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# REPORT ON THE TAKLA-RAINBOW PROPERTY

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Omineca Mining Division, British Columbia NTS 93N/11 55°39.5' Lat., 125°16.7'W

for

CATHEDRAL GOLD CORP.

T.G. Hawkins, P.Geol. May 1, 1987



#### SUMMARY

A review of all geological, geochemical, geophysical surveys and drilling from programs carried out in 1984, 1985, 1986 has demonstrated considerable exploration potential on the Takla Rainbow project, located in central British Columbia, 48 km west of Manson Creek, and within 13 km of an all-weather road.

A minimum of four exploration targets for structurally controlled gold mineralization, along a Hogem diorite and Takla volcanic contact is supported, particularly by +50 ppb soil geochemistry anomalies and less defined geological and geophysical features.

Drilling of 18 holes totalling 2060 m during 1985 and 1986 along Target 1 produced results along 1.1 km of a total possible 3.5 km trend of up to 23.7 g/t Au (uncut) over 1.5 m within a mineralized zone of 4.3 g/t Au (uncut) over 9.1 m.

Based on past work, an evaluation of the property value is estimated at \$520,000.

The objective of the 1987 exploration program is to further delineate known gold mineralization with a target of 500,000-1,000,000 tonnes of 17 g/t Au.

Infill drilling of Target 1 and target definition and drilling of Targets 2, 3, 4 are recommended at an estimated cost of \$800,000.



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1.0 INTRODUCTION

This report represents the compilation of previous work on the Takla-Rainbow property. It was completed by MPH Consulting Limited at the request of Cathedral Gold Corp. on April 12, 1987, for the purposes of filing a prospectus on the Toronto Stock Exchange.

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### 2.0 LOCATION, ACCESS, TITLE

The Takla-Rainbow property is located near the headwaters of Twin Creek, approximately 48 km west of Manson Creek and 156 km northeast of Smithers (Drawing No.1). It is centred at about 55°39.5'N latitude, 125°16.7'W longitude on NTS mapsheet 93N/11. It is located in the Omineca Mining Division of British Columbia.

Access to the property is presently via helicopter. The allweather gravel Manson Creek to Takla Landing road passes within 3 km of the southeast edge of the property, but there are no branch roads leading onto the property. The drilled zone is about 13 km from the road.

The property consists of six 2-post claims and 9 grid claims totalling 159 units, as summarized below and shown in Drawing No.2:

			Anniversary	Year	
Claim	Record No.	Units	Date	Recorded	Group
Twin l	3956	1	July 22/92	1981	Takla-Rainbow
Twin 2	3957	1	July 22/92	1981	Takla-Rainbow
Twin 3	3958	1	July 22/92	1981	Takla-Rainbow
Twin 4	3959	1	July 22/92	1981	Takla-Rainbow
Twin 5	3960	1	July 22/92	1981	Takla-Rainbow
Twin 6	3961 ·	1	July 22/92	1981	Takla-Rainbow
Takla	5964(11)	18	Nov. 14/92	1983	Takla-Rainbow
Rainbow	5965(11)	18	Nov. 14/92	1983	Takla-Rainbow
TRA	6293 (6)	18	June 22/93	1984	Takla-Rainbow
TRB	7284 (9)	18	Sept. 9/87	1985	TR
TRC	7113(7)	18	July 4/92	1985	Takla-Rainbow
TRD	7396(10)	18	Oct. 31/87	1985	TR
TRE	7377(11)	20	Nov. 1/87	1985	TR
TRF	7378(11)	20	Nov. 1/87	1985	TR
TRG Fr	7524 (3)	ì	Mar. 7/88	1986	TR





The Twin 1-6 claims are the subject of an option agreement with the 100% beneficial owners, Kengold and Scafe, dated March 1, 1985, whereby the vendors are entitled to a total of \$100,000 in option payments to 1990 and will retain a 7.5% net profit interest in the Twin claims and all ground held by the vendee within 1-5 km of the Twin claims property boundaries.

All other claims are owned 100% by Imperial Metals Corporation.

