 974089

HOLE NO. : GP-90-13
SECTION : 2354.00 EAST

PLUTONIC OPERATIONS LIMITED
GOWRIE PARK

DIAMOND DRILL RECORD

Northing : 4938.00
Easting : 2354.00
Grid : FIRE TOWER
Direction : Grid South
Inclination : -45.0
Elevation : 9885.00
Azimuth : 360.0
Mag Azimuth :
Length (m) : 30.60
Precol. (m) : 0.20 m
BOCO : <0.20 m
TFR : 0.20 m
Water Table :

Drill Type :
Core Size :
Contractor :N Poltock

Dip Tests Method:

| Depth | Az | Dip |
|---|---|---|
| 30.6 | 360.0 | -45.0 |

Property : FIRE TOWER
State : Tasmania
GMR : GOG 4440
E.L. No. : GOWRIE PARK
Project No. : 706
Date Started :
Date Completed:
Logged by : G. MacDONALD
Relogged by :
Date Logged : May '92
Interpreted : G. MacDONALD

Initialled :

| From (m) | To (m) | Description | Sample No. | From (m) | To (m) | Width (m) | Au (ppm) |
|---|---|---|---|---|---|---|---|
| .00 | .20 | PRECOLLAR | | | | | |
| .20 | 13.50 | VOLCANICLASTIC | | | | | |
| | | QUARTZ LITHIC RICH VOLCANICLASTIC. Beige green to grey green, medium grained to coarse grained (up to 30 mm), massive rock consisting of predominantly of milky white quartz and lesser lithics in a silica sericite carbonate altered matrix. The quartz is generally medium grained and sub - rounded to sub - angular and has a somewhat 'ghosted' appearance due to the alteration. To 7.40 m the lithics are generally rarer and medium grained. Below 7.40 m they are coarse grained and more prominent. The rock is oxidised to 12.20. The rock is cross-cut throughout by quartz carbonate haematite veins generally at 45 to 90 degrees to the core axis. Occasional pyrite veins have oxidised selvedges. There is some manganese staining of fractures to 2.85. Generally only minor pyrite in veins. | SM000Y | .20 | 1.00 | .80 | .27 |
| | | | SM000X | 1.00 | 2.00 | 1.00 | .07 |
| | | | SM0000 | 2.00 | 3.00 | 1.00 | .88 |
| | | | SM0001 | 3.00 | 4.00 | 1.00 | .20 |
| | | | SM0002 | 4.00 | 5.00 | 1.00 | .37 |
| | | | SM0003 | 5.00 | 6.00 | 1.00 | .33 |
| | | | SM0004 | 6.00 | 7.00 | 1.00 | .50 |
| | | | SM0005 | 7.00 | 8.00 | 1.00 | .21 |
| | | | SM0006 | 8.00 | 9.00 | 1.00 | .03 |
| | | | SM0007 | 9.00 | 10.00 | 1.00 | <.01 |
| | | | SM0008 | 10.00 | 11.00 | 1.00 | <.01 |
| | | | SM0009 | 11.00 | 12.00 | 1.00 | .04 |
| | | | SM0010 | 12.00 | 13.00 | 1.00 | .25 |
| | | | SM0011 | 13.00 | 14.00 | 1.00 | .02 |
| .20 | 2.15 | As above but strongly oxidised with occasional manganese staining of fractures and beige green and orange brown fine micro-fractures. The rock is silica, sericite and carbonate altered throughout. | | | | | |
| 2.15 | 7.40 | As above but beige green moderately oxidised minor manganese staining of fractures. Lithics include pale green and grey fine grained siliceous sediments. | | | | | |
| 7.40 | 9.10 | As above but weakly oxidised, mottled grey green due to somewhat spotty carbonate and chloritic alteration. The rock contains chlorite and / or quartz carbonate veining throughout, generally at 60 to 80 degrees to the core axis and oxidised quartz carbonate haematite veins sub - parallel to the chlorite veins. Lithics include fine grained grey to grey green siliceous sediments. Occasional carbonate filled fractures are generally at 50 degrees to the core axis. | | | | | |
| 9.10 | 10.40 | As above but silicified, sericitized and carbonate altered, occasionally chloritic, | | | | | |

