

ROSEBERY LITHOLOGY_VMS LOG

Hole ID: 407R-D2



Project: ROS

Rosebery

Prospect: NRL

North Lake Rosebery

Northing: 5378002.0 mN

Dip: -86.00

Easting: 379827.1 mE

MAG_Azim: 66.00

RL: 361.5 mRL

Total Depth: 1498.1 m

CoordSys: MGA55 (GDA94)

DrillCompany: BLY

Strat	Colour	Lithology	Genetic Text	Litho Facies	Texture	Alt	Min	Summary	Sample_ID	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm	Fe pct
MBV	GRN-GRY	VDA			abx cgr	ab ch si		0-1200.1 Mt black volcanics (as directed by Kim Denwer; unit logged by locating Mt Black fault for quick logging).							

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▲ Andesite	■ Disseminated Sulphides	▨ Interbedded siltstone/shale	■ Not logged	■ Schist	■ Undifferentiated Volcanic	■ Background	▲ Andesite Flow	○ Dolomite	▨ Interbedded VSS/VSL/VSM &	▲ Pyroclastic Breccia	■ See comments for full descrip	■ Undifferentiated Volcaniclastic	■ Elevated	▲ Basalt	○ Fault Zone	■ Intermediate flow	■ Quartz	■ Semi-massive Sulphides	■ Vein Carbonate	■ Anomalous	▲ Breccia - Undifferentiated	▲ Feldspathic (ash) tuff	■ Intermediate Volcaniclastic	▲ Quartz Carbonate Vein	■ Shale	■ Vein quartz	■ Strongly Anomalous	▲ Calcarenite	▲ Feldspathic porphyry	▲ Lapilli Tuff	▲ Quartz Feldspar Porphyry	○ Slate	■ Volcanic Breccia	■ Sub-Grade	▲ Chert	▲ Felsic Flow	▲ Quartz Porphyry	○ Tuff Siltstone	■ Volcanic Conglomerate	■ Low-Grade	▲ Clay	▲ Felsic tuff	▲ Limestone	○ Volcanic Sandstone	■ Undifferentiated Mafic Intrusive	■ High-Grade	▲ Crystal Tuff	▲ Felsic Volcaniclastic	▲ Lithic Tuff	▲ Rhyodacite	○ Undifferentiated Black Shale	■ Undifferentiated Felsic Volcanic	■ Undifferentiated Fluvioglacial Sediment	▲ Dacite	○ Greywacke	▲ Mafic Dyke	▲ Rhyolite	○ Undifferentiated Mafic Intrusive	■ No Core Present	▲ Dacite Breccia	○ Hyaloclastite Breccia	▲ Mafic Volcaniclastic	▲ Rhyolite Breccia	■ Undifferentiated Mafic Intrusive	■ No Core Present	▲ Dacite Flow	○ Interbedded sandstone/shale	▲ Massive sulphide	▲ Rhyolite Tuff	■ Undifferentiated Mafic Intrusive	■ No Core Present	▲ Dacite Lapilli Tuff	○ Interbedded sandstone/siltsto	▲ Mudstone	■ Sandstone	■ Undifferentiated Tuff	■ No Core Present

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Strat	Colour	Lithology	Genetic Text	Litho Facies	Texture	Alt	Min	Summary	Sample_ID	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm	Fe pct
MBV	GRN-GRY	VDA			abx cgr	ab ch si		0-1200.1 Mt black volcanics (as directed by Kim Denwer; unit logged by locating Mt Black fault for quick logging).							

Legend															Mineralisation																																																										
▲ Andesite	■ Disseminated Sulphides	▨ Interbedded siltstone/shale	■ Not logged	■ Schist	■ Undifferentiated Volcanic	■ Andesite Flow	■ Dolomite	■ Interbedded VSS/VSL/VSM &	■ Pyroclastic Breccia	■ See comments for full descrip	■ Undifferentiated Volcaniclastic	■ Basalt	■ Fault Zone	■ Intermediate flow	■ Quartz	■ Semi-massive Sulphides	■ Vein Carbonate	■ Breccia - Undifferentiated	■ Feldspathic (ash) tuff	■ Intermediate Volcaniclastic	■ Quartz Carbonate Vein	■ Shale	■ Vein quartz	■ Calcarenite	■ Feldspathic porphyry	■ Lapilli Tuff	■ Quartz Feldspar Porphyry	■ Slate	■ Volcanic Breccia	■ Chert	■ Felsic Flow	■ Limestone	■ Quartz Porphyry	■ Tuff Siltstone	■ Volcanic Conglomerate	■ Clay	■ Felsic tuff	■ Lithic Tuff	■ Quartzite	■ Rhyolite	■ Volcanic Sandstone	■ Crystal Tuff	■ Felsic Volcaniclastic	■ Mafic Dyke	■ Rhyodacite	■ Undifferentiated Black Shale	■ Dacite	■ Greywacke	■ Mafic Volcaniclastic	■ Rhyolite	■ Undifferentiated Felsic Volcanic	■ Dacite Breccia	■ Hyaloclastite Breccia	■ Massive sulphide	■ Rhyolite Breccia	■ Undifferentiated Fluvioglacial Sediment	■ Dacite Flow	■ Interbedded sandstone/shale	■ Mudstone	■ Rhyolite Tuff	■ Undifferentiated Mafic Intrusive	■ Dacite Lapilli Tuff	■ Interbedded sandstone/siltsto	■ No Core Present	■ Sandstone	■ Undifferentiated Tuff	■ Background	■ Elevated	■ Anomalous	■ Strongly Anomalous	■ Sub-Grade	■ Low-Grade	■ High-Grade

ROSEBERY LITHOLOGY_VMS LOG

Hole ID: 407R-D2



Project: ROS

Rosebery

Prospect: NRL

North Lake Rosebery

Northing: 5378002.0 mN
Easting: 379827.1 mE
RL: 361.5 mRL
CoordSys: MGA55 (GDA94)

Dip: -86.00
MAG_Azim: 66.00
Total Depth: 1498.1 m
DrillCompany: BLY

Strat	Colour	Lithology	Genetic Text	Litho Facies	Texture	Alt	Min	Summary	Sample_ID	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm	Fe pct
MBV	GRN-GRY	VDA			abx cgr	ab ch si		0-1200.1 Mt black volcanics (as directed by Kim Denwer; unit logged by locating Mt Black fault for quick logging).							

