APPENDIX 4: DIAMOND DRILL LOGS

to accompany

1990 SUMMARY REPORT

on the

UNUK RIVER PROJECT
(Unuk, Coul, Icey, Knip, Bou and Irv Claim Groups)

SKEENA MINING DIVISION
NTS 104B/9 & 104B/10
56°35' Lat., 130°20' Long.

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

DECEMBER 20, 1990

B.E. GABOURY
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DIAMOND DRILL LOG

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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 -75° az 302° True 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	Greywacke - 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 (rehealed), 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 - 7.92	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 C.A.								
20.62 - 20.72	rubbly, ground core.								
26.20 - 30.00	well fractured, 1-2cm spacing, irregular core angles, limonite coating								
30.00 - 37.70	black argillaceous interbed, - muddy greywacke, minor fine white calcite stringers, fossils								

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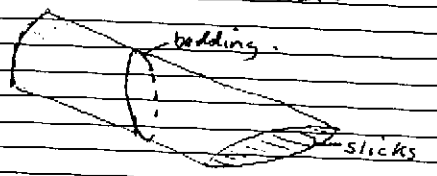
DIAMOND DRILL LOG

Property ..... Project No. ..... Depth ..... Date Began .....
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.
	- 33.80 - 37.5 Strongly fractured section with .5 - 2 cm spacing, limonite stain. - minor slickensides on graphitic slip surfaces, at 45° to C.A. 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.								
	40.23 - 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 whits + stgrs.								
	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 parallel to bedding/foliation, in argillaceous matrix								

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DIAMOND DRILL LOG

Property ..... Project No. ..... Depth ..... Date Began .....
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.
	- Some fragments have zoned altn, with silicified cores surrounded by pyrite, and sericitized rims. - minor (< 2%) 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

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Property ..... Project No. ..... Depth ..... Date Began .....
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 units, 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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Property ..... Project No. ..... Depth ..... Date Began .....
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.
57.90 - 72.50	Dacitic Lapilli - ash Tuff								
	- medium bluish grey (5B 5/1) with dark greenish grey (5 G 4/1) elongated fragments, up to 1 x 3 cm. matrix supported								
	- <1% pyritic fragments, with Qtz - chlorite alteration								
	- weakly pervasive 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 bleb & nests & fragments								
	63.90 - 63.97 : band of 10% diss py.								
	69.05 - 69.10 : band of 10-15% diss. py, at ~ 25° to CA.								
	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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Property ..... Project No. ..... Depth ..... Date Began .....
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, .3cm band at 78.30 m.								
	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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Property ..... Project No. ..... Depth ..... Date Began .....
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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Property ..... Project No ..... Depth ..... Date Began .....
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 - 112.30 : Slivery broken core with numerous graphitic + talcy slip surfaces at irregular core angles, generally ~45° to CA, with minor slickensides raking @ at ~80° down dip								
	113.10 - 113.45 : 5-10% py								

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Property ..... Project No. ..... Depth ..... Date Began .....
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 sericitized 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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Property ..... Project No ..... Depth ..... Date Began .....
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
	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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DIAMOND DRILL LOG

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Property ..... Project No. ..... Depth ..... Date Began .....
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-.3 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 - 200.55 : Clay gouge seam in debris flow.								

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Property ..... Project No. ..... Depth ..... Date Began .....
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.
	208.00 - 214.40 : graphitic argillite with close spaced fault cleavage 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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Property ..... Project No. ..... Depth ..... Date Began .....
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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Property ..... Project No. ..... Depth ..... Date Began .....
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 QT_2 - 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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DIAMOND DRILL RECORD

Property: UNUK RIVER Project No.: 134 Depth: Date Began:

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.	
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	1113-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 - 40.46	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												

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DIAMOND DRILL RECORD

Property: UNUK RIVER Project No.: 134 Depth: Date Began:

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.	
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																	
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												

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property UNUK RIVER Project No. 134 Depth ... Date Began ...

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.	
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																	
80.10 - 80.70	1179-G	0.6	7	.3			6												
80.70 - 81.38	1103-G	0.68																	
81.38 - 81.70	1190-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																	
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												

GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD

Property: UNUK RIVER Project No: 134 Depth: Date Began:
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	
91.60 - 91.90	1196 - G	0.3	9	.1			9												
91.90 - 92.40	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 - 108.30	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 - 110.43	1217 - G 1225 - G	0.5 0.3	7	.5			4												
110.50 - 110.80	1218 - G	0.3	4	.3			4												
110.80 - 111.30	1106 - G	0.5																	
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																	
113.45 - 113.75	1223 - G	0.3	3	.5			7												
113.75 - 114.10	1108 - G	0.35																	
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																	

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property UNUK RIVER Project No. 134 Depth ... Date Began ...

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												

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property UNUK RIVER Project No. 134 Depth Date Began

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																	
146.40 - 146.90	1111 - G	0.5																	
146.90 - 147.40	1267 - 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												

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property: UNUK RIVER Project No: 134 Depth: Date Began:

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 - 222.90	WASTE	15.3																	
222.90 - 223.40	1292-G	0.5	3	.1			28												
223.40 - 227.50	WASTE	4.1																	
227.50 - 228.00	1293-G	0.5	5	.1			27												
228.00 - 234.60	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	13220-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	1324-G	0.5	1	.1			20												
259.00 - 259.50	1325-G	0.5	2	.1			18												

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property UNUK RIVER Project No. 134 Depth Date Began

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

Claim No. Core Size Drilled By

Grid No. Ang'e & 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																	
265.50 - 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												

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property UNUK RIVER Project No. 134 Depth Date Began

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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GRANGES EXPLORATION LTD.
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 | Coord. 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 true | Elevation 1260 m. | Logged By D. Gaboury

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 1-2% 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 veins.								
23.78 - 24.38	: Strongly fractured section, thin calcite fracture coatings, 1-2 cm 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 C.A.								
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.								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No. ..... Depth ..... Date Began .....
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.								
46.20 - 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 + veins, 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,								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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

Property ..... Project No. ..... Depth ..... Date Began .....
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
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 63.80 m.
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

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

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

5 of 8

Property ..... Project No. ..... Depth ..... Date Began .....
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 to gouge								
*	92.30 - 94.40 : Qtz - carb - py vein strongly brecciated and rehealed. - graphitic argillite frags, and cross-cutting Qtz stwk veins. - 5-10% py blebs / stringers								
	94.40 - 95.50 : Fault zone; sandy-graphitic gouge, brecciated, strong Qtz-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 pyritic 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

Property ..... Project No ..... Depth ..... Date Began .....
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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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

7 of 8

Property ..... Project No. ..... Depth ..... Date Began .....
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.
171.40 - 184.70	Dacitic Ash-lapilli tuff								
	-slightly argillaceous matrix and minor argillite fragments -bluish grey matrix -minor chloritic 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 chloritic + sericitic 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

8 of 8

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

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property: UNUK RIVER Project No.: 134 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.	
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				2												
23.45 – 23.95	1375-G	0.5	1				2												
23.95 – 24.35	1376-G	0.4	3				11												
24.35 – 24.85	1377-G	0.5	7				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				2												
26.35 – 26.85	1381-G	0.5	6				3												
26.85 – 27.35	1382-G	0.5	3				6												
27.35 – 27.85	1383-G	0.5	21	.3			3												
27.85 – 28.35	1384-G	0.5	2				2												
28.35 – 28.85	1386-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												

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property: UNUK RIVER Project No: 134 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.	
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	1426-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

Property: UNUK RIVER Project No: 134 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 oz/t	Ag.	Cu.	Zn	As	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		1.2m	1.097	2.0		
87.30 - 87.60	1475-G	0.3	416	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	29						
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	298	2003						
91.00 - 91.30	1484-G	0.3	161	.9	10	139	836						

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property UNUK RIVER Project No. 134 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 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 - 93.20	1489 - G	0.3	137	1.0	17	192	413												
93.20 - 93.50	1490 - G	0.3	83	.9	38	521	256												
93.50 - 93.80	1491 - G	0.3	523	.9	6	148	595												
93.80 - 94.10	1492 - G	0.3	406	1.1	14	235	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	91												
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	1511 - 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												

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	.8			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

Property: UNUK RIVER | Project No: 134 | 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.	
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 - 168.85	WASTE	14.05	—	—			—												
168.85 - 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			35												
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			4½												
189.40 - 189.90	1595-G	0.5	2	.2															
189.90 - 190.40	1596-G	0.5	9	1.0			13												

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property UNUK RIVER Project No 134 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			35												
191.10 - 197.21	waste	6.11																	
197.21	EOH																		

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GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property UNUK RIVER Project No. 134 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.	
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				2												
23.45 - 23.95	1375-G	0.5	1				2												
23.95 - 24.35	1376-G	0.4	3				11												
24.35 - 24.85	1377-G	0.5	7				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				2												
26.35 - 26.85	1381-G	0.5	6				3												
26.85 - 27.35	1382-G	0.5	3				6												
27.35 - 27.85	1383-G	0.5	21	.3			3												
27.35 - 28.35	1384-G	0.5	2				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 - 30.35	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												

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property: UNUK RIVER Project No: 134 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.	
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

Property UNUK RIVER Project No. 134 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 oz/t	Ag	Cu	Zn	As	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							1.2m	1.097	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	44	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											

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property: UNUK RIVER Project No: 134 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 ppb	Ag	Cu	Zn	As	WIDTH X ASSAY
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	.9	6	148	595	
93.80 - 94.10	1492 - G	0.3	406	1.1	14	235	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	91	
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			36	
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	1511 - 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	

AVERAGES					
WIDTH	Au.	Ag.	Cu	Zn.	

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			38												
134.90 - 135.40	1541 - G	0.5	4	.7			34												
135.40 - 136.20	1542 - G	0.8	19	.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			34												
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

Property: UNUK RIVER Project No.: 134 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	
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			4½												
189.40 - 189.90	1595-G	0.5	2	.2			13												
189.90 - 190.40	1596-G	0.5	9	1.0															

GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD

Property UNUK RIVER Project No 134 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	WATER	6.11																	
197.21	EOH																		

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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 True | 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 flow and ash flow tuff fragments, minor argillitic fragments - overall Tr diss. py 16.50 - 20.50 : fault zone; highly fractured and limonite stained, intensely altered, fractures 1-4cm apart, ~60% core recovery 20.50 - 21.50 : Strongly silicified, weakly chloritized, partially recrecciated, 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 argillitic inter-flow breccia, silicified dacitic fragments in argillaceous matrix.								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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Property ..... Project No. ..... Depth ..... Date Began .....
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								
	33.06 - 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 altn in cores of fragments - fine black particulate 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

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Property ..... Project No. ..... Depth ..... Date Began .....
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.								
	81.90 - 82.80 : light green sericite & chloritic alteration in breccia fragments.								
82.80 - 86.40	Fine Grained "Andesitic" Dike								
	- massive, light grey, with 2-8% round chloritic patches, 1 - 2 cm across, possible amygdules - moderately well fractured, 3-5 cm. apart, with minor talc coatings								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No. ..... Depth ..... Date Began .....
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 38° to CA, 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 10+/- core angles.								
	93.80 - 99.00 : Strongly faulted, rubbly core - abundant gouge from 93.85 to 99.0, Tr-1% fine diss py								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No ..... Depth ..... Date Began .....
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								
99.00 - 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								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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Property ..... Project No ..... Depth ..... Date Began .....
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 boxwork-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.)								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No. ..... Depth ..... Date Began .....
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 diam and occassional qtz vnlts ≤ 1cm dia with pyritic								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No. ..... Depth ..... Date Began .....
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 : bresciated, silica-flooded interval with ~ 10% py.								
	211.00 - 212.50 : 5-7% py mainly as fracture fillings (+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 & 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.								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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Property ..... Project No. ..... Depth ..... Date Began .....
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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 fiamme is consistently around 50° to core axis.								
	- minor interflow volcanic mudstone units varying from 3 to 60 m wide, composed of dacitic 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.								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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Property ..... Project No ..... Depth ..... Date Began .....
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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 grained, 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)								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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

Property ..... Project No ..... Depth ..... Date Began .....
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.
	277.35 - 279.49 : Fault Zone ; broken, rubbly core, chips & gouge.								
	277.35 - 279.20 : brecciated interval with discontinuous, haphazardly oriented qtz 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								
	with 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.								

GRANGES EXPLORATION LTD.

DIAMOND DRILL LOG

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

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

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INTERVAL FEET (METRES)	DESCRIPTION
	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

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

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property: UNUK RIVER | Project No.: 134 | Depth: | Date Began: ~~2-27-~~ 6-18-89

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.	Ag.	Cu	Zn	As	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

Property: UNUK RIVER Project No: 134 Depth: Date Began:

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.	Ag.	Cu.	Zn.	As	WIDTH X ASSAY						AVERAGES					
														WIDTH	Au.	Ag.	Cu.	Zn.	
31.00 - 31.50	1637-G	0.5	1	.2			6												
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 - 33.80	1642-G	0.5	5	.1			2												
33.80 - 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

Property: UNUK RIVER Project No: 134 Depth: Date Began:

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.	Ag.	Cu.	Zn.	As	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			5												
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				7												
72.10 – 72.60	1714-G	0.5	4				2												
72.60 – 73.10	1715-G	0.5	4				7												
73.10 – 73.70	1716-G	0.6	1	.1			6												

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property UNUK RIVER Project No 134 Depth Date Began

Hole No. AP 8 Coord 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.	
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	3	.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

Property: UNUK RIVER Project No: 134 Depth: Date Began:

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.	Ag.	Cu.	Zn.	As	WIDTH X ASSAY						AVERAGES					
														WIDTH	Au.	Ag.	Cu.	Zn.	
93.70 - 94.20	1757-G	0.5	2	.1			7												
94.20 - 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	.9			33												
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			17												
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

Property: UNUK RIVER Project No.: 134 Depth: Date Began:

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.	Ag.	Cu.	Zn.	As	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			208												
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	.8			14												
135.30 – 135.80	1835-G	0.5	7	.4			18												

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property UNUK RIVER Project No. 134 Depth Date Began

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.	Ag.	Cu.	Zn.	As	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	1845 - 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

Property UNUK RIVER Project No 134 Depth Date Began

Hole No AP8 Coord 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.	
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	1856-G	0.5	16	1.8			13												
173.50 - 181.00	WASTE	7.5	—	—			—												
181.00 - 181.50	1906-G	0.5	41	3.3			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												

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property: UNUK RIVER | Project No.: 134 | Depth: | Date Began:
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.	Ag.	Cu.	Zn.	As	WIDTH X ASSAY						AVERAGES					
														WIDTH	Au.	Ag.	Cu.	Zn.	
189.50 - 192.66	WASTE	3.16	—	—			—												
192.66 - 193.16	1923-G	0.5	10	2.8			28												
193.16 - 193.66	1924-G	0.5	6	.9			13												
193.66 - 194.16	1925-G	0.5	1	.2			9												
194.16 - 198.10	WASTE	3.94	—	—			—												
198.10 - 198.60	1926-G	0.5	6	.3			18												
198.60 - 199.10	1927-G	0.5	7	.1			36												
199.10 - 199.60	1928-G	0.5	9	.2			36												
199.60 - 300.30	WASTE	0.7	—	—			—												
300.30 - 300.80	1929-G	0.5	7	.1			31												
300.80 - 301.30	1930-G	0.5	2	.1			34												
301.30 - 301.80	1931-G	0.5	9	.2			29												
301.80 - 305.30	WASTE	3.5	—	—			—												
305.30 - 305.80	1932-G	0.5	10	.2			46												
305.80 - 308.47	WASTE	2.67	—	—			—												
308.47 - 308.97	1933-G	0.5	12	.8			17												
308.97 - 309.50	1934-G	0.53	30	3.7			89												
309.50 - 310.00	1848-G	0.5	81	4.9			350												
310.00 - 310.50	1849-G	0.5	136	6.1			586												
310.50 - 311.00	1850-G	0.5	117	3.7			141												
311.00 - 311.52	1935-G	0.52	150	6.0			178												
311.52 - 312.00	1936-G	0.48	239	8.3			378												
312.00 - 312.50	1937-G	0.5	18	1.8			42												
312.50 - 313.00	1938-G	0.5	19	1.1			22												
313.00 - 313.45	1939-G	0.45	61	2.1			115												
313.45 - 313.95	1940-G	0.5	5	.4			36												
313.95 - 314.45	1941-G	0.5	21	1.2			19												
314.45 - 314.95	1942-G	0.5	22	1.8			60												
314.95 - 315.48	1943-G	0.53	36	1.8			22												
315.48 - 316.05	1944-G	0.57	28	1.7			20												
316.05 - 316.55	1945-G	0.5	31	2.0			31												
316.55 - 317.05	1946-G	0.5	24	2.0			23												
317.05 - 317.45	1947-G	0.4	231	3.0			405												
317.45 - 318.03	1948-G	0.58	833	2.2			752												
318.03 - 318.53	1949-G	0.5	174	2.7			193												
318.53 - 319.25	1950-G	0.72	20	.9			17												
319.25 - 319.75	1951-G	0.5	10	.6			17												
319.75 - 320.15	1952-G	0.4	114	1.2			1564												
320.15 - 320.45	1953-G	0.3	97	3.1			605												
320.45 - 320.90	1954-G	0.45	76	4.3			217												

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property: UNUK RIVER Project No: 134 Depth: Date Began:

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.	Ag.	Cu.	Zn.	As
230.90 – 231.20	1955-G	0.3	.85	3.8			328
231.20 – 231.50	1956-G	0.3	124	6.9			503
231.50 – 231.80	1851-G	0.3	139	7.7			658
231.80 – 232.10	1852-G	0.3	145	7.6			447
232.10 – 232.40	1853-G	0.3	185	8.7			457
232.40 – 232.85	1957-G	0.45	21	.8			32
232.85 – 233.40	1958-G	0.55	11	.4			9
233.40 – 233.70	1854-G	0.3	57	1.8			305
233.70 – 234.00	1855-G	0.3	192	5.9			823
234.00 – 234.30	1856-G	0.3	137	5.0			719
234.30 – 234.60	1857-G	0.3	105	4.2			289
234.60 – 235.10	1959-G	0.5	11	.4			16
235.10 – 236.50	WASTE	1.4	—	—			—
236.50 – 237.00	1960-G	0.5	9	.3			5
237.00 – 237.50	1961-G	0.5	3	.3			5
237.50 – 238.30	WASTE	0.8	—	—			—
238.30 – 238.80	1962-G	0.5	2	.3			8
238.80 – 239.30	1963-G	0.5	1	.3			2
239.30 – 239.60	1964-G	0.5	5	.3			6
239.80 – 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	.2			1

WIDTH X ASSAY

WIDTH	Au.	Ag.	Cu	Zn.

