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OZ Minerals Ltd

EL 43/1992 & ML 2/2007

MELBA FLATS

Annual Report for Year Ended March 2009

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SUMMARY

EL 43/1992 is a 6 sq km Exploration Licence surrounding a 269 ha mining lease, ML 2/2007, acquired to facilitate development of identified resources at Melba Flats.

This report covers work completed on both tenements in the twelve-month period to end March 2009, which includes 14 diamond drill holes (MF 94 –107) for 4,257.1m. Also included in this report are discussion, logs and assays for four (4) diamond drill holes (MF 90 – 93) that were drilled in the previous year but had not been fully logged or assayed before the writing of the 2008 Annual Report.

Results from these drill holes are included in ongoing geological interpretations and significantly mineralised intersections have been recorded from several of these holes.

ASX Announcements and Annual Reports of Allegiance Mining cite a drill defined open-cuttable resource of 95,000 tonnes averaging 0.8% Ni and 1.0% Cu in the North Cuni-Genets area and an initial modest inferred mineral resource of 30,000 tonnes at 3% Ni based on seven shallow drill holes at Nickel Reward,

SUMMARY

CONTENTS

14. **Strip Logs MF 89 & 93 (Genets)**
15. **Strip Logs MF 66 & 103 (North Cuni)**
16. **Strip Log MF 102 (North Cuni)**
17. **South Cuni Drill Hole Locations**
18. **Strip Logs MF 14, 15 & 107 (South Cuni)**

APPENDICES

1. **Drill Holes MF 90 – 107, Collars, Assays, Surveys, Geology and Codes**
2. **Drill Holes MF 90 – 107, Header Files and Original Logs**

ATTACHMENTS

1. **CD - EL 43_1992_Melba_Flats_Annual_Report_2009**

Contents

1. EL 43_1992_Melba_Flats_Annual_Report_2009_text.pdf
2. EL 43_1992_Melba_Flats_Annual_Report_2009_figures.pdf
3. Drill Log MF90.xls
4. Drill Log MF91.xls
5. Drill Log MF92.xls
6. Drill Log MF93.xls
7. Drill Log MF94.xls
8. Drill Log MF95.xls
9. Drill Log MF96.xls
10. Drill Log MF97.xls
11. Drill Log MF98.xls
12. Drill Log MF99.xls
13. Drill Log MF100.xls
14. Drill Log MF101.xls
15. Drill Log MF102.xls
16. Drill Log MF103.xls
17. Drill Log MF104.xls
18. Drill Log MF105.xls
19. Drill Log MF106.xls
20. Drill Log MF107.xls
21. EL43_1992_ MF 90-107 Collars.txt
22. EL43_1992_ MF 90-107 Assays.txt
23. EL43_1992_MF 90-107 Surveys.txt
24. EL43_1992_MF 90_107 Collars_Assays_Surveys_Geology_Codes.xls

1. INTRODUCTION

The Melba Flats area is located 17km from Rosebery and 9km from Zeehan on the Murchison Hwy in Western Tasmania. Access to the project area is via tracks established by Forestry Tasmania in the course of clear felling the area. (Figure 1)

EL 43/1992 is a six sq km Exploration Licence surrounding a 269 ha mining lease, ML 2/2007, acquired to facilitate development of identified resources at Melba Flats. Both licences are held by OZ Minerals via its wholly owned subsidiary Allegiance Metals.

Mining Lease 2M/2007 was granted on 22 August 2007 for a 10-year period. Due to the prevailing economic conditions in 2008/2009 and the current size of the resource at Melba Flats, OZ Minerals is currently in the process of converting ML 2/2007 into a Retention Licence.

Prior to its takeover by Zinifex in 2008 (and the subsequent Zinifex/Oxiana transaction that resulted in the formation of OZ Minerals also in 2008) Allegiance Mining had been exploring and evaluating the Melba Flats area since 1997. Prior to 1997 Rio Tinto Exploration (CRA Exploration) had been exploring the area since 1993. Annual Reports written by Rio Tinto provide comprehensive summaries of any work completed in the area prior to their period of tenure. Allegiance Mining compiled their regional drill hole database from information provided in the Rio Tinto Reports.

Previous reports on EL 43/1992 and ML 2/2007 (see References) describe campaigns of geological mapping, airborne and ground geophysics, geochemical sampling and drilling up to drill hole MF 89. This report describes drill holes MF 90 - 93 (carried out in the previous year but not included in the previous annual report due to incomplete logging and assaying) and drill holes MF 94 – 107, carried out in the current year. These holes were completed as part of a core-drilling program to test for extensions of known mineralisation at Nickel Reward, Devereaux, North Cuni, South Cuni and Genets.

2. REGIONAL AND LOCAL GEOLOGY

Geologically the Melba Flats area consists of Cambrian sediments intruded by a number of Cambrian(?) gabbro dykes, see Figure 2. The dykes are thought to be genetically associated with the Serpentine Hill and Razorback Ultramafic bodies east of the tenements, although an association with the Henty Dyke Swarm is also considered possible. The sediments dip to the east and generally strike north south. District folding and common small-scale faulting commonly cause local variations to this trend.

The gabbro dykes are intrusive, often with chilled and brecciated margins, and are both concordant and discordant with the enclosing sediments. The dykes, sediments and ultramafics are pervasively altered. Carbonate and carbonate-talc alteration of the gabbro dykes is typically accompanied by late stage carbonate veining.

The Melba Flats Ni-Cu mineralisation is typically disseminated throughout a gabbro dyke host, but more concentrated (massive in places) on the footwall of the dike. Mineralisation is principally pentlandite-millerite-chalcopyrite-pyrite. Significant cobalt, gold and PGE are associated with either (or both) nickel and copper sulphides. Late-stage carbonate alteration and veining is also accompanied by coarse galena-sphalerite-chalcopyrite. The body of existing petrologic data suggests the Melba Flats sulphides are hydrothermal replacement deposits.

Historical production of 10,000t @ 9.5% Ni and 3.5% Cu to a maximum depth of 50m has been estimated for the Melba Flats field. Exploration to date by Allegiance has shown the Ni-Cu mineralisation to be more widespread and persistent to greater depths than previously thought. Drilling by Allegiance, complemented by surface exposure and former mine workings has identified modest shallow resources at Nickel Reward and North Cuni-Genets. The district is regarded as highly prospective for extensions of these resources and for more substantial bodies at depth associated with larger gabbro and ultramafic intrusives.

The overall strategy for Allegiance Mining at Melba Flats prior to its purchase by Zinifex/OZ Minerals was to commence production from several small pits and to access deeper resources by way of appropriately sized declines from within these pits. Reflecting this strategy, activity at Melba Flats under Allegiance Mining's management in the recent past and including this current year has been undertaken with the objectives of:

- Expanding the shallow open-cuttable resources
- Exploring for deeper, larger deposits by drilling
- Progressing development of the shallow resources towards production.

3. WORK COMPLETED - CURRENT YEAR

Eighteen (18) cored drill holes were completed, testing for extensions of mineralisation at Nickel Reward, Devereaux, North Cuni, South Cuni, and Genets. Their locations are highlighted in Figure 3.

Prospect	No. Holes	Hole IDs	Total Metres
Nickel Reward	3	MF 90 – 92	1260.4
Devereaux	3	MF 104 - 106	692.0
North Cuni	2	MF 102, 103	311.0
Genets	9	MF 93 - 101	3277.2
South Cuni	1	MF 107	475.9

Table1. Drill holes summarised by prospect location

Area	Hole	E_amg	N_amg	Z	Depth	Az_amg	Dip	Prospect
Melba	MF90	366,544	5,365,632	2,207	473.50	288	-58	Ni Reward
Melba	MF91	366,546	5,365,635	2,207	356.40	297	-60	Ni Reward
Melba	MF92	366,546	5,365,634	2,207	430.50	302	-80	Ni Reward
Melba	MF93	366,556	5,367,643	2,213	499.00	314	-65	Genets
Melba	MF94	366,572	5,367,736	2,213	382.00	0	-90	Genets
Melba	MF95	366,611	5,367,835	2,213	293.50	0	-90	Genets
Melba	MF96	366,610	5,367,834	2,213	256.00	315	-50	Genets
Melba	MF97	366,593	5,367,673	2,214	336.20	0	-90	Genets
Melba	MF98	366,739	5,367,753	2,215	403.00	0	-90	Genets
Melba	MF99	366,808	5,367,742	2,216	524.00	0	-90	Genets
Melba	MF100	366,706	5,367,840	2,215	307.00	0	-90	Genets
Melba	MF101	366,705	5,367,841	2,217	276.50	305	-53	Genets
Melba	MF102	366,368	5,367,360	2,208	151.00	267.5	-61	North Cuni
Melba	MF103	366,365	5,367,450	2,208	160.00	270	-60	North Cuni
Melba	MF104	365,670	5,365,450	2,210	236.00	240	-70	Devereaux
Melba	MF105	365,670	5,365,450	2,210	246.00	240	-45	Devereaux
Melba	MF106	365,620	5,365,470	2,210	210.00	240	-60	Devereaux
Melba	MF107	366,535	5,366,665	2,215	475.90	281	-60	South Cuni

Table2. Drill hole collar locations

3.1. Nickel Reward Drill Holes

In the previous year's drilling program, holes were drilled to test for depth extensions of previously identified shallow mineralisation at Nickel Reward. These holes returned mixed results and a more complex structural history than initially interpreted was developed for the Nickel Reward area.

Drill Holes MF 90 – 92,
The location of drill holes MF 90-92 is shown at regional scale in Figure 3 and prospect scale in Figure 4. Strip logs of MF 90-92 are displayed in cross section format in Figure 5. Logs and assays for these holes are attached in Appendix 2.

MF 90 was drilled to test the mineralised nickel reward gabbros beneath MF 81. The hole intersected 3 gabbro dykes however none carried either nickel or copper at >0.05%. The hole deviated well south from its intended azimuth and it is possible that it passed south of the plunging Nickel reward ore shoot.

MF 91 was likewise drilled to test the mineralised nickel reward gabbros beneath MF 81. It intersected 2.3m @ 2.27% Ni and 1.77% Cu in an altered gabbro dyke 120m down dip of MF 81 at 282m. This intersection suggests that the Nickel reward mineralised zone is plunging NE, possibly down a fold axis.

MF 92 was drilled to test the mineralised nickel reward gabbros beneath MF 81 and 91. It intersected no significant mineralisation.

3.2. Devereaux Drill Holes

The Devereaux Mine consists of a very shallow shaft and several pits developed on a thin band of outcropping massive Ni-Cu sulphides 800 m southwest of Nickel Reward. Three very shallow (25m?), poorly recorded drill holes were completed in the 1950s below the immediate workings. All three holes are reported as intersecting significant sulphides.

The previous year's drilling program had determined that the gabbro host dyke, south of the Devereaux workings strikes WNW and dips 85-90° to the northeast. Testing of the dyke further west along strike showed the dyke did not lie where expected and was unmineralised. It is interpreted as having changed strike to NNW, with a major fold or flexure close to MF83 and the surface workings.

Drill Holes MF 104 - 106
The location of drill holes MF 104 - 106 is shown at regional scale in Figure 3 and prospect scale in Figure 6. Strip logs of MF 104 -106 are displayed in cross section format in Figures 7 and 8. Logs and assays for these holes are attached in Appendix 2.

MF 104 -106 all tested an alternative hypothesis for the strike and dip of mineralised gabbro at the Devereaux Prospect than had been tested by previous drilling.

MF 104 intersected four gabbros however none were significantly mineralised with the best intersection being 4.35m @ 0.2% Ni and 0.1% Cu from 115.55m from the shallowest and thickest gabbro dyke.

MF 105 intersected irregular, thin gabbro veins(?) from 208 to 219 m before intersecting an 8m gabbro dyke at 225.2 to 233.2m. No significant mineralisation was associated with either the gabbro veins or dyke.

MF 106 intersected a 6m thick gabbro dyke at a shallow depth (32m) and a thin (<2m) gabbro dyke at 112m. The shallow gabbro contained 3.7m @ 0.2% Ni and <0.1% Cu while the deeper gabbro was unmineralised.

3.3. North Cuni Drill Holes

In the previous year's drilling program, holes drilled to test for southern extensions of the North Cuni mineralised gabbro successfully located the dyke but found it not significantly mineralised.

Drill holes MF 102 and103
The location of drill holes MF 102 and 103 is shown at regional scale in Figure 3 and prospect scale in Figure 9. Strip logs of MF 102 and 103 are displayed in cross section format in Figures 15 and 16. Logs and assays for these holes are attached in Appendix 2.

MF 102 was designed to test below an outcropping mineralised gabbro 200m south of the North Cuni workings. It intersected several gabbros, none of which were significantly mineralised.

MF 103 was located approximately halfway between MF 102 and the North Cuni workings. It intersected two 8m thick unmineralised gabbros at less than 50m depth; a thin gabbro at 64.7 to 66m that contained 1m @ 0.9% Ni (no copper assay) from 65m and a massive ~50m thick unmineralised gabbro from 97.4 to 146.3m.

3.4. Genets Drill Holes

In the previous year's drilling program, holes were drilled to test for the strike and depth extensions of Genets to the north (main Genets dyke was pinched out but a deeper western dyke that carried significant disseminated mineralisation was intersected), and depth extensions of Genets to the south (successfully intersected mineralised main Genets dyke, and also several major deeper dykes).

Drill holes MF 93 - 101
The location of drill holes MF 93 - 101 is shown at regional scale in Figure 3 and prospect scale in Figure 9. Strip logs of MF 93 - 101 are displayed in cross section format in Figures 10, 11, 12, 13 and 14. Logs and assays for these holes are attached in Appendix 2.

MF 93 was drilled to test the intersection in MF 89 approximately 100m down dip. The main Genets Gabbro was intersected from151.1-159.4m beneath a major fault at 139- 140m. The HW half of the gabbro was well mineralised, with the best intersection: 151.1-155.8m., 4.7m @ 0.83% Ni and 0.62% Cu. A deeper gabbro had the appearance and chemistry of an ultramafic and contained appreciable nickel sulphide in the 0.1-0.2% Ni range.

MF 94 was drilled to test the Genets and Western Gabbros at depth beneath MF 87 and MF 88. Three gabbro dykes were intersected. The Eastern Gabbro was unmineralised; the intersection in the Genets Dyke contained 5 (vertical) metres @ 1.2% Ni and 0.8% Cu in the HW section of dyke; and the Western gabbro was extensively replaced by quartz-carbonate veining containing sporadic Pb-Zn mineralisation but low levels of Ni and Cu.

MF 95 tested for the NE strike extension of Genets. The Eastern Gabbro was unmineralised; the central section of Genets Dyke was well mineralised with a best intersection of 122.9 - 126.1m., 3.2 (vertical) metres @ 1.1% Ni and 0.8% Cu; the Western Gabbro contained only minor mineralisation including 224.0-226.3m, 2.3m @ 0.2% Ni and 0.1% Cu.

MF 96 was also drilled to test for the NE strike extension of Genets but was drilled at an angle to the SW from the same site as the vertical MF 95. It intersected multiple gabbro dykes none with any substantial width. The best intersection was from 100.0 to 101.9, 1.9m @ 1.0% Ni and 0.8% Cu.

MF 97 was a vertical drill hole stepping out to the NE from the relatively well mineralised MF 93. It intersected 6.0m @ 0.8% Ni and 0.7% Cu, from 210m, including 212.0 - 214.0m, 2.0m @ 1.3% Ni and 0.9% Cu.

MF 98 was a vertical hole that tested the shallow mineralised gabbro intersections in MF 95 and MF 96 at greater depth and for additional up sequence gabbros. Only weak mineralisation was intersected at 272 – 274m, 2.0m @ 0.3% Ni and 0.2% Cu.

MF 99, 100 and 101 are a NW/SE section of holes designed to test for an extension of the Genets workings down dip to the east. MF 99 tests furthest east and MF 101 furthest west in the section line.

MF 99 intersected 2m @ 0.3% Ni and 0.1% Cu at 425 - 427m; MF 100, 3.3m @ 0.2% Ni and 0.2% Cu at 200.7 – 204m; and MF 101, 4.0m @ 0.7% Ni and 0.5% Cu at 154.0 - 158.0m, including 155.0 to 157.0m, 2.0m @ 1.0% Ni and 0.7% Cu.

3.5. South Cuni Drill Holes

Drill hole MF 107

The location of drill hole MF 107 is shown at regional scale in Figure 3 and prospect scale in Figure 17. A strip log of MF 107 is displayed in cross section format in Figure 18. A log and assays for this hole are attached in Appendix 2.

MF 107 was drilled to test for depth extensions of the South Cuni mineralised gabbro; additional gabbro dykes up sequence and east of South Cuni (between South Cuni and MRT stratigraphic hole DDH SH1); and feeder pipes from a mafic/ultramafic body at depth. Six generally thin (<4m) and unmineralised gabbro dykes were intersected in MF 107 with none at all intersected below 270m.

4. PREVIOUS RESOURCE ESTIMATES

The source of Inferred and Indicated Mineral Resources at North Cuni-Gents and Nickel Reward cited by Allegiance in public documents is *"Allegiance Metals Pty Ltd, Melba Flats Nickel Project, Mineral Resource Report, October 2004"*, by Michael V McKeown.

Only drill holes MF 27 – 64, drilled in 2004, were included in calculating resources. Therefore drill holes MF 65 – 107 have not been included in the resource figures used for either the Genets or Nickel Reward prospects at Melba Flats.

There have been significantly mineralised intervals reported for many of the holes drilled since this resource calculation and while these results may not be part of the resource calculation, they are included in ongoing geological interpretations.

Current estimated mineral resources in the North Cuni-Genets area are:
Indicated: 83,000 t @ 0.7% Ni, 0.6% Cu, 0.02% Co
Inferred: 12,000 t @ 1.2% Ni, 3.3% Cu, 0.04% Co
Including a massive sulfide zone estimated to contain: 1,600 t @ 9.2% Ni, 6.0% Cu, 0.2% Co,

Nickel Reward
Inferred Mineral Resource of 30,000 t @ 3% Ni.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1. Nickel Reward

Only one hole, MF 91, of the three drilled, intersected significant mineralisation, importantly, it was of similar high grade to the inferred resource at Nickel Reward.

The MF 91 intersection extends the mineralised pod at Nickel Reward in the downplunge/ downdip dimension by a further 120m. However the inferred resource at Nickel Reward as it currently stands is only 30,000 t @ 3% Ni and significantly more tonnage at this grade would be required at depths of 280m.

The Nickel Reward area is clearly structurally complex and is poorly understood with the current drilling density insufficient to clearly define the controls. While the grade of Ni and Cu at Nickel Reward are interesting, drilling to date suggests that high grade Ni and Cu mineralisation may be confined to smallish pods developed at the intersection of gabbros and faults.

No immediate work is planned for the Nickel Reward area, as according to the current interpretation, the potential for a large tonnage deposit appears low.

5.2. Devereaux

The three holes drilled at Devereaux failed to intersect significant mineralisation in any of the gabbro dykes intersected in the holes. It is still unclear from geological interpretation of mapping and drill hole sections, if and at what strike and dip, the mineralised gabbro exploited at surface, continues laterally and at depth.

Further geological and structural interpretation of existing data is required before any further testing in the Devereaux area should take place. No immediate work is planned for the Devereaux area as a target model is yet to be developed and the potential for a large tonnage deposit appears low.

5.3. North Cuni

MF 102 and 103 step out along strike south of the North Cuni workings at approximately 200m and 100m respectively. Neither hole intersected significant mineralisation. Previous drilling to the south of the North Cuni Shaft in holes MFP 109, EM 4, MF 85 and MF 86 also failed to intersect significant mineralisation over significant thicknesses.

On current results, no further drilling exploring for extensions of the North Cuni mineralisation at depth to the south of the North Cuni shaft appears warranted.

5.4. Genets

The drilling program carried out around the Genets prospect was designed to test for continuation of the known mineralisation downdip at depth and along strike to the NE. The program was relatively successful to the extent that:

- MF 93, 94 and 97 intersected Ni and Cu mineralisation of approximately the same grade as the inferred resource at Genets at vertical depths of 150 to 200m, which potentially enlarges the resource at Genets
- MF 101, 100, 98, and 99 show that the mineralised system does extend to considerable depths with Ni and Cu sulphide intersections at depths of 150m, 200m, 270m, and 420m respectively, however, none of these intersections were of economic significance
- MF 95 and 96 were drilled 100m directly along strike to the NE of drill fence MF 43 & 44 and 80m directly along strike to the NE of drill fence MF 87 & 88. They intersected Ni and Cu sulphides of generally the same grade as the Genets inferred resource, which will once again potentially enlarge the Genets resource. MF 71 drilled between the MF 87-88 and MF 95-96 fences, did not intersect any mineralisation and may have been collared too far to the NW.

The Genets mineralised system therefore remains open along strike to the NE and at depth to the East. However, with a current size of <100,000t and grades of only 0.7% Ni and 0.6% Cu (although there are quite a number of mineralised holes that are yet to be included in an updated resource calculation), the resource is not currently considered of sufficient size or grade to support a viable mining operation for OZ Minerals at current commodity prices.

No immediate work is planned for Genets as the potential for a large tonnage deposit of sufficient Ni and Cu grade appears low.

5.5. South Cuni

MF 107 was drilled on section with holes MF 14 and MF 15. It was designed to test for depth extensions of the mineralised gabbro exploited at South Cuni, additional gabbro dykes up sequence and east of South Cuni (between South Cuni and MRT stratigraphic hole DDH SH1), and feeder pipes from a mafic/ultramafic body at depth. None of the holes intersected significant mineralisation, with MF 15 failing to intersect any gabbro at all.

These results give little encouragement for a large mineralised system to be developed at depth at South Cuni. That said however, the nearest holes to the south are over 500m away, while MF 72 and 73 test the stratigraphy approximately 100 and 350m respectively to the north of South Cuni.

5.6. Regional

Both Allegiance Mining and OZ Minerals Exploration staff consider that the source of the Melba Flats nickel and copper mineralisation could be a large magmatic nickel sulphide accumulation at depth. The Melba Flats area is underlain by the eastern portion of a significant circular magnetic high interpreted to be at 500 – 700m depths. This magnetic high has not been drill tested to date and several deep (>700m) drill holes to test this magnetic high are proposed for the upcoming year of tenure.

6. REFERENCES

(Alphabetic order)

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APPENDIX 1

Drill Holes MF 90 – 107,
Collars, Assays, Surveys, Geology and Codes

Prospect	Hole_id	Easting AMG66 Z55	Northing AMG66 Z55	RL (+2000m)	Easting GDA94 Z55	Northing GDA94 Z56	Depth	Azimuth (AMG)	Dip
Nickel Reward	MF90	366544	5365632	2207	366656	5365815	473.50	288	-58
Nickel Reward	MF91	366546	5365635	2207	366657	5365818	356.40	297	-60
Nickel Reward	MF92	366546	5365634	2207	366658	5365817	430.50	302	-80
Genets	MF93	366556	5367643	2213	366667	5367826	499.00	314	-65
Genets	MF94	366572	5367736	2213	366684	5367919	382.00	0	-90
Genets	MF95	366611	5367835	2213	366723	5368018	293.50	0	-90
Genets	MF96	366610	5367834	2213	366723	5368018	256.00	315	-50
Genets	MF97	366593	5367673	2214	366705	5367856	336.20	0	-90
Genets	MF98	366739	5367753	2215	366851	5367936	403.00	0	-90
Genets	MF99	366808	5367742	2216	366920	5367926	524.00	0	-90
Genets	MF100	366706	5367840	2215	366818	5368023	307.00	0	-90
Genets	MF101	366705	5367841	2217	366817	5368024	276.50	305	-53
North Cuni	MF102	366368	5367360	2208	366480	5367543	151.00	267.5	-61
North Cuni	MF103	366365	5367450	2208	366477	5367633	160.00	270	-60
Devereaux	MF104	365670	5365450	2210	0	0	236.00	240	-70
Devereaux	MF105	365670	5365450	2210	0	0	246.00	240	-45
Devereaux	MF106	365620	5365470	2210	0	0	210.00	240	-60
South Cuni	MF107	366535	5366665	2215	0	0	475.90	281	-60

Hole	From	To	Ni	Cu	Pb	Zn	As	Co	S	MgO	FeO	Cr	Ag	Pt	Pd
		Unit	%	ppm	ppm	ppm	ppm	ppm	%	%	%	ppm	ppm	ppm	ppm
		Method	XRF	AAS	AAS	AAS	AAS	AAS	Leco	XRF	XRF	AAS	AAS	50gmFA	50gmFA
		Detection Limit	0.01%	10	10	10	50	5	0.01%	0.10%	0.10%	10	1	0.01	0.01
MF90	241.2	242	0.01	-100					0.1						
MF90	242	243	0.01	-100					0.1						
MF90	243	244	0.02	-100					0.1						
MF90	244	245	0.03	-100					-0.1						
MF90	245	246	0.03	100					-0.1						
MF90	246	246.7	0.03	100					-0.1						
MF90	256.4	258	0.03	-100					-0.1						
MF90	258	259	0.02	100					-0.1						
MF90	259	260	0.02	100					0.1						
MF90	260	261	0.03	100					-0.1						
MF90	261	262	0.03	100					-0.1						
MF90	262	263	0.03	100					-0.1						
MF90	263	264	0.03	100					-0.1						
MF90	264	265	0.02	-100					-0.1						
MF90	265	266	0.01	100					0.1						
MF90	266	267	0.01	-100					-0.1						
MF90	267	268	0.01	-100					-0.1						
MF90	268	268.8	0.04	100					0.3						
MF90	288.4	290	0.03	-100					-0.1						
MF90	290	291	0.03	-100					-0.1						
MF90	291	292	0.03	-100					-0.1						
MF90	292	293.3	0.03	100					-0.1						
MF91	282	283	3.17	21500					11.5						
MF91	283	284.3	1.59	14900					6.3						
MF91	284.3	285.3	0.07	300					0.1						
MF91	285.3	287	0.03	200					0.2						
MF92	70	71	0.05	100					-0.1						
MF92	239.8	241	0.01	100					-0.1						
MF92	241	242	0.01	-100					0.16						
MF92	242	243	0.01	100					0.1						
MF92	243	244	0.02	100					-0.1						
MF92	244	245	0.01	-100					-0.1						
MF92	245	246	0.01	100					-0.1						
MF92	246	247	0.01	-100					-0.1						
MF92	247	248.6	0.01	-100					0.11						
MF92	366.7	368	0.01	-100					-0.1						
MF92	368	369	0.01	-100					-0.01						
MF92	369	370	-0.01	100					-0.1						
MF92	370	371	-0.01	-100					0.15						
MF92	371	372	-0.01	-100					0.38						
MF92	372	373	-0.01	-100					0.11						
MF92	373	374	-0.01	-100					-0.1						
MF92	374	375	-0.01	-100					0.26						
MF92	375	376	-0.01	-100					0.21						
MF92	376	377	-0.01	-100					0.3						
MF92	377	378	-0.01	100					0.12						
MF92	378	379	-0.01	-100					0.83						
MF92	379	380	-0.01	-100					-0.1						
MF92	380	381	0.01	100					-0.1						
MF92	381	382	0.02	-100					0.12						
MF92	382	383	0.02	100					0.2						
MF92	383	384	0.03	100					-0.1						
MF92	384	385	0.03	100					-0.1						
MF92	385	386	0.02	-100					-0.1						
MF92	386	387	0.02	100					-0.1						
MF92	387	388	0.03	100					0.11						
MF92	388	389	0.03	100					0.1						
MF92	389	390	0.02	100					0.14						
MF92	390	391	0.02	100					-0.1						

Hole	From	To	Ni	Cu	Pb	Zn	As	Co	S	MgO	FeO	Cr	Ag	Pt	Pd
		Unit	%	ppm	ppm	ppm	ppm	ppm	%	%	%	ppm	ppm	ppm	ppm
		Method	XRF	AAS	AAS	AAS	AAS	AAS	Leco	XRF	XRF	AAS	AAS	50gmFA	50gmFA
		Detection Limit	0.01%	10	10	10	50	5	0.01%	0.10%	0.10%	10	1	0.01	0.01
MF92	391	392	0.01	100					0.15						
MF92	392	393	0.01	-100					-0.1						
MF92	393	394	0.01	-100					-0.1						
MF92	394	395	0.01	-100					-0.1						
MF92	395	396	0.01	-100					0.15						
MF92	396	397	0.01	-100					-0.1						
MF92	397	398	0.02	100					-0.1						
MF92	398	399	0.02	200					-0.1						
MF92	399	400	0.01	-100					0.21						
MF92	400	401	0.01	100					0.21						
MF92	401	402	0.02	100					0.15						
MF92	402	403.2	0.02	-0.01					-0.1						
MF93	130	131	0.01	51					0.4			56			
MF93	131	132	0.02	37					0.4			98			
MF93	132	133	0.02	35					0.1			109			
MF93	133	134	0.02	42					0.3			90			
MF93	134	135	0.01	40					0.7			41			
MF93	135	136	0.01	54					0.1			76			
MF93	136	137	0.03	59					0.1			106			
MF93	137	138	0.03	86					0.1			231			
MF93	138	138.8	0.04	105					0			277			
MF93	151.1	152	0.66	5191					2.5			937			
MF93	152	153	0.42	3241					1.4			1070			
MF93	153	154	0.73	5727					3.3			676			
MF93	154	155	1.71	11328					7.2			692			
MF93	155	155.8	0.6	5833					2.5			613			
MF93	155.8	157	0.16	1093					0.4			529			
MF93	157	158	0.7	385					0.1			518			
MF93	158	159.4	0.3	137					0			508			
MF93	312	313	0.01	103					1.5			110			
MF93	313	314	0.01	139					4.1			184			
MF93	314	315	0.01	84					2.9			175			
MF93	315	316	0.01	96					0.7			142			
MF93	316	317	0.01	16					0			96			
MF93	317	318	0.01	395					0.1			185			
MF93	318	319	0.01	214					0			217			
MF93	319	320	0.01	242					0.1			184			
MF93	320	321	0.01	99					0.3			74			
MF93	321	322	0.01	59					0.1			168			
MF93	322	323	0.01	77					0.8			106			
MF93	323	324	0.01	56					0.4			142			
MF93	324	325.2	0.01	60					0			99			
MF93	325.2	326	0.01	77					0.3			116			
MF93	326	327	0.02	124					0.6			145			
MF93	327	328	-0.1	59					0.4			8			
MF93	328	329	-0.01	36					0.5			6			
MF93	329	330	-0.01	38					0.2			3			
MF93	330	331	-0.01	27					0.3			1			
MF93	331	332	-0.01	30					0.4			4			
MF93	332	333	-0.01	43					1			1			
MF93	333	334	-0.01	61					1.2			2			
MF93	334	335	-0.01	46					0.7			5			
MF93	335	336	-0.01	66					0.7			11			
MF93	336	337	-0.01	58					0.3			13			
MF93	337	338.3	-0.01	32					0.2			12			
MF93	369.5	371	0.1	280					1.4			936			
MF93	371	372	0.13	381					0.5			1284			
MF93	372	373	0.04	64					0			275			
MF93	373	374	0.05	90					0			463			

Hole	From	To	Ni	Cu	Pb	Zn	As	Co	S	MgO	FeO	Cr	Ag	Pt	Pd
		Unit	%	ppm	ppm	ppm	ppm	ppm	%	%	%	ppm	ppm	ppm	ppm
		Method	XRF	AAS	AAS	AAS	AAS	AAS	Leco	XRF	XRF	AAS	AAS	50gmFA	50gmFA
		Detection Limit	0.01%	10	10	10	50	5	0.01%	0.10%	0.10%	10	1	0.01	0.01
MF93	374	375	0.1	388					0.3			1197			
MF93	375	376	0.13	321					0.6			1251			
MF93	376	377	0.13	208					0.2			1583			
MF93	377	378	0.15	270					0.2			1625			
MF93	378	379	0.15	212					0.3			1394			
MF93	379	380	0.14	223					0.7			1858			
MF93	380	381	0.2	464					0.5			1961			
MF93	381	381.9	0.1	201					0.1			1546			
MF94	140.8	142	0.39	2808	16	147			1				4		
MF94	142	143	0.78	5837	11	118			2.49				5		
MF94	143	144	0.76	5884	2	103			2.78				4		
MF94	144	145	1.69	10500	-1	103			6.2				6		
MF94	145	146	1.85	11700	3	113			7.51				6		
MF94	146	147	0.83	6250	2	102			3.08				4		
MF94	147	148	0.33	2589	-1	87			1.22				2		
MF94	148	149	0.08	517	16	113			0.17				1		
MF94	149	150	0.05	280	14	81			0.09				-1		
MF94	150	151	0.04	131	9	153			0.37				1		
MF94	220.5	221.5	0.01	37	421	2444			0.91				1		
MF94	221.5	222.7	0.01	88	5839	15200			1.19				12		
MF94	228.1	229	0.01	31	481	1992			0.85				1		
MF94	229	230	0.01	35	230	379			0.21				-1		
MF94	230	231	0.02	101	414	1128			0.11				1		
MF94	231	232	0.02	65	148	604			0.07				1		
MF94	232	233	0.02	74	80	445			0.06				2		
MF94	233	234	0.02	71	170	806			0.09				1		
MF94	234	235	0.02	31	622	3449			0.23				2		
MF94	235	236	0.02	140	1791	11100			0.92				7		
MF94	236	237	0.11	425	775	2861			0.24				4		
MF94	237	238	0.01	50	1335	5252			0.33				5		
MF94	238	239	0.05	116	203	410			0.14				1		
MF94	239	240	0.05	70	300	663			0.1				1		
MF94	240	241	0.05	41	413	670			0.07				1		
MF94	241	242	0.06	293	449	667			0.26				1		
MF94	242	243	0.03	57	161	861			0.11				1		
MF94	243	244	0.02	92	685	3870			0.91				3		
MF94	244	245	0.02	162	390	1318			1.7				2		
MF94	245	246	0.01	56	2955	8653			0.62				11		
MF94	246	247.1	0.01	33	1915	6403			0.74				7		
MF95	121.2	122	0.02	105					0.08						
MF95	122	122.9	0.09	250					0.53						
MF95	122.9	124	1.3	8918					4.89						
MF95	124	125	1.47	9964					5.24						
MF95	125	126.1	0.64	5274					2.08						
MF95	126.1	127	0.12	1858					0.32						
MF95	127	127.8	0.06	258					0.07						
MF95	127.8	128.6	0.04	217					0.32						
MF95	217.7	219	0.03	106					0.26						
MF95	219	220	0.02	113					0.23						
MF95	220	221	0.03	135					0.2						
MF95	221	222	0.03	111					0.01						
MF95	222	223	0.07	183					0.59						
MF95	223	224	0.07	218					0.09						
MF95	224	225	0.15	821					0.66						
MF95	225	226.3	0.19	986					1.07						
MF96	97	98	0.02	81					0.1						
MF96	98	99	0.03	154					0						
MF96	99	100	0.12	694					0.3						
MF96	100	101	1.5	11500					5.3						

Hole	From	To	Ni	Cu	Pb	Zn	As	Co	S	MgO	FeO	Cr	Ag	Pt	Pd
		Unit	%	ppm	ppm	ppm	ppm	ppm	%	%	%	ppm	ppm	ppm	ppm
		Method	XRF	AAS	AAS	AAS	AAS	AAS	Leco	XRF	XRF	AAS	AAS	50gmFA	50gmFA
		Detection Limit	0.01%	10	10	10	50	5	0.01%	0.10%	0.10%	10	1	0.01	0.01
MF96	101	101.9	0.47	4085					1.2						
MF96	101.9	103	0.01	58					0.5						
MF96	117.3	117.7			16800	27300	19500		3.1				39		
MF96	145	146	0.02	120					0.1						
MF96	146	147	0.01	72					0.1						
MF96	147	148.5	0.02	81					0.1						
MF96	148.5	151	0.03	105					0.1						
MF96	173.7	174.9	0.09	589					0.1						
MF96	174.9	175.4	0.03	125					0.1						
MF96	175.4	176.4	0.06	218					0.2						
MF96	176.4	178	0.04	162					0.1						
MF96	178	179	0.04	156					0.1						
MF96	179	180.2	0.03	150					0.1				0		
MF96	180.2	181.1			9200	10200	245		0.7				28		
MF97	174	175	0.04	101	40	170	50	60	-0.1	10.4	10.7	402			
MF97	175	176	0.04	137	13	176	100	60	-0.1	11.9	11.7	480			
MF97	176	177	0.05	112	9	146	100	40	-0.1	11.6	10.3	501			
MF97	177	178	0.04	137	8	123	100	60	-0.1	10.6	10.8	571			
MF97	206	207	0.04	155	41	171	100	20	-0.1	4.1	10.2	504			
MF97	207	208	0.01	73	1	176	100	40	0.6	6.3	11.1	123			
MF97	208	209	0.07	61	-1	121	100	80	0.2	14	12.8	113			
MF97	209	210	0.13	182	4	126	50	100	0.1	16.4	12.4	652			
MF97	210	211	0.64	180	3	124	450	180	1.5	12.2	14.5	1106			
MF97	211	212	0.33	6614	11800	4753	1250	120	3.8	4.8	19.2	846			
MF97	212	213	1.15	9746	12600	32700	100	260	2.7	11.6	15.3	265			
MF97	213	214	1.53	7667	99	230	150	300	3.9	9.8	16.2	673			
MF97	214	215	0.63	9971	48	214	350	140	1.5	8.7	12	571			
MF97	215	216	0.43	5436	142	456	100	120	0.8	10.8	11.8	416			
MF97	216	217	0.06	3008	29	147	100	60	-0.1	10.6	11.4	501			
MF97	217	218	0.04	222	12	157	250	20	0.2	1.8	14.6	506			
MF97	295.5	297	0.03	95	141	5175	100	40	-0.1	9	9.9	60			
MF98	228	229	0.05	90	-1	128	100	60	0.5	10.9	10.9	441			
MF98	229	230	0.04	108	-1	90	50	40	-0.1	10.6	10.1	406			
MF98	230	231	0.02	83	-1	72	100	20	-0.1	7.6	9.6	191			
MF98	231	232	0.02	85	-1	82	100	40	-0.1	9.5	10.4	206			
MF98	232	233	0.03	79	4	80	100	40	-0.1	10.2	9.8	281			
MF98	237	238	0.05	121	-1	168	100	60	-0.1	12.5	12.6	515			
MF98	238	239	0.04	307	-1	184	150	60	-0.1	9.8	10.9	485			
MF98	251.3	251.8	0.05	169	-1	204	100	100	-0.1	8.7	14.6	394			
MF98	268	269	0.02	43	13	156	50	20	0.2	4.9	9.9	112			
MF98	269	270	0.06	168	1190	4662	200	60	0.5	5.7	16	268			
MF98	270	271	0.04	83	32	121	50	40	-0.1	11.5	10.5	453			
MF98	271	272	0.11	350	6	87	100	80	-0.1	15.4	10.9	942			
MF98	272	273	0.35	1980	107	334	100	120	0.4	15.4	11.5	964			
MF98	273	274	0.24	1288	2	84	50	100	0.4	14.8	11.6	704			
MF98	274	275	0.11	438	7	95	50	60	0.1	13.4	10.9	603			
MF98	275	276	0.12	543	5	86	100	60	0.1	13.7	11	616			
MF98	276	277	0.09	366	7	100	50	60	0.1	12.4	10.5	530			
MF98	277	278	0.07	241	-1	97	100	60	-0.1	11.7	10.5	525			
MF98	278	279	0.05	130	7	94	50	40	-0.1	11.6	10.3	489			
MF98	279	280	0.05	120	-1	100	100	60	-0.1	11.8	10.5	500			
MF98	280	281	0.05	127	-1	199	50	60	-0.1	11.4	11.2	509			
MF98	375	376	0.04	104	9	113	100	60	-0.1	10.2	10.8	313			
MF98	376	377	0.03	81	8	146	100	40	-0.1	8.8	9.3	281			
MF98	377	378	0.04	139	64	340	100	40	-0.1	10	11	258			
MF98	378	379	0.03	173	542	1373	100	40	-0.1	9.5	10.1	244			
MF98	384	385	0.04	96	33	119	50	40	-0.1	11.1	9.4	475			
MF99	412.6	414	0.04	98	35	124	50	40	0.1	8.7	9.1	342			
MF99	414	415	0.04	136	896	1001	50	60	-0.1	9.9	9.4	391			

Hole	From	To	Ni	Cu	Pb	Zn	As	Co	S	MgO	FeO	Cr	Ag	Pt	Pd
		Unit	%	ppm	ppm	ppm	ppm	ppm	%	%	%	ppm	ppm	ppm	ppm
		Method	XRF	AAS	AAS	AAS	AAS	AAS	Leco	XRF	XRF	AAS	AAS	50gmFA	50gmFA
		Detection Limit	0.01%	10	10	10	50	5	0.01%	0.10%	0.10%	10	1	0.01	0.01
MF99	423	424	0.03	100	391	512	50	40	-0.1	9.3	9	188			
MF99	424	425	0.1	241	-1	378	100	80	-0.1	16.4	10.4	665			
MF99	425	426	0.22	942	14	288	100	140	0.5	18.7	11.6	1442			
MF99	426	427	0.3	1524	385	513	50	140	0.7	18	11.4	1133			
MF99	427	428	0.06	121	316	365	50	20	-0.1	12.1	8.1	417			
MF99	428	429	0.06	127	-1	89	50	60	-0.1	12	9.8	346			
MF99	429	430	0.06	133	-1	90	50	60	-0.1	11.9	10.1	328			
MF99	430	431	0.05	114	34	103	100	60	-0.1	11.1	10.1	348			
MF99	431	432	0.04	157	72	148	50	60	-0.1	10.5	9.7	318			
MF99	495	496	0.2	882	-1	75	100	100	0.1	15.1	11	882			
MF99	496	497	0.16	715	-1	78	100	80	-0.1	15.5	10.6	857			
MF99	497	498	0.21	974	13	119	50	100	0.2	13.8	10.3	549			
MF99	498	499	0.06	129	7	126	100	80	-0.1	13.7	10.8	709			
MF99	499	500	0.05	216	-1	127	50	40	-0.1	9.8	10	348			
MF100	179.6	181	0.04	97					-0.1			415			
MF100	181	182	0.1	114					-0.1			1185			
MF100	182	183	0.1	113					-0.1			1079			
MF100	183	184	0.04	104					-0.1			351			
MF100	184	185	0.05	277					0			232			
MF100	185	186	0.09	573					0.4			213			
MF100	186	187	0.02	124					-0.1			176			
MF100	187	188	0.02	108					-0.1			178			
MF100	199.7	200.7	0.01	90					0.6			94			
MF100	200.7	202	0.25	1686					0.4			725			
MF100	202	203	0.28	1850					0.6			649			
MF100	203	204	0.2	1387					0.7			289			
MF100	204	205	0.09	427					0.1			582			
MF100	205	206	0.09	380					0.1			579			
MF100	206	207	0.13	1136					0.2			456			
MF100	207	208	0.02	76					0.8			175			
MF101	126	127	0.08	182					-0.1			727			
MF101	127	128	0.07	168					0.1			682			
MF101	128	129	0.05	150					0.3			578			
MF101	129	130	0.03	190					-0.1			298			
MF101	130	131	0.02	97					-0.1			154			
MF101	131	132	0.03	90					-0.1			209			
MF101	132	133	0.02	96					0.1			185			
MF101	133	134	0.07	156					-0.1			702			
MF101	134	135	0.1	134					-0.1			933			
MF101	142	143	0.12	201					0.2			1216			
MF101	143	144	0.12	220					-0.1			1054			
MF101	144	145	0.04	102					-0.1			396			
MF101	145	146	0.02	83					0.1			166			
MF101	146	147	0.03	553					0.2			421			
MF101	147	148	0.03	83					-0.1			401			
MF101	152	153	0.03	85					-0.1			368			
MF101	153	154	0.12	640					0.1			712			
MF101	154	155	0.43	2941					1.1			1071			
MF101	155	156	0.75	5136					2.4			969			
MF101	156	157	1.21	8122					3.7			765			
MF101	157	158	0.3	1905					0.6			641			
MF101	158	159	0.06	247					1.3			354			
MF101	159	160	0.02	60					-0.1			89			
MF101	160	161	0.02	81					-0.1			100			
MF101	179.6	181	0.1	170					-0.1			887			
MF101	181	182	0.08	122					-0.1			669			
MF102	17	18	0.05	104					-0.1			438			
MF102	18	19	0.05	117					-0.1			462			
MF102	19	20	0.06	141					-0.1			619			

