

84-#625 - 12666 4

**GEOLOGY, GEOCHEMISTRY AND PROSPECTING**

**COLES PROPERTY**

**OMENICA M.D.**

**Whitesail Lake Map Area (93E/6W)**

**53° 25' N, 127° 17' W**

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**12,666**

**May, 1984**

by  
Dr. T. A. Richards  
R. R. #1, Hazelton, B.C.

## TABLE OF CONTENTS

	Page
Location	1 ✓
Access	1 ✓
Physiography	1 ✓
Property History	2 ✓
Work Done	4 ✓
Regional Geology	5 ✓
Local Geology	6 ✓
Property Geology	8 ✓
Mineralization and Alteration	9 ✓
High View Showing	9 ✓
East Side Showing	10 ✓
Camp View Showing	10 ✓
Low View Showing	10 ✓
South Side Showing	10 ✓
Other Anomalous Areas	11 ✓
Geochemistry	12 ✓
Rock Geochemistry	12 ✓
Soil Samples	12 ✓
Silts	13 ✓
Interpretation	14 ✓
Authors Resume	15 ✓
Itemized Cost Statement	16 ✓
Appendix 1 - Rock Geochemistry ppm/ppb	17 ✓
Appendix 2 - Rock Geochemistry ounces/ton	20 ✓
Appendix 3 - Soil Geochemistry	24 ✓
Appendix 4 - Silt Geochemistry	27 ✓
List of Figures	
Figure 1 - Location Map	✓
Figure 2 - Local Geology	✓
Figure 3 - Property Geology and Geochemistry (in pocket)	✓

## LOCATION

The Coles Property is located in the Whitesail Lake region of west-central British Columbia, in NTS map 93E/6W. It is located 130 kilometers south of Houston, B.C, between Coles and Little Whitesail Lake. The initial post is at approximate latitude  $53^{\circ} 25' N$  and longitude  $127^{\circ} 17' W$ . The location is shown in Figure 1.

## ACCESS

Access at present is via aircraft from Houston or Smithers. Coles and Little Whitesail Lake are suitable for fixed wing landings. Good gravel roads terminating at Tahtsa Lake, 25 kilometers north of the property give a good mobilization point to the property.

