



DIATECH

Ph 61 8 9361 2596
Fx 61 8 9470 1504**Detailed Heavy Mineral Analysis**Our Job No.: 05077
Disc No.: -

Sample No: 159855

Overall Sample Assessment: **Negative**

Your Project Code: Benda Bluff, Arnhem Land, NT

Sample Type (as collected): Stream Sediment
Sample Type (as received): Stream Sediment
Observed Sample Type: DMS Concentrate

Head Weight 41.3 kg

Wet Weight kg

Diamond

mm	Number of particles in each size fraction								Total particles	Description of these particles
	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10		

Key Minerals

mm	Number of particles in each size fraction								Wear	Overall Morph. Group	Total particles	No of particles probed	PRIORITY based on Morphology only)	PRIORITY based on morphology and Probe)
	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10						

Other Minerals

mm	% Percentage of particles in each size fraction								Wear	Colour	Angularity	Lustre	Transparency	Form/Shape
	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10						

Almandine								Tr		MW	pale pink	subangular	glassy	transparent	irregular
Anatase						Tr		Tr		MW	blue-green	subangular	greasy	opaque	subhedral to irregular.
Fe Oxide/Hydroxide			100	100	100			90		W	orange-brow	no to angular	dull	opaque	irregular to rounded
Ilmenite				Tr	Tr			10		W	silvery-black	subangular to subrounded	submetallic	opaque	subhedral to irregular
Leucoxene								Tr		W	beige, cream	rounded	polished	opaque	irregular
Mica				Tr	Tr					W	colourless, brown	subangular	pearly	transparent	irregular to subhedral
Orthopyroxene					Tr					W	yellow-green	subangular	glassy	transparent to translucent	subhedral to irregular
Rutile								Tr		W	cherry red	rounded	submetallic	opaque	ovate
Tourmaline				Tr	Tr			Tr		W	black, blue-green, brown	rounded	glassy	translucent	near spherical to irregular
Zircon					Tr					W	colourless	subrounded	glassy	transparent	subhedral to subrounded
TOTAL	%	%	100%	100%	100%	%	100%	%							

What Has Been Observed?Final Conc Weight 120.0900 g | Size Range -1.2+0.2 mm
Weight Observed 120.0900 g**Magnetic Fractions vs Size Fraction**

mm	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10
NotMag							All	
NM			All	All	All			
M6/7			All	All	All			
M4/5			All	All	All			

Comment about this sample:

Technician: JED

Date Observed: 07-Feb-06

Report Printed: 22/02/2006 12:27:42 PM



DIATECH

Ph 61 8 9361 2596

Fx 61 8 9470 1504

Detailed Heavy Mineral Analysis

Our Job No.: 05077

Disc No.: -

Sample No: 159856

Overall Sample Assessment: **Negative**

Your Project Code: Benda Bluff, Arnhem Land, NT

Sample Type (as collected): Stream Sediment

Sample Type (as received): Stream Sediment

Observed Sample Type: DMS Concentrate

Head Weight 48.1 kg

Wet Weight kg

Diamond

Number of particles in each size fraction

mm	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10	Total particles	Description of these particles
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Key Minerals

Number of particles in each size fraction

mm	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10	Wear	Overall Morph. Group	Total particles	No of particles probed	PRIORITY based on Morphology only)	PRIORITY based on morphology and Probe)
----	------	------	------	------	------	-------	-------	-------	------	----------------------	-----------------	------------------------	------------------------------------	---

Other Minerals

% Percentage of particles in each size fraction

mm	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10	Wear	Colour	Angularity	Lustre	Transparency	Form/Shape
----	------	------	------	------	------	-------	-------	-------	------	--------	------------	--------	--------------	------------

