



**MT KERSHAW EL 48/2004**

**ANNUAL REPORT  
FOR THE PERIOD ENDING 30<sup>th</sup> October 2011**

**Author:** C. T. McGilvray

**Date:** 30<sup>th</sup> 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

1.	SUMMARY .....	1
2.	INTRODUCTION .....	2
3.	LAND TENURE.....	3
4.	GEOLOGY .....	5
5.	CURRENT EXPLORATION .....	7
	Work Completed in the 2010-2011 Period.....	7
6.	PREVIOUS EXPLORATION .....	8
	EL 48/2004 Zinifex Exploration. 2004+ .....	8
	EL 20/2001 AurionGold Exploration Pty Ltd. 2001-2003.....	9
	EL 35/2000 AurionGold Exploration Pty Ltd. 2001-2003.....	9
	EL 44/1988 Pasminco Ltd, Noranda Ltd, Plutonic Ltd. 1989-2001 .....	9
	EL 21/1998 Pasminco Exploration. 1998-1999 .....	11
	EL 05/1963 Comstaff Pty. Ltd.; BHP Ltd. 1980-1988.....	11
7.	ENVIRONMENTAL.....	13
8.	CONCLUSIONS AND RECOMMENDATIONS .....	14
9.	EXPENDITURE.....	15
10.	REFERENCES .....	16
	APPENDIX A – Drill Logs.....	20

## LIST OF TABLES

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

## LIST OF FIGURES

<b>Figure No.</b>	<b>Title</b>	<b>Scale</b>
<i>Figure 1</i>	Location of EL48/2004 Mt. Kershaw	1:25,000
<i>Figure 2</i>	LIDAR Survey flight lines over EL48/2004	1:10,000
<i>Figure 3</i>	Mosaic of aerial photogrammetric survey results	1:30,000

