



THE GRANBY MINING CO. LTD.

CORE DRILL LOG

091089

PROPERTY Empire Metals Option

CLAIM Jean 3

LATITUDE	3 + 80 N	BEARING	East (S86°E)	Hole No.	1
DEPARTURE	1 + 50 W	SLOPE	- 45°	PAGE	1/1
ELEVATION	2,975 ±	LENGTH	205 1/2	DATE STOPPED	June 17, 1974

GEOLOGY		SAMPLES				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	RECOVERED	AS REQ.	FROM TO	SHORT
0	6	Casing						
6	115 1/2	Grey to white, massive limestone; white and orange-weathering sections; few dk. grey to grey (brown-green) shaly inclusions; maximum width 1/2'; small py crystals 74-76: leached, porous, core loss; fracturing about 30° off core axis.					74-76	/
115 1/2	116 1/2	Shale band, with up to 3mm grains sphalerite, fine py crystals, small grains galena; shale a pale green-brown colour;	115 1/2-116 1/2	33479	.05 / 2.34	Tr		
116 1/2	121 1/2	Mineralized zone with fair amount of barite, irregular sphalerite, usually in small grains; little galena						
121 1/2	129 1/2	Nearly continuous barite gangue; coarse sphalerite grains; galena relatively poor.	121 1/2-129 1/2	33480	1.08 / 7.00	0.04		
129 1/2	136 1/4	Best section of coarse grained sphalerite, less (but improved) galena, in barite gangue,	129 1/2-136 1/4	33481	7.25 / 8.11	0.52		
136 1/4	139	and a mixture of green-brown shale limestone Massive barite with only minor sphalerite, galena.	136 1/4-139	33482	.25 / .02	.06		
139	145	As (12% to 14%), but reduced amount of sphalerite, barite, small amount galena. Sl-gn mineralization extends into shale 1/2' past contact at 143 1/2'.	139-145	33483	.70 / 5.16	.18		
143 1/2	205 1/2	Grey shale - aphanitic, with fine banding 65°-90° off core axis. Locally, bands are heavily pyritized. Traces of py, gn on fractures partings to 147'. Partings locally at variance with column banding - bedding.						

LOGGED BY: J. Wilkerson

End of Hole

HOLE NO. 1

CORE DRILL LOG

PROPERTY *Empire Metals Option*

CLAIM *Jean 3*

LATITUDE	<i>1+00N</i>	BEARING	<i>East (S86E)</i>	Hole No.	<i>2</i>
DEPARTURE	<i>2+03W</i>	SLOPE	<i>-45°</i>	PAGE	<i>1/2</i>
ELEVATION	<i>2,930 ±</i>	LENGTH	<i>171'</i>	DATE STOPPED	<i>June 20, 1929</i>

GEOLOGY		SAMPLES				RECOVERY	
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	GRAVITY	RECOVERY	SHORT
<i>0-7</i>		<i>Casing</i>			<i>pb/zn</i>		
<i>7-111</i>		<i>Massive grey to white limestone - white and orange weathering sections (may be inclusions of shale, weathered &amp; discolored by ox'd. pyrite). Brownish green-grey shaly inclusions.</i>					
		<i>69 1/2 - 78 1/2 - Altered zone - porous, with hard lamellae irregular, but overall ~45° of f core axis (vertical); sig. high ferruginous cavities; no sulphides seen.</i>					<i>36-39 2'</i> <i>42 1/2 - 43 1/2 1/2'</i>
<i>111-154</i>		<i>Mineralized zone: greenish grey-brown shale, limestone, barite with sphalerite grains; galena occurs locally as massive blebs related to fractures.</i>					
		<i>111-117: fairly good fine to coarse-grained sphalerite, little galena, in shale, limestone, barite</i>	<i>111-117</i>	<i>33484</i>	<i>.17 / 9.31</i>	<i>.30</i>	
		<i>117-125: relatively weak sulphides, impure barite</i>	<i>117-125</i>	<i>33485</i>	<i>.65 / 4.92</i>	<i>.16</i>	
		<i>125-131: mostly barite gangue (little shale); little gn; good sl in shaly sections.</i>	<i>125-131</i>	<i>33486</i>	<i>.58 / 5.22</i>	<i>.08</i>	
		<i>131-137: massive lead-zinc in shaly sections; massive barite</i>	<i>131-137</i>	<i>33487</i>	<i>5.70 / 4.14</i>	<i>.18</i>	
		<i>137-147: massive barite, lower grade sl, gn in massive blebs</i>	<i>137-147</i>	<i>33488</i>	<i>2.28 / 3.00</i>	<i>.20</i>	

LOGGED BY *M. V. Williams*

HOLE NO. *2*

THE GRANBY MINING CO. LTD.

