

**ALLEGIANCE MINING NL ZEEHAN JOINT VENTURE
AVEBURY PROSPECT
A005**

Collar coordinates 354,520.9mE 5,357,467.4mN 171.3mRL
Collar bearing 353⁰
Collar dip -50⁰
Coordinate system AMG

Final hole depth 202.5m

Hole details 0.0m to 3.0m HW
3.0m to 75.8m HQ
75.8m to 202.5m NQ

Drilled to test western end of a magnetic anomaly on the Avebury grid

Commenced 22 February 1999
Completed 5 March 1999

Drilled by Diamond Drilling Tasmania
Logged by Mick McKeown (McKeown Mining)

SUMMARY OF RESULTS

| from | to | description | length | Ni | S | As |
|-------------|-----------|--------------------|---------------|-----------|----------|------------|
| m | m | | m | % | % | ppM |

no serpentinite intersected

Down hole camera surveys

| bhid | at | brg | dip |
|-------------|-----------|------------|------------|
| A005 | 0 | 353.8 | -50.0 |
| A005 | 52 | 7 | -49.0 |
| A005 | 100 | 7 | -48.5 |
| A005 | 151 | 12 | -47.5 |
| A005 | 202 | 7 | -47.5 |

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| from m | to m | DESCRIPTION | from m | to m | rec m | rec % | from m | to m | Ni % | S % |
|-----------|---------|---|-----------|---------|----------|----------|-----------|---------|---------|--------|
| 0.0 | 9.0 | CLAY Mottled brown, faun and orange clay and minor claystone (after rock) fragments with common limonite and goethite staining on fractures. BCA is obscure. The interval is extremely broken. The contact with the next interval is gradational (weathering). | 0.0 | 7.5 | 1.3 | 17 | | | | |
| 9.0 | 19.0 | WEATHERED HORNFELS AND CLAYSTONE Grey, very weathered hornfels and grey, white and orange claystone (after rock) with common limonite and goethite on joints and fractures. BCA is obscure. The interval is extremely broken. The contact with the next interval is gradational (weathering). | 7.5 | 13.2 | 3.0 | 53 | | | | |
| | | | 13.2 | 15.1 | 1.8 | 95 | | | | |
| | | | 15.1 | 15.7 | 0.4 | 67 | | | | |
| | | | 15.7 | 19.0 | 0.8 | 24 | | | | |
| 19.0 | 42.4 | HORNFELS Dark crimson grey hornfels with sparse green actinolite? as stringers, veinlets and patches with narrow bleached alteration haloes, trace quartz as rare stringers, sparse to minor schorl associated with actinolite? 41.7m to 41.9m: actinolite/schorl vein BCA at 23.0m = 50 degrees (bedding). | 19.0 | 20.8 | 0.9 | 50 | | | | |
| | | | 20.8 | 21.3 | 0.5 | 100 | | | | |
| | | | 21.3 | 21.7 | 0.4 | 100 | | | | |
| | | | 21.7 | 22.1 | 0.2 | 50 | | | | |
| | | | 22.1 | 22.6 | 0.5 | 100 | | | | |
| | | | 22.6 | 22.8 | 0.2 | 100 | | | | |
| | | | 22.8 | 23.5 | 0.7 | 100 | | | | |
| | | | 23.5 | 23.7 | 0.2 | 100 | | | | |
| | | | 23.7 | 24.2 | 0.5 | 100 | | | | |