Legend															
▲ Andesite	■ Disseminated Sulphides	▨ Interbedded siltstone/shale	■ Not logged	■ Schist	■ Undifferentiated Volcanic										
▲ Andesite Flow	■ Dolomite	▨ Interbedded VSS/VSL/VSM &	▲ Pyroclastic Breccia	■ See comments for full descrip	■ Undifferentiated Volcaniclastic										
▲ Basalt	■ Fault Zone	▨ Intermediate flow	■ Quartz	■ Semi-massive Sulphides	■ Vein Carbonate										
▲ Breccia - Undifferentiated	■ Feldspathic (ash) tuff	▨ Intermediate Volcaniclastic	■ Quartz Carbonate Vein	■ Shale	■ Vein quartz										
▲ Calcarenite	■ Feldspathic porphyry	▨ Lapilli Tuff	■ Quartz Feldspar Porphyry	■ Slate	■ Volcanic Breccia										
▲ Chert	■ Felsic Flow	▨ Limestone	■ Quartz Porphyry	■ Tuff Siltstone	■ Volcanic Conglomerate										
▲ Clay	■ Felsic tuff	▨ Lithic Tuff	■ Quartzite	■ Volcanic Sandstone	■ Volcanic Siltstone										
▲ Crystal Tuff	■ Felsic Volcaniclastic	▨ Mafic Dyke	■ Rhyodacite	■ Undifferentiated Black Shale	■ Undifferentiated Felsic Volcanic										
▲ Dacite	■ Greywacke	▨ Mafic Volcaniclastic	■ Rhyolite	■ Undifferentiated Fluvioglacial Sediment	■ Undifferentiated Mafic Intrusive										
▲ Dacite Breccia	■ Hyaloclastite Breccia	▨ Massive sulphide	■ Rhyolite Breccia	■ Rhyolite Tuff	■ Sandstone										
▲ Dacite Flow	■ Interbedded sandstone/shale	▨ Mudstone	■ Rhyolite Tuff	■ Undifferentiated Mafic Intrusive											
▲ Dacite Lapilli Tuff	■ Interbedded sandstone/siltsto	▨ No Core Present	■ Sandstone	■ Undifferentiated Tuff											

Mineralisation	
■	Background
■	Elevated
■	Anomalous
■	Strongly Anomalous
■	Sub-Grade
■	Low-Grade
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ROSEBERY LITHOLOGY_VMS LOG

Hole ID: 407R-D2



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Rosebery

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Northing: 5378002.0 mN

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Total Depth: 1498.1 m

CoordSys: MGA55 (GDA94)

DrillCompany: BLY

Strat	Colour	Lithology	Genetic Text	Litho Facies	Texture	Alt	Min	Summary	Sample_ID	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm	Fe pct
650	MBV	GRN-GRY	VDA					0-1200.1 Mt black volcanics (as directed by Kim Denwer; unit logged by locating Mt Black fault for quick logging).							
660															
670															
680															
690															
700															

▲ Andesite	■ Disseminated Sulphides	▨ Interbedded siltstone/shale	■ Not logged	■ Schist	■ Undifferentiated Volcanic
▲ Andesite Flow	■ Dolomite	▨ Interbedded VSS/VSL/VSM &	▲ Pyroclastic Breccia	■ See comments for full descrip	■ Undifferentiated Volcaniclastic
▲ Basalt	■ Fault Zone	▨ Intermediate flow	■ Quartz	■ Semi-massive Sulphides	■ Vein Carbonate
▲ Breccia - Undifferentiated	■ Feldspathic (ash) tuff	▨ Intermediate Volcaniclastic	■ Quartz Carbonate Vein	■ Shale	■ Vein quartz
▲ Calcarenite	■ Feldspathic porphyry	▨ Lapilli Tuff	■ Quartz Feldspar Porphyry	■ Siltstone	■ Volcanic Breccia
▲ Chert	■ Felsic Flow	▨ Limestone	■ Quartz Porphyry	■ Slate	■ Volcanic Conglomerate
▲ Clay	■ Felsic tuff	▨ Lithic Tuff	■ Quartzite	■ Tuff Siltstone	■ Volcanic Sandstone
▲ Crystal Tuff	■ Felsic Volcaniclastic	▨ Mafic Dyke	■ Rhyodacite	■ Undifferentiated Black Shale	■ Volcanic Siltstone
▲ Dacite	■ Greywacke	▨ Mafic Volcaniclastic	■ Rhyolite	■ Undifferentiated Felsic Volcanic	
▲ Dacite Breccia	■ Hyaloclastite Breccia	▨ Massive sulphide	■ Rhyolite Breccia	■ Undifferentiated Fluvio-glacial Sediment	
▲ Dacite Flow	■ Interbedded sandstone/shale	▨ Mudstone	■ Rhyolite Tuff	■ Undifferentiated Mafic Intrusive	
▲ Dacite Lapilli Tuff	■ Interbedded sandstone/siltsto	▨ No Core Present	■ Sandstone	■ Undifferentiated Tuff	

Mineralisation	
■ Background	
■ Elevated	
■ Anomalous	
■ Strongly Anomalous	
■ Sub-Grade	
■ Low-Grade	
■ High-Grade	

ROSEBERY LITHOLOGY_VMS LOG

Hole ID: 407R-D2



Project: ROS

Rosebery

Prospect: NRL

North Lake Rosebery

Northing: 5378002.0 mN
Easting: 379827.1 mE
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Dip: -86.00
MAG_Azim: 66.00
Total Depth: 1498.1 m
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Strat	Colour	Lithology	Genetic Text	Litho Facies	Texture	Alt	Min	Summary	Sample_ID	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm	Fe pct
MBV	GRN-GRY	VDA			abx cgr	ab ch si		0-1200.1 Mt black volcanics (as directed by Kim Denwer; unit logged by locating Mt Black fault for quick logging).							

Legend																																																																																								
▲ Andesite	■ Disseminated Sulphides	▨ Interbedded siltstone/shale	■ Not logged	■ Schist	■ Undifferentiated Volcanic	■ Background	▲ Andesite Flow	○ Dolomite	▨ Interbedded VSS/VSL/VSM &	▲ Pyroclastic Breccia	■ See comments for full descrip	■ Undifferentiated Volcaniclastic	■ Elevated	▲ Basalt	○ Fault Zone	■ Intermediate flow	■ Quartz	■ Semi-massive Sulphides	■ Vein Carbonate	■ Anomalous	▲ Breccia - Undifferentiated	▲ Feldspathic (ash) tuff	■ Intermediate Volcaniclastic	▲ Quartz Carbonate Vein	■ Shale	■ Vein quartz	■ Strongly Anomalous	▲ Calcarenite	▲ Feldspathic porphyry	▲ Lapilli Tuff	▲ Quartz Feldspar Porphyry	○ Slate	■ Volcanic Breccia	■ Sub-Grade	▲ Chert	▲ Felsic Flow	▲ Quartz Porphyry	○ Tuff Siltstone	■ Volcanic Conglomerate	■ Low-Grade	▲ Clay	▲ Felsic tuff	▲ Lithic Tuff	▲ Quartzite	○ Volcanic Sandstone	■ Undifferentiated Mafic Intrusive	■ High-Grade	▲ Crystal Tuff	▲ Felsic Volcaniclastic	▲ Mafic Dyke	▲ Rhyodacite	○ Volcanic Siltstone	■ Undifferentiated Mafic Intrusive	■ High-Grade	▲ Dacite	○ Greywacke	■ Mafic Volcaniclastic	▲ Rhyolite	■ Undifferentiated Black Shale	■ Undifferentiated Felsic Volcanic	■ Undifferentiated Fluvioglacial Sediment	■ Undifferentiated Mafic Intrusive	■ High-Grade	▲ Dacite Breccia	○ Hyaloclastite Breccia	■ Massive sulphide	▲ Rhyolite Breccia	■ Undifferentiated Felsic Volcanic	■ Undifferentiated Fluvioglacial Sediment	■ Undifferentiated Mafic Intrusive	■ High-Grade	▲ Dacite Flow	○ Interbedded sandstone/shale	■ Mudstone	▲ Rhyolite Tuff	■ Undifferentiated Mafic Intrusive	■ Undifferentiated Fluvioglacial Sediment	■ Undifferentiated Mafic Intrusive	■ High-Grade	▲ Dacite Lapilli Tuff	■ Interbedded sandstone/siltsto	■ No Core Present	■ Sandstone	■ Undifferentiated Tuff	■ Undifferentiated Mafic Intrusive	■ Undifferentiated Fluvioglacial Sediment	■ Undifferentiated Mafic Intrusive	■ High-Grade

ROSEBERY LITHOLOGY_VMS LOG

Hole ID: 407R-D2



Project: ROS

Rosebery

Prospect: NRL

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Strat	Colour	Lithology	Genetic Text	Litho Facies	Texture	Alt	Min	Summary	Sample_ID	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm	Fe pct
MBV	GRN-GRY	VDA			abx cgr	ab ch si		0-1200.1 Mt black volcanics (as directed by Kim Denwer; unit logged by locating Mt Black fault for quick logging).							