Almandine							Tr		MW	pale pink	subrounded	glassy	transparent	irregular
Anatase							Tr		MW	blue-grey	subangular	submetallic	translucent, opaque	blocky
Corundum					Tr				W	ice-blue	subangular	glassy	transparent	subhedral
Fe Oxide/Hydroxide			100	100	90		75		W	brown, orange-brown	rounded	dull	opaque	irregular to rounded
Ilmenite				Tr	5		25		W	silvery-black	subangular	dull to submetallic	opaque	subhedral
Martite					2				MW	silvery-black	subangular to angular	submetallic	opaque	euhedral to subhedral
Mica					Tr				MW	cream	subangular	pearly	translucent to transparent	subhedral
Tourmaline			Tr	Tr	3		Tr		W	black-brown	rounded	glassy	translucent	near spherical to rounded
Zircon							Tr		MW	orange, colourless	rounded	glassy	translucent, opaque	ovate
TOTAL	%	%	100%	100%	100%	%	100%	%						

What Has Been Observed?

Final Conc Weight 42.41 g Size Range -1.2+0.2 mm

Weight Observed 42.41 g

Magnetic Fractions vs Size Fraction

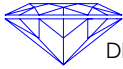
mm	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10
NotMag			All	All	All		All	

Comment about this sample:

Technician: JED

Date Observed: 07-Feb-06

Report Printed: 22/02/2006 12:28:08 PM



DIATECH

Ph 61 8 9361 2596

Fx 61 8 9470 1504

Detailed Heavy Mineral Analysis

Our Job No.: 05077

Disc No.: -

Sample No:**159859**

Overall Sample Assessment:

Negative

Your Project Code:

Benda Bluff, Arnhem Land, NT

Sample Type (as collected): Stream Sediment

Head Weight 46.22 kg

Sample Type (as received): Stream Sediment

Wet Weight kg

Observed Sample Type: DMS Concentrate

Diamond

mm	Number of particles in each size fraction								Total particles	Description of these particles
	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10		

Key Minerals

mm	Number of particles in each size fraction								Wear	Overall Morph. Group	Total particles	No of particles probed	PRIORITY based on Morphology only)	PRIORITY based on morphology and Probe)	
	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10							
Chromite/Cr-Spinel								1		W	B1	1		B	C

black dull matte sheen, near spherical

Other Minerals

mm	% Percentage of particles in each size fraction								Wear	Colour	Angularity	Lustre	Transparency	Form/Shape
	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10						
Almandine					Tr		Tr		W	candy pink	subrounded	glassy	transparent	subhedral to irregular
Anatase				Tr	Tr		Tr		MW	blue-green, blue-grey	subangular	greasy	opaque	subhedral
Corundum					Tr		Tr		MW	ice-blue	subangular	glassy	translucent to transparent	subhedral
Fe Oxide/Hydroxide			100	100	90		30		W	brown, orange-brown	rounded	dull	opaque	irregular to rounded
Gorceixite					Tr		Tr		W	cream	rounded	greasy	opaque	rounded
Haematite				Tr	Tr				MW	silvery-black	subangular	submetallic	opaque	subhedral
Ilmenite				Tr	5		70		MW	silvery-black	subangular	submetallic	opaque	subhedral to irregular
Leucoxene							Tr		W	brown, beige	rounded	polished	opaque	spherical
Martite					5				MW	silvery-black	subangular	submetallic	opaque	euhedral to subhedral
Mica				Tr	Tr				MW	cream	subangular	pearly	translucent to transparent	subhedral
Rutile					Tr		Tr		W	red-brown	subangular	greasy	rounded	subhedral
Tourmaline				Tr	Tr		Tr		W	black-brown	rounded	glassy	translucent	near spherical to rounded
Zircon							Tr		W	orange	rounded	glassy	translucent, opaque	ovate

TOTAL

%	%	100%	100%	100%	%	100%	%
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DIATECH

Ph 61 8 9361 2596
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Detailed Heavy Mineral Analysis

Our Job No.: 05077
Disc No.: -

Sample No: 159859

Overall Sample Assessment: **Negative**

Your Project Code: Benda Bluff, Arnhem Land, NT

What Has Been Observed?

