

PROPERTY FILE

GEOLOGICAL REPORT
on the
CENTRAL ZEBALLOS PROPERTYALBERNI MINING DIVISION
WEST COAST VANCOUVER ISLAND, BRITISH COLUMBIA
NTS 92L/2W
50° 01.5'N 126° 46.5'W

FOR

NEW IMPACT RESOURCES INC.
SUITE 1840 - 200 GRANVILLE STREET
VANCOUVER, B.C.

PREPARED BY

STILLWATER ENTERPRISES LTD.
2891 WEST 14TH AVE.
VANCOUVER, BRITISH COLUMBIA
V6K 2X3

Author: J.C. FREEZE, F.G.A.C.

JUNE, 1989



SUMMARY

The Central Zeballos property comprises 22 crown grants and 11 reverted crown grants in the Alberni mining division on Vancouver Island, British Columbia. The nearest communities are Zeballos, 15 road kilometres to the southwest and Port McNeill, 90 road kilometres to the north. Access is by road via the North Island Highway and the Zeballos Forestry road which connects with the highway 42 kilometres north of Zeballos and 50 kilometres south of Port McNeill. The property is situated on the west coast of Vancouver Island, 33 kilometres east of the Pacific Ocean. The region has a wet climate averaging 250 centimetres precipitation annually.

The Central Zeballos Property was initially staked in 1937 following the discovery of the main vein near the head waters of Bibb Creek. Underground work was started in 1938 with two adits at the No.s 1 and 2 levels. By 1940 a 50 ton per day mill was erected at the base of the mountain on Bibb Creek. The 2,300 foot crosscut was driven at the mill level (No.9 level) and a 400 foot raise was driven to access the stopes being mined at the No.5 level. Recorded production for the mine was 20,472 ounces gold and 14,618 ounces silver from 58,450 tons mined, of which 41,655 tons were milled, from 1940 to 42 and 1946 to 47. The average grade of ore is calculated at 0.491 ounces of gold and 0.35 ounces of silver per ton.

In addition to the gold bearing quartz veins the Central Zeballos Property has been explored intermittently for its' copper (\pm gold) skarn and lime silicate (CaCO_3) potential.

Impact Resources Inc. (now New Impact Resources Inc.) acquired the Central Zeballos Property in 1981. Since that time New Impact Resources Inc. has carried out programmes of back sampling, rehabilitation, drilling, prospecting and geochemical sampling. Both the historic Spud Valley and Privateer properties have received a renewed interest since 1984 and are currently being developed by McAdam Resources Inc. and New Privateer Mines Ltd., respectively. McAdam Resources reports reserves of 429,533 tons grading 0.25 ounces gold per ton over a 4 foot mining width.

In the Fall of 1988 CanAlaska Resources Ltd. optioned the Central Zeballos property from New Impact Resources Inc. and carried out an exploration programme comprising the following: rehabilitation of the No.9 level crosscut; back sampling and geological mapping of the accessible levels of the mine; surface prospecting and geological mapping, geophysical surveys; geochemical sampling and a compilation of all data previously collected. These surveys are discussed in assessment reports covering these programmes.

Underground diamond drilling was carried out from December 1, 1988 to April 3, 1989. A total of 2,211 metres (7,253 feet) were drilled in 21 holes. The drilling tested the main vein structure between the No.4 and 9 levels as well as below the No.9 level. The two programmes carried out by CanAlaska were completed at a total cost of approximately \$600,000.00

In the Zeballos Camp the gold bearing veins are believed to have been formed as a late stage of the Tertiary Sooke (quartz diorite) Intrusion. This quartz diorite body underlies a large portion of the Central Zeballos Property. The veins are lenticular in form and comprise quartz and clay-quartz gouge and breccia hosting pyrite, sphalerite, arsenopyrite, chalcopyrite, galena, pyrrhotite and minor marcasite. The veins average one foot in width but often pinch to much narrower widths. Grades in ore shoots range from 0.25 to over 4 ounces per ton gold.

The recent exploration programmes updated the ore reserve estimates to 9,000 tons Probable grading 0.35 ounces per ton and 48,100 tons Possible grading 0.35 ounces per ton. Drilling has shown that the main vein structure is mineralized beyond the areas previously mined. However, drilling in a gold camp where the veins are narrow and lenticular in shape and the gold occurs in high grade shoots subject to the nugget effect is only useful to delineate structure. Drifting is required to prove up reserves. For this reason it is recommended that further exploration be focused on underground rehabilitation which will develop access to the old workings for exploration thereof and will enable mining to be rapidly initiated if a production decision is made in due course. Additional underground diamond drilling is also recommended.

Several other groups of claims belonging to the Central Zeballos Property also deserve further exploration and have been discussed in this report.

1. INTRODUCTION

The geology and economic potential of a precious metal prospect covered by the Central Zeballos property held by New Impact Resources Inc. and under option to CanAlaska Resources Ltd. is discussed in this report. The data presented was obtained during recent exploration programmes carried out by Beaty Geological Ltd on behalf of New Impact Resources Inc. Results of exploration, development and mining programmes carried out since the discovery of the prospect in the late 1930's, have been summarized. Additional exploration programmes are recommended to test the economic potential of these claims.

1.1 Location and Access

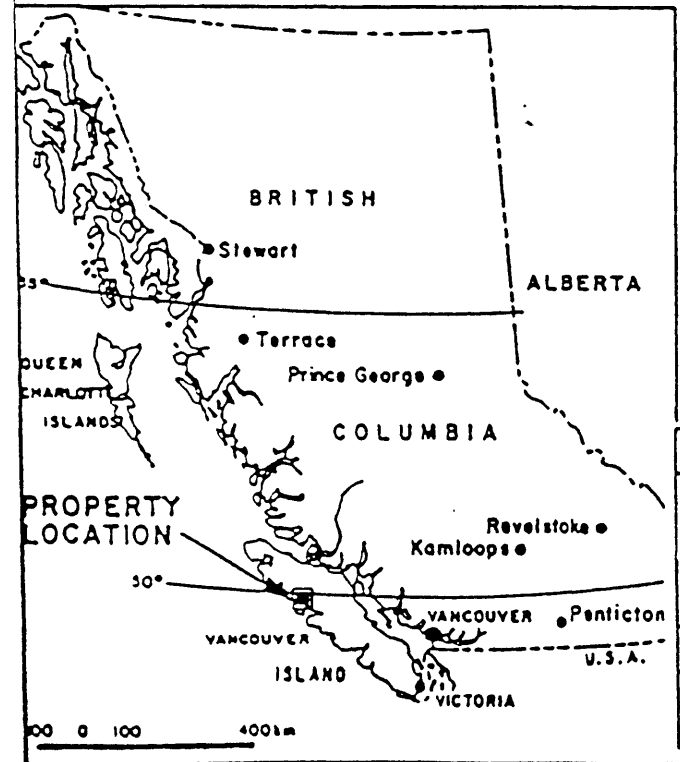
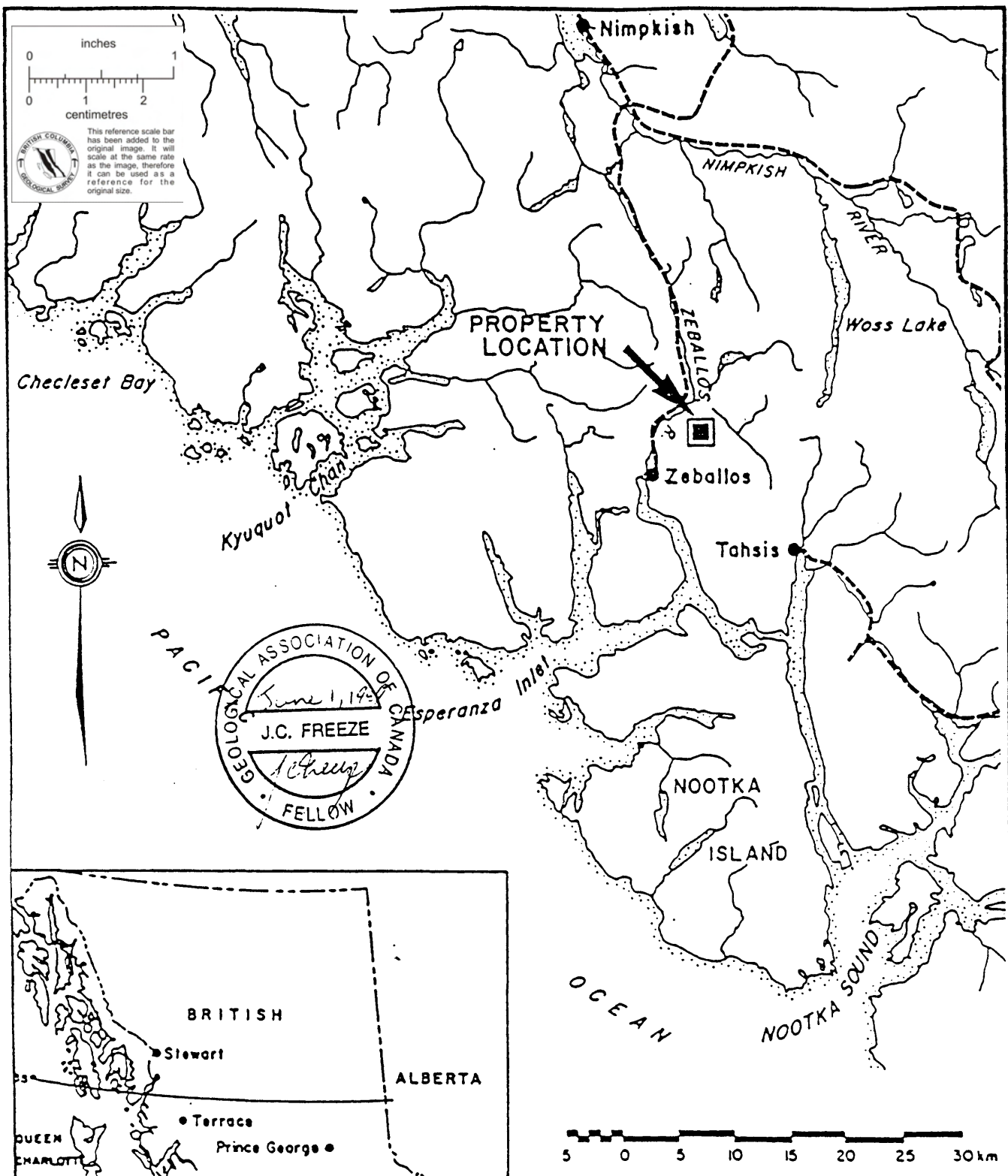
The Central Zeballos property is situated on the west coast of Vancouver Island, British Columbia and is located on N.T.S. Map Sheet 92L/2W at 50°02.5'N and 126°46.5'W. Declination for the area is 23°. The property is 15 road kilometres north of the village of Zeballos, 90 road kilometres south of the town of Port McNeill and 200 road kilometres northwest of the city of Campbell River. The claim blocks cover a total area of approximately 6 square kilometres (150 hectares or 371 acres) see Figure 1.2.

