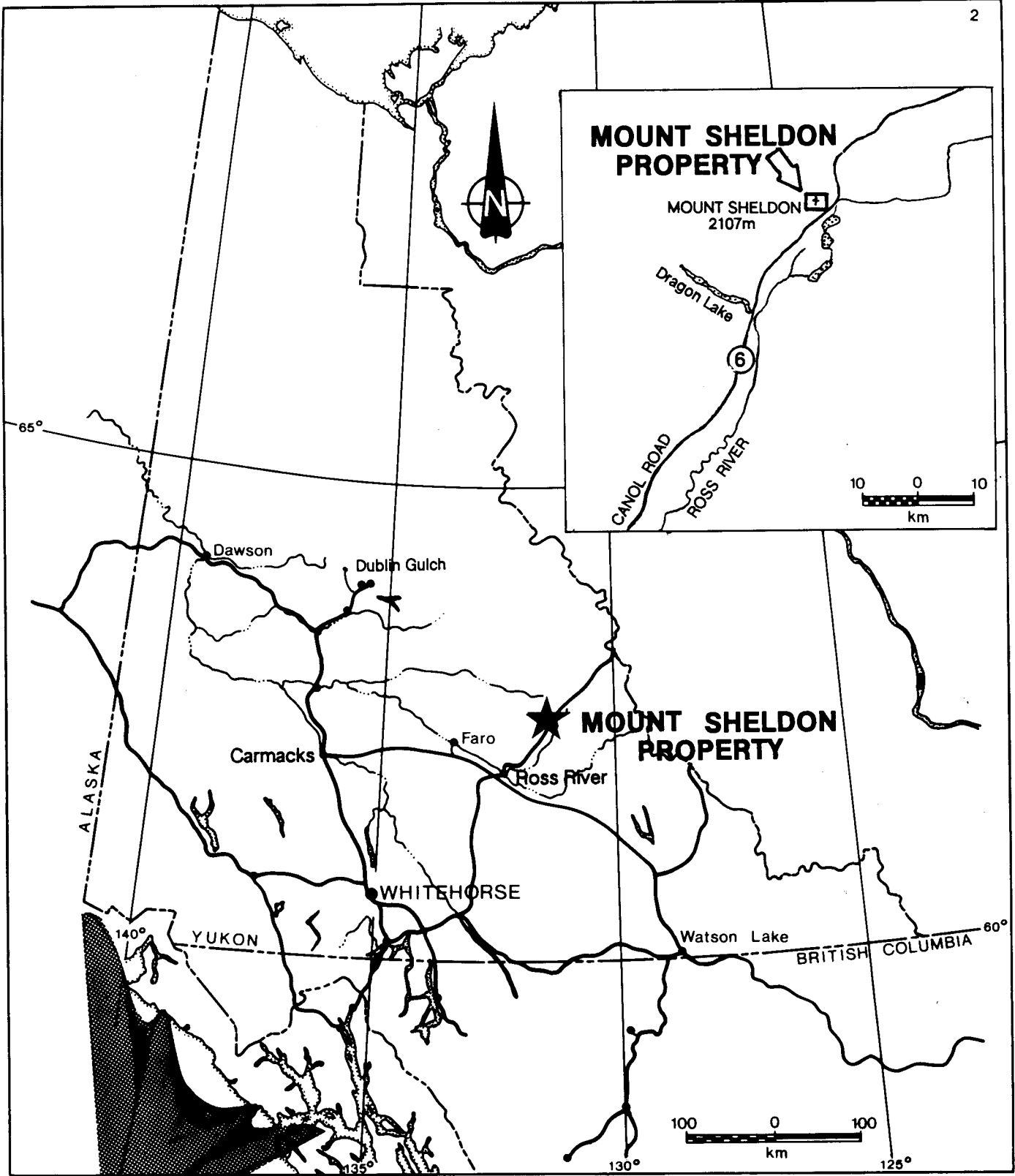
The property is located approximately 305 kilometers NE of Whitehorse, Yukon (Figure 1) in the Whitehorse Mining District, and is accessible by road or helicopter.

Exploration work carried out in 1992 consisted of geological mapping and geochemical sampling and prospecting for the purpose of locating gold deposits. This work was carried out on October 23, 1992 by; R. Hulstein, B.Sc., FGAC, P.Geo., Al Doherty, B.Sc. and, Greg Smith, B.Sc., of Aurum Geological Consultants Inc. This years work was hindered by extensive snow cover. Previous work is summarized from published reports and maps.

## LOCATION AND ACCESS

The claims are located 105 km NE of Ross River, Yukon (Figure 1). The Canol Road (Yukon highway #6), leading to Macmillan Pass, abuts the southeast corner of the property. The Canol Road is currently not maintained during the winter months. The claims are centered at approximately 62° 43' N latitude and 131° 05' W longitude within NTS map area 105 J/11.

Access to the property in 1992 was by helicopter based in Ross River. Various "Cat" trails cross the southern portion of the property.



<b>KOKANEE EXPLORATIONS LTD.</b>	
<b>MOUNT SHELDON PROPERTY</b>	
<b>LOCATION</b>	
Aurum Geological Consultants Inc. Date Nov. 1992	
NTS 105J/11	Drawn by B.H.
	Figure 1

## PHYSIOGRAPHY, CLIMATE AND VEGETATION

The Mount Sheldon property covers Mount Sheldon, a prominent topographic feature of the Ross Lowland. Elevations on the property range from 900m, on the Canol Road, to the 2107m peak of Mount Sheldon. The peak is flanked by steep slopes with local cliffs and felsenmeer covered ridges. Two tarns are located on the north side of Mount Sheldon. Some snow on the uppermost northeast facing slopes is presumed to remain year round.

An interior continental climate with moderate to low precipitation of 30 cm annually, warm summers and cold winters typifies the area. Permafrost is discontinuous, and is present only on the steeper north and east facing slopes and low marshy forested areas. The property is usually snow free from late June to mid September.

Approximately half of the property is above treeline. Ground cover consists of moss, alpine plants, dwarf willow and birch. Sparse spruce forest covers the slopes below treeline.

Recent Pleistocene glaciation scoured the slopes of Mount Sheldon. As a result outcrop is good (20%) except on lower ridge slopes and forested areas. A large portion of the property is covered by felsenmeer and talus fines.

