

FEB 11 1998

Gold Commissioner's Office  
VANCOUVER

**ASSESSMENT REPORT ON THE  
1997 SOIL GEOCHEMICAL AND INDUCED POLARIZATION  
GEOPHYSICAL SURVEYS AT THE  
HARMONY GOLD PROJECT  
SANDSPIT, AMETHYST AND FEATHER GRIDS**

GRAHAM ISLAND, QUEEN CHARLOTTE ISLANDS  
SKEENA MINING DIVISION  
BRITISH COLUMBIA  
CANADA

N.T.S. 103F/08,09  
Latitude 53°32' N  
Longitude 132°13' W

**MINERAL CLAIMS REFERENCED**

Canyon 9-10, El Ninio, Feather 1-2, Ferguson  
F 1-13, 15, Gold 10, 13, 14, 21, 22, Gw #7, 8, 9, #11  
Misty 1-6, V 0-3, 6, 8-15, Qtz 1-2

Prepared for

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by

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**January 30, 1998**

**VOLUME I**

25,393

GEOLOGICAL SURVEY BRANCH  
ASSESSMENT REPORT

**ASSESSMENT REPORT ON THE 1997 SOIL GEOCHEMICAL AND  
INDUCED POLARIZATION GEOPHYSICAL SURVEYS AT THE  
HARMONY GOLD PROJECT SANDSPIT, AMETHYST AND FEATHER  
GRIDS**

**TABLE OF CONTENTS**

VOLUME I		<u>Page</u>
1.0	Summary	1
2.0	Introduction	2
2.1	Location and Access	2
2.2	Physiography and Climate	3
2.3	Exploration History	3
2.4	1997 Surveys	4
3.0	Claim Data	4
4.0	Property Geology	5
5.0	Soil Geochemical Surveys	7
6.0	Induced Polarization Geophysical Surveys	8
7.0	Conclusions	9
8.0	Statement of Costs	10
9.0	References	12
10.0	Statements of Qualifications	14

**LIST OF TABLES**

	<u>Following Page</u>
1.0 Mineral Claims Referenced	4

**LIST OF FIGURES**

	<u>Following Page</u>
1.0 General Location	2
2.0 Regional Geology	3
3.0 Mineral Claim Locations, North West	4
3.1 Mineral Claim Locations, South East	4
3.2 Mineral Claims and Grid Locations, 1:50,000 Scale	In pocket
4.1 Gold Soil Geochemistry and IP Grid Lines, Sandspit Grid	In pocket
4.2 Gold Soil Geochemistry and IP Grid Lines, Amethyst Grid	In pocket
4.3 Gold Soil Geochemistry and IP Grid Lines, Feather Grid	In pocket

## APPENDICES

- I Harmony Gold Project Mineral Claim Holdings, January 1998
- II ICP and Fire Assay Analytical Procedures for Soil Geochemical Samples
- III Analytical Results for Soil Geochemical Samples

### VOLUME II

- IV A Geophysical Report on an Induced Polarization Survey on the Harmony Gold Project, Queen Charlotte Islands, British Columbia, by D.A. Klit, Lloyd Geophysics Inc.

## 1.0 SUMMARY

This report documents soil geochemical and induced polarization geophysical surveys completed in 1997 within the Harmony Gold Project mineral claim block. This block of 116 contiguous claims is centered on the Specogna epithermal gold deposit and the related, prospective Sandspit fault. These surveys are part of ongoing exploration by Misty Mountain Gold Limited of epithermal gold targets along the Sandspit fault and related structures. Latest resource estimates for the Specogna deposit indicate a mineable resource of 33.5 million tonnes of material grading 2.11 grams gold per tonne at a 1.20 grams gold per tonne cut-off.

The Harmony Gold Project claims are situated on Graham Island at latitude 53° 31' north and longitude 132° 13' west, in NTS map sheet area 103F/9E, about 770 kilometres north of Vancouver, British Columbia.

The 1997 surveys were completed at three structural or geochemical target areas called the Sandspit, Amethyst and Feather grids.

Survey Type	Sandspit Grid	Amethyst Grid	Feather Grid
Line cutting and grid surveying (km)	35.1	14.2	6.9
IP geophysics (km)	35.1	5.1	6
Soil Geochemistry (number of samples)	206	328	184

Results of these surveys indicate two principal targets for further exploration.

A possibly significant gold resource could underlay the central Amethyst grid where a 400 m long by about 200 m wide area contains samples with greater than 30 parts per billion gold up to 368 parts per billion gold. Additional exploration for the bedrock source of this gold is warranted. The IP survey over this area did not indicate a possible source.

The Specogna deposit induced polarization chargeability/resistivity high extends over 500 m north of its present drill defined northern edge. This response warrants exploration by drilling.

## 2.0 INTRODUCTION

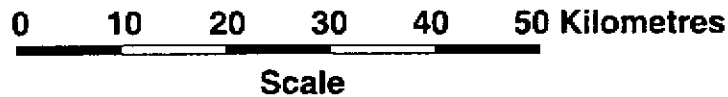
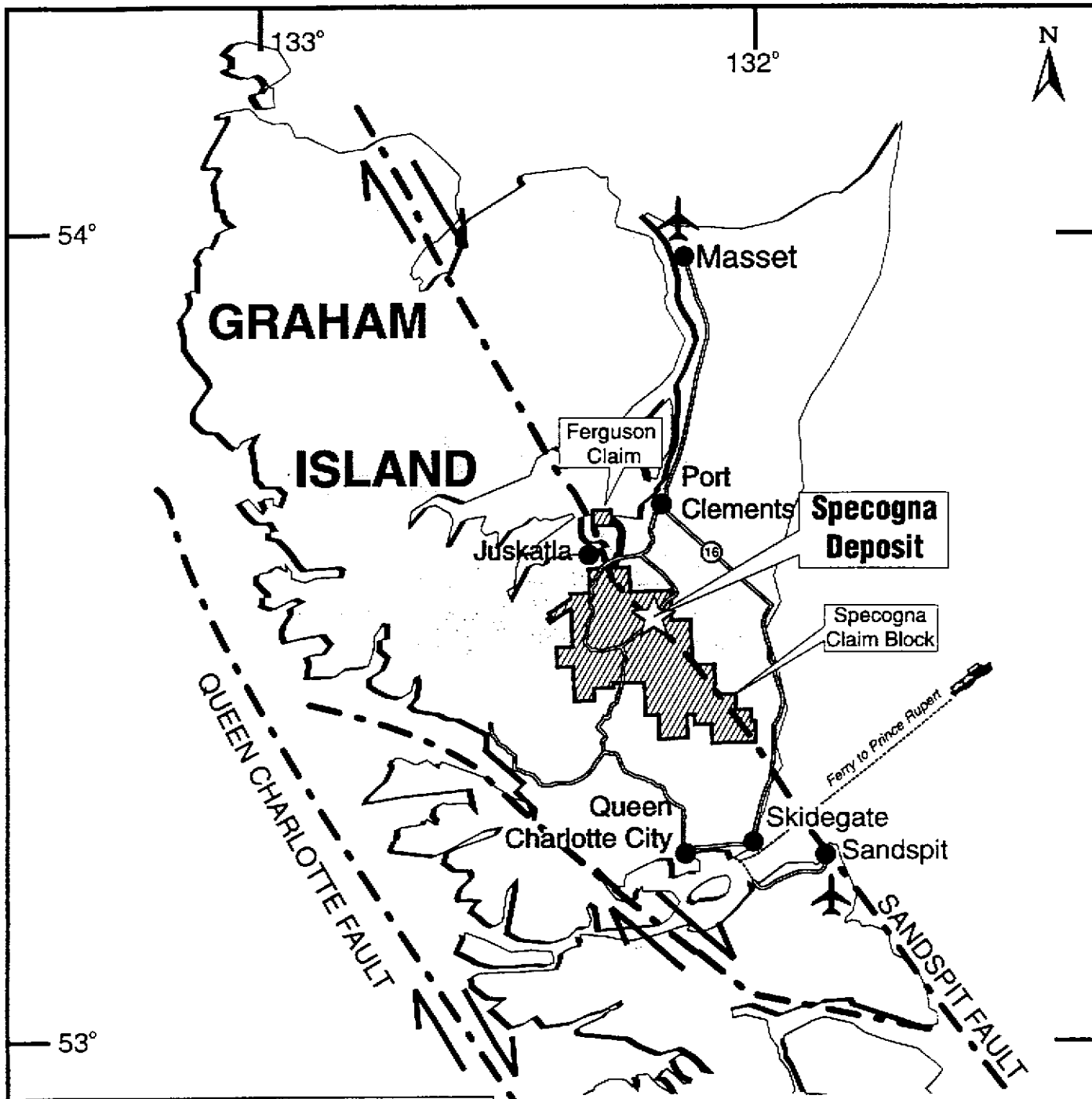
This report documents soil geochemical and induced polarization (IP) geophysical surveys completed in 1997 at three locations within the Harmony Gold Project mineral claim block. This block of 116 contiguous claims is centered on the Specogna epithermal gold deposit and the related, prospective Sandspit fault. These surveys are part of ongoing exploration by Misty Mountain Gold Limited of epithermal gold targets along the Sandspit fault and related structures.

Latest resource estimates for the Specogna deposit undertaken on behalf of Misty Mountain Gold Limited indicate a mineable resource of 33.5 Mt of material grading 2.11g Au/t at a 1.20 g Au/t cut-off (Whelhener, 1997). In addition to this, a further 19.2 Mt of material grading between 1.20 and 0.80g Au/t are available as a stockpile resource. Combining these two resources furnishes a potentially mineable resource of 52.7 Mt of material grading 1.70g Au/t, at an overall waste to ore stripping ratio of 1.2:1 (Niosi, 1997).

### 2.1 Location and Access

The Specogna deposit and regional Harmony Gold Project claims are situated on Graham Island at latitude 53° 31' north and longitude 132° 13' west, in NTS map sheet area 103F/9E, about 770 kilometres north of Vancouver, British Columbia. Graham Island is the most northerly large island in the Queen Charlotte Islands archipelago (Figure 1.0).

Access to the Specogna deposit is via logging roads from the towns of Queen Charlotte City and Port Clements with road distances of approximately 40 kilometres and 30 kilometres, respectively. Misty Mountain Gold Limited has established a trailer camp at Port Clements which is a 35-minute drive from the deposit. Daily flights from Vancouver and Prince Rupert land at the Sandspit airport where taxi and ferry service is available to Queen Charlotte City. Freight can be transported from or to the mainland by scheduled or contract-freight services using B.C. Ferries or independent barge services.



<b>MISTY MOUNTAIN GOLD LIMITED</b>		
HARMONY GOLD PROJECT - Specogna Deposit		
<b>General Location</b>		
Scale	as shown	Date
N.T.S.	103F/8.9	January 31 1998
By	p.a.p/l.o.	Figure
		<b>1.0</b>

## **2.2 Physiography and Climate**

The Specogna deposit is situated at a dilational jog along the northwest trending Sandspit fault (Figure 2.0). The fault scarp forms a major physiographic and geological boundary on Graham Island. The Fault separates the hilly and mountainous terrain associated with Mesozoic and Tertiary rocks of the Skidegate Plateau to the west from the predominantly flat and poorly drained terrain associated with Late Tertiary rocks of the Queen Charlotte Lowlands in the east (Sutherland Brown, 1968).

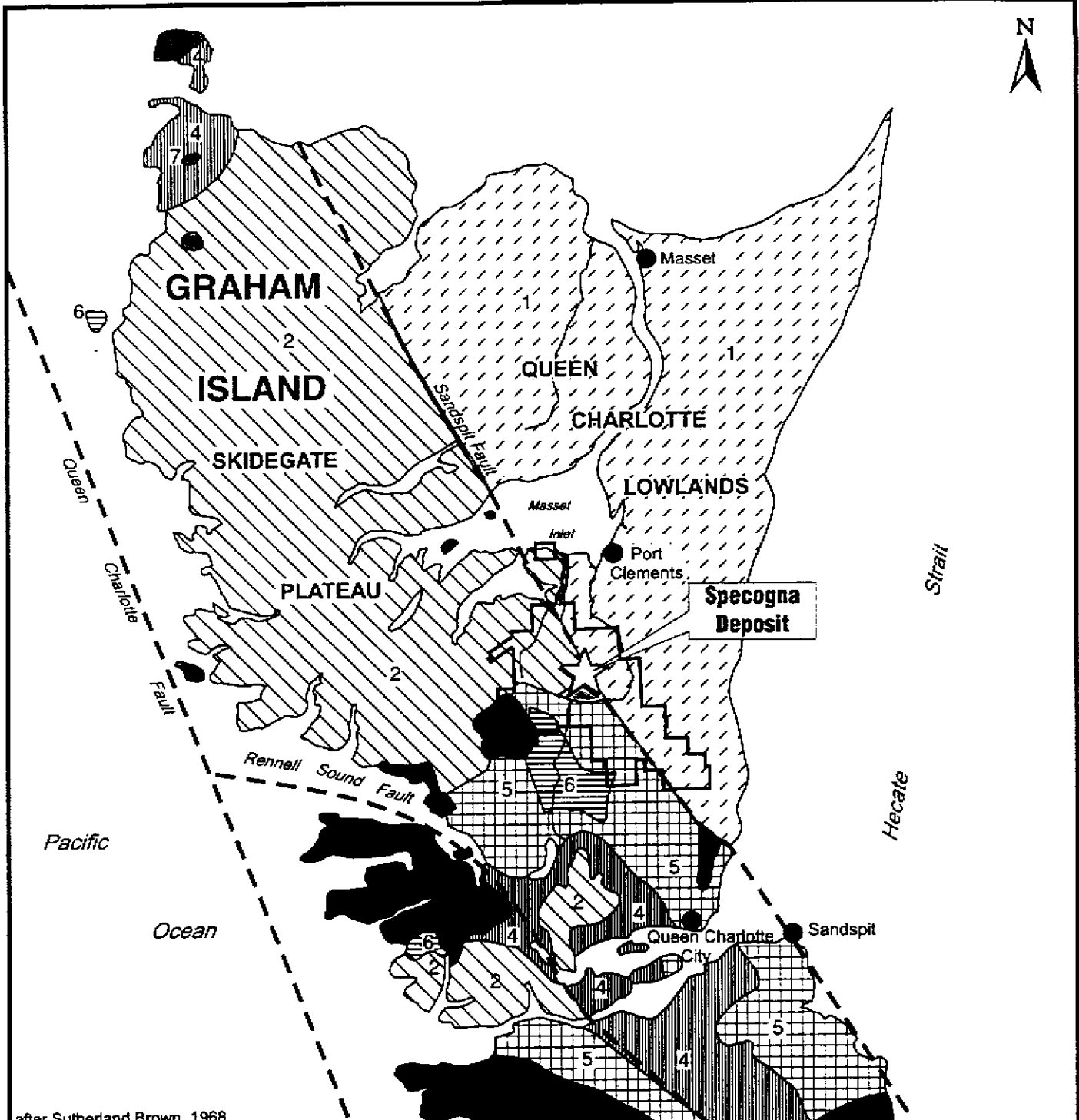
A substantial part of the claim area has been clear-cut logged, including the Specogna deposit area. Logging activity is presently ongoing in the claim area.

