

LOG NO	MAY 2 1993	RD.
ACTION.		
FILE NO:		



**DIAMOND DRILLING  
REPORT ON THE  
TT1 AND CAS CLAIMS  
MITZI PROPERTY**

**OMINECA MINING DIVISION**

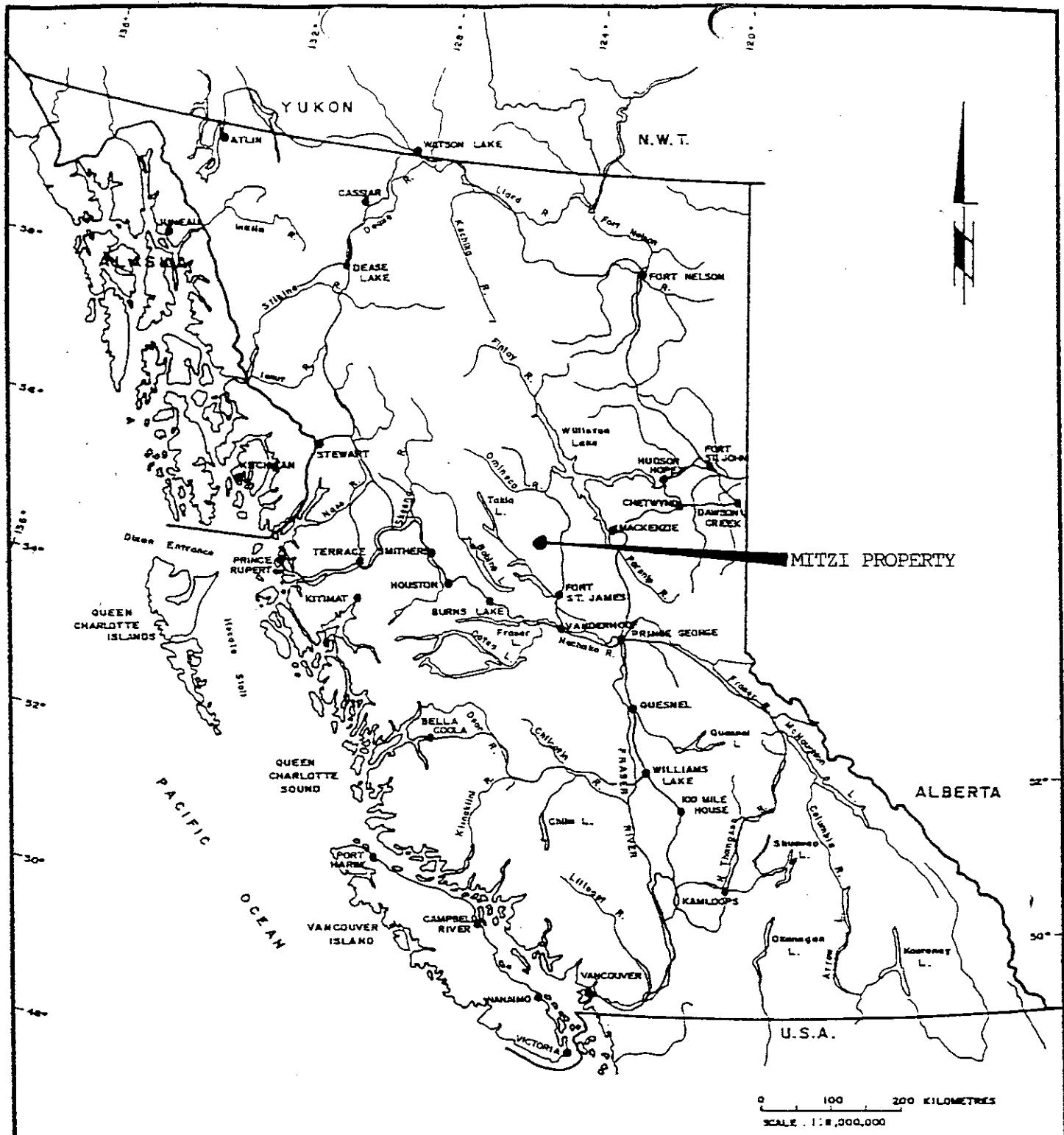
**N.T.S. 93N/01**

**Latitude 55°06' Longitude 124°25'**

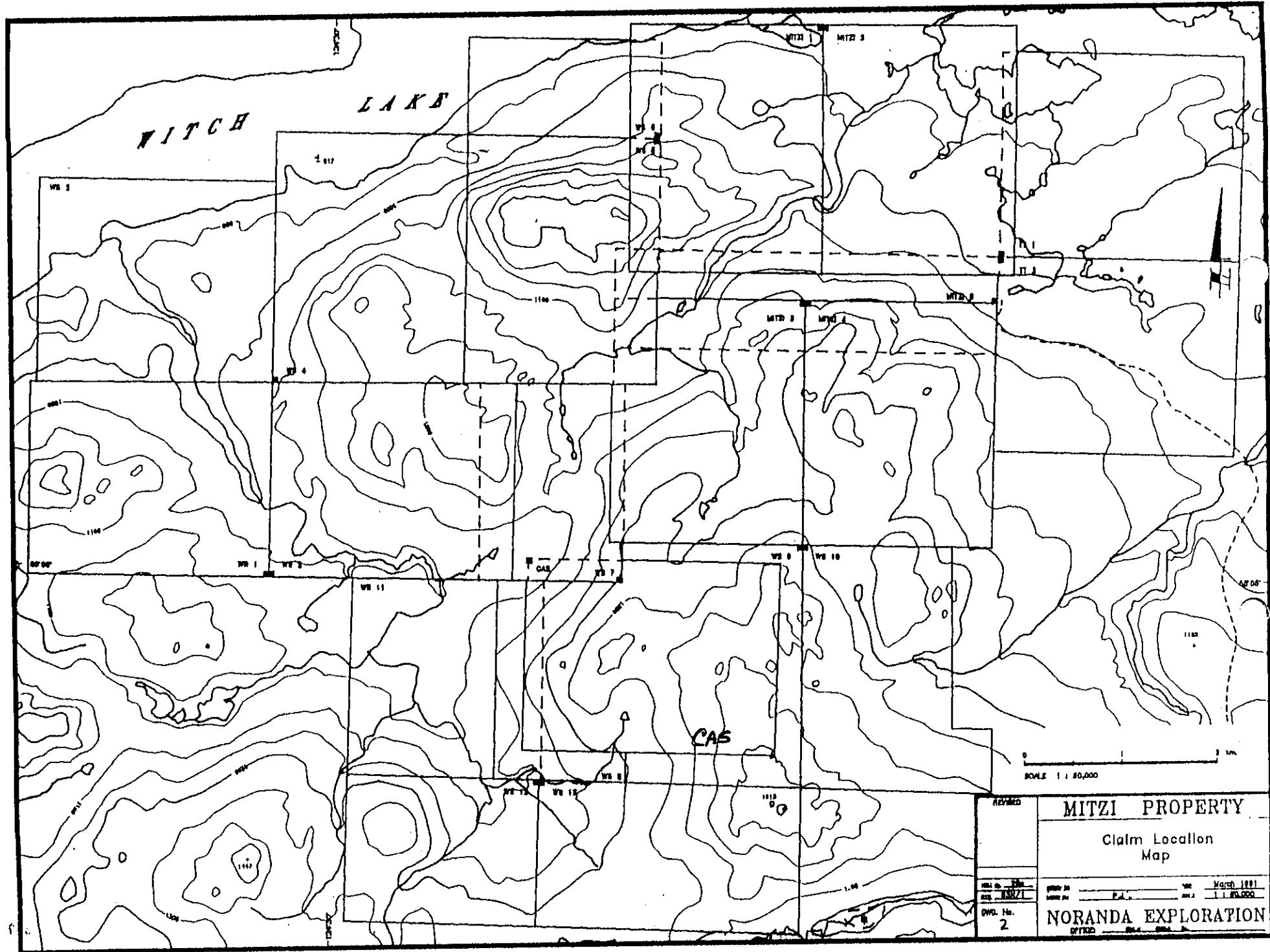
**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

