JWS 441467

THE MOUNT LYELL MINING AND RAILWAY COMPANY
LIMITED

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DIAMOND DRILL RECORD

Hole Number	G3.
Location	Gormanston Area Surface Site 3.
Level	3959·19N 6569·64E.
Co-ordinates	S. 6695·58. E. 1868·91.
Collar R.L.	1280·68'. 361.35m
Length	572 474m 177.39m

Purpose: To test the nature and dimensions of the schist conglomerate contact in the Gormanston area.

Survey Depth	00.
Bearing	90°36'
Inclination	-35°10'
Rod Size	0-64' NO 4 Casing 64-160' NX casing Hole caving @ 168' NX casing reamed to & seated @ 237'. 237' - 335' NX. Bx casing seated @ 335' 335 - 979' Bx.
Machine	F-49J
Logged by	
30' Plans	
30' Sections	
100' Plans	
100' Sections	

Comments:

Commenced	17-5-'68.
Completed	16-7-'68.

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C.K. 66

DIAMOND DRILL RECORD — SURVEY SHEET

HOLE NUMBER G3.

Survey Depth	00	20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400	420
Bearing	-90°36' ~~[illegible]~~										Casing down to 480'!											
Inclination	-35°10'	37½°	-37°	-37½°	-38½°	-38°	-38½°	-39°	-39°	-39°	-39°	-39°	-40°	-40°	-40°	-39½°	-40°	-40°	-39°	-39°	-41°	-42°

Survey Depth	440	460	480	500	520	537.			512													
Bearing				93°	89		BROKEN ROD LEFT IN.															
Inclination	-40½°	-41°	-42°	45°	41°	43°.																

Survey Depth																						
Bearing																						
Inclination																						

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Bearing																						
Inclination																						

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FOOTAGE From	FOOTAGE To	RECOVERY Ft.	RECOVERY %	DESCRIPTION
0	1	1		0 - 95
	10½	3¼		Pale grey (with a greenish hue)
	16½	Sand		coarse grained (modal 5mm) sericite
	20	"		quartz fragmental schist. No
	64	1¾		visible mineralisation.
	68½	¼		S/CA 30 deg. uneven at 5'.
	69	0		Between 73 and 82' the core is
	73	3		extensively shattered and puggy and
	77	3¼		similarly from 91½ - 95'. Sand
	82	1½		is present 87 - 89' and at 92'.
	87	¾		
	92	3		95 - 130
	97	3¾		Light grey, massive quartz schist cont.
	101	2½		minor sericite. At 101' core exhibits
	104	2¾		banding similar to rhyolite flow
	106½	2¼		banding. A typical small scale,
	111	3¼		banded flow or slump fold is present
	115	3		at 111'. The schistosity is not well
	119	2½		developed but tends to be parallel
	121	1½		to the core axis and essentially
	123½	1¾		parallel to the flow banding.
	127	3½		Between 122' and 128' the pug bands
	130	¾		cont. a black, glassy, brittle
				mineral (or mineraloid) which is
				soft (H<2) - appears to be a manganese
				mineral.
				130 - 237.
				Pink - grey and streaked brown, coarse
	132	¾		grained siliceous rhyolite type
	135	2¾		flow breccia consisting of angular
	139	3¾		fragments of banded and massive sil.
	147	¾		rock in a highly siliceous matrix.
	150	2½		Fragments vary in size up to 3 cms.
	163	1		across, modal (5mm - 10 mm).
	165	¾		Schistosity is only weakly developed
	169	1		and parallel to core axis.
	174	2¾		No visible mineralisation.
	179	¼		The rock becomes brecciated after
	184	1¼		about 157', and prior to this it appears
	189	2½		to be a massive silicous rhyolitic rock.
	194	1¼		The brecciated texture is not evident
	200	1½		after 169' and the rock again becomes a
	208	2		massive silicious rhyolitic rock, banded
	218	2¾		parallel to schistosity at 183'. S/CA 10
	223	3		deg. uneven, very poorly developed.
	229	1¾		After 184' rock again has a vague fragmental
	237	1¾		appearance cont. silicious fragments up to
	238	¾		4 cms across and is slightly chloritic 184-187
	242	2		

ASSAYS From	To	Ft.	% Cu.	% FeS_2	Oz. Au.	Oz. Ag.	Sample Number
			NOT ASSAYED.				

