

GEOLOGICAL ASSESSMENT REPORT

on the

TUZEX MINERAL CLAIM

Alberni Mining Division

NTS 092C087

GEOLOGICAL SURVEY BRANCH ASSESSMENT REPORT

FILMED

24, 799 Sookochoff Consultants Inc.

Vancouver, B.C. November 4, 1996

.Sookochoff Consultants Inc...

Laurence Sookochoff, PEng

Geological Assessment Report

on the

Tuzex Mineral Claim

Table of Contents

page

Introduction	1
Property	1
Location and Access	2
Physiography	3
Climate	3
Local Resources	3
History	3
General Geology	4
Property Geology and Mineralization	5
1996 Exploration Program	7
Conclusions	10
Selected References	11
Certificate	12
Statement of Costs	13

Appendices

Appendix 1		Assay Certificate
	Illustrations	

Figure 1.	Location and Claim Map	2
Figure 2.	Location Map: Tuzex showings	6
Figure 3.	Showing 1	7
Figure 4.	Showing 3	9
Figure 5.	Showing 6.	9

Geological Assessment Report

on the

Tuzex Mineral Claim

Introduction

A program of preliminary geological mapping and sampling of six mineral zones was the basis for the 1996 exploration on the Tuzex claim. The six mineral showings were located and generally mapped in exploration of the ground, now covered by the Tuzex claim, in 1989 and 1990.

The information for this report was obtained from publications as set out in the Selected Reference section of this report and from the completion of the 1996 exploration program by the writer.

Property

The Property consists of one located grid-unit claim. Particulars are as follows.

<u>Claim</u>	<u>Units</u>	<u>Tenure No.</u>	Expiry Date
Tuzex	16	319260	July 19, 1997

Any legal aspects to this claim group is beyond the scope of this report.

Location and Access

The Tuzex claim is located proximal to the Nitinat River, 45 kilometres west-northwest of the town of Lake Cowichan, and 40 kilometres south of Port Alberni, which is on the west coast of Vancouver Island.

Access from Lake Cowichan, which is at the south end of Cowichan Lake, is northwestward via a paved road to Youbou thence by graveled road to the north end of Cowichan Lake and Nitinat, thence westward to the Nitinat River and west-southwest to the Tuzex claim. The road kilometres are approximately 50. Access within the Tuzex claim is provided by a network of logging roads.

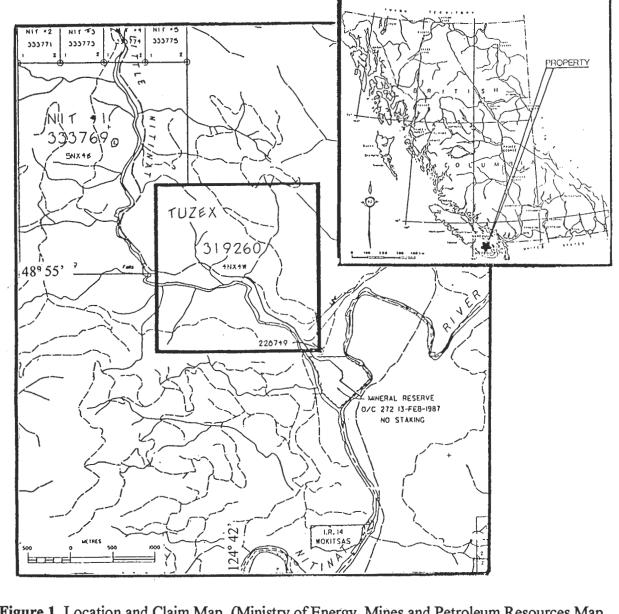


Figure 1. Location and Claim Map. (Ministry of Energy, Mines and Petroleum Resources Map 092C087 used as a base map) Showing the location of the Tuzex claim.

Sookochoff Consultants Inc.