CORE DRILL LOG

PROPERTY *Empire Metals Option*

CLAIM *Jean 3*

LATITUDE	BEARING	Hole No. <i>2</i>
DEPARTURE	SLOPE	PAGE <i>2/2</i>
ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES			RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG No.	<del>Value</del> $\frac{Pb}{Zn}$ Avg.	FROM TO	SHORT
		<i>147-152 1/2 : same as 137-47</i>	<i>147-152 1/2</i>	<i>33489</i>	<i>3.38 / 4.02</i>		
		<i>152 1/2 - 155 1/2 : Pb, Zn reduced as approach contact (at 154') but continues 1 1/2' into footwall shale; very little barite.</i>	<i>152 1/2 - 155 1/2</i>	<i>33490</i>	<i>3.68 / 3.84</i>	<i>.09</i>	
<i>154-171</i>		<i>Grey shale: as in 74-1 - aphanitic, light &amp; dark laminations slightly irregular, but average perpendicular to core axis. Few fine grains slt &amp; visible to 161'.</i>					
		<i>End of Hole</i>					

LOGGED BY *H. J. Wilkinson*

HOLE NO. *2*

## THE GRANBY MINING CO. LTD.

## CORE DRILL LOG

PROPERTY *Empire Metals Option*CLAIM *Jean 3*LATITUDE *1+00 N*BEARING *—*Hole No. *3*DEPARTURE *2+07 W*SLOPE *-90°*PAGE *1/2*ELEVATION *2,930 ±*LENGTH *302'*DATE STOPPED *June 23, 1974*

GEOLOGY		SAMPLES			RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG No.	REMARKS	FROM TO	SHORT
0-6		Casing					
6-193		Massive grey to white limestone - as in 74-2 59-59½ - shaly inclusion with distinctive texture, Fine grains of a white mineral(?) 128' - angular brn-orange fragments (1") contain pyrite & hematite 136-137 mud seam (soft shale) 138-140½ " " " - fine compositional, wavy banding about 45° off core axis, fine py Following bands: ~140' on - limestone strongly mottled, due to bands & disrupted inclusions of orange-brn (altered shale?) Core loss at muddy shale bands (58'-182') 193-198' - only pebbles in core; contact between limestone and mineralized zone is in this interval 93(198) - 233½" Mineralized zone: barite, strongly weathered brown shale (2" recovered at 198'), rusty and partly leached; (to 209') only possible sulphides 1st minute dark bands and or short fractures (aphanitic) Much core loss. 202½-205: dirty limestone and impure barite, possibly aphanitic, minute or fine sulphides (see note above) 205-215 : light grey-brown altered shale,				58-62 ½ 62-65 ½ 70-73 ½ 168-174 1 174-176 ½ 179½-182 1 185-189 2 189-191 ½ 191-193 2 193-198 4 ½ 198-204 4 207-208 ½ 208-214 ½ 214-216 1	
				202½-205	33491	.04/.20 Tr	
				205-215	33492	.13/.20 .08	

LOGGED BY

*J. Williams*

HOLE NO.

*3*

# THE GRANBY MINING CO. LTD.

DD-4

## CORE DRILL LOG

PROPERTY Empire Metals Option

CLAIM Jean 3

LATITUDE	BEARING	Hole No. <u>3</u>
DEPARTURE	SLOPE	PAGE <u>2/2</u>
ELEVATION	LENGTH	DATE STOPPED

GEOLOGY		SAMPLES				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	SPEC. Pkts	A. MTS.	FROM TO	SHORT
		strongly fractured, with minor barite; quartz, apparently on fractures, as seams; rarely more than 1cm thick; fine to coarse grains of sphalerite, galena, pyrite.						
		211- on : prominent, increasing silicification						
		216 on : rock increasingly fragmental, grading to (222') angular clasts of qtz & brown shale in highly siliceous matrix, very little barite.	215-224	33493	.25 / .49	.16	224-226	1 1/2
		224-233 - as (211-224) - highly siliceous qtz- shale (breccia?) with light 'peppering' of very fine to medium grains sphalerite, lesser galena. No barite seen.	224-233	33494	.10 / .70		249-254	2
		232 1/2 - 233 1/2 - fine limestone, traces sulphides in shale bx.					260-265	2 1/2
		233 1/2 (?) - 302 Massive grey limestone, with random inclusions of gray-brown shale, up to 1' in length. Shaley sections slightly pyritized, talcose, phyllitic.					265-273	2 1/2
		End of Hole.					273-279	1/2

LOGGED BY

*M. Wilkinson*

HOLE NO.

