NEWNHAM EXPLORATION & MINING SERVICES

EL 43/92

MELBA FLATS (CUNI) PROJECT

WESTERN TASMANIA

ANNUAL REPORT FOR YEAR ENDING MARCH, 1999

Prepared For:

Allegiance Mining NL
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By:

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15 March, 1998

SUMMARY

Exploration on EL 43/92 during the year was confined to the drilling of one (1) 250 m cored hole, designed to test both the depth extension of the North Cuni deposit and a large geochemical-magnetic anomaly west of the North Cuni Mine.

Results were disappointing. However, further drill testing has been recommended.

A full report on this drilling program is presented in the following report, attached as an appendix to this report:

> "*EL 43/92 Melba Flats (Cuni) Project, Western Tasmania. Report on Drill Hole Completed October 1998*" by L A Newnham, 28 December 1998.

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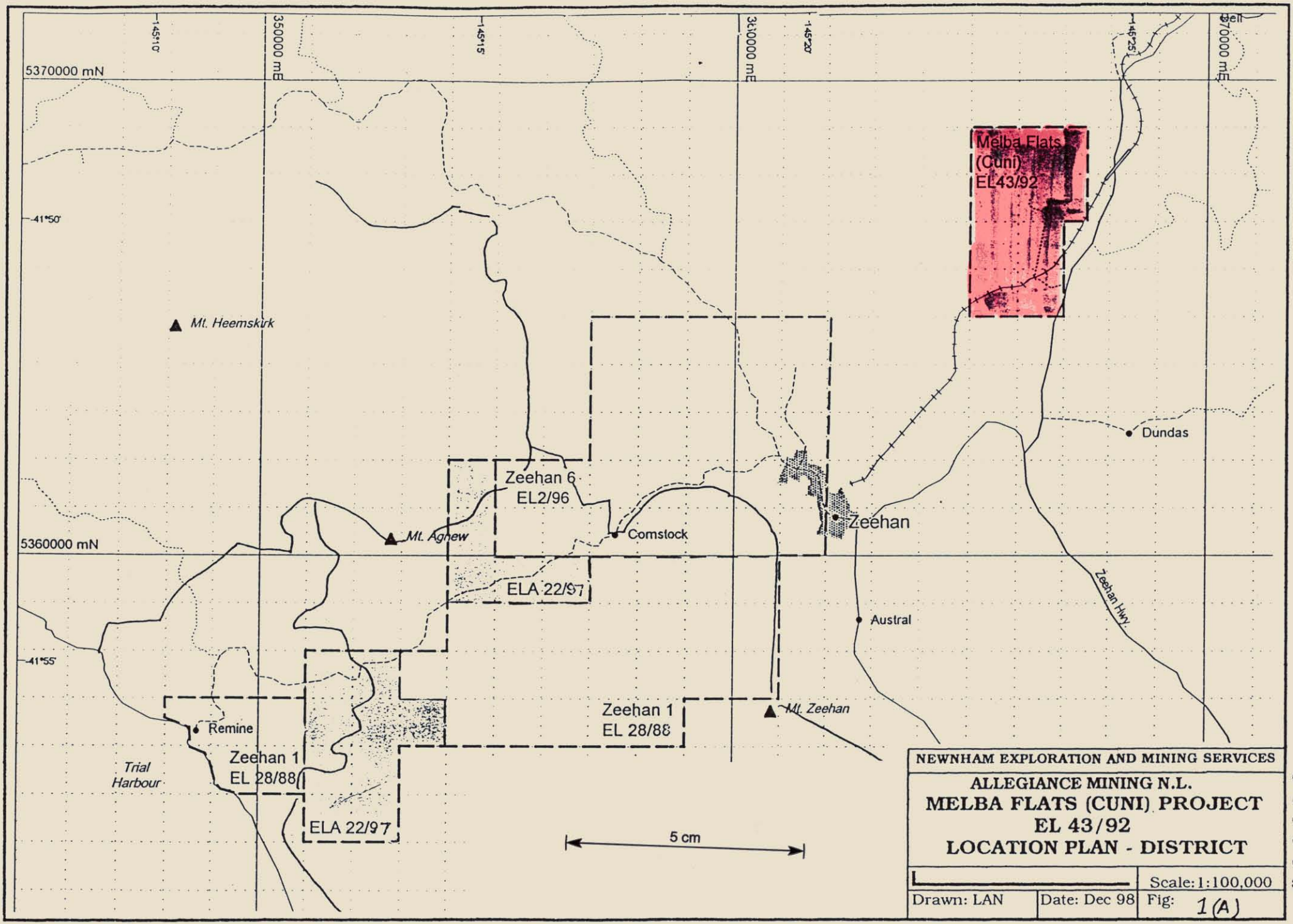

NEWNHAM EXPLORATION AND MINING SERVICES

ALLEGIANCE MINING N.L.

MELBA FLATS (CUNI) PROJECT

EL 43/92

LOCATION PLAN - DISTRICT

Scale: 1:100,000

Drawn: LAN | Date: Dec 98 | Fig: 1(A)

TCR 99-4295 (A)
566004 (VOL 2 of 2)

NEWNHAM EXPLORATION & MINING SERVICES

EL 43/92

MELBA FLATS (CUNI) PROJECT

WESTERN TASMANIA

REPORT ON DRILL HOLE COMPLETED OCTOBER 1998

Prepared For:

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566005

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Maps:

Appendices:

1. SUMMARY

Previous drilling in the North Cuni-Genets Winze area at Melba Flats, north of Zeehan, had intersected a number of narrow zones of high grade Cu and Ni sulfide mineralisation associated with a series of gabbroic dykes or sills within a sequence of Cambrian sediments.

Drill hole MF10 was drilled to test two targets:

(i) the down-dip extension of the North Cuni massive Cu-Ni sulfide mineralisation

(ii) a previously untested magnetic and geochemical anomaly lying west of the North Cuni mineralisation

Gabbro dykes which correlated with the down-dip extension of the North Cuni dykes were intersected but no mineralisation was associated with them.

A deeper series of gabbroic dykes was also intersected to the west of the North Cuni dykes and these are interpreted as the source of the western magnetic-geochemical anomaly. No significant mineralisation was associated with these dykes.

Whilst results of this hole are disappointing, they are interpreted as highlighting the poddy nature of the massive sulfide lenses in this area, and should not represent a discouragement to further drilling. Down-hole EM on MF 10 may detect massive sulfide lenses adjacent to the hole as a guide to further drilling in this area.

2. LAND TENURE and ACCESS

EL 43/92 of nine square kilometres lies 10 kilometres north-east of Zeehan, midway between Zeehan and Renison Bell.

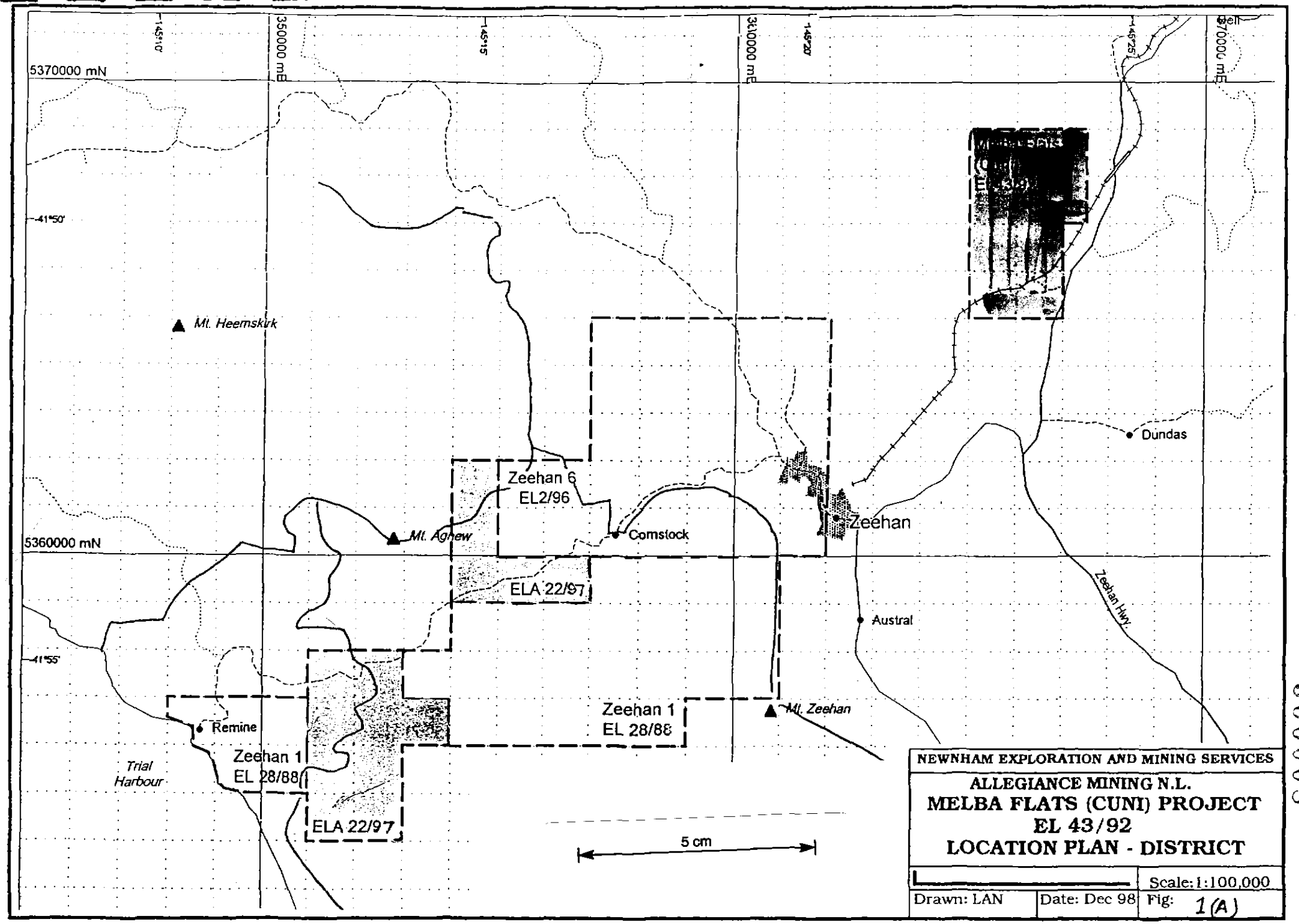
The licence is explored under a joint venture agreement between Allegiance Mining NL and Rio Tinto Exploration Pty Limited. Allegiance is currently the project manager and is incurring all expenditure.

The area is currently classified as Crown Land-Deferred Forest. However, following the recent signing of the Tasmanian Regional Forest Agreement, it is anticipated that the area will be re-classified as Crown Land-Multiple Use State Forest.

Access to the general area is via the Murchison State Highway which clips the south east corner of the licence. The licence area is essentially bisected by a major N-S 4-W-D track constructed early in the century to service mines in the area.

The Emu Bay railway currently terminates at the Melba Flats concentrates depot to the immediate east of EL 43/92.

This railway originally extended through the southern section of the licence area, joining with the North-East Dundas Tram.