## **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.

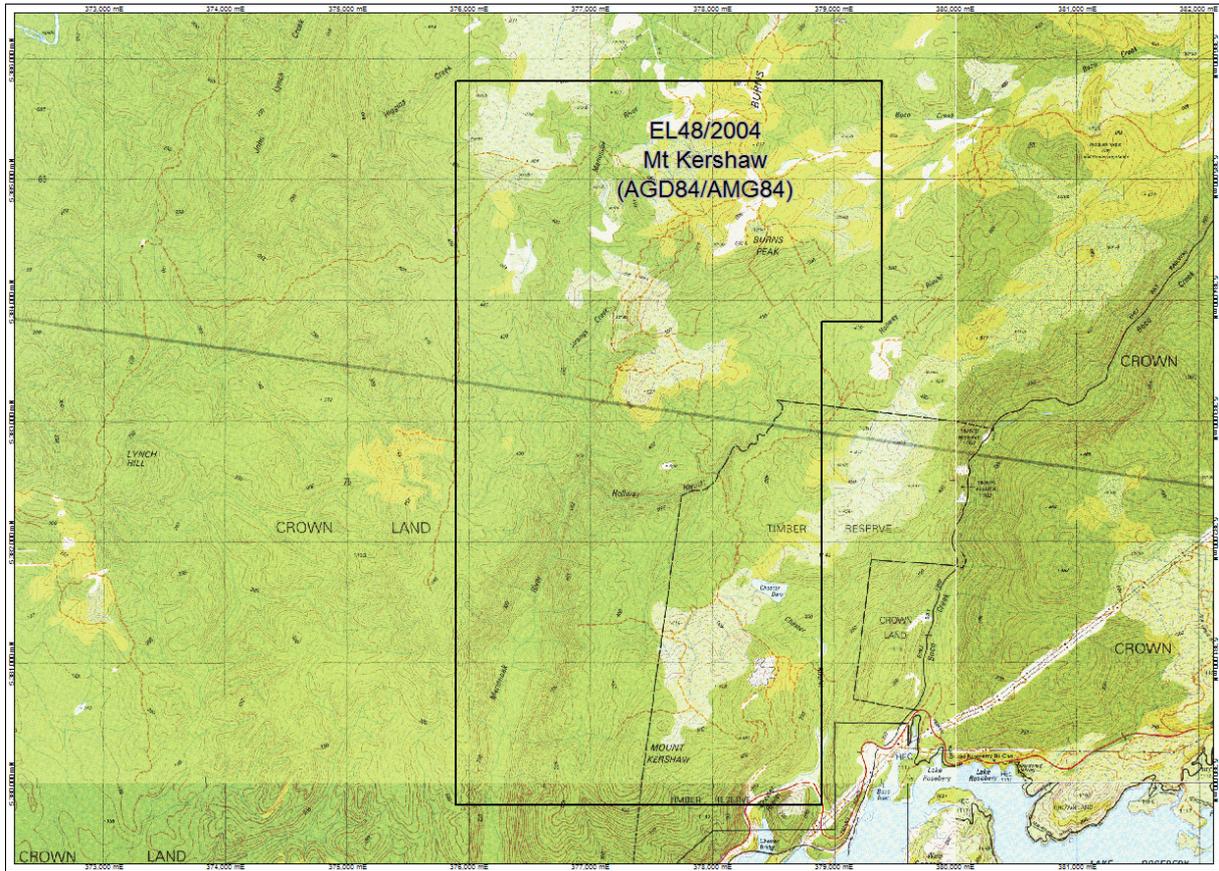
### 3. LAND TENURE

EL 48/2004 Mt Kershaw (15 sq. km) was granted to Zinifex Australia Limited on 23<sup>rd</sup> 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 18<sup>th</sup> 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 volcanoclastics, 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, volcanoclastics 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 fluvial 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
<b>LIDAR</b>				
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 $\sigma$			
Horizontal Accuracy	+/- 0.40m at 1 $\sigma$			
Contours	0.5m	DGN		MGA94/55+AHD
Report	Metadata	PDF		
<b>IMAGERY option</b>				
Orthoimage	0.25m GSD RGB	ECW	DVD	

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



**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 litho geochemistry 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 litho geochemical 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 pit resource and five shallow diamond drillholes were completed (BT1 – BT5). Re-logging 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 Pasmenco 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 31<sup>st</sup> 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
<b>Total Costs</b>		<b>\$650,702</b>

## 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 Pty. 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 1<sup>st</sup> January 1999 – 31<sup>st</sup> 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 1<sup>st</sup> November 1999 – 31<sup>st</sup> 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 1<sup>st</sup> November 2000 – 31<sup>st</sup> 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 period 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 1<sup>st</sup> January to 30<sup>th</sup> 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 Genesis of the Southern Trenches Mineralization, Burns Peak. Unpub. BSc (Hons) thesis, University of Tasmania, Hobart.