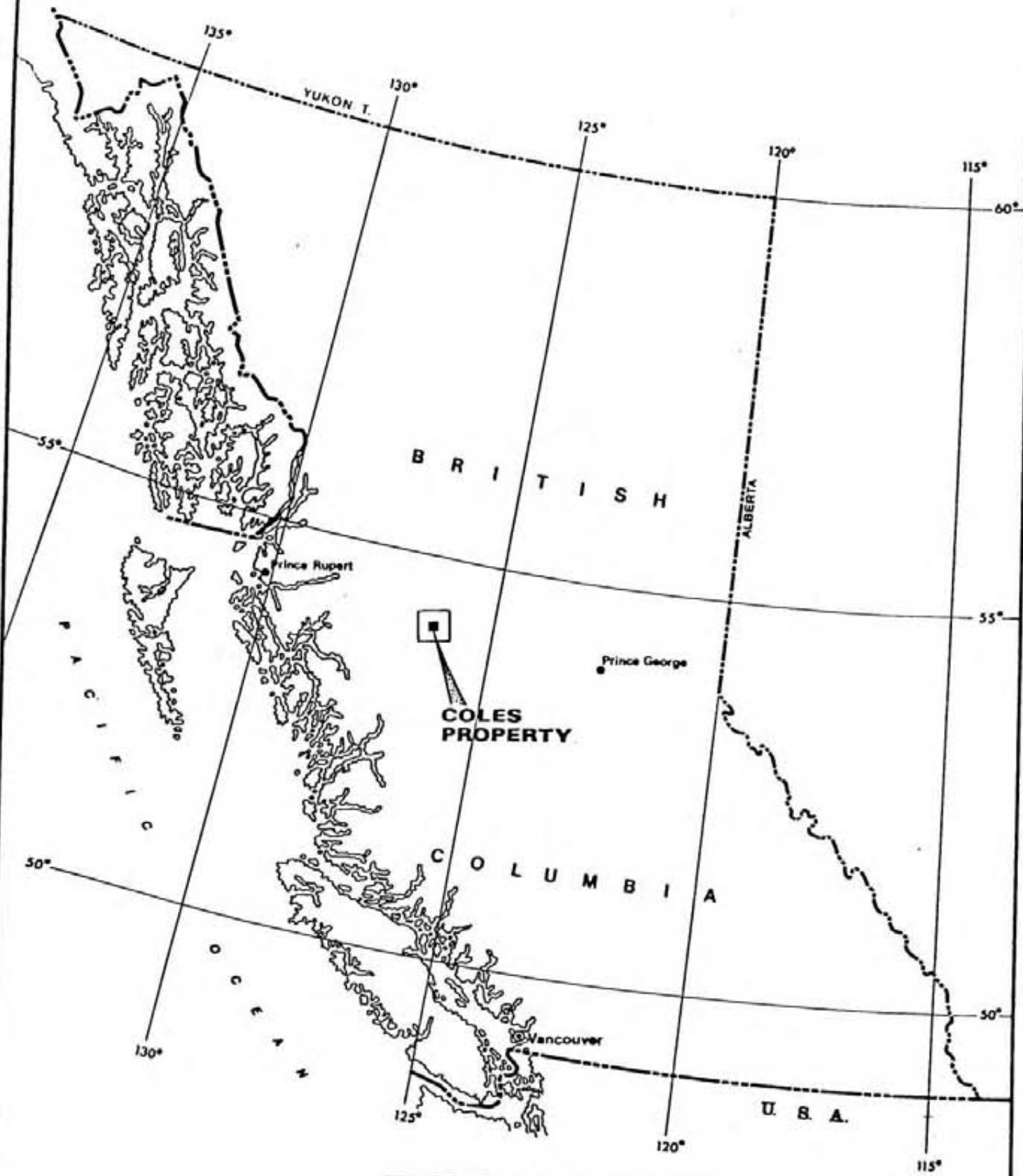
## PHYSIOGRAPHY


The claims are located in the southern part of the Hazelton Mountains and lie between the Coast Mountains and the Nechako Plateau. The terrain is moderate to rugged mountains, rising gently from Coles Lake (915m) southward to a peak height of 2,000m, and dropping off abruptly to Little Whitesail Lake (850m). Tree line is about 1,400 meters. Much of the terrain between 1,280 and 1,680 meters is a broad, flat plateau with little outcrop. Permanent pocket glaciers occupy the areas above 1,800 meters.

The Whitesail Lake area is characterized by interior climate of cold winters and mild summers, with moderate to high precipitation. Snow is usually present from late October to mid-late May.

## PROPERTY HISTORY

The Coles Group comprises of four contiguous mineral claims of a total of 80 units; Coles 1 to 4. They were recorded on May 6, 1983. Mineralization was first noted in the area during the summer of 1982, by T. Richards, B. Holden, P. Surrat and T. Bell. The property was optioned by T. Richards to Nuspar Resources Ltd. in May, 1983. No previous record of mineralization has been found.



<b>NUSPAR RESOURCES Ltd.</b>		
<b>COLES PROPERTY LOCATION MAP</b>		
OMINECA M.D., B.C.		NTS 93 E/6W
V.CUKOR, P.Eng. - NVC ENGINEERING Ltd. - VANCOUVER, B.C.		
DATE: Sept. 1983	SCALE: 0  100 miles	FIG. 1

## WORK DONE

Three to four men explored the Coles Property between July 22 and August 5, 1983. Most work was done prospecting from a fly camp located on the north-east corner of the claims. As little previous exploration had been done on the ground, most of the time spent was in the location and preliminary sampling of veins and vein structures. A preliminary soil grid was run on the northern portion of the claims to test the use of soil-grid geochemistry as a means of discovering anomalies.

An engineer, V. Cukor, visited the property in June and assessed the property. In September, the same engineer prepared a report and map on the Coles Property and on adjacent ground to the north. A portion (60%) of this later work and all the former is filed for assessment.

Geology done by the writer was of reconnaissance nature to assess the overall structural continuity of the system.

## REGIONAL GEOLOGY

The property lies near the western boundary of the Intermontone Belt in west Central British Columbia. Stratified and intrusive rocks in this region range in age from Lower Jurassic to Lower Tertiary. A stratigraphic column of this portion of the Intermontone Belt is as follows:

- Early Tertiary:
  - : Ootsa Lake Group; continental volcanics, rhyolite to andesite; coeval intrusives
- Upper Cretaceous - Early Tertiary:
  - : Kasalka Group, continental volcanics, rhyolite to andesite; flows, breccias, tuffs; coeval intrusives.
- Lower Cretaceous:
  - : Skeena Group; continental and shallow marine sandstone, shale, conglomerate.
- Upper Jurassic:
  - : Ashman formation; marine shale, siltstone and sandstone.
- Lower and Middle Jurassic:
  - : Hazelton Group; island arc, marine and non-marine volcanics; rhyolite to andesite; flow, breccias, tuffs and sediments; and coeval intrusives.

The structure of the area is dominated by faulting, comprising long linear fault zones trending ENE and NNW and block fault morphology. Folding is generally confined to well bedded sediments in proximity to fault zones and intrusions.