145°10'
350000 mE
145°15'
145°20'
145°25'
370000 mE
5370000 mN
41°50'
Mt. Heemskirk
Zeehan 6
EL2/96
Mt. Agnew
Comstock
Zeehan
Dundas
5360000 mN
ELA 22/97
Austral
Zeehan Hwy.
41°55'
Remine
Zeehan 1
EL 28/88
Mt. Zeehan
Trial
Harbour
Zeehan 1
EL 28/88
ELA 22/97
5 cm
NEWNHAM EXPLORATION AND MINING SERVICES
ALLEGIANCE MINING N.L.
MELBA FLATS (CUNI) PROJECT
EL 43/92
LOCATION PLAN - DISTRICT
Scale: 1:100,000
Drawn: LAN
Date: Dec 98
Fig: 1(A)

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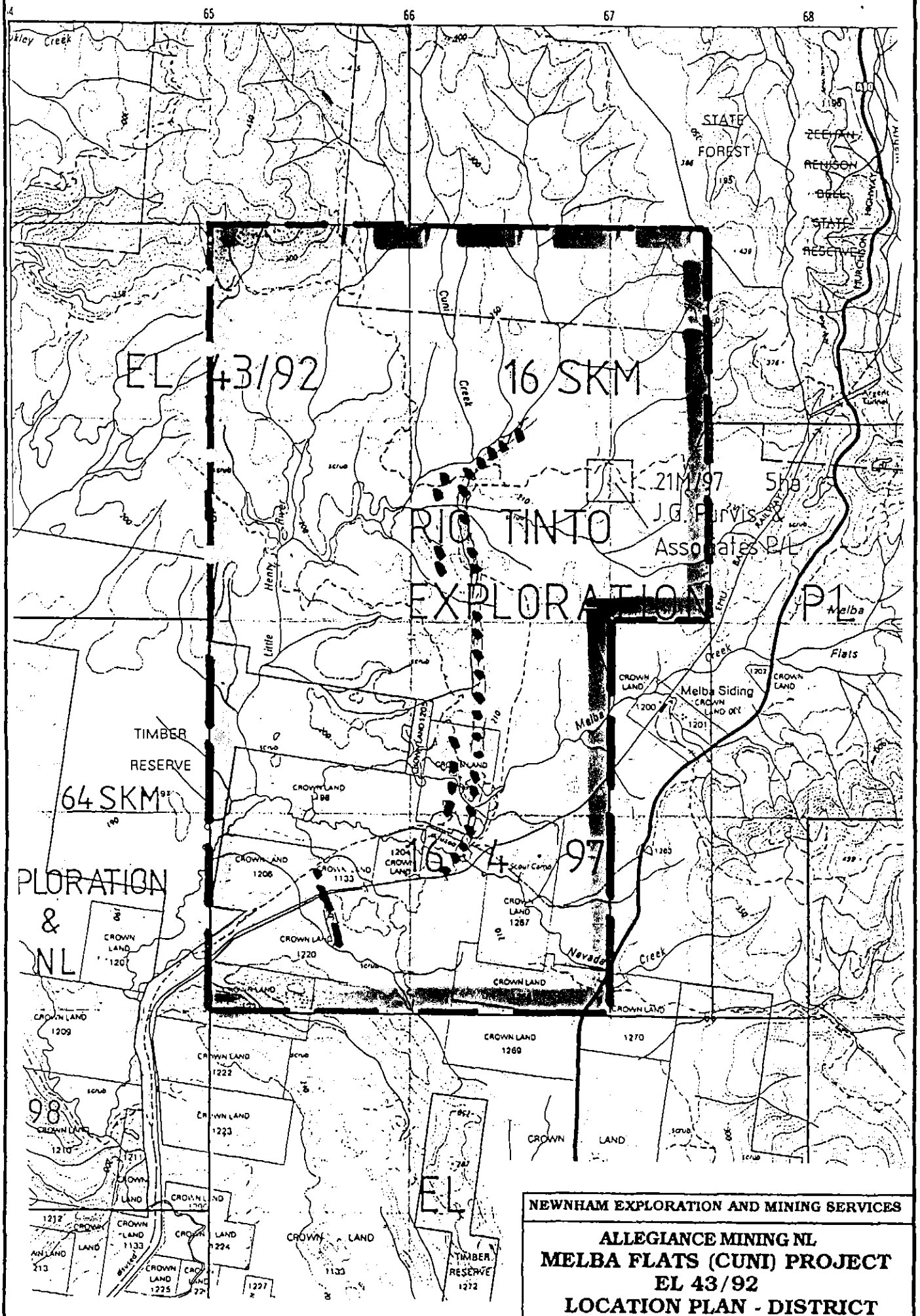


NEWNHAM EXPLORATION AND MINING SERVICES

ALLEGIANCE MINING NL

MELBA FLATS (CUNI) PROJECT

EL 43/92

LOCATION PLAN - DISTRICT

		Scale: 1:25,000
Drawn: LAN	Date: DEC 98	Fig 1(B)

3. GEOLOGY and PREVIOUS EXPLORATION

3.1 Geology:

The Melba Flats area is underlain by a sequence of Cambrian sediments (mudstones, siltstones, sandstones, volcaniclastic lithicwackes) intruded by a series of long, narrow gabbroic dykes or sills. The stratigraphy generally strikes N-S and dips east at approximately 60°. However, the northern section, near Genets Winze strikes north-east and dips south-east. Similarly, the southern section near the Nickel Reward Mine also strikes north-east.

The geology is shown on Fig 2 which is a reproduced 1:10,000 CRA plan, slightly modified by this writer, to highlight the extent of the gabbroic dykes.

Drilling and mining to date suggests there are a number of parallel gabbroic dykes, probably disrupted by cross faulting, especially in the vicinity of fold axes near Genets Winze and Nickel Reward.

Small lenses of nickel and copper sulfide mineralisation have been developed within these gabbro bodies intermittently over four kilometres of strike length.

Drilling suggests these sulfide lenses are up to 75 m long, but generally 0.5-5.0 m thick. Previous mining and drilling suggests they may have limited depth extents but this is open to substantial debate.

Nickel and copper mineralisation within these lenses can be high grade, commonly exceeding 15% combined Ni and Cu. Recent drilling has also confirmed elevated levels of Au, Pt, Pd within the sulfides.

3.2 History:

Comprehensive historical overviews have been present in other well documented reports.

In summary, copper and nickel sulfides were discovered at Melba flats in 1893 and have been intermittently worked by a series of shallow mines along a four kilometre strike length up until the late 1940s.

An estimated 8,000 t 7-11% Ni, 4-14% Cu were extracted from these workings.

Approximately 66 drill holes have been drilled into the area since the beginning of the century, but most of these were very shallow and records are typically poor. Very little drilling below 50 m vertical depth has been completed.

During the life of EL 43/92, the following work, in chronological order, has been completed:

- fixed wing TEM (QUESTEM) survey
- data review
- mineralogical studies on old drill cores
- whole rock regional geochemical surveys
- line cutting and gridding
- PROTEM and ground magnetic surveys over North Cuni-Genets Winze and Nickel Reward-Vaudeau area.
- core drilling five holes at North Cuni-Genets Winze (average 90 m) and two holes at Nickel Reward-Vaudeau
- soil sampling
- IP and resistivity surveying of small orientation areas
- heliborne magnetic survey

4. DRILLING PROGRAM (October 1998)

Cored hole MF 10 was drilled in October 1998 to test two targets:

(i) the depth extension of the North Cuni workings below and to the immediate south of previous hole MFP 109 which intersected 5 m 0.4% Ni, 0.5% Cu

(ii) the magnetic and geochemical anomaly defined by surface surveys to the west of the North Cuni workings

MF 10 was drilled to 249.5 m by Almac Drilling Pty Limited from Zeehan. A detailed log of the hole is attached as Appendix A and assays from sawn half-core samples are presented in Appendix B.

The location of the hole is represented on accompanying Maps 2, 3, 4.

Photos of drill core and access development are presented in Appendix C.

On completion, the hole was lined with unslotted PVC casing in the event that future down-hole geophysical surveys might be required.

Core is currently stored on pallets at the Allegiance Core Shed on Main Street in Zeehan.

5. INTERPRETATION and RECOMMENDATIONS

5.1 Interpretation:

MF 10 intersected five gabbro bodies within a sequence of mudstones, siltstones, sandstones and 'gritty' sediments which may have been volcaniclastic.

On the basis of drill hole dips and bedding-to-core axis angles, it can be interpreted that the sediments were dipping east at 55-60°.

The gabbro bodies were generally concordant with the sediments (sills) although several non-conformable contacts were noted (dykes).

As can be seen on the drill hole section (Fig 4), the gabbro bodies in MF 10 do not correlate well with the gabbro positions in MFP 109. this may be due to one or more factors:

(a) mislocation of MFP 109, which was drilled in 1965 and for which records are poor

(b) poddy, discontinuous nature of the gabbros

(c) fault offsetting of the gabbros

Only very minor mineralisation was present in the form of disseminated pyrite in the sediments and gabbros, and pyrite-sphalerite-galena mineralisation in narrow carbonate and quartz-carbonate vein sets cutting both the sediments and gabbros.

No massive or semi-massive Cu-Ni sulfide mineralisation which could be correlated with North Cuni mineralisation was observed in any of the gabbros.

A gabbroic body from 233.5-242.5 m is interpreted as the possible source of the western magnetic-geochemical anomaly. Only minor sulfides in the form of disseminated pyrite and pyrite-sphalerite-galena in carbonate and quartz-carbonate veins was intersected.

The hole was stopped in gritty sediments with a minor gabbroic component. However, the down-dip extension of the surface anomalous zone had been well passed, and this unit is interpreted as typical of the Cambrian formations in this area.

MF 10 is shown on Fig 3 in plan and longitudinal projection formats relative to all other drilling in the North Cuni-Genets Winze area.

The data has been interpreted as representing a series of conformable gabbro sills, strongly folded (or faulted) in the area between North Cuni workings and Genets Winze workings from a N-S striking sequence to a north-east-south-west striking sequence.

Massive Cu-Ni mineralisation has been developed in discontinuous 'pods' within several of these gabbros.

South of the zone of disruption most mineralisation appears concentrated in the central gabbro which hosts the North Cuni workings.

North of the zone of disruption most mineralisation appears concentrated in a more westerly gabbro which hosts the Genets Winze mineralisation.

However, depending on the nature of the zone of disruption, these two mineralised bodies could be part of the same body.

Drilling to date now suggests the known mineralisation may plunge north.

MF 10 may have missed the mineralisation for a combination of the following reasons:

(a) it drilled beneath the north plunging mineralised body (as shown on longitudinal projection)

(b) the gabbro bodies and the accompanying mineralisation are very poddy and discontinuous

(c) mineralisation does not persist in depth

Reason (a) is considered the most probable.

5.2 Recommendations:

The Melba Flats area is still regarded as having high potential for the discovery of high grade Cu-Ni-Au-PGM mineralisation.

Mineralisation is scattered along a four kilometre strike length of potential host rocks, and drilling to date has been very patchy and shallow.

MF 10 was a useful hole in that it tested two targets. However, it in no way represents an adequate test of the target.

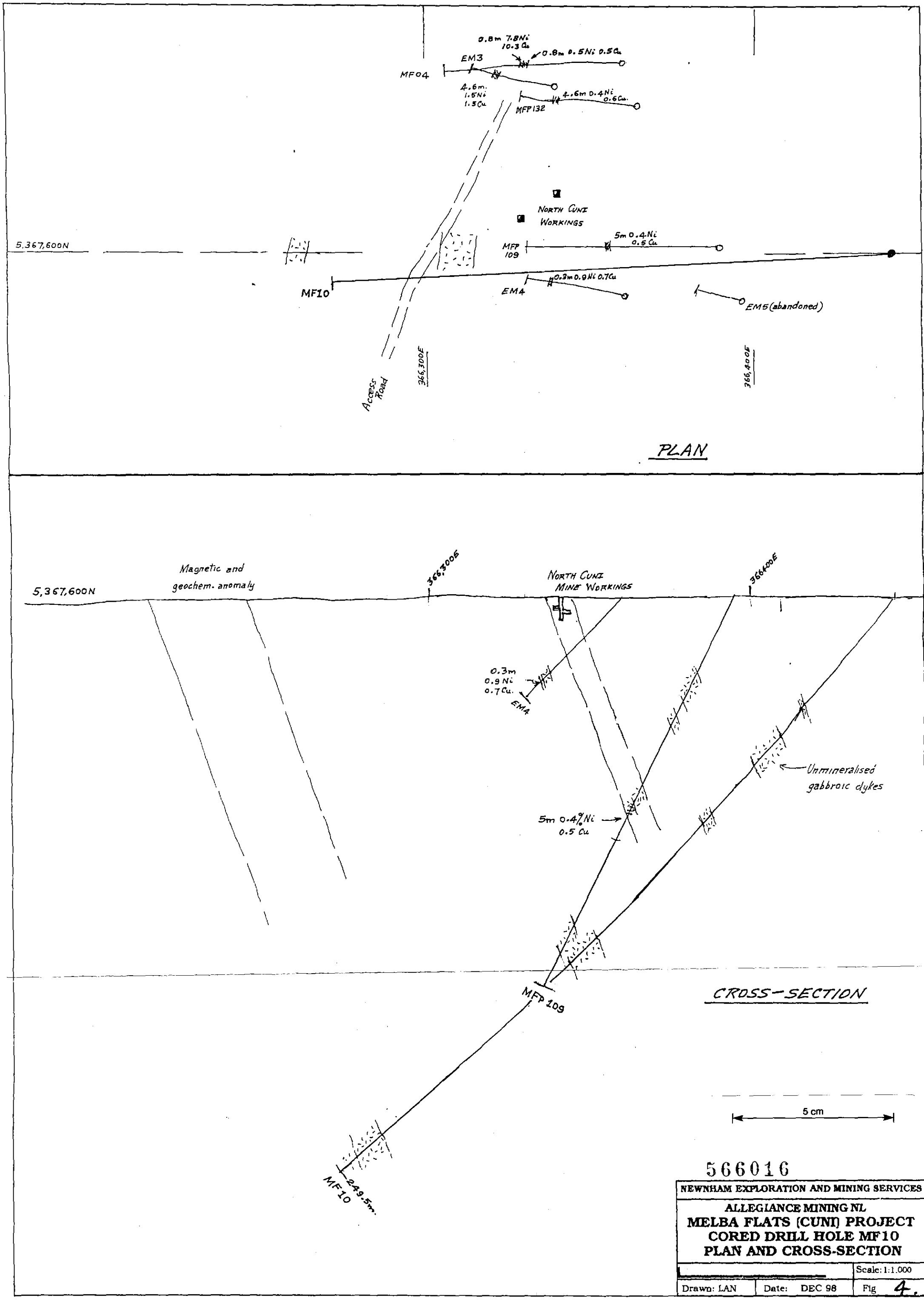
Further exploration is justified in the North Cuni-Genets Winze area and in the Nickel Reward-Vaudeau area. In the North Cuni-Genets