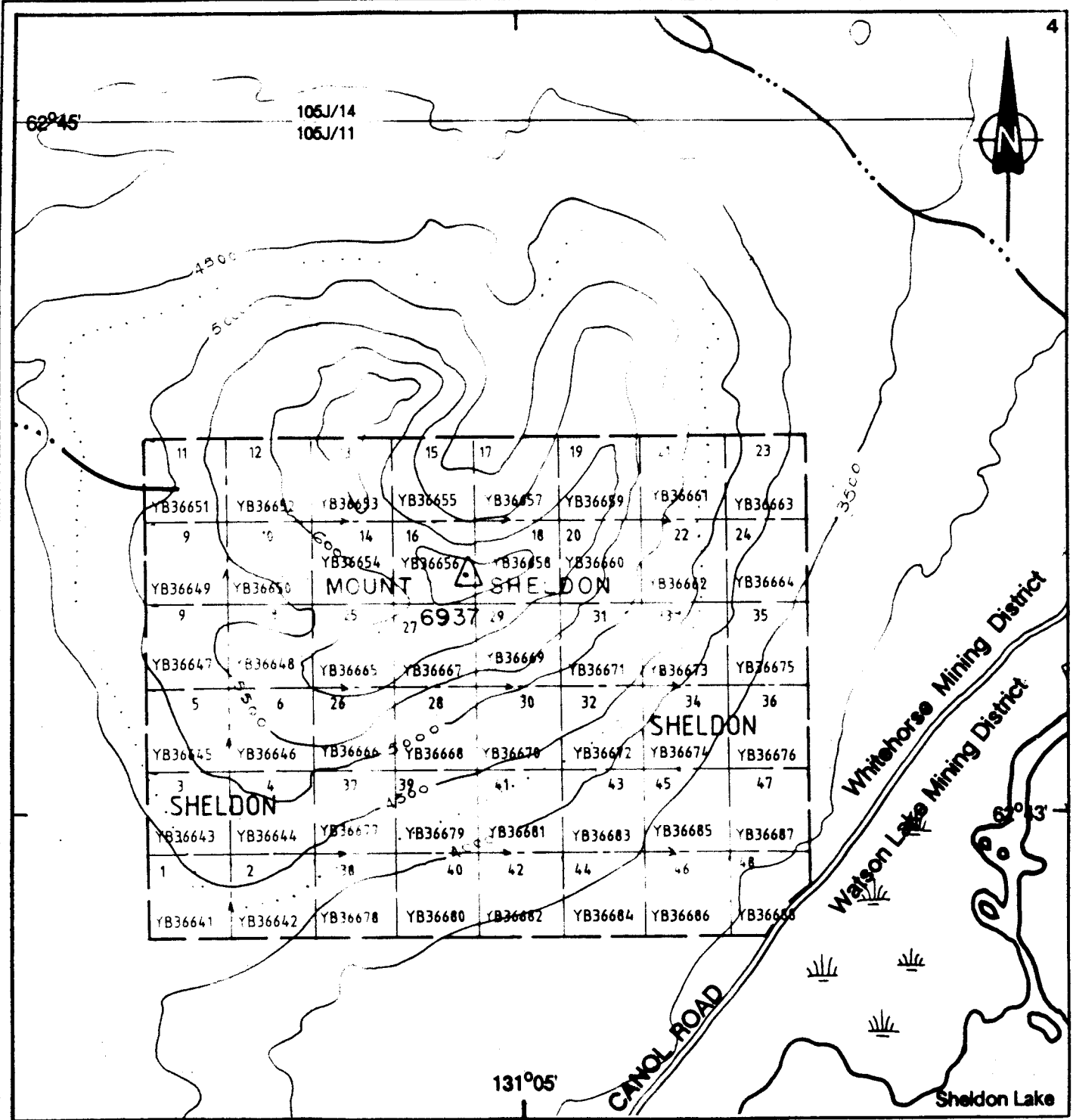
## PROPERTY

The property consists of 48 contiguous unsurveyed two-post quartz claims, covering approximately 2401 acres (972 hectares), staked in accordance with the Yukon Quartz Mining Act (Figure 2). The claims were staked by Gordon Clark for Kokanee Explorations Ltd. on December 29, 1991 and recorded on December 31, 1991. The claims lie within the Whitehorse Mining District. The southeast corner of the claim group abuts the boundary between the Whitehorse and Watson Lake Mining Districts, which follows the Canol Road. Claim data are as follows:

<u>CLAIM NAME</u>	<u>GRANT No.</u>	<u>No. CLAIMS</u>	<u>EXPIRY DATE</u>
Sheldon 1-48	YB36641-688	48	Dec. 31, 1993*

\*subject to approval of 1992 assessment work.





### LEGEND

- claim boundary
- claim number
- tag number
- staking direction
- creek
- 3500 elevation contour; interval 500 ft.

<b>KOKANEE EXPLORATIONS LTD.</b>			
<b>MOUNT SHELDON PROPERTY</b>			
<b>CLAIM MAP</b>			
<i>Aurum Geological Consultants Inc.</i>	Nov. 1992		
NTS 105J/11	DRAWN BY NH	SCALE 1:31,680	FIGURE : 2

Note: adapted from D.I.A.N.D. map sheet

## HISTORY

According to Yukon Minfile (1992) Mount Sheldon has not been staked previously. The area was presumably prospected for placer gold prior to 1944 when the Canol road and pipeline was built. The Geological Survey of Canada discovered mineralized gold-bearing quartz veins on the flanks of Mount Sheldon in 1944 (Kindle, 1945). It is not known who constructed the "Cat" trails across the southern portion of the property, or why.

The Sheldon property was staked by Kokanee Explorations Ltd. to cover the known mineralized quartz veins and the source area of moderately anomalous arsenic and antimony values detected in stream sediments by the Geological Survey of Canada (Hornbrook et al., 1990). The current exploration model is focused on gold deposits hosted by granite intrusives. This became an attractive target with the discovery of the Fort Knox gold deposit, located near Fairbanks Alaska, and the discovery of similar intrusive hosted gold at Dublin Gulch, Yukon.

## GEOLOGY

### Regional Geology

The following is taken largely from a private company report by Crys Exploration (1992). The Mount Sheldon property is situated within the Selwyn Basin, part of the Ominica Belt (Wheeler et al., 1991). The Selwyn Basin is imperfectly defined (Abbott, 1986) and is used here to describe that part of the cordilleran miogeocline comprised of a prism of sedimentary rocks, of Precambrian to Jurassic age, deposited along the western margin of ancient North America. The eastern margin of the basin is marked by the Paleozoic shale - carbonate transition zone while the western margin is defined by the Teslin fault or suture. The sedimentary basin was active from the late Proterozoic to Middle Jurassic (Abbott, 1986). Widespread thin mafic volcanic flows, breccias, and tuffs are found throughout the basin. All of the large stratabound, sediment hosted lead - zinc deposits in the northern Canadian Cordillera are found within the Selwyn Basin.

Sedimentation ceased in the Middle Jurassic in the outer miogeocline with the collision of a Mesozoic island-arc, the Yukon - Tanana Terrane (Tempelman-Kluit, 1979). The Teslin fault or suture is believed to define the boundary between the North American miogeocline and the Yukon - Tanana Terrane. The collision spread eastward with the miogeocline being over thrust by oceanic rocks and the entire package being deformed.