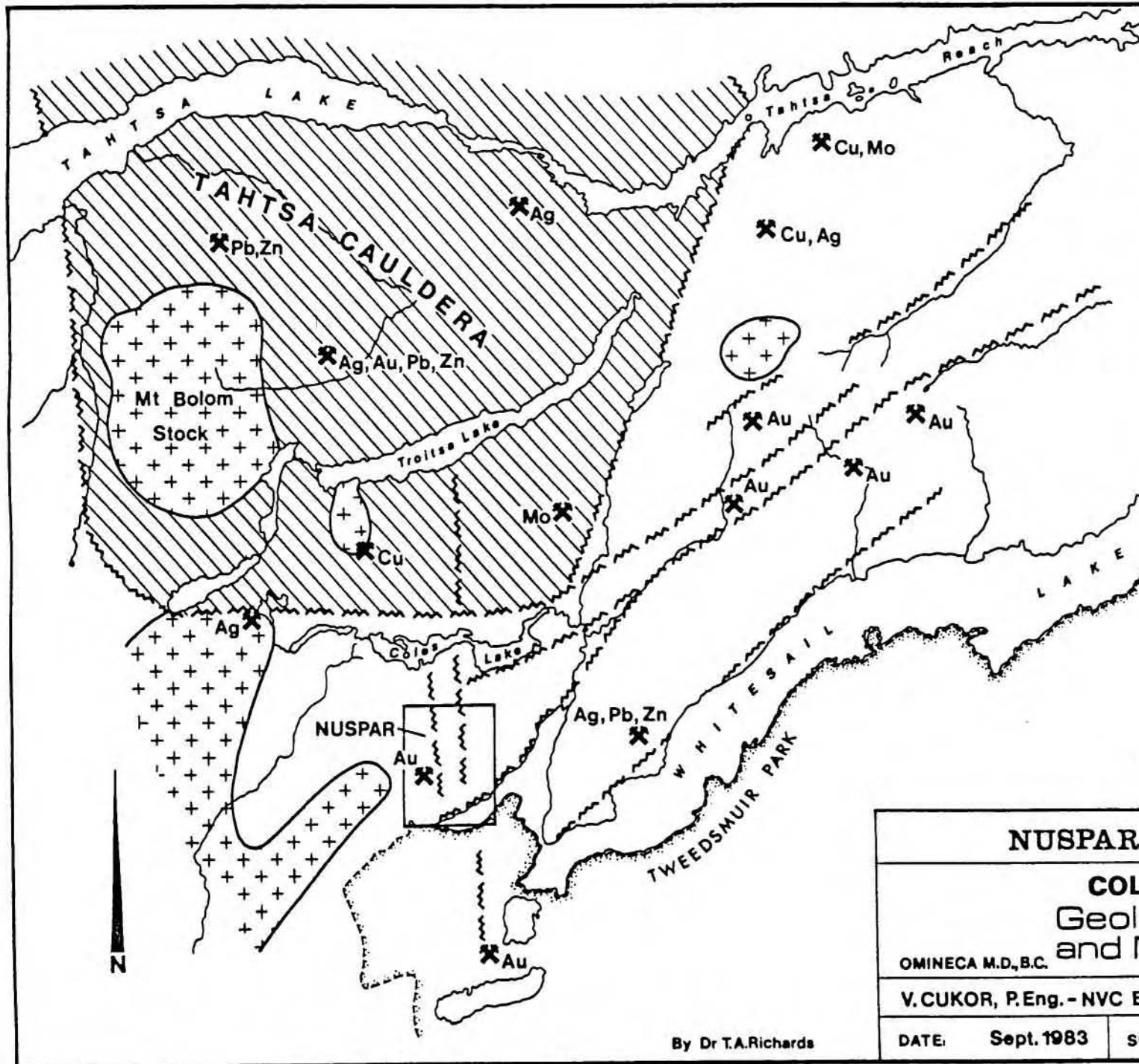
## LOCAL GEOLOGY

The area immediately surrounding the claim group comprises most of the stratigraphic and intrusive elements outlined above. The local region is dominated by a major structural-stratigraphic feature termed the Tahtsa Caldera. This is a major, Upper Cretaceous to Early Tertiary, down-drop volcanic basin measuring some 40 km north-south by 20 km east-west. Within the caldera, rock units comprise the Skeena Group sediments overlain by up to 1,000 meters of volcanics of the Kasalka Group and intruded by coeval granitic stocks. Peripheral to this structure, most of the bed-rock is composed of various volcanics facies of the Hazelton Group. Immediately west of the claims are large granodiorite stocks that are probably apophyse of the intrusive rocks of the Coast Complex.

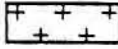


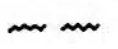
The Tahtsa Caldera is bounded by steep faults, simplified in Figure 2. A major set of north-east trending steep faults defines a 5 to 8 kilometer wide fault zone, termed the Whitesail Fault Zone. This zone strikes parallel to the trace of Whitesail Lake and trends into the Coles property. North-trending faults are common, particularly within and adjacent to the property.

The Coles Property is situated immediately south of the Tahtsa Caldera.





**LEGEND**

-  CRETACEOUS-TERTIARY PLUGS
-  CRETACEOUS VOLCANICS AND SEDIMENTS
-  JURASSIC (HAZELTON) VOLCANICS
-  MAJOR SHEAR AND FRACTURE SYSTEM

**NUSPAR RESOURCES Ltd.**

**COLES PROPERTY**  
**Geologic Elements**  
**and Mineralization**

OMINECA M.D., B.C.