The Central Zeballos property is accessed via a network of logging roads. The main line heads north from Zeballos and connects with the Island highway at 42 kilometres. The original mine road remains as a good four wheel drive road connecting the No.9 level portal with the Nomash Creek logging road which leaves the main Zeballos line 11 kilometres north of town. A pack horse trail following the banks of Bibb Creek used to exist between the No.9 level and the No.2 level crosscuts. Access to the No.1 and No.2 levels and surface showings during the current programme was via Bibb Creek itself and remnants of the old horse trail.

Logging roads following both Goldvalley Creek and Spud Creek valleys provide access to the Scafe, Rimy, Britannia B and M claims. Additional access will be provided to the Scafe claims by logging roads planned to be built crossing Monckton Creek from the Goldvalley line.

Sea port access is currently available at Campbell River. Air access by helicopter is available either from bases in Goldriver or Campbell River.

Groceries, fuel, lumber and general supplies are available to a limited extent in Zeballos. The remainder may be trucked from Campbell River, Port Hardy or Port McNeill.



CANALASKA RESOURCES LTD.	
NEW IMPACT RESOURCES INC.	
LOCATION MAP	
CENTRAL ZEBALLOS PROPERTY	
BEATY GEOLOGICAL LTD.	
SCALE	As shown
DATE	Nov., 1988
DRAWN	JF, GR
DRAWING No.	FIGURE 1.1

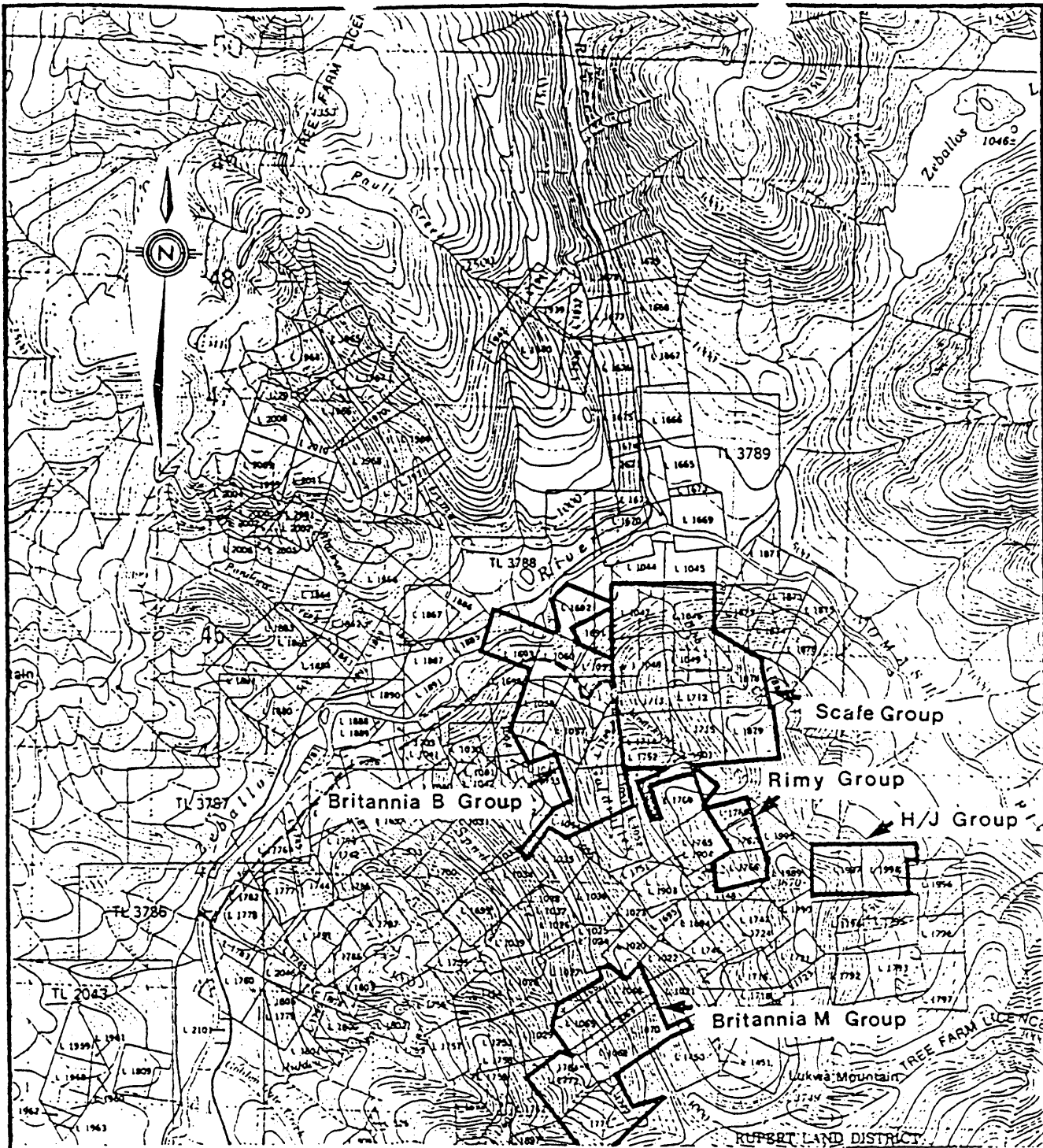
1.2 Property

The Central Zeballos property is held by 22 crown grants and 11 reverted crown grants in the Alberni mining division as listed below. It is understood that the property is held by New Impact Resources Inc. and is under option to CanAlaska Resources Ltd., however, the legal terms are not covered by the scope of this report.

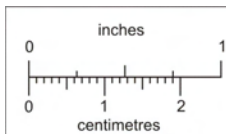
Table 1.2
Claim Status

Group	Name	Expiry Date	Lot No.	Rec No.	Status	
Scafe	AE		L1046		C.G.	
	AD		L1047		C.G.	
	Extension No. 5	12/13/91	L1048	1577	R.C.G.	
	Extension No. 6		L1049		C.G.	
	Extension No.10		L1712		C.G.	
	Extension No. 9	12/13/91	L1713	1576	R.C.G.	
	Extension No. 7	12/13/91	L1714	1575	R.C.G.	
	Extension No. 8		L1715		C.G.	
	Mon Fraction		L1878		C.G.	
	Bas Fraction		L1879		C.G.	
	Rimy 6 & 1	12/13/91	L1901/02	1574	R.C.G.	
	Britannia B	B-1		L1053		C.G.
B-2 Fraction			L1054 ¹		C.G.	
B-3			L1057		C.G.	
B-5			L1058		C.G.	
B-4			L1059		C.G.	
B-6			L1060		C.G.	
T			L1692		C.G.	
B-7			L1693		C.G.	
Wet Fraction			L1749		C.G.	
Britannia M		M-1		L1065		C.G.
		M-2		L1066		C.G.
		M-3 Fraction		L1067		C.G.
	M-4		L1068		C.G.	
	M-6 Fraction		L1069		C.G.	
	M-5		L1070		C.G.	
	XY	12/13/91	L1770	1572	R.C.G.	
	XX	12/13/91	L1771	1571	R.C.G.	
	XZ	12/13/91	L1772	1573	R.C.G.	
	Rimy	Rimy 8	02/13/90	L1766	2471	R.C.G.
	Rimy 5 & 7	02/13/90	L1767/68	2470	R.C.G.	
H/J	H and J No.7	02/13/90	L1997	2472	R.C.G.	
	H and J No.8	02/13/90	L1998	2473	R.C.G.	

