MAP NO.: 115 I 3

ASSESSMENT REPORT X
PROSPECTUS
CONFIDENTIAL X
OPEN FILE

DOCUMENT NO: 092945
MINING DISTRICT: WHITEHORSE
TYPE OF WORK: geochem, trenching

REPORT FILED UNDER: EUGENE CURLEY

DATE PERFORMED: SUMMER, 1990

DATE FILED: FEB 27, 1991

LOCATION: LAT.: 62°07'N

LONG.: 137°05'W

AREA: MT NANSEN

VALUE $: 4,800

CLAIM NAME & NO.: GRIZZLY 1-24

WORK DONE BY: EUGENE CURLEY

WORK DONE FOR: EUGENE CURLEY

DATE TO GOOD STANDING:

| | |
|---|---|
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| | |

REMARKS: In 1989, four trenches were excavated to expose a quartz-arsenopyrite vein on the property. The vein is exposed over 140 meter strike length and is up to 6 meters in width. Chip sample from trench #2 assayed 0.21 oz\ton Au over 3.5 meters and 0.45 oz\ton Au over 1.5 meters. Other mineralization on the property includes Cu-Mo porphyries, skarns and placer. The veins occur in dilational fracture systems peripherial to the porphyries. Five trenches were excavated in 1990.

Affairs Canada  et du Nord Canada

M.R. file no.

R.M.M.R. file no.

Date forwarded
27 Feb '91

# TRANSMITTAL FORM

From ▶ Mining Recorder at: Whitehorse

To ▶ Regional Manager, Mineral Rights at Whitehorse, Y.T.

For action are:

- ☐ NEW APPLICATION FOR PLACER LEASE TO PROSPECT — Name
- ☐ RENEWAL APPLICATION PLACER LEASE TO PROSPECT — Name — Lease no.
- ☐ AFFIDAVIT OF EXPENDITURE ON PLACER LEASE — Name — Lease no.
- ☐ SECURITY DEPOSIT
- ☐ FINANCIAL ABILITY
- ☐ ASSIGNMENT OF PLACER LEASE NO. — From — To
- ☐ GROUPING APPLICATION UNDER SEC. 52(2) PLACER MINING ACT. — Owner
- ☐ DIAMOND DRILL LOGS — Claims — Claim sheet no.
- ☑ QUARTZ ASSESSMENT REPORT — Claims: Grizzly 1-24 — Claim sheet no.: 115-1-3
  - Type of report: Geochem, Trenching
  - Submitted by: Eugene Curley
  - Cls. work performed on: Grizzly 1,2,5,6
  - $ req. for ren. application: 4800.00

OFFICE OF THE REGIONAL MANAGER MINERAL RIGHTS FEB 27 1991 WHITEHORSE YUKON TERRITORY

M Sauthwick
Signature

REPLY ACTION

Date returned

Was this report filed as physical work? If not, then sample location maps and assay reply sheets would help to round out the report, as would a geological map of the property. 092945

Signature

802-37 (7-88)

# ASSESSMENT REPORT

on

GRIZZLY 1-24 CLAIMS

WHITEHORSE MINING DIVISION

CONFIDENTIAL

NTS 115 I/3

Latitude: 62° 07' N
Longitude: 137° 05' W

092945

Prepared for: Eugene Curley

February 15, 1991.

By: Impact Graphix / Diane Brent (B.Sc.)

Report prepared by Diane Brent of:

IMPACT
GRAPHIX

*RR1 S18 C23*
*Whitehorse*
*Yukon*
*Y1A4Z6*
*668-7533*

This report has been examined by the Geological Evaluation Unit under Section 53 (4) Yukon Quartz Mining Act and is allowed as representation work in the amount of $ 4,800.

for Regional Manager, Exploration and Geological Services for Commissioner of Yukon Territory.

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## Location and Access

The GRIZZLY Claims are located about 40 km west of Carmacks, Yukon Territory, along a tributary of Granite Creek, 8 km north of the Mt. Nansen mine site (Figures 1 and 2). They are situated at 62° 07' N latitude and 137° 05' W longitude on N.T.S. mapsheet 115 I/3, on the south facing slope of Victoria Mountain at an elevation of 4500 feet (1500 m). The property can be accessed by helicopter from Carmacks in roughly one half hour or by a 1.5 hour drive. There are cat trails connecting the property to the road, accessible with ATV's.

