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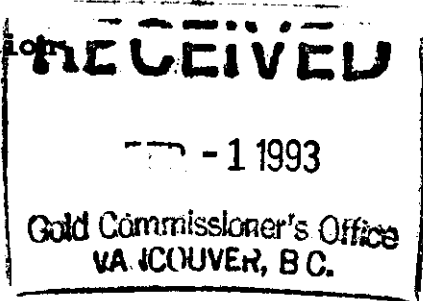
**Geophysical & Geological Assessment Report**

for

Tanos Petroleum Corporation

on the

CIG 200 Claim



Nicola Mining Division

NTS 92I 8W

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**22,780**

Vancouver, B.C.  
January 26, 1993

Laurence Sookochoff, P.Eng.  
Sookochoff Consultants Inc.

**Geophysical & Geological Assessment Report**  
**on the**  
**Cig 200 Claim**

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**TABLE OF CONTENTS**

	<b>page</b>
Introduction .....	1.
Summary .....	1.
Property .....	2.
Location and Access .....	3.
Physiography .....	3.
Water and Power .....	3.
History .....	3.
Geology .....	5.
Mineralization .....	7.
Alteration .....	8.
Review of Exploration on the Property	8.
Exploration to 1990 .....	8.
1990 Geochemical Survey .....	9.
Results .....	10.
Conclusions .....	10.
Recommended Exploration Program .....	10.
Selected References .....	11.
Certificate .....	12.
Statement of Costs .....	13.

**APPENDICES**

**I Assay Certificates**

**ILLUSTRATIONS**

	<b>following page</b>
Figure 1            Location Map	2
Figure 2            Index & Claim Map	3
Figure 3            VLF-EM Survey	5
Figure 4            Geology	7

# Geophysical & Geological Assessment Report

on the

Cig 200 Claim

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## INTRODUCTION

In October 1991 a localized geophysical and geological survey was completed on the Cig 200 Claim as a continuing exploration program based on the results of previous exploration. The current exploration covered and extended the work area of the 1991 area.

The information for this report was obtained from sources as cited under Selected References, from previous exploration on the Cig 200 claim by and/or supervised by the writer and from the completion of the exploration program reported on herein.

## SUMMARY

Tanos Petroleum Corporation owns a 20 unit claim block in the Stump Lake mining camp where production to 1931 from mineralized quartz veins amounted to 77,605 tons averaging a recovered grade of .109 oz Au/ton, 3.26 oz Ag/ton, 1.42% Pb and 0.24% Zn.

The quartz veins within the Stump Lake camp occur in association with northerly trending structures in which mineralization appears to increase along variable trends of the structure. The veins were explored to a depth of 275 meters and along a strike length of 600 meters. The veins are also hosted by shear zones within greenstones of the Nicola volcanics and are of irregular widths with an alteration zone of up to "15 feet wide".

Exploration work in the Stump Lake area in the past five years included that on the original workings on Mineral Hill and on the Mary Reynolds claim group by Noranda.

The Tanos Cig 200 Claim is indicated to be underlain by the Nicola Group of volcanics and interbedded argillite with northerly to northwesterly trending fault zones.

A 1988 exploration program consisting of a VLF-EM survey over a portion of one of the four twenty unit claim blocks disclosed a number of northerly trending anomalies.

A localized exploration program of geological mapping and rock chip sampling completed in 1989, in addition to soil geochemical sampling completed over two of the prime VLF-EM zones of the 1988 exploration area resulted in the delineation of two northerly trending correlative anomalous zones.

A 1990 exploration program of a soil geochemical survey was not correlatable with the previous results and thus was not definitive in establishing the contact zone or the trend of the potential mineral controlling structure trending northerly to the exploration area from the south.

A 1991 exploration program of geological mapping , sampling and a localized geochemical survey disclosed a mineralized fracture zone.

#### PROPERTY

The property consists of one 20 unit mineral claim. Particulars are as follows:

