ALLEGIANCE MINING NL

ZEEHAN NICKEL PROJECT

EL 28/1988

ANNUAL REPORT

For Period Ending
December 2005

Prepared For:

Allegiance Mining NL
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November 2005

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1. SUMMARY

EL 28/1988 west of Zeehan consists of two parts - one to the immediate east of the Avebury nickel sulfide discovery and one to the west of that deposit.

The eastern part covers strike extensions of the formations hosting the North Avebury and Viking deposits and includes the East Avebury, Bismark and Bison prospects.

The western part covers interpreted strike extensions of the formation hosting the Viking deposit and includes East Trial Harbour and Burbank prospects.

The exploration target on both parts is nickel sulfide deposits similar to Avebury, hosted by skarned or altered ultramafic formations within the hydrothermal aureole surrounding the Heemskirk Granite.

The Avebury resource in November 2005 was 6.4 Mt 1.2% Ni with a further inferred resource of 1.3 Mt 1.4% Ni in West Viking.

Previous drilling at East Avebury combined with recent drilling at North Avebury suggests there are excellent opportunities for discovery of additional resources within the eastern part of EL 28/1988.

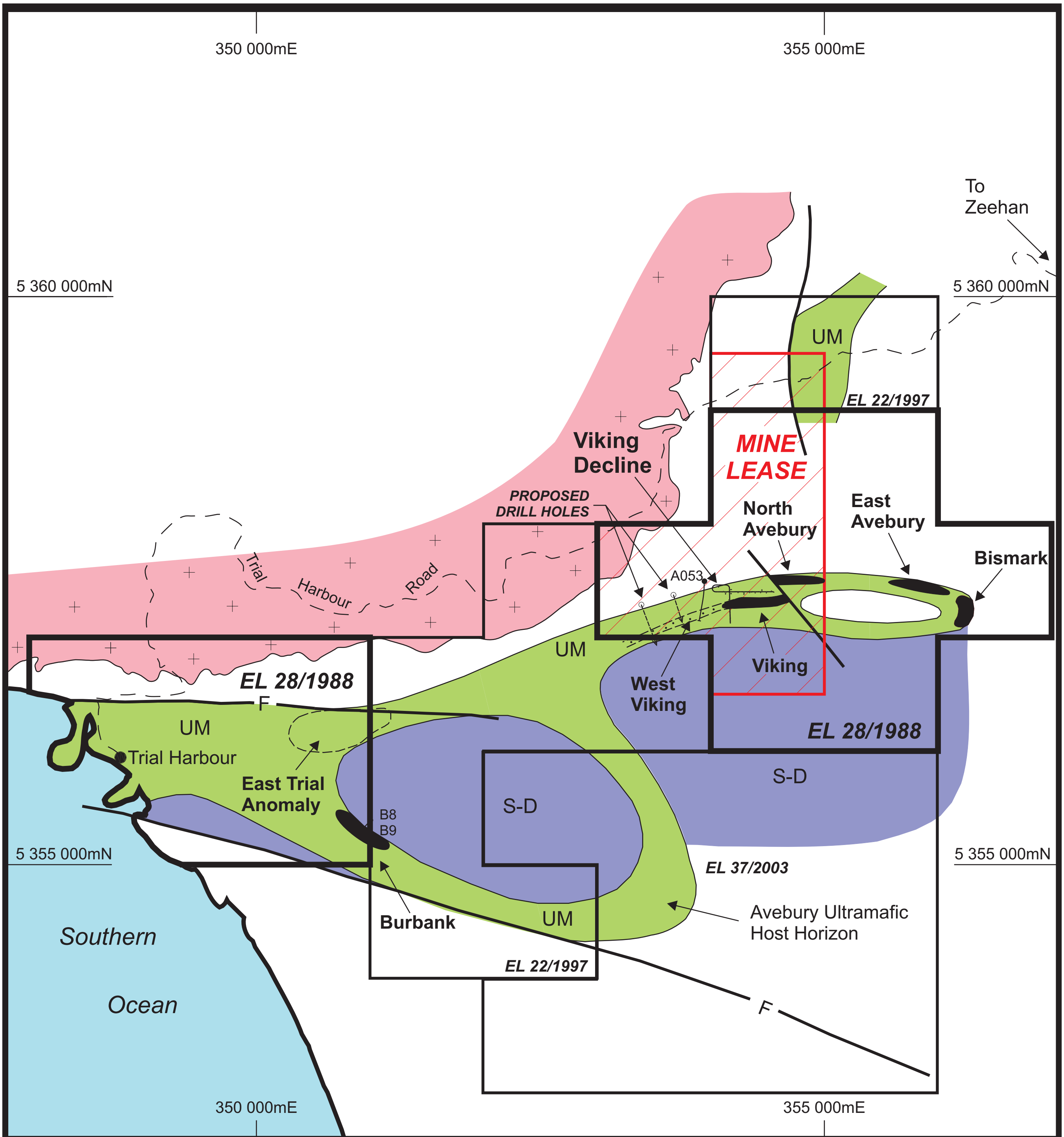
Drill holes A121 (100 m west of EL 28/1988) and A118 (200 m west of EL 28/1988) intersected 7 m 0.9% Ni and 9 m 1.0% Ni respectively in North Avebury. The altered ultramafics which host this mineralisation extend east into EL 28/1988.

At Burbank in the western part of EL 28/1988 drilling last summer, combined with previous drilling by Allegiance, has discovered a major zone of nickel mineralisation in the form of Ni-Fe oxides, interpreted as having developed as the result of leaching of a deeper nickel sulfide deposit by circulating groundwaters associated with a major structure which intersects the deposit. Drill hole B8 intersected 16 m 0.77% Ni and B9 intersected 65 m 0.5% Ni.

During 2004-05 expenditure on EL 28/1988 was $164,000. In 2005-06 the following work is planned:

- (i) drill a further 1-2 deeper drill holes at Burbank with helicopter support
- (ii) map and test drill East Trial aeromagnetic anomaly
- (iii) drill test for strike extensions of North Avebury
- (iv) further drill test East Avebury-Bismark with the intention of identifying a resource in that area
- (v) develop access into the Bison anomaly and undertake ground studies in that area - Bison is east along strike of Viking

This work is estimated to cost $250,000.



0 1 2 Km

LEGEND

- Granite
- UM — Ultramafics
- S-D — Silurian-Devonian Sediments
- Mineralised zones

Allegiance Mining N.L.

EL 28/1988 - AVEBURY	Compiled : L. Newnham
LOCATION PLAN	Date : July 2005
	Drawn : G.M.Bennett
	Revisions :
	File : Ave Location

Newnham Exploration and Mining Services — Figure No. 1

2. EXPLORATION OBJECTIVES

Aeromagnetic data combined with ground mapping, geochemical soil and rock sampling and drilling suggest much of EL 28/1988 is underlain by mafic and ultramafic formations altered by intrusion of the Heemskirk Granite to serpentinite and ultramafic skarns.

These formations host the recently-discovered Avebury nickel sulfide deposit (8 Mt 1.2% Ni).

The Avebury deposit is commercially viable and is currently undergoing development as an underground operation. However, by current industry standards, it is of modest grade and its commercial characteristics would be enhanced if the annual tonnage throughput could be substantially increased. To achieve this, further resources will have to be identified both on the Avebury Mining Lease and the adjacent EL 28/1988.

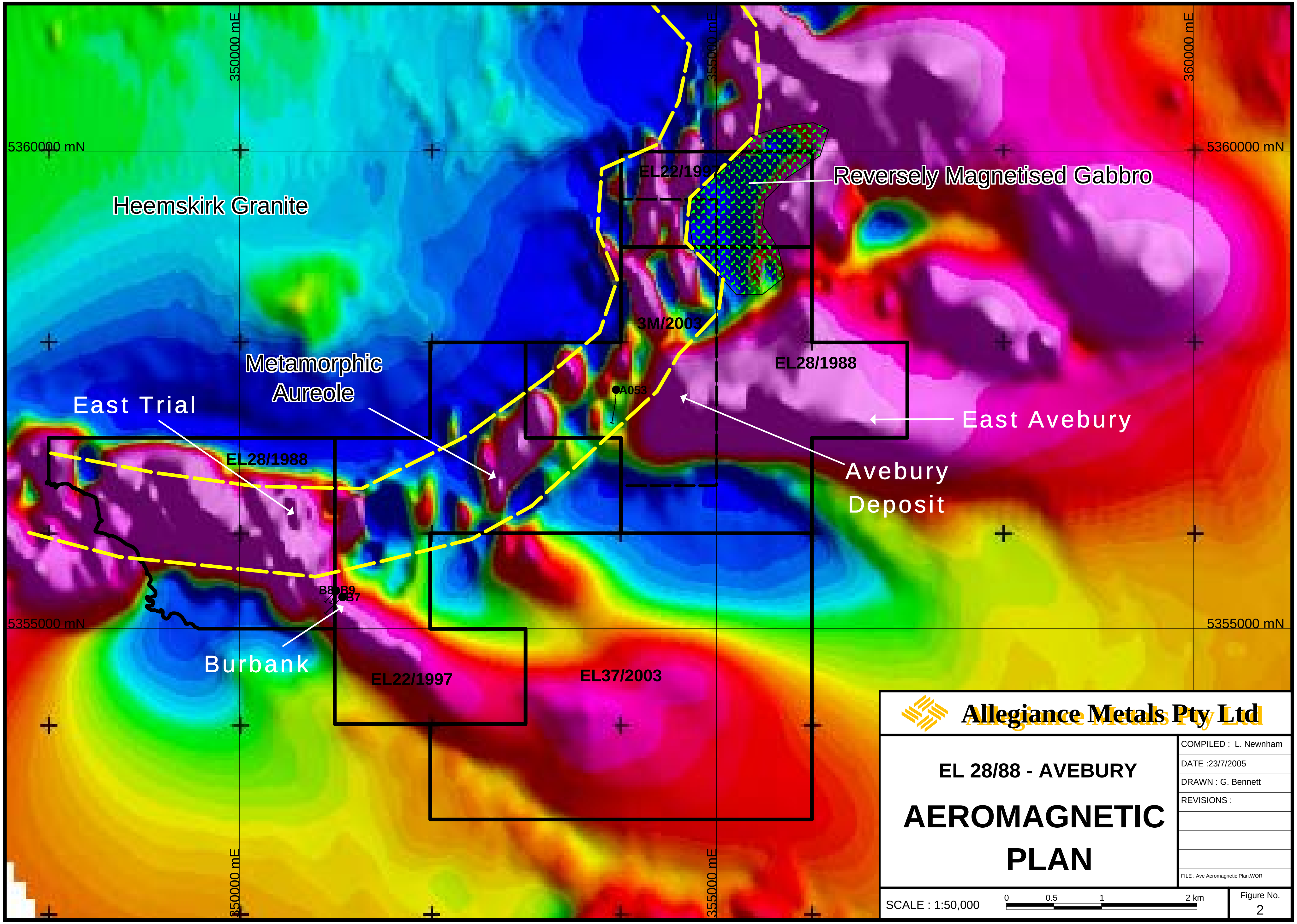
Opportunities for such discoveries have already been drill identified at:

- eastern extensions of North Avebury
- East Avebury
- Burbank

Additional opportunities requiring further ground assessment and drilling have been identified at:

- East Trial Harbour
- Bismark
- Bison (eastern extension of Viking)

A major program of exploration has been planned for 2005-06 to further evaluate these opportunities with the objective of doubling the size of the Avebury resource.


350000 mE
355000 mE
360000 mE
5360000 mN
5355000 mN
Heemskirk Granite
Reversely Magnetised Gabbro
EL22/1997
3M/2003
EL28/1988
Metamorphic
Aureole
East Trial
A053
East Avebury
Avebury
Deposit
B8
B9
B7
Burbank
EL22/1997
EL37/2003
Allegiance Metals Pty Ltd
EL 28/88 - AVEBURY
AEROMAGNETIC
PLAN
COMPILED : L. Newnham
DATE :23/7/2005
DRAWN : G. Bennett
REVISIONS :
FILE : Ave Aeromagnetic Plan.WOR
SCALE : 1:50,000
0
0.5
1
2 km
Figure No.
2

3. WORK COMPLETED THIS YEAR

The sum of $164,000 was spent in 2004-05 on drilling programs at East Avebury and Burbank. Additional drilling was completed on North Avebury to the immediate west of EL 28/1988. In all three areas significant discoveries have been made, which require follow-up drilling.

3.1 Burbank Prospect:

The Burbank prospect straddles the boundary between EL 28/1988 and EL 22/1997 and the same exploration results are reported for both these tenements.

Burbank lies 4 km west of Avebury. The area is underlain by altered ultramafics and cut by a major fault which may be a splay off the Firewood Siding Fault. A substantial zone of nickel mineralisation is developed on the northern side of the ultramafic, possibly associated with this major fault. Prior to 2004-05 two programs of shallow drilling had been completed.

Two cored drill holes, B8 and B9, were completed to test at depth the broad nickeliferous zone intersected in DDH B7 in 2003-04, and in shallow holes B1-B6 in 2002-03.

The two holes totalling 666 m were completed from a single helipad adjacent to the Little Henty River in January-February 2005. Drilling was undertaken by Almac Drilling using an LY38 drill rig working 24 hours/day, 7 days/week, supported on a daily basis by helicopter based in Zeehan.

Coring was HQ-NQ, generally with good core recoveries. Core was logged in Zeehan, selected intervals were split in half for assaying by SGS, and remaining core was stored in Zeehan.

Petrological studies were completed by SKM (NZ). Drill logs, assays and petrological report are appended. Drill hole sections and plans are attached.

DDH B8: intersected an altered ultramafic body between 105.0-283.0 m (178 m). A major fault zone cut through this body (145.0-243.0 m). The fault zone was strongly leached and vuggy with major water flows reported. There was pervasive and abundant development of limonite, goethite and magnetite within, and adjacent to, the fault.

The interval 143.5-159.5 m (16.0 m) assayed 0.77% Ni, 0.37% Zn and <0.10 S, and is equated with the depth extension of a similar zone in B7 (24 m 0.77% Ni, 0.28% Zn - high core losses).

Petrological studies have identified this unit as serpentinised ultramafic, with veins and stringers of magnetite, weakly hydrothermally altered and containing no sulfides.

DDH B9: intersected a similar thick unit of altered ultramafics between 144.0-351.7 m (207 m) beneath B8 and the higher B7. The major fault intersected in B8 was again present in B9. The altered ultramafics and the fault zone were severely leached with the pervasive development of limonite and goethite, probably derived from the weathering of magnetite and sulfides.

The interval 150.2-215.0 m (64.8 m) averaged 0.50% Ni, 0.15% Zn and 0.08% S. Included in this were several higher-grade intervals:

150.2-156.8 m: 6.6 m 0.9% Ni, with values to 2.09% Ni

162.8-168.5 m: 5.7 m 0.71% Ni, with values to 1.07% Ni

180.5-185.5 m: 5 m 0.83% Ni, with values to 1.53% Ni

Petrological studies again suggested the unit of higher nickel values was a serpentinised ultramafic with veins and stringers of magnetite. The unit was hydrothermally altered and strongly leached at a later time by circulating ground water.

However, unlike the shallower B7 and B8 intersections, some fine-grained pentlandite was observed at 147.5 m, associated with magnetite.

Burbank Summary:

The nickeliferous zones in DDH B8 and B9 have been petrologically interpreted (Appendix 5) as - ***" ... an epithermal nickel deposit formed along a major structure that also served as a later conduit for oxidised groundwaters such that sulfides are only preserved peripherally to the structure or possibly at greater depths within it. Limonite and goethite produced by the oxidation are considered to host the nickel in the oxidised samples, but at much higher concentrations than the limonite of lateritic deposits."***

The host rocks are serpentinised ultramafics, variably altered to carbonate-silica assemblages.

In summary, the Burbank geological setting is very similar to Avebury but the depth of weathering is greater, probably reflecting the presence of a very major fault zone intersecting the altered and mineralised zones. What is observed in core at depth at Burbank is similar to the vuggy limonitic gossan outcrop at Avebury.

Burbank mapping suggests the ultramafic host will plunge south-east. If deeper drilling was to be undertaken it should, therefore, be south-east of the current drilling. Deeper drilling to the north-west may result in intersections too deep in the system.

Logs for B8 and B9 are attached as Appendices 1 & 2.

Petrological reports are attached as Appendix 5.

Sections and plans are attached as Maps 7-10.

3.2 North Avebury:

North Avebury is a steeply dipping deposit of nickel sulfides, striking east-west, containing an indicated resource of 2.35 Mt 1.16% Ni.

During 2004-05, drilling within 3M/2003 adjacent to EL 28/1988 identified extensions of North Avebury which indicate it will extend into EL 28/1988.

DDH A121 (Figs 4, 6)

This hole was drilled only 100 m west of the EL 28/1988 boundary and intersected a broad zone of mineralisation within the ultramafics which assayed 35 m 0.6% Ni including 7 m 0.9% Ni. This zone lay some 50 m inside the ultramafic and suggests that DDH A015 drilled beneath A121 may not have gone far enough.

DDH A118 and A114 (Figs 3, 6)

These two holes were drilled 200 m west of the EL 28/1988 boundary and intersected 9.7 m 1.0% Ni and 3 m 0.5% Ni respectively on the margin of the serpentinite.

The combined results of these three drill holes strongly suggest that the North Avebury deposit will extend east across Comstock Creek into EL 28/1988.

Within EL 28/1988 the nearest existing drill hole is A002 which lies approximately 350 m east of A121. It intersected mineralised serpentinite at a relatively shallow depth.

3.3 East Avebury:

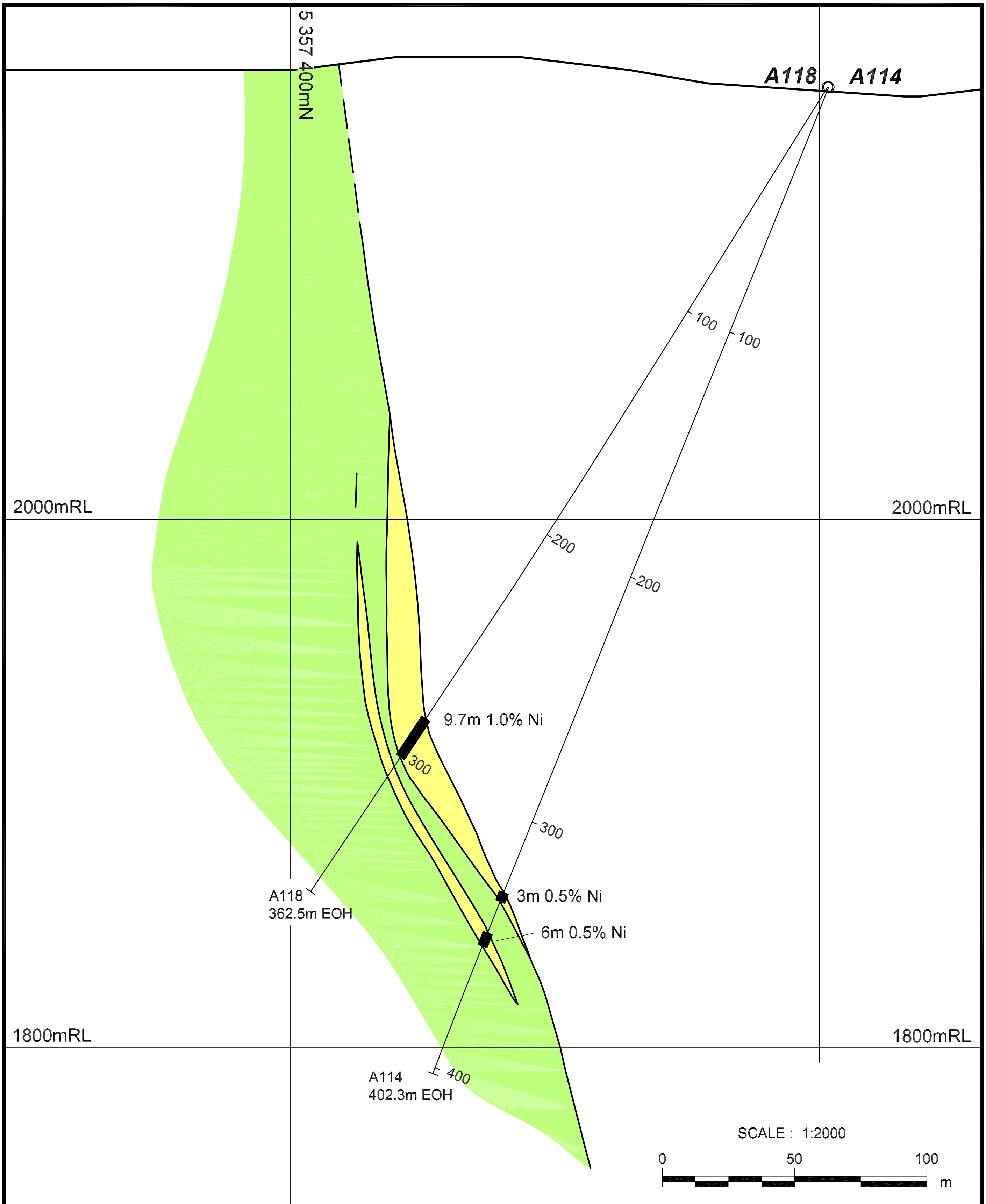
The East Avebury area is underlain by an extensive area of altered ultramafics. Surface soil and rock sampling has identified a high amplitude, extensive Ni-As-Zn anomaly.

Prior to this year, six (6) cored drill holes had been completed to test the anomaly. Four (4) of these intersected significant nickel sulfide mineralisation (Fig 6) including:

A033:	23 m 0.85% Ni
A032:	13 m 0.65% Ni

In 2004-05, drill hole A070 (Fig 5) was completed to test for down-dip extensions of this mineralised zone. It intersected several minor zones of mineralisation including 4 m 0.5% Ni and 2 m 1.0% Ni, and is interpreted as passing beneath the main East Avebury zone.

The log of A070 is attached as Appendix 6.



LEGEND

Yellow	Mineralised ultramafic
Green	Serpentinised ultramafic or ultramafic skarn

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EL 28/88 - AVEBURY

NORTH AVEBURY

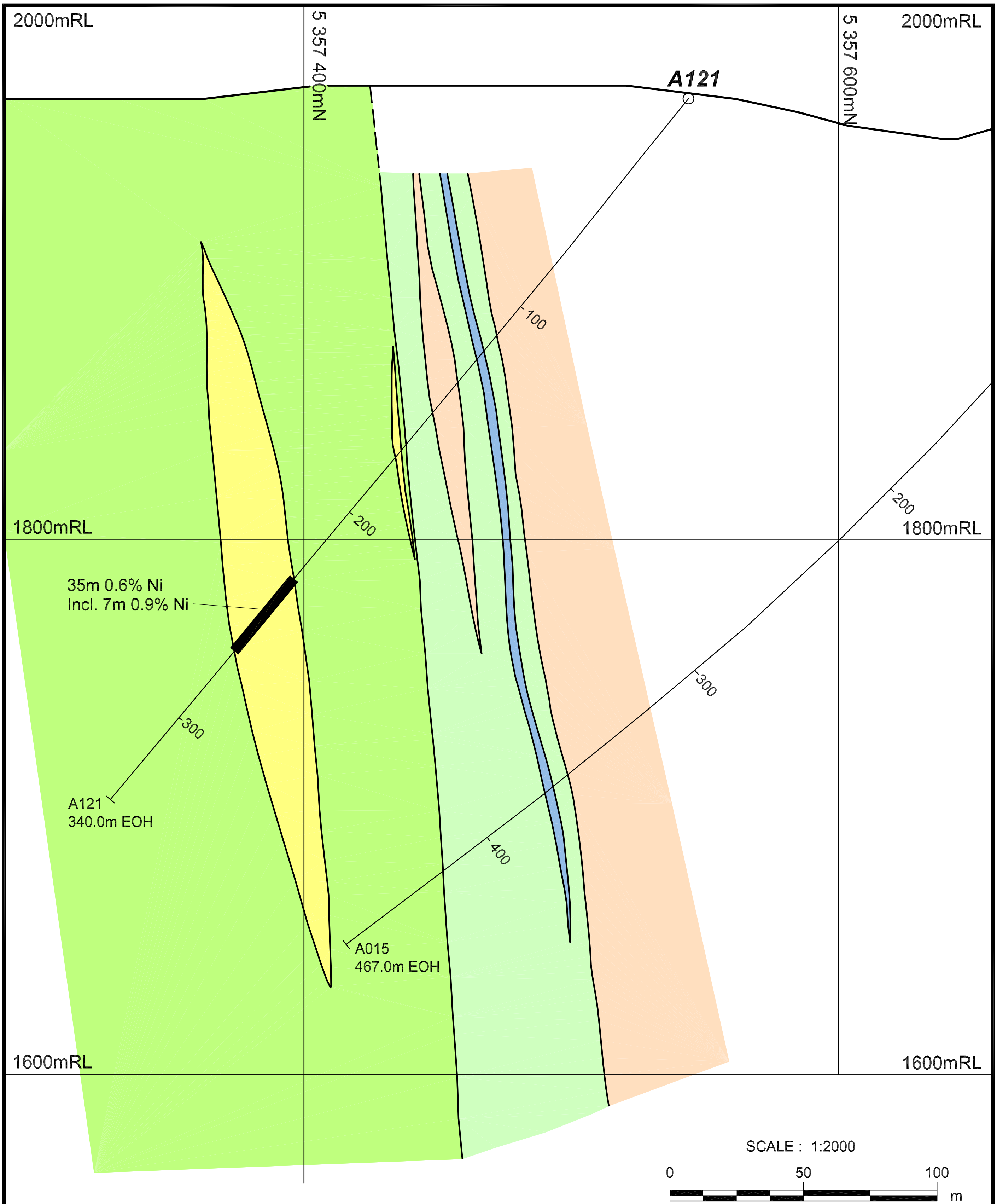
DRILL SECTION

A114 and A118

Compiled : T. Callighan
Date : 21/11/05
Drawn : G.M.Bennett
Revisions :
File : Ave DDH A121XS

Newnham Exploration and Mining Services

Figure No.
3



LEGEND

- Massive, polymict volcaniclastic breccia, sandstone and siltstone, intensive actinolite-silica alteration
- Mineralised ultramafic
- Serpentinised ultramafic or ultramafic skarn
- Massive graded, feldspar-lithic greywacke, phlogopite-biotite alteration
- Laminated black shale, pyrrhotitic

Allegiance Mining N.L.

EL 28/88 - AVEBURY

NORTH AVEBURY

DRILL SECTION

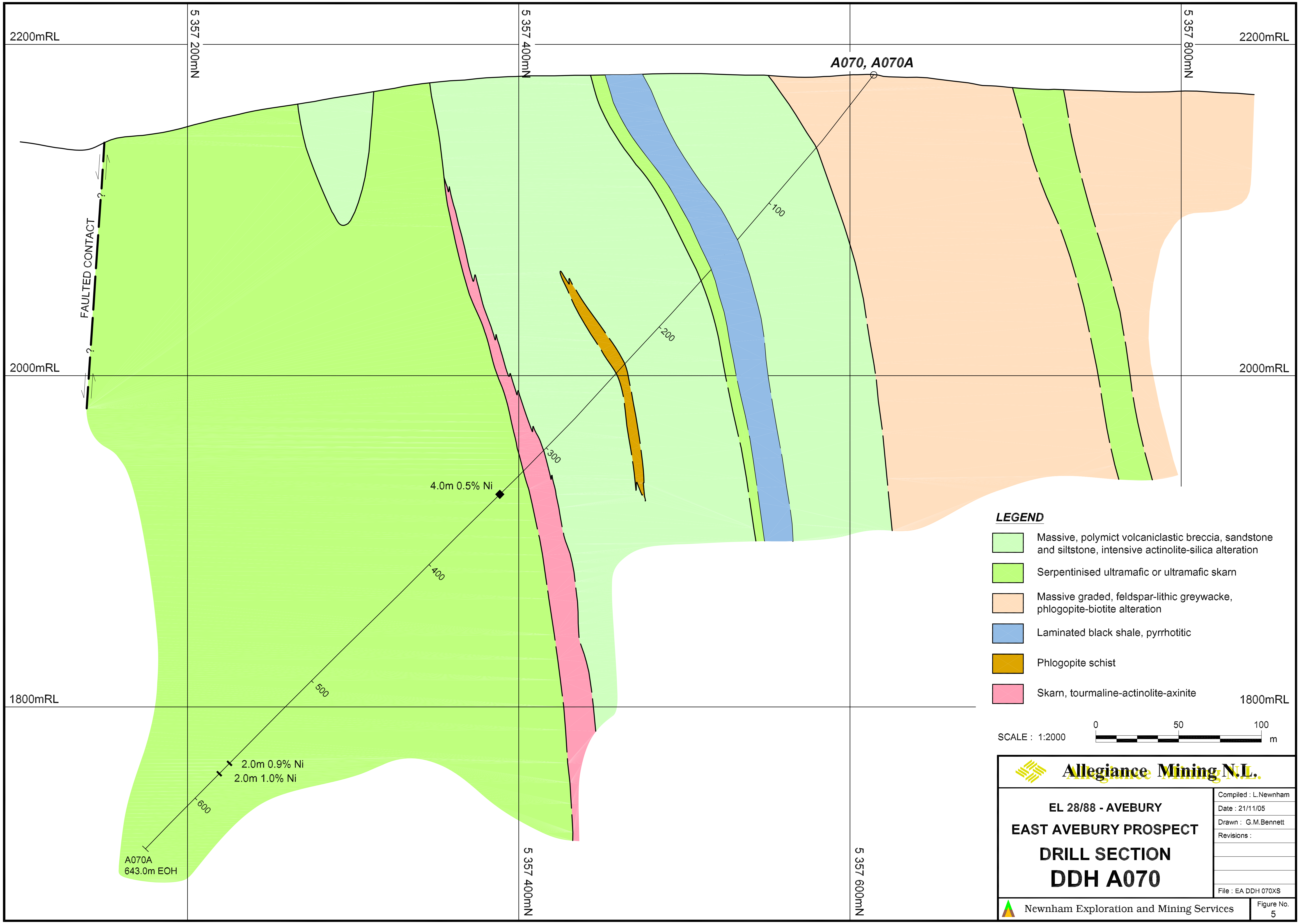
A121

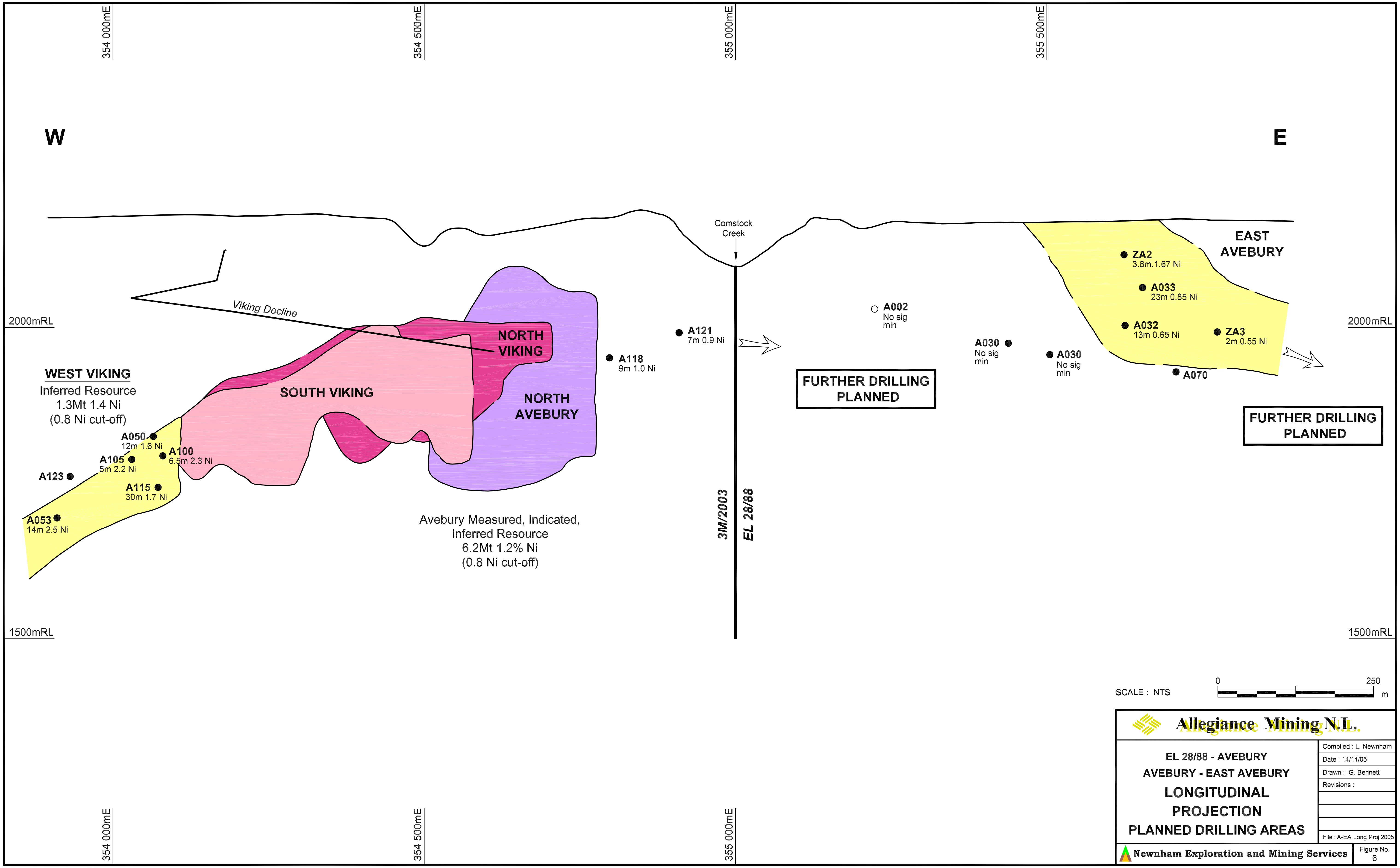
Compiled : T. Callighan
Date : 21/11/05
Drawn : G.M.Bennett
Revisions :

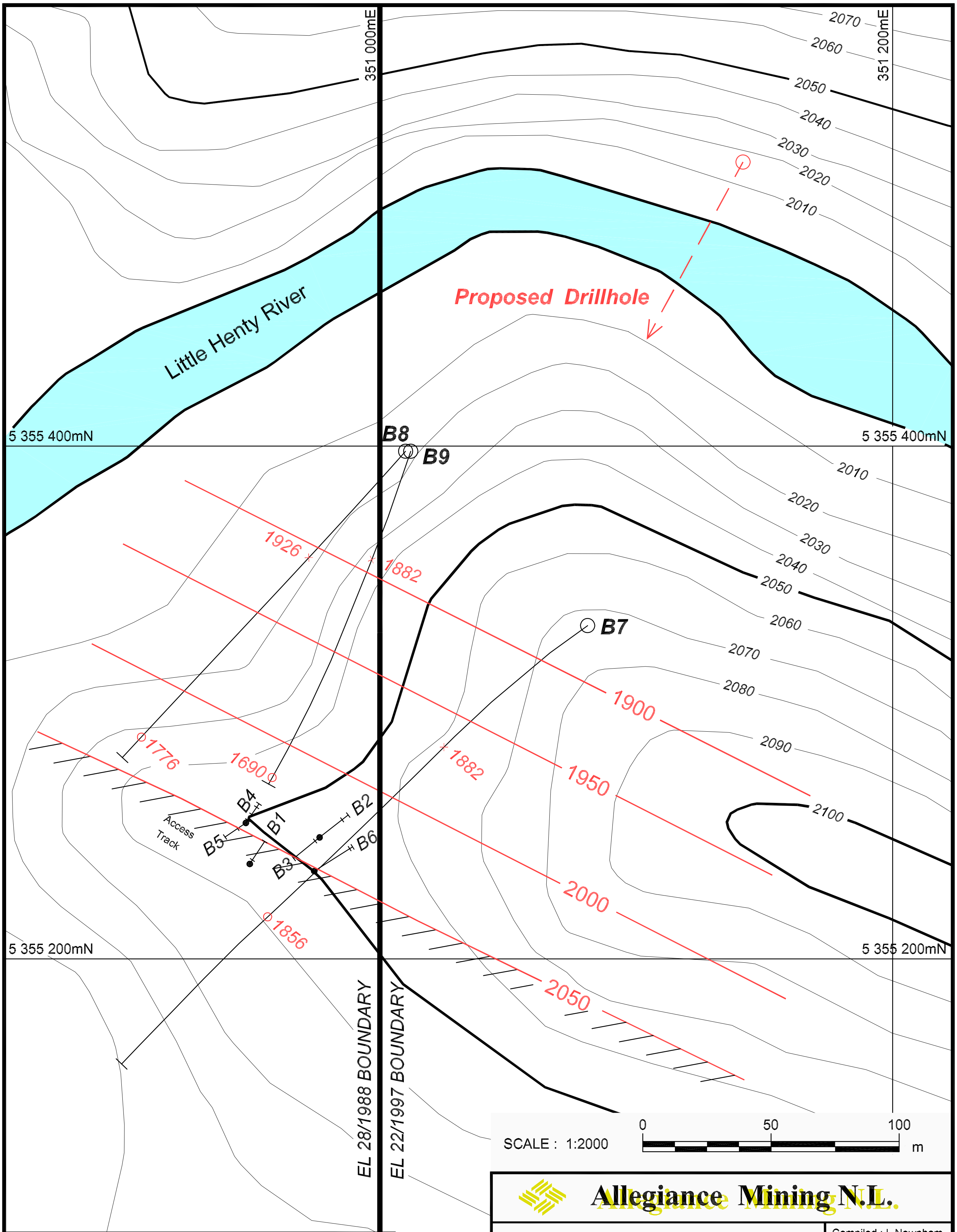
File : Ave DDH A121XS

Newnham Exploration and Mining Services

Figure No. 4


2200mRL
2000mRL
1800mRL
5 357 200mN
5 357 400mN
5 357 600mN
5 357 800mN
A070, A070A
FAULTED CONTACT
100
200
300
400
500
600
4.0m 0.5% Ni
2.0m 0.9% Ni
2.0m 1.0% Ni
A070A
643.0m EOH
LEGEND
Massive, polymict volcaniclastic breccia, sandstone and siltstone, intensive actinolite-silica alteration
Serpentinised ultramafic or ultramafic skarn
Massive graded, feldspar-lithic greywacke, phlogopite-biotite alteration
Laminated black shale, pyrrhotitic
Phlogopite schist
Skarn, tourmaline-actinolite-axinite
SCALE : 1:2000
0
50
100
m
Allegiance Mining N.L.
EL 28/88 - AVEBURY
EAST AVEBURY PROSPECT
DRILL SECTION
DDH A070
Compiled : L.Newnham
Date : 21/11/05
Drawn : G.M.Bennett
Revisions :
File : EA DDH 070XS
Newnham Exploration and Mining Services
Figure No.
5


354 000mE
354 500mE
355 000mE
355 500mE
W
E
Comstock Creek
EAST AVEBURY
ZA2
3.8m.1.67 Ni
A033
23m 0.85 Ni
A032
13m 0.65 Ni
ZA3
2m 0.55 Ni
A070
A002
No sig min
A030
No sig min
A030
No sig min
A121
7m 0.9 Ni
A118
9m 1.0 Ni
FURTHER DRILLING PLANNED
FURTHER DRILLING PLANNED
2000mRL
2000mRL
Viking Decline
NORTH VIKING
SOUTH VIKING
NORTH AVEBURY
WEST VIKING
Inferred Resource
1.3Mt 1.4 Ni
(0.8 Ni cut-off)
A050
12m 1.6 Ni
A100
6.5m 2.3 Ni
A105
5m 2.2 Ni
A123
A115
30m 1.7 Ni
A053
14m 2.5 Ni
Avebury Measured, Indicated, Inferred Resource
6.2Mt 1.2% Ni
(0.8 Ni cut-off)
3M/2003
EL 28/88
1500mRL
1500mRL
SCALE : NTS
0
250
m
Allegiance Mining N.L.
EL 28/88 - AVEBURY
AVEBURY - EAST AVEBURY
LONGITUDINAL PROJECTION
PLANNED DRILLING AREAS
Compiled : L. Newnham
Date : 14/11/05
Drawn : G. Bennett
Revisions :
File : A-EA Long Proj 2005
Newnham Exploration and Mining Services
Figure No. 6



KEY

2000 — Contours of Mieralised Zone Hangingwall

Outcrop of Mineralised Zone

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EL 28/88 - AVEBURY

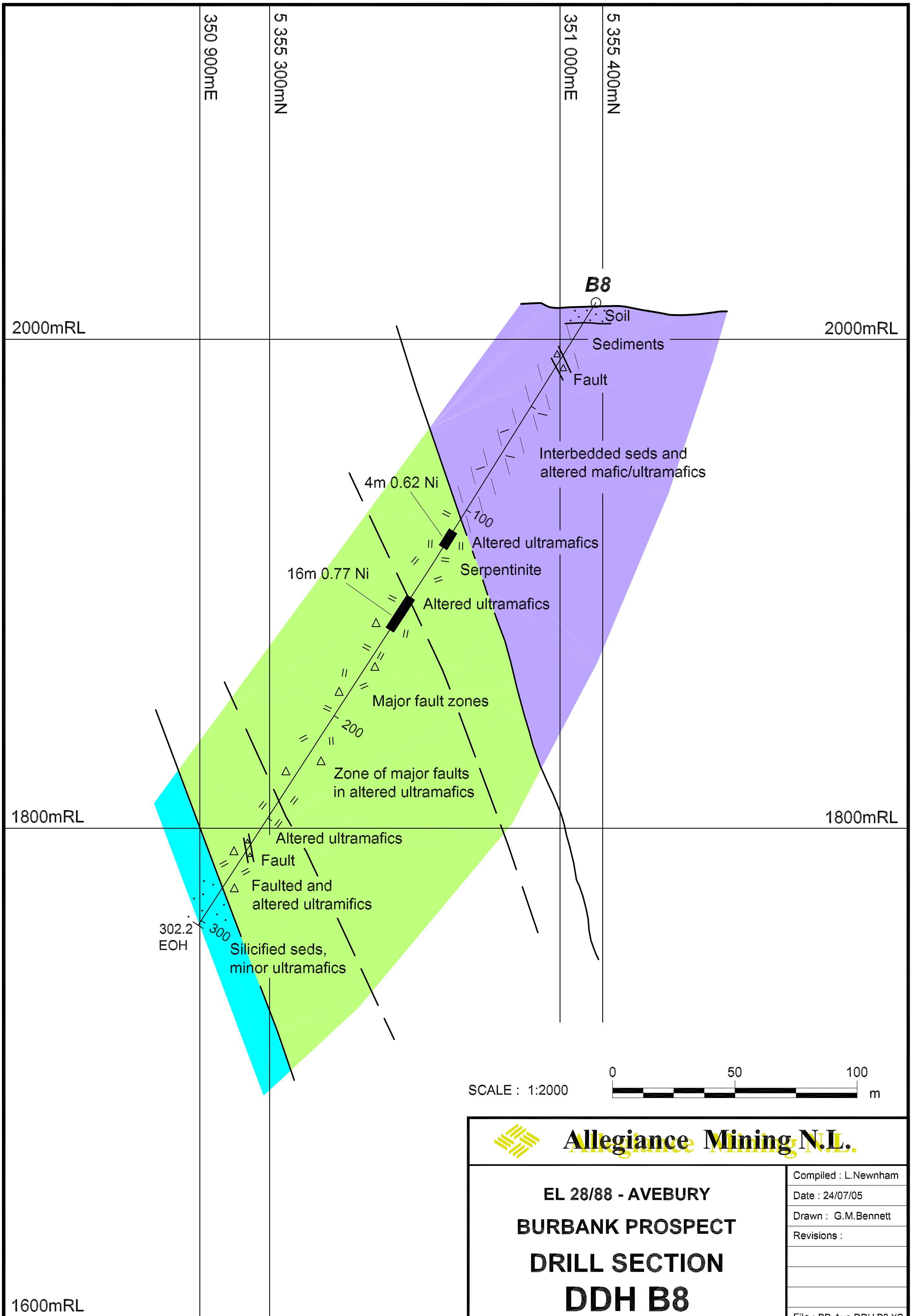
BURBANK PROSPECT

DRILLHOLE LOCATION PLAN AND MINERALISED ZONE

Compiled : L.Newnham	
Date : 24/07/05	
Drawn : G.M.Bennett	
Revisions :	
File : BB-Ave Plan 2005	

Newnham Exploration and Mining Services

Figure No. 7



Allegiance Mining N.L.

EL 28/88 - AVEBURY

BURBANK PROSPECT

DRILL SECTION

DDH B8

Compiled : L.Newnham

Date : 24/07/05

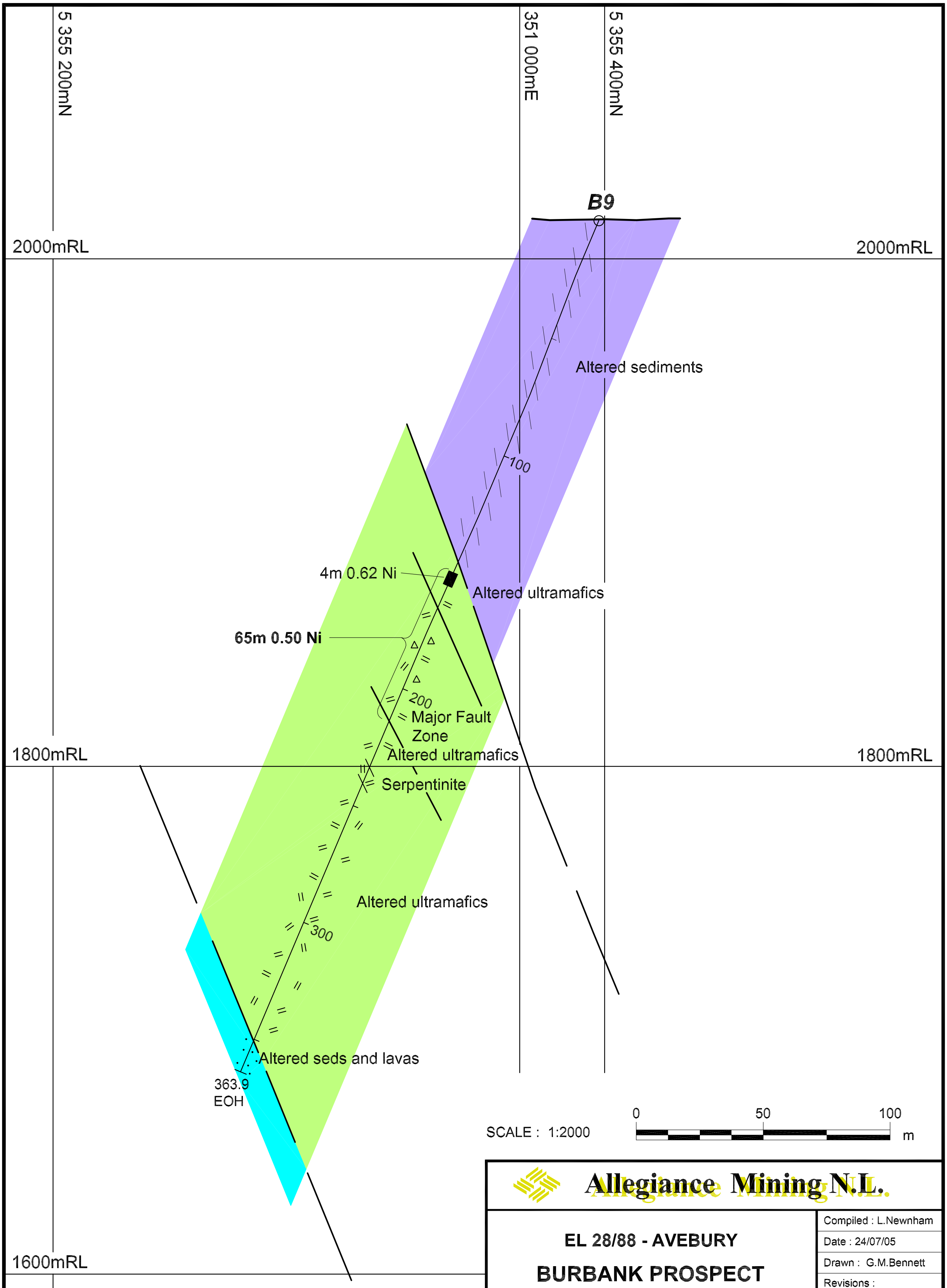
Drawn : G.M.Bennett

Revisions :

File : BB-Ave DDH B8 XS

Newnham Exploration and Mining Services

Figure No. 8



Allegiance Mining N.L.

EL 28/88 - AVEBURY

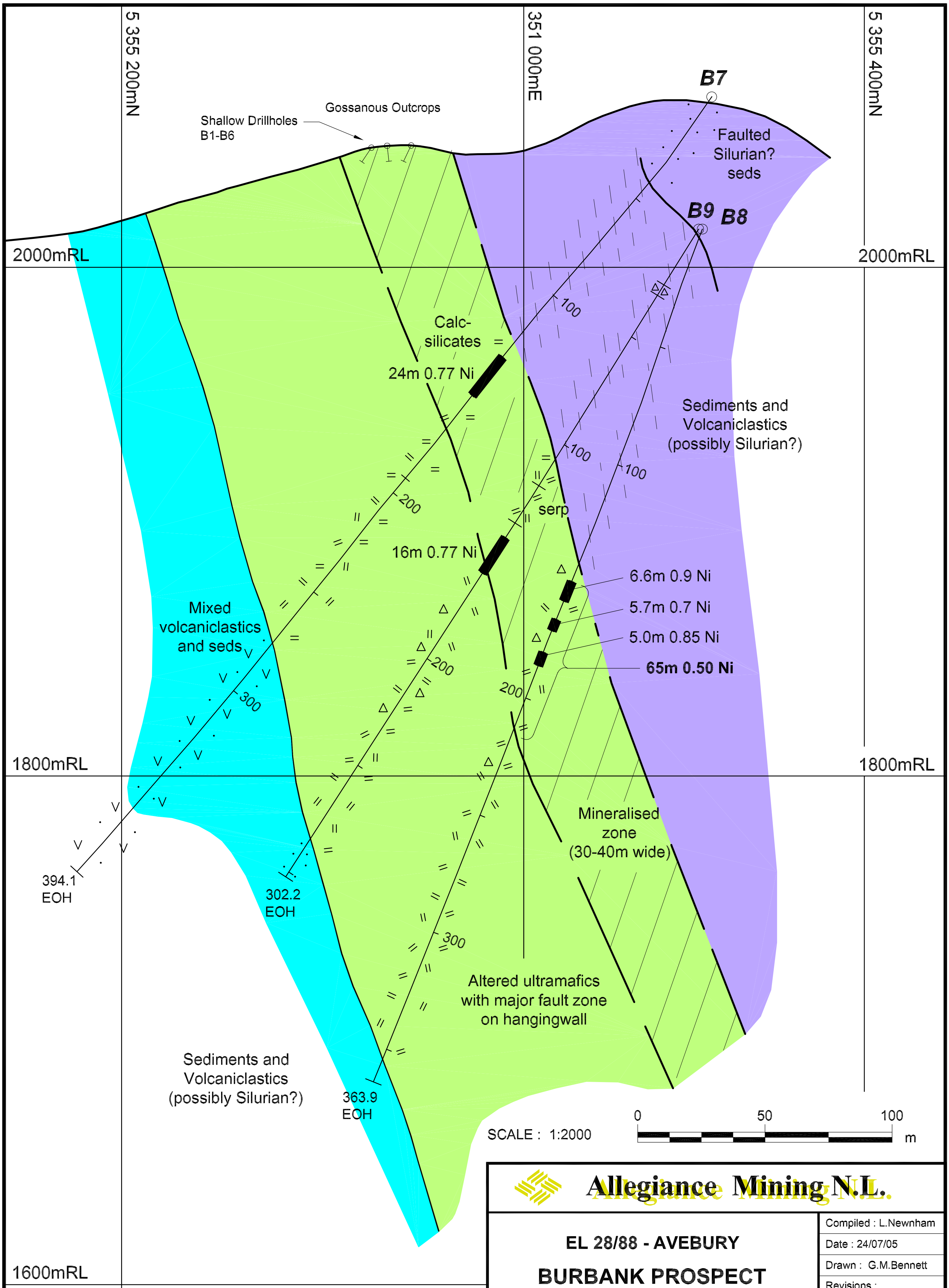
BURBANK PROSPECT

DRILL SECTION

DDH B9

Compiled : L.Newnham	
Date : 24/07/05	
Drawn : G.M.Bennett	
Revisions :	
File : BB-Ave DDH B9 XS	
Figure No. 9	

Newnham Exploration and Mining Services



Allegiance Mining N.L.

EL 28/88 - AVEBURY

BURBANK PROSPECT

INTERPRETATIVE COMPOSITE SECTION

Compiled : L.Newnham
Date : 24/07/05
Drawn : G.M.Bennett
Revisions :

File : BB-Ave Comp XS-05

Newnham Exploration and Mining Services

Figure No. 10

4. WORK PLANNED 2005-06

Exploration on EL 28/1988 will be accelerated in 2005-06 as an important component of the Allegiance strategy to double the Avebury resource base.

Drilling programs are planned at Burbank, East Avebury and North Avebury. Ground access and avaluation programs are planned at Bison and East Trial Harbour, possibly leading to drilling later in the year.

