40 132 2274

DRILLING TARGET:– Depth extension of the All Nations lode below a reverse fault.

REMARKS:– 0.69m of quartz vein with wolframite and molybdenite intersected.

SURVEY DATA			ASSAY DATA											
DEPTH metres	Bearing mag.	Inclin. degs	SAMPLE No.	FROM metres	TO metres	RECOVERY metres	RECOVERY %	ASSAY RESULTS						
0	175	45	Reg. Nos. 801497-801507 analysed for Fe_2O_3, MnO,											
84		42	WO_3 (mass %); Mo, Sn, Bi, Cu, Pb, Zn, Sb, Au,											
124		42	Ag (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	1.80	0.50	28	Rounded, angular boulders and broken fragments of slightly weathered, fine to medium grain quartz sandstone. (Scree).		
1.80	3.60	0.50	28	Weathered, fine-medium grain quartz sandstone and quartzite, sandy in places; broken core.		
3.60	9.50	4.90	83	Light grey, fine-medium grain quartz sandstone and quartzite, and minor light grey quartz grit with thin wispy shale partings. Quartz vein (3-4mm) with muscovite selvedge subparallel to core axis between 5.80-6.75m. Gritty clay/silt (50mm thick) at 8.95m. Quartz-muscovite altered (?) quartzite at 9.40-9.50m. Core strongly jointed and broken; core loss between 9.00-10.50m.		
9.50	16.75	3.70	51	Light brown-cream, weathered and decomposed clayey siltstone; shrinkage cracks in dry core. Quartz siltstone at 11.50-12.00m and 14.40-15.00m. Coarse sandstone-grit at 15.00-16.75m; conglomeratic towards 16.50m (pebbles to 2mm near 15.00m coarsening to 10mm at 16.50+m).		
16.75	19.30	1.75	69	Cream and light grey, fine-medium grain quartz sandstone with thin wispy silt and shale partings.		

Continued over:–

DEPARTMENT OF MINES—TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No.:–	MAP SHEET No.	DISTRICT	LOCATION OF SITE:–
AN 1	37	SHEFFIELD	

All Nations Mine, Moina (109m, bearing 066°M, from the shaft)

Core held G96

R.L. OF SITE:–	SITE SURVEY ON MAP No.:	CORE SIZE:– NQ
BEARING OF HOLE:– 175°M	AIR PHOTO No.:–	COMMENCED:– 4.2.80
INCLINATION OF HOLE:– -45°	DRILL:– F20	COMPLETED:– 11.3.80
CO-ORDS OF SITE:– 425000E 5405900N	DRILLER:– G. Baker	FINAL DEPTH (m):– 131.70

M1029 255

FROM metres	TO metres	RECOVERY metres	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
19.30	21.10	1.30	72	Coarse grain quartz sandstone and fine pebble conglomerate. Pebbles of quartz and quartzite to 5mm diameter, in siliceous matrix. Bedding at 21.05m with BCA=75° and at 21.10m with BCA=65°. Broken core at 19.60-20.60.		
21.10	21.35	0.35	100	Cream, decomposed, clayey siltstone. Bedding at 21.35m with BCA=70°.		
21.35	23.55	1.05	48	Cream and light grey, clayey, decomposed quartz sandstone and grit with pebbles to 3mm. Conglomeratic in part with quartz and quartzite pebbles to 5mm diameter in clayey matrix.		
23.55	25.65	1.90	90	Light grey, coarse grain quartz sandstone and fine pebble conglomerate. Rounded quartz and quartzite pebbles to 3mm diameter, and rare angular siltstone pebbles to 10mm long. Broken core at 24.60-25.20m.		
25.65	26.00	c0.10	c29	Broken, crumbled fine sandstone and siltstone. Probable fault zone.		
26.00	26.20	0.20	100	Lenticular beds of conglomerate in fine grain sandstone and siltstone. BCA=70°.		
26.20	27.00	0.70	88	Thinly and irregularly interbedded fine grain quartz sandstone - siltstone and fine pebble conglomerate. Broken core at 26.2m, 26.7m and 27.0m.		
27.00	34.00	5.40	68	Light grey, coarse grain quartz sandstone and fine pebble conglomerate; and fine-medium grain quartzite; and silty horizons with quartz lenses. Conglomerate composed of rounded quartz and quartzite pebbles to 3mm diameter and rare angular siltstone fragments to 5mm long, and wispy shale partings. Core broken at 30.50-32.50 (probable fault zone at 31.00-31.70) and 33.70-34.00. Quartzite more dominant from 32.0m.		
34.00	35.00	1.00	100	Foliated and sheared quartzite and shale, with minor fine conglomerate; lenses of quartz 1-2mm thick and up to 5mm long throughout. Iron staining of core.		