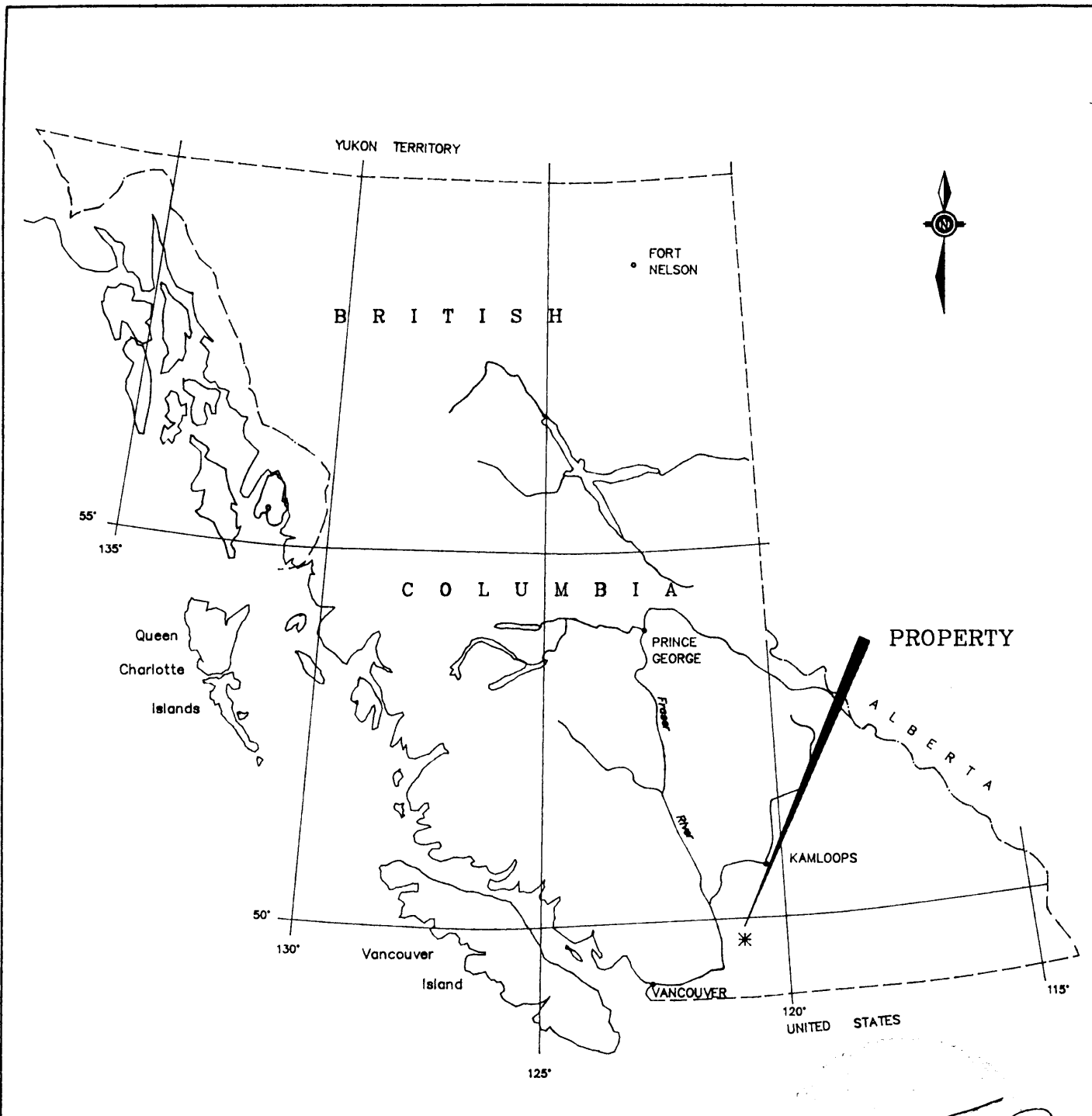
<u>Claim Name</u>	<u>Record No.</u>	<u>Expiry Date*</u>
CIG 200	1855	October 28, 1993

\* On the approval of one years assessment work filed October 28, 1992 for which this report is a part thereof.

#### LOCATION AND ACCESS (49°03'N 117°30'W)

The property is located within seven km of Mineral Hill on the south side of Stump Lake between Peter Hope Lake and Plateau Lake forty km northwest of Merritt in southwest British Columbia.

Access is provided by the Merritt-Kamloops Highway No. 5 to within six km of the property. A secondary road - the Peter Hope Lake road - junctions off to the east within three km south of Stump Lake. This road provides access to the property.



*Leveson*  
 Jan 26/93

SOOKOCHOFF CONSULTANTS INC.		
TANOS PETROLEUM CORPORATION		
CIG CLAIM GROUP NICOLA M.D.		
LOCATION MAP		
DATE: JAN.'93	N.T.S.: 821/8W	FIGURE: 1
SCALE:	DRAWN BY GEO-COMP	

## PHYSIOGRAPHY

The property is situated at the western edge of the Douglas Plateau which is within the physiographic area of the Interior Plateau of British Columbia. Gentle to moderate slopes prevail with elevations ranging to 1375 metres on a northeasterly trending ridge in the northeast from 1100 metres at Peter Hope Lake at the southwest corner of the property.

## WATER AND POWER

Sufficient water for all phases of the exploration program could be available from the southwesterly flowing Peter Hope Creek which flows through the southeast corner of the property. In addition, many other water sources such as small streams and lakes occur within the confines of the property boundaries.