Winze area, the following work is recommended:

(a) down-hole EM on MF 10 to test for 'near miss' situations

(b) drilling of a further hole as shown on Fig 3 Longitudinal Projection to test for depth extensions of mineralisation in MF 03 (0.5 m 7.7% Ni, 2.9% Cu) and MFP 110 (3.4 m 4.3% Ni, 2.7% Cu)

In the Nickel Reward-Vaudeau area it is recommended that existing data be thoroughly collated and assessed prior to any further drill testing in that area.



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NEWNHAM EXPLORATION AND MINING SERVICES

ALLEGIANCE MINING NL

MELBA FLATS (CUNI) PROJECT
CORED DRILL HOLE MF10
PLAN AND CROSS-SECTION

Scale: 1:1.000

Drawn: LAN | Date: DEC 98 | Fig 4.

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APPENDIX A

MF 10
DRILL LOG

COMPANY: Allegiance Mining NL
PROJECT: Melba Flats
HOLE NUMBER: MF 10

Commenced:	26 October 98
Completed:	30 October 98
Logged By:	L A Newnham
Drilled By:	Almac Drilling

Purpose of Hole
.To test both extensions of North Cuni mineralisation and previously untested geochemical and magnetic anomaly west of North Cuni;

Comments on Completion
.a series of gabbroic dykes within a sequence of sandstones, shales and siltstones was intersected as anticipated; however, virtually no mineralisation was intersected; a thick gabbro dyke or sill is interpreted as the source of the western magnetic and geochemical anomaly;

Collar Details

Grid	Northing	Easting	Elevation	Dip	Bearing
AMG	5,367,600	366,445	210	-50	265

Length (m)
249.5

Hole Size	
To (m)	**Size**
67	HQ
249.5	NQ

Significant Core Loss Zones		
From	**To**	**%Rec.**
Nil		

Hole Condition on Completion
all steel casing was removed; unslotted PVC casing placed in full length of hole;

Summary of Results:

Depth		Recovery	Description	Assays							
From	To	%		Length	Cu	Ni	Au	Pt	Pd		
			No significant mineralisation or assays								

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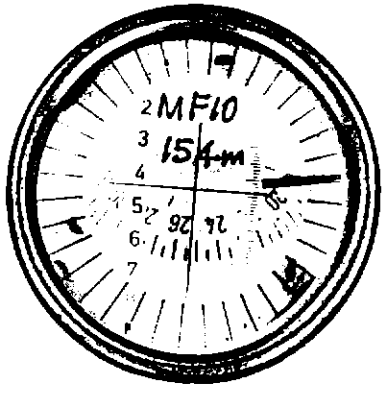
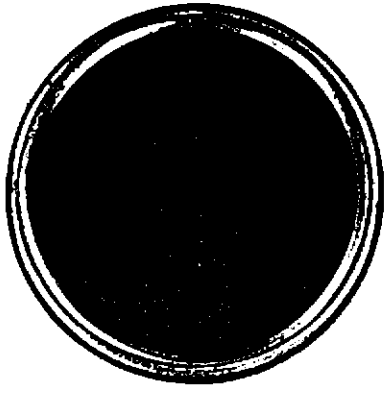
DOWN HOLE SURVEY DATA

COMPANY: Allegiance Mining NL
PROJECT: Melba Flats
HOLE NUMBER: MF 10

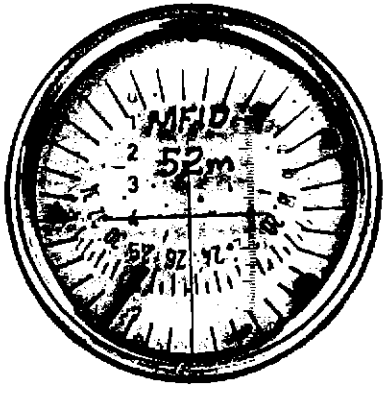
Depth	Dip	Bearing	Interval		Length	Vertical Distance		Horizontal Distance		Co-ordinates			
(m)		(AMG)	From	To	(D)	D.sin dip	R.L.	D. cos dip (HD)	Cumulative HD	N. distance HD. cos brg.	N. co-ordinate	E. distance HD. sin brg.	E. co-ordinate
COLLAR	-50	265					210.00		0.00		5,367,600.0		366,445.0
0	-50	265	0	26	26	19.92	190.08	16.71	16.71	-1.46	5,367,598.5	-16.65	366,428.4
52	-50	265	26	77.5	51.5	39.45	150.63	33.10	49.82	-2.89	5,367,595.7	-32.98	366,395.4
103	-48.5	268	77.5	128.5	51	38.20	112.43	33.79	83.61	-1.18	5,367,594.5	-33.77	366,361.6
154	-40	267	128.5	178	49.5	31.82	80.62	37.92	121.53	-1.98	5,367,592.5	-37.87	366,323.7
202	-42.5	267	178	225.75	47.75	32.26	48.36	35.20	156.73	-1.84	5,367,590.7	-35.16	366,288.6
249.5	-42	267	225.75	249.5	23.75	15.89	32.47	17.65	174.38	-0.92	5,367,589.7	-17.63	366,271.0
249.5													

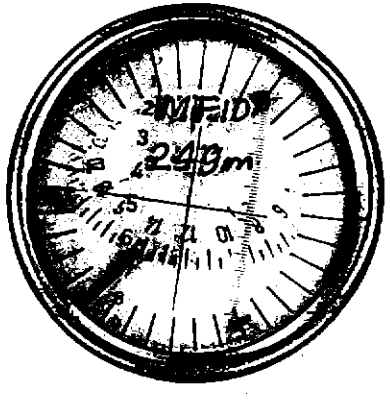




DIP - 48½

BRG: 255 Mag.





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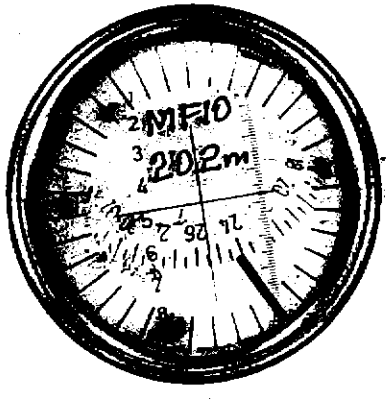


COMPANY: Allegiance Mining NL
PROJECT: Melba Flats
HOLE NUMBER: MF 10

Description			Core Recovery			RQD			Assays							
From	To		From	To	%	From	To	%	From	To	Cu	Ni	Au	Pt	Pd	Ag
.0.0	2.8	No core;	0.0	2.8	0											
2.8	44.5	**INTERBEDDED SANDSTONES, SILTSTONES AND SHALES:** Interbedded sandstones, siltstones and shales, strongly weathered to 13 m.; finer grained units frequently pyritic; **2.8-13.3 m:** interbedded light gray sandstone, maroon shales and fine grained siltstone; widely spaced quartz veins < 20 mm.; fine grained , light gray lesser weathered units, 2-3% pyrite as fine euhedral disseminated grains; soft sediment slumping features in places; core generally broken with significant core losses in some intervals; BCA 70; **13.3-33.8 m:** interbedded light gray shales and siltstones, light gray medium grained sandstones, felspathic in part; thin <2mm. leached quartz veins common in sandstone; soft sediment slumping and disturbed bedding features common; BCA 70-80; pervasive pyrite common in finer grained units as either thin bedding parallel semi-massive and disseminated euhedral units, or 2-3% disseminated euhedral grains; also small augens of semi massive coarse euhedral pyrite; lesser pyrite 2-3% disseminated in medium grained sandstone; pyrite is essentially stratabound and appears syngenetic; core moderately broken with finer grained units reduced to shaley rubble in places and coarser sandstone fractured along numerous joint sets and bedding planes; **33.8-41.5 m:** interbedded maroon (hematitic) fine grained sandstone and light gray fine grained siltstone and shale; sandstone are gritty-arkosic in part with fine	2.8	4.5	100												
			4.5	5.3	60											
			5.3	6.7	45											
			6.7	7.5	100											
			7.5	8.6	80											
			8.6	9.6	90											
			9.6	10.9	70											
			10.9	13.1	100											
			13.1	14.2	70											
			14.2	16.5	100											
			16.5	17.3	75											
			17.3	25.4	100											
			25.4	26.8	60											
			26.8	44.5	100											

COMPANY: Allegiance Mining NL
PROJECT: Melba Flats
HOLE NUMBER: MF 10

Description			Core Recovery			RQD			Assays							
From	To		From	To	%	From	To	%	From	To	Cu	Ni	Au	Pt	Pd	Ag
		33.8-41.5 m .... cont: shale and siltstone fragments common; BCA 70-80; siltstone contains 2-3% pyrite, commonly as thin bedding parallel veins of coarse euhedral striated grains with crystals up to 1 mm; core strongly jointed and fractured in part, with several joint directions 30 CA and 60 CA; **41.5-44.5 m:** interbedded dark gray medium grained sandstone and light gray fine grained shale-siltstone; cut by close spaced 2-3 mm white quartz veins typically 30 CA; BCA 60-70;															
44.5	45.8	**GABBRO:** dark green, white speckled gabbro with very broken and disrupted margins; 1-2% pervasive blebs pyrite;	44.5	45.8	100											
45.8	57.0	**INTERBEDDED SHALES, SILTSTONE and SANDSTONE:** alternating thin beds dark gray shale and fine grained light gray siltstone, interbedded with ocassional thicker beds light gray, fine grained sandstone; shale-siltstone interbeds typically 10-20 mm. wide, producing characteristic stripey appearance; minor thin quartz veins; at 50.4 m., 200 mm. soft sediment slump/breccia zone; thin bedding parallel veins pyrite common in shales (2-3% of shales); minor faulting 30-50 CA, well displayed in banded sediments; represents minor adjustment along joints and bedding planes; core alternatesbetween competent ground and strongly broken units;	45.8	57.0	100											

