HOLE NO. : FTD2
SECTION : 2532.00 EAST

PLUTONIC OPERATIONS LIMITED
GOWRIE PARK

Page: 1

DIAMOND DRILL RECORD

Northing : 4895.00
Easting : 2532.00
Grid : FIRE TOWER
Direction : GRID N
Inclination : -45.0
Elevation : 9967.00
Azimuth : 360.0
Mag Azimuth : 341.5 347.0 349.0; OM=12.5T OR 18.5G
Length (m) : 122.60
Precol. (m) : 2.50
BOCO : < 2.50 m
TFR : 6.30 m
Water Table : N/A

Drill Type :LY38
Core Size :HQ 2.5 NQ
Contractor :LONGYEAR

Dip Tests Method: EASTMAN

Depth	Az	Dip
60.0	5.5	-43.3
120.0	7.5	-42.0

Property : FIRE TOWER
State : Tasmania
GMR : GOG 4440
E.L. No. : GOWRIE PARK
Project No. : 706
Date Started : 16/11/1992
Date Completed: 22/11/1992
Logged by : G. MacDONALD
Relogged by :
Date Logged : 23/11/1992
Interpreted : G. MacDONALD
Initialled :

From (m)	To (m)	Description	Sample No.	From (m)	To (m)	Width (m)	Au (ppm)
.00	2.50	PRECOLLAR					
2.50	30.80	VOLCANICLASTIC Beige green, massive, medium grained, volcaniclastic consisting of quartz and sericitized feldspar phenocrysts, occasional pumice like clasts and rounded to sub - angular beige green vitric tuffs, black siltstones and cherty clasts in a moderately silicified sericitized and carbonate altered matrix.	S00044	2.50	3.00	.50	.02
			S00045	3.00	4.00	1.00	.01
			S00046	4.00	5.00	1.00	<.01
			S00047	5.00	6.00	1.00	.01
			S00048	6.00	7.00	1.00	.01
			S00049	7.00	8.00	1.00	<.01
			S00050	8.00	9.00	1.00	.02
			S00051	9.00	10.00	1.00	<.01
			S00052	10.00	11.00	1.00	<.01
			S00053	11.00	12.00	1.00	.01
			S00054	12.00	13.00	1.00	<.01
			S00055	13.00	14.00	1.00	.01
			S00056	14.00	15.00	1.00	<.01
			S00057	15.00	16.00	1.00	.02
			S00058	16.20	17.00	.80	<.01
			S00059	17.00	18.00	1.00	<.01
			S00060	18.00	19.00	1.00	.01
			S00061	19.00	20.00	1.00	<.01
			S00062	20.00	21.00	1.00	.01
			S00063	21.00	22.00	1.00	.05
			S00064	22.00	23.00	1.00	.02
			S00065	23.00	24.00	1.00	.34
			S00066	24.00	25.00	1.00	.19
			S00067	25.00	26.00	1.00	.06
			S00068	26.00	27.00	1.00	.02
			S00069	27.00	28.00	1.00	<.01
			S00070	28.00	29.00	1.00	.03
			S00071	29.00	30.00	1.00	.01
			S00072	30.00	31.00	1.00	.13
30.80	37.60	VOLCANICLASTIC Beige green and grey interbedded rock. Approximately 80% of the rock is beige green and 20% grey. The rock is moderately silicified, sericitized and carbonate altered throughout. Bedding is strongly soft sediment micro fractured and micro-faulted. Bedding is generally at 35	S00073	31.00	32.00	1.00	.07
			S00074	32.00	33.00	1.00	.04
			S00075	33.00	34.00	1.00	.07
			S00076	34.00	35.00	1.00	.20
			S00077	35.00	36.00	1.00	.05