2

Physiography

The Tuzex claim is bisected by the Little Nitinat River valley at an elevation of 200m a.m.s.l. and covers moderate to steep slopes reaching an elevation of 1000 metres. The area has been the site of intensive logging and abounds with second growth conifers.

Climate

The climate is typical of the west coast with a high precipitation which falls primarily as rain during the winter months. In the summer months rainy periods are shorter and less frequent than in the winter. The total precipitation varies from year to year, but could be 500 centimetres per year. Although the climate in the area is typically mild, unseasonal snow precipitation may occur as early as November.

Local Resources

Most services and supplies for exploration would be available from either Port Alberni on the west coast, or from Nanaimo on the east coast, of Vancouver Island. These two centres could also be the source of adequate labour resources and skills for the development and/or the production stages of a viable mining operation.

History

The history of the general area is significant from the producing property of Westmin Resources at the southwest side of Buttle Lake, 100 km northwest of the Tuzex claim. The mineral showings of the Westmin-Myra and other productive ore zones were originally staked in 1917 after the removal of the Strathcona Park Reserve. The Paramount Mining Company acquired title to about forty mineral claims on Myra and Price Creeks and performed extensive exploration and development of mineral zones which, with additional exploration and development by others on the claims, resulted in the production from the Myra deposit. Production commenced in 1972 and to January 01, 1989 the Myra Falls operation, which included ore from other deposits on the property, processed 9,170,609 tonnes of ore. Production at the Westmin project is continuing to this day.

Mining activity in the area was revived in the late 1970's with the increase in precious metal prices and the discovery of base-precious metal massive sulphide deposits in the Sicker Group of rocks. A staking rush developed on Vancouver Island resulting in the coverage of a belt, including the favorable Sicker Group, of over 150 kilometres long and 15 kilometres wide. The area covered, stretched northwest from Duncan to the Westmin Resources Ltd. mining operation at Buttle Lake. As a result of the increased exploration activity, numerous "new" mineral showings were discovered, with some developed to varying degrees.

The history of the Tuzex claim area stems from the 1860's when placer mining was active at the headwaters of China creek, Nitinat River and Franklin River. Lode mining was initiated in the 1890's when gold bearing quartz veins were located and staked on Mineral creek, at the headwaters of McQuillan creek, in the Soloman Basin, and at the headwaters of China creek. Mining activity lasted to 1900 during which time a stamp mill was in operation on Mineral creek. Mining was reactivated in 1933 to 1944, a period during which several properties produced a small tonnage of high grade ore.

In 1981 Noel (1981) reported on work conducted on the two Ike claims.

In 1982, Admiral Energy and Resources Ltd. staked the Jumbo claim to encompass the showings of the Ike claimsand then conducted an assessment work program which consisted of the rehabilitation of 2.8 km of old logging roads (part of which is an old railway grade) and the stripping of seven mineralized areas. Jones (1982) reported on the work program and is in the assessment roll files as assessment report number 11,143.

Upon the expiry of the Jumbo claim, the Tuzex claim was staked to cover the same area and was one of three contiguous claims explored by Wellington-Young Resources Inc. in 1989. The exploration work was limited to the Tuzex claim and consisted of a soil survey as this was where most of the mineralization was reportedly observed. The results of the survey indicated three anomalous areas where elevated values of five elements were found to generally coincide. One of the anomalous zones reportedly enclosed sulphide mineralization exposed along a logging road cut. The work program was reported on by Verzosa (1990) and is in the assessment roll files as assessment report number 19,849.

In 1995 Sookochoff (1995) completed a lineament array analysis on the Tuzex claim for J. Ruza, the registered owner of the Tuzex claim.

General Geology

The general Property area occurs within the Insular Belt, the westernmost major tectonic subdivision of the Canadian Cordillera and is dominated by volcanics of the Bonanza Group (Ijb) Karmutsen volcanics and related rocks of the Vancouver Group (muTRk), and the Island Intrusives (Jg).

