GEOCHEMICAL REPORT

THE JULIET PROPERTY

Nanaimo Mining District
Vancouver Island, British Columbia
NTS 92L/8E & L/1E
50°15'N - 126°12'E
January 1994

Report Prepared By:
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INTRODUCTION

Background

The Juliet claim group was staked by Orvana Minerals Corp. in October 1992 to cover a gold-copper geochemical anomaly identified by an earlier moss mat drainage sediment regional reconnaissance survey. The location of the property is shown in Figures 1 and 2.

This report includes description of geochemical work carried out on the claims during the late fall of 1992 (after the claims were staked) and during the summer of 1993.

Claim Status

The Juliet claim group comprises 40 units in two four post claim blocks as listed below. The registered owner of the claims is Orvana Minerals Corp. The area of the claim group and location of individual claims are shown in Figure 2.

Claim	Record No.	No. of Units	Date of Record	Expiry Date
Juliet 1	314504	20	1992 Oct 22	1994 Oct 22
Juliet 2	314505	20	1992 Oct 23	1994 Oct 23

Work Program

Field work in the area of the Juliet claim group was conducted as part of a larger program of exploration on Vancouver Island. As such a number of visits to the area were made during the summer and fall of 1992 both before and after the claim group was staked. Detailed moss mat drainage sediment samples collected during the summer permitted reliable recognition of an area of abnormal copper and gold geochemistry. The area was then staked by Orvana and the field crew moved immediately to complete a phase of soil sampling along open contour traverse lines. This program was extended in the summer of 1993.

All field work was conducted by employees of Orvana Minerals Corp. with overall co-ordination for the project provided by Andy Laird and Peter Bradshaw.

Location and Access

The Juliet claim group is located over the headwaters of Capulet Creek, within the south western portion of the Eve River catchment area. The claim group is situated some 10 km south of Sayward Junction.

Access to the claims is provided by an extensive system of logging roads which come out of the claims at a low elevation along Capulet Creek. The claims may be reached by driving north along the Island Highway from Sayward Junction to the Rooney Lake Road turnoff and thence south along the logging roads.

Topography and Vegetation

The claim group is located in very rugged and deeply dissected ground within the Vancouver Island Mountain

Range. Local relief is often extreme with cliffs and scree. The valleys are U-shaped and overdeepened as a consequence of glacial erosion, and cirques are present on the upper flanks of Mount Juliet. The valley floor along Capulet Creek at the common legal corner post of the claims lies at 2500 feet while the summit of Mount Juliet is at 5370 feet.

Much of the area remains old growth coniferous rain forest with very large trees. The lower part of the Capulet Creek valley has been clear cut. At higher elevations the trees give way to alpine meadows and large areas of bare rock and scree.

Soils beneath the old growth forest cover are typically deep organic podzols. In clear cut areas soils have been distributed by the logging operations and the organic layer largely destroyed. Soils on slopes in these areas are often further altered due to erosion of the upper part of the inorganic portion of the profile. At higher elevations and on steeper slopes talus is extensive between bare rock outcrops.

GEOLOGY AND MINERALIZATION

Regional geological mapping by the Geological Survey of Canada shows the area of the Juliet claims as underlain by andesitic volanics of the Karmatsen Formation. Reconnaissance mapping during the soil sampling program indicates interbedded pillow basalts and very fine grained thin bedded dark basaltic (?) tuff or fine grained flows. Minor felsic volcanics (tuff?) and very minor coarse diorite (Island Intrusive), are found in float, both with only minor iron oxide stain. There are a series of fracture zones parallel to the axis of a broad gently north plunging anticline.

There are no published reports (Minfile, Assessment Reports etc) of mineralization in the Juliet claim area. The mineralization observed on the property is a strongly pyritic thin bedded units both above and in a North-south trending narrow shear or fracture zone with minor quartz. The pyritic is fine grained, disseminated and euhedral.

1992-1993 EXPLORATION PROGRAM

General

The Juliet claims were staked in October 1992 on the basis of a moss mat geochemical exploration program. Immediately following the claim staking four soil lines were run. In August 1993 these lines were extended to close off the defined anomalies.

Soil Sampling

Soil samples were collected at 40 metre intervals along contour traverse lines across the claim group. At each sample site a hole was dug with a mattock to reveal the full soil profile. Under most circumstances the B horizon was sampled. At a minority of sites the soil profile developed was not amenable to this form of sampling and decomposed rock or C horizon material was collected. Soils within the area are dominantly deep ferro-humic podzols giving way to humic gleysols in depressions and low lying areas, and to thin regosols on very steep slopes and around outcrops.

Samples were collected in high test strength kraft paper bags. Notes were taken at each sample site on the nature of the site, the soil profile and the material collected. These notes are included in Appendix 1 and are

of use in qualifying the interpretation of the geochemical data.

A total of 168 soil samples were collected on the property. All sites were flagged and tagged in the field to enable relocation. The location of all sample sites are shown in Figure 3.

Sample Preparation and Analysis

All soil samples were shipped to Acme Analytical Laboratories, Vancouver, B.C. for sample preparation and analysis.

The soil samples were dried and then dry sieved using an 80 mesh (180 microns) sieve. The minus 80 mesh portion was retained for analysis. All samples were analyzed using the following procedures:

Gold was determined using a 10 gm sample aliquot, ignited at 600°C, digested with hot aqua regia, extracted using MIBK and determined by graphite furnace AA. The detection limit is 1 ppb.

The elements, Mo, Cu, Pb, Zn, Ag, Ni, Co, Mn, Fe, As, U, Th, Sr, Cd, Sb, Bi, V, Ca, P, La, Cr, Mg, Ba, Ti, B, Al, Na, K and W were determined simultaneously by ICP emission spectroscopy from a 0.5 gm sample aliquot digested with 3 ml of 3-1-2 HCL-HNO_3-H_2O at 95°C for one hour then diluted to 10 cc with H_2O.

Detection limits for the ICP analysis are:

Ag	0. 1 ppm
Cd, Co, Cr, Cu, Mo, Mn, Ni, Sr, Zn, W	1 ppm
As, B, Ba, Bi, La, Pb, Sb, Th, V	2 ppm
U	5 ppm
Al, Ca, Fe, K, Mg, Na, Ti	0.01 %
P	0.001 %

The resulting analytical data were provided in hard copy and in digital format for direct computer manipulation. Copies of the analytical results are presented in Appendix 2 of this report.

Data Handling and Data Presentation

Sample locations were digitized and merged with the analytical results. Maps were then produced over a topographic base of 1:10,000. Element distribution patterns are portrayed individually using graduated dots (blobs) with increasing size of symbol proportional to element abundance. The range of values represented by each dot is set after an examination of the histogram for data from this survey.

RESULTS AND INTERPRETATION

The results for Au, Cu, Mo, Ag, Ba, Pb, Zn and As are given in Figs. 4 to 11 and a summary interpretation map is given in Fig. 12.

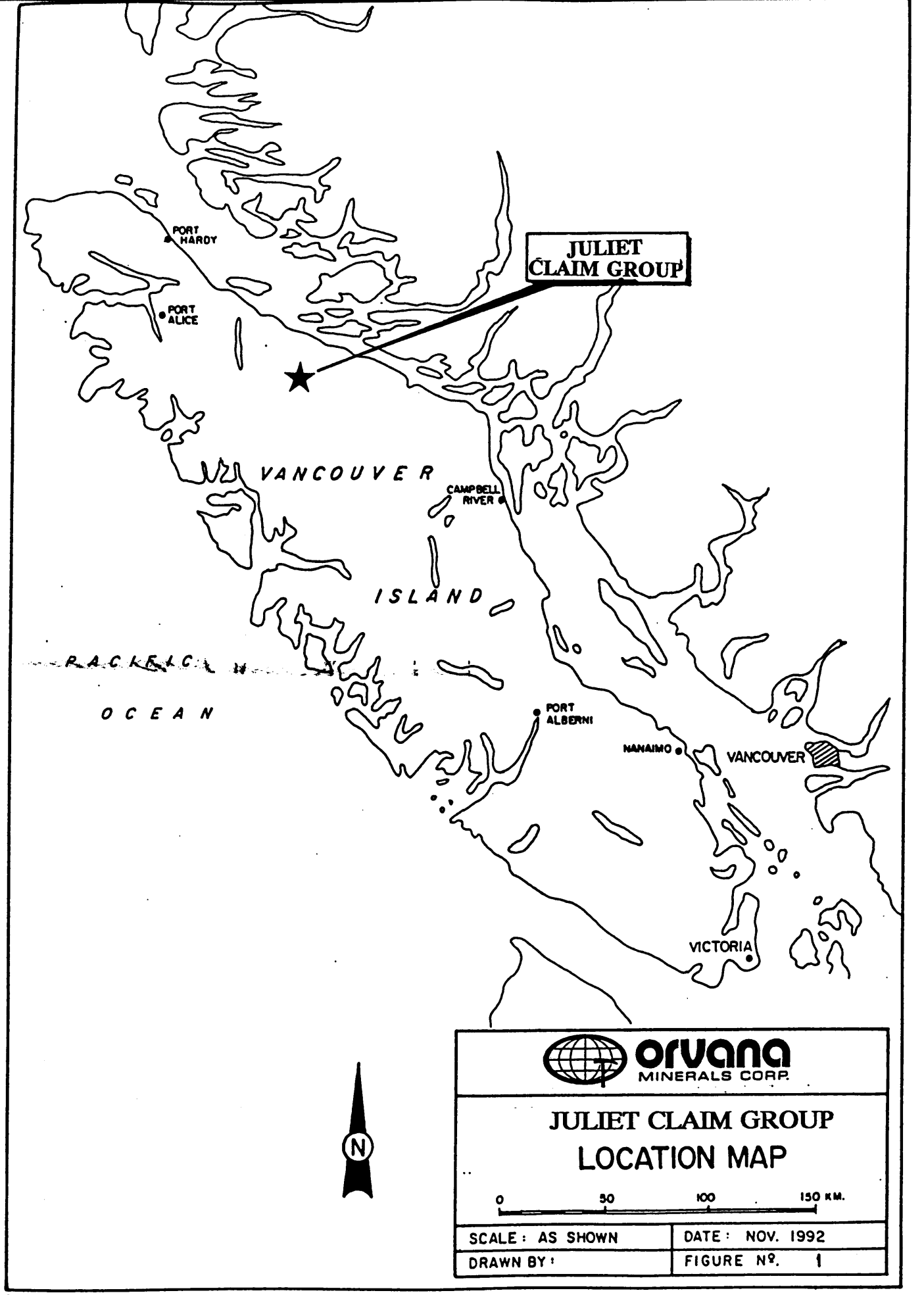
Mo shows a strong coherent 600x400m anomaly in the centre of the grid. This has erratic, generally coincident, Cu anomalies with values up to 500 ppm. Au largely fringes the Mo/Cu anomaly to the north and west and, like Cu is very erratic, with values up to 240 ppb Au. Occasional samples are anomalous in Ag, Ba, Pb, and Zn flanking the central Mo, Cu (Au) anomaly.

The geochemical pattern is consistent with a porphyry Cu/Mo source with associated, but fringing Au. This is similar to the geochemical pattern at Island Copper. However, the observed alteration is very minor and the host rocks are andesitic Karmutsen volcanics rather than Bonanza pyroclastics. Consequently, although the size of the geochemical anomaly is significant the alteration observed to date is not indicative of a large mineral system.

RECOMMENDATION

Two to three days should be spent mapping the area of the Cu, Mo, (Au) geochemical anomaly to:

(1) determine the extent and type of alteration
(2) try to determine if there are significant areas of (recessive?) pyroclastics or intrusives which were not observed during soil sampling
(3) determine if there is any extensive transported overburden which may have masked the geochemical response to underlying mineralization
(4) sample and assay any mineralized material



orvana MINERALS CORP.

JULIET CLAIM GROUP
LOCATION MAP

0 50 100 150 KM.