Mineralisation																																																																												
▲ Andesite	■ Disseminated Sulphides	▨ Interbedded siltstone/shale	■ Not logged	■ Schist	■ Undifferentiated Volcanic	■ Background	▲ Andesite Flow	■ Dolomite	▨ Interbedded VSS/VSL/VSM &	▲ Pyroclastic Breccia	■ See comments for full descrip	■ Undifferentiated Volcaniclastic	■ Elevated	▲ Basalt	■ Fault Zone	■ Intermediate flow	■ Quartz	■ Semi-massive Sulphides	■ Vein Carbonate	■ Anomalous	▲ Breccia - Undifferentiated	■ Feldspathic (ash) tuff	■ Intermediate Volcaniclastic	■ Quartz Carbonate Vein	■ Shale	■ Vein quartz	■ Strongly Anomalous	▲ Calcarenite	■ Feldspathic porphyry	■ Lapilli Tuff	■ Quartz Feldspar Porphyry	■ Siltstone	■ Volcanic Breccia	■ Sub-Grade	▲ Chert	■ Felsic Flow	■ Limestone	■ Quartz Porphyry	■ Slate	■ Volcanic Conglomerate	■ Low-Grade	▲ Clay	■ Felsic tuff	■ Lithic Tuff	■ Quartzite	■ Tuff Siltstone	■ Volcanic Sandstone	■ Undifferentiated Mafic Intrusive	▲ Crystal Tuff	■ Felsic Volcaniclastic	■ Mafic Dyke	■ Rhodacite	■ Undifferentiated Black Shale	■ Volcanic Siltstone	■ High-Grade	▲ Dacite	■ Greywacke	■ Mafic Volcaniclastic	■ Rhyolite	■ Undifferentiated Felsic Volcanic	■ Undifferentiated Fluvioglacial Sediment	▲ Dacite Breccia	■ Hyaloclastite Breccia	■ Massive sulphide	■ Rhyolite Breccia	■ Rhyolite Tuff	■ Undifferentiated Mafic Intrusive	▲ Dacite Flow	■ Interbedded sandstone/shale	■ Mudstone	■ Sandstone	■ Undifferentiated Tuff	▲ Dacite Lapilli Tuff	■ Interbedded sandstone/siltsto	■ No Core Present	■ Sandstone

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Prospect: NRL

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MAG_Azim: 66.00

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Total Depth: 1498.1 m

CoordSys: MGA55 (GDA94)

DrillCompany: BLY

Strat	Colour	Lithology	Genetic Text	Litho Facies	Texture	Alt	Min	Summary	Sample_ID	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm	Fe pct
MBV	GRN-GRY	VDA			abx cgr	ab ch si		0-1200.1 Mt black volcanics (as directed by Kim Denwer; unit logged by locating Mt Black fault for quick logging).							

<ul style="list-style-type: none"> ▲ Andesite ▲ Andesite Flow ▼ Basalt ▲ Breccia - Undifferentiated ▲ Calcarenite ▲ Chert ▲ Clay ▲ Crystal Tuff ▲ Dacite ▲ Dacite Breccia ▲ Dacite Flow ▲ Dacite Lapilli Tuff 	<ul style="list-style-type: none"> ▲ Disseminated Sulphides ▲ Dolomite ▲ Fault Zone ▲ Feldspathic (ash) tuff ▲ Feldspathic porphyry ▲ Felsic Flow ▲ Felsic tuff ▲ Felsic Volcaniclastic ▲ Greywacke ▲ Hyaloclastite Breccia ▲ Interbedded sandstone/shale ▲ Interbedded sandstone/siltsto 	<ul style="list-style-type: none"> ▲ Interbedded siltstone/shale ▲ Interbedded VSS/VSL/VSM & ▲ Intermediate flow ▲ Intermediate Volcaniclastic ▲ Lapilli Tuff ▲ Limestone ▲ Lithic Tuff ▲ Mafic Dyke ▲ Mafic Volcaniclastic ▲ Massive sulphide ▲ Mudstone ▲ No Core Present 	<ul style="list-style-type: none"> ▲ Not logged ▲ Pyroclastic Breccia ▲ Quartz ▲ Quartz Carbonate Vein ▲ Quartz Feldspar Porphyry ▲ Quartz Porphyry ▲ Quartzite ▲ Rhodacite ▲ Rhyolite ▲ Rhyolite Breccia ▲ Rhyolite Tuff ▲ Sandstone 	<ul style="list-style-type: none"> ▲ Schist ▲ See comments for full descrip ▲ Semi-massive Sulphides ▲ Shale ▲ Slate ▲ Tuff Siltstone ▲ Undifferentiated Black Shale ▲ Rhyolite ▲ Undifferentiated Felsic Volcanic ▲ Undifferentiated Fluvioglacial Sediment ▲ Undifferentiated Mafic Intrusive ▲ Undifferentiated Tuff 	<ul style="list-style-type: none"> ▲ Undifferentiated Volcanic ▲ Undifferentiated Volcaniclastic ▲ Vein Carbonate ▲ Vein quartz ▲ Volcanic Breccia ▲ Volcanic Conglomerate ▲ Volcanic Sandstone ▲ Volcanic Siltstone 	<p>Mineralisation</p> <ul style="list-style-type: none"> ▲ Background ▲ Elevated ▲ Anomalous ▲ Strongly Anomalous ▲ Sub-Grade ▲ Low-Grade ▲ High-Grade
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ROSEBERY LITHOLOGY_VMS LOG

Hole ID: 407R-D2



Project: ROS

Rosebery

Prospect: NRL

North Lake Rosebery

Northing: 5378002.0 mN

Dip: -86.00

Easting: 379827.1 mE

MAG_Azim: 66.00

RL: 361.5 mRL

Total Depth: 1498.1 m

CoordSys: MGA55 (GDA94)

DrillCompany: BLY

Strat	Colour	Lithology	Genetic Text	Litho Facies	Texture	Alt	Min	Summary	Sample_ID	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm	Fe pct
MBV	GRN-GRY	VDA			abx cgr	ab ch si		0-1200.1 Mt black volcanics (as directed by Kim Denwer; unit logged by locating Mt Black fault for quick logging).							