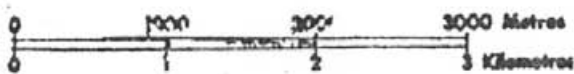
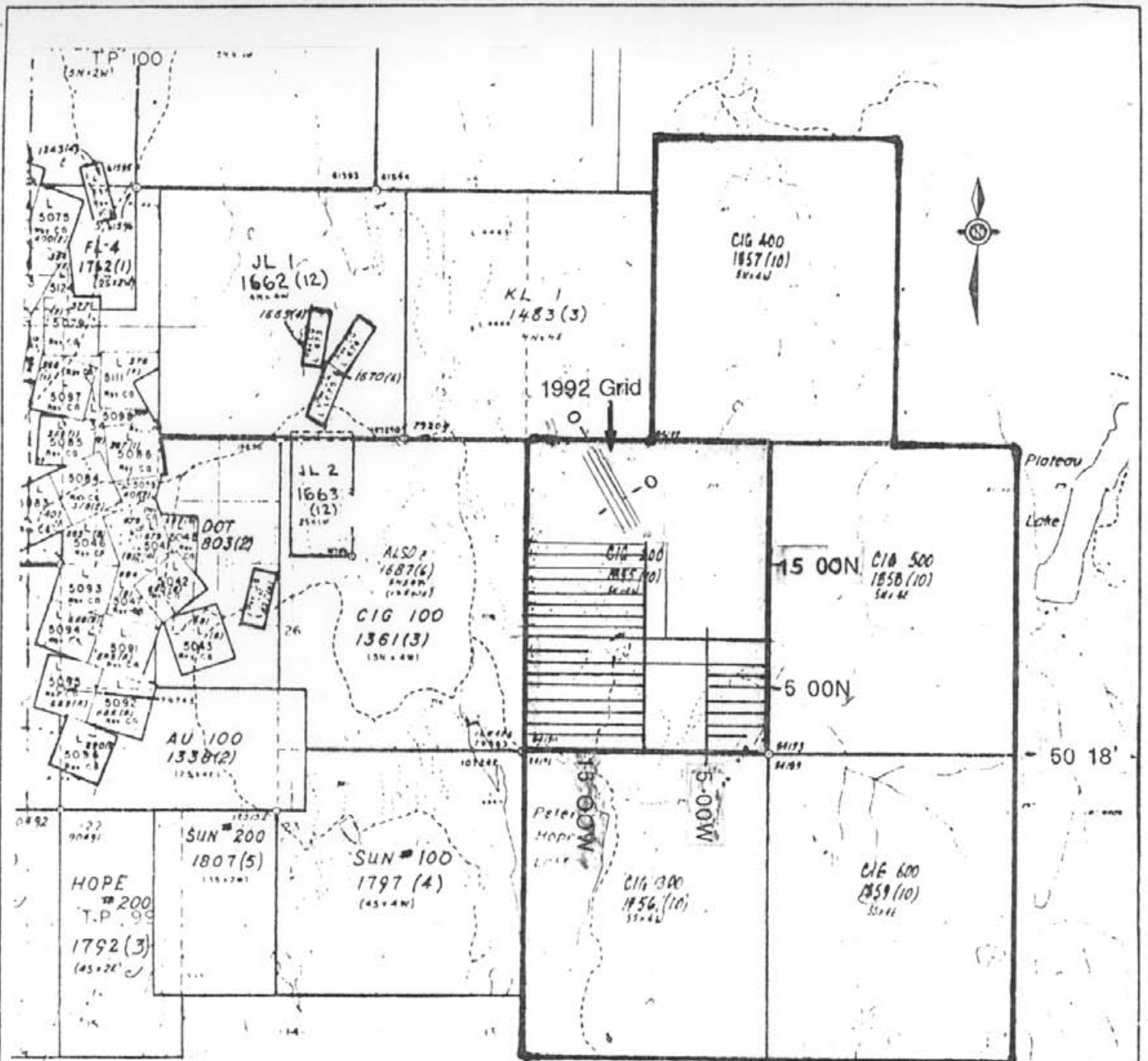
## HISTORY

The history of the immediate area stems from the mineral deposits at Mineral Hill adjacent to Stump Lake and some six km west of the northwestern portion of the Cig 200 Claim. Mineralization was discovered in 1882 with exploration and development consisting of shafts on the Joshua, Tribal Cain and King William claims in addition to shafts on the Enterprise and Planet claims prior to 1890.

Exploration and development on Mineral Hill was sporadic to 1929 when a mill was built and operated to 1931. From 1939 to 1942, when operations were suspended, some mine development occurred in addition to the rebuilding of the mill. Since 1942 limited exploration was carried out on the various properties of the area with the most recent performed by Celebrity Energy Corporation.