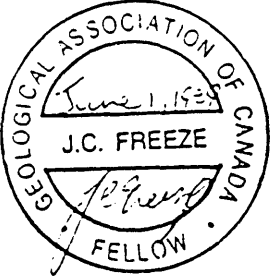
¹ An undivided interest only as to lot 1054 except that part lying southwest of the production northwesterly of the northeasterly boundary of Lot 1035, Rupert District (Surface Title Number 128049-1)



Zeballos
2 km



This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.



NTS 92 L/2W

NEW IMPACT RESOURCES INC.	
CLAIM MAP CENTRAL ZEBALLOS PROPERTY	
BEATY GEOLOGICAL LTD.	
SCALE 1:50,000	DATE NOV., 1988
DRAWN JF, GR	DRAWING No. FIGURE 1.2

1.3 Physiography, Vegetation and Climate

The claims are situated on the west coast of Vancouver Island, 25 kilometres east of the Pacific Ocean. The region has a wet climate; snow cover in winter is moderate; rain, snow, and wind storms are common all year round. Mean annual precipitation is greater than 250 centimetres.

The property covers a rugged, mountainous terrain with elevations ranging from 90 metres (300 feet) to 1,113 metres (3,650 feet). Some slopes are extremely steep, but most may be traversed with care.

Westerly flowing tributaries to the Zeballos River drain the property. The Zeballos River flows southwesterly into Esperanza Inlet which enters the Pacific Ocean 23 kilometres west of the property.

Natural vegetation cover is moderate to dense and typical of west coast rain forest. Cedar, hemlock and balsam trees with thick to moderate underbrush characterize the vegetation. Alder trees grow in thick patches where logging has taken place.

Water and timber resources for exploration and development purposes are plentiful. Several tributaries to the main creeks carry sufficient drilling water during most of the year.

1.4 History

Zeballos Camp

The discovery of placer gold in the Zeballos River in 1907 encouraged prospecting in the surrounding area and led to the discovery of gold bearing quartz veins. The first "gold vein" was staked in 1924 on the Tagore property, 1 1/2 miles up from the mouth of the Zeballos River, and by 1929 forty claims had been staked in the Zeballos River valley. Mining began in the winter of 1934-1935 following the discovery of the rich gold - quartz veins on the White Star, Spud Valley and Privateer properties on Spud Creek. The first shipments were made from these properties in 1937 and 1938. By the end of 1948 a total of 287,811 ounces of gold had been produced from a total of 651,000 ton mined of which 370,750 ton were milled. Average gold grade was 0.44 ounces per ton mined and 0.75 ounces per ton milled.

In 1962 Zeballos Iron Mines Ltd. produced 3700 tons of iron per day from a magnetite skarn in the Karmutsen volcanics north of the Zeballos River. The ore was shipped from a deep sea port in Zeballos. Production ceased and the mine was sold in 1972 due to world iron markets.

Central Zeballos Property

The main vein mined on the Central Zeballos property was discovered in September of 1937 by O.T. Bibb at the headwaters of the creek now named the same. This creek drains the north slope of Lukwa Mountain approximately a mile south of Nomash Creek. Bibb and his associates made open cuts and trenches to the west of the creek exposure of the vein. The upper two adits were started in 1938 when Central Zeballos Gold Mines was formed. The company first started as a private company but went public in April of 1938. In 1938-40 a winze was sunk between the No. 2 and the No.5 levels by Reno Gold Mines whom acquired a 40% interest in the property. In 1940, a 50 ton per day amalgamation-flotation mill was completed at the base of the mountain on Bibb Creek (650 feet elevation). A 2,300 foot crosscut and 400 foot raise were driven to access the stopes being mined on the No.5 level. The property was closed from the autumn of 1942 until early 1946. Mining and milling were resumed but continued only until the spring of 1947 due to disappointing results from 225 feet of drifting on the No.6 level. Recorded production for the mine is 20,472 ounces of gold and 14,618 ounces of silver from 58,450 tons mined of which 41,655 tons were milled. The average grade of ore is calculated at 0.491 ounces of gold and 0.35 ounces of silver per ton.

In addition to the gold bearing quartz veins the Central Zeballos property has been explored intermittently for its copper (\pm gold) skarn and lime silicate (CaCO_3) potential. In 1964 the Silver Standard-Granby Prospecting Syndicate optioned the Central Zeballos-Sunny Boy claims and explored surface copper skarn showings by trenching and sampling. Three zones averaging 2.2% copper over an average width of 6.6 feet were outlined.

In 1965 Consolidated Skeena Mines Ltd. optioned the property and carried out geological mapping, geochemical - soil sampling, a magnetometer survey and surface diamond drilling. Mapping outlined a 4,000 foot strike length and 800 foot dip extent to the main gold bearing vein. The magnetometer survey outlined pyrrhotite zones in addition to the known skarn mineralization. The diamond drilling programme comprised 3,578 feet in 11 holes drilled on the main copper showing. The best result obtained was 0.10 ounces gold per ton, 3.00 ounces silver per ton and 3.10% copper over a 6.5 foot intersection.

Britannia Properties

The Britannia B and M groups of claims were originally staked and explored by the Britannia Mining and Smelting Company. Several gold bearing veins were discovered and investigated by short adits but were not developed for production.

1.5 Recent History

In 1981, Impact Resources Inc. (now New Impact Resources Inc.) acquired the Central Zeballos property and since that time has carried out exploration programmes comprising back sampling of the old workings, rehabilitation of a portion of the old workings, diamond drilling of a dolomitic limestone body in the No.9 level crosscut, reconnaissance prospecting and sampling and a soil geochemical survey. Results were encouraging and warranted additional exploration and rehabilitation of the old workings.

Both the Spud Valley and Privateer properties have received a renewed interest since 1984 and are currently being developed by McAdam Resources Inc. and New Privateer Mines Ltd, respectively. McAdam Resources reports reserves of 429,533 tons grading 0.25 ounces gold per ton over a 4 foot mining width.

In the Fall of 1988 CanAlaska Resources Ltd. optioned the Central Zeballos property from New Impact Resources Inc. and carried out an exploration programme comprising the following: rehabilitation of the No.9 level crosscut; back sampling and geological mapping of the accessible levels of the mine; surface prospecting and geological mapping, geophysical surveys; geochemical sampling and a compilation of all data previously collected. These surveys are discussed in assessment reports covering these programmes. Neither the geochemical sampling nor the geophysical surveys proved to be useful exploration tools on the Central Zeballos Property.

Underground diamond drilling was carried out from December 1, 1988 to April 3, 1989. A total of 2,211 metres (7,253 feet) were drilled in 21 holes. The drilling tested the main vein structure between the No. 5 and 9 levels as well as below the No.9 level. The two programmes carried out by CanAlaska were completed at a total cost of approximately \$600,000.00

