

Report

on

**THE REFERENDUM GOLD PROSPECT**

**Nelson Mining Division  
82F/6 NW  
British Columbia**

for

**SNOWATER RESOURCES LTD.**

**Nelson, B.C.**

by

**ALBERT F. REEVE, P.Eng.**

**March 10, 1987**

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## **INTRODUCTION**

This report on the "Referendum" property near Nelson B.C. has been prepared at the request of Mr. Henry Zukowski, the President of Snowater Resources Ltd. of Nelson, B.C. The report is based on a visit to the property on October 8, 1986, as well as government reports and private material provided by the Owners. The results of exploration work carried out by Snowater during October and November 1986 are also described. The 1986 work included trenching, surface sampling, and diamond drilling.

## **LOCATION AND ACCESS**

The property is located on the northwest part of NTS Map Sheet 82F/6, six miles southwest of the town of Nelson on Fortynine Creek at about 5500 feet above sea level. Access is achieved by driving 22 miles from Nelson via the settlement of Blewett and the Rover Creek forestry road.

The north facing mountain slope on the property is heavily timbered except in the area of the Crown Granted claims which has recently been logged.

## **PROPERTY**

The property covers approximately 2500 acres and is owned by Mr. Tom Cherry of Nelson, B.C. It is understood that Mr. Cherry has

made an option agreement with Snowater Resources Ltd. of Nelson.  
Mineral claim records were provided by the Owners as follows:

**A. Reverted Crown Granted Claims:**

Lot 4388	Golden Cross	Expires	April 8, 1989
Lot 4387	Referendum	Expires	April 8, 1990
Lot 4386	Katie	Expires	April 8, 1989

**B. 2-Post Mineral Claims:**

<b>Claim</b>	<b>Record Number</b>	<b>Expiry Date</b>
Tec 1	2998	April 8, 1987
Tec 1	2999	April 8, 1987
Tec 3	3000	April 8, 1987
Tec 4	3001	April 8, 1987
Tec 5	3002	April 8, 1987
Tec 6	3003	April 8, 1987
Tec 7	3004	April 8, 1987
Tec 8	4414	Aug. 29, 1987
Tec 9	4415	Aug. 29, 1987
Teccu 1	4263	Oct. 29, 1989
Teccu 2	4264	Oct. 29, 1989
*Teccu 3	4489	Nov. 24, 1987
*Teccu 4	4490	Nov. 24, 1987

**C. MGS Mineral Claims**

<b>Claim</b>	<b>No of Units</b>	<b>Record Number</b>	<b>Expiry Date</b>
Tec Gold #1	9	4370	June 3, 1987
Tec Gold	16	2997	April 8, 1987
*Tec Gold #2	12	4488	Nov. 24, 1987

\* Claims recently acquired by staking  
not shown on Claim Map Figure 1.