Production from the Enterprise, King William, Tribal Cain and Joshua Veins of the Stump Lake camp during the period of 1916 to 1944 is reported as 77,605 tons of ore mined yielding 8,494 ounces of gold, 252,939 ounces of silver, 40,822 pounds of copper, 2,206,555 pounds of lead and 367,869 pounds of zinc or a recovered grade of 0.109 oz Au/ton, 3.26 oz Ag/ton, 0.026% Cu, 1.42% Pb and 0.24% Zn.

Other properties in closer proximity to the Tanos Cig 200 Claim on which exploration work was completed include the Mary Reynolds and the Azela within two km to the east. The Mary Reynolds or the Jean Group was one of the early claims staked in the Stump Lake area and has produced a small amount of gold-silver ore. The workings include a "96 foot" deep shaft with a "240 foot" long adit level in addition to numerous other workings exploring a vein system with general characteristics similar to the other Stump Lake deposits.



SOOKOCHOFF CONSULTANTS INC.		
TANOS PETROLEUM CORPORATION		
CIG CLAIM GROUP NICOLA M.D.		
INDEX & CLAM MAP		
DATE: JAN. '93	N.T.S.: 821/8W	FIGURE: 2
SCALE:	DRAWN BY GEO-COMP	

The Azela is within the Johannesburg camp situated "about 16,000 feet" southeast of the Enterprise Mine and two km west of the Tanos property. The main showing is a shaft reportedly "78 feet" deep with open cuts and other workings within the claim. More recent exploration work on a claim adjacent to the Azela and also adjacent to the Tanos property reportedly resulted in the location of vein material similar to that occurring on properties in the Stump Lake area.

Exploration on the Cig 200 claim by Tanos Petroleum Corporation included a localized VLF-EM survey completed in 1988, the results of which were reported on by the writer in a report dated January 11, 1989.

In October 1989 a localized geochemical and geological survey was completed, the results of, which were reported on by the writer in a report dated January 22, 1990.

In October 1990 a geochemical survey was completed in the west central portion of the Cig 200 claim and adjacent and to the north of the 1989 survey. The results were reported on by the writer in a report dated January 10, 1991.

In October 1991 localized geochemical and geological surveys were completed in the northwestern sector of the Cig 200 claim. The results were reported on by the writer in a report dated January 13, 1992.

In October 1992 geophysical and geological surveys were completed over an area including the 1991 survey area. This report provides the data, results and interpretation of the 1992 surveys.

#### GEOLOGY

The regional geology of the area as mapped by W.E. Cockfield and published as map 886 A in G.S.C. Memoir 249 (1947), indicates that the Stump Lake area is underlain by an assemblage of Upper Triassic volcanic flows, pyroclastics and sedimentary units of the Nicola Group. The Nicola is in a northerly trending contact with the Carboniferous and Permian Cache Creek Group which is indicated to occur at Plateau Lake and at the approximate eastern boundary of the Cig 200 Claim. The Cache Creek rocks are shown to rarely outcrop as windows within the Nicola.

In a later geological map published by the GSC, resulting from the geological mapping completed by Monger (1980-82) and McMillan (1969-75 and 77-80) of the B.C. Ministry of Energy, Mines and Resources with supplemental information, the location of the Cache Creek rocks is shown as consisting of the Nicola Group. The Nicola Group consists of argillite, siltstone, volcanic sandstone and local intercalated tuff.



Cig 200 Claim is indicated as consisting of predominantly volcanics with interbedded argillite. The volcanics consist of augite porphyry and augite-plagioclase porphyry, volcanoclastic breccia and tuff.

