

APPENDIX 6d

NCT005 – Lithology Logs

(See Digital File EL20_2003_200505_12_ Appendix6d.pdf)

Survey Depth	Azimuth	Dip	Hole Co-ordinates	
			Easting_AMG	
			Northing_AMG	
			Elevation (m)	
			Azimuth_Mag	
			Dip	

PROJECT:	QUEENSTOWN - MT DARWIN
PROSPECT:	MT. ELLEN
DATE:	4/3/2005
LOGGED BY:	RF

HOLE DEPTH	CORE RECOVERY	RGD	SAMPLE NO	SULPHIDES					PICTORIAL LOG		GRAPHIC LOG					GEOLOGY NOTES	SUMMARY LOG			
				PREFIX	%					STRUCT	ALT	mm								
					1	3	1	3	5			0.06	0.5	2	8			32	64	
	100	90																		
42	100	85																		
	100	85																		
44	100	70																		
	100	80																		
46	100	85																		
	100	80																		
48	100	85																		
	100	60																		
50	100	95																		
	100	80																		
52	100	75																		
	100	70																		
54	100	90																		
	85	50																		
56	115	60																		
	100	55																		
58	95	70																		
	105	75																		
60	100	90																		
	100	100																		
62	100	90																		
	100	80																		
64	100	85																		
	100	85																		
66	100	90																		
	100	100																		
68	100	100																		
	105	100																		
70	95	65																		
	100	45																		
72	100	55																		
	100	85																		
74	100	70																		
	100	55																		
76	105	65																		
	100	90																		
78	100	60																		
	100	80																		
80	100	90																		

REMARKS

cont

network of narrow 5-8mm calcite vns.

veins are predominantly qtz or qtz-chlorite or chlorite. Larger qtz veins are wuggy & typically have a red-brown selvedge. 5-50mm, typically ≤ 20 mm.

chlorite occurs as large blebs in vns and occupies fractures & veinlets

Between 41-46m there are some networks of narrow <2mm calcite vns. Intensity of narrow calcite vns increases from ~60m onwards. Qtz veins are mostly steep to CA whereas calcite vns are more random in orientation

From ~55m onwards there are intervals of coarser phenocryst, up to 3-4 mm

Rare yellow-brown st carb in larger wuggy veins.

Rare pink fizzing carbonate in vns \rightarrow relict Fe from replacement or manganese?

65-71.4 grey-marble colour, less Fe, less fractured

71.4 - 77.4 - marble, as above

69 - some relict weak fine carb (chlorite?) in calcite vns

(weakly magnetic through this interval 60-80)

Survey Depth	Azimuth	Dip	Hole Co-ordinates
			Easting_AMG
			Northing_AMG
			Elevation (m)
			Azimuth_Mag
			Dip