SCALE: AS SHOWN	DATE: NOV. 1992
DRAWN BY:	FIGURE Nº. 1

CHONG

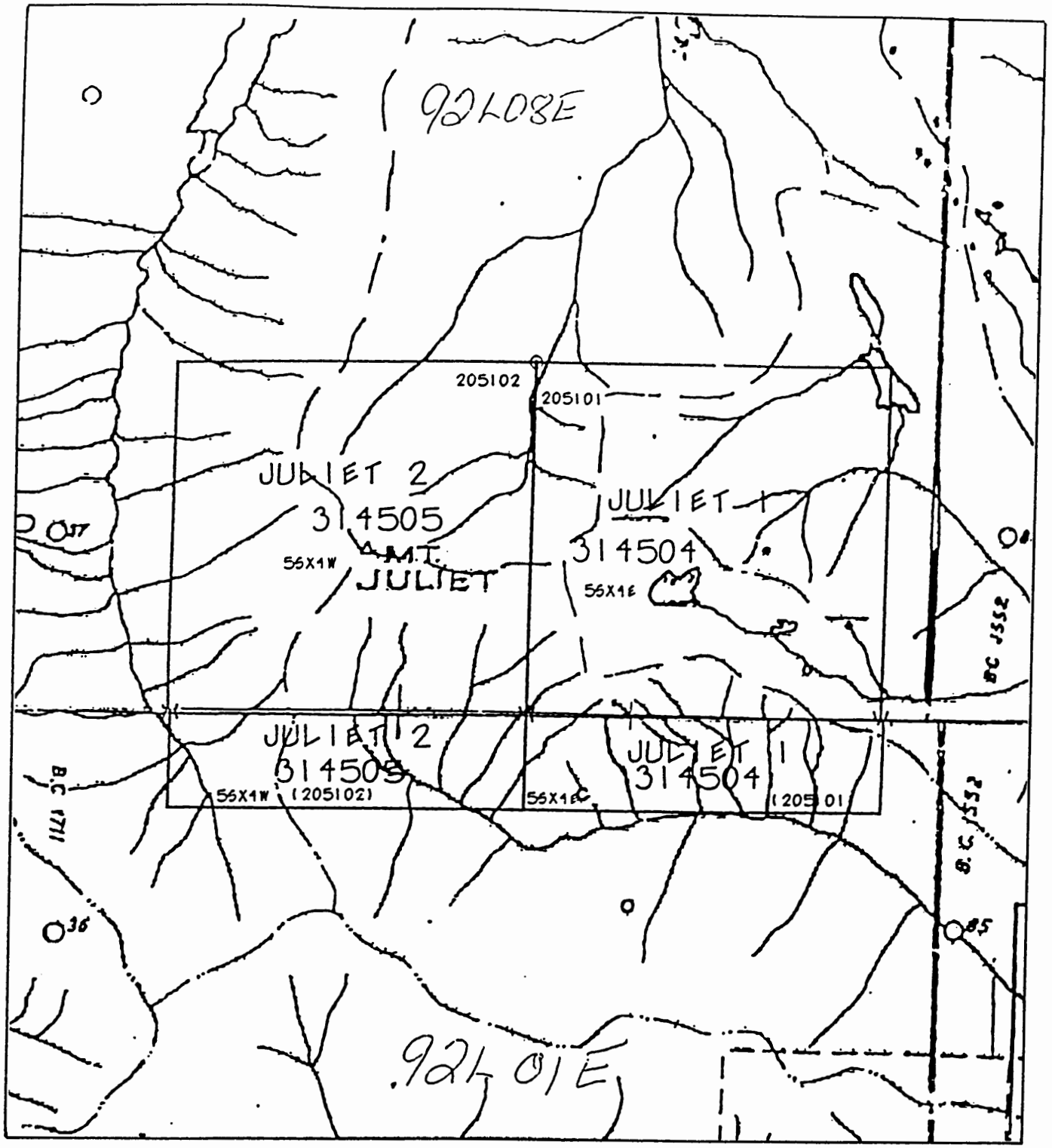
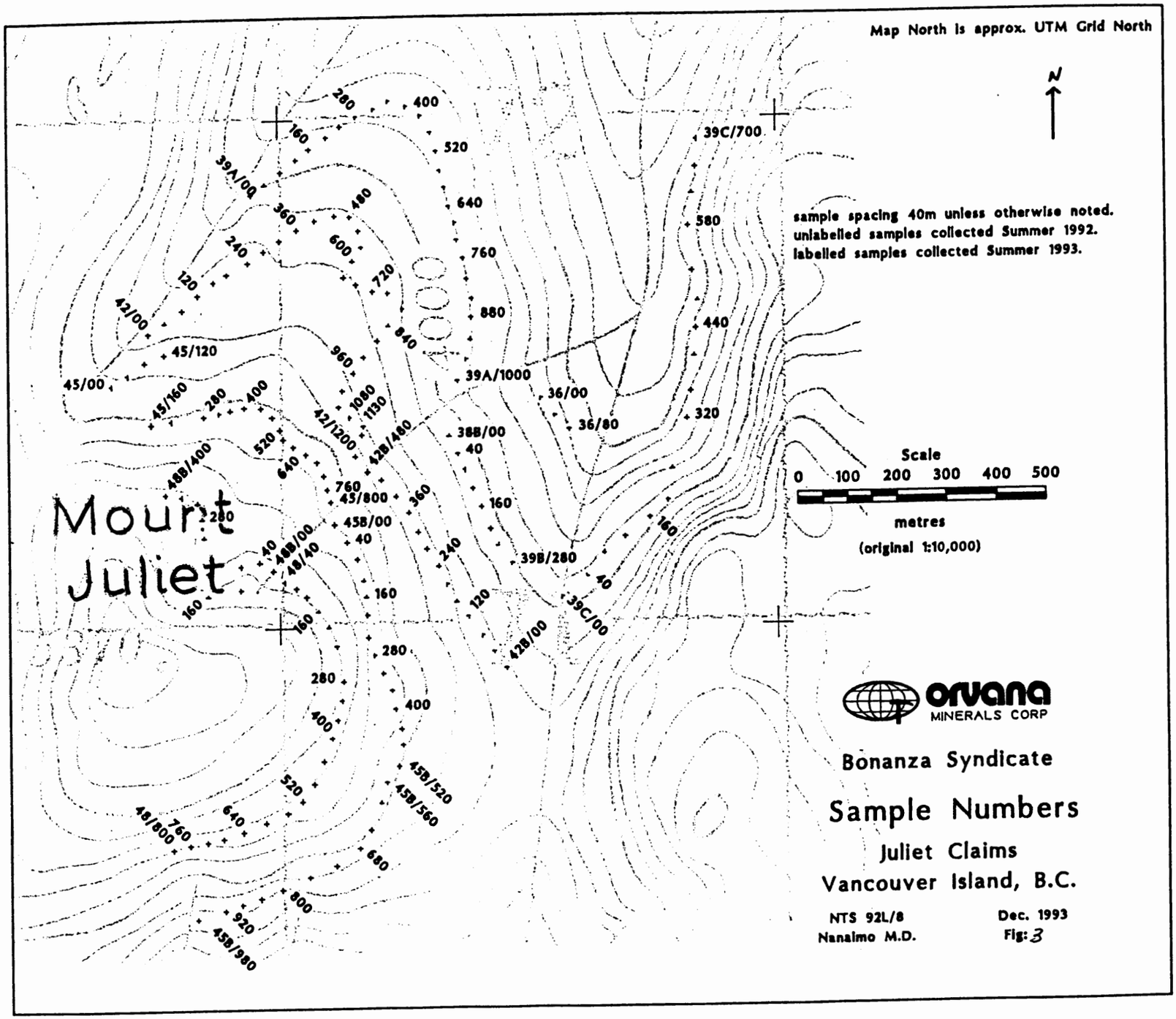
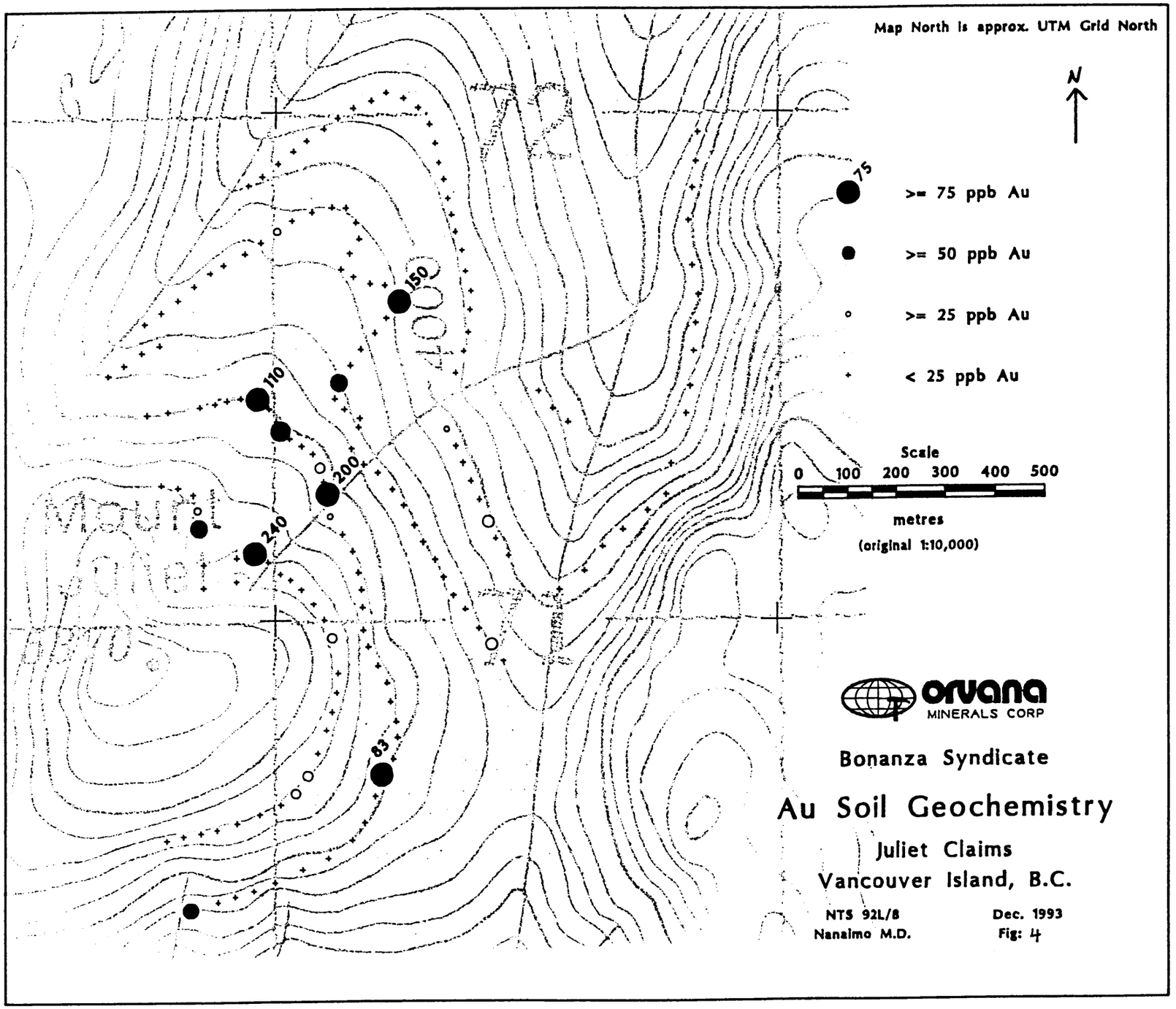
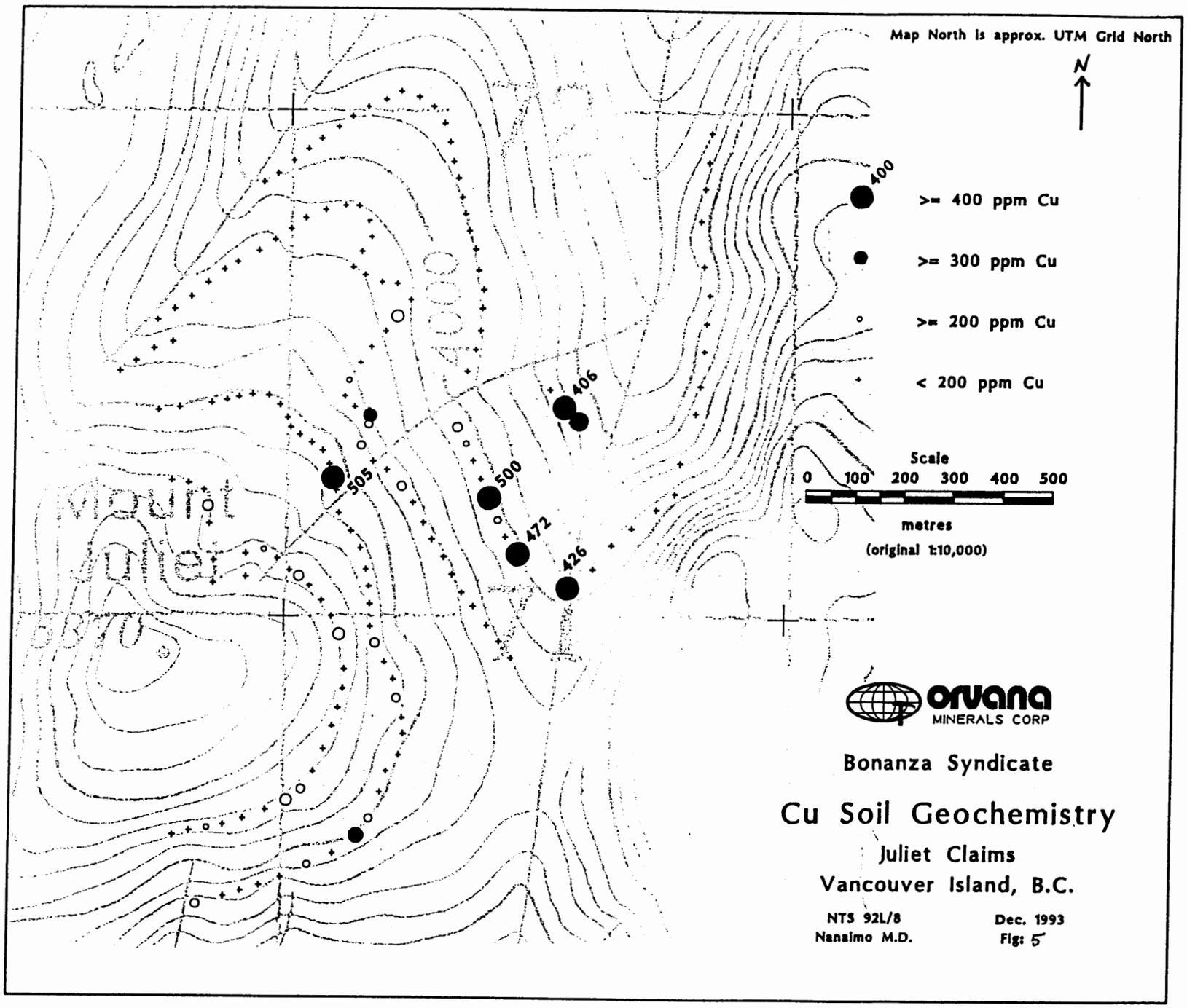
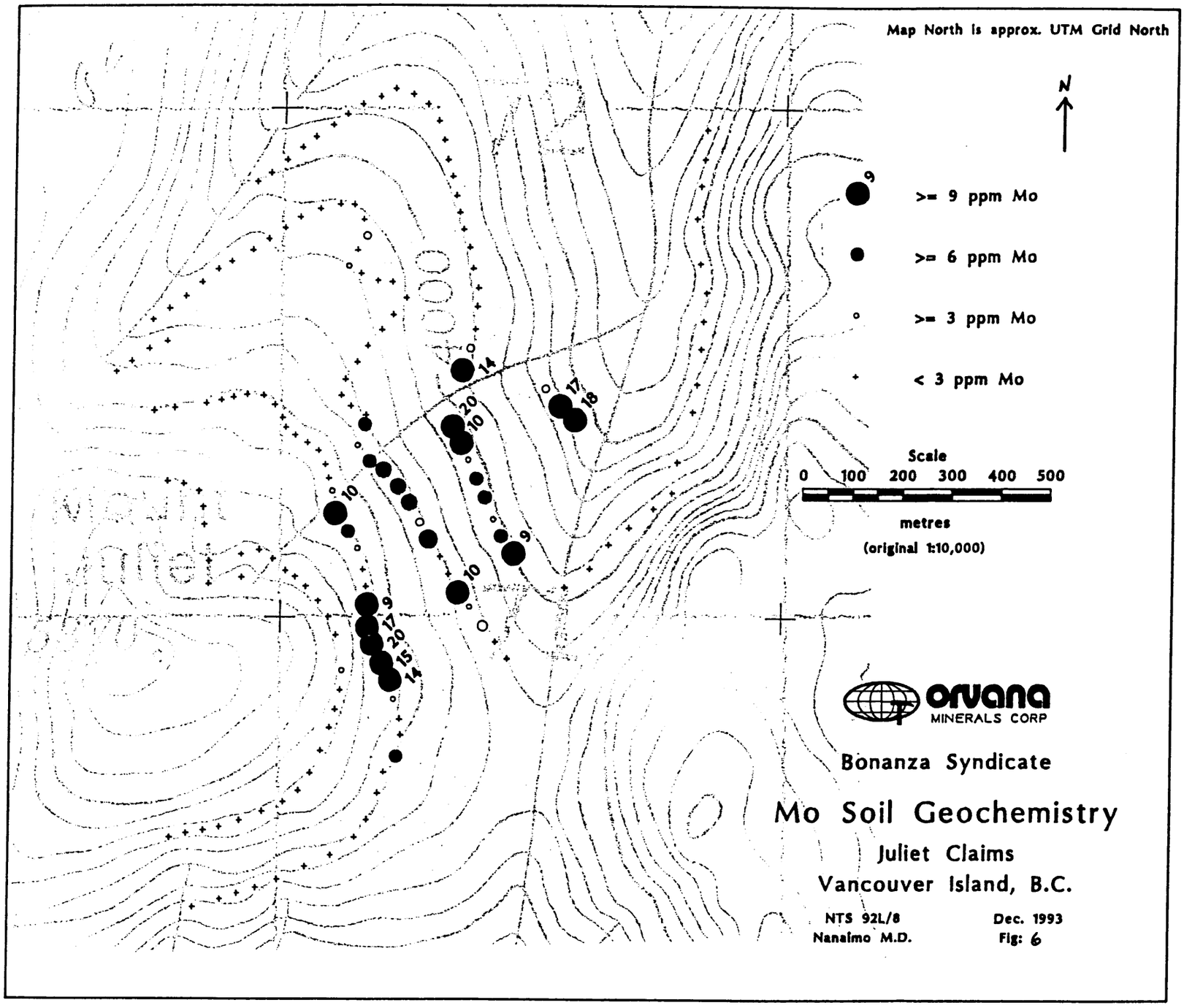


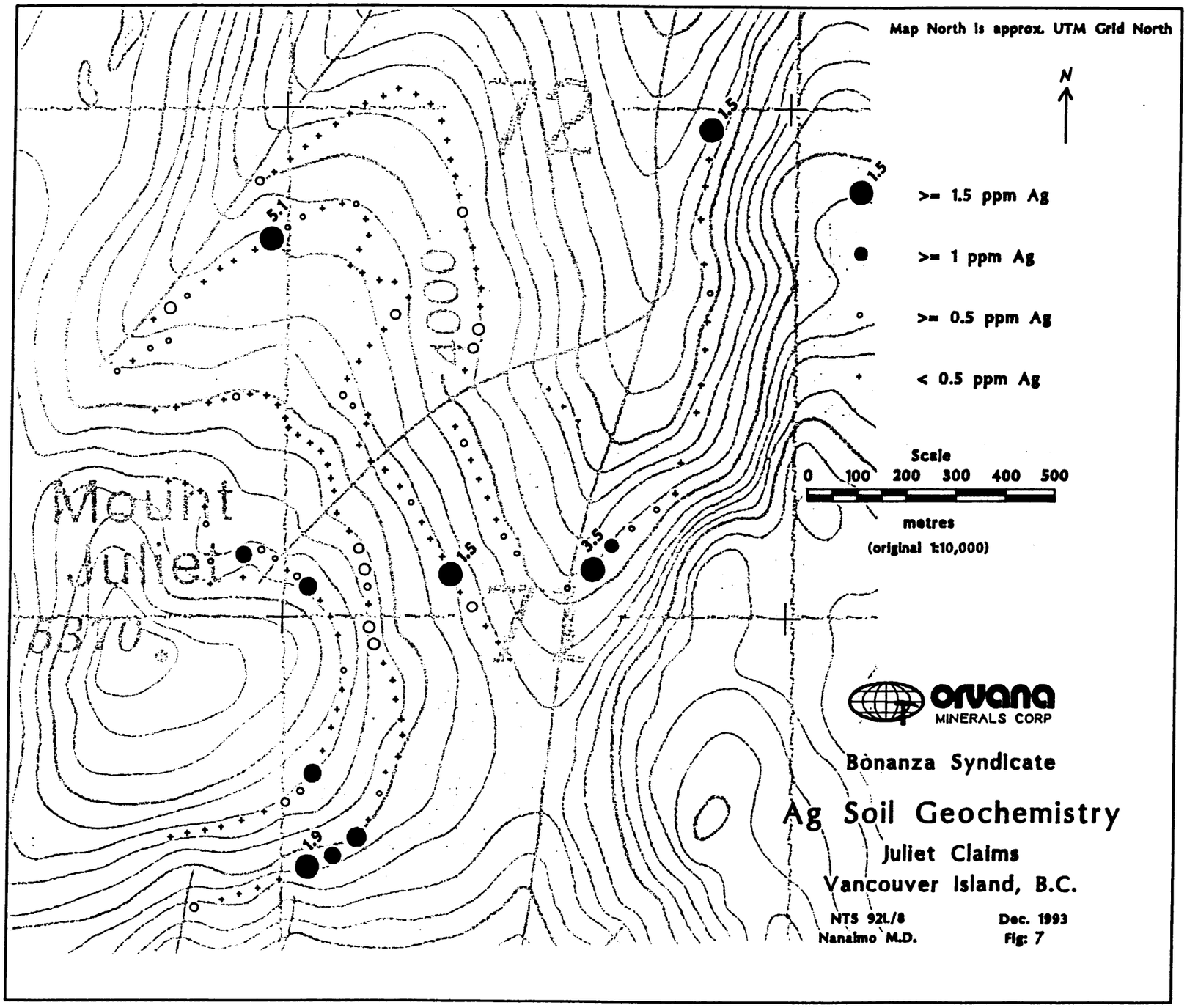
Figure 2: Location of Juliet Claim Group
NTS 92L/8E + 1E (1:50,000 scale)