| From (m) | To (m) | Description | Sample No. | From (m) | To (m) | Width (m) | Au (ppm) |
|---|---|---|---|---|---|---|---|
| | | beige green, moderately oxidised quartz rich volcaniclastic with manganese staining of fractures. Lithics somewhat masked by alteration | | | | | |
| | 10.40 | 11.90 As above but grey green mottled, chloritic rock. Mottling due to strong carbonate and chlorite alteration of matrix. Occasional quartz carbonate veins at 70 to 80 degrees to the core axis. Minor haematite. | | | | | |
| | 11.90 | 12.40 As above but beige brown brown strongly silicified sericitized and with strong carbonate alteration of matrix. Very coarse grained sub - angular lithics to 15 mm are fine grained grey and siliceous. Rock contains occasional pinky orange carbonate veins to 3 mm variably oriented. Rock becomes increasingly oxidised down hole. | | | | | |
| | 12.40 | 13.50 As above but very strongly oxidised in very broken core. Rock is silicified, sericitized and carbonate altered and contains medium grained quartz. Possibly a sheared contact with the underlying rock. | | | | | |
| 13.50 | 18.45 | FELSIC MASS FLOW | | | | | |
| | | BRECCIA-MASS FLOW (?) / CHLORITIC. | SM0012 | 14.00 | 15.00 | 1.00 | .63 |
| | | Medium grained to coarse grained, dark green, massive to very weakly foliated quartz lithic rich volcaniclastic with very occasional possible fiamme (?). Rock is silicified and chloritic throughout with variable carbonate in fine veins. Rock contains minor pyrite throughout locally to 1% in veins. Rock contains very minor quartz chlorite veins at variable orientations and very occasional quartz carbonate haematite veins. Lithics are sub - angular to sub - rounded consisting of fine grained grey siliceous and very dark green fine grained chloritic rock. Quartz is milky white and medium grained to coarse grained sub - rounded. | SM0013 | 15.00 | 16.00 | 1.00 | .04 |
| | | | SM0014 | 16.00 | 17.00 | 1.00 | .08 |
| | | | SM0015 | 17.00 | 18.00 | 1.00 | .03 |
| | | | SM0016 | 18.00 | 19.00 | 1.00 | .02 |
| | 13.50 | 15.00 As above. Incudes a fine grained dark grey siliceous siltstone (?) clast 25 mm, and another dark grey siliceous clast with creamy quartz rimmed quartz clasts (?) and possible fiamme from 14.20 to 14.30. Rock contains quartz carbonate veins at 45 degrees to the core axis. | | | | | |
| | 15.00 | 15.70 As above but moderately oxidised, weak to moderately brecciated rock in broken core. Probably not a shear zone. Rock contains minor pyrite veins and chlorite veins at 70 to 80 degrees to the core axis. | | | | | |
| | 15.70 | 18.10 As above but with occasional very coarse grained lithics (to 15mm), very dark green irregular clasts/alteration effects (?), other clasts and quartz and feldspars, now medium grained to coarse grained. | | | | | |
| | 18.10 | 18.45 As above but dark green to orange brown, moderately oxidised, massive, medium grained to coarse grained quartz, lithic rich rock essentially as logged for 13.50 to 18.10 but | | | | | |