PROJECT: <u>QUEENSTOWN - MT DARWIN</u>
PROSPECT: <u>MT ELLEN</u>
DATE: <u>8-3-2005</u>
LOGGED BY: <u>KM</u>

HOLE DEPTH	CORE RECOVERY	ROD	SAMPLE NO	SULPHIDES					PICTORIAL LOG		GRAPHIC LOG					GEOLOGY NOTES	SUMMARY LOG
				%					STRUCT	ALT	mm						
				.1	.3	1	3	5			0.06	0.5	2	8	32		
162	100	90													11		
162	100	100													25		
	100	100													24	162.4-163m. zone of 1-15cm pegmatitic quartz, Kspm, calcite, chlorite veins CA 70°	
164	100	100													15		
	100	100													16		
166	100	100													13	Continuation of massive feldspar phyric rhyolite	
	95	90													7	alca. No change in alteration. Pervasive	
168	100	100													23	hematitic colour to rock, late calcite, minor	
	100	90													16	?ankerite, minor chlorite, sericite as aggregates	
170	100	75													29	in veins (chlorite), foliated stringers in cleavage	
	100	90													21	(sericite + chlorite). Rock is moderately magnetic.	
172	100	100													29		
	90	100													20	Consistently two forms of pyrite.	
174	100	85													7	minor coarse euhedral disseminated cubes	
	100	100													14	more common med-fine subhedral stringers,	
176	100	95													6	clusters in fractures, vein margins, and less	
	100	90													16	commonly disseminated through rock.	
178	100	70													11	178 coarse chlorite, quartz, calcite vein 10cm.	
	100	80													5		
180	100	95													21		
	100	80													8		
182	100	100													22	182.0-182.1 autoclastic rhyolite breccia.	
	100	100													12		
184	100	95													17	veins majority of veins ~1mm. Veins	
	100	100													9	quartz, carb, chlorite, minor irregular	
186	100	100													13	specular hematite. Pink feldspar	
	100	100													25	(? Kspan) restricted to thicker veins	
188	100	100													18	(≥ 1cm) veins consistently show high angle	
	100	95													6	to CA. (CA 50-90, mainly 60-80°)	
190	100	95													23		
	100	90													9	189.7m 10cm quartz, carb, sericite vein/wall rock	
192	100	100													8	breccia.	
	100	95													22		
194	100	95													7	* Cleavage has steeper dip than veins.	
	100	85													15		
196	100	80													9		
	100	65													16		
198	100	90													24		
	100	75													30		
200	100	35													20		

REMARKS

Survey Depth	Azimuth	Dip	Hole Co-ordinates	
			Easting_AMG	
			Northing_AMG	
			Elevation (m)	
			Azimuth_Mag	
			Dip	

PROJECT: <u>QUEENSTOWN - MT DARWIN</u>
PROSPECT: <u>MT ELLEN</u>
DATE: <u>9-3-2005</u>
LOGGED BY: <u>KM</u>

HOLE DEPTH	CORE RECOVERY	ROD	SAMPLE NO	SULPHIDES					PICTORIAL LOG		GRAPHIC LOG					VEINS/m	GEOLOGY NOTES	SUMMARY LOG
				PREFIX	%	STRUCT	ALT	0.06	0.5	2	8	32	64					
202	100	60													8	-200.3m = HQ → N/A		
	100	70													10			
	70	65													9			
204	100	55													9	204		
	70	45													N/A	Major Fault Zone - Crush zone of milled pebbly, partly re-consolidated rhyolite rubble		
206	10	0													N/A	Major core loss over 10m interval. Minor brecciation, core loss above and below the main zone.		
	10	0													N/A			
208	60	0													N/A			
	60	20													N/A			
210	60	35													0			
	10	0													N/A			
212	10	0													N/A			
	50	0													N/A			
214	100	75													5	214		
	95	70													6	215m 2cm quartz carb sericite/chlor + pyrite vein		
216	100	60													8	Continuation of massive pink-purple to pink-brown feldspar phytic fine grained rhyolite. Below ~200m the rock is slightly less feldspar porphyritic. Minor bands of autoclastic rhyolite with rounded granular autoclasts.		
	100	80													11			
218	100	80													13			
	100	50													12			
220	100	85													1			
	100	95													4			
222	100	95													8			
	100	100													4	Abundant 1-3mm quartz carbonate chlorite veinlets and minor 1-5cm pegmatitic quartz carbonate K-spar chlorite veins.		
224	100	95													13			
	100	95													5	Increase in specular hematite and pyrite, increase in disseminated black opaque crystalline ? magnetite.		
226	100	70													5			
	100	70													6			
228	100	70													11	The rock responds easily to hand magnet		
	100	90													9			
230	100	85													11	Feldspars show no alteration		
	100	100													13	Carbonate is white, HCl reactive, and restricted to veins. Minor sericite/chlorite in combination		
232	100	95													9			
	100	100													6	aligned in weak foliation with lower dip angle than most veins & veinlets.		
234	100	95													10			
	100	100													5			
236	100	100													12	The rock shows a weakly developed fabric comprising brecciated fragment boundaries defined by wispy sericite/chlorite cleavage.		
	100	95													9			
238	100	90													3			
	100	65													5			
240	100	90													12			