## Physiography, Vegetation and Climate

The Grizzly 1-24 Claims are located within the unglaciated Dawson Range of the Yukon Plateau. The Dawson Range consists of narrow valleys incised into the remnants of an old uplifted erosion surface. Undulations in the relatively flat surface culminate along converging ridges in dome like smooth sloped mountains, the highest of which is Victoria Mountain at an elevation of 6136 feet. The valley bottom of Victoria Creek, adjacent to the property, is about 4000-4500 feet. The claim group is transsected by several intermittent streams at its outer perimeter.

Above treeline, the vegetation on the ridges consists of alpine grasses; the valley bottoms have alder, scrub willow and stunted black spruce and in places are swampy. Dry south facing slopes at lower elevations have a sparse covering of poplar. Outcrops are restricted to ridge tops and the generally steeper south-facing slopes. The claims and all ridge tops are covered by vast areas of felsenmer with the valleys having a thick cover of residual soil.

Daytime summer temperatures are normally around 20° C with temperatures seldom rising to the upper 20's. Typical mid winter temperatures average approximately -20° C but periods of severe cold ranging down to -45° C can be expected from November through February. The 20 000' St. Elias mountains to the west form an effective barrier to the moisture from the Pacific Ocean and the area is semi-arid.

## Claim Description

The GRIZZLY 1-24 Claims consist of 24 contiguous claims (YB 26488 to YB 26511) located in the Whitehorse Mining Division (Figure 3). They were recorded on August 15, 1989 by the owner, Eugene Curley and with acceptance of this report will expire August 15, 1991.

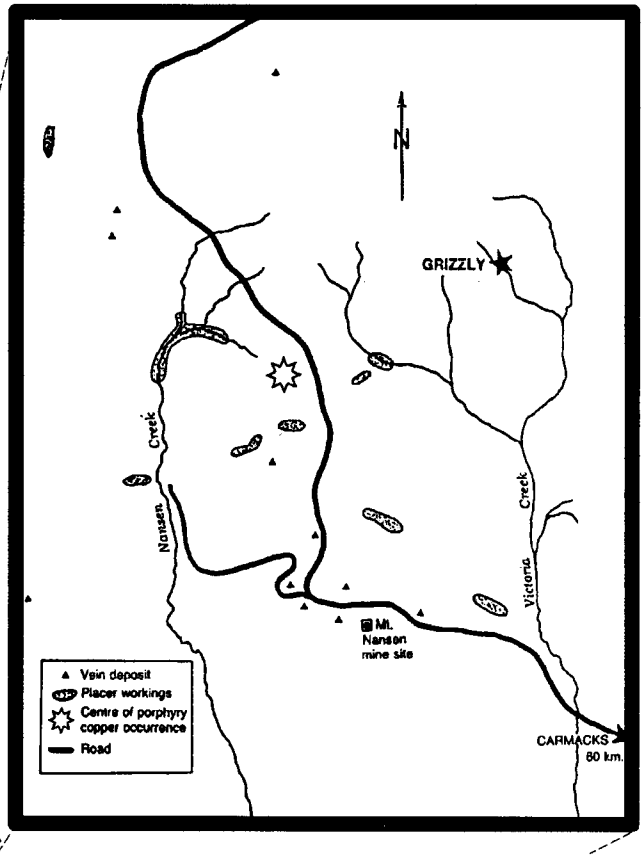


Figure 2 Local map with property location.