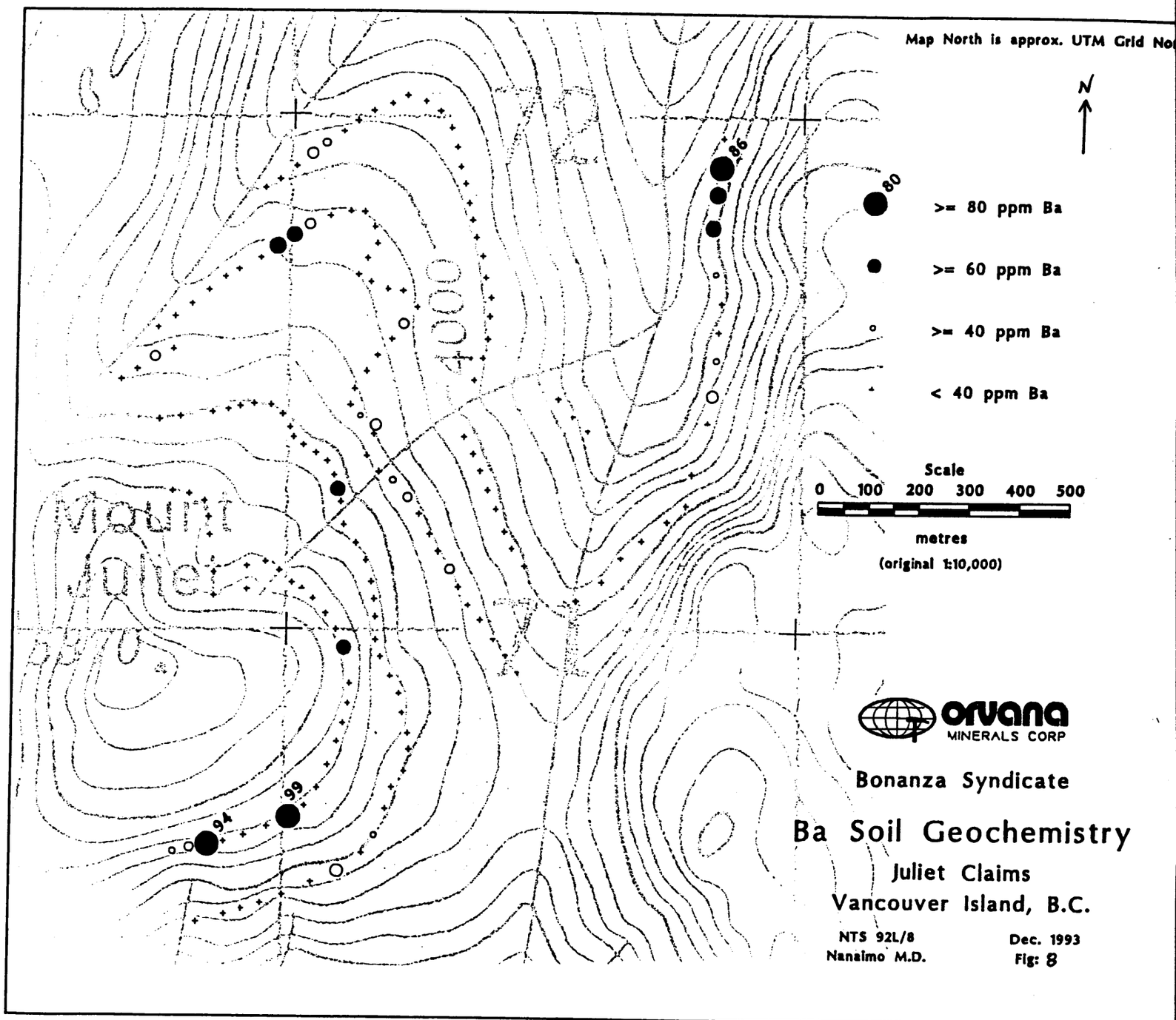

Map North is approx. UTM Grid North
N
sample spacing 40m unless otherwise noted.
unlabelled samples collected Summer 1992.
labelled samples collected Summer 1993.
Scale
0 100 200 300 400 500
metres
(original 1:10,000)
Mount Juliet
orvana MINERALS CORP
Bonanza Syndicate
Sample Numbers
Juliet Claims
Vancouver Island, B.C.
NTS 92L/8
Nanaimo M.D.
Dec. 1993
Fig: 3

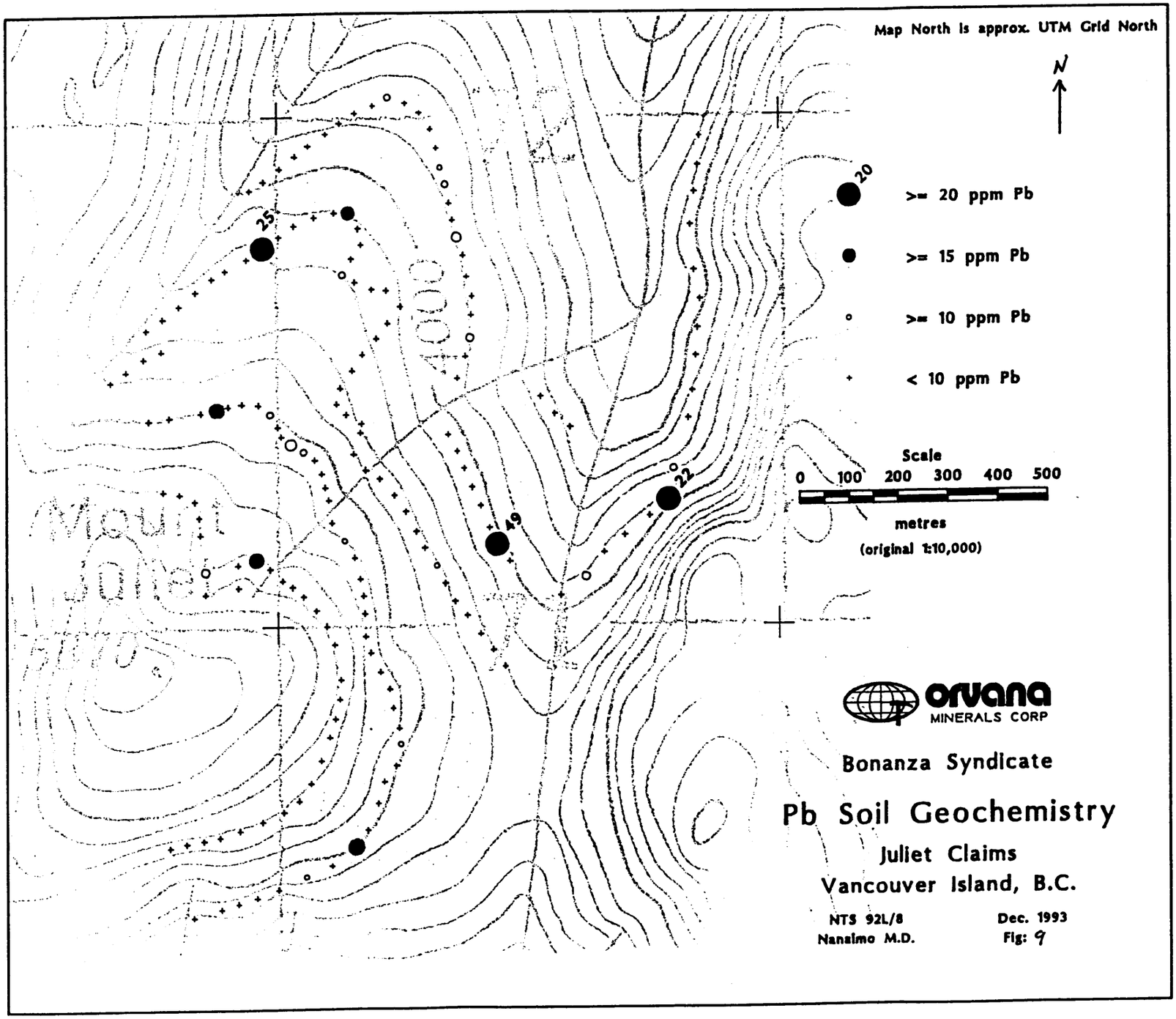

Map North is approx. UTM Grid North
N
75
>= 75 ppb Au
>= 50 ppb Au
>= 25 ppb Au
< 25 ppb Au
150
110
200
240
83
Scale
0 100 200 300 400 500
metres
(original 1:10,000)
orvana
MINERALS CORP
Bonanza Syndicate
Au Soil Geochemistry
Juliet Claims
Vancouver Island, B.C.
NTS 92L/8
Nanaimo M.D.
Dec. 1993
Fig: 4

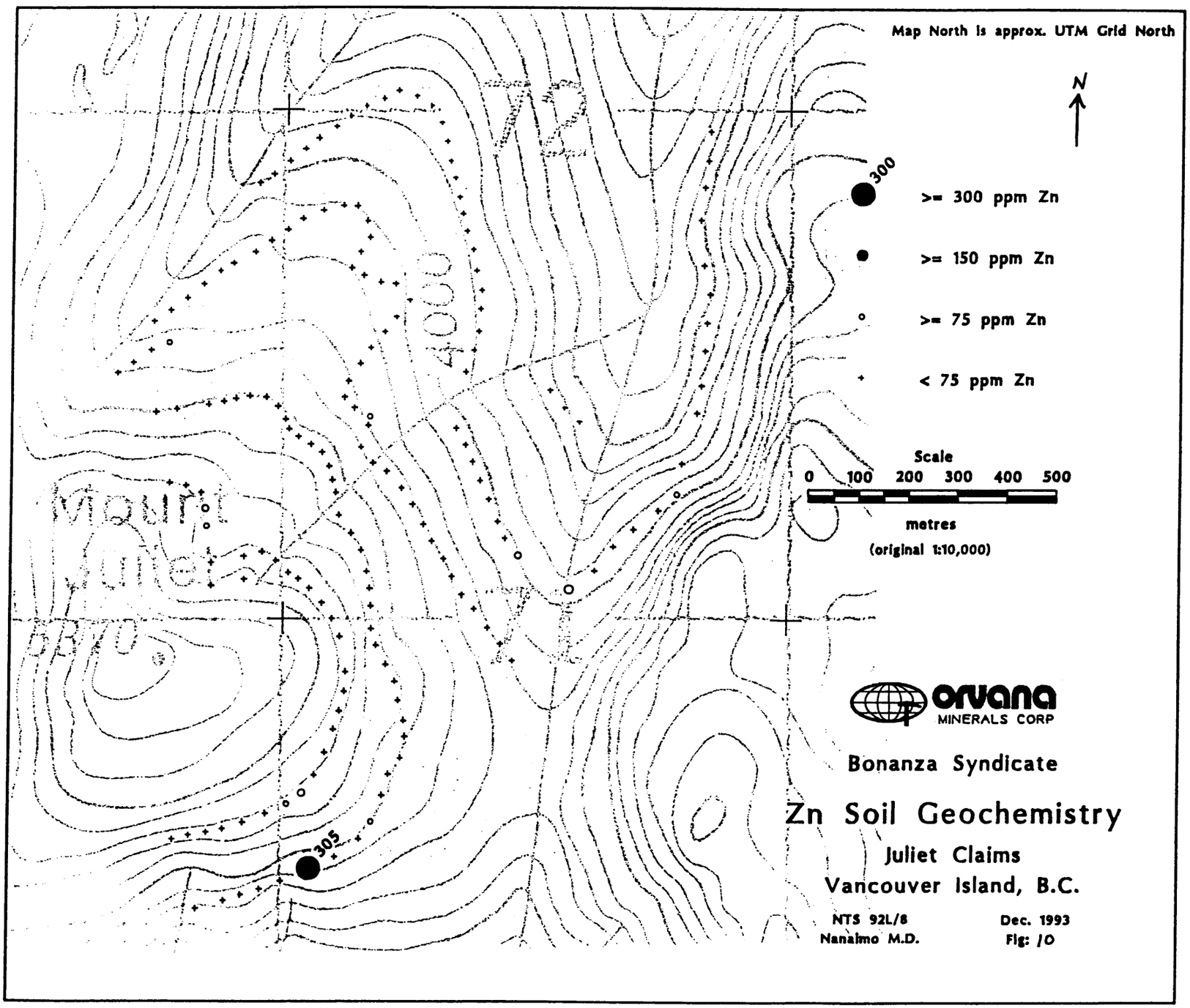

Map North is approx. UTM Grid North
N
400
>= 400 ppm Cu
>= 300 ppm Cu
>= 200 ppm Cu
< 200 ppm Cu
Scale
0 100 200 300 400 500
metres
(original 1:10,000)
406
505
500
472
426
orvana
MINERALS CORP
Bonanza Syndicate
Cu Soil Geochemistry
Juliet Claims
Vancouver Island, B.C.
NTS 92L/8
Nanaimo M.D.
Dec. 1993
Fig: 5

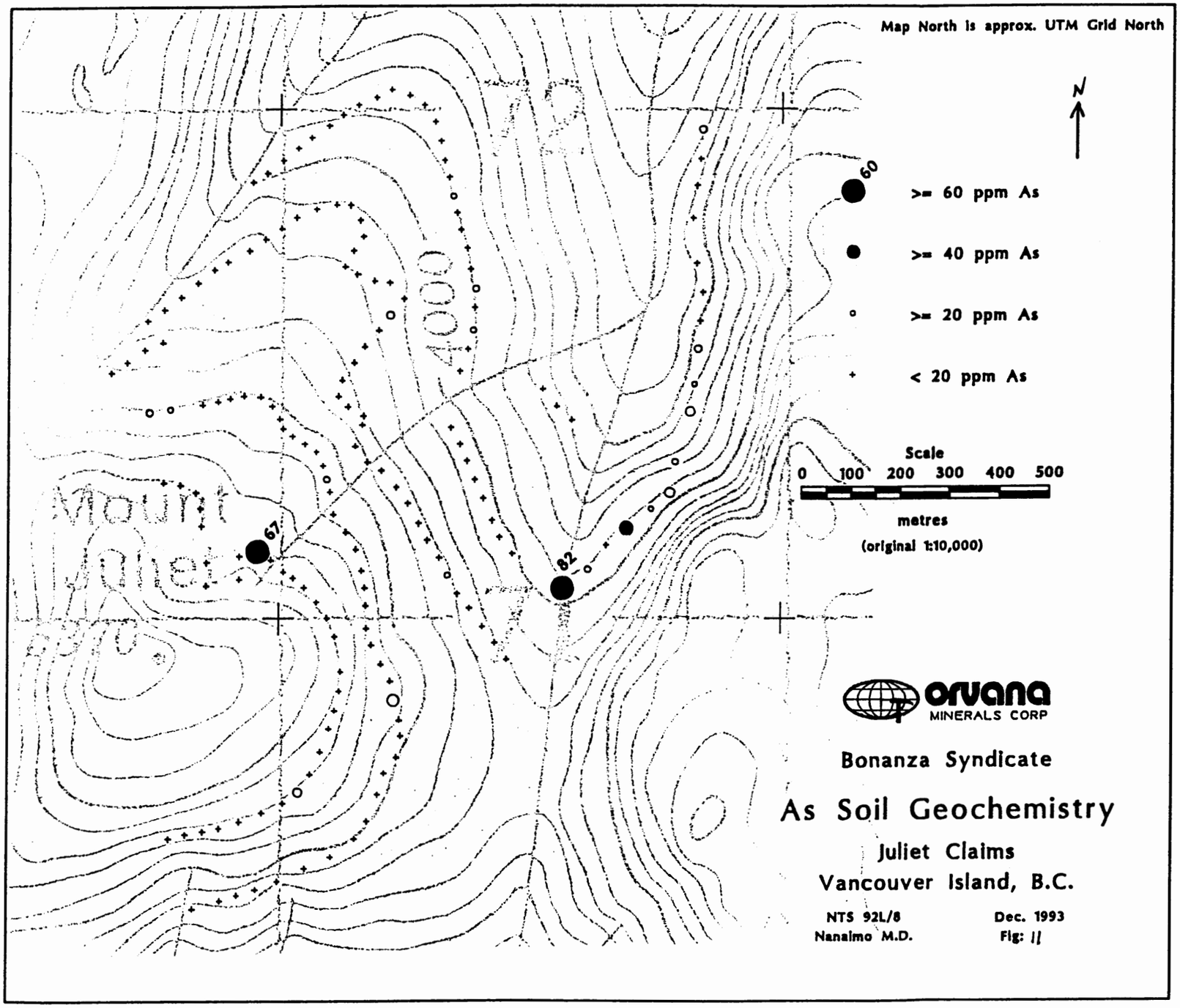

Map North is approx. UTM Grid North
N
>= 9 ppm Mo
>= 6 ppm Mo
>= 3 ppm Mo
< 3 ppm Mo
Scale
0 100 200 300 400 500
metres
(original 1:10,000)
orvana
MINERALS CORP
Bonanza Syndicate
Mo Soil Geochemistry
Juliet Claims
Vancouver Island, B.C.
NTS 92L/8
Nanaimo M.D.
Dec. 1993
Fig: 6

