

GEOLOGICAL ASSESSMENT
OF THE

TOMMY JACK PROPERTY

MINERAL CLAIMS
Au 1 to 4, Tom, and Sic 1 to 6
(68 units)

OMNECA MINING DIVISION
BRITISH COLUMBIA, CANADA

Latitude: 56° 08' 03" N Longitude: 127° 36' 57" W

N.T.S 94 D/4E

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GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

May 15, 2003

27,175

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SUMMARY

The Tommy Jack Property consists of 68 contiguous claim units and is located within the Omineca Mining Division, approximately 95 km northeast of the town of Hazelton British Columbia, Canada. Road access is ~ 16 km away but a new road is planned along Tommy Jack Creek. Topography is mountainous and most of the property is below tree line in primary growth hemlock, fir and spruce forest.

Noranda worked on the property in the mid-1980's, conducting extensive soil and geophysical surveys and drilled 35 short drill holes. Noranda returned the property to the current owner's wife and the Warren's have held the core claims in good standing until present. Subsequent to the results from the 2002 field programme Kodiak has entered into a five-year option agreement with Lorne Warren, at which time Kodiak will have earned 100% ownership.

Tommy Jack is underlain by the Bowser Lake Group a clastic sedimentary rock assemblage, which overlies Stikine, Cache Creek, and Quesnel Terrane rocks. Bowser Lake Group rocks are intruded by the Upper Cretaceous Bulkley Intrusions that are directly related to the mineral occurrences in the area. Most of the Bowser Lake sedimentary rocks are Fe-carbonate and clay altered and locally silicified on the Tommy Jack Property. Dacite dykes cut the Bowser Group rocks and silicification and alteration tends to be more intense in the vicinity of these dykes. Quartz-carbonate veins are common throughout and gold and silver bearing quartz-carbonate-sulphide (sphalerite-galena-pyrite+/-arsenopyrite) veins occur locally.

The original Tommy Jack showing is located along the banks of Tommy Jack Creek and is comprised of highly faulted, clay/Fe-carbonate altered, and silicified Bowser Lake Group sedimentary rocks and banded quartz-Fe-carbonate-arsenopyrite-galena-sphalerite-tetrahedrite-argentite(?) veins. This exposure extends for 135 m along Tommy Jack Creek and 10 m of chip samples taken across the zone average 1.1 gpt Au, 276 gpt Ag, 0.1% Cu, 0.8% Pb and 1.6% Zn. The showing is unconstrained to depth and along strike. The Tommy Jack showing and mineralization within the drill holes share many similarities of polymetallic vein and epithermal vein deposits such as Pachuca (Mexico) and Creede (Colorado, USA).

The 2002 field programme identified significant mineralization in sections of un-sampled drill core from the Noranda drilling and the original Tommy Jack showing. As previous drilling did not test the original showing and the previous drilling was sparsely sampled, the Tommy Jack Property is under-explored. Furthermore, the chip sampling of the original showing produced economic Au-Ag-Cu-Pb-Zn assays and high-grade samples up to 38.3 gpt Au on the property demonstrate the metal endowment and possibility of Tommy Jack to contain an ore body.

1.0 INTRODUCTION

This report is intended to disclose the results of a property exam and sampling programme conducted by International Kodiak Resources Inc during the 2002 field season on the Tommy Jack Property. The work programme was designed to determine whether the Tommy Jack Property has the potential to contain an ore body, even though previous workers have failed to do so. Subsequent to the positive results from the 2002 programme Kodiak has entered into an option agreement with the owner of the property and staked additional claims.

Field activities were conceived, supervised, conducted and the data interpreted by the author and Acme Analytical Laboratories provided all geochemical analyses presented below.

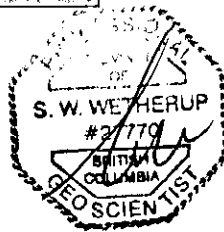
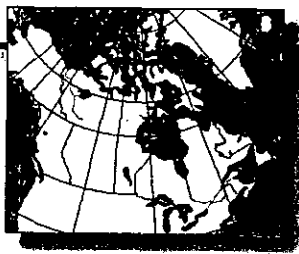
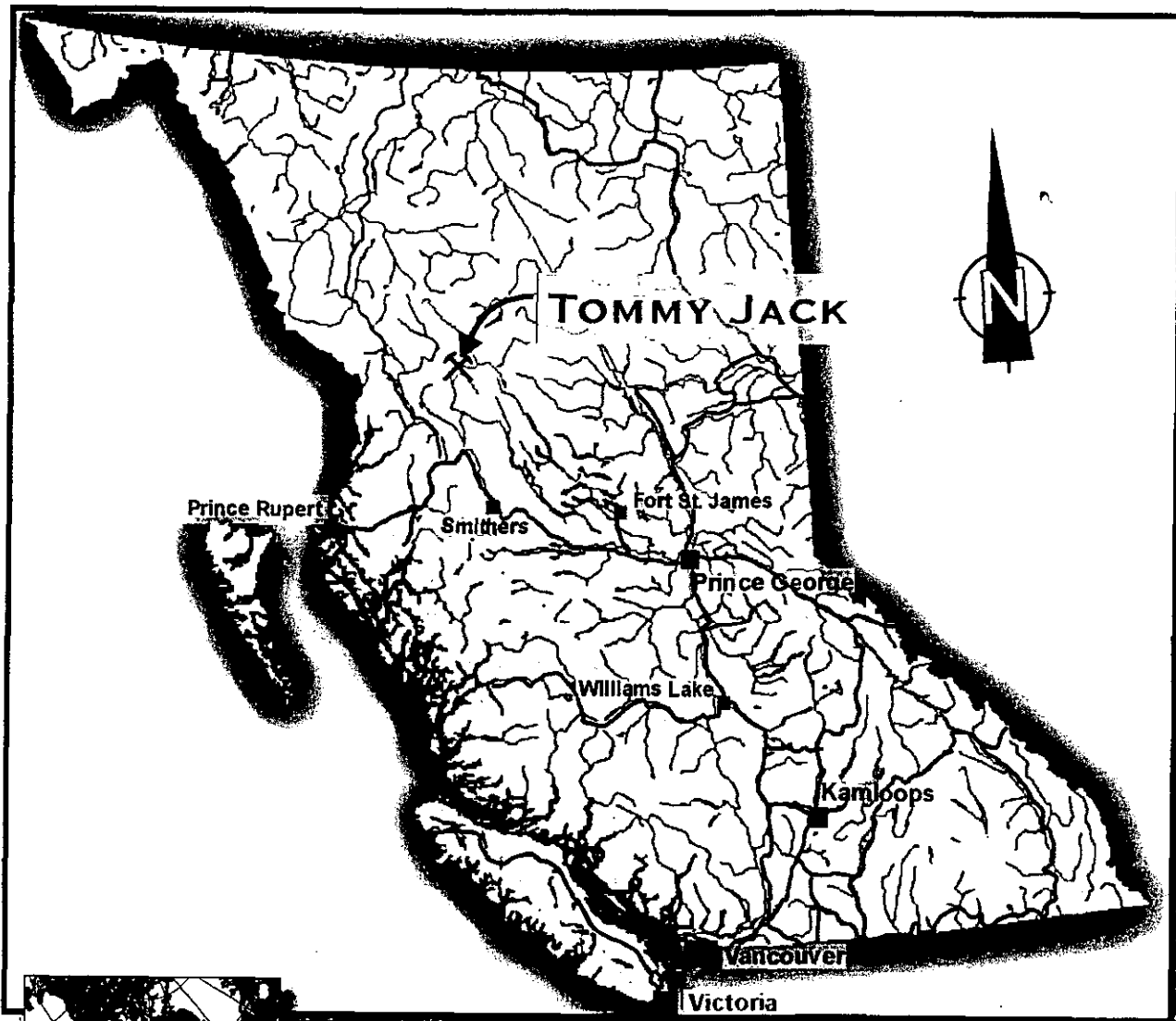
2.0 PROPERTY DESCRIPTION AND LOCATION

The Tommy Jack Property consists of 68 contiguous claim units, covering an area of 14.5 km² within the Omineca Mining Division, British Columbia, Canada (Figures 1, 2 and 3). It is located at 56° 08' 03" N latitude and 127° 36' 57" W longitude, in NTS map sheet 094D/04 E. Currently, these claim blocs have not been legally surveyed. Table 1 lists the claims, claim numbers, current expiry dates and their ownership status for the claim blocs that comprise the Tommy Jack Property.

Claim Name	Tenure #	Expiry Date	Owner	Ownership
AU 1	238791	June 12, 2003	Lorne Warren	100%
AU 2	238792	June 12, 2003	Lorne Warren	100%
AU 3	238793	June 12, 2003	Lorne Warren	100%
AU 4	238794	June 12, 2003	Lorne Warren	100%
TOM	238907	October 24, 2003	Lorne Warren	100%
SIC 1	395459	July 25, 2003	Int. Kodiak Res.	100%
SIC 2	395460	July 25, 2003	Int. Kodiak Res.	100%
SIC 3	395461	July 26, 2003	Int. Kodiak Res.	100%
SIC 4	395462	July 26, 2003	Int. Kodiak Res.	100%
SIC 5	395463	July 26, 2003	Int. Kodiak Res.	100%
SIC 6	395464	July 26, 2003	Int. Kodiak Res.	100%

Table 1: Tommy Jack Property claims, expiry dates, and ownership.

Lorne Warren owns the core claims to the Tommy Jack Property and has entered into an option agreement with International Kodiak Resources Inc. Under this option agreement Kodiak may earn 100% interest in the Au 1 to 4 and Tom claims after making a series of cash and stock payments over a period of five years.



International Kodiak Resources Inc.			
Tommy Jack Property Location Map			
Date	Drafted by	Scale	
May 2003	Wetherup	1:10,000,000	Figure 1

Figure 1: Map of British Columbia, Canada depicting the location of the Tommy Jack Property with respect to major towns, cities and highways.

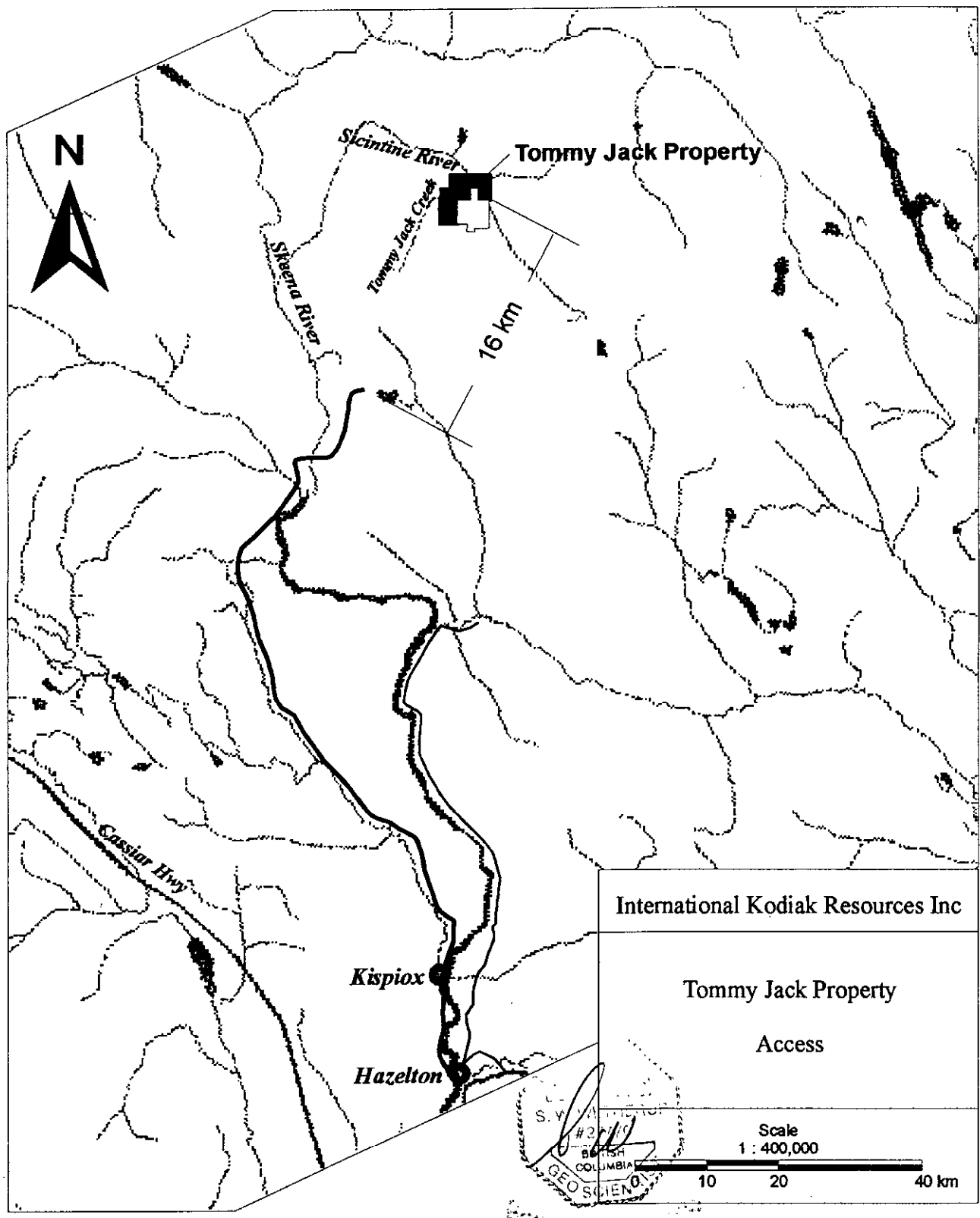
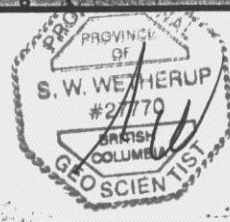
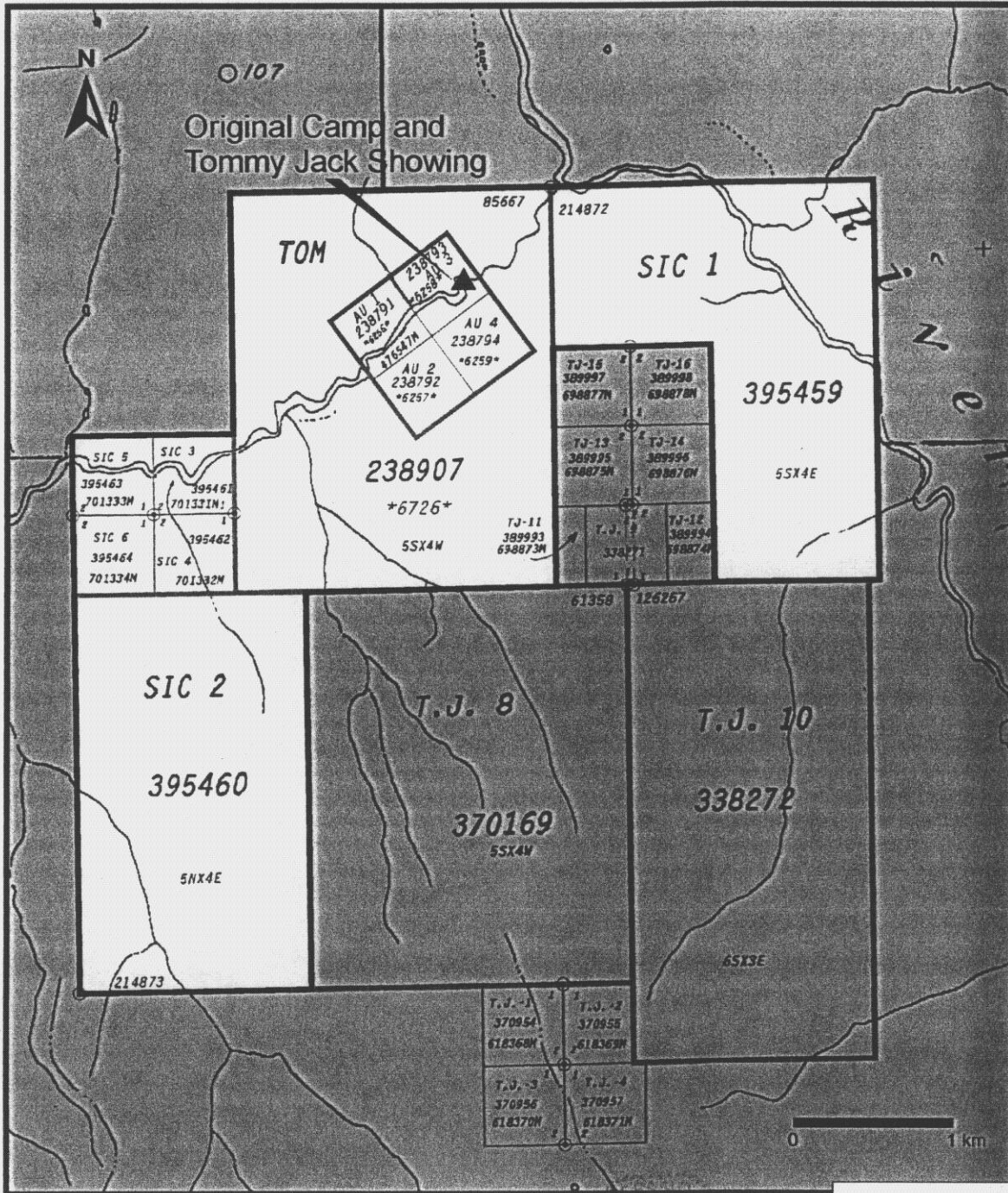