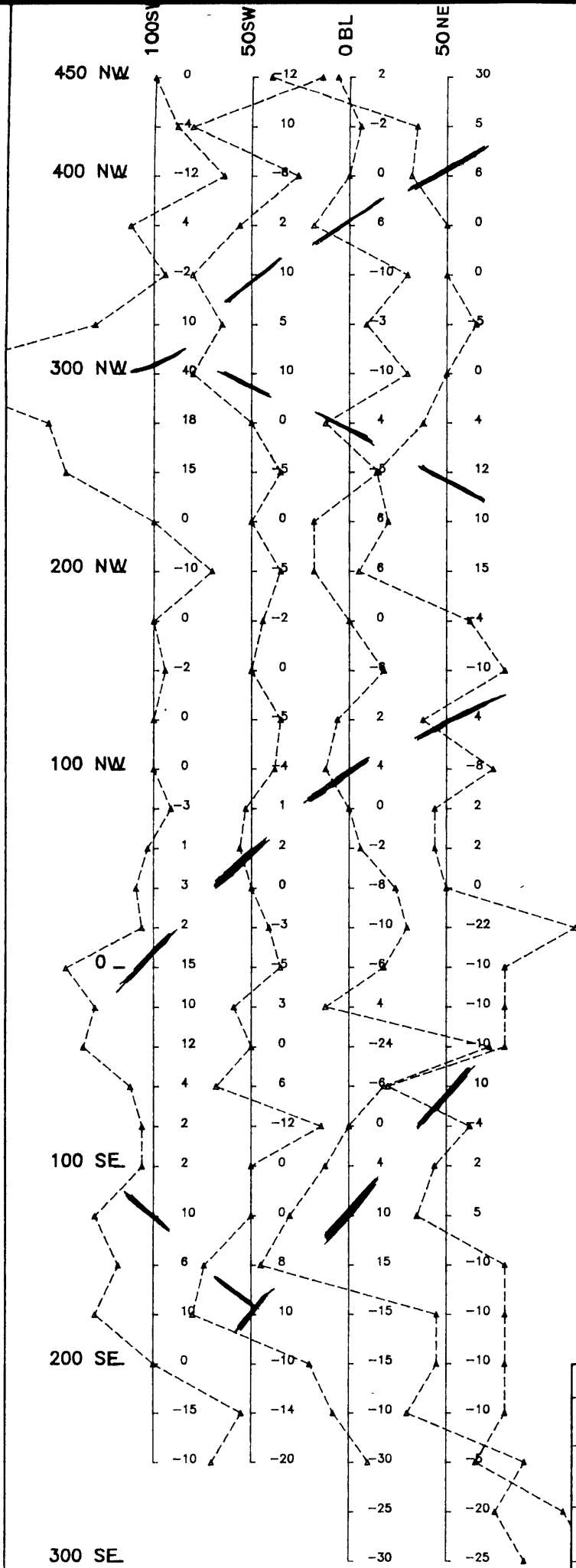
The area is dominated by Tertiary faults with the major north northeast trending Quilchena-Stump Lake fault system defining in part the eastern limit of the Nicola batholith with the Nicola Group. The fault trends through the northeastern portion of Stump Lake, centrally through the Stump Lake camp and five km west of the Cig 200 Claim. The major northwest trending Cherry Creek Fault 20 km north of Stump Lake truncates the Quilchena fault system. Secondary or associated structures in the area trend northerly to northwesterly.

In the Stump Lake area and specifically within the area of Mineral Hill where the major development of and production from mineral zones was carried out, the rocks consist of greenstone of the Nicola Group. The greenstone is an andesitic rock usually fine grained but locally coarser-grained and dioritic to diabasic in texture. Occasional bands of tuff and breccia are included in the formation. The tuff is extremely fine-grained and banded with the breccia containing homogeneous andesitic fragments up to 10 cm in diameter.

#### 1992 GEOLOGICAL SURVEY

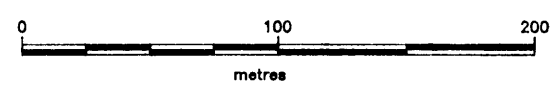
Geological mapping of the localized 150 metre by 750 metre area was not definitive in disclosing any mineral zone or variable alteration that may be associated with mineralization. Essentially the results of the survey disclosed the typical augite porphyry, augite porphyry greenstone and greenstone related to the Nicola Group of rocks. The alteration zones of the mapped area was interpreted as occurring in two general directions - 210° & 090° - of increased epidote. The zones appear to be controlled by the predominant structures of the area.

The resulting heavily propylitized rock type was classified as a greenstone in differentiation from an augite porphyry greenstone in which similar alteration occurs to a lesser degree resulting in an obscure porphyritic texture.



Seattle 18.6 KHz.

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Jan 26 / 93



SOOKOCHOFF CONSULTANTS INC.			
TANOS PETROLEUM CORP.			
CIG 200 CLAIM			
NICOLA M.D.			
VLF-EM SURVEY			
SCALE: 1:3000	DATE: Oct.'92	N.T.S. 821/BW	DRAWN BY: GEO-COMP
			FIGURE: 3

### DESCRIPTION OF ROCK SAMPLES

Eight rock samples were taken and submitted for geochemical analysis. The location of the samples is cross referenced with the accompanying map (Figure 4). A description of the samples is as follows.

