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MINING DISTRICT: WHITEHORSE  
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LOCATION:

LAT.: 60°05'

AREA: MONTANA MOUNTAIN

LONG.: 134°40'

VALUE \$: N/A

CLAIM NAME & NO.: BARB 1-34 (YA86607-40), RAT 1-12 (YB12725-36), RAT 13-29 (YB13101-17), MON 1-16 (YA82825-40), TB 1-6 (YA82967-72), NYAK 1-4 (YA82997-3000), NYAK 5-48 (YA85201-44), JEAN (L202) 19237, KODAK (L203) 18304, HAZEL M (L205) 19285

WORK DONE BY: T.L. SADLIER-BROWN

WORK DONE FOR: FEATHER GOLD RESOURCES CORPORATION

DATE TO GOOD STANDING:

REMARKS: GEOCHEMICAL SAMPLING & PROSPECTING TO DEFINE A DRILLING PROGRAM PERFORMED IN SEPTEMBER 1993. ASSESMENT FOR THIS PROPERTY IS BASED UPON THIS DRILLING (SEE REPORT 093215)

093215

Feather Gold Resources Corp.

A REPORT ON THE MONTANA MOUNTAIN PROPERTY  
Whitehorse Mining District, Yukon

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by  
T.L. Sadlier-Brown, P.Geo.  
August, 1993



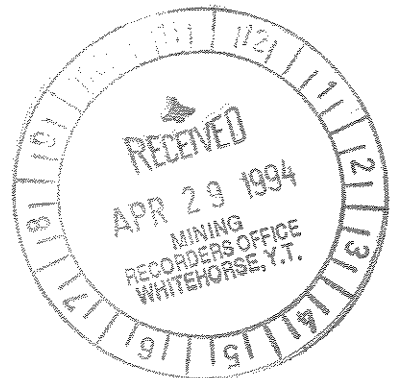
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## SUMMARY

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Feather Gold Resources Ltd. holds 136 mineral claims and Crown Grants at Montana Mountain near Carcross, Yukon. They include the Barb, TB, Rat, Mon, Nyak, Jean, Hazel M and Kodak claims which cover a number of gold and silver prospects.

Areas covered in part by the Barb, TB, Rat and Jean claims were evaluated during June and August of 1993 at which times a total of 48 samples were taken and analyzed by fire assay (for Au and Ag) and ICP methods (for Ag, As, Bi, Cd, Cu, Hg, Mo, Pb, Sb and Zn).

The property lies between elevations of about 1400-2200 m above sea level and is entirely above timberline in moderately to steeply-sloping terrain, mostly within the drainage basin of Big Thing Creek, which flows easterly to Windy Arm on Tagish Lake.

The region was first explored for gold and silver during the late 19th century and by about 1906, numerous gold and silver occurrences had been discovered and staked. Between 1909 and 1921, limited production was obtained from several early discoveries including the Big Thing Mine which adjoins the Feather Gold property. In the late 1960s and early 1970s the Big Thing deposit was redeveloped as the Arctic Mine and saw a brief period of production.

The Jean Claim was staked to cover a high grade gold quartz vein in 1936 and during the late 1950's and early 1960's, a 200' adit was driven in an unsuccessful attempt to intersect the vein. Subsequent exploration included underground drilling by Arctic Gold and Silver Mines in 1967 and a comprehensive program of bulldozer trenching, prospecting, mapping, road construction, soil and stream sampling and additional diamond drilling by Anoorag Resources in 1984 and 1985.

The project area lies within the rocks of the Coast Plutonic Complex where they are intrusive into the dominantly Mesozoic volcanic rocks of the Nisling Terrane. The eastern limit of the claim area is traversed by the Nahlin Fault, an easterly dipping thrust fault which superimposes Paleozoic volcanic and sedimentary rocks of the Cache Creek Group over the Mesozoic Nisling rocks. The mineral occurrences are all hosted by the mid-Cretaceous granitic rocks of the Montana Mountain Pluton which are in both intrusive and fault contact with the intermediate volcanic rocks of the Montana Mountain Volcanics.

All of the observed mineralization is in quartz veins and stringers usually associated with zones of hydrothermal

alteration cutting Montana Mountain granite. The principal sulphide minerals are ~~arsenopyrite and pyrite~~ but galena, tetrahedrite-tennantite, argentite, and minor chalcopyrite are also present. Scorodite, a hydrous iron arsenic oxide, has also been observed associated with gold values which tend to occur in arsenopyrite along with lead, silver, and copper.

Orientations of the veins within the general project area are variable. At the Artic/Big Thing Mine and within the Ridge Zone the vein systems tend to strike northeast to east west and dip moderately northerly. The Jean Vein strikes at  $150^{\circ}$  and dips moderately to the east. A mineralized quartz vein at Rat Lake approximately 1 km east of the Jean Claim area strikes at  $105^{\circ}$  and dips vertically and another similar vein about 700 m to the northeast strikes at  $010^{\circ}$  and dips easterly between  $85-90^{\circ}$ .

Vein widths vary from a few centimetres to over one metre and adjacent zones of host rock alteration and secondary veining may extend for several metres beyond the vein-wallrock contact.

The precious metal content of the veins is highly variable but a significant number of samples returned values in the range between 0.3 to over 12 oz/ton Au and up to 21 oz/ton Ag and are considered to have positive economic implications.

The principal areas of interest are:

- 1) The Ridge Zone
- 2) The Rat Claim Area
- 3) The Jean Claim Area

The Ridge Zone should be considered the leading exploration and development target on the property. Samples from the vein system in the western part of the zone returned assay values ranging between 0.388 and 1.290 oz/ton Au and between 4.63 and 16.06 oz/ton Ag. The thickness and persistence of the vein or vein system has not been established but the similarities in mineralogy and structure between the Ridge Zone veins and the nearby Arctic/Big Thing deposit suggest that the Ridge zone may be a western extension of the Arctic/Big Thing structure.

Production from the Big Thing Mine is reported to total about 3000 tons of sorted ore grading from 1 to 2 oz/ton Au and 100 to 200 oz/ton Ag. The Arctic Mine produced 51,293 tons of ore with an average grade of 0.28 oz/ton Au and 8.3 oz/ton Ag and remaining reserves are estimated at 82,150 tons grading 0.39 oz/ton Au and 10.2 oz/ton Ag. Past production and estimated reserves for this deposit therefore total over

136,000 tons and the potential for the immediate mine area could be 1,000,000 tons.

As it appears likely that the mineral occurrences in the Ridge Zone represent a westward extension of the vein system at the Arctic/Big Thing Mine continued exploration work is strongly recommended. The objective of this work should be to identify and delineate one or more intermediate tonnage vein type gold-silver deposits. Initial work should include:

- 1) a preliminary diamond drilling program totalling about 300 m of drilling in 3 to 5 holes;
- 2) continued excavator and bulldozer trenching;
- 3) geological mapping, sampling and survey work.

An estimate of the cost of carrying out this work during the fall of 1993 is on the order of \$80,000.

The Rat Claim Area contains a number of good Au Ag prospects which returned assay values grading up to 0.645 oz/ton and further exploration work in this area is justified. This should include additional trenching, prospecting, rock and soil sampling and geological mapping and warrants provision of a budget on the order of \$5,000.

Sample taken from the Jean Vein and Lower Trench Areas gave were found to have very high precious metal values. Material obtained from rubble in a trench on the Jean Vein contained respectively 12.018 & 7.542 oz/ton Au and 21.1 & 7.6 oz/ton Ag and loose mineralized material from the Lower Trench Area contained respectively 0.990 & 1.470 oz/ton Au and 4.8 & 1.7 oz/ton Ag.

The mineral occurrences in the Jean Claim area all lie within an elongate multi-element geochemical anomaly extending from the Jean Vein exposure about 450 m northwest to below the Lower Trench. The mineralization, however, appears to occur in narrow and discontinuous veins and, accordingly, the area is not presently considered a high priority site for further work. Any follow-up work should include detailed geological mapping in order to develop an interpretation of the geology as an aid in identifying targets for any additional testing. Provision for a preliminary survey expenditure of \$4,500 is recommended.