NTS 93 E/6W

V. CUKOR, P. Eng. - NVC ENGINEERING Ltd. - VANCOUVER, B.C.

DATE: Sept. 1983

SCALE:  5km

FIG. 2

By Dr T.A. Richards

## PROPERTY GEOLOGY

The property is underlain by volcanics of the Hazelton Group. These are dominated by 1 to 3 meter thick, reddish, maroon to purple, indurated, well bedded, subareal lapilli tuffs. Few flow units were noted. Interbedded volcanic sediments are common. The beds dip uniformly to the north-east.

Towards the western margin of the property, the rocks are hornfelsed by a granodiorite body immediately adjacent the claims. Few dykes were noted.

The most important structural element on the property are north-south striking, steep (east and west) to vertical dipping fault zones. Three such zones have been noted. The most important of these, roughly bisects the centre of the claim block, and with extrapolations, can be traced for over a strike-length of 5 kilometers. It continues northward, off the Coles Group property. This fault zone displays a splay-zone 500 meters north of the initial part. Numerous small shears are apparent on the property that likely relate to the dominate shear zone.

## MINERALIZATION AND ALTERATION

To date, all significant mineralization has been found to be related to shear zones. These comprise epithermal quartz veins and stringers that include massive quartz, banded quartz, stockwork breccia zones and silicified zones. The veins vary in width from a few centimeters up to 6 meters width. Sulfide content is low, comprised of fine-grained pyrite, usually less than 1/2%, rarely to 5%. Minor sphalerite and galena have been noted, particularly in the west central part of Coles 1. Fluorite is common, as purple, green and colourless crystals, masses and disseminations associated with quartz veins. Chalcopyrite is common in quartz veins in the southern portion of the property. Five showings were noted, and shown in the pocket.

Alteration is of two types, argillic and propylite associated directly with the veins and shear zones, and a widespread, selective propylite. Adjacent the shear zones and veins, is a 1 to 5 meter wide bleaching of the rock that grades outwards into a 1 to 10 meter wide zone of propylite. The widespread propylitization is represented by the selective greening of permeable volcanic sediments and tuff located mainly in the north central part of the property. This alteration renders the rock into an alternating suite of a red volcanics (primary) interbedded with green, altered volcanics. It appears to predate the veining.

### High View Showing

This showing is located between 1,580 and 1,680 meters elevation in the north central part of the property. It comprises one main vein up to 6 meters width. It is a breccia zone composed of a box-work of vuggy quartz cementing angular, altered fragments of lapilli tuff. Numerous other veins and lenses up to 3 meters width were noted as splays off the main vein. Pyrite is less than 1%, minor sphalerite noted. Fluorite is locally common. Gold ranges up to 440 ppb, and silver to 27.7 ppm.

#### East-Side Showing

This showing represents a probable splay off the main fault zone. It represents a quartz-vein in a pyritic shear zone. Numerous stringers are present. Minor chalcopyrite was noted. Alteration adjacent the veins is mainly propylite. The present highest gold value of 1,580 ppb was taken from the pyritic zone adjacent the shear zone.

#### Camp View Showing

This showing comprises blocks of banded, vuggy, fine-grained quartz in a boulder train in a small gully. Pyrite is common. The vein has not been exposed or traced. Values ranges to 640 ppb Au.

#### Low View Showing

This showing is located at the northern boundary of the property and represents an extension of the main shear zone that hosts the High View and South Side Showings. It is a 50cm to 2m wide vein and breccia zone containing disseminated pyrite. The vein margins are strongly bleached and locally have an propylite halo extending to 10 meters from the shear. Numerous stringers are associated with the system. Gold values to 240 ppb were noted.

#### South Side Showing

This vein comprises grey to milky, fine grained quartz and quartz breccia to 3 meters width. It contains minor pyrite and chalcopyrite. It has been little investigated.

Other Anomalous Areas

Between the High View and Camp View Showings, is a system of numerous thin veins (to 1 meter) and stock works within shear zones. They contain minor pyrite and common fluorite.

West of the South Side Showings are common float blocks of vuggy, fine-grained quartz with disseminated pyrite.

Isolated exposures of quartz in a creek in the north-west portion of the claim showed Gold up to 440 ppb.

An isolated vein near the west-central margin of the property gave 290 ppb Au.

Galena, sphalerite and minor chalcopyrite were noted in fractured and sheared "sediments" near the west margins of the Coles 1 claim.

## GEOCHEMISTRY

78 rocks were analyzed for Au and Ag, 52 soils were analyzed for Mo, Cu, Pb, Zn, Ag, Au and As, and 9 silts were analyzed for Cu, Pb, Zn, Ag, Mn, As, Sb, Au and Hg. All analysis were done by Vangeochem Lab. Ltd. of 1521 Pemberton Avenue, North Vancouver, B.C.