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
				Foliation is 80° to core axis.		
35.00	38.00	2.70	90	Light grey, fine grain, quartz sandstone and quartzite; minor fine pebble conglomerate horizons. Bedding at 35.80m with BCA=70°. Probable faults at 35.60m and 37.40-38.0m.		
38.00	39.50	1.45	97	Light grey and cream quartz siltstone. Foliated, and with quartz lenses. Probable fault at 38.80m.		
39.50	41.10	1.00	63	Fault zone. Strongly fractured, light grey quartzite and quartz sandstone. Faults at 39.50-40.50m and 40.80-41.10m bearing chlorite and muscovite on sheared surfaces.		
41.10	50.45	8.60	92	Competent, light grey quartzite with minor siltstone horizons (e.g. at 42.80-42.90 with B.C.A.=70°; and at 48.50 with BCA=70°). Irregular thin quartz carbonate veins with thin wolframite (?) blades from 48.80m. Probable faults (sheared zones) at 43.00-43.50m and 43.90-44.50m. Fault at 50.00-50.10m.		
50.45	56.05	5.80	100	"Ghost" conglomerate. Fine-medium pebble conglomerate to 50.80m then coarse pebble conglomerate; composed of white, light grey and pale pink pebbles generally 20mm and up to 50mm diameter in light grey matrix. Quartzite at 52.70-53.40m and at 54.00-54.70m. Sheared and fractured core at 52.00-52.20m and at 53.50m (faults?).		
56.05	56.52	0.47	100	Light grey, sheared and altered (?) quartz porphyry. Quartz phenocrysts to 2mm diameter in grey-green matrix. Tourmaline alteration associated with joints. At 56.05m, abrupt change between conglomerate and quartzite above and quartz porphyry below. Driller reported "rods dropped ¼inch here". Fault contact.		
56.52	72.10	15.35	100	Pale green and pale grey, slightly deformed in part, quartz porphyry; composed of quartz phenocrysts generally 1-2mm and up to 3mm diameter, and mafic green mineral and rare disseminated pyrite and sphalerite in quartzo-feldspathic matrix. 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
				Several quartz veins with associated minor alteration. Quartz and tourmaline veins at 60.10m (20mm thick, VCA=50°), 60.35m (25mm, 70°), and 62.40m (5mm, 30°). Quartz and muscovite veins at 60.45m (3mm, 30°), 61.55m (5mm, 30°), 61.85m (3mm, 30°), and 70.50m (3mm, 35°). Fault at 67.30m; and broken core at 68.40-68.80m and 69.70-69.80,m. From 68m core is slightly decomposed.		
72.10	78.40	6.10	97	Cream-pale brown decomposed porphyry composed of prominent quartz phenocrysts in variably altered cream-pale brown siliceous clayey matrix. Extreme alteration at 73.80m and at 75.80-76.20m. Quartz and muscovite vein at 78.05m (2mm thick, VCA=45°) with associated silica alteration extending 20mm into the porphyry.		
78.40	84.00	5.70	100	Pale grey-pale green porphyry composed of quartz phenocrysts and a mafic green mineral (chlorite/pyroxene?) in a light green matrix. Variably altered and in part decomposed at 81.0m and at 82.5m. Quartz and muscovite veins at 79.10m (5mm thick, VCA=40°), and at 81.10m (2mm, 70°). Topaz and quartz and clay (after feldspar?) vein at 83.20m (10mm, 30°).		
84.00	93.05	9.00	100	Decomposed quartz porphyry containing in places black tourmaline (?) (e.g. at 89.50-90.20m). Extreme alteration and decomposition at 84.50-85.30m and at 89.00-89.50m. Quartz and clay (after feldspar?) vein at 85.75m (25mm thick, VCA=20°) with associated silicification of adjacent porphyry. Quartz vein at 92.00m (15mm thick, VCA=30°) with associated silification of the porphyry extending 50mm either side of the vein.		
93.05	100.20	7.00	98	Variably altered light green and light grey porphyry composed of quartz phenocrysts and a green mafic mineral in an aphinitic groundmass. Quartz and albite veins with molybdenite 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
				wolframite at 96.05m (1mm thick, VCA=25°) and at 97.25m (1-2mm) cutting an earlier chlorite filled joint. Quartz and topaz vein at 97.45m (10mm, 85°) with silica alteration extending 30mm into porphyry. Quartz vein with wolframite at 99.45m (5mm, 25°) but no visible alteration. Stringers of magnetite occur rarely in the unaltered porphyry at 99.90-100.20m.		
100.20	100.60	0.40	100	Altered porphyry composed of chlorite actinolite (?), magnetite, epidote and calcite, quartz and remnant quartz phenocrysts. Topaz and quartz and wolframite vein at 100.45m (8mm thick, VCA=20°); and quartz and albite and molybdenite vein at 100.00m (1mm, VCA=35°). Veins are later than, and not related to the alteration of the porphyry.		804197
100.60	109.17	8.40	98	Light grey, green and cream quartz porphyry with patches of pink albite alteration; xenolith 15mm across at 100.95m. Quartz and albite and molybdenite vein at 101.00m (1-2mm thick, VCA=25°) probably filling a joint. Silicified zone at 101.60-102.00m with disseminated chalcopyrite and pyrite and two 2-3mm thick quartz and topaz and muscovite and wolframite veins. Quartz and topaz and fluorite veins with associated silica - tourmaline alteration of the porphyry at 102.55m (4mm thick); at 102.80m (2mm); at 103.15m (2mm); at 104.15m (3mm, VCA=30°); at 104.25m (3mm, 30°) and at 108m (3-4mm, 30°). Quartz vein at 104.85mm (1mm thick, 20°) with associated albitisation of porphyry. Sigmoided quartz veins at 108.15-108.30m. Fault and vein (30° to core axis) at 104.35-104.45m. Prominent albitisation at 106.75-107.25m.		