AVERAGES

WIDTH	Au.	Ag.	Cu	Zn.

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property: UNUK RIVER Project No: 134 Depth: Date Began:

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	Ag	Cu	Zn	As
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	3	.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			31
275.50 - 276.10	2009-G	0.60	4	.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	.3			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					

WIDTH X ASSAY

AVERAGES

WIDTH	Au.	Ag	Cu.	Zn.

GRANGES EXPLORATION LTD.

DIAMOND DRILL LOG

Property: Unuk River — Project No.: 134 — Depth: 238.05 m — Date Began: Aug 30/90

Hole No.: AP-9 — Co ord.: 1117N / 258W — Horizontal Length: — Date Completed: Sept 3/90

Claim No.: UNUK 26 — Core Size: BGBDM — Drilled By: J.T. THOMAS

Grid No.: ZONE I — Angle & Direction: -50°/Az080 true — Elevation: 1390 m — Logged By: Ross Zawada

INTERVAL FEET METRES	DESCRIPTION	FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
0.0 m → 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 tension 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 - .45 m 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, 75/1m - py 7-10% with Tr sph and Tr Aspy - silica flooding and brecciation (crackle breccia) - moderate → high sericitization - 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

Property: Uluk River | Project No.: 134 | Depth: 238.05m | Date Began: Aug. 30/90
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 - To py								
	25.90 - 26.40 - lesser degree of alteration resulting in a darker black color. - Carbonate filled veinlets at 70° and // 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.								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property: Unuk River | Project No.: 134 | Depth: 238.05 | Date Began: Aug. 30/90
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 - // to CA - ⊥ to CA - 20° to CA								
	51.0 - 57.82 - black, less 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 30° 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

Property: Unuk River | Project No.: 134 | Depth: 238.05 | Date Began: Aug 30/90
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 Zanadin

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 - 94.30 - 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 tension 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 occassional 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								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property: Unuk River | Project No.: 134 | Depth: 238.05 | Date Began: Aug 30/90
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)	124.63 - 135.45 - 2-4% feldspar phenocrysts - decrease in silicification - 129.30 - 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								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property: Unuk River — Project No. 134 — Depth 238.05 — Date Began Aug 30/90
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)	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 ≤ 15/100mm at 30° and 60° to CA 194.16 – 197.21 - mislatch 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								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property: UNUK RIVER | Project No.: 134 | Depth: 238.05 | Date Began: Aug 30/90
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 TAVARA

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 ≈ // 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.								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property: UNUK RIVER | Project No.: 134 | Depth: 238.05 | Date Began: Aug. 31/90
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 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° to CA	219.05	219.55	.50		787	6.6		2.043 %
		219.55	220.05	.50		3298	8.2		7.4 %
								across	1.0
	– 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. 5-6 mm 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								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property: Unuk River | Project No. 134 | Depth: 238.05 | Date Began: Aug. 30/90
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)									
	224.38 – 227.19 - argillite 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, 2-5mm 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 talc - Tr. Aspy, 5-10% py 226.80 – 227.19 - weak brecciation with quartz filled fractures (+ calc) - 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? on bedding? 2-3mm 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

Property: Chuk River | Project No: 134 | Depth: 238.05 | Date Began: Aug 30/90
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 - increase in small carbonate filled fractures at 40° to CA - Tr As py, 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'								
	Acid tests: 76.2 m : 50.5° corrected 139.29 m : 51.5° corrected								

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property UNUK RIVER Project No 134 Depth Date Began

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	As	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	9	.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												

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property: UNUK RIVER Project No: 134 Depth: Date Began:

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.	As	WIDTH X ASSAY	AVERAGES 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			3		-5	3.236 oz/t			
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	40	.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	1	.2			3						
58.50 - 59.00	2074-G	0.50	35	.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	.1			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

Property UNUK RIVER Project No. 134 Depth Date Began

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 oz/t	Ag oz/t	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	—	—			—						
190.50 - 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		1.0	2.04	7.4		
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	2.3			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			79						
227.90 - 228.40	2124-G	0.50											

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property: UNUK RIVER | Project No.: 134 | Depth: | Date Began:

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	WIDTH X ASSAY						AVERAGES					
														WIDTH	Au.	Ag.	Cu.	Zn	
228.40 - 228.90	2125-G	0.50	16	.5			19												
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	4	.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	21			55												
232.30 - 232.80	2134-G	0.50	19	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			23												
235.50 - 237.13	2140-G	1.63	7	.6			41												
237.13 - 238.05	2141-G	0.92	7	.6			24												
HOLE ABANDONED																			

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Page 1 of 9

Property: UNUK R. | Project No.: 134 | Depth: 198.12 m | Date Began: SEPT 3/90
Hole No.: AP10 | Co ord.: 1600 N | Horizontal Length: 140 m | Date Completed: SEPT 5/90
Claim No.: UNUK 26 | 075 W | Core Size: BGBDM | Drilled By: J.T. THOMAS
Grid No.: ZONE 1 | Angle & Direction: -45°/Az282 true | Elevation: 1250m | Logged By: B. GABOURY

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 become 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 generally moderately well silicified & sericitized and contains an 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 veins or as small blebs rimmed with chl. C.A. 14.00m : 44° fabric (bedding?)								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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

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Property ..... Project No. ..... Depth ..... Date Began .....
Hole No. AP10 ..... 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 stars 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 stars, 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 clumpy, matrix supported). Rock is mildly to non-silicified, mildly sericitized, and contains 2-3% py, overall, as disseminations & as								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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Property ..... Project No. ..... Depth ..... Date Began .....
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 – 103.41 : 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.								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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Property ..... Project No ..... Depth ..... Date Began .....
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.								
	CA. 118.30 m : ~50° fabric								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No. ..... Depth ..... Date Began .....
Hole No. AP 10 Co ord. ..... Horizontal Length ..... Date Completed .....
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Grid No ..... Angle & Direction ..... Elevation ..... Logged By .....

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 developments, 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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DIAMOND DRILL LOG

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Property ..... Project No. ..... Depth ..... Date Began .....
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.
	depending on degree of shearing ; overall 1–2% fine disem. py ± very minor concordant qtz ± carb vnlts . Interval containg 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.								
	C.A. 189.0 m ; 85° bedding / fabric.								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property UNUK RIVER Project No. 134 Depth ..... Date Began .....

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.	As 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	24	.4			24						
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			28						
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

Property UNUK RIVER Project No 134 Depth Date Began

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	Cu.	Zn.	As	WIDTH X ASSAY	AVERAGES WIDTH	Au.	Ag.	Cu.	Zn.
73.60 - 74.13	2175-G	0.52	3	.6			58						
74.13 - 74.47	2176-G	0.35	5	.5			88						
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	.9			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	10	.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	.4			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	.5			12						
109.10 - 109.60	2211-G	0.50	6	.7			17						
109.60 - 110.10	2212-G	0.50	33	.3			8						

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property UNUK RIVER Project No 134 Depth Date Began

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

Claim No. Core Size Drilled By

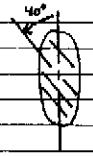
Grid No. Angle & Direction Elevation Logged By

INTERVAL FEET (METRES)	NUMBER	WIDTH	Au. ppb	Ag.	Cu.	Zn.	As	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	131	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	248	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			88						
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	13	.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	.5			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	1.9			29						
178.82 - 179.22	2239-G	0.40	19	.8			25						
179.22 - 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						
191.46 - 198.12	waste	6.66											
198.12	EOH												

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

1 OF 9

Property: UNUK R. | Project No.: 134 | Depth: 141.12 | Date Began: SEPT 7 /90
Hole No.: AP-11 | Co ord.: 1600 N | Horizontal Length: | Date Completed: SEPT 8 /90
Claim No.: UNUK 26 | 003 W | Core Size: BGBDM | Drilled By: J.T. THOMAS
Grid No.: ZONE 1 | Angle & Direction: -45° / 282 True | Elevation: 1208 m | Logged By: B. BORNTRAEGER

INTERVAL FEET (METRES)	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
0 - 9.75	CASING								
9.75 - 42.90	ALTERED AND ALTERED DIABASE DYKE WITH HYDROTHERMALLY & 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								
	18.59 - 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								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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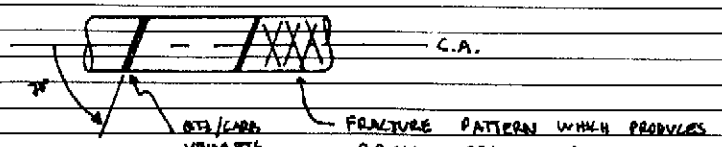
Property ..... Project No. ..... Depth ..... Date Began .....
Hole No. AP-11 ..... Co ord. ..... Horizontal Length ..... Date Completed .....
Claim No ..... Core Size ..... Drilled By .....
Grid No. ..... Angle & Direction ..... Elevation ..... Logged By .....

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  								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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Property ..... Project No. ..... Depth ..... Date Began .....
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 INFILLING - TR sl, gn, asp								
42-90 - 43-00	SHEAR ZONE MARK 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.)								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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Property ..... Project No. ..... Depth ..... Date Began .....
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.
46-82 - 67-73	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 0-20cm 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°								
52.32	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								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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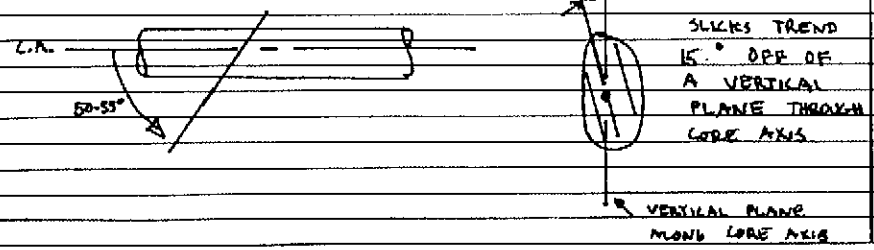
Property ..... Project No. ..... Depth ..... Date Began .....
Hole No. AP 11 Co ord ..... Horizontal Length ..... Date Completed .....
Claim No. ..... Core Size ..... Drilled By .....
Grid No. ..... Angle & Direction ..... Elevation ..... Logged By .....

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 ARE 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 W 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°								



GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

7 OF 9

Property | Project No. | Depth | Date Began
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 PORPHRYTIC FELDSPAR 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 . C.A.'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								

Use Black Pen Only

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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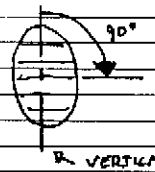
Property ..... Project No. ..... Depth ..... Date Began .....
Hole No. AP 11 Co ord. ..... Horizontal Length ..... Date Completed .....
Claim No. ..... Core Size ..... Drilled By .....
Grid No. ..... Angle & Direction ..... Elevation ..... Logged By .....

INTERVAL FEET (METRES)	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au	Ag	Cu	Zn
	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 90° 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								

GRANGES EXPLORATION LTD.

DIAMOND DRILL LOG

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

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.
	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								
	Acid tests 75.34 m : 45° corrected								
	144.6 m : 45° corrected								

Use Black Pen Only

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property UNUK RIVER Project No. 134 Depth Date Began

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 Au	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	1.4	19	290	21						
40.16 - 40.38	2246-G	0.22	839	4.2	36	8123	765	184.6					
40.38 - 40.82	2247-G	0.44	277	2.0	17	133	59	121.88					
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									
67.93 - 68.65	2252-G	0.72	11	.6									
68.65 - 69.22	2253-G	0.57	139	1.0									
69.22 - 70.22	2254-G	1.00	84	2.1									
70.22 - 72.54	WASTE	2.32	—	—									
72.54 - 73.54	2255-G	1.00	98	5.4									
73.54 - 73.92	2256-G	0.38	26	.5									
73.92 - 74.92	2257-G	1.00	22	.5									
74.92 - 104.82	WASTE	29.90	—	—									
104.82 - 105.90	2258-G	1.08	47	.4									
105.90 - 106.70	2259-G	0.80	39	.6									
106.70 - 107.30	2260-G	0.60	33	.4									
107.30 - 108.00	2261-G	0.70	10	.4									
108.00 - 108.51	2262-G	0.51	6	.3									
108.51 - 109.55	2263-G	1.04	5	.3									
109.55 - 110.33	2264-G	0.78	1	.2									
110.33 - 111.29	2265-G	0.96	1	.2									
111.29 - 111.73	2266-G	0.44	8	.1									
111.73 - 112.00	2267-G	0.27	1	.3									
112.00 - 113.00	2268-G	1.00	1	.4									
113.00 - 141.12	EOH	28.12											
									3.66	.464 oz/t			

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Page 1 of 8

Property: UNUK R | Project No.: 134 | Depth: 138.68 m | Date Began: SEPT. 8/90
Hole No.: AP 12 | Co-ord.: 1340 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 true | 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 bresciated 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. Bresciated portions with the greywacke void/fracture filling occur as matrix supported breccias up to 20 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 : 33° 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 those encountered in interval 69.66-74.90								
	CA 78.00 m : 33° fabric								
	CA 79.95 m : 28° fabric								
	CA 84.00 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 blk/k 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, dissemination & 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 fuitaceous 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 fabric CA. 113.50 m : 45° fabric CA. 115.90 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 - 133.70 : 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 ~ 1 cm								

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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 – 122.20 : 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.								

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property UNUK RIVER Project No. 134 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.	Pb
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		.4m	7.91 g/t	148.6 g/t		.65%	.33%
59.10 - 60.10	2278-G	1.00	95	2.3	29	101	34							
60.10 - 68.16	WASTE	8.06	—	—	—	—	—							
68.16 - 68.66	2279-G	0.50	4	.3										
68.66 - 69.30	2280-G	0.64	1	.1										
69.30 - 69.80	2281-G	0.50	6	.4										
69.80 - 70.71	2282-G	0.91	11	.5										
70.71 - 71.50	2283-G	0.79	5	.4										
71.50 - 72.50	2284-G	1.00	5	.6										
72.50 - 72.90	2285-G	0.40	1	.2										
72.90 - 73.90	2286-G	1.00	1	.4										
73.90 - 74.90	2287-G	1.00	3	.3										
74.90 - 92.50	WASTE	17.60	—	—	—	—	—							
92.50 - 93.00	2288-G	0.50	5	.6										
93.00 - 93.80	2289-G	0.80	5	.4										
93.80 - 94.30	2290-G	0.50	15	.4										
94.30 - 111.15	WASTE	16.85	—	—	—	—	—							
111.15 - 111.60	2291-G	0.45	3	.6										
111.60 - 112.60	2292-G	1.00	74	.8										
112.60 - 113.40	2293-G	0.80	12	1.0										
113.40 - 114.00	2294-G	0.60	10	.8										
114.00 - 114.75	2295-G	0.75	13	1.1										
114.75 - 115.95	2296-G	1.20	80	.8										
115.95 - 116.95	2297-G	1.00	200	2.0										
116.95 - 117.38	2298-G	0.43	108	.8										
117.38 - 117.74	2299-G	0.36	224	1.4										
117.74 - 118.93	2300-G	1.19	36	.7										
118.93 - 119.93	2301-G	1.00	34	.5										
119.93 - 121.00	2302-G	1.07	7	.6										
121.00 - 121.73	2303-G	0.73	9	.5										

GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD

Property UNUK RIVER Project No. 134 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.	Cu.	Zn.		WIDTH X ASSAY						AVERAGES					
														WIDTH	Au.	Ag.	Cu.	Zn.	
121.73 - 122.20	2304-6	0.47	5	.8															
122.20 - 123.70	2305-6	1.50	5	.4															
123.70 -	EOH																		

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property: UNUK RIVER | Project No: 134 | Depth: 35.66 m | Date Began: Sept. 10, 1990
Hole No.: AP-13 | Co ord: 1503 N | Horizontal Length: | Date Completed: Sept. 10, 1990
Claim No.: UNUK 14 | 948 E | Core Size: BGBDM | Drilled By: J.T. Thomas
Grid No.: AP GRID | Angle & Direction: -45°/Az 165 true | Elevation: 1428 m | Logged By: K.P. Pelletier

INTERVAL FEET/METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
0 - 3.05	Casing								
3.05 - 7.4	Missing								
7.4 - 19.25	Diabase black, aphanitic								
	green coloured at beginning and end of interval due to calcite replacement								
	7.4 - 8.2 m mottled green and black coloured, green alteration (calcite repl.) forms whispy bands and pods								
	8.2 - 16.2 m black diabase cut by random calcite fractures prominent fracture set at 060° to CA*, locally with pods of green alteration								
	16.2 - 17.2 m 5-10% pyrite within fractures (1-2%), rock is highly brecciated with grey/green fractures in a dark grey matrix. Microfracture pattern in fragments								
	17.2 - 19.25 m fragments form boxwork like pattern locally								
19.25 - 35.66	Volcaniclastic Mudstone (Debris Flow) and interbedded black mudstone. Debris flow is composed of 10-35% fragments including silicic volcanic (75-80%), argillite (15-20%) and andesitic fragments (5-10%), angular to subrounded, ranging in size from 5mm to up to 8cm, with an average size of 1cm.								
	19.25 - 22.0 m foliation fabric defined by a preferred orientation of fragments and narrow shear bands (0.25 - 1cm) at 045° to CA.								
	22.0 - 27.8 m bedding at 045° to CA, fine grained interval at beginning of unit represents graded bedding								
	preferred orientation of fragments at 040° to CA narrow shear bands (1-8mm) at 045° to CA								
	23.95 - 24.25 m shear band at 045° to CA								
	25.3 - 25.7 m calcite altered diabase (?) grey-green coloured, aphanitic, brecciated								
	27.8 - 29.15 m fine ash tuff 5-10% plag. phen (<1mm), 5% mafic phens, in grey-green ash matrix								
	29.15 - 32.75 m narrow shear bands (1-2cm) at 040° to CA preferred orientation of fragments locally, parallel to shear bands at 040° to CA								
	32.75 - 35.66 calcite stringers (up to 1cm) at 090° to CA								
35.66	END OF HOLE (abandoned)								