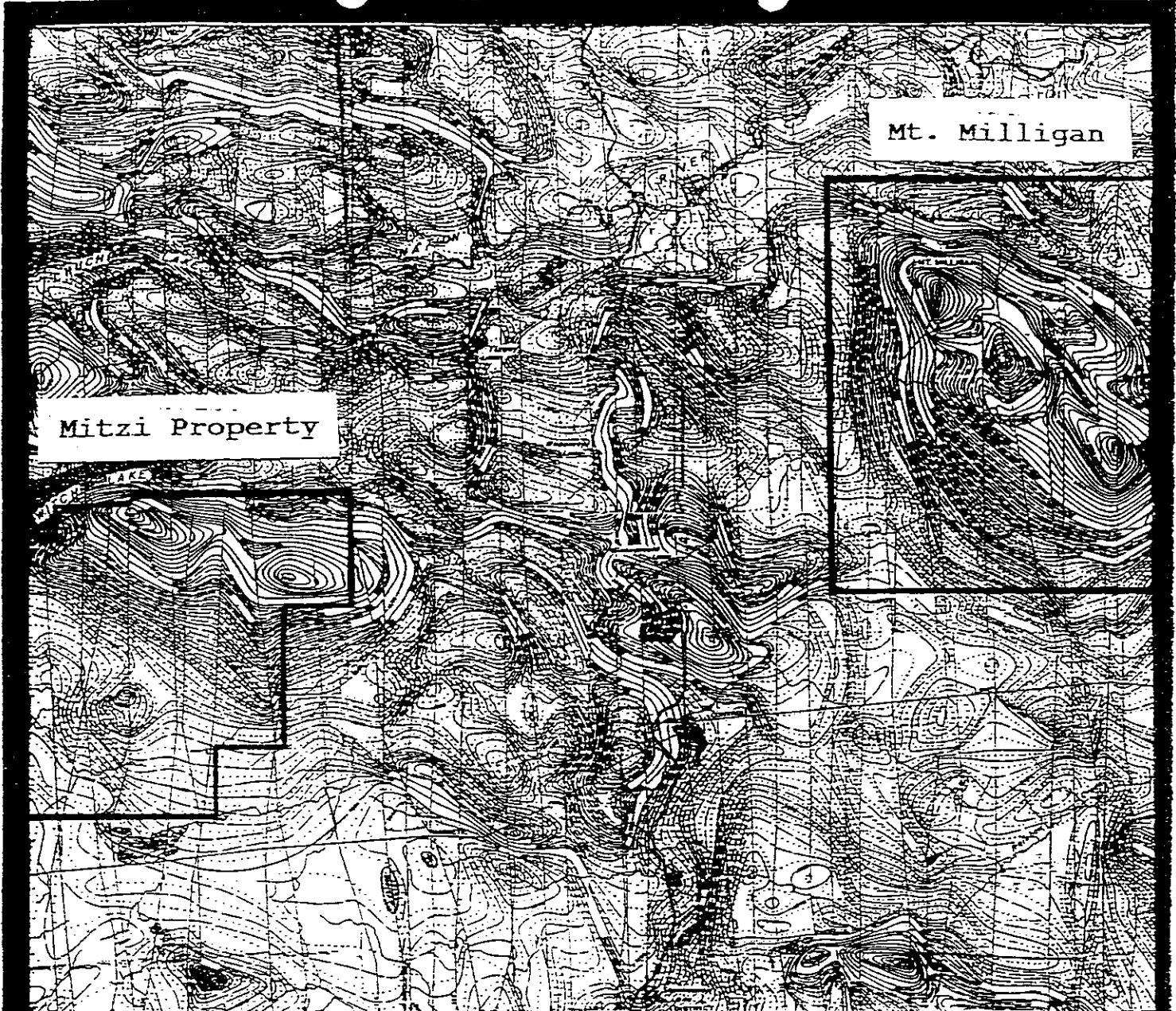
**22,895**

G. Robert Cluff  
Noranda Exploration Company, Limited (No Personal Liability)  
March, 1993

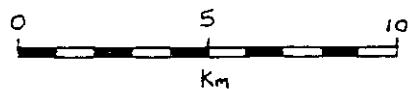


REVISED		
LOCATION MAP		
PROJ. No. _____	SURVEY BY: _____	DATE: _____
N.T.S. _____	DRAWN BY: S.K.B.	SCALE: 1:8,000,000
DWG. No. _____	NORANDA EXPLORATION	
1	OFFICE: PRINCE GEORGE, B.C.	





1584G



REVISED	Regional Airborne Magnetics	
PROLNO.	SURVEY BY: _____ DATE: May 1991	
PLT.S.	DRAWN BY: _____ SCALE: _____	
DWG. NO.	NORANDA EXPLORATION	
3	OFFICE: _____	

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## SUMMARY

From mid January to mid February a 835 m, 8 hole drill program was completed by Cancor Diamond Drilling under Noranda personnel supervision. Five holes were drilled on the Main grid to follow up significant alteration and mineralization encountered in previous drilling in 1991. One hole tested the Taylor Creek Cu-Au skarn showing and the remaining two tested combined geochemical, magnetic and I.P. anomalies in the core and on the flanks of the Cas plug.

The holes drilled on the Main grid confirmed the presence of a large hornfels and skarn alteration zone around the main Witch Lake diorite-gabbro intrusive. Also, and of more economic significance, several holes intersected a younger monzodiorite plug within and about which potassic alteration hosts Cu and weak gold mineralization. The existence of this mineralized system around a small monzodiorite plug indicates good potential for other systems to the west where airborne and ground geophysics suggest similar sized bodies may be present.

The two holes on the Cas confirmed the presence of a zoned alkalic plug with associated copper bearing mineralization around which a large alteration halo is developed. Considering the size of the associated chargeability zone additional surface work appears warranted.

## INTRODUCTION

The Mitzi 1-4 claims were optioned from Richard Haslinger during the winter of 1988-89. Noranda acquired the remainder of claim holdings between 1989 and 1991 by staking and option from Stanley Case.

Noranda's activities to date have focused on exploration for bulk tonnage Cu-Au porphyry deposits and higher grade Cu-Au skarn deposits. These efforts have included geological mapping, soil geochemistry, ground magnetics, IP surveys, Dighem IV airborne MAG-EM survey and diamond drilling. This years diamond drill programme focused on encouraging results from two holes drilled in 1991 and the largest of several airborne targets around which I.P., and magnetic anomalies were identified by ground work in late 1991.

## LOCATION & ACCESS

The Mitzi property is located at the south eastern end of Witch Lake, approximately 180 km northwest of Prince George, B.C. (Figure 1).

Year round access to the property can be gained by helicopter out of Fort St. James. There are several helipads throughout the property. In the fall of 1990 a winter road was constructed from the west end of the Witch logging road to the Taylor Showing. Direct access to the drill camp can be gained by four wheel drive truck and to the Cas grid by snowmobile on drill access roads constructed this year.

## CLAIM STATISTICS

Claim Name	Record #	Units	Record Date	Owner
Cas	11935	20	May 28, 1990	C.S. Case
Mitzi 1	8545	20	July 15, 1987	R. Haslinger
Mitzi 2	8546	20	July 15, 1987	R. Haslinger
Mitzi 3	10166	20	Feb. 13, 1989	R. Haslinger
Mitzi 4	10167	20	Feb. 13, 1989	R. Haslinger
Mitzi 5	243192	16	Mar. 9, 1991	Norex
Mitzi 6	13043	1	Mar. 15, 1991	Norex
Mitzi 7	13044	1	Mar. 15, 1991	Norex
Mitzi 8	13045	1	Mar. 15, 1991	Norex
Mitzi 9	13046	1	Mar. 15, 1991	Norex
Mitzi 10	13047	1	Mar. 15, 1991	Norex

Claim Name	Record #	Units	Record Date	Owner
Mitzi 11	13048	1	Mar. 15, 1991	Norex
Mitzi 12	13049	1	Mar. 15, 1991	Norex
Mitzi 13	13050	1	Mar. 15, 1991	Norex
TT 1	240338	20	Feb. 13, 1989	Norex
TT 2	240339	20	Feb. 13, 1989	Norex
TT 3	242999	20	Dec. 6, 1990	Norex
WS 1	10133	20	Jan. 23, 1989	Norex
WS 2	10134	20	Jan. 23, 1989	Norex
WS 3	10135	20	Jan. 23, 1989	Norex
WS 4	10136	20	Jan. 23, 1989	Norex
WS 5	10137	20	Jan. 24, 1989	Norex
WS 6	10138	8	Jan. 24, 1989	Norex
WS 7	11973	12	Jan. 28, 1990	Norex
WS 8	11974	12	Jan. 28, 1990	Norex
WS 9	11975	20	May 28, 1990	Norex
WS 10	11976	20	May 28, 1990	Norex
WS 11	12852	16	Dec. 2, 1990	Norex
WS 12	12851	12	Dec. 1, 1990	Norex
WS 13	12851	18	Dec. 1, 1990	Norex
Halo 1	243169	1	Feb. 21, 1991	Norex
Halo 2	243170	1	Feb. 21, 1991	Norex
Halo 3	243171	1	Feb. 21, 1991	Norex
Halo 4	243172	1	Feb. 21, 1991	Norex
Halo 5	243173	1	Feb. 21, 1991	Norex
Halo 6	243174	1	Feb. 21, 1991	Norex
Halo 7	243175	1	Feb. 21, 1991	Norex
Halo 8	243176	1	Feb. 21, 1991	Norex

#### TOPOGRAPHY & VEGETATION

The bulk of the area is characterized by moderate relief rounded hills with outcrop ridges and knobs and low swamp valleys. Elevations range from 917 metres at Witch Lake to 1300 metres. The NE quadrant of the property consists of low rolling glacial outwash, esker ridges, pine flats and swamp.