Mineralisation															
	Background		Elevated		Anomalous		Strongly Anomalous		Sub-Grade		Low-Grade		High-Grade		

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Hole ID: 407R-D2



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Rosebery

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North Lake Rosebery

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Strat	Colour	Lithology	Genetic Text	Litho Facies	Texture	Alt	Min	Summary	Sample_ID	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm	Fe pct
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▲ Andesite	■ Disseminated Sulphides	▨ Interbedded siltstone/shale	■ Not logged	■ Schist	■ Undifferentiated Volcanic
▲ Andesite Flow	■ Dolomite	▨ Interbedded VSS/VSL/VSM &	▲ Pyroclastic Breccia	■ See comments for full descrip	■ Undifferentiated Volcaniclastic
▲ Basalt	■ Fault Zone	▨ Intermediate flow	■ Quartz	■ Semi-massive Sulphides	■ Vein Carbonate
▲ Breccia - Undifferentiated	■ Feldspathic (ash) tuff	▨ Intermediate Volcaniclastic	■ Quartz Carbonate Vein	■ Shale	■ Vein quartz
▲ Calcarenite	■ Feldspathic porphyry	▨ Lapilli Tuff	■ Quartz Feldspar Porphyry	■ Slate	■ Volcanic Breccia
▲ Chert	■ Felsic Flow	▨ Limestone	■ Quartz Porphyry	■ Tuff Siltstone	■ Volcanic Conglomerate
▲ Clay	■ Felsic tuff	▨ Lithic Tuff	■ Quartzite	■ Volcanic Sandstone	■ Volcanic Siltstone
▲ Crystal Tuff	■ Felsic Volcaniclastic	▨ Mafic Dyke	■ Rhyodacite	■ Undifferentiated Black Shale	■ Undifferentiated Felsic Volcanic
▲ Dacite	■ Greywacke	▨ Mafic Volcaniclastic	■ Rhyolite	■ Undifferentiated Fluvio-glacial Sediment	■ Undifferentiated Mafic Intrusive
▲ Dacite Breccia	■ Hyaloclastite Breccia	▨ Massive sulphide	■ Rhyolite Breccia	■ Undifferentiated Tuff	
▲ Dacite Flow	■ Interbedded sandstone/shale	▨ Mudstone	■ Rhyolite Tuff		
▲ Dacite Lapilli Tuff	■ Interbedded sandstone/siltsto	▨ No Core Present	■ Sandstone		

Mineralisation	
■	Background
■	Elevated
■	Anomalous
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■	Sub-Grade
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Hole ID: 407R-D2



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Rosebery

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North Lake Rosebery

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▲ Breccia - Undifferentiated	■ Feldspathic (ash) tuff	▨ Intermediate Volcaniclastic	■ Quartz Carbonate Vein	■ Shale	■ Vein quartz
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▲ Crystal Tuff	■ Felsic Volcaniclastic	▨ Mafic Dyke	■ Rhyodacite	■ Undifferentiated Felsic Volcanic	■ Volcanic Siltstone
▲ Dacite	■ Greywacke	▨ Mafic Volcaniclastic	■ Rhyolite	■ Undifferentiated Fluvioglacial Sediment	
▲ Dacite Breccia	■ Hyaloclastite Breccia	▨ Massive sulphide	■ Rhyolite Breccia	■ Undifferentiated Mafic Intrusive	
▲ Dacite Flow	■ Interbedded sandstone/shale	▨ Mudstone	■ Rhyolite Tuff	■ Undifferentiated Tuff	
▲ Dacite Lapilli Tuff	■ Interbedded sandstone/siltsto	▨ No Core Present	■ Sandstone		

Mineralisation	
■ Background	
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MBV	GRN-GRY	VDA			abx cgr	ab ch si		0-1200.1 Mt black volcanics (as directed by Kim Denwer; unit logged by locating Mt Black fault for quick logging).							
									D1395589	0.0	0.0	0.0	0.09		7.3
									D1395590	0.0	0.0	0.0	0.09		7.3

<ul style="list-style-type: none"> ▲ Andesite ▲ Andesite Flow ▼ Basalt ▲ Breccia - Undifferentiated ▲ Calcarenite ▲ Chert ▲ Clay ▲ Crystal Tuff ▲ Dacite ▲ Dacite Breccia ▲ Dacite Flow ▲ Dacite Lapilli Tuff 	<ul style="list-style-type: none"> ■ Disseminated Sulphides ○ Dolomite ○ Fault Zone ▲ Feldspathic (ash) tuff ▲ Feldspathic porphyry ▲ Felsic Flow ▲ Felsic tuff ▲ Felsic Volcaniclastic ○ Greywacke ○ Hyaloclastite Breccia ○ Interbedded sandstone/shale ○ Interbedded sandstone/siltsto 	<ul style="list-style-type: none"> ■ Interbedded siltstone/shale ■ Interbedded VSS/VSL/VSM & ■ Intermediate flow ■ Intermediate Volcaniclastic ▲ Lapilli Tuff ▲ Limestone ▲ Lithic Tuff ▲ Mafic Dyke ▲ Mafic Volcaniclastic ▲ Massive sulphide ▲ Mudstone ■ No Core Present 	<ul style="list-style-type: none"> ■ Not logged ▲ Pyroclastic Breccia ▲ Quartz ▲ Quartz Carbonate Vein ▲ Quartz Feldspar Porphyry ▲ Quartz Porphyry ▲ Quartzite ▲ Rhodacite ▲ Rhyolite ▲ Rhyolite Breccia ▲ Rhyolite Tuff ▲ Sandstone 	<ul style="list-style-type: none"> ■ Schist ■ See comments for full descrip ■ Semi-massive Sulphides ■ Shale ○ Slate ■ Siltstone ■ Tuff Siltstone ■ Undifferentiated Black Shale ■ Undifferentiated Felsic Volcanic ■ Undifferentiated Fluvio-glacial Sediment ■ Undifferentiated Mafic Intrusive ■ Undifferentiated Tuff 	<ul style="list-style-type: none"> ■ Undifferentiated Volcanic ■ Undifferentiated Volcaniclastic ■ Vein Carbonate ■ Vein quartz ■ Volcanic Breccia ■ Volcanic Conglomerate ○ Volcanic Sandstone ○ Volcanic Siltstone 	<p>Mineralisation</p> <ul style="list-style-type: none"> ■ Background ■ Elevated ■ Anomalous ■ Strongly Anomalous ■ Sub-Grade ■ Low-Grade ■ High-Grade
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ROSEBERY LITHOLOGY_VMS LOG

Hole ID: 407R-D2



Project: ROS

Rosebery

Prospect: NRL

North Lake Rosebery

Northing: 5378002.0 mN

Dip: -86.00

Easting: 379827.1 mE

MAG_Azim: 66.00

RL: 361.5 mRL

Total Depth: 1498.1 m

CoordSys: MGA55 (GDA94)