Hole	From	To	Ni	Cu	Pb	Zn	As	Co	S	MgO	FeO	Cr	Ag	Pt	Pd
		Unit	%	ppm	ppm	ppm	ppm	ppm	%	%	%	ppm	ppm	ppm	ppm
		Method	XRF	AAS	AAS	AAS	AAS	AAS	Leco	XRF	XRF	AAS	AAS	50gmFA	50gmFA
		Detection Limit	0.01%	10	10	10	50	5	0.01%	0.10%	0.10%	10	1	0.01	0.01
MF102	20	21	0.06	173					-0.1			594			
MF102	37	38	0.15	224					-0.1			1061			
MF102	38	39	0.05	95					-0.1			351			
MF102	39	40	0.03	93					-0.1			153			
MF102	40	41	0.03	96					-0.1			150			
MF102	41	42	0.03	106					-0.1			168			
MF102	42	43	0.03	111					-0.1			187			
MF102	92	93	0.03	99					-0.1			362			
MF102	93	94	0.03	89					-0.1			242			
MF102	94	95	0.03	70					-0.1			259			
MF102	95	96	0.02	75					-0.1			156			
MF102	96	97	0.03	89					-0.1			177			
MF102	97	98	0.02	73					-0.1			75			
MF102	98	99	0.01	100					0.2			48			
MF102	99	100	0.03	72					0.1			92			
MF102	100	101	0.05	67					-0.1			242			
MF102	101	103	0.04	85					-0.1			213			
MF102	118	119	0.05	91					0.1			274			
MF102	119	120	0.05	114					-0.1			710			
MF102	120	121.2	0.05	99					-0.1			587			
MF103	46	47	0.02				100	80	-0.1	7.9	12.5				
MF103	47	48	0.02				100	60	-0.1	6.6	11.9				
MF103	48	49	0.01				100	40	-0.1	5.7	11.5				
MF103	49	50	0.01				50	40	-0.1	5.9	1.3				
MF103	50	51	0.07				100	100	0.3	11.4	11.4				
MF103	64	65	0.03				100	60	-0.1	6.9	11.3				
MF103	65	66	0.85				50	200	2.1	10	15				
MF103	66	67	0.02				50	20	0.1	3.2	9.9				
MF103	98	99	0.04				100	60	-0.1	8.1	9.9				
MF103	99	100	0.03				100	40	-0.1	9.1	9.1				
MF103	100	101	0.04				100	60	-0.1	11.9	9.6				
MF103	101	102	0.06				50	60	-0.1	13.4	9.5				
MF103	135	136	0.06				100	80	-0.1	13.6	10				
MF103	136	137	0.08				100	100	-0.1	14.5	10				
MF103	137	138	0.07				100	80	-0.1	13.5	10.1				
MF103	138	139	0.07				100	80	-0.1	13.2	10.2				
MF103	139	140	0.06				50	60	-0.1	11.7	9.1				
MF103	140	141	0.05				100	60	-0.1	11.2	11.9				
MF103	141	142	0.06				50	60	-0.1	12.4	9.6				
MF103	142	143	0.06				50	80	-0.1	13.5	9.9				
MF103	143	144	0.07				50	80	-0.1	15.3	9.6				
MF103	144	145	0.07				50	80	-0.1	14.9	10				
MF103	145	146.3	0.05				100	60	0.2	12.1	10.4				
MF103	146.3	147	0.02				100	40	-0.1	4.6	11				
MF104	115.15	115.55	0.1	1149		142	100	60	0.2	6.7	11.3	315		0.04	0.11
MF104	115.55	116.6	0.21	933		186	100	100	0.2	8.9	14.2	781			0.04
MF104	116.6	117.6	0.2	1290		198	100	100	0.2	8.4	12.9	746		0.04	0.05
MF104	117.6	118.6	0.16	941		136	100	60	0.1	8.7	10.9	473		0.04	0.03
MF104	118.6	119.9	0.23	1487		145	50	100	0.2	9.5	12.2	685		0.05	0.06
MF104	119.9	121.2	0.06	661	2	103	100	20	0.3	5.7	9.2	147			
MF104	121.2	122.2	0.14	790		276	100	80	0.2	10.8	10	659			0.02
MF104	122.2	123.2	0.07	144		112	50	60	0.1	12.6	9.8	884			
MF104	123.2	124.2	0.04	147		104	50	40		9	8.8	456			
MF104	124.2	124.9	0.03	485		104	100	20	0.1	6.6	9.2	214			
MF104	124.9	125.95	0.03	233		115	100	40		6.8	9.7	316			
MF104	139.2	139.85	0.03	69		174	50	40		8.3	9.7	404			
MF104	139.85	140.85	0.03	119		126	50	40		7.5	9.2	358			
MF104	140.85	141.85	0.05	36		162	100	80		9.8	11.5	521			
MF104	178.5	179.5	0.03	22		150	100	40		8.5	9.5	382			

Hole	From	To	Ni	Cu	Pb	Zn	As	Co	S	MgO	FeO	Cr	Ag	Pt	Pd
		Unit	%	ppm	ppm	ppm	ppm	ppm	%	%	%	ppm	ppm	ppm	ppm
		Method	XRF	AAS	AAS	AAS	AAS	AAS	Leco	XRF	XRF	AAS	AAS	50gmFA	50gmFA
		Detection Limit	0.01%	10	10	10	50	5	0.01%	0.10%	0.10%	10	1	0.01	0.01
MF104	179.5	180.5	0.04	78		114	50	40		9.1	9.4	434			
MF104	180.5	181.5	0.04	78		137	50	40		8.6	9.4	343			
MF104	181.5	182.5	0.03	93		125	50	40		7.8	9.7	404			
MF104	194.4	195.4	0.09	478		188	50	40	0.1	7.7	9.2	332			
MF104	195.4	196.4	0.03	76	32	156	100	20		6.9	8.3	422			
MF104	196.4	197.4	0.04	106	34	176	50	40		8.8	9.3	424			
MF104	197.4	198.4	0.04	144	1	199	50	40		9.5	9.4	399			
MF104	198.4	198.75	0.04	111	84	249	100	60		8.9	11.8	131			
MF104	199	199.3	0.02	236		179	100	60	0.5	4.8	11.1	106			
MF104	220.7	220.85	0.02	1440		161	50	20	0.1	5.4	9.2	615			
MF105	123	124	0.01	30		91	50	20	0.9	3.9	9	84			
MF105	212	212.9	0.02	106	4	134	50	40		6.6	9.9	153			
MF105	212.9	213.55	0.02	75	2	114	50	40		7.3	9.5	222			
MF105	213.55	214.3	0.02	79	1	121	100	20		6	9.4	171			
MF105	217.8	218.6	0.02	77	3	137	50	40		6.8	10.6	174			
MF105	218.6	219.4	0.02	75	4	135	50	40		6.9	10.5	170			
MF105	221	221.6	0.05	65	123	78	20	120	7.7	2.3	14.2	43			
MF105	225.2	226.2	0.07	113	2	131	100	100		14.3	12.7	720			
MF105	226.2	227.15	0.06	134	1	102	100	80		12.3	10.7	707			
MF105	227.15	228.15	0.03	111		111	50	80		9.8	11	337			
MF105	228.15	229.15	0.02	106	2	103	100	60		8.6	10.8	164			
MF105	229.15	230.15	0.02	160	4	118	100	60		9	11.3	166			
MF105	230.15	231.2	0.02	152	2	117	100	80		8.9	11.7	160			
MF105	231.2	232.2	0.02	278	1	103	100	60		8.6	11	170			
MF105	232.2	233.2	0.02	135		115	50	40		7.1	10.1	162			
MF105	241.75	242.2	0.03	69	96	87	100	60	5.2	2.4	9.6	31			
MF106	32.3	34	0.13	613		195	100	120	0.2	13.4	13.5	733			
MF106	34	36	0.16	700	1	178	100	120	0.1	15.9	12.9	941			
MF106	36	37	0.04	29	2	157	50	60		8.1	11.6	450			
MF106	37	38.15	0.05	111	2	185	50	100		9.7	13	495			
MF106	105.7	106.5	0.04	93	329	153	250	80	4.5	2.1	9	44			
MF106	106.8	107.5	0.02	106	124	106	100	20	3.9	2.2	8.2	38			
MF106	111.5	112.2	0.02	44		77	100	20	0.1	5.5	9.3	114			
MF106	112.2	113	0.08	148	4	84	50	60	0.1	8.2	8.2	867			
MF106	113	113.8	0.09	157		115	100	100	0.1	10.8	10.8	819			
MF106	113.8	114.65	0.03	112	1	116	100	60	0.1	7.4	11.5	187			
MF106	134.15	134.5	0.03	527	92	64	200	120	6.3	3.3	11.8	35			
MF106	141.45	141.85	0.01	26	977	6906	50		0.5	4.4	12.9	22			

project	hole_id	depth	az_amg	dip
Melba	MF90	0	288	-58
Melba	MF90	49	287	-56
Melba	MF90	100	287	-56
Melba	MF90	150	280	-55
Melba	MF90	200	281	-55
Melba	MF90	250	279	-55
Melba	MF90	290	284	-55
Melba	MF90	350	284	-53
Melba	MF90	400	284	-53
Melba	MF90	450	284	-51
Melba	MF90	473.5	284	-51
Melba	MF91	0	297	-60
Melba	MF91	50	299	-60
Melba	MF91	100	296	-59
Melba	MF91	150	296	-58
Melba	MF91	200	296	-57
Melba	MF91	300	298	-55
Melba	MF91	356.4	299	-54
Melba	MF92	0	302	-80
Melba	MF92	50	301	-79
Melba	MF92	100	294	-79
Melba	MF92	150	292	-78
Melba	MF92	200	290	-77
Melba	MF92	250	284	-77
Melba	MF92	300	284	-76
Melba	MF92	350	284	-75
Melba	MF92	400	284	-76
Melba	MF92	430.5	284	-76
Melba	MF93	0	314	-65
Melba	MF93	50	312	-66
Melba	MF93	100	314	-65
Melba	MF93	150	317	-65
Melba	MF93	200	312	-64
Melba	MF93	250	311	-64
Melba	MF93	300	310	-64
Melba	MF93	350	312	-64
Melba	MF93	400	317	-63
Melba	MF93	450	313	-63
Melba	MF93	499	319	-63
Melba	MF94	0	0	-90
Melba	MF94	50	324	-89
Melba	MF94	100	334	-88
Melba	MF94	150	324	-88
Melba	MF94	200	325	-88
Melba	MF95	0	0	-90
Melba	MF95	50	304	-89
Melba	MF95	100	59	-89
Melba	MF95	150	309	-89
Melba	MF95	200	309	-89
Melba	MF95	250	289	-88
Melba	MF95	293.5	289	-88
Melba	MF96	0	315	-50
Melba	MF96	50	315	-50.5
Melba	MF96	100	315.2	-50
Melba	MF96	150	312.2	-49.5
Melba	MF96	200	313.2	-49.5
Melba	MF96	256	315.2	-49.5
Melba	MF97	0	0	-90
Melba	MF97	50	52	-89
Melba	MF97	100	15	-89
Melba	MF97	150	19	-89
Melba	MF97	200	344	-88

project	hole_id	depth	az_amg	dip
Melba	MF97	250	329	-87
Melba	MF98	0	0	-90
Melba	MF98	50	125	-89
Melba	MF98	100	0	-90
Melba	MF98	150	98	-89
Melba	MF98	200	256	-89
Melba	MF98	250	257	-89
Melba	MF98	300	264	-89
Melba	MF98	350	275	-87
Melba	MF98	403	312	-86
Melba	MF99	0	0	-90
Melba	MF99	50	38	-89
Melba	MF99	100	98	-89
Melba	MF99	150	0	-90
Melba	MF99	200	0	-90
Melba	MF99	250	353	-89
Melba	MF99	300	330	-88
Melba	MF99	350	319	-88
Melba	MF99	400	309	-87
Melba	MF99	450	313	-86
Melba	MF99	511	314	-85
Melba	MF100	0	0	-90
Melba	MF100	50	0	-90
Melba	MF100	100	253	-89
Melba	MF100	150	253	-89
Melba	MF100	200	328	-88
Melba	MF100	250	313	-88
Melba	MF101	0	305	-53.2
Melba	MF101	50	307	-53
Melba	MF101	100	306	-53
Melba	MF101	150	308	-53
Melba	MF101	200	308	-52
Melba	MF101	250	308	-52
Melba	MF102	0	267.5	-60.8
Melba	MF102	50	264	-60
Melba	MF102	100	264	-60
Melba	MF102	150	265	-60
Melba	MF103	0	266	-60
Melba	MF103	58	266	-60
Melba	MF103	100	268	-60
Melba	MF103	150	268	-60
Melba	MF104	0	240	-70
Melba	MF104	50	240	-72
Melba	MF104	100	238	-72
Melba	MF104	150	243	-71
Melba	MF104	200	243	-70
Melba	MF105	0	240	-45
Melba	MF105	50	237	-49
Melba	MF105	100	238	-47
Melba	MF105	150	238	-48
Melba	MF105	200	239	-47
Melba	MF105	244	241	-47
Melba	MF106	0	240	-60
Melba	MF106	55	236	-62
Melba	MF106	100	234	-62
Melba	MF106	150	239	-60
Melba	MF106	210	242	-60
Melba	MF107	0	281	-60
Melba	MF107	29.9	278.7	-60.9
Melba	MF107	59.9	278.3	-61.3
Melba	MF107	89.9	278.3	-60.6
Melba	MF107	119.9	277	-59.3

project	hole_id	depth	az_amg	dip
Melba	MF107	149.9	275.6	-58.5
Melba	MF107	179.9	273.7	-58.2
Melba	MF107	209.9	274.3	-57.9
Melba	MF107	239.9	277	-57.4
Melba	MF107	269.9	274.9	-56.5
Melba	MF107	299.9	276.2	-56.1
Melba	MF107	329.9	274.5	-54.2
Melba	MF107	359.9	270.2	-50.2
Melba	MF107	389.9	271.4	-49.3
Melba	MF107	419.9	271.4	-48.3
Melba	MF107	449.9	191.1	-47.8
Melba	MF107	473.9	271.6	-47.4

hole_id	from	to	strat	rock	alt	colour	vis_s_pct	l_cont	struct	sca
MF100	0.00	13.00	Ccf	GWAC	Ch	G2	0	Bk	Bd	45
MF100	13.00	20.80	Ccf	GWAC	Ch	G2	0	Bk	Bd	45
MF100	20.80	29.00	Ccf	SILT	Ch	A2	0.01	Bk		
MF100	29.00	43.30	Ccf	GWAC	Ch	A2	0	Sp	Bd	35
MF100	43.30	45.20	Ccf	SHAL	ChGr	N	0	Sp	Bd	30
MF100	45.20	97.90	Ccf	GWAC	Ch	A2	0	Sp	Bd	35
MF100	97.90	99.40		FALT	ChCy	A2	0	Ft		
MF100	99.40	105.40	Ccf	GWAC	Ch	A2	0	Sp	Bd	35
MF100	105.40	114.50	Ccf	HEVC	He	R2	0	Sp	Bd	30
MF100	114.50	153.70	Ccf	GWAC	Ch	A2	0	Sp	Bd	35
MF100	153.70	178.30	Ccf	HEVC	He	R2	0	Bk	Bd	30
MF100	178.30	179.60	Ccf	GWAC	Ch	A2	0	Bk		
MF100	179.60	188.20	Cgb	GABB	Ch	A4	0.1	Sp		
MF100	188.20	200.70	Ccf	GWAC	Ch	A2	0	Sp	Bd	35
MF100	200.70	205.00	Cgb	GABB	Ch	A4	0.5	Gr		
MF100	205.00	206.80	Cgb	GABB	Ch	A4	0.1	Sp		
MF100	206.80	231.70	Ccf	GWAC	Ch	A2	0	Gr	Bd	45
MF100	231.70	307.00	Ccf	HEVC	He	R2	0	Bk	Bd	30
MF101	3.00	10.70	Ccf	GWAC	Ch	G2	0	Bk	Bd	45
MF101	10.70	24.20	Ccf	GWAC	Ch	G2	0	Bk	Bd	45
MF101	24.20	25.10	Ccf	SILT	Ch	A2	0.01	Bk		
MF101	25.10	56.50	Ccf	GWAC	Ch	A2	0	Sp	Bd	35
MF101	56.50	66.30	Ccf	HEVC	He	R2	0	Sp	Bd	30
MF101	66.30	94.70	Ccf	GWAC	Ch	A2	0	Sp	Bd	35
MF101	94.70	104.40	Cgb	GABB	C	A2	0	Gr		
MF101	104.40	106.80	Ccf	GWAC	Ch	A2	0	Sp	Bd	60
MF101	106.80	118.90	Ccf	HEVC	He	R2	0	Sp	Bd	30
MF101	118.90	125.80	Ccf	GWAC	Ch	A2	0	Sp	Bd	60
MF101	125.80	135.50	Cgb	GABB	C	A2	0	Gr		
MF101	135.50	142.10	Ccf	GWAC	Ch	A2	0	Sp	Bd	60
MF101	142.10	147.90	Cgb	GABB	C	A2	0	Gr		
MF101	147.90	152.00	Ccf	GWAC	Ch	A2	0	Sp	Bd	60
MF101	152.00	155.00	Cgb	GABB	C	A2	0	Gr		
MF101	155.00	159.60	Cgb	GABB	C	A2	1	Gr		
MF101	159.60	160.90	Cgb	GABB	C	A2	0.2	Gr		
MF101	160.90	185.20	Ccf	GWAC	Ch	A2	0	Sp	Bd	60
MF101	185.20	213.40	Ccf	HEVC	He	R2	0	Sp	Bd	30
MF101	213.40	224.10	Ccf	GWAC	Ch	A2	0	Sp	Bd	60
MF101	224.10	239.00	Cgb	GABB	C	A2	0	Gr		
MF101	239.00	276.50	Ccf	GWAC	Ch	A2	0	Sp	Bd	60
MF102	3.00	10.50	Ccf	HEVC	He	R2	0	Sp	Bd	30
MF102	10.50	14.50	Ccf	GWAC	Ch	G2	0	Bk	Bd	45
MF102	14.50	21.00	Cgb	GABB	C	A2	0	Gr		
MF102	21.00	36.80	Ccf	HEVC	He	R2	0	Sp	Bd	30
MF102	36.80	43.00	Cgb	GABB	C	A2	0	Gr		
MF102	43.00	66.70	Ccf	GWAC	Ch	G2	0	Bk	Bd	45
MF102	66.70	81.80	Ccf	SHAL		N				
MF102	81.80	91.50	Ccf	GWAC	Ch	G2	0	Bk	Bd	45
MF102	91.50	121.20	Cgb	GABB	C	A2	0	Gr		
MF102	121.20	130.10	Ccf	GWAC	Ch	A2	0	Sp	Bd	60
MF102	130.10	134.40	Ccf	HEVC	He	R2	0	Sp	Bd	30
MF102	134.40	137.80	Ccf	GWAC	Ch	A2	0	Sp	Bd	60
MF102	137.80	151.00	Ccf	HEVC	He	R2	0	Sp	Bd	30
MF103	0.00	3.00		LOSS						
MF103	3.00	8.70	Ccf	SHAL	Ch	A5	1	Sp	Bd	80

hole_id	from	to	strat	rock	alt	colour	vis_s_pct	l_cont	struct	sca
MF103	8.70	17.40	Ccf	GWAC	Ch	G3	0		Bd	80
MF103	17.40	19.00	Ccf	HEVC	HeCh	R	0	Gr	Bd	80
MF103	19.00	21.80	Ccf	GWAC	Ch	G3	0		Bd	80
MF103	21.80	29.90	Cgb	GABB	Ch	G3	0			
MF103	29.90	37.00	Ccf	HEVC	HeCh	R	0	Gr	Bd	80
MF103	37.00	46.10	Ccf	GWAC	Ch	G3	0		Bd	80
MF103	46.10	54.40	Cgb	GABB	Ch	G3	0			
MF103	54.40	58.00	Ccf	GWAC	Ch	G3	0		Bd	80
MF103	58.00	60.10	Ccf	HEVC	HeCh	R	0	Gr	Bd	80
MF103	60.10	64.70	Ccf	GWAC	Ch	G3	0		Bd	80
MF103	64.70	66.00	Cgb	GABB	Ch	G3	1			
MF103	66.00	73.40	Ccf	GWAC	Ch	G3	0		Bd	70
MF103	73.40	75.00		FALT	CbCh	N	1		Ft	90
MF103	75.00	80.80	Ccf	GWAC	Ch	G3	0		Bd	70
MF103	80.80	83.30		FALT	CbCh	N	1		Ft	90
MF103	83.30	97.40	Ccf	GWAC	Ch	G3	0		Bd	70
MF103	97.40	146.30	Cgb	GABB	Ch	G3	0			
MF103	146.30	152.00	Ccf	HEVC	HeCh	R	0	Gr	Bd	80
MF103	152.00	160.00	Ccf	GWAC	Ch	G3	0		Bd	70
MF104	0.00	3.00		LOSS						
MF104	3.00	7.20	Ccf	HEVC		R				
MF104	7.20	18.00	Ccf	GWAC		Y				
MF104	18.00	21.20	Ccf	GWAC		A				
MF104	21.20	28.10	Ccf	GWAC		Y				
MF104	28.10	33.90	Ccf	GWAC		A			Bd	65
MF104	33.90	38.20	Ccf	HEVC		R				
MF104	38.20	43.00	Ccf	HEVC		R, A				
MF104	43.00	46.70	Ccf	GWAC		A				
MF104	46.70	48.30	Ccf	GWAC		A, N				
MF104	48.30	54.30	Ccf	GWAC		A, N				
MF104	54.30	61.40	Ccf	GWAC		A, N			Bd	50
MF104	61.40	99.40	Ccf	GWAC		A			Bd	50
MF104	99.40	103.00	Ccf	GWAC		A, N			Bd	25
MF104	103.00	105.80	Ccf	GWAC		A			Bd	35
MF104	105.80	107.80	Ccf	GWAC		A		10		
MF104	107.80	115.40	Ccf	GWAC		A	5		Bd	55
MF104	115.40	126.00	Cgb	GABB		G	1	30		
MF104	126.00	139.20	Ccf	HEVC		P, B			Bd	45
MF104	139.20	141.85	Cgb	GABB		G		35		
MF104	141.85	171.30	Ccf	HEVC		R			Bd	20
MF104	171.30	173.20	Ccf	GWAC		G		45	Bd	5
MF104	173.20	178.50	Ccf	HEVC		R			Bd	20
MF104	178.50	182.20	Cgb	GABB		G		25		
MF104	182.20	192.70	Ccf	HEVC	Ch	R			Bd	30
MF104	192.70	194.40	Ccf	GWAC	Ch	A			Bd	30
MF104	194.40	198.75	Cgb	GABB		G		25		
MF104	198.75	199.80	Ccf	GWAC	Ch	A				
MF104	199.80	229.40	Ccf	HEVC		R			BD	30
MF104	229.40	230.65	Ccf	GWAC	Ch	G				
MF104	230.65	236.00	Ccf	HEVC		R				
MF105	0.00	3.00		LOSS						
MF105	3.00	19.10	Ccf	HEVC		O			Bd	25
MF105	19.10	21.00	Ccf	HEVC		P				
MF105	21.00	25.55	Ccf	HEVC		Y				
MF105	25.55	26.70	Ccf	GWAC		G	3			

hole_id	from	to	strat	rock	alt	colour	vis_s_pct	l_cont	struct	sca
MF105	27.70	33.35	Ccf	GWAC		Y				
MF105	33.35	38.20	Ccf	GWAC		G			Bd	12
MF105	38.20	40.00	Ccf	GWAC		Y				
MF105	40.00	45.65	Ccf	GWAC		G			Bd	45
MF105	45.65	56.00	Ccf	HEVC		P			Bd	45
MF105	56.00	57.00	Ccf	GWAC		O				
MF105	57.00	60.70	Ccf	FALT		G				
MF105	60.70	69.00	Ccf	GWAC		G			Bd	40
MF105	69.00	76.90	Ccf	HEVC		P			Bd	30
MF105	76.90	79.20	Ccf	GWAC		G			Bd	40
MF105	82.00	91.90	Ccf	GWAC		G			Bd	50
MF105	91.90	100.00	Ccf	HEVC		P			Bd	60
MF105	100.00	122.45	Ccf	GWAC		G			Bd	50
MF105	122.45	129.90	Ccf	GWAC		A			Bd	70
MF105	129.90	151.50	Ccf	GWAC		A			Bd	60
MF105	151.50	158.15	Ccf	GWAC		A			Bd	60
MF105	158.15	163.85	Ccf	GWAC		A			Bd	70
MF105	163.85	187.50	Ccf	GWAC		A			Bd	60
MF105	187.50	205.30	Ccf	GWAC		G			Bd	30
MF105	205.30	208.40	Ccf	HEVC		R			Ct	65
MF105	208.40	214.30		GWAC		G			Bd	35
MF105	214.30	217.80	Ccf	GWAC		G				
MF105	217.80	219.40	Cgb	GABB		G				
MF105	219.40	225.20	Ccf	GWAC		G			Bd	50
MF105	225.20	233.20	Cgb	GABB		G			Ct	70
MF105	233.20	240.20	Ccf	HEVC		A			Bd	35
MF105	240.20	241.60	Ccf	HEVC		R				
MF105	241.60	246.00	Ccf	GWAC		G			BD	45
MF106	0.00	3.00		LOSS						
MF106	3.00	16.65	Ccf	HEVC		Y			Bd	45
MF106	16.65	24.90	Ccf	GWAC		A			Bd	65
MF106	24.90	27.10	Ccf	GWAC		A			Bd	55
MF106	27.10	31.00	Ccf	GWAC		A	3		Bd	25
MF106	31.00	32.30	Ccf	GWAC		O				
MF106	32.30	38.15	Cgb	GABB		G			Ct	50
MF106	38.15	39.70	Ccf	GWAC		G				
MF106	39.70	61.50	Ccf	HEVC		P			bd	55
MF106	61.50	68.60	Ccf	GWAC		G			bd	40
MF106	68.60	94.00	Ccf	HEVC		P			bd	45
MF106	94.00	99.70	Ccf	GWAC		G			bd	35
MF106	99.70	102.90	Ccf	GWAC		G			bd	45
MF106	102.90	105.70	Ccf	GWAC		G			bd	35
MF106	105.70	112.25	Ccf	GWAC		G				
MF106	112.20	114.65	Cgb	GABB		G				
MF106	114.65	117.10	Ccf	GWAC		G			bd	30
MF106	117.10	141.00	Ccf	HEVC		R			bd	30
MF106	141.00	153.70	Ccf	GWAC		G			ct	30
MF106	153.70	155.60	Ccf	HEVC		R			ct	60
MF106	155.60	163.60	Ccf	GWAC		G			bd	55
MF106	163.60	172.90	Ccf	GWAC		A			bd	40
MF106	172.90	182.00	Ccf	GWAC		G			bd	50
MF106	182.00	186.90	Ccf	GWAC		A			bd	45
MF106	186.90	198.40	Ccf	GWAC		A			bd	50
MF106	198.40	210.00	Ccf	SHAL		A			bd	25
MF107	0.00	10.90	Ccf	CLAY		O			Bd	35

hole_id	from	to	strat	rock	alt	colour	vis_s_pct	l_cont	struct	sca
MF107	10.90	27.00	Ccf	FALT		A	0.3		Bd	50
MF107	27.00	32.50	Ccf	FALT		A	1		Bd	50
MF107	32.50	38.40	Ccf	GWAC		A	3		Bd	55
MF107	38.40	50.70	Ccf	SHAL		N, A	3		Bd	50
MF107	50.70	56.70	Ccf	GWAC		A, N	0.3		Bd	45
MF107	56.70	60.00	Ccf	SHAL		N, A	3		Ft	45
MF107	60.00	73.05	Ccf	GWAC		A, N	0.3		Bd	50
MF107	73.05	77.65	Ccf	SHAL		N, A	0.8			
MF107	77.65	97.00	Ccf	GWAC		G, N	0.3		Bd	55
MF107	97.00	103.50	Ccf	HEVC		R			Bd	70
MF107	103.50	104.05	Cgb	GABB		G			Ct	40
MF107	104.05	113.80	Ccf	HEVC		R			Bd	60
MF107	113.80	118.24	Ccf	GWAC		G, N			Bd	50
MF107	118.24	118.68	Cgb	GABB		G	0.5			
MF107	118.68	119.30	Ccf	GWAC		G				
MF107	119.30	121.60	Ccf	HEVC		R			Bd	55
MF107	121.60	122.85	Ccf	GWAC		G			Bd	50
MF107	122.85	123.11	Cgb	GABB		G			Ct	60
MF107	123.11	134.05	Ccf	GWAC		G, N	0.5		Bd	60
MF107	134.05	139.80	Ccf	HEVC		R			Bd	60
MF107	139.80	141.35	Ccf	HEVC		R			Bd	55
MF107	141.35	164.30	Ccf	HEVC		R			Bd	60
MF107	164.30	170.50	Cgb	GABB		G	0.5			
MF107	170.50	178.10	Ccf	GWAC		G	0.7		Bd	60
MF107	178.10	181.00	Ccf	SHAL		N, G	0.5		Bd	50
MF107	181.00	196.20	Ccf	GWAC		G, N	0.5		Bd	50
MF107	196.20	206.50	Ccf	SHAL		N, G			Bd	55
MF107	206.50	211.50	Ccf	GWAC		G			Bd	65
MF107	211.50	241.80	Ccf	HEVC		R			Bd	55
MF107	241.80	243.70	Ccf	GWAC		G			Bd	60
MF107	243.70	245.50	Cgb	GABB		G	0.2			
MF107	245.50	248.90	Ccf	GWAC		G			Bd	50
MF107	248.90	252.00	Ccf	HEVC		R			Bd	45
MF107	252.00	252.30	Ccf	FALT		C, R			Ct	50
MF107	252.30	255.90	Ccf	HEVC		R			Bd	60
MF107	255.90	265.40	Ccf	GWAC		G, R			Bd	70
MF107	265.40	269.35	Cgb	GABB		G, A	0.2		Ct	50
MF107	269.35	276.50	Ccf	GWAC		A, N			Bd	50
MF107	276.50	310.60	Ccf	GWAC		A, N			Bd	40
MF107	310.60	328.60	Ccf	SHAL		A, N			Bd	55
MF107	328.60	334.40	Ccf	GWAC		A			Bd	55
MF107	334.40	335.40	Ccf	FALT		A				
MF107	335.40	348.90	Ccf	GWAC		A			Bd	50
MF107	348.90	355.10	Ccf	HEVC		R, A			Bd	50
MF107	355.10	378.00	Ccf	GWAC		A, G			Bd	65
MF107	378.00	378.60	Ccf	FALT		A			Ct	30
MF107	378.60	388.90	Ccf	SHAL		N, A			Bd	60
MF107	388.90	394.30	Ccf	GWAC		A, N			Bd	60
MF107	394.30	403.80	Ccf	SHAL		A, N			Bd	60
MF107	403.80	433.40	Ccf	GWAC		A, N			Bd	50
MF107	433.40	445.15	Ccf	SHAL		A, N			Bd	55
MF107	445.15	449.45	Ccf	GWAC		A, N			Bd	60
MF107	449.45	466.65	Ccf	FALT		A, N			Ct	50
MF107	466.65	472.00	Ccf	GWAC		A, N			Bd	60
MF107	472.00	475.90	Ccf	GWAC		G			Bd	30

hole_id	from	to	strat	rock	alt	colour	vis_s_pct	l_cont	struct	sca
MF90	0.00	5.00		LOSS			0			0
MF90	16.50	53.60	Ccf	GWAC			0			0
MF90	53.60	198.90	Ccf	SHAL			0			0
MF90	198.90	200.90	Cgb	GABB			0			0
MF90	200.90	207.50	Ccf	SILT			0			0
MF90	207.50	217.40	Cgb	GABB			0			0
MF90	217.40	235.70	Ccf	HEVC			0			0
MF90	235.70	237.80	Cgb	GABB			0			0
MF90	237.80	240.70	Ccf	HEVC			0			0
MF90	240.70	246.70	Cgb	GABB			0			0
MF90	246.70	256.40	Ccf	HEVC			0			0
MF90	256.40	268.80	Cgb	GABB			0			0
MF90	268.80	288.40	Ccf	GWAC			0			0
MF90	288.40	293.30	Cgb	GABB			0			0
MF90	293.30	344.60	Ccf	GWAC			0			0
MF90	344.60	363.90	Ccf	HEVC			0			0
MF90	363.90	378.00	Ccf	SHAL			0			0
MF90	378.00	433.00	Ccf	GWAC			0			0
MF90	433.00	435.40	Ccf	SHAL			0			0
MF90	435.40	439.60	Ccf	GWAC			0			0
MF90	439.60	441.10		FALT			0			0
MF90	441.10	473.50	Ccf	GWAC			0			0
MF91	0.00	5.00		LOSS			0			0
MF91	5.00	7.50	Cgb	GABB			0			0
MF91	7.50	15.50	Ccf	GWAC			0			0
MF91	15.50	56.40	Ccf	GWAC			0			0
MF91	56.40	74.80	Ccf	SHAL			0			0
MF91	74.80	96.80	Ccf	GWAC			0			0
MF91	96.80	105.00	Ccf	GWAC			0			0
MF91	105.00	111.70	Ccf	SHAL			0			0
MF91	111.70	121.00	Ccf	GWAC			0			0
MF91	121.00	134.60	Ccf	SHAL			0			0
MF91	134.60	198.20	Ccf	CARB			0			0
MF91	198.20	232.50	Ccf	GWAC			0			0
MF91	232.50	236.40	Cgb	GABB			0			0
MF91	236.40	249.70	Ccf	HEVC			0			0
MF91	249.70	263.90	Cgb	GABB			0			0
MF91	263.90	269.70	Ccf	HEVC			0			0
MF91	269.70	278.40	Cgb	GABB			0			0
MF91	278.40	282.00	Ccf	GWAC			0			0
MF91	282.00	287.00	Cgb	GABB			0			0
MF91	287.00	306.00	Ccf	GWAC			0			0
MF91	306.00	306.60	Cgb	GABB			0			0
MF91	306.60	315.00	Ccf	SILT			0			0
MF91	315.00	319.60	Cgb	GABB			0			0
MF91	319.60	356.40	Ccf	GWAC			0			0
MF92	0.00	16.00	Ccf	GWAC			0			0
MF92	16.00	71.90	Ccf	GWAC			0			0
MF92	71.90	78.80	Ccf	SHAL			0			0
MF92	78.80	101.50	Ccf	GWAC			0			0
MF92	101.50	103.50		FALT			0			0
MF92	103.50	135.30	Ccf	GWAC			0			0
MF92	135.30	153.50	Ccf	SHAL			0			0
MF92	153.50	178.00	Ccf	SHAL			0			0
MF92	178.00	197.00	Ccf	CARB			0			0

hole_id	from	to	strat	rock	alt	colour	vis_s_pct	l_cont	struct	sca
MF92	197.00	239.80	Ccf	SILT			0			0
MF92	239.80	248.60	Cgb	GABB			0			0
MF92	248.60	271.80	Ccf	HEVC			0			0
MF92	271.80	287.00	Ccf	GWAC			0			0
MF92	287.00	291.00	Cgb	GABB			0			0
MF92	291.00	309.50	Ccf	SILT			0			0
MF92	309.50	318.50	Ccf	HEVC			0			0
MF92	318.50	365.50	Ccf	SILT			0			0
MF92	365.50	403.20	Cgb	GABB			0			0
MF92	403.20	430.50	Ccf	GWAC			0			0
MF93	0.00	3.00		LOSS			0			0
MF93	3.00	23.70	Ccf	GWAC			0			0
MF93	23.70	24.00	Cgb	GABB			0			0
MF93	24.00	47.00	Ccf	HEVC			0			0
MF93	47.00	49.50	Ccf	GWAC			0			0
MF93	49.50	50.40	Cgb	GABB			0			0
MF93	50.40	58.00	Ccf	SILT			0			0
MF93	58.00	67.00	Ccf	HEVC			0			0
MF93	67.00	79.80	Ccf	GWAC			0			0
MF93	79.80	86.00	Ccf	HEVC			0			0
MF93	86.00	104.20	Ccf	GWAC			0			0
MF93	104.20	105.00	Cgb	GABB			0			0
MF93	105.00	112.00	Ccf	GWAC			0			0
MF93	112.00	123.30	Ccf	HEVC			0			0
MF93	123.30	138.80	Cgb	GABB			0			0
MF93	138.80	140.00		FALT			0			0
MF93	140.00	151.10	Ccf	GWAC			0			0
MF93	151.10	159.40	Cgb	GABB			0			0
MF93	159.40	229.30	Ccf	GWAC			0			0
MF93	229.30	242.30	Cgb	GABB			0			0
MF93	242.30	297.10	Ccf	GWAC			0			0
MF93	297.10	304.50	Cgb	GABB			0			0
MF93	304.50	312.00	Cgb	GABB			0			0
MF93	312.00	325.20	Cgb	GABB			0			0
MF93	325.20	381.90	Cgb	GABB			0			0
MF93	381.90	499.00	Ccf	GWAC			0			0
MF94	0.00	3.00		LOSS			0			0
MF94	3.00	13.50	Ccf	HEVC			0			0
MF94	13.50	67.50	Ccf	GWAC			0			0
MF94	67.50	91.70	Ccf	HEVC			0			0
MF94	91.70	94.80	Cgb	GABB			0			0
MF94	94.80	140.80	Ccf	GWAC			0			0
MF94	140.80	151.00	Cgb	GABB			0			0
MF94	151.00	187.00	Ccf	GWAC			0			0
MF94	187.00	228.10	Ccf	GWAC			0			0
MF94	228.10	247.40	Cgb	GABB			0			0
MF94	247.40	382.00	Ccf	GWAC			0			0
MF95	0.00	3.00		LOSS			0			0
MF95	3.00	20.50	Ccf	GWAC			0			0
MF95	20.50	38.40	Ccf	HEVC			0			0
MF95	38.40	64.10	Ccf	GWAC			0			0
MF95	64.10	75.70	Cgb	GABB			0			0
MF95	75.70	78.50	Cba	GWAC			0			0
MF95	78.50	81.60	Ccf	GWAC			0			0
MF95	81.60	88.30	Ccf	HEVC			0			0

hole_id	from	to	strat	rock	alt	colour	vis_s_pct	l_cont	struct	sca
MF95	88.30	92.00	Ccf	SILT			0			0
MF95	92.00	100.00	Ccf	HEVC			0			0
MF95	100.00	121.20	Ccf	GWAC			0			0
MF95	121.20	128.60	Cgb	GABB			0			0
MF95	128.60	160.50	Ccf	GWAC			0			0
MF95	160.50	192.70	Ccf	HEVC			0			0
MF95	192.70	208.30	Ccf	GWAC			0			0
MF95	208.30	238.50	Cgb	GABB			0			0
MF95	238.50	248.50	Ccf	GWAC			0			0
MF95	248.50	254.00	Ccf	HEVC			0			0
MF95	254.00	269.00	Ccf	GWAC			0			0
MF95	269.00	275.40		FALT			0			0
MF95	275.40	293.50	Ccf	GWAC			0			0
MF96	0.00	3.00		LOSS						
MF96	3.00	10.00	Ccf	GWAC		A3	0	Bk	Bd	55
MF96	10.00	14.50	Ccf	HEVC	Ht	R3	0	Df	Bd	65
MF96	14.50	36.90	Ccf	GWAC		A3	0.2	Sp		
MF96	36.90	42.70	Cbg	GABB	CbSp	G3	0	Sp		
MF96	42.70	54.60	Ccf	GWAC		A3	0	Bk	Bd	70
MF96	54.60	60.00	Cbg	GABB	Cb	G3	0.25	Sp		
MF96	60.00	67.00	Ccf	SILT		A3	1	Ft		
MF96	67.00	71.20	Cbg	GABB	Cb	G3	0.01	Ft		
MF96	71.20	88.90	Ccf	GWAC		A3	1	Df		
MF96	88.90	93.80	Ccf	HEVC	Ht	R3	0	Df	Bd	70
MF96	93.80	96.30	Ccf	SILT		G3	1	Sp	Bd	80
MF96	96.30	101.90	Cbg	GABB		G3	1	Sp		
MF96	101.90	106.30	Ccf	SILT		A3	0.5	Gr	Bd	60
MF96	106.30	131.00	Ccf	GWAC		G3	0.25	Gr	Bd	60
MF96	131.00	141.90	Ccf	GWAC		G2	0.1	Ft	Bd	60
MF96	141.90	143.10		FALT	Cb	G3		Ft		
MF96	143.10	147.50	Cbg	GABB	Sp	G3	0.05	Ft		
MF96	147.50	151.00	Cbg	GABB	Cb	G3	0.05	Ft		
MF96	151.00	157.10	Ccf	GWAC		A3	0	Ft	Bd	60
MF96	157.10	157.20		FALT	Cy	G3	0	Ft	Ft	80
MF96	157.20	173.70	Ccf	GWAC	Cb	G3	0.25	Sp	Bd	60
MF96	173.70	174.90	Cbg	GABB	Sp	G3	0.25	Sp		
MF96	174.90	175.40	Ccf	GWAC		A4	0.25	Sp		
MF96	175.40	180.30	Cbg	GABB		G3	0.1	Sp		
MF96	180.30	181.10		VEIN	Cb	A1	1	Sp		
MF96	181.10	192.20	Ccf	GWAC		G2	0.1	Ft	Bd	60
MF96	192.20	196.90	Ccf	SILT	SiPy	A4	0.5	Gr	Bd	70
MF96	196.90	229.10	Ccf	GWAC		G3	0.25	Gr		
MF96	229.10	236.70	Ccf	SILT	SiPy	A4	0.5	Gr	Bd	80
MF96	236.70	256.00	Ccf	GWAC		G3	0.1	Bk	Bd	60
MF97	0.00	3.00		LOSS						
MF97	3.00	10.00	Ccf	GWAC	Cy	A2	0	Bk		
MF97	10.00	23.00	Ccf	GWAC	Cy	A2	0	Bk	Bd	25
MF97	23.00	26.80	Ccf	SHAL	Cy	N	0	Sp	Bd	20
MF97	26.80	35.30	Ccf	GWAC	Cy	A2	0	Bk		
MF97	35.30	35.50		FALT	Cy	A2	0	Ft		
MF97	35.50	56.90	Ccf	GWAC	Cy	A2	0	Bk	Bd	30
MF97	56.90	69.50	Ccf	HEVC	He	R3	0	Gr	Bd	30
MF97	69.50	113.00	Ccf	GWAC	Ch	A2	0	Sp	Bd	45
MF97	113.00	125.50	Ccf	HEVC	He	R3	0	Gr	Bd	30
MF97	125.50	157.70	Ccf	GWAC	Ch	A2	0	Sp	Bd	45