4.1 Burbank:

One (1)-two (2) further cored drill holes are planned to test the Burbank zone approximately 200 m beneath B9 intersection. These holes will be drilled from a helipad 70 m north-east of the B8-B9 pad. Program details are:

- total metres: 1,000 m HQ-NQ
- schedule: January-February 2006
- cost: $100,000 (1 hole) - $200,000 (2 holes)

4.2 East Trial Harbour:

East Trial Harbour is a prominent airmag anomaly which lies 4 km due west of Viking, immediately south of the Heemskirk Granite. The area is mapped as covered by Precambrian sediments.

The magnetic anomaly is interpreted as an altered ultramafic (serpentinite) concealed beneath a thin veneer of overthrust Precambrian rocks. Field mapping is planned ahead of a decision to drill test the anomaly with 1-2 cored drill holes.

Program details are:

- field mapping: February 2006
- drilling: 600 m (2 holes)
- schedule: Sepember 2006
- cost: $70,000

4.3 North Avebury:

A program of core drilling is planned east of Comstock Creek to test for extensions of North Avebury between drill holes A121 and A002. Initially 3-4 holes are planned, but this number will increase in response to encouraging intersections.

Program details:

- drilling: 2,000 m HQ-NQ
- schedule: March-June 2006
- cost: $200,000

4.4 East Avebury:

A program of core drilling is planned up-plunge of A032 and A033 and down-plunge of ZA3, extending into the Bismark area.

Initially four (4) holes are planned but this number could increase in response to encouraging intersections. The objective of this program will be to identify an inferred resource at East Avebury-Bismark.

Progtam details:

- drilling: 1,600 m HQ-NQ
- schedule: March-June 2006
- cost: $175,000

4.5 Bison:

Bison is an aeromagnetic anomaly sitting midway between Bismark and Viking, on the eastern side of Comstock Creek. In 2006 it is proposed to further assess the anomaly on the ground, develop road access from Bismark to Bison, with the intention of drilling the anomaly late in 2006.

Program details:

- field mapping: February 2006
- access development: February 2006
- drilling: 300 m HQ-NQ, November 2006
- cost: $50,000

....

APPENDIX 1

DDH B8 Drill Log

COMPANY: Allegiance Mining NL
PROJECT: Burbank
HOLE NUMBER: B8

Commenced	14 Jan 05
Completed	26 Jan 05
Logged by	L Newnham
Drilled by	Almac

Purpose of Hole

Test leached nickel zone intersected in B7 at greater depth.

Collar details

Grid	AMG
Easting	351,010E
Northing	5,355,398N
Elevation	2,015
Dip	-57
Bearing	222
Length	302.2

Comments on Completion

intersected major fault zone in middle of sequence of serpentinised and hydrothermally altered ultramafics. Significant Ni-Zn mineralisation associated with limonite in upper section of fault zone. Petrological work suggests this is a severely leached epithermal nickel deposit. Nickel rich zone may have been wider than 16 m., but significant core losses below 159.5m

Hole Size

To	Size
116.5	HQ
302.2	NQ

Major core loss zones

From	To	% recov.
26.5	31.8	75
159.5	227.5	see log
280	285	see log

Hole Condition on Completion

all steel removed from hole;
strong water flows stopped by placing van ruth and wooden plugs and cement in HQ section of hole.

Summary of Assay Results

Depth		Recovery	Description	Length	Assays				
From (m)	To (m)	%		m.	%Ni	%Zn	% S		
110.5	**114.5**	**100**	**serpentinised ultramafic**	**4.0**	**0.62**	**0.24**	**<0.10**		
143.5	**159.5**	**100**	**HW section of major fault**	**16.0**	**0.77**	**0.37**	**<0.10**		
.									

Down Hole Survey Data

Camera Depth	Dip	Mag Brg Actual	Mag Brg Adjusted	Grid Brg AMG
0	**-58**	**210**		**222**
50	**-58**	**210**		**222**
100	**-58**	**211**		**223**
151	**-57**	**213**	**211**	**223**
200	**-57**	**215**	**211**	**223**
248	**-57**	**215**	**211**	**223**
300	**-57**	**211**		**223**

Notes on Surveys

survey bearings at 151, 200, 248 probably affected by magnetite in ultramafics. Adjusted to relate better to adjacent readings.

General Comments

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COMPANY: Allegiance Mining NL
PROJECT: Burbank
HOLE NUMBER: B 8

Description

From	To	Description
0.0	8.0	**SOILS and MUD:**
8.0	26.0	**SEDIMENTS:** fine to medium grained, light to dark gray sediments with some reddish hematitic beds resulting in banded appearance; coarser grained volcaniclastic(?) component in places; BCA 45-55°; core fresh but broken; several strong joint sets normally limonite stained;
26.0	31.0	**BRECCIA/FAULT ZONE:** broken fault breccia consisting of clasts of siliceous sediments, dark green-black ultramafic, light green altered ultramafic, contained in a groundmass of quartz and tremolite-talc; ocassional coarse grains of sulfide in a talcy groundmass; core very broken but recoveries reasonable;
31.0	56.0	**SEDIMENTS, with minor volcaniclastic component(?)** well bedded dark gray-greenish sediments with common beds light brown-cream finer grained sediments; some bands of mafic volcaniclastic (?) material; unit is hornfelsed with volcaniclastic component altered to felted actinolite-tremolite and talc which has been deformed and squeesed out into bedded siliceous sediments; BCA uniform 50°; core fresh and competent; some broken zones and several joint sets; bedding plane fracturing common; no sulfides observed; grades into......
56.0	105.2	**INTERBEDDED SEDIMENTS and MAFIC VOLCANICS, strongly altered, sulfidic near base;** interbedded fine grained reddish-brown well bedded sediments and dark gray-green mafic volcaniclastic units; sediments strongly altered to reddish hornfels and pale cream colored cherts; volcaniclastics altered to acicular actinolite-quartz units, often strongly brecciated; several thin mottled green-brown clay seams near base of interval, possibly very broken and decomposed ultramafics; (eg) 97.5m: 300mm; 102.3m: 300mm; seams generally 30° CA, ??parallel to bedding; BCA near top of interval 60°, but decreasing towards base of interval to 30°; increase in very fine grained disseminated sulfides below 90m., with sulfides also common along thin clay filled joints-?? pyrite or pyrrhotite; core quite competent to 96 m., then becomming more fractured. several strong joint sets;
105.2	118.0	**ALTERED ULTRAMAFICS ?** probable ultramafic unit strongly serpentinised then variably altered to mottled white calc-silicate assemblage with strong hematite/limonite overprint in places; magnetite, possibly some sphalerite, common as thin veins and irregular aggregates; white quartz-carbonate veining, with and without magnetite, common throughout; magnetite veining becomes abundant below 113.0m and associated with rusty brown aggregates, possibly decomposed or leached sphalerite; brecciated and irregular contact with interval above; grades into serpentinite below; core generally competent but substantially decomposed clay zones between 111-114 m;

Core Recovery

From	To	%
0.0	8.0	25
8.0	26.0	100
26.0	26.5	100
26.5	27.7	80
27.7	28.3	50
28.3	30.7	70
30.7	31.8	80
31.8	56.0	100
56.0	105.2	100
105.2	116.5	100
116.5	118.0	86

Assays

From	To	% Ni	% Cu	% S	% Zn	% As	% Co
92.5	93.5	0.01	0.01	0.23	0.01	0.004	
93.5	94.5	0.01	0.01	0.04	0.01	0.002	
94.5	95.5	0.01	<0.01	0.10	0.01	0.002	
95.5	96.5	0.01	0.01	0.40	0.01	0.002	
96.5	97.5	0.04	0.01	0.20	0.02	0.002	
97.5	98.5	0.02	0.01	2.03	0.01	0.002	
98.5	99.5	0.01	0.01	1.97	0.01	0.002	
99.5	100.5	0.01	<0.01	0.65	0.02	0.002	
100.5	101.5	0.02	0.01	1.35	0.02	0.002	
101.5	102.5	0.07	0.01	1.62	0.02	0.003	
102.5	103.5	0.12	<0.01	0.18	0.04	0.002	
103.5	104.5	0.24	<0.01	0.08	0.07	0.002	
104.5	105.5	0.25	<0.01	0.12	0.08	0.005	
105.5	106.5	0.14	<0.01	0.05	0.02	0.006	
106.5	107.5	0.16	<0.01	0.08	0.01	0.005	
107.5	108.5	0.18	<0.01	0.08	0.04	0.004	
108.5	109.5	0.24	<0.01	0.01	0.05	0.005	
109.5	110.5	0.33	<0.01	0.01	0.06	0.003	
110.5	111.5	0.58	<0.01	0.01	0.15	0.005	
111.5	112.5	0.62	<0.01	0.01	0.24	0.004	
112.5	113.5	0.58	<0.01	0.01	0.25	0.003	
113.5	114.5	0.67	<0.01	0.01	0.23	0.006	
114.5	115.5	0.42	<0.01	0.01	0.07	0.004	
115.5	116.5	0.20	<0.01	0.06	<0.01	0.010	
116.5	118.0	0.23	<0.01	0.12	<0.01	0.003	

Description

From	To	Description
118.0	137.5	**SERPENTINITE:** Dark green serpentinised ultramafic. Gradational with units above and below. Thin white quartz-carbonate veins common. Magnetite common as thin veins and aggregates; possible coroded aggregates of sphalerite?? or magnetite. No pyrrhotite or pentlandite observed; core quite broken but good recoveries
137.5	145.5	**ALTERED ULTRAMAFICS:** similar to 105.2-118.0m; interpreted as serpentinite which has been strongly altered to calc-silicate assemblage; light brown-reddish brown and pale green coloration; quartz-carbonate and magnetite veining common-abundant; aggregates of coarse magnetite common-abundant; rare specs of sulfides; possible coroded aggregates of sphalerite (?or magnetite); ground conditions generally competent; *petrological sample 145.3m: veined serpentinite; ultramafic rock which has undergone initial serpentinisation and later weak hydrothermal alteration;*
145.5	242.6	**MAJOR FAULT ZONE:** strongly leached major fault zone within the ultramafic body: clasts dominated by altered ultramafics, dominated by calc-silicates (tremolite, epidote? alteration), ocassional serpentinite clasts; matrix of iron rich quartz-carbonate; magnetite common throughout as veins and aggregates both in the clasts and matrix (ie) late stage veining; magnetite abundant in some sections towards base of unit; fault is strongly leached and vuggy with open space quartz crystal growths common in vugs; strong water flows reported by drillers in this interval; core is typically strongly iron stained (limonitic) brown color, suggestive of some leached material being sulfides; minor very fine grained sulfides associated with magnetite; even though this is a strongly leached major fault zone, groung conditions are generally very good with only minor core losses; ground becomes more broken and friable towards base of unit; *petrological sample 148.5 m: serpentinised and veined ultramafic;* *petrological sample 150.5 m: serpentinised ultramafic, with veins and stringers of magnetite;*
242.6	263.3	**ALTERED ULTRAMAFICS:** typically light gray, speckeled altered ultramafics; consists mainly of tremolite and silica with ocassional irregular intervals of soft brown talc; fine black speckling due to grains of dark chromite? pervasive green colorationwith numerous patches bright green nickel silicate ?? accompanied by purplish axinite and white carbonate matrix; pure silica banding in places; pervasive 1-2% sulfides as coarse irregular grains and aggregates; sulfide is non-magnetic and has appearance of pentlandite; most abundant in zones with common bright green mineral; irregular, almost stylolitic veins of soft brown mineral with reddish brown streak (possibly talc); core very competent with only wide spaced joint sets; no leaching;

Core Recovery

From	To	%
118.0	137.5	100
137.5	145.5	100
145.5	159.5	100
159.5	162.1	40
162.1	175.0	100
175.0	177.3	40
177.3	178.5	66
178.5	179.8	15
179.8	218.0	100
218.0	220.0	60
220.0	222.5	75
222.5	226.5	100
226.5	227.5	12
227.5	242.6	100
242.6	263.3	100

Assays

From	To	% Ni	% Cu	% S	% Zn	% As	% Co
137.5	138.5	0.22	<0.01	0.09	<0.01	<0.002	
138.5	139.5	0.21	<0.01	0.09	0.01	<0.002	
139.5	140.5	0.21	<0.01	0.07	0.01	<0.002	
140.5	141.5	0.23	<0.01	0.07	0.01	<0.002	
141.5	142.5	0.20	<0.01	0.05	0.01	<0.002	
142.5	143.5	0.23	<0.01	0.03	0.02	<0.002	
143.5	144.5	0.51	<0.01	<0.01	0.15	<0.002	
144.5	145.5	0.69	<0.01	<0.01	0.22	0.002	
145.5	146.5	0.85	<0.01	<0.01	0.42	0.003	
146.5	147.5	0.85	<0.01	<0.01	0.41	0.003	
147.5	148.5	0.94	<0.01	<0.01	0.45	0.003	
148.5	149.5	0.92	<0.01	0.02	0.45	0.003	
149.5	150.5	0.79	<0.01	<0.01	0.41	0.004	
150.5	151.5	0.87	<0.01	<0.01	0.45	0.003	
151.5	152.5	0.87	<0.01	<0.01	0.42	0.005	
152.5	153.5	0.58	<0.01	<0.01	0.28	0.004	
153.5	154.5	0.76	<0.01	<0.01	0.42	0.003	
154.5	155.5	0.72	<0.01	<0.01	0.38	0.002	
155.5	156.5	0.77	<0.01	<0.01	0.36	<0.002	
156.5	157.5	0.97	<0.01	0.03	0.47	0.004	
157.5	158.5	0.70	<0.01	<0.01	0.37	0.003	
158.5	159.5	0.58	<0.01	0.01	0.25	0.004	
159.5	162.0	0.16	<0.01	<0.01	0.08	<0.002	
162.0	163.0	0.18	<0.01	0.01	0.12	0.003	
163.0	164.0	0.30	<0.01	0.01	0.19	0.004	
164.0	165.0	0.35	<0.01	0.04	0.18	0.005	
165.0	166.0	0.41	0.01	0.02	0.25	0.002	
166.0	167.0	0.30	<0.01	0.01	0.25	0.003	
167.0	168.0	0.26	<0.01	0.02	0.23	<0.002	
168.0	169.0	0.24	<0.01	0.01	0.19	<0.002	
169.0	170.0	0.29	<0.01	<0.01	0.13	0.002	
170.0	171.0	0.33	<0.01	<0.01	0.17	0.002	
171.0	172.0	0.42	<0.01	<0.01	0.16	0.007	
172.0	173.0	0.35	<0.01	<0.01	0.13	<0.002	
173.0	174.0	0.24	<0.01	0.01	0.11	0.003	
174.0	175.0	0.34	<0.01	0.01	0.14	0.005	
175.0	177.3	0.54	<0.01	0.01	0.27	0.008	
177.3	179.8	0.40	<0.01	0.01	0.30	0.002	
179.8	181.0	0.34	<0.01	0.01	0.28	0.004	
181.0	182.0	0.31	<0.01	0.01	0.25	0.003	
182.0	183.0	0.22	<0.01	<0.01	0.14	0.004	
183.0	184.0	0.16	<0.01	0.01	0.15	<0.002	
184.0	185.0	0.39	<0.01	0.01	0.23	0.005	
185.0	186.0	0.23	<0.01	<0.01	0.18	<0.002	
186.0	187.0	0.25	<0.01	0.01	0.22	0.003	
187.9	189.0	0.44	<0.01	<0.01	0.23	0.002	
189.0	190.0	0.11	<0.01	<0.01	0.06	<0.002	

Description

From	To	Description
263.3	264.9	**FAULT ZONE:** brecciated and broken zone; clasts in top half mainly very soft altered ultramafics with talc-carbonate matrix, and an oolitic texture in places; clasts in lower half strongly silicified light gray sediments ? no sulfides;
264.9	266.3	**SILICIFIED ZONE:** pale gray strongly silicified sediments; sharp 30° CA contact with unit above, diffuse contact with unit below; only rare spec of sulfides; ground conditions competent;
266.3	269.4	**ALTERED ULTRAMAFICS:** strongly altered ultramafics, dark gray, brecciated appearance; dominated by quartz-actinolite-tremolite alteration with abundant talc-carbonate veining, typically with rusty brown coloration (limonite);
269.4	283.8	**FAULTED and ALTERED ULTRAMAFICS:** altered ultramafics as interval above, but cut by several significant brecciated fault zones which carry abundant coarse grained pale green talc; magnetite is common-abundant in several intervals, (eg) 271.6-274.2 and 281.9-283.4m; from 271.6-274.2m: the magnetite is associated with 2-3% sulfides, possibly including some pentlandite; sulfides occur both as irregular aggregates associated with magnetite and in late stage veinlets up to 1 mm. across; core generally very broken in fault zones, separated by moderately competent altered ultramafics; some core losses;
283.8	289.6	**SILICIFIED SEDIMENTS:** similar to 264.9-266.3m; pale gray, massive, strongly silicified; ocassional bands of altered very broken mafic/ultramafic rock; no sulfides observed; upper contact very broken, lower contact approx 30°CA; overall, hard and moderately broken; some core losses;
289.6	292.5	**ALTERED ULTRAMAFICS:** top metre contains abundant magnetite, including 200 mm massive magnetite; lower section consists of pale green-brown medium-fine grained quartz-talc-tremolite alteration; trace disseminated sulfide; core generally very broken;
292.5	300.3	**ALTERED/BRECCIATED BASALTS or MAFIC SEDIMENTS:** generally dark gray, strongly silicified and brecciated mafic rocks, either a basalt or mafic sediment, with soft narrow bands of decomposing ultramafics;sharp 60°CA contact with unit below; unit very broken;
300.3	302.2	**SILICIFIED SEDIMENTS:** dark reddish-brown strongly silicified and altered , fine to medium grained sediments; rare spec of fine sulfide; thin soft talcy seams reduce strength of an otherwise competent rock unit; **END OF HOLE**

Core Recovery

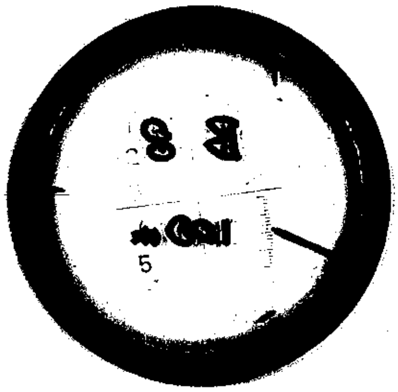
From	To	%
263.3	264.9	100
264.9	266.3	100
266.3	269.4	100
269.4	280.0	100
280.0	281.9	70
281.9	284.0	90
284.0	285.0	80
285.0	289.6	100
289.6	292.5	100
292.5	300.3	100
300.3	302.2	100

Assays

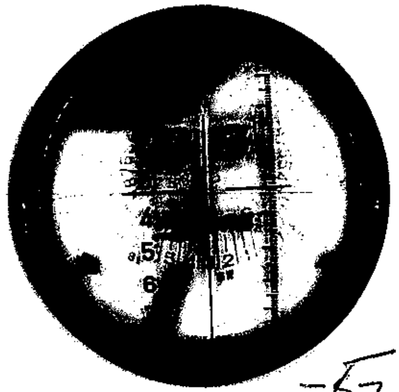
From	To	% Ni	% Cu	% S	% Zn	% As	% Co
190.0	191.0	0.41	<0.01	0.01	0.25	0.004	
191.0	192.0	0.26	<0.01	<0.01	0.17	<0.002	
192.0	193.0	0.25	<0.01	0.01	0.20	<0.002	
193.0	194.0	0.19	<0.01	0.01	0.18	<0.002	
194.0	195.0	0.31	<0.01	0.01	0.25	0.003	
195.0	196.0	0.36	<0.01	0.01	0.30	0.002	
196.0	197.0	0.19	<0.01	<0.01	0.13	<0.002	
197.0	198.0	0.43	<0.01	0.02	0.14	0.004	
198.0	199.0	0.32	<0.01	0.01	0.12	<0.002	
199.0	200.0	0.27	<0.01	<0.01	0.10	<0.002	
200.0	201.0	0.33	<0.01	<0.01	0.16	0.004	
201.0	202.0	0.27	<0.01	0.02	0.13	<0.002	
202.0	203.0	0.27	<0.01	<0.01	0.10	<0.002	
203.0	204.0	0.28	<0.01	0.01	0.13	<0.002	
204.0	205.0	0.18	<0.01	0.01	0.11	0.009	
205.0	206.0	0.37	<0.01	0.01	0.19	0.003	
206.0	207.0	0.28	<0.01	<0.01	0.16	0.003	
207.0	208.0	0.26	<0.01	<0.01	0.12	0.005	
208.0	209.0	0.43	<0.01	0.06	0.17	0.006	
209.0	210.5	0.51	<0.01	<0.01	0.23	0.006	
210.5	211.5	0.32	<0.01	<0.01	0.13	0.004	
211.5	212.5	0.24	<0.01	0.03	0.11	0.003	
212.5	213.5	0.33	<0.01	<0.01	0.17	0.005	
213.5	214.5	0.44	<0.01	0.01	0.17	0.007	
214.5	215.5	0.28	<0.01	0.01	0.12	0.007	
215.5	216.5	0.29	<0.01	<0.01	0.11	0.007	
216.5	217.5	0.31	<0.01	0.01	0.13	0.008	
217.5	218.5	0.27	<0.01	<0.01	0.09	0.007	
218.5	220.0	0.41	<0.01	<0.01	0.13	0.008	
220.0	221.2	0.64	<0.01	<0.01	0.21	0.016	
221.2	222.5	0.72	<0.01	<0.01	0.20	0.010	
222.5	224.0	0.48	<0.01	<0.01	0.10	0.008	
224.0	226.0	0.21	<0.01	<0.01	0.02	0.003	
226.0	227.5	0.25	<0.01	<0.01	0.05	0.002	
227.5	228.5	0.14	<0.01	<0.01	0.03	0.006	
228.5	230.0	0.26	<0.01	<0.01	0.13	0.004	
230.0	231.0	0.33	<0.01	<0.01	0.19	0.003	
231.0	232.0	0.23	<0.01	<0.01	0.08	0.003	
232.0	233.0	0.24	<0.01	<0.01	0.12	0.009	
233.0	234.0	0.13	<0.01	<0.01	0.01	0.003	
234.0	235.0	0.07	<0.01	<0.01	0.02	<0.002	
235.0	236.0	0.08	<0.01	<0.01	0.02	<0.002	
236.0	237.0	0.07	<0.01	<0.01	0.01	<0.002	
237.0	238.0	0.13	<0.01	<0.01	0.03	<0.002	
238.0	239.0	0.15	<0.01	<0.01	0.05	0.002	
239.0	240.0	0.18	<0.01	<0.01	0.05	0.003	
240.0	241.0	0.18	<0.01	<0.01	0.03	0.005	
241.0	242.6	0.22	<0.01	<0.01	0.09	0.002	
242.6	244.0	0.13	<0.01	0.04	0.03	0.003	
244.0	245.0	0.10	<0.01	0.04	0.03	<0.002	
245.0	246.0	0.15	<0.01	0.08	0.03	0.006	
246.0	247.0	0.14	<0.01	0.09	0.03	0.004	
247.0	248.0	0.12	<0.01	0.06	0.01	0.003	
248.0	249.0	0.10	<0.01	0.03	0.01	<0.002	
249.0	250.0	0.15	<0.01	0.09	0.02	0.002	
250.0	251.0	0.20	0.01	0.14	0.03	0.002	
251.0	252.0	0.16	<0.01	0.11	0.02	<0.002	
252.0	253.0	0.19	<0.01	0.13	0.09	0.002	
253.0	254.0	0.18	<0.01	0.12	0.04	0.004	
254.0	255.0	0.18	<0.01	0.11	0.04	0.008	
255.0	256.0	0.16	<0.01	0.09	0.07	0.005	

COMPANY: **Allegiance Mining NL**
PROJECT: **Burbank**
HOLE NUMBER: **B 8**

Description			Core Recovery			Assays							
From	**To**		**From**	**To**	**%**	**From**	**To**	**% Ni**	**% Cu**	**% S**	**% Zn**	**% As**	**% Co**
.		.				256.0	257.0	0.19	<0.01	0.10	0.04	0.019	
						257.0	258.0	0.12	<0.01	0.08	0.04	0.005	
						258.0	259.0	0.17	<0.01	0.12	0.04	0.006	
						259.0	260.0	0.10	<0.01	0.04	0.03	0.003	
						260.0	261.0	0.15	<0.01	0.07	0.02	0.005	
						261.0	262.0	0.20	<0.01	0.12	0.05	0.005	
						262.0	263.5	0.22	<0.01	0.12	0.07	0.004	
						263.5	264.8	0.16	<0.01	<0.01	0.03	0.002	
						264.8	266.3	0.04	<0.01	<0.01	<0.01	<0.002	
						266.3	268.0	0.04	<0.01	<0.01	0.01	0.005	
						268.0	269.0	0.15	<0.01	<0.01	0.02	<0.002	
						269.0	270.0	0.18	<0.01	<0.01	0.03	0.003	
						270.0	271.0	0.15	<0.01	<0.01	0.02	<0.002	
						271.0	272.0	0.02	0.02	1.21	0.01	<0.002	
						272.0	273.0	0.13	<0.01	0.55	0.02	<0.002	
						273.0	274.0	0.20	0.03	2.05	0.02	<0.002	
						274.0	275.0	0.13	0.01	0.78	0.01	<0.002	
						275.0	276.0	0.09	<0.01	0.16	0.02	<0.002	
						276.0	277.0	0.11	<0.01	0.12	0.02	<0.002	
						277.0	278.0	0.11	<0.01	0.09	0.01	<0.002	
						278.0	279.0	0.15	<0.01	0.10	0.03	0.002	
						279.0	280.0	0.11	<0.01	0.05	0.03	<0.002	
						280.0	281.9	0.08	<0.01	0.02	0.03	0.007	
						281.9	282.3	0.28	0.01	0.01	0.28	0.007	
						282.3	283.8	0.08	<0.01	<0.01	0.10	0.002	
						289.6	290.6	0.15	0.01	0.19	0.05	0.003	
						290.6	291.6	0.12	<0.01	0.45	0.02	<0.002	
						291.6	292.6	0.09	<0.01	0.32	0.02	0.002	



-57.
77 brg.



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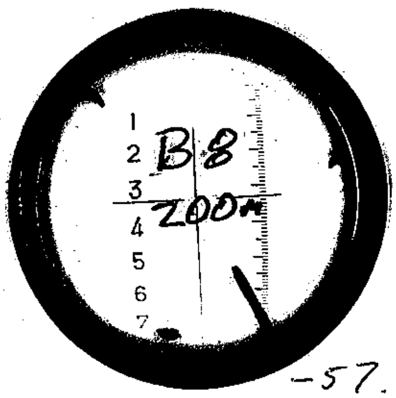
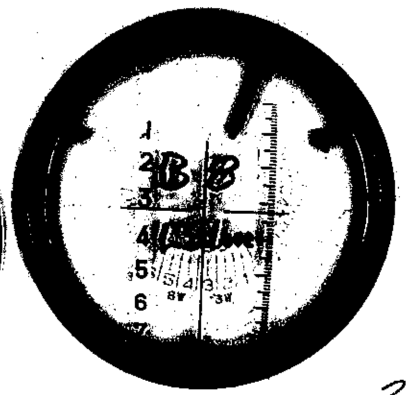
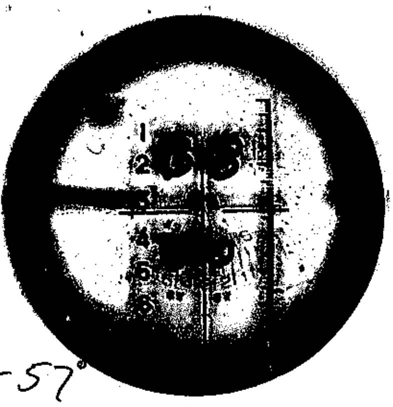
210 (Mag)



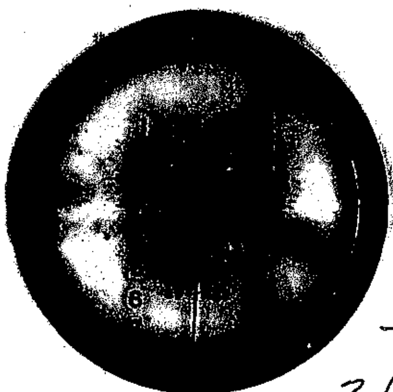
-57.
215 Mag



-58°
213 Mag.



-57°
211 Mag



-57°.
214 Mag

APPENDIX 2

DDH B9 Drill Log

COMPANY: Allegiance Mining NL
PROJECT: Burbank
HOLE NUMBER: B9

Commenced	31 Jan 05
Completed	07 Feb 05
Logged by	L Newnham
Drilled by	Almac

Purpose of Hole

To test leached nickel zone in B8 at greater depth and to the south east

Collar details

Grid	AMG
Easting	351,012E
Northing	5,355,398N
Elevation	2,015
Dip	-67
Bearing	199
Length	363.9

Comments on Completion

.

Hole Size

To	Size
47.8	HQ
363.9	NQ

Major core loss zones

From	To	% recov.
192.3	200.3	see log

Hole Condition on Completion

all steel rods and casing removed; strong water flows stopped with van ruth and wooden plugs and cement in hole just bepow HQ;

Summary of Assay Results

Depth		Recovery	Description	Length	Assays				
From (m)	To (m)	%		m.					
.									

Down Hole Survey Data

Camera Depth	Dip	Mag Brg Actual	Mag Brg Adjusted	Grid Brg AMG
0	-67	187		199
47	-69	187		199
100	-67	189		201
150	-66	190		202
202	-67	190		202
250	-67	205	193	205
300	-67	209	195	207
349	-67	197		209

Notes on Surveys

readings at 250 and 300 metres probably affected by magnetite in serpentinite. Thus tey have been adjusted to relate better to readings above and below.

General Comments

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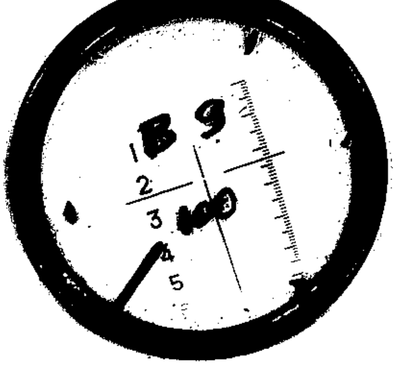
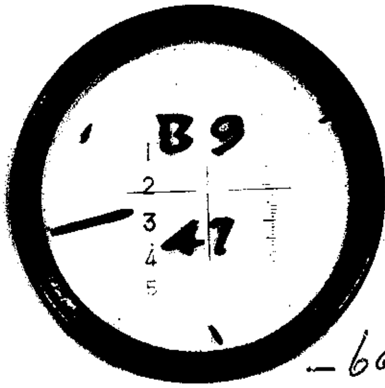
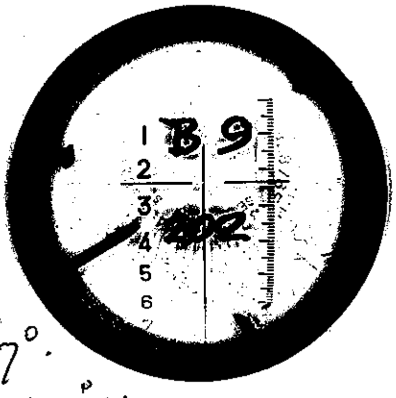
-67°
189°
Mag

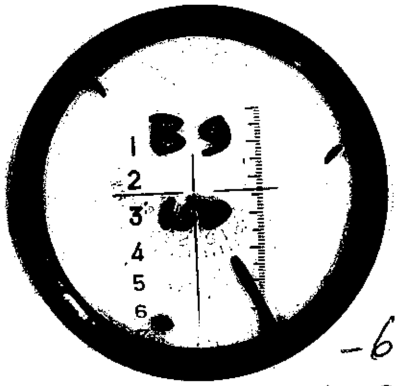




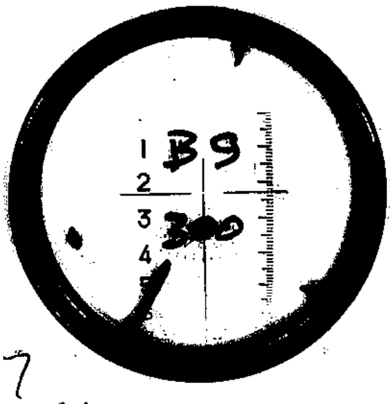
-69.
187°.
Mag.



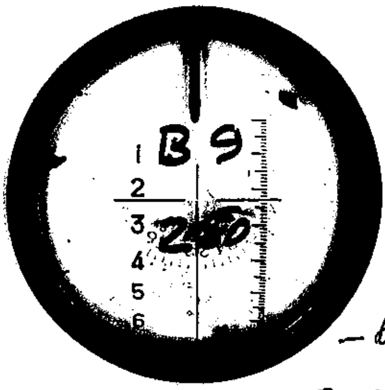
-67°.
190° Mag



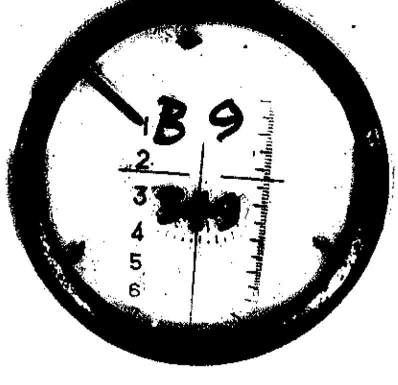
-66°.
190 Mag.



-67
209 Mag.



-67°.
205 Mag



-67°
197° Mag

COMPANY: Allegiance Mining NL
PROJECT: Burbank
HOLE NUMBER: B 9

Description			Core Recovery			Assays							
From	To		From	To	%	From	To	% Ni	% Cu	% S	% Zn	% As	% Co
0.0	10.0	**BROKEN SEDIMENTS:** snapped off reamer; moved rig and recollared;											
0.0	6.0	**NO CORE;** triconed, no core;	0.0	6.0	0								
6.0	144.5	**ALTERED CAMBRIAN SEDIMENTS:** well bedded fine grained cherty sediments;	6.0	24.0	100								
		upper section: fine grained strongly altered cherty	24.0	25.5	80								
		sediments with widespread brecciation;	25.5	142.0	100								
		basal section: interbedded sediments and ultramafics, strongly altered and broken;	142.0	145.0	90								
		6.0-80.0 m: dark gray, purplish-brown fine grained sediments; well bedded and strongly altered to hard cherty units, often with interbeds of cream colored fine grained cherty sediments; mafic volcanic component altered to dark green irregular zones dominated by crystalline actinolite; **Note:** These are Cambrian sediments and very similar in appearance to hangingwall rocks at Avebury; BCA *uniform* 30°; rare specs of sulfides; core moderately brokenby several joint sets but fresh and reasonably competent; grades into: **80.0-88.0 m:** fine grained pale gray-pinkish-cream colored altered and cherty sediments; generally well bedded but extensivly brecciated with gray-green quartz-tremolite-*actinolite* matrix infilling around clasts of cherty sediments; BCA higher than unit above, 40-50°; ocassional grains of sulfide in breccia matrix; *ground conditions improving down hole;* competent with several joint sets; **88.0-111.5 m:** cherty sediments, strongly brecciated and disrupted; higher component of gray-green felted actinolite-tremolite both as breccia matrix and as narrow isolated masses; **note:** these rocks are identical to Viking hangingwall rocks; grades into..... **111.5-125.0 m:** light gray-light brown-creamy and purplish strongly altered cherty rocks, brecciated in places; ground conditions very good; **125.0-125.4 m:** vuggy altered ultramafic; small egg shaped pale green mineral in vugs; lower half limonitic and vuggy; contact 50° CA; **125.4-144.5 m:** strongly brecciated and altered cherty sediments, light reddish-brown with some cream clasts; below 142 m., contains altered ultramafic component and is strongly limonitic; bright green talc common in breccia matrix; ground competent to 143m., then becomes moderately broken; low angled irregular clay filled contact with interval below;											
144.5	162.7	**ALTERED ULTRAMAFICS:** **144.5-147.0 m:** strongly altered and decomposed											
		ultramafic, hematitic-talcy, brecciated and broken;	145.0	146.0	40								
		possibly a sheared or faulted margin on the	146.0	148.0	90								
		ultramafic;	148.0	154.0	100								
		147.0-150.0 m: medium-fine grained, light gray	154.0	157.7	60	145.0	147.0	0.85	<0.01	0.01	0.50	0.011	
		altered ultramafics with flecks and thin seams of white quartz-talc:	157.7	162.9	100	147.0	148.0	0.24	<0.01	0.24	0.10	0.003	
		small pervasive specsand aggregates of magnetite;				148.0	149.0	0.25	<0.01	0.27	0.12	0.003	
		minor very fine grained sulfides with some coarser				149.0	150.2	0.24	<0.01	0.18	0.11	<0.002	
		aggregates associated with magnetite; ground conditions very good; *petrological sample 147.5 m: altered serpentinite, containing calcite and magnetite; very fine grained* ***pentlandite*** *associated with magnetite;*											

Description

From	To	Description
144.5 *continued.......*	162.7	**150.0-156.9 m:** two strongly limonitic and brecciated fault zones separated by altered ultramafics similar to 147-150m; 150.0-151.5m: limonitic brecciated fault zone; 151.5-153.3m: altered ultramafics; 153.3-153.9m: limonitic fault; 153.9-154.7m: altered ultramafics; 154.7-156.9m: limonitic fault; fault zones very soft and broken; altered ultramafics competent, good core; *petrologicalsample 150.4m: altered serpentinite consisting mainly of carbonates (magnesite), opaques (magnetite) and limonite;* **156.9-162.7 m:** medium-dark gray, fine-medium grained silicified and altered ultramafic composed of quartz-finely felted tremolite -actinolite; magnetite common as streaks, veins and aggregates; minor, very fine grained disseminated sulfides, typically associated with magnetite; unit similar to 147-150.0 m;
162.7	215.4	**LEACHED and FAULTED ALTERED ULTRAMAFICS:** alternating gray, medium grained altered ultramafics and faulted leached zones; overall core is strongly limonitic and vuggy in places, suggesting significant water movement;; less altered ultramafics consist of quartz-tremolite-carbonate-?epidote/diopside?; magnetite pervasive as small aggregates and veins; only minor specs of sulfides; faulted zones dominated by clasts of ultramafics and vuggy iron rich matrix; strongly limonitic, possibly due to leaching of magnetite and sulfides; amount of leaching and alteration decreases down hole, particularly below 185m; increasing amount of sulfide associated with magnetite in less altered units towards base of interval (0.5-1%); fault zone 211.2-215.0m. contains large clasts of severely weathered siltstone; core quite competent with good recoveries; several narrow pug zones within faults; *petrological sample 164.8m: altered and serpentinised ultramafic; altered to carbonate-quartz-opaques-magnetite-limonite assemblage;* *petrological sample 183.5m: serpentinised and altered ultramafic; consisting of magnesite-quartz-limonite; minor goethite and limonite;* *petrological sample 185.4m: serpentinised and altered ultramafic; consists mainly of fine grained quartz-opaques-limonite-goethite; goethite and limonite may be after both magnetite and pentlandite;*
215.4	231.6	**ALTERED (SKARNED) ULTRAMAFICS:** similar to unit above but less leached and faulted; dominated by medium grained, gray quartz-carbonate-tremolite alteration, strongly silicified; disseminated and veined magnetite common; pervasive green coloration when fresh; minor specs sulfide associated with magnetite; still vuggy in places but core generally competent with significant joint set 45° CA; grades into serpentinite below;
231.6	238.1	**SERPENTINITE:** dark green-black serpentinite; upper contact gradational with pinkish-brown altered ultramafics; cut by numerous thin white quartz-talc-carbonate veins;

Core Recovery

From	To	%
162.9	166.0	90
166.0	167.5	60
167.5	192.3	100
192.3	193.5	80
193.5	194.9	50
194.9	196.0	90
196.0	199.0	85
199.0	200.3	25
200.3	215.4	100
215.4	231.6	100
231.6	238.1	100

Assays

From	To	% Ni	% Cu	% S	% Zn	% As	% Co
150.2	151.3	2.09	<0.01	0.01	0.78	0.009	
151.3	152.3	0.23	<0.01	0.07	0.14	0.003	
152.3	153.3	0.20	<0.01	0.11	0.07	0.002	
153.3	154.0	1.68	0.01	0.01	0.59	0.017	
154.0	154.7	0.26	<0.01	0.08	0.13	0.002	
154.7	156.8	0.91	<0.01	<0.01	0.29	0.007	
156.8	157.8	0.34	<0.01	0.25	0.07	0.003	
157.8	158.8	0.18	<0.01	0.32	0.02	<0.002	
158.8	159.8	0.19	<0.01	0.59	0.01	<0.002	
159.8	160.8	0.22	<0.01	0.80	0.02	<0.002	
160.8	161.8	0.19	<0.01	0.63	0.03	<0.002	
161.8	162.8	0.21	<0.01	0.24	0.06	0.002	
162.8	164.0	0.70	<0.01	<0.01	0.22	0.003	
164.0	165.0	1.07	<0.01	<0.01	0.27	0.007	
165.0	166.0	0.56	<0.01	0.05	0.17	0.005	
166.0	167.5	0.60	<0.01	0.01	0.22	0.010	
167.5	168.5	0.68	<0.01	<0.01	0.26	0.008	
168.5	169.5	0.48	<0.01	<0.01	0.20	0.004	
169.5	170.5	0.34	<0.01	0.04	0.19	0.006	
170.5	171.5	0.41	<0.01	0.01	0.23	0.004	
171.5	172.5	0.36	<0.01	<0.01	0.18	0.007	
172.5	173.5	0.30	<0.01	0.05	0.13	0.002	
173.5	174.5	0.29	<0.01	0.07	0.11	0.002	
174.5	175.5	0.22	<0.01	0.71	0.04	<0.002	
175.5	176.5	0.42	<0.01	0.10	0.16	<0.002	
176.5	177.5	0.31	<0.01	<0.01	0.12	0.003	
177.5	178.5	0.80	0.01	0.01	0.29	0.008	
178.5	179.5	0.44	<0.01	0.02	0.16	0.004	
179.5	180.5	0.31	<0.01	0.03	0.13	0.002	
180.5	181.5	0.54	0.01	<0.01	0.19	0.007	
181.5	182.5	0.69	0.01	<0.01	0.22	0.004	
182.5	183.5	0.90	<0.01	<0.01	0.25	0.003	
183.5	184.5	1.53	<0.01	0.01	0.33	0.004	
184.5	185.5	0.60	0.01	<0.01	0.21	0.007	
185.5	186.5	0.44	0.01	<0.01	0.16	0.005	
186.5	187.5	0.35	0.01	<0.01	0.10	0.005	
187.5	188.5	0.53	0.01	<0.01	0.15	0.006	
188.5	189.5	0.38	<0.01	<0.01	0.15	0.006	
189.5	190.5	0.27	<0.01	0.01	0.08	0.004	
190.5	191.5	0.30	<0.01	<0.01	0.09	0.003	
191.5	192.5	0.37	<0.01	0.01	0.09	0.003	
192.5	193.5	0.41	0.01	<0.01	0.14	0.003	
193.5	194.9	0.58	0.01	<0.01	0.22	0.004	
194.9	196.0	0.53	<0.01	<0.01	0.14	0.003	
196.0	197.0	0.57	<0.01	<0.01	0.16	0.004	
197.0	198.0	0.33	<0.01	<0.01	0.08	0.004	
198.0	199.0	0.35	<0.01	<0.01	0.14	0.005	
199.0	200.4	0.56	<0.01	<0.01	0.14	0.003	
200.5	202.0	0.14	<0.01	0.03	0.04	0.003	
202.0	203.0	0.45	<0.01	<0.01	0.11	0.004	
203.0	204.0	0.35	<0.01	<0.01	0.08	0.003	
204.0	205.0	0.12	<0.01	0.03	0.02	<0.002	
205.0	206.0	0.20	<0.01	0.04	0.02	0.002	
206.0	207.0	0.46	<0.01	0.38	0.01	0.012	
207.0	208.0	0.43	<0.01	0.01	0.06	0.004	
208.0	209.0	0.47	<0.01	<0.01	0.07	0.004	

Description			Core Recovery		
From	To		From	To	%
231.6 continued......	238.1	aggregates and veins of magnetite common; only rare specs of sulfides; ground conditions good; grades into altered ultramafics below;			
238.1	351.7	**ALTERED ULTRAMAFICS:** **238.1-327.0m:** *not too dissimilar to interval above;* dark green-black ultramafics pervasively altered to light brown-off-white quartz-tremolite rock; variations in intensity of alteration results in overall mottled appearance; magnetite is common to abundant throughout, either as aggregates and grains associated with the alteration process, or infilling late stage veins associated with later hydrothermal alteration; this late stage magnetite has lustrous appearance similar to Avebury magnetite; trace-minor sulfides throughout, generally associated with magnetite, either as isolated grains small aggregates, or in late stage veins with magnetite; towards base of interval, magnetite becomes abundant as irregular veins and masses and euhedral (cubic) grains up to 2 mm. across; ground conditions are generally excellent, with 100% core recovery; since drilling, some sections of core have developed an orange limonitic staining, possibly due to oxidation of magnetite or sulfides, similar effect to ground water coloration at Avebury; grades into interval below; **327.0-329.8m:** massive to semi-massive magnetite replacing serpentinite to 329m., rare grains of sulfides; ground moderately competent to 329m; below 329m., becomes severely weathered /altered , present mainly as brown-green clays; **329.8-351.7 m:** strongly altered ultramafics with significant sulfides; mixed pale green-gray medium grained and dark brown serpentinite, almost totally replaced by quartz-carbonate-tremolite-? epidote. pervasive pale green coloration but no zaratite noted; 1-2% sulfides disseminated throughout-possibly pentlandite or pyrrhotite; ocassionally abundant (eg) 337-338m (probably pyrrhotite); disseminated and veined magnetite common; core generally competent but several strongly sheared units of soft friable ultramafic; contact with unit below broken and marked by quartz-carbonate vein 25°CA;	238.1	351.7	100
351.7	363.9	**ALTERED SEDIMENTS and LAVAS:** off-white-creamy fine grained brecciated and silicified sediments, healed with dark gray mafic matrix of felted actinolite-tremolite, interbedded with fine-medium grained dark gray altered basalts (?), cut by numerous fractures filled with tremolite-actinolite; trace-minor patches and disseminations of sulfides, probably pyrrhotite; ground conditions excellent and moderately hard;	351.7	363.9	100
		END OF HOLE			

Assays							
From	To	% Ni	% Cu	% S	% Zn	% As	% Co
209.0	210.0	0.40	<0.01	<0.01	0.06	0.003	
210.0	211.0	0.69	<0.01	<0.01	0.13	0.004	
211.0	212.0	0.38	<0.01	<0.01	0.08	0.006	
212.0	213.0	0.29	<0.01	<0.01	0.07	<0.002	
213.0	214.0	0.42	<0.01	<0.01	0.18	0.004	
214.0	215.0	0.65	<0.01	<0.01	0.15	0.005	
215.0	216.0	0.38	<0.01	<0.01	0.06	0.003	
216.0	217.0	0.27	<0.01	<0.01	0.03	0.003	
217.0	218.0	0.20	<0.01	<0.01	0.01	0.003	
218.0	219.0	0.17	<0.01	0.12	0.01	<0.002	
219.0	220.0	0.15	<0.01	0.06	0.01	0.016	
220.0	221.0	0.12	<0.01	0.05	0.02	0.004	
221.0	222.0	0.22	<0.01	0.01	0.02	0.004	
222.0	223.0	0.32	<0.01	0.05	0.03	0.006	
223.0	224.0	0.11	<0.01	0.01	0.01	<0.002	
224.0	225.0	0.20	<0.01	<0.01	0.02	0.003	
225.0	226.0	0.24	<0.01	<0.01	0.02	0.003	
226.0	227.0	0.12	<0.01	<0.01	0.01	<0.002	
227.0	228.0	0.24	<0.01	<0.01	0.03	0.006	
228.0	229.0	0.07	<0.01	<0.01	0.01	0.002	
229.0	230.0	0.09	<0.01	0.13	<0.01	<0.002	
230.0	231.0	0.19	<0.01	0.06	0.02	0.002	
231.0	232.0	0.29	<0.01	<0.01	0.04	0.004	
238.0	239.0	0.18	<0.01	0.08	0.01	0.020	
239.0	240.0	0.18	<0.01	0.05	0.02	0.005	
240.0	241.0	0.15	<0.01	0.01	0.03	0.003	
241.0	242.0	0.16	<0.01	0.04	0.04	0.003	
242.0	243.0	0.18	<0.01	0.04	0.05	0.004	
243.0	244.0	0.22	<0.01	<0.01	0.04	0.002	
244.0	245.0	0.21	<0.01	0.03	0.04	0.003	
245.0	246.0	0.17	<0.01	0.12	0.01	0.004	
246.0	247.0	0.17	<0.01	0.14	0.01	0.006	
247.0	248.0	0.16	<0.01	0.13	<0.01	0.006	
248.0	249.0	0.11	<0.01	0.16	<0.01	<0.002	
249.0	250.0	0.16	<0.01	0.18	0.01	0.002	
250.0	251.0	0.11	<0.01	0.21	<0.01	0.002	
251.0	252.0	0.14	<0.01	0.29	0.01	0.002	
252.0	253.0	0.13	<0.01	0.31	<0.01	0.003	
253.0	254.0	0.23	<0.01	0.57	<0.01	0.004	
254.0	255.0	0.15	0.01	0.36	0.01	0.003	
255.0	256.0	0.15	<0.01	0.35	0.01	0.003	
256.0	257.0	0.13	<0.01	0.02	0.02	0.004	
257.0	258.0	0.12	<0.01	0.20	<0.01	0.004	
258.0	259.0	0.12	<0.01	0.27	<0.01	0.003	
259.0	260.0	0.10	<0.01	0.28	<0.01	0.002	
260.0	261.0	0.12	<0.01	0.08	0.02	0.003	
261.0	262.0	0.14	<0.01	0.04	0.03	0.003	
262.0	263.0	0.11	<0.01	0.02	0.02	0.004	
263.0	264.0	0.12	<0.01	0.02	0.02	0.004	
264.0	265.0	0.14	<0.01	0.02	0.02	0.004	
265.0	266.0	0.16	<0.01	0.03	0.02	0.004	
266.0	267.0	0.11	<0.01	0.35	<0.01	<0.002	
267.0	268.0	0.18	<0.01	0.84	<0.01	<0.002	
268.0	269.0	0.12	<0.01	0.51	<0.01	<0.002	
269.0	270.0	0.12	<0.01	0.28	<0.01	<0.002	
270.0	271.0	0.10	<0.01	0.31	<0.01	<0.002	
271.0	272.0	0.09	<0.01	0.27	<0.01	<0.002	
272.0	273.0	0.11	<0.01	0.38	<0.01	<0.002	
273.0	274.0	0.08	<0.01	0.12	<0.01	<0.002	
274.0	275.0	0.10	<0.01	0.16	0.01	<0.002	

COMPANY: Allegiance Mining NL
PROJECT: Burbank
HOLE NUMBER: B 9

Description			Core Recovery			Assays							
From	To		From	To	%	From	To	% Ni	% Cu	% S	% Zn	% As	% Co
						275.0	276.0	0.07	<0.01	0.20	<0.01	<0.002	
						276.0	277.0	0.10	<0.01	0.39	<0.01	<0.002	
						277.0	278.0	0.23	<0.01	0.27	0.03	0.003	
						278.0	279.0	0.47	<0.01	0.08	0.11	0.004	
						279.0	280.0	0.25	<0.01	0.02	0.05	0.003	
						280.0	281.0	0.40	<0.01	<0.01	0.07	0.005	
						281.0	282.0	0.39	<0.01	0.01	0.08	0.004	
						282.0	283.0	0.13	<0.01	0.36	0.02	0.002	
						283.0	284.0	0.12	<0.01	0.03	0.02	0.002	
						284.0	285.0	0.18	<0.01	0.02	0.05	0.005	
						285.0	286.0	0.14	<0.01	0.05	0.02	0.003	
						286.0	287.0	0.13	<0.01	0.11	0.02	0.002	
						287.0	288.0	0.14	<0.01	0.09	<0.01	0.002	
						288.0	289.0	0.11	<0.01	0.09	<0.01	0.002	
						289.0	290.0	0.09	<0.01	0.09	<0.01	0.002	
						290.0	291.0	0.14	<0.01	0.05	0.01	0.002	
						291.0	292.0	0.13	<0.01	0.05	0.01	<0.002	
						292.0	293.0	0.13	<0.01	0.06	0.03	<0.002	
						293.0	294.0	0.15	<0.01	0.18	0.22	0.003	
						294.0	295.0	0.14	<0.01	0.04	0.03	0.003	
						295.0	296.0	0.12	<0.01	0.07	0.01	<0.002	
						296.0	297.0	0.19	<0.01	0.11	0.01	0.007	
						297.0	298.0	0.13	<0.01	0.07	<0.01	0.006	
						298.0	299.0	0.08	<0.01	0.02	<0.01	0.005	
						299.0	300.0	0.11	<0.01	0.04	0.02	0.005	
						300.0	301.0	0.10	<0.01	0.04	0.02	0.005	
						301.0	302.0	0.11	<0.01	0.04	0.01	0.005	
						302.0	303.0	0.14	<0.01	0.04	0.01	0.005	
						303.0	304.0	0.19	0.02	0.28	0.02	0.013	
						304.0	305.0	0.13	0.01	0.09	0.02	0.007	
						305.0	306.0	0.17	<0.01	0.08	0.05	0.006	
						306.0	307.0	0.22	<0.01	0.06	0.03	0.007	
						307.0	308.0	0.19	<0.01	0.17	0.02	0.009	
						308.0	309.0	0.09	<0.01	0.06	0.01	0.007	
						309.0	310.0	0.11	<0.01	0.05	0.02	0.007	
						310.0	311.0	0.19	<0.01	0.09	0.02	0.009	
						311.0	312.0	0.14	<0.01	0.03	0.01	0.010	
						312.0	313.0	0.33	<0.01	0.79	0.06	0.053	
						313.0	314.0	0.10	<0.01	0.04	0.01	0.026	
						314.0	315.0	0.17	<0.01	0.03	0.01	0.006	
						315.0	316.0	0.21	<0.01	0.03	0.01	0.006	
						316.0	317.0	0.17	<0.01	0.02	0.02	0.006	
						317.0	318.0	0.13	<0.01	0.07	0.01	0.006	
						318.0	319.0	0.13	<0.01	0.08	0.01	0.007	
						319.0	320.0	0.19	<0.01	0.04	0.02	0.007	
						320.0	321.0	0.10	0.02	0.05	0.01	0.005	
						321.0	322.0	0.16	<0.01	0.04	0.02	0.006	
						322.0	323.0	0.13	<0.01	0.03	0.01	0.007	
						323.0	324.0	0.10	<0.01	0.02	0.01	0.007	
						324.0	325.0	0.25	<0.01	0.02	0.03	0.008	
						325.0	326.0	0.09	<0.01	0.36	0.02	0.016	
						326.0	327.0	0.10	<0.01	0.05	0.04	0.010	
						327.0	328.0	0.16	<0.01	0.05	0.15	0.008	
						328.0	329.0	0.20	<0.01	0.01	0.40	0.009	
						329.0	329.8	0.33	0.10	0.39	0.13	0.006	
						329.8	331.0	0.20	<0.01	0.37	0.04	0.007	
						331.0	332.0	0.10	<0.01	0.10	0.02	0.006	
						332.0	333.0	0.18	<0.01	0.22	0.01	0.009	
						333.0	334.0	0.24	<0.01	0.42	0.01	0.006	
						334.0	335.0	0.23	<0.01	0.26	0.01	0.005	
						335.0	336.0	0.18	<0.01	0.22	<0.01	0.008	

COMPANY: Allegiance Mining NL
PROJECT: Burbank
HOLE NUMBER: B 9

Description			Core Recovery			Assays								
From	To		From	To	%	From	To	% Ni	% Cu	% S	% Zn	% As	% Co
						336.0	337.0	0.20	<0.01	0.29	0.01	0.006	
						337.0	338.0	0.24	0.02	1.68	0.01	0.004	
						338.0	339.0	0.15	<0.01	0.58	0.01	0.004	
						339.0	340.0	0.14	<0.01	1.08	0.02	0.011	
						340.0	341.0	0.15	<0.01	0.06	0.02	0.004	
						341.0	342.0	0.12	<0.01	0.12	0.01	0.004	
						342.0	343.0	0.14	<0.01	0.13	0.01	0.004	
						343.0	344.0	0.15	<0.01	0.20	0.02	0.004	
						344.0	345.0	0.27	<0.01	0.31	0.02	0.005	
						345.0	346.0	0.25	0.02	1.45	0.02	0.002	
						346.0	347.0	0.14	<0.01	0.57	0.01	<0.002	
						347.0	348.0	0.13	<0.01	0.41	0.01	0.002	
						348.0	349.0	0.09	<0.01	0.10	0.01	<0.002	
						349.0	350.0	0.07	<0.01	0.06	0.01	0.005	
						350.0	351.7	0.07	<0.01	0.32	0.01	0.009	
						351.7	353.0	0.04	0.01	0.90	<0.01	0.003	
						353.0	354.0	0.02	<0.01	0.07	<0.01	0.004	
						354.0	355.0	0.02	<0.01	0.14	<0.01	<0.002	
						355.0	356.0	0.01	<0.01	0.03	<0.01	<0.002	
						356.0	357.0	0.02	<0.01	0.41	<0.01	<0.002	
						357.0	358.0	0.01	<0.01	0.20	<0.01	<0.002	
						358.0	359.0	0.01	<0.01	0.09	<0.01	<0.002	
						359.0	360.0	0.01	<0.01	0.58	<0.01	<0.002	
						360.0	361.0	0.01	<0.01	0.07	<0.01	<0.002	
						361.0	362.0	0.02	<0.01	0.18	<0.01	<0.002	
						362.0	363.0	0.02	<0.01	0.12	<0.01	<0.002	
						363.0	363.9	0.03	<0.01	0.47	<0.01	<0.002	

APPENDIX 3

DDH A070/A070A Drill Log

Allegiance Metals - Drill Log

BHID A070

Collar

Project	BHID	Easting	Northing	RL	Depth	Date	Geologist
East_Avebu	A070	355718.9	5357614.33	2181.6	166.7	23/2/05	DAE

Surveys

Project	BHID	Depth	Azm	Dip
East_Avebu	A070	0	181.3	-52.0
East_Avebu	A070	50		-50.0
East_Avebu	A070	100		-49.7
East_Avebu	A070	150		-48.9
Raw survey data (uncorrected) :				
East_Avebu	A070	0	181.3	-52.0
East_Avebu	A070	50	172.0	-50.0
East_Avebu	A070	100	169.0	-49.7
East_Avebu	A070	150	175.0	-48.9

Hole Sizes

From	Size
0	TR
12	HQ
32.3	NQ

Drilled By

Almac Drilling

Analyses By

BRL

Note : hole abandoned at 166.7m on 23/02/05 (D/S).