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
1497	100.25	100.65	0.40	100	9.1	0.50	1.4	53	180	52	39	75	170	<3

FROM metres	TO metres	RECOVERY metres	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
109.17	109.67	0.50	100	Altered quartz porphyry. Silicification then increasing tourmalisation and sericitisation down hole (i.e. approaching quartz vein). The unaltered/altered porphyry contact is at 70° to core axis. Quartz-topaz vein at 109.25m (2mm thick, VCA=25°) with 10mm wide tourmalisation alteration zone. Irregular patch of quartz with pyrite and chlorite at 109.30-109.35m. Decomposed porphyry at 109.40-109.50m (possible fault). Quartz vein with pyrite at 109.60m (2mm, 45°).		801498
109.67	110.36	0.67	97	Quartz vein with minor wolframite, molybdenite and tourmaline; and later pyrite on quartz crystals in vughs. Vein margin at 109.67m is 45° to core axis, and at 110.36 is 40° to core axis.		801499
110.36	111.00	0.64	100	Altered porphyry; tourmalinised to 110.75m and grey, silica alteration to 111.0m. Quartz vein with tourmaline; wolframite and molybdenite at 110.60m (22mm thick, VCA=35°). The altered/unaltered porphyry contact is at 25° to the core axis.		801500
111.00	111.30	0.30	100	Cream quartz porphyry with quartz and albite vein at 111.25m (1mm, 23°) which is later than the altered porphyry at 111.30-111.75m.		
111.30	111.75	0.45	100	Quartz-tourmaline-sericite alteration of quartz porphyry associated with quartz and topaz and wolframite and molybdenite vein at 111.65m (6mm thick, VCA=45°). Altered/unaltered porphyry margin at 111.30m and at40° to core axis at 111.75m.		801501
111.75	115.55	3.80	100	Cream coloured quartz porphyry with chlorite wisps and pink albitised patches. Molybdenite on joint surfaces (e.g. at 112.75m). Sigmoidal tension gashes filled with quartz and wolframite at 113.75m. Quartz and topaz veins 1-2mm thick at 112.65m, 113.25m, 114.45m, 114.95m with associated alteration to the porphyry. 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
1498	109.17	109.67	0.50	100	4.8	0.16	0.06	100	140	36	22	29	110	34
1499	109.67	110.36	0.67	97	3.0	0.03	0.06	1690	73	720	27	45	16	<3
1500	110.36	110.95	0.59	100	5.1	0.19	0.10	400	140	120	20	34	89	<3
1501	111.35	111.75	0.40	100	5.1	0.25	<0.01	63	80	47	19	60	270	48