*CA Core Axis

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GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD

Property: UNUK RIVER Project No.: 134 Depth: 33.7 m Date Began: SEPT. 10 th
Hole No.: AP-13 Co ord.: Horizontal Length: Date Completed: SEPT. 10, 19
Claim No.: Core Size: Drilled By: J.T. Thomas
Grid No.: Angle & Direction: Elevation: Logged By: K.S. Pelletier

INTERVAL FEET (METRES)	NUMBER	WIDTH	Au ppb	Ag.	Cu.	Zn.	Pb	WIDTH X ASSAY						AVERAGES						
														WIDTH	Au.	Ag.	Cu.	Zn.		
0.00 - 7.40	CASING	7.40	—	—	—	—	—													
7.40 - 16.20	WASTE	8.80	—	—	—	—	—													
16.20 - 17.20	2306-G	1.00	5	.5																
17.20 - 18.10	WASTE	0.90	—	—	—	—	—													
18.10 - 18.60	2307-G	0.50	36	1.5																
18.60 - 23.35	WASTE	4.75	—	—	—	—	—													
23.35 - 24.35	2308-G	1.00	22	.6																
24.35 - 35.70	EOH	11.35																		

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property: UUUK R. | Project No.: 134 | Depth: 243.8m | Date Began: SEPT. 11, 1990
Hole No.: AP 14 | Co ord.: 1503 N | Horizontal Length: | Date Completed: SEPT. 14, 1990
Claim No.: UUUK 14 | 948 E | Core Size: BG - BDM | Drilled By: J.T. Thomas
Grid No.: AP GRID | Angle & Direction: -50°/Az. 165 true | Elevation: 1428 m | Logged By: K.S. Pelletier

INTERVAL FEET/METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
0-6.1	Casing								
6.1 - 11.9 m	Lost								
11.9 - 22.2 m	Diabase, black, aphanitic, cut by calcite stringers throughout at 040° to CA* and by anastamosing fractures altered to light green by calcite replacement								
19.5 - 22.2 m	pervasively altered to highly fractured, light green coloured, calcite depleted rock. Locally fracture forms a boxwork pattern.								
20.6 - 22.2 m	zones which appear to be fragmental along contact zone - could represent xenoliths								
22.2 - 84.5 m	Volcaniclastic Mudstone (Debris Flow) Unit is composed of intercalated debris flow breccias beds and laminated black mudstone horizons. The debris flow contains angular and subangular silicic volcanic fragments (80%) and argillite fragments (20%) in a black mudstone matrix. Fragments range in size from 1m to up to 10cm in size and comprise between 10% and 45% of the rock composition. The black mudstone horizons contain laminated silty beds which are typically disrupted.								
22.2 - 22.4 m	Mudstone.								
22.4 - 26.62m	Debris Flow 10%-15% silicic volcanic fragments (25-75mm) in a green (sericite?) matrix - moderate silic.								
26.62 - 27.83m	Debris Flow 15-20% angular, silicic volcanic fragments in a black, argillaceous matrix								
27.83 - 28.57m	Mudstone, disrupted bedding at 015° to 045° to CA								
28.57 - 39.8 m	Debris Flow 15-20% silicic volcanic frag, 5% argillite fragments in a mudstone matrix From 29.0m to 39.8m the rock is 20% altered to a light green colour by silica replacement. Shear bands at 045° to CA (1-5cm wide) and a preferred orientation of fragments parallel to shear direction.								
39.8 - 41.2 m	Mudstone with thin (2-5cm) intervals of volcaniclastic mudstone (5-10% fragments) At end interval disrupted bedding from 045° to 090°								

*CA - Core Axis

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No. ..... Depth ..... Date Began .....
Hole No. AP 14 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
	To CA.								
	41.2-49.2 m intensive silica alteration with mottled green-grey texture. Fragments partially to completely replaced and overprinted by silica. Interval cut by random quartz stringers (010°-075° to CA) up to 5% and pods of disseminated py (1-2%)								
	49.2-53.9 m generally unaltered except for narrow bands of silica replacement 10-25 cm wide and minor quartz veins and pods (<1cm)								
	53.9-57.9 m intensively silicified and cut by quartz stringers (2%) at 010° to 025° to CA and disseminated pyrite stringers (1-2%)								
	60.25-60.4 m Mudstone, bedding at 060° to CA.								
	61.6-61.85 m Fine ash tuff								
	65.5-66.0 m Quartz stringers at 015° to CA.								
	66.0-66.5 m intensive silica alteration resulting in bleaching of rock to white colour mottled with grey, locally with boxwork fracture pattern, 2-3% diss. py.								
	66.5-67.7 m moderate silicification, overprinting of primary textures bedding at 025° to CA at 66.6m								
	74.5 qtz stringers at 060° to CA								
	75.0-77.2 Mudstone, bedding at 040° to CA (at 76.0m)								
	79.83-80.4 fine ash tuff - dacitic with 5-10% plag. phenocrysts								
	80.4-84.5 Mudstone 040° to CA								
84.5-116.6	Welded, lapilli ash flow tuff or Ignimbrite light grey to green coloured with 1-2% quartz eyes, 5-30% flattened pumice and <5% accidental fragments								
	85.5-103.0 m moderate to intensive fracturing with fragments ranging from 1mm to up to 10 cm in a black aphanitic matrix (silica?) of fracture filling material Blebs and stringers of pyrite throughout interval ranging from 1 to 3%, with zones locally up to 5%								
	90.3-90.5 m whispy, very fine grained, reddish brown sphalerite associated with pyrite blebs (.5 to 1cm diam)								
	97-98 m quartz stringers and pods (<1cm) with <1% pyrite								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No. ..... Depth ..... Date Began .....
Hole No. AP 14 Co ord. ..... Horizontal Length ..... Date Completed .....
Claim No. ..... Core Size ..... Drilled By .....
Grid No. ..... Angle & Direction ..... Elevation ..... Logged By KSP

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag	Cu.	Zn.
	106.0 - 116.0 m sericitized pumice fragments at 070° to 090° to CA								
	116.0 - 116.6 m fine ash tuff								
116.6 - 145.1	Volcaniclastic Mudstone and interbedded mudstone. Composed of 15-35% angular fragments, predominantly silicic volcanic fragments in a black mudstone matrix. Fragments generally < 0.5 cm but up to 5 cm in size.								
	116.8 m at contact sharp quartz veining over 3 cm at 060° to CA								
	119.5 - 120.5 m spotty silica alteration, wispy shear bands at 025° to CA								
	quartz stringers at 010° to 025° to CA								
	120.5 - 130.6 m moderate to intensive silicification, brecciation random quartz stringers both parallel to and normal to CA with minor associated pyrite (<1 to 1%)								
	130.6 - 133.0 m Mudstone bedding at 060° to CA								
	140.5 - 144.1 m Mudstone with lenses volcaniclastic mudstone (3-15 cm thick)								
145.1 - 170.5	Welded lapilli ash flow tuff or lapimbrite								
	pervasively sericitized and silicified								
	145.1 - 153.5 m intensive fracturing and brecciation with fragments ranging from <1 mm to 5 cm								
	Fracture infilling by siliceous, aphanitic blade material. Pyrite content increases along the interval from <1% to up to 5%, forming disseminated pods and lenses generally <1 mm but up to 1 cm								
	150.0 - 151.5 m pyrite associated with trace arsenopyrite								
	153.5 - 153.9 m LBT								
	153.9 - 155.2 m Fault Gouge. Tuff broken up and composed of clay like material								
	massive coarse-grained pyrite (~3%)								
	155.2 - 157.9 m pyrite lenses and fractures parallel to CA (5-10 mm) associated with intergranular trace galena								
	calcite stringers at 070° to 090° to CA								
	157.9 - 158.2 m quartz-pyrite vein								
	12 cm of massive pyrite at beginning of interval and massive quartz with diss. pyrite in the remaining part of the vein								
	158 - 159.3 m 0.5-1% arsenopyrite intergranular with pyrite								
	160.0 m Kaolinite pods								

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GRANGES EXPLORATION LTD.

DIAMOND DRILL LOG

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

Hole No. AP.14. .... Co-ord. .... Horizontal Length .... Date Completed ....

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

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

INTERVAL FEET / METRES	DESCRIPTION	FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	158.2 - 165.0 m pyrite fractures, prominant direction parallel to CA but varies from 000° to 090° to CA comprises from 2-3% ; trace galena locally 162 m 10 cm wide quartz vein with pyrite stringers, trace chalcopyrite, at 090° to CA 164.0 - 165.5 m increasing degree of silicification pyrite (≥5%) overprints fragments and fracture related matrix 165.5 - 170.5 m pyrite content increases to up to 10% forming fine to medium-grained stringers (5mm to 1cm) zones with anastomosing pyrite pods and stringers over 5-10 cm galena (trace to 2%) typically rims pyrite stringers at 167.0 m galena content increases to up to 3%, locally with trace sphalerite it is intergranular with pyrite or forms discreet stringers (.5 cm) at 170.0 m pyrite content increases to up to 15% veins at 015° to CA, quartz stringers at 025° to CA bands of galena up to 0.5 cm associated with massive pyrite								
170.5 - 172.2	MASSIVE SULPHIDE VEIN								
	170.5 - 171.2 m pyrite (35-40%) forms fragmented blebs and pods - intergranular galena (15-20%) with a platy habit. Gangue is composed of massive quartz with 30-50% finely disseminated, earthy pyrite								
	171.2 - 171.7 m pyrite (20-25%) forms large granular pods (2-5cm) with intergranular galena (10%) and blebs of very fine-grained, red-brown galena gangue is massive quartz (55-60%) with finely disseminated pyrite (≤5-15%)								
172.2 - 202.25	Welded lapilli ash flow tuff or Ignimbrite (as above)								
	172.2 - 178.0 pervasively brecciated and silicified (angular fragments in a black siliceous matrix) with pods and stringers of pyrite (5-10%) and								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No. ..... Depth ..... Date Began .....
Hole No. AP14 ..... Co ord. ..... Horizontal Length ..... Date Completed .....
Claim No. ..... Core Size ..... Drilled By .....
Grid No. ..... Angle & Direction ..... Elevation ..... Logged By K.S.P.

INTERVAL FEET/METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	intergranular galena (3-5%) - pyrite stringers most commonly at 010° to CA								
	178.0 - 190.3 m intensive fracturing with quartz stringers (5%) at both 010° and 080° to CA (at 182.0m pumice at 015° to CA) disseminated pyrite in stringers and groundmass (5-10%)								
	190.3 - 191.5 m 5-10% disseminated pyrite and pyrite fractures with 1-2% intergranular galena 5% quartz pods and stringers (up to 2cm)								
	191.5 - 193.8 m moderate fracturing and silicification <1% disseminated pyrite								
	193.8 - 196.0 m pumice fragments altered to kaolinite								
	196.0 - 198.1 m quartz filled fractures (<1%) at 080°-090° to CA random black fractures (silica?) with 0.5-2% disseminated pyrite and pyrite pods (25-50 mm) - at 198.0m fragments in tuff at 010° to CA								
	198.1 - 202.25 m increased fracture intensity with <1% disseminated pyrite								
	199.2 - 199.4 m quartz veining with 1-2% disseminated pyrite								
202.25 - 217.6	Diabase Dyke. light green coloured, aphanitic, intensively altered by calcite replacement contains 15-20% calcite filled amygdules locally (2.5 - 7.5 mm)								
	202.25 - 205.8 m includes zones of brecciated tuff (10-60cm wide)								
	205.8 - 212.9 m brecciated at beginning of interval (up to 2.0m) with quartz stringers (2%) at 060° to CA								
	212.9 - 214.5 m intensively fractured and silicified tuff cut by black colored fractures and pyrite pods (<1%) - minor quartz stringers								
	214.5 - 215.0 m intensively silicified diabase								
	215.0 - 215.85 m intensively fractured and silicified tuff 1-2% disseminated pyrite, trace chalcopyrite								
	215.85 - 217.6 m microfracturing and minor quartz stringers (1%) at 060° to CA								
217.6 - 233.25	Welded lapilli tuff (Ignimbrite)								
	217.6 - 221.0 pyrite (1%) in 1mm fractures at 000° to CA quartz stringers and pods ± trace pyrite								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No. ..... Depth 243.8 m Date Began .....
Hole No. AP14 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.
	221.0 - 222.2 m minor fractures, kaolinitized pumice at 045° to CA								
	222.2 - 224.0 m intensive fracturing with <1% disseminated pyrite								
	224.0 - 227.1 m weak fracturing - quartz stringers (1%) at 010° to 020° to CA								
	227.1 - 227.75 m intensive fracturing, quartz pods up to 1.5 cm with <1% pyrite								
	227.75 - 233.25 m quartz tension fractures (075° to CA), <0.5% pyrite fractures								
	232.8 - 233.25 m pyrite pods (2 x 4 cm) comprising 30-35% of interval								
233.25 - 243.8	Mudstone, black with thin grey coloured interbeds (tuff?) quartz pods and stringers throughout at 060° to 080° to CA								
	242.5 - 243.8 Fault Gauge - black, fissil, altered to clay								
243.8	END OF HOLE								
	TROPARI 230.0 m failed to go through damaged bit Inclination however = -48°								

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property: UNUK RIVER Project No: 134 Depth: Date Began:

Hole No.: AP 14 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	Pb	WIDTH X ASSAY	AVERAGES WIDTH	Au	Ag	Cu	Zn
0.00 - 6.10	CASING	6.10											
6.10 - 41.20	WASTE	35.10	—	—	—	—	—						
41.20 - 42.20	2309-G	1.00	10	.3									
42.20 - 43.20	2310-G	1.00	18	.3									
43.20 - 44.20	2311-G	1.00	4	.1									
44.20 - 45.20	2312-G	1.00	6	.1									
45.20 - 46.20	2313-G	1.00	12	.1									
46.20 - 47.20	2314-G	1.00	22	.1									
47.20 - 48.20	2315-G	1.00	6	.1									
48.20 - 49.20	2316-G	1.00	3	.2									
49.20 - 53.90	WASTE	4.70	—	—	—	—	—						
53.90 - 54.90	2317-G	1.00	4	.2									
54.90 - 55.90	2318-G	1.00	9	.3									
55.90 - 56.90	2319-G	1.00	8	.2									
56.90 - 57.90	2320-G	1.00	1	.2									
57.90 - 65.50	WASTE	7.60	—	—	—	—	—						
65.50 - 66.00	2321-G	0.50	13	.6									
66.00 - 66.50	2322-G	0.50	7	.5									
66.50 - 67.50	2323-G	1.00	4	.4									
67.50 - 84.50	WASTE	17.00	—	—	—	—	—						
84.50 - 85.50	2324-G	1.00	15	.2									
85.50 - 86.50	2325-G	1.00	7	.1									
86.50 - 87.50	2326-G	1.00	9	.1									
87.50 - 88.50	2327-G	1.00	10	.2									
88.50 - 89.50	2328-G	1.00	18	.1		382							
89.50 - 90.50	2329-G	1.00	36	.1		549							
90.50 - 91.50	2330-G	1.00	21	.2									
91.50 - 92.50	2331-G	1.00	25	.2									
92.50 - 93.50	2332-G	1.00	47	.2									
93.50 - 94.50	2333-G	1.00	20	.3									
94.50 - 95.50	2334-G	1.00	14	.3									
95.50 - 96.50	2335-G	1.00	437	.4									
96.50 - 97.50	2336-G	1.00	137	.3									
97.50 - 98.50	2337-G	1.00	15	.3									
98.50 - 99.50	2338-G	1.00	9	.3									
99.50 - 100.50	2339-G	1.00	126	.2									
100.50 - 119.50	WASTE	19.00	—	—	—	—	—						
119.50 - 120.50	2340-G	1.00	106	.3									
120.50 - 121.50	2341-G	1.00	24	.3									
121.50 - 122.50	2342-G	1.00	29	.2									

GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD

Property: UNUK RIVER Project No.: 134 Depth: Date Began:
Hole No.: AP 14 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 Au	Ag	Cu	Zn	Pb
122.50 - 123.50	2343-G	1.00	10	.1								
123.50 - 124.50	2344-G	1.00	9	.1								
124.50 - 127.60	WASTE	3.10	—	—	—	—	—					
127.60 - 128.60	2345-G	1.00	18	.2								
128.60 - 129.60	2346-G	1.00	17	.3								
129.60 - 130.60	2347-G	1.00	17	.5								
130.60 - 145.10	WASTE	14.50	—	—	—	—	—					
145.10 - 146.10	2348-G	1.00	16	1.3	27	143	20					
146.10 - 147.10	2349-G	1.00	3	.3	26	133	11					
147.10 - 148.10	2350-G	1.00	3	.2	23	132	10					
148.10 - 149.10	2351-G	1.00	2	.2	27	130	32					
149.10 - 150.10	2352-G	1.00	2	.4	32	223	11					
150.10 - 151.10	2353-G	1.00	4	.3	42	135	10					
151.10 - 152.10	2354-G	1.00	11	.5	42	200	18					
152.10 - 153.10	2355-G	1.00	20	.5	33	152	33					
153.10 - 153.50	2356-G	0.40	59	.4	21	91	29					
153.50 - 153.90	WASTE	0.40	—	—	—	—	—					
153.90 - 154.90	2357-G	1.00	75	1.3	55	1458	301					
154.90 - 155.90	2358-G	1.00	79	1.6	61	975	508					
155.90 - 156.90	2359-G	1.00	85	1.7	75	2021	415					
156.90 - 157.90	2360-G	1.00	29	.8	46	433	140					
157.90 - 158.20	2361-G	0.30	810	30.9	442	17517	6642					
158.20 - 159.20	2362-G	1.00	70	2.9	67	2031	656					
159.20 - 160.20	2363-G	1.00	92	4.2	48	1760	4401					
160.20 - 161.20	2364-G	1.00	69	1.9	72	3579	377					
161.20 - 162.20	2365-G	1.00	127	1.9	106	3471	431					
162.20 - 163.20	2366-G	1.00	128	2.5	51	2170	1240					
163.20 - 164.20	2367-G	1.00	46	1.2	39	771	462					
164.20 - 165.20	2368-G	1.00	59	3.1	344	1525	1580					
165.20 - 166.20	2369-G	1.00	207	8.9	314	5179	5709					
166.20 - 166.70	2370-G	0.50	247	23.8	1179	42559	11556	123	11.9	589	21479	5778
166.70 - 167.70	2371-G	1.00	326	19.5	901	24165	9234	326	19.5	901	24165	9234
167.70 - 168.70	2372-G	1.00	281	2.9	97	6596	1396	281	2.9	97	6596	1396
168.70 - 169.70	2373-G	1.00	377	13.4	434	25429	7985	377	13.4	434	25429	7985
169.70 - 170.70	2374-G	1.00	511	39.6	1816	20954	13764	511	39.6	1816	20954	13764
170.70 - 171.20	2375-G	0.50	1629	76.5	439	32083	8375	819	38.2	220	16042	4187
171.20 - 171.70	2376-G	0.50	1875	57.0	318	59130	9220	937	28.5	159	29565	4610
171.70 - 172.20	2377-G	0.50	2708	29.9	287	32427	13921	1354	15.0	143	16213	6963
172.20 - 173.20	2378-G	1.00	143	4.2	50	672	1584					
173.20 - 174.20	2379-G	1.00	127	1.3	47	1581	187					

AVERAGES	WIDTH	Au.	Ag.	Cu.	Zn.	Pb
	6.0 m	788	28.2	726.5	26241	8986
		Includes ↓				
	1.5 m	2071	54.4	348	41213	10507

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property: UNUK RIVER Project No.: 134 Depth: Date Began:

Hole No.: AP 14 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.
174.20 - 175.20	2380-G	1.00	48	1.1	39	209	180						
175.20 - 176.20	2381-G	1.00	19	.7	28	1463	135						
176.20 - 177.20	2382-G	1.00	34	1.3	56	331	153						
177.20 - 178.20	2383-G	1.00	1	.6	40	105	13						
178.20 - 179.20	2384-G	1.00	1	.6	42	157	45						
179.20 - 180.20	2385-G	1.00	3	.5	49	172	29						
180.20 - 181.20	2386-G	1.00	8	.5	47	187	45						
181.20 - 182.20	2387-G	1.00	2	.5	38	151	17						
182.20 - 183.20	2388-G	1.00	2	.2	33	64	21						
183.20 - 184.20	2389-G	1.00	6	.5	38	82	8						
184.20 - 185.20	2390-G	1.00	5	.5	50	84	9						
185.20 - 186.20	2391-G	1.00	1	.4	39	152	16						
186.20 - 187.20	2392-G	1.00	5	.6	34	139	32						
187.20 - 188.20	2393-G	1.00	6	.6	39	155	57						
188.20 - 189.20	2394-G	1.00	6	.2	32	149	48						
189.20 - 190.20	2395-G	1.00	2	.9	48	404	817						
190.20 - 191.20	2396-G	1.00	23	4.1	117	3061	4314						
191.20 - 192.20	2397-G	1.00	1	.3	45	54	21						
192.20 - 193.20	2398-G	1.00	2	.2	38	168	45						
193.20 - 194.20	2399-G	1.00	1	.2	24	80	10						
194.20 - 212.40	WASTE	18.20											
212.40 - 212.90	2400-G	0.50	9	.5	12	92	78						
212.90 - 213.90	2401-G	1.00	1	.1	11	11	3						
213.90 - 214.50	2402-G	0.60	4	.1	13	11	5						
214.50 - 215.00	2403-G	0.50	5	.2	39	38	7						
215.00 - 215.85	2404-G	0.85	3	.2	9	44	9						
215.85 - 216.85	2405-G	1.00	7	.5	15	31	6						
216.85 - 217.10	WASTE	0.25											
217.10 - 217.60	2406-G	0.50	5	.2	16	36	3						
217.60 - 218.60	2407-G	1.00	3	.1	16	72	5						
218.60 - 219.60	2408-G	1.00	1	.1	17	116	5						
219.60 - 220.60	2409-G	1.00	2	.1	19	38	5						
220.60 - 221.60	2410-G	1.00	1	.1	17	95	7						
221.60 - 232.80	WASTE	11.20											
232.80 - 233.25	2411-G	0.45	69	2.1	142	1478	698						
233.25 - 234.25	2412-G	1.00	11	1.0	67	985	427						
234.25 - 235.25	2413-G	1.00	9	.9	29	911	469						
235.25 - 236.25	2414-G	1.00	11	.6	49	293	113						
236.25 - 243.80	EOH	7.55											

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Page 1 of 10

Property: UNUK R | Project No.: 134 | Depth: 264.26 m | Date Began: SEPT 14/90
Hole No.: AP 15 | Co ord.: 1503 N | Horizontal Length: | Date Completed: SEPT 16/90
Claim No.: UNUK 14 | 948 E | Core Size: BGBDM | Drilled By: J.T. THOMAS
Grid No.: AP Grid | Angle & Direction: -58°/A$_z$165 True | Elevation: 1428 m | Logged By: B. GABOURY

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au	Ag	Cu	Zn
0 - 7.62	Casing								
7.62 - 22.44	Diabase A black massive very fine grained intrusive rock with a hackly fracture, minor thin calcitic veinlets with peripheral greenish grey alteration. The rock generally contains < 1% py. Overall 80 - 85 % core recovery.								
22.44 - 25.60	Contact Zone An interval composed of brecciated, bleached and silicified diabase with inclusions of coarse andesitic to dacitic pyroclastic. It contains minor tensional quartz - carbonate veinlets ± 2-3 % py. CA 23.70 m : 22° fracture set.								
25.60 - 27.43	Dacitic Pyroclastic Breccia A greenish grey, fragment supported coarse, volcaniclastic rock composed of ash to block sized fragments with a sericitic/chloritic ash matrix. Contains occassional intervals with boxwork type alteration ± ~3% py. Bottom contact gradational. CA 25.70 m : 0° fabric CA 27.83 m : 30° fabric/shearing.								
27.43 - 34.40	Sheared Tuffaceous Mudstone A tuffaceous mudstone composed of 20-30% light colored angular dacitic fragments in an argillite matrix. It contains black argillite/siltstone intercalations up to ~60 cm wide (siltstone laminae								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No. ..... Depth ..... Date Began .....
Hole No. AP 15 Coord. ..... 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.
	are minor component in intercalations)								
	CA 31.50 m : 15° shearing.								
	CA 33.76 m : 57° argillite/debris flow contact								
34.40 - 38.33	Dacitic Pyroclastic Breccia								
	Similar to interval 25.60 - 27.43. Blocks range in size to ≥ 1.0 m (eg 35.96 - 37.39 block of welded dacite ash - lapilli tuff)								
38.33 - 39.41	Altered Diabase								
	An olive grey, "banded", contorted, fine grained igneous rock with irregular contacts, crudely concordant with the fabric. Locally the rock attains the boxwork - type alteration texture typical of other diabase units in the area. It generally contains ≤ 1% pyrite as disseminations & wispy blebs. It contains minor inclusions of dacite pyroclastic breccia and the alteration banding, where present, appears to be at very shallow core angles.								
39.41 - 52.70	Dacitic Pyroclastic Breccia								
	Similar to 34.40 - 38.33. This is a greyish to greenish grey coarse volcaniclastic rock composed of 30% angular dacitic fragments up to 10 cm diameter supported by a greyish relatively unaltered ash matrix. Contains occassional fine ash intercalations up to ~60 cm wide (eg 48.30 - 48.90 m) & ≤ 1% py.								
	CA 48.30 m : 22° fabric // bedding.								
	CA 49.20 m : 30° fabric // bedding.								
	CA 52.70 m : 25° fabric / contact.								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No. ..... Depth ..... Date Began .....
Hole No. AP 15 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.
52.70 - 84.20	Interbedded Tuffaceous Mudstone, Black Argillite & Siltstone A very irregularly interrelated sequence containing ≤1% disseminated pyrite, overall:								
	Tuffaceous Mudstone : Comprises 75 - 80 % of interval. It is composed of 30-40% subrounded to angular dacitic fragments from sand size to ~ 2 cm diameter in a generally black argillitic matrix. (There are, however, intervals where the matrix becomes more tuffaceous, eg 73.30-75.25; or more sericitized, eg 77.30-78.66)								
	Black Argillite : Fine grained, massive, black sedimentary rock, comprising 15-20% of interval as intercalations with siltstone in the tuffaceous mudstone.								
	Siltstone : Fine grey laminae up to 10cm wide within the black argillite intercalations. These comprise no more than 5% of the interval.								
	56.46 - 66.04 : Brecciated & silicified tuffaceous mudstone; a dark to light grey mottled, brecciated & silicified tuffaceous mudstone with remnant patches of unaltered mudstone. Alteration demonstrates replacement textures into remnant unaltered patches (embayment). The entire interval is silica-flooded & contains thin qtz tension gashes at ~ 65-80° to core axis. It, overall, carries 2-3% pyrite as blebs, disseminations & schlieren.								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No. ..... Depth ..... Date Began .....
Hole No. AP 15 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
	66.04 - 69.17 : sericitization of volcanic fragments in tuffaceous mudstone diminishes downhole.								
	71.05 - 71.30 : small fault in argillitic interval ; broken core ; gouge.								
	CA 71.05 m : 30° shearing / foliation fabric								
	CA 72.40 m : 22° fabric								
	CA 77.30 m : 40° fabric								
84.20 - 96.50	Interbedded Black Argillite & Siltstone								
	An interval composed of 95% massive black argillite with thin grey siltstone intercalations up to 1 cm wide. It carries 1-2% fine dissem. py.								
96.50 - 107.42	Brecciated Welded Dacite Ash - Lapilli Tuff.								
	A more or less matrix supported coarse fragmental rock composed of 60-70% angular fractured welded dacite tuff fragments up to ~10 cm diameter in a black argillitic matrix. It contains 1-2% pyrite as disseminations ; wispy thin stringers, minor high core angle quartz-chlorite veinlets up to ~ 1 cm diameter. (the matrix may contain appreciable sulfides ; silica ⟶ it has a dendritic appearance in places)								
	104.93 - 105.93 : ~ 3% pyrite.								
	105.93 - 107.42 : bleached ; more silicified								
107.42 - 143.20	Interbedded Tuffaceous Mudstone, Black Argillite ; Siltstone								
	similar to 52.70 - 84.20 ; interval is mildly brecciated ; bedding demonstrates contraction.								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No ..... Depth ..... Date Began .....
Hole No. AP 15 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. 83.80 m ; 32° fabric								
	CA. 86.00 m ; 42° fabric / bedding.								
	CA. 90.00 m ; 23° fabric / bedding.								
	CA. 96.00 m ; 30° fabric / bedding.								
	CA. 109.63 m ; 32° fabric								
	CA. 111.00 m ; 38° fabric								
	CA. 112.09 m ; 85° argill / tuff mudstone contact								
	CA. 115.20 m ; 39° fabric								
	CA. 117.96 m ; 19° fabric								
	CA. 124.30 m ; 45° fabric								
	* Sample of perlitic volcanic fragment in tuffaceous mudstone taken by D. Aldrich (BCDM) from 109.55m.								
	124.63 - 125.66 : volcanic fragments in mudstone are monolithic, embayed fragments of dacite (they appear pumiceous)								
	125.66 - 126.67 : diabase dike with bleached olive-colored selvages; contact CA's ~ 85°.								
	138.29 - 142.59 : brecciated, silica-flooded, dark grey interval of tuffaceous mudstone. The original texture is almost obliterated — it is dark grey mottled, almost having the appearance of dacite. (in earlier drill holes this was recognized as "altered dacite"). It contains 1-2% pyrite as disseminations & in thin randomly oriented stringers, trace red sphalerite & minor thin quartz tension gashes occur near the top of the interval. (CA's of tension gashes ≥ 55°). This interval carries the same black dendritic schlieren as the welded tuff below it.								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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Property ..... Project No. ..... Depth ..... Date Began .....
Hole No. AP 15 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 130.85 m ; 45° fabric ~// bedding (?)								
	CA 133.20 m ; 18° fabric (small shear)								
	CA 137.25 m ; 45° fabric								
143.20 - 244.68	Welded Dacite Ash-Lapilli Tuff (Ignimbrite)								
	A light olive grey (5Y 6/1) to greenish grey (5GY 6/1), dacitic volcaniclastic rock composed of up to 20% angular lapilli-sized dacitic fragments plus variably flattened sericitized pumiceous fragments (these give the rock its fabric) in a silicified ash groundmass. It generally contains 1-2% disseminated pyrite & minor short intercalations of tuffaceous mudstone. It is moderately silicified & generally mildly to moderately sericitized:								
	143.20 - 152.00 : Extremely brecciated & sheared (fragments are irregular with jagged boundaries, original fabric is obliterated). Breccia infilling material is a fine dark dendritic mixture of pyrite plus graphite plus ?. The original eutaxitic texture begins to reappear at the bottom of this interval.								
	CA 142.75 m ; 43° fabric.								
	154.45 - 160.70 : interval is characterized by numerous fractures & quartz veinlets at 65-80° to core axis; some of these have peripheral bleaching.								
	154.45 - 154.53 : small fault; broken core								
	156.70 - 156.95 : Fault, broken core & gritty gouge.								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No. ..... Depth ..... Date Began .....
Hole No. AP 15 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 162.20 m : 20° fabric (fiammé)								
	CA 167.00 m : 25° fabric "								
	163.07 - 172.82 : ~ 2% pyrite as wispy thin stringers of dirty brass-colored pyrite in a moderately brecciated interval. There appears to be a weak shear fabric at CA's of 10-15°								
	171.90 - 172.82 : bleached, kaolinized								
	174.02 - 175.87 : tuffaceous mudstone interbed (upper CA ~ 30°; lower CA ~ 32°)								
	CA 174.05 m : 42° fabric								
	177.87 - 178.63 : Fault; broken core								
	178.63 - 179.60 : occassion silicified shears & quartz veinlets up to ~ 2cm wide at 30-40° to core axis.								
	CA 181.70 m : 22° fabric (fiammé)								
	184.90 - 187.26 : tuffaceous mudstone interbed (upper CA 5-10°, lower CA ~ 25°)								
	187.26 - 203.30 : degree of brecciation decreases to mild.								
	CA 193.50 m : 32° fabric (fiammé)								
	202.30 - 216.53 : mildly brecciated, contains occassional carbonate - quartz - pyrite stringers at CA's generally ≤ 30°. Interval carries 2-3% Pyrite, trace arsenopyrite & sphalerite:								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

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Property ..... Project No. ..... Depth ..... Date Began .....
Hole No. AP-15 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.
	202.30 - 209.60 : dull colored py, fg aspy? 203.30 - 203.70 : rubbly & clayey gouge 30 cm lost core								
	207.40 - 207.60 : quartz - carbonate - pyrite vein at 35° to core axis with numerous specks of red sphalerite.								
	CA: 212.20 m : 20° fabric (fiamme --- -- but fabric somewhat destroyed by moderate brecciation)								
	CA: 228.00 m : 0° fabric (fiammé)								
	229.51 - 235.15 : Increase in degree of brecciation from mild to intense. Overall, contains 2-3% pyrite as disseminations, blebs & minor short wispy stringers.								
	230.31 - 232.73 : mildly to moderately sericitized & silicified with ~10% quartz veinlets up to 2cm wide at CA's of 40-60° (most ≥ 50°); contains 2-4% py plus occassion. pyrrhotite blebs in quartz veinlets.								
	232.73 - 235.15 : intensely brecciated; contains 2-4% pyrite overall.								
	235.15 - 237.00 : Fault; crushed, broken core, gritty-clayey gouge & bleached, sericitized & Kaolinized sheared hostrock; contains 1-3% pyrite.								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No. ..... Depth ..... Date Began .....
Hole No. AP15 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.
	Upper CA 27° (sharp) with slickensides which rake ~ 36° from the vertical.								
	237.00 - 238.48 : intensely brecciated and sheared welded tuff with 1-2% dissem py.								
	238.48 - 241.30 : Altered Diabase dike ; light yellow-grey, soft, kaolinized, very fine grained dike (Upper CA ~ 36° - irregular)								
	239.88 - 240.69 : 3% py, trace red sphalerite.								
	240.69 - 241.30 : patchy grey silicification ; 1-2% fine py, trace arsenopyrite (?)								
	241.30 - 244.68 : intensely brecciated, sheared & silicified, moderately to intensely sericitized welded tuff with 2-5% pyrite, abundant contorted, discontinuous quartz veinlets at random CA's. Towards the bottom of the interval, a dominant set of quartz veinlets with CA's at ~ 35° cuts shearing (CA's ~ 28° in opposite direction) at steep angles								
244.68-248.67	Black Argillite with Grey Siltstone laminations. massive black fine grained argillite with 15 - 20% grey siltstone laminations vv to ~1cm wide. These often demonstrate truncation by numerous small offsets and are often irregular.								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No. ..... Depth ..... Date Began .....
Hole No. AP 15 Co ord. ..... Horizontal Length ..... Date Completed .....
Claim No. .... Core Size ..... Drilled By .....
Page 10 of 10 Grid No. ..... Angle & Direction ..... Elevation ..... Logged By .....

