MT KERSHAW EL 48/2004

ANNUAL REPORT
FOR THE PERIOD ENDING 30th October 2011

Author:	C. T. McGilvray
Date:	30th October 2011
Submitted To:	Exploration Manager - Australia
Copies To:	Tasmanian Regional Exploration Office Library Mineral Resources Tasmania, Hobart MMG – Melbourne Group office
Submitted By:	
Accepted By:	
Rosebery Report No:	ER02

CONTENTS

LIST OF TABLES

LIST OF FIGURES

1. SUMMARY

Exploration activities conducted in the previous years of tenure have been minimal due to merger and acquisition activity, and shortfalls in staffing levels. Activities focused on the Rosebery Mine Lease have progressively been extending northwards with the granted application of Lake Rosebery EL48/2010 and continued support of Mt Kershaw EL412004. Structural and geological interpretations from the stratigraphy encountered in the north of the Rosebery mine lease has resulted in the realisation that further work is necessary across Lake Rosebery into the southern portion of Mt Kershaw.

Progressive activities have included an aerial LIDAR and photogrammetric survey, and initiation of the Burns Peak exploration project being conducted by Mancala Pty. Ltd. Further work is recommended by both MMG and Mancala in the coming year of tenure.

2. INTRODUCTION

Exploration activities undertaken on EL 48/2004 Mt Kershaw during the period October 2010 to October 2011 are detailed herein.

Access to the tenement is via Boco Road off the Murchison highway in the north and via the Chester mine track off the Bastyan Dam Road in the south. A small network of 4WD tracks developed for logging and previous mineral exploration extend from these main access points and provide access to the majority of the areas of interest.

MMG's main exploration target within EL 48/2004 is Cambrian hosted Rosebery style Zn–Pb–Cu–Au rich VHMS subsurface seafloor replacement style mineralization and/or Hellyer type seafloor mound-type mineralization hosted in the Mount Read Volcanic (MRV) belt. The tenement covers a generally N-S striking section of the MRV including the contact between the Central Volcanic Complex (CVC) and the overlying Southwell Subgroup – or lower Tyndall Group, separated by the units of the Holloway Andesite.

MMG recognize the potential of the Mt Kershaw tenement to provide additional mill feed for the Rosebery Mine and are reinvestigating extensions of the numerous small high grade resources previously extracted, including Southern Trenches, Brown's Tunnell, Chester and Thomas' Tunnel prospects. MMG Exploration intend to assess if there may be extractible economic resources remaining at these localities through an alliance with Mancala as well as the possible existence of similar sized stand alone deposits within the area. A detailed data review process commenced in the latter part of the previous reporting period. In addition, similar geochemical signatures to Henty-style Au mineralization identified in historical partial leach soil data are under review. Further exploration activities in the coming reporting period will include regional mapping and extension of geological interpretation from Lake Rosebery to redefine the exploration strategy.

3. LAND TENURE

EL 48/2004 Mt Kershaw (15 sq. km) was granted to Zinifex Australia Limited on 23rd November 2005 for a period of 5 years (Figure 1). EL 48/2004 covers ground that fell vacant on the relinquishment of EL 35/2000 and EL 20/2001 previously held by Aurion Gold in 2003. The initial license area surrounded the mining lease 20M/2000, held by Hercules Resources which has subsequently been surrendered.
On July 18th 2008 the name of Zinifex Australia Limited was changed to OZ minerals Australia Ltd as a result of a corporate merger between Zinifex Ltd and Oxiana Ltd. In June 2009, China Minmetals Non-Ferrous Metals Co. Ltd., through its subsidiary Album Investment Pty. Ltd., acquired a 100% indirect interest in MMG and all of its Tasmanian projects including the Mt Kershaw tenement holding from OZ Minerals Ltd.

Land covered by EL 48/2004 is crown land designated as State Forest or informal reserves including parts of the Burns Peak and Mt Kershaw Forest Reserve areas. All of the area contained within the tenement boundary is available for exploration under the Mineral Resources Development Act, 1995.

2010 to 2011 superseded the last year of the five year administration period for this tenement and was subject to a tenure renewal extension. MMG has committed significant expenditure during this reporting period and intends to extend the holding of EL48/2004 for another year.

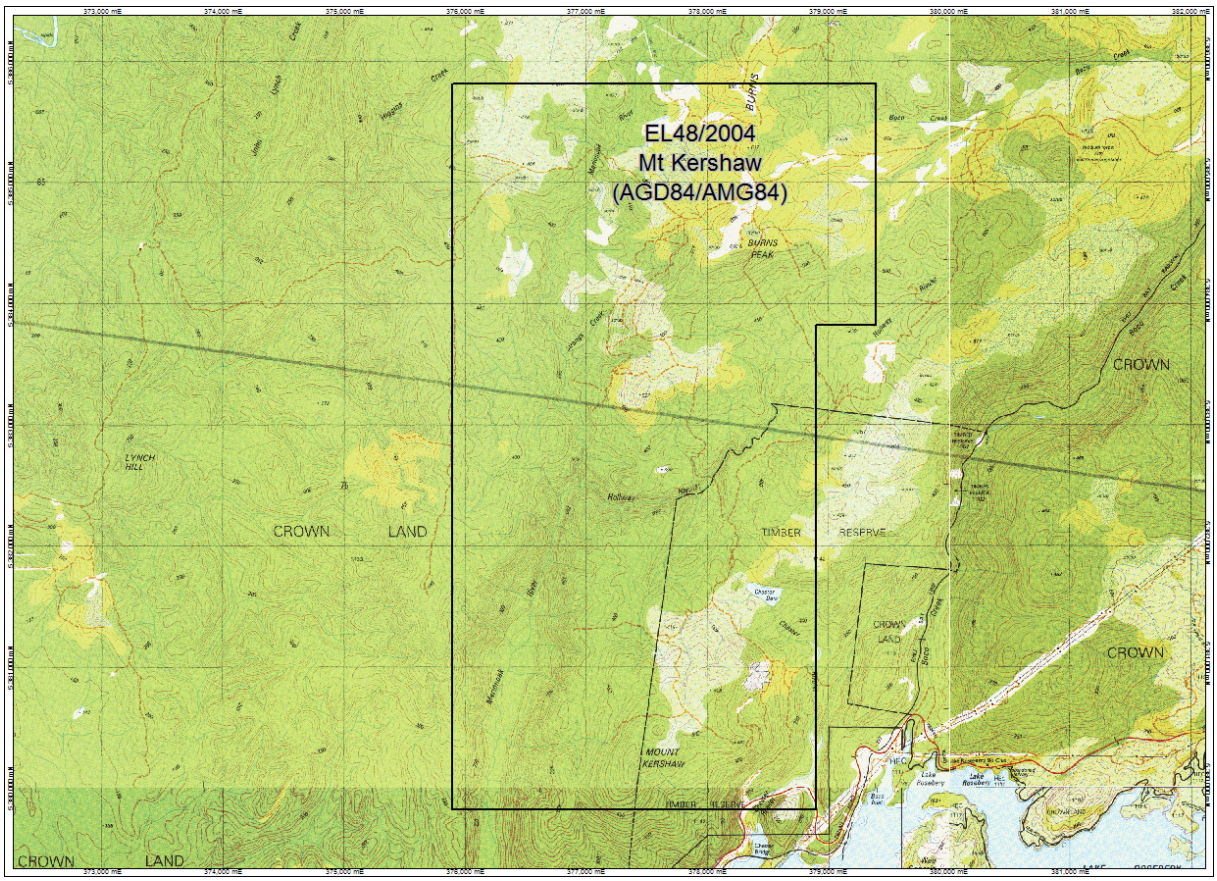


Figure 1. Location of EL48/2004 Mt. Kershaw

4. GEOLOGY

The basement lithologies in western Tasmania are Precambrian in age, comprising predominantly greenschist facies meta-sediments with minor basalt and dolerite. Higher-grade amphibolite and eclogite facies are also present as isolated occurrences within the Precambrian package.

Cambrian volcanism and sedimentation developed on this Precambrian continental crust, and is subdivided into the Eo-Cambrian tholeiitic Crimson Creek Formation (CCF) and the mid- to late-Cambrian predominantly calc-alkaline, Mt Read Volcanics (MRV).

The CCF was deposited in shallow but rapidly subsiding basins (Brown, 1986). The CCF consists of basaltic lavas and volcaniclastics, turbidites, carbonates, chert and minor evaporites.

Ultramafic cumulates and volcanic equivalents were thrust onto the CCF in the mid Cambrian (Crawford and Berry 1992). These rocks generate strong magnetic anomalies and outcrop within the Huskisson Syncline.

The MRV form a 200km long by 20km wide broadly north-south trending belt adjacent to and in some areas on-lapping with and intruding Precambrian basement rocks. The volcanics include intermediate to felsic lavas, sub-volcanic porphyries and granites, volcaniclastics and basement-derived sedimentary rocks. The MRV host six economically significant volcanic hosted massive sulphide deposits. Regional structures that subdivide the MRV are the Rosebery and Henty Faults.

The Mt Kershaw license is located at a regionally significant point within the central part of the MRV, where the main trend changes from north-south to northeast-southwest. The area also coincides with a regional lithological change where lithologies correlated with the Rosebery-Hercules sequence are juxtaposed with lithologies broadly correlated to the Sock Creek and Que-Hellyer sequences.

The MRV are overlain by a late Cambrian – early Ordovician marine and fluviatile sequence of quartzwacke, polymict sandstones, siltstones, shales and polymict conglomerates (Rosebery Group/Stitt Quartzite to the west of the MRV and Owen Group to the east; Corbett, 2002).

Cambrian volcanism and sedimentation was followed by predominantly basement derived Ordovician to Devonian age sedimentation, which includes sandstone and limestone.

At least two phases of regional compression were associated with the mid-Devonian Tabberabberan Orogeny (Keele, 1991). The development of folding, cleavage and regional thrusts in lower Palaeozoic rocks were associated with this event.

Deformation was followed by the extensive intrusion of Devonian to Carboniferous granitoids. The Devonian granites are associated with carbonate replacement Sn

mineralisation at Renison Bell and Mount Bischoff, and the Pb Zn Ag vein deposits of Zeehan and, possibly, the Tullah Fields.

In the Quaternary extensive unconsolidated glacial and fluvioglacial deposits up to >100m thick accumulated (Augustinius and Nichol, 1999). These deposits now obscure parts of the Palaeozoic geology.

5. CURRENT EXPLORATION

Work Completed in the 2010-2011 Period

An aerial LIDAR (Light Detection and Ranging) survey and photogrammetric survey was conducted by Fugro Spatial Solutions Pty. Ltd. over the total area of the licence during the reporting period. Flight lines were 1km apart with additional tie lines at the border of the relevant lease. Figure 2 and Table 1 contain the relevant information of the survey, and Figure 3 shows the mosaic of orthoimagery attained from the survey.

Figure 2: LIDAR Survey flight lines over EL48/2004

Product	Item	Format	Media	Projection
LIDAR				
Digital Terrain Model	Lidar ground model key points	ASCII	DVD	MGA94/55+AHD
Digital Elevation Model	2m Gridded DEM	ASCII	DVD	MGA94/55+AHD
Vertical Accuracy	+/- 0.20m at 1 ō			
Horizontal Accuracy	+/- 0.40m at 1 ō			
Contours	0.5m	DGN		MGA94/55+AHD
Report	Metadata	PDF		
IMAGERY option				
Orthoimage	0.25m GSD RGB	ECW	DVD	

Table 1: Key parameters and outputs for LIDAR survey over EL48/2004

Mancala Pty. Ltd. drilled 9 holes at the Browns Tunnel prospect area during the reporting period (9 drill logs are attached with assays – Appendix A). Activities have included mapping, costeaning and earthworks to clear existing drill pads. Drilling at Burns Peak (aka Browns Tunnel – BPK001 to BPK009) totalled 877m.

6. PREVIOUS EXPLORATION

EL 48/2004 Zinifex Exploration. 2004+

EL48/2004 was granted to focus exploration close to the Rosebery Mine Lease and along strike of the Rosebery Fault system. A geological compilation of the northern portion of the licence and relogging of historic drilling in this area was conducted by Dr Keith Corbett as documented in Skirka, 2007. Parts of this area were sampled for partial leach analysis (564 samples) and reported in Hicks, 2007. The work by Dr Corbett in 2006 continued into the second year of the licence, and this further work is also described in Hicks, 2007.

The partial leach soil sampling assays illustrated some typical problems with this method, but through this there are 3 areas of anomalous responses. Two of these areas sit over known mineralisation (and have not been recommended for additional follow-up) and the third is on a separate lease.

The only recommendation of this work was to extend the sampling to the south, past a single point anomaly on line 5383000mN, which may overly the southern extension of the Burns Peak shear zone.

Hicks, 2008, describes a phase of work that included a review and re-interpretation of the historic IP data collected in the 1990's across the entire tenement by Pasminco. This comprised partial leach soil sampling across new and refurbished gridlines in the southern portion of the licence – 809 samples, plus 39 standard and duplicates and an airborne EM (VTEM) survey.

Results from the soil sampling program indicate that the best anomalies are multi-element features to the south of the Chester deposit in poorly defined Tyndall Group lithologies. IP features are considered coincident with these soil anomalies. The VTEM survey detected an anomalous response in early and mid times adjacent to the Chester deposit which has support from the IP data and nearby partial leach soil anomalism.

Wighton, 2010, reported data compilation and desktop studies of Geology, Geochemistry and Geophysical data as the dominant activity during the previous reporting period.

EL 20/2001 AurionGold Exploration Pty Ltd. 2001-2003

EL20/2001 covered the northern part of EL48/2004, surrounding ML 20M/2000. Exploration work by AurionGold comprised reprocessing of Pasminco IP data (in conjunction with EL35/2000) and the collection of C horizon soil samples in the northeastern part of the license (35 samples). Similarly to EL35/2000, the license was relinquished following a corporate takeover of AurionGold (Vicary, 2003).

EL 35/2000 AurionGold Exploration Pty Ltd. 2001-2003

This license covered the southern part of EL48/2004, south of Cone Hill and west of Chester. Exploration conducted by AurionGold comprised relogging of historic drillholes from the Chester area, compilation of drilling, soil and rockchip data and reprocessing of Pasminco IP data. A program of PIMA, XRD and lithogeochemistry of drillcore samples was also completed (Vicary, 2002). Several recommendations were made however the license was relinquished after AurionGold was taken over by Placer Dome.

EL 44/1988 Pasminco Ltd, Noranda Ltd, Plutonic Ltd. 1989-2001

The license area initially covered the entire area of EL48/2004 and was explored as the Burns Peak Joint Venture. Initial exploration comprised a compilation and review of all Comstaff/BHP geophysical surveys and open file geophysical data, relogging of historic drillcore, 1:1000 scale mapping at Southern Trenches to Leo's Find, compilation of historic geochemistry and the drilling of four diamond drillholes at Southern Trenches – Browns Tunnel (BPD 62 – BPD 65). DHEM surveys were completed on BPD62 – BPD65 and historic drillholes EAF 9, EAF 11 and EAF14 and trial Mise a la Masse and CSAMT surveys were completed (Rosenhain and Mathison, 1989).

In August 1990, Pasminco commenced management of the JV and collected new aeromagnetic and gravity data across the license area. Three additional drillholes were drilled north of Browns Tunnel (BPD66, BPD69 and BPD70), two drillholes north of Leo's Find (BPD71, BPD72) and four drillholes at Mt Kershaw - Chester (BPD67, BPD68, BPD73 and BPD74). Best result was 6m @ 3% Zn+Pb, 0.55g/t Au from BPD66. Petrographic and lithogeochemical data was obtained from selected drillcore samples (including some oxygen isotope data) and minor wacker and rockchip sampling was completed to the east of the Leo's Find area, to the northeast of Chester and in the Mt Kershaw area (Kirsner et al 1991; Lorrigan, 1990). Honours theses were produced by Coutts (1990) on the Hollway Andesite, Reid (1990) on the geology of the Burns Peak – Boco Rd area and Boda (1991) on the geology and structure of the Chester deposit.