FROM metres	TO metres	RECOVERY metres	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
115.55	116.30	0.75	100	Silica and tourmaline alteration of quartz porphyry associated with two generations of veins. Early quartz and chlorite vein at 115.80m (4mm, 30°) and later quartz and topaz and flourite and wolframite and molybdenite veins at 115.70m (8mm, 23°); at 115.85m (5mm, 50°) and at 115.90-116.10 (irregular).		801502
116.30	119.40	3.10	100	Grey and cream chloritic quartz porphyry. Broken core and quartz vein (about 50mm thick) with molybdenite and wolframite at 117.55m. Quartz veins and altered porphyry at 118.15m (1mm, 30°) and at 118.45m (2mm, 30°).		
119.40	120.05	0.65	100	Skarn-type altered porphyry composed of chlorite, magnetite, quartz, carbonate, and actinolite. Irregular banding at about 30° to core axis. Later quartz and albite vein at 119.55m. Rare, very fine grain sparsely disseminated scheelite.		801503
120.05	121.00	0.95	100	Variably altered cream-green-grey quartz porphyry with thin quartz veins bearing wolframite.		
121.00	121.55	0.55	100	Chlorite, tourmaline, megnetite, carbonate and quartz alteration of quartz porphyry similar to 119.40-120.05m.		801504
121.55	122.00	0.45	100	Cream-green quartz porphyry. Fault (?) at 121.85m.		
122.00	122.75	0.75	100	Silica and tourmaline alteration of porphyry associated with a quartz and topaz and flourite and clay (after feldspar) and chlorite and sericite vein at 122.50m (10mm thick, VCA=20°). Quartz and topaz vein at 122.70m.		801505
122.75	131.70	8.95	100	Cream and grey, chloritic, quartz porphyry with pink albitised patches (e.g. at 128.50-129m). Tourmalisation of the porphyry associated with quartz veins at 122.85m (5mm, 70°) and at 126.30-126.50m. Quartz and albite veins filling fractures at 123.5-123.7m. Quartz and albite veins with wolframite and molybdenite at 125.35m (8mm, 35°), at 126.00m (10mm, 80°) and at Continued overleaf		801506 801507

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
1502	115.70	116.20	0.50	100	5.9	0.28	0.11	120	84	280	12	100	150	< 3
1503	119.40	120.05	0.65	100	16.6	1.3	< 0.01	< 19	93	13	20	< 12	120	< 3
1504	121.00	121.35	0.35	100	7.7	0.18	0.03	< 19	60	< 11	9	< 12	55	30
1505	122.35	122.75	0.40	100	5.1	0.23	< 0.01	170	64	< 11	< 8	< 12	79	6
1506	126.30	126.70	0.40	100	6.7	0.27	0.08	< 19	260	100	25	60	68	< 3
1507	130.80	131.30	0.50	100	4.8	0.18	0.44	250	100	< 11	17	< 12	60	8

FROM metres	TO metres	RECOVERY metres	RECOVERY %	DESCRIPTION	SECTION Core	SECTION Sample
				131.15m (6mm, 23°). Quartz veins with muscovite at 130.35m (12mm, 70°) at 130.45m (40mm, 70°), and at 131.60m (25mm, 50°). Altered and sheared porphyry at 130.80-131.20m. E.O.H. 131.70m.		

Continued over

ASSAY DATA

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