

HOLE NO. : FTD3
SECTION : 2500.00 EAST

PLUTONIC OPERATIONS LIMITED
GOWRIE PARK


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Northing : 4895.00
Easting : 2500.00
Grid : FIRE TOWER
Direction : GRID N
Inclination : -45.0
Elevation : 9957.00
Azimuth : 360.0
Mag Azimuth : 341.5 345.4 345.5; OM=12.5T OR 18.5G
Length (m) : 121.50
Precol. (m) : 3.00
BOCO : <3.00 m
TFR : 6.30 m
Water Table : N/A

DIAMOND DRILL RECORD

Drill Type : LY38
Core Size : HQ 3.00 HQ
Contractor : LONGYEAR

Dip Tests Method: EASTMAN
Depth Az Dip
60.0 4.0 -41.2
120.0 4.1 -41.0

Property : FIRE TOWER
State : Tasmania
GMR : GOG 4440
E.L. No. : GOWRIE PARK
Project No. : 706
Date Started : 23/11/1992
Date Completed: 29/11/1992
Logged by : G. MacDONALD
Relogged by :
Date Logged : 30/11/1992
Interpreted : G. MacDONALD
Initialled : 

From (m)	To (m)	Description	Sample No.	From (m)	To (m)	Width (m)	Au (ppm)
.00	3.00	PRECOLLAR					
3.00	19.00	VOLCANICLASTIC Beige green volcanoclastic. The massive rock consists of quartz phenocrysts, possibly sericitized feldspar phenocrysts and occasional sub - angular to sub - rounded fragments of siltstones. The rock is moderately silicified, sericitized and carbonate altered throughout. From approximately 17.00 to 18.50 the rock is more like a quartz feldspar rich sandstone. The rock contains only minor pyrite throughout occurring as discrete irregular clots to 15 mm generally associated with carbonate alteration. A particularly rich zone is from 15.90 to 15.93 with 10% pyrite associated with a carbonate quartz vein at 45 degrees to the core axis. Below this there are occasional quartz chlorite (occasional minor chalcopyrite) cross-cutting veins. From 24.20 to 25.00 a 3 mm thick carbonate pyrite runs parallel to the core axis.	S00223	3.00	5.00	2.00	.01
			S00224	5.00	6.00	1.00	.03
			S00225	6.00	7.00	1.00	<.01
			S00226	7.00	8.00	1.00	<.01
			S00227	8.00	9.00	1.00	.01
			S00228	9.00	10.00	1.00	<.01
			S00229	10.00	11.00	1.00	<.01
			S00230	11.00	12.00	1.00	<.01
			S00231	12.00	13.00	1.00	.01
			S00232	13.00	14.00	1.00	.16
			S00233	14.00	15.00	1.00	.02
			S00234	15.00	16.00	1.00	.27
			S00235	16.20	17.00	.80	.19
			S00236	17.00	18.00	1.00	.03
			S00237	18.00	19.00	1.00	.13
19.00	25.00	VOLCANICLASTIC / PELITE Beige green volcanoclastic as before but with interbedded black siltstone to 200 mm and interbedded beige green and grey fine grained siltstones below 21.15. Bedding of the black siltstones is generally approximately 45 degrees to the core axis whilst the beige green siltstones have deformed bedding. The black siltstones have ghosted quartz fragments and are moderately chlorite altered in patches. The rock contains occasional fine pyrite veins however the black siltstone from 20.65 to 20.85 and 19.70 to 19.75 contains approximately 5% sulphides consisting of pyrite and arsenopyrite equally.	S00238	19.00	20.00	1.00	.30
			S00239	20.00	21.00	1.00	.59
			S00240	21.00	22.00	1.00	.18
			S00241	22.00	23.00	1.00	.07
			S00242	23.00	24.00	1.00	.19
			S00243	24.00	25.00	1.00	.46
25.00	57.90	VOLCANICLASTIC Beige green, massive volcanoclastic consisting of quartz, possibly sericitized feldspar phenocrysts and occasional lithic fragments. The rock contains minor sulphides other than occasional quartz pyrite veins to 5 mm thick at approximately 30 degrees to the core axis with approximately one vein / m except from 33.00 to 33.50 with	S00244	25.00	26.00	1.00	.40
			S00245	26.00	27.00	1.00	.05
			S00246	27.00	28.00	1.00	.03
			S00247	28.00	29.00	1.00	.02
			S00248	29.00	30.00	1.00	.04
			S00249	30.00	31.00	1.00	.05