hole_id	from	to	strat	rock	alt	colour	vis_s_pct	l_cont	struct	sca
MF97	157.70	165.80	Ccf	SHAL	Cy	N	0	Sp	Bd	40
MF97	165.80	174.00	Ccf	GWAC	Ch	A2	0	Sp	Bd	30
MF97	174.00	178.00	Cgb	GABB	ChSp	A5	0		Sp	30
MF97	178.00	180.20	Ccf	GWAC	Ch	A2	0	Sp	Bd	30
MF97	180.20	205.30	Ccf	HEVC	He	R3	0	Gr	Bd	30
MF97	205.30	207.30	Ccf	GWAC	Ch	A2	0	Sp	Bd	30
MF97	207.30	211.00	Cgb	GABB	ChCb	A5	0.5	Gr		
MF97	211.00	211.80	Cgb	GABB	CbCh	A4	0.5	Gr		
MF97	211.80	217.80	Cgb	GABB	CbSe	A3	0.2	Ft	Ft	50
MF97	217.80	225.00	Ccf	SILT	CbSe	A2	0	Gr	Bd	40
MF97	225.00	246.40	Ccf	GWAC	Ch	A2	0	Sp	Bd	30
MF97	246.40	258.00	Ccf	HEVC	He	R3	0	Gr	Bd	30
MF97	258.00	275.90	Ccf	GWAC	Ch	A2	0	Sp	Bd	30
MF97	275.90	280.00	Ccf	SHAL	Cb	N	0	Sp	Bd	40
MF97	280.00	295.50	Ccf	GWAC	Ch	A2	0	Sp	Bd	30
MF97	295.50	323.70	Cgb	GABB	ChSp	A5	0		Sp	30
MF97	323.70	327.80	Ccf	GWAC	Ch	A2	0	Gr	Bd	30
MF97	327.80	336.20	Ccf	HEVC	He	R3	0	Gr	Bd	30
MF98	0.00	3.00		LOSS						0
MF98	3.00	16.80	Ccf	GWAC	Cy	A2	0	Bk		0
MF98	16.80	17.80	Cbg	GABB	CbCh	A2	0.05	Bk		0
MF98	17.80	84.90	Ccf	GWAC		A2	0.5	Ft		0
MF98	84.90	86.80		FALT	Cy	A4	0	Ft		0
MF98	86.80	125.80	Ccf	GWAC		A2	0.5	Gr		0
MF98	125.80	131.60	Ccf	SILT		A3	0.5	Sp		0
MF98	131.60	131.70		VEIN	CbQz	A3	5	Sp		0
MF98	131.70	134.00	Ccf	GWAC		A2	0.5	Gr		0
MF98	134.00	136.30	Ccf	SILT	Py	A4	5	Gr		0
MF98	136.30	139.00	Ccf	GWAC		A2	0.5	Sp		
MF98	139.00	140.00		VEIN	CbQz	C2	2	Sp		
MF98	140.00	152.10	Ccf	GWAC		G3	0.5	Ft		
MF98	152.10	153.60		FALT	Cy	A3	0	Ft		
MF98	153.60	174.00	Ccf	GWAC		G2	0.25	Gr		
MF98	174.00	201.10	Ccf	SILT		A3	2	Ft		
MF98	201.10	218.40	Ccf	GWAC	Ch	A3	0.05	Gr	Bd	30
MF98	218.40	228.00	Ccf	HEVC	He	R3	0	Sp	Bd	45
MF98	228.00	238.90	Cgb	GABB	ChCb	A4	0	Sp		
MF98	238.90	242.20	Ccf	HEVC	He	R3	0	Sp	Bd	45
MF98	242.20	243.90	Ccf	GWAC	Ch	A3	0.05	Gr	Bd	30
MF98	243.90	249.00	Ccf	HEVC	He	R3	0	Sp	Bd	45
MF98	249.00	251.30	Ccf	GWAC	Ch	A3	0.05	Gr	Bd	30
MF98	251.30	251.80	Cgb	GABB	ChCb	A4	0.8	Sp		
MF98	251.80	269.10	Ccf	GWAC	Ch	A3	0.05	Gr	Bd	30
MF98	269.10	275.50	Cgb	GABB	ChCb	A4	0.8	Sp		
MF98	275.50	281.00	Cgb	GABB	Ch	A4	0	Sp		
MF98	281.00	286.30	Ccf	HEVC	He	R3	0	Sp	Bd	45
MF98	286.30	321.10	Ccf	GWAC	Ch	A3	0.05	Gr	Bd	30
MF98	321.10	350.50	Ccf	HEVC	He	R3	0	Sp	Bd	45
MF98	350.50	359.70	Cgb	GABB	ChCb	A4	0	Sp		
MF98	359.70	371.80	Ccf	GWAC	Ch	A3	0.05	Gr	Bd	85
MF98	385.00	388.20	Ccf	GWAC	Ch	A3	0.05	Gr	Bd	75
MF98	388.20	391.20	Ccf	HEVC	He	R3	0	Sp	Bd	45
MF98	391.20	403.00	Ccf	GWAC	Ch	A3	0.05	Gr	Bd	75
MF99	0.00	9.00	Ccf	SHAL	Cy	N	1	Gr		
MF99	9.00	28.30	Ccf	GWAC	ChCy	A2	0.2	Sp	Bd	30

hole_id	from	to	strat	rock	alt	colour	vis_s_pct	l_cont	struct	sca
MF99	28.30	80.70	Ccf	GWAC	ChCb	A2	0.1	Sp	Bd	20
MF99	80.70	105.10	Ccf	GWAC	ChCb	A2	0.1	Sp	Bd	20
MF99	105.10	185.70	Ccf	SHAL	ChCb	N	0.3	Sp	Bd	25
MF99	185.70	232.60	Ccf	GWAC	ChCb	A2	0.1	Sp	Bd	20
MF99	232.60	240.40	Ccf	SHAL	ChCb	N	0.3	Sp	Bd	45
MF99	240.40	246.10	Ccf	GWAC	ChCb	A2	0.1	Sp	Bd	45
MF99	246.10	251.10	Ccf	SHAL	ChCb	N	0.3	Sp	Bd	45
MF99	251.10	253.30	Ccf	GWAC	ChCb	A2	0.1	Sp	Bd	45
MF99	253.30	254.00		FALT	CbCh	A2				
MF99	254.00	263.10	Ccf	GWAC	ChCb	A2	0.1	Sp	Bd	45
MF99	263.10	295.10	Ccf	HEVC	HeCb	R3	0	Gr	Bd	45
MF99	295.10	330.50	Ccf	GWAC	ChCb	A2	0.1	Sp	Bd	20
MF99	330.50	330.80		VEIN	Cb	C2	0.2		Vn	90
MF99	330.80	380.50	Ccf	GWAC	ChCb	A2	0.1	Sp	Bd	20
MF99	380.50	382.10		VEIN	Cb	C2	0.2		Vn	90
MF99	382.10	385.30	Ccf	GWAC	ChCb	A2	0.1	Sp	Bd	20
MF99	385.30	390.80	Ccf	HEVC	HeCb	R3	0	Gr	Bd	45
MF99	390.80	412.70	Ccf	GWAC	ChCb	A2	0.1	Sp	Bd	20
MF99	412.70	424.50	Cgb	GABB	BiCb	A2	0.05			
MF99	424.50	431.40	Cgb	GABB	ChCb	A5	0.3	Sp		
MF99	431.40	439.50	Ccf	GWAC	ChCb	A2	0.1	Sp	Bd	20
MF99	439.50	454.60	Ccf	HEVC	HeCb	R3	0	Gr	Bd	45
MF99	454.60	458.80	Cgb	GABB	BiCb	A2	0.05			
MF99	458.80	460.80	Ccf	GWAC	ChCb	A2	0.1	Sp	Bd	20
MF99	460.80	468.00	Ccf	HEVC	HeCb	R3	0	Gr	Bd	45
MF99	468.00	473.60	Ccf	GWAC	ChCb	A2	0.1	Sp	Bd	20
MF99	473.60	498.60	Cgb	GABB	BiCb	A2	0.05			
MF99	498.60	504.00	Ccf	HEVC	HeCb	R3	0	Gr	Bd	45
MF99	504.00	524.00	Ccf	GWAC	ChCb	A2	0.1	Sp	Bd	20

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.
Ccf	Crimson Creek Fm.
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, lithic rich etc)
the last is the texture (fine grained, breccia etc).
e.g., IUPC is an intrusive, ultramfic, pyroxene phyric and coarse grained.

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
A	Grey

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 2

Drill Holes MF 90 – 107, Header Files and Original Logs

COMPANY	**ALLEGIANCE MINING NL**
PROJECT	**MELBA FLATS EL 43/1992**
HOLE NUMBER	**MF 90**

Commenced	**02-Feb-08**
Completed	**15-Feb-08**
Logged by	**LAN**
Drilled by	**Almac**

Collar Details

Grid	**GDA**
Easting	366655.8
Northing	5365814.7
Elevation	2206.9
Dip	-58
Bearing	288
LENGTH (m)	473.5

Hole Size

To (m)	**Size**
	HQ
473.5	**NQ**

Purpose of Hole

To test Nickel Reward gabbros beneath MF81

Comments on Completion

Three major gabbro dikes were intersected but none carried Ni or Cu >0.05%.
Hole deviated well to the south and may have passed south of the ne plunging Nickel Reward mineralised zone;

Major core losses:

From	**To**	**% rec**
0	**18.8**	**see log**

Hole Completion Condition

Assay Summary

Rock Type	**From**	**To**			

Down Hole Survey

Depth	**Dip**	**Mag Brg**	**Grid Brg**
0	**-58**	**274**	**288**
49	**-56**	**258**	**287**
100	**-56**	**273**	**287**
150	**-55**	**266**	**280**
200	**-55**	**267**	**281**
250	**-55**	**265**	**279**
290	**-55**	**270**	**284**
350	**-53**	**270**	**284**
400	**-53**	**270**	**284**
450	**-51**	**270**	**284**
473.5	**-51**	**270**	**284**

Notes on Surveys

Survey at 49m possibly affected by rods;

ALLEGIANCE MINING NL MELBA FLATS PROJECT DRILL HOLE MF 90

Project	Hole ID	Log		Description		Recovery					Assays										
		From	To		From	To	%				From	To	% Ni	% Cu				% S	Ag	% Pb	% Zn
Melba	MF 90	0.0	5.0	Rubble and clay, including water worn pebbles;	0.0	2.5	15														
					2.5	5.5	30														
	MF 90	5.0	16.5	**GRITS AND GRAPHITIC SHALE:**	5.5	8.5	25														
	MF 90			dark gray coarse grained gritty sediments (coarse sandstone)	8.5	9.0	80														
	MF 90			with minor interbedsof black graphitic shale;	9.0	10.0	80														
	MF 90			BCA 60-70°;	10.0	11.5	5														
	MF 90			vuggy in places;	11.5	12.6	25														
	MF 90			core very broken, rubbly in places; significant core losses;	12.6	13.1	80														
					13.1	13.7	0														
	MF 90	16.5	53.6	**GRAY GRITTY SEDIMENTS:**	13.7	14.2	40														
	MF 90			light gray, medium-coarse grained gritty sediments; ocassional	14.2	15.3	60														
	MF 90			black shaley band; thin white carbonate veins, more common in	15.3	16.2	80														
	MF 90			shaley bands, often leached and carrying minor coarse	16.2	17.4	50														
	MF 90			sphalerite in places;	17.4	18.8	70														
	MF 90			BCA 70-80°;	18.8	19.8	90														
	MF 90			minor vuggy zones indicate water movement;	19.8	53.6	100														
	MF 90			ground broken but steadily improving down hole;																	
	MF 90	53.6	198.9	**INTERBEDDED BLACK SHALES and GRAY GRITTY SILTSTONE**	53.6	78.4	100														
	MF 90			53.6-60.6m: black calcareous shales cut by abundant narrow																	
	MF 90			carbonate veins; upper section strongly calcareous;																	
	MF 90			BCA 70-80°;																	
	MF 90			core moderately broken;																	
	MF 90			60.6-69.4m: light gray fine grained siltstone interbedded with light																	
	MF 90			gray grits and minor black shale beds; calcareous in places;																	
	MF 90			BCA 70-80°;																	
	MF 90			core competent;																	
	MF 90			69.4-76.6m: black shale, calcareous and sulfidic in places,																	
	MF 90			interbedded with minor light gray siltstone;																	
	MF 90			BCA 70-80°;																	
	MF 90			76.6-97.8m: light gray siltstone interbedded with dark gray-black	78.4	83.3	80														
	MF 90			fine grained siltstone-shaley beds, increasing towards base of	83.3	198.9	100														
	MF 90			interval;																	
	MF 90			thin carbonate veins common in darker units;																	
	MF 90			BCA 60-70°;																	
	MF 90			97.8-123.5m: interbedded dark gray-black fine grained siltstone,																	
	MF 90			black shales and light gray fine grained siltstone;																	
	MF 90			white carbonate veining common in dark gray and black shaley																	
	MF 90			beds;																	
	MF 90			*interval strongly calcareous in places;*																	
	MF 90			BCA generally 60-70°;																	
	MF 90			grades down into unit below;																	
	MF 90			123.5-176.5m: well bedded interbedded black shales and light																	
	MF 90			gray grits and siltstone;																	
	MF 90			*both shales and siltstones are strongly calcareous to the point*																	
	MF 90			*of being impure limestone/dolomite;*																	
	MF 90			white anastomosing carbonate veining abundant throughout;																	
	MF 90			pyrite commonas narrow seams parallel to bedding in shales,																	
	MF 90			disseminated and small aggregates in grits and siltstone, and																	
	MF 90			associated with white carbonate veins;																	
	MF 90			BCA 60-80°, but generally 70°;																	
	MF 90			ground conditions good; most fractures anre bedding parallel;																	

ALLEGIANCE MINING NL MELBA FLATS PROJECT DRILL HOLE MF 90

Project	Hole ID	Log		Description	Recovery					Assays										
		From	To		From	To	%			From	To	% Ni	% Cu				% S	Ag	% Pb	% Zn
	MF 90			176.5-198.9m: light gray more massive siltstones and fine																
	MF 90			grained sandstones; minor dark gray shaley beds;																
	MF 90			white carbonate veining common but not as abundant as unit																
	MF 90			above;																
	MF 90			weakly calcareous;																
	MF 90			minor disseminated pyrite;																
	MF 90			BCA 70°;																
	MF 90			ground conditions good;																
	MF 90	198.9	200.9	**GABBRO: (2 m)**	198.9	200.9	100													
	MF 90			dark gray, fine-medium grained strongly altered gabbro;																
	MF 90			abundant white anastomosing carbonate veins; weak calcareous																
	MF 90			alteration pervasive;																
	MF 90			trace sulfides; minor chalcopyrite in carbonate veins;																
	MF 90			HW diffuse and irregular, but approx 40° CA;																
	MF 90			FW very sharp 90° CA;																
	MF 90			ground conditions good;																
	MF 90	200.9	207.5	**SILTSTONE:**	200.9	207.5	100													
	MF 90			interbedded light and dark gray fine-medium grained siltstone;																
	MF 90			BCA 70°;																
	MF 90			calcareous in places; only minor white carbonate veining;																
	MF 90			minor discrete aggregates pyrite;																
	MF 90	207.5	217.4	**GABBRO:**	207.5	217.4	100													
	MF 90			dark gray, fine-medium grained gabbro, strongly altered with																
	MF 90			abundant white carbonate veining and irregular masses;																
	MF 90			altered gabbro strongly calcareous;																
	MF 90			trace-minor disseminated sulfides, often in white carbonate-talc																
	MF 90			veins;																
	MF 90			HW contact 45° CA and discordant to bedding and sharp;																
	MF 90			FW contact sharp 70° CA and probably concordant with																
	MF 90			bedding;																
	MF 90			lower few metres fine grained																
	MF 90	217.4	235.7	**MASSIVE HEMATITIC SILTSTONE and GRITS:**	217.4	235.7	100													
	MF 90			reddish brown fine grained hematitic siltstones interbedded with																
	MF 90			hematitic grits;																
	MF 90			only minor white carbonate veining;																
	MF 90			BCA uniform 70°;																
	MF 90			siltstone is gray for 1m from gabbros above and below interval;																
Melba	MF 90			sharp non-faulted contacts with gabbros above and below;																
	MF 90			carbonate-talc-sulfide veining becoming common towards base																
	MF 90			of unit close to lower gabbro contact;																
	MF 90			ground conditions excellent; most fractures are bedding parallel;																
	MF 90	235.7	237.8	**ALTERED GABBRO:**	235.7	237.8	100													
	MF 90			dark gray fine-medium grained gabbro as for 207.5m…																
	MF 90			minor disseminated sulfides;																
	MF 90			upper contact 60° CA and associated with brecciated sediments																
	MF 90			and quartz-carbonate veined sediments;																
	MF 90			lower contact very sharp 30° CA;																

ALLEGIANCE MINING NL MELBA FLATS PROJECT DRILL HOLE MF 90

Project	Hole ID	Log		Description	Recovery					Assays											
		From	To		From	To	%			From	To	% Ni	% Cu					% S	Ag	% Pb	% Zn
	MF 90	237.8	240.7	**HEMATITIC SEDIMENTS as for 217.4m....**	237.8	240.7	100														
	MF 90			BCA 50°;																	
	MF 90			upper 400mm contact zone with gabbro is brecciated and																	
	MF 90			silicified (?);																	
	MF 90			sharp lower contact with gabbro;																	
	MF 90	240.7	246.7	**ALTERED GABBRO:**	240.7	246.7	100	Melba	MF90	241.2	242.0	0.01	-0.01					0.1			
	MF 90			dark gray medium grained gabbro, pervasive calcareous				Melba	MF90	242.0	243.0	0.01	-0.01					0.1			
	MF 90			alteration; carbonate-talc-(sulfide) veins common;				Melba	MF90	243.0	244.0	0.02	-0.01					0.1			
	MF 90			only trace disseminated sulfides in gabbro; minor coarse				Melba	MF90	244.0	245.0	0.03	-0.01					-0.1			
	MF 90			disseminated sulfides in carbonate-talc veins;				Melba	MF90	245.0	246.0	0.03	0.01					-0.1			
	MF 90			HW contact with hematitic sediments sharp 50° CA;				Melba	MF90	246.0	246.7	0.03	0.01					-0.1			
	MF 90			FW contact also steep and sharp 70° CA but probably																	
	MF 90			discordant with bedding;																	
	MF 90			ground conditions excellent;																	
	MF 90	246.7	256.4	**HEMATITIC SILTSTONES and GRITS:**	246.7	256.4	100														
	MF 90			similar to 217.4 m.....;																	
	MF 90			minor carbonate-talc veining;																	
	MF 90			BCA 60-65°;																	
	MF 90			lower 500 mm dark gray with basal 200 mm strongly altered to																	
	MF 90			spotty chert breccia;																	
	MF 90			contact with gabbro below diffuse, possibly 60° CA;																	
	MF 90			ground conditions excellent;																	
	MF 90	256.4	268.8	**GABBRO:**	256.4	268.8	100	Melba	MF90	256.4	258.0	0.03	-0.01					-0.1			
	MF 90			similar to gabbro above;				Melba	MF90	258.0	259.0	0.02	0.01					-0.1			
	MF 90			dark gray medium-coarse grained strongly altered with abundant				Melba	MF90	259.0	260.0	0.02	0.01					0.1			
	MF 90			carbonate-talc veins;				Melba	MF90	260.0	261.0	0.03	0.01					-0.1			
	MF 90			trace-minor disseminated sulfidesin gabbro and ocassionally in				Melba	MF90	261.0	262.0	0.03	0.01					-0.1			
	MF 90			carbonate-talc veins;				Melba	MF90	262.0	263.0	0.03	0.01					-0.1			
	MF 90			contact with sediments below sharp 50° CA;				Melba	MF90	263.0	264.0	0.03	0.01					-0.1			
	MF 90			sediments below contact are strongly altered and brecciated;				Melba	MF90	264.0	265.0	0.02	-0.01					-0.1			
	MF 90			ground conditions excellent;				Melba	MF90	265.0	266.0	0.01	0.01					0.1			
								Melba	MF90	266.0	267.0	0.01	-0.01					-0.1			
	MF 90	268.8	288.4	**INTERBEDDED GRITS and SILTSTONE:**	268.8	288.4	100	Melba	MF90	267.0	268.0	0.01	-0.01					-0.1			
	MF 90			light to medium gray siltstone interbedded with grits which are				Melba	MF90	268.0	268.8	0.04	0.01					0.3			
	MF 90			hematitic to approx 274 m., then grading into light gray fine-																	
	MF 90			medium grained siltstone and grits; minor dark gray-black shaley																	
	MF 90			beds;																	
	MF 90			272.4 m: 200 mm carbonate vein with sediment clasts;																	
	MF 90			sparse carbonate and carbonate-talc veining;																	
	MF 90			BCA 55-65° but as low as 45° in places;																	
	MF 90	288.4	293.3	**GABBRO:**	288.4	293.3	100	Melba	MF90	288.4	290.0	0.03	-0.01					-0.1			
	MF 90			fine-medium grained altered gabbro with white carbonate veins				Melba	MF90	290.0	291.0	0.03	-0.01					-0.1			
	MF 90			common, including one large vein sub-parallel to CA;				Melba	MF90	291.0	292.0	0.03	-0.01					-0.1			
	MF 90			HW contact sharp 85° CA;				Melba	MF90	292.0	293.3	0.03	0.01					-0.1			
	MF 90			FW contact sharp 80° CA;																	
	MF 90	293.3	344.6	**INTERBEDDED SILTSTONE-SHALE-GRIT:**	293.3	344.6	100														

ALLEGIANCE MINING NL MELBA FLATS PROJECT DRILL HOLE MF 90

Project	Hole ID	Log		Description	Recovery					Assays											
		From	To		From	To	%			From	To	% Ni	% Cu					% S	Ag	% Pb	% Zn
	MF 90			light gray fine grained siltstone interbedded with dark gray																	
	MF 90			medium-coarse grained grits and minor dark gray-black shales;																	
	MF 90			thin white carbonate veining common, more so in dark gray-																	
	MF 90			black shaley beds;																	
	MF 90			BCA generally 45-55°;																	
	MF 90			321.1 m: 400 mm coarse cream calcite-breccia vein with clasts																	
	MF 90			of dark gray shale;																	
	MF 90			minor syngenetic pyrite;																	
	MF 90			ground conditions generally good;																	
	MF 90			*contact with unit belowappearsto be either a tight fold or*																	
	MF 90			*unconformablecontact with sharp change in strike direction along*																	
	MF 90			*one piece of core (344.5-345.0 m);*																	
	MF 90	344.6	363.9	**HEMATITIC SILTSTONE:**	344.6	363.9															
	MF 90			unit dominated by dark red-brown hematitic siltstone, interbedded																	
	MF 90			with dark gray medium-coarse grained siltstone-sandstone;																	
	MF 90			BCA 55-65°;																	
	MF 90			ground conditions excellent; grades into unit below;																	
	MF 90	363.9	378.0	**SILTSTONE:**	363.9	378.0	100														
	MF 90			light gray, fine-medium grained siltstone interbedded with dark																	
	MF 90			gray-black shaley units which increase in proportion down hole;																	
	MF 90			BCA 55-65°;																	
	MF 90			minor white carbonate veins;																	
	MF 90			grades into unit below...																	
	MF 90	378.0	433.0	**INTERBEDDED SHALE and SILTSTONE-SANDSTONE:**	378.0	433.0	100														
	MF 90			dark gray-black shales and siltstones interbedded with light gray																	
	MF 90			siltstone and gray gritty coarse grained sandstones;																	
	MF 90			white carbonate veining common, especially in shaley beds;																	
	MF 90			veins and disseminations of syngenetic pyrite in shaley beds																	
	MF 90			and ocassionally accompanying white carbonate veins;																	
	MF 90			ground conditions generally good;																	
	MF 90	433.0	435.4	**BRECCIATED SHALES, possible fault zone:**	433.0	435.4	100														
	MF 90			dark gray-black siltstoneswith abundant carbonate and quartz-																	
	MF 90			carbonate veins; several pug and brecciated seams; siltstone																	
	MF 90			clasts in quartz veins;																	
	MF 90			minor galena-pyrite-(chalcopyrite) in veins;																	
	MF 90			core very broken and puggy in places- probable crushed or																	
	MF 90			fault zone;																	
	MF 90	435.4	439.6	**SILTSTONE and GRITS:**	435.4	439.6	100														
	MF 90			light gray gritty sandstone interbedded with darker gray medium																	
	MF 90			grained siltstone;																	
	MF 90			minor carbonate veining;																	
	MF 90			core broken;																	
	MF 90	439.6	441.1	**CRUSHED SILTSTONE - BRECCIA; possible fault zone:**	439.6	441.1	100														
	MF 90			dark gray-black siltstone, with several crushed and rubbly																	
	MF 90			zones with siltstone clasts in carbonate veins;																	
	MF 90			pyrite associated with broken zones and in carbonate veins;																	

ALLEGIANCE MINING NL MELBA FLATS PROJECT DRILL HOLE MF 90

Project	Hole ID	Log		Description		Recovery				Assays										
		From	To		From	To	%			From	To	% Ni	% Cu				% S	Ag	% Pb	% Zn
	MF 90			ground very broken;																
	MF 90			possible fault zone;																
	MF 90	441.1	473.5	**INTERBEDDED SILTSTONE-SANDSTONE-GRITS:**	441.1	473.5	100													
	MF 90			light gray-light brown fine grained siltstone interbedded with																
	MF 90			medium-coarse grained sandstone and grits;																
	MF 90			BCA 55-65°;																
	MF 90			minor carbonate veining oftencarrying pyrite and minor																
	MF 90			chalcopyrite;																
	MF 90			460.7 m: 10 mm vein of galena-pyrite-chalcopyrite;																
	MF 90			soft sediment slumping features common;																
	MF 90			ground conditions excellent;																
	MF 90			**END of HOLE**																

COMPANY ALLEGIANCE MINING NL
PROJECT MELBA FLATS EL 43/1992
HOLE NUMBER MF 91

Commenced	17-Feb-08
Completed	28-Feb-08
Logged by	LAN
Drilled by	Almac

Collar Details

Grid	**GDA**
Easting	366,657.40
Northing	5,365,817.50
Elevation	2206.8
Dip	-60
Bearing	300

LENGTH (m)	**356.4**

Hole Size

To (m)	Size
50.7	HQ
356.4	NQ

Purpose of Hole

Test the Nickel Reward gabbros beneath MF 81

Comments on Completion

intersected 2.3m 2.27% Ni, 1.77% Cu in altered gabbro dike 120 metres down dip from MF 81, intersection suggests Nickel Reward mineralised zone is plunging NE, possibly down a fold axis;

Major core losses:

From	To	% rec
0	38	see log

Hole Completion Condition

all HQ and NQ removed; some HW left

Assay Summary

Rock Type	From	To	% Ni	% Cu	% S
gabbro	282.0	284.3	2.27	1.77	8.5

Down Hole Survey

Depth	Dip	Mag Brg	Grid Brg
0	-60		300
50	-60	-60	299
100	-59	282	296
150	-58	282	296
200	-57	282	296
300	-55	284	298
356.4	-54	285	299

Notes on Surveys

ALLEGIANCE MINING NL MELBA FLATS PROJECT DRILL HOLE MF 91

Project	Hole ID	Log		Description		Recovery					Assays								
		From	To		From	To	%				From	To	% Ni	% Cu					% S
Melba	MF 91	0.0	5.0	**RUBBLE (elluvial):**	0.0	4.3	5												
Melba	MF 91			water worn siltstone rubble and pebbles;	4.3	6.5	15												
					6.5	7.5	30												
Melba	MF 91	5.0	7.5	**WEATERED GABBRO with SULFIDES:**	7.5	8.5	100												
Melba	MF 91			severely weathered gabbro rubble with high core losses;	8.5	9.7	90												
Melba	MF 91			aggregates and smeared films of sulfides in gabbro;	9.7	10.7	90												
Melba	MF 91			contact with sediments below is indistinct;	10.7	12.5	35												
					12.5	14.0	60												
Melba	MF 91	7.5	15.5	**SILTSTONE-SANDSTONE:**	14.0	14.8	90												
Melba	MF 91			dark gray rubbly siltstone-sandstone;	14.8	16.3	50												
Melba	MF 91			high core losses;	16.3	16.8	60												
					16.8	18.5	65												
Melba	MF 91	15.5	56.4	**SANDSTONE-GRIT-SILTSTONE:**	18.5	19.0	70												
Melba	MF 91			light gray massive sandstones and grits (coarse sandstone)	19.0	20.1	85												
Melba	MF 91			interbedded with fine grained light gray siltstone and minor dark	20.1	20.9	100												
Melba	MF 91			gray shaley beds;	20.9	22.8	55												
Melba	MF 91			BCA uniform 60°;	22.8	23.8	80												
Melba	MF 91			increase in minor siltstone component towards base of unit;	23.8	24.3	90												
Melba	MF 91			minor carbonate veining throughout accompanied by minor	24.3	25.6	75												
Melba	MF 91			pyrite;	25.6	36.7	100												
Melba	MF 91			15.5-17.0 m: very broken with massive cream colored	36.7	37.9	50												
Melba	MF 91			carbonate veining, possibly a fault or crushed zone;	37.9	39.3	95												
Melba	MF 91			several other broken zones but ground conditions improving	39.3	56.4	100												
Melba	MF 91			down hole;															
Melba	MF 91	56.4	74.8	**INTERBEDDED SHALE - SILTSTONE:**	56.4	74.8	100												
Melba	MF 91			dark gray-black shales interbedded with light gray siltstones;															
Melba	MF 91			BCA 65-75°;															
Melba	MF 91			white carbonate veining abundant, especially in dark gray															
Melba	MF 91			shaley beds;															
Melba	MF 91			increase in siltstones towards base of interval; gradational with															
Melba	MF 91			unit below;															
Melba	MF 91			ground conditions moderately good;															
Melba	MF 91	74.8	96.8	**INTERBEDDED SILTSTONE- GRITS and minor black shale:**	74.8	96.8	100												
Melba	MF 91			light-dark gray siltstone-sandstone- grit interbedded with minor															
Melba	MF 91			dark gray-black shaley beds;															
Melba	MF 91			BCA 45°;															
Melba	MF 91			white carbonate veining common but not as abundant as in															
Melba	MF 91			shaley unit above;															
Melba	MF 91			ground conditions good; few joint sets;															
Melba	MF 91	96.8	105.0	**INTERBEDDED SHALES and COARSE SANDSTONE:**	96.8	105.0	100												
Melba	MF 91			similar to interval above but with higher dark gray shale															
Melba	MF 91			component;															
Melba	MF 91			quartz-carbonate veining common, abundant in slumped and															
Melba	MF 91			brecciated shaley beds;															
Melba	MF 91			ground conditions moderately good but some broken zones															
Melba	MF 91			(eg) 99.3-99.9m;															
Melba	MF 91	105.0	111.7	**SHALES and SILTSTONES, pyritic:**	105.0	111.7	100												
Melba	MF 91			dark gray to black shales, grading down hole into light-dark gray															

ALLEGIANCE MINING NL MELBA FLATS PROJECT DRILL HOLE MF 91

Project	Hole ID	Log		Description		Recovery					Assays								
		From	To		From	To	%				From	To	% Ni	% Cu					% S
Melba	MF 91			interbedded siltstones;															
Melba	MF 91			shales graphitic and pyritic with white carbonate veins															
Melba	MF 91			common;															
Melba	MF 91			BCA 40-50˚ generally but some soft sediment deformation;															
Melba	MF 91			ground competent but graphitic bedding planes weak;															
Melba	MF 91			grades into															
Melba	MF 91	111.7	121.0	**SILTSTONE-SANDSTONE-GRITS-SHALE:**	111.7	121.0	100												
Melba	MF 91			dark gray coarse sandstones interbedded with minor siltstone															
Melba	MF 91			and dark gray-black shales, which increase in abundance															
Melba	MF 91			towards base;															
Melba	MF 91			BCA 45-55˚ but eratic;															
Melba	MF 91			carbonate and quartz-carbonate veins common;															
Melba	MF 91			ground moderately good but some broken zones;															
Melba	MF 91			grades into unit below;															
Melba	MF 91	121.0	134.6	**BLACK SHALE-SANDSTONE:**	121.0	134.6	100												
Melba	MF 91			dark gray-black shales, graphitic in places, interbedded with															
Melba	MF 91			medium-coarse grained gray sandstone and grits;															
Melba	MF 91			BCA variable, generally 40-60˚;															
Melba	MF 91			cream carbonate veining carrying minor galena and sphalerite;															
Melba	MF 91			shales strongly pyritic;															
Melba	MF 91			basal few metres has brecciated or soft sediment deformation															
Melba	MF 91			features;															
Melba	MF 91			white carbonate veining also common;															
Melba	MF 91			shale beds broken, rubbly in places;															
Melba	MF 91			grades into unit below....															
Melba	MF 91	134.6	198.2	**CALCAREOUS SANDSTONE-GRIT and SHALE:**	134.6	198.2	100												
Melba	MF 91			light-medium gray medium-coarse grained sandstone-grit															
Melba	MF 91			sequence interbedded with dark gray -black shales;															
Melba	MF 91			*sandstone and grit is strongly calcareous-impure dolomite or*															
Melba	MF 91			*limestone in places?*															
Melba	MF 91			shales are generally strongly pyritc and calcareous; pyrite is															
Melba	MF 91			present as disseminations, thin massive seams parallel to															
Melba	MF 91			bedding and small massive augens;															
Melba	MF 91			white carbonate veining common but not as abundant as in units															
Melba	MF 91			above; some zones with abundant white carbonate (eg) 162-															
Melba	MF 91			166;															
Melba	MF 91			BCA 45-55˚;															
Melba	MF 91			ground conditions good;															
Melba	MF 91			gradational with unit below.....															
Melba	MF 91	198.2	232.5	**INTERBEDDED SHALES and SANDSTONE:**	198.2	232.5	100												
Melba	MF 91			dark gray sandstone-siltstone interbedded with dark gray-															
Melba	MF 91			black shales;															
Melba	MF 91			BCA 50-60˚															
Melba	MF 91			*siltstone strongly calcareous in places;*															
Melba	MF 91			white carbonate seams parallel to bedding in shaley units;															
Melba	MF 91			pyrite common in shales as disseminations, thin seams parallel															
Melba	MF 91			to bedding and as irregular augens;															
Melba	MF 91			minor disseminated pyrite in siltstone and sandstone;															

ALLEGIANCE MINING NL MELBA FLATS PROJECT DRILL HOLE MF 91

Project	Hole ID	Log		Description		Recovery				Assays								
		From	To		From	To	%			From	To	% Ni	% Cu					% S
Melba	MF 91			ground conditions good;														
Melba	MF 91	232.5	236.4	**ALTERED GABBRO:**	232.5	236.4	100											
Melba	MF 91			dark gray medium-coarse grained gabbro, strongly altered														
Melba	MF 91			(calcareous);														
Melba	MF 91			abundant white whispy carbonate-talc veins;														
Melba	MF 91			trace-minor disseminated sulfides on FW and HW;														
Melba	MF 91			contacts broken and not distinct (faulted?);														
Melba	MF 91			HW contact not sharp and obscured by large masses of white														
Melba	MF 91			carbonate;														
Melba	MF 91			FW contact also irregular and indistinct, possibly low angle to														
Melba	MF 91			CA (30˚);														
Melba	MF 91	236.4	249.7	**HEMATITIC SILTSTONE-SANDSTONE:**	236.4	249.7	100											
Melba	MF 91			reddish-brown hematitic siltstone-sandstone-grit interbedded with														
Melba	MF 91			light gray siltstone;														
Melba	MF 91			minor fine white carbonate veining;														
Melba	MF 91			BCA 45-55˚;														
Melba	MF 91			gray siltstone dominant near top of unit;														
Melba	MF 91			ground conditions excellent;														
Melba	MF 91	249.7	263.9	**ALTERED GABBRO:**	249.7	263.9	100											
Melba	MF 91			gark gray medium-coarse grained gabbro, strongly altered														
Melba	MF 91			(calcareous) with pervasive carbonate-talc alteration;														
Melba	MF 91			trace-minor sulfides in places (eg) 257-258m;														
Melba	MF 91			HW contact very sharp but irregular approx 45˚ CA; sharp														
Melba	MF 91			saw toothed nature with hematitic siltstone; strike of contact														
Melba	MF 91			approx 30˚ different to strike of overlying sediments;														
Melba	MF 91			FW contact with hematitic sediments also very sharp 60˚ CA,														
Melba	MF 91			with strike parallel to strike of sediments;														
Melba	MF 91			ground conditions very good;														
Melba	MF 91	263.9	269.7	**HEMATITIC SILTSTONES-SANDSTONE:**	263.9	269.7	100											
Melba	MF 91			interbedded hematitic siltstone and sandstone;														
Melba	MF 91			BCA 60˚;														
Melba	MF 91			ground conditions excellent;														
Melba	MF 91	269.7	278.4	**ALTERED GABBRO:**	269.7	278.4	100											
Melba	MF 91			dark gray mottled medium-coarse grained gabbro;														
Melba	MF 91			strongly altered with pervasive carbonate-talc masses and														
Melba	MF 91			numerous whispy seams and veins of white-green talc-														
Melba	MF 91			carbonate;														
Melba	MF 91			trace-minor sulfides;														
Melba	MF 91			HW contact very sharp but irregular with thin dark gray fine														
Melba	MF 91			grained chilled margin; undulating 30-40˚ CA;														
Melba	MF 91			FW contact very sharp 50˚ CA and probably parallel to bedding;														
Melba	MF 91			marked by thin carbonate-talc veining;														
Melba	MF 91	278.4	282.0	**SILTSTONE-SANDSTONE:**	278.4	282.0	100											
Melba	MF 91			pale brown-gray fine grained siltstone-sandstone unit creamy														
Melba	MF 91			brown carbonate veins common;														
Melba	MF 91			BCA 70-80˚;														

ALLEGIANCE MINING NL MELBA FLATS PROJECT DRILL HOLE MF 91

Project	Hole ID	Log		Description		Recovery				Assays								
		From	To		From	To	%			From	To	% Ni	% Cu					% S
Melba	MF 91			ground conditions moderately good;														
Melba	MF 91	282.0	287.0	**ALTERED and MINERALISED GABBRO:**	282.0	287.0	100	Melba	MF91	282.0	283.0	3.17	2.15					11.5
Melba	MF 91			dark gray medium-coarse grained gabbro, strongly altered and				Melba	MF91	283.0	284.3	1.59	1.49					6.3
Melba	MF 91			carrying abundant fine-coarse grained sulfides;				Melba	MF91	284.3	285.3	0.07	0.03					0.1
Melba	MF 91			chalcopyrite and pentlandite common in fine late stage white				Melba	MF91	285.3	287.0	0.03	0.02					0.2
Melba	MF 91			carbonate-talc veins;														
Melba	MF 91			mineralisation essentially stops against a 20mm white carbonate														
Melba	MF 91			vein 40° CA at 284.3 m;														
Melba	MF 91			only minor mineralisation 284.3-287.0 m;														
Melba	MF 91			From 285.3-287.0m., massive white quartz-carbonate veining														
Melba	MF 91			containing clasts of gabbro and sediment; basal section of														
Melba	MF 91			interval looks like breccia;														
Melba	MF 91			possibly a faulted FW; 20 mm vein on FW carrying coarse														
Melba	MF 91			galena and sphalerite;														
Melba	MF 91			ground conditions moderately good;														
Melba	MF 91	287.0	306.0	**INTERBEDDED SILTSTONE-GRIT:**	287.0	306.0	100											
Melba	MF 91			light gray fine-medium grained siltstone interbedded with														
Melba	MF 91			gray coarse grained sandstone-grit;														
Melba	MF 91			288.5-289.1 m: massive quartz-carbonate vein:														
Melba	MF 91			BCA 40-50°;														
Melba	MF 91			ground conditions good;														
Melba	MF 91	306.0	306.6	**ALTERED GABBRO:**	306.0	306.6	100											
Melba	MF 91			dark graycoarse grained altered gabbro;														
Melba	MF 91			trace sulfide grains;														
Melba	MF 91			HW eratic and brecciated with clasts of gabbro in overlying														
Melba	MF 91			sediments and sediment clasts in top of gabbro;														
Melba	MF 91			FW contact sharp 40° CA and slightly different strike to														
Melba	MF 91			bedding;														
Melba	MF 91	306.6	315.0	**SILTSTONE:**	306.6	315.0	100											
Melba	MF 91			light gray siltstone;														
Melba	MF 91			BCA 50-60°;														
Melba	MF 91			good ground conditions;														
Melba	MF 91	315.0	319.6	**ALTERED GABBRO:**	315.0	319.6	100											
Melba	MF 91			dark gray coarse grained gabbro, very strongly altered;														
Melba	MF 91			pervasive carbonate-talc alteration; white carbonate veins														
Melba	MF 91			common;														
Melba	MF 91			only trace sulfide grains;														
Melba	MF 91			HW contact sharp but irregular approx 50° CA;														
Melba	MF 91			FW contact diffuse and marked by several narrow carbonate-														
Melba	MF 91			talc veins discordant to bedding;														
Melba	MF 91	319.6	356.4	**INTERBEDDED SILTSTONE-SANDSTONE-SHALE:**	319.6	356.4	100											
Melba	MF 91			light gray medium grained siltstone interbedded with gray														
Melba	MF 91			medium-coarse grained sandstone and black shale beds;														
Melba	MF 91			black shale typically pyritic and cut by numerous white														
Melba	MF 91			carbonate veins;														
Melba	MF 91			BCA 50-60°;														

ALLEGIANCE MINING NL MELBA FLATS PROJECT DRILL HOLE MF 91

Project	Hole ID	Log		Description		Recovery				Assays								
		From	To		From	To	%			From	To	% Ni	% Cu					% S
Melba	MF 91			ground conditions moderately good but shale beds broken in														
Melba	MF 91			places;														
				END of HOLE														

COMPANY ALLEGIANCE MINING NL
PROJECT MELBA FLATS EL 43/1992
HOLE NUMBER MF 92

Commenced	02-Mar-08
Completed	12-Mar-08
Logged by	LAN
Drilled by	Almac

Collar Details

Grid	GDA
Easting	366,657.9
Northing	5,365,817.3
Elevation	2206.8
Dip	-80
Bearing	302

LENGTH (m)	430.5

Hole Size

To (m)	Size
35.5	HQ
430.5	NQ

Purpose of Hole

To test Nickel Reward mineralisation down dip from MF 81 and MF 92;

Comments on Completion

Major core losses:

From	To	% rec
0	16	<50

Hole Completion Condition

all steel removed from hole;

Assay Summary

Rock Type	From	To			

Down Hole Survey

Depth	Dip	Mag Brg	Grid Brg
0	-80		302
50	-79	288	301
100	-79	281	294
150	-78	279	292
200	-77	277	290
250	-77	271	284
300	-76	271	284
350	-75	271	284
400	-76	271	284
430.5	-76	271	284