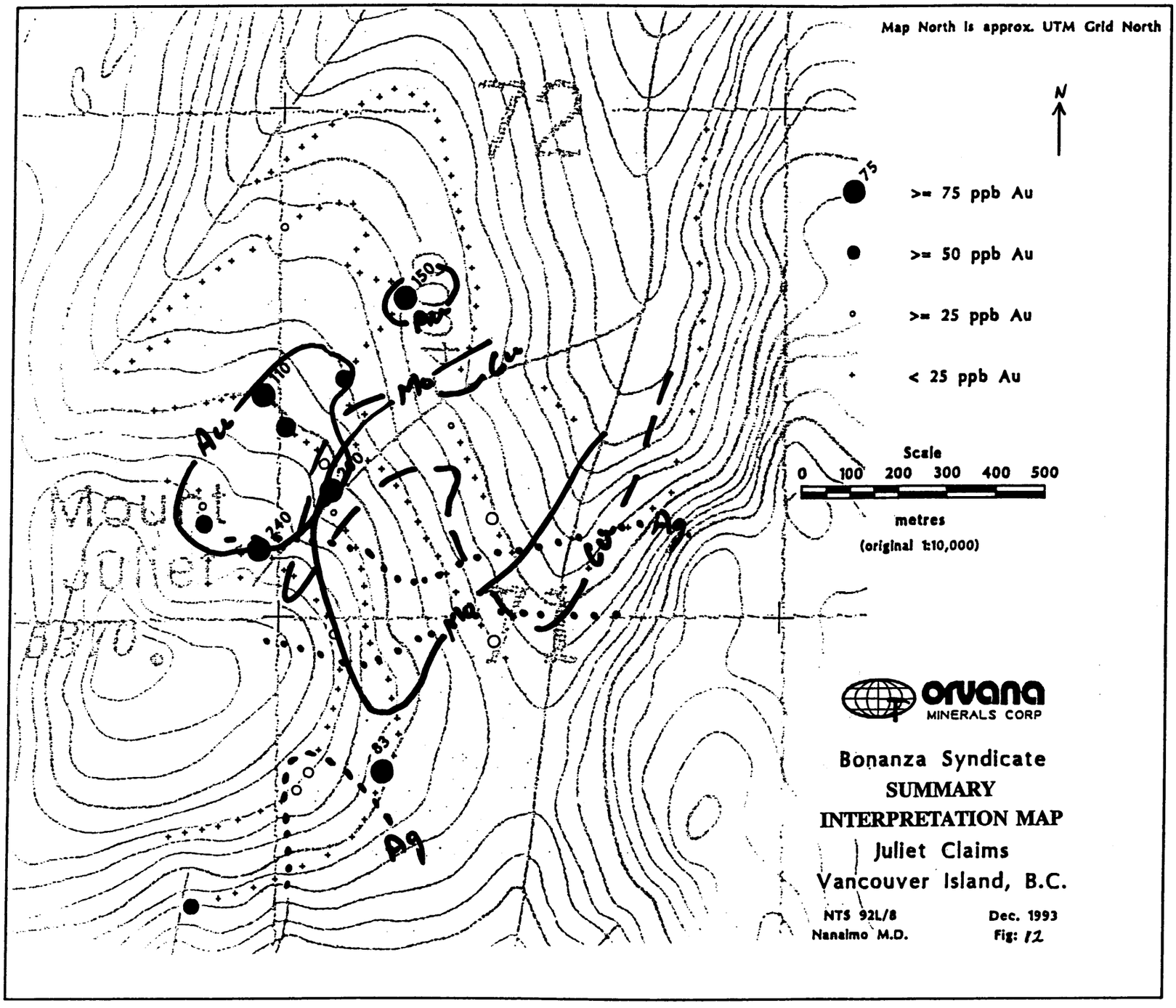

Map North is approx. UTM Grid North
N
>= 1.5 ppm Ag
>= 1 ppm Ag
>= 0.5 ppm Ag
< 0.5 ppm Ag
Scale
0 100 200 300 400 500
metres
(original 1:10,000)
Mount Juliet
5B10
1000
1.5
5.1
1.5
1.5
3.5
1.9
orvana
MINERALS CORP
Bonanza Syndicate
Ag Soil Geochemistry
Juliet Claims
Vancouver Island, B.C.
NTS 92L/8
Nanaimo M.D.
Dec. 1993
Fig: 7


Map North is approx. UTM Grid No
N
86
80
99
94
>= 80 ppm Ba
>= 60 ppm Ba
>= 40 ppm Ba
< 40 ppm Ba
Scale
0 100 200 300 400 500
metres
(original 1:10,000)
orvana
MINERALS CORP
Bonanza Syndicate
Ba Soil Geochemistry
Juliet Claims
Vancouver Island, B.C.
NTS 92L/8
Nanaimo M.D.
Dec. 1993
Fig: 8


Map North is approx. UTM Grid North
N
20
>= 20 ppm Pb
>= 15 ppm Pb
>= 10 ppm Pb
< 10 ppm Pb
Scale
0 100 200 300 400 500
metres
(original 1:10,000)
25
49
22
Mount Joliet
orvana
MINERALS CORP
Bonanza Syndicate
Pb Soil Geochemistry
Juliet Claims
Vancouver Island, B.C.
NTS 92L/8
Nanaimo M.D.
Dec. 1993
Fig: 9


Map North is approx. UTM Grid North
N
300
>= 300 ppm Zn
>= 150 ppm Zn
>= 75 ppm Zn
< 75 ppm Zn
Scale
0 100 200 300 400 500
metres
(original 1:10,000)
400
305
orvana
MINERALS CORP
Bonanza Syndicate
Zn Soil Geochemistry
Juliet Claims
Vancouver Island, B.C.
NTS 92L/8
Nanaimo M.D.
Dec. 1993
Fig: 10


Map North is approx. UTM Grid North
N
60
>= 60 ppm As
>= 40 ppm As
>= 20 ppm As
< 20 ppm As
Scale
0 100 200 300 400 500
metres
(original 1:10,000)
4000
Mount
Juliet
67
82
orvana
MINERALS CORP
Bonanza Syndicate
As Soil Geochemistry
Juliet Claims
Vancouver Island, B.C.
NTS 92L/8
Nanaimo M.D.
Dec. 1993
Fig: 11


Map North is approx. UTM Grid North
N
75
>= 75 ppb Au
>= 50 ppb Au
>= 25 ppb Au
< 25 ppb Au
Scale
0 100 200 300 400 500
metres
(original 1:10,000)
orvana
MINERALS CORP
Bonanza Syndicate
SUMMARY
INTERPRETATION MAP
Juliet Claims
Vancouver Island, B.C.
NTS 92L/8
Nanaimo M.D.
Dec. 1993
Fig: 12
150
110
240
83
Au
Ag

STATEMENT OF COSTS

JULIET PROPERTY
October 24, 1992 to August 31, 1993

Salary	$6374.69
Travel and Meals	1948.55
Publications and maps	166.00
Field Supplies	40.12
Analysis	2041.50
Drafting and Reproduction	820.11
TOTAL	$11,391.06

STATEMENT OF QUALIFICATIONS

I, Peter M.D. Bradshaw of 4725 Rutland Road, West Vancouver, British Columbia, V7W 1G6 hereby certify that:

(1) I am a graduate (1962) of Carleton University, Ottawa, Ontario, with a Bachelor of Science degree in Geology; and a graduate (1965) of Durham University, Durham, England, with a Ph.D. in Geology.

(2) I am a Professional Engineer in the Province of British Columbia.

(3) I have been practicing mineral exploration for 25 years.

Peter M.D. Bradshaw

APPENDIX 1

Soil Samples Field Data

Soil Sampling
Code Sheet

COORDINATES

Where the coordinates are not contained in the sample number the UTM easting and northing is used.

ELEVATION

in feet

LOCAL TERRAIN

RG	ridge crest
TP	knoll or hill top
SS	side slope
BS	base of slope
VF	valley floor
HM	rolling or hummocky ground
T	terrace
GV	depression of gully
ST	bank of stream or channel

SECONDARY ENVIRONMENT AND STATUS AFFECTING CONDITIONS

SW	swamp, bog
SP	groundwater seepage area
BO	base of outcrop
GO	gossan

DRAINAGE STATUS

EX	excessive, all water moves rapidly through the soil
FR	free, normal soil with dominant downward water movement
IM	imperfect
IP	impeded

PARENT MATERIAL

BR	bedrock
TL	talus
CO/CL	colluvium
AL	alluvium
TL/GT	glacial till

SLOPE

in degrees

SLOPE DIRECTION

down hill direction

ROCK FRAGMENTS

The first two letters denote rock type. The last number or symbol is concentration using the G scale.

QV, VQ	quartz veins
CV	carbonate veins

AA	altered andesite
HF, HO	hornfels
FV	felsic volcanics
DC, DA	dacite
DK	dyke (composite unspecified)
RY	rhyolite
BS, BA	basalt
DI, DR	diorite
SY	syenite
CA, BX	carbonate breccia
IN	intrusive (unspecified)
TF, TU	tuff
SS	sandstone
LS	limestone
MO, MZ	monzonite
QM	quartz monzonite
LA	latite
TR	trachyte
CB	chert bands
VC, VL	volcanics (mixed)
SD, MS	sediments (mixed)
PD	pink diorite
CN	conglomerate
AB	andesite breccia
RD	rhyodacite
GR	granite
GS	greenstone
QP	quartz porphyry
AG	argillite
GB	gabbro
SH	shale
MD	microdiorite
MV, BV	mafic (basic) volcanics
BR	breccia

G scale

x	100	%
9	90	%
8	80	%
7	70	%
6	60	%
5	50	%
4	40	%
3	30	%
2	20	%
1	10	%
=	5	%
+	2.5	%
)	1	%
•	0.3	%
(	0.1	%
-	0.03	%
.	0.01	% or trace

VEGETATION

CF	conifer forest
BR	brush, low bush
OG	old growth
AM	alpine meadows
FG	fern
JP	juniper

COATING

FE	iron
MN	manganese
CA	calcium

SAMPLE DEPTH

in cm

COLOR

The color is described using a two letter color range followed by a single digit lightness scale.

COLOR RANGE		LIGHTNESS	
R	red	W	white
U	brown (amber)	9	palest to
O	orange	1	darkest
T	tan (khaki)	N	black
Y	yellow		
G	green		
B	blue		
M	mauve		
W	white		
A	gray (ash)		
N	black (noir)		

PERCENT OF DIFFERENT PARTICLES

Using the G scale

MAXIMUM PARTICLE SIZE

The largest particle in the sample as taken from the ground

		mm
L	very small pebble	6
M	small pebble	11
N	medium pebble	23
O	large pebble	45
P	small cobble	90
Q	large cobble	180
R	small boulder	360
S	medium boulder	725
T	large boulder	1450
U	very large boulder	2900

SOIL | VENTURE NUMBER | SUBGRID OR TRAVERSE | SAMPLED: DAY 25, MONTH OCT, YEAR 92, BY PMC, ASSTD. BY JF | WEATHER: SUNNY | N T S | SHEET No. of

I D E N

COMPANY | PROPERTY: JULIET 2

I P R J

OR PROJECT AND SUB PROJECT

AZIMUTH OF +VE EAST OF TRUE NORTH | GRID 000 | UTM COORDINATES OF GRID ORIGIN: NORTHING, EASTING, ELEVATION

S G R I D

SAMPLE NUMBER	X COORDINATE	Y COORDINATE	ELEVATION	LOCAL TERRAIN	SECONDARY ENVIRONMENT	FACTORS AFFECTING CONDITIONS	FACTORS AFFECTING CONDITIONS	DRAINAGE STATUS	PARENT MATERIAL	% RESIDUAL	SLOPE	SLOPE DIRECTION	ROCK TYPE	FRAGMENTS TYPE	FRAGMENTS TYPE	VEGETATION TYPE	VEGETATION TYPE	VEGETATION TYPE	COATING	COATING	SAMPLE DEPTH	HORIZON SAMPLED	COLOR	% CLAY	% SILT	% SAND	% GRAVEL	% ORGANIC	MAX. PART SIZE	% PARTICLES	ROUNDNESS	SHAPE	SORTING
45000			45300	SS	TA	TA		FS	CO		32	325	BS			CF	BR				020	B	BRN	50	30	/	20	5	5				3
45040			45300	SS	TA	TA		FS	CO		32	305	BS			CF	BR				025	B	BRN	50	35	/	15	2					
45080			45100	SS	TA	TA		FS	CO		34	295	BC			CF					025	B	BRN	50	25	/	10	15	/				
45120			45000	SS	TA	TA		FS	CO		38	325	BS			CF					035	B	BRN										
42000			42000	SS	TA	TA		FS	CO		28	335	BS																				
42040			42000	SS	TA	TA		FS	CO		34	345	BS																				
42080			42000	SS	/	/		FS	CO		34	325	BS																				
42120			42000	SS	/	/		FS	CO		44	320	BS																				
42160			42000	SS	/	/		FS	CO		41	345	BS																				
42200			42000	SS	TA	TA		FS	CO		41	320	BS																				
42240			42000	SS	/	/		FS	CO		32	350	BS																				
42280			42000	SS	TA	TA		FS	CO		42	325	BS																				
42320			42000	SS	TA	TA		FS	CO		39	340	BS																				
42360			42000	SS	TA	TA		FS	CO		40	325	BS																				
42400			41700	SS	TA	TA		FS	CO		45	000	BS																				
42440			42000	SS	/	/		FS	CO		29	030	BS																				
42480			42800	SS	OC	/		FS	CO		35	055	BS																				
42520			43400	SS	/	/		FS	CO		28	065	BS																				
42560			43200	SS	OC	/		FS	CO		38	095	BS																				
																30mE of draw		CF	BR			020	B	BRN	50	30	/	20	5	5				3
																		CF	BR			025	B	BRN	50	35	/	15	2					
																		CF				025	B	BRN	50	25	/	10	15	/				
																		CF				035	B	BRN										
																20mE of draw		CF				025	B	BRN	50	30	/	20	/	/				
																		CF				020	B	BRN	50	30	/	20	5	2				3
																base of o/c		CF				025	B	BRN	50	30	/	20	/	/				
																		CF				020	B	BRN	50	30	/	20	/	/				
																		CF				020	B	BRN	45	25	/	30	/	/				
																		CF				030	B	BRN	45	25	/	30	/	/				
																near base of cliff		CF				025	B	BRN	50	30	/	20	/	/				
																near base of cliff		CF				020	B	BRN	40	25	/	30	5	/				
																near base of cliff		CF				030	B	BRN	35	15	/	30	/	/				
																near base of cliff		CF				030	B	BRN	40	20	/	20	20	/	/			
																		CF				045	B	BRN	35	15	/	20	30	5	2			
																		CF				025	B	OBR	45	20	5	/	30	5	5			
																shallow to o/c		CF	BR			020	B	BRN	25	25	/	/	50	/	/			
																		CF	BR			025	B	OBR	40	55	/	/	05	/	10			
																at foot of o/c		CF	BR			025	B	BRN	30	55	/	/	50	2	20			

TL - Talus

FG - fern glade

SOIL IDEN	VENTURE NUMBER	SUBGRID OR TRAVERSE	SAMPLED DAY	MONTH	YEAR	BY	ASSTD. BY
			26	10	92	BTF	WK

COMPANY / PROPERTY: Juliet

WEATHER: clear & cool

NTS / SHEET No.:

OR PROJECT AND SUB PROJECT:

GRID 000 TRUE NORTH / AZIMUTH OF +VE EAST OF / UTM COORDINATES OF GRID ORIGIN: NORTHING / EASTING / ELEVATION

Sample Number	X Coordinate	Y Coordinate	Elevation (feet)	Local Terrain	Secondary Environment	Factors Affecting Conditions	Factors Affecting Conditions	Drainage Status	Parent Material	% Residual	Slope	Slope Direction	Rock Type	Fragments	Fragments Type	Fragments Type		Vegetation Type	Type	Type	Coating	Coating	Sample Depth	Horizon Sampled	Color	% Clay	% Silt	% Sand	% Gravel	% Organic	Max. Part Size	% Particles	Roundness	Shape
39A100			3900	SS				FR	CL	6	20	340	AN	X				CF					25	B2	3U5	1	3	2	2	2	C	2	S	
R Start traverse @ creek (dry), goes NE.																																		
39A140				SS				FR	CL	8	28	335	AN	X				CF					30	B1	3U5	2	4	1	1	2	P	2	S	
39A180				SS				FR	TL	6	30	340	AN	X				CF	FG				18	B2	3U5	2	4	1	2	1	R	4	A	
39A120				SS	BO			FR	CL	8	35	325	AN	X				FG					15	B1	4U5	2	4	1	2	1	G	5	A	
R Had to drop down ≈ 30 ft to get below bluffs @ this site; continued on @ new elevation																																		
39A160				SS				FR	CL	7	37	325	AN	X				CF					10	B1	5U5	1	4	1	2	2	R	6	A	
39A200				SS				FR	TL	7	27	330	AN	X				CF					25	B2	5OU	2	4	1	1	2	O	2	A	
39A240				SS				FR	CL	8	35	325	AN	X				CF					30	B2	4OU	1	4	2	2	1	O	2	S	
39A280				SS				FR	CL	8	35	340	AN	X				CF					25	B2	4OU	1	3	2	3	1	O	4	S	
39A320				SS				FR	CL	8	37	350	AN	X				CF					12	B2	5OU	1	4	2	2	1	P	3	S	
39A360				RC	BO			FR	CL	9	29	340	AN	X				CF					12	B1	5AU	2	3	2	2	1	N	3	S	
R Station located on ridge crest.																																		
39A400				SS	BO			FR	BR	9	35	050	AN	X				HB					22	B2	4OU	2	2	2	3	1	O	3	S	
39A440				BS	BO			FR	BR	9	34	080	AN	X				CF					25	B2	5OU	2	5	1	1	1	O	2	A	
R Passed Juliet #2 I.P. post 1W OS @ 420m along traverse, 10m east. Had to drop another 30 ft; continued on @ new elevation.																																		
39A480				BS	BO			FR	BR	9	38	070	AN	X				CF					22	B2	6OU	1	2	3	3	1	G	5	A	
39A520				BN	BO			FR	TL	6	34	080	AN	X				CF					30	B2	7OU	1	2	3	3	1	R	5	A	
39A560				BS	BO			FR	BR	7	37	090	AN	X				CF					24	B2	5OU	1	5	1	2	1	G	3	P	
R Had to drop ≈ 20 ft to get to this station, Continued on this level.																																		
39A600				SS				FR	TL	7	34	095	AN	X				CF					30	B1	3U5	1	5	1	1	2	O	2	A	
39A640				SW				FR	CL	8	33	090	AN	X				CF					27	B2	3OU	1	5	1	1	3	O	2	S	
39A680				SW				FR	CL	7	33	085	AN	X				CF					28	B2	5OU	1	4	1	2	2	N	2	S	
39A720				SS				FR	CL	8	34	075	AN	X				CF					28	B2	4OU	1	3	2	2	2	P	3	S	
39A760				SS				FR	CL	8	35	080	AN	X				CF					26	B2	4OU	1	3	3	2	1	C	2	S	
R Creek @ 785m																																		
39A800				SS				FR	CL	7	25	050	AN	X				CF					26	B2	4OU	2	4	2	1	1	N	2	S	

MP - monzonite porphyry, silicified

SOIL — VENTURE NUMBER — SUBGRID OR TRAVERSE — SAMPLED: DAY 26, MONTH 10, YEAR 92, BY RTF, ASSTD. BY WK

IDEN

COMPANY — PROPERTY: Juliet

IPRJ

AZIMUTH OF +VE EAST OF

SGRID

WEATHER: @ Foggy + cool — NTS — SHEET No of

OR PROJECT AND SUB PROJECT

GRID 000 TRUE NORTH — UTM COORDINATES OF GRID ORIGIN: NORTHING / EASTING / ELEVATION

Sample Number (1-6)	X Coordinate (7-11)	Y Coordinate (12-16)	Elevation feet (17-20)	Local Terrain (21-22)	Secondary Environment (23-24)	Factors Affecting Conditions (25-26)	Factors Affecting Conditions (27-28)	Drainage (29)	Status (30)	Parent Material (31-32)	% Residual (33)	Slope (34-35)	Slope Direction (36-38)	Rock Type (39-40)
39A840			3800	SW	BO			F	R	CL	8	38	110	AN
39A880				SS				F	R	CL	8	34	140	AN
39A920				SW				F	R	CL	7	32	110	AN
39A960				SS				F	R	CL	8	36	070	AN
〃 1000				SS				F	R	CL	8	34	125	AN
C Crossed small gully @ 1010m														
1040				SW				F	R	BR	9	40	140	MP
R Traverse ends @ 1060m, where it hits a small ravine. Another 10m further is a monster ravine (impassible).														

Sample Number	Fragments (41)	Type (42-44)	Type (45-47)	(48-52)	Vegetation Type (53-54)	Type (55-56)	Type (57-58)	Coating (59-60)	Coating (61-62)	Sample Depth cm (63-65)	Horizon Sampled (66-67)	Color (68-70)	% Clay (71)	% Silt (72)	% Sand (73)	% Gravel (74)	% Organic (75)	Max. Part Size (76)	% Particles (77)	Roundness (78)	Shape (79)	Sorting (80)
39A840	X				CF					30	B2	404	2	4	2	1	1	0	2	A		F
39A880	X				CF					30	B2	404	2	5	1	1	1	P	2	S		M
39A920	X				CF					32	B2	404	1	6	1	1	1	0	2	S		M
39A960	X				CF					25	B2	304	1	5	2	1	1	P	2	A		M
〃 1000	X				CF					28	B2	504	1	3	3	2	1	P	3	S		M
1040	X				CF					6	B2	504	+	2	3	3	1	0	5	A		r

SOIL IDEN	VENTURE NUMBER	SUBGRID OR TRAVERSE	SAMPLED DAY	MONTH	YEAR	BY	ASSTD. BY	WEATHER	NTS	SHEET No. of
			26	OCT	92	PMC	JF	SUNNY		

COMPANY	PROPERTY	OR PROJECT AND SUB PROJECT
	JULIET 2	

SGRID — Ridge — AZIMUTH OF +VE EAST OF GRID 000 TRUE NORTH — UTM COORDINATES OF GRID ORIGIN: NORTHING, EASTING, ELEVATION

Sample Number	X Coordinate	Y Coordinate	Elevation	Local Terrain	Secondary Environment	Factors Affecting Conditions	Factors Affecting Conditions	Drainage Status	Parent Material	% Residual	Slope	Slope Direction	Rock Type
42600			4250	SS	/	/		FR	CO		45	140	BS
42640			4200	SS	/	/		FR	CO		57	105	BS
42680			4200	SS	/	/		FR	CO		32	085	BS
42720			4200	SS	TA	TA		FR	CO		41	080	BS
42760			4200	SS	TA	TA		FR	CO		40	080	BS
42800			4200	SS	/	/		FR	CO		35	085	BS
42840			4180	GS	SS	GS		FR	CO		50	135	BS
42880			4200	SS	/	/		FR	CO		36	065	BS
42920			4200	SS	/	/		FR	CO		30	115	BS
42960			4200	SS	/	/		FR	CO		30	115	BS
421000			4200	SS	/	/		FR	CO		26	105	BS
421040			4230	SS	/	/		FR	CO		40	110	BS
421090			4250	SS	RI	/		FR	CO		30	030	BS
421130			4250	GS	/	/		FR	CO		41	020	BS
421160			4270	SS	RI	/		FR	CO		34	105	BS
421200			4350	SS	RI			FR	CO		48	105	BS
36000E			3550	SS	/	/		FR	CO		28	045	BS
36040W			3550	GB	SB	SB		FR	AL		15	080	BS
36080W			3520	GS	/	/		FR	CO		41	115	BS

Sample Number	Fragments Type	Type	(Notes)	Vegetation Type	Type	Type	Coating	Coating	Sample Depth	Horizon Sampled	Color	% Clay	% Silt	% Sand	% Gravel	% Organic	Max Part Size	% Particles	Roundness	Shape	Sorting
42600				CF					030	B	BRN	50	15	/	15	20	5	10	/	/	w
42640				CF	BR				025	B	OBR	40	10	/	10	40	/	/	/	/	
42680				CF					025	B	BRN	50	15	-	5	30	5	5	-	/	
42720				CF					025	B	BRN	60	20	/	/	20	/	/	/	/	
42760				CF	BR				040	B	BRN	60	20	/	/	20	/	/	/	/	
42800				CF	BR				030	B	BRN	60	20	5	/	15	25	5	-	/	w
42840			W side str	CF					025	B	BRN	30	40	10	5	15	10	10	/	/	w
42880				CF	BR				025	B	BRN	60	20	/	5	15	/	/	/	/	
42920				CF					030	B	BRN	45	25	5	5	25	5	5	/	/	w
42960				CF					035	B	BRN	45	25	5	/	30	5	5	/	/	w
421000				CF	BR				025	B	BRN	55	25	5	5	20	5	5	/	/	w
421040			25 W of crk	CF	BR				025	B	BRN	40	30	5	/	25	/	/	/	/	
421090			edge of ridge	CF	BR				020	B	BRN	50	25	/	10	15	/	/	/	/	
421130			20 m W of crk	BR					020	B	BRN	70	15	/	/	15	/	/	/	/	
421160			10 m W of crk edge of ridge	BR	CF				030	B	BRN	35	15	/	/	50	/	/	/	/	
421200			near edge of gorge on ridge	CF	BR				030	B	BRN	35	30	5	5	25	5	2	/	/	w
36000E			30 m W of main ck	CF	BR				030	B	BRN	[illegible]	[illegible]	[illegible]	[illegible]	20	/	/	/	/	
36040W			Old stream bed	CF					020	AL	BRN	20	20	/	20	40	/	/	/	/	
36080W			15 m W of stream	CF					025	B	BRN	40	15	5	20	20	5	10	/	/	w

SB- stream bank

SOIL	VENTURE NUMBER	SUBGRID OR TRAVERSE	SAMPLED DAY	MONTH	YEAR	BY	ASSTD. BY	WEATHER	NTS	SHEET No.	of
IDEN			27	10	92	ATF	WK	High cloud cover, cool.			
COMPANY						PROPERTY		OR PROJECT AND SUB PROJECT			
IPRJ						JJ Hill					

SGRID — TRUE NORTH — AZIMUTH OF +VE EAST OF GRID 000

UTM COORDINATES OF GRID ORIGIN — NORTHING — EASTING — ELEVATION

	SAMPLE NUMBER	X COORDINATE	Y COORDINATE	ELEVATION	LOCAL TERRAIN	SECONDARY ENVIRONMENT	FACTORS AFFECTING CONDITIONS	FACTORS AFFECTING CONDITIONS	DRAINAGE	STATUS	PARENT MATERIAL	%RESIDUAL	SLOPE	SLOPE DIRECTION	ROCK TYPE	FRAGMENTS TYPE	FRAGMENTS TYPE	VEGETATION TYPE	VEGETATION TYPE	VEGETATION TYPE	COATING	COATING	SAMPLE DEPTH	HORIZON SAMPLED	COLOR	%CLAY	%SILT	%SAND	%GRAVEL	%ORGANIC	MAX PART SIZE	%PARTICLES ROUNDNESS	SHAPE	SORTING
1	42B/00			4280	RC				FR	CL	6	26	010	AN																				
	R Traverse starts 5m N of creek, goes north.																																	
	42B/40				SS				FR	CL	7	31	045	AN																				
	42B/80				SS				ER	CL	7	33	050	AN																				
5	42B/20				SS				FR	CL	7	37	070	AN	5																			
	42B/60				SS				FR	CL	7	37	055	AN																				
	42B/00				SS				ER	TL	6	34	070	AN																				
	42B/40				SS				FR	CL	7	35	060	AN																				
	42B/80				SS				FR	CL	7	32	070	AN																				
10	42B/20				SS				FR	CL	7	32	060	AN	10																			
	42B/60				SS				FR	CL	7	32	095	AN																				
	42B/00				SS				FR	CL	7	33	080	AN																				
	42B/40				SS				FR	BR	3	70	080	AN																				
	42B/80				SS				ER	CL	7	35	065	AN																				
	R Traverse ends @ 480E edge of steep gully. Red flagging visible across gully.																																	
15																									Altimeter says 4300ft.									
	39B/00				SS				FR	CL	7	28	050	AN																				
	R Traverse starts on edge of steep gully, across from wpt 3900. traverse ended yesterday. Approx 40m NW.																																	
	39B/40				SS				FR	CL	7	37	065	AN																				
20	39B/80				SS				FR	CL	7	34	080	AN	20																			
	39B/20				SS				FR	CL	7	28	075	AN																				
	39B/60				SS				FR	CL	7	28	090	AN																				
	39B/00				SW				FR	CL	7	26	050	AN																				
	39B/40				SW				FR	KL	7	27	085	AN																				
25	R End of traverse; stream 5m south.				SB				FR	CL	5	30	095	AN	25																			

TA - talus   VB - volcanic breccia (andesitic)   JP - juniper

SOIL

Venture Number	Subgrid or Traverse	Sampled Day	Month	Year	By	Asstd. by
		27	10	92	RTF	WK

Weather: Clear + cool

Company / Property: Juliet

Sample Number	X Coordinate	Y Coordinate	Elevation (feet)	Local Terrain	Drainage	Status	Parent Material	% Residual	Slope	Slope Direction	Rock Type	Fragments	Fragment Type	Fragment Type	Vegetation Type	Vegetation Type	Sample Depth (cm)	Horizon Sampled	Color	% Clay	% Silt	% Sand	% Gravel	% Organic	Max. Part. Size	% Particles	Roundness	Sorting
45B/00			4580	SS	F	R	CL	7	37	075	AN	X			JP	CF	10	B2	540	1	2	3	3	1	R	4	S	P
Traverse starts @ 4580ft el on south side of ravine (to steep to cross) and goes south.																												
45B/40				SS	F	R	CL	7	36	045	AN	X			JP	CF	28	B2	40U	1	4	2	2	1	Q	3	S	P
45B/80				SS	F	R	CL	7	38	075	AN	X			CF	JP	18	B2	44B	1	3	3	2	1	Q	3	A	M
45B 120				SS	F	R	TA	6	38	060	AN	6	VB4		JP	CF	15	B1	34B	1	4	2	2	1	R	2	A	P
45B 160				SS	F	R	TA	7	37	075	AN	6	VB4		JP	CF	28	B2	50U	1	4	2	2	1	R	5	A	P
45B 200				SW	F	R	TA	7	37	060	AN	8	VB2		CF	JP	30	B1	34B	1	4	1	2	2	Q	3	A	P
45B 240 → Pyrrhotite silicified monzonite? float				SS	F	R	TA	6	37	060	AN	7	VB1	MZ2	JP		20	B2	50U	1	5	1	2	1	P	3	A	P
45B 280				SS	F	R	CL	7	39	055	AN	X			JP	CF	32	B2	44B	+	5	2	1	1	P	2	A	P
Crossed stree @ 240m and 270m → Monzonite has silicic f.g. groundmass w/ phenocrysts of hornblende & feldspar.																												
45B 320				SS	F	R	CL	7	37	075	AN	7	MZ3		CF	JP	27	B2	40U	1	4	2	2	1	R	4	A	P
45B 360				SS	F	R	CL	7	40	050	AN	X			CF		28	B2	[illegible]0U	1	5	1	2	1	P	3	A	M
Crossed small slide gully @ 350m →				SW	I	M	CL	7	34	080	AN	X			CF	JP	24	B1	3AU	1	6	+	1	2	P	2	A	P
45B400																												
45B 440				BS	I	M	CL	8	16	060	AN	2	VB8		CF	JP	24	B1	34B	1	5	1	1	2	Q	3	A	P
45B 480				RC	F	R	CL	8	10	065	AN	X			CF	JP	14	B2	40U	1	6	1	1	1	P	2	A	M
Crossing ridge into other drainage.																												
45B 520				SS	F	R	CL	8	20	120	AN	5	VB5		CF		18	B2	44B	1	5	1	2	1	P	6	A	P

SOIL

SOIL IDEN	VENTURE NUMBER	SUBGRID OR TRAVERSE	SAMPLED DAY	MONTH	YEAR	BY	ASSTD. BY
			03	Aug	9[illegible]	EAR	MB

COMPANY — PROPERTY

IPRJ

SGRID: Juliet

AZIMUTH OF +VE EAST OF

SAMPLE NUMBER (1–6)	X COORDINATE (7–11)	Y COORDINATE (12–16)	ELEVATION 4500 (17–20)	LOCAL TERRAIN (21–22)	SECONDARY ENVIRONMENT (23–24)	FACTORS AFFECTING CONDITIONS (25–26)	FACTORS AFFECTING CONDITIONS (27–28)	DRAINAGE STATUS (29–30)	PARENT MATERIAL (31–32)	% RESIDUAL (33)	SLOPE (34–35)	SLOPE DIRECTION (36–38)	ROCK TYPE (39–40)
455/560		measured @ 4500ft		SS				FR	CL		28	111	AN
455/600				SS				FR	CL		23	135	AN
458/640				SS				FR	CL		32	123	AN
458/680				SS				FR	CL		32	124	AN
458/720				SS				FR	CL		26	142	AN
458/760				SS				FR	CL		20	142	AN
453/800				SS				FR	CL		30	185	AN
458/840				SS				FR	CL		36	1EC	AN
455/880				SS				FR	CL		30	18C	AN
455/920				SS				FR	CL		36	160	AN
458/780				SS				FR	CL		43	195	AN