From (m)	To (m)	Description	Sample No.	From (m)	To (m)	Width (m)	Au (ppm)
		5 such veins. There are also quartz chlorite (occasional minor chalcopyrite) veins occasionally associated with the pyrite veins. Below 35.50 the sulphide content is approximately 0.2%. Below, 43.00 the rock contains more lithic fragments but not pumiceous clasts. There is some moderate diffuse chlorite alteration below 41.00. From 41.00 to 52.00 the rock contains discrete sulphide (predominantly pyrite) rich patches, generally associated with quartz carbonate (chlorite). Particularly rich patches are from 43.50 to 43.60, from 44.20 to 45.00 in a vein parallel to the core axis and from 48.50 to 48.60. There are two black siltstones bands, weakly chlorite altered from 51.00 to 51.20 with no associated sulphides. Other than these sulphidic patches the rock contains only minor to very minor disseminated pyrite. Below 55.00 the rock fines up down hole to the underlying siltstone. The rock adjacent to the contact, from 57.00 to 57.90 contains 0.5% fine grained disseminated pyrite and arsenopyrite.	S00250	31.00	32.00	1.00	.16
			S00251	32.00	33.00	1.00	.24
			S00252	33.00	34.00	1.00	.07
			S00253	34.00	35.00	1.00	.08
			S00254	35.00	36.00	1.00	.06
			S00255	36.00	37.00	1.00	.28
			S00256	37.00	38.00	1.00	.16
			S00257	38.00	39.00	1.00	.02
			S00258	39.00	40.00	1.00	.02
			S00259	40.00	41.00	1.00	.05
			S00260	41.00	42.00	1.00	.05
			S00261	42.00	43.00	1.00	.28
			S00262	43.00	44.00	1.00	.07
			S00263	44.00	45.00	1.00	.13
			S00264	45.00	46.00	1.00	.16
			S00265	46.00	47.00	1.00	.24
			S00266	47.00	48.00	1.00	.39
			S00267	48.00	49.00	1.00	.22
			S00268	49.00	50.00	1.00	.37
			S00269	50.00	51.00	1.00	.43
			S00270	51.00	52.00	1.00	.45
			S00271	52.00	53.00	1.00	.01
			S00272	53.00	54.90	1.90	.19
			S00273	54.90	56.00	1.10	.59
			S00274	56.00	57.00	1.00	.28
			S00275	57.00	58.00	1.00	3.23
57.90	59.70	PELITE					
		Grey green to black siltstone becoming darker down hole. The rock is generally well bedded at approximately 30 degrees to the core axis. The rock contains brittle style fracture fill pyrite quartz carbonate veins occasionally parallel to bedding but generally perpendicular to bedding at 45 degrees to the core axis. The contact is marked by a pyrite rich quartz vein from 59.70 to 59.75 in the underlying volcanoclastic.	S00276	58.00	59.00	1.00	.29
			S00277	59.00	60.00	1.00	.05
59.70	72.70	VOLCANICLASTIC					
		Beige green volcanoclastic. Finer grained than previous volcanoclastics with visible bedding. The rock is moderately silicified, sericitized and carbonate altered throughout. Bedding is more obvious above 63.40 at 30 degrees to the core axis. There are occasional black siltstone patches from 66.00 to 66.10 and 64.50 to 64.60. The rock contains approximately 2% pyrite from 67.30 to 68.90 associated with diffuse carbonate and quartz veining of the rock. Similar sulphidic patches are from 59.70 to 59.80, 63.40 to 63.60 and 65.75 to 66.00. Other than this the rock contains only minor disseminated sulphides. The rock is brecciated with carbonate filling the brecciation. The rock from 71.90 to the contact also contains 2% sulphides (pyrite >> chalcopyrite).	S00278	60.00	61.00	1.00	.03
			S00279	61.00	62.00	1.00	.02
			S00280	62.00	63.00	1.00	.01
			S00281	63.00	64.00	1.00	.02
			S00282	64.00	65.00	1.00	.12
			S00283	65.00	66.00	1.00	.48
			S00284	66.00	67.00	1.00	.27
			S00285	67.00	68.00	1.00	.61
			S00286	68.00	69.00	1.00	1.22
			S00287	69.00	70.00	1.00	.05
			S00288	70.00	71.00	1.00	1.25
			S00289	71.00	72.00	1.00	.26
			S00290	72.00	73.00	1.00	.50
72.70	75.60	PELITE					
		Black siltstone, occasionally beige green, generally brecciated with occasional bedding at 40 degrees to the core axis. The rock is very sulphidic throughout with	S00291	73.00	74.00	1.00	.99
			S00292	74.00	75.00	1.00	13.20
			S00293	75.00	76.00	1.00	2.18