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### 3.0 HISTORY

The general area of the Takla-Rainbow property has been explored since the 1860's, when placer gold was discovered in the Omineca district. Subsequent efforts to locate the source of the gold led to the discovery of many mineral occurrences in and around the Hogem Batholith. It is not known when the mineralization on the property was first discovered, however, exploration was carried out in the early 1970's and 1980's.

In the 1970's, the target was porphyry copper. Geological mapping, silt sampling, and soil sampling on the Twin claims in the N.B.C. 1970 for Syndicate located pyrite-chalcopyrite mineralization and a Cu soil anomaly in a zone about 1800-2100 m the contact of Takla volcanics with long along the Hogem In 1971, Falconbridge Mines carried out geochemical Batholith. and geophysical surveys and diamond drilling. This was followed by work in 1972 by Wesfrob Mines, and in 1973 by Hudson Bay Mining and Exploration.

No further work is recorded until 1981, when Newmont Mines Ltd. located a geochemical gold anomaly in soils(?) in the same location as N.B.C.'s 1970 Cu anomaly. The claims were allowed to lapse, however, and were restaked, by Lorne Warren and Neil Scafe as the Twin 1-6 claims. Later that year, a property examination by Mattagami Lake Exploration located anomalous Au values in volcanic rocks.

Prospecting and rock sampling carried out by Amir Mines Ltd. on the Twin 1-6 claims in 1983 returned analyses of up to 620 ppb Au and up to 3600 ppm Cu.



In 1983, a regional silt sampling program by Imperial Metals Corporation located an Au-Cu-Zn anomaly in the Twin Creek area, which led to the staking of the Takla and Rainbow claims. The TR series of claims were staked in 1984 to 1986 as exploration of the property proceeded. Soil sampling in 1984 located widespread anomalous Au values and a 1000 m by 400 m Zn anomaly.

The Twin 1-6 claims were optioned in 1985.

Follow-up work in 1985 including IP surveying, additional soil sampling, and diamond drilling was concentrated mainly on a second grid to the west of the 1984 grid. On the W grid, a gold soil anomaly 1000 m long by 50-100 m wide was located coincident with a 900 m long IP anomaly over the area of the contact of Takla volcanics with the Hogem Batholith. Mineralization exposed in the area consisting of disseminated and veinlet pyrite in altered Takla volcanics ran up to 138,000 ppb Au and 60 ppm Ag. Drilling totalling 312 m in four holes intersected mineralization over a 550 m strike length over widths of 0.30 to 1.98 m assaying 1.7-18.2 g/t Au, 2.4-34.6 g/t Ag, and 0.03-6.92% Cu.

Work in 1986 included additional diamond drilling as well as mapping and soil sampling of the areas north and south of the An additional 14 drill holes totalling 1985 zone. 1748 m extended the known length of the zone to 700 m and yielded intersections of up to 1.5 m of 23.7 g/t Au. Results of mapping and soil sampling north of the zone were not as encouraging as to the south. South of the zone, several Au soil anomalies up to 500 m by 75 m and 450 m by 150 m as well as numerous other small isolated gold anomalies, copper anomalies, and silver anomalies, were located. Abundant quartz vein float found in one area south of the zone returned results of up to 63,000 ppb Au, 35.5 ppm Ag, 31,974 ppm Pb and up to 13,682 ppm Cu.



### 4.0 REGIONAL GEOLOGY

### 4.1 Lithologies

The Takla-Rainbow property area is underlain by Lower to Middle Mesozoic volcanic and intrusive rocks in the Quesnel Trough, a graben lying between the Pinchi fault zone to the west and the Manson fault zone to the east (Drawing No. 3).

The area west of the Pinchi fault zone is underlain by Permian Cache Creek Group rocks. They consist predominantly of siliceous argillaceous sediments with lesser amounts of massive and limestone. Unit Al consists of blue-grey, massive, commonly completely recrystallized limestone with up to 10% non-calcareous sediments and volcanics. Near the Pinchi fault zone, it may be altered to dolomite. Unit A2 comprises about 50% blue-grey ribbon chert and argillaceous quartzite with up to 30% argillite and slate occurring mainly as partings between chert layers, 15% greenstone in bands and lenses up to 450 m thick, with 5% limestone and conglomerate. It is at least 1500 m thick.

