

ROSEBERY LITHOLOGY_VMS LOG

Hole ID: 402R



Project: ROS

Rosebery

Prospect: NRL

North Lake Rosebery

Northing: 5377808.0 mN
Easting: 379927.0 mE
RL: 450.5 mRL
CoordSys: MGA55 (GDA94)

Dip: -82.00
MAG_Azim: 241.00
Total Depth: 1511.7 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		VDR						Grey, coarse grained Volcaniclastic mass flow breccia. Moderately silicified with some rare weathered joints and vuggy veins at beginning of unit. Clasts up to 400m. Rare trace fine grained disseminated po-py throughout. Common qtz-carb veins through (can be up to 50cm) some clasts have their own generation within them also. Generally competent core.							

<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 Siltstone Tuff Siltstone Slate 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 	Mineralisation <ul style="list-style-type: none"> Background Elevated Anomalous Strongly Anomalous Sub-Grade Low-Grade High-Grade
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MBV		VDA						Grey, massive, fine grained dacite lava. Silicified with minor trace py. Common planar qtz-carb veins. Competent core							
DK		IMK						Dark green, massive, Basalt dyke. Generally fined grained groundmass with some larger pyroxene crystals (about 1mm). Qtz-carb veining throughout.							
MBV		VDA						Grey, massive, fine grained dacite lava. Silicified with minor trace py. Common planar qtz-carb veins. Competent core							
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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	■ Siltstone	■ Volcanic Breccia									
▲ Chert	■ Felsic Flow	▨ Limestone	■ Quartz Porphyry	■ Slate	■ Volcanic Conglomerate									
▲ Clay	■ Felsic tuff	▨ Lithic Tuff	■ Quartzite	■ Tuff Siltstone	■ Volcanic Sandstone									
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F		FTZ						Small fault, plenty of gouge. Competent rock is sheared either side.							
MBV		VDA						Grey, massive, fine grained dacite lava. Silicified with minor trace py. Common planar Qtz-carb veins. Competent core							
MBV		VDR						Grey, massive, Medium-coarse grained Volcaniclastic/pumiceous breccia unit. Strongly silicified (from dacite?), wispy chi altered feldspar phyric fiamme. Very fine grained disseminated blebs of py throughout. Common Qtz-carb veins and veinlets. Generally competent core.							
MBV		VDR						Grey, coarse grained Volcaniclastic mass flow breccia. Moderately silicified. Clasts up to 400m. Rare trace fine grained disseminated po-py throughout. Common Qtz-carb veins through (can be up to 50cm) some Clasts have their own vein generation within them. Generally competent core.							

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MBV		VDR						Grey to pink, coarse grained Volcaniclastic mass flow breccia. Moderately silicified with clasts up to 500m. Some clast selectively albite and/or epidote altered. Rare trace fine grained disseminated po-py throughout. Common qtz-carb veins throughout, some clasts have their own vein generation within them. Generally competent core.							
MBV		VC						Massive qtz-carb vein. Has a pervasive purple tinge (fluorite?)							
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MBV		VDR						Grey, coarse grained Volcaniclastic mass flow breccia. Moderately silicified with some minor selective albite alteration. Clasts up to 50m. Rare trace fine grained disseminated py throughout. Common qtz-carb veins throughout. Generally competent core.							

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F		FTZ						Large fault zone. Rock comprises of volcaniclastic breccia that is broken and vuggy in areas. Some gouge present at 397.9m							

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F MBV		FTZ VDR						<p>Large fault zone. Rock comprises of volcaniclastic breccia that is broken and vuggy in areas. Some gouge present at 397.9m</p> <p>Grey to pink, coarse grained Volcaniclastic mass flow breccia. Moderately silicified with clasts up to 200m. Some clast selectively albite altered. Rare trace fine grained disseminated po-py throughout. Common qtz-carb veins throughout, some clasts have their own vein generation within them. Generally competent core.</p>								
MBV		VDR						<p>Grey to pink, coarse grained, graded, Volcaniclastic mass flow breccia. Moderately silicified with some clast selectively albite altered, especially at the coarser end of the unit. Common qtz-carb veins throughout, Generally competent core.</p>								

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MBV		VDR						Dacite Volcaniclastic Mass Flow: Light to dark grey, dacite clast dominant volcaniclastic breccia. Dacite clasts are sub-angular to sub-rounded, <1cm to 8cm in size, light grey to cream with variable pink/red albite alteration. Matrix is typically fine grained, dark grey - black with weak sericite and chlorite alteration and minor disseminated zones of pyrite.							

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	■ Rhyodacite	■ 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	■ Undifferentiated Mafic Intrusive	▲ Dacite Flow	■ Interbedded sandstone/shale	■ Mudstone	■ Rhyolite Tuff	■ Sandstone	■ Undifferentiated Tuff	▲ Dacite Lapilli Tuff	■ Interbedded sandstone/siltsto	■ No Core Present	■ Sandstone			

ROSEBERY LITHOLOGY_VMS LOG

Hole ID: 402R



Project: ROS

Rosebery

Prospect: NRL

North Lake Rosebery

Northing: 5377808.0 mN
Easting: 379927.0 mE
RL: 450.5 mRL
CoordSys: MGA55 (GDA94)