Comments

A070 was designed to test East Avebury prospect and locate extensions to mineralisation intersected in drill hole A032.
First attempt at drilling hole, with NQ commenced from 32.3m, was abandoned in caving ground, at 166.7m. Hole was re-drilled by reaming HW casing, then extending HQ core from 85.0m (lipped off hole A070). New hole A070A was drilled on from 89.35m.

Significant Intersections

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
East_Ave	A070	0.00	12.00	Ccc	LOSS				NR			Interval drilled with tricone bit; weathered surficial zone at hole collar.
East_Ave	A070	12.00	15.90	Ccc	GWAC		OB	0.00	GD			Interval drilled with HQ core; fragmented core recovered; highly weathered zone.
East_Ave	A070	15.90	20.35	Ccc	GWAC	Ph	P4	0.00	BR	BD	60	Silt-grade volcaniclastic wacke; minor green, altered sandy lenses.
East_Ave	A070	20.35	21.50	Ccc	GWAC	Ph	PO	0.00	BR			As for previous interval; more clay altered and fragmented core.
East_Ave	A070	21.50	23.55	Ccc	GWAC	Ph	P3	0.10	GD	BD		Silt to sand-grade volcaniclastic wacke.
East_Ave	A070	23.55	23.90	Cba	VBLF	Ch	G4	1.00	SI			Minor lens of basaltic volcaniclastics or hyaloclastite; minor py. aggregates.
East_Ave	A070	23.90	32.30	Ccc	GWAC	Ph	P4	0.00	BR	BD	55	Silt to fine sand-grade volcaniclastics; minor cherty laminae; end of HQ core.
East_Ave	A070	32.30	32.70	Ccc	LOSS		P3	0.00				Very broken core, with overdrilled fragments, at start of NQ coring interval.
East_Ave	A070	32.70	36.50	Ccc	GWAC	Ph	P4	0.00	GL			Fine silt-grade volcaniclastic wacke; rare cherty laminae; indistinct bedding.
East_Ave	A070	36.50	39.60	Ccc	VBLM	Ch	G5	0.00	GL			Poorly bedded throughout; matrix-rich sand-grade volcaniclastics.
East_Ave	A070	39.60	43.55	Ccc	GWAC	Ph	P5	0.00	GL	BD	60	Finer grained; minor cherty laminae and chloritised volcaniclastic lenses.
East_Ave	A070	43.55	45.40	Ccc	GWAC	Ph	P	0.00	GL			Strongly intermixed unit; subordinate basaltic hyaloclastite; minor chert.
East_Ave	A070	45.40	50.10	Cba	VBVC	Ac	B2	0.00	SP	BD	60	Intermixed chloritised/actinolitised volcaniclastics; possibly hyaloclastite.
East_Ave	A070	50.10	51.80	Ccc	GWAC	Ph	BP	0.00	BR			Strongly intermixed silt-grade volcaniclastic wacke and ?hyaloclastite.
East_Ave	A070	51.80	52.00	Ccc	LOSS	Ph	P3	0.00				Very broken; silt-grade volcaniclastic wacke.
East_Ave	A070	52.00	55.20	Ccc	GWAC	Ph	P4	0.00	BR	BD	53	Dominantly massive, silt-grade volcaniclastic wacke.
East_Ave	A070	55.20	55.40	Ccc	LOSS			0.00				Fragments of volcaniclastic wacke.
East_Ave	A070	55.40	58.80	Ccc	VBLF	Ch	G2	0.00	GL	BD	50	Very fine-grained, shaley volcaniclastics; devitrified lenses with fluidal textures.
East_Ave	A070	58.80	61.15	Ccc	SSLT	Ph	B2	0.10	BR	BD	70	Shaley to fine silt-grade; minor volcaniclastic wacke laminae.
East_Ave	A070	61.15	63.75	Ccc	VBLM	Ch	G3	0.05	GC	BD	60	Devitrified volcaniclastics; brecciated lenses; bedding poorly preserved throughout.
East_Ave	A070	63.75	74.20	Ccc	SSLT	Ph	P4	0.10	VN			Fine silt-grade volcaniclastics, grading down hole to volcaniclastic wacke.
East_Ave	A070	74.20	76.60	Ccc	VBVF	Ch	G3	0.10	SI	BD	60	Devitrified shale to silt-grade volcaniclastics; locally fluidal textured.
East_Ave	A070	76.60	78.05	Ccc	VBLF	Ph	B3	0.50	GD	BD	55	Intermixed volcaniclastic shale and wacke; trace py. as fine aggregates.
East_Ave	A070	78.05	84.35	Cba	VBLB	Ch	G4	0.00	GC	BD	40	Common devitrified fragments and fluidal textured laminae and lenses.
East_Ave	A070	84.35	88.55	Cba	VBLB	Ph	B4	0.00	BD	BD	57	Devitrified silica overgrowths on reworked volcanic-derived clasts.
East_Ave	A070	88.55	90.15	Cba	VBLB	Ch	G4	0.00	GC			Abundant fragmented volcanic-derived clasts and laminae.
East_Ave	A070	90.15	95.90	Cba	VBLM	Ph	B4	0.00	SP	BD	60	Very intermixed; shaley and laminated in places; locally volcaniclastic breccia.
East_Ave	A070	95.90	100.45	Cba	VBLB	Ch	G4	0.50	SI			Minor fragmented volcaniclastic mudstone intermixed; py. as small blebs.

Assay Sheet																	
Project	**BHID**	**From m**	**To m**	**Spl_id**	**Ni %**	**Cu ppm**	**Pb ppm**	**Zn ppm**	**As ppm**	**Co ppm**	**S %**	**MgO %**	**FeO %**	**Au ppm**	**Strat**	**Rock**
East_Aveb	A070	127.90	128.90		0.01				50	-20	0.2	5.0	9.0		Ccc	SHAL
East_Aveb	A070	128.90	129.90		0.01				50	-20	0.8	4.8	7.7		Ccc	SHAL
East_Aveb	A070	129.90	130.90		0.01				50	-20	1.5	3.0	6.7		Ccc	SHAL
East_Aveb	A070	130.90	131.90		0.01				50	-20	1.4	3.6	7.1		Ccc	SHAL
East_Aveb	A070	131.90	132.90		0.01				-50	-20	0.6	5.0	7.6		Ccc	SHAL
East_Aveb	A070	132.90	133.90		0.01				-50	-20	0.7	4.3	6.9		Ccc	SHAL
East_Aveb	A070	133.90	134.90		0.01				50	-20	1.5	3.9	7.2		Ccc	SHAL
East_Aveb	A070	134.90	135.90		0.01				-50	-20	1.8	3.5	7.7		Ccc	SHAL
East_Aveb	A070	135.90	136.90		0.01				-50	-20	1.3	3.8	7.8		Ccc	SHAL
East_Aveb	A070	136.90	137.90		0.02				50	20	1.7	4.2	9.4		Ccc	SHAL
East_Aveb	A070	137.90	138.90		0.01				50	-20	1.4	3.5	7.6		Ccc	SHAL
East_Aveb	A070	138.90	139.90		0.01				-50	-20	0.7	3.4	6.9		Ccc	SHAL
East_Aveb	A070	139.90	140.90		0.01				-50	-20	1.2	2.9	6.8		Ccc	SHAL
East_Aveb	A070	140.90	141.90		0.01				-50	-20	1.4	2.8	6.2		Ccc	SHAL
East_Aveb	A070	141.90	143.05		0.01				50	-20	0.7	3.5	6.8		Ccc	SHAL
East_Aveb	A070	143.05	144.05		0.01				100	-20	-0.1	6.3	7.2		Ccc	SHAL
East_Aveb	A070	151.40	152.40		0.01				150	40	-0.1	6.2	8.4		Cba	VBVF
East_Aveb	A070	152.40	153.40		0.01				100	-20	-0.1	4.8	5.3		Cba	VBVF
East_Aveb	A070	153.40	153.70		0.02				150	20	-0.1	6.8	7.1		Cba	VBVF
East_Aveb	A070	153.70	154.25		0.16				2200	-20	-0.1	22.8	2.6		Csu	SKRN
East_Aveb	A070	154.25	155.20		0.24				900	60	0.5	33.0	8.0		Csu	SERP
East_Aveb	A070	155.20	156.20		0.26				900	40	0.1	34.2	6.7		Csu	SERP
East_Aveb	A070	156.20	157.30		0.19				950	40	0.6	32.1	7.3		Csu	SERP
East_Aveb	A070	157.30	158.40		0.17				1150	120	0.1	21.0	6.6		Csu	SERP
East_Aveb	A070	158.40	160.00		0.06				150	60	-0.1	15.8	12.0		Csu	SERP
East_Aveb	A070	160.00	161.50		0.19				1000	20	-0.1	34.8	6.9		Csu	SERP
East_Aveb	A070	161.50	163.00		0.19				1100	40	-0.1	33.0	7.3		Csu	SKRN
East_Aveb	A070	163.00	164.50		0.19				600	20	0.3	29.7	6.4		Csu	LOSS

Geotech Sheet

Project	BHID	From	To	Recovery	Lithology	Weathering	Alteration	Strength	length>10cm	RQD%	No. defects	Defect sets	Defect type	bca struct 1	bca struct 2	Roughness	Fill	Comments
East_Ave	A070	0.00	12.00	0.00	LOSS				0.0									No core recovered; drilled with tricone.
East_Ave	A070	12.00	15.90	0.41	GWAC	VS		VW	0.0	0								Fragmented core; abundant Fe oxide/clay.
East_Ave	A070	15.90	20.35	2.90	GWAC	M	Ph	MS	1.7	57	18	2.5	JT			UR	CY	Broken core throughout; Fe oxide/clay jts.
East_Ave	A070	20.35	21.50	0.35	GWAC	S	Ph	W	0.0	0			JT				CY	Fragmented core; abundant Fe oxide/clay.
East_Ave	A070	21.50	23.55	1.66	GWAC	W	Ph	MS	0.8	48	20	2	JT			PS	CH	Jointed, broken core; locally very broken.
East_Ave	A070	23.55	23.90	0.35	VBLF		Ch	W	0.3	86	1	0	JT			UR	CY	Hard, unbroken core.
East_Ave	A070	23.90	32.30	7.54	GWAC		Ph	MS	4.2	56	43	1.5	JT			PS	CY	Minor broken zones with core loss.
East_Ave	A070	32.30	32.70	0.06	LOSS		Ph	W	0.0	0		4	JT			PR	CY	Common Fe oxide/clay on fractures.
East_Ave	A070	32.70	36.50	3.42	GWAC		Ph	MS	1.6	46	28	2.5	JT			US	CY	Regular breaks; some core loss zones.
East_Ave	A070	36.50	39.60	2.78	VBLM		Ch	S	1.9	67	20	1.5	JT			US	CH	More solid core; few natural breaks.
East_Ave	A070	39.60	43.55	3.88	GWAC		Ph	S	2.9	76	22	1	JT	32		PS	CH	Generally solid core; broken at 42.4-42.6m.
East_Ave	A070	43.55	45.40	1.69	GWAC		Ch	VS	1.5	87	10	1.5	JT			PR	CH	Solid core; regular natural breaks.
East_Ave	A070	45.40	50.10	4.61	VBVC		Ac	VS	3.9	85	16	1	JT	50		UR	CH	Generally solid core.
East_Ave	A070	50.10	51.80	1.44	GWAC		Ph	S	0.9	62	9	1.5	JT			US	CH	Solid core.
East_Ave	A070	51.80	52.00	0.12	LOSS		Ph	S	0.0	0	6	2	JT			UR	CH	Core loss zone; very broken.
East_Ave	A070	52.00	55.20	2.75	GWAC		Ph	MS	1.2	42	24	2.5	JT			UR	CH	Frequent natural breaks in core.
East_Ave	A070	55.20	55.40	0.06	LOSS			MS	0.0	0								Core loss zone; very broken.
East_Ave	A070	55.40	58.80	3.38	VBLF		Ch	S	1.6	48	22	1.5	JT			US	CH	Core broken in patches.
East_Ave	A070	58.80	61.15	2.31	SSLT		Ph	S	1.6	67	14	1	JT			PS	CH	Generally solid core; irregular breaks.
East_Ave	A070	61.15	63.75	2.38	VBLM		Ch	VS	1.8	75	13	1.5	JT			SR	CH	Solid core.
East_Ave	A070	63.75	74.20	10.0	SSLT		Ph	ES	6.0	60	65	1.5	JT			PS	X	Generally solid core; regular natural breaks.
East_Ave	A070	74.20	76.60	2.40	VBVF		Ch	ES	2.2	92	9	1	JT			UR	CH	Solid core.
East_Ave	A070	76.60	78.05	1.40	VBLF		Ph	ES	1.1	76	6	1	JT			US	CH	
East_Ave	A070	78.05	84.35	6.17	VBLB		Ch	ES	5.1	82	22	1.5	JT			UR	CH	Solid core; localised broken patches.
East_Ave	A070	84.35	88.55	4.04	VBLB		Ph	VS	2.7	66	24	2.5	JT			PS	CH	
East_Ave	A070	88.55	90.15	1.58	VBLB		Ch	ES	1.4	89	3	1	JT			UR	CH	Few natural breaks.
East_Ave	A070	90.15	95.90	5.34	VBLM		Ph	VS	3.7	69	28	1.5	JT	45		PS	CH	Locally broken core.
East_Ave	A070	95.90	100.45	4.23	VBLB		Ch	VS	3.1	73	18	1.5	JT	50		UR	CH	Core broken from 96.45-97.0m.

Stratigraphy

Q	Quaternary alluvial, colluvial and dune deposits
Df	Devonian fine grained qtz sst and sslt (Florence Quartzite). Fossiliferous
Dsk	Devonian Skarn
Dg	Devonian Granite
Sc	Silurian sandstone and siltstone
Scc	Silurian pebble-cobble conglomerate.
Su	Silurian sediments
Og	Limestone (Gordon Limestone)
Oc	Pebble conglomerate, PC derivation (Owen Gp).
Os	Siliceous sst and conglomerate.
Ccc	Contiguous Creek Fm
Ccch	Contiguous Creek Fm chert
Ccarb	Contiguous Creek Fm carbonate and calcareous sediments.
Cba	Cambrian Basalt (McIvor Hill Complex)
Cbg	Cambrian gabbro
Cba	Cambrian basaltic volcaniclastics
Csu	Cambrian ultramafic
Cud	Cambrian ultramafic dunite
Cup	Cambrian ultramafic orthopyroxenite

Rock Types

Volcanic Rocktypes have a four letter code. The first letter is the style (intrusive, volcaniclastic etc)
The second is the chemical composition (basaltic, rhyolitic), the third is the major component (qtz phyric, lith
the last is the texture (fine grained, breccia etc). For example IUPC is an intrusive, ultramfic, pyroxene phyri

Style codes

I	Intrusive
L	Lava
V	Volcaniclastic
E	Epiclastic

Composition codes

U	Ultramafic
B	Basaltic (mafic)
A	Andesitic
D	Dacitic
R	Rhyolitic

Composition Codes

Q	Qtz phyric (qtz xtal rich)
F	feldspar phyric
H	Hornblende phyric
P	Pyroxene phyric
L	Lithic rich
X	crystal rich
V	Vitric

Texture codes

F	fine
M	medium
C	coarse

B	breccia

Other Rock codes

CHRT	Chert
CARB	Carbonate
GWAC	Greywacke
SSLT	Siltstone
SAND	Sandstone
SERP	Serpentinite
CONG	Conglomerate
GRAN	Granite
GRAD	Granodiorite
SKRN	Skarn
LOSS	No Core recovery
CLAY	Clay
MMAG	Massive magnetite
SKSP	Serpentinite Skarn
SHAL	Shale
HEVC	Heamatitic Volcaniclastic
PHLG	Phlogopite schist
GABB	Gabbro

Colour

Colours can be classified by shade using a 1 to 5 scale. ie. B1 = pale brown, B5=dark Brown

N	Black
B	Brown
P	Purple
G	Green
C	Cream
W	White
Y	Yellow
T	Tan
R	Red
O	Orange

Alteration

Ac	Actinolite
Ch	Chlorite
Se	Sericite
Cb	Carbonate
Di	Diopside
Ax	Axinite
Sc	Serpentine-chrysotilic
Sp	Serpentine
So	Schorl
Ph	Phlogopite
Sx	Sulphidic
Py	Pyritic
Po	Pyrrhotitic
Ht	Haematitic
Mg	Magnetite
To	Tourmaline
Si	Silica

Qz Quartz

Geotech

Intact Rock Strength	**Code**	**UCS**
Extremely weak	EW	0.5 Mpa
Very Weak	VW	
Weak	W	2.5 Mpa
Moderately strong	MS	37.5 Mpa
Strong	S	75 Mpa
Very strong	VS	100 Mpa
Extremely strong	ES	150 Mpa

Roughness type	**Code**	**Jr**
Stepped Smooth	SS	3.5
Discontinuous	DC	4
Planar Smooth	PS	1
Stepped Rough	SR	3
Planar rough	PR	1.5
Undulating Smooth	US	2
Undulating Rough	UR	3

No of Defect Sets	**Code**	**Jn**
Default	0	1
One Set	1	2
One Set + random	1.5	3
Two Sets	2	4
Two Sets + random	2.5	6
Three Sets	3	9
Three Sets + random	3.5	12
Four Sets	4	15

Joint Alteration	**Code**	**Ja**
Default	0	1
Carb	CB	2
Serpentine	SP	5
Clay	CY	5
Quartz	QZ	1
Sericite	SE	3
Chlorite	CH	3
Clean	X	1
Iron	FE	1.5
Haematite	H	2

Allegiance Metals - Drill Log

BHID A070A

Collar

Project	BHID	Easting	Northing	RL	Depth	Date	Geologist
East_Aveb	A070A	355718.9	5357614.33	181.6	643.0	12/04/2005	DAE

Surveys

Project	BHID	Depth	Azm_mag	Azm_Amg	Dip
East_Aveb	A070A	0	181.3	181.3	-52.0
East_Aveb	A070A	101	171.0	182.1	-49.4
East_Aveb	A070A	180	173.0	182.7	-47.9
East_Aveb	A070A	200	184.0	182.9	-47.0
East_Aveb	A070A	250	180.5	183.3	-47.5
East_Aveb	A070A	300	180.0	183.7	-45.5
East_Aveb	A070A	350	185.0	184.1	-44.4
East_Aveb	A070A	400	186.5	184.5	-45.0
East_Aveb	A070A	450	85.0	184.9	-44.3
East_Aveb	A070A	500	106.0	185.3	-44.8
East_Aveb	A070A	550	200.0	185.7	-45.2
East_Aveb	A070A	600	180.0	186.1	-45.1
East_Aveb	A070A	643	183.0	186.5	-45.9

Hole Sizes

From	Size
0	TR
12	HQ
173.2	NQ

Drilled By

Almac Drilling

Analyses By

BRL

Note : hole stopped at 643.0 on 12/04/05 (D/S).

Comments

Hole was designed to test East Avebury prospect and locate extensions to mineralisation intersected in drill hole A032.
First attempt at drilling hole (A070) was abandoned in caving ground at 166.7m. Hole was restarted by reaming HW casing, then extending HQ core from 85.0m (lipped off hole A070).
Entirely new hole A070A was drilled on from 89.35m.

Significant Intersections

341.7 - 345.7 4.0m @ 0.5% Ni, 0.15% As, 0.02% Co and <0.1% S.
569.2 - 571.2 2.0m @ 0.9% Ni, 0.04% As, 0.06% Co and 0.2% S.
577.0 - 579.0 2.0m @ 1.0% Ni, 0.09% As, 0.05%% Co and 0.6% S.

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
East_Ave	A070A	85.00	88.30	Cba	VBLB	Ph	B4	0.00	SI			Intermixed cherty volcaniclastics; abundant basaltic volcanic detritus.
East_Ave	A070A	88.30	89.90	Cba	VBLB	Ch	G3	0.00	GL	BD	50	Abundant devitrified volcaniclastics (reworked basaltic detritus).
East_Ave	A070A	89.90	95.75	Cba	VBLM	Ph	B5	0.10	GC	BD	70	Very intermixed; altered shaley zones; locally a volcaniclastic breccia.
East_Ave	A070A	95.75	96.50	Cba	VBLF	Ch	G4	0.20	BR			Rare very fine-grained shaley fragments and lenses.
East_Ave	A070A	96.50	97.30	Cba	VBLF	Ch	G4	0.00	NR			Abundant chlorite coating core fragments and as alteration throughout.
East_Ave	A070A	97.30	100.35	Cba	VBLB	Ch	G4	0.05	GL	BD	52	Intermixed light brown volcaniclastic mudstone occurring as fragmented laminae.
East_Ave	A070A	100.35	102.90	Cba	VBVF	Ch	G3	0.00	BR	BD	40	Bleached, altered volcaniclastic mudstone; common fine basaltic flows/intrusions.
East_Ave	A070A	102.90	106.30	Cba	VBLF	Ph	B5	0.00	SP	BD	47	Contorted volcaniclastic mudstone; minor-common fine basaltic ?flows.
East_Ave	A070A	106.30	109.35	Cba	VBLM	Ch	G5	0.00	GL	BD	55	Minor silt-grade volcaniclastics; dominantly basaltic flows or minor intrusions.
East_Ave	A070A	109.35	110.25	Cba	VBLF	Ac	B1	0.00	SI	BD	60	Bleached, fragmented volcaniclastic mudstone; common actinolite veining.
East_Ave	A070A	110.25	114.35	Cba	VBVF	Ac	G3	0.20	BR	BD	55	Colour-mottled, devitrified basaltic flows or minor intrusions; minor shaley bands.
East_Ave	A070A	114.35	119.05	Cba	VBVF	Ac	G2	0.00	SI	BD	50	Colour-mottled, highly altered, devitrified volcaniclastics; common bleached shale.
East_Ave	A070A	119.05	123.10	Cba	VBVF	Ac	G3	0.10	SI	BD	42	Colour-mottled, devitrified basaltic flows or intrusives; common shaley bands.
East_Ave	A070A	123.10	128.50	Cba	VBVF	Ac	G4	0.10	BR	BD	50	Intermixed basaltic flows and volcaniclastics; common bleached shale.
East_Ave	A070A	128.50	128.70	Cba	LOSS		N2		BR			High-angle, layered quartz-carbonate vein; core loss zone.
East_Ave	A070A	128.70	142.75	Ccc	SHAL	Po	N5	3.00	SI	BD	50	Well-bedded; common actinolitised, sandy volcaniclastic lenses and laminae.
East_Ave	A070A	142.75	148.90	Ccc	SHAL	Ph	B3	0.00	SI	BD	40	Well-bedded; alternating phlogopitised mudstone and actinolitised volcaniclastics.
East_Ave	A070A	148.90	152.15	Cba	VBVB	Ac	G4	0.20	NR	BD	60	Colour-mottled, fragmented volcaniclastics; minor bleached shaley lenses.
East_Ave	A070A	152.15	152.60	Csu	SKSP	Sp	G1	0.00	BR			Puggy clay at start of interval; highly altered and sheared.
East_Ave	A070A	152.60	156.00	Csu	SERP	Mg	B5	0.50	BR			Intensely micro-veined with calcite infilling; rare pyrite in micro-veins.
East_Ave	A070A	156.00	156.50	Csu	SERP	Cb	B5	0.00	BR			Broken throughout; strongly veined with carbonate-pyrite micro-veins.
East_Ave	A070A	156.50	158.50	Csu	SERP	Cb	B4	1.00	NR			Common calcite in micro-veins; magnetic core; sparse pyrrhotite and pyrite blebs.
East_Ave	A070A	158.50	161.00	Csu	IULB	Sp	G5	0.00	BR			Strongly serpentinised throughout; possible ultrabasic breccia.
East_Ave	A070A	161.00	162.00	Cba	VBVB	Ac	C3	0.00	BR			Colour-mottled, altered basic volcaniclastics; depth limits uncertain (core loss).
East_Ave	A070A	162.00	163.30	Ccc	SSLT	Ac	G5	0.00	SI	BD	50	Actinolitised silt-grade volcaniclastics; less common phlogopitised shale-siltstone.
East_Ave	A070A	163.30	167.70	Cba	LBVF	Ch	G4	0.20	GC			Chloritised/actinolitised volcanics or volcaniclastics; tourmaline metasomatised.
East_Ave	A070A	167.70	173.20	Cba	VBVF	Ac	C2	0.10		BD	40	Colour-mottled, altered, devitrified shaley volcaniclastics; locally bleached.
East_Ave	A070A	173.20	177.10	Cba	VBVF	Ac	G3	0.00	BR	BD	55	Colour-mottled, altered, possibly skarned, silt-grade volcaniclastics; shaley.

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
East_Ave	A070A	177.10	178.85	Ccc	SHAL	Se	C1	0.20	SP	BD	55	Bleached, cherty volcaniclastic shale; tremolite veins; trace sphalerite blebs.
East_Ave	A070A	178.85	180.10	Ccc	SSLT	Ac	C3	0.00	BR	BD	50	Common grey-black siltstone lenses; tremolite-?epidote alteration zones.
East_Ave	A070A	180.10	180.30		FALT	Ch	G2	0.00	BR			Puggy clay recovered amongst very broken core fragments; minor fault.
East_Ave	A070A	180.30	181.20	Cba	LBPF	Ac	N1	0.00	GL			Strongly altered and intensely veined basaltic flow or intrusive.
East_Ave	A070A	181.20	187.10	Cba	LBPF	Ac	G6	0.00	DF			Very strongly altered and metasomatised (schorl-axinite-epidote); strongly veined.
East_Ave	A070A	187.10	189.00	Cba	LBVF	Ac	C2	0.00	BD			Strongly altered, devitrified basaltic flow or intrusive; strongly veined throughout.
East_Ave	A070A	189.00	195.70	Cba	VBLM	Si	B2	0.00	DF	BD	50	Strongly altered, silicified, cherty volcaniclastics; localised chip wacke lenses.
East_Ave	A070A	195.70	198.05	Cba	LBPF	Ac	G5	2.00	SP			Strongly altered, locally crudely layered basaltic flow or intrusive; pyrrhotite as
												disseminations, in places pervasive; trace cpy. as blebs.
East_Ave	A070A	198.05	204.60	Cba	LBPF	Ac	N4	1.00	SI			Strongly altered, black-green basalt; veined throughout with actinolite-tremolite;
												minor po. as disseminations and aggregates.
East_Ave	A070A	204.60	207.10	Cba	VBVF	Ac	G5	0.10	SP	BD	58	Intermixed basaltic volcaniclastics and possible flows or hyaloclastites; bleached
												tremolite-sericite altered shaley interbeds.
East_Ave	A070A	207.10	208.85	Cba	VBVF	Se	C3	0.00	GL	BD	55	Bleached, cherty volcaniclastic shale; tan-brown in places.
East_Ave	A070A	208.85	216.05	Cba	VBVF	Se	G2	0.00	SP	BD	60	Bleached, altered, cherty volcaniclastic mudstone-shale; common fine
												volcaniclastic chip wacke interbeds; actinolite-tremolite altered.
East_Ave	A070A	216.05	216.70	Cba	LOSS							Core loss zone; few intact core pieces recovered.
East_Ave	A070A	216.70	217.35	Cba	VBVF	Ac	G2	0.00	SP			Altered, cherty volcaniclastics; high-angle carbonate vein at down hole contact.
East_Ave	A070A	217.35	219.80	Cba	VBLF	Ac	G4	0.00	BR	BD	42	Fine silt-grade volcaniclastics; traces of schorl in aggregates and clusters.
East_Ave	A070A	219.80	220.50	Cba	VBLF	Ac	G5	1.00	BR			Odd nodular texture, with carbonate spherules; possible extrusive.
East_Ave	A070A	220.50	228.00	Cba	LBVF	Cb	N3	0.50	BR			Possibly carbonate-altered, locally phlogopitised, basaltic extrusive; alternatively
												a highly altered calcareous sediment; trace po. as aggregates.
East_Ave	A070A	228.00	230.65	Cba	VBLF	Ac	G2	0.00	BR	BD	60	Alternating bleached, tremolite-actinolite altered volcaniclastic wacke and finer,
												bleached, cherty volcaniclastic mudstone.
East_Ave	A070A	230.65	231.30	Cba	LBLF	Sp	G6	1.00	BR			Strongly altered, mottled, basaltic extrusive; sparse po. as aggregates.
East_Ave	A070A	231.30	238.10	Ccarb	CARB	Cb	N1	0.50	BR	BD	30	Strongly altered, limey or dolomitic, volcaniclastic sub-unit; strongly carbonate
												veined; contorted bedding; minor bleached shaley lenses; trace cpy., po. and
												sphalerite aggregates at 233.6m.

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
East_Ave	A070A	238.10	238.60	Cba	LOSS				NR			Core loss zone; broken core fragments only; possibly caved material.
East_Ave	A070A	238.60	244.60	Cba	VBLF	Ac	G4	0.00	SP	BD	25	Intensely altered, carbonate-actinolite replaced, basaltic volcaniclastics and
												intermixed extrusives; odd ?carbonate spherules; carbonate veined throughout.
East_Ave	A070A	244.60	248.50	Cba	VBVF	Ac	G3	0.50	SI	BD	75	Intermixed actinolite-tremolite altered, very fine-grained volcaniclastics with
												common dark green, altered, basaltic flows or hyaloclastite; trace po. as blebs.
East_Ave	A070A	248.50	255.05	Cba	VBLM	Se	C4	0.00	SP	BD	65	Altered, colour-mottled, devitrified, silt-grade volcaniclastic wacke; minor veins of
												calcite; common actinolite-chlorite veins in fractures.
East_Ave	A070A	255.05	255.85		FALT	Ch	B3	1.00	BR			Carbonate-veined, actinolite-chlorite-carbonate matrixed cataclasite.
East_Ave	A070A	255.85	258.80	Cba	VBLF	Ph	B4	2.50	SI			Strongly phlogopitised, fine silt-grade volcaniclastics; minor po. and coarser py.
												aggregates in actinolite veins.
East_Ave	A070A	258.80	261.35	Cba	LBPF	Ac	G4	0.00	NR			Strongly actinolitised, basaltic extrusive, with minor volcaniclastic laminae; sparse
												epidote aggregates with schorl rims/overgrowths; calcite micro-veins.
East_Ave	A070A	261.35	261.50	Cba	LOSS	Ch	G2	0.00	BR			Broken core; calcite veins with chlorite lining fracture surfaces.
East_Ave	A070A	261.50	263.25	Cba	VBLM	Ac	G3	2.00	BR			Indistinctly bedded; possibly an extrusive flow; minor epidote aggregates with
												sparse py.; strongly altered throughout.
East_Ave	A070A	263.25	277.00	Cba	VBLB	Ac	N1	2.00	GC	BD	47	Colour-mottled, locally carbonaceous, commonly bleached, volcaniclastic breccia;
												stretched clasts in chaotic devitrified matrix; minor epidote aggregates; sparse py.
East_Ave	A070A	277.00	279.70	Cba	VBVF	Ac	C2	0.00	SI	BD	30	Alternating bleached, altered volcaniclastic mudstone and grey volcaniclastic
												breccia; chaotic, fragmented bedding; minor epidote aggregates.
East_Ave	A070A	279.70	282.30	Cba	VBLB	So	G4	0.00	VN	BD	40	Colour-mottled, actinolitised, volcaniclastic breccia, with black schorl replacing in
												aggregates and patches; chaotic matrix and fragmented bedding in breccia.
East_Ave	A070A	282.30	284.95	Cba	VBVF	Se	Y3	0.50	DF	BD	68	Stained, altered, volcaniclastic mudstone, with common lenses of chaotic
												volcaniclastic breccia; complex calcite vein at 284.7m.
East_Ave	A070A	284.95	294.40	Cba	VBLB	Ac	B2	1.00	GL	BD	35	Volcaniclastic breccia dominant, with less common interbeds of altered,
												actinolitised, silt-grade volcaniclastics; fragmented, cherty, shaley laminae in
												breccia lenses; sparse po. as aggregates in breccia; trace cpy.
East_Ave	A070A	294.40	302.25	Cba	VBVB	Ac	B1	0.50	DF			Very strongly altered, skarned throughout; bleached, cherty shale fragments in
												chaotic volcaniclastic breccia; locally carbonaceous matrix in breccia.

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
East_Ave	A070A	302.25	304.50	Cba	SKRN	Ac	C2	0.00	SI			Very strongly altered, volcaniclastic shale breccia; pale cream to grey actinolite-
												tremolite-sericite skarn facies; common carbonate in breccia matrix.
East_Ave	A070A	304.50	309.75	Cba	SKRN	Ac	G4	0.20	SI	BD	45	Actinolite-tremolite-quartz skarn facies, after volcaniclastics; common carbonate
												interstitial and in micro-veins; poorly bedded; trace sphalerite as disseminations.
East_Ave	A070A	309.75	311.55	Cba	SKRN	So	C3	0.00	SP			Tremolite-actinolite-sericite groundmass, with ?schorl clusters; relatively coarse
												textured, resembling a porphyritic intrusive in overall appearance.
East_Ave	A070A	311.55	316.90	Cba	SKRN	Ph	B6	0.00	SI	BD	50	Very strongly altered, phlogopite-rich skarn or hornfels, after fine silt-grade
												volcaniclastics; odd ?carbonate spherules locally; common ?actinolite-tremolite
												in veins, micro-veins and irregular, ragged patches.
East_Ave	A070A	316.90	317.25	Cba	LOSS	Sp	W2	0.00	SI			Very soft, ?serpentine-tremolite-actinolite alteration; vein infill; core loss.
East_Ave	A070A	317.25	318.35	Cba	SKSP	Ph	B6	1.50	SP			Very strongly altered, phlogopite-rich skarn or hornfels; dark green actinolite in
												irregular patches; minor coarse py. as aggregates, with trace po.
East_Ave	A070A	318.35	328.10	Csu	SERP	Mg	N6	1.00	GD			Rare dark green serpentine patches; moderately to strongly magnetic; common
												magnetite in aggregates and clusters; sparse po. as disseminations.
East_Ave	A070A	328.10	334.15	Csu	SERP	Mg	N5	0.50	DF			Common ragged aggregates and intergrowths of pale ?serpentine, with magnetite;
												moderately to strongly magnetic; traces of po. as blebs and disseminations.
East_Ave	A070A	334.15	335.70	Csu	SERP	Mg	N6	2.50	DF			Common ragged aggregates and clusters of magnetite; sparse to minor po. as
												disseminations and blebs.
East_Ave	A070A	335.70	339.70	Csu	SERP	Mg	N5	1.00	SP			Common aggregates and intergrowths of pale ?serpentine, with magnetite; sparse
												po. as disseminations and blebs; magnetic core throughout.
East_Ave	A070A	339.70	349.25	Csu	SERP	Sc	N4	2.00	DF			Common mottled, light green serpentinite in patches; magnetic core; magnetite
												with sparse po.-?pentlandite intergrowths.
East_Ave	A070A	349.25	355.45	Csu	SERP	Mg	N6	1.00	SI			Common aggregates and intergrowths of magnetite; sparse po. as disseminations
												and blebs; magnetic core throughout; sparse chrysotile in micro-veins and on
												joint planes.
East_Ave	A070A	355.45	355.70	Csu	SERP	Sc	N5	0.00	SP			Fractured, broken core; core ends are indented and grooved by drilling action.
East_Ave	A070A	355.70	359.80	Csu	SERP	Sc	N5	0.50	DF			Minor mottled, green serpentinite patches; common magnetite as aggregates and
												intergrowths throughout; magnetic core; trace po. as blebs.

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
East_Ave	A070A	359.80	368.95	Csu	SERP	Mg	N6	0.10	DF			Massive black serpentinite; common magnetite as aggregates and intergrowths
												throughout; strongly magnetic core; sparse chrysotile in micro-veins.
East_Ave	A070A	368.95	391.40	Csu	SERP	Mg	N6	0.10	SP			Massive black serpentinite dominant, with minor blotchy patches and mottled
												zones of green serpentinite; common magnetite throughout; magnetic core.
East_Ave	A070A	391.40	391.55	Csu	LOSS	Sc	G6	0.00	SP			No intact core fragments; altered, green serpentinite in broken core.
East_Ave	A070A	391.55	394.75	Csu	SERP	Mg	N5	0.00	BR			Massive to veined black-dark green serpentinite; irregular aggregates and patches
												of amphibole and serpentine with magnetite; strongly magnetic core.
East_Ave	A070A	394.75	395.20	Csu	SERP	Sc	G6	0.00	SI			Strongly micro-fractured; very broken core.
East_Ave	A070A	395.20	400.70	Csu	SERP	Mg	N5	0.50	SP			Massive black serpentinite dominant; broken, with clayey fracture planes; ragged
												aggregates of pale serpentine-amphibole, with common magnetite intergrowths;
												rare traces of po.as blebs and disseminations.
East_Ave	A070A	400.70	401.00		FALT	Sc	G2	0.00	SP	FT	45	Fault zone, infilled with puggy clay, after serpentinite; angular fragments of dark
												green serpentinite; core loss zone.
East_Ave	A070A	401.00	404.50	Csu	SERP	Sc	G6	0.50	DF			Altered and broken at start of interval, with clayey serpentine-chrysotile in veins
												and fractures; becoming dark green with ragged patches of pale serpentine; traces
												of po. as blebs associated with these patches.
East_Ave	A070A	404.50	414.25	Csu	SERP	Mg	N5	0.50	SP			Black to very dark green, massive, fine serpentinite; common, ragged patches of
												pale serpentine throughout; common magnetite; rare po.; magnetic core.
East_Ave	A070A	414.25	414.45		FALT	Sc	G4	0.00	SP	FT	25	Puggy clay and soft, altered, serpentine-chrysotile matrixed breccia infilling fault
												zone; strongly micro-fractured; broken core throughout.
East_Ave	A070A	414.45	422.80	Csu	SERP	Sc	N4	0.00	FR			Fractured, broken and altered throughout; minor fibrous serpentine-chrysotile on
												joints; minor to common magnetite aggregates; core locally magnetic; becoming
												sheared and very strongly fractured from 422.3m.
East_Ave	A070A	422.80	423.15		FALT		N1	0.00	SP	FT	40	Increasingly sheared, altered and clayey serpentinite; becomes a clay matrixed
												breccia infilling fault zone; very soft, crumbly core.
East_Ave	A070A	423.15	425.85	Csu	SERP	Sc	G6	1.00	BR			Very dark green serpentinite dominant; fractured and veined throughout; broken in
												places; sparse po. as blebs associated with pale serpentine patches.

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
East_Ave	A070A	425.85	426.20	Csu	LOSS	Sp	N5	0.00	BR			Very broken ground; few intact core fragments recovered.
East_Ave	A070A	426.20	431.50	Csu	SERP	Mg	N6	0.50	GD			Black, massive, fine serpentinite dominant; several high-angle micro-faults, with
												puggy clay breccia infilling; minor to common magnetite throughout; magnetic.
East_Ave	A070A	431.50	448.20	Csu	SERP	Mg	N6	0.50	VN			Black, massive, fine serpentinite dominant; common ragged aggregates of pale
												serpentine, with magnetite; rare puggy clay infilled fractures; core is strongly
												magnetic throughout.
East_Ave	A070A	448.20	469.25	Csu	SERP	Mg	G6	1.00	BR			Very dark green, locally black, massive serpentinite; common patches and
												aggregates of lighter green, waxy serpentine; common magnetite throughout;
												trace to sparse po. as blebs and disseminations; magnetic core.
East_Ave	A070A	469.25	469.35	Csu	LOSS	Ac	G5	0.00	BR			Broken ground; fragments of altered serpentinite coated with ?actinolite-tremolite.
East_Ave	A070A	469.35	471.80	Csu	SERP	Mg	G6	1.00	SP			Very darkest green, massive, fine serpentinite dominant; lighter green, waxy
												serpentine in patches and crude bands; common magnetite throughout.
East_Ave	A070A	471.80	473.45	Csu	SKSP	Sp	G5	1.00	SP			Colour-mottled, green, altered serpentinite, possibly skarned; possible granular
												textures after ?olivine; trace po. as blebs.
East_Ave	A070A	473.45	474.00		FALT	Se	W2	0.00	SI	FT	20	Highly altered, clayey breccia zone; altered, light green serpentinite clasts; highly
												altered, waxy, fibrous fracture planes.
East_Ave	A070A	474.00	477.30	Csu	SERP	Mg	G6	1.00	DF			Strongly micro-fractured at start of interval; darkest green serpentinite, becoming
												more massive, black; common magnetite in aggregates; sparse po. as blebs
												and disseminations.
East_Ave	A070A	477.30	478.35	Csu	SERP	Sp	G5	0.00	DF			Dark green, altered, crudely banded serpentinite; clayey, fibrous, serpentine-
												chrysotile in some micro-fractures.
East_Ave	A070A	478.35	496.80	Csu	SERP	Mg	N6	0.50	SI			Black, massive, fine serpentinite dominant; minor to common patches of green,
												waxy serpentine; common magnetite in aggregates and patches throughout;
												trace to sparse po. as blebs and disseminations in paler serpentinite.
East_Ave	A070A	496.80	504.75	Csu	SERP	Mg	N6	1.00	VN			Mainly black, massive serpentinite, but with common patches and irregular zones
												of dark green serpentine; common magnetite as aggregates and stringers; sparse
												po. associated with green serpentine patches.

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
East_Ave	A070A	504.75	510.20	Csu	SERP	Mg	N6	0.50	SI			Black serpentinite dominant; few ovoid patches of paler green serpentine; common
												to abundant magnetite in aggregates; trace po.
East_Ave	A070A	510.20	510.45	Csu	SKSP	Ac	N3	2.50	SI			Highly altered, with odd, granular serpentine patches; abundant dark green
												pyroxene groundmass; minor ?pentlandite aggregates; common magnetite as
												aggregates and disseminated, very small euhedral crystals.
East_Ave	A070A	510.45	529.10	Csu	SERP	Mg	N6	1.00	DF			Massive, black, fine serpentinite dominant; minor, irregular patches of paler green
												serpentine; common-abundant magnetite as aggregates and ragged patches,
												showing crude alignment; sparse po. as blebs and disseminations.
East_Ave	A070A	529.10	530.80	Csu	SERP	Sc	N5	0.00	BR			Massive, black, serpentinite, with ragged patches of pale grey-white serpentine-
												chrysotile, becoming less common; moderately magnetic core.
East_Ave	A070A	530.80	534.25	Csu	SERP	Mg	N5	0.00	SP			Massive, black to darkest grey, fine serpentinite; broken to very broken core;
												common magnetite throughout; centimetric veins of fibrous serpentine-chrysotile
												infilling a few fractures.
East_Ave	A070A	534.25	551.05	Csu	SERP	Mg	N6	0.50	SP			Massive, black to darkest grey, fine serpentinite, with common, irregular, ragged
												aggregates of pale grey serpentine-chrysotile; common to abundant magnetite
												throughout; traces of po. associated with pale serpentine patches.
East_Ave	A070A	551.05	567.00	Csu	SERP	Sc	N5	1.00	DF			Massive, black, fine serpentinite, with common ovoid patches of paler, waxy,
												green serpentine; ovoids are locally rimmed with magnetite; common magnetite
												throughout in ragged aggregates; sparse po. as disseminations.
East_Ave	A070A	567.00	568.50	Csu	SERP		G5	0.00	BR			Odd, micro-fractured, granular texture, possibly after olivine; altered, mottled
												serpentinite; minor to common magnetite as aggregates.
East_Ave	A070A	568.50	569.20	Csu	SERP		N6	0.00	GD			Broken core zone; massive, fine, black serpentinite; shattered, disaggregated
												core.
East_Ave	A070A	569.20	575.90	Csu	SERP	Mg	N5	1.00	SP			Massive, black serpentinite, with common intermixed patches of white-light grey,
												actinolite-tremolite; common-abundant magnetite as aggregates in finer black
												serpentinite; band of magnetite-?pentlandite from 569.43-569.48m; sharp planar
												basal contact to interval at 30 degrees to core axis.

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
East_Ave	A070A	575.90	577.00		FALT		N3	0.00	BR			Puggy clay-matrixed breccia recovered at uphole contact; puggy grey-black clay
												becoming more common; core loss zone.
East_Ave	A070A	577.00	579.65	Csu	SERP	Ac	N2	0.00	SP			Strongly altered, leached, fractured serpentinite; brecciated near uphole contact;
												common magnetite in darker, grey-black serpentinite from 578.7m; broken core,
												gradually becoming more intact.
East_Ave	A070A	579.65	580.00		FALT		N3	0.00	NR			Few fragments of dark grey, puggy clay.
East_Ave	A070A	580.00	581.55	Csu	SERP	Ac	N2	0.00	BR			Leached, altered, light grey serpentinite, becoming less altered, black, massive,
												fine serpentinite.
East_Ave	A070A	581.55	581.90	Csu	SERP	Mg	N5	0.00	BR			Strongly fractured, very broken, black, fine serpentinite.
East_Ave	A070A	581.90	589.50	Csu	SERP	Mg	N6	0.00	BR			Very broken, black to darkest grey, fine, massive serpentinite; rare patches of
												green serpentine; common fine magnetite in aggregates and stringers.
East_Ave	A070A	589.50	592.10	Csu	LOSS				NR			Fragments of black, massive serpentinite and puggy clay; driller reported total
												core loss over 1m within this zone, from 591-592m.
East_Ave	A070A	592.10	593.60	Csu	SERP	Ac	N3		VN			Puggy clay-matrixed breccia at uphole contact; becoming dark grey, leached,
												altered serpentinite; very broken core throughout.
East_Ave	A070A	593.60	624.30	Csu	SERP	Mg	N6	1.00	GD			Massive, fine, very darkest grey to black serpentinite dominant; minor, irregular,
												ragged aggregates of pale serpentine-chrysotile containing magnetite and sparse
												po. These aggregates impart a coarser textural appearance; common magnetite
												as aggregates throughout.
East_Ave	A070A	624.30	643.00	Csu	SERP	Sc	N6	1.00				Massive, very fine, darkest green to black serpentinite dominant; common ragged
												to ovoid patches of paler green to grey serpentine-chrysotile-actinolite, locally
												rimmed with fine magnetite; sparse po.-?pentlandite as blebs and aggregates in
												some of these paler patches; common fine-grained magnetite in aggregates and
												crudely aligned stringers throughout; serpentinite groundmass gradually becomes
												finer and dark green in colour; core fractured, veined and broken from 642.6m.
												EOH depth confirmed at 643.0m.