2. GEOLOGY

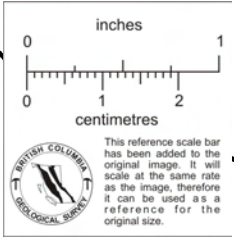
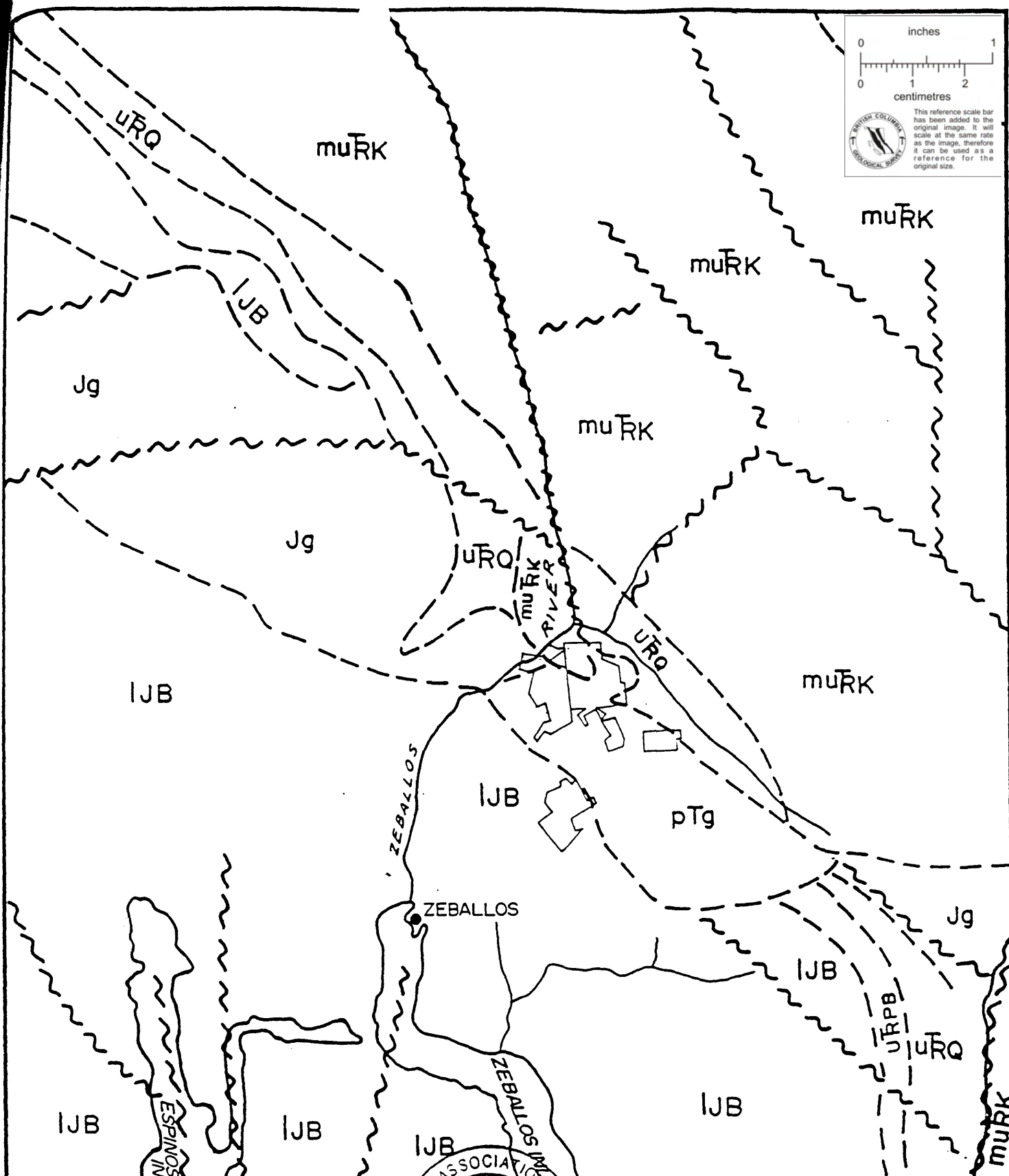
2.1 Regional Geology

The Zeballos River area was mapped initially by H.C. Gunning of the Geological Survey of Canada ("G.S.C.") in 1932 as part of a regional map covering an area of 142 square miles. Gunning's report and map are part of the G.S.C. Summary Report 1932. The most recent geological work in the area was compiled in 1977 by J.E. Muller as G.S.C. Open File 463 (see Figure 2.1).

The oldest rocks in the area are Triassic volcanics and sediments correlated with the Vancouver Group in the Nimpkish Lake region. In the Zeballos area the group is represented by two formations. The lower is the Karmutsen Formation comprising mafic to intermediate volcanics and volcanoclastics; overlying the Karmutsen volcanics is the Quatsino limestone. These rocks lie in fault contact along the northern branch of the Zeballos River north of the property. Early Jurassic Bonanza Group volcanics overlies the Vancouver Group on the southwest portion of the Britannia claims.

The volcanic and sedimentary rocks were intruded and in part replaced by a Jurassic Island Intrusion of granodioritic to quartz dioritic composition which outcrops in a northwesterly trending body predominantly north of the Zeballos River. A younger intrusive named the Zeballos (quartz diorite) Batholith, which has been dated at 38 Ma (Tertiary - Oligocene/Eocene) intrudes all older rocks and outcrops in a southeasterly trending body south of the Zeballos River.

The gold bearing quartz veins are believed to have been emplaced during the late stages of the Tertiary quartz diorite intrusion along with mafic and felsic dykes which are seen both to crosscut and be crosscut by the veins.



CANALASKA RESOURCES LTD.	
CENTRAL ZEBALLOS PROPERTY	
REGIONAL GEOLOGY	
BEATY GEOLOGICAL LTD.	
SCALE 1:125,000	DATE SEPT., 1988
DRAWN JF,GR	FIGURE 2.1

SEE OPPOSING PAGE FOR LEGEND
 Taken from G.S.C. Open File 463
 by J.E. Muller, 1977

2.2 Regional Mineralization

The mineral deposits of the Zeballos Camp have been investigated and described by geologists of the Minister of Mines for B.C. and the Geological Survey of Canada since 1908. Descriptions given by J.S. Stevenson (1935 to 1948) and by Bancroft (1940) have been found to be accurate and informative. The Zeballos camp is well known for its' rich gold bearing quartz veins which produced a total of 287,811 ounces of gold between 1934 and 1948.

Vein Structure

These veins comprise quartz and sulphides in well defined fault fissures which are rarely more than a foot in width but maintain fairly uniform strikes and dips for considerable distances. The gold bearing vein material occurs as lenticular bodies, often referred to as ore shoots, within the consistent structures making reserves difficult to block out by diamond drilling.

Some of the gold bearing veins occur in sheeted zones comprised of joints spaced 2 to 8 inches apart over widths of up to 4 feet. Although narrow gouge films and quartz sulphide stringers line these joints the gold grades over the 4 foot width is often less than in the narrower but solid veins. These sheeted zones often grade into narrow shears containing high grade lenticular quartz sulphide veins.

Vein Composition

The vein material comprises sulphides and gold occurring in a gangue of quartz and minor carbonate. Gold grades appear to have an inverse relationship the amount of carbonate in the gangue. Films of gouge usually line the walls to the quartz sulphide veins. Banding occurs both between the quartz and sulphides and between the sulphides themselves indicating a sequential deposition. The quartz occurs in a comb texture made up of pyramid shaped crystals with sulphides often occurring between crystals. Sulphides comprising pyrite, sphalerite, arsenopyrite, chalcopyrite, galena, pyrrhotite and minor marcasite make up from 10 to 50%, averaging 25%, of the vein material.

Crushed country rock occurring in vein shears with gold bearing stringers and disseminated pyrite are usually low in gold content. Brecciated vein matter characterizes many parts of the veins and includes fragments of wall rock up to 10 inches across. Some of the wall rock fragments have been totally replaced by silicification. Where this has not occurred the wall rock tends to dilute the mineralization. Visible gold often occurs in the veins but commercial ore may

not contain any gold visible to the naked eye. The Privateer and the Goldfield veins are the best known for gold crystals and hackly masses of visible gold. Gold distribution in the quartz sulphide ore is directly proportional to the sphalerite and galena content. This evidence suggests that these minerals were precipitated from the same solutions although banding evidence indicates that the gold was deposited slightly later than the base metals. As a rule quartz veins containing pyrite and arsenopyrite without sphalerite and galena do not contain very much gold. The entire depositional sequence is believed to have started with pyrrhotite and some sphalerite, followed by arsenopyrite, pyrite, sphalerite, chalcopyrite, galena and gold. Mineral associations with gold are varied: it replaces arsenopyrite, pyrite and galena and occurs along the contact of quartz and the various sulphides, galena, sphalerite and pyrite. It also occurs entirely surrounded by quartz or moulded around the ends of prismatic quartz crystals.

The deposition of quartz appears to have started soon after the pyrrhotite and to have been repeated several times before the final stages of mineralization. The earliest quartz is dark grey and contains fine grained arsenopyrite and pyrite. This grey quartz forms the walls to most gold bearing veins as well as most of the gangue in narrow veins. A second stage quartz is drusy and white while a third and last stage quartz is white and barren of both sulphides and gold.

Wallrock Alteration

Alteration along the veins occurs in all rock types but is more intense along those crosscutting granodiorite and quartz diorite. Complete sericitization of the plagioclase crystals and total destruction of biotite and hornblende crystals has occurred in these intrusive rocks. The lime silicate rocks show little alteration and the volcanics show an altered zone up to 6 inches from the vein shears.

In addition to the gold bearing quartz veins the Zeballos camp hosts several skarn deposits. The largest discovered to date is a magnetite skarn in the Karmutsen volcanics north of the Zeballos River. In 1962 Zeballos Iron Mines Ltd. produced 3700 tons of iron per day from this skarn. Production ceased in 1972 due to world iron markets. Other skarn deposits host magnetite, copper and gold. Impressive gold results have recently been announced from the Footwall Property on the Artlish River.

2.3 Property Geology

The Triassic Karmutsen volcanics underlie the northern portion of the Scafe and Britannia B claim groups just south of the Zeballos River. These volcanics comprise basaltic lava, pillow lava, breccia and tuff.