Sample Number (map)(assay sheet)	Description	Cu ppm	Zn ppm
1) R BL 344NW	APG: Heavy epidote & red hematite patches on fractures	130	71
2) R BL 375NW	APG: Schistose & silicified w/ qtz as irregular stringers	236	43
3) R BL 400NW	APG: silicified; lt qz stringers & blebs	72	30
4) R 50SW 385NW	Amphibolite & qtz	95	46
5) R 50SW 225NW	APG: Siliceous; chloritic	88	65
6) R 50NE 200SE	G: Heavy epidote; moderate qtz	44	28
7) R 50NE 150SE	APG: Moderate epidote slashes	66	17
8) R BL 278E	APG: Light quartz stringers	459	38

For complete assay results refer to Appendix I.

Although the rock sample assay results disclosed only anomalous copper values, the results suggest increased copper values in association with quartz stringers and/or increased epidote.

### MINERALIZATION

Mineralization on Mineral Hill of the Stump Lake camp is essentially associated with quartz veins which occur as quartz fillings in shear and fracture zones. The principal quartz veins strike from north 45 degrees west to north 25 degrees east and dip between 45 degrees easterly and vertical.

The quartz is white and vitreous and is mineralized irregularly with sulphides which include pyrite, galena, sphalerite, tetrahedrite, chalcopyrite and bornite. The sulphides occur in segregations, thin seams and disseminations which usually make up a low proportion of the veins. Gold and silver values are proportional to the amount of sulphides in any one vein.

Mineralization on the Cig 200 claim within the survey area, located in the 1991 exploration program, occurs at station 00 - 00, at the indicated intersection of two structural-alteration zones. The mineral zone is comprised of a breccia zone of discontinuous quartz veinlets up to 10 centimetres wide over a width of 0.6 metres is located 100 metres west of a diorite outcrop. The zone strikes at 320°, dips vertically, is hosted by a greenstone and is comprised of quartz with 10% creamy brownish carbonate (ankerite?).

The veinlets may contain angular heterolithic breccia fragments in addition to seriate textured fragments of up to two centimetres wide within the general zone. Occasional galena crystals occur within selective rare breccia zones of less than two centimetres wide and void of quartz. This narrow zone contains angular fragments of less than two millimetres wide in a creamy brown matrix and appears to transect other veinlets.

#### ALTERATION

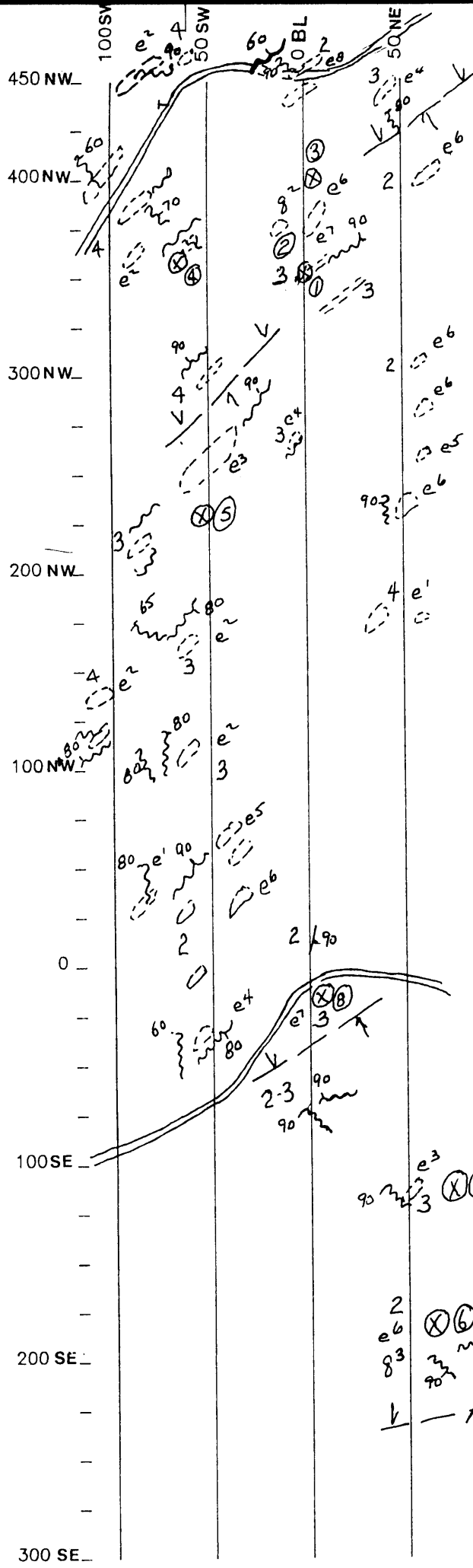
At the Stump Lake camp, general chloritic alteration is pervasive in the massive and locally sheared andesite. The quartz veins are usually accompanied by rather prominent alteration of the wall rock. The walls are bleached and pyritized with no appreciable values. The width of the alteration zone is not constant but may attain a thickness of "15 feet".