Stratigraphy

Q	Quaternary alluvial, colluvial and dune deposits
Df	Devonian fine grained qtz sst and sslt (Florence Quartzite). Fossiliferous
Dsk	Devonian Skarn
Dg	Devonian Granite
Sc	Silurian sandstone and siltstone
Scc	Silurian pebble-cobble conglomerate.
Su	Silurian sediments
Og	Limestone (Gordon Limestone)
Oc	Pebble conglomerate, PC derivation (Owen Gp).
Os	Siliceous sst and conglomerate.
Ccc	Contiguous Creek Fm
Ccch	Contiguous Creek Fm chert
Ccarb	Contiguous Creek Fm carbonate and calcareous sediments.
Cba	Cambrian Basalt (McIvor Hill Complex)
Cbg	Cambrian gabbro
Cba	Cambrian basaltic volcaniclastics
Csu	Cambrian ultramafic
Cud	Cambrian ultramafic dunite
Cup	Cambrian ultramafic orthopyroxenite

Rock Types

Volcanic Rocktypes have a four letter code. The first letter is the style (intrusive, volcaniclastic etc)
The second is the chemical composition (basaltic, rhyolitic), the third is the major component (qtz phyric, lith
the last is the texture (fine grained, breccia etc). For example IUPC is an intrusive, ultramfic, pyroxene phyri

Style codes

I	Intrusive
L	Lava
V	Volcaniclastic
E	Epiclastic

Composition codes

U	Ultramafic
B	Basaltic (mafic)
A	Andesitic
D	Dacitic
R	Rhyolitic

Composition Codes

Q	Qtz phyric (qtz xtal rich)
F	feldspar phyric
H	Hornblende phyric
P	Pyroxene phyric
L	Lithic rich
X	crystal rich
V	Vitric

Texture codes

F	fine
M	medium
C	coarse

B	breccia

Other Rock codes

CHRT	Chert
CARB	Carbonate
GWAC	Greywacke
SSLT	Siltstone
SAND	Sandstone
SERP	Serpentinite
CONG	Conglomerate
GRAN	Granite
GRAD	Granodiorite
SKRN	Skarn
LOSS	No Core recovery
CLAY	Clay
MMAG	Massive magnetite
SKSP	Serpentinite Skarn
SHAL	Shale
HEVC	Heamatitic Volcaniclastic
PHLG	Phlogopite schist
GABB	Gabbro

Colour

Colours can be classified by shade using a 1 to 5 scale. ie. B1 = pale brown, B5=dark Brown

N	Black
B	Brown
P	Purple
G	Green
C	Cream
W	White
Y	Yellow
T	Tan
R	Red
O	Orange

Alteration

Ac	Actinolite
Ch	Chlorite
Se	Sericite
Cb	Carbonate
Di	Diopside
Ax	Axinite
Sc	Serpentine-chrysotilic
Sp	Serpentine
So	Schorl
Ph	Phlogopite
Sx	Sulphidic
Py	Pyritic
Po	Pyrrhotitic
Ht	Haematitic
Mg	Magnetite
To	Tourmaline
Si	Silica

Qz	Quartz

Geotech

Intact Rock Strength	Code	UCS
Extremely weak	EW	0.5 Mpa
Very Weak	VW	
Weak	W	2.5 Mpa
Moderately strong	MS	37.5 Mpa
Strong	S	75 Mpa
Very strong	VS	100 Mpa
Extremely strong	ES	150 Mpa

Roughness type	Code	Jr
Stepped Smooth	SS	3.5
Discontinuous	DC	4
Planar Smooth	PS	1
Stepped Rough	SR	3
Planar rough	PR	1.5
Undulating Smooth	US	2
Undulating Rough	UR	3

No of Defect Sets	Code	Jn
Default	0	1
One Set	1	2
One Set + random	1.5	3
Two Sets	2	4
Two Sets + random	2.5	6
Three Sets	3	9
Three Sets + random	3.5	12
Four Sets	4	15

Joint Alteration	Code	Ja
Default	0	1
Carb	CB	2
Serpentine	SP	5
Clay	CY	5
Quartz	QZ	1
Sericite	SE	3
Chlorite	CH	3
Clean	X	1
Iron	FE	1.5
Haematite	H	2

Geotech Sheet

Project	BHID	From	To	Recovery	Lithology	Weathering	Alteration	Strength	length>10cm	RQD%	No. defects	Defect sets	Defect type	bca struct 1	bca struct 2	Roughness	Fill	Comments
East_Ave	A070A	85.00	88.30	2.83	VBLB		Ph	VS	2.2	77	18	1.5	JT			UR	Ch	Hole lipped off A070; incomplete core.
East_Ave	A070A	88.30	89.90	1.42	VBLB		Ch	VS	1.4	100	2	1	JT			UR	Ch	Whole core/all new hole cut from 89.85m.
East_Ave	A070A	89.90	95.75	5.69	VBLM		Ph	VS	4.1	71	25	1.5	JT	40		PS	Ch	Core broken from 91.65-91.8m.
East_Ave	A070A	95.75	96.50	0.75	VBLF		Ch	VS	0.6	85	2	1	JT			UR	Ch	Solid core; rare carbonate microveins.
East_Ave	A070A	96.50	97.30	0.39	VBLF		Ch	W	0.0	0		4	JT			PS	Ch	Extremely broken; few intact core pieces.
East_Ave	A070A	97.30	100.35	3.05	VBLB		Ch	VS	2.4	77	13	1.5	JT			UR	Ch	Core broken at start of interval.
East_Ave	A070A	100.35	102.90	2.34	VBVF		Ch	S	2.0	87	8	1.5	JT			PR	Ch	High-angle carbonate-clay fractures.
East_Ave	A070A	102.90	106.30	3.09	VBLF		Ph	VS	2.1	69	16	1.5	JT			US	Ch	Core broken in places.
East_Ave	A070A	106.30	109.35	2.95	VBLM		Ch	VS	2.5	85	8	1	JT			US	Ch	Solid core; few high-angle micro-fractures.
East_Ave	A070A	109.35	110.25	0.90	VBLF		Ac	VS	0.7	78	5	1	JT			SS	Ch	Solid core.
East_Ave	A070A	110.25	114.35	3.96	VBVF		Ac	VS	3.1	79	10	1.5	JT			UR	Ch	Solid core; irregular natural breaks.
East_Ave	A070A	114.35	119.05	4.59	VBVF		Ac	VS	4.2	92	15	1.5	JT	50		PS	Ch	Regular broad-spaced bedding joints.
East_Ave	A070A	119.05	123.10	3.98	VBVF		Ac	ES	3.3	82	8	1	JT	50		UR	X	Solid core; few natural breaks.
East_Ave	A070A	123.10	128.50	5.18	VBVF		Ac	VS	4.2	81	16	1.5	JT	50	35	PS	Ch	Core becomes broken from 127.8m.
East_Ave	A070A	128.50	128.70	0.09	LOSS			MS	0.0	0						PS	Ch	Core as fragments only; core loss zone.
East_Ave	A070A	128.70	142.75	13.8	SHAL		Po	S	11	78	45	2	JT	42		UR	Ch	Pyrite crystals on some fractures; fissile.
East_Ave	A070A	142.75	148.90	5.89	SHAL		Ph	VS	5.1	86	21	1.5	JT	40		PS	Ch	Frequent bedding-parallel joints.
East_Ave	A070A	148.90	152.15	3.15	VBVB		Ac	VS	2.5	79	10	1.5	JT			UR	Ch	Generally solid core.
East_Ave	A070A	152.15	152.60	0.18	SKSP		Sp	VW	0.0	0	4	1.5	JT			PS	Sp	Core loss; puggy clay; micro-fractured.
East_Ave	A070A	152.60	156.00	3.23	SERP		Mg	W	2.5	76	18	2.5	JT			US	Sp	Fractured and micro-veined throughout.
East_Ave	A070A	156.00	156.50	0.3	SERP		Cb	W	0.0	0	8	4	JT			US	Cb	Very broken; few intact core pieces.
East_Ave	A070A	156.50	158.50	1.38	SERP		Cb	MS	0.8	58	10	2.5	JT			US	Sp	Broken core throughout; strong veining.
East_Ave	A070A	158.50	161.00	0.51	IULB		Sp	MS	0.0	0			JT				Sp	Very broken; no intact core pieces.
East_Ave	A070A	161.00	162.00	0.80	VBVB		Ac	S	0.4	55	8	1.5	JT			SR	Ch	Very broken to completely fragmented.
East_Ave	A070A	162.00	163.30	1.08	SSLT		Ac	S	0.4	33	12	1.5	JT			US	Ch	Broken zones; pyrite on joint surfaces.
East_Ave	A070A	163.30	167.70	3.66	LBVF		Ch	S	2.8	75	17	1.5	JT			PS	Cb	Very broken in places.
East_Ave	A070A	167.70	173.20	5.21	VBVF		Ac	VS	4.7	91	8	1	JT			US	Cy	End of extension to HQ at 173.2m.
East_Ave	A070A	173.20	177.10	3.52	VBVF		Ac	VS	3.0	86	11	1.5	JT			PS	Ch	NQ core drilling commenced from 173.2m.

Geotech Sheet

Project	BHID	From	To	Recovery	Lithology	Weathering	Alteration	Strength	length>10cm	RQD%	No. defects	Defect sets	Defect type	bca struct 1	bca struct 2	Roughness	Fill	Comments
East_Ave	A070A	177.10	178.85	1.74	SHAL		Se	ES	1.4	79	4	1	JT			US	Se	Broken at start of interval.
East_Ave	A070A	178.85	180.10	1.23	SSLT		Ac	VS	1.1	92	3	1	JT			US	Ch	Solid core; becoming sheared.
East_Ave	A070A	180.10	180.30	0.07	FALT		Ch	VW	0.0	0								Core loss; very broken core zone.
East_Ave	A070A	180.30	181.20	0.86	LBPF		Ac	S	0.7	78	4	1	JT			US	Cy	Some puggy clay infilling joints.
East_Ave	A070A	181.20	187.10	5.02	LBPF		Ac	MS	2.6	51	34	1.5	JT	40		US	Cy	Broken in places; puggy clay in fractures.
East_Ave	A070A	187.10	189.00	1.76	LBVF		Ac	MS	0.9	53	10	1.5	JT			UR	Cy	Puggy clay in a few fractures.
East_Ave	A070A	189.00	195.70	5.97	VBLM		Si	ES	3.3	56	32	1.5	JT	25		PS	Cb	Localised broken core zones.
East_Ave	A070A	195.70	198.05	2.23	LBPF		Ac	S	1.7	78	8	1.5	JT			US	Ch	Waxy fracture planes.
East_Ave	A070A	198.05	204.60	6.21	LBPF		Ac	W	3.9	63	32	2	JT			UR	Ch	High-angle tremolite-chlorite fractures.
East_Ave	A070A	204.60	207.10	2.30	VBVF		Ac	MS	1.8	78	11	1.5	JT			US	Se	Broken in places; waxy fracture planes.
East_Ave	A070A	207.10	208.85	1.75	VBVF		Se	ES	1.4	78	7	1	JT	50		PS	X	Solid core; few natural breaks.
East_Ave	A070A	208.85	216.05	6.81	VBVF		Se	VS	5.6	83	26	1.5	JT	60		PS	Se	Dominant bedding parallel joint set.
East_Ave	A070A	216.05	216.70	0.06	LOSS		Ac	W	0.0	0						PS	Ch	Core loss zone.
East_Ave	A070A	216.70	217.35	0.62	VBVF		Ac	S	0.4	68	5	1	JT	20		US	Cy	Regular natural breaks; waxy fractures.
East_Ave	A070A	217.35	219.80	2.14	VBLF		Ac	VS	1.4	64	11	1.5	JT	60		PS	Se	Regular carbonate-infilled micro-veins.
East_Ave	A070A	219.80	220.50	0.45	VBLF		Ac	MS	0.1	24	5	2	JT			UR	Ch	Broken throughout; waxy fractures.
East_Ave	A070A	220.50	228.00	7.09	LBVF		Cb	MS	5.2	74	26	1.5	JT			US	Ch	Strongly veined; broken in patches.
East_Ave	A070A	228.00	230.65	2.49	VBLF		Ac	VS	2.1	86	10	1.5	JT	55		PS	X	Becoming broken at base.
East_Ave	A070A	230.65	231.30	0.35	LBPF		Sp	W	0.0	0	8	2	JT			PS	Sp	Very broken; waxy, serpentinised.
East_Ave	A070A	231.30	238.10	6.24	CARB		Cb	S	4.1	65	27	1.5	JT	30		PR	Cb	Very broken in patches; core loss zones
																		from 232.45-232.9m and 235.9-236.05m;
																		waxy fractures.
East_Ave	A070A	238.10	238.60	0.00	LOSS				0.0									Rounded fragments only; caved material.
East_Ave	A070A	238.60	244.60	5.42	VBLF		Ac	S	3.4	63	29	1.5	JT	30	50	US	Ch	Very broken at start; becoming solid core
																		from 240.4m.
East_Ave	A070A	244.60	248.50	3.81	VBVF		Ac	ES	3.8	100	7	1	JT	50		US	X	Solid, generally unbroken core.
East_Ave	A070A	248.50	255.05	6.50	VBLM		Se	ES	5.4	83	18	1.5	JT	65		PS	X	Solid core; few natural breaks.
East_Ave	A070A	255.05	255.85	0.56	FALT		Ch	W	0.2	43	8	1	JT	25		US	Cy	Very broken; sheared; chloritic fractures.

Geotech Sheet

Project	BHID	From	To	Recovery	Lithology	Weathering	Alteration	Strength	length>10cm	RQD%	No. defects	Defect sets	Defect type	bca struct 1	bca struct 2	Roughness	Fill	Comments
East_Ave	A070A	255.85	258.80	2.73	VBLF		Ph	VS	2.1	76	12	1.5	JT	40		US	Ch	Becoming solid; sparse py. on joints.
East_Ave	A070A	258.80	261.35	2.52	LBPF		Sc	ES	2.2	88	5	1	JT			UR	Cb	Solid core; few natural breaks.
East_Ave	A070A	261.35	261.50	0.08	LOSS		Ch	W	0.0	0						PS	Cb	No intact core; wedged core fragments.
East_Ave	A070A	261.50	263.25	1.68	VBLM		Ac	S	0.9	51	9	1.5	JT			US	Cb	Strongly fractured; carbonate veined.
East_Ave	A070A	263.25	277.00	13.4	VBLB		Ac	VS	12	92	19	1	JT			PS	Ch	Solid core; few natural breaks.
East_Ave	A070A	277.00	279.70	2.67	VBVF		Ac	VS	2.5	95	3	0				US	X	Solid core; very few natural breaks.
East_Ave	A070A	279.70	282.30	2.52	VBLB		So	VS	2.2	85	3	0				PS	Ch	Solid core; broken from 281.5-281.75m.
East_Ave	A070A	282.30	284.95	2.57	VBVF		Se	ES	2.3	90	5	1	JT	35		PS	Cy	Generally solid core; jointing at vein.
East_Ave	A070A	284.95	294.40	9.38	VBLB		Ac	ES	8.6	92	12	1	JT			US	X	Very solid core; few natural breaks.
East_Ave	A070A	294.40	302.25	7.62	VBVB		Ac	ES	7.0	92	10	1	JT			UR	X	Extremely solid core; tough and compact.
East_Ave	A070A	302.25	304.50	2.21	SKRN		Ac	VS	2.0	91	4	1	JT	35		PS	Cb	Solid core; regular natural breaks.
East_Ave	A070A	304.50	309.75	5.16	SKRN		Asc	ES	5.1	98	8	1	JT	65		US	Cb	Solid core; irregular natural breaks.
East_Ave	A070A	309.75	311.55	1.75	SKRN		So	ES	1.3	74	5	1.5	JT	62	15	US	Cb	Solid core; irregular natural breaks.
East_Ave	A070A	311.55	316.90	5.08	SKRN		Ph	S	3.1	60	41	1.5	JT	58		PS	Sp	Regular breaks; altered ?talc on joints;
																		becoming more broken, weaker at base.
East_Ave	A070A	316.90	317.25	0.17	LOSS		Sp	VW	0	0	4	1	JT			US	Cy	Core loss; waxy, crumbly core.
East_Ave	A070A	317.25	318.35	1.01	SKSP		Ph	VS	0.9	88	6	1.5	JT	73		US	Cb	Solid core; irregular natural breaks.
East_Ave	A070A	318.35	328.10	9.72	SERP		Mg	MS	9.1	93	11	1	JT	55		US	Sp	Solid core, but soft to very soft throughout;
																		pale ?serpentine on joints.
East_Ave	A070A	328.10	334.15	5.84	SERP		Mg	MS	5.4	92	9	1.5	JT	20		PS	Cy	Solid core, but soft throughout;
East_Ave	A070A	334.15	335.70	1.51	SERP		Mg	MS	1.5	96	3	1	JT	50		PS	Sp	Solid core; soft; few natural breaks.
East_Ave	A070A	335.70	339.70	3.93	SERP		Mg	MS	3.7	93	3	0				PS	Sp	Solid core; soft; rare natural breaks.
East_Ave	A070A	339.70	349.25	9.43	SERP		Sc	MS	8.5	90	22	1.5	JT	50		PS	Sp	Sparse chrysotile in veins and on joints.
East_Ave	A070A	349.25	355.45	6.12	SERP		Mg	MS	5.7	93	7	1.5	JT	50		US	Sp	Trace chrysotile on joint surfaces.
East_Ave	A070A	355.45	355.70	0.08	SERP		Sc	W	0.0	0	4	2	JT			PS	Sp	Slickensides with serpentine-chrysotile ;
																		broken core; core loss apparent.
East_Ave	A070A	355.70	359.80	4.10	SERP		Sc	MS	3.6	88	8	1.5	JT	18	62	PS	Sp	Slickensided clayey, fibrous serpentine on
																		joint surfaces; locally with chrysotile.

Geotech Sheet

Project	BHID	From	To	Recovery	Lithology	Weathering	Alteration	Strength	length>10cm	RQD%	No. defects	Defect sets	Defect type	bca struct 1	bca struct 2	Roughness	Fill	Comments
East_Ave	A070A	359.80	368.95	9.02	SERP		Mg	MS	8.5	95	16	1.5	JT	35	87	US	Cb	Rare serpentine-chrysotile on joints.
East_Ave	A070A	368.95	391.40	22.0	SERP		Mg	S	20	90	32	1.5	JT	60	18	PS	Sp	Locally clayey serpentine-chrysotile on joints and as rare micro-veins.
East_Ave	A070A	391.40	391.55	0.04	LOSS		Sc	MS	0.0	0						PS	Sp	Broken core fragments; loss apparent.
East_Ave	A070A	391.55	394.75	3.13	SERP		Mg	MS	2.7	87	11	1.5	JT	58	18	PS	Sp	Regular breaks; serpentine-chrysotile on joints; fibrous joint surfaces.
East_Ave	A070A	394.75	395.20	0.37	SERP		Sc	W	0.1	30	9	2.5	JT			US	Sp	Fibrous serpentine-chrysotile on joint surfaces; very broken core.
East_Ave	A070A	395.20	400.70	5.21	SERP		Mg	MS	4.4	83	23	2	JT	50	35	PS	Sp	Broken core throughout; fibrous joint surfaces, with serpentine-chrysotile.
East_Ave	A070A	400.70	401.00	0.22	FALT		Sc	VW	0.0	0	7	4	FR			SS	Cy	Very broken, crumbly core; swelling clay.
East_Ave	A070A	401.00	404.50	3.42	SERP		Sc	MS	2.6	77	13	2	JT	70	25	PS	Sp	Weak, broken ground at start of interval.
East_Ave	A070A	404.50	414.25	9.62	SERP		Mg	MS	8.6	89	21	1.5	JT	60	35	PS	Sp	Fibrous serpentine-chrysotile on joints.
East_Ave	A070A	414.25	414.45	0.12	FALT		Sc	VW	0.0	0	7	4	FR			US	Cy	Very broken, crumbly core; puggy clay.
East_Ave	A070A	414.45	422.80	7.78	SERP		Sc	W	4.4	56	47	2	FT	60	30	US	Cy	Numerous small faults infilled with puggy clay and, in places, breccia; weak, very strongly fractured ground.
East_Ave	A070A	422.80	423.15	0.27	FALT			VW	0.2	70	3	1	FT	40		US	Cy	Intact, but clayey core; very weak ground.
East_Ave	A070A	423.15	425.85	2.58	SERP		Sc	MS	1.5	58	21	2	JT	60	35	PS	Cb	Very broken core in places; fibrous, clayey serpentine-chrysotile on joints.
East_Ave	A070A	425.85	426.20	0.06	LOSS		Sp	W	0.0	0						PS	Sp	Core loss zone; broken ground.
East_Ave	A070A	426.20	431.50	4.86	SERP		Mg	MS	1.7	36	25	2.5	JT	35	15	US	Cy	Core broken to very broken throughout; weak, puggy clay zones in micro-faults.
East_Ave	A070A	431.50	448.20	16.3	SERP		Mg	S	15	91	52	1.5	JT	60	50	PS	Cb	Solid core, with regular natural breaks; rare serpentine-chrysotile on joints.
East_Ave	A070A	448.20	469.25	20.6	SERP		Mg	S	18	89	30	1.5	JT	37	55	PS	X	Rare clayey, fibrous serpentine-chrysotile on joints; generally very solid core.
East_Ave	A070A	469.25	469.35	0.03	LOSS		Ac	W	0.0	0						SS	Cy	Very broken, fragmented core.

Geotech Sheet

Project	BHID	From	To	Recovery	Lithology	Weathering	Alteration	Strength	length>10cm	RQD%	No. defects	Defect sets	Defect type	bca struct 1	bca struct 2	Roughness	Fill	Comments
East_Ave	A070A	469.35	471.80	2.42	SERP		Mg	MS	2.3	96	3	1	JT	45		PS	Cy	Solid core; clay after serpentine-chrysotile
																		on joints.
East_Ave	A070A	471.80	473.45	1.55	SKSP		Sp	W	1.3	83	8	1	JT	35		PS	Cy	Strongly micro-fractured throughout.
East_Ave	A070A	473.45	474.00	0.50	FALT		Se	W	0.1	22	6	1.5	JT	40		US	Cy	Weak, clayey fault-infill zone.
East_Ave	A070A	474.00	477.30	3.21	SERP		Mg	MS	2.8	87	5	1	JT	45		US	Sp	Waxy, fibrous serpentine-chrysotile on
																		joints.
East_Ave	A070A	477.30	478.35	0.96	SERP		Sp	W	0.4	41	6	1	JT			PS	Cy	Fractured core; open micro-fractures.
East_Ave	A070A	478.35	496.80	18.2	SERP		Mg	MS	18	97	16	1	JT	60		PS	X	Fibrous serpentinite on a few joints.
East_Ave	A070A	496.80	504.75	7.61	SERP		Mg	MS	6.9	91	11	1.5	JT	42		PS	Cy	Puggy clay in some fractures near base.
East_Ave	A070A	504.75	510.20	5.42	SERP		Mg	MS	5.1	94	4	1	JT	55		US	Cy	Generally solid core; few natural breaks.
East_Ave	A070A	510.20	510.45	0.25	SKSP		Ac	MS	0.3	100	0							Solid, unbroken core.
East_Ave	A070A	510.45	529.10	18.2	SERP		Mg	MS	17	94	14	1	JT			PS	X	Few joints coated with fibrous serpentine-
																		chrysotile.
East_Ave	A070A	529.10	530.80	1.62	SERP		Sc	MS	1.4	84	5	1	JT	30		US	X	Rare serpentine-chrysotile on joints.
East_Ave	A070A	530.80	534.25	3.21	SERP		Mg	MS	1.5	48	29	1.5	JT	60	35	US	Sp	Numerous natural core breaks throughout;
																		minor fibrous to clayey serpentine-
																		chrysotile on joints, infilling steeper angle
																		fractures.
East_Ave	A070A	534.25	551.05	16.2	SERP		Mg	MS	14	90	39	1.5	JT	67	28	PS	Sp	Shallower angle joints are generally clean
																		breaks; steeper angle joints are coated with
																		fibrous serpentine-chrysotile.
East_Ave	A070A	551.05	567.00	15.7	SERP		Sc	S	15	96	13	1	JT	72		UR	Sp	Few natural breaks; joints locally coated
																		with serpentine-chrysotile.
East_Ave	A070A	567.00	568.50	1.49	SERP			MS	1.3	87	4	1.5	JT	22		UR	Sp	Some clayey serpentine-chrysotile as
																		smears on joint surfaces.
East_Ave	A070A	568.50	569.20	0.32	SERP			VW	0.0	0	15	2.5	JT			US	Sp	Extremely broken core; few intact pieces;
																		waxy serpentine on joint surfaces.
East_Ave	A070A	569.20	575.90	6.43	SERP		Mg	MS	5.1	79	23	1.5	JT	30	40	PS	Sp	Regular breaks in core; soft throughout;
																		fibrous serpentine-chrysotile on some jts.

Geotech Sheet

Project	BHID	From	To	Recovery	Lithology	Weathering	Alteration	Strength	length>10cm	RQD%	No. defects	Defect sets	Defect type	bca struct 1	bca struct 2	Roughness	Fill	Comments
East_Ave	A070A	575.90	577.00	0.49	FALT			EW	0.0	0								Disaggregated puggy clay; few intact core
																		pieces.
East_Ave	A070A	577.00	579.65	2.54	SERP		Ac	W	2.0	79	14	1.5	JT	20	57	US	Cy	Numerous fine, open micro-fractures; core
																		appears to be leached, slightly weathered.
East_Ave	A070A	579.65	580.00	0.09	FALT			EW	0.0	0								Few puggy clay fragments only.
East_Ave	A070A	580.00	581.55	1.48	SERP		Ac	W	0.9	57	11	1	JT	25		PS	Cy	Broken throughout, becoming extremely
																		broken from 581.4m.
East_Ave	A070A	581.55	581.90	0.16	SERP		Mg	W	0.0	0	6	1.5	JT			PR	Sp	Broken core, with loss apparent.
East_Ave	A070A	581.90	589.50	7.04	SERP		Mg	MS	3.7	52	37	1.5	JT	50		PS	Cb	Core very broken throughout; minor puggy
																		clay in crush zones.
East_Ave	A070A	589.50	592.10	0.37	LOSS			VW	0.0	0						US	Cy	Common puggy clay fragments; few intact
																		core pieces; abundant caved material.
East_Ave	A070A	592.10	593.60	1.25	SERP		Ac	W	0.5	41	12	1.5	JT	40		US	Cy	Very broken core, becoming solid from
																		593.35m; puggy clay on some joints and
																		also as fragments.
East_Ave	A070A	593.60	624.30	30.1	SERP		Mg	S	29	95	35	1.5	JT	53	80	PS	X	Solid core, with few natural breaks; steeper
																		angle joints locally have puggy clay
																		coatings.
East_Ave	A070A	624.30	643.00	18.1	SERP		Sc	S	17	96	17	1	JT	42		PS	X	Solid, unbroken core; few natural breaks,
																		some with greasy, fibrous serpentine-
																		chrysotile coatings; core broken at end of
																		hole.
																		EOH depth confirmed at 643.0m.

Assay Sheet

Project	BHID	From m	To m	Ni %	Cu ppm	Pb ppm	Zn ppm	As ppm	Co ppm	S %	MgO %	Strat	Rock	
East Avebu	A070A	254.05	255.05	0.01				100	-20	-0.1	5.4	Cba	VBLM	1
East Avebu	A070A	255.05	255.85	0.02				100	20	-0.1	13.5		FALT	2
East Avebu	A070A	255.85	256.85	0.01				-50	40	1.1	11.4	Cba	VBLF	3
East Avebu	A070A	256.85	257.85	-0.01				-50	20	1.3	11.6	Cba	VBLF	4
East Avebu	A070A	257.85	258.80	-0.01				50	20	1.5	10.4	Cba	VBLF	5
East Avebu	A070A	258.80	259.80	-0.01				100	60	-0.1	13.1	Cba	LBPF	6
East Avebu	A070A	282.30	283.30	-0.01				-50	-20	-0.1	6.6	Cba	VBVF	7
East Avebu	A070A	283.30	284.30	0.02				200	80	-0.1	7.6	Cba	VBVF	8
East Avebu	A070A	284.30	284.95	0.01				250	80	0.2	5.7	Cba	VBVF	9
East Avebu	A070A	284.95	285.95	0.01				150	40	1.5	3.8	Cba	VBLB	10
East Avebu	A070A	285.95	286.95	0.01				300	120	0.3	5.2	Cba	VBLB	11
East Avebu	A070A	286.95	287.95	0.01				300	80	0.9	4.1	Cba	VBLB	12
East Avebu	A070A	287.95	288.95	-0.01				250	60	0.4	5.6	Cba	VBLB	13
East Avebu	A070A	308.75	309.75	0.01				100	20	-0.1	7.8	Cba	SKRN	14
East Avebu	A070A	309.75	310.75	-0.01				200	20	-0.1	6.5	Cba	SKRN	15
East Avebu	A070A	310.75	311.55	0.01				350	40	-0.1	6.2	Cba	SKRN	16
East Avebu	A070A	311.55	312.55	0.08				250	60	-0.1	14.7	Cba	SKRN	17
East Avebu	A070A	312.55	313.55	0.09				200	40	-0.1	15.0	Cba	SKRN	18
East Avebu	A070A	313.55	314.55	0.08				200	40	-0.1	15.3	Cba	SKRN	19
East Avebu	A070A	314.55	315.55	0.08				100	20	-0.1	16.0	Cba	SKRN	20
East Avebu	A070A	315.55	316.55	0.10				50	40	-0.1	16.0	Cba	SKRN	21
East Avebu	A070A	316.55	316.90	0.10				300	20	-0.1	17.7	Cba	SKRN	22
East Avebu	A070A	316.90	317.25	0.07				350	20	-0.1	19.1	Cba	LOSS	23
East Avebu	A070A	317.25	318.35	0.61				100	140	0.2	18.4	Cba	SKSP	24
East Avebu	A070A	318.35	319.35	0.19				1150	300	0.2	38.4	Csu	SERP	25
East Avebu	A070A	319.35	320.35	0.23				1600	320	-0.1	39.9	Csu	SERP	26
East Avebu	A070A	320.35	321.35	0.21				1300	240	-0.1	39.7	Csu	SERP	27
East Avebu	A070A	321.35	322.35	0.23				1450	220	-0.1	39.7	Csu	SERP	28
East Avebu	A070A	322.35	323.35	0.26				1600	220	-0.1	39.9	Csu	SERP	29
East Avebu	A070A	323.35	324.35	0.26				1750	220	-0.1	39.7	Csu	SERP	30
East Avebu	A070A	324.35	325.35	0.26				1350	200	-0.1	39.4	Csu	SERP	31
East Avebu	A070A	325.35	326.35	0.24				1300	180	-0.1	39.5	Csu	SERP	32

Assay Sheet

Project	BHID	From m	To m	Ni %	Cu ppm	Pb ppm	Zn ppm	As ppm	Co ppm	S %	MgO %	Strat	Rock	
East Avebu	A070A	326.35	327.35	0.29				1450	180	-0.1	38.7	Csu	SERP	33
East Avebu	A070A	327.35	328.10	0.25				1050	140	-0.1	39.2	Csu	SERP	34
East Avebu	A070A	328.10	329.10	0.23				950	140	-0.1	39.6	Csu	SERP	35
East Avebu	A070A	329.10	330.10	0.27				1050	120	-0.1	38.6	Csu	SERP	36
East Avebu	A070A	330.10	331.10	0.30				1300	140	-0.1	39.7	Csu	SERP	37
East Avebu	A070A	331.10	332.10	0.24				900	100	-0.1	39.2	Csu	SERP	38
East Avebu	A070A	332.10	333.10	0.26				1000	100	-0.1	39.5	Csu	SERP	39
East Avebu	A070A	333.10	334.15	0.26				850	100	-0.1	39.7	Csu	SERP	40
East Avebu	A070A	334.15	335.15	0.28				900	100	-0.1	39.2	Csu	SERP	41
East Avebu	A070A	335.15	335.70	0.23				800	80	-0.1	39.3	Csu	SERP	42
East Avebu	A070A	335.70	336.70	0.28				700	120	-0.1	39.4	Csu	SERP	43
East Avebu	A070A	336.70	337.70	0.27				750	120	-0.1	39.3	Csu	SERP	44
East Avebu	A070A	337.70	338.70	0.24				650	100	-0.1	39.0	Csu	SERP	45
East Avebu	A070A	338.70	339.70	0.23				500	100	-0.1	38.8	Csu	SERP	46
East Avebu	A070A	339.70	340.70	0.24				550	120	-0.1	39.7	Csu	SERP	47
East Avebu	A070A	340.70	341.70	0.27				850	120	-0.1	38.8	Csu	SERP	48
East Avebu	A070A	341.70	342.70	0.74				2000	280	-0.1	38.9	Csu	SERP	49
East Avebu	A070A	342.70	343.70	0.44				1700	120	-0.1	40.4	Csu	SERP	50
East Avebu	A070A	343.70	344.70	0.45				1150	160	-0.1	40.2	Csu	SERP	51
East Avebu	A070A	344.70	345.70	0.40				1000	160	-0.1	40.9	Csu	SERP	52
East Avebu	A070A	345.70	346.70	0.33				800	140	-0.1	39.9	Csu	SERP	53
East Avebu	A070A	346.70	347.70	0.39				1050	140	-0.1	40.5	Csu	SERP	54
East Avebu	A070A	347.70	348.70	0.26				600	120	-0.1	40.3	Csu	SERP	55
East Avebu	A070A	348.70	349.25	0.30				700	160	-0.1	39.8	Csu	SERP	56
East Avebu	A070A	349.25	350.25	0.24				650	120	-0.1	40.5	Csu	SERP	57
East Avebu	A070A	350.25	351.25	0.30				1100	140	-0.1	40.9	Csu	SERP	58
East Avebu	A070A	351.25	352.25	0.22				550	100	-0.1	39.9	Csu	SERP	59
East Avebu	A070A	352.25	353.25	0.22				450	120	-0.1	40.2	Csu	SERP	60
East Avebu	A070A	353.25	354.25	0.24				500	120	-0.1	39.5	Csu	SERP	61
East Avebu	A070A	354.25	355.70	0.23				400	140	-0.1	38.7	Csu	SERP	62
East Avebu	A070A	355.70	356.70	0.24				300	120	-0.1	39.9	Csu	SERP	63
East Avebu	A070A	356.70	357.70	0.24				400	120	-0.1	39.2	Csu	SERP	64

Assay Sheet														
Project	BHID	From m	To m	Ni %	Cu ppm	Pb ppm	Zn ppm	As ppm	Co ppm	S %	MgO %	Strat	Rock	
East Avebu	A070A	357.70	358.70	0.39				450	180	-0.1	40.5	Csu	SERP	65
East Avebu	A070A	358.70	359.80	0.58				300	240	0.2	39.8	Csu	SERP	66
East Avebu	A070A	359.80	360.80	0.25				150	140	-0.1	40.1	Csu	SERP	67
East Avebu	A070A	360.80	361.80	0.25				250	140	-0.1	39.5	Csu	SERP	68
East Avebu	A070A	361.80	362.80	0.29				550	140	-0.1	39.2	Csu	SERP	69
East Avebu	A070A	362.80	363.80	0.23				250	120	-0.1	39.6	Csu	SERP	70
East Avebu	A070A	363.80	364.80	0.25				200	120	-0.1	40.6	Csu	SERP	71
East Avebu	A070A	364.80	365.80	0.24				150	120	-0.1	41.0	Csu	SERP	72
East Avebu	A070A	365.80	366.80	0.29				150	140	-0.1	40.7	Csu	SERP	73
East Avebu	A070A	366.80	367.80	0.29				150	140	-0.1	39.9	Csu	SERP	74
East Avebu	A070A	367.80	368.95	0.28				200	140	-0.1	40.4	Csu	SERP	75
East Avebu	A070A	368.95	370.00	0.26				150	140	-0.1	40.3	Csu	SERP	76
East Avebu	A070A	370.00	371.00	0.25				250	140	-0.1	39.9	Csu	SERP	77
East Avebu	A070A	371.00	372.00	0.25				300	120	-0.1	40.2	Csu	SERP	78
East Avebu	A070A	372.00	373.00	0.24				400	120	-0.1	40.7	Csu	SERP	79
East Avebu	A070A	373.00	374.00	0.22				400	120	-0.1	39.7	Csu	SERP	80
East Avebu	A070A	374.00	375.00	0.21				350	120	-0.1	39.8	Csu	SERP	81
East Avebu	A070A	375.00	376.00	0.24				450	140	-0.1	39.4	Csu	SERP	82
East Avebu	A070A	376.00	377.00	0.32				450	180	-0.1	39.9	Csu	SERP	83
East Avebu	A070A	377.00	378.00	0.23				500	120	-0.1	39.7	Csu	SERP	84
East Avebu	A070A	378.00	379.00	0.22				600	100	-0.1	40.6	Csu	SERP	85
East Avebu	A070A	379.00	380.00	0.21				500	100	-0.1	39.7	Csu	SERP	86
East Avebu	A070A	380.00	381.00	0.21				500	100	-0.1	40.0	Csu	SERP	87
East Avebu	A070A	381.00	382.00	0.20				550	100	-0.1	40.4	Csu	SERP	88
East Avebu	A070A	382.00	383.00	0.20				600	100	-0.1	39.3	Csu	SERP	89
East Avebu	A070A	383.00	384.00	0.22				550	120	-0.1	41.1	Csu	SERP	90
East Avebu	A070A	384.00	385.00	0.21				400	120	-0.1	42.8	Csu	SERP	91
East Avebu	A070A	385.00	386.00	0.21				250	120	-0.1	40.0	Csu	SERP	92
East Avebu	A070A	386.00	387.00	0.22				150	140	-0.1	40.0	Csu	SERP	93
East Avebu	A070A	387.00	388.00	0.23				150	140	-0.1	40.8	Csu	SERP	94
East Avebu	A070A	388.00	389.00	0.23				250	120	-0.1	40.9	Csu	SERP	95
East Avebu	A070A	389.00	390.00	0.22				200	120	-0.1	41.3	Csu	SERP	96

Assay Sheet

Project	BHID	From m	To m	Ni %	Cu ppm	Pb ppm	Zn ppm	As ppm	Co ppm	S %	MgO %	Strat	Rock	
East Avebu	A070A	390.00	391.00	0.23				250	140	-0.1	39.7	Csu	SERP	97
East Avebu	A070A	391.00	391.55	0.23				250	120	-0.1	39.9	Csu	LOSS	98
East Avebu	A070A	391.55	392.55	0.23				250	120	-0.1	40.0	Csu	SERP	99
East Avebu	A070A	392.55	393.55	0.25				200	140	-0.1	39.7	Csu	SERP	100
East Avebu	A070A	393.55	394.75	0.22				200	120	-0.1	40.2	Csu	SERP	101
East Avebu	A070A	394.75	395.20	0.23				250	120	-0.1	40.4	Csu	SERP	102
East Avebu	A070A	395.20	396.20	0.22				250	120	-0.1	40.8	Csu	SERP	103
East Avebu	A070A	396.20	397.20	0.24				400	100	-0.1	39.9	Csu	SERP	104
East Avebu	A070A	397.20	398.20	0.25				450	120	-0.1	40.7	Csu	SERP	105
East Avebu	A070A	398.20	399.20	0.24				250	120	-0.1	40.9	Csu	SERP	106
East Avebu	A070A	399.20	400.20	0.23				150	140	-0.1	40.2	Csu	SERP	107
East Avebu	A070A	400.20	400.70	0.23				150	140	-0.1	40.9	Csu	SERP	108
East Avebu	A070A	400.70	401.00	0.24				150	100	-0.1	42.7		FALT	109
East Avebu	A070A	401.00	402.00	0.19				300	100	-0.1	41.5	Csu	SERP	110
East Avebu	A070A	402.00	403.00	0.21				350	100	-0.1	40.5	Csu	SERP	111
East Avebu	A070A	403.00	404.00	0.24				500	100	-0.1	40.0	Csu	SERP	112
East Avebu	A070A	404.00	404.50	0.23				450	100	-0.1	40.2	Csu	SERP	113
East Avebu	A070A	404.50	405.50	0.25				550	140	-0.1	40.1	Csu	SERP	114
East Avebu	A070A	405.50	406.50	0.23				600	100	-0.1	39.7	Csu	SERP	115
East Avebu	A070A	406.50	407.50	0.23				800	100	1.5	36.2	Csu	SERP	116
East Avebu	A070A	407.50	408.50	0.24				600	120	-0.1	40.3	Csu	SERP	117
East Avebu	A070A	408.50	409.50	0.23				50	120	-0.1	40.4	Csu	SERP	118
East Avebu	A070A	409.50	410.50	0.21				300	100	-0.1	40.4	Csu	SERP	119
East Avebu	A070A	410.50	411.50	0.23				500	100	-0.1	40.5	Csu	SERP	120
East Avebu	A070A	411.50	412.50	0.21				350	100	-0.1	38.5	Csu	SERP	121
East Avebu	A070A	412.50	413.50	0.24				400	120	-0.1	39.9	Csu	SERP	122
East Avebu	A070A	413.50	414.25	0.23				150	140	-0.1	39.4	Csu	SERP	123
East Avebu	A070A	414.25	414.45	0.22				150	120	-0.1	41.3		FALT	124
East Avebu	A070A	414.45	415.45	0.23				150	120	-0.1	40.2	Csu	SERP	125
East Avebu	A070A	415.45	416.45	0.22				50	140	-0.1	39.5	Csu	SERP	126
East Avebu	A070A	416.45	417.45	0.24				200	140	-0.1	39.1	Csu	SERP	127

Assay Sheet

Project	BHID	From m	To m	Ni %	Cu ppm	Pb ppm	Zn ppm	As ppm	Co ppm	S %	MgO %	Strat	Rock	
East Avebu	A070A	417.45	418.45	0.22				300	120	-0.1	38.3	Csu	SERP	128
East Avebu	A070A	418.45	419.45	0.22				150	140	-0.1	39.3	Csu	SERP	129
East Avebu	A070A	419.45	420.60	0.21				150	120	-0.1	40.8	Csu	SERP	130
East Avebu	A070A	420.60	421.60	0.21				100	120	-0.1	41.0	Csu	SERP	131
East Avebu	A070A	421.60	422.80	0.23				100	140	-0.1	42.3	Csu	SERP	132
East Avebu	A070A	422.80	423.15	0.24				50	160	-0.1	42.1		FALT	133
East Avebu	A070A	423.15	424.15	0.25				100	180	-0.1	39.7	Csu	SERP	134
East Avebu	A070A	424.15	425.15	0.27				50	180	-0.1	39.5	Csu	SERP	135
East Avebu	A070A	425.15	426.20	0.48				50	300	0.1	39.0	Csu	SERP	136
East Avebu	A070A	426.20	427.20	0.22				50	160	-0.1	39.8	Csu	SERP	137
East Avebu	A070A	427.20	428.20	0.30				100	200	-0.1	39.6	Csu	SERP	138
East Avebu	A070A	428.20	429.20	0.25				50	140	-0.1	40.2	Csu	SERP	139
East Avebu	A070A	429.20	430.20	0.28				50	160	-0.1	39.7	Csu	SERP	140
East Avebu	A070A	430.20	431.20	0.27				50	180	0.1	39.0	Csu	SERP	141
East Avebu	A070A	431.20	431.50	0.31				50	200	0.1	39.2	Csu	SERP	142
East Avebu	A070A	431.50	432.50	0.24				50	140	-0.1	39.4	Csu	SERP	143
East Avebu	A070A	432.50	433.50	0.29				50	180	0.1	39.1	Csu	SERP	144
East Avebu	A070A	433.50	434.50	0.26				-50	160	-0.1	40.4	Csu	SERP	145
East Avebu	A070A	434.50	435.50	0.24				50	140	-0.1	39.9	Csu	SERP	146
East Avebu	A070A	435.50	436.50	0.24				50	140	-0.1	40.0	Csu	SERP	147
East Avebu	A070A	436.50	437.50	0.23				50	140	-0.1	39.7	Csu	SERP	148
East Avebu	A070A	437.50	438.50	0.24				50	140	-0.1	40.4	Csu	SERP	149
East Avebu	A070A	438.50	439.50	0.26				50	160	-0.1	39.6	Csu	SERP	150
East Avebu	A070A	439.50	440.50	0.26				50	160	-0.1	39.5	Csu	SERP	151
East Avebu	A070A	440.50	441.50	0.20				50	140	-0.1	40.6	Csu	SERP	152
East Avebu	A070A	441.50	442.50	0.24				-50	160	-0.1	39.7	Csu	SERP	153
East Avebu	A070A	442.50	443.50	0.24				50	160	-0.1	39.1	Csu	SERP	154
East Avebu	A070A	443.50	444.50	0.22				50	160	-0.1	39.6	Csu	SERP	155
East Avebu	A070A	444.50	445.50	0.22				50	160	-0.1	38.8	Csu	SERP	156
East Avebu	A070A	445.50	446.50	0.24				50	160	-0.1	39.8	Csu	SERP	157
East Avebu	A070A	446.50	447.50	0.24				50	160	-0.1	39.1	Csu	SERP	158

Assay Sheet

Project	BHID	From m	To m	Ni %	Cu ppm	Pb ppm	Zn ppm	As ppm	Co ppm	S %	MgO %	Strat	Rock	
East Avebu	A070A	447.50	448.20	0.21				50	160	-0.1	39.2	Csu	SERP	159
East Avebu	A070A	448.20	449.20	0.22				50	160	-0.1	38.8	Csu	SERP	160
East Avebu	A070A	449.20	450.20	0.26				50	200	-0.1	38.4	Csu	SERP	161
East Avebu	A070A	450.20	451.20	0.34				50	240	-0.1	37.9	Csu	SERP	162
East Avebu	A070A	451.20	452.20	0.25				50	180	-0.1	39.5	Csu	SERP	163
East Avebu	A070A	452.20	453.20	0.32				50	220	-0.1	38.9	Csu	SERP	164
East Avebu	A070A	453.20	454.20	0.27				50	180	-0.1	39.1	Csu	SERP	165
East Avebu	A070A	454.20	455.20	0.29				50	200	-0.1	39.2	Csu	SERP	166
East Avebu	A070A	455.20	456.20	0.22				50	160	-0.1	39.2	Csu	SERP	167
East Avebu	A070A	456.20	457.20	0.21				50	140	-0.1	38.8	Csu	SERP	168
East Avebu	A070A	457.20	458.20	0.20				50	140	-0.1	38.9	Csu	SERP	169
East Avebu	A070A	458.20	459.20	0.22				50	140	-0.1	38.3	Csu	SERP	170
East Avebu	A070A	459.20	460.20	0.21				50	140	-0.1	39.1	Csu	SERP	171
East Avebu	A070A	460.20	461.20	0.23				50	180	-0.1	38.8	Csu	SERP	172
East Avebu	A070A	461.20	462.20	0.23				50	180	-0.1	38.9	Csu	SERP	173
East Avebu	A070A	462.20	463.20	0.22				50	180	-0.1	38.6	Csu	SERP	174
East Avebu	A070A	463.20	464.20	0.22				50	180	-0.1	38.5	Csu	SERP	175
East Avebu	A070A	464.20	465.20	0.23				50	180	-0.1	38.6	Csu	SERP	176
East Avebu	A070A	465.20	466.20	0.22				50	160	-0.1	39.5	Csu	SERP	177
East Avebu	A070A	466.20	467.20	0.22				50	160	-0.1	38.6	Csu	SERP	178
East Avebu	A070A	467.20	468.20	0.24				50	180	-0.1	39.5	Csu	SERP	179
East Avebu	A070A	468.20	469.35	0.24				50	180	0.2	38.3	Csu	SERP	180
East Avebu	A070A	469.35	470.35	0.22				50	180	-0.1	39.4	Csu	SERP	181
East Avebu	A070A	470.35	471.35	0.23				50	180	-0.1	39.3	Csu	SERP	182
East Avebu	A070A	471.35	471.80	0.20				50	140	-0.1	39.9	Csu	SERP	183
East Avebu	A070A	471.80	472.80	0.22				50	160	0.1	39.6	Csu	SERP	184
East Avebu	A070A	472.80	473.45	0.24				50	180	-0.1	40.3	Csu	SERP	185
East Avebu	A070A	473.45	474.00	0.26				50	160	-0.1	41.6		FALT	186
East Avebu	A070A	474.00	475.00	0.26				50	160	-0.1	41.8	Csu	SERP	187
East Avebu	A070A	475.00	476.00	0.36				100	220	-0.1	40.5	Csu	SERP	188
East Avebu	A070A	476.00	477.00	0.27				50	180	-0.1	40.2	Csu	SERP	189

Assay Sheet

Project	BHID	From m	To m	Ni %	Cu ppm	Pb ppm	Zn ppm	As ppm	Co ppm	S %	MgO %	Strat	Rock	
East Avebu	A070A	477.00	477.30	0.23				50	160	-0.1	40.0	Csu	SERP	190
East Avebu	A070A	477.30	478.35	0.22				50	140	-0.1	40.9	Csu	SERP	191
East Avebu	A070A	478.35	479.35	0.26				50	180	-0.1	40.5	Csu	SERP	192
East Avebu	A070A	479.35	480.35	0.20				50	140	-0.1	40.0	Csu	SERP	193
East Avebu	A070A	480.35	481.35	0.18				50	140	-0.1	39.8	Csu	SERP	194
East Avebu	A070A	481.35	482.35	0.17				50	140	-0.1	39.1	Csu	SERP	195
East Avebu	A070A	482.35	483.35	0.25				50	180	-0.1	40.4	Csu	SERP	196
East Avebu	A070A	483.35	484.35	0.27				50	180	-0.1	40.1	Csu	SERP	197
East Avebu	A070A	484.35	485.35	0.18				50	140	-0.1	39.9	Csu	SERP	198
East Avebu	A070A	485.35	486.35	0.25				50	180	-0.1	39.4	Csu	SERP	199
East Avebu	A070A	486.35	487.35	0.18				50	160	-0.1	39.8	Csu	SERP	200
East Avebu	A070A	487.35	488.35	0.18				50	160	-0.1	39.8	Csu	SERP	201
East Avebu	A070A	488.35	489.35	0.17				50	160	-0.1	39.5	Csu	SERP	202
East Avebu	A070A	489.35	490.35	0.20				50	160	-0.1	40.7	Csu	SERP	203
East Avebu	A070A	490.35	491.35	0.20				50	140	-0.1	39.7	Csu	SERP	204
East Avebu	A070A	491.35	492.35	0.19				50	160	-0.1	40.2	Csu	SERP	205
East Avebu	A070A	492.35	493.35	0.20				50	140	-0.1	41.3	Csu	SERP	206
East Avebu	A070A	493.35	494.35	0.24				50	160	-0.1	40.9	Csu	SERP	207
East Avebu	A070A	494.35	495.35	0.22				50	160	-0.1	39.1	Csu	SERP	208
East Avebu	A070A	495.35	496.35	0.18				50	140	-0.1	40.2	Csu	SERP	209
East Avebu	A070A	496.35	496.80	0.17				50	140	-0.1	40.4	Csu	SERP	210
East Avebu	A070A	496.80	497.80	0.18				50	140	-0.1	40.1	Csu	SERP	211
East Avebu	A070A	497.80	498.80	0.19				50	140	-0.1	39.8	Csu	SERP	212
East Avebu	A070A	498.80	499.80	0.27				50	200	-0.1	38.7	Csu	SERP	213
East Avebu	A070A	499.80	500.80	0.17				50	160	-0.1	39.0	Csu	SERP	214
East Avebu	A070A	500.80	501.80	0.18				50	180	-0.1	40.2	Csu	SERP	215
East Avebu	A070A	501.80	502.80	0.41				50	280	-0.1	39.1	Csu	SERP	216
East Avebu	A070A	502.80	503.80	0.20				50	180	-0.1	40.9	Csu	SERP	217
East Avebu	A070A	503.80	504.75	0.18				50	140	-0.1	40.7	Csu	SERP	218
East Avebu	A070A	504.75	505.75	0.16				50	140	-0.1	40.2	Csu	SERP	219
East Avebu	A070A	505.75	506.75	0.17				50	160	-0.1	38.8	Csu	SERP	220
East Avebu	A070A	506.75	507.75	0.17				50	160	-0.1	38.8	Csu	SERP	221

Assay Sheet

Project	BHID	From m	To m	Ni %	Cu ppm	Pb ppm	Zn ppm	As ppm	Co ppm	S %	MgO %	Strat	Rock	
East Avebu	A070A	507.75	508.75	0.17				50	160	-0.1	39.2	Csu	SERP	222
East Avebu	A070A	508.75	509.75	0.30				200	220	-0.1	39.9	Csu	SERP	223
East Avebu	A070A	509.75	510.20	0.18				50	160	-0.1	40.0	Csu	SERP	224
East Avebu	A070A	510.20	510.45	1.29				100	580	1.1	39.8	Csu	SKSP	225
East Avebu	A070A	510.45	511.50	0.17				50	140	-0.1	40.1	Csu	SERP	226
East Avebu	A070A	511.50	512.50	0.17				50	160	-0.1	38.3	Csu	SERP	227
East Avebu	A070A	512.50	513.50	0.18				50	160	-0.1	38.0	Csu	SERP	228
East Avebu	A070A	513.50	514.50	0.16				50	140	-0.1	38.5	Csu	SERP	229
East Avebu	A070A	514.50	515.50	0.17				50	160	-0.1	36.7	Csu	SERP	230
East Avebu	A070A	515.50	516.50	0.15				50	140	-0.1	38.1	Csu	SERP	231
East Avebu	A070A	516.50	517.50	0.19				100	200	-0.1	34.0	Csu	SERP	232
East Avebu	A070A	517.50	518.50	0.16				100	160	-0.1	36.3	Csu	SERP	233
East Avebu	A070A	518.50	519.50	0.16				50	180	-0.1	36.7	Csu	SERP	234
East Avebu	A070A	519.50	520.50	0.17				50	180	-0.1	36.3	Csu	SERP	235
East Avebu	A070A	520.50	521.50	0.18				50	180	-0.1	36.6	Csu	SERP	236
East Avebu	A070A	521.50	522.50	0.21				100	180	-0.1	37.9	Csu	SERP	237
East Avebu	A070A	522.50	523.50	0.25				100	200	-0.1	36.4	Csu	SERP	238
East Avebu	A070A	523.50	524.50	0.37				50	240	-0.1	35.9	Csu	SERP	239
East Avebu	A070A	524.50	525.50	0.26				50	180	-0.1	39.1	Csu	SERP	240
East Avebu	A070A	525.50	526.50	0.25				150	160	-0.1	39.1	Csu	SERP	241
East Avebu	A070A	526.50	527.50	0.25				350	120	-0.1	39.4	Csu	SERP	242
East Avebu	A070A	527.50	528.50	0.21				250	120	-0.1	40.0	Csu	SERP	243
East Avebu	A070A	528.50	529.10	0.20				150	100	-0.1	39.0	Csu	SERP	244
East Avebu	A070A	529.10	530.10	0.20				100	140	-0.1	38.8	Csu	SERP	245
East Avebu	A070A	530.10	530.80	0.35				150	200	-0.1	39.5	Csu	SERP	246
East Avebu	A070A	530.80	531.80	0.21				150	120	-0.1	38.8	Csu	SERP	247
East Avebu	A070A	531.80	532.80	0.21				250	120	-0.1	38.1	Csu	SERP	248
East Avebu	A070A	532.80	533.80	0.22				150	140	-0.1	37.6	Csu	SERP	249
East Avebu	A070A	533.80	534.25	0.22				100	160	-0.1	37.9	Csu	SERP	250
East Avebu	A070A	534.25	535.25	0.21				100	140	-0.1	38.4	Csu	SERP	251
East Avebu	A070A	535.25	536.25	0.21				50	140	-0.1	38.8	Csu	SERP	252
East Avebu	A070A	536.25	537.25	0.22				50	140	-0.1	38.7	Csu	SERP	253