East of the Pinchi Fault are rocks of the Takla Group (Units B, C) and Hogem Batholith (Units 1-9). The Takla Group is about 7500 m thick and consists of an apparently conformable succession of Upper Triassic sediments and tuffs in the lower part and (Lower Jurassic?) flows in the upper part. Unit B includes andesitic and basaltic flows, tuffs, breccias, and agglomerates which are commonly cut by pyroxene and feldspar porphyry dykes. Lesser amounts of conglomerate, shale, greywacke and limestone also occur sporadically. Coal is reported (Armstrong, 1949) to occur within the Takla Group at a location on Discovery Creek



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ALC: N



about 23 km north-northeast of the Takla-Rainbow property. Unit C includes the Upper Triassic sediments - interbedded argillite, siltstone, shale, greywacke, and tuff with local thick beds of conglomerate and limestone.

The Hogem Batholith has been divided into three phases of intrusive activity by Garnett (1978). Phase I of the intrusions occurred in Upper Triassic to Lower Jurassic time and is the intrusive equivalent of the Takla Group volcanics. Phase II occurred during the Lower to Middle Jurassic, while Phase III took place in the Upper Cretaceous. In the map area, Phase I is represented by Units 1, 3, 4, and 5. Units 1, 3, and 4 are a mafic suite of rocks consisting of dark grey, medium- to coarsegrained diorite (Unit 1); plagioclase porphyritic pyroxenebiotite monzodiorite (Unit 3); and plagioclase porphyritic hornblende-biotite monzonite (Unit 4). Unit 1 commonly contains up to 5% magnetite and is thus strongly magnetic. Units 3 and 4 generally occur as gradational zones between the more mafic margins of the batholith and its granodioritic core. Unit 5 is the most widespread unit of the Hogem Batholith. It is actually a group of chemically similar, leucocratic, guartz-bearing felsic rocks. Granodiorite and quartz monzodiorite predominate but the composition ranges from tonalite to granite. The rocks are medium- to coarse-grained, locally porphyritic, and locally contain grey fine-grained xenoliths.

The Germansen Batholith (Unit 5a) is composed of granodiorite, quartz diorite, and minor granite. It is of Jurassic to Cretaceous age.

Phase II rocks in the map area consist of a small outlier of Unit 6 foliated sympite. The main area of Phase II rocks lies to the north of the map area in the Duckling Creek-Haha Creek area.



Phase III consists of Unit 9 granite and alaskite bodies intruding earlier intrusives as well as abundant alaskite and aplite dykes.

### 4.2 Structure

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The Pinchi fault zone is the most important structural feature in the region. It is at least 240 km long and forms the western boundary of the Quesnel Trough. The fault zone is locally up to 300 m wide and has had at least 2 periods of movement.

Regional folding of the Cache Creek Group rocks is tight and strikes in a northwesterly direction. Folding in the Takla Group is more open and strikes west to northwest. The Takla rocks are less schistose than the older Cache Creek rocks.

### 4.3 Economic Setting and Mineral Occurrences (Drawing No. 4)

The region was first worked for placer gold. The first placer gold discovery in the area was on Vital Creek (10 km northwest of property) in 1869. Total recorded the Takla-Rainbow qold production from the Omineca Mining Division from 1874 to 1945 is 1,490,362 g Au, the bulk of which came from Germansen and Manson Rivers. Placer gold production from some of the creeks has been reactivated in the past 10 years or so. Placer gold-producing areas near the Takla-Rainbow property include Twin Creek (10), Silver Creek/Kenny Creek (5), 20 Mile Creek (8), and Vital Creek (17). Placer Hg and jade occur, in addition to Au, at Vital Creek.