Final Conc Weight 10.66 g | Size Range -1.2+0.2 mm
Weight Observed 10.66 g

Magnetic Fractions vs Size Fraction

mm	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10
NotMag			All	All	All		All	

Comment about
this sample:

Technician: JED

Date Observed: 08-Feb-06

Report Printed: 22/02/2006 12:29:26 PM



DIATECH

Ph 61 8 9361 2596

Fx 61 8 9470 1504

Detailed Heavy Mineral Analysis

Our Job No.: 05077

Disc No.: -

Sample No:**159860**

Overall Sample Assessment:

Negative

Your Project Code:

Benda Bluff, Arnhem Land, NT

Sample Type (as collected): Stream Sediment

Head Weight 48.26 kg

Sample Type (as received): Stream Sediment

Wet Weight kg

Observed Sample Type: DMS Concentrate

Diamond

mm	Number of particles in each size fraction								Total particles	Description of these particles
	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10		

Key Minerals

mm	Number of particles in each size fraction								Wear	Overall Morph. Group	Total particles	No of particles probed	PRIORITY based on Morphology only)	PRIORITY based on morphology and Probe)
	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10						

Other Minerals

mm	% Percentage of particles in each size fraction								Wear	Colour	Angularity	Lustre	Transparency	Form/Shape
	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10						
Anatase					Tr		Tr		MW	ice-blue to cream	subangular	greasy	opaque	subhedral
Corundum					Tr		Tr		W	ice-blue	subangular	glassy	translucent to transparent	subhedral
Fe Oxide/Hydroxide			100	100	40		40		W	brown, orange-brown	rounded	dull	opaque	irregular to rounded
Gorceixite					Tr				W	cream	subangular to rounded	porcelain-like	opaque	subhedral to rounded
Ilmenite				Tr	50		60		W	silvery-black	subangular	submetallic	opaque	subhedral
Leucoxene							Tr		W	beige	subrounded	polished	opaque	irregular
Mica				Tr	Tr				W	cream	subangular	pearly	translucent to transparent	subhedral
Rutile							Tr		W	cherry red	rounded	submetallic	opaque	rolled
Tourmaline			Tr	Tr	10		Tr		W	black-brown	rounded	glassy	translucent	near spherical to rounded
Zircon							Tr		W	orange, colourless	rounded	glassy	translucent, opaque	ovate
TOTAL	%	%	100%	100%	100%	%	100%	%						

What Has Been Observed?

Final Conc Weight 40.98000 g Size Range -1.2+0.2 mm

Weight Observed 40.98000 g

Magnetic Fractions vs Size Fraction

mm	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10
NotMag			All	All	All		All	

Comment about this sample:**Technician:**

VL

Date Observed:

24-Nov-05

Report Printed:

22/02/2006 12:29:51 PM



DIATECH

Ph 61 8 9361 2596

Fx 61 8 9470 1504

Detailed Heavy Mineral Analysis

Our Job No.: 05077

Disc No.: -

Sample No:**159862**

Overall Sample Assessment:

Negative

Your Project Code:

Benda Bluff, Arnhem Land, NT

Sample Type (as collected): Stream Sediment

Head Weight 50.84 kg

Sample Type (as received): Stream Sediment

Wet Weight kg

Observed Sample Type: DMS Concentrate

Diamond

mm	Number of particles in each size fraction								Total particles	Description of these particles
	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10		

Key Minerals

mm	Number of particles in each size fraction								Wear	Overall Morph. Group	Total particles	No of particles probed	PRIORITY based on Morphology only)	PRIORITY based on morphology and Probe)
	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10						

Chromite/Cr-Spinel

W	B1		1		B	C
black dull matte sheen, spherical						

Other Minerals

mm	% Percentage of particles in each size fraction								Wear	Colour	Angularity	Lustre	Transparency	Form/Shape
	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10						