Dip: -82.00
MAG_Azim: 241.00
Total Depth: 1511.7 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
550	MBV	VDR						Dacite Volcaniclastic Mass Flow: Light to dark grey, dacite clast dominant volcaniclastic breccia. Dacite clasts are sub-angular to sub-rounded, <1cm to 8cm in size, light grey to cream with variable pink/red albite alteration. Matrix is typically fine grained, dark grey - black with weak sericite and chlorite alteration and minor disseminated zones of pyrite.							
570	MBV MBV	VDR VDR						White to cream, semi massive carbonate/calcite. Moderate foliation throughout this small zone at 45 degrees to CA. Patchy chlorite alteration throughout. Possibly a small vein filled fault.							
	MBV	VDR						Dacite Volcaniclastic Breccia: Grey to dark grey, volcaniclastic breccia. Clast composed of 1-6cm sub-angular variably albite altered dacite clasts, and finer 1-3cm black wispy chlorite altered pumice.							
	MBV	VDR						Semi Massive Carbonate: Another zone of creamy - white foliated semi massive carbonate and calcite. Pinky/purple mineral possibly fluorite however only trace occurrence. Interspersed black chlorite between foliations in Cb.							
580								Volcaniclastic Breccia Mass Flow: Grey to black, dacite clast dominant breccia mass flow. Moderately sorted in parts, typically fine grained on average, however larger dacite clasts in a couple of zones where mass flow has coarsened up, 615-618 and 624-626, 648-650. Otherwise fine grained. Possibly fiamme. Occasional planar 2-4mm Qz-Co veins.							
590															
600															

<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/siltstone 	<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 description ■ Semi-massive Sulphides ■ Shale ■ Siltstone ■ 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: 402R



Project: ROS

Rosebery

Prospect: NRL

North Lake Rosebery

Northing: 5377808.0 mN
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RL: 450.5 mRL
CoordSys: MGA55 (GDA94)

Dip: -82.00
MAG_Azim: 241.00
Total Depth: 1511.7 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
600	MBV	VDR						Volcaniclastic Breccia Mass Flow: Grey to black, dacite clast dominant breccia mass flow. Moderately sorted in parts, typically fine grained on average, however larger dacite clasts in a couple of zones where mass flow has coarsened up, 615-618 and 624-626, 648-650. Otherwise fine grained. Possibly fiamme. Occasional planar 2-4mm Qz-Co veins.							
610															
620															
630															
640															
650															

▲ 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	■ Rhodacite	■ 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: 402R



Project: ROS

Rosebery

Prospect: NRL

North Lake Rosebery

Northing: 5377808.0 mN
Easting: 379927.0 mE
RL: 450.5 mRL
CoordSys: MGA55 (GDA94)

Dip: -82.00
MAG_Azim: 241.00
Total Depth: 1511.7 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
650	MBV	VDR						Volcaniclastic Breccia Mass Flow: Grey to black, dacite clast dominant breccia mass flow. Moderately sorted in parts, typically fine grained on average, however larger dacite clasts in a couple of zones where mass flow has coarsened up, 615-618 and 624-626, 648-650. Otherwise fine grained. Possibly fiamme. Occasional planar 2-4mm Qz-Co veins.							
660															
670															
680															
690															
700															

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	■ Hyaloclastite Breccia	■ Hyaloclastite Breccia	■ Rhyolite Breccia	■ Undifferentiated Fluvioglacial Sediment	▲ Dacite Breccia	■ Interbedded sandstone/shale	■ Massive sulphide	■ Rhyolite Tuff	■ Undifferentiated Mafic Intrusive	▲ Dacite Flow	■ Interbedded sandstone/siltsto	■ Mudstone	■ Sandstone	■ Undifferentiated Tuff	▲ Dacite Lapilli Tuff	■ Interbedded sandstone/siltsto	■ No Core Present	■ Sandstone

ROSEBERY LITHOLOGY_VMS LOG

Hole ID: 402R



Project: ROS

Rosebery

Prospect: NRL

North Lake Rosebery

Northing: 5377808.0 mN
Easting: 379927.0 mE
RL: 450.5 mRL
CoordSys: MGA55 (GDA94)

Dip: -82.00
MAG_Azim: 241.00
Total Depth: 1511.7 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		VDR						Dark grey to dark brown, generally moderately sorted fine to medium grained, weakly foliated volcanoclastic breccia.							
DK		IMK						Dyke Swarm: Dark green to black basaltic dyke from: 769.3 - 769.9, 771.0 - 771.2, 772.8 - 773.0 and 774.0 - 774.6. Dykes cross cut by 5-20mm quartz - carbonate veins. Lithology between dykes is moderately sorted volcanoclastic breccia.							
MBV		VDR						Pink to grey, albite and variably sericite altered, feldspar lithic volcanoclastic breccia. Moderately sorted, with semi pervasive albitisation - possibly due to below fault.							
F		FTZ						Small fault, mainly broken and sheared rock with no puggy material. Breaks around 30 degrees to CA. Does not appear to be a significant fault.							
MBV		VDR						Grey to cream, weak to moderate sericite - chlorite - albite altered, moderately sorted, volcanoclastic breccia. Individual clasts are difficult to identify due alteration but likely dacitic composition similar to above units. The amount of matrix has also decreased - indicating the possible carapace of the lava. Patchy chlorite and sericite alteration or replacement in the matrix - albite variably alters the dacite. Fines into an ashy sand from 787.4m - 787.7m where bedding is evident.							
MBV		VDR						Fines into a small dark grey ashy unit. Could possibly be a dyke but slightly coarser grained than previous dykes and contacts not as sharp.							

