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MINISTRY OF ENERGY, MINES
AND PETROLEUM RESOURCES

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Rec'd

AUG 27 1986

SUBJECT _____
FILE _____
VANCOUVER, B.C.

GEOLOGICAL REPORT
ON THE
OTTER CLAIM GROUP

VANCOUVER ISLAND, ALBERNI MINING DIVISION

49° ^{23'} North Latitude, 124° 56.5' West Longitude
12-3'
N.T.S. 92F/2W

FOR

Operator: TRIACTOR RESOURCES CORPORATION
#770-885 Dunsmuir Street
Vancouver, B.C., V6C 1N8

FILMED

Owner: Robert W. Stewart
GEOLOGICAL BRANCH
ASSESSMENT REPORT

15,037

Guy A. Royer, Geologist
Trans-Arctic Explorations Ltd.
#815 - 850 West Hastings Street
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February, 1986

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SUMMARY

The property has excellent geological potential for hosting polymetallic mineral deposits. Sulphides are very common throughout the Otter claim group particularly in the volcanics and greenstones, while heavier concentrations of sulphides were found to occur within the shear zones. Pyrite is by far the most abundant sulphide ubiquitously present in many outcrops. Chalcopyrite, bornite and malachite were occasionally noted in several outcrops indicating the presence of copper, a metal commonly found to host gold.

The abundance of both carbonate and plutonic rock in close proximity leads to the potential of a skarn deposit being found on this claim group. One interesting area noted by the author is in the southwest corner of the group where traces of copper bearing minerals such as bornite or malachite are quite common. Shear zones are quite abundant here as is the juxtaposition of different rock types. Many of the rocks here are heavily iron stained and greenstone is quite abundant. Even some of the plutonic rocks located here contain sulphides. This area should certainly be explored in greater detail.

The Kola showing which lies approximately one km to the south contains copper ore which carries good values in gold (up to .328 oz/ton). The distinct possibility exists for a similar situation to be found on the Otter claim group. The structure and lithology of the Kola and Otter area are quite similar as is the copper ore.

INTRODUCTION

In January and February of 1986 the author mapped and prospected the Otter claim group which lies just south of Sproat Lake in the Port Alberni area of Vancouver Island. The approximate geographical coordinates of the area under discussion are $49^{\circ} 12'$ north latitude and $124^{\circ} 55'$ west longitude. The claim group is owned by Triactor Resources of Vancouver British Columbia.

The area is located approximately 12 km west-southwest of Port Alberni and it is easily accessible due to an extensive network of old logging roads.

The topography is generally moderate by Cordilleran standards though steep narrow canyons and precipitous cliffs are occasionally encountered. Outcrops are quite numerous and road-cuts reveal many excellent exposures. A majority of the area has been logged out. Several different lithologies including sediments, plutonics and volcanics were noted here with many of the latter rocks being metamorphosed to the greenschist facies. The sediments mapped include argillites, impure sandstones, i.e. greywacke and more prominently, black impure carbonates. The volcanic rocks seem to be mainly of an andesitic composition while the plutonics could probably be classified as tonalite judging by the colour index. Shear zones with much accompanying sulphides are quite numerous on the Otter claim group.

PROPERTY AND OWNERSHIP

<u>Claim Name</u>	<u>No. of Units</u>	<u>Record No.</u>	<u>Expiry Date</u>
Sproat	20	2586	May 29, 1987
Otter	20	2587	May 29, 1987
Arbutus	18	2588	May 29, 1987
Alder #1	12	2584	May 29, 1987
Alber #2	15	2585	May 29, 1987

The expiry date shown takes into account the word under discussion as being accepted for assessment credits.

This property is beneficially held for Triactor Resources though it is registered in the name of Mr. R.W. Shaw.

LOCATION AND ACCESS

The area under discussion is located approximately 10 km southwest of Port Alberni on Vancouver Island in the Alberni Mining Division. The approximate geographic coordinates are 49° 13' north latitude and 124° 56' west longitude. Access to the claims is provided by good logging roads from Port Alberni.

