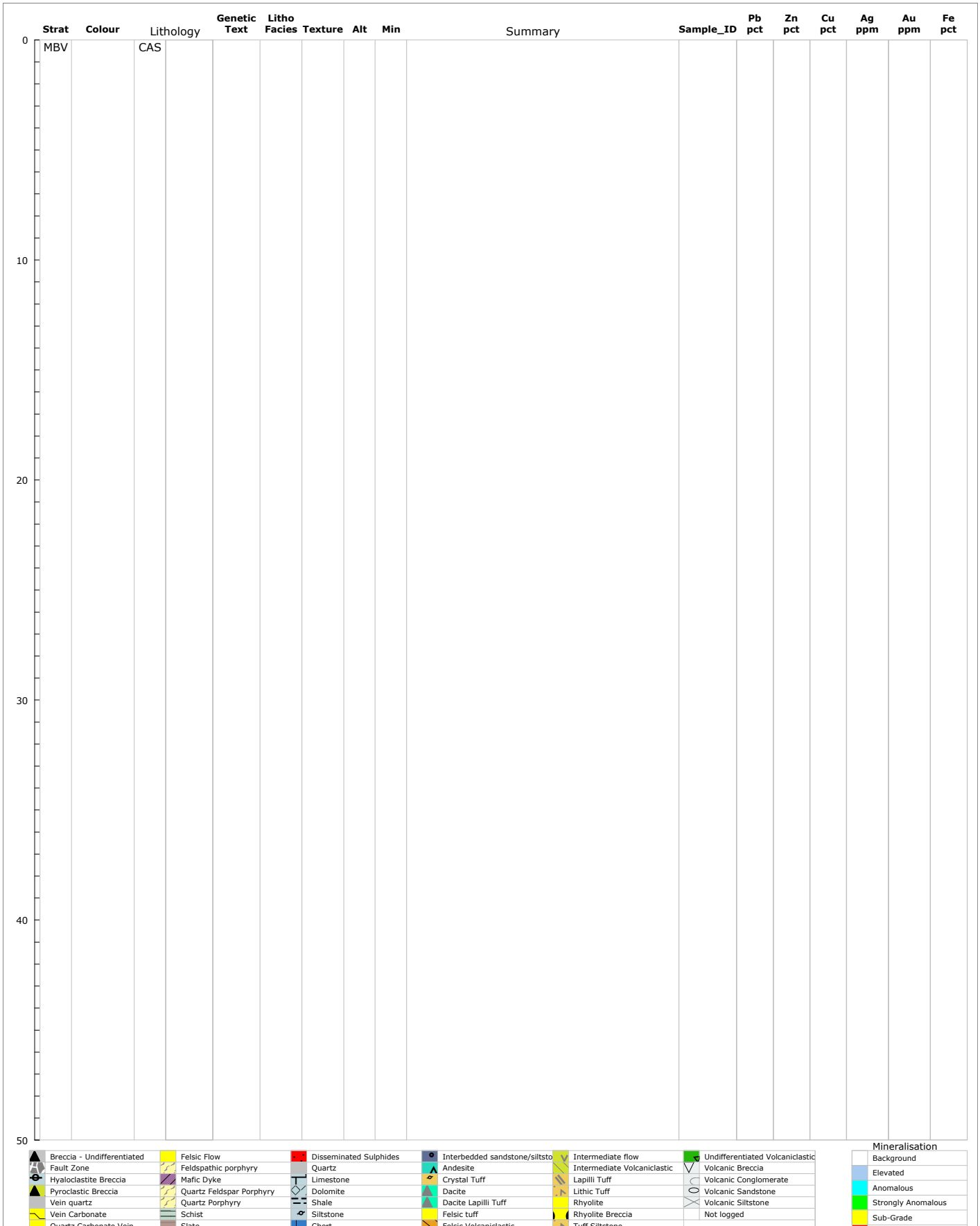
ROSEBERY LITHOLOGY_VMS LOG

Hole ID: 414R-D1

Project: ROS Rosebery

Prospect: NRL North Lake Rosebery

Northing:	5378203.8 mN	**Dip:**	-87.00
Easting:	379836.7 mE	**MAG_Azim:**	66.00
RL:	372.5 mRL	**Total Depth:**	1672.1 m
CoordSys:	MGA55 (GDA94)	**DrillCompany:**	BLY



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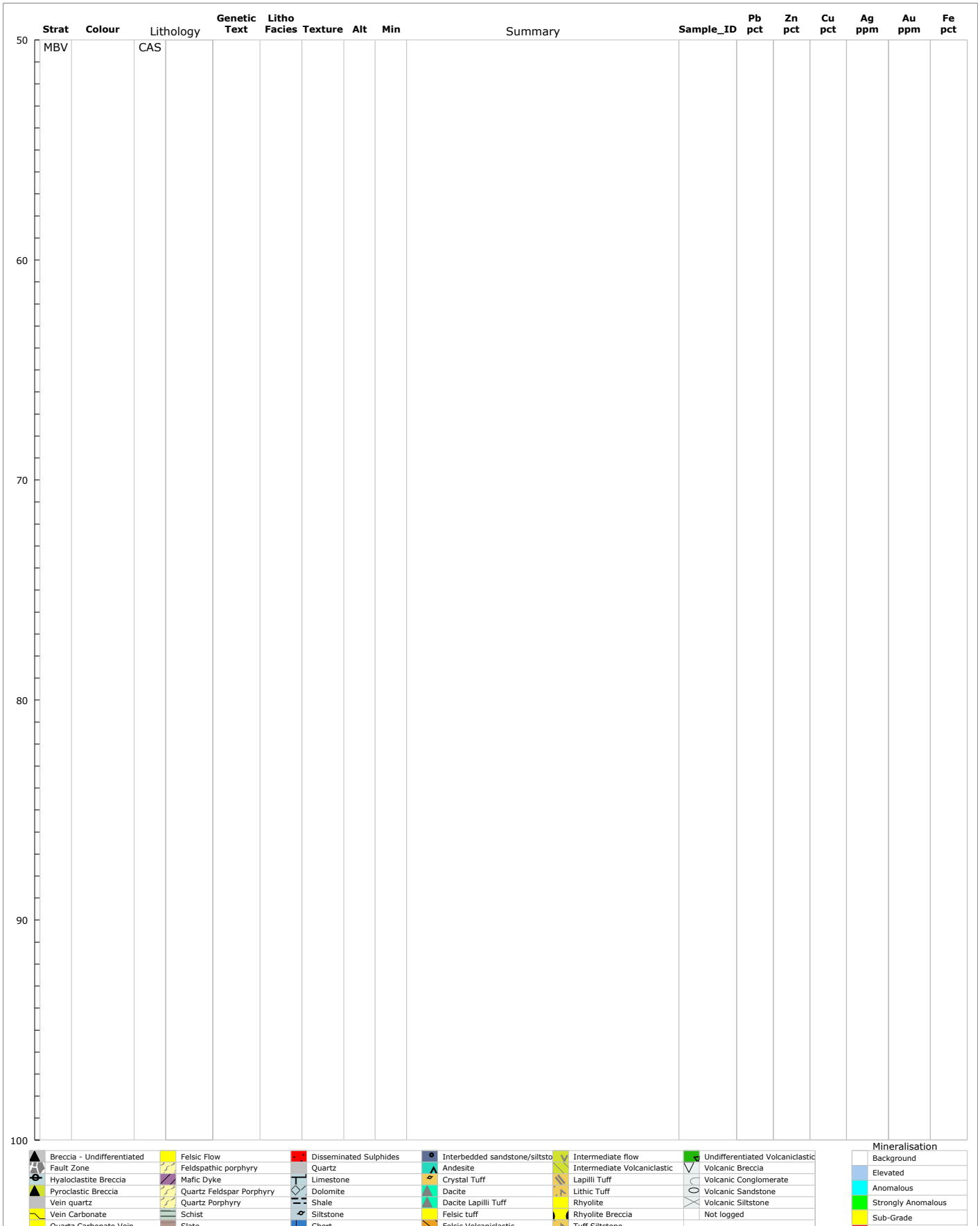

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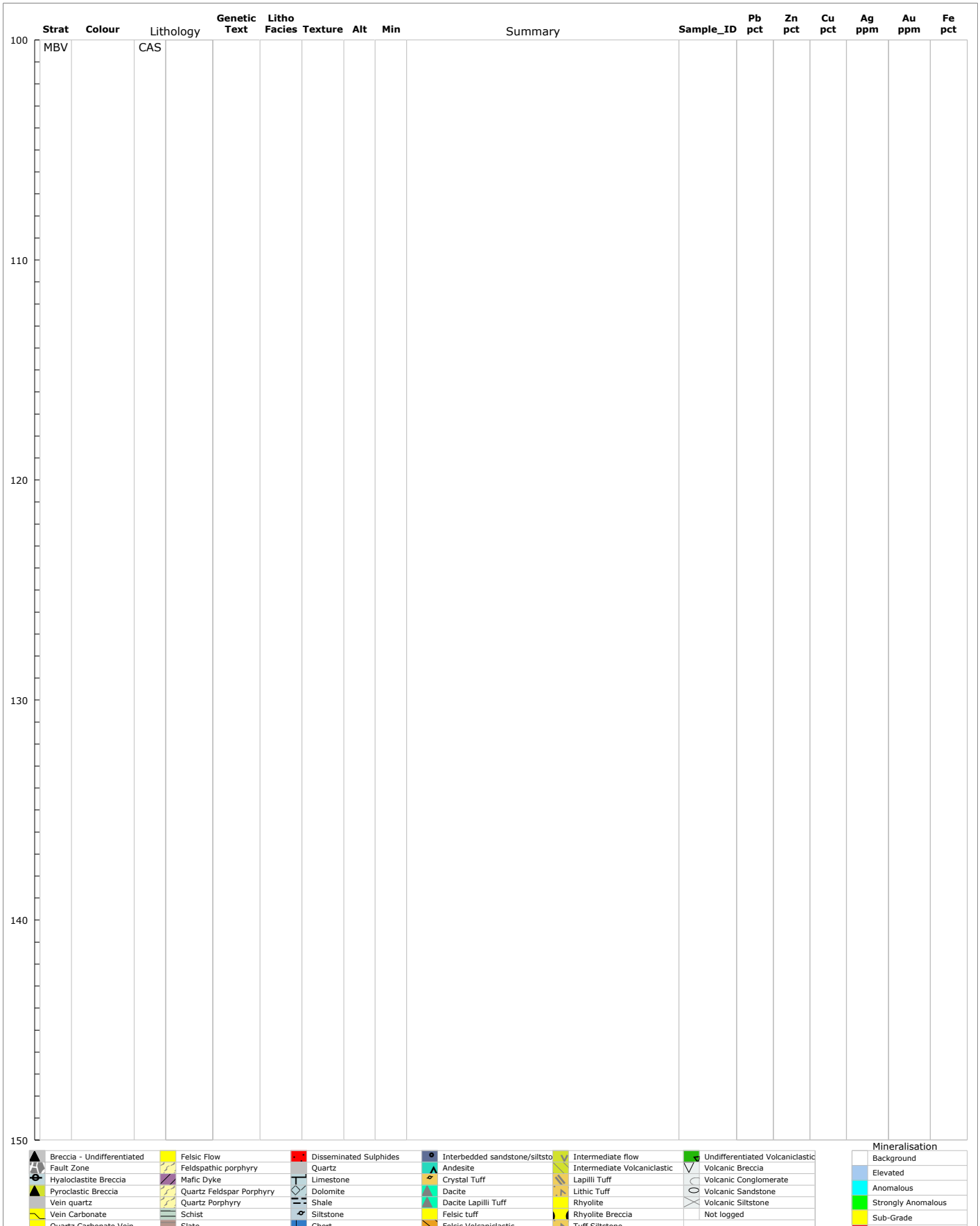