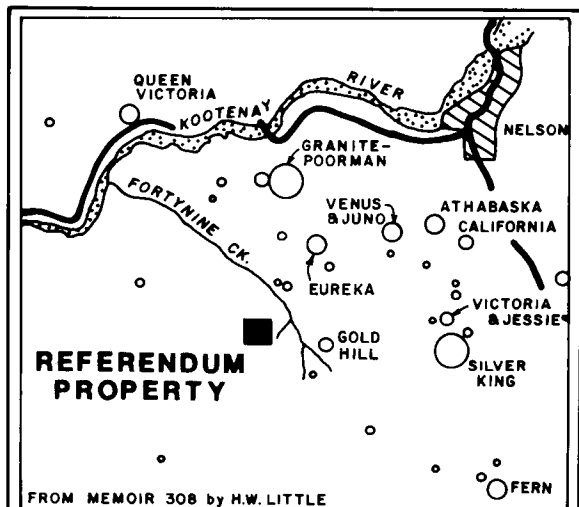
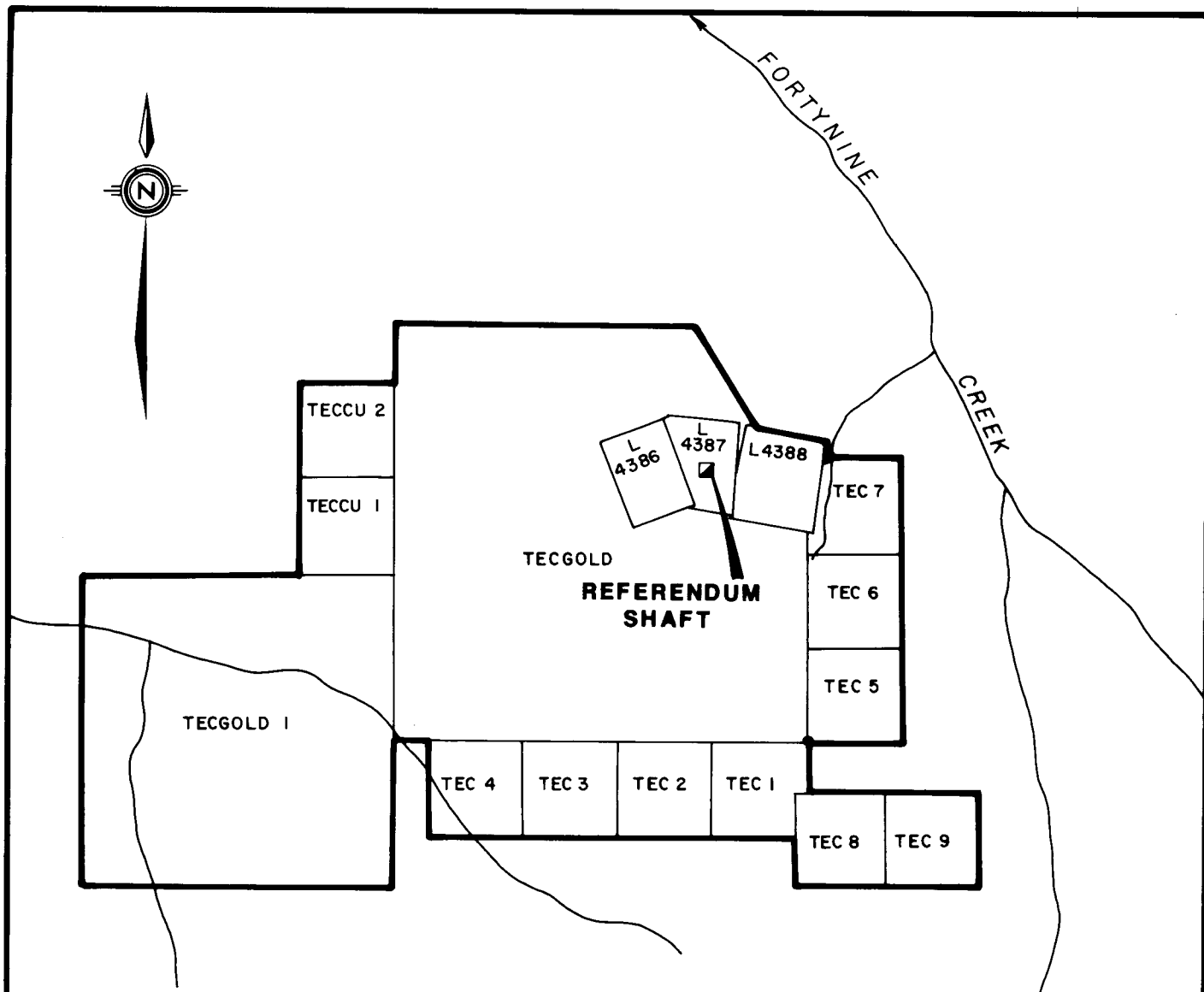
## **SUMMARY AND CONCLUSIONS**

The Referendum gold property held by Snowater Resources Ltd. is located 6 miles southwest of Nelson, B.C. It is accessible by road and is located within an area of about 100 square miles where gold and silver bearing ores have been mined from about 30 locations. This area's close proximity to the Trail smelter (about 40 miles) could be a considerable economic advantage to any future mine development programme. The principal host rocks for the precious metals bearing veins and shear zones are the Rossland Volcanic Group which also hosts British Columbia's second most productive gold mining district near the town of Rossland.

There has been about 130 oz. of gold produced from the main Referendum vein, 100 oz. from a 250 foot shaft prior to 1907 and, within the last three years, about 30 oz. from surface near the shaft collar. The surface material averaged .13 oz/ton gold whereas ore from the shaft averaged .40 oz/ton.

Recent exploration work, carried out by Snowater in the fall of 1986 which consisted of trenching, sampling, mapping, and diamond drilling (3 holes), has identified six veins in addition to the Referendum. Two of these have a west-southwest trend, parallel to the Referendum and are marked "Vein 2" and "Vein 3" on Figure 2 of this report. Vein 2 returned one surface assay of 2.4 opt gold across 1.1 ft. and Vein 2 averaged .25 opt gold across an average width of 1 ft. along a strike length of 100 ft. with the best assay being 1.08 opt gold across 1.1 ft. These grades and widths are not necessarily commercial but indicate exploration potential and should be followed by further surface

work along the west-southwest trending projection of the Referendum vein system which includes Vein 3 and Vein 2. This work would consist of trenching and surface sampling. Prospecting, trenching and sampling of other veins on the property may be carried out at this time as well. The planning of further diamond drilling should await assay results of the recommended surface work.