Almandine					Tr		Tr		MW	candy pink	subrounded	glassy	transparent	near spherical to irregular
Fe Oxide/Hydroxide			100	100	50		40		W	brown, orange-brown	rounded	dull	opaque	irregular to rounded
Ilmenite			Tr	Tr	40		55		W	silvery-black	subangular	submetallic	opaque	irregular to subhedral
Leucoxene				Tr	Tr		Tr		MW	grey-blue	subangular	greasy	opaque	subhedral
Mica					Tr				MW	cream	subangular	greasy	translucent to transparent	subhedral to irregular
Phosphate							Tr		W	red-brown	rounded	polished	opaque	spherical
Tourmaline			Tr	Tr	10		5		W	black-brown	subrounded	glassy	translucent	near spherical to irregular
Zircon							Tr		W	colourless	rounded	glassy	transparent, translucent	ovate
TOTAL	%	%	100%	100%	100%	%	100%	%						

What Has Been Observed?

Final Conc Weight 15.14000 g Size Range -1.2+0.2 mm

Weight Observed 15.14000 g

Magnetic Fractions vs Size Fraction

mm	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10
NotMag			All	All	All		All	

Comment about this sample:**Technician:** JED**Date Observed:** 07-Feb-06**Report Printed:** 22/02/2006 12:30:42 PM



DIATECH

Ph 61 8 9361 2596

Fx 61 8 9470 1504

Detailed Heavy Mineral Analysis

Our Job No.: 05077

Disc No.: -

Sample No:**159863**

Overall Sample Assessment:

Negative

Your Project Code:

Benda Bluff, Arnhem Land, NT

Sample Type (as collected): Stream Sediment

Head Weight 51.36 kg

Sample Type (as received): Stream Sediment

Wet Weight kg

Observed Sample Type: DMS Concentrate

Diamond

mm	Number of particles in each size fraction								Total particles	Description of these particles
	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10		

Key Minerals

mm	Number of particles in each size fraction								Wear	Overall Morph. Group	Total particles	No of particles probed	PRIORITY based on Morphology only)	PRIORITY based on morphology and Probe)
	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10						

Other Minerals

mm	% Percentage of particles in each size fraction								Wear	Colour	Angularity	Lustre	Transparency	Form/Shape
	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10						
Almandine							Tr		MW	pale pink	subangular	glassy	transparent	irregular
Anatase					Tr		Tr		MW	blue-green	subangular	greasy	opaque	subhedral to irregular
Fe Oxide/Hydroxide			100	100	70		70		W	orange-brown	rounded to angular	dull	opaque	irregular to rounded
Gorceixite					Tr				W	cream	subangular to rounded	polished	opaque	irregular
Ilmenite				Tr	20		30		W	silvery-black	subangular	submetallic	opaque	subhedral to irregular
Leucoxene							Tr		W	brown, beige	subangular	polished	opaque	blocky
Martite					Tr				MW	silvery-black	angular	submetallic	opaque	subhedral to euhedral
Mica					Tr				W	colourless, brown	subangular	pearly	transparent	irregular to subhedral
Rutile							Tr		MW	cherry red	subrounded	submetallic	translucent	tabular
Tourmaline				Tr	10		Tr		W	black, blue-green, brown	rounded	glassy	translucent	near spherical to irregular
Zircon				Tr	Tr		Tr		W	colourless, pink	subangular	glassy	transparent to translucent	irregular
TOTAL	%	%	100%	100%	100%	%	100%	%						

What Has Been Observed?

Final Conc Weight 132.13 g Size Range -1.2+0.2 mm

Weight Observed 132.13 g

Magnetic Fractions vs Size Fraction

mm	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10
NotMag			All	All	All		All	

Comment about this sample:

Technician: JED

Date Observed: 09-Feb-06

Report Printed: 22/02/2006 12:31:07 PM



DIATECH

Ph 61 8 9361 2596

Fx 61 8 9470 1504

Detailed Heavy Mineral Analysis

Our Job No.: 05077

Disc No.: -

Sample No: 159864

Overall Sample Assessment: **Negative**

Your Project Code: Benda Bluff, Arnhem Land, NT

Sample Type (as collected): Stream Sediment

Sample Type (as received): Stream Sediment

Observed Sample Type: DMS Concentrate

Head Weight 67.7 kg

Wet Weight kg

Diamond

Number of particles in each size fraction

mm	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10	Total particles	Description of these particles
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Key Minerals