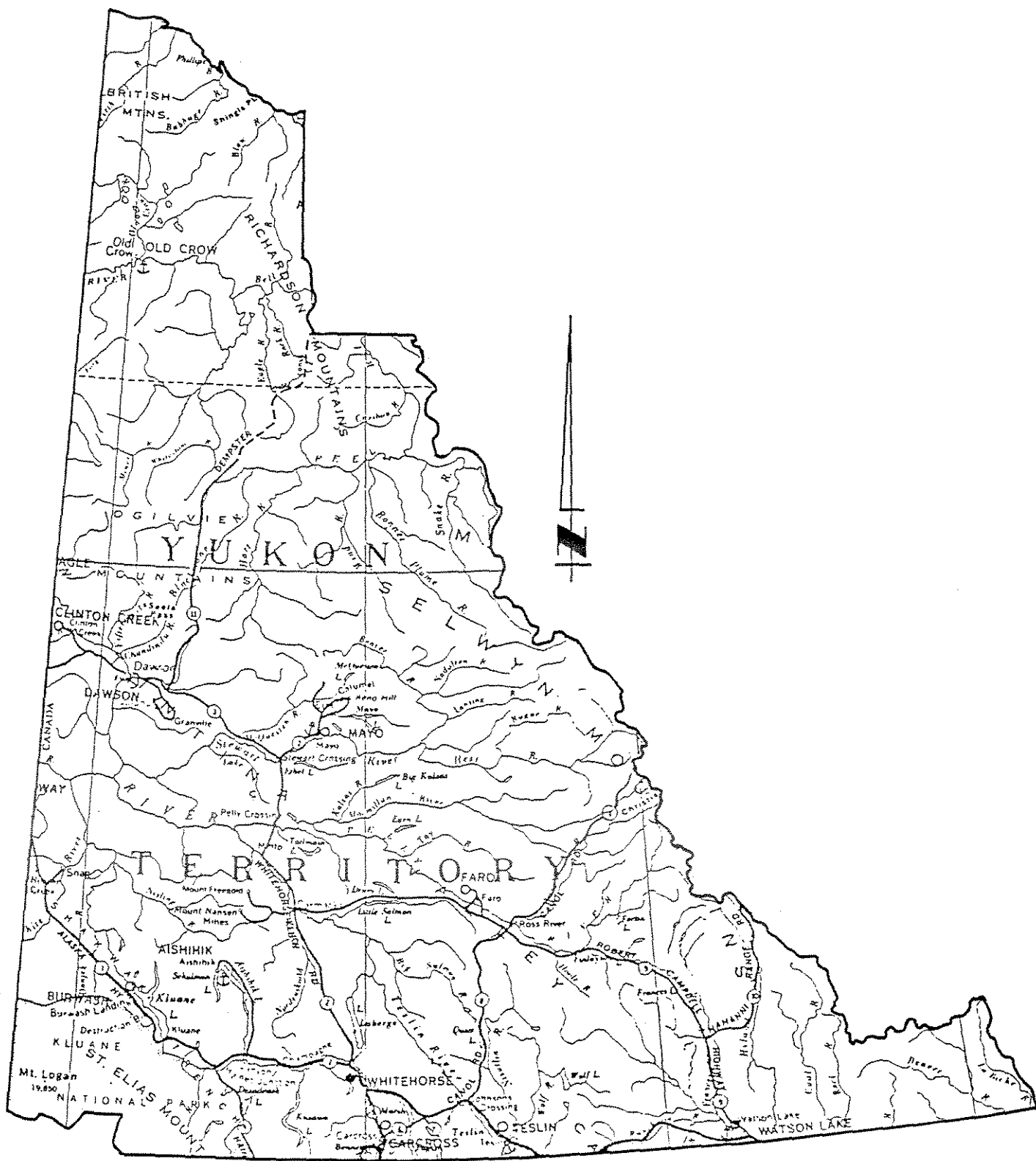
The total recommended expenditure for the next phase of exploration work on the property is \$ 89,500. The immediate emphasis should be on the Ridge Zone as it appears to hold most promise for a significant discovery.

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FEATHER GOLD PROPERTY

Fig. 1 Location Map

## 1.0 INTRODUCTION

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### 1.1 Terms of Reference and Scope of Report

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Nevin Sadlier-Brown Goodbrand Ltd. (NSBG) was retained by the management of Feather Gold Resources Ltd. to prepare a preliminary geological and economic evaluation of the Company's holdings in the Montana Mountain area near Carcross, Yukon Territory. The objective of the evaluation was to characterize the mineral occurrences on the claims and to prepare a set of recommendations for such further exploration, development and engineering work as may be required to establish reserves and, if advisable, advance the property to the pre-feasibility stage.

The information contained in this report is based upon a field examinations of the property carried out between June 10th and 14th and between August 1st and 6th 1993. The field data was supplemented by a review of previous reports on the various mineral occurrences contained within claims now held by Feather Gold and by additional useful information provided by Mr. Larry Barrett who is a director of Feather Gold and the supervisor/manager of the field work being conducted on the property at the time of the visits.

The work carried out during the course of the examination consisted of assessing and sampling a number of mineral showings situated within the Barb, TB, Rat, Mon, Jean and Kodak claims. These occurrences had been identified by exploration work, particularly bulldozer, excavator and hand trenching, carried out on behalf of Feather Gold, Anooraq Resources Corp. and their predecessors. The principal occurrences in the Jean Claim area have also been tested by diamond drilling carried out on behalf of Anooraq.

A total of 48 samples were analyzed by fire assay (for Au and Ag) and ICP methods (for Ag, As, Bi, Cd, Cu, Hg, Mo, Pb, Sb and Zn). Analytical results and geological observations were compared with those in earlier reports, in particular MacKean (1987 & 1988) and Carlyle (1990), and used with the earlier data to characterize and evaluate each of the occurrences.

### 1.2 Description of Mineral Tenures

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The property under discussion consists of a total of 133 mineral claims and 3 Crown grants for a total of 136 mineral tenures controlled by Feather Gold Resources Ltd. The Mon, TB, Nyak, Jean, Kodak, and Hazel M properties are held directly by Feather Gold under the terms of an agreement with

Anoorag Resources Ltd. The Barb and Rat Claims are held by Feather Gold under agreement with Larry and Bill Barrett.

Claim names, record numbers, expiry dates and ownership details are provided in Table 1. The claims all lie within the Whitehorse Mining District and are recorded with the Whitehorse Mining Recorder's office at 300 Main Street, Whitehorse, Yukon.

Table 1 Schedule of Claims

<u>Claim Name</u>	<u>Record No.</u>	<u>Expiry Date</u>	<u>Owner of Record</u>
Barb 1-34	YA86607-40	May 3 1996	Larry Barrett
Rat 1-12	YB12725-36	Dec 15 1993	Bill Barrett
Rat 13-29	YB13101-17	Mar 15 1994	Feather Gold
Mon 1-16	YA82825-40	Aug 27 1993	Feather Gold
TB 1-6	YA82967-72	Sept 4 1993	Feather Gold
Nyak 1-4	YA82997-3000	Dec 4 1993	Feather Gold
Nyak 5-48	YA85201-44	Dec 4 1993	Feather Gold
Jean (L202)	19237		
Kodak (L203)	18304		
Hazel M (L205)	19285		

### 1.3 Location and Access

The Feather Gold property comprises an area of approximately 3,000 ha on Montana Mountain, which is 12 km due south of the village of Carcross, Yukon. Carcross is a small community on Bennett Lake, 74 km by road south of Whitehorse. It may be reached from both Whitehorse and Skagway, Alaska via Highway 2 or from the Alaska Highway at Jake's Corner via Highway 8.

The areas of interest within the claim group are accessible from a gravel road which intersects Highway 2 just south of the Nares River bridge at Carcross. The road was the principal access to the old Big Thing and Arctic Mines and leads southerly up the northern slope of Montana Mountain and the valley of Upper Tin Cup Creek. The northern boundary of the Barb Claims is about 11 km from the highway it is about 13 km to the vicinity of the Ridge Trench Area which is the site of the bulk of the recent Feather Gold exploration work.

The mineral occurrences on the Rat and Jean Claims lie from 1 to 2 km south of this area and are readily accessible from here on foot or by four wheel drive vehicle via unimproved tote roads.

The extreme southern part of the claim holdings may be reached by a tote road leading southerly from the vicinity of the Arctic Mine workings to the headwater area of Montana and Pooley Creeks, some 4 km north of the B.C./Yukon border.

The claims are centred at 60° 05' N. Lat., 134° 40' W. Long. and the locality is depicted on the Department of Energy, Mines and Resources 1:50,000 scale Carcross Map Sheet (NTS #105D2).

#### 1.4 Physiographic Setting

The property lies between elevations of about 1400-2200 m above sea level with the principal project areas between 1500-1800 m above sea level. The claims are entirely above timberline in moderately to steeply-sloping terrain, mostly within the drainage basin of Big Thing Creek, which flows easterly to Windy Arm on Tagish Lake. Vegetation consists mainly of a variety of alpine shrubs and grasses and is generally sparse and may be absent in exposed or rocky terrains.

The area of interest has been affected by both continental and subsequent alpine glaciation. As a result, much of the property, particularly areas of moderate terrain, is mantled in glacial overburden which, on steeper slopes, is covered by extensive talus deposits. Bedrock outcrops are therefore almost invariably restricted to cliff faces, stream cuts and occasional small exposures in otherwise overburden-covered areas. In some areas angular float from nearby bedrock sources is present on the surface and can be a useful guide to local rock types. Rust coloured oxides on float boulders and in soils have also proven to be good indicators of nearby sulphide mineralization.

Climatic conditions in the area can be somewhat severe. The project areas are characterized by the long, cold winters and short, cool summers typical of a moderated northern interior climate. Winter temperatures are commonly between -10°C and -20°C but may reach extremes of -40°C. Summer temperatures normally range between 5°C and 15°C and occasionally exceed 25°C. Permafrost occurs in overburden-covered areas throughout the property, particularly on north facing slopes.

## 1.5 History of Previous Work

The Montana Mountain region was first explored for gold and silver during the late 19th century, prior to the discovery of the placer gold deposits in the Klondike area. During the Klondike Gold Rush prospecting activity in the Tagish Lake area was minimal but, by about 1906, activity had resumed and numerous gold and silver occurrences had been discovered and staked in the area. The prospecting which led to these discoveries had presumably benefited from the completion of the White Pass and Yukon Railway, which provided good access to the Carcross area from tidewater at Skagway by 1900.

Between 1909 and 1921, limited production was obtained from several early discoveries in the project area. Among those near the Feather Gold property were the Big Thing Mine (later the Arctic Mine), the Montana Mine and the Venus Mine.

Exploration and mining activity fell off during the early 1920's and did not resume in earnest until the mid-1960's when a period of activity occurred at the Arctic/Big Thing and Venus mines. In the late 1960s and early 1970s both of these properties were put into production.

The Arctic Mine, which is situated on two Crown granted mineral claims, entirely surrounded by the Feather Gold property, was operated by Arctic Gold and Silver Mines Ltd. and produced in 1968 and 1969. The area now covered by the Barb property was, in 1966, covered by the Norm Claims and the area covered by the Rat Claims was held as the Brun Claims. The two Crown grants were subsequently acquired by Rex Silver Mines Ltd., who are the present owners.