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Numerous mercury deposits/showings occur along the Pinchi fault zone over at least 160 km. Cinnabar occurs in brecciated limestone, serpentinite, and other sediments of the Cache Creek Group as veinlets, blebs, grains, fissure-fillings, or breccia cement. Locally, stibnite may also be present. The larger deposits are all hosted by limestone. The largest, the Pinchi Lake Mine. located 130 km southeast of the Takla-Rainbow property, produced over 1,800,000 kg of Hg from 1940-1944 from ore grading 0.5-0.75% Hg. Occurrences near the Takla-Rainbow property include Amy (4), Pole (12), Houston North (11), and Takla Mercury Mine (15). The Takla Mercury Mine produced a minor amount of Hg in the 1940's.

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Most of the other mineral occurrences in the area are porphyry copper + molybdenum style showings in or near the Hogem Batholith. Much exploration was carried out on several of these showings in the 1970's due to the discovery of significant copper deposits in the Guichon Batholith near Merritt in the 1960's. The Guichon Batholith is similar in age to the Hogem batholith and is also located in the Quesnel Trough. No economic deposits have been located in the Hogem Batholith. The Smoke showing (13), also contains uranium. The Twin showing (6) was the original focus of exploration on the Takla-Rainbow property. Other nearby porphyry-type showings include the Gar (1), Bob (2), Slide (3), Loop (7), Hooey (9), and Lin (16). Garnett (1978) states that porphyry Cu + Mo mineralization in or near the Hogem Batholith is associated mainly with Phase II and Phase III intrusions. Units 1 and 3 of the Phase I intrusion have minor associated pyrite-chalcopyrite-magnetite mineralization, whereas metallic mineralization is essentially absent from Unit 5.



The Lustdust showing (14) is a massive sulphide prospect in Cache Creek Group sediments. Published indicated reserves total 327,226 tonnes grading about 2.6 g/t Au, 55 g/t Ag, 2.7% Zn, as of December 31, 1974 (Minfile).

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### 5.0 CURRENT WORK AND VALUATION

The current program results based on geochemical, geophysical and geological work have identified a first priority target on the West Grid defined by: (Drawing No. 5).

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- a northwest trending geological structural target of at least 700 m strike length by up to 100 m width defined by drilling along a major structural break at the contact of the Hogem Batholith with the Takla volcanics;
- ii) coincident geochemical gold anomaly in soils of a minimum of 1.5 km length, a maximum of 400 m width defined by +50 ppb gold in soils;
- iii) coincident geophysical anomaly from induced polarization surveys on l.l km of strike length along the grid.

Target 1 mineralization that apparently is the cause of the above anomalies is conspicuously associated with hydrothermally altered granite porphyry dykes and proximal host rock containing varying degrees of pyrite and displaying anomalous gold geochemistry. The best intersections in drill core to date include 1.28 m of 37.0 g/t Au in DDH-9 and 23.7 g/t Au over 1.5 m (uncut) which represents a higher grade core within a zone averaging 4.3 g/t Au over 9.1 m (uncut) in DDH-13.

The dykes or dyke swarms postdate both the Hogem dioritic intrusives and Takla volcanics.

Sulphide mineralization, predominantly pyrite, containing gold occurs in subparallel northwest trending shears that roughly parallel an undulating Hogem diorite, Takla volcanic contact.



The mineralized zone is broadly associated with potassic and chloritic alteration of both granite porphyry and andesitic volcanics. Quartz and ankerite/calcite veins also crosscut the areas of gold values. Red hematite and jasper are conspicuously present in close association with high gold values.

Drawing No. 6 and Table 1 following serve to demonstrate the nature and extent of mineralization outlined to date on Target 1.

Other exploration targets include:

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Target 2 is the southeasterly extension of the Target 1 soil geochemistry. A minor break between Targets 1 and 2 is defined geologically by a tongue of Hogem Batholith dioritic intrusive which is also defined geochemically by suppressed gold values in soils. Mineralization is expected to be similar to that found in the Target 1 area.

Target 3 is defined by very anomalous, continuous and widespread gold values in soils and talus fines up to 4100 ppb Au. Coincidence of gold with copper to +200 ppm is evident in the talus slopes whereas strong coincidence with silver to +1.0 ppm is evident at the break in slope in the soils.

