40 141 2280

DRILLING TARGET:- Quartz vein intersected in D.D.H. AN1

REMARKS:- 0.41 m of quartz vein bearing wolframite intersected.

SURVEY DATA			ASSAY DATA									
DEPTH metres	Bearing mag.	Inclin. degs	SAMPLE No.	FROM metres	TO metres	RECOVERY metres	RECOVERY %	ASSAY RESULTS				
0	179	40	Reg. Nos. 801508-801512 analysed for Fe_2O_3, MnO,									
93.5		43	WO_3 (mass %); Mo, Sn, Bi, Cu, Pb, Zn, Sb, Au, Ag									
146.0		45	(g/tonne).									
			Sb - all less than 10 g/t									
			Au - all less than 0.3 g/t									

GEOLOGICAL LOG

Logged by:- P.L.F. Collins

FROM metres	TO metres	RECOVERY metres	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
0.00	3.00	0.35	12	Fragments of quartz sandstone and grit. Scree.		
3.00	8.55	2.20	40	Weathered, light grey, fine-medium grained quartz sandstone with minor grit/fine conglomerate and siliceous siltstone horizon horizons. Quartz vein (as fragments of quartz) at 6.50 m.		
8.55	11.00	1.05	43	Weathered, light grey, shale and siliceous siltstone.		
11.00	12.70	0.90	53	Light grey, fine grained quartz sandstone and grit/fine conglomerate.		
12.70	13.45	0.68	91	White-light grey quartz siltstone and argillite with thin grit beds. Bedding at 12.80 m, BCA=60°.		
13.45	19.05	5.05	90	Light grey quartz sandstone, grit and fine conglomerate (quartz and quartzite fragments to 3 mm, shale fragments to 5 mm). Shale wisps in quartz sandstone from 14.20-15.00 m. Broken core at 13.45-13.50 m; 16.20-16.40 m (fault); 16.75-16.85 m. From 17.50 m appears to be leached (very porous). Irregular quartz vein (2 mm) at 18.25 m.		

Continued over:-

DEPARTMENT OF MINES—TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No.:- AN2	MAP SHEET No. 37	DISTRICT SHEFFIELD	LOCATION OF SITE:-
All Nations Mine, Moina (78 m, bearing 065°M, from the shaft). Core held M 96.			
R.L. OF SITE:-	SITE SURVEY ON MAP No.:		CORE SIZE:- NQ
BEARING OF HOLE:- 179°M	AIR PHOTO No.:-		COMMENCED:- 14-3-80
INCLINATION OF HOLE:- -40°	DRILL:- F20		COMPLETED:- 17-5-80
COORDS OF SITE:- H 25000E 5405900N	DRILLER:- G. Baker		FINAL DEPTH (m):- 146.50 m

M1029

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FROM metres	TO metres	RECOVERY metres	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
19.05	20.45	1.40	100	Pale grey/green argillite, siltstone and fine quartz sandstone, minor grit horizons. Bedding at 19.05 m, BCA = 65°.		
20.45	35.60	13.50	89	Grey - pale grey/green quartz sandstone and fine conglomerate. Silty horizon at 22.60-22.90 m; white quartzite at 23.00-23.55 m. Interbedded grey quartz sandstone and green shale at 24.55-25.40 m, 26.60-27.80 m. Bedding at 20.45 m, BCA=60°. Faults(?) at 23.00 m, 25.20 m, 26.75 m, 29.00 m, 29.95 m, 31.45-31.60 m, 33.50-33.80, 35.60m. Sheared fault(?) zone 32.00-35.60 m. Quartz veins (up to 2 mm) with muscovite.		
35.60	37.30	1.70	100	White quartzite with thin (up to 3 mm) shale beds. Bedding at 36.00 m, BCA=60°. Jointed and quartz-muscovite veins. Fault at 36.95 m.		
37.30	38.10	0.80	100	Grey/green quartzite and shale.		
38.10	46.50	6.40	100	White-pale grey quartzite and grit, with thin shale beds at 42.00 m (BCA=65°) and at 38.60 m (BCA=60°). Interbedded quartzite and shale at 44.75-45.05 m, and 46.25-46.50 m. Conglomeratic at 45.70-46.00 m. Quartz + topaz + wolframite + chlorite + sericite vein at 39.90 m (40 mm thick, VCA=20°). Quartz + muscovite + clay (after feldspar) veins at 39.45 m (80 mm, 70°); 39.70 m (20 mm); and in broken core at 40.95-41.30 m with wolframite. Quartz stringers with wolframite at 40.30 m (1-2 mm, VCA=20°). Quartz + muscovite + sericite + chlorite + wolframite vein at 46.45 m (2-4 mm, VCA=20°). Fault at 46.50 m.		
46.50	47.15	0.65	100	Conglomerate (pebbles up to 15 mm in grey matrix) with white quartzite.		
47.15	50.35	3.20	100	Grey quartzite with numerous quartz veins (1-2 mm) with clay and wolframite filling joints at 20° to core axis. Quartz vein		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY metres	RECOVERY %	ASSAY RESULTS