According to Muller (1977), the Insular Belt (Island Mountains) contains a middle Paleozoic and a Jurassic volcanic-plutonic complex, both apparently underlain by gneissmigmatite terrains and overlain respectively by Permo-Pennsylvanian and Cretaceous clastic sediments. A thick shield of Upper Triassic basalt (Karmutsen Formation), overlain by carbonateclastic sediments separates these two in space and time.

The structure of the Island is almost entirely dominated by steep faults. Only the flyschtype Pennsylvanian and Jura-Cretaceous sediments and associated thin-bedded tuffs show isoclinal shear folding. Faulting and rifting probably occurred during the outflow of Karmutsen lavas in Late Triassic time, establishing the northerly and westerly directed fault systems affecting Sicker and Vancouver Group rocks (Muller 1977).

Property Geology and Mineralization

Open File 463 (Muller, 1977) indicates that the Tuzex claim is underlain by volcanics of the Bonanza Group (IJb) in the south and the Island Intrusives (Jg) in the north.

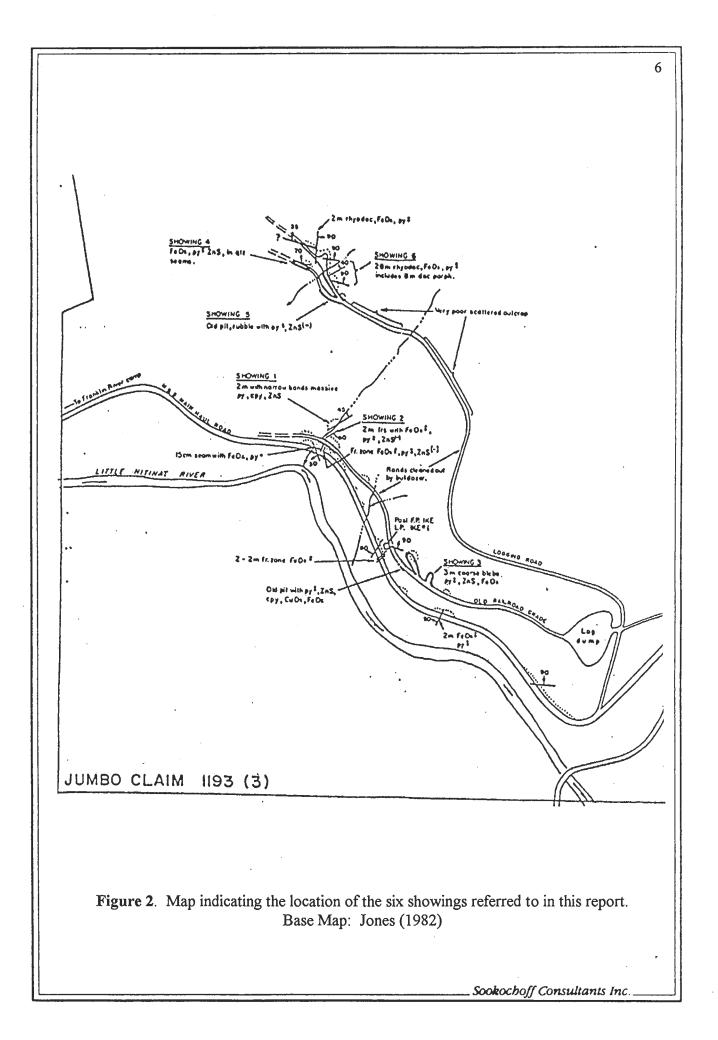
Jones (1982) reports that in the local geology the mineralized zones, showings 1, 2 and 3 plus an old pit were observed along the old railway gradein the southwest portion of the property. Each zone occurs within the more siliceous volcanics, namely dacitic to rhyolitic tuffs (?), and are characterized by a prominent limonitic gossan. The zones, which vary from one to three metres thick, contain abundant pyrite as disseminations and fracture coatings. They also contain narrow stringers and bands of massive sulphides, which include in the ordder of abundance, pyrite, black sphalerite, chalcopyrite and very minor galena in a siliceous gangue. Lasser marcasite, pyrrhotite and magnetite are also present. The massive sulphide bands vary from 0.1 to 1.0m thick.

