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Nizi  
104P/2-3  
104J/14-15

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## INTRODUCTION

This report was prepared at the request of Dr. Michael Marchand, Director of Madrona Mining Limited, and concerns a diamond drill program conducted during the period September 3 to 23, 1996 on the Nizi claims, British Columbia, under a joint venture with Orogrande Resources Inc. Six holes were drilled during the course of the program for an aggregate total of 3022 feet.

Falcon Drilling of Prince George, B.C. was contracted to do the drilling and Vancouver Island Helicopters of Stewart, B.C. was contracted for the transportation requirements. A camp was established 26 km northwest of the claim on a small reserve rented from the Dease River Band.

Selected portions of the drill core were split and submitted for analysis to TerraMin Research Labs Ltd. of Calgary, Alberta. The core was stacked for storage in a small clearing on the east side of the road 3.75 km from where the camp was erected.

### Location and Access

*Minfile*  
The Nizi claims (Figure 1) are located in north-central British Columbia and can be found on NTS map sheets 104 I/14+15 and 104 P/2+3. They are centred at 58°59' North latitude and 139°00' West longitude. Good Hope Lake is the nearest community to the property, located 39 km to the northwest on the Stewart/Cassiar Highway. The property can be accessed only by helicopter at the present time.

Located within the Cassiar Mountains the topography in the claim area is highly variable. The elevation ranges from 1100 metres to 2010 metres ASL with slopes being generally steep but can be locally precipitous. Most of the property is above tree line and the flora consists of alpine grasses and shrubs except in the steeper areas which are scree covered or outcrop.

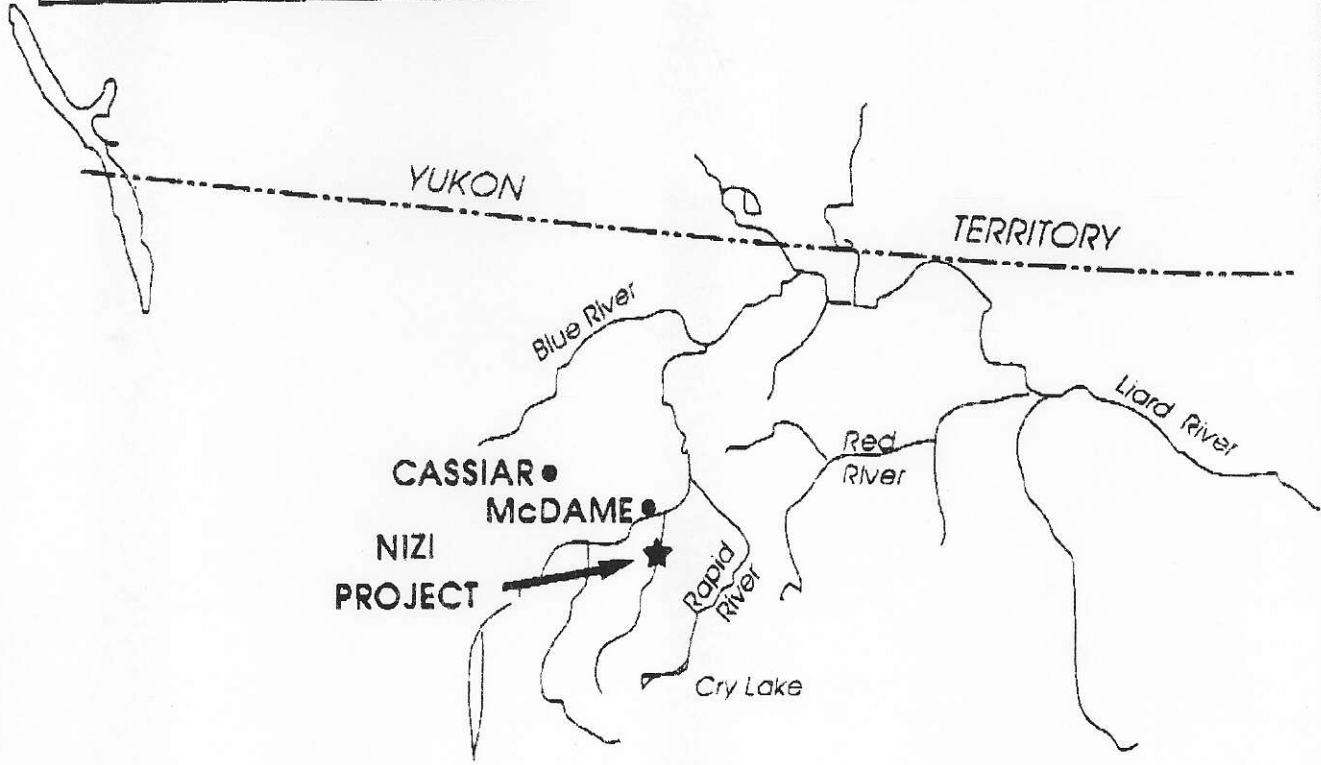
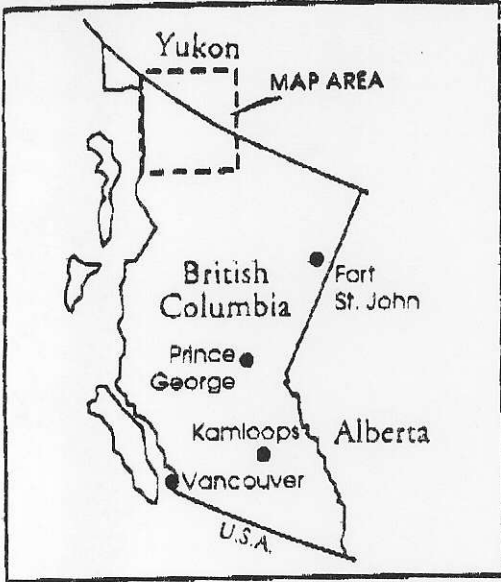
### Claims Data