Two suites of granitoid intrusives, ranging from Paleozoic to Cenozoic age, related to underplating and or subduction are found on both sides of the Tintina

fault. Granitoid emplacement peaked during the Early - Middle Cretaceous (Tempelman-Kluit, 1981). The Western Suite granitoid intrusives found west and southwest of the Selwyn Basin are predominantly granodiorite in composition and are associated with porphyry copper - molybdenum and copper skarn deposits. The Eastern or Selwyn Plutonic Suite of granitoid intrusives are distributed along a northwest trending arcuate belt within the Selwyn Basin. The granitoids are mainly granitic in composition and are associated with tin, tungsten, and molybdenum mineralization. The Dublin Gulch deposit is hosted by a quartz monzonite pluton of the Selwyn Plutonic Suite (Tempelman-Kluit, 1981).

The Tintina fault generally follows the Mesozoic suture which separates ancestral North America from the composite accreted terrane, the Yukon - Tanana Terrane. At least 450 km of dextral strike slip movement has taken place along the Tintina fault since latest Cretaceous or Early Tertiary time (Tempelman-Kluit, 1979). This has caused western parts of the Selwyn Basin to be offset and juxtaposed against itself along the Tintina fault.

The geology of the Sheldon Lake map area has been most recently mapped by Gordey et al. (1987) at a scale of 1:250,000. The Mount Sheldon property lies within the upper panel of the Sheldon Thrust one to two kilometers south of where the Sheldon thrust outcrops. Older Late Proterozoic Hyland group, sandstone, quartzite, conglomerate, slate, and minor limestone are thrust over younger Ordovician-Silurian Road River Group shales, mudstones, and cherts (Gordey et al., 1987).

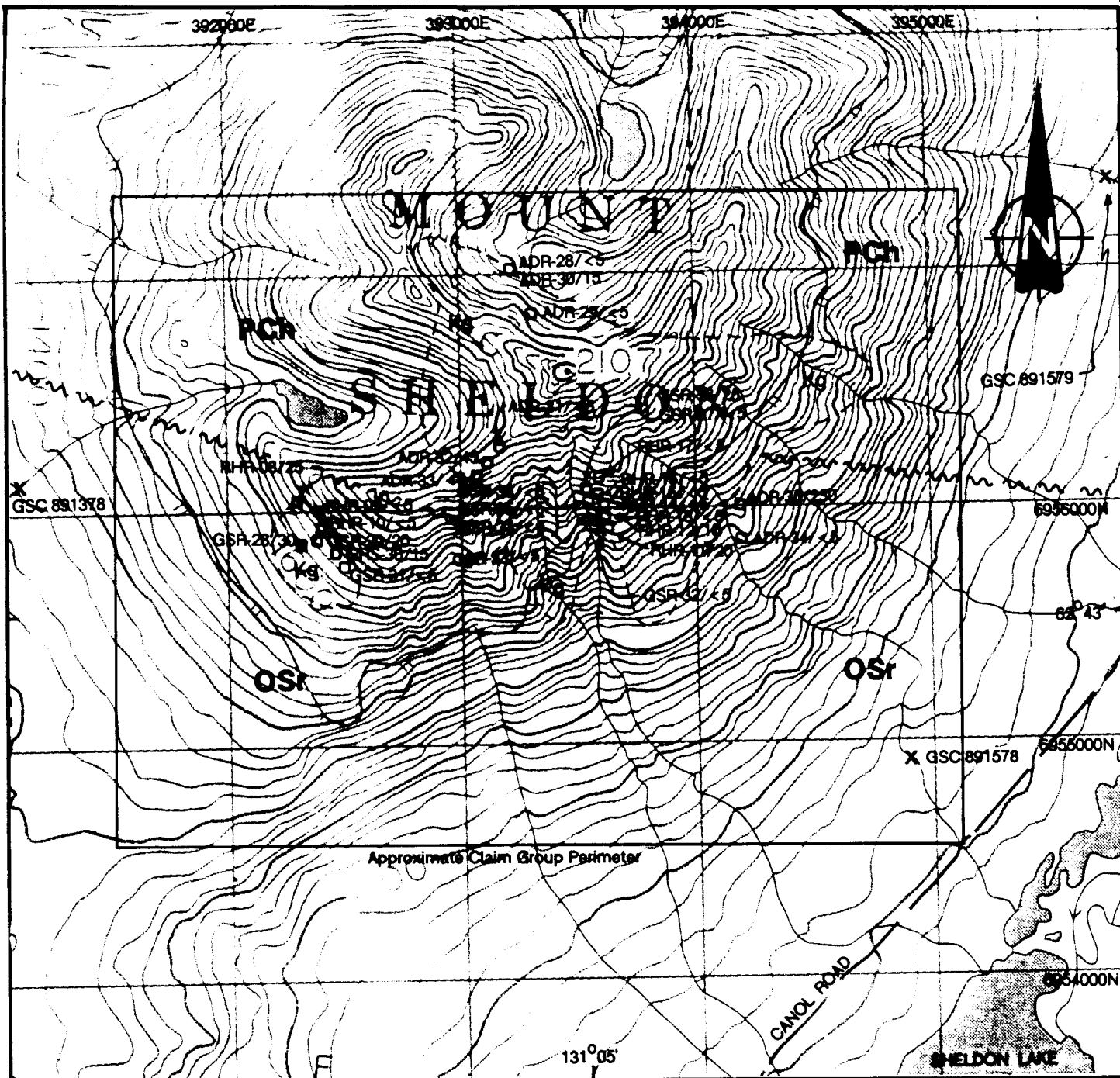
Mount Sheldon is bisected by a regional northwest trending normal fault, through the upper panel of the Sheldon Thrust, which separates the Hyland Group to the north from the Road River Group to the south (Gordey et al., 1987). A small (<2km<sup>2</sup>) pluton of the Selwyn Plutonic Suite intrudes along this normal fault between the Hyland and Road River Groups.

### **Geology of the Mount Sheldon Property**

As shown on Figure 3 (modified in part from Gordey et al., 1987) the most common sedimentary lithologies on the property are shales, slate, and chert of the Ordovician-Silurian-Devonian Road River Group. These rocks are found in the southern portion of the property and are in fault contact with the Hyland Group rocks to the north. The northern portion of the property is underlain by massive quartzite, slate, argillite and minor limestone of the Late Proterozoic Hyland Group. Rocks of both the Road River Group and the Hyland Group generally strike east to southeast and dip moderate to steeply south.