Lithology Legend										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 Volcanoclastic	■ Elevated
▲ Basalt	■ Fault Zone	▨ Intermediate flow	▲ Quartz	■ Semi-massive Sulphides	■ Vein Carbonate	■ Anomalous	▲ Breccia - Undifferentiated	■ Feldspathic (ash) tuff	▨ Intermediate Volcanoclastic	▲ Quartz Carbonate Vein	■ Shale	■ Vein quartz	■ Strongly Anomalous
▲ Calcarenite	■ Feldspathic porphyry	▨ Lapilli Tuff	▲ Quartz Feldspar Porphyry	■ Siltstone	▲ Vein quartz	■ Sub-Grade	▲ Chert	■ Felsic Flow	▨ Limestone	▲ Quartz Porphyry	■ Slate	▲ Volcanic Breccia	■ Low-Grade
■ Clay	■ Felsic tuff	▨ Lithic Tuff	▲ Quartzite	■ Tuff Siltstone	▲ Volcanic Conglomerate	■ High-Grade	▲ Crystal Tuff	■ Felsic Volcanoclastic	▨ Mafic Dyke	▲ Rhyolite Breccia	■ Undifferentiated Black Shale	▲ Volcanic Sandstone	
■ Dacite	■ Greywacke	▨ Mafic Volcanoclastic	▲ Rhyolite	■ Undifferentiated Felsic Volcanic	▲ Volcanic Siltstone		■ Dacite Breccia	■ Hyaloclastite Breccia	▨ Massive sulphide	▲ Rhyolite Tuff	■ Undifferentiated Fluvio-glacial Sediment	▲ Undifferentiated Mafic Intrusive	
■ Dacite Flow	■ Interbedded sandstone/shale	▨ Mudstone	▲ Sandstone	■ Undifferentiated Tuff			■ Dacite Lapilli Tuff	■ Interbedded sandstone/siltsto	▨ No Core Present				

ROSEBERY LITHOLOGY_VMS LOG

Hole ID: 402R



Project: ROS

Rosebery

Prospect: NRL

North Lake Rosebery

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RL: 450.5 mRL
CoordSys: MGA55 (GDA94)

Dip: -82.00
MAG_Azim: 241.00
Total Depth: 1511.7 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		VDA						Grey to pale pink, weakly albite and sericite altered coherent dacite lava.							
F		FTZ						Small fault. Mainly broken core at low angles to CA (around 20 - 30 degrees). Associated moderate carbonate alteration either side of the fault in the dacite. Not a significant fault.							
MBV		VDA						Dacite - core more broken and there is an increase in Cb alteration. Dacite itself appears to be more fractured or even clastic in parts - no longer a coherent lava. However, this could be due to an increase in alteration giving a "pseudo breccia" texture.							

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	■ Feldspar porphyry	■ Lapilli Tuff	■ Quartz Feldspar Porphyry	■ Slate	■ Volcanic Breccia	■ Sub-Grade	▲ Chert	■ Felsic Flow	■ Limestone	■ Quartz Porphyry	■ Tuff Siltstone	■ Volcanic Conglomerate	■ Low-Grade	▲ Clay	■ Felsic tuff	■ Lithic Tuff	■ Quartzite	■ Undifferentiated Black Shale	■ Volcanic Sandstone	■ High-Grade	▲ 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	■ Sandstone	▲ Dacite Lapilli Tuff	■ Interbedded sandstone/siltsto	■ No Core Present	■ Sandstone	■ Undifferentiated Tuff

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Project: ROS

Rosebery

Prospect: NRL

North Lake Rosebery

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Dip: -82.00
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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
DK		IMK						Dyke. More dark grey/black then green like above dykes. Massive texture with Cb veins 2-3mm. Grey to pink Dacite - Looking more coherent now but there are a few zones where it does look like a breccia - (the patchy pink albite alteration makes it look brecciated). There is a decrease in the patchy Cl alteration and the Cb alteration is still weak to moderate but less veining.							
MBV		VDA													
DK		IMK						Small black massive dyke. Pink to grey, albite and carbonate altered, dacite. Coherent or breccia - possibly both. Increase in the albite alteration, but still patchy and variable/selective. Definitely a hyaloclastite in parts as a grey clast supporting matrix is visible. Still Cb alt and veining.							
MBV		VDA													

Lithology Legend										Mineralisation		
▲ Andesite	■ Disseminated Sulphides	▨ Interbedded siltstone/shale	■ Not logged	■ Schist	■ Undifferentiated Volcanic	■ Background	■ 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	■ Basalt	■ Quartz	■ Semi-massive Sulphides	■ Vein Carbonate	■ Vein quartz	■ Volcanic Breccia	■ Volcanic Conglomerate
▲ Breccia - Undifferentiated	■ Fault Zone	▨ Intermediate flow	■ Quartz Carbonate Vein	■ Shale	■ Vein quartz	■ Calcarenite	■ Quartz Feldspar Porphyry	■ Siltstone	■ Volcanic Sandstone	■ Volcanic Siltstone	■ Undifferentiated Felsic Volcanic	■ Undifferentiated Fluvio-glacial Sediment
■ Chert	■ Feldspathic (ash) tuff	▨ Lapilli Tuff	■ Quartz Porphyry	■ Slate	■ Volcanic Sandstone	■ Clay	■ Limestone	■ Tuff Siltstone	■ Volcanic Siltstone	■ Undifferentiated Felsic Volcanic	■ Undifferentiated Mafic Intrusive	■ Undifferentiated Tuff
■ Crystal Tuff	■ Felsic Flow	▨ Lithic Tuff	■ Rhyodacite	■ Rhyolite	■ Rhyolite Breccia	■ Mafic Dyke	■ Mafic Volcaniclastic	■ Massive sulphide	■ Mudstone	■ Sandstone	■ No Core Present	
■ Dacite	■ Felsic tuff	▨ Mafic Dyke	■ Rhyolite	■ Rhyolite Tuff	■ Sandstone	■ Dacite Breccia	■ Hyaloclastite Breccia	■ Interbedded sandstone/shale	■ Interbedded sandstone/siltsto			
■ Dacite Flow	■ Felsic Volcaniclastic	▨ Mafic Dyke	■ Rhyolite	■ Rhyolite Tuff	■ Sandstone	■ Dacite Flow	■ Hyaloclastite Breccia	■ Interbedded sandstone/shale	■ Interbedded sandstone/siltsto			
■ Dacite Lapilli Tuff	■ Greywacke	▨ Mafic Dyke	■ Rhyolite	■ Rhyolite Tuff	■ Sandstone	■ Dacite Lapilli Tuff	■ Hyaloclastite Breccia	■ Interbedded sandstone/shale	■ Interbedded sandstone/siltsto			