COMPANY: Allegiance Mining NL
PROJECT: Melba Flats
HOLE NUMBER: MF 10

Description			Core Recovery			RQD			Assays							
From	To		From	To	%	From	To	%	From	To	Cu	Ni	Au	Pt	Pd	Ag
57.0	69.0	**GABBRO:** dark gray, white speckeled medium grained gabbro with numerous white carbonate veins (calcite?) filling micro fractures; significant calcareous component in gabbre itself; calcite in places 5-10% of core; 67.1-67.4 m: 300 mm. brecciated shale, either a thin bed with gabbro either side, or large include block within gabbro; calcite veining abundant below 67.4 m; sharp fine grained margin at 69 m., 60 CA;	57.0	69.0	100				58.0	59.0	0.01	0.03	<0.01	<0.05	<0.01	<5
									60.0	61.0	0.01	<0.01	<0.01	<0.05	<0.01	<5
									63.0	64.0	0.02	0.03	<0.01	<0.05	<0.01	<5
									66.0	67.0	0.01	0.03	<0.01	<0.05	<0.01	<5
									67.5	68.5	0.02	0.03	<0.01	<0.05	<0.01	<5
69.0	88.2	**INTERBEDDED SHALE, SILTSTONE and SANDSTONE:** interbedded dark gray siltstone, buff colored shale and dark gray sandstone; unit strongly brecciated andquartz-carbonateveioned adjacent to overlying gabbro; quartz-carbonate as abundant anastomosing veins and matrix to brecciatedshales to 70 m., then veining decreasing down hole; sandstone often calcareous with awhite flecked appearance; core moderately competent but some slumped and broken sections; BCA 70-80;	69.0	88.2	100												
88.2	92.2	**GABBRO:** coarse grained dark gray gabbro, cut by numerous fine <1 mm. white carbonate veins; HW contact sharp 40 CA, with 100 mm. broken graphitic shale on contact; FW contact more diffuse, accompanied by 20-30 mm. calcite-quartz-sphalerite-pyrite veining within the gabbro, close to contact; fragments of gabbro within graphitic slickensided black shales on footwall; minor sulfides in gabbro as discrete grains of pyrite and ocassional blebs chalcopyrite and pyrite; core moderately competent with joint sets 30 and 60 CA;	88.2	92.2	100				91.2	92.2	0.03	0.03	<0.01	<0.05	<0.01	<5

COMPANY: Allegiance Mining NL
PROJECT: Melba Flats
HOLE NUMBER: MF 10

Description			Core Recovery			RQD			Assays							
From	To		From	To	%	From	To	%	From	To	Cu	Ni	Au	Pt	Pd	Ag
92.2	140.0	**INTERBEDDED SHALE, SILTSTONE and SANDSTONE-GRITS:** **92.2-96.8 m:** well bedded light gray mudstone-shale with minor sandstone; BCA 45; numerous < 1mm. carbonate veins; 2-3% disseminated pyrite in sediments and within quartz-carbonate veins; several 10-30 mm. quartz carbonate veins contain coarse light brown sphalerite and galena; **96.8-106 m:** interbedded black graphitic shales and medium gray fine grained sandstone; soft sediment slumping and microfracturing common; fragments of shale common in sandstone; BCA 40-50 but variable; abundant anastomosing quartz- carbonate and carbonate veining, generally 1-5 mm.; several 10-20 mm veins in shaley units carry substantial coarse honey colored sphalerite, and galena; disseminated pyrite 2-3% in both quartz-carbonate veins and disseminated in sandstone, and in thin bedding conformable veins in shale; core reasonably competent but tends to be more broken where veining most intense; **106.0-117.3 m:** gradational with unit above; interbedded dark gray-black shales, graphitic in part, and dark gray fine grained sandstones; slumping and soft sediment brecciation common; anastomosing thin (1-5 mm) quartz-carbonate and carbonate veining abundant for most of unit; coarse pyrite, sphalerite and galena common in these thin veins; disseminated fine grained pyrite common in thin seams parallel to bedding and disseminated in shales and sandstones; **117.3-130.4 m:** interbedded buff colored fine grained siltstone-mudstone and hematitic	92.2	140.0	100				107.0	108.0	0.01	0.01	<0.01	<0.05	<0.01	<5

COMPANY: Allegiance Mining NL
PROJECT: Melba Flats
HOLE NUMBER: MF 10

Description			Core Recovery			RQD			Assays							
From	To		From	To	%	From	To	%	From	To	Cu	Ni	Au	Pt	Pd	Ag
		117.3-130.4 .....cont. fine grained sandstone and hematitic siltstone; ocassional dark gray-black slumped graphitic shale beds; BCA variable but generally 70-80; common 1-5 mm quartz-carbonate veins with pyrite-sphalerite-galena, but not as abundant as in unit above; several 10-20 mm. quartz-carbonate veins with coarse sphalerite-pyrite-galena; core generally competent except for broken shale beds; **130.4-140 m.:** interbedded medium gray, medium grained sandstone and minor buff colored mudstone; BCA 60-70; widely spaced 1-2 mm. carbonate veins with minor sulfides; 1-2% pervasive disseminated pyrite in sandstone; core generally competent with wide spaced jointing 30 CA; sharp contact with gabbro below at 40 CA;															
140.0	152.8	**GABBRO:** medium grained dark gray gabbro; abundant 1-40 mm. anastomosing carbonate and quartz-carbonate veins, typically containing 2-3% euhedral pyrite as grains and aggregates accompanied in places by light brown sphalerite and galena; 1-2% pervasive disseminated pyrite in gabbro; ground competent; sharp contact with sediments below, 60-70, but irregular;	140.0	152.8	100				140.0	141.0	0.01	0.02	<0.01	<0.05	<0.01	<5
									141.0	142.0	0.01	0.01	<0.01	<0.05	<0.01	<5
									143.0	144.0	0.02	0.01	<0.01	<0.05	<0.01	<5
									145.0	146.0	0.02	0.05	<0.01	<0.05	<0.01	<5
									147.0	148.0	0.02	0.03	<0.01	<0.05	<0.01	<5
152.8	233.4	**INTERBEDDED SHALE, SILTSTONE and SANDSTONE:** whole unit is strongly calcareous; **152.8-162.5 m:** light gray, medium grained siltstone interbedded with banded hematitic siltstone and light gray calcareous grit;	152.8	233.4	100				149.0	150.0	0.02	0.03	<0.01	<0.05	<0.01	<5
									152.0	153.0	0.01	0.01	<0.01	<0.05	<0.01	<5

COMPANY: Allegiance Mining NL
PROJECT: Melba Flats
HOLE NUMBER: MF 10

Description			Core Recovery			RQD			Assays							
From	To		From	To	%	From	To	%	From	To	Cu	Ni	Au	Pt	Pd	Ag
		152.8-162.5 m. cont..... 1-5 mm. carbonate veining common; BCA 70, 1-3% disseminated pyrite pervasive in sediments and as coarser grains in quartz-carbonate and quartz-chlorite veinlets; core competent; gradational with unit below; **162.5-191.4 m:** hematitic calcareous grits, siltstone and fine grained sandstone, with minor interbeds of light gray siltstone and fine grained sandstone; soft sediment slumping and microfracturing common; BCA generally 70-80; fine (1-5 mm) carbonate and quartz-carbonate anastomosing veins common, with several 20-40 mm. quartz-carbonate veins; 1-3% pyrite as disseminated grains and thin bedding parallel seams; coarser grained and more abundant in thin carbonate veins; core generally very competent; **191.4-220.3 m:** interbedded light gray siltstones, mudstone, and fine grained sandstone, ocassional darker gray carbonaceous units; pervasively calcareous; BCA variable but generally 70-80; carbonate and quartz-carbonate veins common throughout, typically 1-10 mm. but ocassionally up to 40 mm.; chlorite selvedges on some veins and minor pyrite-sphalerite associated with some veins; 196.6 m., 200 mm quartz-carbonate open space vein filling; 191.4-202 m: pyrite common in places, disseminated as coarse euhedral grains in sediments or as clusters adjacent to veins (2-5%); **220.3-224 m:** well bedded hematitic grits and siltstone; BCA 70-80; widely spaced 1-5 mm. carbonate and quartz-carbonate veinlets; core competent;							193.5	194.5	0.02	<0.01	<0.01	<0.05	<0.01	<5
									194.5	195.5	0.01	<0.01	<0.01	<0.05	<0.01	<5
									196.5	197.5	0.01	<0.01	<0.01	<0.05	<0.01	<5
									197.5	198.5	0.01	<0.01	0.02	<0.05	<0.01	<5
									199.5	200.5	0.01	<0.01	0.01	<0.05	<0.01	<5
									201.5	202.5	<0.01	<0.01	<0.01	<0.05	<0.01	<5

COMPANY: Allegiance Mining NL
PROJECT: Melba Flats
HOLE NUMBER: MF 10

Description			Core Recovery			RQD			Assays								
From	To		From	To	%	From	To	%	From	To	Cu	Ni	Au	Pt	Pd	Ag
.		224.0-233.4 m. cont..........							232.5	233.5	0.02	<0.01	<0.01	<0.05	<0.01	<5
		light to medium gray sandstone, grits and siltstone;														
		generally calcareous, strongly so in places;														
		anastomosing 1-10 mm. carbonate and quartz-carbonate veins;														
		BCA 70-80, but contact with gabbro below 45 CA;														
		trace disseminated pyrite in sediments and associated with carbonate veins;														
233.4	242.6	**GABBRO:**														
		medium grained, medium gray gabbre; sharp HW contact 45 CA; FW contact 60-70 CA;	233.4	242.6	100				233.5	235.5	0.02	0.03	<0.01	<0.05	<0.01	<5
		1-5 mm. carbonate and quartz-carbonate veins common, with several veins near FW							238.5	239.5	0.01	0.01	<0.01	<0.05	<0.01	<5
		40-60 mm.;							240.5	241.5	0.01	0.03	<0.01	<0.05	<0.01	<5
		1-2% pyrite disseminated and in thin veinlets throughout gabbro;							241.5	242.5	0.02	<0.01	<0.01	<0.05	<0.01	<5
		coarse light brown sphalerite and galena common in carbonate veins as large coarsely							243.5	244.5	0.01	<0.01	<0.01	<0.05	<0.01	5
		crystalline aggregates;							244.5	245.5	0.01	<0.01	<0.01	<0.05	<0.01	<5
		core generally competent with a few broken							245.5	246.5	0.01	<0.01	<0.01	<0.05	<0.01	<5
		zones;							246.5	247.5	0.01	<0.01	<0.01	<0.05	<0.01	<5
									247.5	249.5	0.01	<0.01	<0.01	<0.05	<0.01	<5
242.6	249.5	**MIXED GABBRO and BRECCIATED SEDIMENTS:**	242.6	249.5	100											
		fine grained light gray gabbroic rock with large blocks (inclusions) light gray siltstone;														
		carbonate and quartz-carbonate veining up to									Pb	Zn				
		60 mm. wide with common coarse light brown							240.5	241.5	0.08	0.31				
		sphalerite and galena, up to several % in some veins;							241.5	242.5	0.08	0.30				
									243.5	244.5	0.30	0.99				
		END OF HOLE														

APPENDIX B

MF 10 ASSAYS

566029

ANALABS

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (004) 31 6837
Facsimile : (004) 31 8890

Our reference : BU015389
Your reference : **L.Newnham drop-off**
Project code : Zeehan Core
Date received : 06/11/98
Date reported : 25/11/98

Lindsay Newnham
Managing Geologist

Allegiance Mining NL
Newnham Exploration and Mining Services
P.O.Box 132
RIVERSIDE
TAS 7250

Number of pages of results : 2
Number of Samples : 30
First Sample : MF10: 58.0-59.0
Last Sample : MF10: 247.5-249.5

Invoice to:
Lindsay Newnham
Managing Geologist

Allegiance Mining NL
Newnham Exploration and Mining Services
P.O.Box 132
RIVERSIDE
TAS 7250

Electronic Data Transmission :

Modem		Y 25/11/98
Facsimile		/ /
Disk Report	Y	/ /

Preliminary Reports :
15/11/98 Report
17/11/98 Report

Results to:

Results to:

Remarks :

Authorised by .....
On behalf of:

Alex Chong
Laboratory Manager

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

566030

ANALABS

Our reference : BU015389
Your reference : L.Newnham drop-off
Project code : Zeehan Core
Report date : 25/11/98
Report status : Final
Page : 1 of 2

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (004) 31 6837
Facsimile : (004) 31 8890