During 1992-1993 two diamond drillholes were drilled at the Summit prospect, east of Leo's Find (BPD76, BPD77) and an additional two diamond drillholes were completed at Browns Tunnel (BPD78, BPD79). Best result was 9.0m @ 2.5% Cu in a stringer sulphide zone from BPD78. High grade sulphide clasts were reportedly intersected in BPD77. DHEM surveys were completed on BPD66, BPD69, BPD71-74 and BPD76-77 and lithogeochemistry was conducted, primarily from andesites from the Hollway and Browns Tunnel area in addition to felsic volcanics from Chester. Dipole-dipole IP data was collected at Hollway-Cone Hill and South Kershaw (largely south of EL 48/2004), which identified chargeability anomalies at both areas (Kirsner, 1992; Poltock et al, 1993).

A follow-up hole was drilled at the Summit prospect (BPD80) down dip from BPD77. Three additional diamond drillholes were completed at Browns Tunnel (BPD81, BPD82 and BPD85) and historic drillholes EAF2 and CP7 were extended. Best result was 0.5m @ 17.8% Zn, 8.3% Pb, 2.7% Cu and 15.5 g/t Au from BPD85. Drillhole BPD83 was drilled into the Hollway pyrite zone, which intersected a wide interval of intense silica-pyrite alteration. A Mise-a-la-Masse survey was completed on BPD78 at Browns Tunnel, ground magnetic traverses were completed on the Southern Trenches – Browns Tunnel area and DHEM surveys were completed on BPD78-85. Additional mapping was undertaken at the Cone Hill – Hollway area and MMI soil geochemistry was trialled in the Brown Tunnel to Shale Basin area. No significant anomalies were identified (Poltock and Saxon, 1994; Saxon, 1995).

In 1996, work at Browns Tunnel focused on assessing the potential for a near surface, open pittable resource and five shallow diamond drillholes were completed (BT1 – BT5). Relogging of historic drill core and additional petrography lead to a new geological interpretation and a provisional inferred resource for Lens 1 was calculated (190,000t @ 7.7% Zn, 2.8% Pb, 0.7% Cu, 0.98g/t Au and 48g/t Ag). Regridding of the Brown's Tunnel to Southern Trenches area was followed by ground magnetic traverses, soil sampling (583 samples) and mapping. At Southern Trenches rockchip sampling, trenching (seven trenches ST1 – ST7) and RC drilling (STRC1 – STRC7) was completed (Quayle and Dibben, 1996; Weber et al, 1997). Best result was 13m @ 11.7% Zn, 7.9% Pb, 9g/t Au and 0.6% Cu from STRC5. Additional mapping and rockchip sampling was undertaken at Cone Hill and IP and ground magnetic surveys were completed at Hollway (mainly east of EL48/2004; Quayle and Dibben, 1996). A review of previous data included digitizing previous open file and Pasminco geochemistry datasets (Weber et al, 1997).

The Brown's Tunnel resource was refined by an additional 11 diamond drillholes (001B – 008B, 011B – 013B) which resulted in an inferred resource of 90,000t @ 7.4% Zn, 1.9% Pb, 0.9g/t Au, 49g/t Au (Edwards et al, 1998). At Southern Trenches an additional four diamond drillholes (009B, 010B, 014B and 015B) resulted in an inferred resource of 10,000t @ 23.4% Zn, 18.3% Pb, 2.1% Cu, 12.1g/t Au and 96g/t Ag (Edwards et al, 1998). Metallurgical testwork indicated that the Southern Trenches and Browns Tunnel mineralisation was suitable for the Rosebery mill. An orientation partial leach soil survey line was completed across Southern Trenches and five additional lines of soil

samples were collected for partial leach analysis south of the Southern Trenches / Cone Hill area. Dipole-dipole IP data was also collected from these five lines.

Following a pre-feasibility review, Pasminco concluded that the Browns Tunnel deposit was un-economic and Hercules Resources entered into an arrangement with Pasminco. An additional five shallow diamond drillholes were completed at Southern Trenches (STM1 – STM5, also referred to as 016B – 020B), which confirmed the earlier Pasminco resource. The Southern Trenches to Leo's Find area was then incorporated into ML 20M/2000 (Edwards and Parfrey, 1999; Edwards and Denwer, 2000).

The southern part of the license was relinquished and additional partial leach soil sampling was completed to the immediate south of Southern Trenches (538 samples). Several anomalies were identified and a shallow diamond drillhole (STD1) was drilled to test a partial leach anomaly, intersecting minor base metal mineralisation (1.0m @ 2.0% Zn from 76m). An honours thesis on the isotopic systematics of the Southern Trenches area was submitted (Woolford, 2000). A small program of partial leach soil sampling in the Leo's Find – Summit area (163 samples) was completed during 2001 following which the license was relinquished (McNeill 2001).

EL 21/1998 Pasminco Exploration. 1998-1999

The license comprised part of the relinquished part of EL44/1988, predominantly west of the Rosebery Fault in the southwestern part of EL48/2004. Exploration on EL21/1998 was contiguous with exploration on the neighbouring EL44/1988 and comprised a dipole-dipole IP survey and limited partial leach soil sampling (35 samples). No significant anomalies were identified and the license was subsequently relinquished (Parfrey and Simpson, 1999).

EL 05/1963 Comstaff Pty. Ltd.; BHP Ltd. 1980-1988

Work during this period initially focused on the east Chester (EAB) area, where additional gridding, mapping, C horizon soil sampling and geophysical surveys (ground magnetics, I.P, S.P) were completed (Hall and Pigott, 1980; Anderson, 1982). This work was followed up with the drilling of four diamond drillholes (EAB1 – EAB4) with the best result from EAB3: 6.2m @ 1.5% Zn from 36.8m (Shaw, 1983). A Dighem III survey was flown over all except the most southern part of EL48/2004 during 1983 (Dvorak, 1983) with no significant anomalies identified.

In 1984 a new grid was established across the Southern Trenches to Browns Tunnel area (EAF grid) and a program of geological mapping, C horizon auger sampling (including Au assays) and a UTEM survey was completed. Fifteen drillholes were drilled in the Browns Tunnel area (ESB1, EAF1-EAF14) to follow up elevated gold values returned from soil and channel sampling. A preliminary resource of 110,000t @ 18.8% Zn, 6.6% Pb, 1.3% Cu, 122 g/t Ag and 4.1g/t Au was calculated, based on intersections from five

drillholes (Shaw and Roberts, 1985). An additional four drillholes were completed in the Thomas's Tunnel (EAF15-EAF16) and Southern Trenches areas (EAF17-EAF18). Narrow bands of massive sulphide were intersected in EAF15, EAF16 and EAF18 (Mroczek, 1985).

BHP Minerals entered into a JV with Comstaff and Preussag in 1985 and a program of regional BLEG drainage sampling was completed. Several historic drillholes at the Pinnacles area were surveyed with downhole Sirotem. No significant anomalies were identified however BHP reported difficulties with the Sirotem surveys due to self-response effects (Anon, 1986).

During 1986 - 1988, a significant program of mapping, relogging and data compilation was completed and an extensive UTEM survey across the entire area covered by EL 48/2004 commenced (173 line km). This survey concluded in late 1987 and several weak UTEM responses were identified. These anomalies along with several additional geological targets including the Hollway Pyrite Zone, Chester and West Mt Kershaw areas were followed up with a program of power auger geochemical sampling (811 auger holes for 1127m). No significant anomalies were reported (Anon, 1987). A program of Lead and Sulphur isotope analyses was completed from mineralisation from the Pinnacles, Chester, East Chester and Hollway areas (Anon, 1988).

7. ENVIRONMENTAL

There was no environmental or rehabilitation activities conducted on EL 48/2004 during this reporting period. Drainage structures of some sections of track were reopened to manage water run-off during the current drill program.

8. CONCLUSIONS AND RECOMMENDATIONS

The current work being conducted on ML28/93 and Lake Rosebery EL41/2010 indicates that the geology and structural architecture from these leases to the north may be interpreted in a variety of ways. The aerial photogrammetric study and LIDAR study forms a firm foundation for topographic control. It is intended in the coming year of tenure to revise the current interpretation by 1:5,000 mapping through the southern portion of the lease and potentially drilling in the southern extremity of the lease area. Truthing of geophysical anomalies will occur during the mapping exercise.

Mancala are intending to drill the northern portion of the lease until EOY2011 where a feasibility study will be initiated to determine the viability of mining at the Southern Trenches, Browns Tunnel and Thoams; Tunnel prospects. Results are encouraging to date and will be monitored closely.

9. EXPENDITURE

Expenditure on EL 48/2004 Mt Kershaw for the year ending 31st October 2011 was approximately **$650,702** mainly relating to the Burns Peak drill program.

Geoscientific	Geology	$160,383
	Geochemistry	$0
	Geophysics	$0
	Remote Sensing	$6,714
Drilling and Gridding	Gridding	$0
	Drilling	$274,235
Land Access Costs		$107,986
Rehabilitation Costs		$0
Feasibility Study Costs		$0
Other Costs		$44,768
Administration Costs		$56,616
Total Costs		$650,702

10. REFERENCES

Anderson, B. E., 1982. Progress report on Chester-Pinnacles EL 5 / 63 Part 4. Unpub. Comstaff Pty. Ltd. Report (TCR 83 – 1903).

Anon, 1986. EL 5 / 63, Comstaff JV, NW Tasmania. Report for the year ended 30 June 1987. Unpub. BHP Lty. Ltd. Report (TCT 87-2571).

Augustinius, P. C., and Nichol, S., 1999. Ground-penetrating radar imaging of Pleistocene sediments, Boco Plain, Western Tasmania. Aust. J. Earth Sci. 46:275-282.

Boda, S. P., 1991. The geology, structural setting and genesis of the Chester Mine, Northwest Tasmania. Unpub. BSc (Hons) thesis, University of Tasmania, Hobart.

Brown, A. V. 1986. Geology of the Dundas-Mt Lidsay Mt Youngbuck Region. Geological Survey Tasmania Bull. 6. Tasmanian Department of Mines, Hobart.

Corbett, K.D., 2002. Updating the geology of the Mount Read Volcanics belt. A report for the Western Tasmanian Regional Minerals Program. Mineral Resources Tasmania.

Coutts, B.P., 1990. The geology, geochemistry and hydrothermal alteration of the Hollway Andesite, Western Tasmania. BSc Honours thesis (unpub), University of Tasmania.

Crawford, A. J., and Berry, R. F., 1992. Tectonic Implications of the Late Proterozoic – Early Paleozoic Igneous Rock Associations in Western Tasmania. Tectonophysics, 214:37 – 56.

Dvorak, Z., 1983. DIGHEM III survey of the East Chester, North Pieman and Arthur River Areas, Tasmania. Unpub. DIGHEM Ltd report for Comstaff Pty (TCR 84 – 2129).

Edwards, P.W., Murphy, F.C. and Whitbread, M., 1999. Burns Peak EL 44/88 Joint Venture. Annual report November 1997 – December 1998. Pasminco Rosebery Mine. TCR 99-4262.

Edwards, P. W., and Parfrey, O. 1999. Burns Peak EL 44 / 88. Joint Venture Annual Report 1st January 1999 – 31st October 1999. Unpub. Pasminco Rosebery Mine Report (TCR 99 – 4394).

Edwards, P.W. and Denwer, K., 2000. Burns Peak EL 44/88 Joint Venture. Annual report 1st November 1999 – 31st October 2000. Pasminco Rosebery Mine. TCR 01-4515.

Hall, D. B., and Pigott, G. F., 1980. East Chester EAB Grid exploration report for 1980, EL 5 /63, Section 4. Unpub. Comstaff PTY Ltd. Report (TCR80 – 1413).

Keele, R. A., 1991. The Zeehan – Red hills – Lake Selina Traverse – A Domain Approach to the Analysis of Structural Data. CODES: AMIRA Project P291 – Structure and Mineralization in Western Tasmania. November 1991.

Kirsner, L.W., 1992. EL 44/88 Burns Peak. Annual report for the period November 1991 – October 1992. Pasminco Exploration. TCR 92-3406.

Kirsner, L.W., Lorrigan, A.N. and Rae, H.C., 1991. EL 44/88 Burns Peak. Annual report for period November 1990 – October 1991. Pasminco Exploration. TCR 99-3310.

Lorrigan, A.N., 1990. EL 44/88 Burns Peak. Annual report for the period November 1989 – October 1990. Pasminco Exploration. TCR 90-3203.

McNeill, A.W., 2001. Burns Peak EL 44/88. Annual and Final relinquishment Report for the period 1st November 2000 – 31st May 2001. Upub. Pasminco Exploration Report (TCR 01 – 4567).

Mroczec, C. R. 1985. Interim report on the EAF15 – 18 Drilling program, Chester-Pinnacles EL 5 / 63 Part 4. Unpublished company report. Rio Tinto Australian Exploration Pty Ltd. (TCR 75 – 1124).

Parfrey, O. and Simpson, K. L. 1999. First Annual and Final Technical Report for the Period November 1998 – 99. Unpub. Pasminco Exploration Report (TCR 00 – 4414).

Poltock, R.A., Kirsner, L.W. and Saxon, M.S., 1993. EL 44/88 Burns Peak. Annual report for the period November 1992 – October 1993. Pasminco Exploration. TCR 93-3523.

Poltock, R. A., and Sazon, M. S., 1994. Burns Peak Annual Report for the Period November 1993 0 October 1994. Unpub. Pasminco Exploration Report T94 – 13 (TCR 94-3654).

Quayle, P.M. and Dibben, S.M., 1996. Burns Peak El 44/88 Joint Venture. Annual report, period ending October 1996. Pasminco Exploration. TCR 96-3945.

Reid, R. O., 1990. The geology of the Burns Peak – Boco Road Area. Unpub. BSc (Hons) thesis, University of Tasmanis, Hobart.

Rosenhain, A. N. and Mathison, I. J., November 1989. EL 44 / 88 Burns Peak. Annual Report on Exploration Activity. January 1989 – October 1989 (TCR 89-3059).

Saxon, M.S., 1995. Burns Peak EL 44/88 Joint Venture Annual Report for the periuod November 1994 – October 1995. Pasminco Exploration Report T95-19 (TCR95-3803).

Shaw, R.W.L., 1983. Report to the Mines Department of Tasmania for the period 1st January to 30th June 1983. Summary of work completed, in progress and proposed for EL 5/63. Unpub. Comstaff Pty Ltd. (TCR 83-1983).

Shaw, R.W.L. and Roberts, R.H., 1985. Browns Tunnel Resource, Pinnacles. EL 5/63, Area 4. Unpub. Comstaff Pty Ltd. TCR

Skirka, M., 2007. Mt Kershaw EL48/2004. First Annual Report for the period ending 23 November, 2006. Zinifex Rosebery Mine. TCR 07-5458.

Vicary, M. 2002. 2001 – 2002 Annual Report, Tasmania Gold Project, Mt Kershaw EL 35 / 2000. Unpub. Auriongold report. (TCR 02-4663).

Weber, G.B., Dibben, S.M. and Murphy, F.C., 1997. Burns Peak EL 44/88 Joint Venture. Annual report for the period ending October 1997. Pasminco Exploration. (TCR 97-4085).

Woodford, A. 2000. Geology and Genisis of the Southern Trenches Mineraization, Burns Peak. Unpub. BSc (Hons) thesis, University of Tasmania, Hobart.