At the Cig 200 claim the alteration is predominantly propylitic consisting of variable amounts of chlorite and epidote and less obvious carbonate. The more intense propylitic alteration results in a greenstone commonly with carbonate stringers.

The main mineral zone does not exhibit any significant bleaching or pyritization of the wall rock as at the Stump Lake mineral zones and other alteration zones of bleaching and pyritization were not evident in the 1992 geological survey..

#### 1992 VLF-EM SURVEY

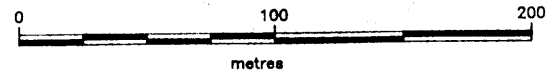
Four grid lines oriented at 330° and 50 metres apart were established and extended 450 metres northwest and up to 300 metres southeast. Readings were taken at 25 metre intervals except for 100 metres from station 0+0 where readings were at 20 metre intervals. The survey covered a 150 metre by 750 metre area and incorporated the 1991 soil geochemical survey area.



LEGEND

- chl chlorite
- ep epidote
- carb carbonate
- sil siliceous
- V T Topographical depression
- 8 Quartz stringers
- Outcrop
- Q Quartz zone
- Diorite
- Greenstone
- Augite Porphyry Greenstone
- Augite Porphyry
- Fracture
- Volcanic flow bed
- Sample Site
- Sample Number (rock)

*[Handwritten Signature]*  
 Jan 26 / 1983



SOOKOCHOFF CONSULTANTS INC.				
TANOS PETROLEUM CORP.				
CIG 200 CLAIM				
NICOLA M.D.				
GEOLOGY				
SCALE: 1:3000	DATE: Oct.'92	N.T.S. B21/BW	DRAWN BY: GEO-COMP	FIGURE: 4

A Sabre Model 27 VLF-EM Receiver instrument manufactured by Sabre Electronics of Vancouver was utilized in the VLF-EM survey.

The VLF-EM Receiver measures the amount of distortion produced in a primary transmitted magnetic field - in this case Seattle at a frequency of 18.6 Khz - and a secondary magnetic field which may be induced by a conductive mass such as a sulphide body. The VLF-EM unit - due to its relatively high frequency - can detect low conductive zones such as fault or shear zones, carbonaceous sediments or lithological contacts.

The major disadvantage of the VLF method, however is that the high frequency results in a multitude of anomalies from unwanted sources such as swamp edges, creek and topographical highs.

The survey readings were plotted as raw data and are shown on accompanying Figure 4. The results of the survey indicated anomalous trends at 210° and at 090° which appear to indicate structural trends according to the fracture direction and topographical depressions of the geological field survey. The indicated major structure of the topographical depressions are directly correlative in the northeast and indirectly or non correlative elsewhere.

#### CONCLUSIONS

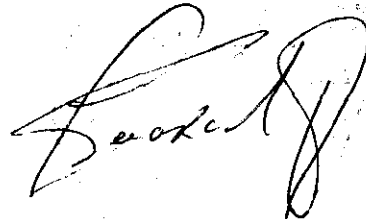
The 1992 surveys were not successful in providing additional information as to the quartz bearing structure centred at station 0+0. The grid line direction at 330° was not ideal for delineating the quartz bearing structure trending at 320°, however the VLF-EM anomalies appear to generally correlate with zones of increased epidote alteration which may indicate increased alteration in association with mineral controlling structures.

The more significant results of the survey were obtained from the northeastern portion of the survey area where increased epidote alteration and elevated copper values (samples 1 & 2) occur generally associated with a VLF-EM anomaly.

**RECOMMENDATIONS**

The correlative anomalous northeast area should be examined for potential mineralization and prior to any detailed exploration in the area, recce geological mapping and sampling is recommended with emphasis based on locating heavily propylitized bedrock in association with topographical depressions.

Respectfully submitted,  
**SOOKOCHOFF CONSULTANTS INC.**

A handwritten signature in dark ink, appearing to read 'Laurence Sookochoff', written in a cursive style.

**Laurence Sookochoff, P.Eng.**

**January 26, 1993**  
**Vancouver, B.C.**

**SELECTED REFERENCES**

**COCKFIELD, W.E. - Geology and Mineral Deposits of Nicola Map Area, Memoir 249, G.S.C. 1961.**

**B.C. MINISTER OF MINES REPORTS - 1936 p D14-D23**

**GEOLOGICAL SURVEY OF CANADA - Bedrock Geology of Ashcroft (92I) map area, Open File 980**

**RAYNER, G.H. - A Report on the Stump Lake Property for Celebrity Energy Corporation, April 14, 1983.**

**SOOKOCHOFF, L. - Geophysical Assessment Report for Tanos Petroleum Corporation on the Cig 200 Claim, January 11, 1989.**