Number of particles in each size fraction

mm	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10	Wear	Overall Morph. Group	Total particles	No of particles probed	PRIORITY based on Morphology only)	PRIORITY based on morphology and Probe)
----	------	------	------	------	------	-------	-------	-------	------	----------------------	-----------------	------------------------	------------------------------------	---

Other Minerals

% Percentage of particles in each size fraction

mm	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10	Wear	Colour	Angularity	Lustre	Transparency	Form/Shape
----	------	------	------	------	------	-------	-------	-------	------	--------	------------	--------	--------------	------------

Almandine					Tr				W	pink	subangular	glassy	transparent	subhedral to irregular
Anatase				Tr	Tr		Tr		MW	black-green	subangular	greasy	opaque	subhedral to irregular
Corundum					Tr		Tr		MW	ice-blue, colourless	subangular	glassy	transparent to translucent	subhedral to irregular
Fe Oxide/Hydroxide			100	100	20		10		W	orange-brown	rounded to subangular	dull	opaque	irregular to rounded
Gorceixite					Tr				W	cream	subrounded	polished	opaque	subrounded to irregular
Ilmenite			Tr	Tr	80		90		MW	silvery-black	subangular	submetallic	opaque	irregular to subhedral
Leucosene							Tr		W	beige, cream	subrounded	polished	opaque	irregular
Orthopyroxene			Tr	Tr	Tr		Tr		MW	yellow-green	subangular	glassy	translucent to transparent	subhedral to irregular
Rutile							Tr		MW	cherry red	subrounded	submetallic	translucent, opaque	tabular, rolled
Staurolite					Tr				MW	orange-brown	subangular	greasy	translucent	subhedral to irregular
Tourmaline			Tr	Tr	Tr		Tr		W	black, black-brown, black-green	rounded	glassy	translucent	near spherical to rounded
Zircon				Tr	Tr		Tr		W	colourless, pink	subangular to subrounded	glassy	transparent to translucent	subhedral to subrounded
TOTAL	%	%	100%	100%	100%	%	100%	%						

What Has Been Observed?

Final Conc Weight 152.9700 g Size Range -1.2+0.2 mm

Weight Observed 65.46 g

Magnetic Fractions vs Size Fraction

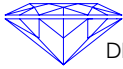
mm	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10
NM			All	All	All		All	
M6/7			All	All	All		All	
M4/5			All	All	All		None	

Comment about this sample:

Technician: JED

Date Observed: 14-Feb-06

Report Printed: 22/02/2006 12:31:32 PM



DIATECH

Ph 61 8 9361 2596

Fx 61 8 9470 1504

Detailed Heavy Mineral Analysis

Our Job No.: 05077

Disc No.: -

Sample No:

159865

Overall Sample Assessment:

Negative

Your Project Code:

Benda Bluff, Arnhem Land, NT

Sample Type (as collected): Stream Sediment

Head Weight 58.52 kg

Sample Type (as received): Stream Sediment

Wet Weight kg

Observed Sample Type: DMS Concentrate

Diamond

mm	Number of particles in each size fraction								Total particles	Description of these particles
	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10		

Key Minerals

mm	Number of particles in each size fraction								Wear	Overall Morph. Group	Total particles	No of particles probed	PRIORITY based on Morphology only)	PRIORITY based on morphology and Probe)
	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10						

Other Minerals

mm	% Percentage of particles in each size fraction								Wear	Colour	Angularity	Lustre	Transparency	Form/Shape
	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10						