The Quatsino limestone outcrops in two bodies on the Scafe Group of claims. One occurs north of the main vein and is well exposed in the No.9 level crosscut. This body is dolomitized and was tested by drilling but was not found to be of a commercial quality. The second limestone body outcrops south of the main vein on the northern shoulder of Lukwa Mountain.

The Jurassic granodiorite body belonging to the Island Intrusions intrudes Vancouver Group volcanics and sediments in the northwestern portion of the Britannia B Group just south of the Zeballos River.

The Tertiary aged quartz diorite, Zeballos Batholith, underlies the largest portion of the Central Zeballos property. This body intrudes the Triassic Karmutsen volcanics and Quatsino limestone in the north and southeasterly portions of the Scafe Group of claims; the Bonanza volcanics in the western portion of the Britannia M claim group ; and the Jurassic granodiorite body in the northwestern part of the Britannia claim group. A complex melange of intrusions are exposed along this contact on the Goldvalley logging road. Several altered mafic xenoliths occurring in the batholiths are believed to be remnants of the volcanics and older intrusives which have been granitized by the intruding body.

A third intrusive event is evidenced by felsic and mafic dykes which occur along the same structures as the gold bearing veins. They are believed to have been injected close to the same time as the mineralization was deposited. The dykes themselves are highly altered and mineralized in places.

2.4 Property Mineralization and Alteration

Central Zeballos - Scafe Group

Skarn mineralization occurs along the contacts between the intrusive bodies, the limestone and the volcanics both south and north of the main vein on the Scafe Group. A diamond drilling programme conducted in the sixties outlined a mineralized zone containing copper and some gold. The gold values appear to be sporadic, as is typical of skarn deposits. Although this mineralization may have some economic importance in the future the current direction for exploration is the gold bearing quartz sulphide veins.

An extensive gold bearing quartz sulphide vein was discovered on the Central Zeballos property in 1937 and was developed over a 1440 foot (439 metres) strike length and an 900 foot (274 metres) vertical extent. The vein strikes approximately 090° and dips from 85° to 65° to the south. Within the developed workings three main ore shoots were mined by stoping. When mining was discontinued in 1947 two zones on the No.5 level had been blocked out but were not taken. The vein was drifted along on the No.6 level for approximately 400 feet. Stations were established on the No. 7 and 8 levels in the main raise but the vein was not explored at these levels. The No.9 level drift shows a consistent vein for approximately 300 feet. At the western end of the No.9 level drift the vein is diverted by a southwesterly striking splay in the main structure and is then cut off by a northeasterly trending fault.

Programmes of back sampling of the old workings were carried out both in 1982 and recently in 1988. Based on the results from the 1982 programme D. Tully, P. Eng. calculated possible-probable reserves to be 9,020 short tons based on a density of 12 cubic feet per short ton ore and a mining width of 1.2 feet. The western most area blocked out in the late 1940's but not mined, on the No.5 level, has been calculated by Tully to contain 1,662 tons grading 1.239 ounces gold and 0.97 ounces silver per ton.

During the Fall sampling programme areas not accessed in 1982 were sampled as well as some of the same areas for comparison. The results of the recent sampling indicate that two ore shoots may be present at the No.6 level. Values from 0.546 to 0.79 ounces gold per ton over 20 to 30 centimetres were obtained from 30 to 40 metres east of the main raise. At the western face of the No.6 drift a value of 3.856 ounces gold per ton over 22 centimetres (8.66 inches) was obtained. In the western most area blocked out by Tully on the No.5 level, values of up to 2.826 ounces gold per ton over a width of 35 centimetres (13.78 inches) were obtained. At the western face of the No.5 level a sample taken over 35 centimetres assayed 4.616 ounces per ton.

Two other mineralized structures are exposed in the No.9 level crosscut and were drifted on for short distances. The strike of these is 060° which is the average strike of the ore bearing veins in the mines on Spud Creek (held by McAdam Resources and New Privateer Mines). The most northerly structure is a narrow quartz vein with some clay gouge and pyrite, arsenopyrite, sphalerite and galena. Although the vein is narrow where exposed it is gold bearing and may open up into better widths along the strike or dip extent as most of the economic veins in the camp pinch to narrow widths in places. The second structure is a quartz diorite porphyry dyke similar in appearance to the dyke occurring in the footwall of the main vein in the discovery showing at the No.1 level on the west fork of Bibb Creek. Pyrite and chalcopyrite mineralization hosting weak gold mineralization occurs along a post dyke shear on the footwall selvage of the dyke.

Surface prospecting and geological mapping along the strike projection of the main vein delineated narrow quartz veins and aplite dykes up to 750 metres west of the discovery showing at the No.1 level on the west fork of Bibb creek.

A northerly trending grid line which was prospected, mapped and soil sampled 1,530 metres west of the discovery showing delineated two narrow quartz veins and a rhyolite dyke all striking 060° . The veins showed only minor gold mineralization and the soil samples did not detect any noticeable geochemical anomalies.

Britannia B Claim Group

Several narrow gold bearing quartz sulphide veins have been discovered over the years on the Britannia B claim. The following are results obtained from a report written for the Britannia Mining and Smelting Company Ltd in 1937.

Vein	Adit Length feet	Elevation Claim	Assay oz/ton	Width inches
Garbo		B	0.13	7.5
End		B	0.02	1-13
Wet Fraction		B	Trace	2-4
River		B	0.02	4
Dyke	West	1830	B	15.6

Some of these veins and some new discoveries were sampled during the recent exploration programme. Several mineralized shear zones and quartz veins occur along and just south of the contact between the Jurassic granodiorite and the Tertiary quartz diorite batholiths. Weak gold, silver, copper, zinc and arsenic mineralization occurs in these structures but so far none have been proven economic. The average strike of these structures is 060° . Several of the structures are well exposed along the east-west to southerly curve on the Goldvalley Main logging road. A couple of veins are exposed on Monckton and Goldvalley Creeks just above and below their confluence, respectively. One quartz vein is exposed in an old trench in a gulley in the northwestern corner of the Britannia B claims approximately 375 metres south of the Goldvalley logging road. (See Figure 2.3.a). In the late 1930's plans were drawn up by the Britannia Mining and Smelting Company to drive two long crosscuts to access a group of these veins occurring in the northwest corner of the B-5 claim.

Shear zones and quartz veins are also exposed on the southern half of the Britannia B claims. Weak gold values over narrow widths were obtained from veins exposed along a narrow switch back on the Goldvalley Main line 160 to 360 metres south of Monckton Creek.

A zone containing several veins is exposed along the western loop of the Goldvalley Main line at the southwestern end of the Britannia B claims. Several of these veins carry weak gold mineralization. The most encouraging results were obtained from a 2 to 5 centimetre wide rusty fracture in silicified quartz diorite which carries 0.268 ounces per ton gold, 0.19 ounces per ton silver and 9000 ppm arsenic. A 9 centimetre wide gouge zone carries 5590 ppm molybdenum with weak gold values (0.013 ounces per ton).

Britannia M Claim Group

Narrow gold bearing quartz sulphide veins were discovered in the 1930's on the Britannia M claims. Three of these veins were drifted on for short distances. The following are results obtained from a report written for the Britannia Mining and Smelting Company Ltd in 1937.

Vein	Adit	Length feet	Elevation feet	Claim	Assay oz/ton	Width inches
Free Gold	Upper	56		M	0.61	4.7
"	Lower	38		M	1.51	2.5
Goat		100		M	0.31	9
Long		82		M	0.19	4

One of these veins and adits was discovered and sampled during the recent programme. Although these veins are narrow where exposed on the Britannia M claims they are very continuous and extend onto claims held by McAdam Resources Inc. in Goldvalley. These veins parallel the Goldfield and other veins currently being developed by McAdam Resources Inc. on the Spud Valley property which bounds the northern edge of the Britannia M claims.

The character of the gold bearing veins is the same as that described under regional mineralization.

3. DIAMOND DRILLING

Diamond drilling was carried out from December 1 to 15, 1988; and from January 17 to April 3, 1989 during which time a total of 2,211 metres (7253 feet) were drilled. All drilling was carried out from the No.9 level crosscut at an elevation of 200 metres (650 feet).

Eight holes totalling 3,228 feet were drilled from station 1, 1840 feet from the No.9 level portal. These holes were targeted to test the mineralization in the main vein between the No.5 level and the No.9 level and west of the No.4 and 5 level drifts.

An additional 4,025 feet were drilled in 13 holes from a new extension of the crosscut 50 feet south of the No.9 level drift (2,350 feet from the portal). Twelve of these holes tested the extension of the vein below the No.9 level. One flat hole was drilled due south of the main vein to search for additional mineralized veins. Table 3.2 lists drill hole data.

