GEOLOGICAL, GEOCHEMICAL, GEOPHYSICAL

AND DIAMOND DRILLING REPORT

on the

UNUK "C" CLAIM GROUP

UNUK RIVER AREA

SKEENA MINING DIVISION
NTS 104 B/9 AND 104 B/10

Held under option by:

GRANGES INC.
2300 - 885 WEST GEORGIA STREET
VANCOUVER, B.C.
V6C 3E8

SEPTEMBER 20, 1990

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INTRODUCTION

The area encompassed by this report entails a portion of the Unuk Claim Group "C" which includes Unuk 26 (6397), Unuk 14 (5242), and Unuk 15 (5243). Ashworth Explorations Ltd. and Malcolm Bell are the recorded owners of the claims. The claims are held by Granges Inc. of Vancouver, B.C. under option from Cove Resources Corporation and Springer Resources Ltd. The exploration program was completed under the supervision of B.E. Gaboury, geologist for Granges Inc.

LOCATION AND ACCESS

The claims are all located in the Skeena Mining Division, approximately 1000 km north of the city of Vancouver and 65 km north of Stewart, B.C. on NTS map sheets 104 B/9 and 104 B/10 (Figures 1 and 2).

Access to the area is gained by helicopter from Bell 2 on the Stewart-Cassiar highway approximately 50 km to the east.

The property is characterized by steep vegetation-covered slopes up to 1220 m (4000 ft) elevation and alpine conditions with ice fields and glaciers at higher elevations. Elevations on the property, vary from approximately 1069 m (3500 ft) to 1890 m (6200 ft).

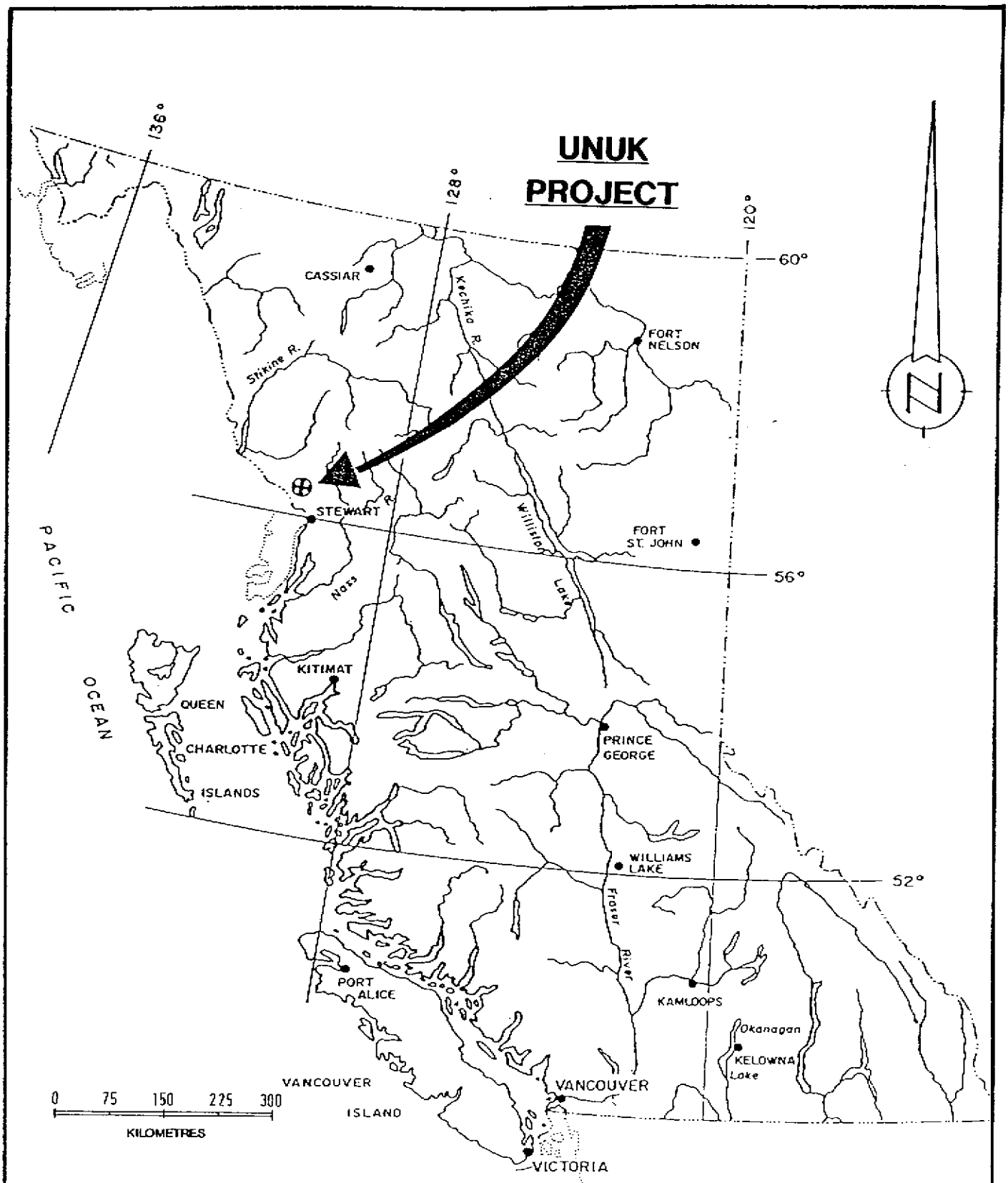
PREVIOUS WORK

The claims discussed in this report were staked in 1986 and 1987 on behalf of Malcolm Bell and Ashworth Explorations Ltd.

Initial work in 1986 involved an airborne VLF-Mag survey commissioned by Hi-Tec Resource Management Ltd., followed by a four day follow-up examination of the property geology by J.P. Sorbara and Associates. In September and October of 1987 Hi-Tech Resource Management Ltd. conducted a two-phase reconnaissance type exploration program (totalling 28 days) to find precious metal mineralization similar to that found in the Brucejack Lake area. Hi-Tec carried out a similar program in 1988 (28 days) to follow up the results of the previous year and to outline other areas of interest on which to focus future exploration efforts.

The net result of these preliminary reconnaissance-style investigations was the definition of six areas of interest. The area known as Zone 1/A.P. Zone is one area thus defined.

In June of 1989 Granges Inc. initiated its exploration program to examine further the six areas of interest outlined by the previous workers and to develop other new areas of interest.



PROPERTY LOCATION MAP

UNUK OPTION

SKEENA MINING DIVISION, B. C.

GRANGES INC.

FIGURE: **1**

January and February 1989, followed by a ground exploration program. The summer ground-based exploration program involved establishing a surveyed control grid with 100 m line spacings, detailed (1:1000 scale) mapping, prospecting and collection of soil samples at 50 m intervals. The later discovery of a cross-cutting base metal-bearing, auriferous structure now known as the A.P. Structure led to the establishment of the A.P. grid located to the immediate south, and overlapping with the Zone 1 grid. The two grids were subjected to a ground-based VLF-Mag survey utilizing an EDA Instruments Inc. Omni-Plus VLF/Magnetometer carried out by SJ Geophysics of Delta, B.C. The result of the geological, geochemical and geophysical investigations was the discovery of gold mineralization associated with what appeared to be a zone of brecciation, hydrothermal alteration and sulfide mineralization known as the Zone 1 Trench Area; the delineation of the auriferous A.P. Structure; and the delineation and surface sampling of the Cliff Structure to the north along strike of the A.P. Structure. In addition, several other soil and rock geochemical anomalies were outlined in the 1989 field program. In the latter part of the field season the A.P. Structure was drill-tested with five holes. Although significant alteration and sulfide mineralization was encountered, assay results were discouraging. Gold values encountered in surface trenching (1989 field program) could not be repeated in drill core.

1990 FIELD SEASON PROGRAM

Surface geological work completed up to August 15, 1990 on the Zone 1/A.P. Zone included:

1. The re-establishment of pre-existing Zone 1 and A.P. Zone grids, location of anomalous soil sample sites from 1989 field program, and fill-in soil sampling where warranted.

2. The re-mapping of the Zone 1 grid plus more detailed prospecting and rock sampling in areas of interest outlined in 1989.

3. An IP survey over areas of interest (from 1989 field season).

4. Six diamond drill holes, AP-6 to AP-12 inclusive.

The camp utilized in 1989 was re-activated June 22, 1990 and work commenced in the Zone 1/A.P. Zone area two days later with field orientation and reconnaissance.

Re-establishment of the Zone 1 grid was accomplished primarily by Granges Inc. personnel, with some minor line-

cutting by Gordon Clark and Associates in preparation for IP survey. In conjunction with the Zone 1/A.P. Zone re-mapping program from June 24 to August 19, 1990, 139 rock samples were collected and submitted for analysis (Figures 3 and 4). In addition, 31 rock samples were collected and submitted for whole rock geochemical analysis.

Soil and rock samples collected were submitted to Acme Analytical Laboratories of Vancouver for 30-element ICP analysis, geochemical fire assay for gold and flameless atomic absorption for mercury. The rock samples collected for whole rock analysis were submitted to Chemex Laboratories of North Vancouver. Appendix A lists the rock samples (with descriptions) collected in conjunction with the mapping and prospecting activities, and includes certificates of analyses. Appendix B lists rocks collected for whole rock analysis plus descriptions and analyses.

IP surveying over areas of interest outlined in the 1989 field program was carried out by Peter Walcott and Associates utilizing a Huntec 7.5 kw transmitter-generator and a BRGM Elrec 6 receiver in a pole-dipole array (Figure 5). A total of 8.69 km of IP pseudosections over the A.P. Zone and Zone 1 areas were completed.

Six diamond drill holes were completed by J.T. Thomas Diamond Drilling Limited of Smithers, B.C., during the period of August 15th to September 9, 1990. Assaying was performed by Acme Analytical Laboratories of Vancouver, B.C.

RESULTS OF 1990 MAPPING, PROSPECTING AND GEOPHYSICS

Remapping of the Zone 1 grid has produced a great deal of insight into the nature of the AP Structure and its relationship with other major regional structural features. The Zone 1 area is characterized by a series of rhyolitic to dacitic flowrocks and associated coarse fragmental volcanic rocks; variably welded dacitic ash flow tuffs; and a thick overlying crudely to nonbedded heterolithic pyroclastic breccia with occasional intercalations of fine-bedded tuff or debris flow (blackish argillaceous matrix as opposed to the more sericitic tuffaceous matrix of the pyroclastic breccia). The nature of these rocks suggest near-vent facies volcanism and this is further supported by "epithermal" geochemical signatures reported in numerous rock assays returned to date. The volcanic sequence is cross-cut by numerous "felsic" to andesitic dikes which are commonly vesicular and produce peripheral brecciation, hydrothermal alteration and sulfide mineralization (pyrite +/- sphalerite, +/- galena, +/- arsenopyrite) of the host rock. Larger diabase bodies are located in the northwest corner and the north central portion of the Zone 1 grid and in the AP Zone area itself (the AP Zone is noted for its

multitude of cross-cutting, anastomosing diabase dikes comprising 10-15% of the northwest area. The large diabase body in the Zone 1 area is characteristically black, aphanitic, and magnetic but occasionally contains brecciated, pyritic, greenish altered sections usually at the edges of the intrusive or along fractures. The altered sections have been found, through thin section analysis, to be a silicified, chloritized and carbonatized mafic rock. Similar alteration is observed in the AP diabase as well as the smaller sill-like diabase unit which occurs in the north central portion of the Zone 1 grid. An extreme case of this type of alteration is observed in the "felsic" dike swarm in the Zone 1 trench area. These dikes, as well as undergoing alteration themselves, have brecciated, silicified and introduced sulfide mineralization in the host pyroclastic breccias. Two north-south tie lines were IP surveyed (lines 800 W and 600 W) and although the sulfide mineralization is detected on 800 W as a moderately strong chargeability high it cannot be traced through to tie line 600 W. A soil anomaly of up to 145 ppb Au occurs on a west-facing slope above the Zone 1 trenches (which tested sulfide mineralization related to a swarm of east-west trending "felsic" dikes). The anomaly is located downslope to the west of the southeast contact of the large diabase body with the coarse pyroclastic breccia. IP over this area indicates several anomalous areas of high chargeability. One which occurs to the east of the previously-mentioned soil anomaly is visible as a strongly gossanous pyritic contact zone at least 5-10 m thick. A diamond drill hole is planned to test this contact and assays are currently pending for surface sampling carried out in this zone earlier.

Soil anomalies in the Zone 1 area are recognized as being spatially related to the sheared contact of the felsic volcanic sequence to the west (recognized as very likely being the Mt. Dilworth Formation) and a dominantly sedimentary sequence fitting the Department of Mine's description of portions of the Betty Creek Formation. Shearing at the felsic volcanic-sedimentary contact appears to be at very shallow angles (possibly a sheared bedding plane contact) and in many places a dominantly dip slip motion is indicated. The AP structure has been traced with IP from a Z-type flexure around 1350 N on the AP grid to the Cliff Zone at 700 N/275 W on the Zone 1 grid, a distance of approximately 500 m. The AP diabase (as traced by 1989 ground magnetic survey) appears to have deformed the AP structure (folded to the east as is indicated by IP data) and was likely instrumental in producing the gold-poor ankerite-galena-sphalerite veins such as "Don's Vein" in addition to the abundant near flat-lying tensional quartz veinlets which occur in trenches 1 and 10 on the AP Zone. The only apparent difference between the Cliff Zone and the AP Zone is that the AP Zone is observed to cross-cut stratigraphy while the Cliff Zone appears to follow a

lithologic contact. It is possible that the Cliff Zone is the major structure and that the AP Zone is a splay structure. Another such splay structure appears to originate from the main structure at 1200 N/250 W and extends southwestward at azimuth 225 towards "Red Knob", where gold levels in soil reach 420 ppb. It manifests itself only as a weak chargeability high and a minor inflection in the resistivity on the IP pseudosection for line 900 N.

Due to overburden cover below the cliffs of felsic volcanics a sporadic gold geochemical anomaly is detected in the soils there and sheared tuffs at 1225 N/170 W (near the felsic volcanic-sedimentary contact) were found to carry 15,381 ppb gold across a 1.5 m chip sample. The IP survey over the felsic volcanic-sedimentary contact has produced a continuously traceable zone of broad subtle chargeability highs which may have coincident resistivity lows or flanking resistivity highs.

Where exposed, the Cliff Zone (at the base of the cliffs between lines 700 N and 1100 N) has been found to carry consistently elevated gold values of up to 1400 ppb. Between lines 100 N and 1300 N the zone appears to be sinistrally drag-folded so as to produce an apparent displacement of about 200 m to the west. This appears to be supported by IP data. Smaller scale sinistral drag folds with steep northwesterly plunges are observed in ash flow tuffs around 1100 N/250 W. This sinistral drag-folding is also observed to overprint diabase dikes in this area. Slickenside evidence, as well as plunges of small-scale drag folds in this area, indicate an almost horizontal stress field. The sequence of structural events leading to what is today observed would then be as follows:

1. Development of a shear structure with dominantly dipslip displacement (Cliff Zone = sheared felsic volcanic - sedimentary contact) + splay structures (AP structure and "Red Knob" structure).

2. Emplacement of diabase dikes and larger diabase intrusive bodies with resultant deformation of pre-existing AP Zone and development of ankeritic veins (eg. Don's Vein).

3. Re-activation of shear zones by a horizontal dextral stress field producing sinistral drag folding and northwestwardly trending siliceous auriferous veins such as those observed in the cliff between lines 1100 N and 1200 N.

Judging by the higher gold values observed in the northwest trending siliceous veins, it would appear that the later reactivation of the shear zone plays an important role in

the concentration of gold within the tensional regime created within the sinistrally drag-folded portions of the structures.

To date only approximately 300 m of strike length, of a total of 2000 m, has been drill-tested along the AP-Cliff Zone Structure. The area which has been drill-tested is one which is structurally complex with abundant cross-shears and cross-cutting diabase dikes. Better continuity is expected within the structure away from this area. These expectations are supported by the visual and geochemical evidence from the Cliff Zone between 700 N and 100 N and by IP data between 1200 N and 1600 N.

DIAMOND DRILLING

Drilling of the Zone 1 structure was undertaken to examine further the correlation of IP, geochemical and geological evidence. Six diamond drill holes, AP-6 to AP-12 were completed for a depth of 1,520.93 metres (Figure 4).

The following is a summary of results. For more information see appended drill logs and record sheets or contact Granges to view core.

Hole AP-6 1350 N 88.5 W -45° Az 302° Depth 300.84 m

Hole AP-6 encountered a series of greywackes, tuffaceous mudstones, argillites and minor dacitic tuffs. The target was an IP anomaly. Semi-massive pyrite and up to 15% disseminated pyrite were encountered in a siliceous tuff from 62.5 to 70.40 m downhole. No significant gold mineralization, however, was encountered. Similarly, an argillaceous tuff from 73.76 to 85.65 was found to carry up to 25% pyrite in short intervals (generally $\leq$ 35 cm) but again these sections carried no significant gold mineralization.

Hole AP-7 738 N 195 W -45° Az 314° Depth 197.21 m

The target was a shear zone in tuffaceous mudstone, exposed in the "Cliff Zone". Sampling on surface in 1989 returned values of up to 1400 ppb gold. The drill hole was collared in a series of andesitic tuffs and tuffaceous wackes. These then grade into more tuffaceous argillites with dacitic lappilli-ash tuffs. Silicification, strong carbonate alteration and quartz-pyrite veining was encountered from 85.80 - 96.50 m downhole. No significant mineralization was encountered.

Hole AP-8 1175 N 321 W -55° Az 080° Depth 306.91 m

The target of this hole was an IP/geochemical anomaly and a test of continuity of high grade veins in a sinistrally drag-folded portion of a structural break between a thick felsic volcanic sequence to the west and a dominantly sedimentary sequence to the east. The drill hole encountered a coarse pyroclastic breccia, welded dacite tuff, flowbanded rhyolite and several fine-grained often pyritic "andesitic" dikes, plus black argillite and fossiliferous greywacke. The most significant sulfide mineralization was encountered within or peripheral to the "andesitic" dikes, but assaying returned negative results.

Hole AP-9 1117 N 258 W -55° Az 080° Depth 238.05 m

The target was an IP/geochemical anomaly and a test of the "high grade" cross-cutting veins which occur in the area of sinistral drag folding. The hole encountered a thick sequence of variably welded dacite tuff which grades downhole into tuffaceous mudstones and argillites. A silicified pyritic, sphalerite and arsenopyrite-bearing shear zone was encountered from 16.90 - 20.00 metres. Although it carried no significant gold, values were anomalous. Arsenopyrite and pyrite mineralization associated with brecciation, silicification and carbonate alteration in the argillites and siltstones was encountered from 219.05 - 220.05 metres. However, assaying returned negative results and, due to drilling difficulties, the hole was abandoned.

Hole AP-10 1600 N 075 W -45° Az 282° Depth 198.12 m

Target was an IP/geochemical anomaly. The hole intersected a series of tuffaceous mudstones and altered welded dacite tuff. Up to 7% pyrite was encountered in a brecciated and sheared interval of dacitic pyroclastic breccia from 95.84 - 102.41 m downhole. A wide zone of shearing in the graphitic black argillites was encountered near the bottom of the hole. No significant mineralization was encountered.

Hole AP-11 1600 N 003 W -45° Az 282° Depth 141.12 m

Target was an IP/geochemical anomaly. The hole encountered diabase with hydrothermal alteration, veining and pyrite-sphalerite-galena mineralization, at its contact with tuffaceous mudstones. The remainder of the hole encountered a series of tuffaceous mudstones, argillite and welded dacite tuff with no significant sulfide mineralization.

Hole AP-12 1240 N 094 W -45° Az 210° Depth 138.68 m

Purpose of the hole was to complete the drilling of the targets proposed for hole AP-9. The hole encountered a series of fossiliferous greywacke and argillite which grades into tuffaceous mudstone followed by welded dacite tuff. Brecciatic carbonate veining, up to 5% pyrite and traces of brown resinous sphalerite was encountered in tuffaceous mudstone from 56.60 - 59.10 m downhole. This includes a 40 cm vein with 7-10% pyrite, trace chalcopyrite and tetrahedrite. Sheared tuffaceous mudstone near the welded tuff contact from 111.15 - 116.95 m is sericitized and carries up to 10% pyritic plus grey carbonate-pyrite veins. Assays yielded negative results.

CORE STORED IN EXPLORATION CAMP ON THE COUL 2 CLAIM.

CERTIFICATE OF QUALIFICATIONS

I Bernard E. Gaboury of Nanaimo, British Columbia do hereby certify that;

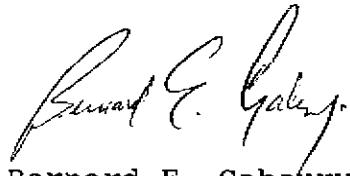
(1) I am a project geologist for Granges Inc. with office at 2300-885 West Georgia Street, Vancouver, B.C., V6C 3E8.

(2) I am a graduate of University of Manitoba, Winnipeg, Manitoba with a BSc(Hons) degree in Physical Chemistry and an MSc degree in Geology.

(3) That I have practised geology for twelve years.

(4) I have been a member in good standing of the Association of Professional Engineers Province of Manitoba since 1983.

Dated at Vancouver, B.C. this 4th date of January 1990.



Bernard E. Gaboury, BSc Hons, MSc, P.Eng.

CERTIFICATE OF QUALIFICATIONS

I Arthur John O'Donnell, of Delta, British Columbia do hereby certify that:

1) I am Exploration Manager for Granges Inc. with office at 2300-885 West Georgia Street, Vancouver, B.C., V6C 3E8.

2) I am a graduate of Saint Francis Xavier University, Antigonish, N.S. with a BSc degree in geology. I also took an extra year of geology at Dalhousie University, Halifax, N.S.

3) That I have practised my profession for thirty years.

4) I have been a member in good standing of the Association of Professional Engineers of the Province of Ontario since 1970 and the Association of Professional Engineers Province of Manitoba since 1980.

Dated at Vancouver, B.C. this 24th day of May 1989.

A. J. O'Donnell, P.Eng.

STATEMENT OF EXPENDITURES

Claim 5242, Unuk 14

Geologists Wages:		
Prospecting and Mapping -	1.5 man days at $235	$ 352.50
	8 man days at $200	1,600.00
	7 man days at $145	1,015.00
	2 man days at $130	260.00
Geochemical Survey Assays:		
1 rock sample at $6.25		6.25
Geophysical Survey:		
1.17 km IP survey		2,793.03
Report Preparation and Drafting		100.00
Office Overhead		612.68
TOTAL		$6,739.46

Claim 5243, Unuk 15

Geologists Wages:		
Prospecting and Mapping -	3 man days at $235	$ 705.00
	15 man days at $200	3,000.00
	5 man days at $145	725.00
Geochemical Survey Assays:		
23 rock samples at $6.25		143.75
6 whole rock samples at $24		144.00
Report Preparation and Drafting		100.00
Office Overhead		481.77
TOTAL		$5,299.52

Claim 6397, Unuk 26

Geologists Wages:		
Prospecting and Mapping -	9.5 man days at $235	$2,232.50
	25 man days at $200	5,000.00
	1 man day at $130	130.00
Diamond Drilling -	7 days at $200	1,400.00
	12 days at $175	2,100.00
	5 days at $145	725.00
Geochemical Survey Assays:		
115 rock samples at $6.25		718.75
25 whole rock samples at $24		600.00
Geophysical Survey:		
6.898 km IP survey		16,466.97
Diamond Drilling:		
1,520.93 m		112,467.09
Core Assaying:		
1,123 30-element ICP at $6.25		7,018.75
Report Preparation and Drafting		2,000.00
Office Overhead		15,085.90
TOTAL		$165,944.96
GRAND TOTAL		**$177,983.94**

APPENDIX A

Rock Samples Submitted for 30-Element ICP Analysis

Descriptions and Certificates or Analysis

Rock Sample Record Sheet

Sample No.	Location (ZONE 7)		Description	Geochem. Au	Ag	Cu	Zn	Pb	As	
1	11+05N	1+12W	2-4cm wide qtz vein in intensely sheared lithic tuff ~ 15-25% diss pyr, 5% fg arsenop 10-15% sphal.	3841	310	439	18811	2942	12257	1400
2	11+45N	1+45W	grab within sheared lithic tuff w 5-10% diss pyr	861	25	5	14	19	1021	60
3	11+70N	1+45W	grab in int. sil fract adj to shear zone 1-3% diss. pyr.	2273	273	16	731	60	2851	1100
4	11+70N	1+55W	grab in rusty weath, fract. rhy w 1-3% diss. pyr.	1126	309	493	3397	180	25514	600
5	11+00N	0+75W		44	10.5	19	22	31	154	460
6 Rock	18+50N	0+40E	SHEARED FLOW BAND RHYOLITE 5% ~ 10% DISSEM. Py	11	1.1	14	145	18		
7	18+00N	0+40E	" " " " " " " "	15	.1	4	25	16	68	
8	8+90N	3+30W	SHEARED RHYOLITE (FLOW BAND?) IN FAULT/SHEAR 5% DISSEM Py	8	.4	6	55	4	29	
9	9+50N	2+77W	ANDESITIC? DYKE 5% ~ 15% DISSEM Py IN FAULT/SHEAR	13	5.3	41	512	41	123	
10	9+60N	2+75W	SHEARED RHYOLITE 3% - 5% Py IN SHEAR/FAULT, MINOR CHLORITE	8	5.2	25	547	36	31	
11	11+98N	1+46E	GRAB FROM DYKE (ANDESITE?) 10% - 15-% + DISSEM. Py	11	1.5	16	370	105	19	
12	13+00N	0+10W	RHYO DYKE? W MINOR Py 1% ~ 2%	3	.1	9	114	5	17	
13	16+50N	0+40W	FLOW BANDED RHYOLITE 2% ~ 4% DISSEM. Py	4	.1	3	31	8	5	
14	16+85N	0+30W	" " " 2% - 5% " "	3	.1	5	59	14	81	
15	17+75N	0+40E	" " " FRACTURED	9	.1	5	39	19	47	
16	17+50N	0+25E	FLOW BANDED RHYOLITE? 3% ~ 5% DISSEM. Py	3	.1	4	21	2	2	
17	15+75N	2+50W	" " " ? ~ 2% DISSEM. Py	6	.4	6	116	10	12	
18	14+00N	5+25W	DYKE (? TYPE? OF DYKE) X-CUTTING PYROS. 5% ~ 8% DISS. Py							

Rock Sample Record Sheet

Sample No.		Location (ZONE 1)		Description	Geochem. Au ppb	Ag ppm	Cu ppm	Zn ppm	Pb ppm	As ppm	Hg ppb
19	R	1725 N	880 W	Heterolithic breccia, dacitic + argillite	whole rock						
20	R	1630 N	1010 W	QTz-chl-ankerite vein, along fault.	2	1.1	6	38	257	3	
21	R	1702 N	970 W	QTz vn., andesite.	8	.1	4	69	6	4	
22	R	590 N	560 W	carbonate cemented brx, dacitic Tuff, 3-5% diss py	81	.6	16	157	4	59	80
23	R	850 N	475 W	patchy diss. py in massive rhyolite tuff	17	.6	8	46	12	30	90
24	R	875 N	410 W	rhyolite to dacite ash tuff, 1-2% diss. py	11	.2	6	106	2	7	80
25	R	910 N	400 W	sheared dacitic debris flow, 5-10% py blebs.	208	1.6	12	87	23	657	160
26	R	909 N	400 W	Sheared dacitic debris flow, 10-20% py	160	.8	12	98	20	25	110
27	R	925 N	370 W	Flow banded rhyol., Tr py							
28	R	820 N	385 W	dacitic ash flow Tuff, 2-3% py in blebs.	71	.1	7	13	16	86	80
29	R	690 N	335 W	sheared ash flow Tuff, 1-2% py, minor blebs.	2	.1	13	76	14	8	60
30	R	700 N	250 W	1-2 m. shear zone, Fe-carb. brx., 10-20% py stwk	332	1.8	14	492	124	615	190
31	R	885 N	025 E	andesitic, carbonate-altd dike rock,	4	.1	12	141	2	14	330
32	R	885 N	027 E	less altd, grey-brown weathering andesitic dike	1	.1	13	14	2	17	50
33	R	815 N	040 E	fault zone, brxd + carb. infilling, py blebs+nests	31	.2	15	30	2	69	2400
34	R	845 N	050 E	carb. (ankerite) brx vein, Tr-1% py, minor stwk py	3	.1	8	149	2	2	100
35	R	620 N	960 E	basaltic andesite bomb tuff, hbld-feld. porph.	whole rock						
36 L.S.	R	9+30 N	7+75 W	RHYOLITE? fg tr. Py							
37	R	13+00 N	7+00 W	RHYOLITE Brx? 10%-15% Py	8	.1	6	109	11	20	1500
38	✓R	15+00 N	8+50 W	RHYOLITE? 2% Py	4	.2	5	191	5	2	180
39	✓R	13+70 N	7+00 W	RHYOLITE 5%~8% DISSEM. Py	7	.1	6	200	2	5	620
40	R	13+80 N	6+30 W	RHYOLITE 10% Py MINOR CHLORITIC ALTERATION	6	.2	9	107	12	8	730
41	✓R	15+90 N	5+35 W (B)	DIABASE? RHY?	21	.1	6	126	2	2	30
42	✓R	15+90 N	5+35 W (A)	RHYOLITE fg 2%-3% Py	7	.1	6	164	2	3	180

Rock Sample Record Sheet

Sample No.		Location		Description	Geochem. Au ppb	Ag	Cu	Zn	Pb	As	Hg
43 ✓	R	15+85N	4+15W	3% disem Py tr Po slight CHLORITIC Rhyolite	2	.1	6	133	3	5	320
44	R	14+25N	6+50W	Rhy Bx. 1% - 3% Py	4	.1	4	15	2	1	200
45	R	15+30N	5+50W	Rhy 1% - 5% Py tr. Pb	3	.1	12	139	7	2	620
46 ✓	R	15+00N	6+00W	Rhy. 1% - 3% Py	3	.1	6	139	2	2	220
47 ✓	R	16+70N	4+20W	Rhyolite dyke? 3% Py	4	.1	9	147	11	2	230
48 ✓	R	17+00N	4+20W	Rhyolite dyke? tr Po - 3% Py in fractures	6	.1	11	140	2	7	180
49	R	14+85N	2+00W	TUFFS? Rhyolite w 3% Disem Py	4	.2	6	83	6	4	130
50	R	14+75N	2+30W	Rhyolite tuffs? tr to 1% Py	1	.4	10	96	20	5	270
51	R	13+80N	2+80W	Felsic dyke (Rhyolite) 1% to 5% Py	8	.1	9	176	11	8	780
52	R	13+90N	2+75W	Rhyolite 3% Py	1	.1	9	149	13	4	540
53	R	13+60N	2+35W	Flow Banded Rhyolite? 3% - 5% Py disem	10	.3	9	17	9	20	220
54	R	13+70N	2+60W	Rhyolite 3% Py tr. Sph.	5	.1	5	336	22	4	840
55	R	11+00N	8+60E	Qtz Vein over 10cm wide sampled	12	.1	18	19	4	58	2000
56	R	14+00N	6+20E	Felsic Dyke w 15% disem Py							
57 ✓	R	14+40N	6+50W	Rhyolite Bx							
58 ✓	R	15+30N	4+75W	Rhyolite to aleptic chloritic w/ 3% Py	3	.1	4	108	2	3	130
59 ✓	R	15+30N	4+80W	Rhyolite to " " " tr Py							
60 ✓	R	17+00N	6+00W	Rhyolite	20	.1	6	159	2	4	490
61 ✓	R	14+00N	7+00E	Qtz Veining w 5% Py (Vein 5-7 cm wide)							
62 L.S. July 14	R	17+00N	5+70E	Shear in tuffaceous / and graphitic tuffs rocks	10	.1	23	411	9	2	50
63 L.S.	R	15+80N	6+00E	Py + hydrothermal in shear zone w Qtz	15	.1	35	142	25	85	710
64 L.S.	R	16+10N	6+25E	Py + " " " "	12	.2	34	235	34	210	880
65	R	11+90N	5+80W	Pyroclastic breccia w int. silicification < 2% diss pyrite	4	.3	10	348	9	11	2500
66	R	11+90N	6+08W	Pyroclastic bx, perv. fol, silica, mx alt. to Fe-oxide	1	.1	7	128	5	8	380
67	R	11+60N	5+50W	" " " " " " " "	19	.1	9	146	7	12	320
68	R	18+00N	0+30E	Flow banded rhyolite with 15-20% diss pyrite	291	.5	14	209	45	823	810

#1 SKI[illegible] #1 [illegible] - GRI[illegible]

Rock Sample Record Sheet

Sample No.	Location		Description	Geochem.						
				Au ppb	Ag ppm	Cu ppm	Zn ppm	Pb ppm	As ppm	Hg ppm
69 R	1226N	171W	Bernie's former station of 1223N [illegible]	242	1.5	14	[illegible]	37	250	150
70 R	1100N	110W	8 cm width of Qtz filled fracture w Aspy, Py, Sph.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
L.S. 71 R	1710N	585W	altered Basalt? diabase? w 5% Py	3	.1	41	71	14	8	230
L.S. 72 R	1420N	850W	" " " ? in contact w [illegible] : 5% Py	1	.1	9	54	24	8	220
73 R	1750N	810W	altered diabase w 2-5% diss pyr	7	.2	7	72	17	19	230
74 R	1550N	220W	contact alt zone in rhy tuff-adj to diabase, 10% py	1187 / 19	.4	17	72	224	237	
75 R	1680N	645W	brecciated rhy tuff, mottled diss py	2	.1	6	259	26	6	
76 R	1690N	775W	rhy lapilli tuff, 1-2% diss & blebs py	4	.1	7	36	12	8	
77 R	1625N	780W	fract. filling & dispersed py (up to 10%) in felsic tuff	3	.1	10	60	16	7	
78 R	1201N	401W	qtz stringers in clay alt. rhyolite, <1% fine galena/tetra	192	20.2	35	514	547	1227	+100
79 R	1201N	399W	clay alt rhy, tr galena/tetra, no qtz stringers	311	171	35	225	590	139	2600
80 R	1801N	100E	qtz stringers & repl. in f-gr seds, 10-15% fat diss py	1625	3.0	10	284	28	4464	
81 R	1500N	175W	fract. filling, 2% py in flow banded rhyolites	54	.2	4	1	17	144	
82 R	1400N	215W	grab pyritic/kaolinized? rhy w 2-4% diss py	15	1.0	5	4	13	63	90
83 R	1390N	140W	grab rhy w kaolinitization?-serasite-limonite 2-3% py	8	.1	10	31	29	11	
84 R	1450N	160W	grab rhy tuff? sheared w 2-3% daisy-cubic py	1	.2	7	207	35	.2	
85 R	1475N	020W	grab from gossanous rhy w sericitic/kaol. alt, 5-10% py	14	1.0	6	68	26	3	
86 R	1425N	020W	grab from fract. 10m wide, 3-5% diss py	10	1.0	10	15	10	2	
87 R	1450N	700W	grab select 6cm fracture % py?	2	.1	9	59	15	2	
88 R	1500N	650W	grab select across 6cm fract. 2-5% diss py	1	.1	6	78	8	6	
89 R	11.85N	073W	grab select (10cm) w/in 4m fract, <5% to up to 25% diss py	41	2.1	10	16	20	165	1300
90 R	1200N	075W	grab (~50cm) w/in 5m wide shear w bleached qtz <5% diss py							
91 R	1050N	105W	grab in red, fissil, rusty weath argill.	4	.3	28	31	10	21	70
92 R	1075N	115W	shear in lithic cx andesite-grab over 1m -5% diss py	13	2.7	14	84	47	35	180

Zone 1

Rock Sample Record Sheet

Sample No.	Location		Description	Geochem. Au ppb	Ag ppm	Cu	Zn	Pb	As	Hg
93 R	1800N	525W	green brecciated diabase, w blk mx cont diss py	2	.1	4	145	4	4	200
94	1220N	264W	2m chip across alter zone on N edge of green grey dacitic pyroclastic	50	2.4	3	16	16	120	310
95	1225N	240W	1m composite grab from HW contact of 7-10m wide alter. zone	40	1.7	4	58	16	118	330
96	1320N	507W	composite grab across 3-5m wide zone in Zg; up to 20% py	4	.5	8	140	14	23	2400
97	1400N	533W	grab sample, bleached Zg w 3-5% py, possible felsic dike	1	.1	6	6	9	7	730
98	1330N	573W	composite grab across ~3m wide zone in sericit Zg, up to 10% py	1	.1	4	12	9	6	2300
99	1550N	500W	dacitic breccia in dark green matrix, 5-10% py	44	.1	8	143	9	9	320
100	1705N	600W	strongly silicified dacite @ diabase contact 3-5% py	5	.1	8	30	16	7	560
101	1520N	810W	ankerite brx vein in diabase 3-5% py	2	.3	2	34	7	5	1800
102	1420N	852W	strongly silic brx, concentric alteration rims	6	.2	10	78	57	229	1200
103	1280N	760W	contact zone in diabase, brx'd, silic., 10-15% py	16	.8	145	159	142	36	1500
104	1000N	800W	qtz-carb brx in float, 1-2% py	1	.4	74	86	4	4	60
105	1735N	750W	alt'd coarse and/dac tuff, near diabase 3-5% py	1	.1	5	40	10	9	620
106	1150N	130W	py vn in stroly silic dac tuff-brx, 10-15% py	138	9.4	6	13	178	208	430
107	1125N	125W	stroly silic. dac tuff brx, qtz-carb vn, 10-20% py	1978	71.8	30	326	1240	2855	760
108	1550N	220W	rhyolite in contact with diabase, 10% py	1187	64.0	17	72	241	2372	4300
109	1680N	645W	brx'd rhyolite tuff, mottled diss. py	2	.1	6	229	26	6	430
110	1690N	775W	rhyolite Tuff, 1-2% py	4	.1	7	36	12	8	700
111	1625N	780W	fracture filling & diss. py in felsic tuff	3	.1	10	60	16	7	1200
112	1201N	401W	qtz stringers in alt'd rhyolite, <1% py	192	20.2	35	514	547	1227	7100
113	1201N	399W	clay alt'd rhyolite, fr gad, fr py	311	171.0	35	226	590	139	26000
114	1801N	100W	qtz stgrs, in f.gr. sed, 10-15% py							
WEST OF BRUCE GLACIER										
116 R-DG-90-1			strongly silic, seric, blocky Tuff, 10-20% py	7	.3	4	7	21	30	920
117 R-KP-90-1			pyrod. brx w pods py, diss py, fr arsenopy	10	.2	3	2	15	28	1700

Zone 1

Rock Sample Record Sheet

Sample No.	Location N	Location W	Description	Geochem. Au	Ag	Cu	Zn	Pb	As	Hg
118 R	1210	150	Composite grab across 4 m, ash flow tuff w 5% py (2e)	64	1.0	36	33	11	107	180
119	1225	170	composite grab across 1.5 m, andes ash tuff, sericitized, 10% py, tr sph	1538	22.3	321	1706	2348	9602	8600
120	1223	170	sericitized andes tuff w abundant qtz vnlts <5% py (3d)	114	.4	19	210	27	115	360
121	1305	200	silicified lapilli tuff w up to 10% fine py							
122	1185	875	graphitic shear with silicif./carbon. host rock, abund. qtz vnlts, up to 10% py	8	1.4	30	135	25	30	2000
123	1419	297	sheared, carbonatized coarse pyroclastic w qtz-carb-chl-py lenses/vnlts, 0-3% py	2	.3	14	334	2	23	1800
124	1415	300	more sheared, carbon., sericit. coarse pyroclastic w up to 10% py (2g)	6	2.1	15	25	27	75	1100
125	1405	330	sheared, heavily carbonatized coarse pyroclastic, ank bx vns up to 1m wide which appear to be concord. w shearing, 5-10% py, tr sph?	3	.2	8	102	8	30	710
126	1205	345	1m chip across sulfide-bx vn on FW of felsic dike.	24	3.1	5	29	19	94	660
127	1195	342	ankeritic sulfide-bx, HW of felsic dike, overall 3-5% py	3	.3	9	38	2	71	530
128	1216	325	~1m chip across sulfide rich zone in FW of andesitic dike	65	1.1	5	119	16	221	600
129	1225	312	5-10% py plus numerous qtz vnlts in silicif. sulfide zone FW to dike	131	4.3	11	340	25	827	1600
130	1395	350	carbonate, sericitized coarse pyroclastic (2g) along trace of dike, up to 10% py	3	.1	10	147	15	27	980
131	1399	381	1m chip (2g), sericitized, kaolinized, fine silic. stgrs, 5-10% py	14	.7	6	44	13	44	1200
132	1399	380	.3 m chip qtz-chl-py vn parallel to fol (Az 012/80E)	103	2.2	7	5	15	70	3900
133	1399	379	2 m chip in altered FW to qtz-chl-py vn (above), ≤ 3% py	8	.3	8	35	23	27	750
134	1368	432	up to 20% py in carbonatized/sericitized (2g) adjacent to felsic dike	40	2.3	10	25	14	109	830
135	1338	436	bxed dike w abundant qtz-stkwks in med coarse (2g) weathered	98	4.5	12	798	30	133	1300
136 R	1226N	171W	fol aft. - qtz veins, 1-3% diss py	243	1.5	14	144	39	359	150
137 R	1230N	170W	mineralized py pods along 075° fracture in aft.	1	.1	8	72	12	17	150
138 R	1095N	110W	flow banded rhy w 5% py - arsen along flowbands	61	.5	8	105	9	165	750
139 R	1069N	110W	lithic rx and - py-arsen along fractures	24	.3	6	128	8	82	150
140 R	1280N	790W	autobx, green alt, silic. diabase - py encrusted frags	5	.2	8	332	24	13	2400
141 R	1290N	750W	bx diabase - altered to white clay frags - py mx	5	.1	8	388	17	15	4700

Big Andesite like

ZONE 1 EAST GRID

Rock Sample Record Sheet

Sample No.	Location		Description	Geochem.						
				Au	Ag	Cu	Zn	Pb	As	Fe
142 R	1250N	815E	fault zone, graphitic argillite, 3-5% py		.1	33	78	11	53	3%
143 R	1275N	815E	fault, qtz-carb. breccia veins, tr cpy, 1-2% py		.1	182	76	3	115	8%
144	1290N	815E								

Zone 1 West Grid

Rock Sample Record Sheet

Sample No.	Location		Description	Geochem.						
				Au	Ag	Cu	Zn	Pb	As	
145 *	1230 N	150W	shrd, drag-folded dac. lap tuff, skarned strin, .5m samples. Grab shrimy trends Az 036, contains ~5% py							
146 *	1235 N	151 W	Bxed argillite near felsic contact, 2-4% py, qtz ank vns							
147 *	1235 N	152W	ankerite-rich material in Bxed argillite.							
148 *	1235 N	162W	bleached altered ash-lapilli tuff w 3-5% py, tr aspy							

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

GEOCHEMICAL ANALYSIS CERTIFICATE

Granges Inc. PROJECT 134 File # 90-2564 Page 1

2300 - 885 W. Georgia St., Vancouver BC V6C 3E8

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	Hg ppb
CR 4+36S 6+54W	4	29	13	89	.1	6	3	614	2.64	11	5	ND	4	34	.3	2	2	2	1.23	.019	32	4	.43	513	.01	4	1.12	.01	.16	2	24	50
CR 190S 850W	1	64	10	78	.5	36	20	1021	5.12	30	5	ND	1	117	1.6	3	2	33	4.44	.169	13	13	2.91	104	.01	5	.67	.02	.24	1	3	90
CR 220S 850W	1	41	17	85	.1	19	17	867	6.10	20	5	ND	2	122	1.4	2	2	42	4.50	.194	18	9	2.14	82	.01	2	1.01	.03	.18	1	3	100
CR 514S 950W	1	122	32	185	2.4	120	29	2174	9.12	579	5	ND	1	78	4.1	3	2	43	4.85	.219	12	46	3.22	30	.01	2	.50	.01	.22	1	35	210
CR 534S 950W	1	9	13	52	.1	16	6	1705	4.24	49	5	ND	1	103	1.6	2	2	6	5.22	.045	8	4	1.67	44	.01	2	.28	.02	.12	1	2	20
R 1399N 381W	4	6	13	44	.7	7	5	144	6.88	44	5	ND	1	12	.2	16	2	10	.05	.087	7	5	.03	51	.01	2	.39	.01	.37	1	14	1200
R 1399N 380W	5	7	17	8	2.2	7	4	49	4.33	70	5	ND	1	5	.2	20	2	6	.08	.010	5	8	.03	37	.01	8	.24	.01	.21	1	103	3100
R 1399N 379W	3	8	23	33	.3	4	7	603	8.85	113	5	ND	1	12	.2	19	2	17	.11	.129	13	4	.06	382	.01	2	.71	.01	.40	1	8	750
R 1395N 350W	2	10	15	147	.1	4	11	2937	12.32	27	5	ND	1	56	3.1	8	2	27	3.12	.132	7	3	1.10	32	.01	2	.44	.01	.22	1	3	960
R 1368N 432W	3	10	14	25	2.3	6	10	814	8.63	109	5	ND	1	8	.6	11	2	10	.51	.128	6	2	.07	23	.01	2	.33	.01	.19	1	40	830
R 1338N 436W	17	12	30	792	4.5	5	12	793	6.69	133	5	ND	1	33	1.3	16	2	139	.30	.155	4	7	.09	161	.04	8	.32	.01	.29	1	98	13000
R 1260N 740E	2	69	12	63	.3	28	9	417	4.05	82	5	ND	1	89	.2	102	2	20	1.48	.189	6	15	.49	59	.01	10	.52	.02	.22	1	10	40000
R 1000N 640E	4	80	29	81	.2	16	12	388	5.48	2415	5	ND	1	195	.3	12	2	49	1.91	.193	8	13	.40	97	.01	8	.54	.02	.27	7	9	960
R 885N 025E	1	12	2	141	.1	3	18	1392	8.82	14	5	ND	1	134	3.0	2	2	50	3.50	.128	8	1	1.61	99	.01	5	1.96	.03	.13	1	4	330
R 885N 027E	1	13	2	114	.1	2	11	902	8.14	17	5	ND	1	190	3.3	2	2	40	3.56	.172	11	3	1.38	56	.01	9	3.28	.03	.08	1	1	50
R 845N 050E	1	8	2	145	.1	4	17	1356	7.26	2	5	ND	1	71	2.2	2	2	79	3.80	.151	8	2	1.76	111	.01	2	2.72	.03	.15	1	3	100
R 815N 040E	4	15	2	30	.2	9	7	26	16.37	69	5	ND	1	4	.2	5	2	5	.01	.005	2	4	.01	2	.01	2	.18	.01	.09	1	31	2400
R 545N 775E	1	58	7	75	.1	15	12	1019	5.73	10	5	ND	1	50	2.6	2	2	187	1.88	.169	6	22	2.03	74	.23	2	2.27	.07	.09	1	1	70
R 540N 775E	1	60	9	74	.1	13	13	886	5.16	5	5	ND	1	35	2.5	2	2	167	1.39	.171	6	20	1.77	63	.25	5	1.85	.05	.07	1	20	80
R 17+10N 6+00W	3	6	2	159	.1	1	7	865	6.23	4	5	ND	1	70	2.1	2	3	149	2.20	.251	13	4	1.70	82	.01	5	2.32	.08	.05	2	20	400
R 17+00N 4+20W	2	11	2	140	.1	1	13	1364	7.36	7	5	ND	1	109	1.6	2	2	87	2.98	.246	13	3	1.40	78	.02	2	2.19	.05	.12	1	6	180
R 16+70N 4+20W	1	9	11	147	.1	4	12	1406	7.35	2	5	ND	1	135	2.3	2	2	110	3.07	.239	14	2	1.61	66	.01	3	2.75	.05	.08	1	4	230
R 15+90N 6+50W	2	18	2	134	.1	4	10	1004	6.50	2	5	ND	1	48	2.0	2	2	109	2.37	.203	13	4	1.36	64	.10	3	1.98	.07	.06	1	5	120
R 15+90N 5+35W (A)	1	6	2	164	.1	2	11	1189	6.96	3	5	ND	1	130	1.6	2	2	123	3.20	.219	13	2	1.37	62	.01	4	2.50	.07	.06	1	7	180
R 15+90N 5+35W (B)	2	6	2	126	.1	3	12	1359	6.92	2	5	ND	1	88	1.8	2	2	115	2.75	.216	13	5	1.23	82	.09	5	1.74	.07	.13	2	21	30
R 15+85N 4+15W	1	6	3	133	.1	2	10	1291	6.99	5	5	ND	1	102	2.1	2	2	92	2.61	.212	13	3	1.65	52	.01	5	2.52	.05	.09	1	2	360
R 15+30N 5+50W	1	12	7	139	.1	3	13	1532	6.65	2	5	ND	1	181	2.9	2	2	99	4.12	.219	12	4	1.33	56	.01	2	2.44	.06	.09	1	3	620
R 15+30N 4+75W	1	4	2	108	.1	5	13	1861	7.76	3	5	ND	1	198	3.8	2	2	104	4.50	.212	12	3	1.69	27	.01	3	2.74	.05	.04	1	3	130
R 15+00N 8+50W	3	5	5	191	.2	6	3	690	3.52	2	5	ND	2	55	.2	2	2	3	.77	.006	23	6	.25	118	.01	2	.48	.04	.18	1	4	180
R 15+00N 6+00W	1	6	2	139	.1	3	12	1293	6.70	2	5	ND	1	218	2.3	2	2	109	3.18	.188	16	2	1.51	150	.01	4	2.35	.05	.05	1	3	220
R 14+85N 2+00W	7	6	6	83	.2	12	1	493	1.57	4	5	ND	3	4	.2	2	3	1	.05	.002	31	10	.04	187	.01	2	.32	.01	.20	1	4	130
R 14+75N 2+30W	7	10	20	96	.4	10	1	249	.97	5	5	ND	5	13	.2	2	2	2	.36	.006	29	10	.04	97	.01	4	.26	.03	.14	2	1	230
R 14+50N 7+30E	1	33	11	70	.1	9	10	1008	4.62	4	5	ND	1	721	2.3	2	5	30	7.42	.099	7	7	1.26	87	.01	2	.93	.02	.15	1	6	140
R 14+25N 6+50W	1	4	2	194	.1	5	9	580	5.73	4	5	ND	2	32	1.5	2	2	106	1.45	.177	19	5	1.51	74	.01	3	2.26	.05	.09	1	4	210
R 14+00N 6+20E	1	7	4	83	.1	6	20	1104	7.32	13	5	ND	1	322	2.5	2	2	48	6.04	.116	5	2	1.70	73	.01	6	1.32	.03	.16	1	5	240
R 14+00N 7+00E	1	56	2	25	.1	11	7	937	3.59	9	5	ND	1	367	.7	2	2	14	5.17	.154	4	7	1.59	92	.01	10	.29	.01	.16	1	3	110
STANDARD C/AU-R	18	58	39	132	7.3	72	29	1048	4.23	41	21	7	36	52	18.6	15	19	55	.55	.095	36	58	.95	179	.07	33	1.99	.06	.14	11	487	1300

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: P1-P2 Rock P3 Soil AU** ANALYSIS BY FA\ICP FROM 10 GM SAMPLE. HG ANALYSIS BY FLAMELESS AA.

DATE RECEIVED: JUL 16 1990 DATE REPORT MAILED: July 27/90 SIGNED BY. C. Leong ,D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

Granges Inc. PROJECT 134 FILE # 90-2564

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	Hg ppb
R 13+90N 2+70W	1	9	13	144	.1	3	15	815	7.31	4	5	ND	1	69	1.7	5	2	87	1.37	.255	12	4	1.20	74	.01	4	2.30	.05	.15	1	1	540
R 13+80N 6+30W	2	9	12	107	.2	4	12	961	6.68	8	5	ND	2	64	1.5	4	2	50	2.16	.174	6	4	1.17	47	.01	4	.94	.03	.13	1	6	730
R 13+80N 2+80W	1	9	11	176	.1	3	18	381	7.18	8	5	ND	1	29	1.6	7	2	102	.73	.169	9	4	1.17	68	.01	6	2.92	.04	.21	1	8	780
R 13+70N 7+00W	2	6	2	200	.1	2	14	1005	7.86	5	5	ND	1	55	2.7	3	2	116	1.99	.221	12	4	1.28	60	.01	9	2.76	.06	.10	1	7	620
R 13+70N 2+60W	1	5	22	336	.1	4	15	1956	7.56	4	5	ND	1	99	3.5	2	2	71	3.15	.222	10	2	1.37	79	.01	2	2.23	.05	.14	1	5	840
R 13+60N 2+35W	2	9	9	17	.3	2	2	797	2.41	20	5	ND	4	19	.2	2	2	4	1.06	.009	18	2	.30	72	.01	2	.21	.05	.07	1	10	220
R 13+00W 7+00W	3	6	11	109	.1	6	13	2212	5.93	20	5	ND	1	22	.9	9	2	35	.96	.171	9	5	.32	39	.01	8	.37	.01	.14	1	8	1500
R 11+10N 8+60E	1	18	4	19	.1	12	4	123	1.99	58	5	ND	1	119	.2	15	2	5	.66	.072	3	6	.13	56	.01	2	.20	.02	.13	1	12	12000
R 9+30N 8+50W	4	5	2	108	.1	7	2	311	2.38	2	5	ND	4	8	.2	2	2	1	.13	.010	28	7	.10	140	.01	2	.36	.02	.24	1	7	180
UR 3225N 1700E	1	96	2493	4262	8.4	5	10	257	6.19	84	5	ND	1	178	16.5	33	2	15	1.28	.073	2	4	.02	25	.01	4	.17	.01	.13	1	115	11000
UR 3000N 1700E	4	7	2	50	.1	4	4	339	5.63	7	5	ND	1	26	1.0	2	2	2	.72	.004	2	3	.42	2	.01	2	.03	.01	.01	1	66	400
STANDARD C	18	59	43	132	7.3	73	32	1041	4.21	38	21	8	36	52	18.1	15	17	55	.54	.096	37	59	.95	178	.07	36	2.03	.06	.14	12	-	1200

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	Hg ppb
AP TRENCH #10 GRAB	3	319	17046	3174	64.0	7	7	43	18.23	7842	5	20	2	3	11.1	130	8	1	.02	.001	2	5	.01	3	.01	2	.09	.01	.03	2	38748	13400
CR 030N 950W	3	5	132	112	.1	5	2	31	2.04	600	5	ND	2	62	.2	10	2	6	.11	.103	13	16	.01	188	.01	3	.34	.01	.25	1	71	260
CR 025N 955W	5	19	427	785	1.1	9	5	48	2.60	800	5	ND	1	15	4.8	27	2	4	.13	.058	5	8	.01	35	.01	4	.25	.01	.15	1	197	560
CR 00N 840W	1	37	21	139	.2	61	25	1309	6.00	39	6	ND	1	127	1.6	4	4	135	4.47	.193	10	96	3.41	92	.01	2	3.06	.04	.07	1	6	70
CR 025S 1000W	10	11	49	4	.3	11	3	245	2.22	397	5	ND	1	7	.2	17	2	2	.03	.038	2	10	.01	166	.01	5	.17	.01	.11	1	40	380
CR 174S 653W	2	40	60	74	3.3	37	27	310	7.44	223	5	ND	1	37	.2	4	2	45	.67	.236	8	30	.28	21	.01	3	.49	.04	.11	1	68	40
CR 180S 620W	1	98	12	82	.6	32	22	1183	7.07	50	8	ND	1	54	.6	2	4	199	1.42	.207	10	69	3.32	39	.01	2	3.73	.03	.05	1	8	50
CR 185S 640W	1	19	14	123	.5	35	24	1190	6.54	38	5	ND	1	96	1.5	2	2	188	2.46	.178	9	82	2.64	39	.01	2	2.90	.06	.03	1	10	40
CR 185S 602W	2	9	17	40	.4	13	6	176	1.77	89	5	ND	1	21	.2	2	2	5	.30	.055	11	4	.11	89	.01	4	.39	.02	.18	1	15	70
CR 185S 600W	7	16	19	65	1.0	14	6	571	1.98	103	5	ND	2	40	.2	2	4	4	.63	.041	12	7	.18	96	.01	3	.38	.01	.19	1	13	120
CR 190S 640W	2	72	34	329	1.8	12	20	339	5.05	153	6	ND	1	57	2.1	17	2	14	1.34	.223	8	2	.23	31	.01	3	.48	.04	.22	1	29	100
CR 230S 770W	22	16	67	76	3.7	8	3	29	2.35	174	5	ND	1	11	.2	10	2	8	.05	.023	4	17	.01	123	.01	5	.22	.02	.17	1	304	90
CR 245S 780W	1	22	7	48	.1	13	14	541	3.47	17	5	ND	1	171	.2	3	2	11	3.70	.081	13	2	1.21	104	.01	4	.54	.03	.22	1	2	20
CR 250S 775W	4	5	13	74	1.1	11	4	27	2.70	170	5	ND	1	47	.2	3	3	11	.13	.115	6	29	.02	142	.01	6	.17	.01	.28	1	81	90
CR 260S 77W	1	8	8	10	.5	4	3	1578	2.40	44	5	ND	2	52	.2	2	3	1	2.20	.012	11	2	.72	36	.01	7	.35	.01	.18	1	70	10
CR 270S 760W	4	12	13	26	.4	44	23	404	7.45	84	5	ND	1	35	.3	2	4	30	.75	.131	6	40	.23	17	.01	2	.28	.02	.16	1	16	40
CR 300S 860W	1	20	9	61	.1	14	12	632	3.22	15	5	ND	3	102	.3	2	2	29	3.45	.088	24	7	1.60	135	.01	3	.84	.03	.19	1	4	30
CR 300S 775W	9	12	32	24	1.9	13	3	193	3.12	133	5	ND	1	20	.2	2	2	5	.40	.026	8	34	.07	57	.01	3	.13	.02	.15	2	41	30
CR 300S 610W	6	9	25	5	.1	6	3	330	1.53	19	5	ND	6	19	.2	2	2	2	.08	.019	32	3	.05	167	.01	3	.39	.01	.26	1	6	40
CR 370S 595W	3	2	9	5	.1	3	1	25	.40	54	5	ND	8	2	.2	2	2	1	.02	.012	37	10	.02	81	.01	6	.42	.01	.21	1	6	10
CR 380S 820W	3	48	470	238	3.1	31	20	37	7.05	389	5	ND	1	35	.2	6	2	11	.61	.254	7	9	.01	15	.01	4	.32	.01	.23	1	337	180
CR 380S 575W	1	20	5	129	.1	2	21	1725	7.52	2	5	ND	1	76	1.3	2	2	72	2.90	.100	10	4	2.09	102	.01	3	3.00	.04	.15	1	1	20
CR 405S 705W	19	18	35	18	2.3	18	5	44	1.93	94	5	ND	1	12	.2	2	2	4	.05	.045	8	8	.02	100	.01	6	.26	.02	.17	1	25	120
CR 450S 845W	4	2	10	39	.1	3	1	49	1.03	75	5	ND	1	4	.2	2	2	1	.04	.009	16	18	.02	90	.01	5	.29	.01	.18	2	5	5
CR 495S 785W	13	54	106	308	2.4	42	12	955	4.31	114	8	ND	1	124	2.2	5	3	22	2.01	.084	5	7	.69	55	.01	2	.35	.01	.18	1	77	100
CR 510S 760W	7	24	43	46	2.6	7	5	63	3.83	309	5	ND	1	37	.2	5	2	27	.33	.208	8	13	.07	72	.01	4	.34	.05	.12	2	180	80
R 1800N 525W	2	4	4	145	.1	6	12	1236	6.52	4	7	ND	1	130	1.2	2	2	86	2.39	.188	14	4	1.28	58	.01	2	2.37	.05	.10	1	2	200
R 1705N 600W	6	8	16	30	.1	6	3	219	3.82	7	5	ND	5	5	.2	2	2	10	.04	.017	25	25	.14	122	.01	3	.50	.02	.12	1	5	560
R 1550N 500W	2	8	9	143	.1	3	13	2946	6.60	9	6	ND	1	134	1.4	2	3	103	5.13	.183	11	3	2.33	78	.01	4	1.75	.05	.04	1	44	320
R 1520N 810W	7	2	7	34	.3	2	8	3999	5.75	5	8	ND	2	293	1.4	2	10	38	11.40	.104	7	5	3.15	41	.01	2	.89	.02	.05	1	2	1800
R 1420N 852W	507	10	57	78	.2	9	20	975	10.86	229	5	ND	1	47	1.6	11	3	17	.96	.156	6	3	.32	8	.01	2	.39	.04	.18	1	6	1200
R 1400N 533W	5	6	9	6	.1	6	10	120	4.00	7	5	ND	1	20	.2	4	3	13	.42	.149	6	22	.04	24	.01	6	.34	.01	.22	1	1	730
R 1372N 516W	6	5	5	78	.1	7	5	611	5.53	10	7	ND	1	22	.2	2	3	9	1.08	.041	10	5	.53	54	.01	3	1.07	.01	.15	1	1	760
R 1330N 573W	10	4	9	12	.1	6	2	31	2.53	6	5	ND	2	4	.2	2	2	2	.01	.015	14	28	.02	79	.01	2	.26	.01	.24	1	1	2300
R 1320N 507W	5	8	14	140	.5	5	11	188	7.11	23	5	ND	2	10	1.1	9	2	12	.20	.119	8	3	.05	18	.01	3	.46	.01	.26	1	4	2400
R 1290N 750W	9	8	17	388	.1	8	10	158	5.26	15	5	ND	2	27	1.2	4	2	19	.39	.078	10	23	.15	33	.01	2	.51	.03	.19	1	5	4900
STANDARD C/AU-R	18	58	41	131	6.9	68	31	1049	3.95	39	20	7	37	52	38.6	14	19	55	.51	.090	37	56	.90	181	.07	32	1.90	.06	.14	11	475	1200

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	Hg ppb
R 1280N 790W	4	8	24	330	.2	4	10	1370	15.20	13	5	ND	1	29	.2	3	2	72	1.66	.166	8	12	.63	14	.01	8	1.20	.03	.08	1	5	2600
R 1280N 760W	25	145	142	159	.8	1	7	92	18.73	36	5	ND	1	4	.3	13	2	8	.12	.091	2	2	.02	1	.01	6	.26	.01	.17	2	16	15000
R 1230N 170W	1	8	12	73	.3	5	15	1241	7.14	17	5	ND	1	13	1.1	2	2	38	.76	.118	10	12	.96	129	.01	2	1.93	.01	.20	1	1	180
R 1228N 240W	5	4	16	58	1.7	5	2	356	3.03	118	5	ND	1	12	.3	5	2	2	.33	.039	10	2	.11	44	.01	3	.30	.01	.18	1	40	330
R 1220N 264W	4	3	16	16	2.4	4	2	218	1.92	120	8	ND	1	8	.2	7	2	3	.10	.074	7	1	.02	105	.01	5	.25	.01	.19	1	50	310
R 1000N 800W	2	74	4	86	.4	27	11	715	3.55	4	5	ND	1	76	.9	2	2	53	2.17	.107	4	28	1.23	115	.20	4	1.63	.03	.08	1	1	60
R 1710N 585W	4	41	14	71	.1	9	10	444	4.58	8	5	ND	1	28	.2	2	2	41	.90	.063	9	12	.62	41	.01	4	.91	.03	.08	1	3	230
R 1420N 850W	3	9	24	84	.1	2	13	1687	7.59	8	5	ND	1	117	.2	5	2	66	3.80	.198	8	10	1.32	53	.01	2	1.24	.04	.09	1	1	220
R 1226N 171W	2	14	39	144	1.5	2	6	355	5.50	359	6	ND	1	13	.2	7	2	7	.10	.097	8	1	.03	132	.01	5	.28	.01	.29	1	243	150
R 1100N 110W	4	10	220	1276	11.7	5	10	580	7.38	16322	5	4	1	14	5.1	265	2	1	1.19	.010	2	7	.52	19	.01	3	.18	.01	.12	1	4123	350
R 1096N 110W	4	6	8	128	.3	5	1	878	3.09	22	5	ND	1	14	.9	2	4	1	.39	.017	6	3	.33	79	.01	5	.57	.01	.16	1	24	150
R 1095N 110W	7	8	8	105	.5	6	1	963	2.49	155	5	ND	1	19	.3	2	2	1	.67	.011	5	3	.22	43	.01	2	.24	.01	.14	1	61	70
→ R 790N 190W	2	15	266	257	3.4	9	11	1376	4.61	277	5	ND	1	38	1.1	13	2	6	2.83	.059	2	7	1.16	27	.01	2	.25	.01	.14	1	219	110
R 18+00N 0+30E	3	14	45	209	4.9	7	1	41	2.09	821	5	2	2	4	.4	6	2	1	.02	.003	12	4	.01	104	.01	3	.14	.01	.15	1	2491	840
VR-1-L.S.-90	6	12	25	100	1.6	5	1	108	2.45	346	9	ND	2	3	.6	6	2	1	.01	.009	13	1	.01	57	.01	8	.19	.01	.17	1	108	240
VR-2-L.S.-90	7	9	28	175	2.3	5	1	457	2.20	740	5	ND	2	10	.7	11	2	1	.36	.012	15	5	.12	60	.01	2	.16	.01	.14	1	101	200
VR-3-L.S.-90	4	3	47	15	.9	7	1	58	1.09	680	5	ND	4	3	.2	6	2	1	.01	.003	20	5	.01	176	.01	2	.12	.01	.20	1	193	160
VR-4-L.S.-90	5	4	9	10	1.1	7	1	31	.91	66	5	ND	5	3	.2	4	2	1	.01	.004	21	6	.01	200	.01	4	.15	.01	.22	1	58	130
VR 2950N 2250E	3	58	88	12	.9	2	11	82	19.15	102	5	ND	1	22	.3	36	3	27	.18	.035	2	1	.04	7	.01	6	.29	.01	.19	1	31	820
VR 2901N 2326E	3	13	34	624	4.2	4	11	65	5.75	33	5	ND	1	11	2.7	16	2	18	.52	.177	7	1	.07	15	.01	4	.42	.02	.22	1	29	710
VR 2900N 2150E	4	3	11	100	.2	3	2	333	2.06	6	5	ND	1	74	.2	2	2	5	.86	.016	16	5	.33	68	.01	3	.93	.03	.11	1	1	210
VR 2798N 1830E	6	28	4	64	.1	12	7	254	1.34	10	5	ND	1	401	.7	8	2	8	2.65	.046	3	6	.15	62	.01	7	.25	.03	.12	1	42	600
VR 2795N 1845E	1	37	10	53	.1	9	9	448	2.36	8	5	ND	1	538	.2	7	2	12	3.09	.060	3	9	.59	56	.01	7	.26	.03	.13	1	45	500
VR 2700N 1975E	7	5	15	144	.3	5	1	32	.85	179	5	ND	2	9	.2	3	2	1	.04	.001	19	5	.02	48	.01	5	.22	.01	.16	1	40	240
VR 2695N 2155E	1	140	58	77	.1	2	20	627	6.17	16	5	ND	1	228	.5	2	2	137	4.18	.143	5	11	1.16	29	.18	6	1.70	.04	1.14	1	2	30
VR 2600N 1500E	1	107	17	40	.7	72	24	214	7.49	20	8	ND	1	4	.2	2	2	33	.03	.057	2	36	.57	46	.01	5	1.31	.02	.13	1	8	280
VR 2510N 2145E	3	390	15873	99999	24.3	8	20	1138	2.88	165	5	ND	1	168	479.4	22	2	41	3.94	.048	2	13	1.11	22	.01	5	.24	.01	.07	2	676	128000
VR 2300N 2175E	2	85	33	178	.3	15	11	358	3.15	29	5	ND	1	38	.7	6	3	39	.58	.103	9	10	.26	58	.01	10	.60	.02	.30	1	37	1050
VR 2145N 2240E	7	72545	21449	40346	173.9	9	15	316	9.81	38	7	11	1	80	193.7	61	2	12	.24	.017	2	10	.19	9	.01	9	.29	.01	.06	1	15798	162000
VR 1900N 1525E	1	246	139	234	.6	4	16	742	7.28	5	5	ND	1	34	1.1	7	2	106	.67	.221	6	13	1.89	119	.11	3	3.08	.02	.15	1	18	600
STANDARD C/AU-R	18	62	43	131	7.0	69	31	1051	3.96	42	18	7	36	53	18.5	14	20	56	.51	.090	37	60	.87	180	.07	36	1.86	.06	.13	11	461	1500

ASSAY RECOMMENDED for Cu, Pb, Zn As > 1%
Ag > 30 ppm

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

GEOCHEMICAL ANALYSIS CERTIFICATE

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2300 - 885 W. Georgia St., Vancouver BC V6C 3E8

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	Hg ppb
CR 636W 225N	6	10	36	102	.6	8	1	672	1.21	62	5	ND	1	96	.3	2	2	1	1.12	.015	7	6	.14	151	.01	2	.09	.01	.12	1	24	60
CR 636W 056N	3	20	435	55	1.8	6	1	10	.97	87	5	ND	1	2	.2	6	2	1	.01	.002	8	6	.01	216	.01	2	.08	.01	.11	1	42	240
CR 1+35N 700W	6	11	31	50	.2	7	2	584	1.60	42	5	ND	1	54	.5	10	2	1	2.18	.020	2	5	.84	16	.01	6	.16	.01	.09	1	4	70
CR 175N 580W	7	37	1446	1681	6.1	7	1	728	2.14	348	6	ND	1	20	9.4	15	2	1	.96	.008	4	4	.48	85	.01	2	.12	.01	.11	1	31	1100
CR 3+15N 5+10W	5	24	89	193	1.7	16	4	775	3.05	307	5	ND	1	19	1.8	16	2	7	1.34	.019	2	4	.35	25	.01	4	.11	.01	.07	1	93	190
CR 600W L00	5	8	79	148	.3	5	1	15	1.07	97	5	ND	1	5	.5	5	2	1	.01	.005	10	7	.01	114	.01	2	.11	.01	.14	1	22	170
CR 590W 250N	5	87	128	949	27.2	8	1	38	1.76	3195	5	ND	1	3	4.3	39	2	1	.03	.007	8	7	.01	92	.01	2	.13	.01	.15	1	517	1100
CR 0+30S 0+60W	173	40	32	64	.9	8	17	133	5.64	26	5	ND	1	14	.5	8	2	16	.25	.117	9	2	.09	22	.01	5	.39	.02	.13	1	23	180
CR 500S 950W	8	71	328	2524	6.1	16	6	105	4.16	797	5	ND	1	5	15.9	23	2	3	.05	.023	5	8	.01	17	.01	3	.17	.01	.12	1	223	9400
CR 508S 950W	8	65	52	143	2.4	174	40	34	8.95	1016	5	ND	1	36	.8	10	2	15	.54	.230	9	26	.02	10	.01	11	.44	.01	.20	1	44	300
CR 5+12S 950W	3	12	19	30	1.2	16	4	13	2.01	421	5	ND	1	5	.2	3	2	3	.02	.020	5	7	.01	75	.01	3	.11	.01	.10	2	56	230
CR 5+13S 950W	10	22	54	32	2.7	28	10	45	6.02	417	5	ND	1	3	.2	7	2	4	.01	.011	3	7	.01	7	.01	2	.11	.01	.09	1	221	330
CR 030S 865W	1	8	17	78	.1	4	6	1103	3.53	42	5	ND	1	47	.2	2	2	11	2.08	.094	11	3	.71	591	.03	2	1.62	.02	.17	1	7	40
R 18+50N 0+40E	5	14	18	148	1.1	9	2	560	1.96	118	5	ND	1	9	.2	4	2	1	.44	.021	13	8	.11	62	.01	2	.19	.01	.15	1	54	190
R 18+00N 0+40E	5	4	16	25	.1	6	1	46	1.25	68	5	ND	2	2	.2	2	2	1	.02	.004	18	6	.01	42	.01	5	.15	.04	.07	1	15	1200
R 17+75N 0+40E	5	5	19	34	.1	8	1	150	1.16	47	5	ND	2	11	.2	2	2	1	.25	.003	17	8	.03	54	.01	3	.11	.03	.07	1	9	1400
R 17+50N 0+25E	6	4	22	21	.1	5	1	33	1.37	2	5	ND	2	2	.2	2	5	1	.01	.008	17	6	.01	60	.01	4	.16	.03	.11	1	3	20
R 16+85N 0+30W	9	5	14	59	.1	3	1	305	.91	64	5	ND	1	10	.3	2	3	1	.50	.003	12	6	.21	62	.01	2	.22	.02	.13	1	3	30
R 16+50N 0+40W	5	5	9	35	.1	8	2	589	2.57	5	5	ND	1	9	.2	2	2	1	.57	.011	15	7	.51	63	.01	2	.83	.03	.12	1	4	40
R 15+75N 2+50W	5	6	10	116	.4	7	3	273	2.48	12	5	ND	2	18	.2	3	2	1	.37	.009	18	7	.18	63	.01	2	.56	.03	.11	1	6	460
R 15+00N 6+50W	11	6	8	78	.1	3	10	325	6.81	6	5	ND	1	14	.2	2	2	102	.48	.200	9	2	1.04	63	.01	3	1.53	.04	.07	1	1	780
R 15+00N 1+75W	5	4	17	1	.2	8	2	254	1.69	144	5	ND	2	10	.2	2	2	1	.26	.002	13	8	.03	92	.01	4	.16	.01	.15	1	54	70
R 14+75N 0+20W	6	6	26	68	1.0	3	4	414	3.94	3	5	ND	1	7	.2	5	2	1	.43	.063	12	7	.13	50	.01	2	.61	.01	.13	1	14	120
R 14+50N 7+00W	3	9	16	59	.1	5	14	868	6.95	2	5	ND	1	18	.7	2	2	44	1.79	.148	10	5	.67	25	.01	7	.39	.01	.11	1	2	370
R 14+50N 1+60W	2	7	35	207	.2	3	15	1096	8.33	18	5	ND	1	52	2.1	2	2	93	1.80	.193	8	3	1.58	74	.01	5	2.94	.02	.10	2	1	120
R 14+25N 0+20W	5	10	10	15	1.0	4	4	440	4.99	2	5	ND	1	8	.2	3	2	1	.39	.077	15	3	.17	88	.01	6	.68	.02	.15	1	10	60
R 14+00N 0+15W	4	5	13	4	1.0	6	1	21	2.04	63	5	ND	4	1	.2	3	2	1	.01	.002	18	8	.01	98	.01	5	.14	.01	.17	1	15	90
R 13+90N 1+40W	5	10	29	31	.1	3	3	17	4.21	11	5	ND	1	13	.2	3	2	1	.13	.018	7	4	.01	36	.01	3	.22	.04	.14	1	8	290
R 13+00N 0+10W	1	9	5	114	.1	1	22	943	7.00	17	5	ND	1	221	2.0	2	2	111	5.92	.109	4	5	1.54	73	.01	2	.47	.01	.05	2	3	380
R 11+98N 1+46E	1	16	105	370	1.5	4	28	1966	12.11	19	5	ND	1	164	3.2	4	2	28	4.41	.082	2	2	1.12	15	.01	2	.68	.02	.08	1	11	440
R 9+60N 2+75W	12	25	33	547	5.2	6	5	967	6.79	31	5	ND	2	2	1.9	4	2	3	.03	.006	9	4	.20	43	.01	2	.96	.01	.12	1	8	630
R 9+50N 2+77W	5	41	41	512	5.3	2	21	244	7.31	123	5	ND	1	5	2.0	8	2	53	.25	.140	7	3	.28	16	.01	2	1.01	.02	.16	1	13	790
R 8+90N 3+30W	5	6	4	55	.4	8	1	40	1.67	29	5	ND	1	4	.2	2	2	1	.01	.007	13	7	.01	120	.01	2	.22	.01	.17	1	8	180
R 1801N 100E	3	10	28	284	3.0	8	11	190	3.30	4464	5	3	1	17	1.0	22	2	6	.62	.104	5	7	.05	38	.01	2	.19	.01	.14	1	1625	510
R 1702N 970W	3	4	6	69	.1	8	4	595	3.27	4	5	ND	1	299	.2	2	3	10	2.76	.032	5	8	.35	49	.01	2	1.14	.01	.06	1	8	60
R 1690N 775W	3	7	12	36	.1	6	9	504	6.51	8	5	ND	1	18	1.1	2	2	23	1.30	.195	9	5	.27	27	.01	2	.25	.03	.14	1	4	700
STANDARD C/AU-R	18	57	42	133	7.2	67	32	1019	4.00	38	21	7	36	52	18.5	15	19	55	.51	.095	37	58	.91	180	.07	37	1.92	.06	.14	11	495	1500

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: Rock AU** ANALYSIS BY FA\ICP FROM 10 GM SAMPLE. HG ANALYSIS BY FLAMELESS AA.