Almandine					Tr		Tr		MW	pink, pale orange	subangular	glassy	translucent	subhedral to euhedral
Anatase					Tr		Tr		MW	blue-green	subangular	greasy	opaque	subhedral to euhedral
Corundum					Tr		Tr		MW	ice-blue to pale pink	subangular	glassy	transparent	subhedral to irregular
Epidote					Tr				W	yellow-green	subangular	dull to glassy	translucent to opaque	subhedral to irregular
Fe Oxide/Hydroxide			100	100	10		10		W	orange brown	rounded to subangular	dull	opaque	irregular
Gorceixite					Tr				W	cream	subrounded	polished	opaque	subrounded to irregular
Ilmenite				Tr	90		90		MW	silvery-black	subangular	submetallic	opaque	subhedral to irregular
Kyanite					Tr		Tr		MW	ice-blue	subangular	glassy	transparent	subhedral
Leucoxene							Tr		W	beige	subrounded	polished	opaque	irregular
Muscovite					Tr				MW	colourless	subangular	pearly	transparent	subhedral flakes
Orthopyroxene			Tr		Tr		Tr		MW	yellow-green	subangular	glassy	translucent to transparent	subhedral to irregular
Rutile					Tr		Tr		MW	orange-brown	subangular	greasy	opaque to translucent	subhedral to irregular
Staurolite							Tr		MW	orange-brown	subrounded	glassy	transparent	blocky
Tourmaline			Tr	Tr	Tr		Tr		W	black, black-brown, black-green	rounded	glassy	translucent	near spherical to rounded
Zircon			Tr	Tr	Tr		Tr		W	colourless	subrounded	glassy	transparent	near spherical to subhedral
TOTAL	%	%	100%	100%	100%	%	100%	%						



DIATECH

Ph 61 8 9361 2596
Fx 61 8 9470 1504

Detailed Heavy Mineral Analysis

Our Job No.: 05077
Disc No.: -

Sample No: 159865

Overall Sample Assessment: **Negative**

Your Project Code: Benda Bluff, Arnhem Land, NT

What Has Been Observed?

Final Conc Weight 119.87 g Size Range -1.2+0.2 mm
Weight Observed 119.87 g

Magnetic Fractions vs Size Fraction

mm	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10
NM			All	All	All			
M6/7			All	All	All			
M4/5			All	All	All			

Comment about
this sample:

Technician: VL

Date Observed: 03-Jan-05

Report Printed: 22/02/2006 12:31:58 PM



DIATECH

Ph 61 8 9361 2596

Fx 61 8 9470 1504

Detailed Heavy Mineral Analysis

Our Job No.: 05077

Disc No.: -

Sample No:**159866**

Overall Sample Assessment:

Unresolved

Your Project Code:

Benda Bluff, Arnhem Land, NT

Sample Type (as collected): Stream Sediment

Head Weight 52.86 kg

Sample Type (as received): Stream Sediment

Wet Weight kg

Observed Sample Type: DMS Concentrate

Diamond

mm	Number of particles in each size fraction								Total particles	Description of these particles
	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10		

Key Minerals

mm	Number of particles in each size fraction								Wear	Overall Morph. Group	Total particles	No of particles probed	PRIORITY based on Morphology only)	PRIORITY based on morphology and Probe)
	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10						

Chromite/Cr-Spinel

W	B1		1		B	B
---	----	--	---	--	---	---

black dull well rounded finely granular.

Other Minerals

mm	% Percentage of particles in each size fraction								Wear	Colour	Angularity	Lustre	Transparency	Form/Shape
	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10						

Anatase					Tr		Tr		MW	grey-green	subangular	greasy	opaque	subhedral
Corundum					Tr		Tr		MW	colourless, blue	subangular	glassy	transparent to translucent	subhedral to irregular
Fe Oxide/Hydroxide			100	100	100		40		W	orange-brown	rounded to angular	dull	opaque	irregular to rounded
Ilmenite				Tr			60		W	silvery-black	subangular	submetallic	opaque	subhedral to irregular
Leucoxene							Tr		W	brown, beige	subangular	polished	opaque	blocky
Martite				Tr					MW	silvery-black	angular	submetallic	opaque	subhedral to euhedral
Mica					Tr				W	colourless	subangular	pearly	transparent	subhedral
Phosphate							Tr		MW	orange	rounded	resinous	opaque	ovate
Rutile							Tr		W	red-black, cherry red	rounded	submetallic	opaque	rolled
Staurolite							Tr		MW	orange-brown	subrounded	glassy	translucent	irregular
Tourmaline			Tr	Tr			Tr		W	black, brown, blue-green	rounded	glassy	translucent	near spherical to irregular
Zircon					Tr		Tr		W	colourless	subangular	glassy	transparent	irregular
TOTAL	%	%	100%	100%	100%	%	100%	%						

What Has Been Observed?