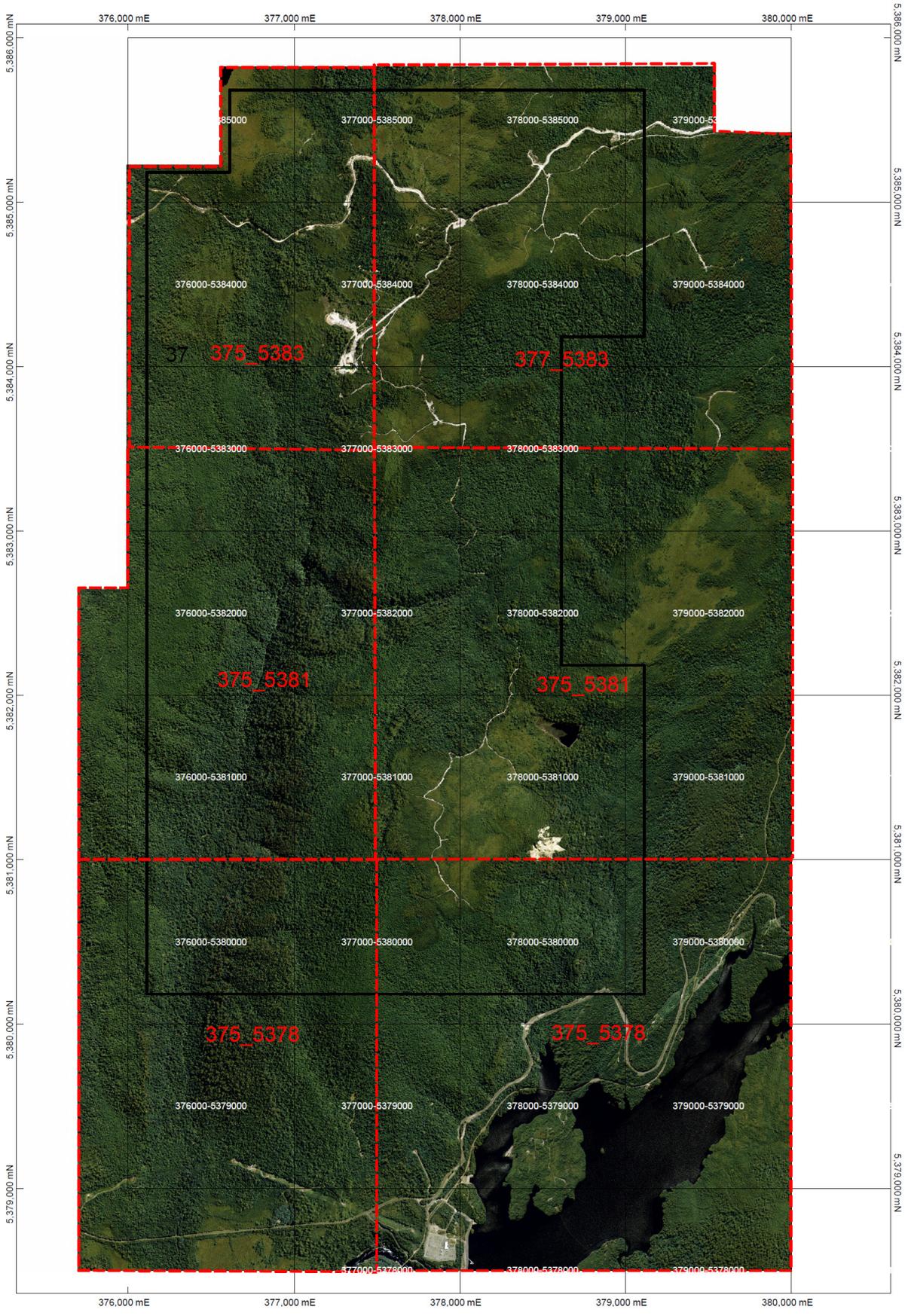
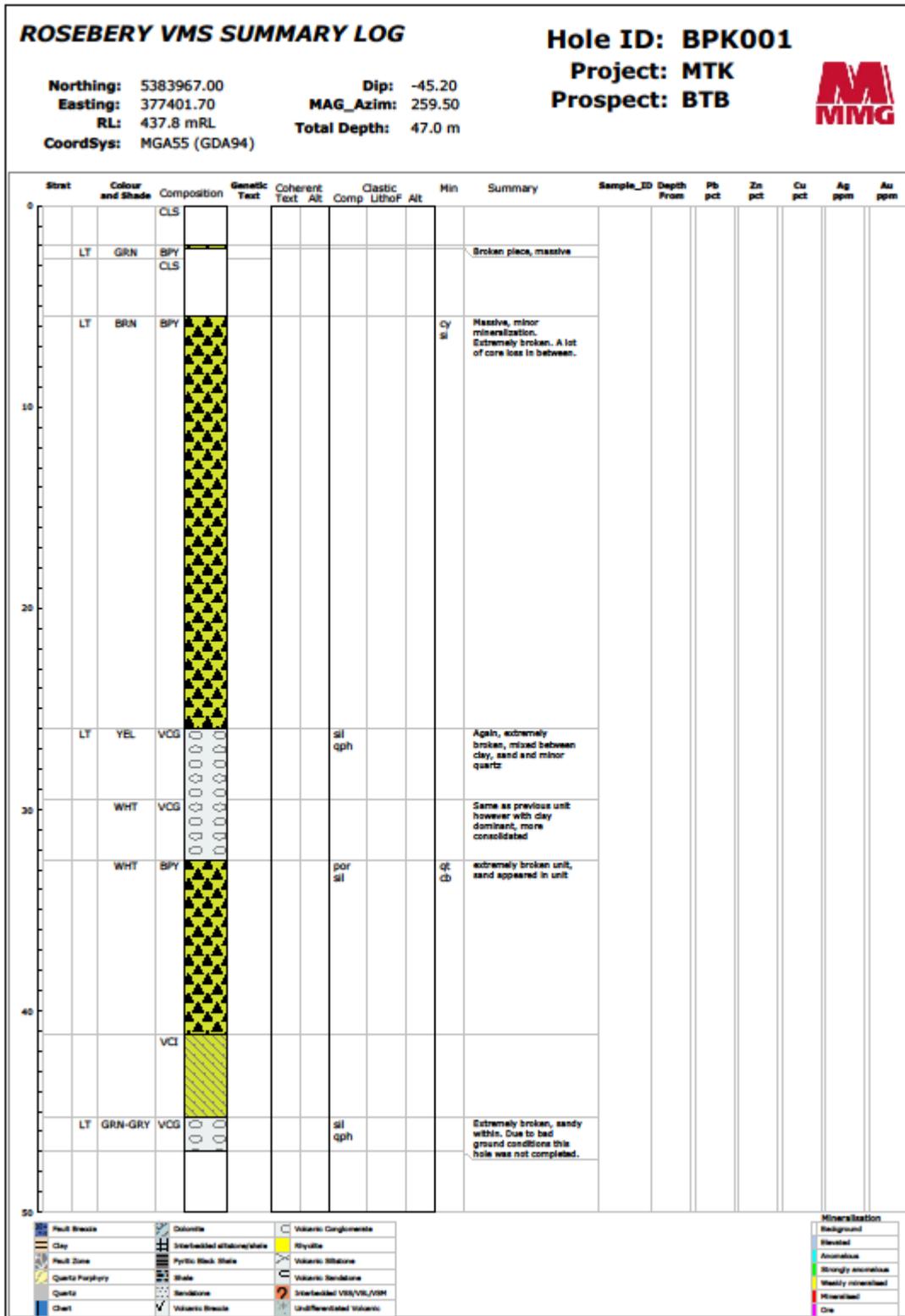