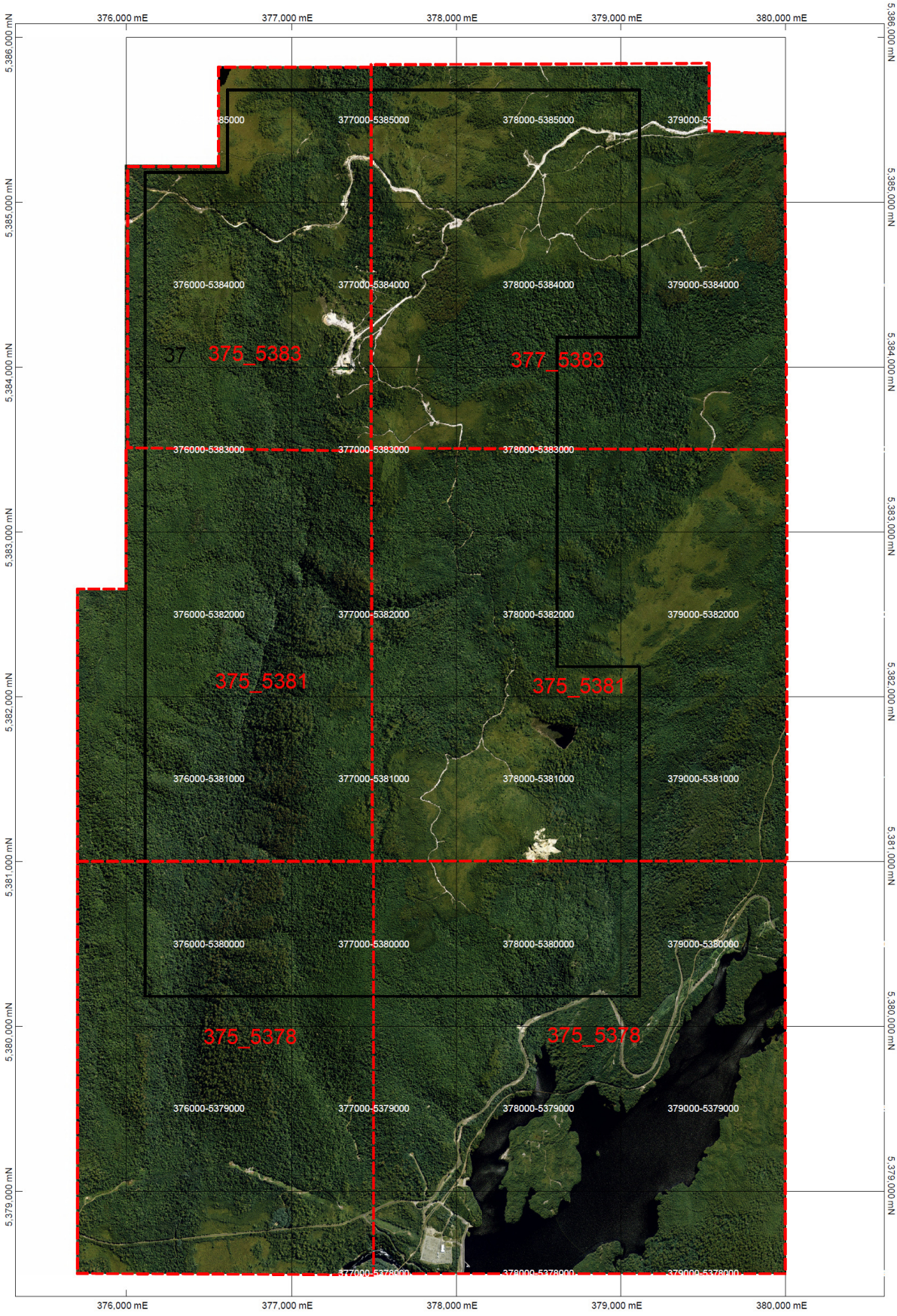
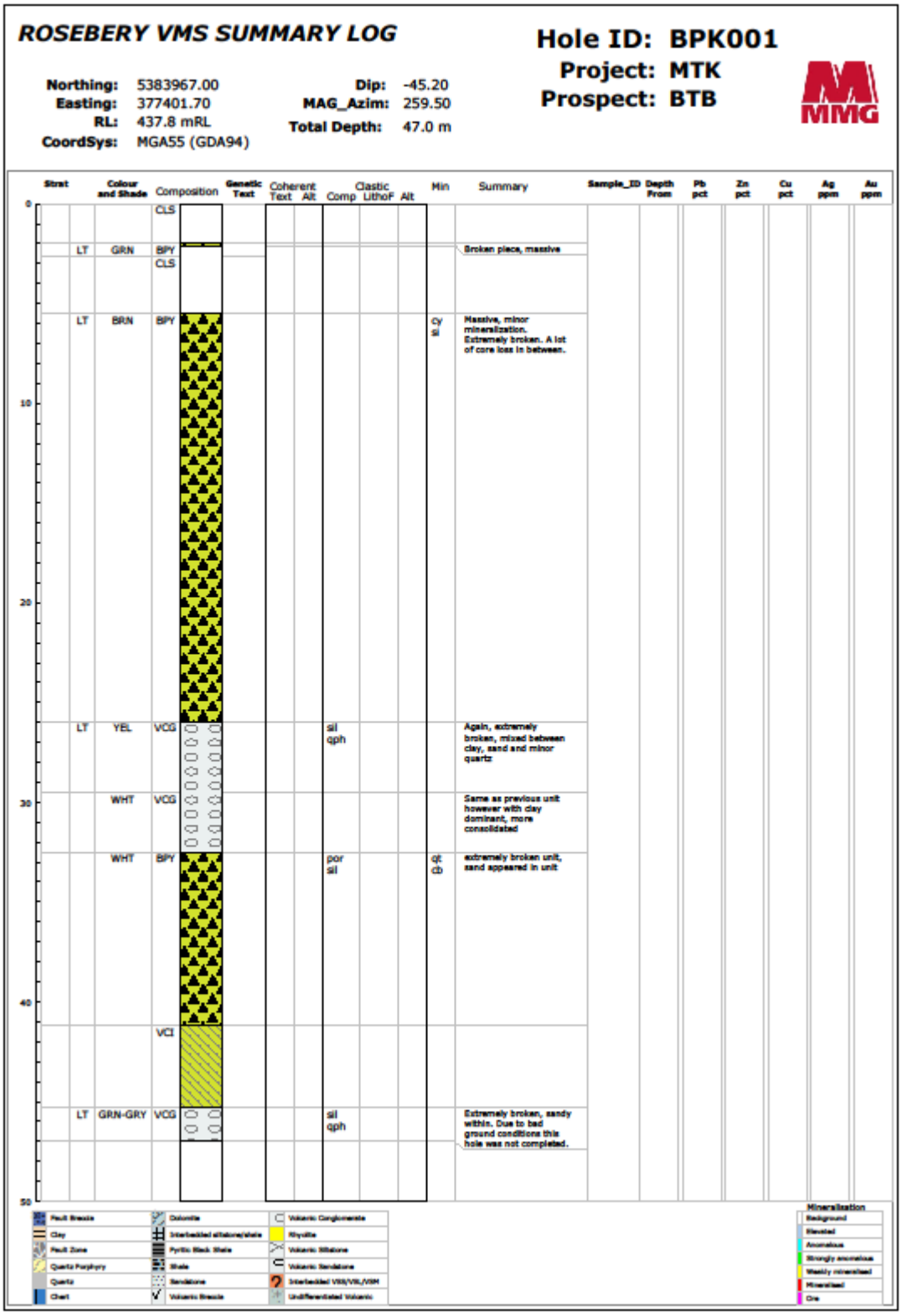


Figure 3: Mosaic of aerial photogrammetric survey results

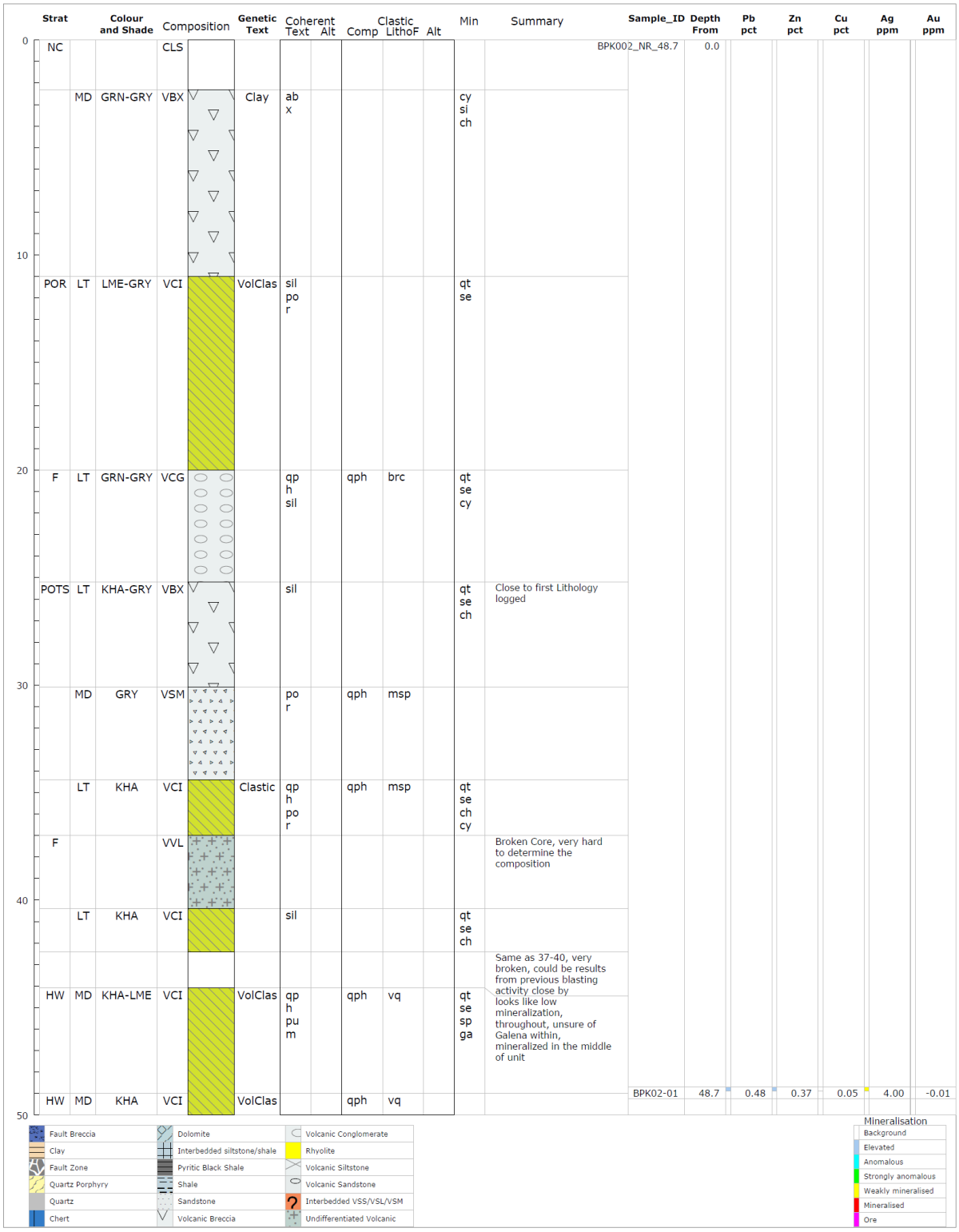
APPENDIX A – Drill Logs



ROSEBERY VMS SUMMARY LOG

Hole ID: BPK002
Project: MTK
Prospect: BTB

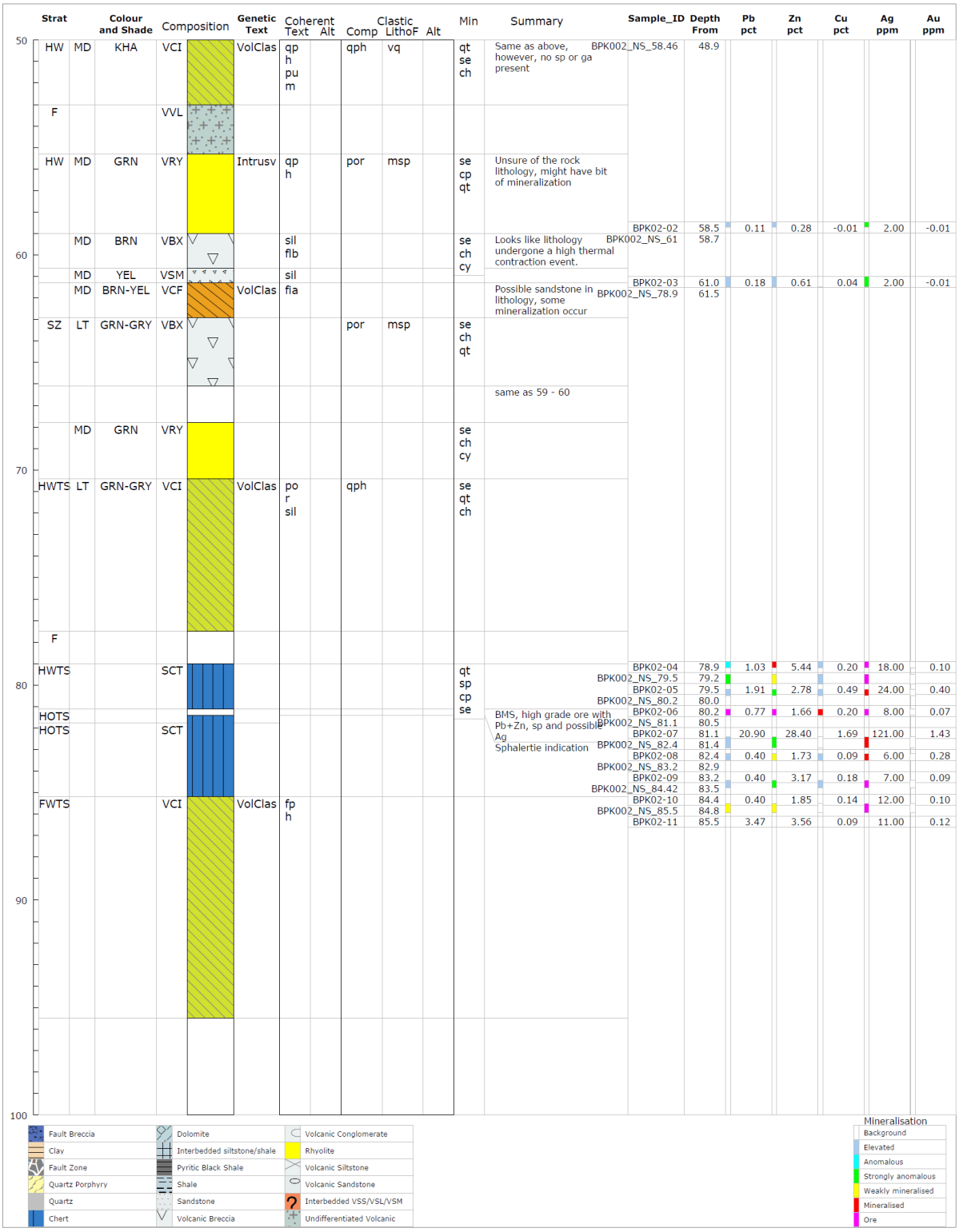
Northing:	5383973.37	**Dip:**	-45.20
Easting:	37841.29	**MAG_Azim:**	259.50
RL:	437.8 mRL	**Total Depth:**	95.5 m
CoordSys:	MGA55 (GDA94)		



ROSEBERY VMS SUMMARY LOG

Hole ID: BPK002
Project: MTK
Prospect: BTB

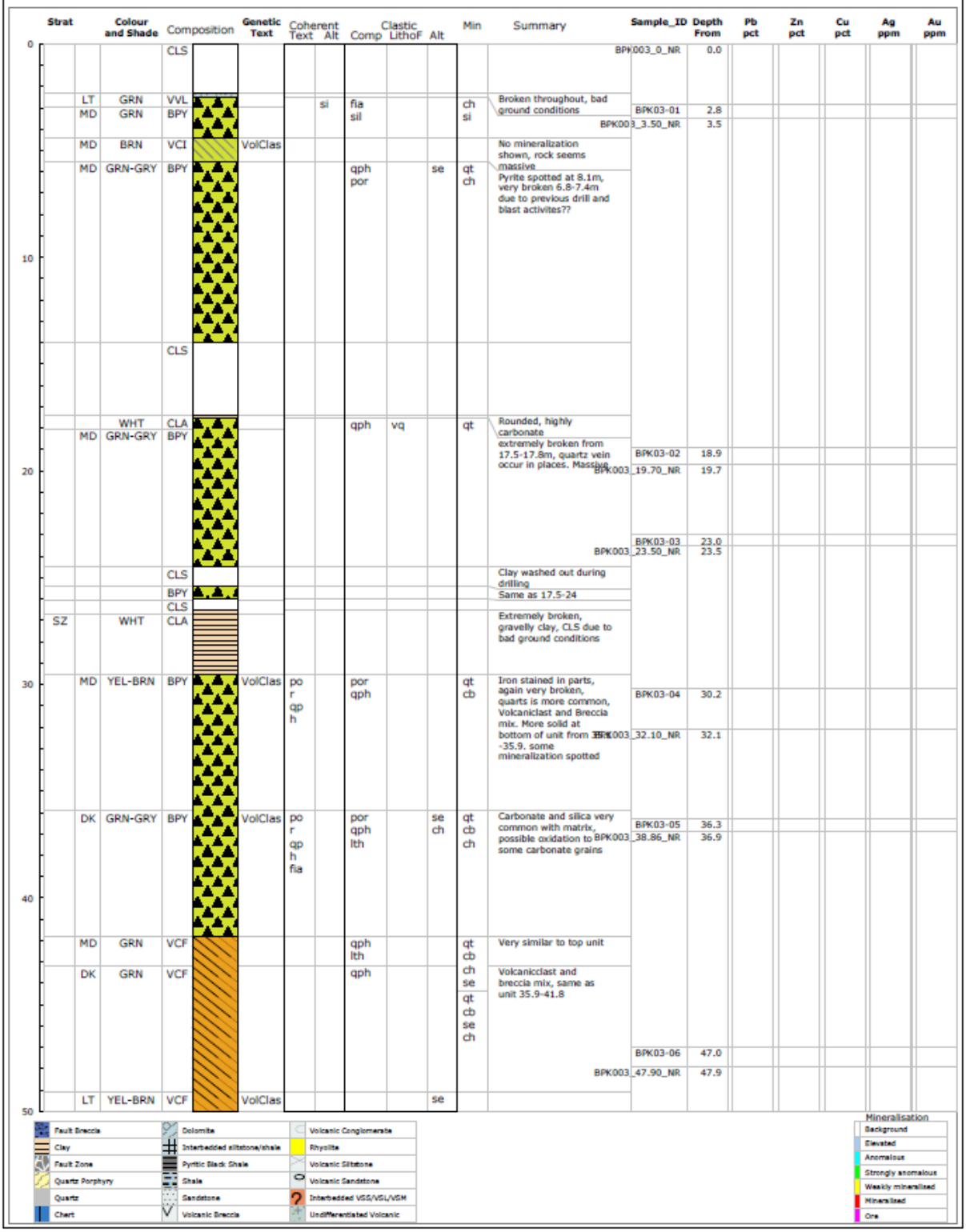
Northing:	5383973.37	**Dip:**	-45.20
Easting:	37841.29	**MAG_Azim:**	259.50
RL:	437.8 mRL	**Total Depth:**	95.5 m
CoordSys:	MGA55 (GDA94)		