From (m)	To (m)	-----Description-----	Sample No.	From (m)	To (m)	Width (m)	μ (ppm)
		approximately 1% sulphides throughout. Sulphides are predominantly pyrite with minor chalcopyrite and with arsenopyrite generally as fine grained disseminations. Sulphides are associated with cross-cutting quartz and / or carbonate veins at generally high angles to the core axis. From 74.20 to 74.80 the rock contains approximately 10% pyrite with much pyrite as disseminations in the siltstone.					
75.60	77.60	VOLCANICLASTIC					
		Beige green, generally fine grained to medium grained, moderately bedded volcanoclastic, almost a sandstone. The upper contact is gradational with sulphidic carbonate brecciation of the core adjacent to the contact. The rock is also sulphidic from 76.70 to 77.30 with approximately 1 % sulphides in veins associated with carbonate alteration. Elsewhere the rock contains minor disseminated sulphides. The lower contact with the underlying black siltstone is sharp.	S00294	76.00	77.00	1.00	.14
			S00295	77.00	78.00	1.00	.03
77.60	86.20	PELITE					
		Black siltstone with discernible 2mm thick grey green bedding at 35 to 45 degrees to the core axis. The rock contains 1 to 2% sulphides throughout generally in cross-cutting pyrite carbonate veins with lesser pyrite carbonate veins concordant to bedding. Sulphides also occur as very fine grained disseminations. From 82.00 to 82.10 and 85.70 to 85.80 the rock is carbonate brecciated with 5% galena associated with the carbonate. The lower contact of the siltstone is somewhat gradational with intermixing of the siltstone and the underlying volcanoclastic. This contact zone contains 1% galena associated with carbonate alteration.	S00296	78.00	79.00	1.00	.05
			S00297	79.00	80.00	1.00	.02
			S00298	80.00	81.00	1.00	.01
			S00299	81.00	82.00	1.00	.01
			S00300	82.00	83.00	1.00	<.01
			S00301	83.00	84.00	1.00	.07
			S00302	84.00	85.00	1.00	.19
			S00303	85.00	86.00	1.00	.33
			S00304	86.00	87.00	1.00	.03
86.20	107.00	VOLCANICLASTIC					
		Beige coarse grained volcanoclastic with numerous lithic fragments and two interbedded siltstones, one from 89.50 to 90.10 the other from 102.60 to 103.10. The rock is moderately silicified, sericitized and carbonate altered throughout.	S00305	87.00	88.00	1.00	.18
			S00306	88.00	89.00	1.00	.07
			S00307	89.00	90.00	1.00	1.48
			S00308	90.00	91.00	1.00	1.74
			S00309	91.00	92.00	1.00	1.39
86.20	89.50	Volcanoclastic with a 15 mm thick pyrite carbonate vein at 87.80 at 80 degrees to the core axis and a 5 mm thick pyrite carbonate vein at 80 degrees to the core axis at 89.45. Occasional irregular carbonate veins contain minor clots of galena. Other than this the rock contains only 0.1% pyrite.	S00310	92.00	93.00	1.00	1.05
			S00311	93.00	94.00	1.00	1.47
			S00312	94.00	95.00	1.00	.58
			S00313	95.00	96.00	1.00	.43
			S00314	96.00	97.00	1.00	.13
			S00315	97.00	98.00	1.00	.03
			S00316	98.00	99.00	1.00	.03
89.50	90.10	Interbedded grey green bedded siltstone at 30 degrees to the core axis with approximately 1% pyrite and 0.5% arsenopyrite associated with carbonate brecciation of the rock. Bedding is generally approximately 30 degrees to the core axis though the siltstone may be a raft.	S00317	99.00	100.00	1.00	.01
			S00318	100.00	101.00	1.00	.03
			S00319	101.00	102.00	1.00	.12
			S00320	102.00	103.00	1.00	.12
			S00321	103.00	104.00	1.00	.16
			S00322	104.00	105.00	1.00	2.03
90.10	102.60	Volcanoclastic. From 90.10 to 99.00 the volcanoclastic is as above. From 99.00 to 102.60 pumiceous like clasts are more common. The rock contains 10% pyrite in a white	S00323	105.00	106.00	1.00	1.02
			S00324	106.00	107.00	1.00	2.34