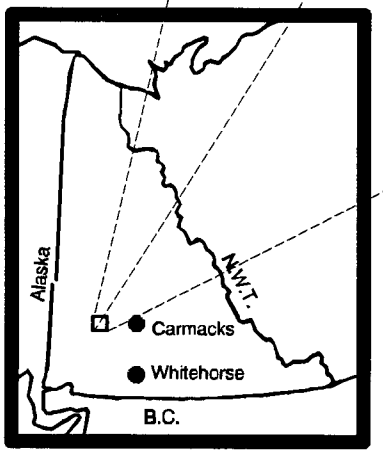


Figure 1 Regional Location Map

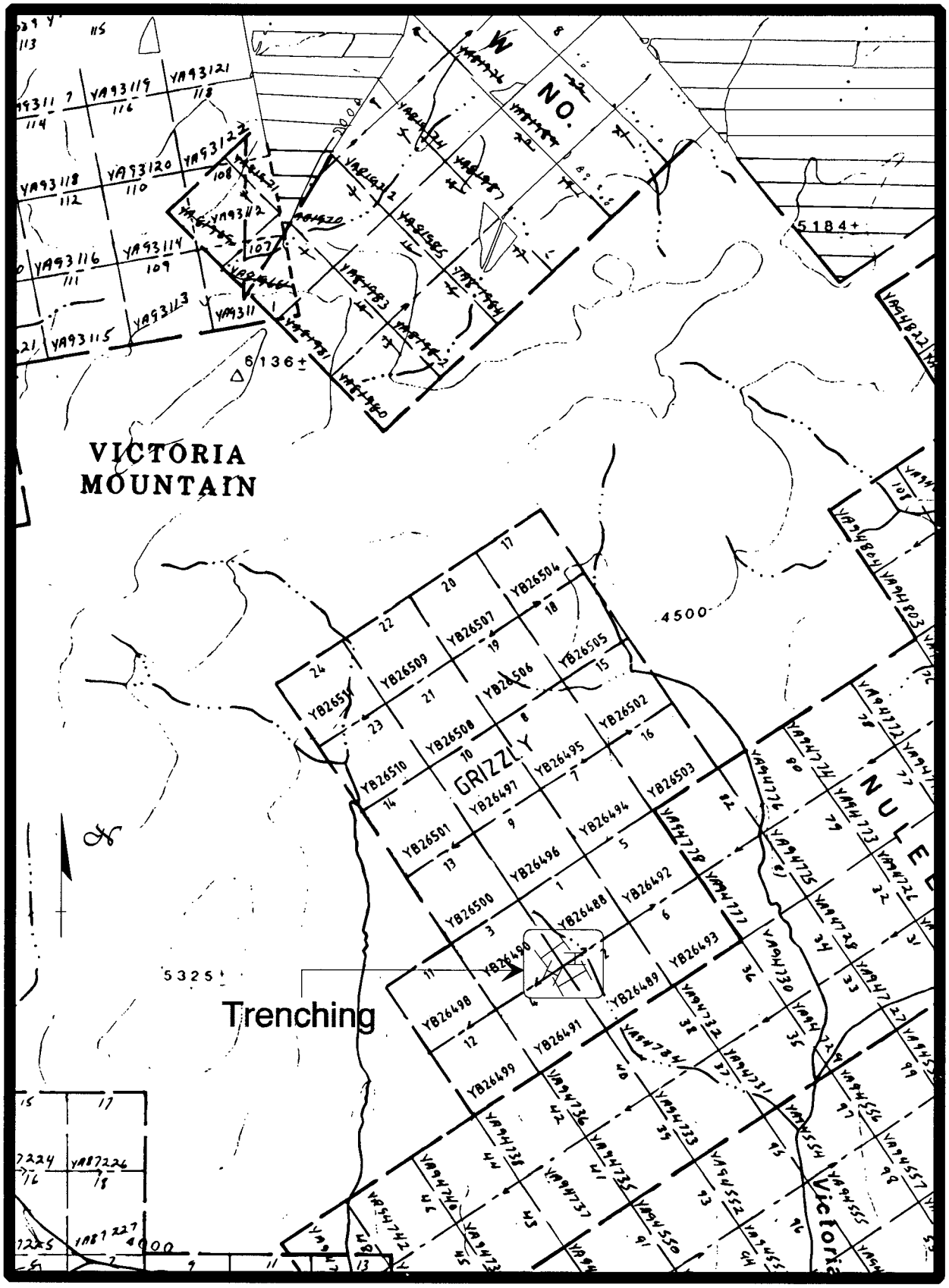


Figure 3: Claim Map (1:30,000)

## History

The area in the vicinity of the Grizzly claims has been marked by considerable hardrock and placer exploration activity, for over 50 years (Carlson, p. 1). The Grizzly property is located only 8 km north of the Mt. Nansen gold-silver-copper-lead-zinc mine. The Freegold Mountain district is located 15 km north of the property (Map 115 I/6). Several placer operations continue to be active in the area. The present Mt. Nansen property held by B.Y.G. Natural Resources, includes the Brown-McDade, Webber, and Heustis veins. The original discovery was made by gold panning in 1943. Considerable development and exploration has been carried out with reserves standing at 953,400 Tonnes @ 9.4 g/T Au and 190 g/T Ag (published in January 1989). The deposit has both oxidized ore that is heap-leachable and sulphide reserves amenable to conventional milling. Sporadic, limited production from the Webber and Heustis veins in 1968, 1975, and 1976 was halted due to poor recoveries resulting from the lack of a cyanide circuit. B.Y.G. is currently arranging financing to resume production.