GEOLOGY

The rocks on the claims were divided by the author into five separate mappable units. Granitoid rocks probably of a granodiorite composition were mainly noted in the north part of the map area near Sproat Lake. This rock is usually medium grained with an average colour index of about 30. The quartz content is about 20%; most of the feldspars are green in colour and probably plagioclase. Much of the rock is moderately to heavily altered so the original mineralogy of the mafics is difficult to determine though originally biotite and hornblende occurred in sub-equal amounts. In addition to numerous iron oxides other secondary minerals include epidote chlorite and sericite with many outcrops displaying a spectrum between fine and coarse grained but three to five mm is the usual range. Heavily altered rock is very friable; i.e. crumbly and often vuggy with zeolites sometimes present. Although the zones of heavy alteration where intensely prospected only a minor amount of pyrite was usually noted though malachite and azurite is occasionally visible.

Volcanic rocks are the most abundant variety, volumetrically, they are only absent on the north part of the claims. There is quite a variation in texture and colour. Most are coloured various shades of dark green though some grade to grey, dark brown or black. Sometimes the volcanics are very porphyritic while adjacent is aphanitic rock with very few phenocrysts. Most of the phenocrysts are of plagioclase and a few of hornblende, they are usually one to five mm long and typically compose 20 to 40% of the rock. The matrix is usually aphanitic though occasionally it is barely visible to the naked eye. In places the rock is vesicular and occasionally amygdaloidal with amygdules composed of

quartz, chlorite, carbonate and zeolites. The black coloured volcanics seem to contain the fewest phenocrysts and are usually the least altered. Moderate to heavy altered volcanic rock is often purplish brown coloured with kaolinite, sericite and iron-oxides being very abundant. Shear zones are often present within the altered volcanics, these often host pure chlorite and sometimes carbonate. Quartz and carbonate veining is often found adjacent to the shear zones. Traces of sulphides are very widespread, although during this examination, they were only found in minor amounts. Traces of copper mineralization in the form of malachite, azurite and chalcopyrite were noted in a couple outcrops. On a property adjoining these claims copper ore is known to host gold, and for this reason any occurrence of copper should be investigated further.

Greenstone is sometimes present as the volcanic have undergone a little metamorphism up to the greenschist facies. These rocks feature a matrix clearly visible in hand specimen with a grain size of 1 to 2 mm. Chlorite, actinolite, hornblende and epidote are the most common minerals and this rock frequently hosts conspicuous quartz and calcite veins. Often, however, much plagioclase remains and true greenstones are volumetrically quite rare on the claims.

Sedimentary rocks can be divided into two separate categories, argillites and carbonates. The former is quite widespread but occurs only in relatively small patches among the volcanics. It is a relatively uniform non-descript rock, dark coloured and aphanitic. However, in a couple outcrops it is very well banded and reveals a slaty cleavage and is weathered a yellowish colour.

The carbonate is a very distinctive blackish coloured rock primarily composed of calcite. It is quite fine grained and is often

intruded by many small calcite veins. The carbonate was noted only in one relatively small area of the claims but here it is quite widespread particularly along road-cuts. Some of the carbonate is a breccia, the matrix being composed of relatively coarse calcite crystals 3 mm to 1 cm long hosting brecciated fragments of volcanic rock up to 7 or even 12 cm long. The carbonate often contains a fair percentage of argillaceous material. Narrow diabase dykes were sometimes noted along the granodiorites; these dykes often host quartz veins.

LITHOLOGY

The plutonic rocks are most numerous on the eastern part of the claim group. Most of these are medium grained with typical crystals being between 3 and 7 mm long. The average colour index is about 20 with the quartz content approximately 25%. The feldspars are usually all white in colour probably indicating plagioclase and thus a rock of tonalitic composition. In a few outcrops pinkish feldspars were noted perhaps indicting granodiorite, but this pigeon holing is quite conjectural without a microscope. Hornblende and biotite are the dominant mafics, they are present in sub-equal amounts. Some of the plutonics are noticeably finer grained with a higher colour index. Their approximate grain size and colour index are respectively 1 to 2 mms and 35. Most of the plutonics are quite fresh and unaltered except where they are adjacent to shear zones they are moderately altered with much epidote, chlorite and quartz veining with minute sulphide specks occasionally noted.