Notes on Surveys

ALLEGIANCE MINING NL MELBA FLATS PROJECT DRILL HOLE MF92

Project	Hole ID	Log		Description	Recovery					Assays								
		From	To		From	To	%			From	To	% Ni	% Cu					% S
Melba	MF 92	0.0	16.0	**SHEARED SEDIMENT and GABBRO?? RUBBLE-very poor**	0.0	10.5	10											
Melba	MF 92			**recoveries:**	10.5	12.0	60											
Melba	MF 92			rubbly zone of very weathered rocks and very poor recoveries;	12.0	13.0	70											
Melba	MF 92			most of this material is clearly sedimentary; other dark gray-	13.0	16.0	50											
Melba	MF 92			black sulfidic rocks have appearance of sheared gabbro;														
Melba	MF 92			(see top of MF 91);														
Melba	MF 92			very sharp contact with sediments below, 40° CA;														
Melba	MF 92	16.0	71.9	**SILTSTONE-SANDSTONE:**	16.0	19.0	90	Melba	MF92	70.0	71.0	0.05	100.00					-0.10
Melba	MF 92			massive light gray medium grained siltstone-coarse grained	19.0	71.9	100											
Melba	MF 92			sandstone with abundant white carbonate veining;														
Melba	MF 92			40.9-42.9 m: several 20 mm cream carbonate veins with coarse														
Melba	MF 92			sphalerite and minor galena;														
Melba	MF 92			BCA 40-50°;														
Melba	MF 92			carbonate veins at 60.6 m carry coarse chalcopyrite;														
Melba	MF 92			ground conditions improve dramatically below 16 m;														
Melba	MF 92			overall ground conditions good with few broken zones associated														
Melba	MF 92			with abundant carbonate veining;														
Melba	MF 92	71.9	78.8	**GRAPHITIC and PYRITIC BLACK SHALES:**	71.9	78.8	100											
Melba	MF 92			black shale, graphitic in places, pyritic, abundant white														
Melba	MF 92			carbonate veins throughout;														
Melba	MF 92			BCA variable 40-60°, generally 45-55°;														
Melba	MF 92			ground moderately competent, but broken in places;														
Melba	MF 92			grades down into unit below;														
Melba	MF 92	78.8	101.5	**SILTSTONE-SANDSTONE:**	78.8	101.5	100											
Melba	MF 92			light gray medium-coarse grained siltstone and coarse grained														
Melba	MF 92			sandstone, interbedded with minor dark gray-black shales;														
Melba	MF 92			white carbonate veining common throughout;														
Melba	MF 92			BCA variable but generally 45-55°;														
Melba	MF 92	101.5	103.5	**BRECCIATED SILTSTONE- POSSIBLE FAULT:**	101.5	102.2	30											
Melba	MF 92			light gray siltstone, brecciated and cut by quartz-carbonate	102.2	103.3	75											
Melba	MF 92			veins;														
Melba	MF 92			core very broken in places;														
Melba	MF 92			*significant core losses;*														
Melba	MF 92	103.5	135.3	**SILTSTONE-SANDSTONE-GRITS:**	103.3	135.3	100											
Melba	MF 92			dark gray medium grained siltstone-sandstone -coarse mafic														
Melba	MF 92			grits with minor interbedded black pyritic shales;														
Melba	MF 92			white carbonate veining common throughout;														
Melba	MF 92			minor coarse sphalerite in white carbonate veins;														
Melba	MF 92			121.5-122.5 m: coarse mafic grit;														
Melba	MF 92			BCA typically 55-60°;														
Melba	MF 92			ground conditions good;														
Melba	MF 92			grades into unit below.....														
Melba	MF 92	135.3	153.5	**BLACK PYRITIC SHALE:**	135.3	153.5	100											
Melba	MF 92			black pyritic shale and siltstone interbedded with minor light														
Melba	MF 92			gray siltstone and fine grained sandstone, often showing soft														
Melba	MF 92			sediment deformation;														

ALLEGIANCE MINING NL MELBA FLATS PROJECT DRILL HOLE MF92

Project	Hole ID	Log		Description	Recovery					Assays								
		From	To		From	To	%			From	To	% Ni	% Cu					% S
Melba	MF 92			BCA generally 40-50°;														
Melba	MF 92			white carbonate veining common;														
Melba	MF 92			pyrite abundant in black shales, less common in siltstones;														
Melba	MF 92			minor cream colored veins parallel to bedding and carrying														
Melba	MF 92			minor galena-sphalerite-chalcopyrite;														
Melba	MF 92			ground moderately competent but several broken zones with														
Melba	MF 92			bedding parallel fractures common;														
Melba	MF 92			grades into														
Melba	MF 92	153.5	178.0	**INTERBEDDED BLACK SHALES and GRAY SILTSTONE:**	153.5	178.0	100											
Melba	MF 92			interbedded black pyritic shales and light-medium gray, fine-														
Melba	MF 92			coarse grained siltstones-sandstones;														
Melba	MF 92			white carbonate veining abundant especially in black strongly														
Melba	MF 92			pyritic shales;														
Melba	MF 92			weakly calcareous in places;														
Melba	MF 92			BCA variable, generally 40-50°;														
Melba	MF 92			ground conditions good;														
Melba	MF 92			grades into.....														
Melba	MF 92	178.0	197.0	**CALCAREOUS SILTSTONE (limestone?) -SHALE:**	178.0	197.0	100											
Melba	MF 92			*light gray highly calcareous siltstone (dolomite or dirty limestone?)*														
Melba	MF 92			interbedded with minor dark gray siltstone/shale;														
Melba	MF 92			BCA 30-40°;														
Melba	MF 92			white anastomosing carbonate veins common;														
Melba	MF 92			ground conditions good;														
Melba	MF 92			gradational with.....														
Melba	MF 92	197.0	239.8	**SILTSTONE-MINOR SHALE:**	197.0	239.8	100											
Melba	MF 92			light grayfine-medium grained siltstone, more massively bedded														
Melba	MF 92			than units above, interbedded with minor dark gray siltstone-														
Melba	MF 92			shale bands;														
Melba	MF 92			BCA 45-55°, ocassionally 60°;														
Melba	MF 92			white carbonate veining common;														
Melba	MF 92			ground conditions good except for a few broken zones below														
Melba	MF 92			231 m;														
Melba	MF 92	239.8	248.6	**GABBRO:**	239.8	248.6	100	Melba	MF92	239.8	241.0	0.01	100.00					-0.10
Melba	MF 92			altered dark gray medium grained gabbro;				Melba	MF92	241.0	242.0	0.01	-100.00					0.16
Melba	MF 92			white carbonate veins and irregular masses common;				Melba	MF92	242.0	243.0	0.01	100.00					0.10
Melba	MF 92			zones of minor coarse disseminated sulfides both in the gabbro				Melba	MF92	243.0	244.0	0.02	100.00					-0.10
Melba	MF 92			and associated with the white carbonate veins;				Melba	MF92	244.0	245.0	0.01	-100.00					-0.10
Melba	MF 92			both margins are obscure and give appearance of being wide				Melba	MF92	245.0	246.0	0.01	100.00					-0.10
Melba	MF 92			finer grained light brown "chilled margins"; both margins are				Melba	MF92	246.0	247.0	0.01	-100.00					-0.10
Melba	MF 92			parallel to adjacent sediments; these finer grained margins				Melba	MF92	247.0	248.6	0.01	-100.00					0.11
Melba	MF 92			could be altered sediments with true contacts each being														
Melba	MF 92			400 mm into gabbro proper;														
Melba	MF 92			ground conditions excellent;														
Melba	MF 92	248.6	271.8	**INTERBEDDED HEMATITIC and GRAY SILTSTONE-GRITS:**	248.6	271.8	100											
Melba	MF 92			reddish-brown fine grained siltstone interbedded with minor														
Melba	MF 92			medium-coarse grained light gray siltstone-sandstone-grit;														
Melba	MF 92			BCA 40-50°;														

ALLEGIANCE MINING NL MELBA FLATS PROJECT DRILL HOLE MF92

Project	Hole ID	Log		Description	Recovery					Assays								
		From	To		From	To	%			From	To	% Ni	% Cu					% S
Melba	MF 92			minor white carbonate veining throughout;														
Melba	MF 92			ground conditions good;														
Melba	MF 92			gradational with.....														
Melba	MF 92	271.8	287.0	**SILTSTONE-SHALE-SANDSTONE-GRIT:**	271.8	287.0	100											
Melba	MF 92			light gray medium grained siltstone and medium-coarse grained														
Melba	MF 92			sandstone interbedded with thin pyritic black shale beds;														
Melba	MF 92			soft sediment slumping and deformation common;														
Melba	MF 92			white carbonate veins common;														
Melba	MF 92			BCA irregular, generally 30-40°;														
Melba	MF 92			ground conditions good;														
Melba	MF 92			sharp but irregular contact with gabbro below;														
Melba	MF 92	287.0	291.0	**ALTERED GABBRO:**	287.0	291.0	100											
Melba	MF 92			dark gray medium grained altered gabbro;														
Melba	MF 92			abundant white carbonate masses and veins;														
Melba	MF 92			only trace sulfides (if any);														
Melba	MF 92			HW contact sharp and irregular, approximately 80° CA and with														
Melba	MF 92			different strike direction to HW sediments;														
Melba	MF 92			FW contact sharp 55° CA and also different strike direction to														
Melba	MF 92			FW sediments;														
Melba	MF 92			ground conditions good;														
Melba	MF 92	291.0	309.5	**SILTSTONE:**	291.0	309.5	100											
Melba	MF 92			light gray fine grained siltstone with minor interbeds of dark														
Melba	MF 92			gray shale;														
Melba	MF 92			well bedded BCA 50°;														
Melba	MF 92			white carbonate veining common;														
Melba	MF 92			very good ground;														
Melba	MF 92			gradational with.....														
Melba	MF 92	309.5	318.5	**HEMATITIC SILTSTONE:**	309.5	318.5	100											
Melba	MF 92			fine grained hematitic siltstone with minor light gray interbeds;														
Melba	MF 92			well bedded BCA 70°;														
Melba	MF 92			excellent ground;														
Melba	MF 92			gradational with.....														
Melba	MF 92	318.5	365.5	**SILTSTONE-minor shale:**	318.5	365.5	100											
Melba	MF 92			light gray fine-medium grained siltstone interbedded with minor														
Melba	MF 92			dark gray shale beds;														
Melba	MF 92			BCA slumped but generally 35-45°;														
Melba	MF 92			343.6 m: 500 mm zone white quartz-carbonate;														
Melba	MF 92			excellent ground conditions;														
Melba	MF 92	365.5	403.2	**ALTERED GABBRO:**	365.5	403.2	100	Melba	MF92	366.7	368.0	0.01	-100.00					-0.10
Melba	MF 92			strongly altered medium-coarse grained gabbro with pervasive				Melba	MF92	368.0	369.0	0.01	-100.00					-0.01
Melba	MF 92			development calcareous groundmass (felspar alteration) and				Melba	MF92	369.0	370.0	-0.01	100.00					-0.10
Melba	MF 92			common-abundant white carbonate-talc veins ranging from				Melba	MF92	370.0	371.0	-0.01	-100.00					0.15
Melba	MF 92			stringers up to 50 mm wide veins;				Melba	MF92	371.0	372.0	-0.01	-100.00					0.38
Melba	MF 92			sulfide content ranges from trace to minor and up to common				Melba	MF92	372.0	373.0	-0.01	-100.00					0.11
Melba	MF 92			over short intervals; occurs mainly associated with late stage				Melba	MF92	373.0	374.0	-0.01	-100.00					-0.10
Melba	MF 92			alteration event as isolated grains and aggregates, and often as				Melba	MF92	374.0	375.0	-0.01	-100.00					0.26

ALLEGIANCE MINING NL MELBA FLATS PROJECT DRILL HOLE MF92

Project	Hole ID	Log		Description		Recovery				Assays								
		From	To		From	To	%			From	To	% Ni	% Cu					% S
Melba	MF 92			thin filaments along fine fractures and commonly in fine				Melba	MF92	375.0	376.0	-0.01	-100.00					0.21
Melba	MF 92			carbonate-talc veins;				Melba	MF92	376.0	377.0	-0.01	-100.00					0.30
Melba	MF 92			370-375 m: low grade sulfides;				Melba	MF92	377.0	378.0	-0.01	100.00					0.12
Melba	MF 92			378.4-379.2 m: minor disseminated and stringer sulfides;				Melba	MF92	378.0	379.0	-0.01	-100.00					0.83
Melba	MF 92			390.0-398.0 m: minor sulfides as fine filaments in late stage				Melba	MF92	379.0	380.0	-0.01	-100.00					-0.10
Melba	MF 92			carbonate-talc veins;				Melba	MF92	380.0	381.0	0.01	100.00					-0.10
Melba	MF 92			minor sphalerite-galena in thicker white carbonate-talc veins				Melba	MF92	381.0	382.0	0.02	-100.00					0.12
Melba	MF 92			(eg) 391 m;				Melba	MF92	382.0	383.0	0.02	100.00					0.20
Melba	MF 92			talc and green alteration becomes quite intense towards base;				Melba	MF92	383.0	384.0	0.03	100.00					-0.10
Melba	MF 92			HW is a confused zone of brecciated soft sediments within				Melba	MF92	384.0	385.0	0.03	100.00					-0.10
Melba	MF 92			chilled (finer grained)brownish gabbro from 365.5-366.7 m;				Melba	MF92	385.0	386.0	0.02	-100.00					-0.10
Melba	MF 92			FW is sharp and marked by a 30 mm white quartz-carbonate				Melba	MF92	386.0	387.0	0.02	100.00					-0.10
Melba	MF 92			vein; contact 70° CA but strike is approximately 30°				Melba	MF92	387.0	388.0	0.03	100.00					0.11
Melba	MF 92			different to bedding;				Melba	MF92	388.0	389.0	0.03	100.00					0.10
Melba	MF 92			ground conditions generally excellent;				Melba	MF92	389.0	390.0	0.02	100.00					0.14
								Melba	MF92	390.0	391.0	0.02	100.00					-0.10
Melba	MF 92	403.2	430.5	**SILTSTONE-SHALE-GRIT:**	403.2	430.5	100	Melba	MF92	391.0	392.0	0.01	100.00					0.15
Melba	MF 92			light-dark gray fine-medium grained siltstone interbedded				Melba	MF92	392.0	393.0	0.01	-100.00					-0.10
Melba	MF 92			with minor gritty bands;				Melba	MF92	393.0	394.0	0.01	-100.00					-0.10
Melba	MF 92			BCA 35-50° but generally 45°;				Melba	MF92	394.0	395.0	0.01	-100.00					-0.10
Melba	MF 92			minor-common white carbonate veins throughout;				Melba	MF92	395.0	396.0	0.01	-100.00					0.15
Melba	MF 92			excellent ground conditions;				Melba	MF92	396.0	397.0	0.01	-100.00					-0.10
								Melba	MF92	397.0	398.0	0.02	100.00					-0.10
Melba	MF 92			**END of HOLE**				Melba	MF92	398.0	399.0	0.02	200.00					-0.10
								Melba	MF92	399.0	400.0	0.01	-100.00					0.21
								Melba	MF92	400.0	401.0	0.01	100.00					0.21
								Melba	MF92	401.0	402.0	0.02	100.00					0.15
								Melba	MF92	402.0	403.2	0.02	-0.01					-0.10

COMPANY ALLEGIANCE MINING NL
PROJECT MELBA FLATS EL 43/1992
HOLE NUMBER MF 93

Commenced	19-Mar-08
Completed	01-Apr-08
Logged by	LAN
Drilled by	Almac

Collar Details

Grid	GDA
Easting	366,667.3
Northing	5,367,826.1
Elevation	2212.9
Dip	-65
Bearing	314
LENGTH (m)	499

Hole Size

To (m)	Size
75.5	HQ
499	NQ

Purpose of Hole

To test intersection in MF 89 approx. 100 m. further down dip

Comments on Completion

The main Genets Gabbro was intersected from 151.1-159.4m., beneath a major fault at 139-140m;
The HW half of the gabbro was well mineralised the best intersection being 151.1-155.8m., 4.7m 0.83% Ni, 0.62% Cu, 3.4%S;
A deeper gabbro had appearance and chemistry of an ultramafic and contained significant nickel sulfidesin the 0.1-0.2% Ni range;

Major core losses:

From	To	% rec
0	27.9	see log

Hole Completion Condition

all rods and casing removed from hole

Assay Summary

Rock Type	From	To	% Ni	% Cu	% S
Gabbro	151.1	156	0.83	0.62	3.4

Down Hole Survey

Depth	Dip	Mag Brg	Grid Brg
0	-65	298	314
50	-66	298	312
100	-65	300	314
150	-65	303	317
200	-64	298	312
250	-64	297	311
300	-64	296	310
350	-64	300	312
400	-63	303	317
450	-63	299	313
499	-63	305	319

Notes on Surveys

ALLEGIANCE MINING NL MELBA FLATS PROJECT DRILL HOLE MF 93

Project	Hole ID	Log		Description		Recovery		Assays					
		From	To		From	To	%	From	To	% Ni	% Cu	% S	Cr
Melba	MF 93	0.0	3.0	**TRICONE - NO CORE:**	0.0	3.0	0						
					3.0	4.0	30						
Melba	MF 93	3.0	23.7	**SILTSTONE-SANDSTONE:**	4.0	5.0	70						
Melba	MF 93			light gray siltstone and medium-coarse grained sandstone	5.0	6.0	50						
Melba	MF 93			interbedded with minor light gray grits and dark gray-black shale;	6.0	7.0	80						
Melba	MF 93			BCA 40-50°, generally 45°;	7.0	8.2	80						
Melba	MF 93			core very broken with significant core losses near collar;	8.2	9.1	100						
					9.1	10.0	90						
Melba	MF 93	23.7	24.0	**GABBRO:**	10.0	13.0	100						
Melba	MF 93			narrow dike of dark gray medium grained gabbro;	13.0	14.0	80						
Melba	MF 93			no sulfides observed;	14.0	15.0	90						
Melba	MF 93			core very broken and rubbly with some core losses;	15.0	16.0	90						
Melba	MF 93			HW contact appears irregular and intrusive;	16.0	21.0	100						
Melba	MF 93			FW contact broken rubble and therefore not observed;	21.0	22.0	80						
					22.0	23.5	100						
Melba	MF 93	24.0	47.0	**HEMATITIC SILTSTONE-SANDSTONE:**	23.5	25.0	80						
Melba	MF 93			reddish brown interbedded siltstone and coarse grained	25.0	26.0	80						
Melba	MF 93			sandstone with minor interbedded light gray siltstone;	26.0	27.0	70						
Melba	MF 93			BCA 50-60°, generally 55°;	27.0	27.9	80						
Melba	MF 93			core broken but slowly improving down hole;	27.9	47.0	100						
Melba	MF 93			gradational with unit below;									
Melba	MF 93	47.0	49.5	**SILTSTONE with MINOR GABBRO DIKE:**	47.0	49.5	100						
Melba	MF 93			light gray siltstone;									
Melba	MF 93			BCA 50°;									
Melba	MF 93			47.9m: 200 mm dark gray medium grained gabbro dike;									
Melba	MF 93			HW contact 50°;									
Melba	MF 93			FW contact broken;									
Melba	MF 93			trace fine grained sulfide;									
Melba	MF 93			vuggy in places;									
Melba	MF 93	49.5	50.4	**GABBRO:**	49.5	50.4	100						
Melba	MF 93			dark gray medium grained gabbro;									
Melba	MF 93			very broken and rubbly; vuggy in places;									
Melba	MF 93			trace of fine grained disseminated sulfides;									
Melba	MF 93			HW contact broken but possibly 55° CA;									
Melba	MF 93			FW contact rubbly;									
Melba	MF 93	50.4	58.0	**SILTSTONE:**	50.4	58.0	100						
Melba	MF 93			light gray siltstone with minor shale and thin sandstone beds;									
Melba	MF 93			BCA 55-60°;									
Melba	MF 93			cut by a number of thin white quartz-carbonate veins									
Melba	MF 93			carrying minor sulfides;									
Melba	MF 93			core moderately broken in places;									
Melba	MF 93			gradational with unit below;									
Melba	MF 93	58.0	67.0	**HEMATITIC SILTSTONE-SANDSTONE:**	58.0	67.0	100						
Melba	MF 93			interbedded hematitic medium-coarse grained sandstone and									

ALLEGIANCE MINING NL MELBA FLATS PROJECT DRILL HOLE MF 93

Project	Hole ID	Log		Description		Recovery		Assays					
		From	To		From	To	%	From	To	% Ni	% Cu	% S	Cr
Melba	MF 93			minor siltstone;									
Melba	MF 93			BCA 40-50˚, generally 45˚;									
Melba	MF 93			number of thin (1-2mm) white carbonate veins; vuggy in places;									
Melba	MF 93			ground moderately good but some irregular fracturing;									
Melba	MF 93			gradational with….									
Melba	MF 93	67.0	79.8	**SANDSTONE - minor siltstone:**	67.0	79.8	100						
Melba	MF 93			light to medium gray coarse grained sandstone with minor									
Melba	MF 93			interbedded light gray siltstone; calcareous in places;									
Melba	MF 93			BCA 45-50˚;									
Melba	MF 93			minor irregular carbonate veins;									
Melba	MF 93			ground conditions good;									
Melba	MF 93			gradational with….									
Melba	MF 93	79.8	86.0	**HEMATITIC SANDSTONE - SILTSTONE:**	79.8	86.0	100						
Melba	MF 93			reddish brown hematitic sandstone-siltstone;									
Melba	MF 93			BCA 55-60˚;									
Melba	MF 93			ground conditions good;									
Melba	MF 93			gradational with….									
Melba	MF 93	86.0	104.2	**SANDSTONE - SILTSTONE:**	86.0	104.2	100						
Melba	MF 93			light gray medium grained sandstone interbedded with light gray									
Melba	MF 93			siltstone and minor shale beds;									
Melba	MF 93			BCA 40-50˚;									
Melba	MF 93			101.0-101.8 m: quartz and quartz-carbonate veining (massive)									
Melba	MF 93			with matrix material possibly fine grained gabbro;									
Melba	MF 93			ground conditions moderately good with several broken zones									
Melba	MF 93			towards base;									
Melba	MF 93	104.2	105.0	**ALTERED GABBRO:**	104.2	105.0	100						
Melba	MF 93			dark gray fine-medium grained altered gabbro;									
Melba	MF 93			no sulfides observed;									
Melba	MF 93			HW broken but posssibly 80˚ CA; marked by thin cream									
Melba	MF 93			carbonate vein with coarse galena;									
Melba	MF 93			FW contact 50˚ CA, sharp and concordent with bedding;									
Melba	MF 93	105.0	112.0	**SILTSTONE - SANDSTONE:**	105.0	112.0	100						
Melba	MF 93			light gray medium-coarse grained sandstone interbedded with									
Melba	MF 93			light gray siltstone-shale bands;									
Melba	MF 93			BCA 45˚;									
Melba	MF 93			ground conditions good;									
Melba	MF 93			gradational with…..									
Melba	MF 93	112.0	123.3	**HEMATITIC SILTSTONE:**	112.0	123.3	100						
Melba	MF 93			reddish brown hematitic siltstone, minor fine grained sandstone;									
Melba	MF 93			BCA 40-45˚;									
Melba	MF 93			ground conditions excellent;									

ALLEGIANCE MINING NL MELBA FLATS PROJECT DRILL HOLE MF 93

Project	Hole ID	Log		Description		Recovery		Assays					
		From	To		From	To	%	From	To	% Ni	% Cu	% S	Cr
Melba	MF 93	123.3	138.8	**ALTERED GABBRO:**	123.3	138.8	100	130.0	131.0	0.01	<0.01	0.37	56
Melba	MF 93			123.3 - 130.1 m: dark gray medium coarse grained gabbro with				131.0	132.0	0.02	<0.01	0.38	98
Melba	MF 93			finer grained HW margin;				132.0	133.0	0.01	<0.01	0.11	109
Melba	MF 93			trace sulfides;				133.0	134.0	0.01	<0.01	0.30	90
Melba	MF 93			HW contact probably 40° CA and conformable with overlying				134.0	135.0	<0.01	<0.01	0.67	41
Melba	MF 93			sediments;				135.0	136.0	0.01	<0.01	<0.1	76
Melba	MF 93			fine white carbonate-talc veins common;				136.0	137.0	0.02	<0.01	0.14	106
Melba	MF 93			ground conditions excellent;				137.0	138.0	0.02	<0.01	<0.1	231
Melba	MF 93			130.0-138.8m: severely altered and broken cream-green fine-				138.0	138.8	0.03	0.01	<0.1	277
Melba	MF 93			medium grained gabbro (?);									
Melba	MF 93			cut by numerous creamy colored carbonate veins carrying minor									
Melba	MF 93			to common coarse sphalerite and minor galena;									
Melba	MF 93			core quite broken in places (influence of fault below);									
Melba	MF 93	138.8	140.0	**FAULT:**	138.8	140.0	100						
Melba	MF 93			very broken mixture of clay pug with clasts of sediment and									
Melba	MF 93			gabbro;									
Melba	MF 93			pale gray-brown-cream color;									
Melba	MF 93			no core losses;									
Melba	MF 93	140.0	151.1	**SILTSTONE-SANDSTONE:**	140.0	151.1	100						
Melba	MF 93			interbedded siltstone-sandstone; pale brown altered coloration to									
Melba	MF 93			141.6 m., then dark gray;									
Melba	MF 93			BCA variable but settling down to to 70° near base;									
Melba	MF 93			cream colored carbonate veining common;									
Melba	MF 93			145.2 - 146.2m: cream colored carbonate veining, vuggy and									
Melba	MF 93			carrying abundant coarse galena-sphalerite;									
Melba	MF 93			core broken to 147.0 m., but then becoming very good;									
Melba	MF 93	151.1	159.4	**GABBRO:**	151.1	159.4	100	151.1	152.0	0.66	0.51	2.49	937
Melba	MF 93			151.1 - 155.8 m: dark gray medium grained gabbro, strongly				152.0	153.0	0.42	0.32	1.44	1070
Melba	MF 93			mineralised;				153.0	154.0	0.72	0.57	3.26	676
Melba	MF 93			fine (1-2mm) white carbonate veins common; pervasive carbonate				154.0	155.0	1.71	1.13	7.23	692
Melba	MF 93			alteration of gabbro;				155.0	155.8	0.60	0.58	2.47	613
Melba	MF 93			much of the sulfide is associated with the carbonate veins and				155.8	157.0	0.15	0.10	0.41	529
Melba	MF 93			the pervasive carbonate alteration;				157.0	158.0	0.06	0.03	0.11	518
Melba	MF 93			dominant sulfides are pentlandite and chalcopyrite, heavily				158.0	159.4	0.03	0.01	<0.1	508
Melba	MF 93			disseminated near base of interval;									
Melba	MF 93			ground conditions good;									
Melba	MF 93			155.8-159.4 m: continuation of gabbro from above but only									
Melba	MF 93			trace sulfides;									
Melba	MF 93			HW at 151.1 m: irregular and sharp, intrusive;									
Melba	MF 93			FW at 159.4 m: 35° CA and striking approximately 90° to									
Melba	MF 93			sediments below (ie) intrusive;									
Melba	MF 93	159.4	229.3	**SILTSTONE-SANDSTONE-SHALE:**	159.4	229.3	100						
Melba	MF 93			monotonous gray siltstone, medium-coarse grained sandstone									
Melba	MF 93			and minor dark gray-black shale beds;									

ALLEGIANCE MINING NL MELBA FLATS PROJECT DRILL HOLE MF 93

Project	Hole ID	Log		Description		Recovery		Assays					
		From	To		From	To	%	From	To	% Ni	% Cu	% S	Cr
Melba	MF 93			siltstone strongly calcareous in places;									
Melba	MF 93			BCA 55-60˚, steeper in places to 90˚;									
Melba	MF 93			minor quartz and quartz-carbonate veining;									
Melba	MF 93			syngenetic pyrite common in shaley beds;									
Melba	MF 93			ground conditions very good;									
Melba	MF 93	229.3	242.3	**ALTERED GABBRO:**	229.3	242.3	100						
Melba	MF 93			dark gray medium-coarse grained gabbro;									
Melba	MF 93			pervasive carbonate alteration and white-cream carbonate veins									
Melba	MF 93			common;									
Melba	MF 93			trace sulfides, typically associated with carbonate veins;									
Melba	MF 93			HW contact sharp 70˚ CA;									
Melba	MF 93			at 230.3 m: 400 mm sediment lath or xenolith suggesting									
Melba	MF 93			intrusive gabbro;									
Melba	MF 93			FW sharp 80˚ CA, but discordent to bedding;									
Melba	MF 93			dark coloration and black patches (serpentine?) towards FW									
Melba	MF 93			suggestive of ultramafic-mafic mix;									
Melba	MF 93			ground conditions excellent;									
Melba	MF 93	242.3	297.1	**SILTSTONE-SANDSTONE-SHALE:**	242.3	297.1	100						
Melba	MF 93			light gray-light brown siltstone interbedded with sandstone and									
Melba	MF 93			dark gray-black shale;									
Melba	MF 93			BCA 60-70˚;									
Melba	MF 93			syngenetic pyrite common in shales;									
Melba	MF 93			ground conditions excellent to 292.0m;									
Melba	MF 93			292.0-297.1 m: major cream colored carbonate veining common									
Melba	MF 93			with abundant chalcopyrite-sphalerite-galena in some veins;									
Melba	MF 93			ground broken;									
Melba	MF 93	297.1	304.5	**FINE GRAINED GABBRO??: with sediment xenoliths ??**	297.1	304.5	100						
Melba	MF 93			dark gray-dark brown fine-medium grained unit which has									
Melba	MF 93			appearance of gabbro or mafic sediment with narrow intervals of									
Melba	MF 93			fine grained sediment;									
Melba	MF 93			gradational with unit below....									
Melba	MF 93	304.5	312.0	**GABBRO:**	304.5	312.0	100						
Melba	MF 93			dark medium grained gabbro;									
Melba	MF 93			trace-nil sulfides;									
Melba	MF 93			Hw contact gradational;									
Melba	MF 93			FW contact sharp 80˚ CA;									
Melba	MF 93			ground conditions excellent;									
Melba	MF 93	312.0	325.2	**FINE GRAINED GABBRO or MAFIC SEDIMENT ??**	312.0	325.2	100	312.0	313.0	0.01	0.01	1.46	110
Melba	MF 93			similar to 297.1 m..... Petrology recommended;				313.0	314.0	0.01	0.01	4.05	184
Melba	MF 93			dark brown-gray fine grained spotty altered rock with the				314.0	315.0	0.01	<0.01	2.92	175
Melba	MF 93			appearance of either a mafic sediment or fine grained gabbro				315.0	316.0	0.01	<0.01	0.68	142
Melba	MF 93			mixed with light brown-fawn fine grained cherty sediments;				316.0	317.0	<0.01	<0.01	<0.1	96
Melba	MF 93			minor sulfides associated with carbonate and quartz-carbonate				317.0	318.0	<0.01	0.03	0.11	185

ALLEGIANCE MINING NL MELBA FLATS PROJECT DRILL HOLE MF 93

Project	Hole ID	Log		Description		Recovery		Assays					
		From	To		From	To	%	From	To	% Ni	% Cu	% S	Cr
Melba	MF 93			veins, and as masses and disseminations in altered rock;				318.0	319.0	<0.01	0.02	<0.1	217
Melba	MF 93			several cream colored quartz-carbonate veins with galena-				319.0	320.0	<0.01	0.02	<0.1	184
Melba	MF 93			sphalerite-chalcopyrite;				320.0	321.0	<0.01	<0.01	0.34	74
Melba	MF 93			ground conditions good;				321.0	322.0	<0.01	<0.01	<0.1	168
Melba	MF 93			gradational with unit below.....				322.0	323.0	<0.01	<0.01	0.75	106
								323.0	324.0	<0.01	<0.01	0.44	142
Melba	MF 93	325.2	381.9	**ALTERED GABBRO and possible ULTRAMAFIC COMPONENT:**	325.2	381.9	100	324.0	325.2	<0.01	<0.01	<0.1	99
Melba	MF 93			middle section of this unit is an altered coarse grained gabbro,				325.2	326.0	<0.01	<0.01	0.34	116
Melba	MF 93			but top and bottom sections (especially bottom section) has the				326.0	327.0	0.01	0.01	0.61	145
Melba	MF 93			appearance of an altered ultramafic;				327.0	328.0	<0.01	<0.01	0.43	8
Melba	MF 93			significant sulfides in the altered upper and lower sections;				328.0	329.0	<0.01	<0.01	0.48	6
Melba	MF 93			325.2 - 338.3 m: dark gray strongly altered mafic-ultramafic (?)				329.0	330.0	<0.01	<0.01	0.23	3
Melba	MF 93			with blotchy appearance;				330.0	331.0	<0.01	<0.01	0.31	1
Melba	MF 93			large cream colored carbonate masses in places;				331.0	332.0	<0.01	<0.01	0.43	4
Melba	MF 93			several coarse felspar-axinite (??) masses;				332.0	333.0	<0.01	<0.01	0.97	1
Melba	MF 93			minor-common sulfides;				333.0	334.0	<0.01	<0.01	1.22	2
Melba	MF 93			ground conditions excellent;				334.0	335.0	<0.01	<0.01	0.68	5
Melba	MF 93			sharp contact with interval below;				335.0	336.0	<0.01	<0.01	0.60	11
Melba	MF 93			338.3-369.5 m: light greenish-gray altered gabbro with abundant				336.0	337.0	<0.01	<0.01	0.25	13
Melba	MF 93			dark green-black spotting (hornblende/serpentinite?);				337.0	338.3	<0.01	<0.01	0.19	12
Melba	MF 93			thin carbonate veining common;									
Melba	MF 93			trace sulfides;				369.5	371.0	0.09	0.02	1.36	936
Melba	MF 93			ground conditions excellent;				371.0	372.0	0.13	0.03	0.52	1284
Melba	MF 93			gradational with				372.0	373.0	0.03	<0.01	<0.1	275
Melba	MF 93			369.5-381.9 m: altered ultramafics (?) dark green-black finer				373.0	374.0	0.04	<0.01	<0.1	463
Melba	MF 93			grained rock with large masses serpentine and serpentine				374.0	375.0	0.09	0.03	0.26	1197
Melba	MF 93			coated fractures;				375.0	376.0	0.12	0.03	0.62	1251
Melba	MF 93			thin carbonate-talc veins common;				376.0	377.0	0.12	0.02	0.17	1583
Melba	MF 93			minor-common sulfides as thin films in veins, and as aggregates				377.0	378.0	0.15	0.02	0.21	1625
Melba	MF 93			and disseminations in altered ultramafics;				378.0	379.0	0.14	0.02	0.31	1394
Melba	MF 93			interval more broken than previous one, becoming quite broken				379.0	380.0	0.14	0.02	0.66	1858
Melba	MF 93			below 378 m;				380.0	381.0	0.20	0.04	0.45	1961
Melba	MF 93			fine grained ?chilled / margin, possibly 50° CA;				381.0	381.9	0.09	0.02	<0.1	1546
Melba	MF 93	381.9	499.0	**INTERBEDDED SILTSTONE-SHALE-SANDSTONE:**	381.9	499.0	100						
Melba	MF 93			light gray siltstone interbedded with medium-coarse grained									
Melba	MF 93			sandstone and dark gray shale beds;									
Melba	MF 93			BCA typically 40-50° in upper section, gradually steepening down									
Melba	MF 93			hole to 60-70°;									
Melba	MF 93			390.8-390.9 m: 100 mm conformable sulfidic gabbro;									
Melba	MF 93			410.3 m: 400 mm zone of cream colored carbonate veins with									
Melba	MF 93			coarse sphalerite and galena;									
Melba	MF 93			428.7 m: 900mm broken zone with abundant white and cream									
Melba	MF 93			colored carbonate veining carrying sphalerite and galena;									
Melba	MF 93			431.2-434.6 m: black and dark gray shale with abundant white									
Melba	MF 93			and cream carbonate veins carrying minor galena-sphalerite;									
Melba	MF 93			core broken;									
Melba	MF 93			441.0-442.6 m: similar zone of carbonate veining but host									

ALLEGIANCE MINING NL MELBA FLATS PROJECT DRILL HOLE MF 93

Project	Hole ID	Log		Description		Recovery		Assays					
		From	To		From	To	%	From	To	% Ni	% Cu	% S	Cr
Melba	MF 93			sediment coarse sandstone-shale mixture;									
Melba	MF 93			core broken;									
Melba	MF 93			442.6-452.7 m: light gray siltstone-coarse sandstone;									
Melba	MF 93			BCA 40-45°;									
Melba	MF 93			ground conditions good;									
Melba	MF 93			452.7-458.4 m: dark gray shale with minor interbedded									
Melba	MF 93			siltstone-sandstone;									
Melba	MF 93			thin seams and veins of pyrite common in shale;									
Melba	MF 93			458.4-474.1 m: interbedded calcareous light gray sandstone-									
Melba	MF 93			light gray siltstone and minor dark gray shale;									
Melba	MF 93			BCA 45°;									
Melba	MF 93			good ground;									
Melba	MF 93			474.1-479.5 m: black pyritic and graphitic shales;									
Melba	MF 93			core very broken;									
Melba	MF 93			479.5-499.0 m: massive light-dark gray siltstone interbedded with									
Melba	MF 93			medium-coarse grained sandstone;									
Melba	MF 93			weakly calcareous in places;									
Melba	MF 93			BCA 35-45°;									
Melba	MF 93			ground conditions excellent;									
Melba	MF 93			**END of HOLE**									

COMPANY ALLEGIANCE MINING NL
PROJECT MELBA FLATS EL 43/1992
HOLE NUMBER MF 94

Commenced	
Completed	23-Apr-08
Logged by	LAN
Drilled by	Almac

Collar Details

Grid	**GDA**
Easting	366,684.2
Northing	5,367,919.4
Elevation	2213.4
Dip	-90
Bearing	

LENGTH (m)	382.0

Hole Size

To (m)	**Size**
87.2	HQ
382	NQ

Purpose of Hole

To test the Genets and Western Gabbros at depth beneath MF 87 and MF 88.

Comments on Completion

three gabbro dikes were intersected; eastern dike was unmineralised; Genets Dike intersected 5 (vertical) metres 1.18%Ni, 0.80%Cu, 4.4%S in HW section of dike;
western dike was extensively replaced by quartz-carbonate veining containing sporadic Pb-Zn mineralisation but low levels of Ni-Cu

Major core losses:

From	**To**	**% rec**

Hole Completion Condition

All steel removed from hole

Assay Summary

Rock Type	**From**	**To**	**%Ni**	**%Cu**	**%S**
gabbro	142.0	147.0	1.18	0.80	4.4

Down Hole Survey

Depth	**Dip**	**Mag Brg**	**Grid Brg**
0	**-90**		
50	**-89**	**310**	**324**
100	**-88**	**320**	**334**
150	**-88**	**310**	**324**
200	**-88**	**311**	**325**
250	**-87**	**304**	**318**
300	**-87**	***304***	***318***
350	**-87**	**302**	**316**
382	***-87***	***302***	***316***

Notes on Surveys

reading at 300 was double image and therefore rejected;

ALLEGIANCE MINING NL MELBA FLATS PROJECT DRILL HOLE MF94

Project	Hole ID	Log		Description	Recovery			Assays							
		From	To		From	To	%	From	To	% Ni	% Cu	% S	ppmAg	%Pb	%Zn
Melba	MF 94	0.0	3.0	**TRICONE:**	0.0	3.0	0								
Melba	MF 94			no core											
Melba	MF 94	3.0	13.5	**HEMATITIC SILTSTONE-SANDSTONE:**	3.0	4.0	30								
Melba	MF 94			interbedded dark gray siltstone- sandstone and reddish brown	4.0	5.0	80								
Melba	MF 94			hematitic siltstone-sandstone;	5.0	6.0	20								
Melba	MF 94			gray siltstone pyritic in places;	6.0	7.0	40								
Melba	MF 94			BCA 40°;	7.0	8.0	15								
Melba	MF 94			core broken;	8.0	9.0	30								
Melba	MF 94			gradational with....	9.0	9.5	90								
					9.5	10.9	100								
Melba	MF 94	13.5	67.5	**SILTSTONE-SANDSTONE:**	10.9	11.8	35								
Melba	MF 94			intermixed and interbedded gray fine grained siltstone and	11.8	12.9	25								
Melba	MF 94			medium-coarse grained sandstone; small lenses of coarse	12.9	13.7	80								
Melba	MF 94			sandstone embedded in pyritic siltstone in places (eg) 17.5m;	13.7	14.9	100								
Melba	MF 94			leached (vuggy) fine carbonate veins;	14.9	16.0	90								
Melba	MF 94			BCA 40°;	16.0	40.6	100								
Melba	MF 94			core generally broken;	40.6	42.2	80								
Melba	MF 94			41.8-42.2m: core very broken with minor pug seams;	42.2	67.5	100								
Melba	MF 94			possible small fault zone;											
Melba	MF 94			below 55m: minor shale bands with irregular bedding and											
Melba	MF 94			associated seams and veins of syngenetic pyrite;											
Melba	MF 94			minor leached quartz-carbonate veins;											
Melba	MF 94			core very broken;											
Melba	MF 94	67.5	91.7	**HEMATITIC SILTSTONE-SANDSTONE:**	67.5	91.7	100								
Melba	MF 94			hematitic red-brown siltstone-sandstone interbedded with dark											
Melba	MF 94			gray-light gray siltstone-sandstone;											
Melba	MF 94			BCA 40°;											
Melba	MF 94			ground conditions improve dramatically below 80m;											
Melba	MF 94			below 90m: increase in black shale component and core											
Melba	MF 94			becomes more broken with eratic BCA, close to sub-parallel to											
Melba	MF 94			core axis;											
Melba	MF 94	91.7	94.8	**GABBRO:**	91.7	94.8	100								
Melba	MF 94			dark gray medium grained gabbro;											
Melba	MF 94			HW sharp but broken;											
Melba	MF 94			FW broken and marked by 30mm quartz-carbonate vein;											
Melba	MF 94			no mineralisation recognised;											
Melba	MF 94			core very broken, especially in HW half;											
Melba	MF 94	94.8	140.8	**SILTSTONE-SANDSTONE, minor shale:**	94.8	140.8	100								
Melba	MF 94			fine-medium grained siltstone interbedded with light-medium											
Melba	MF 94			gray, medium-coarse grained sandstone, and minor dark gray											
Melba	MF 94			shale;											
Melba	MF 94			BCA 30° near top of unit but increasing to 40-45° down hole;											
Melba	MF 94			96.7m: 200mm brecciated and veined zone with coarse											
Melba	MF 94			galena-sphalerite in quartz-carbonate vein;											
Melba	MF 94			110.1-111.1m: abundant white carbonate veining;											
Melba	MF 94	140.8	151.0	**GABBRO-mineralised:**	140.8	151.0	100	140.8	142.0	0.39	0.28	1.00	4	<0.01	0.01
Melba	MF 94			medium-coarse grained dark gray altered gabbro;				142.0	143.0	0.77	0.58	2.49	5	<0.01	0.01
Melba	MF 94			140.8-147.5m: strongly mineralised with several metres				143.0	144.0	0.75	0.58	2.78	4	<0.01	0.01
Melba	MF 94			heavily disseminated-semi-massive pentlandite-chalcopyrite;				144.0	145.0	1.69	1.05	6.20	6	<0.01	0.01
Melba	MF 94			147.5-151.0m: mineralisation rapidly decreases towards FW;				145.0	146.0	1.85	1.17	7.51	6	<0.01	0.01
Melba	MF 94			HW contact sharp 35° CA and parallel to bedding;				146.0	147.0	0.83	0.62	3.08	4	<0.01	0.01
Melba	MF 94			FW contact obscure with irregular contact with sediments				147.0	148.0	0.33	0.25	1.22	2	<0.01	<0.01
Melba	MF 94			which contain coarse euhedral pyrite;				148.0	149.0	0.08	0.05	0.17	1	<0.01	0.01
Melba	MF 94			ground conditions generally good;				149.0	150.0	0.05	0.02	0.09	<1	<0.01	<0.01
								150.0	151.0	0.03	0.01	0.37	1	<0.01	0.01
Melba	MF 94	151.0	187.0	**SILTSTONE-SANDSTONE-minor shale:**	151.0	187.0	100								
Melba	MF 94			light-medium gray fine-medium grained siltstone and coarse											
Melba	MF 94			sandstone with minor shale bands;											
Melba	MF 94			BCA 40-45°;											
Melba	MF 94			minor cream colored carbonate veins with trace sphalerite-											
Melba	MF 94			galena;											
Melba	MF 94			ground conditions generally good;											
Melba	MF 94			gradational with interval below;											
Melba	MF 94	187.0	228.1	**SILTSTONE-SHALE-common quartz-carbonate veins:**	187.0	208.0	100								
Melba	MF 94			interval dominated by light brown-fawn-light gray fine grained	208.0	209.0	80								
Melba	MF 94			siltstone interbedded with minor shale and medium grained	209.0	209.5	50								
Melba	MF 94			sandstone;	209.5	228.1	100								
Melba	MF 94			BCA 40-45°;											
Melba	MF 94			interval characterised by abundance of quartz and quartz-											
Melba	MF 94			carbonate veins, often accompanied by coarse galena-											
Melba	MF 94			sphalerite-minor chalcopyrite mineralisation;											
Melba	MF 94			187.6m: 200mm cream colored carbonate vein with abundant											
Melba	MF 94			coarse sphalerite-galens;											
Melba	MF 94			201.4m: cream carbonate and quartz-carbonate vein with											
Melba	MF 94			minor galena-sphalerite;											
Melba	MF 94			208.3-209.5m: very broken zone with some core loss (possible											
Melba	MF 94			fault ?);											
Melba	MF 94			213.8-216.6m: hematitic sandstone;											
Melba	MF 94			below 218m: core becomes very broken;											
Melba	MF 94			220.5-222.7m: abundant and massive quartz and cream colored				220.5	221.5	<0.01	<0.01	0.91	1	0.04	0.24
Melba	MF 94			carbonate veining infilling open spaces with vuggy growth				221.5	222.7	<0.01	<0.01	1.19	12	0.58	1.52
Melba	MF 94			textures; sphalerite and galena common as large seggregations											