A series of north-south trending hand trenches were dug on the site of the Grizzly property in the 1920's to uncover a quartz vein. However, no claims were staked at the time and no subsequent work or staking has been documented until the vein was rediscovered by Eugene Curley in 1989.

## Regional Geology

The greater part of the Mount Nansen/Mount Freegold area (115 I/3,6) containing the Grizzly property is within the Yukon Crystalline Tectonic Terrane, with the northwest part occupied by the Yukon Crystalline Terrane (Carlson, p. 7). Basement rocks include metamorphosed and deformed sedimentary, volcanic and plutonic rocks of uncertain age (Carlson, Sheet 2 - Map 115 I/3). These are intruded by two suites of foliated plutonic rocks: the Klotassin Suite (Triassic-Jurassic), mainly granodiorites, and the Big Creek Suite (Jurassic) including syenites and monzonites. It is thought that latest metamorphism of basement rocks is related to the emplacement of these suites (Carlson, p. ii).

The Dawson Range batholith (lower Cretaceous) consists of the regionally exposed Casino Granodiorite and the more localized Coffee Creek Granite. The Mount Nansen volcanics, mainly andesite with a lesser felsic component may be cogenetic with these intrusives (Carlson, p. ii).

The Mount Nansen Suite comprises Mount Nansen Volcanics, Bow Creek Granite, a granophyric pluton with related peripheral quartz-feldspar porphyry dikes, and numerous intermediate to felsic porphyry stocks and dikes (Carlson, p. ii).

The Carmacks Volcanic Suite (upper Cretaceous) has been subdivided into three units: the lowermost Basal Felsic Member consists of pyroclastic rocks and associated glassy domes or plugs. The middle Lower Andesite Member consists of andesite and pyroclastics with minor basalt. The most extensive is the Upper Basalt Member mainly made up of basalt flows with some andesite flows (Carlson, p. iii).

## Economic Geology

Four types of mineral deposits have been identified in the region: porphyries, veins, skarns and placer. The porphyries are low-grade copper-molybdenum deposits with local gold enrichment in the upper parts. Breccias with high precious metals values occur within the porphyries and peripherally and are associated with quartz-feldspar porphyry dikes. Gold and silver-bearing quartz veins, such as the vein on the Grizzly property, occur in dilational fracture systems, peripheral to the porphyries. Gold-bearing iron-rich skarns are hosted in calareous meta-sediments of the Yukon Crystalline Terrane. Base metal-rich veins are rare and distal from porphyry centres.

"Mineralization controls are recognized as follows:

1) Proximity to major regional structures such as the Big Creek Fault and the Minto Linear which extends north to northeasterly through the map area.

2) Local structures, ranging in trend from northwesterly to northeasterly, are important as hydrothermal channelways and vein sites.

3) Presence of favourable host including Mount Nansen volcanics and Casino Granodiorite.

4) Proximity to porphyry stocks or quartz feldspar porphyry dikes." (Carlson, p. iii)

## Work Done

In August-September 1989 four northwest-southeast trending trenches were excavated and sampled (Figure 4). Trenches #1 (10.1 $m^3$) and #2 (11.3 $m^3$) were dug by hand while trenches #3 (8.4 $m^3$) and #4 (10.4 $m^3$) were dug mechanically (Plates 1 to 6). Sampling was done by three parties: the owner, Noranda Exploration Company (August) and Total Energold Corporation (September). The latter also undertook a limited geochemical survey of the property at 50 m intervals along northwest trending tie lines 100 meters apart. During the 1990 field season eight additional trenches (totalling 1900 $m^3$) were dug with a D3 Cat, involving 3 people (including the owner) for a period of 5 days.