The property (Figure 2) is comprised of two modified grid system claims composing 28 claim units, stated on August 13, 1994, as per:

Claim Name	Claim Number	No. of Units	Expiry Date
Nizi 1	330062	18	Aug. 13, 1997
Nizi 2	330063	10	Aug. 13, 1997

The claims are held in the name of Oro Grande Resources Inc. which has in turn optioned the property to Madrona Mining Limited.

Taiga Consultants Ltd. has not verified the ownership or claim status of these properties and makes no claim as to the accuracy of the above information which was obtained from Madrona Mining and Oro Grande Resources.



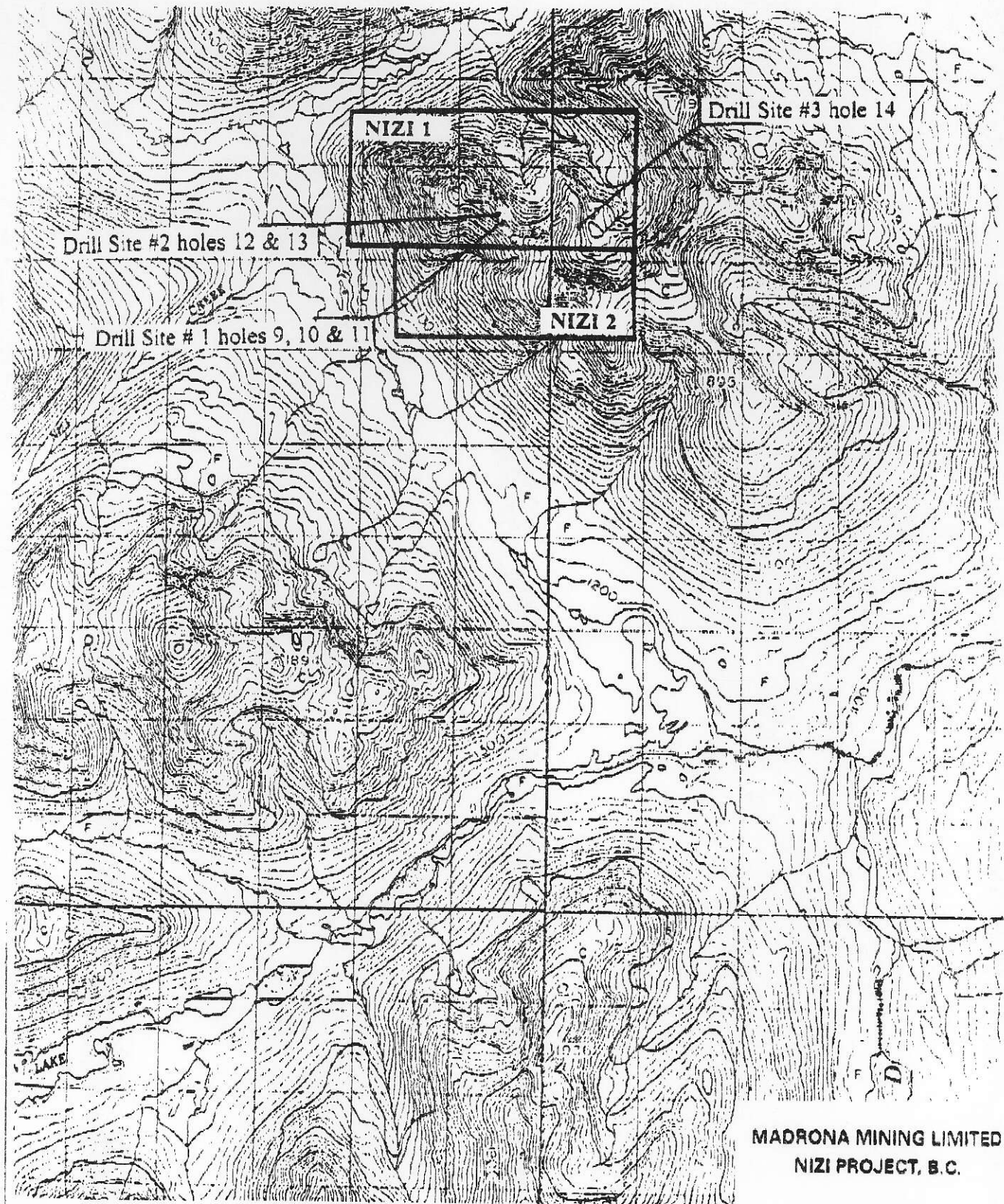
*Gui Salazar - Geo*

MADRONA MINING LIMITED  
NIZI PROJECT, B.C.

LOCATION MAP

Figure 1

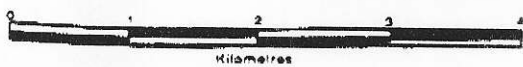
96472M NIZI BC 2/21/2



MADRONA MINING LIMITED  
 NIZI PROJECT, B.C.

Claim Map  
 Figure 2

129°00'



## EXPLORATION HISTORY

The Nizi Claims were first staked in 1969 by J. Altenbury. They were located to cover an extensive gossanous zone of polymetallic mineralization hosted within veins and shears.

In 1970, a small soil sample survey was conducted in conjunction with a geological evaluation. Anomalous concentrations of lead and zinc were found to be associated with north trending topographical lineaments. Sumac Mines Limited optioned the property in 1972 and explored the area for a porphyry-style copper deposit through geological mapping and soil/silt geochemical surveys. Though several silver/zinc anomalies and a high gold anomaly were identified, the claims were allowed to lapse in 1973.