The Jean Claim was staked by Matthew Watson, a Carcross businessman, in September 1936, following the discovery of gold and silver-bearing quartz vein float on the northwest side of Montana Mountain. The vein source was opened up by a trenching program in 1937 and 1938 but subsequent exploration was curtailed by the outbreak of World War II. Serious work in this area was not resumed until the late 1950's and early 1960's, at which time a 200' adit was driven in an attempt to intersect the vein. Subsequent exploration consisting of four short underground drill holes was carried out by Arctic Gold and Silver Mines in 1967.

In 1984 and 1985 the Jean property, the adjoining Crown grants, and the adjacent Mon, TB and Nyak Claim Groups were explored by Anooraq Resources Corporation. This work consisted of bulldozer trenching, prospecting, mapping, road construction and geochemical soil and stream sampling. It was continued by Univex Mining Corp. in 1986 under agreement with Anooraq and included 1300' of drilling in ten holes.

The work re-assessed the original vein and resulted in the discovery of a second mineralized area further to the north (the Lower Trench Area). Exploration results, however, were not considered sufficiently encouraging to justify additional expenditures in these areas and Univex relinquished it's option. The claims were later aquired by Feather Gold as an augment to it's other local holdings.

## 2.0 GEOLOGY

### 2.1 General Setting

Montana Mountain lies within the intermontane superterrane, one of several accreted geological terranes which make up the geology of the northern Cordillera. This large scale lithological and structural assemblage is bounded to the east by the Teslin Fault and to the west by the Denali Fault and has been divided (Hart & Radloff, 1990) into three discrete component terranes - including the Nisling, Northern Cache Creek and Stikine Terranes - and two later assemblages, the sedimentary rocks of the Whitehorse Trough and the Coast Plutonic Complex.

The project area lies within the rocks of the Coast Plutonic Complex where they are intrusive into the dominantly Mesozoic volcanic rocks of the Nisling Terrane. The eastern limit of the claim area is traversed by the Nahlin Fault, an easterly dipping thrust fault which superimposes the Paleozoic volcanic and sedimentary rocks of the Cache Creek Group over the Mesozoic Nisling rocks which are locally represented by the Montana Mountain Volcanics (of the Mt. Nansen Group) and the clastic sedimentary rocks of the Laberge Group.

The greater part of the project area is underlain by the mid-Cretaceous granitic rocks of the Montana Mountain Pluton which are in both intrusive and fault contact with the intermediate volcanic rocks of the Montana Mountain Volcanics.

The Montana Mountain Pluton consists, for the most part, of brownish-orange weathering, medium-grained hornblende biotite granite. It was formerly incorporated as one plutonic assemblage with the rocks of the Carcross Pluton which lies immediately to the north on the lower slopes of Montana Mountain. The Carcross Pluton, however, is now considered to be discrete and in intrusive contact with the Montana Mountain Pluton (Hart et al 1990). It consists principally of fine to medium-grained biotite hornblende granite and granodiorite and is much larger and younger, being lower Tertiary in age, than the Montana Mountain granite.

The youngest plutonic rocks in the project area are widely spaced basaltic and dioritic dykes which cut the Montana Mountain granites. The latter also host number of quartz and quartz sulphide veins, some of which are mineralized with gold, silver and base metal sulphides.

## 2.2 Property Geology and Mineralization

All of the mineralization observed during the course of the evaluation under discussion was associated with quartz veins and stringers usually associated with zones of hydrothermal alteration cutting Montana Mountain granite. The principal sulphide minerals are arsenopyrite and pyrite but galena, tetrahedrite (or, more likely tennantite, the arsenic rich variety of the tetrahedrite-tennantite isomorphous series), argentite and minor chalcopyrite may also be present. The hydrous ferrous arsenate mineral scorodite, an alteration product of arsenopyrite, has also been observed in some vein structures.

Sulphides occur both within the quartz veins and adjacent altered granite wallrock. In the veins they are generally weakly to strongly disseminated but may also form as massive bands of variable, occasionally substantial, width. In the altered wallrock they are generally disseminated but may also form as fine stringers or fracture surfaces coatings. Near surface sulphides have invariably been altered to yellowish-brown oxides.

No visible gold was observed or has been reported to occur in any of the showings examined but, according to Hart and Radloff (1990), the gold is present in its native form associated with the sulphide minerals. In a discussion of the gold occurrences on the Jean Claim, MacDonald (1986) speculates that the lack of visible gold in high assay samples may indicate that a discrete gold/silver mineral such as electrum or a telluride may be present. Hawthorne (1989) reports that gold in vein material (assumed to be from the Arctic Mine) occurred in native form enclosed in arsenopyrite and that 25% was in low silver electrum.

Although the gold values tend to occur in arsenopyrite they are apparently more directly related to the presence of lead, silver, copper and zinc than to arsenic. Barren arsenopyrite occurrences are not uncommon.

Isotopic studies of the vein material (Hart & Radloff, 1990) indicate that the mineralizing event occurred much later than the emplacement of the mid-Cretaceous host rocks and is possibly related to activity in the Nahlin Fault Zone during late Cretaceous or early Tertiary time. The veins, however,

are contemporaneous with emplacement of the Carcross Pluton. This suggests that they may have been formed by hydrothermal activity related to this event. The tendency of known mineralized veins to have north-south strikes or to dip more or less northerly towards the younger pluton is consistent with this hypothesis and may have local exploration implications.

Orientations of the veins within the general project area are somewhat variable. At the Arctic/Big Thing Mine, which lies north and east of the area under discussion, the vein systems tend to strike northeasterly and dip moderately northwest. Veins observed in the Ridge Zone, a possible western extension of the Arctic/Big Thing structures, generally conform with those further to the east having strikes between 80-110° and with variable northerly dips.

Veins 1 and 2 in the Jean/Kodak Claim area near the so-called "Anoorag Lower Trench" strikes northeast and dip moderately to the north. Further south on the Jean Claim the Main Vein is reported (McKean, 1987) to strike at 150° and dip moderately to the east. MacDonald (1986) also reports a subsidiary fracture system developed perpendicular to this orientation. (This would approximately parallel the Arctic, Ridge Zone and Lower Trench orientations.)

A mineralized quartz vein at Rat Lake approximately 1 km east of the Jean Claim area strikes at 105° and dips vertically and another similar vein about 700 m to the northeast strikes at 010° and dips easterly between 85-90°.

Vein widths vary from a few centimetres to over one metre and adjacent zones of host rock alteration and secondary veining may extend for several metres beyond the vein wallrock contact.

The precious metal content of the veins was found to be highly variable but a significant number of samples returned values in the range between 0.3 to over 12 oz/ton Au and up to 21 oz/ton Ag. These values are considered to be economically significant.

### 3.0 MINERAL OCCURRENCES

#### 3.1 Barb and TB Claims

The principal mineral showings observed on the Barb and TB Claims lie within the Ridge Trench Area and adjacent Creek Vein and in the Peerless Adit. Bedrock exposure in these areas is limited but trenching and underground work has exposed segments of several parallel or sub-parallel veins which tend to strike northeast-southwest and dip variably to the northwest.

Veins intersected in the Peerless Adit are apparently controlled by the same fracture set as those in the Arctic and Big Thing mine workings which lie a few hundred metres to the east. The vein system in the Ridge Trench area can be interpreted as a westerly extension of the Arctic/Big Thing structure. The adjacent Creek Vein, which was not exposed at the time of the property examination, is apparently a parallel system lying to the south.

A total of twenty-two rock samples were taken from bedrock mineral occurrences exposed in bulldozer trenches and float boulders interpreted as representative of a nearby bedrock source. They are described below with pertinent analytical data included with each description. Comprehensive data are contained in the Assayers Certificates in Appendix B.

#### Ridge Trench Area

The Ridge Trench Area lies at the divide between Big Thing and Upper Tin Cup Creeks and straddles the boundary between the Barb and TB Claims. It is the site of some thirteen bulldozer trenches excavated to explore for mineralization to the west along strike of the Arctic/Big Thing veins. For descriptive purposes the trenches are labelled from east to west with the letters A through N as depicted in Figure 4. Trenches A through K were described by Carlyle (1990). They, along with Trenches L, M and N which were opened in 1993 are also discussed in this report.

#### Trench A

This trench is situated just north of the summit of the ridge immediately west of the access road and a short distance west of the Pride of the Yukon Crown Grant boundary (The Arctic/Big Thing property). It crosses the strike of two east west trending quartz veins or vein systems enclosed in zones of altered rusted granite. The vein material consists of pale grey quartz locally mineralized with disseminated

arsenopyrite, pyrite and tetrahedrite-tennantite. The quartz varies in character from massive to euhedral crystalline locally exhibiting comb-like structures with a sulphide matrix.

Three samples of mineralized material were taken. Samples F-02 and F-03 are representative grab samples of mineralized vein material. Sample FG-26 is from the north vein where it is exposed on the east wall of the trench. Assay results were found to be consistent with those reported by Carlyle (1990) and are as follows:

	<u>Au</u> oz/ton	<u>Ag</u> oz/ton	<u>As</u> PPM	<u>Cu</u> PPM	<u>Pb</u> PPM	<u>Zn</u> PPM
F-02	0.056	0.50	2760	68	360	126
F-03	0.134	2.30	3560	97	1010	130
FG-26	0.015	0.33	>10000	62	202	68

#### Trench B

The vein exposed in Trench B parallels those in Trenches A and D to the south. It was sampled by Carlyle and found to have erratic but generally low values ranging between 52 and 5400 PPB Au.

#### Trench D

Trench D appears to intersect the extensions of the veins in Trench A. Sample F-08 is a poorly mineralized grab sample of angular float from this trench inferred to be representative of the local vein material which was obscured by ice and snow at the time it was taken. Sample FG-27 is a grab sample of well mineralized vein material from a quartz vein enclosed within a 3 m thick alteration zone. It is the most northerly and best mineralized of the two veins exposed in the trench. A second weakly mineralized vein lies about 4 m to the south.