Figure 3: Mosaic of aerial photogrammetric survey results

# 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)

Strat	Colour and Shade	Composition	Genetic Text	Coherent Text	Alt	Clastic Comp	LithoF	Alt	Min	Summary	Sample_ID	Depth From	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm
NC		CLS									BPK002_NR_48.7	0.0					
MD	GRN-GRY	VBX	Clay	abx					cy								
POR	LME-GRY	VCI	VolClas	silpor					qtse								
F	GRN-GRY	VCG		qphsil		qph	brc		qtscy								
POTS	KHA-GRY	VBX		sil					qtsech	Close to first Lithology logged							
MD	GRY	VSM		por		qph	msh										
LT	KHA	VCI	Clastic	qphpor		qph	msh		qtsechcy								
F		VVL								Broken Core, very hard to determine the composition							
LT	KHA	VCI		sil					qtsech								
HW	KHA-LME	VCI	VolClas	qphpum		qph	vq		qtse sp ga	Same as 37-40, very broken, could be results from previous blasting activity close by looks like low mineralization, throughout, unsure of Galena within, mineralized in the middle of unit							
HW	KHA	VCI	VolClas			qph	vq				BPK002-01	48.7	0.48	0.37	0.05	4.00	-0.01

Mineralisation		
Background		
Elevated		
Anomalous		
Strongly anomalous		
Weakly mineralised		
Mineralised		
Ore		

Fault Breccia	Dolomite	Volcanic Conglomerate
Clay	Interbedded siltstone/shale	Rhyolite
Fault Zone	Pyritic Black Shale	Volcanic Siltstone
Quartz Porphyry	Shale	Volcanic Sandstone
Quartz	Sandstone	Interbedded VSS/VSL/VSM
Chert	Volcanic Breccia	Undifferentiated Volcanic



# 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)

Strat	Colour and Shade	Composition	Genetic Text	Coherent Text	Alt	Clastic Comp	LithoF	Alt	Min	Summary	Sample_ID	Depth From	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm
		CLS									BPK003_0_NR	0.0					
LT	GRN	VVL				sil	sil		ch	Broken throughout, bad ground conditions	BPK03-01	2.8					
MD	GRN	BPY							si		BPK003_3_50_NR	3.5					
MD	BRN	VCI	VolClas							No mineralization shown, rock seems massive							
MD	GRN-GRY	BPY				qph	por	se	qt	Pyrite spotted at 8.1m, very broken 6.8-7.4m due to previous drill and blast activities??							
		CLS							ch								
		CLS															
MD	WHT	CLA				qph	vq		qt	Rounded, highly carbonate	BPK03-02	18.9					
MD	GRN-GRY	BPY								extremely broken from 17.5-17.8m, quartz vein occur in places. Massive	BPK003_19.70_NR	19.7					
		CLS															
		CLS															
		CLS								Clay washed out during drilling	BPK003_23.50_NR	23.5					
		CLS								Same as 17.5-24							
SZ	WHT	CLA								Extremely broken, gravelly clay, CLS due to bad ground conditions							
		CLS															
		CLS															
MD	YEL-BRN	BPY	VolClas	po	qph	por	qph		qt	Iron stained in parts, again very broken, quartz is more common, Volcaniclast and Breccia mix. More solid at bottom of unit from 32.1-35.9, some mineralization spotted	BPK03-04	30.2					
		CLS							cb								
		CLS															
		CLS															
		CLS															
		CLS															
DK	GRN-GRY	BPY	VolClas	po	qph	por	qph	lth	se	Carbonate and silica very common with matrix, possible oxidation to BPK003_38.86, some carbonate grains	BPK03-05	36.3					
		CLS							ch								
		CLS							cb								
		CLS							ch								
		CLS							ch								
		CLS							se								
		CLS							cb								
		CLS							cb								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS							ch								
		CLS							se								
		CLS					</										