DATE RECEIVED: JUL 9 1990 DATE REPORT MAILED: July 14/90 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	Hg ppb
R 1680N 645W	3	6	26	229	.1	8	10	1069	5.31	6	5	ND	1	58	.6	2	2	77	1.68	.167	11	5	1.02	66	.01	2	1.49	.05	.08	1	2	430
R 1630N 1010W	2	6	259	38	1.1	1	2	385	2.05	3	5	ND	1	126	.2	2	2	7	1.32	.050	3	5	.19	48	.01	2	.58	.01	.04	1	2	40
R 1625N 780W	8	10	16	60	.1	3	8	170	3.61	7	5	ND	2	16	.2	2	3	14	.44	.111	10	6	.11	48	.01	4	.40	.03	.13	1	3	1200
R 1550N 220W	2	17	244	72	64.0	1	13	21	7.19	2317	5	ND	1	2	.2	84	2	13	.01	.019	2	2	.01	15	.01	3	.23	.01	.17	1	1187	4300
R 1419N 297W	2	14	2	334	.3	5	12	2306	7.34	23	5	ND	1	163	2.0	2	4	29	6.32	.072	5	6	2.42	47	.01	2	.52	.01	.11	1	2	1800
R 1415N 300W	4	15	27	125	2.1	2	13	1537	6.31	75	5	ND	1	126	.9	5	5	24	3.86	.132	7	5	1.26	45	.01	2	.38	.02	.18	1	6	1100
R 1405N 330W	4	8	8	102	.2	5	12	1184	6.33	30	5	ND	2	55	.2	5	2	26	1.57	.209	14	4	.57	90	.01	2	.74	.02	.23	1	3	710
R 13+10N 2+00W	4	7	41	9	6.9	2	3	31	3.30	269	5	ND	1	6	.2	9	2	3	.02	.012	9	3	.01	37	.01	2	.23	.01	.23	1	131	730
R 1228N 312W	5	11	25	340	4.3	4	2	154	2.52	827	5	ND	2	7	.2	21	3	1	.08	.056	14	5	.02	146	.01	2	.24	.01	.17	1	131	1600
R 12+25N 1+70W	1	321	2348	1706	22.3	4	11	700	6.99	9602	5	15	1	17	2.0	131	8	5	.84	.092	5	3	.30	33	.01	2	.31	.01	.23	2	15381	8600
R 12+23N 1+70W	2	19	27	210	.4	8	14	1695	7.15	115	5	ND	1	18	.7	2	4	37	1.56	.102	7	9	1.23	69	.01	2	1.85	.01	.14	1	114	360
1216N 325W	4	5	16	119	1.1	4	1	405	1.37	221	5	ND	5	4	.2	7	2	1	.08	.008	21	5	.02	103	.01	2	.21	.01	.14	1	65	600
R 12+10N 1+50W	6	36	11	33	1.0	6	2	560	2.38	107	5	ND	1	10	.2	2	2	1	.32	.019	9	7	.28	140	.01	2	.43	.01	.16	1	64	180
R 1205N 345W	4	5	19	29	3.1	1	2	56	2.47	94	5	ND	2	5	.2	10	2	4	.02	.028	13	3	.01	134	.01	4	.26	.01	.15	1	24	660
R 1201N 401W	4	35	547	514	20.2	8	3	143	1.58	1227	5	ND	1	13	1.0	21	2	17	.26	.132	7	9	.02	101	.01	5	.24	.01	.16	1	192	7100
R 1201N 399W	3	35	590	226	171.0	1	13	303	5.17	139	5	ND	2	17	.2	32	2	40	.35	.154	9	3	.10	37	.01	6	.51	.01	.22	1	311	26000
R 1195N 345W	3	9	2	38	.3	4	3	7400	6.45	71	5	ND	2	111	2.8	10	2	2	11.48	.010	8	2	4.61	28	.01	2	.28	.01	.09	1	3	930
R 11+90N 6+08W	3	7	5	128	.1	7	10	1085	5.62	8	5	ND	1	41	.2	3	2	12	.86	.115	15	5	.29	110	.01	2	.60	.02	.19	2	1	380
R 11+90N 5+80W	3	10	9	348	.3	3	12	812	4.57	11	5	ND	2	23	1.3	2	5	33	.39	.134	18	6	.42	86	.01	5	1.34	.03	.19	1	4	2500
R 1185N 875W	6	30	25	135	1.4	3	7	921	3.09	30	5	ND	1	100	.2	13	2	14	1.25	.134	4	4	.32	33	.01	2	.19	.02	.08	1	8	2000
R 11+85N 0+73W	3	10	20	16	2.1	5	24	347	9.73	166	5	ND	1	25	.8	8	7	16	1.13	.067	4	5	.19	16	.01	2	.41	.03	.15	1	41	1300
R 11+70N 1+55W	7	243	1857	3897	308.8	1	4	65	9.56	25614	5	10	1	2	8.8	667	4	1	.02	.008	2	3	.03	11	.01	6	.17	.01	.09	1	10738	6800
R 11+70N 1+45W	4	46	60	731	27.3	6	6	71	13.22	2851	5	2	1	3	2.1	65	6	1	.07	.005	2	7	.02	5	.01	5	.19	.01	.10	1	3273	5500
R 11+60N 5+50W	2	9	7	146	.1	5	16	1485	5.92	12	5	ND	1	70	1.2	2	3	74	2.83	.248	12	4	.55	77	.01	2	1.26	.04	.09	2	19	320
R 11+45N 1+45W	1	5	19	14	2.5	2	4	84	3.07	1921	5	ND	1	5	.2	39	2	1	.12	.011	7	4	.02	38	.01	3	.24	.02	.15	1	861	60
R 11+05N 1+12W	4	434	2942	18891	390.4	6	5	263	6.27	12257	5	4	1	8	39.2	669	2	3	.35	.016	3	7	.12	18	.01	2	.18	.01	.09	1	3841	17000
R 11+00N 0+75W	2	18	51	250	10.3	4	17	1599	8.76	153	5	ND	1	50	1.8	8	2	19	2.96	.348	3	3	1.37	28	.01	11	.47	.04	.17	1	74	760
R 10+75N 1+15W	1	14	47	84	2.7	3	9	425	7.41	35	5	ND	1	7	1.4	9	5	39	.24	.104	5	6	.85	35	.01	3	2.00	.01	.18	1	13	180
R 10+50N 10+05W	1	28	10	31	.3	16	13	241	3.76	21	5	ND	2	7	.2	2	2	30	.09	.014	16	11	.69	53	.01	6	1.11	.01	.19	1	4	70
910N 400W	3	12	23	87	1.6	4	12	177	5.27	657	5	ND	2	7	.2	7	2	13	.33	.123	10	7	.21	26	.01	4	.78	.01	.17	1	208	160
R 909N 400W	3	12	20	98	.8	4	9	247	5.23	25	5	ND	2	7	.2	5	2	14	.27	.118	9	6	.24	34	.01	2	.89	.01	.18	1	160	110
R 875N 410W	8	6	2	106	.2	7	2	367	2.56	7	5	ND	2	3	.2	2	2	1	.08	.006	20	7	.28	52	.01	3	.89	.01	.17	1	11	80
R 850N 475W	6	8	12	46	.6	8	3	374	2.59	30	5	ND	2	3	.2	2	2	4	.04	.020	19	9	.14	84	.01	2	.68	.01	.14	1	17	90
R 820N 385W	4	7	16	13	.1	8	2	397	3.20	86	5	ND	3	7	.2	3	2	1	.34	.008	13	8	.19	115	.01	2	.62	.02	.16	1	71	80
R 700N 250W	4	14	124	492	1.8	6	13	727	9.95	615	5	ND	1	38	3.3	6	12	2	1.44	.017	2	5	.33	15	.01	2	.22	.01	.14	1	322	190
R 690N 335W	5	13	14	76	.1	9	4	1397	2.97	8	5	ND	1	16	.6	2	2	1	1.40	.011	8	5	.55	67	.01	2	.46	.01	.20	1	2	60
R 590N 560W	6	16	4	157	.6	1	2	8606	3.64	59	5	ND	2	138	1.1	3	2	2	7.81	.010	11	3	2.09	34	.01	2	.68	.01	.11	1	81	80
STANDARD C/AU-R	19	57	37	133	7.2	71	30	1036	4.11	41	19	6	38	53	18.7	15	21	56	.52	.095	37	59	.94	178	.07	33	1.98	.06	.14	11	489	1500

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	Hg ppb
CR 5+20N 4+40W	2	3	13	69	.1	3	2	163	1.42	7	5	ND	4	4	.2	2	2	1	.03	.005	33	4	.03	95	.01	5	.31	.02	.12	1	5	20
CR 5+20N 3+45W	2	150	5	98	.2	5	19	1040	5.93	12	5	ND	1	55	.4	2	6	68	1.99	.147	17	4	1.11	108	.01	5	1.84	.04	.11	1	10	30
CR 5+15N 2+90W	6	4	26	39	.6	5	1	21	.91	175	5	ND	1	2	.2	3	2	1	.02	.009	35	5	.01	125	.01	5	.18	.01	.14	1	36	80
CR 5+00N 10+65W	1	10	12	119	.1	1	10	1492	4.33	2	5	ND	1	56	.6	2	2	47	2.76	.126	14	4	1.17	148	.01	4	1.87	.04	.11	2	4	20
CR 5+00N 6+85W	12	81	56	317	2.2	16	9	37	3.34	288	5	ND	1	9	1.9	23	2	6	.06	.030	8	8	.01	36	.01	4	.16	.04	.11	1	74	320
CR 5+00N 6+70W	2	21	8	66	.1	14	13	219	3.68	10	5	ND	4	18	.2	4	4	37	.25	.086	24	12	1.54	371	.01	6	2.01	.01	.16	1	6	20
CR 5+00N 6+25W	2	22	12	63	.1	15	13	521	3.15	10	6	ND	2	71	.2	2	2	32	2.40	.090	20	11	1.72	134	.01	4	1.71	.02	.16	1	10	20
CR 5+00N 4+40W	16	5	17	35	.1	6	1	703	1.58	14	5	ND	1	100	.2	2	4	1	1.29	.005	17	7	.04	59	.01	5	.19	.03	.07	1	8	10
CR 4+80N 5+70W	2	7	9	140	.1	1	11	1071	5.22	3	5	ND	1	79	1.5	2	2	30	2.59	.266	15	3	1.76	83	.01	2	1.60	.03	.14	1	8	20
CR 4+80N 5+45W	6	5	8	29	.1	5	1	15	1.28	88	5	ND	1	12	.2	2	2	1	.01	.014	10	5	.01	162	.01	4	.17	.01	.15	1	22	30
CR 4+50N 5+20W	5	5	27	55	.3	5	2	50	2.08	255	5	ND	1	7	.2	3	2	1	.02	.014	11	6	.01	246	.01	2	.13	.01	.12	1	46	100
CR 4+12N 4+40W	16	8	6	232	.1	10	2	71	2.06	22	5	ND	1	12	.7	2	2	1	.17	.007	13	12	.01	16	.01	4	.12	.09	.02	1	11	150
CR 3+00N 12+75W	2	8	7	105	.1	1	13	1134	4.98	5	5	ND	1	42	.4	2	2	56	2.43	.140	11	4	1.31	213	.01	8	1.87	.03	.11	2	9	20
CR 0+85N 2+80W	1	9	6	63	.1	7	18	837	4.38	4	5	ND	2	111	.2	2	2	28	2.85	.126	23	4	.78	66	.01	10	.56	.03	.22	1	16	30
CR 0+20N 6+15W	12	6	31	89	.6	2	1	11	1.25	128	5	ND	1	3	.2	5	2	1	.01	.002	19	4	.01	230	.01	3	.14	.01	.12	1	32	150
CR 0+05N 7+35W	3	67	46	131	2.2	18	19	15	5.09	737	5	ND	1	7	.2	13	2	7	.10	.054	4	5	.01	14	.01	7	.33	.01	.18	1	41	100
CR 0+20S 6+20W	4	2	16	51	.4	3	1	8	1.00	127	5	ND	1	2	.2	2	2	1	.01	.002	28	4	.01	169	.01	4	.14	.01	.15	2	30	50
CR 0+40S 7+25W	4	6	13	4	.1	7	2	21	1.40	43	5	ND	1	4	.2	2	2	1	.01	.001	7	9	.01	106	.01	4	.13	.01	.15	1	16	40
CR 1+00S 7+20W	5	4	11	13	.1	5	1	21	1.15	90	5	ND	2	3	.2	2	2	1	.01	.008	28	6	.01	51	.01	4	.15	.05	.07	1	16	50
CR 1+00S 6+75W	7	7	21	24	.6	5	1	13	1.05	89	5	ND	1	10	.2	3	2	1	.01	.010	29	5	.01	207	.01	4	.14	.01	.14	1	45	40
CR 1+50S 7+00W	3	4	5	49	.1	5	1	494	.75	39	5	ND	1	14	.2	2	2	1	.77	.007	10	6	.37	83	.01	3	.11	.01	.12	1	184	20
CR 1+50S 6+60W	2	35	9	85	.4	24	23	975	5.17	87	5	ND	1	104	.2	2	2	41	2.67	.221	11	15	1.06	60	.01	3	.50	.03	.17	2	13	80
CR 1+57S 6+60W	21	29	88	30	8.2	18	9	48	3.45	123	5	ND	1	3	.2	8	2	7	.01	.039	5	4	.01	68	.01	4	.25	.01	.18	2	108	160
CR 1+60S 6+60W	2	127	12	157	1.2	44	22	1307	5.24	126	5	ND	1	117	1.0	3	2	64	4.65	.170	7	64	1.18	27	.01	4	.75	.03	.10	1	32	40
CR 1+75S 6+50W	18	33	65	43	3.5	33	11	343	3.98	76	5	ND	1	7	.2	6	2	59	.10	.046	4	18	.45	40	.01	5	.64	.01	.11	2	57	100
R 18+60N 0+50E	10	6	5	104	1.7	4	2	287	2.22	112	5	ND	1	4	.2	3	2	1	.22	.005	16	5	.11	72	.01	3	.30	.01	.19	2	48	60
R 17+00N 5+70E	3	23	9	41	.1	4	33	815	7.96	2	5	ND	1	114	.3	2	2	102	2.08	.136	5	3	1.22	66	.01	4	.97	.03	.07	1	10	50
R 16+90N 5+50E	4	11	8	106	.1	4	25	1298	7.41	13	5	ND	1	142	1.0	2	4	117	2.80	.117	8	3	1.54	59	.01	2	.53	.03	.03	2	19	200
R 16+10N 6+25E	22	34	34	235	.2	5	14	453	8.56	212	5	ND	1	115	1.9	4	6	25	1.87	.022	2	5	.53	23	.01	2	1.46	.02	.07	1	12	880
R 15+80N 6+00E	13	35	25	142	.1	3	14	263	7.36	85	5	ND	1	23	.6	3	2	22	.47	.025	2	3	.40	27	.01	3	1.16	.02	.08	1	15	710
R 12+75N 8+15E	4	182	3	76	.1	13	6	312	1.74	115	5	ND	1	323	.2	2	2	5	2.14	.085	3	9	.47	68	.01	6	.27	.01	.18	1	15	80
R 12+50N 8+15E	3	33	11	28	.1	16	8	152	6.67	53	5	ND	1	33	.2	449	5	5	.40	.029	2	8	.10	18	.01	6	.23	.01	.13	2	15	29000
R-1-90-LS	2	57	2	22	.1	15	14	576	3.55	2	5	ND	1	28	.3	2	2	107	.69	.164	10	30	1.22	30	.26	6	1.42	.06	.03	2	12	20
R-2-90-LS	4	40	3	68	.1	9	17	550	4.99	2	5	ND	1	12	.8	6	4	165	.60	.141	7	8	1.29	43	.26	2	1.52	.03	.05	1	3	180
R-3-90-LS	3	36	6	30	.1	9	18	486	4.70	4	5	ND	1	5	.3	2	2	181	.51	.131	6	6	1.50	22	.26	5	1.54	.03	.03	2	11	10
R-4-90-LS	3	41	110	84	.6	8	11	244	3.20	2	5	ND	1	5	.2	2	2	88	.34	.068	3	8	.67	24	.18	4	.74	.02	.02	1	8	20
STANDARD C/AU-R	19	59	41	132	7.3	71	32	1032	4.10	40	19	7	36	53	18.6	15	18	55	.52	.096	37	58	.94	180	.08	34	1.96	.06	.13	12	488	1600

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	Hg ppb
R-DG-90-1	5	4	21	7	.3	6	2	36	2.05	30	5	ND	2	6	.2	3	2	1	.03	.006	15	5	.01	44	.01	2	.27	.01	.22	1	7	920
R-KP-90-1	5	3	15	2	.2	3	2	63	2.12	28	5	ND	2	3	.2	2	2	1	.05	.002	12	3	.02	60	.01	3	.18	.02	.15	1	10	1700
* R 1750N 810W	11	7	17	72	.2	7	6	1118	3.59	19	5	ND	1	340	.3	2	2	19	2.76	.062	10	6	.15	183	.01	6	.38	.03	.15	1	7	230
* R 1735N 750W	2	5	10	40	.1	3	11	1007	6.47	9	5	ND	1	26	.2	2	6	23	1.80	.177	10	1	.59	31	.01	4	.32	.03	.16	1	1	620
CR 710N 440W	6	13	21	56	.1	3	13	537	5.95	28	5	ND	1	79	.2	8	2	16	.96	.280	10	1	.22	71	.01	6	.64	.02	.27	1	5	90
CR 705N 710W	1	23	15	33	.2	2	5	100	3.93	554	5	ND	2	13	.2	19	3	10	.06	.090	11	1	.02	316	.01	4	.26	.01	.19	1	26	750
CR 675N 475W	4	2	10	19	.5	3	1	32	1.35	172	5	ND	1	11	.2	3	3	1	.01	.011	14	4	.01	178	.01	3	.15	.01	.12	1	17	80
CR 650N 475W	2	3	10	10	.2	2	1	18	.76	116	5	ND	1	8	.2	4	2	1	.01	.004	12	3	.01	116	.01	4	.11	.01	.16	1	21	120
CR 612N 487A W	5	15	39	4	3.9	11	6	53	2.35	189	5	ND	1	2	.2	3	5	5	.01	.002	2	5	.01	46	.01	2	.17	.01	.15	1	99	190
CR 610N 487B W	3	21	69	9	2.5	5	3	19	2.01	423	5	ND	1	4	.2	8	2	4	.01	.023	3	4	.01	197	.01	2	.17	.01	.19	1	53	90
CR 600N 487A W	16	15	98	2	8.4	11	3	25	2.11	364	5	ND	1	2	.2	12	3	4	.01	.001	3	6	.01	99	.01	2	.15	.01	.20	1	159	500
CR 600N 488A W	3	7	83	4	1.6	5	2	26	1.55	318	5	ND	1	4	.2	5	2	3	.01	.004	5	3	.01	173	.01	3	.16	.01	.14	1	53	150
CR 300N 885W	2	10	17	39	.1	3	6	147	3.00	549	5	ND	1	10	.2	17	2	8	.13	.090	13	1	.05	187	.01	4	.45	.01	.19	1	15	210
UR 1609N 1619E	1	101	5	62	.1	2	11	738	3.73	52	5	ND	1	126	.5	2	4	32	4.05	.192	6	1	.39	67	.06	2	1.02	.02	.20	6	20	80
UR 1608N 1621E	2	70	12	55	.1	4	27	556	5.69	47	5	ND	1	83	.3	2	2	33	2.50	.197	4	1	.31	49	.10	2	.96	.03	.24	2	26	160
STANDARD C/AU-R	19	58	38	129	7.3	70	31	1052	3.97	40	19	7	38	53	18.6	15	21	55	.52	.097	38	56	.89	182	.07	33	1.89	.06	.14	11	500	1600

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	Hg ppb
R 1150N 245W	5	10	18	117	1.7	7	7	175	2.52	77	5	ND	1	10	.4	6	4	7	.33	.137	11	5	.07	39	.01	6	.45	.01	.22	1	21	320
R 1150N 130W	7	6	178	13	9.4	10	2	57	3.84	208	5	ND	1	3	.5	13	4	1	.01	.006	6	17	.01	19	.01	2	.19	.01	.17	1	138	430
R 1125N 125W	6	30	124	325	71.8✓	16	2	119	4.43	7855	5	3	1	3	1.5	148	3	1	.04	.013	5	3	.07	27	.01	2	.21	.01	.11	1	1978	760
R 940N 440W	6	5	14	22	.3	6	1	79	.96	18	5	ND	2	5	.2	2	5	1	.01	.009	19	30	.01	88	.01	2	.20	.04	.10	1	8	60
R 900N 390W	8	6	13	34	1.0	9	1	119	1.34	68	5	ND	4	6	.2	2	4	1	.01	.012	30	3	.02	133	.01	3	.27	.02	.15	1	20	90
R 900N 290W	1	127	2	75	.1	18	23	1012	7.14	2	5	ND	1	147	1.1	3	2	126	3.63	.236	9	33	1.34	53	.04	6	1.73	.02	.19	1	6	20
R 895N 623W	2	25	2	77	.1	16	10	355	3.19	3	5	ND	3	36	1.1	2	4	29	1.09	.092	26	20	1.50	103	.01	2	1.83	.03	.18	1	5	40
UR 2775N 1805E	1	59	3	69	.1	12	12	116	4.46	7	5	ND	1	79	.2	2	4	12	.62	.118	3	9	.04	18	.01	8	.40	.02	.19	1	11	570
UR 2700N 2335E	1	86	8	75	1.3	17	9	129	3.59	41	5	ND	1	31	1.2	6	2	53	.31	.129	10	20	1.33	92	.01	2	1.68	.01	.20	1	23	110

✓ ASSAY RECOMMENDED

APPENDIX B

Rock Samples Submitted for Whole Rock Analysis

Descriptions and Certificates of Analysis

Sample Number	Location	Description
WR 2	1390 N/200 W	Flowbanded rhyolite
WR 3	1380 N/330 W	Felsic dike
WR 4	1205 N/340 W	Felsic dike
WR 5	1420 N/230 W	Felsic dike
WR 6	1330 N/280 W	Welded ash flow tuff
WR 7	1419 N/297 W	Coarse pyroclastic flow
WR 8	1440 N/265 W	Coarse pyroclastic flow
WR 11	965 N/423 W Zone 1 grid	Dacite tuff, 5-10% pumice fragments
WR 12	975 N/135 W Zone 1 grid	Intermediate to felsic dike
WR 14	1725 N/880 W	Foliated coarse felsic pyroclastic
WR 15	925 N/370 W	"Andesitic" dike in sediments
WR 16	620 N/960 E	Basaltic andesite flow/flow breccia
WR 17	DDH AP-1 at 75.5 m	Diabase dike
WR 18	1650 N/525 W	Diabase dike
WR 19	930 N/850 W	Rhyolite
WR 20	1770 N/600 W	Altered diabase
WR 21	1500 N/850 W	Altered diabase
WR 22	1500 N/800 W	Altered diabase
WR 23	1600 N/735 W	Altered diabase
WR 24	1685 N/645 W	Altered diabase
WR 25	1500 N/800 W	Diabase
WR 26	1710 N/600 W	Altered diabase
WR 27	1650 N/645 W	Diabase
WR 28	1200 N/285 W	Rhyolite autobreccia
WR 29	1000 N/200 W	Intermed <-> felsic dike
WR 30	1300 N/600 W	Mafic dike
WR 31	1380 N/540 W	Felsic dike
WR 34	Unit 5e, ridge S.E. of A.P. zone	Granodiorite
WR 35	1680 N/570 E	Diabase dike
WR 36	1305 N/700 E	Andesitic dike
WR 37	1700 N/600 E	Diabase dike with epidote stringers
WR 40	DDH AP-1 @ 53 m	Quartz-chlorite schist
WR 41	DDH AP-1 @ 62 m	Andesite tuff breccia
WR 42	DDH AP-1 @ 24 m	Dacitic ash tuff
WR 43	DDH AP-4 @ 8.8 m	Ash flow (lenticular) tuff
WR 44	DDH AP-4 @ 18.3 m	Debris flow (possibly "black tuff")
WR 45	DDH AP-4 @ 26 m	Altered dacite
WR 55	990 N/295 W	Cherty, flowbanded rhyolite
WR 56	1452 N/206 W	Dacitic ash flow tuff
WR 57	975 N/135 E	Felsic dike
WR 59	1515 N/810 W	Diabase - green altered
WR 60	900 N/250 W	Diabase dike/stock
WR 61	1170 N/875 W	
WR 62	1250 N/850 W	
WR 63	1250 N/850 E	
WR 64	1250 N/875 W	
WR 65	1200 N/100 W	
WR 66	1250 N/700 W	
WR 67	1690 N/625 W	

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

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PHONE: 604-984-0221

To: GRANGES EXPLORATION LTD.

885 W. GEORGIA ST., 23RD FLOOR
VANCOUVER, BC
V6C 3E8

Project : UNUK R #134
Comments: ATTN: F. FELDER CC: B. GABOURY

Invoice Date: 2-AUG-90
Invoice No. : I-9019205
P.O. Number :

CERTIFICATE OF ANALYSIS A9019205

SAMPLE DESCRIPTION	PREP CODE		Al2O3 %	BaO %	CaO %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	TiO2 %	LOI %	TOTAL %
WR-01	208	294	14.50	0.15	6.38	10.71	6.04	5.25	0.16	1.83	0.58	49.94	0.74	2.06	98.34
WR-02	208	294	11.19	0.22	0.16	1.34	6.10	0.40	0.03	0.29	< 0.01	78.85	0.16	1.54	100.30
WR-03	208	294	14.26	0.02	6.53	10.33	2.25	4.60	0.23	2.48	0.33	43.87	1.40	11.90	98.20
WR-04	208	294	14.05	0.09	3.28	11.15	3.86	3.45	0.13	2.04	0.40	52.94	1.44	6.40	99.23
WR-05	208	294	8.77	0.01	< 0.01	1.39	0.75	0.24	0.04	3.95	< 0.01	84.61	0.14	0.93	100.85
WR-06	208	294	13.62	0.14	0.43	4.40	4.87	0.47	0.12	3.86	< 0.01	68.85	0.33	2.21	99.31
WR-07	208	294	10.72	0.13	8.84	12.08	2.88	4.35	0.35	1.60	0.39	42.26	0.96	14.50	99.06
WR-08	208	294	15.47	0.17	1.49	8.10	4.64	1.46	0.11	1.98	0.37	57.29	1.29	5.29	97.66
WR-09	208	294	11.29	0.25	< 0.01	0.79	7.91	0.16	< 0.01	0.39	0.02	79.09	0.24	0.75	100.90
WR-10	208	294	15.24	0.06	3.97	7.71	1.94	2.80	0.05	5.40	0.51	54.32	0.98	7.81	100.80
WR-11	208	294	11.78	0.02	3.19	9.72	1.57	1.47	0.15	1.63	0.35	61.77	1.49	4.83	97.97
WR-12	208	294	15.56	0.17	5.35	11.18	2.70	2.45	0.18	3.43	0.65	54.94	2.00	2.16	100.75
WR-13	208	294	13.11	0.04	9.02	9.50	1.77	4.62	0.15	2.98	0.33	41.17	0.89	13.03	96.61
WR-14	208	294	11.88	0.14	1.22	4.24	3.50	1.04	0.03	1.35	0.04	72.71	0.13	3.02	99.30
WR-15	208	294	14.25	0.23	< 0.01	5.66	7.77	0.91	0.06	0.87	0.06	67.62	0.55	1.52	99.51
WR-16	208	294	13.56	0.11	8.41	8.82	5.08	6.72	0.01	2.03	0.61	49.19	0.91	2.10	97.56
WR-17	208	294	14.44	0.16	5.81	11.22	3.06	3.06	0.21	2.92	0.65	54.71	2.00	2.13	100.35
WR-18	208	294	14.31	0.18	4.43	10.68	2.90	2.15	0.20	3.04	0.63	55.52	1.82	2.42	98.28
WR-19	208	294	14.34	0.16	< 0.01	4.60	5.11	0.55	0.03	2.14	0.07	68.26	0.46	2.68	98.41
WR-20	208	294	14.60	0.18	4.86	9.95	2.78	2.34	0.19	3.11	0.43	55.42	1.42	2.55	97.84
WR-21	208	294	13.65	0.26	0.62	3.81	3.28	0.51	0.06	3.51	< 0.01	70.66	0.34	2.84	99.55
WR-22	208	294	14.73	0.12	2.83	9.12	1.70	2.38	0.12	4.82	0.56	57.58	1.39	3.76	99.13
WR-23	208	294	14.63	0.18	4.07	10.17	2.83	2.56	0.16	3.30	0.48	56.54	1.27	3.48	99.67
WR-24	208	294	13.52	0.17	4.77	8.04	3.35	2.38	0.17	3.02	0.40	56.59	1.02	5.65	99.07
WR-25	208	294	14.20	0.20	5.15	10.72	2.81	2.22	0.20	3.17	0.50	54.86	1.36	4.29	99.67
WR-26	208	294	16.68	0.15	3.86	7.21	1.99	3.02	0.13	6.02	0.64	53.81	1.58	4.66	99.74
WR-27	208	294	15.48	0.23	2.97	10.06	3.05	1.58	0.19	4.24	0.58	57.17	1.50	2.14	99.20
WR-28	208	294	14.44	0.28	2.61	8.16	4.50	1.82	0.14	1.97	0.42	60.26	1.06	3.94	99.59
WR-29	208	294	11.90	0.12	0.29	1.86	6.82	0.41	0.03	1.34	< 0.01	75.14	0.16	0.90	98.97
WR-30	208	294	14.33	0.22	4.94	11.24	2.39	2.65	0.19	3.20	0.61	53.06	1.50	4.98	99.30
WR-31	208	294	15.42	0.15	2.12	8.90	3.09	1.93	0.09	4.09	0.89	57.00	2.23	3.31	99.23
WR-32	208	294	16.72	0.29	3.54	5.35	3.10	2.59	0.21	4.59	0.45	58.78	0.84	2.27	98.74
WR-33	208	294	16.56	0.77	4.94	7.75	3.14	3.56	0.18	3.32	0.48	51.70	0.82	5.08	98.29
WR-34	208	294	12.11	0.12	10.46	10.34	2.54	10.31	0.18	2.33	0.62	44.78	1.08	2.93	97.78
WR-35	208	294	13.65	0.13	4.78	13.33	1.28	2.63	0.22	3.95	0.56	55.00	2.66	1.40	99.57
WR-36	208	294	13.97	0.13	2.75	13.48	2.51	2.33	0.15	2.77	0.55	49.38	2.43	8.55	98.99
WR-37	208	294	12.42	0.08	5.37	12.14	0.26	2.59	0.17	4.60	0.43	54.94	2.46	3.56	99.02
WR-40	208	294	10.93	0.24	2.34	2.87	3.66	0.38	0.08	2.48	0.17	72.62	0.23	3.04	99.04
WR-41	208	294	13.98	0.17	3.80	7.81	4.04	1.51	0.18	2.00	0.54	59.50	1.90	4.69	100.10
WR-42	208	294	11.30	0.19	1.68	5.06	4.23	0.73	0.10	1.36	0.15	70.19	0.36	3.77	99.13

CERTIFICATION: B. Gaboury

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WR-43	208	294	13.51	0.24	0.31	3.15	7.63	0.66	0.03	0.22	0.08	70.58	0.44	2.65	99.48
WR-44	208	294	14.47	0.15	1.53	2.82	4.93	1.25	0.11	0.44	0.12	67.67	0.49	5.41	99.39
WR-45	208	294	11.88	0.02	1.31	1.42	3.11	1.26	0.09	0.78	0.05	74.92	0.13	4.16	99.14
WR-46	208	294	11.38	0.04	0.19	1.82	3.34	0.52	< 0.01	0.03	0.02	76.79	0.23	3.23	97.59

CERTIFICATION: B. Coyle

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Invoice Date: 15-AUG-90
Invoice No. : I-9020247
P.O. Number :

CERTIFICATE OF ANALYSIS A9020247

SAMPLE DESCRIPTION	PREP CODE		Al2O3 %	BaO %	CaO %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	TiO2 %	LOI %	TOTAL %	
WR 38	205	294	18.07	0.17	5.14	8.85	1.05	4.41	0.30	5.77	0.47	50.75	1.17	3.38	99.53	
WR 39	205	294	10.13	0.26	0.53	3.29	5.86	0.28	0.01	0.20	0.17	74.96	0.38	2.32	98.38	
WR 59	205	294	16.40	0.18	2.29	10.06	2.27	3.68	0.10	4.73	0.69	53.86	1.53	3.63	99.44	
WR 60	205	294	12.91	0.08	5.58	12.74	1.90	3.12	0.15	1.82	0.35	51.10	1.71	6.78	98.23	
WR 61	205	294	15.03	0.21	4.48	10.67	2.92	2.49	0.21	3.38	0.63	54.82	1.45	3.17	99.47	

CERTIFICATION: B. Caglioni

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221

To: GRANGES EXPLORATION LTD.

885 W. GEORGIA ST., 23RD FLOOR
VANCOUVER, BC
V6C 3E8

Invoice Date: 11-JUL-90
Invoice No. : I-9018120
P.O. Number :

Project : UNUK (GS134)
Comments: ATTN: F. FELDER CC: J. HARDY

CERTIFICATE OF ANALYSIS A9018120

	SAMPLE DESCRIPTION	PREP CODE		Al2O3 %	BaO %	CaO %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	TiO2 %	LOI %	TOTAL %
WR61	L11+70N 8+75W	208	294	13.63	0.16	5.92	8.31	3.26	2.10	0.19	2.56	0.54	54.24	1.38	8.27	100.55
WR62	L12+50N 8+50W	208	294	15.04	0.18	5.01	9.68	7.25	2.56	0.34	0.37	0.41	47.93	1.12	11.00	100.90
WR63	L12+50N 8+50E GR	208	294	8.95	0.12	0.11	14.33	3.66	0.31	0.01	0.12	0.24	64.47	0.61	7.93	100.85
WR64	L12+50N 8+75W	208	294	13.59	0.23	0.14	4.84	9.19	0.15	0.04	0.16	0.24	67.41	1.43	3.00	100.40
WR65	L12+00N 1+00W	208	294	19.36	0.08	0.74	3.68	4.57	1.78	0.05	1.30	0.29	64.34	0.60	4.10	100.90
WR66	L1250N700WZONE1	208	294	13.73	0.17	2.68	10.46	6.99	2.09	0.56	0.44	0.52	51.73	1.56	8.53	99.46
WR67	R1690N625W GRID1	208	294	14.86	0.24	5.66	9.86	2.73	1.39	0.20	3.69	0.76	56.14	1.54	3.92	100.95
WR68	R DYKE4 GRID1	208	294	13.33	0.26	0.08	1.39	9.56	0.08	0.01	0.23	0.14	74.26	0.23	1.04	100.60
WR69	CR 580W 255N	208	294	13.44	0.16	3.18	11.13	4.57	1.50	0.85	2.00	0.48	53.91	1.51	8.00	100.75

CERTIFICATION: B. Caughlin

APPENDIX C

Core Sample Assay Certificates

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

GEOCHEMICAL ANALYSIS CERTIFICATE

Granges Inc. PROJECT 134 File # 90-3975 Page 1

2300 - 885 W. Georgia St., Vancouver BC V6C 3E8

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	Hg ppb
1087 G	2	48	13	115	.1	13	14	215	4.59	18	5	ND	1	40	.5	2	2	20	.91	.033	5	6	1.00	72	.01	2	1.79	.01	.14	1	11	80
1088 G	2	57	18	108	.3	15	16	178	5.04	27	8	ND	1	32	.5	3	2	19	.67	.030	4	6	.93	55	.01	4	1.78	.01	.18	1	14	90
1089 G	2	40	6	100	.1	12	13	214	4.78	15	5	ND	1	46	.4	3	2	19	1.11	.035	5	6	1.01	62	.01	2	1.89	.01	.16	1	11	70
1090 G	1	33	8	105	.2	8	12	223	4.54	13	5	ND	1	51	.3	2	3	20	1.27	.039	5	7	1.01	56	.01	5	1.90	.01	.14	1	8	60
1091 G	2	33	5	92	.2	9	11	210	4.58	10	5	ND	1	42	.2	2	2	21	.92	.044	6	8	1.01	113	.01	6	1.97	.02	.16	1	4	70
1092 G	2	27	6	85	.1	11	10	251	4.20	7	5	ND	1	63	.2	2	3	23	1.73	.086	7	10	.99	112	.01	3	1.96	.03	.15	1	7	60
1093 G	1	39	11	81	.1	10	12	208	4.83	13	5	ND	1	16	.2	2	2	21	.18	.041	13	7	.94	234	.01	6	1.97	.01	.17	1	3	50
1094 G	2	37	17	104	.1	14	13	215	4.98	16	5	ND	1	45	.2	2	2	21	1.12	.042	5	8	1.00	65	.01	7	1.99	.02	.18	1	16	60
1095 G	1	42	11	96	.1	10	13	239	4.69	11	5	ND	1	54	.6	2	2	20	1.37	.040	5	6	.96	62	.01	5	1.89	.01	.17	1	6	50
1096 G	2	54	13	107	.2	14	13	228	4.89	23	5	ND	1	46	.2	2	4	18	1.12	.036	4	7	.91	58	.01	5	1.83	.01	.17	1	6	70
1097 G	1	44	11	91	.2	12	13	237	4.77	18	5	ND	1	39	.4	2	2	19	.86	.035	5	6	.92	69	.01	2	1.86	.01	.17	1	6	60
1098 G	1	39	23	99	.2	14	19	177	5.58	18	6	ND	1	19	.2	2	2	19	.41	.033	4	6	.82	32	.01	6	1.66	.01	.17	1	10	110
1099 G	1	36	7	85	.1	10	12	153	4.31	11	5	ND	1	16	.2	2	2	19	.27	.040	8	7	.95	79	.01	6	1.79	.01	.14	1	6	90
1100 G	1	41	9	87	.1	13	10	170	4.15	14	5	ND	1	39	.2	4	2	18	.87	.044	7	10	.89	78	.01	6	1.73	.01	.17	1	10	100
1109 G	1	39	8	81	.1	11	11	220	3.97	15	5	ND	1	78	.2	3	2	15	1.65	.045	7	6	.87	65	.01	5	1.48	.01	.15	1	4	80
1112 G	1	24	12	61	.1	8	7	263	3.07	9	5	ND	1	104	.2	2	2	11	3.41	.082	9	7	.75	79	.01	5	1.39	.02	.16	1	3	130
1113 G	2	62	28	95	.1	19	11	179	6.02	23	5	ND	1	22	.3	2	5	15	.51	.039	5	3	.63	30	.01	5	.54	.01	.21	1	5	130
1114 G	3	56	19	119	.2	23	12	192	4.92	23	5	ND	1	28	.2	3	4	14	.49	.049	5	5	.65	55	.01	3	.42	.01	.18	1	4	90
1115 G	3	50	19	165	.1	22	12	229	4.16	18	5	ND	1	36	.2	4	2	13	.83	.049	5	4	.72	68	.01	3	.39	.01	.17	1	6	100
1116 G	3	55	14	178	.2	22	10	270	4.84	19	5	ND	1	41	.6	3	2	16	1.00	.053	4	7	.94	68	.01	5	.47	.01	.19	1	5	90
1117 G	1	29	16	178	.3	8	11	545	3.68	18	8	ND	2	193	.7	2	2	16	4.93	.068	4	6	.77	86	.01	5	.39	.02	.15	1	4	130
1118 G	1	18	17	65	.1	10	11	333	3.84	11	5	ND	1	71	.6	2	2	12	2.18	.051	3	4	.53	56	.01	5	.38	.02	.16	1	8	120
1119 G	2	42	5	121	.2	14	11	493	3.89	32	5	ND	1	94	.5	3	2	13	2.06	.064	3	5	1.12	78	.01	4	.45	.01	.18	1	5	100
1120 G	3	43	13	104	.1	11	11	977	5.51	36	5	ND	1	451	.7	3	3	31	5.50	.152	6	5	2.03	84	.01	3	.55	.01	.13	1	7	90
1121 G	2	29	3	108	.1	13	11	787	4.85	32	5	ND	1	61	.6	5	2	41	1.49	.066	8	15	1.07	106	.01	3	.52	.02	.15	1	3	110
1122 G	2	21	2	155	.1	6	14	918	6.07	2	5	ND	1	124	1.0	2	2	30	4.36	.121	8	5	.88	65	.01	2	1.98	.03	.19	1	11	50
1123 G	2	27	7	140	.3	8	28	866	6.69	4	6	ND	1	102	1.7	2	2	26	3.67	.112	7	4	.81	60	.01	3	1.86	.02	.17	1	2	50
1124 G	2	15	12	24	.3	4	14	1333	5.76	2	5	ND	2	233	.8	3	2	29	5.69	.117	9	7	.82	63	.01	2	1.79	.03	.16	1	5	40
1125 G	1	18	6	27	.3	6	22	1259	7.15	6	5	ND	2	148	1.3	2	2	29	5.04	.119	8	5	.76	60	.01	3	1.81	.03	.16	1	1	50
1126 G	2	14	2	122	.6	3	18	1272	6.98	22	5	ND	1	63	.8	2	2	73	3.35	.132	12	3	1.04	89	.04	6	2.67	.02	.16	1	30	30
1127 G	2	41	9	108	1.5	3	20	1327	7.30	13	5	ND	1	45	1.0	2	2	82	2.48	.138	11	1	1.19	54	.01	5	2.60	.01	.21	1	10	60
1128 G	2	48	10	76	.6	3	20	1429	8.72	15	5	ND	1	78	1.6	2	2	82	3.97	.134	7	5	1.08	44	.01	3	2.82	.03	.13	1	4	30
1129 G	2	52	57	80	1.2	10	33	1667	15.89	227	6	ND	1	85	1.5	2	2	79	4.27	.120	4	2	1.04	32	.01	4	2.83	.02	.20	1	104	100
1130 G	1	66	9	79	1.7	15	15	786	4.06	7	5	ND	1	38	.2	5	2	18	1.57	.066	6	6	.67	58	.01	7	1.66	.01	.22	1	6	70
1131 G	3	33	27	147	1.5	17	16	784	4.67	15	5	ND	1	36	.4	7	2	16	1.76	.074	4	5	.53	52	.01	4	1.45	.01	.22	1	2	80
1132 G	1	25	8	159	.3	6	14	1989	5.67	4	5	ND	2	104	.2	2	4	32	6.04	.116	11	6	.93	59	.01	4	2.58	.01	.20	1	1	60
STANDARD C/AU-R	19	60	38	132	6.7	72	32	1054	3.97	40	17	7	37	53	19.0	15	22	56	.52	.097	38	57	.90	182	.07	39	1.89	.06	.13	11	482	1500

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: P1-11 CORE P12-13 ROCK P14-18 SOIL AU** ANALYSIS BY FA\ICP FROM 10 GM SAMPLE.
HG ANALYSIS BY FLAMELESS AA.

DATE RECEIVED: AUG 28 1990 DATE REPORT MAILED: Sept 7/90. SIGNED BY. C. Leong .D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

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

GEOCHEMICAL ANALYSIS CERTIFICATE

Granges Inc. File # 90-3620

2300 - 885 W. Georgia St., Vancouver BC V6C 3E8

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
1101-G	1	19	34	99	3.2	10	20	1412	16.34	28	5	ND	1	78	.9	2	2	11	3.04	.101	6	4	.23	29	.01	2	.79	.01	.23	1	8
1102-G	1	21	60	108	1.4	18	25	1067	15.78	52	6	ND	2	81	1.1	7	2	17	3.50	.071	3	6	.41	29	.01	2	.99	.01	.19	1	11
1103-G	1	26	24	161	.7	20	17	706	7.87	19	5	ND	1	75	.3	4	2	34	2.05	.070	4	21	.63	53	.01	3	1.58	.01	.22	1	6
1104-G	1	28	41	45	1.2	11	23	822	16.35	23	5	ND	1	67	.6	2	2	20	2.33	.079	3	5	.44	28	.01	2	1.12	.01	.20	1	9
1105-G	4	32	27	127	.3	21	11	706	6.20	5	5	ND	1	123	.7	3	2	25	3.43	.076	5	8	.69	57	.01	2	1.77	.01	.18	1	10
1106-G	4	34	16	151	.5	14	10	754	5.65	13	5	ND	2	116	.6	2	2	21	3.25	.059	5	9	.73	64	.01	2	1.81	.01	.17	1	8
1107-G	5	32	54	171	.4	17	14	630	8.75	112	5	ND	1	100	1.2	4	2	24	3.49	.101	4	9	.57	52	.01	2	1.54	.02	.18	1	52
1108-G	2	30	69	189	.4	11	14	593	12.18	251	5	ND	1	89	1.7	6	2	17	2.99	.123	4	5	.44	31	.01	2	1.22	.01	.17	1	94
1110-G	1	16	69	171	.4	59	26	1994	8.44	36	5	ND	1	89	.7	2	2	144	3.76	.075	5	123	2.03	47	.01	2	3.89	.02	.12	1	2
1111-G	1	25	47	141	.6	65	38	1848	10.83	40	5	ND	1	106	.9	2	2	162	4.20	.093	5	130	2.09	43	.01	2	3.86	.02	.11	1	3
R 1235N 162W	1	10	4	146	.3	11	9	2636	3.81	478	5	ND	3	32	.2	4	2	9	2.88	.084	19	4	1.45	58	.01	3	.64	.01	.28	1	18
R 1235N 152W	1	7	11	53	.4	4	2	2636	2.47	6	5	ND	3	76	.2	4	2	6	5.36	.010	13	3	2.54	59	.01	2	.26	.01	.10	1	1
R 1235N 151W	1	2	2	33	.5	4	2	7263	4.45	5	5	ND	1	185	.4	2	2	4	13.51	.029	4	2	4.56	60	.01	3	.25	.01	.10	1	1
R 1230N 150W	7	3	80	247	.7	3	1	729	2.44	132	5	ND	1	11	.2	2	2	1	.70	.009	13	3	.23	90	.01	3	.40	.01	.22	1	47
STANDARD C/AU-R	18	61	39	132	7.1	73	31	1045	3.95	42	15	7	38	53	18.6	15	17	57	.51	.094	39	60	.89	182	.09	35	1.89	.06	.14	13	512

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: Core/Rock AU** ANALYSIS BY FA\ICP FROM 30 GM SAMPLE.

DATE RECEIVED: AUG 18 1990 **DATE REPORT MAILED:** Aug 21/90. **SIGNED BY.** .....D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

Granges Inc. PROJECT 134 FILE # 90-3975

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	Hg ppb
1133 G	2	19	3	152	.6	9	17	2282	6.39	9	8	ND	1	97	1.0	2	2	31	5.33	.117	10	7	.92	61	.01	2	2.51	.01	.25	2	4	30
1134 G	1	14	5	142	.3	7	16	2153	6.02	13	5	ND	1	77	1.2	2	2	29	4.46	.123	9	4	.86	74	.01	6	2.40	.01	.26	1	12	20
1135 G	5	15	15	149	.7	7	16	2049	6.73	12	5	ND	1	71	1.2	2	7	29	4.13	.136	10	5	.88	84	.01	6	2.45	.01	.28	1	6	20
1136 G	2	18	12	163	.8	8	17	1715	6.70	3	5	ND	1	77	.8	2	2	27	4.07	.127	10	6	.79	60	.01	2	2.19	.01	.22	1	4	20
1137 G	1	17	23	139	1.0	10	20	2528	7.12	15	5	ND	1	132	1.0	2	4	29	5.96	.134	9	7	.83	53	.01	3	2.27	.01	.23	1	6	30
1138 G	1	18	12	145	.7	9	19	1903	7.55	9	5	ND	1	80	1.1	2	9	31	4.09	.138	8	6	.91	54	.01	6	2.37	.01	.24	1	8	20
1139 G	1	16	8	143	.8	8	19	1985	7.24	7	5	ND	1	88	1.2	2	6	29	4.28	.135	8	6	.92	48	.01	4	2.26	.01	.22	1	5	20
1140 G	1	16	2	139	.4	7	15	2044	4.76	3	5	ND	1	95	.5	2	2	27	4.37	.139	10	5	.88	51	.01	7	2.13	.01	.26	1	6	30
1141 G	1	15	8	65	1.4	6	16	1568	5.37	4	5	ND	1	106	.6	2	3	21	4.88	.125	7	6	.51	56	.01	5	1.45	.01	.26	1	4	40
1142 G	1	20	12	142	1.4	3	23	1664	9.69	5	5	ND	1	87	1.6	2	6	76	3.81	.138	6	2	1.38	37	.01	2	3.19	.01	.14	2	9	50
1143 G	2	17	11	127	.9	10	17	1586	6.21	15	9	ND	1	107	.6	4	3	30	4.87	.125	8	7	.85	52	.01	2	2.33	.01	.21	1	5	20
1144 G	2	16	8	152	.3	6	16	1596	6.37	7	5	ND	1	93	1.2	2	2	38	4.30	.136	10	8	1.08	49	.01	2	2.90	.01	.20	1	1	30
1145 G	1	20	17	159	.7	8	25	1400	7.65	15	5	ND	1	79	1.6	2	2	39	3.69	.153	9	9	1.11	75	.01	7	3.08	.01	.23	1	9	20
1146 G	1	21	2	151	.5	9	17	1539	6.21	8	5	ND	1	108	1.3	2	2	36	4.79	.137	10	8	1.01	51	.01	2	2.81	.01	.21	1	1	20
1147 G	1	18	32	134	.7	8	18	1355	8.43	38	5	ND	1	103	.9	2	2	37	4.30	.137	8	8	1.01	52	.01	2	2.83	.01	.20	1	2	10
1148 G	1	21	17	143	.6	7	21	1237	7.11	11	5	ND	1	93	1.8	3	2	41	3.77	.137	9	8	1.08	51	.01	3	3.01	.01	.19	1	8	10
1149 G	1	21	2	158	.4	8	17	1198	7.12	7	5	ND	1	101	.8	2	2	43	3.92	.137	10	9	1.12	52	.01	4	3.17	.01	.19	1	12	20
1150 G	1	25	2	155	.4	9	18	1208	6.59	11	5	ND	1	107	1.1	2	2	42	4.05	.150	12	10	1.06	52	.01	3	3.06	.01	.19	1	38	30
1151 G	1	24	17	138	.7	9	18	1017	7.29	31	7	ND	1	99	1.0	3	2	34	3.83	.148	8	8	.85	52	.01	4	2.45	.01	.19	2	109	30
1152 G	2	11	9	142	.3	9	18	1219	7.02	17	5	ND	1	100	1.4	2	6	53	4.13	.132	12	10	1.18	53	.01	3	3.37	.02	.19	2	2	20
1153 G	1	20	2	154	.5	8	17	1267	6.79	15	5	ND	1	114	1.2	2	5	51	4.61	.126	12	10	1.15	51	.01	4	3.19	.02	.17	1	1	30
1154 G	1	17	18	141	.3	9	20	1242	7.55	34	5	ND	1	114	1.0	2	2	50	4.59	.133	7	10	1.13	52	.01	2	3.17	.02	.17	1	1	20
1155 G	1	18	2	144	.3	9	16	1296	6.49	16	5	ND	1	129	1.2	2	2	51	4.98	.121	10	10	1.10	50	.01	3	3.04	.02	.15	1	2	30
1156 G	1	16	37	127	1.0	11	24	1134	9.87	109	5	ND	1	109	1.8	2	2	41	4.54	.115	7	8	.88	55	.01	2	2.48	.02	.17	1	3	30
1157 G	2	20	28	141	.8	11	25	1177	8.35	64	5	ND	1	95	.9	3	2	49	4.08	.125	7	9	1.07	45	.01	2	2.94	.02	.15	1	3	20
1158 G	2	24	23	152	.5	11	22	1239	7.26	24	5	ND	1	87	1.3	2	2	55	3.87	.128	9	11	1.20	55	.01	3	3.27	.02	.16	2	3	30
1159 G	1	22	13	145	.2	10	19	1282	7.05	19	5	ND	1	103	1.2	2	2	55	4.32	.126	10	10	1.19	46	.01	4	3.25	.02	.14	2	8	20
1160 G	2	20	5	141	.4	12	18	1269	6.91	20	5	ND	1	105	1.4	2	2	57	4.33	.123	11	13	1.16	68	.01	2	3.28	.02	.17	2	3	30
1161 G	1	18	4	143	.4	8	18	1259	6.99	23	5	ND	1	103	1.5	2	2	56	4.21	.131	11	11	1.18	53	.01	2	3.31	.02	.17	1	2	20
1162 G	2	31	10	129	.2	12	19	1237	7.29	22	5	ND	1	91	1.0	2	2	59	3.91	.127	13	11	1.26	59	.01	2	3.48	.02	.18	1	1	10
1163 G	2	23	20	118	.6	17	22	1099	7.47	42	5	ND	1	100	.7	3	2	49	4.23	.105	6	18	1.05	66	.01	3	2.89	.02	.19	3	5	20
1164 G	2	24	2	116	.3	19	20	1226	6.77	22	5	ND	1	100	.9	2	2	60	4.36	.107	9	22	1.27	66	.01	2	3.37	.02	.19	1	15	20
1165 G	1	15	2	68	.1	14	14	868	4.51	13	5	ND	1	70	.2	2	2	39	3.20	.065	8	9	.86	60	.01	3	2.33	.01	.18	1	1	10
1166 G	2	22	4	111	.2	19	20	1174	6.46	18	5	ND	1	87	.3	2	2	54	3.80	.094	9	22	1.23	61	.01	2	3.17	.01	.18	1	4	20
1167 G	1	38	2	163	.4	22	22	1337	6.43	18	5	ND	1	120	1.8	2	2	55	4.57	.090	7	24	1.23	52	.01	2	3.10	.01	.14	2	7	30
1168 G	2	40	44	29	.8	16	16	510	6.81	42	5	ND	1	68	.4	7	2	17	2.18	.059	3	6	.43	58	.01	3	1.29	.01	.21	2	4	40
STANDARD C/AU-R	19	60	39	132	6.8	73	32	1054	3.97	41	20	7	36	53	19.0	16	20	56	.52	.097	37	57	.90	181	.07	37	1.89	.06	.14	11	488	1600

Hp 6

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	Hg ppb
1169 G	1	14	5	74	.3	8	9	569	3.20	7	5	ND	1	47	.4	2	2	18	1.64	.031	6	5	.62	106	.01	5	1.58	.01	.15	1	3	20
1170 G	1	32	2	152	.2	9	14	978	4.54	7	5	ND	1	76	.9	2	2	39	2.47	.033	5	9	.93	248	.01	7	2.33	.01	.23	1	1	40
1171 G	1	8	21	68	.2	6	9	874	3.55	21	5	ND	1	112	.2	2	3	14	3.34	.025	4	6	.47	68	.01	4	1.15	.02	.21	1	2	60
1172 G	1	9	12	101	.1	7	5	754	2.65	3	5	ND	1	67	.2	2	3	22	2.26	.025	4	6	.60	61	.01	6	1.37	.01	.16	1	1	20
1173 G	2	44	26	237	.6	11	21	997	6.57	7	5	ND	1	66	1.0	2	2	46	2.64	.115	9	10	.97	77	.01	5	2.48	.02	.21	1	2	40
1174 G	3	50	29	331	.5	14	21	1158	7.09	2	5	ND	1	71	1.3	2	3	44	3.09	.110	9	11	1.02	115	.01	5	2.50	.02	.18	1	1	60
1175 G	3	55	11	379	.6	7	25	1032	7.22	5	5	ND	1	68	1.5	2	2	38	2.78	.116	8	5	.80	66	.01	4	2.05	.02	.17	1	2	80
1176 G	2	42	8	211	.2	12	25	1426	4.93	7	5	ND	1	101	1.2	2	2	34	4.66	.104	8	8	.90	78	.01	6	2.19	.02	.18	1	12	50
1177 G	2	26	9	144	.5	11	11	1130	3.38	5	5	ND	2	110	.5	2	2	32	4.37	.093	9	11	.82	85	.01	6	1.84	.02	.17	1	3	40
1178 G	2	17	28	111	.9	34	31	461	6.85	17	5	ND	1	71	.2	5	2	16	2.25	.064	3	8	.29	46	.01	5	.86	.01	.21	1	8	50
1179 G	3	25	7	188	.3	13	12	1007	3.86	6	8	ND	1	89	1.1	2	2	38	3.40	.108	7	14	.98	73	.01	6	2.07	.02	.20	1	7	40
1180 G	2	9	16	22	.4	6	11	762	3.16	14	5	ND	1	116	.2	5	2	9	3.44	.012	3	5	.26	68	.01	6	.70	.02	.21	1	1	40
1181 G	1	17	3	75	.1	6	6	1133	3.06	2	5	ND	1	129	.4	2	4	22	3.62	.093	10	7	.92	79	.01	7	1.87	.02	.23	1	1	50
1182 G	2	28	2	68	.2	9	8	884	4.10	4	5	ND	1	78	.6	2	2	25	1.95	.018	7	9	.98	74	.01	6	2.18	.02	.21	1	1	50
1183 G	1	24	2	166	.2	10	12	636	4.22	8	5	ND	1	58	.2	2	2	23	1.35	.027	4	7	.82	60	.01	7	1.95	.01	.19	2	1	40
1184 G	2	37	4	136	.5	13	13	615	4.80	11	5	ND	1	54	.4	2	4	24	1.04	.048	4	7	.88	60	.01	6	2.00	.01	.20	1	3	30
1185 G	2	25	2	97	.3	12	14	716	4.47	8	5	ND	1	62	.6	2	2	27	1.65	.056	6	8	.96	120	.01	8	2.20	.01	.19	1	2	20
1186 G	1	23	2	92	.1	11	9	707	4.02	6	5	ND	1	64	.3	2	2	32	1.74	.073	10	9	.92	177	.01	3	2.13	.01	.18	1	1	10
1187 G	2	19	2	110	.1	10	6	642	2.70	5	5	ND	1	65	.5	2	2	17	1.70	.022	7	6	.65	69	.01	5	1.54	.01	.20	1	1	20
1188 G	2	21	28	50	.5	7	21	916	8.65	19	5	ND	1	81	.5	3	5	26	3.57	.098	5	7	.68	56	.01	4	1.51	.01	.18	2	4	10
1189 G	1	4	2	40	.1	8	13	867	3.85	7	5	ND	1	54	.2	3	2	18	2.65	.029	3	5	.84	70	.01	5	1.54	.01	.13	1	4	5
1190 G	1	7	10	22	.2	7	16	803	4.01	11	5	ND	1	44	.2	2	2	18	2.42	.051	3	4	.73	56	.01	3	1.32	.01	.11	1	1	10
1191 G	2	32	14	59	.4	21	25	1069	6.84	7	5	ND	1	77	.2	3	2	30	3.93	.091	4	11	.90	38	.01	3	1.62	.01	.17	1	7	10
1192 G	2	31	11	80	.5	18	19	834	7.28	13	5	ND	1	63	.8	3	2	28	3.63	.062	4	16	.74	40	.01	5	1.34	.01	.15	2	3	20
1193 G	2	26	16	47	.2	17	19	566	5.97	12	5	ND	1	35	.3	2	2	15	1.58	.042	2	8	.75	34	.01	7	1.25	.01	.13	1	1	10
1194 G	1	19	5	13	.1	7	8	478	2.06	3	5	ND	1	42	.3	2	2	15	1.64	.028	3	4	.46	39	.01	5	.95	.01	.11	1	3	5
1195 G	2	91	6	110	.3	17	16	481	5.02	10	5	ND	1	66	.6	2	2	28	1.36	.059	6	10	.89	51	.01	5	2.19	.01	.16	1	1	40
1196 G	2	25	27	68	.1	14	13	718	5.49	9	5	ND	1	93	.5	2	2	31	3.49	.077	4	12	.87	58	.01	6	2.06	.02	.17	1	9	60
1197 G	2	32	15	73	.4	12	10	612	4.01	2	5	ND	1	99	.6	2	2	20	3.20	.114	7	9	.85	43	.01	5	1.80	.01	.14	1	12	30
1198 G	1	26	11	97	.1	9	9	510	3.88	2	5	ND	1	79	.3	2	2	19	2.58	.067	6	7	.76	37	.01	5	1.79	.01	.12	1	15	50
1199 G	2	35	2	111	.1	11	8	472	3.70	4	5	ND	1	81	.7	2	2	19	2.28	.048	8	8	.76	45	.01	10	1.82	.01	.15	1	7	40
1200 G	2	27	8	89	.1	9	10	366	3.15	5	5	ND	1	83	.2	2	2	16	2.00	.067	5	6	.57	45	.01	4	1.37	.01	.15	1	6	30
1201 G	2	32	31	73	.4	20	20	209	9.32	18	5	ND	1	67	.4	8	2	8	1.58	.064	3	5	.22	24	.01	4	.72	.01	.17	1	12	40
1202 G	2	40	6	115	.1	11	13	373	3.40	3	5	ND	1	71	.3	2	2	17	1.64	.053	6	8	.72	50	.01	4	1.65	.01	.16	1	3	30
1203 G	2	50	10	105	.2	13	12	408	4.41	3	5	ND	1	73	.2	2	5	18	2.06	.065	4	7	.77	42	.01	4	1.68	.01	.14	1	3	30
1204 G	2	34	8	100	.1	10	11	431	3.98	3	5	ND	1	81	.2	2	2	21	2.18	.060	5	7	.81	51	.01	6	1.82	.01	.18	1	1	40
STANDARD C/AU-R	19	57	39	132	6.8	72	32	1051	3.96	39	19	7	38	53	19.1	15	22	56	.52	.097	38	57	.89	182	.07	36	1.88	.06	.13	11	495	1500

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	Hg ppb
1205 G	3	71	7	136	.4	19	10	409	4.76	6	5	ND	1	106	.6	2	8	32	1.84	.064	9	12	1.02	117	.01	8	2.36	.01	.18	3	1	30
1206 G	2	76	36	99	.3	16	13	312	5.58	27	5	ND	1	91	.2	3	7	25	1.38	.057	5	9	.75	70	.01	6	1.82	.02	.22	1	30	40
1207 G	3	81	12	120	.4	15	13	475	5.01	8	5	ND	1	104	1.0	4	2	32	2.15	.058	8	11	1.07	97	.01	8	2.47	.02	.18	1	3	50
1208 G	3	84	7	112	.2	17	15	653	7.29	2	5	ND	1	102	1.2	2	9	50	2.22	.126	8	15	1.53	59	.01	3	3.57	.01	.15	1	4	30
1209 G	3	63	10	124	.3	11	11	468	5.24	8	5	ND	1	103	1.2	2	3	35	1.98	.066	5	11	1.04	62	.01	3	2.42	.01	.21	1	9	40
1210 G	3	53	53	91	.5	16	15	346	7.55	30	5	ND	1	86	1.2	6	2	27	1.37	.066	4	10	.81	59	.01	4	1.94	.01	.18	1	10	30
1211 G	4	82	14	137	.3	18	13	471	5.91	2	5	ND	1	79	1.0	2	8	40	1.04	.081	7	13	1.24	57	.01	6	2.93	.01	.18	1	1	30
1212 G	3	73	41	134	.7	20	17	395	8.20	16	5	ND	1	91	1.6	2	2	24	1.84	.064	4	8	.66	60	.01	3	1.76	.01	.21	1	14	50
1213 G	4	58	7	138	.1	14	10	531	4.31	2	5	ND	1	114	.9	2	4	33	2.19	.079	10	12	.94	63	.01	3	2.23	.02	.18	2	2	40
1214 G	3	40	6	83	.4	12	12	501	4.68	4	5	ND	1	125	.5	2	3	28	2.39	.076	6	10	.78	59	.01	9	1.82	.02	.18	1	2	40
1215 G	11	56	12	162	.4	23	13	670	4.75	16	5	ND	1	165	1.5	2	2	32	3.19	.071	6	11	.85	114	.01	7	2.05	.02	.17	1	11	50
1216 G	11	36	7	212	.6	21	10	631	4.34	10	5	ND	1	152	1.3	2	2	35	2.71	.076	8	13	.98	95	.01	2	2.16	.01	.15	1	4	50
1217 G	5	34	10	112	.5	17	10	569	4.19	4	5	ND	1	121	1.0	2	2	17	2.96	.066	5	8	.66	61	.01	2	1.62	.01	.16	1	7	40
1218 G	4	35	6	151	.3	13	10	981	4.11	4	5	ND	2	168	1.2	2	5	25	4.34	.064	7	9	.86	55	.01	5	2.05	.02	.15	2	4	60
1219 G	10	36	6	43	.6	31	13	607	4.45	7	5	ND	3	127	.3	3	2	33	3.15	.075	7	12	.93	97	.01	8	2.22	.02	.20	1	14	30
1220 G	9	50	40	126	.4	34	17	561	7.41	97	5	ND	1	124	1.5	4	3	30	3.50	.070	4	10	.84	69	.01	3	2.06	.01	.18	1	49	40
1221 G	6	44	4	164	.6	19	11	735	4.21	4	5	ND	2	147	1.3	2	3	29	4.05	.066	7	11	.83	61	.01	3	2.09	.01	.16	1	4	60
1222 G	5	37	33	253	.6	13	13	743	5.31	58	5	ND	1	134	.9	2	5	19	4.97	.083	5	8	.53	59	.01	4	1.29	.01	.15	2	34	50
1223 G	5	32	6	197	.5	13	9	684	3.66	7	5	ND	1	103	1.4	3	2	30	2.96	.084	8	10	.85	53	.01	5	1.93	.02	.17	1	3	40
1224 G	7	41	5	178	.5	20	8	746	4.07	5	5	ND	2	118	.7	2	3	31	3.77	.066	8	13	.87	58	.01	6	2.05	.01	.16	1	1	30
1225 G	11	55	10	216	.7	31	12	556	3.05	13	5	ND	2	118	1.4	2	2	29	4.03	.066	7	11	.66	73	.01	3	1.56	.01	.17	1	18	50
1226 G	5	32	72	101	1.6	19	14	608	13.52	73	5	ND	3	112	1.5	11	8	8	3.21	.044	5	8	.32	32	.01	5	.89	.02	.18	3	41	70
1227 G	6	40	22	194	.5	21	11	632	3.31	87	5	ND	1	132	1.2	2	3	15	3.65	.065	5	8	.57	60	.01	4	1.28	.02	.19	2	44	50
1228 G	9	39	52	195	1.8	40	18	780	6.37	41	5	ND	3	170	1.2	7	3	26	5.66	.083	4	11	.84	46	.01	2	1.51	.01	.16	1	23	80
1229 G	8	49	16	114	1.2	29	13	612	4.27	34	5	ND	1	117	.5	3	2	24	3.82	.079	5	9	.84	59	.01	4	1.76	.01	.17	2	40	60
1230 G	7	43	11	169	2.0	27	10	654	4.59	3	6	ND	1	115	.7	2	2	23	3.35	.063	4	9	.89	78	.01	4	1.90	.01	.16	1	4	90
1231 G	4	33	33	132	1.7	18	12	870	5.09	7	5	ND	2	162	.7	2	4	15	5.24	.051	5	5	.90	61	.01	4	1.77	.01	.17	1	23	130
1232 G	11	57	32	183	2.4	29	18	767	5.34	14	5	ND	2	136	1.1	2	2	32	4.15	.081	6	8	.80	61	.01	5	1.79	.01	.18	2	10	110
1233 G	4	43	42	236	1.5	10	27	2136	10.70	50	8	ND	4	225	2.3	4	10	110	10.30	.123	7	2	1.45	25	.01	2	2.92	.03	.12	3	11	120
1234 G	6	22	20	166	1.3	19	26	1295	11.02	26	5	ND	2	143	1.0	5	7	58	5.95	.104	4	6	.95	30	.01	2	1.96	.02	.13	1	5	80
1235 G	3	29	18	65	1.2	1	29	1477	9.95	85	5	ND	3	125	1.3	5	2	103	4.66	.136	7	3	1.26	36	.01	7	2.42	.03	.16	2	6	50
1236 G	4	24	7	48	.5	3	25	1427	8.31	265	5	ND	1	125	.9	2	10	117	4.30	.146	7	3	1.49	54	.01	7	2.79	.03	.19	2	11	40
1237 G	3	14	13	112	.8	3	35	1421	10.93	28	5	ND	2	121	1.1	3	10	97	4.63	.132	6	4	1.38	52	.01	5	2.69	.01	.18	2	5	50
1238 G	3	9	7	124	.7	1	30	1441	8.94	23	5	ND	3	123	.6	2	9	105	4.25	.137	8	2	1.50	50	.01	2	2.99	.02	.16	1	4	30
1239 G	3	10	2	128	.4	3	24	1431	8.32	17	5	ND	1	121	.7	2	8	111	3.91	.139	7	1	1.55	55	.01	2	3.29	.01	.17	1	1	20
1240 G	2	29	6	114	.5	3	25	1552	7.15	14	5	ND	2	145	.7	2	2	96	5.46	.123	7	2	1.09	34	.01	2	2.40	.03	.13	1	6	40
STANDARD C/AU-R	19	58	40	131	7.4	73	32	1050	3.92	41	20	7	39	53	18.8	16	22	56	.52	.097	38	57	.89	182	.08	36	1.89	.06	.13	11	471	1500

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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	Hg ppb
1241 G	9	44	27	117	1.5	31	21	713	6.24	17	5	ND	3	155	1.2	5	2	25	4.39	.058	5	9	.71	42	.01	4	1.73	.01	.18	2	9	80
1242 G	11	60	26	148	1.0	32	12	529	4.98	9	5	ND	1	106	1.0	2	3	32	2.34	.059	5	11	.85	82	.01	2	2.11	.01	.19	1	17	40
1243 G	4	39	15	137	.6	19	18	974	5.82	25	5	ND	1	150	1.2	2	4	38	4.65	.108	6	18	1.07	70	.01	4	2.35	.01	.19	1	4	40
1244 G	3	36	7	115	.6	30	22	1065	4.92	25	5	ND	2	183	.9	2	3	56	4.14	.076	8	33	1.24	103	.01	3	2.65	.01	.20	1	3	30
1245 G	1	25	8	104	.3	32	20	1446	5.27	28	5	ND	2	355	1.5	2	2	58	8.00	.073	6	49	1.41	53	.01	2	2.92	.02	.19	1	2	20
1246 G	2	24	12	146	.9	44	29	1498	9.36	44	5	ND	2	167	1.9	5	2	95	3.99	.094	5	75	2.45	63	.01	3	4.70	.01	.19	3	3	30
1247 G	2	42	17	113	.9	24	19	1171	6.52	36	5	ND	2	147	1.2	3	2	50	3.83	.106	5	31	1.42	57	.01	3	2.71	.01	.20	1	4	40
1248 G	2	44	12	129	1.6	29	22	892	5.58	21	5	ND	1	112	1.1	2	3	49	2.54	.093	5	29	1.25	64	.01	3	2.48	.01	.20	1	1	30
1249 G	2	49	11	131	1.7	47	31	1017	7.26	11	5	ND	1	105	.7	2	2	78	2.15	.090	4	54	1.66	93	.01	5	3.41	.01	.20	1	1	40
1250 G	4	36	18	122	2.0	16	12	637	3.92	3	5	ND	1	94	.4	2	7	24	1.85	.078	6	9	.84	51	.01	6	1.76	.01	.23	1	2	50
1251 G	4	32	29	131	1.8	12	25	1597	8.15	58	5	ND	2	119	1.3	3	2	41	4.99	.159	4	7	1.30	45	.01	2	2.15	.01	.24	1	22	110
1252 G	3	20	17	150	1.1	21	22	1328	7.07	88	5	ND	1	136	1.0	2	2	44	4.55	.120	5	25	1.33	52	.01	2	2.31	.01	.23	1	37	80
1253 G	1	37	2	128	1.2	56	34	1503	7.30	22	5	ND	2	133	1.2	5	2	96	5.01	.094	5	72	2.23	91	.01	5	3.87	.01	.18	1	3	60
1254 G	1	35	20	113	2.2	69	45	1537	10.17	123	5	ND	1	89	.9	6	2	93	4.40	.086	2	63	1.78	60	.01	5	3.11	.01	.25	1	16	100
1255 G	3	33	13	116	1.9	50	34	1671	8.83	96	5	ND	3	149	1.2	11	4	85	5.76	.087	4	61	1.95	53	.01	5	3.08	.01	.22	1	20	90
1256 G	3	35	23	112	2.3	48	34	1599	8.92	147	5	ND	2	156	1.5	6	2	81	5.22	.085	5	57	1.69	54	.01	2	3.11	.01	.21	1	49	110
1257 G	3	37	5	127	1.4	58	36	1472	7.45	48	5	ND	3	122	1.7	5	3	96	5.02	.095	6	74	1.89	45	.01	3	3.77	.01	.18	1	1	60
1258 G	2	42	2	213	.8	25	34	1582	5.65	54	5	ND	1	146	.8	2	2	103	5.05	.139	6	28	1.50	70	.01	2	2.78	.01	.23	1	14	130
1259 G	3	26	23	113	2.7	43	36	1324	10.36	103	5	ND	2	93	1.0	9	3	73	4.04	.086	4	42	1.37	38	.01	2	2.63	.01	.17	1	47	140
1260 G	4	35	8	108	.7	64	35	1614	7.36	41	5	ND	2	143	.7	2	2	93	6.21	.078	6	65	1.70	48	.01	5	3.62	.01	.19	1	5	30
1261 G	2	37	2	119	.7	58	38	1734	8.84	62	5	ND	3	143	1.0	2	2	124	6.37	.104	5	91	1.75	46	.01	2	3.86	.02	.19	1	7	20
1262 G	4	37	3	126	.6	63	39	1959	9.72	49	5	ND	2	120	1.5	2	6	147	4.92	.088	5	115	2.05	44	.01	2	4.36	.02	.14	1	8	30
1263 G	2	30	25	126	1.1	54	36	1743	9.22	38	5	ND	4	140	.7	6	2	135	5.60	.101	6	104	1.74	59	.01	2	3.46	.03	.15	1	3	60
1264 G	1	41	5	146	.4	62	40	1727	7.65	43	5	ND	2	149	.7	3	2	159	5.47	.101	7	115	2.21	79	.01	2	3.77	.02	.20	1	2	50
1265 G	2	27	2	168	.5	63	35	1672	7.93	34	5	ND	3	119	1.0	3	4	158	5.43	.104	5	134	1.85	36	.01	4	3.36	.04	.14	1	4	40
1266 G	2	23	4	125	.4	58	35	1861	8.13	31	5	ND	3	126	1.2	4	7	153	5.12	.092	6	130	1.89	53	.01	2	3.66	.04	.18	3	2	20
1267 G	2	24	18	154	.1	58	31	1937	7.79	34	5	ND	2	136	1.0	4	2	138	6.54	.073	6	102	2.03	30	.01	2	3.59	.03	.07	2	2	30
1268 G	1	48	25	126	.5	67	41	2356	8.56	49	5	ND	3	264	1.2	4	2	144	8.01	.087	8	106	2.64	92	.01	2	3.84	.02	.17	1	4	30
1269 G	1	45	2	103	.2	60	37	1291	7.77	29	5	ND	4	173	1.0	5	2	189	5.49	.087	9	100	2.39	88	.07	3	3.89	.10	.12	2	1	20
1270 G	2	57	4	138	.5	61	40	1551	8.02	38	5	ND	3	189	1.4	6	2	168	6.01	.093	8	117	2.22	69	.02	2	3.67	.03	.16	1	3	30
1271 G	2	32	6	102	.2	58	33	1902	7.83	38	5	ND	3	170	.6	4	4	160	8.26	.084	7	114	2.12	73	.01	2	3.52	.04	.08	1	2	20
1272 G	2	29	9	121	.6	16	17	1115	4.81	14	5	ND	4	118	.4	4	2	41	5.14	.095	9	15	.99	55	.01	3	2.18	.01	.20	1	11	60
1273 G	6	24	8	114	.5	17	19	1126	5.17	18	5	ND	2	129	.3	3	2	43	5.47	.082	9	21	1.01	107	.01	2	2.23	.02	.16	1	14	70
1274 G	4	36	18	117	.4	17	18	706	5.51	32	5	ND	3	107	.4	8	6	40	3.44	.092	8	15	1.01	63	.01	2	2.20	.02	.17	2	10	110
1275 G	3	34	14	86	.1	14	10	1206	3.22	17	5	ND	3	254	.2	2	4	25	10.92	.054	11	11	.59	171	.01	2	1.41	.01	.15	13	7	90
1276 G	3	32	7	100	.1	15	16	662	4.28	12	5	ND	1	113	.2	2	4	36	3.70	.075	8	17	.86	62	.01	2	1.89	.02	.14	1	3	100
STANDARD C/AU-R	20	62	40	133	7.6	73	33	1054	3.97	40	21	8	40	54	19.6	15	23	64	.52	.097	40	60	.90	194	.08	38	1.89	.07	.14	13	498	1300