ROSEBERY VMS SUMMARY LOG

Hole ID: BPK003
Project: MTK
Prospect: BTB

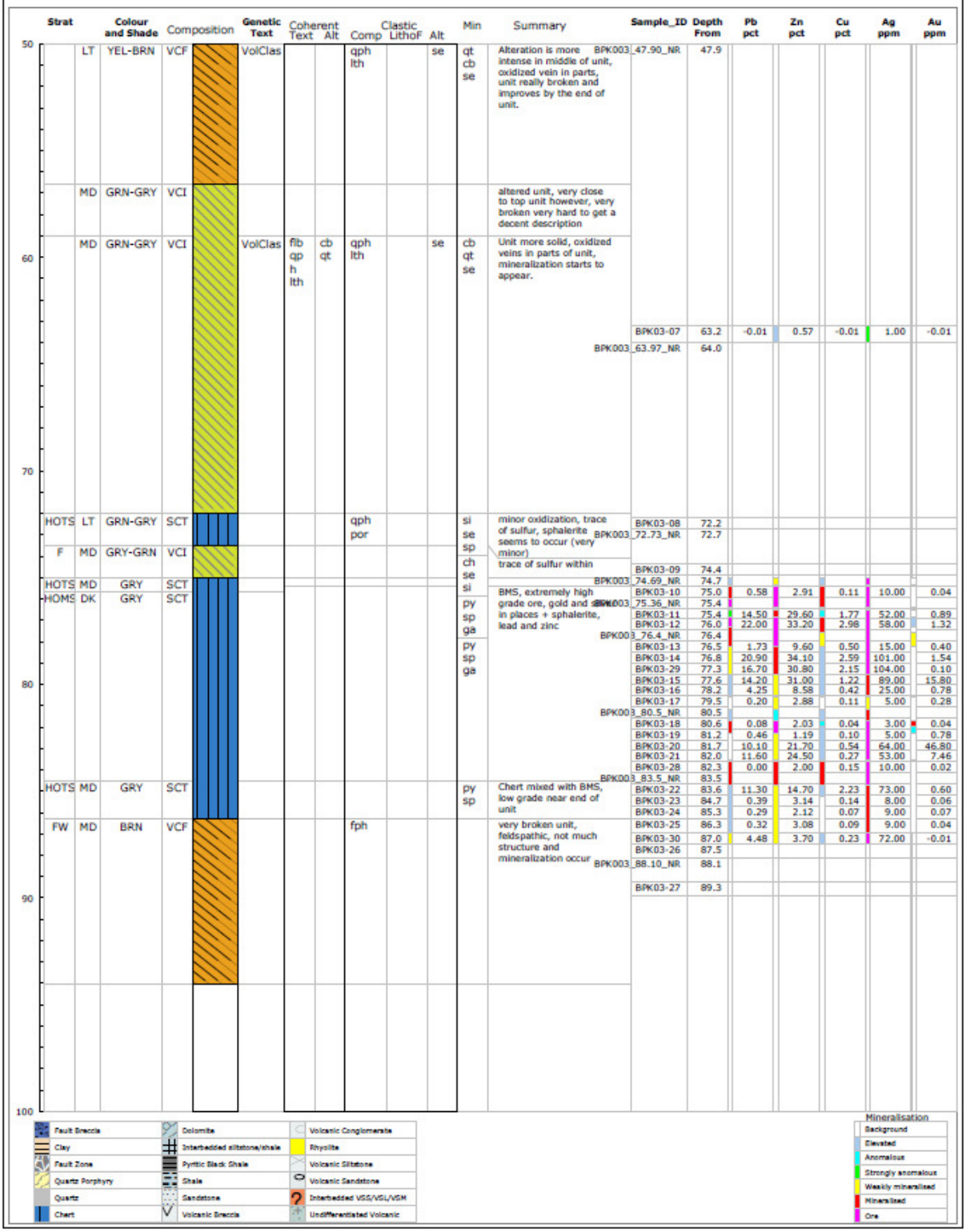
Northing:	5383978.94	**Dip:**	-48.10
Easting:	377399.92	**MAG_Azim:**	267.30
RL:	437.8 mRL	**Total Depth:**	94.0 m
CoordSys:	MGA55 (GDA94)		



ROSEBERY VMS SUMMARY LOG

Hole ID: BPK003
Project: MTK
Prospect: BTB

Northing:	5383978.94	**Dip:**	-48.10
Easting:	377399.92	**MAG_Azim:**	267.30
RL:	437.8 mRL	**Total Depth:**	94.0 m
CoordSys:	MGA55 (GDA94)		

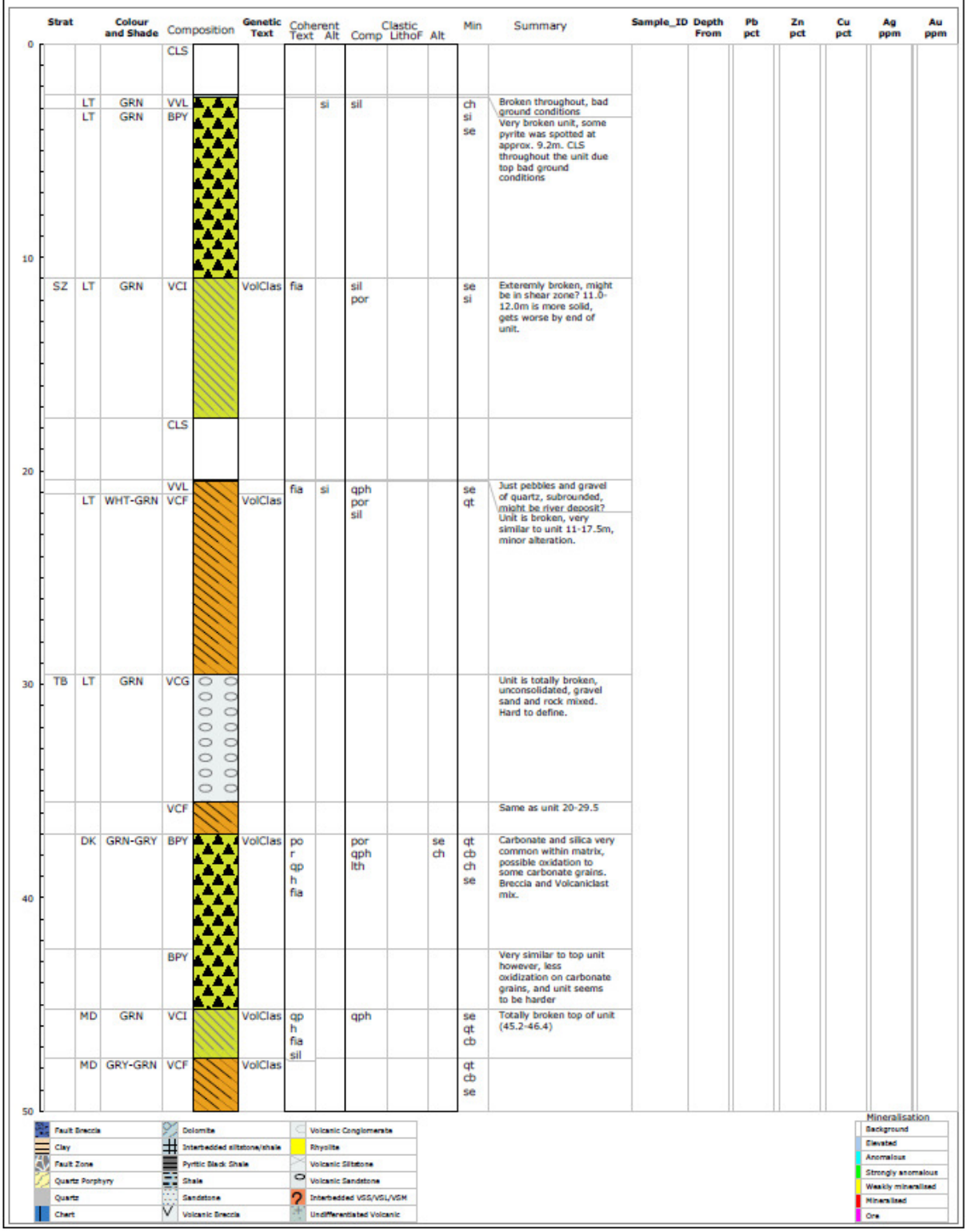


Sample_ID	Depth From	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm
BPK003_47.90_NR	47.9					
BPK03-07	63.2	-0.01	0.57	-0.01	1.00	-0.01
BPK003_63.97_NR	64.0					
BPK03-08	72.2					
BPK003_72.73_NR	72.7					
BPK03-09	74.4					
BPK003_74.69_NR	74.7					
BPK03-10	75.0	0.58	2.91	0.11	10.00	0.04
BPK003_75.36_NR	75.4					
BPK03-11	75.4	14.50	29.60	1.77	52.00	0.89
BPK03-12	76.0	22.00	33.20	2.98	58.00	1.32
BPK003_76.4_NR	76.4					
BPK03-13	76.5	1.73	9.60	0.50	15.00	0.40
BPK03-14	76.8	20.90	34.10	2.59	101.00	1.54
BPK03-29	77.3	16.70	30.80	2.15	104.00	0.10
BPK03-15	77.6	14.20	31.00	1.22	89.00	15.80
BPK03-16	78.2	4.25	8.58	0.42	25.00	0.78
BPK03-17	79.5	0.20	2.88	0.11	5.00	0.28
BPK003_80.5_NR	80.5					
BPK03-18	80.6	0.08	2.03	0.04	3.00	0.04
BPK03-19	81.2	0.46	1.19	0.10	5.00	0.78
BPK03-20	81.7	10.10	21.70	0.54	64.00	46.80
BPK03-21	82.0	11.60	24.50	0.27	53.00	7.46
BPK03-28	82.3	0.00	2.00	0.15	10.00	0.02
BPK003_83.5_NR	83.5					
BPK03-22	83.6	11.30	14.70	2.23	73.00	0.60
BPK03-23	84.7	0.39	3.14	0.14	8.00	0.06
BPK03-24	85.3	0.29	2.12	0.07	9.00	0.07
BPK03-25	86.3	0.32	3.08	0.09	9.00	0.04
BPK03-30	87.0	4.48	3.70	0.23	72.00	-0.01
BPK03-26	87.5					
BPK003_88.10_NR	88.1					
BPK03-27	89.3					

ROSEBERY VMS SUMMARY LOG

Hole ID: BPK004
Project: MTK
Prospect: BTB

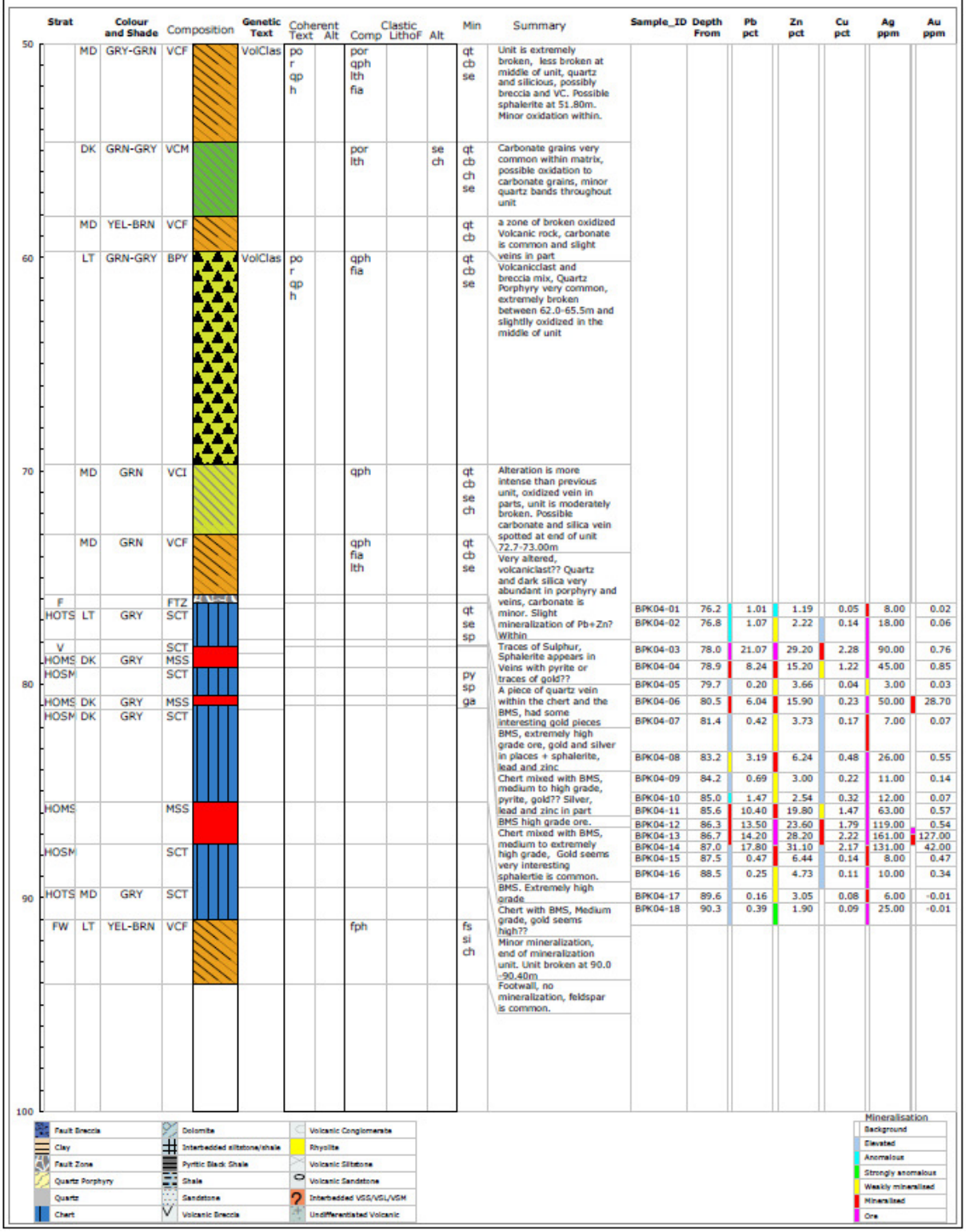
Northing:	5383978.00	**Dip:**	-51.80
Easting:	377398.90	**MAG_Azim:**	171.60
RL:	437.9 mRL	**Total Depth:**	94.0 m
CoordSys:	MGA55 (GDA94)		