Assay Sheet

Project	BHID	From m	To m	Ni %	Cu ppm	Pb ppm	Zn ppm	As ppm	Co ppm	S %	MgO %	Strat	Rock	
East Avebu	A070A	537.25	538.25	0.21				100	160	-0.1	38.9	Csu	SERP	254
East Avebu	A070A	538.25	539.25	0.21				150	140	-0.1	38.5	Csu	SERP	255
East Avebu	A070A	539.25	540.25	0.19				100	120	-0.1	40.2	Csu	SERP	256
East Avebu	A070A	540.25	541.25	0.21				150	140	-0.1	39.6	Csu	SERP	257
East Avebu	A070A	541.25	542.25	0.21				200	120	-0.1	40.0	Csu	SERP	258
East Avebu	A070A	542.25	543.25	0.20				250	140	-0.1	39.6	Csu	SERP	259
East Avebu	A070A	543.25	544.25	0.20				200	140	-0.1	39.6	Csu	SERP	260
East Avebu	A070A	544.25	545.25	0.20				100	140	-0.1	39.7	Csu	SERP	261
East Avebu	A070A	545.25	546.25	0.20				150	120	-0.1	39.9	Csu	SERP	262
East Avebu	A070A	546.25	547.25	0.16				100	120	-0.1	39.7	Csu	SERP	263
East Avebu	A070A	547.25	548.25	0.18				100	140	-0.1	39.4	Csu	SERP	264
East Avebu	A070A	548.25	549.25	0.17				100	140	-0.1	39.5	Csu	SERP	265
East Avebu	A070A	549.25	550.25	0.16				50	120	-0.1	39.8	Csu	SERP	266
East Avebu	A070A	550.25	551.05	0.16				50	160	-0.1	38.2	Csu	SERP	267
East Avebu	A070A	551.05	552.00	0.16				100	160	-0.1	39.8	Csu	SERP	268
East Avebu	A070A	552.00	553.00	0.16				100	140	-0.1	39.4	Csu	SERP	269
East Avebu	A070A	553.00	554.00	0.15				50	140	-0.1	40.7	Csu	SERP	270
East Avebu	A070A	554.00	555.00	0.15				50	140	-0.1	39.8	Csu	SERP	271
East Avebu	A070A	555.00	556.00	0.16				200	160	-0.1	40.8	Csu	SERP	272
East Avebu	A070A	556.00	557.00	0.14				100	120	-0.1	40.9	Csu	SERP	273
East Avebu	A070A	557.00	558.00	0.15				100	140	-0.1	39.8	Csu	SERP	274
East Avebu	A070A	558.00	559.00	0.15				50	140	-0.1	39.4	Csu	SERP	275
East Avebu	A070A	559.00	560.00	0.15				50	100	-0.1	40.9	Csu	SERP	276
East Avebu	A070A	560.00	561.00	0.15				50	120	-0.1	40.7	Csu	SERP	277
East Avebu	A070A	561.00	562.00	0.15				100	120	-0.1	42.0	Csu	SERP	278
East Avebu	A070A	562.00	563.00	0.15				100	120	-0.1	41.0	Csu	SERP	279
East Avebu	A070A	563.00	564.00	0.15				100	120	-0.1	41.6	Csu	SERP	280
East Avebu	A070A	564.00	565.00	0.16				50	120	-0.1	40.5	Csu	SERP	281
East Avebu	A070A	565.00	566.00	0.18				50	140	-0.1	40.4	Csu	SERP	282
East Avebu	A070A	566.00	567.00	0.21				150	140	-0.1	40.7	Csu	SERP	283
East Avebu	A070A	567.00	568.00	0.16				50	120	-0.1	40.7	Csu	SERP	284
East Avebu	A070A	568.00	568.50	0.17				50	160	-0.1	39.3	Csu	SERP	285

Assay Sheet

Project	BHID	From m	To m	Ni %	Cu ppm	Pb ppm	Zn ppm	As ppm	Co ppm	S %	MgO %	Strat	Rock	
East Avebu	A070A	568.50	569.20	0.15				50	140	-0.1	39.6	Csu	SERP	286
East Avebu	A070A	569.20	570.20	1.15				400	640	0.2	37.4	Csu	SERP	287
East Avebu	A070A	570.20	571.20	0.74				350	500	0.1	35.1	Csu	SERP	288
East Avebu	A070A	571.20	572.20	0.14				50	160	-0.1	37.7	Csu	SERP	289
East Avebu	A070A	572.20	573.20	0.13				50	160	-0.1	36.4	Csu	SERP	290
East Avebu	A070A	573.20	574.20	0.16				50	160	-0.1	36.7	Csu	SERP	291
East Avebu	A070A	574.20	575.20	0.06				100	40	-0.1	25.5	Csu	SERP	292
East Avebu	A070A	575.20	575.90	0.14				50	220	-0.1	30.7	Csu	SERP	293
East Avebu	A070A	575.90	577.00	0.18				200	160	0.3	37.5		FALT	294
East Avebu	A070A	577.00	578.00	0.63				600	320	0.4	39.4	Csu	SERP	295
East Avebu	A070A	578.00	579.00	1.35				1100	660	0.8	38.5	Csu	SERP	296
East Avebu	A070A	579.00	579.65	0.19				300	140	0.3	38.1	Csu	SERP	297
East Avebu	A070A	579.65	580.00	0.36				1150	260	0.1	40.3		FALT	298
East Avebu	A070A	580.00	581.00	0.25				600	160	0.3	39.2	Csu	SERP	299
East Avebu	A070A	581.00	581.55	0.18				150	60	0.7	37.5	Csu	SERP	300
East Avebu	A070A	581.55	581.90	0.24				600	120	0.4	38.3	Csu	SERP	301
East Avebu	A070A	581.90	583.00	0.20				300	120	0.4	39.0	Csu	SERP	302
East Avebu	A070A	583.00	584.00	0.24				300	160	0.7	37.2	Csu	SERP	303
East Avebu	A070A	584.00	585.00	0.26				450	180	0.8	37.3	Csu	SERP	304
East Avebu	A070A	585.00	586.00	0.22				400	180	0.3	36.9	Csu	SERP	305
East Avebu	A070A	586.00	587.00	0.19				150	160	0.2	38.2	Csu	SERP	306
East Avebu	A070A	587.00	588.00	0.23				200	160	0.2	38.3	Csu	SERP	307
East Avebu	A070A	588.00	589.00	0.20				200	160	0.9	37.3	Csu	SERP	308
East Avebu	A070A	589.00	589.50	0.17				150	120	0.2	37.1	Csu	SERP	309
East Avebu	A070A	589.50	592.10	0.16				150	80	0.3	37.1	Csu	LOSS	310
East Avebu	A070A	592.10	593.10	0.19				300	100	0.3	39.9	Csu	SERP	311
East Avebu	A070A	593.10	593.60	0.20				300	120	0.1	39.6	Csu	SERP	312
East Avebu	A070A	593.60	594.60	0.20				300	120	-0.1	39.4	Csu	SERP	313
East Avebu	A070A	594.60	595.60	0.20				300	120	-0.1	39.2	Csu	SERP	314
East Avebu	A070A	595.60	596.60	0.20				250	120	-0.1	39.4	Csu	SERP	315
East Avebu	A070A	596.60	597.60	0.21				350	140	-0.1	39.2	Csu	SERP	316
East Avebu	A070A	597.60	598.60	0.21				400	120	-0.1	39.3	Csu	SERP	317

Assay Sheet

Project	BHID	From m	To m	Ni %	Cu ppm	Pb ppm	Zn ppm	As ppm	Co ppm	S %	MgO %	Strat	Rock	
East Avebu	A070A	598.60	599.60	0.25				550	140	-0.1	38.8	Csu	SERP	318
East Avebu	A070A	599.60	600.60	0.60				3000	240	-0.1	39.4	Csu	SERP	319
East Avebu	A070A	600.60	601.60	0.21				400	120	-0.1	39.5	Csu	SERP	320
East Avebu	A070A	601.60	602.60	0.20				450	120	-0.1	39.3	Csu	SERP	321
East Avebu	A070A	602.60	603.60	0.20				250	140	-0.1	38.6	Csu	SERP	322
East Avebu	A070A	603.60	604.60	0.22				400	140	-0.1	38.5	Csu	SERP	323
East Avebu	A070A	604.60	605.60	0.22				400	160	-0.1	39.2	Csu	SERP	324
East Avebu	A070A	605.60	606.60	0.22				250	160	-0.1	39.2	Csu	SERP	325
East Avebu	A070A	606.60	607.60	0.23				350	160	-0.1	39.3	Csu	SERP	326
East Avebu	A070A	607.60	608.60	0.23				150	160	-0.1	39.5	Csu	SERP	327
East Avebu	A070A	608.60	609.60	0.19				250	120	-0.1	39.7	Csu	SERP	328
East Avebu	A070A	609.60	610.60	0.20				300	140	-0.1	39.9	Csu	SERP	329
East Avebu	A070A	610.60	611.60	0.18				200	100	-0.1	40.4	Csu	SERP	330
East Avebu	A070A	611.60	612.60	0.19				200	120	-0.1	39.9	Csu	SERP	331
East Avebu	A070A	612.60	613.60	0.18				100	140	-0.1	40.2	Csu	SERP	332
East Avebu	A070A	613.60	614.60	0.26				350	160	-0.1	39.8	Csu	SERP	333
East Avebu	A070A	614.60	615.60	0.21				200	160	-0.1	39.7	Csu	SERP	334
East Avebu	A070A	615.60	616.60	0.24				400	160	-0.1	39.4	Csu	SERP	335
East Avebu	A070A	616.60	617.60	0.24				400	160	-0.1	39.8	Csu	SERP	336
East Avebu	A070A	617.60	618.60	0.19				400	120	-0.1	40.0	Csu	SERP	337
East Avebu	A070A	618.60	619.60	0.22				600	120	-0.1	39.9	Csu	SERP	338
East Avebu	A070A	619.60	620.60	0.19				200	140	-0.1	39.6	Csu	SERP	339
East Avebu	A070A	620.60	621.60	0.16				150	120	-0.1	40.3	Csu	SERP	340
East Avebu	A070A	621.60	622.60	0.20				250	160	-0.1	39.9	Csu	SERP	341
East Avebu	A070A	622.60	623.60	0.20				100	160	-0.1	39.9	Csu	SERP	342
East Avebu	A070A	623.60	624.30	0.17				100	140	-0.1	40.8	Csu	SERP	343
East Avebu	A070A	624.30	625.30	0.23				250	180	-0.1	39.8	Csu	SERP	344
East Avebu	A070A	625.30	626.30	0.22				200	160	-0.1	40.7	Csu	SERP	345
East Avebu	A070A	626.30	627.30	0.19				200	140	-0.1	39.8	Csu	SERP	346
East Avebu	A070A	627.30	628.30	0.20				200	140	-0.1	40.1	Csu	SERP	347
East Avebu	A070A	628.30	629.30	0.20				200	140	-0.1	40.0	Csu	SERP	348
East Avebu	A070A	629.30	630.30	0.19				200	140	-0.1	40.2	Csu	SERP	349

Project	BHID	From m	To m	Ni %	Cu ppm	Pb ppm	Zn ppm	As ppm	Co ppm	S %	MgO %	Strat	Rock	
East Avebu	A070A	630.30	631.30	0.20				100	160	-0.1	40.1	Csu	SERP	349
East Avebu	A070A	631.30	632.30	0.22				100	160	-0.1	39.9	Csu	SERP	350
East Avebu	A070A	632.30	633.30	0.21				300	140	-0.1	40.2	Csu	SERP	351
East Avebu	A070A	633.30	634.30	0.19				200	140	-0.1	40.6	Csu	SERP	352
East Avebu	A070A	634.30	635.30	0.19				150	140	-0.1	40.4	Csu	SERP	353
East Avebu	A070A	635.30	636.30	0.20				100	140	-0.1	40.6	Csu	SERP	354
East Avebu	A070A	636.30	637.30	0.19				50	160	-0.1	40.5	Csu	SERP	355
East Avebu	A070A	637.30	638.30	0.23				100	160	-0.1	41.1	Csu	SERP	356
East Avebu	A070A	638.30	639.30	0.20				50	140	-0.1	40.7	Csu	SERP	357
East Avebu	A070A	639.30	640.30	0.20				100	160	-0.1	40.1	Csu	SERP	358
East Avebu	A070A	640.30	641.30	0.20				50	140	-0.1	40.6	Csu	SERP	359
East Avebu	A070A	641.30	642.30	0.20				100	140	-0.1	40.4	Csu	SERP	360
East Avebu	A070A	642.30	643.00	0.20				150	120	-0.1	41.2	Csu	SERP	361

APPENDIX 4

DDH B8 & B9 Assays

SGS

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Lindsay Newnham

Allegiance Metals Pty Limited

PO Box 62
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TASMANIA 7469
AUSTRALIA

Lab Ref	WM084921
Client Ref	**236606**
Project	
Received	24/03/2005
First Reported	5/04/2005
Re-Reported	13/04/2005
Samples	168
First Sample	B8 92.5-93.5
Last Sample	*SS B8 290.6-291.6
Pages	12
Fax	
eReport	
Email	
FTP	

Copy

Notes

Authorised *on behalf of*

Richard Bowen
Laboratory Manager

The results in the following analytical report pertain to the samples provided to this laboratory for preparation and/or analysis as requested by the client.

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Lab Ref WM084921
Client Ref **236606**
Project
Reported 13/04/2005
Status Final

ANALYTICAL REPORT

Sample	*Ni*	*Cu*	*Pb*	*Zn*	*As*	*S*
B8 92.5-93.5	150	170	<50	140	40	2330
B8 93.5-94.5	140	150	<50	120	<20	480
B8 94.5-95.5	170	80	<50	160	<20	1050
B8 95.5-96.5	170	140	<50	150	<20	4070
B8 96.5-97.5	400	90	<50	220	<20	2040
B8 97.5-98.5	250	120	<50	150	20	2.03%
B8 98.5-99.5	190	110	<50	140	<20	1.97%
B8 99.5-100.5	190	60	<50	210	<20	6530
B8 100.5-101.5	200	100	<50	270	20	1.35%
B8 101.5-102.5	710	130	<50	270	30	1.62%
B8 102.5-103.5	1240	50	<50	440	<20	1890
B8 103.5-104.5	2400	50	<50	750	<20	800
B8 104.5-105.5	2550	70	<50	850	50	1210
B8 105.5-106.5	1470	20	<50	290	60	500
B8 106.5-107.5	1600	30	<50	120	50	860
B8 107.5-108.5	1870	<10	70	440	40	840
B8 108.5-109.5	2490	<10	<50	520	50	110
B8 109.5-110.5	3340	<10	<50	670	30	110
B8 110.5-111.5	5820	10	<50	1550	50	130
B8 111.5-112.5	6250	<10	<50	2490	40	120
B8 112.5-113.5	5860	<10	50	2500	30	100
B8 113.5-114.5	6700	<10	<50	2310	60	90
B8 114.5-115.5	4250	<10	<50	780	40	90
B8 115.5-116.5	2070	<10	<50	80	110	680
B8 116.5-118.0	2300	<10	<50	90	30	1220
B8 137.5-138.5	2260	<10	<50	90	<20	980
B8 138.5-139.5	2130	<10	<50	100	<20	900
B8 139.5-140.5	2150	<10	<50	110	<20	700
B8 140.5-141.5	2350	<10	<50	110	<20	730
B8 141.5-142.5	2010	<10	<50	100	<20	550
B8 142.5-143.5	2320	<10	<50	260	<20	320
B8 143.5-144.5	5130	<10	<50	1530	20	60
B8 144.5-145.5	6910	<10	<50	2210	20	60
B8 145.5-146.5	8540	<10	<50	4290	30	70
B8 146.5-147.5	8540	10	<50	4150	30	70
B8 147.5-148.5	9430	<10	<50	4520	30	90
B8 148.5-149.5	9200	80	<50	4580	30	270
B8 149.5-150.5	7950	<10	<50	4190	40	70
B8 150.5-151.5	8700	<10	<50	4560	30	70
B8 151.5-152.5	8740	<10	140	4240	50	80
Scheme	*ICP42S*	*ICP42S*	*ICP42S*	*ICP42S*	*ICP42S*	*ICP42S*
Units	*PPM*	*PPM*	*PPM*	*PPM*	*PPM*	*PPM*
Detection Limit	*20*	*10*	*50*	*10*	*20*	*20*
Upper Scheme						

- not analysed / -- element not determined / I.S. insufficient sample / L.N.R. listed not received

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Lab Ref WM084921
Client Ref **236606**
Project
Reported 13/04/2005
Status Final

ANALYTICAL REPORT

Sample	*Au*	*Au(R)*	*Au(S)*			
B8 92.5-93.5	0.02					
B8 93.5-94.5	0.02					
B8 94.5-95.5	0.02					
B8 95.5-96.5	0.02					
B8 96.5-97.5	0.02					
B8 97.5-98.5	<0.01					
B8 98.5-99.5	<0.01					
B8 99.5-100.5	0.02					
B8 100.5-101.5	0.02					
B8 101.5-102.5	<0.01					
B8 102.5-103.5	0.03	0.05				
B8 103.5-104.5	0.02					
B8 104.5-105.5	0.02					
B8 105.5-106.5	<0.01					
B8 106.5-107.5	0.02					
B8 107.5-108.5	0.02					
B8 108.5-109.5	0.02					
B8 109.5-110.5	0.02					
B8 110.5-111.5	<0.01	<0.01				
B8 111.5-112.5	0.02					
B8 112.5-113.5	<0.01					
B8 113.5-114.5	<0.01					
B8 114.5-115.5	<0.01					
B8 115.5-116.5	<0.01					
B8 116.5-118.0	<0.01					
B8 137.5-138.5	0.02					
B8 138.5-139.5	<0.01					
B8 139.5-140.5	<0.01					
B8 140.5-141.5	<0.01	<0.01				
B8 141.5-142.5	<0.01					
B8 142.5-143.5	<0.01					
B8 143.5-144.5	<0.01					
B8 144.5-145.5	<0.01					
B8 145.5-146.5	0.02					
B8 146.5-147.5	0.02					
B8 147.5-148.5	0.02					
B8 148.5-149.5	0.12					
B8 149.5-150.5	<0.01					
B8 150.5-151.5	<0.01					
B8 151.5-152.5	0.02					
Scheme	*FAA505*	*FAA505*	*FAA505*			
Units	*PPM*	*PPM*	*PPM*			
Detection Limit	*0.01*	*0.01*	*0.01*			
Upper Scheme						

- not analysed / -- element not determined / I.S. insufficient sample / L.N.R. listed not received

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Lab Ref WM084921
Client Ref **236606**
Project
Reported 13/04/2005
Status Final

ANALYTICAL REPORT

Sample	*Ni*	*Cu*	*Pb*	*Zn*	*As*	*S*
B8 152.5-153.5	5840	<10	<50	2810	40	70
B8 153.5-154.5	7670	<10	110	4200	30	70
B8 154.5-155.5	7260	<10	<50	3870	20	60
B8 155.5-156.5	7710	<10	<50	3690	<20	50
B8 156.5-157.5	9760	40	100	4790	40	310
B8 157.5-158.5	7040	<10	<50	3730	30	70
B8 158.5-159.5	5800	20	170	2500	40	180
B8 59.5-162.0	1690	20	<50	830	<20	<20
B8 162.0-163.0	1820	10	50	1200	30	110
B8 163.0-164.0	3050	<10	60	1980	40	110
B8 164.0-165.0	3580	<10	50	1830	50	400
B8 165.0-166.0	4100	140	<50	2590	20	280
B8 166.0-167.0	3000	<10	<50	2570	30	180
B8 167.0-168.0	2660	<10	<50	2390	<20	230
B8 168.0-169.0	2490	<10	<50	1900	<20	180
B8 169.0-170.0	2970	<10	<50	1390	20	60
B8 170.0-171.0	3300	<10	<50	1750	20	60
B8 171.0-172.0	4250	10	60	1690	70	70
B8 172.0-173.0	3560	20	60	1320	<20	60
B8 173.0-174.0	2430	<10	<50	1150	30	110
B8 174.0-175.0	3440	20	90	1490	50	100
B8 175.0-177.3	5470	30	200	2780	80	130
B8 177.3-179.8	4030	<10	70	3040	20	180
B8 179.8-181.0	3410	<10	100	2810	40	150
B8 181.0-182.0	3170	<10	110	2500	30	120
B8 182.0-183.0	2210	10	110	1420	40	40
B8 183.0-184.0	1650	<10	110	1510	<20	130
B8 184.0-185.0	3950	<10	120	2330	50	130
B8 185.0-186.0	2390	<10	120	1830	<20	80
B8 186.0-187.0	2570	<10	120	2220	30	110
B8 187.9-189.0	4400	<10	170	2370	20	70
B8 189.0-190.0	1110	<10	<50	670	<20	<20
B8 190.0-191.0	4100	10	150	2540	40	100
B8 191.0-192.0	2610	<10	100	1750	<20	40
B8 192.0-193.0	2550	<10	120	2040	<20	120
B8 193.0-194.0	1960	<10	100	1810	<20	140
B8 194.0-195.0	3140	<10	110	2540	30	130
B8 195.0-196.0	3650	<10	100	3030	20	180
B8 196.0-197.0	1960	<10	90	1370	<20	90
B8 197.0-198.0	4320	20	130	1440	40	230
Scheme	*ICP42S*	*ICP42S*	*ICP42S*	*ICP42S*	*ICP42S*	*ICP42S*
Units	*PPM*	*PPM*	*PPM*	*PPM*	*PPM*	*PPM*
Detection Limit	*20*	*10*	*50*	*10*	*20*	*20*
Upper Scheme						

- *not analysed* / -- *element not determined* / *I.S. insufficient sample* / *L.N.R. listed not received*

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Lab Ref WM084921
Client Ref **236606**
Project
Reported 13/04/2005
Status Final

ANALYTICAL REPORT

Sample	*Au*	*Au(R)*	*Au(S)*			
B8 152.5-153.5	0.04					
B8 153.5-154.5	<0.01					
B8 154.5-155.5	0.02					
B8 155.5-156.5	<0.01					
B8 156.5-157.5	<0.01					
B8 157.5-158.5	0.23					
B8 158.5-159.5	0.04					
B8 59.5-162.0	<0.01					
B8 162.0-163.0	0.02					
B8 163.0-164.0	<0.01					
B8 164.0-165.0	<0.01					
B8 165.0-166.0	<0.01					
B8 166.0-167.0	<0.01	<0.01				
B8 167.0-168.0	<0.01					
B8 168.0-169.0	<0.01					
B8 169.0-170.0	<0.01					
B8 170.0-171.0	<0.01					
B8 171.0-172.0	<0.01					
B8 172.0-173.0	0.04					
B8 173.0-174.0	0.02					
B8 174.0-175.0	<0.01	<0.01				
B8 175.0-177.3	<0.01					
B8 177.3-179.8	<0.01					
B8 179.8-181.0	<0.01					
B8 181.0-182.0	<0.01					
B8 182.0-183.0	0.04					
B8 183.0-184.0	<0.01					
B8 184.0-185.0	<0.01					
B8 185.0-186.0	<0.01					
B8 186.0-187.0	<0.01					
B8 187.9-189.0	<0.01	<0.01				
B8 189.0-190.0	<0.01					
B8 190.0-191.0	<0.01					
B8 191.0-192.0	0.07					
B8 192.0-193.0	0.23					
B8 193.0-194.0	<0.01					
B8 194.0-195.0	<0.01					
B8 195.0-196.0	0.04					
B8 196.0-197.0	0.21					
B8 197.0-198.0	0.08					
Scheme	*FAA505*	*FAA505*	*FAA505*			
Units	*PPM*	*PPM*	*PPM*			
Detection Limit	*0.01*	*0.01*	*0.01*			
Upper Scheme						

- not analysed / -- element not determined / I.S. insufficient sample / L.N.R. listed not received

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Sample	*Ni*	*Cu*	*Pb*	*Zn*	*As*	*S*
B8 198.0-199.0	3220	<10	<50	1240	<20	120
B8 199.0-200.0	2780	<10	<50	1000	<20	<20
B8 200.0-201.0	3330	10	80	1690	40	<20
B8 201.0-202.0	2780	10	90	1330	<20	250
B8 202.0-203.0	2710	<10	<50	1060	<20	50
B8 203.0-204.0	2880	10	50	1390	<20	120
B8 204.0-205.0	1870	40	100	1170	90	150
B8 205.0-206.0	3780	30	70	1990	30	160
B8 206.0-207.0	2880	20	80	1600	30	60
B8 207.0-208.0	2600	70	80	1250	50	60
B8 208.0-209.0	4380	70	220	1720	60	680
B8 209.0-210.5	5130	70	230	2390	60	<20
B8 210.5-211.5	3210	<10	<50	1380	40	60
B8 211.5-212.5	2480	10	<50	1170	30	350
B8 212.5-213.5	3370	30	<50	1780	50	90
B8 213.5-214.5	4490	50	140	1730	70	160
B8 214.5-215.5	2890	20	140	1280	70	100
B8 215.5-216.5	2900	30	110	1140	70	90
B8 216.5-217.5	3170	40	120	1370	80	110
B8 217.5-218.5	2710	30	130	970	70	50
B8 218.5-220.0	4150	20	100	1320	80	50
B8 220.0-221.2	6470	20	70	2100	160	70
B8 221.2-222.5	7270	60	90	2030	100	80
B8 222.5-224.0	4820	20	60	1080	80	60
B8 224.0-226.0	2130	<10	<50	230	30	70
B8 226.0-227.5	2570	<10	<50	590	20	50
B8 227.5-228.5	1400	10	<50	360	60	90
B8 228.5-230.0	2640	20	<50	1380	40	90
B8 230.0-231.0	3360	10	<50	1910	30	70
B8 231.0-232.0	2380	<10	<50	850	30	90
B8 232.0-233.0	2470	10	50	1270	90	70
B8 233.0-234.0	1370	<10	70	600	30	50
B8 234.0-235.0	740	<10	60	270	<20	70
B8 235.0-236.0	810	<10	<50	220	<20	90
B8 236.0-237.0	710	<10	60	180	<20	40
B8 237.0-238.0	1350	<10	<50	350	<20	40
B8 238.0-239.0	1590	10	<50	550	20	50
B8 239.0-240.0	1840	<10	60	500	30	60
B8 240.0-241.0	1820	60	60	340	50	60
B8 241.0-242.6	2270	70	60	950	20	50
Scheme	*ICP42S*	*ICP42S*	*ICP42S*	*ICP42S*	*ICP42S*	*ICP42S*
Units	*PPM*	*PPM*	*PPM*	*PPM*	*PPM*	*PPM*
Detection Limit	*20*	*10*	*50*	*10*	*20*	*20*
Upper Scheme						

- not analysed / -- element not determined / I.S. insufficient sample / L.N.R. listed not received

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ANALYTICAL REPORT

Sample	*Au*	*Au(R)*	*Au(S)*			
B8 198.0-199.0	<0.01					
B8 199.0-200.0	<0.01					
B8 200.0-201.0	0.45					
B8 201.0-202.0	<0.01					
B8 202.0-203.0	<0.01					
B8 203.0-204.0	<0.01					
B8 204.0-205.0	<0.01					
B8 205.0-206.0	<0.01					
B8 206.0-207.0	<0.01					
B8 207.0-208.0	0.02					
B8 208.0-209.0	<0.01					
B8 209.0-210.5	0.22					
B8 210.5-211.5	<0.01					
B8 211.5-212.5	<0.01	<0.01				
B8 212.5-213.5	0.02	<0.01				
B8 213.5-214.5	<0.01					
B8 214.5-215.5	0.02					
B8 215.5-216.5	<0.01					
B8 216.5-217.5	<0.01					
B8 217.5-218.5	<0.01					
B8 218.5-220.0	<0.01					
B8 220.0-221.2	<0.01					
B8 221.2-222.5	0.02					
B8 222.5-224.0	<0.01					
B8 224.0-226.0	<0.01					
B8 226.0-227.5	<0.01					
B8 227.5-228.5	<0.01					
B8 228.5-230.0	0.02					
B8 230.0-231.0	0.02					
B8 231.0-232.0	<0.01					
B8 232.0-233.0	<0.01					
B8 233.0-234.0	<0.01	<0.01				
B8 234.0-235.0	<0.01					
B8 235.0-236.0	<0.01					
B8 236.0-237.0	<0.01					
B8 237.0-238.0	<0.01					
B8 238.0-239.0	<0.01					
B8 239.0-240.0	<0.01					
B8 240.0-241.0	<0.01					
B8 241.0-242.6	<0.01					
Scheme	*FAA505*	*FAA505*	*FAA505*			
Units	*PPM*	*PPM*	*PPM*			
Detection Limit	*0.01*	*0.01*	*0.01*			
Upper Scheme						

- not analysed / -- element not determined / I.S. insufficient sample / L.N.R. listed not received

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ANALYTICAL REPORT

Sample	*Ni*	*Cu*	*Pb*	*Zn*	*As*	*S*
B8 242.6-244.0	1320	10	120	320	30	440
B8 244.0-245.0	1020	<10	100	330	<20	450
B8 245.0-246.0	1500	<10	<50	310	60	840
B8 246.0-247.0	1450	<10	200	330	40	910
B8 247.0-248.0	1250	10	60	160	30	670
B8 248.0-249.0	1050	<10	50	140	<20	380
B8 249.0-250.0	1550	60	<50	250	20	950
B8 250.0-251.0	2000	100	<50	320	20	1460
B8 251.0-252.0	1660	60	130	280	<20	1110
B8 252.0-253.0	1900	40	<50	950	20	1390
B8 253.0-254.0	1800	50	<50	420	40	1290
B8 254.0-255.0	1890	10	<50	450	80	1120
B8 255.0-256.0	1640	<10	70	790	50	900
B8 256.0-257.0	1990	<10	70	420	190	1080
B8 257.0-258.0	1260	<10	<50	450	50	870
B8 258.0-259.0	1740	<10	100	450	60	1290
B8 259.0-260.0	1030	<10	<50	320	30	450
B8 260.0-261.0	1530	10	100	280	50	790
B8 261.0-262.0	2070	10	70	580	50	1230
B8 262.0-263.5	2230	<10	80	730	40	1260
B8 263.5-264.8	1680	10	80	360	20	70
B8 264.8-266.3	420	<10	<50	70	<20	70
B8 266.3-268.0	470	20	<50	120	50	70
B8 268.0-269.0	1510	70	<50	280	<20	80
B8 269.0-270.0	1840	20	<50	360	30	30
B8 270.0-271.0	1550	30	<50	230	<20	70
B8 271.0-272.0	2000	210	<50	140	<20	1.21%
B8 272.0-273.0	1330	80	<50	200	<20	5500
B8 273.0-274.0	2040	330	<50	210	<20	2.05%
B8 274.0-275.0	1310	140	<50	160	<20	7850
B8 275.0-276.0	920	10	<50	200	<20	1690
B8 276.0-277.0	1170	20	<50	210	<20	1290
B8 277.0-278.0	1100	20	<50	110	<20	960
B8 278.0-279.0	1580	80	<50	380	20	1080
B8 279.0-280.0	1120	80	<50	350	<20	560
B8 280.0-281.9	870	60	<50	350	70	240
B8 281.9-282.3	2800	100	60	2840	70	120
B8 282.3-283.8	830	20	<50	1020	20	60
B8 289.6-290.6	1520	150	<50	560	30	1900
B8 290.6-291.6	1280	70	<50	250	<20	4520
Scheme	*ICP42S*	*ICP42S*	*ICP42S*	*ICP42S*	*ICP42S*	*ICP42S*
Units	*PPM*	*PPM*	*PPM*	*PPM*	*PPM*	*PPM*
Detection Limit	*20*	*10*	*50*	*10*	*20*	*20*
Upper Scheme						

- *not analysed* / -- *element not determined* / *I.S. insufficient sample* / *L.N.R. listed not received*

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ANALYTICAL REPORT

Sample	*Au*	*Au(R)*	*Au(S)*			
B8 242.6-244.0	<0.01					
B8 244.0-245.0	<0.01					
B8 245.0-246.0	<0.01					
B8 246.0-247.0	<0.01					
B8 247.0-248.0	0.02					
B8 248.0-249.0	<0.01					
B8 249.0-250.0	0.02	0.02				
B8 250.0-251.0	<0.01					
B8 251.0-252.0	<0.01					
B8 252.0-253.0	0.02					
B8 253.0-254.0	<0.01	<0.01				
B8 254.0-255.0	<0.01					
B8 255.0-256.0	<0.01					
B8 256.0-257.0	<0.01					
B8 257.0-258.0	<0.01					
B8 258.0-259.0	<0.01					
B8 259.0-260.0	<0.01					
B8 260.0-261.0	<0.01					
B8 261.0-262.0	<0.01					
B8 262.0-263.5	<0.01					
B8 263.5-264.8	<0.01					
B8 264.8-266.3	<0.01					
B8 266.3-268.0	<0.01					
B8 268.0-269.0	<0.01					
B8 269.0-270.0	<0.01					
B8 270.0-271.0	<0.01					
B8 271.0-272.0	<0.01	<0.01				
B8 272.0-273.0	<0.01					
B8 273.0-274.0	<0.01					
B8 274.0-275.0	<0.01					
B8 275.0-276.0	<0.01	<0.01				
B8 276.0-277.0	<0.01					
B8 277.0-278.0	<0.01					
B8 278.0-279.0	<0.01					
B8 279.0-280.0	<0.01					
B8 280.0-281.9	<0.01					
B8 281.9-282.3	0.10					
B8 282.3-283.8	<0.01					
B8 289.6-290.6	<0.01	<0.01				
B8 290.6-291.6	<0.01					
Scheme	*FAA505*	*FAA505*	*FAA505*			
Units	*PPM*	*PPM*	*PPM*			
Detection Limit	*0.01*	*0.01*	*0.01*			
Upper Scheme						

- not analysed / -- element not determined / I.S. insufficient sample / L.N.R. listed not received

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ANALYTICAL REPORT

Sample	*Ni*	*Cu*	*Pb*	*Zn*	*As*	*S*
B8 291.6-292.6	970	90	<50	260	20	3270
*SS B8 101.5-102.5	740	120	<50	220	30	1.65%
*SS B8 146.5-147.5	8540	20	<50	3410	50	80
*SS B8 173.0-174.0	2510	<10	<50	970	30	120
*SS B8 202.0-203.0	2860	20	<50	910	30	80
*SS B8 231.0-232.0	2410	<10	<50	860	40	110
*SS B8 257.0-258.0	1290	<10	<50	470	60	920
*SS B8 290.6-291.6	1260	60	<50	280	<20	4390
Scheme	*ICP42S*	*ICP42S*	*ICP42S*	*ICP42S*	*ICP42S*	*ICP42S*
Units	*PPM*	*PPM*	*PPM*	*PPM*	*PPM*	*PPM*
Detection Limit	*20*	*10*	*50*	*10*	*20*	*20*
Upper Scheme						

- not analysed / -- element not determined / I.S. insufficient sample / L.N.R. listed not received

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ANALYTICAL REPORT

Sample	*Au*	*Au(R)*	*Au(S)*			
B8 291.6-292.6	<0.01					
*SS B8 101.5-102.5	<0.01					
*SS B8 146.5-147.5	<0.01					
*SS B8 173.0-174.0	<0.01					
*SS B8 202.0-203.0	<0.01					
*SS B8 231.0-232.0	<0.01					
*SS B8 257.0-258.0	<0.01					
*SS B8 290.6-291.6	<0.01					
Scheme	*FAA505*	*FAA505*	*FAA505*			
Units	*PPM*	*PPM*	*PPM*			
Detection Limit	*0.01*	*0.01*	*0.01*			
Upper Scheme						

- not analysed / -- element not determined / I.S. insufficient sample / L.N.R. listed not received

ANALYSIS DESCRIPTION

For solid samples, reported units are expressed as mass / mass.
ie: % denotes %mass/%mass, ppm denotes mg/kg, ppb denotes µg/kg.
For liquid samples, reported units are expressed as mass / volume.
ie: % denotes %mass/%volume, ppm denotes mg/L, ppb denotes µg/L.

Job number : **WM084921** Order number : **236606**

Scheme code: **ICP42S** ICP-OES after DIG42S

Ni	:	Nickel 20-25000 ppm
Cu	:	Copper 10-25000 ppm
Pb	:	Lead 50-25000 ppm
Zn	:	Zinc 10-25000 ppm
As	:	Arsenic 20-25000 ppm
S	:	Sulphur 20-100000 ppm

Scheme code: **FAA505** Au Pt Pd, FAS, AAS, 50g

Au	:	Gold 0.01-1000 ppm
Au(R)	:	Gold Repeat 0.01-1000 ppm
Au(S)	:	Gold Duplicate 0.01-1000 ppm

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Lindsay Newnham

Allegiance Metals Pty Limited

PO Box 62
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AUSTRALIA

Lab Ref	WM084999
Client Ref	**236606**
Project	
Received	24/03/2005
First Reported	5/04/2005
Re-Reported	11/04/2005
Samples	216
First Sample	B9 145.0-147.0
Last Sample	*SS 355.0-356.0
Pages	14
Fax	
eReport	
Email	
FTP	
Copy	
Notes	

Authorised *on behalf of*

Richard Bowen
Laboratory Manager

The results in the following analytical report pertain to the samples provided to this laboratory for preparation and/or analysis as requested by the client.

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Client Ref **236606**
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ANALYTICAL REPORT

Sample	*Ni*	*Cu*	*Pb*	*Zn*	*As*	*S*
B9 145.0-147.0	8520	40	80	5060	110	120
B9 147.0-148.0	2410	60	<50	1070	30	2460
B9 148.0-149.0	2570	20	70	1290	30	2700
B9 149.0-150.2	2460	20	520	1160	<20	1810
B9 150.2-151.3 1.1	2.09%	90	280	7840	90	120
B9 151.3-152.3 1.0	2350	<10	50	1430	30	750
B9 152.3-153.3 1.0 6.6m	2060	10	<50	790	20	1170
B9 153.3-154.0 0.7 0.9Ni	1.68%	130	280	5910	170	130
B9 154.0-154.7 0.7 0.33Zn.	2630	10	<50	1300	20	850
B9 154.7-156.8 2.1	9190	10	110	2970	70	50
B9 156.8-157.8 1.0 0.04S	3460	<10	<50	720	30	2540
B9 157.8-158.8	1850	<10	110	270	<20	3230
B9 158.8-159.8	1960	<10	<50	180	<20	5930
B9 159.8-160.8	2200	<10	60	250	<20	8080
B9 160.8-161.8 1.0	1910	<10	<50	370	<20	6300
B9 161.8-162.8 1.0	2180	<10	<50	640	20	2410
B9 162.8-164.0 1.2	7080	10	<50	2210	30	60
B9 164.0-165.0 1.0	1.07%	<10	80	2790	70	80
B9 165.0-166.0 1.0 5.7m.	5650	20	50	1740	50	550
B9 166.0-167.5 1.5	6000	<10	<50	2280	100	160
B9 167.5-168.5 1.0 0.71Ni	6830	10	<50	2670	80	70
B9 168.5-169.5 0.22Zn. 0.02S	4860	10	<50	2060	40	40
B9 169.5-170.5	3490	10	90	1930	60	410
B9 170.5-171.5 65m	4150	<10	<50	2320	40	100
B9 171.5-172.5	3640	<10	80	1880	70	60
B9 172.5-173.5 0.50Ni	3020	<10	<50	1320	20	560
B9 173.5-174.5 0.15Zn	2900	<10	<50	1120	20	720
B9 174.5-175.5	2290	<10	<50	440	<20	7140
B9 175.5-176.5 0.08S.	4210	<10	<50	1600	<20	1040
B9 176.5-177.5	3190	40	180	1270	30	40
B9 177.5-178.5	8070	130	180	2960	80	100
B9 178.5-179.5	4470	70	70	1610	40	250
B9 179.5-180.5	3130	80	<50	1310	20	300
B9 180.5-181.5	5430	180	90	1930	70	40
B9 181.5-182.5 5m	6960	110	90	2210	40	60
B9 182.5-183.5 0.85Ni 0.85	9000	20	70	2570	30	60
B9 183.5-184.5 0.24Zn	1.53%	30	<50	3300	40	100
B9 184.5-185.5	6090	140	60	2190	70	40
B9 185.5-186.5 <0.01S	4440	130	140	1620	50	20
B9 186.5-187.5	3560	100	70	1000	50	<20
Scheme	*ICP42S*	*ICP42S*	*ICP42S*	*ICP42S*	*ICP42S*	*ICP42S*
Units	*PPM*	*PPM*	*PPM*	*PPM*	*PPM*	*PPM*
Detection Limit	*20*	*10*	*50*	*10*	*20*	*20*
Upper Scheme						

- not analysed / -- element not determined / I.S. insufficient sample / L.N.R. listed not received

150.2 – 215.0 : 64.8m. 0.50Ni, 0.15Zn, 0.08S.

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Sample	*Au*	*Au(R)*	*Au(S)*			
B9 145.0-147.0	0.06					
B9 147.0-148.0	0.02					
B9 148.0-149.0	0.02	<0.01				
B9 149.0-150.2	0.02					
B9 150.2-151.3	0.02					
B9 151.3-152.3	0.02					
B9 152.3-153.3	0.04					
B9 153.3-154.0	0.04					
B9 154.0-154.7	0.04					
B9 154.7-156.8	0.04					
B9 156.8-157.8	<0.01					
B9 157.8-158.8	<0.01					
B9 158.8-159.8	0.02					
B9 159.8-160.8	<0.01					
B9 160.8-161.8	<0.01					
B9 161.8-162.8	0.02					
B9 162.8-164.0	0.08					
B9 164.0-165.0	0.02					
B9 165.0-166.0	NVL	0.02				
B9 166.0-167.5	0.02					
B9 167.5-168.5	<0.01					
B9 168.5-169.5	<0.01					
B9 169.5-170.5	0.02					
B9 170.5-171.5	0.15					
B9 171.5-172.5	<0.01					
B9 172.5-173.5	<0.01					
B9 173.5-174.5	0.02					
B9 174.5-175.5	0.02					
B9 175.5-176.5	<0.01					
B9 176.5-177.5	0.06					
B9 177.5-178.5	<0.01	0.02				
B9 178.5-179.5	<0.01					
B9 179.5-180.5	<0.01					
B9 180.5-181.5	<0.01					
B9 181.5-182.5	<0.01					
B9 182.5-183.5	<0.01					
B9 183.5-184.5	<0.01					
B9 184.5-185.5	0.02					
B9 185.5-186.5	0.02					
B9 186.5-187.5	<0.01					
Scheme	*FAA505*	*FAA505*	*FAA505*			
Units	*PPM*	*PPM*	*PPM*			
Detection Limit	*0.01*	*0.01*	*0.01*			
Upper Scheme						

- not analysed / -- element not determined / I.S. insufficient sample / L.N.R. listed not received

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Sample	*Ni*	*Cu*	*Pb*	*Zn*	*As*	*S*
B9 187.5-188.5	5390	120	100	1520	60	50
B9 188.5-189.5	3880	90	110	1530	60	20
B9 189.5-190.5	2710	70	<50	870	40	150
B9 190.5-191.5	3030	70	50	900	30	80
B9 191.5-192.5	3700	70	<50	990	30	140
B9 192.5-193.5 1.0	4100	110	70	1420	30	40
B9 193.5-194.9 1.4	5840	110	120	2200	40	80
B9 194.9-196.0 1.1	5350	60	<50	1470	30	50
B9 196.0-197.0 1.0	5710	50	290	1610	40	90
B9 197.0-198.0 1.0	3350	50	150	820	40	<20
B9 198.0-199.0 1.0	3540	30	190	1460	50	60
B9 199-.0-200.4 1.4	5630	20	<50	1460	30	30
B9 200.5-202.0 1.5	1480	<10	<50	430	30	380
B9 202.0-203.0 1.0	4540	30	110	1190	40	80
B9 203.0-204.0	3500	20	<50	870	30	60
B9 204.0-205.0	1240	<10	<50	200	<20	300
B9 205.0-206.0	2030	20	<50	250	20	470
B9 206.0-207.0	4620	50	<50	160	120	3860
B9 207.0-208.0	4350	60	<50	680	40	120
B9 208.0-209.0	4740	80	<50	790	40	40
B9 209.0-210.0	4010	30	<50	680	30	40
B9 210.0-211.0	6960	<10	<50	1300	40	50
B9 211.0-212.0	3800	<10	<50	850	60	60
B9 212.0-213.0	2940	10	<50	710	<20	20
B9 213.0-214.0	4250	20	<50	1340	40	40
B9 214.0-215.0 1.0	6510	<10	<50	1540	50	50
B9 215.0-216.0	3850	<10	<50	630	30	50
B9 216.0-217.0	2720	<10	<50	350	30	70
B9 217.0-218.0	2010	<10	<50	170	30	80
B9 218.0-219.0	1780	<10	<50	160	<20	1260
B9 219.0-220.0	1510	10	<50	150	160	660
B9 220.0-221.0	1200	<10	<50	200	40	530
B9 221.0-222.0	2240	10	<50	210	40	120
B9 222.0-223.0	3260	10	<50	360	60	550
B9 223.0-224.0	1100	<10	<50	160	<20	190
B9 224.0-225.0	2010	<10	<50	280	30	50
B9 225.0-226.0	2410	20	<50	280	30	70
B9 226.0-227.0	1210	<10	<50	130	<20	80
B9 227.0-228.0	2410	40	<50	390	60	80
B9 228.0-229.0	740	<10	<50	170	20	90
Scheme	*ICP42S*	*ICP42S*	*ICP42S*	*ICP42S*	*ICP42S*	*ICP42S*
Units	*PPM*	*PPM*	*PPM*	*PPM*	*PPM*	*PPM*
Detection Limit	*20*	*10*	*50*	*10*	*20*	*20*
Upper Scheme						

3.5m 0.56Ni 0.17Zn <0.01S

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Sample	*Au*	*Au(R)*	*Au(S)*
B9 187.5-188.5	0.02		
B9 188.5-189.5	<0.01		
B9 189.5-190.5	0.02		
B9 190.5-191.5	0.02	<0.01	
B9 191.5-192.5	<0.01		
B9 192.5-193.5	<0.01		
B9 193.5-194.9	<0.01		
B9 194.9-196.0	<0.01		
B9 196.0-197.0	0.12		
B9 197.0-198.0	<0.01		
B9 198.0-199.0	<0.01		
B9 199-.0-200.4	0.02		
B9 200.5-202.0	0.02		
B9 202.0-203.0	0.06	0.05	
B9 203.0-204.0	0.16		
B9 204.0-205.0	<0.01		
B9 205.0-206.0	<0.01		
B9 206.0-207.0	0.02		
B9 207.0-208.0	<0.01		
B9 208.0-209.0	<0.01		
B9 209.0-210.0	<0.01		
B9 210.0-211.0	<0.01		
B9 211.0-212.0	<0.01		
B9 212.0-213.0	<0.01		
B9 213.0-214.0	<0.01	<0.01	
B9 214.0-215.0	0.02		
B9 215.0-216.0	0.02		
B9 216.0-217.0	<0.01		
B9 217.0-218.0	<0.01		
B9 218.0-219.0	0.02		
B9 219.0-220.0	<0.01		
B9 220.0-221.0	<0.01		
B9 221.0-222.0	<0.01		
B9 222.0-223.0	<0.01		
B9 223.0-224.0	0.02		
B9 224.0-225.0	<0.01		
B9 225.0-226.0	0.06		
B9 226.0-227.0	0.04		
B9 227.0-228.0	<0.01		
B9 228.0-229.0	<0.01	<0.01	
Scheme	*FAA505*	*FAA505*	*FAA505*
Units	*PPM*	*PPM*	*PPM*
Detection Limit	*0.01*	*0.01*	*0.01*
Upper Scheme			

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Sample	*Ni*	*Cu*	*Pb*	*Zn*	*As*	*S*
B9 229.0-230.0	920	20	<50	90	<20	1350
B9 230.0-231.0	1980	20	<50	270	20	600
B9 231.0-232.0	2960	<10	<50	490	40	60
B9 238.0-239.0	1830	<10	<50	150	200	870
B9 239.0-240.0	1890	<10	<50	210	50	570
B9 240.0-241.0	1550	10	<50	390	30	100
B9 241.0-242.0	1620	40	<50	410	30	420
B9 242.0-243.0	1860	50	<50	550	40	490
B9 243.0-244.0	2210	<10	<50	440	20	80
B9 244.0-245.0	2190	10	<50	470	30	350
B9 245.0-246.0	1710	<10	<50	150	40	1210
B9 246.0-247.0	1750	<10	<50	100	60	1420
B9 247.0-248.0	1670	10	<50	70	60	1380
B9 248.0-249.0	1120	20	<50	50	<20	1660
B9 249.0-250.0	1660	10	<50	130	20	1800
B9 250.0-251.0	1100	20	<50	70	20	2140
B9 251.0-252.0	1400	20	<50	130	20	2930
B9 252.0-253.0	1350	20	<50	70	30	3160
B9 253.0-254.0	2350	60	<50	60	40	5740
B9 254.0-255.0	1550	100	<50	130	30	3640
B9 255.0-256.0	1540	90	<50	130	30	3580
B9 256.0-257.0	1310	20	<50	220	40	220
B9 257.0-258.0	1210	40	<50	90	40	2050
B9 258.0-259.0	1230	10	<50	60	30	2780
B9 259.0-260.0	1070	10	<50	80	20	2340
B9 260.0-261.0	1240	40	<50	210	30	870
B9 261.0-262.0	1440	30	<50	300	30	440
B9 262.0-263.0	1130	20	<50	280	40	220
B9 263.0-264.0	1290	60	<50	250	40	250
B9 264.0-265.0	1400	50	<50	290	40	200
B9 265.0-266.0	1620	50	<50	260	40	330
B9 266.0-267.0	1150	30	<50	60	<20	3560
B9 267.0-268.0	1830	90	<50	80	<20	8430
B9 268.0-269.0	1280	50	<50	60	<20	5170
B9 269.0-270.0	1220	20	<50	60	<20	2820
B9 270.0-271.0	1050	30	<50	70	<20	3180
B9 271.0-272.0	950	20	<50	60	<20	2700
B9 272.0-273.0	1120	30	<50	80	<20	3880
B9 273.0-274.0	850	20	<50	80	<20	1210
B9 274.0-275.0	1080	<10	<50	100	<20	1670
Scheme	*ICP42S*	*ICP42S*	*ICP42S*	*ICP42S*	*ICP42S*	*ICP42S*
Units	*PPM*	*PPM*	*PPM*	*PPM*	*PPM*	*PPM*
Detection Limit	*20*	*10*	*50*	*10*	*20*	*20*
Upper Scheme						

- not analysed / -- element not determined / I.S. insufficient sample / L.N.R. listed not received

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Sample	*Au*	*Au(R)*	*Au(S)*			
B9 229.0-230.0	0.04					
B9 230.0-231.0	0.02					
B9 231.0-232.0	0.02					
B9 238.0-239.0	0.02					
B9 239.0-240.0	<0.01	0.02				
B9 240.0-241.0	<0.01					
B9 241.0-242.0	<0.01					
B9 242.0-243.0	<0.01					
B9 243.0-244.0	<0.01					
B9 244.0-245.0	<0.01					
B9 245.0-246.0	<0.01					
B9 246.0-247.0	<0.01					
B9 247.0-248.0	0.01					
B9 248.0-249.0	0.02					
B9 249.0-250.0	<0.01					
B9 250.0-251.0	<0.01					
B9 251.0-252.0	0.01					
B9 252.0-253.0	0.02					
B9 253.0-254.0	0.02					
B9 254.0-255.0	<0.01					
B9 255.0-256.0	0.02					
B9 256.0-257.0	<0.01					
B9 257.0-258.0	<0.01					
B9 258.0-259.0	<0.01	<0.01				
B9 259.0-260.0	0.02					
B9 260.0-261.0	0.02	<0.01				
B9 261.0-262.0	0.02					
B9 262.0-263.0	<0.01					
B9 263.0-264.0	<0.01					
B9 264.0-265.0	<0.01					
B9 265.0-266.0	<0.01					
B9 266.0-267.0	<0.01					
B9 267.0-268.0	0.02					
B9 268.0-269.0	0.02					
B9 269.0-270.0	0.02					
B9 270.0-271.0	<0.01					
B9 271.0-272.0	<0.01					
B9 272.0-273.0	0.02					
B9 273.0-274.0	<0.01	<0.01				
B9 274.0-275.0	<0.01					
Scheme	*FAA505*	*FAA505*	*FAA505*			
Units	*PPM*	*PPM*	*PPM*			
Detection Limit	*0.01*	*0.01*	*0.01*			
Upper Scheme						