	<u>Au</u> oz/ton	<u>Ag</u> oz/ton	<u>As</u> PPM	<u>Cu</u> PPM	<u>Pb</u> PPM	<u>Zn</u> PPM
F-08	0.020	0.70	6310	94	568	20
FG-27	0.338	1.25	<10000	118	782	4880

A sample obtained by Carlyle (FGR-81; Carlyle 1990) from the approximate site of FG-27 had a comparable gold value of 0.344 oz/ton.

Trenches C, F, G, H, I, J, and K either did not reach bedrock or were sloughed in at the time of the writer's visit. Trench E exposed limited bedrock containing a small rusted patch but no significant veining or sulphide mineralization was observed nor was any reported by Carlyle.

## West Trenches

Three trenches were excavated in the vicinity of the Barb and TB Claim boundary about 300 to 400 m west of the trenches described above. They were intended to test areas of altered near-bedrock float possibly derived from westerly extensions of Ridge Zone structures

Trench L lies immediately north of the access road and about 20 m west of the Barb 1 and 2 Initial Posts. It strikes north-south in faulted granitic rocks hosting two discrete mineralized structures: 1) an east west striking zone of intense hydrothermal alteration and veining and 2) a north-south striking mineralized quartz vein.

The altered zone(1) strikes at  $85^\circ$  and dips northerly at  $62^\circ$ . It is 7 to 8 m thick with a core of consisting of a 1.5 m thick band of yellow clay bounded to the north and south by intensely weathered and leached quartz-sulphide veins and bands of scorodite up to 30 cm thick. Samples obtained from this zone are as follows:

- F-13 Loose fragments of massive sulphide consisting of galena, arsenopyrite, tetrahedrite-tennantite and minor pyrite encountered in rust colored clay overburden during trenching.
- FG-15 Rusted and altered granite 2 m wide from north limit of zone.
- FG-16 Impure yellow clay and argillically altered granite approximately 2 m wide.
- FG-17 Blue-green glassy granular scorodite from a seam approximately 30 cm thick associated with rusted broken quartz vein material
- FG-18 Band of yellowish-green clay about 1.5 m thick.
- FG-19 Quartz scorodite vein 5 to 6 cm thick.
- FG-20 Altered rusted granite extending 5 m south to the end of the trench.

The mineralized quartz vein is exposed in the east wall of the trench about 8 m from the south end. It strikes at  $010^\circ$ , dips east at  $45^\circ$  and is 30 to 40 cm thick. It consists of massive white quartz containing patches of coarse euhedral galena, pyrite, arsenopyrite and possibly minor sphalerite and tetrahedrite-tennantite. Samples FG-21 and FG-22 are representative of this material.

Assay values for the samples from Trench L are as follows:

	<u>Au</u> oz/ton	<u>Ag</u> oz/ton	<u>As</u> PPM	<u>Cu</u> PPM	<u>Pb</u> PPM	<u>Zn</u> PPM
F-13	0.776	10.20	>10000	8060	1470	274
FG-15	0.019	0.28	2160	97	151	85
FG-16	0.069	0.56	924	41	349	82
FG-17	0.894	12.06	651	792	5810	1310
FG-18	0.085	0.85	1152	92	1220	132
FG-19	1.290	14.92	>10000	3150	1777	134
FG-20	<0.002	0.12	1076	64	96	117
FG-21	0.031	2.75	4780	75	>10000	1081
FG-22	0.004	5.74	761	227	>10000	>10000

Trenches M and N are the most westerly of the ridge trenches and lie within the TB Claims about 60 m west of Trench L. They intersect a quartz-sulphide vein or vein system which appears to strike approximately east west and dip gently to the north. The sulphides include arsenopyrite, pyrite and chalcopyrite (probably with associated tenorite), and minor tetrahedrite-tennantite. The vein lies within a zone of oxidized and argillically altered granite. The flat dip of the zone, more or less parallel to the floor of the trench, precludes an accurate determination of its thickness.

Sample F-04 is quartz float mineralized with disseminated sulphides including pyrite, arsenopyrite, and possibly minor galena. It was obtained from an area of rusted altered granite associated with rust coloured clay from a surface occurrence prior to trenching at the site.

Sample FG-23 is from a flat dipping quartz vein exposed in Trench M. The quartz is locally euhedral forming comb-like structures mineralized with coarse interstitial arsenopyrite.

Samples FG-24 and 25, are from Trench N. FG-24 consists of strongly disseminated to massive arsenopyrite probably with tetrahedrite-tennantite and pyrite in a quartz matrix. FG-25 is dark weathered massive sulphide composed of arsenopyrite, pyrite, chalcopyrite, galena and tetrahedrite-tennantite. It is coated with dark brown iron oxides and a black earthy oxide mineral which may be tenorite.

Assay data for Trenches M and N are as follows:

	<u>Au</u> oz/ton	<u>Ag</u> oz/ton	<u>As</u> PPM	<u>Cu</u> PPM	<u>Pb</u> PPM	<u>Zn</u> PPM
F-04	0.086	0.30	>10000	25	168	<2
FG-23	0.418	4.63	9490	32	944	69
FG-24	0.775	12.54	>10000	102	5050	49
FG-25	0.388	16.06	4510	1325	7700	116

### Creek Vein

The Creek Vein was not exposed at the time of the writers visit but is reported (Carlyle 1990) to be between 1 and 2.5 m in width and well mineralized with arsenopyrite, pyrite and scorodite. A short adit was driven into it sometime in the past and it was extensively trenched by Carlyle in 1990 but no significant precious metal values were reported from it.

Two samples of mineralized rock were taken from the valley of Big Thing Creek just below the trench area. Sample F-05 is altered and rusted quartz monzonite with a greenish hue containing pyrite and a bright grey disseminated sulphide - possibly tetrahedrite-tennantite and local narrow (1 or 2 mm) veins of arsenopyrite. It was in place in an excavation at the base of the slope on the north side of Big Thing Creek and represents altered zone material marginal to the Creek Vein. Samples F-06 and F-07 consisted of an angular float boulder of quartz vein material mineralized with disseminated pyrite, arsenopyrite, galena and possibly tetrahedrite-tennantite. They were found in the creek bed downstream from the Creek Vein. Assay results are as follows:

	<u>Au</u> oz/ton	<u>Ag</u> oz/ton	<u>As</u> PPM	<u>Cu</u> PPM	<u>Pb</u> PPM	<u>Zn</u> PPM
F-05	<0.003	0.10	116	26	42	68
F-06	0.024	1.00	>10000	33	244	36
F-07	0.022	1.00	5870	40	58	30

### Peerless Adit

The Peerless Adit lies about 700 m north of the Ridge Trench Area and was driven to intersect down dip extensions of the Big Thing vein system. A grab sample of rusty altered quartz monzonite and quartz vein material with disseminated arsenopyrite, pyrite, galena and minor chalcopyrite and sphalerite was taken for assay from the dump. Results are as follows:

	<u>Au</u> oz/ton	<u>Ag</u> oz/ton	<u>As</u> PPM	<u>Cu</u> PPM	<u>Pb</u> PPM	<u>Zn</u> PPM
F-21	0.042	0.80	>10000	319	396	244

### 3.2 Rat Claims

The known mineral occurrences on the Rat Claims lie south of Big Thing Creek and on the lower slope of the main edifice of Montana Mountain. Showings were examined at Rat Lake, the Rat Trench area, the Carlyle Vein and the Wheelbarrow Vein.

## Rat Lake

A mineralized quartz vein system outcrops near a bulldozer road north of the small tarn called Rat Lake and about 10 m east of the creek flowing from it towards Big Thing Creek. It consists of one or more narrow (3 to 7 cm) siliceous stringer veins exposed over a width of 0.5 m within a 1 m wide zone of alteration in the granitic host rock. The zone strikes at 105° to 115°, dips vertically and is mineralized with disseminated galena, minor tetrahedrite-tennantite, pyrite and thin arsenopyrite stringers.

Sample F-14, is a representative grab sample of high-grade vein material; sample FG-5 is representative of the vein material in place; sample FG-6 is a channel sample of oxidized material from the 1 m wide zone of alteration and mineralization and sample FG-7 is altered zone material cut by narrow (0.3 to 0.5 cm) quartz stringers mineralized with disseminated tetrahedrite, arsenopyrite and pyrite. This sample is representative of a fracture zone about 0.5 m wide.

Another vein about 20 m north of the west end of Rat Lake adjacent a bulldozer trail is 30 to 40 cm wide, strikes at 100°, dips vertically and contains disseminated arsenopyrite, tetrahedrite-tennantite and pyrite. Sample FG-01 is representative of the mineralized material.

Assay results for the Rat Lake area veins are as follows:

	<u>Au</u> oz/ton	<u>Ag</u> oz/ton	<u>As</u> PPM	<u>Cu</u> PPM	<u>Pb</u> PPM	<u>Zn</u> PPM
F-14	0.744	1.20	>10000	15	1090	8
FG-5	0.033	0.06	6490	15	85	11
FG-6	0.024	0.09	2270	12	59	48
FG-7	0.645	1.11	5770	18	569	12
FG-01	0.111	0.35	<10000	6	936	184

Three additional zones of alteration and weak mineralization are exposed in a 20 metre long north-south trending trench cut into the slope just west of Rat Lake. Sample FG-02 is from an east-west striking quartz vein about 0.2 m wide about 5 m north of the south end of the trench. Sample FG-03 is a similar parallel zone 10 m further north and sample FG-04 is from another 0.2m wide vein 5 m further north at the end of the trench. Assay results are as follows:

	<u>Au</u> oz/ton	<u>Ag</u> oz/ton	<u>As</u> PPM	<u>Cu</u> PPM	<u>Pb</u> PPM	<u>Zn</u> PPM
FG-02	0.015	0.09	5540	17	80	19
FG-03	0.076	0.09	4980	13	183	16
FG-04	0.024	0.05	2910	11	165	31

Zones of alteration and silicification - including quartz veining also occur north of Rat Lake along the road leading across the slope towards the "Rat Trench" area.