# 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)

Strat	Colour and Shade	Composition	Genetic Text	Coherent Text	Alt	Comp	Clastic Lithof	Alt	Min	Summary	Sample_ID	Depth From	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm
	LT	YEL-BRN	VCF				qph lth		qt cb se	Alteration is more intense in middle of unit, oxidized vein in parts, unit really broken and improves by the end of unit.	BPK003_47.90_NR	47.9					
	MD	GRN-GRY	VCI							altered unit, very close to top unit however, very broken very hard to get a decent description							
	MD	GRN-GRY	VCI	VolClas	fib qp h lth	cb qt	qph lth		se cb qt se	Unit more solid, oxidized veins in parts of unit, mineralization starts to appear.							
											BPK003_63.20_NR	63.2	-0.01	0.57	-0.01	1.00	-0.01
											BPK003_63.97_NR	64.0					
	HOTS	LT	GRN-GRY	SCT			qph por		si se sp	minor oxidation, trace of sulfur, sphalerite seems to occur (very minor)	BPK003_72.73_NR	72.2					
	F	MD	GRY-GRN	VCI					ch se si	trace of sulfur within	BPK003_74.40_NR	74.4					
	HOTS	MD	GRY	SCT					py sp ga	BMS, extremely high grade ore, gold and silver in places + sphalerite, lead and zinc	BPK003_74.69_NR	74.7					
	HOMS	DK	GRY	SCT							BPK003_75.36_NR	75.4	0.58	2.91	0.11	10.00	0.04
											BPK003_75.54_NR	75.4	14.50	29.60	1.77	52.00	0.89
											BPK003_76.00_NR	76.0	22.00	33.20	2.98	58.00	1.32
											BPK003_76.40_NR	76.4					
											BPK003_76.50_NR	76.5	1.73	9.60	0.50	15.00	0.40
											BPK003_76.80_NR	76.8	20.90	34.10	2.59	101.00	1.54
											BPK003_77.30_NR	77.3	16.70	30.80	2.15	104.00	0.10
											BPK003_77.60_NR	77.6	14.20	31.00	1.22	89.00	15.80
											BPK003_78.20_NR	78.2	4.25	8.58	0.42	25.00	0.78
											BPK003_79.50_NR	79.5	0.20	2.88	0.11	5.00	0.28
											BPK003_80.50_NR	80.5					
											BPK003_80.60_NR	80.6	0.08	2.03	0.04	3.00	0.04
											BPK003_81.20_NR	81.2	0.46	1.19	0.10	5.00	0.78
											BPK003_81.70_NR	81.7	10.10	21.70	0.54	64.00	46.80
											BPK003_82.00_NR	82.0	11.60	24.50	0.27	53.00	7.46
											BPK003_82.30_NR	82.3	0.00	2.00	0.15	10.00	0.02
											BPK003_83.50_NR	83.5					
	HOTS	MD	GRY	SCT					py sp	Chert mixed with BMS, low grade near end of unit	BPK003_83.60_NR	83.6	11.30	14.70	2.23	73.00	0.60
											BPK003_84.70_NR	84.7	0.39	3.14	0.14	8.00	0.06
											BPK003_85.30_NR	85.3	0.29	2.12	0.07	9.00	0.07
											BPK003_86.30_NR	86.3	0.32	3.08	0.09	9.00	0.04
											BPK003_87.00_NR	87.0	4.48	3.70	0.23	72.00	-0.01
											BPK003_87.50_NR	87.5					
											BPK003_88.10_NR	88.1					
											BPK003_89.30_NR	89.3					


	Background
	Disseminated
	Anomalous
	Strongly anomalous
	Weakly mineralized
	Mineralized
	Ore

# ROSEBERY VMS SUMMARY LOG

Hole ID: BPK004

Project: MTK

Prospect: BTB



Northing: 5383978.00

Easting: 377398.90

RL: 437.9 mRL

CoordSys: MGA55 (GDA94)

Dip: -51.80

MAG\_Azim: 171.60

Total Depth: 94.0 m

Strat	Colour and Shade	Composition	Genetic Text	Coherent Text	Alt	Clastic Comp	Lithof	Alt	Min	Summary	Sample_ID	Depth From	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm
		CLS															
LT	GRN	VVL							ch	Broken throughout, bad ground conditions							
LT	GRN	BPY							si	Very broken unit, some pyrite was spotted at approx. 9.2m. CLS throughout the unit due top bad ground conditions							
									sil								
SZ	LT	GRN	VCI	VolClas	fi				se	Extremely broken, might be in shear zone? 11.0-12.0m is more solid, gets worse by end of unit.							
									sil								
		CLS															
LT	WHT-GRN	VVL							se	Just pebbles and gravel of quartz, subrounded, might be river deposit? Unit is broken, very similar to unit 11-17.5m, minor alteration.							
		VCF	VolClas	fi					qt								
TB	LT	GRN	VCG							Unit is totally broken, unconsolidated, gravel sand and rock mixed. Hard to define.							
		VCF								Same as unit 20-29.5							
DK	GRN-GRY	BPY	VolClas	po					qt	Carbonate and silica very common within matrix, possible oxidation to some carbonate grains. Breccia and Volcaniclast mix.							
				r					cb								
				q					ch	Very similar to top unit however, less oxidation on carbonate grains, and unit seems to be harder							
				p					se								
				h					cb	Totally broken top of unit (45.2-46.4)							
				f					se								
MD	GRN	VCI	VolClas	q					qt								
				h					cb								
				f					cb								
				sil					se								
MD	GRY-GRN	VCF	VolClas														