The volcanic rocks are the most ubiquitous on the claim group. Most are probably of an andesitic composition judging by their predominantly dark green colour. Some volcanics are coloured light grey to almost black with some weathered to purplish brown in colour. The amount of phenocrysts in the matrix varies from 0 to 50% but usually they are quite sparse averaging only about 10% of the rock. The phenocrysts are all less than 2 mm long and are wholly composed of plagioclase. Some of the volcanics are vesicular, amygdaloidal with the amygdules composed of quartz, chlorite and zeolites. Many of the outcrops display prominent iron staining. Some of these volcanic rocks were altered and found to contain blebs of quartz, calcite and epidote in addition to tiny flecks of sulphides. All these aforementioned minerals in addition to sericite, kaolin, talc and zeolites were found to be quite abundant in the shear zones. In the vicinity of these shear zones the volcanics have been metamorphosed to such an extent that they formed into greenstones. Small outcrops of volcanic breccias were occasionally noted.

The greenstone is obviously derived from the volcanic rock and in some outcrops the two are quite gradational. The greenstone however has a very distinct mineralogy. It is also somewhat coarser grained than the volcanics allowing identification of individual minerals. These are green coloured including mainly epidote (a light skarn mineral) along with chlorite, hornblende and actinolite, occasionally the amphiboles predominate. The rock is sometimes soft and crumbly and frequently it possesses a schistose foliation. Sulphides including chalcopyrite and bornite in addition to pyrite were often noted.

Carbonate of an impure variety is the most abundant sediment. It is dark grey to typically black in colour and though usually massive is occasionally well stratified. There is much calcite and

some quartz veining present. Some of the carbonates are silicified and are often vuggy, containing much drusy quartz and calcite as well as random specks of sulphides. Sandstones were only noted on the southwest corner of the map area. They generally seem quite impure and could be classified as arkoses or greywackes. These rocks are medium grained sandstones with very indistinct bedding planes. These rocks are heavily iron stained and are pink to dark brown. One outcrop contains much visible malachite.

ECONOMIC POTENTIAL

Sulphides and other economic minerals, at first glance may seem sparse, nevertheless, this area shows good potential for the discovery of minerals. Aside from the fact that this property lies on strike from a known gold occurrence immediately to the southwest, there are also a number of two post claims near the central area of the Otter claim group which are reported to host pods of copper rich material. Several shear zones are present in the volcanics and carbonates, the latter rocks are often brecciated. Many of the igneous rocks are heavily iron stained and the granitoidal rocks particularly are often heavily altered, they are often quite spongy with cavities infilled by iron oxides. These rocks are sometimes intruded by diabase dykes which could possibly be sources of mineralization. Many of the volcanics have undergone some metamorphism although no true skarn was found, during this reconnaissance investigation, much greenstone is present, these rock types are always prime targets for economic mineralization. Furthermore this area has excellent logis-

tics as it is very close to major transportation and shipping facilities. Even during this initial reconnaissance investigation, there was one mineral discovery made on what the southern area of your claim group. This discovery was found in a shear zone and may possibly be an extension of the Kola gold prospect which lies further to the southwest. Rock geochem samples collected from this zone returned highly anomalous gold values. This area should be explored further to try and determine the extent and the direction of this mineral occurrence. Other areas of these claims still retain prime exploration potential and it is highly recommended the company continue to pursue its aggressive program of development.

Respectfully submitted,
TRANS-ARCTIC EXPLORATIONS LTD.


Guy A. Royer,
Geologist

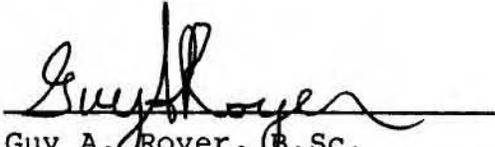
CERTIFICATE

I, Guy A. Royer am a consulting geologist for Trans-Arctic Explorations Ltd. of Vancouver, British Columbia.

I hereby certify that:

1. I graduated from the University of Saskatchewan with a B.Sc. degree in geology in April, 1980.
2. I have been practising my profession for six years.
3. I have no interest, beneficial or otherwise in the property of Triactor Resources Corporation.
4. I am the author of this report, which is primarily based upon my personal observations made while in the field.

Dated at Vancouver, B.C. this 25 day of Aug, 1986.


Guy A. Royer, B.Sc.