Vegetation consists of mature stands of spruce, pine and balsam. Undergrowth is mainly alders, willows and devil's club.

## PREVIOUS WORK

pre 1960	Discovery of Ted Taylor showing.
1965-68	Ambassador Mines Ltd. of Vancouver, B.C., completed a soil grid, magnetometer and seismic survey in the area around the Ted Taylor showing.
1987	Staked by R. Haslinger.
1988	Placer Dome In. performed a recon. examination of the Ted Taylor showing. They collected 3 lines of soil samples and took a number of rock samples.
1989-91	Noranda Exploration performed soil geochemistry, geological mapping, prospecting, ground magnetics, induced polarization survey, airborne Mag-EM survey and ten diamond drill holes.

## REGIONAL GEOLOGY

The area has most recently been described by J.E. Armstrong in G.S.C. Memoir 252, 1949, Fort St. James Map-area. The area is also covered by G.S.C. Map 97A by H.M.A. Rice, 1949 (Geology of Smithers - Fort St. James Area).

The Mitzi property lies in a broad northwest trending package of rocks known as the Quesnel Trough. These include Upper Triassic to Lower Jurassic Takla Group volcanics and sediments which have been intruded by a series of felsic to ultramafic stocks and batholiths, ranging in age from Upper Triassic to Lower Cretaceous.

Recent exploration in the Quesnel Trough has focused on several bulk tonnage Cu-Au prospects. The most notable is the Mount Milligan project with published geological reserves of 386 million ton grading 0.21% Cu and 0.016 opt Au.

The Mt. Milligan Cu-Au zones and their associated monzonitic intrusives are situated on the flanks of a strong magnetic high which reflects an older more dioritic stock. The Mitzi property covers a similar large magnetic feature, shown by outcrop and drilling to be a series of gabbroic to dioritic intrusives with local flanking monzodiorite, syenite, monzodiorite plugs and dykes.

## **PROPERTY GEOLOGY**

The dominant lithological unit encountered in outcrop and the 18 holes drilled to date consists of a thick sequence of feldspar and augite porphyritic trachy-andesite, andesite and trachyte flows with local fragmental equivalents which belong to the Witch Lake Formation of the Takla Group.

## **MINERALIZATION & ALTERATION**

Surface work and diamond drilling has established the presence of extensive zones of hornfelsed and propylitic skarn and potassic altered volcanics, principally the trachy-andesite suite, along the south western flank of the main Witch Lake (Hogem) intrusives and the north west and south flanks of the "Cas" plug.

The propylitic alteration suite, typically consisting of pyrite enriched (2+% range) chlorite, carbonate ± epidote development and carbonate ± quartz sulphide veining, occurs distal (up to 2 km) from the intrusive. This is the dominant alteration in the trachy-andesite flows on the higher slopes of the Taylor Creek Valley.

The propylitic suite described above appear to proceed progressively into calc-silicate hornfels and garnet to pyroxene skarn. This skarn zone appears in outcrop on the lower slopes of the Taylor Creek Valley and as a wide zone along the southern flank of the main intrusives. Sulphide content commonly exceeds 5% in this zone and consists of pyrrhotite, pyrite, and chalcopyrite. Pyrrhotite dominates over pyrite (usually 2:1) and chalcopyrite occurs in trace amounts but locally can exceed 1% in strongly fracture controlled zones where garnet and pyroxene skarn dominate over hornfelsing.

A potassic alteration suite is first recognized on the inside edge of the skarn zone in local vein stockwork zones and more exclusively as pervasive patches of k-spar flooding and secondary biotite in volcanics adjacent to monzonite porphyry and diorite intrusives. The secondary k-spar and/or biotite is accompanied by 3%+ sulphides, mainly pyrite & chalcopyrite and 2%+ disseminated magnetite. The volcanics develop a coarsely mottled texture due to k-spar or biotite and sulphide flooding. Chalcopyrite in these sections can exceed 3% locally.

Alteration in the main Witch Lake diorite-gabbroic intrusive is extensively vein controlled biotite and magnetite with minor disseminated biotite and local magnetite flooding. This oxide-rich potassic alteration suite has generally low sulphide, i.e. less than 2% pyrite with traces of chalcopyrite. Gypsum and/or anhydrite veining is locally developed along with quartz-kspars-pyrite-magnetite stockwork veining.

The alteration suites and associated mineralization identified around the main Witch Lake intrusives appear to suggest a large early hornfels - skarn envelope which developed around these relatively hot intermediate stocks upon which local secondary propylitic and potassic alteration & copper mineralized systems were superimposed around the later more monzonitic plugs.

#### DIAMOND DRILLING

The 1992 round of diamond drilling was contracted to Cancor Drilling Company Ltd., Courtenay, B.C. with Noranda personnel supervising the geological component.

The program commenced with a series of holes (NA-92-11 to 14) on the Main Grid on section and adjacent to Holes NA-91-8 and 10. The objectives being to vector in on more Cu-Au rich potassic alteration zones thought likely to be in the vicinity of these holes. Hole NA-92-18 subsequently followed up the best intersection in this group.

#### DRILL HOLE SUMMARIES

##### Main Grid:

Hole NA-92-14, drilled 400 m east and 125 m south of NA-92-11 cut 8 m of feldspar and augite porphyritic-trachyte before entering massive medium to fine grained diorite with local gabbroic sections and thin monzonite dykes. This intrusive showed strong chlorite, magnetite and biotite alteration of the mafics, and generally contains 2-5% magnetite and 1-3% brown biotite. Local trace chalcopyrite is present as disseminated specks and in veins.

Cas Grid:

Hole NA-92-16 was drilled to test a magnetic and soil Cu anomaly on the outer northeast edge of the chargeability zone flanking the Cas monzonite plug. It intersected an interbedded sequence of andesite-feldspar andesite (possibly intrusive) and andesite fragmentals cut by small feldspar porphyry and augite porphyry dykes. Alteration consists of biotite hornfelsing with pyrite, pyrrhotite disseminations with local propylitic selvages. Sulphide mineralization is less than 2% and dominantly pyrite, epidote is locally present. No significant assays were obtained from this hole.

## CONCLUSIONS

The additional five holes on the Main Grid have confirmed the presence of a large sulphide rich hornfels and skarn zone flanking the southwest side of a series of diorite to gabbroic intrusives. Younger monzonite intrusives with associated propylitic to potassic alteration and Cu + Au mineralization were intersected in the drilling. These plugs carry significant magnetite and would show up as a discrete magnetic high if it was further away from the Witch diorites, and in fact a number of such features have been noted by previous airborne and ground surveys to the southwest.

## RECOMMENDATIONS

The potential area remaining on the Main Grid for development of ore grade mineralization at moderate depth appears limited by the surrounding holes to a size range which would require a much higher grade zone than can be reasonably expected for an alkalic porphyry. Hence further work should be focused away from this area. The mineralized monzonite intersected in the drilling is also magnetic and lies at the east end of a string of small airborne mag/resistivity high which extends for a further 8 km to the west. The nearest group of three anomalies lies partly on the east edge of the current Main Grid. Within an area of NE-SW cross-faulting significant Cu soil and I.P. chargeability anomalies were detected in this area on the last line, both are open to the south and west. Also several small altered pyrite/chalcopyrite mineralized trachy-andesite outcrops were located on this line. This area and south of airborne anomaly areas are therefore the recommended focus of further exploration activities on the Main Grid.

The two holes drilled on the Cas Grid while not returning any high Cu-Au values did confirm the presence of a zoned alkalic plug with associated potassic alteration and copper bearing sulphide mineralization around which a large alteration halo is developed. Considering the size of the flanking chargeability zone additional surface work (i.e. detailed mapping and trenching) is recommended to investigate the potential of the rest of the plug contact area.