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	Hg ppb
1277 G	4	33	2	136	.1	20	15	788	5.90	24	5	ND	1	89	1.6	4	3	41	3.20	.085	8	19	1.10	35	.01	2	2.45	.01	.11	1	69	140
1278 G	2	25	2	126	.2	18	14	960	5.92	20	5	ND	2	105	1.0	4	2	42	4.12	.081	8	18	1.15	68	.01	2	2.54	.02	.10	1	4	100
1279 G	2	34	3	165	.1	31	22	1254	7.20	25	5	ND	2	116	1.9	2	5	92	4.91	.093	8	49	1.35	59	.01	2	3.12	.03	.11	1	17	80
1280 G	7	37	12	143	1.0	27	14	1131	4.06	21	5	ND	1	340	1.0	8	7	21	7.30	.058	5	11	.60	89	.01	3	1.48	.01	.15	1	13	150
1281 G	8	51	20	183	1.1	27	12	926	4.80	23	5	ND	1	222	.6	6	9	18	4.63	.066	6	8	.65	58	.01	2	1.64	.01	.18	1	16	130
1282 G	5	24	15	86	.6	18	8	2176	2.92	19	5	ND	1	638	.5	6	3	13	15.71	.039	6	6	.45	74	.01	5	1.19	.01	.15	1	6	110
1283 G	5	30	18	82	.9	19	7	2227	2.39	13	5	ND	1	492	.7	4	5	10	12.76	.036	5	6	.31	55	.01	2	.84	.01	.14	2	8	60
1284 G	7	32	36	134	2.1	23	17	572	5.33	50	5	ND	1	95	.9	9	2	15	1.74	.067	5	8	.48	52	.01	4	1.20	.01	.19	1	17	70
1285 G	8	25	38	134	1.7	32	21	501	4.95	49	5	ND	1	77	.5	5	5	16	1.44	.057	4	6	.46	46	.01	4	1.17	.01	.16	1	17	100
1286 G	9	25	15	116	1.3	19	19	1045	6.11	30	5	ND	1	106	.6	7	4	34	3.13	.076	5	13	.87	43	.01	3	1.91	.02	.14	1	9	120
1287 G	5	53	29	112	3.5	23	13	284	5.34	28	5	ND	2	81	.2	11	3	19	.26	.057	5	10	.77	58	.01	5	1.66	.01	.19	1	26	190
1288 G	4	56	26	102	2.7	27	30	790	5.56	28	5	ND	2	180	.3	10	5	22	2.56	.088	6	13	1.02	87	.01	3	1.17	.01	.20	2	18	160
1289 G	3	15	16	85	1.8	17	9	3436	3.99	27	5	ND	1	689	1.5	6	5	23	16.79	.073	6	12	.68	33	.01	2	1.48	.01	.09	1	11	80
1290 G	9	42	55	128	4.4	29	18	833	5.11	56	5	ND	1	132	.2	10	3	19	2.41	.079	5	8	.67	68	.01	2	1.22	.01	.19	1	27	180
1291 G	2	25	2	132	.8	15	12	1270	5.10	13	5	ND	2	110	.6	6	3	28	3.66	.059	10	15	.96	116	.01	2	2.08	.02	.13	1	5	130
1292 G	4	82	16	150	.1	26	15	417	5.36	28	5	ND	1	106	.5	11	2	21	1.23	.052	6	8	.79	54	.01	2	1.13	.01	.18	1	3	340
1293 G	5	43	8	127	.1	25	11	490	4.95	27	5	ND	1	118	.5	10	4	16	2.11	.082	4	6	.77	54	.01	3	.68	.01	.17	1	5	420
1294 G	9	50	24	163	.4	29	11	569	4.74	39	5	ND	2	134	1.3	13	2	11	2.43	.067	4	4	.74	55	.01	3	.43	.01	.18	1	6	550
1295 G	3	28	6	165	.1	13	10	1413	5.08	19	5	ND	1	229	.3	2	2	17	4.70	.066	5	4	.76	51	.01	2	.41	.01	.13	1	6	170
1296 G	4	66	17	108	.1	23	14	440	4.86	43	5	ND	1	115	.2	14	2	11	1.24	.053	5	3	.69	50	.01	3	.43	.01	.18	1	6	590
1297 G	3	62	16	95	.3	21	13	462	5.60	33	5	ND	1	98	.2	10	4	11	1.45	.046	5	4	.96	60	.01	2	.43	.01	.17	1	17	310
1298 G	3	14	6	111	.1	9	10	656	4.18	8	5	ND	1	88	.2	4	2	14	1.89	.046	14	12	.54	51	.01	4	.59	.01	.15	1	1	140
1299 G	5	6	2	144	.1	5	2	580	1.15	3	5	ND	1	160	.9	2	2	1	3.30	.003	23	3	.17	120	.01	4	.32	.01	.20	1	7	60
1300 G	5	7	4	155	.1	4	1	470	.84	2	5	ND	1	181	.7	2	2	1	3.17	.002	17	3	.14	59	.01	5	.29	.01	.22	2	21	70
1301 G	4	6	2	129	.1	5	1	879	1.29	2	5	ND	1	169	.4	2	2	1	4.15	.011	26	3	.20	39	.01	5	.30	.01	.15	1	5	90
1302 G	5	8	2	162	.1	7	1	641	1.49	2	5	ND	1	80	.5	2	2	1	2.66	.004	23	18	.17	33	.01	4	.30	.02	.13	1	2	180
1303 G	3	14	8	92	.1	7	5	647	2.61	3	5	ND	1	260	.2	2	3	4	3.88	.020	18	3	.35	57	.01	4	.33	.01	.15	1	9	90
1304 G	4	6	3	113	.4	4	2	565	1.00	2	6	ND	2	124	.4	4	2	1	2.91	.002	24	3	.14	45	.01	4	.26	.01	.16	1	1	80
1305 G	4	5	3	144	.1	3	1	526	.98	2	5	ND	1	131	.2	2	6	1	2.46	.002	21	3	.11	47	.01	4	.27	.01	.18	1	1	90
1306 G	6	5	7	149	.1	5	2	626	1.49	2	5	ND	2	122	.2	2	4	2	2.81	.019	21	15	.17	47	.01	5	.38	.02	.18	1	1	100
1307 G	5	8	6	206	.2	5	1	481	1.74	4	5	ND	2	165	.7	2	2	1	2.79	.003	23	2	.21	47	.01	4	.33	.02	.19	1	1	130
1308 G	4	25	7	88	.1	10	7	890	3.18	8	5	ND	1	126	.2	2	6	9	3.02	.037	17	5	.40	62	.01	4	.61	.01	.18	1	2	80
1309 G	5	7	7	120	.3	6	5	533	3.05	6	5	ND	3	127	.2	3	2	3	1.99	.016	23	3	.40	57	.01	4	.62	.01	.19	1	1	90
1310 G	6	15	11	132	.2	8	5	484	2.06	14	5	ND	1	114	.7	3	2	4	1.68	.023	18	2	.29	53	.01	4	.36	.01	.18	1	6	80
1311 G	5	6	5	151	.1	4	1	463	1.09	6	5	ND	1	103	.2	2	2	1	2.00	.001	18	17	.14	57	.01	6	.29	.02	.18	1	1	90
1312 G	6	7	12	144	.1	5	1	439	.98	3	5	ND	1	82	.2	2	2	1	1.65	.001	17	4	.12	41	.01	3	.25	.02	.14	1	1	110
STANDARD C/AU-R	19	58	40	132	6.9	73	32	1054	3.98	39	19	7	36	53	18.9	15	23	56	.52	.100	37	58	.90	181	.07	37	1.89	.06	.14	11	495	1500

Hp 6

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	Hg ppb
1313 G	5	3	10	140	.1	5	1	466	1.20	4	5	ND	1	83	.6	2	2	1	1.55	.001	17	4	.15	40	.01	4	.26	.02	.15	1	2	160
1314 G	12	20	21	111	1.1	12	6	343	3.22	86	5	ND	1	104	.6	4	8	2	1.13	.014	11	3	.34	59	.01	2	.36	.01	.21	1	53	130
1315 G	7	30	35	29	2.6	17	14	820	8.77	267	5	ND	1	104	.6	7	2	4	1.61	.058	3	10	.37	26	.01	3	.38	.01	.21	1	150	150
1316 G	3	53	36	317	2.8	20	15	243	3.84	65	6	ND	1	100	.8	10	4	8	.61	.076	6	3	.33	50	.01	4	.46	.01	.25	1	39	460
1317 G	3	56	56	180	6.7	19	12	270	4.52	86	5	ND	1	81	.5	13	2	10	.52	.074	4	3	.29	41	.01	7	.46	.01	.24	1	73	290
1318 G	4	53	67	144	5.2	21	12	178	4.50	127	5	ND	1	85	.4	11	3	6	.65	.069	4	3	.15	46	.01	3	.43	.01	.24	1	78	250
1319 G	4	42	56	156	5.4	19	11	121	3.86	120	5	ND	1	71	.5	11	9	4	.47	.079	6	7	.09	44	.01	4	.45	.01	.24	1	77	220
1320 G	6	57	40	109	3.6	23	11	459	5.08	133	6	ND	1	231	.6	9	2	5	2.74	.054	3	5	.41	44	.01	4	.33	.01	.19	1	90	180
1321 G	6	42	18	104	1.6	15	10	878	4.18	36	5	ND	1	417	.4	2	2	10	6.18	.049	4	14	1.40	74	.01	4	.35	.01	.19	1	33	130
1322 G	9	56	22	128	1.4	25	13	552	4.80	26	5	ND	1	158	1.1	2	5	9	2.23	.060	3	7	.66	74	.01	2	.38	.01	.21	1	11	120
1323 G	8	53	21	115	1.7	26	11	450	4.06	28	5	ND	1	146	.6	4	2	8	2.06	.053	3	5	.60	66	.01	4	.40	.01	.21	2	21	100
1324 G	4	34	14	140	.1	15	11	510	3.60	20	5	ND	1	144	1.1	7	2	11	2.64	.055	4	3	.61	66	.01	7	.36	.01	.17	1	1	190
1325 G	5	29	18	113	.1	14	10	381	3.64	18	5	ND	1	133	.9	6	3	11	1.86	.062	4	3	.61	56	.01	7	.39	.01	.18	1	2	210
1326 G	2	29	7	86	.3	12	13	554	3.76	12	6	ND	2	138	.3	5	6	15	2.56	.060	6	4	.71	128	.01	5	.40	.02	.18	2	2	160
1327 G	5	30	14	125	.1	16	12	631	3.93	17	5	ND	2	266	1.0	4	2	16	5.77	.053	3	8	.80	152	.01	2	.43	.01	.17	1	1	240
1328 G	3	56	16	107	.3	16	14	471	4.34	20	5	ND	1	145	.4	6	2	14	1.84	.039	3	4	.70	76	.01	5	.40	.02	.20	1	4	440
1329 G	2	20	6	104	.1	11	16	1000	5.33	8	5	ND	2	179	.3	2	2	30	3.69	.085	10	5	1.05	101	.01	3	.52	.02	.15	1	1	240
1330 G	2	29	7	104	.1	12	15	557	4.61	8	5	ND	2	140	.3	2	2	21	2.27	.085	13	3	.83	87	.01	2	.54	.02	.17	1	1	250
1331 G	3	23	7	159	.1	22	23	791	6.17	9	5	ND	2	128	1.2	3	2	43	3.10	.105	9	21	1.14	63	.01	2	2.08	.02	.14	1	3	220
1332 G	3	12	2	128	.1	7	16	1980	6.76	7	5	ND	3	277	1.7	2	2	26	7.95	.087	14	5	2.24	43	.01	2	1.69	.02	.12	1	1	100
1333 G	3	17	2	131	.1	9	21	1113	7.20	8	5	ND	3	121	1.5	2	5	35	3.38	.118	17	5	1.64	49	.01	2	2.54	.02	.16	1	5	90
1334 G	3	14	5	187	.2	7	18	1425	6.32	9	5	ND	3	120	1.0	3	2	30	4.05	.121	16	5	1.62	63	.01	2	2.10	.02	.14	1	2	160
1335 G	3	22	14	151	.1	15	23	993	6.66	5	5	ND	2	91	.9	2	9	42	2.76	.127	11	22	1.37	160	.01	8	2.33	.02	.14	1	2	120
1336 G	3	15	5	150	.1	8	20	941	6.77	3	5	ND	2	87	.6	3	3	33	2.65	.126	14	6	1.34	82	.01	2	2.37	.02	.12	1	1	100
1337 G	4	13	5	126	.1	6	16	1670	6.45	6	5	ND	3	124	.7	2	2	29	4.92	.116	16	6	1.45	89	.01	2	2.10	.02	.13	1	1	80
1338 G	2	24	8	104	.1	7	20	1331	6.41	5	5	ND	3	127	.7	2	4	29	4.49	.111	13	7	1.41	41	.01	2	2.08	.02	.15	1	13	70
1339 G	2	17	2	148	.1	5	16	823	6.82	2	5	ND	2	89	.7	2	2	34	2.44	.123	18	9	1.22	68	.01	2	2.58	.03	.18	1	2	100
1340 G	3	17	6	115	.3	10	23	1182	5.94	15	5	ND	3	164	.8	4	2	26	4.05	.136	11	5	1.05	85	.01	2	1.80	.02	.17	1	3	130
1341 G	4	10	30	67	.3	9	19	1877	5.87	42	5	ND	2	153	.5	4	2	14	6.02	.114	9	2	1.33	47	.01	2	.69	.02	.16	1	5	150
1342 G	8	16	35	114	.6	8	25	2211	7.03	41	5	ND	3	168	1.3	4	6	20	7.55	.108	10	3	1.62	51	.01	2	.89	.02	.16	1	7	240
1343 G	4	13	2	127	.1	7	16	1237	5.69	5	5	ND	2	105	.7	2	2	26	3.57	.148	13	7	1.04	109	.01	2	1.53	.02	.16	1	3	230
1344 G	3	21	5	156	.3	10	20	1204	5.89	11	5	ND	3	102	.5	3	2	28	3.55	.132	14	5	1.06	220	.01	3	1.55	.02	.15	1	1	460
1345 G	2	11	3	76	.1	8	19	903	6.69	2	5	ND	2	78	.3	2	2	31	2.24	.125	18	4	1.04	60	.01	7	2.01	.02	.16	1	1	420
1346 G	5	7	2	54	.1	11	24	1271	6.92	10	5	ND	2	93	.4	2	3	31	3.13	.120	13	4	1.09	112	.01	3	1.66	.02	.16	1	1	310
1347 G	2	13	2	63	.2	10	22	1750	5.98	11	5	ND	3	105	.5	4	2	24	3.87	.139	15	9	1.12	61	.01	2	1.22	.03	.13	1	1	190
1348 G	8	51	33	215	.6	13	33	2081	7.89	73	5	ND	3	145	1.0	4	9	27	7.22	.134	11	2	1.83	63	.01	2	1.16	.02	.16	1	13	400
STANDARD C/AU-R	20	60	39	133	7.1	73	33	1053	3.97	40	19	7	37	53	19.3	16	23	58	.52	.094	38	60	.90	182	.08	39	1.89	.06	.13	12	507	1600

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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	Hg ppb
1349 G	2	26	31	132	.6	10	24	1850	7.27	36	5	ND	2	133	1.1	2	2	22	5.46	.103	10	4	1.79	46	.01	2	1.05	.02	.14	1	7	380
1350 G	2	19	12	100	.2	5	18	909	6.68	10	5	ND	2	78	.3	2	2	29	1.79	.132	17	3	1.09	112	.01	3	1.58	.02	.21	1	17	200
1351 G	3	21	9	180	.3	10	23	857	6.95	32	5	ND	2	87	1.0	2	2	29	2.03	.148	16	3	1.13	61	.01	2	1.64	.02	.20	1	5	250
1352 G	4	13	5	138	.2	5	15	1561	6.26	9	5	ND	2	104	.2	2	2	24	4.20	.105	14	2	1.63	47	.01	2	.97	.02	.15	1	2	120
1353 G	3	16	3	156	.3	7	19	1164	6.66	13	5	ND	2	88	.6	2	2	29	3.18	.116	16	7	1.46	53	.01	8	1.68	.03	.18	1	2	100
1354 G	2	21	7	120	.3	6	19	1056	5.64	9	5	ND	2	92	.8	2	3	26	3.09	.119	15	3	1.32	48	.01	5	1.36	.03	.17	1	2	120
1355 G	4	18	3	111	.1	9	20	1057	6.15	12	5	ND	2	93	.5	2	3	30	3.21	.121	15	4	1.36	43	.01	5	1.46	.02	.16	1	2	130
1356 G	3	16	4	105	.1	6	15	1029	5.40	6	5	ND	2	96	.3	2	2	24	3.44	.099	15	3	1.35	45	.01	2	1.09	.02	.15	1	1	110
1357 G	4	18	7	97	.3	7	14	1194	5.20	7	5	ND	2	114	.6	2	5	23	3.83	.087	12	10	1.28	54	.01	3	.81	.02	.15	1	94	150
1358 G	10	42	24	448	.3	17	16	682	5.04	21	5	ND	1	168	3.0	4	2	17	2.78	.080	5	3	.96	74	.01	5	.66	.01	.21	23	5	710
1359 G	2	19	16	48	.5	11	14	1246	6.01	27	5	ND	2	158	.5	4	2	14	4.33	.049	4	3	1.27	54	.01	3	.37	.01	.17	2	2	250
1360 G	4	30	9	80	.1	9	11	1013	5.85	15	5	ND	1	148	.4	2	4	22	3.59	.053	3	4	1.16	75	.01	8	.42	.02	.16	1	4	240
1361 G	4	27	12	80	.3	9	10	853	4.20	13	5	ND	1	136	.4	2	3	12	3.09	.042	2	6	1.02	67	.01	6	.41	.01	.18	1	2	260
1362 G	3	26	12	79	.2	9	11	669	3.90	15	5	ND	1	116	.5	3	4	12	2.46	.059	3	3	.80	66	.01	5	.43	.02	.19	2	2	210
1363 G	3	21	7	102	.2	7	7	778	3.44	8	5	ND	2	195	.5	2	3	7	4.00	.043	4	4	.98	63	.01	2	.36	.01	.18	1	2	180
1364 G	3	29	14	94	.2	12	12	879	5.02	16	5	ND	1	117	.4	2	3	19	2.30	.083	8	5	.79	72	.01	2	.47	.02	.19	1	5	150
1365 G	8	35	24	144	.6	8	10	913	3.93	10	5	ND	2	239	.7	2	9	11	4.06	.055	7	15	.92	140	.01	5	.40	.02	.19	2	1	190
1366 G	3	16	7	49	.1	6	17	1443	6.49	13	5	ND	2	124	.9	2	4	32	2.75	.122	12	4	1.03	91	.01	4	.66	.03	.17	1	1	180
1367 G	2	17	3	178	.2	7	17	1785	7.73	8	5	ND	2	145	2.0	2	2	33	3.63	.100	12	4	1.32	70	.01	2	.56	.02	.18	1	2	300
1368 G	1	18	4	106	.3	5	18	1570	6.98	10	5	ND	3	162	1.0	2	2	30	3.92	.098	12	3	1.36	83	.01	3	.46	.02	.16	1	1	260
1369 G	2	20	2	89	.2	6	10	1035	3.83	3	5	ND	1	114	.4	2	2	30	2.34	.051	6	14	.75	63	.01	4	1.92	.03	.18	1	1	80
1370 G	2	18	12	102	.3	1	33	921	10.06	33	5	ND	1	200	1.6	2	2	147	3.63	.123	3	1	1.35	32	.02	2	3.10	.05	.08	1	7	500
1371 G	1	15	2	103	.1	1	22	1299	8.08	4	5	ND	1	193	1.5	2	2	172	5.07	.113	3	1	1.40	22	.03	3	3.37	.05	.04	1	1	380
1372 G	1	16	2	60	.1	7	12	539	3.44	6	5	ND	1	117	.5	2	2	22	2.68	.053	8	10	.84	99	.01	3	1.78	.02	.17	1	3	60
1373 G	1	18	7	59	.1	5	8	590	3.11	2	5	ND	1	122	.5	2	2	19	2.89	.045	7	14	.87	121	.01	2	1.77	.02	.19	1	1	50
1374 G	1	15	2	56	.1	4	8	505	2.97	2	5	ND	1	111	.4	2	2	18	2.50	.041	5	7	.83	71	.01	4	1.68	.03	.19	1	1	60
1375 G	1	15	2	63	.2	6	9	316	3.21	2	5	ND	1	73	.4	2	2	20	1.40	.047	6	8	.82	63	.01	4	1.65	.02	.16	1	1	70
1376 G	2	31	11	76	.3	15	17	192	3.76	11	5	ND	1	75	.5	2	2	14	.99	.042	6	8	.71	49	.01	2	1.42	.02	.14	1	3	120
1377 G	3	26	16	71	.4	8	8	449	2.84	4	5	ND	1	298	.2	2	2	16	4.90	.094	5	23	.74	50	.01	3	1.39	.02	.16	2	7	140
1378 G	1	12	11	71	.3	8	9	650	3.61	6	5	ND	2	242	.6	2	2	20	6.38	.135	5	18	1.19	60	.01	5	1.92	.03	.16	1	1	90
1379 G	2	20	17	55	.3	8	9	364	3.12	8	5	ND	1	224	.2	4	3	13	4.48	.110	5	10	.70	57	.01	2	1.32	.02	.16	1	1	130
1380 G	2	13	11	41	.1	4	6	271	2.46	2	5	ND	1	122	.2	2	2	7	2.72	.083	4	4	.55	65	.01	6	1.07	.02	.17	1	1	140
1381 G	2	12	10	35	.1	6	6	238	2.09	3	5	ND	1	151	.3	2	4	6	2.94	.078	4	13	.51	59	.01	3	1.01	.02	.18	2	6	110
1382 G	1	21	17	58	.1	7	8	528	3.12	6	5	ND	1	172	.2	2	2	12	5.28	.108	5	5	.73	65	.01	3	1.34	.02	.18	1	3	130
1383 G	2	6	9	34	.3	5	8	375	2.67	3	5	ND	2	165	.2	2	2	8	4.29	.069	4	7	.66	62	.01	4	1.13	.02	.18	1	21	120
1384 G	2	11	2	37	.1	8	9	530	2.80	2	5	ND	1	446	.2	2	2	10	7.81	.047	5	6	.74	40	.01	3	1.22	.01	.12	1	2	80
STANDARD C/AU-R	19	58	40	131	6.9	72	32	1054	3.97	39	20	6	37	53	19.1	15	21	56	.52	.095	38	56	.90	181	.07	36	1.89	.06	.14	11	493	1400

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	Hg ppb
1385 G	2	16	13	51	.1	9	8	566	2.96	3	5	ND	1	426	.3	2	3	10	6.02	.034	4	6	.70	43	.01	4	1.20	.01	.13	3	5	110
1386 G	2	12	15	47	.1	11	8	433	2.93	2	5	ND	1	243	.3	2	3	9	4.11	.053	4	8	.72	66	.01	6	1.20	.02	.16	1	4	80
1387 G	1	31	30	71	.3	13	14	168	4.77	8	5	ND	1	90	.2	4	2	10	1.41	.036	2	9	.55	63	.01	3	1.11	.01	.18	1	2	220
1388 G	2	23	19	55	.4	12	11	340	3.64	5	5	ND	1	116	.2	2	2	14	2.74	.043	3	9	.70	58	.01	3	1.38	.02	.16	1	4	240
1389 G	2	26	28	71	.2	12	12	372	3.72	7	5	ND	1	138	.2	2	2	15	3.43	.047	3	12	.62	69	.01	3	1.32	.02	.19	1	5	190
1390 G	1	16	10	59	.2	11	10	331	2.32	4	5	ND	1	122	.2	2	2	12	3.22	.051	4	9	.48	71	.01	5	1.12	.02	.19	1	9	100
1391 G	2	12	25	16	.4	9	8	1053	2.47	13	5	ND	1	279	.5	2	2	7	7.48	.048	5	11	.44	73	.01	4	.83	.02	.15	1	1	90
1392 G	1	13	22	28	.3	7	6	440	2.65	5	5	ND	1	167	.2	3	2	8	4.11	.069	3	6	.52	57	.01	7	1.03	.02	.15	1	5	80
1393 G	1	14	25	45	.2	8	6	436	2.91	7	5	ND	1	163	.2	2	2	8	3.89	.065	3	7	.57	75	.01	6	1.12	.02	.14	1	7	100
1394 G	1	13	14	47	.4	6	7	503	2.66	7	5	ND	2	238	.2	4	2	7	5.69	.059	4	5	.59	55	.01	5	1.06	.02	.15	1	6	140
1395 G	2	14	5	47	.3	8	10	601	2.43	2	5	ND	1	247	.2	2	4	5	6.17	.046	3	10	.52	65	.01	2	.91	.02	.15	2	4	330
1396 G	1	14	2	53	.1	9	9	463	2.52	2	5	ND	1	203	.3	2	2	9	4.61	.063	4	11	.69	57	.01	7	1.19	.02	.15	1	4	180
1397 G	1	23	9	57	.3	13	13	377	3.70	8	5	ND	1	239	.6	2	2	12	4.29	.057	3	10	.66	61	.01	5	1.22	.02	.16	1	3	170
1398 G	1	25	18	69	.2	13	11	343	4.06	7	5	ND	1	148	.2	2	2	16	3.23	.056	3	11	.75	61	.01	3	1.41	.02	.16	1	28	120
1399 G	2	20	15	72	.2	12	10	370	3.99	9	5	ND	1	155	.2	2	2	14	3.41	.055	3	16	.78	71	.01	5	1.44	.02	.17	1	3	100
1400 G	2	26	17	73	.4	11	11	379	4.35	11	5	ND	1	161	.4	5	2	15	3.50	.050	3	10	.81	61	.01	5	1.47	.02	.15	1	7	130
1401 G	1	23	18	68	.4	10	10	401	4.29	9	5	ND	1	159	.5	3	3	17	3.47	.049	3	9	.88	66	.01	6	1.62	.02	.17	1	3	110
1402 G	1	24	17	70	.3	13	13	377	4.26	11	5	ND	1	144	.2	2	2	18	3.14	.045	3	10	.86	71	.01	5	1.68	.02	.18	1	6	130
1403 G	2	16	4	58	.1	8	9	353	3.79	11	5	ND	1	189	.6	4	2	14	3.31	.121	5	15	.85	70	.01	7	1.59	.02	.17	1	7	60
1404 G	2	20	13	74	.2	12	13	326	3.94	9	5	ND	1	163	.3	2	2	13	2.96	.086	4	9	.75	86	.01	2	1.51	.02	.19	1	9	100
1405 G	2	27	11	71	.3	11	11	276	4.29	10	5	ND	1	138	.6	2	2	15	2.33	.050	3	10	.81	71	.01	5	1.58	.01	.19	1	5	120
1406 G	2	37	20	82	.1	12	12	294	4.72	11	5	ND	1	139	.3	2	5	17	2.33	.046	3	9	.89	77	.01	7	1.75	.02	.21	1	9	110
1407 G	2	32	14	84	.3	14	11	258	5.48	13	5	ND	1	118	.3	2	2	17	1.83	.060	3	13	1.10	72	.01	3	1.88	.02	.18	1	5	100
1408 G	2	28	13	79	.2	11	12	171	4.86	12	5	ND	1	98	.5	2	3	14	1.20	.060	3	10	.96	39	.01	3	1.63	.01	.16	1	8	90
1409 G	1	19	13	55	.6	7	8	823	3.10	9	5	ND	2	828	.5	2	2	9	12.42	.035	3	6	.61	56	.01	3	1.04	.01	.14	1	11	70
1410 G	1	28	22	72	.8	11	10	400	4.55	12	5	ND	1	309	.9	2	2	12	4.35	.073	3	7	.80	63	.01	5	1.42	.01	.18	1	14	90
1411 G	2	20	12	74	.4	7	6	821	2.66	11	5	ND	1	870	.4	2	2	8	11.89	.056	3	12	.58	121	.01	6	1.00	.01	.14	1	11	60
1412 G	2	28	25	65	1.0	13	10	368	3.85	17	5	ND	1	163	.2	3	2	11	2.50	.080	4	7	.75	51	.01	3	1.26	.01	.18	1	15	40
1413 G	3	21	19	53	1.4	12	12	755	3.38	15	5	ND	2	479	.2	4	2	9	7.32	.082	3	10	.64	68	.01	2	1.02	.02	.19	4	16	60
1414 G	1	24	24	71	.7	10	11	519	3.98	17	5	ND	1	421	1.2	3	2	15	5.59	.047	3	9	.82	87	.01	3	1.48	.02	.18	1	15	40
1415 G	2	28	4	73	.2	12	13	217	3.66	8	5	ND	1	86	.2	2	3	16	1.37	.052	5	17	.79	77	.01	6	1.53	.02	.20	1	7	50
1416 G	1	17	2	58	.1	9	8	163	2.50	4	5	ND	1	85	.3	2	2	15	1.24	.081	8	10	.64	88	.01	4	1.29	.02	.18	1	2	30
1417 G	1	18	2	61	.2	7	6	1040	2.68	3	5	ND	2	831	.2	2	2	11	13.48	.042	3	7	.75	115	.01	3	1.18	.01	.12	1	4	40
1418 G	2	37	6	81	.2	13	14	199	4.65	13	5	ND	1	118	1.3	2	2	22	1.44	.045	4	9	1.06	69	.01	2	1.81	.02	.17	1	1	70
1419 G	2	38	12	84	.2	12	12	164	4.47	10	5	ND	1	73	.2	2	2	21	.86	.038	4	11	1.08	64	.01	2	1.82	.01	.18	1	2	90
1420 G	2	40	8	90	.1	12	12	245	5.04	13	5	ND	1	116	.2	2	2	20	1.76	.041	3	8	1.15	58	.01	3	1.84	.01	.15	1	16	100
STANDARD C/AU-R	19	58	39	132	6.9	72	32	1055	3.97	39	20	7	36	53	19.2	15	22	56	.52	.098	37	57	.90	180	.07	37	1.89	.06	.14	11	499	1500

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	Hg ppb
1421 G	2	41	19	90	.2	11	10	227	5.31	11	5	ND	1	106	.5	4	2	19	1.24	.050	4	10	1.16	58	.01	3	1.84	.01	.16	1	4	80
1422 G	1	50	17	105	.3	11	12	166	4.58	11	5	ND	1	86	.2	2	2	19	.85	.034	4	10	1.13	58	.01	2	1.80	.01	.16	1	4	90
1423 G	1	43	13	95	.3	12	10	202	4.56	10	5	ND	1	107	.2	2	2	17	1.32	.069	4	13	1.10	59	.01	2	1.73	.01	.16	1	4	80
1424 G	1	19	17	53	.2	8	7	340	3.60	8	8	ND	1	227	.2	2	2	9	3.68	.078	4	10	.87	55	.01	2	1.16	.01	.14	1	6	70
1425 G	1	14	15	52	.2	10	8	427	3.16	7	5	ND	1	192	.2	2	3	8	3.62	.085	4	13	.98	74	.01	3	1.08	.01	.15	1	2	50
1426 G	2	18	9	57	.3	11	10	1088	4.13	10	5	ND	1	299	.2	2	2	12	4.75	.057	5	10	1.87	91	.01	2	.89	.01	.17	1	4	20
1427 G	2	21	14	88	.4	16	12	1786	5.19	14	5	ND	1	164	.2	4	2	42	3.38	.073	5	27	1.77	62	.01	2	2.05	.01	.13	1	4	30
1428 G	2	40	11	85	.6	59	30	1960	7.50	41	5	ND	1	233	.5	5	2	117	4.61	.080	5	79	3.03	98	.01	2	3.62	.02	.08	1	3	20
1429 G	1	35	3	93	.6	60	29	1573	8.13	34	5	ND	1	228	.6	4	2	154	4.35	.083	8	85	3.08	113	.01	3	3.70	.03	.07	1	1	10
1430 G	1	36	7	92	.4	59	28	1343	8.13	29	5	ND	1	167	.6	5	2	145	3.61	.076	8	77	3.07	79	.02	4	3.61	.05	.10	1	2	20
1431 G	1	24	17	53	.7	27	17	2707	6.57	31	5	ND	1	373	.5	6	2	67	7.77	.072	5	41	2.11	68	.01	4	2.51	.01	.13	1	8	40
1432 G	2	29	20	71	1.5	31	19	1763	6.95	64	5	ND	1	95	.3	8	2	52	2.47	.081	5	34	2.09	45	.01	2	2.17	.01	.17	1	19	60
1433 G	2	74	18	136	1.4	20	13	851	3.74	32	5	ND	2	69	.2	3	3	13	1.18	.068	5	9	.78	49	.01	3	.98	.01	.22	2	17	70
1434 G	7	27	29	113	1.2	27	11	723	5.06	89	5	ND	1	73	.3	3	2	16	.97	.069	4	9	.71	53	.01	4	1.03	.01	.24	2	150	60
1435 G	6	26	19	129	1.0	22	12	1445	4.56	66	5	ND	1	49	.2	2	2	26	1.70	.076	5	16	1.28	45	.01	2	1.31	.01	.19	1	30	50
1436 G	2	22	13	94	.8	15	13	2569	5.40	36	5	ND	1	60	.2	6	2	30	3.58	.076	6	16	2.41	36	.01	2	1.64	.01	.16	1	28	70
1437 G	1	49	13	78	1.5	51	24	2492	7.51	45	5	ND	1	49	.4	10	2	82	3.14	.086	6	55	3.06	36	.01	3	2.78	.01	.15	1	24	180
1438 G	2	51	25	101	1.6	43	25	1930	7.05	49	5	ND	1	42	.3	7	2	72	2.27	.094	5	49	2.46	43	.01	2	2.54	.01	.17	1	16	200
1439 G	8	55	16	158	1.4	34	12	1067	5.43	27	5	ND	1	54	.5	3	2	40	1.27	.061	5	21	1.45	28	.01	2	1.75	.01	.16	1	12	60
1440 G	4	50	21	141	1.0	25	11	1233	5.37	54	5	ND	1	44	.2	3	2	43	1.37	.057	5	21	1.66	57	.01	4	1.90	.01	.17	1	30	40
1441 G	1	38	5	95	1.1	45	26	2182	7.49	38	5	ND	1	61	.5	4	2	96	3.06	.083	6	69	3.13	146	.01	2	2.93	.01	.13	1	4	40
1442 G	6	37	11	89	1.1	49	24	2272	7.71	50	5	ND	1	135	.6	5	2	112	4.52	.075	7	74	3.62	39	.01	2	2.85	.02	.08	1	9	30
1443 G	1	40	7	84	.5	59	30	1262	7.46	18	5	ND	1	211	.8	3	2	148	5.30	.091	9	91	2.81	73	.01	2	3.32	.04	.09	1	4	10
1444 G	1	42	13	96	.4	63	30	1159	8.14	2	5	ND	1	166	.7	2	2	146	5.35	.087	8	92	3.16	74	.01	2	3.81	.07	.09	1	1	10
1445 G	1	42	2	102	.4	72	33	923	8.45	6	5	ND	1	156	1.0	3	2	173	4.10	.095	10	98	2.82	150	.09	4	3.95	.19	.09	1	1	10
1446 G	1	43	14	97	.5	69	33	888	8.12	5	7	ND	1	146	1.3	6	2	179	3.83	.087	9	95	2.81	141	.11	6	3.74	.18	.10	1	1	5
1447 G	1	42	13	99	.6	65	32	1161	8.22	11	5	ND	1	172	.8	6	2	167	4.78	.084	9	94	2.64	133	.08	3	3.68	.13	.12	1	12	5
1448 G	1	50	10	122	.8	62	33	1394	8.18	43	5	ND	1	118	.5	4	2	142	2.70	.093	7	114	2.89	55	.01	2	3.68	.02	.14	1	4	5
1449 G	1	27	18	94	1.1	62	29	1932	8.72	34	5	ND	1	99	.6	6	2	145	3.13	.103	5	126	3.50	32	.01	2	3.69	.03	.13	1	1	20
1450 G	1	48	12	136	1.6	70	37	2264	7.63	51	5	ND	1	107	.6	5	2	128	4.33	.121	6	104	3.45	35	.01	2	3.22	.03	.15	1	21	60
1451 G	1	33	30	139	2.0	96	36	2260	8.19	156	5	ND	1	64	.8	7	2	106	3.72	.096	5	94	3.12	41	.01	3	2.75	.03	.18	1	33	50
1452 G	1	33	15	96	1.6	82	37	2125	8.71	69	5	ND	1	74	.7	5	2	136	3.34	.155	7	113	3.39	35	.01	4	3.52	.03	.14	1	9	40
1453 G	1	10	13	88	.4	9	10	2621	4.98	16	5	ND	1	75	.5	4	2	30	4.11	.070	8	16	2.34	51	.01	2	1.60	.01	.16	1	3	40
1454 G	2	23	24	144	.6	10	12	2569	5.89	12	5	ND	1	52	.3	3	2	37	3.72	.115	10	16	2.23	53	.01	2	1.75	.01	.20	1	11	30
1455 G	1	24	14	71	.7	7	15	3855	8.12	13	5	ND	1	91	.8	2	2	42	6.07	.109	11	21	3.10	38	.01	2	1.91	.02	.16	1	14	20
1456 G	1	24	17	77	.6	9	15	2493	8.78	9	5	ND	1	46	1.2	3	2	50	3.42	.126	9	20	2.29	55	.01	2	2.29	.01	.18	1	9	20
STANDARD C/AU-R	20	59	43	133	7.4	72	32	1054	3.97	40	15	7	39	52	18.6	15	21	58	.51	.099	39	61	.92	187	.08	36	1.92	.06	.14	12	505	1600

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	Hg ppb
1457 G	1	15	6	76	.5	11	22	2138	6.71	21	5	ND	1	33	.2	3	7	39	3.05	.147	9	12	1.98	46	.01	3	1.98	.01	.20	1	17	30
1458 G	1	14	8	93	.3	10	15	1966	5.35	8	5	ND	1	33	.7	2	2	30	2.81	.149	10	9	1.66	43	.01	2	1.67	.01	.23	1	6	20
1459 G	6	50	37	259	1.3	11	24	2330	13.14	22	5	ND	1	27	1.7	4	2	46	2.26	.148	7	14	1.98	27	.01	2	2.64	.01	.18	1	28	80
1460 G	1	14	10	87	.4	8	21	2205	5.41	22	5	ND	1	37	.3	2	2	25	3.23	.155	9	7	1.72	50	.01	2	1.47	.01	.24	1	10	20
1461 G	1	18	18	86	.6	9	19	1842	6.32	18	5	ND	1	31	.4	3	3	32	2.53	.155	8	7	1.59	49	.01	2	1.76	.01	.25	1	13	30
1462 G	1	19	7	112	.6	9	19	2093	6.68	11	5	ND	1	32	1.1	3	2	35	2.71	.149	8	9	1.75	50	.01	4	1.91	.01	.23	1	10	40
1463 G	1	19	3	73	.4	9	16	2135	6.76	5	5	ND	1	34	.4	2	2	32	2.70	.150	8	10	1.68	45	.01	2	1.79	.01	.22	1	8	50
1464 G	2	30	8	54	.6	10	23	1679	6.84	12	5	ND	1	85	.4	3	2	37	2.20	.145	5	9	1.49	46	.01	2	2.11	.01	.21	1	15	20
1465 G	3	37	23	112	1.1	13	32	1404	11.30	22	5	ND	1	44	1.1	4	2	35	1.51	.129	4	9	1.20	33	.01	2	1.90	.01	.21	1	25	50
1466 G	1	36	12	129	1.1	8	23	1888	8.83	9	5	ND	1	30	1.0	3	2	43	1.71	.130	5	6	1.63	34	.01	2	2.32	.01	.19	1	33	40
1467 G	2	35	17	79	.7	12	21	1552	9.06	12	5	ND	1	27	.5	2	3	32	1.52	.140	5	9	1.35	43	.01	2	1.71	.01	.24	1	18	50
1468 G	4	17	2	213	.5	7	17	2250	7.10	10	7	ND	1	34	1.2	2	2	38	2.52	.128	7	7	1.82	42	.01	2	2.02	.01	.23	1	15	50
1469 G	3	28	20	86	1.2	10	25	1803	9.80	16	5	ND	1	27	.9	5	2	46	1.73	.127	5	8	1.54	27	.01	2	2.18	.01	.22	1	37	70
STANDARD C/AU-R	19	59	39	130	7.1	72	32	1052	3.96	40	19	7	37	53	19.0	15	22	55	.52	.096	37	57	.89	180	.07	37	1.86	.06	.14	11	498	1300

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

GEOCHEMICAL ANALYSIS CERTIFICATE

Granges Inc. PROJECT UNUK R.PROJECT 134 File # 90-3876

2300 - 885 W. Georgia St., Vancouver BC V6C 3E8

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	Hg ppb
1470 G	1	21	14	27	.3	12	23	1339	3.65	26	5	ND	1	42	.4	2	2	10	2.26	.139	7	10	.86	44	.01	3	.57	.01	.27	1	7	50
1471 G	1	22	27	20	.5	14	25	1415	3.65	32	5	ND	1	37	.8	2	2	7	2.29	.129	6	7	.87	36	.01	4	.43	.01	.23	1	11	30
1472 G	2	16	13	338	.4	9	15	1082	2.50	48	5	ND	1	37	2.0	3	4	8	1.86	.130	6	7	.69	43	.01	3	.51	.01	.26	1	11	130
1473 G	5	20	45	75	1.6	6	12	1860	9.49	3675	5	ND	1	141	.2	44	2	9	3.66	.068	2	11	.89	21	.01	2	.50	.01	.19	1	806	140
1474 G	1	8	59	32	1.3	8	11	1682	8.41	4213	5	ND	1	108	.5	41	2	5	3.49	.083	3	9	.88	27	.01	2	.32	.01	.15	1	767	100
1475 G	3	18	68	334	1.3	6	11	1239	7.85	996	5	ND	1	72	1.7	9	2	5	2.45	.098	4	8	.71	27	.01	2	.39	.01	.18	1	416	120
1476 G	1	19	209	45	3.8	6	12	1871	17.70	8159	5	ND	1	109	.2	80	2	7	3.23	.047	2	13	.73	12	.01	2	.31	.01	.13	1	2399	150
1477 G	1	13	18	132	.6	9	15	1233	5.57	549	5	ND	1	137	.9	3	2	10	2.89	.117	4	4	.59	43	.01	2	.40	.01	.23	1	200	70
1478 G	1	26	13	120	1.4	12	22	851	5.81	74	5	ND	1	66	.5	3	3	12	1.19	.115	5	10	.72	36	.01	3	.44	.01	.22	1	34	90
1479 G	1	20	5	120	.3	9	19	1233	7.45	25	5	ND	1	37	.2	6	2	31	.90	.122	6	11	1.13	34	.01	2	.59	.01	.21	1	6	80
1480 G	1	48	16	44	1.4	10	21	1458	10.81	38	5	ND	1	44	.2	11	2	31	1.37	.114	5	16	1.28	17	.01	2	.70	.01	.18	2	22	60
1481 G	1	17	10	71	.6	8	19	974	5.28	24	5	ND	1	56	.5	6	4	16	1.28	.112	7	8	1.16	50	.01	2	.46	.01	.21	2	11	40
1482 G	1	8	5	38	.4	10	19	1050	4.88	23	5	ND	1	148	.3	5	4	11	2.86	.124	6	10	1.20	53	.01	2	.40	.01	.20	1	12	50
1483 G	1	35	36	288	1.7	5	15	982	6.26	2003	5	ND	1	116	1.0	16	6	10	2.41	.097	3	8	1.00	25	.01	2	.41	.01	.20	1	376	160
1484 G	1	10	38	134	.9	8	8	2525	4.51	836	5	ND	1	177	1.0	16	2	5	5.19	.051	4	5	3.04	55	.01	2	.33	.01	.19	1	161	110
1485 G	1	20	11	88	.6	14	7	2012	3.72	59	5	ND	1	196	1.1	7	5	7	4.09	.047	3	10	1.99	72	.01	3	.46	.01	.24	1	43	100
1486 G	1	18	7	80	.5	6	17	2340	7.25	29	5	ND	1	138	.2	7	2	67	2.73	.093	5	11	2.32	54	.01	2	1.26	.01	.18	1	13	90
1487 G	1	63	44	133	1.5	11	14	1163	7.43	117	5	ND	1	142	.4	12	2	25	2.45	.082	2	11	1.73	25	.01	2	.43	.01	.16	1	87	130
1488 G	1	11	18	78	.3	6	10	2073	5.62	92	5	ND	1	265	.7	7	2	34	3.88	.054	3	9	2.16	63	.01	2	.29	.01	.07	1	31	110
1489 G	1	17	44	192	1.0	6	16	1255	6.69	413	5	ND	1	154	1.1	10	6	30	2.41	.085	3	10	1.37	30	.01	2	.32	.01	.10	1	137	180
1490 G	2	38	21	521	.9	11	7	4059	7.55	256	5	ND	1	420	1.9	27	2	16	8.62	.035	4	11	1.84	51	.01	2	.21	.01	.08	1	83	1600
1491 G	1	6	37	148	.9	4	9	1202	3.76	595	5	ND	1	109	1.8	5	2	9	2.43	.045	2	7	.65	31	.01	4	.16	.01	.04	1	523	120
1492 G	1	14	57	235	1.1	8	9	3775	7.81	587	5	ND	1	320	.2	17	3	19	7.48	.040	5	11	2.47	40	.01	2	.17	.01	.06	1	406	370
1493 G	1	38	12	128	1.1	7	4	6049	7.43	206	5	ND	1	432	.6	16	2	9	12.30	.020	6	8	3.91	77	.01	2	.18	.01	.06	1	107	600
1494 G	9	40	17	175	.7	27	12	1029	4.15	41	5	ND	1	147	1.4	4	2	14	2.42	.075	4	9	.98	62	.01	4	.41	.01	.17	1	19	150
1495 G	4	35	21	154	.8	20	11	1089	4.53	19	5	ND	1	170	.9	4	2	16	2.53	.068	4	10	1.01	78	.01	6	.38	.01	.17	1	8	140
1496 G	2	30	24	78	.9	15	12	520	4.31	45	6	ND	1	75	1.1	4	2	14	1.27	.064	5	10	.79	50	.01	7	.60	.01	.29	2	19	110
1497 G	3	61	13	180	.8	36	18	1162	6.49	38	5	ND	1	83	1.0	4	2	81	2.42	.083	5	57	1.48	51	.01	2	1.53	.01	.15	1	162	140
STANDARD C/AU-R	18	60	36	134	7.0	72	32	1056	3.97	41	20	7	38	53	19.4	11	22	56	.52	.102	38	61	.91	181	.07	39	1.89	.06	.12	11	483	1500

AP 7

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: CORE AU** ANALYSIS BY FA\ICP FROM 10 GM SAMPLE. HG ANALYSIS BY FLAMELESS AA.

DATE RECEIVED: AUG 27 1990 DATE REPORT MAILED: Aug 31/90. SIGNED BY. C. Leong .D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

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

GEOCHEMICAL ANALYSIS CERTIFICATE

Granges Inc. PROJECT UNUK R. 134 File # 90-4140 Page 1

2300 - 885 W. Georgia St., Vancouver BC V6C 3E8

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	Hg ppb
1498 G	2	36	12	76	.6	18	14	1486	5.72	31	5	ND	1	80	.8	2	2	62	3.16	.074	7	26	1.68	37	.01	2	1.96	.02	.10	1	66	30
1499 G	2	31	8	101	.7	19	16	1455	5.99	18	5	ND	1	60	.6	5	2	66	2.77	.094	8	28	1.82	44	.01	4	1.99	.02	.11	1	29	20
1500 G	3	25	17	89	.9	20	16	1396	5.78	26	5	ND	1	59	.9	4	2	57	2.67	.085	8	24	1.60	40	.01	4	1.75	.02	.12	1	19	80
1501 G	4	29	16	102	.7	15	19	1186	5.01	30	5	ND	1	62	.3	4	2	47	2.18	.075	7	16	1.32	45	.01	3	1.46	.02	.13	1	31	60
1502 G	2	13	5	96	.4	12	12	1322	4.66	7	5	ND	1	49	.7	2	2	48	2.30	.076	10	16	1.47	36	.01	2	1.78	.02	.12	1	16	50
1503 G	4	30	10	118	.6	7	17	1401	6.07	15	5	ND	1	67	1.1	2	2	68	2.86	.143	7	8	1.37	58	.01	6	1.97	.02	.09	1	37	70
1504 G	1	29	13	95	.6	11	14	1565	6.50	8	5	ND	1	79	.8	2	2	65	3.11	.162	9	5	1.53	45	.01	2	2.19	.02	.13	1	51	50
1505 G	1	19	7	188	.3	7	12	1836	6.02	12	5	ND	1	110	1.1	2	5	93	4.19	.167	8	6	1.40	22	.01	2	2.47	.03	.05	1	49	70
1506 G	5	19	8	169	.1	11	13	1494	5.16	17	5	ND	1	71	.9	2	2	62	2.98	.155	11	10	1.55	48	.01	2	2.30	.01	.14	1	9	60
1507 G	1	10	5	86	.2	25	16	1109	4.66	15	5	ND	1	54	.8	2	2	74	2.65	.033	5	26	1.36	29	.01	4	2.11	.01	.10	1	7	40
1508 G	28	66	8	113	2.5	55	30	2082	7.36	32	5	ND	1	71	.4	3	4	64	3.44	.044	4	32	1.74	42	.01	2	2.42	.01	.11	1	178	120
1509 G	1	9	8	170	.3	16	10	1130	3.48	6	5	ND	1	57	.4	3	4	32	2.55	.031	7	19	1.03	32	.01	2	1.46	.02	.12	1	10	90
1510 G	3	23	15	76	.8	13	15	2043	6.95	37	5	ND	1	69	.9	5	2	58	3.92	.074	9	14	2.00	32	.01	2	2.64	.02	.11	1	27	40
1511 G	12	14	14	104	.6	20	11	1234	6.16	38	5	ND	1	48	1.1	3	2	53	2.09	.069	5	17	1.42	37	.01	2	2.18	.01	.10	1	18	30
1512 G	3	36	7	87	1.2	27	24	1466	7.86	13	5	ND	1	39	.3	2	2	103	1.63	.051	4	31	1.78	35	.01	2	2.87	.02	.10	1	10	40
1513 G	4	33	5	106	1.0	26	22	1359	6.63	13	5	ND	1	29	1.1	3	2	91	1.11	.056	5	28	1.92	31	.01	2	2.72	.01	.11	1	5	50
1514 G	6	23	26	99	1.0	18	24	1413	6.19	21	5	ND	1	49	.8	4	2	67	1.41	.081	6	24	1.61	34	.01	2	2.45	.02	.13	1	23	40
1515 G	4	19	17	104	.7	13	14	1250	6.01	34	5	ND	1	50	.5	3	2	40	1.66	.066	6	12	1.36	38	.01	2	1.94	.02	.14	1	13	60
1516 G	1	136	12	52	2.1	9	20	3381	8.67	15	5	ND	1	65	1.4	2	2	57	4.21	.156	12	10	2.68	20	.01	3	2.83	.03	.06	1	27	80
1517 G	3	42	16	136	1.3	22	24	1775	7.75	29	6	ND	1	46	1.3	4	2	62	2.04	.112	9	15	1.69	48	.01	5	2.69	.01	.14	2	30	60
1518 G	1	30	2	55	.6	8	17	2010	6.34	10	5	ND	1	59	.2	2	2	56	2.54	.130	12	12	1.53	59	.01	2	2.44	.02	.15	1	1	40
1519 G	1	17	5	167	.2	8	18	1625	6.02	18	5	ND	1	51	.9	2	2	51	2.82	.134	11	11	1.15	45	.01	3	2.34	.02	.16	1	3	40
1520 G	3	18	2	126	.2	7	17	1594	6.38	28	5	ND	1	49	.9	2	2	50	2.92	.137	11	12	1.13	38	.01	2	2.48	.02	.19	1	1	50
1521 G	10	21	13	182	.4	9	18	1799	6.35	57	5	ND	1	68	.7	2	2	53	3.53	.136	11	11	1.15	66	.01	2	2.52	.02	.18	1	11	60
1522 G	1	12	10	171	.3	6	15	1647	6.33	13	5	ND	1	58	.9	2	2	52	3.50	.122	10	9	1.16	37	.01	2	2.41	.01	.14	1	3	50
1523 G	2	13	42	225	.3	10	23	1699	7.16	64	8	ND	2	68	1.6	2	2	55	3.35	.126	10	11	1.15	45	.01	3	2.51	.02	.15	1	13	100
1524 G	1	24	9	129	.4	8	16	1817	6.83	15	5	ND	1	33	.8	2	2	50	2.54	.118	8	8	1.78	36	.01	2	2.20	.02	.15	2	3	40
1525 G	1	20	2	49	.4	4	11	2587	4.86	9	5	ND	1	177	1.0	2	2	35	5.59	.109	7	7	1.78	49	.01	2	1.64	.01	.14	1	3	30
1526 G	1	25	6	34	.6	7	17	2065	6.67	10	5	ND	1	36	.6	2	2	46	3.31	.119	9	10	2.10	30	.01	2	2.13	.01	.14	1	1	20
1527 G	3	19	11	99	.6	11	18	1853	6.23	21	5	ND	1	72	.9	3	2	49	3.30	.096	8	9	1.76	42	.01	2	2.04	.02	.14	2	2	30
1528 G	7	14	14	65	.5	14	15	1379	5.66	15	5	ND	1	34	.2	4	2	51	2.12	.088	7	13	1.53	42	.01	2	2.02	.02	.17	1	2	20
1529 G	1	27	5	69	.4	6	17	2575	7.47	28	5	ND	1	55	.8	2	2	48	4.20	.101	8	7	2.25	31	.01	2	2.13	.02	.12	1	1	90
1530 G	2	16	2	210	.3	7	12	1986	5.58	17	5	ND	1	59	1.2	2	3	48	3.47	.109	10	9	1.99	51	.01	2	2.09	.02	.14	1	2	40
1531 G	1	18	8	157	.6	5	14	1711	6.44	25	5	ND	1	53	1.1	3	2	53	3.13	.108	8	8	1.92	31	.01	2	2.24	.02	.13	1	1	80
1532 G	1	21	2	68	.5	4	14	1475	6.20	11	5	ND	1	29	.6	2	2	48	2.76	.111	9	8	1.88	38	.01	3	2.10	.02	.13	1	1	20
1533 G	3	14	3	117	.5	12	14	1849	5.39	14	5	ND	1	55	1.1	2	2	44	3.43	.093	9	10	1.81	33	.01	2	2.03	.02	.15	1	2	40
STANDARD C/AU-R	19	59	40	130	6.9	69	31	1053	3.97	39	20	7	39	55	18.9	15	21	56	.52	.097	39	57	.90	181	.07	38	1.89	.06	.14	11	487	1500

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: P1-14 CORE P15 ROCK AU** ANALYSIS BY FA\ICP FROM 10 GM SAMPLE. HG ANALYSIS BY FLAMELESS AA.

DATE RECEIVED: SEP 4 1990 DATE REPORT MAILED: Sept 12/90. SIGNED BY: D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

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

GEOCHEMICAL ANALYSIS CERTIFICATE

Granges Inc. PROJECT UNUK R.PROJECT 134 File # 90-4061 Page 1

2300 - 885 W. Georgia St., Vancouver BC V6C 3E8

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	Hg ppb
1537 G	9	65	33	133	1.7	27	13	453	5.71	56	5	ND	1	23	.2	4	2	23	.43	.050	3	9	1.01	39	.01	2	1.80	.01	.22	1	13	40
1538 G	12	56	24	133	1.8	26	11	1144	4.14	34	5	ND	1	35	.6	5	2	24	1.68	.056	6	9	1.50	55	.01	2	1.82	.01	.19	1	10	80
1539 G	12	58	26	137	2.2	29	12	529	4.98	44	5	ND	1	24	.3	6	2	23	.50	.052	4	9	1.11	46	.01	2	1.79	.01	.19	1	10	90
1540 G	10	64	39	131	2.3	25	14	888	5.95	83	5	ND	1	36	.3	8	2	29	1.17	.093	5	7	1.25	26	.01	5	1.81	.01	.18	1	18	80
1541 G	2	31	6	84	.4	8	17	2490	6.71	20	5	ND	4	41	.6	3	3	51	3.41	.124	9	10	2.24	58	.01	2	2.33	.02	.13	2	5	70
1542 G	3	28	18	196	1.3	14	14	1478	4.06	38	5	ND	1	37	.8	4	2	24	2.16	.067	5	8	1.37	53	.01	2	1.51	.01	.19	1	7	80
1545 G	5	19	15	146	.7	16	9	1164	3.92	21	5	ND	5	26	.4	2	2	20	1.77	.045	10	9	1.50	64	.01	2	1.66	.01	.16	2	9	110
1546 G	15	57	17	170	.6	30	11	712	4.55	31	5	ND	6	22	.7	4	2	30	.72	.079	6	11	1.21	89	.01	2	1.90	.01	.17	4	9	90
1547 G	7	33	43	106	2.8	31	16	556	4.97	73	5	ND	1	27	.4	6	2	20	.74	.049	4	9	.71	35	.01	5	1.30	.01	.21	1	23	120
1548 G	3	40	20	121	1.8	16	15	942	4.67	33	5	ND	1	23	.4	5	4	29	1.02	.049	6	10	1.21	45	.01	2	1.74	.01	.16	1	13	100
1549 G	3	37	6	130	1.6	14	14	1300	3.93	19	5	ND	1	30	.5	3	2	31	1.63	.049	8	12	1.44	46	.01	4	1.77	.01	.15	1	8	80
1550 G	2	35	15	88	.2	11	13	1383	5.70	17	5	ND	6	31	.5	2	2	51	1.74	.086	7	14	1.70	67	.01	2	2.29	.02	.11	4	10	90
1551 G	12	57	15	164	.6	26	12	580	4.96	32	5	ND	5	28	.4	4	2	31	.63	.065	4	12	1.17	77	.01	5	2.00	.01	.16	3	9	100
1552 G	8	42	16	137	1.1	19	9	1007	4.10	24	5	ND	1	101	.2	4	2	29	2.41	.059	4	10	1.11	40	.01	2	1.76	.02	.14	1	10	80
1553 G	5	57	17	137	1.0	24	12	481	5.02	33	5	ND	1	49	.6	5	4	27	1.21	.066	4	10	.97	36	.01	2	2.01	.01	.22	1	8	110
1554 G	4	50	26	125	.3	22	11	569	5.46	38	5	ND	5	58	.3	4	2	26	1.83	.114	5	11	.94	76	.01	3	1.90	.01	.18	2	8	90
1555 G	4	38	15	114	.9	25	10	654	4.77	39	5	ND	1	66	.2	4	3	26	2.34	.105	6	12	.90	65	.01	3	1.82	.01	.20	1	5	120
1556 G	6	51	23	144	1.0	21	10	504	4.49	32	5	ND	1	54	.5	4	2	23	1.57	.069	4	8	.90	70	.01	2	1.77	.01	.19	1	5	100
1557 G	6	32	15	90	.7	20	9	588	3.75	27	5	ND	1	62	.3	5	2	22	2.14	.072	5	9	.80	74	.01	2	1.63	.02	.19	1	7	90
1558 G	5	58	24	165	.9	21	10	891	4.90	38	5	ND	1	74	.4	3	5	23	2.54	.064	5	8	1.09	51	.01	3	1.82	.01	.21	1	7	120
1559 G	5	43	22	110	.8	21	11	538	4.70	31	5	ND	1	55	.5	3	2	24	1.60	.071	5	9	.93	54	.01	4	1.88	.01	.23	1	8	100
1560 G	6	42	18	109	.8	23	11	370	4.58	31	5	ND	1	42	.2	4	3	22	.77	.070	4	9	.88	65	.01	3	1.76	.01	.19	1	4	80
1561 G	8	54	22	145	1.0	25	12	332	5.13	34	5	ND	1	40	.8	4	2	23	.71	.068	4	9	.88	44	.01	2	1.83	.01	.22	1	8	70
1562 G	7	56	18	133	1.0	22	12	374	4.93	31	5	ND	1	43	.4	4	3	26	.96	.065	4	10	.83	56	.01	4	1.71	.01	.16	1	7	50
1563 G	7	59	26	89	1.2	25	11	671	5.15	38	5	ND	1	107	.4	3	8	25	1.85	.060	3	10	.85	64	.01	2	1.78	.01	.21	1	11	60
1564 G	5	63	14	168	1.1	23	12	385	5.05	31	5	ND	1	60	.2	3	2	24	.81	.064	4	9	.85	61	.01	6	1.85	.01	.21	1	4	80
1565 G	9	43	14	228	1.0	28	14	611	5.46	28	5	ND	1	79	1.4	2	2	35	2.38	.084	6	10	.94	63	.01	4	2.04	.01	.19	1	8	130
1566 G	8	42	11	208	.2	23	14	682	4.96	26	5	ND	6	85	1.0	5	2	32	2.91	.069	7	7	.89	75	.01	7	1.81	.01	.14	2	9	120
2033 G	7	11	29	345	2.3	10	8	1951	5.18	424	5	ND	1	142	1.4	12	2	19	3.17	.106	8	6	.74	46	.01	2	1.17	.01	.12	1	43	510
2034 G	4	4	11	125	.8	1	9	1607	5.14	14	5	ND	1	40	.2	3	2	31	1.30	.136	13	2	1.02	62	.01	5	1.90	.02	.12	1	6	220
2035 G	4	4	11	110	2.1	6	8	4949	4.30	81	5	ND	1	30	.2	8	2	13	1.68	.126	11	4	.66	55	.01	2	.92	.01	.19	1	32	350
2036 G	4	12	43	115	4.8	4	9	1940	5.76	105	5	ND	4	57	.5	14	2	10	1.68	.120	9	2	.47	44	.01	5	.66	.01	.14	2	79	620
2037 G	6	12	49	148	7.3	6	10	978	7.47	207	5	ND	4	38	.5	21	2	5	1.42	.112	8	5	.49	43	.01	3	.51	.01	.18	3	177	660
2038 G	6	9	24	136	2.1	1	8	2721	3.31	280	5	ND	6	52	.5	14	2	10	2.66	.098	9	2	1.01	79	.01	6	.57	.01	.14	3	115	430
STANDARD C/AU-R	19	57	37	131	6.7	70	31	1049	3.95	41	23	7	38	52	19.6	15	21	55	.51	.092	37	55	.91	180	.07	37	1.89	.06	.14	13	484	1300

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: P1 CORE P2-4 ROCK AU** ANALYSIS BY FA\ICP FROM 10 GM SAMPLE. HG ANALYSIS BY FLAMELESS AA.

DATE RECEIVED: SEP 1 1990 DATE REPORT MAILED: Sept 5/90 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	Hg ppb
1534 G	1	22	12	89	.6	5	11	1854	5.73	9	5	ND	1	42	.2	5	2	42	2.77	.088	9	15	1.71	28	.01	3	1.90	.02	.13	1	3	80
1535 G	5	44	15	155	1.4	14	11	1483	5.39	11	5	ND	1	42	.2	5	2	37	2.21	.076	7	12	1.54	56	.01	4	1.94	.01	.16	1	6	70
1536 G	6	73	18	152	2.1	22	12	726	5.04	37	5	ND	1	48	.2	3	2	25	.98	.053	4	13	1.13	51	.01	8	1.88	.01	.22	1	8	60
1543 G	1	17	12	75	1.1	7	6	4106	4.12	33	5	ND	1	100	.2	6	2	12	6.40	.040	7	8	2.74	35	.01	6	1.00	.01	.15	1	7	50
1544 G	2	38	26	107	2.0	12	9	943	4.94	44	5	ND	1	24	.2	4	2	25	.90	.070	5	14	1.27	54	.01	6	1.90	.01	.20	3	17	100
1567 G	10	35	15	120	.7	23	10	509	4.22	22	5	ND	1	82	.2	3	2	24	2.10	.102	6	13	.80	59	.01	6	1.72	.01	.16	1	5	90
1568 G	9	40	21	135	.9	27	11	479	4.32	28	5	ND	1	88	.2	6	2	21	1.87	.099	5	13	.75	64	.01	6	1.66	.01	.18	1	7	100
1569 G	9	35	17	114	.7	24	8	438	4.68	34	5	ND	1	84	.2	2	2	13	2.43	.083	7	10	.61	45	.01	7	1.36	.01	.16	1	4	80
1570 G	10	37	17	106	.7	26	10	313	3.73	24	5	ND	1	56	.2	4	2	20	1.19	.113	5	13	.70	65	.01	7	1.58	.01	.19	1	14	90
1571 G	3	12	9	180	.3	5	8	1249	5.26	4	5	ND	1	101	.2	2	2	72	4.62	.160	8	9	.74	22	.01	3	1.98	.03	.07	1	2	80
1572 G	1	15	8	107	.2	7	11	1069	6.80	8	5	ND	1	80	.2	3	2	83	3.34	.154	8	15	.97	25	.01	5	2.54	.03	.06	1	1	40
1573 G	2	37	4	155	.4	7	9	1102	5.36	9	5	ND	1	75	.2	3	2	49	3.75	.100	7	12	.79	30	.01	3	2.07	.02	.09	1	1	50
1574 G	3	9	9	119	.5	5	9	549	4.13	18	5	ND	1	62	.2	2	2	11	1.61	.053	5	6	.58	78	.01	3	1.54	.01	.13	1	3	50
1575 G	5	7	5	122	.3	9	10	738	4.76	13	5	ND	1	54	.2	2	2	26	2.50	.112	7	10	.78	156	.01	5	1.89	.02	.12	1	3	40
1576 G	3	44	18	174	1.4	17	14	1067	7.14	62	5	ND	1	100	.2	2	2	54	2.93	.082	5	31	.76	32	.01	5	1.90	.02	.11	1	7	110
1577 G	4	20	8	144	.7	9	7	521	2.86	12	5	ND	1	57	.2	2	2	5	1.37	.034	8	6	.45	44	.01	4	1.16	.01	.14	1	1	70
1578 G	6	26	21	177	1.4	19	11	489	3.43	39	6	ND	1	50	.4	2	3	14	1.28	.059	6	8	.49	55	.01	4	1.27	.01	.16	1	13	90
1579 G	22	27	24	142	2.0	19	13	1019	4.94	45	5	ND	1	62	.4	5	4	26	2.55	.065	6	14	.86	45	.01	8	1.64	.02	.14	1	6	100
1580 G	5	26	12	177	1.1	20	13	1269	4.41	25	5	ND	1	212	.6	3	5	27	4.90	.065	5	17	.70	132	.01	6	1.68	.02	.16	1	3	110
1581 G	12	33	5	114	.8	16	13	1612	4.73	21	5	ND	1	93	.2	2	2	33	4.41	.049	9	14	.61	30	.01	4	1.78	.02	.08	1	3	80
1582 G	20	37	7	97	.8	26	18	1156	4.64	31	5	ND	1	71	.2	3	2	31	2.99	.046	9	16	.62	122	.01	3	1.80	.02	.12	1	2	70
1583 G	15	30	5	234	1.0	22	14	1032	5.24	29	5	ND	1	106	.2	3	2	28	2.71	.061	8	15	.75	205	.01	3	1.68	.02	.10	1	3	80
1584 G	6	30	18	179	1.3	18	11	773	5.28	52	5	ND	1	51	.2	3	3	18	1.29	.059	6	12	.69	67	.01	5	1.14	.02	.15	1	4	100
1585 G	3	44	32	185	2.8	15	9	435	4.05	46	5	ND	1	63	.2	4	5	10	.50	.059	4	6	.58	65	.01	4	.44	.01	.20	1	8	120
1586 G	3	56	45	125	4.2	19	11	651	4.50	53	5	ND	1	126	.2	4	2	11	1.69	.062	3	8	.65	57	.01	6	.53	.01	.23	1	19	150
1587 G	2	54	45	131	4.9	17	10	423	4.78	46	5	ND	1	77	.2	4	2	12	.56	.062	4	8	.69	56	.01	6	.47	.01	.22	1	23	160
1588 G	4	56	39	151	4.4	20	11	517	4.90	80	5	ND	1	72	.2	5	4	14	.73	.083	4	8	.67	54	.01	6	.54	.01	.24	1	16	190
1589 G	3	64	41	167	2.9	20	11	602	5.88	129	5	ND	1	90	.3	4	2	13	.79	.087	4	9	.71	50	.01	6	.58	.01	.25	1	21	150
1590 G	4	52	30	262	2.5	22	10	384	3.52	75	6	ND	1	70	.2	3	2	8	.59	.068	4	5	.42	48	.01	5	.51	.01	.21	1	15	170
1591 G	5	18	4	304	.4	3	2	705	3.20	10	5	ND	1	143	.6	2	2	5	2.37	.028	10	2	.33	75	.01	5	.32	.02	.14	1	4	130
1592 G	5	12	8	108	.8	10	2	293	2.37	40	7	ND	1	48	.2	2	3	1	.90	.016	11	8	.16	56	.01	4	.37	.02	.20	1	11	70
1593 G	3	9	9	96	.5	2	1	292	2.61	43	6	ND	1	44	.5	2	2	1	.88	.014	9	1	.14	49	.01	5	.27	.02	.17	1	31	50
1594 G	4	8	5	97	.3	5	1	563	2.94	4	5	ND	1	39	.4	2	3	1	1.64	.013	9	5	.21	47	.01	3	.48	.02	.16	1	6	60
1595 G	2	7	2	104	.2	2	3	546	1.87	2	5	ND	2	60	.3	2	3	1	1.69	.008	17	3	.16	46	.01	2	.58	.02	.13	1	2	40
1596 G	3	24	14	111	1.0	12	13	1030	6.11	13	5	ND	1	66	.2	3	3	39	2.18	.079	7	16	.70	42	.01	5	1.72	.02	.14	1	9	60
1597 G	5	21	19	247	1.0	9	10	1557	5.81	10	5	ND	1	156	.5	2	2	30	4.13	.090	7	11	.70	36	.01	5	1.52	.01	.15	1	9	120
STANDARD C/AU-R	19	61	41	131	7.0	72	31	1051	3.97	40	15	7	37	53	18.8	15	20	55	.50	.094	38	60	.88	180	.07	38	1.90	.06	.14	11	484	1500

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	Hg ppb
1598 G	3	11	15	184	.6	3	5	458	4.60	25	5	ND	1	32	.5	2	5	7	.81	.032	9	2	.31	63	.01	2	.98	.04	.24	1	19	60
1599 G	9	5	9	74	.4	8	11	949	5.31	12	5	ND	1	38	.7	2	4	31	1.54	.137	13	4	1.00	22	.01	2	1.64	.03	.18	1	3	110
1600 G	1	8	6	48	.1	4	7	466	3.44	6	5	ND	2	23	.4	2	2	18	.77	.068	21	2	.50	47	.01	2	1.08	.04	.16	1	2	130
1601 G	3	10	4	89	.1	7	10	985	4.93	8	5	ND	1	36	.2	2	2	29	1.60	.133	16	5	.97	52	.01	5	1.54	.03	.20	1	3	180
1602 G	2	5	12	121	.1	4	10	1063	5.10	10	5	ND	1	35	.3	2	2	30	1.65	.133	14	2	1.02	43	.01	2	1.55	.03	.20	1	1	430
1603 G	2	6	6	77	.3	5	10	975	4.89	6	5	ND	1	39	.7	2	2	27	1.56	.141	12	4	.95	35	.01	2	1.42	.03	.19	1	1	130
1604 G	2	7	2	82	.2	3	9	1072	5.17	6	5	ND	2	33	.5	2	5	27	1.56	.109	17	2	1.01	39	.01	2	1.40	.03	.18	1	2	160
1605 G	6	7	22	76	.4	6	10	1631	4.86	8	5	ND	1	45	.7	2	2	26	2.96	.128	11	3	1.21	39	.01	5	1.12	.02	.18	1	3	200
1606 G	3	6	13	106	.1	4	10	1093	5.02	11	5	ND	1	34	.2	2	2	23	1.26	.137	17	1	.49	67	.01	3	.76	.02	.22	1	1	270
1607 G	3	6	16	77	.3	6	10	1133	5.43	10	5	ND	1	40	.6	2	2	27	1.72	.141	15	3	.96	45	.01	3	1.22	.03	.20	1	2	200
1608 G	1	6	2	114	.1	2	8	823	4.66	6	5	ND	1	33	.5	2	2	23	1.32	.134	16	2	.73	42	.01	2	1.29	.03	.20	1	1	240
1609 G	3	12	7	88	.1	6	7	702	4.25	10	5	ND	1	32	.2	2	2	18	1.16	.112	17	4	.58	41	.01	5	1.04	.02	.21	1	2	160
1610 G	2	8	7	83	.3	3	7	563	3.50	9	5	ND	2	23	.2	2	3	9	.95	.071	21	2	.27	62	.01	2	.72	.01	.22	1	2	190
1611 G	4	6	9	74	.2	5	5	527	3.12	8	5	ND	2	20	.2	2	2	11	.84	.070	22	3	.15	69	.01	3	.55	.01	.21	1	1	200
1612 G	5	7	8	64	.2	5	4	492	2.41	6	5	ND	3	8	.2	2	2	3	.34	.021	31	1	.08	84	.01	2	.61	.02	.29	1	1	180
1613 G	6	9	10	102	.2	6	6	444	2.88	3	5	ND	1	25	.3	2	3	10	.89	.089	18	6	.44	41	.01	2	.74	.03	.17	1	1	150
1614 G	2	9	14	113	.1	4	6	329	3.19	5	5	ND	2	22	.3	2	2	10	.60	.079	20	2	.39	52	.01	2	.97	.04	.25	1	2	160
1615 G	8	13	8	101	.1	9	5	366	2.37	4	5	ND	1	23	.2	2	3	9	.47	.078	23	7	.17	179	.01	3	.56	.03	.17	3	2	220
1616 G	4	6	14	89	.2	4	4	806	2.71	3	5	ND	1	23	.4	2	2	4	1.59	.032	32	2	.72	47	.01	4	.54	.02	.22	1	2	150
1617 G	5	5	10	162	.1	9	4	488	2.76	3	5	ND	1	15	.5	2	2	3	.82	.027	22	7	.46	49	.01	2	.67	.03	.20	1	1	260
1618 G	3	7	10	124	.2	4	2	536	1.69	2	5	ND	2	14	.2	2	2	2	1.01	.030	25	2	.30	53	.01	2	.34	.03	.16	1	39	250
1619 G	6	6	8	70	.2	10	2	247	1.09	4	5	ND	2	7	.2	3	2	1	.38	.012	22	7	.07	62	.01	3	.25	.04	.14	1	2	180
1620 G	4	4	8	55	.1	4	2	550	2.36	3	5	ND	1	14	.4	2	2	1	.97	.003	17	2	.45	47	.01	2	.37	.03	.16	1	5	210
1621 G	5	5	13	62	.1	10	1	348	1.28	3	5	ND	1	5	.3	2	2	1	.31	.004	21	6	.06	66	.01	3	.33	.03	.12	1	2	180
1622 G	5	6	12	78	.3	4	2	467	2.16	6	7	ND	1	14	.2	2	2	1	.76	.013	19	2	.35	58	.01	3	.35	.03	.14	1	2	220
1623 G	7	4	21	68	.1	13	1	258	1.58	4	5	ND	1	6	.2	2	2	1	.22	.005	20	10	.09	60	.01	2	.26	.04	.14	1	4	190
1624 G	4	3	6	64	.1	2	2	387	1.69	2	5	ND	1	8	.2	2	2	1	.52	.004	22	3	.18	100	.01	2	.22	.03	.15	1	3	180
1625 G	6	5	10	74	.1	12	1	249	1.34	3	5	ND	1	5	.3	2	2	1	.27	.003	19	8	.12	46	.01	2	.30	.04	.14	1	1	200
1626 G	6	7	14	153	.1	4	2	479	1.39	5	5	ND	2	10	.5	3	2	1	.85	.002	24	3	.26	52	.01	6	.26	.01	.19	1	1	380
1627 G	5	8	10	69	.1	11	2	210	1.27	5	5	ND	3	4	.2	2	2	2	.34	.004	22	9	.10	42	.01	5	.35	.01	.22	1	3	160
1628 G	4	9	17	100	.1	5	5	239	2.14	4	5	ND	5	6	.4	2	4	5	.11	.026	32	2	.05	48	.01	3	.42	.01	.19	1	3	230
1629 G	4	9	11	107	.1	10	3	238	1.50	7	5	ND	4	5	.2	2	2	5	.12	.024	24	7	.04	48	.01	2	.36	.02	.16	1	2	280
1630 G	3	9	19	77	.3	4	2	497	1.19	4	7	ND	4	9	.2	2	2	1	1.02	.004	25	2	.15	51	.01	2	.26	.01	.15	1	6	220
1631 G	4	4	18	50	.2	8	2	436	1.09	2	5	ND	5	5	.2	2	2	1	.36	.006	28	6	.12	52	.01	2	.32	.01	.16	1	1	240
1632 G	1	7	16	59	.1	4	1	237	.95	4	5	ND	5	4	.3	2	2	1	.20	.005	29	2	.04	51	.01	2	.22	.02	.13	1	1	270
1633 G	3	4	17	47	.1	10	2	280	1.09	4	5	ND	6	4	.2	2	2	1	.14	.004	31	7	.03	46	.01	2	.29	.02	.16	1	1	230
STANDARD C/AU-R	19	59	37	134	7.1	73	32	1054	3.97	40	21	7	39	52	19.1	15	20	58	.52	.096	39	59	.90	183	.08	38	1.89	.06	.14	11	483	1500