Figure 2: Nearest road access to Tommy Jack is ~ 16 km to the southwest and that point is a ~ 90 km drive from Hazelton, BC.



International Kodiak Resources Inc.

Tommy Jack Property
Claim Map

Date	Drafted by	Scale	
May 2003	Wetherup	1 : 40,000	Figure 1

Figure 3: Claim map (as of November 20, 2002) depicting the claims in the Tommy Jack area; Kodiak owns the highlighted claims Sic 1-6, Tom, and Au 1-4. Also, the location of the Tommy Jack “Camp Showing” is denoted by a triangle.

Outcrop of the mineralization occurs in a cut bank on the side of Tommy Jack Creek and its strike extents appear to continue up the hillside away from the creek. Tommy Jack Creek is part of the Skeena Watershed and as such is a salmon spawning creek, but it is not specified as a protected watershed area. There are no parks/nature reserves in the area around or over the Tommy Jack Property.

3.0 ACCESS, CLIMATE, INFRASTRUCTURE, AND PHYSIOGRAPHY

Elevations on the Tommy Jack Property range from 730 m at the junction of Tommy Jack Creek and the Sicintine River to 1700 m above mean sea level. Most of the property is covered by dense, primary growth hemlock, spruce and fir forest and above 1600 m vegetative cover is dominated by scrubby spruce, heather, moss and grass. The topography consists of rugged mountains, which descend 1000 m into the main drainages with slope grades commonly, 20 to 40%.

Tommy Jack is 95 km north of the Yellowhead Highway (Hwy 16) and the community of Hazelton, British Columbia. Currently access is by helicopter. The nearest road access is located approximately 16 km south-southwest of the property with a new road slated to go through the property within the next two years. This new road is intended to be the new haul road for the Kemess Au-Cu mine (owned by Northgate Exploration), which is 110 km northeast of the Tommy Jack Property.

Precipitation in the area is high (~ 1300 mm) with snow falling in October and remaining until late May or June. Fall is often subject to heavy valley fogs and poor weather, which closes down the field season by October and doesn't allow for safe flying until late December. Groundwork is therefore limited to the summer months between late June and October, although drilling and some geophysical surveying is possible in the winter.

4.0 HISTORY

The first discovery of the Tommy Jack Showing was by native trappers and two prospectors apparently worked the in the area between the 1930's and 40's (Myers, 1988). Kerr and Glen Huck staked the property in either 1962 or 1963 (Myers, 1988) and Canex Aerial Exploration recorded the first work on the property in 1964. Canex's publicly recorded work consisted of a 1460 by 1650 m soil grid but they also did trenching and drilling around the showing in 1967, which is written up in a unpublished company report.

Most of the work done on the Tommy Jack Property was by Noranda Exploration between the years of 1985 and 1987 (Table 3). Noranda had optioned the ground from a prospector based in Smithers, BC. They conducted a large soil geochemical survey (2004 samples over a 2.8 by 2.0 km area) and followed it up in 1986 by drilling 10 holes totaling 762 metres. After/during the first round of drilling Noranda completed 55.5 km of ground magnetometer surveying, 4 km of VLF-EM surveying, prospecting, silt sampling and assayed their soils taken in 1985 for Au. In 1987, they completed another

25 drill holes totaling 1690.5 metres and subsequent to the results decided to return the property to its owner, Joyce Warren.

Year	Report #	Company	Work Done	\$ Spent	\$ Spent (2002 \$'s)
1963/64	574	Canex	827 soils	\$9,000.00	\$52,000.00
1967	n/r	Canex	trenching; 3 drill holes (not assayed)	n/a	n/a
1985	13778	Noranda	45 soils; 2 silts; 12 rocks	\$3,623.00	\$6,069.00
1985	14631	Noranda	2004 soils	\$15,146.56	\$87,347.00
1986	15515	Noranda	10 DDHs, 762 m; 191	\$120,755.00	\$198,610.00
1987	16062	Noranda	re-analyzed 543 soils from 1985	\$2,384.50	\$3,785.00
1987	16943	Noranda	25 DDHs, 1690.5 m; 338 samples	\$209,032.00	\$331,797.00
1986/87	n/r	Noranda	55.5 km of mag; 4 km of VLF-EM, 115 rocks; 92 silts	n/a	n/a
1989	19581	Intertech	28 rocks; 5 silts; 746 soil; 23.2 km VLF-EM	\$63,208.18	\$91,872.00
1995	24589	A. Raven	15 rocks; 132 soils	\$15,660.00	\$19,716.00
2000	26197	A. Raven	35 rocks; 4.3 km SP survey; 12 m trenching	\$24,804.00	\$25,973.00
Total				\$817,169.00	

Table 2: Summary of recorded work on the Tommy Jack Property.

Intertech Minerals Corp. optioned the Tommy Jack Property from Joyce Warren in 1989 and completed a geochemical soil survey (south of the Noranda grid), a 23.2 km of VLF-EM survey and prospecting programme. They recommended further work including drilling but failed to follow-up on this work and gave the property back to Joyce Warren.

Since 1989, little work has occurred and Joyce Warren has signed the title of the central 20 unit bloc and 4 two post claims to her husband Lorne Warren, which they have kept in good standing since 1989.

The area south of the Warren ground (Figure 3) was staked and is currently held by Alan Raven (formerly a contactor for Noranda). Alan Raven has conducted a small geochemical soil survey, a self-potential geophysical survey, and minor trenching on his ground. In May of 2002, Alan Raven optioned his property to Gold City Industries who is currently the operator.

5.0 GEOLOGY

The Tommy Jack Property lies in the Intermontane Belt of the British Columbia Cordillera. It is within a geological feature called the Bowser Basin, which is characterized by the Middle to Upper Jurassic Bowser Lake Group, a large sedimentary overlap assemblage that covers rocks of the Stikine, Quesnel and Cache Creek Terranes (Figure 4; after Wheeler and McFeely, 1991). Intruding the Bowser Lake Group are the Upper Cretaceous Bulkley Intrusions, which form high-level granodiorite, quartz monzonite to monzodiorite mountain massifs in the area (Evenchick and Porter, 1993). These intrusions impart wide hornfelsed alteration zones within the Bowser Group sedimentary rocks, up to 1000 m from the intrusion contacts. Felsic dykes are also

common around the massifs. The Bulkley Intrusions appear to be directly related to mineral occurrences in the area (Richards, 1978).

On the Tommy Jack Property, Bowser Lake Group sedimentary rocks are generally shallowly dipping, medium to fine grained arenite intercalated with minor siltstone, shale and conglomerate. The sedimentary rocks are cut by near vertical 1 to 5 m wide quartz-feldspar porphyry dacite to rhyolite dykes. Moderately dipping, graphitic NE to SE trending faults cut the Bowser Lake Group rocks along Tommy Jack Creek.

Most of the Bowser Lake Group rocks on the property have been subjected to weak to moderate Fe-carbonate and clay alteration. Silicification and quartz veining occurs locally. At least three type of veins occur within the property: (1) barren, 1mm to 10 cm wide lenticular and wispy white quartz +/- calcite veins, (2) massive, 10 to 20 cm wide galena-sphalerite-pyrite-tetrahedrite veins, and (3) 5 to 50 cm thick, banded, gold bearing quartz-Fe-carbonate-arsenopyrite-argentite?-sphalerite-galena-tetrahedrite veins. Fe-clay /carbonate alteration and silicification envelopes the sulphide bearing quartz veins and is most intense at the contacts with the felsic dykes and within graphitic fault zones.

6.0 DEPOSIT TYPES

The Tommy Jack prospect is classified as "Type I05 - Polymetallic Ag-Pb-Zn (+/- Au, Cu) Veins" by the BC Geological Survey. This classification includes Pachuca - Real del Monte (Mexico), Silverton District and Creede (Colorado). These districts are gold bearing and contain similar metal abundances as the Tommy Jack Showing (Table 4; after Mosier *et al.*, 1986). Both, Pachuca and Creede/Silverton are considered Epithermal Vein deposits by the US Geological Survey classification scheme. Either classification is valid, as these deposits and the Tommy Jack prospect appear to be transitional between a porphyry Cu-Au and epithermal Au type systems.

	Tonnes	Au gpt	Ag gpt	Cu %	Pb %	Zn %	Total Oz Au	Total Oz Ag	Value (US\$) @ 2002 Prices
Tommy Jack (avg. ten 1 m chip samples)	-	1.1	276	0.1	0.8	1.6	-	-	-
Creede (Silverton District)	3.9 MT	1.2	714	0.1	4.0	1.7	0.15×10^6	90×10^6	\$ 451 Million
Pachuca (Real del Monte)	107 MT	2.2	461	0.04	0.2	0.75	7.6×10^6	1.6×10^9	\$ 9.6 Billion

Table 3: Comparison of metal grades between Tommy Jack, Pachuca and Creede.

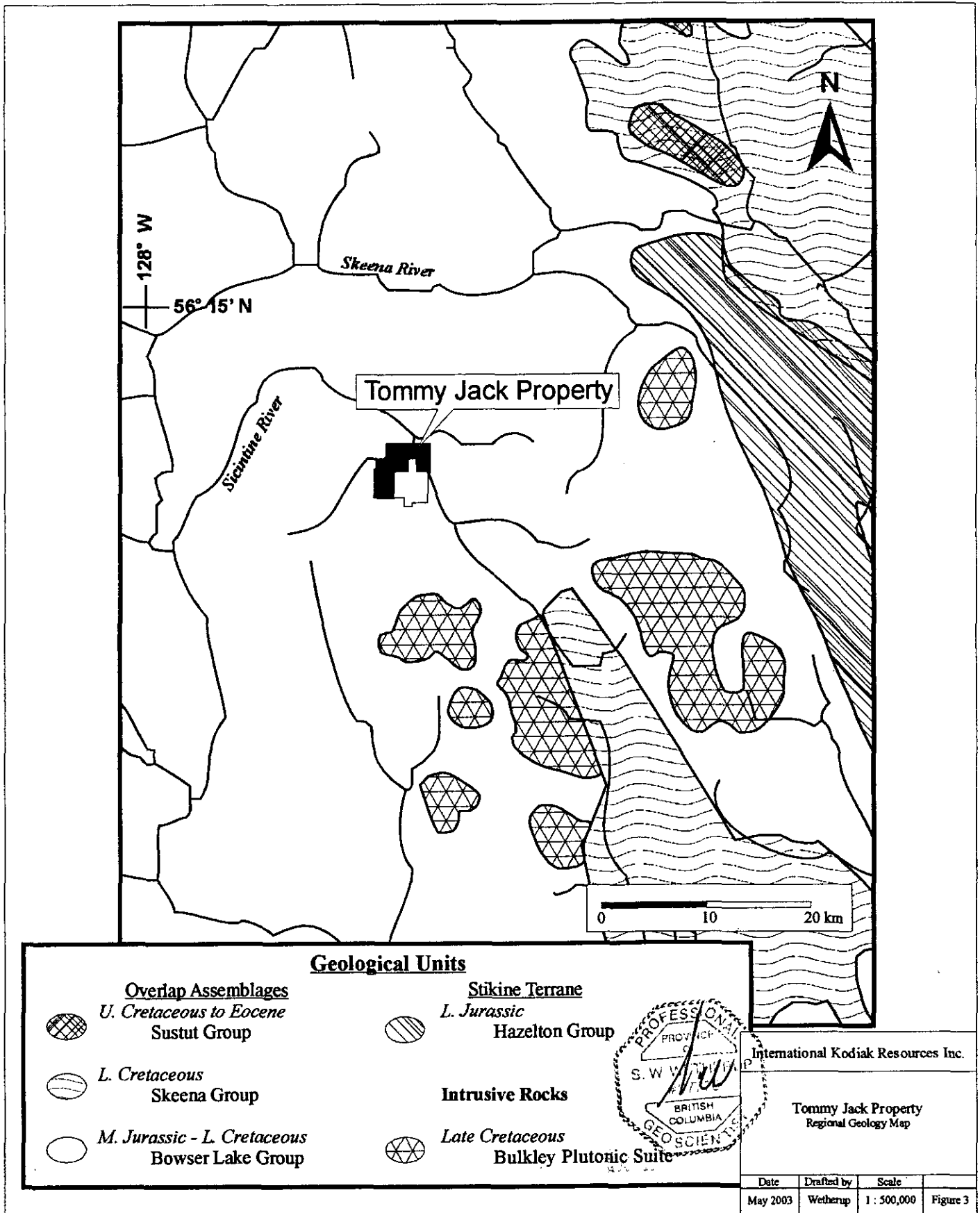


Figure 4: Regional geology surrounding the Tommy Jack Property (after Wheeler and McFeely, 1991).