**APPENDIX I**  
**COST STATEMENT**

**APPENDIX I**  
**COST STATEMENT**

**DRILLING**

**Contractor: Cancor Drilling Company Ltd., Courtenay, B.C.**

**Contractor Costs:**

<b>Drilling (Footage)</b>	<b>\$ 50,312.28</b>
<b>Services (Drill Roads, Mob/Demob, materials used, core trays, etc)</b>	<b><u>\$ 49,868.69</u></b>
<b>Total Contractor Costs</b>	<b>\$100,180.97</b>

**Total Metres drilled = 835 m Cost per metre drilled \$119.98/m**

**Labour Costs:**

<b>Senior Geologist</b>	<b>\$ 8,068.12</b>
<b>Core Splitter</b>	<b><u>4,255.68</u></b>
<b>Total Labour Costs</b>	<b>\$ 12,323.80</b>

**Total Metres drilled = 835 m Cost per metre drilled \$14.76/m**

**Services (includes access road building, camp costs & supplies):**

<b>Supplies</b>	<b>\$ 6,025.86</b>
<b>Transport, Roads, Mobilization</b>	<b><u>7,494.46</u></b>
<b>Total Services Costs</b>	<b>\$ 13,520.32</b>

**Total Metres drilled = 835 Cost per metre drilled \$16.19/m**

**TOTAL DRILLING RELATED COSTS ARE EQUAL TO \$150.93 PER METRE DRILLED.**

**Assaying Costs:**

<b>Assaying</b>	<b>\$ 3,437.19</b>
<b>Sample Transport</b>	<b><u>419.62</u></b>
<b>Total Assay Costs</b>	<b>\$ 3,856.81</b>

**Total Samples Analyzed = 247 Cost per sample analyzed = \$15.61**

**Costs related to drilling drill hole NA92-16 on the Cas Claim.**

**Drill Related Cost = \$150.93/m drilled**

**Total Metres drilled in NA92-16 = 98.76 m**

**Total Drill Related Cost for NA92-16 = \$14,905.85**

**Assay Cost per Sample = \$15.61/sample**

**Number of Samples Analyzed for NA92-16 = 32 samples**

**Total Assay Cost for NA92-16 = \$499.52**

**Total Cost of Drilling NA92-16 = \$15,405.37**

**Costs relating to drilling NA92-14 on the TT1 claim.**

**Drill Related Cost = \$150.93/m drilled**

**Total Metres Drilled in NA92-14 = 100.3 m**

**Total Drill Related Cost for NA92-14 = \$15,138.28**

**Assay Cost per Sample = \$15.61/sample**

**Number of Samples Analyzed for NA92-14 = 28 samples**

**Total Assay Cost for NA92-14 = \$ 437.08**

**Total Cost of Drilling NA92-14 = \$15,575.36**

**APPENDIX II**  
**DRILL LOGS**

PROPERTY : MITZI  
 HOLE No. : NA-92-14  
 Grid System :  
 Collar Eastings : 83250.000  
 Collar Northings : 78625.000  
 Collar Elevations : 1000.000  
 Collar Bearing : 0.00  
 Grid Baseline : 0.00

NORANDA EXPLORATION CO. LTD.  
 DIAMOND DRILL LOG

PAGE : 1

Collar Inclination : -45.00  
 Grid Bearing : 0.00  
 Final Depth : 100.30  
 Claim No. : TTI

Logged by : T. WALKER.  
 Date : Jan 30, 1992 - Jan 31, 1992  
 Downhole Survey :  
 Drilled By : CANCER DRILLING.  
 Core Size : BDGM

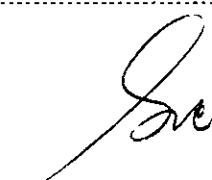
INTERVAL(m) FROM TO	MAJOR/MINOR UNITS	DESCRIPTION	SAMPLE NUMBER	INTERVAL(m) FROM TO		SAMPLE WIDTH	GEOCHEMICAL SAMPLES		
				Cu ppm	Au ppb		Cu ppm	Au ppb	Ag ppm
0.00	100.30								
0.00	10.70	CASING		0.00	10.70	10.70	C/I	C/I	C/I
10.70	19.00	PELD & ADG POR. TRACH Medium to pale grey, massive flinty porphyritic mafics altered to calcite. Feldspars altered to sericite-clay, locally fragmental - disseminated pyrite.	57603 57602 57601	10.70	13.00	2.30	296.	116.	0.6
19.00	28.80	AZT. DIOR / MICRO DIORITE Fine to medium grained, strongly chloritized, 2-3% disseminated magnetite, disseminations and blebs of pyrite and chalcopyrite. 2-5% disseminated brown biotite.	57604 57605 57606 57607	19.00	22.00	3.00	1321.	34.	1.1
28.80	30.50	MONZONITE DYKE Medium grey, flinty, aphanitic, weakly feldspar porphyritic - matrix sericite altered. 3-5% disseminated magnetite and pyrite.							
30.50	58.00	DIOR / MICRO DIORITE As above, with disseminated secondary biotite. 5-10% magnetite, locally 20%. Local magnetite, pyrite, quartz, and trace chalcopyrite veins. Disseminated pyrite and specks of chalcopyrite.	57608 57609 57610 57611 57612 57613 57614 57615 57616	31.00	34.00	3.00	195.	16.	0.2
				34.00	37.00	3.00	162.	6.	0.4
				37.00	40.00	3.00	198.	5.	0.1
				40.00	43.00	3.00	229.	12.	0.1
				43.00	46.00	3.00	175.	10.	0.2
				46.00	49.00	3.00	89.	5.	0.3
				49.00	52.00	3.00	104.	8.	0.1
				52.00	55.00	3.00	89.	15.	0.1
				55.00	58.00	3.00	228.	9.	0.5
58.00	66.90	DIORITE / GABBRO Medium to coarse grained, magnetite rich, calcite +/- carbonate, biotite altered mafics. 10% disseminated magnetite, 1-2% brown biotite, disseminated pyrite and specks of chalcopyrite.	57617 57618 57619	58.00	61.00	3.00	302.	10.	0.4
				61.00	64.00	3.00	342.	11.	0.3
				64.00	67.00	3.00	237.	10.	0.2
66.90	67.70	MONZ. POR. DYKE As above but more feldspar porphyritic	57620	67.00	70.00	3.00	483.	9.	0.4

NORANDA EXPLORATION CO. LTD.  
DIAMOND DRILL LOG

PROPERTY : MITZI  
HOLE No. : NA-92-14

PAGE : 2

INTERVAL(m) FROM TO	MAJOR/MINOR UNITS	DESCRIPTION	SAMPLE NUMBER	INTERVAL(m) FROM TO		SAMPLE WIDTH	GEOCHEMICAL SAMPLES		
							Cu ppm	Au ppb	Ag ppm
67.70	79.90	+ quartz-pyrite-chalcopyrite veins. ALTERED DIORITE Fine to medium grained, strong chlorite alteration, less magnetic more epidotization, disseminated pyrite. Chloritization due to heavy faulting. Biotite alteration common between 67.7 and 72.7 m; 2-3% mag.	57621	70.00	73.00	3.00	354.	8.	0.4
			57622	73.00	76.00	3.00	399.	16.	0.4
			57623	76.00	79.00	3.00	431.	53.	0.8
			57624	79.00	82.00	3.00	425.	38.	0.3
79.90	81.90	MORB POR. DYKE As above, local feldspar flooding and disseminated brown biotite and pyrite.							
81.90	100.30	DIORITE / GABBRO As above. Medium to coarse grained, chlorite alteration + 2-3% brown biotite, 10-20% magnetite disseminations and veins of magnetite flooding; disseminated pyrite and specks of chalcopyrite. Local 2-5 cm monzonite dykes. B.O.H.	57625	82.00	85.00	3.00	640.	19.	0.1
			57626	85.00	88.00	3.00	322.	17.	0.3
			57627	88.00	91.00	3.00	390.	14.	0.6
			57628	91.00	94.00	3.00	398.	15.	0.4
			57629	94.00	97.00	3.00	574.	44.	0.6
			57630	97.00	100.30	3.30	531.	12.	0.5



PROPERTY :  
 HOLE No. : MA-92-16  
 Grid System :  
 Collar Eastings : 18000.000  
 Collar Northings : 11200.000  
 Collar Elevations : 1270.000  
 Collar Bearing : 180.00  
 Grid Baseline : 0.00

NORANDA EXPLORATION CO. LTD.  
 DIAMOND DRILL LOG

PAGE : 1

Collar Inclination : -45.00  
 Grid Bearing : /80.00  
 Final Depth : 98.76  
 Claim No. : CAS

Logged by : T. WALKER.  
 Date : -  
 Downhole Survey :  
 Drilled By : CANCOR DRILLING  
 Core Size : BDGM