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| from m | to m | DESCRIPTION | from m | to m | rec m | rec % | from m | to m | Ni % | S % |
|-----------|---------|--|-----------|---------|----------|----------|-----------|---------|---------|--------|
| | | The interval is extremely broken. | 24.2 | 24.4 | 0.2 | 100 | | | | |
| | | | 24.4 | 25.3 | 0.9 | 100 | | | | |
| | | | 25.3 | 26.0 | 0.7 | 100 | | | | |
| | | The contact with the next interval is sharp but irregular. | 26.0 | 26.4 | 0.4 | 100 | | | | |
| | | | 26.4 | 26.7 | 0.3 | 100 | | | | |
| | | | 26.7 | 27.5 | 0.8 | 100 | | | | |
| | | | 27.5 | 28.5 | 0.3 | 30 | | | | |
| | | | 28.5 | 29.2 | 0.7 | 100 | | | | |
| | | | 29.2 | 29.6 | 0.4 | 100 | | | | |
| | | | 29.6 | 29.9 | 0.1 | 33 | | | | |
| | | | 29.9 | 30.1 | 0.2 | 100 | | | | |
| | | | 30.1 | 30.4 | 0.3 | 100 | | | | |
| | | | 30.4 | 30.8 | 0.4 | 100 | | | | |
| | | | 30.8 | 31.5 | 0.7 | 100 | | | | |
| | | | 31.5 | 31.9 | 0.4 | 100 | | | | |
| | | | 31.9 | 32.2 | 0.3 | 100 | | | | |
| | | | 32.2 | 32.4 | 0.2 | 100 | | | | |
| | | | 32.4 | 32.7 | 0.3 | 100 | | | | |
| | | | 32.7 | 33.1 | 0.4 | 100 | | | | |
| | | | 33.1 | 33.9 | 0.8 | 100 | | | | |
| | | | 33.9 | 34.5 | 0.6 | 100 | | | | |
| | | | 34.5 | 34.9 | 0.3 | 75 | | | | |
| | | | 34.9 | 36.0 | 1.1 | 100 | | | | |
| | | | 36.0 | 36.6 | 0.6 | 100 | | | | |
| | | | 36.6 | 37.4 | 0.8 | 100 | | | | |
| | | | 37.4 | 37.7 | 0.3 | 100 | | | | |
| | | | 37.7 | 38.5 | 0.8 | 100 | | | | |
| | | | 38.5 | 40.1 | 1.6 | 100 | | | | |
| | | | 40.1 | 42.2 | 1.9 | 90 | | | | |

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| from m | to m | DESCRIPTION | from m | to m | rec m | rec % | from m | to m | Ni % | S % |
|-----------|---------|--|-----------|---------|----------|----------|-----------|---------|---------|--------|
| 42.4 | 64.0 | CHERT | 42.2 | 42.6 | 0.4 | 100 | | | | |
| | | Mottled grey to white and slightly pink chert with sparse green chlorite as rare flecks, stringers and veinlets, sparse schorl as flecks and stringers, trace to sparse quartz as stringers, and trace crystalline pyrite on some joints and associated with quartz stringers. | 42.6 | 43.5 | 0.9 | 100 | | | | |
| | | | 43.5 | 44.7 | 1.2 | 100 | | | | |
| | | | 44.7 | 45.7 | 1.0 | 100 | | | | |
| | | | 45.7 | 46.5 | 0.8 | 100 | | | | |
| | | | 46.5 | 48.0 | 1.5 | 100 | | | | |
| | | | 48.0 | 48.7 | 0.7 | 100 | | | | |
| | | Some parts of the chert are altered tuffs, consisting of fine angular fragments in a fine grained groundmass. | 48.7 | 49.3 | 0.6 | 100 | | | | |
| | | | 49.3 | 50.6 | 1.3 | 100 | | | | |
| | | | 50.6 | 51.3 | 0.7 | 100 | | | | |
| | | The interval has a brecciated fabric throughout. | 51.3 | 53.3 | 1.6 | 80 | | | | |
| | | | 53.3 | 53.7 | 0.4 | 100 | | | | |
| | | BCA at 43.2m = 0 degrees (bedding). | 53.7 | 54.3 | 0.6 | 100 | | | | |
| | | | 54.3 | 55.5 | 1.2 | 100 | | | | |
| | | The interval is broken. | 55.5 | 56.7 | 1.2 | 100 | | | | |
| | | | 56.7 | 57.9 | 1.2 | 100 | | | | |
| | | The contact with the next interval is gradational (lithology). | 57.9 | 58.5 | 0.6 | 100 | | | | |
| | | | 58.5 | 59.8 | 1.3 | 100 | | | | |
| | | | 59.8 | 61.5 | 0.7 | 41 | | | | |
| | | | 61.5 | 62.5 | 1.0 | 100 | | | | |
| | | | 62.5 | 63.7 | 1.2 | 100 | | | | |
| 64.0 | 111.0 | HORNFELS AND LESSER CHERT | 63.7 | 64.5 | 0.8 | 100 | | | | |
| | | | 64.5 | 65.8 | 1.3 | 100 | | | | |
| | | Crimson grey hornfels and cherty hornfels and lesser red brown to cream brown chert with sparse slightly vuggy pyrite blebs along bedding and as stringers, sparse quartz as stringers and veinlets, and sparse chlorite as rare flecks, stringers and veinlets. | 65.8 | 67.3 | 1.5 | 100 | | | | |
| | | | 67.3 | 69.0 | 1.7 | 100 | | | | |
| | | | 69.0 | 69.8 | 0.8 | 100 | | | | |
| | | | 69.8 | 70.5 | 0.7 | 100 | | | | |
| | | The interval has a brecciated fabric throughout. | 70.5 | 72.1 | 1.6 | 100 | | | | |
| | | | 72.1 | 73.3 | 1.2 | 100 | | | | |
| | | BCA at 28.4m = 40 to 50 degrees (bedding). | 73.3 | 74.3 | 1.0 | 100 | | | | |