Jones continues his description by stating thst interesting mineralization was also observed on the upper (northernmost) loogging road. This road was rehabilitated to approximately 200 metres beyond a main junction. At the junction and west from it on thd lower branch road are two rubbbly exposures of limonitic rhyodacite designated as mineral showings 4 and 5. Each represent a zone from one to two metres wide containing fine seams of massive pyrite, chalcopyrite and black sphalerite. Showing 6, located on the upper branch road, consists of two wide bands of heavily iron stained and pyritized dacite to rhyodacite separated by an irregular band 6-8m thick of massive, unmineralized dacite porphyry. This entire zone is at least 20 metres in width.

All of the mineralized zones, except showing 4, appear to strike to the northeast. However, showing 4 appears to strike westerly. Also, faulting and fracturing to the west of the creek near showing 4 have trends to the north and to the west.Because of this apparent change in attitudes on either sice of the creek, it is suggested that a northeast striking fault lies in the creek gully.

Jones (1982) also describes mineralization occurring along the main logging road as narrow seams of massive sulphides at the creek beneath showings 1 and 2 as well as several 2m wide pyritic fracture zones to the east. Outcrops along the road are obscured by a heavy layer of muddy dust from the main road traffic.

Verzosa (1990) reports that dacites and other volcanics were located on the Property particularly along the main haulage road. A number of mineralized shear zones, up to 15 metres wide, characterized by heavy clay alteration and gossan occur in the volcanics. The zones commonly carry abundant disseminations and stringers of pyrite and to a lesser extent, sphalerite, chalcopyrite and minor galena disseminated within narrow bands of the mineralized zones.



1996 Exploration Program

The 1996 exploration program consisted of the mapping and sampling of the six mineral shoeings as reported by Jones (1982). The map indicating the showings is included as Figure 3 and is the map from Jones' 1982 report.

Based on the work completed by the writer, a sketch map of each showing, as referenced to the Jones (1982) numbered showings, is herein included showing the sample locations and sample numbers which are cross referenced to Table I of sample numbers, sample description and assay or geochem results.

The legend for the following Figures 3 to 5 is as follows:

D	Dacite	RD	Rhyodacite	R	Rhyolite
ہ ہے	' Fracture	F1	Sample Interval	x	Grab Sample

Showing 1 (Figure 3), on the north bank of the creek, consists of a short drift on a two metre zone of mineralization hosted by a rhyodacite. The zone includes quartz and massive sulphide veins of black sphalerite, galena and variable amounts of pyrite. Four grab samples, Tuz 14 to Tuz 17, were taken from this zone.

Showing 2 (Figure 3), on the south bank of the creek, is not a definitive zone and consi\sts of a fracture zone hosting iron oxides, pyrite and sphalerite. This zone was not sampled.