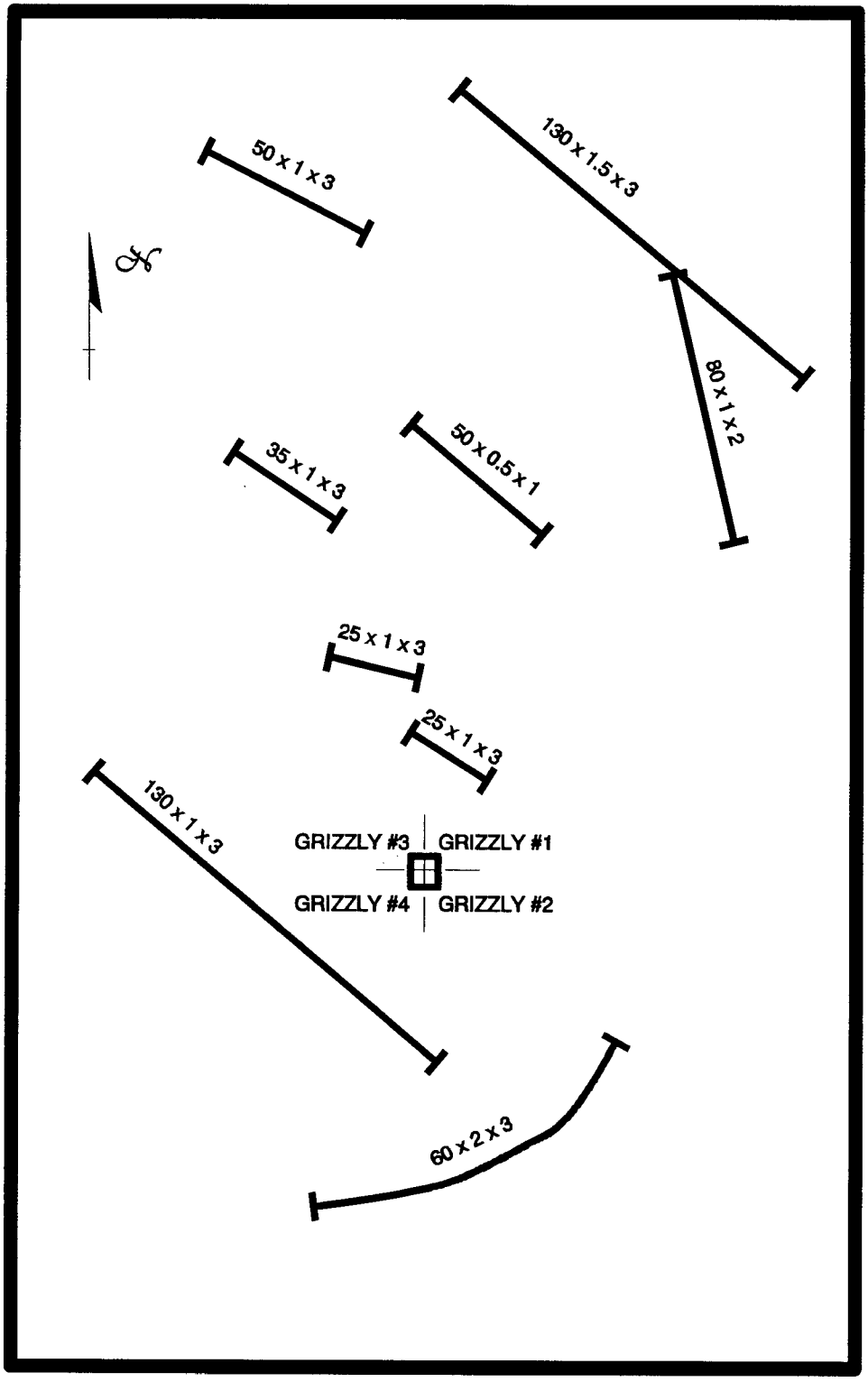


Figure 4 Trench Map

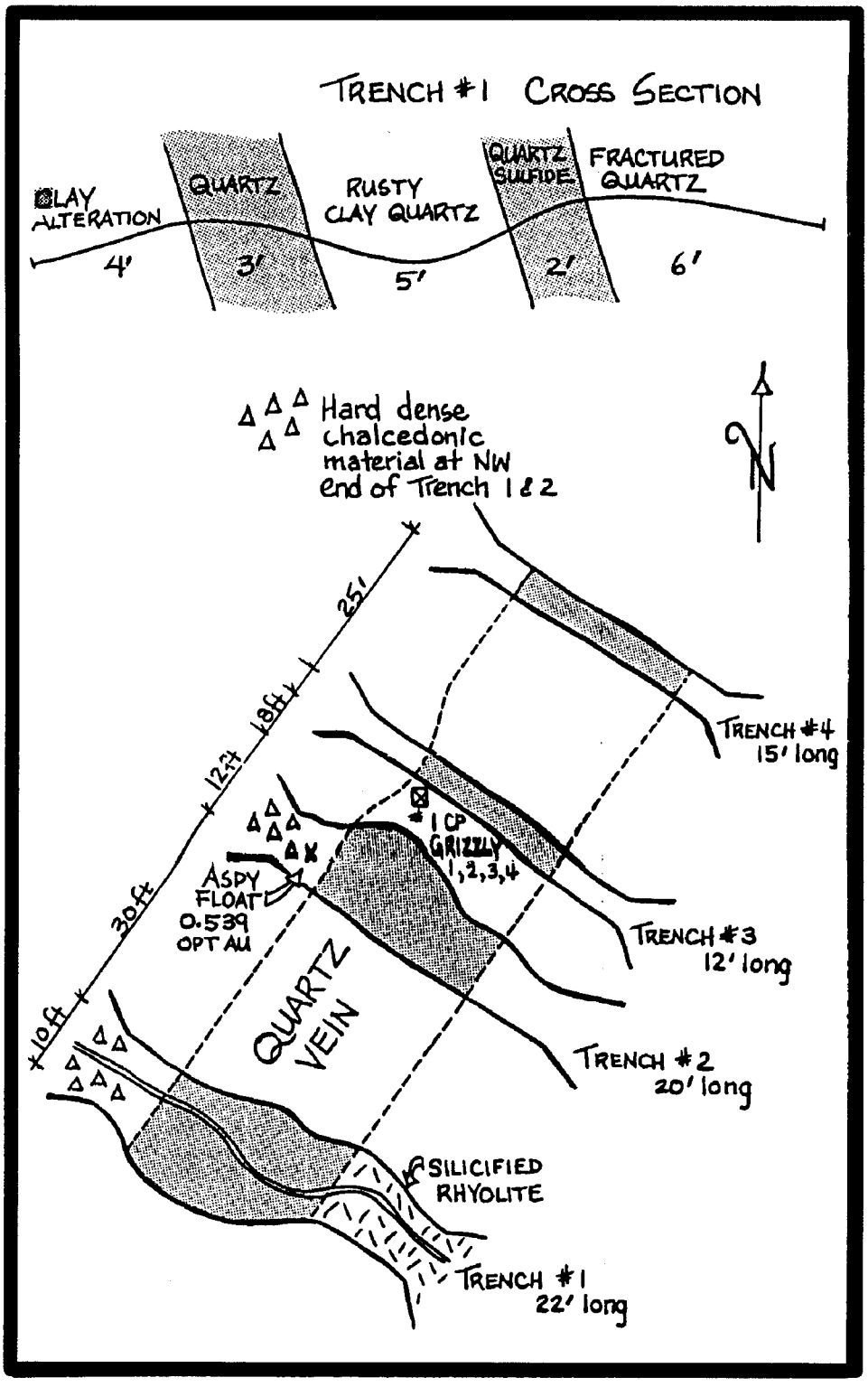


Figure 5 Trench #1 Detail

Claim Geology

Outcrop on the property consists of mid to late Cretaceous Mt. Nansen andesite to latite massive flows and feeders, introducing Jurassic orthoclase-hornblende porphyritic syenite of the Mount Freegold plutonic suite. Previously unmapped felsic porphyry dikes and a silicified rhyolitic dike are intimately associated with the altered and brecciated quartz sulphide vein. The rhyolite appears to be part of the basal felsic member of the late Cretaceous to Paleocene Carmacks Suite.

The Grizzly vein is part of a series of vein deposits peripheral to the center of a porphyry copper occurence. It consists of a mineralized white quartz vein striking $190^{o}$ to $220^{o}$ and dipping approximately $60^{o}$ to the west. The vein is approximately 6m wide and is exposed over a strike length of 140m and is open in both directions along strike. The down dip potential remains completely untested. At surface the vein is weathered and stained with scorodite, iron, and manganese oxides. It contains patches of arsenopyrite up to 1cm across and in other places is honeycombed with rusty cavities.

A chip sample of the vein in trench no. 2 returned an average of 0.21 oz/ton Au over 3.5m and 0.45 oz/ton over 1.5m. A grab sample of quartz/arsenopyrite float from the trench immediately below the claim post ran 1.239 oz/ton Au, 1.69 oz/ton Ag and was anomalous in Cu (185 ppm), Mo(28 ppm), Pb (979 ppm), As(>30 000 ppm), Sb(91 ppm), W(34 ppm) and Hg(410 ppm).