COST BREAKDOWN

Field Costs

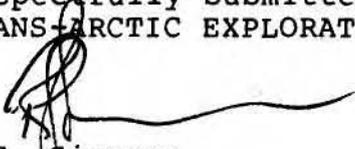
Supervisor, 3 days at \$250/day (includes 4X4 truck, gas and mileage)	\$ 750.00
Geologist, 18 days at \$180/day	3,230.00
Assistant, 5 days at \$100/day	500.00
4X4 3/4 ton truck, 18 days at \$110/day (includes gas and mileage)	1,980.00
Room and board, 26 combined man days at \$50/day	1,300.00
Lab and assay costs	<u>350.00</u>
	\$8,120.00

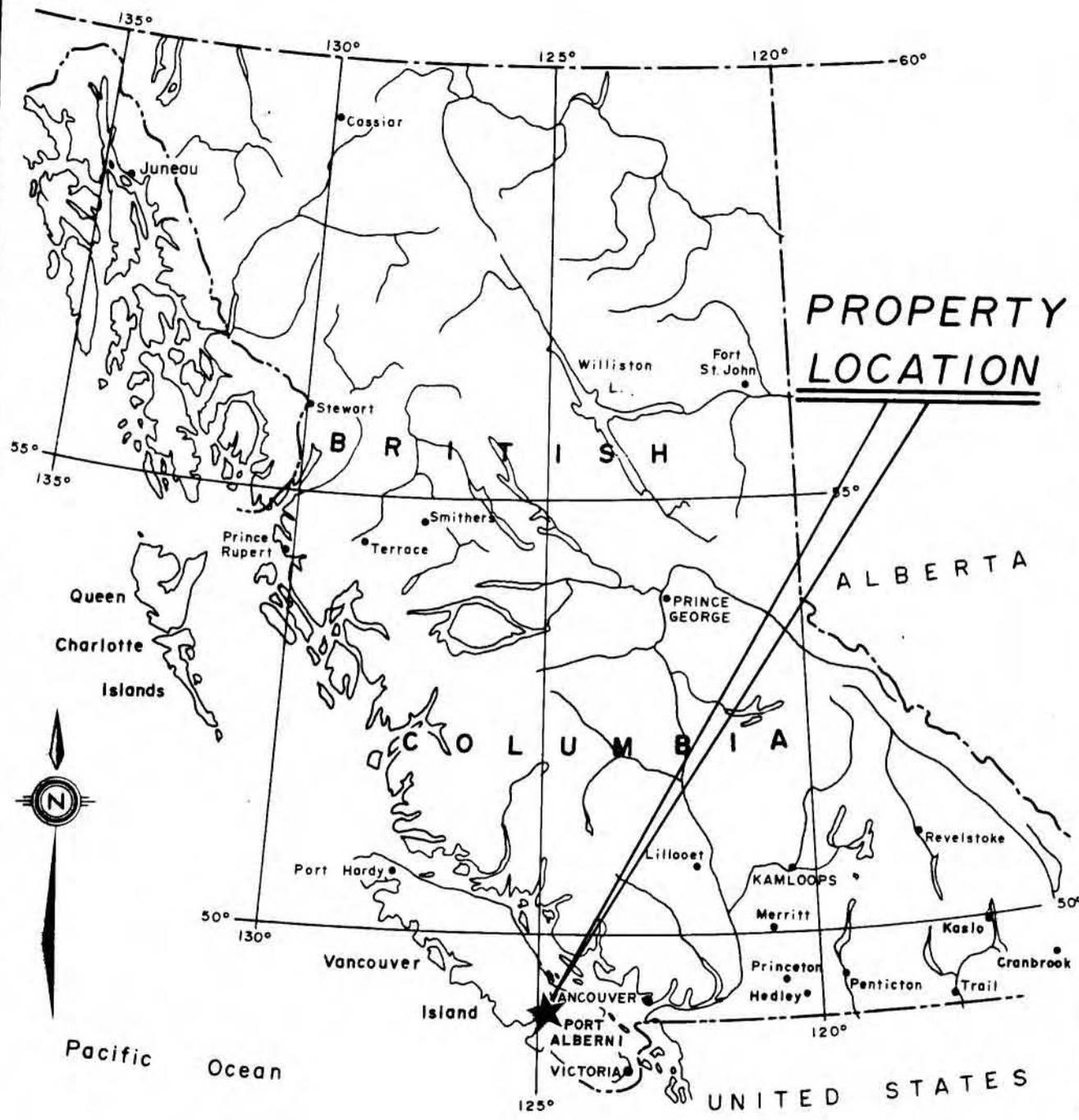
Office

Report compilation, typing and photocopying	\$ 500.00
Drafting and base map preparation	<u>425.00</u>
	\$ 925.00