[illegible] Smpl 289332 near LCP

WEATHER — NTS — SHEET No of

OR PROJECT AND SUB PROJECT

GRID 000 TRUE NORTH — UTM COORDINATES OF GRID ORIGIN: NORTHING — EASTING — ELEVATION

FRAGMENTS (41)	TYPE (42–44)	TYPE (45–47)	(48–52)	VEGETATION TYPE (53–54)	TYPE (55–56)	TYPE (57–58)	COATING (59–60)	COATING (61–62)	SAMPLE DEPTH (63–65)	HORIZON SAMPLED (66–67)	COLOR (68–70)	% CLAY (71)	% SILT (72)	% SAND (73)	% GRAVEL (74)	% ORGANIC (75)	MAX. PART SIZE (76)	% PARTICLES (77)	ROUNDNESS (78)	SHAPE (79)	SORTING (80)
X				OG					10	32	4RU	5	4	1							
X				OG					50	B2	3RU	5	4	1							
X				OG					25	B2	50U	2	3	3	2						
X				OG					25	BC	50U	5	2	2	1						
X				OG					35	B2	4RU	5	4	1							
X				OG					30	B2	60U	3	5	1	1						
X				OG					50	B2	50U	3	5	2							
X				OG					40	B2	40U	4	5	1							
X				OG					20	B2	4RU	4	3	2	1						
X				OG					35	B2	50U	2	5	2	1						
X				AM					15	B2	40U	2	4	2	2						

SOIL | VENTURE NUMBER | SUBGRID OR TRAVERSE | SAMPLED: DAY 04 MONTH Aug YEAR 93 BY EAR ASSTD BY PB | WEATHER | NTS | SHEET No. of

IDEN | COMPANY | PROPERTY

IPRJ | OR PROJECT AND SUB PROJECT

SGRID: Juliet | GRID 000 TRUE NORTH | UTM COORDINATES OF GRID ORIGIN: NORTHING | EASTING | ELEVATION

AZIMUTH OF +VE EAST OF

SAMPLE NUMBER	X COORDINATE	Y COORDINATE	ELEVATION	LOCAL TERRAIN	SECONDARY ENVIRONMENT	FACTORS AFFECTING CONDITIONS	FACTORS AFFECTING CONDITIONS	DRAINAGE STATUS	PARENT MATERIAL	%RESIDUAL	SLOPE	SLOPE DIRECTION	ROCK TYPE
45/160		measured	4350	SC				EXCL		58	300		AN
45/180			4340	SS				IMCL		39	248		AN
45/240			4341	SS				FRCL		54	333		AN
45/280			4342	SS				FRCL		54	314		AN
45/320			4330	RC				FRCL		36	341		AN
45/360			4320	RC				FRCL		27	021		AN
45/400				RC				FRCL		10	007		AN
45/440				RC				FRCL		20	111		AN
45/480				SS				FRCL		20	070		AN
45/520				SS				FRCL		24	052		AN
45/560				SS				FRCL		29	088		AN
45/600				SS				FRCL		42	113		AN
45/640				SS				FRCL		40	125		AN
45/680				SS				FRCL		44	069		AN
45/720				SS				FRCL		55	132		AN
45/760				CV				FRCL		21	102		AN
45/800		BAC		SS				FRCL		33	045		AN

	FRAGMENTS TYPE	FRAGMENTS TYPE		VEGETATION TYPE	VEGETATION TYPE	VEGETATION TYPE	COATING	COATING	SAMPLE DEPTH	HORIZON SAMPLED	COLOR	% CLAY	% SILT	% SAND	% GRAVEL	% ORGANIC	MAX PART SIZE	% PARTICLES	ROUNDNESS	SHAPE
1				AM					25	BC	5 0 U	5	2	1						
				AM					20	B2	6 0 U	5	3	1						
				AM					40	B2	7 CU	6	3	1						
				AM					15	B2	5 0 U	5	3	1	1					
5				AM					25	B2	3 0 U	5	3	1	1					
				AM					35	BC	3 0 U	4	3	2	1					
				AM					15	B2	7 0 U	5	3	2						
				AM					15	B2	6 0 U	4	4	2						
	BR	Y		AM					20	B2	5 CU	3	5	2						
10	BR	Y		OG					20	B2	5 0 U	5	3	2						
	BR	Y		OG					30	B1	3 0 U	2	3	4						
	BR	Y		OG					25	B2	3 0 U	3	4	3						
	BR	Y		CG					20	B2	6 CU	4	4	2						
	BR	Y		OG					20	BC	4 0 U	3	4	3						
15	BR	Y		AM					35	B2	5 0 U	3	3	2	2					
				OG					15	BC	6 0 U	1	2	3	4					
				AM					20	BC	2 RU	6	2	1	1					
20																				
25																				

Bedrock Breccia

rust starts

SOIL	VENTURE NUMBER	SUBGRID OR TRAVERSE	SAMPLED DAY	MONTH	YEAR	BY	ASSTD. BY
IDEN			05	Aug	93	EAR	PB

COMPANY	PROPERTY
IPRJ	

SGRID: Juliet

AZIMUTH OF +VE EAST OF

WEATHER	NTS	SHEET No	of

OR PROJECT AND SUB PROJECT

GRID 000 TRUE NORTH	UTM COORDINATES OF GRID ORIGIN NORTHING	EASTING	ELEVATION

SAMPLE NUMBER (1–6)	X COORDINATE (7–11)	Y COORDINATE (12–16)	ELEVATION 3900ft. (17–20)	LOCAL TERRAIN (21–22)	SECONDARY ENVIRONMENT (23–24)	FACTORS AFFECTING CONDITIONS (25–26)	FACTORS AFFECTING CONDITIONS (27–28)	DRAINAGE STATUS (29–30)	PARENT MATERIAL (31–32)	% RESIDUAL (33)	SLOPE (34–35)	SLOPE DIRECTION (36–38)	ROCK TYPE (39–40)
39C-00	ret. Hunter [illegible] 280 measured		3660 ft	CV				FR	CL		30	008	AB
39C-40			3680	SS				FR	CL		30	314	AB
39C-80			3660	SS				FR	CL		29	355	AB
39C-120			3660	SS				FR	CL		35	337	AB
39C-160			3660	SS				FR	CL		32	335	AB
39C-200			3670	SS				FR	CL		37	324	AB
39C-240			3660	SS				FR	CL		42	320	AB
39C-320	skipped 280		3530	SS				FR	CL		36	283	AN
39C-360			3460	SS				FR	CL		40	316	AN
39C-400			3400	SS				FR	CL		38	297	AN
39C-440			3370	SS				FR	CL		42	290	AN
39C-480			3330	SS				FR	CL		42	286	AB
39C-520			3270	SS				FR	CL		42	284	AB
39C-580			3230	SS				FR	CL		42	260	AB
39C-620			3220	SS				FR	CL		32	307	AB
39C-660			3180	SS				FR	CL		28	314	AB
39C-700			3130	SS				FR	CL		28	302	AB

FRAGMENTS (41)	TYPE (42–44)	TYPE (45–47)	(48–52)	VEGETATION TYPE (53–54)	TYPE (55–56)	TYPE (57–58)	COATING (59–60)	COATING (61–62)	SAMPLE DEPTH (63–65)	HORIZON SAMPLED (66–67)	COLOR (68–70)	% CLAY (71)	% SILT (72)	% SAND (73)	% GRAVEL (74)	% ORGANIC (75)	MAX. PART. SIZE (76)	% PARTICLES (77)	ROUNDNESS (78)	SHAPE (79)	SORTING (80)
Y		[illegible]	[illegible]	AM					20	31	4AU	2	2	3	3						
X				AM					25	B2	5OU	4	3	2	1						
Y				OG					25	B2	5OU	6	3	1							
X				AM					35	B2	2YU	6	2	2							
Y				AM					20	BC	4OU	3	3	2	2						
X				OG					15	BC	3RU	3	2	2	3						
Y				AM					10	B2	5OU	5	2	2	1						
Y				OG					15	B2	5OU	3	5	2	1						
Y				OG					25	B2	3RU	3	3	2	2						
X				OG					40	B2	5OU	5	3	1	1						
Y				OG					30	B2	4OU	6	3	1							
X				OG					45	B2	5OU	5	3	2							
X				OG					20	B2	4OU	4	3	2	1						
1				OG					35	B2	4OU	5	3	1	1						
Y				OG					30	B2	4OU	4	2	2	2						
X				OG					30	B2	3OU	6	3	1							
X				OC					20	BC	2YU	2	3	3	2						

SOIL | VENTURE NUMBER | SUBGRID OR TRAVERSE | SAMPLED: DAY 06 MONTH Aug YEAR 93 BY AR ASSTD BY AB | WEATHER | NTS | SHEET No of

IDEN | COMPANY | PROPERTY

IPRJ | OR PROJECT AND SUB PROJECT

SGRID: Juliet | GRID 000 TRUE NORTH | UTM COORDINATES OF GRID ORIGIN: NORTHING | EASTING | ELEVATION

AZIMUTH OF +VE EAST OF

SAMPLE NUMBER	X COORDINATE	Y COORDINATE	ELEVATION ~4800	LOCAL TERRAIN	SECONDARY ENVIRONMENT	FACTORS AFFECTING CONDITIONS	FACTORS AFFECTING CONDITIONS	DRAINAGE	STATUS	PARENT MATERIAL	%RESIDUAL	SLOPE	SLOPE DIRECTION	ROCK TYPE
488/00	rock outcrop 20m	measured	4630	SS				F	R	CL		42	043	AN
488/40				SS				F	R	CL		44	025	AN
488/80				SS				F	R	CL		44	065	AB
488/120				CV				F	R	CL		31	057	AB
488/160				SS				F	R	CL		18	045	AN
488/200				TP				F	R	CL		19	057	AN
488/240				TP				F	R	CL		22	028	AN
488/280				TP				F	R	CL		30	020	AN
488/320				TP				F	R	CL		16	0	
488/360				SS				F	R	CL		34	320	AB
488/400				SS				F	R	CL		38	358	AN
August 7 1993														
48/360		measured	4540	SS				F	R	CL		47	070	AB
48/400			4600	SS				F	R	CL		38	144	AB
48/440			4648	SS				F	R	CL		44	146	AB
48/480				SS				F	R	CL		38	135	AB
48/520			4652	SS				F	R	CL		38	128	AN
48/560			4656	SS				F	R	CL		42	111	AN
48/600				SS				F	R	CL		35	100	AN
48/640				SS				F	R	CL		42	116	AN
48/680				SS				F	R	CL		33	171	AB
48/720				SS				F	R	CL		42	162	AB
48/760				SS				F	R	CL		39	165	AB
48/800				SS				F	R	CL		42	162	AN

FRAGMENTS TYPE	FRAGMENTS TYPE	VEGETATION TYPE	VEGETATION TYPE	VEGETATION TYPE	COATING	COATING	SAMPLE DEPTH	HORIZON SAMPLED	COLOR	%CLAY	%SILT	%SAND	%GRAVEL	%ORGANIC	MAX. PART SIZE	%PARTICLES	ROUNDNESS	SHAPE	STRUCTURE
X		AM					05	B2	5RU	3	5	1	1						
X		AM					30	BC	3RU	5	3	1	1						
X		AM					60	A1	4AU	5	3	1	1						
X		AM					15	BC	3RU	4	2	2	2						
X		AM					20	B2	5YU	5	4	1							
X		AM					25	B2	4RU	6	3	1							
9	DI 1	AM					30	B2	5OU	3	4	2	1						
X		AM					20	BC	5YU	3	3	2	2						
9	DI 1	AM					15	B2	4OU	4	3	2	1						
X		AM					40	B2	2YU	5	2	2	1						
X		AM					10	B2	4RU	5	3	1	1						
X		AM					25	B2	4OU	4	5	1							
X		AM					20	B2	4OU	4	4	1	1						
X		OG					35	B2	4OU	3	5	1	1						
X		OG					60	B1	5GY	2	3	2	1						
X		OG					25	BC	3YB	3	4	2	1						
X		OG					30	BC	4YB	2	2	3	3						
X		AM					20	BC	3OU	4	4	1	1						
X		OG					15	B2	6OU	5	3	2							
X		AM					20	B2	6OU	4	4	2							
X		AM					25	BC	4OU	2	4	2	1						
X		AM					15	B2	5OU	3	4	2	1						
X		AM					15	B2	6OU	4	4	1	1						

APPENDIX 2

Soil Samples Analytical Results

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
39C/00	<1	426	5	128	.5	63	53	1067	5.43	82	<5	<2	<2	48	1.4	<2	<2	124	.77	.052	4	59	1.59	34	.28	<2	4.22	.03	.03	<1	19
39C/40	<1	105	12	46	3.5	20	13	299	9.17	23	<5	<2	<2	19	1.4	<2	<2	201	.25	.036	4	72	.62	18	.73	<2	3.10	.02	.02	1	8
39C/80	<1	75	6	39	1.0	13	9	197	10.14	16	5	<2	<2	12	.8	2	2	236	.20	.037	3	65	.37	9	.73	<2	2.46	.01	.03	2	9
39C/120	<1	115	6	73	.5	22	22	939	5.00	41	<5	<2	<2	49	.2	5	<2	119	.49	.059	5	54	.77	34	.29	<2	5.48	.02	.02	<1	10
39C/160	<1	160	2	53	.5	30	19	497	5.46	20	5	<2	<2	26	.2	<2	<2	119	.74	.049	4	54	1.18	20	.46	<2	4.66	.02	.02	<1	13
39C/200	<1	153	22	79	.2	38	38	1254	6.04	32	<5	<2	<2	73	.6	2	<2	142	1.32	.042	5	50	1.38	24	.45	2	4.52	.04	.02	3	9
39C/240	<1	124	11	52	.2	29	18	423	7.01	22	5	<2	<2	33	.4	<2	<2	193	.82	.033	4	59	.94	21	.71	<2	4.03	.02	.02	<1	11
39C/320	<1	111	<2	48	.1	24	17	420	9.19	31	<5	<2	<2	137	<.2	<2	<2	232	.94	.071	3	52	.84	37	.59	<2	3.71	.03	.03	1	3
39C/360	<1	115	9	50	.4	29	19	382	7.00	20	<5	<2	<2	275	<.2	<2	<2	132	1.06	.055	3	43	1.06	57	.29	<2	4.34	.05	.03	<1	3
39C/400	<1	95	<2	52	.1	21	23	688	6.80	26	<5	<2	<2	79	<.2	2	3	151	1.49	.038	3	41	.80	42	.50	<2	3.59	.05	.06	2	3
39C/440	<1	66	<2	26	.3	11	10	504	8.15	16	<5	<2	<2	27	<.2	<2	4	275	.40	.041	3	55	.36	12	.70	<2	1.97	.01	.02	<1	4
39C/480	<1	105	4	53	.5	23	23	652	7.94	13	<5	<2	<2	71	<.2	<2	<2	172	1.01	.042	3	56	.69	24	.51	<2	4.07	.03	.02	<1	11
RE 39C/480	<1	110	<2	56	.4	25	25	677	8.24	20	<5	<2	<2	74	<.2	4	<2	175	1.07	.044	4	59	.73	26	.51	<2	4.30	.03	.02	<1	12
39C/520	<1	125	<2	37	.4	22	29	730	8.07	18	<5	<2	<2	97	<.2	<2	<2	170	1.34	.054	4	59	.73	40	.46	<2	4.29	.06	.03	<1	5
39C/580	2	144	<2	59	.2	35	44	1383	7.55	7	<5	<2	<2	149	<.2	3	<2	143	1.74	.039	4	60	1.22	65	.47	<2	5.64	.07	.02	<1	3
39C/620	<1	155	<2	66	<.1	40	59	1774	7.24	10	<5	<2	<2	122	<.2	<2	2	148	1.93	.038	5	61	1.47	67	.45	<2	5.00	.06	.04	<1	3
39C/660	<1	105	3	57	.1	32	54	2342	7.48	<2	<5	<2	<2	135	<.2	<2	<2	165	1.80	.035	3	69	1.28	86	.45	<2	4.68	.06	.03	<1	2
39C/700	<1	128	2	67	1.5	23	21	1469	7.15	26	<5	<2	<2	53	<.2	4	<2	203	1.49	.079	5	67	.63	25	.58	<2	4.61	.02	.03	<1	21
45/160	<1	109	6	51	.2	21	15	322	8.01	25	<5	<2	<2	18	<.2	<2	<2	222	.31	.035	3	69	.67	15	.70	<2	4.52	.01	.02	<1	23
45/200	<1	66	6	30	<.1	12	8	267	8.17	21	<5	<2	<2	12	.3	<2	2	255	.28	.025	3	61	.36	8	.77	<2	2.42	.01	.01	1	17
45/240	<1	167	7	44	.2	28	18	382	11.92	23	11	<2	2	16	.4	5	4	273	.18	.022	3	116	.76	17	.81	<2	6.21	.01	.01	<1	17
45/280	<1	129	2	44	<.1	21	15	433	14.06	3	5	<2	<2	16	<.2	<2	3	296	.17	.042	2	101	.74	8	.89	<2	3.87	.01	.02	1	8
45/320	<1	61	16	33	.3	9	7	285	14.35	<2	<5	<2	<2	9	<.2	<2	<2	407	.20	.042	3	72	.26	12	1.15	<2	1.95	.01	.02	2	6
45/360	<1	92	4	50	.6	16	15	346	9.22	12	<5	<2	<2	15	.8	<2	3	262	.31	.054	3	51	.50	8	.75	<2	2.71	.01	.02	2	3
45/400	<1	105	4	34	.2	12	9	246	11.73	7	<5	<2	<2	11	<.2	<2	2	268	.22	.054	3	70	.36	16	.81	<2	3.19	.01	.03	1	3
45/440	1	122	<2	32	<.1	19	12	285	11.08	5	8	<2	<2	9	<.2	<2	2	270	.20	.057	2	92	.62	13	1.00	<2	4.77	.01	.03	<1	110
45/480	<1	53	11	33	.2	10	8	236	11.13	5	<5	<2	<2	10	<.2	<2	<2	395	.29	.052	2	67	.28	8	1.26	<2	1.75	.01	.02	<1	8
45/520	<1	43	8	32	.1	9	7	425	11.18	<2	<5	<2	<2	9	<.2	<2	<2	325	.32	.040	3	65	.27	11	1.05	<2	2.01	.01	.03	2	6
45/560	<1	89	4	27	.1	13	9	293	7.46	<2	<5	<2	<2	18	.2	2	<2	194	.40	.042	3	49	.31	18	.67	<2	2.06	.02	.02	<1	71
45/600	1	84	14	24	<.1	11	8	241	12.58	10	<5	<2	<2	21	<.2	<2	<2	247	.25	.042	2	60	.21	12	.75	<2	2.64	.01	.02	<1	8
45/640	<1	135	11	53	.2	29	18	384	12.14	<2	8	<2	<2	13	.3	3	<2	269	.25	.029	2	108	.92	14	1.01	<2	4.57	.01	.02	2	5
45/680	<1	68	3	31	.1	11	9	235	10.77	9	<5	<2	<2	17	.2	<2	<2	300	.27	.035	3	66	.34	12	.73	<2	2.83	.01	.02	1	6
45/720	<1	154	5	56	.2	40	24	402	13.03	17	6	<2	<2	18	<.2	<2	<2	267	.36	.028	2	105	1.38	15	1.00	4	5.06	.02	.02	<1	41
45/760	1	505	4	68	<.1	87	90	495	5.69	23	<5	<2	<2	230	<.2	2	<2	117	2.03	.027	<2	39	.54	63	.19	<2	7.90	.12	.10	2	10
45/800	3	172	4	40	.3	13	9	126	4.87	9	<5	<2	<2	23	<.2	2	3	98	.25	.032	3	36	.30	15	.29	<2	4.85	.02	.02	3	200
45B/560	2	169	<2	45	.4	34	23	263	9.51	8	<5	<2	<2	31	<.2	4	2	199	.33	.037	3	62	.83	22	.48	2	3.52	.02	.03	4	83
45B/600	2	115	2	40	.5	20	13	195	6.00	14	<5	<2	<2	26	.2	<2	3	132	.25	.038	3	43	.44	19	.37	<2	4.15	.01	.03	<1	8
STANDARD C/AU-S	18	60	37	128	6.8	65	31	1027	3.96	39	15	7	35	51	18.4	14	16	56	.50	.086	34	61	.89	184	.09	32	1.88	.06	.13	11	53