	Background
	Elevated
	Anomalous
	Strongly anomalous
	Weakly mineralized
	Mineralized
	Ore

# 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)

Strat	Colour and Shade	Composition	Genetic Text	Coherent Text	Alt	Comp	Clastic Lithof	Alt	Min	Summary	Sample_ID	Depth From	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm
MD	GRY-GRN	VCF	VolClas	por	qph	qph			qt	Unit is extremely broken, less broken at middle of unit, quartz and silicious, possibly breccia and VC. Possible sphalerite at 51.80m. Minor oxidation within.							
DK	GRN-GRY	VCM				por			qt	Carbonate grains very common within matrix, possible oxidation to carbonate grains, minor quartz bands throughout unit							
MD	YEL-BRN	VCF							qt	a zone of broken oxidized Volcanic rock, carbonate is common and slight veins in part							
LT	GRN-GRY	BPY	VolClas	por	qph	qph			qt	Volcaniclast and breccia mix, Quartz Porphyry very common, extremely broken between 62.0-65.5m and slightly oxidized in the middle of unit							
MD	GRN	VCI				qph			qt	Alteration is more intense than previous unit, oxidized vein in parts, unit is moderately broken. Possible carbonate and silica vein spotted at end of unit							
MD	GRN	VCF				qph			qt	Very altered, volcaniclast?? Quartz and dark silica very abundant in porphyry and veins, carbonate is minor. Slight mineralization of Pb+Zn? Within	BPK04-01	76.2	1.01	1.19	0.05	8.00	0.02
F	HOTS	LT	FTZ						qt		BPK04-02	76.8	1.07	2.22	0.14	18.00	0.06
V	HOMS	DK	SCT						qt	Traces of Sulphur, Sphalerite appears in Veins with pyrite or traces of gold??	BPK04-03	78.0	21.07	29.20	2.28	90.00	0.76
HOMS	DK	GRY	MSS						py	A piece of quartz vein within the chert and the BMS, had some interesting gold pieces	BPK04-04	78.9	8.24	15.20	1.22	45.00	0.85
HOMS	DK	GRY	SCT						sp	BMS, extremely high grade ore, gold and silver in places + sphalerite, lead and zinc	BPK04-05	79.7	0.20	3.66	0.04	3.00	0.03
HOMS	DK	GRY	MSS						ga	Chert mixed with BMS, medium to high grade, pyrite, gold?? Silver, lead and zinc in part	BPK04-06	80.5	6.04	15.90	0.23	50.00	28.70
HOMS	DK	GRY	SCT							BMS high grade ore.	BPK04-07	81.4	0.42	3.73	0.17	7.00	0.07
HOMS			MSS							Chert mixed with BMS, medium to extremely high grade, Gold seems very interesting sphalerite is common.	BPK04-08	83.2	3.19	6.24	0.48	26.00	0.55
HOMS			MSS							BMS, Extremely high grade.	BPK04-09	84.2	0.69	3.00	0.22	11.00	0.14
HOMS			MSS							Chert mixed with BMS, medium to extremely high grade, Gold seems very interesting sphalerite is common.	BPK04-10	85.0	1.47	2.54	0.32	12.00	0.07
HOMS			MSS							BMS high grade ore.	BPK04-11	85.6	10.40	19.80	1.47	63.00	0.57
HOMS			MSS							Chert mixed with BMS, medium to extremely high grade, Gold seems very interesting sphalerite is common.	BPK04-12	86.3	13.50	23.60	1.79	119.00	0.54
HOMS			MSS							BMS, Extremely high grade.	BPK04-13	86.7	14.20	28.20	2.22	161.00	127.00
HOMS			MSS							Chert with BMS, Medium grade, gold seems high??	BPK04-14	87.0	17.80	31.10	2.17	131.00	42.00
HOMS			MSS							Minor mineralization, end of mineralization unit. Unit broken at 90.0-90.40m	BPK04-15	87.5	0.47	6.44	0.14	8.00	0.47
HOTS	MD	GRY	SCT							Footwall, no mineralization, feldspar is common.	BPK04-16	88.5	0.25	4.73	0.11	10.00	0.34
FW	LT	YEL-BRN	VCF			fph			fs		BPK04-17	89.6	0.16	3.05	0.08	6.00	-0.01
FW	LT	YEL-BRN	VCF			fph			si		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

Easting: 377399.20

RL: 437.7 mRL

CoordSys: MGA55 (GDA94)