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	Hg ppb
1634 G	1	2	9	30	.2	1	2	294	.73	3	5	ND	6	2	.2	2	3	1	.15	.003	26	1	.03	43	.01	3	.24	.02	.14	1	6	130
1635 G	3	4	18	60	.1	1	2	267	1.19	3	5	ND	5	4	.4	2	3	1	.20	.005	24	1	.08	49	.01	2	.24	.03	.11	1	3	170
1636 G	5	4	20	29	.2	7	1	247	.72	7	5	ND	4	3	.2	2	4	1	.26	.004	25	6	.07	49	.01	2	.18	.02	.11	1	4	100
1637 G	4	4	23	19	.2	5	2	119	.88	6	5	ND	5	3	.2	2	2	1	.08	.007	28	6	.03	50	.01	2	.17	.02	.11	1	1	50
1638 G	10	5	21	74	.4	2	3	334	1.89	7	5	ND	5	4	.4	2	2	3	.13	.007	25	2	.09	59	.01	2	.37	.02	.12	1	2	120
1639 G	3	3	11	74	.2	5	3	535	1.42	7	5	ND	4	9	.2	2	6	1	.98	.007	23	4	.35	29	.01	3	.22	.01	.13	1	2	130
1640 G	1	2	25	43	.2	1	2	746	1.19	8	5	ND	4	32	.2	2	2	1	1.69	.006	21	2	.46	84	.01	2	.19	.02	.12	1	1	100
1641 G	13	18	27	180	.7	4	7	133	3.06	8	5	ND	3	8	.2	4	2	4	.13	.023	17	3	.06	50	.01	3	.43	.01	.22	1	3	380
1642 G	1	4	8	29	.1	2	1	134	1.04	2	5	ND	5	5	.3	2	2	1	.23	.003	25	2	.07	43	.01	2	.21	.02	.15	1	5	160
1643 G	4	2	2	17	.1	6	2	122	1.37	7	5	ND	4	6	.2	2	2	1	.12	.004	23	6	.10	54	.01	3	.21	.02	.14	1	1	190
1644 G	3	4	11	62	.2	2	2	137	1.16	3	5	ND	4	5	.4	2	2	1	.07	.005	24	2	.04	49	.01	3	.29	.02	.16	1	6	250
1645 G	6	9	21	20	.2	3	2	183	.98	4	5	ND	4	4	.2	2	2	1	.32	.004	25	4	.08	47	.01	2	.23	.01	.11	1	7	180
1646 G	2	8	16	25	.3	1	2	117	1.13	2	5	ND	5	8	.2	2	2	1	.10	.003	24	1	.06	52	.01	3	.24	.02	.15	1	1	160
1647 G	5	2	15	22	.3	5	2	865	1.56	2	5	ND	5	16	.2	2	2	1	1.43	.006	26	4	.63	39	.01	3	.32	.02	.13	1	5	140
1648 G	3	3	12	24	.2	1	2	575	1.87	4	5	ND	6	12	.2	2	2	1	.92	.004	28	1	.50	35	.01	3	.34	.02	.15	1	22	80
1649 G	4	2	12	18	.2	6	1	236	1.65	3	5	ND	6	10	.2	2	2	1	.39	.003	27	5	.29	42	.01	2	.34	.02	.15	1	6	60
1650 G	2	2	12	14	.1	1	1	226	1.41	3	5	ND	5	7	.2	2	2	1	.35	.004	26	2	.25	49	.01	3	.32	.03	.13	1	2	80
1651 G	5	1	8	12	.1	5	2	179	1.25	2	5	ND	5	5	.2	2	3	1	.28	.003	25	6	.19	54	.01	2	.30	.02	.13	1	3	110
1652 G	2	6	8	15	.1	1	1	396	.92	2	5	ND	6	4	.3	2	3	1	.05	.005	35	2	.03	83	.01	2	.35	.01	.14	1	6	120
1653 G	4	4	8	12	.1	11	1	228	1.19	2	5	ND	5	9	.2	2	3	1	.36	.003	27	9	.14	45	.01	3	.29	.02	.13	1	1	90
1654 G	1	2	8	12	.1	2	2	296	1.44	3	5	ND	5	8	.2	2	2	1	.44	.004	29	2	.25	49	.01	2	.39	.02	.15	1	3	70
1655 G	5	4	16	10	.1	11	1	263	1.16	2	5	ND	6	7	.3	2	2	1	.29	.004	28	9	.16	54	.01	2	.32	.02	.17	1	2	60
1656 G	2	2	23	15	.1	2	1	187	1.42	2	5	ND	6	6	.2	2	6	1	.23	.004	30	2	.18	57	.01	2	.38	.02	.15	1	12	60
1657 G	4	3	20	21	.1	11	1	200	1.35	2	5	ND	6	8	.2	2	2	1	.26	.004	29	9	.17	63	.01	2	.41	.03	.17	1	4	30
1658 G	1	3	13	16	.1	3	2	149	1.36	5	5	ND	7	5	.2	2	4	1	.09	.004	29	3	.12	42	.01	2	.38	.02	.15	1	8	40
1659 G	5	5	17	18	.2	10	2	164	1.63	7	5	ND	6	6	.3	2	2	1	.16	.004	26	7	.16	63	.01	4	.43	.02	.15	1	7	130
1660 G	2	5	26	15	.2	3	2	384	1.56	2	5	ND	6	12	.4	2	2	1	.54	.004	26	2	.26	59	.01	2	.38	.02	.14	1	5	120
1661 G	5	3	11	21	.1	10	2	231	1.68	2	5	ND	6	10	.2	2	2	2	.33	.003	27	8	.24	41	.01	2	.49	.02	.14	1	3	40
1662 G	3	4	13	9	.2	1	1	259	1.10	5	5	ND	5	20	.2	2	2	1	.51	.004	28	3	.20	51	.01	2	.31	.02	.12	1	1	50
1663 G	6	4	32	32	.1	10	2	363	1.47	2	5	ND	4	11	.4	2	2	2	.48	.004	30	9	.27	44	.01	2	.45	.03	.13	1	1	220
1664 G	4	5	12	38	.1	3	2	175	1.67	3	5	ND	6	6	.4	2	2	2	.19	.004	27	3	.22	37	.01	2	.53	.02	.14	1	3	110
1665 G	6	3	15	30	.1	10	2	158	1.27	2	5	ND	6	6	.2	2	2	1	.20	.003	25	9	.15	44	.01	2	.37	.02	.14	1	1	260
1666 G	4	4	18	34	.1	4	1	316	1.38	3	5	ND	5	18	.6	2	3	1	.63	.004	25	2	.30	34	.01	2	.43	.02	.13	1	13	240
1667 G	6	1	12	33	.1	7	1	307	1.67	2	5	ND	5	12	.5	2	2	2	.46	.004	26	7	.29	42	.01	2	.55	.02	.15	1	2	160
1668 G	4	5	16	32	.2	2	1	225	1.28	2	5	ND	5	8	.2	2	2	1	.32	.004	25	2	.19	44	.01	2	.38	.02	.12	1	1	260
1669 G	6	3	18	48	.2	7	1	171	1.48	4	5	ND	5	5	.5	2	2	2	.16	.003	27	8	.17	83	.01	2	.49	.02	.14	1	1	190
STANDARD C/AU-R	19	57	40	131	6.7	70	32	1050	3.97	41	20	7	37	53	19.0	14	17	55	.51	.094	37	57	.89	180	.07	34	1.89	.06	.14	11	488	1300

#8

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	Hg ppb
1670 G	4	2	15	30	.1	1	2	279	1.60	2	5	ND	5	6	.2	2	2	2	.34	.004	30	1	.23	74	.01	3	.47	.02	.14	1	5	100
1671 G	6	4	15	27	.1	6	1	208	1.35	4	5	ND	6	6	.5	2	3	1	.25	.004	30	6	.16	50	.01	2	.29	.02	.13	1	3	80
1672 G	3	2	18	26	.1	3	2	166	1.33	3	5	ND	5	9	.2	2	2	1	.17	.003	28	1	.12	75	.01	4	.19	.02	.14	1	7	90
1673 G	6	5	23	72	.1	9	2	147	1.40	4	5	ND	5	6	.5	2	2	1	.15	.003	27	7	.11	71	.01	3	.26	.02	.13	1	4	140
1674 G	4	3	18	36	.1	2	3	192	1.96	3	5	ND	6	5	.9	2	2	1	.17	.004	34	1	.17	63	.01	2	.40	.02	.15	1	6	90
1675 G	7	5	14	29	.1	7	2	159	1.40	5	5	ND	5	8	.3	2	2	1	.21	.003	26	7	.12	47	.01	3	.27	.02	.12	1	7	340
1676 G	2	1	14	16	.1	2	2	176	1.28	2	8	ND	5	11	.8	2	2	1	.31	.004	26	1	.16	51	.01	2	.28	.02	.13	1	1	60
1677 G	4	4	14	19	.1	7	2	167	1.32	2	5	ND	4	8	.2	2	2	1	.29	.003	29	5	.21	40	.01	2	.34	.03	.12	1	3	50
1678 G	1	3	10	14	.2	1	1	118	1.10	3	5	ND	6	6	.3	2	6	1	.15	.004	26	1	.12	54	.01	2	.26	.02	.12	1	9	60
1679 G	4	1	16	24	.1	8	1	138	1.30	2	5	ND	6	5	.2	2	2	1	.14	.004	30	6	.10	80	.01	2	.25	.02	.14	1	6	130
1680 G	2	3	13	17	.1	1	2	204	1.45	4	5	ND	4	12	.2	2	2	1	.26	.004	26	2	.11	58	.01	2	.26	.03	.14	1	7	120
1681 G	5	2	17	9	.1	7	1	180	1.55	3	5	ND	3	10	.2	2	2	1	.26	.003	26	4	.14	65	.01	2	.30	.02	.11	1	11	100
1682 G	2	2	9	9	.1	1	2	187	1.63	4	5	ND	4	13	.2	2	2	1	.35	.003	26	1	.16	52	.01	2	.29	.03	.13	1	9	110
1683 G	6	4	15	10	.2	9	2	158	1.26	5	5	ND	5	7	.3	2	2	1	.25	.003	24	7	.12	48	.01	2	.17	.02	.11	1	1	100
1684 G	3	3	16	15	.1	1	2	217	1.77	7	5	ND	5	7	.2	2	2	1	.23	.003	31	1	.15	48	.01	3	.24	.02	.16	1	6	130
1685 G	4	3	15	8	.1	6	1	102	1.12	6	5	ND	4	4	.6	2	2	1	.06	.004	28	5	.04	64	.01	4	.20	.03	.12	1	11	80
1686 G	2	6	22	7	.2	1	1	354	1.37	5	5	ND	4	13	.2	4	2	1	.72	.004	24	1	.29	44	.01	2	.19	.02	.12	1	5	60
1687 G	3	4	21	11	.2	6	2	179	1.54	3	5	ND	5	6	.4	2	2	1	.21	.003	26	5	.18	39	.01	4	.30	.02	.12	1	12	70
1688 G	3	6	9	11	.1	2	2	203	1.55	4	5	ND	6	5	.2	2	2	1	.16	.003	34	3	.11	71	.01	2	.36	.04	.18	2	8	80
1689 G	4	1	20	11	.1	11	2	187	1.63	2	5	ND	4	21	.2	2	2	1	.40	.004	25	8	.20	45	.01	4	.35	.02	.14	1	7	90
1690 G	2	6	17	9	.1	2	2	154	1.40	6	9	ND	4	6	.3	2	2	1	.17	.003	27	2	.10	46	.01	4	.22	.02	.13	1	3	60
1691 G	5	4	27	8	.1	11	2	163	1.29	4	5	ND	4	10	.3	2	2	1	.26	.004	25	8	.12	56	.01	3	.22	.02	.14	1	9	50
1692 G	3	5	15	9	.2	3	2	167	1.52	5	5	ND	5	8	.3	3	2	1	.20	.005	24	2	.17	73	.01	3	.31	.03	.14	1	2	80
1693 G	6	6	12	7	.1	13	2	183	1.37	9	5	ND	4	12	.2	2	2	1	.28	.003	23	9	.16	60	.01	3	.25	.03	.15	1	7	70
1694 G	3	4	10	13	.1	1	2	222	1.23	9	5	ND	4	13	.2	2	2	1	.40	.002	23	2	.17	77	.01	3	.21	.02	.14	1	6	90
1695 G	7	3	15	16	.1	11	2	325	1.58	5	5	ND	5	11	.5	2	2	1	.22	.003	24	10	.14	85	.01	3	.23	.02	.14	1	4	60
1696 G	4	3	22	25	.1	4	2	182	1.45	4	5	ND	4	10	.4	2	2	1	.23	.003	24	5	.14	53	.01	2	.21	.02	.14	1	6	80
1697 G	6	3	16	17	.2	13	2	182	1.41	3	5	ND	5	7	.4	2	2	1	.15	.003	24	9	.09	58	.01	3	.22	.02	.14	1	3	70
1698 G	3	5	12	11	.1	2	2	144	1.29	6	5	ND	4	11	.2	2	4	1	.16	.004	23	2	.12	68	.01	3	.21	.02	.14	1	2	80
1699 G	6	4	14	16	.1	12	2	160	1.47	4	5	ND	4	10	.2	2	2	1	.22	.004	21	9	.17	60	.01	3	.30	.03	.16	1	3	80
1700 G	3	5	18	19	.4	1	2	170	1.42	6	5	ND	6	8	.5	2	2	1	.25	.004	21	2	.17	52	.01	2	.24	.02	.13	1	4	70
1701 G	6	12	25	21	.3	12	2	300	1.42	5	5	ND	5	15	.3	2	2	1	.59	.004	24	10	.23	76	.01	2	.27	.02	.16	1	1	80
1702 G	3	4	9	14	.2	2	2	214	1.29	5	5	ND	4	12	.2	2	5	1	.45	.004	18	3	.21	55	.01	2	.21	.03	.13	1	2	100
1703 G	6	3	12	16	.3	11	2	371	1.21	4	5	ND	4	15	.3	2	2	1	.80	.004	21	10	.31	60	.01	3	.25	.02	.14	1	12	80
1704 G	3	5	16	12	.4	1	2	227	1.36	4	5	ND	5	6	.2	2	2	1	.25	.003	24	2	.12	73	.01	3	.26	.02	.13	1	1	60
1705 G	6	4	14	15	.2	11	2	543	1.47	5	6	ND	3	48	.2	2	4	1	1.17	.003	21	9	.50	75	.01	3	.28	.03	.17	1	4	60
STANDARD C/AU-R	19	62	38	131	7.1	72	32	1047	3.94	37	20	7	39	55	20.0	14	19	56	.50	.095	38	55	.87	182	.07	33	1.91	.06	.14	11	504	1500

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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	Hg ppb
1706 G	3	4	23	127	.3	1	2	652	1.50	2	5	ND	5	6	1.5	2	2	1	.15	.003	24	2	.08	91	.01	6	.29	.03	.17	1	5	140
1707 G	4	7	21	146	.3	4	1	1299	.86	4	5	ND	6	7	2.1	2	2	1	.30	.004	32	5	.14	109	.01	5	.37	.01	.22	1	3	290
1708 G	3	5	31	58	.2	2	1	244	1.10	3	5	ND	5	7	.5	2	7	1	.21	.003	26	2	.12	107	.01	5	.29	.02	.15	1	4	70
1709 G	5	4	26	60	.3	5	1	316	1.07	7	5	ND	4	26	.6	2	2	1	.67	.004	23	6	.29	52	.01	4	.22	.03	.14	1	5	80
1710 G	3	5	29	87	.5	1	2	453	1.32	7	5	ND	4	20	.8	2	8	1	.73	.003	20	1	.34	57	.01	2	.21	.03	.13	1	4	110
1711 G	5	7	40	103	.3	5	1	591	1.26	4	5	ND	2	22	.9	3	2	1	1.15	.002	18	6	.51	53	.01	4	.19	.03	.11	1	4	160
1712 G	3	3	22	235	.2	1	1	455	1.07	6	5	ND	5	23	1.7	2	2	1	.98	.004	29	1	.43	41	.01	3	.28	.02	.17	1	1	450
1713 G	5	4	25	26	.4	6	2	270	1.47	7	5	ND	3	12	.3	2	5	1	.46	.002	15	7	.31	60	.01	2	.30	.03	.09	1	4	70
1714 G	3	1	16	24	.1	1	1	1392	1.34	2	5	ND	3	39	.6	2	2	1	3.24	.002	25	1	1.42	269	.01	5	.41	.01	.18	1	4	50
1715 G	2	1	10	19	.1	1	1	3480	2.27	7	5	ND	1	76	.3	2	2	1	6.50	.002	15	3	2.92	34	.01	2	.26	.01	.11	1	4	60
1716 G	1	1	4	21	.1	1	1	3319	2.33	6	5	ND	1	74	.8	2	2	1	6.65	.002	11	1	2.94	48	.01	4	.25	.01	.11	1	1	90
1717 G	4	3	2	26	.3	3	2	2308	1.62	6	5	ND	4	17	.6	3	3	2	2.88	.003	25	3	.16	213	.01	3	.52	.01	.26	1	1	80
1718 G	3	2	8	22	.3	3	2	924	1.08	2	5	ND	3	31	.7	2	2	1	2.41	.002	18	3	.74	33	.01	2	.28	.01	.14	1	1	60
1719 G	3	1	2	40	.3	1	2	756	1.31	6	5	ND	4	19	.5	3	2	1	1.64	.004	23	1	.40	59	.01	6	.33	.02	.18	1	3	320
1720 G	4	3	5	27	.1	4	1	570	1.07	6	5	ND	4	15	.2	2	2	1	.83	.003	25	4	.29	57	.01	3	.27	.02	.17	1	5	110
1721 G	3	3	9	22	.3	1	1	1660	1.58	3	5	ND	3	29	.3	2	6	1	2.90	.003	21	1	1.04	57	.01	3	.25	.03	.16	1	1	100
1722 G	5	2	7	27	.2	4	1	694	1.11	7	5	ND	3	26	.2	2	2	1	1.37	.003	18	5	.53	49	.01	5	.18	.04	.11	1	4	240
1723 G	2	1	11	26	.1	3	1	2115	1.90	2	5	ND	2	41	.4	2	4	1	4.38	.003	20	6	1.39	56	.01	3	.31	.03	.18	1	4	320
1724 G	3	3	10	51	.1	5	1	2111	1.68	3	5	ND	1	69	.6	2	4	1	4.35	.004	16	3	1.93	41	.01	2	.17	.02	.13	1	4	190
1725 G	2	1	9	31	.4	2	3	4725	5.43	43	5	ND	1	129	.7	2	2	1	7.31	.003	4	1	2.91	32	.01	2	.15	.01	.08	1	5	280
1726 G	3	1	2	37	.4	4	2	5060	3.24	23	5	ND	1	126	.7	3	5	1	8.22	.005	9	4	2.81	39	.01	3	.20	.02	.11	1	13	220
1727 G	3	3	8	193	.4	3	2	4812	2.78	8	5	ND	3	112	1.1	2	2	1	9.71	.005	16	3	3.15	65	.01	2	.27	.01	.17	1	2	400
1728 G	6	4	17	139	.3	12	2	1089	1.28	6	5	ND	2	29	1.0	2	3	1	2.25	.003	20	9	.68	110	.01	3	.27	.02	.17	1	1	380
1729 G	4	7	18	119	.2	2	3	799	1.37	5	5	ND	2	29	.7	2	3	1	1.59	.006	21	2	.68	64	.01	3	.26	.02	.17	1	2	240
1730 G	7	4	8	38	.2	10	1	563	1.22	4	5	ND	3	16	.2	2	4	1	1.08	.003	24	8	.48	50	.01	4	.25	.03	.18	1	3	120
1731 G	3	11	28	44	.3	5	5	339	1.19	5	5	ND	2	23	.3	3	2	1	.76	.003	20	3	.17	156	.01	3	.23	.02	.14	1	17	270
1732 G	6	6	17	49	.3	10	1	496	1.22	2	5	ND	3	16	.2	3	2	1	1.20	.003	25	9	.29	242	.01	2	.27	.01	.22	1	4	180
1733 G	4	6	10	64	.3	2	2	711	1.28	8	5	ND	4	28	.2	2	2	1	1.46	.003	23	2	.57	67	.01	2	.29	.01	.21	1	1	140
1734 G	5	6	13	47	.1	8	2	706	1.36	7	5	ND	2	34	.2	2	4	1	1.42	.003	21	7	.61	56	.01	5	.30	.01	.18	1	2	120
1735 G	1	4	11	166	.6	2	22	1868	6.70	17	5	ND	1	67	1.1	5	2	90	3.58	.095	9	6	2.57	52	.01	2	2.06	.02	.13	1	1	230
1736 G	1	4	2	125	.2	3	21	1402	6.58	11	5	ND	1	142	1.2	3	2	131	3.70	.106	9	8	2.19	78	.01	2	1.78	.03	.15	1	1	180
1737 G	1	6	6	133	.2	2	20	1633	6.13	11	5	ND	1	415	.7	2	2	110	7.07	.098	9	6	2.28	81	.01	2	1.37	.02	.13	1	1	200
1738 G	1	4	2	119	.3	2	21	1323	6.59	10	5	ND	1	136	.9	2	2	155	3.50	.106	10	8	2.42	75	.01	2	1.95	.03	.14	1	1	150
1739 G	1	5	8	97	.2	2	20	1270	6.76	9	5	ND	1	152	.8	2	2	149	3.27	.110	9	7	2.24	80	.01	2	2.14	.03	.12	1	1	90
1740 G	1	6	8	110	.2	4	20	1239	6.46	8	5	ND	1	170	.8	4	3	127	3.41	.106	9	9	2.05	88	.01	2	1.95	.03	.13	1	32	120
1741 G	1	6	3	77	.5	2	21	1280	6.17	13	5	ND	1	189	.5	3	2	93	3.69	.101	10	7	1.85	104	.01	6	1.19	.03	.18	1	12	100
STANDARD C/AU-R	19	61	41	129	7.0	73	32	1051	3.97	40	21	7	38	53	18.9	15	20	56	.52	.097	38	57	.89	182	.07	36	1.89	.06	.14	13	509	1400

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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	Hg ppb
1742 G	1	1	2	87	.1	3	19	2258	5.39	18	5	ND	1	166	.4	2	2	57	4.92	.080	9	3	2.01	65	.01	3	.84	.02	.17	1	10	270
1743 G	5	3	9	52	.2	10	2	402	1.47	22	5	ND	2	13	.2	2	2	2	.67	.003	15	5	.31	63	.01	2	.21	.02	.09	1	5	230
1744 G	3	1	10	67	.1	1	2	396	1.12	62	5	ND	4	14	.2	2	4	1	.72	.003	28	1	.31	58	.01	4	.31	.01	.20	1	5	200
1745 G	4	3	10	72	.2	8	1	966	.93	21	5	ND	3	36	.2	2	4	1	2.03	.003	27	4	.70	50	.01	2	.24	.01	.18	1	2	180
1746 G	2	1	11	52	.1	1	1	635	.97	14	5	ND	4	13	.2	2	4	1	1.31	.004	29	1	.42	50	.01	5	.30	.01	.21	1	2	150
1747 G	4	1	14	50	.1	7	1	353	.93	10	5	ND	4	9	.2	2	2	1	.65	.002	29	4	.22	55	.01	4	.28	.01	.20	1	1	310
1748 G	3	1	13	63	.1	3	1	491	.99	5	5	ND	3	14	.2	2	2	1	.97	.002	28	1	.29	48	.01	3	.29	.01	.20	1	2	370
1749 G	4	1	20	76	.3	5	1	522	1.03	7	5	ND	3	18	.2	2	2	1	.93	.002	25	3	.30	49	.01	2	.26	.01	.18	1	2	490
1750 G	3	2	23	92	.1	1	2	783	1.14	8	5	ND	2	22	.3	2	2	1	1.45	.002	24	1	.53	60	.01	4	.33	.01	.21	1	5	450
1751 G	4	1	14	47	.1	7	1	560	.80	2	5	ND	2	28	.2	2	2	1	1.17	.002	26	5	.36	69	.01	3	.23	.01	.20	1	2	320
1752 G	3	1	43	231	.1	4	2	793	1.44	8	5	ND	2	30	.9	2	2	1	1.49	.004	24	2	.56	65	.01	3	.27	.01	.22	1	2	560
1753 G	3	1	13	56	.1	4	1	447	.77	4	5	ND	3	29	.3	2	2	1	1.10	.002	23	3	.38	49	.01	4	.24	.01	.20	1	1	190
1754 G	3	1	14	52	.1	1	1	751	.87	5	5	ND	2	28	.2	2	2	1	1.61	.001	24	1	.62	34	.01	3	.30	.01	.24	1	1	140
1755 G	3	1	13	51	.1	4	1	697	.70	7	5	ND	1	31	.2	2	2	1	1.55	.002	19	3	.54	40	.01	4	.27	.01	.18	1	2	210
1756 G	2	1	18	61	.1	1	1	1658	1.10	17	5	ND	1	44	.4	2	2	1	2.89	.001	17	1	1.11	39	.01	2	.27	.01	.18	1	3	190
1757 G	3	2	19	117	.1	3	1	1266	.88	7	5	ND	3	28	.2	2	2	1	2.44	.001	22	2	.94	47	.01	4	.27	.01	.16	1	2	260
1758 G	3	1	14	33	.1	1	2	3220	1.95	34	5	ND	3	58	.4	2	2	1	5.87	.002	23	1	2.74	31	.01	4	.28	.01	.17	1	3	120
1759 G	2	1	11	56	.2	2	2	1333	1.61	9	5	ND	2	96	.4	2	2	4	3.63	.005	17	1	1.25	34	.01	2	.41	.01	.21	1	2	210
1760 G	5	7	15	25	.3	9	2	596	1.16	30	5	ND	1	35	.2	2	2	1	.99	.001	16	7	.32	24	.01	4	.31	.01	.15	1	2	270
1761 G	4	5	12	26	1.0	2	2	610	1.34	32	5	ND	2	25	.2	2	2	1	.93	.001	16	2	.32	18	.01	3	.25	.01	.14	1	6	270
1762 G	15	3	23	32	.4	10	2	810	1.12	32	5	ND	2	44	.2	3	2	1	1.33	.003	20	7	.46	32	.01	6	.33	.01	.19	1	9	190
1763 G	4	6	17	38	.1	3	3	936	1.36	27	5	ND	1	46	.3	2	2	1	1.62	.001	20	1	.57	25	.01	4	.30	.01	.15	1	4	170
1764 G	4	6	16	47	.5	2	4	1216	2.48	23	5	ND	2	159	.3	3	5	3	3.83	.005	15	1	1.34	164	.01	2	.37	.01	.20	1	3	180
1765 G	4	10	17	86	.3	5	13	855	3.51	30	5	ND	1	153	.3	2	4	19	3.06	.045	8	1	1.25	117	.01	2	.49	.01	.21	1	2	270
1766 G	4	42	8	109	.4	15	10	1034	6.04	50	9	ND	1	177	.7	15	2	19	3.68	.105	4	3	1.36	56	.01	9	.69	.01	.31	1	6	510
1767 G	4	71	11	116	.1	21	16	718	5.05	43	5	ND	1	59	.7	26	2	18	1.67	.078	6	4	1.12	59	.01	6	.61	.01	.30	1	6	590
1768 G	3	30	8	64	.1	10	12	1129	4.26	21	5	ND	1	29	.2	8	2	11	2.05	.050	12	3	1.30	46	.01	6	.55	.01	.22	1	156	290
1769 G	4	20	6	55	.1	10	9	1191	4.32	14	5	ND	1	50	.3	4	2	9	2.38	.044	12	2	1.46	49	.01	4	.50	.01	.21	1	5	280
1770 G	6	34	15	117	.2	15	12	847	4.60	24	5	ND	1	24	.7	15	2	14	1.64	.063	9	4	1.19	69	.01	4	.64	.01	.21	1	5	480
1771 G	5	48	13	152	.4	13	14	1164	5.22	39	5	ND	1	118	.8	18	2	14	3.01	.055	5	4	1.42	59	.01	6	.49	.01	.24	1	3	470
1772 G	5	55	19	148	.6	16	15	1104	4.29	27	5	ND	1	85	.7	18	2	11	2.38	.045	8	11	1.15	97	.01	2	.42	.01	.20	9	4	510
1773 G	4	51	23	213	.1	18	13	883	5.61	63	5	ND	1	27	1.4	18	2	17	1.73	.072	8	3	1.12	40	.01	6	.59	.01	.26	1	5	540
1774 G	4	22	19	143	.3	10	9	1399	4.71	28	5	ND	1	27	1.1	9	2	13	2.69	.072	11	3	1.60	54	.01	7	.98	.01	.21	1	3	350
1775 G	16	22	15	220	.2	10	9	1052	3.81	19	8	ND	1	22	.6	9	2	9	1.82	.037	13	3	1.05	117	.01	5	.89	.01	.21	1	4	680
1776 G	4	1	8	104	.1	1	2	2495	2.57	3	5	ND	1	30	.7	2	2	1	4.31	.002	26	1	2.10	46	.01	4	.53	.01	.17	1	4	100
1777 G	14	4	6	110	.1	4	2	1333	2.52	5	5	ND	2	27	.6	3	4	1	2.25	.005	31	4	1.18	47	.01	3	.70	.01	.18	1	1	220
STANDARD C/AU-R	19	58	37	131	6.8	69	31	1049	3.95	40	21	7	37	53	18.9	15	21	55	.51	.094	38	56	.91	179	.08	34	1.89	.06	.14	12	495	1400

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	Hg ppb
1778 G	30	13	14	125	.2	9	5	800	3.78	13	5	ND	1	24	.2	5	2	5	1.16	.023	17	10	.86	32	.01	3	.99	.01	.12	1	8	300
1779 G	8	35	26	171	.3	14	7	490	3.83	32	5	ND	2	17	.6	13	2	7	.69	.049	13	7	.63	42	.01	2	.64	.01	.19	1	10	620
1780 G	3	40	24	120	.3	16	11	386	3.78	39	5	ND	1	21	.3	14	2	10	.64	.072	12	7	.59	52	.01	2	.52	.01	.27	1	10	500
1781 G	2	35	25	113	.4	14	9	439	3.52	34	5	ND	2	21	.2	15	2	8	.70	.069	12	5	.55	48	.01	5	.49	.01	.24	1	10	540
1782 G	3	74	17	106	.4	25	17	714	3.69	24	5	ND	1	58	.3	9	2	12	1.71	.047	6	14	.91	118	.01	4	.58	.01	.24	26	7	380
1783 G	2	29	10	66	.1	11	6	870	2.74	13	5	ND	1	55	.2	6	2	9	1.72	.022	14	10	.95	104	.01	3	.42	.01	.20	13	6	260
1784 G	4	41	18	144	.3	16	10	718	4.53	32	5	ND	1	37	.6	14	2	12	1.42	.054	8	7	1.03	41	.01	5	.39	.01	.20	1	7	560
1785 G	4	37	12	181	.2	13	9	915	5.62	31	5	ND	2	33	.6	14	4	13	1.76	.070	16	7	1.12	47	.01	6	.44	.01	.21	1	4	480
1786 G	3	19	8	68	.1	8	7	763	4.50	17	5	ND	1	40	.2	7	2	7	1.49	.034	16	8	1.03	43	.01	4	.39	.01	.20	1	3	200
1787 G	3	23	12	151	.3	13	9	695	3.94	24	5	ND	2	28	.6	9	2	10	1.36	.049	15	6	.94	46	.01	7	.42	.01	.21	1	8	300
1788 G	4	42	31	123	.6	21	10	455	3.43	39	5	ND	2	28	.3	14	2	10	.95	.064	14	5	.66	51	.01	4	.44	.01	.22	1	13	390
1789 G	6	35	9	129	.2	18	11	411	4.86	30	6	ND	2	29	.3	7	3	20	.80	.068	15	7	.81	49	.01	3	.52	.01	.24	1	1	210
1790 G	3	42	2	40	.1	13	7	295	4.67	19	5	ND	1	34	.2	3	2	17	.60	.069	10	7	.78	48	.01	3	.54	.01	.25	2	3	90
1791 G	3	48	2	29	.1	18	9	277	4.08	24	5	ND	1	31	.2	5	2	13	.57	.053	5	5	.82	45	.01	5	.49	.01	.25	1	5	80
1792 G	3	48	6	22	.2	18	9	324	4.47	30	5	ND	1	62	.2	10	2	13	.89	.056	3	6	.89	49	.01	5	.44	.01	.22	1	6	100
1793 G	5	44	4	18	.2	13	6	450	3.81	22	5	ND	1	153	.2	11	2	13	2.01	.060	4	8	1.22	55	.01	5	.46	.01	.24	1	7	80
1794 G	2	23	2	14	.1	10	5	483	4.39	13	5	ND	1	76	.2	5	2	14	1.47	.080	6	9	1.11	39	.01	3	.47	.01	.21	1	7	50
1795 G	1	53	2	10	.1	11	8	176	2.46	24	5	ND	1	43	.2	11	2	8	.51	.048	3	4	.58	45	.01	3	.47	.01	.25	1	7	70
1796 G	2	40	2	21	.1	11	7	335	4.24	18	5	ND	1	68	.2	7	2	14	.97	.048	3	6	.95	46	.01	5	.43	.01	.21	1	7	80
1797 G	2	48	2	25	.1	11	8	255	3.10	22	5	ND	1	66	.2	10	2	11	.73	.056	3	6	.76	52	.01	6	.47	.01	.23	1	4	100
1798 G	2	25	2	22	.1	6	7	335	2.63	14	5	ND	1	41	.2	7	2	8	.78	.050	4	7	.60	46	.01	2	.40	.01	.20	1	1	110
1799 G	1	6	3	78	.3	3	16	2233	7.35	15	5	ND	1	100	.4	10	2	84	5.38	.087	7	9	2.90	39	.01	3	.48	.02	.12	1	8	170
1800 G	3	36	16	22	.2	17	13	279	4.77	36	5	ND	1	27	.2	12	2	9	.58	.043	5	6	.76	39	.01	4	.40	.01	.19	1	9	250
1801 G	2	29	4	21	.1	12	8	345	4.80	15	5	ND	1	31	.2	10	2	13	.77	.067	6	7	.91	41	.01	4	.42	.01	.19	1	2	100
1802 G	2	37	3	34	.1	12	7	475	4.29	16	5	ND	1	56	.2	11	2	11	1.20	.064	11	11	.96	45	.01	5	.45	.01	.21	10	3	120
1803 G	2	44	37	25	.5	20	10	435	4.94	35	5	ND	1	34	.2	17	2	14	.95	.065	6	7	.87	42	.01	4	.49	.01	.22	1	9	200
1804 G	1	58	28	21	.4	19	11	279	4.41	32	5	ND	1	30	.2	20	2	12	.61	.063	5	6	.73	45	.01	6	.45	.01	.24	1	10	130
1805 G	3	54	18	29	.3	21	12	273	4.67	31	7	ND	1	37	.2	18	2	13	.60	.077	4	7	.79	45	.01	7	.47	.01	.24	1	9	90
1806 G	3	30	6	26	.1	10	7	463	3.82	18	5	ND	1	67	.2	12	2	10	1.54	.035	3	9	1.01	128	.01	7	.39	.01	.20	1	6	100
1807 G	1	37	7	27	.2	13	12	446	4.46	27	5	ND	1	94	.2	13	2	16	1.58	.047	2	7	1.16	100	.01	6	.53	.01	.24	1	6	150
1808 G	2	27	2	28	.1	9	9	576	4.24	21	5	ND	1	71	.2	12	2	10	1.54	.054	3	8	1.14	64	.01	7	.40	.01	.20	1	5	130
1809 G	2	31	5	43	.1	11	9	342	3.98	19	5	ND	1	39	.2	14	2	10	.78	.055	5	7	.91	57	.01	5	.41	.01	.22	1	5	140
1810 G	3	29	7	350	.1	9	9	1144	4.96	20	5	ND	1	48	.4	14	3	5	2.72	.036	14	8	1.60	45	.01	6	.34	.01	.15	1	16	480
1811 G	4	19	2	152	.1	8	6	736	4.22	13	5	ND	2	47	.7	9	2	6	1.76	.032	19	13	1.22	67	.01	2	.37	.01	.18	1	1	300
1812 G	3	27	2	25	.1	10	8	534	4.09	21	5	ND	1	47	.2	11	2	11	1.37	.048	7	7	1.02	68	.01	3	.42	.01	.19	1	2	150
1813 G	3	18	4	44	.1	7	7	562	4.35	14	5	ND	1	31	.2	9	2	7	1.27	.035	16	7	.95	44	.01	3	.37	.01	.14	1	1	180
STANDARD C/AU-R	19	60	36	131	6.9	72	31	1051	3.97	39	18	7	37	52	18.5	15	19	55	.51	.098	38	59	.89	181	.07	37	1.91	.06	.14	11	504	1600

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

GEOCHEMICAL ANALYSIS CERTIFICATE

Granges Inc. PROJECT 134 File # 90-3988

2300 - 885 W. Georgia St., Vancouver BC V6C 3E8

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	Hg ppb
1825 G	8	33	42	61	1.8	6	12	2038	8.14	119	5	ND	1	62	.2	20	7	9	1.54	.179	6	12	.58	42	.03	11	1.05	.01	.48	2	16	620
1826 G	6	9	23	236	1.2	3	9	1467	4.12	53	5	ND	1	58	.4	11	4	8	1.65	.169	7	6	.49	56	.02	9	.74	.01	.38	1	10	750
1827 G	6	6	22	137	1.0	5	8	1216	2.93	33	5	ND	1	66	.3	10	2	7	1.56	.181	9	9	.58	100	.01	11	.74	.01	.38	1	8	650
1828 G	6	9	36	133	2.0	1	10	930	3.89	95	5	ND	1	40	.2	12	3	8	1.28	.166	9	7	.42	42	.02	6	.81	.01	.40	1	16	2800
1829 G	6	16	80	1181	6.2	6	9	313	6.33	190	5	ND	1	24	2.5	18	2	6	.75	.150	9	6	.19	26	.01	7	.67	.01	.32	1	41	3300
1830 G	4	50	2870	987	14.7	1	5	3651	5.70	200	5	ND	1	47	2.7	44	2	3	3.14	.080	3	8	2.25	30	.01	3	.41	.01	.22	1	39	3000
1831 G	5	10	146	58	4.1	4	9	1887	6.24	208	5	ND	1	54	.2	32	2	5	1.91	.139	8	10	.62	44	.01	7	.58	.01	.32	1	25	480
1832 G	4	8	37	94	4.0	3	9	2394	4.71	109	5	ND	4	46	.3	32	2	7	1.92	.140	12	13	.79	59	.01	17	.54	.01	.31	1	17	180
1846 G	2	8	38	2240	4.6	3	5	4886	5.12	159	5	ND	1	104	5.0	15	2	4	6.77	.080	4	6	3.45	48	.01	2	.38	.01	.20	1	225	4500
1847 G	4	6	22	91	2.6	2	8	1109	4.61	69	5	ND	1	50	.2	10	5	13	1.26	.173	11	7	.48	48	.01	7	.89	.01	.31	1	30	580
1848 G	4	11	35	472	4.9	5	15	1679	6.86	350	5	ND	1	33	1.0	15	2	19	1.94	.116	4	12	1.16	38	.01	4	.47	.01	.27	1	81	1200
1849 G	2	14	35	17	6.1	1	18	1327	13.71	586	5	ND	1	28	.4	16	2	20	1.45	.123	5	14	.71	28	.01	2	.42	.01	.25	1	136	1700
1850 G	2	11	17	236	3.7	3	21	3099	5.23	141	5	ND	1	38	.2	12	2	43	2.51	.197	10	8	1.09	66	.01	3	.86	.01	.34	1	117	2100
1851 G	1	18	36	6	7.7	2	18	1890	10.89	658	5	ND	1	25	.7	18	2	23	1.44	.129	2	13	1.14	26	.01	2	.69	.01	.29	1	139	2800
1852 G	2	18	18	7	7.6	2	14	3251	8.52	447	5	ND	1	81	.6	16	2	27	3.11	.120	3	12	2.15	34	.01	2	.82	.01	.24	1	145	2400
1853 G	2	13	38	256	8.7	5	13	2563	10.92	457	5	ND	1	26	1.2	23	2	20	1.77	.093	2	16	1.68	37	.01	2	.88	.01	.27	1	185	3100
1854 G	1	4	4	50	1.8	2	3	6371	5.55	305	5	ND	1	143	.2	4	2	10	11.76	.024	4	1	5.08	30	.01	2	.61	.01	.08	1	57	540
1855 G	1	12	17	600	5.9	2	11	4243	7.30	823	5	ND	1	39	1.2	21	2	23	3.29	.089	2	11	2.98	35	.01	4	.64	.01	.21	1	192	3600
1856 G	1	9	16	17	5.0	3	9	4575	6.61	719	5	ND	1	52	.2	27	2	19	4.83	.076	2	7	3.44	32	.01	2	.60	.01	.18	1	137	2100
1857 G	2	6	22	7	4.2	4	9	5749	7.44	289	5	ND	1	70	.2	12	2	19	5.03	.065	2	10	3.50	39	.01	2	.52	.01	.17	1	105	2400
STANDARD C/AU-R	19	62	37	133	7.2	73	32	1054	3.97	41	21	7	39	52	18.5	15	22	59	.51	.098	40	61	.89	188	.08	35	1.88	.06	.13	12	496	1600

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: CORE AU** ANALYSIS BY FA\ICP FROM 10 GM SAMPLE. HG ANALYSIS BY FLAMELESS AA.

DATE RECEIVED: AUG 30 1990 **DATE REPORT MAILED:** Sept 5/90. **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	Hg ppb
1814 G	3	15	2	97	.1	6	6	592	4.17	11	5	ND	1	53	.4	8	2	5	1.46	.029	18	10	1.09	62	.01	3	.30	.01	.16	1	5	230
1815 G	4	60	4	35	.1	16	11	285	4.23	27	11	ND	1	35	.2	31	3	12	.51	.049	7	8	.81	53	.01	4	.40	.01	.22	1	2	220
1816 G	1	40	2	24	.1	10	8	340	3.80	16	9	ND	1	30	.2	21	3	10	.67	.026	8	6	.80	44	.01	3	.35	.01	.19	1	9	140
1817 G	2	19	6	29	.1	10	12	774	3.90	20	6	ND	1	58	.2	11	2	8	1.69	.035	7	9	1.07	41	.01	4	.31	.01	.16	1	4	130
1818 G	1	29	9	69	.2	10	11	795	4.30	22	5	ND	1	54	.3	12	2	10	1.81	.050	5	10	1.13	36	.01	5	.33	.01	.17	1	1	190
1819 G	4	38	7	21	.3	13	9	805	4.19	23	5	ND	1	78	.2	20	2	8	1.29	.055	6	9	.95	33	.01	2	.36	.01	.20	1	4	180
1820 G	2	28	3	33	.4	6	6	1176	4.59	13	5	ND	2	67	.2	13	2	8	1.40	.036	15	7	1.08	37	.01	3	.34	.01	.19	1	4	150
1821 G	2	32	5	37	.3	7	6	1079	3.29	28	5	ND	1	57	.2	16	2	5	1.40	.028	13	7	.86	34	.01	3	.27	.01	.15	1	7	160
1822 G	3	13	4	36	.3	7	6	1304	4.50	20	5	ND	1	76	.2	7	3	6	1.60	.039	15	9	1.09	47	.01	5	.29	.01	.16	1	3	140
1823 G	4	22	17	61	.6	9	6	1435	4.84	22	5	ND	1	127	.2	15	2	7	1.81	.044	14	15	1.09	39	.01	5	.34	.01	.19	1	9	210
1824 G	5	23	16	197	1.2	7	7	722	2.99	18	6	ND	1	62	.2	16	3	8	1.11	.073	6	3	.26	39	.01	4	.40	.01	.22	1	3	400
1833 G	4	3	8	141	.6	1	7	2159	4.09	10	5	ND	1	52	.2	6	2	6	2.14	.162	15	7	1.06	68	.01	4	.43	.01	.24	1	7	240
1834 G	4	6	20	116	.8	3	8	2080	5.09	14	5	ND	1	43	.2	6	2	12	2.19	.145	13	7	1.24	75	.01	3	1.11	.02	.17	1	8	250
1835 G	4	4	13	171	.4	2	7	1840	4.50	18	5	ND	1	39	.2	5	4	14	2.07	.143	17	16	1.18	57	.01	2	1.32	.02	.18	1	7	220
1836 G	3	3	16	138	.3	2	6	928	4.94	5	5	ND	1	65	.2	3	2	18	1.39	.122	14	8	.85	129	.01	4	1.44	.02	.13	1	1	150
1837 G	4	4	5	111	.3	2	4	838	4.28	4	5	ND	1	88	.4	5	2	7	1.33	.092	14	6	.50	124	.01	3	.96	.02	.17	1	1	110
1838 G	5	4	2	76	.2	5	1	805	3.78	2	5	ND	1	33	.2	2	2	1	.52	.020	12	5	.38	73	.01	5	.37	.03	.12	1	1	100
1839 G	8	5	4	96	.2	11	2	859	3.80	2	5	ND	1	39	.2	3	2	2	.56	.023	15	35	.37	96	.01	3	.53	.05	.14	1	19	120
1840 G	5	3	6	131	.3	3	1	1051	3.83	2	6	ND	1	51	.2	2	2	1	.69	.024	12	6	.37	94	.01	5	.59	.02	.11	1	6	110
1841 G	5	2	5	101	.1	5	1	1038	3.28	3	5	ND	1	36	.2	2	3	1	.40	.020	11	4	.26	96	.01	3	.35	.02	.10	1	5	100
1842 G	5	3	6	87	.1	5	1	1258	3.44	2	5	ND	1	45	.2	2	2	1	.55	.020	12	3	.25	63	.01	2	.13	.03	.09	1	1	90
1843 G	6	3	9	117	.3	4	1	1132	3.66	2	5	ND	1	54	.2	2	2	1	.90	.019	13	21	.31	61	.01	3	.26	.04	.11	1	5	130
1844 G	5	3	3	85	.1	4	1	1450	3.63	2	5	ND	1	187	.2	2	2	1	2.93	.017	10	8	.45	48	.01	2	.16	.03	.11	1	14	140
1845 G	5	4	10	97	.1	6	2	1163	3.04	5	5	ND	1	125	.2	3	4	1	2.64	.025	9	8	.44	70	.01	2	.17	.03	.10	1	1	190
1858 G	3	15	11	52	1.8	7	4	1293	2.10	13	5	ND	1	19	.2	6	3	2	1.18	.020	10	7	.42	50	.01	3	.36	.01	.20	1	16	170
1859 G	6	3	8	108	.2	6	2	971	3.57	2	5	ND	1	73	.2	2	2	4	1.12	.036	13	22	.33	49	.01	2	.65	.03	.09	1	1	160
1860 G	5	4	15	104	.3	4	1	874	3.27	7	5	ND	1	59	.2	3	2	1	.94	.019	10	5	.28	70	.01	2	.28	.03	.10	1	1	210
1861 G	6	3	59	94	.3	5	1	1134	3.59	3	5	ND	1	47	.2	2	2	1	.92	.020	11	8	.34	208	.01	2	.33	.04	.09	1	2	200
1862 G	6	5	8	77	.2	8	1	1113	3.52	6	5	ND	1	96	.2	2	2	1	1.71	.018	10	9	.39	71	.01	4	.24	.04	.09	1	2	230
1863 G	8	5	12	152	.4	7	2	1090	3.90	4	5	ND	1	36	.5	2	3	1	.73	.022	13	26	.39	59	.01	5	.42	.04	.08	1	4	410
1864 G	4	8	14	120	.3	4	4	955	4.15	2	5	ND	1	150	.3	3	2	9	2.39	.055	14	8	.83	84	.01	3	.72	.03	.08	1	6	250
1865 G	4	4	10	101	.2	4	4	823	4.09	2	5	ND	1	77	.2	2	2	16	1.21	.049	16	8	.61	55	.01	2	.80	.03	.07	1	1	300
1866 G	3	7	8	104	.4	3	6	1328	4.54	6	5	ND	1	245	.4	4	2	16	3.39	.112	11	8	.76	65	.01	4	.50	.03	.11	1	9	270
1867 G	4	4	8	96	.2	4	7	1387	5.38	3	5	ND	1	86	.3	3	2	26	1.38	.128	14	21	.72	109	.02	3	.89	.05	.11	1	10	260
1868 G	3	4	10	126	.4	2	4	1093	4.79	3	5	ND	1	193	.2	4	2	24	2.80	.103	15	9	.71	92	.07	2	1.57	.04	.06	1	4	200
1869 G	3	3	4	122	.4	1	7	1077	5.42	9	5	ND	1	181	.2	3	2	41	2.34	.141	13	8	.91	121	.05	2	1.82	.03	.05	1	1	120
STANDARD C/AU-R	19	60	40	132	7.1	70	31	1053	3.97	40	21	7	37	52	18.5	15	23	55	.51	.099	37	60	.90	180	.07	37	1.88	.06	.14	11	496	1500

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	Hg ppb
1870 G	4	4	12	128	.4	7	9	1208	5.10	14	5	ND	1	200	.8	5	2	41	2.46	.146	13	4	.90	98	.03	4	1.94	.05	.10	2	6	120
1871 G	4	3	2	138	.6	4	9	1579	5.47	17	5	ND	1	192	.9	5	2	39	2.24	.149	12	9	1.11	129	.02	4	2.13	.04	.13	1	7	180
1872 G	3	2	5	135	.4	3	8	1314	5.59	6	5	ND	1	165	.6	3	2	44	2.08	.164	15	3	1.07	125	.02	6	2.16	.06	.14	1	7	120
1873 G	3	3	9	126	.4	6	8	990	5.33	5	5	ND	1	96	.2	2	2	35	1.25	.158	16	4	1.01	131	.01	3	1.84	.05	.16	1	7	150
1874 G	3	2	2	129	.5	6	9	859	5.53	8	7	ND	1	94	.8	4	2	40	1.30	.154	16	4	2.01	116	.01	4	2.36	.02	.12	1	2	190
1875 G	3	1	2	140	.3	5	7	1431	5.32	15	5	ND	1	279	.7	2	2	35	3.10	.129	11	8	1.25	127	.01	2	2.23	.03	.14	1	1	220
1876 G	3	4	17	106	1.4	6	9	1491	6.12	40	5	ND	1	115	.4	5	2	31	2.00	.145	10	3	.82	73	.02	3	1.53	.03	.17	1	19	800
1877 G	4	1	9	137	.8	5	9	1809	5.79	28	5	ND	1	83	1.0	4	2	35	1.90	.152	13	3	1.04	119	.03	2	1.77	.03	.15	1	2	210
1878 G	4	5	22	137	2.6	6	9	1989	5.31	101	5	ND	1	55	.2	9	2	22	1.33	.160	11	4	.60	64	.02	3	1.10	.02	.22	1	35	470
1879 G	4	4	5	119	.5	6	9	1791	5.36	7	5	ND	1	124	.5	2	2	35	2.28	.135	13	8	.91	114	.03	2	1.85	.06	.13	1	2	80
1880 G	4	2	7	129	.3	5	9	1479	5.58	6	5	ND	1	92	.6	3	2	42	1.89	.152	12	3	.97	107	.03	3	1.90	.06	.14	1	5	100
1881 G	3	5	4	138	.5	7	10	1574	5.67	10	5	ND	1	121	.9	4	2	45	2.35	.166	13	4	.96	129	.05	6	1.89	.06	.16	1	1	90
1882 G	4	4	8	143	.3	8	9	1452	5.57	7	5	ND	1	130	1.2	2	2	44	2.37	.152	14	4	.94	139	.08	5	1.70	.08	.15	1	3	100
1883 G	4	2	4	130	.3	5	8	1449	5.44	9	5	ND	1	197	.7	2	2	39	2.98	.138	14	10	.95	124	.05	6	1.90	.07	.11	1	6	80
1884 G	3	5	2	131	.2	5	8	1469	5.61	9	5	ND	1	190	.7	2	2	40	2.98	.146	12	4	.94	121	.06	3	1.93	.07	.13	1	4	120
1885 G	3	1	10	122	.4	5	10	1511	5.97	9	5	ND	1	179	.7	4	2	45	2.99	.169	13	3	.91	97	.05	2	1.93	.06	.10	1	3	200
1886 G	3	5	8	135	.2	4	9	1581	5.60	5	5	ND	1	146	1.0	2	2	36	2.71	.150	13	4	.96	119	.04	2	1.85	.05	.12	1	4	180
1887 G	4	3	13	185	.5	5	9	1379	5.51	13	5	ND	1	150	.2	2	6	28	2.55	.154	10	5	.80	81	.01	2	1.79	.05	.16	1	19	950
1888 G	4	2	6	86	.2	5	3	915	2.92	6	5	ND	1	39	.4	2	2	6	.96	.043	16	5	.58	90	.01	6	1.11	.01	.18	1	7	160
1889 G	5	3	17	88	.4	6	3	760	2.30	7	5	ND	2	21	.2	3	2	2	.65	.019	20	4	.44	61	.01	3	.91	.01	.19	1	3	170
1890 G	4	4	19	118	.2	3	2	939	2.18	6	5	ND	2	13	.2	2	2	1	.78	.007	22	4	.52	44	.01	4	.86	.01	.23	1	10	220
1891 G	7	5	22	64	.4	7	3	1354	2.80	12	5	ND	1	27	.2	2	2	1	1.23	.045	13	21	.65	97	.01	3	.93	.01	.20	1	2	300
1892 G	4	15	15	55	.7	9	6	977	3.12	8	5	ND	2	19	.2	7	2	10	.86	.034	17	5	.64	56	.01	4	1.27	.01	.26	1	5	260
1893 G	2	54	62	70	1.6	14	12	889	4.13	21	5	ND	5	10	.2	21	2	11	.75	.049	23	6	.67	32	.01	7	1.46	.01	.26	1	7	210
1894 G	7	6	11	68	.6	8	5	888	4.04	10	5	ND	2	11	.5	3	2	3	.60	.032	15	5	.62	66	.01	2	1.42	.01	.18	1	1	450
1895 G	9	2	6	123	.1	5	3	763	3.94	12	5	ND	1	11	.2	2	2	1	.41	.028	14	13	.53	96	.01	3	1.38	.01	.21	1	4	130
1896 G	8	3	13	79	.6	3	3	1116	4.37	11	5	ND	1	14	.2	2	2	1	.82	.032	10	3	.71	97	.01	5	1.47	.01	.20	1	3	160
1897 G	6	8	12	92	.8	4	3	1856	3.94	12	5	ND	1	29	.4	4	2	2	1.28	.031	8	4	.77	94	.01	2	1.22	.01	.17	1	5	410
1898 G	7	3	4	96	.3	9	5	1840	3.79	4	5	ND	1	26	.2	2	2	8	1.42	.032	16	6	.86	63	.01	4	1.47	.01	.23	1	1	250
1899 G	6	9	11	167	.9	10	9	2557	5.34	10	5	ND	2	20	.7	2	2	7	1.60	.038	18	11	1.18	278	.01	2	1.98	.01	.31	1	8	580
1900 G	4	25	10	73	1.4	14	16	2517	5.36	35	5	ND	3	20	.6	7	2	20	1.68	.074	17	6	1.16	141	.01	7	1.99	.01	.30	1	7	500
1901 G	3	31	24	26	2.8	13	15	3145	4.59	22	6	ND	2	21	.2	15	2	14	2.40	.101	10	5	1.08	42	.01	4	1.10	.01	.31	1	18	560
1902 G	3	20	13	76	1.4	10	13	3850	2.76	21	5	ND	1	25	.2	10	2	13	2.88	.118	11	4	1.13	71	.01	3	.82	.01	.31	1	8	300
1903 G	3	18	24	141	1.9	12	10	2028	2.71	14	7	ND	3	15	.3	7	3	7	1.02	.064	17	11	.42	43	.01	6	.67	.01	.30	1	16	350
1904 G	3	21	20	86	2.2	9	8	917	1.99	187	5	ND	4	12	.2	9	4	5	.71	.047	20	4	.33	71	.01	5	.56	.01	.24	1	27	460
1905 G	4	11	10	34	1.5	7	3	1409	1.15	18	5	ND	1	16	.2	4	2	3	1.30	.026	14	6	.43	40	.01	4	.40	.01	.24	2	4	200
STANDARD C/AU-R	20	61	40	133	7.3	73	32	1053	3.97	41	19	7	40	53	19.4	15	22	59	.51	.098	39	61	.90	182	.08	36	1.89	.07	.13	12	495	1600

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	Hg ppb
1906 G	5	13	8	54	2.3	13	5	805	1.56	13	5	ND	3	16	.2	5	2	6	.62	.026	13	3	.34	55	.01	3	.64	.01	.25	2	41	200
1907 G	4	32	41	143	5.8	12	24	659	7.77	143	5	ND	2	17	.4	11	4	16	.72	.097	5	14	.30	18	.01	6	.68	.01	.27	2	85	1200
1908 G	2	17	32	35	4.2	6	23	1684	11.25	467	5	ND	1	54	.2	38	4	13	2.47	.125	4	3	.91	13	.01	3	.39	.01	.21	1	77	1400
1909 G	2	16	25	44	3.6	5	27	1168	7.41	181	5	ND	1	35	.2	12	5	19	1.85	.181	8	2	.50	31	.01	3	.48	.01	.27	3	54	1900
1910 G	2	16	27	120	3.6	6	27	2436	7.14	77	5	ND	1	59	.3	8	2	58	2.78	.196	12	1	1.28	35	.01	2	1.21	.01	.24	1	30	1000
1911 G	2	14	5	118	.1	5	23	1398	7.43	25	5	ND	1	147	.5	2	2	189	2.74	.166	14	4	1.90	80	.01	2	3.03	.03	.07	1	5	120
1912 G	2	15	8	143	.7	3	26	821	8.33	21	5	ND	1	84	.9	2	3	207	1.89	.180	13	2	2.40	66	.01	2	3.37	.03	.09	1	8	340
1913 G	2	11	12	117	.4	4	24	526	8.52	18	5	ND	2	29	1.0	2	2	221	.90	.187	14	2	3.08	80	.01	4	3.76	.03	.09	2	6	580
1914 G	2	18	24	92	1.9	6	29	1710	8.03	23	5	ND	1	48	1.0	5	2	167	2.88	.188	12	2	1.86	42	.01	3	1.86	.03	.14	1	7	800
1915 G	2	15	11	100	.6	4	24	1384	7.49	14	5	ND	1	38	.8	2	3	196	2.27	.180	11	4	2.29	44	.01	2	2.83	.03	.10	2	4	1400
1916 G	1	15	3	99	.8	3	23	1451	7.46	11	5	ND	1	41	.9	2	2	202	2.32	.173	11	4	2.02	54	.01	2	2.67	.03	.08	1	5	2400
1917 G	2	15	9	104	.6	4	24	1091	8.22	21	5	ND	1	42	.7	2	4	202	1.89	.179	10	3	2.47	49	.01	2	3.22	.03	.09	1	2	2000
1918 G	3	16	19	80	1.4	2	25	884	8.18	35	5	ND	1	40	.5	3	2	194	1.59	.178	9	3	2.28	48	.01	5	2.80	.03	.10	1	3	5000
1919 G	3	13	10	137	.7	4	21	1657	8.07	16	5	ND	1	87	1.3	2	4	194	3.24	.145	9	5	2.55	70	.01	2	2.95	.03	.08	1	2	1300
1920 G	1	18	9	118	.4	3	23	1362	8.53	18	5	ND	1	55	1.1	2	2	204	2.39	.172	11	3	2.85	61	.01	5	3.35	.02	.08	1	4	1400
1921 G	2	10	5	141	.6	1	22	2033	8.27	14	12	ND	1	112	1.3	2	2	213	3.40	.163	8	2	2.70	48	.01	2	3.17	.03	.07	1	3	2000
1922 G	3	23	36	27	3.0	6	26	1358	8.78	39	5	ND	1	30	.4	5	2	181	1.99	.164	6	2	1.60	33	.01	2	1.88	.04	.10	1	8	8800
1923 G	3	48	21	87	2.8	4	26	1652	8.57	28	5	ND	1	47	.5	2	6	179	2.75	.166	11	4	2.40	53	.01	2	2.58	.03	.10	1	10	950
1924 G	5	36	20	153	.9	17	10	1417	4.72	13	5	ND	2	33	.6	2	2	35	2.43	.068	11	6	1.97	55	.01	3	1.94	.01	.24	1	6	280
1925 G	5	19	105	506	.2	17	9	1275	4.74	9	5	ND	2	22	1.6	2	4	27	2.21	.061	13	7	1.93	51	.01	3	2.14	.01	.27	1	1	330
1926 G	5	51	7	79	.3	16	9	526	4.51	18	5	ND	3	273	.7	7	4	15	3.39	.057	7	3	1.87	106	.01	2	.51	.01	.22	1	6	210
1927 G	10	35	13	183	.1	30	16	928	4.63	36	5	ND	2	42	1.2	14	5	28	2.80	.086	7	5	1.87	54	.01	4	.98	.01	.22	1	7	1200
1928 G	10	33	14	199	.2	28	12	937	4.59	36	5	ND	3	32	1.4	18	6	26	2.79	.078	11	5	2.00	50	.01	3	1.19	.01	.21	1	9	1300
1929 G	4	79	18	110	.1	21	14	362	5.58	31	5	ND	3	96	.6	9	2	13	1.05	.059	11	2	1.15	64	.01	3	.55	.01	.26	2	7	760
1930 G	3	74	12	103	.1	18	12	619	4.97	34	5	ND	3	63	.2	12	2	12	1.73	.052	9	3	1.44	59	.01	6	.49	.01	.24	1	2	630
1931 G	5	61	18	91	.2	22	12	400	4.69	29	5	ND	3	31	.2	12	2	11	.97	.064	10	4	1.06	57	.01	4	.52	.01	.25	1	9	1050
1932 G	10	51	14	144	.2	33	12	1072	4.74	46	5	ND	2	54	1.1	18	2	17	2.87	.069	7	4	1.96	26	.01	4	.98	.01	.25	1	10	1300
1933 G	7	21	11	192	.8	10	3	3672	1.90	17	5	ND	1	65	.7	3	2	6	5.77	.044	8	2	2.95	39	.01	4	.41	.01	.22	1	12	180
1934 G	6	37	59	169	3.7	21	12	3191	5.72	89	5	ND	1	56	.8	12	4	8	4.98	.061	6	2	2.85	30	.01	3	.40	.01	.18	1	30	1100
1935 G	2	18	32	280	6.0	5	25	2873	7.63	178	9	ND	1	36	.5	14	4	26	2.16	.163	7	9	.83	33	.01	7	.62	.01	.24	1	150	5400
1936 G	2	25	38	2185	8.3	5	24	5325	10.33	398	5	ND	1	31	4.0	14	2	14	2.54	.131	5	3	1.12	26	.01	12	.36	.01	.20	1	239	6800
1937 G	2	10	15	130	1.8	4	22	4595	5.90	42	5	ND	1	61	.4	5	8	29	4.62	.177	8	2	2.16	42	.01	4	.71	.01	.24	1	18	750
1938 G	2	8	10	90	1.1	5	25	3517	6.54	22	5	ND	1	47	.5	2	5	63	3.48	.176	8	2	1.96	43	.01	6	1.30	.01	.22	1	19	330
1939 G	2	9	18	151	2.1	5	24	2725	8.34	115	5	ND	1	36	.5	4	2	108	2.56	.180	9	7	2.23	37	.01	3	2.24	.01	.17	1	61	2600
1940 G	1	7	2	138	.4	3	22	2777	7.26	36	5	ND	1	34	.6	2	2	131	2.40	.167	9	2	2.40	42	.01	4	2.66	.01	.18	1	5	140
1941 G	1	9	5	112	1.2	2	21	4412	5.55	19	5	ND	1	61	.2	2	3	55	4.70	.166	8	1	2.53	32	.01	5	.92	.01	.19	1	21	210
STANDARD C/AU-R	19	57	41	131	6.6	72	32	1049	3.95	40	19	7	39	53	19.5	15	18	55	.51	.094	38	56	.92	182	.07	37	1.92	.06	.14	11	483	1400

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	Hg ppb
1942 G	1	9	14	119	1.8	5	19	3978	6.15	60	5	ND	1	40	.6	14	2	22	4.74	.155	5	7	2.11	31	.01	4	.41	.01	.19	1	22	220
1943 G	1	11	18	170	1.8	4	18	4460	6.82	22	5	ND	1	40	.5	11	2	32	4.44	.161	5	8	2.18	26	.01	4	.60	.01	.17	1	36	200
1944 G	1	9	18	179	1.7	2	18	5150	7.38	20	8	ND	1	58	.8	12	2	31	5.30	.156	5	9	2.93	22	.01	4	.69	.01	.18	1	28	180
1945 G	1	13	18	106	2.0	5	22	4180	7.71	31	5	ND	1	32	.6	14	2	27	4.44	.173	6	8	2.49	23	.01	6	.64	.01	.19	1	31	150
1946 G	2	12	20	131	2.0	3	20	4706	7.25	23	5	ND	1	32	.4	15	2	20	4.67	.153	5	6	2.65	23	.01	5	.58	.01	.18	1	24	200
1947 G	2	10	30	82	3.0	4	21	1655	6.93	405	5	ND	1	32	.3	15	2	15	2.16	.151	5	6	.76	23	.01	4	.33	.01	.18	1	231	830
1948 G	3	8	15	137	2.2	5	16	3707	7.57	752	5	ND	1	63	.3	20	2	13	4.23	.127	4	15	1.96	20	.01	6	.27	.01	.15	1	833	1900
1949 G	2	12	27	70	2.7	5	20	2763	9.91	193	5	ND	1	55	.2	19	2	30	2.90	.151	3	9	1.59	16	.01	11	.57	.01	.17	1	174	2300
1950 G	2	8	12	77	.9	4	20	2266	6.23	17	5	ND	1	74	.6	8	2	51	3.21	.159	7	5	1.95	39	.01	6	1.16	.01	.18	1	20	130
1951 G	2	7	10	99	.6	3	19	2728	8.21	17	5	ND	1	44	.4	8	2	122	3.17	.139	8	8	2.86	33	.01	5	2.52	.01	.12	1	10	200
1952 G	3	7	15	101	1.2	6	14	3156	6.33	1564	5	ND	1	256	.2	11	2	52	6.75	.108	6	17	2.71	60	.01	3	.55	.01	.10	1	114	650
1953 G	2	10	36	22	3.6	4	12	3572	8.76	605	5	ND	1	94	.2	20	2	13	4.35	.090	2	7	2.60	17	.01	10	.27	.01	.14	1	97	1600
1954 G	2	11	33	4	4.3	6	19	2309	9.74	217	5	ND	1	96	.2	17	2	15	2.53	.161	4	9	1.13	20	.01	7	.40	.01	.19	1	76	3700
1955 G	2	9	32	12	3.8	4	14	4174	8.59	328	5	ND	1	27	.2	14	2	18	3.66	.119	2	7	2.70	16	.01	6	.52	.01	.14	1	85	1500
1956 G	2	24	31	16	6.9	6	16	3812	11.18	503	5	ND	1	34	.2	18	2	21	3.76	.106	3	17	2.55	13	.01	9	.56	.01	.13	1	124	3200
1957 G	6	3	15	15	.8	6	2	2282	4.77	32	5	ND	1	24	.3	4	2	2	1.70	.017	6	3	1.19	37	.01	3	1.34	.01	.09	1	21	280
1958 G	6	2	11	26	.4	4	1	1987	3.29	9	5	ND	1	50	.9	2	3	1	3.21	.020	7	5	1.53	49	.01	5	1.17	.01	.09	1	11	180
1959 G	5	3	7	46	.4	7	1	1122	2.88	16	5	ND	1	33	.6	2	2	2	1.78	.019	8	7	1.15	51	.01	7	1.14	.01	.10	2	11	140
1960 G	8	3	12	28	.3	7	1	497	2.98	5	6	ND	1	25	.7	2	2	2	.49	.014	10	24	.57	35	.01	2	1.17	.01	.05	2	9	220
1961 G	8	3	9	38	.3	9	2	377	3.30	5	6	ND	2	8	.6	2	3	5	.10	.014	11	5	.70	56	.01	3	1.44	.02	.07	2	3	140
1962 G	9	3	14	45	.3	9	2	505	2.80	8	6	ND	1	36	.8	2	2	3	.68	.016	9	7	.61	36	.01	4	1.16	.02	.07	2	2	140
1963 G	7	4	23	56	.3	8	1	775	2.44	2	5	ND	1	103	.9	2	2	2	1.89	.019	9	7	.51	45	.01	5	.98	.02	.05	1	1	90
1964 G	11	3	23	61	.3	11	2	440	2.37	6	6	ND	2	27	.4	2	3	4	.61	.017	9	41	.49	35	.01	4	.95	.03	.05	1	5	100
1965 G	7	3	11	52	.1	7	2	555	2.83	4	7	ND	2	39	.2	2	2	2	.83	.015	12	4	.41	35	.01	3	1.10	.03	.05	2	9	80
1966 G	7	3	11	68	.1	8	2	813	2.99	2	5	ND	1	49	.2	2	3	2	1.39	.016	15	5	.44	40	.01	3	1.16	.03	.06	1	2	90
1967 G	3	14	12	145	.2	4	17	1783	7.13	2	5	ND	1	111	.2	2	3	158	4.56	.120	11	5	1.52	18	.01	2	2.59	.03	.02	1	2	110
1968 G	2	7	7	113	.4	3	24	1634	7.90	19	5	ND	1	149	.8	4	2	173	3.03	.170	12	6	1.49	52	.01	4	2.32	.02	.07	1	1	210
1969 G	1	3	7	91	.3	3	18	1855	6.77	10	5	ND	1	240	.2	2	2	154	6.02	.150	11	3	1.33	39	.01	2	1.85	.02	.05	1	3	160
1970 G	4	3	11	61	.2	6	10	1533	4.97	10	5	ND	1	97	.3	2	2	78	2.39	.076	11	4	1.18	35	.01	2	1.01	.02	.06	1	1	140
1971 G	6	4	14	67	.2	6	3	1069	3.33	13	5	ND	2	33	.5	2	2	3	.85	.016	11	3	.71	41	.01	2	.51	.02	.07	1	3	250
1972 G	9	4	13	57	.3	7	5	1021	3.85	10	5	ND	1	42	.2	2	2	21	.84	.032	10	22	.68	69	.01	4	.67	.02	.08	1	10	180
1973 G	5	2	6	64	.2	5	4	1090	3.33	9	5	ND	1	61	.2	2	2	19	1.45	.027	10	4	.67	127	.01	2	.62	.02	.09	1	2	170
1974 G	6	4	10	68	.5	6	3	921	3.25	15	5	ND	2	33	.3	2	2	13	.86	.022	9	4	.64	93	.01	3	.49	.02	.08	1	6	560
1975 G	6	4	11	67	.4	4	2	776	2.64	11	5	ND	1	25	.2	2	2	1	.56	.013	8	2	.48	43	.01	2	.39	.01	.08	1	4	500
1976 G	9	24	23	88	1.4	9	3	669	3.34	15	6	ND	1	24	.4	9	2	1	.49	.029	8	25	.47	40	.01	4	1.01	.03	.05	1	5	680
1977 G	7	19	20	51	1.2	7	3	735	3.62	19	8	ND	2	21	.2	6	3	2	.47	.028	9	3	.50	52	.01	4	.87	.02	.08	1	7	740
STANDARD C/AU-R	19	58	44	129	7.0	71	31	1047	3.99	39	21	7	38	53	18.7	15	19	56	.52	.097	38	60	.88	180	.07	33	1.89	.06	.14	13	498	1500

RP 8

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	Hg ppb
1978 G	6	10	20	65	.6	4	4	1809	4.75	10	9	ND	1	77	.5	4	7	1	1.76	.043	9	6	.85	72	.01	4	.30	.03	.12	1	15	500
1979 G	6	7	9	102	.1	6	4	1067	4.44	2	5	ND	1	62	.2	2	2	1	.84	.053	12	4	.64	78	.01	3	.33	.02	.12	1	4	220
1980 G	7	4	4	99	.1	5	3	1489	3.84	2	5	ND	1	138	.5	2	2	1	1.99	.030	11	18	.78	73	.01	6	.29	.03	.11	1	11	200
1981 G	6	7	12	92	.1	4	2	1383	3.47	7	5	ND	1	108	.5	2	2	1	1.70	.018	10	3	.65	147	.01	3	.39	.03	.13	1	2	160
1982 G	6	7	18	69	.2	3	4	1002	3.88	7	5	ND	1	38	.2	2	4	1	.46	.017	10	3	.47	60	.01	4	.27	.04	.08	1	10	230
1983 G	7	13	15	119	.3	5	7	1156	5.43	13	5	ND	1	60	.2	3	2	1	.87	.031	8	5	.51	53	.01	4	.86	.04	.07	1	17	500
1984 G	8	13	9	72	.4	9	4	1075	3.82	64	5	ND	1	77	.2	4	11	1	.97	.026	10	24	.40	59	.01	3	.92	.03	.10	1	14	240
1985 G	7	15	13	71	.6	4	4	1015	3.59	3	7	ND	1	63	.7	2	3	1	.99	.019	11	4	.44	68	.01	2	1.05	.03	.09	1	11	340
1986 G	7	15	13	61	.3	5	4	938	3.21	3	6	ND	1	47	.3	3	2	1	.80	.010	12	4	.38	60	.01	9	.91	.02	.10	1	6	310
1987 G	6	65	20	63	1.7	5	4	2630	3.37	5	5	ND	1	239	.5	4	2	1	3.30	.009	7	4	.43	37	.01	2	.97	.02	.09	1	6	820
1988 G	10	12	21	75	.4	7	3	764	3.31	6	5	ND	1	39	.7	2	2	1	.47	.011	13	30	.34	60	.01	2	1.01	.03	.10	1	15	470
1989 G	6	6	26	166	.1	3	5	2016	4.71	2	5	ND	1	134	1.4	2	2	18	2.61	.041	12	3	1.08	80	.01	3	1.87	.03	.09	1	7	200
1990 G	2	15	8	184	.5	4	24	1743	8.15	9	8	ND	1	122	1.4	2	5	197	2.79	.159	13	3	1.82	77	.01	4	3.23	.03	.09	1	6	320
1991 G	2	13	12	121	.3	4	26	1396	7.83	33	5	ND	1	165	.6	2	2	199	2.90	.168	13	2	1.74	82	.01	6	3.06	.03	.10	1	3	250
1992 G	2	10	11	132	.2	3	22	2114	6.97	9	7	ND	1	353	1.4	2	3	205	5.41	.152	12	3	1.53	101	.11	5	2.60	.06	.13	2	4	100
1993 G	1	10	9	178	.4	2	24	2149	7.24	21	5	ND	1	289	1.3	2	2	199	4.61	.151	11	2	1.78	116	.02	2	2.93	.02	.07	1	2	160
1994 G	2	9	14	143	.5	2	24	1658	8.00	26	5	ND	1	165	.8	2	8	189	3.05	.171	13	2	1.90	82	.02	3	3.13	.02	.11	1	3	90
1995 G	1	14	11	151	.1	3	21	1843	7.21	14	5	ND	1	167	.8	2	5	199	3.11	.171	13	2	1.83	98	.05	2	2.76	.04	.10	1	5	110
1996 G	2	9	9	115	.1	1	20	1493	7.18	4	5	ND	1	155	.6	2	4	198	2.87	.170	13	2	1.88	97	.05	2	3.05	.04	.10	1	4	60
1997 G	2	7	6	84	.2	3	20	2830	8.24	9	7	ND	1	299	1.5	3	7	168	5.47	.135	10	1	2.12	53	.01	2	3.42	.01	.06	1	5	70
1998 G	2	12	15	307	.5	5	26	1560	8.77	10	7	ND	1	124	1.9	2	9	208	2.72	.163	12	1	2.21	84	.04	2	3.32	.03	.07	1	14	230
1999 G	2	15	8	117	.1	5	24	1692	7.42	10	5	ND	1	167	1.2	2	2	223	3.00	.170	14	3	1.53	144	.11	4	2.59	.05	.07	1	2	70
2000 G	2	16	36	203	.6	2	21	3466	7.40	16	5	ND	1	250	1.6	2	8	197	5.19	.143	13	3	1.76	105	.04	2	2.80	.03	.07	1	20	130
2001 G	2	16	5	121	.1	3	23	1450	7.92	2	5	ND	1	159	.9	2	5	221	3.33	.160	13	1	1.96	62	.01	8	3.21	.03	.06	1	5	60
2002 G	1	13	13	133	.1	2	24	1359	7.80	2	5	ND	1	185	1.2	2	2	203	3.51	.169	13	1	1.89	65	.03	2	2.95	.03	.06	1	1	100
2003 G	1	11	15	112	.1	3	21	1438	7.34	19	5	ND	1	230	.7	2	8	149	3.54	.150	12	1	2.06	124	.01	4	1.97	.02	.16	1	34	330
2004 G	4	37	57	1308	1.6	9	17	1755	5.34	88	5	ND	1	244	5.2	4	2	26	2.79	.096	8	3	1.42	90	.01	8	.70	.01	.31	1	23	2300
2005 G	7	43	31	247	1.6	21	13	904	4.54	44	5	ND	1	164	1.3	6	2	27	2.45	.081	7	3	1.17	39	.01	2	.75	.01	.21	1	18	500
2006 G	16	38	44	185	2.8	32	10	787	4.20	45	5	ND	2	75	1.1	19	2	16	1.86	.087	7	4	1.25	49	.01	4	1.06	.01	.20	1	9	660
2007 G	15	38	50	197	2.2	31	9	873	4.16	44	5	ND	1	62	1.2	18	4	14	1.90	.095	8	4	1.38	21	.01	2	.88	.01	.19	1	8	760
2008 G	13	35	34	156	1.4	25	10	875	4.79	36	5	ND	1	85	1.2	14	5	31	2.27	.099	7	9	1.64	55	.01	4	1.22	.01	.17	2	13	630
2009 G	5	42	28	84	.4	21	14	687	5.21	41	5	ND	1	135	.2	7	2	30	2.06	.076	5	6	1.38	27	.01	2	1.43	.01	.17	1	4	400
2010 G	5	51	18	109	.1	18	13	697	4.90	33	5	ND	1	94	.6	8	5	23	1.75	.062	6	8	1.41	73	.01	5	1.23	.01	.17	1	17	380
2011 G	5	57	22	136	.2	18	14	487	4.71	41	5	ND	1	78	.2	10	6	16	1.08	.074	6	5	1.10	59	.01	3	.82	.01	.20	1	5	630
2012 G	4	54	15	103	.3	19	12	398	5.14	48	5	ND	1	50	.2	11	6	16	.65	.065	6	11	1.12	48	.01	4	1.23	.01	.22	1	16	660
2013 G	3	36	17	90	.2	13	9	757	4.42	42	5	ND	1	133	.2	6	2	18	2.58	.061	5	9	1.52	52	.01	3	1.63	.01	.17	1	11	410
STANDARD C/AU-R	19	59	38	129	6.7	69	32	1050	3.95	41	19	7	38	53	18.8	16	24	56	.51	.093	38	57	.89	181	.07	34	1.90	.06	.14	11	503	1400