DrillCompany: BLY

Strat	Colour	Lithology	Genetic Text	Litho Facies	Texture	Alt	Min	Summary	Sample_ID	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm	Fe pct
MBV	GRN-GRY	VDA			abx cgr	ab ch si		0-1200.1 Mt black volcanics (as directed by Kim Denwer; unit logged by locating Mt Black fault for quick logging).	D1395591	0.0	0.0	0.0	0.15		3.0
									D1395592	0.0	0.0	0.0	0.04		1.4
									D1395593	0.0	0.0	0.0	0.07		2.7
									D1395594	0.0	0.0	0.0	0.08		1.6
									D1395595	0.0	0.0	0.0	0.06		0.8

<ul style="list-style-type: none"> ▲ Andesite ▲ Andesite Flow ▼ Basalt ▲ Breccia - Undifferentiated ▲ Calcarenite ▲ Chert ▲ Clay ▲ Crystal Tuff ▲ Dacite ▲ Dacite Breccia ▲ Dacite Flow ▲ Dacite Lapilli Tuff 	<ul style="list-style-type: none"> ■ Disseminated Sulphides ○ Dolomite ○ Fault Zone ▲ Feldspathic (ash) tuff ▲ Feldspathic porphyry ▲ Felsic Flow ▲ Felsic tuff ▲ Felsic Volcaniclastic ○ Greywacke ○ Hyaloclastite Breccia ○ Interbedded sandstone/shale ○ Interbedded sandstone/siltsto 	<ul style="list-style-type: none"> ■ Interbedded siltstone/shale ■ Interbedded VSS/VSL/VSM & ■ Intermediate flow ■ Intermediate Volcaniclastic ▲ Lapilli Tuff ■ Limestone ▲ Lithic Tuff ■ Mafic Dyke ■ Mafic Volcaniclastic ■ Massive sulphide ■ Mudstone ■ No Core Present 	<ul style="list-style-type: none"> ■ Not logged ▲ Pyroclastic Breccia ▲ Quartz ▲ Quartz Carbonate Vein ▲ Quartz Feldspar Porphyry ▲ Quartz Porphyry ▲ Quartzite ▲ Rhodacite ▲ Rhyolite ▲ Rhyolite Breccia ▲ Rhyolite Tuff ▲ Sandstone 	<ul style="list-style-type: none"> ■ Schist ■ See comments for full descrip ■ Semi-massive Sulphides ■ Shale ○ Siltstone ■ Slate ○ Tuff Siltstone ○ Undifferentiated Black Shale ■ Rhyolite ■ Undifferentiated Felsic Volcanic ■ Undifferentiated Fluvio-glacial Sediment ■ Undifferentiated Mafic Intrusive ■ Undifferentiated Tuff 	<ul style="list-style-type: none"> ■ Undifferentiated Volcanic ■ Undifferentiated Volcaniclastic ■ Vein Carbonate ■ Vein quartz ■ Volcanic Breccia ■ Volcanic Conglomerate ○ Volcanic Sandstone ○ Volcanic Siltstone 	<p>Mineralisation</p> <ul style="list-style-type: none"> ■ Background ■ Elevated ■ Anomalous ■ Strongly Anomalous ■ Sub-Grade ■ Low-Grade ■ High-Grade
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ROSEBERY LITHOLOGY_VMS LOG

Hole ID: 407R-D2



Project: ROS

Rosebery

Prospect: NRL

North Lake Rosebery

Northing: 5378002.0 mN
Easting: 379827.1 mE
RL: 361.5 mRL
CoordSys: MGA55 (GDA94)

Dip: -86.00
MAG_Azim: 66.00
Total Depth: 1498.1 m
DrillCompany: BLY

Strat	Colour	Lithology	Genetic Text	Litho Facies	Texture	Alt	Min	Summary	Sample_ID	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm	Fe pct
MBV	GRN-GRY	VDA			abx cgr	ab ch si		0-1200.1 Mt black volcanics (as directed by Kim Denwer; unit logged by locating Mt Black fault for quick logging).	D1395596	0.0	0.0	0.0	0.03		0.7
									D1395597	0.0	0.0	0.0	0.05		1.3
									D1395598	0.0	0.0	0.0	0.03		1.1
									D1395599	0.0	0.0	0.0	0.02		1.0

<ul style="list-style-type: none"> ▲ Andesite ▲ Andesite Flow ▲ Basalt ▲ Breccia - Undifferentiated ▲ Calcarenite ▲ Chert ▲ Clay ▲ Crystal Tuff ▲ Dacite ▲ Dacite Breccia ▲ Dacite Flow ▲ Dacite Lapilli Tuff 	<ul style="list-style-type: none"> ■ Disseminated Sulphides ○ Dolomite ○ Fault Zone ▲ Feldspathic (ash) tuff ▲ Feldspathic porphyry ▲ Felsic Flow ▲ Felsic tuff ▲ Felsic Volcaniclastic ○ Greywacke ○ Hyaloclastite Breccia ○ Interbedded sandstone/shale ○ Interbedded sandstone/siltsto 	<ul style="list-style-type: none"> ■ Interbedded siltstone/shale ■ Interbedded VSS/VSL/VSM & ■ Intermediate flow ■ Intermediate Volcaniclastic ▲ Lapilli Tuff ▲ Limestone ▲ Lithic Tuff ▲ Mafic Dyke ▲ Mafic Volcaniclastic ▲ Massive sulphide ▲ Mudstone ▲ No Core Present 	<ul style="list-style-type: none"> ■ Not logged ▲ Pyroclastic Breccia ▲ Quartz ▲ Quartz Carbonate Vein ▲ Quartz Feldspar Porphyry ▲ Quartz Porphyry ▲ Quartzite ▲ Rhyodacite ▲ Rhyolite ▲ Rhyolite Breccia ▲ Rhyolite Tuff ▲ Sandstone 	<ul style="list-style-type: none"> ■ Schist ■ See comments for full descrip ■ Semi-massive Sulphides ■ Shale ○ Slate ■ Tuff Siltstone ■ Undifferentiated Black Shale ■ Rhyolite ■ Undifferentiated Felsic Volcanic ■ Undifferentiated Fluvioglacial Sediment ■ Undifferentiated Mafic Intrusive ■ Undifferentiated Tuff 	<ul style="list-style-type: none"> ■ Undifferentiated Volcanic ■ Undifferentiated Volcaniclastic ■ Vein Carbonate ■ Vein quartz ■ Volcanic Breccia ■ Volcanic Conglomerate ○ Volcanic Sandstone ○ Volcanic Siltstone 	<p>Mineralisation</p> <ul style="list-style-type: none"> ■ Background ■ Elevated ■ Anomalous ■ Strongly Anomalous ■ Sub-Grade ■ Low-Grade ■ High-Grade
---	---	---	--	---	--	--

ROSEBERY LITHOLOGY_VMS LOG

Hole ID: 407R-D2



Project: ROS

Rosebery

Prospect: NRL

North Lake Rosebery

Northing: 5378002.0 mN

Dip: -86.00

Easting: 379827.1 mE

MAG_Azim: 66.00

RL: 361.5 mRL

Total Depth: 1498.1 m

CoordSys: MGA55 (GDA94)