The main vein structure was intersected in 19 of the 20 holes drilled to test it. The vein was always intersected approximately where expected indicating that there are no major faults offsetting the structure in the area tested by drilling. New veins were also intersected in several holes. Results are summarized in table 3.3. The following is a list of abbreviations used in table 3.3.

TABLE 3.1
ABBREVIATIONS

Ande	Andesite	kaolin	kaolinite
Ap	Aplite	Ma	Malachite
brx	breccia	med	medium
Cb	carbonate	P	porhyry
Chl	chlorite	perv	pervasive
Cs	coarse	pheno	phenocryst
Cp	Chalcopyrite	Po	Pyrrhotite
D	Diorite	Py	Pyrite
diss	disseminated	Q	Quartz
F	Feldspar	R	Rhyolite
Fels	Felsite	rk	rock
f.gr.	fine grained	Se	Sericite
frctr	fracture	Si	Siliceous
Ga	Galena	Sp	Sphalerite
gge	gouge	stkwk	stockwork
gr.	grained	Su	Sulphide
He	Hematite	Vn	Vein
homog	homogeneous	vnlt	veinlet
Ja	Jarosite	X	xenolith

TABLE 3.2 DRILL HOLE DATA

Drill Hole CZ-9-88/ 89	Angle ^o	Azimuth ^o w.r.t. GN	Total Depth metre/feet	Drill Station
1	+35	137	188.98/620	1 1,840 ft.
2	+60	200	187.76/616	1 from portal
3	+55	179.5	167.94/551	1
4	+41	153	163.07/535	1
5	+30.5	165	129.84/426	1
6	+29	145	146.30/480	1
7	-45	340	55.78/183	2 2,350 ft.
8	-70	340	62.18/204	2 from portal
9	-90	340	68.58/225	2
10	-45	075	75.59/248	2
11	-45	050	61.87/203	2
12	-45	305	46.33/152	2
13	-45	014	52.43/172	2
14	-45	086.5	97.23/319	2
15	-35	046	67.67/222	2
16	-50	025	91.14/299	2
17	-37	0 ^o	53.95/177	2
18	-38	314 ^o	62.18/204	2
19	0 ^o	180 ^o	134.42/441	2
20	+36	141 ^o	150.88/495	1
21	+40	147.5 ^o	146.61/481	1

TABLE 3.3 DRILLING RESULTS

Drill Hole	Intersection		Gold Assay oz/ton	True Width Metres	Level of Intersection (ft.)	Vein Name	Proximity of GDP dyke	Description
CZ-9-88/89								
1	121.47	121.61	1.2	.10	674	27 m. N of	12.5 m.S	Qtz. vnlit and sil wallrock
1	121.61	121.76	0.011	.17	672	main vein	12 m. S	Frctrs w/Qtz. & FeO ₂
1	149.73	149.96	0.003	.16	620	main	14.3 m. N	Qtz. vnlit w/Py cubes in Se alt
2	161.34	161.57	0.016	.14	440	main	1.75 m. S	Fault w/gouge centre, Se selvages
3	143.22	143.65	0.024	.335	514	main	1 m. S	Fault gouge & Se selvages
4	136.68	137.08	0.014	.33	600	main	8.5 m. N	Qtz. vn w/f.gr. Su, Clay & Se gouge
5	124.47	124.78	0.009	.294	691	main	9.5 m. N	Brx. qtz. & gouge w/f.gr. grey Su
6	129.78	129.86	0.003	.06	691	main	5 m. N	Pervasive Se alt zone
7	19.81	20.03	0.028	.19	945	main	23.5 m. N	Qtz. vn. & gouge, f. gr. grey Su, Py, Se
7	36.53	36.76	0.068	.20	984	new		Gouge w/qtz, f.gr. grey Su & Se
8	26.28	26.41	0.036	.084	981	main	21 m. N	Fault-qtz. w/f.gr. grey Su & Se gouge
9	36.64	36.98	0.024	.12	1021	new	21 m. N	Se alt & clay gouge
9	47.24	47.52	0.014	.10	1055.5	main		Qtz. & cb vn in Se alt zone, Py <1%
10	51.85	52.28	0.014	.10	1019	main		Gouge Se & kaolin f. gr. grey Su <1%
10	52.28	52.55	2.878	.064	1020	main		Qtz. vn w/Py, Sp, Ga blebs & f. gr. grey Su
10	52.55	52.73	0.026	.064	1021	main		Gouge Se & kaolin, v. f. gr. Su <1%
10	60.17	60.45	0.012	.064	1038	new		Qtz.-Ca vn w/Py & Se alt selvages
11	34.84	34.94	0.002	.053	980	main		Se alt w/gouge-qtz. brx. in centre
12	21.82	21.95	0.006	.07	951	main		Pervasive Se & kaolin, v. f. gr. Py & Ga <1%
12	22.61	22.84	0.008	.12	953.5	main		Intense kaolin alt, v. f. gr. Py
13	6.90	7.10	0.009	.175	916.4	new		Qtz. vnlit in Se alt zone
13	19.54	20.11	0.004	.51	946	main		Se alt, v.fr. gr. Py
13	20.11	20.33	0.004	.19	947	main		Qtz. vn minor f. gr. Py
14	94.18	94.72	0.006	.035	1123	new		Fault gouge w/qtz. vnlit
15	22.53	22.70	0.007	.12	945	main	30 m. N	Fault kaolin, Cb, Se, Chl
15	29.26	29.44	0.008	.11	957	new		Fault gouge w/qtz. vnlit, trace Py
17	16.73	17.16	0.005	.43	934	main		Qtz. vnlt w/ <3% Py
18	23.29	23.50	0.024	.14	949	main	24 m. N	Fault Se & Ca gouge & qtz. vn, Py 2%
18	23.74	23.93	0.014	.13	950	main	24 m. N	Fault gouge & Se alt, Py 2%
19	113.57	113.65	1.482	.07	900	new		Fault gouge Se & Cb & qtz. vnlit, Py <20%
20	142.93	143.23	0.568	.22	625	main	9 m. N	Brx. qtz. vn w/f. gr. grey Su in fault gouge
21	136.70	136.90	0.012	.16	611	main		Se & clay fault gouge
21	137.03	137.27	0.004	.19	610.5	main		Se & clay fault gouge w/qtz. vnlit & Py 2%
21	139.30	139.35	0.087	.04	606	main		Fault Se-Clay gouge & brx. qtz. Py %

EAST

East fork of Bibb Creek

Fault

1600

105 Sub-level West canyon of Bibb Creek

No.1 Level W.

No.1 Level E.

545 a.p.t. / 4'

206 Sub-level

No.2 Level East

No.3 Level East

1,845 a.p.t. / 4'

1200

PROBABLE RESERVES
3000 TONS GRADING 0.35 O.P.T. Au

No.4 Level

No.5 Level

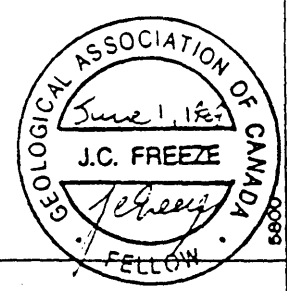
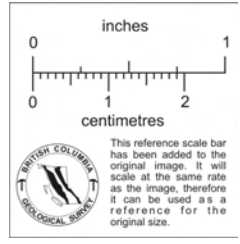
No.6