BULK ASSAYS From	To	Ft.	% Cu.	% FeS_2	Oz. Au.	Oz. Ag.

REMARKS

Core badly broken and ground 0 - 1'
2-10'
Sand present between 2-10' (with core) and also 10½-16½ 82-86½
Core extensively badly broken and ground 58-87
Sand 87-89 and at 92'
Sand at 97'. Core shattered and very puggy (light grey) 97-101' and between 106' and 111' where the 1"-2" pug band parallel the core axis and cont. shattered fragments of quartz schist. (fault zone).
Core shattered and puggy 111'-130' and cont. sand at 115' and 128-130'. Pug is stained ochre red by iron at 111', 113' 115' 117', 132-133', at 135' 140-157'.
This section prepared from sample at 159'.
Sand 130-131½, 147-157

Thin section prepared poor 146'.
Sand present between 170&172'. 174-183' 186½-189'; 190½-198'; 202-208'; (fawn fine grained sand). Core badly broken and ground 199-237'.

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DIAMOND DRILL RECORD

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FOOTAGE From	FOOTAGE To	RECOVERY Ft.	RECOVERY %	DESCRIPTION	ASSAYS From	To	Ft.	% Cu.	% FeS$_2$	Oz. Au.	Oz. Ag.	Sample Number	BULK ASSAYS From	To	Ft.	% Cu.	% FeS$_2$	Oz. Au.	Oz. Ag.	REMARKS
242	247	¼		(237 - 276) Purple grey, coarse grained (modal 5 mm) moderately haematitic sericite quartz fragmental schist cut by coarsely mottled buff schist 256-260' which shows banding at 30 deg. to CA at 257'. S/CA approx. 30 deg/CA but is weakly developed. Rock is pitted by leaching. No visible mineralisation. Quite strongly haematitic after 274'.															Sand present between 208-218 223-229 230-235' Hole caving at 168' Drillers report loss of return water at approx. 240'.
	253	0																		
	255	6																		
	260	1½																		
	267	3																		
	272	3																		
	275	1½																		
	280	½																		
	284	1																		
	288	½																		
	294	¼																		
	300	1¼		(276 - 309) Light grey-white, hard medium-coarse grained quartzite sandstone containing fine grains of a black mineral (probably ~~chlorite~~ CHROMITE) and is locally stained green. Between 294'~~92~~' and 300' the sandstone is cut by a limonite cemented fault breccia and between 300 and 305 consists of clay cont. angular quartzite fragments.															
	305	1¼																		
	310	1																		Core very badly broken and ground 237 - 314.
	314	½																		
	320	0																		
	325	1¾																		
	330	1																		
	333	2																		Clay 300-305, 309-333'.
				(309 - Mediumg brown, soft ~~plaster~~ PLASTIC clay cont. occasional fragments of the above rock type. The clay becomes gritty after 333' and is slightly haematitic (stained purple) at 355'. Numerous pieces of white quartzite sandstone cont. ~~chlorite~~ CHROMITE occur between 349 and 378'. At about 370' the core cont. a short ~~length~~ LENGTH (3") of light grey slightly greenish, mottled purple haematitic quartzite after which the core consists of clay cont. pebbles of quartz and quartzite.															
	340	3																		
	345	4¾																		
	350	2¾																		
	356	2																		
	359	¼																		
	362	¼																		
	363	0																		
	368	¾																		
	373	¼																		
	378	½		(373 - 378) Grey-brown, coarse grained sand cont. angular pebbles of light grey, ~~chloritic~~ CHROMITIC quartzite.														
	383	3¼																		
	386	¼		(378 - 392) Brown clay cont. fragments and pebbles of quartz, quartzite and haem. quartz. Between 390¾ and 392' is a med-coarse grained, brown sand.														
	390	¾																		
	390¾	¼																		
				(392 - 396) Light grey, medium grained, quartzite sandstone cont. minor ~~chloritic~~. CHROMITE														