DrillCompany: BLY

Strat	Colour	Lithology	Genetic Text	Litho Facies	Texture	Alt	Min	Summary	Sample_ID	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm	Fe pct
1200	MBV	GRN-GRY	VDA			abx	ab	0-1200.1 Mt black volcanics (as directed by Kim Denwer; unit logged by locating Mt Black fault for quick logging). Mt black fault; discrete zone of strong deformation/foliation and change to quartz phyric volcanics. Pale green to green; chlorite-silica altered 3-5mm quartz crystal rich volcanoclastic breccia with distinctive 1-2mm irregular chlorite "crackle" veinlets; common 5-20mm strongly silicified siltstone/cherty? Clasts; competent core; sharp lower contact.	D1395601	0.0	0.0	0.0	0.94		2.3
	F	GRN-GRY	CLA			cgr	ch								
	HW	GRN	VBX			fol	si								
						xlt	ch								
							si								
1210									D1395602	0.0	0.0	0.0	0.05		1.6
	HW	GRN	VBX			xlt	ch	Same as the above unit except upper fist metre is a finer ~1mm quartz crystal rich graded top of mass flow unit.							
							si								
1220	HW	GRN-CRM	VBX			xlt	ch	Moderate green to creamy green; chlorite-silica altered 2-5mm quartz crystal rich volcanoclastic breccia with occasionally visible strongly altered lithics 10-30mm; base of unit appears to have clasts 10-100mm from the underlying unit which may be a lava or a fine grained volcanoclastic unit that has been intensely altered and any primary texture appears obliterated; abundant 1-2mm irregular chlorite "crackle" veinlets.	D1395603	0.0	0.0	0.0	0.02		1.8
						lth	si								
1230									D1395604	0.0	0.0	0.0	0.08		1.7
1240									D1395605	0.0	0.0	0.0	0.02		2.5
1250	HW	GRY	VBX			xlt	si	Pale green to pale grey-cream; intensely silica-weakly chlorite altered; upper 3m of the unit may be a lava?? But most likely a fine grained top as below this the unit grades and appears like the overlying albeit with smaller 1-3mm quartz crystals; volcanoclastic breccia with possible 5-20mm lithic clasts? that have been strongly altered; appears to have a somewhat clear lower contact.							
							ch								

<ul style="list-style-type: none"> Andesite Andesite Flow Basalt Breccia - Undifferentiated Calcarenite Chert Clay Crystal Tuff Dacite Dacite Breccia Dacite Flow Dacite Lapilli Tuff 	<ul style="list-style-type: none"> Disseminated Sulphides Dolomite Fault Zone Feldspathic (ash) tuff Feldspathic porphyry Felsic Flow Felsic tuff Felsic Volcanoclastic Greywacke Hyaloclastite Breccia Interbedded sandstone/shale Interbedded sandstone/siltstone 	<ul style="list-style-type: none"> Interbedded siltstone/shale Interbedded VSS/VSL/VSM & Intermediate flow Intermediate Volcanoclastic Lapilli Tuff Limestone Lithic Tuff Mafic Dyke Mafic Volcanoclastic Massive sulphide Mudstone No Core Present 	<ul style="list-style-type: none"> Not logged Pyroclastic Breccia Quartz Quartz Carbonate Vein Quartz Feldspar Porphyry Quartz Porphyry Quartzite Rhyodacite Rhyolite Rhyolite Breccia Rhyolite Tuff Sandstone 	<ul style="list-style-type: none"> Schist See comments for full description Semi-massive Sulphides Shale Siltstone Slate Tuff Siltstone Undifferentiated Black Shale Undifferentiated Felsic Volcanic Undifferentiated Fluvio-glacial Sediment Undifferentiated Mafic Intrusive Undifferentiated Tuff 	<ul style="list-style-type: none"> Undifferentiated Volcanic Undifferentiated Volcanoclastic Vein Carbonate Vein quartz Volcanic Breccia Volcanic Conglomerate Volcanic Sandstone Volcanic Siltstone 	<p>Mineralisation</p> <ul style="list-style-type: none"> Background Elevated Anomalous Strongly Anomalous Sub-Grade Low-Grade High-Grade
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ROSEBERY LITHOLOGY_VMS LOG

Hole ID: 407R-D2



Project: ROS

Rosebery

Prospect: NRL

North Lake Rosebery

Northing: 5378002.0 mN

Dip: -86.00

Easting: 379827.1 mE

MAG_Azim: 66.00

RL: 361.5 mRL

Total Depth: 1498.1 m

CoordSys: MGA55 (GDA94)

DrillCompany: BLY

Strat	Colour	Lithology	Genetic Text	Litho Facies	Texture	Alt	Min	Summary	Sample_ID	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm	Fe pct
HW	GRY	VBX			xlt	si		Pale green to pale grey-cream; intensely silica-weakly chlorite altered; upper 3m of the unit may be a lava?? But most likely a fine grained top as below this the unit grades and appears like the overlying albeit with smaller 1-3mm quartz crystals; volcaniclastic breccia with possible 5-20mm lithic clasts? that have been strongly altered; appears to have a somewhat clear lower contact.	D1395606	0.0	0.0	0.0	0.08		1.4
HW	GRY	VSS			xlt	si		Moderate grey; weakly silica altered; somewhat graded 1-2mm quartz crystal rich volcaniclastic sandstone with the lower half of the unit containing and increasing amount of 1-50mm black shale rip clasts; also possible 5-20mm pumice/fiamme?; common 1-5mm planar quartz carbonate veinlets; competent core; sharp lower contact.							
HW	BLK	SBH			fgr			Appears to be unit 3d. Black shale with coarse 2-5mm planar quartz carbonate veins as well as >1mm quartz carbonate veins; common pyrrhotite and lesser pyrite; unit contains two ~20cm zones of medium grained volcaniclastic sandstone; the lower occurrence could be a reverse faulted repetition as there is a small fault at its base; whilst no fault can be observed around the upper occurrence; upper portion is therefore possibly a second blackshale with a small 20cm erosional sandstone base which does contain black shale rip ups or it is a massive 3m black shale clast; lower contact of the unit is gradational into a sandstone.	D1395607	0.0	0.1	0.0	0.13		2.9
HW	GRN-GRY	VSS			xlt	ch	si	Green grey; weakly chlorite-weakly silica altered medium grained 0.5mm to ~2mm quartz crystal volcaniclastic sandstone with possible >2mm lithics?? Lower contact appears as a grain size and the lower unit appears exactly the same; common 2-5mm planar quartz carbonate veins with lesser 1-2mm chlorite veinlets.	D1395608	0.0	0.0	0.0	0.12		2.8
HW	GRN-GRY	VSS			xlt	si		Upper part of the unit is the same as above unit; quartz crystal volcaniclastic sandstone; from 1294.1 the unit contains abundant rip up light to moderate grey ash clasts from the below unit; clasts range from 5mm to 70cm; lower contact is with the fine grained ashy top of the below unit;	D1395609	0.0	0.0	0.0	0.05		3.0
HW	GRY	VSB			fgr	si		Upper 2m of the unit is a fine grained moderate grey volcaniclastic ash with several 10-50mm pumice rafts; then grades into a quartz-feldspar volcaniclastic and at 1303m the unit contains abundant 10mm to 1.5m moderate grey volcaniclastic ash rip clasts from the lower unit; lower contact is with underlying ashy gradational unit; common irregular 1-4mm quartz-carbonate and lesser chlorite veinlets.	D1395610	0.0	0.0	0.0	0.13		2.9