From (m)	To (m)	Description	Sample No.	From (m)	To (m)	Width (m)	Au (ppm)
		degrees to the core axis but some significant rotation of bedding has occurred. Pyrite averages up to 0.5% throughout and is generally associated with the carbonate alteration. Trace galena is visible and there are quartz chlorite veins parallel to the core axis from 32.30 to 33.00. Fine quartz, minor chalcopyrite and galena veins cross-cut at 20 degrees to the core axis from 33.20 to 33.50. Below 33.50 bedding is generally indistinct with predominantly beige green and interbedded dark grey beds from 33.50 to 35.90 and predominantly dark grey siltstone below 35.90. The rock is weak to moderately chlorite altered from 33.40 with the chlorite as veins and diffuse alteration, generally associated with silicification. The unit averages 1% pyrite with the best zones from 34.70 to 34.85 with 5% pyrite and arsenopyrite, 36.30 to 36.40 with 5% pyrite and from 37.50 to 37.60 with 5% sulphides consisting of pyrite and arsenopyrite and minor chalcopyrite. Sulphides are predominantly pyrite and arsenopyrite (possibly fine grained galena) with very minor chalcopyrite. Sulphides are in fine irregularly oriented fracture fill veins and in more continuous veins generally at 20 to 35 degrees to the core axis. To a lesser degree sulphides are associated with chlorite alteration.	S00078 S00079	36.00 37.00	37.00 38.00	1.00 1.00	.13 .17
37.60	39.65	PELITE Beige green, fine grained, massive siltstone derived from vitric tuffs. The rock is the same as the beige green beds in the overlying interbedded siltstones. The rock is moderately silicified, sericitized and carbonate altered throughout with pyrite associated with silicification. The rock contains 5% pyrite from 39.10 to 39.35 associated with diffuse silicification. Elsewhere the rock averages 1% pyrite throughout.	S00080 S00081	38.00 39.00	39.00 40.00	1.00 1.00	.22 .03
39.65	45.90	PELITE BLACK SILTSTONE. Same rock as the black to dark grey beds in the interbedded siltstones from 30.80 to 37.60. The rock is moderately carbonate altered throughout. The rock contains visible banding of alteration at 15 to 50 degrees to the core axis. The rock appears to be weakly to moderately chlorite altered in patches. This rock is particularly sulphidic with the sulphides 2% to 4% throughout. Sulphides consists of predominantly pyrite but with some arsenopyrite also and minor chalcopyrite. Mineralization is in attenuated irregularly oriented fracture fill veins. Fine carbonate veins dip 25 degrees to 340 degrees (TN) these veins contain pyrite and arsenopyrite though numerous other orientations are common also. A carbonate vein brecciating the rock is at 70 degrees to 360 degrees (TN). The lower contact with the underlying volcaniclastic is sharp and at 70 degrees to the core axis.	S00082 S00083 S00084 S00085 S00086 S00087	40.00 41.00 42.00 43.00 44.00 45.00	41.00 42.00 43.00 44.00 45.00 46.00	1.00 1.00 1.00 1.00 1.00 1.00	.65 .05 .09 .07 .06 .04
45.90	94.25	VOLCANICLASTIC Beige green, massive to bedded, fine grained to medium grained volcaniclastic generally with quartz phenocrysts	S00088 S00089	46.00 47.00	47.00 48.00	1.00 1.00	.03 .14