ALLEGIANCE MINING NL MELBA FLATS PROJECT DRILL HOLE MF94

Melba	MF 94			and infilling late veins;											
Melba	MF 94			222.7-228.1m: pale fawn-brown altered sediments (?);											
Melba	MF 94	228.1	247.4	**ALTERED GABBRO (?) with massive quartz-carbonate**	228.1	237.3	100	228.1	229.0	<0.01	<0.01	0.85	1	0.04	0.19
Melba	MF 94			**veining:**	237.3	238.0	60	229.0	230.0	<0.01	<0.01	0.21	<1	0.02	0.03
Melba	MF 94			interval is intensely altered and veined and difficult to	238.0	247.4	100	230.0	231.0	0.02	0.01	0.11	1	0.04	0.11
Melba	MF 94			determine true gabbro HW and FW;				231.0	232.0	0.02	<0.01	0.07	1	0.01	0.06
Melba	MF 94			where seen, gabbro is dark gray, medium grained, intensely				232.0	233.0	0.02	<0.01	0.06	2	<0.01	0.04
Melba	MF 94			altered but carrying only trace sulfides;				233.0	234.0	0.02	<0.01	0.09	1	0.01	0.08
Melba	MF 94			interval dominated by massive quartz-cream carbonate				234.0	235.0	0.01	<0.01	0.23	2	0.06	0.34
Melba	MF 94			veining as large masses and thick veins; veins often zoned				235.0	236.0	0.02	0.01	0.92	7	0.17	1.11
Melba	MF 94			and crystalline around open space vugs;				236.0	237.0	0.10	0.04	0.24	4	0.07	0.28
Melba	MF 94			green nickel blooms common in altered gabbro and in veins;				237.0	238.0	0.01	<0.01	0.33	5	0.13	0.52
Melba	MF 94			sulfides common in veins as coarse sphalerite with lesser				238.0	239.0	0.05	0.01	0.14	1	0.02	0.04
Melba	MF 94			galena and minor chalcopyrite; often associated with minor				239.0	240.0	0.05	<0.01	0.10	1	0.03	0.06
Melba	MF 94			pyrite-pentlandite(?)-pyrrhotite(?) occuring in thin late stage				240.0	241.0	0.05	<0.01	0.07	1	0.04	0.06
Melba	MF 94			veins and commonly as coarse seggregations and seams in				241.0	242.0	0.06	0.02	0.26	1	0.04	0.06
Melba	MF 94			the major quartz-carbonate veins;				242.0	243.0	0.03	<0.01	0.11	1	0.01	0.08
Melba	MF 94			carbonate difficult to react to acid;				243.0	244.0	0.01	<0.01	0.91	3	0.06	0.38
Melba	MF 94			core near FW and HW strongly altered and obscured by				244.0	245.0	0.01	0.01	1.70	2	0.03	0.13
Melba	MF 94			veining; difficult to say if pale brown rocks near HW and FW				245.0	246.0	<0.01	<0.01	0.62	11	0.29	0.86
Melba	MF 94			are altered sediments or silicified fine grained gabbro;				246.0	247.4	<0.01	<0.01	0.74	7	0.19	0.64
Melba	MF 94			core moderately broken in places;											
Melba	MF 94	247.4	382.0	**WELL BEDDED SILTSTONE:**	247.4	382.0	100								
Melba	MF 94			light brown-medium gray fine-medium grained siltstone and											
Melba	MF 94			coarse sandstone with minor shale beds;											
Melba	MF 94			253.3-254.5m: massive cream carbonate-quartz vein with											
Melba	MF 94			lithic fragments and common coarse sphalerite-minor galena-											
Melba	MF 94			chalcopyrite-pyrite;											
Melba	MF 94			BCA generally 45°;											
Melba	MF 94			ground conditions excellent;											
Melba	MF 94			306.5-307.2m: quartz carbonate veining with minor sphalerite;											
Melba	MF 94			310.0-330.0m: coarse grained mafic sandstone in this interval											
Melba	MF 94			carries significant disseminated sulfides-possibly pyrrhotite;											
Melba	MF 94			below 330.0m: sequence dominated by coarse gritty sandstone											
Melba	MF 94			BCA generally 50-55° but variable from 30-70°;											
Melba	MF 94			ground conditions excellent;											
Melba	MF 94			END of HOLE											

COMPANY ALLEGIANCE MINING NL
PROJECT MELBA FLATS EL 43/1992
HOLE NUMBER MF 95

Commenced	28-Apr-08
Completed	12-May-08
Logged by	LAN
Drilled by	Almac

Collar Details

Grid	**GDA**
Easting	366,722.5
Northing	5,368,017.5
Elevation	2212.9
Dip	-90
Bearing	
LENGTH (m)	293.5

Hole Size

To (m)	**Size**
87.6	HQ
293.5	HQ

Purpose of Hole

to test NE strike extension of Genets at moderate depth;

Comments on Completion

the Eastern Dike was unmineralised;
the central section of Genets Dike was well mineralised: 122.9-126.1m., 3.2 vertical metres 1.12% Ni, 0.84% Cu, 4.03% S;
the western dike contained minor mineralisation including 224.0-226.3m., 2.3m 0.17% Ni, 0.09% Cu;

Major core losses:

From	**To**	**% rec**

Hole Completion Condition

NQ rods removed from hole;
HQ casing was dropped and not retrieved when hole collapsed over top of casing;

Assay Summary

Rock Type	**From**	**To**	**% Ni**	**% Cu**	**% S**
gabbro	122.9	126	1.12	0.84	4.03

Down Hole Survey

Depth	**Dip**	**Mag Brg**	**Grid Brg**
0	-90		
50	-89	290	304
100	-89	45	59
150	-89	295	309
200	-89	295	309
250	-88	275	289
293.5	-88	275	289

Notes on Surveys

ALLEGIANCE MINING NL MELBA FLATS PROJECT DRILL HOLE MF 95

Project	Hole ID	Log		Description	Recovery			Assays				
		From	To		From	To	%	From	To	% Ni	% Cu	% S
Melba	MF 95	0.0	3.0	**TRICONE:**	0.0	3.0	0					
Melba	MF 95			no core;								
Melba	MF 95	3.0	20.5	**SILTSTONE-SANDSTONE:**	3.0	4.0	30					
Melba	MF 95			light gray fine-medium grained siltstone interbedded with	4.0	6.0	50					
Melba	MF 95			medium grained light gray sandstone;	6.0	7.0	40					
Melba	MF 95			core very broken with eratic BCA's;	7.0	8.0	60					
Melba	MF 95			gradational with....	8.0	9.0	60					
					9.0	10.0	70					
Melba	MF 95	20.5	38.4	**HEMATITIC SILTSTONE-SANDSTONE:**	10.0	11.0	100					
Melba	MF 95			red-brown hematitic siltstone-sandstone with minor interbedde	11.0	12.0	90					
Melba	MF 95			light gray siltstone;	12.0	13.0	80					
Melba	MF 95			core very broken but gradually improving down hole;	13.0	14.5	100					
Melba	MF 95			BCA 30-40°;	14.5	16.0	70					
Melba	MF 95			gradational with.....	16.0	18.0	100					
					18.0	19.0	80					
Melba	MF 95	38.4	64.1	**SILTSTONE-SANDSTONE:**	19.0	20.5	60					
Melba	MF 95			light and dark gray medium-coarse grained siltstone and	20.5	23.0	100					
Melba	MF 95			sandstone with minor interbedded fine siltstone and shale;	23.0	24.0	90					
Melba	MF 95			BCA 35-40°;	24.0	25.0	70					
Melba	MF 95			ground conditions slowly improving down hole but still some	25.0	26.5	70					
Melba	MF 95			very broken zones;	26.5	64.1	100					
Melba	MF 95	64.1	75.7	**ALTERED GABBRO:**	64.1	75.7	100					
Melba	MF 95			light gray medium grained strongly altered gabbro;								
Melba	MF 95			trace-minor euhedral sulfides (pyrite) on joints and in thin								
Melba	MF 95			carbonate veins near HW and FW;								
Melba	MF 95			HW contact sharp 50° CA, with a strike similar to bedding but								
Melba	MF 95			bedding dip 40° CA (ie) contact disconformable;								
Melba	MF 95			FW broken;								
Melba	MF 95			ground moderately competent but a few broken zones-								
Melba	MF 95			generally associated with strong talc-carbonate alteration;								
Melba	MF 95	75.7	78.5	**DARK MAFIC ROCK (sediment or basalt?):**	75.7	78.5	100					
Melba	MF 95			dark gray fine grained rock with igneous appearance but relict								
Melba	MF 95			bedding in places;								
Melba	MF 95	78.5	81.6	**SILTSTONE-SANDSTONE:**	78.5	81.6	100					
Melba	MF 95			dark gray fine grained siltstone interbedded with minor medium								
Melba	MF 95			grained sandstone;								
Melba	MF 95			BCA 35-40°;								
Melba	MF 95			ground moderately competent;								
Melba	MF 95			gradational with.....								
Melba	MF 95	81.6	88.3	**HEMATITIC SILTSTONE:**	81.6	88.3	100					
Melba	MF 95			red-brown fine-medium grained siltstone interbedded with								
Melba	MF 95			minor hematitic sandstone;								
Melba	MF 95			BCA 45°;								
Melba	MF 95			core moderately broken;								
Melba	MF 95	88.3	92.0	**GRAY SILTSTONE:**	88.3	92.0	100					
Melba	MF 95	92.0	100.0	**HEMATITIC SILTSTONE-SANDSTONE:**	92.0	100.0	100					
Melba	MF 95			BCA 35-40°;								
Melba	MF 95			ground conditions good;								
Melba	MF 95			gradational with.....								
Melba	MF 95	100.0	121.2	**SILTSTONE-SANDSTONE:**	100.0	121.2	100					
Melba	MF 95			dark gray siltstone interbedded with dark gray coarse grained								
Melba	MF 95			sandstone;								
Melba	MF 95			BCA 35-45°;								
Melba	MF 95			soft sediment deformation in places;								
Melba	MF 95			ground conditions generally good;								
Melba	MF 95	121.2	128.6	**ALTERED and MINERALISED GABBRO:**	121.2	128.6	100	121.2	122.0	0.02	0.01	0.08
Melba	MF 95			dark gray medium grained gabbro with top half well mineralised;				122.0	122.9	0.09	0.02	0.53
Melba	MF 95			HW contact marked by 10mm carbonate-talc vein at 55° CA;				122.9	124.0	1.30	0.89	4.89
Melba	MF 95			cream colored carbonate veining common throughout;				124.0	125.0	1.47	0.99	5.24
Melba	MF 95			121.2-122.8m: minot to common coarse grained mineralisation;				125.0	126.1	0.63	0.52	2.08
Melba	MF 95			122.8m: 40mm cream quartz-carbonate vein with coarse				126.1	127.0	0.11	0.18	0.32
Melba	MF 95			sphalerite;				127.0	127.8	0.05	0.02	0.07
Melba	MF 95			122.9-126.1m: common-abundant coarse grained sulfides;				127.8	128.6	0.03	0.02	0.32
Melba	MF 95			interval cut by several significant carbonate veins;								
Melba	MF 95			very abrupt base to mineralisation in middle of gabbro-marked								
Melba	MF 95			by thin talc vein;								
Melba	MF 95			below 126.1m: essentially unmineralised except for minor								
Melba	MF 95			mineralisation on FW;								
Melba	MF 95			FW of gabbro diffuse and not clear cut;								

ALLEGIANCE MINING NL MELBA FLATS PROJECT DRILL HOLE MF 95

Project	Hole ID	Log		Description	Recovery			Assays				
		From	To		From	To	%	From	To	% Ni	% Cu	% S
Melba	MF 95	128.6	160.5	**SILTSTONE-SHALE-SANDSTONE- very calcareous:**	128.6	160.5	100					
Melba	MF 95			light and dark gray fine grained siltstone interbedded with								
Melba	MF 95			medium-coarse grained sandstone and minor shale beds;								
Melba	MF 95			BCA 40-45°;								
Melba	MF 95			ground conditions good;								
Melba	MF 95			below 135m: coarse grained sandstones pervasively altered and								
Melba	MF 95			strongly calcareous;								
Melba	MF 95			gradational with.....								
Melba	MF 95	160.5	192.7	**HEMATITIC SILTSTONE-SANDSTONE:**	160.5	192.7	100					
Melba	MF 95			red brown hematitic siltstone interbedded with red-brown medium								
Melba	MF 95			and coarse grained hematitic sandstone; several minor beds of								
Melba	MF 95			gray fine grained siltstone and minor sandstone;								
Melba	MF 95			BCA 30-35°;								
Melba	MF 95			ground conditions good;								
Melba	MF 95	192.7	208.3	**SILTSTONE-SANDSTONE:**	192.7	208.3	100					
Melba	MF 95			light and dark graysiltstone interbedded with medium grained								
Melba	MF 95			sandstone and minor beds of dark gray shale;								
Melba	MF 95			BCA 40-45°;								
Melba	MF 95			ground conditions good;								
Melba	MF 95			199-208m: several 50-75mm white quartz and white quartz-								
Melba	MF 95			cream carbonate veins at irregular orientations to CA; quartz-								
Melba	MF 95			carbonate veins contain dark brown sphalerite and minor								
Melba	MF 95			coarse pyrite;								
Melba	MF 95	208.3	238.5	**GABBRO:**	208.3	238.5	100					
Melba	MF 95			dark gray coarse-medium grained gabbro with pervasive pale								
Melba	MF 95			green talc-carbonate alteration;								
Melba	MF 95			HW sharp 70° CA;								
Melba	MF 95			FW sharp 60° CA;								
Melba	MF 95			thin cream colored carbonate veins common, throughout,								
Melba	MF 95			ocassionally carrying coarse sphalerite and minor pyrite;								
Melba	MF 95			214.7-215.0m: 300mm cream colored carbonate vein with								
Melba	MF 95			minor coarse sphalerite;								
Melba	MF 95			217.3-217.7m: 400mm cream carbonate-white quartz vein;				217.7	219.0	0.02	0.01	0.26
Melba	MF 95			217.7-226.3m: dark gray, coarse grained strongly altered				219.0	220.0	0.02	0.01	0.23
Melba	MF 95			gabbro with significant sulfides as aggregates and				220.0	221.0	0.03	0.01	0.20
Melba	MF 95			disseminations; (<0.5% sulfides)				221.0	222.0	0.03	0.01	0.01
Melba	MF 95			below 226.3m: gabbro slightly lighter in color and medium				222.0	223.0	0.06	0.01	0.59
Melba	MF 95			grained with only trace sulfides;				223.0	224.0	0.07	0.02	0.09
Melba	MF 95			238.0-238.5m: minor coarse euhedral pyrite in finer grained				224.0	225.0	0.14	0.08	0.66
Melba	MF 95			gabbro close to margin;				225.0	226.3	0.18	0.09	1.07
Melba	MF 95	238.5	248.5	**SILTSTONE-SANDSTONE:**	238.5	248.5	100					
Melba	MF 95			dark gray siltstone interbedded with dark gray medium-coarse								
Melba	MF 95			grained sandstone (mafic clasts);								
Melba	MF 95			246.4m: 400mm ?altered gabbro?								
Melba	MF 95			BCA 50-60°;								
Melba	MF 95			core quite broken;								
Melba	MF 95			gradational with.....								
Melba	MF 95	248.5	254.0	**HEMATITIC SILTSTONE:**	248.5	254.0	100					
Melba	MF 95			red-brown hematitic siltstone with minor interbedded light gray								
Melba	MF 95			siltstone;								
Melba	MF 95			BCA 50-60°;								
Melba	MF 95			ground moderately good;								
Melba	MF 95			gradational with.....								
Melba	MF 95	254.0	269.0	**SHALE-SILTSTONE-SANDSTONE (carbonate-sulfide veins**	254.0	269.0	100					
Melba	MF 95			light and dark gray siltstone interbedded with minor dark gray								
Melba	MF 95			shales and medium-coarse grained sandstone;								
Melba	MF 95			BCA 50-60°;								
Melba	MF 95			ground conditions good;								
Melba	MF 95	269.0	275.4	**BROKEN SEDIMENTS and SEVERAL MINERALISED**	269.0	275.4	100					
Melba	MF 95			**BRECCIA ZONES-POSSIBLE FAULT ?**								
Melba	MF 95			interval of dark gray medium-coarse grained sandstones cut by								
Melba	MF 95			several carbonate and quartz-carbonate veins carrying								
Melba	MF 95			abundant galena-sphalerite; some veins brecciated and may								
Melba	MF 95			represent fault zones;								
Melba	MF 95			269.0m: 200mm veined zone with dark mafic clasts and minor								
Melba	MF 95			sphalerite-galena;								
Melba	MF 95			274.6m: 300mm cream colored carbonate vein carrying semi-								
Melba	MF 95			massive pyrite-galena-sphalerite;								
Melba	MF 95			275.3m: 100mm cream colored carbonate vein carrying coarse								
Melba	MF 95			galena-sphalerite-pyrite;								

ALLEGIANCE MINING NL MELBA FLATS PROJECT DRILL HOLE MF 95

Project	Hole ID	Log		Description	Recovery			Assays				
		From	To		From	To	%	From	To	% Ni	% Cu	% S
Melba	MF 95			interval generally very broken;								
Melba	MF 95	275.4	293.5	**SHALE-SILTSTONE-SANDSTONE:**	275.4	293.5	100					
Melba	MF 95			dark gray shales interbedded with fawn and gray medium-								
Melba	MF 95			coarse grained sandstone and light gray siltstone;								
Melba	MF 95			BCA 50-55°;								
Melba	MF 95			minor carbonate veining generally carrying galena-sphalerite;								
Melba	MF 95			ground moderately competent;								
Melba	MF 95			**END of HOLE**								

Allegiance Metals - Drill Log

BHID MF96

Collar

Project	BHID	Easting	Northing	RL	Depth	Date	Geologist
Melba	MF96	366610	5367834	2213	256	20/05/2008	DG

Surveys

Project	BHID	Depth	Azm_Amg	Dip
Melba	MF96	0	315	-50
Melba	MF96	50	203.2	-50.5
Melba	MF96	100	315.2	-50.0
Melba	MF96	150	312.2	-49.5
Melba	MF96	200	313.2	-49.5
Melba	MF96	256	315.2	-49.5
Raw data (uncorrected)				
Melba	MF96	50	190	-50.5
Melba	MF96	100	302	-50.0
Melba	MF96	150	299	-49.5
Melba	MF96	200	300	-49.5
Melba	MF96	256	302	-49.5

Hole Sizes

From	Size
0	HQ
78	NQ

Drilled By

Almac

Analyses By

BRL

Comments

Significant Intersections

Nth Cuni - Genets 100.0 - 101.9 1.9m @ 1.0% Ni and 0.8% Cu.

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF96	0	3		LOSS							No core recovery - tri cone?
Melba	MF96	3	10	Ccf	GWAC		A3	0.00	Bk	Bd	55	Pale grey-green lithic wacke and siltstone. Core heavily fractured and recovery around 75% (estimated). BCA around 55 degrees, rock somewhat sheared with disrupted lenses of sand grade material surrounded by finer grained silts.
Melba	MF96	10	14.5	Ccf	HEVC	Ht	R3	0.00	Df	Bd	65	Well-bedded hematitic volcaniclastic lithic wacke/greywacke and minor siltstone. BCA around 65 degrees. Pervasive hematite alteration with distinct red-brown colouration, diffuse boundary with lower interval. Core quite broken.
Melba	MF96	14.5	36.9	Ccf	GWAC		A3	0.20	Sp			Pale grey-green quartz-feldspar greywacke and siltstone. BCA quite variable, from around 60 degrees to 90 degrees and locally more variable where significantly deformed. Minor coarse disseminated pyrite. Quartz veining at 20.2m and 31.2m. Bedding is generally sheared and disrupted. Core often quite fractured.
Melba	MF96	36.9	42.7	Cbg	GABB	CbSp	G3	0.00	Sp			Massive altered medium grained, mid green gabbro. Serpentine-luecoxene altered adjacent to uphole contact, carbonate(?) altered for majority of interval. No sulphide observed except trace chalcopyrite in a quartz vein at 40.0m.
Melba	MF96	42.7	54.6	Ccf	GWAC		A3	0.00	Bk	Bd	70	Pale grey-green quartz-feldspar lithic wacke and siltstone. Generally well bedded with fairly consistent BCA around 70 degrees. Grading and rip-up clasts give uphole facing.
Melba	MF96	54.6	60	Cbg	GABB	Cb	G3	0.25	Sp			Massive altered medium grained, mid green gabbro. Predominantly carbonate(?) altered. Sulphide occurs as sparse individual grains (disseminations) and minor veinlets, with a general increase in concentration downhole although still very minor to trace. Quite broken, probably faulted at upper contact.
Melba	MF96	60	67	Ccf	SILT		A3	1.00	Ft			Mixed zone of siltstone and greywacke, with lesser black shale and a small gabbro dyke at 61.5m. All quite broken and fractured with some gritty and partially clay altered faulted sediments. Often pyritic, as coarse disseminations and veins.
Melba	MF96	67	71.2	Cbg	GABB	Cb	G3	0.01	Ft			Massive altered medium grained, mid green gabbro. Some serpentine alteration. Sulphide essentially absent, single veinlet observed. Faulted upper and lower contacts, also minor faulting within gabbro.
Melba	MF96	71.2	88.9	Ccf	GWAC		A3	1.00	Df			Pale grey-green quartz-feldspar lithic wacke and siltstone. Generally well bedded with fairly consistent BCA around 70 degrees, but some localised bedding disruptions. Grading gives uphole facing. Individual beds can be significantly pyritic, also coarse grained disseminated pyrite unrelated to bedding. Minor qtz-carb veining. Approaching downhole contact, hematite altered clasts become notable in sand-sized fraction. Core generally much more intact than hole so far.
Melba	MF96	88.9	93.8	Ccf	HEVC	Ht	R3	0.00	Df	Bd	70	Well-bedded hematitic volcaniclastic lithic wacke/greywacke and minor siltstone. BCA around 70 degrees. Pervasive hematite alteration with distinct red-brown colouration.
Melba	MF96	93.8	96.3	Ccf	SILT		G3	1.00	Sp	Bd	80	Mid green and pale grey-green siltstone. BCA somewhat variable and locally

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
												bedding is brecciated. Later buff to colourless calcite veining. Coarse pyrite
												euhedra disseminated throughout. Small gabbro dyke from 96.1 to 96.2m.
												Core quite intact.
Melba	MF96	96.3	101.9	Cbg	GABB		G3	1.00	Sp			Massive fine to coarse grained altered mineralised gabbro. General decrease in
												apparent grainsize at margins - chilled? Mostly sulphide is minor to trace,
												although approximately 1m is strongly mineralised (>>5% sulphide). Sulphide
												occurs as finely disseminated grains. Best grade from 100.0 to 101.0,
												immediately downhole of late buff to colourless carbonate veining.
												Lower contact clearly intrusive/igneous.
Melba	MF96	101.9	106.3	Ccf	SILT		A3	0.50	Gr	Bd	60	Pale grey and grey-green siltstone with minor greywacke. BCA locally variable and
												brecciated, but overall fairly consistent around 60. Minor disseminated pyrite,
												mostly adjacent to uphole contact with gabbro. Minor late carbonate-quartz
												veining.
Melba	MF96	106.3	131	Ccf	GWAC		G3	0.25	Gr	Bd	60	Pale green, grey-green, dark grey and buff/pale brown greywacke and siltstone,
												with minor shale. BCA locally variable and brecciated, but generally around 60
												degrees. Minor carbonate-quartz veining throughout; most significant at 117.4-
												117.6m, where there is significant sphalerite, galena and arsenopyrite associated
												with the carbonate veining. Core somewhat fractured around 125.5m.
Melba	MF96	131	141.9	Ccf	GWAC		G2	0.10	Ft	Bd	60	Pale grey and grey-green greywacke with minor siltstone. BCA quite variable and
												brecciated, but most common orientation is around 60 degrees. Graded beds
												face uphole.
Melba	MF96	141.9	143.1		FALT	Cb	G3		Ft			Brittle fault in sediments at boundary of gabbro. Minor carbonate fill, 0.4m core
												loss.
Melba	MF96	143.1	147.5	Cbg	GABB	Sp	G3	0.05	Ft			Massive fine to coarse grained altered gabbro. Chilled upper margin.
												Sulphide present as trace fine disseminations. Serpentine-leucoxene alteration
												dominates where sulphide is present.
Melba	MF96	147.5	151	Cbg	GABB	Cb	G3	0.05	Ft			Massive coarse grained altered gabbro. Faulted and broken with minor core loss.
												Sulphide present as trace fine disseminations.
Melba	MF96	151	157.1	Ccf	GWAC		A3	0.00	Ft	Bd	60	Mid green and mid to dark grey greywacke and siltstone. BCA quite variable and
												brecciated. Core moderately fractured.
Melba	MF96	157.1	157.2		FALT	Cy	G3	0.00	Ft	Ft	80	Puggy brittle fault in greywacke. Gritty clay fill.
Melba	MF96	157.2	173.7	Ccf	GWAC	Cb	G3	0.25	Sp	Bd	60	Mid green, grey-green, dark grey and buff/pale brown greywacke and siltstone,
												with minor shale. BCA quite variable and locally brecciated, but often around 60
												degrees. Minor carbonate-quartz veining throughout. Graded beds give uphole
												facing. Minor pyrite veining. Trace sp-gn with carbonate veining around 160m.
Melba	MF96	173.7	174.9	Cbg	GABB	Sp	G3	0.25	Sp			Massive medium grained altered gabbro. Some serpentine alteration. Trace
												disseminated fine grained sulphide, with a small zone around 174.3m that has
												small aggregates of sulphide (notably chalcopyrite, and a brassy Fe-Ni sulphide?).

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF96	174.9	175.4	Ccf	GWAC		A4	0.25	Sp			Massive mid to dark grey heavily altered volcaniclastics. Brecciated, with serpentine fracture fill surrounding breccia fragments of altered sediments. Fine veins of sulphide (pe?).
Melba	MF96	175.4	180.3	Cbg	GABB		G3	0.10	Sp			Massive medium grained altered gabbro. Trace disseminated fine grained sulphides.
Melba	MF96	180.3	181.1		VEIN	Cb	A1	1.00	Sp			Lower 0.8m of gabbro (above) is largely replaced by carbonate-quartz-sulphide veining - notably sphalerite and galena. Calcite varies from colourless to buff (ferroan?) and vaugely pinkish (suggests Mn). Small patches of heavily altered gabbro remain.
Melba	MF96	181.1	192.2	Ccf	GWAC		G2	0.10	Ft	Bd	60	Mid grey and grey-green greywacke with minor siltstone. BCA locally variable and brecciated, but most common orientation is around 60 degrees. Graded beds face uphole. Some laminated siltstones.
Melba	MF96	192.2	196.9	Ccf	SILT	SiPy	A4	0.50	Gr	Bd	70	Mid to dark grey and grey green laminated siltstone with lesser gritty layers and minor shale. BCA fairly consistent around 70 degrees, but locally deformed. Minor silica and pyrite veining.
Melba	MF96	196.9	229.1	Ccf	GWAC		G3	0.25	Gr			Mid green and mid to dark grey greywacke and siltstone in roughly equal proportions. Bedding varies throughout interval; at uphole end BCA is around 60, gradually decreases downhole to parallel to core axis at 221.3 before increasing again; strong evidence of gentle to open folding. Individual beds often brecciated. Locally pyritic. Minor late carbonate veining.
Melba	MF96	229.1	236.7	Ccf	SILT	SiPy	A4	0.50	Gr	Bd	80	Mid to dark grey and grey-green laminated siltstone with lesser gritty layers and minor shale. BCA fairly consistent around 80 degrees, but locally deformed. Minor silica and pyrite veining. Difficult to be certain but may be a repitition of the laminated silts from 192.2-196.9m.
Melba	MF96	236.7	256	Ccf	GWAC		G3	0.10	Bk	Bd	60	Massive grey-green feldspar-quartz lithic greywacke with lesser siltstone. BCA usually brecciated and disrupted but where intact tends to be around 60 degrees. Facing still uphole based on graded beds so probably not fold repeated beds in previous interval. END.

Allegiance Metals - Drill Log

BHID

MF97

Collar

Project	BHID	Easting	Northing	RL	Depth	Date	Geologist
Melba	MF97	366593.4	5367672.5	2214.1	336.2	12/06/2008	TC

Surveys

Project	BHID	Depth	Azm_Amg	Dip
Melba	MF97	0	0	-90
Melba	MF97	50	52	-89
Melba	MF97	100	15	-89
Melba	MF97	150	19	-89
Melba	MF97	200	344	-88
Melba	MF97	250	329	-87
Raw data (uncorrected)				

Hole Sizes

From	Size
0	HQ

Drilled By

Almac

Analyses By

BRL

Comments

MF97 is an exploration drillhole near the Genets working, Melba Flats.

Significant Intersections

Nth Cuni - Genets 210.0 - 216.0 6.0m @ 0.8% Ni and 0.7% Cu.
including 212.0 - 214.0 2.0m @ 1.3% Ni and 0.9% Cu.

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF97	0	3		LOSS							Tri Cone, no core recovery.
Melba	MF97	3	10	Ccf	GWAC	Cy	A2	0.00	Bk			Pale grey to dark grey, weathered volcaniclastic siltsone and greywacke with minor black shale. Deeply weathered and broken. Core loss.
Melba	MF97	10	23	Ccf	GWAC	Cy	A2	0.00	Bk	Bd	25	Pale grey, feldspar lithic volcaniclastic greywacke and siltstone. Abundant rip clasts. Moderately weathered and broken.
Melba	MF97	23	26.8	Ccf	SHAL	Cy	N	0.00	Sp	Bd	20	Black shale and interbedded pale grey volcaniclastic siltsone.
Melba	MF97	26.8	35.3	Ccf	GWAC	Cy	A2	0.00	Bk			Pale grey, feldspar lithic volcaniclastic greywacke and siltstone. Abundant rip clasts. Moderately weathered and broken.
Melba	MF97	35.3	35.5		FALT	Cy	A2	0.00	Ft			Puggy Fault. Core loss. Grey clay.
Melba	MF97	35.5	56.9	Ccf	GWAC	Cy	A2	0.00	Bk	Bd	30	Pale grey, feldspar lithic volcaniclastic greywacke and siltstone. Abundant rip clasts. Moderately weathered and broken. Weak chlorite pervasive alteration.
Melba	MF97	56.9	69.5	Ccf	HEVC	He	R3	0.00	Gr	Bd	30	Red to purple, hematitic feldspar lithic volcaniclastic greywacke and siltstone. Well bedded, graded beds. Pervasive hematite staining.
Melba	MF97	69.5	113	Ccf	GWAC	Ch	A2	0.00	Sp	Bd	45	Pale grey, feldspar lithic volcaniclastic greywacke and siltstone. Abundant rip clasts. Pervasive chlorite alteration. Minor disrupted black shale bands.
Melba	MF97	113	125.5	Ccf	HEVC	He	R3	0.00	Gr	Bd	30	Red to purple, hematitic feldspar lithic volcaniclastic greywacke and siltstone. Well bedded, graded beds. Pervasive hematite staining.
Melba	MF97	125.5	157.7	Ccf	GWAC	Ch	A2	0.00	Sp	Bd	45	Pale grey, feldspar lithic volcaniclastic greywacke and siltstone. Abundant rip clasts. Pervasive chlorite alteration. Minor disrupted black shale bands.
Melba	MF97	157.7	165.8	Ccf	SHAL	Cy	N	0.00	Sp	Bd	40	Black shale and interbedded pale grey volcaniclastic siltsone.
Melba	MF97	165.8	174	Ccf	GWAC	Ch	A2	0.00	Sp	Bd	30	Pale grey, feldspar lithic volcaniclastic greywacke and siltstone. Abundant rip clasts. Pervasive chlorite alteration. Minor disrupted black shale bands.
Melba	MF97	174	178	Cgb	GABB	ChSp	A5	0.00		Sp	30	Massive, dark grey, equigranular to porphyritic, feldspar phyric gabbro. Very dark serpentinite-chlorite matrix. Sericite altered feldspars. Late carbonate veining. Trace fine disseminated sulphides.
Melba	MF97	178	180.2	Ccf	GWAC	Ch	A2	0.00	Sp	Bd	30	Pale grey, feldspar lithic volcaniclastic greywacke and siltstone. Abundant rip clasts. Pervasive chlorite alteration. Minor disrupted black shale bands.
Melba	MF97	180.2	205.3	Ccf	HEVC	He	R3	0.00	Gr	Bd	30	Red to purple, hematitic feldspar lithic volcaniclastic greywacke and siltstone. Well bedded, graded beds. Pervasive hematite staining.

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF97	205.3	207.3	Ccf	GWAC	Ch	A2	0.00	Sp	Bd	30	Pale grey, feldspar lithic volcaniclastic greywacke and siltstone. Abundant rip clasts. Pervasive chlorite alteration. Minor disrupted black shale bands.
Melba	MF97	207.3	211	Cgb	GABB	ChCb	A5	0.50	Gr			Massive, dark grey to black, coarse to medium grained feldspar phyric gabbro. Black serpentine/chlorite matrix. Carbonate altered feldspar phenos. Fine disseminated and blebby sulphides to 0.5%. High mafic component?
Melba	MF97	211	211.8	Cgb	GABB	CbCh	A4	0.50	Gr			Massive, dark grey to black, coarse to medium grained feldspar phyric gabbro. Black serpentine/chlorite matrix. Carbonate altered feldspar phenos. Fine disseminated and blebby sulphides to 0.5%. High mafic component? Late qtz-siderite vein with 2-5% coarse sphalerite-galena veining. Bleached and sericite altered selvedge.
Melba	MF97	211.8	217.8	Cgb	GABB	CbSe	A3	0.20	Ft	Ft	50	Massive, pale grey to green, medium grained equigranular feldspar-pyroxene phyric gabbro. Carbonate-sericite altered feldspars. Chlorite altered mafics. Late carbonate veining. Strong bleaching at base near faulted contact.
Melba	MF97	217.8	225	Ccf	SILT	CbSe	A2	0.00	Gr	Bd	40	Laminated pale grey volcaniclastic siltstone. Abundant siderite veinlets. Bleached and sericite carbonate altered.
Melba	MF97	225	246.4	Ccf	GWAC	Ch	A2	0.00	Sp	Bd	30	Pale grey, feldspar lithic volcaniclastic greywacke and siltstone. Abundant rip clasts. Pervasive chlorite alteration. Minor disrupted black shale bands.
Melba	MF97	246.4	258	Ccf	HEVC	He	R3	0.00	Gr	Bd	30	Red to purple, hematitic feldspar lithic volcaniclastic greywacke and siltstone. Well bedded, graded beds. Pervasive hematite staining.
Melba	MF97	258	275.9	Ccf	GWAC	Ch	A2	0.00	Sp	Bd	30	Pale grey, feldspar lithic volcaniclastic greywacke and siltstone. Abundant rip clasts. Pervasive chlorite alteration. Minor disrupted black shale bands.
Melba	MF97	275.9	280	Ccf	SHAL	Cb	N	0.00	Sp	Bd	40	Black shale and interbedded pale grey volcaniclastic siltsone. Disrupted, abundant carbonate veining.
Melba	MF97	280	295.5	Ccf	GWAC	Ch	A2	0.00	Sp	Bd	30	Pale grey, feldspar lithic volcaniclastic greywacke and siltstone. Abundant rip clasts. Pervasive chlorite alteration. Minor disrupted black shale bands.
Melba	MF97	295.5	323.7	Cgb	GABB	ChSp	A5	0.00		Sp	30	Massive, dark grey, equigranular to porphyritic, feldspar phyric gabbro. Very dark serpentinite-chlorite matrix. Sericite altered feldspars. Late carbonate veining. Trace fine disseminated sulphides.

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF97	323.7	327.8	Ccf	GWAC	Ch	A2	0.00	Gr	Bd	30	Pale grey, feldspar lithic volcaniclastic greywacke and siltstone. Abundant rip clasts. Pervasive chlorite alteration. Minor disrupted black shale bands.
Melba	MF97	327.8	336.2	Ccf	HEVC	He	R3	0.00	Gr	Bd	30	Red to purple, hematitic feldspar lithic volcaniclastic greywacke and siltstone. Well bedded, graded beds. Pervasive hematite staining. Mixed with dark green grey feldspar lithic greywacke. EOH

Allegiance Metals - Drill Log

BHID

MF98

Collar

Project	BHID	Easting	Northing	RL	Depth	Date	Geologist
Melba	MF98	366738.9	5367752.6	2217.2	403	12/06/2008	DG

Surveys

Project	BHID	Depth	Azm_Amg	Dip
Melba	MF98	0	0	-90
Melba	MF98	50	125	-89
Melba	MF98	100	60	-90
Melba	MF98	150	98	-89
Melba	MF98	200	256	-89
Melba	MF98	250	257	-89
Melba	MF98	300	264	-89
Melba	MF98	350	275	-87
Melba	MF98	403	312	-86
Raw data (uncorrected)				

Hole Sizes

From	Size
0	HQ
51.4	NQ

Drilled By

Almac

Analyses By

BRL

Comments

Only weak mineralisation was intersected in the 2nd gabbro in MF98.

Significant Intersections

MF98 272 - 274 2.0m @ 0.3% Ni, 0.2% Cu

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF98	0	3		LOSS							No recovery - tri-coned?
Melba	MF98	3	16.8	Ccf	GWAC	Cy	A2	0.00	Bk			Pale grey quartz-feldspar lithic wacke and siltstone. Bedding torn apart and brecciated. Moderately clay altered towards uphole end of interval but overall quite fresh. Moderately to strongly broken core.
Melba	MF98	16.8	17.8	Cbg	GABB	CbCh	A2	0.05	Bk			Massive pale green-grey coarse grained altered gabbro. Alteration is carbonate-chlorite. Appears to have been very feldspar rich (~60% by volume). Trace sulphide, probably pyrite. Very broken, minor loss.
Melba	MF98	17.8	84.9	Ccf	GWAC		A2	0.50	Ft			Pale grey quartz-feldspar lithic wacke and siltstone, with minor black carbonaceous shale. Bedding torn apart and brecciated. Moderately hornfelsed. Patchily sulphidic, usually as coarse pyrite in (minor) back shales, also some wackes contain medium to fine grained disseminated pyrite which tarnishes quickly. Core quite intact and competent below about 42m. Minor late calcite and quartz veining. Trace galena-sphalerite in some carbonate veins.
Melba	MF98	84.9	86.8		FALT	Cy	A4	0.00	Ft			Minor late brittle fault. Minor clay alteration, also quartz-carbonate (although this may have been veining prior to fracturing).
Melba	MF98	86.8	125.8	Ccf	GWAC		A2	0.50	Gr			Pale grey/green-grey quartz-feldspar lithic wacke and siltstone, with minor black carbonaceous shale. Bedding torn apart and brecciated. Moderately hornfelsed. Patchily sulphidic, both py-gn-sp-asp locally associated with quartz-carb veins, also some wackes contain medium grained disseminated pyrite which tarnishes quickly.
Melba	MF98	125.8	131.6	Ccf	SILT		A3	0.50	Sp			Similar to previous intervals but with higher proportion of siltstones and shaley units. Bedding quite strongly brecciated.
Melba	MF98	131.6	131.7		VEIN	CbQz	A3	5.00	Sp			Carbonate filled vein breccia in shaley unit. Calcite-ferroan calcite fill and medium to fine grained sphalerite and pyrite.
Melba	MF98	131.7	134	Ccf	GWAC		A2	0.50	Gr			Pale grey/green-grey greywacke and siltstone. Silty units laminated. Bedding disrupted. Rip-up clasts of siltstone in greywacke. Minor pyrite.
Melba	MF98	134	136.3	Ccf	SILT	Py	A4	5.00	Gr			Dark grey and black siltstone and carbonaceous shale with much lesser greywacke. Strongly pyritic (usually stratiform disseminations). Bedding intensely disrupted and brecciated. Small scale isoclinal folding of bedding.

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF98	136.3	139	Ccf	GWAC		A2	0.50	Sp			Pale grey/green-grey greywacke and siltstone, minor black shale. Bedding strongly disrupted and brecciated.
Melba	MF98	139	140		VEIN	CbQz	C2	2.00	Sp			Carbonate filled breccia veining in greywacke. Calcite-ferroan calcite fill and some open-space filling euhedral quartz. Minor pyrite, trace cp-gn-sp.
Melba	MF98	140	152.1	Ccf	GWAC		G3	0.50	Ft			Mid grey/green lithic wacke and siltstone, with lesser black shale. Bedding moderately to intensely brecciated and disrupted. Some tuffaceous siltstones around 145m. Locally pyritic, overall sulphide is minor.
Melba	MF98	152.1	153.6		FALT	Cy	A3	0.00	Ft			Brittle fault in greywackes. Gravelly fault material with minor clay alteration.
Melba	MF98	153.6	174	Ccf	GWAC		G2	0.25	Gr			Mid grey/green lithic wacke and siltstone, with lesser black shale. Bedding moderately to intensely brecciated and disrupted. Where bedding is relatively consistent, the orientation is around 30-35 degrees to CA. Small conglomerate unit at 163.7; clasts are siltstones and greywackes similar to those in the rest of the hole. Conglomerate clasts are sub-rounded to well rounded, with fairly low sphericity.
Melba	MF98	174	201.1	Ccf	SILT		A3	2.00	Ft			Mid grey siltstone and black carbonaceous shale with lesser greenish greywacke. Shaley units quite pyritic (usually stratiform disseminations). Bedding strongly to intensely disrupted and brecciated. Minor late carbonate veining.
Melba	MF98	201.1	218.4	Ccf	GWAC	Ch	A3	0.05	Gr	Bd	30	Massive green grey,feldspar lithic volcaniclastic greywacke. Graded beds with laminated siltstone interbeds. Minor black shaley units. Minor disseminated Py. Disrupted to laminar bedding.
Melba	MF98	218.4	228	Ccf	HEVC	He	R3	0.00	Sp	Bd	45	Massive red, hematitic feldspar-lithic volcaniclastic greywacke. Pervasive hematite alteration. Minor laminated siltstone. Graded beds facing up hole. Late qtz veining.
Melba	MF98	228	238.9	Cgb	GABB	ChCb	A4	0.00	Sp			Masive, dark grey, equigranular, feldspar-pyroxene(Chlorite altered) phyric gabbro. Coarse grained at the top, becoming finer down hole. Pervasive chlorite altered matrix with carbonate altered feldspars. Late carbonate veining. Irregular intrusive contacts.
Melba	MF98	238.9	242.2	Ccf	HEVC	He	R3	0.00	Sp	Bd	45	Massive red, hematitic feldspar-lithic volcaniclastic greywacke. Pervasive hematite alteration. Minor laminated siltstone. Graded beds facing up hole.