ROSEBERY VMS SUMMARY LOG

Hole ID: BPK004
Project: MTK
Prospect: BTB

Northing:	5383978.00	**Dip:**	-51.80
Easting:	377398.90	**MAG_Azim:**	171.60
RL:	437.9 mRL	**Total Depth:**	94.0 m
CoordSys:	MGA55 (GDA94)		

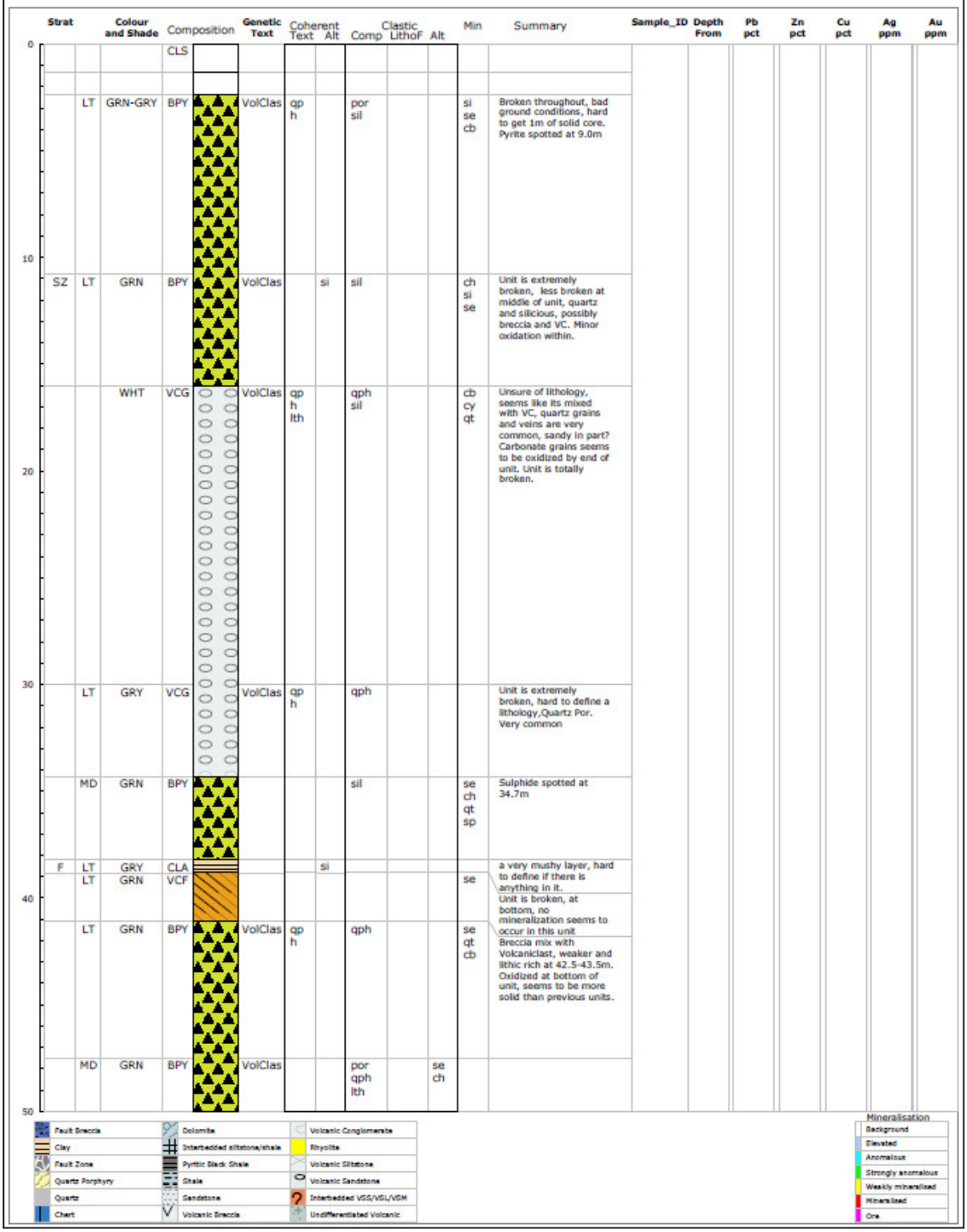


Sample_ID	Depth From	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm
BPK04-01	76.2	1.01	1.19	0.05	8.00	0.02
BPK04-02	76.8	1.07	2.22	0.14	18.00	0.06
BPK04-03	78.0	21.07	29.20	2.28	90.00	0.76
BPK04-04	78.9	8.24	15.20	1.22	45.00	0.85
BPK04-05	79.7	0.20	3.66	0.04	3.00	0.03
BPK04-06	80.5	6.04	15.90	0.23	50.00	28.70
BPK04-07	81.4	0.42	3.73	0.17	7.00	0.07
BPK04-08	83.2	3.19	6.24	0.48	26.00	0.55
BPK04-09	84.2	0.69	3.00	0.22	11.00	0.14
BPK04-10	85.0	1.47	2.54	0.32	12.00	0.07
BPK04-11	85.6	10.40	19.80	1.47	63.00	0.57
BPK04-12	86.3	13.50	23.60	1.79	119.00	0.54
BPK04-13	86.7	14.20	28.20	2.22	161.00	127.00
BPK04-14	87.0	17.80	31.10	2.17	131.00	42.00
BPK04-15	87.5	0.47	6.44	0.14	8.00	0.47
BPK04-16	88.5	0.25	4.73	0.11	10.00	0.34
BPK04-17	89.6	0.16	3.05	0.08	6.00	-0.01
BPK04-18	90.3	0.39	1.90	0.09	25.00	-0.01

ROSEBERY VMS SUMMARY LOG

Hole ID: BPK005
Project: MTK
Prospect: BTB

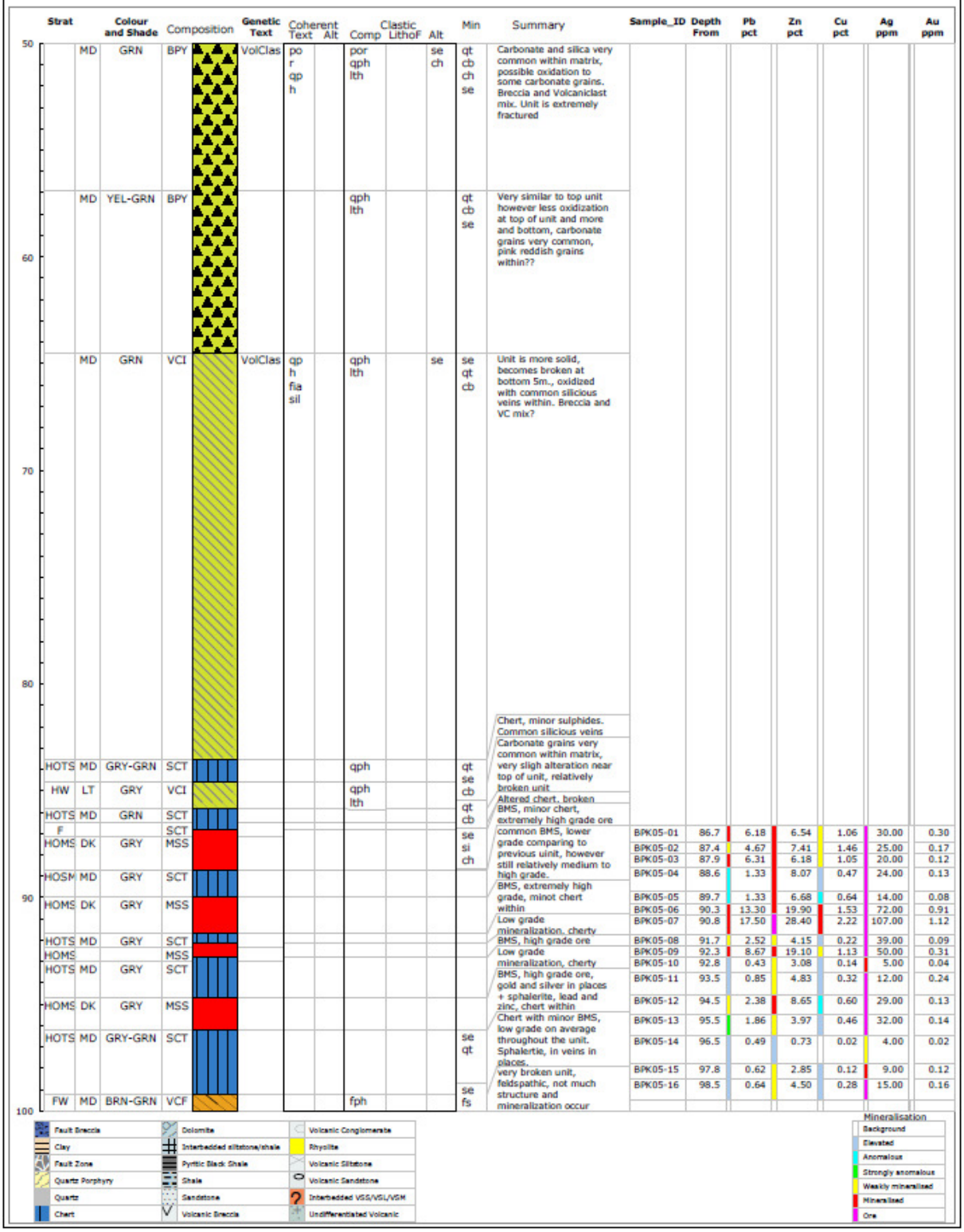
Northing:	5383978.00	**Dip:**	-59.10
Easting:	377399.20	**MAG_Azim:**	268.30
RL:	437.7 mRL	**Total Depth:**	102.8 m
CoordSys:	MGA55 (GDA94)		



ROSEBERY VMS SUMMARY LOG

Hole ID: BPK005
Project: MTK
Prospect: BTB

Northing:	5383978.00	**Dip:**	-59.10
Easting:	377399.20	**MAG_Azim:**	268.30
RL:	437.7 mRL	**Total Depth:**	102.8 m
CoordSys:	MGA55 (GDA94)		

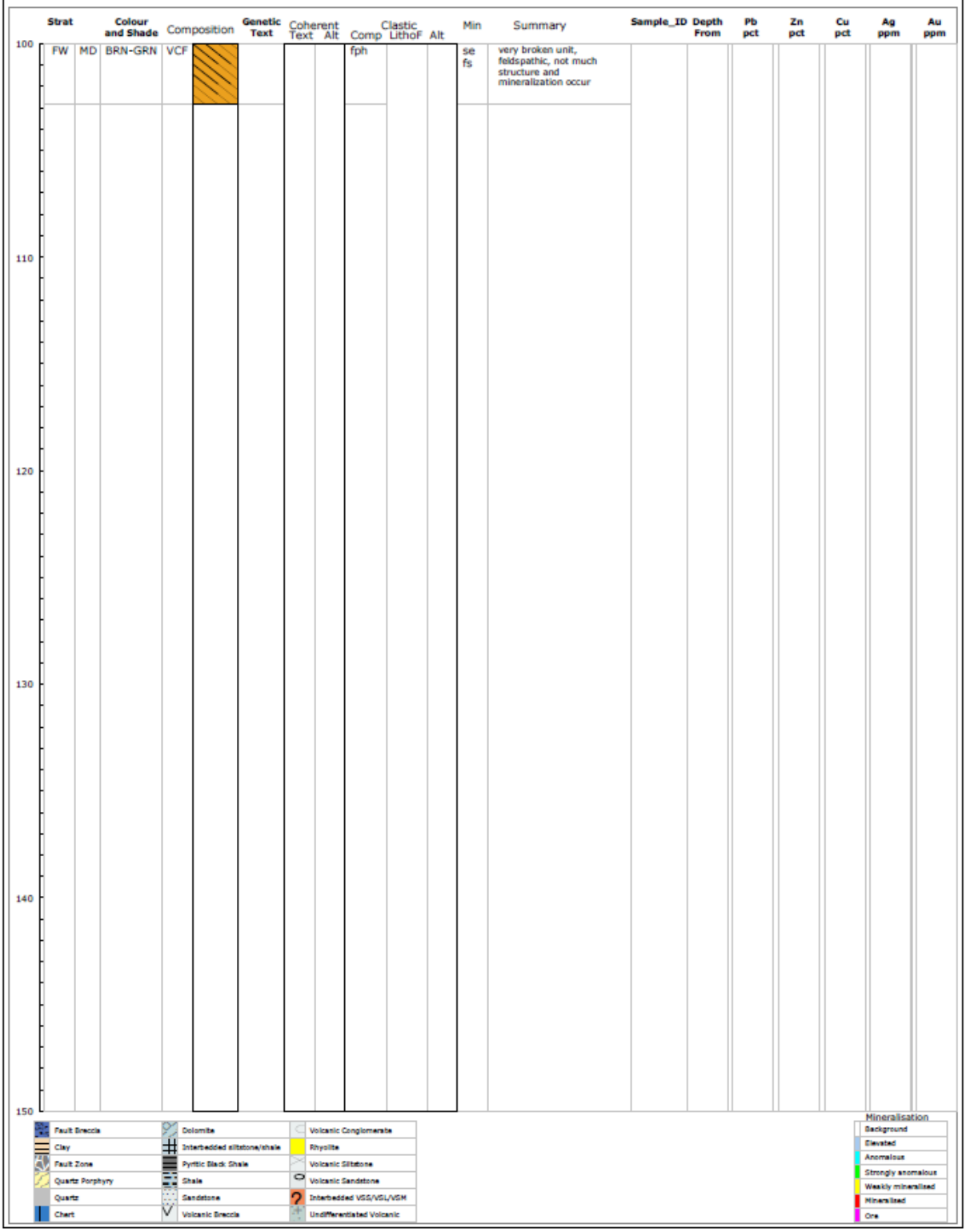


Sample_ID	Depth From	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm
BPK05-01	86.7	6.18	6.54	1.06	30.00	0.30
BPK05-02	87.4	4.67	7.41	1.46	25.00	0.17
BPK05-03	87.9	6.31	6.18	1.05	20.00	0.12
BPK05-04	88.6	1.33	8.07	0.47	24.00	0.13
BPK05-05	89.7	1.33	6.68	0.64	14.00	0.08
BPK05-06	90.3	13.30	19.90	1.53	72.00	0.91
BPK05-07	90.8	17.50	28.40	2.22	107.00	1.12
BPK05-08	91.7	2.52	4.15	0.22	39.00	0.09
BPK05-09	92.3	8.67	19.10	1.13	50.00	0.31
BPK05-10	92.8	0.43	3.08	0.14	5.00	0.04
BPK05-11	93.5	0.85	4.83	0.32	12.00	0.24
BPK05-12	94.5	2.38	8.65	0.60	29.00	0.13
BPK05-13	95.5	1.86	3.97	0.46	32.00	0.14
BPK05-14	96.5	0.49	0.73	0.02	4.00	0.02
BPK05-15	97.8	0.62	2.85	0.12	9.00	0.12
BPK05-16	98.5	0.64	4.50	0.28	15.00	0.16