Final Conc Weight	31.53000 g	Size Range	-1.2+0.2 mm
Weight Observed	31.53000 g		

Magnetic Fractions vs Size Fraction

mm	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10
NotMag			All	All	All		All	

Comment about this sample:**Technician:** JED**Date Observed:** 08-Feb-06**Report Printed:** 22/02/2006 12:32:25 PM



DIATECH

Ph 61 8 9361 2596

Fx 61 8 9470 1504

Detailed Heavy Mineral Analysis

Our Job No.: 05077

Disc No.: -

Sample No:**159872**

Overall Sample Assessment:

Negative

Your Project Code:

Benda Bluff, Arnhem Land, NT

Sample Type (as collected): Stream Sediment

Head Weight 45.96 kg

Sample Type (as received): Stream Sediment

Wet Weight kg

Observed Sample Type: DMS Concentrate

Diamond

mm	Number of particles in each size fraction								Total particles	Description of these particles	
	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10			

Key Minerals

mm	Number of particles in each size fraction								Wear	Overall Morph. Group	Total particles	No of particles probed	PRIORITY based on Morphology only)	PRIORITY based on morphology and Probe)	
	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10							

Other Minerals

mm	% Percentage of particles in each size fraction								Wear	Colour	Angularity	Lustre	Transparency	Form/Shape
	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10						
Almandine							Tr		MW	pale pink	subrounded	glassy	transparent	irregular
Anatase							Tr		MW	blue-grey	subangular	submetallic	translucent, opaque	blocky
Fe Oxide/Hydroxide			100	100	100		80		W	orange-brown, black	rounded to subangular	dul	opaque	irregular to rounded
Ilmenite					Tr		20		W	silvery-black	subangular	submetallic	opaque	subhedral to irregular
Leucosene							Tr		W	beige, cream	subrounded	polished	opaque	irregular
Rutile							Tr		W	cherry red	rounded	submetallic	opaque	elongate
Tourmaline				Tr	Tr		Tr		W	black, brown	rounded	glassy	translucent to transparent	near spherical to irregular
Zircon							Tr		MW	orange-brown, colourless	rounded	glassy	translucent, opaque	ovate
TOTAL	%	%	100%	100%	100%	%	100%	%						

What Has Been Observed?

Final Conc Weight 6.710000 g Size Range -1.2+0.2 mm

Weight Observed 6.710000 g

Magnetic Fractions vs Size Fraction

mm	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10
NotMag			All	All	All		All	

Technician:

VL

Date Observed:

08-Dec-05

Report Printed:

22/02/2006 12:34:13 PM

Comment about this sample:



DIATECH

Ph 61 8 9361 2596

Fx 61 8 9470 1504

Detailed Heavy Mineral Analysis

Our Job No.: 05077

Disc No.: -

Sample No:**159873**

Overall Sample Assessment:

Negative

Your Project Code:

Benda Bluff, Arnhem Land, NT

Sample Type (as collected): Stream Sediment

Head Weight 45.32 kg

Sample Type (as received): Stream Sediment

Wet Weight kg

Observed Sample Type: DMS Concentrate

Diamond

mm	Number of particles in each size fraction								Total particles	Description of these particles
	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10		