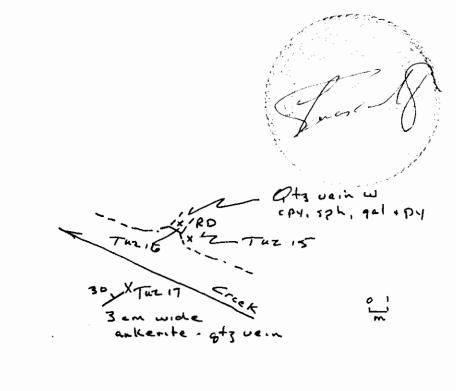


Figure 3. Showing 1. Indicating geology and sample locations

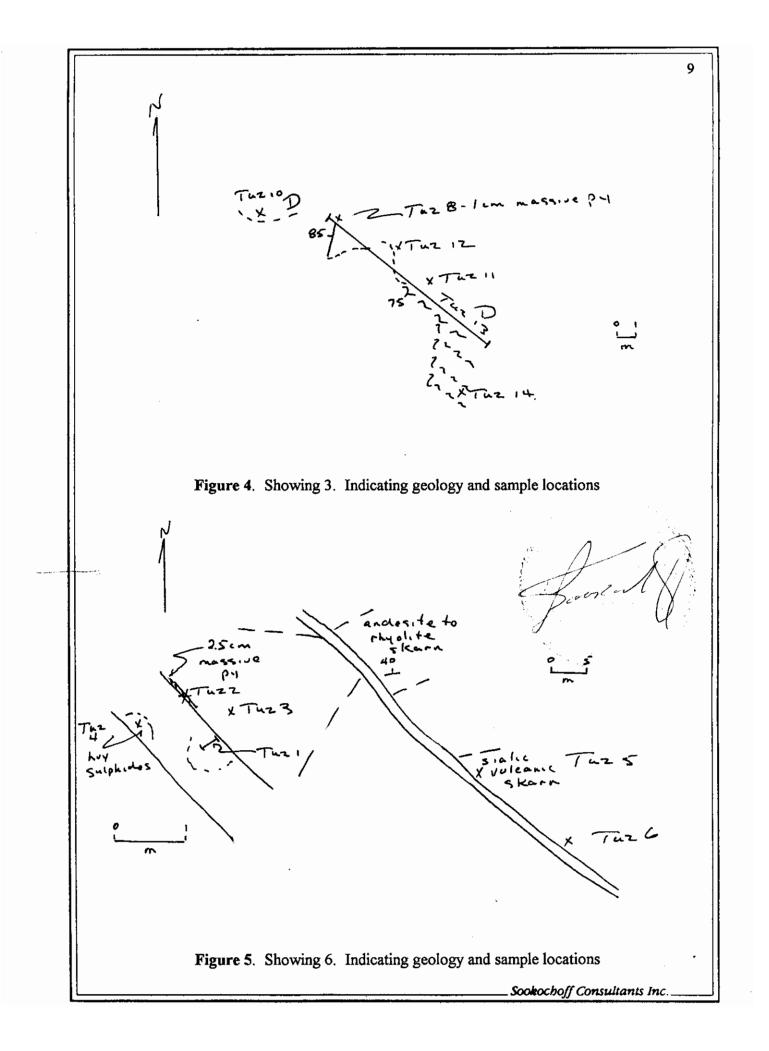
7

Table I

Sample Description Tuzex Mineral Claim

Sample No.	Locati	on Description		Assay	
	Showi	ng	Au/ppb	Cu/ppm	Zn/ppm
Tuz 1	6	2.0m zone of diss & blebs py in a sil'd andesite	8	70	87
Tuz 2	6	6 cm andesite-dacite contact zone w/ massive p	y 16	25	68
Tuz 3	6	Grabs of meta-dacite w/ mod to hvy blebs py	8	28	70
Tuz 4	6	Grabs of sil'd zone w/ heavy pockets py	8	11	49
Tuz 5	6	12 m skarn zone of rhy to rhyodacite w/ mod j	by 5	12	48
Tuz 6	6	Grabs from 10m zone of skarn w/fine diss py	142	578	1579
Tuz 7	4	Meta dioritew/ blebs py	9	78	106
Tuz 8	3	Hvy limonitic zone w/ one cm massive py	34000	9215	99999
Tuz 9	3	Hvy limonitic zone w/ med to fine gr py	11640	13949	99999
Tuz 10	3	Fine gr & splashes sph, gal & py in a meta vol	9020	2945	81804
Tuz 11	3	2.5 cm py in a dacite	434	2413	8511
Tuz 12	3	Meta diorite	72	89	618
Tuz 13	3	Composite: Stockwork of massive py veinlets			
		in a dacite	864	1759	67583
Tuz 14	1	Grabs of qtz vein w/ pockets py	330	10111	1818
			Au	Cu%	Zn%
			oz/t		
Tuz 15	1	Sil'd zone w/ blebs, pockets & diss massive			
		sulphides. Hvy dk brn limonite	.030	.227	9.91
Tuz 16	1	Massive sulphide vein	.241	.430	5.68
Tuz 17	1	3 cm wide quartz vein: ankeritic, lt brn	.016	.259	.95