| From (m) | To (m) | Description | Sample No. | From (m) | To (m) | Width (m) | Au (ppm) |
|---|---|---|---|---|---|---|---|
| | | in very broken core. Lithics include sub - angular dark grey fine grained sediments. | | | | | |
| 18.45 | 23.50 | FELSIC MASS FLOW | | | | | |
| | | BRECCIA WITH FIAMME / MASS FLOW (?). | SM0017 | 19.00 | 20.00 | 1.00 | <.01 |
| | | Possibly a second discrete mass flow. The last 1.3 m could possibly be included in the following unit. Rock is dark green to very dark green, massive, medium grained to very coarse grained and consists of medium grained to coarse grained sub - rounded milky white quartz and coarse grained to very coarse grained lithics often 'ghosted' including fine grained sediments and fiamme to 20 mm in a chloritic variably carbonate altered matrix. Rock contains minor pyrite throughout in veins and locally very minor chalcopyrite and possibly arsenopyrite. | SM0018 | 20.00 | 21.00 | 1.00 | .05 |
| | | | SM0019 | 21.00 | 22.00 | 1.00 | .05 |
| | | | SM0020 | 22.00 | 23.00 | 1.00 | .05 |
| | | | SM0021 | 23.00 | 24.00 | 1.00 | .07 |
| | | 18.45 20.45 As above but grey green to dark green medium grained to very coarse grained (up 50 mm) milky white quartz and lithic rich volcaniclastic again. Rock is silicified and chloritic with a variably carbonate altered matrix. Lithics include dark green, fine grained, siliceous, sediments and pale green siliceous siltstone as well as possible chloritic fiamme. Quartz is medium grained to coarse grained. The rock contains minor pyrite veining and associated very minor chalcopyrite and possibly arsenopyrite. | | | | | |
| | | 20.45 22.20 As above but very dark green massive more matrix rich rock with occasional medium grained to coarse grained sub - angular ghosted clasts. Rock is very chloritic and contains only very occasional cross-cutting quartz carbonate chlorite veins at 45 degrees to the core axis. Rock contains minor pyrite and chalcopyrite in fine irregularly oriented veins. | | | | | |
| | | 22.20 23.50 As above but very green, massive, medium grained to coarse grained milky water table quartz and lithic rich volcaniclastic in moderately broken core but not a shear zone. Rock is chloritic and moderately carbonate altered throughout and is moderately oxidised throughout. The rock contains oxidised haematite veins at low angles to the core axis. The rock contains fine, irregularly oriented pyrite chlorite quartz veins. Lithics are generally very dark green and ghosted to 5 mm. | | | | | |
| 23.50 | 26.95 | VOLCANICLASTIC | | | | | |
| | | QUARTZ LITHIC FIAMME VOLCANICLASTIC. | SM0022 | 24.00 | 25.00 | 1.00 | <.01 |
| | | Dark green, medium grained to coarse grained, weakly foliated at 20 degrees to the core axis, rock consisting of somewhat sparse sub - rounded medium grained to coarse grained (up to 3 mm) milky white quartz and very dark green sub - angular, chloritic, lithics to 5 mm, occasionally up to 25 mm sub - parallel to to the core | SM0023 | 25.00 | 26.00 | 1.00 | <.01 |
| | | | SM0024 | 26.00 | 27.00 | 1.00 | <.01 |