Gossanous subcrops of altered Takla volcanics occur sporadically around and adjacent to two parallel granite porphyry dykes that are 25 m to 50 m wide trending northwesterly on the TRS grid.

Mineralization is characterized by highly pyritized (10%) granite porphyry with up to 960 ppb Au. Samples of quartz float with abundant chalcopyrite and galena contain up to 63,000 ppb Au;

# TAKLA-RAINBOY DRILLING SUNNART 1985-86

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

NO. (setres)LENGTR       (DIP       NIDOLE       BOTTON       DIP       EASTING NORTHING       PRON       TO       LENGTE       LENGTE       LAu(g/t)       Lg(ppn)       Cu(ppn)       In(p         1385       1       76.41       61       -45       -30.5       -37.4       360       3100       12+50       1       42.00       42.30       0.30       1       2.74       34.8       69248         2       78.33       61       1       -45       -32       -38.5       360       3+00       12+50       1       42.00       42.30       0.30       1       2.74       34.8       69248         2       78.33       61       1       -45       -32       -38.5       360       3+00       12+00       1       53.36       55.30       1.54       1       7.13       10.9       15307         3       79.86       59       1<-45       -40       -42.5       1       360       5+00       10+00       60.65       61.11       0.46       1       1.65       2.4       29         4       76.81       56       1       -40.75       -42.9       360       7+00       8+50       1       20.66       22.3	
1385       1       76.81       61       -45       -30.5       -37.8       360       3400       12450       1       2.30       0.30       2.74       34.8       69248         2       78.33       61       1       -45       -32       -38.5       360       3400       12400       1       53.36       55.30       1.94       7.13       10.9       15307         3       79.86       59       1       -45       -40       -42.5       360       5400       10400       60.65       61.11       0.46       1       1.65       2.4       29         4       76.81       56       1       -40       -42.5       360       5400       10400       60.65       61.11       0.46       1       1.65       2.4       29         4       76.81       56       1       -40       -42.5       360       7400       450       1       20.66       22.30       1.64       1       18.03       34.5       301         1985       5       118.26       67       -55       -55.5       -55.2       045       2491       04775       58.50       59.17       0.67       4.46       0.3       329	pu)
1385       1 76.41       61       -45       -30.5       -37.4       360       3+00       12+50       1 42.00       42.30       0.30       2.74       34.8       69248         2 78.33       61       -45       -32       -38.5       360       3+00       12+60       53.36       55.30       1.34       7.13       10.9       15307         3 79.46       59       -45       -40       -42.5       360       5+00       10+00       60.65       61.11       0.46       1.65       2.4       29         4       76.41       56       -45       -40.75       -42.9       360       7+00       4+50       120.66       22.30       1.64       140.03       34.5       301         1985       5       118.26       67       -55       -55.5       -55.2       045       2+31       0+778       58.50       59.17       0.67       4.46       0.3       124         1985       5       118.26       67       -55       -55.5       -55.2       045       2+31       0+778       158.50       59.17       0.67       4.46       0.3       124         1       1       1       1       1       1	*****
1385       1       76.41       61       -45       -30.5       -37.84       360       3400       12750       1       42.00       42.30       0.30       1       2.74       34.8       65248         2       78.33       61       1       -45       -32       -38.54       360       3400       12750       1       42.00       42.30       0.30       1       2.74       34.8       65248         2       78.33       61       1       -45       -32       -38.54       360       3400       12400       1       53.36       55.30       1.94       1       7.13       10.9       15307         3       79.46       59       1       -45       -40       -42.54       360       5400       10400       1       60.65       61.11       0.46       1       1.65       2.4       29         4       76.41       56       1       -40       -42.54       360       7400       850       1       20.66       22.30       1.64       1       18.03       34.5       301         1       1       1       1       1       1       1       1       1       1       1       1 <th></th>	
2       18.33       61       1       -32       -38.5       380       3400       12400       1       53.36       53.30       1.33       1       1.13       10.5       15307         3       79.86       59       1       -40       -42.5       360       5400       10400       1       60.65       61.11       0.46       1       1.65       2.4       29         4       76.81       56       1       -40.75       -42.9       360       7400       450       1       20.66       22.30       1.64       1       18.03       34.5       301         1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       34.5       301         1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1	
3       75.40       55       -40       -42.5       360       5400       10400       104.05       01.11       0.40       1       1.65       2.4       25         4       76.41       56       -40.75       -42.9       360       7400       4+50       1       20.66       22.30       1.64       1       14.03       34.5       301         1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1	
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1986 5 118.26 67 [-55 -55.5 -55.2 ] 045 2+91 0+778   58.50 59.17 0.67   4.46 0.3 124   104.54 112.16 7.62   1.34 0.6 329	
1 1 104.54 112.16 7.62 1 1.34 0.6 329	114
	123
	17
6 36.93 56   -55 -55.5 -54.5 -55.0   045 3487 04845   NO INTERSECTION	
7 81.69 47 1 -55 -54.5 -54 -54.5   045 5+76 0+765   BO INTERSECTION	
\$ 117.35 70   -55 -54.5 -51 -53.5   045 6469 04628   38.24 39.01 0.77   1.89 1.1 15	17
9 115.21 68   -55 -55.5 -51 -53.8   045 7+37 0+558   21.10 22.29 1.15   3.50 3.9 92	195
	120
	33
10 99.91 57   -55 -56.5 -54 -55.2   045 8+16 0+455   13.00 13.40 0.40   2.37 1.8 257	129
	119
11 117.65 64   -55 -55.5 -54 -54.8   045 1+47 0+765   NO INTERSECTION	
12 191.41 115   -55 -53.5 -51 -53.2   045 1496 04945   56.30 56.70 0.40   1.58 2.8 4373	135
I I I I I I I I I I I I I I I I I I I	
13 121.31 70   -55 -57.5 -52 -54.4   045 2492 04275   20.40 24.05 3.25   5.11 1.1 320	114
	110
	85
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TABLE 1