ROSEBERY LITHOLOGY_VMS LOG

Hole ID: 402R



Project: ROS

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
MBV		VDA						Pink to grey, albite and carbonate altered, dacite. Coherent or breccia - possibly both. Increase in the albite alteration, but still patchy and variable/selective. Definitely a hyaloclastite in parts as a grey clast supporting matrix is visible. Still Cb alt and veining.							
MBV		VDA						Green to grey Dacite. Moving away from the albite alteration to moderate CI and Ser alt. Distinct change in the colour of the rock. Also weakly foliated. Hyaloclastite to Coherent and CI filled fractures and veins.							
MBV		VDA						Move away from the CI alteration but still the dominant phase. Still an overall green tinge to the rock but not as intense as the previous section. Seeing a little bit more patchy pink albite alteration now. Still Dacite and still appears to be a combination of hyaloclastite and coherent type rock.							
DK MBV		IMK VDA						Small dark grey/black massive dyke. Grey to pink Dacite. Appears more coherent and massive textured here, with intermittent zones that look brecciated/clastic. Increase in pink albite alteration. Probably a hyaloclastite towards 1089.5m.							

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	■ Slate	■ Volcanic Breccia	■ Sub-Grade	▲ Chert	■ Felsic Flow	■ Limestone	■ Quartz Porphyry	■ Tuff Siltstone	■ Volcanic Conglomerate	■ Low-Grade	▲ Clay	■ Felsic tuff	■ Lithic Tuff	■ Quartzite	■ Undifferentiated Black Shale	■ Volcanic Sandstone	■ High-Grade	▲ Crystal Tuff	■ Felsic Volcaniclastic	■ Mafic Dyke	■ Rhyodacite	■ Undifferentiated Felsic Volcanic	■ Volcanic Siltstone	▲ Dacite	■ Greywacke	■ Mafic Volcaniclastic	■ Rhyolite	■ Undifferentiated Fluvio-glacial Sediment	▲ Dacite Breccia	■ Hyaloclastite Breccia	■ Massive sulphide	■ Rhyolite Breccia	■ Undifferentiated Mafic Intrusive	▲ Dacite Flow	■ Interbedded sandstone/shale	■ Mudstone	■ Rhyolite Tuff	■ Sandstone	▲ Dacite Lapilli Tuff	■ Interbedded sandstone/siltsto	■ No Core Present	■ Undifferentiated Tuff

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Hole ID: 402R



Project: ROS

Rosebery

Prospect: NRL

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
MBV		VDA						Grey to pink Dacite. Appears more coherent and massive textured here, with intermittent zones that look brecciated/clastic. Increase in pink albite alteration. Probably a hyaloclastite towards 1089.5m.							
									D1395714	0.0	0.0	0.0	-0.01		2.0
									D1395715	0.0	0.0	0.0	-0.01		1.8
									D1395716	0.0	0.0	0.0	-0.01		2.0
MBV		VDA						Dull grey to green Dacite - seeing an increase in Cl and to a lesser extent Se alteration. Rock has taken up a weak to moderate foliation around 50 degrees to CA. Probably a hyaloclastite.	D1395717	0.0	0.0	0.0	-0.01		3.0

<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 ■ Rhodacite ■ Rhyolite ■ Rhyolite Breccia ■ Rhyolite Tuff ■ Sandstone 	<ul style="list-style-type: none"> ■ Schist ■ See comments for full descrip ■ Semi-massive Sulphides ■ Shale ■ 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: 402R



Project: ROS

Rosebery

Prospect: NRL

North Lake Rosebery

Northing: 5377808.0 mN
Easting: 379927.0 mE
RL: 450.5 mRL
CoordSys: MGA55 (GDA94)

Dip: -82.00
MAG_Azim: 241.00
Total Depth: 1511.7 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		VDA						Dull grey to green Dacite - seeing an increase in Cl and to a lesser extent Se alteration. Rock has taken up a weak to moderate foliation around 50 degrees to CA. Probably a hyaloclastite.	D1395718	0.0	0.0	0.0	-0.01		1.4
									D1395719	0.0	0.1	0.0	0.17		2.5
F		FTZ						Mt black fault occurs somewhere within this zone. From 1117.2m onwards appears to be polymict epiclastics. Between 1111.6 - 1117.2 is strong to intense, semi-pervasive Cb alteration and silicification. Difficult to place an exact location on the fault.							
HW		VBX						Cream to brown, semi pervasive Cb alteration and moderately silicified, polymict volcanoclastic breccia. Clasts are typically sub-angular to sub-rounded, 20-40mm in size, and composed of common fine grained silicified/siltstone clasts, common 1-2mm quartz and feldspar lithics, rare amygdaloidal basaltic clasts and occasional rhyo-dacite clasts. Cb alteration is semi pervasive - typically replacing the matrix, however leaving the larger clasts unaltered. More brown-cream is siderite alteration. Some silicification in matrix which also occurs as some minor 5cm veins. Small 1cm fault at 1119.0 metres at ~30 degrees to CA and another small 5cm fault at 1120.5 which is mainly just broken core with a small amount of pug. Cb alteration decreases in intensity down hole away from Mt Black fault zone.	D1395720	0.0	0.0	0.0	0.04		2.4
HW		VBX						Pale green to cream, semi pervasive chlorite and sericite altered, fine grained volcanoclastic breccia. Alteration has moved to a moderately pervasive chlorite and sericite zonation. Chlorite typically occurs along fractures and as veinlets whereas the sericite is more pervasive and occurs throughout the matrix. The nature of the alteration makes the clastic texture difficult to distinguish in some parts. Clasts composed of common <0.5 to 2mm sub-rounded quartz crystals, occasional 1-2mm sub-angular feldspar lithics, occasional 10-20mm sub-rounded siltstone clasts. Rare pyrite and pyrrhotite clasts? - may just be secondary mineralisation. Trace pyrite and pyrrhotite vein related mineralisation, which occurs in occasional 3-5cm quartz calcite veins.	D1395721	0.0	0.0	0.0	0.02		2.1
									D1395722	0.0	0.0	0.0	0.03		1.9