Dip: -59.10

MAG\_Azim: 268.30

Total Depth: 102.8 m

Strat	Colour and Shade	Composition	Genetic Text	Coherent Text	Alt	Clastic Comp	Lithof	Alt	Min	Summary	Sample_ID	Depth From	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm
		CLS															
LT	GRN-GRY	BPY	VolClas	qp h		por sil			si se cb	Broken throughout, bad ground conditions, hard to get 1m of solid core. Pyrite spotted at 9.0m							
SZ	LT GRN	BPY	VolClas		si	sil			ch si se	Unit is extremely broken, less broken at middle of unit, quartz and silicious, possibly breccia and VC. Minor oxidation within.							
	WHT	VCG	VolClas	qp h lth		qph sil			cb cy qt	Unsure of lithology, seems like its mixed with VC, quartz grains and veins are very common, sandy in part? Carbonate grains seems to be oxidized by end of unit. Unit is totally broken.							
LT	GRY	VCG	VolClas	qp h		qph				Unit is extremely broken, hard to define a lithology, Quartz Por. Very common							
MD	GRN	BPY				sil			se ch qt sp	Sulphide spotted at 34.7m							
F	LT GRN	CLA VCF			si				se	a very mushy layer, hard to define if there is anything in it. Unit is broken, at bottom, no mineralization seems to occur in this unit							
LT	GRN	BPY	VolClas	qp h		qph			se qt cb	Breccia mix with Volcaniclast, weaker and lithic rich at 42.5-43.5m. Oxidized at bottom of unit, seems to be more solid than previous units.							
MD	GRN	BPY	VolClas			por qph lth			se ch								

Mineralisation			
Background			
Elevated			
Anomalous			
Strongly anomalous			
Weakly mineralized			
Mineralized			
Ore			

Fault Breccia	Dolomite	Volcanic Conglomerate
Clay	Interbedded siltstone/shale	Rhyolite
Fault Zone	Pyritic Black Shale	Volcanic Siltstone
Quartz Porphyry	Shale	Volcanic Sandstone
Quartz	Sandstone	Interbedded VSS/VSL/VSM
Chart	Volcanic Breccia	Undifferentiated Volcanic

# ROSEBERY VMS SUMMARY LOG

Hole ID: **BPK005**

Project: **MTK**

Prospect: **BTB**



Northing: 5383978.00

Easting: 377399.20

RL: 437.7 mRL

CoordSys: MGA55 (GDA94)

Dip: -59.10

MAG\_Azim: 268.30

Total Depth: 102.8 m

Strat	Colour and Shade	Composition	Genetic Text	Coherent Text	Alt	Comp	Clastic Lithof	Alt	Min	Summary	Sample_ID	Depth From	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm
MD	GRN	BPY	VolClas	por r q p h		por q p h l t h		se c h	qt c b c h s e	Carbonate and silica very common within matrix, possible oxidation to some carbonate grains. Breccia and Volcaniclast mix. Unit is extremely fractured							
MD	YEL-GRN	BPY				q p h l t h			qt c b s e	Very similar to top unit however less oxidation at top of unit and more and bottom, Carbonate grains very common, pink reddish grains within??							
MD	GRN	VCI	VolClas	q p h f i a s i l		q p h l t h		se	se q t c b	Unit is more solid, becomes broken at bottom 5m., oxidized with common silicious veins within. Breccia and VC mix?							
HOTS MD	GRY-GRN	SCT				q p h			qt s e c b	Chert, minor sulphides. Common silicious veins							
HW LT	GRY	VCI				q p h l t h			qt s e c b	Carbonate grains very common within matrix, very slight alteration near top of unit, relatively broken unit							
HOTS MD	GRN	SCT							qt c b	Altered chert, broken BMS, minor chert, extremely high grade ore							
F		SCT							se s i c h	Common BMS, lower grade comparing to previous unit, however still relatively medium to high grade.	BPK05-01	86.7	6.18	6.54	1.06	30.00	0.30
HOMS DK	GRY	MSS									BPK05-02	87.4	4.67	7.41	1.46	25.00	0.17
HOMS MD	GRY	SCT									BPK05-03	87.9	6.31	6.18	1.05	20.00	0.12
HOMS DK	GRY	MSS									BPK05-04	88.6	1.33	8.07	0.47	24.00	0.13
HOMS MD	GRY	MSS									BPK05-05	89.7	1.33	6.68	0.64	14.00	0.08
HOMS DK	GRY	MSS									BPK05-06	90.3	13.30	19.90	1.53	72.00	0.91
HOTS MD	GRY	SCT									BPK05-07	90.8	17.50	28.40	2.22	107.00	1.12
HOMS MD	GRY	MSS									BPK05-08	91.7	2.52	4.15	0.22	39.00	0.09
HOTS MD	GRY	SCT									BPK05-09	92.3	8.67	19.10	1.13	50.00	0.31
HOMS MD	GRY	MSS									BPK05-10	92.8	0.43	3.08	0.14	5.00	0.04
HOTS MD	GRY	SCT									BPK05-11	93.5	0.85	4.83	0.32	12.00	0.24
HOMS DK	GRY	MSS									BPK05-12	94.5	2.38	8.65	0.60	29.00	0.13
HOTS MD	GRY-GRN	SCT									BPK05-13	95.5	1.86	3.97	0.46	32.00	0.14
HOMS DK	GRY	MSS									BPK05-14	96.5	0.49	0.73	0.02	4.00	0.02
HOTS MD	GRY-GRN	SCT							se q t	Chert with minor BMS, low grade on average throughout the unit. Sphaerite, in veins in places, very broken unit, feldspathic, not much structure and mineralization occur	BPK05-15	97.8	0.62	2.85	0.12	9.00	0.12
FW MD	BRN-GRN	VCF				f p h			se f s		BPK05-16	98.5	0.64	4.50	0.28	15.00	0.16