Plate 1: 1989 Trenches


Plate 2: 1989 Trenches

Plate 3 - Trench #2

Plate 4: Trench #1

Plate 5 : Gossanous subcrop

Plate 6: Trench #3

Conclusions and Recommendations

The GRIZZLY vein constitues a new precious metal vein discovery in a prolific mining camp. The high grade values are from a vein of an impressive 6m width. Accompanied by silicification, extensive clay alteration and brecciation it is obviously formed in an active environment.

It's setting within the Nansen/Freegold camp demands comparison with the exploration parameters locally employed.

a) Proximity to regional NNE trending structures; it is on the extension of the Rusk Ck./Nansen Ck. East Fork linear.

b) Proximity to crosscutting local NNW strucutures; the porphorytic dikes and the branch of the creek adjacent the trenching are localized along a NNW trend.

c)Favourable host rock; the Grizzly is in Mount Nansen volcanics and associated with the felsic member of the bimodal Carmacks volanic suite. The Casino Granodiorite is exposed at a lower elevation 2 km SW along the Rusk/East Fork linear.

The discovery remains essentially untested in spite of its positive geologic setting. It is recommended that a program of evaluation be undertaken. A grid should be run extending NE and SW of the present exposure. Basic prospecting, mapping and geochemical surveying should be completed over the grid. Further trenching and a limited drilling program should implemented to test the strike and dip extensions of the vein.

Diane Brent

Geologist (B. Sc.)

Impact Graphix

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Webster, M.P., 1986. Geology and Geochemistry Report on the Row 1-24 Claims Victoria Mountain Project. Assessment Report, Noranda Exploration Company Ltd.

STATEMENT OF COSTS

**1989**:(after 15 Aug.)

| | | |
|---|---|---|
| Labour | | 1720.00 |
| Transportation | | 1139.40 |
| Geochemical Costs | | |
| Soils | | 1513.50 |
| Rocks | | 181.00 |
| Trenching | | 349.20 |
| Drafting | | 700.00 |
| | Total | 5603.10 |

**1990**:

| | | |
|---|---|---|
| Labour | | 2250.00 |
| Trenching | | 2850.00 |
| Living Expenses | | 570.00 |
| | Total | 5670.00 |
| Report Writing & Drafting | | 1985.00 |

**TOTAL: $13 258.10**

STATEMENT OF COSTS (Detailed)

**1989: $ 5603.10**

| | *Noranda* | *Total Energold* | *E. Curley* |
|---|---|---|---|
| Labour | 1@200 + 150 = 350.00 | 4@265 + 160 = 1220.00 | 150.00 |
| Transportation | 2@50 + 100 = 200.00 | 939.40 (1.4@670 + fuel) | |
| Geochem Costs | | | |
| Soils | 22@15 = 330.00 | 1183.50 | |
| Rocks | 7@20 = 140.00 | 13.50 | 2@13.75 = 27.50 |
| Trenching | | | |
| Hand | | | $21.4m^3$@15 = 321.00 |
| Mechanical | | | $18.8m^3$@1.50 = 349.20 |
| Drafting | | 28 hrs@25 = 700.00 | |

**1990: $5670.00**

| | |
|---|---|
| Labour | 3@150 * 5 days = 2250.00 |
| Trenching | $1900m^3$ @1.50 = 2850.00 |
| Living Expenses | 5 days @38 * 3 persons = 570.00 |
| Report Writing (1991) | $1985.00 |

**TOTAL: $13 258.10**

## STATEMENT OF QUALIFICATIONS

I, Diane Brent, of the City of Whitehorse, Yukon Territory do hereby certify that:

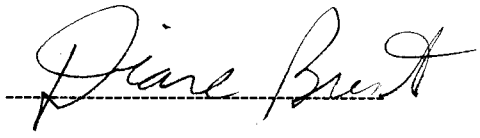
1. I have been an exploration geologist since 1987 and I have been working for Impact Graphix since December 1990.

2. I am a graduate of McGill University, Montreal, Quebec with a B. Sc. in Geology.

3. I am a Member of the Yukon Chamber of Mines.

4. I have not personally inspected the property in question.

5. I have no personal interest in this property.



Diane Brent
Geologist
Impact Graphix.