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	Hg ppb
2014 G	2	29	5	73	.2	9	9	906	4.05	22	5	ND	1	77	.2	4	2	16	2.62	.059	7	10	2.17	83	.01	6	1.69	.01	.14	1	7	210
2015 G	4	22	8	55	.1	10	8	790	4.15	34	5	ND	1	106	.2	5	5	15	3.13	.090	7	11	1.99	55	.01	2	1.58	.02	.16	1	13	200
2016 G	2	27	8	72	.2	14	12	273	3.33	26	5	ND	1	53	.3	7	3	13	.73	.063	6	14	.84	63	.01	2	1.10	.02	.18	1	11	270
2017 G	2	36	22	88	.1	10	14	287	3.86	24	5	ND	1	46	.2	7	2	19	.66	.047	6	8	.75	70	.01	3	1.39	.02	.15	1	11	250
2018 G	4	2	10	134	.2	2	8	1509	5.63	10	5	ND	1	140	.2	2	3	42	2.70	.143	16	4	.91	69	.04	3	1.95	.04	.07	1	4	90
2019 G	4	2	10	139	.1	1	9	1261	5.78	4	5	ND	1	108	.7	2	7	50	2.28	.162	17	3	.94	74	.03	5	1.97	.04	.07	2	3	100
2020 G	4	1	12	137	.2	1	9	1278	5.74	11	5	ND	1	113	.8	2	2	47	2.26	.151	17	8	.86	69	.03	6	1.91	.05	.07	1	2	120
2021 G	3	2	9	142	.1	1	8	1128	5.67	9	5	ND	1	100	.5	2	2	43	1.96	.148	17	4	.84	73	.01	2	1.96	.04	.06	1	3	130
2022 G	4	1	9	137	.2	2	9	1496	5.66	6	5	ND	1	165	.6	2	2	44	2.85	.148	16	4	.91	55	.01	4	1.95	.04	.06	2	4	140
2023 G	4	4	5	137	.3	3	9	1247	6.03	9	5	ND	1	86	.5	2	2	47	1.90	.164	17	4	1.08	66	.01	2	2.14	.05	.07	1	4	130
2024 G	5	1	6	135	.4	3	9	1229	5.47	10	5	ND	1	102	.2	2	7	39	2.02	.144	16	10	.86	60	.01	3	1.67	.04	.06	1	4	160
2025 G	3	1	11	131	.3	1	9	1080	5.33	10	5	ND	1	101	.4	2	2	44	2.08	.143	17	3	.79	46	.01	2	1.87	.05	.05	1	3	200
2026 G	4	3	9	135	.3	6	9	1285	5.48	11	5	ND	1	108	.5	2	2	42	2.26	.148	17	3	.86	77	.02	2	1.74	.04	.06	1	3	130
2027 G	5	1	4	131	.2	4	8	1233	5.13	11	5	ND	1	89	.2	2	2	40	1.97	.137	15	4	.79	94	.04	4	1.38	.03	.07	1	3	140
2028 G	5	1	13	130	.2	2	9	1268	5.47	8	5	ND	1	75	.3	4	2	33	1.97	.149	15	6	.65	121	.01	2	1.11	.03	.07	1	3	320
2029 G	4	1	7	123	.4	2	8	1143	5.20	8	5	ND	1	57	.2	2	3	21	1.70	.133	12	2	.56	161	.01	4	.69	.02	.10	2	9	340
2030 G	4	3	16	134	.1	2	8	1418	5.44	11	5	ND	1	84	.4	2	3	30	2.47	.168	13	3	.81	76	.01	2	.99	.02	.07	1	12	350
2031 G	10	4	26	233	1.5	1	10	1254	6.50	91	5	ND	1	39	.4	17	7	27	1.02	.142	10	3	.65	89	.01	2	.64	.01	.10	1	14	680
2032 G	5	1	23	392	3.9	2	10	2205	9.17	244	6	ND	1	88	2.3	170	8	22	2.52	.123	7	9	.87	21	.01	2	.70	.01	.09	1	21	4300
STANDARD C/AU-R	19	58	37	131	6.9	70	32	1051	3.95	41	20	7	38	53	19.6	15	19	55	.52	.093	38	56	.89	181	.07	36	1.88	.06	.14	11	508	1600

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

GEOCHEMICAL ANALYSIS CERTIFICATE

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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	Hg ppb
2039-G	3	5	3	151	.3	2	6	1230	4.98	16	5	ND	1	43	.6	2	2	40	1.44	.122	17	6	.95	72	.04	2	1.71	.04	.12	1	1	130
2040-G	2	4	6	102	.3	1	7	1165	5.41	8	5	ND	1	57	.4	3	2	38	1.64	.124	16	5	.90	69	.02	2	1.88	.06	.10	1	1	200
2041-G	2	2	5	137	.3	1	7	1229	5.02	6	5	ND	1	86	.5	2	2	41	2.18	.127	17	9	.89	82	.03	2	1.91	.04	.09	1	10	130
2042-G	2	3	8	129	.2	1	7	1231	5.32	6	5	ND	1	97	.3	2	2	42	2.22	.126	17	5	.77	71	.06	2	1.82	.07	.09	1	8	120
2043-G	2	3	6	139	.1	2	7	1085	5.64	6	5	ND	1	87	.2	2	2	54	1.93	.145	19	6	.86	66	.06	2	1.88	.07	.08	1	2	190
2044-G	2	4	5	140	.1	1	6	988	5.00	4	5	ND	1	85	.5	2	2	45	1.87	.125	18	8	.80	106	.12	2	1.69	.07	.17	1	16	110
2045-G	3	3	6	128	.1	2	6	1199	4.93	9	5	ND	1	152	.4	2	2	43	2.77	.121	17	7	.75	71	.07	2	1.68	.06	.08	1	8	120
2046-G	1	4	2	92	.2	1	5	2190	4.79	17	5	ND	1	212	.3	3	3	37	4.72	.103	13	6	.75	53	.04	2	1.70	.07	.08	1	36	150
2047-G	4	4	8	177	.2	1	7	1776	5.56	9	5	ND	1	264	.4	2	2	42	4.09	.121	15	7	.78	51	.05	2	1.87	.07	.07	1	16	200
2048-G	2	3	8	138	.2	1	7	1151	5.41	7	5	ND	1	99	.4	2	3	47	2.18	.130	17	8	.75	77	.08	2	1.84	.09	.09	1	3	130
2049-G	3	3	7	140	.1	2	7	1115	5.24	2	5	ND	1	98	.5	2	2	46	2.18	.122	20	6	.72	58	.04	4	1.65	.07	.07	1	7	160
2050-G	2	3	2	139	.1	1	7	1178	5.42	9	5	ND	1	102	.5	2	3	47	2.14	.129	21	6	.79	79	.05	6	1.62	.08	.10	1	1	130
2051-G	3	4	5	289	.1	1	7	1405	6.46	8	5	ND	1	150	.9	2	2	46	3.00	.130	18	7	.94	39	.02	2	2.06	.06	.05	1	10	300
2052-G	4	5	8	160	.2	1	7	1637	7.26	11	5	ND	1	140	.2	3	2	52	3.46	.133	17	8	1.22	51	.02	2	2.05	.11	.06	1	13	310
2053-G	3	4	6	140	.1	2	7	1422	5.78	11	5	ND	1	101	.3	2	3	48	2.15	.143	19	7	.74	82	.05	2	1.58	.08	.11	1	12	160
2054-G	2	3	3	135	.1	1	7	1288	5.50	6	5	ND	1	83	.3	2	2	46	1.93	.133	18	5	.75	88	.05	2	1.43	.09	.13	1	2	150
2055-G	2	3	6	126	.1	1	7	1144	5.31	4	5	ND	1	98	.2	2	2	45	2.12	.129	20	6	.78	58	.02	5	1.74	.06	.07	1	3	170
2056-G	3	4	6	128	.1	2	7	1104	5.65	7	5	ND	1	89	.2	3	2	49	2.05	.141	19	8	.82	59	.02	2	1.91	.08	.08	1	4	160
2057-G	2	3	4	112	.2	1	7	1258	5.94	9	5	ND	1	104	.3	4	2	51	2.61	.144	18	8	.83	64	.05	2	2.05	.08	.09	1	12	220
2058-G	3	4	6	131	.1	1	8	1172	6.01	8	5	ND	1	85	.4	2	2	54	2.03	.149	17	9	.84	93	.07	4	2.03	.08	.14	1	3	120
2059-G	2	4	5	131	.1	1	8	1220	6.01	8	5	ND	1	99	.2	2	2	57	2.21	.158	17	9	.92	98	.07	2	1.96	.10	.14	1	10	110
2060-G	2	3	18	141	.1	1	8	1119	5.80	5	5	ND	1	102	.3	3	2	56	2.13	.158	17	8	.92	74	.05	2	2.05	.07	.10	1	6	120
2061-G	2	4	7	151	.1	1	7	1404	6.02	5	5	ND	1	181	.5	2	3	46	3.00	.140	17	7	.85	83	.03	2	2.06	.07	.10	1	7	170
2062-G	2	4	9	138	.1	1	8	1382	6.15	4	5	ND	1	104	.2	2	2	52	2.52	.146	17	8	.94	64	.03	2	1.98	.07	.09	1	6	150
2063-G	2	5	8	133	.2	1	7	1105	5.63	3	5	ND	1	85	.2	2	2	47	2.20	.143	19	5	.79	72	.02	2	1.96	.08	.10	1	9	140
2064-G	3	3	2	141	.1	3	7	1253	5.47	5	5	ND	1	98	.2	2	2	46	2.16	.134	18	7	.80	96	.09	2	1.53	.09	.15	1	6	100
2065-G	2	7	5	93	.4	1	8	2166	5.37	3	5	ND	1	136	.2	3	2	42	3.50	.129	15	8	1.33	49	.02	2	1.80	.07	.07	1	1	240
2066-G	3	3	45	141	.6	4	7	784	4.98	3	5	ND	1	75	.3	2	4	38	1.63	.113	16	8	.80	64	.02	3	1.91	.08	.09	1	3236	260
2067-G	1	2	58	105	.1	1	4	3712	4.46	4	5	ND	1	648	.2	2	2	31	11.17	.076	14	6	.64	38	.01	2	1.52	.04	.05	1	29	130
2068-G	3	3	19	101	.3	4	8	659	4.58	6	7	ND	1	62	.2	2	5	42	1.29	.138	15	8	.70	56	.02	2	1.77	.10	.07	1	478	160
2069-G	2	4	18	134	.3	1	7	1030	5.47	4	5	ND	1	125	.2	3	2	42	2.19	.134	15	7	.83	56	.02	2	2.02	.08	.07	1	46	150
2070-G	3	4	4	159	.1	3	8	633	5.89	6	14	ND	1	39	.2	2	2	47	.79	.149	19	8	.93	74	.02	2	2.20	.06	.09	1	12	110
2071-G	2	6	5	133	.1	1	7	1091	5.91	5	5	ND	1	85	.3	3	2	51	2.21	.154	17	8	.85	77	.08	3	2.00	.08	.11	1	40	120
2072-G	4	4	2	152	.1	5	7	1125	5.22	5	5	ND	1	79	.2	2	2	50	1.73	.134	18	8	.85	91	.14	3	1.31	.09	.22	1	15	90
2073-G	2	4	4	130	.2	1	7	1180	5.23	3	5	ND	1	88	.2	2	3	41	2.42	.133	17	5	.77	62	.02	2	1.76	.08	.08	1	11	140
2074-G	2	5	11	136	.3	1	6	1071	4.83	2	5	ND	1	75	.2	2	2	41	2.29	.125	13	7	.78	55	.02	2	1.79	.07	.09	1	36	130
STANDARD C/AU-R	18	57	36	130	6.7	69	32	1051	3.97	39	19	7	39	53	19.0	15	19	55	.50	.090	40	58	.89	182	.07	32	1.92	.06	.14	11	506	1500

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: P1 TO P6 CORE P7 TO P9 ROCK AU** ANALYSIS BY FA\ICP FROM 10 GM SAMPLE. HG ANALYSIS BY FLAMELESS AA.

DATE RECEIVED: SEP 12 1990 DATE REPORT MAILED: Sept 19/90 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	Hg ppb
2075-G	3	9	8	137	.5	3	6	935	5.37	4	6	ND	1	60	.2	2	3	36	1.80	.128	16	8	.77	58	.04	3	1.69	.05	.09	1	37	100
2076-G	2	4	9	113	.5	2	7	1072	4.86	6	5	ND	1	87	.2	2	2	44	2.52	.126	16	7	.78	50	.02	4	1.65	.06	.08	1	1	150
2077-G	2	4	9	120	.5	3	7	1108	5.15	6	5	ND	1	85	.2	2	2	48	2.30	.136	15	9	.94	46	.02	2	1.91	.08	.07	1	21	160
2078-G	2	5	5	139	.4	1	6	1019	4.96	4	5	ND	1	76	.2	2	2	45	2.10	.126	17	6	.80	53	.02	2	1.72	.07	.08	1	2	110
2079-G	5	5	4	173	.6	2	3	1003	5.73	5	5	ND	1	39	.2	2	4	2	.58	.050	14	4	.68	65	.01	2	.57	.02	.14	1	3	390
2080-G	5	5	4	114	.3	2	3	1523	4.60	22	5	ND	1	172	.2	2	2	5	2.62	.042	7	4	.49	107	.01	2	.59	.01	.11	1	4	400
2081-G	3	11	4	118	.3	5	4	707	4.88	9	10	ND	1	26	.2	2	2	12	.35	.037	13	5	.54	81	.01	2	.69	.02	.11	1	6	430
2082-G	3	27	9	149	.5	18	15	1280	6.18	40	5	ND	1	75	.3	4	2	27	1.18	.068	13	10	.79	186	.01	3	.58	.01	.24	1	5	420
2083-G	3	14	10	139	.7	12	13	1609	5.97	23	9	ND	1	59	.3	2	3	39	1.36	.083	21	11	.93	78	.01	2	1.03	.03	.16	1	9	360
2084-G	8	6	19	118	.7	5	7	1221	4.43	13	5	ND	2	59	.3	4	2	25	1.16	.045	23	6	.81	64	.01	3	1.00	.03	.18	1	1	280
2085-G	13	10	25	94	.8	7	3	846	3.13	5	7	ND	1	34	.5	2	2	1	.72	.017	17	7	.58	41	.01	2	.80	.04	.09	1	1	230
2086-G	9	64	9	101	1.0	3	3	1220	3.46	7	5	ND	1	32	.2	3	3	2	.99	.016	15	3	.65	70	.01	2	.74	.06	.06	1	3	210
2087-G	6	10	6	87	.2	7	1	425	2.86	6	17	ND	1	16	.2	2	3	1	.24	.015	14	7	.32	72	.01	2	.53	.04	.11	1	1	220
2088-G	4	3	10	108	.2	1	1	911	3.44	6	9	ND	1	23	.2	2	2	1	.58	.012	13	3	.39	117	.01	3	.75	.04	.14	1	2	160
2089-G	6	4	9	138	.2	7	1	555	2.63	5	8	ND	1	32	.4	2	3	1	.55	.011	18	6	.36	64	.01	2	.95	.02	.12	1	8	220
2090-G	5	4	11	141	.1	2	1	775	3.20	2	5	ND	1	51	.5	2	2	1	.73	.011	18	3	.35	56	.01	2	1.02	.06	.10	1	1	150
2091-G	8	5	12	142	.1	6	2	945	3.35	2	6	ND	2	73	.2	2	2	8	1.26	.038	25	6	.16	261	.09	2	.76	.09	.07	1	2	60
2092-G	6	13	10	141	.5	2	1	842	3.13	2	9	ND	2	49	.3	2	2	3	.89	.013	17	2	.13	53	.06	2	.61	.05	.07	1	172	80
2093-G	8	5	15	140	.2	6	1	1068	3.24	3	5	ND	2	73	.4	2	4	3	1.13	.014	24	4	.15	112	.08	2	.71	.07	.10	1	7	70
2094-G	7	5	16	157	.2	3	1	702	3.19	10	9	ND	2	20	.4	2	2	1	.34	.011	22	2	.47	113	.01	2	.46	.01	.13	1	1	180
2098-G	17	4	8	79	.5	7	4	1677	2.85	13	7	ND	1	36	.2	3	2	4	1.53	.022	17	7	.91	85	.01	2	.39	.01	.20	1	1	150
2099-G	6	6	7	135	.3	2	1	1171	2.90	51	5	ND	1	55	.3	2	2	1	1.12	.008	12	3	.44	67	.01	2	.50	.01	.16	1	12	140
2100-G	5	8	7	137	.6	6	4	1817	2.67	25	5	ND	1	50	.2	4	2	3	1.74	.039	11	7	.86	76	.01	2	.39	.01	.21	1	2	150
2107-G	2	32	10	74	1.9	24	15	3607	4.03	50	5	ND	1	40	.2	13	2	7	3.16	.108	8	8	1.33	40	.01	4	.47	.01	.25	1	10	130
2108-G	1	37	10	66	1.7	29	18	2935	4.69	50	5	ND	1	41	.3	12	2	9	2.70	.095	8	9	1.29	42	.01	2	.53	.01	.28	1	7	120
2109-G	1	39	7	40	1.4	32	19	3116	5.04	47	5	ND	1	39	.2	8	2	15	2.76	.093	8	10	1.57	49	.01	4	.56	.01	.25	1	12	100
2110-G	2	44	7	104	1.4	36	19	2434	5.19	38	5	ND	1	37	.2	8	2	23	2.00	.062	7	16	1.83	50	.01	4	.94	.01	.22	1	5	130
2111-G	1	43	6	111	1.4	40	19	2583	6.39	33	5	ND	1	38	.3	9	2	27	2.32	.059	6	19	2.17	45	.01	2	1.25	.01	.19	1	5	130
2112-G	1	32	9	103	1.4	39	18	1703	6.34	49	6	ND	1	30	.4	9	3	29	1.53	.063	7	18	1.89	47	.01	3	1.40	.01	.20	1	5	140
2113-G	1	37	5	157	1.0	30	18	2150	5.28	28	5	ND	1	35	.6	5	2	30	2.05	.064	10	18	2.02	46	.01	4	1.47	.01	.21	1	11	120
2114-G	2	32	8	93	1.2	34	20	2090	5.90	29	5	ND	1	37	.3	8	2	32	2.00	.070	12	19	2.21	111	.01	3	1.34	.01	.22	1	10	130
2115-G	1	43	8	142	1.3	40	19	2457	5.64	51	5	ND	1	35	.5	7	2	31	2.37	.050	7	20	2.08	49	.01	3	1.10	.01	.18	1	3	160
2116-G	3	29	10	143	1.6	22	11	1719	3.58	55	5	ND	2	43	.4	13	2	9	1.85	.039	13	8	1.35	70	.01	3	.47	.01	.23	1	22	180
2117-G	4	15	9	136	.9	8	6	1528	1.56	23	5	ND	2	29	.4	8	2	2	1.64	.025	14	4	.74	55	.01	2	.39	.01	.21	1	20	100
2118-G	4	24	23	136	2.7	17	12	1469	4.20	262	6	ND	1	60	.2	12	4	4	1.83	.033	5	6	.83	51	.01	2	.41	.01	.23	1	113	200
2124-G	1	16	5	59	.5	7	5	2663	4.14	12	5	ND	1	48	.2	5	2	8	4.37	.045	9	5	2.43	66	.01	3	.38	.01	.18	1	7	110
STANDARD C/AU-R	18	57	38	130	7.0	70	32	1051	3.98	40	19	7	39	53	18.6	15	20	55	.50	.090	39	60	.89	182	.07	34	1.88	.06	.14	11	487	1500

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

GEOCHEMICAL ANALYSIS CERTIFICATE

Granges Inc. PROJECT 134 File # 90-4231

2300 - 885 W. Georgia St., Vancouver BC V6C 3E8

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	Hg ppb
LS-UR-90-99	1	50	16	42	.1	7	10	817	2.98	146	5	ND	1	228	.5	7321	2	15	3.82	.104	3	8	.72	21	.01	7	.21	.01	.13	1	161	110
UR-90-BB-6	1	231	35	77	.1	6	8	208	1.18	2	5	ND	1	44	.5	57949	51	5	.39	.008	2	1	.02	3	.01	6	.09	.01	.05	1	53	210
LS-UR-100A-90	1	122	8	63	.5	10	22	1233	6.96	11	5	ND	1	331	.2	1755	2	137	6.94	.158	7	19	1.60	45	.01	7	1.34	.03	.13	1	5	120
2095 G	6	7	13	126	.6	2	2	944	2.89	31	5	ND	1	28	.6	36	2	2	.67	.012	12	4	.55	28	.01	4	.37	.01	.13	1	6	170
2096 G	5	12	12	111	1.1	5	4	1938	4.21	30	5	ND	1	153	.4	17	2	4	3.46	.018	4	8	1.53	33	.01	3	.33	.01	.15	1	15	100
2097 G	6	11	8	140	1.7	5	4	2222	2.61	9	5	ND	1	57	.3	63	3	7	2.32	.040	18	10	1.13	114	.01	2	.36	.01	.20	1	11	140
2101 G	4	15	15	79	1.1	8	8	1579	3.19	16	5	ND	1	31	.4	11	2	3	1.50	.048	9	7	.68	41	.01	4	.45	.01	.23	1	9	70
2102 G	4	16	13	101	1.3	11	9	2470	4.09	21	5	ND	1	44	.3	18	3	5	2.45	.076	7	8	1.01	32	.01	11	.45	.01	.25	1	7	90
2103 G	4	15	13	66	1.2	16	14	2720	3.70	44	5	ND	1	46	.2	12	4	4	2.59	.055	6	10	1.09	34	.01	4	.33	.01	.20	1	9	60
2104 G	8	12	8	161	.9	12	8	1876	1.63	57	5	ND	2	34	.4	15	3	2	1.93	.040	13	6	.79	36	.01	6	.37	.01	.21	1	9	70
2105 G	3	22	33	90	6.6	19	10	1581	4.95	1170	5	ND	1	48	.2	23	2	3	1.67	.035	6	8	.70	36	.01	4	.39	.01	.22	1	787	180
2106 G	3	12	60	179	8.2	11	7	1434	5.10	3708	5	3	1	73	.2	43	2	2	2.48	.023	5	8	.98	33	.01	3	.31	.01	.18	1	3298	320
2119 G	9	26	46	198	6.7	22	10	450	5.52	489	5	ND	1	49	.4	18	2	5	.97	.058	3	7	.39	39	.01	3	.38	.01	.21	1	211	250
2120 G	2	7	21	79	2.3	4	5	1962	6.66	1831	5	ND	1	48	.2	18	2	2	3.33	.017	3	9	1.60	19	.01	2	.24	.01	.14	1	423	160
2121 G	4	11	27	14	2.4	11	7	1462	3.89	781	5	ND	1	52	.2	17	2	4	3.46	.018	2	7	1.64	30	.01	6	.28	.01	.16	1	237	90
2122 G	7	22	29	84	2.3	19	12	1024	3.90	199	5	ND	1	43	.2	15	2	6	2.44	.051	4	8	.86	39	.01	3	.43	.01	.24	1	95	130
2123 G	2	14	10	19	1.4	9	7	3197	4.31	28	5	ND	1	46	.2	12	2	3	5.46	.032	4	6	2.64	25	.01	5	.26	.01	.15	1	10	70
2130 G	1	13	3	65	.3	4	6	2593	4.04	7	5	ND	1	99	.2	5	2	20	4.95	.038	8	7	2.78	37	.01	3	.78	.01	.11	1	4	60
STANDARD C/AU-R	19	58	37	132	7.0	71	31	1052	3.94	40	20	7	38	53	18.5	15	22	55	.51	.099	38	60	.90	181	.07	38	1.88	.06	.14	13	495	1300

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: ROCK/CORE AU** ANALYSIS BY FA\ICP FROM 10 GM SAMPLE. HG ANALYSIS BY FLAMELESS AA.

DATE RECEIVED: SEP 8 1990 DATE REPORT MAILED: Sept 13/90. SIGNED BY. C. Leong .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	Hg ppb
2125-G	2	13	2	116	.5	7	6	2876	4.03	14	5	ND	1	48	.4	4	2	9	4.85	.052	7	7	2.75	69	.01	2	.36	.01	.17	1	16	100
2126-G	2	18	2	90	.4	12	9	1692	3.94	17	5	ND	1	37	.4	4	2	15	2.61	.038	12	12	1.96	68	.01	2	.75	.02	.17	1	3	60
2127-G	1	20	5	60	.7	28	23	1800	4.72	40	5	ND	1	45	.2	5	2	41	2.95	.075	6	21	2.30	84	.01	4	1.09	.01	.18	1	9	50
2128-G	3	21	6	77	.7	22	18	2153	5.07	49	5	ND	1	48	.2	6	2	35	3.52	.075	6	19	2.48	95	.01	2	1.14	.01	.20	1	11	70
2129-G	1	11	2	95	.2	7	5	1769	3.24	6	5	ND	1	37	.3	3	2	6	2.96	.025	12	7	2.04	44	.01	2	.53	.01	.15	1	6	50
2131-G	4	3	4	83	.1	1	1	1824	2.57	2	5	ND	1	165	.4	2	2	1	4.20	.012	13	6	1.61	72	.01	2	.41	.01	.18	1	5	180
2132-G	3	9	3	126	.1	3	4	1566	3.76	5	7	ND	1	46	.5	2	2	11	2.77	.037	14	8	1.90	53	.01	2	.70	.01	.16	1	2	70
2133-G	3	60	38	120	2.1	19	12	519	5.36	55	5	ND	1	47	.5	10	2	19	.97	.066	4	9	1.17	70	.01	4	.56	.01	.26	1	16	190
2134-G	3	60	20	135	1.3	17	12	566	5.28	47	5	ND	1	42	.4	11	2	21	.83	.048	4	9	1.16	69	.01	7	.47	.01	.20	1	14	170
2135-G	2	69	10	112	.6	14	12	764	5.00	37	5	ND	1	51	.6	10	2	23	1.29	.045	4	8	1.38	83	.01	3	.53	.01	.22	1	1	180
2136-G	1	64	9	98	.4	11	10	672	4.01	33	5	ND	1	48	.3	9	3	16	1.28	.050	4	9	1.18	70	.01	4	.47	.01	.22	1	3	170
2137-G	2	61	13	82	.5	15	11	728	5.10	36	5	ND	1	77	.2	10	2	22	1.37	.045	3	8	1.17	70	.01	6	.55	.01	.23	1	10	200
2138-G	2	44	19	90	1.0	13	10	1291	4.56	37	5	ND	1	102	.3	8	2	14	3.10	.052	2	8	1.55	62	.01	3	.50	.01	.21	1	16	280
2139-G	2	34	24	69	.7	10	10	638	4.70	33	5	ND	1	43	.3	7	2	16	1.04	.073	4	8	.80	69	.01	4	.58	.02	.23	1	8	350
2140-G	2	37	27	89	.6	13	9	835	6.44	41	5	ND	1	47	.4	10	4	19	1.18	.070	3	11	.98	42	.01	3	.50	.01	.19	1	7	340
2141-G	1	26	9	63	.6	9	7	1806	3.87	24	5	ND	1	100	.2	6	2	14	3.27	.052	3	9	1.66	61	.01	2	.40	.01	.17	1	7	210
2142-G	3	74	30	152	1.3	23	17	621	5.16	34	5	ND	1	57	.6	6	2	29	1.31	.062	5	17	.94	70	.01	2	1.90	.01	.22	2	8	310
2143-G	3	58	19	155	.8	18	14	1239	5.86	31	5	ND	1	99	.4	8	2	27	2.78	.056	4	19	1.29	76	.01	2	2.13	.01	.22	1	9	360
2144-G	3	17	7	9	.3	6	2	1490	3.29	79	7	ND	1	61	.4	3	2	3	2.64	.012	7	9	.85	56	.01	2	.46	.01	.17	1	67	120
2145-G	2	13	5	1	.4	2	2	977	3.57	145	5	ND	1	50	.2	2	3	1	1.94	.008	5	4	.47	51	.01	2	.27	.01	.15	1	100	70
2146-G	4	8	6	10	.4	5	2	1053	3.81	85	5	ND	1	23	.3	3	2	1	1.48	.009	9	8	.82	56	.01	2	.64	.01	.17	1	52	30
2147-G	3	5	5	50	.2	3	1	792	2.62	23	5	ND	2	20	.3	2	2	1	1.05	.010	14	4	.53	61	.01	3	.56	.01	.18	1	10	20
2148-G	4	3	4	29	.3	5	2	488	2.53	16	5	ND	2	21	.2	2	2	1	.65	.005	13	6	.49	65	.01	2	.83	.01	.18	1	11	30
2149-G	3	4	7	48	.3	2	2	637	2.99	19	5	ND	2	24	.3	2	2	1	.86	.007	12	5	.56	56	.01	2	.84	.01	.17	1	12	50
2150-G	3	2	6	33	.1	6	2	668	2.22	9	5	ND	1	31	.2	2	2	1	1.05	.005	14	7	.50	54	.01	2	.71	.01	.15	1	10	30
2151-G	4	7	20	34	.5	3	4	660	3.43	18	5	ND	1	21	.3	4	2	1	.94	.004	11	4	.54	44	.01	2	.71	.01	.14	1	29	70
2152-G	4	5	12	92	.3	5	2	823	3.85	9	5	ND	1	19	.4	2	2	2	1.01	.012	13	8	.78	50	.01	2	1.14	.01	.15	1	10	110
2153-G	3	7	8	98	.2	1	2	704	3.13	8	5	ND	3	27	.6	2	2	2	.99	.012	20	5	.62	61	.01	5	1.11	.02	.14	1	3	120
2154-G	5	19	8	47	.4	8	2	861	3.95	14	5	ND	1	21	.2	2	2	2	1.27	.013	11	11	.66	49	.01	2	.82	.01	.20	1	52	80
2155-G	2	4	6	57	.2	2	1	1872	3.43	3	5	ND	1	25	.2	2	2	1	2.38	.009	14	6	1.36	48	.01	2	.97	.01	.14	1	11	40
2156-G	3	2	8	59	.3	5	1	831	3.23	14	5	ND	1	12	.2	2	2	1	1.16	.010	11	8	.84	48	.01	2	.90	.01	.17	1	6	120
2157-G	3	3	8	82	.4	2	1	927	3.24	29	5	ND	2	13	.3	2	2	1	1.51	.010	11	6	.89	56	.01	2	.73	.01	.18	1	29	150
2158-G	3	1	6	69	.2	5	1	921	2.90	18	5	ND	3	15	.2	2	2	1	1.20	.010	18	8	.81	46	.01	4	.97	.01	.18	1	6	60
2159-G	1	3	6	59	.3	1	1	720	2.35	21	5	ND	2	29	.3	2	2	1	1.27	.011	15	5	.60	45	.01	2	.69	.01	.19	1	19	80
2160-G	4	1	9	48	.2	5	1	933	3.25	78	5	ND	1	19	.3	2	2	1	1.78	.012	12	8	1.02	39	.01	2	.75	.01	.18	1	10	110
2161-G	1	1	3	95	.2	1	1	1620	2.76	9	9	ND	2	26	.2	2	2	1	2.66	.010	15	6	1.54	37	.01	2	.83	.01	.15	1	4	350
STANDARD C/AU-R	18	57	39	130	7.0	67	31	1049	3.97	38	17	7	39	52	18.6	15	20	56	.50	.090	37	57	.87	181	.07	37	1.86	.06	.14	13	489	1300

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	Hg ppb
2162-G	4	2	5	50	.2	4	1	784	2.94	3	5	ND	2	34	.3	2	2	1	1.45	.010	16	8	.90	52	.01	4	.51	.01	.17	1	5	290
2163-G	2	2	4	56	.4	1	1	1838	3.65	7	5	ND	1	62	.2	3	4	1	4.11	.009	6	6	1.78	47	.01	2	.63	.01	.19	1	19	300
2164-G	5	3	12	51	.4	6	1	508	3.91	11	5	ND	2	13	.4	2	2	1	.83	.011	10	6	.57	49	.01	6	.60	.01	.19	1	48	280
2165-G	10	1	10	20	.8	1	1	736	3.24	6	5	ND	2	28	.5	2	4	1	1.27	.011	11	5	.72	53	.01	5	.78	.01	.23	1	12	50
2166-G	4	2	14	18	.3	5	1	471	2.95	5	5	ND	2	13	.2	2	2	1	.64	.011	17	8	.57	55	.01	2	.93	.02	.18	1	3	130
2167-G	3	1	15	38	.2	1	1	592	2.85	3	5	ND	2	15	.2	2	3	1	.78	.011	14	6	.55	60	.01	2	.84	.02	.20	1	4	140
2168-G	4	2	5	31	.2	4	1	560	2.27	2	5	ND	3	16	.3	2	2	1	.92	.012	16	7	.63	51	.01	3	.77	.02	.16	1	1	120
2169-G	2	1	5	46	.3	1	1	547	2.27	2	5	ND	3	14	.4	2	3	1	.87	.011	15	5	.58	60	.01	4	.75	.02	.20	1	1	180
2170-G	3	1	9	26	.1	6	1	452	2.55	4	5	ND	2	13	.2	2	4	1	.60	.011	18	9	.55	60	.01	2	.95	.02	.18	1	4	140
2171-G	2	2	7	36	.4	1	1	647	2.91	5	5	ND	3	23	.3	2	2	1	1.09	.013	14	5	.70	58	.01	5	.90	.02	.21	1	5	150
2172-G	3	1	6	25	.1	5	1	685	2.23	14	5	ND	2	20	.4	2	4	1	1.23	.013	15	10	.77	50	.01	2	.79	.01	.18	1	1	60
2173-G	2	2	12	24	.5	1	1	516	3.23	9	5	ND	2	17	.4	2	2	1	.97	.012	12	5	.59	61	.01	4	.73	.01	.27	1	2	70
2174-G	25	1	11	24	.7	2	1	1823	2.96	1005	5	ND	1	53	.2	5	2	1	3.67	.011	6	8	1.57	34	.01	4	.40	.01	.20	1	15	80
2175-G	22	1	14	63	.6	1	1	817	3.62	58	5	ND	2	25	.3	2	2	1	1.22	.012	11	5	.72	55	.01	3	.77	.01	.25	1	3	130
2176-G	18	3	18	44	.5	5	1	644	3.59	88	5	ND	2	17	.2	2	2	1	.89	.011	11	8	.63	42	.01	4	.78	.01	.24	1	5	80
2177-G	4	1	9	51	.3	1	1	2373	3.82	20	5	ND	1	70	.2	2	3	1	3.92	.011	6	8	1.63	45	.01	2	.80	.02	.21	1	1	60
2178-G	9	1	6	60	.3	4	1	900	2.36	9	5	ND	2	21	.3	2	4	1	1.19	.012	13	8	.67	51	.01	2	.64	.02	.20	1	1	40
2179-G	3	1	11	35	.4	1	1	666	3.17	9	5	ND	2	15	.3	2	3	1	.70	.012	14	5	.66	52	.01	2	.92	.02	.18	1	6	30
2180-G	4	2	16	35	.5	6	2	473	3.44	10	5	ND	2	14	.2	2	2	1	.45	.011	13	9	.48	57	.01	4	.87	.02	.21	1	6	40
2181-G	3	3	12	33	.2	3	1	558	3.28	7	5	ND	2	16	.2	2	2	1	.54	.013	15	5	.50	58	.01	2	.94	.02	.19	1	1	30
2182-G	4	1	10	48	.2	6	1	651	3.13	7	5	ND	2	16	.3	2	2	1	.61	.011	16	8	.53	58	.01	2	.94	.02	.21	1	6	20
2183-G	3	3	6	49	.1	2	1	495	2.24	8	5	ND	3	13	.2	2	2	1	.42	.013	20	5	.42	57	.01	2	.83	.02	.18	1	1	30
2184-G	5	2	4	17	.4	8	1	549	2.74	9	5	ND	3	16	.2	2	2	1	.53	.013	21	9	.51	76	.01	5	.91	.03	.20	1	5	20
2185-G	3	3	13	29	.4	2	2	1212	5.11	13	5	ND	1	23	.2	2	2	1	1.28	.011	9	8	.91	54	.01	2	.98	.02	.16	1	13	40
2186-G	5	1	7	45	.3	5	1	520	2.54	9	5	ND	2	13	.4	2	3	1	.48	.012	20	8	.48	58	.01	2	.83	.03	.18	1	7	40
2187-G	4	3	10	37	.2	2	2	1158	4.56	10	5	ND	2	19	.2	2	2	1	1.11	.011	15	8	1.03	64	.01	2	1.38	.03	.18	1	11	120
2188-G	4	2	6	52	.3	7	1	447	2.72	12	5	ND	4	10	.5	2	2	2	.35	.013	22	9	.50	65	.01	7	1.00	.03	.17	1	12	200
2189-G	3	4	9	56	.5	2	2	475	3.00	9	5	ND	1	25	.3	2	2	1	.99	.014	11	5	.52	51	.01	2	.58	.01	.22	1	7	90
2190-G	4	3	6	31	.5	6	1	598	2.89	6	5	ND	1	24	.2	3	2	1	1.27	.014	11	8	.69	53	.01	5	.46	.01	.23	1	16	110
2191-G	3	5	9	27	.9	2	1	709	2.91	8	5	ND	1	38	.2	2	2	1	1.55	.013	10	6	.75	45	.01	2	.37	.01	.19	1	16	130
2192-G	4	3	5	24	.4	8	1	852	2.04	7	5	ND	1	43	.3	2	2	1	2.15	.012	11	12	.93	48	.01	4	.28	.01	.20	1	4	140
2193-G	2	5	10	48	.3	3	2	622	3.21	10	5	ND	1	20	.4	2	2	1	.72	.011	13	5	.51	59	.01	2	.69	.01	.19	1	7	160
2194-G	4	2	8	42	.3	4	2	1240	2.78	12	5	ND	1	44	.3	3	2	1	1.80	.011	10	8	.74	49	.01	2	.44	.01	.18	1	7	190
2195-G	2	4	3	28	.1	2	1	746	1.78	2	5	ND	1	33	.5	2	2	1	1.10	.011	16	5	.43	55	.01	2	.36	.01	.19	1	4	150
2196-G	6	3	14	56	.7	4	1	717	3.82	12	5	ND	1	23	.2	2	3	1	.80	.011	12	7	.51	53	.01	2	.41	.01	.22	1	11	120
2197-G	4	5	10	38	.4	2	1	992	2.85	11	5	ND	1	36	.2	3	2	1	1.51	.011	10	6	.67	64	.01	2	.38	.01	.18	1	5	140
STANDARD C/AU-R	18	58	38	131	6.8	70	32	1051	3.97	40	19	7	39	52	18.3	15	20	55	.50	.092	40	60	.89	182	.07	35	1.89	.06	.14	12	492	1500

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Granges Inc. PROJECT 134 FILE # 90-4377

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	Hg ppb
2198-G	8	4	10	49	.8	4	1	1488	3.37	40	5	ND	1	44	.2	3	2	1	2.11	.009	8	7	.95	41	.01	2	.42	.01	.16	1	5	130
2199-G	4	3	8	39	.5	1	1	575	2.48	16	5	ND	2	18	.2	2	4	1	.63	.009	14	2	.43	45	.01	2	.44	.01	.17	1	9	120
2200-G	5	3	12	52	.6	4	1	498	2.52	12	5	ND	1	21	.2	3	2	1	.60	.010	13	4	.29	41	.01	2	.32	.01	.18	1	12	70
2202-G	3	3	15	37	.8	2	2	362	3.85	22	5	ND	2	32	.2	3	2	1	.46	.010	14	3	.18	37	.01	2	.38	.01	.22	1	10	130
2203-G	5	3	4	52	.3	6	1	804	1.21	7	5	ND	1	31	.3	2	2	1	1.66	.012	17	8	.70	58	.01	3	.29	.01	.16	1	1	140
2204-G	5	3	14	67	.9	2	2	1692	3.48	19	5	ND	1	35	.2	6	2	1	2.20	.010	8	8	.93	51	.01	2	.38	.01	.24	1	13	200
2205-G	5	2	9	68	.6	5	1	396	2.03	11	5	ND	1	25	.2	2	2	1	.55	.009	13	3	.23	47	.01	2	.22	.01	.15	1	6	150
2206-G	7	2	15	73	1.0	2	2	1388	3.76	15	5	ND	1	51	.2	3	2	1	2.04	.009	7	5	.87	43	.01	2	.31	.01	.20	1	12	160
2207-G	4	3	8	57	.4	5	1	337	1.71	6	5	ND	1	20	.2	2	2	1	.44	.009	14	4	.23	46	.01	3	.25	.01	.17	1	10	140
2208-G	2	2	7	37	.6	2	1	646	2.02	12	5	ND	2	78	.2	3	2	1	1.09	.008	12	4	.45	37	.01	4	.33	.01	.19	1	6	180
2209-G	3	2	7	76	.6	4	1	512	2.03	9	5	ND	1	29	.2	3	2	1	.77	.011	12	4	.32	40	.01	2	.25	.01	.17	1	14	130
2210-G	5	3	12	36	.9	1	2	1232	3.99	12	5	ND	1	34	.3	4	2	1	1.50	.011	11	3	.66	42	.01	3	.34	.01	.22	1	27	140
2211-G	6	2	10	53	.7	4	2	635	3.00	17	5	ND	1	30	.2	3	2	1	.93	.012	10	4	.40	41	.01	2	.26	.01	.17	1	6	130
2212-G	3	2	7	81	.3	1	1	835	1.72	8	5	ND	1	59	.3	2	2	1	1.21	.008	9	3	.47	32	.01	2	.32	.01	.18	1	33	230
2213-G	1	2	5	5	.7	3	1	685	2.38	107	5	ND	1	29	.2	4	2	1	1.06	.011	9	4	.42	39	.01	2	.24	.01	.16	1	1	80
2214-G	2	3	22	2	1.4	2	2	328	3.76	239	7	ND	2	34	.2	5	2	1	.55	.010	10	2	.22	27	.01	2	.35	.01	.20	1	121	150
2215-G	3	2	10	1	.6	3	1	279	2.13	149	5	ND	2	45	.2	3	2	1	.48	.006	11	3	.19	20	.01	2	.30	.01	.17	1	63	100
2216-G	3	3	15	76	.9	6	2	880	2.78	5171	5	ND	1	50	.3	20	2	1	1.35	.011	5	7	.56	22	.01	4	.30	.01	.16	1	499	240
2217-G	2	5	14	39	.8	2	1	295	2.71	1787	5	ND	2	30	.3	12	4	1	.46	.009	11	2	.19	45	.01	4	.29	.01	.16	1	244	180
2218-G	5	3	10	3	.6	7	1	137	1.87	180	11	ND	2	19	.2	3	2	1	.23	.012	16	5	.09	52	.01	3	.29	.01	.19	1	49	160
2219-G	7	5	22	169	1.3	2	2	618	3.45	1563	5	ND	1	43	.4	11	2	1	1.41	.007	8	3	.37	39	.01	2	.26	.01	.16	1	218	260
2220-G	7	2	10	27	.6	6	1	186	1.89	62	7	ND	1	27	.2	2	3	1	.29	.009	17	4	.11	49	.01	2	.30	.01	.19	1	21	70
2221-G	6	6	10	21	.7	3	1	450	2.45	111	5	ND	1	42	.3	3	3	1	1.03	.006	10	2	.23	54	.01	3	.25	.01	.17	1	35	50
2222-G	6	4	14	87	1.0	6	1	405	2.35	88	5	ND	1	25	.3	3	2	1	.59	.009	13	5	.23	51	.01	4	.31	.01	.20	1	18	100
2223-G	5	5	10	43	1.0	2	1	1231	3.16	60	5	ND	1	54	.2	4	3	1	1.91	.009	7	3	.59	45	.01	2	.22	.01	.16	1	53	80
2224-G	5	3	8	41	.5	5	1	399	1.64	22	5	ND	1	28	.2	2	3	1	.61	.011	15	4	.22	55	.01	2	.26	.01	.18	1	17	80
2225-G	2	4	8	42	.6	3	1	611	2.04	23	5	ND	1	29	.2	3	2	1	1.00	.011	11	4	.36	43	.01	2	.26	.01	.17	1	12	70
2226-G	4	3	13	30	.8	6	3	666	2.30	31	5	ND	1	26	.2	4	2	1	1.01	.011	10	5	.37	51	.01	2	.26	.01	.17	1	12	90
2227-G	3	5	7	26	1.3	3	1	1192	2.68	39	5	ND	1	34	.2	4	2	1	1.86	.011	8	4	.68	42	.01	4	.22	.01	.16	1	23	150
2228-G	4	4	8	30	.6	5	1	672	2.10	18	5	ND	1	33	.3	2	2	1	1.09	.012	11	6	.42	44	.01	5	.27	.01	.18	1	10	60
2229-G	2	4	8	26	.4	3	1	364	1.87	57	8	ND	1	27	.2	2	2	1	.57	.010	14	2	.18	47	.01	2	.25	.01	.18	1	50	110
2230-G	4	4	6	28	.4	5	1	380	2.22	17	5	ND	1	31	.2	2	2	1	.60	.010	15	5	.22	54	.01	2	.29	.01	.20	1	41	70
2231-G	2	6	5	74	.7	2	1	479	1.81	17	5	ND	1	24	.4	2	4	1	.52	.010	13	1	.21	42	.01	5	.27	.01	.20	1	24	90
2232-G	4	7	7	76	.7	3	2	502	2.44	20	5	ND	1	25	.2	2	6	1	.49	.011	12	3	.19	34	.01	2	.33	.01	.22	1	20	150
2233-G	2	6	2	120	.3	1	2	1780	3.51	6	5	ND	1	69	.2	2	2	1	1.66	.023	13	4	.92	55	.01	3	.37	.01	.19	1	4	120
2234-G	2	29	20	70	2.1	14	15	2353	5.82	30	5	ND	1	59	.2	10	2	12	2.27	.089	8	9	1.29	45	.01	3	.48	.01	.24	1	28	210
STANDARD C/AU-R	18	57	38	131	6.9	68	31	1051	3.97	39	21	7	38	53	18.6	15	21	55	.50	.088	39	59	.89	181	.08	36	1.90	.06	.14	12	513	1600

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	Hg ppb
2235-G	3	32	19	206	2.0	18	18	1610	6.45	42	5	ND	1	48	1.1	11	8	18	2.02	.102	8	5	1.39	40	.01	2	.70	.01	.23	1	18	220
2236-G	5	22	24	107	3.5	13	9	1016	4.08	36	5	ND	1	170	.5	7	3	10	3.13	.052	6	3	.61	72	.01	3	.40	.01	.19	1	42	130
2237-G	5	53	20	162	1.9	14	11	921	3.91	33	12	ND	1	187	.9	8	3	9	2.52	.059	6	3	1.01	78	.01	3	.45	.01	.25	1	7	150
2238-G	4	56	17	136	1.9	17	11	595	4.53	29	5	ND	1	93	.4	9	3	10	1.72	.052	2	3	.81	71	.01	3	.45	.01	.25	1	15	170
2239-G	6	45	16	121	.8	17	11	594	4.37	25	5	ND	1	170	.4	4	4	9	2.40	.053	2	4	.87	68	.01	4	.45	.01	.25	1	19	150
2240-G	2	9	12	162	.4	2	1	529	1.44	2	5	ND	2	123	.6	2	13	1	2.89	.001	28	2	.22	83	.01	2	.31	.01	.19	1	1	110
2241-G	2	7	14	143	.6	1	1	503	1.06	3	5	ND	2	121	.4	3	2	1	2.81	.001	24	1	.22	79	.01	2	.34	.01	.21	1	3	190
2242-G	4	9	2	208	.2	5	4	408	1.94	7	5	ND	2	82	1.0	2	8	3	1.42	.015	17	2	.37	55	.01	2	.34	.01	.19	2	9	180

TR 10

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

GEOCHEMICAL ANALYSIS CERTIFICATE

Granges Inc. PROJECT 134 File # 90-4583 Page 1

2300 - 885 W. Georgia St., Vancouver BC V6C 3E8

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	Hg ppb
2251 G	4	30	50	119	4.5	18	10	641	3.56	88	5	ND	1	55	.3	10	2	8	1.52	.060	4	7	.89	45	.01	9	.83	.01	.20	1	69	200
2252 G	8	10	9	130	.6	2	1	745	2.78	18	5	ND	1	32	.4	2	2	1	.78	.014	7	4	.51	49	.01	5	.72	.01	.16	1	11	350
2253 G	5	14	18	104	1.0	1	2	1401	4.32	277	5	ND	1	57	.2	4	2	1	2.42	.015	3	6	.85	33	.01	4	.42	.01	.19	1	135	140
2254 G	3	29	33	102	2.1	11	9	1224	4.24	135	5	ND	1	63	.3	10	2	6	2.28	.054	3	8	1.13	28	.01	5	.65	.01	.20	1	88	80
2255 G	5	40	52	175	5.4	18	10	808	4.18	108	5	ND	1	53	.6	14	2	9	1.94	.068	4	10	1.15	39	.01	9	.87	.01	.21	1	98	130
2256 G	6	16	12	124	.5	5	1	667	2.39	9	5	ND	1	14	.4	2	2	1	.44	.035	8	8	.50	64	.01	3	.72	.01	.12	1	26	580
2257 G	5	8	13	131	.5	1	1	648	3.21	10	5	ND	1	16	.3	3	2	1	.42	.015	8	4	.66	56	.01	6	.91	.02	.18	1	22	260
2258 G	6	7	3	88	.4	2	1	1451	2.48	14	5	ND	1	61	.2	2	2	1	2.14	.038	8	8	.84	51	.01	5	.29	.01	.17	1	47	120
2259 G	6	16	8	90	.6	3	2	1189	3.06	12	5	ND	1	48	.3	3	2	1	1.84	.017	7	7	.73	39	.01	6	.30	.01	.18	1	39	100
2260 G	5	4	8	125	.4	4	1	787	1.15	10	5	ND	1	45	.2	2	2	1	1.36	.002	16	21	.52	24	.01	4	.27	.01	.16	1	33	110
2261 G	6	8	8	122	.4	3	2	788	1.89	9	5	ND	2	49	.3	3	2	1	1.43	.085	13	5	.64	64	.01	4	.32	.01	.19	1	10	140
2262 G	8	11	15	100	.5	8	2	484	1.61	6	7	ND	2	37	.3	2	2	1	.94	.087	11	40	.35	51	.01	5	.29	.02	.17	1	6	160
2263 G	5	9	12	77	.3	7	1	861	1.33	8	5	ND	3	43	.2	2	3	1	1.68	.004	14	11	.52	74	.01	3	.29	.02	.17	1	5	100
2264 G	7	5	14	38	.2	10	2	563	1.47	4	5	ND	3	30	.2	2	2	1	1.02	.006	13	42	.37	65	.01	4	.25	.01	.15	1	1	80
2265 G	3	6	13	63	.2	6	1	962	1.59	5	5	ND	2	38	.2	2	4	1	1.78	.005	10	9	.53	69	.01	4	.24	.01	.13	1	1	130
2266 G	7	8	9	74	.1	11	1	458	1.08	2	7	ND	3	26	.2	2	2	1	.76	.008	14	44	.25	74	.01	2	.24	.01	.16	1	8	430
2267 G	4	9	10	104	.3	6	6	979	3.08	13	5	ND	1	59	.2	3	2	1	1.86	.031	9	8	.74	51	.01	4	.31	.02	.16	1	1	160
2268 G	3	7	10	91	.4	4	6	1027	4.37	8	5	ND	1	43	.2	5	2	3	1.78	.050	7	17	.98	49	.01	6	.56	.01	.20	1	1	110
2279 G	3	27	16	102	.3	18	12	679	4.84	27	5	ND	1	37	.3	8	2	16	1.63	.063	5	9	1.35	54	.01	6	.42	.01	.17	1	4	190
2280 G	4	22	8	112	.1	10	9	1395	5.94	14	5	ND	1	68	.5	9	2	24	3.83	.077	7	19	2.46	73	.01	4	.84	.02	.12	1	1	250
2281 G	14	42	14	279	.4	33	11	613	4.82	34	5	ND	1	42	1.6	16	2	21	1.81	.063	6	9	1.64	42	.01	3	.40	.01	.17	1	6	410
2282 G	17	40	20	258	.5	35	10	813	5.04	37	5	ND	1	52	1.7	19	2	19	2.78	.069	6	11	1.84	47	.01	5	.36	.01	.15	1	11	420
2283 G	12	41	20	317	.4	32	7	867	3.85	34	5	ND	1	58	2.6	16	2	16	3.28	.053	6	7	1.84	58	.01	2	.39	.01	.17	1	5	430
2284 G	13	44	21	300	.6	35	9	750	3.89	36	5	ND	1	57	1.8	19	2	15	2.96	.056	5	10	1.74	53	.01	4	.35	.01	.16	1	5	500
2285 G	9	37	15	258	.2	23	6	1120	4.04	27	5	ND	1	348	2.2	13	2	12	6.00	.053	5	9	2.52	56	.01	3	.26	.01	.12	1	1	350
2286 G	16	38	15	254	.4	32	9	813	4.31	37	5	ND	1	59	2.0	18	2	17	2.90	.065	7	14	1.76	59	.01	2	.39	.01	.18	1	1	490
2287 G	6	72	18	130	.3	22	12	467	5.01	33	5	ND	1	58	.6	12	2	18	1.23	.066	5	9	1.13	45	.01	5	.45	.01	.20	1	3	300
2288 G	3	33	15	100	.6	14	11	741	4.65	33	5	ND	1	54	.5	9	2	18	1.50	.013	3	10	1.25	88	.01	3	.30	.01	.13	1	9	210
2289 G	2	25	8	91	.4	6	6	2531	4.74	22	5	ND	1	215	.5	8	2	12	6.48	.015	3	5	2.99	93	.01	2	.24	.01	.10	1	5	190
2290 G	1	25	8	107	.4	8	7	927	3.83	19	5	ND	1	61	.5	6	2	13	2.14	.010	4	8	1.43	149	.01	3	.29	.01	.12	1	15	180
2291 G	1	16	2	112	.6	7	8	941	4.14	14	5	ND	1	96	.5	5	2	4	2.45	.038	5	8	1.02	44	.01	2	.39	.01	.17	1	3	90
2292 G	2	22	15	199	.8	7	15	392	5.36	187	6	ND	1	29	.5	4	2	7	.91	.316	6	7	.56	22	.01	2	.47	.01	.17	1	74	80
2293 G	1	19	6	24	1.0	7	18	505	7.31	36	7	ND	1	38	.2	6	2	7	1.24	.155	5	8	.76	20	.01	5	.45	.01	.20	1	12	50
2294 G	1	15	8	41	.8	9	21	1099	5.90	21	5	ND	1	45	.2	8	2	5	2.48	.125	5	8	.91	22	.01	2	.33	.01	.19	1	10	70
2295 G	1	18	8	27	1.1	9	19	2460	9.38	23	5	ND	1	55	.3	15	2	3	3.98	.097	4	11	1.95	36	.01	3	.29	.01	.18	1	13	80
2296 G	4	9	25	213	.8	13	9	977	3.38	86	5	ND	1	44	.5	6	2	1	2.16	.035	3	7	.82	31	.01	2	.24	.01	.15	1	80	100
STANDARD C/AU-R	18	60	40	131	7.0	71	31	1057	3.98	39	15	7	38	53	18.5	15	21	55	.52	.095	38	59	.90	181	.07	36	1.90	.06	.14	11	487	1500

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: P1-P3 CORE P4 ROCK AU** ANALYSIS BY FA\ICP FROM 10 GM SAMPLE. HG ANALYSIS BY FLAMELESS AA.

DATE RECEIVED: SEP 17 1990 DATE REPORT MAILED: Sept 25/90 SIGNED BY. .D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

Granges Inc. PROJECT 84 FILE # 90-4583

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	Hg ppb
2297 G	1	13	40	473	2.0	8	11	1446	5.20	291	5	ND	1	56	.9	10	2	3	2.97	.041	2	7	1.13	12	.01	2	.30	.01	.16	1	200	160
2298 G	1	11	17	167	.8	5	5	815	2.23	129	5	ND	1	54	.6	6	2	4	2.27	.048	3	7	.88	50	.01	5	.36	.01	.20	2	108	100
2299 G	1	14	19	30	1.4	4	10	1875	5.45	213	5	ND	1	51	.2	9	2	3	3.46	.035	2	6	1.44	22	.01	2	.29	.01	.16	1	224	60
2300 G	2	20	7	84	.7	8	9	1318	2.58	36	5	ND	1	51	.2	7	2	5	2.69	.052	5	8	1.08	52	.01	2	.38	.01	.21	1	36	100
2301 G	2	23	12	92	.5	8	6	1184	1.90	34	5	ND	1	35	.2	5	3	2	2.70	.045	7	17	1.12	39	.01	2	.36	.01	.20	1	34	60
2302 G	1	22	11	98	.6	8	6	1740	3.03	10	5	ND	1	42	.2	5	2	5	3.78	.044	7	10	1.84	38	.01	2	.72	.01	.21	1	7	50
2303 G	1	20	12	84	.5	10	7	1590	3.30	12	5	ND	1	62	.2	3	2	8	3.68	.045	7	20	1.78	43	.01	2	.99	.01	.21	1	9	40
2304 G	1	15	18	92	.8	8	6	2378	3.88	39	5	ND	1	214	.3	5	2	8	6.80	.037	5	12	1.92	48	.01	2	.96	.01	.17	1	5	70
2305 G	3	18	16	184	.4	9	7	1065	3.55	18	5	ND	1	38	.6	3	2	10	2.24	.051	8	19	1.39	43	.01	2	1.16	.01	.19	1	5	70
2306 G	2	5	8	115	.5	4	14	1010	6.63	9	5	ND	1	49	.2	5	2	105	1.96	.178	10	11	1.33	105	.02	2	2.48	.04	.11	1	5	80
2307 G	1	11	29	148	1.5	2	18	1516	9.58	19	5	ND	1	117	.2	5	2	153	3.58	.243	11	13	1.35	57	.02	2	2.94	.07	.05	1	36	60
2308 G	1	25	14	69	.6	2	3	970	3.36	74	5	ND	2	59	.2	2	2	3	1.98	.019	18	3	.35	52	.01	2	.42	.01	.24	1	22	70
2309 G	3	8	20	178	.3	2	1	3057	3.00	2	5	ND	1	81	.5	3	2	3	4.29	.011	11	21	1.22	58	.01	2	.80	.02	.14	1	10	80
2310 G	2	5	9	67	.3	3	2	1953	3.14	3	5	ND	1	94	.2	2	2	2	3.01	.014	9	6	.68	74	.01	2	.97	.01	.15	1	18	40
2311 G	5	6	9	54	.1	6	1	1254	1.60	2	5	ND	1	67	.3	2	2	1	2.32	.004	12	30	.29	46	.01	2	.49	.03	.15	1	4	30
2312 G	3	4	3	60	.1	5	1	684	1.32	2	5	ND	1	36	.5	2	2	1	1.49	.002	13	5	.15	63	.01	2	.45	.02	.17	1	6	60
2313 G	9	6	9	146	.1	7	1	709	1.57	2	5	ND	1	39	.5	2	3	1	1.69	.002	9	37	.14	82	.01	4	.42	.02	.13	1	12	70
2314 G	5	7	11	79	.1	4	1	782	2.17	2	5	ND	1	51	.4	2	2	1	1.63	.007	10	6	.24	60	.01	3	.73	.02	.15	1	22	30
2315 G	7	6	4	56	.1	7	1	614	1.84	2	5	ND	1	41	.2	2	2	2	1.43	.009	15	32	.17	72	.01	2	.64	.01	.19	1	6	40
2316 G	3	8	7	44	.2	5	1	632	1.95	4	5	ND	2	50	.2	2	2	4	1.54	.007	16	5	.16	52	.01	2	.59	.04	.18	1	3	30
2317 G	7	13	7	23	.2	4	2	943	2.10	10	5	ND	1	50	.2	2	2	1	2.52	.007	11	27	.20	48	.01	3	.35	.03	.17	1	4	50
2318 G	5	7	14	49	.3	4	1	669	2.28	9	5	ND	2	37	.4	2	2	1	1.76	.008	14	5	.23	72	.01	2	.38	.02	.18	1	9	60
2319 G	10	23	7	87	.2	15	1	1059	2.25	7	5	ND	1	39	.4	2	2	1	1.73	.008	10	42	.48	33	.01	2	.22	.04	.11	1	8	80
2320 G	3	9	4	70	.2	5	1	774	2.13	5	5	ND	2	34	.2	2	2	1	1.33	.009	12	7	.40	39	.01	2	.35	.04	.11	1	1	70
2321 G	4	8	6	45	.6	6	4	941	3.96	33	5	ND	1	39	.2	2	2	5	1.49	.020	3	29	.55	65	.01	3	.41	.01	.07	1	13	130
2322 G	2	8	4	68	.5	2	3	2132	3.63	15	5	ND	1	40	.2	3	5	4	2.21	.036	6	8	.76	74	.01	2	.61	.01	.03	1	7	110
2323 G	4	6	6	79	.4	1	3	1677	4.56	6	5	ND	1	64	.2	4	3	5	1.75	.060	8	16	.71	119	.01	2	1.16	.02	.12	1	4	60
2324 G	4	9	5	139	.2	4	3	853	2.95	6	5	ND	1	53	.9	2	2	5	1.85	.022	13	6	.28	67	.01	2	.68	.02	.13	1	15	50
2325 G	6	5	3	126	.1	4	2	684	2.81	52	5	ND	1	34	.6	2	2	1	1.09	.013	10	24	.15	73	.01	2	.92	.03	.18	1	7	40
2326 G	7	3	4	196	.1	5	2	811	2.14	16	5	ND	1	44	1.3	2	2	1	1.58	.015	13	4	.12	66	.01	2	.79	.03	.17	1	9	50
2327 G	4	4	2	139	.2	3	2	732	2.22	3	5	ND	1	34	.8	2	2	1	1.35	.012	9	4	.14	55	.01	2	.74	.02	.16	1	10	40
2328 G	4	8	3	382	.3	2	2	1064	2.31	2	5	ND	1	49	2.4	2	2	1	1.80	.010	9	2	.13	65	.01	4	.70	.03	.16	1	18	80
2329 G	5	9	5	549	.1	4	2	891	2.24	2	5	ND	1	36	3.4	2	4	1	1.52	.010	8	5	.15	58	.01	2	.68	.02	.14	1	36	130
2330 G	4	7	8	195	.2	2	2	974	2.54	2	5	ND	1	48	1.4	2	2	1	1.60	.010	7	2	.16	71	.01	2	.64	.03	.15	1	21	70
2331 G	6	5	7	124	.2	5	2	1169	2.67	3	5	ND	1	44	.8	2	3	1	1.72	.011	6	6	.28	62	.01	3	.50	.02	.15	1	25	60
2332 G	4	6	16	126	.2	2	2	1137	2.44	3	5	ND	1	42	.7	2	3	1	1.93	.013	6	4	.25	46	.01	2	.45	.02	.18	1	42	50
STANDARD C/AU-R	18	60	37	130	7.0	71	31	1056	3.99	39	15	7	37	53	18.6	15	18	55	.52	.097	37	60	.89	182	.07	32	1.89	.06	.13	13	474	1500

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SEP 25 '90 11:56

Granges Inc. PROJECT 4 FILE # 90-4583

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppb	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	ppb
2333 G	6	4	6	132	.3	6	1	1155	2.18	2	5	ND	1	34	.3	2	2	1	1.67	.015	6	6	.27	48	.01	5	.73	.02	.15	1	20	30
2334 G	5	5	3	139	.3	4	2	1014	2.85	5	5	ND	1	32	.5	2	2	1	1.36	.011	5	3	.23	59	.01	2	.74	.02	.15	1	14	50
2335 G	4	4	11	137	.6	5	2	949	2.42	22	5	ND	1	30	.5	2	2	1	1.39	.011	5	6	.19	56	.01	2	.52	.01	.17	1	437	110
2336 G	2	6	4	83	.3	3	2	935	2.59	10	5	ND	1	48	.2	2	2	1	1.36	.011	5	2	.18	46	.01	2	.57	.01	.16	1	137	70
2337 G	3	4	7	130	.3	6	1	1246	1.96	6	5	ND	1	64	.5	2	2	1	1.98	.011	7	4	.17	42	.01	2	.62	.01	.17	1	15	60
2338 G	2	5	6	115	.3	2	1	945	2.23	3	5	ND	1	37	.3	2	2	1	1.50	.011	9	2	.14	51	.01	3	.58	.02	.15	1	8	50
2339 G	3	5	6	115	.2	5	1	793	2.50	3	5	ND	1	29	.7	2	2	1	1.09	.010	10	5	.18	113	.01	2	.76	.02	.13	1	126	30
2340 G	7	7	3	163	.3	5	4	914	2.55	4	5	ND	1	51	.4	2	2	8	1.95	.020	8	6	.31	52	.01	2	.57	.01	.14	1	106	80
2341 G	7	5	4	147	.3	5	1	328	1.23	3	6	ND	1	22	.6	2	2	1	.52	.001	13	4	.12	66	.01	3	.32	.02	.15	1	24	90
2342 G	6	4	6	104	.2	1	1	640	1.41	2	5	ND	1	50	.2	2	2	1	1.30	.001	14	1	.10	31	.01	2	.38	.03	.14	1	29	50
2343 G	3	5	4	98	.1	5	1	624	1.46	2	5	ND	1	48	.2	2	2	1	1.44	.001	17	5	.13	53	.01	2	.47	.01	.14	1	10	60
2344 G	4	5	3	136	.1	2	1	615	1.19	2	5	ND	1	47	.4	2	2	1	1.55	.001	16	1	.10	32	.01	3	.36	.02	.13	1	9	50
2345 G	3	6	8	50	.2	4	1	699	2.69	2	5	ND	3	27	.2	2	2	1	1.26	.006	12	5	.24	47	.01	2	.69	.03	.07	1	18	60
2346 G	1	7	2	76	.3	4	3	735	3.23	2	5	ND	3	40	.2	2	2	6	1.18	.018	11	4	.31	37	.01	2	.99	.04	.07	1	17	50
2347 G	5	10	4	90	.5	13	8	1006	4.19	8	5	ND	1	71	.8	2	2	17	1.75	.046	13	11	.51	90	.01	2	1.31	.02	.12	1	17	70
STANDARD C/AU-R	18	58	40	133	7.1	71	31	1057	3.99	41	15	7	37	53	18.5	15	20	55	.52	.098	37	60	.90	180	.07	36	1.89	.06	.14	11	492	1400

Granges Inc. PROJEC 134 FILE # 90-4583

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	Hg ppb
3179 G	1	65	20	15	2.9	6	12	86	5.01	214	5	ND	1	71	.2	10	2	36	.28	.207	6	2	.07	77	.01	5	.47	.02	.21	1	81	140
3180 G	2	57	23	27	2.2	8	8	66	3.41	350	5	ND	1	73	.2	8	5	31	.24	.169	5	4	.08	88	.01	5	.47	.02	.14	2	180	110
3181 G	1	49	12	74	1.5	9	10	143	3.77	175	5	ND	1	79	.2	4	2	67	.37	.166	7	6	.48	81	.01	4	1.06	.03	.12	1	71	40
3182 G	2	61	52	80	5.4	9	13	156	6.44	884	5	ND	1	67	.2	18	3	102	.22	.122	5	11	.47	53	.01	4	.94	.04	.09	11	1847	160
3183 G	1	111	7	88	1.7	10	19	1055	7.07	68	5	ND	1	61	.2	7	2	189	1.88	.255	8	13	1.85	61	.01	4	2.18	.04	.09	1	30	110
3184 G	1	77	5	97	1.1	11	19	787	6.56	48	5	ND	1	55	.2	6	3	223	1.62	.215	7	15	1.99	50	.01	2	2.32	.04	.04	1	28	70
3185 G	1	96	15	84	.8	10	22	1494	7.06	26	5	ND	1	85	.4	6	5	216	3.58	.252	10	14	2.83	90	.01	3	2.61	.04	.07	1	4	60
3186 G	1	80	12	86	.9	10	23	1391	6.84	19	5	ND	1	75	.3	5	2	237	3.17	.219	9	13	2.84	47	.01	3	2.52	.04	.03	1	7	40
3187 G	1	67	12	96	1.1	10	23	1154	7.07	19	5	ND	1	68	.2	10	3	226	2.94	.221	9	14	2.57	58	.01	4	2.53	.04	.04	1	15	60
3188 G	1	62	13	61	1.4	7	13	1178	4.38	38	5	ND	1	72	.3	5	5	155	3.21	.225	7	14	1.43	57	.01	4	1.23	.05	.08	1	18	50
3189 G	2	37	17	101	1.6	7	14	226	3.92	212	5	ND	1	37	.2	5	2	95	.57	.210	10	7	.54	106	.01	2	1.03	.04	.10	1	65	110
3190 G	2	14	12	136	.9	4	15	518	7.00	71	5	ND	1	38	.2	5	2	125	.86	.201	12	9	2.05	129	.01	5	2.72	.02	.08	1	24	50
3191 G	1	27	15	172	1.7	6	15	273	7.14	155	5	ND	1	61	.4	9	3	156	.58	.207	8	9	1.91	126	.01	5	2.59	.03	.06	1	66	180
3192 G	1	58	18	118	1.8	10	21	709	7.13	117	5	ND	1	53	.5	10	4	188	1.25	.227	8	14	1.93	124	.01	8	2.68	.03	.06	1	36	60
3193 G	1	17	20	129	1.8	4	14	172	7.80	139	5	ND	1	26	.2	10	2	118	.49	.214	11	10	1.57	179	.01	6	2.68	.01	.10	1	54	60
3194 G	3	20	17	169	3.2	6	12	158	4.62	268	5	ND	1	23	.6	8	2	45	.24	.130	7	6	.44	246	.01	4	.95	.01	.10	1	74	330
3195 G	2	11	17	166	1.1	3	16	362	6.88	58	5	ND	1	25	.6	10	2	120	.54	.182	13	10	2.18	351	.01	6	2.87	.01	.08	1	13	40
D-8-L.S.-U.R.-90	1	100	26	36	3.5	12	18	74	6.08	237	5	ND	1	32	.2	13	2	61	.38	.164	5	12	.36	32	.01	8	.69	.03	.14	1	116	80
D-9-L.S.-U.R.-90	3	15	12	43	.6	5	14	114	3.78	55	5	ND	1	32	.2	6	2	34	.53	.180	8	5	.54	79	.01	5	.76	.03	.16	1	18	60
D-10-L.S.-U.R.-90	3	18	35	88	4.3	5	6	50	4.20	305	5	ND	1	142	.2	10	2	17	.02	.088	5	2	.02	112	.01	2	.26	.02	.30	1	145	250
L.S.-U.R.-102-90	2	124	31	10	.8	15	20	676	4.67	35	5	ND	1	61	.3	15	3	27	2.08	.142	4	8	.71	49	.01	2	.33	.01	.15	1	12	510
L.S.-U.R.-103-90	1	83	8	60	.6	9	16	567	4.51	2578	5	2	1	442	.2	67	2	33	3.55	.080	3	11	1.71	107	.01	5	.24	.01	.15	1	1801	150
U.R.-90-BB-1	1	80	15	57	.3	8	14	850	3.50	118	5	ND	1	193	.2	24205	2	14	4.01	.060	2	6	.68	22	.01	6	.20	.01	.11	1	483	190
U.R. 5050N 2300E	6	7	22	20	2.3	5	1	64	2.20	60	5	ND	3	3	.2	51	3	1	.01	.006	15	3	.01	59	.01	4	.18	.01	.15	1	44	200
U.R. 3448N 2016E	45	9	42	632	3.4	1	3	123	9.90	81	7	ND	1	3	4.8	161	2	5	.03	.007	8	11	.78	11	.01	6	.82	.02	.10	2	6	1700
U.R. 3200N 1720E	2	47	15	46	.2	13	9	316	2.18	48	5	ND	1	146	.2	10	2	5	2.24	.043	6	7	.21	105	.01	5	.48	.02	.18	1	7	210
U.R.-90-100	1	129	14	71	.3	7	16	1311	5.74	7	5	ND	1	79	.3	16	2	95	4.00	.173	9	15	1.98	111	.01	7	2.37	.01	.21	1	7	100
U.R.-90-101	4	17	12	107	27.3	5	4	150	3.17	54	5	ND	2	17	.2	20	2	95	.40	.139	10	11	.85	31	.01	3	1.03	.03	.07	1	228	240
STANDARD C/AU-R	18	60	43	132	7.1	70	31	1059	3.99	40	17	7	37	53	18.6	15	21	55	.53	.098	37	60	.90	181	.07	34	1.90	.06	.13	13	490	1400

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

GEOCHEMICAL ANALYSIS CERTIFICATE

Granges Inc. PROJECT 134 File # 90-4476 Page 1

2300 - 885 W. Georgia St., Vancouver BC V6C 3E8

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	Hg ppb
2243-G	1	7	17	126	.1	1	14	924	7.29	17	5	ND	1	58	.2	6	2	117	1.98	.231	15	9	2.51	66	.01	2	3.10	.04	.09	1	18	50
2244-G	1	7	17	187	.2	1	13	1075	7.48	18	5	ND	1	100	.4	3	2	106	3.38	.211	13	11	1.64	80	.07	3	2.74	.06	.11	1	21	20
2245-G	1	19	21	240	1.4	1	14	645	5.92	118	5	ND	1	73	.5	8	2	49	2.19	.242	13	8	.94	56	.01	3	1.61	.02	.31	1	13	110
2246-G	1	36	765	8123	4.2	1	6	4640	5.70	596	5	ND	1	312	19.0	5	2	6	16.64	.042	4	8	.58	14	.01	2	.16	.01	.05	1	839	2100
2247-G	1	17	59	133	2.0	1	13	1630	6.58	1324	5	ND	1	33	.2	8	2	17	2.21	.205	2	6	.68	37	.01	2	.62	.01	.31	1	277	120
2248-G	1	31	45	223	2.8	3	15	1629	8.02	115	5	ND	1	29	.4	12	2	31	1.75	.205	2	12	1.38	25	.01	3	1.27	.01	.29	1	53	130
2249-G	5	29	27	436	1.8	15	9	1905	4.04	90	5	ND	1	54	1.1	7	2	22	2.23	.067	6	10	1.53	50	.01	5	1.50	.01	.35	1	38	280
2250-G	1	77	509	447	2.7	3	13	1721	7.13	101	5	ND	1	107	1.1	7	2	53	3.42	.200	6	11	1.53	44	.01	2	2.05	.02	.25	1	72	270
2269-G	1	32	15	95	.8	11	7	1489	3.96	44	5	ND	1	68	.2	10	2	8	2.75	.031	3	7	1.75	68	.01	4	.53	.01	.22	2	11	240
2270-G	2	29	14	68	1.1	10	6	1064	4.00	38	5	ND	1	136	.2	7	2	6	2.89	.020	2	7	1.55	48	.01	2	.47	.01	.16	1	11	120
2271-G	1	28	24	104	1.6	8	8	1237	4.20	31	5	ND	1	197	.2	6	2	12	3.42	.088	4	8	2.07	137	.01	2	.90	.02	.22	1	12	190
2272-G	1	9	42	302	1.9	1	2	5599	4.22	65	5	ND	1	172	.9	2	2	4	14.39	.015	2	1	6.01	36	.01	2	.34	.01	.09	1	21	130
2273-G	5	25	125	118	5.2	11	8	3088	5.07	86	5	ND	1	52	.2	12	2	6	5.45	.040	2	5	3.16	62	.01	2	.41	.01	.20	1	26	140
2274-G	1	21	15	154	2.2	6	7	4338	5.29	44	5	ND	1	117	.4	7	2	11	7.68	.035	3	6	3.90	59	.01	2	.35	.01	.13	1	9	170
2275-G	4	48	22	87	4.0	18	8	2281	4.17	43	5	ND	1	57	.2	11	2	18	4.10	.041	3	7	2.22	115	.01	2	.63	.01	.26	1	11	180
2276-G	1	19	10	50	1.5	4	4	5702	5.26	27	5	ND	1	86	.2	2	2	8	10.49	.015	2	1	4.80	51	.01	2	.29	.01	.12	1	9	70
2277-G	1	1463	3309	6534	148.6	3	5	4797	9.69	2352	5	3	1	38	11.8	77	2	3	5.29	.006	2	5	5.08	35	.01	2	.21	.01	.10	1	7908	5400
2278-G	1	29	34	101	2.3	22	17	2268	5.81	468	5	ND	1	93	.2	15	2	26	4.22	.034	3	14	2.48	55	.01	2	.47	.01	.18	1	95	170
2348-G	5	27	20	143	1.3	1	2	767	2.24	19	5	ND	1	25	.4	4	2	1	1.08	.012	9	5	.45	65	.01	5	.39	.02	.23	1	16	130
2349-G	5	26	11	133	.3	5	2	471	2.66	5	5	ND	2	28	.4	2	2	1	.65	.012	9	5	.27	48	.01	6	.38	.01	.23	1	3	130
2350-G	3	23	10	122	.2	1	2	593	3.36	7	5	ND	1	56	.3	3	3	1	.99	.010	8	4	.42	46	.01	3	.41	.02	.24	1	3	120
2351-G	3	27	32	130	.2	3	2	515	3.02	7	5	ND	1	20	.3	4	3	1	.62	.014	10	3	.39	38	.01	4	.33	.01	.19	1	2	130
2352-G	5	32	11	223	.4	3	2	487	3.63	12	5	ND	1	32	1.0	3	3	1	.66	.014	8	4	.43	36	.01	4	.34	.01	.19	1	2	180
2353-G	4	42	10	135	.3	3	2	747	2.63	8	5	ND	1	44	.4	6	2	1	1.24	.014	10	3	.52	54	.01	5	.42	.01	.26	1	4	110
2354-G	4	42	18	200	.5	3	3	1078	3.72	37	5	ND	1	62	.7	7	2	1	1.89	.021	7	7	.77	39	.01	4	.30	.01	.19	2	11	160
2355-G	5	33	33	152	.5	2	2	488	2.99	23	5	ND	1	27	.5	7	3	1	.80	.012	7	3	.31	31	.01	7	.29	.01	.18	1	20	150
2356-G	5	21	29	91	.4	4	1	419	3.00	89	5	ND	1	40	.4	5	4	1	.83	.008	7	5	.30	44	.01	4	.32	.01	.17	1	59	140
2357-G	4	55	301	1458	1.3	3	3	684	3.72	129	5	ND	1	50	4.9	13	2	1	1.33	.026	2	4	.52	18	.01	7	.33	.01	.16	2	75	900
2358-G	4	61	508	975	1.6	3	2	744	3.87	104	5	ND	1	38	2.8	18	2	1	1.77	.008	4	5	.80	26	.01	2	.22	.01	.14	1	79	600
2359-G	4	75	415	2021	1.7	3	2	956	3.46	104	5	ND	1	36	6.8	15	3	1	2.00	.011	5	6	.88	28	.01	3	.22	.01	.15	1	85	820
2360-G	5	46	140	433	.8	3	1	604	2.55	42	5	ND	1	24	1.4	9	2	1	1.23	.011	5	6	.52	49	.01	4	.24	.01	.16	2	29	280
2361-G	1	442	6642	17517	30.4	2	8	1392	18.02	744	5	ND	1	28	59.4	46	2	1	.74	.005	2	9	1.04	7	.01	2	.09	.01	.06	1	810	6600
2362-G	8	67	656	2031	2.9	5	2	380	3.77	75	5	ND	1	20	6.1	18	2	1	.67	.009	4	5	.26	21	.01	2	.22	.01	.15	1	70	1200
2363-G	6	48	4401	1760	4.2	2	3	548	4.50	121	5	ND	1	44	6.4	12	3	1	.90	.007	3	3	.36	22	.01	3	.21	.01	.14	1	92	780
2364-G	7	72	377	3579	1.9	5	2	647	3.74	86	5	ND	1	28	12.5	14	2	1	1.03	.009	3	7	.42	30	.01	5	.19	.01	.13	1	69	1300
2365-G	6	106	431	2471	1.9	2	4	305	4.56	180	5	ND	1	15	9.0	14	2	1	.44	.009	4	1	.18	18	.01	2	.24	.01	.16	1	127	880
STANDARD C/AU-R	17	58	38	131	6.8	68	32	1051	3.97	39	16	6	37	53	19.0	15	20	56	.51	.093	39	59	.90	179	.07	35	1.90	.06	.14	11	496	1500

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: CORE AU** ANALYSIS BY FA\ICP FROM 10 GM SAMPLE. HG ANALYSIS BY FLAMELESS AA.