Legend										Mineralisation			
▲ Andesite	■ Disseminated Sulphides	▨ Interbedded siltstone/shale	▲ Not logged	■ Schist	■ Undifferentiated Volcanic	■ Background	■ Undifferentiated Volcaniclastic	■ Elevated	■ Anomalous	■ Strongly Anomalous	■ Sub-Grade	■ Low-Grade	■ High-Grade
▲ Andesite Flow	■ Dolomite	▨ Interbedded VSS/VSL/VSM &	▲ Pyroclastic Breccia	■ See comments for full descrip	■ Undifferentiated Volcaniclastic	■ Anomalous	■ Undifferentiated Volcaniclastic	■ Elevated	■ Anomalous	■ Strongly Anomalous	■ Sub-Grade	■ Low-Grade	■ High-Grade
▲ Basalt	■ Fault Zone	▨ Intermediate flow	▲ Quartz	■ Semi-massive Sulphides	■ Vein Carbonate	■ Anomalous	■ Vein Carbonate	■ Elevated	■ Anomalous	■ Strongly Anomalous	■ Sub-Grade	■ Low-Grade	■ High-Grade
▲ Breccia - Undifferentiated	■ Feldspathic (ash) tuff	▨ Intermediate Volcaniclastic	▲ Quartz Carbonate Vein	■ Shale	■ Vein quartz	■ Anomalous	■ Vein quartz	■ Elevated	■ Anomalous	■ Strongly Anomalous	■ Sub-Grade	■ Low-Grade	■ High-Grade
▲ Calcarenite	■ Feldspathic porphyry	▨ Lapilli Tuff	▲ Quartz Feldspar Porphyry	■ Siltstone	■ Volcanic Breccia	■ Anomalous	■ Siltstone	■ Elevated	■ Anomalous	■ Strongly Anomalous	■ Sub-Grade	■ Low-Grade	■ High-Grade
▲ Chert	■ Felsic Flow	▨ Limestone	▲ Quartz Porphyry	■ Slate	■ Volcanic Conglomerate	■ Anomalous	■ Slate	■ Elevated	■ Anomalous	■ Strongly Anomalous	■ Sub-Grade	■ Low-Grade	■ High-Grade
▲ Clay	■ Felsic tuff	▨ Lithic Tuff	▲ Quartzite	■ Tuff Siltstone	■ Volcanic Sandstone	■ Anomalous	■ Tuff Siltstone	■ Elevated	■ Anomalous	■ Strongly Anomalous	■ Sub-Grade	■ Low-Grade	■ High-Grade
▲ Crystal Tuff	■ Felsic Volcaniclastic	▨ Mafic Dyke	▲ Rhodacite	■ Undifferentiated Black Shale	■ Volcanic Siltstone	■ Anomalous	■ Rhodacite	■ Elevated	■ Anomalous	■ Strongly Anomalous	■ Sub-Grade	■ Low-Grade	■ High-Grade
▲ Dacite	■ Greywacke	▨ Mafic Volcaniclastic	▲ Rhyolite	■ Undifferentiated Felsic Volcanic	■ Undifferentiated Felsic Volcanic	■ Anomalous	■ Rhyolite	■ Elevated	■ Anomalous	■ Strongly Anomalous	■ Sub-Grade	■ Low-Grade	■ High-Grade
▲ Dacite Breccia	■ Hyaloclastite Breccia	▨ Massive sulphide	▲ Rhyolite Breccia	■ Undifferentiated Fluvio-glacial Sediment	■ Undifferentiated Felsic Volcanic	■ Anomalous	■ Rhyolite Breccia	■ Elevated	■ Anomalous	■ Strongly Anomalous	■ Sub-Grade	■ Low-Grade	■ High-Grade
▲ Dacite Flow	■ Interbedded sandstone/shale	▨ Mudstone	▲ Rhyolite Tuff	■ Undifferentiated Mafic Intrusive	■ Undifferentiated Felsic Volcanic	■ Anomalous	■ Rhyolite Tuff	■ Elevated	■ Anomalous	■ Strongly Anomalous	■ Sub-Grade	■ Low-Grade	■ High-Grade
▲ Dacite Lapilli Tuff	■ Interbedded sandstone/siltsto	▨ No Core Present	▲ Sandstone	■ Undifferentiated Tuff	■ Undifferentiated Felsic Volcanic	■ Anomalous	■ Sandstone	■ Elevated	■ Anomalous	■ Strongly Anomalous	■ Sub-Grade	■ Low-Grade	■ High-Grade

ROSEBERY LITHOLOGY_VMS LOG

Hole ID: 407R-D2



Project: ROS

Rosebery

Prospect: NRL

North Lake Rosebery

Northing: 5378002.0 mN

Dip: -86.00

Easting: 379827.1 mE

MAG_Azim: 66.00

RL: 361.5 mRL

Total Depth: 1498.1 m

CoordSys: MGA55 (GDA94)

DrillCompany: BLY

Strat	Colour	Lithology	Genetic Text	Litho Facies	Texture	Alt	Min	Summary	Sample_ID	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm	Fe pct
HW	GRY	VSB			fgr xlt	si		Upper 2m of the unit is a fine grained moderate grey volcanoclastic ash with several 10-50mm pumice rafts; then grades into a quartz-feldspar volcanoclastic and at 1303m the unit contains abundant 10mm to 1.5m moderate grey volcanoclastic ash rip clasts from the lower unit; lower contact is with underlying ashy gradational unit; common irregular 1-4mm quartz-carbonate and lesser chlorite veinlets.	D1395611	0.0	0.0	0.0	0.03		1.2
HW	GRY	VSB			fgr xlt	si cb		Upper 1m of the unit is a moderate grey fine grained volcanoclastic ash with common 10-50mm pumice rafts; grades into a 1mm quartz-feldspar crystal rich volcanoclastic with small ~1mm lithics?; at 1319.3 the unit grades into a silica - moderately carbonate? yellow-brown-grey unit which appears to have 1-2mm quartz crystals with very common 5-30mm squashed pumices; lithic rich with common 5-30mm rip up ash clasts and what appears to be a large 70cm basal ashy clast; 2-10mm chert/siltstone grey to brown lithics; lower contact is an erosional contact with an ashy unit; common large 10-50cm quartz carbonate veins with associated sphalerite;pyrite and pyrrhotite.	D1395612	0.0	0.0	0.0	0.04		1.4
									D1395613	0.0	0.0	0.0	0.08		2.5
HW	GRY	SSH			fgr	si		Upper 1m of the unit is a fine grained moderate grey ashy unit with common 10-30mm pumice rafts; this is possible the black shale that sits upon unit 2A?; which grade into 5m of fine to medium grained volcanoclastic sandstone grading into a weakly silica-weakly carbonate altered 1-3mm milky quartz almost augen like foliated unit; appears to be volcanoclastic but could be a lava? as the unit at the base appears to experience somewhat retrograding of crystal size; likely to be volcanoclastic as appears to have numerous 1-2mm quartz crystals and some milky white augen like zones appear to possibly be altered lithic clasts; abundant 1-8cm irregular quartz-carbonate veins; lower contact somewhat ambiguous with fine grained unit.	D1395614	0.1	0.1	0.0	2.11		1.6
									D1395615	0.0	0.0	0.0	0.06		2.8
HW	GRY	VRX			lth qfp	si		Appears to be unit 2B; to 121349 the unit grades from a fine to medium grained volcanoclastic sandstone; which then grades into a 1-3mm quartz crystal rich volcanoclastic sandstone with increasing amounts of 10-30mm black shale clasts; from 1356 the unit contains increased lithics as well as distinctive 30-100mm pale 3-4mm quartz crystal rich rhyolitic clasts to the base of the unit; the unit also possibly 10-300mm siltstone rip up clasts;							