INTERVAL FEET/(METRES)	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
	4-6% pyrite occurs as disseminations, often concentrated in silty laminae. The rock is mildly brecciated & contorted, containing occassional thin, contorted quartz - carbonate ± pyrite veinlets ≤ 1cm wide								
	247.40 - 248.67 : sheared interval with 3-5% fine dissem. py plus trace galena & trace cpy (very small traces). Quartz veining is more abundant & is ~ concordant with fabric (which varies from 63° to core axis at top of interval, 12° in the centre & 65° at the bottom)								
248.67 - 249.02	Fault ; broken siltstone/argillite core & gouge.								
249.02 - 264.26	Tuffaceous Siltstone / Arenite								
	A light grey, relatively soft, silty sedimentary rock with occassional light colored, sand-sized volcanic fragments. Sericite is noticeable on surfaces broken along fabric. It contains 1-2% fine pyrite often associated with thin dark schlieren aligned to give the rock a noticeable fabric.								
	252.35 - 255.51 : Major Fault ; entire interval is clayey, gritty gouge with occassional quartz - carbonate pebbles. No visible sulfide mineralization (this looks like fault in bottom of AP14)								
	CA 237.40 m : 24° crude fabric CA 241.30 m : 32° fabric CA 244.68 m : 25° fabric CA 245.70 m : 28° bedding								
264.26	End of Hole								
	Trapari 259.01 m : -59°/Az 170								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD

Property: UNUK RIVER Project No.: 134 Depth: Date Began:
Hole No: AP 15 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.	Pb	WIDTH X ASSAY						AVERAGES					
														WIDTH	Au.	Ag.	Cu	Zn	
0.00 - 7.62	CASING	7.62	—	—	—	—													
7.62 - 22.44	WASTE	14.82	—	—	—	—													
22.44 - 23.44	2415-G	1.00	6	.6	9	116	18												
23.44 - 24.45	2416-G	1.01	3	.2	7	120	34												
24.45 - 25.45	2417-G	1.00	4	.3	7	109	38												
25.45 - 26.40	2418-G	0.95	4	.3	19	163	31												
26.40 - 27.43	2419-G	1.03	9	.7	59	269	22												
27.43 - 56.46	WASTE	29.03	—	—	—	—													
56.46 - 57.00	2420-G	0.54	6	.1	13	95	7												
57.00 - 58.00	2421-G	1.00	5	.1	12	101	2												
58.00 - 59.00	2422-G	1.00	7	.3	20	183	4												
59.00 - 60.00	2423-G	1.00	12	.2	22	93	5												
60.00 - 61.00	2424-G	1.00	2	.2	16	23	5												
61.00 - 62.00	2425-G	1.00	12	.1	16	124	7												
62.00 - 63.00	2426-G	1.00	7	.1	16	14	2												
63.00 - 64.00	2427-G	1.00	7	.2	19	19	4												
64.00 - 65.04	2428-G	1.04	6	.1	29	12	5												
65.04 - 66.04	2429-G	1.00	6	.1	19	19	2												
66.04 - 103.90	WASTE	37.86	—	—	—	—													
103.90 - 104.93	2430-G	1.03	40	.1	9	133	3												
104.93 - 105.93	2431-G	1.00	42	.1	6	138	4												
105.93 - 106.93	2432-G	1.00	25	.1	10	93	3												
106.93 - 107.42	2433-G	0.49	5	.1	5	162	12												
107.42 - 137.29	WASTE	29.87	—	—	—	—													
137.29 - 138.29	2434-G	1.00	8	.7	19	286	2												
138.29 - 139.29	2435-G	1.00	3	.2	10	143	10												
139.29 - 140.29	2436-G	1.00	2	.1	11	83	10												
140.29 - 163.07	WASTE	22.78	—	—	—	—													
163.07 - 163.98	2437-G	0.91	35	.1	4	129	4												
163.98 - 165.33	2438-G	1.35	12	.1	8	134	4												
165.33 - 166.50	2439-G	1.17	12	.1	8	167	6												
166.50 - 167.50	2440-G	1.00	13	.1	11	246	2												
167.50 - 168.50	2441-G	1.00	6	.1	4	263	3												
168.50 - 169.50	2442-G	1.00	7	.1	9	297	3												
169.50 - 171.00	2443-G	1.50	3	.1	275	432	7												
171.00 - 171.90	2444-G	0.90	3	.1	6	281	8												
171.90 - 172.82	2445-G	0.92	1	.1	10	276	3												
172.82 - 202.30	WASTE	29.48	—	—	—	—													
202.30 - 203.30	2446-G	1.00	6	.1	6	104	3												
203.30 - 203.70	2447-G	0.40	2	1.0	19	132	3												

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property: UNUK RIVER Project No.: 134 Depth: Date Began:

Hole No.: AP 15 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	Pb
203.70 - 204.60	2448-G	0.90	2	.1	5	200	3
204.60 - 205.60	2449-G	1.00	9	.1	6	147	6
205.60 - 206.34	2450-G	0.74	19	.2	11	192	2
206.34 - 206.60	2451-G	0.26	5	.1	4	125	5
206.60 - 207.40	2452-G	0.80	16	.1	6	177	3
207.40 - 207.60	2453-G	0.20	11	.1	8	1328	2
207.60 - 209.00	2454-G	1.40	4	.1	5	67	5
209.00 - 210.50	2455-G	1.50	7	.1	4	82	2
210.50 - 212.00	2456-G	1.50	8	.1	7	145	4
212.00 - 213.50	2457-G	1.50	3	.2	16	91	7
213.50 - 215.00	2458-G	1.50	2	.1	23	74	3
215.00 - 216.53	2459-G	1.53	1	.4	17	73	2
216.53 - 229.51	WASTE	12.98	—	—	—	—	—
229.51 - 230.31	2460-G	0.80	3	.5	13	146	2
230.31 - 230.90	2461-G	0.59	5	.9	14	3173	4
230.90 - 231.65	2462-G	0.75	3	.2	9	113	3
231.65 - 232.73	2463-G	1.08	2	.4	21	29	2
232.73 - 233.73	2464-G	1.00	4	.3	13	76	5
233.73 - 235.15	2465-G	1.42	7	.3	16	109	4
235.15 - 237.00	2466-G	1.85	5	.1	7	94	2
237.00 - 238.48	2467-G	1.48	1	.1	6	176	6
238.48 - 239.88	2468-G	1.40	37	.3	8	46	6
239.88 - 240.69	2469-G	0.81	16	.8	30	265	233
240.69 - 241.30	2470-G	0.61	5	.3	48	35	5
241.30 - 242.30	2471-G	1.00	4	3	19	230	21
242.30 - 243.30	2472-G	1.00	22	.5	33	169	39
243.30 - 244.68	2473-G	1.38	14	.6	24	107	372
244.68 - 245.70	2474-G	1.02	23	.8	25	348	67
245.70 - 246.50	2475-G	0.80	20	.9	41	358	310
246.50 - 247.40	2476-G	0.90	104	.9	52	100	66
247.40 - 248.67	2477-G	1.27	6	.8	57	451	303
248.67 - 249.02	2478-G	0.35	7	.4	35	111	14
249.02 - 250.00	2479-G	0.98	6	.3	42	100	26
250.00 - 251.00	2480-G	1.00	5		38	93	8
251.00 - 252.00	2481-G	1.00	4	.3	43	75	7
252.00 - 264.26	EOH	12.26	—	—	—	—	—

WIDTH X ASSAY

WIDTH	Au.	Ag.	Cu	Zn.
AVERAGES				

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property: UNUK RIVER | Project No.: 134 | Depth: 190.2m | Date Began: Sept. 18, 1990
Hole No.: AP-16 | Co ord.: 905N | Horizontal Length: | Date Completed: Sept. 19, 1990
Claim No.: UUUK 14 | 456W | Core Size: BG-BQM | Drilled By: J.T. Thomas
Grid No.: ZONE 1 | Angle & Direction: -45°/A2134 (mag) | Elevation: 1432m | Logged By: K.S. Pelletier

INTERVAL FEET/METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au	Ag	Cu	Zn
0 - 9.6	CASING								
9.6 - 10.7	Volcaniclastic tuffaceous mudstone (20-40% recovery) 10-15% siliceous volcanic fragments and minor chlorite fragments in a black, aphanitic mudstone matrix -intervals of silicification (bleaching) from 1-50cm wide								
10.7 - 38.7	Dacite ash flow tuff (10.7m - 31.6m ; 20-30% recovery) massive, grey to greyish green coloured with 5-10% feldspar phenocrysts (secondary albite?) and rare qtz eyes moderately to intensly silicified with overprinting of primary textures fractured throughout with rusty weathering along fractures locally qtz stringers throughout at 000° to 046° to CA* 11.4-11.6 massive qtz with 0.5-2% diss pyrite 31.6-32.0 qtz stringers at 055° to CA								
38.7 - 45.8	Interbedded black mudstone, tuffaceous mudstone, fine ash tuff and lapilli tuff								
	38.7 - 39.6 Fine ash tuff dark grey to green coloured with 2-3% plag. phenocrysts and 3-5% matic (chloritic) phenocrysts (1-2mm)								
	39.6 - 45.8 argillite, tuffaceous mudstone and lapilli tuffs with a weak lineation and preferred orientation of fragments at 075° to 086° to CA -qtz stringers (<1%) at 010° to CA								
	40.7 - 41.0 3cm wide qtz vein and intensive silicification								
	42.8 - 45.8 chlorite alteration, rock altered to mottled grey and green with no primary textures preserved -qtz veins from 1-2cm at 090° to CA and 1-2% diss. pyrite								
45.8 - 59.85	Diorite Dyke (between 48.0m and 50.0m, <30% recovery) light grey to greyish green coloured, aphanitic chlorite and clay altered with 3-5% calcite stringers								

* [illegible]

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No. ..... Depth ..... Date Began .....
Hole No. AP-16 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.
	- qtz stringers at 045° to CA, predominantly within first half of interval								
59.85-155.65	Dacitic ash flow tuff and welded lapilli tuff intensively altered, sericitized and silicified light to black green and grey mottled rock with rare primary textures preserved locally (fiamme, lithic fragments)								
	- bands of chlorite enrichment (<1 cm - 20 cm) and calcite pods sometimes rimmed by chlorite throughout the unit								
	- qtz stringers (080° to CA) and minor diss pyrite (0.2-1%) and fractures with rusty weathering aureols throughout								
	63.5-65.8 calcite pods (0.5 to up to 2.5 cm) rimmed with diss pyrite								
	64.5-64.8 brecciated by random quartz stringers with 5% disseminated pyrite in matrix and pods of very fine-grained, reddish-brown sphalerite (1-2%)								
	68.0-80.0 blocky, broken interval with poor recovery (60-80%) rusty weathering along random fractures (<10%) with 1-3% diss. pyrite locally								
	80.4-83.5 calcite pods with pyrite along margins and very fine-grained, grey coloured diss pyrite (1-2%)								
	84.5-136.0 increasing alteration and mottling of tuff with no primary textures preserved								
	87.5-96.0 rusty weathering fracture surfaces due to diss. pyrite and pyrite stringers (<1%)								
	91.4-92.4 intensive silicification and bleaching, brecciation by random black siliceous fractures)								
	96.0-99.6 increasing chlorite content although still intensively silicified, tuff is dark green coloured and mottled.								
	- bands (20-50 cm) with silvery-grey coloured finely diss. pyrite								
	99.6-100.5 bleached by silicification to white colour, <1% pyr								
	100.5-102.0 chloritic pumice frags at 075° to CA								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property | Project No. | Depth | Date Began
Hole No. A.P.-16 | 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.
	106.0 - 116.0 tuff bleached to light green to white, mottled, with all primary textures obscured by silicification and sericitization - dark green lenses and pods of chlorite								
	116.0 - 131.0 chloritic horizon with abundant lenticular pumice fragments, light to dark green and grey coloured, mottled, with zones with a purple coloured hue (aphanitic, disseminated, non-magnetic) - calcite stringers (<1%) at 045° to 055° to CA								
	131.3 - 135.9 intensively silicified, no primary textures preserved qtz stringers at 050° to CA								
	135.9 - 136.2 Fault Gauge, silicic, rubbly and broken								
	136.2 - 147.5 15-20% welded pumice fragments altered to chlorite, locally with medium-grained calcite in core of pumice								
	147.5 - 155.65 Lithic rich tuff with 20-25% silicic volcanic and chlorite fragments in a purplish-grey, aphanitic matrix								
	153.5 - 155.65 intensive silicification, bleaching in bands 10-50 cm wide - qtz stringers at 045° to CA								
155.65 - 160.9	Diabase Dike, black, aphanitic								
	155.65 - 157.5 altered to greyish-green due to calcite replacement - very minor calcite stringers at 055° to CA								
160.9 - 172.7	Dacitic ash flow tuff with 20-25% rhyolitic and chlorite fragments and 5-10% sericitized pumice fragments								
	161.65 - 162.1 banded qtz vein at 010° to CA								
	162.2 - 168.7 talc filled fractures (<1%) at 010° - 020° to CA								
	165.0 - 172.7 slickenslides on talc surface at 020° to CA								
	172.7 - 190.2 welded tuff with chloritic altered pumice at 080° to 090° to CA								
	182.6 - 183.1 calcite veins (0.5-2.0cm) at 015° to 045° to CA								
190.2	END OF HOLE								

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DIAMOND DRILL RECORD

Property: UNUK RIVER Project No.: 134 Depth: Date Began:

Hole No.: AP 16 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.	Pb	WIDTH X ASSAY						AVERAGES					
														WIDTH	Au.	Ag.	Cu.	Zn.	
0.00 - 9.60	CASING	9.60																	
9.60 - 10.70	WASTE	1.10	—	—	—	—	—												
10.70 - 13.70	2482-G	3.00	97	1.4	11	574	19												
13.70 - 14.70	2483-G	1.00	55	2.8	12	2207	74												
14.70 - 15.70	2484-G	1.00	25	1.5	10	589	13												
15.70 - 16.45	2485-G	0.75	25	1.1	8	895	20												
16.45 - 18.70	WASTE	2.25	—	—	—	—	—												
18.70 - 19.70	2486-G	1.00	15	.9	4	937	38												
19.70 - 20.70	2487-G	1.00	18	.6	9	689	10												
20.70 - 21.70	2488-G	1.00	16	1.2	9	250	13												
21.70 - 26.50	2489-G	4.80	64	.7	11	335	13												
26.50 - 29.60	2490-G	3.10	21	.5	8	335	11												
29.60 - 30.60	2491-G	1.00	37	.2	6	162	7												
30.60 - 31.60	2492-G	1.00	28	.4	10	117	18												
31.60 - 32.60	2493-G	1.00	23	.1	4	143	8												
32.60 - 33.60	2494-G	1.00	10	.2	7	51	8												
33.60 - 34.60	2495-G	1.00	6	.1	7	60	9												
34.60 - 35.60	2496-G	1.00	6	.2	1	60	7												
35.60 - 36.60	2497-G	1.00	12	.1	8	117	7												
36.60 - 37.60	2498-G	1.00	5	.4	6	304	22												
37.60 - 38.60	2499-G	1.00	8	.1	5	183	15												
38.60 - 39.60	2500-G	1.00	9	.2	6	243	13												
39.60 - 40.70	2501-G	1.10	9	.1	13	212	5												
40.70 - 41.00	2502-G	0.30	38	.5	12	88	10												
41.00 - 42.80	WASTE	1.80	—	—	—	—	—												
42.80 - 43.80	2503-G	1.00	70	.4	4	47	5												
43.80 - 44.80	2504-G	1.00	95	.7	12	140	23												
44.80 - 45.80	2505-G	1.00	91	1.0	10	375	11												
45.80 - 46.80	2506-G	1.00	240	1.0	9	681	6												
46.80 - 47.80	2507-G	1.00	15	.2	9	241	8												
47.80 - 59.85	WASTE	12.05	—	—	—	—	—												
59.85 - 60.85	2508-G	1.00	81	.9	11	161	16												
60.85 - 63.50	WASTE	2.65	—	—	—	—	7												
63.50 - 64.50	2509-G	1.00	14	.6	8	175	11												
64.50 - 65.80	2510-G	1.30	38	.8	17	563	3												
65.80 - 80.40	WASTE	14.60	—	—	—	—	—												
80.40 - 81.40	2511-G	1.00	11	.1	5	34	2												
81.40 - 82.40	2512-G	1.00	14	.2	2	25	2												
82.40 - 83.40	2513-G	1.00	39	.1	5	38	7												
83.40 - 91.40	WASTE	8.00	—	—	—	—	—												

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property UNUK RIVER Project No 134 Depth Date Began

Hole No. AP 16 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.	Pb.
91.40 - 92.40	2514-G	1.00	18	.1	4	25	7
92.40 - 96.60	WASTE	4.20	—	—	—	—	—
96.60 - 97.60	2515-G	1.00	61	.3	4	36	4
97.60 - 99.60	WASTE	2.00	—	—	—	—	—
99.60 - 100.50	2516-G	0.90	16	.1	5	43	2
100.50 - 131.30	WASTE	30.80	—	—	—	—	—
131.30 - 132.30	2517-G	1.00	5	.3	5	37	2
132.30 - 133.30	2518-G	1.00	4	1	2	52	10
133.30 - 134.30	2519-G	1.00	3	.3	18	251	11
134.30 - 153.65	WASTE	19.35	—	—	—	—	—
153.65 - 154.65	2520-G	1.00	1	.1	6	40	3
154.65 - 155.65	2521-G	1.00	2	.1	4	54	2
155.65 - 156.65	2522-G	1.00	3	.1	19	250	2
156.65 - 160.80	WASTE	4.15	—	—	—	—	—
160.80 - 161.65	2523-G	0.85	1	.1	9	88	2
161.65 - 162.10	2524-G	0.45	1	.1	9	83	2
162.10 - 163.10	2525-G	1.00	1	.1	4	40	2
163.10 - 164.10	2526-G	1.00	1	.1	2	42	2
164.10 - 165.10	2527-G	1.00	6	.1	3	47	3
165.10 - 166.10	2528-G	1.00	2	.1	3	39	6
166.10 - 167.10	2529-G	1.00	1	.2	2	46	3
167.10 - 167.70	2530-G	0.60	5	.1	4	30	2
167.70 - 168.70	2531-G	1.00	2	.1	3	38	2
168.70 - 190.20	EOH	21.50	—	—	—	—	—

WIDTH X ASSAY					

AVERAGES					
WIDTH	Au.	Ag.	Cu.	Zn.	