DATE RECEIVED: SEP 16 1990 DATE REPORT MAILED: Sept 19/90 SIGNED BY. D. TOYE; C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

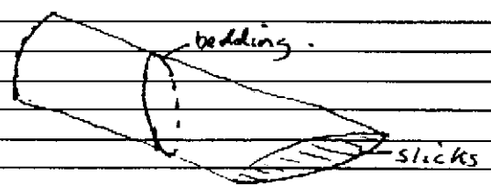
Page 1 of 14

Property Unuk River Option | Project No. 134 | Depth 300.84 m. | Date Began Aug. 15/1990
Hole No. AP-6 | Co ord. 1350N/88.5W | Horizontal Length 227 m. | Date Completed Aug. 19/1990
Claim No. UNUK 26 | Core Size BG BDM | Drilled By J.T. Thomas
Grid No. Zone 1 | Angle & Direction -45° az 302° | Elevation 1268 m. | Logged By D. Gaboury

INTERVAL FEET (METRES)	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
0 - 4.10	Casing								
4.10 - 44.50	Grey wacke - fine to med. grained, silt to fine sand, muddy matrix, minor argillaceous interbeds. - fossiliferous, with calcite replacement of bivalves, and minor pyrite replacement. - numerous small scale bedding disruptions (revealed), moderately fractured, with thin limonite coatings, spaced 5-20 cm apart. - overall 1-2% finely disseminated py., with minor small patches of 2-3% py.								
7.30 - 7.98	close spaced, irregular fractures, 1-2 cm spacing,								
11.00 - 11.45	broken core - shear zone, 50% recovery								
15.55 - 16.05	rubbly broken core, 50% recovery								
18.30 - 20.10	broken core, sharp irregular fractures, abundant limonite coating.								
20.22 - 20.52	rubbly, broken core, with talc and graphite coatings, .5cm of clayey graphitic gouge. Irregular core angles, ~60° to CA.								
20.62 - 20.72	rubbly, ground core.								
26.20 - 30.00	well fractured, 1-2 cm. spacing, irregular core angles, limonite coating								
30.00 - 37.70	black argillaceous interbed, - muddy greywacke, minor fine white calcite stringers, fossils								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Hole No. AP 6 | Co ord. | Horizontal Length | Date Completed
Claim No. | | Core Size | Drilled By
Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD							
		FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	33.86 - 37.5 Strongly fractured section with 1.5 - 2 cm spacing, limonite stain. - minor slickensides on graphitic slip surfaces, at 45° to CA. slicks rake 20° from horizontal.								
									
	37.70 - 37.80 3-5% diss. py in small pod, in med. grained grey wacke.								
	37.90 - 38.71 broken, well fractured core, 1-2cm. spacing.								
	40.33 - 41.15 Fault zone, graphite/talc gouge, tectonic brecciation + rehealing. - fault at 30°-45° to C.A. - 10-15% tan to greenish grey sericitized breccia frags, 10% QTz + calcite veins + stringers.								
	40.85 - 40.90 10-15% QTz-carb stwk with 3-5% diss. py								
	41.15 - 41.45 interbedded argillaceous dacitic debris flow .2 - 1.0 cm dacitic lithic fragments.								
	45.50 - 45.13 Transitional contact, from argillaceous greywacke to dacitic lapilli tuff. - weakly sericitized, partially pyrite replaced angular fragments of dacite, .2 - 3.0 cm. across, elongate paballel to bedding/foliation, in argillaceous matrix								

Use Black Pen Only

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Hole No. AP 6 | Co ord. | Horizontal Length | Date Completed
Claim No. | | Core Size | Drilled By
3 of 14 | Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET/METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	- some fragments have zoned altn, with silicified cores, surrounded by pyrite, and sericitized rims.								
	- minor (< 3%) fine Qtz stringers and cross-cutting veinlets, ± - cm py stringer at lower contact.								
	Core angles: (Bedding) 11.00 m. : 49°								
	32.00 : 48°								
	39.20 : 43°								
	43.00 : 35°								
	44.20 : 40°								
	44.90 : 65°								
45.13 - 48.20	Dacitic lapilli-ash tuff								
	- med. to coarse grained with .5 to 2.0cm long fragments, weakly chloritic								
	- overall medium bluish-grey, (5B 5/1) to greenish grey.								
	- minor limonite coated fractures at irregular angles								
	- moderately well foliated								
	- patchy pyrite replacement, minor stringers overall 5% py.								
	46.00 - 46.50 fine Qtz ladder veins at ~55° to core axis, in bleached zone parallel to bedding.								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

4 of 14

Hole No. AP6 | Co ord. | Horizontal Length | Date Completed
Claim No. | | Core Size | Drilled By
Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET/METRES	DESCRIPTION	SAMPLE RECORD							
		FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
48.20 - 57.90	Argillaceous siltstone								
	- massive, fine grained generally black to dark grey with minor sandy greywacke interbands.								
	- Strongly fractured, 1-3 cm. spacing, minor slickensides, with Qtz-chlor veining.								
	48.20 - 51.30 - weakly silicified zone, with ~2% fine Qtz veinlets, with chlorite & calcite, Tr-1% py.								
	50.00 - 51.30 - close spaced Qtz-chlorite tension vnlts, 1-2 mm, parallel to core axis, with 1-2% fine diss. py.								
	51.30 - 54.00 - light greenish grey (5GY 6/1) altered, strongly silicified siltstone								
	- 5% fine Qtz-carb. stwk, and 3-5% very fine black, diffuse hairline veinlets.								
	- 1.0 to 3.0 cm. spaced fractures,								
	- 3-5% py stringers + veinlets.								
	53.85 - 54.0 : 1-2 cm. wide Qtz vein subparallel to core axis, with patchy pink carbonate and arborescent dark brownish black mineral								
	- Sharp lower contact with 2cm. of 10% diss. py band.								
	Core angles (Bedding): 45.20 m. : 45°								
	47.00 : 45°								
	55.00 : 45°								
	57.90 : 50°								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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Hole No. AP 6 | Co ord. | Horizontal Length | Date Completed
Claim No. | | Core Size | Drilled By
Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
52.90 - 72.50	Dacitic Lapilli - ash Tuff								
	- medium bluish grey (5B 5/1) with dark greenish grey (5G 4/1) elongated fragments, up to 1 x 3 cm. matrix supported - <1% pyritic fragments, with Qtz - chlorite alteration - weakly perrasive sericite altn.								
	62.5 - 62.60 : 50-60% py in strongly silicified tuff section.								
	63.0 - 63.40 : fine grained tuff, weakly banded, 1 cm. py band at top contact.								
	63.50 - 63.90 : 2-3% py blebs & nests, & fragments								
	63.90 - 63.97 : band of 10% diss. py.								
	69.05 - 69.10 : band of 10-15% diss. py, at ~ 35° to C.A.								
	69.70 - 70.40 : 5-8% diss. py, 1-2% blebs & fragments								
	Core angles (bedding/foliation) 59.60 m. : 45° 62.20 : 55° 71.70 : 48°								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

6 of 14

Hole No. AP 6 | Co ord. | Horizontal Length | Date Completed
Claim No. | | Core Size | Drilled By
Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD							
		FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
72.50 - 87.75	Argillaceous lapilli tuff-								
	- dark bluish grey (5B 3/1)								
	- dacitic, locally silicified heterolithic tuff with 10'-15% argillite fragments, 20% dacite fragments, in argillaceous/tuffaceous matrix, locally clast-supported.								
	- fragments up to 1 x 4 cm.								
	- overall Tr-1% py								
	- minor interbedded siltstone/argillite.								
	73.76 - 74.06 : massive fine grained silicified section, poorly banded, with minor sericite-altered fragments, Tr cpy, py								
	74.65 - 74.80 : Tr-1% pyrrhotite, cpy, in minor QTz-carb. veinlets								
	74.95 - 75.50 : argillite/siltstone, thinly banded, with 2'-3% diss. py								
	78.10 - 78.55 : 1-2% blebs + diss. py, 2cm. band at 78.30m.								
	79.50 - 79.74 : Black argillite with wispy py blebs and disseminations, 3-5% py								
	79.74 - 79.94 : 10-20% py, blebs + bands, with QTz-carb. veinlets strongly silicified tuff, & graphitic argillite 5cm. diss. py. band at 79.75m.								
	79.94 - 80.85 : 1-2% diss. py, minor blebs, in lapilli tuff.								
*	80.85 - 81.20 : 20-25% py, in blebs & bands, with a 10cm section of near massive py in silicified argillite								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

7 of 14

Hole No. AP 6 | Co ord. | Horizontal Length | Date Completed
Claim No. | | Core Size | Drilled By
Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	81.58 - 81.66 : 5-10% py in bands, weakly silicified tuff.								
	82.70 - 84.50 : banded argillaceous lapilli tuff, with 1-2% py blebs								
	84.95 - 85.40 : 3-5% py diss. & blebs in slightly argillaceous lapilli tuff								
	85.40 - 85.65 : 20% py, silicified tuff								
	85.65 - 87.75 : 3-5% py stngrs & blebs in argillaceous tuff with abundant Qtz-carb. vnlts.								
	87.30 - 87.40 : fault gouge, sandy/clayey, graphitic, brecciated argillaceous tuff.								
	Core Angles (bedding/foliation):								
	73.00 m. : 45°								
	76.50 m : 47°								
	85.00 : 48°								
	90.00 : 49°								
87.75 - 125.20	Interbedded Argillite & Siltstone								
	- Black, finely laminated to massive - 2-3% fine irregular cross cutting carbonate veinlets - Tr graphite on slip surfaces, and numerous small scale bedding disruptions.								
	89.65 - 90.00 : 2-3% py in irregular, <2mm thick								
	91.60 - 91.70 : 3-5% py blebs & stngrs, minor coarse argillaceous breccia								
	93.80 - 94.10 : patchy py, 5-10% overall								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

8 of 14

Hole No. AP 6 | Co ord. | Horizontal Length | Date Completed
Claim No | | Core Size | Drilled By
Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	97.75 - 97.95 : 3-5% py blebs & stringers								
	101.70 - 103.65 : Folded bedding, generally parallel to core axis, in interbedded siltstone/argillite with 3-5% py blebs + dissemination								
	103.65 - 104.85 : rubbly-angular broken core with graphitic fault gouge at 103.65 - 103.90								
	105.60 - 106.38 : Broken, sheared core, minor polished graphitic fault surfaces								
	107.10 - 107.40 : broken, graphitic section bedding = parallel faults								
	107.70 - 109.00 : 2-3% diss. + banded py								
	109.31 - 109.37 : silicified band. parallel to bedding; sericitic with perpendicular Qtz-carb. tension veinlets								
	109.97 - 110.03 : 2-3% disseminated & banded py								
	110.67 - 110.74 : graphitic clay gouge, at 45° to core axis								
	110.80 - 111.30 : 3-5% disseminated and blebs py								
	111.30 - 112.20 : Slivery broken core with numerous graphitic + talcy slip surfaces at irregular core angles generally ~45° to C.A, with minor slickensides raking @ at ~80° down dip.								
	113.10 - 113.45 : 5-10% py								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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Hole No. AP 6 | Co ord. | Horizontal Length | Date Completed
Claim No. | | Core Size | Drilled By
Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	113.80 - 113.90 : 15-20% diss. py in small lens, with surrounding 10 cm. of 3-5% py								
	116.75 - 116.84 : band of finely disseminated py.								
	117.85 - 119.18 : Fault gouge & broken core, graphitic clay gouge, at 118.05 - 118.25, 118.46 - 118.50, and 118.95 - 119.10, all parallel to bedding at ~40° to C.A.								
	119.18 - 120.00 : Folded bedding, parallel to core axis.								
	Core angles (bedding):								
	99.90 m. : 25°								
	102.00 : 9°								
	105.00 : 25°								
	110.00 : 35°								
	116.90 : 45°								
	119.50 : 0°								
	121.10 : 50°								
	124.50 : 55°								
125.20 - 150.80	Dacitic Ash - lapilli tuff								
	- medium to dark bluish black matrix, with lighter, greenish grey altered sections and seficitized fragments								
	- minor argillite and argillaceous debris flow interbeds.								
	- irregular upper contact at very low core angle, with band of diss. py, 3-5%, along contact from 125.20 - 126.00 m								
	- Tr pyritic fragments with altered rims.								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Hole No. A P - 6 | Co ord. | Horizontal Length | Date Completed
Claim No. | | Core Size | Drilled By
10 of 14 | Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	125.20 - 129.20 : strongly altered section, sericitized and bleached to greenish grey, mottled, with relict fragments, 3-5% py.								
	129.20 - 131.15 : graphitic argillite, 1-1% py								
	131.15 - 131.35 : sericitized breccia fragments in argillaceous tuff, weakly silicified, 3-5% py stringers								
	134.80 - 135.55 : 2-3% py stringers and blebs in weakly silicified section, with 5-10% irregular, cross-cutting Qtz-carb. veinlets.								
	143.20 - 148.40 : re-silicified altered breccia, light greenish grey, weakly sericitized fine grained matrix with relic fragments, 146.40 - 146.50 : 5-10% diss. py								
	148.40 - 150.80 : Massive graphitic argillite, with minor x-cutting carb. veinlets.								
	Core Angles (Bedding): 137.2 m : 45° 142.6 : 45° 154.0 : 47°								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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Hole No. AP 6 | Co ord. | Horizontal Length | Date Completed
Claim No. | | Core Size | Drilled By
Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
150.80 - 280.30	Argillaceous debris flow								
	- overall greenish grey dacitic fragments, angular, .2 - 1.0 cm. in black or greenish black argillite matrix.								
	- locally well bedded with ~ 1-3% diss. py, minor bands of 5-8% py, 1-2 cm. thick.								
	- 1-2% x-cutting Qtz-carb veinlets, .1-.2 cm.								
	162.40 - 162.70 : fault zone, brecciated, graphitic/clay gouge, minor Qtz-carb. veinlets, parallel to bedding.								
	166.60 - 166.90 : broken core and graphitic gouge section								
	179.50 - 181.00 : broadly folded bedding, sub-parallel to core axis, with broken, faulted section, polished graphitic fault surfaces at irregular core angles.								
	191.40 - 197.70 : massive argillite section								
	193.20 - 193.30 : graphitic fault gouge.								
	197.70 - 198.50 : broken core 20 cm. graphitic gouge 198.2 - 198.40								
	199.45 - 199.90 : Qtz vn, 2 cm wide at ~5° to C.A.								
	200.25 - 200.35 : Clay gouge seam in debris flow.								

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DIAMOND DRILL LOG

12 of 14

Hole No. A.P. 6 | Co ord. | Horizontal Length | Date Completed

Claim No. | Core Size | Drilled By

Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD							
		FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
208.00 - 214.40	graphitic argillite with close spaced fault cleavages at ~70° to core axes. with slickensides raking 45° from vertical. - numerous small graphitic gouge sections.								
218.00 - 218.50	: slivery - broken core, graphitic slip surfaces and gouge.								
223.07 - 223.20	: graphitic and sandy gouge.								
230.20 - 238.75	: Closely spaced fracturing with graphitic gouge sections .5 - 10 cm thick, - minor Qtz - carb veinlets parallel to bedding.								
239.20 - 239.80	fault zone, broken core, 10-20 cm. of graphitic gouge.								
241.20 - 248.70	: altered tuffaceous section - greyish to dusky yellowish green (5 GY 6/2) - Sericitized, fine ground mass with 20-30% clay altered feldspar x/s Tr/Py minor argillite debris flow interbeds								
245.36 - 247.00	- Strongly brecciated tuffaceous debris flow, with numerous gouge sections + broken core. - Talc coating fractures at bottom contact, at 40° to core axis								

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GRANGES EXPLORATION LTD.

DIAMOND DRILL LOG

13 of 14

Hole No. A.P. 6 | Co ord. | Horizontal Length | Date Completed

Claim No. | Core Size | Drilled By

Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	250.70 – 253.15 : Fault zone in poorly laminated debris flow / argillite, with numerous gouge sections								
	255.00 – 256.00 : rubbly, broken core, with graphitic / clay gouge.								
	261.80 – 262.86 : Fault zone, broken core and graphitic gouge.								
	264.30 – 264.85 : Fault zone graphitic gouge, minor Talc. 1cm. Qtz-carb. vein, parallel to bedding at bottom of section.								
	Core Angles (bedding):								
	154.0 m 47°								
	159.0 m 43°								
	175.00 42°								
	212.00 90°								
	216.00 70°								
	220.50 35°								
	230.50 60								
	233.30 75°								
	237.40 70°								
	253.80 38°								
	260.60 60°								
	261.50 34°								
	265.80 55°								
	269.00 48°								

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DIAMOND DRILL LOG

14 of 14

Hole No. AP 6 | Co ord. | Horizontal Length | Date Completed

Claim No. | Core Size | Drilled By

Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
280.30 - 300.84	Dacitic Lapilli Tuff-								
	- bluish grey, partly welded tuff, with dacitic fragments up to 10 cm.								
	- matrix supported, and <5% argillite fragments.								
	- weak, pervasive sericite alteration.								
	285.00 - 285.60 : 2-3% py stringers & blebs								
	288.90 - 289.00 : vuggy Qtz - carb. veinlets 2-3% py blebs.								
	293.50 - 299.00 : argillaceous debris flow with numerous fault gouge sections.								
	294.50 - 295.20 : 30% core recovery, 1-2% blebs & stringers py,								
	299.30 - 300.84 : bleached light bluish grey sericitized and clay-altered tuff. Tr-1% diss py. broken, rubbly core;								
300.84	E.O.H - abandoned								
	Acid tests								
	184.22 m ; 40° corrected								
	255.0 m ; 38° corrected.								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD

Hole No. AP 6 | Co ord. | Horizontal Length | Date Completed

Claim No. | Core Size | Drilled By

Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET (METRES)	NUMBER	WIDTH	Au. ppb	Ag. ppm	Cu.	Zn.	As. ppm	WIDTH X ASSAY
0.00 - 4.00	CASING	4.00						
4.00 - 8.03	WASTE	4.03						
8.03 - 8.53	1087-G	0.5	11	.1			18	
8.53 - 8.83	1088-G	0.3	14	.3			27	
8.83 - 9.33	1089-G	0.5	11	.1			15	
9.33 - 9.83	1090-G	0.5	8	.2			13	
9.83 - 10.33	1091-G	0.5	4	.2			10	
10.33 - 10.63	1092-G	0.3	7	.1			7	
10.63 - 11.43	1093-G	0.8	3	.1			13	
11.43 - 11.73	1094-G	0.3	16	.1			16	
11.73 - 12.13	1095-G	0.4	6	.1			11	
12.13 - 12.43	1096-G	0.3	6	.2			23	
12.43 - 12.93	1097-G	0.5	6	.2			18	
12.93 - 18.07	WASTE	5.14						
18.07 - 18.90	1098-G	0.83	10	.2			18	
18.90 - 19.40	1099-G	0.5	6	.1			11	
19.40 - 19.90	1100-G	0.5	10	.1			14	
19.90 - 20.50	1109-G	0.6	4	.1			15	
20.50 - 21.00	1112-G	0.5	3	.1			9	
21.00 - 34.14	WASTE	13.14						
34.14 - 34.64	1113-G	0.5	5	.1			23	
34.64 - 35.00	WASTE	0.36						
35.00 - 35.50	1114-G	0.5	4	.2			23	
35.50 - 36.27	WASTE	0.77						
36.27 - 36.77	1115-G	0.5	6	.1			18	
36.77 - 37.27	WASTE	0.5						
37.27 - 37.57	1116-G	0.3	5	.2			19	
37.57 - 37.87	1117-G	0.3	4	.3			18	
37.87 - 38.37	1118-G	0.5	8	.1			11	
38.37 - 40.00	WASTE	1.63						
40.00 - 40.40	1119-G	0.4	5	.2			32	
40.40 - 40.95	1120-G	0.55	7	.1			36	
40.95 - 41.50	WASTE	0.55						
41.50 - 41.65	1121-G	0.15	3	.1			32	
41.65 - 45.30	WASTE	3.65						
45.30 - 45.60	1122-G	0.3	11	.1			2	
45.60 - 45.90	WASTE	0.3						
45.90 - 46.20	1123-G	0.3	2	.3			4	
46.20 - 47.10	WASTE	0.9						
47.10 - 47.40	1124-G	0.3	5	.3			2	

AVERAGES					
WIDTH	Au.	Ag.	Cu.	Zn.	

Use Black Pen Only

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Hole No AP 6 | Co ord | Horizontal Length | Date Completed

Claim No. | Core Size | Drilled By

Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET (METRES)	NUMBER	WIDTH	Au. ppb	Ag. ppm	Cu.	Zn.	As. ppm	WIDTH X ASSAY						AVERAGES WIDTH	Au.	Ag.	Cu.	Zn.
47.4 - 47.7	1125-G	0.3	1	.3			6											
47.7 - 50.7	WASTE	3.0	—	—			—											
50.7 - 51.2	1126-G	0.5	30	.6			22											
51.2 - 51.5	WASTE	0.3	—	—			—											
51.5 - 52.0	1127-G	0.5	10	1.5			13											
52.0 - 53.5	WASTE	1.5	—	—			—											
53.5 - 53.75	1128-G	0.25	4	.6			15											
53.75 - 54.05	1129-G	0.3	104	1.2			227											
54.05 - 57.10	WASTE	3.05	—	—			—											
57.10 - 57.60	1130-G	0.5	6	1.7			7											
57.60 - 57.90	1131-G	0.3	2	1.5			15											
57.90 - 58.40	1132-G	0.5	1	.3			4											
58.40 - 58.90	1133-G	0.5	4	.6			9											
58.90 - 59.50	1134-G	0.6	12	.3			13											
59.50 - 60.00	1135-G	0.5	6	.7			12											
60.00 - 60.50	1136-G	0.5	4	.8			3											
60.50 - 61.00	1137-G	0.5	6	.8			15											
61.00 - 61.50	1138-G	0.5	8	.7			9											
61.50 - 62.00	1139-G	0.5	5	.8			7											
62.00 - 62.40	1140-G	0.4	6	.4			3											
62.40 - 62.70	1101-G	0.3	8	5.2			28											
62.70 - 63.00	1141-G	0.3	4	1.4			4											
63.00 - 63.50	1142-G	0.5	9	1.4			5											
63.50 - 64.00	1143-G	0.5	1	.9			15											
64.00 - 64.50	1144-G	0.5	1	.3			7											
64.50 - 65.00	1145-G	0.5	9	.7			15											
65.00 - 65.50	1146-G	0.5	1	.5			8											
65.50 - 66.00	1147-G	0.5	2	.7			38											
66.00 - 66.50	1148-G	0.5	8	.6			11											
66.50 - 67.00	1149-G	0.5	12	.4			7											
67.00 - 67.50	1150-G	0.5	38	.4			11											
67.50 - 68.00	1151-G	0.5	109	.7			31											
68.00 - 68.50	1152-G	0.5	2	.3			17											
68.50 - 69.00	1153-G	0.5	1	.5			15											
69.00 - 69.30	1154-G	0.3	1	.3			34											
69.30 - 69.70	1155-G	0.4	2	.3			16											
69.70 - 70.00	1156-G	0.3	3	1.0			109											
70.00 - 70.40	1157-G	0.4	3	.8			64											
70.40 - 70.90	1158-G	0.5	3	.5			24											
70.90 - 71.40	1159-G	0.5	8	.2			19											

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GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD

Hole No. AP 6 Co ord. Horizontal Length Date Completed

Claim No. Core Size Drilled By

Grid No. Angle & Direction Elevation Logged By

INTERVAL FEET (METRES)	NUMBER	WIDTH	Au.	Ag	Cu	Zn.	As.	WIDTH X ASSAY						AVERAGES					
														WIDTH	Au.	Ag.	Cu	Zn.	
71.40 - 71.90	1160 - G	0.5	3	.4			20												
71.90 - 72.20	1161 - G	0.3	2	.4			23												
72.20 - 72.50	1162 - G	0.3	1	.2			22												
72.50 - 73.00	1163 - G	0.5	5	.6			42												
73.00 - 73.50	1164 - G	0.5	15	.3			22												
73.50 - 74.00	1165 - G	0.5	1	.1			13												
74.00 - 74.50	1166 - G	0.5	4	.2			18												
74.50 - 75.00	1167 - G	0.5	7	.4			18												
75.00 - 75.50	1168 - G	0.5	4	.8			42												
75.50 - 76.00	1169 - G	0.5	3	.3			7												
76.00 - 76.30	1170 - G	0.3	1	.2			7												
76.30 - 76.60	1171 - G	0.3	2	.2			21												
76.60 - 77.10	1172 - G	0.5	1	.1			3												
77.10 - 77.50	1173 - G	0.4	2	.6			7												
77.50 - 78.00	1174 - G	0.5	1	.5			2												
78.00 - 78.50	1175 - G	0.5	2	.6			5												
78.50 - 79.00	1176 - G	0.5	12	.2			7												
79.00 - 79.50	1177 - G	0.5	3	.5			5												
79.50 - 79.80	1178 - G	0.3	8	.9			17												
79.80 - 80.10	1102 - G	0.3	11	1.4			58												
80.10 - 80.70	1179 - G	0.6	7	.3			6												
80.70 - 81.38	1103 - G	0.68	6	.7			19												
81.38 - 81.70	1180 - G	0.32	1	.4			14												
81.70 - 82.20	1181 - G	0.5	1	.1			2												
82.20 - 82.70	1182 - G	0.5	1	.2			4												
82.70 - 83.20	1183 - G	0.5	1	.2			8												
83.20 - 83.70	1184 - G	0.5	3	.5			11												
83.70 - 84.20	1185 - G	0.5	2	.3			8												
84.20 - 84.40	1186 - G	0.2	1	.1			6												
84.40 - 84.70	1187 - G	0.3	1	.1			5												
84.70 - 85.30	1188 - G	0.6	4	.5			19												
85.30 - 85.80	1104 - G	0.5	9	1.2			23												
85.80 - 86.10	1189 - G	0.3	4	.1			7												
86.10 - 86.40	1190 - G	0.3	1	.2			11												
86.40 - 86.70	1191 - G	0.3	7	.4			7												
86.70 - 87.10	1192 - G	0.4	3	.5			13												
87.10 - 87.40	1193 - G	0.3	1	.2			12												
87.40 - 87.75	1194 - G	0.35	3	.1			3												
87.75 - 91.10	WASTE	3.35																	
91.10 - 91.60	1195 - G	0.5	1	.3			10												

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GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD

Hole No. AP 6 | Co ord. | Horizontal Length | Date Completed
Claim No. | | Core Size | Drilled By
Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET (METRES)	NUMBER	WIDTH	Au.	Ag.	Cu.	Zn.	As.
91.60 - 91.90	1196-G	0.3	9	.1			9
91.90 - 93.40	1197-G	0.5	12	.4			2
92.40 - 92.90	1198-G	0.5	15	.1			2
92.90 - 93.40	1199-G	0.5	7	.1			4
93.40 - 93.70	1200-G	0.3	6	.1			5
93.70 - 94.10	1201-G	0.4	12	.4			18
94.10 - 94.60	1202-G	0.5	3	.1			3
94.60 - 95.10	1203-G	0.5	3	.2			3
95.10 - 95.60	1204-G	0.5	1	.1			3
95.60 - 96.65	WASTE	1.05					
96.65 - 97.15	1205-G	0.5	1	.4			6
97.15 - 97.45	1206-G	0.3	30	.3			27
97.45 - 97.95	1207-G	0.5	3	.4			8
97.95 - 101.60	WASTE	3.65					
101.60 - 102.10	1208-G	0.5	4	.2			2
102.10 - 102.60	1209-G	0.5	9	.3			8
102.60 - 103.10	1210-G	0.5	10	.5			30
103.10 - 103.50	1211-G	0.4	1	.3			2
103.50 - 107.60	WASTE	4.1					
107.60 - 107.90	1212-G	0.3	14	.7			16
107.90 - 108.20	1213-G	0.3	2	.1			2
108.30 - 109.00	1214-G	0.8	2	.4			4
109.00 - 109.50	1215-G	0.5	11	.4			16
109.50 - 110.00	1216-G	0.5	4	.6			10
110.00 - 110.50 110.17 - 110.47	1217-G 1105-G	0.5 0.3	7 10	.5 .3			7 5
110.50 - 110.80	1218-G	0.3	4	.3			4
110.80 - 111.30	1106-G	0.5	8	.5			13
111.30 - 111.60	1219-G	0.3	14	.6			7
111.60 - 112.10	1220-G	0.5	49	.4			97
112.10 - 112.60	1221-G	0.5	4	.6			4
112.60 - 113.10	1222-G	0.5	34	.6			58
113.10 - 113.45	1107-G	0.35	52	.4			112
113.45 - 113.75	1223-G	0.3	3	.5			7
113.75 - 114.10	1108-G	0.35	94	.4			251
114.10 - 114.60	1224-G	0.5	1	.5			5
114.60 - 116.40	WASTE	1.8					
116.40 - 116.70	1225-G	0.3	18	.7			13
116.70 - 117.00	1226-G	0.3	41	1.6			73
117.00 - 117.30	1227-G	0.3	44	.5			87
117.30 - 123.20	WASTE	5.9					

WIDTH X ASSAY

AVERAGES

WIDTH	Au.	Ag.	Cu.	Zn.

Use Black Pen Only

GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD

Hole No. AP 6 Co ord. Horizontal Length Date Completed

Claim No. Core Size Drilled By

Grid No. Angle & Direction Elevation Logged By

INTERVAL FEET/(METRES)	NUMBER	WIDTH	Au.	Ag.	Cu.	Zn.	As.	WIDTH X ASSAY						AVERAGES					
														WIDTH	Au.	Ag.	Cu.	Zn.	
123.20 - 123.70	1228-G	0.5	23	1.8			41												
123.70 - 124.10	1229-G	0.4	40	1.2			34												
124.10 - 124.60	1230-G	0.5	4	2.0			3												
124.60 - 124.90	1231-G	0.3	23	1.7			7												
124.90 - 125.20	1232-G	0.3	10	2.4			14												
125.20 - 125.70	1233-G	0.5	11	1.5			50												
125.70 - 126.20	1234-G	0.5	5	1.3			26												
126.20 - 126.70	1235-G	0.5	6	1.2			85												
126.70 - 127.20	1236-G	0.5	11	.5			265												
127.20 - 127.70	1237-G	0.5	5	.8			28												
127.70 - 128.20	1238-G	0.5	4	.7			23												
128.20 - 128.70	1239-G	0.5	1	.4			17												
128.70 - 129.80	1240-G	1.1	6	.5			14												
129.80 - 130.30	1241-G	0.5	9	1.5			17												
130.30 - 130.80	1242-G	0.5	17	1.0			9												
130.80 - 131.30	1243-G	0.5	4	.6			25												
131.30 - 131.80	1244-G	0.5	3	.6			25												
131.80 - 132.30	1245-G	0.5	2	.3			28												
132.30 - 132.80	1246-G	0.5	3	.9			44												
132.80 - 133.30	1247-G	0.5	4	.9			36												
133.30 - 133.80	1248-G	0.5	1	1.6			21												
133.80 - 134.30	1249-G	0.5	1	1.7			11												
134.30 - 134.80	1250-G	0.5	2	2.0			3												
134.80 - 135.30	1251-G	0.5	22	1.8			58												
135.30 - 135.80	1252-G	0.5	37	1.1			88												
135.80 - 136.30	1253-G	0.5	3	1.2			22												
136.30 - 136.80	1254-G	0.5	16	2.2			123												
136.80 - 137.30	1255-G	0.5	20	1.9			96												
137.30 - 137.80	1256-G	0.5	49	2.3			147												
137.80 - 138.30	1257-G	0.5	1	1.4			48												
138.30 - 138.80	1258-G	0.5	14	.8			54												
138.80 - 139.30	1259-G	0.5	47	2.7			103												
139.30 - 139.80	1260-G	0.5	5	.7			41												
139.80 - 140.30	1261-G	0.5	7	.7			62												
140.30 - 143.20	WASTE	2.9																	
143.20 - 143.70	1262-G	0.5	8	.6			49												
143.70 - 144.20	1263-G	0.5	3	1.1			38												
144.20 - 144.70	1264-G	0.5	2	.4			43												
144.70 - 145.20	1265-G	0.5	4	.5			34												
145.20 - 145.70	1266-G	0.5	2	.4			31												

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GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD

Hole No. AP 6 Co ord. Horizontal Length Date Completed

Claim No. Core Size Drilled By

Grid No. Angle & Direction Elevation Logged By

INTERVAL FEET (METRES)	NUMBER	WIDTH	Au.	Ag.	Cu.	Zn.	As.	WIDTH X ASSAY						AVERAGES					
														WIDTH	Au.	Ag.	Cu.	Zn.	
145.70 - 145.90	WASTE	0.2	—	—			—												
145.90 - 146.40	1110 - G	0.5	2	.4			36												
146.40 - 146.90	1111 - G	0.5	3	.6			40												
146.90 - 147.40	1261 - G	0.5	2	.1			34												
147.40 - 147.90	WASTE	0.5	—	—			—												
147.90 - 148.40	1268 - G	0.5	4	.5			49												
148.40 - 150.50	WASTE	2.1	—	—			—												
150.50 - 151.00	1269 - G	0.5	1	.2			29												
151.00 - 151.50	1270 - G	0.5	3	.5			38												
151.50 - 152.00	1271 - G	0.5	2	.2			38												
152.00 - 156.40	WASTE	4.4	—	—			—												
156.40 - 156.90	1272 - G	0.5	11	.6			14												
156.90 - 157.40	1273 - G	0.5	14	.5			18												
157.40 - 161.90	WASTE	4.5	—	—			—												
161.90 - 162.40	1274 - G	0.5	10	.4			32												
162.40 - 162.90	1275 - G	0.5	7	.1			17												
162.90 - 163.40	1276 - G	0.5	3	.1			12												
163.40 - 166.10	WASTE	2.7	—	—			—												
166.10 - 166.60	1277 - G	0.5	69	.1			24												
166.60 - 167.10	1278 - G	0.5	4	.2			20												
167.10 - 173.90	WASTE	6.8	—	—			—												
173.90 - 174.40	1279 - G	0.5	17	.1			25												
174.40 - 179.25	WASTE	4.85	—	—			—												
179.25 - 179.75	1280 - G	0.5	13	1.0			21												
179.75 - 180.25	1281 - G	0.5	16	1.1			23												
180.25 - 180.75	1282 - G	0.5	6	.6			19												
180.75 - 181.25	1283 - G	0.5	8	.9			13												
181.25 - 186.85	WASTE	5.6	—	—			—												
186.85 - 187.35	1284 - G	0.5	17	2.1			50												
187.35 - 187.85	1285 - G	0.5	17	1.7			49												
187.85 - 190.70	WASTE	2.85	—	—			—												
190.70 - 191.20	1286 - G	0.5	9	1.3			30												
191.20 - 197.50	WASTE	6.3	—	—			—												
197.50 - 198.10	1287 - G	0.6	26	3.5			28												
198.10 - 199.00	1288 - G	0.9	18	2.7			28												
199.00 - 199.45	WASTE	0.45	—	—			—												
199.45 - 199.95	1289 - G	0.5	11	1.8			27												
199.95 - 200.45	1290 - G	0.5	27	4.4			56												
200.45 - 207.10	WASTE	6.65	—	—			—												
207.10 - 207.60	1291 - G	0.5	5	.8			13												

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GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD

Hole No. AP6 Co ord. Horizontal Length Date Completed

Claim No. Core Size Drilled By

Grid No. Angle & Direction Elevation Logged By

INTERVAL FEET/METRES	NUMBER	WIDTH	Au.	Ag.	Cu.	Zn.	As.	WIDTH X ASSAY	AVERAGES WIDTH	Au.	Ag.	Cu.	Zn.
207.60 - 232.90	WASTE	15.3	—	—			—						
232.90 - 233.40	1292-G	0.5	3	.1			28						
233.40 - 237.50	WASTE	4.1	—	—			—						
237.50 - 238.00	1293-G	0.5	5	.1			27						
238.00 - 334.60	WASTE	6.6	—	—			—						
234.60 - 235.10	1294-G	0.5	6	.4			39						
235.10 - 235.60	1295-G	0.5	6	.1			19						
235.60 - 236.80	WASTE	1.2	—	—			—						
236.80 - 237.30	1296-G	0.5	6	.1			43						
237.30 - 237.80	1297-G	0.5	17	.3			33						
237.80 - 240.60	WASTE	2.8	—	—			—						
240.60 - 241.10	1298-G	0.5	1	.1			8						
241.10 - 241.60	1299-G	0.5	7	.1			3						
241.60 - 242.10	1300-G	0.5	21	.1			2						
242.10 - 242.60	1301-G	0.5	5	.1			2						
242.60 - 242.90	1302-G	0.3	2	.1			2						
242.90 - 243.40	1303-G	0.5	9	.1			3						
243.40 - 243.90	1304-G	0.5	1	.4			2						
243.90 - 244.40	1305-G	0.5	1	.1			2						
244.40 - 244.90	1306-G	0.5	1	.1			2						
244.90 - 245.40	1307-G	0.5	1	.2			4						
245.40 - 245.90	1308-G	0.5	2	.1			8						
245.90 - 246.40	1309-G	0.5	1	.3			6						
246.40 - 246.90	1310-G	0.5	6	.2			14						
246.90 - 247.40	1311-G	0.5	1	.1			6						
247.40 - 247.90	1312-G	0.5	1	.1			3						
247.90 - 248.40	1313-G	0.5	2	.1			4						
248.40 - 248.70	1314-G	0.3	53	1.1			86						
248.70 - 249.20	1315-G	0.5	150	2.6			267						
249.20 - 249.70	1316-G	0.5	39	2.8			65						
249.70 - 250.20	1317-G	0.5	73	6.7			86						
250.20 - 250.70	1318-G	0.5	78	5.2			127						
250.70 - 251.20	1319-G	0.5	77	5.4			120						
251.20 - 251.70	1320-G	0.5	90	3.6			133						
251.70 - 252.20	1321-G	0.5	33	1.6			36						
252.20 - 252.70	1322-G	0.5	11	1.4			26						
252.70 - 253.20	1323-G	0.5	21	1.7			28						
253.20 - 258.50	WASTE	5.3	—	—			—						
258.50 - 259.00	1334-G	0.5	1	.1			20						
259.00 - 259.50	1335-G	0.5	2	.1			18						

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GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Hole No. AP 6 | Co ord. | Horizontal Length | Date Completed

Claim No. | Core Size | Drilled By

Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET (METRES)	NUMBER	WIDTH	Au.	Ag.	Cu.	Zn.	As.	WIDTH X ASSAY						AVERAGES					
														WIDTH	Au.	Ag.	Cu.	Zn.	
259.50 - 263.60	WASTE	4.1	—	—			—												
263.60 - 264.10	1326-G	0.5	2	.3			12												
264.10 - 264.60	1327-G	0.5	1	.1			17												
264.60 - 265.10	1328-G	0.5	4	.3			20												
265.10 - 268.50	WASTE	3.4	—	—			—												
268.50 - 269.00	1329-G	0.5	1	.1			8												
269.00 - 269.50	1330-G	0.5	1	.1			8												
269.50 - 280.00	WASTE	10.50	—	—			—												
280.00 - 280.50	1331-G	0.5	3	.1			9												
280.50 - 281.00	1332-G	0.5	1	.1			7												
281.00 - 281.50	1333-G	0.5	5	.1			8												
281.50 - 282.00	1334-G	0.5	2	.2			9												
282.00 - 282.50	1335-G	0.5	2	.1			5												
282.50 - 283.00	1336-G	0.5	1	.1			3												
283.00 - 283.50	1337-G	0.5	1	.1			6												
283.50 - 284.00	1338-G	0.5	13	.1			5												
284.00 - 284.50	1339-G	0.5	2	.1			2												
284.50 - 285.00	1340-G	0.5	3	.3			15												
285.00 - 285.50	1341-G	0.5	5	.3			42												
285.50 - 286.00	1342-G	0.5	7	.6			41												
286.00 - 286.50	1343-G	0.5	3	.1			5												
286.50 - 287.00	1344-G	0.5	1	.3			11												
287.00 - 287.50	1345-G	0.5	1	.1			2												
287.50 - 288.00	1346-G	0.5	1	.1			10												
288.00 - 288.50	1347-G	0.5	1	.2			11												
288.50 - 289.00	1348-G	0.5	13	.6			73												
289.00 - 289.50	1349-G	0.5	7	.6			36												
289.50 - 290.00	1350-G	0.5	17	.2			10												
290.00 - 290.50	1351-G	0.5	5	.3			32												
290.50 - 291.00	1352-G	0.5	2	.2			9												
291.00 - 291.50	1353-G	0.5	2	.3			13												
291.50 - 292.00	1354-G	0.5	2	.3			9												
292.00 - 292.50	1355-G	0.5	2	.1			12												
292.50 - 293.00	1356-G	0.5	1	.1			6												
293.00 - 293.50	1357-G	0.5	94	.3			7												
293.50 - 294.50	1358-G	1.0	5	.3			21												
294.50 - 295.00	1359-G	0.5	2	.5			27												
295.00 - 295.50	1360-G	0.5	4	.1			15												
295.50 - 296.00	1361-G	0.5	2	.3			13												
296.00 - 296.50	1362-G	0.5	2	.2			15												

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GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD

Hole No. AP 6 | Co ord. | Horizontal Length | Date Completed

Claim No. | Core Size | Drilled By

Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET (METRES)	NUMBER	WIDTH	Au.	Ag.	Cu.	Zn.	As.	WIDTH X ASSAY						AVERAGES					
														WIDTH	Au.	Ag.	Cu.	Zn.	
296.50 - 297.00	1363-G	0.5	2	.2			8												
297.00 - 298.50	1364-G	1.5	5	.2			16												
298.50 - 299.30	1365-G	0.8	1	.6			10												
299.30 - 299.80	1366-G	0.5	1	.1			13												
299.80 - 300.30	1367-G	0.5	2	.2			8												
300.30 - 300.84	1368-G	0.54	1	.3			10												

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DIAMOND DRILL LOG

1 of 8

Property Unuk River Option | Project No. 134 | Depth 197.21 m. | Date Began Aug. 20/90

Hole No. A.P. 7 | Co ord. 738N / 195W | Horizontal Length 148 m. | Date Completed Aug. 22/90

Claim No. UNUK 26 | Core Size BG - BDM | Drilled By J.T. Thomas

Grid No. Zone 1 | Angle & Direction -45° az 314 | Elevation 1260 m. | Logged By D. Gabourry

INTERVAL FEET / (METRES)	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
0 - 7.62	Casing								
7.62 - 61.10	Fine Grained Andesitic Tuff / tuffaceous Wacke - medium bluish grey (5B 5/1) - foliated locally weakly banded - fine feldspar and mafic phenocrysts - minor limonite - weathered fracture down to 15.20 meters - Tr - 1% fine white carb. veinlets								
19.20 - 19.50	: sheared graphitic argillite section +2% py stngrs, sub-parallel to C.A.								
20.42 - 21.95	: very fine weakly silicified altered tuff, greenish grey (5GY 6/1) with weak laminations 1-3% py in stringers trending ~38° to C.A, with x-cutting offsetting Qtz-carb. stwk vnlts.								
23.78 - 24.38	: Strongly fractured section thin calcite fracture coatings, 1-2cm fracture spacing.								
24.38 - 27.40	: .2 - 1.0 cm Qtz-carb.-chlorite veins at 80° to 90° to C.A, 5-10 cm apart								
34.45 - 34.65	: graphitic shear, with parallel Qtz-carb vein and perpendicular tension veinlets - shear at 30° to CA.								
34.65 - 36.50	: minor Qtz-carb. stringers, 2-3% py stringers & blebs								
43.15 - 43.35	: sharply defined fine ash tuff bed, greenish grey, with weak sericite alteration.								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

2 of 8

Hole No ..... Co ord ..... Horizontal Length ..... Date Completed .....
Claim No. ..... Core Size ..... Drilled By .....
Grid No. ..... Angle & Direction ..... Elevation ..... Logged By .....

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	43.30 - 43.50 : greenish grey fine ash tuff.								
	44.10 - 46.20 : tuff becomes slightly argillaceous and graphitic with rehealed brecciation, fracturing.								
	46.70 - 46.80 : shear zone, graphitic slivery core, 50% Qtz-carb. infilling of breccia, Tr-1% py								
	47.40 - 49.60 : strongly fractured fault zone fractures at low core angles (5-10° to C.A.) with slickensides raking ~10° from horizontal ~50% Qtz-carb stringers + units, Tr-1% py.								
	50.80 - 51.10 : irregular Qtz-carb. stringers + veinlets, in brecciated shear zone, with minor chlorite and graphite.								
	51.70 - 53.70 : Argillaceous tuff section, with irregular carbo stringers at low core angles, 1-2% stringers of py.								
	53.70 - 56.10 : shear zone, brecciated, re-silicified, numerous graphitic/talc gouge seams and slivery, broken core, minor Qtz-carb. veining, locally strongly foliated + friable 1-2% diss. py.								
	56.10 - 60.90 : moderately sericitized, fine grained andesitic tuff with 10% med. grained chloritic clots, minor irregular Qtz-chlorite veinlets,								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Hole No. ..... Co ord. ..... Horizontal Length ..... Date Completed .....
Claim No. ..... Core Size ..... Drilled By .....
3 of 8 Grid No. ..... Angle & Direction ..... Elevation ..... Logged By .....

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	- locally brecciated and Qtz-carb. healed, with 2-3% diss. py ~20% core Recovery								
61.10 - 66.10	Argillaceous debris flow - tuffaceous with coarse feldspathic fragments, and argillite / siltstone interbeds. - minor Qtz - carb - chlorite veinlets at varying core angles. - numerous graphite slip surfaces, - overall 2-3% fine diss py 61.10 - 61.60 : shear zone, highly fractured, graphitic argillite								
66.10 - 75.28	Fine Andesitic Tuff - dark greenish grey weakly chloritic and sericitic 3-5% Qtz - carb. veinlets and breccia infilling - Weakly foliated, minor intercalated flows, 66.10 - 67.50 : brecciated, silicified, greenish grey sericite alt'n, 1-2% py blebs & stgrs. * 70.00 - 72.00 : amygdaloidal andesite flow silitified, Qtz-carb. amygdules with 5-10% py stringers								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Hole No. ..... Co ord. ..... Horizontal Length ..... Date Completed .....
Claim No. ..... Core Size ..... Drilled By .....
Grid No. ..... Angle & Direction ..... Elevation ..... Logged By .....

INTERVAL FEET (METRES)	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
75.28 - 78.40	Interbedded Argillite / Argillaceous Andesite Tuff - fine ash to lapilli size fragments in tuffaceous interbeds - minor Qtz - carb. stringers at varying core angles, - Tr py stringers & bands, minor py fragments bedding at 60° to core axis at 63.80m.								
78.40 - 91.00	Dacitic lapilli - Ash tuff - matrix supported, angular fragments - medium bluish grey and greenish grey frags. in light bluish grey matrix - <5% pyritic fragments, with altered rims - gradational upper contact								
	* 85.80 - 86.50 : Gradual increase in silicification and sericitization, 5-10% py blebs and stringers								
	* 86.50 - 88.00 : Strong carb. & sericite alt'n, yellowish grey carb. matrix and a 1-2 cm irregular carb.-py vein, sub-parallel to core axis, with 10-15% py, 1-2% arsenopyrite								
	* 88.00 - 91.00 : Strongly sericite-altered fragments in silicified matrix - Qtz - carb. veinlets at 60°-90° to core axis. - 5-8% py stringers and blebs								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Hole No. ..... Co ord. ..... Horizontal Length ..... Date Completed .....
Claim No. ..... Core Size ..... Drilled By .....
Grid No. ..... Angle & Direction ..... Elevation ..... Logged By .....

INTERVAL FEET / (METRES)	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
91.00 - 96.50	Argillite								
	massive, locally brecciated, with cross-cutting carb.-Qtz stringers at varying core angles, largely > 60°								
	91.50 - 92.30 : fault zone; broken core & gouge								
*	92.30 - 94.40 : Qtz_1 - carb - py vein strongly brecciated and reheated. - graphitic argillite frags, and cross-cutting Qtz stwk units. - 5-10% py blebs & stringers								
	94.40 - 95.50 : Fault zone; Sandy-graphitic gouge, brecciated, strong Qtz_2-carb. stwk., minor talc.								
	96.20 - 96.50 : laminated tuffaceous argillite; fine grained, light greenish grey, weakly brecciated and sericitized								
	Core Angles: foliation : 90.2 m. 45°								
96.50 - 113.50	Argillaceous volcanic debris flow								
	- weak to non-foliated argillaceous matrix with ~40% dacitic fragments, minor pyrite and argillite fragments - numerous tuffaceous interbeds, - overall 1-2% diss. py, and stringers								
	98.50 - 101.00 : silicified tuff section, 3-5% py stringers								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Hole No. ..... Co ord. ..... Horizontal Length ..... Date Completed .....
Claim No. ..... Core Size ..... Drilled By .....
Grid No. ..... Angle & Direction ..... Elevation ..... Logged By .....

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
113.50 - 127.25	Dacitic lapilli tuff - Matrix supported, Dark bluish grey, with light grey to black fragments, up to 2 cm. across. - minor cross-cutting carb.-Qtz veinlets at low core angles (30°-45°) - overall 1-2% py blebs & stringers 119.80 - 120.40 : Fine grained altered andesitic section. Light greenish grey, weakly sericitized 124.00 - 124.40 : Fault zone, strongly fractured, with slickensides raking at steep core angles								
127.25 - 171.90	Argillite - massive with minor siltstone interbeds, minor cross-cutting carb. stringers and diffuse pyrite bands. - overall 1% py. - minor tuffaceous sections 133.50 - 135.00 : Fault zone, graphitic gouge seams at top and bottom of section 136.25 - 136.60 : Carb.-infilled breccia vein at ~20-30° to C.A. 137.60 - 137.70 : Qtz - carb. breccia vein at ~40° to C.A. Core Angles: 136.80 - 72° - siltstone laminae 142.50 35° " "								

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DIAMOND DRILL LOG

7 of 8

Hole No. ..... Co ord. ..... Horizontal Length ..... Date Completed .....

Claim No. ..... Core Size ..... Drilled By .....

Grid No. ..... Angle & Direction ..... Elevation ..... Logged By .....

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD							
		FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
171.90 - 184.70	Dacitic Ash-lapilli tuff								
	- Slightly argillaceous matrix and minor argillite fragments - bluish grey matrix - minor chlorite alteration in fragments, - weakly foliated - overall Tr py								
	179.95 - 180.05 : graphitic / talc gouge								
	180.40 - 180.60 : minor talc coating in brecciated section								
	181.90 - 181.94 : Qtz vein with graphitic contacts at 42° to c.A.								
184.70 - 187.60	Argillite								
	massive, with minor siltstone interbeds Tr - 1% py stringers, at ~ 50° ° to Core Axis								
	187.10 - 187.16 : graphitic gouge								
	187.48 - 187.58 : graphitic gouge and brecciated section								
	Core angles : 185.00 - 45° 186.50 - 50°								
187.60 - 190.80	Andesitic lapilli tuff								
	Coarse, bluish grey, silicified and chlorite + sericite altered. 3 - 5 % fine cross-cutting Qtz - carb. veinlets at 30° to 60° to core Axis. 1-2 % py stringers, minor py fragments								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Hole No. ..... Co ord. ..... Horizontal Length ..... Date Completed .....

Claim No. ..... Core Size ..... Drilled By .....

8 of 8 Grid No. ..... Angle & Direction ..... Elevation ..... Logged By .....

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD							
		FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
190.80 - 197.21	Massive Dacite Flow light to medium bluish grey moderately silicified, weak chloritization Tr py.								
197.21	E.O.H lost core in transport missing : 142.95 - 149.00 154.83 - 168.80 174.30 - 179.85								
	Acid tests 87.54 m : no etch readable 191.24 m : 37° corrected								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD

Hole No. AP 7 | Co ord. | Horizontal Length | Date Completed

Claim No. | Core Size | Drilled By

Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET / (METRES)	NUMBER	WIDTH	Au. ppb	Ag ppm	Cu.	Zn.	As. ppm	WIDTH X ASSAY						AVERAGES					
														WIDTH	Au.	Ag.	Cu.	Zn.	
0.00 - 7.62	CASING	7.62																	
7.62 - 20.40	WASTE	12.78																	
20.40 - 20.95	1369-G	0.55	1	.2			3												
20.95 - 21.45	1370-G	0.5	7	.3			33												
21.45 - 21.95	1371-G	0.5	1	.1			4												
21.95 - 22.45	1372-G	0.5	3	.1			6												
22.45 - 22.95	1373-G	0.5	1	.1			2												
22.95 - 23.45	1374-G	0.5	1	.1			2												
23.45 - 23.95	1375-G	0.5	1	.2			2												
23.95 - 24.35	1376-G	0.4	3	.3			11												
24.35 - 24.85	1377-G	0.5	7	.4			4												
24.85 - 25.35	1378-G	0.5	1	.3			6												
25.35 - 25.85	1379-G	0.5	1	.3			8												
25.85 - 26.35	1380-G	0.5	1	.1			2												
26.35 - 26.85	1381-G	0.5	6	.1			3												
26.85 - 27.35	1382-G	0.5	3	.1			6												
27.35 - 27.85	1383-G	0.5	21	.3			3												
27.85 - 28.35	1384-G	0.5	2	.1			2												
28.35 - 28.85	1385-G	0.5	5	.1			3												
28.85 - 29.35	1386-G	0.5	4	.1			2												
29.35 - 29.85	1387-G	0.5	2	.3			8												
29.85 - 30.35	1388-G	0.5	4	.4			5												
30.35 - 30.85	1389-G	0.5	5	.2			7												
30.85 - 31.35	1390-G	0.5	9	.2			4												
31.35 - 31.85	1391-G	0.5	1	.4			13												
31.85 - 32.35	1392-G	0.5	5	.3			5												
32.35 - 32.85	1393-G	0.5	7	.2			7												
32.85 - 33.35	1394-G	0.5	6	.4			7												
33.35 - 33.85	1395-G	0.5	4	.3			2												
33.85 - 34.35	1396-G	0.5	4	.1			2												
34.35 - 34.85	1397-G	0.5	3	.3			8												
34.85 - 35.35	1398-G	0.5	28	.2			7												
35.35 - 35.85	1399-G	0.5	3	.2			9												
35.85 - 36.35	1400-G	0.5	7	.4			11												
36.35 - 36.85	1401-G	0.5	3	.4			9												
36.85 - 37.35	1402-G	0.5	6	.3			11												
37.35 - 44.00	WASTE	6.65	—	—			—												
44.00 - 44.50	1403-G	0.5	7	.1			11												
44.50 - 45.00	1404-G	0.5	9	.2			9												
45.00 - 45.50	1405-G	0.5	5	.3			10												

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GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Hole No. AP-7 | Co ord. | Horizontal Length | Date Completed

Claim No. | Core Size | Drilled By

Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET (METRES)	NUMBER	WIDTH	Au. ppb	Ag. ppm	Cu.	Zn.	As. ppm	WIDTH X ASSAY						AVERAGES					
														WIDTH	Au.	Ag.	Cu.	Zn.	
45.50 - 46.00	1406-G	0.5	9	.1			11												
46.00 - 46.40	1407-G	0.4	5	.3			13												
46.40 - 46.70	1408-G	0.3	8	.2			12												
46.70 - 47.00	1409-G	0.3	11	.6			9												
47.00 - 47.50	1410-G	0.5	14	.8			12												
47.50 - 48.00	1411-G	0.5	11	.4			11												
48.00 - 48.50	1412-G	0.5	15	1.0			17												
48.50 - 49.00	1413-G	0.5	16	1.4			15												
49.00 - 49.50	1414-G	0.5	15	.7			17												
49.50 - 50.00	1415-G	0.5	7	.2			8												
50.00 - 50.50	1416-G	0.5	2	.1			4												
50.50 - 51.00	1417-G	0.5	4	.2			3												
51.00 - 51.50	1418-G	0.5	1	.2			13												
51.50 - 52.00	1419-G	0.5	2	.2			10												
52.00 - 52.50	1420-G	0.5	16	.1			13												
52.50 - 53.00	1421-G	0.5	4	.2			11												
53.00 - 53.50	1422-G	0.5	4	.3			11												
53.50 - 54.00	1423-G	0.5	4	.3			10												
54.00 - 54.50	1424-G	0.5	6	.2			8												
54.50 - 55.00	1425-G	0.5	2	.2			7												
55.00 - 55.50	1426-G	0.5	4	.3			10												
55.50 - 56.00	1427-G	0.5	4	.4			14												
56.00 - 58.00	1428-G	2.0	3	.6			41												
58.00 - 60.00	1429-G	2.0	1	.6			34												
60.00 - 60.50	1430-G	0.5	2	.4			29												
60.50 - 61.00	1431-G	0.5	8	.7			31												
61.00 - 61.50	1432-G	0.5	19	1.9			64												
61.50 - 62.00	1433-G	0.5	17	1.4			32												
62.00 - 62.50	1434-G	0.5	150	1.2			89												
62.50 - 63.00	1435-G	0.5	30	1.0			66												
63.00 - 63.50	1436-G	0.5	28	.8			36												
63.50 - 64.00	1437-G	0.5	24	1.5			45												
64.00 - 64.50	1438-G	0.5	16	1.6			49												
64.50 - 65.00	1439-G	0.5	12	1.4			27												
65.00 - 65.50	1440-G	0.5	30	1.0			54												
65.50 - 66.00	1441-G	0.5	4	1.1			38												
66.00 - 66.50	1442-G	0.5	9	1.1			50												
66.50 - 67.00	1443-G	0.5	4	.5			18												
67.00 - 67.50	1444-G	0.5	1	.4			2												
67.50 - 68.00	1445-G	0.5	1	.4			6												

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Hole No. AP 7 | Co ord | Horizontal Length | Date Completed

Claim No. | Core Size | Drilled By

Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET (METRES)	NUMBER	WIDTH	Au oz/t	Ag ppm	Cu	Zn	As ppm	WIDTH X ASSAY						AVERAGES WIDTH	Au g/t	Ag g/t	Cu	Zn
68.00 - 68.50	1446-G	0.5	1	.5			5											
68.50 - 69.00	1447-G	0.5	12	.6			11											
69.00 - 69.50	1448-G	0.5	4	.8			43											
69.50 - 70.00	1449-G	0.5	1	1.1			34											
70.00 - 70.50	1450-G	0.5	21	1.6			51											
70.50 - 71.00	1451-G	0.5	33	2.0			156											
71.00 - 71.50	1452-G	0.5	9	1.6			69											
71.50 - 77.50	WASTE	6.0																
77.50 - 78.00	1453-G	0.5	3	.4			16											
78.00 - 78.50	1454-G	0.5	11	.6			12											
78.50 - 79.00	1455-G	0.5	14	.7			13											
79.00 - 79.50	1456-G	0.5	9	.6			9											
79.50 - 80.00	1457-G	0.5	17	.5			21											
80.00 - 80.50	1458-G	0.5	6	.3			8											
80.50 - 81.00	1459-G	0.5	28	1.3			22											
81.00 - 81.50	1460-G	0.5	10	.4			22											
81.50 - 82.00	1461-G	0.5	13	.6			18											
82.00 - 82.50	1462-G	0.5	10	.6			11											
82.50 - 83.00	1463-G	0.5	8	.4			5											
83.00 - 83.50	1464-G	0.5	15	.6			12											
83.50 - 84.00	1465-G	0.5	25	1.1			22											
84.00 - 84.50	1466-G	0.5	33	1.1			9											
84.50 - 85.00	1467-G	0.5	18	.7			12											
85.00 - 85.50	1468-G	0.5	15	.5			10											
85.50 - 85.80	1469-G	0.3	37	1.2			16											
85.80 - 86.10	1470-G	0.3	7	.3	21	27	26											
86.10 - 86.40	1471-G	0.3	11	.5	22	20	132											
86.40 - 86.70	1472-G	0.3	11	.4	16	338	48											
86.70 - 87.00	1473-G	0.3	806	1.6	20	75	3675											
87.00 - 87.30	1474-G	0.3	767	1.3	8	32	4213							1.2 m	1.09	2.0		
87.30 - 87.60	1475-G	0.3	411	1.3	18	334	996											
87.60 - 87.90	1476-G	0.3	2399	3.8	19	45	8159											
87.90 - 88.20	1477-G	0.3	200	.6	13	132	549											
88.20 - 88.70	1478-G	0.5	34	1.4	26	120	74											
88.70 - 89.20	1479-G	0.5	6	.3	20	120	25											
89.20 - 89.70	1480-G	0.5	22	1.4	48	49	38											
89.70 - 90.20	1481-G	0.5	11	.6	17	71	24											
90.20 - 90.70	1482-G	0.5	12	.4	8	38	23											
90.70 - 91.00	1483-G	0.3	376	1.7	35	288	2003											
91.00 - 91.30	1484-G	0.3	161	.9	10	134	836											

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GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Hole No. AP 7 | Co ord. | Horizontal Length | Date Completed

Claim No. | Core Size | Drilled By

Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET (METRES)	NUMBER	WIDTH	Au ppb	Ag.	Cu	Zn.	As	WIDTH X ASSAY						AVERAGES					
														WIDTH	Au.	Ag.	Cu.	Zn.	
91.30 - 91.80	1485 - G	0.5	43	.6	20	88	59												
91.80 - 92.30	1486 - G	0.5	13	.5	18	80	29												
92.30 - 92.60	1487 - G	0.3	87	1.5	63	133	117												
92.60 - 92.90	1488 - G	0.3	31	.3	11	78	92												
92.90 - 93.30	1489 - G	0.3	137	1.0	17	192	413												
93.30 - 93.50	1490 - G	0.3	83	.9	38	521	256												
93.50 - 93.80	1491 - G	0.3	523	.7	6	148	595												
93.80 - 94.10	1492 - G	0.3	406	1.1	14	335	587												
94.10 - 94.50	1493 - G	0.4	107	1.1	38	128	206												
94.50 - 95.00	1494 - G	0.5	19	.7	40	175	41												
95.00 - 95.50	1495 - G	0.5	8	.8	35	154	19												
95.50 - 96.00	1496 - G	0.5	19	.9	30	78	45												
96.00 - 96.50	1497 - G	0.5	162	.8	61	180	38												
96.50 - 97.00	1498 - G	0.5	66	.6			31												
97.00 - 97.50	1499 - G	0.5	29	.7			18												
97.50 - 98.00	1500 - G	0.5	19	.9			26												
98.00 - 98.50	1501 - G	0.5	31	.7			30												
98.50 - 99.00	1502 - G	0.5	16	.4			7												
99.00 - 99.50	1503 - G	0.5	37	.6			15												
99.50 - 100.00	1504 - G	0.5	51	.6			8												
100.00 - 100.50	1505 - G	0.5	49	.3			12												
100.50 - 101.00	1506 - G	0.5	9	.1			17												
101.00 - 101.50	1507 - G	0.5	7	.2			15												
101.50 - 102.00	1508 - G	0.5	178	2.5			32												
102.00 - 102.50	1509 - G	0.5	10	.3			6												
102.50 - 103.00	1510 - G	0.5	27	.8			37												
103.00 - 103.50	(511) - G	0.5	19	.6			38												
103.50 - 104.00	1512 - G	0.5	10	1.2			13												
104.00 - 104.50	1513 - G	0.5	5	1.0			13												
104.50 - 105.00	1514 - G	0.5	23	1.0			21												
105.00 - 113.00	WASTE	8.0	—	—			—												
113.00 - 113.50	1515 - G	0.5	13	.7			34												
113.50 - 114.00	1516 - G	0.5	27	2.1			15												
114.00 - 114.50	1517 - G	0.5	30	1.3			29												
114.50 - 115.00	1518 - G	0.5	1	.6			10												
115.00 - 116.50	WASTE	1.5	—	—			—												
116.50 - 117.00	1519 - G	0.5	3	.2			18												
117.00 - 117.50	1520 - G	0.5	1	.2			28												
117.50 - 118.00	1521 - G	0.5	11	.4			57												
118.00 - 118.50	1522 - G	0.5	3	.3			13												

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GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Hole No AP 7 | Co ord. | Horizontal Length | Date Completed

Claim No | Core Size | Drilled By

Grid No | Angle & Direction | Elevation | Logged By

INTERVAL FEET/METRES	NUMBER	WIDTH	Au	Ag	Cu.	Zn	As	WIDTH X ASSAY						AVERAGES					
														WIDTH	Au.	Ag.	Cu.	Zn.	
118.50 - 119.00	1523-G	0.5	13	.3			64												
119.00 - 121.50	WASTE	2.5	—	—			—												
121.50 - 122.00	1524-G	0.5	3	.4			15												
122.00 - 122.50	1525-G	0.5	3	.4			9												
122.50 - 123.00	1526-G	0.5	1	.6			10												
123.00 - 123.50	1527-G	0.5	2	.6			21												
123.50 - 124.00	1528-G	0.5	2	.5			15												
124.00 - 124.50	1529-G	0.5	1	.9			28												
124.50 - 125.00	1530-G	0.5	2	.3			17												
125.00 - 125.50	1531-G	0.5	1	.6			25												
125.50 - 126.00	1532-G	0.5	1	.5			11												
126.00 - 126.50	1533-G	0.5	2	.5			14												
126.50 - 127.00	1534-G	0.5	3	.6			9												
127.00 - 127.50	1535-G	0.5	6	1.4			11												
127.50 - 128.00	1536-G	0.5	8	2.1			37												
128.00 - 128.50	1537-G	0.5	7	1.1			33												
128.50 - 133.40	WASTE	4.9	—	—			—												
133.40 - 133.90	1538-G	0.5	17	2.0			49												
133.90 - 134.40	1539-G	0.5	5	.7			22												
134.40 - 134.90	1540-G	0.5	7	.9			28												
134.90 - 135.40	1541-G	0.5	4	.7			34												
135.40 - 136.20	1542-G	0.8	14	.7			24												
136.20 - 136.60	1543-G	0.4	2	.3			4												
136.60 - 137.10	1544-G	0.5	1	.2			8												
137.10 - 139.00	WASTE	1.9	—	—			—												
139.00 - 139.50	1545-G	0.5	9	.7			21												
139.50 - 140.00	1546-G	0.5	9	.6			31												
140.00 - 140.50	1547-G	0.5	23	2.8			73												
140.50 - 141.00	1548-G	0.5	13	1.8			33												
141.00 - 141.50	1549-G	0.5	8	1.6			19												
141.50 - 142.00	1550-G	0.5	10	.2			17												
142.00 - 142.50	1551-G	0.5	9	.6			32												
142.50 - 143.00	1552-G	0.5	10	1.1			24												
143.00 - 149.00	WASTE	6.0	—	—			—												
149.00 - 149.50	1553-G	0.5	8	1.0			33												
149.50 - 150.00	1554-G	0.5	8	.3			38												
150.00 - 150.50	1555-G	0.5	5	.9			39												
150.50 - 151.00	1556-G	0.5	5	1.0			32												
151.00 - 151.50	1557-G	0.5	7	.7			27												
151.50 - 152.00	1558-G	0.5	7	.9			38												

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GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Hole No AP 7 | Co ord. | Horizontal Length | Date Completed

Claim No. | Core Size | Drilled By

Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET / METRES	NUMBER	WIDTH	Au.	Ag.	Cu.	Zn.	As	WIDTH X ASSAY						AVERAGES					
														WIDTH	Au.	Ag.	Cu.	Zn.	
152.00 - 152.50	1559-G	0.5	8	.8			31												
152.50 - 153.00	1560-G	0.5	4	.8			31												
153.00 - 153.50	1561-G	0.5	8	1.0			34												
153.50 - 154.00	1562-G	0.5	7	1.0			31												
154.00 - 154.50	1563-G	0.5	11	1.2			38												
154.50 - 154.80	1564-G	0.3	4	1.1			31												
154.80 - 168.35	WASTE	14.05	—	—			—												
168.35 - 169.35	1565-G	0.5	8	1.0			28												
169.35 - 169.85	1566-G	0.5	9	.2			26												
169.85 - 170.35	1567-G	0.5	5	.7			22												
170.35 - 170.85	1568-G	0.5	7	.9			28												
170.85 - 171.35	1569-G	0.5	4	.7			34												
171.35 - 171.85	1570-G	0.5	14	.7			24												
171.85 - 172.35	1571-G	0.5	2	.3			4												
172.35 - 172.85	1572-G	0.5	1	.2			8												
172.85 - 173.35	1573-G	0.5	1	.4			9												
173.35 - 173.85	1574-G	0.5	3	.5			18												
173.85 - 174.20	1575-G	0.35	3	.3			13												
174.20 - 179.90	WASTE	5.7	—	—			—												
179.90 - 180.40	1576-G	0.5	7	1.4			62												
180.40 - 180.90	1577-G	0.5	1	.7			12												
180.90 - 181.40	1578-G	0.5	13	1.4			39												
181.40 - 181.90	1579-G	0.5	6	2.0			45												
181.90 - 182.40	1580-G	0.5	3	1.1			25												
182.40 - 182.90	1581-G	0.5	3	.8			21												
182.90 - 183.40	1582-G	0.5	2	.8			31												
183.40 - 183.90	1583-G	0.5	3	1.0			29												
183.90 - 184.40	1584-G	0.5	4	1.3			52												
184.40 - 184.90	1585-G	0.5	8	2.8			46												
184.90 - 185.40	1586-G	0.5	19	4.2			53												
185.40 - 185.90	1587-G	0.5	23	4.9			46												
185.90 - 186.40	1588-G	0.5	16	4.4			80												
186.40 - 186.90	1589-G	0.5	21	2.9			129												
186.90 - 187.40	1590-G	0.5	15	2.5			75												
187.40 - 187.90	1591-G	0.5	4	.4			10												
187.90 - 188.40	1592-G	0.5	11	.8			40												
188.40 - 188.90	1593-G	0.5	31	.5			93												
188.90 - 189.40	1594-G	0.5	6	.3			4												
189.40 - 189.90	1595-G	0.5	2	.2			2												
189.90 - 190.40	1596-G	0.5	9	1.0			13												

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DIAMOND DRILL RECORD

Property: UNUK RIVER | Project No: 151 | Depth: | Date Began:

Hole No.: AP 7 | Co ord: | Horizontal Length: | Date Completed:

Claim No.: | | Core Size: | Drilled By:

Grid No.: | Angle & Direction: | Elevation: | Logged By:

INTERVAL FEET (METRES)	NUMBER	WIDTH	Au.	Ag.	Cu.	Zn.	As	WIDTH X ASSAY						AVERAGES					
														WIDTH	Au.	Ag.	Cu.	Zn.	
190.40 - 190.80	1597-G	0.4	9	1.0		1	10												
190.80 - 191.10	1598-G	0.3	19	.6			25												
191.10 - 197.21	waste	6.11																	
197.21	EOH																		

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

1 of 17

Property: Unuk River Option | Project No.: 134 | Depth: 306.91 | Date Began: Aug. 23/90
Hole No.: A P-8 | Co ord.: 1175 N | Horizontal Length: 186 m | Date Completed: Aug 29/90
Claim No.: Unuk 26 | 321 W | Core Size: BGBDM | Drilled By: J.T. Thomas
Grid No.: Zone 1 | Angle & Direction: -55°/Az 080 | Elevation: 1408 m | Logged By: D & B Gabovny

INTERVAL FEET / (METRES)	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
0 - 3.05	Casing								
3.05 - 21.50	Pyroclastic breccia								
	- very coarse, poorly sorted heterolithic breccia, greenish to bluish grey, matrix supported, with dacitic and rhyolitic flows and ash flow tuff fragments, minor argillite fragments								
	- overall Tr diss. py								
	16.50 - 20.50 : fault zone; highly fractured and limonite stained, unkerite altered, fractures 1-4cm apart, ~60% core recovery								
	20.50 - 21.50 : strongly silicified, weakly chloritized, partially rebrecciated, minor kaolinized fragments								
	Core Angles: (of predominant fracture directions) 11.5m : 45° 13.0m : 46°								
21.50 - 26.15	Ash Flow Tuff								
	- Brecciated and strongly silicified dacitic welded tuff. - relict flattened pumice fragments. - Strongly fractured and limonite-stained.								
	21.50 - 22.20 : very strongly fractured, fault zone kaolinized breccia fragments								
	24.60 - 25.65 : fault zone, strong brecciation, Fe-carb. and silica flooding.								
	25.65 - 26.15 : minor argillite inter-flow breccia, silicified dacite fragments in								

GEOLOGICAL BRANCH
ASSESSMENT REPORT

20,390

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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Hole No. ..... Co ord. ..... Horizontal Length ..... Date Completed .....
Claim No. ..... Core Size ..... Drilled By .....
Grid No. ..... Angle & Direction ..... Elevation ..... Logged By .....