Key Minerals

mm	Number of particles in each size fraction								Wear	Overall Morph. Group	Total particles	No of particles probed	PRIORITY based on Morphology only)	PRIORITY based on morphology and Probe)
	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10						
Chromite/Cr-Spinel								1		W B1	1		B	C

black, well rounded smooth dull matte sheen

Other Minerals

mm	% Percentage of particles in each size fraction								Wear	Colour	Angularity	Lustre	Transparency	Form/Shape
	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10						
Almandine								Tr	MW	pale pink	subrounded	glassy	transparent	irregular
Fe Oxide/Hydroxide			100	100	100			85	W	orange-brown	rounded to angular	dull	opaque	irregular to rounded
Ilmenite				Tr				15	W	silvery-black	subangular	submetallic	opaque	subhedral to irregular
Leucoxene								Tr	W	beige, cream	subrounded	polished	opaque	irregular
Rutile								Tr	MW	cherry red	rounded	submetallic	opaque	ovate
Spessartine								Tr	MW	orange	subrounded	glassy	transparent	irregular
Tourmaline			Tr	Tr				Tr	W	black-brown	rounded	glassy	translucent to transparent	near spherical to irregular
Zircon								Tr	MW	orange	rounded	glassy	translucent, opaque	ovate
TOTAL	%	%	100%	100%	100%	%	100%	%						

What Has Been Observed?

Final Conc Weight 15.29000 g Size Range -1.2+0.2 mm

Weight Observed 15.29000 g

Magnetic Fractions vs Size Fraction

mm	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10
NotMag			All	All	All		All	

Comment about this sample:

Technician:

VL

Date Observed:

08-Dec-05

Report Printed:

22/02/2006 12:34:38 PM



DIATECH

Ph 61 8 9361 2596

Fx 61 8 9470 1504

Detailed Heavy Mineral Analysis

Our Job No.: 05077

Disc No.: -

Sample No:

159874

Overall Sample Assessment:

Negative

Your Project Code:

Benda Bluff, Arnhem Land, NT

Sample Type (as collected): Stream Sediment

Head Weight 56.4 kg

Sample Type (as received): Stream Sediment

Wet Weight kg

Observed Sample Type: DMS Concentrate

Diamond

mm	Number of particles in each size fraction								Total particles	Description of these particles
	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10		

Key Minerals

mm	Number of particles in each size fraction								Wear	Overall Morph. Group	Total particles	No of particles probed	PRIORITY based on Morphology only)	PRIORITY based on morphology and Probe)
	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10						

Other Minerals

mm	% Percentage of particles in each size fraction								Wear	Colour	Angularity	Lustre	Transparency	Form/Shape
	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10						
Almandine							Tr		MW	pale pink	subrounded	glassy	transparent	irregular
Amphibole					Tr				MW	green	angular	glassy	transparent	subhedral
Anatase							Tr		MW	blue-grey	subangular	submetallic	translucent, opaque	blocky
Epidote							Tr		MW	yellow-green	subangular	glassy	translucent	blocky
Fe Oxide/Hydroxide			100	100	100		60		W	orange-brown, black	rounded to angular	dull	opaque	irregular to rounded
Ilmenite				Tr	Tr		40		W	silvery-black	subangular	submetallic	opaque	subhedral to irregular
Leucosene							Tr		W	beige, grey	subrounded	polished	opaque	irregular
Mica					Tr				W	colourless	subangular	pearly	transparent	subhedral
Rutile							Tr		MW	cherry red	subrounded	submetallic	opaque	rolled
Tourmaline			Tr	Tr	Tr		Tr		W	black, brown, blue-black	rounded	glassy	translucent to transparent	near spherical to irregular
Zircon					Tr		Tr		W	colourless	subangular	glassy	transparent	subhedral to irregular
TOTAL	%	%	100%	100%	100%	%	100%	%						

What Has Been Observed?

Final Conc Weight	6.050000 g	Size Range	-1.2+0.2 mm
Weight Observed	6.050000 g		

Magnetic Fractions vs Size Fraction

mm	+1.2	+1.0	+0.8	+0.4	+0.3	+0.25	+0.20	+0.10
NotMag			All	All	All		All	

Comment about this sample:

Technician: JED

Date Observed: 06-Feb-06

Report Printed: 22/02/2006 12:35:04 PM