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FOOTAGE From	FOOTAGE To	RECOVERY Ft.	RECOVERY %	DESCRIPTION
390¾	392	core		(396 -
	393	1¼		Light brown plastic clay cont. grains
	396	½		of quartz and quartzite.
	398	½		At 426' a 1 inch long cored piece of
	402	½		light grey quartzite as 392 - 396
	407	1¾		occurs in the clay which contains
	412	1		small fragments of the same rock.
	417	4		After 428' the clay contains less
	425	4		quartzose fragments and fragments of
	428	2		decomposed schist (?) become
	433	4		common. These are composed of clay
	435½	2½		minerals but ar of lighter colour
	438	2½		with a relict schistose texture.
	443	3¾		Fine banding (bedding?) at 450 - 451
	448	2		is at 30 deg/CA at 450' and 10 deg/CA
	450	1½		at 451'.
				Facing up the hole is shown by a ¼"
				thick graded lamina at 450¼.(?)
	455	4½		(455 - 459½)
	457	sand	(1')	Light grey to tan fine sand composed
	459	"	(1¾)	mainly of silica with minor amounts of a
				fine black sand which may be iron oxides
				or possibly chromite.
				(459½ - 471)
	460	1		Light brown plastic clay.
	466	3		
	471	1½		(471 - 481)
	473	½		Mixed dark grey and light brown clay.
	477	½		
	480	0		(481 - 491)
	490	1½		Clay and sand carrying numerous
				rock fragments to 1½ dia.
				The fragments are predominantly
				pale grey quartzite but white quartz
				fragments are also common.
				Among the fragments were noted water
				rounded quartz pebbles and a ½" diam.
				fragment of weathered dolerite. Limon-
				ite concretions are common.
				This material is almost certainly
				glacial detritus. crud.
	498	4		(491 - 538)
	503	3		Cla y. Black for first ½' then typical
				tan.
				From 537 - 538 the clay contains
				much coarse material, mainly water
				worn quartz and quartzite grains and

ASSAYS From	To	Ft.	% Cu.	% FeS_2	Oz. Au.	Oz. Ag.	Sample Number	BULK ASSAYS From	To	Ft.	% Cu.	% FeS_2	Oz. Au.	Oz. Ag.	REMARKS

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FOOTAGE From	FOOTAGE To	RECOVERY Ft.	RECOVERY %	DESCRIPTION	ASSAYS From	ASSAYS To	ASSAYS Ft.	ASSAYS % Cu.	ASSAYS % FeS_2	ASSAYS Oz. Au.	ASSAYS Oz. Ag.	Sample Number	BULK ASSAYS From	BULK ASSAYS To	BULK ASSAYS Ft.	BULK ASSAYS % Cu.	BULK ASSAYS % FeS_2	BULK ASSAYS Oz. Au.	BULK ASSAYS Oz. Ag.	REMARKS
				and pebbles, but also considerable crusty limonite.* Traces of metallic copper also occur. One flattened piece 4 mm wide and ¾" long looks unnatural, ~~and~~ other tiny plates occur.																
503	508	4		At 537¾ to 538 is a band of charcoal in the clay.																
	515	3																		
	525	½																		
	527½	2½																		
	550	2																		
	537	1																		
	538	1																		
	542	1¼		(538 - 544) Light brown weathered argillaceous sandstone (probably of the Pioneer beds). Bedding is apparent at 40°/CA at 542½.																Core badly broken 538 - 546. * The copper is probably derived from drilling gear
	546	1¼		(544 - 572) Dull purple and grey-green coarse grained to medium grained slightly hematitic quartoze congl. and sandstone.																
	548	¼																		
	554	¼																		
	559	½																		
	567	2½																		
	571	½																		
	572	¼		The core is predominatly of purplish sandstone and grit with angular fragments modal (2-3 mm). Local grey green coarser bands occur.																
				END OF HOLE																

Core badly broken + ground 546-572