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| from m | to m | DESCRIPTION | from m | to m | rec m | rec % | from m | to m | Ni % | S % |
|-----------|---------|---|-----------|---------|----------|----------|-----------|---------|---------|--------|
| | | | 74.3 | 76.3 | 2.0 | 100 | | | | |
| | | The interval is broken to extremely broken. | 76.3 | 77.8 | 1.5 | 100 | | | | |
| | | | 77.8 | 79.4 | 1.6 | 100 | | | | |
| | | The contact with the next interval is gradational (lithology). | 79.4 | 81.7 | 2.3 | 100 | | | | |
| | | | 81.7 | 82.5 | 0.8 | 100 | | | | |
| | | | 82.5 | 85.5 | 3.0 | 100 | | | | |
| | | | 85.5 | 88.5 | 3.0 | 100 | | | | |
| | | | 88.5 | 90.2 | 1.7 | 100 | | | | |
| | | | 90.2 | 91.5 | 1.3 | 100 | | | | |
| | | | 91.5 | 94.2 | 2.7 | 100 | | | | |
| | | | 94.2 | 96.6 | 2.4 | 100 | | | | |
| | | | 96.6 | 97.5 | 0.9 | 100 | | | | |
| | | | 97.5 | 100.5 | 3.0 | 100 | | | | |
| | | | 100.5 | 102.3 | 1.8 | 100 | | | | |
| | | | 102.3 | 103.5 | 1.2 | 100 | | | | |
| | | | 103.5 | 106.0 | 2.5 | 100 | | | | |
| | | | 106.0 | 106.5 | 0.5 | 100 | | | | |
| | | | 106.5 | 107.8 | 1.3 | 100 | | | | |
| | | | 107.8 | 109.5 | 1.7 | 100 | | | | |
| | | | 109.5 | 111.2 | 1.7 | 100 | | | | |
| | | | 111.2 | 111.9 | 0.7 | 100 | | | | |
| 111.0 | 158.5 | HORNFELS | 111.9 | 112.5 | 0.6 | 100 | | | | |
| | | | 112.5 | 113.6 | 1.1 | 100 | | | | |
| | | Grey to crimson grey , fine grained hornfels with trace to sparse actinolite as diffuse stringers, veinlets and lace veining, trace pyrite as stringers, and trace pyrite associated with actinolite. | 113.6 | 113.9 | 0.3 | 100 | | | | |
| | | | 113.9 | 114.4 | 0.4 | 80 | | | | |
| | | | 114.4 | 115.0 | 0.5 | 83 | | | | |
| | | | 115.0 | 115.4 | 0.4 | 100 | | | | |
| | | This interval is a hydrothermally altered sandstone or tuff. | 115.4 | 115.8 | 0.2 | 50 | | | | |
| | | | 115.8 | 118.5 | 2.7 | 100 | | | | |
| | | BCA at 132.8m = 45 degrees (irregular bedding). | 118.5 | 120.2 | 1.7 | 100 | | | | |