The climate of the Queen Charlotte Islands is typical of British Columbia maritime areas, with temperatures ranging from 1°C in January to 15°C in August. Annual average precipitation is in the order of 2 metres. Rain falls on approximately 213 days of each year. Snow falls on approximately 18 days of each year.

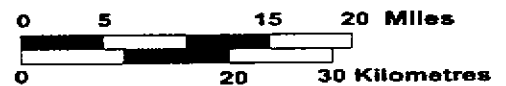
## **2.3 Exploration History**

The Specogna deposit, previously referred to as the Cinola deposit, was discovered in early 1970 by two prospectors, Efreem Specogna and Johnny Trico (Champigny et al., 1980). From 1971 to 1991, nine successive companies completed 392 holes for a total drilling meterage of 44,831m. During this period 474 metres of underground exploration was also completed and a mine development plan for the deposit was taken to an advanced stage feasibility study (Christopher, 1997; City Resources (Canada) Limited, 1988).

In November 1994, directors of the Hunter Dickinson Group (Inc.) acquired controlling interest in the deposit through the formation of a new company called Misty Mountain Gold Limited. Subsequently, 36,626 metres of additional diamond drilling in 151 holes and a number of technical studies on gold amenability have been completed.



after Sutherland Brown, 1968



**TERTIARY**

- Skonun Formation**  
*Clastic Sediments*
- Masset Formation**  
*Basalt, Andesite, Rhyolite Volcanics*

**CRETACEOUS**

- Haida Formation**  
*Sandstone - mudstone*
- Undivided Sediments**

**JURASSIC**

- Yakoun Formation**  
*Andesitic Flows, Volcaniclastic*

**TRIASSIC-JURASSIC**

- Undivided Sediments**

**CRETACEOUS-TERTIARY**

- Intrusives**  
*Diorite - granite*

- Mineral Claims**

<b>MISTY MOUNTAIN GOLD LIMITED</b>		
HARMONY GOLD PROJECT - Specogna Deposit		
<b>Regional Geology</b>		
Scale	as shown	Date
N.T.S.	103F/8.9	January 31 1996
By	p.a.p.t.j.e.	Figure
		<b>2.0</b>



## 2.4 1997 Surveys

The 1997 surveys of Induced Polarization (IP) geophysics and soil geochemistry were completed at three structural or geochemical target areas called the Sandspit, Amethyst and Feather grids.

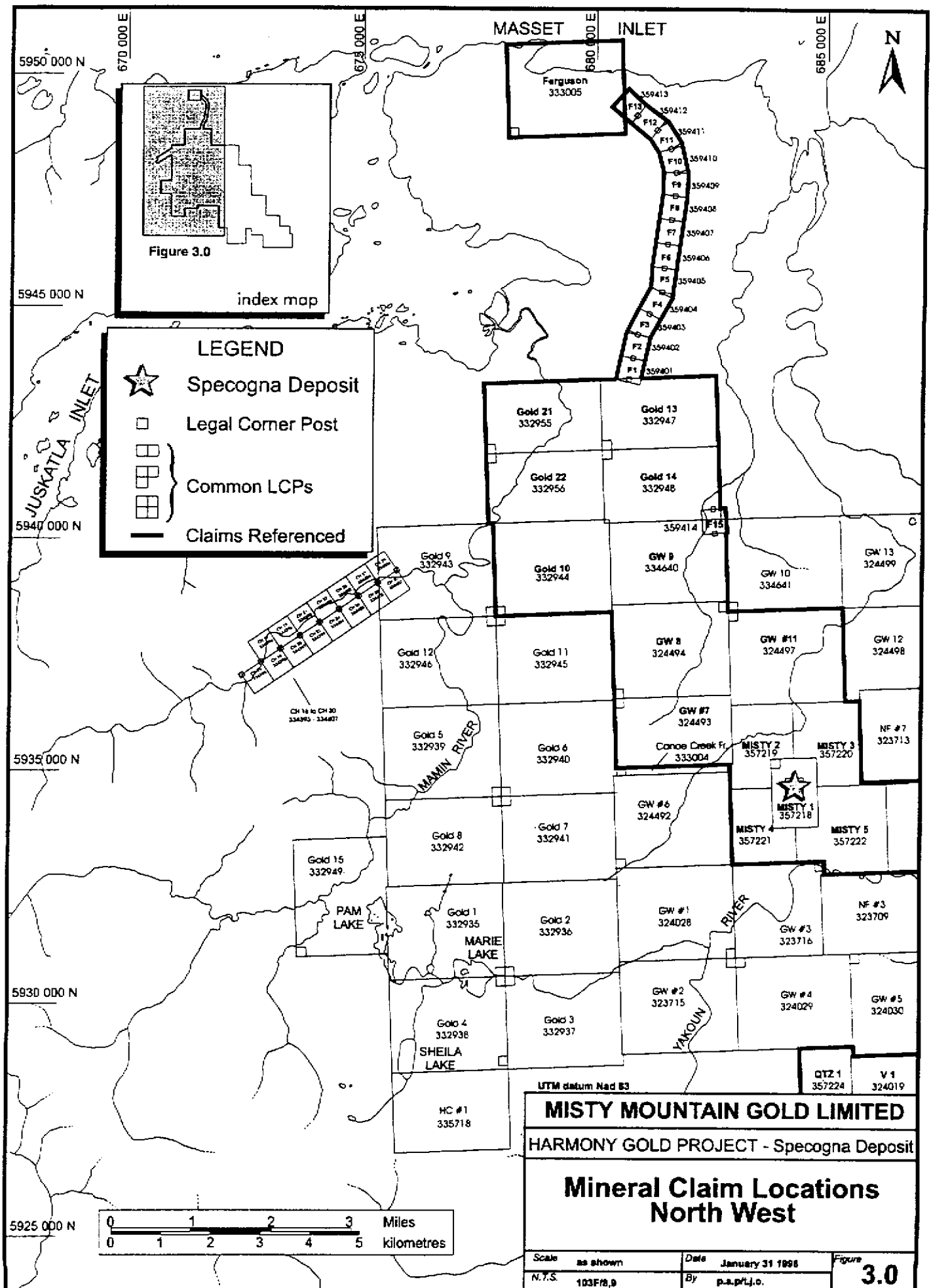
Survey Type	Sandspit Grid	Amethyst Grid	Feather Grid
Line cutting and grid surveying (km)	35.1	14.2	6.9
IP geophysics (km)	35.1	5.1	6
Soil Geochemistry (number of samples)	206	328	184

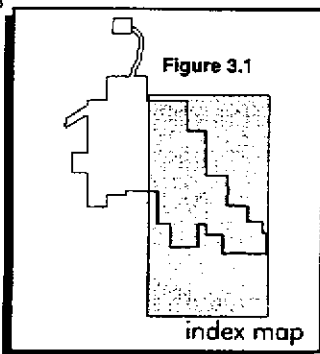
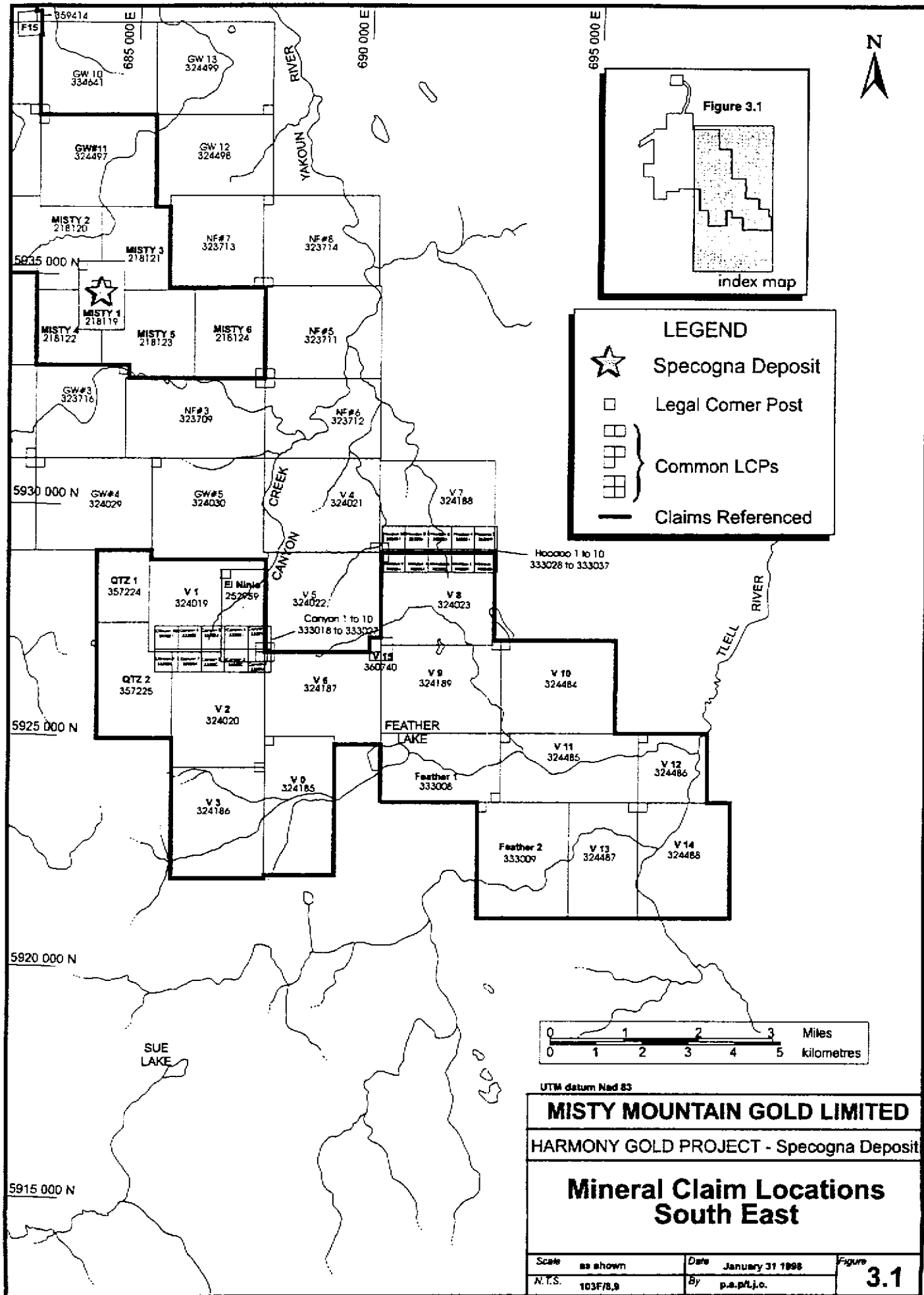
## 3.0 CLAIM DATA

The 304 square kilometre Harmony Gold Project consists of 116 mineral claims totaling 1,217 units. These claims are located as shown in overview in Figures 3.0 and 3.1 and in detail in Figure 3.2. The claims are situated in the Skeena Mining Division on NTS map sheets 103/F08 and 103/F09.





The claims are owned 100% by Misty Mountain Gold Limited except for the El Ninio claim. Misty Mountain Gold Limited has an option to earn a 75% interest in the El Ninio claim which is held by Doromin Resources Ltd.

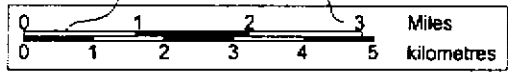
A listing of the claims for which the assessment work documented in this report was filed, is given in Table 1.0. A listing of all Harmony Gold Project claims is listed in Appendix I.





**LEGEND**

-  Specogna Deposit
-  Legal Corner Post
-  Common LCPs
-  Claims Referenced



UTM datum Nad 83

<b>MISTY MOUNTAIN GOLD LIMITED</b>		
HARMONY GOLD PROJECT - Specogna Deposit		
<b>Mineral Claim Locations South East</b>		
Scale	as shown	Date
N.T.S.	103F/8,9	January 31 1998
By		p.a.p/t.j.o.
		<b>Figure 3.1</b>

**Table 1.0 Mineral Claims Referenced**

NTS 103F8, 103F9.

Skeena Mining Division

Claim Name	Units	Tenure Number	Completion Date	Expiry Date*
CANYON 9	1	333026	06-Dec-94	06-Dec-07
CANYON 10	1	333027	06-Dec-94	06-Dec-07
EL NINIO	8	252959	21-Aug-89	21-Aug-07
FEATHER 1	20	333008	05-Dec-94	05-Dec-00
FEATHER 2	20	333009	05-Dec-94	05-Dec-01
FERGUSON	20	333005	02-Dec-94	02-Dec-07
F 1	1	359401	18-Sept-97	18-Sept-98
F 2	1	359402	18-Sept-97	18-Sept-98
F 3	1	359403	18-Sept-97	18-Sept-98
F 4	1	359404	18-Sept-97	18-Sept-98
F 5	1	359505	18-Sept-97	18-Sept-98
F 6	1	359506	18-Sept-97	18-Sept-98
F 7	1	359507	18-Sept-97	18-Sept-98
F 8	1	359508	18-Sept-97	18-Sept-98
F 9	1	359509	18-Sept-97	18-Sept-98
F 10	1	359510	18-Sept-97	18-Sept-98
F 11	1	359511	18-Sept-97	18-Sept-98
F 12	1	359512	18-Sept-97	18-Sept-98
F 13	1	359513	18-Sept-97	18-Sept-98
F 15	1	359514	18-Sept-97	18-Sept-98
GOLD 10	20	332944	28-Nov-94	28-Nov-07
GOLD 13	18	332947	30-Nov-94	28-Nov-05
GOLD 14	18	332948	30-Nov-94	28-Nov-05
GOLD 21	15	332955	30-Nov-94	30-Nov-07
GOLD 22	15	332956	30-Nov-94	30-Nov-06
GW #7	15	324493	26-Mar-94	26-Mar-07
GW 8	20	324494	26-Mar-94	26-Mar-07
GW 9	20	334640	31-Mar-95	31-Mar-07
GW #11	20	324497	28-Mar-94	28-Mar-07
MISTY 1	6	357218	25-Jun-97	25-Jun-08
MISTY 2	20	357219	29-Jun-97	29-Jun-08
MISTY 3	20	357220	29-Jun-97	29-Jun-07
MISTY 4	16	357221	29-Jun-97	29-Jun-07
MISTY 5	16	357222	29-Jun-97	29-Jun-08
MISTY 6	20	357223	29-Jun-97	29-Jun-07
V 0	18	324185	16-Mar-94	16-Mar-01
V 1	20	324019	09-Mar-94	09-Mar-07
V 2	20	324020	11-Mar-94	11-Mar-07
V 3	20	324186	18-Mar-94	18-Mar-01
V 6	20	324187	17-Mar-94	17-Mar-01
V 8	20	324023	12-Mar-94	12-Mar-07
V 9	20	324189	17-Mar-94	17-Mar-01
V 10	20	324484	30-Mar-94	30-Mar-01
V 11	18	324485	01-Apr-94	01-Apr-01
V 12	9	324486	02-Apr-94	02-Apr-01
V 13	15	324487	03-Apr-94	03-Apr-02
V 14	20	324488	03-Apr-94	03-Apr-01
V 15	1	360740	27-Nov-97	27-Nov-98
QTZ 1	12	357224	01-Jul-97	01-Jul-01
QTZ 2	20	357225	01-Jul-97	01-Jul-01

\* subject to acceptance of this assessment report.