Combined field and office, Grand Total	<u><u>\$9,045.00</u></u>
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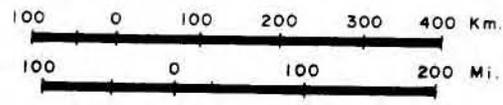
Respectfully submitted
TRANS-ARCTIC EXPLORATIONS LTD.


R.S. Simpson
General Manager



PROPERTY LOCATION

OTTER CLAIM GROUP



STIRLING ARM

SPROAT

APPROXIMATE WEST BOUNDARY OF

INTRUSIVE

FOSELLI CREEK

ROAD

SUMMIT

AREA "C"

AREA "B"

ARBUTUS

AREA "A"

THRUST FAULT

MARY CALCITE STRINGERS

RUSBY INTRUSIVE ZONE

YAHU SHEAR

YAHU 1 - 515 ppb Au

YAHU 2 - 300 ppb Au

YAHU 3 - 370 ppb Au

YAHU 4 - 30 ppb Au

YAHU 5 - 15 ppb Au

SOIL SAMPLES

Tributary of Cous Creek

GEOLOGICAL BRANCH ASSESSMENT REPORT

15,037

TO ACCOMPANY REPORT BY: GUY A. ROYER, GEOLOGIST.

TRIACOTOR RESOURCES CORP
 OTTER CLAIM GROUP
 SPROAT LAKE, PORT ALBERNI AREA
 ALBERNI M.D., B.C.

GEOLOGICAL MAP

SCALE: 1:10,000 DATE: AUG. 86. N.T.S.: 92 F/2 W MAP: 3 DRAFTED BY: B.D.S.

LEGEND

- SANDSTONE, INCLUDING GREYWACKE
- GRANITES, GRANODIORITE, TONALITE
- VARIOUS VOLCANIC ROCKS INCLUDING PORPHYRITIC ANDESITE & DACITE TRANSITIONAL TO GREENSTONE
- PREDOMINANTLY APHANITIC AND FRESH VOLCANIC ROCK
- CARBONATE
- GREENSTONE
- ARGILLITE
- ALTERED GRANITIC ROCKS
- LIMIT OF OUTCROP
- ROAD
- CREEK
- SHORELINE
- CLAIM BOUNDARY
- PROPERTY BOUNDARY
- LEGAL CORNER POST
- ROCK SAMPLE LOCATION
- FAULT
- CONTACT

ROCK ASSAYS													
SAMPLE No.	Cu ppm	Mo ppm	Ag ppm	Au ppb	Pb ppm	Zn ppm	SAMPLE No.	Cu ppm	Mo ppm	Ag ppm	Au ppb	Pb ppm	Zn ppm
70457				5			70593	143	1	.1	10		
58				< 5			94	75	1	.1	< 5		
59				5			95	66	2	.1	< 5		
60				5			96				25		
61				5			97				5		
62	400	1	.4	< 5	2		98				5		
70563	19		.1	< 5			99				350		
84	15		.1	< 5			70600				50		
85	58		.7	< 5			55631	39	2	.2	< 5	2	141
86	70		.7	< 5			32	111	2	.1	< 5	3	82
87	82		.1	< 5			33	7530	1	3.3	10	2	81
88	62		.1	< 5			34	2090	1	.6	125	1	36
89	15		.1	< 5			35	278	2	.4	5	1	138
90	508	2	.1	5			36	1940	4	1.8	< 5	18	110
91	33	1	.1	< 5			70462				< 5		105
70592	12	1	.1	< 5			70483	125	2	.2	< 5	1	62
							70484	115	5	.1	< 5	2	25

500 m 0 500 m

Field Work Carried Out By: TRANS-ARCTIC EXPLORATIONS LTD.