8



Showing 3 (Figure 4) is a skarned zone resulting from a diorite intruding dacitic volcanics. Thus the volcanics are host to disseminations and stringers of variable amounts of pyrite, chalcopyrite and sphalerite and exhibit surficial limonite staining. Values of up to 34,000 ppb Au, 9215 ppm Cu and 99999 ppm Zn were obtained from the mineralized volcanics (Tuz 8). Massive sulphide stringers occur along two sets of fracture planes. The massive sulphides are up to 2.5 cm wide and contain significant gold, copper and zinc values (Tuz 11).

Showing 4, located on the lower branch of the upper road, is of a carbonated diorite. The allotriomorphic textured, propylitized diorite contains patchy blebs of pyrite. A sample of the diorite returned 9 ppb Au, 78 ppm Cu and 106 ppm Zn.

Showing 6 (Figure 5), located on the upper branch of the upper road, is an extensive zone of predominantly rhyolitic to dacitic volcanics with andesites which are skarned to variable degrees. The skarn zone, which can be traced for 75 metres in outcrop and reddish brown soil, contains a variable degree of pyrite occurring predominantly as disseminations and as massive veinlets and patches. Assays of up to 142 ppb Au over a 10 metre section of the zone were obtained. However, the massive pyrite (Tuz 2) was weaker in gold than the massive pyrite zone at Showing 3.

Conclusions

The Tuzex mineral showings are skarn zones resulting from dioritic intrusives invading a predominantly sialic formation of volcanics. The skarn zone is not delineated and the mineral controls not established, however, is indicated as potentially extensive. The encouraging feature of the zone is the gold bearing mineralization which, as typical of skarn zones, displays erratic mineral values. It appears that the degree of gold mineralization may be directly proportional to the pyritic content of the host rock and if the degree of pyrite is related to the proximity to the dioritic intrusive, the configuration of the intrusive and the potentially economic gold zone should be established by geophysical methods.

Respectfully submitted.

Laurence Sookochoff, P.Eng.

November 4, 1996 Vancouver, B.C. 10

Selected References

CLAPP, C.H. - Southern Vancouver Island, Part B, Canada Department of Mines Geological Survey Branch, Canada Department of Mines, Geological Survey Branch, Memoir No. 13. 1912.

EASTWOOD, G.E.P. - Geology of the Kennedy Lake Area, Vancouver Island, British Columbia. Bulletin No. 55, British Columbia Department of Mines and Petroleum Resources. 1968.

MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES - Minifile Map 092F, Alberni. (Specific Reports, Run Date 90/06/16).

Maps B.C.- Aerial Photographs 30BC 80082, No's 228 & 229.

MULLER, J.E. - Geology of Vancouver Island. Geological Survey of Canada, Ministry of Energy, Mines and Petroleum Resources. 1977.

MARSHAK, S. - Basic Methods of Structural Geology. Prentice Hall, 1988.

SOOKOCHOFF, L. - Summary Report on the Pacific Claim Group for Toby Creek Resources Ltd., November 16, 1992.

- Geological & Geophysical Assessment Report on the Pacific Claim Group for Calcap Investments Ltd., July 19, 1994. Assessment Report 23482.

- Geological and Geochemical Assessment Report on the Taurus Claims for International Black Gold Resources Inc. March 17, 1995.