ROSEBERY VMS SUMMARY LOG

Hole ID: BPK005
Project: MTK
Prospect: BTB

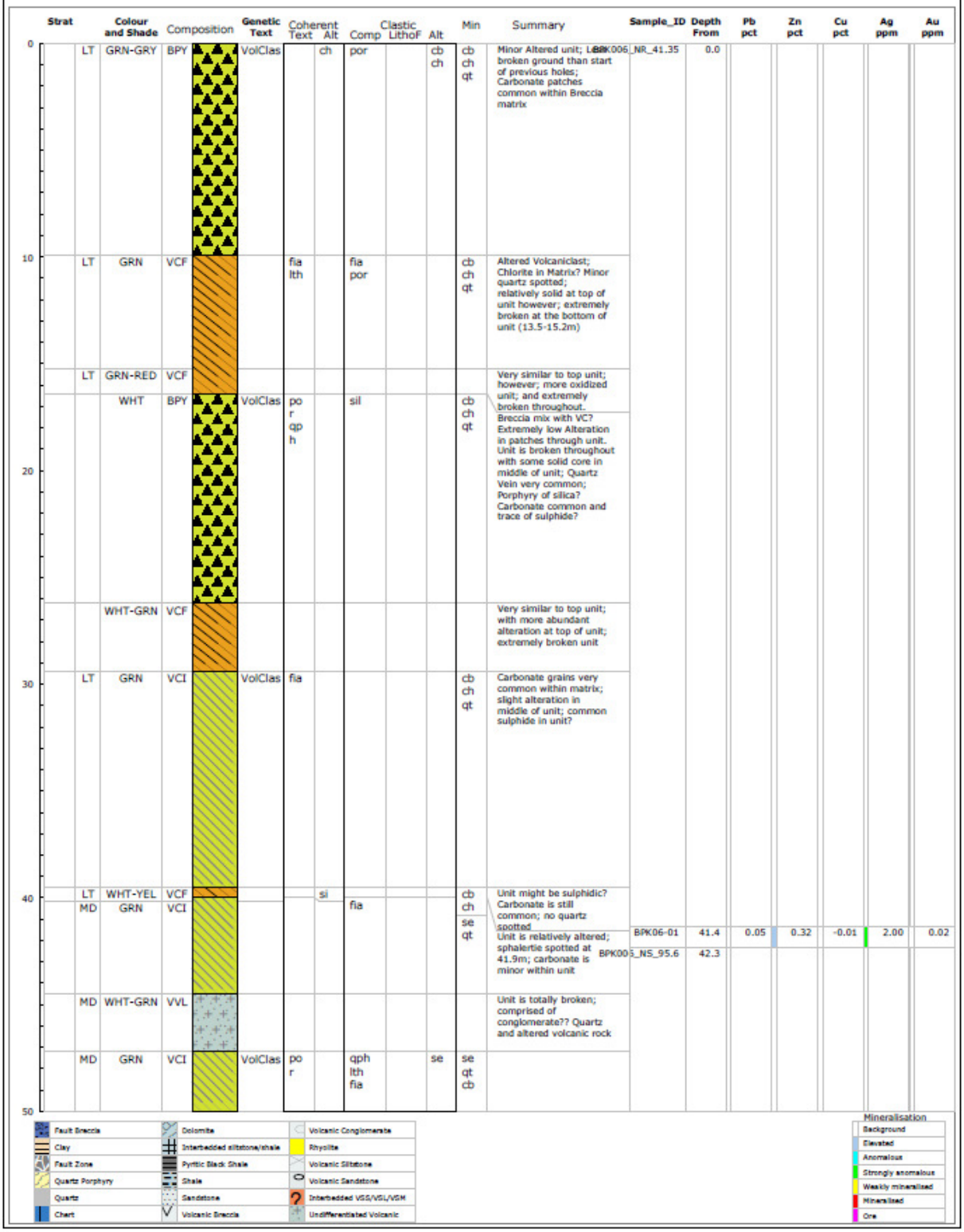
Northing:	5383978.00	**Dip:**	-59.10
Easting:	377399.20	**MAG_Azim:**	268.30
RL:	437.7 mRL	**Total Depth:**	102.8 m
CoordSys:	MGA55 (GDA94)		



ROSEBERY VMS SUMMARY LOG

Hole ID: BPK006
Project: MTK
Prospect: BTB

Northing:	5383978.94	**Dip:**	-65.70
Easting:	377400.62	**MAG_Azim:**	273.10
RL:	437.8 mRL	**Total Depth:**	110.1 m
CoordSys:	MGA55 (GDA94)		

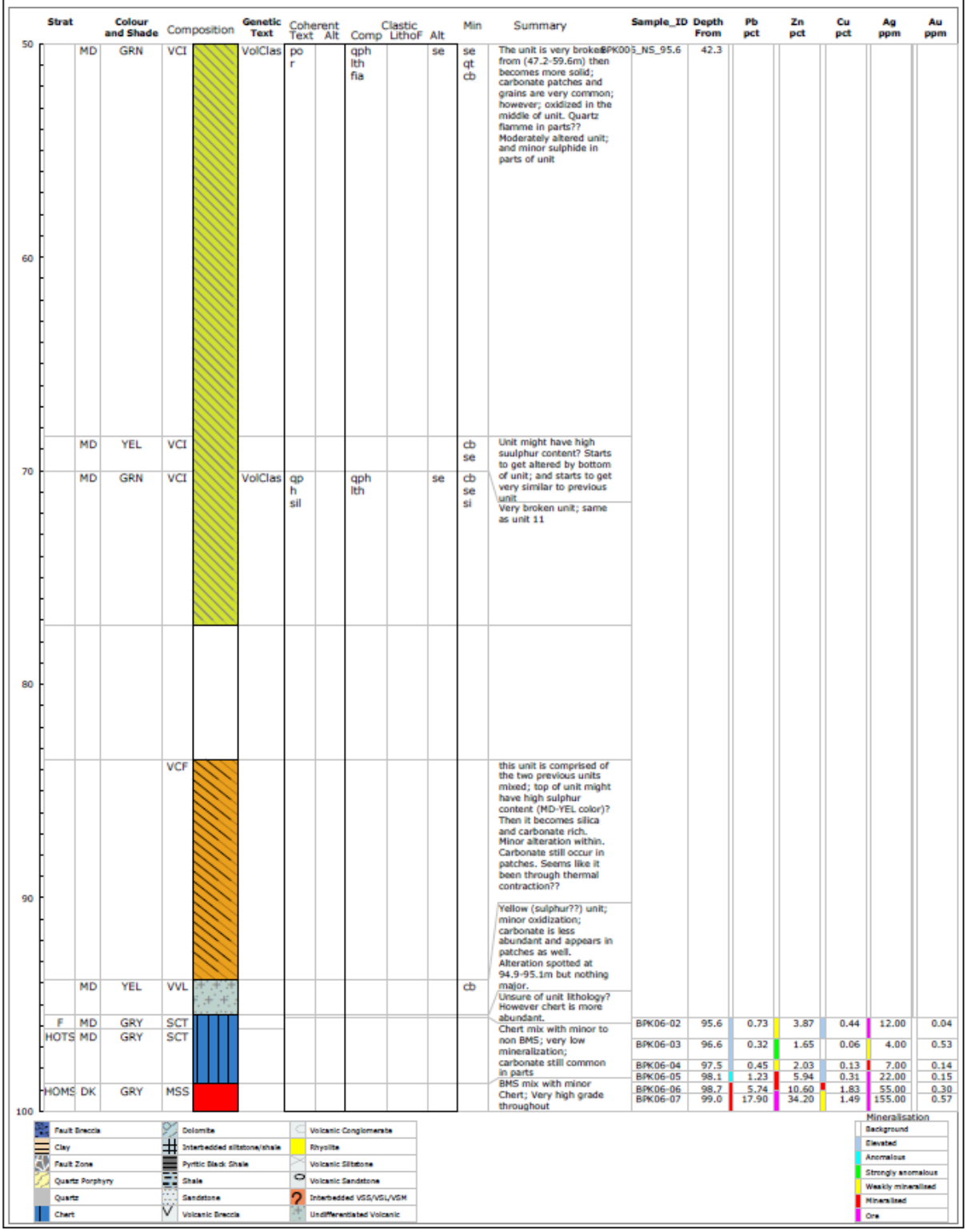


Sample_ID	Depth From	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm
BPK006_NR_41.35	0.0					
BPK06-01	41.4	0.05	0.32	-0.01	2.00	0.02
BPK006_NS_95.6	42.3					

ROSEBERY VMS SUMMARY LOG

Hole ID: BPK006
Project: MTK
Prospect: BTB

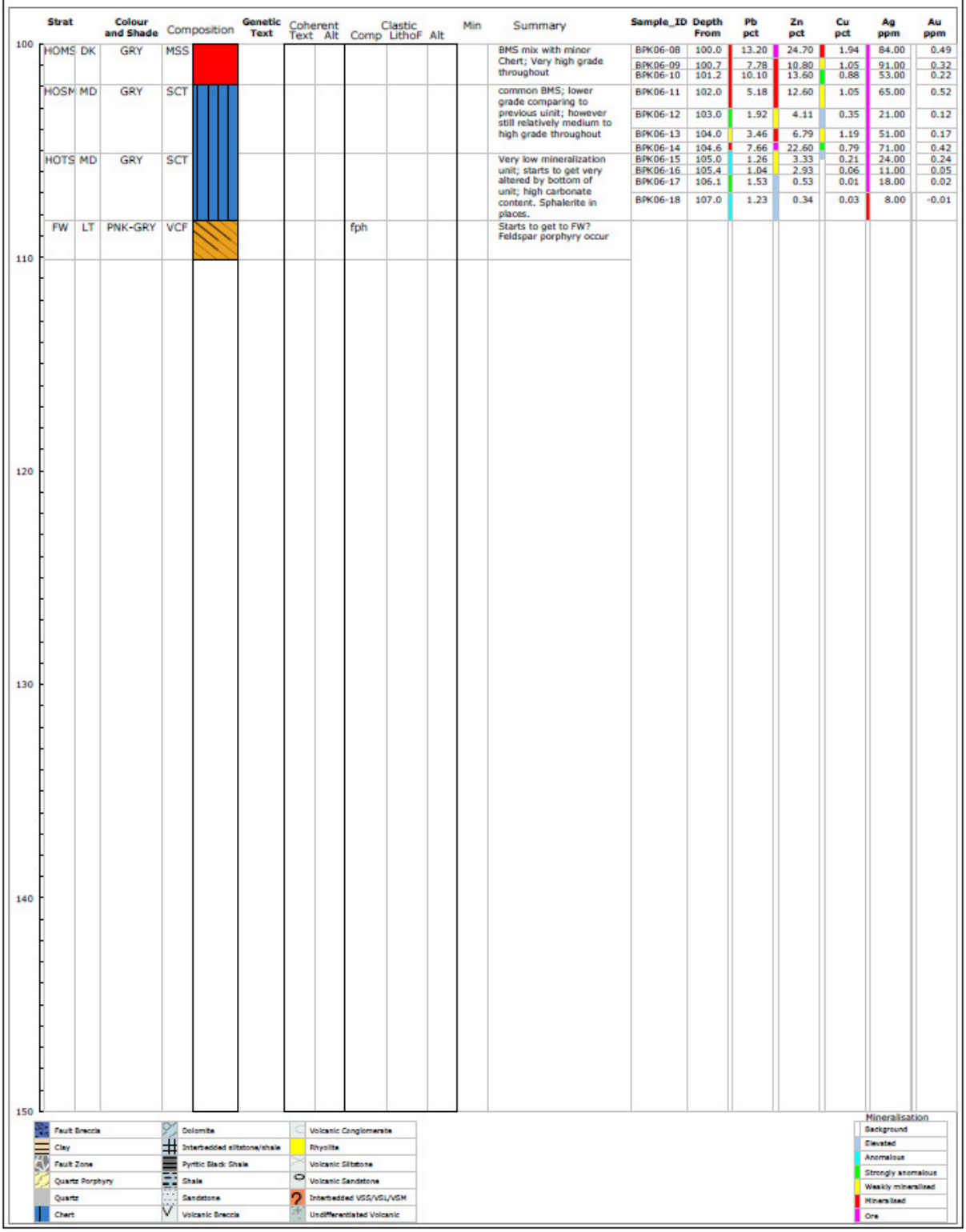
Northing:	5383978.94	**Dip:**	-65.70
Easting:	377400.62	**MAG_Azim:**	273.10
RL:	437.8 mRL	**Total Depth:**	110.1 m
CoordSys:	MGA55 (GDA94)		



ROSEBERY VMS SUMMARY LOG

Hole ID: BPK006
Project: MTK
Prospect: BTB

Northing:	5383978.94	**Dip:**	-65.70
Easting:	377400.62	**MAG_Azim:**	273.10
RL:	437.8 mRL	**Total Depth:**	110.1 m
CoordSys:	MGA55 (GDA94)		

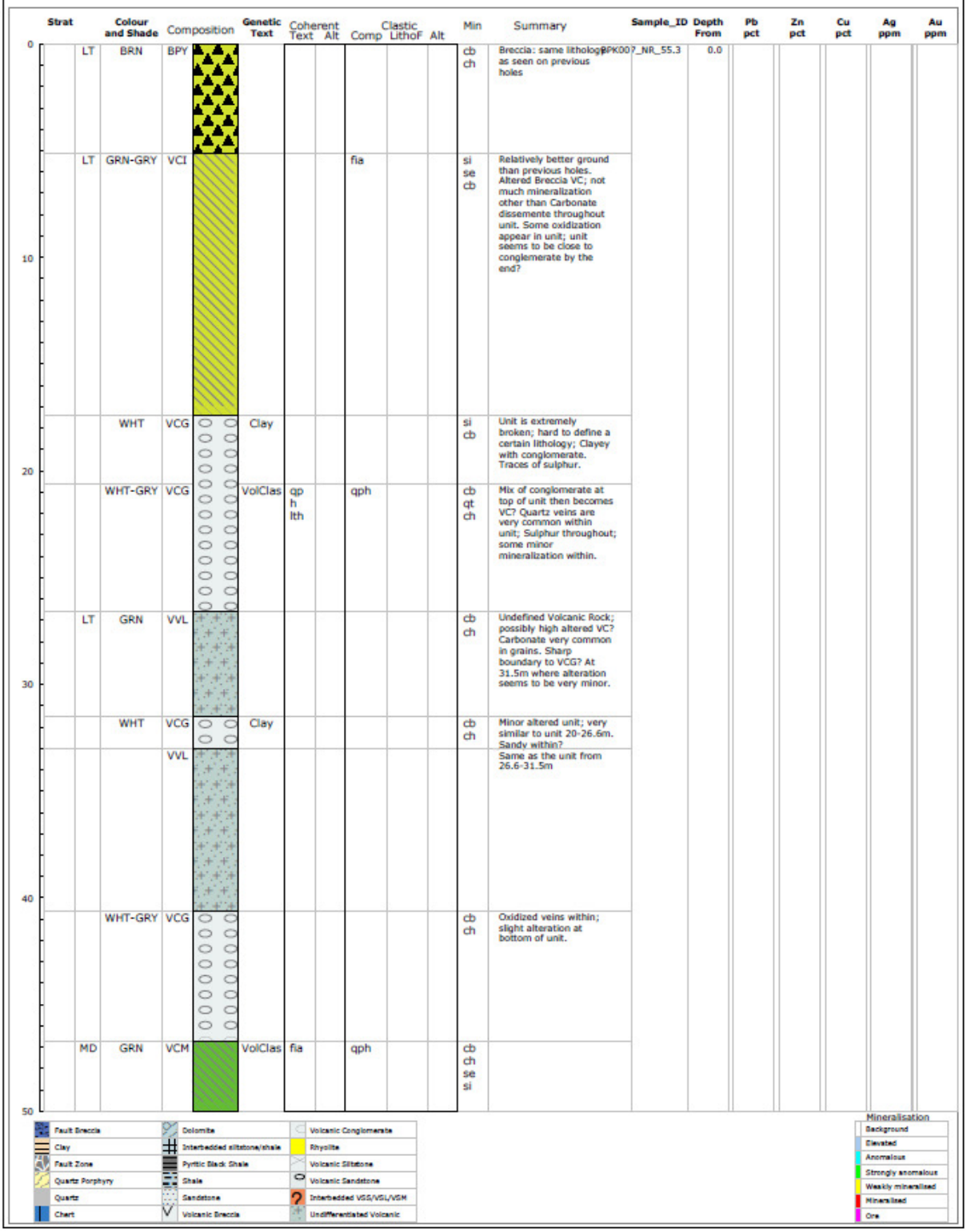


Sample_ID	Depth From	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm
BPK06-08	100.0	13.20	24.70	1.94	84.00	0.49
BPK06-09	100.7	7.78	10.80	1.05	91.00	0.32
BPK06-10	101.2	10.10	13.60	0.88	53.00	0.22
BPK06-11	102.0	5.18	12.60	1.05	65.00	0.52
BPK06-12	103.0	1.92	4.11	0.35	21.00	0.12
BPK06-13	104.0	3.46	6.79	1.19	51.00	0.17
BPK06-14	104.6	7.66	22.60	0.79	71.00	0.42
BPK06-15	105.0	1.26	3.33	0.21	24.00	0.24
BPK06-16	105.4	1.04	2.93	0.06	11.00	0.05
BPK06-17	106.1	1.53	0.53	0.01	18.00	0.02
BPK06-18	107.0	1.23	0.34	0.03	8.00	-0.01