ANALYTICAL DATA

Sample	Au	Pt	Pd			
MF10: 58.0-59.0	<0.01	<0.05	<0.01			
MF10: 60.0-61.0	<0.01	<0.05	<0.01			
MF10: 63.0-64.0	<0.01	<0.05	<0.01			
MF10: 66.0-67.0	<0.01	<0.05	<0.01			
MF10: 67.5-68.5	<0.01	<0.05	<0.01			
MF10: 91.2-92.2	<0.01	<0.05	<0.01			
MF10: 107.0-108.0	<0.01	<0.05	<0.01			
MF10: 140.0-141.1	<0.01	<0.05	<0.01			
MF10: 141.0-142.0	<0.01	<0.05	<0.01			
MF10: 143.0-144.0	<0.01	<0.05	<0.01			
MF10: 145.0-146.0	<0.01	<0.05	<0.01			
MF10: 147.0-148.0	<0.01	<0.05	<0.01			
MF10: 149.0-150.0	<0.01	<0.05	<0.01			
MF10: 152.0-153.0	<0.01	<0.05	<0.01			
MF10: 193.5-194.5	<0.01	<0.05	<0.01			
MF10: 194.5-195.5	<0.01	<0.05	<0.01			
MF10: 196.5-197.5	<0.01	<0.05	<0.01			
MF10: 197.5-198.5	0.02	<0.05	<0.01			
MF10: 199.5-200.5	0.01	<0.05	<0.01			
MF10: 201.5-202.5	<0.01	<0.05	<0.01			
MF10: 232.5-233.5	<0.01	<0.05	<0.01			
MF10: 233.5-235.5	<0.01	<0.05	<0.01			
MF10: 238.5-239.5	<0.01	<0.05	<0.01			
MF10: 240.5-241.5	<0.01	<0.05	<0.01			
MF10: 241.5-242.5	<0.01	<0.05	<0.01			
MF10: 243.5-244.5	<0.01	<0.05	<0.01			
MF10: 244.5-245.5	<0.01	<0.05	<0.01			
MF10: 245.5-246.5	<0.01	<0.05	<0.01			
MF10: 246.5-247.5	<0.01	<0.05	<0.01			
MF10: 247.5-249.5	<0.01	<0.05	<0.01			
Method	F652	F652	F652			
Units	ppm	ppm	ppm			
Detection Limit	0.01	0.05	0.01			

Notes: N.A. = not analysed, -- = element not determined, I.S. = insufficient sample, L.N.R. = listed not received

566031

ANALABS

Our reference : BU015389
Your reference : L.Newnham drop-off
Project code : Zeehan Core
Report date : 25/11/98
Report status : Final
Page : 2 of 2

Analabs Pty. Ltd.
ACN 004 591 664
14 Thirkell St, Burnie
Tasmania 7320
Telephone : (004) 31 6837
Facsimile : (004) 31 8890

ANALYTICAL DATA

Sample	Cu	Ni	Pb	Zn	Ag	
MF10: 58.0-59.0	0.01	0.03	<0.01	0.01	<5	
MF10: 60.0-61.0	0.01	<0.01	<0.01	0.02	<5	
MF10: 63.0-64.0	0.02	0.03	<0.01	0.04	<5	
MF10: 66.0-67.0	0.01	0.03	<0.01	0.02	<5	
MF10: 67.5-68.5	0.02	0.03	0.01	0.32	<5	
MF10: 91.2-92.2	0.03	0.03	0.10	0.05	<5	
MF10: 107.0-108.0	0.01	0.01	<0.01	0.03	<5	
MF10: 140.0-141.1	0.01	0.02	<0.01	0.06	<5	
MF10: 141.0-142.0	0.01	0.01	0.03	0.08	<5	
MF10: 143.0-144.0	0.02	0.01	<0.01	0.03	<5	
MF10: 145.0-146.0	0.02	0.05	0.01	0.03	<5	
MF10: 147.0-148.0	0.02	0.03	0.01	0.03	<5	
MF10: 149.0-150.0	0.02	0.03	<0.01	0.03	<5	
MF10: 152.0-153.0	0.01	0.01	<0.01	0.02	<5	
MF10: 193.5-194.5	0.02	<0.01	<0.01	0.01	<5	
MF10: 194.5-195.5	0.01	<0.01	<0.01	0.02	<5	
MF10: 196.5-197.5	0.01	<0.01	<0.01	0.06	<5	
MF10: 197.5-198.5	0.01	<0.01	0.01	0.01	<5	
MF10: 199.5-200.5	0.01	<0.01	0.02	0.01	<5	
MF10: 201.5-202.5	<0.01	<0.01	0.03	0.08	<5	
MF10: 232.5-233.5	0.02	<0.01	<0.01	0.01	<5	
MF10: 233.5-235.5	0.02	0.03	<0.01	0.01	<5	
MF10: 238.5-239.5	0.01	0.01	<0.01	0.01	<5	
MF10: 240.5-241.5	0.01	0.03	0.08	0.31	<5	
MF10: 241.5-242.5	0.02	<0.01	0.08	0.30	<5	
MF10: 243.5-244.5	0.01	<0.01	0.30	0.99	5	
MF10: 244.5-245.5	0.01	<0.01	0.01	0.04	<5	
MF10: 245.5-246.5	<0.01	<0.01	<0.01	0.02	<5	
MF10: 246.5-247.5	<0.01	<0.01	0.01	0.16	<5	
MF10: 247.5-249.5	<0.01	<0.01	0.01	0.03	<5	
Method	A103	A103	A103	A103	A103	
Units	%	%	%	%	ppm	
Detection Limit	0.01	0.01	0.01	0.01	5	

Notes: N.A. = not analysed, -- = element not determined, I.S. = insufficient sample, L.N.R. = listed not received

ANALYSIS DESCRIPTION

Job number : BU015389 Order number : L.Newnham drop-off

Scheme code : S033 - Drillcore/Rock; Dry, Jaw crush, Fine pulv, Ring

---

Sample preparation. Drillcore,Rock samples; Dry, Jaw crush, Fine pulverise, Ringmill, <3.5kg

---

Scheme code : F652 - 50g fire assay, Lead collection, AAS

Fire assay, Lead collection, Aqua Regia,Uranyl Nitrate digest, AAS, 50g sample.

Scheme code : G103 - Triple acid digest, Ore Grade samples

Triple acid digest, (HCl,HNO3,HClO4), Ore grade samples.

Scheme code : A103 - AAS analysis

AAS analysis of sample after G103 digest.