<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: 402R



Project: ROS

Rosebery

Prospect: NRL

North Lake Rosebery

Northing: 5377808.0 mN
Easting: 379927.0 mE
RL: 450.5 mRL
CoordSys: MGA55 (GDA94)

Dip: -82.00
MAG_Azim: 241.00
Total Depth: 1511.7 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
1150	HW	VBX						Pale green to cream, semi pervasive chlorite and sericite altered, fine grained volcanoclastic breccia. Alteration has moved to a moderately pervasive chlorite and sericite zonation. Chlorite typically occurs along fractures and as veinlets whereas the sericite is more pervasive and occurs throughout the matrix. The nature of the alteration makes the clastic texture difficult to distinguish in some parts. Clasts composed of common <0.5 to 2mm sub-rounded quartz crystals, occasional 1-2mm sub-angular feldspar lithics, occasional 10-20mm sub-rounded siltstone clasts. Rare pyrite and pyrrhotite clasts? - may just be secondary mineralisation. Trace pyrite and pyrrhotite vein related mineralisation, which occurs in occasional 3-5cm quartz calcite veins.	D1395723	0.0	0.0	0.0	0.02		1.7
1160									D1395724	0.0	0.0	0.0	0.03		2.1
1170	HW	VBX						Grey to green, moderate semi pervasive chlorite and weak sericite altered, feldspar lithic volcanoclastic breccia. White feldspar lithics/crystals are typically abundant, sub-angular and 1-2mm in size. There is banding present that may represent bedding where it appears the grain size has fined into 5-10cm beds.	D1395725	0.0	0.0	0.0	0.01		1.9
	HW	VBX						Volcanoclastic sandstone: Pale grey, weakly chlorite and sericite altered, fine to coarse grained volcanoclastic sandstone with occasional elongate and stretch shale rip up clasts. Unit is weakly bedded in parts and coarsens up where it contains the shale rip ups. Sandstone composed of fine feldspar and quartz lithics. Occasional dark chlorite banding that is pseudo fiamme.							
1180	BS	SSH						Black to dark grey, Cb and pyrite altered, black shale with occasional small 10-30cm interbeds of coarser grained siltstones and sandstones. Common 1-10mm Cb veinlets and trace pyrite. Zone of 40cm semi massive pyrite from 1185.9 - 1186.3m - vein related in Qz-Cb vein.	D1395726	0.1	0.2	0.0	2.82		5.5
1190									D1395727	0.0	0.0	0.0	0.51		4.2
1200	HW	VBX						Grey to pale dull green, weak semi pervasive Cl alteration and moderate semi pervasive Se and silicification, moderately sorted volcanoclastic breccia. Clasts composition difficult to distinguish clasts but appears generally fine grained - with occasional 2-3mm sub rounded feldspar clasts and quartz crystals present. The Se alteration possibly makes this look coherent. Cl alteration is more patchy occurring in fractures or in veinlets. Unit slightly grades from the above shale. Occasional low angle Qz - Cb 1-3mm veins.							

<ul style="list-style-type: none"> ▲ Andesite ▲ Andesite Flow ▲ Basalt ▲ Breccia - Undifferentiated ▲ Calcarenite ▲ 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/siltsto 	<ul style="list-style-type: none"> ■ Interbedded siltstone/shale ■ Interbedded V5S/V5L/V5M & ■ 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 ▲ Rhodactite ▲ 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 ■ 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: 402R



Northing: 5377808.0 mN
Easting: 379927.0 mE
RL: 450.5 mRL
CoordSys: MGA55 (GDA94)