INTERVAL(m) FROM TO	MAJOR/MINOR UNITS	DESCRIPTION	SAMPLE NUMBER	INTERVAL(m) FROM TO	SAMPLE WIDTH	GEOCHEMICAL SAMPLES		
						Cu ppm	Au ppb	Ag ppm
0.00	98.76							
0.00	3.00	OVERBURDEN		0.00	3.00	3.00	C/1	C/1
3.00	12.10	ANDESITE FRAGMENTAL  Dark grey to medium grey-green, finely feldspar (lesser augite) porphyritic mas- sive volcanic flows with scattered, sub- angular to angular fragments of similar material and coarser, more crowded intru- sive equivalent, from mm to ~10 cm across. Linear fractures lined with thin films of pyrite, pyrrhotite, chlorite, possibly trenact, epidotes also have mm to cm scale haloes of bleaching (sericite-clay alteration). Approximately 10-20 visible fractures/m. Very minor fine disseminated pyrite-pyrrhotite.	57661	3.00	6.00	3.00	57.	12. 0.1
12.10	12.45	Py-Po STRINGER ZONE  Narrow stringers of pyrite, pyrrhotite in chlorite altered material. Trace of chalcopyrite. Surrounding volcanics in- tensely bleached especially at fractures for ~0.5 m either side.						
12.45	18.20	ANDESITE FRAGMENTAL  As from 3-12.1 m.	57665	15.00	18.00	3.00	57.	2. 0.1
18.20	23.20	ANDESITE  Similar to andesite fragmental unit but distinctly less porphyritic, more uniform texture, less fragments. Contacts diffuse. Possibly weakly biotitized phenocrysts.	57666	18.00	21.00	3.00	95.	2. 0.1
23.20	28.93	ANDESITE FRAGMENTAL  As from 3-12.1 m. A few scattered py- rite, pyrrhotite filled fractures up to several mm wide.	57667	21.00	24.00	3.00	69.	2. 0.1
28.93	29.30	GARNET-CHLORITE SKARN						

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MORANDA EXPLORATION CO. LTD.  
DIAMOND DRILL LOG

PROPERTY :  
HOLE No. : MA-92-16

PAGE : 2

INTERVAL(m) FROM TO	MAJOR/MINOR UNITS	DESCRIPTION	SAMPLE NUMBER	INTERVAL(m) FROM TO		SAMPLE WIDTH mm	GEOCHEMICAL SAMPLES		
				ppm	ppb		Au ppb	Ag ppm	
		Coarse reddish garnets and dark green calc-silicate (chlorite?) in cross-cutting vein.							
29.30	41.00	ANDESITE FRAGMENTAL As from 3-12.1 m. A few fractures filled with mm scale quartz veins.	57670 57671 57672 57673	30.00 33.00 36.00 39.00	33.00 36.00 39.00 42.00	3.00 3.00 3.00 3.00	57. 28. 38. 54.	2. 2. 2. 2.	0.1 0.1 0.1 0.1
41.00	46.40	ANDESITE As from 18.2-23.2 m. Grades into above lithology with depth. A few quartz veins especially near lower contact.	57674 57675	42.00 45.00	45.00 48.00	3.00 3.00	119. 86.	2. 2.	0.1 0.1
46.40	47.75	FIELD PORPHYRY (MONZ?) DYKE Pale grey to creamy, diffuse phenocrysts oxidized, possibly biotitic (rusty speckled texture).							
47.75	67.90	ANDESITE FRAGMENTAL As from 3-12.1 m. Composition of fragments varies from dark aphanitic to coarsely porphyritic. A few quartz veins, 1 cm pyrite vein at 63.5 m.	57676 57677 57678 57679 57680 57681 57682	48.00 51.00 54.00 57.00 60.00 63.00 66.00	51.00 54.00 57.00 60.00 63.00 66.00 69.00	3.00 3.00 3.00 3.00 3.00 3.00 3.00	46. 44. 39. 44. 60. 53. 89.	2. 2. 2. 2. 2. 2. 2.	0.1 0.1 0.1 0.1 0.1 0.1 0.1
67.90	71.95	BLEACHED FRACTURED ZONE Pale green, mottled texture with chlorite and pyrrhotite, pyrite in fractures, clots.	57683	69.00	72.00	3.00	80.	2.	0.1
71.95	74.10	APHANITIC VOLCANIC / CHERT Grey, massive to vaguely banded, with fine speckled texture except near contacts. Most chert-like at contacts. Scattered coarse pyrrhotite masses with bleached haloes.	57684	72.00	75.00	3.00	70.	2.	0.1
74.10	79.30	ANDESITE As from 18.2-23.2 m. Scattered fine augite and feld phenocrysts, a few fragments, especially near upper contact. A few chlorite-pyrite-pyrrhotite lined fractures with bleached haloes.	57685 57686	75.00 78.00	78.00 81.00	3.00 3.00	68. 79.	2. 2.	0.1 0.1
79.30	80.05	FIELD PORPHYRY DYKE Dull, pale creamy grey, fine, diffuse tip phenocrysts. Bleaching near fractures.							

NORANDA EXPLORATION CO. LTD.  
DIAMOND DRILL LOG

PROPERTY :  
HOLE No. : NA-92-16

PAGE : 3

INTERVAL(m)		MAJOR/MINOR UNITS	DESCRIPTION	SAMPLE NUMBER	INTERVAL(m)		SAMPLE WIDTH	Cu ppm	Au ppb	Ag ppm	GEOCHEMICAL SAMPLES
FROM	TO				FROM	TO					
80.05	84.90		Minor quartz. ANDESITE As from 74.1-79.3 m.	57687	81.00	84.00	3.00	77.	2.	0.1	
84.90	87.20		ANG. PORPHYRY DYKE Dark green phenocrysts up to 1 cm long in aphanitic dark grey matrix. Scattered fine feldspar phenocrysts. A few 1 cm quartz veins near center of dyke. Contacts well defined.	57688	84.00	87.00	3.00	51.	2.	0.1	
87.20	98.76		ANDESITE PRAGMENTAL As from 3.0-12.1 m. Except intensity of fracturing/bleaching decreases to about 1-5/a. E.O.H.	57689	87.00	90.00	3.00	67.	2.	0.1	
				57690	90.00	93.00	3.00	65.	2.	0.1	
				57691	93.00	96.00	3.00	49.	2.	0.1	
				57692	96.00	98.76	2.76	54.	2.	0.1	