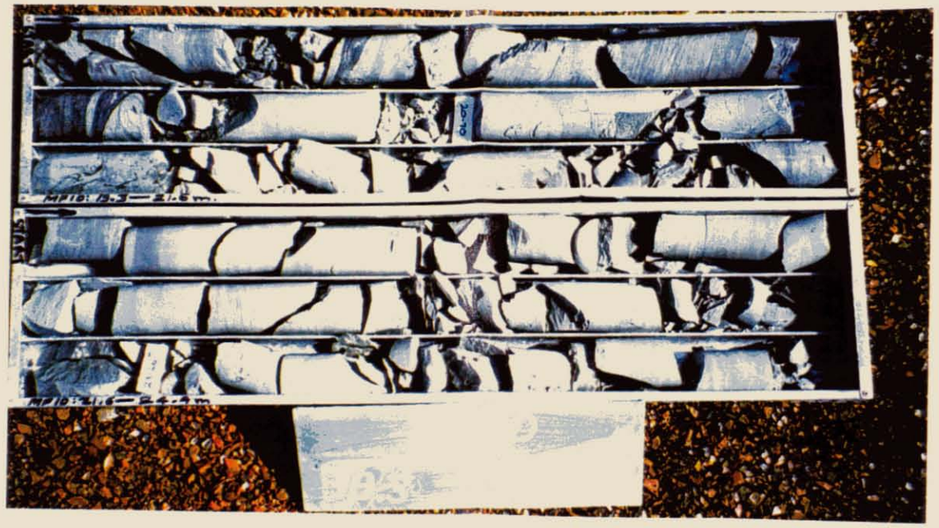
APPENDIX C

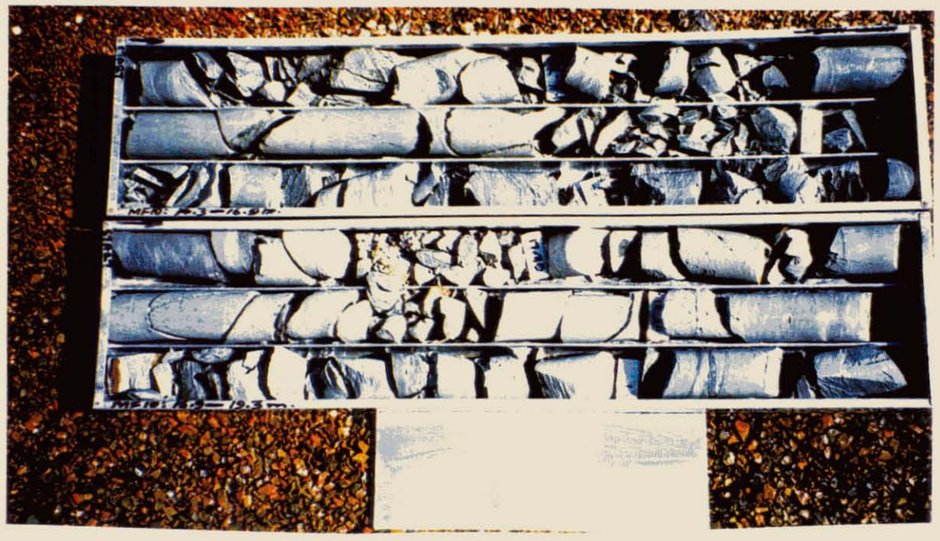
CORE AND ACCESS PHOTOS

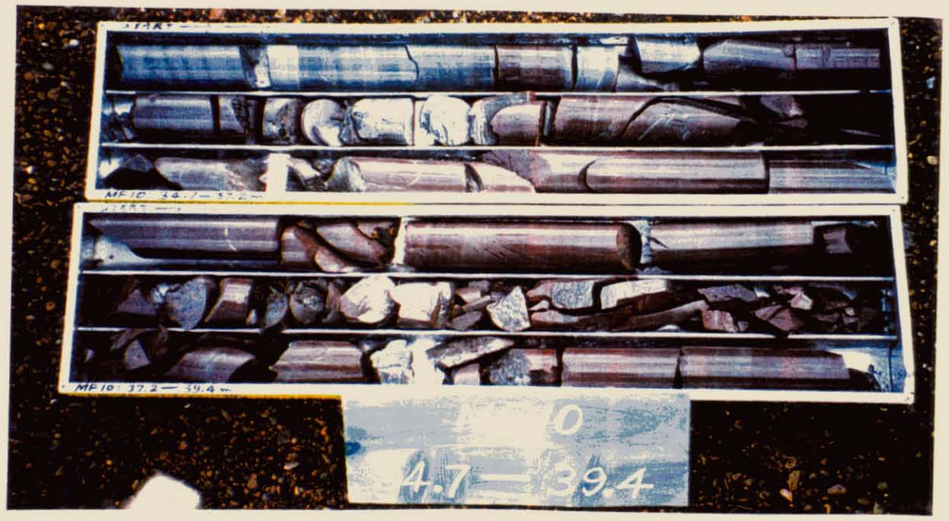
566034

MF 10 DRILL ACCESS

566035



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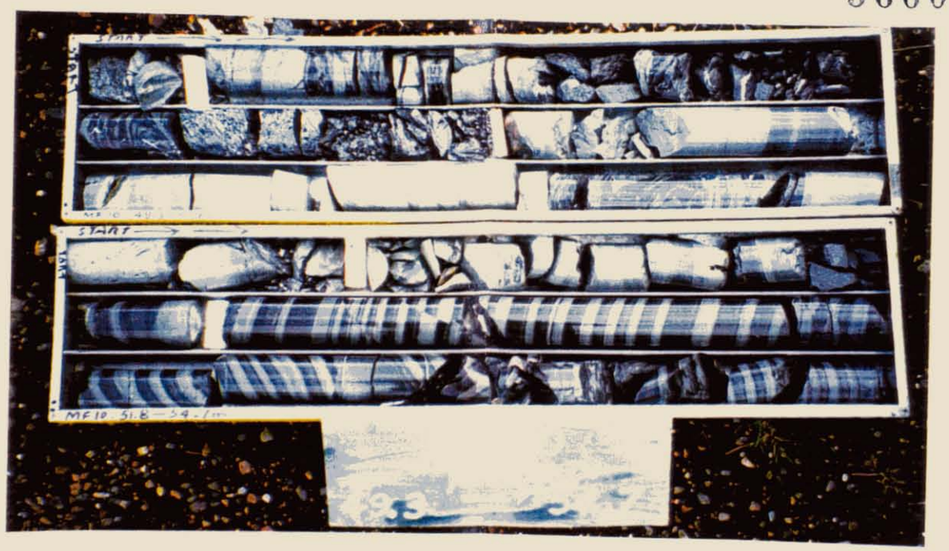
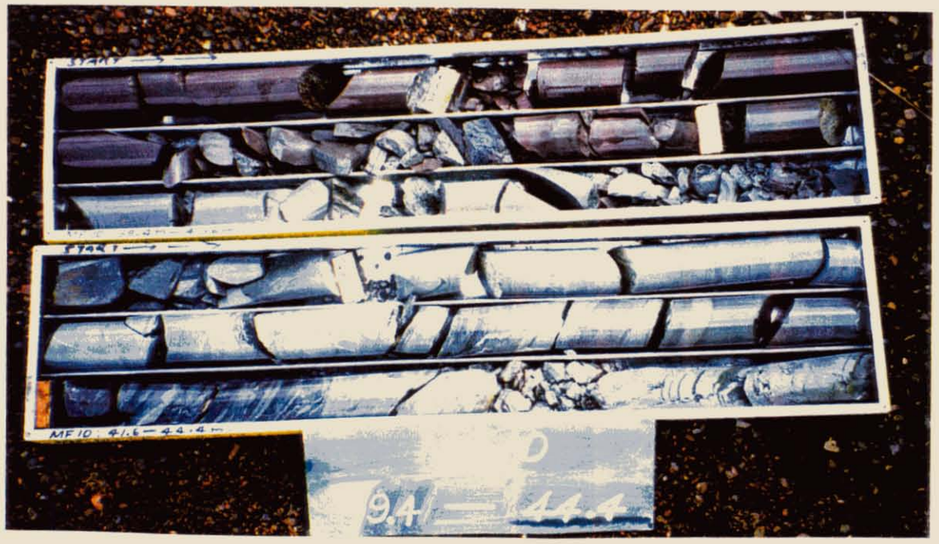
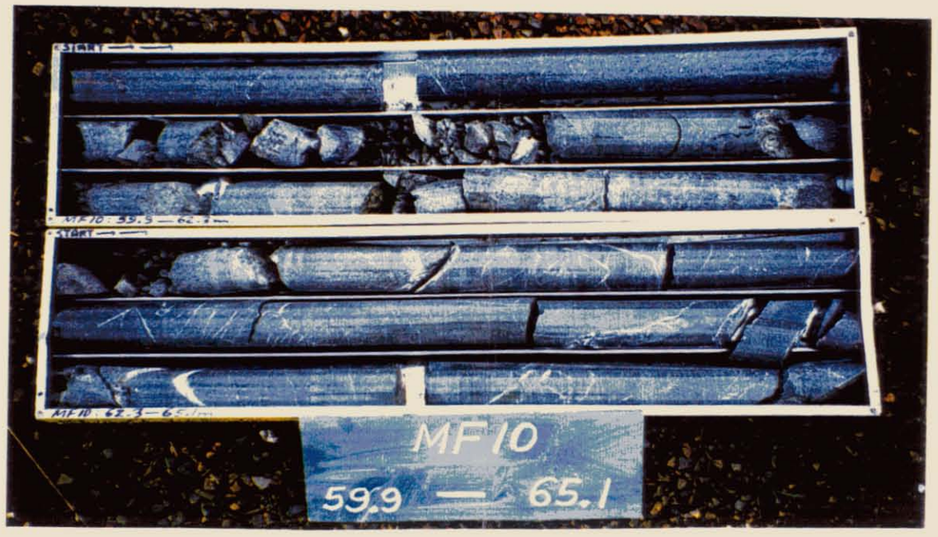
MF10 37.2 — 39.4 m
0
4.7 — 39.4


START
MF10 51.8 — 54.1 m


START
START
MF10 41.6 — 44.4 m
D
9.4 — 44.4

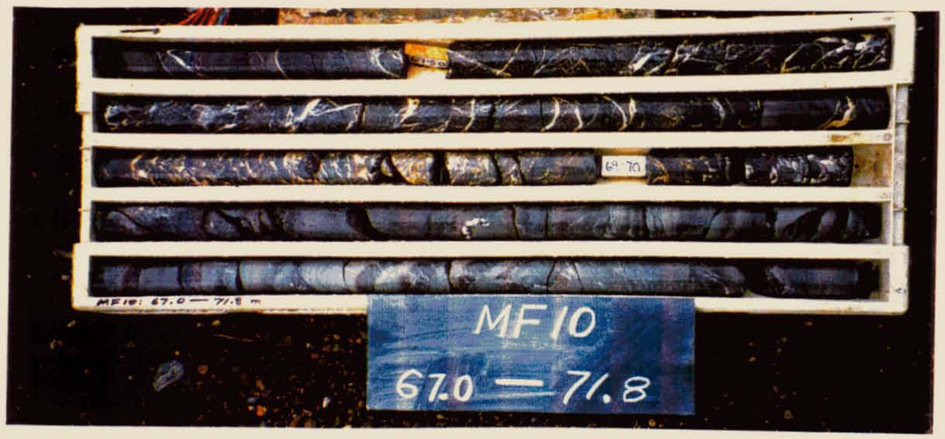

START
MF10 54.1
MF10 57.1 — 59.9 m
MF10
54.7 — 59.9


START
MF10 46.6 — 49.3 m


START
MF10 55.5 — 62.3 m
START
MF10 62.3 — 65.1 m
MF10
59.9 — 65.1

566037


MF10
65.1 — 67.0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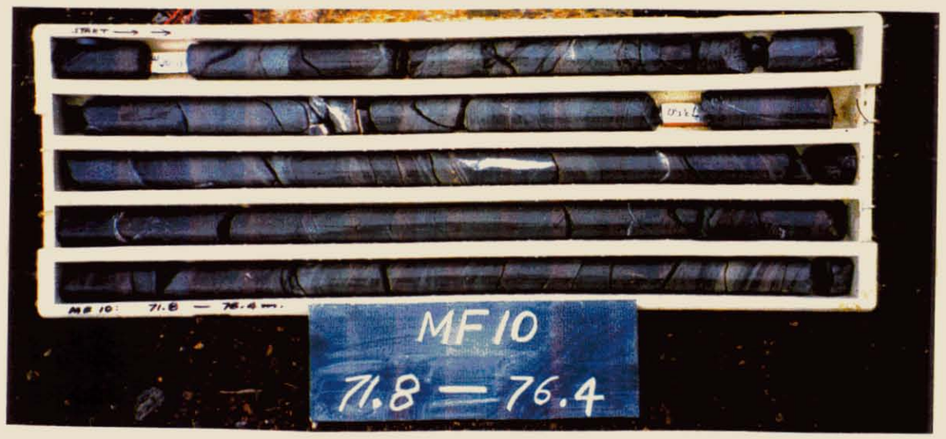
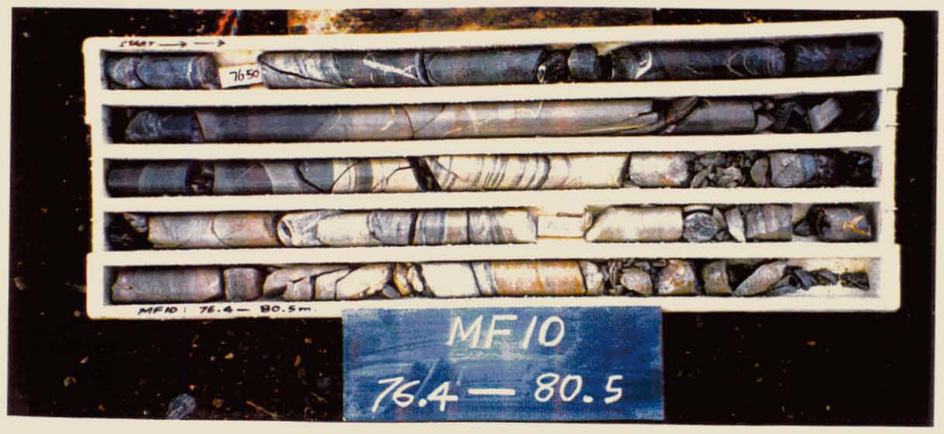
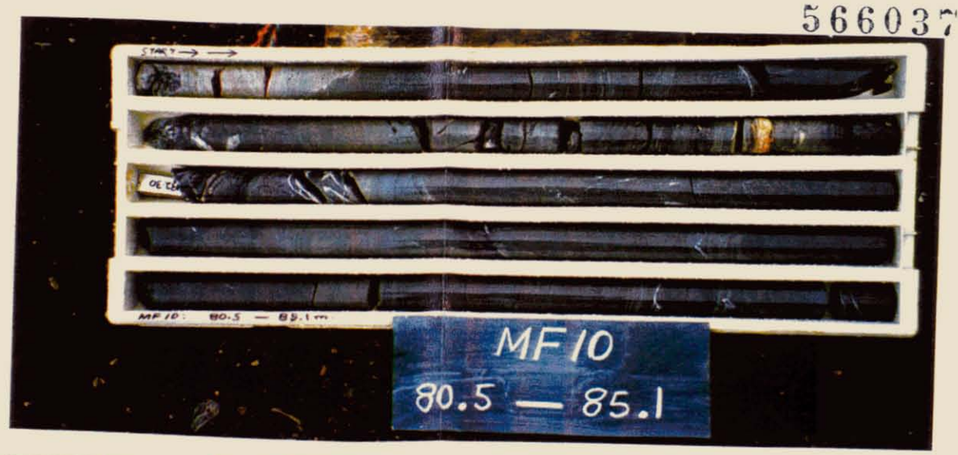
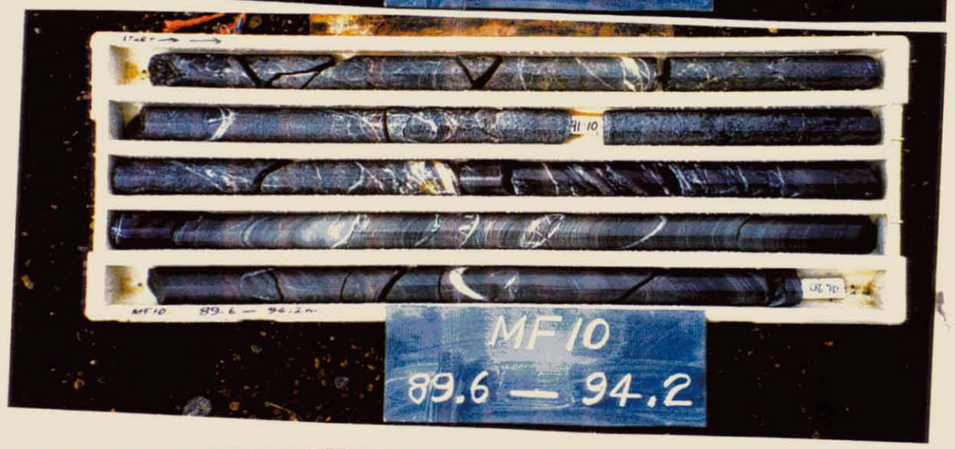
67.0 — 71.8