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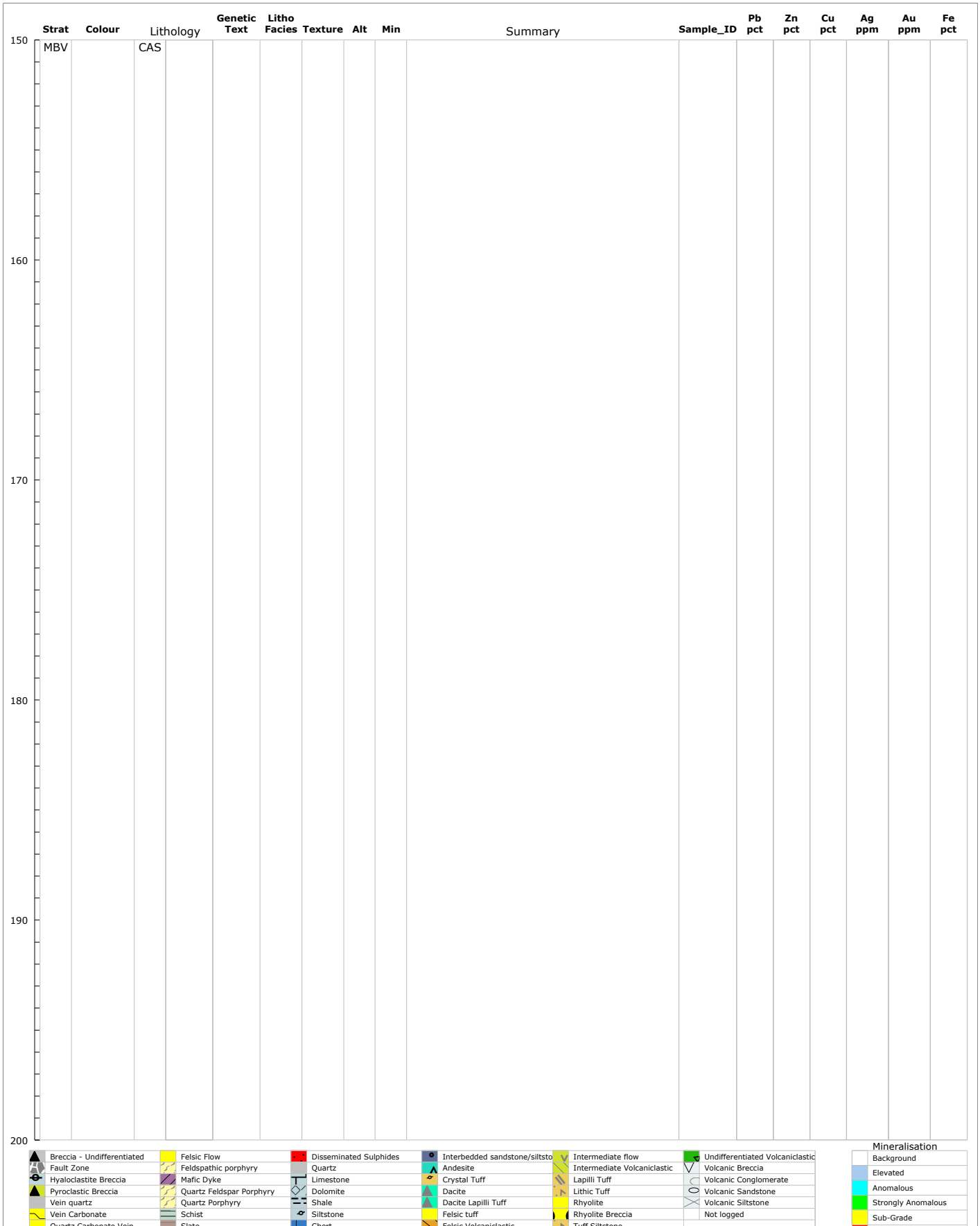

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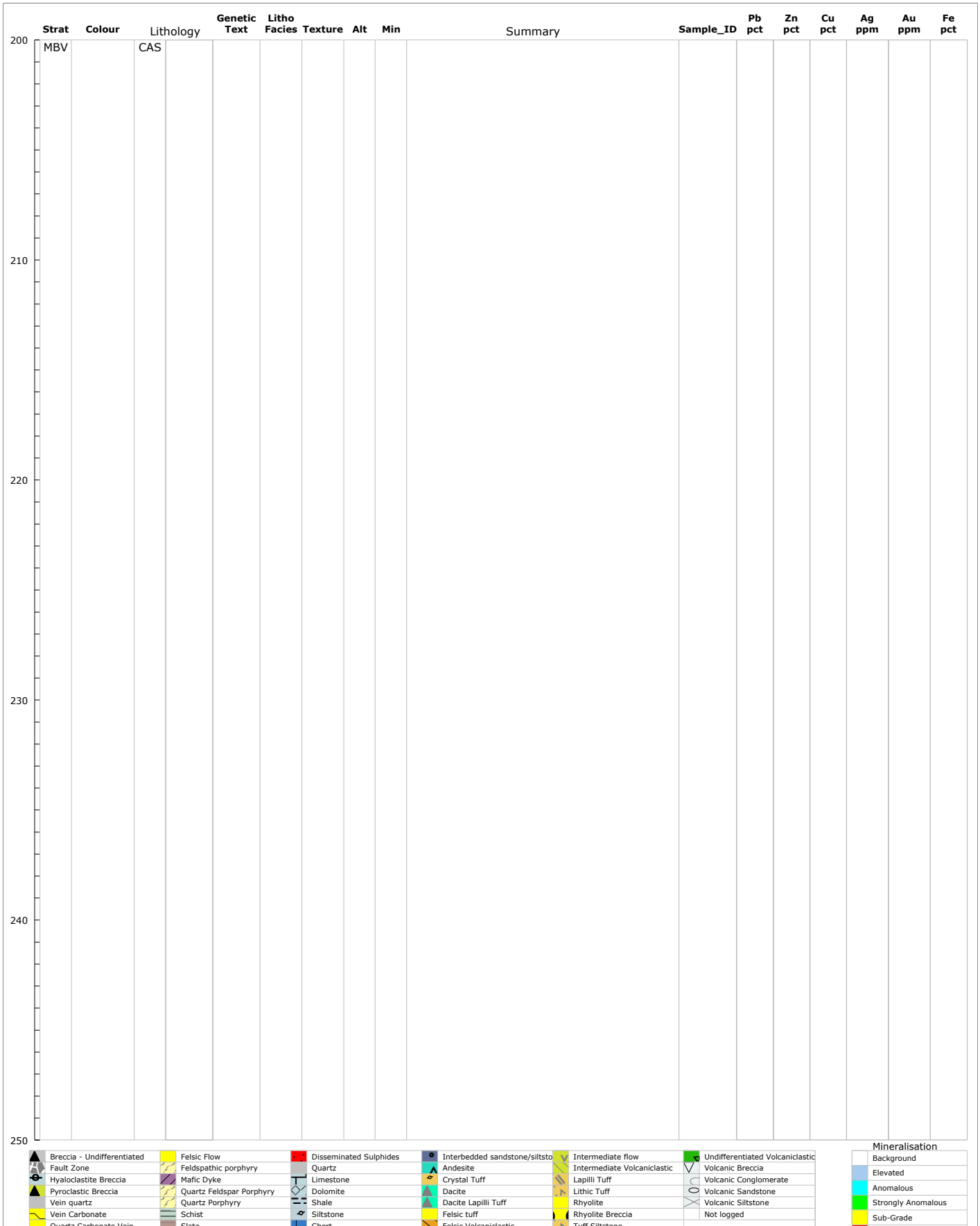

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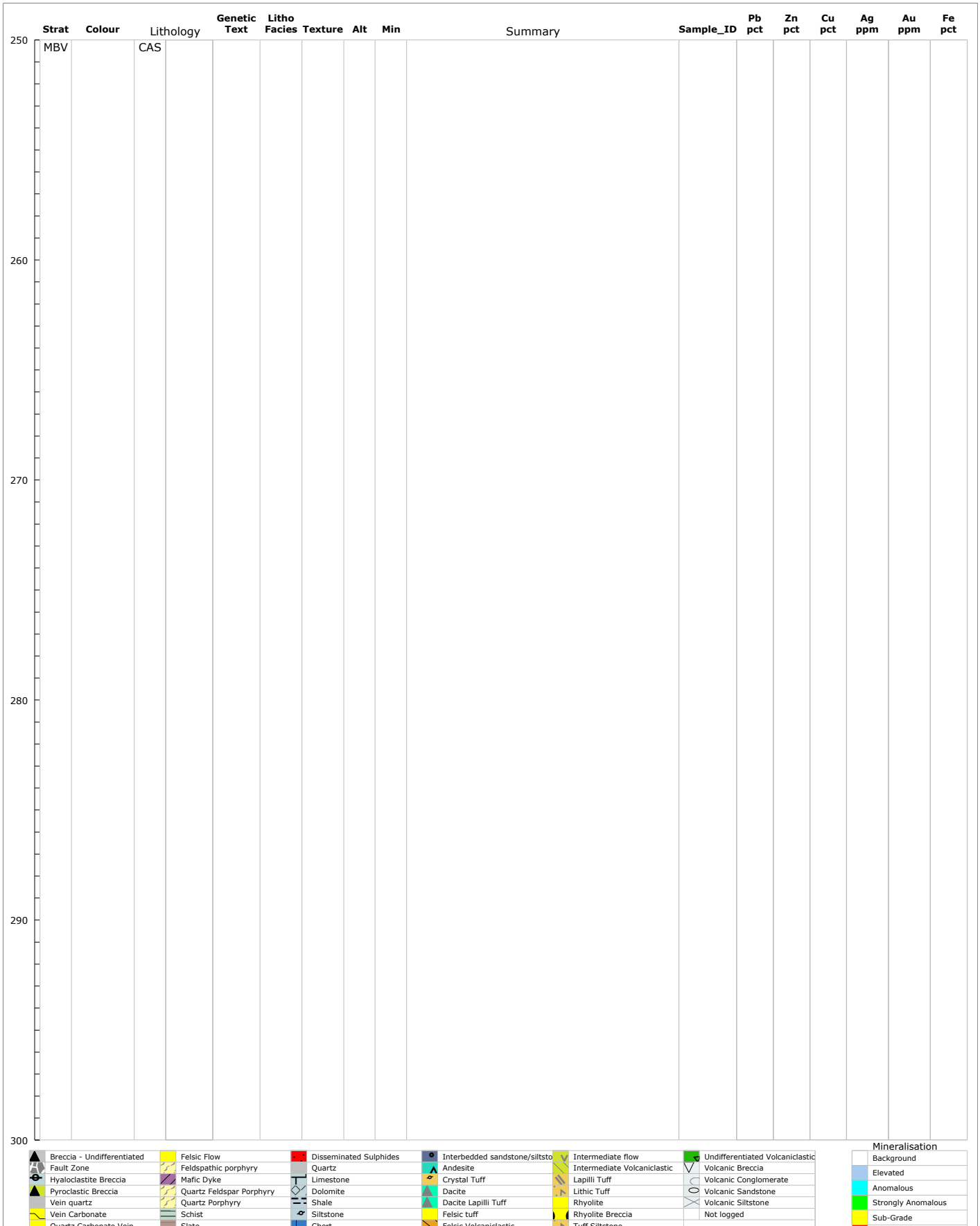