- not analysed / -- element not determined / I.S. insufficient sample / L.N.R. listed not received

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Sample	*Ni*	*Cu*	*Pb*	*Zn*	*As*	*S*
B9 275.0-276.0	760	10	<50	70	<20	2080
B9 276.0-277.0	1040	50	<50	80	<20	3980
B9 277.0-278.0	2310	40	<50	380	30	2760
B9 278.0-279.0	4780	30	<50	1130	40	820
B9 279.0-280.0	2590	30	<50	520	30	210
B9 280.0-281.0	4090	80	<50	720	50	80
B9 281.0-282.0	3940	50	<50	860	40	160
B9 282.0-283.0	1380	40	<50	280	20	3640
B9 283.0-284.0	1240	30	<50	280	20	380
B9 284.0-285.0	1820	20	<50	530	50	210
B9 285.0-286.0	1490	10	<50	230	30	510
B9 286.0-287.0	1360	50	<50	270	20	1130
B9 287.0-288.0	1480	50	<50	90	20	920
B9 288.0-289.0	1110	30	<50	70	20	950
B9 289.0-290.0	990	30	<50	70	20	930
B9 290.0-291.0	1430	20	<50	140	20	580
B9 291.0-292.0	1300	50	<50	110	<20	570
B9 292.0-293.0	1330	<10	<50	330	<20	650
B9 293.0-294.0	1570	20	<50	2220	30	1890
B9 294.0-295.0	1450	<10	<50	300	30	460
B9 295.0-296.0	1240	<10	<50	110	<20	740
B9 296.0-297.0	1950	20	<50	180	70	1170
B9 297.0-298.0	1370	50	<50	80	60	720
B9 298.0-299.0	800	20	<50	70	50	270
B9 299.0-300.0	1130	10	<50	230	50	480
B9 300.0-301.0	1050	10	<50	260	50	430
B9 301.0-302.0	1150	10	<50	150	50	470
B9 302.0-303.0	1420	10	<50	180	50	460
B9 303.0-304.0	1930	230	<50	220	130	2820
B9 304.0-305.0	1300	160	<50	220	70	970
B9 305.0-306.0	1730	30	<50	530	60	850
B9 306.0-307.0	2230	10	<50	300	70	660
B9 307.0-308.0	1980	10	<50	260	90	1710
B9 308.0-309.0	970	<10	<50	170	70	620
B9 309.0-310.0	1160	<10	<50	200	70	580
B9 310.0-311.0	1950	10	<50	240	90	900
B9 311.0-312.0	1410	10	<50	170	100	350
B9 312.0-313.0	3320	30	70	640	530	7970
B9 313.0-314.0	1010	10	<50	110	260	410
B9 314.0-315.0	1740	<10	<50	170	60	320
Scheme	*ICP42S*	*ICP42S*	*ICP42S*	*ICP42S*	*ICP42S*	*ICP42S*
Units	*PPM*	*PPM*	*PPM*	*PPM*	*PPM*	*PPM*
Detection Limit	*20*	*10*	*50*	*10*	*20*	*20*
Upper Scheme						

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Sample	*Au*	*Au(R)*	*Au(S)*			
B9 275.0-276.0	<0.01					
B9 276.0-277.0	0.02					
B9 277.0-278.0	<0.01					
B9 278.0-279.0	<0.01					
B9 279.0-280.0	0.02					
B9 280.0-281.0	0.02					
B9 281.0-282.0	<0.01					
B9 282.0-283.0	0.02					
B9 283.0-284.0	0.06	0.05				
B9 284.0-285.0	0.02					
B9 285.0-286.0	<0.01					
B9 286.0-287.0	<0.01					
B9 287.0-288.0	<0.01					
B9 288.0-289.0	0.02					
B9 289.0-290.0	0.02					
B9 290.0-291.0	<0.01					
B9 291.0-292.0	<0.01					
B9 292.0-293.0	0.02					
B9 293.0-294.0	0.02					
B9 294.0-295.0	<0.01					
B9 295.0-296.0	<0.01					
B9 296.0-297.0	0.02					
B9 297.0-298.0	<0.01					
B9 298.0-299.0	0.02					
B9 299.0-300.0	0.02	0.02				
B9 300.0-301.0	<0.01					
B9 301.0-302.0	<0.01					
B9 302.0-303.0	0.02					
B9 303.0-304.0	0.02					
B9 304.0-305.0	<0.01					
B9 305.0-306.0	<0.01					
B9 306.0-307.0	<0.01					
B9 307.0-308.0	0.02					
B9 308.0-309.0	<0.01					
B9 309.0-310.0	0.02					
B9 310.0-311.0	<0.01					
B9 311.0-312.0	<0.01					
B9 312.0-313.0	<0.01					
B9 313.0-314.0	<0.01	<0.01				
B9 314.0-315.0	<0.01					
Scheme	*FAA505*	*FAA505*	*FAA505*			
Units	*PPM*	*PPM*	*PPM*			
Detection Limit	*0.01*	*0.01*	*0.01*			
Upper Scheme						

- *not analysed* / -- *element not determined* / *I.S. insufficient sample* / *L.N.R. listed not received*

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Sample	*Ni*	*Cu*	*Pb*	*Zn*	*As*	*S*
B9 315.0-316.0	2100	10	<50	150	60	390
B9 316.0-317.0	1740	20	50	290	60	290
B9 317.0-318.0	1340	<10	<50	150	60	700
B9 318.0-319.0	1350	<10	<50	170	70	840
B9 319.0-320.0	1960	<10	<50	230	70	420
B9 320.0-321.0	1090	280	<50	160	50	540
B9 321.0-322.0	1630	<10	<50	200	60	450
B9 322.0-323.0	1300	<10	<50	160	70	330
B9 323.0-324.0	1020	<10	<50	170	70	280
B9 324.0-325.0	2530	<10	<50	370	80	260
B9 325.0-326.0	980	<10	<50	260	160	3600
B9 326.0-327.0	1090	<10	<50	410	100	570
B9 327.0-328.0	1690	30	<50	1590	80	520
B9 328.0-329.0	2070	70	50	4030	90	150
B9 329.0-329.8	3330	1060	<50	1330	60	3930
B9 329.8-331.0	2010	90	<50	460	70	3740
B9 331.0-332.0	1070	20	<50	250	60	1090
B9 332.0-333.0	1810	30	50	160	90	2290
B9 333.0-334.0	2410	60	60	130	60	4210
B9 334.0-335.0	2370	30	50	100	50	2650
B9 335.0-336.0	1840	10	<50	80	80	2210
B9 336.0-337.0	2090	30	<50	120	60	2970
B9 337.0-338.0	2470	220	<50	140	40	1.68%
B9 338.0-339.0	1560	90	<50	100	40	5820
B9 339.0-340.0	1440	60	110	280	110	1.08%
B9 340.0-341.0	1570	20	60	260	40	650
B9 341.0-342.0	1230	20	<50	140	40	1220
B9 342.0-343.0	1410	10	<50	150	40	1380
B9 343.0-344.0	1580	<10	<50	210	40	2040
B9 344.0-345.0	2710	10	50	200	50	3160
B9 345.0-346.0	2550	260	130	290	20	1.45%
B9 346.0-347.0	1490	80	60	120	<20	5720
B9 347.0-348.0	1380	70	<50	100	20	4110
B9 348.0-349.0	920	20	<50	180	<20	1030
B9 349.0-350.0	780	20	<50	130	50	620
B9 350.0-351.7	700	50	<50	170	90	3250
B9 351.7-353.0	410	100	<50	90	30	9060
B9 353.0-354.0	260	10	<50	80	40	700
B9 354.0-355.0	230	30	<50	80	<20	1410
B9 355.0-356.0	170	10	<50	70	<20	340
Scheme	*ICP42S*	*ICP42S*	*ICP42S*	*ICP42S*	*ICP42S*	*ICP42S*
Units	*PPM*	*PPM*	*PPM*	*PPM*	*PPM*	*PPM*
Detection Limit	*20*	*10*	*50*	*10*	*20*	*20*
Upper Scheme						

- not analysed / -- element not determined / I.S. insufficient sample / L.N.R. listed not received

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Lab Ref WM084999
Client Ref **236606**
Project
Reported 11/04/2005
Status Final

ANALYTICAL REPORT

Sample	*Au*	*Au(R)*	*Au(S)*			
B9 315.0-316.0	<0.01					
B9 316.0-317.0	<0.01					
B9 317.0-318.0	<0.01					
B9 318.0-319.0	<0.01					
B9 319.0-320.0	<0.01					
B9 320.0-321.0	0.02					
B9 321.0-322.0	<0.01					
B9 322.0-323.0	<0.01					
B9 323.0-324.0	0.04					
B9 324.0-325.0	<0.01					
B9 325.0-326.0	<0.01					
B9 326.0-327.0	0.04					
B9 327.0-328.0	0.10					
B9 328.0-329.0	<0.01	<0.01				
B9 329.0-329.8	<0.01					
B9 329.8-331.0	0.06					
B9 331.0-332.0	<0.01					
B9 332.0-333.0	<0.01					
B9 333.0-334.0	<0.01					
B9 334.0-335.0	<0.01	<0.01				
B9 335.0-336.0	<0.01					
B9 336.0-337.0	<0.01					
B9 337.0-338.0	0.02					
B9 338.0-339.0	<0.01					
B9 339.0-340.0	<0.01					
B9 340.0-341.0	<0.01					
B9 341.0-342.0	0.02					
B9 342.0-343.0	0.02					
B9 343.0-344.0	<0.01					
B9 344.0-345.0	0.02					
B9 345.0-346.0	<0.01	<0.01				
B9 346.0-347.0	<0.01					
B9 347.0-348.0	<0.01					
B9 348.0-349.0	<0.01					
B9 349.0-350.0	<0.01					
B9 350.0-351.7	<0.01					
B9 351.7-353.0	0.02	0.02				
B9 353.0-354.0	<0.01					
B9 354.0-355.0	<0.01					
B9 355.0-356.0	<0.01					
Scheme	*FAA505*	*FAA505*	*FAA505*			
Units	*PPM*	*PPM*	*PPM*			
Detection Limit	*0.01*	*0.01*	*0.01*			
Upper Scheme						

- *not analysed* / -- *element not determined* / *I.S.* *insufficient sample* / *L.N.R.* *listed not received*

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Sample	*Ni*	*Cu*	*Pb*	*Zn*	*As*	*S*
B9 356.0-357.0	200	30	<50	60	<20	4190
B9 357.0-358.0	180	20	<50	70	<20	2090
B9 358.0-359.0	150	20	<50	60	<20	990
B9 359.0-360.0	180	50	<50	60	<20	5870
B9 360.0-361.0	160	20	<50	70	<20	760
B9 361.0-362.0	210	30	<50	70	<20	1810
B9 362.0-363.0	250	30	<50	60	<20	1250
B9 363.0-363.9	310	70	<50	70	<20	4750
*SS 171.5-172.5	3160	20	90	1890	90	130
*SS 197.0-198.0	2620	40	130	740	30	40
*SS 223.0-224.0	930	10	<50	140	50	240
*SS 254.0-255.0	1370	120	<50	140	30	3330
*SS 279.0-280.0	2260	40	<50	550	30	200
*SS 304.0-305.0	1170	170	<50	270	50	900
*SS 329.0-329.8	2750	1100	<50	1540	40	3560
*SS 355.0-356.0	170	30	<50	70	<20	360
Scheme	*ICP42S*	*ICP42S*	*ICP42S*	*ICP42S*	*ICP42S*	*ICP42S*
Units	*PPM*	*PPM*	*PPM*	*PPM*	*PPM*	*PPM*
Detection Limit	*20*	*10*	*50*	*10*	*20*	*20*
Upper Scheme						

- not analysed / -- element not determined / I.S. insufficient sample / L.N.R. listed not received

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Status Final

ANALYTICAL REPORT

Sample	*Au*	*Au(R)*	*Au(S)*			
B9 356.0-357.0	<0.01					
B9 357.0-358.0	0.02					
B9 358.0-359.0	0.02	<0.01				
B9 359.0-360.0	<0.01					
B9 360.0-361.0	<0.01					
B9 361.0-362.0	<0.01					
B9 362.0-363.0	<0.01					
B9 363.0-363.9	<0.01					
*SS 171.5-172.5	<0.01					
*SS 197.0-198.0	<0.01					
*SS 223.0-224.0	<0.01					
*SS 254.0-255.0	0.02					
*SS 279.0-280.0	<0.01					
*SS 304.0-305.0	<0.01					
*SS 329.0-329.8	<0.01					
*SS 355.0-356.0	<0.01					
Scheme	*FAA505*	*FAA505*	*FAA505*			
Units	*PPM*	*PPM*	*PPM*			
Detection Limit	*0.01*	*0.01*	*0.01*			
Upper Scheme						

- *not analysed* / -- *element not determined* / *I.S. insufficient sample* / *L.N.R. listed not received*

ANALYSIS DESCRIPTION

For solid samples, reported units are expressed as mass / mass.
ie: % denotes %mass/%mass, ppm denotes mg/kg, ppb denotes µg/kg.
For liquid samples, reported units are expressed as mass / volume.
ie: % denotes %mass/%volume, ppm denotes mg/L, ppb denotes µg/L.

Job number : **WM084999** Order number : **236606**

Scheme code: **ICP42S** ICP-OES after DIG42S

Ni	:	Nickel 20-25000 ppm
Cu	:	Copper 10-25000 ppm
Pb	:	Lead 50-25000 ppm
Zn	:	Zinc 10-25000 ppm
As	:	Arsenic 20-25000 ppm
S	:	Sulphur 20-100000 ppm

Scheme code: **FAA505** Au Pt Pd, FAS, AAS, 50g

Au	:	Gold 0.01-1000 ppm
Au(R)	:	Gold Repeat 0.01-1000 ppm
Au(S)	:	Gold Duplicate 0.01-1000 ppm

APPENDIX 5

DDH B8 & B9 Petrological Report

SINCLAIR KNIGHT MERZ

SKM

The Petrology of 8 Samples from the Burbank Prospect, Tasmania

- For Allegiance Metals NL
- M1159
- 7 June 2005

The Petrology of 8 Samples from the Burbank Prospect, Tasmania

- M1159
- 7 June 2005

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Contents

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Project Manager:	Phil White
Name of Organisation:	Allegiance Metals NL
Name of Project:	Petrology of 8 Samples from Burbank, Tasmania
Name of Document:	Ap01004
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Summary

A suite of eight rock samples from Burbank, Tasmania was examined in polished thin section.

The original lithologies comprise serpentinised ultramafics.

The rocks have been serpentinised then variably altered to carbonate-silica assemblages and most have then been oxidised by groundwaters.

Veining and brecciation is limited and veins consists mainly of magnesite and quartz, with minor magnetite and chalcedony.

Chromite occurs as a primary mineral and some magnetite was produced during serpentinisation. Hydrothermal magnetite is also present and in the least oxidised sample it is accompanied by pentlandite. In the oxidised samples the magnetite and pentlandite have been altered to goethite and limonite with possibly some limonite and goethite introduced into some of the rock from groundwaters.

Elevated zinc concentrations may reflect a franklinite component in the hydrothermal magnetite with some zinc also possibly present in the limonite in more oxidised samples.

It is concluded that an epithermal nickel deposit formed along a major structure that also served as later conduit for oxidised groundwaters such that sulphides are only preserved peripherally to the structure or possibly at greater depths within it. Limonite and goethite produced by the oxidation are considered to host the nickel in the oxidised samples, but at much higher concentrations than the limonite of laterite nickel deposits.

1. Introduction

A suite of eight samples from Burbank, Tasmania was submitted in May 2005 with an e-mailed request for petrological analysis (see appendix A).

Of these samples, all were prepared as polished thin sections, and examined in transmitted and reflected light as appropriate.

The principal aim of the study was to establish where exploitable nickel sulphides may be found.

2. Lithologies

Lithologies, alteration and vein mineralogy of the samples are summarised in Table 2-1. Full petrographic descriptions are given in Section 7.

■ **Table 2-1 Summary of Lithologies and Alteration**

Sample Numbers SKM	Allegiance	Lithology (and primary minerals)	Alteration and Veining	
13228	B8 145.3 m	Serpentinite (Chr)	Total: Vein:	Chs, Mag, Lm, Mt, Hm, Tlc Lm, Mag, Q, Ccd, Mt
13229	B8 148.5 m	Serpentinite (Chr)	Total: Vein:	Chs, Mag, Mt, Lm, Tlc Mag, Lm
13230	B8 150.5 m	Serpentinite (Chr)	Total: Vein:	Chs, Lm, Lx Mag, Q
13231	B9 147.5 m	Serpentinite (Chr)	Total:	Cal, Mt, Chs, Pen, Rt
13232	B9 150.4 m	Serpentinite (Chr)	Total:	Mag, Mt, Lm, Cal
13233	B9 164.8 m	Serpentinite (Chr)	Total:	Mag, Cal, Q, Lm. Mt
13234	B9 183.5	Serpentinite (Chr)	Total:	Mag, Q, Lm, Goe, Mt, Ccd
13235	B9 185.4 m	Serpentinite	Total: Vein:	Q, Mag, Lm, Goe, Mt Lm

Mineral Abbreviations

Cal	Calcite	Lx	Leucoxene
Ccd	Chalcedony	Mag	Magnesite
Chr	Chromite	Mt	Magnetite
Chs	Chrysotile	Pen	Pentlandite
Gth	Goethite	Rt	Rutile
Hm	Hematite	Q	Quartz
Lm	Limonite	Tlc	Talc

The rocks have all been designated as serpentinite. The basis for doing this is either the presence of serpentine minerals, remnant chromite with a shattered texture or the ghost of chromite with a shattered texture. Chromite is resistant to alteration so is usually a good marker mineral for ultramafic precursors to altered rocks. During serpentinisation of ultramafics there is a volume increase and one of the features that mark it is the pulling apart of chromite grains, to give a shattered texture. So when this texture is observed not only can altered rocks be identified as ultramafics they can be interpreted to have been serpentinised, as is the case in this instance. In one sample there is a ghost of elongate olivine grains and in another there are ghosts of pyroxene grains. The occurrence of remnant primary textures is too limited to apply ultramafic rock names, although in least in the case of that with the pyroxene ghosts, the rock is likely to have been originally a peridotite.

3. Alteration and Vein Mineralogy

In this group of rocks three alteration events can be recognised. The first is serpentinisation, the second is hydrothermal alteration and the third is oxidation by ground waters. Serpentinisation involves a hydration of ultramafic rocks with olivine and pyroxenes going to serpentinite minerals. Since serpentine minerals do not incorporate much iron or titanium in their structure the iron from the primary minerals forms magnetite and titanium forms rutile or leucoxene, as are observed in these rocks. There is a fibrous habit to at least some of the serpentinite in these rocks and on this basis it has been identified as chrysotile. An XRD would be required to exactly identify it, but the point is not germane to the goal of this study. The serpentinisation process usually takes place below the seafloor following the formation of the ultramafics at spreading ridges. Since these rocks are regarded as being Cambrian in age the serpentinisation is very likely a Cambrian event, significantly predating the intrusion of Carboniferous granite into the area and the hydrothermal alteration associated with it.

Where ultramafics are hydrothermally altered, rather than serpentines there are strong brecciation textures due to the volume of the rock increasing, and indications of supersaturation of the altering fluids with silica in non-equilibrium phases. In this case volume-increase textures are lacking and there are only minor occurrences of non-equilibrium forms of silica, which means that the rocks were serpentinised prior to hydrothermal alteration and the volume increase had already taken place.

Altered serpentinites have a very distinctive suite of alteration minerals. There is a characteristic succession of minerals with increasing intensity of alteration that reflects the degree of water/rock interaction indicative of either increasing proximity to a fluid bearing structure and/or the amount of fluid that has passed through the structure that was responsible for the alteration. Talc is usually the first mineral to form, which is then replaced by carbonates and then by silica minerals, with the most intensely altered rocks consisting only of silica. All these minerals are found in the sample suite and their distribution can be used to determine hydrothermal fluid flow pathways.

On this basis B9 is closer to a major structure that hydrothermal fluids have moved along than B8 because there is only minor alteration of the serpentinite in B8 and there are only minor remnants of serpentinite in B9. Going from 147.5 m to 185.4 m in B9 the hole is getting closer to such a major structure, because the remnants of serpentinite are in the sample from 147.5 m and the abundance of hydrothermal silica minerals (mainly quartz with minor chalcedony) steadily increases with depth over this interval.

Veining is found mainly in B8 and most of the hydrothermal minerals in these rocks are in veins, with only very limited alteration around them, suggestive of considerable prior reaction between serpentinite and the fluid such that the fluid is close to being in equilibrium with the serpentinite. This is consistent with these samples being some distance from a major structure. Hydrothermal minerals in the veins include mainly magnesite, but quartz and chalcedony are also found along with opaques.

The conditions of the hydrothermal alteration can be interpreted from the textures and minerals present. The presence of open space textures, mainly vugs, is suggestive that pressures were hydrostatic, and the presence of both quartz and chalcedony is suggestive of temperatures in the vicinity of 200°C, possibly with the chalcedony reflecting cooling. The presence of carbonates is indicative of the hydrothermal waters containing CO_2.

Limonite and goethite are present in all except the sample from B9 147.5 m. They can be seen to be oxidation products of magnetite and possibly any sulphides that were originally present. Limonite and goethite also occur in veins, and limonite lines cracks and stains parts of the rock.

As the rocks are found at depth below the normal weathering surface this oxidation must have been produced by ground waters where a limited set of conditions applied. This is because generally ground waters become reduced below the water table by rock reaction. The special conditions are that the ground waters must be cold, the area have high relief and precipitation rates and that the waters are channelled. This is because oxygen has inverse solubility in water and is more abundant in cold waters. There also needs to be a strong hydraulic gradient with possible rock reaction focussed into the area where the samples are derived. It is understood that a major thrust fault is present in the area that fulfils the last requirement and the other requirements should also be met in western Tasmania. The fact that holes were collared at se level would suggest that either they are bordering on an area of high relief or that the oxidation is not current.

4. Brecciation and Veining

With the exception of some limonite veining in B9 185.4 m veining is limited to samples from B8. In the sample from 145.3 m the veins have formed a stockwork, but the veining is much weaker in the other samples. The style of veining is indicative of multiple brittle fracturing events. The lack of shearing is suggestive that the process may be one of hydrothermal brecciation under tensile conditions rather than a purely tectonic process.

5. Mineragraphy

Four sets of opaque or semi-opaque minerals can be recognised: primary minerals, minerals produced by serpentinisation, minerals produced by hydrothermal alteration and minerals produced by oxidation by ground waters. Chromite is the primary mineral present, it has the shattered appearance typical of that in serpentinites and while most of it is dark brown and transparent some is opaque suggestive of it being iron rich.

Magnetite has been produced during serpentisation as a host for the iron from mafic minerals that can not be incorporated into serpentine minerals. It occurs as dusty material disseminated through the rock.

Hydrothermal opaques are most apparent in the sample from B9 147.5 m that has not been oxidised. Magnetite is found replacing talc and as very fine grains with pentlandite. The pentlandite also occurs as individual grains. The assay of the rock (See Appendix A) gives 0.1 wt% Zn, but no zinc minerals are apparent, possibly the magnetite has a significant franklinite ($ZnFe_2O_4$) component to it. In other samples magnetite can be seen replacing chromite as well as talc and as a vein mineral.

The oxidation minerals are goethite and limonite that occur as replacement of magnetite and by themselves in veins.

6. Discussion

The main aim of the study was to establish if there is an exploitable nickel sulphide body present. Secondary aims included establishing the residence of the nickel and to a lesser extent the zinc. Nickel sulphide (pentlandite) has been directly identified in B9 147.5 m associated with carbonate hydrothermal alteration. Where hydrothermal textures have been preserved, such as in B9 185.4 m, there is evidence in the form of goethite similar in size and shape to the pentlandite in B9 147.5 m that nickel sulphides were originally present. Therefore, since chalcedony and vuggy textures are present the deposit originally formed as an epithermal-nickel deposit. A similar deposit is found at Jaro on the island of Leyte in the Philippines. The deposit at Burbank has then been modified by oxidising ground waters. Of the minerals present after oxidation limonite and goethite are capable of containing nickel, and these can be major ore minerals in lateritic nickel deposits. There is a very rough relationship between the abundance of limonite and goethite, and nickel in the oxidised samples. However, the grades found at Burbank are similar to those found in limonitic ore of lateritic deposits which are essentially all limonite and this requires that the limonite and goethite at Burbank to be very nickel-rich.

Table 6-1 Potential Nickel bearing Minerals in Relation to Assays

Sample No.	Ni (%)	S (ppm)	Pentlandite (vol %)	Limonite + goethite (vol %)
B8 145.3 m	0.69	60		4
B8 148.5 m	0.92	270		5
B8 150.5 m	0.79	70		2
B9 117.5 m	0.24	2700	<1	
B9 150.4 m	2.09	120		7
B9 164.8 m	1.07	80		4
B9 183.5 m	1.53	100		9
B9 185.4 m	0.60	40		8

In B8 the hydrothermal alteration is suggestive of the samples being away from the main structure controlling hydrothermal alteration. This may possibly also reflect the intensity of the hydrothermal mineralisation, with there thus being limited hydrothermal nickel mineralisation, but there is still oxidation suggestive that nickel is being transferred from elsewhere, during the oxidation process and that the ground waters are channelled by something other than the main structure.

In B9 the oxidised samples have better nickel grades than the unoxidised sample, but it is not known what the original distribution of hydrothermal nickel was in the oxidised samples. Since the alteration sequence in B9 is indicative of the sulphide-bearing sample being furthest from the main structure there would also be an expectation that it would have a lower hydrothermal nickel content in comparison to samples closer to the structure. As oxidation is present in B9 closer to where the main structure is interpreted to be, it is likely that in B9 the major structure is both the main control over the distribution of hydrothermal nickel and the oxidising groundwater. Thus it is likely that only the lower grade, peripheral sulphide mineralisation will be preserved where the oxidised waters have flowed through the main structure. Therefore to find nickel sulphides requires finding where the oxidised waters have not been. This is either laterally peripheral to the main structure or at depths sufficiently great that oxygen in the groundwater has been removed by the rock oxidation processes.

No primary zinc minerals are apparent in the unoxidised sample (B9 117.5 m) and it is suggested that the zinc may be present in secondary magnetite as a franklinite component. As hydrothermal magnetite is preserved in most of the samples the zinc can remain in the magnetite and for the oxidised samples there is scope for zinc to be absorbed onto limonite.

It is concluded that an epithermal nickel deposit is present, but much of its currently known extent has been oxidised. Some transport of nickel has occurred during the oxidation where ground waters have been channelled outside of the structure that originally controlled the location of the mineralisation. Where ground waters have travelled along the same structure as the mineralisation only peripheral sulphide mineralisation has been preserved, but there is scope for sulphide mineralisation to be present associated with the main structure at greater depths. This is of course providing that the hydrothermal mineralisation is of greater vertical extent than the oxidation and is of adequate grade.

It is possible that there may be a zone of supergene enrichment of nickel at the interface between the oxidised waters and any preserved hypogene sulphides at depth that may require drilling directly down the major structure to test, providing that this is technically feasible. Otherwise, new holes should be stepped out from known zones of mineralisation in order to intercept the mineralisation deeper, if topography allows.

7. Petrographic Descriptions

Sample Numbers:	**Allegiance**	**:**	**B8 145.3 m**
	Sinclair Knight Merz	**:**	**13228**
Rock Name:	**Veined Serpentinite**		

Petrographic Description

Lithology: In hand specimen, the sample is a pale brown rock cut by a network of veins. It is weakly magnetic and does not react with HCl.

The rock has been serpentinised, which implies an ultramafic precursor, the only remnants of which lie in the presence of fine grained chromite with a shattered texture.

Alteration: The rock has undergone two phases of alteration. The first is serpentinisation and the second is weak hydrothermal alteration. In thin section, the rock consists mainly of fine to medium grained chrysotile. In places it has a radiating fibrous texture to identify it as chrysotile. Overall there is a mesh texture defined by clear curved elongate grains surrounding opaques and grains of chrysotile that have a light brown stain to them.

There is patchy replacement of the chrysotile in the vicinity of veins by magnesite and less commonly talc. Very fine grained limonite is patchily disseminated through the rock.

Veining: There is a network of very thin veins (< 0.1 mm) cut by later veins up to 3 mm wide. The early, thin veins consist of limonite and magnesite. The thicker veins consist of magnesite, limonite and opaques with the thicker veins have vugs with rhombohedral magnesite and fine grained prismatic quartz lining them. Some vugs are infilled by chalcedony.

Mineragraphy: Fine grained subhedral grains of chromite show a shattered texture, typical of that found in serpentinites. The grains are nearly completely opaque, indicating an iron rich chromite. They have slight alteration on the margins and fractures to magnetite. Very fine grained opaque disseminated through the rock is magnetite, the repository of the iron from the original mafic minerals. Magnetite also occurs in the veins, where it shows slight alteration on its margins to hematite and lies within much more common limonite.

Brecciation: The multiple veining events have produced a stockwork.

Proportions (%): Primary: Chromite (1)
Secondary: Chrysotile (85), magnesite (5), limonite (4), magnetite (3), talc (2), quartz (<1), chalcedony (<1), hematite (<1)

Sample Numbers:	Allegiance	:	B8 148.5 m
	Sinclair Knight Merz	:	13229
Rock Name:	Veined Serpentinite		

Petrographic Description

Lithology: In hand specimen, the rock is a pale brown colour with white veins. It is magnetic and does not react with HCl.

In thin section, there is a vague ghost of an original granular texture, including some ghosts of elongate olivine grains. Some fine grained primary chromite is the remnant of an ultramafic precursor.

Alteration: The rock has been serpentinised to chrysotile that has a mesh texture defined by rounded grains surrounding patches of very fine grained opaques. Some of the serpentine has a fibrous habit to identify it as chrysotile.

There is patchy alteration around veins to magnesite and talc. Limonite surrounds patches of the larger opaque grains.

Veining: Veins consist of fine grained magnesite and have some vugs. There are area of cloudy magnesite that surround rounded patches of jarosite.

Mineragraphy: Fine grained opaques have cores of primary chromite that is replaced by magnetite or are entirely replaced by magnetite. Very fine grained opaques in the chrysotile are magnetite.

Brecciation: The rock has been fractured to form the veins.

Proportions (%): Primary: Chromite (<1)
Secondary: Chrysotile (86), magnesite (6), magnetite (5), limonite (2), jarosite (1), talc (<1)

Sample Numbers:	Allegiance	:	B8 150.4 m
	Sinclair Knight Merz	:	13230
Rock Name:	Serpentinite		

Petrographic Description

Lithology: In hand specimen, this is a pink-brown rock with a layered appearance that contains patches of bleached material and grains of magnetite. The sample is magnetic and doesn't react with HCl.

In thin section, there are the ghosts of medium grained pyroxene grains and primary chromite to indicate that the rock was originally an ultramafic, presumably a peridotite.

Alteration: The rock has been serpentinised and has a fine grained mesh texture defined by grains of chrysotile around very fine grained dusty opaques. The bleached areas are after pyroxene grains and contain very fine grained opaques that do not take a polish that is leucoxene.

Limonite is found surrounding opaques and as patches through the rock.

Veining: There are thin veins of anhedral fine grained quartz and thicker veins of fine grained magnesite. Along the margins of the magnesite veins are ghosts of a radiating mineral, possibly talc.

Mineragraphy: Primary chromite occurs as fine anhedral to subhedral grains, it is slightly replaced around its margins by magnetite. Magnetite also occurs as fine stringers of fine grains and as very fine grains in the chrysotile.

Brecciation: The rock has been fractured to provide the veining.

Proportions (%): Primary: Chromite (1)
Secondary: Chrysolite (84), magnesite (5), limonite (5), magnetite (3), leucoxene (2), quartz (<1)

Sample Numbers:	**Allegiance**	**:**	**B9 147.5 m**
	Sinclair Knight Merz	**:**	**13231**
Rock Name:	**Altered Serpentinite**		

Petrographic Description

Lithology: In hand specimen, the sample is a dark rock with white patches and a band of fine grained magnetite. It is magnetic and reacts with HCl.

In thin section, nothing remains of the original rock except for fine grained primary chromite that has a shattered texture suggestive of a serpentinised ultramafic.

Alteration: There are minor remnants of chrysotile, other wise the rock is totally replaced by calcite and opaques. There are ghosts of a platey radiating mineral throughout the rock. Possibly this was talc. It is now replaced by opaques and by calcite. It occurs in layers with more granular calcite that contains fine grained, equant, disseminated opaques.

Mineragraphy: Primary chromite is found as fine, shattered grains. The opaque replacing the platey mineral is magnetite. Magnetite also as anhedral to subhedral fine to very fine grains in patches, some of which is intergrown with very fine anhedral pentlandite. The pentlandite also occurs as individual grains or intergrown with rutile.

Proportions (%): Primary: Chromite (1)
Secondary: Calcite (95), magnetite (4), chrysotile (<1), pentlandite (<1), rutile (<1)

Sample Numbers:	**Allegiance**	**:**	**B9 150.4 m**
	Sinclair Knight Merz	**:**	**13232**
Rock Name:	**Altered Serpentinite**		

Petrographic Description

Lithology: In hand specimen, the sample is a dark rock that has been strongly oxidised. It is magnetic where it is dark and weakly reacts with HCl.

In thin section, nothing remains of the original rock except for some primary chromite with a shattered texture suggestive of a serpentinised ultramafic.

Alteration: The rock consists of carbonates, opaques and limonite. Since the rock is only weakly reactive to HCl the majority of the carbonate is likely to be magnesite, with some calcite. Most of the carbonate is granular, but some has dusty ghosts of a radiating platey mineral, most likely talc. Some of the opaque also replaces the platey mineral, but is otherwise disseminated through the rock. Limonite occurs in large patches.

Mineragraphy: There are shattered fine grains of chromite and some similar looking grains of magnetite, possibly after chromite. Magnetite is found replacing a platey mineral and as very fine disseminated grains.

Proportions (%): Primary: Chromite (1)
Secondary: Magnesite (80), magnetite (7), limonite (7), calcite (5)

Sample Numbers:	**Allegiance**	**:**	**B9 164.8 m**
	Sinclair Knight Merz	**:**	**13233**
Rock Name:	**Altered Serpentinite**		

Petrographic Description

Lithology: In hand specimen, the sample has a chaotically layered appearance with pale bands between dark and iron stained bands. It is magnetic and patchily reactive to HCl.

In thin section, primary chromite that occurs as fine shattered grains is all that remains of the original rock. This suggests an ultramafic precursor, with the texture of the chromite indicative of serpentinisation..

Alteration: With the exception of the chromite the rock is altered to carbonates, quartz and opaques with patches of limonite. Most of the carbonate is granular, but some has a ghost of a texture of a platey mineral, possibly talc. Some of the opaque minerals are also replacing this platey mineral. Fine grain granular quartz is patchily intergrown with the carbonate. There are no clear optical differences in the carbonate, but the samples behaviour when reacted with HCl suggests that there is a mixture of calcite and magnesite. There are patches of limonite throughout the rock, but some are concentrated around opaques.

Mineragraphy: Fine, shattered grains of chromite are present. There are also similar grains of magnetite that may be after magnetite. Magnetite is also found as a replacement of a platey mineral and as very fine grained disseminated material throughout the sample.

Proportions (%): Primary: Chromite (1)
Secondary: Magnesite (55), calcite (30), quartz (6), limonite (4), magnetite (4)

Sample Numbers:	**Allegiance**	**:**	**B9 183.5 m**
	Sinclair Knight Merz	**:**	**13234**
Rock Name:	**Altered Serpentinite**		

Petrographic Description

Lithology: In hand specimen, the sample is strongly iron-stained. It is not reactive to HCl and is patchily magnetic.

In thin section, fine to medium grained anhedral, shattered grains of chromite are concentrated in one part of the sample. These are all that remains of the original rock to suggest that it was an ultramafic, with the shattered texture consistent with it being serpentinised.

Alteration: The rock is altered to fine grained, granular magnesite that occurs as oblate patches amongst fine grained granular quartz, with both mineral stained by and intergrown with limonite. There are minor small areas of fine grained chalcedony

Mineragraphy: In addition to the chromite there are fine to very fine grained patches of magnetite, which sit in patches of goethite and limonite. Other patches of goethite and limonite are possibly after magnetite.

Proportions (%): Primary: Chromite (2)
Secondary: Magnesite (44), quartz (43), limonite (6), goethite (3), magnetite (2), chalcedony (<1)

Sample Numbers:	Allegiance	:	B9 185.4
	Sinclair Knight Merz	:	13235
Rock Name:	Altered Serpentinite		

Petrographic Description

Lithology: In hand specimen, this is a dark brown rock with a granular texture with elongate whit areas. It is patchily magnetic and does not react with HCl.

In thin section, there is a ghost of shattered chromite grains sufficiently similar to other samples in the suite to suggest that the rock was a serpentinised ultramafic.

Alteration: The rock is totally altered to fine grained granular quartz, with some variation in grain size, that contains oblate patches of fine grained granular magnesite. There are scattered opaques and limonite throughout the rock.

Veining: There are elongate areas of limonite.

Mineragraphy: Where there are ghosts of shattered primary chromite there are minor remnants of magnetite after the chromite and there are a few isolated very fine grains of magnetite throughout the rock. However, most of the iron minerals have been oxidised to goethite and limonite with limonite predominating. There are also patches of limonite without goethite. In areas of carbonate there are grains of goethite very similar in shape and size to the magnetite and pentlandite found in B9 147.5 m.

Proportions (%): Secondary: Quartz (80), magnesite (12), limonite (5), goethite (3), magnetite (<1)

Appendix A Client Instructions

From: LINDSAY ARTHUR NEWNHAM [mailto:lnewnham@vision.net.au]
Sent: Fri 29/04/2005 6:49 p.m.
To: White, Philip J (SKM)
Cc: Allegiance
Subject: samples for inspection.

Phil,
On behalf of Allegiance Mining NL., I am forwarding to you today 8 slabs of drill core for petrological and mineralogical examination.

The samples come from two recently completed drill holes, B8 and B9, on a project known as Burbank in western Tasmania.

The drill tested area is underlain by a body of Cambrian ultramafic rocks which have been intruded at depth by a Carboniferous granite. The ultramafic is very strongly altered and, in the case of these two drill holes, cut by a major (regional) fault structure.

Our primary search target in this area is nickel sulfides. These two holes intersected significant nickel but it was not present as sulfide. Assays also suggest the nickel is accompanied by zinc, again not present as sulfide.

A casual review of the assay data from both holes suggest there is an inverse relationship between nickel and sulfur. I will fax to you full assay data on the these holes but request you keep this information confidential.

The core has been extensively leached and the drillers reported strong water flows from these intervals. Both holes collared at sea level and the principal intersections are well beneath the very thin surface zone of weathering in this part of Tasmania.

The overall appearance of this core is strongly limonitic, with pervasive coarse grained magnetite.

Our principal interest is whether this nickeliferous material has been derived from a sulfidic deposit, and if that is a possibility, would the sulfidic body be deeper, or along strike closer or further from the granite.

The sample numbers and assay data(for the 1 metre sample intervals) are:

B8- 145.3 m: 0.69% Ni, 0.22% Zn, 60 ppm S
B8- 148.5 m: 0.92% Ni, 0.45% Zn, 270 ppm S
B8- 150.5 m: 0.79% Ni, 0.41% Zn, 70 ppm S

B9- 147.5 m: 0.24% Ni, 0.10% Zn, 0.27% S
B9- 150.4 m: 2.09% Ni, 0.78% Zn, 120 ppm S
B9- 164.8 m: 1.07% Ni, 0.27% Zn, 80 ppm S
B9- 183.5 m: 1.53% Ni, 0.33% Zn, 100 ppm S
B9- 185.4 m: 0.60% Ni, 0.21% Zn, 40 ppm S

Please phone me at any time should you wish to discuss progress.
61 3 63943434

Your invoice should be forwarded to:
Allegiance Metals NL
PO Box 62,
Zeehan,
TASMANIA, 7275
AUSTRALIA

Thanks very much,

Regards,

Lindsay Newnham

Appendix B Glossary and Definitions

ALTERATION ASSEMBLAGES

Argillic:	Clay-rich assemblages dominated by low-temperature clays such as kaolinite, smectite, and interlayered illite-smectite. These are formed by low temperature (<230°C), acid to neutral, low salinity hydrothermal fluids.
Phyllic:	Dominated by illite or sericite and quartz, together with pyrite and possibly anhydrite. May also contain minor chlorite, calcite, titanite and rutile. Formed in the presence of moderate to high temperature (approx. 230-400°C), acid to neutral fluids at a range of salinities, commonly in permeable zones and adjacent to veins.
Propylitic:	Characterised by chlorite, with some of illite/sericite, epidote, quartz, albite, calcite, and anhydrite. Formed at moderate temperatures (mostly 200-300°C), in the presence of near-neutral pH fluids with a range of salinities, commonly in low permeability areas.
High-temperature propylitic:	Contains secondary actinolite and/or garnet in addition to the above assemblage. Forms under similar conditions, but higher temperatures (>290°C) than propylitic assemblages.
Potassic:	Major secondary minerals are biotite, orthoclase, quartz, and magnetite. Anhydrite is a common accessory, and minor albite and titanite or rutile can also develop. Potassic alteration is caused by near-intrusive, hot fluids (>300°C) with a strong magmatic character and high salinity.
Advanced argillic:	Contains alunite, diaspore, and/or pyrophyllite, together with one or more of quartz, chalcedony, kaolinite, and dickite. These assemblages occur as tabular near-vertical zones formed from condensed acid magmatic vapours in the porphyry environment, and as near-horizontal blankets at shallow epithermal levels, where acid-sulphate fluids form from oxidised steam condensates.
Skarn:	May contain garnet, clinopyroxene, vesuvianite, scapolite, wollastonite, epidote, amphibole, magnetite and calcite as major components. Minor amounts of biotite, K-feldspar, quartz and chlorite may also be present. Minerals present are similar to those found in potassic, high temperature propylitic and propylitic assemblages of porphyry systems. Developed in the presence of calcium-rich, high salinity fluids over a wide temperature range with early anhydrous minerals forming in the range 300 - 700°C. Occurs near the contact between calcareous lithologies and intrusives.

MINERALISATION

Carlin-type:	Precious metal mineralisation, usually with the gold occurring submicroscopically, associated with the silicification of calcareous rocks in continental settings. Also broadly applied to any carbonate replacement deposit; evidence is mounting that this may be erroneous.
Epithermal:	Mineralisation produced by near-surface hydrothermal fluids related to igneous activity; originally defined as having formed in the range 50-200°C, though 150-300°C is perhaps more commonly accepted now.
Epigenetic:	Mineralisation which was later introduced into older rocks
Gold fineness:	A measure of the gold content of native gold or silver grains, determined by the equation 1000 x Au/(Au + Ag), where Au and Ag are determined by weight.
High-sulphidation:	Originally referred to opaque minerals which contain sulphur in a high oxidation state, but now used in a broader sense for deposits which contain them; for example “enargite-gold” (or quartz-alunite, or acid-sulphate) systems, in which the mineralising hydrothermal fluids have a major magmatic component, and produce acid alteration, with base metal mineralisation at shallow levels.
Hypogene:	Formed by processes occurring within the earth, especially mineralisation associated with ascending hot fluids.
Hypothermal:	Mineralisation associated with high temperature hydrothermal fluids; originally defined as forming at 300-500°C, today it commonly applies to temperatures over about 500°C.
Low-sulphidation:	Originally referred to opaque minerals containing sulphur in a low oxidation state, but now used in a broader sense for the deposits which contain them; for example “adularia-sericite” type systems in which meteoric-dominated fluids produce phyllic, propylitic, and argillic alteration zones.
Mesothermal:	Mineralisation produced at deep levels in the crust, from high temperature hydrothermal fluids (250-400°+), at near lithostatic pressures. The fluids can be meteoric and/or magmatic and/or metamorphic in origin; where the latter is significant, this mineralisation is normally termed metamorphogenic.
Porphyry:	Hypothermal deposits occurring as stockworks or disseminations intimately associated with porphyritic intrusives, with mineralisation associated with potassic alteration, although this is frequently overprinted.
Skarn:	Mineralisation associated with moderate to high temperature, hydrothermally altered/metasomatised rocks near the contact between intrusive bodies and carbonate rocks.

Supergene: Formed by surficial processes, particularly oxidation, hydration, solution, and deposition.

Syngenetic: Mineralisation which formed at the same time as the enclosing rocks.

Volcanic-Hosted Massive Sulphide (VHMS) Mineralisation associated with hydrothermal systems developed in volcanic and volcano-sedimentary rocks in a submarine setting.

GENERAL DESCRIPTIVE TERMS

Sinter: Surficial chemically deposited precipitate, that is in the strictest sense of the term, siliceous. May be diagnosed on the basis of recognisable plant fragments (leaves, stems), near-horizontal planar lamination, and/or low-temperature mineralogy (*eg.* opal and chalcedony).

Travertine: Calcareous (usually $CaCO_3$) sinter deposit.

Vein: Material which was chemically deposited by fluids within a rock fracture. Veins exhibit a range of textures and minerals, depending primarily on the temperature, depth, and composition of both the fluid and the host rock. Veins may contain a small amount (<10%) of entrained host rock and/or vein clasts.

Breccia: Coarse (usually >2 mm) fragmental rock, consisting of generally angular clasts of one or more lithologies. A complexly veined rock can have a brecciated appearance (if veins are multi-generational and/or branching), but it is important to differentiate between the two. Veins are generally linear or sinuous, whereas a breccia matrix is highly irregular.

TEXTURAL TERMS FOR VEINS AND BRECCIAS

Matrix: The interstitial material between clasts in a breccia, of which there are two main types. Some breccias may contain a proportion of both types:

Clastic matrix: composed of finely ground clast material; and

Chemically deposited matrix (cement): composed of chemically deposited material (usually similar to veins).

If the matrix encloses and separates clasts, the breccia is *matrix-supported*; if clasts are in contact and support each other, it is described as *clast-supported*.

Vug (druse): Open cavity within a rock, usually in a vein or breccia cement, which is lined by euhedral prismatic crystals that project into the cavity.

Pseudomorph: A mineral or minerals occurring in the crystal form of another, usually due to alteration or replacement of the original mineral (*eg.* limonite after pyrite, alunite + pyrophyllite after feldspar, quartz after calcite).

Prismatic:	Crystals which exhibit elongate euhedral shapes and have prismatic terminations are common in veins and cements, where they are considered to form by slow crystallisation. Prismatic crystals may be zoned by bands of different composition (*e.g.* amethyst bands in quartz) or with abundant fluid inclusions.
Colloform:	A botryoidal type of texture commonly observed in vein chalcedony, where radiating aggregates of chalcedony have a grape-like outer surface. Banding within this material produces agate.
Comb:	Masses of parallel long, thin crystals growing inwards from the vein margins produce a texture like that of a comb.
Saccharoidal:	Granular aggregates of equant crystals having the appearance of sugar in hand specimen.
Crustiform:	Banding texture produced by differences of mineralogy, texture, and/or colour away from the vein margins. Crustiform banding is commonly produced by alternating chalcedony and saccharoidal quartz layers.
Cockade:	Concentric crustiform banding in the cement surrounding matrix-supported breccia clasts.
Imbrication:	A fabric found within some breccias where there is a subparallel alignment of clasts, similar to that observed within some fluvial gravels.
Vein breccia:	Rock consisting predominantly of vein fragments (<10% host rock clasts) in a chemically-deposited matrix. Clasts are generally subangular, and matrix-supported in a matrix of generally similar vein minerals (*eg.* quartz, chalcedony), which may be banded and enclose open cavities.
Polymict vein breccia:	Rock consisting of altered host rock ± vein clasts in a chemically deposited matrix, where the matrix, rock, and vein clasts each comprise at least 10% of the rock volume. Clasts are generally subangular, and enclosed by a matrix of vein minerals (*eg.* quartz, chalcedony).
Polymict breccia:	Rock consisting of various altered host rock ± lesser (<10%) vein clasts. These may occur in a chemically-deposited matrix, or in a clastic matrix. Clasts range from subangular to subrounded, and may be either clast or matrix-supported.
Monomict breccia:	Similar to a polymict breccia, but containing only a single clast type. Jigsaw breccias and crackle breccias are special types of monomict breccia.
Brecciated rock:	A rock which consists largely (>90%) of fragments of a single lithology. Clasts are commonly angular, and are usually surrounded by matrix material.
Brecciated vein:	Similar to a brecciated rock, but consisting largely (>90%) of vein clasts.

Matrix breccia: A breccia which consists largely (>80%) of clastic matrix material.

Crackle breccia: A type of brecciated rock that has been fractured, but with little or no matrix material. Clasts are still essentially in place. These have been called hydrofractured breccias, but "crackle breccia" is preferred.

Jigsaw breccia: A type of brecciated rock that has been fractured, and has minor matrix material separating clasts. There has been minimal transport and rotation of the clasts, which can be visually fitted together by removal of the matrix.

GENETIC TERMS FOR BRECCIAS

Hydrothermal breccia: A general term for breccias that formed primarily as a result of hydrothermal activity, including phreatic and magmatic-phreatic breccias. These range from brecciated rocks to vein breccias and polymict breccias, and include both erupted (*Hydrothermal eruption breccias*) and subsurface rocks. Diagnostic features include the presence of altered host rock clasts, hydrothermal vein clasts, and hydrothermal minerals within the matrix cement, though not all will exhibit all of these features. Plant fragments may occur in hydrothermal eruption breccias.

Phreatic breccia: A more specific term for breccias which form due to the expansion of steam and gas in a water-dominated hydrothermal fluid where there is no direct association of brecciation with magmatic activity.

Magmatic-phreatic breccia: A specific term for breccias formed due to flashing of hydrothermal fluids following intrusion of magma, but which do not contain juvenile magmatic material.

Phreatomagmatic (diatreme) breccia: A breccia formed by the explosive interaction of magma and groundwater. Diatremes are near-vertical pipe-like bodies up to 1 km across. The breccias are generally polymict, with rounded, matrix-supported clasts. The matrix contains finely ground wallrock clasts and juvenile magmatic material, but lacks chemically deposited minerals (unless deposited later).

Tectonic breccia: Breccia formed by the mechanical disruption of rocks in response to tectonic stress. These generally occur in identifiable fault planes, which are commonly steeply dipping. They typically exhibit a planar fabric, imbrication, slickensides, and strain textures such as undulose extinction in quartz crystals.

Sedimentary breccia: Breccia emplaced at the Earth's surface by predominantly sedimentary processes. These breccias are generally polymict and exhibit sedimentary textures (*eg.* planar fabric, graded bedding). They include talus breccias, debris flows, turbidites, landslide deposits, solution breccias, reef breccias, and glacial deposits (tillites).

Intrusive breccia:	A breccia which forms at the margins of an intrusive body during emplacement. Clasts include early-crystallised intrusive material and wallrock fragments.
Volcaniclastic breccia:	Breccia formed at or near the surface due to fragmentation on release of magmatic volatiles to produce deposits which include vent breccias, crumble breccias, flow breccias, tuffs, lapilli tuffs, ignimbrites, and lahar deposits. Clasts are mostly unaltered volcanic material in a matrix of fine volcanic detritus.

HYDROTHERMAL SYSTEMS

Boiling zone:	Zone of two-phase (*ie*. boiling) fluid, generally within a hydrothermal upflow.
Conductive:	Transmitted through a rock or liquid.
Convective:	Transmitted by movement of a fluid.
Hydrofracturing:	Fracturing of rocks when fluid pressure exceeds the minimum compressive stress plus the effective tensile strength of the rock.
Hydrostatic:	Where pressures are determined by the amount of overlying liquid.
Hydrothermal breccia:	A general term for a rock which was brecciated by fluid processes within a hydrothermal system, without being specific as to whether energy transfer was convective or conductive, or directly magmatic.
Hydrothermal eruption:	An eruption which reaches the surface and is caused by hydrothermal processes.
Lithostatic:	Where fluid pressures are determined by the confining rock pressure
Magmatic:	Water of magmatic origin, that is derived from the loss of volatiles from magma.
Meteoric:	Water of surficial origin, including near-surface groundwaters.
Outflow:	Area where water is flowing laterally away from an upflow zone.
Paleowatertable:	The level within the rock mass below which groundwaters were formerly present.
Permeability:	The ability of fluid to flow through the rock, which depends on the porosity and the degree of interconnection of pores.
Piezometric surface:	A surface of equal fluid pressure within the rock mass.
Porosity:	Degree of pore space within a rock.

Single phase zone:	A zone in which the pressure gradient corresponds to a single-phase liquid.
Two-phase fluid:	Fluid consisting of two separate phases (*ie*. liquid (water) and gas (steam)).
Upflow:	Area where hot water is flowing more or less vertically upwards within a geothermal system.

FLUID INCLUSIONS

Daughter crystal:	Solid crystal which has been precipitated within a fluid inclusion after trapping.
Equivalent salinity:	An estimate of salinity, expressed as wt% NaCl, calculated from melting temperature determinations.
Necking:	Post-entrapment reshaping of an inclusion to a more equant shape, during which an inclusion may be divided into two or more separate inclusions, which can have different vapour/liquid ratios.
Primary:	Trapped during primary crystal growth from a fluid.
Pseudosecondary:	Trapped on a microfracture during growth of the crystal.
Secondary:	Trapped after growth of the crystal, generally on a healed microfracture.