FROM metres	TO metres	RECOVERY metres	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
				with wolframite at 48.55 m (3 mm, 35°).		
50.35	53.58	3.23	100	"Ghost" conglomerate. Grey conglomerate composed of well-rounded pebbles (10-15 mm, up to 40 mm) of white and grey quartzite and some grey argillite in a grey siliceous matrix with pink/red hematitic patches. Grey quartzite at 51.30-51.50 m. Irregular joints (BCA= 30-40°) filled with quartz and wolframite and later pyrite as veins 1-3 mm thick; eg. at 52.35 m (1 mm thick), 52.43 m (2 mm), 52.90 m (2 mm), 53.05 m (2 mm), 53.35 m (3 mm).		
53.50	53.58			Fault Sheared, decomposed buff coloured conglomerate.		
53.58	54.00	0.42	100	Conglomerate, composed of well rounded pebbles of quartzite up to 50 mm (generally 10-20 mm) in a dark grey-red, hematitic and siliceous matrix.		
54.00	54.30	0.30	100	Conglomerate, composed of well rounded pebbles (generally 10-20 mm, up to 40 mm) of quartzite in a green chloritic and argillaceous and in part red hematitic matrix bearing quartz grains of a similar size and habit to the quartz phenocrysts in the underlying porphyry.		
54.30	54.50	0.20	100	Decomposed chloritic quartz porphyry. Quartz vein with wolframite appears to extend into conglomerate. No evidence of a fault between the porphyry and overlying conglomerate.		
54.50	63.38	8.88	100	Grey-green massive quartz porphyry; quartz phenocrysts generally 2 mm but up to 5 mm. Fault at 61.25-61.30 m. Quartz vein with wolframite at 61.05 m (irregular 5 mm thick, VCA=45°) and sericite alteration 30 mm either side of vein. Quartz + sericite + clay (after feldspar) veins at 61.60 m (2 mm, 40°, sericite alteration 20 mm); 62.90 m (8 mm, 30°, sericite alteration 50 mm). In part contains angular to elongate lithic and		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY metres	RECOVERY %	ASSAY RESULTS