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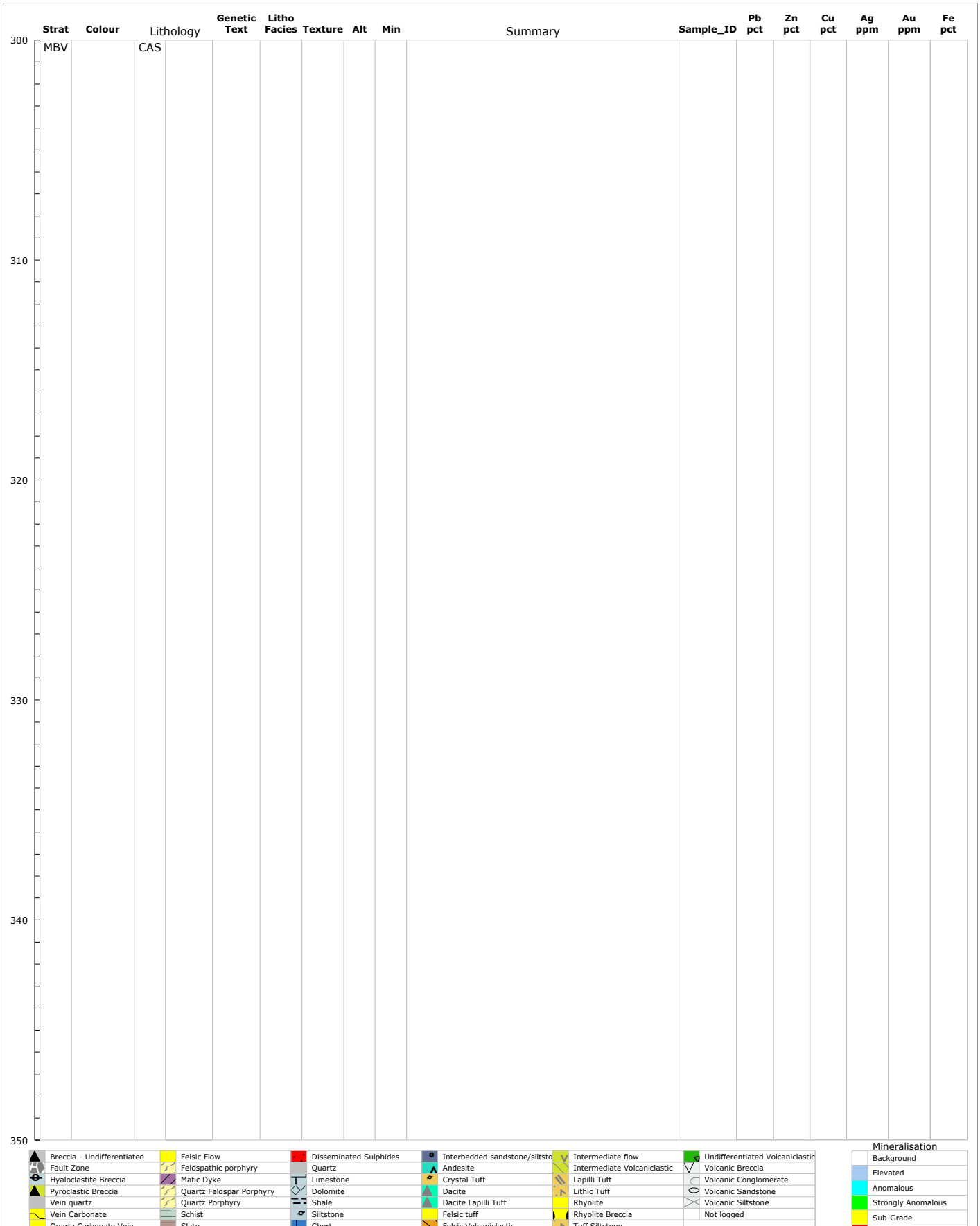

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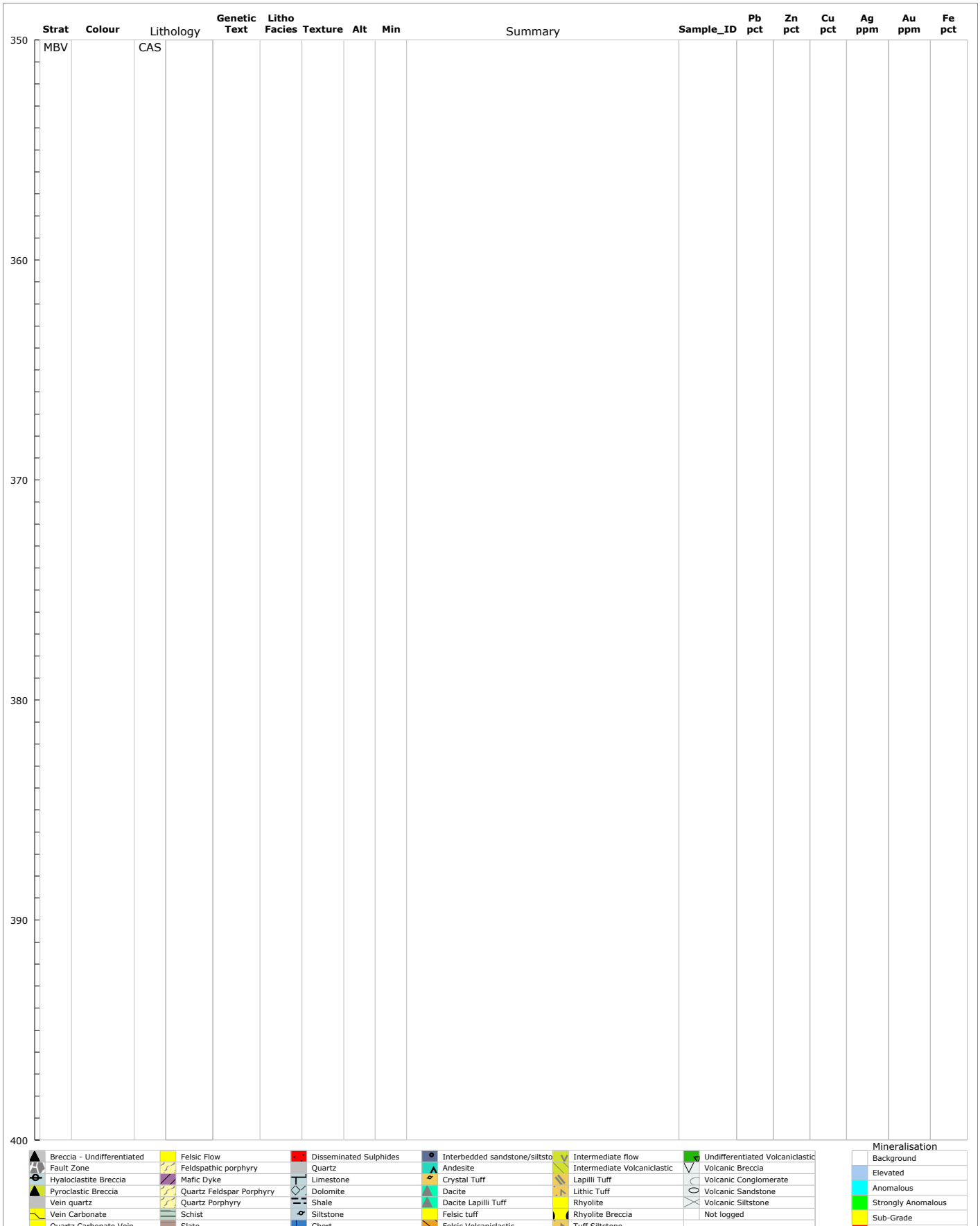