Dip: -82.00
MAG_Azim: 241.00
Total Depth: 1511.7 m
DrillCompany: BLY

Project: ROS
Rosebery
Prospect: NRL
North Lake Rosebery

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		VBX						Grey to pale dull green, weak semi pervasive Cl alteration and moderate semi pervasive Se and silicification, moderately sorted volcanoclastic breccia. Clasts composition difficult to distinguish clasts but appears generally fine grained - with occasional 2-3mm sub rounded feldspar clasts and quartz crystals present. The Se alteration possibly makes this look coherent. Cl alteration is more patchy occurring in fractures or in veinlets. Unit slightly grades from the above shale. Occasional low angle Qz - Cb 1-3mm veins.	D1395728	0.0	0.0	0.0	0.06		2.7
HW		VBX						Grey to cream, weakly Cl altered and silicified, bedded fine grained volcanoclastic siltstone with occasional 2-5cm interbeds of coarser grained sandstone. Siltstone is quite hard and silicified. Rare 2-8cm dark bands of Cl with 1-2mm feldspar lithics in it - possibly a pseudo breccia. Bedded around 70-75 degrees to CA.	D1395729	0.0	0.0	0.0	0.43		1.8
HW		VBX						Grey to brown, selectively Cl and Se altered with pervasive silicification, moderately sorted polymict volcanoclastic breccia. Clasts could be described as a "gritty" texture. Clasts composed of common 1-3mm feldspar lithics, rare 3-4mm sub rounded Qz crystals and, 2-20mm sub rounded siltstone clasts in a fine grey sericite and Cl altered matrix (10-20% matrix). Weakly foliated at 60-70 degrees to CA with occasional elongated clasts.	D1395730	0.0	0.0	0.0	0.10		1.5
								Grey to cream, weak to moderate Cb, Se, Cl alteration and silicified, fine grained volcanoclastic siltstone with occasional 2-5cm interbeds of coarser sandstone and finer shales. Cb alteration is patchy occurring in thick 5cm veins. Bedding around 60 degrees to CA.	D1395731	0.0	0.0	0.0	0.01		1.7
HW		VBX						Grey to dark grey, weakly silicified Cl and Cb altered, predominantly medium to fine grained volcanoclastic sandstone with occasional interbeds of shale or smaller shale rip up clasts. 2-4mm planar and irregular Cb veins.							
HW		VBX						Black to dark grey, Cb altered, predominantly black shales with smaller interbeds of fine siltstones. Small <1mm pyrite and pyrrhotite veinlets and 2-3mm Cb veins. More of a transitional shale unit - not the classic hanging wall black shale.							
BS		SSH						Grey/cream to brown, variably moderate Se and Cb altered with weaker selective Cl alteration, graded volcanoclastic sandstone to coarse breccia. Similar unit to that of 1213.5-1231.7m - however this is clearly a distinct graded sequence - moving from a sandstone to a breccia from 1258m to 1279.4m. Clasts composed of, sub angular to sub-rounded 5-30mm siltstone clasts, 20-50mm elongate and sub-rounded black shale rip ups, 2-3mm feldspar lithics, and occasional 1-2mm sub rounded Qz crystals. Cb alteration is semi pervasive throughout the matrix with the Cl alteration more selective and occurring in fractures and <1mm veinlets.	D1395732	0.0	0.0	0.0	0.04		3.2
HW		VBX													

Mineralisation									
▲ Andesite	■ Disseminated Sulphides	▨ Interbedded siltstone/shale	■ Not logged	■ Schist	■ Undifferentiated Volcanic				
▲ Andesite Flow	■ Dolomite	▨ Interbedded V5S/V5L/V5M &	▲ 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	■ Rhodochite	■ 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: 402R



Project: ROS

Rosebery

Prospect: NRL

North Lake Rosebery

Northing: 5377808.0 mN
Easting: 379927.0 mE
RL: 450.5 mRL
CoordSys: MGA55 (GDA94)

Dip: -82.00
MAG_Azim: 241.00
Total Depth: 1511.7 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
HW		VBX						Another graded sequence, grey, weakly Cl and Se altered, fine to medium grained volcaniclastic sandstone. Fine to medium grained sandstone to 1303m where it then coarsens into a breccia where it is composed of abundant 1-3mm sub angular feldspar lithics, occasional 1-2mm sub rounded quartz crystals, occasional 20-40mm sub angular rhyo-dacite clasts, and rare 10-30mm elongate shale rip ups. Moderate increase in Cl - Se alteration towards 1314m with occasional dark 1-2cm Cl and Se bands.	D1395738	0.0	0.0	0.0	0.02		2.2
									D1395739	0.0	0.0	0.0	0.01		2.2
HW		VBX						Cream to dull green/grey, strong semi pervasive Se and Cl altered and weak to moderately Cb alerted and silicified, volcaniclastic breccia with variable 5-30cm interbeds of finer sandstone and siltstone material. Sericite alteration occurs with a wispy and banded texture, also banded Cl altered zones. There are occasional 20-30mm bands of completely Sericite replaced rock that give this unit a "footwall-like" appearance.	D1395740	0.0	0.3	0.0	0.24		1.2
BS		SSH						Black to dark grey, Cb veined, shale with some interbeds of siltstone. This looks like the more classic hanging wall black shale - with abundant 1mm planar Cb and Pyrite veinlets. Bedding around 80 degrees to CA. 2-3 small ~1cm puggy faults and one 4cm band of related remobilised galena mineralisation.	D1395741	0.0	0.0	0.0	0.38		1.9
									D1395742	0.0	0.0	0.0	0.84		1.5
HOTS		VSL					sp py	Grey, weak to moderate Se - Py altered, volcaniclastic siltstone to coarse sandstone with trace sulphides. Could possibly describe this rock as host due to trace disseminated and stringy red-brown sphalerite and disseminated Py. The unit moves in and out of interbedded siltstones and medium to coarse grained sandstone and from 1350 to 1352m becomes more sorted and a decrease in sulphides with common 2-3mm crystals of feldspar. A couple of 4-10cm Qz-Cb veins with associated pyrite.							