The area was re-staked in 1979 by Regional Resources Ltd. This company conducted detailed geological mapping and geochemical surveys to assess the gold and silver potential on the property. Gold, silver, lead, and zinc anomalies were located which confirmed and extended those identified by Sumac Mines Limited. Regional Resources Ltd. conducted further exploration in 1982 and defined additional silver, gold, zinc, and lead mineralization.

The claims were again allowed to expire and were subsequently staked in 1987 by Gold Giant Minerals Inc. This company established a 36.4 km grid from which 1,060 soil samples were collected. Geophysical surveys (magnetometer and VLF-EM) were also conducted. Additional exploration in 1991 outlined a quartz vein/stock work system that is highly anomalous in gold and silver and the area became the focus for subsequent work.

An airborne geophysical survey was completed in the spring of 1992 and was followed up by a diamond drill program having an aggregate total of 957.38 metres drilled in 5 holes. These five holes were drilled for Gold Fields Canadian Mining Ltd., the project operator. The claim owners at this time (Gold Giant Minerals Inc.) also drilled an additional three holes at the conclusion of the first program. These later holes had an aggregate total of 343.82 metres.

The showings were restaked by Hunter Explorations in 1994. Oro Grande Resources Inc. acquired the properties from the stakers in 1995 and Madrona Mining Limited entered into its present option agreement with Oro Grande Resources Inc. in July 23 of 1996.