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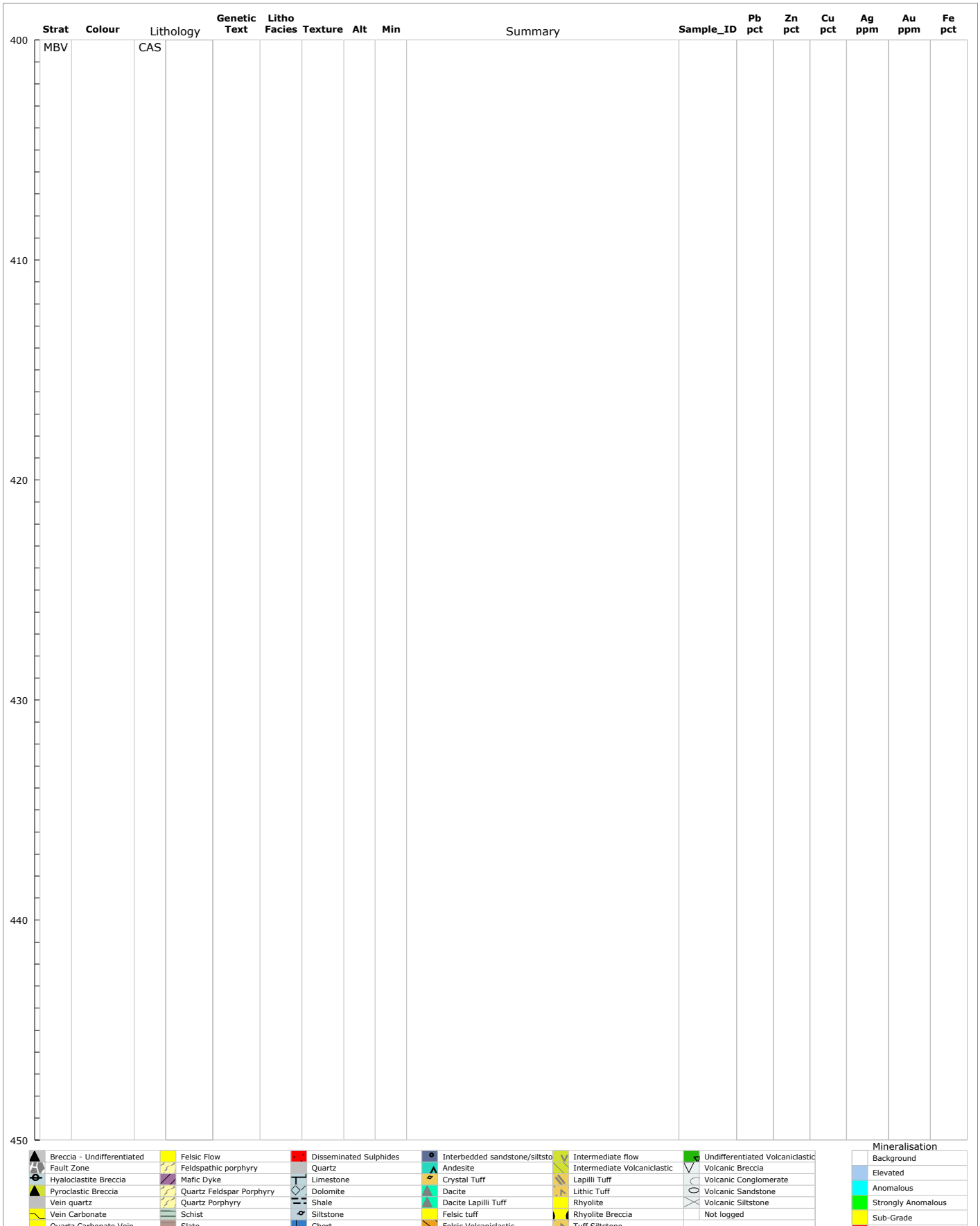

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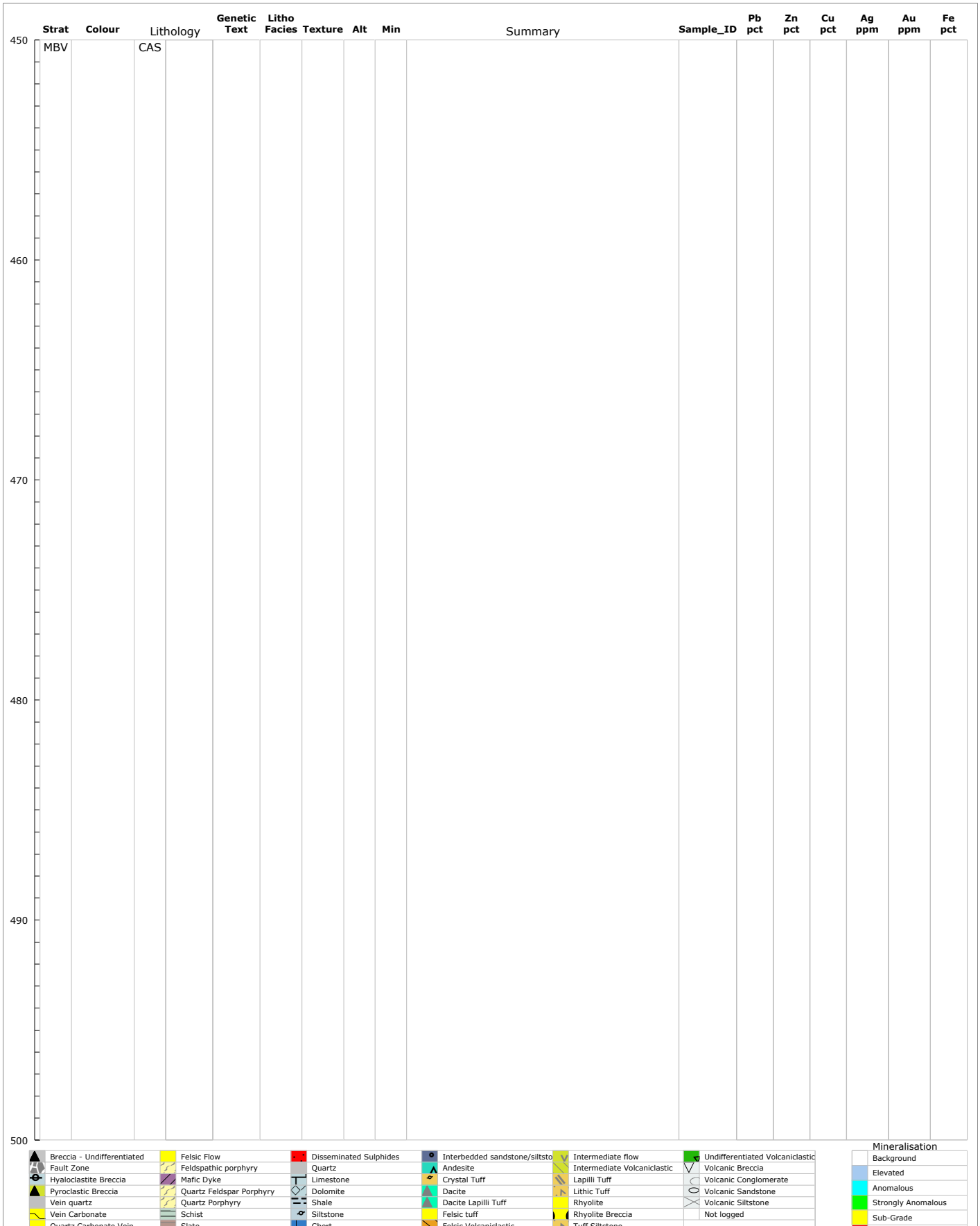

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Strat	Colour	Lithology	Genetic Text	Litho Facies	Texture	Alt	Min	Summary	Sample_ID	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm	Fe pct
MBV		CAS													
MBV	GRY-GRN	VBX		mas	pum cgr	ch cb		Massive, volcaniclastic pumice/dacite breccia, weakly graded. Possibly multiple flows. Areas of intense carb alteration. dacite clasts (upto 50cm) Frequent qtz-carb veining.							

500 510 520 530 540 550

Breccia - Undifferentiated
Fault Zone
Hyaloclastite Breccia
Pyroclastic Breccia
Vein quartz
Vein Carbonate
Felsic Flow
Feldspathic porphyry
Mafic Dyke
Quartz Feldspar Porphyry
Quartz Porphyry
Schist
Disseminated Sulphides
Quartz
Limestone
Dolomite
Shale
Siltstone
Interbedded sandstone/siltsto
Andesite
Crystal Tuff
Dacite
Dacite Lapilli Tuff
Felsic tuff
Intermediate flow
Intermediate Volcaniclastic
Lapilli Tuff
Lithic Tuff
Rhyolite
Rhyolite Breccia
Undifferentiated Volcaniclastic
Volcanic Breccia
Volcanic Conglomerate
Volcanic Sandstone
Volcanic Siltstone
Not logged

Mineralisation
Background
Elevated
Anomalous
Strongly Anomalous
Sub-Grade

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Vein quartz
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Mafic Dyke
Quartz Feldspar Porphyry
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Rhyolite Breccia
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600
610
620
630
640
650

Breccia - Undifferentiated
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Pyroclastic Breccia
Vein quartz
Vein Carbonate
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Rhyolite
Rhyolite Breccia
Undifferentiated Volcaniclastic
Volcanic Breccia
Volcanic Conglomerate
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670
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690
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MBV	GRY-GRN	VBX		mas	pum cgr	ch cb		Massive, volcaniclastic pumice/dacite breccia, weakly graded. Possibly multiple flows. Areas of intense carb alteration. dacite clasts (upto 50cm) Frequent qtz-carb veining.							
DK	GRN	IMK		mas	aph fgr	ch		Massive basalt dyke, end contact is diffuse with some interstitial country rock							
MBV	GRY-GRN	VBX		mas	pum cgr	ch cb		Massive, volcaniclastic pumice/dacite breccia, weakly graded. Frequent qtz-carb veining.							

700 710 720 730 740 750

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Vein Carbonate
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Mafic Dyke
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Rhyolite
Rhyolite Breccia
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Volcanic Conglomerate
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MBV	GRY-GRN	VBX		mas	pum cgr	ch cb		Massive, volcaniclastic pumice/dacite breccia, weakly graded. Frequent qtz-carb veining.							
DK	GRY	VDA		mas	por		po	Massive, weakly foliated Qtz dacite porphyry.							
MBV	GRN-GRY	VBX		mas	pum fia		po	Massive volcaniclastic pumice breccia,							
MBV	GRN-GRY	VSS		mas	fgr	ch cb	po	Massive to weakly graded Volcaniclastic sandstone. Disseminated po throughout is cleaved. (unit become coarse grained in last 1m.							

750 760 770 780 790 800

Breccia - Undifferentiated
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MBV	GRN-GRY	VSS		mas	fgr	ch cb	po	Massive to weakly graded Volcaniclastic sandstone. Disseminated po throughout is cleaved. (unit become coarse grained in last 1m.							
MBV	GRY-GRN	VMD		vtb	fgr	ch	po	Thinly laminated, slightly deformed , Volcaniclastic mudstone							
MBV	GRN-GRY	VBX		mas	pum fia		po	Massive volcaniclastic pumice breccia,							
MBV	GRN-GRY	VSS		mas	fgr	ch cb	po po	Massive to weakly graded Volcaniclastic sandstone. Strongly deformed in areas, Disseminated po throughout. Small qtz veinlets also host po.							

800 810 820 830 840 850

Breccia - Undifferentiated
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DK	GRN	IMK		mas	aph fgr	ch		Massive basalt dyke,
MBV	GRN-GRY	VSS		mas	pum	ch cb	py po	Massive to weakly graded, pumaceious Volcaniclastic sandstone.

Sample_ID	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm	Fe pct

850 860 870 880 890 900

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Pyroclastic Breccia
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Volcanic Breccia
Volcanic Conglomerate
Volcanic Sandstone
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DK	GRN	IMK		mas	aph	cb	py	Massive basalt dyke,							
MBV	GRN-GRY	VSS		mas	fgr pum	ch cb	py po	Massive to weakly graded, pumaceious Volcaniclastic sandstone.							
MBV	GRN-PNK	VDA		brc	abx fgr	ch ab cb	py py	Massive, Dacite auto breccia, variably altered, intensely veined.							