**LOCATION MAP**  
**SILVER & GOLD MINES,**  
**NELSON M.D.-B.C.**  
**SCALE 1"=4 MILES**

○ AMOUNT OF PRODUCTION IS RELATIVE TO CIRCLE'S DIAMETER.



**SNOWWATER RESOURCES LTD.**  
**REFERENDUM CLAIM GROUP**  
 NELSON M.D.-B.C. NTS:82F/6

**CLAIM MAP**

To accompany a report by  
 A.F.Reeve P.Eng. March 1987

**FIGURE:1**

## GEOLOGY OF THE NELSON DISTRICT

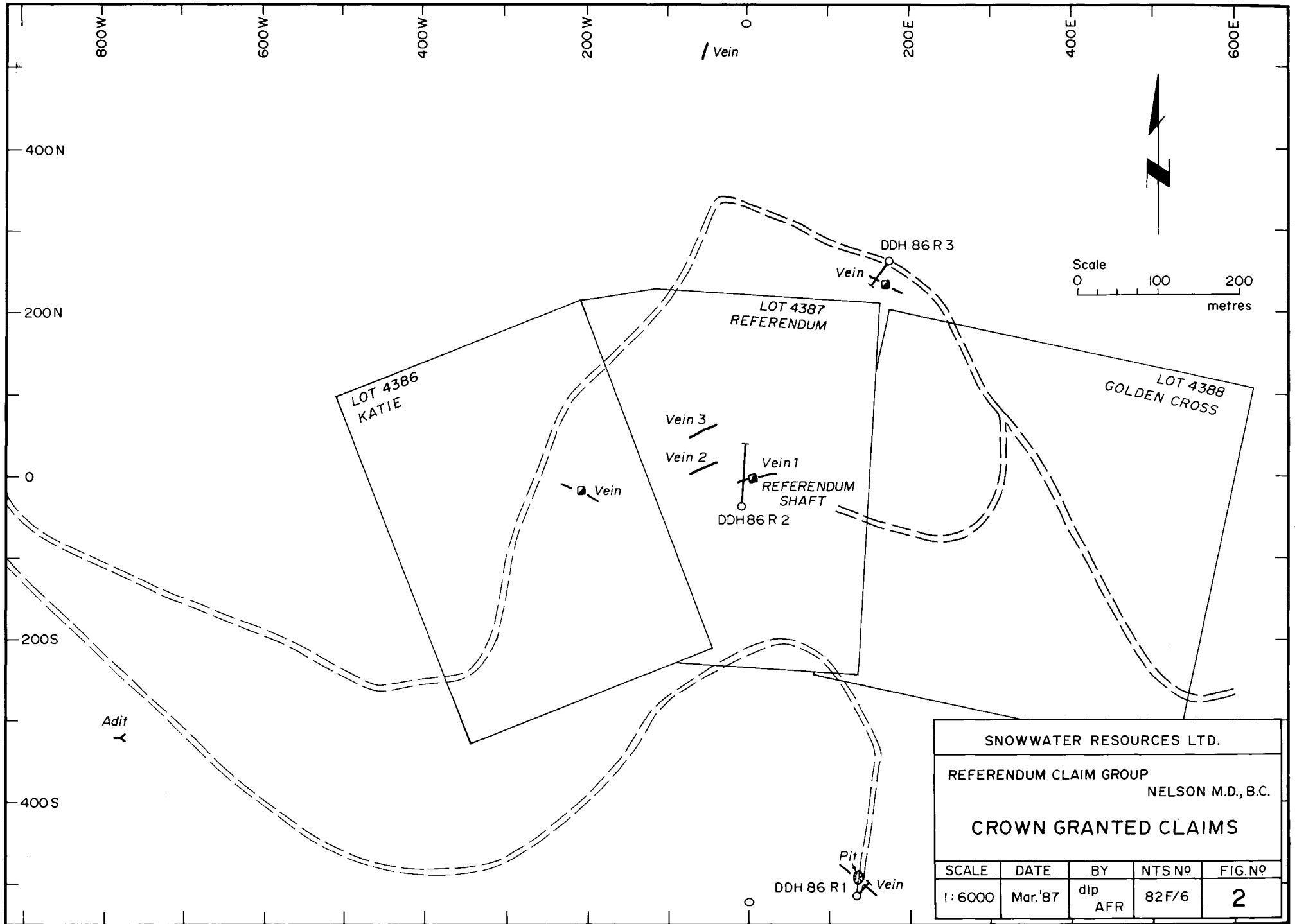
The area immediately southwest of Nelson has been the subject of considerable mining activity. It covers about 100 square miles and is underlain principally by volcanic rocks of the Jurassic Rossland Group. This unit is composed of flows and tuffs of basaltic to felsic composition. They have been folded into a northwest trending belt which forms a roof pendant within granitic rocks of the Nelson batholith. The Rossland rocks have been subject to "greenschist" metamorphism and include intensely sheared zones of chlorite and sericite schist.