GRANGES EXPLORATION LTD.

DIAMOND DRILL LOG

page 1 of 4

Property: UNUK RIVER | Project No.: 134 | Depth: 86.6 m | Date Began: Sept. 20, 1990

Hole No.: AP-17 | Co ord: 1502 N | Horizontal Length: | Date Completed: Sept. 21, 1990

Claim No.: UNUK 14 | 1020 E | Core Size: B.G.-B.O.M. | Drilled By: J.T. Thomas

Grid No.: AP | Angle & Direction: -47°/Az 134 | Elevation: 1420 m | Logged By: K.S. Pelletier

INTERVAL FEET/METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
0-6.8	CASING								
6.8-16.5	Volcaniclastic tuffaceous mudstone with interbedded black mudstone								
	25-30% angular lithic fragments (average size of 5mm but up to 5cm) composed predominantly of silicic volcanic fragments and minor argillite fragments in a black mudstone matrix								
	9.0-10.5 weak foliation fabric at 020° to CA*								
	qtz veins up to 1cm at 035° to CA (2%)								
	10.5-13.3 black, aphanitic mudstone with dark grey, laminated silty beds - bedding 050° to CA (at 12m)								
	13.0-13.1 narrow (10cm) horizon of Fault Gauge with dark grey to black, clay like mud								
	- shear planes at 045° to CA								
	13.3-13.5 random quartz stringers								
	- shearing weakens after 14.0m								
	14.5-16.5 increasing moderate to intensive silicification along interval altering rock to a medium grey colour								
	15.5-16.5 moderate to intensive hydrofracturing by black, aphanitic, siliceous stringers with <1% diss pyrite								
	sericite bands (1-3cm) define a weak foliation at 045° to CA								
16.5-46.9	Rhyolite ash flow tuff (?)								
	massive, grey to light green coloured, locally with 3-5% lapilli sized lithic fragments and sericitized pumice fragments								
	- moderate to intensive silicification and sericitization and 1-3% diss pyrite and pyrite fractures occur locally throughout most of the unit								
	- primary textures are typically overprinted by silicification and locally by random black, aphanitic, siliceous fractures								

* CA = Core Axis

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No. ..... Depth ..... Date Began .....
Hole No. AP-17 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.
	18.3-18.6 pumice fragments at 025° to CA								
	17.4-18.3 qtz tension gashes at 060° to 090° to CA								
	18.7-19.5 intensive hydrofracturing by random siliceous black fractures								
	19.5-20.5 ripups and inclusions of volcaniclastic tuffaceous mudstone within tuff								
	20.5-32.0 increasing degree of hydrofracturing to form zones of tectonically brecciated tuff with black siliceous matrix with 0.5-1% diss pyrite, Tr arsenopyrite (?) sericite bands at 025° to CA at 21.6m								
	26.5-32.0 Fault Zone intensive bleaching to light green to white colour anastamosing black siliceous fractures forming intensive fracturing sericite shear bands at 025° to CA albitization shown by euhedral albite throughout								
	32.0-41.0 albite overprinting throughout (1-2mm euhedral crystals), locally brecciated by hydrofracturing. minor remnant pumice								
	32.0-37.8 qtz stringers from 045°-070° to CA								
	41.5-45.4 weak to moderate increasing silicification dark grey coloured along fractures resulting in a brecciated appearance.								
	45.4-46.9 Fault Gouge - broken to rubble, Kaolinite along fractures over first half of interval qtz stringers throughout at 045° to CA zones of intensive sericitization - hydrofracturing at contact (46-46.9m)								
46.9-51.15	Mudstone, black, aphanitic, with minor laminated, grey coloured silty beds								
	46.9-49.0 bedding at 030° to CA (at 47.1m) quartz stringers (<0.1%) at 045° to CA 1% diss pyrite and random pyrite stringers (locally foliated)								
	49.0-50.5 fine ash tuff (?) sericitized, silicified foliation at 045° to CA, associated diss and fract pyrite								

GRANGES EXPLORATION LTD.

DIAMOND DRILL LOG

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

Hole No. AP-17 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.
	50.5 - 51.15 volcaniclastic tuffaceous mudstone, weakly silicified 10-15% silic volcanic fragments and minor argillite fragments in a light grey matrix foliation at 045° to CA								
51.15 - 58.2	Dacite Tuff, moderately to intensely silicified, light green and grey mottled texture weak foliation at 045° to CA minor quartz stringers and tension gashes at 070° to CA, diss pyrite from 0 to 2%								
	51.15 - 51.25 Gouge, sandy, unlithified material								
	53.7 2-3 cm wide black silica vein (at 045° to CA) with 15% diss pyrite and whispy pyrite lenses								
	53.7 - 54.3 qtz veins up to 1 cm wide with 1% diss pyrite (veins at 080° to CA)								
	56.0 - 58.2 intensive silicification and sericitization; <1% diss and stringers of pyrite								
58.2 - 68.1	Mudstone. black, aphanitic mudstone with interbedded laminated grey silty beds, volcaniclastic mudstone horiz. bedding largely disrupted foliation at 050° to CA (59.7m)								
	58.95 - 60.8 Volcaniclastic tuffaceous mudstone 30-40% silicic volcanic and minor argillite fragments in a black, mudstone matrix								
	61.2 - 62.3 Fault Gouge graphitic mudstone, very broken and rubbly qtz stringers (<2%) with up to 10% pyrite good bedding measurement at 070° to CA (61m)								
	62.3 - 67.1 massive quartz replacement of mudstone (?) dark grey to white; locally brecciated pyrite pods and fractures throughout (3-5%) Kaolinite along fractures, slickensides along some fractured surfaces								
	64.0 - 67.0 rubbly, broken (66.3 - 67.1, 38% recovery)								
	66.9 - 67.0 volcaniclastic mudstone								
	67.0 - 67.1 quartz rubble — end Fault Zone								

GRANGES EXPLORATION LTD.

DIAMOND DRILL LOG

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

Hole No. AP-17 ..... 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.
	67.1 - 68.1 Volcaniclastic mudstone with weak foliation at 035° to CA 2% pyrite in pods and fractures								
68.1 - 86.6	Rhyolite ash flow tuff								
	light to dark grey coloured with bands (1-5 cm) of sericite at 045° to CA (68.2 m) pervasive silicification overprints primary textures except rare pumice fragments locally hydrofracturing by random black siliceous fractures throughout quartz stringers at 065° to 085° to CA throughout (locally cutting pyrite stringers)								
	68.1 - 70.0 3% pyrite in pods (up to 2cm) and stringers at 020° to CA								
	70.0 - 70.5 pyrite increases to 5% forming wispy pods up to 3cm wide, associated trace sphalerite and galena								
	71.7 - 72.8 pyrite (5%) and galena (3%) stringers 3-5mm wide parallel to CA along length of interval								
	72.8 - 83.1 decrease in pyrite to <1% and decrease in hydrofracture intensity, re arsenopyrite (81-83m) pyrite occurs in stringers and pods and replacement of pumice fragments qtz stringers throughout (1%) at 075° to 085° to CA								
	83.1 - 86.6 increase in silicification diss pyrite and pyrite stringers (<1%)								
86.6	END OF HOLE								
	abandoned								

GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD

Property UNUK RIVER Project No. 134 Depth Date Began
Hole No AP 17 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
0.00 - 6.80	CASING	6.80					
6.80 - 14.50	WASTE	7.70	—	—	—	—	—
14.50 - 15.50	2532-G	1.00	5	.4	35	181	11
15.50 - 16.50	2533-G	1.00	4	.2	6	210	13
16.50 - 17.50	2534-G	1.00	10	.2	2	153	16
17.50 - 18.50	2535-G	1.00	9	.2	24	162	9
18.50 - 19.50	2536-G	1.00	5	.2	5	255	19
19.50 - 20.50	2537-G	1.00	10	.7	19	250	47
20.50 - 21.50	2538-G	1.00	10	.3	4	242	27
21.50 - 22.50	2539-G	1.00	25	.2	5	222	43
22.50 - 23.50	2540-G	1.00	22	.2	5	174	27
23.50 - 25.50	2541-G	2.00	28	.2	7	205	33
25.50 - 26.50	2542-G	1.00	26	.2	8	194	20
26.50 - 27.50	2543-G	1.00	17	.2	3	19	21
27.50 - 28.50	2544-G	1.00	11	.1	5	112	19
28.50 - 29.50	2545-G	1.00	5	.3	7	157	22
29.50 - 30.50	2546-G	1.00	12	.1	8	162	22
30.50 - 31.50	2547-G	1.00	4	.1	5	220	27
31.50 - 32.50	2548-G	1.00	6	.3	5	102	23
32.50 - 44.90	WASTE	12.40	—	—	—	—	—
44.90 - 45.90	2549-G	1.00	17	.5	8	400	214
45.90 - 46.90	2550-G	1.00	1	.1	7	153	32
46.90 - 47.90	2551-G	1.00	11	.1	5	176	18
47.90 - 48.90	2552-G	1.00	8	.5	6	44	13
48.90 - 49.60	2553-G	0.70	11	.2	9	41	7
49.60 - 50.60	2554-G	1.00	6	.2	4	40	12
50.60 - 52.70	WASTE	2.10	—	—	—	—	—
52.70 - 53.70	2555-G	1.00	3	.1	6	64	13
53.70 - 54.20	2556-G	0.50	6	.3	6	48	12
54.20 - 54.70	2557-G	0.50	1	.2	11	48	12
54.70 - 61.30	WASTE	6.60	—	—	—	—	—
61.30 - 62.30	2558-G	1.00	25	1.0	42	124	46
62.30 - 63.30	2559-G	1.00	1274	34.0	621	19115	17403
63.30 - 64.30	2560-G	1.00	1230	7.4	97	2609	604
64.30 - 65.30	2561-G	1.00	623	3.4	65	1418	1483
65.30 - 66.30	2562-G	1.00	989	3.8	112	1722	1092
66.30 - 67.10	2563-G	1.00	723	2.0	54	1031	747
67.10 - 68.10	2564-G	1.00	226	1.7	49	611	145
68.10 - 69.10	2565-G	1.00	482	11.5	149	12923	9385
69.10 - 70.10	2567-G	1.00	226	6.9	209	7893	4706

WIDTH X ASSAY

AVERAGES

WIDTH	Au.	Ag.	Cu.	Zn.	Pb
[illegible]	[illegible]	[illegible]		1.92	[illegible]
	[illegible]	[illegible]		%	[illegible]

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property UNUK RIVER Project No. 134 Depth Date Began

Hole No. AP 17 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
70.10 - 71.10	2567-6	1.00	3768	6.6	110	4577	5253
71.10 - 72.10	2568-6	1.00	570	10.0	162	11486	11532
72.10 - 73.10	2569-6	1.00	27	5.6	98	6273	8588
73.10 - 74.10	2570-6	1.00	6	.9	71	445	365
74.10 - 75.10	2571-6	1.00	14	1.0	63	974	590
75.10 - 76.10	2572-6	1.00	26	3.0	89	1478	2448
76.10 - 77.10	2573-6	1.00	22	3.1	64	1369	2750
77.10 - 78.10	2574-6	1.00	19	2.7	106	1827	1300
78.10 - 79.10	2575-6	1.00	263	1.6	61	428	347
79.10 - 80.10	2576-6	1.00	4	.5	48	207	129
80.10 - 81.10	2577-6	1.00	58	.6	55	151	172
81.10 - 82.10	2578-6	1.00	13	.7	47	203	121
82.10 - 83.10	2579-6	1.00	16	.7	62	218	91
83.10 - 84.10	2580-6	1.00	8	.6	56	130	91
84.10 - 85.10	2581-6	1.00	10	.3	47	92	33
85.10 - 86.10	2582-6	1.00	3	.1	36	46	12
		END OF HOLE					

WIDTH X ASSAY

AVERAGES

WIDTH	Au.	Ag.	Cu.	Zn.	Pb
1.00	3.779	6.6		.96%	.53%

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property UNUK RIVER | Project No. 134 | Depth 93.0 | Date Began Sept. 21, 1990.
Hole No. AP-18 | Co-ord. 1502 N | Horizontal Length | Date Completed Sept. 22, 1990.
Claim No. UNUK 14 | 1020 E | Core Size BG-BDM | Drilled By J.T. Thomas.
Grid No. AP | Angle & Direction -59°/Az 134 True | Elevation 1420m | Logged By K.S. Pelletier

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au	Ag	Cu	Zn
0-7.2	CASING								
7.2-29.5	Volcaniclastic tuffaceous mudstones, pyroclastic interbeds								
	20-35% poorly sorted, angular silicic volcanic and minor acicular fragments (1-5 mm, up to cm) in a blackk mudstone matrix								
	intervals of graphite between 50-120 cm								
11.0-12.9	pyroclastic tuff with 25-30% siliceous volcanic fragments (2mm-6cm), locally with reaction rims, in a light grey coloured siliceous matrix								
13.4-17.1	Fault Gauge broken, rubbly								
	weak foliation Fabric at 035° to CA* (13.5m)								
13.7-14.2	graphite, sheared with foliation at 025° to CA								
	very minor (<0.5%) diss. pyrite								
22.0-22.7	black mudstone with bedding at 020° to CA								
	folded and disrupted qtz and pyrite stringers at 020° to CA (both up hole + down hole)								
24.2-24.45	qtz stringers at 020° to CA								
	10 cm of graphite at end of interval								
24.5-29.5	minor (<0.5%) pyrite pods and stringers throughout								
	qtz stringers (1%) locally with pyrite								
29.5-63.3	Rhyolite ash flow tuff (?)								
	massive, grey to greenish grey coloured, locally with sericitized pumice fragments								
	- moderate to intensive silicification and sericitization								
	- weakly to intensively hydrofractured and brecciated by black, siliceous random fractures forming angular fragments ranging from 1mm to up to 10 cm in size								
	- diss. pyrite throughout unit concentrated in fractures								
34.0-35.0	- shear bands at 035° to CA								
34.0-39.9	brecciation by hydrofracturing through random black, siliceous fracture material increasing in intensity along								

*CA Core Axis

Use Black Pen Only

GRANGES EXPLORATION LTD.

DIAMOND DRILL LOG

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

Hole No. AP-18 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.
	interval, Kaolinitization along fractures between 38.6-39.6m								
42.0-42.5	intensive hydrofracturing								
43.1-44.5	sericitization, sericite bands with minor diss. py at 050° to CA								
by 46.3	hydrofracture brecciation becomes much less pervasive except locally								
46.5-48.5	qtz stringers at 000° to 045° to CA <0.5% diss pyrite								
48.5-63.3	varying degrees of hydrofracturing from none to intensive sericite shear bands throughout, qtz pods and stringers with minor pyrite (<1.5%) associated with fractures								
63.3-74.55	Volcaniclastic tuffaceous mudstone (as above) with interbedded mudstone and lapilli tuffs								
63.3-63.9	tuffaceous mudstone with <10% lapilli sized silicic volcanic and argillite fragments foliation at 045° to CA trace pyrite								
63.9-66.1	lapilli tuff, banded, 15-20% pyrite replaced argillite fragments in a greyish green matrix bedding at 070° to CA (64.8m) pyrite stringers (<1%) parallel to CA								
66.1-68.5	volcaniclastic tuffaceous mudstone with 15-20% silicic volcanic rock fragments in a black mudstone matrix pyrite stringers parallel to CA (<0.5%) quartz stringers at 045° to CA with diss pyrite								
68.5-72.7	Fault Gouge cubbly, broken, clay like texture black, locally graphitic mudstone with minor tuffaceous mudstone. pyrite stringers at 000°-045° to CA (1-2%) minor quartz stringers								
68.9-70.2	massive quartz with disseminated pyrite pods and stringers within black mudstone								
71.4-73.4	50% recovery								
75.0-75.2	sheacing in tuffaceous mudstone at 030° to CA								

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GRANGES EXPLORATION LTD.