## **4.0 PROPERTY GEOLOGY**

The geology of the Queen Charlotte Islands has been mapped by A. Sutherland-Brown and documented in the British Columbia Department of Mines Bulletin No. 54 (1968). The bulletin identifies five main rock formations within the Harmony Gold Project claim area: the Jurassic Yakoun Formation; the Cretaceous Queen Charlotte Group, which includes the Haida and Honna Formations; the Early Tertiary Masset Formation; and the Late Tertiary Skounon Formation (Figure 2.0). The Gold Creek and Juskatla Tertiary volcanic complexes have been mapped and described more recently by Hickson (1991).

The Harmony Gold Project claims are aligned along the northwest trending, steep easterly dipping Sandspit fault. The Specogna deposit is located in the immediate hanging wall of the fault at a strike flexure or dilational jog, possibly related to the fault intersecting the Gold Creek volcanic complex. The fault appears to have been an active scarp that resulted in the Masset and Yakoun formations west of the fault contributing to the Skounon Formation sediments being deposited east of the fault in a subsiding basin. The Specogna gold deposit formed by a hot spring system that was fed by a fluid conduit within the plane of the Sandspit fault.

### **4.1 Yakoun Group**

The lithology of the Middle Jurassic (Bajocian) Yakoun Group is described by Indrelid et al. (1991). The Yakoun Group contains an abundance of primary and reworked volcanic material that was deposited in marine and subaerial environments. These volcanics include tuffs, lapilli tuffs, breccias and andesitic flows. Lithologies of the reworked sedimentary sections include the following: relatively deep water interbedded tuff and shale; shallower marine interbedded tuffaceous shale, siltstone and fine to coarse sandstone; and conglomerate, ranging from matrix supported gravel conglomerate to clast supported pebble and cobble conglomerate.

## **4.2 Queen Charlotte Group**

The Middle to Upper Cretaceous Queen Charlotte Group rock sequence is composed of a tripartite sedimentary package of conglomerates, sandstones and mudstones: the Albian Haida Formation, the Cenomanian to Santonian Skidegate Formation, and the Coniacian to Santonian Honna Formation (Forgarassy and Barnes, 1991). These rock types have been identified in outcrop at numerous localities in the Queen Charlotte Islands (Haggart, 1991).

Forgarassy and Barnes (1991) suggest that the Haida-Skidegate-Honna sequence represents an overall fining upward sedimentary package deposited during a marine transgression event. The base of the Haida Formation is recognized as a non-marine, probably fluvial deposit that quickly grades upward into near shore shallow marine sediments. The overlying mudstones of the Skidegate Formation indicate the gradual deepening of waters in this marine environment. The Honna Formation, which overlies the Haida and Skidegate Formations, consists of coarse grained clastics that may represent either submarine channel and turbidite deposition or fan-delta deposition.

## **4.3 Masset Formation**

The Late Oligocene to Early Pliocene Masset Formation is composed of aphyric to feldspar-phyric, mafic to felsic lava flows and pyroclastics. Minor intercalated sediments that underlie much of Graham Island occur within the Formation (Hickson, 1991). Hickson observed thick rhyolite flows at the core of inland hills along the west coast of Graham Island. These flows may represent vent areas from which volcanic products and sediments were shed to the east and west. Hickson indicates that the Masset Formation accumulated at or above sea level.

## **4.4 Skonun Formation**

The Specogna deposit is hosted by the Tertiary (Miocene to Pliocene) Skonun Formation. This formation is the youngest present on Graham Island and is characterized by marine and non-

marine detrital sediments. These sediments consist of a thick sequence of conglomerates, sandstones, mudstones, siltstones, and volcanic pyroclastics. Seven units of the Skonun Formation have been identified in the area of the Specogna Deposit (Deighton et al., 1989). These units include mudstones, siltstones, sandstones, conglomerates and sedimentary breccias.

## 5.0 SOIL GEOCHEMICAL SURVEYS

During August to November 1997, Misty Mountain Gold Limited conducted soil geochemical surveys at the Sandspit, Amethyst and Feather grids. These grids are located as shown in Figure 3.2. The locations of the Sandspit and Feather grids were selected by centering the grids on the Sandspit fault as indicated by airborne geophysics (Case, 1997; Pezzot, 1997). The Amethyst grid is a westward extension of an earlier grid that had anomalous gold soil geochemistry at its west edge.

Soil samples were collected along the surveyed grid lines at the locations shown in Figures 4.1 to 4.3. The grid coordinate for each sample was used as the sample number. Samples were collected from glacial basal till underlying a 0.5 to 2 m thick blanket of black organic soil. The basal till is generally unoxidized and contains varying amounts of rounded pebbles and cobbles in a very compacted blue-grey clay matrix. Augers were used to sample the till through the organic soil. Samples were sent to International Plasma Laboratory in Vancouver for preparation and 32 element ICP and gold geochemical analysis. The analytical procedures used are given in Appendix II and the analytical results are given in Appendix III.

The gold geochemistry for the surveys are plotted in Figures 4.1 to 4.3. Gold is the single most significant element in these surveys since it strongly indicates the Specogna deposit at the east end of lines 5934700N and 5935000N where highs of 592 and 138 parts per billion (ppb) gold were obtained (Figure 4.1). The target areas of the Sandspit grid survey were the western and northern portions of the grid. No significant results worth pursuing were obtained.

With the results from near the Specogna deposit as a guide, it is apparent that a potentially significant gold resource could underlay the central Amethyst grid. Here, centered on line 9800N and station 7275E, the soil geochemical survey resulted in a significant area of samples containing greater than 30 ppb gold, with highs of 320 and 368 ppb gold (Figure 4.2). Additional exploration for the bedrock source of this gold is warranted in this 400 m long by about 200 m wide area.

Gold soil geochemistry for the Feather grid resulted in an isolated single maximum sample result of 150 ppb (Figure 4.3). Based on these results alone, no further work is recommended here.

## **6.0 INDUCED POLARIZATION GEOPHYSICAL SURVEYS**

In October to November 1997, Lloyd Geophysics Inc. of Vancouver conducted IP surveys on the Sandspit, Amethyst and Feather grids under contract to Misty Mountain Gold Limited. These surveys were completed after an initial orientation survey over the Specogna deposit indicated that the technique would work well on delineating this moderately sulphidic and strongly silicified deposit type. The Sandspit and Feather grids were located along the Sandspit fault as defined by Pezzot (1997). The Amethyst grid was located over an area of anomalous gold geochemistry as defined in Section 5.0 above. The purpose of the surveys at each of the grids was to search for signatures similar to that of the Specogna deposit.

A complete report by D.A. Klit of Lloyd Geophysics Inc., January 1998, giving the IP survey techniques, data and results is attached in Appendix VI.

In his report, Klit indicates that the Specogna deposit chargeability/resistivity high extends over 500 m north of its present drill defined northern edge. This IP response warrants exploration by drilling. Klit also identifies several IP features at the Feather and Amethyst grids that would be of more interest if they coincided with anomalous soil geochemistry. No significant IP response is associated with the gold soil geochemical anomaly at the Amethyst grid.



## 7.0 CONCLUSIONS

The results of the soil geochemical and IP geophysical surveys on the Sandspit, Amethyst and Feather grids indicate two principal targets for further exploration.

A possibly significant gold resource could underlay the central Amethyst grid. A 400 m long by about 200 m wide area contains samples with greater than 30 parts per billion gold, and with highs of up to 368 parts per billion gold. Additional exploration for the bedrock source of this gold is warranted. The IP survey over this area did not indicate a possible source.

The Specogna deposit chargeability/resistivity high extends over 500 m north of its present drill defined northern edge. This IP response warrants exploration by drilling.

## 8.0 STATEMENT OF COSTS

The collective costs for the line cutting, grid surveying, soil sampling and IP geophysical surveying on the Sandspit, Amethyst and Feather grids, for the period August 15 to December 15, 1997, are as follows:

Line cutting, grid surveying and soil sampling field personnel:

### Sandspit Grid

Bernhard Augsten, project manager	36 days at \$300/day	\$10,800
Bogart Cross, field technician	53 days at \$180/day	\$ 9,540
Thomas Nottelman, field technician	27 days at \$240/day	\$ 6,480
Peter Fischl, field technician	18 days at \$240/day	\$ 4,320
Gary Parup, field technician	20 days at \$240/day	\$ 4,800
Kevin Maguire, field technician	21 days at \$180/day	\$ 3,780
John Merrill, field technician	29 days at \$160/day	\$ 4,640
Wilfred Parnel, field technician	30 days at \$160/day	\$ 4,800
Gerald Amos, field technician	<u>35 days</u> at \$160/day	<u>\$ 5,600</u>
Subtotal 269 person days		Subtotal.....\$54,760

### Amethyst Grid

Bernhard Augsten, project manager	12 days at \$300/day	\$ 3,600
Bogart Cross, field technician	18 days at \$180/day	\$ 3,240
Thomas Nottelman, field technician	20 days at \$240/day	\$ 4,800
Peter Fischl, field technician	12 days at \$240/day	\$ 2,880
Gary Parup, field technician	4 days at \$240/day	\$ 960
Tara Laycock , field technician	12 days at \$240/day	\$ 2,880
John Merrill, field technician	18 days at \$160/day	\$ 2,880
Wilfred Parnel, field technician	20 days at \$160/day	\$ 3,200
Gerald Amos, field technician	<u>18 days</u> at \$160/day	<u>\$ 2,880</u>
Subtotal 134 person days		Subtotal.....\$27,320

### Feather Grid

Bernhard Augsten, project manager	6 days at \$300/day	\$ 1,800
Bogart Cross, field technician	12 days at \$180/day	\$ 2,160
Thomas Nottelman, field technician	16 days at \$240/day	\$ 3,840
Tara Laycock , field technician	11 days at \$240/day	\$ 2,640
John Merrill, field technician	15 days at \$160/day	\$ 2,400
Wilfred Parnel, field technician	<u>16 days</u> at \$160/day	<u>\$ 2,560</u>
Subtotal 76 person days		Subtotal.....\$15,400

Crew mobilization/demobilization from Vancouver to Port Clements.....\$8,100

Food and Accommodation (479 field technician plus 200 IP crew person days):

Food services	679 person days at \$67.50/day	\$45,833
Accommodation	3 months trailer camp at \$3400/month	<u>\$10,200</u>
		Subtotal.....\$56,033

Vehicle Rentals:		
Four crew cab and suburban 4X4's for 3 months at \$1875/month.....		\$22,500
Equipment and Supplies:		
Field supplies including chain saw rentals and repairs		\$7,875
Vehicle fuel and repairs		<u>\$5,590</u>
	Subtotal.....	\$13,465
Laboratory Soil Sample Analysis:		
<b>Sandspit grid</b>	206 samples at \$25/sample	\$ 5,150
<b>Amethyst grid</b>	328 samples at \$25/sample	\$ 8,200
<b>Feather grid</b>	184 samples at \$25/sample	<u>\$ 4,600</u>
	Subtotal.....	\$17,950
Contractors: Lloyd's Geophysics Inc. – Induced Polarization Surveying		
<b>Sandspit grid</b>	29 survey days at \$1765.50/day	\$51,200
<b>Amethyst grid</b>	5 survey days at \$1765.50/day	\$ 8,827
<b>Feather grid</b>	6 survey days at \$1765.50/day	\$10,593
	(Crew of 5 for 40days = 200 person days)	
One ton 4x4 crew cab for 40 days at \$80.25/day		\$ 6,472
Mob/demobilization from Vancouver to Port Clements		\$ 9,611
Report and map preparation		<u>\$ 4,280</u>
	Subtotal.....	\$90,983
Report Preparation:		
Haslinger, Richard - writing	5 days at \$400/day	\$ 2,000
Nottelman, Thomas – graphics	15 days at \$260/day	<u>\$ 3,900</u>
	Subtotal.....	\$5,900
Management:		
Haslinger, Richard	15 days at \$400/day	\$ 6,000
Regagliati, Mark	5 days at \$500/day	<u>\$ 2,500</u>
	Subtotal.....	\$8,500
		<b><u>TOTAL \$320,911</u></b>

These costs were incurred at the three grids in separate approved work programs as follows:

<u>Work Approval Number</u>	<u>Grid</u>	<u>Portion of Costs</u>
SMI-97-0200017-164	Sandspit grid	\$191,650
SMI-97-0200017-249	Amethyst grid	\$ 76,492
SMI-97-0200017-290	Feather grid	<u>\$ 52,769</u>
	<b>Total</b>	<b>\$320,911</b>

## 9.0 REFERENCES

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**Rebagliati, C.M., Case, T.T., and DeLong, C., 1995.** Harmony (Cinola) Property Assessment Report, 1995 Geochemical Exploration Program, May 11, 1995.

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## 10.0 STATEMENT OF QUALIFICATIONS

I, Richard J. Haslinger, of the City of Vancouver, Province of British Columbia, DO HEREBY CERTIFY THAT:

1. I am a Geological Engineer employed by Misty Mountain Gold Limited, a mineral exploration company with offices at Suite 1020 - 800 West Pender Street, Vancouver, British Columbia.
2. I am a graduate of the University of British Columbia, with a Bachelor of Applied Science in Geological Engineering, 1986.
3. I have practiced my profession continuously since graduation.
4. I am a member in good standing of the Association of Professional Engineers and Geoscientists of British Columbia.
5. The foregoing report is based on:
  - a) A study of available company and government reports.
  - b) My personal knowledge of the area resulting from my direct participation in and management of exploration on the Harmony Gold Project since February 1995 to December 1997.