On the accompanying map in the pocket, only the significantly anomalous numbers are shown. Sample locations are shown in the insert. Values obtained are listed in the appendicies.

### Rock Geochemistry

All samples are prospector grabs. Those shown as numbers with alphabetical sequence represent separate samples from the same location across vein widths. Some samples are shown as ppm Ag and ppb Au, others in oz/t (ounces per ton). Most samples did not show anomalous gold or silver. 14 samples were in excess of 100 ppb, Au, with a high of 1,580 ppb Au. Highest silver value found was 27.7 ppm.

Values not shown in the accompanying appendicies do not relate to the Coles property.

### Soil Samples

A soil grid was run on the northern portion of the property. This area is a broad, upland surface with very little relief and vertically no outcrop. The grid was one of reconnaissance nature, run, using a hip-chain, to test an east west cross section, and four north-south sections. Values for all metals are low, with few spot anomalies. No contourable data was found.

Anomalous values are shown on the accompanying map. Gold recorded two values greater than 5 ppb with a high of 20 ppb. No anomalous silver was noted. Zinc is low (less than 100 ppm); with a single high of 197 ppm. Lead is

uniform in the general 10-20 ppm, with a single high of 46 ppm. Use of a soil grid for further exploration will probably be of little use in effective evaluation of the property.

#### Silts

Of the 9 silts taken, two (No's 115 and 116) gave highly anomalous values. Cu, Pb and As gave particularly significant values, with a high of 4,939 ppm As noted. Gold ranged from nd (not detectable) to a high of 35 ppb. Values over 20 ppb are probably significant in the Whitesail area.

## **INTERPRETATION**

The Coles Claims are underlain by an extensive, linear system of quartz-bearing shear zones that contain anomalous gold up to 1,580 ppb and silver to 27 ppm. It is an epithermal, fracture-controlled system that probably relates to the development and evolution of the Tahtsa Caldera and is of probably Tertiary age. The area has been little explored. There is much room within systems as large as these for the presence of economic pockets of mineralization.



**AUTHORS RESUME**

**Tom Richards,**

B.Sc. - UBC, 1965

Ph.d. - UBC, 1971

1970 - 1978 : Research Scientist, Geological Survey of Canada,  
Cordilleran Section. Vancouver, B.C.

1979 - Present: Mineral Exploration, West Central, B.C.

ITEMIZED COST STATEMENT:

Wages - Field Time:		
B. Holden; 10 days @\$150/day	\$1,500.00	
D. Smith; 10 days @\$100/day	1,000.00	
D. Ethier; 10 days @\$100/day	1,000.00	
T. Richards; 7 days @\$300/day	2,100.00	
Employee expenses (15%)	<u>840.00</u>	\$ 6,400.00
Food		740.00
Geochemistry: Rock Samples	705.25	
Soil and Silt Samples	<u>902.00</u>	1,607.25
Shipping		50.00
Expediting		75.00
Equipment, Supplies & Rentals		150.00
Transportation: Truck	200.00	
Helicopter	<u>2,695.00</u>	2,895.00
Bookkeeping, office		200.00
Report Preparation:		
Tom Richards - 2 days	600.00	
Drafting 6 hours @\$15/hr.	90.00	
Secretarial, copying	<u>120.00</u>	810.00
Engineering:		
V. Cukor, Invoice #344(4JUL83)		1,358.01
V. Cukor, 60%/Inv.#359(15SEP83)		<u>1,143.00</u>
TOTAL EXPENSES INCURRED:		<u>\$15,468.26</u>

Appendix 1

Rock Geochemistry  
**VANGEOCHEM LAB LIMITED**  
=====

1521 Pemberton Ave.  
North Vancouver B.C. V7P 2S3  
(604)986-5211 Telex: 04-352578

**GEOCHEMICAL ANALYTICAL REPORT**  
=====

CLIENT: MR. TOM RICHARDS  
ADDRESS: R R #1  
: Hazelton BC  
: V0J 1Y0

DATE: August 9 1983  
REPORT#: 83-75-001

PROJECT#: None  
COPY SENT TO: TOM RICHARDS  
SAMPLES ARRIVED: Aug 4 1983  
REPORT COMPLETED: August 9 1983  
ANALYSED FOR: Ag Au

JOB#: 83179  
INVOICE#: 7321  
TOTAL SAMPLES: 43  
SAMPLE TYPE: 43 rocks  
REJECTS: SAVED

PREPARED FOR: MR. TOM RICHARDS

ANALYSED BY: MR. DAVID CHIU

SIGNED: 

GENERAL REMARK: Au analyses - Fire Assay / AA finish

**WANGCHEM LAB LIMITED**  
 1521 Pemberton Avenue  
 North Vancouver B.C. V7P 2S3  
 (604) 986-5211 Telex: 04-352578

PREPARED FOR: MR. TOM RICHARDS  
 NOTES: nd = none detected  
 : — = not analysed  
 : is = insufficient sample