DIAMOND DRILL LOG

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

Hole No. AP-18 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
74.55 – 93.0	Welded, lapilli rhyolite tuff grey to greenish grey coloured, with 5-10% welded pumice fragments and 5-20% angular, silicic volcanic fragments in an aphanitic, glassy matrix pyrite pods (0.5-1.5cm) and stringers throughout (3-5%) minor fracturing locally - fracture infilling by black siliceous material and 1-2% disseminated pyrite								
78.5 – 88.6	increase in pyrite to up to 5% and increase in hydrofracturing pyrite pods up to 2cm and coarse-grained disseminated pyrite with associated galena (0.5-2%) pyrite replacement of lithic fragments								
83.3 – 84.2	quartz stringers at 080° to CA								
88.6 – 93.0	rubbly, broken, intensive kaolinitization 89.55-91.4 m - 54% recovery 91.4-93.0 m - 80% recovery								
93.0	END OF HOLE abandoned								

Use Black Pen Only

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property: UNUK RIVER Project No: 134 Depth: Date Began:

Hole No: AP 18 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	Pb
68.9 - 69.58	2583-G	0.60	23	.9	52	351	55
69.5 - 70.40	2584-G	0.90	24	.9	37	155	59
70.4 - 71.40	2585-G	1.00	14	1.0	32	195	43
74.55 - 75.55	2586-G	1.00	10	.4	27	107	27
75.55 - 76.55	2587-G	1.00	20	.7	49	502	213
76.55 - 77.55	2588-G	1.00	1192	2.5	36	737	198
77.55 - 78.55	2589-G	1.00	40	.9	75	656	621
78.55 - 79.55	2590-G	1.00	61	2.6	73	2701	5054
79.55 - 80.55	2591-G	1.00	46	2.9	119	10911	2643
80.55 - 81.55	2592-G	1.00	159	8.1	234	8662	11252
81.55 - 82.55	2593-G	1.00	100	3.4	161	1874	3555
82.55 - 83.55	2594-G	1.00	69	6.0	246	7856	5591
83.55 - 84.55	2595-G	1.00	43	2.0	48	999	1178
84.55 - 85.55	2596-G	1.00	48	.5	55	419	251
85.55 - 86.55	2597-G	1.00	129	1.8	91	2338	3016
86.55 - 87.55	2598-G	1.00	118	2.1	161	994	2384
87.55 - 87.55	2599G	1.00	41	.7	40	547	130
88.55 - 89.55	2600-G	1.00	4134	25.7	571	8605	1978
89.55 - 91.40	2601-G	0.85	867	11.3	213	2243	898
91.40 - 93.00	2602-G	0.60	122	4.0	62	2998	1424
		END OF HOLE					

WIDTH X ASSAY

AVERAGES

WIDTH	Au 5/t	Ag 5/t	Cu	Zn	Pb
1.85m	2.63	19.09		2.26	1.15

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Page 1 of 5

Property: UNUK R | Project No.: 134 | Depth: 221.59 m. | Date Began: SEPT 22/90
Hole No.: R-4 | Co ord: 100 S | Horizontal Length: | Date Completed: SEPT 24/90
Claim No.: COUL 1 | 890 W | Core Size: BGBDM | Drilled By: J.T. THOMAS
Grid No.: "R" Grid | Angle & Direction: -50°/Az 266 true | Elevation: 847 m. | Logged By: B. GRABOURY

INTERVAL FEET / METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
0 - 3.05	Casing								
2.60 - 65.34	Andesite								
	A medium fine grained dusky green (5G 3/2) to greyish green (5G 5/2), mildly brecciated extrusive volcanic rock with occassional thin pinkish white carbonate veinlets at random orientations. The rock is moderately chloritized & carbonatized and generally contains ≤ 1% pyrite as disseminations & occassional wispy blebs. The rock is locally magnetic (eg darker green interval from 11.25 - 19.20 m).								
	47.09 - 47.84 : 3-5% py								
	53.72 - 54.75 : 3-5% py as randomly oriented stringers.								
	64.87 - 65.34 : sheared lower contact of andesite; contains ~5% fine pyrite in stringers & schlieren oriented with foliation.								
	CA. 65.25 m : 45° shearing.								
65.34 - 72.00	Brecciated Interbedded Black Argillite & Laminated Siltstone with minor tuffaceous fragments & intercalations								
	A highly brecciated & moderately contorted interval composed of massive black, often graphitic argillite with ~ 30% grey laminated siltstone &/or massive grey tuffaceous wacke. Laminated siltstone intercalations are typically ≤ 10cm wide & are composed of individual laminae of the order of 1mm to 10 mm wide & demonstrate frequent disruption by small offsets (micro faults). Silty to arenaceous tuffaceous wacke interbeds								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No. ..... Depth ..... Date Began .....
Hole No. R-4 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.
	reach widths of ≥ 1 m and are typically massive & brecciated with fracture infilling by thin, randomly oriented white quartz-carbonate veinlets up to ~5 mm wide which generally do not extend into the enveloping black argillite (indicating tectonic deformation postdates qtz-carb veining in the siltstones). Overall, the interval contains 1-2% pyrite as disseminations, wisps, and occassionally as replacements in occassional felsic volcanic fragments. Quartz-carbonate veining comprises ~5% of the interval and includes occassional lensoid pods in the black argillite, usually concordant with the fabric:								
	65.34 - 65.69 : Brecciated siltstone with abundant fine, randomly oriented carbonate veinlets. Interval contains trace specks of chalcopyrite & brownish resinous sphalerite.								
	CA 66.50 m : 48° fabric.								
72.00 - 74.98	Andesite								
	similar to 2.60 - 65.34 but more bleached & chloritized. Upper contact 60° with respect to core axis.								
74.98 - 221.59	Brecciated Interbedded Black Argillite & Laminated Siltstone with minor Tuffaceous fragments & Intercalations								
	As in interval 65.34 - 72.00 m.								
	75.65 - 76.81 : Tuffaceous conglomerate with ~3% py/ several volcanic fragments & finer tuffaceous intercalations contain 6								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No. ..... Depth ..... Date Began .....
Hole No. R-4 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.
	very light green mica (fuchsite?)								
77.85 - 80.77 :	Overall 10% pyrite as very fine impregnations & schlieren oriented with fabric. Occassional traces of reddish sphalerite & possible arsenopyrite at 76.85 m. The interval is moderately fractured & the silty sections, as well as some portions of the black argillite are silicified.								
CA 79.00 m :	37° fabric (slickensides raking 58° from vertical)								
85.45 - 86.48 :	Fault; broken splintery core plus minor gouge								
CA 86.40 m :	60° shearing.								
CA 90.80 m :	60° laminations in siltstone								
CA 95.00 m :	40° shearing (poor fabric)								
CA 96.00 m :	50° shearing.								
CA 104.00 m :	50° shearing fabric								
CA 106.80 m :	30° poor fabric								
CA 112.80 m :	50° fabric parallel with laminations in siltstone								
CA 119.60 m :	42° bedding in siltstone								
CA 117.00 m :	46° bedding parallel to fabric								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No ..... Depth ..... Date Began .....
Hole No. R-4 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.
	126.35 - 126.65 : Small fault ; broken core ; minor gritty gouge.								
	129.65 - 131.15 : tuffaceous wacke gritstone - contains volcanic fragments up to 3 mm in diameter.								
	CA 142.00 m : 20° bedding (disrupted)								
	CA 148.50 m : 0° bedding (disrupted)								
	CA 151.00 m : 45° bedding (disrupted)								
	CA 160.33 m : 20° bedding (disrupted)								
	150.48 - 152.72 : tuffaceous wacke gritstone.								
	163.88 - 167.73 : Fault ; broken core, pebbles ; clayey gouge.								
	164.65 - 166.18 : tuffaceous wacke gritstone Upper CA 20° Lower CA 60°								
	169.36 - 170.00 : tuffaceous wacke.								
	CA 170.00 m : 45° bedding.								
	172.97 - 174.60 : tuffaceous wacke (ranges from arenite to gritstone)								
	CA 175.00 m : 30° bedding.								
	CA 179.00 m : 65° bedding.								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No ..... Depth ..... Date Began .....
Hole No. R-4 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 185.50 m : 45° fabric (shearing)								
	CA 188.10 m : 80° bedding								
	CA 191.00 m : 55° bedding (disrupted)								
	195.40 - 202.00 : shearing fabric is anastomosing along core axis.								
	CA 204.75 m : 90° shearing fabric								
	CA 215.49 m : 45° fabric.								
221.59	End of Hole								
	Acid test 221.59 : 49° corrected.								

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GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD

Property UNUK RIVER Project No. 134 Depth Date Began
Hole No B4 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
47.04 - 47.80	2603-G	0.76	2	.1			2	
53.72 - 54.75	2604-G	1.03	7	.1			3	
64.87 - 65.34	2605-G	.27	4	.1			11	
65.34 - 65.69	2606-G	.25	2	.1			18	
65.69 - 66.69	2607-G	1.00	8	.1			24	
66.69 - 67.69	2608-G	1.00	3	.1			39	
67.65 - 68.69	2609-G	1.00	4	.1			69	
68.69 - 69.69	2610-G	1.00	1	.1			23	
75.65 - 76.31	2611-G	1.16	1	.2			69	
76.81 - 77.85	2612-G	1.04	7	.1			167	
77.85 - 78.85	2613-G	1.00	3	.1			537	
78.85 - 79.90	2614-G	1.05	5	.1			882	< 5700 ppb Hg.
79.90 - 80.77	2615-G	1.00	3	.1			1089	< 12000 ppb Hg.
80.77 - 81.77	2616-G	1.00	3	.2			53	
			END OF HOLE					

AVERAGES					
WIDTH	Au.	Ag.	Cu.	Zn.	

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

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

Hole No: R-4 | Co-ord | Horizontal Length | Date Completed

Claim No. | Core Size | Drilled By

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

COMPOSITE SAMPLES

INTERVAL FEET/METRES	NUMBER	WIDTH	Au	Ag	Cu	Zn	As	WIDTH X ASSAY						AVERAGES					
														WIDTH	Au	Ag	Cu	Zn	
2.6 - 7.6	2801-G		1	.1			3												
7.6 - 12.6	2802-G		1	.1			2												
12.6 - 17.6	2803-G		1	.1			2												
17.6 - 22.6	2804-G		2	.1			2												
22.6 - 27.6	2805-G		4	.3			4												
27.6 - 32.6	2806-G		3	.3			4												
32.6 - 37.6	2807-G		1	.6			7												
37.6 - 42.6	2808-G		7	.2			4												
42.6 - 47.04	2809-G		4	.4			6												
47.84 - 52.84	2810-G		3	.2			2												
52.84 - 53.72	2811-G		2	.2			4												
54.75 - 59.75	2812-G		1	.1			2												
59.75 - 64.87	2813-G		1	.1			4												
69.69 - 74.69	2814-G		1	.6			25												
74.69 - 75.80	2815-G		1	.2			69												
81.77 - 86.77	2816-G		14	.2			267												
86.77 - 91.77	2817-G		2	.1			124												
91.77 - 96.77	2818-G		8	.4			65												
96.77 - 101.77	2819-G		7	.4			110												
101.77 - 106.77	2820-G		4	.4			36												
106.77 - 111.77	2821-G		5	.3			35												
111.77 - 116.77	2822-G		8	1.3			41												
116.77 - 121.77	2823-G		16	.5			31												
121.77 - 126.77	2824-G		14	.6			51												
126.77 - 131.77	2825-G		8	.2			42												
131.77 - 136.77	2826-G		8	.2			26												
136.77 - 141.77	2827-G		8	.3			31												
141.77 - 146.77	2828-G		8	.3			30												
146.77 - 151.77	2829-G		14	.2			25												
151.77 - 156.77	2830-G		7	.1			30												
156.77 - 161.77	2831-G		11	.3			29												
161.77 - 166.77	2832-G		11	.3			44												
166.77 - 171.77	2833-G		5	.2			54												
171.77 - 176.77	2834-G		8	.4			41												
176.77 - 181.77	2835-G		8	.1			62												
181.77 - 186.77	2836-G		6	.1			54												
186.77 - 191.77	2837-G		9	.2			46												
191.77 - 196.77	2838-G		4	.2			21												
196.77 - 201.77	2839-G		3	.3			36												

GRANGES EXPLORATION LTD.
DIAMOND DRILL RECORD

Property UNUK RIVER Project No. Depth Date Began

Hole No. R-4 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.	
201.77-206.77	2840-G		12	.1			42												
206.77-211.97	2841-G		5	.3			43												
211.77-216.77	2842-G		10	.3			50												
216.77-221.59	2843-G		6	.5			37												

GRANGES EXPLORATION LTD.

DIAMOND DRILL LOG

Property UNUK RIVER | Project No. 134 | Depth 273.4 m | Date Began September 25, 90
Hole No. R-5 | Co ord. 378 S | Horizontal Length | Date Completed September 29, 90
Claim No. Coul | 730 W | Core Size BQ-BDM | Drilled By J.T. Thomas
Grid No. "R" | Angle & Direction -53°/Az 266 True | Elevation 878 m | Logged By K.S. Pelletier

INTERVAL FEET/METRES	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
0-0.9	CASING								
0.9-2.6	Mudstone and fine ash tuff								
	massive black mudstone with interbedded dark grey, laminated siltstone beds, calcareous bedding is highly disrupted by numerous small scale offsets and contourting of beds disseminated pyrite and very fine-grained replacement of siltstone beds (1-2%)								
2.6-34.77	Andesite flow								
	dark green to greenish-grey coloured, fine to medium grained, locally brecciated with angular fragments ranging in size from 2-5 mm, chloritic altered pervasively calcified, locally with up to 15% calcite forming a green and white mottled texture locally with whispy, web-like stringers of calcite-chlorite at 025° to 030° To CA carbonate stringers at 070° to 080° To CA throughout								
	8.25-10.5 calcite pods and stringers (070° To CA)								
	29.5-34.2 increasing calcite pods and stringers chlorite-calcite bands at 050° To CA								
	34.11-34.77 intensive calcite replacement altering rock to light green colour brecciated fragments subrounded and ranging in size from 0.5-2 cm								
34.77-59.9	Brecciated argillite and siltstone (minor greywacke)								
	highly distorted and brecciated black mudstone and interccalated grey siltstone horizons (1-15 cm) more resistant silty horizons are typically brecciated or offset along small scale fractures, also locally folded, calcite replacement (first 3 int.) horizons of intraformational breccia with angular siltstone and mudstone fragments (1mm-3cm) in a black argillite matrix								

Use Black Pen Only

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No. ..... Depth ..... Date Began .....
Hole No. R-5 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.
	argillite is typically graphitic, massive, medium grey coloured fine-grained greywacke y horizons range from 3cm to 5m and comprise <2% of the overall unit - tectonic breccia forms locally by fracturing through random calcite stringers - pyrite, both disseminated and in fractures, comprises an overal 0.5-1% of the unit								
34.77 - 38.7	fine-grained, grey coloured greywacke, calcareous calcite stringers at 080° to 70°CA								
38.74 - 39.74	intraformational breccia with laminated siltstone blocks overprinted by very fine-grained pyrite								
39.74 - 40.47	massive calcite replacement to form mottled grey and light green to white texture. fracture infilling by calcite pyrite stringers and also a 1cm vein (060°to CA)								
41.16 - 42.6	massive calcite replacement, disseminated pyrite and random pyrite stringers throughout (2%)								
47.06 - 47.5	intensive silicification altering rock to white to light green qtz stringers at 080° to 090° to CA and also parallel to CA <0.1% crome mica (fuchsite)								
49.5 - 52.5	intraformational breccia angular to subrounded mudstone and siltstone in a black argillite matrix fragments (2mm x 1cm up to 5mm x 2.5 cm) commonly replaced by very fine-grained pyrite.								
49.85 - 50.1	white fuchsite bearing fragments (8mm x 3cm), irregular shaped with embayed boundaries								
52.55	bedding at 040° to CA								
55.9 - 58.5	Andesite Dyke 10-15% very fine-grained, calcite replaced plagioclase phenocrysts in a grey, aphanitic matrix last 35 cm brecciated, fragments are 2-4 cm and matrix contains >20% disseminated pyrite and trace chalcopyrite								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No. ..... Depth ..... Date Began .....
Hole No. R-5 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.
58.5 - 80.53	Brecciated Argillite and Siltstone (as above)								
	60.03 - 60.6 intensive calcite replacement random, very fine-grained pyrite stringers (5%)								
	65.9 bedding at 030° to CA but bedding mainly highly distorted								
	64.8 quartz-pyrite vein at 025° to CA								
	70.48 - 80.53 silicified with carbonate overprinting light to dark grey, mottled with indistinct layering overprinted by 10-15% med-grained calcite blebs (1-3mm to 1-8cm), irregular shaped with embayed boundaries disseminated pyrite and pyrite stringers (035° to CA) throughout								
80.53 - 83.0	Andesite Dykes light grey to greenish grey, homogeneous with 10-15% fine-grained plagioclase phenocrysts								
83.0 - 213.0	Brecciated Argillite and Siltstone (as above)								
	83.83 - 83.94 random, deformed and offset quartz veins (up to 2.5cm wide) at 070° to CA								
	90.07 - 90.5 brecciated and intensively silicified fractured siliceous fragments (5mm - 2cm) pyrite infilling in some fractured fragments 5% disseminated, medium-grained pyrite								
	93.1 Trace chalcopyrite associated with diss. pyr.								
	95.0 - 96.4 intensively silicified to light grey to greenish grey, mottled texture calcite blebs throughout 2% finely disseminated to medium-grained disseminated pyrite and pyrite stringers - random - locally brecciating rock quartz stringers at 080° to CA								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No. ..... Depth ..... Date Began .....
Hole No. R-5 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 - 99.3 intensively silicified (as above)								
	99.5 - 99.7 Teasively silicified irregular, embayed contact boundary with blakk argillite								
	108.5 - 110.75 intensively silicified to mottled light grey to greyish white colour, contains sub-angular to rounded black argillite fragments replaced by pyrite in their cores random quartz stringers round calcite blebs (.5 - .75 cm) throughout								
	118.9 - 121.2 intensively silicified overprinted by round to oblong shaped calcite blebs (3-10mm) 1 ≤1% disseminated pyrite								
	124.7 - 127.1 intensively silicified irregular contact with unaltered argillite trends parallel to CA throughout most of interval								
	129.0 bedding at 040° to CA								
	137.0 bedding at 030° to CA								
	148.2 small scale folds - pyrite replacement of siltstone								
	149.0 bedding at 045° to CA								
	154.1 small scale fold								
	156.5 quartz vein (.5cm) at 020° to CA								
	176.85 - 177.27 intensive silicification no visible sulfides								
	179.0 - 180.0 massive quartz veining at 015° to CA ≤1% associated diss. pyrite								
	187.0 - 188.0 medium grained pyrite cubes disseminated throughout								
	190.5 - 192.15 intensive silicification, brecciated with 3% diss. medium-grained pyrite								
	196.1 - 196.3 quartz stringers at 090° to CA								
	201.5 bedding at 035° to CA								
213.0 - 246.6	Rhyolite Flow								
	medium to dark grey to greenish grey coloured, fine-grained to aphanitic, siliceous autobrecciated in first m of interval contains pods and stringers of pyrite throughout, overall comprising between 3 to 5%								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No. ..... Depth ..... Date Began .....
Hole No. R-5 ..... 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.
	213.0 - 216.0 5-8% fine to medium-grained pyrite disseminated and in wispy irregular shaped pods ranging from 0.5 to 3 cm quartz stringers throughout at 045° to CA								
	217.0 - 217.4 quartz vein (1-2cm wide) at 045° to CA with <0.1% pyrite								
	222.0 - 237.5 sericitized black siliceous fractures and associated pyrite pods widely dispersed throughout quartz and pyrite stringers at 045° to CA								
	237.5 - 246.6 locally autobrecciated gloma interval minor replacement of fragments (.5-3cm.) by finely disseminated pyrite (<0.1%)								
246.6 - 264.8	Brecciated Argillite and Siltstone (as above) pyrite replacement of siltstone fragments throughout interval quartz veins and stringers at 000° to 015° to CA								
	256.0 bedding at 030° to CA								
	261.0 - 264.8 massive, fine-grained greywacke								
264.8 - 269.6	Rhyolite Tuff white to grey coloured, mottled textured, pervasively sericitized and calcified 15-20% irregular shaped, white coloured fragments (1mm - 1cm) with embayed (fuzzy) boundaries, completely replaced by calcite weak foliation defined by sericite bands at 020° to CA								
	269.5 quartz-pyrite vein (3cm) at 015° to CA with parallel trending pyrite stringers pyrite mainly very-fine-grained disseminated and in irregular pods (up to 1.5cm) comprising 3-5% overall abundance in unit, trace fuchsite locally								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No ..... Depth ..... Date Began .....
Hole No. R-5 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.
269.6-271.34	Brecciated Argillite and Siltstone (as above) quartz veins up to 1cm parallel to CA bedding highly disrupted (015° to CA at 270.3)								
271.34-273.4	Rhyolite Flow grey to yellowish green, pervasively sericitized and carbonate altered, mottled textured homogeneous except in last 30 cm where it appears to be auto brecciated qtz stringers throughout at 080° to CA and <1% finely disseminated pyrite								
273.4	END OF HOLE								
	Acid Test 122.32 m : 50° corrected								
	Acid Test 273.40 m : 48° corrected.								