R.J. Haslinger, P.Eng.  
January 30, 1998

**APPENDIX I**

**HARMONY GOLD PROJECT MINERAL CLAIM HOLDINGS**

**JANUARY 1998**

**APPENDIX 1 HARMONY GOLD PROJECT MINERAL CLAIM HOLDINGS  
JANUARY 1998**

NTS 103FB, 103FB, 103F15

Skeena Mining Division

Claim Name	Units	Tenure Number	Completion Date	Expiry Date	Ownership
CANOE CREEK FRACTION	1	333004	08-Dec-94	08-Dec-07	Misty Mountain (100%)
CANYON 1	1	333018	06-Dec-94	06-Dec-07	Misty Mountain (100%)
CANYON 2	1	333019	06-Dec-94	06-Dec-07	Misty Mountain (100%)
CANYON 3	1	333020	06-Dec-94	06-Dec-07	Misty Mountain (100%)
CANYON 4	1	333021	06-Dec-94	06-Dec-07	Misty Mountain (100%)
CANYON 5	1	333022	06-Dec-94	06-Dec-07	Misty Mountain (100%)
CANYON 6	1	333023	06-Dec-94	06-Dec-07	Misty Mountain (100%)
CANYON 7	1	333024	06-Dec-94	06-Dec-07	Misty Mountain (100%)
CANYON 8	1	333025	06-Dec-94	06-Dec-07	Misty Mountain (100%)
CANYON 9	1	333026	06-Dec-94	06-Dec-07	Misty Mountain (100%)
CANYON 10	1	333027	06-Dec-94	06-Dec-07	Misty Mountain (100%)
CH 14	1	334391	14-Mar-95	14-Mar-07	Misty Mountain (100%)
CH 15	1	334392	15-Mar-95	15-Mar-07	Misty Mountain (100%)
CH 16	1	334393	15-Mar-95	15-Mar-07	Misty Mountain (100%)
CH 17	1	334394	15-Mar-95	15-Mar-07	Misty Mountain (100%)
CH 18	1	334395	15-Mar-95	15-Mar-07	Misty Mountain (100%)
CH 19	1	334396	15-Mar-95	15-Mar-07	Misty Mountain (100%)
CH 20	1	334397	15-Mar-95	15-Mar-07	Misty Mountain (100%)
CH 21	1	334398	15-Mar-95	15-Mar-07	Misty Mountain (100%)
CH 22	1	334399	15-Mar-95	15-Mar-07	Misty Mountain (100%)
CH 23	1	334400	15-Mar-95	15-Mar-07	Misty Mountain (100%)
CH 24	1	334401	15-Mar-95	15-Mar-07	Misty Mountain (100%)
CH 25	1	334402	15-Mar-95	15-Mar-07	Misty Mountain (100%)
CH 26	1	334403	15-Mar-95	15-Mar-07	Misty Mountain (100%)
CH 27	1	334404	15-Mar-95	15-Mar-07	Misty Mountain (100%)
CH 28	1	334405	15-Mar-95	15-Mar-07	Misty Mountain (100%)
CH 29	1	334406	15-Mar-95	15-Mar-07	Misty Mountain (100%)
CH 30	1	334407	15-Mar-95	15-Mar-07	Misty Mountain (100%)
EL NINIO	8	252959	21-Aug-89	21-Aug-07	Doromin Resources (100%)*
FEATHER 1	20	333008	05-Dec-94	05-Dec-00	Misty Mountain (100%)
FEATHER 2	20	333009	05-Dec-94	05-Dec-01	Misty Mountain (100%)
FERGUSON	20	333005	02-Dec-94	02-Dec-07	Misty Mountain (100%)
F 1	1	359401	18-Sept-97	18-Sept-98	Misty Mountain (100%)
F 2	1	359402	18-Sept-97	18-Sept-98	Misty Mountain (100%)
F 3	1	359403	18-Sept-97	18-Sept-98	Misty Mountain (100%)
F 4	1	359404	18-Sept-97	18-Sept-98	Misty Mountain (100%)
F 5	1	359505	18-Sept-97	18-Sept-98	Misty Mountain (100%)
F 6	1	359506	18-Sept-97	18-Sept-98	Misty Mountain (100%)
F 7	1	359507	18-Sept-97	18-Sept-98	Misty Mountain (100%)
F 8	1	359508	18-Sept-97	18-Sept-98	Misty Mountain (100%)
F 9	1	359509	18-Sept-97	18-Sept-98	Misty Mountain (100%)
F 10	1	359510	18-Sept-97	18-Sept-98	Misty Mountain (100%)
F 11	1	359511	18-Sept-97	18-Sept-98	Misty Mountain (100%)
F 12	1	359512	18-Sept-97	18-Sept-98	Misty Mountain (100%)
F 13	1	359513	18-Sept-97	18-Sept-98	Misty Mountain (100%)
F 15	1	359514	18-Sept-97	18-Sept-98	Misty Mountain (100%)
GOLD 1	20	332935	23-Nov-94	23-Nov-07	Misty Mountain (100%)
GOLD 2	20	332936	23-Nov-94	23-Nov-07	Misty Mountain (100%)
GOLD 3	20	332937	22-Nov-94	22-Nov-07	Misty Mountain (100%)
GOLD 4	20	332938	22-Nov-94	22-Nov-07	Misty Mountain (100%)
GOLD 5	20	332939	26-Nov-94	26-Nov-07	Misty Mountain (100%)
GOLD 6	20	332940	26-Nov-94	26-Nov-07	Misty Mountain (100%)
GOLD 7	20	332941	26-Nov-94	26-Nov-07	Misty Mountain (100%)
GOLD 8	20	332942	26-Nov-94	26-Nov-07	Misty Mountain (100%)
GOLD 9	20	332943	28-Nov-94	28-Nov-07	Misty Mountain (100%)
GOLD 10	20	332944	28-Nov-94	28-Nov-07	Misty Mountain (100%)
GOLD 11	20	332945	28-Nov-94	28-Nov-07	Misty Mountain (100%)
GOLD 12	20	332946	28-Nov-94	28-Nov-07	Misty Mountain (100%)
GOLD 13	18	332947	30-Nov-94	30-Nov-05	Misty Mountain (100%)
GOLD 14	18	332948	30-Nov-94	30-Nov-05	Misty Mountain (100%)
GOLD 15	20	332949	27-Nov-94	27-Nov-07	Misty Mountain (100%)
GOLD 21	15	332955	30-Nov-94	30-Nov-07	Misty Mountain (100%)
GOLD 22	15	332956	30-Nov-94	30-Nov-06	Misty Mountain (100%)
GW #1	20	324028	07-Mar-94	07-Mar-07	Misty Mountain (100%)
GW #2	20	323715	15-Feb-94	15-Feb-07	Misty Mountain (100%)
GW #3	16	323716	18-Feb-94	18-Feb-07	Misty Mountain (100%)



**APPENDIX 1 HARMONY GOLD PROJECT MINERAL CLAIM HOLDINGS  
JANUARY 1998**

NTS 103F8, 103F9, 103F15  
Skeena Mining Division

Claim Name	Units	Tenure Number	Completion Date	Expiry Date	Ownership
GW #4	20	324029	05-Mar-94	05-Mar-07	Misty Mountain (100%)
GW #5	20	324030	10-Mar-94	10-Mar-07	Misty Mountain (100%)
GW #6	20	324492	25-Mar-94	25-Mar-07	Misty Mountain (100%)
GW #7	15	324493	26-Mar-94	26-Mar-07	Misty Mountain (100%)
GW 8	20	324494	26-Mar-94	26-Mar-07	Misty Mountain (100%)
GW 9	20	334640	31-Mar-95	31-Mar-07	Misty Mountain (100%)
GW #10	20	334641	31-Mar-95	31-Mar-07	Misty Mountain (100%)
GW #11	20	324497	28-Mar-94	28-Mar-07	Misty Mountain (100%)
GW 12	20	324498	29-Mar-94	29-Mar-07	Misty Mountain (100%)
GW 13	20	324499	03-Apr-94	03-Apr-07	Misty Mountain (100%)
HC 1	20	335718	29-Apr-95	29-Apr-07	Misty Mountain (100%)
HOODOO 1	1	333028	06-Dec-94	06-Dec-07	Misty Mountain (100%)
HOODOO 2	1	333029	06-Dec-94	06-Dec-07	Misty Mountain (100%)
HOODOO 3	1	333030	06-Dec-94	06-Dec-07	Misty Mountain (100%)
HOODOO 4	1	333031	06-Dec-94	06-Dec-07	Misty Mountain (100%)
HOODOO 5	1	333032	06-Dec-94	06-Dec-07	Misty Mountain (100%)
HOODOO 6	1	333033	06-Dec-94	06-Dec-07	Misty Mountain (100%)
HOODOO 7	1	333034	06-Dec-94	06-Dec-07	Misty Mountain (100%)
HOODOO 8	1	333035	06-Dec-94	06-Dec-07	Misty Mountain (100%)
HOODOO 9	1	333036	06-Dec-94	06-Dec-07	Misty Mountain (100%)
HOODOO 10	1	333037	06-Dec-94	06-Dec-07	Misty Mountain (100%)
MISTY 1	6	357218	25-Jun-97	25-Jun-08	Misty Mountain (100%)
MISTY 2	20	357219	29-Jun-97	29-Jun-08	Misty Mountain (100%)
MISTY 3	20	357220	29-Jun-97	29-Jun-07	Misty Mountain (100%)
MISTY 4	16	357221	29-Jun-97	29-Jun-07	Misty Mountain (100%)
MISTY 5	16	357222	29-Jun-97	29-Jun-08	Misty Mountain (100%)
MISTY 6	20	357223	29-Jun-97	29-Jun-07	Misty Mountain (100%)
NF #3	18	323709	17-Feb-94	17-Feb-07	Misty Mountain (100%)
NF #5	20	323711	20-Feb-94	20-Feb-07	Misty Mountain (100%)
NF #6	15	323712	18-Feb-94	18-Feb-07	Misty Mountain (100%)
NF #7	16	323713	20-Feb-94	20-Feb-07	Misty Mountain (100%)
NF #8	20	323714	20-Feb-94	20-Feb-07	Misty Mountain (100%)
V 0	18	324185	16-Mar-94	16-Mar-01	Misty Mountain (100%)
V 1	20	324019	09-Mar-94	09-Mar-07	Misty Mountain (100%)
V 2	20	324020	11-Mar-94	11-Mar-07	Misty Mountain (100%)
V 3	20	324186	18-Mar-94	18-Mar-01	Misty Mountain (100%)
V 4	20	324021	10-Mar-94	10-Mar-07	Misty Mountain (100%)
V 5	20	324022	10-Mar-94	10-Mar-07	Misty Mountain (100%)
V 6	20	324187	17-Mar-94	17-Mar-01	Misty Mountain (100%)
V 7	20	324188	19-Mar-94	19-Mar-07	Misty Mountain (100%)
V 8	20	324023	12-Mar-94	12-Mar-07	Misty Mountain (100%)
V 9	20	324189	17-Mar-94	17-Mar-01	Misty Mountain (100%)
V 10	20	324484	30-Mar-94	30-Mar-01	Misty Mountain (100%)
V 11	18	324485	01-Apr-94	01-Apr-01	Misty Mountain (100%)
V 12	9	324486	02-Apr-94	02-Apr-01	Misty Mountain (100%)
V 13	15	324487	03-Apr-94	03-Apr-02	Misty Mountain (100%)
V 14	20	324488	03-Apr-94	03-Apr-01	Misty Mountain (100%)
V 15	1	360740	27-Nov-97	27-Nov-98	Misty Mountain (100%)
QTZ 1	12	357224	01-Jul-97	01-Jul-01	Misty Mountain (100%)
QTZ 2	20	357225	01-Jul-97	01-Jul-01	Misty Mountain (100%)

**TOTAL # CLAIMS: 116**  
**TOTAL # UNITS: 1217**

\* Subject to option agreement with Doromin Resources Ltd.

**APPENDIX II**

**ICP AND FIRE ASSAY ANALYTICAL PROCEDURES  
FOR SOIL GEOCHEMICAL SAMPLES**



2036 Columbia Street  
Vancouver, B.C.  
Canada V5Y 3E1  
Phone (604) 879-7878  
Fax (604) 879-7898

works\faaas.pag

Method of Gold & Silver analysis by Fire Assay / AAS

- (a) 10.0 to 30.0 grams of sample was mixed with a combination of fluxes in a fusion pot. The sample was then fused at high temperature for one hour to form a lead "button".
- (b) The precious metals are extracted by cupellation. The dore bead is then dissolved in boiling concentrated aqua regia solution heated by a hot water bath.
- (c) The gold & silver in solution are determined with an Atomic Absorption Spectrometer. The value, in ppb or ppm or grams-per-tonne is calculated by comparison with a set of known standards.

QUALITY CONTROL

Every fusion of 24 pots contains 22 samples, one internal standard or blank, and a random reweigh of one of the samples. Samples with anomalous gold values greater than 1000 ppb are automatically checked by Fire Assay/AA methods. Samples with gold values greater than 10000 ppb are checked by Fire Assay/Gravimetric methods.



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works\icpaqr.pag

Method of 30 element analysis by Aqua Regia digestion/ICP

- (a) 0.50 grams of sample is digested with diluted Aqua Regia solution by heating in a hot water bath, at about 95 Celsius for 90 minutes, then cooled and bulked up to a fixed volume with de-mineralized water, and thoroughly mixed. digested samples are let settled over night to separate residue from solution.
- (b) The specific elements are determined using an Inductively Coupled Argon Plasma spectrophotometer. All elements are corrected for inter-element interference. All data are subsequently stored onto computer diskette.

QUALITY CONTROL

The machine is first calibrated using three known standards and a blank. The test samples are then run in batches.

A sample batch consists of 38 or less samples. Two tubes are placed before a set. These are an Inhouse standard and an acid blank, which are both digested with the samples. A known standard with characteristics best matching the samples is chosen and placed after every fifteenth sample. After every 38th sample (not including standards), two samples, chosen at random, are re-weighed and analyzed. At the end of a batch, the standard and blank used at the beginning is rerun. The readings for these knowns are compared with the pre-rack knowns to detect any calibration drift.

**APPENDIX III**

**ANALYTICAL RESULTS FOR SOIL GEOCHEMICAL SAMPLES**



INTERNATIONAL PLASMA LABORATORY LTD.