In this area, ores containing gold, silver and base metals have been mined on a small scale from about 30 locations. The seven largest operations, according to B.C. Department of Mines literature were as follows:

Name of Mine	Tonnage Produced	Oz/Au	Oz/Ag
Silver King	221,997	2,220	4,437,720
Granite Poorman	197,749	63,280	25,707
Athabaska	46,055	20,264	4,605
Queen Victoria	44,423	1,777	19,990
Fern Mine	12,430	6,215	497
Eureka	9,815	589	35,923
Venus Juno	5,967	3,401	3,043

Most of the mineralization occurs as quartz veins and stockworks in the volcanics and the adjacent Nelson batholith. Some "replacements" and disseminations of sulphide within sheared volcanic rocks are also reported.





To accompany a report by A.F.Reeve, P.Eng.

**GEOLOGY AND MINERALIZATION  
OF THE REFERENDUM PROPERTY**

(refer to Fig. 2)

The present property covers about 2500 acres and is underlain by fragmental volcanic rocks and minor sediments of the Rossland Group. Intense shearing has produced bands of chlorite and sericite schist which have a general northwest trend and dip steeply to the southwest. The bedrock is covered by fairly shallow till and outcrops are frequently seen in road cuts, prospect pits and trenches.

Seven quartz vein showings were seen on the property as follows:

- i) **The Referendum Vein** is located on the central part of Crown Grant No. 1626. It varies in width from 1 foot to 5.5 feet, has an west-southwest strike and dips  $80^{\circ}$  to the south. It is milky white in colour and contains irregular clusters and bands of tourmaline. Some stringers of quartz were noted in the sheared footwall. There is a shaft on the vein which is reported to be 200 feet deep and which produced 250 tons of material averaging .40 oz/ton gold in 1907 (B.C. Minister of Mines Annual Report 1907, page 103). A 5.5 foot sample taken by the writer at the shaft assayed .126 oz/ton gold: a 150 ft. length of the vein was sampled on seven sections by Watson, P. Eng. in the fall of 1986; none of these samples returned significant gold assays. The owner has, during the past three years, shipped 220 tons of quartz averaging .13 oz/ton gold and minor silver to the Cominco smelter at Trail. This material was surface mined from a 100 foot

section of the vein centred approximately on the shaft. A shipment of 10 tons from the shaft dump averaged .20 oz/ton gold and 7.75 oz/ton silver.

Diamond drill hole 1986 R-2 cut the Referendum vein about 90 ft. below surface immediately west of the shaft where the vein is about 2.3 ft. thick. No significant assay was reported from the drill core.

- ii) A quartz vein, subparallel to the Referendum, is located about 100 feet to the northwest. It is marked "Vein 2" on Figure 2, is exposed intermittently for 150 ft. along strike in a trench bottom and is about one foot wide. Eight sample sections were taken across the vein by Watson in the fall of 1986. One sample returned an assay of 2.4 opt gold across 1.1 ft. The remaining samples assayed .1 opt gold or less. Drill hole 1986 R2 intersected the down dip projection of this vein 220 ft. below surface. No assay was reported from the core.
  
- iii) A second subparallel quartz vein marked "Vein 3" is located 130 ft. northwest of Vein 2. It is about one foot thick and was sampled by Watson on eight sections along a strike length of 100 ft. The best assay result from each section was as follows, from west to east along the trench bottom: 2.6 ft/.03 opt gold; 1.1 ft/.62 opt gold; .66ft/.37 opt gold; .98ft/.05 opt gold; 1.1 ft/.17 opt gold; .66 ft/1.08 opt gold; .33 ft/0.1 opt gold; and .33 ft/.23 opt gold.