**- Geochemical and Geological Assessment Report for Tanos Petroleum Corporation on the Cig 200 Claim, January 22, 1990.**

**- Geochemical Assessment Report for Tanos Petroleum Corporation on the CIG Claim Group, January 10, 1991.**

**- Geochemical and Geophysical Assessment Report for Tanos Petroleum Corporation on the Cig 200 Claim, January 13, 1992.**

**RICHARDSON, P.W. - Report on the Stump Lake Property for Goldbrae Developments Ltd., July 11, 1985.**



**CERTIFICATE**

I, Laurence Sookochoff, of the city of Vancouver, in the Province of British Columbia, do hereby certify:

That I am a Consulting Geologist with offices at 1027-510 West Hastings Street, Vancouver, B.C. V6B 1L8

I 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 practising my profession for the past twenty-six years.
3. I am registered with the Association of Professional Engineers of British Columbia.
4. Information for the accompanying report was obtained from sources cited under Selected References, from the exploration program reported on herein and from work carried out on the property from 1988 to 1992.
5. I have no direct, indirect nor contingent interest in the property described herein, or in the securities of Tanos Petroleum Corporation, nor do I expect to receive any.

  
Laurence Sookochoff, P.Eng.  
Consulting Geologist

January 26, 1993  
Vancouver, B.C.

**Tanos Petroleum Corporation  
Cig 200 Claim  
Statement of Costs**

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The field work on the Cig 200 Claim was carried out from October 25, 1992 to October 28, 1992 to the value as follows:

**Geophysical & Geological**

<b>Laurence Sookochoff, P. Eng.</b>	
4 days @ \$550.	\$ 2,200.00
<b>Car rental:</b>	
4 days @ \$70.00 plus gas & km	565.00
<b>Room &amp; board:</b>	
4 man days @ \$125.00	500.00
<b>Field supplies</b>	100.00
<b>Assays</b>	89.88
<b>Compilation &amp; draughting</b>	275.00
<b>Report, xerox, printing &amp; compilation</b>	<u>750.00</u>
	\$ 4,479.88
	<u>-----</u>

**Appendix I**  
**ASSAY CERTIFICATES**



## GEOCHEMICAL ANALYSIS CERTIFICATE

Sookochoff Consultants Inc. PROJECT CIG File # 92-3926 Page 1

1027 - 510 W. Hastings St, Vancouver BC V6B 1L8



SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm
R 50NE 150SE	1	66	2	17	.1	6	4	337	.74	2	5	ND	1	245	.3	2	3	36	4.83	.069	2	8	.20	30	.13	2	.56	.02	.03	1
R 50NE 200SE	4	44	2	28	.1	16	7	292	1.35	3	5	ND	1	26	.2	2	2	23	1.03	.045	2	13	.45	82	.06	3	.52	.02	.26	1
R 50SW 225NW/	1	88	2	65	.1	15	22	716	3.38	2	5	ND	1	67	.2	2	4	77	1.41	.165	2	16	1.69	200	.19	2	2.13	.04	.66	1
R 50SW 385NW	1	95	2	46	.2	25	18	590	2.81	2	5	ND	1	89	.5	2	5	70	5.98	.135	2	73	1.26	203	.20	2	1.52	.03	1.06	1
R BL 27SE	1	459	4	38	.2	12	13	847	2.24	2	5	ND	1	111	.2	2	3	60	7.94	.109	3	19	.95	22	.13	2	.91	.01	.10	1
R BL 344NW/	1	234	4	40	.2	14	12	387	2.18	2	5	ND	1	63	.2	2	5	60	2.22	.173	2	91	.53	63	.19	4	.78	.03	.38	1
R BL 375NW/	1	130	4	71	.2	27	23	522	3.55	2	5	ND	1	50	.2	2	2	105	1.89	.197	2	107	1.80	222	.24	3	2.16	.05	1.49	1
RE R BL 344NW/	1	236	5	43	.3	13	13	389	2.21	2	5	ND	1	63	.2	2	3	61	2.19	.175	2	91	.54	57	.19	2	.79	.03	.40	1
R BL 400NW/	1	72	2	30	.1	11	10	377	1.47	2	5	ND	1	161	.2	2	3	37	1.24	.119	2	38	.68	56	.13	3	.77	.02	.29	1
STANDARD C	17	58	37	130	7.4	66	31	1030	3.96	40	17	7	35	51	18.4	14	21	55	.51	.086	38	59	.91	176	.09	34	1.88	.06	.14	10

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. AU DETECTION LIMIT BY ICP IS 3 PPM.  
ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB

- SAMPLE TYPE: P1 ROCK P2 SOIL Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: NOV 9 1992 DATE REPORT MAILED: Nov 17/92 SIGNED BY: *C. Leong* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS