

ARIS SUMMARY SHEET

District Geologist, Kamloops

Off Confidential: 94.10.28

ASSESSMENT REPORT 23282

MINING DIVISION: Nicola

PROPERTY: Cig 200  
LOCATION: LAT 50 18 50 LONG 120 17 45  
UTM 10 5576809 692528  
NTS 092I08W

CAMP: 013 Stump Lake Area

CLAIM(S): Cig 200  
OPERATOR(S): Sookochoff, L.  
AUTHOR(S): Sookochoff, L.  
REPORT YEAR: 1994, 16 Pages  
COMMODITIES  
SEARCHED FOR: Copper, Silver  
KEYWORDS: Triassic, Nicola Group, Greenstones, Diorites, Argillites  
WORK  
DONE: Geophysical  
EMGR 6.0 km  
RELATED  
REPORTS: 18288, 19619, 20846, 22068, 22780

LOG NO: FEB 21 1994 RD.

ACTION.

FILE NO:

**GEOLOGICAL & GEOPHYSICAL ASSESSMENT REPORT**

for

**CYPANGO VENTURES LTD.**

on the

**CIG 200 CLAIM**

**SUB-RECORDER  
RECEIVED**

**FEB 10 1994**

M.R. # ..... \$ .....  
VANCOUVER, B.C.

**Nicola Mining Division**

**NTS 092I08W**

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**23,282**

**Vancouver, B.C.  
January 28, 1994**

**Laurence Sookochoff, P.Eng.  
Consulting Geologist**

**FILMED**

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**Geological & Geophysical Assessment Report**  
on the  
**CIG 200 Claim**  
for  
**Cypango Ventures Ltd.**

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Geological & Geophysical Assessment Report  
on the  
CIG 200 Claim  
for  
Cypango Ventures Ltd.

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INTRODUCTION

Localized geological and geophysical surveys were completed on the CIG 200 Claim in October 1993. This exploration program was initiated to explore for geologically indicated potentially economic mineralization within or associated with the Nicola Group of rocks or Tertiary intrusives in an unexplored area adjacent to an area of previous exploration completed by Tanos Petroleum Corporation (name changed to Cypango Ventures Ltd.).

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

Cypango Ventures Ltd. had exploration completed on a 20 unit claim block located in the Stump Lake mining camp where production to 1931 from mineralized quartz veins of the Camp 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 productive quartz veins of the Stump Lake camp, which were explored and developed to a depth of 275 meters and along a strike length of 600 meters, are associated with northerly trending structures in which mineralization appears to increase along variable trends of the structure and with an alteration zone of up to "15 feet wide".

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.

Previous exploration on the CIG 200 claim, which included localized geological mapping in addition to selected localized geophysical and geochemical surveys disclosed correlative anomalous zones and a mineralized fracture zone which through subsequent exploration was determined as not being definitive in establishing potentially economic mineral controlling structures.

The results of the 1993 localized exploration program disclosed a syenite float rock, which may be the cause of the occasional mineralization found on the Claim, and a VLF-EM indicated fault zone correlating with a topographical low.

#### 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, 1994

\* On the approval of one years assessment work filed October 28, 1993 for which this report is a part thereof.

#### LOCATION AND ACCESS

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 year-round maintained gravel road, the Peter Hope Lake road, junctions off to the east within three km south of Stump Lake. This road provides access to poor secondary roads through the property.

#### 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 1,375 metres on a northeasterly trending ridge in the northeast from 1,100 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.

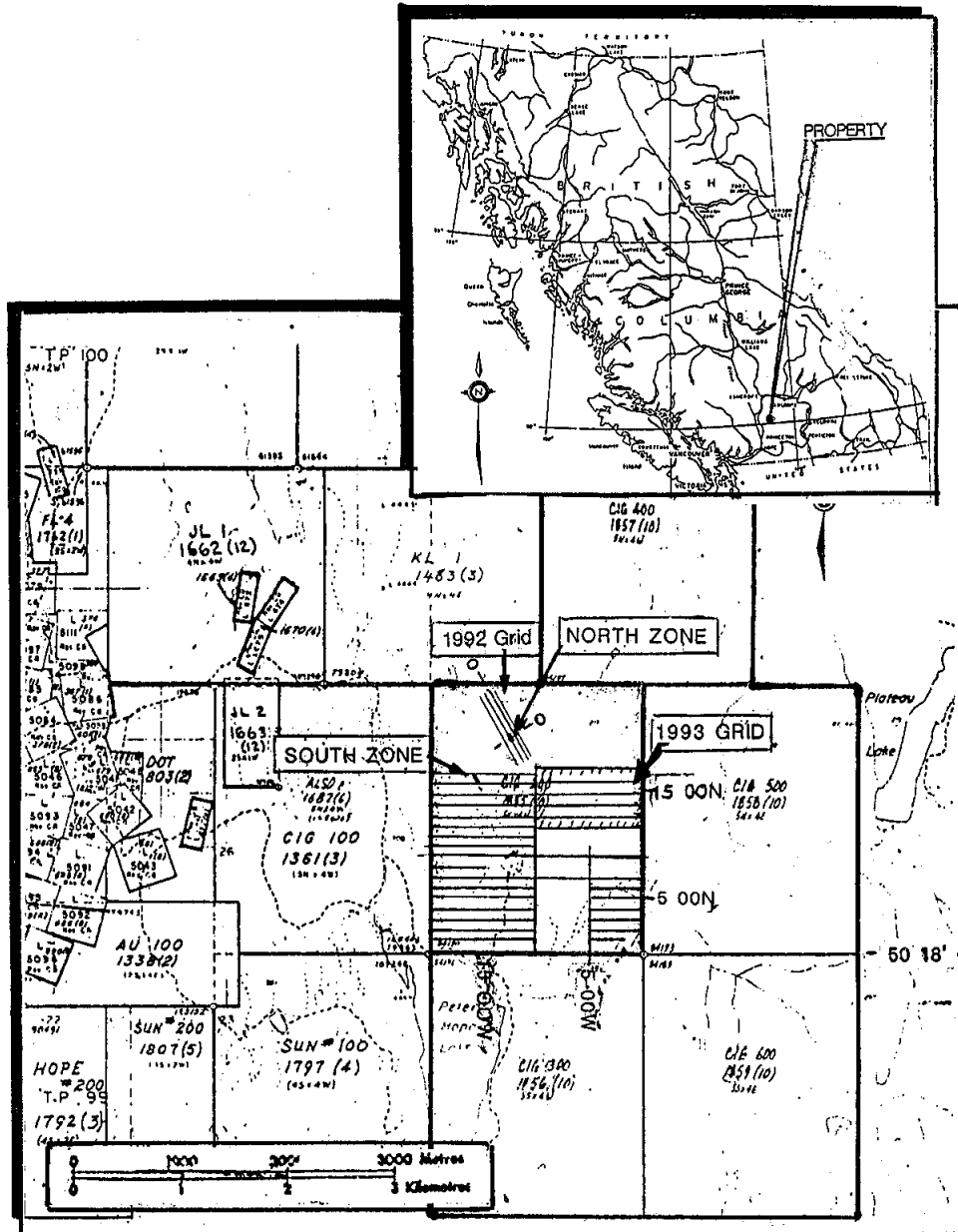


Figure 1. Location, Claim & Index Map.

Base Map: Ministry of Energy, Mines and Petroleum Resources  
Mineral Titles Reference Map 092I08W.

## 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.

Exploration on the Cig 200 claim by Tanos Petroleum Corporation (Cypango Ventures Ltd.) since 1988 is as follows:

1988 - a localized VLF-EM survey.

1989 - localized geochemical and geological surveys.

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.

1991 - localized geochemical and geological surveys were completed in the northwestern sector of the Cig 200 claim.

1992 - localized geological and geophysical (VLF-EM) surveys in the northwestern sector of the CIG 200 claim.

## 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 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.

The greenstones strike at 040° to 060° and dip nearly vertical in the vicinity of the workings. Porphyritic to fine grained hornblende-andesitic dykes, up to two and one-half meters wide occur in the area. Quartz filled fractures and shear zones strike northerly and dip easterly.

#### 1993 GEOLOGICAL SURVEY (Figure 2)

In the 1993 localized geological survey of the northeastern sector of the Cig 200 claim, mapping was completed along the six grid lines utilized in the VLF-EM survey. The grid covered an area of 600 metres by 1,000 metres, however outcrop was only evident in the easternmost grid area.

Outcrops are predominantly of greenstone or augite porphyry greenstone - metamorphosed rocks of the Nicola Group. The general boundary between the two rock types occurs along a discontinuous (to the north) northerly trending topographical depression which is interpreted as a fault zone.

Within the northern-central portion of the mapped area disseminated pyrite occurs in association with an augite porphyry greenstone. Barren quartz veinlets occur in the south adjacent to the indicated fault zone. An angular float boulder of syenite was located in this area. The coarse grained allotriomorphic textured syenite contains 40% pink feldspars in a hornblende-feldspar matrix hosting rare fine grained pyrite.



### 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.

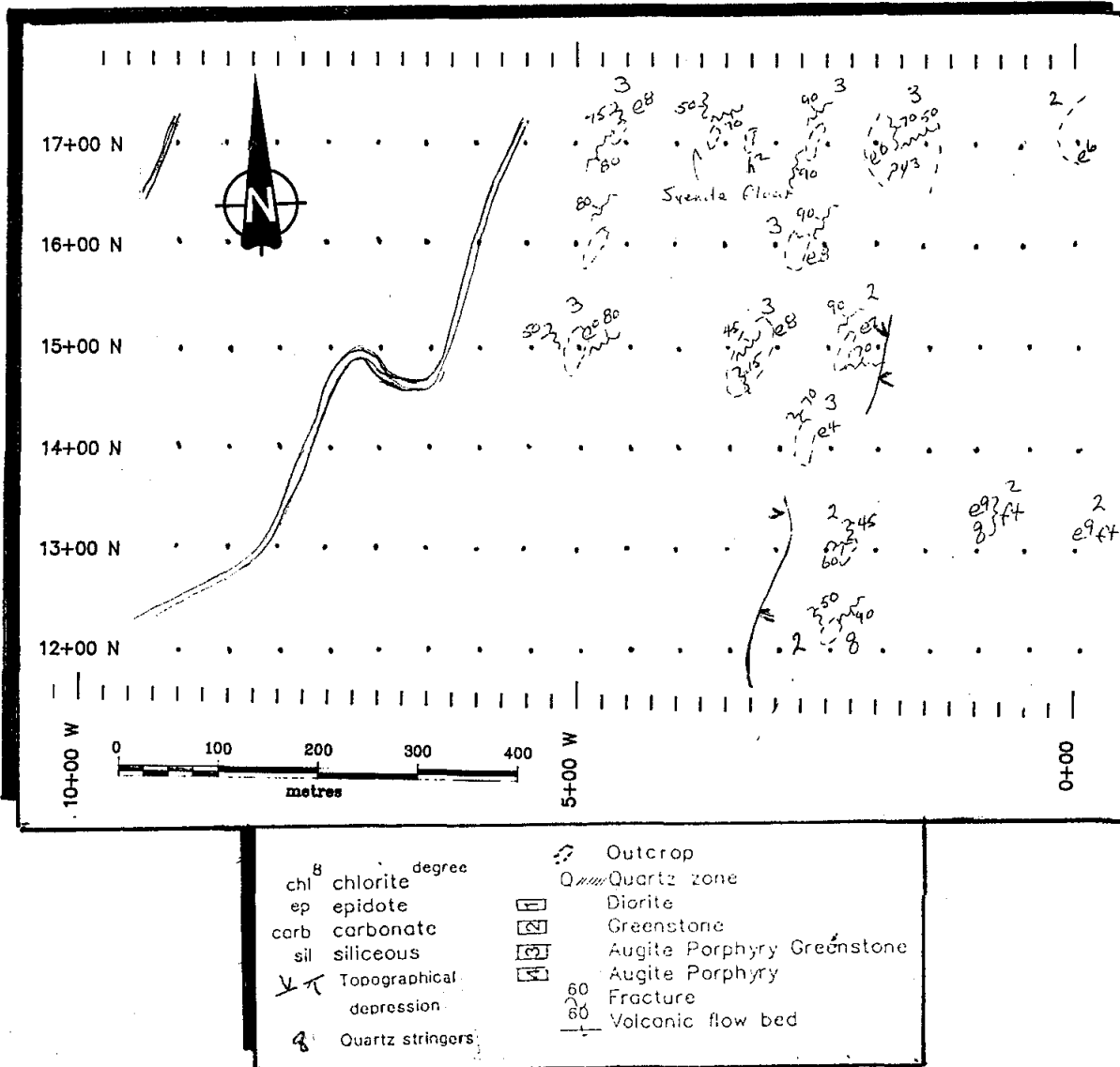


Figure 2. Geological Survey Results - 1993

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 occurs in two areas; the North Zone and the South Zone (Figure 1). At the North Zone 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. Occasional galena crystals occur within selective rare breccia zones of less than two centimetres wide and void of quartz.

The South zone mineralization is of rare blebs of chalcopyrite within a quartz stringer and hosted by an altered argillite with pyrite. The north northwesterly trend of this zone could be reflected in an anomalous copper soil geochemical value in the area of 15+00 W of the northernmost 17+00 N line of the 1990 soil geochemical survey.

1993 VLF-EM Survey  
(Figure 3)

A Sabre Model 27 VLF-EM receiver manufactured by Sabre Electronics of Vancouver was utilized in the VLF-EM survey. The primary transmission utilized was from Seattle, broadcasting at a frequency of 18.6 Khz. The VLF-EM receiver measures the amount of distortion produced in the primary transmitted field 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 and has the added disadvantage of indicating anomalous conditions from unwanted sources such as swamp edges, creeks and topographical highs.

Six 1,000 metre long grid lines at were established as an addition to the previous grid. The grid designations were from 12+00 N to 17+00 N at 100 metre intervals and from 0 W to 1000 W with stations at 50 metre intervals. The area covered was 500 metres by 1000 metres within the northeast sector of the CIG 200 mineral claim.

The survey readings were Fraser Filtered and plotted as indicated on the accompanying Figure 3. Only the positive values were plotted and contoured at intervals of 10. The raw field data is presented in Appendix I of this report.

The results of the survey indicated two en echelon primary northerly trending anomalies in the east correlating with the topographical low which appears to designate the alteration "contact " between a greenstone and an augite porphyry greenstone. The two anomalies are thus interpreted as indicating a fault zone. A prime anomaly in the northwest covers a broad low, locally swampy, area which possibly reflects the swampy conditions. A central, moderate order, anomaly appears to reflect a topographic high.

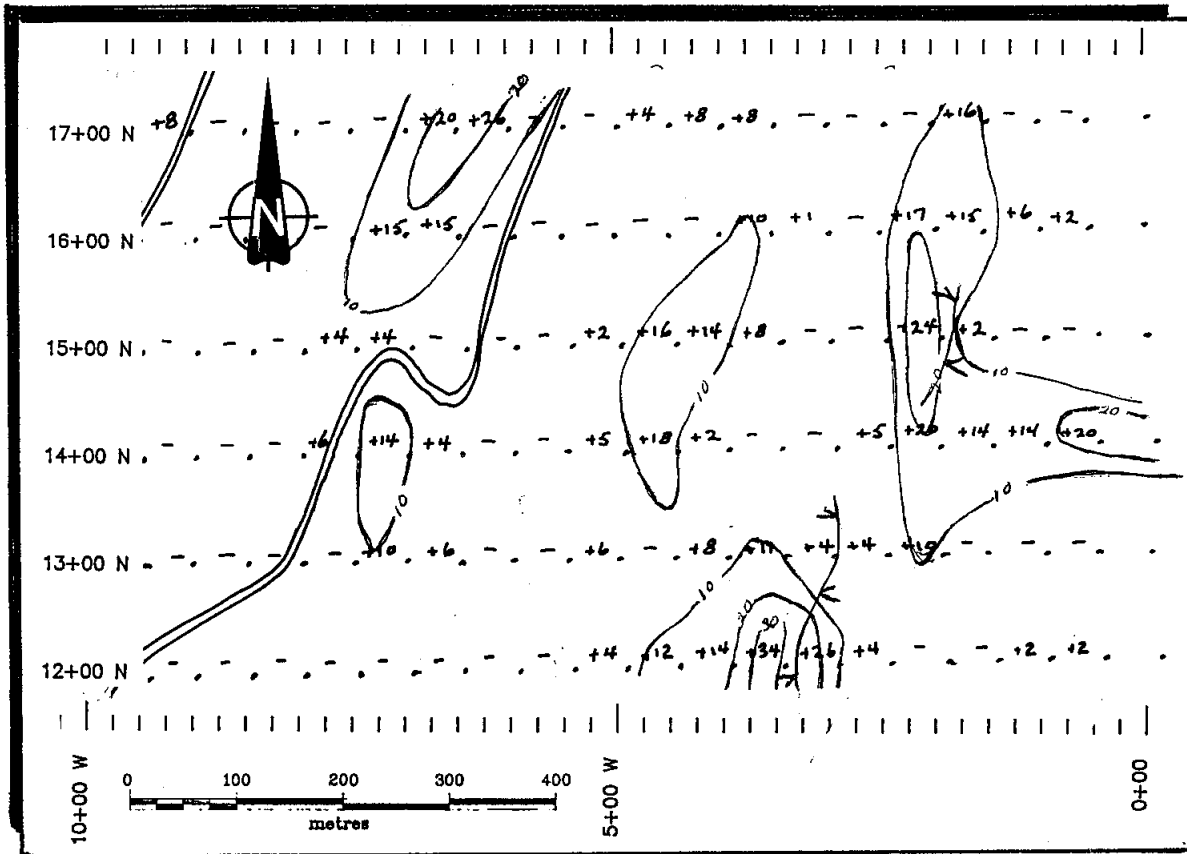


Figure 3. VLF-EM Survey Results - 1993

Map shows only the positive values of the Fraser Filtered field values. (Field values are appended as Appendix I) Increasing positive values indicate increasing conductivity.

#### CONCLUSIONS

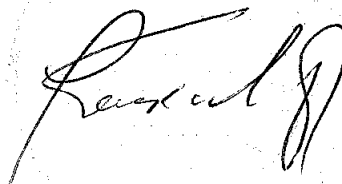
The limited 1993 exploration program contributed to the data base of information on the CIG 200 mineral claim derived from previous exploration by Cypango Ventures Ltd. (Tanos Petroleum Corporation).

Geologically, an unexposed syenitic intrusive, indicated only as float on the CIG 200 claim, may be the cause for the increased propylitic alteration (including pyrite) within the mapped area and possibly the mineralization of the North Zone and the South Zone northwest and west of the 1993 exploration area. A significant north-south topographically expressed structure which is substantiated by the 1993 VLF-EM survey, could provide the controlling features to potentially host economic mineral zones.

RECOMMENDATIONS

Soil geochemical sampling is recommended to cover the eastern VLF-EM anomalies to determine the mineral controlling potential of the indicated structure. The northwestern VLF-EM anomaly should also be tested through soil geochemistry where the humic material of the swampy ground could indicate mineralization within the proximal drainage area.

Respectfully submitted,



Laurence Sookochoff, P.Eng.  
Consulting Geologist

January 28, 1994  
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

Moore, J.M. et al - Nicola Lake Region Geology and Mineral Deposits. B.C.Ministry of Energy, Mines and Petroleum Resources, Mineral Resources Division. Open File 1990-29.

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 Resources on the CIG Claim Group. January 10, 1991.

Geochemical & Geological Assessment Report for Tanos Petroleum Corporation on the CIG 200 Claim. January 13, 1992.

-Geophysical & Geological Assessment Report for Tanos Petroleum Corporation on the CIG 200 Claim. January 26, 1993.

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

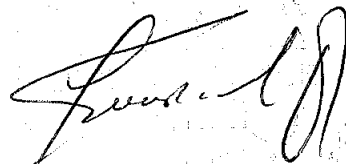
CERTIFICATE

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-seven 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 supervision of the exploration program reported on herein and from work carried out on the property since 1988.
5. I have no direct, indirect nor contingent interest in the property described herein, or in the securities of Cypango Ventures Ltd., nor do I expect to receive any.



Laurence Sookochoff, P.Eng.  
Consulting Geologist

January 28, 1994  
Vancouver, B.C.

Cypango Ventures Ltd.  
Cig 200 Claim  
Statement of Costs

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The field work on the Cig 200 Claim was carried out from October 22, 1993 to October 28, 1993 to the value as follows:

Geological & Geophysical

Laurence Sookochoff, P. Eng.	
4 days @ \$550.	\$ 2,200.00
Car rental:	
4 days @ \$65.00 plus gas & km	560.00
Room & board:	
4 man days @ \$125.00	500.00
Field supplies	280.00
Data compilation & draughting	450.00
Report, xerox, printing & compilation	<u>1,100.00</u>
	\$ 5,090.00

**Appendix 1**  
**VLf-EM Raw Data**



VLF-EM Raw Data

Line 12 + 00 N

Station	Reading
0 W	-2
50 W	+10
100 W	+4
150 W	-6
200 W	0
250 W	-10
300 W	+2
350 W	+2
400 W	-4
450 W	-8
500 W	-6
550 W	-2
600 W	0
650 W	+6
700 W	+16
750 W	+16
800 W	+10
850 W	+12
900 W	+10
950 W	+14
1000 W	+10

Line 14 + 00 N

Station	Reading
0 W	+2
50 W	+2
100 W	+10
150 W	-4
200 W	-8
250 W	-6
300 W	0
350 W	0
400 W	-2
450 W	-15
500 W	-10
550 W	-2
600 W	-5
650 W	-5
700 W	-10
750 W	-10
800 W	0
850 W	0
900 W	+4
950 W	+10
1000 W	+12

Line 16 + 00 N

Station	Reading
0 W	0
50 W	-2
100 W	-5
150 W	-4
200 W	-4
250 W	-8
300 W	-2
350 W	+5
400 W	0
450 W	-5
500 W	-2
550 W	0
600 W	-8
650 W	+2
700 W	0
750 W	-5
800 W	+6
850 W	+6
900 W	+10
950 W	+8
1000 W	+10

Line 13 + 00 N

Station	Reading
0 W	-6
50 W	-5
100 W	0
150 W	-4
200 W	-4
250 W	-6
300 W	-2
350 W	+2
400 W	-4
450 W	-2
500 W	0
550 W	0
600 W	+2
650 W	+6
700 W	+7
750 W	+5
800 W	+12
850 W	+10
900 W	+8
950 W	+6
1000 W	+6

Line 15 + 00 N

Station	Reading
0 W	0
50 W	+2
100 W	0
150 W	-4
200 W	0
250 W	0
300 W	0
350 W	-6
400 W	-10
450 W	-10
500 W	-4
550 W	-0
600 W	0
650 W	+4
700 W	-6
750 W	-10
800 W	+8
850 W	+0
900 W	0
950 W	0
1000 W	0

Line 17 + 00 N

Station	Reading
0 W	-8
50 W	-6
100 W	0
150 W	-6
200 W	-10
250 W	-8
300 W	-12
350 W	-10
400 W	+10
450 W	-6
500 W	-4
550 W	-6
600 W	0
650 W	-2
700 W	+4
750 W	-6
800 W	-8
850 W	+6
900 W	-4
950 W	-4
1000 W	-10