VEN HUIZEN, G.J. - Summary Report on the Pacific Mining Claims for Ruza Resources Ltd. 15 December 1990.

VERZOSA, R.S. - 1989 Geochemical Survey on the Tuzex, Explor 1, and Explor 11Mineral Claims for Wellington-Young Resources Ltd. May, 1990. Assessment Report 19,849.

WESTERMAN, C.J. - The McKinlay Property, Report for Jantri Resources Inc., June 30, 1988.

WOOD, D Geological, Geochemical & Geophysical Report on the Snapper Claims Property for Saga Resources Ltd. June 30, 1987. Assessment Report 17058.

Certificate

I, Laurence Sookochoff, of the City of Vancouver, in the Province of British Columbia, do hereby certify that I am a Consulting Geologist and principal of Sookochoff Consultants Inc. with offices at Suite 1027, The Standard Building, 510 West Hastings Street, Vancouver, BC V6B 1L8.

I, Laurence Sookochoff, further certify that:

- 1) I am a graduate of the University of British Columbia (1966) and hold a B.Sc. degree in Geology.
- 2) I have been practicing my profession for the past twenty-nine years.
- 3) I am registered and in good standing with the Association of Professional Engineers and Geoscientists of British Columbia.
- 4) Information for this report was obtained from sources as cited under the Selected References section of this report and from work the writer has completed on the Tuzex claim.

Laurence Sookochoff, P. Eng.

Vancouver, BC November 4, 1995

Tuzex Claim Statement of Costs

The exploration work on the Tuzex claim was carried out from June 13 to July 3, 1996 to the value as follows.

L. Sookochoff -	one day @ \$550.	\$	550.00
Travel and field exp	enses		215.00
Assays			321.27
Report, xerox, print	ting		500.00
		_	