7.0 MINERALIZATION

The main surface exposure of gold-silver mineralization occurs in the banks of Tommy Jack Creek below an area used as a camp by Noranda and Canex during their work programmes. This exposure extends for approximately 135 m N-S along the creek, and the veins strike 135 and dip 30-35 degrees to the southwest. A true thickness for the zone is roughly calculated to be 40 to 55 m however the extents along strike and to depth is unknown. Ten 1 m chip samples collected across this zone, perpendicular to the attitude of the zone averaged 1.1 gpt Au, 276 gpt Ag, 0.1% Cu, 0.8 % Pb and 1.6 % Zn. Grab samples from the Camp Showing range from 0.02 to 10.56 gpt gold and 10.9 to 1824.7 gpt Ag. Of the eleven grab samples taken six returned > 1gpt gold and five samples >100 gpt silver.

Fe-carbonate and clay altered arenite, silicified arenite and siltstone, quartz filled breccia with soft clay altered arenite fragments, and banded sulphide and gold bearing quartz veins typify the rocks in the Camp Showing. Veins are 5 to 50 cm wide and are comprised of banded quartz-Fe-carbonate-arsenopyrite-argentite?-sphalerite-galena-tetrahedrite. These veins generally return assay values between 1.13 and 10.56 gpt gold. The Camp Showing and Bowser Lake Group rocks elsewhere along Tommy Jack Creek are cut by numerous steep to moderately dipping dip-slip faults. The relationship between the faults and the timing of quartz vein generation is uncertain.

Drilling by Noranda failed to intersect the banded veins observed in the Camp Showing, as the nearest holes were collared more than ½ km to the south (Figure 5). However, several zones of gold and silver mineralization were encountered by these holes. Generally, the most impressive gold and silver values in the drill holes come from quartz-galena-sphalerite-pyrite veins, which are usually 1 to 3 metres from the contact of a felsic dyke or locally within the chilled margins of the dyke. Intertech Minerals reported the following as the "best drill intersections" from the Noranda drilling:

Drill Hole	Width metres	Gold		Silver	
		gpt	opt	gpt	opt
86-5	6.6	4.3	0.125	83.6	2.43
87-14	0.6	31.05	0.3	129.0	3.76
87-23	1.3	14.69	0.42	36.3	1.06

It is important to note that Noranda sampled about 16.5% of the core that they drilled and representative sampling of the un-split core, by Kodiak, revealed a few interesting samples including a 38.3 gpt Au over 0.2 m sample from hole 87-14. This 38.3 gpt Au sample was approximately 25 m below the interval reported by Intertech Minerals in hole 87-14 (above).

8.0 EXPLORATION

Fieldwork occurred during July 16 to 18, 2002 and July 23 to 29, 2002. The programme was conceived, supervised, and conducted by the author on behalf of International Kodiak Resources Inc. In 2002, Kodiak completed a property examination, a small geochemical rock sampling programme and staked an additional 44 claim units. The expenses incurred during the 2002 fieldwork except for the staking costs are included in Appendix I. Rock sampling consisted of splitting and analyzing previously un-sampled core, chip sampling the Camp Showing and prospecting. Core sampling was designed to analyze a representative suite of rock and alteration types and chip sampling of the Camp Showing attempted to broadly quantify the continuity of mineralization. Overall the programme sought to examine the mineralization and determine whether previous work adequately tested known mineralization and/or precluded the possibility of making a significant discovery. Field expenses incurred during the 2002 work programme are summarized in Appendix I and the locations of grab and chip samples are plotted in figures 5 and 6.

Two core samples yielded gold values above 1.0 gpt Au with a high of 38.3 gpt over 0.2 m. In addition, sixteen of the thirty-six core samples returned greater than 1.0 gpt Ag and up to 291 gpt Ag from a variety of rock types, which demonstrates the widespread nature of the mineralizing system throughout the area. More importantly, (1) the high-grade gold assay, (2) predominance of Fe-carbonate/clay alteration and (3) anomalous silver throughout the core indicates that the scant sampling done previously did not identify all of the mineralized zones and visual selection during sampling was not entirely effective.

Results from the chip sampling are encouraging. Ten chip samples taken over 1 m each averaged 1.1 gpt Au, 276 gpt Ag, 0.1% Cu, 0.8% Pb and 1.6% Zn. These chip samples were taken in pogo-stick fashion so as to sample a continuous section perpendicular to the bedding. Also, seven grab samples from the banded veins within and outside of the chip sampled area yielded between 1.13 to 10.56 gpt Au and 55 to 1824 gpt Ag (Figure 6 and Appendix I).

All samples collected were analyzed for 37 elements by ICP-MS and Au and Ag were reanalyzed by fire assay. Appendix II contains the assay certificates and summary rock descriptions of all samples and selected assays.

Acme Analytical Laboratories analyzed all of the samples taken during this field programme. Detection limits for analytical methods provided by Acme for the ICP-MS and fire assay methods are presented in Appendix III.

9.0 SAMPLING METHODS

As mentioned above three types of rock samples were collected during the 2002 field programme, core, chip and grab samples. Samples were given unique five digit sample numbers that were recorded in field books and on the sample bag before sealing it.

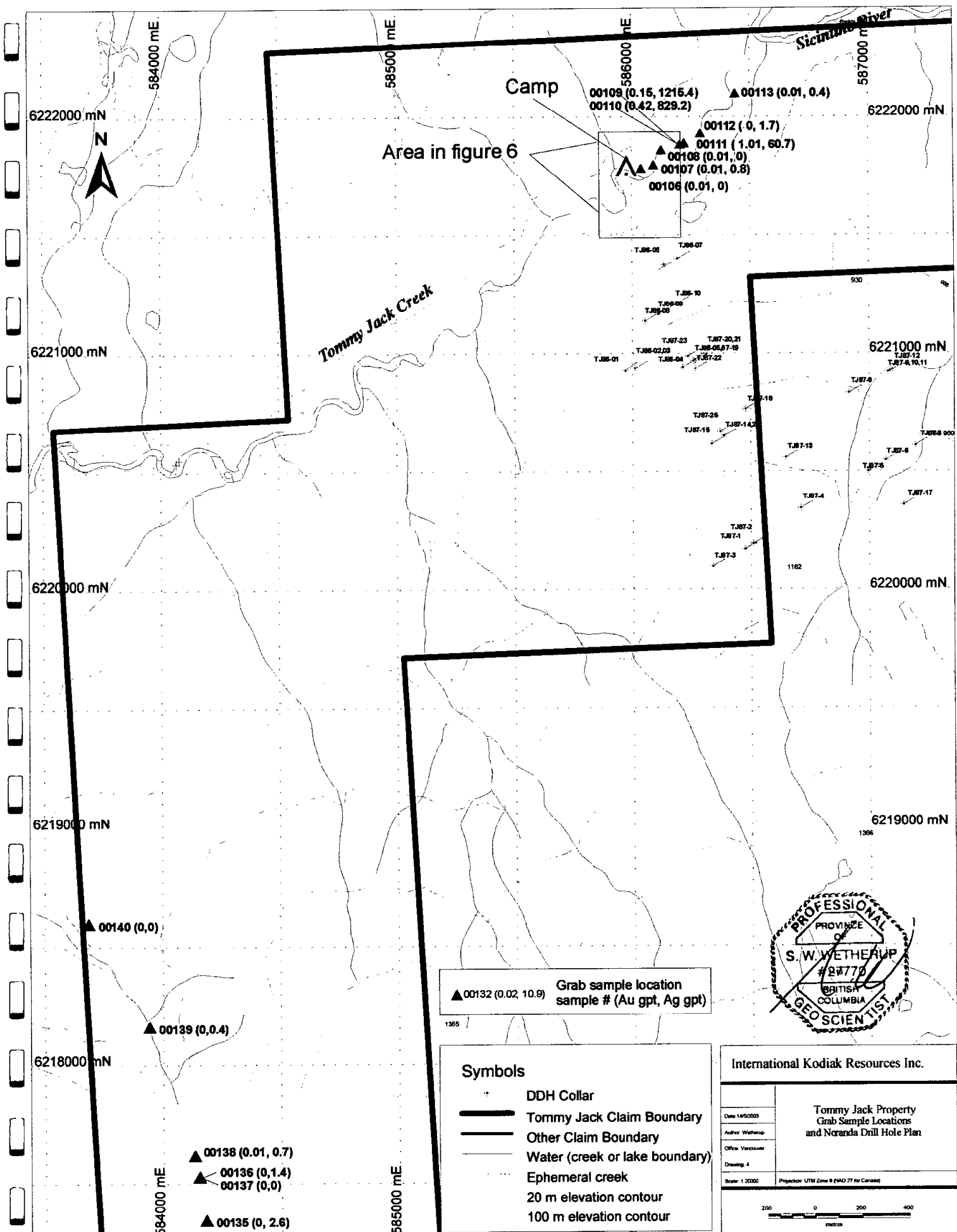


Figure 5: Location of grab samples with gold (gpt) and silver (gpt) assay results and collars of Noranda drill holes.

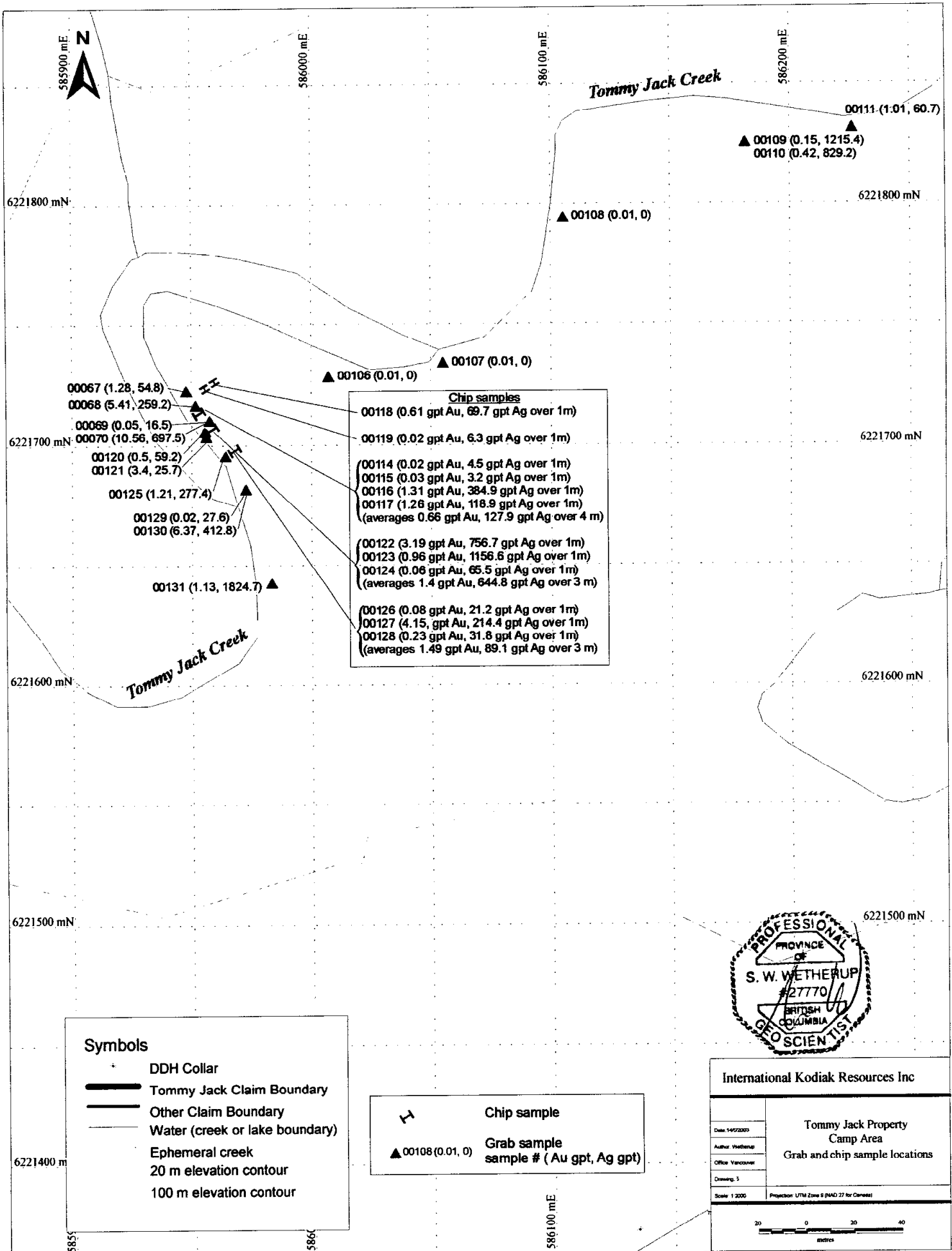


Figure 6: Camp area with locations of grab and chip sampling with gold (grams/tonne) and silver (grams/tonne) assay values.

Core samples were selected to represent the various rock and alteration types observed in the core and to sample many of the silicified zones that had not been previously analyzed.

Sample intervals were marked, given a unique sample number, and their locations (i.e. hole number and meterage/footage) were recorded along with a short geological description. These intervals were then split using a core splitter, with half of the core placed back into the core box and half into a plastic sample bag.

Chip samples were taken from a steep, crumbly slope by breaking the rock with a rock hammer and collecting the chips in a plastic sample bag, along 1 metre intervals marked by the supervising geologist. A conscious effort was made to not bias these samples by collecting an unrepresentative amount of high-grade quartz vein material. The exposure did not allow for continuous sampling over more than three to four metres so subsequent chip sample runs were offset parallel to layering to an area where the next run could be collected stratigraphically above the previous run (Figure 6). Locations, sample numbers, and a brief geological description were recorded in a field notebook.

Grab samples were collected, given a sample number, placed in a plastic sample bag, and sealed. Also, a hand sample was collected, a GPS coordinate taken (using a Garmin XL 12 hand held GPS) and a brief geological description of the sample was recorded into a field notebook.

10.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

All samples were transported by helicopter to base camp, packed into the field vehicle, and personally delivered to Acme Laboratories, in Vancouver by the project geologist/author.

Acme Analytical Laboratories is located at 852 East Hastings Street, Vancouver, BC and is an ISO 9002 accredited analytical laboratory. Acme conducted all of the analytical work on the samples including the crushing and splitting. Kodiak requested that all samples be analyzed for 37 elements by ICP-MS using an aqua-regia digestion and fire assay for Au and Ag.

Sample preparation for the ICP-MS method constituted crushing up to 4 kg of sample to -10 mesh (70%), followed by splitting to a 250 g aliquot that was then pulverized to -150 mesh (95%). From there the 250 g aliquot was split to a 30 g aliquot, subjected to an aqua-regia digestion and then analyzed by an Inductively Coupled Plasma Mass Spectrometer (ICP-MS) apparatus for 37 elements. Also, a classical, lead collection, fire assay was performed on 29.2 g of sample pulp and the dore bead analyzed by ICP-ES for Au and Ag. The details of both the fire assay and ICP-MS method are in Appendix III.

11.0 DATA VERIFICATION

Verification of the data has relied upon ISO 9002 certified Acme Analytical Laboratories' data verification procedures. Acme Labs verifies data in three ways, by running (1) blanks to test for carry-over affects, (2) duplicates to test for precision, and (3) standards which are cross checked at other laboratories to ensure accuracy. The author received the data directly from the laboratory and any inaccuracies with the data would be due to unforeseen problems at the lab. A statistical analysis of the standard and the re-run results provided by Acme are contained in Appendix IV.

The 2002 fieldwork programme was small and running a cross-laboratory check is not justified, especially as Acme Analytical Laboratories runs regular cross-laboratory checks of its own.

12.0 INTERPRETATION AND CONCLUSIONS

Chip and grab samples from the Camp Showing in 2002 provided encouraging results. They demonstrated the presence of substantial zones (over 10 m) of potentially economic Au-Ag-Cu-Pb-Zn grades as well as veins of high-grade gold and silver mineralization up to 10.56 gpt Au and 1825 gpt Ag. The Camp Showing has not been tested to depth by the Noranda drilling as the closest hole is collared over ½ km to the south.

Previous drill holes were not sampled completely (~16.5%) and Kodiak discovered several other significant zones of mineralization with 36 scattered samples. Therefore, the drill core has more potential than previously thought. Drill holes appear to have been centered directly on geochemical soil anomalies yet failed to adequately explain the soil anomalies. This is not surprising as the area has been glaciated and the soils have most likely been transported. A recent assessment report from the owner of adjacent property south of Kodiak's ground suggests glacial transport is from north to south on his property (B.C. ARIS 26,187). If this is correct the soil anomalies probably originated from the Camp Showing on Tommy Jack Creek and the width of the soil anomalies suggests that the mineralization may continue along strike to the east.

Overall, the 2002 fieldwork programme has been successful in determining that the Tommy Jack Property not only contains potentially economic grades of Au, Ag, Cu, Pb, and Zn over significant widths, but the previous body of work inadequately assessed the known mineralization and soil anomalies. Therefore, it is this author's conclusion that the Tommy Jack Property has been under-explored and determining its potential to contain an ore body can be achieved with a small field and drill programme.

13.0 RECOMMENDATIONS

To progress the Tommy Jack Property, a three-stage programme is recommended:

- (1) Digitize and compile data from previous work,
- (2) Prospect and field check ideas generated from the compilation,
- (3) Select drill targets and test known showings and possible strike extensions.

Compilation of the data will give a geological framework with which to interpret the mineralization and more importantly target areas where mineralization may occur. As the data is readily available the expense for compiling it is minor when compared to the amount and dollar value of data provided (> 817,000). Also, it will guide the exploration plans and allow more precise delineation of areas to prospect, trench or drill, reducing field expenses greatly.

Compiling the previously acquired data will undoubtedly produce a number of hypotheses for where mineralization may be found. Hence, a small field programme consisting of prospecting and geological mapping is suggested to follow-up these ideas. Finally, the camp showing will need to be tested to depth and along strike.

Depending on the timing for the completion of the new Kemess haul road (Sloan Connector), drilling may be wisely delayed until 2004, as mob/demob costs would decrease substantially.

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Richards, T.A.

1978: Geology of Hazelton (west-half) map-area, British Columbia; Current Research, Part A, Geological Survey of Canada, Paper 78-1A, p. 59-60.

Thompson, W.D.

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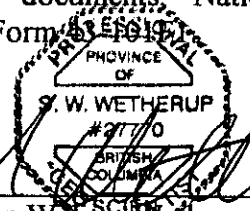
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1991: Tectonic Assemblage Map of the Canadian Cordillera and Adjacent Parts of the United States of America; Geological Survey of Canada, "A" Series Map , 1712A.

STATEMENT OF QUALIFICATIONS

I, Stephen William Wetherup of 635 East 45th Avenue, Vancouver, British Columbia, certify that:

1. I am a graduate of the University of Manitoba with a BSc. Honours in Geology, in 1995,
2. I have practiced my profession as an mineral exploration geologist with Fox Geological Services, Phelps Dodge Corp. of Canada and as a geological consultant, for 5 years,
3. I have been operating a business as a geological consultant under my own name since June, 2001,
4. I am a member of the Society of Economic Geologists, Geological Association of Canada, and the Vancouver Mining Exploration Group,
5. I am a Professional Geoscientist registered with the Association of Professional Geoscientists and Engineers of British Columbia,
6. I last visited the Tommy Jack Property between July 23 and July 28, 2002,
7. I am the author of this report,
8. I am not aware of any material facts or change in facts at the time this certification is dated.
9. I have no monetary interest in the property nor do I own or expect to receive interest in the company who is currently operating on the property,
10. I have had no previous involvement with the Tommy Jack Property,
11. I have read the TSX Venture Exchange policy documents, National Instrument 43-101, Companion Policy 43-101CP, and Form 43-101F.


Stephen William Wetherup,
BSc., P. Geo.

Vancouver, British Columbia

Dated this 22 day of

MAY, 2003

APPENDIX I
2002 Field Expenses

Summary of Expenses on Tommy Jack Property
For the Period July 1 - October 31, 2002

Expense Category	Item	Vendor	Units	Rate	Amount	Totals
Field Labour	Geologist	Stephen Wetherup	13 days	\$267.50/day	\$3,477.50	
	Labourer	Jason Chornobay	10 days	\$150/day	\$1,500.00	
	Labourer	Jordon Ross	11 days	\$150/day	\$1,650.00	
	<i>Subtotal of Labour</i>					\$6,627.50
Acc and Board	Accommodations	Stephen Wetherup (expenses)			\$663.23	
	Meals	Stephen Wetherup (expenses)			\$630.62	
	<i>Subtotal of Meals and Entertainment</i>					\$1,293.85
Transportation	Truck rental	Stephen Wetherup	11 days	\$80.25/day	\$882.75	
	Fuel	Stephen Wetherup (expenses)			\$258.33	
	Helicopter	CJL Enterprises	3.4 hours	\$885.64/hour	\$3,011.18	
	Helicopter	Interior Helicopters	10.8 hours	\$1061.55/hour	\$11,464.74	
	<i>Subtotal of Travel & Accommodations</i>					\$15,617.00
Geochemical Analyses	Assays	Acme Analytical Laboratories			\$1,500.68	
	Assays	Acme Analytical Laboratories			\$65.74	
	Assays	Acme Analytical Laboratories			\$1,995.02	
	<i>Subtotal of Geochemical Analyses</i>					\$3,561.44
Misc. Expenses	Sat Phone	Globalstar Canada			\$51.78	
	Field gear	Jordon Ross (expenses)			\$139.12	
	Field gear	Stephen Wetherup (expenses)			\$810.76	
	Report writing	Stephen Wetherup (labour and printing)			\$6,553.75	
	<i>Subtotal of Miscellaneous Expenses</i>					\$7,555.41
<i>Grand Total of Tommy Jack Project</i>						\$34,655.20

APPENDIX II
Assay Certificates
and
Summary Geological Descriptions with Selected Assays

Tommy Jack Property - 2002 Grab Samples

Summary Descriptions and Select Assay Values

Note: All assay results by ICP-MS method except for Au and Ag, which were done by fire assay.

Sample Number	UTM Easting	UTM Northing	Datum	Zone	Sample Description	Cu (ppm)	Pb (ppm)	Zn (ppm)	Hg (ppb)	FA Au (gpt)	FA Ag (gpt)
67	585944	6221715	NAD 27	09V	Quartz vein with 2-5% pyrite, arsenopyrite, graphite; banded sulphide and quartz; vein 50 cm wide.	73	7312	776	880	1.28	54.8
68	585981	6221705	NAD 27	09V	Sample of lower quartz zone, 10-30% sulphide; pyrite, galena, sphalerite, arsenopyrite.	478	16127	9171	3570	5.41	259.2
69	585981	6221705	NAD 27	09V	Brecciated arenite with quartz infill.	74	316	7647	44	0.05	16.5
70	585981	6221705	NAD 27	09V	Large banded quartz vein with pyrite and arsenopyrite.	1053	10082	18782	3389	10.56	697.5
106	586031	6221711	NAD 27	09V	Quartz-carbonate vein with 10% sulphide and graphite.	28	3	32	6	0.01	0
107	586052	6221713	NAD 27	09V	Quartz-carbonate vein within shale.	51	25	54	8	0.01	0.8
108	586104	6221782	NAD 27	09V	Quartz-carbonate veins within a fault zone.	30	14	70	7	0.01	0
109	586188	6221811	NAD 27	09V	Galena-sphalerite vein; 20-30 cm vein within shale.	4944	20494	99999	28344	0.15	1215.4
110	586188	6221811	NAD 27	09V	Malachite stained shale with galena-sphalerite veins; may contain tetrahedrite.	2428	1458	4106	1023	0.42	829.2
111	586225	6221828	NAD 27	09V	Quartz-carbonate-galena-arsenopyrite vein; runs for 20 m in outcrop; within a recessive carbonate altered arenite.	205	1622	1306	225	1.01	60.7
112	586266	6221835	NAD 27	09V	Silicified siltstone with quartz-carbonate-pyrite vein stockwork; tr-1% sulphide.	79	75	95	34	0	1.7
113	586427	6222074	NAD 27	09V	Quartz-carbonate vein 5 cm wide with trace sulphide within medium grained arenite.	39	221	282	32	0.01	0.4
120	585987	6221708	NAD 27	09V	Grab of lowermost banded quartz vein in the camp showing; 10 cm wide.	371	392	191	74	0.5	59.2
121	585987	6221708	NAD 27	09V	Sample taken directly above 120; banded quartz-pyrite-arsenopyrite-galena.	41	803	196	258	3.4	25.7
125	585973	6221695	NAD 27	09V	Quartz-veined and silicified arenite and siltstone.	128	2227	3030	5016	1.21	277.4
129	585972	6221667	NAD 27	09V	Sulphide rich shale.	82	48	815	60	0.02	27.6
130	585972	6221667	NAD 27	09V	Quartz-carbonate vein with pyrite-arsenopyrite and galena	152	4890	3862	1697	6.37	412.8
131	585978	6221667	NAD 27	09V	Quartz-carbonate vein with 2% galena, 1% arsenopyrite, argentite?; within siliceous shale.	1771	17794	1001	5253	1.13	1824.7

Tommy Jack Property - 2002 Grab Samples

Summary Descriptions and Select Assay Values

Note: All assay results by ICP-MS method except for Au and Ag, which were done by fire assay.

Sample Number	UTM Easting	UTM Northing	Datum	Zone	Sample Description	Cu (ppm)	Pb (ppm)	Zn (ppm)	Hg (ppb)	FA Au (gpt)	FA Ag (gpt)
132	585984	6221640	NAD 27	09V	Quartz-Fe-carbonate vein (mostly carbonate) within carbonate altered arenite.	63	63	176	70	0.02	10.9
133	584191	6216954	NAD 27	09V	Quartz-carbonate veins within a weakly altered arenite; ~10% quartz veins; vuggy veins.	51	44	71	86	0	6.6
134	584298	6217118	NAD 27	09V	Carbonate-clay altered medium grained arenite; 1 cm limonitic rind on weathered surfaces.	54	11	81	76	0.01	0.8
135	584321	6217255	NAD 27	09V	20 cm thick carbonate vein within arenite; abundant limonite staining.	12	6	19	46	0	2.6
136	584305	6217162	NAD 27	09V	Silicified arenite and siltstone with abundant (10%) quartz veins with ~1% disseminated pyrite.	30	7	86	224	0	1.4
137	584218	6217427	NAD 27	09V	Limonitic carbonate vein stockwork in silicified and carbonate altered arenite/siltstone.	29	7	62	118	0	0
138	584143	6217509	NAD 27	09V	Carbonate altered arenite with 1-2% quartz-carbonate-pyrite veins.	40	7	72	46	0.01	0.7
139	583445	6218090	NAD 27	09V	Clay (sericite altered) dacite dyke with ~2-3% pyrite; ~2% quartz phenocrysts.	7	5	19	50	0	0.4
140	582747	6218670	NAD 27	09V	Carbonate/clay altered and veined limonite stained coarse grained arenite with trace sphalerite and Fe-carbonate in veins.	6	5	22	71	0	0

Tommy Jack Property - 2002 Chip Samples
 Summary Descriptions and Select Assay Values

Note: All assay results by ICP-MS method except for Au and Ag, which were done by fire assay.

Sample Number	UTM Easting	UTM Northing	Datum	Zone	Sample Description	Cu (ppm)	Pb (ppm)	Zn (ppm)	Hg (ppb)	FA Au (gpt)	FA Ag (gpt)
114	585972	6221709	NAD 27	09V	Begins at base of quartz breccia zone a graphitic shear, mostly comminuted and carbonate altered arenite	81	46	1850	39	0.02	4.5
115	585972	6221709	NAD 27	09V	Second metre up from 114; through 50 cm quartz vein.	61	146	3503	39	0.03	3.2
116	585972	6221709	NAD 27	09V	2-3 m above base of quartz breccia zone.	370	16793	5389	5185	1.31	384.9
117	585972	6221709	NAD 27	09V	3-4 m above base of quartz breccia zone; carbonate and clay altered arenite.	314	1651	1012	349	1.26	118.9
118	585986	6221708	NAD 27	09V	Same horizon as sample 115; ~1 m above base of silicified zone; 25 cm banded quartz vein within section.	376	939	711	98	0.61	69.7
119	585987	6221708	NAD 27	09V	Same horizon as sample 115; ~1 m above base of silicified zone, 30 cm banded quartz vein within section.	37	491	2192	78	0.02	6.3
122	585973	6221702	NAD 27	09V	0-1 m of next section ~ 1 m above samples 114-117; this sample is mostly banded quartz vein which extends into the creek.	3107	14946	26911	6692	3.19	756.7
123	585973	6221702	NAD 27	09V	1-2 m of second section; some quartz vein with mostly quartz breccia and arenite.	5164	23832	99999	21825	0.96	1156.6
124	585973	6221702	NAD 27	09V	2-3 m of second section; sulphide rich carbonate and clay altered arenite and shale.	415	8469	14171	2166	0.06	65.5
126	595971	6221681	NAD 27	09V	0-1 m of third section; ~1-2 m above second section; Silicified shale/siltstone with abundant pyrite (2-5%) and ~ 20% quartz-carbonate veins.	73	57	562	143	0.08	21.2
127	595971	6221681	NAD 27	09V	2-3 m of third section; silicified shale/siltstone with abundant pyrite (2-5%) and ~ 10-20% quartz-carbonate veins.	182	14223	3187	1073	4.15	214.4
128	595971	6221681	NAD 27	09V	1-2 m of third section; silicified shale/siltstone with abundant pyrite (2-5%) and ~ 10-20% quartz-carbonate veins.	58	194	287	86	0.23	31.8

Tommy Jack Property - 2002 Core Samples

Summary Descriptions and Select Assay Values

Note: All assay results by ICP-MS method except for Au and Ag, which were done by fire assay.

Sample Number	Drill Hole	From	To	Length (m)	Sample Description	Cu (ppm)	Pb (ppm)	Zn (ppm)	Hg (ppb)	FA Au (gpt)	FA Ag (gpt)
53	87-14	26.5	27.1	0.61	Siliceous dacite; clay altered with qtz-carb veins.	87.68	877.51	1926.4	736	1.50	5.7
54	87-14	25.6	25.9	0.61	Siliceous dacite	31.19	162.51	96.3	34	0.02	2.7
55	87-14	34.4	35.2	0.76	Siliceous arenite with several sulphide bearing qtz veins.	118.07	31.26	57.7	7	0.15	1.3
56	n/1	24.7	25.3	0.61	Silicified arenite with quartz veins.	88.24	951.1	115.1	15	0.62	5.5
57	86-9	31.4	32.0	0.61	Silicified arenite with quartz veins.	41.81	55.34	109.4	8	0.00	0.3
58	87-26	14.4	14.8	1.40	Dacite dyke contact with sediments.	34.37	111.05	106.3	9	0.00	1.7
59	87-26	16.2	17.4	1.20	Dacite dyke and contact zone with sediments	42.98	152.15	153.4	13	0.01	2.1
60	86-1	32.9	33.5	0.61	Dacite dyke with abundant disseminated pyrite.	5.47	4.03	33.1	0	0.02	0.0
61	86-1	30.5	31.1	0.61	Clay altered dacite dyke with few quartz veins and disseminated pyrite.	7.11	2.79	28.2	0	0.00	0.5
62	86-1	17.4	18.0	0.61	Abundant quartz-carbonate within shale.	58.33	123.39	167.2	17	0.17	2.5
63	87-16	5.5	6.4	0.91	Quartz-Fe-carbonate veined siltstone with few sulphide veins.	70.57	25.54	73.4	5	0.01	2.5
64	87-16	7.0	7.9	0.91	Quartz-Fe-carbonate veined siltstone with few sulphide veins.	73.05	36.04	104.1	8	0.01	0.0
65	87-7	55.8	57.3	1.52	Quartz-Fe-carbonate veined arenite with few graphitic zones.	40.99	5.63	109	82	0.00	1.1
66	87-7	44.8	45.7	1.52	Quartz-Fe-carbonate veined arenite; carbonate altered.	30.05	3.61	17.7	0	0.00	0.0
84	87-11	19.7	20.2	0.50	Intense quartz-sulphide veining in carbonate altered and silicified arenite.	163.09	159.7	690.9	69	0.01	8.7
85	87-11	28.3	29.1	0.76	Unaltered silstone and arenite with one 5 cm quartz vein.	64.09	15.43	102.7	5	0.00	0.6
86	87-2	4.0	5.0	1.00	Carbonate altered arenite with scant sulphide veining	59.76	6.84	251.8	28	0.00	0.0
87	87-16	7.9	9.1	1.22	Medium grained arenite with 1% quartz-carbonate veins	71.32	222.9	2123.4	118	0.01	1.8

Tommy Jack Property - 2002 Core Samples

Summary Descriptions and Select Assay Values

Note: All assay results by ICP-MS method except for Au and Ag, which were done by fire assay.

Sample Number	Drill Hole	From	To	Length (m)	Sample Description	Cu (ppm)	Pb (ppm)	Zn (ppm)	Hg (ppb)	FA: Au (gpt)	FA: Ag (gpt)
88	n/l	18.1	19.0	0.90	Arenite with 1% quartz-carbonate veins	29.48	330.32	73.6	6	0.01	0.0
89	n/l	19.0	19.4	0.40	Arenite with 1% quartz-carbonate veins	21.08	105.38	41.3	0	0.02	0.0
90	n/l	19.4	20.9	1.50	Arenite with quartz-carbonate-pyrite veins and disseminated pyrite locally.	67.97	18.36	93.4	10	0.05	1.1
91	n/l	57.3	58.8	1.52	Clay altered arenite with quartz-carbonate veins with disseminated and blebs of sulphide.	35.87	8.35	55.4	5	0.01	0.0
92	n/l	n/l	n/l	0.20	High grade quartz -chalcopyrite-argenitite?-galena-sphalerite vein.	952.15	5894.5	18940.2	969	0.12	290.9
93	87-13	10.1	11.6	1.52	Dacite dyke contact with quartz-pyrite veins.	16.09	120.69	329.9	31	0.11	0.6
94	87-13	5.8	7.0	1.22	Dacite dyke with 1% pyrite-galena veins	33.26	513.4	826.3	61	0.40	3.7
95	87-14	29.3	29.5	0.20	Quartz-pyrite-sphalerite vein at dyke contact.	675.89	21205.39	56725	9430	38.30	135.9
96	87-6	64.9	66.4	1.52	Silicified dacite dyke?, and arenite with rare quartz-Fe-carbonate vein	70.17	33.36	106.9	7	0.01	0.3
97	87-5	13.1	14.6	1.52	Rusty siliceous dacite dyke	47.14	9.51	63.6	14	0.03	0.8
98	87-5	8.5	10.1	1.52	Silicified arenite	9.51	19.73	148.7	9	0.01	0.0
99	87-5	11.6	13.1	1.52	Silicified dacite contact with rusty quartz veins in arenite	33.25	6.68	45.5	26	0.00	0.0
100	87-5	19.8	21.0	1.22	Silicified dacite dyke	23.66	88.83	104.9	13	0.11	0.0
101	87-5	23.8	25.3	1.52	Carbonate altered arenite/siltstone with a 10 cm quartz vein	73.2	6.8	56.4	9	0.00	0.8
102	87-5	25.3	26.8	1.52	Carbonate altered arenite with rare quartz-carbonate veining	80.83	21.26	82.7	10	0.02	0.6
103	87-5	26.8	28.3	1.52	Carbonate altered and silicified arenite	5.48	12.24	56	0	0.02	0.5
104	87-5	28.3	29.6	1.22	Carbonate altered and silicified arenite	18.75	25.25	642.2	53	0.03	0.9
105	87-5	38.1	39.0	0.91	Aphanitic dacite with 2-3% disseminated pyrite 1mm cubes.	44.81	5.37	45.6	6	0.01	1.3

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International Kodiak Resources Inc. File # A202769R
320 - 885 Dunsmuir St., Vancouver BC V6C 1R5

SAMPLE#	Ag** gm/mt	Au** gm/mt
00067	54.8	1.28
00068	259.2	5.41
00069	16.5	.05
00070	697.5	10.56
STANDARD R-1/AU-1	101.0	3.31

GROUP 6 - PRECIOUS METALS BY FIRE ASSAY FROM I.A.T. SAMPLE, ANALYSIS BY ICP-ES.
- SAMPLE TYPE: ROCK PULP

DATE RECEIVED: OCT 31 2002 DATE REPORT MAILED: Nov 14/02 SIGNED BY: *C. Long* D: TOYE, C. LEONG, J. LANG; CERTIFIED B.C. ASSAYERS

All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of the analysis only.

Date FA *2/16*

SAMPLE#	Ag** gm/mt	Au** gm/mt
00053	5.7	1.50
00054	2.7	.02
00055	1.3	.15
00056	5.5	.62
00057	.3	<.01
00058	1.7	<.01
00059	2.1	.01
00060	<.3	.02
00061	.5	<.01
00062	2.5	.17
00063	2.5	.01
00064	<.3	.01
00065	1.1	<.01
00066	<.3	<.01
00084	8.7	.01
00085	.6	<.01
00086	<.3	<.01
00087	1.8	.01
00088	<.3	.01
00089	<.3	.02
00090	1.1	.05
00091	<.3	.01
00092	290.9	.12
00093	3.6	.11
00094	3.7	.40
RE 00094	3.1	.39
00095	135.9	38.30
00096	.3	.01
00097	.8	.03
00098	<.3	.01
00099	<.3	<.01
00100	<.3	.11
STANDARD R-1/AU-1	101.4	3.39

GROUP 6 - PRECIOUS METALS BY FINE ASSAY FROM 1 A.T. SAMPLE, ANALYSIS BY JCP-ES.
 - SAMPLE TYPE: CORE PULP
 Samples denoted 'RE' are Reverse and 'REE' are Reagent Residue

DATE RECEIVED: OCT 31 2002 DATE REPORT MAILED: *Nov 14/02* SIGNED BY: *[Signature]* D. TOYS, C. LEONG, J. UMMS; CERTIFIED B.C. ASSAYERS



SUNSHINE SYSTEMS

SAMPLE#	Ag** gm/mt	Au** gm/mt
00101	.8	<.01
00102	.05	.02
00103	.05	.02
00104	.05	.03
00105	1.3	.01
STANDARD R-1/AU-1	101.0	3.31

Sample type: CORE PULP.

SUNSHINE SYSTEMS

SUNSHINE SYSTEMS



ASSAY CERTIFICATE



International Kodiak Resources Inc. File # A202770R2 Page 1
320 - 805 Dunsmuir St., Vancouver BC V6C 1K5

OCTAFORM SYSTEMS

604 408 0373

11/22 '02 13:47 NO. 818 03/10

SAMPLE#	Ag** gm/mt	Au** gm/mt
00106	<.3	.01
00107	.8	.01
00108	<.3	.01
00109	1215.4	.15
00110	829.2	.42
00111	60.7	1.01
00112	1.7	<.01
00113	.4	.01
00114	4.5	.02
00115	3.2	.03
00116	384.9	1.31
00117	118.9	1.26
00118	69.7	.61
00119	6.3	.02
00120	59.2	.50
00121	25.7	3.40
00122	756.7	3.19
00123	1156.6	.96
00125-A	65.5	.06
00125-B	277.4	1.21
00126	21.2	.08
00127	214.4	4.15
RE 00127	217.5	4.06
00128	31.8	.23
00129	27.6	.02
00130	412.8	6.37
00131	1824.7	1.13
00132	10.9	.02
00133	6.6	<.01
00134	.8	.01
00135	2.6	<.01
00136	1.4	<.01
00137	<.3	<.01
STANDARD R-1/AU-1	100.4	3.43

GROUP 6 - PRECIOUS METALS BY FIRE ASSAY FROM 1 A.T. SAMPLE, ANALYSIS BY ICP-ES.
- SAMPLE TYPE: ROCK PULP
Samples beginning 'RE' are Retests and 'IRE' are Reject Retests.