About 50 m north of the Rat Creek occurrence is a vertically dipping quartz vein approximately 0.3 m wide striking at 115°. Sample FG-8 is representative vein material from this site. A similar parallel vein lies about 80 m to the north. Sample FG-9 is representative of this showing and FG-10 consists of mineralized float from a nearby site 8 m to the northeast. Assay results from these zones are as follows:

	<u>Au</u> oz/ton	<u>Ag</u> oz/ton	<u>As</u> PPM	<u>Cu</u> PPM	<u>Pb</u> PPM	<u>Zn</u> PPM
FG-08	0.016	0.71	>10000	72	252	18
FG-09	0.289	0.55	>10000	50	179	7
FG-10	0.457	2.94	>10000	28	721	7

#### Rat Trench Area

The Rat Trench was excavated to expose a vein of white auriferous quartz northeast of Rat Lake. The vein cuts granitic or possibly quartz monzonite country rock. The trench bears at 115° but was, at the time of the visit, partly sloughed and filled with snow. Sample F-15 is a grab sample of loose material from a 5-8 cm thick white quartz vein containing disseminated pyrite and streaks of pyrite and tetrahedrite exposed in the trench. It was obtained from the western part of the trench and is thought to be from a different vein than the one reported from the eastern end of the trenched area by Carlyle (1990).

Sample FG-11 is mineralized vein material from a small pit in a rusted and altered zone in the granite talus below the bulldozer road northwest of the Rat Trench area. Sample FG-12 is loose quartz vein material from another smaller trench bearing at 120° in the area north of the Rat Trench and east of the FG-11 pit.

Assay results are as follows:

	<u>Au</u> oz/ton	<u>Ag</u> oz/ton	<u>As</u> PPM	<u>Cu</u> PPM	<u>Pb</u> PPM	<u>Zn</u> PPM
F-15	0.642	0.90	7340	17	4990	2340
FG-11	0.021	0.14	>10000	49	50	28
FG-12	0.111	0.16	3560	11	667	163

## Carlyle Vein

The Carlyle Vein is located 40-50 m northeast of a small ultrabasic body which outcrops on the north face of Montana Mountain east of the Rat Trench. It consists of a quartz vein bearing 010° and dipping easterly at 85-90° mineralized with arsenopyrite. Sample F-16 is a representative grab sample of mineralized vein material. Assay results are as follows:

	<u>Au</u> oz/ton	<u>Ag</u> oz/ton	<u>As</u> PPM	<u>Cu</u> PPM	<u>Pb</u> PPM	<u>Zn</u> PPM
F-16	0.036	0.20	>10000	<1	66	6

## Wheelbarrow Vein

The Wheelbarrow Vein lies just west of the entrance to a small cirque at the base of the Montana Mountain edifice and due south of the Arctic Mine workings. The vein has been excavated by a large trench which was filled with snow at the time of the writers visit. The main vein system strikes at about 090° and consists of massive quartz with disseminated galena, tetrahedrite-tennantite and arsenopyrite. The main vein is crosscut by one or more narrow apparently discontinuous vertical quartz sulphide veins which strike at 170°. These are mineralized with pyrite, arsenopyrite and minor tetrahedrite-tennantite.

Sample F-18 is a grab sample of sulphide rich loose material which may be representative of the main zone. It is made up of massive quartz with strongly disseminated arsenopyrite, galena and tetrahedrite-tennantite.

Sample F-17 is a grab sample of mineralized vein material from a crosscutting vein striking at 170° at the extreme western end of the Wheelbarrow vein trench. The sample consists of quartz with disseminated arsenopyrite and pyrite. It does not appear to be completely discrete from the quartz monzonite host rock but rather a zone of silicification and mineralization within the intrusive and of undetermined but narrow width.

Assay results are are as follows:

	<u>Au</u> oz/ton	<u>Ag</u> oz/ton	<u>As</u> PPM	<u>Cu</u> PPM	<u>Pb</u> PPM	<u>Zn</u> PPM
F-18	<0.003	0.10	>10000	<1	58	4
F-17	0.008	<0.10	>10000	<1	8	<2

### 3.3 Jean Claim Area

#### Lower Trench Area

The Lower Trench Area is situated in the northern part of the Jean Claim on the north slope of the northwest ridge of Montana Mountain, just west of the pass at the headwaters of Big Thing Creek. It is excavated into a vein or vein system cutting Montana Mountain Granite.

Two veins striking at 060° to 070° and dipping northerly at 45° to 50° were exposed by Univex in 1986 but were covered by snow at the time of the examination. Sample JF-09 consists of quartz vein material well mineralized with galena, sphalerite, tetrahedrite-tennantite, pyrite and arsenopyrite taken from rubble at the trench site. There also appears to be some realgar and possibly cinnabar present. FG-14 is a duplicate check sample of similar material from the same site.

Sample JF-10 is a chip sample across 1.5 m of mineralized quartz vein within a zone of silicification in an outcrop at the upper edge of the Lower Trench just above the site of sample JF-09 and immediately to the east of the collar of Anooraq drill hole #10. The vein here may be wider than 1.5 m but disappears under overburden to the east. It strikes at 135° and dips northeasterly at 85-90°. Sample FG-13 is from the same vein or zone of silicification a few metres northeast along strike. The vein here strikes at 150° and dips northeasterly at 70 to 80°.

Assay results for amples from the Lower Trench Area are as follows:

	<u>Au</u> oz/ton	<u>Ag</u> oz/ton	<u>As</u> PPM	<u>Cu</u> PPM	<u>Pb</u> PPM	<u>Zn</u> PPM
JF-09	0.990	4.80	>10000	86	>10000	>10000
FG-14	1.470	1.70	4300	45	>10000	9090
JF-10	<0.003	0.20	3340	<1	410	132
FG-13	0.024	0.04	5590	9	337	97

#### Jean Vein Area

Sample JF-11 consists of a grab sample of white quartz vein float containing banded galena, sphalerite, tetrahedrite-tennantite, and disseminated euhedral pyrite. The sample was obtained from the bluff above the Jean adit and about 40 m from it on a bearing of approximately 110° (this is probably just below the Jean Vein Showing).

Sample JF-19 is a composite grab sample from the rubble pile in the bulldozer cut on the road immediately below the Zone 1 exposure of the Jean Vein. It consists of mineralized quartz vein material apparently derived from the Jean Vein which, at this point, occurs in a trench and is completely obscured by rubble and snow.

Sample JF-20 consists of siliceous felsite dyke material with abundant pyrite as disseminations and stringers. The sample was obtained from a rusty weathering area of outcrop or near outcrop on the bulldozer road immediately below and to the northwest of the Jean Adit.

Sample JF-12 is siliceous and rusted quartz vein material - probably float - cut by narrow stringers of massive pyrite and arsenopyrite. It is from a site on the west facing slope of the northwest ridge of Montana Mountain and uphill from the bulldozer road leading southeasterly up the valley north of Mt. Matheson. It may be derived from the Zone 1 or Jean Vein Area which is above and to the east of the sample site.

Assay results for samples from the Jean Claim Area are as follows:

	<u>Au</u> oz/ton	<u>Ag</u> oz/ton	<u>As</u> PPM	<u>Cu</u> PPM	<u>Pb</u> PPM	<u>Zn</u> PPM
JF-11	12.018	21.10	>10000	136	>10000	>10000
JF-19	7.542	7.6	>10000	78	>10000	>10000
JF-20	<0.003	0.30	2560	112	112	280
JF-12	0.344	0.90	170	68	1800	220

The locations of the samples from the Jean Claims are depicted in Figure 3. Trenches, drill sites, roads and geochemical data are summarized in Figure 5.

## 4.0 EVALUATION

### 4.1 Ridge Zone

#### Discussion

The Ridge Zone should be considered the leading exploration and development target on the property. Samples from the east-west striking vein system recently discovered western part of the zone returned assay values ranging between 0.388 and 1.290 oz/ton Au and between 4.63 and 16.06 oz/ton Ag. The thickness and persistence of the vein or vein system has not been established but the similarities in mineralogy and structure between it and the Arctic/Big Thing deposit, which is located about 1 km to the east, invite comparison.

The quartz sulphide vein mineralization observed in the Ridge Zone Area appears to be configured in a manner similar to that at the Arctic/Big Thing deposit. Both vein systems have strikes which vary from northeast-southwest to east-west and dip moderately to the north. Both contain similar values in gold and silver, are dominated by arsenopyrite, and have textural features in common such as distinctive comb-like euhedral quartz crystal veins with interstitial arsenopyrite.

The productive veins at Arctic are reported (Campbell 1983) to pinch, swell and occasionally to pinch out altogether with mineralization reappearing in an adjacent en echelon structure. The Ridge Zone veins could be extensions of the Arctic veins or discrete but related veins developed en echelon to those at Arctic.

Between 1910 and 1915 production at the Big Thing Mine totalled about 3000 tons of sorted ore with reported grades from 1 to 2 oz/ton Au and 100 to 200 oz/ton Ag. The Arctic Mine produced 51,293 tons of ore with an average grade of 0.28 oz/ton Au and 8.3 oz/ton Ag. Remaining reserves are estimated at 82,150 tons grading 0.39 oz/ton Au and 10.2 oz/ton Ag (Campbell 1983). Past production and estimated reserves for this deposit therefore total over 136,000 tons and the potential for the immediate mine area could be 1,000,000 tons (Campbell 1983).