The Nizi property falls within the study area of a 1995 B.C. Geological Survey Open File #RGS-44 a stream sediment geochemical survey which indicates coincident Au-Sb-As-Ag-Ba and Cu-Pb-Zn-Ag-Ba anomalies (maps 51.52 Bond 1995). This is shown along with the geology of the area in Figures 3 and 4.

## GEOLOGY

(after W.D. Bond, 1995)

The rocks in the claim area are composed of metavolcanic and metasedimentary assemblages (Figure 3). A main metavolcanic sequence forms a wedge in the centre of the area that is at least 1200 metres thick in the northwest and thins to about 200 metres in the southeast by Zinc Lake. All of the significant mineralization located to date is hosted within the main metavolcanic sequence. The volcanic wedge comprises numerous mafic, intermediate, and felsic units which form a complex interlayered package.

Mafic to intermediate volcanics form about 35% of the main volcanic sequence. They become increasingly felsic from northwest to southeast, and are comprised of fine- to medium-grained massive flows with lesser porphyritic flows. Brecciated and/or highly fractured phases occur locally which may be carbonatized and/or silicified.

Intermediate felsic volcanic rocks form the greatest proportion of the main volcanic wedge hosting the mineralization. They are fine- to medium-grained flows and tuffs which are commonly brecciated. Strong shear fracturing is locally exhibited and a pyroclastic and/or flow origin is evident in much of the sequence cored.

Felsic volcanic/subvolcanic rocks form the smallest portion of the main volcanic unit. They are generally massive, fine-grained, light grey to buff to chalky white to locally black in colour. The rocks can exhibit a spotted, mottled black/white texture locally.

The felsic volcanic/subvolcanic sequence forms two major formations. The more southerly formation may be relatively continuous while the northern formation is a series of lens-like zones ranging up to 60 metres wide by 250 metres long. Three southeasterly lenses in the northern formation are host to, or at least near to, most of the known gold-bearing quartz vein/shear structures. Most of these rocks appear to be of pyroclastic origin with portions being subjected to silicification.

The most evident structures in the area are north to northwest trending faults ranging from less than a few centimetres to three metres in width. They are near vertical and are marked by intense Fe-carbonate alteration. In addition to the foregoing, there are east to southeast trending structures which are occupied by many of the quartz veins/veinlets found throughout the property, northeast trending fracture/jointing, north to northeast trending shears/fractures, and local breccia zones.

Alteration of the rocks can be variably carbonate, limonite/hematite, silicification, and sericitization. Pyrite is found disseminated throughout the felsic volcanic unit and also occurs locally in irregular patches, breccia matrix filling, swirls, and fracture filling.

Three main types of mineralization of economic significance are present in the claim area. These types are:

- a) sphalerite  $\pm$  galena  $\pm$  chalcopyrite  $\pm$  gold  $\pm$  silver associated with quartz carbonate veins/breccia in the felsic volcanic unit;
- b) sphalerite + galena + silver  $\pm$  gold  $\pm$  rare chalcopyrite associated with shears or fractures  $\pm$  quartz/carbonate veins/breccia in intermediate and intermediate/felsic volcanics; and
- c) gold  $\pm$  silver  $\pm$  sphalerite  $\pm$  galena associated with silicified zones in the felsic volcanic unit near Zinc Lake.

Structures with the presence of quartz and/or significant amounts of sulphides are generally required for gold to be present.

## DRILL PROGRAM

Six diamond drill holes were completed during the course of the program of subject in this report (Figure 5). The drilling was conducted by Falcon Drilling Ltd. of Prince George, B.C. who utilized a hydraulic rig developed by them. BW-sized core was recovered (1.654" or 4.2 cm diameter).

Five of the holes were drilled to test the area of the Discovery/Surprise vein structures. Two sites were used, with three holes being drilled from one site and two from another. The sixth hole was drilled in the Zinc Lake area to test the southeast extension of the felsic volcanic unit. Holes 96-9, 10, 12, and 13 were drilled to assess mineralization known as the Discovery and Surprise veins. Hole 96-11 was drilled for structural confirmation and, as previously noted, 96-14 was drilled at Zinc Lake to test the southeast extension of the favourable formation. The holes are plotted on individual sections (Figures 6 through 11), and then projected on cross sections A-A' (Figure 12) in the NW-SE plane and B-B' (Figure 13) in the SW-NE plane. Both cross sections are referenced to Figure 3.