No.7

No.8

POSSIBLE RESERVES
10,000 TONS GRADING 0.35 O.P.T. Au

POSSIBLE RESERVES
2,500 TONS GRADING 0.35 O.P.T. Au



800

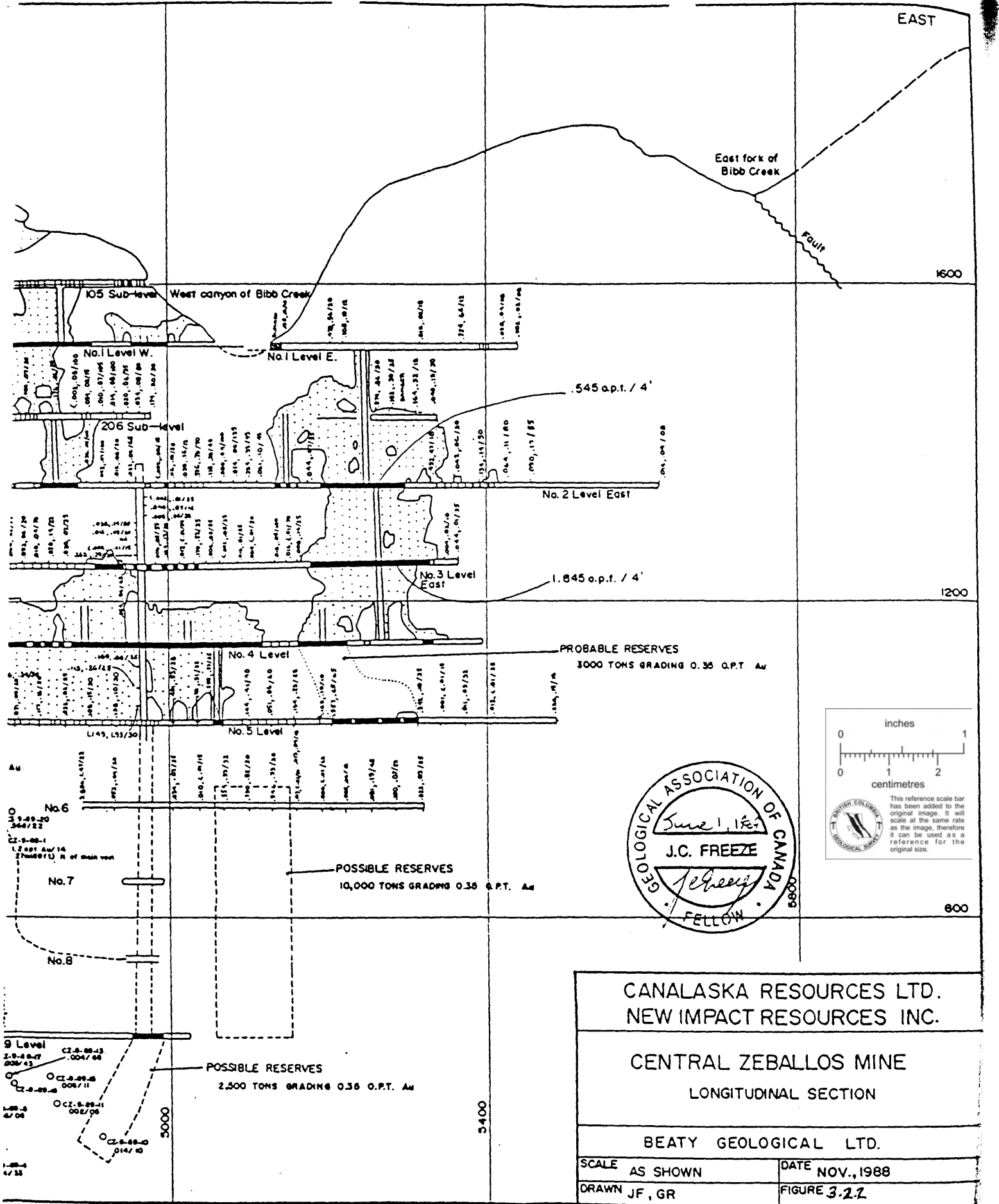
CANALASKA RESOURCES LTD.
NEW IMPACT RESOURCES INC.

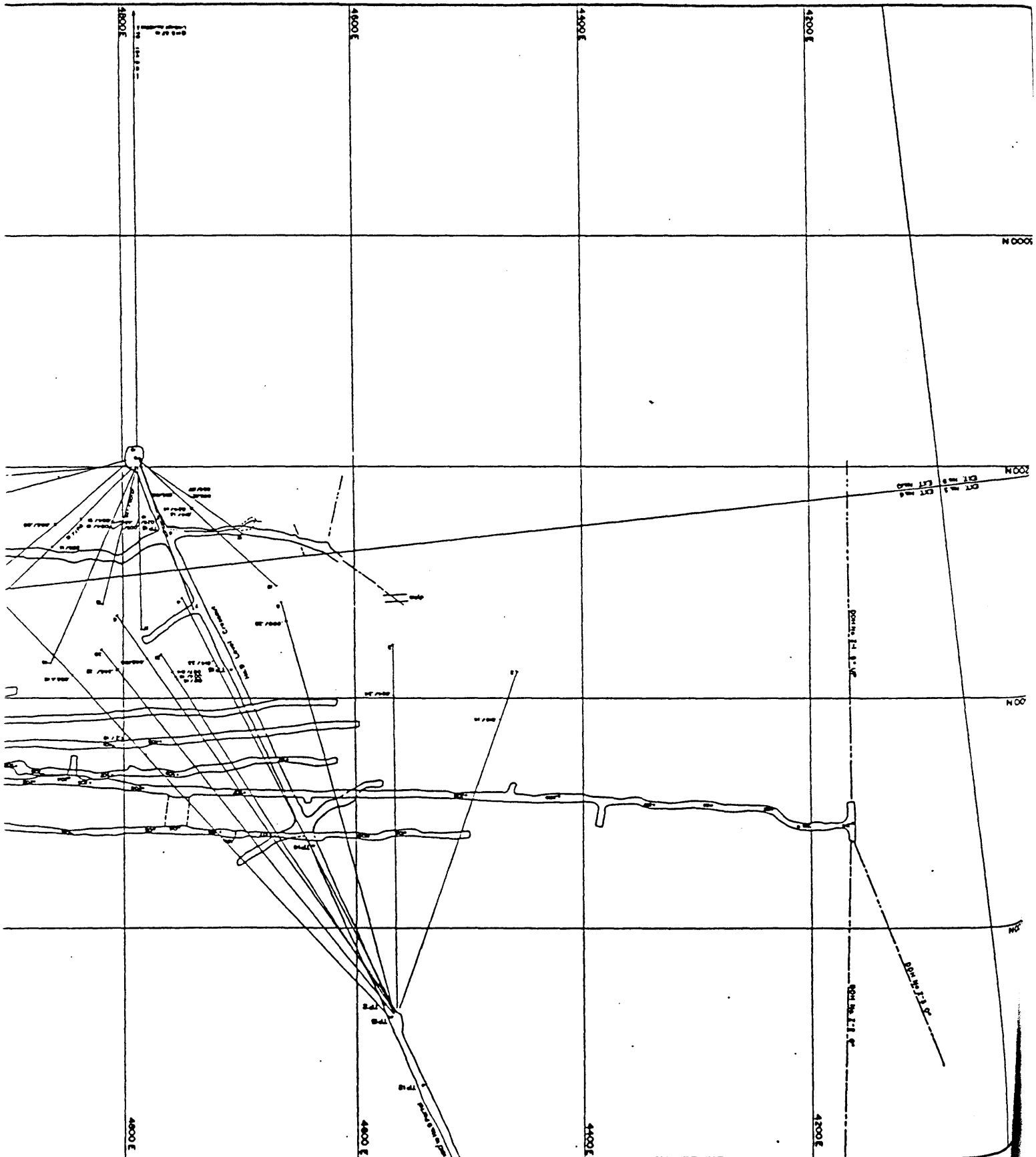
CENTRAL ZEBALLOS MINE
LONGITUDINAL SECTION

BEATY GEOLOGICAL LTD.