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF98	242.2	243.9	Ccf	GWAC	Ch	A3	0.05	Gr	Bd	30	Massive green grey,feldspar lithic volcaniclastic greywacke. Graded beds with laminated siltstone interbeds.
Melba	MF98	243.9	249	Ccf	HEVC	He	R3	0.00	Sp	Bd	45	Massive red, hematitic feldspar-lithic volcaniclastic greywacke. Pervasive hematite alteration. Minor laminated siltstone. Graded beds facing up hole.
Melba	MF98	249	251.3	Ccf	GWAC	Ch	A3	0.05	Gr	Bd	30	Massive green grey,feldspar lithic volcaniclastic greywacke. Graded beds with laminated siltstone interbeds. Minor coarse disseminated py in siltstones.
Melba	MF98	251.3	251.8	Cgb	GABB	ChCb	A4	0.80	Sp			Massive, coarse grained porphyritic feldspar-pyroxene(chlorite altered) gabbro. Moderately altered with chloritic matrix, carbonated altered feldspars and coarse leucoxene. Medium to fine grained diseminated sulphides to 1.0%.
Melba	MF98	251.8	269.1	Ccf	GWAC	Ch	A3	0.05	Gr	Bd	30	Massive green grey,feldspar lithic volcaniclastic greywacke. Graded beds with laminated siltstone interbeds. Minor coarse disseminated py in siltstones. Increasing coarse quartz veining down hole. Bleached and carbonate altered on lower gabbro contact.
Melba	MF98	269.1	275.5	Cgb	GABB	ChCb	A4	0.80	Sp			Massive, coarse grained porphyritic feldspar-pyroxene(chlorite altered) gabbro. Moderately altered with chloritic matrix, carbonated altered feldspars and coarse leucoxene. Medium to fine grained diseminated sulphides to 1.0%.
Melba	MF98	275.5	281	Cgb	GABB	Ch	A4	0.00	Sp			Gradational contact to medium grained equigranular, grey-green feldspar-pyroxenegabbro. Biotite alteraration and minor carbonate veining. No appreciable sulphide mineralisation.
Melba	MF98	281	286.3	Ccf	HEVC	He	R3	0.00	Sp	Bd	45	Massive red, hematitic feldspar-lithic volcaniclastic greywacke. Pervasive hematite alteration. Minor laminated siltstone. Graded beds facing up hole. Small conglomerate pebble beds near the base of many beds. Minor green feldspar lithic greywacke/siltstone.
Melba	MF98	286.3	321.3	Ccf	GWAC	Ch	A3	0.05	Gr	Bd	30	Massive green grey,feldspar lithic volcaniclastic greywacke. Graded beds with laminated siltstone interbeds. Minor coarse disseminated py in siltstones. Graded beds facing up hole. Patchy carbonate veining and bleaching,particularly of siltstone interbeds.
Melba	MF98	321.1	350.5	Ccf	HEVC	He	R3	0.00	Sp	Bd	45	Massive red, hematitic feldspar-lithic volcaniclastic greywacke. Pervasive hematite alteration. Minor laminated siltstone. Graded beds facing up hole.

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
												Interbedded with dark grey green, chlorite altered feldspar-lithic volcaniclastic
												greywacke.
Melba	MF98	350.5	359.7	Cgb	GABB	ChCb	A4	0.00	Sp			Massive, coarse grained porphyritic feldspar-pyroxene(chlorite altered) gabbro.
												Moderately altered with chloritic matrix, carbonated altered feldspars and coarse
												leucoxene. Gradational contact to fine grained equigranular gabbro downhole.
												No sulphides. High mafic content.
Melba	MF98	359.7	371.8	Ccf	GWAC	Ch	A3	0.05	Gr	Bd	85	Massive green grey,feldspar lithic volcaniclastic greywacke. Graded beds with
												laminated siltstone interbeds. Minor coarse disseminated py in siltstones.
												Moderately hornfelsed. Pervasive chlorite alteration with disseminated biotite.
												High BCA.
Melba	MF98	359.7	385	Cgb	GABB	ChCb	A4	0.00	Sp			Massive, coarse grained porphyritic feldspar-pyroxene(chlorite altered) gabbro.
												Moderately altered with chloritic matrix, carbonated altered feldspars and coarse
												leucoxene. Coarsens down hole tocoarse grained equigranular feldsapr-
												pyroxene-biotite phyric gabbro. No sulphides. High mafic content.
Melba	MF98	385	388.2	Ccf	GWAC	Ch	A3	0.05	Gr	Bd	75	Massive green grey,feldspar lithic volcaniclastic greywacke. Graded beds with
												laminated siltstone interbeds. Minor coarse disseminated py in siltstones.
												Moderately hornfelsed. Pervasive chlorite alteration with disseminated biotite.
Melba	MF98	388.2	391.2	Ccf	HEVC	He	R3	0.00	Sp	Bd	45	Massive red, hematitic feldspar-lithic volcaniclastic greywacke. Pervasive
												hematite alteration. Minor laminated siltstone. Graded beds facing up hole.
Melba	MF98	391.2	403	Ccf	GWAC	Ch	A3	0.05	Gr	Bd	75	Massive green grey,feldspar lithic volcaniclastic greywacke. Graded beds with
												laminated siltstone interbeds. Minor coarse disseminated py in siltstones.
												Moderately hornfelsed. Pervasive chlorite alteration with disseminated biotite.
												EOH

Allegiance Metals - Drill Log

BHID

MF99

Collar

Project	BHID	Easting	Northing	RL	Depth	Date	Geologist
Melba	MF99	366807.6	5367742.2	2215.7	524	03/07/2008	TC

Surveys

Project	BHID	Depth	Azm_Amg	Dip
Melba	MF99	0	0	-90
Melba	MF99	50	38	-89
Melba	MF99	100	98	-89
Melba	MF99	150	111	-90
Melba	MF99	200	145	-90
Melba	MF99	250	353	-89
Melba	MF99	300	330	-88
Melba	MF99	350	319	-88
Melba	MF99	400	309	-87
Melba	MF99	450	313	-86
Melba	MF99	511	314	-85

Hole Sizes

From	Size
0	HQ
61	NQ

Drilled By

Almac LY44

Analyses By

BRL

Comments

Significant Intersections

Genets 425 - 427m 2m @ 0.3% Ni and 0.1% Cu

Allegiance Metals Drill Log MF 99

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF99	0	9	Ccf	SHAL	Cy	N	1.00	Gr			Broken and weathered, black graphitic shale. Laminated beds, disrupted. Pyrite disseminations. Broken and puggy sheared zones.
Melba	MF99	9	28.3	Ccf	GWAC	ChCy	A2	0.20	Sp	Bd	30	Massive, pale grey, feldspar-lithic volcaniclastic greywacke. Minor siltstone interbeds. Minor disseminated Py. Low bca. Pervasive chlorite alteration.
Melba	MF99	28.3	80.7	Ccf	GWAC	ChCb	A2	0.10	Sp	Bd	20	Massive, pale grey, feldspar-lithic volcaniclastic greywacke. Minor siltstone and black shale interbeds. Disseminated diagenetic py. Pervasive weak chlorite alteration. Minor carbonate spotting. Broken core.
Melba	MF99	80.7	105.1	Ccf	GWAC	ChCb	A2	0.10	Sp	Bd	20	Massive, pale grey, feldspar-lithic volcaniclastic greywacke. Minor siltstone and black shale interbeds. Disseminated diagenetic py. Pervasive weak chlorite alteration. Minor carbonate spotting. 20% shale bands.
Melba	MF99	105.1	185.7	Ccf	SHAL	ChCb	N	0.30	Sp	Bd	25	Laminated black shale and siltstone with minor greywacke interbeds. Disrupted bedding with rip uip clasts and slump folds. Minor coarse disseminated Py. Late calcite veins.
Melba	MF99	185.7	232.6	Ccf	GWAC	ChCb	A2	0.10	Sp	Bd	20	Massive, pale grey, feldspar-lithic volcaniclastic greywacke. Minor siltstone and black shale interbeds. Disseminated diagenetic py. Pervasive weak chlorite alteration. Minor carbonate spotting. Broken core.
Melba	MF99	232.6	240.4	Ccf	SHAL	ChCb	N	0.30	Sp	Bd	45	Laminated black shale and siltstone with minor greywacke interbeds. Disrupted bedding with rip uip clasts and slump folds. Minor coarse disseminated Py. Late calcite veins.
Melba	MF99	240.4	246.1	Ccf	GWAC	ChCb	A2	0.10	Sp	Bd	45	Massive, pale grey, feldspar-lithic volcaniclastic greywacke. Minor siltstone and black shale interbeds. Disseminated diagenetic py. Pervasive weak chlorite alteration. Minor carbonate spotting.
Melba	MF99	246.1	251.1	Ccf	SHAL	ChCb	N	0.30	Sp	Bd	45	Laminated black shale and siltstone with minor greywacke interbeds. Disrupted bedding with rip uip clasts and slump folds. Minor coarse disseminated Py. Late calcite veins.
Melba	MF99	251.1	253.3	Ccf	GWAC	ChCb	A2	0.10	Sp	Bd	45	Massive, pale grey, feldspar-lithic volcaniclastic greywacke. Minor siltstone and black shale interbeds. Disseminated diagenetic py. Pervasive weak chlorite alteration. Minor carbonate spotting.
Melba	MF99	253.3	254		FALT	CbCh	A2					Broken core. Brittle fault. Siderite veining.
Melba	MF99	254	263.1	Ccf	GWAC	ChCb	A2	0.10	Sp	Bd	45	Massive, pale grey, feldspar-lithic volcaniclastic greywacke. Minor siltstone and black shale interbeds. Disseminated diagenetic py. Pervasive weak chlorite alteration. Minor carbonate spotting.

Allegiance Metals Drill Log MF 99

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF99	263.1	295.1	Ccf	HEVC	HeCb	R3	0.00	Gr	Bd	45	Massive, red to purple, feldspar-lithic volcaniclastic greywacke and siltstone interbeds. Strong heamatite alteration. Graded beds facing up hole. Minor Carbonate veining.
Melba	MF99	295.1	330.5	Ccf	GWAC	ChCb	A2	0.10	Sp	Bd	20	Massive, pale grey, feldspar-lithic volcaniclastic greywacke. Minor siltstone and black shale interbeds. Disseminated diagenetic py. Pervasive weak chlorite alteration. Minor carbonate spotting. Increasing patchy sericite alteration.
Melba	MF99	330.5	330.8		VEIN	Cb	C2	0.20		Vn	90	Massive, siderite vein. Lesser white qtz. Trace py-Spal-gal. Colliform textures.
Melba	MF99	330.8	380.5	Ccf	GWAC	ChCb	A2	0.10	Sp	Bd	20	Massive, pale grey, feldspar-lithic volcaniclastic greywacke. Minor siltstone and black shale interbeds. Disseminated diagenetic py. Pervasive weak chlorite alteration. Minor carbonate spotting. Increasing qtz-carb veining..
Melba	MF99	380.5	382.1		VEIN	Cb	C2	0.20		Vn	90	Massive, siderite vein. Lesser white qtz. Trace py-Spal-gal. Colliform textures. Large euhedral Py xtals.
Melba	MF99	382.1	385.3	Ccf	GWAC	ChCb	A2	0.10	Sp	Bd	20	Massive, pale grey, feldspar-lithic volcaniclastic greywacke. Minor siltstone and black shale interbeds. Disseminated diagenetic py. Pervasive weak chlorite alteration.
Melba	MF99	385.3	390.8	Ccf	HEVC	HeCb	R3	0.00	Gr	Bd	45	Massive, red to purple, feldspar-lithic volcaniclastic greywacke and siltstone interbeds. Strong heamatite alteration. Graded beds facing up hole.
Melba	MF99	390.8	412.7	Ccf	GWAC	ChCb	A2	0.10	Sp	Bd	20	Massive, pale grey, feldspar-lithic volcaniclastic greywacke. Minor siltstone and black shale interbeds. Pervasive weak chlorite, hornfels spotting and biotite alteration of coarse volcaniclastics. Minor qtz-carb veins.
Melba	MF99	412.7	424.5	Cgb	GABB	BiCb	A2	0.05				Massive, equigranular, fine to medium grained feldspar-pyroxene-biotiite gabbro. Weak carbonate alteration and chlorite alteration of mafic minerals.
Melba	MF99	424.5	431.4	Cgb	GABB	ChCb	A5	0.30	Sp			Massive, granophyric to porphyritic feldspar-pyroxene gabbro. Coarse grained, chlorite altered pyroxene phocrysts. Minor nodule/aggrgates of sulphides to 0.3%. Chilled lower margin with fine grained gabbro and hornfelsed volcaniclastics.
Melba	MF99	431.4	439.5	Ccf	GWAC	ChCb	A2	0.10	Sp	Bd	20	Massive, pale grey, feldspar-lithic volcaniclastic greywacke. Minor siltstone and black shale interbeds. Pervasive weak chlorite, hornfels spotting and biotite alteration of coarse volcaniclastics. Minor qtz-carb veins.
Melba	MF99	439.5	454.6	Ccf	HEVC	HeCb	R3	0.00	Gr	Bd	45	Massive, red to purple, feldspar-lithic volcaniclastic greywacke and siltstone interbeds. Strong heamatite alteration. Graded beds facing up hole.
Melba	MF99	454.6	458.8	Cgb	GABB	BiCb	A2	0.05				Massive, equigranular, fine to medium grained feldspar-pyroxene-biotiite gabbro. Weak carbonate alteration and chlorite alteration of mafic minerals.

Allegiance Metals Drill Log MF 99

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF99	458.8	460.8	Ccf	GWAC	ChCb	A2	0.10	Sp	Bd	20	Massive, pale grey, feldspar-lithic volcaniclastic greywacke. Minor siltstone and black shale interbeds. Pervasive weak chlorite, hornfels spotting and biotite alteration of coarse volcaniclastics.
Melba	MF99	460.8	468	Ccf	HEVC	HeCb	R3	0.00	Gr	Bd	45	Massive, red to purple, feldspar-lithic volcaniclastic greywacke and siltstone interbeds. Strong heamatite alteration. Graded beds facing up hole.
Melba	MF99	468	473.6	Ccf	GWAC	ChCb	A2	0.10	Sp	Bd	20	Massive, pale grey, feldspar-lithic volcaniclastic greywacke. Minor siltstone interbeds. Pervasive chlorite alteration.
Melba	MF99	473.6	498.6	Cgb	GABB	BiCb	A2	0.05				Massive, equigranular, fine to medium grained feldspar-pyroxene-biotiite gabbro. Weak carbonate alteration and chlorite alteration of mafic minerals.
Melba	MF99	498.6	504	Ccf	HEVC	HeCb	R3	0.00	Gr	Bd	45	Massive, red to purple, feldspar-lithic volcaniclastic greywacke and siltstone interbeds. Strong heamatite alteration. Graded beds facing up hole.
Melba	MF99	504	524	Ccf	GWAC	ChCb	A2	0.10	Sp	Bd	20	Massive, pale grey, feldspar-lithic volcaniclastic greywacke. Minor siltstone interbeds. Pervasive chlorite alteration.

Allegiance Metals - Drill Log

BHID

MF100

Collar

Project	BHID	Easting	Northing	RL	Depth	Date	Geologist
Melba	MF100	366706.3	5367839.8	2216.8	307	21/07/2008	TC

Surveys

Project	BHID	Depth	Azm_Amg	Dip
Melba	MF100	0	0	-90
Melba	MF100	50	35	-90
Melba	MF100	100	253	-89
Melba	MF100	150	253	-89
Melba	MF100	200	328	-88
Melba	MF100	250	313	-88
Raw data (uncorrected)				

Hole Sizes

From	Size
0	HQ
51.5	NQ

Drilled By

Almac

Analyses By

BRL

Comments

MF100 was designed to test the eastern down dip extension of Genets workings, Melba Flats.

Significant Intersections

Genets 200.7 - 204 3.3m @ 0.2% Ni and 0.2% Cu

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF100	0	13	Ccf	GWAC	Ch	G2	0.00	Bk	Bd	45	Broken and weathered, pale green to grey, feldspar-lithic volcaniclastic greywacke. Interbedded laminated black shale and siltstone. Weakly weathered with broken zones. Pervasive chlorite alteration.
Melba	MF100	13	20.8	Ccf	GWAC	Ch	G2	0.00	Bk	Bd	45	Broken and weathered, pale green to grey, feldspar-lithic volcaniclastic greywacke. Interbedded laminated black shale and siltstone. Weakly weathered Pervasive chlorite alteration.
Melba	MF100	20.8	29	Ccf	SILT	Ch	A2	0.01	Bk			Very broken, laminated pale green volcaniclastic siltstone and black shale. Disrupted and faulted? Moderately weathered. Trace Py.
Melba	MF100	29	43.3	Ccf	GWAC	Ch	A2	0.00	Sp	Bd	35	Broken and weathered, pale green to grey, feldspar-lithic volcaniclastic greywacke. Interbedded laminated black shale and siltstone. Weakly weathered Pervasive chlorite alteration.
Melba	MF100	43.3	45.2	Ccf	SHAL	ChGr	N	0.00	Sp	Bd	30	Laminated black shale. Disrupted, mylonitic and foliated beds. Graphitic layers. Minor coarse pyrite nodules.
Melba	MF100	45.2	97.9	Ccf	GWAC	Ch	A2	0.00	Sp	Bd	35	Broken and weathered, pale green to grey, feldspar-lithic volcaniclastic greywacke. Interbedded laminated black shale and siltstone. Weakly weathered Pervasive chlorite alteration.
Melba	MF100	97.9	99.4		FALT	ChCy	A2	0.00	Ft			Broken and puggy fult. Significant core loss.
Melba	MF100	99.4	105.4	Ccf	GWAC	Ch	A2	0.00	Sp	Bd	35	Broken and weathered, pale green to grey, feldspar-lithic volcaniclastic greywacke. Interbedded laminated black shale and siltstone. Weakly weathered Pervasive chlorite alteration.
Melba	MF100	105.4	114.5	Ccf	HEVC	He	R2	0.00	Sp	Bd	30	Massive, red to purple, feldspar-qtz xtal lithic volcaniclastic greywacke with fine silty tops. Pervasive hematite alteration. Minor carbonate veins.
Melba	MF100	114.5	153.7	Ccf	GWAC	Ch	A2	0.00	Sp	Bd	35	Massive, graded, pale green to grey, feldspar-quartz -lithic volcaniclastic greywacke. Interbedded laminated black shale and siltstone. Minor calcite veins. Pervasive chlorite alteration.
Melba	MF100	153.7	178.3	Ccf	HEVC	He	R2	0.00	Bk	Bd	30	Massive, red to purple, feldspar-qtz xtal lithic volcaniclastic greywacke with fine silty tops. Pervasive hematite alteration. Minor carbonate veins.
Melba	MF100	178.3	179.6	Ccf	GWAC	Ch	A2	0.00	Bk			Massive, graded, pale green to grey, feldspar-quartz -lithic volcaniclastic greywacke and siltstone. Chlorite altered. Broken and faulted.

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF100	179.6	188.2	Cgb	GABB	Ch	A4	0.10	Sp			Massive, dark grey to black, porphyritic feldspar-pyroxene phyric gabbro. Chlorite altered mafic minerals. Sparse fine leucoxene and sulphides. Sulphides most abundant at 185m. Calcite veins. Chilled lower margin.
Melba	MF100	188.2	200.7	Ccf	GWAC	Ch	A2	0.00	Sp	Bd	35	Massive, graded, pale green to grey, feldspar-quartz -lithic volcaniclastic greywacke. Interbedded laminated black shale and siltstone. Numerous calcite veins. Pervasive chlorite alteration. Minor limestone and calcareous greywacke.
Melba	MF100	200.7	205	Cgb	GABB	Ch	A4	0.50	Gr			Massive, dark grey to black, porphyritic feldspar-pyroxene phyric gabbro. Chlorite altered mafic minerals. Sporadic blebs of coarse sulphides to 10mm. Minor disseminated sulphides. Abundant calcite veins. Siderite vein and bleached gabbro at 203.5m.
Melba	MF100	205	206.8	Cgb	GABB	Ch	A4	0.10	Sp			Massive, dark grey to black, porphyritic feldspar-pyroxene phyric gabbro. Chlorite altered mafic minerals. Sparse fine leucoxene and sulphides.
Melba	MF100	206.8	231.7	Ccf	GWAC	Ch	A2	0.00	Gr	Bd	45	Massive, graded, pale green to grey, feldspar-quartz -lithic volcaniclastic greywacke. Interbedded laminated black shale and siltstone. Sparse calcite veins. Pervasive chlorite alteration.
Melba	MF100	231.7	307	Ccf	HEVC	He	R2	0.00	Bk	Bd	30	Massive, red to purple, feldspar-qtz xtal lithic volcaniclastic greywacke with fine silty tops. Pervasive hematite alteration. Minor carbonate veins.

Allegiance Metals - Drill Log

BHID

MF101

Collar

Project	BHID	Easting	Northing	RL	Depth	Date	Geologist
Melba	MF101	366705.2	5367840.7	2216.8	276.5	06/08/2008	TC

Surveys

Project	BHID	Depth	Azm_Amg	Dip
Melba	MF101	0	305	-53.2
Melba	MF101	50	307	-53
Melba	MF101	100	306	-53
Melba	MF101	150	308	-53
Melba	MF101	200	308	-52
Melba	MF101	250	308	-52
Raw data (uncorrected)				

Hole Sizes

From	Size
0	HQ
63.7	NQ

Drilled By

Almac

Analyses By

BRL

Comments

MF101 was designed to test the eastern down dip extension of Genets workings, Melba Flats.

Significant Intersections

Genets 154.0 - 158.0 4.0m @ 0.7% Ni and 0.5% Cu
including 155.0 157.0 2.0m @ 1.0% Ni and 0.7% Cu

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF101	3	10.7	Ccf	GWAC	Ch	G2	0.00	Bk	Bd	45	Broken and weathered, pale green to grey, feldspar-lithic volcaniclastic greywacke. Interbedded laminated black shale and siltstone. Weakly weathered with broken zones. Pervasive chlorite alteration.
Melba	MF101	10.7	24.2	Ccf	GWAC	Ch	G2	0.00	Bk	Bd	45	Broken and weathered, pale green to grey, feldspar-lithic volcaniclastic greywacke. Interbedded laminated black shale and siltstone. Weakly weathered Pervasive chlorite alteration.
Melba	MF101	24.2	25.1	Ccf	SILT	Ch	A2	0.01	Bk			Very broken, laminated pale green volcaniclastic siltstone and black shale. Disrupted and faulted? Moderately weathered. Trace Py.
Melba	MF101	25.1	56.5	Ccf	GWAC	Ch	A2	0.00	Sp	Bd	35	Broken and weathered, pale green to grey, feldspar-lithic volcaniclastic greywacke. Interbedded laminated black shale and siltstone. Weakly weathered Pervasive chlorite alteration.
Melba	MF101	56.5	66.3	Ccf	HEVC	He	R2	0.00	Sp	Bd	30	Massive, red to purple, feldspar-qtz xtal lithic volcaniclastic greywacke with fine silty tops. Pervasive hematite alteration. Minor carbonate veins.
Melba	MF101	66.3	94.7	Ccf	GWAC	Ch	A2	0.00	Sp	Bd	35	Broken and weathered, pale green to grey, feldspar-lithic volcaniclastic greywacke. Interbedded laminated black shale and siltstone. Weakly weathered Pervasive chlorite alteration.
Melba	MF101	94.7	104.4	Cgb	GABB	C	A2	0.00	Gr			Massive, dark grey, equigranular feldspar-pyroxene phyric gabbro. Variable grainsize from coarse to very fine chilled margins. Weak chlorite alteration of mafic minerals.
Melba	MF101	104.4	106.8	Ccf	GWAC	Ch	A2	0.00	Sp	Bd	60	Massive, dark grey, feldspar-lithic greywacke and siltstone. Graded beds with silty tops. Pervasive chlorite alteration.
Melba	MF101	106.8	118.9	Ccf	HEVC	He	R2	0.00	Sp	Bd	30	Massive, red to purple, feldspar-qtz xtal lithic volcaniclastic greywacke with fine silty tops. Pervasive hematite alteration. Minor carbonate veins.
Melba	MF101	118.9	125.8	Ccf	GWAC	Ch	A2	0.00	Sp	Bd	60	Massive, dark grey, feldspar-lithic greywacke and siltstone. Graded beds with silty tops. Pervasive chlorite alteration. Late carbonate veins.
Melba	MF101	125.8	135.5	Cgb	GABB	C	A2	0.00	Gr			Massive, dark grey, porphyritic feldspar-pyroxene gabbro. Variable grainsize from coarse to very fine chilled margins. Weak chlorite alteration of mafic minerals. Xenoliths of greywacke. High mafic content , approaching ultramafic? Carbonate veins and alteration.

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF101	135.5	142.1	Ccf	GWAC	Ch	A2	0.00	Sp	Bd	60	Massive, dark grey, feldspar-lithic greywacke and siltstone. Graded beds with silty tops. Pervasive chlorite alteration. Late carbonate veins.
Melba	MF101	142.1	147.9	Cgb	GABB	C	A2	0.00	Gr			Massive, dark grey, porphyritic feldspar-pyroxene gabbro. Variable grainsize from coarse to very fine chilled margins. Weak chlorite alteration of mafic minerals. Xenoliths of greywacke. High mafic content , approaching ultramafic? Abundant carbonate veins and alteration.
Melba	MF101	147.9	152	Ccf	GWAC	Ch	A2	0.00	Sp	Bd	60	Massive, dark grey, feldspar-lithic greywacke and siltstone. Graded beds with silty tops. Pervasive chlorite alteration. Late carbonate veins.
Melba	MF101	152	155	Cgb	GABB	C	A2	0.00	Gr			Massive, dark grey, equigranular feldspar-pyroxene phyric gabbro. Variable grainsize from coarse to very fine chilled margins. Weak chlorite alteration of mafic minerals. Minor sulphides Cpy-pe on upper brecciated contact.
Melba	MF101	155	159.6	Cgb	GABB	C	A2	1.00	Gr			Massive, dark grey, porphyritic feldspar-pyroxene gabbro. Variable grainsize from coarse to very fine chilled margins. Weak chlorite alteration of mafic minerals. High mafic content , approaching ultramafic? Numerous rounded blebs of sulphide mineralisation to 0.5cm. Good disseminated mineralisation.
Melba	MF101	159.6	160.9	Cgb	GABB	C	A2	0.20	Gr			Massive, dark grey, porphyritic feldspar-pyroxene gabbro. Variable grainsize from coarse to very fine chilled margins. Weak chlorite alteration of mafic minerals. High mafic content , approaching ultramafic? Very broken.
Melba	MF101	160.9	185.2	Ccf	GWAC	Ch	A2	0.00	Sp	Bd	60	Massive, dark grey, feldspar-lithic greywacke and siltstone. Graded beds with silty tops. Pervasive chlorite alteration. Late carbonate veins. Some very coarse grit beds and black shales.
Melba	MF101	185.2	213.4	Ccf	HEVC	He	R2	0.00	Sp	Bd	30	Massive, red to purple, feldspar-qtz xtal lithic volcaniclastic greywacke with fine silty tops. Pervasive hematite alteration. Minor carbonate veins.
Melba	MF101	213.4	224.1	Ccf	GWAC	Ch	A2	0.00	Sp	Bd	60	Massive, dark grey, feldspar-lithic greywacke and siltstone. Graded beds with silty tops. Pervasive chlorite alteration. Late carbonate veins. Some very coarse grit beds and black shales. 220.8 siderite vein with minor basemetals.
Melba	MF101	224.1	239	Cgb	GABB	C	A2	0.00	Gr			Massive, dark grey, equigranular feldspar-pyroxene phyric gabbro. Variable grainsize from coarse to very fine chilled margins. Weak chlorite alteration of mafic minerals. Minor sulphides Cpy-pe on upper brecciated contact.

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF101	239	276.5	Ccf	GWAC	Ch	A2	0.00	Sp	Bd	60	Massive, dark grey, feldspar-lithic greywacke and siltstone. Graded beds with
												silty tops. Pervasive chlorite alteration. Late carbonate veins. Some very coarse
												grit beds and black shales. 255.8 siderite vein with coarse sphalerite.
												Minor calcareous sandstone at 244.2m.
												EOH

Allegiance Metals - Drill Log

BHID

MF102

Collar

Project	BHID	Easting	Northing	RL	Depth	Date	Geologist
Melba	MF102	366367.6	5367360	2207.9	151	18/08/2008	TC

Surveys

Project	BHID	Depth	Azm_Amg	Dip
Melba	MF102	0	267.5	-60.8
Melba	MF102	50	264	-60
Melba	MF102	100	264	-60
Melba	MF102	150	265	-60
Raw data (uncorrected)				

Hole Sizes

From	Size
0	HQ
75.3	NQ

Drilled By

Almac

Analyses By

BRL

Comments

MF102 was designed to test below an outcropping mineralised gabbro 200m sth of the Nth Cuni workings. It intersected several gabbros but none were significantly mineralised.

Significant Intersections

No significant assays

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF102	3	10.5	Ccf	HEVC	He	R2	0.00	Sp	Bd	30	Massive, red to purple, feldspar-qtz xtal lithic volcaniclastic greywacke with fine silty tops. Pervasive hematite alteration. Minor carbonate veins. Moderately weathered and broken
Melba	MF102	10.5	14.5	Ccf	GWAC	Ch	G2	0.00	Bk	Bd	45	Broken and weathered, pale green to grey, feldspar-lithic volcaniclastic greywacke. Interbedded laminated siltstone. Weakly weathered and broken. Pervasive chlorite alteration.
Melba	MF102	14.5	21	Cgb	GABB	C	A2	0.00	Gr			Massive, dark grey, equigranular feldspar-pyroxene phyric gabbro. Variable grainsize from coarse to very fine chilled margins. Weak chlorite alteration of mafic minerals. Weathered and crumbly. Some core loss.
Melba	MF102	21	36.8	Ccf	HEVC	He	R2	0.00	Sp	Bd	30	Massive, red to purple, feldspar-qtz xtal lithic volcaniclastic greywacke with fine silty tops. Pervasive hematite alteration. Minor carbonate veins. Moderately weathered and broken
Melba	MF102	36.8	43	Cgb	GABB	C	A2	0.00	Gr			Massive, dark grey, equigranular feldspar-pyroxene phyric gabbro. Variable grainsize from coarse to very fine chilled margins. Weak chlorite alteration of mafic minerals. Weathered and crumbly. Some core loss.
Melba	MF102	43	66.7	Ccf	GWAC	Ch	G2	0.00	Bk	Bd	45	Broken and weathered, pale green to grey, feldspar-lithic volcaniclastic greywacke. Interbedded laminated siltstone. Weakly weathered and broken. Pervasive chlorite alteration.
Melba	MF102	66.7	81.8	Ccf	SHAL		N					Laminated black, graphitic shale. Sporadic carbonate-basemetal veins in sheared fault zones. Minor interbedded greywacke and siltstone.
Melba	MF102	81.8	91.5	Ccf	GWAC	Ch	G2	0.00	Bk	Bd	45	Broken and weathered, pale green to grey, feldspar-lithic volcaniclastic greywacke. Interbedded laminated siltstone. Weakly weathered . Pervasive chlorite alteration.
Melba	MF102	91.5	121.2	Cgb	GABB	C	A2	0.00	Gr			Massive, dark grey, equigranular feldspar-pyroxene phyric gabbro. Variable grainsize from coarse to very fine chilled margins. Weak chlorite alteration of mafic minerals. Variable grin size with chilled margins, grading up to coarse feldspar-plagioclase phyric gabbro.
Melba	MF102	121.2	130.1	Ccf	GWAC	Ch	A2	0.00	Sp	Bd	60	Massive, dark grey, feldspar-lithic greywacke and siltstone. Graded beds with silty tops. Pervasive chlorite alteration. Late carbonate veins.

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF102	130.1	134.4	Ccf	HEVC	He	R2	0.00	Sp	Bd	30	Massive, red to purple, feldspar-qtz xtal lithic volcaniclastic greywacke with fine
												silty tops. Pervasive hematite alteration. Minor carbonate veins.
												Grade beds facing uphole.
Melba	MF102	134.4	137.8	Ccf	GWAC	Ch	A2	0.00	Sp	Bd	60	Massive, dark grey, feldspar-lithic greywacke and siltstone. Graded beds with
												silty tops. Pervasive chlorite alteration. Late carbonate veins.
Melba	MF102	137.8	151	Ccf	HEVC	He	R2	0.00	Sp	Bd	30	Massive, red to purple, feldspar-qtz xtal lithic volcaniclastic greywacke with fine
												silty tops. Pervasive hematite alteration. Minor carbonate veins.
												Grade beds facing uphole.

Allegiance Metals - Drill Log

BHID

MF103

Collar

Project	BHID	Easting	Northing	RL	Depth	Date	Geologist
Melba	MF103	366365	5367450	2208	160	16/09/2008	TC

Surveys

Project	BHID	Depth	Azm_Amg	Dip
Melba	MF103	0	266	-60
Melba	MF103	58	266	-60
Melba	MF103	100	268	-60
Melba	MF103	150	268	-60
Raw data (uncorrected)				

Hole Sizes

From	Size
0	HQ
51.5	NQ

Drilled By

ALMAC

Analyses By

BRL

Comments

Significant Intersections

Nth Cuni 65.0 - 66.0 1.0m @ 0.9% Ni

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF103	0	3		LOSS							No Core recovery
Melba	MF103	3	8.7	Ccf	SHAL	Ch	A5	1.00	Sp	Bd	80	Laminated black shale and pale grey volcaniclastic siltstone. Banded on 10cm scale. Chlorite altered volcaniclastics. Minor disseminated diagenetic pyrite.
Melba	MF103	8.7	17.4	Ccf	GWAC	Ch	G3	0.00		Bd	80	Massive, pale green to grey, feldspar lithic volcaniclastic greywacke. Pervasive chlorite alteration. Graded beds with fine graned laminated volcaiclastic siltstone tops.
Melba	MF103	17.4	19	Ccf	HEVC	HeCh	R	0.00	Gr	Bd	80	Massive, purple/red, feldspar lithic volcaniclastic greywacke. Pervasive hematite alteration. Graded beds with siltstone interbeds. Gradtional contacts.
Melba	MF103	19	21.8	Ccf	GWAC	Ch	G3	0.00		Bd	80	Massive, pale green to grey, feldspar lithic volcaniclastic greywacke. Pervasive chlorite alteration. Graded beds with fine graned laminated volcaiclastic siltstone tops. Dominantly siltstone.
Melba	MF103	21.8	29.9	Cgb	GABB	Ch	G3	0.00				Massive, coarse grained, equigranular feldspar-pyroxene phyric gabbro. Some intergrown granophyric textures. Pervasive chlorite alteration of mafic minerals. Carbonate altered feldspars.
Melba	MF103	29.9	37	Ccf	HEVC	HeCh	R	0.00	Gr	Bd	80	Massive, purple/red, feldspar lithic volcaniclastic greywacke. Pervasive hematite alteration. Graded beds with siltstone interbeds. Gradtional contacts.
Melba	MF103	37	46.1	Ccf	GWAC	Ch	G3	0.00		Bd	80	Massive, pale green to grey, feldspar lithic volcaniclastic greywacke. Pervasive chlorite alteration. Graded beds with fine graned laminated volcaiclastic siltstone tops.
Melba	MF103	46.1	54.4	Cgb	GABB	Ch	G3	0.00				Massive, coarse grained to fine grained, equigranular feldspar-pyroxene phyric gabbro. variable grain sizes, with sediment xenoliths. Chilled margins.. Pervasive chlorite alteration of mafic minerals. Carbonate altered feldspars. Drilled through early CRA hole at 47m. Massive carbonate veining.
Melba	MF103	54.4	58	Ccf	GWAC	Ch	G3	0.00		Bd	80	Massive, pale green to grey, feldspar lithic volcaniclastic greywacke. Pervasive chlorite alteration. Graded beds with fine graned laminated volcaiclastic siltstone tops.
Melba	MF103	58	60.1	Ccf	HEVC	HeCh	R	0.00	Gr	Bd	80	Massive, purple/red, feldspar lithic volcaniclastic greywacke. Pervasive hematite alteration. Graded beds with siltstone interbeds. Gradtional contacts.

Allegiance Metals Drill Log												
Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF103	60.1	64.7	Ccf	GWAC	Ch	G3	0.00		Bd	80	Massive, pale green to grey, feldspar lithic volcaniclastic greywacke. Pervasive chlorite alteration. Graded beds with fine graned laminated volcaiclastic siltstone tops. Dominantly broken siltstones.
Melba	MF103	64.7	66	Cgb	GABB	Ch	G3	1.00				Massive, coarse grained to fine grained, equigranular feldspar-pyroxene phyric gabbro. variable grain sizes, with sediment xenoliths. Chilled margins.. Pervasive chlorite alteration of mafic minerals. Carbonate altered feldspars. Minor medium grained cpy-py disseminations and veins.
Melba	MF103	66	73.4	Ccf	GWAC	Ch	G3	0.00		Bd	70	Massive, pale green to grey, feldspar lithic volcaniclastic greywacke. Pervasive chlorite alteration. Graded beds with fine grained laminated volcaniclastic siltstone tops. Dominantly siltstone tops.
Melba	MF103	73.4	75		FALT	CbCh	N	1.00		Ft	90	Massive, vuggy,laminated siderite-calcite vein in strongly sheared and faulted graphitic black shale. Minor basemetal mineralisation. Disseminated sphalerite-galena veining in carbonates.
Melba	MF103	75	80.8	Ccf	GWAC	Ch	G3	0.00		Bd	70	Massive, pale green to grey, feldspar lithic volcaniclastic greywacke. Pervasive chlorite alteration. Graded beds with fine grained laminated volcaniclastic siltstone tops.
Melba	MF103	80.8	83.3		FALT	CbCh	N	1.00		Ft	90	Massive, vuggy,laminated siderite-calcite vein in strongly sheared and faulted graphitic black shale. Minor basemetal mineralisation. Disseminated sphalerite-galena veining in carbonates.
Melba	MF103	83.3	97.4	Ccf	GWAC	Ch	G3	0.00		Bd	70	Massive, pale green to grey, feldspar lithic volcaniclastic greywacke. Pervasive chlorite alteration. Graded beds with fine grained laminated volcaniclastic siltstone tops.
Melba	MF103	97.4	146.3	Cgb	GABB	Ch	G3	0.00				Massive, coarse grained, equigranular feldspar-pyroxene phyric gabbro. Some intergrown granophyric textures. Pervasive chlorite alteration of mafic minerals. Carbonate altered feldspars. Calcite veining.
Melba	MF103	146.3	152	Ccf	HEVC	HeCh	R	0.00	Gr	Bd	80	Massive, purple/red, feldspar lithic volcaniclastic greywacke. Pervasive hematite alteration. Graded beds with siltstone interbeds. Gradtional contacts.
Melba	MF103	152	160	Ccf	GWAC	Ch	G3	0.00		Bd	70	Massive, pale green to grey, feldspar lithic volcaniclastic greywacke. Pervasive chlorite alteration. Graded beds w fine grained laminated volcaniclastic siltst tops

Allegiance Metals - Drill Log

BHID MF104

Collar

Project	BHID	Easting	Northing	RL	Depth	Date	Geologist
Melba	MF104	365670	5365450	2210	236	27/09/2008	L David/H Byrne

Surveys

Project	BHID	Depth	Azm_Amg	Dip
Melba	MF104	0	240	-70
Melba	MF104	50	240	-72
Melba	MF104	100	238	-72
Melba	MF104	150	243	-71
Melba	MF104	200	243	-70
Raw data (uncorrected)				

Hole Sizes

From	Size
0	HQ
61.4	NQ

Drilled By

Almac

Analyses By

BRL

Comments

Significant Intersections

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF104	0	3		LOSS							No Core
Melba	MF104	3	7.2	Ccf	HEVC		R					Brecciated, purple-brown hematitic SILTSTONE and m.g. feldspathic volcano-sedimentary silty sandstone. Mainly weathered to clay from 3 - 4m. Limonite fracture coatings common. Core broken to often very broken. Basal contact broken.
Melba	MF104	7.2	18	Ccf	GWAC		Y					Yellow-brown weathered, brecciated, limonitic SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Local relic primary purple-brown patches but mostly relic buff colour after primary light grey-green colour (see below). Lise-gange banding 7.4m - 7.6m. Limonite fracture coatings common. 7.8m - 8m and 8.7m - 9m totally weathered to clay. Core broken to often very broken. Basal contact gradational.
Melba	MF104	18	21.2	Ccf	GWAC		A					Light grey-green SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Limonite fracture coatings common. Core broken to often very broken. Basal contact gradational
Melba	MF104	21.2	28.1	Ccf	GWAC		Y					Yellow-brown weathered, brecciated, limonitic SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Rare local relic primary light grey-green colour. Limonite fracture coatings common. Core broken to often very broken. Basal contact gradational.
Melba	MF104	28.1	33.9	Ccf	GWAC		A			Bd	65	Light grey-green SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Local **UPWARD FACING GRADED BEDDING**. Minor limonite fracture coatings. Core broken to often very broken. CRUSH ZONE 30.8m - 31m. Basal contact sharp, disconformable. Bedding = 50 to CA at 31.1m, 65 to CA at 32.1m.
Melba	MF104	33.9	38.2	Ccf	HEVC		R					Purple-brown hematitic SILTSTONE and minor f.g. feldspathic volcano-sedimentary silty SANDSTONE. Local **UPWARD FACING GRADED BEDDING**. Curved lise-gange banding at 36.7m. Limonite (vuggy) fracture coatings common. CRUSH ZONES at 37.5m - 37.6m and 38m - 38.3m with brecciated sst/SILTSTONE in between. Core in 10cm to 15cm sticks with local broken zones. Basal contact broken.

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF104	38.2	43	Ccf	HEVC, GWAC		R, A					Mixed purple-brown hematitic and light grey-green SILTSTONE and minor f.g. feldspathic volcano-sedimentary silty SANDSTONE. Limonite (vuggy) fracture coatings common. CRUSH ZONE 39.2m - 39.4m. Core in 5cm to 10cm sticks. Basal contact broken. BASE OF OXIDATION at 43m.
Melba	MF104	43	46.7	Ccf	GWAC		A					Brecciated light grey-green SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Core broken to often very broken with local 5cm - 10cm CRUSH ZONES. Basal contact broken.
Melba	MF104	46.7	48.3	Ccf	GWAC, SSLT		A, N					Brecciated light grey-green SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Minor thinnly interbedded BLACK MUDSTONE. Bedding severely disrupted by tectonic brecciation. Core broken with prominent clay CRUSH ZONE 47.4m - 47.8m. Basal contact broken.
Melba	MF104	48.3	54.3	Ccf	GWAC, SSLT		A, N					Brecciated light grey-green SILTSTONE/m.g. feldspathic volcano-sedimentary silty SANDSTONE and thinnly interbedded BLACK MUDSTONE in equal proportions. Bedding severely disrupted by tectonic brecciation. Strong open space QUARTZ-CHLORITE veining from 50.2m to 52m with rare PYRITE fracture coatings. Core broken to locally very broken. Basal contact broken.
Melba	MF104	54.3	61.4	Ccf	GWAC, SSLT		A, N			Bd	50	Brecciated light grey-green SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Minor thinnly interbedded BLACK MUDSTONE. Bedding partly to locally severely disrupted by tectonic brecciation. Minor QUARTZ-FE CARBONATE veining and tectonic breccia matrix fill. Core in 20cm - 40cm sticks with minor 10cm wide broken zones. Basal contact irregular. Bedding at 57.3m at 50 degress to CA.
Melba	MF104	61.4	99.4	Ccf	GWAC		A			Bd	50	Light grey-green SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Minor local **UPWARD FACING GRADED BEDDING (eg. at 75.9m).** Often moderately tectonically brecciated with QUARTZ-FE CARBONATE vein stockworks. PYRITIC BLACK MUDSTONE from 78.4m to 78.9m. Core in 10cm to 80cm sticks but broken to very broken associated with strong QUARTZ-CHLORITE veining from 89m to 92.5m. Basal contact brecciated. Bedding = 50 to CA at 64.2m, 40 to CA at 73m, parallel to CA at 74.9m, 40 to CA at 75.8m.