REPORT NUMBER: 83-75-001

JOB NUMBER: 83179

PAGE 1 OF 2

SAMPLE #	Ag ppm	Au ppb
BH-R-83-61		
BH-R-83-62		
BH-R-83-64	4.3	30
BH-R-83-69B		
BH-R-83-69C		
BH-R-83-70A		
BH-R-83-70B		
BH-R-83-71		
BH-R-83-74		
BH-R-83-75		
BH-R-83-77A		
BH-R-83-82B	8.9	1500
BH-R-83-84	6.6	20
BH-R-83-85	.5	40
BH-R-83-90	1.4	60
BH-R-83-93A	.3	20
BH-R-83-94A	.8	20
BH-R-83-95B	.3	5
BH-R-83-99B	.7	110
BH-R-83-101A	2.5	20
BH-R-83-101B	.6	30
BH-R-83-103A	27.6	440
BH-R-83-105A	2.0	71
BH-R-83-105B	1.6	120
BH-R-83-106C	.7	15
BH-R-83-107A	1.5	10
BH-R-83-108F	3.4	110
BH-R-83-109F	1.8	15
BH-R-83-111C	1.4	200
DS-R-83-3B	.2	10
DS-R-83-3C	.3	10
TR-R-83-40	18.8	340
TR-R-83-41	6.0	640
TR-R-83-42	1.2	310
TR-R-83-43	nd	nd
TR-R-83-44	nd	5
TR-R-83-45	.8	5
TR-R-83-47	.1	60
TR-R-83-48	.5	nd
DETECTION LIMIT	0.1	5

VANGOCHEM LAB LIMITED  
1521 Pesberton Avenue  
North Vancouver B.C. V7P 2S3  
(604) 986-5211 Telex: 04-352578

PREPARED FOR: KR. TOM RICHARDS  
NOTES: nd = none detected  
: — = not analysed  
: is = insufficient sample

REPORT NUMBER: 83-75-001      JOB NUMBER: 83179

PAGE 2 OF 2

SAMPLE #	Ag ppm	Au ppb
TR-R-83-49	.5	240
TR-R-83-50	25.4	70
TR-R-83-51	.6	10
TR-R-83-52	1.1	230
DETECTION LIMIT	0.1	5

Appendix 2

Rock Geochemistry  
**VANGEOCHEM LAB LIMITED**

=====

1521 Pemberton Ave.  
North Vancouver B.C. V7P 2S3  
(604)986-5211 Telex: 04-352578

**ASSAY ANALYTICAL REPORT**

=====

CLIENT: MR. TOM RICHARDS  
ADDRESS: R R #1  
          : Hazelton BC  
          : V0J 1Y0

DATE: August 17 1983

REPORT#: 83-75-003

PROJECT#: NONE  
COPY SENT TO: MR. TOM RICHARDS  
SAMPLES ARRIVED: August 08 1983  
REPORT COMPLETED: August 17 1983  
ANALYSED FOR: Ag Au

JOB#: 83194  
INVOICE#: 7361  
TOTAL SAMPLES: 135  
REJECTS: SAVED FOR 3 MONTHS  
PULPS: SAVED FOR 1 YEAR  
SAMPLE TYPE: 135 ROCK

PREPARED FOR: MR. TOM RICHARDS

ANALYSED BY: David Child

SIGNED: \_\_\_\_\_

Registered Provincial Assayer

GENERAL REMARK: None

VANEDCHEM LAB LIMITED  
1521 Pemberton Avenue  
North Vancouver B.C. V7P 2S3  
(604) 986-5211 Telex: 04-352578

PREPARED FOR: MR. TOM RICHARDS

NOTES: nd = none detected  
: - = not analysed  
: is = insufficient sample

REPORT NUMBER: 83-75-003 JOB NUMBER: 83194

PAGE 4 OF 7

SAMPLE #	Ag oz/st	Au oz/st
BH-R-83-59	.	.
BH-R-83-60	..	..
BH-R-83-63	.	.
BH-R-83-65	.	.
BH-R-83-66	.07	<.005
BH-R-83-69	.	.
BH-R-83-69A	.	.
BH-R-83-72	..	..
BH-R-83-73	..	..
BH-R-83-76	.	.
BH-R-83-77	.	.
BH-R-83-78	.	.
BH-R-83-79	.05	<.005
BH-R-83-80	.03	<.005
BH-R-83-81	.08	<.005
BH-R-83-81A	.21	.006
BH-R-83-81B	.21	.010
BH-R-83-82A	.08	<.005
BH-R-83-83	.11	<.005
BH-R-83-85	.05	<.005

DETECTION LIMIT

1 Troy oz/short ton = 34.28 ppm

.01 .005  
1 ppm = 0.0001% ppm = parts per million

signed: \_\_\_\_\_

WANGCHEM LAB LIMITED  
1521 Fernberton Avenue  
North Vancouver B.C. V7P 2S3  
(604) 986-5211 Telex: 04-352578