31,974 ppm Pb; 35.5 ppm Ag and 25,100 ppb Au, 13,682 ppm Cu; 14.6 ppm Ag and were collected in talus within the confines of the broad geochemical anomaly.

Target 4 is defined by the presence of isolated Au geochemical soil highs to 290 ppb in the vicinity of the Hogem-Takla contact.

5.1 Valuation

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Past work on the property has included:

1983	- Regional geochemical program and staking	\$ 20,000
1984	<ul> <li>12.2 km of grid with 445 soil samples at</li> <li>25 m spacing on one grid (East)</li> <li>10 days of geological mapping and sampling</li> </ul>	21,000
1985	<ul> <li>10.9 km of grid with 437 soil samples at 25 m spacing on two grids (East; West)</li> <li>4.05 km of pole-dipole induced polarization on East Grid</li> <li>4.75 km of induced polarization on West Grid</li> <li>311.81 m of BQ diamond drilling in 4 holes on the West Grid (see Drill Hole Summary) along 550 m of strike length to a vertical 30 m depth</li> </ul>	139,000
1986	<ul> <li>Establishment of three new grids - TRN and TRS and TRS<sub>2</sub> of 20.4, 21 and 13 line km respectively</li> <li>Soil sampling of all grids, totalling 1441 soil samples</li> </ul>	
	<ul> <li>BQ diamond drilling totalling 1748.5 m in 14 holes on West Grid as extension of 1985 drilling geological mapping and sampling</li> </ul>	330,000
	<ul> <li>Additional expenditures related to administration of claims</li> </ul>	10,000
		\$520,000



Initial results suggest that economic grades of gold mineralization over mineable widths may be encountered over sufficient area to provide economic tonnage, and extensive further work is fully justified.

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Therefore, fair and reasonable value on the property is estimated at \$520,000.



### 6.0 PROPOSED WORK PLAN

# 6.1 Plan

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Targets outlined by geological, geochemical and partial geophysical surveys are defined as follows (see Drawing No. 5).