REMARKS

Survey Depth	Azimuth	Dip	Hole Co-ordinates	
			Easting_AMG	
			Northing_AMG	
			Elevation (m)	
			Azimuth_Mag	
			Dip	

PROJECT: <u>QUEENSTOWN - MT DARWIN</u>
PROSPECT: <u>MT ELLEN</u>
DATE: <u>10-3-2005</u>
LOGGED BY: <u>KM</u>

HOLE DEPTH	CORE RECOVERY	RQD	SAMPLE NO	SULPHIDES					PICTORIAL LOG		GRAPHIC LOG					VEINS/m >1mm	GEOLOGY NOTES	SUMMARY LOG
				%					STRUCT	ALT	mm							
				1	3	1	3	5			0.06	0.5	2	8	32			
282	100	100													20	No change in rock type from above.		
	100	85													11			
	100	60													5			
284	100	90													13	Pink-brown, purple-brown, minor green-		
	100	65													8	grey-pink hematitic, heavily veined, feldspar,		
286	100	60													29	magnetite phytic fine grained		
	100	100													23	coherent rhyolite, with gradations to		
288	100	90													18	more finely granular ("sugary")		
	100	95													35	textured crystalline rhyolite (probable		
290	100	90													16	deformation textures - causing rock		
	100	80													11	to be more porous, easier to drill and		
292	100	65													14	reactive to anaerobically sericite) chlorite		
	100	50													14	(cleavage).		
294	100	65													10			
	100	60													13	Rock has a slightly feldspar porphyritic texture.		
296	100	65													14	Feldspars are clear subhedral - rounded		
	100	60													17	plagioclase, completely unaltered. Crystalline		
298	100	65													8	magnetite occurs in association with chlorite,		
	100	70													4	feldspar and as discrete subhedral crystals.		
300	100	90													13	magnetite is evenly disseminated through		
	100	100													11	the rhyolite wall rock (not in veins). Veins		
302	100	70													8	are relatively non-magnetic, rhyolite is		
	100	50													7	moderately magnetic to hard magnet.		
304	100	85													4			
	100	70													14			
306	100	85													12	No carbonate alt in the rhyolite but abundant		
	100	90													9	white, cream carbonate in veins and veinlets		
308	100	90													16	(In addition to the > 1mm veins logged		
	100	85													13	there are numerous planar-arranged		
310	100	70													15	veinlets)		
	100	90													20			
312	100	100													16			
	100	70													13	312.5 zone of magnetitic quartz, Kspar, sericite,		
314	100	80													17	calcite, chlorite veins, 0.5 - 5cm, deformed, folded		
	100	90													18	314.1		
316	100	75													18			
	100	80													12			
318	100	85													16			
	100	100													15			
320	100	50													12	319.5 change to non magnetic rhyolite		
REMARKS																		
-219.8 Fault w/ 20cm crush zone - no core loss.																		

Survey Depth	Azimuth	Dip	Hole Co-ordinates	
			Easting_AMG	Northing_AMG
			Elevation (m)	
			Azimuth_Mag	
			Dip	