\$ 1,686.27

13

Appendix I

ASSAY CERTIFICATE

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716 GEOCHEMICAL ANALYSIS CERTIFICATE Sookochoff Consultants Inc. PROJECT TUZA File # 96-2259 Page 1 1027 - 510 W. Hastings St, Vancouver BC V6B 1L8 Pb Cd Sb SAMPLE# Мо Cu Zn Ag Ni Co Mn Fe As U Au Th Sr Bi V Ça P La Cr Mg Ba Tỉ B AL Na K W TL Ho Au* % % ррп ppm ppm ppm ppm 7 % pom pom **% pp**a * % % ppm ppm ppm mqq ppm ppm ppm pom pom pom ppm pom pom pom pom pom ppb 4 35 1092 6.69 <2 88 1.22 .251 2 5 2.03 12 .31 <3 2.09 .04 .04 <2 <5 <1 TUZ-1 2 70 9 87 <.3 11 <5 <2 <2 51 <.2 5 8 <5 <2 <2 82 <.2 5 <2 72 1.21 .253 1 2 1.84 8.23 <3 2.01 .04 .02 <2 <5 2 TUZ-2 2 25 15 68 <.3 4 52 992 9.39 30 16 28 70 <.3 3 30 945 6.29 13 <5 <2 <2 67 <.2 4 <2 48 1.14 .216 2 6 1.39 10 .24 <3 1.77 .04 .02 3 < 5 < 1 TUZ-3 5 10 8 2 7 TUZ-4 1 11 5 49 <.3 3 7 575 4.57 14 <5 <2 <2 11 <.2 <2 50 .58 .213 5 1.25 41 .18 <3 1.44 .04 .16 <2 <5 <1 8 TUZ-5 2 12 11 48 <.3 2 7 507 5.56 6 <5 <2 <2 27 <.2 2 <2 32 .85 .213 5 2 .98 31 .21 4 1 .21 .04 .15 2 < 5 1 5 TUZ-6 35 578 1215 1579 10.6 5 51 1087 10.85 355 <5 <2 2 24 15.5 10 23 17 .64 .056 1 4 .82 16 .03 <3 1.28 .01 .13 <2 <5 2 142 2 <5 <2 <2 46 .4 14 23 1200 5.90 .2 6 2 169 2.94 .094 TUZ-7 2 78 26 106 6 29 2.40 50 .24 6 3.54 .08 .10 <2 5 <1 9 <1 4 .48 5 .01 <3 .57 .01 .02 5 <5 1 34000 <1 9215 1213 99999 105.7 15 162 1242 21.07 2897 <5 27 <2 6 820.3 4 605 7 .59 .005 TUZ-8 <1 13949 1944 99999 120.4 16 293 1870 21.53 2289 <5 11 <2 5 894.1 <2 1040 10 .31 .027 1 2 .31 8 .02 <3 .68 .01 .09 TUZ-9 4 <5 <1 11640 <1 2945 1038 81804 43.5 6 245 2261 15.50 21887 <5 8 <2 28 641.1 16 157 9 1.30 .042 1 <1 1.44 5 .01 3 1.88 .01 .02 3 <5 1 9020 TUZ-10 <1 2964 1087 84519 44.1 7 253 2354 15.91 22435 <5 7 <2 28 661.2 14 161 10 1.33 .043 1 1 1.51 5 .01 <3 1.97 .01 .02 3 <5 <1 9050 RE TUZ-10 452 <5 <2 <2 45 144.6 6 108 22 2.11 .041 2 2413 527 8511 15.6 7 56 877 11.21 TUZ-11 2 4 .67 10 .04 4 1.84 .01 .03 5 <5 1 434 60 <5 <2 <2 147 3.6 7 2 146 2.86 .121 7 9 2.04 46 .23 <3 4.88 .37 .07 <2 10 1 TUZ-12 1 89 17 618 .5 8 20 1958 6.17 72 1 1759 649 67583 17.7 11 68 698 20.29 483 <5 <2 <2 23 663.6 <2 115 25 .86 .037 2 13 .48 15 .05 <3 1.27 .01 .09 <2 <5 8 TUZ-13 864 TUZ-14 6 10111 56 1818 33.7 22 39 1904 4.63 30 <5 <2 <2 12 15.1 8 37 24 .32 .038 1 13 .53 14 .08 <3 1.03 .02 .12 35 <5 <1 330 43 19 8 35 51 20.2 16 18 68 .54 .098 38 62 1.06 188 .07 30 2.03 .06 .14 12 <5 2 527 STANDARD C2/AU-R 19 61 46 139 6.3 71 36 1176 3.92

> ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB - SAMPLE TYPE: ROCK AU* - IGNITED, AQUA-REGIA/MIBK EXTRACT, GF/AA FINISHED. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE REPORT MAILED: JUN 27/96 SIGNED BY. .D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS DATE RECEIVED: JUN 17 1996

AA	ASSAY CERTIFICATE	
44	Sookochoff Consultants Inc. PROJECT TUZA File # 96-2259 Page 2	j.
	1027 - 510 W. Hastings St, Vancouver BC V6B 1L8	L
	SAMPLE# Cu Pb Zn Ag** Au**	
	SAMPLE# Cu Pb Zn Ag** Au** % % oz/t oz/t	
	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
	RE TUZ-17 .262 .06 .95 2.48 .012	
	AG** AND AU** BY FIRE ASSAY FROM 1 A.T. SAMPLE 1 GM SAMPLE LEACHED IN 50 ML AQUA - REGIA, DILUTE TO 100 ML, ANALYSIS	
	BY ICP. - SAMPLE TYPE: ROCK <u>Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.</u>	
DATE RECEIVED:	JUN 17 1996 DATE REPORT MAILED: 77 //SIGNED BY. J. D. TOYE, C.LEONG, J. WANG; CERTIFIED B.C. ASSAYE	ERS
	JUN 17 1996 DATE REPORT MAILED: JUN 27/96 SIGNED BY. J.J. D. TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYE	
•		