Location	Size	Defined By
Target 1		
- West Grid (1985) - Rainbow Claim	1.5 km long (open NW)	Gold in soils to +50 ppb
- Twin 3,4,5,6 Claims	400 m wide	Geology Partial geophysics (30%)
- Takla Claim		Partial drilling (30%)
Target 2		
- East Grid (1984)	1.5 m long	Gold in soils to +50 ppb
- Rainbow Claim	(open Sw) 400 m wide	Limited geophysics
- Takla Claim - TRB Claim		
Target 3		
- TRS Grid (1986)	l km long (open)	Gold in soils (+50 ppb), talus (+400 ppb)
- Rainbow Claim - TRD Claim		Abundant mineralized float in talus to 63,000 ppb Au
<u>Target 4</u>		
- TRN Grid (1986)	Isolated high spots	Gold in soil +50 ppb
- TKE Claim		



Previous geophysical surveying over limited areas has provided good drill target information. Thirty kilometres of induced polarization and total coverage magnetics are therefore proposed prior to drilling new or extended targets.

The areas of proposed coverage are:

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	Line km IP	Line km Magnetics
Target l	5	11
Target 2	8	12
Target 3	14	21
Target 4	_3	20
	30	64

Dipole-dipole frequency domain coverage is recommended for higher definition of mineralized zones and for greater ease in surveying a number of relatively small and isolated grids, given the increased mobility of the dipole-dipole system.

Following this geophysics surveying and basic ground checks for geological support by trenching where possible, an extensive drilling program is proposed as:

•		Total met	res	Holes	Spac	ing
Target l	L	1000	(infill)	10	50	m
		1000	(undercut	t) 4		
Target 2	2	700		5	200	m
Target 3	3	900		6	200	m
Target 4	1	400		2	200	m
		4000				
		====				



Detailed mapping and surface sampling is to continue as an ongoing part of the grid program to be aided by a hand trenching program.

Extension of the Target 1 grid to the northwest by 500 m is required.

Exploration of Target 2 is best served by the extension of the TRS Grid baseline and crosslines by 800 m to the northwest along the strike of the geochemical and projected geological trends.

Exploration of Target 3 is to include the extension of TRS grid lines llN, l2N, l3N, l4N, l5N to the southwest in order to close the geochemical soil anomaly.

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6.2 Budget

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Mobilization:	Geology IP Drilling	\$ 18,000
Personnel:	Project Manager/Geologist Assistant Geologists Technicians	
	Cook	57,000
Support Services:	Room and Board Transportation:	21,000
	Helicopter	67,000
Contract Services:	Geophysics Drilling - 4000 m @ \$80/m Road Construction - 13 km	87,500 320,000 100,000
Analyses (Au, ICP,	plus check assay)	50,000
Petrographic Work		500
Report Preparation		8,500
Contingency @ 15%		73,000
	<b>Total</b> , say	\$800,000



### 7.0 CONCLUSIONS

- 1. The Takla Rainbow project, having been the subject of three years and a total of more than \$520,000 worth of exploration, demonstrates extensive potential for shearhosted gold mineralization of economic grades over mineable widths.
- 2. Wide-spaced preliminary drilling on Target 1 has produced results along 1.1 km of a total possible 3.5 km trend of up to 23.7 g/t Au (uncut) over 1.5 m within a mineralized zone of 4.3 g/t Au (uncut) over 9.1 m.
- 3. Future work will be aimed at demonstrating continuity of what appears to be persistent mineralization of variable gold grade.
- 4. Gold values in rock appear to be consistently associated with elevated copper and silver values, although a full range of other metals was not previously analyzed. Gold is also associated with pyrite, chlorite, epidote, carbonate, hematite, and silica alteration in varying degrees at the disconformable contact between the Hogem Batholith and the Takla volcanics.
- 5. Definition of targets is best accomplished by geological mapping, geochemical (soil) surveying, and geophysical (I.P.) surveying.
- Infill drilling and undercutting, and strike extension drilling is required on Target 1.
- 7. Three geochemically identified targets require further geological and geophysical work prior to preliminary drilling.