PREPARED FOR: MR. TOM RICHARDS  
NOTES: nd = none detected  
: - = not analysed  
: is = insufficient sample

REPORT NUMBER: 83-75-003 JOB NUMBER: 83194

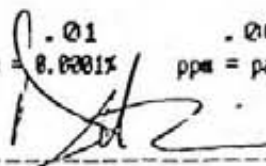
PAGE 5 OF 7

SAMPLE #	Ag oz/st	Au oz/st
BH-R-83-88	.06	<.005
BH-R-83-89		
BH-R-83-91		
BH-R-83-92		
BH-R-83-92B		
BH-R-83-93B	.02	<.005
BH-R-83-94B	.04	<.005
BH-R-83-95A	.02	<.005
BH-R-83-95B	.03	<.005
BH-R-83-95C	.03	<.005
BH-R-83-96A	.03	<.005
BH-R-83-97A	.03	<.005
BH-R-83-97B	.04	<.005
BH-R-83-97C	.03	<.005
BH-R-83-98A	.03	<.005
BH-R-83-98B	.02	<.005
BH-R-83-99A	.04	<.005
BH-R-83-101C	.06	<.005
BH-R-83-102	.07	<.005
BH-R-83-103B	.13	<.005

DETECTION LIMIT  
1 Troy oz/short ton = 34.28 ppm

1 ppm =  $\frac{.01}{1000000}$  ppm = parts per million

signed: \_\_\_\_\_





VAHEDCHEM LAB LIMITED  
1521 Pemberton Avenue  
North Vancouver B.C. V7P 2S3  
(604) 986-5211 Telex: 04-352578

PREPARED FOR: MR. TOM RICHARDS

NOTES: rd = none detected  
: - = not analysed  
: is = insufficient sample

REPORT NUMBER: 83-75-003 JOB NUMBER: 83194

PAGE 6 OF 7

SAMPLE #	Ag oz/st	Au oz/st
BH-R-83-103C	.05	<.005
BH-R-83-104B	.05	<.005
BH-R-83-104C	.06	<.005
BH-R-83-104D	.09	<.005
BH-R-83-104E	.06	<.005
BH-R-83-106A	.07	<.005
BH-R-83-106B	.04	<.005
BH-R-83-107B	.03	<.005
BH-R-83-108A	.03	<.005
BH-R-83-110A	.16	<.005
BH-R-83-110B	.09	<.005
BH-R-83-111A	.06	<.005
BH-R-83-111B	.10	<.005
BH-R-83-111D	.07	<.005
DE-R-83-5	.06	<.005
DE-R-83-53	.04	<.005
DE-R-83-57A	.11	<.005
DE-R-83-57B	.05	<.005
DE-R-83-57C	.05	<.005
DE-R-83-57D	.06	<.005

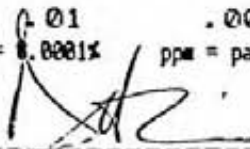
DETECTION LIMIT

1 Troy oz/short ton = 34.28 ppm

1 ppm =  $\frac{.01}{1000000}$

.005 ppm = parts per million

signed: \_\_\_\_\_



Appendix 3

Soil Geochemistry  
**VANGEOCHEM LAB LIMITED**

=====

1521 Pemberton Ave.  
North Vancouver B.C. V7P 2S3  
(604)986-5211 Telex: 04-352578

*Class - 5.10*

**GEOCHEMICAL ANALYTICAL REPORT**

=====

CLIENT: MR. TOM RICHARDS  
ADDRESS: R R #1  
          : Hazelton BC  
          : V0J 1Y0

DATE: August 19 1983

REPORT#: 83-75-006

PROJECT#: NONE  
COPY SENT TO: MR. TOM RICHARDS  
SAMPLES ARRIVED: August 10 1983  
REPORT COMPLETED: August 19 1983  
ANALYSED FOR: Mo Cu Pb Zn Ag Au As

JOB#: 83203  
INVOICE#: 7371  
TOTAL SAMPLES: 52  
SAMPLE TYPE: 52 SOIL & SILT  
REJECTS: DISCARDED

PREPARED FOR: MR. TOM RICHARDS

ANALYSED BY: VGC STAFF

SIGNED: *[Signature]*

GENERAL REMARK: NONE

**WANGCHEM LAB LIMITED**  
 1521 Pemberton Avenue  
 North Vancouver B.C. V7P 2S3  
 (604) 986-5211 Telex: 04-352578

PREPARED FOR: MR. TOM RICHARDS  
 NOTES: nd = none detected  
 : — = not analysed  
 : is = insufficient sample