# CERTIFICATE OF ANALYSIS

## IPL 97L1206

2036 Columbia et  
Vancouver, B.C.  
Canada V5Y 3E1  
Phone (604) 879-7878  
Fax (604) 879-7898

**Misty Mountain Gold Ltd.**

Project : Specogna = SANDSPIT GRID

Shipper : Ron Konst

Shipment: PO#:

Analysis:

Au(FA/AAS 20g) ICP(AqR)30

206 Samples

Out: Dec 12, 1997 In: Dec 08, 1997

[120617:45:46:79121297]

Comment:

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Att: Ron Konst	Ph:604/684-6365
	Fx:604/684-8092
	Em:AllanE@hdgold.com

CODE	AMOUNT	TYPE	PREPARATION DESCRIPTION	PULP	REJECT		
B111	206	Soil	Dry & sift to -80 mesh, discard reject.	12M/Dis	00M/Dis		
<b>Analytical Summary</b>							
##	Code	Method	Units	Description	Element	Limit	Limit
						Low	High
01	0312	FA/AAS	ppb	Au FA/AAS finish 20g	Gold	5	9999
02	0721	ICP	ppm	Ag ICP	Silver	0.1	99.9
03	0711	ICP	ppm	Cu ICP	Copper	1	20000
04	0714	ICP	ppm	Pb ICP	Lead	2	20000
05	0730	ICP	ppm	Zn ICP	Zinc	1	20000
06	0703	ICP	ppm	As ICP	Arsenic	5	9999
07	0702	ICP	ppm	Sb ICP	Antimony	5	999
08	0732	ICP	ppm	Hg ICP	Mercury	3	9999
09	0717	ICP	ppm	Mo ICP	Molybdenum	1	999
10	0747	ICP	ppm	Tl ICP (Incomplete Digestion)	Thallium	10	999
11	0705	ICP	ppm	Bi ICP	Bismuth	2	9999
12	0707	ICP	ppm	Cd ICP	Cadmium	0.1	99.9
13	0710	ICP	ppm	Co ICP	Cobalt	1	9999
14	0718	ICP	ppm	Ni ICP	Nickel	1	9999
15	0704	ICP	ppm	Ba ICP (Incomplete Digestion)	Barium	2	9999
16	0727	ICP	ppm	W ICP (Incomplete Digestion)	Tungsten	5	999
17	0709	ICP	ppm	Cr ICP (Incomplete Digestion)	Chromium	1	9999
18	0729	ICP	ppm	V ICP	Vanadium	2	9999
19	0716	ICP	ppm	Mn ICP	Manganese	1	9999
20	0713	ICP	ppm	La ICP (Incomplete Digestion)	Lanthanum	2	9999
21	0723	ICP	ppm	Sr ICP (Incomplete Digestion)	Strontium	1	9999
22	0731	ICP	ppm	Zr ICP	Zirconium	1	9999
23	0736	ICP	ppm	Sc ICP	Scandium	1	9999
24	0726	ICP	x	Ti ICP (Incomplete Digestion)	Titanium	0.01	1.00
25	0701	ICP	x	Al ICP (Incomplete Digestion)	Aluminum	0.01	9.99
26	0708	ICP	x	Ca ICP (Incomplete Digestion)	Calcium	0.01	9.99
27	0712	ICP	x	Fe ICP	Iron	0.01	9.99
28	0715	ICP	x	Mg ICP (Incomplete Digestion)	Magnesium	0.01	9.99
29	0720	ICP	x	K ICP (Incomplete Digestion)	Potassium	0.01	9.99
30	0722	ICP	x	Na ICP (Incomplete Digestion)	Sodium	0.01	5.00
31	0719	ICP	x	P ICP	Phosphorus	0.01	5.00

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DL=Download 3D=3/4 Disk EM=E-Mail BT=BBS Type BL=BBS(1=Yes 0=No) ID=C008501  
\* Our liability is limited solely to the analytical cost of these analyses.

BC Certified Assayer: David Chiu



INTERNATIONAL PLASMA LABORATORY LTD

CERTIFICATE OF ANALYSIS
IPL 97L1206

2036 Columbia St
Vancouver, B.C.
Canada V5Y 3E1
Phone (604) 879-7878
Fax (604) 879-7898

Client: Misty Mountain Gold Ltd.
Project: Specogna = SANDSPIR GRID

206 Samples
206=Soil

[120610:00:44:79121297]

Out: Dec 12, 1997 Page 1 of 6
In: Dec 08, 1997 Section 1 of 1

Table with 28 columns (Sample Name, Au, Ag, Cu, Pb, Zn, As, Sb, Hg, Mo, Tl, Bi, Cd, Co, Ni, Ba, W, Cr, V, Mn, La, Sr, Zr, Sc, Ti, Al, Ca, Fe, Mg, K, Na, P) and multiple rows of data points for various sample IDs (e.g., L 4400N 3000E S).









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Canada V5Y 3E1
Phone (604) 879-7878
Fax (604) 879-7898

Client : Misty Mountain Gold Ltd.
Project: Specogna

206 Samples
206-Soil

[120610:00:44:79121297]

Out: Dec 12, 1997 Page 4 of 6
In : Dec 08, 1997 Section 1 of 1

Table with columns for Sample Name, Au, Ag, Cu, Pb, Zn, As, Sb, Hg, Mo, Tl, Bi, Cd, Co, Ni, Ba, W, Cr, V, Mn, La, Sr, Zr, Sc, Ti, Al, Ca, Fe, Mg, K, Na, P. Contains multiple rows of sample analysis data.

Summary table with columns for Min Limit, Max Reported\*, Method, and various element symbols (Au, Ag, Cu, Pb, Zn, As, Sb, Hg, Mo, Tl, Bi, Cd, Co, Ni, Ba, W, Cr, V, Mn, La, Sr, Zr, Sc, Ti, Al, Ca, Fe, Mg, K, Na, P).

No Test Ins=Insufficient Sample Del=Delay Max=No Estimate Rec=ReCheck m=x1000 %=Estimate % NS=No Sample S=Soil





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CERTIFICATE OF ANALYSIS

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Client : Misty Mountain Gold Ltd.  
 Project: Specogna

206 Samples  
 206-Soil

[120610:00:44:79121297]

Out: Dec 12, 1997 Page 6 of 6  
 In : Dec 08, 1997 Section 1 of 1

Sample Name	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Hg ppm	Mo ppm	Tl ppm	Bi ppm	Cd ppm	Co ppm	Ni ppm	Ba ppm	W ppm	Cr ppm	V ppm	Mn ppm	La ppm	Sr ppm	Zr ppm	Sc ppm	Ti %	Al %	Ca %	Fe %	Mg %	K %	Na %	P %
L 5300N 4450E S	13	<	4	9	16	17	<	<	1	<	<	0.1	2	2	31	<	5	29	48	6	7	<	1	0.05	0.96	0.02	0.63	0.05	0.04	0.02	0.01
L 5300N 4475E S	66	0.1	15	14	76	83	5	<	2	<	<	0.9	8	12	61	<	18	66	305	8	9	4	7	0.08	5.20	0.04	3.40	0.45	0.04	<	0.06
L 5300N 4500E S	74	0.3	14	13	56	102	<	<	2	<	<	1.2	6	9	47	<	20	70	194	6	6	7	6	0.08	5.80	0.03	4.39	0.31	0.03	<	0.04
L 5300N 4525E S	40	0.3	15	13	61	71	<	<	2	<	<	1.0	8	11	32	<	20	85	235	6	5	3	8	0.10	4.66	0.03	4.12	0.34	0.04	<	0.03
L 5300N 4550E S	14	0.2	11	9	50	41	<	<	1	<	<	1.0	5	7	32	<	12	100	206	8	5	1	4	0.10	2.50	0.04	4.21	0.25	0.03	<	0.03
L 5300N 4575E S	<	0.4	21	11	92	28	<	<	3	<	<	1.1	6	13	74	<	17	79	287	4	9	2	5	0.02	3.48	0.04	3.55	0.30	0.04	<	0.04
L 5300N 4600E S	10	0.3	7	13	28	24	<	<	2	<	<	0.4	3	4	43	<	8	78	90	6	7	<	1	0.08	1.38	0.03	1.75	0.12	0.04	0.01	0.01
L 5300N 4625E S	12	0.3	11	13	48	28	<	<	2	<	<	1.0	4	7	46	<	15	91	161	5	6	2	3	0.04	3.08	0.03	4.21	0.23	0.03	<	0.02
L 5300N 4650E S	20	<	4	8	20	13	<	<	1	<	<	0.2	3	3	36	<	6	71	75	6	8	<	1	0.07	1.09	0.02	1.70	0.11	0.03	<	0.01
L 5300N 4675E S	46	0.2	6	8	38	25	<	<	2	<	<	0.5	4	4	37	<	7	69	169	8	8	<	2	0.07	1.49	0.05	1.96	0.21	0.04	<	0.02
L 5300N 4700E S	12	<	2	5	26	10	<	<	1	<	<	0.1	3	2	45	<	4	28	116	6	17	<	1	0.02	0.95	0.06	0.85	0.12	0.05	0.02	0.01

Min Limit 5 0.1 1 2 1 5 5 3 1 10 2 0.1 1 1 2 5 1 2 1 2 1 1 1 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01  
 Max Reported\* 9999 99.9 20000 20000 20000 9999 999 9999 999 999 9999 99.9 9999 9999 9999 999 9999 9999 9999 9999 9999 9999 9999 9999 1.00 9.99 9.99 9.99 9.99 9.99 5.00 5.00  
 Method FA/A ICP  
 —No Test Ins=Insufficient Sample Del=Delay Max=No Estimate Rec=ReCheck m=x1000 %=Estimate % NS=No SampleS=Soil



**CERTIFICATE OF ANALYSIS**  
iPL 97J1038

2036 Columbia St  
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**Misty Mountain Gold Ltd.**  
Project : Canyon Grid = **AMETHYST GRID**  
Shipper : Ron Konst  
Shipment: PO#:  
Analysis:  
Au(FA/AAS 20g) ICP(AqR)30

**186 Samples**

Out: Oct 17, 1997 In: Oct 15, 1997

[103816:37:41:79102197]

Comment:

**Document Distribution**

1 Misty Mountain Gold Ltd. EN RT CC IN FX  
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Att: Ron Konst Ph:604/684-6365  
Fx:604/684-8092  
Em:tomk@hdgold.com

CODE	AMOUNT	TYPE	PREPARATION DESCRIPTION	PULP	REJECT		
B111	186	Soil	Dry & sift to -80 mesh, discard reject.	12M/D1s	00M/D1s		
				NS=No Sample	Rep=Replicate M=Month Dis=Discard		
<b>Analytical Summary</b>							
##	Code	Method	Units	Description	Element	Limit Low	Limit High
01	0312	FA/AAS	ppb	Au FA/AAS finish 20g	Gold	5	10000
02	0721	ICP	ppm	Ag ICP	Silver	0.1	100.0
03	0711	ICP	ppm	Cu ICP	Copper	1	20000
04	0714	ICP	ppm	Pb ICP	Lead	2	20000
05	0730	ICP	ppm	Zn ICP	Zinc	1	20000
06	0703	ICP	ppm	As ICP	Arsenic	5	10000
07	0702	ICP	ppm	Sb ICP	Antimony	5	1000
08	0732	ICP	ppm	Hg ICP	Mercury	3	10000
09	0717	ICP	ppm	Mo ICP	Molybdenum	1	1000
10	0747	ICP	ppm	Tl ICP (Incomplete Digestion)	Thallium	10	1000
11	0705	ICP	ppm	Bi ICP	Bismuth	2	10000
12	0707	ICP	ppm	Cd ICP	Cadmium	0.1	100.0
13	0710	ICP	ppm	Co ICP	Cobalt	1	10000
14	0718	ICP	ppm	Ni ICP	Nickel	1	10000
15	0704	ICP	ppm	Ba ICP (Incomplete Digestion)	Barium	2	10000
16	0727	ICP	ppm	W ICP (Incomplete Digestion)	Tungsten	5	1000
17	0709	ICP	ppm	Cr ICP (Incomplete Digestion)	Chromium	1	10000
18	0729	ICP	ppm	V ICP	Vanadium	2	10000
19	0716	ICP	ppm	Mn ICP	Manganese	1	10000
20	0713	ICP	ppm	La ICP (Incomplete Digestion)	Lanthanum	2	10000
21	0723	ICP	ppm	Sr ICP (Incomplete Digestion)	Strontium	1	10000
22	0731	ICP	ppm	Zr ICP	Zirconium	1	10000
23	0736	ICP	ppm	Sc ICP	Scandium	1	10000
24	0726	ICP	%	Ti ICP (Incomplete Digestion)	Titanium	0.01	1.00
25	0701	ICP	%	Al ICP (Incomplete Digestion)	Aluminum	0.01	10.00
26	0708	ICP	%	Ca ICP (Incomplete Digestion)	Calcium	0.01	10.00
27	0712	ICP	%	Fe ICP	Iron	0.01	10.00
28	0715	ICP	%	Mg ICP (Incomplete Digestion)	Magnesium	0.01	10.00
29	0720	ICP	%	K ICP (Incomplete Digestion)	Potassium	0.01	10.00
30	0722	ICP	%	Na ICP (Incomplete Digestion)	Sodium	0.01	5.00
31	0719	ICP	%	P ICP	Phosphorus	0.01	5.00

**DUPLICATE**







CERTIFICATE OF ANALYSIS
iPL 97J1038

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Client: Misty Mountain Gold Ltd.
Project: Canyon Grid

186 Samples
186=Soil1

[103814:55:07:79102197]

Out: Oct 17, 1997
In: Oct 15, 1997

Page 3 of 5
Section 1 of 1

Table with columns: Sample Name, Au, Ag, Cu, Pb, Zn, As, Sb, Hg, Mo, Tl, Bi, Cd, Co, Ni, Ba, W, Cr, V, Mn, La, Sr, Zr, Sc, Ti, Al, Ca, Fe, Mg, K, Na, P. Contains detailed analytical data for 186 samples, including various elements and their concentrations in ppm or ppb.