### 8.0 RECOMMENDATIONS

- Followup infill, undercut, and strike length extension drilling is recommended for Target 1, to begin as soon as weather permits.
- 2. Extensive induced polarization surveys and magnetometer surveys, anomaly check trenching, and continued geological mapping and sampling are recommended on Targets 2, 3, and 4.
- 3. Best priority targets generated from 2) above are recommended for preliminary drilling of at least 2 to 6 holes per target.
- 4. The estimated cost of this program is \$800,000.

Respectfully submitted,

### MPH Consulting Limited



May 1, 1987 Vancouver, B.C.

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### CERTIFICATE

I, T.E. Gregory Hawkins, do hereby certify:

- That I am a Consulting Geologist with business offices at 2406, 555 West Hastings Street, Vancouver, B.C. V6B 4N5.
- 2. That I am a graduate in geology of The University of Alberta, Edmonton (B.Sc. 1973), and of McGill University, Montreal, (M.Sc. 1979).
- 3. That I have practised within the geological profession for the past sixteen years.
- 4. That I am a Fellow of the Geological Association of Canada and a Professional Geologist registered in the Province of Alberta.
- 5. That the opinions, conclusions and recommendations contained herein are based on a review of field work carried out on the property, although for weather reasons, no site visit was made by me.

6. That I own no direct, indirect, or contingent interests in the subject property or shares or securities of Cathedral Gold Corp. or associated companies.

realor T.E. Gregory Hawkins P.Geol.

May 1, 1987

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#### REFERENCES

- Armstrong, J.E. 1949: Fort St. James Map-area, Cassiar and Coast Districts, British Columbia; GSC Mem. 252
- Bacon, W.R. 1970: Geological and Geochemical Report on the Twin Claim Group; for N.B.C. Syndicate (AR 2501).
- Edmunds, C. 1983: Geological Report on the Twin Creek Property; for Amir Mines Ltd. (AR 12162).
- Garnett, J.A. 1978: Geology and Mineral Occurrences of the Southern Hogem Batholith; B.C. MEMPR Bull. 70.
- GSC Map 1424A
- Holland, S.S. 1950: Placer Gold Production of British Columbia; BCDM Bull. 28.
- Minfile B.C. MEMPR Minfile, Feb. 2, 1984.
- Morton, J.W. 1984: Takla-Rainbow Group; A Geochemical Soil Survey; for Imperial Metals Corporation (AR 13171).
- Pesalj, R. 1985: Geological, Geochemical, Geophysical, and Diamond Drilling Report; Takla-Rainbow Property; for Imperial Metals Corporation.
- Pesalj, R. and D. Gorc. 1986: Geological and Geochemical Report; Takla-Rainbow Property; for Imperial Metals Corporation.



Appendix I

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## CONVERSION FACTORS FOR METRIC UNITS



# CONVERSION FACTORS FOR METRIC UNITS

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1	inch	=	25.4 millimetres	(mm)
			or 2.54 centimetres	(cm)
1	cm .	=	0.394 inch	
1	foot	=	0.3048 metre	(m)
1	m	=	3.281 feet	
1	mile	=	1.609 kilometres	(km)
1	km	=	0.621 mile	
1	acre	=	0.4047 hectares	(ha)
1	ha	=	2.471 acres	
1	ha	=	100 m x 100 m - 10,000 m <sup>2</sup>	
1	km <sup>2</sup>	=	100 ha	
1	troy ounce	=	31.103 grams	(g)
1	g	=	0.032 troy oz .	
1	pound	=	0.454 kilogram	(kg)
1	kg	=	2.20 lb	
1	ton (2000 lb)	=	0.907 tonne	(t)
1	tonne	=	1.102 ton = 2205 lb	
1	troy ounce/ton (oz/ton)	=	34.286 grams/tonne	(g/t)
1	g/t	=	0.0292 oz/ton	
1	g/t	=	l part per million	(ppm)
1	ppm	=	1000 parts per billion	(ppb)
1	0,000 g/t	=	1%	