**APPENDIX III**  
**DRILL CORE ANALYSIS**

## GEOCHEMICAL ANALYSIS CERTIFICATE

Mitzi (W) NA 92-14

Noranda Exploration Co. Ltd. PROJECT 9202-004 185 File # 92-0270

1050 Davie St., Vancouver BC V6E 1M4

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au** ppb
057601 DR	1	299	7	.4	39	12	329	3.86	9	5	ND	1	171	.2	2	2	92	2.28	.166	8	50	.45	96	.12	8	1.51	.05	.07	1	61	
057602 DR	1	199	5	.57	.3	24	8	343	4.48	3	5	ND	3	171	.2	2	3	115	1.79	.147	10	54	.30	138	.13	7	1.44	.06	.07	1	490
057603 DR	1	296	13	.59	.6	36	17	295	5.36	10	7	ND	4	85	.3	2	2	105	1.86	.163	14	43	.28	66	.13	6	1.47	.08	.11	1	116
057604 DR	1	1321	3	.64	1.1	100	25	454	4.84	17	5	ND	2	56	.3	2	2	136	2.36	.026	2	116	1.28	50	.18	6	1.44	.06	.12	1	34
057605 DR	1	218	2	.42	.1	63	21	602	4.00	10	5	ND	1	83	.2	2	2	107	4.18	.020	2	138	2.30	108	.18	4	1.51	.06	.27	2	36
057606 DR	1	271	8	.33	.6	54	23	333	4.36	8	7	ND	3	63	.2	2	2	163	1.62	.040	4	154	1.75	223	.15	6	1.67	.10	.60	2	6
057607 DR	1	372	2	.41	.7	52	25	477	5.84	7	6	ND	4	67	.2	4	2	211	2.00	.099	6	125	1.69	130	.15	7	2.06	.09	.80	2	8
RE 057611 DR	1	208	2	.22	.2	71	28	341	4.57	6	5	ND	1	33	.2	2	2	166	1.72	.019	2	192	2.33	156	.13	6	1.54	.07	.43	2	8
057608 DR	1	195	2	.23	.2	80	30	365	5.03	4	5	ND	1	43	.2	2	2	177	1.59	.036	2	211	2.42	185	.12	6	1.55	.10	.62	1	16
057609 DR	1	162	2	.30	.4	62	23	350	4.07	5	5	ND	3	49	.2	2	2	139	2.01	.044	2	144	2.17	194	.13	8	1.88	.07	.53	2	6
057610 DR	1	198	4	.28	.1	62	23	350	4.16	3	5	ND	1	39	.2	2	2	143	1.86	.019	2	162	2.16	110	.13	5	1.79	.08	.31	1	5
057611 DR	1	229	2	.24	.1	74	29	364	4.79	6	5	ND	1	36	.2	2	2	175	1.81	.024	2	202	2.45	171	.13	6	1.68	.08	.45	1	12
057612 DR	1	175	4	.27	.2	72	25	322	4.63	7	5	ND	1	24	.2	2	2	188	1.47	.016	2	194	2.11	119	.14	4	1.45	.08	.41	2	10
057613 DR	1	89	3	.22	.3	72	25	336	3.13	5	5	ND	1	33	.2	2	2	84	1.28	.014	2	172	2.57	171	.10	5	1.33	.09	.56	1	5
057614 DR	1	104	2	.20	.1	70	24	322	2.93	5	5	ND	1	27	.3	2	2	77	1.04	.022	2	167	2.40	165	.11	6	1.24	.09	.55	1	8
057615 DR	1	89	2	.22	.1	64	21	333	2.86	5	5	ND	1	37	.2	2	2	78	1.37	.030	2	182	2.30	184	.12	5	1.56	.09	.63	1	15
057616 DR	2	228	2	.32	.5	65	26	438	4.97	11	5	ND	2	54	.4	3	2	193	1.86	.036	2	211	1.93	169	.16	7	2.04	.14	.53	3	9
057617 DR	1	302	2	.40	.4	76	32	473	6.15	7	5	ND	2	176	.3	2	2	231	2.70	.054	4	161	2.20	290	.14	9	2.80	.10	.65	1	10
057618 DR	1	342	2	.29	.3	82	30	381	5.85	4	5	ND	1	78	.4	2	2	218	1.78	.035	2	191	2.10	290	.15	6	2.23	.11	.64	1	11
057619 DR	1	237	2	.25	.2	66	24	343	5.00	5	5	ND	1	68	.2	2	2	191	1.97	.032	2	224	1.62	211	.14	8	1.97	.09	.45	1	10
057620 DR	1	483	2	.33	.4	94	33	502	5.55	11	5	ND	2	77	.2	2	2	198	2.85	.023	2	246	2.19	162	.13	8	2.17	.08	.45	14	9
057621 DR	2	354	2	.35	.4	87	31	439	5.28	9	5	ND	1	54	.4	2	2	194	2.38	.036	2	258	2.63	190	.14	9	2.50	.13	.52	1	8
057622 DR	2	399	2	.43	.4	81	41	485	6.66	16	5	ND	1	57	.4	3	2	304	2.13	.023	2	248	2.35	154	.14	8	2.40	.10	.42	2	16
057623 DR	1	431	6	.33	.8	79	28	294	7.54	9	5	ND	2	46	.4	2	2	379	2.09	.027	2	198	1.03	122	.14	12	1.73	.07	.25	2	53
057624 DR	2	425	5	.29	.3	41	26	456	5.07	25	5	ND	2	95	.3	2	2	163	2.86	.107	6	122	1.71	97	.12	6	2.30	.08	.41	2	38
057625 DR	1	640	2	.31	.1	113	36	428	5.93	12	5	ND	1	35	.3	2	2	230	1.58	.027	2	289	2.58	184	.13	4	1.64	.09	.53	1	19
057626 DR	1	322	2	.30	.3	121	39	463	6.42	7	5	ND	1	37	.4	2	2	233	1.31	.024	2	334	3.49	175	.13	5	1.44	.10	.41	2	17
057627 DR	1	390	5	.26	.6	120	37	477	5.85	3	5	ND	1	39	.2	2	2	199	1.00	.021	2	298	3.35	216	.13	6	1.34	.11	.63	1	14
057628 DR	2	398	2	.27	.4	109	36	551	6.04	5	5	ND	1	46	.4	2	2	192	1.27	.033	2	256	3.76	203	.13	7	1.74	.10	.64	2	15
057629 DR	2	574	3	.29	.6	118	39	467	5.92	9	5	ND	1	40	.3	2	2	191	1.32	.028	2	305	3.35	262	.15	5	1.61	.10	.75	1	44
057630 DR	1	531	2	.24	.5	117	37	492	5.78	3	5	ND	2	41	.2	2	2	190	1.39	.020	2	291	2.97	188	.12	4	1.40	.10	.60	1	12
STANDARD C/AU-R	19	62	37	125	7.3	65	31	1033	3.88	42	19	8	40	54	17.7	16	20	60	.50	.092	40	59	.90	181	.08	33	1.84	.08	.17	11	482

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.

THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.

ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB

- SAMPLE TYPE: CORE      AU\*\* ANALYSIS BY FA/ICP FROM 20 GM SAMPLE. Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: FEB 5 1992 DATE REPORT MAILED: Feb 12/92 SIGNED BY: *Chuny* D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

Bondar-Clegg & Company Ltd.  
130 Pemberton Ave.  
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V7P 2R5  
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# Geochemical Lab Report

A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

REPORT: V92-00139.0 ( COMPLETE )

Mitzi(MS) Na 92-05, 16, 17

REFERENCE INFO: 9202-007

CLIENT: NORANDA EXPLORATION CO. LTD.  
PROJECT: 185

SUBMITTED BY: UNKNOWN

DATE PRINTED: 27-FEB-92

ORDER	ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Au	Gold Fire Assay 20g	50	5 PPB	Fire-Assay
2	Ag	Silver	50	0.2 PPM	HNO <sub>3</sub> -HCl Hot Extr.
3	Cu	Copper	50	1 PPM	HNO <sub>3</sub> -HCl Hot Extr.
4	Pb	Lead	50	2 PPM	HNO <sub>3</sub> -HCl Hot Extr.
5	Zn	Zinc	50	1 PPM	HNO <sub>3</sub> -HCl Hot Extr.
6	Mo	Molybdenum	50	1 PPM	HNO <sub>3</sub> -HCl Hot Extr.
7	Ni	Nickel	50	1 PPM	HNO <sub>3</sub> -HCl Hot Extr.
8	Co	Cobalt	50	1 PPM	HNO <sub>3</sub> -HCl Hot Extr.
9	Cd	Cadmium	50	1.0 PPM	HNO <sub>3</sub> -HCl Hot Extr.
10	Bi	Bismuth	50	5 PPM	HNO <sub>3</sub> -HCl Hot Extr.
11	As	Arsenic	50	5 PPM	HNO <sub>3</sub> -HCl Hot Extr.
12	Sb	Antimony	50	5 PPM	HNO <sub>3</sub> -HCl Hot Extr.
13	Fe	Iron	50	0.01 PCT	HNO <sub>3</sub> -HCl Hot Extr.
14	Mn	Manganese	50	0.01 PCT	HNO <sub>3</sub> -HCl Hot Extr.
15	Te	Tellurium	50	10 PPM	HNO <sub>3</sub> -HCl Hot Extr.
16	Ba	Barium	50	2 PPM	HNO <sub>3</sub> -HCl Hot Extr.
17	Cr	Chromium	50	1 PPM	HNO <sub>3</sub> -HCl Hot Extr.
18	V	Vanadium	50	1 PPM	HNO <sub>3</sub> -HCl Hot Extr.
19	Sn	Tin	50	20 PPM	HNO <sub>3</sub> -HCl Hot Extr.
20	W	Tungsten	50	20 PPM	HNO <sub>3</sub> -HCl Hot Extr.
21	La	Lanthanum	50	1 PPM	HNO <sub>3</sub> -HCl Hot Extr.
22	Al	Aluminum	50	0.01 PCT	HNO <sub>3</sub> -HCl Hot Extr.
23	Mg	Magnesium	50	0.01 PCT	HNO <sub>3</sub> -HCl Hot Extr.
24	Ca	Calcium	50	0.01 PCT	HNO <sub>3</sub> -HCl Hot Extr.
25	Na	Sodium	50	0.01 PCT	HNO <sub>3</sub> -HCl Hot Extr.
26	K	Potassium	50	0.01 PCT	HNO <sub>3</sub> -HCl Hot Extr.
27	Sr	Strontium	50	1 PPM	HNO <sub>3</sub> -HCl Hot Extr.
28	Y	Yttrium	50	1 PPM	HNO <sub>3</sub> -HCl Hot Extr.