From (m)	To (m)	Description
		and occasional sericitized feldspars. The rock contains occasional clasts or deformed beds of dark grey to black siltstones. The rock is moderately banded in patches with the banding probably due to sericite alteration. The rock is moderately silicified, sericitized and carbonate altered throughout. From 61.00 to 72.00 the carbonate alteration is snowflake textured.
45.90	59.00	The rock contains 0.1 to 0.2% disseminated sulphides, being predominantly pyrite but with significant arsenopyrite, minor chalcopyrite and possibly galena. The rock contains very occasional chlorite veins with minor associated chalcopyrite. More sulphidic patches are from 51.95 to 52.00. The rock contains black siltstone infilling fractures.
59.00	72.00	The rock contains more minor disseminated sulphides with a more sulphidic rich zone from 59.90 to 60.05. The rock contains banding of alteration (sericite). Below 68.00 banding is at 15 to 20 degrees to the core axis dipping sub-vertical to 245 degrees at 71.80.
72.00	75.65	The rock is moderately altered with galena now more common. Black siltstone patches from 75.10 to 75.15 and 75.45 to 75.65 have contacts at 45 to 50 degrees to the core axis and bedding parallel to this. The upper siltstone contains 4% galena in fine veins at 20 degrees to the core axis.
75.65	85.00	Below 75.65 the volcaniclastic changes character with sericitized pumiceous patches and other lithics more common. The rock is strongly carbonate altered throughout with approximately 1% sulphides (predominantly pyrite) throughout. Sulphides (pyrite >> galena and chalcopyrite) are as disseminated clots generally associated with siliceous patches in the middle of carbonate alteration. From 76.30 to 77.10 the volcaniclastic shows banding of sericite alteration at 45 to 50 degrees to the core axis. At 79.00 is a 30 mm thick pyrite vein at 80 degrees to the core axis. Below 77.10 the rock contains more lithic fragments of beige green siltstones and black siltstones generally sub - angular to sub - rounded. There is a puggy zone at 82.00. At 84.60 the foliation is at 35 degrees to the core axis. At 83.40 a strongly carbonate healed breccia cross-cuts the core at 35 degrees to the core axis with pyrite, galena and chalcopyrite clots. There is a puggy zone at 84.60.
85.00	93.30	Below 85.00 the sulphide content drops to 0.2% throughout and is predominantly galena. At 85.80 the foliation is at 35 degrees to the core axis, at 89.80 the foliation is at 45 degrees to the core axis.
93.30	94.25	The rock contains 2% sulphides throughout as

Sample No.	From (m)	To (m)	Width (m)	Au (ppm)
S00090	48.00	49.00	1.00	.05
S00151	49.00	50.00	1.00	.08
S00152	50.00	51.00	1.00	.26
S00153	51.00	52.00	1.00	.11
S00154	52.00	53.00	1.00	.08
S00155	53.00	54.00	1.00	.12
S00156	54.00	55.00	1.00	.19
S00157	55.00	56.00	1.00	.11
S00158	56.00	57.00	1.00	.15
S00159	57.00	58.00	1.00	2.18
S00160	58.00	59.00	1.00	.12
S00161	59.00	60.00	1.00	1.32
S00162	60.00	61.00	1.00	.17
S00163	61.00	62.00	1.00	.03
S00164	62.00	63.00	1.00	.02
S00165	63.00	64.00	1.00	.01
S00166	64.00	65.00	1.00	.01
S00167	65.00	66.00	1.00	.05
S00168	66.00	67.00	1.00	.03
S00169	67.00	68.00	1.00	<.01
S00170	68.00	69.00	1.00	.02
S00171	69.00	70.00	1.00	.05
S00172	70.00	71.00	1.00	.04
S00173	71.00	72.00	1.00	.13
S00174	72.00	73.00	1.00	.26
S00175	73.00	74.00	1.00	.08
S00176	74.00	75.00	1.00	.10
S00177	75.00	76.00	1.00	.44
S00178	76.00	77.00	1.00	1.08
S00179	77.00	78.00	1.00	.50
S00180	78.00	79.00	1.00	5.24
S00181	79.00	80.00	1.00	1.93
S00182	80.00	81.00	1.00	2.33
S00183	81.00	82.00	1.00	.02
S00184	82.00	83.00	1.00	<.01
S00185	83.00	84.00	1.00	.61
S00186	84.00	85.00	1.00	.14
S00187	85.00	86.00	1.00	<.01
S00188	86.00	87.00	1.00	.01
S00189	87.00	88.00	1.00	.01
S00190	88.00	89.00	1.00	.01
S00191	89.00	90.00	1.00	.02
S00192	90.00	91.00	1.00	.04
S00193	91.00	92.00	1.00	<.01
S00194	92.00	93.00	1.00	.01
S00195	93.00	94.00	1.00	<.01
S00196	94.00	95.00	1.00	.18