From (m)	To (m)	Description	Sample No.	From (m)	To (m)	Width (m)	Au (ppm)
		carbonate vein from 93.30 to 93.33. Elsewhere the rock contains occasional fine pyrite veins cross-cutting and disseminated clots of chalcopyrite, pyrite and possibly arsenopyrite, particularly to 96.90. From 100.30 to 100.90 the rock contains approximately 2% pyrite and minor sphalerite (?). The rock below 99.00 is foliated at 30 to 40 degrees to the core axis.					
102.60	103.10	Bedded black siltstone, possibly a raft. The rock contains 3% pyrite in cross-cutting pyrite carbonate veins and as fine grained disseminated patches.					
103.10	107.00	Volcaniclastic. Beige green moderately silicified and sericitized, moderately to strongly carbonate altered rock consisting of quartz and sericitized feldspar phenocrysts. The rock contains 1% sulphides consisting of pyrite in carbonate veins and pyrite and minor arsenopyrite and chalcopyrite in fine grained disseminations and disseminated clots. The contact with the underlying siltstone is sharp. Some veins are oxidised. From 106.00 to 106.10 there is a particularly sulphidic zone with 2% pyrite and arsenopyrite associated with silicification and carbonate alteration.					
107.00	116.20	PELITE Beige green to grey green fine grained siltstones generally well bedded.	S00325	107.00	108.00	1.00	.09
			S00326	108.00	109.00	1.00	<.01
107.00	109.70	Beige green with interbedded dark grey green beds. Bedding is at 35 to 40 degrees to the core axis. The rock contains very occasional cross-cutting fine carbonate vein with minor pyrite and chalcopyrite.	S00327	109.00	110.00	1.00	<.01
			S00328	110.00	111.00	1.00	<.01
			S00329	111.00	112.00	1.00	<.01
			S00330	112.00	113.00	1.00	.30
			S00331	113.00	114.00	1.00	.35
109.70	112.60	Dark grey green siltstones. Bedding is at 40 to 45 degrees to the core axis. The rock contains only minor pyrite and chalcopyrite in occasional cross-cutting carbonate veins.	S00332	114.00	115.00	1.00	.15
			S00333	115.00	116.00	1.00	.01
			S00334	116.00	117.00	1.00	.01
112.60	116.20	Beige green to grey green fine grained to medium grained siltstones similar to the volcaniclastic sandstones. The rock contains a sulphidic brecciated zone from 112.80 to 112.85 with 2% pyrite and chalcopyrite associated with quartz and carbonate veining. Elsewhere the rock contains minor sulphides in carbonate veins.					
116.20	121.50	PSAMMITE Grey green quartz feldspar mafic sandstone generally massive but with some interbedded siltstone at 117.50 to 118.00. The rock contains very minor sulphides in cross-cutting carbonate and / or quartz veins with a more sulphidic patch from 116.70 to 117.30 with 0.5% pyrite and chalcopyrite in carbonate veins. No obvious shearing but broken core and core loss. These rock are from the hanging	S00335	117.00	118.00	1.00	.01
			S00336	118.00	119.00	1.00	.03
			S00337	119.00	120.00	1.00	.01
			S00338	120.00	121.50	1.50	.08

HOLE NO. : FTD3

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From (m)	To (m)	Description	Sample No.	From (m)	To (m)	Width (m)	μ (ppm)
		wall sediments.					
	121.50	E.O.H.					