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	■ 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										

ROSEBERY LITHOLOGY_VMS LOG

Hole ID: 402R



Northing: 5377808.0 mN

Dip: -82.00

Project: ROS

Easting: 379927.0 mE

MAG_Azim: 241.00

Rosebery

RL: 450.5 mRL

Total Depth: 1511.7 m

Prospect: NRL

CoordSys: MGA55 (GDA94)

DrillCompany: BLY

North Lake Rosebery

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
HOTS		VSL					sp py	Grey, weak to moderate Se - Py altered, volcanoclastic siltstone to coarse sandstone with trace sulphides. Could possibly describe this rock as host due to trace disseminated and stringy red-brown sphalerite and disseminated Py. The unit moves in and out of interbedded siltstones and medium to coarse grained sandstone and from 1350 to 1352m becomes more sorted and a decrease in sulphides with common 2-3mm crystals of feldspar. A couple of 4-10cm Qz-Cb veins with associated pyrite.	D1395743	0.0	0.0	0.0	0.73		3.3
HO		VSS						Grey to cream, moderate to strong semi-pervasive Cb-Se alteration and minor Cl + Py, moderately sorted coarse grained volcanoclastic sandstone to breccia. Common 2-3mm sub-rounded feldspars in a strongly Cb-Se altered matrix. Only minor trace disseminated Py visible. The intensity of alteration makes identifying the lithics from the matrix difficult and has an overall 'gritty' texture.							
HOTS		VSL					sp ga	Cream to grey, moderately Cb - Se - Py altered, fine grained volcanoclastic siltstones with trace sphalerite and galena. Sp and Gn occur predominantly as small 1-2mm veinlets and are prominent from 1360 - 1365m. Starts to coarsen into a sandstone towards 1372m. Small fault 1366.4m which is mainly broken core.	D1395744	0.0	0.1	0.0	4.01		2.3
TZ		VSS						Cream/grey to dull green, moderate to strong semi pervasively Se - Cl - Cb + minor Py altered, coarse grained volcanoclastic sandstone. This unit is a more intensely altered correlate of the below host unit and the contact is quite transitional however there are now common sub rounded 1-3mm feldspars present. Se alteration is banded and wispy textured. The matrix where less altered is a fine grey siltstone - however it is predominantly altered by Cl and Se. No obvious sulphides bar trace disseminated Py.	D1395745	0.1	0.1	0.0	1.33		1.5
TZ		VBX						White to grey/green, Cb - Si - Cl - Se altered, feldspar lithic volcanoclastic breccia. This unit is marked by a number of 5-20cm Qz-Cb veins - however the feldspar lithics are generally still visible in the "veins" so possibly not veins but a silica flooding or replacement. Cl-Se alteration is still strong and pervasive in texture. Difficult rock to give a name to hence transitional.	D1395746	0.0	0.0	0.0	0.04		1.4
FW		VBX						Grey to dull green, strongly Cl-Se-Cb altered, feldspar lithic volcanoclastic breccia. Abundant 2-3mm sub angular feldspar lithics in a fine grey mudstone matrix. Not entirely convinced this is footwall but the abundant feldspars are an indicator. There are occasional 2-3cm dark Cl-Se bands but not fiamme. No sulphides with only trace disseminated Py. Weakly foliated at 80 to CA.	D1395747	0.0	0.0	0.0	0.16		1.6
FW		VBX						Cream to grey, pervasively Cb-Si + minor Se altered, feldspar lithic volcanoclastic breccia. Common 1-3mm sub-angular feldspar lithics present in a fine grey matrix. The increased Cb alteration likely due to some fracturing in the core. Not convinced this is footwall as the below unit are host-like rocks again.							

Lithology Legend										Mineralisation		
▲ Andesite	■ Disseminated Sulphides	▨ Interbedded siltstone/shale	▲ Not logged	■ Schist	■ Undifferentiated Volcanic	■ Background	■ 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 Volcanoclastic	■ Basalt	■ Quartz	■ Semi-massive Sulphides	■ Vein Carbonate	■ Vein quartz	■ Volcanic Breccia	■ Volcanic Conglomerate
▲ Breccia - Undifferentiated	■ Fault Zone	▨ Intermediate flow	▲ Quartz Carbonate Vein	■ Shale	■ Vein quartz	■ Calcarenite	▲ Quartz Feldspar Porphyry	■ Siltstone	■ Volcanic Sandstone	■ Volcanic Siltstone	■ Slate	■ Tuff Siltstone
■ Chert	■ Feldspathic (ash) tuff	▨ Intermediate Volcanoclastic	▲ Quartz Feldspar Porphyry	■ Undifferentiated Black Shale	■ Undifferentiated Felsic Volcanic	■ Clay	▲ Quartz Porphyry	■ Tuff Siltstone	■ Undifferentiated Fluvio-glacial Sediment	■ Undifferentiated Mafic Intrusive	■ Undifferentiated Tuff	
■ Crystal Tuff	■ Feldspathic porphyry	▨ Lapilli Tuff	▲ Rhyolite	■ Rhyolite Breccia		■ Dacite	■ Felsic Flow	■ Rhyolite Tuff				
■ Dacite Breccia	■ Felsic tuff	▨ Mafic Dyke	▲ Rhyolite Breccia	■ Rhyolite Tuff		■ Dacite Flow	■ Felsic Volcanoclastic	■ Sandstone				
■ Dacite Flow	■ Greywacke	▨ Mafic Volcaniclastic	■ Rhyolite Breccia	■ Sandstone		■ Dacite Lapilli Tuff	■ Hyaloclastite Breccia					
	■ Hyaloclastite Breccia	▨ Massive sulphide	■ Rhyolite Tuff				■ Interbedded sandstone/shale					
	■ Interbedded sandstone/siltsto	▨ Mudstone					■ No Core Present					