INTERVAL FEET/METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
26.15 - 27.40	Argillaceous Debris Flow								
	~20% light greenish grey felsic fragments in black argillite matrix - strongly fractured broken core, with minor carb. stringers and limonite stain								
27.40 - 33.30	Ash Flow tuff								
	- strongly silicified & brecciated welded dacitic tuff - strongly fractured, with pervasive limonite/ankerite alteration - abundant black arborescent and diffuse overgrowths along fine fracture veinlets - minor relict silicified/chloritized flattened pumice fragments								
	32.00 - 32.61 : irreg. carb. veinlets, sub-parallel to core axis								
	33.00 - 33.30 : fault gouge, rusty stained at bottom of section.								
33.30 - 63.80	Dacitic Flow breccia								
	- light greenish grey, strongly silicified, locally flow banded fragments - fragment supported, matrix-deficient - chlorite and sericite alt'n in cores of fragments - fine black pacticulate rims around relict fragments - limonitic stain diffuses outward from numerous fractures - overall tr py.								
	55.15 - 55.25 : fault gouge + limonitic breccia, at ~ 50° to C.A.								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Hole No. ..... Co ord. ..... Horizontal Length ..... Date Completed .....
Claim No. ..... Core Size ..... Drilled By .....
Grid No. ..... Angle & Direction ..... Elevation ..... Logged By .....

INTERVAL FEET (METRES)	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
63.80 - 82.80	Flow Banded / Brecciated Rhyolite								
	- light bluish grey								
	- gradational upper contact from silicified dacite to finely laminated rhyolite								
	- minor very fine welded tuff sections with relict flattened pumice fragments								
	68.00 - 69.50 : Fault zone, strongly fractured & rubbly core								
	73.90 - 74.50 : Fault zone, strongly fractured, silicified & sericitized								
	75.30 - 75.90 : Fault zone, strongly fractured and broken, rubbly core. ~50% core recovery								
	78.00 : 1cm. wide band of massive pyrite, in irreg. Qtz vein, at ~55° to C.A.								
	75.10 - 78.00 : minor irreg. carb. veinlets, with grey outer margins and pale orange centers, .5 - 1cm. thick.								
	81.40 - 82.80 : light green sericite & chlorite alteration in breccia fragments.								
82.80 - 86.40	Fine Grained "Andesitic" Dike								
	- massive, light grey, with 2-3% round chloritic patches, .1 - .2cm across, possible amygdules								
	- moderately well fractured, 3-5cm. apart, with minor talc coatings								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Hole No. ..... Co ord. ..... Horizontal Length ..... Date Completed .....
Claim No. ..... Core Size ..... Drilled By .....
Grid No. ..... Angle & Direction ..... Elevation ..... Logged By .....

INTERVAL FEET (METRES)	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	84.50 - 86.40 : Strong fractures, fault zone, talc coatings, abundant gouge								
	84.00 : 1cm Qtz-carb. veinlet at ±30° to core axis								
	upper contact at 39° to C.A., with weak flow banding.								
86.40 - 99.00	Brecciated / Banded rhyolite lapilli tuff								
	- Strongly silicified breccia, with numerous welded tuff and flow banded fragments								
	- Strong sericite alteration of fragments and in tuffaceous bands.								
	- Tr very fine diss. py								
	88.60 - 88.80 : Fault zone, strongly fractured, and limonitic gouge								
	89.00 - 89.20 : Fault zone								
	89.91 - 90.20 : Fault zone, rubbly limonitic core.								
	90.20 - 93.60 : Very strong silicification, with 1-2% fine Qtz stockwork veinlets, up to 1cm thick.								
	· relict fragment outlines with strongly sericitized cores.								
	-92.0 - 93.10 : Several short gouge seams, faults at low core angles.								
	93.80 - 99.00 : Strongly faulted, rubbly core - abundant gouge from 93.85 to 99.0 Tr-1% fine diss py								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Hole No. ..... Co ord. ..... Horizontal Length ..... Date Completed .....
Claim No. ..... Core Size ..... Drilled By .....
Grid No. ..... Angle & Direction ..... Elevation ..... Logged By .....

INTERVAL FEET/METRES	DESCRIPTION	SAMPLE RECORD							
		FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	- minor Qtz veinlets at 30-45° to core axis.								
	94.00 - 96.00 : 40% core recovery								
19.00 - 103.80	Argillaceous Debris Flow								
	- light greenish grey dacitic fragments supported in argillite matrix, with minor siltstone interbeds - Strongly faulted throughout section, with rubbly broken core and graphitic/clay gouge to 103.00. - Siltstone laminae at 100.00 : 55° to C.A.								
103.80 - 108.30	Tuffaceous Wacke								
	- medium grained, dark grey, finely laminated feldspathic grey wacke. - minor fractures with diffuse limonite stain - weak chlorite alteration								
	Core angles: upper contact 103.80 : 25° Bedding 104.80 : 62° 105.30 : 52° 107.50 : 60°								
108.30 - 131.70	Argillaceous Debris Flow								
	- Interbedded debris flow and minor massive to poorly bedded argillite/siltstone - Strong to moderate incipient crackle breccia with very fine calcite veinlets - Tr diss py, and minor py in calcite veinlets								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Hole No. ..... Co ord. ..... Horizontal Length ..... Date Completed .....
Claim No. ..... Core Size ..... Drilled By .....
Grid No. ..... Angle & Direction ..... Elevation ..... Logged By .....

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	110.60 - 113.00 : Strongly faulted with fractures at 0-20° to C.A. - Minor slickensides rake ~45° to C.A. - rubbly gouge from 110.6 to 111.6								
	114.91 - 116.40 : Fault zone with gouge at 114.91 to 115.00, fault at low core angle, ~20° to C.A., slickensides rake ~30° from vertical - Tr-1% py in calcite fracture veinlets								
	118.80 - 119.20 - very light grey, strongly silicified dike, with chloritic phenocrysts, and cross-cutting Qtz-carb. veinlets,								
	122.90 - 123.45 : Fault zone, gravelly-clay gouge and crackle breccia								
	129.50 - 131.35 : gradually increasing silicification - bleached sections, minor tuff areas bands.								
	131.35 - 131.70 : Fault zone, graphitic/gravelly clay gouge.								
131.70 - 169.20	Brecciated Dacite Lapilli tuff - very strongly altered, silicified, light bluish to light greenish grey.								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Hole No. ..... Co ord. ..... Horizontal Length ..... Date Completed .....
Claim No. ..... Core Size ..... Drilled By .....
Grid No. ..... Angle & Direction ..... Elevation ..... Logged By .....

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD							
		FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	* 131.70 - 134.00 : very strongly silicified box work alteration pattern around relict fragments, -numerous Qtz stringers -5-10% patch py blebs and stringers								
	133.20 - 133.25 : rusty, vuggy Qtz-carb. vein at ~45° to CA, with Tr-1% galena								
	134.00 - 134.70 : 1-2% py, in strongly silicified, box work - altered tuff - breccia, weak to moderate sericitic alteration.								
	134.70 - 145.70 : Very strongly silicified, moderately to strongly sericitized, box work alteration around relict fragments, -cross cutting Qtz-carb. veinlets spaced ~ 1-2 cm apart, at ~35-45° to C.A. -minor chloritic alteration.								
	143.00 - 143.50 : fault gouge								
	146.00 - 154.30 : very strong silicification, greenish black, chloritic, tuff-breccia, strong crackle brecciation and calcite stockwork veinlets. -Qtz-chlorite-carb. fracture veinlets with slickensides at varying core angles. Tr py								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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Hole No ..... Co ord ..... Horizontal Length ..... Date Completed .....
Claim No. ..... Core Size ..... Drilled By .....
Grid No. ..... Angle & Direction ..... Elevation ..... Logged By .....

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD							
		FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	153.90 - 156.90 : Faulted, strongly brecciated and broken core, with Qtz.-chlorite-carb. infilling and veinlets, Tr-1% py in veinlets								
*	156.96 - 157.50 : Strongly silicified section with ~50% Qtz-carb. veins, 5-10% py blebs and stringers, Tr sphalerite, Lower contact at ~35° to C.A.								
	158.00 - 164.00 : Fault zone, very strongly fractured, abundant slickensides at chaotic angles, and irregular Qtz-carb. tension veinlets, Minor greenish black, altered breccia fragments, Overall 3-5% py in stockwork veinlets.								
	166.10 - 166.80 : irregular Qtz-py vein sub-parallel to core axis, with diffuse alteration selvage, 2-3% py blebs and stringers								
	167.10 - 169.20 : Strong box work - hydrothermal alteration in breccia, relict fragments abundant, strongly silicified and sericitized								
	174.2 : minor fault surfaces at ~35° to C.A, with slickensides raking ~30° from vertical (C.A)								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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Hole No. ..... Co ord. ..... Horizontal Length ..... Date Completed .....
Claim No. ..... Core Size ..... Drilled By .....
Grid No. ..... Angle & Direction ..... Elevation ..... Logged By .....

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD							
		FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	Core Angles:								
	Faults/Fractures : 150.00 m : 60°								
	153.80 : "								
169.20 - 181.70	Dacitic Ash - lapilli tuff								
	- medium bluish grey matrix, with ~30% angular fragments of mostly sericitized dacite, and minor argillite, tr py fragments								
	- minor irregular QTz - carb. veinlets, tr diss py								
	169.20 - 169.70 : gradational upper contact, with decreasing brecciation and alteration								
	169.70 - 170.00 : fault zone, rubbly, limonite stained								
	170.00 - 171.5 : Weakly altered bleached section, light greenish grey, with minor limonite stained fractures at 40-50° to core axis.								
181.70 - 193.20	Very fine "Andesitic" dike rock								
	- light bluish grey, aphanitic, weakly silicified								
	- pervasive stockwork fracture veinlets with diffuse pyrite/carb. infilling,								
	- overall 2-3% py								
	- upper contact at very low core angle, from 181.20 - 182.00, with a .5 cm wide py - QTz - carb vein along contact								
	- lower contact at ~60° to core axis								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Hole No. ..... Co ord. ..... Horizontal Length ..... Date Completed .....
Claim No. ..... Core Size ..... Drilled By .....
Grid No. ..... Angle & Direction ..... Elevation ..... Logged By .....

INTERVAL FEET (METRES)	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
193.20 - 209.20	Argillite								
	- massive to weakly foliated, with minor siltstone laminae								
	- overall contains 2-3% qtz-carb veinlets ± crackle breccia filling.								
	- minor healed fault disrupted bedding.								
	- 1-2% py as blebs ± stringers								
	198.40 - 198.65 : graphitic gouge.								
	206.90 - 209.20 : minor bands of dissem. py // to bedding.								
	207.80 - 208.50 : fault zone ; rubbly core ± graphitic gouge.								
	C.A. 196.00 36° bedding								
	C.A. 198.50 64° "								
	C.A. 203.20 30° "								
	C.A. 206.00 37° "								
	C.A. 207.90 60° "								
209.20 - 222.40	Massive Andesite / Dacite								
	- massive fine to medium fine grained, light olive to olive grey (5Y 5/2 ↔ 5Y 3/2)								
	- brecciated upper contact with volcanic ± argillite fragments								
	- overall contains 5-6% py as fine grained disseminations, coarser blebs within quartz-carbonate veinlets, fracture fillings and as arborescent impregnations often peripheral to healed fractures								
	- contains abundant very fine chalky white equant (plagioclase ?) xtals, possible carbonate amygdales with chloritic rims, occassional x-cutting carb. vnlts at CA's ≤ 25° (generally ≤ 4mm dia) and occasional qtz vnlts ≤ 1cm dia with pyritic								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Hole No. ..... Co ord. ..... Horizontal Length ..... Date Completed .....
Claim No. ..... Core Size ..... Drilled By .....
Grid No. ..... Angle & Direction ..... Elevation ..... Logged By .....

INTERVAL FEET (METRES)	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	selvages at CA's ≤ 25°.								
	209.50 - 211.00 : brecciated, silica - flooded interval with ~ 10% py.								
	211.00 - 212.50 : 5-7% py mainly as fracture fillings (Py fractures at shallow CA's)								
	212.50 - 217.05 : ~ 2% py								
	217.05 - 218.53 : mildly bxed interval with ~5% Py as fracture fillings, disseminations Py blebs within qtz - carb vnlts. Includes 217.45 - 217.70 a 1cm wide smokey qtz - carb - py vnlts at 15° core angle.								
	218.53 - 219.75 : 1-3% py								
	219.75 - 220.45 : fault zone in bxed bleached interval with qtz - py veining. Overall contains ~ 15% py & tr aspy								
	220.45 - 222.40 : bxed, mildly silicified interval with 10 - 15% py as impregnations, fracture fillings & coarser blebs in quartz fracture infilling.								
222.40 - 236.0	Welded Dacite ash - lapilli Tuff								
	- greenish grey (5 GY 6/1) dacitic fragmental composed of at least 20% lapilli - sized volcanic fragments of dacitic to andesitic composition in a fine ash groundmass.								
	- fragments vary from angular to flattened, chloritic &/or sericitic, wispy and aligned so as to give a foliated appearance probably indicative of bedding.								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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Hole No. ..... Co ord. ..... Horizontal Length ..... Date Completed .....
Claim No. ..... Core Size ..... Drilled By .....
Grid No. ..... Angle & Direction ..... Elevation ..... Logged By .....

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	223.4 - 224.6 : medium grey (N5) to medium dark grey (N4) composed of angular fragments of massive andes/dacite (similar to 220.45 - 223.40) in a quartz - carb groundmass. - contains ~10% py in the quartz carb fracture filling. - chloritic rims around fragments - fracture set at ~ 45° to core axis & another set haphazardly oriented.								
	224.6 - 236.0 : fractures with chloritic coating & 2-3% py, oriented ~ 30° to core axis.								
	224.6 - 226.4 : "bedding" at ~ 40° to core axis.								
	226.4 - 230.73 : increased chloritic micro fractures, randomly oriented, thin calcite veins (< 1 mm dia oriented ≤ 25° to core axis)								
236.00 - 244.68	Massive Andesite (Dike ?)								
	- greenish black (5G 3/1) (236.0 → 240.30), greyish black (N2) (240.3 → 241.30), to dark greenish grey (5G 4/1) (241.30 → 244.68), massive fine grained with occassional inclusions of welded tuff. - contains two sets of thin calcite veins; one oriented 70° to core axis & the other at ≤ 25° to core axis.								
	236.00 - 240.30 : carbonate alteration - lower contact is fault w rubbly core & gouge.								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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Hole No. ..... Co ord. ..... Horizontal Length ..... Date Completed .....
Claim No. ..... Core Size ..... Drilled By .....
Grid No. ..... Angle & Direction ..... Elevation ..... Logged By .....

INTERVAL FEET/METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
244.68 - 267.16	Welded Dacite ash - lapilli Tuff								
	- greenish grey (5GY 6/1) volcanic fragmental rock similar to 222.4 - 223.4 except lapilli fragments have decreased to ~ 10%								
	- contains ≤ 2% py as fine fracture fillings & sparse disseminations								
	- bedding indicated by tigmme is consistently around 50° to core axis.								
	- minor interflow volcanic mudstone units varying from 2 to 6 m wide, composed of clastic welded tuff fragments in an argillaceous matrix (fragments commonly angular).								
	mudstone interbeds; 244.68 - 245.80 248.82 - 249.18 249.60 - 250.00 bedding CA ~60° 250.17 - 250.60 bedding CA ~50° 250.74 - 250.87 251.00 - 251.30								
	255.00 - 258.45 : FAULT ZONE								
	255.00 - 255.22 : broken core								
	255.22 - 257.95 : brecciated bleached interval, light olive to pale yellowish grey (5Y 7/2 ↔ 5Y 7/1)								
	255.50 - 255.80 : 3-5% py as blebs & fine arborescent growths.								
	255.80 - 256.80 : tr py, abundant fine discontinuous, haphazardly oriented qtz-carb vnlts generally < 3 mm dia.								

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DIAMOND DRILL LOG

Hole No. ..... Co ord. ..... Horizontal Length ..... Date Completed .....

Claim No. ..... Core Size ..... Drilled By .....

Grid No. ..... Angle & Direction ..... Elevation ..... Logged By .....

INTERVAL FEET/METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	256.80 - 257.95 : broken core plus minor white gouge, minor thin pyritic vnlts								
	257.95 - 258.45 : fractured core, fracture set at ~60° to core axis.								
	259.95 - 260.29 : broken core, minor thin pyritic vnlts.								
	C.A. 261.0 m : 50° bedding. C.A. 263.0 m : 43° bedding. C.A. 267.0 m : 45° bedding.								
267.16 - 273.23	Massive Andesite.								
	- fine to medium fine, greyish black (N2) to olive grey (5Y 4/1), massive volcanic rock of andesitic to dacitic (finer grained portions) composition.								
	- overall contains ≤ 1-2% py								
	- upper contact cuts bedding at a core angle of ~45° across bedding so as to indicate that this unit is likely a dike, oriented vertically and trending across the drill section at ~Az 035 to Az 045								
	- brecciated and contains abundant thin haphazardly oriented tensional qtz vnlts with chloritic selvages, generally < 2 mm dia.								
	270.60 - 270.80 : qtz-chl-py vnlt ≤ 1 cm dia @ 20° to core axis, contains abundant coarse py.								
	272.90 - 273.23 : bleached foliated lower contact : CA 34° (shearing)								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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Hole No. ..... Co ord. ..... Horizontal Length ..... Date Completed .....
Claim No. ..... Core Size ..... Drilled By .....
Grid No. ..... Angle & Direction ..... Elevation ..... Logged By .....

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD							
		FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
273.23 - 277.35	Black Argillite								
	- a generally fine grained black massive rock with occassional light grey tuffaceous laminae within 1.0 m of upper contact, Laminae generally ≤ 1 cm dia.								
	= occassional tuffaceous mudstone intervals with sparse felsic volcanic fragments up to 20 mm dia in black argillite matrix.								
	- Contains 1-3% py, overall as disseminations & stringers plus in minor sub mm sized qtz veinlets.								
	273.63 - 277.35 : Fault Zone; broken rubbly core plus gouge.								
	275.73 - 276.00 : graphitic, clayey gouge plus fine qtz chips.								
	276.00 - 277.35 : numerous thin qtz - py veins, haphazardly oriented & stigmatically folded, overall interval contains ~ 2-3% fine py.								
	CA. 276.10 m : 23° shearing.								
	276.50 m : 45° shearing.								
	277.00 m : 45° shearing.								
277.35 - 279.49	Fossiliferous Greywacke.								
	- a medium grained, dark grey arenite with white carbonate pelecypod fossils and occassional argillite chips & interbeds:								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Hole No. ..... Co ord. ..... Horizontal Length ..... Date Completed .....
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INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	277.35 - 279.49 : Fault zone ; broken, rubbly core, chips & gouge.								
	277.35 - 279.20 ; brecciated interval with discontinuous, haphazardly oriented quartz vnlts, overall ~ 3% py plus a dark colored sulfide in an intensely qtz-veined interval / 278.4 - 279.2								
279.49 - 285.20	Interbedded Black Argillite & Siltstone								
	- consists of massive black argillite (as in interval 273.33 - 277.35) interbedded with lighter grey siltstone beds up to ~ 4 cm wide ; contains minor pyritic horizons & thin concordant qtz vnlts up to 25 mm wide usually associated with small shears.								
	284.40 - 285.20 : fault zone ; broken core, chips & gouge toward bottom of interval.								
	CA. 279.99 : 50° bedding.								
	CA. 283.93 : 50° bedding.								
285.20 - 306.91	Fossiliferous Greywacke								
	A generally medium to medium dark grey arenite with fairly abundant light colored calcareous pelecypod plus other (?) fossils, argillitic rip-up clasts, gritty interbeds & rip-up clasts. - Gritty interbeds are generally ~ 60 cm or less in dia while argillaceous bands vary up to ~ 2 m wide.								

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DIAMOND DRILL LOG

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Hole No. ..... Co ord. ..... Horizontal Length ..... Date Completed .....

Claim No. ..... Core Size ..... Drilled By .....

Grid No. ..... Angle & Direction ..... Elevation ..... Logged By .....

INTERVAL FEET (METRES)	DESCRIPTION	SAMPLE RECORD							
		FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	CA. 291.88 m ; 70° bedding.								
	CA. 297.00 m ; 65° bedding.								
	CA. 306.00 m ; 65° bedding.								
306.91	End of Hole.								
	Acid tests 54.9 m : 51° corrected.								
	97.6 m : 53° corrected								
	185.1 m : 52.5° corrected								
	274.2 m : 52.0° corrected.								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD

Hole No. AP 8 | Coord. | Horizontal Length | Date Completed 6189
Claim No. | | Core Size | Drilled By
Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET (METRES)	NUMBER	WIDTH	Au. ppb	Ag. ppm	Cu.	Zn.	As ppm	WIDTH X ASSAY						AVERAGES WIDTH	Au.	Ag.	Cu.	Zn.	
0.00 - 3.05	CASING	3.05																	
3.05 - 10.00	WASTE	6.95	—	—			—												
10.00 - 10.50	1599-G	0.5	3	.4			12												
10.50 - 11.00	1600-G	0.5	2	.1			6												
11.00 - 11.50	1601-G	0.5	3	.1			8												
11.50 - 12.00	1602-G	0.5	1	.1			10												
12.00 - 12.50	1603-G	0.5	1	.3			6												
12.50 - 13.00	1604-G	0.5	2	.2			6												
13.00 - 13.50	1605-G	0.5	3	.4			8												
13.50 - 14.00	1606-G	0.5	1	.1			11												
14.00 - 14.50	1607-G	0.5	2	.3			10												
14.50 - 15.00	1608-G	0.5	1	.1			6												
15.00 - 15.50	1609-G	0.5	2	.1			10												
15.50 - 16.00	1610-G	0.5	2	.3			9												
16.00 - 17.00	1611-G	1.0	1	.2			8												
17.00 - 17.50	1612-G	0.5	1	.2			6												
17.50 - 18.50	1613-G	1.0	1	.2			3												
18.50 - 19.50	1614-G	1.0	2	.1			5												
19.50 - 20.50	1615-G	1.0	2	.1			4												
20.50 - 21.00	1616-G	0.5	2	.2			3												
21.00 - 21.50	1617-G	0.5	1	.1			3												
21.50 - 22.00	1618-G	0.5	39	.2			2												
22.00 - 22.50	1619-G	0.5	2	.2			4												
22.50 - 23.00	1620-G	0.5	5	.1			3												
23.00 - 23.50	1621-G	0.5	2	.1			3												
23.50 - 24.00	1622-G	0.5	2	.3			6												
24.00 - 24.50	1623-G	0.5	4	.1			4												
24.50 - 25.00	1624-G	0.5	3	.1			2												
25.00 - 25.50	1625-G	0.5	1	.1			3												
25.50 - 26.00	1626-G	0.5	1	.1			5												
26.00 - 26.50	1627-G	0.5	3	.1			5												
26.50 - 27.00	1628-G	0.5	3	.1			4												
27.00 - 27.50	1629-G	0.5	2	.1			7												
27.50 - 28.00	1630-G	0.5	6	.3			4												
28.00 - 28.50	1631-G	0.5	1	.2			2												
28.50 - 29.00	1632-G	0.5	1	.1			4												
29.00 - 29.50	1633-G	0.5	1	.1			4												
29.50 - 30.00	1634-G	0.5	6	.2			3												
30.00 - 30.50	1635-G	0.5	3	.1			3												
30.50 - 31.00	1636-G	0.5	4	.2			7												

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Hole No. AP 8 | Co ord. | Horizontal Length | Date Completed

Claim No | Core Size | Drilled By

Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET (METRES)	NUMBER	WIDTH	Au ppb	Ag ppm	Cu.	Zn.	As ppm	WIDTH X ASSAY						AVERAGES					
														WIDTH	Au.	Ag.	Cu.	Zn.	
31.00 – 31.50	1637-G	0.5	1	.2			2												
31.50 – 32.00	1638-G	0.5	2	.4			7												
32.00 – 32.50	1639-G	0.5	2	.2			7												
32.50 – 33.00	1640-G	0.5	1	.2			8												
33.00 – 33.30	1641-G	0.3	3	.7			8												
33.30 – 33.30	1642-G	0.5	5	.1			2												
33.30 – 35.10	1643-G	1.3	1	.1			7												
35.10 – 35.60	1644-G	0.5	6	.2			3												
35.60 – 38.20	1645-G	2.6	7	.2			4												
38.20 – 38.70	1646-G	0.5	1	.3			2												
38.70 – 39.20	1647-G	0.5	5	.3			2												
39.20 – 39.70	1648-G	0.5	22	.2			4												
39.70 – 40.20	1649-G	0.5	6	.2			3												
40.20 – 40.70	1650-G	0.5	2	.1			3												
40.70 – 41.20	1651-G	0.5	3	.1			2												
41.20 – 41.70	1652-G	0.5	6	.1			2												
41.70 – 42.20	1653-G	0.5	1	.1			2												
42.20 – 42.70	1654-G	0.5	3	.1			3												
42.70 – 43.10	1655-G	0.4	2	.1			2												
43.10 – 43.60	1656-G	0.5	12	.1			2												
43.60 – 44.10	1657-G	0.5	4	.1			2												
44.10 – 44.60	1658-G	0.5	8	.1			5												
44.60 – 45.10	1659-G	0.5	7	.2			7												
45.10 – 45.60	1660-G	0.5	5	.2			2												
45.60 – 46.10	1661-G	0.5	3	.1			2												
46.10 – 46.60	1662-G	0.5	1	.2			5												
46.60 – 47.10	1663-G	0.5	1	.1			2												
47.10 – 47.60	1664-G	0.5	3	.1			3												
47.60 – 48.10	1665-G	0.5	1	.1			2												
48.10 – 48.60	1666-G	0.5	13	.1			3												
48.60 – 49.10	1667-G	0.5	2	.1			2												
49.10 – 49.60	1668-G	0.5	1	.2			2												
49.60 – 50.10	1669-G	0.5	1	.2			4												
50.10 – 50.60	1670-G	0.5	5	.1			2												
50.60 – 51.10	1671-G	0.5	3	.1			4												
51.10 – 51.60	1672-G	0.5	7	.1			3												
51.60 – 52.10	1673-G	0.5	4	.1			4												
52.10 – 52.60	1674-G	0.5	6	.1			3												
52.60 – 53.10	1675-G	0.5	7	.2			5												
53.10 – 53.60	1676-G	0.5	1	.1			2												

GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD

Hole No. AP 8 | Co ord. | Horizontal Length | Date Completed
Claim No. | | Core Size | Drilled By
Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET/METRES	NUMBER	WIDTH	Au. ppb	Ag. ppm	Cu.	Zn.	As ppm	WIDTH X ASSAY						AVERAGES					
														WIDTH	Au.	Ag.	Cu.	Zn.	
53.60 - 54.10	1677-G	0.5	3	.1			2												
54.10 - 54.60	1678-G	0.5	9	.2			3												
54.60 - 55.10	1679-G	0.5	6	.1			2												
55.10 - 55.60	1680-G	0.5	7	.1			4												
55.60 - 56.10	1681-G	0.5	11	.1			3												
56.10 - 56.60	1682-G	0.5	9	.1			4												
56.60 - 57.10	1683-G	0.5	1	.2			5												
57.10 - 57.60	1684-G	0.5	6	.1			7												
57.60 - 58.10	1685-G	0.5	11	.1			6												
58.10 - 58.60	1686-G	0.5	5	.2			5												
58.60 - 59.10	1687-G	0.5	12	.2			3												
59.10 - 59.60	1688-G	0.5	5	.1			4												
59.60 - 60.10	1689-G	0.5	7	.1			2												
60.10 - 60.60	1690-G	0.5	3	.1			6												
60.60 - 61.10	1691-G	0.5	9	.1			4												
61.10 - 61.60	1692-G	0.5	2	.2			5												
61.60 - 62.10	1693-G	0.5	7	.1			9												
62.10 - 62.60	1694-G	0.5	6	.1			9												
62.60 - 63.10	1695-G	0.5	4	.1			5												
63.10 - 63.60	1696-G	0.5	6	.1			4												
63.60 - 64.10	1697-G	0.5	3	.2			3												
64.10 - 64.60	1698-G	0.5	2	.1			6												
64.60 - 65.10	1699-G	0.5	3	.1			4												
65.10 - 65.60	1700-G	0.5	4	.4			6												
65.60 - 66.10	1701-G	0.5	1	.3			5												
66.10 - 66.60	1702-G	0.5	2	.2			5												
66.60 - 67.10	1703-G	0.5	12	.3			4												
67.10 - 67.60	1704-G	0.5	1	.4			4												
67.60 - 68.10	1705-G	0.5	4	.2			5												
68.10 - 68.60	1706-G	0.5	5	.3			2												
68.60 - 69.10	1707-G	0.5	3	.3			4												
69.10 - 69.60	1708-G	0.5	4	.2			3												
69.60 - 70.10	1709-G	0.5	5	.3			7												
70.10 - 70.60	1710-G	0.5	4	.5			7												
70.60 - 71.10	1711-G	0.5	4	.3			4												
71.10 - 71.60	1712-G	0.5	1	.2			6												
71.60 - 72.10	1713-G	0.5	4	.4			7												
72.10 - 72.60	1714-G	0.5	4	.1			2												
72.60 - 73.10	1715-G	0.5	4	.1			7												
73.10 - 73.70	1716-G	0.6	1	.1			6												

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Hole No. AP 8 | Co ord | Horizontal Length | Date Completed

Claim No. | Core Size | Drilled By

Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET (METRES)	NUMBER	WIDTH	Au ppb	Ag ppm	Cu	Zn	As ppm	WIDTH X ASSAY						AVERAGES					
														WIDTH	Au.	Ag.	Cu.	Zn.	
73.70 - 74.20	1717-G	0.5	1	.3			6												
74.20 - 74.70	1718-G	0.5	1	.3			2												
74.70 - 75.20	1719-G	0.5	3	.3			6												
75.20 - 75.70	1720-G	0.5	5	.1			6												
75.70 - 76.20	1721-G	0.5	1	.3			3												
76.20 - 76.70	1722-G	0.5	4	.2			7												
76.70 - 77.20	1723-G	0.5	4	.1			2												
77.20 - 77.70	1724-G	0.5	4	.1			3												
77.70 - 78.20	1725-G	0.5	5	.9			43												
78.20 - 78.70	1726-G	0.5	13	.4			23												
78.70 - 79.20	1727-G	0.5	2	.4			8												
79.20 - 79.70	1728-G	0.5	1	.3			6												
79.70 - 80.20	1729-G	0.5	2	.2			5												
80.20 - 80.70	1730-G	0.5	3	.2			4												
80.70 - 81.20	1731-G	0.5	17	.3			5												
81.20 - 81.70	1732-G	0.5	4	.3			2												
81.70 - 82.20	1733-G	0.5	1	.3			8												
82.20 - 82.70	1734-G	0.5	2	.1			7												
82.70 - 83.20	1735-G	0.5	1	.6			17												
83.20 - 83.70	1736-G	0.5	1	.2			11												
83.70 - 84.20	1737-G	0.5	1	.2			11												
84.20 - 84.70	1738-G	0.5	1	.3			10												
84.70 - 85.20	1739-G	0.5	1	.2			9												
85.20 - 85.70	1740-G	0.5	32	.2			8												
85.70 - 86.20	1741-G	0.5	12	.5			13												
86.20 - 86.70	1742-G	0.5	10	.1			18												
86.70 - 87.20	1743-G	0.5	5	.2			22												
87.20 - 87.70	1744-G	0.5	5	.1			62												
87.70 - 88.20	1745-G	0.5	2	.2			21												
88.20 - 88.70	1746-G	0.5	2	.1			14												
88.70 - 89.20	1747-G	0.5	1	.1			10												
89.20 - 89.70	1748-G	0.5	2	.1			5												
89.70 - 90.20	1749-G	0.5	2	.3			7												
90.20 - 90.70	1750-G	0.5	5	.1			8												
90.70 - 91.20	1751-G	0.5	2	.1			2												
91.20 - 91.70	1752-G	0.5	2	.1			8												
91.70 - 92.20	1753-G	0.5	1	.1			4												
92.20 - 92.70	1754-G	0.5	1	.1			5												
92.70 - 93.20	1755-G	0.5	2	.1			7												
93.20 - 93.70	1756-G	0.5	3	.1			17												

GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD

Hole No. AP 8 | Co ord. | Horizontal Length | Date Completed

Claim No. | Core Size | Drilled By

Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET (METRES)	NUMBER	WIDTH	Au. ppb	Ag. ppm	Cu	Zn	As ppm	WIDTH X ASSAY						AVERAGES					
														WIDTH	Au.	Ag.	Cu.	Zn.	
93.70 - 94.30	1757-G	0.5	½	.1			7												
94.30 - 95.00	1758-G	0.8	3	.1			34												
95.00 - 96.00	1759-G	1.0	2	.2			9												
96.00 - 96.50	1760-G	0.5	2	.3			30												
96.50 - 97.00	1761-G	0.5	6	1.0			32												
97.00 - 97.50	1762-G	0.5	9	.4			32												
97.50 - 98.00	1763-G	0.5	4	.1			27												
98.00 - 98.50	1764-G	0.5	3	.5			23												
98.50 - 99.00	1765-G	0.5	2	.3			30												
99.00 - 99.50	1766-G	0.5	6	.4			50												
99.50 - 100.00	1767-G	0.5	6	.1			43												
100.00 - 100.50	1768-G	0.5	156	.1			21												
100.50 - 101.00	1769-G	0.5	5	.1			14												
101.00 - 101.50	1770-G	0.5	5	.2			24												
101.50 - 102.00	1771-G	0.5	3	.4			39												
102.00 - 102.50	1772-G	0.5	4	.6			27												
102.50 - 103.00	1773-G	0.5	5	.1			63												
103.00 - 103.50	1774-G	0.5	3	.3			28												
103.50 - 103.80	1775-G	0.3	4	.2			19												
103.80 - 104.30	1776-G	0.5	4	.1			3												
104.30 - 108.00	WASTE	3.7	—	—			—												
108.00 - 108.50	1777-G	0.5	1	.1			5												
108.50 - 109.00	1778-G	0.5	8	.2			13												
109.00 - 109.50	1779-G	0.5	10	.3			32												
109.50 - 110.00	1780-G	0.5	10	.3			39												
110.00 - 110.50	1781-G	0.5	10	.4			34												
110.50 - 111.00	1782-G	0.5	7	.4			24												
111.00 - 111.50	1783-G	0.5	6	.1			13												
111.50 - 112.00	1784-G	0.5	7	.3			32												
112.00 - 112.50	1785-G	0.5	4	.2			31												
112.50 - 113.00	1786-G	0.5	3	.1			17												
113.00 - 113.50	1787-G	0.5	8	.3			24												
113.50 - 114.00	1788-G	0.5	13	.6			35												
114.00 - 114.50	1789-G	0.5	1	.2			30												
114.50 - 115.00	1790-G	0.5	3	.1			19												
115.00 - 115.50	1791-G	0.5	5	.1			24												
115.50 - 116.00	1792-G	0.5	6	.2			30												
116.00 - 116.50	1793-G	0.5	7	.2			22												
116.50 - 117.00	1794-G	0.5	7	.1			13												
117.00 - 117.50	1795-G	0.5	7	.1			24												

GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD

Hole No. AP 8 Co ord. Horizontal Length Date Completed

Claim No. Core Size Drilled By

Grid No. Angle & Direction Elevation Logged By

INTERVAL FEET (METRES)	NUMBER	WIDTH	Au. ppb	Ag. ppm	Cu.	Zn.	As ppm	WIDTH X ASSAY						AVERAGES					
														WIDTH	Au.	Ag.	Cu.	Zn.	
117.50 - 118.00	1796-G	0.5	7	.1			18												
118.00 - 118.50	1797-G	0.5	4	.1			22												
118.50 - 118.80	1798-G	0.3	1	.1			14												
118.80 - 119.20	1799-G	0.4	8	.3			15												
119.20 - 119.70	1800-G	0.5	9	.2			36												
119.70 - 120.20	1801-G	0.5	2	.1			15												
120.20 - 120.70	1802-G	0.5	3	.1			16												
120.70 - 121.20	1803-G	0.5	9	.5			35												
121.20 - 121.70	1804-G	0.5	10	.4			32												
121.70 - 122.20	1805-G	0.5	9	.3			31												
122.20 - 122.70	1806-G	0.5	6	.1			18												
122.70 - 123.20	1807-G	0.5	6	.2			27												
123.20 - 123.70	1808-G	0.5	5	.1			21												
123.70 - 124.20	1809-G	0.5	5	.1			19												
124.20 - 124.70	1810-G	0.5	16	.1			20												
124.70 - 125.20	1811-G	0.5	1	.1			13												
125.20 - 125.70	1812-G	0.5	2	.1			21												
125.70 - 126.20	1813-G	0.5	1	.1			24												
126.20 - 126.70	1814-G	0.5	5	.1			11												
126.70 - 127.20	1815-G	0.5	2	.1			27												
127.20 - 127.70	1816-G	0.5	9	.1			16												
127.70 - 128.20	1817-G	0.5	4	.1			20												
128.20 - 128.70	1818-G	0.5	1	.2			22												
128.70 - 129.20	1819-G	0.5	4	.3			23												
129.20 - 129.70	1820-G	0.5	4	.4			13												
129.70 - 130.20	1821-G	0.5	7	.3			28												
130.20 - 130.70	1822-G	0.5	3	.3			20												
130.70 - 131.20	1823-G	0.5	9	.6			22												
131.20 - 131.70	1824-G	0.5	3	1.2			18												
* 131.70 - 132.00	1825-G	0.3	16	1.8			119												
132.00 - 132.30	1826-G	0.3	10	1.2			53												
132.30 - 132.60	1827-G	0.3	8	1.0			33												
132.60 - 132.90	1828-G	0.3	16	2.0			95												
132.90 - 133.20	1829-G	0.3	41	6.2			190												
133.20 - 133.50	1830-G	0.3	39	14.7			200												
133.50 - 133.80	1831-G	0.3	25	4.1			209												
* 133.80 - 134.30	1832-G	0.5	17	4.0			109												
134.30 - 134.80	1833-G	0.5	7	.6			10												
134.80 - 135.30	1834-G	0.5	8	.9			14												
135.30 - 135.80	1835-G	0.5	7	.4			18												

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Hole No. AP 8 | Co ord. | Horizontal Length | Date Completed

Claim No. | | Core Size | Drilled By

Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET (METRES)	NUMBER	WIDTH	Au. ppm	Ag. ppm	Cu.	Zn.	As ppm	WIDTH X ASSAY						AVERAGES					
														WIDTH	Au.	Ag.	Cu.	Zn.	
135.80 - 136.30	1836-G	0.5	1	.3			5												
136.30 - 136.80	1837-G	0.5	1	.3			4												
136.80 - 137.30	1838-G	0.5	1	.2			2												
137.30 - 137.80	1839-G	0.5	19	.2			2												
137.80 - 138.30	1840-G	0.5	6	.3			2												
138.30 - 138.80	1841-G	0.5	5	.1			3												
138.80 - 139.30	1842-G	0.5	1	.1			2												
139.30 - 139.80	1843-G	0.5	5	.3			2												
139.80 - 140.30	1844-G	0.5	14	.1			2												
140.30 - 140.80	1645-G	0.5	1	.1			5												
140.80 - 141.30	1859-G	0.5	1	.2			2												
141.30 - 141.80	1860-G	0.5	1	.3			7												
141.80 - 142.30	1861-G	0.5	2	.3			3												
142.30 - 142.80	1862-G	0.5	2	.2			6												
142.80 - 143.30	1863-G	0.5	4	.4			4												
143.30 - 143.80	1864-G	0.5	6	.3			2												
143.80 - 145.30	1865-G	0.5	1	.2			2												
145.30 - 145.80	1866-G	0.5	9	.4			6												
145.80 - 146.30	1867-G	0.5	10	.2			3												
146.30 - 149.50	WASTE	3.2	—	—			—												
149.50 - 150.00	1868-G	0.5	4	.4			3												
150.00 - 153.90	WASTE	3.9	—	—			—												
153.90 - 154.40	1869-G	0.5	1	.4			9												
154.40 - 154.90	1870-G	0.5	6	.4			14												
154.90 - 155.40	1871-G	0.5	7	.6			17												
155.40 - 155.90	1872-G	0.5	7	.4			6												
155.90 - 156.40	1873-G	0.5	7	.4			5												
156.40 - 156.90	1874-G	0.5	2	.5			8												
156.90 - 157.20	1846-G	0.3	1	.3			15												
157.20 - 157.50	1847-G	0.3	9	1.4			40												
157.50 - 158.00	1875-G	0.5	2	.8			28												
158.00 - 158.50	1876-G	0.5	35	2.6			101												
158.50 - 159.00	1877-G	0.5	2	.5			7												
159.00 - 159.50	1878-G	0.5	5	.3			6												
159.50 - 160.00	1879-G	0.5	1	.5			19												
160.00 - 160.50	1880-G	0.5	3	.3			7												
160.50 - 161.00	1881-G	0.5	6	.3			9												
161.00 - 161.50	1882-G	0.5	4	.2			9												
161.50 - 162.00	1883-G	0.5	3	.4			9												
162.00 - 162.50	1884-G	0.5	4	.2			5												

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Hole No. AP 8 | Co ord | Horizontal Length | Date Completed

Claim No. | Core Size | Drilled By

Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET (METRES)	NUMBER	WIDTH	Au. ppb	Ag. ppm	Cu.	Zn.	As ppm	WIDTH X ASSAY						AVERAGES					
														WIDTH	Au.	Ag.	Cu.	Zn.	
162.50 - 163.00	1885-G	0.5	3	.4			9												
163.00 - 163.50	1886-G	0.5	4	.2			5												
163.50 - 164.00	1887-G	0.5	19	.5			13												
164.00 - 164.50	1888-G	0.5	7	.2			6												
164.50 - 165.00	1889-G	0.5	3	.4			7												
165.00 - 165.50	1890-G	0.5	10	.2			6												
165.50 - 166.00	1891-G	0.5	2	.4			12												
166.00 - 166.50	1892-G	0.5	5	.7			8												
166.50 - 167.00	1893-G	0.5	7	1.6			21												
167.00 - 167.50	1894-G	0.5	1	.6			10												
167.50 - 168.00	1895-G	0.5	4	.1			12												
168.00 - 168.50	1896-G	0.5	3	.6			11												
168.50 - 169.00	1897-G	0.5	5	.8			12												
169.00 - 169.50	1898-G	0.5	1	.3			4												
169.50 - 170.00	1899-G	0.5	8	.9			10												
170.00 - 170.50	1900-G	0.5	7	1.4			35												
170.50 - 171.00	1901-G	0.5	18	2.8			22												
171.00 - 171.50	1902-G	0.5	8	1.4			21												
171.50 - 172.00	1903-G	0.5	16	1.9			14												
172.00 - 172.50	1904-G	0.5	27	2.2			187												
172.50 - 173.00	1905-G	0.5	4	1.5			18												
173.00 - 173.50	1858-G	0.5	16	1.8			13												
173.50 - 181.00	WASTE	7.5	—	—			—												
181.00 - 181.50	1906-G	0.5	41	2.3			13												
181.50 - 182.00	1907-G	0.5	85	5.8			143												
182.00 - 182.50	1908-G	0.5	77	4.2			467												
182.50 - 183.00	1909-G	0.5	54	3.6			181												
183.00 - 183.50	1910-G	0.5	30	3.6			77												
183.50 - 184.00	1911-G	0.5	5	.1			25												
184.00 - 184.50	1912-G	0.5	8	.7			22												
184.50 - 185.00	1913-G	0.5	6	.4			18												
185.00 - 185.50	1914-G	0.5	7	1.9			23												
185.50 - 186.00	1915-G	0.5	4	.6			14												
186.00 - 186.50	1916-G	0.5	5	.8			11												
186.50 - 187.00	1917-G	0.5	2	.6			21												
187.00 - 187.50	1918-G	0.5	3	1.4			35												
187.50 - 188.00	1919-G	0.5	2	.7			16												
188.00 - 188.50	1920-G	0.5	4	.4			18												
188.50 - 189.00	1921-G	0.5	3	.6			14												
189.00 - 189.50	1922-G	0.5	8	3.0			39												

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GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD

Hole No. AP8 | Co ord. | Horizontal Length | Date Completed
Claim No. | | Core Size | Drilled By
Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET / METRES	NUMBER	WIDTH	Au. ppb	Ag. ppm	Cu.	Zn.	As ppm	WIDTH X ASSAY
189.50 - 192.66	WASTE	3.16	—	—			28	
192.66 - 193.16	1923-G	0.5	10	2.8			13	
193.16 - 193.66	1924-G	0.5	6	.9			9	
193.66 - 194.16	1925-G	0.5	1	.2			—	
194.16 - 198.10	WASTE	3.94	—	—			18	
198.10 - 198.60	1926-G	0.5	6	.3			36	
198.60 - 199.10	1927-G	0.5	7	.1			36	
199.10 - 199.60	1928-G	0.5	9	.2			—	
199.60 - 200.30	WASTE	0.7	—	—			31	
200.30 - 200.80	1929-G	0.5	7	.1			34	
200.80 - 201.30	1930-G	0.5	2	.1			29	
201.30 - 201.80	1931-G	0.5	9	.2			—	
201.80 - 205.30	WASTE	3.5	—	—			46	
205.30 - 205.80	1932-G	0.5	10	.2			—	
205.80 - 208.47	WASTE	2.67	—	—			17	
208.47 - 208.97	1933-G	0.5	12	.8			89	
208.97 - 209.50	1934-G	0.53	30	3.7			350	
209.50 - 210.00	1848-G	0.5	81	4.9			586	
210.00 - 210.50	1849-G	0.5	136	6.1			141	
210.50 - 211.00	1850-G	0.5	117	3.7			178	
211.00 - 211.52	1935-G	0.52	150	6.0			398	
211.52 - 212.00	1936-G	0.48	239	8.3			42	
212.00 - 212.50	1937-G	0.5	18	1.8			22	
212.50 - 213.00	1938-G	0.5	19	1.1			115	
213.00 - 213.45	1939-G	0.45	61	2.1			36	
213.45 - 213.95	1940-G	0.5	5	.4			19	
213.95 - 214.45	1941-G	0.5	21	1.2			60	
214.45 - 214.95	1942-G	0.5	22	1.8			22	
214.95 - 215.48	1943-G	0.53	36	1.8			20	
215.48 - 216.05	1944-G	0.57	28	1.7			31	
216.05 - 216.55	1945-G	0.5	31	2.0			23	
216.55 - 217.05	1946-G	0.5	24	2.0			405	
217.05 - 217.45	1947-G	0.4	231	3.0			752	
217.45 - 218.03	1948-G	0.58	833	2.2			193	
218.03 - 218.53	1949-G	0.5	174	2.7			17	
218.53 - 219.25	1950-G	0.72	20	.9			17	
219.25 - 219.75	1951-G	0.5	10	.6			1564	
219.75 - 220.15	1952-G	0.4	114	1.2			605	
220.15 - 220.45	1953-G	0.3	97	3.6			217	
220.45 - 220.90	1954-G	0.45	76	4.3				

AVERAGES

WIDTH	Au.	Ag	Cu.	Zn.

GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD

Hole No. AP8 Co ord. Horizontal Length Date Completed

Claim No. Core Size Drilled By

Grid No. Angle & Direction Elevation Logged By

INTERVAL FEET (METRES)	NUMBER	WIDTH	Au ppb	Ag. ppm	Cu.	Zn.	As ppm	WIDTH X ASSAY						AVERAGES WIDTH	Au	Ag.	Cu.	Zn.
220.90 - 221.20	1955-G	0.3	85	13.8			328											
221.20 - 221.50	1956-G	0.3	124	6.9			503											
221.50 - 221.80	1851-G	0.3	139	7.7			658											
221.80 - 222.10	1852-G	0.3	145	7.6			447											
222.10 - 222.40	1853-G	0.3	185	8.7			457											
222.40 - 222.85	1957-G	0.45	21	.8			32											
222.85 - 223.40	1958-G	0.55	11	.4			9											
223.40 - 223.70	1854-G	0.3	57	1.8			305											
223.70 - 224.00	1855-G	0.3	192	5.9			823											
224.00 - 224.30	1856-G	0.3	137	5.0			714											
224.30 - 224.60	1857-G	0.3	105	4.2			289											
224.60 - 225.10	1959-G	0.5	11	.4			16											
225.10 - 226.50	WASTE	1.4	—	—			—											
226.50 - 227.00	1960-G	0.5	9	.3			5											
227.00 - 227.50	1961-G	0.5	3	.3			5											
227.50 - 228.30	WASTE	0.8	—	—			—											
228.30 - 228.80	1962-G	0.5	2	.3			8											
228.80 - 229.30	1963-G	0.5	1	.3			2											
229.30 - 229.80	1964-G	0.5	5	.3			6											
229.80 - 235.00	WASTE	5.2	—	—			—											
235.00 - 235.50	1965-G	0.5	9	.1			6											
235.50 - 236.00	1966-G	0.5	2	.1			4											
236.00 - 236.50	1967-G	0.5	2	.2			2											
236.50 - 243.80	WASTE	7.3	—	—			—											
243.80 - 244.30	1968-G	0.5	1	.4			19											
244.30 - 244.67	1969-G	0.37	3	.3			10											
244.67 - 244.96	1970-G	0.29	1	.2			10											
244.96 - 245.46	1971-G	0.5	3	.2			13											
245.46 - 245.96	1972-G	0.5	10	.3			10											
245.96 - 246.46	1973-G	0.5	2	.2			9											
246.46 - 246.96	1974-G	0.5	6	.5			15											
246.96 - 247.46	1975-G	0.5	4	.4			11											
247.46 - 254.50	WASTE	7.04	—	—			—											
254.50 - 255.00	1976-G	0.5	5	1.4			15											
255.00 - 255.50	1977-G	0.5	7	1.2			19											
255.50 - 255.80	1978-G	0.3	15	.6			10											
255.80 - 256.30	1979-G	0.5	4	.1			2											
256.30 - 256.80	1980-G	0.5	11	.1			2											
256.80 - 257.45	1981-G	0.65	2	.1			1											
257.45 - 257.95	1982-G	0.5	10	.4			1											

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GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Hole No. AP8 | Co ord | Horizontal Length | Date Completed

Claim No | Core Size | Drilled By

Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET / METRES	NUMBER	WIDTH	Au. ppb	Ag. ppm	Cu.	Zn.	As ppm	WIDTH X ASSAY						AVERAGES					
														WIDTH	Au.	Ag.	Cu.	Zn.	
257.95 - 258.45	1983-G	0.50	17	.3			13												
258.45 - 258.95	1984-G	0.50	14	.4			64												
258.95 - 259.45	1985-G	0.50	11	.6			3												
259.45 - 259.95	1986-G	0.50	6	.3			3												
259.95 - 260.40	1987-G	0.45	6	1.7			5												
260.40 - 260.90	1988-G	0.50	15	.4			6												
260.90 - 266.66	WASTE	5.76	—	—			—												
266.66 - 267.16	1989-G	0.50	7	.1			2												
267.16 - 267.66	1990-G	0.50	6	.5			9												
267.66 - 268.10	1991-G	0.44	3	.3			33												
268.10 - 268.55	1992-G	0.45	4	.2			9												
268.55 - 269.45	1993-G	0.90	2	.4			21												
269.45 - 269.80	1994-G	0.35	3	.5			26												
269.80 - 270.20	1995-G	0.40	5	.1			14												
270.20 - 270.60	1996-G	0.40	4	.1			4												
270.60 - 270.80	1997-G	0.20	5	.2			9												
270.80 - 271.00	1998-G	0.20	14	.5			10												
271.00 - 271.50	1999-G	0.50	7	.1			10												
271.50 - 271.95	2000-G	0.45	20	.6			16												
271.95 - 272.40	2001-G	0.45	5	.1			2												
272.40 - 272.90	2002-G	0.50	1	.1			2												
272.90 - 273.23	2003-G	0.33	34	.1			19												
273.23 - 273.63	2004-G	0.40	23	1.6			88												
273.63 - 274.00	2005-G	0.37	18	1.6			44												
274.00 - 274.50	2006-G	0.50	9	2.8			45												
274.50 - 275.00	2007-G	0.50	8	2.2			44												
275.00 - 275.50	2008-G	0.50	13	1.4			36												
275.50 - 276.10	2009-G	0.60	9	.4			41												
276.10 - 276.44	2010-G	0.34	17	.1			33												
276.44 - 276.80	2011-G	0.36	5	.2			41												
276.80 - 277.35	2012-G	0.55	16	.3			48												
277.35 - 277.80	2013-G	0.45	11	.2			42												
277.80 - 278.40	2014-G	0.60	7	.2			22												
278.40 - 279.20	2015-G	0.80	13	.1			34												
279.20 - 279.49	2016-G	0.29	11	.2			26												
279.49 - 279.99	2017-G	0.50	11	.1			24												
279.99 - 306.93	EOH	26.94																	

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Depth 238.05m — Aug 30/90

Hole No. AP-9 | Co ord. 1117 N | Horizontal Length | Date Completed Sept 3/90
Claim No. UNUK 26 | 258 W | Core Size BGBDM | Drilled By J.T. THOMAS
Grid No. ZONE 1 | Angle & Direction -50/A2080 | Elevation 1390m | Logged By TOSS ZAGIDA

INTERVAL FEET (METRES)	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
0.0m → 6.10	- CASing								
6.10 → 215.11	: Welded DACite Tuff - greenish grey (5GY 6/1) to dark grey (N3) with a mottled appearance due to VARying degrees of alteration. - 20 - 30% lapilli sized fragments that are obliterated to VARying degrees due to alteration - moderate to highly silicified - chlorite filled feathion gashes, 1-2mm wide and ≈ 55° to CORE AXIS (CA) - Carbonate filled fractures, <1mm to 5mm wide, at ≈ 50° → 80° to CA.								
6.10 → 16.90	- Shattered CORE								
	- 10.66 → 11.27 - .45m extra CORE in shattered fragments due to material sloughing back down hole.								
	- 11.27 → 14.33 - 45% RECOVERY								
	- 14.33 → 16.90 - 22% RECOVERY								
16.90 → 20.0	- high concentration of chl. filled fractures, 75/m - py 7-10% with Tr sph and Tr Aspy - silica flooding and brecciation (crackle breccia) - moderate → high sericitication - 16.90 - 17.37, 7-10% py, Tr - 1% Aspy, Tr Sph. - 17.37 - 18.00, 1-2% py, Tr Aspy, Tr Sph - 18.0 - 20.0, 10% py, Tr Aspy, Tr Sph								

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GRANGES EXPLORATION LTD.

DIAMOND DRILL LOG

Hole No. AP 9 | Co ord. | Horizontal Length | Date Completed Sept 3/90

Claim No. | Core Size | Drilled By

Grid No. | Angle & Direction | Elevation | Logged By Ross Zawada

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
6.10 - 215.11 (cont'd)	22.55 - 23.42 - black to greenish black dacite tuff - moderately silicified - carbonate filled fractures at 60°-80° to CA								
	24.30 - carbonate veinlet at 60° to CA								
	24.97 - carbonate veinlet, 7mm wide at 60° to CA								
	24.97 - 25.14 - zone of brecciation with quartz and carbonate flooding - weak hydrothermal alteration - Tr py								
	25.90 - 26.40 - lesser degree of alteration resulting in a darker black color - carbonate filled veinlets at 70° and 11 to CA.								
	28.55 - chlorite filled tension gashes at 70° to CA								
	33.64 - fracture at 55° to CA, slickensides at 50° S								
	37.36 - fracture at 45° to CA, slickensides at 10° to CA								
	39.59 - carbonate veinlet, 4mm wide at 50° to CA								
	40.72 - fracture at 45° to CA - py, chl, and carbonate on fracture surface.								
	41.76 - 42.26 - chl filled tension gashes at 70° to CA								
	41.30 - 47.85 - lesser degree of alteration expressed as a greenish black to black color.								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Hole No. AP9 | Co ord. | Horizontal Length | Date Completed Sept. 3/90
Claim No. | | Core Size | Drilled By
Grid No. | Angle & Direction | Elevation | Logged By Ross ZAWADA

INTERVAL FEET (METRES)	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
6.10 - 215.11 (cont'd)	47.85 - 51.0 - greenish grey dacite with chlorite filled tension gashes at - 11° to CA - 4° to CA - 20° to CA								
	51.0 - 57.82 - block, lessee altered dacite - 54.05 - carbonate veinlet at 40° to CA - 54.23 - fracture at 35° to CA, chl + py on fracture surface - 54.89 - carbonate veinlet at 35° to CA								
	57.82 - 75.5 - greenish grey dacite - 59.4 - chl. filled tension gashes at 60° to CA - 60.3 - chl. filled tension gashes at 70° to CA - 60.8 - chl. filled tension gashes at 75° to CA - 64.8 - carbonate veinlet, 4mm wide at 20° to CA - 65.8 - chl. filled tension gashes at 75° to CA, displaced by carbonate veinlet at 15° to CA. - 72.74 carbonate veinlet 30mm wide at 10° to CA								
	75.5 - 78.93 - back into darker, less altered rock								
	78.93 - back into greenish grey color								
	84.11 - 84.4 - zone of hydrothermal alteration with leached reaction rims around fragments. - chl. filled tension gashes at 65° to CA								
	84.53 - carbonate veinlets <1mm - 3mm // to CA								
	89.0 - 89.93 - chl. filled tension gashes sub // to CA, displaced on a mm scale by 1-2 mm quartz veinlets at 50° to CA								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Hole No. AP 9 | Co ord. | Horizontal Length | Date Completed Sept. 3/90
Claim No. | | Core Size | Drilled By
Grid No. | Angle & Direction | Elevation | Logged By Ross Emmons

INTERVAL FEET (METRES)	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
6.10-215.11 (cont'd)	91.65 - 95.70 - Shear zone with quartz flooded brecciation - 91.85 - 91.95 - gouge - high degree of silicification across shear (except gouge) - hydrothermal alteration throughout, but most intense from 94.08 - 94.70 - foliation at 60° to CA - lithic mudstone unit at 92.56 - 93.36 with ≈ 30-40% dacite fragments - Tr pyrite								
	96.3 - 101.06 - greenish grey dacite rock with chl. filled Tenshion gashes at 10-40° to CA 98.71 - 99.82 - shear with carbonate alteration - shattered core and gouge from 99.08-99.63								
	101.76 - 102.51 - shattered core - fol. at 50° to CA, taken from larger fragments								
	102.51 - 120.71 - greenish grey dacite tuff with accassional carbonate veinlets at 50-70° to CA - high degree of silicification - 'lamme' giving a foliation of 40° to CA - mottled appearance - feldspar (Plagioclase) phenocrysts; euhedral-subhedral, 1-2mm across.								
	120.71 - 124.63 - shattered core. - larger fragments show fol. // → sub // to CA								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Hole No. AP9 | Co ord. | Horizontal Length | Date Completed Sept. 31/90
Claim No. | | Core Size | Drilled By
Grid No. | Angle & Direction | Elevation | Logged By Ross Zawada

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
6.10 - 215.11 (cont'd)	124.63 - 135.45 - 2-4% feldspar phenocrysts - decrease in silicification - 129.20 - fiamme @ 11 to CA - 133.40 - fiamme at 20° to CA.								
	135.45 - 154.98 - No feldspar phenocrysts - higher degree of welding - continues to be a lesser degree of silicification 138.10 - fiamme at 30° to CA 140.21 — 141.29 - shattered core 141.44 - fiamme at 20° to CA 142.77 — 143.24 - shattered core 147.19 - carbonate filled fractures ≤ 1mm at 45° to CA - fiamme at 20° to CA 149.14 - 149.44 - py filled fractures at 70° to CA - fiamme at 20° to CA								
	154.98 - back into the feldspar phenocrysts								
	154.98 - 156.31 - lesser degree of welding								
	156.31 — 169.62 - intensely welded with fiamme giving foliation from 11 to 30° to CA - 163.4 Carbonate filled fractures at 40° to CA - 163.97 - fiamme at 30° to CA - 164.10 - carbonate filled fractures at 70° to CA - 165.95 — 166.85 - shattered core - 167.44 - carb filled fractures at 70° to CA - 167.64 - fiamme at 11 to CA - 168.8 - carbonate filled fractures at 30° to CA								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Hole No. AP 9 | Co ord. | Horizontal Length | Date Completed Sept 3/90
Claim No. | | Core Size | Drilled By
Grid No. | Angle & Direction | Elevation | Logged By Todd Zawada

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
6.10 – 215.11 (cont'd)	169.62 – 203.88 - lesser degree of welding - increase in chloritization - still in feldspar phenocrysts 171.89 - carbonate filled fracture at 25° to CA 172.85 - carbonate filled fracture at 70° to CA 173.33 – 173.59 - shattered core 173.97 – 174.12 - shattered core 177.10 – 179.11 - more intensely welded 178.6 – 178.78 - shattered core 179.63 – 180.13 - carbonate filled fractures at 80° to CA 181.87 - carbonate filled fracture at 25° to CA 186.67 - carbonate filled fractures at 50° to CA 187.54 - fracture at 45° to CA, py on fracture surfaces. 191.0 – 191.59 - 1% py located in fractures and as fine grained disseminations throughout the rock. 192.27 – 193.08 - increase in density of carbonate filled fractures ≤ 15/10mm at 30° and 60° to CA 194.16 – 197.21 - mis/latch resulting in 72% core recovery 198.0 – 198.18 - shattered core. 200.25 - carb filled fracture at 75° to CA 200.80 - carbonate filled fracture at 30° to CA 201.89 – 202.96 - shattered core. 203.88 – 213.44 - color change back to greenish grey - higher degree of welding 211.80 fiamme at 25° to CA 213.44 – 215.11 - sheared volcanics with a strong foliation at 40° to CA - some fragments highly chloritized - strongly sericitized throughout - Tr py locally - Contact with lithic mudstone at ± 214.51 - 214.63 – 214.87, shattered core with gouge from 214.78 – 214.84								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Hole No. AP9 | Co ord. | Horizontal Length | Date Completed Sept 3/90
Claim No. | | Core Size | Drilled By
Grid No. | Angle & Direction | Elevation | Logged By Ross Tanaka

INTERVAL FEET/METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
215.11 → 238.05	: Intercalated beds of dacite welded tuff and lithic mudstones and occassional argillite horizons - lithic mudstone is matrix supported with 10 → 70% angular to sub-angular fragments - fragments range in size from 1mm → 100mm and are moderately to highly sericitized - fragments have a moderate lineation of 40° to CA - py is found throughout the section in quantities ranging from Tr → 10% - Tr - 1% Aspy and Tr Sph found locally								
	215.23 - 215.48 - dacite ash flow - highly sericitized - very weak carbonate alteration								
	215.48 - 215.90 - lithic mudstones with ≈ 30% fragments - upper contact at 70° to CA - lower contact at 55° to CA - ≈ 1-2% py replacing portions of or entire fragments								
	215.90 - 216.92 - dacite tuff - strong foliation at 40° to CA - high degree of sericitization from 215.90 - 216.06 - moderate sericitization through the rest of the interval - 215.83 quartz-carbonate vein, 14mm wide at 50° to CA vein contains fractures 1-3mm wide filled with a black mineral (Silicate?). fractures are ≈ 11 to CA and concentrated in the vein but do extend out into the host rock. - Tr. py throughout the interval; somewhat more abundant in the "black" fractures.								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Hole No. AP9 | Co ord. | Horizontal Length | Date Completed Sept 2/90
Claim No. | | Core Size | Drilled By
Grid No. | Angle & Direction | Elevation | Logged By Ross Zawada

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au ppb	Ag.	Cu.	Zn.
215.11 – 238.05 (cont'd)									
	216.92 – 227.19								
	- 216.92 - 219.55 - lithic mudstone with ≈20% fragments								
	- 3-5% py, concentrated primarily in fragments								
	- fragments moderately sericitized								
	-218.50 - band of py 5mm wide at 30° at CA	219.05	219.55	.50		787	6.6		
		219.55	220.05	.50		3298	8.2		
	- 219.55 – 220.10 - aegillite								
	- moderately - highly silicified with small quartz veinlets throughout. Veining most intense at upper + lower contacts								
	- upper contact – sulfide mineralisation and quartz veining. 5-6mm wide at 40° to CA								
	- lower contact, quartz and carbonate veining 40mm wide at 35° to CA								
	- py ranges from V.f.g. to euhedral xtals 3mm across								
	- Aspy, 3-5% in Vein								
	220.10 - 224.38								
	- lithic mudstone, matrix supported with ≈50% clasts.								
	- clasts are angular to sub-angular, moderately sericitized and uniform in size, ranging from 1mm → 5mm.								
	220.10 – 221.14 - 5% py, some fine grained disseminations but mostly fine grained agglomerations within fragments or as whole fragments								
	221.87 - py filled fractures @ 30° to CA 3mm wide								
	222.07 - py filled fractures at 40° to CA 3mm wide								
	222.51 - py filled fractures at 30° to CA 5mm wide								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Hole No. AP 9 | Co ord. | Horizontal Length | Date Completed Sept 3/90
Claim No. | | Core Size | Drilled By
Grid No. | Angle & Direction | Elevation | Logged By Tara Zamora

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
215.11 → 238.05' (cont'd)									
	224.38 – 227.19 - aegillite with ≈ 5% ghost fragments - high silicification - 2-3% py as blebs within fragments - quartz veining that contains Tr Sph and Tr Aspy 225.81 - quartz vein, 2-5 mm wide @ 60° to CA - Tr. Sph, 10-15% py 226.15 - Quartz vein 30mm wide at 60° to CA - Tr-1% Aspy, 15-20% Py 226.69 - Quartz vein 40mm wide at 50° to CA 15-20% py 226.75 - Quartz vein 35mm wide at 40° to CA ± grey carb - Tr. Aspy, 5-10% py 226.80 – 227.19 - weak brecciation with quartz filled fractures (+ carb) - 2-4% py concentrated in fractures - Tr. sph.								
	227.19 – 238.05' - lithic mudstone with ≤ 20% fragments - 227.19 – 227.65 - 4-5% py + aspy in qtz - carb vein. - 227.65 – 228.12 - weak to moderate brecciation with ≈ 5% py concentrated in quartz veinlets 228.12 – 231.25' - Tr. py 228.36 - py concentrated on fracture plane? or bedding? 2-3 mm wide at 40° to CA 230.97 - quartz vein 5mm wide at 30° to CA - Tr. Sph, Tr py 231.25 – 231.79 - dacite tuff, highly silicified with complete silica replacement of some fragments - Random fracture with tr. py. 231.79 – 232.88 - Tr – 1% py found as very fine grained dissemination but primarily concentrated in fractures								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Hole No. AP 9 | Co ord. | Horizontal Length | Date Completed Sept 3/90
Claim No. | | Core Size | Drilled By
Grid No. | Angle & Direction | Elevation | Logged By Ross Zawada

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD							
		FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
215.11 - 238.05' (cont'd)									
	234.02 - 234.13 - inverse in small carbonate filled fractures at 40° to CA - Tr Aspy, Tr py								
	234.19 - 234.39 - gouge with Tr py								
	234.19 → 236.22 - shattered core 70% recovery								
	236.22 → 237.13 - lost core 1% recovery								
	237.13 → 238.05 - shattered core 50% Recovery								
	Hole Abandoned at 238.05'								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD

Hole No. AP 9 Co ord. Horizontal Length Date Completed

Claim No. Core Size Drilled By

Grid No. Angle & Direction Elevation Logged By

INTERVAL FEET (METRES)	NUMBER	WIDTH	Au. ppb	Ag. ppm	Cu.	Zn.	As ppm	WIDTH X ASSAY						AVERAGES					
														WIDTH	Au.	Ag.	Cu.	Zn.	
0.00 - 6.10	CASING	6.10																	
6.10 - 6.60	2018-G	0.50	4	.2			10												
6.60 - 7.10	2019-G	0.50	3	.1			4												
7.10 - 7.60	2020-G	0.50	2	.2			11												
7.60 - 8.20	2021-G	0.60	3	.1			9												
8.20 - 8.70	2022-G	0.50	4	.2			6												
8.70 - 9.20	2023-G	0.50	4	.3			9												
9.20 - 9.70	2024-G	0.50	4	.4			10												
9.70 - 10.20	2025-G	0.50	3	.3			10												
10.20 - 10.66	2026-G	0.46	3	.3			11												
10.66 - 10.96	2027-G	0.30	3	.2			11												
10.96 - 11.27	2028-G	0.31	3	.2			8												
11.27 - 12.80	2029-G	1.53	9	.4			8												
12.80 - 14.33	2030-G	1.53	12	.1			11												
14.33 - 15.60	2031-G	1.27	14	1.5			91												
15.60 - 16.90	2032-G	1.30	21	3.9			244												
16.90 - 17.50	2033-G	0.60	43	2.3			424												
17.50 - 18.00	2034-G	0.50	6	.8			14												
18.00 - 18.50	2035-G	0.50	32	2.1			81												
18.50 - 19.00	2036-G	0.50	79	4.8			105												
19.00 - 19.50	2037-G	0.50	177	7.3			207												
19.50 - 20.00	2038-G	0.50	115	2.1			280												
20.00 - 20.50	2039-G	0.50	1	.3			16												
20.50 - 21.00	2040-G	0.50	1	.3			8												
21.00 - 21.50	2041-G	0.50	10	.3			6												
21.50 - 22.00	2042-G	0.50	8	.2			6												
22.00 - 22.50	2043-G	0.50	2	.1			6												
22.50 - 23.00	2044-G	0.50	16	.1			4												
23.00 - 23.50	2045-G	0.50	8	.1			9												
23.50 - 24.95	WASTE	1.45	—	—			—												
24.95 - 25.50	2046-G	0.55	36	.2			17												
25.50 - 26.00	2047-G	0.50	16	.2			9												
26.00 - 26.50	WASTE	0.50	—	—			—												
26.50 - 27.00	2048-G	0.50	3	.2			7												
27.00 - 27.50	2049-G	0.50	7	.1			2												
27.50 - 28.00	2050-G	0.50	1	.1			9												
28.00 - 28.50	WASTE	0.50	—	—			—												
28.50 - 29.00	2051-G	0.50	10	.1			8												
29.00 - 29.50	2052-G	0.50	13	.2			11												
29.50 - 30.00	2053-G	0.50	12	.1			11												

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GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Hole No. AP 9 Co ord. Horizontal Length Date Completed

Claim No. Core Size Drilled By

Grid No. Angle & Direction Elevation Logged By

INTERVAL FEET / METRES	NUMBER	WIDTH	Au	Ag	Cu.	Zn.	Ws	WIDTH X ASSAY						AVERAGES					
			ppb	ppm			ppm							WIDTH	Au.	Ag.	Cu.	Zn.	
30.00 - 32.50	WASTE	2.50																	
32.50 - 33.00	2054-G	0.50	2	.1			6												
33.00 - 33.50	2055-G	0.50	3	.1			4												
33.50 - 34.00	2056-G	0.50	4	.1			7												
34.00 - 34.50	2057-G	0.50	12	.2			9												
34.50 - 35.00	2058-G	0.50	3	.1			8												
35.00 - 36.30	WASTE	1.30																	
36.30 - 36.80	2059-G	0.50	10	.1			8												
36.80 - 37.30	2060-G	0.50	6	.1			5												
37.30 - 37.80	2061-G	0.50	7	.1			5												
37.80 - 38.30	2062-G	0.50	6	.1			4												
38.30 - 41.80	WASTE	3.50																	
41.80 - 42.30	2063-G	0.50	9	.2			3												
42.30 - 42.80	2064-G	0.50	6	.1			5												
42.80 - 47.90	WASTE	5.10																	
47.90 - 48.40	2065-G	0.50	1	.4			3												
48.40 - 48.90	2066-G	0.50	3236	.6			5												
48.90 - 49.40	2067-G	0.50	29	.1			4												
49.40 - 49.90	2068-G	0.50	478	.3			6												
49.90 - 50.40	2069-G	0.50	46	.3			4												
50.40 - 50.90	2070-G	0.50	12	.1			6												
50.90 - 51.40	2071-G	0.50	48	.1			5												
51.40 - 51.90	2072-G	0.50	15	.1			5												
51.90 - 58.00	WASTE	6.10																	
58.00 - 58.50	2073-G	0.50	11	.2			3												
58.50 - 59.00	2074-G	0.50	36	.3			2												
59.00 - 59.50	2075-G	0.50	37	.5			4												
59.50 - 60.00	2076-G	0.50	1	.5			6												
60.00 - 60.50	2077-G	0.50	21	.5			6												
60.50 - 61.00	2078-G	0.50	2	.4			4												
61.00 - 91.30	WASTE	30.30																	
91.30 - 91.80	2079-G	0.50	3	.6			5												
91.80 - 92.30	2080-G	0.50	4	.3			22												
92.30 - 92.80	2081-G	0.50	6	.3			9												
92.80 - 93.30	2082-G	0.50	5	.5			40												
93.30 - 93.80	2083-G	0.50	9	.7			23												
93.80 - 94.30	2084-G	0.50	1	.7			13												
94.30 - 94.80	2085-G	0.50	1	.8			5												
94.80 - 95.30	2086-G	0.50	3	1.0			7												
95.30 - 95.80	2087-G	0.50	1	.2			6												

GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD

Hole No. AP 9 | Co ord | Horizontal Length | Date Completed

Claim No. | Core Size | Drilled By

Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET / METRES	NUMBER	WIDTH	Au ppb	Ag. ppm	Cu. ppm	Zn ppm	As ppm	WIDTH X ASSAY	AVERAGES WIDTH	Au	Ag.	Cu.	Zn
95.80 - 96.30	2088-G	0.50	2	.2			6						
96.30 - 123.00	WASTE	26.70	—	—			—						
123.00 - 123.50	2089-G	0.50	8	.2			5						
123.50 - 124.00	2090-G	0.50	1	.1			2						
124.00 - 190.50	WASTE	66.50	—	—			—						
140.50 - 191.00	2091-G	0.50	2	.1			2						
191.00 - 191.55	2092-G	0.55	172	.5			2						
191.55 - 192.05	2093-G	0.50	7	.2			3						
192.05 - 213.60	WASTE	21.55	—	—			—						
213.60 - 214.10	2094-G	0.50	1	.2			10						
214.10 - 214.60	2095-G	0.50	6	.6			31						
214.60 - 215.10	2096-G	0.50	15	1.1			30						
215.10 - 215.60	2097-G	0.50	11	1.7			9						
215.60 - 216.10	2098-G	0.50	1	.5			13						
216.10 - 216.60	2099-G	0.50	12	.3			51						
216.60 - 217.10	2100-G	0.50	2	.6			25						
217.10 - 217.60	2101-G	0.50	9	1.1			16						
217.60 - 218.10	2102-G	0.50	7	1.3			21						
218.10 - 218.60	2103-G	0.50	9	1.2			44						
218.60 - 219.05	2104-G	0.45	9	.9			57						
219.05 - 219.55	2105-G	0.50	787	6.6			1170						
219.55 - 220.05	2106-G	0.50	3298	8.2			3708						
220.05 - 220.55	2107-G	0.50	10	1.9			50						
220.55 - 221.00	2108-G	0.45	7	1.7			50						
221.00 - 221.30	2109-G	0.30	12	1.4			47						
221.30 - 221.80	2110-G	0.50	5	1.4			38						
221.80 - 222.30	2111-G	0.50	5	1.4			33						
222.30 - 222.80	2112-G	0.50	5	1.4			49						
222.80 - 223.30	2113-G	0.50	11	1.0			28						
223.30 - 223.80	2114-G	0.50	10	1.2			29						
223.80 - 224.30	2115-G	0.50	3	1.3			51						
224.30 - 224.70	2116-G	0.40	22	1.6			55						
224.70 - 225.20	2117-G	0.50	20	.9			23						
225.20 - 225.70	2118-G	0.50	113	2.7			262						
225.70 - 226.00	2119-G	0.30	211	6.7			489						
226.00 - 226.50	2120-G	0.50	423	3.3			1831						
226.50 - 226.90	2121-G	0.40	237	2.4			781						
226.90 - 227.40	2122-G	0.50	95	2.3			199						
227.40 - 227.90	2123-G	0.50	10	1.4			23						
227.90 - 228.40	2124-G	0.50	.7	.5			12						

2.043 Zn
7.4 Zn/g
1 m

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GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Hole No. AP 9 | Co ord. | Horizontal Length | Date Completed

Claim No. | Core Size | Drilled By

Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET (METRES)	NUMBER	WIDTH	Au. ppb	Ag. ppm	Cu. ppm	Zn. ppm	As ppm	WIDTH X ASSAY						AVERAGES WIDTH	Au.	Ag.	Cu.	Zn.	
228.40 - 228.90	2125-G	0.50	16	.5			14												
228.90 - 229.40	2126-G	0.50	3	.4			17												
229.40 - 229.90	2127-G	0.50	9	.7			40												
229.90 - 230.40	2128-G	0.50	11	.7			49												
230.40 - 230.70	2129-G	0.30	6	.2			6												
230.70 - 231.20	2130-G	0.50	9	.3			7												
231.20 - 231.50	2131-G	0.30	5	.1			2												
231.50 - 231.80	2132-G	0.30	2	.1			5												
231.80 - 232.30	2133-G	0.50	16	2.1			55												
232.30 - 232.80	2134-G	0.50	14	1.3			47												
232.80 - 233.30	2135-G	0.50	1	.6			37												
233.30 - 233.80	2136-G	0.50	3	.4			33												
233.80 - 234.10	2137-G	0.30	10	.5			36												
234.10 - 234.80	2138-G	0.70	16	1.0			37												
234.80 - 235.50	2139-G	0.70	8	.7			33												
235.50 - 237.13	2140-G	1.63	7	.6			41												
237.13 - 238.05	2141-G	0.92	7	.6			24												
HOLE ABANDONED																			

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GRANGES EXPLORATION LTD.