DATE RECEIVED: OCT 31 2002 DATE REPORT MAILED: Nov 14/02 SIGNED BY: *C.L.* D. TOYE, C. LEONG, J. WANG, CERTIFIED B.C. ASSAYERS



SAMPLE#	Ag** gm/mt	Au** gm/mt
00138	.7	.01
00139	.4	<.01
00140	<.3	<.01
00141	<.3	<.01
00142	1.0	.01
00143	.5	.08
RE 00143	<.3	.08
00144	.3	.04
00145	.9	.07
00146	2.2	.05
00147	11.3	.17
00148	1.1	<.01
00149	<.3	<.01
00150	<.3	<.01
STANDARD R-1/AU-1	101.5	3.31

Sample type: ROCK FULP. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



SAMPLE#	Hg	Cu	Pb	Zn	Ag	Hl	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Tl	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga	Sample
	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	gm
00101	.48	73.20	6.80	56.4	879	9.3	9.8	618	3.68	31.5	.2	.7	1.2	115.0	.23	1.02	.07	11	2.22	.040	6.0	3.8	.90	42.3	<.001	1	.33	.023	.13	.7	5.4	.07	.07	9	.2	.03	.9	30
00102	3.57	80.83	21.26	82.7	1039	11.5	12.0	727	3.21	69.5	.2	2.4	1.8	104.8	.64	1.00	.09	11	2.65	.043	7.6	4.1	.87	46.8	<.001	1	.33	.027	.16	1.0	4.5	.06	.23	10	.3	.03	.8	30
00103	3.64	6.48	12.24	56.0	141	9.1	10.4	695	3.38	35.1	.4	10.8	2.9	78.1	.41	.42	.04	10	2.11	.044	13.4	3.5	.92	49.8	<.001	2	.32	.031	.15	.7	4.1	.06	.09	<.1	<.02	.8	30	
00104	1.24	18.75	25.25	642.2	578	11.8	14.2	878	2.92	259.3	.2	13.4	1.7	99.8	5.97	.76	.43	13	2.61	.039	7.6	4.9	.78	62.9	<.001	2	.41	.023	.17	1.6	4.9	.08	.26	63	.1	<.02	.9	30
00105	.66	44.81	5.37	45.6	726	10.3	13.8	905	3.95	48.2	.2	10.0	1.2	70.1	.26	.79	.22	14	2.73	.105	6.7	5.2	.80	40.3	.001	1	.46	.030	.20	.4	7.7	.10	.08	6	.2	.03	1.0	30
STANDARD	9.21	126.67	31.94	163.4	283	37.0	12.3	759	3.35	32.0	6.5	21.2	3.6	26.8	5.88	4.90	5.05	77	.55	.083	19.0	173.1	.58	136.9	.089	2	1.78	.030	.16	3.9	3.5	1.11	.02	226	1.3	1.00	6.2	30

Standard is STANDARD D53.



International Kodiak Resources Inc. FILE # A202769



Table with columns for Sample ID and various chemical elements (Pb, Cu, Zn, Ag, Ni, Co, Mn, Fe, Al, U, Au, Th, Sr, Cd, Sb, Bi, V, Ca, P, La, Cr, Mg, Ba, Tl, B, Al, Na, K, N, Sc, Ti, S, Mo, Se, Te, Ga, Cs, Pd, Pt, Sample #). Rows include sample IDs 00830 through 00879 and a STANDARD 053.

Sample type: ROCK 0150 602. Samples beginning "AC" are Arsenic and "BC" are Bismuth Arsenic.



GEOCHEMICAL ANALYSIS CERTIFICATE

International Kodjak Resources Inc. File # A202770 Page 1



SAMPLE	NO	Ca	Pb	Zn	Ag	Bi	Co	Ni	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Cr	P	Le	Cr	Ni	Be	Tl	S	Al	Mn	K	U	Sc	Th	S	Hg	Sn	Te	Ga	Sample
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
57	17	3.25	17	2.2	43	1	4.1	2	83	6	4.1	1.1	4.1	1.6	4.01	14	30	4	274.001	4.5	1.7	4.01	2.0	802	2	91	329	4.01	4	4.1	4.02	4.01	45	4.1	4.02	4.1	30	
00106	64	10.22	3.30	32.3	190	10.3	12.0	1930	7.39	21.2	1	5	3	194.2	10	1.09	20	34	0.02	0.00	1.4	7.0	1.70	24.4	804	2	46	0.02	12	1.0	6.0	0.05	0.01	6	3	0.02	4	30
00107	62	11.25	34.60	15.6	1619	11.7	13.0	2914	10.01	23.0	4	5	1	147.3	20	2.08	32	24	12.01	0.01	7	3.6	3.13	33.7	803	2	42	0.02	0.05	1.2	4.2	0.03	0.01	8	6	0.03	7	30
00108	30	20.90	14.35	19.7	637	4.7	6.8	1627	0.13	13.4	4	6	1	101.6	44	2.17	60	10	10.30	0.04	7	3.7	2.09	58.0	801	2	54	0.02	0.07	1.1	4.7	0.05	1.0	7	3	0.02	1.1	30
00109	1.45	4944.36	35493.84	99999.0	99999.0	8.1	14.2	1820	10.31	321.9	4	6	1	10.7	3157.74	2092.61	25	15	74	0.04	4.5	4.1	83	8.2	806	4	23	0.04	4.01	2.4	6.3	0.05	15.20	28344	4	30	1.4	30
00110	2.31	2427.66	1467.61	4106.4	99999.0	10.3	11.6	426	0.05	302.4	1	5.7	6	29.2	41.03	232.41	17	10	165	0.03	2.1	12.0	84	66.0	801	4	2.18	0.04	17	1.0	9.5	1.0	2.00	1820	2.0	0.0	3.0	30
00111	2.15	295.04	1621.93	1395.4	80421	9.1	9.2	304	4.4	2599.0	4	774.6	1	46.0	12.70	87.00	24	6	1.82	0.01	4.1	30.0	10	14.1	801	2	38	0.05	10	12.0	1.0	0.0	2.02	225	1.0	0.0	1.0	30
00112	75	70.00	74.67	94.7	3269	12.0	20.6	969	8.69	117.1	1	1.0	5	346.8	33	1.81	74	4	0.02	3.66	7.0	0.5	1.05	116.4	806	2	2.48	0.02	23	1.2	10.1	1.11	1.2	34	4	1.0	4	30
00113	1.67	31.10	221.00	231.7	1507	4.6	5.1	2379	2.62	80.4	4	1.6	1	790.8	2.04	1.20	06	13	11.10	0.17	6.4	13.1	30	35.6	801	4	1.64	0.02	04	6.1	4.3	0.03	14	32	6	0.04	1.3	30
00114	5.62	90.16	46.16	1850.3	3637	29.8	24.4	1501	5.44	109.7	1	1.9	5	138.3	13.09	4.40	10	30	3.20	0.00	1.9	0.6	79	337.1	803	2	1.54	0.04	17	1.1	9.6	1.0	0.0	39	4	0.03	0.0	30
00118	1.04	61.41	145.77	3582.6	4004	21.0	20.7	1404	5.19	79.9	1	11.0	7	34.4	27.42	3.06	05	35	1.30	0.09	3.0	0.9	75	120.0	802	3	1.25	0.04	20	1.6	12.2	1.11	0.05	30	3	0.03	2.5	30
00116	9.45	289.95	1672.06	8388.0	99999.0	6.3	9	78	3.18	1306.2	4	872.7	1	10.0	50.46	415.73	21	6	0.02	0.03	4.1	37.4	0.03	63.9	801	2	1.70	0.04	07	12.1	1.3	1.0	1.19	1405	3.0	0.03	1.1	30
00117	2.46	313.96	1651.09	1811.0	99999.0	12.0	0.8	1030	5.09	682.0	4	822.0	1	0.0	9.11	74.12	06	25	1.10	1.90	1.6	10.9	31	74.7	802	2	1.10	0.09	14	9.1	7.6	1.12	7.0	300	1.0	0.03	2.6	30
00119	2.87	375.16	935.45	713.4	67140	10.3	15.7	142	6.46	450.0	1	431.6	5	13.9	7.74	194.17	11	26	25	0.07	1.8	19.6	20	13.3	801	2	1.02	0.02	10	0.2	7.7	1.00	7.1	90	1	0.04	2.2	30
00110	1.10	30.73	491.25	2971.9	7014	10.6	21.2	1166	6.79	79.8	1	51.7	8	11.9	26.16	8.42	07	46	26	0.05	4.6	12.1	60	65.0	801	4	2.14	0.02	22	6.3	10.2	1.12	0.05	70	4	0.04	4.0	30
00120	4.66	370.81	301.12	190.9	68045	9.6	2.0	107	3.00	373.6	4	436.7	4	7.0	2.40	64.32	11	11	12	0.03	4.5	34.9	16	35.6	802	2	4.49	0.07	06	11.7	2.6	0.01	6.6	74	3	0.03	1.3	30
00121	4.29	41.43	902.00	196.2	23060	4.0	1.7	63	3.19	2392.3	4	3034.4	4	4.3	1.11	87.70	06	3	0.01	0.00	4.5	33.0	0.01	13.0	801	1	0.09	0.09	04	14.0	6	0.01	1.01	250	4	0.02	4	30
00122	6.23	1306.81	14045.96	20030.7	99999.0	11.1	3.4	253	5.45	1212.9	4	1316.7	4	14.4	308.76	1197.04	34	6	0.01	0.01	4.5	32.9	1.0	7.9	801	4	2.27	0.00	03	10.0	2.0	0.0	6.30	6002	1.6	0.03	1.0	30
00123	3.78	1364.11	23831.54	99999.0	99999.0	11.0	23.0	844	6.00	490.7	4	622.4	2	64.0	1716.93	2927.47	30	21	2.00	1.00	4.6	34.1	35	11.6	803	1	1.62	0.00	10	107.9	5.6	19	10.87	2125	7	0.0	2.0	30
00125-4	2.66	419.30	8406.23	14171.1	63415	12.2	14.2	1302	3.95	328.4	4	70.2	4	67.7	146.42	41.40	07	23	2.01	0.02	1.0	11.2	7.0	49.3	801	2	0.87	0.02	1.0	1.6	6.4	1.11	9.0	2146	1	0.04	1.0	30
00125-0	11.34	120.44	2227.54	3029.9	99999.0	3.9	6	61	0.99	179.2	4	450.9	4	6.6	23.06	284.82	03	42	0.02	0.02	4.5	29.6	0.1	4.1	802	1	0.06	0.06	02	16.0	3	0.03	4.5	6216	4	0.0	2	30
00124	0.4	73.40	51.30	582.0	10641	11.0	11.2	1063	1.17	3830.6	4	104.9	3	11.0	13.40	19.91	06	22	2.6	0.07	1.6	7.1	22	64.0	803	4	0.1	0.02	24	3.2	0.0	1.1	1.21	143	5	0.06	9	30
00127	1.30	182.00	14221.71	3006.7	99999.0	14.9	11.8	1054	7.46	6426.2	4	2590.1	4	43.3	44.44	107.73	07	35	1.17	0.04	2.6	12.5	7.1	35.5	801	2	1.32	0.02	16	3.9	10.0	1.11	4.0	1073	5	0.06	2.9	30
00127	1.30	181.42	14300.16	3234.0	99999.0	15.2	15.3	1066	7.04	6476.6	1	2716.4	4	63.7	41.46	104.30	07	34	1.10	0.04	2.6	11.7	7.1	34.5	804	1	1.36	0.02	16	4.0	10.3	1.10	4.59	1104	6	0.07	2.9	30
00128	1.71	67.96	192.00	286.8	91015	13.2	13.6	871	3.71	8116.6	1	39.8	4	21.8	3.06	42.96	00	21	0.4	0.00	1.7	19.5	3.0	63.8	801	2	0.33	0.07	30	14.0	0.3	1.4	1.12	95	4	0.07	1.0	30
00129	7.0	61.50	40.03	315.0	26992	11.7	22.7	1321	2.61	670.4	1	7.0	7	27.9	9.62	14.92	05	30	1.64	0.07	4.0	7.0	1.2	63.9	801	2	1.26	0.09	19	2.0	12.4	1.11	1.13	60	3	0.07	2.4	30
00130	5.00	152.20	4000.00	3042.3	99999.0	10.0	3.0	241	6.16	17749.6	4	134.4	1	15.3	46.00	210.49	06	8	2.2	0.06	4.6	20.1	1.0	12.5	803	2	0.44	0.06	07	15.7	1.7	1.0	3.32	1697	2.2	0.03	9	30
00131	3.05	1771.13	17793.67	1040.0	99999.0	4.0	9	221	1.20	2296.6	4	107.4	4	13.9	38.07	2601.96	07	42	1.4	0.01	4.5	29.9	0.4	7.2	801	4	0.06	0.09	02	17.9	5	0.07	1.50	6253	0	0.04	2	30
00132	1.34	67.92	62.95	195.7	9908	12.7	11.4	1659	6.47	49.0	4	12.2	2	201.9	1.61	3.05	0.02	30	0.97	0.07	1.6	16.0	3.50	30.6	803	2	1.32	0.03	04	3.0	4.1	0.4	0.7	70	4	0.03	2.0	30
00133	1.64	61.20	44.00	71.0	7225	12.2	12.8	697	2.67	32.1	4	2.9	6	107.6	34	7.47	04	49	3.21	0.42	6.7	18.2	34	40.1	801	2	1.43	0.06	03	3.0	6.0	4.02	4.01	66	1	0.06	4.0	30
00134	0.05	54.00	10.55	80.5	1256	10.7	20.2	504	4.36	13.3	1	1.0																										