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property: UNUK RIVER Project No: 134 Depth: Date Began:

Hole No.: B-5 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.	
17.37 - 18.37	2617-6	1.00	1	.4			15												
32.67 - 33.67	2618-6	1.00	1	.2			10												
33.67 - 34.77	2619-6	0.90	10	.1			24												
34.77 - 35.40	2620-6	.43	16	.6			35												
38.74 - 39.74	2621-6	1.00	18	.9			57												
39.74 - 40.37	2822-6	.63	8	.3			54												
40.47 - 41.16	2623-6	.69	19	.8			92												
41.16 - 41.50	2624-6	.34	9	.3			40												
41.50 - 42.50	2625-6	1.00	5	.3			20												
42.50 - 44.50	2626-6	2.00	17	.7			40												
44.50 - 45.50	2627-6	1.00	7	.5			36												
45.50 - 46.50	2628-6	1.00	6	.4			37												
46.50 - 47.96	2629-6	1.00	1	1.8			55												
47.06 - 48.50	2630-6	1.44	15	5.3			76												
48.50 - 49.50	2631-6	1.00	40	1.6			65												
49.50 - 50.50	2632-6	1.00	37	1.6			51												
50.60 - 51.50	2633-6	1.00	50	1.8			63												
51.50 - 52.50	2634-6	1.00	69	2.6			68												
52.50 - 53.50	2635-6	1.00	54	2.4			66												
53.50 - 54.50	2636-6	1.00	53	2.8			60												
54.90 - 55.90	2637-6	1.00	9	.3			10												
55.90 - 56.90	2638-6	1.00	5	.3			8												
56.90 - 57.50	2639-6	.60	9	.3			12												
57.50 - 58.50	2640-6	1.00	41	1.6			55												
54.50 - 54.90	2641-6	.40	47	2.3			44												
58.50 - 59.50	2642-6	1.00	18	.5			28												
59.50 - 60.03	2643-6	.53	21	.9			34												
60.30 - 60.60	2644-6	.30	8	.1			21												
60.60 - 61.60	2645-6	1.00	25	1.9			42												
61.60 - 62.60	2646-6	1.00	52	3.9			67												
62.60 - 63.60	2647-6	1.00	25	.8			40												
63.60 - 64.60	2648-6	1.00	9	.1			25												
64.60 - 65.60	2649-6	1.00	18	.2			39												
70.48 - 71.48	2650-6	1.00	10	.2			14												
71.48 - 72.48	2651-6	1.00	2	.2			9												
72.48 - 73.48	2652-6	1.00	3	.1			12												
73.48 - 74.48	2653-6	1.00	3	.1			13												
74.48 - 75.48	2654-6	1.00	1	.1			10												
75.48 - 76.53	2655-6	1.05	1	.2			8												
76.53 - 77.53	2656-6	1.00	3	.3			9												

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property UNUK RIVER Project No 134 Depth Date Began

Hole No. R-5 Co-ord. Horizontal Length Date Completed

Claim No Core Size Drilled By

Grid No. Angle & Direction Elevation Logged By

MINERALIZED SAMPLES

INTERVAL FEET / METRES	NUMBER	WIDTH	Au.	Ag.	Cu.	Zn.	As	WIDTH X ASSAY						AVERAGES					
														WIDTH	Au.	Ag	Cu.	Zn.	
77.53-78.53	2657-G	1.00	5	.2			14												
78.53-79.53	2658-G	1.00	7	.3			14												
79.53-80.53	2659-G	1.00	13	.5			12												
80.53-81.00	2660-G	0.47	3	.2			9												
81.00-82.00	2661-G	1.00	7	.8			19												
82.00-83.00	2662-G	1.00	5	3.4			27												
83.00-83.83	2663-G	0.83	29	8.2			91												
83.83-83.94	2664-G	0.11	18	42.9			221												
83.94-84.91	2665-G	0.97	11	10.1			129												
84.91-85.90	2666-G	0.99	3	.4			23												
85.90-87.22	2667-G	1.32	18	1.0			60												
87.22-88.22	2668-G	1.00	4	.4			23												
88.22-89.07	2669-G	0.85	9	.5			25												
89.07-90.07	2670-G	1.00	38	2.6			60												
90.07-91.50	2671-G	0.43	16	.7			56												
91.50-92.50	2672-G	1.00	14	.6			57												
92.50-93.50	2673-G	1.00	11	.8			79												
93.50-94.50	2674-G	1.00	13	.4			84												
94.50-95.50	2675-G	1.00	16	.5			93												
95.50-96.50	2676-G	1.00	24	.6			107												
96.50-97.50	2677-G	1.00	12	1.0			54												
97.50-98.50	2678-G	1.00	24	.5			80												
98.50-99.50	2679-G	1.00	14	.5			81												
99.50-100.50	2680-G	1.00	27	.8			86												
100.50-214.00	COMPOSITE SAMPLED																		
214.00-215.00	2681-G	1.00	3	.3			23												
215.00-216.00	2682-G	1.00	1	.5			16												
216.00-217.00	2683-G	1.00	3	.3			9												
217.00-218.00	2684-G	1.00	4	.2			12												
218.00-264.30	COMPOSITE SAMPLED																		
264.30-264.80	2685-G	0.50	33	1.9			67												
264.80-265.80	2686-G	1.00	1	.2			11												
265.80-266.80	2687-G	1.00	3	.1			10												
266.80-267.80	2688-G	1.00	1	.1			10												
267.80-268.80	2689-G	1.00	6	.1			10												
268.80-269.80	2690-G	0.80	6	.3			12												
269.60-270.60	2691-G	1.00	25	2.0			58												
270.60-271.34	2692-G	1.00	9	1.2			67												
271.34-272.34	2693-G	1.00	3	.2			18												
272.34-273.34	2694-G	1.00	1	.2			24												

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property UNUK RIVER Project No Depth Date Began

Hole No R-5 Co-ord Horizontal Length Date Completed

Claim No. Core Size Drilled By

Grid No. Angle & Direction Elevation Logged By

COMPOSITE SAMPLES

INTERVAL FEET/METRES	NUMBER	WIDTH	Au.	Ag	Cu	Zn.	As	WIDTH X ASSAY						AVERAGES					
														WIDTH	Au.	Ag	Cu.	Zn.	
105.00 - 110.75	2851-G		16	.5			50												
110.00 - 117.00	2852-G		10	.4			35												
117.00 - 122.00	2853-G		7	.2			23												
122.00 - 127.80	2854-G		2	.1			34												
127.80 - 134.00	2855-G		17	.5			37												
134.00 - 139.30	2856-G		12	.7			48												
139.30 - 144.70	2857-G		53	1.9			79												
144.70 - 150.10	2858-G		32	.7			106												
150.10 - 156.00	2859-G		13	.5			38												
156.00 - 161.90	2860-G		21	.6			55												
161.90 - 167.50	2861-G		127	3.2			252												
167.50 - 173.30	2862-G		51	.8			58												
173.30 - 179.00	2863-G		8	.3			47												
179.00 - 184.70	2864-G		7	.5			33												
184.70 - 190.20	2865-G		2	.2			31												
190.20 - 196.10	2866-G		4	.3			35												
196.10 - 201.80	2867-G		10	.4			44												
201.80 - 207.50	2868-G		7	.5			42												
207.50 - 213.00	2869-G		10	.5			44												
218.00 - 224.00	2870-G		2	.2			9												
224.00 - 230.40	2871-G		2	.3			24												
230.40 - 236.30	2872-G		1	.5			20												
236.30 - 241.80	2873-G		2	.6			51												
241.80 - 246.60	2874-G		5	.3			15												
246.60 - 253.10	2875-G		14	.8			51												
253.10 - 258.60	2876-G		4	.4			43												
258.60 - 264.30	2877-G		2	.1			19												

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property: UNUK R | Project No: 134 | Depth: 160.63m | Date Began: SEPT 26/90
Hole No: R 6 | Co ord: 176.5 S 761 W | Horizontal Length: | Date Completed: SEPT 27/90
Claim No: Coul 1 | Core Size: BGBDM | Drilled By: J.T. THOMAS
Grid No: "R" Grid | Angle & Direction: -45°/Az 246 true | Elevation: 800 m | Logged By: B. GABOURY

INTERVAL FEET (METRES)	DESCRIPTION	SAMPLE RECORD FROM	TO	WIDTH	SAMPLE	Au.	Ag.	Cu.	Zn.
0 - 3.05	Casing.								
3.05 - 106.35	Black Argillite with minor laminated Siltstone Interbeds.								
	A massive black argillite with 10-15% massive & laminated grey arenaceous to silty greywacke intercalations varying up to 2.0 m wide. It contains occassional thin sericitized tuffaceous interbeds up to several tens of cm wide. It is generally brecciated & contorted throughout the entire interval and possesses a weak, poorly developed shear fabric. Overall, it contains 1-2% disseminated pyrite.								
12.80 - 14.33	: Sericitized lapilli tuff; a light grey green volcaniclastic with 3-5% disseminated pyrite (up to 10% between 12.86 - 13.11). Upper contact CA ~ 20° (irregular)								
23.20 - 23.57	: Sericitized lapilli tuff with 3-5% disseminated pyrite & minor quartz stockworks. Upper & lower contact CA's ~ 45°.								
23.57 - 25.20	: Minor tuff component occurs as wispy "stringers" of sericitized lapilli tuff generally, but not always, concordant with the crude fabric. It contains 3-5% disseminated pyrite, but this diminishes downhole with "sericite stringer" abundance.								
27.82 - 29.30	: Laminated siltstone with bedding CA's anastomosing down core axis (~0°)								
34.25 - 36.23	: crudely laminated siltstone.								

Use Black Pen Only

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Property ..... Project No. ..... Depth ..... Date Began .....
Hole No. R6 ..... 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 20.00 m : 45° crude fabric								
	CA 28.00 m : 0° fabric // bedding.								
	CA 35.36 m : 45° weak fabric // bedding								
	CA 36.30 m : 40° weak fabric // bedding.								
	41.15 - 43.00 : Fault ; broken core ; 5 cm gouge (at 41.60 m)								
	44.90 - 47.24 : Fault ; broken core plus several pebbly ; gouge intervals.								
	CA 48.00 m : 20° crude shearing fabric								
	CA 55.00 m : 0° (anastomosing) shearing fabric								
	CA 59.00 m : 50° crude shearing fabric								
	CA 67.00 m : 45° fabric // bedding in siltstone								
	82.62 - 106.35 m : Major Fault ; intensely fractured ; broken core with numerous clayey, graphitic ; gritty gouge intervals. Overall contains 2 - 3% fine disseminated pyrite (with up to ~10% in badly crushed ; gouge intervals (88.39 - 106.35)								
	82.62 - 86.65 : ≤ 2% pyrite ; CA's appear to be ≤ 20° for the poorly developed shearing.								
	86.65 - 89.19 : < 1% - 4% (max) fine disseminated pyrite								
	100.00 - 102.00 : intense chlorite alteration (chloritic clayey gouge), preceded by 4.0 m of graphitic								

GRANGES EXPLORATION LTD.
DIAMOND DRILL LOG

Page 3 of 3

Property ..... Project No. ..... Depth ..... Date Began .....
Hole No. R6 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.
	phyllitic argillite from (96.0 – 100.0). This material contains quartz tension gashes ≤ .5cm wide at 20° ; at 80° to core axis.								
106.35–113.35	Interbedded Greywacke ; Andesite ash tuff. A massive, dark grey to dark grey green chloritic arenaceous to silty volcanic greywacke (locally demonstrates bedding) containing intercalations of massive grey andesite fine ash tuff (contains randomly oriented qtz tension vnlts ; ≤10% dissem. pyrite. Entire interval is a fault zone. CA 112.3 m : 45° bedding.								
113.35 – 116.0	Black Graphitic Argillite. as before ; Contains ~ 1% pyrite. Entire interval fault zone. 113.0 – 113.2 ; 65% randomly oriented quartz vnlts varying from 2–10 mm wide.								
116.0 – 160.63	Andesite massive homogeneous dark grey green, brecciated andesite with fracture infilling by white carbonate. The entire interval demonstrates pervasive carbonatization ; mild chloritization ; contains 1–2% fine disseminated pyrite.								
160.63	End of Hole. Acid test 144.39m : 44.5°								

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

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

Hole No.: R-6 | Co ord | Horizontal Length | Date Completed

Claim No. | Core Size | Drilled By

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

MINERALIZED SAMPLES

INTERVAL FEET / METRES	NUMBER	WIDTH metres	Au.	Ag.	Cu.	Zn.	As	WIDTH X ASSAY	AVERAGES: WIDTH	Au.	Ag.	Cu.	Zn.
0 - 11.80	waste	11.80	—	—			—						
11.80 - 13.30	2695-G	1.50	31	.6			182						
13.30 - 14.33	2696-G	1.03	22	.1			272						
14.33 - 14.93	2697-G	.60	10	.7			78						
14.93 - 22.70	WASTE	7.77	—	—			—						
22.70 - 23.20	2698-G	.50	7	1.1			201						
23.20 - 23.57	2699-G	.37	8	.2			318						
23.57 - 24.40	2700-G	.83	10	1.5			148						
24.40 - 25.20	2701-G	.80	7	1.4			105						
88.39 - 88.80	2702-G	.41	44	.9			88						
88.80 - 89.19	2703-G	.39	9	.2			66						
88.19 - 90.00	2704-G	.81	19	.6			86						
90.00 - 90.50	2705-G	0.50	13	.4			83						
90.50 - 91.50	2706-G	1.00	17	.5			83						
91.50 - 92.80	2707-G	1.30	15	.5			77						
92.80 - 93.80	2708-G	1.00	19	.5			91						
93.80 - 94.80	2709-G	1.00	22	.7			81						
94.80 - 95.80	2710-G	1.00	18	.5			58						
95.80 - 96.82	2711-G	1.02	16	.5			52						
96.82 - 97.85	2712-G	1.03	20	.3			78						
97.85 - 98.15	2713-G	.30	13	.5			82						
98.15 - 99.00	2714-G	.85	19	1.1			105						
99.00 - 100.00	2715-G	1.00	9	.2			62						
100.00 - 101.00	2716-G	1.00	17	1.1			116						
101.00 - 102.00	2717-G	1.00	2	.3			154						
102.00 - 103.02	2718-G	1.02	6	.3			41						
103.02 - 103.90	2719-G	.88	12	.9			71						
103.90 - 105.35	2720-G	1.45	1	.1			12						
105.35 - 106.35	2721-G	1.00	2	.1			57						
118.6 - 119.43	2722-G	.83	2	.1			10						

GRANGES EXPLORATION LTD.

DIAMOND DRILL RECORD

Property UNUK RIVER Project No Depth Date Began

Hole No R-6. Co ord Horizontal Length Date Completed

Claim No. Core Size Drilled By

Grid No. Angle & Direction Elevation Logged By

COMPOSITE SAMPLES {1 x (5-10 cm) pcs / m}

INTERVAL FEET / METRES	NUMBER	WIDTH metres	Au	Ag	Cu	Zn	As
3.05 - 12.80	2878-G	9.73	14	1.1			89
14.93 - 22.70	2879-G	7.77	9	1.8			60
25.20 - 30.20	2880-G	5.00	7	.3			32
30.30 - 35.36	2881-G	5.06	5	.3			35
35.36 - 41.15	2882-G	5.79	3	.1			11
41.15 - 47.24	2883-G	6.09	6	.3			32
47.24 - 51.55	2884-G	4.31	12	.2			51
51.55 - 56.39	2885-G	4.84	9	.1			33
56.39 - 61.26	2886-G	4.87	41	2.0			64
61.26 - 66.00	2887-G	4.74	30	1.4			75
66.00 - 72.24	2888-G	6.24	34	1.3			113
72.24 - 78.33	2889-G	6.09	59	4.5			106
78.33 - 82.62	2890-G	4.29	61	3.1			118
82.62 - 86.65	2891-G	4.03	38	2.6			27
121.0 - 127.10	2892-G	6.10	1	.2			15
127.10 - 132.10	2893-G	5.00	4	.1			15
132.10 - 137.70	2894-G	5.60	3	.2			8
137.70 - 143.00	2895-G	6.30	4	.2			24

WIDTH X ASSAY

AVERAGES					
WIDTH	Au.	Ag.	Cu	Zn.	