#### Conclusions and Recommendations

There is only limited information available for the interval between the Arctic workings and the eastern part of the Ridge Zone and no information for the interval between the eastern and western Ridge Zone trenches. It is nevertheless likely that the mineral occurrences in the Ridge Zone represent a

westward extension of the vein system at the Arctic/Big Thing Mine and, accordingly, continued exploration work is strongly recommended. The objective of this work will be to identify and delineate one or more intermediate tonnage vein type gold-silver deposits. Initial work should evaluate the vein or vein system exposed in the vicinity of Trenches L, M and N. This will include:

- 1) a preliminary diamond drilling program totalling about 300 m of drilling in 3 to 5 holes;
- 2) continued excavator and bulldozer trenching;
- 3) geological mapping, sampling and survey work.

An estimate of the cost of carrying out this work during the fall of 1993 is on the order of \$80,000.

#### 4.2 Rat Claim Area

##### Discussion

The Rat Claim Area contains a number of good Au Ag prospects some of which have been developed by bulldozer trenching. Several economically interesting Au values up to 0.645 oz/ton have been obtained from samples from this area and further work in the area is clearly justified. The sites are shown in Figure 3. The most promising are considered to be:

- 1) the Rat Lake Outlet Area from which Samples F-14 and FG-05, 06 & 07 were obtained;
- 2) the hand trench areas from which Samples FG-09 & 10 were obtained;
- 3) the "Rat Trench" Area, the site of Sample F-15 and near the site of Sample FG-12.

The proximity of the mineralization in the Rat Trench area and other similar occurrences to the small ultramafic body depicted on the north face of Montana Mountain may have economic implications. The ultramafic rocks in this area appear to be partly carbonatized - altered to magnesite - a process associated with gold deposition in other areas (Ash et.al. 1989). This suggests that these veins should be prospected as possible "listwanite" type gold deposits.

##### Conclusions and Recommendations

Several of the mineralized structures in the Rat Claim Area are considered to be good targets for further exploration work. This should include additional trenching, prospecting, rock and soil sampling and geological mapping. This work warrants provision of a budget on the order of \$5,000.

### 4.3 Jean Group

#### Discussion

The principal mineral occurrences on the Jean Claim Group are in the Jean Vein and Lower Trench Areas. Assay values at both of sites were extremely high. Sample JF-11 and JF-19 which were obtained from rubble in a trench on the Jean Vein contained respectively 12.018 & 7.542 oz/ton Au and 21.1 & 7.6 oz/ton Ag!. Samples JF-09 and FG-13 were loose mineralized material from the Lower Trench Area and contained respectively 0.990 & 1.470 oz/ton Au and 4.8 & 1.7 oz/ton Ag.

A large boulder of well mineralized quartz float was reported (MacDonald 1986) to have been found "approximately 100 metres northwest of Zone 1" (also referred to as the Upper Trench and Jean Vein site). Three samples taken from the boulder by MacDonald returned values of 27.4, 15.1 and 13.28 oz/ton Au. The boulder is rumoured to be larger than the material observed in the Jean Vein would allow but the location suggests that this vein was its source.

The mineralization in the Jean Claim Area appears to occur in narrow and discontinuous veins. Univex drilled nine angled diamond drill holes in the Jean Vein Area and one hole (DDH 10) in the Lower Trench Area in 1986 (MacKean 1987). Only the Jean Vein holes intersected Au quartz mineralization. Results for intersections with assays over 0.30 oz/ton Au are summarized as follows:

Hole Number	Depth Interval(ft)	Width(ft)	Au(oz/ton)
DDH 1	27.0 - 27.5	0.5	0.457
DDH 3	78.3 - 79.3	1.0	1.225
DDH 4	110.0 - 111.5	1.5	1.988
DDH 5	94.5 - 95.0	0.5	0.368
DDH 7	21.0 - 22.0	1.0	0.694
DDH 8	70.0 - 71.0	1.5	0.694
DDH 9	119.0 - 120.0	1.0	0.325

Although DDH 10 did not intersect any mineralization Univex did encounter two small auriferous veins in the Lower Trench Area. These are assumed to be the source of the high assays from this area but they have since been obscured by caving. A limited amount of additional bulldozer trenching was carried out by Feather Gold in this area during July and August of 1993 but the veins were not exposed.

The mineral occurrences in this area are all located within an elongate multi-element geochemical anomaly extending from the Jean Vein exposure about 450 m northwest to below the Lower Trench. The anomaly roughly coincides with both the

projected strike of the vein and the fall line down slope from the high-grade outcrops. It may therefore, at least in part, be a result of downhill migration of mineralized material.

The gold anomaly and trench and drill hole locations are depicted in Figures 4 & 5.

#### Conclusions & Recommendations

Because of the inconclusive nature of the results to date in the Jean Claim Area it is not presently considered a high priority site for further work. The extremely high gold values are nevertheless interesting and they do justify some effort.

A logical next step would be detailed geological mapping. This does not appear to have been done in the past perhaps because the configuration of the mineralized structures appeared to present obvious drill targets! Drilling these was not successful and, accordingly, an alternative interpretation of the geology will be required to identify targets for any additional testing.

Mapping should be done using detailed air photographs or, in this terrain, with the aid of a Geographic Positioning System receiver as it will be important to locate the various geological features accurately and in three dimensions. Provision for a preliminary survey expenditure of \$4,500 is recommended.

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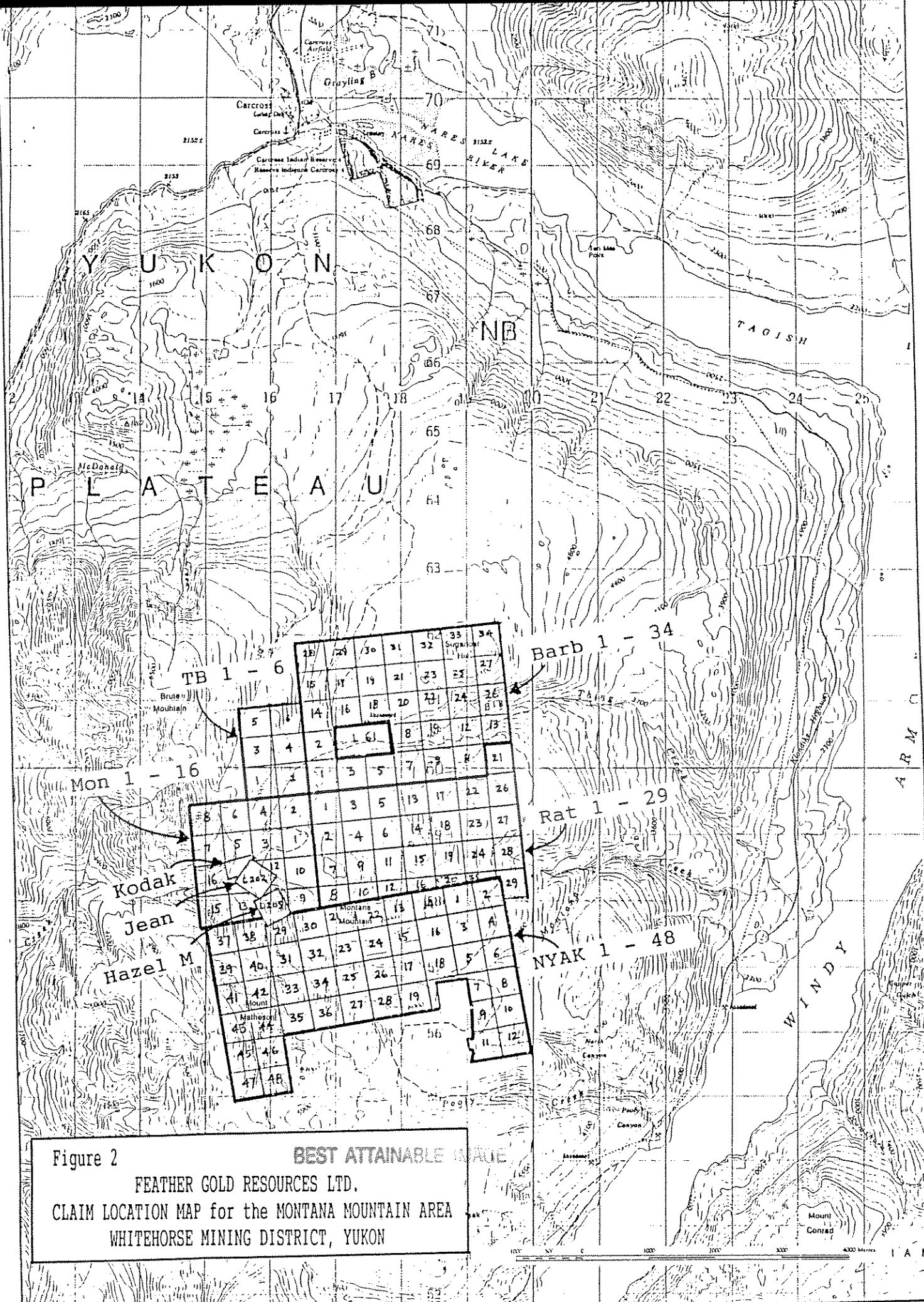


Figure 2  
**BEST ATTAINABLE IMAGE**  
 FEATHER GOLD RESOURCES LTD.  
 CLAIM LOCATION MAP for the MONTANA MOUNTAIN AREA  
 WHITEHORSE MINING DISTRICT, YUKON

TB 1 - 6

28	29	30	31	32	33	34
15	17	19	21	23	25	27
3	4	2	16	8	18	12
1	7	3	5	7	9	21

Mon 1 - 16

8	6	4	2	1	3	5	13	17	22	26
7	5	3	1	2	4	6	14	18	23	27
16	15	10	7	9	11	15	19	24	28	
37	38	29	30	21	22	13	14	1	2	

Kodak  
 Jean  
 Hazel M

37	38	29	30	21	22	13	14	1	2
29	40	31	32	23	34	15	16	3	4
41	42	33	34	25	26	17	18	5	6
43	44	35	36	27	28	19	20	7	8
45	46							9	10
47	48							11	12