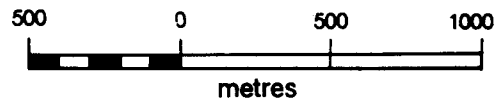
Both the Road River and Hyland Groups have been intruded by a two kilometer by one kilometer body of Cretaceous biotite granite to granodiorite along the northwest trending normal fault that bisects the property. The intrusive is elongated in a northwest direction. A small, less than two hundred by three hundred meter, satellite stock of similar composition is found less than a kilometer to the west of the main intrusion on the same normal fault. Rusty weathering to tan hornfels is developed in the surrounding metasediments. The granite found on the Mount Sheldon property is typical of the Selwyn Plutonic Suite and similar to the pluton found at Dublin Gulch

Due to the small size of the granite intrusive, and chilled margins along the contact, the crystal size and percentage of mafic minerals is quite variable. The granite is commonly grey, locally tan (due to limonite), medium grained with megacrystic feldspar crystals up to 2.5 cm long. Overall the granite is composed largely of feldspar, both medium grained and megacrystic crystals, and quartz with an average of 5% biotite and hornblende. Numerous dykes, and possibly sills, of granite, locally megacrystic but frequently fine to medium grained, are found near the margin of the intrusive. Preliminary reconnaissance mapping in 1992 indicates that the granite contact is far more irregular than is currently shown on Figure 3.



**LEGEND**

- Kg Cretaceous granite
- OSr Road River Group: Ordovician chert, shale, argillite
- PCh Hyland Group: Proterozoic quartzite, argillaceous limestone, slate
- ~ Fault
- RHR-09/Au ppb  
Sample number  
Rock sample site
- X GSC 891378  
Sample number  
Stream sediment sample site
- ~1100 elevation contour: 20 m.



**KOKANEE EXPLORATIONS LTD.**  
**MOUNT SHELTON PROPERTY**  
**GEOLOGY**  
**and**  
**GEOCHEMISTRY**

Aurum Geological Consultants Inc.	Nov. 1992
NTS 105J/11 Drawn by R.H.	Scale 1:25,000 Figure 3

*geology after Gordey et al. (1987)*

## MINERALIZATION

Significant mineralization discovered to date on the property consists of gold-bearing arsenopyrite quartz veins hosted by the granite intrusive and adjacent hornfelsed metasediments (Kindle, 1945). Three separate showings were discovered in 1944 by Kindle of the Geological Survey of Canada on the east, northeast, and south sides of Mount Sheldon. Due to the snow cover these showings were neither sought nor located in 1992, and as a result the locations are not shown on Figure 3. Work in 1992 was directed towards testing the granite for bulk tonnage disseminated gold potential.

According to the Yukon Minfile (1992) the showing, on the east side of the mountain, consists of a 60 cm wide quartz vein cutting porphyritic granite exposed for a strike length of 15 m (Yukon Minfile, 1992). A chip sample containing 5% arsenopyrite assayed 0.51 g/t gold. On the northeast side of the mountain a chip sample from a 30 by 60 cm area of pyrrhotite in hornfelsed metasediments and limestone assayed 0.2% copper and trace gold. On the south side of Mount Sheldon, a small quartz - arsenopyrite vein cutting granite assayed 0.69 g/t gold and 0.06% tin.

Disseminated pyrite (<0.5%) was the most common sulfide noted during the 1992 field season. Pyrite was locally concentrated on fractured surfaces or in quartz veinlets. Veining and fractures were neither strong nor exceptionally common. Traces of arsenopyrite, molybdenite and possibly chalcopyrite were noted, along with pyrite. Quartz veinlets and penetrative fractures or joints have local sericitized, chloritized, or bleached selvages. One area, where sample ADR-035 was collected, of megacrystic granite is quartz veined and moderately well jointed (spaced < 1.0 m). This above sample returned 230 ppb gold, the highest gold value in 1992 from the property. The same sample also returned 1.4 ppm silver, 186 ppm arsenic, 6 ppm bismuth, 32 ppm tungsten, and 0.55 ppm tellurium, all moderately anomalous values. Other areas underlain by megacrystic granite that were sampled and examined returned less than 45 ppb gold.

As is typical of the Selwyn Plutonic Suite, hornfels is moderately well developed adjacent to the granite intrusive. The hornfels commonly contain disseminated and blebs of pyrite and or pyrrhotite and locally arsenopyrite. A sample collected in 1992, sample ADR-034, of some better mineralized hornfelsed material returned 96 ppm arsenic but most other elements including gold and silver were background or below detection limits.

## GEOCHEMISTRY

### 1992 Results

A total of 29 rock samples were collected on the Mount Sheldon property in 1992. Of these, 19 are from float and 10 are from outcrop. Float samples from scree and felsenmeer are representative of lithologies located upslope. All samples were analyzed for total gold and silver content, and for 29 additional elements including As, Bi, W, and Te. Results for the work carried out are shown on Figure 3. Complete analytical results and sample descriptions are included in Appendix B.

Sample ADR-035 which returned 230 ppb gold, the highest gold value in 1992, is described above under 'mineralization'. No significant concentration of anomalous gold values are noted.

Of the 29 rock samples Aurum collected from outcrop, talus, and felsenmeer; seven returned values >20 ppb gold. Two samples ADR-035 and GSR-038 had coincident anomalous values for Au, Ag, As, Bi, W, and Te. Both samples were of strongly to moderately well jointed megacrystic granite. Both samples returned 0.55 ppm Te, the highest Te value from the property in 1992.

A sample (GSR-29) of megacrystic granite returned 2.6 ppm Ag, the highest Ag value from the property in 1992. Samples (RHR-12, 13, ADR-28, 30, & 36) of megacrystic granite returned arsenic values between 152 and 750 ppm. Alteration in these samples ranged from a weak yellow green staining to a moderately developed stockwork of quartz veinlets. Bismuth values were generally low, <2 ppm, with two samples returning anomalous values of 34 ppm (sample GSR-29) and 42 ppm (sample ADR-032) respectively. Tungsten values ranged up to 100 ppm.

### Stream Sediment Samples

In 1990 the Geological Survey of Canada released regional stream sediment and water geochemical data, GSC Open File 2173, for the Sheldon Lake map sheet (Hornbrook et al., 1990). Three samples collected by the GSC are from streams draining the property. Two of the samples, from creeks draining the southeast slope of Mount Sheldon returned near background values for most elements. Sample GSC 891378 (See Figure 3), draining the west slope of Mount Sheldon, returned anomalous values for a number of elements including: 82 ppm Cu, 210 ppm Mo, 8.0 ppm Sb, 323 ppm As, 10 ppm tungsten and a number of anomalous values for rare earth elements typically associated with granites.