Min Limit 5 0.1 1 2 1 5 5 3 1 10 2 0.1 1 1 2 5 1 2 1 2 1 1 1 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01
Max Reported\* 9999 99.9 20000 20000 9999 999 9999 999 999 9999 99.9 9999 9999 9999 999 9999 9999 9999 9999 9999 9999 9999 9999 9999 1.00 9.99 9.99 9.99 9.99 9.99 5.00 5.00
Method FA/A ICP
-NS=No Test Ins=Insufficient Sample Del=Delay Max=No Estimate Rec=ReCheck m=x1000 %=Estimate % NS=No Sample So1





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Client : Misty Mountain Gold Ltd.  
Project: Canyon Grid

186 Samples  
186=Soil

[103814:55:07:79102197]

Out: Oct 17, 1997  
In : Oct 15, 1997

Page 4 of 5  
Section 1 of 1

Table with columns: Sample Name, Au (ppb), Ag (ppm), Cu (ppm), Pb (ppm), Zn (ppm), As (ppm), Sb (ppm), Hg (ppm), Mo (ppm), Tl (ppm), Bi (ppm), Cd (ppm), Co (ppm), Ni (ppm), Ba (ppm), W (ppm), Cr (ppm), V (ppm), Mn (ppm), La (ppm), Sr (ppm), Zr (ppm), Sc (ppm), Ti (%), Al (%), Ca (%), Fe (%), Mg (%), K (%), Na (%), P (%). Rows list various sample IDs and their corresponding element concentrations.

Summary table with 28 columns and 5 rows. Columns correspond to elements: Au, Ag, Cu, Pb, Zn, As, Sb, Hg, Mo, Tl, Bi, Cd, Co, Ni, Ba, W, Cr, V, Mn, La, Sr, Zr, Sc, Ti, Al, Ca, Fe, Mg, K, Na, P. Rows include: Min Limit, Max Reported, Method, and a legend for test results (e.g., In=Insufficient Sample, Del=Delay).





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Misty Mountain Gold Ltd.

142 Samples

Out: Oct 24, 1997 In: Oct 21, 1997

[105715:02:51:79102897]

Project : Canyon Grid = AMETHYST GRID

Shipper : Ron Konst

Shipment: POW:

Analysis:

Au(FA/AAS 20g) ICP(AqR)30

Comment:

Document Distribution

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Canada					
Att: Ron Konst					
		Ph:	604/684-6365		
		Fx:	604/684-8092		
		Em:	tomk@hdgold.com		

CODE	AMOUNT	TYPE	PREPARATION DESCRIPTION	PULP	REJECT
B111	142	Soil	Dry & sift to -80 mesh, discard reject.	12M/Dis	OOM/Dis

Analytical Summary

##	Code	Method	Units	Description	Element	Limit Low	Limit High
01	0312	FA/AAS	ppb	Au FA/AAS finish 20g	Gold	5	9999
02	0721	ICP	ppm	Ag ICP	Silver	0.1	99.9
03	0711	ICP	ppm	Cu ICP	Copper	1	20000
04	0714	ICP	ppm	Pb ICP	Lead	2	20000
05	0730	ICP	ppm	Zn ICP	Zinc	1	20000
06	0703	ICP	ppm	As ICP	Arsenic	5	9999
07	0702	ICP	ppm	Sb ICP	Antimony	5	999
08	0732	ICP	ppm	Hg ICP	Mercury	3	9999
09	0717	ICP	ppm	Mo ICP	Molybdenum	1	999
10	0747	ICP	ppm	Tl ICP (Incomplete Digestion)	Thallium	10	999
11	0705	ICP	ppm	Bi ICP	Bismuth	2	9999
12	0707	ICP	ppm	Cd ICP	Cadmium	0.1	99.9
13	0710	ICP	ppm	Co ICP	Cobalt	1	9999
14	0718	ICP	ppm	Ni ICP	Nickel	1	9999
15	0704	ICP	ppm	Ba ICP (Incomplete Digestion)	Barium	2	9999
16	0727	ICP	ppm	W ICP (Incomplete Digestion)	Tungsten	5	999
17	0709	ICP	ppm	Cr ICP (Incomplete Digestion)	Chromium	1	9999
18	0729	ICP	ppm	V ICP	Vanadium	2	9999
19	0716	ICP	ppm	Mn ICP	Manganese	1	9999
20	0713	ICP	ppm	La ICP (Incomplete Digestion)	Lanthanum	2	9999
21	0723	ICP	ppm	Sr ICP (Incomplete Digestion)	Strontium	1	9999
22	0731	ICP	ppm	Zr ICP	Zirconium	1	9999
23	0736	ICP	ppm	Sc ICP	Scandium	1	9999
24	0726	ICP	%	Ti ICP (Incomplete Digestion)	Titanium	0.01	1.00
25	0701	ICP	%	Al ICP (Incomplete Digestion)	Aluminum	0.01	9.99
26	0708	ICP	%	Ca ICP (Incomplete Digestion)	Calcium	0.01	9.99
27	0712	ICP	%	Fe ICP	Iron	0.01	9.99
28	0715	ICP	%	Mg ICP (Incomplete Digestion)	Magnesium	0.01	9.99
29	0720	ICP	%	K ICP (Incomplete Digestion)	Potassium	0.01	9.99
30	0722	ICP	%	Na ICP (Incomplete Digestion)	Sodium	0.01	5.00
31	0719	ICP	%	P ICP	Phosphorus	0.01	5.00

DUPLICATE



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Client : Misty Mountain Gold Ltd.
Project: Canyon Grid = AMETHYST GRID

142 Samples
142=Soil

(105715:02:51:79102897)

Out: Oct 24, 1997
In : Oct 21, 1997

Page 1 of 4
Section 1 of 1

Table with columns for Sample Name and elements Au, Ag, Cu, Pb, Zn, As, Sb, Hg, Mo, Tl, Bi, Cd, Co, Ni, Ba, W, Cr, V, Mn, La, Sr, Zr, Sc, Ti, Al, Ca, Fe, Mg, K, Na, P. Each row contains concentration values in ppm or %.

Summary table with columns: Min Limit, Max Reported\*, Method. Lists detection limits and methods for various elements.







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Client : Misty Mountain Gold Ltd.  
 Project: Canyon Grid

**142 Samples**  
 142=Soil

[105715:02:51:79102897]

Out: Oct 24, 1997  
 In : Oct 21, 1997

Page 4 of 4  
 Section 1 of 1

Sample Name	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Hg ppm	Mo ppm	Tl ppm	Bi ppm	Cd ppm	Co ppm	Ni ppm	Ba ppm	W ppm	Cr ppm	V ppm	Mn ppm	La ppm	Sr ppm	Zr ppm	Sc ppm	Ti %	Al %	Ca %	Fe %	Mg %	K %	Na %	P %
9700N 6850E S	< 0.4	13	13	30	46	<	<	1	<	<	1.0	6	7	131	<	22	92	155	4	48	5	5	0.13	3.44	0.07	2.00	0.30	0.03	0.03	0.02	
9700N 6875E S	< 0.3	16	12	84	21	<	<	3	<	<	<	9	11	132	<	22	108	1124	2	56	1	4	0.10	2.69	0.13	3.28	0.63	0.03	0.04	0.02	
9700N 6900E S	< 0.3	12	67	69	29	<	<	1	<	<	0.1	13	11	125	<	19	63	501	2	53	1	3	0.09	2.48	0.14	1.75	0.60	0.05	0.03	0.03	
9700N 6925E S	5 0.3	13	11	66	26	<	<	2	<	<	<	10	15	186	<	21	135	341	3	65	1	5	0.11	3.19	0.17	4.07	0.80	0.04	0.04	0.03	
9700N 7000E S	22 0.3	26	16	63	21	<	<	3	<	<	<	14	12	114	<	26	176	404	2	15	11	7	0.22	3.69	0.05	5.28	0.56	0.04	0.03	0.02	
9700N 7025E S	26 0.3	49	27	84	64	<	<	2	<	<	<	17	17	130	<	36	173	378	2	19	20	13	0.19	6.98	0.05	5.60	0.65	0.03	0.03	0.01	
9700N 7075E S	36 0.3	4	6	13	7	<	<	<	<	<	0.2	3	2	19	<	5	89	58	2	3	4	1	0.10	0.34	0.02	0.39	0.03	0.09	0.02	0.01	
9700N 7100E S	58 0.3	13	7	24	<	<	<	2	<	<	<	4	3	49	<	14	127	259	<	7	3	3	0.14	0.66	0.05	2.62	0.17	0.07	0.03	0.03	
9700N 7150E S	52 0.6	34	15	44	40	<	<	1	<	<	<	23	5	59	<	20	171	4100	4	9	3	13	0.16	4.18	0.04	4.48	0.22	0.03	0.02	0.04	
9700N 7175E S	56 0.4	26	12	43	10	5	<	1	<	<	<	14	5	133	<	17	184	1714	3	20	2	7	0.18	1.90	0.14	4.09	0.42	0.05	0.02	0.03	
9700N 7200E S	30 0.3	41	12	62	35	<	<	1	<	<	<	19	11	110	<	23	158	4106	5	35	2	11	0.18	3.96	0.16	4.25	0.90	0.06	0.03	0.05	
9700N 7250E S	12 0.3	26	10	56	17	<	<	1	<	<	<	29	7	125	<	17	192	4180	4	23	2	7	0.21	2.22	0.25	4.50	0.71	0.07	0.02	0.05	
9700N 7275E S	7 0.3	21	15	48	30	<	<	2	<	<	<	12	8	83	<	21	158	480	3	26	4	7	0.18	3.77	0.13	4.46	0.43	0.03	0.03	0.02	
9700N 7300E S	86 1.4	24	14	69	27	<	<	2	<	<	<	13	9	94	<	19	147	611	4	24	2	7	0.22	3.33	0.15	3.32	0.47	0.04	0.03	0.03	
9700N 7325E S	11 0.2	24	16	39	48	<	<	2	<	<	<	8	8	149	<	25	157	220	4	46	8	9	0.19	5.36	0.06	4.61	0.29	0.03	0.03	0.02	
9700N 7350E S	30 0.3	29	19	53	65	7	<	1	<	<	<	14	11	152	<	25	134	442	5	36	14	14	0.21	5.78	0.10	3.96	0.70	0.04	0.03	0.03	
9700N 7375E S	9 0.4	31	14	49	15	<	<	2	<	<	<	13	9	128	<	20	142	633	5	31	2	6	0.18	2.68	0.23	3.81	0.64	0.07	0.03	0.02	
9700N 7400E S	7 0.3	41	16	66	23	<	<	2	<	<	<	14	14	124	<	28	144	465	4	53	2	7	0.22	3.20	0.31	3.87	1.19	0.06	0.04	0.02	
9700N 7425E S	< 0.8	14	9	16	20	<	<	<	<	<	0.5	1	3	81	<	11	15	57	5	33	1	1	0.02	1.28	0.39	0.18	0.10	0.02	0.03	0.04	
9700N 7450E S	< 0.5	20	8	25	11	<	<	6	<	<	0.5	1	3	58	<	8	26	43	2	16	1	2	0.02	0.67	0.15	0.47	0.08	0.05	0.03	0.04	
9700N 7475E S	< 0.4	7	10	36	6	<	<	1	<	<	0.6	1	3	94	<	4	12	236	3	57	1	1	0.01	0.37	0.94	0.23	0.16	0.04	0.04	0.05	
9700N 7525E S	10 0.4	14	12	28	28	<	<	1	<	<	0.5	5	6	119	<	16	87	415	4	50	1	2	0.06	2.01	0.31	1.06	0.39	0.03	0.03	0.03	
9700N 7550E S	41 0.3	22	13	61	31	<	<	2	<	<	0.3	13	12	137	<	29	97	489	4	65	5	9	0.21	3.03	0.41	2.29	1.11	0.04	0.04	0.03	
9700N 7675E S	12 0.7	19	16	27	57	<	<	2	<	<	<	10	5	33	<	24	204	491	<	7	9	10	0.22	4.97	0.08	3.28	0.69	0.02	0.02	0.02	
9700N 7700E S	84 0.7	17	18	27	<	<	<	1	<	<	<	8	7	70	<	26	214	219	2	15	3	4	0.23	1.59	0.06	4.56	0.36	0.04	0.02	0.02	

Min Limit 5 0.1 1 2 1 5 5 3 1 10 2 0.1 1 1 2 5 1 2 1 2 1 1 1 1 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01

Max Reported\* 9999 99.9 20000 20000 20000 9999 999 9999 999 999 9999 99.9 9999 9999 9999 999 9999 9999 9999 9999 9999 9999 9999 9999 1.00 9.99 9.99 9.99 9.99 9.99 5.00 5.00

Method FA/A ICP

—No Test Ins=Insufficient Sample Del=Delay Max=No Estimate Rec=ReCheck m=1000 %=Estimate % NS=No Sample So/1



**CERTIFICATE OF ANALYSIS**  
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[105814:07:42:79103097]

**Misty Mountain Gold Ltd.**

**93 Samples**

Out: Oct 30, 1997 In: Oct 21, 1997

Project : Feather Grid

Shipper : Ron Konst

Shipment: PO#:

Analysis:

Au(FA/AAS 20g) ICP(AqR)30

Comment:

**Document Distribution**

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Canada	
Att: Ron Konst	Ph: 604/684-6365
	Fx: 604/684-8092
	Em: tomk@hdgold.com

CODE	AMOUNT	TYPE	PREPARATION DESCRIPTION	PULP	REJECT
B111	93	Soil	Dry & sift to -80 mesh, discard reject.	12M/Dis	OOM/Dis

**Analytical Summary**

##	Code	Method	Units	Description	Element	Limit Low	Limit High
01	0312	FA/AAS	ppb	Au FA/AAS finish 20g	Gold	5	9999
02	0721	ICP	ppm	Ag ICP	Silver	0.1	99.9
03	0711	ICP	ppm	Cu ICP	Copper	1	20000
04	0714	ICP	ppm	Pb ICP	Lead	2	20000
05	0730	ICP	ppm	Zn ICP	Zinc	1	20000
06	0703	ICP	ppm	As ICP	Arsenic	5	9999
07	0702	ICP	ppm	Sb ICP	Antimony	5	999
08	0732	ICP	ppm	Hg ICP	Mercury	3	9999
09	0717	ICP	ppm	Mo ICP	Molybdenum	1	999
10	0747	ICP	ppm	Tl ICP (Incomplete Digestion)	Thallium	10	999
11	0705	ICP	ppm	Bi ICP	Bismuth	2	9999
12	0707	ICP	ppm	Cd ICP	Cadmium	0.1	99.9
13	0710	ICP	ppm	Co ICP	Cobalt	1	9999
14	0718	ICP	ppm	Ni ICP	Nickel	1	9999
15	0704	ICP	ppm	Ba ICP (Incomplete Digestion)	Barium	2	9999
16	0727	ICP	ppm	W ICP (Incomplete Digestion)	Tungsten	5	999
17	0709	ICP	ppm	Cr ICP (Incomplete Digestion)	Chromium	1	9999
18	0729	ICP	ppm	V ICP	Vanadium	2	9999
19	0716	ICP	ppm	Mn ICP	Manganese	1	9999
20	0713	ICP	ppm	La ICP (Incomplete Digestion)	Lanthanum	2	9999
21	0723	ICP	ppm	Sr ICP (Incomplete Digestion)	Strontium	1	9999
22	0731	ICP	ppm	Zr ICP	Zirconium	1	9999
23	0736	ICP	ppm	Sc ICP	Scandium	1	9999
24	0726	ICP	%	Ti ICP (Incomplete Digestion)	Titanium	0.01	1.00
25	0701	ICP	%	Al ICP (Incomplete Digestion)	Aluminum	0.01	9.99
26	0708	ICP	%	Ca ICP (Incomplete Digestion)	Calcium	0.01	9.99
27	0712	ICP	%	Fe ICP	Iron	0.01	9.99
28	0715	ICP	%	Mg ICP (Incomplete Digestion)	Magnesium	0.01	9.99
29	0720	ICP	%	K ICP (Incomplete Digestion)	Potassium	0.01	9.99
30	0722	ICP	%	Na ICP (Incomplete Digestion)	Sodium	0.01	5.00
31	0719	ICP	%	P ICP	Phosphorus	0.01	5.00

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\* Our liability is limited solely to the analytical cost of these analyses.