Sample type: SOIL. Samples beginning 'RE' are duplicate samples.

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
45B/640	2	236	<2	76	.3	41	28	316	7.31	10	<5	<2	<2	69	<.2	<2	<2	137	.31	.051	<2	71	1.13	41	.27	<2	7.15	.02	.02	<1	22
45B/680	2	328	17	72	1.4	38	38	525	8.73	10	<5	<2	<2	11	.5	<2	<2	121	.10	.091	3	66	1.19	21	.04	2	6.91	.01	.02	1	23
45B/720	1	171	2	66	1.2	36	24	302	10.16	9	<5	<2	<2	82	.4	<2	<2	200	.48	.057	<2	70	.82	59	.32	<2	5.39	.04	.02	<1	4
45B/760	<1	230	10	305	1.9	23	18	288	11.90	6	<5	<2	<2	19	1.1	<2	5	241	.17	.081	2	68	.47	14	.16	<2	4.50	.01	.01	<1	6
45B/800	<1	174	<2	56	.2	31	25	253	7.02	<2	<5	<2	2	66	<.2	<2	<2	126	.37	.068	<2	56	.76	37	.36	<2	8.31	.02	.02	1	6
45B/840	1	155	<2	45	.1	31	21	240	10.64	<2	<5	<2	2	45	<.2	<2	<2	192	.27	.043	<2	77	.61	39	.43	<2	7.20	.02	.02	1	2
45B/880	2	170	<2	32	.2	24	20	162	8.20	<2	<5	<2	<2	26	.3	<2	<2	148	.28	.072	<2	45	.39	23	.46	<2	6.73	.02	.02	<1	5
45B/920	1	189	<2	60	.2	40	27	358	9.42	<2	<5	<2	3	44	<.2	<2	<2	214	.32	.043	<2	61	1.36	33	.48	2	6.66	.02	.03	<1	3
45B/980	<1	250	4	70	.7	39	23	406	7.67	3	5	<2	2	61	<.2	<2	<2	187	.35	.045	<2	56	1.40	33	.34	<2	6.15	.02	.03	<1	59
48/360	1	165	<2	33	<.1	17	12	196	8.83	<2	<5	<2	2	22	<.2	<2	<2	204	.25	.040	<2	51	.24	23	.40	<2	6.72	.02	.03	1	7
48/400	1	176	<2	39	.1	24	18	127	10.55	3	<5	<2	<2	25	<.2	<2	4	211	.19	.139	<2	53	.50	22	.42	<2	5.66	.01	.02	1	10
48/440	1	176	5	47	<.1	27	25	186	10.85	17	<5	<2	2	36	<.2	2	<2	247	.30	.102	<2	57	.53	24	.77	<2	4.10	.02	.04	1	14
48/480	<1	181	<2	40	1.3	23	17	266	8.90	<2	<5	<2	<2	53	<.2	<2	<2	197	.41	.098	<2	51	.50	20	.64	<2	4.89	.02	.03	1	41
48/520	<1	248	4	104	.6	39	24	521	6.29	30	<5	<2	<2	41	.6	<2	<2	147	.54	.061	<2	41	1.00	37	.39	<2	4.43	.04	.04	1	39
48/560	<1	283	<2	78	.7	30	31	3347	5.65	5	<5	<2	<2	171	<.2	<2	<2	124	.80	.126	2	50	1.10	99	.19	2	5.17	.06	.09	<1	22
48/600	1	90	5	34	.4	14	12	275	6.79	8	<5	<2	<2	56	.3	3	<2	140	.28	.069	<2	33	.27	26	.45	3	3.29	.02	.03	1	17
48/640	<1	145	4	42	.1	24	19	174	8.94	<2	<5	<2	2	60	<.2	2	<2	248	.45	.057	<2	45	.51	27	.66	3	4.73	.03	.03	1	10
48/680	<1	99	3	36	<.1	17	12	167	11.06	<2	<5	<2	3	25	<.2	<2	3	251	.25	.080	<2	67	.26	19	.76	<2	4.12	.02	.04	1	5
48/720	<1	207	3	54	.2	37	19	435	5.44	<2	<5	<2	<2	79	<.2	<2	<2	131	.65	.041	<2	44	.74	94	.45	<2	5.02	.04	.04	<1	10
48/760	<1	112	4	59	.1	31	16	461	9.21	2	<5	<2	2	104	<.2	<2	3	236	.63	.055	<2	52	.87	50	.90	<2	4.03	.03	.06	<1	13
48/800	<1	88	5	58	<.1	32	16	329	7.73	<2	<5	<2	<2	69	<.2	<2	<2	170	.42	.046	<2	39	.83	43	.38	<2	5.19	.02	.07	<1	9
48B/00	1	110	2	35	.5	20	14	280	10.01	<2	<5	<2	2	20	.2	<2	<2	209	.30	.054	<2	44	.48	16	.65	<2	3.36	.02	.03	<1	16
48B/40	1	204	16	39	.6	20	21	358	6.72	67	<5	<2	<2	86	.3	4	<2	100	.33	.055	<2	36	.50	28	.27	2	3.93	.03	.03	3	240
48B/80	1	77	2	21	1.2	7	5	64	4.25	4	<5	<2	<2	78	.4	2	2	90	.35	.051	<2	29	.10	18	.35	2	3.11	.02	.02	<1	9
RE 48B/280	<1	278	5	98	.3	46	41	1228	6.65	2	5	<2	<2	31	<.2	<2	<2	139	.55	.074	2	65	2.03	25	.51	<2	6.29	.02	.04	<1	22
48B/120	1	137	2	33	.4	12	29	2550	4.69	3	<5	<2	<2	43	.2	<2	<2	74	.41	.538	2	46	.21	34	.16	2	7.03	.03	.04	1	5
48B/160	<1	100	12	38	.5	13	9	175	8.93	6	<5	<2	2	28	.5	<2	<2	166	.18	.060	6	63	.42	16	.55	<2	3.26	.01	.04	1	16
48B/200	<1	96	6	43	.1	20	11	205	12.26	<2	<5	<2	4	11	.5	<2	3	252	.16	.038	<2	64	.75	15	.81	<2	3.31	.01	.02	<1	18
48B/240	<1	172	6	78	.5	31	26	1779	6.31	<2	<5	<2	2	23	<.2	<2	<2	182	.38	.071	<2	64	1.45	24	.68	<2	5.34	.02	.02	<1	63
48B/280	<1	276	4	97	.4	44	42	1277	6.62	<2	<5	<2	<2	30	<.2	<2	<2	137	.52	.072	2	64	2.02	25	.50	<2	6.33	.02	.04	<1	31
48B/320	<1	119	<2	46	<.1	21	12	230	12.64	<2	<5	<2	3	18	<.2	<2	2	239	.17	.038	<2	87	.68	17	.79	<2	4.34	.01	.03	<1	8
48B/360	<1	193	<2	65	.1	36	23	452	6.76	<2	<5	<2	<2	41	<.2	<2	<2	145	.61	.031	<2	67	1.69	33	.62	<2	5.69	.03	.02	1	20
48B/400	<1	104	2	40	.3	18	12	221	7.31	3	<5	<2	<2	47	<.2	<2	<2	156	.45	.033	<2	57	.60	27	.56	<2	4.38	.03	.02	<1	19
STANDARD C/AU-S	20	63	41	136	7.3	71	32	1076	4.09	46	15	7	38	54	16.6	15	21	61	.51	.088	42	62	.92	191	.09	31	1.94	.07	.15	11	48

Sample type: SOIL. Samples beginning 'RE' are duplicate samples.

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
48/00	<1	85	3	27	.3	13	9	130	3.10	4	<5	<2	<2	24	<.2	<2	2	111	.67	.028	<2	25	.36	9	.40	4	1.67	.03	.02	<1	12
48/40	1	270	<2	33	.6	24	58	1225	3.48	<2	<5	<2	<2	136	<.2	<2	<2	47	.95	.070	<2	18	.17	36	.10	3	4.55	.05	.03	1	14
48/80	1	117	2	23	1.3	16	8	118	4.01	6	<5	<2	<2	34	<.2	<2	<2	86	.37	.030	<2	25	.36	15	.37	4	2.41	.02	.02	<1	11
48/120	1	146	<2	25	.4	21	14	150	6.47	3	<5	<2	<2	45	<.2	<2	<2	127	.33	.035	<2	32	.36	39	.50	4	4.89	.02	.02	1	19
48/160	2	79	5	25	.3	15	11	151	8.74	9	<5	<2	2	31	.3	<2	<2	220	.20	.034	<2	30	.31	22	.57	<2	2.66	.01	.03	<1	13
48/200	2	291	<2	26	.4	30	15	128	6.22	5	<5	<2	<2	85	<.2	<2	<2	104	.36	.028	<2	23	.35	62	.30	2	7.48	.04	.03	<1	39
48/270	3	130	<2	23	.5	13	7	80	6.51	3	<5	<2	<2	35	<.2	<2	<2	134	.21	.032	<2	25	.11	22	.39	4	3.63	.01	.02	<1	11
RE 48/80	1	112	3	26	1.4	15	8	99	4.02	3	<5	<2	<2	32	<.2	<2	<2	87	.35	.028	<2	24	.33	14	.37	4	2.38	.02	.01	<1	11
48/320	2	135	<2	29	.3	15	8	130	8.61	8	<5	<2	<2	63	.2	<2	<2	142	.38	.046	<2	28	.17	30	.41	2	2.56	.02	.02	<1	4
STANDARD C/AU-S	17	62	33	125	6.4	67	30	1107	3.96	41	15	6	34	52	16.9	14	16	53	.52	.086	37	55	.91	194	.08	33	1.88	.06	.14	10	45

Sample type: SOIL. Samples beginning 'RE' are duplicate samples.

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

Orvana Minerals Corp. File # 92-3859 Page 1

710 - 1177 W. Hastings St, Vancouver BC V6E 2K3 Submitted by: Rob Fredericks

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
36/00	4	100	2	16	.2	13	4	68	6.23	2	5	ND	1	18	.3	2	3	115	.15	.052	2	55	.18	17	.36	4	7.54	.02	.01	1	3
36/40	17	406	5	74	.4	42	57	2209	12.65	2	5	ND	1	125	.3	2	2	76	.85	.132	4	26	.69	35	.08	3	4.42	.06	.06	1	6
36/80	18	373	2	55	.1	46	27	284	10.10	2	5	ND	1	66	.2	2	2	136	.42	.073	3	43	.86	37	.35	2	6.39	.04	.02	1	9
39B/00	20	259	2	18	.2	22	7	83	9.74	2	5	ND	1	49	.2	2	2	96	.19	.046	2	36	.31	27	.33	3	10.07	.02	.01	1	25
39B/40	10	208	2	26	.6	11	4	98	9.02	2	5	ND	2	22	.3	7	2	91	.13	.071	4	43	.18	12	.29	4	9.06	.02	.02	1	6
39B/80	3	98	3	25	.3	13	6	92	6.39	2	5	ND	1	13	.3	2	2	136	.17	.044	3	38	.26	13	.40	4	4.09	.02	.03	1	2
39B/120	6	147	2	30	.1	19	8	136	5.93	2	5	ND	1	20	.2	4	2	92	.18	.070	4	53	.45	22	.31	3	9.05	.02	.04	1	8
39B/160	6	500	2	48	.2	33	50	526	7.15	2	5	ND	1	31	.3	5	2	127	.31	.073	13	51	.87	19	.36	4	9.35	.04	.02	1	3
39B/200	3	225	9	48	.4	21	52	2308	7.19	5	5	ND	1	78	.2	2	2	127	.46	.057	6	34	.94	34	.27	4	4.50	.05	.05	1	47
39B/240	6	101	49	48	.5	18	11	278	9.48	10	5	ND	1	48	.2	2	2	131	.21	.057	3	36	.71	34	.19	3	3.33	.03	.04	1	5
39B/280	9	472	5	95	.5	84	115	1537	7.98	9	5	ND	1	98	.4	2	2	112	.94	.113	6	46	1.35	38	.24	4	5.60	.08	.04	1	11
42/600	1	88	7	28	.1	15	11	158	11.57	2	5	ND	1	13	.2	2	2	384	.30	.033	2	58	.32	10	1.20	3	2.42	.03	.02	1	7
42/640	3	98	11	33	.1	15	11	120	12.19	2	5	ND	2	30	.2	2	2	311	.27	.048	2	54	.29	15	.98	4	3.69	.02	.05	1	7
RE 42/840	2	294	4	64	.8	51	59	1765	9.96	32	5	ND	1	144	.2	2	2	131	.92	.077	3	55	1.16	51	.18	3	6.02	.06	.06	1	18
42/680	1	187	7	38	.4	31	15	258	9.64	2	5	ND	1	25	.2	2	2	236	.34	.053	3	68	.55	28	.79	3	7.36	.04	.05	1	20
42/720	1	152	4	31	.1	23	12	161	3.57	2	5	ND	1	31	.3	2	2	94	.46	.064	3	49	.64	34	.31	3	7.65	.03	.01	1	6
42/760	1	76	5	19	.1	11	9	114	11.38	6	5	ND	1	13	.2	2	2	243	.15	.055	2	41	.32	12	.24	3	3.39	.02	.02	1	1
42/800	2	127	4	35	.3	25	14	235	9.09	5	5	ND	1	32	.2	2	2	213	.43	.045	2	48	.67	19	.58	4	3.76	.03	.02	1	150
42/840	2	294	2	65	.8	50	59	1746	9.90	27	5	ND	1	145	.2	2	2	130	.93	.076	3	55	1.18	52	.17	2	6.00	.06	.08	1	18
42/880	1	114	8	42	.1	18	9	236	14.51	2	5	ND	2	16	.2	2	2	286	.21	.055	2	68	.33	15	.79	3	3.62	.03	.04	1	3
42/920	1	76	5	32	.2	15	6	103	10.36	2	5	ND	1	9	.2	2	2	329	.19	.049	3	47	.21	13	.81	4	2.86	.02	.05	1	7
42/960	2	144	7	38	.1	23	10	181	11.14	2	5	ND	1	17	.2	2	2	306	.27	.038	2	53	.55	16	.94	3	4.10	.03	.02	1	9
42/1000	1	205	2	34	.1	30	13	180	8.09	3	5	ND	1	16	.2	2	2	188	.25	.033	3	77	.69	24	.71	3	8.46	.03	.03	1	63
42/1040	1	152	6	34	.6	30	13	182	11.67	3	7	ND	4	16	.2	3	2	244	.24	.035	3	96	.61	23	.83	5	6.68	.03	.07	1	6
42/1090	1	137	6	54	.5	41	13	229	10.59	2	5	ND	2	28	.8	2	2	202	.25	.051	5	65	.84	40	.74	3	5.00	.03	.04	1	11
42/1130	1	300	7	76	.3	61	42	434	7.44	8	5	ND	1	69	.5	4	2	170	.49	.052	4	68	1.44	55	.54	3	6.80	.04	.05	1	17
42/1160	6	237	5	25	.4	29	13	93	8.33	2	5	ND	1	39	.2	2	2	153	.24	.037	2	43	.39	36	.40	3	5.10	.03	.03	1	5
42/1200	3	243	2	22	.1	24	13	90	7.81	2	5	ND	2	64	.2	2	2	129	.39	.048	3	41	.36	33	.37	2	7.45	.04	.04	1	6
42B/00	1	133	2	48	.2	32	16	258	6.81	2	5	ND	1	24	.3	4	2	128	.38	.031	4	69	1.10	21	.42	3	5.14	.04	.04	1	8
42B/40	2	134	4	56	.1	36	18	323	9.02	2	5	ND	2	29	.2	2	2	219	.52	.037	3	59	1.15	15	.69	2	3.44	.05	.03	1	47
STANDARD C/AU-S	18	60	37	131	7.3	69	31	1065	3.96	42	18	7	36	52	18.7	15	21	60	.50	.095	39	60	.95	183	.09	34	1.88	.08	.16	10	47