DIAMOND DRILL LOG

Page 1 of 9

Hole No. AP10 | Co ord. 1600 N | 198.12m | Horizontal Length 140 m | Date Completed SEPT 3/90 – SEPT 5/90

Claim No. UNUK 26 | 075W | Core Size BGBDM | Drilled By J.T. THOMAS

Grid No. ZONE 1 | Angle & Direction -45° / 282° | Elevation 1250m | Logged By B. GIABOURY

INTERVAL FEET (METRES)	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
0 - 11.28	Casing.								
11.28 - 13.60	Volcanic Mudstone / Debris Flow ~ 20% angular, felsic to intermediate volcanic clasts up to 5 mm dia in a dark argillaceous matrix. Entire section is a fault zone with ~ 30% core recovery C.A. 13.55 m : 75° weak foliation.								
13.60 - 95.85	Altered welded Dacite ash - lapilli Tuff. a mottled, medium grey (N5) to greenish grey (5GY 6/1) felsic to intermediate volcanic fragmental containing irregular bleached 3-5 cm wide patches which appear to be ghost fragments. These became more pronounced downhole. Has a weak fabric by virtue of alignment of lensoid sericitic/chloritic schlieren (fiamme). In the upper portions of the unit are coarse carbonate clots (± coarse py blebs) with chloritic selvages. Occassional feldspar-phyric sections with lathe-like xtals up to 3 mm long often semi-parallel to fabric. The rock is centrally moderately well silicified & sericitized and contains on average of ~2% py. It contains brecciated intervals with abundant haphazardly oriented chloritic fractures, occassionally with peripheral bleaching & pyrite mineralization. 13.60 - 15.10 : bleached & silicified interval with 2-4% py in chl/py vnlts or as small blebs rimmed with chl. C.A. 14.00m : 44° fabric (bedding?)								

GEOLOGICAL BRANCH
ASSESSMENT REPORT

20,390

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Hole No. AP 10 | Co ord. | Horizontal Length | Date Completed
Claim No. | | Core Size | Drilled By
Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET (METRES)	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	18.74 - 20.88 : brecciated interval with abundant haphazardly oriented rehealed chloritic fractures & 2-4% py as coarse blebs or stringers associated with chloritic fractures.								
	21.38 - 22.30 : Fault ; rubbly core & clayey gouge.								
	32.15 - 32.65 : 2-3% coarse py, chloritic stgrs.								
	38.71 - 39.21 : 2-3% py, chloritic stgrs.								
	C.A. 28.80 m : 45° fabric.								
	C.A. 33.50 m : 50° weak fabric								
	C.A. 43.00 m : 48° weak fabric								
	56.70 - 57.30 : minor fault ; crushed, broken core, minor bleaching & chloritic fractures.								
	C.A. 57.30 : 60° fabric								
	C.A. 62.30 : 55° fabric								
	68.40 - 69.36 : moderately intense brecciation ; irregular chloritic stgrs at core angles generally ≥ 45° plus irregular carbonate blebs (fracture infillings), contains 3-5% py overall.								
	69.36 - 72.24 : very mildly bleached interval ; whitish envelopes around sericitic/chloritic ghost pumice fragments.								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

page 3 of 9

Hole No. AY10 | Co ord. | Horizontal Length | Date Completed
Claim No. | | Core Size | Drilled By
Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET (METRES)	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	72.64 - 73.60 : crushed & mildly sheared & sericitized interval with 3-5% fine disseminated py; core angles appear to be ≥ 55°.								
	73.60 - 80.10 : mildly brecciated interval with randomly oriented chl/py fractures; overall contains ~ 2-4% py mainly in or peripheral to chloritic stgrs or as coarse blebs in minor carbonate masses (fracture infillings). brecciation is most intense between 74.12 - 74.80 (5-7% py)								
	C.A. 77.40 m : 45° fabric (bedding)								
	87.36 - 89.20 : brecciated interval with numerous randomly oriented chl-py stgrs, overall carries 3-5% py								
	87.89 - 89.20 : 30% core recovery								
	C.A. 90.00 m : ~65° fabric (bedding)								
	C.A. 93.00 m : 57° fabric (bedding)								
95.85 - 117.12	Dacitic Pyroclastic Breccia / Lapilli Tuff.								
	A medium light grey (N6) to light greenish grey (5GY 8/1) coarse dacitic fragmental volcanic rock composed of subrounded to angular fragments up to at least 5cm dia. in a finer grained lightly sericitic volcanic ash groundmass (generally always matrix supported). Rock is mildly to non-silicified, mildly sericitized and contains 2-3% py, overall, as disseminations & as								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Hole No. AP 10 | Co ord. | Horizontal Length | Date Completed
Claim No. | | Core Size | Drilled By
Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.

occassional stringers up to 5 mm wide. Matrix color becomes pinkish grey (5YR 8/1) below 102.41). Lapilli content becomes notably depleted below ~110.0 m.

95.85 - 102.41 : Brecciated Interval ; a variably brecciated interval containing fairly abundant, haphazardly oriented chl-py stringers plus some occassional irregular qtz-py veins up to ~1 cm wide. Rock is mildly to moderately silicified and the bleached (lighter colored) intervals are mildly to moderately sericitized. Overall contains 3-5% py as dissems & in chl-py stgrs :

96.32 - 98.00 : Fault Zone ; rubbly core — 20% core recovery

98.80 - 100.50 : Fault Zone ; more intensely brecciated interval with ~5% py ; includes a crushed interval from 99.30 - 99.57 with 5-7% py & a rubbly interval with 60% core recovery from 99.67 - 100.50.

101.17 - 101.50 : 5% py mainly in chl-qtz-py stgrs.

102.00 - 102.41 : 5% py as stgrs in bleached interval.

C.A. 101.50 m : 58° very crude fabric.

108.81 - 109.10 : bxed, pyritic healed shear w 5-7% py, tr sph, CA ~ 42°

111.00 - 112.60 : FAULT ZONE ; rubbly, broken core plus clayey gouge, no visible alteration or change in sulfide content.

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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Hole No. AP 10 | Co ord. | Horizontal Length | Date Completed
Claim No. | Core Size | Drilled By
Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	114.42 – 114.75 : brecciated interval with abundant randomly oriented chlorite – pyrite stringers ; overall ~5% py.								
	114.75 – 115.50 : Fault Zone ; bleached, rubbly core plus white gouge, 3–5% py as disseminations ; in occassional stringers.								
	115.50 – 116.12 : numerous pyritic stringers & open py – qtz crystal lined fractures at ~45° to core axis, overall 3–5% py.								
	116.12 – 117.12 : brecciated interval with one 7cm wide qtz – py vein at ~40° to core axis (∥ to fabric), abundant randomly oriented py ± chl stgrs (although many are concordant with fabric). Overall 7–10% py plus tr–1% resinous brown sphalerite in qtz – py vein								
	C.A. 117.12 m : 50° fabric								
117.12 – 163.07	Welded Dacite Ash-Lapilli Tuff.								
	a generally more greenish to olive grey colored dacitic volcaniclastic rock demonstrating less silicification and more sericitization than that encountered in the interval 13.60 – 95.85. Otherwise fragment content, composition and general fabric is similar:								
	117.56 – 117.96 : mildly brecciated interval, with ≤1cm wide qtz – py veinlet with tr sph, overall contains 4–6% py mainly in randomly oriented chl – py stringers.								
	C.A. 118.30 m : ~50° fabric.								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Hole No. AP 10 | Co ord. | Horizontal Length | Date Completed
Claim No. | | Core Size | Drilled By
Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	119.1 - 123.0 : mildly brecciated & silicified with 3-5% py as disseminations & in randomly oriented stringers (± chl) :								
	119.1 - 120.1 : numerous carb - py (tan to dirty grey colored) vnlts, ~ 40° to 45° to core axis, up to 5 cm wide.								
	121.85 - 123.0 : 5% py in a somewhat more brecciated interval.								
	123.0 - 138.40 : FAULT ZONE ; rubbly, broken core & gouge intervals, rock is locally mildly bleached & sericitized & contains 2-4% py :								
	125.55 - 126.19 : interflow volcanic mudstone; dacitic fragments up to 1cm diameter in a somewhat argillaceous/sericitic matrix								
	126.19 - 128.02 : broken core plus 22 cm of clayey gouge, ~60° core recovery								
	128.02 - 134.60 : broken, rubbly core, contains 2-4% py mainly in randomly oriented py ± chl stringers.								
	134.60 - 136.30 : broken, rubbly core with 3-5% py as stringers, blebs & disseminations (up to 6-8% py in somewhat more bleached and sericitized interval from 135.94 - 136.30 m)								
	CA. 134.80 m : 65° fabric								
	CA. 132.10 m : ~70° fabric								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Hole No. AP 10 | Co ord. | Horizontal Length | Date Completed
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INTERVAL FEET (METRES)	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	138.40 - 156.20 : rock becomes more greenish to olive grey colored, with more sericitization & better fabric development; contains occassional brecciated intervals with fracture infilling by a dark colored chl/py (?) matrix. Brecciated intervals, although displaying random fracture orientation, possess one fracture set oriented // to fabric.								
	C.A. 145.39 m : 45° fabric								
	C.A. 152.00 m : 40° fabric.								
	156.20 - 163.07 : sericitization increases from mild to moderately strong toward bottom contact. Pyrite content averages 1-3% py & occurs mainly as disseminations, blebs & schlieren:								
	162.05 - 163.07 : intense sericitization & bleaching to a light olive color.								
	C.A. 157.50 m : 50° fabric								
	C.A. 160.20 m : 40° fabric								
	C.A. 162.80 m : 34° fabric / shearing.								
163.07 - 198.12	Volcanic Mudstone (Debris Flow) with black argillite & siltstone interbeds								
	A coarse volcanic fragmental composed of up to 35% subrounded to angular andesitic to dacitic fragments up to ~ 2cm diameter in a black argillite matrix. Fragments display minor to intense sericitization,								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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Hole No. AP 10 | Co ord. | Horizontal Length | Date Completed
Claim No. | | Core Size | Drilled By
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INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	depending on degree of shearing, overall 1–2% fine dissem. py & very minor concordant qtz–carb vnlts. Interval containing black argillite or lighter colored coarser grained silty interbeds varying from ~3cm diameter to several metres.								
	CA 165.00 m : 50° bedding / fol.								
	CA 167.00 m : 47° "								
	CA 171.80 m : 67° "								
	CA 175.00 m : 65° "								
	175.57 – 186.50 : Fault; broken, splintery core plus several clayey / graphitic gouge intervals								
	176.10 – 177.20 : brecciated with 10–20% irregular, anastomosing qtz stkwks (generally ≤ 4mm wide), overall ≤ 2% py., broken core & minor gouge								
	177.20 – 177.55 : mainly clayey gouge plus broken core								
	177.55 – 178.82 : sheared black argillite with ~10% fine concordant white qtz–py vnlts (~2% py overall)								
	C.A. 177.80 m : 52° fol / shearing.								
	186.50 – 188.12 : olive-colored, sheared tuffaceous interval, moderately sericitized, < 2% py overall.								
	C.A. 187.70m : 60° fabric.								
	190.65 – 191.46 m : olive colored, moderately well sericitized, tuffaceous interval, 10% irreg. qtz vnlts up to 5mm dia at variable CA's, < 2% py.								
	CA. 189.0 m : 85° bedding / fabric.								

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INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	191.96 - 198.12 : Fault ; splintery broken core (black graphitic argillite) plus clayey graphitic gouge.								
198.12	End of Hole								
	Acid tests :								
	61.00 m : 44° corrected								
	122.0 m : 44° corrected								
	183.0 m : 42.5° corrected.								

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Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET (METRES)	NUMBER	WIDTH	Au. ppb	Ag. ppm	Cu	Zn.	Zs ppm	WIDTH X ASSAY						AVERAGES					
														WIDTH	Au.	Ag.	Cu	Zn.	
0.00 - 11.28	CASING	11.28	—	—	—	—	—												
11.28 - 12.43	2142-G	1.15	8	1.3			34												
12.43 - 13.60	2143-G	1.17	9	.8			31												
13.60 - 14.10	2144-G	0.50	67	.3			79												
14.10 - 14.60	2145-G	0.50	100	.4			145												
14.60 - 15.10	2146-G	0.50	52	.4			85												
15.10 - 15.60	2147-G	0.50	10	.2			23												
15.60 - 18.74	WASTE	3.14	—	—	—	—	—												
18.74 - 19.24	2148-G	0.50	11	.3			16												
19.24 - 19.74	2149-G	0.50	12	.3			19												
19.74 - 20.24	2150-G	0.50	10	.1			9												
20.24 - 20.88	2151-G	0.64	29	.5			18												
20.88 - 21.38	2152-G	0.50	10	.3			9												
21.38 - 21.85	2153-G	0.47	3	.2			8												
21.85 - 22.30	2154-G	0.45	52	.4			14												
22.30 - 22.80	2155-G	0.50	11	.2			3												
22.80 - 32.15	WASTE	9.35	—	—	—	—	—												
32.15 - 32.65	2156-G	0.50	6	.3			14												
32.65 - 33.15	2157-G	0.50	29	.4			29												
33.15 - 38.21	WASTE	5.06	—	—	—	—	—												
38.21 - 38.71	2158-G	0.50	6	.2			18												
38.71 - 39.21	2159-G	0.50	19	.3			21												
39.21 - 43.50	WASTE	4.29	—	—	—	—	—												
43.50 - 44.00	2160-G	0.50	10	.2			78												
44.00 - 44.50	2161-G	0.50	4	.2			9												
44.50 - 56.20	WASTE	11.70	—	—	—	—	—												
56.20 - 56.70	2162-G	0.50	5	.2			3												
56.70 - 57.30	2163-G	0.60	19	.4			7												
57.30 - 57.80	2164-G	0.50	48	.4			11												
57.80 - 68.40	WASTE	10.60	—	—	—	—	—												
68.40 - 68.88	2165-G	0.48	12	.8			6												
68.88 - 69.36	2166-G	0.48	3	.3			5												
69.36 - 69.80	2167-G	0.44	4	.2			3												
69.80 - 70.24	2168-G	0.44	1	.2			2												
70.24 - 70.74	2169-G	0.50	1	.3			2												
70.74 - 71.24	2170-G	0.50	4	.1			4												
71.24 - 71.74	2171-G	0.50	5	.4			5												
71.74 - 72.24	2172-G	0.50	1	.1			14												
72.24 - 72.64	2173-G	0.40	2	.5			9												
72.64 - 73.60	2174-G	0.96	15	.7			1005												

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DIAMOND DRILL RECORD

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Claim No. | Core Size | Drilled By

Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET/METRES	NUMBER	WIDTH	Au. ppb	Ag. ppm	Cu	Zn	Tts ppm	WIDTH X ASSAY	AVERAGES WIDTH	Au.	Ag.	Cu.	Zn.
73.60 - 74.12	2175-G	0.52	3	.4			58						
74.12 - 74.47	2176-G	0.35	5	.5			89						
74.47 - 74.80	2177-G	0.33	1	.3			20						
74.80 - 75.20	2178-G	0.40	1	.3			9						
75.20 - 75.50	2179-G	0.30	6	.4			4						
75.50 - 76.00	2180-G	0.50	6	.5			10						
76.00 - 76.50	2181-G	0.50	1	.2			7						
76.50 - 77.00	2182-G	0.50	6	.2			7						
77.00 - 77.50	2183-G	0.50	1	.1			8						
77.50 - 78.00	2184-G	0.50	5	.4			9						
78.00 - 78.60	2185-G	0.60	13	.4			13						
78.60 - 79.10	2186-G	0.50	7	.3			9						
79.10 - 79.60	2187-G	0.50	11	.2			10						
79.60 - 80.10	2188-G	0.50	12	.3			12						
80.10 - 86.86	WASTE	6.76	—	—	—	—	—						
86.86 - 87.36	2189-G	0.50	7	.5			9						
87.36 - 87.89	2190-G	0.53	16	.5			6						
87.89 - 89.20	2191-G	1.31	16	.9			8						
89.20 - 89.70	2192-G	0.50	4	.4			7						
89.70 - 94.15	WASTE	4.45	—	—	-	-	—						
94.15 - 94.85	2193-G	0.70	7	.3			10						
94.85 - 95.35	2194-G	0.50	7	.3			12						
95.35 - 95.85	2195-G	0.50	4	.1			2						
95.85 - 96.32	2196-G	0.47	11	.7			12						
96.32 - 98.00	2197-G	1.68	5	.4			11						
98.00 - 98.35	2198-G	0.35	5	.8			40						
98.35 - 98.80	2199-G	0.45	9	.5			16						
98.80 - 99.30	2200-G	0.50	12	.6			12						
99.30 - 99.57	2202-G	0.27	113	.8			22						
99.57 - 100.10	2203-G	0.53	1	.3			7						
100.10 - 100.55	2204-G	0.45	13	.9			19						
100.55 - 101.17	2205-G	0.62	6	.6			11						
101.17 - 101.50	2206-G	0.33	12	1.0			15						
101.50 - 102.00	2207-G	0.50	10	.7			6						
102.00 - 102.41	2208-G	0.41	6	.6			12						
102.41 - 108.31	WASTE	5.90	—	—	—	—	—						
108.31 - 108.81	2209-G	0.50	14	.6			9						
108.81 - 109.10	2210-G	0.29	27	.9			12						
109.10 - 109.60	2211-G	0.50	6	.7			17						
109.60 - 110.10	2212-G	0.50	33	.3			8						

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GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD

Hole No. AP 10 | Co ord | Horizontal Length | Date Completed

Claim No. | Core Size | Drilled By

Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET (METRES)	NUMBER	WIDTH	Au. ppb	Ag ppm	Cu.	Zn.	Ppm	WIDTH X ASSAY	AVERAGES WIDTH	Au.	Ag.	Cu.	Zn.
110.10 - 113.92	WASTE	3.82											
113.92 - 114.42	2213-G	0.50	1	.7			107						
114.42 - 114.75	2214-G	0.33	121	1.4			239						
114.75 - 115.08	2215-G	0.33	63	.6			149						
115.08 - 115.50	2216-G	0.42	499	.9			5171						
115.50 - 116.12	2217-G	0.62	244	.8			1787						
116.12 - 116.62	2218-G	0.50	49	.6			180						
116.62 - 117.12	2219-G	0.50	218	1.3			1563						
117.12 - 117.56	2220-G	0.44	21	.6			62						
117.56 - 117.96	2221-G	0.40	35	.7			111						
117.96 - 118.46	2222-G	0.50	18	1.0			99						
118.46 - 119.10	WASTE	0.64											
119.10 - 120.10	2223-G	1.00	53	1.0			60						
120.10 - 121.10	2224-G	1.00	17	.5			22						
121.10 - 121.85	2225-G	0.75	12	.6			23						
121.85 - 123.00	2226-G	1.15	12	.8			31						
123.00 - 124.05	2227-G	1.05	23	1.3			39						
124.05 - 125.20	2228-G	1.15	10	.6			18						
125.20 - 134.60	WASTE	9.40											
134.60 - 135.60	2229-G	1.00	50	.4			57						
135.60 - 136.30	2230-G	0.70	41	.4			17						
136.30 - 160.00	WASTE	23.70											
160.00 - 160.93	2231-G	0.93	24	.7			17						
160.93 - 162.05	2232-G	1.12	20	.7			20						
162.05 - 163.07	2233-G	1.02	4	.3			6						
163.07 - 164.20	2234-G	1.13	28	2.1			30						
164.20 - 165.20	2235-G	1.00	18	2.0			42						
165.20 - 176.10	WASTE	10.90											
176.10 - 177.20	2236-G	1.10	42	3.5			36						
177.20 - 177.55	2237-G	0.35	7	1.9			33						
177.55 - 178.82	2238-G	1.27	15	2.9			29						
178.82 - 179.32	2239-G	0.40	19	.8			25						
179.32 - 186.50	WASTE	7.28											
186.50 - 187.50	2240-G	1.00	1	.4			2						
187.50 - 188.12	2241-G	0.62	3	.6			3						
188.12 - 190.65	WASTE	2.53											
190.65 - 191.46	2242-G	0.81	9	.2			7						
1914.6 - 198.12	waste	6.66											
198.12	EOH												

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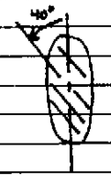
141.12m SEPT 7/90

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

1 OF 9

Hole No. AP-11 | Co ord. 1600N | Horizontal Length | Date Completed SEPT 8/90
Claim No. UNUK 26 | 003W | Core Size BG, BDM | Drilled By J.T. THOMAS
Grid No. ZONE 1 | Angle & Direction -45°/Az 282 | Elevation 1208 m | Logged By B. BORNTRAEGER

INTERVAL FEET (METRES)	DESCRIPTION
0 - 9.75	CASING
9.75 - 42.90	ALTERED DIABASE DYKE WITH HYDROTHERMALLY ALTERED AND BRECCIATED LOWER CONTACT
	- MASSIVE, VERY FINE GRAINED (vfg), GREENISH GREY (5 GY 6/1) TO GREENISH BLACK (5GY 4/1), INTRUSIVE IGNEOUS ROCK, MILDLY BRECCIATED & FRACTURED WITH TENSIONAL QTZ-CARB VEINLETS UP TO 2 cm WIDE AT VARIABLE CORE ANGLES (SOME FILLED WITH PINK Mn-CALCITE), LARGER QTZ VEINLETS HAVE CHLORITE SELVAGES.
	- OVERALL COLOR BECOMES LIGHTER DOWN THE HOLE
	- < 1% DISS. py OVERALL + ISOLATED QTZ-CARB VEINLETS w/ py BLEBS
	9.75 - 14.00 POOR CORE RECOVERY ≈ 40-50%; RUBBLY - SLIGHTLY MAGNETIC
	18.53 - 18.90 MODERATE CHLORITE FOLIATION @ 80-90° TO C.A.
	27.82 - 28.35 SHEAR ZONE INTENSE FOLIATION @ 60-75° TO C.A. @ 28.16 - 28.21 FAULT GOUGE FROM 28.25 - 28.35
	31.14 SLICKENSIDES ON QTZ/CARB VEIN (2cm WIDE) - VEIN CONTACTS C.A. ≈ 50° - WELL DEVELOPED CHLORITE MINERAL LINEATIONS
	 SLICKENSIDES TREND 40° FROM VERTICAL PLANE THROUGH CORE AXIS
	38.11 - 39.11 SERICITIZED DIABASE DYKE - WALL ROCK OF HYDROTHERMALLY BRECCIATED LOWER CONTACT
	39.11 - 40.04 INCREASE IN SILICIFICATION TOWARDS HYDROTHERMALLY BRECCIATED LOWER CONTACT

SAMPLE RECORD							
FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.

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GRANGES EXPLORATION LTD.

DIAMOND DRILL LOG

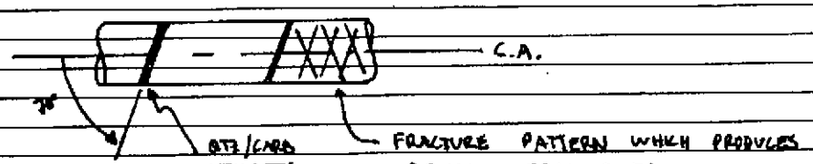
2 OF 9

Hole No. AP-11 Co ord. Horizontal Length Date Completed

Claim No. Core Size Drilled By

Grid No. Angle & Direction Elevation Logged By

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
40-04 - 40-16	HYDROTHERMALLY ALTERED AND BRECCIATED LOWER CONTACT OF DIABASE DYKE								
	- PERVASIVE SERICITIZATION OF FRAGMENTS WITH A SURROUNDING BLEACHED RIND								
	- 1-3 % FINE GRAINED (f.g.) py ALONG FRACTURES								
40-16 - 40-38	QTZ / CARB VEIN 10 cm WIDE WITH SILICIFIED BRECCIA FRAGMENTS ALONG BOTH CONTACTS OF THE VEIN								
	- INCREASE IN SILICIFICATION AS YOU APPROACH THE VEIN								
	- VEIN CONTACTS HAVE C.A.'s OF 55-60°								
	SX'S								
	- py (5-10%) OCCURS AS DISS, BLEBS AND ALONG FRACTURE SURFACES								
	- TR OF gn, sl & asp								
	- SX'S CONCENTRATED ALONG CONTACTS / SELVAGES OF QTZ / CARB VEIN.								
40-38 - 40-82	HYDROTHERMALLY ALTERED BRECCIA WITH QTZ / CARB VEINLETS UP TO 1 cm WIDE. (S.A. 40-04 - 40-16)								
	- C.A.'S RANGE FROM 50-70°								
	SX'S								
	- 1-5 % py AS DISS., AND BLEBS ALONG FRACTURES SURROUNDING BRECCIA FRAGMENTS AND ALONG SELVAGES OF QTZ / CARB VEINLETS								



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GRANGES EXPLORATION LTD.

DIAMOND DRILL LOG

3 OF 9

Hole No. AP 11 | Co ord. | Horizontal Length | Date Completed

Claim No. | Core Size | Drilled By

Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET (METRES)	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	40-82 - 41-29 HYDROTHERMALLY ALTERED BRECCIATED LOWER CONTACT w/ QTZ/CARB VEINLETS UP TO 0.3 cm WIDE (S.A. 40-04 - 40-16) - C.A.'s ≈ 80-90° - 1-5 % py AS DISS AND BLEBS ALONG FRACTURE SURFACES								
	41-29 - 42-12 THIN HORIZON OF VOLCANOCLASTIC MUDSTONE GRADING INTO A "POKER CHIP CLEAVAGE" MUDSTONE - BOTH CONTACTS HAVE BEEN CARBONATE ALTERED - FRAGMENTS IN VOLCANOCLASTIC MUDSTONE ARE SUB-ANG - ANG UP TO 0.7 cm ACROSS AND HAVE BEEN REPLACED BY CARBONATE - 1 py VEINLET 0.3 cm WIDE CONSISTING OF f.g. py. C.A. ≈ 55° - C.A.'s IN VOLC. MUDSTONE ≈ 50-60° - C.A.'s IN POKER CHIP CLEAVAGED MUDSTONE ≈ 80-90°								
	42-12 - 42-90 HYDROTHERMALLY ALTERED BRECCIATED LOWER CONTACT OF DIABASE DYKE (S.A. 40-04 - 40-16) - QTZ/CARB VEIN ≈ 3cm WIDE U. CONTACT C.A. ≈ 45° L. CONTACT C.A. ≈ 60° SX'S - 5-7 % py AS DISS, BLEBS AND FRACTURE INFILLINGS - TR sl, gn, asp								
42-90 - 43-00	SHEAR ZONE ALONG CONTACT BETWEEN ALTERED DIABASE DYKE AND MUDSTONE - MUDSTONE STRONGLY SHEARED w/ CARBONATE INFILLING								
43-00 - 46-82	LOST CORE (MUDSTONE w/ BLEBS OF V.f.g. DISS py.)								

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GRANGES EXPLORATION LTD.

DIAMOND DRILL LOG

Hole No. AP 11 | Co ord. | Horizontal Length | Date Completed

Claim No. | Core Size | Drilled By

Grid No. | Angle & Direction | Elevation | Logged By

4 OF 9

INTERVAL FEET (METRES)	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
46-82 - 67-93	BLACK MUDSTONE WITH INTERCOLLATED ZONES / HORIZONS OF GREYWACKE AND VOLCANOCLASTIC MUDSTONE.								
	BLACK v.f.g. MUDSTONE w/ INTERBEDDED LAYERS OF GREYWACKE AND VOLCANOCLASTIC MUDSTONE UP TO 2cm THICKNESS, BUT RARELY EXCEEDING 0-20 cm THICKNESS. CARBONATE VEINLETS OCCUR IN THE MUDSTONE @ IRREGULAR C.A.'S AND CAN BE UP TO 0.5cm WIDE. OVERALL COLOR IS BLACK WITH THE GREYWACKE HORIZONS APPEARING AS BLACK AND WHITE SPECKLED LAYERS. OVERALL < 2% f.g. DISS py HOWEVER THE CONCENTRATION OF py INCREASES UP TO 2-5% IN THE GREYWACKE AND VOLC. MUDSTONE LAYERS.								
	48.90 - 51.23 BLACK MUDSTONE w/ "POKER CHIP CLEAVAGE" AND THIN BANDS (< 10cm WIDE) OF BLACK SHEARED, FAULT GOUGE CORE RECOVERY ≈ 70-90% C.A.'s ≈ 75 - 85°								
	52.37 1.0 cm WIDE CARB. BRECCIA w/ 1-2% py ALONG SELVAGES AS DISSEMINATIONS C.A. 80°								
	53.08 - 59.13 SHEAR ZONE IN MUDSTONE • FAULT GOUGE • POOR RECOVERY 20-80%								
	59.60 - 59.80 SHEAR ZONE w/ CARB VEINLETS UP TO 0.2 cm WIDE C.A's ≈ 70° • DEVELOPEMENT OF FAULT GOUGE ON FRACTURE SURFACES • CORE HIGHLY FRACTURED								
	62.65 - 62.80 SHEAR ZONE w/ FAULT GOUGE								

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DIAMOND DRILL LOG

5 OF 9

Hole No. AP 11 | Co ord. | Horizontal Length | Date Completed

Claim No. | Core Size | Drilled By

Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET (METRES)	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	62.95 – 64.84 VOLCANO CLASTIC MUDSTONE								
	• V.f.g. py IN BLEBS UP TO 2 cm ACROSS								
	• FRAGMENTS SUB ANG. – ANG UP TO 2cm ACROSS – MODERATE TO INTENSE CARBONATE ALTERATION OF FRAGMENTS AS OPPOSED TO WEAK CARB ALTERATION IN MUDDY MATRIX								
	• MATRIX SUPPORTED W/ MATRIX CONSISTING OF V. f.g. BLACK MUD								
67.93 – 69.22	MODERATELY SILICIFIED / SERICITIZED FELSIC – INTERMEDIATE TUFF								
	f.g. GREENISH GREY (5G 6/1) FELSIC – INT. TUFF								
	• DEVELOPEMENT OF SERICITE THROUGOUT								
	• SILICIFICATION AND AN INCREASE IN SERICITE ALONG FRACTURED SURFACES								
	• MINOR DEVELOPEMENT OF CHLORITE ON FRACTURE SURFACES								
	• CA'S ARE VARIABLE 30 – 85° FOR FRACTURE SURFACES								
69.22 – 73.54	BLACK MUDSTONE W/ INTERCOLLATED ZONES / HORIZONS OF GREY WACKE								
	(S.A. 46.82 – 67.93)								
	CA'S FOR CARB. VEINLET 0.5 cm WIDE @ 71.75, 71.82 ≈ 80-85°								
	– LACK OF POKER CHIP CLEAVAGE								
	72.90 SHEAR ZONE								
	• FAULT GOUGE W/ f.g. DISS. py (1-2 %) CA. ≈ 70-75°								

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DIAMOND DRILL LOG

6 OF 9

Hole No. AP 11 | Co ord. | Horizontal Length | Date Completed

Claim No. | Core Size | Drilled By

Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET (METRES)	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
73-54-105-81	WELDED DACITIC ASH FLOW TUFF								

MASSIVE, f-g. GREENISH GREY (5G 6/1) TO DARK GREENISH GREY (5G 4/1) ASH FLOW TUFF. WELDED PUMICE FRAGMENTS HAVE BEEN REPLACED BY CHLORITE. SOME ACCIDENTAL LAPILLI SIZE FRAGMENTALS OCCUR UP TO 2 cm ACROSS. THESE FRAGMENTALS HAVE BEEN ALTERED TO CHLORITE OR HAVE BEEN BLEACHED. OVERALL < 2 % py AS DISS THIN (< 0.25 cm) QTZ / CARB VEINLETS OCCUPY FRACTURES AND HAVE A THIN LAYER OF FAULT GOUGE COATING THE FRACTURE SURFACE. OVERALL THE CORE IS RUBBLY AND HIGHLY FRACTURED WITH FEW PIECES OF CORE OVER 10 cm IN LENGTH. C.A.'S OF FRACTURES ARE EXTREMELY VARIABLE THROUGHOUT THIS INTERVAL.

73.54 - 73.92 MOD. SERICITE ALTERATION & SILICIFICATION AND MINOR CHLORITE DEVELOPEMENT ASSOCIATED WITH THE SILICA.

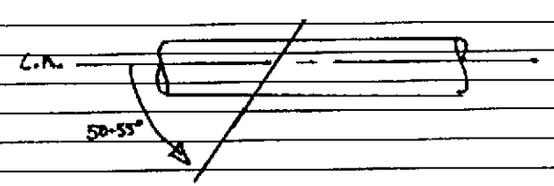
- 1-2 % f-g. DISS py.

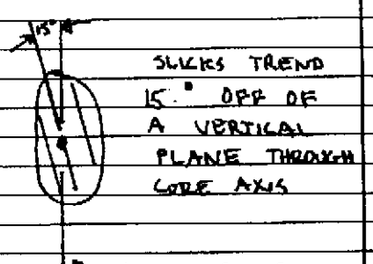
90.83 - 91.00 RUBBLY / GROUND CORE

92.35 - 92.53 FAULT GOUGE

92.70 - 96.86 RUBBLY CORE WHICH IS HIGHLY FRACTURED - CHLORITE AND FAULT GOUGE ON FRACTURE SURFACES

100-18 SLICKENSIDES ON FRACTURE SURFACE CA ≈ 50-55°





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GRANGES EXPLORATION LTD.

DIAMOND DRILL LOG

7 OF 9

Hole No. AP 11 | Co ord. | Horizontal Length | Date Completed

Claim No. | Core Size | Drilled By

Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET (METRES)	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	100.19 - 100.40 QTZ / CHLORITE FILLED EXTENSION GASHES 0.3 cm WIDE x 5 cm LONG FOLLOW ≈ C.A.								
	103.75 - 104.84 SILICIFIED TUFF W QTZ STRINGERS UP TO 0.3 cm WIDE AND PORPHYRYTIC FELOSPAR CRYSTALS UP TO 0.2 cm ACROSS								
	- f.g. py AND CHLORITE REPLACING FLATTENED PUMICE FRAGMENTS								
	- MODERATE SERICITE ALTERATION								
104.84 - 141.0	MODERATELY SERITICIZED DACITIC ASH FLOW TUFF W INTERCOLLATED ZONES OF VOLCANOCLASTIC MUDSTONES.								
	TUFF								
	DACITIC ASH FLOW ^ HORIZONS VARYING IN THICKNESS FROM 1m → 6m WITH VARYING DEGREES OF SERICITE ALTERATION. OVERALL < 1% f.g. DISS py. ACCIDENTAL MAFIC FRAGMENTS ARE SUB ANG - ANG (UP TO 0.7 cm ACROSS) AND HAVE UNDERGONE CHLORITE ALTERATION. FELSIC FRAGMENTS; SUB ANG - ANG; UP TO 0.7 cm ACROSS HAVE BEEN SERITICIZED. CA'S ARE VARIABLE								
	VOLCANOCLASTIC MUDSTONE CONTAINS SUB ANG - ANG FRAGMENTS UP TO 2 cm ACROSS OF FELSIC COMPOSITION, SUPPORTED IN A BLACK MUDDY MATRIX. ALTERATION CONSISTS OF MODERATE SILICIFICATION. OVERALL < 1% f.g. py. C.A.'S VARIABLE VOLC. MUDSTONE HAS TAKEN UP THE SHEARING.								
	110.33 - 111.57 SILICIFIED VOLC. MUDSTONE								
	- SILICIFICATION OF MATRIX - 2-3 % f.g DISS py.								
	120.00 5 cm WIDE SHEAR ZONE W FAULT GOUGE								
	120.65 - 121.31 SHEARED MUD STONE W FAULT GOUGE SHEARING @ 90° TO C.A.								
	121.66 5 cm WIDE SHEAR ZONE W FAULT GOUGE								

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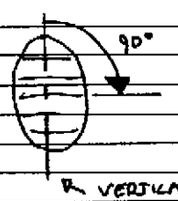
GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Hole No. AP 11 | Co ord. | Horizontal Length | Date Completed
Claim No. | | Core Size | Drilled By
Grid No. | Angle & Direction | Elevation | Logged By

8 OF 9

INTERVAL FEET (METRES)	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	121-66 – 126-99 LAPILLI SIZED VOLC. MUDSTONE								
	• BLACK MUDDY MATRIX SUPPORTED ; CLAST SIZE UP TO 2 cm ACROSS ; SUB ANG – ANG.								
	• SERICITIZED FELSIC FRAGMENTS								
	126-99 – 131-79 COARSE FRAGMENTAL VOLC. MUDSTONE								
	• f.g. MUDDY MATRIX WITH AN INCREASE IN f.g. VOLCANIC ASH DOWN THE HOLE.								
	• CLASTS ARE SERITICIZED AND FELSIC IN COMPOSITION SUB ANG – ANG ; UP TO 8 cm ACROSS								
	• SERICITE ALTERATION INCREASES DOWN THE HOLE								
	< 5cm WIDE FRACTURE SURFACES w/ FAULT GOUGE								
	@ 129-39, 131-08, 131-11 CA'S ≈ 70-80°								
	SLICKENSIDES @ 131-11 CA ≈ 75°  90° SLICKS ARE 70° FROM A VERTICAL PLANE THROUGH CORE AXIS R VERTICAL PLANE								
	131-79 – 141-12 MODERATELY SERICITIZED LAPILLI DACITE TUFF GRADING INTO A MODERATELY SERICITIZED DACITE ASH FLOW TUFF								
	• LAPILLI SIZED FRAGMENTS ARE MOD.– INT. SERICITIZED ; REMNANT TEXTURES, GHOST FRAGMENTS								
	• FRAGMENT SIZE DECREASES DOWN HOLE								

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DIAMOND DRILL LOG

Hole No. AP 11 | Co ord. | Horizontal Length | Date Completed

Claim No. | | Core Size | Drilled By

9 OF 9 | Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET (METRES)	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	C.A.'s VARIABLE BUT SHALLOWING OUT DOWN HOLE								
	135-48 = 80-85°								
	138-40 = 35°								
	140·35 = 20°								
	140·90 = 15-20°								
141·12	EOH								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD

Hole No. AP 11 | Co ord. | Horizontal Length | Date Completed

Claim No. | Core Size | Drilled By

Grid No. | Angle & Direction | Elevation | Logged By

INTERVAL FEET (METRES)	NUMBER	WIDTH	Au. ppb	Ag. ppm	Cu. ppm	Zn. ppm	Pb ppm	WIDTH X ASSAY						AVERAGES WIDTH	Au.	Ag.	Cu.	Zn.
0.00 - 9.75	CASING	9.75	—	—	—	—	—											
9.75 - 38.11	WASTE	28.36	—	—	—	—	—											
38.11 - 39.11	2243-G	1.00	18	.1	7	126	17											
39.11 - 40.04	2244-G	0.93	21	.2	7	187	17											
40.04 - 40.16	2245-G	0.12	13	1.9	19	240	21											
40.16 - 40.38	2246-G	0.22	839	4.2	36	8123	765											
40.38 - 40.82	2247-G	0.44	277	2.0	17	133	59											
40.82 - 41.29	2248-G	0.47	53	2.8	31	223	45											
41.29 - 42.12	2249-G	0.83	38	1.8	29	436	27											
42.12 - 42.90	2250-G	0.78	72	2.7	77	447	509											
42.90 - 66.93	WASTE	24.03	—	—	—	—	—											
66.93 - 67.93	2251-G	1.00	69	4.5	30	119	50											
67.93 - 68.65	2252-G	0.72	11	.6	10	130	9											
68.65 - 69.22	2253-G	0.57	135	1.0	14	104	18											
69.22 - 70.22	2254-G	1.00	88	2.1	27	102	33											
70.22 - 72.54	WASTE	2.32	—	—	—	—	—											
72.54 - 73.54	2255-G	1.00	98	5.4	40	175	52											
73.54 - 73.92	2256-G	0.38	26	.5	16	124	12											
73.92 - 74.92	2257-G	1.00	22	.5	8	131	13											
74.92 - 104.82	WASTE	29.90	—	—	—	—	—											
104.82 - 105.90	2258-G	1.08	47	.4	7	88	3											
105.90 - 106.70	2259-G	0.80	39	.6	16	90	8											
106.70 - 107.30	2260-G	0.60	33	.4	4	125	8											
107.30 - 108.00	2261-G	0.70	10	.4	8	122	8											
108.00 - 108.51	2262-G	0.51	6	.3	11	100	15											
108.51 - 109.55	2263-G	1.04	5	.3	9	77	12											
109.55 - 110.33	2264-G	0.78	1	.2	5	38	14											
110.33 - 111.29	2265-G	0.96	1	.2	6	63	13											
111.29 - 111.73	2266-G	0.44	8	.1	8	74	9											
111.73 - 112.00	2267-G	0.27	1	.3	9	124	10											
112.00 - 113.00	2268-G	1.00	1	.4	7	91	10											
113.00 - 141.12	EOH	28.12																

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DIAMOND DRILL LOG

Property: UNUK K | Project No. 134 | Depth 138.68 m | Date began
Hole No. AP 12 | Co ord. 1240 N | Horizontal Length | Date Completed SEPT 9/90
Claim No. UNUK 26 | 094W | Core Size BGBDM | Drilled By J.T. THOMAS
Grid No. ZONE 1 | Angle & Direction -45°/Az 240 | Elevation 1244 m | Logged By B. GABOURY

INTERVAL FEET (METRES)	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
0 - 3.96	Casing								
3.96 - 35.05	Fossiliferous Greywacke A medium dark to dark grey (N4 - N3) siltstone/arenite with white carbonate pelecypod casts plus occassional intervals with darker colored wispy finer grained, subangular clasts (argillite or chloritized volcanic fragments) up to ~ 2cm diameter. The rock has a very weak fabric probably indicative of bedding. Overall it contains ≤ 1% pyrite plus minor blocky, rubbly intervals (faults). It generally becomes finer grained downhole: 8.05 - 14.33 : Fault ; rusty rubbly core & clayey gouge ; 30% core recovery. 23.00 - 29.57 : Fault ; broken core & gouge, 45-50% core recovery.								
35.05 - 37.00	Andesite Dike A medium fine grained, massive, medium grey (N5) to greenish grey (5G 6/1) igneous rock with ≤ 1% pyrite as disseminations and as blebs in occassional quartz - carbonate veinlets up to ~ 3 mm in diameter. The hostrocks at both contacts is brecciated and contains minor accumulations of pyrite. There is a dominant fracture/carbonate veinlet set at ~ 45° to the core axis in the centre of the vein. C.A. 17.80 m : 68° fabric (bedding) C.A. 20.80 m : 63° fabric (bedding) C.A. 32.40 m : 65° fabric C.A. 35.05 m : 15° contact.								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No ..... Depth ..... Date Began .....
Hole No. AP 12 Co ord. ..... Horizontal Length ..... Date Completed .....
Claim No. ..... Core Size ..... Drilled By .....
Grid No. ..... Angle & Direction ..... Elevation ..... Logged By .....

INTERVAL FEET/METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
37.00 - 54.00	Interbedded Black Argillite & Greywacke.								

A fine grained massive black argillaceous rock containing brecciated intervals where breccia infilling material is arenaceous greywacke. The argillite contains ~1% pyrite usually as blebs or in thin randomly oriented quartz-carbonate veinlets up to ~1 cm wide (often attiliated with minor shearing & brecciation. Brecciated portions with the greywacke void/fracture filling occur as matrix supported breccias up to 30 cm in length with very angular argillite fragments up to several cm in dia. They appear to generally trend with the fabric (bedding?)

37.00 - 39.10 : interval containing 3-5% very fine quartz-pyrite veinlets generally at 55-60° to core axis.

C.A. 40.20 m : 60° fabric
C.A. 44.00 m : 43° fabric
C.A. 46.80 m : 42° fabric
C.A. 50.00 m : 45° fabric.

54.00 - 69.66	Interbedded Tuffaceous Mudstone (Debris Flow) & Black Argillite								

An interval similar to the previously described one except there is ~30% intercalations of tuffaceous mudstone. This material is composed of up to 50% subrounded to angular dacitic to andesitic fragments up to ~20 cm diameter in an argillaceous matrix.

54.00 - 56.60 : Fault; sheared argillite & debris flow with 15-20% fine generally concordant quartz-carbonate - pyrite stringers up to 2 cm wide. Generally contains 4-6% fine disseminated pyrite plus pyrite blebs in quartz veinlets. Gouge seam from ~ 54.45 - 55.30 m.

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No. ..... Depth ..... Date Began .....
Hole No. AP 12 Co ord. ..... Horizontal Length ..... Date Completed .....
Claim No. .... Core Size ..... Drilled By .....
Grid No. ..... Angle & Direction ..... Elevation ..... Logged By .....

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	CA. 55.60 m ; 45° shearing								
*	56.60 - 59.10 ; brecciated tuffaceous mudstone ; consists of a brecciated tuffaceous mudstone with cross-cutting carbonate-(pyrite) veinlets up to several cm wide at variable core angles (comprise 30-40% of interval). Contains 3-5% pyrite, overall, as fine disseminations, replacements of volcanic fragments & as coarse blebs in carbonate veinlets :								
	56.60 - 57.00 ; carbonate breccia vein with 1-3% pyrite, tr galena & tr brown sphalerite								
	57.00 - 57.50 ; brecciated black argillite with ~10% randomly oriented carbonate veinlets, 5% fine disseminated pyrite.								
	57.50 - 58.00 ; 2-4% dissem. pyrite								
	CA. 57.90 m ; 30° shear with slickensides raking 65° from vertical.								
	58.00 - 58.40 ; black argillite with 1-2% fine dissem. py.								
	58.40 - 58.70 ; brecciated black argillite with ~40% anastomosing grey to tan colored carbonate veinlets ; 3-5% py, possible trace arsenopyrite.								
*	58.70 - 59.10 ; silicified, brecciated argillite with carbonate								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No. ..... Depth ..... Date Began .....
Hole No. AP 12 Co ord. ..... Horizontal Length ..... Date Completed .....
Claim No. ..... Core Size ..... Drilled By .....
Grid No. ..... Angle & Direction ..... Elevation ..... Logged By .....

INTERVAL FEET/METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	impregnation. Contains 7-10% pyrite, trace chalcopyrite, trace dark metallic sulfide (tetrahedrite?) plus a reddish earthy mineral (cinnabar or hematite)								
	CA 59.10 m : 25° lower vein contact								
	62.10 - 69.30 : Interval is composed of 75% tuffaceous mudstone & 25% of short intercalations of massive black argillite.								
	69.30 - 69.66 : sheared tuffaceous horizon with 3-5% disseminated pyrite.								
69.66 - 74.90	Black Argillite								
	A generally massive fine grained sedimentary rock with 2-4% py as irregular patches of fine grained impregnation up to 3 cm across.								
	CA 64.80 m : 23° fabric / shearing.								
	CA 66.20 m : 37° fabric								
	CA 69.30 m : 25° fabric / shearing								
	CA 72.45 m : 20° pink carb - quartz vein								
74.90 - 118.93	Interbedded Black Argillite / Siltstone & Tuffaceous Mudstone								
	similar to interval 54.00 - 69.66								
	82.86 - 86.05 : massive black argillite interbed with irregular impregnation patches similar to these encountered in interval 69.66-74.90								
	CA 78.00 m : 33° fabric								
	CA 79.95 m : 28° fabric								
	CA 91.00 m : 30° fabric								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No. ..... Depth ..... Date Began .....
Hole No. AP 12 Co ord. ..... Horizontal Length ..... Date Completed .....
Claim No. ..... Core Size ..... Drilled By .....
Grid No. ..... Angle & Direction ..... Elevation ..... Logged By .....

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	CA 87.90 m : 25° fabric/shearing.								
	93.00 - 93.80 : sheared, carbonate-altered interval with crushed core & gouge (93.48-93.57). Peripheral to crushing is an envelope of brecciation and carbonate veining. Overall, interval contains 2-3% pyrite (top 20cm ~5% py)								
	CA 93.57 m : 30° shearing								
	96.62 - 111.15 : The rock becomes more an interbedded tuffaceous mudstone and siltstone with minor black argillite interbeds. The siltstone intercalations are generally finely laminated, but laminations have been dismembered & distorted by brecciation & shearing. The siltstone appears to be greywacke (fairly high volcanic component) and locally becomes arenaceous. Overall, interval contains ~1% pyrite.								
	CA 102.00 m : 33° fabric CA 106.00 m : 30° fabric CA 109.00 m : 30° fabric								
	111.15 - 116.95 : sheared interbedded andesite ash-lapilli tuff, argillite & siltstone.								
	111.15 - 111.60 : more sheared, sericitized & silicified, tuffaceous interval with 3-5% pyrite as disseminations, blebs & discontinuous stringers. Rock is composed of 35-40% sericitized lapilli in a light grey green ash matrix.								
	111.60 - 114.00 : a variably sheared, sericitized & silicified tuff similar to								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No ..... Depth ..... Date Began .....
Hole No. AP 12 Co ord ..... Horizontal Length ..... Date Completed .....
Claim No. ..... Core Size ..... Drilled By .....
Grid No. ..... Angle & Direction ..... Elevation ..... Logged By .....

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	111.15 - 111.60 with ~ 5% pyrite as blebs > impregnations > disseminations & occassional short irregular stringers.								
	114.00 - 114.75 : 7-10% py mainly as coarse blebs within roughly concordant grey carbonate - pyrite veinlets comprising > 30% of the interval. Possible trace fine arsenopyrite. Hostrock appears to be tuffaceous mudstone								
	114.75 - 115.95 : 3-5% pyrite as disseminations > blebs & irregular stringers often subparallel to the fabric. The interval includes narrow carbonate - pyrite breccia veins up to 2cm wide generally concordant with the fabric.								
	115.95 - 116.95 : a crushed & sheared interval with gouge. Shearing appears to follow core axis. The interval contains 4-6% pyrite as disseminations & blebs in quartz - carbonate stringers. Hostrock appears to be a siltstone, exhibiting brecciation & numerous anastomosing grey carbonate veins.								
	CA. 111.60 m : 28° shearing								
	CA. 113.50 m : 45° fabric								
	CA. 115.80 m : 45° fabric								
	CA. 116.90 m : 17° fabric								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No. ..... Depth ..... Date Began .....
Hole No. AP 12 Co ord. ..... Horizontal Length ..... Date Completed .....
Claim No. ..... Core Size ..... Drilled By .....
Grid No. ..... Angle & Direction ..... Elevation ..... Logged By .....

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	116.95 - 118.93 : gradation from siltstone at top of interval to tuffaceous mudstone at lower contact. Overall, contains 2-4% pyrite as disseminations & stringers, more or less concordant with fabric. Mild brecciation occurs peripheral to lower contact.								
	117.38 - 117.74 : 4 cm wide quartz - carbonate - pyrite vein.								
	CA. 118.93 m : 37° diffuse lower contact.								
118.93 - 138.68	Welded Dacite Ash - Lapilli Tuff.								
	A mottled greenish grey (5 G 5/1) volcaniclastic rock of intermediate composition. It consists of 15 - 50% andesitic to dacitic volcanic fragments in an ash groundmass. Some fragments (pumice) are flattened and heavily sericite - altered. The matrix is somewhat silicified, chloritized & sericitized. Unwelded intervals with more argillaceous groundmass (interflow material?) occurs from 127.28 - 128.55 m & 136.35 - 138.68. Overall, contains ≤ 1% py. :								
	118.93 - 123.70 : mildly brecciated interval (numerous areas where original fabric due to welding is disrupted). The rock contains ~2% pyrite mainly as discontinuous stringers of coarse dirty brass colored pyrite or as coarse blebs associated with carbonate veins. Carbonate veins comprise ≤ 5% of interval and are predominantly oriented at ~40° to core axis reaching widths of ~1cm.								

GRANGES EXPLORATION LTD.

DIAMOND DRILL LOG

Page 8 of 8

Property ..... Project No. ..... Depth ..... Date Began .....

Hole No. AP 12 Co ord. ..... Horizontal Length ..... Date Completed .....

Claim No. ..... Core Size ..... Drilled By .....

Grid No. ..... Angle & Direction ..... Elevation ..... Logged By .....

INTERVAL FEET (METRES)	DESCRIPTION	SAMPLE RECORD							
		FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	121.73 – 122.30 : a relatively intensely brecciated interval with white/grey carb ± pyrite fracture infilling.								
	123.70 – 138.68 : mildly brecciated								
	CA 119.70 m : ~ 85° fabric (fiamme)								
	CA 122.80 m : 45° fabric "								
	CA 123.10 m : 5° fabric "								
	CA 132.00 m : 80° fabric "								
138.68	End of Hole								
	Acid tests : 61.0m : 42.5° corrected								
	123.0 m : 40° corrected.								

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DIAMOND DRILL RECORD

Property UNUK RIVER Project No 154 Depth Date Began

Hole No. AP 12 Co ord. Horizontal Length Date Completed

Claim No. Core Size Drilled By

Grid No. Angle & Direction Elevation Logged By

INTERVAL FEET (METRES)	NUMBER	WIDTH	Au ppb	Ag. ppm	Cu. ppm	Zn. ppm	Pb ppm	WIDTH X ASSAY						AVERAGES					
														WIDTH	Au.	Ag	Cu.	Zn.	
0.00 - 3.96	CASING	3.96																	
3.96 - 54.00	WASTE	50.04	—	—	—	—	—												
54.00 - 54.60	2269-G	0.60	11	.8	32	95	15												
54.60 - 55.60	2270-G	1.00	11	1.1	29	68	19												
55.60 - 56.60	2271-G	1.00	12	1.6	28	109	24												
56.60 - 57.00	2272-G	0.40	21	1.9	9	302	42												
57.00 - 57.50	2273-G	0.50	26	5.2	25	118	125												
57.50 - 58.00	2274-G	0.50	9	2.2	21	154	15												
58.00 - 58.40	2275-G	0.40	11	4.0	48	87	22												
58.40 - 58.70	2276-G	0.30	9	1.5	19	50	10												
58.70 - 59.10	2277-G	0.40	7908	148.6	1463	6534	3309												
59.10 - 60.10	2278-G	1.00	95	2.3	29	101	39												
60.10 - 68.16	WASTE	8.06	—	—	—	—	—												
68.16 - 68.66	2279-G	0.50	4	.3	27	102	16												
68.66 - 69.30	2280-G	0.64	1	.1	22	112	8												
69.30 - 69.80	2281-G	0.50	6	.4	42	279	14												
69.80 - 70.71	2282-G	0.91	11	.5	40	253	20												
70.71 - 71.50	2283-G	0.79	5	.4	41	317	20												
71.50 - 72.50	2284-G	1.00	5	.6	44	300	21												
72.50 - 72.90	2285-G	0.40	1	.2	37	252	15												
72.90 - 73.90	2286-G	1.00	1	.4	38	254	15												
73.90 - 74.90	2287-G	1.00	3	.3	72	130	18												
74.90 - 92.50	WASTE	17.60																	
92.50 - 93.00	2288-G	0.50	9	.6	33	100	15												
93.00 - 93.80	2289-G	0.80	5	.4	25	91	8												
93.80 - 94.30	2290-G	0.50	15	.4	25	107	8												
94.30 - 111.15	WASTE	16.85																	
111.15 - 111.60	2291-G	0.45	3	.6	16	112	2												
111.60 - 112.60	2292-G	1.00	74	.8	27	199	15												
112.60 - 113.40	2293-G	0.80	12	1.0	19	24	6												
113.40 - 114.00	2294-G	0.60	10	.9	15	41	8												
114.00 - 114.75	2295-G	0.75	13	1.1	18	27	8												
114.75 - 115.95	2296-G	1.20	80	.9	9	213	25												
115.95 - 116.95	2297-G	1.00	200	2.0	13	473	40												
116.95 - 117.38	2298-G	0.43	108	.8	11	167	17												
117.38 - 117.74	2299-G	0.36	224	1.4	14	30	19												
117.74 - 118.93	2300-G	1.19	36	.7	20	84	7												
118.93 - 119.93	2301-G	1.00	34	.5	23	92	12												
119.93 - 121.00	2302-G	1.07	7	.6	22	98	11												
121.00 - 121.73	2303-G	0.73	4	.5	20	84	12												

GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD

Property UNUK RIVER Project No. 157 Depth Date Began

Hole No. AP 12 Co ord Horizontal Length Date Completed

Claim No. Core Size Drilled By

Grid No. Angle & Direction Elevation Logged By

INTERVAL FEET (METRES)	NUMBER	WIDTH	Au. ppb	Ag. ppm	Cu. ppm	Zn. ppm	Pb ppm	WIDTH X ASSAY						AVERAGES					
														WIDTH	Au.	Ag.	Cu.	Zn.	
121.73 - 122.20	2304-G	0.47	5	.8	15	92	18												
122.20 - 123.70	2305-G	1.50	5	.4	18	134	16												
123.70 -	EOH																		

130° 30'

130° 15'

56° 30'

104B/10E | 104B/9W

104B/9W | 104B/9E

104B/8W | 104B/8E

56° 30'

N

CREEK

STORIE

RIVER

UNUK

SNOW

GLACIER

UNUK 44 6398 (10)

UNUK 26
6397 (10)

UNUK 13
5241 (2)

UNUK 14
5242 (2)

UNUK 15
5243 (2)

UNUK 16
5239 (2)

UNUK 17
5240 (2)

UNUK 18
5236 (2)

UNUK 19
5237 (2)

UNUK 37
6484 (10)

UNUK 36
6483 (10)

UNUK 12
5228 (2)

UNUK 11
5227 (2)

UNUK 29
6480 (10)

UNUK 10
5232 (2)

UNUK 9
5231 (2)

UNUK 8
5238 (2)

UNUK 34
6482 (10)

UNUK 7
5235 (2)

UNUK 1
5225 (2)

UNUK 2
5226 (2)

UNUK 28
6479(10)

UNUK 3
5229 (2)

UNUK 4
5230 (2)

UNUK 5
5233 (2)

UNUK 6
5234 (2)

COUL 1
5211 (2)

COUL 2
5212 (2)

COUL 3
5213 (2)

COUL 4
5214 (2)

8088 (10)

UNUK 50

UNUK 22
5246 (2)

UNUK 23
5247 (2)

UNUK 21
5245 (2)

UNUK 30
6481 (10)

UNUK 24
5248 (2)

UNUK 25
5249 (2)

GEOLOGICAL BRANCH
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GLACIER

IRV
5222 (2)

SNOW

ICEY 1
5223 (2)

ICEY 2
5224 (2)

KNIP 1
5220 (2)

KNIP 2
5221 (2)

BOU 1
5217 (2)

BOU 2
5218 (2)

BOU 3
5219 (2)

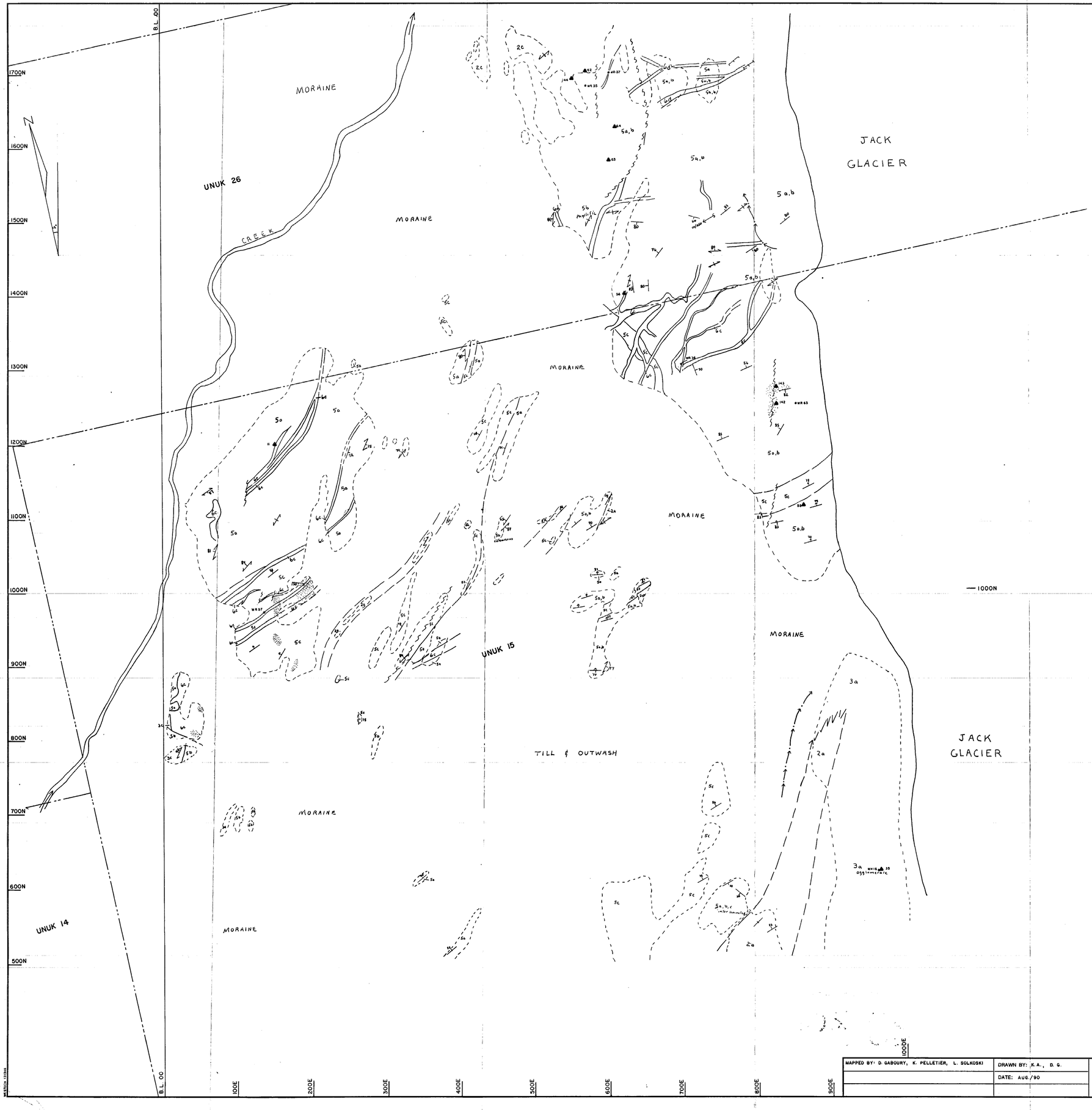
SCALE

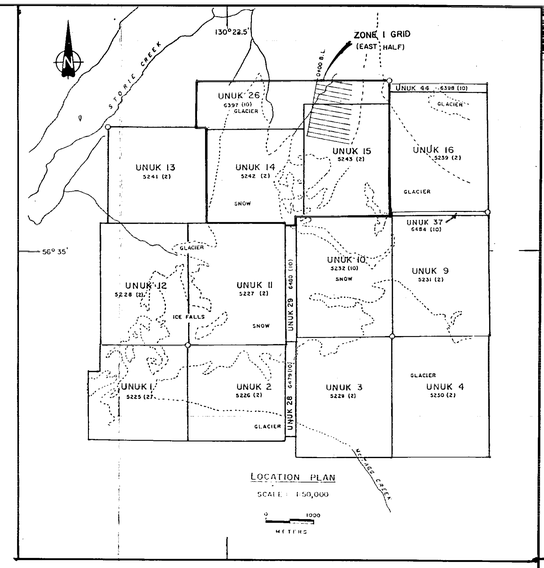
0 1 2 3 4

KILOMETERS

FIGURE: 2

DRAWN BY: P.V./C.U.	GRANGES INC. VANCOUVER, B.C.	CLAIM LOCATION MAP UNUK OPTION SKEENA MINING DIVISION, B.C. (1)	SCALE: 1 : 50, 000
DATE: JAN., 1990			PROJECT No.: 134
			N.T.S.: 104 B / 9 W





LEGEND

VOLCANIC ROCKS

1 Rhyolite
- 1a Rhyolite flow; massive, flow banded, spheriolitic
- 1b Rhyolite ash flow tuff: 1b' lithic rich
- 1c Rhyodacite ash flow tuff: 1c' lithic rich
- 1d Pyroclastic broccia, rhyolitic to rhyodacitic
- 1e Fine ash tuff, siliceous

2 Dacite
- 2a Dacite flow; massive, flow banded
- 2b Dacite ash flow tuff: 2b' lithic rich
- 2c Dacite lapilli tuff
- 2d Dacite pyroclastic breccia
- 2e Debris flow; argillaceous matrix

3 Andesitic
- 3a Andesite flow; massive, amygdaloidal: 3a' porphyritic
- 3b Andesite flow; pillowed: 3b' pillow breccia
- 3c Andesite lapilli tuff
- 3d Pyroclastic broccia, andesitic to dacitic
- 3e Fine ash tuff, andesitic to dacitic

4 Basaltic
- 4a Basalt flow; massive, amygdaloidal
- 4b Basalt flow; pillowed: 4b' pillow breccia

SEDIMENTARY ROCKS

5
- 5a Mudstone, argillite
- 5b Siltstone, minor greywacke
- 5c Greywacke, minor arkose
- 5d Arkose, minor greywacke (and/or conglomerate)
- 5e Polymictic conglomerate
- 5f Epiclastic broccia
- 5g Debris flow broccia

INTRUSIVE ROCKS

6
- 6a Feldspar porphyritic granodiorite
- 6b Augite porphyritic granodiorite
- 6c Diorite
- 6d Diabase

SYMBOLS

- OUTCROP AREA
- GEOLOGICAL BOUNDARIES
- BEDDING ; TOP KNOWN/UNKNOWN
- FOLIATION/SCHISTOSITY
- JOINTING
- FRACTURES
- FAULTS
- THRUST
- SHEAR ZONES ; NARROW/WIDE
- MINOR FOLD AXIS
- MINERAL ALIGNMENT
- CLAST ELONGATION/RODDING
- MAJOR FOLDS
- QUARTZ VEIN - UNMINERALIZED / - SULPHIDE MINERALIZED
- SWAMPY MEADOW
- CLIFF
- PYRITIZATION (STIPLING INDICATES INTENSITY)
- TRENCH
- ROCK SAMPLES ANALYSED BY ICP - SEE APPENDIX A FOR RESULTS
- WHOLE ROCK SAMPLES ANALYSED FOR COMPOSITION - SEE APPENDIX B FOR RESULTS

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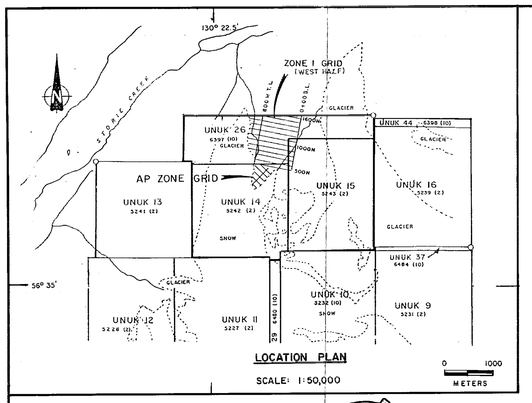
FIGURE: 3

MAPPED BY: D. GABOURY, K. PELLETIER, L. SOLKOSKI	DRAWN BY: K.A., D. G.	GRANGES INC. VANCOUVER, B.C.	GEOLOGY ZONE 1 GRID (EAST HALF) (2) UNUK RIVER OPTION SKEENA MINING DIVISION, B. C.
	DATE: AUG./90		SCALE: 1:2000
			PROJECT No.: 134
			N.T.S. No.: 104B/9W



LEGEND

VOLCANIC ROCKS

1 Rhyolite
- 1a Rhyolite flow; massive, flow banded, spherioilitic
- 1b Rhyolite ash flow tuff: 1b' lithic rich
- 1c Rhyodacite ash flow tuff: 1c' lithic rich
- 1d Pryoclastic breccia, rhyolitic to rhyodacitic
- 1e Fine ash tuff, siliceous

2 Dacite
- 2a Dacite flow; massive, flow banded
- 2b Dacite ash flow tuff: 2b' lithic rich
- 2c Dacite lapilli tuff
- 2d Dacite pyroclastic breccia
- 2e Debris flow; argillaceous matrix

3 Andesitic
- 3a Andesite flow; massive, amygdaloidal: 3a' porphyritic
- 3b Andesite flow; pillowed: 3b' pillow breccia
- 3c Andesite lapilli tuff
- 3d Pyroclastic breccia, andesitic to dacitic
- 3e Fine ash tuff, andesitic to dacitic

4 Basaltic
- 4a Basalt flow; massive, amygdaloidal
- 4b Basalt flow; pillowed: 4b' pillow breccia

SEDIMENTARY ROCKS

5
- 5a Mudstone, argillite
- 5b Siltstone, minor greywacke
- 5c Greywacke, minor arkose
- 5d Arkose, minor greywacke (and/or conglomerate)
- 5e Polymictic conglomerate
- 5f Epiclastic breccia
- 5g Debris flow breccia

INTRUSIVE ROCKS

6
- 6a Feldspar porphyritic granodiorite
- 6b Augite porphyritic granodiorite
- 6c Diorite
- 6d Dubose

SYMBOLS

- OUTCROP AREA
- GEOLOGICAL BOUNDARIES
- BEDDING ; TOP KNOWN/UNKNOWN
- FOLIATION/SCHISTOSITY
- JOINTING
- FRACTURES
- FAULTS
- THRUST
- SHEAR ZONES ; NARROW/WIDE
- MINOR FOLD AXIS
- MINERAL ALIGNMENT
- CLAST ELONGATION/RODDING
- MAJOR FOLDS
- QUARTZ VEIN -UNMINERALIZED -SULPHIDE MINERALIZED
- SWAMPY MEADOW
- CLIFF
- PYRITIZATION (STIPLING INDICATES INTENSITY)
- TRENCH
- ▲ ROCK SAMPLES ANALYSED BY ICP.- SEE APPENDIX A FOR RESULTS
- ⊕WR 12 WHOLE ROCK SAMPLES ANALYSED FOR COMPOSITION – SEE APPENDIX B FOR RESULTS

GEOLOGICAL BRANCH
ASSESSMENT REPORT

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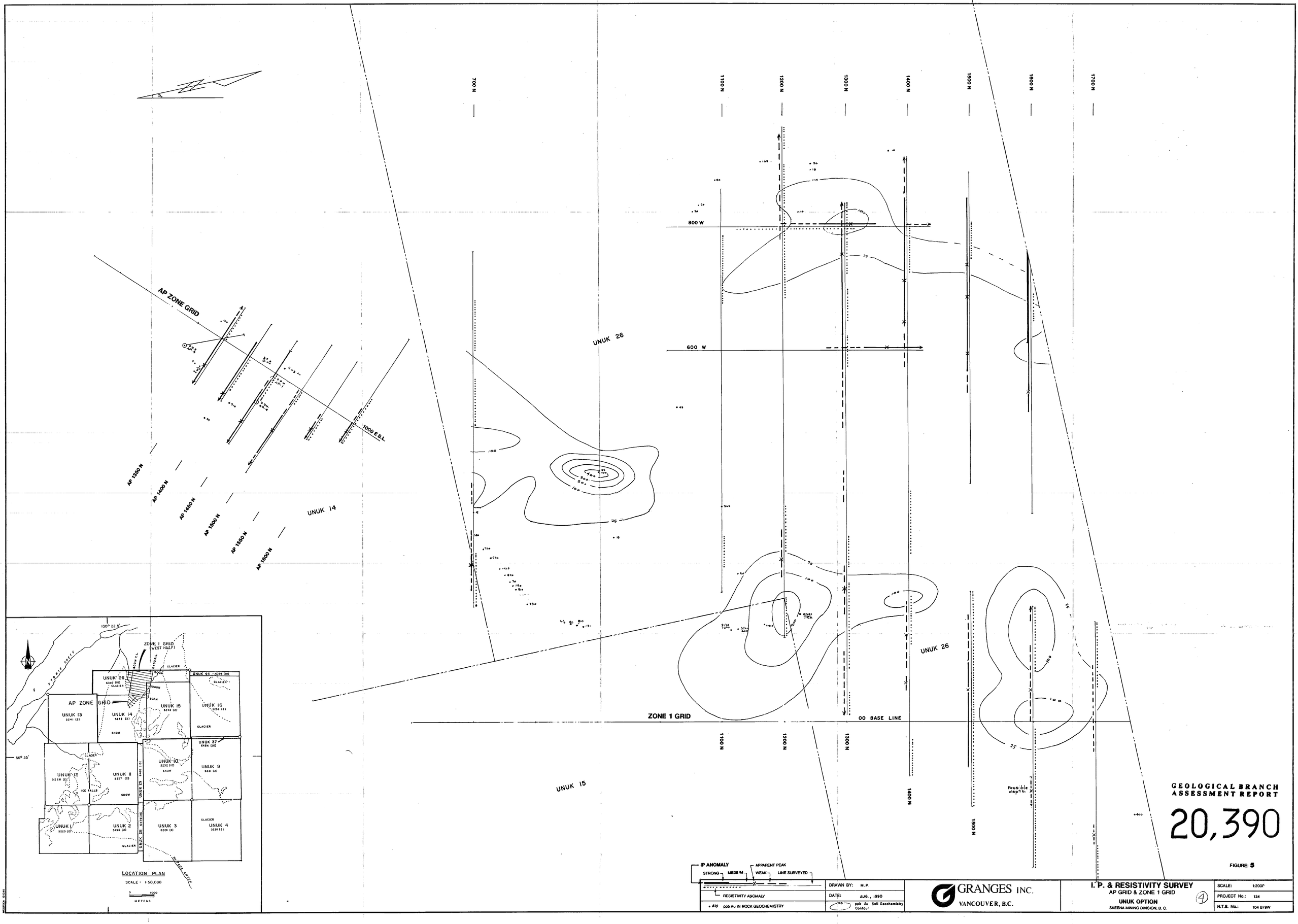
FIGURE: 4

MAPPED BY: D. GABOURY, B. GABOURY, K. PELLETIER, L. SOLKOSKI	DRAWN BY: D. G.	GRANGES INC. VANCOUVER, B.C.	GEOLOGY & DIAMOND DRILLING ZONE 1 GRID (WEST HALF) & AP ZONE UNUK OPTION SKEENA MINING DIVISION, B. C.	SCALE: 1:2000
	DATE: AUG./90			PROJECT NO.: 134
				N.T.S. No.: 104B/9W

WESTECH, 131144


AP ZONE GRID
AP 1350 N
AP 1400 N
AP 1450 N
AP 1500 N
AP 1550 N
AP 1600 N
1000 E.B.L.
UNUK 14
UNUK 15
UNUK 26
700 N
1100 N
1200 N
1300 N
1400 N
1500 N
1600 N
1700 N
800 W
600 W
ZONE 1 GRID
00 BASE LINE
Possible depth
LOCATION PLAN
SCALE : 1:50,000
METERS
ZONE 1 GRID (WEST HALF)
AP ZONE GRID
UNUK 13
UNUK 14
UNUK 15
UNUK 16
UNUK 26
UNUK 44
UNUK 37
UNUK 10
UNUK 9
UNUK 12
UNUK 11
UNUK 1
UNUK 2
UNUK 3
UNUK 4
UNUK 28
UNUK 29
STEWART
SNOW
GLACIER
ICE FALLS
IP ANOMALY
STRONG
MEDIUM
WEAK
APPARENT PEAK
LINE SURVEYED
RESISTIVITY ANOMALY
ppb Au IN ROCK GEOCHEMISTRY
ppb Au Soil Geochemistry Contour
DRAWN BY: M.P.
DATE: AUG., 1990
GRANGES INC.
VANCOUVER, B.C.
I. P. & RESISTIVITY SURVEY
AP GRID & ZONE 1 GRID
UNUK OPTION
SKEENA MINING DIVISION, B. C.
SCALE: 1:2000
PROJECT No.: 134
N.T.S. No.: 104 B/9W
GEOLOGICAL BRANCH
ASSESSMENT REPORT
20,390
FIGURE: 5