FROM metres	TO metres	RECOVERY metres	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
				and volcanic fragments (e.g. 56.0-58.0 m). At 60.50 m possible bedding in the porphyry (BCA=50°).		
63.38	63.79	0.37	90	Quartz Vein (Vugy) with wolframite blades (up to 20 mm), rare molybdenite and late pyrite in vugs. Vein margin at 63.38 m is VCA=45°. Broken core at lower contact (faulted ?). Sericitisation and silicification of the porphyry extends only 100 mm either side of vein. No tourmalinisation of the porphyry. The lower 150 mm of quartz vein is of interlocking quartz crystals with pyrite which contrasts with the upper part consisting of coarse, white quartz with wolframite blades. Core is broken at the boundary between the two types of quartz vein.	801508	
63.[illegible]	65.80	2.00	100	Grey-green quartz porphyry.		
65.80	74.20	8.05	96	Variably altered quartz porphyry; decomposed in part (e.g. at 66.00-66.50 m, 66.70-66.95 m, 72.30-72.65 m). Pink alluite alteration at 68.60-69.00 m, 69.50-69.80 m; and mafic phenocrysts (?) at 71.70-72.10 m. Quartz veins at 66.65 m (12 mm, 60°) and at 70.40 m (12 mm). Quartz veins with wolframite, sericite and clay (after feldspar) at 67.00 m (2 mm, 50°); at 71.05 m (2 mm, 35°) with tourmaline alteration 5 mm either side; and at 73.10 m (4 mm, 30°). Faults at 74.00-74.20 m.		
74.20	74.50	0.30	100	Tourmalinised grey/brown quartz porphyry associated with a quartz-topaz-wolframite vein at 74.35 m (23 mm, 35°).	801509	
74.[illegible]	77.15	2.65	100	Buff coloured quartz porphyry with mafic flecks. Quartz vein with wolframite and late pyrite at 76.40 m (20 mm, 40°).		
77.15	77.70	0.55	100	Tourmalinised grey/brown quartz porphyry associated with several quartz + wolframite veins at 77.17 m (8 mm, 40°); 77.25 m (2 mm, 40°); 77.45 m (5 mm, 20°); 77.55 m (20 mm, 20°).	801510	
77.70	78.90	1.20	100	Grey-buff coloured quartz porphyry. Fault (?) at 78.25 m.		

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY metres	RECOVERY %	ASSAY RESULTS Fe_2O_3	MnO	WO_3	Mo	Sn	Bi	Cu	Pb	Zn	Ag
1508	63.38	63.79	0.37	90	2.4	0.03	0.14	81	41	520	17	45	5	8
1509	74.20	74.50	0.30	100	6.4	0.23	0.23	63	100	<11	40	16	60	10
1510	77.15	77.70	0.55	100	4.8	0.15	0.29	230	82	1130	20	100	68	5

FROM metres	TO metres	RECOVERY metres	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
78.90	102.10	22.80		Grey quartz porphyry with quartz phenocrysts up to 4 mm and mafic phenocrysts up to 5 mm. Porphyry texture is medium-fine grained with some pink albite alteration, tourmaline alteration, and minor actinolite/chlorite alteration. Altered porphyry with actinolite and pyrite at 99.70-99.85 m. Faults (?) at 82.50-82.60 m, 91.70 m, 97.85-98.25 m, 99.20 m, 101.20-101.70 m, 102.00-102.10 m. Quartz veins ± topaz, ± wolframite, ± molybdenite at:-		
				79.30 m, 2 mm thick, 40°VCA		
				79.45 m, 1 mm " 35° "		
				80.73 m, 10 mm " 65° "		
				80.75 m, 2 mm " 15° "		
				81.50 m, 10 mm " 55° "		
				82.05 m, 5 mm " 25° "		
				83.95 m, 2 mm " 30° "		
				84.55 m, 25 mm " 90° "		
				85.15 m, 1 mm " 15° "		
				86.15 m, 2 mm " 20° "		
				87.00 m, 2 mm " 10° "		
				87.35-88.20 m, 5 mm " Parallel		
				88.65-88.95 m, 5 mm " Sub-parallel		
				89.85-90.20 m, 5 mm " Sub-parallel		
				91.25 m, 12½ mm " 50° VCA		
				91.60 m, 4 mm " 10° VCA		
				93.80 m, 6 mm " 25° "		
				97.25 m, 10 mm " 25° "		
				99.20-99.58 m, 10 mm " Sub-parallel		
				100.15 m, 4 mm " 10° VCA		
				101.90 m, 10 mm " 75° "		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY metres	RECOVERY %	ASSAY RESULTS