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**Geochemical  
Lab Report**

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REFERENCE INFO:

CLIENT: NORANDA EXPLORATION CO. LTD.  
PROJECT: 185

SUBMITTED BY: UNKNOWN  
DATE PRINTED: 27-FEB-92

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
D DRILL CORE	50	2 -150	50	CRUSH,PULVERIZE -150	50

REPORT COPIES TO: MR. EVERET VAN LEEUWEN

INVOICE TO: MR. EVERET VAN LEEUWEN

Bondar-Clegg & Company Ltd.  
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PAGE 1A

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Ag PPM	Cu PPM	Pb PPM	Zn PPM	Mo PPM	Ni PPM	Co PPM	Cd PPM	Bi PPM	As PPM
D2 57654		96	<0.2	1613	9	26	2	62	51	<1.0	5	16
D2 57655		20	<0.2	776	8	21	4	66	33	<1.0	6	15
D2 57656		12	<0.2	471	6	12	3	48	20	<1.0	<5	36
D2 57657		11	<0.2	479	7	17	4	75	26	<1.0	5	7
D2 57658		34	<0.2	625	6	14	<1	44	25	<1.0	<5	16
D2 57659		16	<0.2	474	8	11	2	45	22	<1.0	<5	6
D2 57660		25	<0.2	852	5	20	<1	47	33	<1.0	<5	6
NA92-1b D2 57661 ↓ D2 57662		12	<0.2	57	5	20	3	7	13	<1.0	6	6
		<5	<0.2	56	3	14	2	7	12	<1.0	6	<5
D2 57663		<5	<0.2	66	3	14	7	7	15	<1.0	<5	<5
D2 57664		<5	<0.2	490	6	20	3	8	28	<1.0	<5	<5
D2 57665		<5	<0.2	57	4	25	10	7	12	<1.0	<5	7
D2 57666		<5	<0.2	95	2	15	23	8	15	<1.0	6	<5
D2 57667		<5	<0.2	69	2	16	11	7	14	<1.0	<5	<5
D2 57668		<5	<0.2	55	3	15	5	7	11	<1.0	5	7
D2 57669		<5	<0.2	71	3	19	5	7	14	<1.0	<5	<5
D2 57670		<5	<0.2	57	<2	18	2	6	11	<1.0	<5	<5
D2 57671		<5	<0.2	28	3	14	8	6	10	<1.0	<5	<5
D2 57672		<5	<0.2	38	<2	13	6	6	10	<1.0	<5	9
D2 57673		<5	<0.2	54	4	14	6	6	13	<1.0	5	9
D2 57674		<5	<0.2	119	4	18	5	8	19	<1.0	<5	<5
D2 57675		<5	<0.2	86	4	14	4	7	15	<1.0	<5	9
D2 57676		<5	<0.2	46	3	18	6	7	13	<1.0	<5	7
D2 57677		<5	<0.2	44	3	20	5	5	13	<1.0	5	6
D2 57678		<5	<0.2	39	3	21	3	6	10	<1.0	6	7
D2 57679		<5	<0.2	44	4	22	2	5	10	<1.0	<5	9
D2 57680		<5	<0.2	60	4	34	3	8	12	<1.0	<5	<5
D2 57681		<5	<0.2	53	4	20	2	7	12	<1.0	<5	11
D2 57682		<5	<0.2	89	6	17	3	7	14	<1.0	7	<5
D2 57683		<5	<0.2	80	5	13	5	8	14	<1.0	<5	<5
D2 57684		<5	<0.2	70	5	23	3	5	17	<1.0	6	<5
D2 57685		<5	<0.2	68	3	12	7	8	15	<1.0	<5	6
D2 57686		<5	<0.2	79	5	15	7	10	16	<1.0	<5	6
D2 57687		<5	<0.2	77	3	21	3	8	18	<1.0	7	11
D2 57688		<5	<0.2	51	4	24	2	7	15	<1.0	<5	<5
D2 57689		<5	<0.2	67	4	20	2	7	14	<1.0	5	<5
D2 57690		<5	<0.2	65	3	17	2	7	12	<1.0	<5	5
D2 57691		<5	<0.2	49	3	16	1	6	11	<1.0	<5	<5
NA92-1b D2 57692 D2 57693		<5	<0.2	54	4	17	1	7	13	<1.0	<5	7
		<5	<0.2	130	5	20	1	6	15	<1.0	<5	<5

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# Geochemical Lab Report

A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

DATE PRINTED: 27-FEB-92

REPORT: V92-00139.0 ( COMPLETE )

PROJECT: 185

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SAMPLE NUMBER	ELEMENT UNITS	Sb PPM	Fe PCT	Mn PCT	Te PPM	Ba PPM	Cr PPM	V PPM	Sn PPM	W PPM	La PPM	Al PCT
D2 57654	<5	4.73	0.03	<10	54	77	97	<20	<20	8	3.61	
D2 57655	<5	5.09	0.03	<10	53	86	122	<20	<20	6	3.43	
D2 57656	<5	3.63	0.04	<10	43	70	75	<20	<20	10	4.46	
D2 57657	<5	4.52	0.04	<10	109	102	107	<20	<20	9	3.15	
D2 57658	<5	4.09	0.04	<10	28	74	75	<20	<20	11	4.09	
D2 57659	<5	3.45	0.03	<10	45	63	67	<20	<20	12	4.67	
D2 57660	<5	4.75	0.04	<10	48	63	80	<20	<20	9	4.23	
<i>NA92-16</i> D2 57661	<5	3.64	0.04	<10	119	32	111	<20	<20	7	2.64	
↓ D2 57662	<5	3.06	0.04	<10	89	29	95	<20	<20	7	2.44	
D2 57663	<5	3.70	0.04	<10	59	21	100	<20	<20	6	2.54	
D2 57664	<5	5.69	0.04	<10	47	17	113	<20	<20	6	2.48	
D2 57665	<5	3.23	0.05	<10	60	15	105	<20	<20	7	2.60	
D2 57666	<5	3.38	0.03	<10	44	21	100	<20	<20	6	2.56	
D2 57667	<5	3.56	0.04	<10	78	20	98	<20	<20	6	2.92	
D2 57668	<5	2.91	0.05	<10	68	22	96	<20	<20	6	2.39	
D2 57669	<5	4.88	0.07	<10	68	17	130	<20	<20	6	2.64	
D2 57670	<5	3.35	0.08	<10	96	21	115	<20	<20	6	2.81	
D2 57671	<5	2.97	0.04	<10	152	19	101	<20	<20	6	2.87	
D2 57672	<5	2.78	0.03	<10	76	19	87	<20	<20	6	2.56	
D2 57673	<5	2.71	0.03	<10	73	16	98	<20	<20	6	2.53	
D2 57674	<5	3.90	0.04	<10	34	12	113	<20	<20	6	2.60	
D2 57675	<5	3.05	0.05	<10	37	15	123	<20	<20	7	2.43	
D2 57676	<5	2.80	0.04	<10	46	16	105	<20	<20	6	2.83	
D2 57677	<5	3.11	0.04	<10	169	15	99	<20	<20	5	3.14	
D2 57678	<5	2.78	0.04	<10	109	23	90	<20	<20	6	2.84	
D2 57679	<5	2.88	0.05	<10	75	16	94	<20	<20	6	2.90	
D2 57680	<5	2.97	0.05	<10	149	28	95	<20	<20	6	2.88	
D2 57681	<5	3.00	0.04	<10	97	20	95	<20	<20	6	2.68	
D2 57682	<5	3.87	0.05	<10	62	27	90	<20	<20	8	2.70	
D2 57683	<5	3.20	0.04	<10	54	22	95	<20	<20	6	2.71	
D2 57684	<5	3.88	0.05	<10	60	27	111	<20	<20	8	2.61	
D2 57685	<5	3.13	0.03	<10	93	32	85	<20	<20	6	2.73	
D2 57686	<5	3.13	0.04	<10	58	34	89	<20	<20	6	2.44	
D2 57687	<5	3.37	0.04	<10	122	27	106	<20	<20	5	3.10	
D2 57688	<5	3.87	0.06	<10	97	21	127	<20	<20	11	3.29	
D2 57689	<5	3.30	0.05	<10	231	19	107	<20	<20	5	3.35	
D2 57690	<5	3.05	0.04	<10	118	18	103	<20	<20	4	3.25	
D2 57691	<5	2.66	0.04	<10	114	16	92	<20	<20	4	2.93	
<i>NA92-16</i> D2 57692	<5	2.83	0.04	<10	84	17	95	<20	<20	4	2.99	
D2 57693	<5	3.67	0.05	<10	40	22	121	<20	<20	5	2.63	

Bondar-Clegg & Company Ltd.  
130 Pemberton Ave.  
North Vancouver, B.C.  
V7P 2R5  
(604) 985-0681 Telex 04-352667



**Geochemical  
Lab Report**

A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

DATE PRINTED: 27-FEB-92

REPORT: V92-00139.0 ( COMPLETE )