Mineralisation									
▲ Andesite	■ Disseminated Sulphides	▨ Interbedded siltstone/shale	■ Not logged	■ Schist	■ Undifferentiated Volcanic				
▲ Andesite Flow	■ Dolomite	▨ Interbedded VSS/VSL/VSM &	▲ Pyroclastic Breccia	■ See comments for full descrip	■ Undifferentiated Volcanoclastic				
▲ Basalt	■ Fault Zone	▨ Intermediate flow	■ Quartz	■ Semi-massive Sulphides	■ Vein Carbonate				
▲ Breccia - Undifferentiated	■ Feldspathic (ash) tuff	▨ Intermediate Volcanoclastic	■ Quartz Carbonate Vein	■ Shale	■ Vein quartz				
▲ Calcarenite	■ Feldspathic porphyry	▨ Lapilli Tuff	■ Quartz Feldspar Porphyry	■ Siltstone	■ Volcanic Breccia				
▲ Chert	■ Felsic Flow	▨ Limestone	■ Quartz Porphyry	■ Slate	■ Volcanic Conglomerate				
▲ Clay	■ Felsic tuff	▨ Lithic Tuff	■ Quartzite	■ Tuff Siltstone	■ Volcanic Sandstone				
▲ Crystal Tuff	■ Felsic Volcanoclastic	▨ Mafic Dyke	■ Rhyodacite	■ Undifferentiated Black Shale	■ Volcanic Siltstone				
▲ Dacite	■ Greywacke	▨ Mafic Volcanoclastic	■ Rhyolite	■ Undifferentiated Felsic Volcanic					
▲ Dacite Breccia	■ Hyaloclastite Breccia	▨ Massive sulphide	■ Rhyolite Breccia	■ Undifferentiated Fluvio-glacial Sediment					
▲ Dacite Flow	■ Interbedded sandstone/shale	▨ Mudstone	■ Rhyolite Tuff	■ Undifferentiated Mafic Intrusive					
▲ Dacite Lapilli Tuff	■ Interbedded sandstone/siltsto	▨ No Core Present	■ Sandstone	■ Undifferentiated Tuff					

ROSEBERY LITHOLOGY_VMS LOG

Hole ID: 407R-D2



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Rosebery

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North Lake Rosebery

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Total Depth: 1498.1 m

CoordSys: MGA55 (GDA94)

DrillCompany: BLY

Strat	Colour	Lithology	Genetic Text	Litho Facies	Texture	Alt	Min	Summary	Sample_ID	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm	Fe pct
BS	BLK	SBH				fgr		Typical black slate with gradational lower contact.	D1395626	0.0	0.4	0.0	0.47		2.8
HO	GRY	VSS				slt	si	Moderate to pale grey; weakly silica altered; host like volcanoclastic sandstone with minor zones of >50mm replaced fine grained feldspars much as the uphole host like unit; lower contact is gradational; trace disseminated pyrite and associated with 1-2mm quartz carbonate veins. Unit appears to be the same as the uphole unit which also lies directly below a host like horizon; Moderately chlorite-weakly carbonate-weakly sericite altered transitional 0.5-2mm feldspar phyrlic unit; feldspars appear strongly replaced; uncommon zones appear to contain 10-20mm fiamme lower contact is also transitional.							
FW	GRY-GRN	VCF				fph fia	ch cb		D1395627	0.0	0.0	0.0	0.23		
									D1395628	0.0	0.0	0.0	0.84		2.9
FW	GRY-GRN	VCF				fph fia	si ch cb	Grey-pale grey green; silica-weakly chlorite-weakly carbonate altered 1-2mm feldspar phyrlic pumice breccia with common 5-20mm squashed fiamme; lower contact is the rosebery fault; common 1-4mm planar quartz carbonate veins.							
									D1395629	0.0	0.0	0.0	0.03		1.5
F HW	GRY-BLK YEL-GRN	CLA VBX				bl bl	si se	First 15cm is pale grey fault gouge and the remaining 15cm is dark grey almost black fault gouge. Pale yellow green; Intensely silica-weakly sericite altered; abundant 1 mm quartz crystals throughout; unit appears to have two domains; the pale grey almost white unit when dry appears to have angular 1-5mm greyish clasts within a white matrix; when wet this unit is intensely silicified and may in fact be large veins; the pale yellow green portion accounts for ~75% of the core volume; appears to have abundant >1mm quartz crystals the original textures in both components are not discernable; and this unit remains unidentified with any of the recent core logged on the western side of the rosebery fault.							
									D1395630	0.0	0.0	0.0	0.08		1.1
									D1395631	0.0	0.0	0.0	0.07		2.2

Mineralisation									
▲ Andesite	■ Disseminated Sulphides	▨ Interbedded siltstone/shale	■ Not logged	■ Schist	■ Undifferentiated Volcanic				
▲ Andesite Flow	■ Dolomite	▨ Interbedded VSS/VSL/VSM &	▲ Pyroclastic Breccia	■ See comments for full descrip	■ Undifferentiated Volcanoclastic				
▲ Basalt	■ Fault Zone	▨ Intermediate flow	■ Quartz	■ Semi-massive Sulphides	■ Vein Carbonate				
▲ Breccia - Undifferentiated	■ Feldspathic (ash) tuff	▨ Intermediate Volcanoclastic	■ Quartz Carbonate Vein	■ Shale	■ Vein quartz				
▲ Calcarenite	■ Feldspathic porphyry	▨ Lapilli Tuff	■ Quartz Feldspar Porphyry	■ Siltstone	■ Volcanic Breccia				
▲ Chert	■ Felsic Flow	▨ Limestone	■ Quartz Porphyry	■ Slate	■ Volcanic Conglomerate				
▲ Clay	■ Felsic tuff	▨ Lithic Tuff	■ Quartzite	■ Tuff Siltstone	■ Volcanic Sandstone				
▲ Crystal Tuff	■ Felsic Volcanoclastic	▨ Mafic Dyke	■ Rhodactite	■ Undifferentiated Black Shale	■ Volcanic Siltstone				
▲ Dacite	■ Greywacke	▨ Mafic Volcanoclastic	■ Rhyolite	■ Undifferentiated Felsic Volcanic					
▲ Dacite Breccia	■ Hyaloclastite Breccia	▨ Massive sulphide	■ Rhyolite Breccia	■ Undifferentiated Fluvio-glacial Sediment					
▲ Dacite Flow	■ Interbedded sandstone/shale	▨ Mudstone	■ Rhyolite Tuff	■ Undifferentiated Mafic Intrusive					
▲ Dacite Lapilli Tuff	■ Interbedded sandstone/siltsto	▨ No Core Present	■ Sandstone	■ Undifferentiated Tuff					