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| from m | to m | DESCRIPTION | from m | to m | rec m | rec % | from m | to m | Ni % | S % |
|-----------|---------|---|-----------|---------|----------|----------|-----------|---------|---------|--------|
| | | BCA at 134.0m = 45 degrees (planar bedding). | 120.2 | 121.2 | 1.0 | 100 | | | | |
| | | BCA at 157.0m = 45 degrees (planar bedding). | 121.2 | 122.5 | 1.3 | 100 | | | | |
| | | | 122.5 | 123.8 | 1.3 | 100 | | | | |
| | | The interval is broken. | 123.8 | 124.5 | 0.7 | 100 | | | | |
| | | | 124.5 | 126.5 | 2.0 | 100 | | | | |
| | | The contact with the next interval is gradational (lithology). | 126.5 | 127.5 | 1.0 | 100 | | | | |
| | | | 127.5 | 130.0 | 2.5 | 100 | | | | |
| | | | 130.0 | 131.9 | 1.9 | 100 | | | | |
| | | | 131.9 | 133.5 | 1.6 | 100 | | | | |
| | | | 133.5 | 136.0 | 2.5 | 100 | | | | |
| | | | 136.0 | 137.6 | 1.6 | 100 | | | | |
| | | | 137.6 | 139.1 | 1.5 | 100 | | | | |
| | | | 139.1 | 140.7 | 1.6 | 100 | | | | |
| | | | 140.7 | 142.5 | 1.8 | 100 | | | | |
| | | | 142.5 | 143.6 | 1.1 | 100 | | | | |
| | | | 143.6 | 145.0 | 1.4 | 100 | | | | |
| | | | 145.0 | 146.6 | 1.6 | 100 | | | | |
| | | | 146.6 | 148.5 | 1.9 | 100 | | | | |
| | | | 148.5 | 149.4 | 0.9 | 100 | | | | |
| | | | 149.4 | 151.5 | 2.1 | 100 | | | | |
| | | | 151.5 | 153.1 | 1.6 | 100 | | | | |
| | | | 153.1 | 154.5 | 1.4 | 100 | | | | |
| | | | 154.5 | 157.5 | 3.0 | 100 | | | | |
| 158.5 | 173.0 | HORNFELS | 157.5 | 160.5 | 3.0 | 100 | | | | |
| | | As from 111.0m and 158.5m but with sparse pyrrhotite as stringers, flecks, fracture fill and along bedding, trace pyrite in quartz stringers and veinlets and on joints, sparse quartz as stringers, and trace chalcopyrite associated with pyrrhotite stringers. | 160.5 | 163.5 | 3.0 | 100 | | | | |
| | | | 163.5 | 166.5 | 3.0 | 100 | | | | |
| | | | 166.5 | 169.5 | 3.0 | 100 | | | | |
| | | | 169.5 | 172.5 | 3.0 | 100 | | | | |
| | | BCA is irregular. | | | | | | | | |

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| from m | to m | DESCRIPTION | from m | to m | rec m | rec % | from m | to m | Ni % | S % |
|-----------|---------|---|-----------|---------|----------|----------|-----------|---------|---------|--------|
| | | The interval is broken. | | | | | | | | |
| | | The contact with the next interval is sharp at a low angle to the core axis. | | | | | | | | |
| 173.0 | 181.1 | HORNFELS AND CHERT | 172.5 | 174.9 | 2.4 | 100 | | | | |
| | | Mottled brown cherty hornfels and grey, red brown and white chert with trace chlorite as stringers, sparse schorl in chert as small patches up to 10cm across, trace quartz as stringers, and sparse green actinolite associated with schorl. | 174.9 | 177.5 | 2.6 | 100 | | | | |
| | | The chert has a brecciated fabric. | 177.5 | 178.5 | 1.0 | 100 | | | | |
| | | BCAs are about 0 degrees and this interval may represent a band of narrow true thickness. | 178.5 | 181.5 | 3.0 | 100 | | | | |
| | | The interval is broken. | | | | | | | | |
| | | The contact with the next interval is sharp but irregular. | | | | | | | | |
| 181.3 | 191.3 | HORNFELS | 181.5 | 184.5 | 3.0 | 100 | | | | |
| | | As from 158.5m to 173.0m. | 184.5 | 187.3 | 2.8 | 100 | | | | |
| | | BCA is irregular. | 187.3 | 188.7 | 1.4 | 100 | | | | |
| | | The interval is broken to very broken. | 188.7 | 190.5 | 1.8 | 100 | | | | |
| | | The contact with the next interval is gradational (lithology). | 190.5 | 192.6 | 2.1 | 100 | | | | |

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| from m | to m | DESCRIPTION | from m | to m | rec m | rec % | from m | to m | Ni % | S % |
|-----------|---------|--|-----------|---------|----------|----------|-----------|---------|---------|--------|
| 191.3 | 202.5 | HORNFELS | 192.6 | 193.5 | 0.9 | 100 | | | | |
| | | As from 111.0m and 158.5m. | 193.5 | 195.0 | 1.5 | 100 | | | | |
| | | BCA is irregular. | 195.0 | 196.5 | 1.5 | 100 | | | | |
| | | The interval is broken to very broken. | 196.5 | 198.0 | 1.5 | 100 | | | | |
| | | | 198.0 | 199.2 | 1.2 | 100 | | | | |
| | | | 199.2 | 200.7 | 1.5 | 100 | | | | |
| | | END OF HOLE AT 202.5m. | 200.7 | 202.5 | 1.8 | 100 | | | | |

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