Barb 1 - 34

Rat 1 - 29

NYAK 1 - 48

LEGEND

- Sample Site & Number ..... x F-16
- Adit Portal ..... - F-1
- Road ..... -
- Geological Boundary ..... -
- Fault ..... -

Tgc	Carcross Pluton (Granite)
mKqm	Montana Mountain Pluton
ub	Ultramafics;serpentine,magnesite

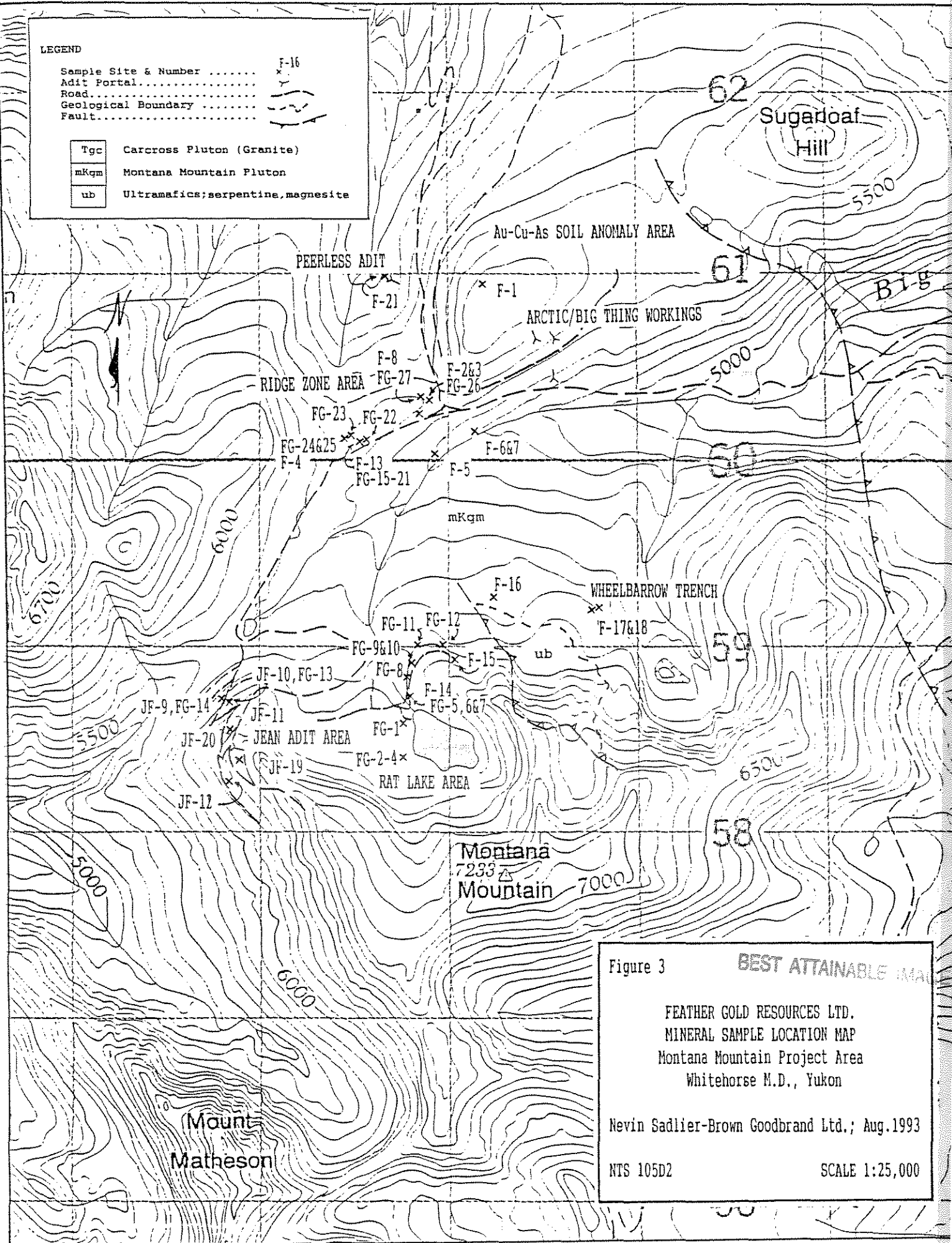
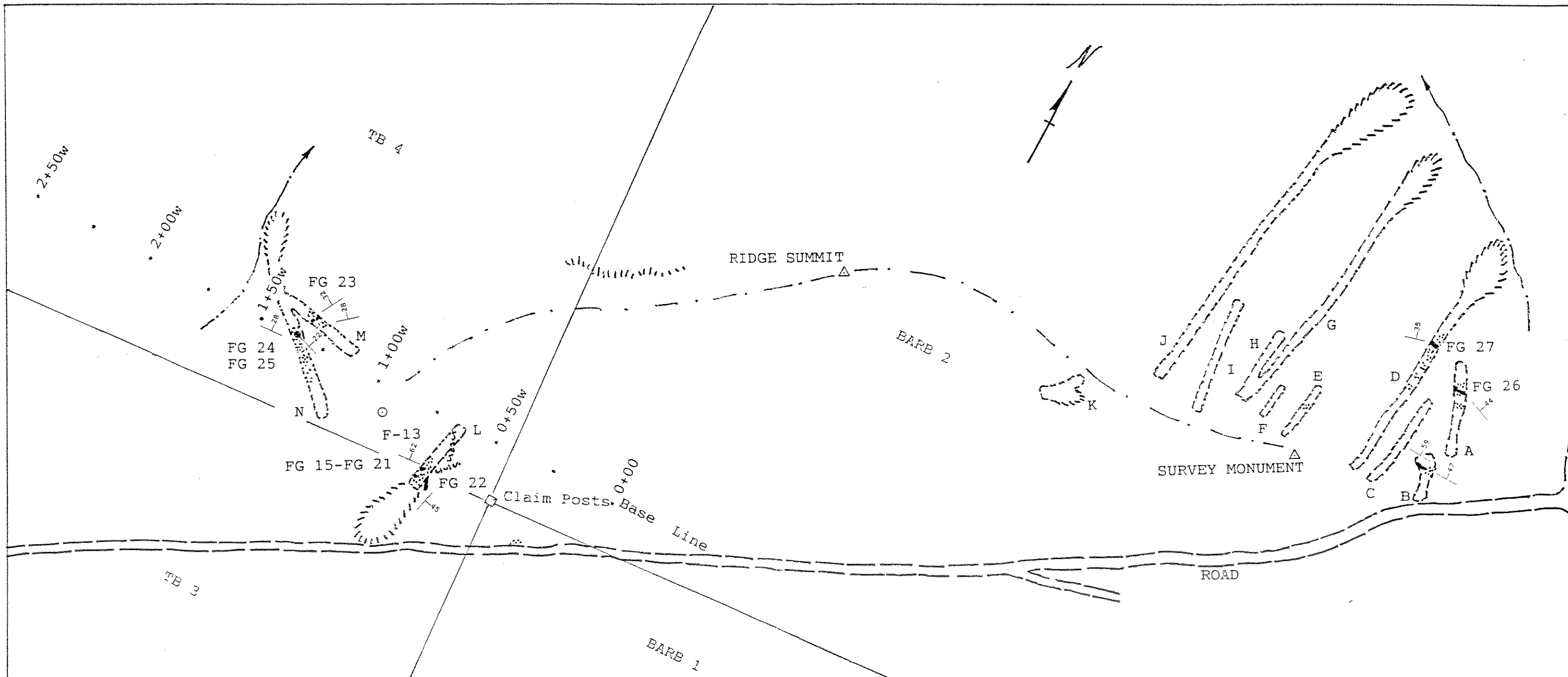


Figure 3  
**BEST ATTAINABLE IMA**  
 FEATHER GOLD RESOURCES LTD.  
 MINERAL SAMPLE LOCATION MAP  
 Montana Mountain Project Area  
 Whitehorse M.D., Yukon  
 Nevin Sadlier-Brown Goodbrand Ltd.; Aug.1993  
 NTS 105D2 SCALE 1:25,000



**LEGEND**

Trench.....	B
Waste Pile.....	
Quartz Sulphide Vein.....	
Alteration Zone.....	
Strike & Dip of Vein.....	
Fault.....	
Sample Number.....	FG 21
Road.....	

**ASSAY RESULTS**

	<u>Au</u> oz/ton	<u>Ag</u> oz/ton	<u>As</u> PPM	<u>Cu</u> PPM	<u>Pb</u> PPM	<u>Zn</u> PPM
F-13	0.776	10.20	>10000	8060	1470	274
FG-15	0.019	0.28	2160	97	151	85
FG-16	0.069	0.56	924	41	349	82
FG-17	0.894	12.06	651	792	5810	1310
FG-18	0.085	0.85	1152	92	1220	132
FG-19	1.290	14.92	>10000	3150	1777	134
FG-20	<0.002	0.12	1076	64	96	117
FG-21	0.031	2.75	4780	75	>10000	1081
FG-22	0.004	5.74	761	227	>10000	>10000
FG-23	0.418	4.63	9490	32	944	69
FG-24	0.775	12.54	>10000	102	5050	49
FG-25	0.388	16.06	4510	1325	7700	116
FG-26	0.015	0.33	>10000	62	202	68
FG-27	0.338	1.25	<10000	118	782	4880

FEATHER GOLD RESOURCES LTD.  
 PLAN of the RIDGE ZONE; BARB & TB CLAIM AREA  
 Montana Mountain Project Area  
 Whitehorse M.D., Yukon

Nevin Sadlier-Brown Goodbrand Ltd.; Aug.1993

NTS 105D2 FIGURE 4

Scale:

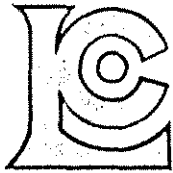
Feather Gold Resources

W/O 00256

Sample	Au oz/ton	Ag oz/ton	Cu ppm	Pb ppm	Zn ppm	As ppm
FG-01	0.111	0.35	6	936	154	>10000
FG-02	0.015	0.09	17	80	19	5540
FG-03	0.076	0.09	13	183	16	4980
FG-04	0.024	0.05	11	165	31	2910
FG-05	0.033	0.06	15	95	11	6490
FG-06	0.024	0.09	12	59	48	2270
FG-07	0.645	1.11	18	569	12	5770
FG-08	0.016	0.71	72	252	18	>10000
FG-09	0.289	0.55	20	179	7	>10000
FG-10	0.457	2.94	28	721	7	>10000
FG-11	0.021	0.14	48	50	28	>10000
FG-12	0.111	0.18	11	667	163	3560
FG-13	0.024	0.04	3	337	97	5590
FG-14	1.470	1.70	45	>10000	9090	4800
FG-15	0.019	0.28	97	151	65	2180
FG-16	0.069	0.56	41	349	82	924
FG-17	0.894	12.06	792	5810	1310	651
FG-18	0.085	0.85	92	1220	132	1152
FG-19	1.290	14.92	3150	1777	134	>10000
FG-20	<0.002	0.12	64	96	117	1076
FG-21	0.031	2.75	75	>10000	1081	4780
FG-22	0.004	5.74	227	>10000	>10000	761
FG-23	0.418	4.63	32	944	69	9490
FG-24	0.775	12.54	102	5050	49	>10000
FG-25	0.398	16.06	1325	7700	116	4510
FG-26	0.015	0.33	52	202	68	>10000
FG-27	0.336	1.25	118	792	4880	>10000

Certified by





# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
 212 Brooksbank Ave., North Vancouver  
 British Columbia, Canada V7J 2C1  
 PHONE: 604-984-0221

To: NEVIN SADLIER-BROWN GOODBRAND LTD.,

500 - 342 WATER ST.  
 VANCOUVER, BC  
 V6B 1B6

Page Number : 1  
 Total Pages : 1  
 Certificate Date: 29-JUN-93  
 Invoice No. : 19315963  
 P.O. Number :  
 Account : GT

Project :

Comments: ATTN: TIM SADLIER-BROWN

## CERTIFICATE OF ANALYSIS A9315963

SAMPLE	PREP CODE	Au FA oz/T	Ag FA oz/T	Ag ppm	As ppm	Bi ppm	Cd ppm	Cu ppm	Hg ppm	Mo ppm	Pb ppm	Sb ppm	Zn ppm		
F-01	208 274	< 0.003	< 0.1	0.6	42	2	< 0.5	4	2	14	30	< 2	12		
F-02	208 274	0.056	0.5	11.2	2760	8	2.5	68	1	4	370	4	126		
F-03	208 274	0.134	2.3	86.6	3560	56	2.5	97	1	12	1010	66	130		
F-04	208 274	0.086	0.3	8.8	>10000	18	< 0.5	25	< 1	2	168	20	< 2		
F-05	208 274	< 0.003	0.1	1.6	116	6	1.0	26	1	3	42	2	68		
F-06	208 274	0.024	1.0	31.2	>10000	60	< 0.5	33	< 1	3	244	32	36		
F-07	208 274	0.022	1.0	33.0	5870	8	1.0	46	1	4	58	30	30		
F-08	208 274	0.020	0.7	17.8	6310	32	< 0.5	94	1	4	568	8	20		
F-14	208 274	0.744	1.2	42.0	>10000	46	2.0	15	< 1	2	1090	6	8		
F-15	208 274	0.642	0.9	54.6	7340	10	>100.0	17	1	4	4990	12	2340		
F-16	208 274	0.036	0.2	2.6	>10000	8	< 0.5	< 1	< 1	7	66	68	6		
F-17	208 274	0.008	< 0.1	0.2	>10000	8	< 0.5	< 1	< 1	4	8	6	< 2		
F-18	208 274	< 0.003	0.1	1.2	>10000	2	< 0.5	< 1	< 1	4	58	16	4		
JF-09	208 274	0.990	4.8	168.0	>10000	16	>100.0	86	< 1	14	>10000	44	>10000		
JF-10	208 274	< 0.003	0.2	1.8	3340	4	6.0	< 1	< 1	6	410	< 2	132		
JF-11	208 274	12.018	21.1	>200	>10000	90	>100.0	136	< 1	< 1	>10000	274	>10000		
JF-12	208 274	0.344	0.9	15.0	170	18	6.0	68	< 1	1	1800	4	220		
JF-13	208 274	0.776	10.2	>200	>10000	564	7.0	8060	< 1	5	1470	994	274		
JF-19	208 274	7.542	7.6	>200	>10000	18	>100.0	78	< 1	< 1	>10000	52	>10000		
JF-20	208 274	< 0.003	0.3	4.8	2560	8	3.0	112	< 1	< 1	112	6	280		
JF-21	208 274	0.042	0.8	21.0	>10000	14	6.0	319	< 1	26	396	42	244		
ARCTIC BIG THING	208 274	0.546	120.1	>200	>10000	96	>100.0	5370	< 1	22	9410	>10000	4590		

CERTIFICATION: *Hart Buchler*

# VGC VANGEOCHEM LAB LIMITED

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RENO, NEVADA, U.S.A.

REPORT NUMBER: 020076 AA

JOB NUMBER: 030076

VGC CONSULTING

PAGE 1 OF 1

SAMPLE #	Cu %	Ag oz/st	Au oz/st	As %
FG 17A	0.08	5.18	0.880	--
FG 22A	0.07	8.14	0.090	--
FG 23A	0.01	2.11	0.278	--
FG 24A	0.01	7.85	0.848	--
FG 25A	0.14	17.54	0.172	--

PRELIMINARY REPORT ONLY  
DATA TO BE CONFIRMED BY  
CALCULATION OR REPEATED  
ANALYSES

DETECTION LIMIT

0.01

0.01

0.005

0.01

1 Troy oz/short ton = 31.20 ppm

1 ppm = 0.0001 %

ppm = parts per million

&lt; = less than

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

*needs  
approval*

*copy*

MINFILE: 105D 008  
PAGE NO: 1 of 2  
UPDATED: 07/29/94

**YUKON MINFILE  
STANDARD REPORT  
EXPLORATION AND GEOLOGICAL SERVICES DIVISION, DIAND  
WHITEHORSE**

NAME(S): Jean  
MINFILE #: 105D 008  
MAJOR COMMODITIES: Au, Ag  
MINOR COMMODITIES: Pb, Zn  
TECTONIC ELEMENT: Northern Stikine Terrane

NTS MAP SHEET: 105 D 2  
LATITUDE: 60°03'49"N  
LONGITUDE: 134°42'49"W  
DEPOSIT TYPE: Vein  
STATUS: Drilled prospect

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**CLAIMS (PREVIOUS AND CURRENT)**

JEAN, ELEANOR, KODAK, HAZEL M, ATHES, MON, TB, AFI

**WORK HISTORY**

Staked as Jean and Eleanor cl (19237) in Sep/36 by M.R. Watson, who added Kodak & Hazel M cl (19274) in Jun/39 and explored with hand trenching prior to taking the claims to lease in 1958. The property was optioned in 1960 by New Imperial ML, which did further trenching and drove a 69 m x-cut below the showing in 1961 and 1962. During 1967, Arctic Gold and Silver ML drilled four holes from the face of the x-cut.

DuPont tied on Athes cl (YA60875) in Jun/81 on the west side and performed limited mapping and sampling later in the year. Anooraq Res Corp optioned the leased claims, tied on Mon and TB cl (YA82825) in Aug/84 and performed bulldozer and hand trenching, prospecting and road construction later in the year. Univex Mg Corp L acquired a large interest in Anooraq's position and performed a preliminary evaluation in 1985 and explored with soil sampling and 9 holes (215 m) in 1986.

Omni Res L tied on AFI cl (YB7855) to the northwest in Sep/87 and conducted mapping and geochem sampling later in the year and trenched in 1989. Anooraq performed soil sampling on the Mon and TB claims in 1988.

The Jean, Kodak, Hazel M, Mon and TB claims were transferred to Feather Gold Res L in Mar/92. Feather Gold Resources performed a program of lithochemical sampling and diamond drilling (10 holes totalling 791 metres) in Aug and Sept/93.

**GEOLOGY**

Two subparallel quartz veins that may be faulted extensions of a single structure occur along the contact between andesitic flows and Cretaceous quartz monzonite. The veins strike 150° and dip 55° north. The upper (Jean) zone is up to 61 cm wide and contains 20% galena, sphalerite and pyrite plus minor arsenopyrite. The lower (Kodiak) zone consists of a swarm of veinlets 2.5 to 3 m wide containing stibnite, arsenopyrite, pyrite and galena. The best sample taken from the upper zone assayed 940.1 g/t Au, 1080 g/t Ag, 10.6% Pb and 6.5% Zn over 30.5 cm while the lower zone returned up to 65.8 g/t Au, 175.5 g/t Ag and 2.1% Pb over 15.2 cm. Drilling intersected only minor amounts of vein quartz, suggesting the vein rapidly pinches at depth.

On Omni's claims three 1989 trenches exposed vuggy, banded quartz-sulphide veins up to 50 cm thick, cutting altered granodiorite. The veins are marked by surface gossans and successive envelopes of sericitic, argillic and propylitic alteration. Vein minerals include arsenopyrite, galena and pyrite. Assays returned values up to 532.1 g/t Ag and 9.63 g/t Au.

**REFERENCES**

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- NEW IMPERIAL MINES LTD, Nov/60. Prospectus.
- OMNI RESOURCES INC., Dec/89. Assessment Report #092777 by H.F. MacKinnon.
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