FROM metres	TO metres	RECOVERY metres	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
102.10	102.55	0.45	100	Actinolite, biotite and minor magnetite alteration of quartz porphyry associated with a quartz vein (80 mm) with biotite at 102.35 m.		
102.55	108.15	5.60	100	Fine-medium, grey-green quartz porphyry with green hornblende phenocrysts and stringers of actinolite/chlorite alteration. Quartz + sericite + molybdenite vein at 106.85 (6 mm, 20°). Quartz + wolframite + molybdenite + late pyrite vein at 107.60 m (55 mm, 80°) with 30 mm tourmaline alteration zone.		
108.15	108.90	0.75	100	Tourmalinised quartz porphyry. Quartz vein with molybdenite at 108.65 m (6 mm, 18°).		801511
108.90	120.85	11.95	100	Grey-green, fine-medium grained quartz porphyry; actinolite stringers to 109.50 m; tourmalinised porphyry at 116.00-116.35 m. Narrow, fine quartz porphyry dyke (?) at 113.55-113.80 m. Contact at 113.55 m is 45° to core axis and at 113.80 is 25°. Faults at 117.00 m, 117.15 m. Quartz veins ± wolframite ± molybdenite, at 110.00 m (10 mm, 20°); at 116.85 m (4 mm, 30°) and at 117.05 m (3 mm, 25°). Quartz veins and actinolite-biotite alteration at 112.90-113.30 m, and 114.10-114.20 m here cut by later quartz vein (3 mm, 25°). Quartz + actinolite vein at 119.45 m (4 mm, 30°). Quartz + topaz vein at 118.30 m (12 mm, 30°) with tourmaline alteration of porphyry between 118.20-118.45 m.		
120.85	121.50	0.65	100	Tourmalinised porphyry associated with a topaz + quartz + epidote (?) + chlorite + fluorite vein (greater than 30 mm, VCA=10°) with molybdenite and wolframite. Biotite alteration of porphyry extends 5 mm from the vein. Fault at 121.50 m.		801512
121.50	128.95	8.10	100	Grey-green quartz and quartz-feldspar porphyry with flecks of hornblende. Apparent chilled margin (?) at 128.80-128.95 m. Quartz vein at		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY metres	RECOVERY %	ASSAY RESULTS Fe_2O_3	MnO	WO_3	Mo	Sn	Bi	Cu	Pb	Zn	Ag
1511	108.20	108.80	0.60	100	7.2	0.34	0.02	820	89	53	<8	<12	120	5
1512	121.00	121.50	0.50	100	6.7	0.28	<0.01	230	76	20	14	<12	150	89

FROM metres	TO metres	RECOVERY metres	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
				123.65 m (7 mm, 20°) with 60 mm tourmaline alteration zone. Quartz + clay + biotite veins at 125.30 m (2 mm, 28°) and at 127.85 m (2 mm, 40°), both with 10 mm silicification zone. Quartz + topaz + fluorite + wolframite + molybdenite vein at 128.75 m (28 mm, 40°) with tourmaline alteration zone 128.50-128.80 m.		
128.95	146.50	17.55	100	Coarse, blotchy grey-green quartz porphyry gradational to a fine grained quartz-phyric rock. Fragmental appearance of pyroclastic or auto brecciated lava at 129.15-130.00 m; and at 131.50-132.50 m (aphanitic green-grey angular fragments up to 20 mm in a green chloritic matrix). Probable quartz-phyric lava at 136.00-146.50 m. Faults at 130.00 m, 132.40 m, 138.60-138.70 m. Numerous joints lined with quartz and molybdenite. Quartz vein at 141.50 m (3 mm, 30°). Quartz + wolframite + molybdenite vein at 141.80 m (10 mm, 30°). Quartz + topaz + fluorite + sericite + molybdenite + wolframite vein at 143.40 m (15 mm, 40°). E.O.H. 146.50 m.		

Continued over

ASSAY DATA

SAMPLE No.	FROM metres	TO metres	RECOVERY metres	RECOVERY %	ASSAY RESULTS