## CONCLUSIONS AND RECOMMENDATIONS

The Mount Sheldon property covers a Cretaceous granite pluton with associated dykes hosted by sedimentary rocks of the Hyland and Road River Groups. Sulphide mineralization including arsenopyrite, pyrite, pyrrhotite, molybdenite and possibly chalcopyrite is found in and adjacent to the intrusive as disseminations, blebs, fracture veinlets and, as a constituent of quartz veinlets.

A large regional thrust fault, the Sheldon Thrust, lies two kilometers north of the property. A major north northwest trending normal fault structure has been found on the property along which the granite pluton has been emplaced.

A total of 29 rock samples were collected in 1992 of which seven returned gold values between 20 and 230 ppb. Rock samples consisted largely of megacrystic granite variably altered, weakly mineralized, and occasionally cut by a stockwork of quartz veins.

Two creeks draining the property sampled by the Geological Survey of Canada returned near or below background values for most elements. A third creek, draining the west side of the property, returned anomalous values for a number of elements including copper, molybdenum, antimony, arsenic and tungsten.

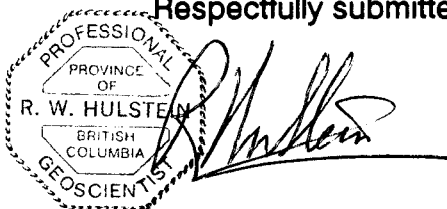
Weakly mineralized rock samples (mostly quartz-veined megacrystic granite), and a stream sediment sample returned significant anomalous values for a number of elements. As the property is underlain by favorable lithologies and structures it should be further explored for gold mineralization.



The following work program is recommended:

1. Compile a 1:5,000 scale orthophoto map of the Mount Sheldon property incorporating all available geological, geochemical and remote sensing data to better identify potential exploration targets.
2. Further exploration consisting of prospecting, geological mapping and rock, soil and, stream sediment geochemistry should be carried out over and adjacent to the known granite intrusives.
3. Claim tagging is recommended to determine possible claim fractions.
4. Any further work (geophysics, trenching, etc.) is contingent on results of the above work.

Respectfully submitted;



A circular professional seal for a geoscientist in the Province of British Columbia. The seal contains the text "PROFESSIONAL", "PROVINCE OF", "R. W. HULSTEIN", "BRITISH COLUMBIA", and "GEOSCIENTIST". A handwritten signature is written over the seal.

November 16, 1992

Roger W. Hulstein, B.Sc., FGAC, P.Geo.

## REFERENCES

- Abbott J.G., Gordey S.P., Tempelman-Kluit D.J., 1986. Setting of stratiform, sediment - hosted lead - zinc deposits in Yukon and Northeastern British Columbia; *in* Mineral Deposits of Northern Cordillera, ed. J.A. Morin, The Canadian Institute of Mining and Metallurgy, Special volume 37, p.1-18.
- Crysi Exploration, 1992. Intrusive Hosted Gold Targets, Yukon and British Columbia, Canada. A private report prepared for Kokanee Explorations Ltd., Vancouver, B.C.
- Gordey S.P., Irwin S.E.B., 1987. Geology of Sheldon Lake and Tay River Map Areas, Yukon Territory; Geological Survey of Canada, Map 19-1987 (3 sheets), scale 1:250,000.
- Hornbrook E.H.W., Friske P.W.B., Lynch J.J., McCurdy M.W., Gross H, Galletta A.C., Durham C.C., 1990. Regional Stream Sediment and Water Geochemical Data, East-Central Yukon; NTS 105J, Geological Survey of Canada, Open File 2173, 1:250,000 scale.
- Kindle E.D., 1945. Geological Reconnaissance Along The Canol Road, From Teslin River to MacMillan Pass, Yukon; Geological Survey of Canada, Paper 45-21.
- Tempelman-Kluit D.J., 1979. Transported Cataclasite, Ophiolite and Granodiorite in Yukon: Evidence of Arc-Continent Collision; Geological Survey of Canada, Paper 79-14.
- Tempelman-Kluit, 1981. Geology and Mineral Deposits of Southern Yukon: *in* Yukon Geology and Exploration 1979-80; Geology Section, Department of Indian and Northern Affairs, Whitehorse Yukon.
- Wheeler J.O. and McFeely P., 1991. Tectonic Assemblage Map of the Canadian Cordilleras and Adjacent parts of the United States of America; Geological Survey of Canada, Map 1712A, scale 1:2,000,000.
- Yukon Minfile, 1992. Northern Cordilleran Mineral Inventory; Exploration and Geological Services, Department of Indian and Northern Affairs, Whitehorse Yukon.

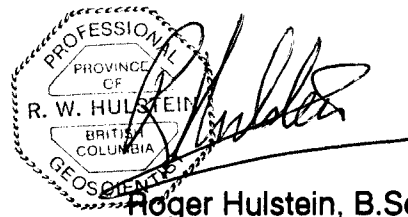
## STATEMENT OF QUALIFICATIONS

I, ROGER W. HULSTEIN, with business address:

Aurum Geological Consultants Inc.  
 205 - 100 Main St.  
 P.O. Box 4367  
 Whitehorse, Yukon  
 Y1A 3T5

do hereby certify that:

1. I am a geologist with AURUM GEOLOGICAL CONSULTANTS INC., 205-100 Main Street, Whitehorse, Yukon Territory
2. I am a graduate of Saint Mary's University, Halifax, with a degree in geology (B.Sc., 1981) and have been involved in geology and mineral exploration continuously since 1978.
3. I am a member of the Geological Association of Canada (A3572).
4. I am a member of The Association of Professional Engineers and Geoscientists of the Province of British Columbia, Registration No. 19127.
5. I have no direct or indirect interest in the properties of Kokanee Explorations Ltd.
6. I am the author of this report on the Mount Sheldon property, which is based on my personal examination on the ground October 23, 1992, information supplied to me by Kokanee Explorations Ltd., and on referenced sources.
7. I consent to the use of this report, in a company report or statement, provided no portion is used out of context in such a manner as to convey a meaning differing from that set out in the whole.



November 16, 1992

Roger Hulstein, B.Sc., FGAC, P. Geo.

## STATEMENT OF COSTS

### 1992 Assessment Work Valuation: Mount Sheldon Property

#### 1. Geological and Geochemical

##### A. Fieldwork

R. Hulstein, B.Sc., of Whitehorse, Yukon. October 23, 1992; 1.0 day @ \$350.00/day:	\$350.00
G. Smith, B.Sc., of Vancouver, B.C. October 23, 1992; 1.0 day @ \$320.00/day:	320.00
R.A. Doherty, B.Sc., of Whitehorse, Yukon. October 23, 1992; 1.0 day @ \$350.00/day:	350.00

##### B. Geochemical Analysis

29 samples @ \$19.49 ea:	565.21
--------------------------	--------

##### C. Support Costs

Meals & Accommodation;	224.95
Field Expenses:	124.81
Sample bags, flagging tape & thread:	
Truck Rental:	100.00
Gasoline:	
Radio and phone charges:	15.00
Helicopter:	1568.72

##### D. Research and Report Preparation

R. Hulstein, B.Sc. 3 days @ \$350.00:	<u>1050.00</u>
--	----------------

Goods and Service Tax (@ 7%) on \$4,668.69:	326.80
---	--------

<b>Total Valuation of 1992 Assessment Work:</b>	<b><u>\$4995.49</u></b>
---	-------------------------

**APPENDIX A**  
**Rock Sample Descriptions**

Sample Number	Location	Description	Attitude	Width	Au ppb	Ag ppm	As ppm	Bi ppm	W ppm	Te ppm
RHR-08	West side of claims 6956050N/392300E	Boulder (<0.5m) of fresh megacrystic hornblende biotite granite. Feldspar megacrysts 1-2 cm long. Approx. 40% quartz, commonly as rounded blebs.	Float	Grab	25	<0.2	2	<2	<2	<0.05
RHR-09	West side of claims, ~ 70m east of RHR-08 6956000N/392380E	Similar to sample RHR08 above. Megacrystic grey biotite granite. Feldspar phenocrysts 2.5 cm long. Minor limonite stain around local mafic clots. minor discontinuous hairline fractures.	Float	Grab	<5	<0.2	4	<2	25	<0.05
RHR-10	~ 40m east of RHR-09 6956900N/392400E	Boulder(<0.5m) of tan felsic siliceous intrusive, rare quartz phenocrysts. One 1mm quartz veinlet noted. 0.1% disseminated pyrite trace disseminated arsenopyrite.	Float	Grab	<5	0.2	32	<2	<2	<0.05
RHR-11	South side of main intrusion 6955900N/393600E	Sample of megacrystic granite and finer grained felsic rock with rare megacrysts. The finer grained felsic rock locally approaches a quartz-feldspar-porphyry in appearance. Granite is limonite stained and foliated, trace chlorite.	Float	Grab	20	<0.2	84	<2	<2	0.1
RHR-12	50m upslope from RHR-11 ~ 40m SW of GSR-32 6955950N/393600E	Limonite stained and foliated medium grained bleached granodiorite. Rare feldspar megacrysts. Trace chlorite, partially silicified and weakly pyritized. Approx.<0.5% disseminated pyrite. Fine grained muscovite on fractures.	Float	Grab	10	<0.2	184	<2	<2	0.05
RHR-13	10m north of R-12 6955950N/393600E	Similar to RHR-12 above except crosscut by 1 cm wide quartz veinlet. Trace to 0.5% disseminated pyrite. Rare megacrysts.	Float	Grab	<5	0.2	152	<2	28	0.05
RHR-14	Located above RHR-13, ~ 10-15m below GSR-34 6956050N/393600E	Weakly limonite stained, foliated, fine grained felsic intrusive. Rare quartz phenocrysts. Crosscut by local fractures filled with grey quartz, minor muscovite on fractures.	Float	Grab	<5	<0.2	78	<2	8	0.05
RHR-15	8m below GSR-35 & 36. 6956060N/393600E	Dark brown rusty-limonitic foliated metasediment, poss. siltstone. Trace disseminated pyrite.	Float	Grab	<5	0.2	14	2	4	0.1
RHR-16	Ten meters above GSR-37 6956060N/393600E	Sample of megacrystic granite intruded by a feldspar pegmatite dyke. Approx. 30% quartz.	Float	Grab	<5	0.2	2	<2	6	<0.05
RHR-17	Base of granite outcrop, 15m above RHR-16. 6956110N/393580N	Rotton - decomposed megacrystic granite. Weak limonite weathering. Fractured, breaks along feldspar megacryst grain boundaries. Feldspar are weakly sericitized. Approx. 1% fine grained biotite.		Grab	<5	0.4	8	<2	30	0.05

AURUM GEOLOGICAL CONSULTANTS INC.		Rock Sample Location and description Record 1992									
Project: Sheldon Claims/Kokanee Explorations Inc.		Area: Mount Sheldon, Yukon, NTS 105J/11		Samplers: GS/RAD/RH		Date: October, 1992					
Sample Number	Location	Description	Attitude	Width	Au ppb	Ag ppm	As ppm	Bi ppm	W ppm	Te ppm	
GSR-028	SW Face ~ 1620m elev. 6955860N/392300E	Float of granodiorite, 5% biotite/hornblende, 10% megacrysts >0.5cm. Metasediment outcrop in area.	Float	Grab	30	<0.2	6	<2	<2	0.1	
GSR-029	~ 80m upslope from R-028 6955860N/392380E	Float of megacrystic granodiorite.	Float	Grab	20	2.6	8	34	12	0.25	
GSR-030	~ 50m east of R-029 6955800N/392450E	Float of megacrystic granodiorite.	Float	Grab	15	<0.2	4	<2	6	0.05	
GSR-031	~ 100m east of R-030. 6955730N/392510E	Float of megacrystic granodiorite.	Float	Grab	<5	<0.2	2	<2	<2	<0.05	
GSR-032	SE facing slope, ~ 1500m el 6955970N/393560E	Float: Medium grained granodiorite, rare feldspar phenocrysts, moderate fracturing, trace pyrite on fractures.	Float	Grab	<5	<0.2	34	<2	3	<0.05	
GSR-033	~ 35m above R-032 6955970N/393550E	Float: megacrystic granodiorite, 5-10% biotite/hornblende, 40% feldspar phenocrysts up to 1cm.	Float	Grab	<5	<0.2	<2	<2	<2	<0.05	
GSR-034	~ 50m above R-033 6956030N/393540E	Float: Megacrystic granodiorite as R-032.	Float	Grab	<5	<0.2	140	<2	5	<0.05	
GSR-035	~ 10m above R-034 6956030N/393540E	Float: Megacrystic granodiorite, cut by quartz veinlets, sample consists of 75% of quartz, muscovite on fractures.	Float	Grab	<5	0.8	90	<2	4	<0.05	
GSR-036	as R-035. 6956030N/393540E	Float: Medium grained granodiorite, 40% quartz veins, feldspar appears bleached.	Float	Grab	<5	1	750	<2	8	0.05	
GSR-037	50m above R-036 6956080N/393530E	Float: Megacrystic granodiorite, 10% feldspar phenocrysts, 10% rounded quartz phenocrysts, 5%biotite/hornblende, medium - coarse grained, rusty fractures.	Float	Grab	<5	0.2	10	<2	24	<0.05	
GSR-038	25m west of R-037. 6956080N/393510E	Chip from outcrop: megacrystic granodiorite, 20% feldspar phenocrysts, no visible sulfides, strong jointing spaced @ 10-20cm.	100/65S	1.0m	25	0.4	28	6	20	0.55	
ADR-028	N. side 6957010N/393210E	Biotite granite, sparsely megacrystic, zones of quartz - muscovite trace pyrite. Free growth quartz crystals in vugs- occur rarely. Minor sericite.	Grab/ outcrop		<5	0.2	212	<2	18	<0.05	
ADR-029	6956660N/393300E	Medium grained biotite granite. Megacrysts of orthoclase common to 1-2 cm, trace pyrite, (& chalcopyrite??).	Grab/ outcrop		<5	<0.2	64	<2	35	<0.05	
ADR-030	6957010N/393210E	Megacrystic biotite granite yellowish green alteration	Grab/		15	0.2	194	<2	40	<0.05	

AURUM GEOLOGICAL CONSULTANTS INC. Rock Sample Location and description Record 1992										
Project: Sheldon Claims/Kokanee Explorations Inc. Area: Mount Sheldon, Yukon, NTS 105J/11 Samplers: GS/RAD/RH Date: October, 1992										
Sample Number	Location	Description	Attitude	Width	Au ppb	Ag ppm	As ppm	Bi ppm	W ppm	Te ppm
		of feldspars, trace pyrite. Some weak diffuse quartz veins with muscovite (sericite) envelopes.	outcrop							
ADR-031	6956260N/393160E	Quartz veins in biotite - granite. Late stage. Hydrolytic veins - white quartz - some granoblastic texture.	Grab/ outcrop		<5	<0.2	48	<2	3	<0.05
ADR-032	6956200N/393100E	Medium grained biotite granite, sparse megacrysts, some sericite alteration. Minor disseminated pyrite, arsenopyrite.	Grab/ outcrop		45	0.8	<2	42	90	0.4
ADR-033	6956140N/393060E	Ditto as above but with quartz vein containing molybdenite on fracture surfaces.	Grab/ outcrop		<5	0.6	34	<2	100	<.05
ADR-034	6955860N/394200E	Hornfelsed siltstone, black silicified arsenopyrite, pyrrhotite bearing siltstone.	Grab/ outcrop		<5	<0.2	96	<2	<2	<.05
ADR-035	6956000N/394180E	Vein quartz - composite sample of vein quartz from joint surfaces in pegmatitic granite, trace pyrite, some sericite envelopes.	Grab/ outcrop		230	1.4	186	6	32	0.55



**APPENDIX B**  
**Analytical Methods and Reports**



# Chemex Labs Ltd.

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

To: KOKANEE EXPLORATIONS LTD.

C/O 1440 - 625 HOWE ST.  
 VANCOUVER, BC  
 V6C 2T6

Page Number : 1-A  
 Total Pages : 1  
 Certificate Date: 10-NOV-92  
 Invoice No. : I9223746  
 P.O. Number :  
 Account : KKG

Project : SHELDON  
 Comments : CC: ALLAN DOHERTY CC: GEOFF CHATER

## CERTIFICATE OF ANALYSIS A9223746

SAMPLE	PREP CODE	Au ppb FA+AA	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
ADR-028	205 274	< 5	0.2	0.92	212	70	< 0.5	< 2	0.18	0.5	2	135	35	1.88	< 10	< 1	0.53	20	0.16	465
ADR-029	205 274	< 5	< 0.2	0.95	64	70	< 0.5	< 2	0.20	< 0.5	3	130	9	1.88	10	< 1	0.50	20	0.36	435
ADR-030	205 274	15	0.2	0.84	194	80	< 0.5	< 2	0.58	< 0.5	3	83	12	1.93	< 10	< 1	0.52	20	0.34	465
ADR-031	205 274	< 5	< 0.2	0.43	48	90	< 0.5	< 2	0.05	< 0.5	1	154	9	1.06	< 10	< 1	0.27	10	0.12	140
ADR-032	205 274	45	0.8	0.79	< 2	90	< 0.5	42	0.53	< 0.5	3	60	12	1.73	< 10	< 1	0.33	30	0.28	405
ADR-033	205 274	< 5	0.6	0.69	34	110	< 0.5	< 2	0.38	< 0.5	3	137	12	1.65	< 10	1	0.38	30	0.18	580
ADR-034	205 274	< 5	< 0.2	1.86	96	240	< 0.5	< 2	0.22	< 0.5	15	52	64	3.27	< 10	< 1	0.91	20	0.80	540
ADR-035	205 274	230	1.4	0.47	186	60	< 0.5	6	0.11	0.5	1	191	11	0.78	< 10	< 1	0.24	20	0.10	270
GSR-028	205 274	30	< 0.2	0.91	6	160	< 0.5	< 2	0.19	< 0.5	4	54	6	1.83	10	< 1	0.54	20	0.45	305
GSR-029	205 274	20	2.6	1.42	8	120	< 0.5	34	0.41	< 0.5	5	165	7	2.36	10	< 1	0.71	20	0.52	370
GSR-030	205 274	15	< 0.2	0.63	4	100	< 0.5	< 2	0.15	< 0.5	2	81	25	1.31	< 10	< 1	0.29	20	0.20	180
GSR-031	205 274	< 5	< 0.2	1.17	2	160	< 0.5	< 2	0.33	< 0.5	4	138	10	1.96	10	< 1	0.59	20	0.40	270
GSR-032	205 274	< 5	< 0.2	0.33	34	160	< 0.5	< 2	0.46	1.5	1	59	40	0.60	< 10	< 1	0.19	10	0.03	220
GSR-033	205 274	< 5	< 0.2	1.33	< 2	200	< 0.5	< 2	0.32	< 0.5	3	180	11	1.94	10	< 1	0.70	30	0.41	295
GSR-034	205 274	< 5	< 0.2	0.42	140	60	< 0.5	< 2	0.06	< 0.5	< 1	139	61	0.53	< 10	< 1	0.22	< 10	0.01	80
GSR-035	205 274	< 5	0.8	0.79	90	130	< 0.5	< 2	1.13	3.0	1	93	28	0.32	< 10	< 1	0.47	10	0.01	490
GSR-036	205 274	< 5	1.0	0.48	750	80	< 0.5	< 2	0.18	1.0	2	106	132	0.72	< 10	< 1	0.27	< 10	0.01	195
GSR-037	205 274	< 5	0.2	1.34	10	110	< 0.5	< 2	0.63	< 0.5	4	103	10	2.04	10	< 1	0.35	40	0.36	325
GSR-038	205 274	25	0.4	0.95	28	120	< 0.5	6	0.15	< 0.5	2	117	34	2.06	< 10	< 1	0.42	30	0.27	245
RHR-008	205 274	25	< 0.2	1.04	2	160	< 0.5	< 2	0.17	< 0.5	4	104	4	1.98	10	< 1	0.62	20	0.43	325
RHR-009	205 274	< 5	< 0.2	1.02	4	310	< 0.5	< 2	0.27	< 0.5	3	115	8	1.97	< 10	< 1	0.47	20	0.44	305
RHR-010	205 274	< 5	0.2	0.37	32	120	< 0.5	< 2	0.04	< 0.5	< 1	144	8	0.66	< 10	< 1	0.17	< 10	0.01	250
RHR-011	205 274	20	< 0.2	0.75	84	150	< 0.5	< 2	0.16	< 0.5	1	158	28	1.16	< 10	< 1	0.30	10	0.17	105
RHR-012	205 274	10	< 0.2	0.36	184	40	< 0.5	< 2	0.23	< 0.5	< 1	75	49	0.69	< 10	< 1	0.16	< 10	0.07	105
RHR-013	205 274	< 5	0.2	0.60	152	90	< 0.5	< 2	0.26	0.5	1	78	57	0.74	< 10	< 1	0.15	< 10	0.07	95
RHR-014	205 274	< 5	< 0.2	0.26	78	60	< 0.5	< 2	0.11	1.0	< 1	55	39	0.43	< 10	< 1	0.12	< 10	< 0.01	70
RHR-015	205 274	< 5	0.2	2.52	14	250	< 0.5	2	0.27	< 0.5	11	145	143	4.81	10	< 1	0.81	< 10	1.18	480
RHR-016	205 274	< 5	0.2	0.44	2	60	< 0.5	< 2	0.21	< 0.5	1	54	4	0.89	< 10	< 1	0.23	20	0.17	205
RHR-017	205 274	< 5	0.4	1.10	8	80	< 0.5	< 2	0.15	< 0.5	1	232	96	2.07	< 10	< 1	0.38	20	0.32	170

CERTIFICATION: *Jhai D Ma*



# Chemex Labs Ltd.

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

To: KOKANEE EXPLORATIONS LTD.

C/O 1440 - 625 HOWE ST.  
 VANCOUVER, BC  
 V6C 2T6

Project: SHELTON  
 Comments: CC: ALLAN DOHERTY CC: GEOFF CHATER

Page Number :1-B  
 Total Pages :1  
 Certificate Date: 10-NOV-92  
 Invoice No. :19223746  
 P.O. Number :  
 Account :KKG

## CERTIFICATE OF ANALYSIS A9223746

SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	W ppm	Te ppm
ADR-028	205 274	2	0.03	3	450	18	4	3	10	0.02	< 10	< 10	11	< 10	74	18	< 0.05
ADR-029	205 274	5	0.04	3	430	14	< 2	6	9	0.11	< 10	< 10	21	10	50	35	< 0.05
ADR-030	205 274	13	0.03	1	420	10	2	6	22	0.11	< 10	< 10	19	20	36	40	< 0.05
ADR-031	205 274	1	0.02	2	200	8	< 2	2	4	0.03	< 10	< 10	8	< 10	24	3	< 0.05
ADR-032	205 274	6	0.02	1	430	32	6	4	16	0.04	< 10	< 10	13	80	34	90	0.40
ADR-033	205 274	5	0.03	3	430	42	4	4	14	0.03	< 10	< 10	11	100	78	100	< 0.05
ADR-034	205 274	1	0.02	26	360	2	< 2	3	11	0.08	< 10	< 10	37	< 10	50	< 2	< 0.05
ADR-035	205 274	1	0.01	3	200	68	4	1	5	0.01	< 10	< 10	7	20	62	32	0.55
GSR-028	205 274	< 1	0.03	4	500	12	< 2	6	7	0.14	< 10	< 10	25	< 10	50	< 2	0.10
GSR-029	205 274	3	0.12	4	560	34	< 2	8	21	0.19	< 10	< 10	33	< 10	38	12	0.25
GSR-030	205 274	2	0.04	2	280	12	< 2	4	8	0.08	< 10	< 10	13	< 10	20	6	0.05
GSR-031	205 274	1	0.10	3	430	12	< 2	7	18	0.16	< 10	< 10	26	< 10	28	< 2	< 0.05
GSR-032	205 274	< 1	0.03	1	120	24	2	1	30	< 0.01	< 10	< 10	1	< 10	110	3	< 0.05
GSR-033	205 274	< 1	0.14	3	430	12	< 2	6	22	0.13	< 10	< 10	24	< 10	32	< 2	< 0.05
GSR-034	205 274	< 1	0.04	3	20	12	< 2	1	8	< 0.01	< 10	< 10	< 1	< 10	44	5	< 0.05
GSR-035	205 274	< 1	0.02	5	120	46	2	< 1	98	< 0.01	< 10	< 10	< 1	< 10	76	4	< 0.05
GSR-036	205 274	< 1	0.03	4	90	50	2	< 1	22	< 0.01	< 10	< 10	< 1	< 10	104	8	0.05
GSR-037	205 274	1	0.09	3	410	10	2	5	20	0.03	< 10	< 10	18	< 10	42	24	< 0.05
GSR-038	205 274	2	0.04	3	410	26	2	5	9	0.07	< 10	< 10	17	< 10	36	20	0.55
RHR-008	205 274	2	0.04	4	440	14	< 2	7	8	0.15	< 10	< 10	25	< 10	42	< 2	< 0.05
RHR-009	205 274	< 1	0.05	2	420	8	< 2	7	9	0.14	< 10	< 10	28	10	30	25	< 0.05
RHR-010	205 274	1	0.03	2	80	12	< 2	< 1	8	< 0.01	< 10	< 10	< 1	< 10	12	< 2	< 0.05
RHR-011	205 274	< 1	0.07	3	170	10	< 2	3	12	0.02	< 10	< 10	7	< 10	14	< 2	0.10
RHR-012	205 274	< 1	0.02	2	100	12	< 2	1	14	< 0.01	< 10	< 10	1	< 10	24	< 2	0.05
RHR-013	205 274	1	0.06	< 1	100	16	< 2	1	19	< 0.01	< 10	< 10	1	20	38	28	0.05
RHR-014	205 274	< 1	0.02	1	< 10	12	< 2	< 1	9	< 0.01	< 10	< 10	< 1	< 10	76	8	0.05
RHR-015	205 274	6	0.05	27	1190	6	< 2	13	23	0.12	< 10	< 10	192	< 10	34	4	0.10
RHR-016	205 274	< 1	0.02	2	210	18	< 2	3	9	0.04	< 10	10	11	< 10	26	6	< 0.05
RHR-017	205 274	2	0.08	3	440	8	< 2	5	13	0.07	< 10	< 10	20	10	36	30	0.05

CERTIFICATION: *Jhai D Ma*