PROJECT: 185

PAGE 1C

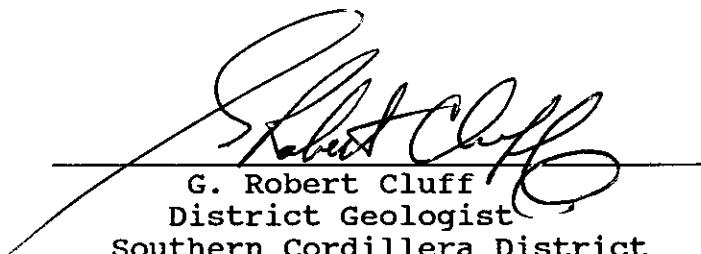
SAMPLE NUMBER	ELEMENT UNITS	Mg PCT	Ca PCT	Na PCT	K PCT	Sr PPM	Y PPM
D2 57654		0.60	>10.00	0.18	0.07	86	7
D2 57655		1.18	9.10	0.14	0.35	94	7
D2 57656		0.51	>10.00	0.17	0.14	86	7
D2 57657		1.47	8.54	0.11	0.53	114	8
D2 57658		0.30	>10.00	0.15	0.08	69	8
D2 57659		0.41	>10.00	0.19	0.06	101	7
D2 57660		0.43	>10.00	0.09	0.05	91	7
<i>NA92-1C</i>	D2 57661	1.14	4.78	0.23	0.35	95	14
↓	D2 57662	0.79	5.54	0.21	0.26	99	14
	D2 57663	0.83	6.14	0.18	0.18	93	14
D2 57664		0.88	4.30	0.13	0.18	82	13
D2 57665		0.95	5.47	0.12	0.17	65	12
D2 57666		0.67	5.72	0.12	0.15	57	13
D2 57667		0.83	5.48	0.23	0.25	136	13
D2 57668		0.88	5.36	0.15	0.23	95	12
D2 57669		1.02	8.78	0.17	0.21	97	11
D2 57670		1.10	5.55	0.22	0.28	150	11
D2 57671		1.01	5.29	0.25	0.50	169	11
D2 57672		0.81	6.06	0.20	0.25	125	11
D2 57673		0.77	4.48	0.18	0.23	105	11
D2 57674		0.96	5.19	0.09	0.15	69	13
D2 57675		0.89	4.37	0.09	0.15	89	13
D2 57676		0.95	5.08	0.11	0.17	94	13
D2 57677		0.98	3.93	0.28	0.41	153	10
D2 57678		0.85	3.80	0.23	0.34	140	12
D2 57679		0.94	4.63	0.18	0.27	124	12
D2 57680		0.95	3.89	0.25	0.34	127	11
D2 57681		0.87	4.02	0.21	0.25	103	13
D2 57682		0.73	4.70	0.15	0.19	93	14
D2 57683		0.67	4.85	0.17	0.18	121	14
D2 57684		1.15	4.81	0.18	0.23	122	12
D2 57685		0.73	4.15	0.26	0.24	123	13
D2 57686		0.75	5.20	0.15	0.17	97	13
D2 57687		1.12	4.78	0.27	0.33	139	11
D2 57688		1.33	6.83	0.25	0.32	182	12
D2 57689		1.21	4.37	0.34	0.50	230	11
<i>NA92-1C</i>	D2 57690	0.98	4.95	0.28	0.29	221	11
	D2 57691	0.87	4.54	0.27	0.25	140	9
	D2 57692	0.93	4.71	0.28	0.23	147	9
	D2 57693	0.80	5.52	0.09	0.15	61	12


## STATEMENT OF QUALIFICATIONS

I, G. Robert Cluff, of the City of Surrey, Province of British Columbia, do certify that:

1. I am a Geologist residing at 8089-158A Street, Surrey, British Columbia.
2. I am a graduate of the University of Saskatchewan, Saskatoon, Saskatchewan with a Bachelor's of Science (Honours) degree in 1974 and a Master of Science degree in 1981, both in Geological Sciences.
3. I am a member in good standing of the British Columbia-Yukon Chamber of Mines.
4. I presently hold the position of District Geologist, South Cordillera District with Noranda Exploration Company, Limited and have been in their employ from 1977 to 1988 and from 1990 to the present.
5. I have been involved in mineral exploration work since 1970.

April 12 / 93  
Date

  
G. Robert Cluff  
District Geologist  
Southern Cordillera District  
Noranda Exploration Company, Limited  
(No Personal Liability)



22,895

Fig. 4

**MITZI PROPERTY**

I.P. SURVEY(Chargeability)  
(DDH LOCATION MAP)

PROJECT: MITZI PROJECT # : 285  
BASELINE AZIMUTH : 90 Deg.

SCALE = 1 : 5000 DATE : 11/28/90

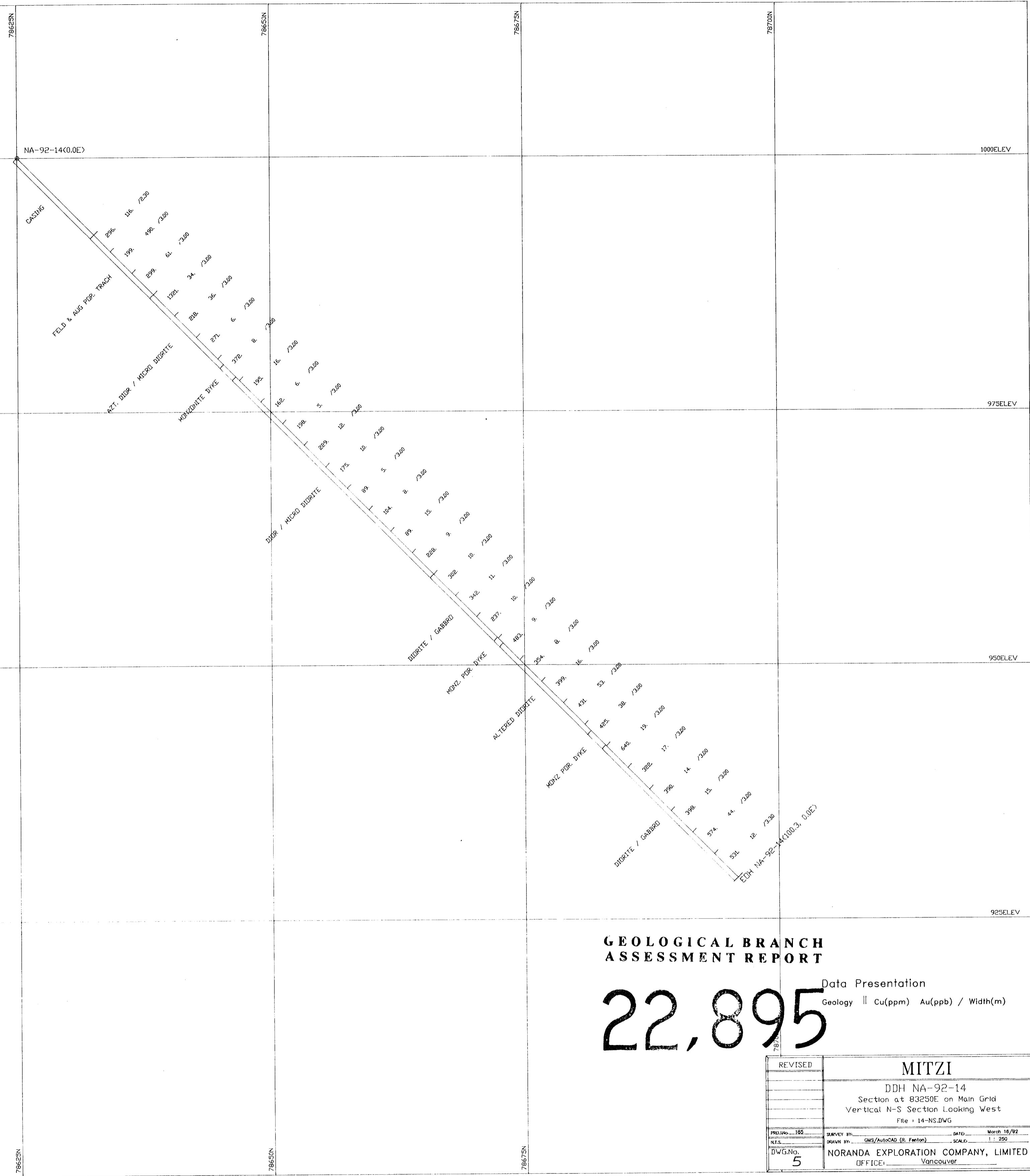
SURVEY BY : WK NTS :

FILE: Mip  
NORANDA EXPLORATION

Instrument : BROM  
Field : msec  
Datum : 0.0msec  
Contour Interval : 2.0 msec

Conductor Axis :

100m 50m 25m 100m 200m







# GEOLOGICAL BRANCH ASSESSMENT REPORT

**22,895**

## Data Presentation

Geology || Cu(ppm) Au(ppb) / Width(m)

REVISED	MITZI	
	DDH NA-92-16	
	Section at 1000E on Cass Grid	
	Vertical N-S Section Looking West	
	File : 16-NS.DWG	
PROJ No. 185	SURVEY BY:	DATED March 18/92
N.T.S.	DRAWN BY: CMS/AutoCAD (R. Fenton)	SCALE: 1 : 250
DWG No. 7	NORANDA EXPLORATION COMPANY, LIMITED	
	OFFICE: Vancouver	