BC Certified Assayer: David Chiu









**CERTIFICATE ANALYSIS**  
**iPL 97J1058**

2036 Columbia St  
Vancouver, B.C.  
Canada V5Y 3E1  
Phone (604) 879-7878  
Fax (604) 879-7898

Client : Misty Mountain Gold Ltd.  
Project: Feather Grid

**93 Samples**  
93=Soil

[105814:07:42:79103097]

Out: Oct 30, 1997 Page 3 of 3  
In : Oct 21, 1997 Section 1 of 1

Sample Name	Au	Ag	Cu	Pb	Zn	As	Sb	Hg	Mo	Tl	Bi	Cd	Co	Ni	Ba	W	Cr	V	Mn	La	Sr	Zr	Sc	Ti	Al	Ca	Fe	Mg	K	Na	P
	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%	%
27600N 91475E S	<	<	20	13	66	43	<	<	1	<	<	0.5	14	13	85	<	16	111	304	3	30	2	4	0.12	3.32	0.16	2.65	0.79	0.04	0.03	0.02
27600N 91500E S	8	<	17	9	50	42	<	<	1	<	<	0.3	8	8	52	<	12	118	217	3	15	1	4	0.11	3.11	0.07	2.72	0.51	0.03	0.02	0.01
27600N 91525E S	<	<	14	9	44	41	<	<	1	<	<	<	6	8	39	<	16	168	204	3	13	2	3	0.09	3.75	0.07	4.37	0.41	0.03	0.02	0.02
27600N 91550E S	<	<	8	7	32	16	<	<	<	<	<	<	5	6	29	<	9	199	193	3	10	1	2	0.06	2.22	0.06	4.91	0.36	0.04	0.02	0.01
27600N 91575E S	<	<	20	9	43	44	<	<	1	<	<	<	7	7	33	<	20	225	189	3	7	6	6	0.11	4.83	0.03	6.60	0.18	0.01	0.02	0.01
27600N 91600E S	<	<	23	9	33	21	<	<	2	<	<	<	6	5	37	<	12	193	160	3	7	2	4	0.02	2.70	0.03	5.17	0.18	0.02	0.02	0.02
27600N 91625E S	<	<	23	10	65	30	<	<	1	<	<	<	23	9	117	<	13	133	1577	4	43	1	5	0.02	2.81	0.39	4.83	0.89	0.12	0.07	0.03
27600N 91650E S	<	0.1	13	<	32	8	<	<	1	<	<	<	3	3	24	<	6	184	122	2	3	1	1	0.03	1.25	0.01	3.71	0.06	0.02	0.02	0.01
27600N 91675E S	<	0.1	13	6	36	14	<	<	2	<	<	<	4	4	29	<	10	161	189	2	10	1	2	0.03	1.99	0.08	4.75	0.37	0.04	0.02	0.02
27600N 91775E S	<	<	6	9	10	11	<	<	<	<	<	0.4	2	4	45	<	6	16	100	4	26	1	1	0.01	0.48	0.51	0.22	0.11	0.02	0.03	0.02
27600N 91875E S	10	0.2	3	14	30	5	<	<	<	<	<	0.3	1	1	37	<	2	8	46	2	29	<	<	<	0.24	0.50	0.23	0.11	0.02	0.03	0.02
27600N 91925E S	10	<	5	8	19	17	<	<	1	<	<	<	4	3	34	<	8	72	82	2	15	1	1	0.13	1.08	0.06	1.20	0.14	0.03	0.02	0.01
27600N 91950E S	<	<	24	11	58	85	<	<	1	<	<	<	10	12	58	<	33	135	215	3	12	12	10	0.13	7.17	0.05	5.68	0.40	0.03	0.02	0.02
27600N 91975E S	12	<	18	9	51	68	<	<	2	<	<	<	7	9	58	<	29	125	207	3	11	8	6	0.11	5.72	0.04	4.75	0.32	0.02	0.02	0.01
27600N 92000E S	<	<	6	9	16	6	<	<	<	<	<	0.2	4	3	16	<	8	132	119	3	7	1	1	0.12	0.80	0.04	1.82	0.11	0.03	0.02	0.01

Min Limit    5   0.1    1    2    1    5   5    3   1   10   2   0.1   1   1   2   5    1   2   1   2    1    1    1   0.01   0.01   0.01   0.01   0.01   0.01   0.01   0.01   0.01

Max Reported\* 9999 99.9 20000 20000 20000 9999 999 9999 999 999 9999 99.9 9999 9999 9999 999 9999 9999 9999 9999 9999 9999 9999 9999 9999 9999 1.00 9.99 9.99 9.99 9.99 9.99 9.99 5.00 5.00

Method        FA/A ICP

—\*No Test    Ins=Insufficient Sample    Del=Delay    Max=No Estimate    Rec=ReCheck    m=x1000    %=Estimate %    NS=No SampleS=Soil



**CERTIFICATE OF ANALYSIS**  
iPL 97J1093

2036 Columbia Street  
Vancouver, B.C.  
Canada V5Y 3E1  
Phone (604) 879-7878  
Fax (604) 879-7898

**Misty Mountain Gold Ltd.**

**91 Samples**

Out: Nov 03, 1997 In: Oct 29, 1997

[109316:22:29:79110597]

Project : Feather Grid  
Shipper : Ron Konst  
Shipment: PO#:  
Analysis:

Au(FA/AAS 20g) ICP(AQR)30

Comment:

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Att: Ron Konst	Ph:604/684-6365
	Fx:604/684-8092
	Em:AllanE@hdgold.com

CODE	AMOUNT	TYPE	PREPARATION DESCRIPTION	PULP	REJECT		
B111	91	Soil	Dry & sift to -80 mesh, discard reject.	12M/Disc	00M/Disc		
NS=No Sample Rep=Replicate M=Month Dis=Discard							
<b>Analytical Summary</b>							
##	Code	Method	Units	Description	Element	Limit Low	Limit High
01	0312	FA/AAS	ppb	Au FA/AAS finish 20g	Gold	5	9999
02	0721	ICP	ppm	Ag ICP	Silver	0.1	99.9
03	0711	ICP	ppm	Cu ICP	Copper	1	20000
04	0714	ICP	ppm	Pb ICP	Lead	2	20000
05	0730	ICP	ppm	Zn ICP	Zinc	1	20000
06	0703	ICP	ppm	As ICP	Arsenic	5	9999
07	0702	ICP	ppm	Sb ICP	Antimony	5	999
08	0732	ICP	ppm	Hg ICP	Mercury	3	9999
09	0717	ICP	ppm	Mo ICP	Molybdenum	1	999
10	0747	ICP	ppm	Tl ICP (Incomplete Digestion)	Thallium	10	999
11	0705	ICP	ppm	Bi ICP	Bismuth	2	9999
12	0707	ICP	ppm	Cd ICP	Cadmium	0.1	99.9
13	0710	ICP	ppm	Co ICP	Cobalt	1	9999
14	0718	ICP	ppm	Ni ICP	Nickel	1	9999
15	0704	ICP	ppm	Ba ICP (Incomplete Digestion)	Barium	2	9999
16	0727	ICP	ppm	W ICP (Incomplete Digestion)	Tungsten	5	999
17	0709	ICP	ppm	Cr ICP (Incomplete Digestion)	Chromium	1	9999
18	0729	ICP	ppm	V ICP	Vanadium	2	9999
19	0716	ICP	ppm	Mn ICP	Manganese	1	9999
20	0713	ICP	ppm	La ICP (Incomplete Digestion)	Lanthanum	2	9999
21	0723	ICP	ppm	Sr ICP (Incomplete Digestion)	Strontium	1	9999
22	0731	ICP	ppm	Zr ICP	Zirconium	1	9999
23	0736	ICP	ppm	Sc ICP	Scandium	1	9999
24	0726	ICP	%	Ti ICP (Incomplete Digestion)	Titanium	0.01	1.00
25	0701	ICP	%	Al ICP (Incomplete Digestion)	Aluminum	0.01	9.99
26	0708	ICP	%	Ca ICP (Incomplete Digestion)	Calcium	0.01	9.99
27	0712	ICP	%	Fe ICP	Iron	0.01	9.99
28	0715	ICP	%	Mg ICP (Incomplete Digestion)	Magnesium	0.01	9.99
29	0720	ICP	%	K ICP (Incomplete Digestion)	Potassium	0.01	9.99
30	0722	ICP	%	Na ICP (Incomplete Digestion)	Sodium	0.01	5.00
31	0719	ICP	%	P ICP	Phosphorus	0.01	5.00

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DL=Download 3D=3 1/2 Disk EM=E-Mail BT=BBS Type BL=BBS(1=Yes 0=No) ID=C008501  
\* Our liability is limited solely to the analytical cost of these analyses.

BC Certified Assayer: David Chiu



INTERNATIONAL PLASMA LABORATORY LTD.

CERTIFICATE OF ANALYSIS
iPL 97J1093

2036 Columbia St
Vancouver, B.C.
Canada V5Y 3E1
Phone (604) 879-7878
Fax (604) 879-7898

Client : Misty Mountain Gold Ltd.
Project: Feather Grid

91 Samples
91=Soil

[109316:22:29:79110597]

Out: Nov 03, 1997
In : Oct 29, 1997

Page 1 of 3
Section 1 of 1

Table with columns: Sample Name, Au, Ag, Cu, Pb, Zn, As, Sb, Hg, Mo, Tl, Bi, Cd, Co, Ni, Ba, W, Cr, V, Mn, La, Sr, Zr, Sc, Tl, Al, Ca, Fe, Mg, K, Na, P. Rows contain sample IDs and corresponding element concentrations.

Min Limit 5 0.1 1 2 ...
Max Reported\* 9999 99.9 20000 20000 20000 9999 999 9999 999 999 9999 99.9 9999 9999 9999 999 9999 9999 9999 9999 9999 9999 9999 9999 1.00 9.99 9.99 9.99 9.99 9.99 5.00 5.00
Method FA/A ICP ICP ICP ...
- =No Test. Ins=Insufficient Sample Del=Delay Max=No Estimate Rec=ReCheck m=x1000 X=Estimate % NS=No Sample S=Soil





**APPENDIX IV**

**A GEOPHYSICAL ASSESSMENT REPORT ON  
AN INDUCED POLARIZATION SURVEY  
ON THE HARMONY GOLD PROJECT  
QUEEN CHARLOTTE ISLANDS  
BRITISH COLUMBIA**