900 910 920 930 940 950

Breccia - Undifferentiated
Fault Zone
Hyaloclastite Breccia
Pyroclastic Breccia
Vein quartz
Vein Carbonate
Felsic Flow
Feldspathic porphyry
Mafic Dyke
Quartz Feldspar Porphyry
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Rhyolite Breccia
Undifferentiated Volcaniclastic
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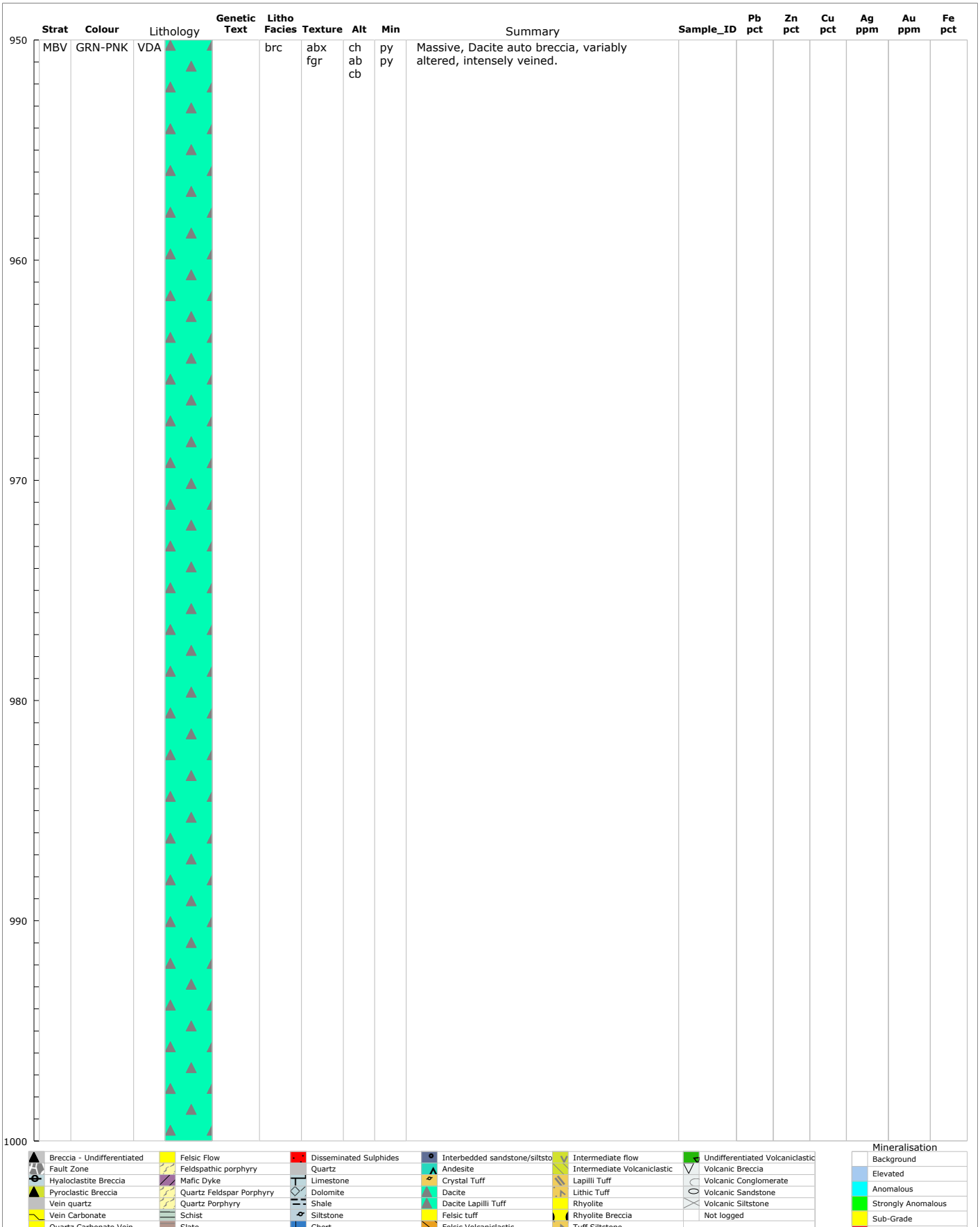
Project: ROS Rosebery

Prospect: NRL North Lake Rosebery

Northing:	5378203.8 mN	**Dip:**	-87.00
Easting:	379836.7 mE	**MAG_Azim:**	66.00
RL:	372.5 mRL	**Total Depth:**	1672.1 m
CoordSys:	MGA55 (GDA94)	**DrillCompany:**	BLY



ROSEBERY LITHOLOGY_VMS LOG

Hole ID: 414R-D1

Project: ROS Rosebery

Prospect: NRL North Lake Rosebery

Northing:	5378203.8 mN	**Dip:**	-87.00
Easting:	379836.7 mE	**MAG_Azim:**	66.00
RL:	372.5 mRL	**Total Depth:**	1672.1 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-PNK	VDA		brc	abx fgr	ch ab cb	py py	Massive, Dacite auto breccia, variably altered, intensely veined.							

1000
1010
1020
1030
1040
1050

Breccia - Undifferentiated
Fault Zone
Hyaloclastite Breccia
Pyroclastic Breccia
Vein quartz
Vein Carbonate
Felsic Flow
Feldspathic porphyry
Mafic Dyke
Quartz Feldspar Porphyry
Quartz Porphyry
Schist
Disseminated Sulphides
Quartz
Limestone
Dolomite
Shale
Siltstone
Interbedded sandstone/siltsto
Andesite
Crystal Tuff
Dacite
Dacite Lapilli Tuff
Felsic tuff
Intermediate flow
Intermediate Volcaniclastic
Lapilli Tuff
Lithic Tuff
Rhyolite
Rhyolite Breccia
Undifferentiated Volcaniclastic
Volcanic Breccia
Volcanic Conglomerate
Volcanic Sandstone
Volcanic Siltstone
Not logged

Mineralisation
Background
Elevated
Anomalous
Strongly Anomalous
Sub-Grade

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MBV	GRN-PNK	VDA		brc	abx fgr	ch ab cb	py py	Massive, Dacite auto breccia, variably altered, intensely veined.							

1050
1060
1070
1080
1090
1100

Breccia - Undifferentiated
Fault Zone
Hyaloclastite Breccia
Pyroclastic Breccia
Vein quartz
Vein Carbonate
Felsic Flow
Feldspathic porphyry
Mafic Dyke
Quartz Feldspar Porphyry
Quartz Porphyry
Schist
Disseminated Sulphides
Quartz
Limestone
Dolomite
Shale
Siltstone
Interbedded sandstone/siltsto
Andesite
Crystal Tuff
Dacite
Dacite Lapilli Tuff
Felsic tuff
Intermediate flow
Intermediate Volcaniclastic
Lapilli Tuff
Lithic Tuff
Rhyolite
Rhyolite Breccia
Undifferentiated Volcaniclastic
Volcanic Breccia
Volcanic Conglomerate
Volcanic Sandstone
Volcanic Siltstone
Not logged

Mineralisation
Background
Elevated
Anomalous
Strongly Anomalous
Sub-Grade

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RL:	372.5 mRL	**Total Depth:**	1672.1 m
CoordSys:	MGA55 (GDA94)	**DrillCompany:**	BLY

Strat	Colour	Lithology	Genetic Text	Litho Facies	Texture	Alt	Min	Summary
MBV	GRN-PNK	VDA		brc	abx fgr	ch ab cb	py py	Massive, Dacite auto breccia, variably altered, intensely veined.
DK	GRN	IMK		mas	aph fgr	ch		Massive basalt dyke,
MBV	GRN-PNK	VDA		brc	abx fgr	ch ab cb		Massive, Dacite auto breccia, variably altered,
MBV	PNK-GRN	VDA		brc	abx fgr	ab ch cb		Massive, Dacite auto breccia, variably altered with increased albite.

Sample_ID	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm	Fe pct

1100 1110 1120 1130 1140 1150

Breccia - Undifferentiated
Fault Zone
Hyaloclastite Breccia
Pyroclastic Breccia
Vein quartz
Vein Carbonate
Felsic Flow
Feldspathic porphyry
Mafic Dyke
Quartz Feldspar Porphyry
Quartz Porphyry
Schist
Disseminated Sulphides
Quartz
Limestone
Dolomite
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Andesite
Crystal Tuff
Dacite
Dacite Lapilli Tuff
Felsic tuff
Intermediate flow
Intermediate Volcaniclastic
Lapilli Tuff
Lithic Tuff
Rhyolite
Rhyolite Breccia
Undifferentiated Volcaniclastic
Volcanic Breccia
Volcanic Conglomerate
Volcanic Sandstone
Volcanic Siltstone
Not logged

Mineralisation
Background
Elevated
Anomalous
Strongly Anomalous
Sub-Grade

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Hole ID: 414R-D1

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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	PNK-GRN	VDA		brc	abx fgr	ab ch cb		Massive, Dacite auto breccia, variably altered with increased albite.							

1150
1160
1170
1180
1190
1200

Breccia - Undifferentiated
Fault Zone
Hyaloclastite Breccia
Pyroclastic Breccia
Vein quartz
Vein Carbonate
Felsic Flow
Feldspathic porphyry
Mafic Dyke
Quartz Feldspar Porphyry
Quartz Porphyry
Schist
Disseminated Sulphides
Quartz
Limestone
Dolomite
Shale
Siltstone
Interbedded sandstone/siltsto
Andesite
Crystal Tuff
Dacite
Dacite Lapilli Tuff
Felsic tuff
Intermediate flow
Intermediate Volcaniclastic
Lapilli Tuff
Lithic Tuff
Rhyolite
Rhyolite Breccia
Undifferentiated Volcaniclastic
Volcanic Breccia
Volcanic Conglomerate
Volcanic Sandstone
Volcanic Siltstone
Not logged

Mineralisation
Background
Elevated
Anomalous
Strongly Anomalous
Sub-Grade

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Hole ID: 414R-D1

Project: ROS Rosebery

Prospect: NRL North Lake Rosebery

Northing:	5378203.8 mN	**Dip:**	-87.00
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RL:	372.5 mRL	**Total Depth:**	1672.1 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	PNK-GRN	VDA		brc	abx fgr	ab ch cb		Massive, Dacite auto breccia, variably altered with increased albite.							
DK	GRN	IMK		mas	aph fgr	ch		Massive basalt dyke,							
MBV	PNK-GRN	VDA		brc	abx fgr	ab ch cb		Massive, Dacite auto breccia, variably altered with increased albite.	D1394794	0.0	0.0	0.0	0.19		4.4
F	CRM-GRN	FTZ		clv		cb ch		Shear zone, fully annealed, interpreted at Mt Black Fault							
HWTS	GRY-GRN	VBX		grd	mon xlt	ch cb si	po	Weakly graded, crystal rich sandstone. Common sub-rounded qtz crystals, Large shale rip ups at base of unit up to 50cm. Some minor qtz carb veining. Po in the shale clasts	D1394795	0.0	0.0	0.0	0.05		2.1
BS	BLK-GRY	VST		bed	sla	cb	sp po	Interbedded black shale with interstitial sandstone. siltstone beds. Heavily veined hosting red brown sph and po particularly at base.							