3

# THE GRANBY MINING CO. LTD.

## CORE DRILL LOG

 PROPERTY Empire Metals Option

 CLAIM Jean 2

 LATITUDE 6 + 00 S

 BEARING East (S86 E)

 Hole No. 5

 DEPARTURE 1 + 50 W

 SLOPE -45°

 PAGE 1/2

 ELEVATION 2,930 ±

 LENGTH 169'

 DATE STOPPED June 28, 1974

GEOLOGY		SAMPLES				RECOVERY				
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	GRAVITY	ASSAY	FROM TO	SHORT		
0 - 9		Casing					10-12	1		
9 - 146		Massive grey to white limestone - as in 2, 3, 4. white & orange-weathering sections. Middle-brown patches & streaks of shale at random intervals					12-14 14-15 37-39	1/2 1/2 1/2		
146 - 160 1/2		Mineralized zone - shale, barite, sphalerite, galena					42-48	3		
146 - 147 1/2		aphanitic, middle-brown shale with quartz clasts. Coarse to fine grains of sphalerite, galena, disseminated. Fine disseminated pyrite. Little barite (at bottom)	146-147 1/2	33453	44	56	07	48-52	1/2	
147 1/2 - 151		Fairly pure barite, with low-grade sphalerite, not much galena. Sl. in coarse grains, to 1 cm plus	147 1/2-151	33454	51	38	Fr	52-54 55 1/2-59	1/2 1/2	
151 - 156		good coarse-grained sphalerite (not much galena) in barite gangue. Few shaley patches, with fine-grained pyrite & galena.	151-156	33455	10	12	25	06	107-108 108-111	1 1/2
156 - 157 1/2		coarse grained sphalerite and galena in barite gangue	156-157 1/2	33456	8.10	9.10	06	142-146 156-160	1 1/2	
157 1/2 - 160 1/2		barite, becoming increasingly contaminated with talcose phyllitic wall rock	157 1/2-160 1/2	33457	33	2.00	06	160-163	2	

 LOGGED BY J. Wilkins

 HOLE NO. 5





THE GRANBY MINING CO. LTD.  
CORE DRILL LOG

187 1/2 - 194: 1.67 1.05  
2.64 2.2  
DD-4

PROPERTY Empire Metals Option

CLAIM Jean 2

LATITUDE 1100 S  
DEPARTURE 100 W  
ELEVATION 2,910 ±

BEARING East (S86°E)  
SLOPE -45°  
LENGTH 211'

Hole No. 6  
PAGE 1/2  
DATE STOPPED June 30, 1977

GEOLOGY		SAMPLES				RECOVERY		
FROM	TO	DESCRIPTION	FROM TO	TAG NO.	Depth Feet	14 Ass.	FROM TO	SHORT
0	9	Casing					18-21	1/2
9	187 1/2	Massive grey to white limestone - as in previous holes. White and orange weathering sections. Patches and thin layers of brown shale (mudstone?) at random intervals. Traces of galena in shale as lower contact approached.					87 1/2 - 89	1/2
							96 - 97 1/2	1/2
							97 1/2 - 99	1/2
							107 - 109	1
							140 - 141	1/2
							141 - 142	1/2
187 1/2	194	Mineralized Zone: Highly silicified, fair mineralization. Barite nearly nil, sl, less qz, py					142 - 144	1/2
		187 - 189: aphanitic, middle-brown shale with quartz clasts. Fine disseminated sl, little qz. Shale altered - talcose, phyllitic.	187	33458	1.95	4.62	.16	
		189 - 192 1/2: Highly siliceous, altered rock with fragments & streaks of black & grey shale. Fair-grade, medium-grained sphalerite and galena. Quartz stringers to 1cm, with pale yellow sh associated (as well as typical reddish-brown variety, throughout this section). Galena tends to occur as <u>irregular stringers</u> , and <u>small blobs (?) on laminations</u> .	189	33457	2.10	2.46	.15	
		192 1/2 - 194: progressively less altered, with pronounced laminations, 40° off core axis, at 194'	192 1/2	33460	.79	.77	.06	

LOGGED BY J. Williamson

HOLE NO. 6