- iv) A northwest striking vein located about 1600 feet south-southeast of the Referendum shaft is exposed in a pit. A six foot sample taken by the writer, containing 10% white quartz, assayed .005 oz/ton gold and a specimen of rusty copper stained quartz from the hanging wall assayed .078 oz/ton gold. A 10 ton shipment by the Owner from this location assayed .05 oz/ton gold.

Diamond drill hole 1986 R1 cut the downward projection of the vein about 150 ft. below the surface. No significant drill core assays were reported.

- v) A strong, sulphide bearing, quartz vein was seen in the wall of a second shaft about 900 feet north-northeast of the Referendum. It is near vertical and has a northwest strike. A sample of dump material taken by the writer assayed .376 oz/ton gold and .14 oz/ton silver.

Diamond drill hole 1986 R3 cut the down dip projection of this vein about 130 ft. below the surface; no significant assays were reported from the core.

- vi) A north-northeast trending quartz vein is located about 1700 ft. north of the Referendum shaft. A 2 ft. sample returned .002 opt gold.

- vii) A shaft was located on a northwest trending quartz vein about 650 ft. west of the Referendum shaft. Three samples taken did not return a significant gold assay.

## RECOMMENDATIONS

An exploration programme is recommended for the Referendum claim group as follows:

### Phase I - Trenching and Sampling

- Excavator 200 hrs x \$100	\$ 20,000
- Buldozer 50 hrs x \$80	4,000
- Sampling & Geology Crew 20 days x 550	11,000
- Assays (Au, Ag) 400 x \$13	5,200
- Accommodation, meals, travel	4,000
- Allowance for survey control	2,500
- Reporting and exploration related office expense	3,000
- Contingeny allowance, 10%	5,300
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<b>Total</b>	<b>\$ 55,000</b>
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Phase II - Subject to the results of Phase I, proceed with 3000 ft. of diamond drilling @ \$40 per foot including all support costs and a 10% contingency allowance.

**\$132,000**  
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**Appendix A**

**WRITER'S CERTIFICATE**

**ALBERT F. REEVE LIMITED**

**CERTIFICATE**

I, Albert F. Reeve of 904 - 675 West Hastings Street, Vancouver, British Columbia, do hereby certify that:

1. I am employed by Albert F. Reeve Limited of Vancouver, British Columbia and have practiced as a mineral exploration geologist for the past 24 years.
2. I graduated from Michigan Technological University, Houghton, Michigan in 1961, with a Bachelor of Science degree in Geological Engineering.
3. I am a member in good standing of the Association of Professional Engineers of British Columbia.
4. I have no direct or indirect interest whatsoever in Snowater Resources Ltd. or its mineral properties, nor do I expect to receive any such interest.

Albert F. Reeve, P.Eng.

Vancouver, B.C.

March 10, 1987

**Appendix B**

**REFERENCES**



**REFERENCES**

B.C. Minister of Mines Annual Report 1907, page 103.

Report for Coffee Creek Resources Ltd., W.G. Hainsworth, January  
1981.

Geochemical Report by J. Edington of Spokane, Washington, B.C.  
Assessment Report #3533, 1971.

British Columbia Department of Mines & Petroleum Resources,  
Geological Fieldwork 1985, pages 333, 334 and 335.

G.S.C. Memoir #308, Nelson Map Area, West Half, H.W. Little,  
1960.

British Columbia Mineral Inventory File.

Report for Snowater Resources Ltd. by A.F. Reeve dated October  
22, 1986.

Assay Plan, Diamond Drill Hole Sections, Drill Logs and Notes by  
I.M. Watson dated December 1986.

**Appendix C**

**SMELTER RECEIPTS**

**SMELTER RECEIPTS**  
from Cominco Ltd., Trail B.C.  
to Tom Cherry, Nelson B.C.

<b>Date</b>	<b>Short Tons</b>	<b>Grade oz/ton Au</b>	<b>Grade oz/ton Ag</b>
September 3, 1986	22.9	.089	0.65
September 3, 1986	22.7	.087	0.15
September 6, 1985	19.7	.057	0.35
August 7, 1985	12.4	.130	0.40
July 5, 1985	9.0	.278	0.30
November 29, 1984	10.8	.172	0.25
November 23, 1984	10.9	.080	0.35
November 22, 1984	19.2	.232	1.00
October 25, 1984	12.2	.055	0.25
September 26, 1984	23.3	.203	0.20
November 28, 1983	25.2	.147	0.90
November 17, 1983	10.2	.200	7.75
November 17, 1983	10.1	.045	1.20
September 28, 1983	22.0	.100	0.35
September 7, 1983	9.8	.158	2.20