REPORT NUMBER: 83-75-006

JOB NUMBER: 83203

PAGE 1 OF 2

SAMPLE #	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	As ppm
DSC 1	2	12	13	44	.4	nd	20
DSC 2	2	8	14	15	.5	nd	2
DSC 3	3	25	17	50	.3	5	4
DSC 4	2	30	19	81	.2	nd	4
DSC 5	3	21	21	43	.4	nd	4
DSC 6	3	15	18	51	.4	nd	2
DSC 7	3	10	23	27	nd	nd	2
DSC 8	2	18	18	50	.3	nd	4
DSC 9	2	25	19	85	nd	5	4
DSC 10	2	23	22	48	.1	nd	2
DSC 11	2	20	20	59	.2	nd	2
DSC 14	2	16	21	47	.1	nd	4
DSC 15	3	22	23	90	.4	nd	4
DSC 16	2	37	25	79	.3	.5	4
DSC 17	2	25	23	63	.2	nd	4
DSC 18	4	20	24	90	nd	nd	4
DSC 19	4	95	46	197	.4	nd	10
DSC 20	4	27	20	86	.2	20	4
DSC 21	2	15	13	48	nd	nd	2
DSC 22	3	23	13	49	.1	nd	4
DSC 23	2	27	19	70	.2	nd	4
DSC 24	2	37	24	88	.4	nd	4
DSC 25	2	35	23	70	.1	10	4
DSC 26	2	27	21	65	.4	nd	4
DSC 27	3	19	20	80	.2	nd	4
DSC 28	3	15	19	19	.5	nd	2
DSC 29	2	10	19	43	.4	nd	4
DSC 30	3	10	13	26	.2	nd	nd
DSC 31	1	5	8	9	.1	nd	2
DSC 32	1	5	19	29	.5	nd	nd
DSC 33	2	nd	10	10	.3	nd	nd
DSC 34	2	4	16	16	.1	nd	2
DSC 35	3	15	26	48	.2	nd	nd
DSC 36	2	nd	10	9	.2	nd	2
DSC 37	3	18	23	95	.3	nd	4
DSC 38	3	3	16	21	.4	nd	2
DSC 39	2	4	15	20	.4	nd	4
DSC 40	2	23	19	31	.8	nd	4
DSC 41	3	12	23	54	.4	5	2
DETECTION LIMIT	1	1	2	1	0.1	5	2

VANEGCHEM LAB LIMITED  
 1521 Pemberton Avenue  
 North Vancouver B.C. V7P 2S3  
 (604) 986-5211 Telex: 04-352578

PREPARED FOR: MR. TOM RICHARDS

NOTES: nd = none detected  
 : — = not analysed  
 : is = insufficient sample

REPORT NUMBER: 83-75-006

JOB NUMBER: 83203

PAGE 2 OF 2

SAMPLE #	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	As ppm
DSC 42	2	6	20	33	.3	nd	2
DSC 43	4	12	20	48	.4	nd	2
DSC 44	3	13	17	18	.3	nd	2
DSC 45	3	11	19	36	.4	nd	4
DSC 46	2	18	14	62	.4	nd	4
DSC 47	2	5	19	9	.5	nd	nd
DSC 48	5	8	15	41	nd	nd	2
DSC 50	2	25	14	45	.3	nd	4
DSC 51	1	20	14	55	nd	nd	10
DSC 52	3	17	10	48	.1	nd	4
DSC 53	2	15	14	58	.2	nd	4
DSC 54	2	16	15	57	.3	nd	4
DSC 55	2	25	18	87	.3	10	10
DETECTION LIMIT	1	1	2	1	0.1	5	2

Appendix 4.

SILT GEOCHEMISTRY:

<u>Sample No.</u>	<u>ppm</u>							<u>ppb</u>	
	Cu	Pb	Zn	Ag	Mn	As	Sb	Au	Ag
52	23	6	58	0.2	711	6	3	15	25
56	11	6	38	0.1	364	5	2	15	65
58	26	6	56	0.1	631	7	2	5	35
59	11	5	41	0.1	392	6	2	20	35
61A	21	6	51	0.3	511	6	2	35	20
28	18	8	53	0.2	592	8	2	nd	15
29	17	7	47	0.2	490	8	2	nd	15
115	163	133	90	0.4	579	410	12	nd	40
116	247	43	106	0.8	354	4939	14	10	25

GEOLOGY, MINERALIZATION and GEOCHEMISTRY  
 COLES CLAIMS, OMENICA M.D.  
 WHITESAIL LAKE AREA, NTS 93E-6/W

Legend:

- Qv : Quartz Vein
- Py : pyrite
- cpy : chalcopyrite
- pyrr : pyrrhotite
- sph : sphalerite
- gal : galena
- fl : Fluorite
- ~~~~~ Shear Zone, known
- ~~~~~ Shear Zone, extrapolated;
- (440) Gold value, rock geochemistry: ppb.
- 27 Silver value, rock geochemistry ppm.
- Cu: Copper, Pb-lead, Zn- Zinc, As: arsenic, Au-gold, Ag- silver
- Vein exposure

GEOLOGICAL BRANCH  
 ASSESSMENT REPORT

12,666

SAMPLE LOCATIONS

- o Rock, CV series - General testing
- Rock, BH series
- ▲ Rock, TR series } Vangeochemistry
- Soil sample and grid layout