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SAMPLE#	Hg	Cu	Pb	Mn	Ag	Bi	Co	Ni	Fe	As	Sr	Au	Th	Sr	Cd	Sb	Si	V	Ca	F	La	Cr	Mg	Ba	Ti	B	Al	Mo	K	V	Sc	Tl	Se	Hg	So	Te	Co	Sample
	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
00138	1.39	39.62	6.06	72.3	151	16.7	14.3	925	3.64	11.7	.1	.3	.9	19.3	.17	.06	.05	98	4.22	148	18.3	32.3	.70	43.6	.001	2	1.74	.611	.05	2.3	7.4	.03	.01	.41	.1	.03	6.7	30
00139	2.94	7.43	4.72	19.0	224	.6	6.5	1451	4.68	3.7	.1	<.2	.7	149.1	.09	.78	.03	25	7.26	167	8.3	4.7	1.54	40.5	.001	1	.46	.007	.06	1.9	3.4	.02	.12	.50	<.1	.02	1.2	30
00140	1.73	6.39	8.16	22.0	173	18.2	8.4	908	6.48	31.7	<.1	<.2	.3	176.2	.06	1.82	.05	53	6.72	130	2.4	13.1	.77	19.94	.001	1	.46	.007	.01	4.3	6.4	.02	.08	.71	.1	.03	1.1	30
00141	7.35	22.25	7.46	18.6	414	1.7	.3	119	.37	15.6	.4	.6	4.6	8.2	.73	.78	.19	<.1	.07	.003	13.2	7.4	.02	18.8	.002	<.1	.34	.058	.12	3.8	.9	<.02	<.01	4	<.1	.07	.9	30
00142	23.15	6.76	12.80	38.5	778	7.6	2.4	64	1.78	75.6	.4	19.9	1.8	9.3	.30	3.11	.60	14	.06	.078	18.2	32.7	.03	46.8	.002	<.1	.30	.003	.19	7.6	.9	.14	.01	.17	.5	.63	1.4	30
00143	2.64	10.50	6.33	19.1	456	3.2	2.7	47	.75	159.7	.3	66.8	3.1	16.3	.42	1.48	.06	11	.04	.019	16.5	13.3	.03	91.14	.001	<.1	.67	.002	.21	2.8	.9	.18	.01	.04	<.1	<.02	2.3	30
RE 00143	2.51	11.97	6.56	18.6	483	2.9	2.7	41	.74	152.0	.3	63.7	3.1	16.8	.40	1.41	.07	11	.04	.018	16.8	13.3	.03	90.64	.001	<.1	.71	.002	.22	1.9	.9	.18	<.01	.04	<.1	<.02	2.4	30
00144	2.77	8.99	5.80	18.7	628	4.7	1.3	38	.88	126.2	.3	41.5	2.5	8.9	.40	2.51	.11	6	.03	.015	13.1	20.7	.03	48.4	.001	<.1	.47	.001	.22	4.3	.7	.11	<.01	.113	<.1	.02	1.7	30
00145	5.34	6.72	6.37	9.4	642	2.8	.2	41	.82	204.7	.1	60.3	1.7	15.1	1.19	8.10	.02	<.2	.02	.007	8.8	19.3	.02	42.94	.001	1	.74	.001	.16	7.8	.3	.06	.04	.76	.3	<.02	1.8	30
00146	3.17	3.58	4.86	6.2	1701	3.3	.4	34	.47	375.2	.5	48.2	3.8	14.9	.40	11.16	.06	3	.07	.008	11.7	16.5	.06	81.84	.001	<.1	.38	.001	.17	4.6	.7	.12	<.01	.128	<.1	<.02	1.5	30
00147	18.82	18.48	7.97	7.6	10936	3.5	.5	53	1.74	488.6	<.1	164.7	.1	5.1	.65	52.03	<.02	<.1	.01	.002	2.1	35.8	.01	26.24	.001	<.1	.06	.002	.05	16.2	.3	.73	1.33	734	1.7	3.78	.3	30
00148	7.26	18.99	9.22	27.9	148	9.9	4.1	290	.94	6.6	1.1	.4	6.2	13.9	.15	.49	.11	18	.11	.036	19.8	19.5	.17	128.9	.001	<.1	.63	.025	.32	2.4	1.8	.10	<.01	.13	<.1	.03	2.8	30
00149	1.88	19.29	18.68	18.9	122	12.8	7.3	343	1.76	-3.8	1.3	.2	5.5	23.8	.30	.12	.12	17	.21	.050	21.8	37.5	.30	69.2	.002	<.1	1.00	.042	.18	1.9	1.7	.07	<.01	.7	<.1	.02	4.9	30
00150	1.48	36.72	6.90	11.5	77	19.5	3.7	141	1.93	2.4	1.1	<.2	6.9	23.6	.49	.22	.07	13	.41	.027	17.8	14.5	.04	88.1	.001	<.1	.77	.024	.38	1.4	1.2	.06	<.01	.6	<.1	<.02	2.4	30
STANDARD 001	9.29	121.78	32.18	188.3	387	34.4	11.6	769	8.37	32.8	6.8	21.1	3.7	28.6	6.80	8.90	6.18	74	.84	.084	18.6	177.9	.58	121.6	.002	2	1.68	.031	.15	3.8	3.5	1.20	.62	229	1.2	1.08	5.9	30

Sample type: NICK RISED GPC. Samples containing 'RE' are Reagents and 'STD' are Reagent Standards.

APPENDIX III
Detection Limits
and
Analytical Methods

Detection Limits for Au and Ag by Fire Assay

Acme Analytical Laboratories Ltd. lists the detection limits for the Au and Ag Fire Assay (Package 6: Au-Ag) in their price brochure as:

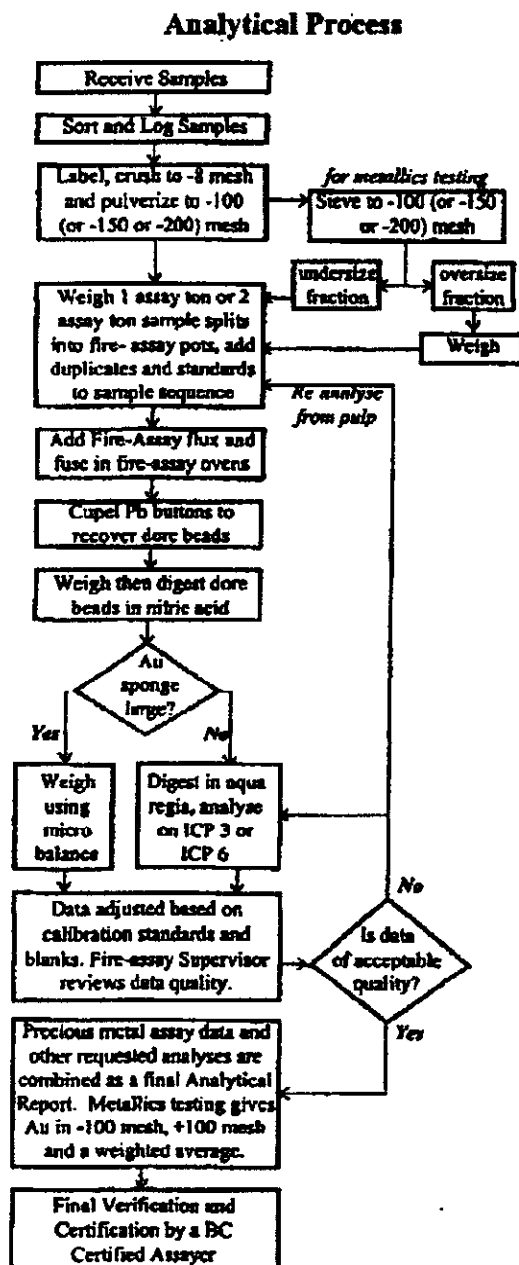
0.001 ounces per tonne for Au

0.001 ounces per tonne for Ag

ACME Analytical Laboratories Ltd.

852 East Hastings Street, Vancouver, British Columbia, Canada V6A 1R6
 Telephone: (604) 253-3158 • Facsimile: (604) 253-1716 • Toll free: 1-800-990-ACME (2263) • e-mail: acme_labs@mindlink.bc.ca

METHODS AND SPECIFICATIONS FOR ANALYTICAL PACKAGE GROUP 6 - PRECIOUS METAL ASSAY



Comments

Sample Preparation

Rocks and drill core are crushed to -8 mesh (-0.25 cm), riffle split to 250 g splits then pulverized to -100 mesh (-150 or -200 at client's request). Duplicates of crushed (rejects) and pulverized (pulp) material are added in each analytical batch (34 samples) to monitor sample inhomogeneity and analytical precision, respectively. One assay ton (29.2 ±0.01g) or two assay ton (58.4 ±0.01g) splits are weighed. High-grade gold standard STD Au-1 (Ag-2 if Ag assay requested) and a blank are added to each analytical batch to monitor accuracy. Results are reported in imperial (oz/t) or metric (gm/tonne) measure. For metallics testing, a 1Kg (or larger) split is pulverized and sieved to -100 mesh (-150 or -200 mesh at client's request). A representative 1 or 2 assay ton split of the undersize (-100, -150 or -200 mesh) fraction is assayed. Material remaining in the sieve (oversize fraction) is collected, weighed and assayed in total.

Sample Digestion

Fusing at 1000°C for 1 hour with fire-assay fluxes containing a PbO litharge and Ag inquart liberates all Au, Pt and Pd. After cooling, lead buttons are recovered and cupelled at 950°C to render Ag ±Au ±Pt ±Pd dore beads. Beads are weighed then leached in 1 mL of conc. HNO₃ at >95°C to dissolve Ag leaving Au sponges.

Sample Analysis

Large Au sponges >2 mm weighed by micro-balance (gravimetric determination). Small flakes are digested by adding 6 mL of 50% HCl to the HNO₃ solution then determined by ICP-ES (Jarrel Ash Atom-Comp model 800 or 975). Pt and Pd are also determined by ICP-ES. Every Ag fire assay is accompanied by a wet assay. Ag concentrations <10 oz/t are reported from the wet assay, results >10 oz/t are from the fire assay. Au metallics testing reports concentrations of Au in the -100 mesh fraction, the +100 mesh fraction and the calculated weighted average of these fractions.

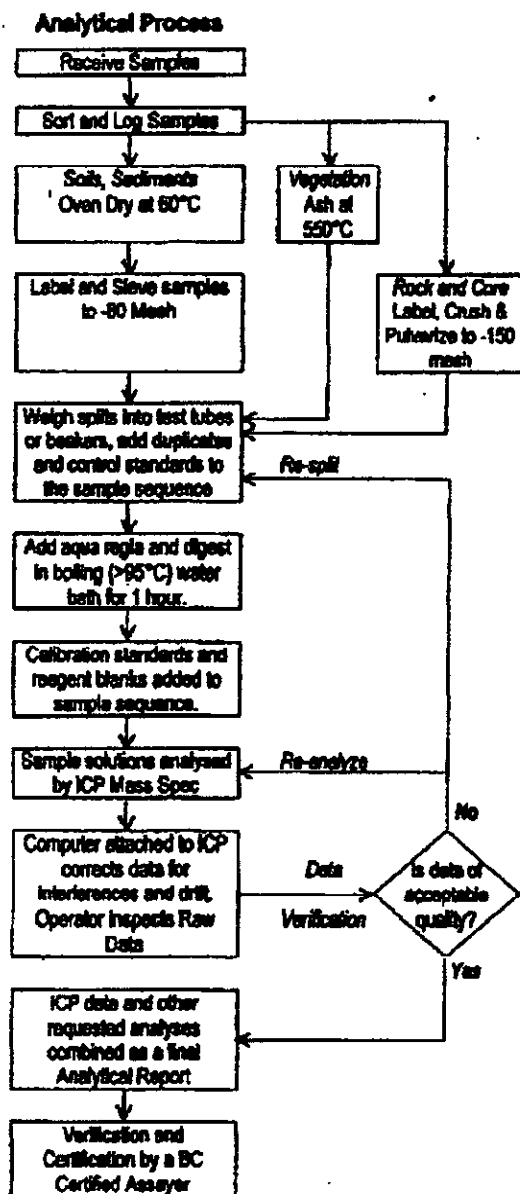
Data Evaluation

Raw and final data undergoes a final verification by a British Columbia Certified Assayer who then signs the Analytical Report before it is released to the client. Chief Assayer is Clarence Leong, other certified assayers are Dean Toye and Jacky Wang.

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METHODS AND SPECIFICATIONS FOR ANALYTICAL PACKAGE GROUP 1F-MS – ULTRATRACE BY ICP-MS • AQUA REGIA



Comments

Sample Collection

Samples may consist of soil, sediment, plant or rock. A minimum field sample weight of 200 gm is recommended.

Sample Preparation

Soils and sediments are dried (60°C) and sieved to -80 mesh (-177 microns). Moss-mat samples are dried (60°C), pounded to loosen trapped sediment, then sieved to -80 mesh. Rocks are dried (60°C) crushed (>75% -10 mesh) and pulverized (>96% -150 mesh). Spits weighing 1 to 30 g (Optional packages) are placed in bottles. Each batch (34 samples) contains a duplicate pulp split for monitoring precision and reference material DS2 for monitoring accuracy.

Sample Digestion

Aqua Regia is added to each bottle (3mL/gm of sample). Aqua Regia is a 2:2:2 mixture of ACS grade concentrated HCl, concentrated HNO₃ and distilled H₂O. Sample solutions are heated for 1 hr in a boiling hot water bath (95°C). The solutions are then diluted to 20:1 mL/gm ratio. A reagent blank is carried in parallel through leaching and analysis.

Sample Analysis

Analysis is by an Elan 6000 ICP Mass Spec for the determination of 37 elements comprising: Au, Ag, Al, As, B, Ba, Bi, Ca, Cd, Co, Cr, Cu, Fe, Hg, Ga, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Se, Sr, Te, Th, Ti, Tl, U, V, W and Zn. Extended element packages containing incompatible elements (Hf, Nb, etc.) and REEs are available. Sample volumes of 10 to 30 gm are recommended when the determination of Au or other elements subject to the nugget effect are of importance.

Data Evaluation

Raw data are reviewed by the instrument operator and by the laboratory information management system. The data is subsequently reviewed and adjusted by the Data Verification Technician. Finally all documents and data undergo a final verification by a British Columbia Certified Assayer who then signs the Analytical Report before it is released to the client. Chief Assayer is Clarence Leong, other certified assayers are Dean Toye and Jacky Wang.

GROUP 1F-MS - STD DS3

Standard Package

Optional Elements

ELEMENT	Unit	Detection Limit	Official Value	Standard Deviation	%RSD
As	ppb	0.2	21.0	6.5	30.9%
Ag*	ppb	2	281	11	3.9%
Al	%	0.01	1.70	0.05	2.7%
As*	ppm	0.1	29.7	2.4	8.0%
B	ppm	1	2	1	44.4%
Ba	ppm	0.5	147.8	7.8	5.3%
Bi	ppm	0.02	8.89	0.38	8.9%
Ca	%	0.01	0.82	0.01	2.8%
Cd*	ppm	0.01	8.58	0.27	4.9%
Co*	ppm	0.1	12.0	0.4	3.7%
Cr*	ppm	0.5	181.9	4.7	2.8%
Cu*	ppm	0.01	128.95	2.80	2.1%
Fe*	%	0.01	3.87	0.87	2.2%
Ge	ppm	0.1	8.2	0.2	3.1%
Hg*	ppb	5	295	31	13.4%
K	%	0.01	8.18	0.91	5.4%
La	ppm	0.5	17.4	0.7	3.9%
Mg	%	0.01	0.99	0.02	2.7%
Mn*	ppm	1	793	19	2.9%
Mo*	ppm	0.01	8.32	0.33	3.9%
Na	%	0.001	0.828	0.082	5.4%
Ni*	ppm	0.1	35.8	1.1	3.0%
P	%	0.001	0.888	0.083	6.4%
Pb*	ppm	0.01	34.93	1.88	2.9%
S	%	0.02	9.82	0.01	42.9%
Sb*	ppm	0.02	5.18	0.57	7.2%
Se	ppm	0.1	2.7	0.1	4.9%
Se	ppm	0.1	1.2	0.1	16.9%
Br	ppm	0.5	28.4	1.2	4.1%
Te	ppm	0.02	1.11	0.08	8.2%
Tb	ppm	0.1	3.8	0.2	5.2%
Tl	%	0.001	0.880	0.084	4.9%
Tl	ppm	0.02	8.38	0.86	5.9%
U	ppm	0.1	6.3	1.1	18.9%
V*	ppm	2	78	2	2.5%
W	ppm	0.2	3.7	0.3	8.0%
Zn*	ppm	0.1	154.8	2.7	1.8%

ELEMENT	Unit	Detection Limit	Official Value	Standard Deviation	%RSD
Ba	ppm	0.1	2.4	0.2	8.9%
Ce	ppm	0.02	31.48	1.18	3.7%
Ce	ppm	0.1	5.7	0.2	3.8%
Ge	ppm	0.1	8.1	0.8	14.4%
Hf	ppm	0.02	8.15	0.83	17.7%
In	ppm	0.02	2.14	0.12	3.7%
Li	ppm	0.1	15.9	0.5	3.1%
Nb	ppm	0.02	1.82	0.88	5.8%
Rb	ppm	0.1	13.7	0.8	4.9%
Ru	ppb	1	1	1	72.9%
Sn	ppm	0.02	7.11	0.26	3.7%
Ta	ppm	0.05	< 0.05	0.08	-
Y	ppm	0.1	8.2	0.3	3.9%
Zr	ppm	0.1	2.8	0.2	7.8%
Pt	ppb	2	< 2	0	-
Pd	ppb	10	< 10	1	-
Ce	ppb	1	< 1	-	-

Rare Earth Elements

Pr	ppm	0.02	3.98	-	-
Nd	ppm	0.02	13.88	-	-
Sm	ppm	0.02	2.78	-	-
Eu	ppm	0.02	0.57	-	-
Gd	ppm	0.02	2.38	-	-
Tb	ppm	0.01	0.31	-	-
Dy	ppm	0.02	1.58	-	-
Ho	ppm	0.02	0.28	-	-
Er	ppm	0.02	0.78	-	-
Tm	ppm	0.01	0.14	-	-
Yb	ppm	0.01	0.78	-	-
Lu	ppm	0.02	0.88	-	-

*DS3 was certified against CARMET Reference Materials
TELL-4, LICSD-4 and STSD-1 for these elements

n = 347

period: Apr to Jul 2001

Precision: Based on sample duplicates and given in multiples of detection limit. These apply to most elements, some elements can display higher precision error in some samples owing to the nature of those samples.

Multiples of Detection Limit: 0.3 — 1 — 2 — 5 — 10 — 20 — 50 — 100 — Upper Limit
Precision: | >100% | 100% | 50% | 25% | 17.5% | 12.5% | 10% | 12.5% |

APPENDIX IV
Statistical Analysis of
Standards and Re-Runs

Statistical Analysis of Fire Assay and ICP-MS Re-Runs

ICP-MS Re-Runs

	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th
127	1.3	182.08	14222.71	3186.7	99999	14.9	15.5	1054	7.76	5426.2	0	2690.1	0.4
RE 00127	1.3	181.62	14380.26	3224.8	99999	15.2	15.3	1065	7.84	5479.8	0.1	2716.4	0.4
Mean	1.3	181.9	14301.5	3205.8	99999.0	15.1	15.4	1059.5	7.8	5453.0	0.1	2703.3	0.4
Std Dev.	0.000	0.325	111.405	26.941	0.000	0.212	0.141	7.778	0.057	37.901	0.071	18.597	0.000
% Dev	0.000	0.179	0.773	0.833	0.000	1.390	0.910	0.729	0.720	0.690	58.579	0.683	0.000

	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Tl	B
127	63.3	40.44	107.73	0.07	35	2.17	0.054	2.6	12.5	0.71	35.5	0.000	2
RE 00127	65.7	41.46	104.30	0.07	36	2.20	0.054	2.6	12.7	0.71	34.5	0.004	2
Mean	64.5	41.0	106.0	0.1	35.5	2.2	0.1	2.6	12.6	0.7	35.0	0.0	2.0
Std Dev.	1.697	0.721	2.425	0.000	0.707	0.021	0.000	0.000	0.141	0.000	0.707	0.003	0.000
% Dev	2.564	1.731	2.237	0.000	1.953	0.962	0.000	0.000	1.110	0.000	1.980	58.579	0.000

	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga
127	1.32	0.022	0.16	3.9	10.0	0.11	4.47	1073	0.5	0.06	2.9
RE 00127	1.36	0.022	0.16	4.0	10.3	0.10	4.59	1104	0.6	0.07	2.9
Mean	1.3	0.0	0.2	4.0	10.2	0.1	4.5	1088.5	0.6	0.1	2.9
Std Dev.	0.028	0.000	0.000	0.071	0.212	0.007	0.085	21.920	0.071	0.007	0.000
% Dev	2.067	0.000	0.000	1.759	2.047	6.309	1.839	1.974	11.392	9.811	0.000

	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th
143	2.5	10.50	6.33	19.1	456	3.2	2.7	47	0.75	150.2	0.3	66.9	3.1
RE 00143	2.5	11.07	6.55	18.6	453	2.9	2.7	46	0.74	152.0	0.3	63.7	3.1
Mean	2.5	10.8	6.4	18.9	454.5	3.1	2.7	46.5	0.7	151.1	0.3	65.3	3.1
Std Dev.	0.021	0.403	0.156	0.354	2.121	0.212	0.000	0.707	0.007	1.273	0.000	2.263	0.000
% Dev	0.833	3.603	2.359	1.841	0.465	6.503	0.000	1.498	0.940	0.835	0.000	3.349	0.000

	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Tl	B
143	16.3	0.42	1.48	0.05	11	0.04	0.019	16.5	13.3	0.03	91.1	0.000	0
RE 00143	16.8	0.50	1.51	0.07	11	0.04	0.018	16.5	15.3	0.03	93.6	0.000	0
Mean	16.6	0.5	1.5	0.1	11.0	0.0	0.0	16.5	14.3	0.0	92.4	0.0	0.0
Std Dev.	0.354	0.057	0.021	0.014	0.000	0.000	0.001	0.000	1.414	0.000	1.768	0.000	0.000
% Dev	2.092	10.951	1.399	19.074	0.000	0.000	3.681	0.000	9.000	0.000	1.878	0.000	1.000

	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te	Ga
143	0.67	0.002	0.21	2.0	0.9	0.18	0.01	86	0.0	0.00	2.3
RE 00143	0.71	0.002	0.23	1.9	0.9	0.18	0.00	94	0.0	0.00	2.4
Mean	0.7	0.0	0.2	2.0	0.9	0.2	0.0	90.0	0.0	0.0	2.4
Std Dev.	0.028	0.000	0.014	0.071	0.000	0.000	0.007	5.657	0.000	0.000	0.071
% Dev	2.000	3.000	4.000	5.000	6.000	7.000	8.000	9.000	10.000	11.000	12.000

Statistical Analysis of Fire Assay and ICP-MS Re-runs

ICP-MS Re-Runs

	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th
94	1.1	33.26	513.40	826.3	3346	2.0	8.3	3081	3.23	243.6	0.2	280.0	0.6
RE 00094	1.1	32.77	503.00	810.9	3059	2.0	8.0	3010	3.16	242.1	0.2	270.4	0.5
RRE 00094	1.2	30.22	477.99	771.1	2508	1.7	8.0	3040	3.16	241.6	0.1	278.1	0.5
Mean	1.1	32.1	498.1	802.8	2971.0	1.9	8.1	3043.7	3.2	242.4	0.2	276.2	0.5
Std Dev.	0.084	1.632	18.200	28.485	425.874	0.173	0.173	35.642	0.040	1.041	0.058	5.084	0.058
% Dev	7.064	4.841	3.525	3.427	12.537	8.354	2.094	1.157	1.254	0.427	25.728	1.808	9.768

	Sr	Gd	Sb	Bi	V	Ca	P	Li	Cr	Mg	Ba	Ti	B
94	77.1	11.90	1.82	0.14	6	2.85	0.075	5.9	4.6	0.74	55.7	0.001	2
RE 00094	77.4	11.04	1.65	0.13	6	2.79	0.075	5.7	4.5	0.73	53.4	0.000	2
RRE 00094	75.5	10.70	1.76	0.13	4	2.83	0.073	5.5	3.7	0.73	39.3	0.000	1
Mean	76.7	11.2	1.7	0.1	5.3	2.8	0.1	5.7	4.3	0.7	49.5	0.0	1.7
Std Dev.	1.021	0.618	0.086	0.006	1.155	0.031	0.001	0.200	0.493	0.006	8.879	0.001	0.577
% Dev	1.315	5.227	4.712	4.150	17.797	1.070	1.530	3.390	10.363	0.781	15.218	63.397	25.728

	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga
94	0.45	0.029	0.27	2.0	3.5	0.11	1.78	61	0.2	0.00	1.0
RE 00094	0.44	0.030	0.25	2.0	3.2	0.10	1.80	52	0.2	0.00	1.0
RRE 00094	0.28	0.020	0.19	0.8	3.4	0.07	1.74	48	0.2	0.02	0.6
Mean	0.4	0.0	0.2	1.6	3.4	0.1	1.8	53.7	0.2	0.0	0.9
Std Dev.	0.095	0.006	0.042	0.693	0.153	0.021	0.031	6.658	0.000	0.012	0.231
% Dev	19.653	17.297	14.960	30.217	4.340	18.236	1.694	11.037	0.000	63.397	21.040

Fire Assay Re-runs

	Ag (gpt)	Au (gpt)
94	3.7	0.4
RE 00094	3.1	0.39
Mean	3.4	0.4
Std Dev.	0.424	0.007
% Dev	11.094	1.759

	Ag (gpt)	Au (gpt)
143	0.5	0.08
RE 00143	0	0.08
Mean	0.3	0.1
Std Dev.	0.354	0.000
% Dev	58.579	0.000

	Ag (gpt)	Au (gpt)
127	214.4	4.15
RE 00127	217.5	4.06
Mean	216.0	4.1
Std Dev.	2.192	0.064
% Dev	1.005	1.527

	Ag (gpt)	Au (gpt)
143	0.5	0.08
RE 00143	0.3	0.08
Mean	0.4	0.1
Std Dev.	0.141	0.000
% Dev	26.120	0.000

Note: Bold values were below detection (<0.3 gpt)
Therefore value between 0 and 0.3 gpt and both
extreme possibilities are calculated above.

Statistical Analysis of Fire Assay and ICP-MS Standards

ICP-MS Standards

	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th
STANDARD DS3	9.23	131.91	30.08	179.7	310	37.1	12.0	758	3.40	33.2	6.0	22.0	3.4
STANDARD DS3	9.29	126.70	32.18	160.3	307	34.6	11.6	767	3.37	32.0	6.0	21.1	3.7
STANDARD DS3	8.84	132.24	30.38	156.9	304	35.6	11.9	745	3.33	32.3	6.3	18.0	3.5
STANDARD DS3	9.21	126.57	31.94	163.4	283	37.0	12.3	759	3.35	32.0	6.5	21.2	3.6
Mean	9.14	129.36	31.15	165.08	301.00	36.08	11.95	757.25	3.36	32.38	6.20	20.58	3.55
Std Dev.	0.20	3.14	1.07	10.1	12	1.2	0.3	9	0.03	0.6	0.2	1.8	0.1
% Dev	2.19	2.37	3.32	5.77	3.91	3.21	2.36	1.19	0.88	1.72	3.80	7.89	3.51

	Sr	Cd	Sb	Bi	V	Cu	P	La	Cr	Mg	Ba	Tl	B
STANDARD DS3	26.1	5.93	4.85	5.23	83	0.55	0.088	18.1	175.3	0.59	146.0	0.084	2
STANDARD DS3	26.6	5.80	5.00	5.18	74	0.54	0.084	18.6	177.9	0.58	135.6	0.082	2
STANDARD DS3	25.1	6.01	5.00	5.32	82	0.53	0.084	17.7	177.7	0.57	137.1	0.081	2
STANDARD DS3	26.8	5.88	4.90	5.05	77	0.55	0.083	19.0	173.1	0.58	136.9	0.089	2
Mean	26.15	5.91	4.94	5.20	79.00	0.54	0.08	18.35	176.00	0.58	138.90	0.08	2.00
Std Dev.	0.8	0.09	0.07	0.11	4	0.01	0.002	0.6	2.3	0.01	4.8	0.004	0
% Dev	2.82	1.47	1.50	2.12	5.10	1.73	2.55	3.01	1.27	1.39	3.33	4.06	0.00

	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Grams
STANDARD DS3	1.80	0.034	0.15	3.9	3.7	1.21	0.03	233	1.4	1.00	6.0	30
STANDARD DS3	1.68	0.031	0.15	3.8	3.5	1.20	0.02	220	1.2	1.00	5.9	30
STANDARD DS3	1.74	0.031	0.15	3.8	3.6	1.16	0.03	220	1.3	1.01	5.9	30
STANDARD DS3	1.78	0.030	0.16	3.9	3.5	1.11	0.02	225	1.3	1.00	6.2	30
Mean	1.75	0.03	0.15	3.85	3.58	1.17	0.03	224.50	1.30	1.00	6.00	
Std Dev.	0.05	0.002	0.01	0.1	0.1	0.05	0.01	6	0.1	0.01	0.1	
% Dev	2.93	5.21	3.17	1.48	2.61	3.74	18.76	2.66	5.91	0.50	2.30	

Fire Assay Standards

	Ag(gpt)	Au(gpt)
STANDARD R-1/AU-1	101.5	3.31
STANDARD R-1/AU-1	101.4	3.39
STANDARD R-1/AU-1	101	3.31
STANDARD R-1/AU-1	101	3.31
STANDARD R-1/AU-1	100.4	3.43
Mean	101.06	3.35
Std Deviation	0.43	0.06
% Deviation	0.43	1.66