1200 1210 1220 1230 1240 1250

Breccia - Undifferentiated
Fault Zone
Hyaloclastite Breccia
Pyroclastic Breccia
Vein quartz
Vein Carbonate
Felsic Flow
Feldspathic porphyry
Mafic Dyke
Quartz Feldspar Porphyry
Quartz Porphyry
Schist
Disseminated Sulphides
Quartz
Limestone
Dolomite
Shale
Siltstone
Interbedded sandstone/siltsto
Andesite
Crystal Tuff
Dacite
Dacite Lapilli Tuff
Felsic tuff
Intermediate flow
Intermediate Volcaniclastic
Lapilli Tuff
Lithic Tuff
Rhyolite
Rhyolite Breccia
Undifferentiated Volcaniclastic
Volcanic Breccia
Volcanic Conglomerate
Volcanic Sandstone
Volcanic Siltstone
Not logged

Mineralisation
Background
Elevated
Anomalous
Strongly Anomalous
Sub-Grade

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Hole ID: 414R-D1

Project: ROS Rosebery

Prospect: NRL North Lake Rosebery

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RL:	372.5 mRL	**Total Depth:**	1672.1 m
CoordSys:	MGA55 (GDA94)	**DrillCompany:**	BLY

Strat	Colour	Lithology	Genetic Text	Litho Facies	Texture	Alt	Min	Summary
BS	BLK-GRY	VST		bed	sla	cb	sp po	Interbedded black shale with interstitial sandstone. siltstone beds. Heavily veined hosting red brown sph and po particularly at base.
HW	GRY-GRN	VSS		mas	qph xlt	ch cb	py	Massive, medium grained, Volcanic sandstone. Minor grading. Trace py at base of unit.

Sample_ID	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm	Fe pct
D1394796	0.0	0.0	0.0	0.04		1.7
D1394797	0.0	0.0	0.0	0.31		4.0
D1394798	0.0	0.0	0.0	0.12		2.5
D1394799	0.0	0.0	0.0	0.10		2.0
D1394800	0.0	0.0	0.0	0.05		2.6
D1394901	0.0	0.0	0.0	0.03		2.2

1250 1260 1270 1280 1290 1300

Breccia - Undifferentiated
Fault Zone
Hyaloclastite Breccia
Pyroclastic Breccia
Vein quartz
Vein Carbonate
Felsic Flow
Feldspathic porphyry
Mafic Dyke
Quartz Feldspar Porphyry
Quartz Porphyry
Schist
Disseminated Sulphides
Quartz
Limestone
Dolomite
Shale
Siltstone
Interbedded sandstone/siltsto
Andesite
Crystal Tuff
Dacite
Dacite Lapilli Tuff
Felsic tuff
Intermediate flow
Intermediate Volcaniclastic
Lapilli Tuff
Lithic Tuff
Rhyolite
Rhyolite Breccia
Undifferentiated Volcaniclastic
Volcanic Breccia
Volcanic Conglomerate
Volcanic Sandstone
Volcanic Siltstone
Not logged

Mineralisation
Background
Elevated
Anomalous
Strongly Anomalous
Sub-Grade

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Strat	Colour	Lithology	Genetic Text	Litho Facies	Texture	Alt	Min	Summary
HW	GRY-GRN	VSS		mas	qph xlt	ch cb	py	Massive, medium grained, Volcanic sandstone. Minor grading. Trace py at base of unit.
HWTS	GRY-GRN	VSB		itb	qph	ch cb si	sp	Variable unit, Brecciated to interbedded. Medium-coarse sandstone matrix. Trace disseminated red-brown sph
BS	BLK-GRY	VST		bed	sla	cb		Interbedded black shale with interstial siltstone beds with minor sandstone. Weakly graded, common planar qtz-carb veins in mudstone.
HWTS	GRY-GRN	VBX		grd	qph cgr	ch cb se	sp	Weakly graded, crystal rich epiclastic sandstone breccia. Common sub-rounded qtz crystals which are very coarse grained at base, Clast include shale, quartzite and quarts phyric rhyolite up to 20cm . Grades up to medium sandstone. Sphalerite is most common in the matrix at the base. Some minor qtz carb veining.

Sample_ID	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm	Fe pct
D1394902	0.0	0.0	0.0	0.12		1.9
D1394903	0.0	0.0	0.0	0.04		1.4
D1394904	0.0	0.0	0.0	0.02		1.4
D1394905	0.0	0.0	0.0	0.02		2.6

1300 1310 1320 1330 1340 1350

Breccia - Undifferentiated
Fault Zone
Hyaloclastite Breccia
Pyroclastic Breccia
Vein quartz
Vein Carbonate
Felsic Flow
Feldspathic porphyry
Mafic Dyke
Quartz Feldspar Porphyry
Quartz Porphyry
Schist
Disseminated Sulphides
Quartz
Limestone
Dolomite
Shale
Siltstone
Interbedded sandstone/siltsto
Andesite
Crystal Tuff
Dacite
Dacite Lapilli Tuff
Felsic tuff
Intermediate flow
Intermediate Volcaniclastic
Lapilli Tuff
Lithic Tuff
Rhyolite
Rhyolite Breccia
Undifferentiated Volcaniclastic
Volcanic Breccia
Volcanic Conglomerate
Volcanic Sandstone
Volcanic Siltstone
Not logged

Mineralisation
Background
Elevated
Anomalous
Strongly Anomalous
Sub-Grade

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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
HWTS	GRY-GRN	VBX		grd	qph cgr	ch cb se	sp	Weakly graded, crystal rich epiclastic sandstone breccia. Common sub-rounded qtz crystals which are very coarse grained at base, Clast include shale, quartzite and quarts phyric rhyolite up to 20cm . Grades up to medium sandstone. Sphalerite is most common in the matrix at the base. Some minor qtz carb veining.	D1394906	0.0	0.0	0.0	0.04		1.6
									D1394907	0.0	0.0	0.0	0.02		1.6
HWTS	GRY-GRN	VBX		grd	qph	ch cb se	sp	Weakly graded, crystal rich epiclastic sandstone breccia. Common sub-rounded qtz crystals which are very coarse grained at base, angular shale rip ups at base and common quartzite clasts. Red-brown sph in the matrix.	D1394908	0.0	0.0	0.0	0.15		1.5
									D1394808	0.0	0.0	0.0	2.00	0.03	3.0
									D1394810	0.0	0.1	0.0	1.00	-0.01	1.6
									D1394811	0.0	0.1	0.0	1.00	-0.01	1.7
									D1394812	0.0	0.1	0.0	1.00	-0.01	1.5
BS	BLK-GRY	VST		itb		ch se si	py po	Interbedded shale/siltstone, contacts can be sharp or graded. Intense planar veining in shale.	D1394813	0.0	0.1	0.0	1.00	-0.01	1.9
									D1394909	0.0	0.0	0.0	0.14		0.8
HWTS	GRY-GRN	VSS		mas		ch se si	po po	Medium grained siliceous sandstone (possible a dacite as top contact may be peperitic) trace disseminated blebs of po/py throughout.							
HO	GRY	VSL		itb		ch si	po py	Weakly bedded, grey siltstone, trace po/py in veinlets.							
HO	GRY-GRN	VSL		itb		ch se si	sp py	Weakly graded, minor cherty areas, red-brown sph in veinlets and cavity fill.	D1394910	0.0	0.0	0.0	0.23		2.5
									D1394814	0.0	0.0	0.0	1.00	-0.01	1.9
									D1394815	0.1	0.1	0.0	3.00	-0.01	2.0
									D1394816	0.0	0.0	0.0	-1.00	-0.01	1.7
									D1394817	0.0	0.0	0.0	-1.00	-0.01	2.1
									D1394818	0.0	0.0	0.0	-1.00	-0.01	1.8
									D1394819	0.0	0.0	0.0	1.00	-0.01	1.4
									D1394820	0.0	0.0	0.0	-1.00	-0.01	1.4
									D1394821	0.0	0.1	0.0	-1.00	-0.01	1.6
									D1394822	0.0	0.3	0.0	-1.00	-0.01	1.2
									D1394823	0.0	0.1	0.0	-1.00	-0.01	1.3
HW	GRN-WHT	VSS		brc	xlt pum	ch si se	py sp	Variably altered unit. Strongly cleaved in areas. Minor qtz crystals with frequent se-ch altered fiamme. Could possibly be a FW equivalent.	D1394824	0.1	0.1	0.0	-1.00	-0.01	1.4
									D1394825	0.0	0.0	0.0	-1.00	-0.01	1.4

Breccia - Undifferentiated; Fault Zone; Hyaloclastite Breccia; Pyroclastic Breccia; Vein quartz; Vein Carbonate; Felsic Flow; Feldspathic porphyry; Mafic Dyke; Quartz Feldspar Porphyry; Quartz Porphyry; Schist; Disseminated Sulphides; Quartz; Limestone; Dolomite; Shale; Siltstone; Interbedded sandstone/siltsto; Andesite; Crystal Tuff; Dacite; Dacite Lapilli Tuff; Felsic tuff; Intermediate flow; Intermediate Volcaniclastic; Lapilli Tuff; Lithic Tuff; Rhyolite; Rhyolite Breccia; Undifferentiated Volcaniclastic; Volcanic Breccia; Volcanic Conglomerate; Volcanic Sandstone; Volcanic Siltstone; Not logged

Mineralisation: Background; Elevated; Anomalous; Strongly Anomalous; Sub-Grade

ROSEBERY LITHOLOGY_VMS LOG

Hole ID: 414R-D1

Project: ROS Rosebery

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Strat	Colour	Lithology	Genetic Text	Litho Facies	Texture	Alt	Min	Summary
HW	GRN-WHT	VSS		brc	xlt pum	ch si se	py sp	Variably altered unit. Strongly cleaved in areas. Minor qtz crystals with frequent se-ch altered fiamme. Could possibly be a FW equivalent.
HW	GRN	VBX		mas	xlt pum	ch se si		Massive, crystal rich epiclastic sandstone breccia. Common sub-rounded qtz crystals which are very coarse grained, minor siliceous clasts.
HW	GRY-GRN	VSS		mas	xlt pum	ch se si		Massive, crystal rich epiclastic sandstone. Common medium sub-rounded qtz crystals with minor subangular fsp. Probably fine grained top of sed unit below.
DK	GRY	IFK		mas	fgr	si	sp	
HWTS	GRY-GRN	VBX		grd	xlt pum	ch se si		Small fine grained felsic dyke. (could be a siltstone)
								Massive, crystal rich epiclastic sandstone breccia. Common sub-rounded qtz crystals which are very coarse grained, minor siliceous clasts up to 5cm.
								Medium-fine grained sandstone. Sph is washed through. End of unit is more siliceous and barren.
						si		Massive, crystal rich epiclastic sandstone breccia. Common sub-rounded qtz crystals and angular fsp, common fsp phyric fiamme, frequent siliceous clasts up to 5cm.
HWTS	GRY-RED	VSS		itb	fgr	ch si se	sp	
HW	GRY-GRN	VBX		grd	pum		sp	