ROSEBERY VMS SUMMARY LOG

Hole ID: BPK007
Project: MTK
Prospect: BTB

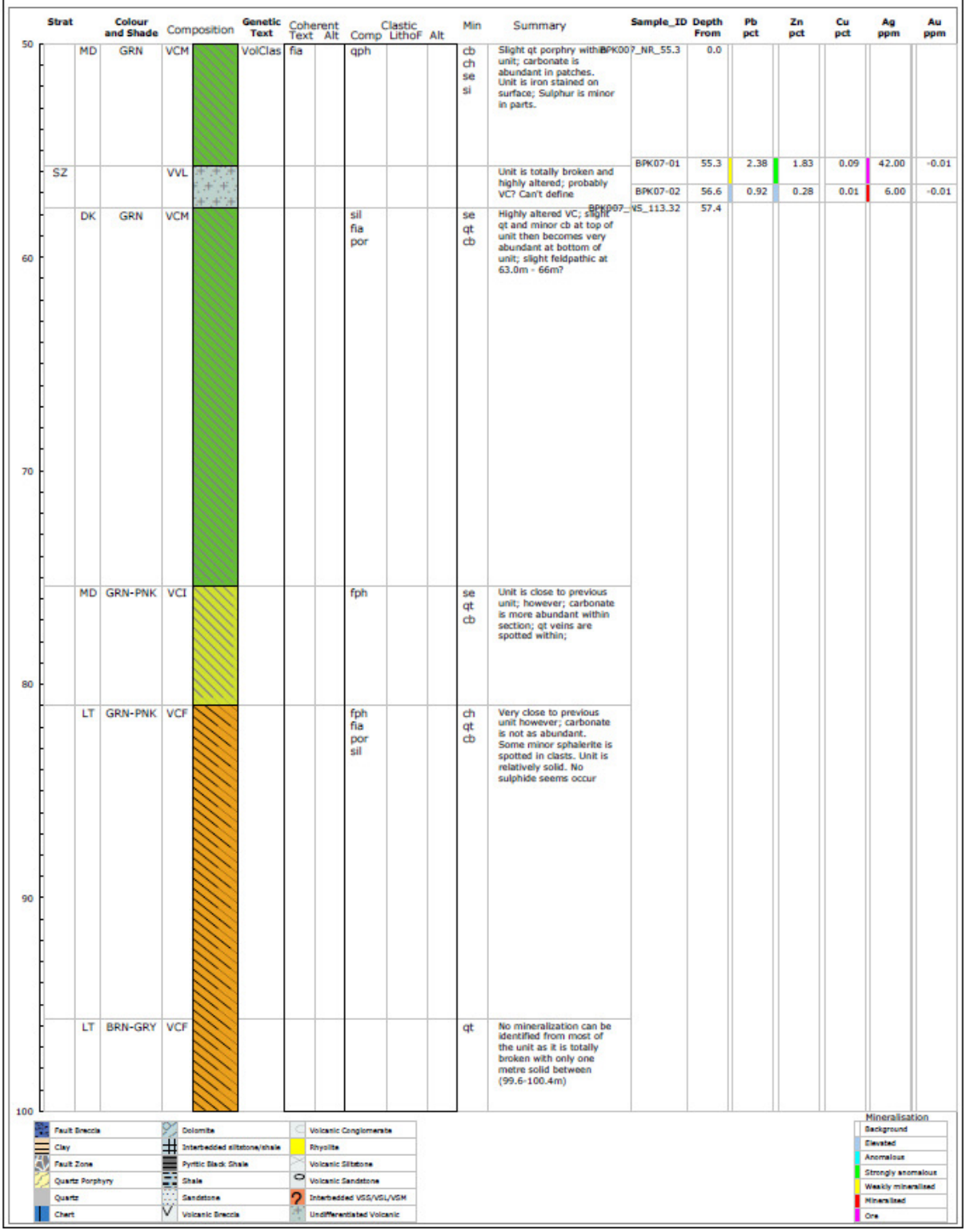
Northing:	5383978.00	**Dip:**	-74.10
Easting:	377399.80	**MAG_Azim:**	271.30
RL:	437.8 mRL	**Total Depth:**	128.6 m
CoordSys:	MGA55 (GDA94)		



ROSEBERY VMS SUMMARY LOG

Hole ID: BPK007
Project: MTK
Prospect: BTB

Northing:	5383978.00	**Dip:**	-74.10
Easting:	377399.80	**MAG_Azim:**	271.30
RL:	437.8 mRL	**Total Depth:**	128.6 m
CoordSys:	MGA55 (GDA94)		

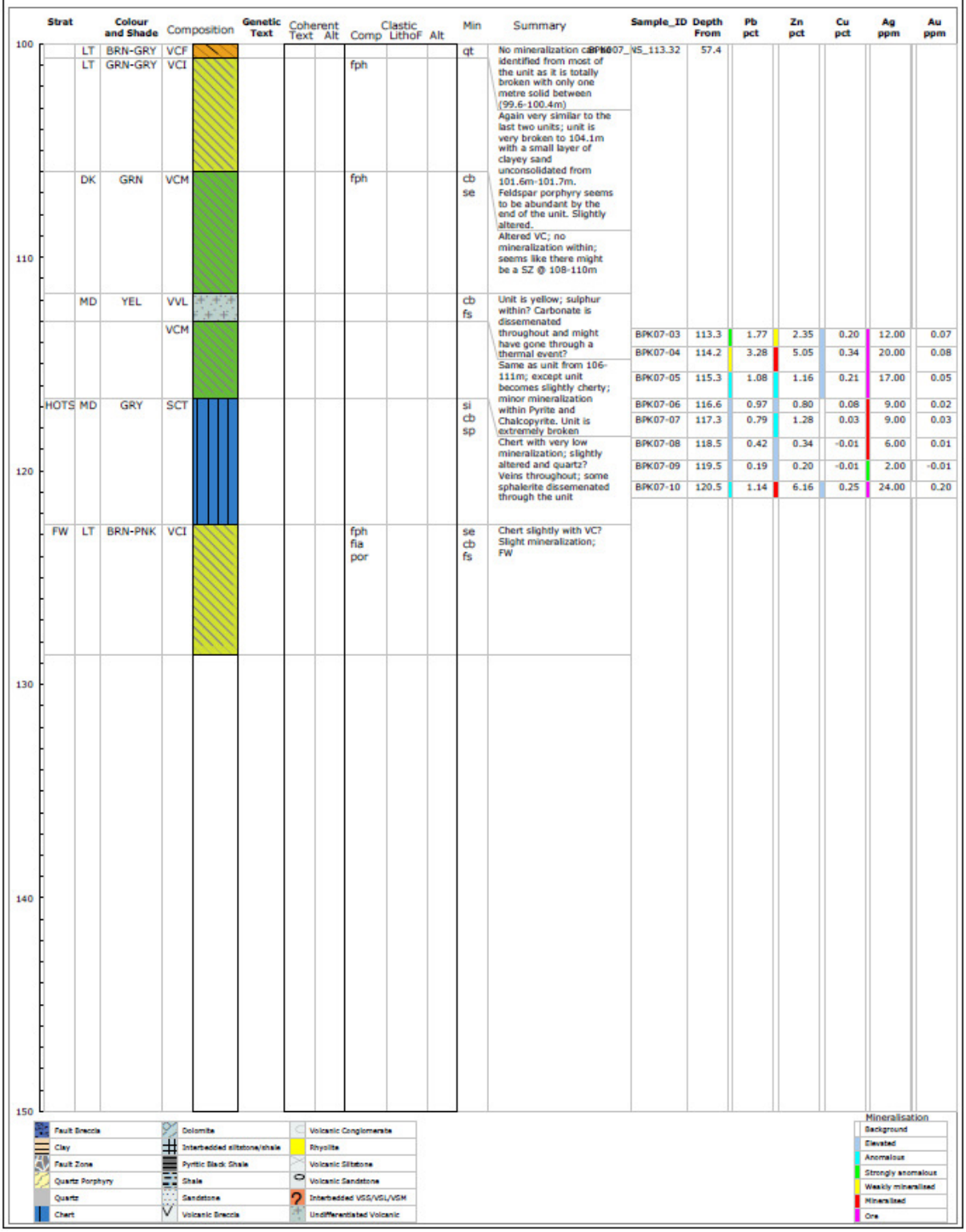


Sample_ID	Depth From	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm
BPK007_NR_55.3	0.0					
BPK07-01	55.3	2.38	1.83	0.09	42.00	<0.01
BPK07-02	56.6	0.92	0.28	0.01	6.00	<0.01
BPK007_VS_113.32	57.4					

ROSEBERY VMS SUMMARY LOG

Hole ID: BPK007
Project: MTK
Prospect: BTB

Northing:	5383978.00	**Dip:**	-74.10
Easting:	377399.80	**MAG_Azim:**	271.30
RL:	437.8 mRL	**Total Depth:**	128.6 m
CoordSys:	MGA55 (GDA94)		

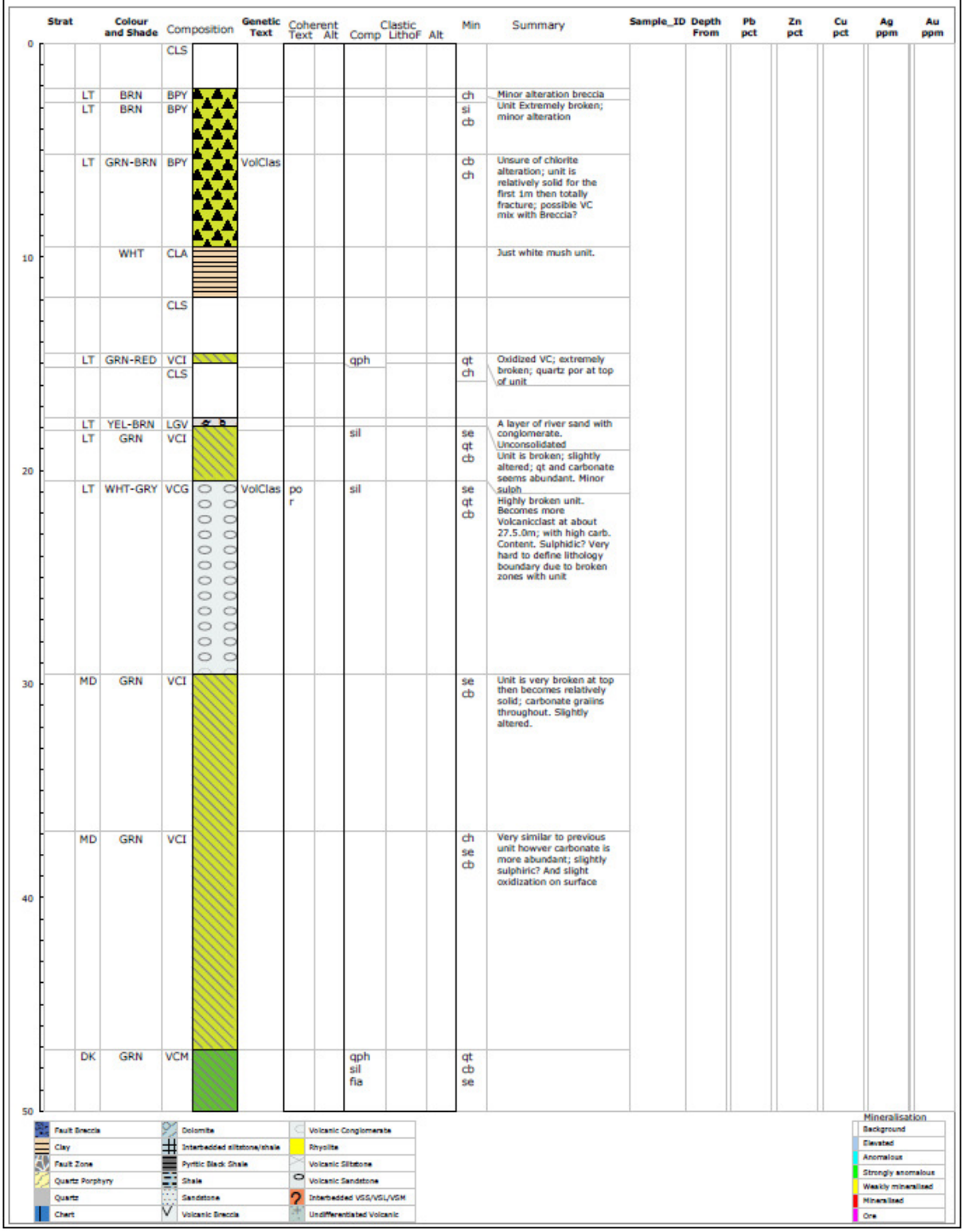


Sample_ID	Depth From	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm
BPK007_NS_113.32	57.4					
BPK07-03	113.3	1.77	2.35	0.20	12.00	0.07
BPK07-04	114.2	3.28	5.05	0.34	20.00	0.08
BPK07-05	115.3	1.08	1.16	0.21	17.00	0.05
BPK07-06	116.6	0.97	0.80	0.08	9.00	0.02
BPK07-07	117.3	0.79	1.28	0.03	9.00	0.03
BPK07-08	118.5	0.42	0.34	-0.01	6.00	0.01
BPK07-09	119.5	0.19	0.20	-0.01	2.00	-0.01
BPK07-10	120.5	1.14	6.16	0.25	24.00	0.20

ROSEBERY VMS SUMMARY LOG

Hole ID: BPK008
Project: MTK
Prospect: BTB

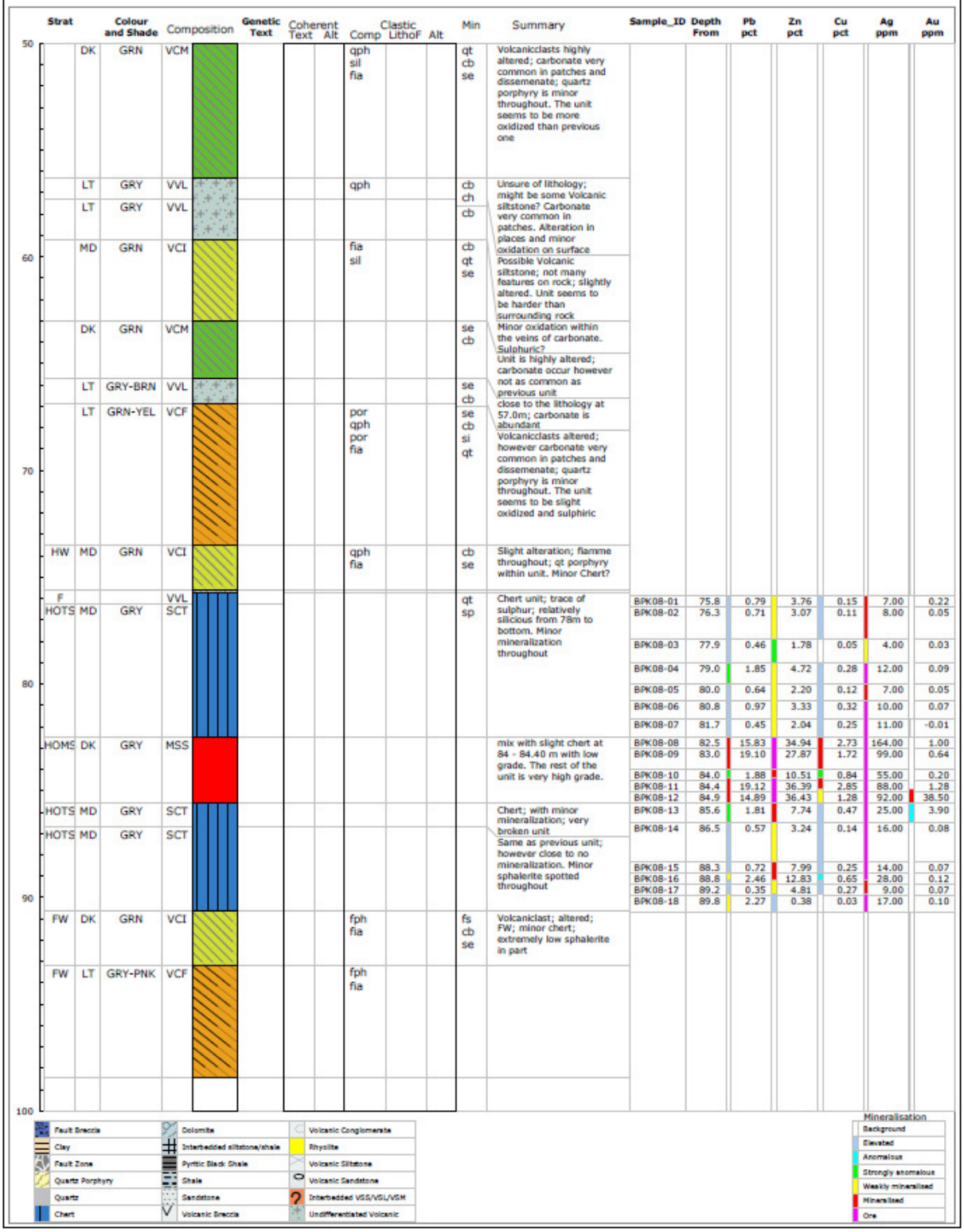
Northing:	5383984.00	**Dip:**	-56.80
Easting:	377396.80	**MAG_Azim:**	268.80
RL:	437.7 mRL	**Total Depth:**	98.4 m
CoordSys:	MGA55 (GDA94)		