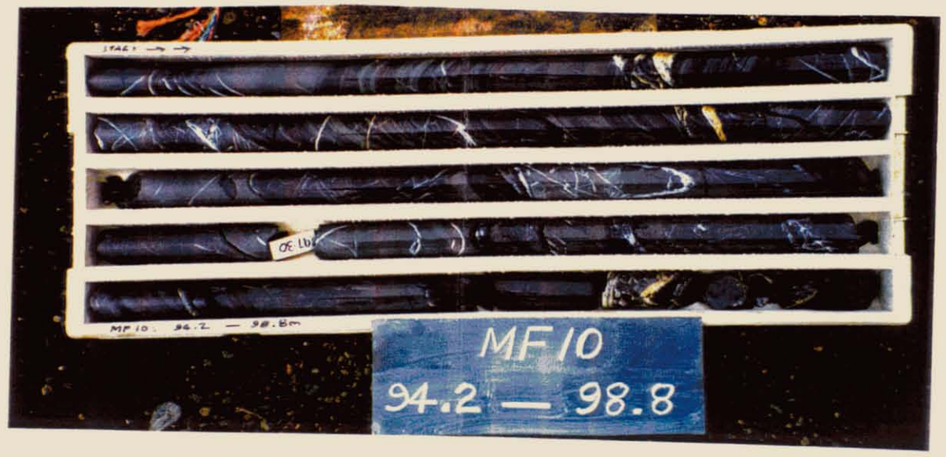

MF10
71.8 — 76.4


MF10
76.4 — 80.5


MF10
80.5 — 85.1


MF10
85.1 — 89.6


MF10
89.6 — 94.2

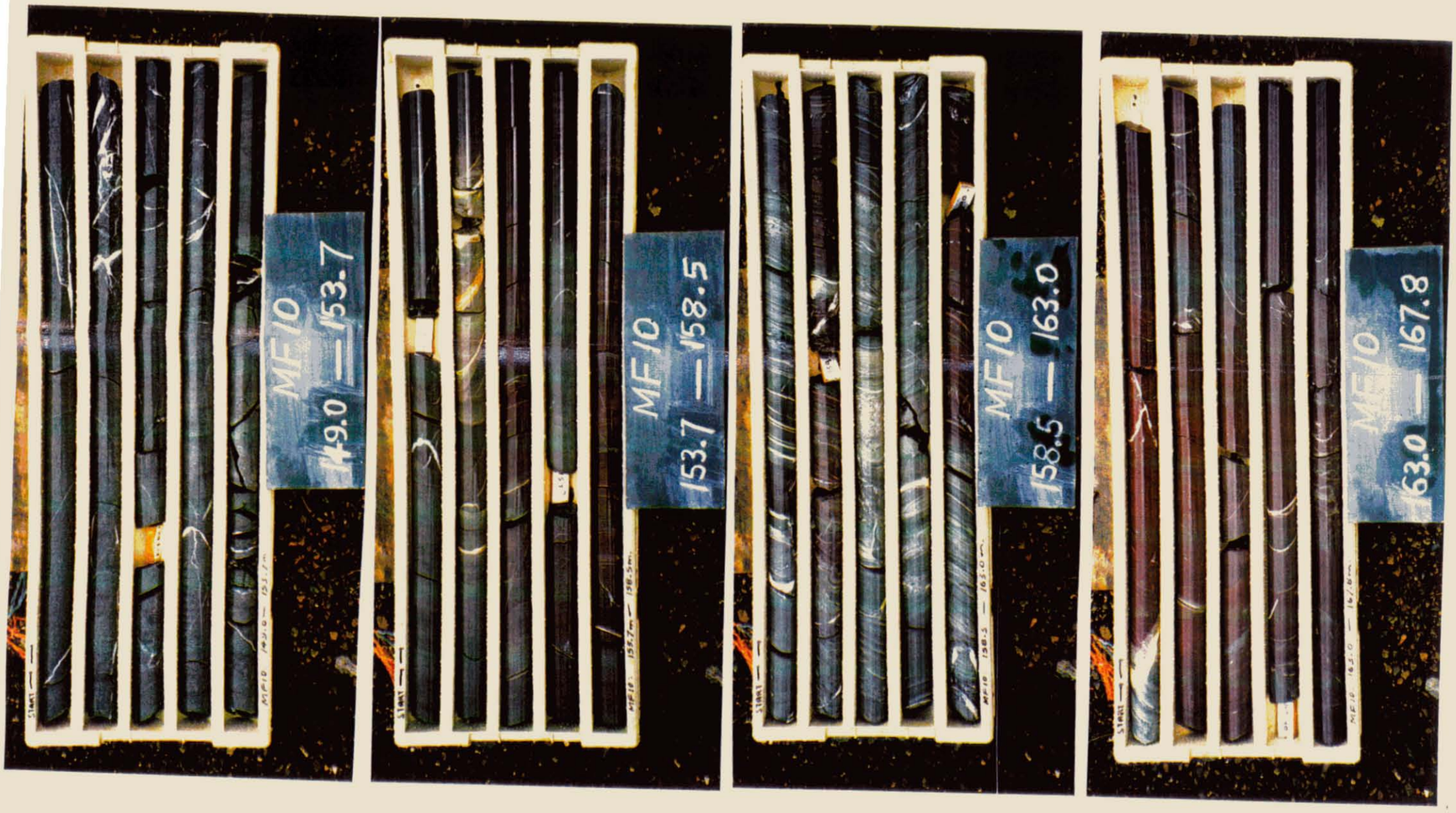

MF10
94.2 — 98.8

566038


MF10
116.5 — 121.0
MF10
121.0 — 125.7
MF10
125.7 — 130.4
MF10
130.4 — 134.9


MF10
98.8 — 103.1
MF10
103.1 — 107.4
MF10
107.4 — 112.1
MF10
112.1 — 116.5

566039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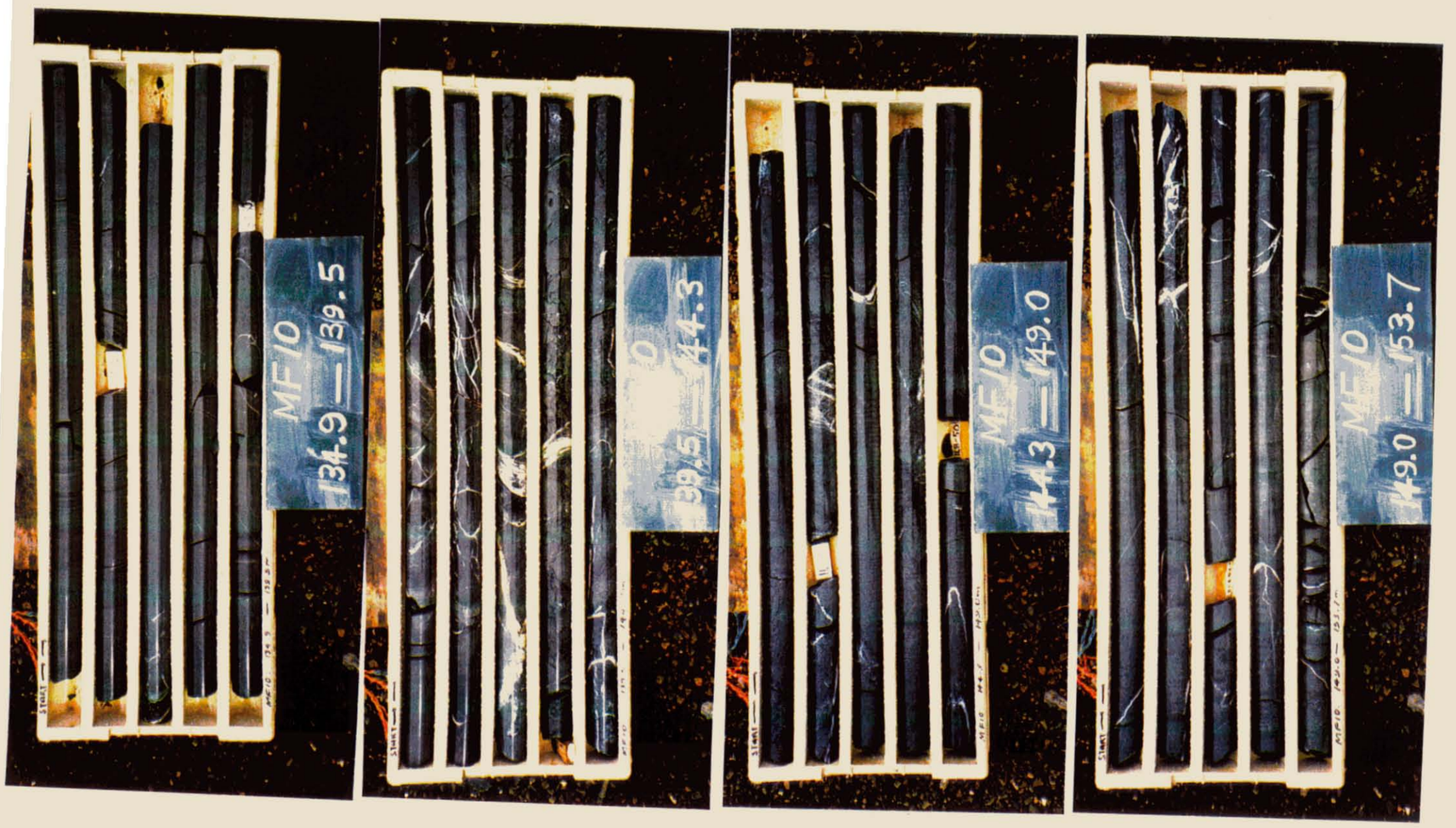
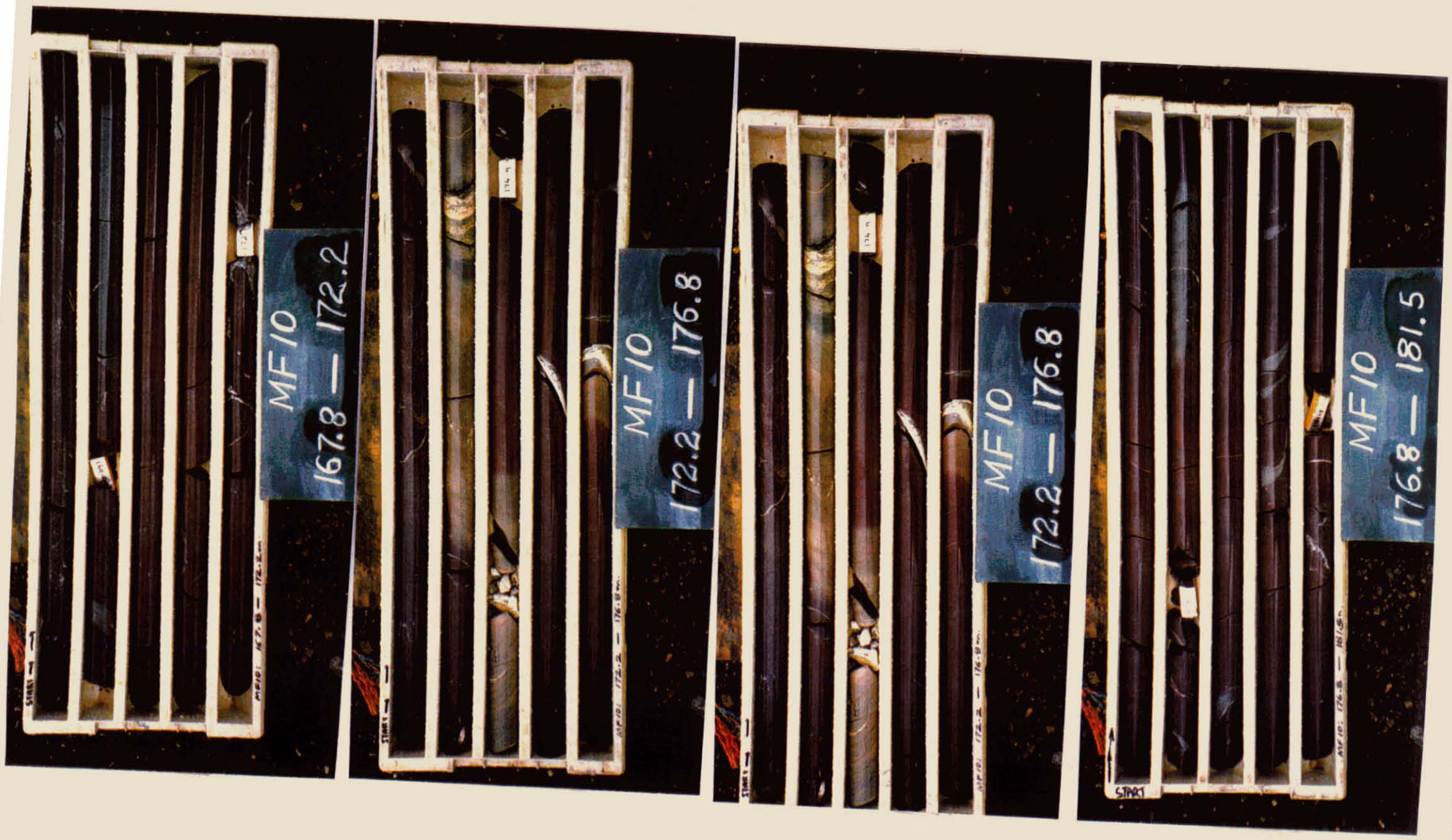
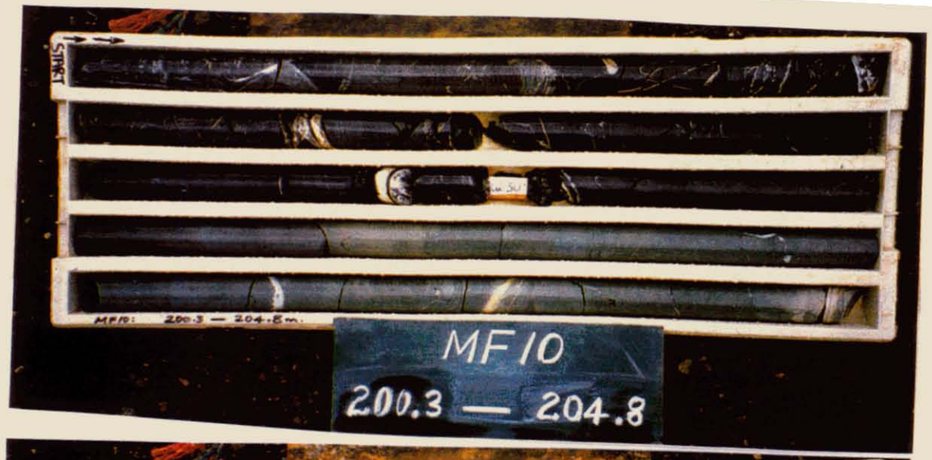
149.0 — 153.7
MF10
153.7 — 158.5
MF10
158.5 — 163.0
MF10
163.0 — 167.8