| From (m) | To (m) | Description | Sample No. | From (m) | To (m) | Width (m) | Au (ppm) |
|---|---|---|---|---|---|---|---|
| | | axis at 26.70 as well as fiamme to 20 mm. The rock contains fine chlorite quartz veins at 80 to 40 degrees to the core axis and occasional quartz carbonate chlorite veins up to 5 mm thick variably oriented. The rock contains minor pyrite and occasionally very minor chalcopyrite associated with chlorite veining. Rock has somewhat gradational contact with the underlying silicified, sericitized carbonate altered rock. | | | | | |
| 26.95 | 29.75 | VOLCANICLASTIC | | | | | |
| | | QUARTZ LITHIC VOLCANICLASTIC. | SM0025 | 27.00 | 28.00 | 1.00 | .41 |
| | | 26.95 29.75 Beige green to grey green, medium grained to coarse grained milky white quartz, occasional lithic rich, volcaniclastic. Rock is very strongly silicified and carbonate altered and is sericitized. The rock is variably chlorite altered, the chlorite associated with quartz, carbonate and sulphides in irregular veins. Lithics are pale green to dark green, fine grained siltstones and are generally sub - angular to 10 mm. Two intersections of very fine grained, black siltstone may be clasts or beds. These are both around 150 mm thick. The rock is strongly veined throughout with the dominant orientation around 45 to 70 degrees to the core axis. | SM0026 | 28.00 | 29.00 | 1.00 | .97 |
| | | | SM0027 | 29.00 | 30.00 | 1.00 | .07 |
| | | 26.95 27.20 As above but beige green to grey green strongly silicified and sericitized with carbonate altered spotty alteration and minor chlorite veining. Rock contains minor pyrite and trace arsenopyrite and possibly chalcopyrite. Medium grained quartz but no obvious lithics. | | | | | |
| | | 27.20 27.80 Cross-cutting grey green bands / bed of strongly sericitized, moderately silicified rock with medium grained sub - rounded quartz. Possibly a discrete bed or clast. Banding cross-cuts at 45 degrees to the core axis. And is in turn cross cut by quartz carbonate veins. | | | | | |
| | | 27.40 27.80 As above but beige green to grey green strongly veined with around 0.5% arsenopyrite and chalcopyrite associated with quartz carbonate chlorite veining / alteration at *around 20 degrees to the core axis*, predominantly from 27.65 to 27.80. Occasional medium grained quartz visible. | | | | | |
| | | 27.80 28.00 Black siltstone clast/bed. Upper contact slightly off set at 45 degrees to the core axis, lower contact at 35 degrees to the core axis. Rock is strongly quartz carbonate veined, up to 5 mm thick and oriented at 70 degrees to the core axis. Rock contains minor fine grained disseminated arsenopyrite and lesser chalcopyrite. | | | | | |
| | | 28.00 28.85 As above but beige green silicified, sericitized and carbonate altered. Rock contains numerous quartz-carbonate veins at 45 | | | | | |

| From (m) | To (m) | Description | Sample No. | From (m) | To (m) | Width (m) | Au (ppm) |
|---|---|---|---|---|---|---|---|
| | | to 50 degrees to the core axis and contains 0.5% fine grained disseminated arsenopyrite pyrite and very minor chalcopyrite throughout. Rock contains medium grained quartz and medium grained to coarse grained lithics, predominantly black fine grained siltstone. | | | | | |
| 28.85 | 29.00 | Black siltstone clast or bed. Rock contains discrete patch of quartz and/or carbonate alteration and 1% fine grained disseminated arsenopyrite, 0.5% pyrite and minor chalcopyrite throughout. Upper contact around 60 degrees to the core axis, lower contact at 60 to 70 with both contacts sharp. | | | | | |
| 29.00 | 29.75 | As above but beige green and more diffusely silicified, sericitized and carbonate altered rock with medium grained to coarse grained quartz and minor dark grey medium grained lithics. Rock contains a 1cm wide interbed (?) of black siltstone and concordant pyrite and sphalerite (?). Veining at 70 degrees to the core axis at 29.17 is moderately autobrecciated now but the bed may be a primary feature. Rock becomes weakly chloritic below 29.60 and has a gradational contact with the underlying chloritic altered quartz lithic volcaniclastic. | | | | | |
| 29.75 | 30.60 | QUARTZ FIAMME LITHIC VOLCANICLASTIC. Green to dark green massive medium grained to coarse grained sub - rounded milky white quartz and sub - rounded to sub - angular dark green lithic rich volcaniclastic. Rock is silicified and chloritic altered throughout with moderate sericitisation and variable diffuse carbonate alteration throughout. Lithics are up to 15 mm and include fine grained, dark green siliceous sediments / tuff, beige green tuff and sericitized fiamme to 30 mm. The rock contains minor veining at 70 degrees to the core axis and quartz carbonate chlorite veining at low angles to the core axis. Rock contains very minor pyrite and possibly some arsenopyrite. | | | | | |
| 30.60 | | E.O.H. | | | | | |