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.
- SAMPLE TYPE: SOIL AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE. Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: NOV 2 1992 DATE REPORT MAILED: Nov 4/92 SIGNED BY ..... D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

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
42B/80	5	111	5	38	.1	26	11	183	7.99	4	5	ND	1	20	.2	2	2	208	.41	.028	2	44	.73	11	.70	3	2.46	.04	.01	1	13
42B/120	3	76	8	31	.8	9	3	71	5.79	2	5	ND	1	12	.2	2	3	112	.13	.065	3	49	.15	11	.30	3	6.39	.02	.01	1	2
42B/160	10	171	2	34	.1	14	8	83	5.89	7	5	ND	1	33	.2	2	2	87	.18	.042	2	44	.42	23	.28	2	8.37	.02	.01	1	5
42B/200	2	168	6	46	1.5	22	14	195	6.58	22	5	ND	1	73	.2	2	2	104	.42	.060	3	35	.72	36	.25	3	5.25	.05	.03	2	15
42B/240	2	134	10	42	.3	19	11	185	8.03	15	5	ND	1	69	.2	2	2	131	.34	.054	2	32	.72	51	.33	2	4.31	.04	.04	1	9
42B/280	8	145	2	39	.2	27	11	206	8.60	3	5	ND	1	14	.2	2	2	179	.27	.036	2	47	.71	16	.55	2	3.41	.02	.03	1	2
42B/320	4	161	3	26	.4	17	9	88	3.84	2	5	ND	1	19	.4	3	2	74	.21	.030	3	30	.39	14	.22	3	4.53	.02	.04	1	4
42B/360	7	197	9	36	.5	24	9	106	11.93	6	5	ND	1	16	.2	2	2	243	.18	.040	2	56	.38	21	.77	2	3.57	.02	.02	1	5
42B/400	7	257	6	51	.2	31	11	242	8.01	8	5	ND	1	31	.3	2	2	138	.16	.053	2	27	.85	50	.31	2	4.25	.02	.02	1	3
42B/440	7	154	4	21	.1	30	9	94	8.15	2	5	ND	1	23	.2	2	2	189	.15	.038	2	39	.28	43	.46	2	2.96	.01	.02	1	2
42B/480	6	173	4	23	.1	20	8	108	12.51	2	5	ND	1	8	.2	2	2	328	.19	.034	3	76	.34	10	.86	2	5.21	.02	.01	1	8
RE 45B/120	1	117	6	34	.9	18	9	98	7.44	2	5	ND	1	32	.2	2	2	202	.27	.042	2	47	.51	20	.76	2	4.03	.03	.02	1	9
45B/00	10	184	8	37	.1	15	5	83	15.06	2	5	ND	3	22	.2	2	2	158	.14	.048	2	76	.34	15	.59	2	7.18	.02	.02	1	26
45B/40	6	136	10	41	.1	22	9	141	9.97	3	5	ND	1	21	.2	2	2	279	.28	.030	2	47	.63	12	.81	2	2.78	.03	.01	1	6
45B/80	3	92	2	33	.8	15	5	74	8.24	2	5	ND	2	9	.2	4	2	245	.22	.037	3	57	.34	9	.66	3	3.93	.02	.03	1	5
45B/120	2	136	8	39	.9	20	11	109	7.56	2	5	ND	1	34	.3	2	2	198	.28	.043	2	49	.53	23	.72	2	4.67	.03	.03	1	14
45B/160	2	138	4	40	.6	18	7	94	9.25	2	5	ND	1	25	.2	2	2	244	.23	.045	2	48	.63	15	.74	2	4.02	.03	.04	1	9
45B/200	9	136	5	25	.2	13	6	44	6.78	2	5	ND	1	37	.2	2	2	109	.34	.033	2	27	.15	16	.34	2	3.50	.02	.02	1	8
45B/240	17	173	5	22	.9	15	6	53	12.70	12	5	ND	2	28	.2	5	2	159	.18	.039	2	57	.21	16	.54	2	4.79	.02	.03	1	12
45B/280	20	254	3	25	.9	9	3	44	9.43	2	5	ND	1	62	.2	2	2	96	.24	.048	2	31	.18	26	.42	2	4.47	.02	.03	1	2
45B/320	15	181	6	32	.3	14	5	71	12.44	7	5	ND	2	40	.2	2	2	208	.19	.047	2	59	.30	18	.70	2	4.76	.02	.03	1	15
45B/360	14	173	2	32	.2	15	7	91	7.29	3	5	ND	1	28	.2	2	2	140	.20	.041	2	43	.35	14	.41	2	4.46	.02	.01	1	8
45B/400	3	249	2	74	.3	44	189	2369	2.85	38	5	ND	1	33	.7	2	2	63	.93	.086	4	51	.41	17	.16	4	6.76	.04	.03	1	6
45B/440	2	137	7	50	.4	25	28	895	5.03	6	5	ND	1	36	.2	2	2	109	.82	.037	4	42	.56	19	.40	3	2.58	.04	.04	1	3
45B/480	2	84	10	35	.4	13	7	74	7.16	2	5	ND	1	14	.2	3	2	220	.16	.036	3	34	.18	11	.53	2	2.75	.02	.02	1	17
45B/520	6	187	7	65	.3	34	19	257	6.96	2	5	ND	2	71	.2	2	2	136	.42	.042	4	45	.82	38	.42	2	4.73	.05	.04	1	6
STANDARD C/AU-S	19	61	41	136	7.6	70	31	1100	4.16	43	22	7	38	53	18.8	14	20	60	.51	.086	41	62	.91	186	.09	34	1.97	.08	.16	11	46

Sample type: SOIL. Samples beginning 'RE' are duplicate samples.

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

Orvana Minerals Corp. PROJECT JULIET File # 92-3819 Page 1

710 - 1177 W. Hastings St, Vancouver BC V6E 2K3 Submitted by: Rob Fredericks

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
39A/00	1	69	4	61	.7	27	24	2358	7.26	2	5	ND	1	21	.6	2	2	223	.86	.046	2	59	1.06	16	.71	2	2.87	.02	.02	1	12
39A/40	1	42	7	41	.1	24	10	318	10.48	3	5	ND	2	13	.2	2	2	350	.35	.027	2	67	.54	9	1.04	2	1.75	.02	.02	1	4
39A/80	1	88	7	64	.3	33	38	1957	6.15	2	5	ND	1	46	.6	2	2	155	.76	.041	2	60	1.26	25	.59	2	3.26	.04	.03	1	8
39A/120	1	102	7	74	.1	26	42	7285	5.57	2	5	ND	2	98	1.5	2	3	144	1.30	.060	2	49	.63	55	.39	2	5.25	.07	.06	1	3
39A/160	1	85	7	57	.2	21	38	4042	6.00	2	5	ND	1	69	.9	2	2	148	.90	.051	3	51	.46	47	.43	2	5.29	.04	.02	1	5
39A/200	1	62	4	45	.1	20	12	285	10.82	3	5	ND	2	14	.2	2	2	209	.32	.027	2	76	.54	10	.81	2	2.71	.02	.01	1	6
39A/240	1	72	6	40	.2	23	12	332	7.72	2	5	ND	2	15	.2	2	2	205	.46	.029	2	60	.72	9	.75	2	2.80	.03	.02	1	8
39A/280	1	131	5	40	.3	22	12	215	5.68	10	5	ND	2	15	.2	2	2	144	.27	.035	2	60	.38	16	.57	2	7.25	.02	.02	2	6
39A/320	1	89	9	38	.4	19	10	149	9.92	9	5	ND	2	15	.2	2	2	225	.28	.030	2	64	.38	15	.84	2	2.98	.02	.02	1	13
39A/360	1	26	11	23	.1	9	8	68	5.37	2	5	ND	2	9	.2	2	2	646	.18	.012	2	42	.13	5	1.40	2	.88	.01	.02	1	14
39A/400	1	38	8	33	.1	14	8	115	8.05	2	5	ND	3	29	.2	2	2	512	.25	.015	2	33	.29	13	1.34	2	1.51	.02	.05	1	7
39A/440	1	74	4	33	.1	16	11	421	10.07	2	5	ND	2	46	.2	2	2	177	.33	.040	2	61	.36	28	.53	2	3.22	.03	.03	1	1
39A/480	1	136	8	56	.3	14	20	691	10.26	2	5	ND	2	60	.2	2	2	302	.43	.040	2	52	.43	25	.69	2	3.41	.03	.02	1	13
39A/520	1	164	6	53	.1	34	18	282	6.12	3	5	ND	1	97	.6	2	2	174	.86	.026	2	58	1.03	39	.60	2	4.17	.04	.05	1	10
39A/560	1	62	10	26	.1	9	5	100	8.76	2	5	ND	2	28	.2	2	2	277	.37	.023	2	56	.22	17	.88	2	2.08	.02	.02	1	7
39A/600	1	70	11	49	.4	27	13	279	7.11	6	5	ND	1	33	1.0	2	2	198	.62	.023	2	73	1.01	14	.68	2	2.49	.03	.02	1	2
39A/640	1	88	6	36	.3	21	10	186	9.13	22	5	ND	2	31	.2	2	2	186	.28	.030	2	71	.44	14	.55	2	2.55	.02	.02	1	12
RE 39A/240	1	74	6	40	.3	24	13	326	7.79	3	5	ND	1	15	.8	2	2	210	.47	.029	2	60	.74	9	.75	2	2.85	.03	.02	1	4
39A/680	1	107	4	30	.8	17	9	96	9.68	4	5	ND	3	11	.4	2	2	172	.16	.030	2	106	.25	12	.55	2	7.85	.01	.01	1	7
39A/720	1	74	13	43	.4	25	12	228	6.49	5	5	ND	1	28	.9	2	2	149	.53	.030	2	60	.54	17	.40	2	3.24	.04	.02	1	3
39A/760	1	141	6	38	.4	26	15	144	7.48	3	5	ND	3	14	.2	2	2	206	.24	.037	2	68	.38	15	.62	2	7.20	.02	.02	1	10
39A/800	1	104	9	26	.4	15	9	72	10.15	13	5	ND	3	11	.2	2	2	184	.12	.033	2	95	.23	12	.52	2	6.25	.02	.02	1	4
39A/840	2	104	7	46	.2	27	12	127	11.62	24	5	ND	3	13	.9	2	2	314	.18	.044	2	72	.29	20	.85	2	3.42	.01	.02	1	9
39A/880	2	87	6	36	.2	18	10	107	10.62	11	5	ND	3	19	.2	2	2	263	.54	.027	2	69	.27	14	.83	2	3.04	.02	.02	1	11
39A/920	1	135	12	43	.9	24	12	200	5.79	22	5	ND	1	21	.7	2	2	133	.38	.032	2	43	.37	13	.44	2	3.75	.03	.02	1	3
39A/960	4	155	9	30	.8	19	10	108	6.49	5	5	ND	2	15	.7	2	3	120	.18	.042	3	57	.24	15	.40	2	7.34	.02	.01	1	8
39A/1000	14	190	4	35	.1	19	10	95	15.01	2	5	ND	4	13	.2	2	2	321	.16	.032	2	86	.26	9	.84	2	3.93	.01	.01	1	3
39A/1040	2	200	5	47	.3	34	21	378	6.21	2	5	ND	2	162	1.1	2	2	83	2.34	.051	4	31	.77	33	.13	2	6.56	.05	.09	1	2
42/00	1	44	7	33	.4	15	8	215	7.50	2	5	ND	2	13	.6	2	2	314	.43	.028	2	52	.36	10	.94	2	2.02	.01	.02	1	15
42/40	1	59	2	38	.9	18	11	618	7.90	5	5	ND	2	19	.3	2	2	216	.35	.035	2	61	.43	15	.71	2	3.23	.02	.02	1	4
42/80	1	98	6	64	.5	18	27	7639	4.70	2	5	ND	1	40	1.3	2	2	130	.44	.066	6	50	.33	31	.24	3	3.70	.02	.02	1	3
42/120	1	68	5	25	.2	14	9	221	11.69	2	5	ND	3	13	.2	2	2	294	.31	.025	2	78	.39	9	.95	2	2.51	.01	.02	1	4
42/160	1	40	2	22	.2	13	8	134	7.08	2	5	ND	3	22	.2	2	2	297	.30	.025	2	46	.27	13	.89	2	1.24	.02	.02	1	5
42/200	1	49	7	22	.3	13	8	199	6.95	2	5	ND	2	25	1.1	2	2	272	.37	.026	2	47	.32	16	.80	2	1.59	.01	.02	1	6
42/240	1	49	6	16	.1	7	5	62	10.99	2	5	ND	3	13	.2	2	2	389	.15	.028	2	53	.22	8	1.08	2	1.82	.01	.02	1	9
42/280	1	132	25	70	5.1	36	36	1569	7.30	5	5	ND	1	125	.4	2	2	178	.42	.042	3	75	1.30	67	.37	2	5.07	.03	.04	1	11
42/320	1	159	9	38	.5	23	27	1319	5.24	2	5	ND	1	170	.8	2	2	130	1.00	.054	3	54	.82	65	.36	2	5.40	.06	.04	1	32
STANDARD C/AU-S	17	62	38	128	6.8	71	31	1076	3.96	42	19	7	38	53	16.7	15	21	58	.50	.084	39	60	.91	182	.09	35	1.88	.06	.14	10	46

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.
- SAMPLE TYPE: SOIL AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE. Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: OCT 28 1992 DATE REPORT MAILED: Nov 3/92 SIGNED BY: D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

ACME ANALYTICAL

Orvana Minerals Corp. PROJECT JULIET FILE # 92-3819

ACME ANALYTICAL

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
42/360	1	98	2	31	.5	25	18	315	5.80	2	5	ND	1	181	.2	2	2	122	.69	.039	4	43	.80	53	.28	3	4.28	.09	.03	1	1
42/400	1	76	2	25	.3	15	8	159	7.62	2	5	ND	1	135	.2	2	2	259	.59	.034	2	47	.46	39	.88	2	2.53	.05	.03	1	1
42/440	1	90	8	24	.4	17	10	163	12.82	4	5	ND	2	18	.2	2	2	349	.25	.032	2	94	.46	9	1.13	2	2.77	.03	.04	1	9
42/480	1	14	15	16	.5	6	3	45	1.24	2	5	ND	2	21	.2	5	2	149	.18	.036	3	28	.15	20	.66	2	.83	.01	.05	1	1
42/520	1	92	9	26	.2	13	7	100	13.07	4	5	ND	1	10	.2	2	2	371	.17	.030	2	80	.30	9	1.19	2	2.93	.02	.03	1	14
42/560	4	85	5	29	.1	16	16	94	6.28	2	5	ND	1	41	.2	2	2	218	.37	.036	2	31	.26	14	.75	3	1.82	.02	.04	1	21
RE 42/440	1	84	6	22	.1	16	9	148	11.83	5	5	ND	1	15	.2	2	2	324	.22	.030	2	86	.41	8	1.06	2	2.55	.02	.02	1	5
45/00	1	121	3	51	.5	23	29	2711	4.86	2	5	ND	1	47	.2	2	3	142	.93	.060	3	50	.69	34	.46	3	6.50	.08	.05	1	18
45/40	1	79	2	25	.3	15	9	243	8.47	2	5	ND	1	46	.2	2	2	288	.39	.031	3	53	.32	36	1.12	2	2.87	.04	.03	1	3
45/80	1	66	2	29	.5	13	17	806	5.07	2	5	ND	1	59	.4	2	2	201	.78	.042	3	41	.36	52	.77	3	3.09	.12	.03	1	4
45/120	1	116	4	77	.5	34	48	4397	5.28	4	5	ND	1	42	.2	2	2	141	.86	.044	3	56	1.18	29	.56	3	3.84	.07	.04	1	4
STANDARD C/AU-S	19	61	39	133	7.5	71	32	1083	3.96	42	18	7	36	53	19.0	15	21	59	.50	.085	39	61	.91	184	.09	34	1.88	.08	.16	11	49

Sample type: SOIL. Samples beginning 'RE' are duplicate samples.