ROSEBERY VMS SUMMARY LOG

Hole ID: BPK008
Project: MTK
Prospect: BTB

Northing:	5383984.00	**Dip:**	-56.80
Easting:	377396.80	**MAG_Azim:**	268.80
RL:	437.7 mRL	**Total Depth:**	98.4 m
CoordSys:	MGA55 (GDA94)		

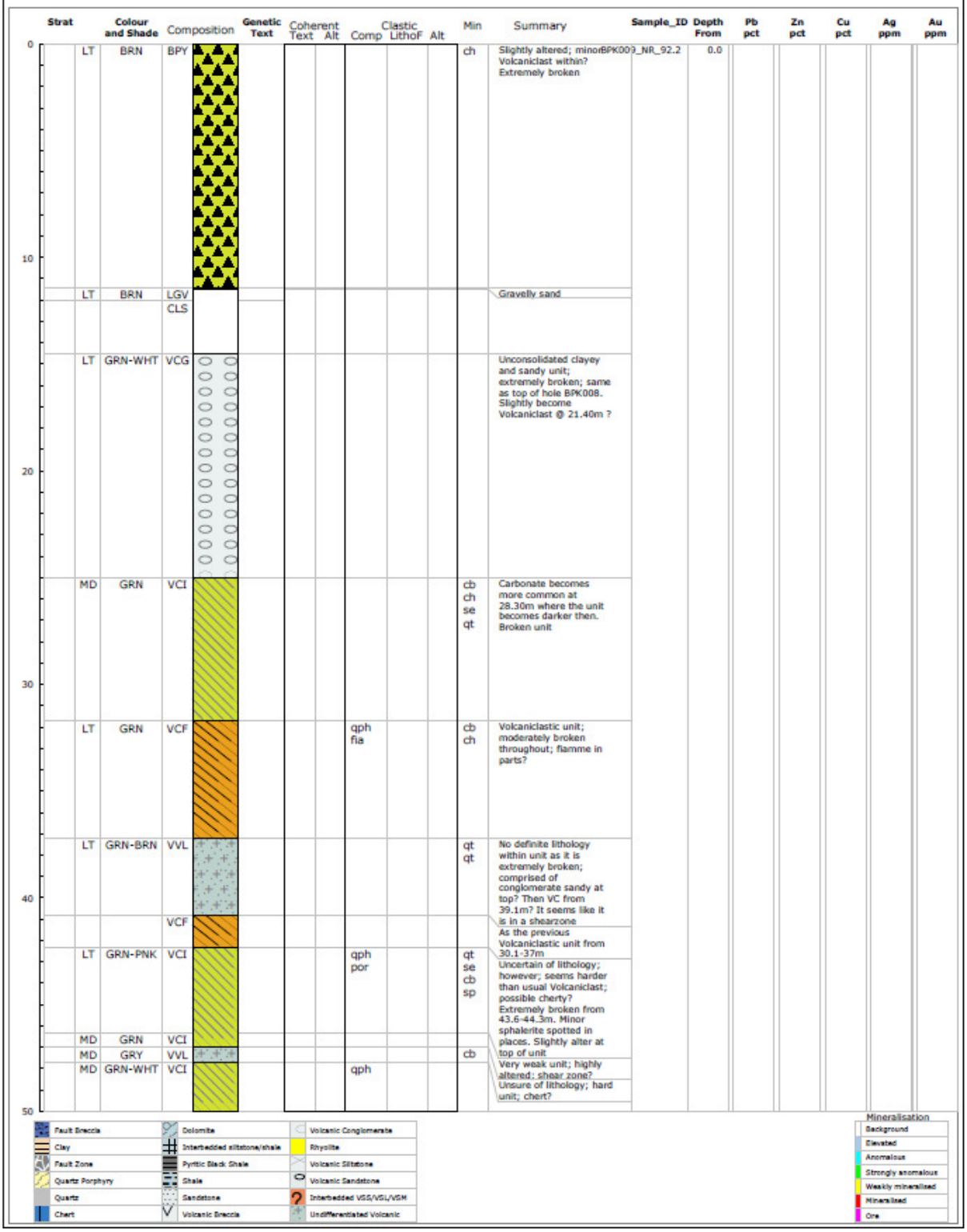


Sample_ID	Depth From	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm
BPK08-01	75.8	0.79	3.76	0.15	7.00	0.22
BPK08-02	76.3	0.71	3.07	0.11	8.00	0.05
BPK08-03	77.9	0.46	1.78	0.05	4.00	0.03
BPK08-04	79.0	1.85	4.72	0.28	12.00	0.09
BPK08-05	80.0	0.64	2.20	0.12	7.00	0.05
BPK08-06	80.8	0.97	3.33	0.32	10.00	0.07
BPK08-07	81.7	0.45	2.04	0.25	11.00	-0.01
BPK08-08	82.5	15.83	34.94	2.73	164.00	1.00
BPK08-09	83.0	19.10	27.87	1.72	99.00	0.64
BPK08-10	84.0	1.88	10.51	0.84	55.00	0.20
BPK08-11	84.4	19.12	36.39	2.85	88.00	1.28
BPK08-12	84.9	14.89	36.43	1.28	92.00	38.50
BPK08-13	85.6	1.81	7.74	0.47	25.00	3.90
BPK08-14	86.5	0.57	3.24	0.14	16.00	0.08
BPK08-15	88.3	0.72	7.99	0.25	14.00	0.07
BPK08-16	88.8	2.46	12.83	0.65	28.00	0.12
BPK08-17	89.2	0.35	4.81	0.27	9.00	0.07
BPK08-18	89.8	2.27	0.38	0.03	17.00	0.10

ROSEBERY VMS SUMMARY LOG

Hole ID: BPK009
Project: MTK
Prospect: BTB

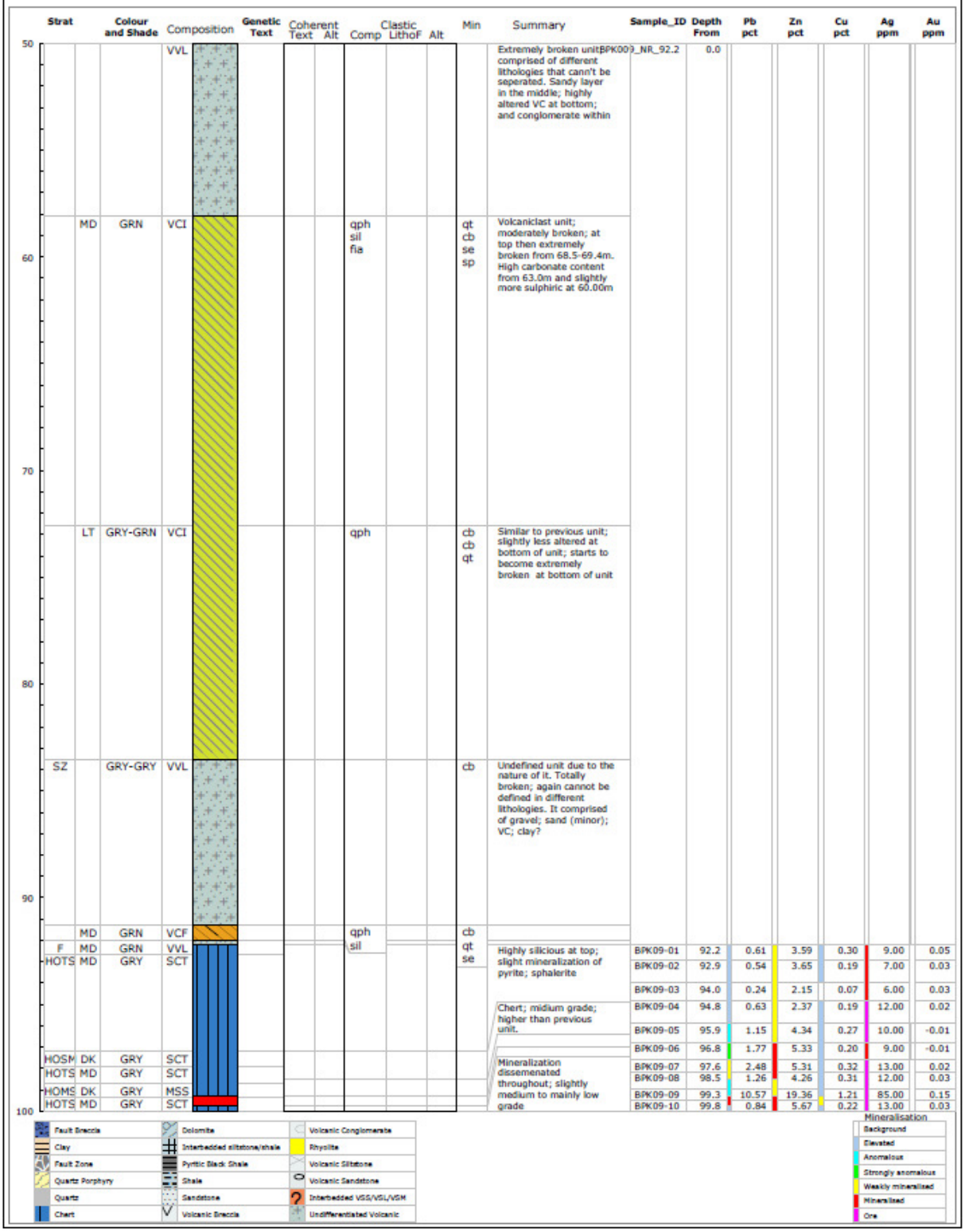
Northing:	5383984.00	**Dip:**	-66.70
Easting:	377397.40	**MAG_Azim:**	268.30
RL:	437.8 mRL	**Total Depth:**	106.6 m
CoordSys:	MGA55 (GDA94)		



ROSEBERY VMS SUMMARY LOG

Hole ID: BPK009
Project: MTK
Prospect: BTB

Northing:	5383984.00	**Dip:**	-66.70
Easting:	377397.40	**MAG_Azim:**	268.30
RL:	437.8 mRL	**Total Depth:**	106.6 m
CoordSys:	MGA55 (GDA94)		

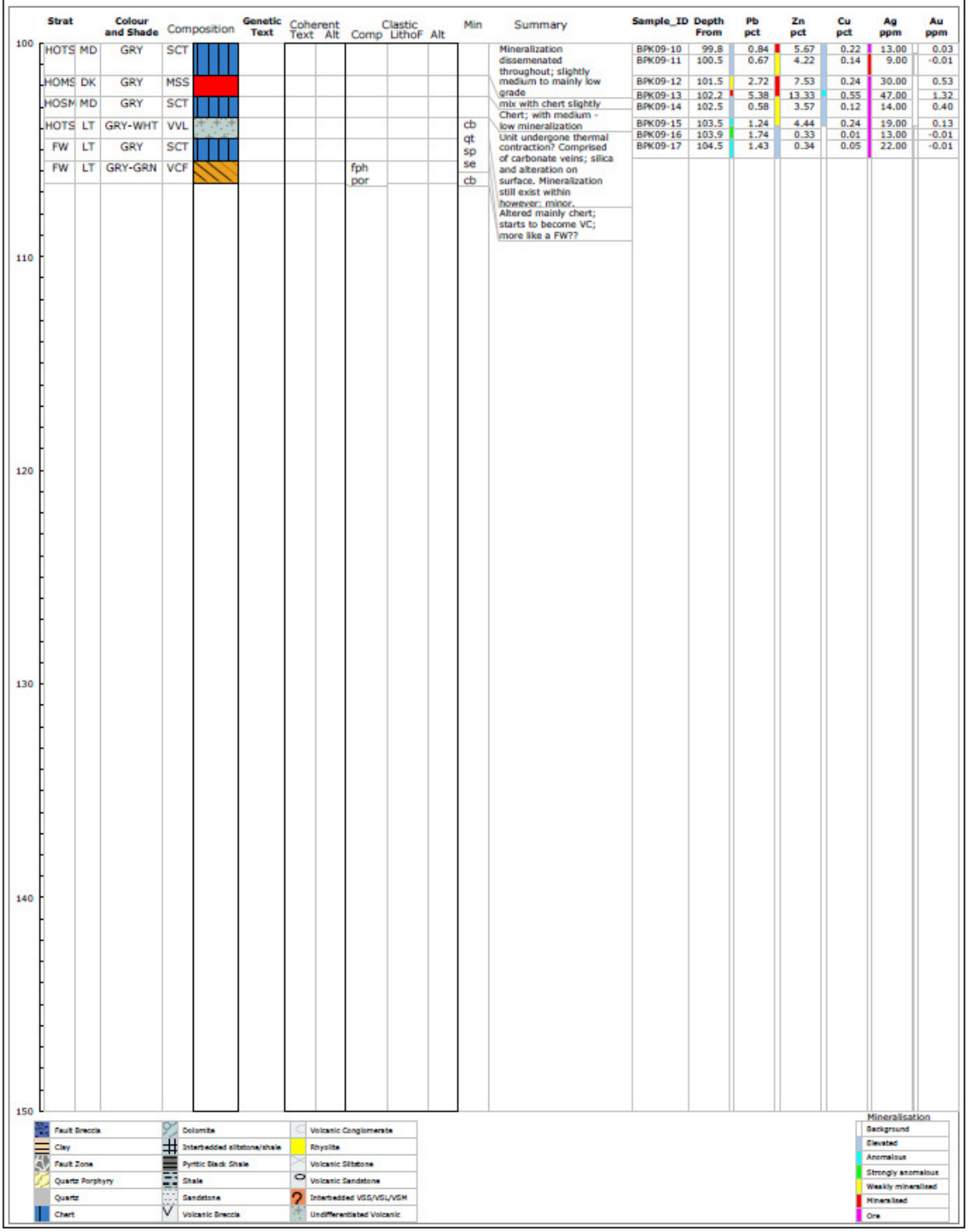


Sample_ID	Depth From	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm
BPK009_NR_92.2	0.0					
BPK09-01	92.2	0.61	3.59	0.30	9.00	0.05
BPK09-02	92.9	0.54	3.65	0.19	7.00	0.03
BPK09-03	94.0	0.24	2.15	0.07	6.00	0.03
BPK09-04	94.8	0.63	2.37	0.19	12.00	0.02
BPK09-05	95.9	1.15	4.34	0.27	10.00	-0.01
BPK09-06	96.8	1.77	5.33	0.20	9.00	-0.01
BPK09-07	97.6	2.48	5.31	0.32	13.00	0.02
BPK09-08	98.5	1.26	4.26	0.31	12.00	0.03
BPK09-09	99.3	10.57	19.36	1.21	85.00	0.15
BPK09-10	99.8	0.84	5.67	0.22	13.00	0.03

ROSEBERY VMS SUMMARY LOG

Hole ID: BPK009
Project: MTK
Prospect: BTB

Northing:	5383984.00	**Dip:**	-66.70
Easting:	377397.40	**MAG_Azim:**	268.30
RL:	437.8 mRL	**Total Depth:**	106.6 m
CoordSys:	MGA55 (GDA94)		



Sample_ID	Depth From	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm
BPK09-10	99.8	0.84	5.67	0.22	13.00	0.03
BPK09-11	100.5	0.67	4.22	0.14	9.00	<0.01
BPK09-12	101.5	2.72	7.53	0.24	30.00	0.53
BPK09-13	102.2	5.38	13.33	0.55	47.00	1.32
BPK09-14	102.5	0.58	3.57	0.12	14.00	0.40
BPK09-15	103.5	1.24	4.44	0.24	19.00	0.13
BPK09-16	103.9	1.74	0.33	0.01	13.00	<0.01
BPK09-17	104.5	1.43	0.34	0.05	22.00	<0.01