The core was sampled based on alteration intensity and/or sulphide content. Generally, interesting intervals were split and bagged on a five-foot sample interval. The samples were sent to TerraMin Research Labs Ltd. of Calgary, Alberta, for analysis. Drill logs and assay results are appended to this report.

Significant assay results are plotted on the drill sections. Although the various zones appear to be structurally continuous most of the mineralization is inconsistent. An exception to this is evident in holes 96-10, 96-12, and 96-13

Hole	Interval	Width	% Zn	% Pb	g/t Ag	g/t Au
96-10	168'-183'	15'	2.49			
	183'-198'	15'	2.28	.35	187.0	
→ 96-12	213'-228'	15'	2.60	3.42	808.6	1.277
	228'-248'	20'	0.29			
96-13	123'-138'	15'	1.51	.70		
	138'-143'	5'	.48		1905.0	5.50

This zone of mineralization is hosted in a dacite/carbonate breccia within a strong shear. The zone is characterized by the presence of a sooty matte-black material tentatively identified as carbon. Of particular significance are breccia clasts consisting of massive sulphide and bedded material (dominantly sphalerite and galena), strongly indicative of a volcanogenic origin. The presence of these clasts imply that a volcanogenic massive sulphide deposit of unknown dimensions may be present at depth with the clasts having been torn away and incorporated in the breccia. That this zone of mineralization was not encountered in hole 96-9 is problematic, but there may be several reasons for its missing such as structural offset. It remains open to the northwest and at depth. The drilling indicates that it is steeply dipping (75° to 85°) and consistent with the dominant northwest-southeast structural orientation evident in the claim area. Each of holes 96-9, 96-10, 96-12, and 96-13 encountered at least two zones of sulphide enrichment at depth. These zones are characterized by having up to 10% pyrite as disseminations, blebs, flow breccia matrix, and/or fracture filling. Visible economic minerals present are sphalerite, galena, and chalcopyrite which are present as fracture filling within these general zones of pyrite mineralization. Most of the mineralization encountered in the drilling appears to be of epithermal derivation. The exceptions are the breccia fragments of massive sulphide (Zn, *Pb isotopes?*)



Pb. and Ag) mineralization previously noted which are considered to be of volcanogenic origin from a deposit at depth. A short summary of each hole and their significant intercepts follows (also see sections and drill logs):

**NZ 96-09 (Figure 6)**

Azimuth	Dip	Depth	Elev.	Target
033°	-60°	548' (144m)	1808m	Surprise and Discovery veins

The rocks cut in this hole are dominantly dacitic tuff, usually light grey in colour that commonly exhibit flow breccia and less commonly fault breccia; limonitic alteration is variable but can be intense, particularly at shallow depths, parting surfaces are also commonly limonitic or hematitic. Minor pyrite is disseminated throughout the section with two zones of strong pyritization (5-10%) occurring from 319' to 363' and 438' to 535'. Significant intersections encountered in this hole include:

Interval	Width	% Zn	% Pb	g/t Ag	g/t Au
177'-327'	15'	.550			
including 178'-193'	5'		.62	233.1	1.84
348'-353'	15'	.218			
378'-388'	5'	.169	.079	45.00	1.461
	10'	.285	.1	161.85	12.80

metallic assays were conducted on two of these sections with the following results:

348'-353'	1st assay	1.460 g/t Au
	2nd assay (metallic)	1.286 g/t Au
378'-388'	1st assay	12.800 g/t Au
	2nd assay (metallic)	14.908 g/t Au

**NZ 96-10 (Figure 7)**

Azimuth	Dip	Depth	Elev.	Target
342°	-60°	548'	1808m	Surprise and Discovery veins

The principal rock type in this hole is again dacitic tuff that exhibit flow and fault brecciation as in 96-09. Intense limonitic alteration is present in the upper portions of the hole where parting surfaces are also coated with limonite and/or hematite. Again, pyrite is disseminated throughout the hole with more intense pyritization occurring in two zones from 318' to 356' and from 456' to 525'. Significant intercepts in this hole include:

Interval	Width	% Zn	% Pb	g/t Ag	g/t Au
103'-123'	20'	.078	.232	78.45	.428
168'-183'	15'	2.480	.350	187.00	
358'-373'	15'	.051			1.707
428'-453'	25'	.280			2.074

The section from 428' to 453' was also assayed for metallics with the following results were:

1st assay	2.074 g/t Au
2nd assay (metallic)	1.471 g/t Au