MF10
134.9 — 139.5
MF10
139.5 — 144.3
MF10
144.3 — 149.0
MF10
149.0 — 153.7

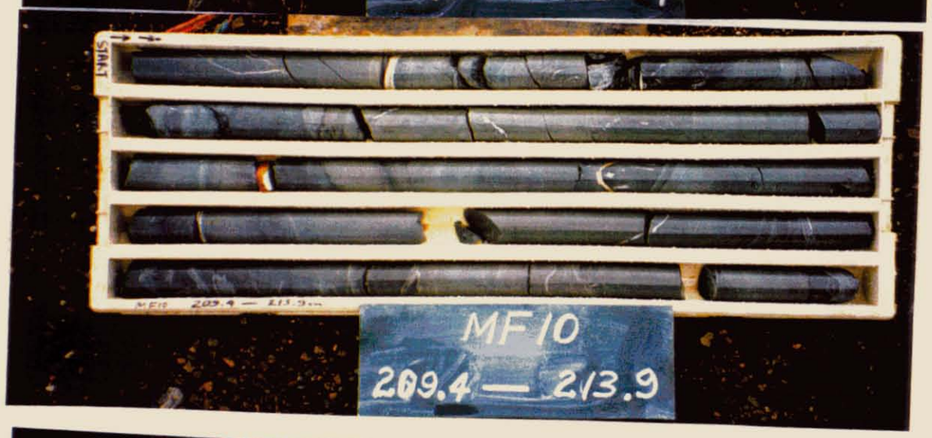
566040


MF10
181.5 — 186.3
START
MF10
186.3 — 190.9
START
MF10
190.9 — 195.7
START
MF10
195.7 — 200.3
START


MF10
167.8 — 172.2
START
MF10
172.2 — 176.8
START
MF10
172.2 — 176.8
START
MF10
176.8 — 181.5
START


START
MF10
200.3 — 204.8


START
MF10
204.8 — 209.4

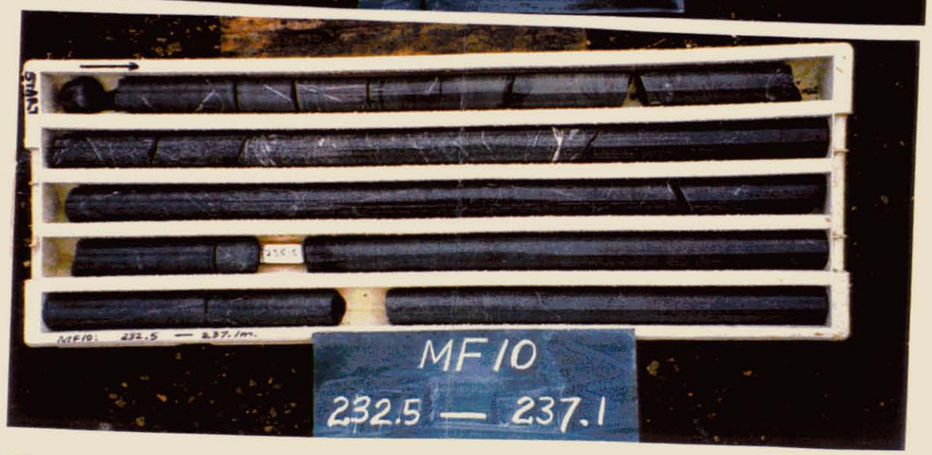

START
MF10
209.4 — 213.9


START
MF10
213.9 — 218.7

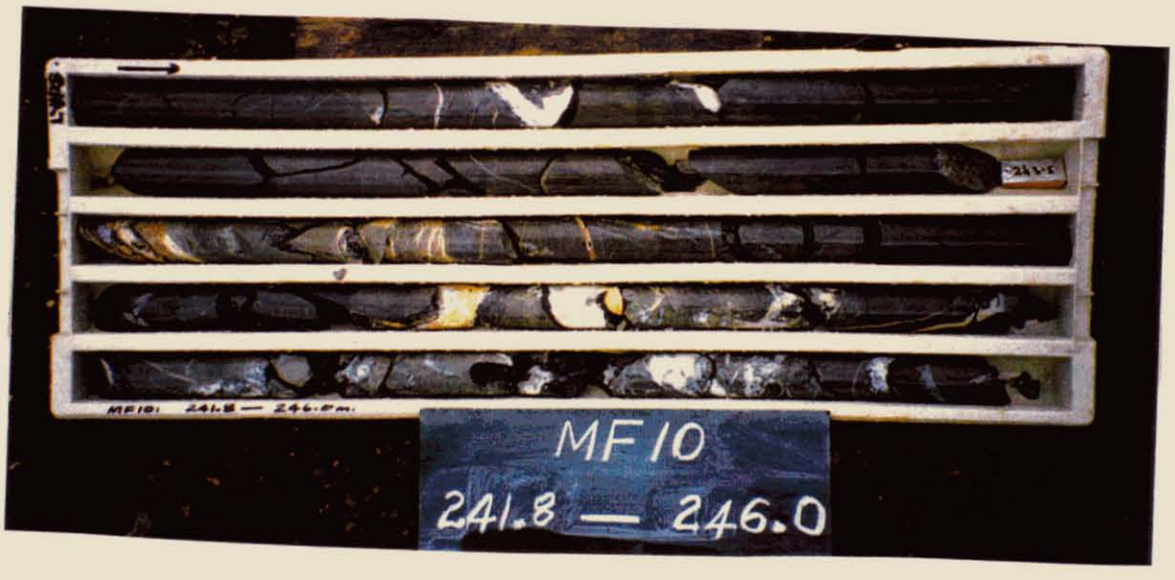

START
MF10
218.7 — 223.2


START
MF10
223.2 — 227.9


START
MF10
227.9 — 232.5


START
MF10
232.5 — 237.1


START
MF10: 237.1 — 241.8m.
MF 10
237.1 — 241.8


START
MF10: 241.8 — 246.0m.
MF 10
241.8 — 246.0


START
MF10: 246.0 — 249.5m. END OF HOLE
MF 10
246.0 — 249.5
END

REFERENCE

STRATIGRAPHY

Cainozoic	Qra	Marsh and swamp deposits; alluvium; river gravels; talus.
Devonian	Db	Bell Shale (Siltstone).
	Df	Florence Quartzite (Sandstone).
Silurian	Sac	Austral Creek Siltstone (Siltstone).
	Sk	Keel Quartzite (Sandstone).
	Sa	Amber Slate (Siltstone).
	Sc	Crotty Quartzite (Dominantly sandstone with minor siltstone).
Middle Cambrian	€db	Brewery Junction Formation (Interbedded siltstone, sandstone and conglomerate).
	€dra	Razorback Conglomerate (Dominantly chert deriver, interbedded conglomerate, pebbly sandstone and sandstone).
	€dh	Hodge Slate (Interbedded siltstone and mudstone with minor sandstone).
	€dre	Red Lead Conglomerate (Poorly-sorted, volcaniclastic, polymic conglomerate).
Cambrian (?)	€vs	Interbedded black mudstone, red siltstone, grey Volcaniclastic (andesitic) lithicwacke and quartz wacke.
Eocambrian	€cc	Crimson Creek Formation (Volcaniclastic [basaltic] lithicwacke, siltstone and mudstone with intercalated tholeiitic basalt flows).
	€sru	Success Creek group (Dominantly Siltstone).
	€sd	Success Creek group (Dominantly Sandstone).

IGNEOUS ROCKS

Devonian (?)	Dgq	Red and white massive quartz bodies.
Cambrian (?)	€g	Subophitic textured gabbroic rocks.
Cambrian	€sb	Basalt, commonly with pillows and individual flows graded from coarse-grained bases to fine-grained tops.
	€sg	Massive and multiply-intrusive two-pyroxene, granular textured gabbro.
	€spg	Serpentinised peridotite with intrusive gabbro.
	€sp	Serpentinised, orthopyroxene-rich, peridotite.
	€so	Serpentinised, olivine-rich, peridotite.
	€ss	Undifferentiated, massive and foliated, serpentinite.

Geological boundary, approximate.

Faulted Boundary, approximate.

Bedding, facing known, unknown.

Cleavage undifferentiated, vertical.

Foliation.

Blowfly — Abandoned mine or working.

Geology after Brown 1991 and ZEEHAN 1:50,000 Geological Map (unpublished).

5 370 000mN
5 369 000mN
5 368 000mN
5 367 000mN
5 366 000mN
5 365 000mN

J64 000mE
J65 000mE
J66 000mE
J67 000mE
J68 000mE
J69 000mE

Genet's Winze
North Point Area
1:1000 Plan Area
Lead Blocks
Serpentine Hill
South Cuni
Blowfly
Mosquito
Vaudeau
Nickel Hoard
Deveraux
McKimmie
Melba Siding
HENTY RIVER
LITTLE HENTY
MELBA CREEK FLATS
Railway
HIGHWAY
Emu
MURCHISON
NEVADA CREEK
MELBA

AMG North / Mag. North 12.1°

5 cm

0 200 400 600 800 metres

CRA EXPLORATION PTY. LIMITED

MELBA FLATS EL 43/92
GEOLOGICAL MAP

Ref.:	SK 55-05	File:	Melba\680
Scale:	1 : 10,000	Date:	April 1994
Author:	T. Aravanis	Report No.:	21143
Drawn:	R. Traviersо	Plan No.:	Tv 680

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MAP 2.

NEWNHAM EXPLORATION AND MINING SERVICES

ALLEGIANCE MINING N.L.
TRIAL HARBOUR PROJECT
NORTH CUNI-GENETS WINZE AREA
DRILLING PLAN and LONGITUDINAL PROJ.

DRAWN: LAN
DRAFTSPERSON:
DATE: Dec.98
FILE No.
SCALE: 1:1000 0m. 60m
FIG. No. 3.

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