Allegiance Metals Drill Log												
Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF104	99.4	103	Ccf	GWAC, SSLT		A, N			Bd	25	Brecciated light grey-green SILTSTONE/m.g. feldspathic volcano-sedimentary silty SANDSTONE and thinnly interbedded BLACK MUDSTONE in equal proportions. Minor slightly remobilised syngenetic PYRITE layers. Bedding often severely disrupted by tectonic brecciation. Core broken to locally very broken. Basal contact broken. Bedding = 25 to CA at 100.3m.
Melba	MF104	103	105.8	Ccf	GWAC		A			Bd	35	Light grey-green laminated to thinnly interbedded weakly brecciated SILTSTONE and minor f.g. feldspathic volcano-sedimentary silty SANDSTONE. Coarse GRAVITY FLOW BRECCIA with prominent siliceous matrix from 105.25m to 105.3m. Core in 10cm to 30cm sticks. Basal contact irregular. Bedding = 35 to CA at 103.3m.
Melba	MF104	105.8	107.8	Ccf	GWAC		A		10			GRAVITY FLOW BRECCIA - polymict, coarse with angular lithic fragments from 2mm to 20mm across in a light grey silicified silty matrix.Fragments consist of lightgrey and dark grey sediment and minor vein quartz. Tectonic brecciation overprint. Core in 15cm to 30cm sticks. Basal contact sharp at 10 degrees to CA.
Melba	MF104	107.8	115.4	Ccf	GWAC		A	5.00		Bd	55	Light grey-green laminated to thinnly interbedded weakly brecciated SILTSTONE and minor f.g. feldspathic volcano-sedimentary silty SANDSTONE. Laminated BLACK MUDSTONE from 110.4m to 110.8m and 111.3m to 111.5m. Weakly brecciated in basal 90cm. Massive FE CARBONATE - MINOR QUARTZ VEIN from 111m to 111.1m. Two QUARTZ-CHLORITE ladder veins 5mm and 15mm at 50 degrees to CA near basal contact. Minor FE CARBONATE - QUARTZ veining. Fine grained GABBRO - minor quartz-Fe carbonate vein from 115.15m to 115.3m with 20mm x 10mm **CHALCOPYRITE** clot and associated veinlets with minor **CHALCOPYRITE**. Disseminated **?PENTLANDITE/PYRITE** (5%)in basal 25cm. Core in 10cm to 30cm sticks. Basal contact stoped, irregular. Bedding = 55 to CA at 110.2m.

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF104	115.4	126	Cgb	GABB		G	1.00	30			GABBRO - dark green, massive, equigranular feldspar-pyroxene phyric. Finer grained chilled margins with central coarse grained part from 121.5m to 124.8m. Very fine grained in basal 40cm with weak patchy pink SILICA-HEMATITE alteration. Large sediment ?xenolith from 119.9m to 121.1m. Moderate QUARTZ - FE CARBONATE veining throughout. **CHALCOPYRITE** clots (10mm x 5mm) and wisps in top 10cm. Trace to locally 3% or 5% fine disseminated **CHALCOPYRITE - ?PENTLANDITE/PYRITE** (including in ?xenolith with extra **CHALCOPYRITE**) in upper finer grained part with small **CHALCOPYRITE** clots in occasional quartz veinlets. Sulphide absent in coarse grained part. Minor **CHALCOPYRITE** small blebs (5%) in basal 15cm. Basal contact sharp, at 30 to CA.
Melba	MF104	126	139.2	Ccf	HEVC		P, B			Bd	45	Purple-brown hematitic interbedded SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Top 1.3m altered to dark purple and moderately **INDURATED** by overlying gabbro. Pale green-grey SERICITE bleached zone 138.1m - 138.6m with QUARTZ- FE CARBONATE veins 1cm - 2cm thick with minor CHLORITE veinlets in middle part. **DOWNWARD FACING GRADED BEDDING at 133.8m, 134m and 137.6m.** Minor QUARTZ-CARBONATE +/- CHLORITE veining throughout. Minor QUARTZ-FE CARBONATE veining with tectonic breccia matrix fill below 137.9m. Trace **PYRITE** 138.1 - 138.6m, commonly associated with chlorite stringers. Trace **CHALCOPYRITE** and rare **PYRITE** below 138.9m, generally associated with quartz veining. <60mm gabbro blotches in basal 0.4m. Bedding: 45 degrees to LCA at 130m, 30 degrees to LCA at 137.4m. Basal contact irregular.
Melba	MF104	139.2	141.85	Cgb	GABB		G		35			GABBRO - dark green, massive, fine to coarse grained, equigranular feldspar-pyroxene phyric. Chilled margins (each 50cm wide) are finer grained. Weak patchy pink SILICA-HEMATITE alteration in top 55mm. Sediment ?xenolith from 139.5m to 139.65m. Moderate QUARTZ - FE CARBONATE veining throughout. Rare **CHALCOPYRITE** blebs at 140.8m. 3 to 5% leucoxcene throughout. Basal contact sharp, irregular at 35 to CA.

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF104	141.85	171.3	Ccf	HEVC		R			Bd	20	Red-purple hematitic interbedded SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Top 0.8m is moderately **INDURATED** and weakly ?sericite bleached to pale grey-brown. **DOWNWARD FACING GRADED BEDDING at 143.9m, 157.3m, 165.4m. UPWARD FACING GRADED BEDDING at 169.6m.** Fine grained dark green gabbro veins at 142.7m (70mm) and 143.05m (<10mm). Dark grey-black fine grained altered mudstone 70mm band at 143m. Occasional clasts/lenses of pale grey-brown sediment. Chaotic tectonic brecciation from 145.5m to 149.5m with disrupted bedding often sub-parallel to CA (?minor fold hinge). Moderate QUARTZ-CARBONATE +/- CHLORITE veining throughout, one 7cm wide at 149.5m at 55 to CA. Bedding = 45 to CA at 143.9m, 40 to CA at 144.7m, 40 to CA at 150.3m, 5 to LCA at 155.3m, 35 to CA at 157.2m, 25 degrees to LCA at 165.4m, 20 to CA at 169.7m. Basal contact gradational.
Melba	MF104	171.3	173.2	Ccf	GWAC		G		45	Bd	5	Light grey-green SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Occasional QUARTZ-CARBONATE +/- CHLORITE veins and common chlorite veinlets. Common sub-angular to sub-rounded, often lenticular, clasts of siltstone in a sandstone matrix below 172m (?rip-up clasts/?flaser bedding). Bedding = 5 to CA at 172.5m. Basal contact sharp, 45 degrees to LCA.
Melba	MF104	173.2	178.5	Ccf	HEVC		R			Bd	20	Red-purple hematitic SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE to 175.7m. Below 175.7 core is dark purple-brown and moderately **INDURATED**. Parallel CHLORITE-QUARTZ-CARBONATE veins at 172.2m (35mm wide), 172.5m (40mm wide) and 172.8m (70mm wide) all at 60 to CA. QUARTZ-CARBONATE +/- CHLORITE veinlets throughout. Bedding: 20 degrees to LCA at 175.3m. Basal contact sharp - defined by carbonate-quartz vein.
Melba	MF104	178.5	182.2	Cgb	GABB		G		25			GABBRO - dark green, massive, medium grained, equigranular feldspar-pyroxene phyric. Finer grained chilled margins (each 15cm wide). Occasional QUARTZ - CARBONATE veining. Very rare, very fine **CHALCOPYRITE** from 180.5m - 181.6m. Trace to minor leucoxcene, 1% in top 0.4m. Basal contact sharp, 25 degrees to LCA .

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF104	182.2	192.7	Ccf	HEVC	Ch	R			Bd	30	Mixed red-brown hematitic and light grey-green SILTSTONE and minor f.g. feldspathic volcano-sedimentary silty SANDSTONE. Occasional light grey-green 70-200mm bands/patches. **UPWARD FACING GRADED BEDDING at 186m and 191.1m.** GABBRO vein/dyke from 182.35m - 182.5m. Wispy gabbro patch (?vein) 30mm across at 185.3m with 5% fine disseminated **CHALCOPYRITE/PYRITE/?PENTLANDITE**. Often moderately tectonically brecciated with QUARTZ CARBONATE vein stockworks. Basal 50cm moderately **INDURATED**. Bedding: 45 degrees to LCA at 185.9m; 30 degrees to LCA at 191.1m. Basal contact irregular.
Melba	MF104	192.7	194.4	Ccf	GWAC	Ch	A			Bd	30	Light grey-green ?CHLORITE altered interbedded SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Moderate QUARTZ- FE CARBONATE +/- CHLORITE veinlets at all angles. Trace **PYRITE** 193.4m - 194.3m, minor to 1% below 194.3m. Bedding: 30 degrees to LCA at 194.1m. Basal contact sharp 30 degrees to LCA.
Melba	MF104	194.4	198.75	Cgb	GABB		G		25			GABBRO - dark green, massive, equigranular feldspar-pyroxene phyric. Finer grained chilled margins with central coarse grained section from 195.9 - 196.8 & 197.2 - 197.6m. Moderate irregular QUARTZ - FE CARBONATE +/- CHLORITE veining, at all angles. Trace to locally 1% fine disseminated **?PENTLANDITE/PYRITE.** Minor, small **CHALCOPYRITE** blebs in upper 0.2m. 3 to 5% leucoxcene throughout. Basal contact sharp, 25 degrees to LCA.
Melba	MF104	198.75	199.8	Ccf	GWAC	Ch	A					Light grey-green m.g. feldspathic volcano-sedimentary silty SANDSTONE and minor SILTSTONE. Bedding appears to be disrupted by tectonic brecciation to 198.2m. Common sub-angular predominantly lenticular clasts (<30mm length & 5mm width) of siltstone in a sandstone matrix below 198.2m (?rip-up clasts/?flaser bedding). Pervasive CHLORITE alteration and ubiquitous dark green chlorite veinlets. 5% **PYRITE/?PENTLANDITE** 199m - 199.3m and rare to base. Basal contact gradational.

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF104	199.8	229.4	Ccf	HEVC		R			BD	30	Red-brown SILTSTONE, MUDSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Light grey-green zones occur between 202.8m - 203m and 220.5 - 221.2m and are badly broken. **UPWARD FACING GRADED BEDDING at 208m, 210m, 211.3m, 220.1m, 227.3m.** Common QUARTZ - CARBONATE +/- CHLORITE veining. Occasionally moderately tectonically brecciated with QUARTZ - CARBONATE vein stockworks. **CHALCOPYRITE** blebs up to 1cm across in QUARTZ - CARBONATE - CHLORITE vein 20mm wide at 208.7m Green-grey CHLORITE altered zone with 5% **CHALCOPYRITE** blebs up 5mm x 10mm in QUARTZ - CARBONATE - CHLORITE veins from 220.7m - 220.85m. Trace **PYRITE** 218.5 - 219.8m, occuring predominately along fractures. Basal alteration contact gradational. Bedding: 30 degrees to LCA at 209.4m; 20 to CA at 212.8m, 30 to CA at 220.1m, 10 to CA at 222.3m, 45 to CA at 227.3m, 15 degrees to LCA at 228.8m.
Melba	MF104	229.4	230.65	Ccf	GWAC	Ch	G					Light grey-green SILTSTONE and minor f.g. feldspathic volcano-sedimentary silty SANDSTONE. Moderate pervasive CHLORITE alteration. Abundant irregular QUARTZ - CARBONATE - CHLORITE veinlets, at all angles. Basal 70 mm is moderately hematite altered. Basal alteration contact gradational.
Melba	MF104	230.65	236	Ccf	HEVC		R					Red-brown SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. **UPWARD FACING GRADED BEDDING at 233m.** Occasional QUARTZ-FE CARBONATE veining and tectonic breccia matrix fill. Several **CHALCOPYRITE** blebs <10mm x 8mm in QUARTZ-PINK CARBONATE vein 20mm wide at 233m. Also trace **CPY** in thin (2mm wide) qtz vein at 233.65m. Basal 2 meters has minor red-brown and black fine grained sub-rounded sediment clasts (?rip-up clasts) up to 30mm, in a f.g. silty sandstone matrix. EOH at 236m

Allegiance Metals - Drill Log

BHID

MF105

Collar

Project	BHID	Easting	Northing	RL	Depth	Date	Geologist
Melba	MF105	365670	5365450	2210	246	07/10/2008	H Byrne

Surveys

Project	BHID	Depth	Azm_Amg	Dip
Melba	MF104	0	240	-45
Melba	MF105	50	237	-49
Melba	MF105	100	238	-47
Melba	MF105	150	238	-48
Melba	MF105	200	239	-47
Melba	MF105	244	241	-47
Raw data (uncorrected)			Azm_Mag	Dip
Melba	MF105	0	227	-45
Melba	MF105	50	224	-49
Melba	MF105	100	225	-47
Melba	MF105	150	225	-48
Melba	MF105	200	226	-47
Melba	MF105	244	228	-47

Hole Sizes

From	Size
0	HQ
73	NQ

Drilled By

Almac

Analyses By

BRL

Comments

Devereaux Prospect

Significant Intersections

Allegiance Metals Drill Log												
Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF105	0	3		LOSS							No Core
Melba	MF105	3	19.1	Ccf	HEVC		O, P			Bd	25	Yellow-brown weathered, limonitic c.g. feldspathic volcano-sedimentary silty SANDSTONE and SILTSTONE. Frequent relic primary purple-brown patches. White, leached and bleached 15.8 - 17m. Liesegang banding 10.27- 10.95m. 13 - 14.5m weathered to clay. 0.2m zones at 6.5 & 12.2m containing <35mm, often lenticular, sub-rounded clasts (?rip-up clasts). Limonite fracture coatings common and occasional limonitic boxworks below 13m. Bedding = 25 to CA at 4.8m. Core broken to often very broken. Basal contact gradational.
Melba	MF105	19.1	21	Ccf	HEVC		P					Purple-brown haematitic m.g. feldspathic volcano-sedimentary silty SANDSTONE and SILTSTONE. Core broken to often very broken. Basal contact broken.
Melba	MF105	21	25.55	Ccf	HEVC, GWAC		Y					Brecciated, yellow-brown weathered, limonitic SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Local relic primary purple-brown patches and relic buff colour after primary light grey-green colour (see below). Limonite fracture coatings common and occasional limonitic boxwork. Liesegang banding 21.2 - 21.35m. Buff, soft and clayey zone (possibly fault gouge) 24.25 - 24.4m with 2% fine disseminated PYRITE. Core in 4 to 30 cm sticks. Basal contact irregular.
Melba	MF105	25.55	26.7	Ccf	GWAC		G	3.00				Light grey-green SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Top 0.2m brecciated. Limonite fracture coatings and patches common. 2 - 4% disseminated fine to course PYRITE. Core broken to very broken. Basal contact irregular.
Melba	MF105	27.7	33.35	Ccf	GWAC, HEVC		Y					Yellow-brown weathered, brecciated, limonitic SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Local relic primary purple-brown patches but mostly relic buff colour after primary light grey-green colour (see below). Light grey-green 0.15 - 0.4m sandstone patches with 1-3% disseminated PYRITE to 28m. Abundant limonite fracture coatings and boxworks. Core broken to occasionally very broken. Basal contact gradational.
Melba	MF105	33.35	38.2	Ccf	GWAC		G			Bd	12	Light grey-green SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Purple brown haematitic zone 33.6 - 34.4m, base of zone is gradational. Occasional limonite fracture coatings becoming common below 35.5m. 5% PYRITE 33.6 - 33.9m and minor to 2% PYRITE below 36.8m. Bedding = 12 to CA at 35.7m Core broken to occasionally very broken. Basal contact gradational.
Melba	MF105	38.2	40	Ccf	GWAC		Y					Yellow-brown weathered limonitic SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Relic primary light grey-green colour throughout. Abundant limonite fracture coatings and pits. Common irregular vuggy quartz veinlets (1 - 8mm). Core broken to often very broken. CRUSH ZONE 38.5m - 38.75m, with quartz fragments to 50mm. Gouge seam in basal 0.1m. Basal contact at base of gouge and limonite staining.

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF105	40	45.65	Ccf	GWAC		G			Bd	45	Light grey-green SILTSTONE and c.g. feldspathic volcano-sedimentary silty SANDSTONE. **UPWARD FACING GRADED BEDDING** at 42.05 & 43.1m. Minor limonite fracture coatings to 43.6m. Core broken to often very broken. CRUSH ZONES at 41m - 41.5m, 44.05 - 44.4m and 44.9m - 44.4m. Patchy 2% PYRITE 40.9 - 41m and 3-5% PYRITE on fractures at 44.85m & 44.6m Basal contact gradational and broken. Bedding = 45 to CA at 43.1m, 20 to CA at 42.05m.
Melba	MF105	45.65	56	Ccf	HEVC		P			Bd	45	Purple-brown haematitic zone SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Transitional zone in top 1.2m containing a mixture of light grey-green and purple-brown haematitic siltstone and very minor sandstone. Light grey-green m.g. feldspathic volcano-sedimentary silty SANDSTONE 53.4 - 53.8m. Minor limonite fracture coatings to 49m. Occasional pale to dark green fracture surfaces (?chlorite). Core broken to very broken. CRUSH ZONE at 53m - 53.2m. Pale grey-green 0.1m bleached zone at 50.1m with 2% fine diseminated **PYRITE**. Basal contact broken. Bedding = 50 to CA at 49.6m, 45 to CA at 55.2m.
Melba	MF105	56	57	Ccf	GWAC		O					Orange-brown, limonitic stained c.g feldspathic volcano-sedimentary silty SANDSTONE. Relic primary purple-brown haematitic and light grey-green color throughout. Limonite fracture coatings common. Core is broken. Contact put at BASE OF OXIDATION.
Melba	MF105	57	60.7	Ccf	FALT		G					Fault Zone. Light grey-green SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. 70mm fault gouge seam at 57.9m. Core is very broken throughout. Trace **PYRITE**, locally 1-2%. Common vein QUARTZ +/-CHLORITE in basal 0.3m Basal contact broken.
Melba	MF105	60.7	69	Ccf	GWAC		G			Bd	40	Brecciated light grey-green SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Bedding severely disrupted by tectonic brecciation to 67.4m. Massive open space QUARTZ-CHLORITE vein from 60.8m to 60.1m. Core in 0.5cm to 70cm sticks but broken to very broken associated with strong, vuggy QUARTZ-CHLORITE veining from 60.7m to 67.1m. Occasional, irregular QUARTZ-FE CARBONATE veining, predominately as discontinuous stringers & veinlets. Common wispy creamy-yellow ?sericite to 67.7m. **?UPWARD FACING GRADED BEDDING** at 78.8m. Trace **PYRITE** 60.1 to 67m, locally 1%. Rare **PYRITE** 67 - 68.5m. Very rare **CHALCOPYRITE** at 68.45m. Bedding = 40 to CA at 67.7m, 20 to CA at 68.5m. Basal contact gradational.
Melba	MF105	69	76.9	Ccf	HEVC		P			Bd	30	Purple-brown haematitic SILTSTONE and c.g. feldspathic volcano-sedimentary silty SANDSTONE. Light grey-green 20 - 50cm zones at 69.9, 72, 73 & 76m. **DOWNWARD FACING GRADED BEDDING** at 72.5m & 74.9m. Occasional irregular veinlets and stringers of QUARTZ-FE CARBONATE, at all angles throughout. Common, irregular QUARTZ-FE CARBONATE +/- CHLORITE veins with minor **CHALCOPYRITE** specks (0.5 - 3mm) 71.1 - 73m. Rare fine **CHALCOPYRITE** below 75.1m, often associated with QTZ-CB veining. Core in 3cm to 85cm sticks with minor broken zone 73 - 73.6m. Basal contact sharp - defined by carbonate-quartz vein, 35 to CA. Bedding = 25 to CA at 69.9m, 15 to CA at 70.2m, 30 to CA at 72.5m, 40 to CA at 74.9m.

Allegiance Metals Drill Log												
Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF105	76.9	79.2	Ccf	GWAC		G			Bd	40	Light grey-green SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Bedding moderately disrupted by tectonic brecciation. Common QUARTZ-FE CARBONATE +/- CHLORITE veining and tectonic breccia matrix fill. Core in 10cm - 40cm sticks. Rare, fine **CHALCOPYRITE**, often associated with QTZ-CB veining. Basal contact gradational. Bedding at 40 to CA at 77.3m.
Melba	MF105	76.9	82	Ccf	HEVC		P			Bd	35	Mixed interval of purple-brown haematitic and light grey-green SILTSTONE and f.g. feldspathic volcano-sedimentary silty SANDSTONE. Common QUARTZ-FE CARBONATE +/- CHLORITE veining and occasional tectonic breccia matrix fill. Core in 10 - 57cm sticks. Very rare, very fine **CHALCOPYRITE** 79.8 - 80.7m, associated with QTZ-CB veining. Basal contact gradational. Bedding = 35 to CA at 79.3m
Melba	MF105	82	91.9	Ccf	GWAC		G			Bd	50	Brecciated green SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Bedding often severely disrupted by tectonic brecciation with CHLORITE-QUARTZ +/- CARBONATE stockwork. Common irregular QUARTZ-FE CARBONATE +/- CHLORITE veining, at all angles and occasional tectonic breccia matrix fill. Minor local **UPWARD FACING GRADED BEDDING** at 84.85 & 85.4m. Common irregular QUARTZ-FE CARBONATE +/- CHLORITE veining, at all angles and occasional tectonic breccia matrix fill. Minor wispy creamy yellow ?sericite. Core is in 9 - 60cm sticks but broken to very broken below 90.2m. Rare **CHALCOPYRITE** 86.3 - 89.3m. Basal contact broken. Bedding = 50 to CA at 84.8m.
Melba	MF105	91.9	100	Ccf	HEVC		P			Bd	60	Purple-brown haematitic interbedded SILTSTONE and f.g. feldspathic volcano-sedimentary silty SANDSTONE. Light grey-green 0.25m zone at 94m. Pale green-grey SERICITE bleached and brecciated zone 96.4m - 96.45m with minor irregular QUARTZ- FE CHLORITE veinlets. Moderate CHLORITE-QUARTZ-CARBONATE veinlets below 94.2m. Very rare, very fine **CHALCOPYRITE** often occurring along fracture surfaces. Core is in 5 to 40 cm sticks, broken to badly broken to 93.7m. Bedding = 60 to CA at 94.3m, 65 to CA at 96.95m. Core is in 5 to 40 cm sticks, broken to badly broken to 93.7m. Basal contact gradational.
Melba	MF105	100	122.45	Ccf	GWAC		G			Bd	50	Light grey-green SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. **DOWNWARD FACING GRADED BEDDING at 107.8, 114.9, 118.75, 119.05, 120.75 & 121.3m.** Locally moderately tectonically brecciated with QUARTZ-FE CARBONATE vein stockworks. Common CHLORITE stringers. Core in 10cm to 50cm sticks but broken to very broken 106 - 107.8m and 112.1 - 113.6m. Rare fine **PYRITE** to 121.1m, minor PYRITE blebs to 10mm below 121.1m. Basal contact broken. Bedding = 50 to CA at 102.6m, 50 to CA at 108.4m, 55 to CA at 113.8m, 60 to CA at 119.7m, 70 to CA at 121m.

Allegiance Metals Drill Log												
Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF105	122.45	129.9	Ccf	GWAC		A			Bd	70	Brecciated light green to grey SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Minor thinly interbedded BLACK MUDSTONE. Bedding severely disrupted by tectonic brecciation. Common CHLORITE-QUARTZ +/- FE CARBONATE vein stockwork. QUARTZ with minor FE CARBONATE & CHLORITE veins (10-40mm) 126.6 - 127.85m. Core in 5cm - 40cm sticks but very broken between 124.85 & 125.6m with occasional vein quartz fragments (<40mm). Trace **PYRITE**, locally 2%, 5-7% 123 - 124m, often associated with CHLORITE veining. Basal contact broken. Banding at 70 degrees to CA at 128.5.
Melba	MF105	129.9	151.5	Ccf	GWAC		A			Bd	60	Brecciated grey SILTSTONE/f.g. feldspathic volcano-sedimentary silty SANDSTONE and BLACK MUDSTONE. Bedding severely to locally weakly disrupted by tectonic brecciation. Local **UPWARD FACING GRADED BEDDING** at 144.25m & 149.05. Abundant stringers of black graphitic material at all angles throughout. Strong QUARTZ-FE CARBONATE veining. Massive 0.5 m QUARTZ - minor CHLORITE vein at 137.9m. Core in 5cm - 45cm sticks but badly broken to 130.5 and with minor <15cm wide broken zones. 3-5% fine disseminated **PYRITE** in black mudstone beds. Rare **CHALCOPYRITE** bleb associated with veining. Basal contact broken. Bedding = 60 to CA at 140.05, 65 to CA at 143.3, 40 to CA at 149.3.
Melba	MF105	151.5	158.15	Ccf	GWAC		A			Bd	60	Light grey to green SILTSTONE and f.g. feldspathic volcano-sedimentary silty SANDSTONE. Minor thinly interbedded BLACK MUDSTONE. **DOWNWARD FACING GRADED BEDDING** at 153.2 & 156.4m. Bedding locally moderately disrupted by tectonic brecciation. Common QUARTZ-FE CARBONATE +/- CHLORITE veining and tectonic breccia matrix fill. Core in 3cm - 50cm sticks with badly broken to151.6m. Local 2% **PYRITE** associated with black mudstone and very rare **CHALOCPYRITE** associated with veining. Trace orange-brown & black **SPHALERITE** blebs in vein at 155.3m Basal contact broken. Bedding = 50 to CA at 153.8, 60 to CA at 156.4m.
Melba	MF105	158.15	163.85	Ccf	GWAC		A			Bd	70	Thinly interbedded BLACK MUDSTONE, grey SILTSTONE and lesser f.g. feldspathic volcano-sedimentary silty SANDSTONE. Abundant **PYRITE** laminae (syngenetic?), associated with black mudstone & occasional <7mm fragments. Overall 5-7% pyrite. Rare **CHALCOPYRITE** bleb associated with veining at 162m. Bedding often disrupted by tectonic brecciation. Moderate QUARTZ-FE CARBONATE +/- CHLORITE veining and tectonic breccia matrix fill. Core broken to locally very broken. Basal contact broken. Bedding = 70 to CA at 159m, 40 to CA at 159.6m.

Allegiance Metals Drill Log												
Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF105	163.85	187.5	Ccf	GWAC		A			Bd	60	Brecciated light grey-green SILTSTONE/m.g. feldspathic volcano-sedimentary silty SANDSTONE and thinly interbedded BLACK MUDSTONE. Bedding locally strongly disrupted by tectonic brecciation. Moderate QUARTZ-FE CARBONATE +/- CHLORITE veining and tectonic breccia matrix fill. Trace (locally 2-4%) **PYRITE**, commonly associated with black mudstone. Trace **SPHALERITE** & **CHALCOPYRITE** in stringers 166-166.5m. 2% orange-brown & red-brown **SPHALERITE** blebs in QTZ-CB veins at 163.5 & 168.2m. Core in 5 - 80cm sticks with minor broken zones <10cm. Basal contact gradational. Bedding = 60 to CA at 165.15, 50 to CA at 170.1, 65 to CA at 183.9m.
Melba	MF105	187.5	205.3	Ccf	GWAC		G			Bd	30	Light grey-green SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Minor thinly interbedded BLACK MUDSTONE. Bedding locally disrupted by moderate tectonic brecciation. Minor QUARTZ-FE/pale pink CARBONATE +/- CHLORITE veining. 7-10% red-brown **SPHALERITE** blebs & minor **GALENA** in QTZ-CB vein at 203m. Minor **PYRITE** to 195m and trace below 195m. Locally 1-3% **PYRITE**. Core in 8cm - 90cm sticks. Basal contact gradational. Bedding = 30 to CA at 188.2, 30 to CA at 196.5, 65 to CA at 199, 30 to CA at 201.5, 50 to CA at 204.9m.
Melba	MF105	205.3	208.4	Ccf	HEVC		R			Ct	65	Red-purple haematitic SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Occasional QUARTZ-CARBONATE +/- CHLORITE veinlets. Bedding occasionally disrupted by weak tectonic brecciation. Bedding: 25 degrees to CA at 207.3m. Basal contact sharp, 65 to CA.
Melba	MF105	208.4	214.3		GWAC, GABB		G			Bd	35	Light grey-green SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Common, irregular bands and patches of fine-grained dark green-black ?serpentinised GABBRO at 208.95 - 209, 209.3 - 209.35m, 209.4 - 209.9m, 212 - 213.4, 213.65 - 213.95, 214.1 - 214.15, 214.2 - 214.25. Sediment is reddish-brown and moderately indurated 209.9 - 210.5m. Weak, patchy, wispy creamy-yellow ?sericite alteration 210.8 - 212.6m. Bedding locally moderately disrupted by tectonic brecciation. Abundant QUARTZ-CARBONATE-CHLORITE veining. 1-3% **PYRITE** 210.6 - 212.2m. 10% leucoxcene disseminated through gabbros. Trace to minor fine **PYRITE/?PENTLANDITE** disseminated through gabbro veins below 212m. Bedding = 35 to CA at 210.8m. Basal contact sharp.
Melba	MF105	214.3	217.8	Ccf	GWAC		G					Grey-green and pale reddish-brown strongly INDURATED SILTSTONE and f.g. feldspathic volcano-sedimentary silty SANDSTONE. Minor QUARTZ-CARBONATE-CHLORITE veining, often as discontinuous stringers and veinlets. QUARTZ-CARBONATE tectonic breccia matrix fill at 216.3m. Basal contact irregular.
Melba	MF105	217.8	219.4	Cgb	GABB		G					Fine-grained dark green GABBRO and pale grey-green to pale reddish-brown strongly INDURATED SILTSTONE. Gabbro as irregular bands (218 - 218.2, 218.5 - 219.1, 219.1 - 219.25m) and patches. Strong QUARTZ-CARBONATE +/- CHLORITE veining. Trace very fine **PYRITE/?PENTLANDITE** and 10-15% lecoxcene disseminated through GABBRO. Basal contact irregular.

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF105	219.4	225.2	Ccf	GWAC		G			Bd	50	Light grey-green SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Sediment is red-brown 219.7 - 220.5m. 150mm band of fine-grained dark green-black ?serpentinised GABBRO with 10-15% disseminated leucoxcene and trace **PYRITE/?PENTLANDITE** at 220.8m. 20cm bleached zone at 220.5m. 60cm massive (~50%) very fine disseminated sooty PYRITE at 221m. Bedding strongly disrupted by tectonic brecciation. Common QUARTZ-CARBONATE-CHLORITE veinlets and stringers. Weak, patchy fine white & pale pink cb spotting 224.1 - 224.25m. Local 1-2% **PYRITE**. Bedding = 50 to CA at 223.5m. Banding = 5 to Ca at 222.5m. Basal contact gradational sharp, 50 to CA.
Melba	MF105	225.2	233.2	Cgb	GABB		G			Ct	70	GABBRO - dark green, massive, medium grained, equigranular feldspar-pyroxene phyric. Gabbro is black (?serpentinised) to 226.85m. Finer grained chilled margins (20cm wide at top & 5cm wide at base). Common QUARTZ - CARBONATE +/- CHLORITE veining. Rare to trace fine **PYRITE/?PENTLANDITE**. 5-10% disseminated leucoxcene. Basal contact sharp, 70 to CA .
Melba	MF105	233.2	240.2	Ccf	HEVC		A			Bd	35	Patchy dark purple-grey & green-grey, hard, strongly indurated SILTSTONE and f.g. feldspathic volcano-sedimentary silty SANDSTONE. Bedding locally disrupted by strong tectonic brecciation. Common QUARTZ-FE CARBONATE +/- CHLORITE veining and tectonic breccia matrix fill. Local minor **PYRITE**. Core in 3 to 50 cm sticks but broken 235.95 - 238m. Bedding = 35 to CA at 239.5m. Baal contact gradational.
Melba	MF105	240.2	241.6	Ccf	HEVC		R					Red-brown haematitic SILTSTONE. Light grey-green siltstone band 241.23 - 241.38m. Minor QUARTZ-FE CARBONATE +/- CHLORITE stringers. Basal contact gradational.
Melba	MF105	241.6	246 EOH	Ccf	GWAC		G			Bd	45	Light grey-green laminated SILTSTONE and minor c.g. feldspathic volcano-sedimentary silty SANDSTONE. **UPWARD FACING GRADED BEDDING** at 242.8m. Minor QUARTZ-FE CARBONATE +/- CHLORITE veining and tectonic breccia matrix fill. Very fine disseminated **PYRITE** (~25-40%) 241.8 - 242.2m. Local minor **PYRITE**, often associated with veining. Core is in 3 to 40 cm sticks with minor <20cm broken zones. Bedding = 45 to CA at 242.5, 35 to CA at 243.7, 65 to CA at 244.6, 67 to CA at 245.6m.

Allegiance Metals - Drill Log

BHID

MF106

Collar

Project	BHID	Easting	Northing	RL	Depth	Date	Geologist
Melba	MF106	365620	5365470	2210	210	21/10/2008	H Byrne

Surveys

Project	BHID	Depth	Azm_Amg	Dip
Melba	MF106	0	240	-60
Melba	MF106	55	236	-62
Melba	MF106	100	234	-62
Melba	MF106	150	239	-60
Melba	MF106	210	242	-60
Raw data (uncorrected)				
Melba	MF106	0	227	-60
Melba	MF106	55	223	-62
Melba	MF106	100	221	-62
Melba	MF106	150	226	-60
Melba	MF106	210	229	-60

Hole Sizes

From	Size
0	HQ
87.5	NQ

Drilled By

Almac

Analyses By

BRL

Comments

Deveraux

Significant Intersections

Allegiance Metals Drill Log												
Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF106	0	3		LOSS							No Core
Melba	MF106	3	16.65	Ccf	HEVC		Y			Bd	45	Yellow-brown weathered, soft, brecciated, limonitic SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Local relic primary purple-brown patches. Relic black and dark grey colour after shale/mudstone and siltstone at 13.6 - 14.5m & below 16.3m. Lise-gange banding 11m -11.4m. Abundant limonite fracture coatings. Common 15 - 30cm zones totally weathered to clay. Quartz fragments to 90mm, 7.85 - 8m & massive quartz 13 - 13.2m, both are vuggy & limonite stained. Core broken to often very broken. Bedding = 45 to CA at 4.2m. Basal contact gradational.
Melba	MF106	16.65	24.9	Ccf	GWAC		A			Bd	65	Brecciated pale grey to pale green-grey, bleached SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Moderate thinnly interbedded BLACK MUDSTONE/SHALE. Locally, bedding strongly disrupted by tectonic brecciation. Minor (locally 1-3%) fine diseminated **PYRITE**, predominantly associated with black shale & occasionally along fracture surfaces. Syngenetic PYRITE layers 22.2 - 22.55m. Occasional limonite fracture coatings and 10 - 30 cm limonite stained zones. Core broken to often very broken. CRUSH ZONES: 17.77 - 17.85m, 20.15 - 20.25, 20.35 - 20.5m, 21.8 - 22.07& 24.65 - 24.9m, including 50mm gouge seam at base, 80 degrees to CA.. Basal contact put at base of gouge seam. Bedding = 65 to CA at 17.7m.
Melba	MF106	24.9	27.1	Ccf	GWAC		A			Bd	55	Light grey-green, bleached, m.g. feldspathic volcano-sedimentary silty SANDSTONE and lesser SILTSTONE. Occasional limonite fracture coatings and 20 - 30 cm limonite stained zones. Core is very broken. Abundant CHLORITE veinlets and 3% **PYRITE** in basal 20cm. Basal contact gradational & broken. Bedding = 55 degrees to CA at 26.2m.
Melba	MF106	27.1	31	Ccf	GWAC		A	3.00		Bd	25	Brecciated green-grey SILTSTONE/m.g. feldspathic volcano-sedimentary silty SANDSTONE and BLACK MUDSTONE/SHALE. 3- 5% **PYRITE** 27.1 - 27.6m & 27.9 - 29m. Minor **MOLYBDENITE** below 28.15, increasing to 1% at 28.6 to 28.9m. Minor syngenetic **PYRITE** layers. Core is vuggy and pitted throughout. Bedding often severely disrupted by tectonic brecciation. Occasional CHLORITE +/- QUARTZ veinlets to 28.2m and below 28.9m. Minor limonite fracture coatings. Core broken to very broken. CRUSH ZONES: 28.35 - 28.4, 29.2 - 29.5m, 30.65 - 30.75m and 30.85 - 31 including 50mm gouge seam at base Basal contact put at base of fault gouge. Bedding = 25 to CA at 100.3m.
Melba	MF106	31	32.3	Ccf	GWAC		O					Brecciated SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Minor thinnly interbedded BLACK MUDSTONE. Core is orange brown weathered with common limonite fracture coatings to 31.8, and grey-green to base. Bedding strongly disrupted by tectonic brecciation. Common vuggy QUARTZ +/- CHLORITE veinlets. Minor fine black **?SPHALERITE** associated with QTZ veinlets at 31.2 - 31.4m. Core is very broken throughout. 45mm gouge seam at basal contact. BASE OF OXIDATION 31.8m.

Allegiance Metals Drill Log

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF106	32.3	38.15	Cgb	GABB		G			Ct	50	GABBRO - pale green, weathered, bleached, massive, equigranular feldspar-pyroxene phyric. QUARTZ + minor CHLORITE vein fragments to 70mm at 36 - 36.2m. Moderate irregular QUARTZ - FE CARBONATE +/- CHLORITE veining, at all angles. Minor to 1% **?PENTLANDITE/PYRITE** to 35.8m, and rare to base. 2% leucoxcene below 36.2m. 10mm crush zone at 33.75m & 30mm gouge seam at 35.8m. Core is very broken throughout. Basal contact sharp, 50 degrees to LCA.
Melba	MF106	38.15	39.7	Ccf	GWAC		G					Light grey-green f.g. feldspathic volcano-sedimentary silty SANDSTONE. Occasional CHLORITE +/- QUARTZ stringers. Core is very broken with CRUSH zones: 38.75 - 28.9m and 39.5 to base. Rare **CHALCOPYRITE**, on fracture surface at 38.3m and locally trace PYRITE often on fracture surfaces. Basal contact broken.
Melba	MF106	39.7	61.5	Ccf	HEVC		P			bd	55	Purple-brown haematitic SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. To 41m core is a green purple colour (transitional zone). Pale cream-green, 30-40cm bleached zones at 43.75m with irregular Fe Carbonate veining & associated minor fine ?**GALENA/?MOLYBDENITE** & at 44.5m. **UPWARD FACING GRADED BEDDING** at 42.2m, 52.35. **DOWNWARD FACING GRADED BEDDING** at 50.55 & 54.35. Moderate, commonly vuggy, QUARTZ - CHLORITE +/- FE CARBONATE stringers. Minor QUARTZ-FE CARBONATE veining and tectonic breccia matrix fill 46.3 - 46.8m. Core in 5cm to 45cm sticks with frequent 10 - 40cm wide broken zones. Basal contact broken. Bedding = 55 to CA at 41.4m, 55 to CA at 49.4m, 55 to CA at 50.55m, 55 to CA at 52.35m 55 to CA at 54.6, 45 to CA 57.95, 35 to CA at 58.5m, 55 to CA at 60.2m.
Melba	MF106	61.5	68.6	Ccf	GWAC		G			bd	40	Mixed interval of light grey-green and lesser purple-brown haematitic SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Bedding often disrupted by tectonic brecciation. Common vuggy QUARTZ - FE CARBONATE - CHLORITE veinlets. Leisegang banding common below 63.5m. Core in 5cm to 35cm sticks with frequent 10 - 30cm wide broken zones. Local minor **PYRITE** associated with veinlets. Basal contact broken. Bedding = 40 to CA at 62.1m
Melba	MF106	68.6	94	Ccf	HEVC		P			bd	45	Purple-brown haematitic SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Light grey-green zone 75.2 - 76.1m. Bedding locally strongly disrupted by tectonic brecciation. **UPWARD FACING GRADED BEDDING** at 88.8m. Strong QUARTZ - FE CARBONATE - CHLORITE veining at all angles, vuggy & leached to 82m. Leisegang banding common to 75.2m. 25 - 30cm pale green-cream bleached CHLORITIC zones at 80.6 with minor CHALCOPYRITE & 1% PYRITE & at 81m with 7-10% PYRITE. Core broken to very broken to 82m with 20cm CRUSH ZONE at 71.9m. Core in 5cm to 65cm sticks below 82m. Trace **CHALCOPYRITE** 70.2 - 70.7m. Local minor **PYRITE** associated with veinlets. Basal contact gradational. Bedding = 45 to CA at 81.8m, 25 to CA at 82.1, 50 to CA at 83.6m, 85 to CA at 85.8m, 45 to CA at 86.6m, 40 to CA at 88.65, 10 to CA at 90.1, 10 to CA at 91.4m.

Allegiance Metals Drill Log												
Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF106	94	99.7	Ccf	GWAC		G			bd	35	Light grey-green SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Local **UPWARD FACING GRADED BEDDING**. Occasional QUARTZ - CARBONATE +/- CHLORITE veining. Core in 6 to 40 cm sticks. Minor creamy yellow SERICITE wisps to 94.8m. Locally 1% **PYRITE**. Basal contact broken. Bedding = 35 to CA at 95m, 40 to CA at 95.6m, 3 to CA at 96.8m, 30 to CA at 99.1m.
Melba	MF106	99.7	102.9	Ccf	GWAC		G			bd	45	Brecciated grey-green SILTSTONE/m.g. feldspathic volcano-sedimentary silty SANDSTONE and thinly interbedded BLACK MUDSTONE. Minor syngenetic PYRITE layers. Strong irregular QUARTZ - CARBONATE +/- CHLORITE veining. Bedding often severely disrupted by tectonic brecciation. Core locally slightly broken. Basal contact gradational. Bedding = 45 to CA at 102.6m.
Melba	MF106	102.9	105.7	Ccf	GWAC		G			bd	35	Brecciated grey-green laminated to thinnly interbedded SILTSTONE and minor f.g. feldspathic volcano-sedimentary silty SANDSTONE. Bedding severely disrupted by tectonic brecciation. Common QUARTZ - CARBONATE +/- CHLORITE veining. Minor PYRITE, 3-5% 103.15 - 103.4 & 103.75 - 103.95m. Core in 8cm to 40cm sticks. Basal contact irregular. Bedding = 35 to CA at 104.5m, 25 to CA at 104.9.
Melba	MF106	105.7	112.25	Ccf	GWAC		G					Grey-green laminated to thinnly interbedded SILTSTONE and minor f.g. feldspathic volcano-sedimentary silty SANDSTONE. Minor thinnly interbedded BLACK MUDSTONE 107.85 - 109m. 20cm massive GABBRO vein at 111.7 & 3cm at 111.95m. 10% disseminated leucoxcene & trace **PYRITE/?PENTLANDITE** in GABBRO. 3-5% fine disseminated **PYRITE/?PENTLANDITE** 111.6 - 111.7m. Bedding partly to locally severely disrupted by tectonic brecciation. Below 108.85m, core is hard and indurated from underlying GABBRO. 30 - 50% very finely disseminated sooty **PYRITE** 105.7 - 106.5m & 106.8 -107.5. Occasional QUARTZ - CARBONATE +/- CHLORITE veining. Core in 7cm to 40cm sticks but 30cm broken zone at 108.7m and minor broken zones at 107.85 & 108.3m. Basal contact irregular.
Melba	MF106	112.2	114.65	Cgb	GABB		G					GABBRO - dark green & black, massive, medium grained, equigranular feldspar-pyroxene phyric. Intense QUARTZ - CARBONATE veining at all angles to 113.6m. 1cm lensey pink CB-QTZ vein at 113.57. Rare, very fine **PYRITE/?PENTLANDITE** to 113.8m, 1-2% below 113.8m. 5-10% disseminated leucoxcene. Basal contact irregular.
Melba	MF106	114.65	117.1	Ccf	GWAC		G			bd	30	Grey-green SILTSONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Bedding locally moderately disrupted by tectonic brecciation to 116m. Minor QUARTZ - CHLORITE - CARBONATE veining, strong between 115 & 115.4m. Common sub-angular predominantly lenticular clasts (<30mm length & <5mm width) of siltstone in a sandstone matrix below 115.5m (?rip-up clasts/?flaser bedding). Very rare, fine **CHALCOPYRITE** associated with veining. Basal contact gradational. Bedding = 25 to CA at 116.1, 30 to CA at 116.5m.