ROSEBERY LITHOLOGY_VMS LOG

Hole ID: 402R



Project: ROS

Rosebery

Prospect: NRL

North Lake Rosebery

Northing: 5377808.0 mN

Dip: -82.00

Easting: 379927.0 mE

MAG_Azim: 241.00

RL: 450.5 mRL

Total Depth: 1511.7 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
FW		VBX						Cream to grey, pervasively Cb-Si + minor Se altered, feldspar lithic volcanoclastic breccia. Common 1-3mm sub-angular feldspar lithics present in a fine grey matrix. The increased Cb alteration likely due to some fracturing in the core. Not convinced this is footwall as the below unit are host-like rocks again. Grey to cream, moderately Cb-Se altered, volcanoclastic siltstone to sandstone. No obvious sulphides like the host rocks seen up hole, however some small <1mm Py veinlets. Common irregular and planar 1-3mm Cb veins. Weakly foliated or bedded at 80-85 degrees to CA. Increase intensity of the Se down hole.	D1395748	0.0	0.0	0.0	0.07		1.2
HO		VSL							D1395749	0.0	0.0	0.0	0.15		1.5
TZ		VSS						Dull green to pale yellow, moderate to strong Se-Cl altered, foliated, medium to coarse grained volcanoclastic. Starting to see common 1-2mm sub-rounded feldspar crystals. Se has the typical wispy banded texture and the Cl is semi pervasive throughout the matrix.	D1395751	0.0	0.0	0.0	0.17		1.1
TZ		VBX						White to dull green, pervasively Si-Se-Cl altered, volcanoclastic breccia with large zones of Qz flooding. Very similar unit to 138.4-1385m. Qz flooding or veining in zones up to 80cm. Remaining intermittent rock is pervasively Se-Cl altered with common 2-3cm bands of intense wispy pale yellow Se. Feldspar 2-3mm in size are also present where alteration has not replaced them. This sequence is a repetition of the pattern seen above from 1352.8m to 1385m, that is: A transition from host like rock; to increased Se-Cl alteration with feldspar lithics; and into an intensely Se-Cl altered zones with silica flooding. Green to pale yellow, strongly Cl-Se altered, foliated, volcanoclastic breccia. Similar to above unit without the silica flooding. Decrease in intensity of alteration towards 1439m with interbeds of sandstone/siltstone and white 1-2mm white feldspar lithic rich units.	D1395752	0.0	0.0	0.0	0.13		2.9
TZ		VBX													
HOTS		VSL					sp py	Grey to brown, weak to moderate Cb-Se altered, fine grained volcanoclastic siltstone with trace sulphides. Looks like host again, quite fine grained massive bedded siltstones with interesting 2-15cm intervals of dark generally Cl altered feldspar lithic rich material - probably pumiceous material. Trace red/brown Sp and Py in <1mm veinlets and blebs. Interesting another host like unit.	D1395753	0.0	0.2	0.0	0.48		1.8

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

ROSEBERY LITHOLOGY_VMS LOG

Hole ID: 402R



Project: ROS

Rosebery

Prospect: NRL

North Lake Rosebery

Northing: 5377808.0 mN

Dip: -82.00

Easting: 379927.0 mE

MAG_Azim: 241.00

RL: 450.5 mRL

Total Depth: 1511.7 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	
HOTS		VSL					sp py	Grey to brown, weak to moderate Cb-Se altered, fine grained volcaniclastic siltstone with trace sulphides. Looks like host again, quite fine grained massive bedded siltstones with interesting 2-15cm intervals of dark generally Cl altered feldspar lithic rich material - probably pumiceous material. Trace red/brown Sp and Py in <1mm veinlets and blebs. Interesting another host like unit.	D1395754	0.0	0.0	0.0	-0.01		1.4	
FW		VSS														
								Grey, weak to moderate Se altered, feldspar lithic rich volcaniclastic (?) and fine grained siltstones. Interesting rocks - clearly a transition from the above host like siltstone to a more feldspar lithic rich unit. Very interesting relationship between the siltstone and the feldspar lithic unit - can be described as irregular and interfingering. This feldspar phryic unit is likely pumice that is mixing with the fine siltstones and has been stretched and foliated.	D1395755	0.0	0.0	0.0	-0.01		1.4	
FW		VBX						Cream to brown, strong Cb-Se-Cl alteration, feldspar lithic rich volcaniclastic breccia with common dark 1-4cm bands of fiamme. Pretty typical footwall, weakly foliated.	D1395756	0.0	0.0	0.0	0.22		1.8	
F		FTZ						Start of Rosebery Fault zone: Cream to black, moderate to strong Cb alteration with a dark grey to black material right before the main centre of the fault - probably massive tourmaline. Main zone of the fault. A 5cm band (1475.4 -1475.45m) of puggy finely ground up material and then fractured, broken and puggy core to 1475.7m. Orientation of ~80 degrees to CA for the focal point of fault - very distinct contact. Dark grey to cream, strongly altered - dominant Cb and Si phases. Pretty messed up rock, maybe a fine sediment - still fault effected. Pale grey to cream, deformed and silicified, Se altered, volcaniclastic - distinct foliation change apparent, around 20-30 degrees to CA now. Clasts that are visible are 4-30m in size and sub-angular to sub-rounded.								
F		FTZ														
HW		VBX														
HW		VBX							D1395757	0.0	0.0	0.0	0.38		1.7	
									D1395758	0.0	0.0	0.0	0.11		1.3	

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

ROSEBERY LITHOLOGY_VMS LOG

Hole ID: 402R



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Rosebery

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North Lake Rosebery

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RL: 450.5 mRL
CoordSys: MGA55 (GDA94)

Dip: -82.00
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Total Depth: 1511.7 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
HW		VBX						Pale grey to cream, deformed and silicified, Se altered, volcanoclastic - distinct foliation change apparent, around 20-30 degrees to CA now. Clasts that are visible are 4-30m in size and sub-angular to sub-rounded.	D1395759	0.0	0.0	0.0	0.02		1.4
									D1395760	0.0	0.0	0.0	0.10		1.3

▲ 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	

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