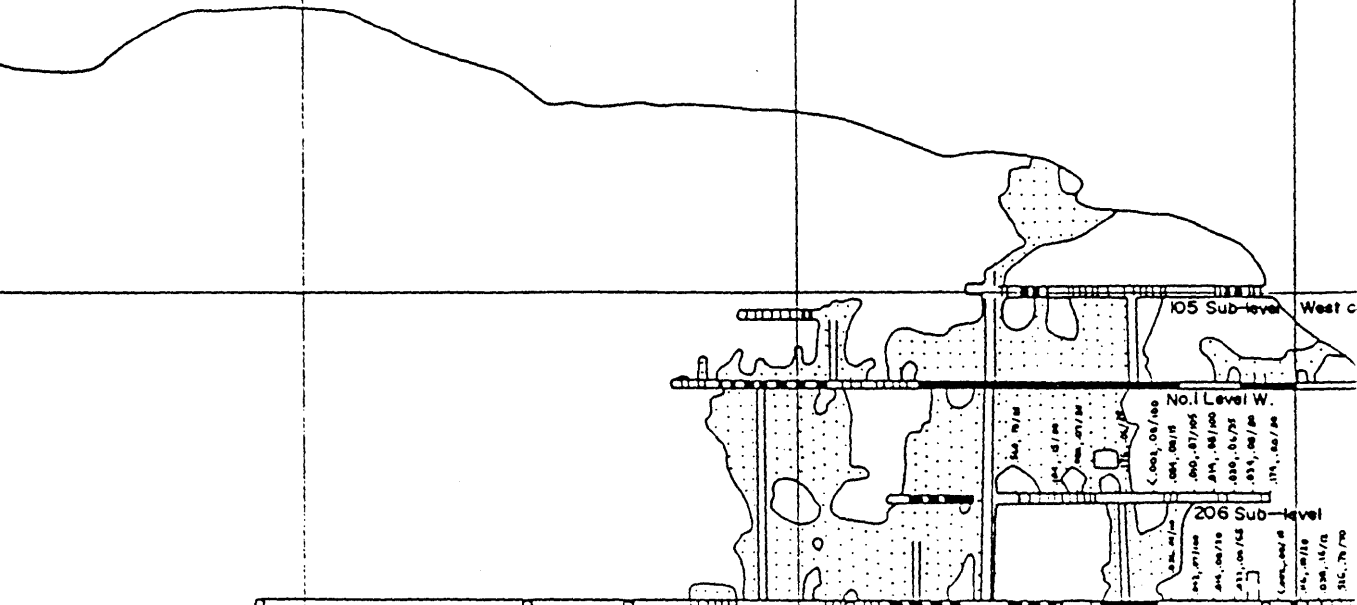
SCALE AS SHOWN
DRAWN JF, GR

DATE NOV., 1988
FIGURE 3.2.1





WEST



No.2 Level West

PROBABLE RESERVES
6000 TONS GRADING 0.36 O.P.T. Au

CZ-9-89-2
016/14

CZ-9-89-3
024/34

POSSIBLE RESERVES
10,600 TONS GRADING 0.36 O.P.T. Au

CZ-9-89-4
014/33

CZ-9-89-21
012/18

CZ-9-89-5
009/29

CZ-9-89-6
003/08

No.6

CZ-9-89-1
1297 Au 14
27m(8911) N of main vein

No.7

No.8

No.9 Level Crosscut
Portal to North

No.9 Level

CZ-9-89-8
024/13

CZ-9-89-7
026/19

CZ-9-89-17
008/11

CZ-9-89-13
004/08

CZ-9-89-12
006/07

CZ-9-89-6
004/08

CZ-9-89-11
008/11

CZ-9-89-11
002/08

CZ-9-89-4
014/32



LEGEND

Sample number

gold in oz per ton

silver in oz per ton

width in cm

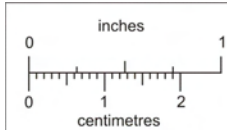
104, .13 / 20



Drill hole



Stopped area



This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

0.3 to 1.85 o.p.t. over 4 feet

Commercial Marginal Low Waste

4600

5000

Drill hole No.s CZ-9-88-1 to 89-6, 20 and 21 tested the downward extension of the ore shoots blocked out on the No.5 level and indicated by recent sampling at the western face of both the No. 5 and 6 levels. At the same time the narrower veins paralleling the main vein to the north were also tested by these holes.

Where CZ-9-89-20 intersected the main vein structure a brecciated quartz vein with fine grained sulphides carries 0.568 ounces gold per ton across a 0.22 metre (8.7 inches) width. This zone was intersected at the No.6 level, 115 feet below an ore shoot previously mined on the No.5 level and 95 feet west of ore grade mineralization sampled (3.8 ounces gold/ton over 8.5 inches) in the western face of the No. 6 drift. This intersection suggests that the ore shoot mined on the No.5 level may extend 115 feet in depth over its 100 foot lateral extent. Drill hole CZ-9-88-1 intersected a zone carrying only 0.003 ounces per ton gold in the main vein structure between hole No. 20 and the No.6 level drift. While this result does not allow reserve estimates to be given for this area, it is not uncommon to find low values within ore shoots in the Central Zeballos mine and other mines in the Zeballos Camp.

Drill hole CZ-9-88-1 intersected a new vein 89 feet (27 metres) north of the main vein between the No. 6 and 7 levels. This zone consists of a white quartz veinlet with siliceous hanging wall and footwall. No sulphides were visible in the zone. A 0.10 metre (4 inches) width carries 1.2 ounces per ton gold.

The narrow veins exposed on the No.9 level were not detected in any of drill holes CZ-9-88-1 to 89-6, 20 or 21.

Hole No.s CZ-9-89-7 to 18 were drilled to test the extension of the vein below the No.9 level. Drill hole CZ-9-89-10 intersected a zone carrying 0.82 ounces gold per ton over a width of 0.23 metres (within this a 0.064 metre width carries 2.878 ounces per ton). The zone comprises a quartz vein occurring within a clay and sericite gouge. The vein hosts coarse pyrite, sphalerite and galena; both the vein and the gouge host fine grained grey sulphides. This intersection of the main vein structure is 121 feet below the No.9 level and 50 feet (15 metres) west of the raise where commercial ore is noted on old mine maps. This suggests a new ore shoot may be developing between the area intersected by CZ-9-89-10 and the raise area.

The fourth mineralized zone intersected by the recent drilling is in a new structure 372 feet south of the main vein on the No.9 level. This zone was intersected by CZ-9-89-19 which was a flat hole drilled for a distance of 441 feet (134.42 metres) due south of the main vein. The zone comprises a quartz veinlet within fault gouge of sericite and carbonate and pyrite up to 20%. The structure carries 1.48 ounces per ton over a 0.07 metre width. Although this is not an economic width, this structure is a new discovery and is worthy of further investigation.

4. RESERVES

A back sampling programme of the old workings was carried out in 1982 by D. Tully, P. Eng. who calculated the following reserves:

Area	Category	Tons	Grade oz/ton	Area ² ft ²	Density ft ³ /ton	Width feet
No.4-5 levels West	Probable	1,662	1.239	18,000	12	1.12
No.2-9 levels West	Possible- Probable	9,020		90,200	12	1.2

In 1988 and 1989 Beaty Geological Ltd. carried out exploration programmes comprising: rehabilitation of the No.9 level crosscut to 1840 feet; back sampling and geological mapping of the accessible levels of the mine; and 7,253 feet (2,211 metres) of diamond drilling from the No.9 level which intersected the main vein structure between the No.s 4 and 7 levels and up to 155 feet below the No.9 level.

The 1988 back sampling programme confirmed the presence of the western ore shoot between the No.4 and 5 levels and a 35 centimetre chip sample carrying 4.616 ounces per ton suggests a western extension to this ore shoot in the western face of the No.5 level. In addition to this, an eastern ore shoot between the same levels indicated on mine maps from 1947 was confirmed.

Two ore shoots are also indicated at the No.6 level. Values from 0.546 to 0.79 ounces gold per ton over 20 to 30 centimetre were obtained from 30 to 40 metres east of the main raise. At the western face of the No.6 drift a value of 3.856 ounces gold per ton over 22 centimetre (8.66 inches) was obtained.

5. CONCLUSIONS

The Central Zeballos mine was abandoned in 1947 with ore reserves left in the developed workings. The potential for developing additional reserves along both the strike and dip extent of the main vein is excellent. In addition to the main vein, gold mineralization occurs in several other parallel structures within the old workings which deserve further attention.

On the adjacent Britannia B and M claims several narrow gold bearing structures show potential for hosting economic gold mineralization. Two other groups of claims, the Rimy and the H&J, cover areas proximal to known gold bearing quartz veins and have an excellent potential for covering the extensions of the known veins as well as parallel structures to them.

The Fall exploration programme updated the ore reserve estimates in the Central Zeballos Mine. Probable and Possible Reserves are estimated at 9,000 and 48,100 tons, respectively, grading 0.35 ounces per ton.

During the underground drilling programme a total of 2,211 metres (7,253 feet) were drilled from the No.9 level. Four of the twenty-one holes intersected high grade gold mineralization of between 0.5 and 2.78 ounces per ton, several of the holes intersected mineralized zones of between 0.02 and 0.087 ounces per ton gold indicating continuity to the gold bearing structure. Two zones show potential for developing further reserves. The first zone suggests an extension to the No.5 level ore shoot for at least 115 foot vertically and 100 foot laterally. The second zone suggests a 121 foot vertical extension to ore grade mineralization delineated in old mine records in the vicinity of the raise on the No.9 level.

Diamond drilling was successful in identifying the extension of mineralization in the main vein structure beyond those areas previously mined. The next phase of exploration required is underground development which will require a programme of rehabilitating the old workings and drifting along the Central Zeballos vein in mineralized areas. In addition to providing exploration data this programme will also develop access and enable mining to be rapidly initiated if a production decision is made in due course. Additional diamond drilling is also warranted to continue to test the strike and dip extent of the main vein and the narrower parallel veins.

6. RECOMMENDATIONS

Based on the conclusions stated above, the following Phase III and IV exploration programmes are recommended. The decision to proceed with Phase IV is not contingent upon favourable results from drilling in Stage III of Phase III and may proceed without completing Stage III. The justification to proceed with the Phase IV programme of rehabilitation for exploration on the No.5 level is based on current information indicating probable reserves on the No.5 level. While drilling has proven to be encouraging in the Central Zeballos Mine, the nugget effect of the gold mineralization limits the ability of drilling results to substantiate reserve estimates. Therefor drilling may be carried out to provide further encouragement as to the extent of gold mineralization in the Central Zeballos Mine but it is not imperative.

PHASE III Exploration and Development No.9 Level

Stage I

- 1) The mine access and haulage road which connects the No.9 level portal with the Nomash Creek logging road should be improved over its' 1.5 kilometre length.
- 2) An engineering study should be carried out to evaluate the existing raise and lower mine workings in order to have a better control on costs for the next stages of further exploration and development.

Stage II

Track should be installed on the No.9 level from the dump area outside the portal to the raise. Rehabilitation of the No.9 level should be completed from the intersection of the No.9 level crosscut and the main No.9 level drift to the raise, a distance of approximately 200 feet. The cost required to complete this work is estimated as the Phase III Stage II programme in section 7.

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