PROJECT: <u>QUEENSWAY - MT DARWIN</u>
PROSPECT: <u>MT ELLEN</u>
DATE: <u>11-7-2005</u>
LOGGED BY: <u>KM</u>

HOLE DEPTH	CORE RECOVERY	RQD	SAMPLE NO	PREFIX	SULPHIDES					PICTORIAL LOG		GRAPHIC LOG					VELOCITY > 1mm	GEOLOGY NOTES	SUMMARY LOG
					%					STRUCT	ALT	mm							
					1	3	1	3	5			0.06	0.5	2	8	32			
322	100	75														20	319.5-328m non porphyritic, non magnetic fine coherent rhyolite with alternating orange-brown, grey green colouration, small faults.		
	100	100														16			
	100	70														12			
324	100	90														23			
	100	80														11			
326	100	100														22			
	100	95														16			
328	100	100														23			
	70	40														16	328.5 Fault zone - crushed rhyolite, 300m coreless		
330	100	85														18			
	100	70														24	330.3 minor fault, no core loss, highly foliated with increased chlorite → rock shear zone.		
332	100	100														24			
	100	95														44	332.4-338.8 antite-calcite, chlorite crackle vein - wall rock breccia		
334	100	100														36	319.5-338m magnetic response increasing from		
	100	95														22	abrupt decrease near fault to gradual increase down hole to "normal level response" @ 338m.		
336	100	95														13	Colour change in rhyolite consistent with de-magnetisation, implies fault-controlled fluid		
	100	100														25			
338	100	90														17	338m.		
	100	100														26	339. weakly developed anastomosing seriate cleavage.		
340	100	90														19	from 338-360m, rhyolite is fine grained		
	100	100														14	porphyritic with unaltered euhedral-sub rounded		
342	100	90														8	feldspars + rare quartz. Common disseminated		
	100	95														16	microcline crystals		
344	100	50														3	Rock trending, more pink-orange in colour		
	100	90														12	from 338-360m.		
346	100	95														8			
	100	95														10			
348	100	90														5			
	100	75														10			
350	100	75														12			
	100	50														6			
352	100	90														11			
	100	85														11			
354	100	80														15	Anastomosing cleavage, veinlet network		
	100	65														19	defined by sericite		
356	80	30														6			
	100	80														8			
358	100	85														8			
	100	65														17			
360	100	70														15			

REMARKS

Survey Depth	Azimuth	Dip	Hole Co-ordinates	
			Easting_AMG	
			Northing_AMG	
			Elevation (m)	
			Azimuth_Mag	
			Dip	

PROJECT: <u>QUEENSTOWN - MT DARWIN</u>
PROSPECT: <u>MT ELLEN</u>
DATE: <u>12-3-2005</u>
LOGGED BY: <u>KM</u>

HOLE DEPTH	CORE RECOVERY	RQD	SAMPLE NO PREFIX	SULPHIDES					PICTORIAL LOG		GRAPHIC LOG					VEINS μ / mm	GEOLOGY NOTES	SUMMARY LOG
				%					STRUCT	ALT	mm							
				1	3	1	3	5			0.06	0.5	2	8	32	64		
362	100	100															21	Continuation of purple-brown, pink, orange
	100	95															21	feldspar >> quartz, phytic, hematitic, heavily veined.
	100	45															14	fractured rhyolite, mainly coherent, massive, with
364	100	95															20	local bands of autochthonic granular-pebbly
	100	90															12	monomict rhyolite breccia. This forms moderately
366	100	90															3	magnetic
	100	100															31	
368	100	100															36	Increase in specular hematite and pyrite
	100	95															13	associated with veins and fractures (typically
370	100	100															10	pyrite, hematite enriched in separate veins.
	100	90															18	Magnetite occurs as phenocrysts and in
372	100	80															7	wispy stringers, often with chlorite.
	100	75															0	
374	100	100															8	
	100	100															21	
376	100	85															16	
	100	90															5	
378	100	80															6	
	100	90															14	
380	100	40															7	
	100	50															13	
382	100	70															11	
	100	70															14	
384	100	100															33	Increasing pyrite down hole, mainly frambolitic
	100	100															12	of red-fine subhedral pyrite in fractures,
386	100	95															10	veinlets and on vein margins. Minor
	100	95															12	coarse euhedral pyrite in thicker veins
388	100	85															20	and disseminated in rhyolite.
	100	100															20	
390	100	90															26	Zone of autochthonic breccia bands and
	100	95															26	bands of sperulitic, perlitic textures.
392	100	100															15	Local increase in quartz phenocrysts.
	100	100															16	
394	100	90															15	
	100	90															14	
396	100	95															9	
	100	100															12	
398	100	90															7	
	95	80															4	
400	100	95															17	

REMARKS