**SKEENA MINING DIVISION**

**LONGITUDE 132°20'W**

**LATITUDE 53°32'N  
NTS 103F/7,8,9 & 15**

**BY**

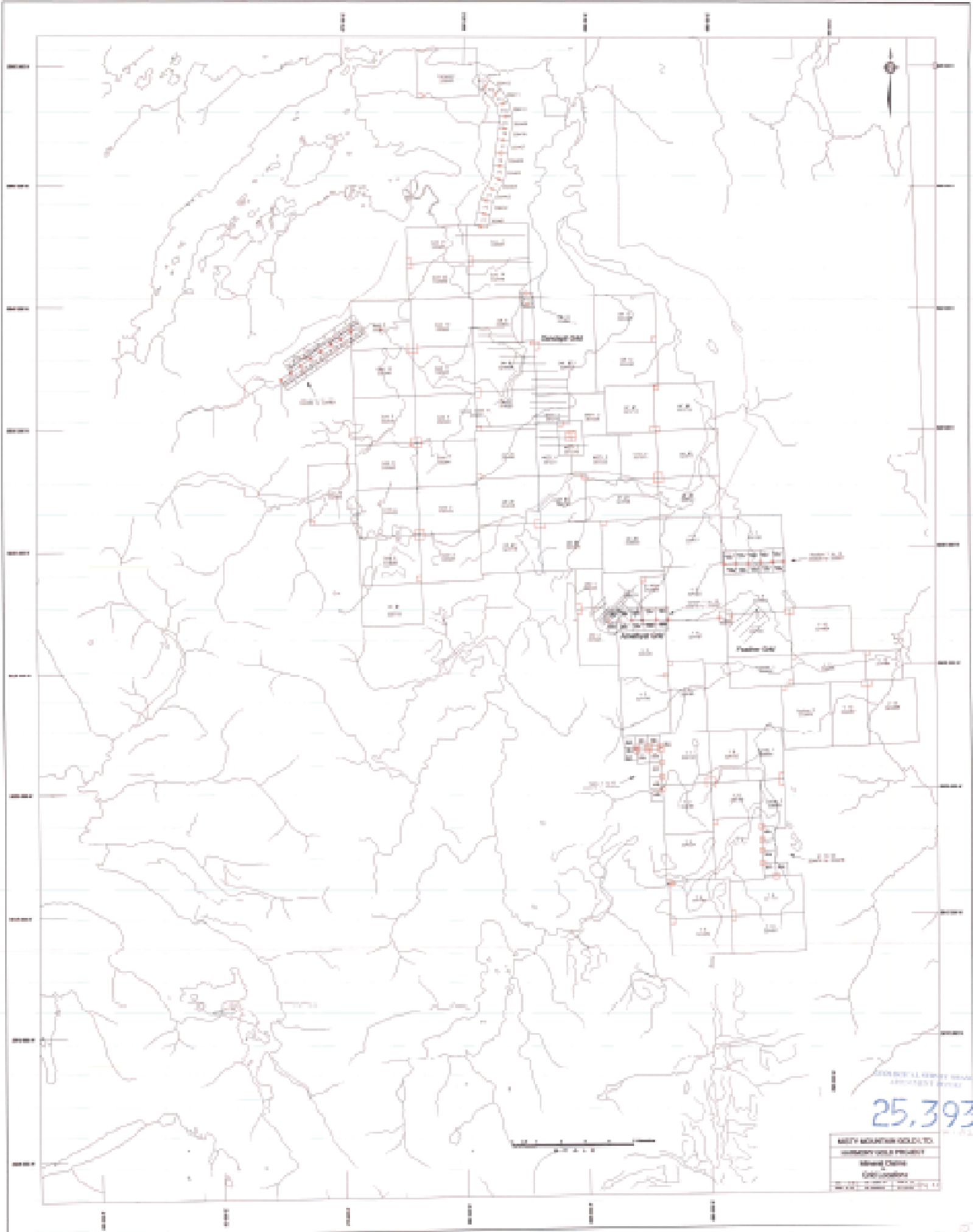
**Daniel A. Klit, B.Sc.**

**LLOYD GEOPHYSICS INC.**

**JANUARY, 1998**

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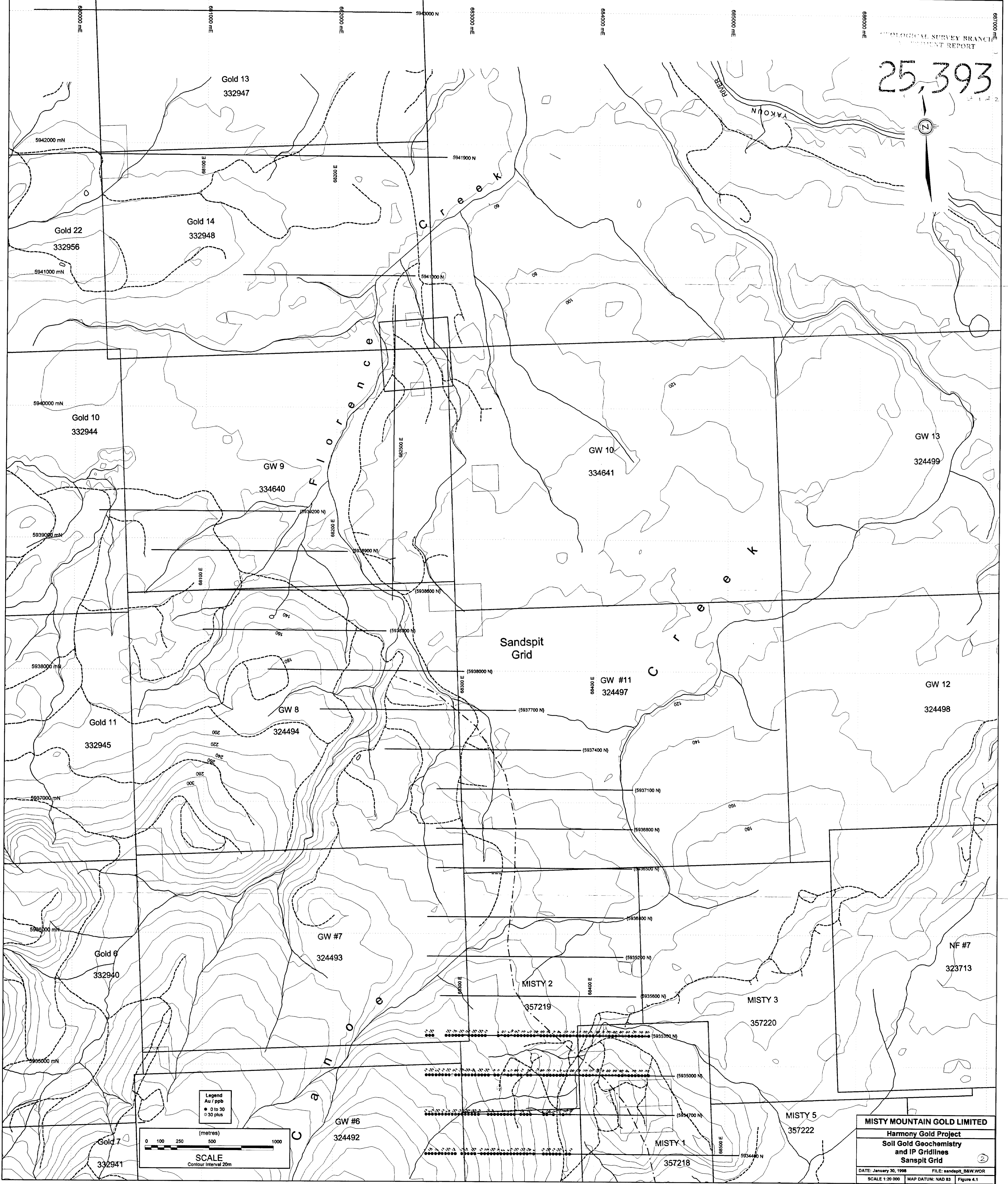




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25,393

WEST COAST COASTAL  
COUNCIL OF DISTRICTS  
Map of  
Coastal  
Council

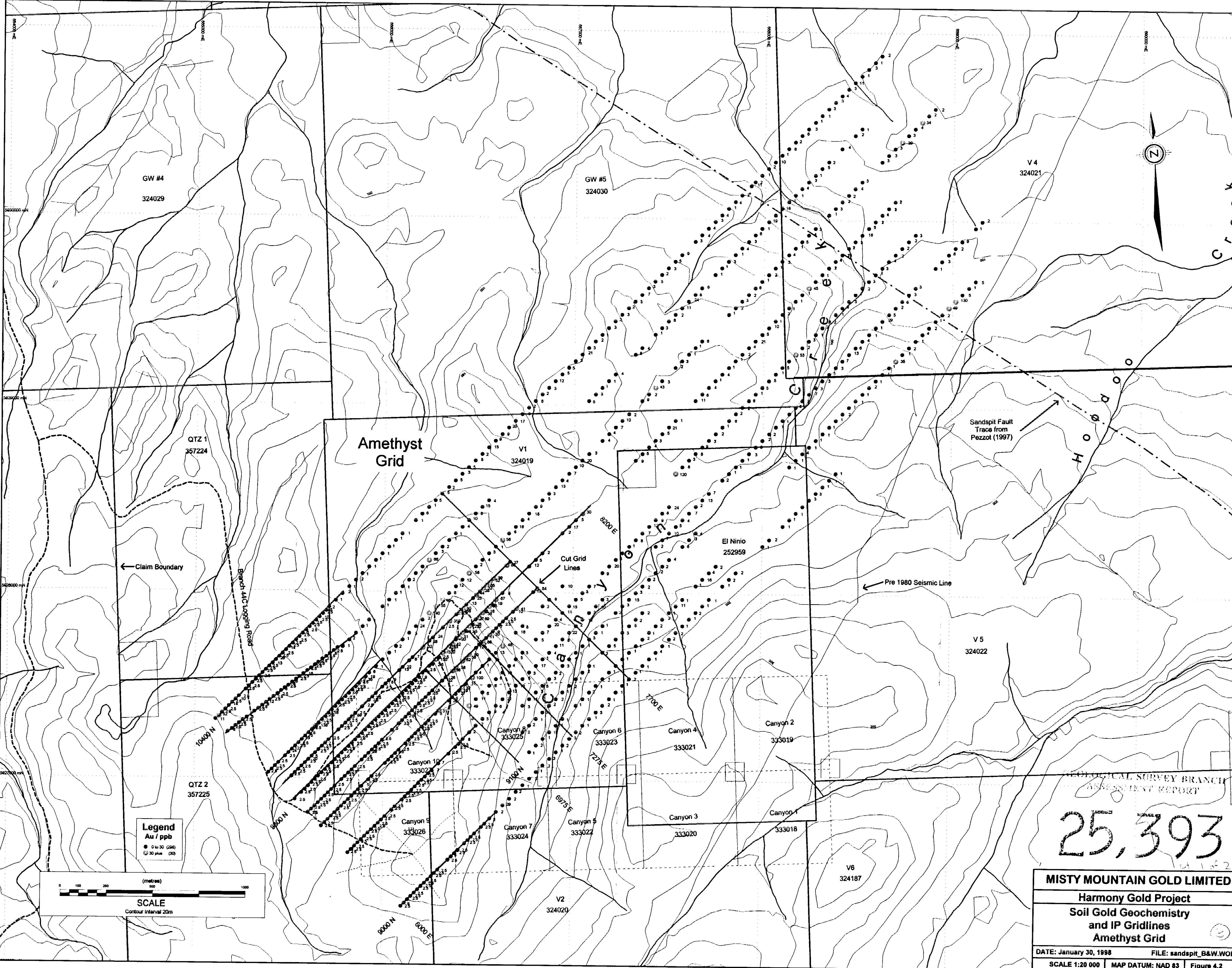


Legend  
Au / ppb  
● 0 to 30  
○ 30 plus

(metres)  
0 100 250 500 1000  
SCALE  
Contour Interval 20m

MISTY MOUNTAIN GOLD LIMITED  
Harmony Gold Project  
Soil Gold Geochemistry  
and IP Gridlines  
Sandspit Grid

DATE: January 30, 1998 FILE: sandspit\_B&W.WOR  
SCALE 1:20 000 MAP DATUM: NAD 83 Figure 4.1



25,393

ECOLOGICAL SURVEY BRANCH  
 ASSESSMENT REPORT

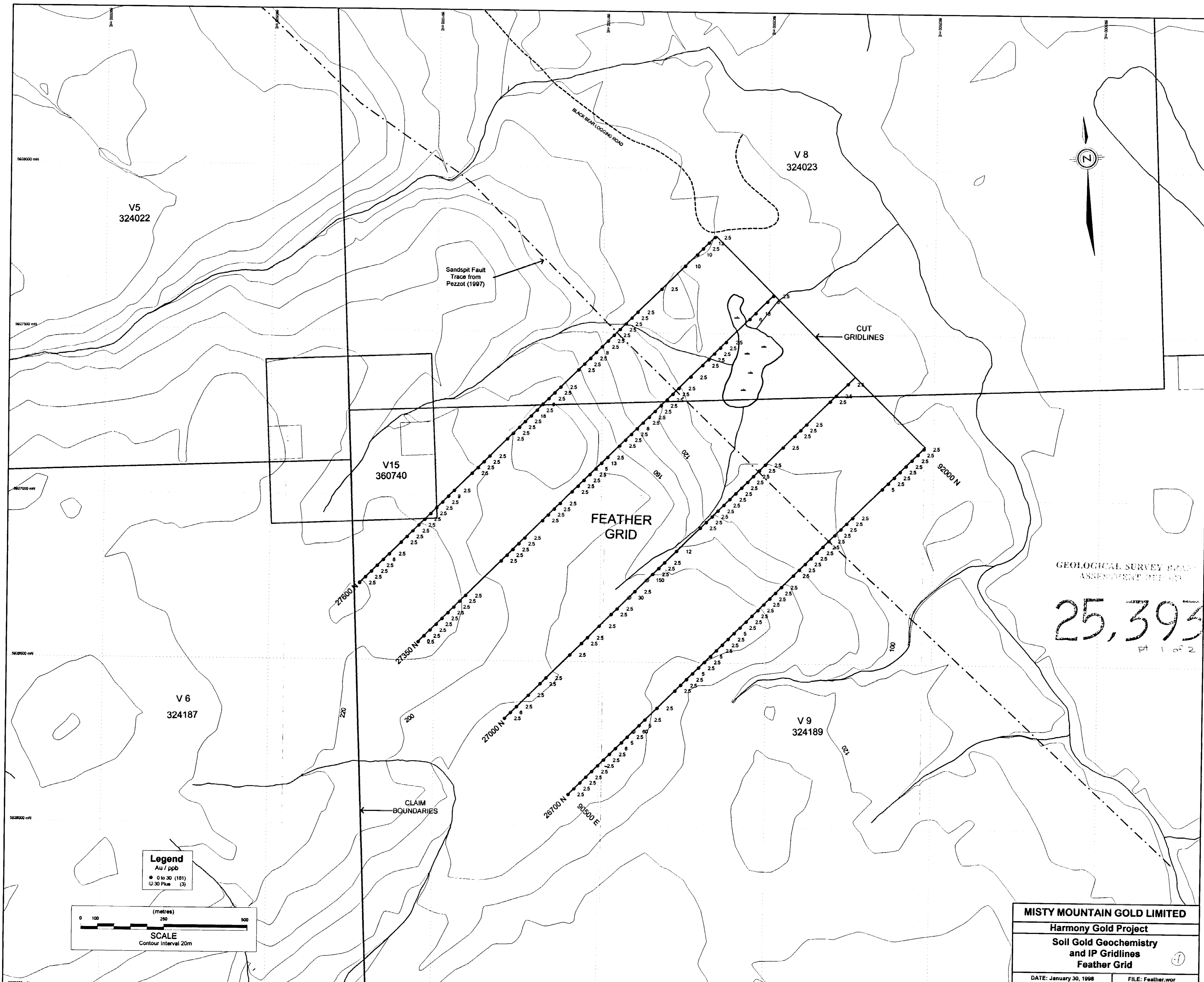
**MISTY MOUNTAIN GOLD LIMITED**

**Harmony Gold Project**

**Soil Gold Geochemistry  
 and IP Gridlines  
 Amethyst Grid**

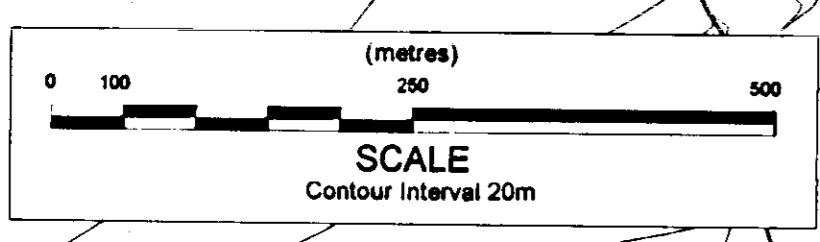
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SCALE 1:20 000 MAP DATUM: NAD 83 Figure 4.2



GEOLOGICAL SURVEY BRANCH  
ASSESSMENT INTENSITY  
**25,393**  
Pt 1 of 2

**Legend**  
Au / ppb  
● 0 to 30 (181)  
○ 30 Plus (3)



**MISTY MOUNTAIN GOLD LIMITED**  
**Harmony Gold Project**  
**Soil Gold Geochemistry**  
**and IP Gridlines**  
**Feather Grid**  
DATE: January 30, 1998 FILE: Feather.wor  
SCALE 1:5000/NTS 1031/8 MAP DATUM: NAD 83 Figure 4.3