Allegiance Metals Drill Log												
Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF106	117.1	141	Ccf	HEVC		R			bd	30	Red-brown SILTSTONE and c.g. feldspathic volcano-sedimentary silty SANDSTONE. **DOWNWARD FACING GRADED BEDDING** at 120.8, 129.7, 130.9, 131.1, 133.1, 137.1 & 140.3m. Bedding often sub-parallel to CA (?minor fold hinge) at 117.6 - 117.9m. Occasional QUARTZ-FE CARBONATE +/- CHLORITE veining and tectonic breccia matrix fill. 10cm bleached & chloritized zone at 133.37m with 2 **?GABBRO** veins at 133.39 (4mm) & 121.41m (20mm) with trace **CHALCOPYRITE** & fine **PYRITE/?PENTLANDITE** & 5% fine disseminated leucoxcene. 25 - 40% very finely disseminated **PYRITE** & minor **CHALCOPYRITE** 134.15 - 134.5m. Trace **CPY** in qtz-cb vein at 136.45m. Grey-green bleached CHLORITIC zones at 139.45 (85mm) & 139.7 (40cm) with 5-8% PYRITE. Basal contact gradational. Bedding = 4 to CA at 117.8m, 10 to CA at 118.25, 11 to CA at 119.2, 40 to CA at 120.8, 25 to CA at 123.8m, 35 to CA at 125.5, 50 to CA at 129.7, 30 to CA at 130.9m, 40 to CA at 131.1, 30 to CA at 133.1, 20 to CA at 137.2, 15 to CA at 140.6m.
Melba	MF106	141	153.7	Ccf	GWAC		G			ct	30	Grey-green SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Mixed purple-brown hematitic & grey-green zone 150.5 - 151.3m. Semi-massive to massive intense FE CARBONATE-SIL alteration with CHLORITE veinlet stockwork & 5 - 10% orange-brown **SPHALERITE > GALENA** as 0.5 -10mm blebs 141.45 - 141.85m. **DOWNWARD FACING GRADED BEDDING** at 147.7m. Bedding locally moderately disrupted by tectonic brecciation. Strong QUARTZ- FE CARBONATE +/- CHLORITE veining throughout. Patchy trace PYRITE. Rare CHALCOPTYRITE 148.8 - 149.7. Minor creamy yellow SIDERITE wisps below 152.1. Core is in 3 - 50cm sticks but very broken 141 - 141.25, 141.4 - 141.45 & 148 - 149.3m. Bedding = 10 to CA at 144.4m, 30 to CA at 147.7m. Basal contact sharp, 30 degrees to LCA.
Melba	MF106	153.7	155.6	Ccf	HEVC		R			ct	60	Red-brown haematitic SILTSTONE and f.g. feldspathic volcano-sedimentary silty SANDSTONE. Bedding strongly disrupted by tectonic brecciation. Common QUARTZ-FE CARBONATE veining and tectonic breccia matrix fill. Core in 20cm - 40cm sticks with minor 10cm wide broken zones. Basal contact sharp, 60 to CA.
Melba	MF106	155.6	163.6	Ccf	GWAC		G			bd	55	Pale grey-green & cream (?bleached/cb) SILTSTONE and c.g. feldspathic volcano-sedimentary silty SANDSTONE. Mixed purple-brown hematitic & grey-green zone 160.1 - 162m. Strong patchy FE CARBONATE-SILICA alteration as irregular veinlets & veins to 20cm & tectonic breccia matrix fill. Occasional CHLORITE veinlets. **DOWNWARD FACING GRADED BEDDING** at 157.25m. **UPWARD FACING GRADED BEDDING** at 163.3m. 1% PYRITE 158.1 - 158.8m. Bedding locally moderately disrupted by tectonic brecciation. Core in 5cm - 55cm sticks. Basal contact gradational. Bedding = 65 to CA at 157.1, 55 to CA at 160.8, 50 to CA at 161.9, 55 to CA at 163m.

Allegiance Metals Drill Log												
Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF106	163.6	172.9	Ccf	GWAC		A			bd	40	Light grey & green SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Minor thinly interbedded BLACK MUDSTONE throughout with major zones 165 - 165.4 & 167.25 - 167.85m. Bedding locally moderately disrupted by tectonic brecciation. Strong QUARTZ-FE CARBONATE +/- CHLORITE veining to 165.9m and minor to base. QUARTZ-CB vein 171.9 - 172.55m. Core in 3cm - 50cm Local 2% **PYRITE** associated with black mudstone. 1% orange-brown **SPHALERITE > GALENA** blebs associated with veining 163.6 - 163.7m. Basal contact gradational. Bedding = 30 to CA at 165.4, 40 at 170m.
Melba	MF106	172.9	182	Ccf	GWAC		G			bd	50	Grey-green SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Very minor thinly interbedded BLACK MUDSTONE 177.9 - 178.8 & below 181.5m. Bedding locally moderately disrupted by tectonic brecciation. Minor QUARTZ-FE CARBONATE +/- CHLORITE veining and tectonic breccia matrix fill. Orange-brown **SPHALERITE** bleb (3mm) associated with qtz-cb vein 175.5m. Core in 10cm - 47cm sticks. Basal contact put at 25 mm qtz-cb vein.. Bedding = 50 to CA at 174.2m, 25 to CA at 177.2m, 45 to CA at 179.9, 50 to CA at 181.8m.
Melba	MF106	182	186.9	Ccf	GWAC		A			bd	45	Grey-green SILTSTONE/m.g. feldspathic volcano-sedimentary silty SANDSTONE and thinnly interbedded BLACK MUDSTONE in equal proportions. **UPWARD FACING GRADED BEDDING** at 183.1m. Syngenetic PYRITE layers associated with mudstone. Bedding locally moderately disrupted by tectonic brecciation. Minor QUARTZ-CARBONATE stringers at all angles. Core in 7 - 55 cm sticks. Basal contact gradational. Bedding = 50 to CA at 183.6m, 45 to CA at 184.7, 35 to CA at 135.2m, 55 to CA at 185.6, 40 to CA at 186.6m.
Melba	MF106	186.9	198.4	Ccf	GWAC		A			bd	50	Grey-green SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Minor BLACK MUDSTONE below 191.8m. Bedding locally moderately disrupted by tectonic brecciation. **UPWARD FACING GRADED BEDDING** at 188.6m. Minor QUARTZ-FE CARBONATE +/- CHLORITE veining (strong at 181.95 - 182.1m), and tectonic breccia matrix fill. 3 - 5% yellow-brown (honey coloured) **SPHALERITE > GALENA** as blebs (1-3mm) 196.65 - 196.8m, associated with qtz-cb veining. Basal contact irregular. Bedding = 50 to CA at 174.2m, 25 to CA at 177.2m, 45 to CA at 179.9, 50 to CA at 181.8m.
Melba	MF106	198.4	210	Ccf	SHAL		A			bd	25	Interbedded grey SILTSTONE and BLACK MUDSTONE and minor m.g. feldspathic volcano-sedimentary silty SANDSTONE. Bedding locally moderately disrupted by tectonic brecciation. Minor QUARTZ-CARBONATE stringers at all angles. 3% syngenetic PYRITE layers associated with mudstone to 200.6m & 205 - 209.4m. 5 -7% yellow-brown (honey coloured) **SPHALERITE > GALENA/?MOLY** as blebs (1-3mm) associated with qtz-cb vein at 205.4m. Core broken to locally very broken. Basal contact broken. Bedding = 20 to CA at 199.6, 70 to CA at 199.8, 40 to CA at 200.6, 35 to CA 202.9, 25 to CA 204.5, 20 to CA at 206.6, 30 to CA at 207, 25 to CA at 208m, 25 to CA at 209.35.

OZ MINERALS - DIAMOND DRILL LOG

Hole Number:	**MF107**
Designed By:	Lloyd David
Logged By:	H. Byrne
Date Logged:	02/12/2008
Drilled By:	Jhi Triffet & David Golez, Boart Longyear

Location:	East of South Cuni, Melba Flats Exploation Licence 43/1992
Purpose:	To test for depth extenions of South Cuni mineralised gabbro; additional mineralised gabbro sills between DDH SH1 & South Cuni & down sequence & west of South Cuni; and feeder pipes from a mafic/ultramafic body at depth.
Result:	

Drilling Commenced:	25/11/2008
Drilling Completed:	11/12/2008
Actual Depth:	475m
Collar azimuth:	278.7° AMG
Collar dip:	-60°
Surveyed Northing:	
Surveyed Easting:	
Surveyed RL:	

Planned Depth:	600m
Planned Direction:	281° AMG; 268°Mag
Planned Dip:	-60°
Planned Northing:	5 366 665mN
Planned Easting:	366 535mE
Planned Collar RL:	215m ASL

Hole Size:	HQ: 0 - 83.3m. NQ: 83.3 - 475.9m.
Hole Category:	Deep Exploration
Hole Condition:	40mm diameter slotted PVC pipe run to EOH

Downhole Surveys

Date	Depth	Azimuth (mag)	Azimuth (AMG)	Dip
26/11/2008	29.9m	265.7°	278.7°	-60.9°
27/11/2008	59.9m	265.3°	278.3°	-61.3°
28/11/2008	89.9m	265.3°	278.3°	-60.6°
28/11/2008	119.9m	264°	277°	-59.3°
30/11/2008	149.9m	262.6°	275.6°	-58.5°
01/12/2008	179.9m	262.7°	273.7°	-58.2°
01/12/2008	209.9m	263.3°	274.3°	-57.9°
01/12/2008	239.9m	264°	277°	-57.4°

Date	Depth	Azimuth (mag)	Azimuth (AMG)	Dip
02/12/2008	269.9m	261.9°	274.9°	-56.5°
03/12/2008	299.9m	263.2°	276.2°	-56.1°
4/12/2008	329.9m	261.5°	274.5°	-54.2°
4/12/2008	359.9m	257.2°	270.2°	-50.2°
8/12/2008	389.9m	258.4°	271.4°	-49.3°
9/12/2008	419.9m	258.4°	271.4°	-48.3°
10/12/2008	449.9m	178.1°	191.1°	-47.8°
11/12/2008	473.9m	258.6°	271.6°	-47.4°

OZ Minerals Drill Log MF 107												
Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF107	0	10.9	Ccf	CLAY		O			Bd	35	Orange-brown weathered, very soft and clayey SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Local relic ?primary purple-brown hematitic patches and light grey siltstone patches. Liesegange banding 8m - 9.7m. Minor limonite fracture coatings. Core broken to often very broken, with frequent 0.3 - 1m zones of rubble. Bedding = 35 to CA at 9.2m. Basal contact broken.
Melba	MF107	10.9	27	Ccf	GWAC, FALT		A	0.30		Bd	50	Faulted zone with crush zones & frequent gouge seams 15.9 - 16.3m, 17.7 - 17.9m, 21.8 - 22.2m and 26.6 - 26.9. Pale grey, leached and bleached SILTSTONE and c.g. feldspathic volcano-sedimentary silty SANDSTONE. Orange-brown oxidised zones and common limonite fracture coatings to 13.9m. Bedding locally weakly disrupted by tectonic brecciation to 16m and below 26.2m. **UPWARD FACING GRADED BEDDING** at 23.5m. Core is very broken below 11.3m. Water loss at 22.2m. Local trace **PYRITE**. Bedding = 50 to CA at 22.7m. BASE OF OXIDATION 16.2m. Basal contact broken.
Melba	MF107	27	32.5	Ccf	GWAC, FALT		A	1.00		Bd	50	Grey SILTSTONE and f.g. feldspathic volcano-sedimentary silty SANDSTONE, interbedded khaki green & grey mudstone. **UPWARD FACING GRADED BEDDING** at 28.7m. Core is broken to very broken with crush zones & gouge seams at 28.1 - 28.3m and 31 - 31.2m. Bedding is moderately disrupted by tectonic brecciation below 31.2m. Minor **PYRITE** below 31.9m increasing to 2% at 32.35m. Basal contact broken and faulted.
Melba	MF107	32.5	38.4	Ccf	GWAC, SHAL		A	3.00		Bd	55	Pale grey SILTSTONE/m.g. feldspathic volcano-sedimentary silty SANDSTONE and thinly interbedded graphitic BLACK MUDSTONE. Top contact FAULTED, 65 to CA (70mm gouge seam), with crush zone & 150mm gouge seam to 32.95m. Bedding moderately disrupted by tectonic brecciation 34.3 - 34.8m and below 35.8m. 2-3% disseminated **PYRITE**. Core is in 5 to 20 cm sticks, with rubble zones with gouge seams at 33.2 - 33.3m & 37.2 - 37.7m. Bedding = 55 to CA at 33.5m. Basal contact sharp 45 to CA.
Melba	MF107	38.4	50.7	Ccf	SHAL, GWAC		N, A	3.00		Bd	50	Brecciated black graphitic MUDSTONE and minor grey SILTSTONE/m.g. feldspathic volcano-sedimentary silty SANDSTONE. Bedding severely disrupted by tectonic brecciation. FAULT gouge at 40.1, 41.8 and 46.2m. Core broken to very broken. 4 - 7% disseminated **PYRITE** to 40.5m, 41.9 - 44.1m, 48.8 - 49.8m. 1-3% disseminated **PYRITE** 44.1 - 48.8 and below 49.8m. Bedding = 50 to CA at 39.2m Basal contact sharp 30 to CA.
Melba	MF107	50.7	56.7	Ccf	GWAC, SHAL		A, N	0.30		Bd	45	Pale grey SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Minor 3 - 30mm bands of graphitic black MUDSTONE below 55.8m. **UPWARD FACING GRADED BEDDING** at 54m. 60mm FAULT breccia at 50.9m, 45 to CA. Bedding locally weakly to strongly disrupted by tectonic brecciation to 53.8m. Common black graphitic stringers associated with brecciated zones. Core is in 5 to 30cm sticks with occasional 10 - 30cm wide badly broken zones including brecciated ?FAULTED zone 52.1 - 52.4m. Minor **PYRITE** to 52.6m, commonly associated with graphite stringers, rare to 54.4m and trace **PYRITE** below 54.4m. Bedding = 45 to CA at 54m, 40 to CA at 56.3m. Basal contact broken.
Melba	MF107	56.7	60	Ccf	SHAL, GWAC		N, A	3.00		Ft	45	Brecciated black graphitic MUDSTONE and minor 5-60mm fragments & brecciated bands of pale grey f.g feldspathic volcano-sedimentary silty sandstone. Bedding strongly disrupted by tectonic brecciation. 3-5% **PYRITE** as stringers and 1-20mm blebs. 60mm FAULT gouge with vuggy QTZ vein at 56.9m, 45 to CA. Core is broken with 10-20cm wide badly broken zones at 56.7, 58 and 59.55m. Basal contact broken.

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF107	60	73.05	Ccf	GWAC, SHAL		A, N	0.30		Bd	50	Brecciated pale grey SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Graphitic black MUDSTONE 67 - 68.1m. **UPWARD FACING GRADED BEDDING** at 64.9m and 65.7m. Bedding weakly to locally severely disrupted by tectonic brecciation. FAULTS: 30 to CA at 68.1m & 20mm fault breccia at 70.8m, 30 to CA. Abundant black graphite stringers. Common irregular vuggy veinlets and stringers of QTZ +/- CB 62.3 - 63.1m and below 72.5m. Trace **PYRITE** to 63.1m, 64.9 - 68.1 and below 68.65m, rare to 64.9m, 3-5% 67 - 68.65m. Core is broken to locally very broken. Bedding = 60 to CA at 64.2m, 50 to CA at 65.9m. Basal contact broken.
Melba	MF107	73.05	77.65	Ccf	SHAL, GWAC		N, A	0.80				Brecciated black MUDSTONE, dark grey & green-grey SILTSTONE and c.g. feldspathic volcano-sedimentary silty SANDSTONE. Top contact FAULTED with crush, vein qtz frags to 50mm and seams of gouge to 73.5m. Core is moderately to locally strongly interrupted by tectonic brecciation. Common vuggy QTZ +/- CHLORITE veinlets to 74.23m and below 76m. Core is often broken to very broken. 1-3% fine **PYRITE** as discontinuous stringers to 74.1m. Basal contact is gradational.
Melba	MF107	77.65	97	Ccf	GWAC,SHAL		G, N	0.30		Bd	55	Pale grey-green SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Minor patchy black mudstone 81.8 - 83.6m and thinly interbedded BLACK MUDSTONE 90.3 - 90.8m & 93.1 - 93.7m. Bedding locally moderately disrupted by tectonic brecciation. Minor CARBONATE +/- CHLORITE stringers & veinlets, often discontinuous and at all angles. Local trace to minor **PYRITE**. Core in 5cm - 70cm sticks with minor 5-10cm broken zones. Bedding = 35 to CA at 86.6m, 55 to CA at 88.4m, 55 to CA at 94.5m, 50 to CA at 95m. Basal contact gradational.
Melba	MF107	97	103.5	Ccf	HEVC		R			Bd	70	Red-brown haematitic interbedded SILTSTONE and f.g to m.g. feldspathic volcano-sedimentary silty SANDSTONE. Bottom 20cm altered to dark purple & pale green and strongly **INDURATED** by underlying gabbro. Minor CHLORITE along fractures. Strong QUARTZ-CHLORITE +/- CARBONATE veining in basal 20cm. **UPWARD FACING GRADED BEDDING** at 97.7m, 97.7m and 102.2m. Core in 5 to 60cm sticks with broken zone 98.9 - 99.2m. Bedding: 75 to CA at 98.4m, 70 to CA at 101.7m. Basal contact irregular 50 to CA.
Melba	MF107	103.5	104.05	Cgb	GABB		G			Ct	40	GABBRO - dark green, massive, fine-grained equigranular feldspar-pyroxene phyric. Very fine grained in basal 1cm. Very fine trace **PYRITE/?PENTLANDITE** in basal 15cm. 3-5% disseminated leucoxene. Basal contact sharp 40 to CA.
Melba	MF107	104.05	113.8	Ccf	HEVC		R			Bd	60	Red-purple haematitic interbedded SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Top 45m is moderately **INDURATED** and weakly ?sericite bleached to pale grey-green from overlying gabbro. **UPWARD FACING GRADED BEDDING** at 104.5m, 106.8m and 113.3m. Moderate QUARTZ-CARBONATE +/- CHLORITE veining, one 1cm wide at 108.2m at 25 to CA. Pale green-grey SERICITE bleached zone 106.8 - 107m. Bedding = 55 to CA at 104.1m, 60 to CA at 104.5m, 65 to CA at 106m, 70 to CA at 112.95m. Basal contact gradational.
Melba	MF107	113.8	118.24	Ccf	GWAC, SHAL		G, N			Bd	50	Light grey-green laminated to thinly interbedded weakly brecciated SILTSTONE and f.g. feldspathic volcano-sedimentary silty SANDSTONE. Very minor laminated BLACK MUDSTONE. Bedding locally weakly interrupted by tectonic brecciation. Moderate discontinuous QUARTZ-CHLORITE-CARBONATE veining below 114.8m. Fine grained equigranular feldspar-pyroxene phyric GABBRO vein from 115.22m (50 to CA) to 115.3m (35 to CA) with rare, fine **PYRITE/?PENTLANDITE** and 5% fine dissem leucoxene. Locally trace to minor **PYRITE**. Bedding = 50 to CA at 115.7m. Basal contact sharp, 60 to CA, defined by qtz-cb vein.
Melba	MF107	118.24	118.68	Cgb	GABB		G	0.50				GABBRO - dark green, massive, coarse-grained equigranular feldspar-pyroxene phyric. 20mm qtz-cb vein with minor <3mm **PYRITE** blebs at top contact. Finer grained chilled margin in basal 90mm. Occasional discontinuous QUARTZ-CARBONATEstringers & veinlets, increasing to abundant below 118.55m. 1% **PYRITE/?PENLANDITE** below 118.55m. Basal contact irregular.
Melba	MF107	118.68	119.3	Ccf	GWAC		G					Light grey-green SILTSTONE and f.g. feldspathic volcano-sedimentary silty SANDSTONE. Minor **PYRITE** in top 10cm. Basal contact gradational.

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Melba	MF107	119.3	121.6	Ccf	HEVC		R			Bd	55	Red-brown haematitic interbedded SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Occasional QUARTZ - CARBONATE - CHLORITE veining. Bedding = 55 to CA at 120.8m & 121.45m. Gradational basal contact.
Melba	MF107	121.6	122.85	Ccf	GWAC		G			Bd	50	Light grey-green SILTSTONE and f.g. feldspathic volcano-sedimentary silty SANDSTONE. **UPWARD FACING GRADED BEDDING** at 121.2m. Bedding = 50 to CA at 121.85 & 122.45m. Minor **PYRITE** in basal 10cm. Basal contact sharp, 65 to CA.
Melba	MF107	122.85	123.11	Cgb	GABB		G			Ct	60	GABBRO - dark green-black, massive, very coarse-grained equigranular feldspar-pyroxene phyric. Finer grained chilled margin in basal 30mm. Minor QUARTZ-CARBONATE veining. Trace **PYRITE** in top 30mm. 5% dissem leucoxene. Basal contact sharp, 60 to CA.
Melba	MF107	123.11	134.05	Ccf	GWAC,SHAL		G, N	0.50		Bd	60	Light grey-green SILTSTONE/m.g. feldspathic volcano-sedimentary silty SANDSTONE and thinly interbedded BLACK MUDSTONE. Minor syngenetic **PYRITE** layers. Moderate irregular QUARTZ - CARBONATE +/- CHLORITE veining. Bedding locally weakly disrupted by tectonic brecciation. Bedding = 50 to CA at 123.5m & 124.65m, 60 to CA at 128.5m, 130.05m & 132.5m. Basal contact gradational.
Melba	MF107	134.05	139.8	Ccf	HEVC		R			Bd	60	Red-brown haematitic interbedded SILTSTONE and c.g. feldspathic volcano-sedimentary silty SANDSTONE. **UPWARD FACING GRADED BEDDING** at 134.98, 135.38, 135.9m & 139.7m. Minor QUARTZ - CARBONATE - CHLORITE veining. Bedding = 85 to CA at 135.38, 80 at 135.9m, 60 to CA at 138.7 & 139.7m. Basal contact sharp, 40 to CA.
Melba	MF107	139.8	141.35	Ccf	HEVC		R			Bd	55	Pale red-grey SERICITE bleached zone with irregular QUARTZ- FE CARBONATE +/- CHLORITE veining. Very fine, dark green CHLORITE/?GABBRO <40mm veins at 139.8 & 140.1 with 5-10% fine dissem leucoxene. Core is broken below 139.3m. Fine, wisps of creamy SERICITE throughout. Small FAULT 55 to CA, with 2-3mm gouge & 20mm qtz-cb-chlorite vein. Bedding = 55 to CA at 140.2. Basal contact put at base of bleaching, 35 to CA.
Melba	MF107	141.35	164.3	Ccf	HEVC		R			Bd	60	Red-brown haematitic SILTSTONE and c.g. feldspathic volcano-sedimentary silty SANDSTONE. **UPWARD FACING GRADED BEDDING** at 144, 146.1,147, 150.95, 151.3 & 162m. Moderately tectonically brecciated with QUARTZ-FE CARBONATE vein stockworks 144.6 - 145.3m. Moderate QUARTZ- CARBONATE +/- CHLORITE veining and occasional tectonic breccia matrix fill. 0.3m grey-green bleached CHLORITIC zone at 160.07m. Pale reddish to greenish grey INDURATED zone from underlying gabbro & lensey fine dark green <30mm GABBRO vein with 5% leucoxene at 163.4m. Bedding = 60 to CA at 143.2m, 65 at 144, 50 to CA at 150.95, 55 at 163.2m. Basal contact sharp, 70 to CA.
Melba	MF107	164.3	170.5	Cgb	GABB		G	0.50				GABBRO - dark green, black below 169.5m, massive, very coarse-grained equigranular feldspar-pyroxene phyric. INDURATED, patchy, purple-green fine SANDSTONE and SILTSTONE to 165.3m, with fine GABBRO veins at 164.3 - 164.55m, 164.58 - 164.7m & 165.05 - 165.15m. Fine sandstone ?xenolith 166.4 - 166.45m. Finer grained chilled margin 165.3 -166.2m. Minor CARBONATE +/- QUARTZ & CHLORITE veining, with moderate wispy veining below 168.5m. Minor **PYRITE** & rare **CALCOPYRITE** 164.8.-165.3m. Trace **PYRITE/?PENTLANDITE** below 164.8 - 169.8. Minor **PYRITE/?PENTLANDITE** below 169.8m, commonly associated with veining. 5-10% dissem leucoxene, associated with gabbro. Basal contact irregular.
Melba	MF107	170.5	178.1	Ccf	GWAC, SHAL		G	0.70		Bd	60	Pale grey-green SILTSTONE and c.g. feldspathic volcano-sedimentary silty SANDSTONE. Minor black MUDSTONE to 172m. Core is pale-brown and INDURATED from overlying gabbro to 170.8m. Bedding locally strongly disrupted by tectonic brecciation. Moderate QUARTZ - FE CARBONATE +/- CHLORITE veining (<40mm) and tectonic breccia matrix fill. Trace **PYRITE** to 171m and locally 1% **PYRITE**. Core is moderately broken to 172m. Bedding = 65 to CA at 173.85m, 50 to CA at 175.6m, 60 to CA at 177.5. Basal contact gradational.
Melba	MF107	178.1	181	Ccf	SHAL, GWAC		N, G	0.50		Bd	50	Thinly interbedded black MUDSTONE and minor grey-green SILTSTONE/f.g feldspathic volcano-sedimentary silty SANDSTONE. Syngenetic **PYRITE** layers associated with mudstone. Bedding locally slightly disrupted by tectonic brecciation. Minor, commonly discontinuous, CARBONATE +/- QUARTZ stringers. Bedding = 50 to CA at 178.3m

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Melba	MF107	181	196.2	Ccf	GWAC, SHAL		G, N	0.50		Bd	50	Brecciated pale grey-green SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Minor thinly interbedded black MUDSTONE. Minor syngentic **PYRITE** layers. Bedding moderately to locally strongly disrupted by tectonic brecciation. Common QUARTZ - FE CARBONATE +/- CHLORITE veining to 60mm and occasional tectonic breccia matrix fill. Trace **SPHALERITE-GALENA** 191-191.5m, including 10mm vein with 25% at 191.1m, associated with QTZ-CB veining. Rare **CHALCOPYRITE** bleb associated with QTZ-CHL vein at 194.85m. Core is locally moderately broken. Local 1-2% PYRITE. Bedding = 30 to CA at 182.3m, 60 to CA at 187.1m, 50 to CA at 191.7m, 50 to CA at 196m. Basal contact is arbitrary.
Melba	MF107	196.2	206.5	Ccf	SHAL, GWAC		N, G			Bd	55	Black MUDSTONE and dark grey to green SILTSONE/c.g. feldspathic volcano-sedimentary silty SANDSTONE. Bedding often strongly interrupted by tectonic brecciation. Common QUARTZ-FE CARBONATE-CHLORITE veins to 40mm. QUARTZ-FE CARBONATE-CHLORITE vein 201.1 - 201.8m, including 60mm of FAULT breccia at 201.2m, 60 to CA. 10.5cm vein at base. Bedding = 45 to CA at 203.7m, 55 to CA at 204.4m.
Melba	MF107	206.5	211.5	Ccf	GWAC		G			Bd	65	Light grey-green SILTSTONE and f.g. feldspathic volcano-sedimentary silty SANDSTONE. Bedding moderately interrupted by tectonic brecciation. Minor QUATRZ-CARBONATE-CHLORITE veining. Bedding = 65 to CA at 208.65, 70 to CA at 209.4m. Minor **PYRITE** in basal 10cm. Basal contact gradational.
Melba	MF107	211.5	241.8	Ccf	HEVC		R			Bd	55	Red-brown haematitic SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Pale grey-green 15 - 70cm zones at 212.1m, 217m, 221.35m, 240m & 241.4m. **UPWARD FACING GRADED BEDDING** at 227.65m. Occasional QUARTZ-FE CARBONATE +/- CHLORITE veinlets. Bedding = 70 to CA at 213.55m, 80 to CA at 226.3m, 40 to CA at 234.65, 55 to CA at 241.3m. Basal contact gradational.
Melba	MF107	241.8	243.7	Ccf	GWAC		G			Bd	60	Light grey-green SILTSTONE and f.g. feldspathic volcano-sedimentary silty SANDSTONE. **UPWARD FACING GRADED BEDDING** at 243.1m. Bedding = 60 to CA at 242m, 70 to CA at 243.1m. Basal contact difficult to distinguish.
Melba	MF107	243.7	245.5	Cgb	GABB		G	0.20				GABBRO - dark green, massive, fine-grained equigranular feldspar-pyroxene phyric. Chilled margins (each 15cm wide) are finer grained. Common, irregular CHLORITE-CARBONATE veinlets. 70 mm QTZ-FE CARB vein with minor light green ?fuchsite, 25 to CA at 245.1m. 100mm sediment ?xenolith at 245.18m. Very fine, rare **PYRITE/?PENTLANDITE**. Rare **GALENA & CHALCOPYRITE** associated with CARB veinlets at 244m. 5-10% dissem leucoxene. Basal contact irregular.
Melba	MF107	245.5	248.9	Ccf	GWAC		G			Bd	50	Light grey-green SILTSTONE and f.g. feldspathic volcano-sedimentary silty SANDSTONE. Occasional stringers and veinlets of CHLORITE-QUARTZ-CARBONATE. Bedding = 50 to CA at 247.5m. Trace **SPHALERITE-GALENA** assoc with veinlets below 248.6m. Core is bleached below 248.6m. Basal contact gradational.
Melba	MF107	248.9	252	Ccf	HEVC		R			Bd	45	Red-brown haematitic SILTSTONE and f.g. feldspathic volcano-sedimentary silty SANDSTONE. Top contact bleached to 249.35m with strong QUARTZ-CHLORITE-CARBONATE veining at 248.9 - 249.1m. 1% **MAGNETITE** & minor **PYRITE/?PENTLNDITE** in 50mm vein at 249m. Basal 30mm is leached reddish cream. Bedding = 45 to CA at 251.6m. Basal contact put at fault, 60 to CA.
Melba	MF107	252	252.3	Ccf	FALT		C, R			Ct	50	Major FAULT in pale reddish-cream bleached SILTSONE & f.g. feldspathic volcano-sedimentary silty SANDSTONE. 20cm rubble zone below 252.06m. Contact put at base of gouge seam, 50 to CA.
Melba	MF107	252.3	255.9	Ccf	HEVC		R			Bd	60	Red-brown haematitic SILTSTONE and f.g. feldspathic volcano-sedimentary silty SANDSTONE. Top contact bleached reddish cream and badly broken to 252.75m, probably due to overlying fault. **UPWARDS FACING GRADED BEDDING** at 254.35m. Bedding = 65 to CA at 254.35m, 60 to CA at 255m. Basal contact gradational.

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Melba	MF107	255.9	265.4	Ccf	GWAC		G, R			Bd	70	Light grey-green SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE & minor intervals reddish brown haematitic SANDSTONE & SILTSONE to 259.8m. Pale creamy green-red bleached zone 257.05 - 257.45m with 8-20mm QUARTZ-CHLORITE-CARBONATE veins. Core is greenish grey & strongly interrupted by tectonic brecciation below 264.5m. Minor CHLORITE-CARBONATE stringers below 261m. Bedding = 70 to CA at 256.3m, 70 to CA at 259.1m, 65 to CA at 263.3m. Basal contact sharp, 60 to CA.
Melba	MF107	265.4	269.35	Cgb	GABBRO WAC		G, A	0.20		Ct	50	Brecciated greenish grey SILTSTONE/f.g feldspathic volcano-sedimentary silty SANDSTONE & minor patchy very fine black GABBRO. Strong QUARTZ-FE CARBONATE veining, with <50mm vein 267.1 - 267.9m. Massive QUARTZ - FE CARBONATE vein at 268.6 - 268.7m. Minor bright green ?fuchsite associated with veining 268.4 - 268.7m Gouge seam at 268.55m, 50 to CA, same sense S0. Very fine & rare **CHALCOPYRITE & PYRITE/PENTLANDITE** 266.2 - 266.5m and rare **CHALCOPYRITE** & trace **PYRITE/PENTLANDITE** below 267.2m. 5-10% fine disseminated leucoxene, often associated with gabbro. Basal contact sharp, 50 to CA.
Melba	MF107	269.35	276.5	Ccf	GWAC, SHAL		A, N			Bd	50	Brecciated grey and greenish grey SILTSTONE/f.g. feldspathic volcano-sedimentary silty SANDSTONE and minor BLACK MUDSTONE. Bedding severely disrupted by tectonic brecciation to 268.6m & moderately to strongly disrupted to base. Local **UPWARD FACING GRADED BEDDING** at 277.3m. Strong QUARTZ-FE CARBONATE-CHLORITE veining, including 15cm vein at 271.05 & 10cm vein with ~10% **SPHALEITE-GALENA** at 273.4m. Core in 5cm - 40cm sticks. Local, rare, very fine **PYRITE**. Basal contact gradational. Bedding = 50 to CA at 269.4m.
Melba	MF107	276.5	310.6	Ccf	GWAC, SHAL		A, N			Bd	40	Brecciated grey and greenish grey SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Minor black MUDSTONE below 293.5m. **UPWARD FACING GRADED BEDDING** at 277.3m, 284.15m, 297.6m. Bedding is locally moderately disrupted by tectonic brecciation below 297.8m. Occasional CARBONATE +/-CHLORITE veining. Locally trace **PYRITE**, often associated with mudstone. Basal contact gradational. Bedding = 40 to CA m 278.9m, 35 to CA at 280.85m, 30 to CA at 284.15m, 40 to CA at 303.5m.
Melba	MF107	310.6	328.6	Ccf	SHAL, GWAC		A, N			Bd	55	Greenish grey SILTSTONE/m.g. feldspathic volcano-sedimentary silty SANDSTONE and BLACK MUDSTONE in equal proportions. Bedding often moderately disrupted by tectonic brecciation. Common CARBONATE +/- QUARTZ veining at all angles. 20cm QUARTZ-CARBONATE-CHLORITE vein at 327.15m. Core is in 7 - 70 cm sticks with locally 15-30cm wide broken zones. Trace, locally moderate, PYRITE to 322.1, often associated with veining. Trace **SPHALERITE-GALENA** associated with FE CARBONATE veining 319.9 - 321.1m. Basal contact gradational. Bedding = 60 to CA at 311.1m, 65 to CA at 313.1m, 40 to CA at 317.8m, 40 to CA at 319.5m, 55 to CA at 328.5m.
Melba	MF107	328.6	334.4	Ccf	GWAC		A			Bd	55	Greenish grey SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. Bedding locally moderately disrupted by tectonic brecciation. **UPWARD FACING GRADED BEDDING** at 332.8m & 333.9m. Common QUARTZ-FE CARBONATE veining and occasional tectonic breccia matrix fill. Basal contact sharp, 50 to CA. Bedding = 50 to CA at 328.7m, 60 to CA at 332.8m & 55 to CA at 333.9m.
Melba	MF107	334.4	335.4	Ccf	FALT		A					Major FAULTED zone in brown-grey m.g feldspathic volcano-sedimentary silty SANDSTONE. FAULT breccia cemented by FE CARBONATE-QUARTZ and pale green ?sericite to 334.92m and below 335.3m, opp sense S0. Common FE CARBONATE-QUARTZ stringers 334.92 - 335.3m. 30mmx20mm **SPHALERITE** bleb in QUARTZ-FE CARBONATE vein at 335m. Basal contact irregular.
Melba	MF107	335.4	348.9	Ccf	GWAC		A			Bd	50	Greenish grey SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. **UPWARD FACING GRADED BEDDING** at 343.5m. Occasional QUARTZ-FE CARBONATE +/- CHLORITE veining and minor tectonic breccia matrix fill. Basal contact gradational. Bedding = 50 to CA at 340.5m, 50 to CA at 343.5m, 55 to CA at 347.65m.
Melba	MF107	348.9	355.1	Ccf	HEVC, GWAC		R, A			Bd	50	Mixed purple-brown haematitic and light grey-green SILTSTONE and minor f.g. feldspathic volcano-sedimentary silty SANDSTONE. Core in 5cm to 85cm sticks. Basal contact gradational. Bedding = 50 at 349.7m, 50 to CA at 350.25m.

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Melba	MF107	355.1	378	Ccf	GWAC		A, G			Bd	65	Light grey-green & greenish grey SILTSTONE and m.g. feldspathic volcano-sedimentary silty SANDSTONE. **UPWARD FACING GRADED BEDDING** at 372.9, 376.3m. Bedding often moderately interrupted by tectonic brecciation. Minor QUARTZ- FE CARBONATE stringers & veins at all angles & minor tectonic breccia matrix fill. QUARTZ-FE CARBONTE annealed <30 mm faults with 2% **GALENA-SPHALERITE** at 369.9m & 373.6m. 10cm badly broken zone at 371.1m, possibly fault. Bedding = 65 to CA at 377.25m. Basal contact sharp, 65 to CA.
Melba	MF107	378	378.6	Ccf	FALT		A			Ct	30	FAULTED zone in greenish-grey SILTSTONE. Fault breccia annealed by FE-CARBONATE-QUARTZ to 378.2, 50 to CA & 378.45 - 378.6m. 2-3% **SPHALERITE-GALENA** associated with veining. Basal contact sharp, 30 to CA.
Melba	MF107	378.6	388.9	Ccf	SHAL, GWAC		N, A			Bd	60	Thinly interbedded BLACK MUDSTONE & greenish grey SILTSTONE/f.g. feldspathic volcano-sedimentary silty SANDSTONE. Bedding often moderartely & locally strongly disrupted by tectonic brecciation. Common CARBONATE+/-QUARTZ stringers & occasional veins, at all angles. Minor to 1% fine disseminated **PYRITE** associated with mudstone. Basal contact gradational. Bedding = 60 to CA at 380.75m, 65 to CA at 384.9m.
Melba	MF107	388.9	394.3	Ccf	GWAC, SHAL		A, N			Bd	60	Greenish grey c.g. feldspathic volcano-sedimentary silty SANDSTONE. Minor SILTSTONE & BLACK MUDSTONE. Bedding weakly interrupted by tectonic brecciation. Minor discontinuous CARBONATE+/- QUARTZ stringers at all angles. Bedding = 65 to CA at 377.25m, 60 to CA at 390m. Basal contact gradational.
Melba	MF107	394.3	403.8	Ccf	GWAC,S HAL		A, N			Bd	60	Brecciated greenish grey SILTSTONE/m.g. feldspathic volcano-sedimentary silty SANDSTONE and thinly interbedded BLACK MUDSTONE. Bedding often moderately to locally strongly disrupted by tectonic brecciation. Common discontinuous CARBONATE+/- QUARTZ stringers at all angles. Minor PYRITE associated with mudstone. Bedding = 60 to CA at 400.3m Basal contact gradational.
Melba	MF107	403.8	433.4	Ccf	GWAC, SHAL		A, N			Bd	50	Greenish grey SILTSONE & m.g. feldspathic volcano-sedimentary silty SANDSTONE. Minor thinly interbedded BLACK MUDSTONE, 419.6 - 422.2m. **UPWARD FACING GRADED BEDDING** at 411m. Bedding locally moderately disrupted by tectonic brecciation. Occasional QUARTZ-CARBONATE +/- CHLORITE veins (10-70mm), common between 421.5 & 424.6m, with 120mm vein at 421.9m. Local minor to 1% **PYRITE** associated with mudstone. Bedding = 50 to CA at 405.45m, 40 to CA at 411m, 50 to CA at 419.6m, 50 to CA at 426.9m. Basal contact gradational.
Melba	MF107	433.4	445.15	Ccf	GWAC, SHAL		A, N			Bd	55	Brecciated greenish grey SILTSTONE/m.g. feldspathic volcano-sedimentary silty SANDSTONE and thinly interbedded BLACK MUDSTONE. Bedding strongly disrupted by tectonic brecciation. Common black graphitic stringers associated with brecciated zones. Common irregular CARBONATE+/- QUARTZ veining at all angles. Minor **PYRITE** associated with mudstone. Trace **SPHALERITE-GALENA** associated with irregular 50mm FE-CARBONATE-QUARTZ veining at 436.95m. Bedding = 55 to CA at 438.75m, 60 to CA at 441m. Basal contact gradational.
Melba	MF107	445.15	449.45	Ccf	GWAC		A, N			Bd	60	Brecciated light grey-green & dark grey SILTSTONE & f.g feldspathic volcano-sedimentary SANDSTONE. Very minor black MUDSTONE. **UPWARD FACING GRADED BEDDING** at 447.4m, 448.2m, 448.8m. Bedding often strongly disrupted by tectonic brecciation. Common QUARTZ-FE CARBONATE +/- CHLORITE veins (20 - 40mm) below 448.3m. Bedding = 60 to CA at 446.1m. Basal contact put at appearance of vein, 70 to CA.
Melba	MF107	449.45	466.65	Ccf	FALT		A, N			Ct	50	Major faulted zone in greenish grey & dark grey SILTSONE/m.g feldspathic volcano-sedimentary silty SANDSTONE & BLACK MUDSTONE. Bedding severely disrupted by tectonic brecciation to 458.8m & below 466m & moderately disrupted 458.8 - 466m. Frequent gouge seams & fault breccia cemented by FE-CARBONATE-QUARTZ and pale green ?sericite. Core is in 5 to 40 cm sticks, with frequent 10-30cm wide badly broken zones. Common irregular & discontinuous FE CARBONATE +/- QUARTZ. Locally trace to minor **SPHALERITE-GALENA-PYRITE**, typically associated with veining. Faults = 60 to CA at 449.55m, 70 to CA at 449.7m, 40 to CA at 451.15, 10 to CA at 455.3m, 30 to CA at 466.05m. Vein = 60 to CA at 449.85m, 20 to CA at 451.1, 45 to CA at 452.2m, 50 to CA at 458.1m. Basal contact put at base of massive 40cm vein/fault breccia, 50 to CA.

Project	BHID	From	To	Stratigraphy	Rock Type	Alteration	Colour	Visual S%	L.Cont.	Struct	BCA	Description
Melba	MF107	466.65	472	Ccf	GWAC, SHAL		A, N			Bd	60	Brecciated light grey-green & dark grey SILTSTONE & f.g feldspathic volcano-sedimentary SANDSTONE. Minor black MUDSTONE. Bedding often strongly disrupted by tectonic brecciation. Moderate CARBONATE +/- QUARTZ veining at all angles. Bedding = 60 to CA at 446.1m. Basal contact put at base of brecciation.
Melba	MF107	472	475.9	Ccf	GWAC		G			Bd	30	Light grey-green SILTSTONE & m.g feldspathic volcano-sedimentary SANDSTONE. Minor FE CARBONATE +/- QUARTZ +/- CHLORITE veinlets & stringers. Trace **PYRITE** and rare **CHALCOPYRITE** associated with veining to 472.5m. Bedding = 30 to CA at 472.4m.