Sample_ID	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm	Fe pct
D1394911	0.0	0.0	0.0	0.15		1.2
D1394912	0.0	0.0	0.0	0.08		1.2
D1394913	0.0	0.0	0.0	0.02		0.8
D1394914	0.0	0.0	0.0	0.25		1.7
D1394915	0.0	0.0	0.0	7.48		2.2
D1394826	0.0	0.0	0.0	-1.00	-0.01	1.4
D1394827	0.0	0.5	0.0	-1.00	-0.01	2.0
D1394828	0.0	0.1	0.0	-1.00	-0.01	2.1
D1394829	0.0	0.1	0.0	-1.00	-0.01	1.8
D1394830	0.0	0.0	0.0	-1.00	-0.01	1.7
D1394916	0.0	0.0	0.0	0.07		1.9

Breccia - Undifferentiated
Fault Zone
Hyaloclastite Breccia
Pyroclastic Breccia
Vein quartz
Vein Carbonate
Felsic Flow
Feldspathic porphyry
Mafic Dyke
Quartz Feldspar Porphyry
Quartz Porphyry
Schist
Disseminated Sulphides
Quartz
Limestone
Dolomite
Shale
Siltstone
Interbedded sandstone/siltsto
Andesite
Crystal Tuff
Dacite
Dacite Lapilli Tuff
Felsic tuff
Intermediate flow
Intermediate Volcaniclastic
Lapilli Tuff
Lithic Tuff
Rhyolite
Rhyolite Breccia
Undifferentiated Volcaniclastic
Volcanic Breccia
Volcanic Conglomerate
Volcanic Sandstone
Volcanic Siltstone
Not logged

Mineralisation
Background
Elevated
Anomalous
Strongly Anomalous
Sub-Grade

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Hole ID: 414R-D1

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Northing:	5378203.8 mN	**Dip:**	-87.00
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Strat	Colour	Lithology	Genetic Text	Litho Facies	Texture	Alt	Min	Summary
HW	GRY-GRN	VBX		grd	pum	ch si se	sp	Massive, crystal rich epiclastic sandstone breccia. Common sub-rounded qtz crystals and angular fsp, common fsp phyric fiamme, frequent siliceous clasts up to 5cm.
HW	GRY-GRN	VBX		grd	pum	ch si se		Massive, crystal rich epiclastic sandstone breccia. Common sub-rounded qtz crystals and angular fsp, common fsp phyric fiamme,
HW	GRY-GRN	VBX		grd	pum	ch si se		Massive, crystal rich epiclastic sandstone breccia. Common sub-rounded qtz crystals and angular fsp, common fsp phyric fiamme,
F	GRY-GRN	FTZ		mas		to		Rosebery fault zone, tourmaline altered pug. Core is very broken.
HW	GRN-WHT	VBX		mas	fol pum	se si	py	Massive, crystal rich pumicious breccia, Coarse grained and clast rich in crystal rich fine matrix. strongly silicified and sericite altered. Qtz crystal rich (0.5mm) with minor small siliceous clasts.

Sample_ID	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm	Fe pct
D1394830	0.0	0.0	0.0	-1.00	-0.01	1.7
D1394916	0.0	0.0	0.0	0.07		1.9
D1394831	0.0	0.1	0.0	-1.00	-0.01	1.4
D1394832	0.0	0.1	0.0	-1.00	-0.01	1.4
D1394833	0.0	0.1	0.0	-1.00	-0.01	1.2
D1394834	0.0	0.1	0.0	-1.00	-0.01	1.3
D1394835	0.0	0.1	0.0	1.00	-0.01	1.4
D1394836	0.0	0.1	0.0	1.00	-0.01	1.6
D1394837	0.0	0.2	0.0	1.00	0.01	1.8
D1394839	0.0	0.2	0.0	1.00	0.01	2.0
D1394840	0.0	0.2	0.0	1.00	-0.01	2.0
D1394917	0.0	0.0	0.0	0.09		1.6
D1394841	0.0	0.1	0.0	1.00	-0.01	1.7
D1394842	0.0	0.1	0.0	1.00	-0.01	1.7
D1394843	0.0	0.0	0.0	1.00	0.01	1.9
D1394844	0.0	0.1	0.0	1.00	-0.01	1.4
D1394845	0.0	0.1	0.0	-1.00	-0.01	1.2
D1394846	0.0	0.1	0.0	1.00	-0.01	1.1
D1394847	0.0	0.0	0.0	-1.00	0.01	1.2
D1394918	0.0	0.0	0.0	0.84		2.5
D1394919	0.5	0.6	0.0	8.86		4.4
D1394920	0.0	0.0	0.0	0.06		1.4

Breccia - Undifferentiated
Fault Zone
Hyaloclastite Breccia
Pyroclastic Breccia
Vein quartz
Vein Carbonate
Felsic Flow
Feldspathic porphyry
Mafic Dyke
Quartz Feldspar Porphyry
Quartz Porphyry
Schist
Disseminated Sulphides
Quartz
Limestone
Dolomite
Shale
Siltstone
Interbedded sandstone/siltsto
Andesite
Crystal Tuff
Dacite
Dacite Lapilli Tuff
Felsic tuff
Intermediate flow
Intermediate Volcaniclastic
Lapilli Tuff
Lithic Tuff
Rhyolite
Rhyolite Breccia
Undifferentiated Volcaniclastic
Volcanic Breccia
Volcanic Conglomerate
Volcanic Sandstone
Volcanic Siltstone
Not logged

Mineralisation
Background
Elevated
Anomalous
Strongly Anomalous
Sub-Grade

ROSEBERY LITHOLOGY_VMS LOG

Hole ID: 414R-D1

Project: ROS Rosebery

Prospect: NRL North Lake Rosebery

Northing:	5378203.8 mN	**Dip:**	-87.00
Easting:	379836.7 mE	**MAG_Azim:**	66.00
RL:	372.5 mRL	**Total Depth:**	1672.1 m
CoordSys:	MGA55 (GDA94)	**DrillCompany:**	BLY

Strat	Colour	Lithology	Genetic Text	Litho Facies	Texture	Alt	Min	Summary
HW	GRN-WHT	VBX		mas	fol pum	se si	py	Massive, crystal rich pumicious breccia, Coarse grained and clast rich in crystal rich fine matrix. strongly silicified and sericite altered. Qtz crystal rich (0.5mm) with minor small siliceous clasts.
HW	GRY-GRN	VBX		mas	fol pum	ch si	py	Massive, foliated, pumicious breccia, clasts are smaller, angular and chl altered with no crystals, scattered through a fine siltstone matrix. Very fine grained disseminated py throughout which locally can be +50%. (e.g 1545.3m) Boundary is slightly gradational between units.

Sample_ID	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm	Fe pct
D1394921	0.0	0.0	0.0	0.03		0.8
D1394922	0.0	0.0	0.0	0.15		1.3
D1394923	0.0	0.0	0.0	0.30		2.9
D1394924	0.0	0.0	0.0	0.05		0.9
D1394925	0.0	0.0	0.0	0.16		0.8

1500 1510 1520 1530 1540 1550

Breccia - Undifferentiated
Fault Zone
Hyaloclastite Breccia
Pyroclastic Breccia
Vein quartz
Vein Carbonate
Felsic Flow
Feldspathic porphyry
Mafic Dyke
Quartz Feldspar Porphyry
Quartz Porphyry
Schist
Disseminated Sulphides
Quartz
Limestone
Dolomite
Shale
Siltstone
Interbedded sandstone/siltsto
Andesite
Crystal Tuff
Dacite
Dacite Lapilli Tuff
Felsic tuff
Intermediate flow
Intermediate Volcaniclastic
Lapilli Tuff
Lithic Tuff
Rhyolite
Rhyolite Breccia
Undifferentiated Volcaniclastic
Volcanic Breccia
Volcanic Conglomerate
Volcanic Sandstone
Volcanic Siltstone
Not logged

Mineralisation
Background
Elevated
Anomalous
Strongly Anomalous
Sub-Grade

ROSEBERY LITHOLOGY_VMS LOG

Hole ID: 414R-D1

Project: ROS Rosery

Prospect: NRL North Lake Rosebery

Northing:	5378203.8 mN	**Dip:**	-87.00
Easting:	379836.7 mE	**MAG_Azim:**	66.00
RL:	372.5 mRL	**Total Depth:**	1672.1 m
CoordSys:	MGA55 (GDA94)	**DrillCompany:**	BLY

Strat	Colour	Lithology	Genetic Text	Litho Facies	Texture	Alt	Min	Summary
HW	GRY-GRN	VBX		mas	fol pum	ch si	py	Massive, foliated, pumicious breccia, clasts are smaller, angular and chl altered with no crystals, scattered through a fine siltstone matrix. Very fine grained disseminated py throughout which locally can be +50%. (e.g 1545.3m) Boundary is slightly gradational between units.
HW	GRY-GRN	VSL		bnd	fol fgr	ch se si		Massive-diffusely bedded, Volcaniclastic siltstone. Banded chl-ser alteration. Diffuse contacts. (pretty much same as units above and below with no clasts).
HW	GRY-GRN	VBX		mas	fol pum	ch si	py	Massive, foliated, pumicious breccia, clasts are small, angular and chl altered with no crystals, scattered through a fine siltstone matrix. Very fine grained disseminated py, sometimes replaces chl altered whisps. Last 1m is py rich (+50%). Lower boundary looks interfingered.
HW	GRN-GRY	VSS		mas	fol	se si ch	py	Massive, foliated Volcaniclastic sandstone, Medium grained, qtz/fsp? Rich. Banded ser alteration with associated fine grained py. Lower contact is sharp.
HW	GRY-GRN	VBX		mas	fol pum	ch si	py	Massive, foliated, pumicious breccia, clasts are small, angular and chl altered with no crystals, scattered through a fine siltstone matrix. Very fine grained disseminated py, sometimes replaces chl altered whisps. Lower boundary is sharp against barite alteration.
					fol	se si	sp ga	Massive to weakly banded, Volcaniclastic sandstone, blotchy ba-ser-chl-si alteration. Disseminated to whispy banded cream sph, ga and py. First 10cm is high grade.
HW	GRY-GRN	VSS		mas	fol cgr	se si	sp ga	Massive to weakly banded, Volcaniclastic sandstone, blotchy ser-chl-si-ba alteration (ba is fading out). Whispy stringers of honey sph, ga and py.
HW	GRY-GRN	VSS		mas	fol cgr	se si	sp ga	