From (m)	To (m)	Description	Sample No.	From (m)	To (m)	Width (m)	Au (ppm)
		fine veins and as disseminations in a fragment of siltstone from 94.00 to 94.25. The rock is increasingly foliated at 45 degrees to the core axis with the carbonate alteration concordant to this foliation. The fine sulphide veins associated with silicification are generally concordant to this foliation. The lower contact of this unit is marked by the siltstone though the underlying unit is of similar composition to this one only finer grained.					
94.25	101.90	PELITE Beige green to pale grey green, massive occasionally bedded siltstone derived from felsic vitric tuff. From 94.25 to 94.40 the rock is medium grained, below this it is fine grained to very fine grained. The rock is moderately silicified, sericitized and carbonate altered throughout with the carbonate as snowflake textures. The rock contains a fragment of black siltstone from 94.90 to 95.00. The rock is bedded from 97.00 to 97.20 at 35 degrees to the core axis and also from 97.90 to 98.10. The rock contains very minor sulphides except from 96.50 to 96.80 with 1% pyrite in diffuse irregular veins. There is a puggy shear zone at 50 degrees to the core axis at 98.15. From 100.50 to 100.70 the rock contains 2% sulphides consisting of pyrite and chalcopyrite in a carbonate breccia at 50 degrees to the core axis. The lower contact with the underlying grey green bedded siltstone is gradational.	S00197	95.00	96.00	1.00	.02
			S00198	96.00	97.00	1.00	<.01
			S00199	97.00	98.00	1.00	<.01
			S00200	98.00	99.00	1.00	<.01
			S00201	99.00	100.00	1.00	<.01
			S00202	100.00	101.00	1.00	.02
			S00203	101.00	102.00	1.00	<.01
101.90	108.85	PELITE Grey green, well bedded fine grained to medium grained siltstone. Bedding is at 35 to 40 degrees to the core axis and fines up down hole. The rock contains quartz, feldspar and probably mafic fragments. From 106.80 to 107.00 the rock is silicified, sericitized and carbonate altered elsewhere it is grey green and chloritic. The rock contains negligible veining except for undeformed cross-cutting veins of carbonate, occasional pyrite and a distinctive red mineral, possibly haematite. The more porous medium grained beds, generally broader, contain approximately 0.2% pyrite as fine grained disseminated clots. The contact with the underlying mass flows is in broken core and is not discrete with some siltstone included in the mass flows near the contact.	S00204	102.00	103.00	1.00	<.01
			S00205	103.00	104.00	1.00	<.01
			S00206	104.00	105.00	1.00	<.01
			S00207	105.00	106.00	1.00	<.01
			S00208	106.00	107.00	1.00	<.01
			S00209	107.00	108.00	1.00	<.01
			S00210	108.00	109.00	1.00	<.01
108.85	122.60	FELSIC MASS FLOW Grey green mass flows consisting of sub - rounded to sub - angular fragments of beige green and dark green siltstones as described above, pumice like fragments, milky white cherty fragments, fine grained volcanic fragments and quartz, feldspar and biotite (?) porphyritic volcanics in a quartz feldspar mafic rich matrix. The rock is foliated at approximately 50 degrees to the core axis. The rock contains only very minor disseminated sulphides throughout. 108.85 111.80 A discrete mass flow fining up down-hole.	S00211	109.00	110.00	1.00	<.01
			S00212	110.00	111.00	1.00	<.01
			S00213	111.00	112.00	1.00	<.01
			S00214	112.00	113.00	1.00	<.01
			S00215	113.00	114.00	1.00	<.01
			S00216	114.00	115.00	1.00	<.01
			S00217	115.00	116.20	1.20	.05
			S00218	116.20	117.60	1.40	<.01
			S00219	117.60	119.80	2.20	<.01

From (m)	To (m)	Description	Sample No.	From (m)	To (m)	Width (m)	Au (ppm)
	111.80	114.60 Another discrete mass flow fining up down-hole with the lower contact disappearing into broken core.	S00220	119.80	121.00	1.20	<.01
			S00221	121.00	122.20	1.20	<.01
			S00222	122.20	122.60	.40	<.01
	114.60	119.80 Moderate broken core and core loss.					
	119.80	122.00 Much broken core, strongly sheared core and much core loss. Shearing is at 55 to 60 degrees to the core axis. This is the shear zone intersected in GP-90-4.					
	122.00	122.60 As above but only moderately sheared and broken core.					
	122.60	E.O.H.					