PETROGRAPHIC TEXTURAL TERMS

Aphanitic:	Fine-grained igneous rocks in which individual crystals are not visible to the naked eye.
Amygdaloidal:	Containing vesicles which have been infilled by a secondary mineral.
Equigranular:	Composed of crystals of approximately equal grain size.
Holocrystalline:	Composed entirely of crystals (*ie*., no glass).
Hyaline:	Containing volcanic glass.
Ophitic:	Coarse pyroxene crystals partly or wholly enclosing plagioclase laths.
Pilotaxitic:	Felted mass of acicular or lath-like crystals.
Porphyritic:	Igneous rock containing coarse crystals (phenocrysts) in a fine groundmass.
Porphyry:	Medium-grained subvolcanic rock containing phenocrysts.

Trachytic:	Parallel, flow-aligned feldspars, with sparse phenocrysts.
Vesicular:	Containing spherical/ellipsoidal cavities of gas bubbles trapped in a cooling lava.
Vitric:	Glassy; dominated by volcanic glass.

ALTERATION INTENSITY

Unaltered:	No secondary minerals.
Weak:	Minor (<25 vol.%) secondary minerals.
Moderate:	25-75 vol.% secondary minerals.
Strong:	>75 vol.% secondary minerals.
Intense:	Completely altered (except for primary quartz, zircon, and apatite), but primary textures remain visible.
Total:	Completely altered (except for primary quartz, zircon, and apatite), and primary textures lost.

GRAIN SIZE (AS USED IN IGNEOUS/HYDROTHERMAL PETROLOGY)

Very fine	<0.05 mm
Fine	0.05-1 mm
Medium	1-5 mm
Coarse	5-30 mm
Very coarse	>30 mm

MINERAL PROPORTIONS

Rare	<1%
Minor	1-5%
Moderate	5-10%
Major	10-50%
Predominant	>50%

MINERAL AND ROCK TERMS

Rock classification follows that given in the Australasian Institute of Mining and Metallurgy, Field Geologists' Manual. Mineral nomenclature is that of the IMA.

Some terms that have been found to be used elsewhere in different senses are defined below:

Illite:	Colourless, birefringent clay which is characterised by having the largest XRD peak at about 10.0A (8.8°). This peak should not shift on glycolation, but is not sufficiently sharp to be termed sericite.
Illite-smectite:	Pale green or brownish fine-grained clay, which has a major XRD peak between 15.4 and 10.0A (5.7 - 8.8°) that shifts on glycolation.
Sericite:	Colourless birefringent clay which commonly forms coarse flakes. It is characterised by very sharp XRD peaks at 10.0A (8.8°), 4.98 (17.8) and 3.33A (26.6°).
Obsidian:	Volcanic rock composed of >80% glass with well developed conchoidal fracturing and vitreous lustre.
Pitchstone:	Volcanic rock composed of >80% glass with poorly developed conchoidal fracturing and a resinous lustre. Contains >4% water and more crystallites than obsidian.
Perlite:	Weakly anisotropic, hydrous volcanic glass usually with spherical fractures.

APPENDIX 6

DDH A114 Drill Log

Allegiance Metals - Drill Log

BHID

A114

Collar

Project	BHID	Easting	Northing	RL	Depth	Date	Geologist
Avebury	A114	354783.4	5357603.59	2163.59	402.3	5/8/05	TC

Collar survey by Ian Green (23/08/05)

Surveys

Project	BHID	Depth	Azm_Amg	Dip
Avebury	A114	0	182.6	-68.0
Avebury	A114	50	180.5	-68.0
Avebury	A114	100	181.0	-67.9
Avebury	A114	151	181.5	-68.0
Avebury	A114	200	182.0	-68.1
Avebury	A114	250	182.5	-68.1
Avebury	A114	301	183.0	-68.0
Avebury	A114	350	183.5	-68.3
Avebury	A114	400	184.0	-68.9
Raw surveys (uncorrected single-shot camera data) :				
Avebury	A114	50	180.0	-68.0
Avebury	A114	100	191.0	-67.9
Avebury	A114	151	196.0	-68.0
Avebury	A114	200	Dodgy	-68.1
Avebury	A114	250	180.5	-68.1
Avebury	A114	301	187.0	-68.0
Avebury	A114	350	185.0	-68.3
Avebury	A114	400	194.0	-68.9

Hole Sizes

From	Size
0	HQ
86.7	NQ

Drilled By

Almac

Analyses By

BRL

Note : Samples delivered to BRL at 16:50 hr on 19/08/05.

Comments

A114 was designed as an exploration hole to the east of the Nth Avebury Resource boundary.

Significant Intersections

Only low grade Ni was intercepted in A114 including:

329.0 - 332.0 3.0m @ 0.5% Ni, 0.6% S, <0.01% As and 0.02% Co.
336.0 - 339.0 3.0m @ 0.4% Ni, 0.4% S, <0.01% As and 0.01% Co.
344.0 - 350.0 6.0m @ 0.5% Ni, 0.7% S, <0.01% As and 0.01% Co.

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Avebury	A114	0.0	14.5	Ccc	LOSS	Cy	O	0.00				Core loss, puggy clay. Deeply weathered greywacke.
Avebury	A114	14.5	16.0	Ccc	SHAL	Cy	N	0.00	Bk			Deeply weathered black shale. Broken with core loss. Disrupted bedding. Graphitic, possibly originally pyrrhotitic. Partially silicified.
Avebury	A114	16.0	25.0	Ccc	GWAC	Cy	O	0.00	Bk	Bd	30	Deeply weathered, clay altered feld-lithic greywacke. Remnant bedding. Shaley tops to beds. Significant core loss.
Avebury	A114	25.0	41.0	Ccc	GWAC	PhLi	P	0.00		Bd	55	Well bedded feld-lithic greywacke with shaley interbeds. Graded beds facing down hole. Pervasive phlogopite alteration. Limonitic joints.
Avebury	A114	41.0	77.5	Ccc	GWAC	PhBi	B3	0.00		Bd	65	Well bedded feld-lithic greywacke with shaley interbeds. Graded beds facing down hole. Pervasive phlogopite alteration.
Avebury	A114	77.5	80.0	Ccc	GWAC	AcCh	G3	0.00				Intensely actinolite altered greywacke. Pervasive, coarse crystalline actinolite needles. Interstitial carbonate.
Avebury	A114	80.0	85.8	Ccc	GWAC	PhBi	B3	0.00		Bd	65	Well bedded feld-lithic greywacke with shaley interbeds. Graded beds facing down hole. Pervasive phlogopite alteration. Calcite veining.
Avebury	A114	85.8	86.5		FALT	CyCh	G4	0.00		Ft	30	Puggy, late brittle fault. Broken core.
Avebury	A114	86.5	93.3	Ccc	GWAC	PhBi	B3	0.00		Bd	65	Well bedded feld-lithic greywacke with shaley interbeds. Graded beds facing down hole. Pervasive phlogopite alteration.
Avebury	A114	93.3	104.6	Cba	VBLB	AcDi	G5	0.00		Bd	45	Dark green to cream, intensely altered basltic volcaniclastics. Banded green and cream layers. Minor tourmaline and axinite veins and spots. Intense pervasive actinolite-diopside alteration.
Avebury	A114	104.6	104.8		FALT	Ch	G5	0.00		Ft	80	Chloritic, ductile fault.
Avebury	A114	104.8	113.9	Cba	VBLB	AcDi	G5	0.00		Bd	45	Dark green to cream, intensely altered basltic volcaniclastics. Banded green and cream layers. Minor tourmaline and axinite veins and spots. Intense pervasive actinolite-diopside alteration.
Avebury	A114	113.9	177.2	Ccc	GWAC	PhBi	A3	0.00		Bd	65	Well bedded feld-lithic greywacke with shaley interbeds. Graded beds facing down hole. Pervasive phlogopite alteration. Strongly hornfelsed. Late fine actinolite veining
Avebury	A114	177.2	177.7	Ccc	GWAC	AcPh	A3	0.00				Massive, feld-lithic greywacke. Hornfelsed. Pervasive phlogopite alteration. Intense actinolite-veined overprint.
Avebury	A114	177.7	230.0	Ccc	GWAC	PhAc	A3	0.00	Bd	Bd	60	Massive, feld-lithic greywacke. Hornfelsed. Pervasive phlogopite alteration.

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
												Well bedded, graded beds facing downhole. Numerous fine actinolite veins. Fine hornfelsed shale-sst tops of greywacke beds.
Avebury	A114	230.0	237.8	Ccc	GWAC	PhBi	B3		Bd	Bd	50	Massive, graded bedded feld-lithic greywacke. Hornfelsed. Pervasive phlogpite-biotite alteration. Numerous late actinolite veins.
Avebury	A114	237.8	242.3	Ccc	GWAC	PhAc	B3		Bd	Bd	50	Massive, graded bedded feld-lithic greywacke. Hornfelsed. Pervasive phlogpite-biotite alteration. Numerous late actinolite veins. Minor bands of intensely actinolite altered basalt?
Avebury	A114	242.3	247.5	Ccc	GWAC	PhAc	B3		Gr	Bd		Massive, graded bedded feld-lithic greywacke. Hornfelsed. Pervasive phlogpite-biotite alteration. Numerous late actinolite veins.
Avebury	A114	247.5	259.7	Cba	VBLB	AcDi	G4					Massive, intensely actinolite altered basaltic volcaniclastic sandstone and breccia. Domainal actinolite-diopside alteration. Minor tourmaline patches. Silicified cherty patches.
Avebury	A114	259.7	264.3	Ccc	GWAC	PhAc	B3			Bd	60	Massive, graded bedded feld-lithic greywacke. Hornfelsed. Pervasive phlogpite-biotite alteration. Numerous late actinolite veins. Pachy actinolite altered basaltic breccia?
Avebury	A114	264.3	288.1	Cba	LBLB	Ac	G5					Massive, fine grained intensely actinolite altered basaltic volcanic. Dark green actinolite alteration with patches of cream diopside. Rare tourmaline clots.
Avebury	A114	288.1	319.2	Cba	VBLB	AcDi	G5	0.00				Massive, intensely actinolite altered basaltic volcaniclastic sandstone and breccia. Domainal actinolite-diopside alteration. Minor tourmaline patches. Silicified cherty patches. Axinite clots and aggregates.
Avebury	A114	319.2	325.1	Cba	PHLG	PhAc	B5	0.00				Mottled, intense actinolite alteration and dark brown phlogopite alteration. Tourmaline zones. Schistose texture. White magnesite veins.
Avebury	A114	325.1	327.8	Cba	VBLB	AcDi	G5	0.00				Massive, intensely actinolite altered basaltic volcaniclastic sandstone and breccia. Domainal actinolite-diopside alteration. Minor tourmaline patches. Silicified cherty patches. Axinite clots and aggregates. Dropped core loss of 0.8m.
Avebury	A114	327.8	330.8	Csu	SKSP	TrDi	G3	1.00				Pale green and black intensely metasomatised ultramafic. Crystalline tremolite-diopsite with lesser black magnetite and minor coarse disseminated pentlandite. Core loss at contact.

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Avebury	A114	330.8	332.4	Csu	MMAG	Mt	N	0.50	Gr			Massive black magnetite. Mottled texture. Black serpentinite matrix. Minor Pe disseminations.
Avebury	A114	332.4	329.9	Csu	SKSP	TrDi	G4	1.00				Pale green and grey intensely metasomatised ultramafic. Crystalline tremolite-diopsite with minor coarse disseminated pentlandite. 5% silicified zones and calcite veins.
Avebury	A114	329.9	344.5	Csu	SERP	SpMt	N	0.50				Massive black serpentinite. 10% coarse magnetite aggregates. Very minor fine Pe with magnetite.
Avebury	A114	344.5	345.5		FALT	SpMt	N	0.00	Ft			Broken rubbly black serpentinite. Faulted.
Avebury	A114	345.5	356.2	Csu	SERP	SpMt	N	2.00				Massive black serpentinite. 5% coarse magnetite aggregates. 1-2% pentlandite replacement of magnetite. Coarse sulphide aggregates.
Avebury	A114	356.2	357.0	Csu	MSSX	PeTr	A	60.0				Massive Pe-Po vein. Mottled colliform texture. Coarse bladed talc or tremolite needles.
Avebury	A114	357.0	359.8	Csu	SERP	SpTr	N	2.00				Massive black serpentinite. 5% coarse magnetite aggregates. 1-2% pentlandite replacement of magnetite. Coarse sulphide aggregates. Patchy pale grey metasomatised ultramafic.
Avebury	A114	359.8	366.0	Csu	SERP	SpMt	N	2.00				Massive black serpentinite. 5% coarse magnetite aggregates. 1-2% pentlandite replacement of magnetite. Coarse sulphide aggregates.
Avebury	A114	366.0	376.0	Csu	SERP	SpTr	N	0.50				Massive black serpentinite. 5% coarse magnetite aggregates. 1-2% pentlandite replacement of magnetite. Coarse sulphide aggregates. Patchy pale grey metasomatised ultramafic.
Avebury	A114	376.0	402.3	Csu	SERP	SpMt	N	0.20				Massive black serpentinite. 5% coarse magnetite aggregates. Rare pentlandite with magnetite. Minor magnesite-chrysotile veins.

Assay Sheet																
Project	BHID	From m	To m	Spl_id	Ni %	Cu ppm	Pb ppm	Zn ppm	As ppm	Co ppm	S %	MgO %	FeO %	Au ppm	Strat	Rock
Avebury	A114	325.0	326.0		0.03				50	-20	-0.1	6.7	2.4		Cba	VBLB
Avebury	A114	326.0	327.8		0.10				50	-20	-0.1	8.8	5.5		Cba	VBLB
Avebury	A114	327.8	329.0		0.21				50	60	0.4	14.9	15.7		Csu	SKSP
Avebury	A114	329.0	330.0		0.55				50	140	1.1	10.6	22.3		Csu	SKSP
Avebury	A114	330.0	331.0		0.47				50	200	0.3	21.6	27.7		Csu	SKSP
Avebury	A114	331.0	332.0		0.43				50	280	0.3	23.5	41.2		Csu	MMAG
Avebury	A114	332.0	333.0		0.25				50	120	0.2	11.4	18.9		Csu	SKSP
Avebury	A114	333.0	334.0		0.09				100	-20	-0.1	5.6	3.9		Csu	SKSP
Avebury	A114	334.0	335.0		0.07				50	-20	-0.1	9.3	3.3		Csu	SKSP
Avebury	A114	335.0	336.0		0.27				150	-20	0.6	15.6	4.6		Csu	SKSP
Avebury	A114	336.0	337.0		0.48				50	180	0.8	18.4	42.2		Csu	SKSP
Avebury	A114	337.0	338.0		0.33				50	160	0.1	37.9	21.0		Csu	SKSP
Avebury	A114	338.0	339.0		0.44				50	220	0.4	36.5	25.2		Csu	SKSP
Avebury	A114	339.0	340.0		0.37				50	220	0.2	36.1	26.9		Csu	SKSP
Avebury	A114	340.0	341.0		0.22				50	180	0.1	36.7	25.0		Csu	SERP
Avebury	A114	341.0	342.0		0.23				50	180	0.2	36.8	25.0		Csu	SERP
Avebury	A114	342.0	343.0		0.26				50	140	0.4	38.6	22.0		Csu	SERP
Avebury	A114	343.0	344.0		0.30				50	120	0.3	39.2	17.1		Csu	SERP
Avebury	A114	344.0	345.0		0.41				50	120	0.6	40.9	14.5		Csu	SERP
Avebury	A114	345.0	346.0		0.59				50	140	0.8	40.9	11.3			FALT
Avebury	A114	346.0	347.0		0.42				50	100	0.6	42.2	10.2		Csu	SERP
Avebury	A114	347.0	348.0		0.49				50	120	0.7	41.3	9.6		Csu	SERP
Avebury	A114	348.0	349.0		0.43				50	100	0.6	41.5	9.3		Csu	SERP
Avebury	A114	349.0	350.0		0.43				50	120	0.6	40.9	9.6		Csu	SERP
Avebury	A114	350.0	351.0		0.30				50	100	0.4	42.1	9.8		Csu	SERP
Avebury	A114	351.0	352.0		0.31				50	80	0.4	41.7	9.1		Csu	SERP
Avebury	A114	352.0	353.0		0.31				50	100	0.4	41.2	9.8		Csu	SERP
Avebury	A114	353.0	354.0		0.23				50	80	0.2	40.9	10.9		Csu	SERP
Avebury	A114	354.0	355.0		0.20				50	80	0.2	41.7	11.1		Csu	SERP
Avebury	A114	355.0	356.0		0.20				50	120	0.9	39.6	12.4		Csu	SERP
Avebury	A114	356.0	357.0		0.61				400	640	9.1	26.7	21.9		Csu	MSSX
Avebury	A114	357.0	358.0		0.20				-50	120	2.6	25.2	11.1		Csu	SERP
Avebury	A114	358.0	359.0		0.13				-50	60	0.9	38.6	6.0		Csu	SERP

Assay Sheet

Project	BHID	From m	To m	Spl_id	Ni %	Cu ppm	Pb ppm	Zn ppm	As ppm	Co ppm	S %	MgO %	FeO %	Au ppm	Strat	Rock
Avebury	A114	359.0	360.0		0.22				50	80	0.4	41.7	10.4		Csu	SERP
Avebury	A114	360.0	361.0		0.21				50	60	0.1	42.3	10.7		Csu	SERP
Avebury	A114	361.0	362.0		0.38				50	140	0.6	41.5	12.0		Csu	SERP
Avebury	A114	362.0	363.0		0.40				-50	160	0.9	41.3	12.5		Csu	SERP
Avebury	A114	363.0	364.0		0.34				50	120	0.5	41.6	11.2		Csu	SERP
Avebury	A114	364.0	365.0		0.30				50	80	0.3	42.2	9.8		Csu	SERP
Avebury	A114	365.0	366.0		0.24				50	80	0.1	41.6	10.7		Csu	SERP
Avebury	A114	366.0	367.0		0.12				50	20	-0.1	36.6	9.6		Csu	SERP
Avebury	A114	367.0	368.0		0.16				50	60	-0.1	32.1	12.4		Csu	SERP
Avebury	A114	368.0	369.0		0.64				50	200	0.6	38.7	13.1		Csu	SERP
Avebury	A114	369.0	370.0		0.47				50	140	0.4	40.0	10.7		Csu	SERP
Avebury	A114	370.0	371.0		0.20				50	60	-0.1	43.1	8.9		Csu	SERP
Avebury	A114	371.0	372.0		0.15				50	40	-0.1	42.0	9.1		Csu	SERP
Avebury	A114	372.0	373.0		0.35				50	160	0.4	41.8	11.2		Csu	SERP
Avebury	A114	373.0	374.0		0.21				50	80	-0.1	43.1	10.2		Csu	SERP
Avebury	A114	374.0	375.0		0.22				50	100	-0.1	42.8	12.6		Csu	SERP
Avebury	A114	375.0	376.0		0.24				50	100	-0.1	42.0	13.4		Csu	SERP
Avebury	A114	376.0	377.0		0.21				50	80	-0.1	42.8	11.6		Csu	SERP
Avebury	A114	377.0	378.0		0.20				50	80	-0.1	43.0	11.2		Csu	SERP
Avebury	A114	378.0	379.0		0.17				50	80	-0.1	42.6	14.0		Csu	SERP
Avebury	A114	379.0	380.0		0.19				50	60	-0.1	42.7	12.1		Csu	SERP
Avebury	A114	380.0	381.0		0.18				50	60	-0.1	43.8	10.4		Csu	SERP
Avebury	A114	381.0	382.0		0.16				50	80	-0.1	42.3	13.5		Csu	SERP
Avebury	A114	382.0	383.0		0.16				50	100	-0.1	41.9	15.8		Csu	SERP
Avebury	A114	383.0	384.0		0.18				50	100	-0.1	41.4	16.2		Csu	SERP
Avebury	A114	384.0	385.0		0.17				50	80	-0.1	42.2	14.0		Csu	SERP
Avebury	A114	385.0	386.0		0.18				50	80	-0.1	42.5	13.4		Csu	SERP
Avebury	A114	386.0	387.0		0.17				50	80	-0.1	42.9	12.4		Csu	SERP
Avebury	A114	387.0	388.0		0.18				50	80	-0.1	41.5	14.2		Csu	SERP
Avebury	A114	388.0	389.0		0.18				50	80	-0.1	42.0	13.5		Csu	SERP
Avebury	A114	389.0	390.0		0.23				50	140	0.1	38.9	19.6		Csu	SERP
Avebury	A114	390.0	391.0		0.21				50	100	-0.1	40.4	16.5		Csu	SERP
Avebury	A114	391.0	392.0		0.24				50	100	-0.1	40.7	15.1		Csu	SERP

Assay Sheet

Project	BHID	From m	To m	Spl_id	Ni %	Cu ppm	Pb ppm	Zn ppm	As ppm	Co ppm	S %	MgO %	FeO %	Au ppm	Strat	Rock
Avebury	A114	392.0	393.0		0.26				50	100	-0.1	40.6	15.8		Csu	SERP
Avebury	A114	393.0	394.0		0.31				50	120	-0.1	40.9	14.3		Csu	SERP
Avebury	A114	394.0	395.0		0.31				50	100	-0.1	41.6	12.0		Csu	SERP
Avebury	A114	395.0	396.0		0.31				50	120	0.1	41.5	14.7		Csu	SERP
Avebury	A114	396.0	397.0		0.27				50	100	0.1	41.6	13.5		Csu	SERP
Avebury	A114	397.0	398.0		0.30				50	120	0.1	39.8	16.7		Csu	SERP
Avebury	A114	398.0	399.0		0.34				50	160	0.4	39.3	17.8		Csu	SERP
Avebury	A114	399.0	400.0		0.29				50	120	0.1	40.1	16.1		Csu	SERP
Avebury	A114	400.0	401.0		0.24				50	100	-0.1	41.4	14.5		Csu	SERP
Avebury	A114	401.0	402.3		0.30				50	100	0.1	41.2	12.5		Csu	SERP

Stratigraphy

Q	Quaternary alluvial, colluvial and dune deposits
Df	Devonian fine grained qtz sst and sslt (Florence Quartzite). Fossiliferous
Dsk	Devonian Skarn
Dg	Devonian Granite
Sc	Silurian sandstone and siltstone
Scc	Silurian pebble-cobble conglomerate.
Su	Silurian sediments
Og	Limestone (Gordon Limestone)
Oc	Pebble conglomerate, PC derivation (Owen Gp).
Os	Siliceous sst and conglomerate.
Ccc	Contiguous Creek Fm
Ccch	Contiguous Creek Fm chert
Ccarb	Contiguous Creek Fm carbonate and calcareous sediments.
Cba	Cambrian Basalt (McIvor Hill Complex)
Cbg	Cambrian gabbro
Cba	Cambrian basaltic volcaniclastics
Csu	Cambrian ultramafic
Cud	Cambrian ultramafic dunite
Cup	Cambrian ultramafic orthopyroxenite

Rock Types

Volcanic Rocktypes have a four letter code. The first letter is the style (intrusive, volcaniclastic etc)
The second is the chemical composition (basaltic, rhyolitic), the third is the major component (qtz phyric, lith
the last is the texture (fine grained, breccia etc). For example IUPC is an intrusive, ultramfic, pyroxene phyri

Style codes

I	Intrusive
L	Lava
V	Volcaniclastic
E	Epiclastic

Composition codes

U	Ultramafic
B	Basaltic (mafic)
A	Andesitic
D	Dacitic
R	Rhyolitic

Composition Codes

Q	Qtz phyric (qtz xtal rich)
F	feldspar phyric
H	Hornblende phyric
P	Pyroxene phyric
L	Lithic rich
X	crystal rich
V	Vitric

Texture codes

F	fine
M	medium
C	coarse

B	breccia

Other Rock codes

CHRT	Chert
CARB	Carbonate
GWAC	Greywacke
SSLT	Siltstone
SAND	Sandstone
SERP	Serpentinite
CONG	Conglomerate
GRAN	Granite
GRAD	Granodiorite
SKRN	Skarn
LOSS	No Core recovery
CLAY	Clay
MMAG	Massive magnetite
SKSP	Serpentinite Skarn
SHAL	Shale
HEVC	Heamatitic Volcaniclastic
PHLG	Phlogopite schist
GABB	Gabbro

Colour

Colours can be classified by shade using a 1 to 5 scale. ie. B1 = pale brown, B5=dark Brown

N	Black
B	Brown
P	Purple
G	Green
C	Cream
W	White
Y	Yellow
T	Tan
R	Red
O	Orange

Alteration

Ac	Actinolite
Ch	Chlorite
Se	Sericite
Cb	Carbonate
Di	Diopside
Ax	Axinite
Sc	Serpentine-chrysotilic
Sp	Serpentine
So	Schorl
Ph	Phlogopite
Sx	Sulphidic
Py	Pyritic
Po	Pyrrhotitic
Ht	Haematitic
Mg	Magnetite
To	Tourmaline
Si	Silica

Qz	Quartz

Geotech

Intact Rock Strength	**Code**	**UCS**
Extremely weak	EW	0.5 Mpa
Very Weak	VW	
Weak	W	2.5 Mpa
Moderately strong	MS	37.5 Mpa
Strong	S	75 Mpa
Very strong	VS	100 Mpa
Extremely strong	ES	150 Mpa

Roughness type	**Code**	**Jr**
Stepped Smooth	SS	3.5
Discontinuous	DC	4
Planar Smooth	PS	1
Stepped Rough	SR	3
Planar rough	PR	1.5
Undulating Smooth	US	2
Undulating Rough	UR	3

No of Defect Sets	**Code**	**Jn**
Default	0	1
One Set	1	2
One Set + random	1.5	3
Two Sets	2	4
Two Sets + random	2.5	6
Three Sets	3	9
Three Sets + random	3.5	12
Four Sets	4	15

Joint Alteration	**Code**	**Ja**
Default	0	1
Carb	CB	2
Serpentine	SP	5
Clay	CY	5
Quartz	QZ	1
Sericite	SE	3
Chlorite	CH	3
Clean	X	1
Iron	FE	1.5
Haematite	H	2

APPENDIX 7

DDH A118 Drill Log

Allegiance Metals - Drill Log

BHID

A118

Collar

Project	BHID	Easting	Northing	RL	Depth	Date	Geologist
Avebury	A118	354783.4	5357603.09	2163.59	362.5	6/9/05	DAE

Collar survey by Ian Green (23/08/05)

Drilling commenced 10/08/05 D/S

Drilling completed 23/08/05 N/S

Surveys

Project	BHID	Depth	Azm_Amg	Dip
Avebury	A118	0	183.0	-58.0
Avebury	A118	50	184.4	-58.1
Avebury	A118	78.9	184.4	-57.9
Avebury	A118	100	184.5	-57.9
Avebury	A118	150	185.0	-57.9
Avebury	A118	200	186.0	-57.1
Avebury	A118	250	187.0	-56.1
Avebury	A118	300	188.0	-56.3
Avebury	A118	350	189.0	-55.8
Raw surveys (uncorrected single-shot camera data) :				
Avebury	A118	50	178.0	-58.3
Avebury	A118	100	176.5	-58.3
Avebury	A118	150	178.0	-57.9
Avebury	A118	200	176.5	-57.1
Avebury	A118	250	177.5	-56.1
Avebury	A118	300	190.0	-56.3
Avebury	A118	350	202.0	-55.8

Hole Sizes

From	Size
0.0	Tricone
21.0	HQ
71.0	NQ

Drilled By

Almac

Analyses By

BRL

Note : Hole cased with UPVC pipe on completion of drilling; gyro survey attempted by Downhole Surveys on 31/08/09; casing blocked off below 79m.

Comments

A118 was designed as an infill hole for further testing and definition of the North Avebury resource. The hole was collared from surface and targeted to intersect the North Avebury ultramafic contact zone at approximately 1920m RL, nominally on-section at 354800E.

Significant Intersections

North Avebury : 287.25 - 296.9m 9.65m DHT @ 0.99% Ni, 0.02% As, 0.02% Co and 0.7% S.
North Avebury : 312.25 - 315.3m 3.05m DHT @ 0.91% Ni, 500 ppm As, 0.03% Co and 1.3% S.

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Avebury	A118	0.00	21.00		LOSS							Interval drilled with tricone bit through weathered surficial zone.
Avebury	A118	21.00	23.50	Ccc	LOSS		P3	0.0	NR			Fragmented core; probably rubble caved from up hole; fragments of relatively fresh light to medium purple-grey siltstone and greywacke.
Avebury	A118	23.50	26.50	Ccc	CLAY		O2	0.0	NR			Broken to crumbly, loosely cohesive, soft clay, after siltstone or greywacke; probably in situ from weathered profile.
Avebury	A118	26.50	37.00	Ccc	GWAC		P2	0.0	BR	BD	60	Strongly weathered, clayey, light to medium purple-grey, locally orange-brown, silt-grade to fine sandy greywacke; minor shale laminae and intraclasts; remnant fragmented bedding locally preserved; relatively coarse-grained, massive lenses increasing; common orange-brown ferruginous clay completely to partially replacing original rock, gradually decreasing to fracture infillings and coatings on joint surfaces.
Avebury	A118	37.00	40.30	Ccc	GWAC		P3	0.0	DF	BD	60	Moderately weathered, medium purple-grey, sandy greywacke; rare black shaley laminae and locally as fragmented intraclasts; massive, poorly bedded; common orange-brown ferruginous clay coating joint surfaces and in places as semi-pervasive replacement.
Avebury	A118	40.30	43.30	Ccc	CONG		N4	0.3	BR	BD	50	Broken, micro-fractured, dark grey, carbonaceous, shaley intraformational conglomerate or sedimentary breccia; irregular grey-black shale laminae and as groundmass, with fragmented lenses, interbeds and intraclasts of silt-grade to sandy greywacke; trace py. as disseminations and small clusters.
Avebury	A118	43.30	43.70	Ccc	LOSS		N2	0.0	NR			Completely fragmented core; significant core loss apparent.
Avebury	A118	43.70	47.00	Ccc	GWAC		N3	0.0	DF	BD	62	Broken, medium to dark grey, carbonaceous shale and intermixed silt-grade greywacke, locally grading to sedimentary breccia; poorly bedded, with disturbed to fragmented zones; trace qtz. in very fine veinlets; trace iron oxide stained clay as coatings on some fracture surfaces.
Avebury	A118	47.00	54.50	Ccc	SHAL		N5	0.1	SI	BD	55	Broken, dark grey to purple-grey, massive, carbonaceous shale to fine siltstone; trace qtz. microveins and stringers; rare traces of cpy. as small blebs within qtz. microveins.

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Avebury	A118	54.50	55.20	Ccc	SHAL		G3	1.0	SI			Moderately altered, micro-faulted, khaki-green to grey shale; possibly volcaniclastic, with lesser altered silty lenses; disturbed, disrupted to fragmented bedding throughout; sparse po. as small aggregates within micro-fractures and as disseminations.
Avebury	A118	55.20	64.40	Ccc	SSLT	Ph	P3	1.5	SP	BD	55	Weakly altered, broken, massive, medium-dark purple to grey-brown siltstone, with minor carbonaceous shale lenses and laminae; siltstone grades locally into coarser wacke; poorly bedded, with disturbed to contorted laminae and partings; trace qtz. microveins and stringers; sparse po. and py. as small aggregates and stringers; mineralisation controlled by micro-fracturing.
Avebury	A118	64.40	65.00		LOSS		N3	0.0	NR			Fragmented core zone, with significant loss apparent; few fragments of soft, puggy clay, possibly infilling fault crush zone.
Avebury	A118	65.00	69.70	Ccc	GWAC	Ph	P4	0.5	DF			Broken, weakly altered, massive to micro-fractured, medium to dark purple-grey, sandy greywacke, with common grey-black, carbonaceous shale lenses and fragmented laminae; poorly bedded throughout; trace qtz. microveins; trace to sparse po. and py. as veinlets and stringers, infilling micro-fractures.
Avebury	A118	69.70	71.00	Ccc	SHAL	Po	N4	3.0	SI			Moderately altered, micro-fractured, veined, medium to dark grey to dark green-grey shale to very fine-grained siltstone; disrupted to fragmented throughout; contorted bedding; trace qtz. stringers; minor po. and py. as fracture-controlled microveins and stringers.
Avebury	A118	71.00	71.80	Ccc	SHAL	Po	G4	5.0	DF	BD	75	Similar litholgy to 69.7-71.0m, with planar bedding more common; micro-faulted, with strongly cross-cutting po. and py. microveins; NQ commenced at 71.0m.
Avebury	A118	71.80	83.50	Ccc	SSLT	PoPh	N4	1.5	GL	BD	50	Weakly altered, massive to micro-faulted, dark grey to black-grey, carbonaceous siltstone, with minor shale interbeds; grading to coarser, sandy greywacke in massive lenses; poorly bedded throughout; sparse actinolite selvedges around micro-fractures; trace qtz. microveins; sparse phlogopite alteration towards end of interval; sparse po., trace py., as fine veinlets in micro-fractures and as stringers and aggregates.

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Avebury	A118	83.50	85.00	Cba	VBLB	PhAc	G4	0.0	DF	BD	75	Moderately altered, dark brown to medium-dark green, chaotic, fine volcaniclastic breccia; abundant phlogopitised to increasingly actinolitised, silt-grade matrix, supporting sub-angular volcanic clast up to 6mm in length; lesser cherty, shaley volcaniclastic interbeds and laminae; sparse axinite aggregates increasing near end of interval.
Avebury	A118	85.00	87.40	Cba	SKRN	AcAxSo	G4	0.0	SI			Strongly altered, metasomatised, dark green, actinolitised, fine-garined, mafic volcanics, with lesser cherty volcaniclastic shale interbeds; common boro-silicate skarn overprint, with patches and aggregates of coarse axinite and sparse schorl.
Avebury	A118	87.40	92.05	Cba	HEVC	HtAc	B4	0.0	SP	BD	62	Moderately altered, micro-fractured, brown-tan to dark green, chaotic, very fine-grained, volcaniclastic shale; alternating actinolitised and cherty hematitic bands; locally planar bedded; common actinolite infilling fine micro-fractures and as selvedges; sparse axinite-schorl skarn overprint.
Avebury	A118	92.05	95.95	Cba	LBPF	AcAx	G5	0.2	SI	BD	35	Strongly altered, pervasively actinolitised, massive to banded, locally spotted, very fine-grained mafic volcanics; minor shaley volcaniclastic or possible hyaloclastite laminae and interbeds; axinite-sparse schorl skarn overprint from 94.55-94.75m; sparse ?epidote bands; trace po. as blebs.
Avebury	A118	95.95	98.80	Cba	SKRN	AxAc	P2	5.0	DF	BD	60	Strongly altered, metasomatised, banded, granular to coarsely crystalline, boro-silicate and intermixed calc-silicate skarn; abundant axinite, locally coarsely crystalline; common actinolite; minor to common po.-pe. as bands and ragged aggregates; sparse py. and tarnishing ?cpy. as clusters and small aggregates.
Avebury	A118	98.80	103.00	Cba	LBPF	Ac	G5	1.0	GL			Strongly altered, pervasively actinolitised, massive, locally banded and spotted, very fine-grained, mafic volcanics; sparse hyaloclastite as fragmented laminae; trace axinite stringers; sparse po. as disseminations and small aggregates.
Avebury	A118	103.00	112.85	Ccc	SSLT	PhAc	N5	0.1	GL	BD	48	Weakly altered, massive, darkest grey-black, very fine-grained, carbonaceous siltstone and lesser shale; massive, poorly bedded to laminated; minor actinolite-tremolite in microveins; trace qtz. veinlets; rare traces of cpy. as blebs.

Allegiance Metals Drill Log												
Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Avebury	A118	112.85	128.10	Ccc	GWAC	PhAc	N4	0.10	BR	BD	58	Weakly altered, massive, very dark grey to brown-grey, silt-grade to sandy greywacke dominant; minor carbonaceous shale laminae; massive bedding in coarser clastic lenses; minor actinolite-tremolite in veins and microveins; rare traces of po. as blebs and clusters associated with actinolite microveins.
Avebury	A118	128.10	129.20	Cba	VBVF	Ac	G4	0.30	DF			Moderately altered, micro-fractured, brown to medium-dark green, fragmented, cherty volcaniclastic shale, intermixed with actinolitised, fine silt-grade, mafic volcaniclastics; brecciated at start of interval; disturbed, disrupted to contorted bedding throughout; trace po. as small aggregates associated with actinolite.
Avebury	A118	129.20	146.20	Ccc	GWAC	AcPh	N4	0.00	GL	BD	46	Weakly altered, massive, very dark grey to brown-grey, fine silt-grade greywacke, becoming coarser and more massive with depth; generally poorly bedded; minor actinolite-tremolite veins and microveins; pervasive weak phlogopite alteration of matrix in wacke lenses; rare traces of qtz. in fine microveins.
Avebury	A118	146.20	155.80	Ccc	SSLT	AcPh	B4	0.00	DF	BD	45	Moderately altered, massive to broken, very dark brown to green-grey, fine silt-grade greywacke and finer siltstone dominant; lesser, irregular lenses of coarser wacke; common actinolite-tremolite as veins, microveins and stringers throughout; weak pervasive phlogopite alteration throughout.
Avebury	A118	155.80	156.85	Ccc	GWAC	AcQz	G4	0.00	DF			Moderately altered, veined to massive, very dark grey to green, sandy to silt-grade greywacke; qtz. veins at start and end of interval; common actinolite-tremolite as semi-pervasive alteration and in veins and microveins throughout; indistinctly bedded.
Avebury	A118	156.85	167.60	Ccc	GWAC	PhAc	G4	0.10	SI	BD	20	Weakly altered, massive, very dark grey-green to brown, sandy greywacke dominant, with irregular interbeds and lenses of siltstone; poorly bedded throughout; pervasively phlogopitised silty matrix; minor actinolite-tremolite veins and microveins and as selvedges; rare traces of cpy. as blebs and aggregates.
Avebury	A118	167.60	169.40	Ccc	SSLT	PhAc	P5	0.00	SI	BD	56	Moderately altered, massive, very dark purple-brown siltstone, with irregular interbeds and lenses of coarser sandy greywacke; well-bedded, with silty to shaley tops to coarser interbeds; minor actinolite-tremolite veins.

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Avebury	A118	169.40	178.80	Ccc	GWAC	PhAc	N4	0.00	GL	BD	37	Weakly altered, massive, darkest grey to green-grey, medium to coarse-grained, sandy greywacke, becoming gradually finer to silt-grade; massive to irregularly bedded; weak pervasive phlogopite alteration of silty matrix; sparse actinolite-tremolite alteration in micro-fractures and veins.
Avebury	A118	178.80	190.50	Ccc	SSLT	PhAc	B5	0.10	SP	BD	48	Moderately altered, massive to micro-fractured, very dark brown to green-grey, siltstone and fine silt-grade greywacke; minor interbeds and lenses of coarser wacke intermixed; generally poorly bedded; moderate pervasive phlogopite alteration throughout; minor actinolite-tremolite alteration in micro-fractures, veins and microveins, and as selvedges.
Avebury	A118	190.50	191.30	Cba	LBPF	Ac	B4	0.0	DF			Altered, dark brown, mottled purple-grey, spotted, possibly amygdaloidal mafic volcanic; small, pitted amygdales infilled with fine, dark pyroxene.
Avebury	A118	191.30	196.25	Ccc	SSLT	Ph	B5	0.00	GL			Moderately altered, broken, micro-fractured, very dark brown to grey-green, massive siltstone, grading to silt-grade greywacke; poorly bedded throughout; moderate to strong, pervasive phlogopite alteration of silty matrix; minor actinolite-tremolite alteration in micro-fractures and veins, and as selvedges.
Avebury	A118	196.25	203.60	Ccc	SSLT	AcPh	B5	0.10	DF			Strongly altered, broken, micro-fractured, very dark brown, mottled green, sandy volcaniclastic wacke, with abundant siltstone; poorly bedded, with disturbed to fragmented textures in places; moderate to strong pervasive phlogopite alteration; minor to common actinolite-tremolite alteration in patches and microveins; sparse calcite microveins; rare traces of cpy. and py. as blebs and small aggregates.
Avebury	A118	203.60	208.80	Ccc	GWAC	PhAc	B5	0.10	GL			Moderately altered, massive to micro-fractured, very dark brown, purple-grey, mottled green, silt-grade greywacke, with lesser sandy volcaniclastic wacke lenses; minor fragmented mafic volcanic material in possible minor flows or intrusions; moderate to strong pervasive phlogopite alteration; minor, but gradually increasing actinolite-tremolite alteration in microveins; trace light green, felted tremolite in veins, locally containing rare traces of po.; rare traces of possible schorl as minute crystal aggregates.

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Avebury	A118	208.80	218.00	Ccc	SSLT	Ph	B6	0.10	SP	BD	72	Moderately altered, massive, darkest brown to grey-brown siltstone dominant; minor sandy greywacke interbeds and lenses; sparse mafic volcanic flow or intrusive material, with possible amygdaloidal textures; pervasive phlogopite alteration throughout; irregular bedding laminae throughout, generally planar; trace qtz. microveins; rare traces of po. as microveins and stringers near start.
Avebury	A118	218.00	223.50	Ccc	GWAC	HtPhAc	B4	0.10	DF	BD	70	Moderately altered, massive, medium-dark brown, in places green, coarse-grained sandy greywacke to chip wacke; pervasive hematite alteration and staining of silty matrix; poorly bedded, with rare silty laminae; minor to common actinolite-tremolite alteration in patches, microveins and micro-fractures.
Avebury	A118	223.50	224.25	Cba	VBLB	HtAc	B4	0.2	DF			Moderately altered, micro-fractured, medium-dark brown, mottled green, medium to coarse-grained volcaniclastic breccia; chaotic, fragmented textures; indistinctly bedded throughout; pervasive hematite alteration of silty to sandy matrix; common actinolite-tremolite replacing volcanic clasts; trace po. and cpy. as blebs in association with actinolite-tremolite.
Avebury	A118	224.25	227.65	Cba	VBPB	Ac	G4	0.50	SI	BD	55	Moderately altered, colour-mottled, light to medium green, light cream-green, mafic volcaniclastic breccia, with abundant altered, silt-grade matrix throughout; poorly bedded, with disturbed to contorted laminae; fragmental textures throughout; finer, silty towards end of interval; sparse mgt. veins at end of interval; trace to sparse po. and cpy. as blebs and aggregates.
Avebury	A118	227.65	230.55	Ccarb	LMST	Mg	N1	1.00	SI	BD	38	Weakly altered, micro-fractured, light grey, locally light green-grey, fine-grained, silty limestone; irregularly oriented bedding; sparse calcite stringers, veins and microveins; minor mgt. as stringers and aggregates; sparse po. and trace cpy. as small aggregates associated with mgt.
Avebury	A118	230.55	236.80	Cba	VBPF	AcPh	G4	0.20	GL	BD		Strongly altered, massive, medium-dark green, in places mottled brown, silt-grade volcaniclastics; sparse shaley lenses and laminae; generally poorly bedded, with fine fragmental textures; minor brown phlogopite in diffuse patches and aggregates throughout; sparse mgt. as disseminations and aggregates; trace po. as blebs.

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Avebury	A118	236.80	244.85	Cba	VBVF	AcSeQz	G2	0.00	GL	BD	60	Strongly altered, colour-mottled, light-medium green to cream, cherty, devitrified, shaley to fine silt-grade volcaniclastics; common laminae, wisps and streaks of cherty volcaniclastic shale; chaotic, fragmented to brecciated textures increasing down hole; sparse qtz. veins; minor axinite staining and overprint.
Avebury	A118	244.85	249.20	Cba	LBPF	AcPh	G5	0.20	GL			Strongly altered, micro-fractured, pervasively actinolitised, dark green, fine-grained mafic volcanic, with common wisps, streaks and fragmented laminae of bleached, devitrified, shaley volcaniclastics or possible hyaloclastite; minor brown phlogopite in patches and aggregates; trace po. as small blebs; trace ?niccolite or apy. in aggregates near end of interval.
Avebury	A118	249.20	253.00	Cba	VBPB	AcSeQz	G4	0.2	SI	BD	55	Strongly altered, micro-fractured, dark green, mottled cream to light green, fragmented, devitrified, cherty volcaniclastic shale, with common actinolitised, mafic flow material or intrusives; disrupted, fragmented to brecciated textures throughout; locally spherulitic; trace axinite staining and weak overprint; trace po. as disseminations and blebs.
Avebury	A118	253.00	257.45	Cba	VBVM	AcSe	G3	0.20	SI	BD	45	Moderately altered, micro-faulted, light to medium green, mottled cream-white, devitrified, fine to medium-grained, silty volcaniclastics; lesser cherty, devitrified, shaley volcaniclastics as fragmented laminae and patches; sparse axinite staining and weak overprint; trace po. as blebs and clusters; rare traces of ?sphalerite as subhedral aggregates.
Avebury	A118	257.45	259.05	Cba	SKRN	AcAx	G2	1.00	DF	BD	47	Strongly altered, broken, leached, light to medium green, mottled cream and light purple, actinolite-sericite-axinite skarn, after silt-grade and shaley volcaniclastics; minor to common axinite in coarse crystalline patches and as staining; sparse schorl as scattered aggregates; sparse po. as blebs; trace sphalerite.
Avebury	A118	259.05	270.50	Cba	VBVF	AcSeQz	G3	0.20	DF	BD	55	Strongly altered, micro-fractured, light to medium green, mottled grey-cream, devitrified, cherty, silt-grade volcaniclastics, with abundant fragmented, cherty volcaniclastic shale lenses and laminae; weak axinite skarn overprint; trace po. as blebs and disseminations; rare traces of ?sphalerite.

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Avebury	A118	270.50	273.35	Cba	VBVM	AcSoAx	C4	0.20	DF			Very strongly altered, light to medium green-cream, mottled black, devitrified, silt-grade volcaniclastics, with irregular patchy schorl and minor axinite skarn overprint; chaotic fragmental textures; indistinctly bedded; trace po. as small dispersed aggregates.
Avebury	A118	273.35	279.20	Cba	VBVC	AcAx	G2	0.30	SI	BD	42	Strongly altered, micro-fractured, light green, mottled green-cream, devitrified, silt-grade to sandy volcaniclastics; chaotic, fragmental textures, with rare shaley laminae; weak to moderate axinite-schorl skarn overprint in irregular patches and aggregates; trace po. as blebs and microveins.
Avebury	A118	279.20	287.25	Cba	VBVF	AcQzSe	C2	0.10	SI	BD	58	Strongly altered, micro-faulted to brecciated, colour-mottled, cream-grey, medium to dark green, cherty, devitrified, shaley volcaniclastics dominant; minor fine silt-grade lenses; poorly bedded, with disrupted, fragmented to brecciated textures throughout; trace po.-pe. as aggregates and microveins.
Avebury	A118	287.25	287.95	Csu	SKSP	DiPo	N2	3.00	SI			Very strongly altered, mottled cream-grey to light grey, diopside skarn, after serpentinite; common irregular patches of black serpentinite; minor po.-pe. as disseminations, clusters and ragged aggregates.
Avebury	A118	287.95	290.70	Csu	SERP	MgPo	N5	4.00	SI			Massive, darkest grey to black, very fine-grained serpentinite; sparse diopside skarn patches; common mgt. interstitial and as ragged aggregates; minor pe. and po. as conspicuous small aggregates, with mgt. in micro-fractures.
Avebury	A118	290.70	291.20	Csu	SKSP	DiMg	N3	3.00	DF			Strongly altered, medium to dark grey, mottled cream and black, fine-grained, diopside-mgt. skarn, after serpentinite; irregular patches of black serpentinite; minor mgt. interstitial; sparse po.-pe. as small aggregates.
Avebury	A118	291.20	296.90	Csu	SERP	MgPo	N5	3.00	SI			Massive to micro-fractured, black to darkest green, very fine-grained serpentinite; minor green serpentine in ragged aggregates, possibly inclusions; common mgt. interstitial and as ragged aggregates and bands; minor conspicuous pe.-po. as clusters and small aggregates, often with mgt. infilling fine micro-fractures; trace fibrous serpentine-chrysotile coating fracture planes.

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Avebury	A118	296.90	298.80	Csu	SKSP	QzDiAc	G2	1.50	SP			Extremely hard, massive, light apple green, mottled white, qtz.-matrixed diopside-tremolite skarn; possible chrome diopside; sparse pe.-po. as aggregates and stringers; breccia-like textures.
Avebury	A118	298.80	299.65	Csu	SKSP	DiMg	N4	2.50	SI			Altered, banded to massive, black to dark grey, diopside-serpentine-mgt. skarn, after serpentinite; common mgt. interstitial and as semi-massive bands; minor pe. as blebs, disseminations and aggregates.
Avebury	A118	299.65	312.25	Csu	SKSP	DiQzAc	G2	1.00	DF			Strongly altered, massive, light apple green, mottled white, locally grey, qtz.-matrixed diopside-tremolite skarn; possible chrome diopside; sparse pe.-po. as aggregates and microveins; rare traces of sphalerite in subhedral clusters.
Avebury	A118	312.25	315.30	Csu	SERP	MgDi	N5	1.0	SP			Massive, becoming broken, black, fine-grained serpentinite, with minor patches of light to medium grey diopside-mgt. skarn; common mgt. interstitial and as ragged aggregates throughout; sparse pe. and po. as blebs and small clusters.
Avebury	A118	315.30	315.90		FALT		N6	2.00	BR	FT	65	Very soft, broken, sheared, crushed serpentinite-breccia; clayey in and around fractures; sheared mgt. coating fracture planes.
Avebury	A118	315.90	356.20	Csu	SERP	MgSc	N5	0.50	SI			Broken, becoming massive, black to darkest grey, ultra fine-grained serpentinite; minor aggregates or possibly inclusions of soft green serpentine; sparse white serpentine-chrysotile microveins, locally with cross fibres; minor to common mgt. interstitial and as small ragged aggregates; trace po.-pe. as blebs, small clusters and scattered aggregates, decreasing down hole; broken in places, with local crush or minor fault zones.
Avebury	A118	356.20	362.50	Csu	SKSP	DiQz	N2	0.20				Broken, micro-fractured, light grey, mottled cream-green, diopside-qtz. skarn, after serpentinite; sparse irregular patches of black-grey serpentinite at start of interval; minor light green-cream, clayey serpentine-talc infilling micro-fractures; rare traces of po. as blebs and clusters. EOH at 362.5m confirmed.