Sample_ID	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm	Fe pct
D1394926	0.0	0.0	0.0	0.33		1.4
D1394927	0.0	0.0	0.0	0.14		1.1
D1394928	0.0	0.0	0.0	0.20		1.1
D1394929	0.0	0.0	0.0	0.11		1.3
D1394930	0.0	0.0	0.0	0.37		1.3
D1394458	0.0	0.0	0.0	1.00	-0.01	1.4
D1394459	0.0	0.0	0.0	1.00	0.02	1.9
D1394460	5.3	11.6	0.3	321.00	5.00	0.8
D1394461	0.7	1.5	0.0	182.00	1.55	0.5
D1394462	0.3	0.5	0.0	69.00	0.92	1.2
D1394464	0.0	0.0	0.0	9.00	0.04	1.6

Breccia - Undifferentiated; Fault Zone; Hyaloclastite Breccia; Pyroclastic Breccia; Vein quartz; Vein Carbonate; Felsic Flow; Feldspathic porphyry; Mafic Dyke; Quartz Feldspar Porphyry; Quartz Porphyry; Schist; Disseminated Sulphides; Quartz; Limestone; Dolomite; Shale; Siltstone; Interbedded sandstone/siltsto; Andesite; Crystal Tuff; Dacite; Dacite Lapilli Tuff; Felsic tuff; Intermediate flow; Intermediate Volcaniclastic; Lapilli Tuff; Lithic Tuff; Rhyolite; Rhyolite Breccia; Undifferentiated Volcaniclastic; Volcanic Breccia; Volcanic Conglomerate; Volcanic Sandstone; Volcanic Siltstone; Not logged

Mineralisation: Background; Elevated; Anomalous; Strongly Anomalous; Sub-Grade

ROSEBERY LITHOLOGY_VMS LOG

Hole ID: 414R-D1

Project: ROS Rosebery

Prospect: NRL North Lake Rosebery

Northing:	5378203.8 mN	**Dip:**	-87.00
Easting:	379836.7 mE	**MAG_Azim:**	66.00
RL:	372.5 mRL	**Total Depth:**	1672.1 m
CoordSys:	MGA55 (GDA94)	**DrillCompany:**	BLY

Strat	Colour	Lithology	Genetic Text	Litho Facies	Texture	Alt	Min	Summary
HW	GRY-GRN	VSS		mas	fol cgr	se si	sp ga	Massive to weakly banded, Volcaniclastic sandstone, blotchy ser-chl-si-ba alteration (ba is fading out). Whispy stringers of honey sph, ga and py.
HW	GRY-GRN	VSL		mas	fol	se si	sp ga	Massive to weakly banded, Volcaniclastic Siltstone, weakly banded ser-chl-si alteration . Whispy stringers of honey sph, ga and py more concentrated at end of unit.
HW	GRY-GRN	VSS		mas	fol cgr	se si	sp ga	Massive to weakly banded, Volcaniclastic sandstone, blotchy ser-chl-si alteration . Whispy stringers of honey sph, ga and py High grade min in the form of larger stringers from 1606.4-1606.5 and 1611-1611.2m. Boundary id gradational
HW	GRN-GRY	VSS		mas	fol cgr	se si	py	Massive to weakly banded, Volcaniclastic sandstone, more intense blotchy ser-chl-si alteration . Generally barren with minor fine grained py. Boundary is gradational with alteration
HW	GRY-GRN	VSS		mas	fol cgr	se si	sp ga	Massive to weakly banded, Volcaniclastic sandstone, blotchy ser-chl-si-ba alteration . Random whispy stringers of honey sph, ga and py.
HW	GRY-GRN	VSS		bnd	fol fgr	se si	sp po	Diffusely bedded to banded, fine grained volcaniclastic sandstone/siltstone. Vein controlled banded ser alteration. Disseminated to stringer sph at beginning of unit with disseminated py throughout <2%). Small veinlets throughout host po and py.

Sample_ID	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm	Fe pct
D1394464	0.0	0.0	0.0	9.00	0.04	1.6
D1394931	0.2	0.3	0.0	20.40		3.9
D1394465	0.4	1.2	0.0	40.00	0.29	1.8
D1394466	0.1	0.1	0.0	16.00	0.51	3.1
D1394467	0.0	0.0	0.0	-1.00	0.09	1.9
D1394468	0.9	2.0	0.1	69.00	0.21	1.3
D1394469	0.0	0.0	0.0	2.00	0.04	0.9
D1394470	0.1	0.1	0.0	3.00	0.06	2.2
D1394471	0.7	1.8	0.0	13.00	0.13	1.5
D1394472	0.1	0.1	0.0	2.00	0.11	1.7
D1394473	0.0	0.0	0.0	1.00	0.09	1.6
D1394474	0.0	0.0	0.0	1.00	0.06	1.6
D1394475	0.5	0.6	0.0	7.00	0.16	2.7
D1394932	0.1	0.4	0.0	1.63		3.3
D1394476	1.4	4.0	0.0	18.00	0.43	4.0
D1394478	0.3	1.4	0.0	5.00	0.10	2.5
D1394479	0.0	0.0	0.0	1.00	0.06	2.0
D1394480	0.0	0.1	0.0	1.00	0.08	2.5
D1394481	0.0	0.1	0.0	1.00	0.04	1.9
D1394482	0.0	0.0	0.0	2.00	0.03	1.4
D1394483	0.0	0.0	0.0	1.00	0.02	1.7
D1394484	0.0	0.0	0.0	1.00	0.01	1.4
D1394485	0.0	0.0	0.0	-1.00	0.04	3.0
D1394486	0.0	0.0	0.0	-1.00	-0.01	1.1
D1394933	0.0	0.0	0.0	0.05		0.8
D1394487	0.0	0.0	0.0	-1.00	-0.01	1.2
D1394488	0.0	0.0	0.0	-1.00	0.04	1.5
D1394489	0.1	0.1	0.0	1.00	0.04	2.9
D1394490	0.0	0.0	0.0	1.00	0.10	2.4
D1394491	0.1	0.5	0.0	3.00	0.23	1.2
D1394492	0.0	0.0	0.0	1.00	0.04	1.5
D1394493	0.0	0.1	0.0	3.00	0.09	1.2
D1394494	0.1	0.2	0.0	3.00	0.02	0.6
D1394495	0.1	0.1	0.0	1.00	0.01	0.6
D1394496	1.0	2.3	0.1	16.00	0.32	1.6
D1394497	0.1	0.3	0.0	2.00	0.01	0.6
D1394498	0.4	0.9	0.0	7.00	0.23	1.6
D1394934	0.1	0.3	0.0	2.11		1.5
D1394499	0.1	0.1	0.0	2.00	0.06	0.9
D1394500	0.3	0.4	0.0	5.00	0.03	0.7
D1394801	0.2	0.3	0.0	6.00	0.03	1.2
D1394802	0.1	0.5	0.0	3.00	0.07	1.5
D1394803	0.0	0.0	0.0	1.00	0.02	0.9
D1394804	0.6	5.1	0.1	15.00	0.13	2.2
D1394805	0.1	0.2	0.0	3.00	0.06	1.2
D1394806	0.0	0.0	0.0	1.00	0.05	1.0
D1394807	0.1	0.1	0.0	4.00	0.10	2.9
D1394935	0.0	0.0	0.0	0.21		4.4

Breccia - Undifferentiated; Fault Zone; Hyaloclastite Breccia; Pyroclastic Breccia; Vein quartz; Vein Carbonate; Felsic Flow; Feldspathic porphyry; Mafic Dyke; Quartz Feldspar Porphyry; Quartz Porphyry; Schist; Disseminated Sulphides; Quartz; Limestone; Dolomite; Shale; Siltstone; Interbedded sandstone/siltsto; Andesite; Crystal Tuff; Dacite; Dacite Lapilli Tuff; Felsic tuff; Intermediate flow; Intermediate Volcaniclastic; Lapilli Tuff; Lithic Tuff; Rhyolite; Rhyolite Breccia; Undifferentiated Volcaniclastic; Volcanic Breccia; Volcanic Conglomerate; Volcanic Sandstone; Volcanic Siltstone; Not logged

Mineralisation: Background; Elevated; Anomalous; Strongly Anomalous; Sub-Grade

ROSEBERY LITHOLOGY_VMS LOG

Hole ID: 414R-D1

Project: ROS Rosebery

Prospect: NRL North Lake Rosebery

Northing:	5378203.8 mN	**Dip:**	-87.00
Easting:	379836.7 mE	**MAG_Azim:**	66.00
RL:	372.5 mRL	**Total Depth:**	1672.1 m
CoordSys:	MGA55 (GDA94)	**DrillCompany:**	BLY

Strat	Colour	Lithology	Genetic Text	Litho Facies	Texture	Alt	Min	Summary
HW	GRY-GRN	VSS		bnd	fol fgr	se si	sp po	Diffusely bedded to banded, fine grained volcaniclastic sandstone/siltstone. Vein controlled banded ser alteration. Disseminated to stringer sph at beginning of unit with disseminated py throughout <2%). Small veinlets throughout host po and py.
HW	GRN-GRY	VBX		mas	fol cgr	se si	py	Massive, foliated, pumicious breccia, ser altered fsp phyric pumice and silicified qtz phyric lava clasts generally about 3-5cm, scattered through a qtz phyric sandstone matrix.

Sample_ID	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm	Fe pct
D1394936	0.0	0.0	0.0	0.45		3.1
D1394937	0.0	0.0	0.0	0.16		1.4
D1394938	0.0	0.0	0.0	0.12		1.3

1650 1660 1670 1680 1690 1700

Breccia - Undifferentiated; Fault Zone; Hyaloclastite Breccia; Pyroclastic Breccia; Vein quartz; Vein Carbonate; Quartz Carbonate Vein

Felsic Flow; Feldspathic porphyry; Mafic Dyke; Quartz Feldspar Porphyry; Quartz Porphyry; Schist; Slate

Disseminated Sulphides; Quartz; Limestone; Dolomite; Shale; Siltstone; Chert

Interbedded sandstone/siltsto; Andesite; Crystal Tuff; Dacite; Dacite Lapilli Tuff; Felsic tuff; Felsic Volcaniclastic

Intermediate flow; Intermediate Volcaniclastic; Lapilli Tuff; Lithic Tuff; Rhyolite; Rhyolite Breccia; Tuff Siltstone

Undifferentiated Volcaniclastic; Volcanic Breccia; Volcanic Conglomerate; Volcanic Sandstone; Volcanic Siltstone; Not logged

Mineralisation

- Background
- Elevated
- Anomalous
- Strongly Anomalous
- Sub-Grade