Assay Sheet																
Project	**BHID**		**From m**	**To m**	**Ni %**	**Cu ppm**	**Pb ppm**	**Zn ppm**	**As ppm**	**Co ppm**	**S %**	**MgO %**	**FeO %**	**Au ppm**	**Strat**	**Rock**
Avebury	A118		95.00	95.95	0.01				50	60	-0.1	3.0	17.2		Cba	LBPF
Avebury	A118		95.95	97.00	0.02				300	140	5.8	1.8	15.3		Cba	SKRN
Avebury	A118		97.00	98.00	0.01				50	-20	0.1	3.1	10.4		Cba	SKRN
Avebury	A118		98.00	98.80	0.01				50	20	1.3	1.8	10.7		Cba	SKRN
Avebury	A118		98.80	99.80	0.01				50	80	-0.1	3.3	18.4		Cba	LBPF
Avebury	A118		99.80	100.80	0.01				50	80	-0.1	2.7	20.7		Cba	LBPF
Avebury	A118		100.80	101.80	0.01				150	200	1.0	2.6	22.1		Cba	LBPF
Avebury	A118		101.80	103.00	0.02				200	180	0.6	4.5	17.2		Cba	LBPF
Avebury	A118		103.00	104.00	0.03				100	60	-0.1	5.1	10.5		Cba	LBPF
Avebury	A118		227.00	227.65	0.03				150	200	-0.1	14.0	15.6		Cba	VBPB
Avebury	A118		227.65	228.65	0.01				50	-20	0.1	14.1	5.5		Ccarb	LMST
Avebury	A118		228.65	229.65	0.01				50	-20	0.1	14.5	3.9		Ccarb	LMST
Avebury	A118		229.65	230.55	0.02				100	160	0.2	15.7	13.9		Ccarb	LMST
Avebury	A118		230.55	231.50	0.02				50	180	-0.1	10.2	17.1		Cba	VBPF
Avebury	A118		256.50	257.45	0.01				100	-20	-0.1	4.8	4.5		Cba	VBVM
Avebury	A118		257.45	258.45	0.02				150	40	-0.1	8.1	5.9		Cba	SKRN
Avebury	A118		258.45	259.05	0.03				150	60	0.3	6.2	7.2		Cba	SKRN
Avebury	A118		259.05	260.00	0.02				50	-20	-0.1	3.5	3.5		Cba	VBVF
Avebury	A118		278.20	279.20	0.05				50	-20	-0.1	4.8	2.7		Cba	VBVC
Avebury	A118		279.20	280.20	0.55				650	80	0.7	6.0	5.3		Cba	VBVF
Avebury	A118		280.20	281.20	0.06				50	-20	-0.1	4.4	2.8		Cba	VBVF
Avebury	A118		281.20	282.20	0.04				50	-20	-0.1	3.9	2.2		Cba	VBVF
Avebury	A118		282.20	283.20	0.05				250	-20	-0.1	3.7	1.8		Cba	VBVF
Avebury	A118		283.20	284.20	0.05				100	-20	-0.1	3.1	1.9		Cba	VBVF
Avebury	A118		284.20	285.20	0.06				150	-20	-0.1	5.1	2.7		Cba	VBVF
Avebury	A118		285.20	286.20	0.04				100	-20	-0.1	3.6	2.4		Cba	VBVF
Avebury	A118		286.20	287.25	0.19				400	60	0.5	5.1	4.1		Cba	VBVF
Avebury	A118		287.25	287.95	1.06				1450	200	0.9	26.1	4.0		Csu	SKSP
Avebury	A118		287.95	289.00	0.22				100	60	-0.1	37.6	12.0		Csu	SERP
Avebury	A118		289.00	290.00	0.94				100	200	0.5	39.7	15.7		Csu	SERP
Avebury	A118		290.00	290.70	2.71				200	480	1.9	38.4	13.4		Csu	SERP
Avebury	A118		290.70	291.20	1.11				100	160	0.7	26.9	7.2		Csu	SKSP

Assay Sheet

Project	BHID		From m	To m	Ni %	Cu ppm	Pb ppm	Zn ppm	As ppm	Co ppm	S %	MgO %	FeO %	Au ppm	Strat	Rock
Avebury	A118		291.20	292.00	0.61				50	160	0.2	37.6	18.3		Csu	SERP
Avebury	A118		292.00	293.00	0.49				50	220	0.2	33.7	27.4		Csu	SERP
Avebury	A118		293.00	294.00	1.15				100	340	1.0	30.7	34.1		Csu	SERP
Avebury	A118		294.00	295.00	0.55				50	220	0.3	33.2	28.3		Csu	SERP
Avebury	A118		295.00	296.00	1.03				100	320	0.9	31.2	33.2		Csu	SERP
Avebury	A118		296.00	296.90	1.63				100	420	1.8	28.0	35.3		Csu	SERP
Avebury	A118		296.90	298.00	0.30				50	20	0.2	6.1	5.9		Csu	SKSP
Avebury	A118		298.00	298.80	0.10				50	-20	-0.1	4.1	4.8		Csu	SKSP
Avebury	A118		298.80	299.65	0.78				50	200	0.4	21.6	19.6		Csu	SKSP
Avebury	A118		299.65	300.50	0.07				50	-20	-0.1	5.5	4.6		Csu	SKSP
Avebury	A118		300.50	301.50	0.07				50	-20	-0.1	3.0	3.5		Csu	SKSP
Avebury	A118		301.50	302.50	0.09				150	-20	-0.1	2.7	3.3		Csu	SKSP
Avebury	A118		302.50	303.50	0.09				50	-20	-0.1	8.4	5.7		Csu	SKSP
Avebury	A118		303.50	304.50	0.09				50	-20	-0.1	6.3	5.9		Csu	SKSP
Avebury	A118		304.50	305.50	0.35				100	20	0.4	9.3	5.4		Csu	SKSP
Avebury	A118		305.50	306.50	0.33				600	-20	0.5	12.0	4.6		Csu	SKSP
Avebury	A118		306.50	307.50	0.46				200	20	0.9	11.9	5.3		Csu	SKSP
Avebury	A118		307.50	308.50	0.24				50	-20	0.2	13.2	5.0		Csu	SKSP
Avebury	A118		308.50	309.50	0.10				100	-20	0.1	7.6	4.8		Csu	SKSP
Avebury	A118		309.50	310.50	0.16				350	-20	0.7	7.2	5.9		Csu	SKSP
Avebury	A118		310.50	311.50	0.08				100	-20	0.2	10.8	4.2		Csu	SKSP
Avebury	A118		311.50	312.25	0.15				100	-20	0.2	6.5	5.1		Csu	SKSP
Avebury	A118		312.25	313.30	0.79				50	300	1.2	28.5	32.9		Csu	SERP
Avebury	A118		313.30	314.30	1.12				50	340	1.8	25.4	31.6		Csu	SERP
Avebury	A118		314.30	315.30	0.83				50	220	1.0	33.9	17.4		Csu	SERP
Avebury	A118		315.30	315.90	0.28				50	80	0.4	40.4	13.4			FALT
Avebury	A118		315.90	316.70	0.49				50	140	0.4	40.5	12.5		Csu	SERP
Avebury	A118		316.70	317.60	0.25				-50	60	0.2	41.2	9.3		Csu	SERP
Avebury	A118		317.60	318.60	0.32				50	120	0.2	39.7	17.5		Csu	SERP
Avebury	A118		318.60	319.60	0.22				50	80	-0.1	41.2	11.4		Csu	SERP
Avebury	A118		319.60	320.60	0.90				50	220	0.8	40.5	11.7		Csu	SERP
Avebury	A118		320.60	321.60	0.51				50	140	0.4	40.1	12.0		Csu	SERP

Assay Sheet

Project	BHID		From m	To m	Ni %	Cu ppm	Pb ppm	Zn ppm	As ppm	Co ppm	S %	MgO %	FeO %	Au ppm	Strat	Rock
Avebury	A118		321.60	322.60	0.31				50	80	0.1	41.6	9.8		Csu	SERP
Avebury	A118		322.60	323.60	0.36				50	100	0.2	41.8	10.7		Csu	SERP
Avebury	A118		323.60	324.60	0.44				50	140	0.3	41.4	12.0		Csu	SERP
Avebury	A118		324.60	325.60	0.35				50	80	0.1	41.2	8.7		Csu	SERP
Avebury	A118		325.60	326.60	0.31				-50	80	0.1	41.4	9.6		Csu	SERP
Avebury	A118		326.60	327.60	0.34				50	100	0.2	41.8	10.5		Csu	SERP
Avebury	A118		327.60	328.60	0.49				50	180	0.5	38.7	17.6		Csu	SERP
Avebury	A118		328.60	329.60	0.43				50	160	0.4	39.6	15.7		Csu	SERP
Avebury	A118		329.60	330.60	0.31				50	120	0.2	38.5	17.2		Csu	SERP
Avebury	A118		330.60	331.60	0.27				50	60	-0.1	40.8	9.5		Csu	SERP
Avebury	A118		331.60	332.60	0.25				50	60	-0.1	42.0	8.9		Csu	SERP
Avebury	A118		332.60	333.60	0.25				50	60	-0.1	41.8	9.0		Csu	SERP
Avebury	A118		333.60	334.60	0.29				50	80	-0.1	41.9	9.8		Csu	SERP
Avebury	A118		334.60	335.60	0.27				50	60	-0.1	41.9	9.1		Csu	SERP
Avebury	A118		335.60	336.60	0.25				50	40	-0.1	41.9	8.7		Csu	SERP
Avebury	A118		336.60	337.60	0.25				50	40	-0.1	42.0	8.4		Csu	SERP
Avebury	A118		337.60	338.60	0.26				50	60	-0.1	42.3	8.2		Csu	SERP
Avebury	A118		338.60	339.60	0.29				50	80	-0.1	42.4	8.1		Csu	SERP
Avebury	A118		339.60	340.60	0.32				50	60	-0.1	42.3	8.5		Csu	SERP
Avebury	A118		340.60	341.60	0.38				50	100	-0.1	41.9	10.2		Csu	SERP
Avebury	A118		341.60	342.60	0.26				50	40	-0.1	42.8	7.7		Csu	SERP
Avebury	A118		342.60	343.60	0.60				50	160	0.2	41.8	9.0		Csu	SERP
Avebury	A118		343.60	344.60	0.24				50	20	-0.1	41.9	8.5		Csu	SERP
Avebury	A118		344.60	345.60	0.31				50	80	-0.1	42.0	8.7		Csu	SERP
Avebury	A118		345.60	346.60	0.26				50	40	-0.1	42.3	7.7		Csu	SERP
Avebury	A118		346.60	347.60	0.25				50	40	-0.1	41.9	8.5		Csu	SERP
Avebury	A118		347.60	348.60	0.23				50	40	-0.1	42.0	8.9		Csu	SERP
Avebury	A118		348.60	349.60	0.22				50	40	-0.1	41.5	9.0		Csu	SERP
Avebury	A118		349.60	350.60	0.20				50	40	-0.1	40.9	8.2		Csu	SERP
Avebury	A118		350.60	351.60	0.22				50	40	-0.1	42.1	7.6		Csu	SERP
Avebury	A118		351.60	352.60	0.24				50	60	-0.1	41.8	8.6		Csu	SERP
Avebury	A118		352.60	353.60	0.22				-50	40	-0.1	41.6	8.2		Csu	SERP

Assay Sheet

Project	BHID		From m	To m	Ni %	Cu ppm	Pb ppm	Zn ppm	As ppm	Co ppm	S %	MgO %	FeO %	Au ppm	Strat	Rock
Avebury	A118		353.60	354.50	0.21				50	40	-0.1	41.4	8.2		Csu	SERP
Avebury	A118		354.50	355.40	0.18				50	60	-0.1	40.4	9.4		Csu	SERP
Avebury	A118		355.40	356.20	0.18				50	40	-0.1	40.1	8.5		Csu	SERP
Avebury	A118		356.20	357.00	0.09				50	-20	-0.1	28.1	5.0		Csu	SKSP
Avebury	A118		357.00	358.00	0.05				50	-20	0.2	16.1	1.8		Csu	SKSP
Avebury	A118		358.00	359.00	0.04				-50	-20	-0.1	20.1	2.3		Csu	SKSP
Avebury	A118		359.00	360.00	0.03				-50	-20	-0.1	15.8	1.5		Csu	SKSP
Avebury	A118		360.00	361.00	0.03				50	-20	-0.1	16.4	1.4		Csu	SKSP

Geotech Sheet

Project	BHID	From	To	Recovery	Lithology	Weathering	Alteration	Strength	length>10cm	RQD%	No. defects	Defect sets	Defect type	bca struct 1	bca struct 2	Roughness	Fill	Comments
Avebury	A118	0.00	21.00	0.00	LOSS	ES			0.0	0								No core; drilled with tricone bit.
Avebury	A118	21.00	23.50	0.19	LOSS	W		S	0.0	0						UR	Cy	Probably rubble; not in situ; iron oxide stained clay coating irregular fractures.
Avebury	A118	23.50	26.50	0.76	CLAY	ES		EW	0.2	30								Soft, loosely cohesive clay, after weathered siltstone; crumbly on drying; some rubbly rock fragments embedded in clay.
Avebury	A118	26.50	37.00	5.67	GWAC	VS		VW	1.2	21		4	JT	36	5	PR	Cy	Very broken to completely fragmented throughout; very soft, clayey in places; iron oxide stained clay coating fracture planes.
Avebury	A118	37.00	40.30	2.22	GWAC	MS		W	0.4	18	34	2.5	JT	50	20	PR	Cy	Moderately soft; broken to very broken throughout; iron oxide stained clay coating joints and in micro-fractures.
Avebury	A118	40.30	43.30	2.37	CONG	VW		MS	1.1	46	28	2.5	JT	58	28	PR	Cy	Relatively soft; broken to very broken throughout; sparse iron oxide stained clay coating joints near start of interval.
Avebury	A118	43.30	43.70	0.16	LOSS	MS		VW	0.0	0		4						Completely fragmented, with few intact core pieces; depth limits uncertain due to loss.
Avebury	A118	43.70	47.00	2.68	GWAC	EW		MS	0.7	26	31	2.5	JT	42	55	PR	Cy	Moderately soft; broken to very broken throughout; local clayey breccia crush zones; slightly weathered.
Avebury	A118	47.00	54.50	6.84	SHAL			S	2.4	35	64	3	JT	45	35	PR	Cy	Medium hard, gradually becoming more solid; very regular natural breaks and joints throughout; very broken in patches.
Avebury	A118	54.50	55.20	0.62	SHAL			ES	0.5	85	2	0	JT	52		PS	Qz	Hard, solid, compotent core.
Avebury	A118	55.20	64.40	8.86	SSLT		Ph	VS	4.9	55	60	2.5	JT	28	45	PS	Cy	Hard, in places solid, compotent core; frequent and numerous natural breaks; very broken core in places.
Avebury	A118	64.40	65.00	0.08	LOSS			W	0.0	0		4	FR			US	Cy	Completely fragmented; no intact core pieces; some puggy clay.

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Project	BHID	From	To	Recovery	Lithology	Weathering	Alteration	Strength	length>10cm	RQD%	No. defects	Defect sets	Defect type	bca struct 1	bca struct 2	Roughness	Fill	Comments
Avebury	A118	65.00	69.70	4.26	GWAC		Ph	VS	1.9	45	35	3	JT	36	68	PS	Cy	Strongly jointed, broken throughout; clay, with chlorite and some py., coating joint planes; few very steep angle, throughgoing joints at 5-8 degrees to core axis.
Avebury	A118	69.70	71.00	1.28	SHAL		Po	VS	1.2	92	5	1	JT	62		US	Ch	Hard, solid, compotent core; end of HQ coring at 71.0m.
Avebury	A118	71.00	71.80	0.54	SHAL		Po	VS	0.5	83	1	0				US	Ch	Hard, solid, compotent core; start of NQ coring at 71.0m.
Avebury	A118	71.80	83.50	11.3	SSLT		PoPh	VS	7.1	63	101	3	JT	60	35	PS	Ch	Hard, solid in places; strongly jointed, broken throughout; py. on some joints.
Avebury	A118	83.50	85.00	1.42	VBLB		PhAc	VS	1.1	75	5	1.5	JT	36	55	US	Ch	Hard, solid core; infrequent natural breaks throughout.
Avebury	A118	85.00	87.40	2.31	SKRN		AcAxS	ES	1.9	81	10	1.5	JT	40		PS	Ch	Very hard, solid, compotent core; broken zone from 86.2-86.4m.
Avebury	A118	87.40	92.05	4.40	HEVC		HtAc	ES	3.9	89	15	1	JT	40		US	X	Very hard, indurated, locally cherty; regular natural breaks throughout.
Avebury	A118	92.05	95.95	3.76	LBPF		AcAx	ES	3.6	96	4	0	JT	42		US	Ch	Very hard, solid, compotent core.
Avebury	A118	95.95	98.80	2.75	SKRN		AxAc	VS	2.4	88	7	1.5	JT	44		PR	X	Hard, solid, compotent core; slightly pitted in coarser skarn zones.
Avebury	A118	98.80	103.00	4.18	LBPF		Ac	ES	3.7	88	12	1.5	JT	42	25	PR	Cb	Very hard, solid, compotent core.
Avebury	A118	103.00	112.85	9.51	SSLT		PhAc	ES	7.3	77	30	1.5	JT	34	25	US	X	Very hard, solid, generally compotent core; broken in patches.
Avebury	A118	112.85	128.10	14.8	GWAC		PhAc	ES	10	71	75	2	JT	55	25	PS	Cy	Very hard, solid core; regular natural breaks throughout.
Avebury	A118	128.10	129.20	1.07	VBVF		Ac	ES	0.7	65	3	0	JT	52		PR	X	Hard, with regular natural breaks.
Avebury	A118	129.20	146.20	16.0	GWAC		AcPh	ES	13	81	55	1.5	JT	23	65	PR	Cy	Very broken from start of interval to 130.7m; becoming very hard, solid, compotent core.
Avebury	A118	146.20	155.80	9.23	SSLT		AcPh	VS	5.7	62	41	1.5	JT	32	10	US	X	Hard to very hard; broken in patches; very broken from 153.9-154.75m.

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Project	BHID	From	To	Recovery	Lithology	Weathering	Alteration	Strength	length>10cm	RQD%	No. defects	Defect sets	Defect type	bca struct 1	bca struct 2	Roughness	Fill	Comments
Avebury	A118	155.80	156.85	1.02	GWAC		AcQz	VS	0.6	56	3	0	JT			UR	Cy	Persistent, very steep angle, clay coated joint from start of interval to 156.2m.
Avebury	A118	156.85	167.60	10.6	GWAC		PhAc	ES	9.4	89	30	1.5	JT	38	62	PS	Ch	Very hard, solid, compotent core; irregular natural breaks throughout.
Avebury	A118	167.60	169.40	1.72	SSLT		PhAc	ES	1.5	85	7	2	JT	20	77	PS	X	Very hard, generally solid, compotent core.
Avebury	A118	169.40	178.80	9.06	GWAC		PhAc	ES	6.9	76	52	2	JT	70	76	PS	Ch	Very hard, generally solid, compotent core; natural breaks more regular from 175.35m.
Avebury	A118	178.80	190.50	11.5	SSLT		PhAc	ES	10	87	26	2	JT	52	22	PS	X	Very hard, becoming increasingly solid, compotent core; irregular chlorite coated fractures.
Avebury	A118	190.50	191.30	0.75	LBPF		Ac	ES	0.4	51	5	2.5	JT	32	16	PS	Ch	Extremely hard; tending to wedging ground, with strong intersecting joint sets.
Avebury	A118	191.30	196.25	4.83	SSLT		Ph	S	2.4	51	39	2.5	JT	20	62	PS	Ch	Hard, but broken throughout; strong, undulating, steep angle, chlorite coated fractures; strong intersecting joint sets.
Avebury	A118	196.25	203.60	7.04	SSLT		AcPh	VS	3.7	53	43	2.5	JT	65	20	US	Cy	Hard to very hard, but broken throughout; irregular undulating, steep angle chlorite coated fractures.
Avebury	A118	203.60	208.80	5.10	GWAC		PhAc	ES	4.6	90	13	1.5	JT	56	26	PS	X	Very hard, solid, compotent core.
Avebury	A118	208.80	218.00	9.06	SSLT		Ph	ES	6.9	76	42	2	JT	57	25	PS	X	Very hard, generally solid, compotent core; irregular steep angle fractures sub-parallel to core axis.
Avebury	A118	218.00	223.50	5.14	GWAC		HtPhA	VS	3.7	72	17	1.5	JT	40	16	US	Ch	Hard, generally solid, compotent core; broken zone from 219.35-219.8m.
Avebury	A118	223.50	224.25	0.74	VBLB		HtAc	VS	0.6	74	2	0	FR			UR	Cb	Hard, solid, compotent core.
Avebury	A118	224.25	227.65	3.40	VBPB		Ac	VS	3.2	93	5	1	JT	38		PR	Cb	Hard to very hard, solid, compotent core; fine py. crystals on joint planes.
Avebury	A118	227.65	230.55	2.81	LMST		Mg	VS	2.5	88	6	1.5	JT	58		US	Cy	Relatively hard, solid, compotent core.
Avebury	A118	230.55	236.80	6.01	VBPF		AcPh	ES	5.4	91	16	1.5	JT	77	30	US	Ch	Hard to very hard, solid, compotent core.

Geotech Sheet

Project	BHID	From	To	Recovery	Lithology	Weathering	Alteration	Strength	length>10cm	RQD%	No. defects	Defect sets	Defect type	bca struct 1	bca struct 2	Roughness	Fill	Comments
Avebury	A118	236.80	244.85	7.89	VBVF		AcSe(	ES	7.2	91	13	1.5	JT	40	27	UR	Cy	Extremely hard, solid, very compotent core; irregular natural breaks throughout.
Avebury	A118	244.85	249.20	4.3	LBPF		AcPh	VS	4.1	95	8	1.5	JT	55	16	US	Ch	Hard, solid, compotent core; few natural breaks throughout.
Avebury	A118	249.20	253.00	3.80	VBPB		AcSe(	ES	3.4	90	6	1	JT	40		PR	Ch	Very hard, solid, compotent core.
Avebury	A118	253.00	257.45	4.39	VBVM		AcSe	ES	4.2	96	5	1	JT	50		PS	X	Very hard, solid, compotent core; becoming slightly leached, pitted.
Avebury	A118	257.45	259.05	1.39	SKRN		AcAx	MS	0.8	57	10	1.5	FR	50	20	PR	Ch	Softer, leached and pitted core; some clay coated fractures.
Avebury	A118	259.05	270.50	11.3	VBVF		AcSe(	ES	10	92	11	1.5	JT	40	20	UR	X	Extremely hard, solid, compotent core; slightly leached, pitted appearance in skarn zones.
Avebury	A118	270.50	273.35	2.77	VBVM		AcSoA	ES	2.8	100	2	0				UR	X	Very hard, solid, compotent core.
Avebury	A118	273.35	279.20	5.71	VBVC		AcAx	ES	5.2	91	6	0	JT			DC	X	Very hard, solid, generally compotent core; few irregular natural breaks.
Avebury	A118	279.20	287.25	7.83	VBVF		AcQzS	ES	7.5	96	8	1.5	JT	42	68	PR	Qz	Extremely hard, very solid, compotent core; few irregular natural breaks.
Avebury	A118	287.25	287.95	0.70	SKSP		DiPo	S	0.6	90	1	0	FR			DC	X	Relatively soft, but solid, unbroken core.
Avebury	A118	287.95	290.70	2.67	SERP		MgPo	MS	2.3	84	5	1.5	JT	40		US	Sp	Relatively soft throughout.
Avebury	A118	290.70	291.20	0.47	SKSP		DiMg	S	0.5	96	1	0				UR	Sp	Solid, although relatively soft throughout.
Avebury	A118	291.20	296.90	5.52	SERP		MgPo	S	5.2	94	14	1.5	JT	55	20	US	Sp	Relatively soft, generally solid, compotent core; broken at start of interval.
Avebury	A118	296.90	298.80	1.88	SKSP		QzDiA	ES	1.9	100	1	0						Extremely hard, solid, compotent core;
Avebury	A118	298.80	299.65	0.76	SKSP		DiMg	S	0.6	76	7	1	JT	50		US	Sp	Relatively soft, with regular natural breaks.
Avebury	A118	299.65	312.25	12.4	SKSP		DiQzA	ES	12	95	8	1.5	JT	55		PR	X	Very hard, solid, compotent core; few planar to undulating natural breaks.
Avebury	A118	312.25	315.30	2.99	SERP		MgDi	S	2.6	87	13	2	JT	60	30	US	Sp	Relatively soft, with regular natural breaks; fibrous serpentine-chrysotile coating on some fractures.

Geotech Sheet

Project	BHID	From	To	Recovery	Lithology	Weathering	Alteration	Strength	length>10cm	RQD%	No. defects	Defect sets	Defect type	bca struct 1	bca struct 2	Roughness	Fill	Comments
Avebury	A118	315.30	315.90	0.36	FALT			VW	0.0	0		4	FR			PS	Cy	Very soft, sheared and clayey; loosely consolidated, weak core.
Avebury	A118	315.90	356.20	37.7	SERP		MgSc	MS	27	70	183	2.5	JT	45	22	US	Sp	Relatively soft; broken to very broken near start and end of interval; regular natural breaks and local crush zones; fibrous serpentine-chrysotile coatings on most fracture planes.
Avebury	A118	356.20	362.50	5.38	SKSP		DiQz	VS	2.1	38	39	2.5	JT	36	22	US	Sp	Hard, broken to very broken throughout; soft clayey serpentine-talc infilling and coating fractures; last tray, covering interval from 361.35-362.5m, blown over by wind; core not reconstructed in total. EOH at 362.5m confirmed.

Stratigraphy

Q	Quaternary alluvial, colluvial and dune deposits
Df	Devonian fine grained qtz sst and sslt (Florence Quartzite). Fossiliferous
Dsk	Devonian Skarn
Dg	Devonian Granite
Sc	Silurian sandstone and siltstone
Scc	Silurian pebble-cobble conglomerate.
Su	Silurian sediments
Og	Limestone (Gordon Limestone)
Oc	Pebble conglomerate, PC derivation (Owen Gp).
Os	Siliceous sst and conglomerate.
Ccc	Contiguous Creek Fm
Ccch	Contiguous Creek Fm chert
Ccarb	Contiguous Creek Fm carbonate and calcareous sediments.
Cba	Cambrian Basalt (McIvor Hill Complex)
Cbg	Cambrian gabbro
Cba	Cambrian basaltic volcaniclastics
Csu	Cambrian ultramafic
Cud	Cambrian ultramafic dunite
Cup	Cambrian ultramafic orthopyroxenite

Rock Types

Volcanic Rocktypes have a four letter code. The first letter is the style (intrusive, volcaniclastic etc)
The second is the chemical composition (basaltic, rhyolitic), the third is the major component (qtz phyric, lith
the last is the texture (fine grained, breccia etc). For example IUPC is an intrusive, ultramfic, pyroxene phyri

Style codes

I	Intrusive
L	Lava
V	Volcaniclastic
E	Epiclastic

Composition codes

U	Ultramafic
B	Basaltic (mafic)
A	Andesitic
D	Dacitic
R	Rhyolitic

Composition Codes

Q	Qtz phyric (qtz xtal rich)
F	feldspar phyric
H	Hornblende phyric
P	Pyroxene phyric
L	Lithic rich
X	crystal rich
V	Vitric

Texture codes

F	fine
M	medium
C	coarse

B	breccia

Other Rock codes

CHRT	Chert
CARB	Carbonate
GWAC	Greywacke
SSLT	Siltstone
SAND	Sandstone
SERP	Serpentinite
CONG	Conglomerate
GRAN	Granite
GRAD	Granodiorite
SKRN	Skarn
LOSS	No Core recovery
CLAY	Clay
MMAG	Massive magnetite
SKSP	Serpentinite Skarn
SHAL	Shale
HEVC	Heamatitic Volcaniclastic
PHLG	Phlogopite schist
GABB	Gabbro

Colour

Colours can be classified by shade using a 1 to 5 scale. ie. B1 = pale brown, B5=dark Brown

N	Black
B	Brown
P	Purple
G	Green
C	Cream
W	White
Y	Yellow
T	Tan
R	Red
O	Orange

Alteration

Ac	Actinolite
Ch	Chlorite
Se	Sericite
Cb	Carbonate
Di	Diopside
Ax	Axinite
Sc	Serpentine-chrysotilic
Sp	Serpentine
So	Schorl
Ph	Phlogopite
Sx	Sulphidic
Py	Pyritic
Po	Pyrrhotitic
Ht	Haematitic
Mg	Magnetite
To	Tourmaline
Si	Silica

Qz	Quartz

Geotech

Intact Rock Strength	**Code**	**UCS**
Extremely weak	EW	0.5 Mpa
Very Weak	VW	
Weak	W	2.5 Mpa
Moderately strong	MS	37.5 Mpa
Strong	S	75 Mpa
Very strong	VS	100 Mpa
Extremely strong	ES	150 Mpa

Roughness type	**Code**	**Jr**
Stepped Smooth	SS	3.5
Discontinuous	DC	4
Planar Smooth	PS	1
Stepped Rough	SR	3
Planar rough	PR	1.5
Undulating Smooth	US	2
Undulating Rough	UR	3

No of Defect Sets	**Code**	**Jn**
Default	0	1
One Set	1	2
One Set + random	1.5	3
Two Sets	2	4
Two Sets + random	2.5	6
Three Sets	3	9
Three Sets + random	3.5	12
Four Sets	4	15

Joint Alteration	**Code**	**Ja**
Default	0	1
Carb	CB	2
Serpentine	SP	5
Clay	CY	5
Quartz	QZ	1
Sericite	SE	3
Chlorite	CH	3
Clean	X	1
Iron	FE	1.5
Haematite	H	2

APPENDIX 8

DDH A121 Drill Log

Allegiance Metals - Drill Log

BHID

A121

Collar

Project	BHID	Easting	Northing	RL	Depth	Date	Geologist
Avebury	A121	354905.9	5357543.9	2165.1	340	20/9/05	TC

Surveys

Project	BHID	Depth	Azm_Amg	Dip
Avebury	A121	0	179.92	-51
Avebury	A121	50	179.37	-51.4
Avebury	A121	100	180.02	-50.4
Avebury	A121	150	181.06	-50.2
Avebury	A121	200	182.31	-50.0
Avebury	A121	250	183	-50.5
Avebury	A121	300	184	-50

Hole Sizes

From	Size
9	Tri-cone
56.5	HQ
340	NQ

Drilled By

Almac

Analyses By

BRL

Comments

A121 was designed as a resource extension hole for Nth Avebury .
It hit extensive low grade sulphide mineralisation.

Significant Intersections

Nth Avebury 237.0 - 244.0 7m @ 0.9% Ni, 0.01% As, 0.02% Co and 0.7% S.
from a large low grade intersection of:
233.0 - 268.0 35.0m @ 0.6% Ni, <0.01% As, 0.01% Co and 0.3% S.

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Avebury	A121	0	9	LOSS	LOSS							Tricone, no core recovery.
Avebury	A121	9	16.3	Ccc	GWAC	PhLi	B5	0.00	Gr			Broken, weathered, feld-lithic greywacke. Poor core recovery.
Avebury	A121	16.3	30.5	Ccc	GWAC	PhLi	A3	0.00	Bk	Bd	70	Massive, graded, feld-lithic greywacke. Bedded. Pervasive phlog-bio alteration. Limonitic joints. Late actinolite veining.
Avebury	A121	30.5	40.2	Ccc	GWAC	PhLi	A3	0.00	Bk	Bd	70	Massive, graded, feld-lithic greywacke. Bedded. Pervasive phlog-bio alteration. Limonitic joints. Late actinolite veining. Minor qtz veining. Broken core. Possibly late brittle faulting.
Avebury	A121	40.2	101.2	Ccc	GWAC	PhBi	A3	0.00		Bd	70	Massive, graded, feld-lithic greywacke. Bedded. Pervasive phlog-bio alteration. Late actinolite veining.
Avebury	A121	101.2	113.5	Ccc	GWAC	PhBi	A3	0.00		Bd	70	Massive, graded, feld-lithic greywacke. Bedded. Pervasive phlog-bio alteration. Late actinolite veining.
Avebury	A121	113.5	121.3	Cba	LBLB	AcPh	G5	0.00				Brecciated basaltic volcanics and phlogopite altered greywake and shale. Intensely actinolite altered basaltic volcanics, possibly peperitic.
Avebury	A121	121.3	125.6	Ccc	SHAL	Ph	N	0.20		Bd	70	Disrupted and submylonitic black shale. Minor py. Actinolite veining.
Avebury	A121	125.6	134	Cba	VBLB	AcTo	G5	0.10				Brecciated, basaltic volcanics. Intense actinolite alteration, clastic texture, possibly flow breccia?? Late tourmaline veining.
Avebury	A121	134	136.2		FALT	AcTo	G5	0.20	Ft			Broken, puggy faulted volcaniclastics.
Avebury	A121	136.2	152	Ccc	GWAC	PhAc	B5	0.00		Bd	65	Interbedded feld-lithic greywacke and black shale. Disrupted bedding. Broken core. Pervasive phlogopite alteration.
Avebury	A121	152	166.7	Cba	LBLB	Ac	G5	0.00	Sp			Massive to brecciated basaltic volcanics. Intense actinolite alteration. Late calcite veining. Chloritic joints.
Avebury	A121	166.7	184.5	Csu	SKSP	TrDi	A3	0.50	Gr			Massive, grey intensely metasomatised ultramafic. Crystalline tremolite-diopside with 10-15% magnetite aggregates and coarse to massive veins. Minor disseminated Po.
Avebury	A121	184.5	189	Csu	SERP	SpMt	N	0.20	Gr			Massive, black serpentinite. 10% magnetite aggregates and veins. Trace disseminated Pe-Po. Light green serpentinite patches.
Avebury	A121	189	193	Csu	SKSP	TrDi	A3	0.30	Gr			Massive, grey intensely metasomatised ultramafic. Crystalline tremolite-diopside with 10-15% magnetite aggregates. %0% balck serpentinite.
Avebury	A121	193	215.4	Csu	SERP	SpMt	N	0.30	Gr			Massive black serpentinite. 10% magnetite xtals. Sparse faulting/jts with

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
												chrysotile veining. Trace disseminated Pe.
Avebury	A121	215.4	216.3		FALT	CySp	A2	0.00	Ft	Ft	75	Puggy fault.
Avebury	A121	216.3	235.8	Csu	SERP	SpMt	N	0.40	Gr			Massive, black serpentinite. 10% magnetite aggregates and veins. Minor disseminated Pe-Po. Light green serpentinite patches.
Avebury	A121	235.8	236.6	Csu	SKSP	TrDi	A2	0.00	Gr	Ft	20	Pale cream, intensely metasomatised ultramafic. Tremolite diopside selvedge around low angle calcite filled fault.
Avebury	A121	236.6	256.1	Csu	SERP	SpMt	N	0.60	Ft	Ft	20	Massive, black serpentinite. 10% magnetite aggregates and veins. 0.5-1.0% coarse disseminated Pe-Po. Light green serpentinite patches. Minor low angle chrysotile filled faults.
Avebury	A121	256.1	257.1		FALT	SpMt	N	0.60	Ft	Ft	25	Broken, puggy and chrysotile veined fault.
Avebury	A121	257.1	263.9	Csu	SERP	SpMt	N	0.60	Ft	Ft	20	Massive, black serpentinite. 10% magnetite aggregates and veins. 0.5-1.0% coarse disseminated Pe-Po. Light green serpentinite patches. Minor low angle chrysotile filled faults.
Avebury	A121	263.9	264.1		FALT	SpMt	N	0.60	Ft	Ft	25	Broken, puggy and chrysotile veined fault.
Avebury	A121	264.1	270.2	Csu	SERP	SpMt	N	0.60	Ft	Ft	20	Massive, black serpentinite. 10% magnetite aggregates and veins. 0.5-1.0% coarse disseminated Pe-Po. Light green serpentinite patches.
Avebury	A121	270.2	270.8		FALT	SpMt	N	0.60	Ft	Ft	25	Broken, puggy and chrysotile veined fault.
Avebury	A121	270.8	312.2	Csu	SERP	SpMt	N	0.20				Massive, black serpentinite. 10% magnetite aggregates and veins. Minor disseminated Pe-Po. Light green -grey serpentinite spots??.
Avebury	A121	312.2	312.5		FALT	SpMt	N	0.60	Ft	Ft	25	Broken, puggy and chrysotile veined fault.
Avebury	A121	312.5	321.2	Csu	SERP	SpMt	N	0.20				Massive, black serpentinite. 10% magnetite aggregates and veins. Minor disseminated Pe-Po. Light green -grey serpentinite spots??.
Avebury	A121	321.2	321.5		FALT	SpMt	N	0.60	Ft	Ft	25	Broken, puggy and chrysotile veined fault.
Avebury	A121	321.5	340	Csu	SERP	SpMt	N	0.20				Massive, black serpentinite. 10% magnetite aggregates and veins. Minor disseminated Pe-Po. Light green -grey serpentinite spots??. Possibly trem-diopside spots.

Assay Sheet

Project	BHID	From m	To m	Spl_id	Ni %	Cu ppm	Pb ppm	Zn ppm	As ppm	Co ppm	S%	MgO %	FeO %	Au ppm	Strat	Rock
Avebury	A121	166.7	168		0.07				200	<20	<0.1	15.9	4.5			
Avebury	A121	168	169		0.20				850	<20	0.7	15.9	3.7			
Avebury	A121	169	170		0.06				100	60	0.2	19.7	12.5			
Avebury	A121	170	171		0.32				350	260	1.0	16.3	7.6			
Avebury	A121	171	172		0.13				250	60	0.6	15.4	3.1			
Avebury	A121	172	173		0.27				300	100	3.6	14.3	8.1			
Avebury	A121	173	174		0.15				150	60	4.2	14.9	9.3			
Avebury	A121	174	175		0.09				200	<20	0.7	14.1	2.6			
Avebury	A121	175	176		0.21				350	40	0.9	15.7	3.5			
Avebury	A121	176	177		0.29				350	60	0.5	18.1	5.0			
Avebury	A121	177	178		0.22				550	220	0.3	26.3	6.7			
Avebury	A121	178	179		0.20				1300	300	0.1	22.6	5.1			
Avebury	A121	179	180		0.23				200	40	0.1	21.2	7.1			
Avebury	A121	180	181		0.16				200	20	<0.1	19.4	9.3			
Avebury	A121	181	182		0.26				400	60	<0.1	19.6	9.9			
Avebury	A121	182	183		0.24				150	40	<0.1	20.7	9.3			
Avebury	A121	183	184		0.19				150	40	<0.1	20.3	9.9			
Avebury	A121	184	185		0.24				250	40	<0.1	25.5	10.9			
Avebury	A121	185	186		0.28				750	80	<0.1	30.5	13.4			
Avebury	A121	186	187		0.25				450	80	<0.1	32.1	11.8			
Avebury	A121	187	188		0.26				400	60	<0.1	35.5	9.3			
Avebury	A121	188	189		0.24				400	60	<0.1	35.6	10.0			
Avebury	A121	189	190		0.14				100	20	<0.1	26.9	9.3			
Avebury	A121	190	191		0.26				100	80	<0.1	32.1	14.0			
Avebury	A121	191	192		0.24				100	60	<0.1	33.7	10.4			
Avebury	A121	192	193		0.59				100	140	0.4	28.8	16.6			
Avebury	A121	193	194		0.27				150	60	0.1	36.1	10.4			
Avebury	A121	194	195		0.29				100	60	0.1	37.8	9.6			
Avebury	A121	195	196		0.30				250	80	0.4	39.2	11.4			
Avebury	A121	196	197		0.43				150	140	0.5	37.2	14.0			
Avebury	A121	197	198		0.31				350	80	0.4	39.5	10.3			
Avebury	A121	198	199		0.22				50	40	0.2	41.0	7.3			
Avebury	A121	199	200		0.29				250	80	0.1	40.5	8.7			

Assay Sheet

Project	BHID	From m	To m	Spl_id	Ni %	Cu ppm	Pb ppm	Zn ppm	As ppm	Co ppm	S%	MgO %	FeO %	Au ppm	Strat	Rock
Avebury	A121	200	201		0.24				50	60	<0.1	41.5	8.0			
Avebury	A121	201	202		0.27				50	60	<0.1	42.0	8.4			
Avebury	A121	202	203		0.23				100	40	<0.1	41.6	8.6			
Avebury	A121	203	204		0.29				50	80	<0.1	40.8	11.4			
Avebury	A121	204	205		0.25				50	60	<0.1	42.0	7.5			
Avebury	A121	205	206		0.25				50	40	<0.1	41.5	7.1			
Avebury	A121	206	207		0.25				50	60	<0.1	41.6	7.2			
Avebury	A121	207	208		0.21				50	20	<0.1	42.5	5.9			
Avebury	A121	208	209		0.21				50	20	<0.1	41.4	6.0			
Avebury	A121	209	210		0.23				50	20	<0.1	41.3	5.4			
Avebury	A121	210	211		0.23				50	40	<0.1	41.1	6.0			
Avebury	A121	211	212		0.33				50	100	<0.1	39.8	10.7			
Avebury	A121	212	213		0.27				50	60	<0.1	39.9	8.1			
Avebury	A121	213	214		0.26				50	60	<0.1	40.4	8.7			
Avebury	A121	214	215		0.22				50	40	<0.1	41.0	7.5			
Avebury	A121	215	216		0.22				50	40	<0.1	42.1	7.2			
Avebury	A121	216	217		0.32				50	80	0.1	42.4	7.2			
Avebury	A121	217	218		0.38				100	80	<0.1	41.3	7.1			
Avebury	A121	218	219		0.27				50	60	<0.1	41.3	6.3			
Avebury	A121	219	220		0.31				150	80	<0.1	40.8	6.2			
Avebury	A121	220	221		0.34				300	140	<0.1	40.8	6.3			
Avebury	A121	221	222		0.21				300	80	<0.1	41.0	5.9			
Avebury	A121	222	223		0.21				50	40	<0.1	41.9	5.0			
Avebury	A121	223	224		0.23				50	60	<0.1	41.5	6.0			
Avebury	A121	224	225		0.23				50	60	<0.1	41.0	6.9			
Avebury	A121	225	226		0.22				50	60	<0.1	41.4	7.6			
Avebury	A121	226	227		0.23				50	80	<0.1	40.8	9.3			
Avebury	A121	227	228		0.37				50	140	0.2	40.2	11.8			
Avebury	A121	228	229		0.26				50	100	0.3	40.6	10.5			
Avebury	A121	229	230		0.24				50	80	0.3	40.6	10.9			
Avebury	A121	230	231		0.26				50	100	0.1	40.6	11.3			
Avebury	A121	231	232		0.30				50	120	0.1	40.9	11.1			
Avebury	A121	232	233		0.39				50	140	0.2	40.1	9.4			

Assay Sheet																
Project	**BHID**	**From m**	**To m**	**Spl_id**	**Ni %**	**Cu ppm**	**Pb ppm**	**Zn ppm**	**As ppm**	**Co ppm**	**S%**	**MgO %**	**FeO %**	**Au ppm**	**Strat**	**Rock**
Avebury	A121	233	234		0.51				100	200	0.4	39.9	13.9			
Avebury	A121	234	235		0.41				100	120	0.2	40.9	9.1			
Avebury	A121	235	236		0.38				100	120	0.1	38.2	9.6			
Avebury	A121	236	237		0.26				150	40	<0.1	38.3	6.3			
Avebury	A121	237	238		0.95				100	280	0.8	39.4	13.6			
Avebury	A121	238	239		0.57				50	160	0.4	39.2	12.7			
Avebury	A121	239	240		0.74				100	180	0.6	39.2	14.9			
Avebury	A121	240	241		0.81				100	160	0.5	40.7	9.3			
Avebury	A121	241	242		1.02				50	200	0.8	37.0	15.6			
Avebury	A121	242	243		0.94				100	160	0.7	39.9	12.0			
Avebury	A121	243	244		1.14				100	200	0.9	37.8	16.1			
Avebury	A121	244	245		0.58				50	80	0.3	40.7	8.7			
Avebury	A121	245	246		0.56				50	100	0.2	40.7	9.3			
Avebury	A121	246	247		0.61				50	100	0.2	40.4	10.0			
Avebury	A121	247	248		0.56				50	100	0.2	41.5	8.9			
Avebury	A121	248	249		0.35				50	60	0.1	42.4	8.9			
Avebury	A121	249	250		0.45				50	80	0.1	42.8	7.7			
Avebury	A121	250	251		0.41				50	80	0.1	41.7	9.1			
Avebury	A121	251	252		0.46				50	80	0.1	42.6	6.6			
Avebury	A121	252	253		0.53				50	100	0.3	42.1	9.8			
Avebury	A121	253	254		0.78				50	180	0.4	42.5	8.0			
Avebury	A121	254	255		0.69				100	160	0.4	41.1	11.2			
Avebury	A121	255	256		0.50				50	140	0.2	40.9	12.1			
Avebury	A121	256	257		0.34				50	100	0.1	41.2	10.5			
Avebury	A121	257	258		0.37				50	120	0.1	41.3	11.2			
Avebury	A121	258	259		0.61				50	200	0.3	40.8	13.3			
Avebury	A121	259	260		0.95				50	360	0.8	38.6	15.2			
Avebury	A121	260	261		0.29				50	100	0.1	40.0	11.4			
Avebury	A121	261	262		0.37				50	120	0.1	40.7	11.1			
Avebury	A121	262	263		0.39				50	120	0.1	41.5	10.3			
Avebury	A121	263	264		0.44				50	120	0.3	41.2	9.5			
Avebury	A121	264	265		0.46				50	140	0.3	40.4	10.3			
Avebury	A121	265	266		0.30				50	80	0.1	41.2	10.4			

Assay Sheet

Project	BHID	From m	To m	Spl_id	Ni %	Cu ppm	Pb ppm	Zn ppm	As ppm	Co ppm	S%	MgO %	FeO %	Au ppm	Strat	Rock
Avebury	A121	266	267		0.47				50	140	0.3	41.0	10.5			
Avebury	A121	267	268		1.00				50	280	0.9	39.3	12.2			
Avebury	A121	268	269		0.26				50	80	<0.1	40.2	10.2			
Avebury	A121	269	270		0.30				50	100	<0.1	38.7	13.1			
Avebury	A121	270	271		0.28				50	100	<0.1	39.3	12.0			
Avebury	A121	271	272		0.25				100	100	<0.1	39.3	14.3			
Avebury	A121	272	273		0.22				100	80	<0.1	39.0	12.4			
Avebury	A121	273	274		0.23				50	80	<0.1	38.6	13.1			
Avebury	A121	274	275		0.26				50	100	<0.1	38.3	13.6			
Avebury	A121	275	276		0.30				50	100	<0.1	38.9	14.3			
Avebury	A121	276	277		0.30				50	100	0.1	38.1	14.3			
Avebury	A121	277	278		0.27				50	80	<0.1	38.7	13.0			
Avebury	A121	278	279		0.25				50	80	<0.1	38.7	13.1			
Avebury	A121	279	280		0.23				50	100	<0.1	37.8	16.0			
Avebury	A121	280	281		0.21				50	100	<0.1	37.3	16.0			
Avebury	A121	281	282		0.22				50	100	<0.1	38.5	14.3			
Avebury	A121	282	283		0.25				50	100	<0.1	38.5	13.4			
Avebury	A121	283	284		0.18				50	60	<0.1	40.0	10.3			
Avebury	A121	284	285		0.18				50	40	<0.1	40.5	8.7			
Avebury	A121	285	286		0.21				50	80	<0.1	39.9	10.7			
Avebury	A121	286	287		0.23				50	80	<0.1	39.5	10.5			
Avebury	A121	287	288		0.24				50	80	<0.1	39.9	10.0			
Avebury	A121	288	289		0.22				50	60	<0.1	39.9	10.3			
Avebury	A121	289	290		0.22				50	60	<0.1	40.2	9.9			

Geotech Sheet

Project	BHID	From	To	Recovery	Lithology	Weathering	Alteration	Strength	length>10cm	RQD%	No. defects	Defect sets	Defect type	bca struct 1	bca struct 2	Roughness	Fill	Comments
Avebury	A121	120	133.1	13.1	VBLB		AcTo	VS	11	84	15	2.5	Jt	60	30	PR	Ac	Massive basaltic volcanics.
Avebury	A121	133.1	135.5	2.4	FALT		AcTo	W	0	0	12	2	Jt	70	30	PS	Ch	Broken volcanics.
Avebury	A121	135.5	137.7	2.2	GWAC		PhAc	S	0.6	27	18	3	Jt	60	70	PS	Ch	Jointed greywacke.
Avebury	A121	137.7	146	8.3	GWAC		PhAc	S	6.1	73	27	2.5	Jt	60	70	PS	Ch	Jointed greywacke.
Avebury	A121	146	152.4	6.4	GWAC		PhAc	S	0.3	4.7	100	3.5	Jt	60	30	PS	Ch	Broken greywacke.
Avebury	A121	152.4	166.7	14.3	VBLB		AcTo	S	10	73	51	2.5	Jt	20	45	PS	Ch	Massive basaltic volcanics.
Avebury	A121	166.7	188.4	21.7	SKSP		TrDi	S	21	94	35	1.5	Jt	20	50	PR	Tr	Massive ultramafic skarn
Avebury	A121	188.4	189	0.6	FALT		Sp	MS	0	0	6	1	Ft	25		PS	Sp	Serpentinite fault.
Avebury	A121	189	192.6	3.6	SKSP		TrDi	MS	3.2	89	5	2	Jt	20	50	PR	Tr	Massive ultramafic skarn
Avebury	A121	192.6	201.6	9	SERP		SpMt	MS	3.7	41	122	3	Ft	25	60	PS	Sp	Serpentinite, jointed with puggy shears.
Avebury	A121	201.6	215.4	13.8	SERP		SpMt	MS	12	87	65	2.5	Ft	25	60	PS	Sp	Serpentinite with spare low angle flts.
Avebury	A121	215.4	216.3	0.9	FALT		SpCy	W	0	0	100	4	Ft	70		PS	Sp	Puggy fault.
Avebury	A121	216.3	232.8	16.5	SERP		SpMt	MS	14	87	14	1.5	Jt	30	60	PS	Sp	Massive black serpentinite.
Avebury	A121	232.8	234.7	1.9	SERP		SpMt	W	0.9	47	100	3	Ft	15	60	PS	Cy	Serp with puggy crush zones.
Avebury	A121	234.7	250.5	15.8	SERP		SpMt	MS	13	80	29	2	Jt	60	20	PS	Sp	Massive serp, minor low angle faults.
Avebury	A121	250.5	256.1	5.6	SERP		SpMt	MS	3.4	61	34	3	Ft	20	60	PS	Sp	Serp, with flts and jts.
Avebury	A121	256.1	257.1	1	FALT		SpCy	W	0	0	100	4	Ft	20	60	PS	Sp	Puggy Fault.
Avebury	A121	257.1	263	5.9	SERP		SpMt	MS	5.2	88	12	2.5	Jt	60	20	PS	Sp	Massive Serp
Avebury	A121	263	264.2	1.2	FALT		Spcy	W	0.3	25	100	4	Ft	70	25	PS	Sp	Puggy Fault.
Avebury	A121	264.2	270.2	6	SERP		SpMt	MS	5.5	92	7	2.5	Jt	70	25	PS	Sp	Massive Serp
Avebury	A121	270.2	270.8	0.6	FALT		SpCy	W	0	0	100	4	Ft	65	20	PS	Sp	Puggy Fault.
Avebury	A121	270.8	283	12.2	SERP		SpMt	MS	9.4	77	53	3	Jt	65	30	PS	Sp	Jointed serpentinite.
Avebury	A121	283	301.4	18.4	SERP		SpMt	MS	17	94	36	2.5	Jt	50	45	PS	Sp	Massive Serpentinite.
Avebury	A121	301.4	312.2	10.8	SERP		SpMt	MS	6.3	58	53	3	Jt	45	70	PS	Sp	Serp, jointed with broken zones.
Avebury	A121	312.2	312.5	0.3	FALT		SpCy	W	0	0	100	4	Ft	70		PS	Sp	Puggy fault.
Avebury	A121	312.5	321.2	8.7	SERP		SpMt	MS	6.9	79	15	2.5	Ft	70	30	PS	Sp	Massive Serpentinite.
Avebury	A121	321.2	321.5	0.3	FALT		SpCy	W	0	0	100	4	Ft	70		PS	Sp	Puggy fault.
Avebury	A121	321.5	340	18.5	SERP		SP	MS	15	82	75	2.5	Ft	20	70	PS	Sp	Massive serp, minor low angle faults.

Stratigraphy

Q	Quaternary alluvial, colluvial and dune deposits
Df	Devonian fine grained qtz sst and sslt (Florence Quartzite). Fossiliferous
Dsk	Devonian Skarn
Dg	Devonian Granite
Sc	Silurian sandstone and siltstone
Scc	Silurian pebble-cobble conglomerate.
Su	Silurian sediments
Og	Limestone (Gordon Limestone)
Oc	Pebble conglomerate, PC derivation (Owen Gp).
Os	Siliceous sst and conglomerate.
Ccc	Contiguous Creek Fm
Ccch	Contiguous Creek Fm chert
Ccarb	Contiguous Creek Fm carbonate and calcareous sediments.
Cba	Cambrian Basalt (McIvor Hill Complex)
Cbg	Cambrian gabbro
Cba	Cambrian basaltic volcaniclastics
Csu	Cambrian ultramafic
Cud	Cambrian ultramafic dunite
Cup	Cambrian ultramafic orthopyroxenite

Rock Types

Volcanic Rocktypes have a four letter code. The first letter is the style (intrusive, volcaniclastic etc)
The second is the chemical composition (basaltic, rhyolitic), the third is the major component (qtz phyric, lith
the last is the texture (fine grained, breccia etc). For example IUPC is an intrusive, ultramfic, pyroxene phyri

Style codes

I	Intrusive
L	Lava
V	Volcaniclastic
E	Epiclastic

Composition codes

U	Ultramafic
B	Basaltic (mafic)
A	Andesitic
D	Dacitic
R	Rhyolitic

Composition Codes

Q	Qtz phyric (qtz xtal rich)
F	feldspar phyric
H	Hornblende phyric
P	Pyroxene phyric
L	Lithic rich
X	crystal rich
V	Vitric

Texture codes

F	fine
M	medium
C	coarse

B	breccia

Other Rock codes

CHRT	Chert
CARB	Carbonate
GWAC	Greywacke
SSLT	Siltstone
SAND	Sandstone
SERP	Serpentinite
CONG	Conglomerate
GRAN	Granite
GRAD	Granodiorite
SKRN	Skarn
LOSS	No Core recovery
CLAY	Clay
MMAG	Massive magnetite
SKSP	Serpentinite Skarn
SHAL	Shale
HEVC	Heamatitic Volcaniclastic
PHLG	Phlogopite schist
GABB	Gabbro

Colour

Colours can be classified by shade using a 1 to 5 scale. ie. B1 = pale brown, B5=dark Brown

N	Black
B	Brown
P	Purple
G	Green
C	Cream
W	White
Y	Yellow
T	Tan
R	Red
O	Orange

Alteration

Ac	Actinolite
Ch	Chlorite
Se	Sericite
Cb	Carbonate
Di	Diopside
Ax	Axinite
Sc	Serpentine-chrysotilic
Sp	Serpentine
So	Schorl
Ph	Phlogopite
Sx	Sulphidic
Py	Pyritic
Po	Pyrrhotitic
Ht	Haematitic
Mg	Magnetite
To	Tourmaline
Si	Silica

Qz	Quartz

Geotech

Intact Rock Strength	**Code**	**UCS**
Extremely weak	EW	0.5 Mpa
Very Weak	VW	
Weak	W	2.5 Mpa
Moderately strong	MS	37.5 Mpa
Strong	S	75 Mpa
Very strong	VS	100 Mpa
Extremely strong	ES	150 Mpa

Roughness type	**Code**	**Jr**
Stepped Smooth	SS	3.5
Discontinuous	DC	4
Planar Smooth	PS	1
Stepped Rough	SR	3
Planar rough	PR	1.5
Undulating Smooth	US	2
Undulating Rough	UR	3

No of Defect Sets	**Code**	**Jn**
Default	0	1
One Set	1	2
One Set + random	1.5	3
Two Sets	2	4
Two Sets + random	2.5	6
Three Sets	3	9
Three Sets + random	3.5	12
Four Sets	4	15

Joint Alteration	**Code**	**Ja**
Default	0	1
Carb	CB	2
Serpentine	SP	5
Clay	CY	5
Quartz	QZ	1
Sericite	SE	3
Chlorite	CH	3
Clean	X	1
Iron	FE	1.5
Haematite	H	2