# ROSEBERY VMS SUMMARY LOG

Hole ID: BPK006

Project: MTK

Prospect: BTB



Northing: 5383978.94

Easting: 377400.62

RL: 437.8 mRL

CoordSys: MGA55 (GDA94)

Dip: -65.70

MAG\_Azim: 273.10

Total Depth: 110.1 m

Strat	Colour and Shade	Composition	Genetic Text	Coherent Text	Alt	Clastic Comp	Lithof	Alt	Min	Summary	Sample_ID	Depth From	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm
	LT GRN-GRY	BPY				por			cb ch qt	Minor Altered unit; L88K006 broken ground than start of previous holes; Carbonate patches common within Breccia matrix	L88K006_NR_41.35	0.0					
	LT GRN	VCF		fla	lth	por			cb ch qt	Altered Volcaniclast; Chlorite in Matrix? Minor quartz spotted; relatively solid at top of unit however; extremely broken at the bottom of unit (13.5-15.2m)							
	LT GRN-RED	VCF															
		WHT	BPY	VolClas	po r qp h	sil			cb ch qt	Very similar to top unit; however; more oxidized unit; and extremely broken throughout. Breccia mix with VC? Extremely low Alteration in patches through unit. Unit is broken throughout with some solid core in middle of unit; Quartz Vein very common; Porphyry of silica? Carbonate common and trace of sulphide?							
		WHT-GRN	VCF							Very similar to top unit; with more abundant alteration at top of unit; extremely broken unit							
	LT GRN	VCI		VolClas	fla				cb ch qt	Carbonate grains very common within matrix; slight alteration in middle of unit; common sulphide in unit?							
	LT WHT-YEL	VCF				sil			cb ch	Unit might be sulphidic? Carbonate is still common; no quartz spotted							
	MD GRN	VCI				fla			se qt	Unit is relatively altered; sphalerite spotted at 41.9m; carbonate is minor within unit	BPK06-01	41.4	0.05	0.32	-0.01	2.00	0.02
											BPK006_NS_95.6	42.3					
	MD WHT-GRN	VVL								Unit is totally broken; comprised of conglomerate?? Quartz and altered volcanic rock							
	MD GRN	VCI		VolClas	po r	qph lth fla		se	se qt cb								

	Fault Breccia		Dolomite		Volcanic Conglomerate
	Clay		Interbedded siltstone/shale		Rhyolite
	Fault Zone		Pyritic Black Shale		Volcanic Siltstone
	Quartz Porphyry		Shale		Volcanic Sandstone
	Quartz		Sandstone		Interbedded VSS/VSL/VSM
	Chert		Volcanic Breccia		Undifferentiated Volcanic

	Background
	Elevated
	Anomalous
	Strongly anomalous
	Weakly mineralised
	Mineralised
	One

# 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)

Strat	Colour and Shade	Composition	Genetic Text	Coherent Text	Alt	Clastic Comp	LithoF	Alt	Min	Summary	Sample_ID	Depth From	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm
	MD	GRN	VCI	VolCias	po	qph	lth	fla	se	qt							
					r				cb	The unit is very broken from (47.2-59.6m) then becomes more solid; carbonate patches and grains are very common; however, oxidized in the middle of unit. Quartz flame in parts?? Moderately altered unit; and minor sulphide in parts of unit	BPK005_NS_95.6	42.3					
	MD	YEL	VCI						cb	Unit might have high sulphur content? Starts to get altered by bottom of unit; and starts to get very similar to previous unit.							
	MD	GRN	VCI	VolCias	qp	qph	lth	sil	se	cb	Very broken unit; same as unit 11						
					h	lth		sil	se	se							
			VCF							this unit is comprised of the two previous units mixed; top of unit might have high sulphur content (MD-YEL color)? Then it becomes silica and carbonate rich. Minor alteration within. Carbonate still occur in patches. Seems like it been through thermal contraction??							
										Yellow (sulphur??) unit; minor oxidization; carbonate is less abundant and appears in patches as well. Alteration spotted at 94.9-95.1m but nothing major.							
	MD	YEL	VVL						cb	Unsure of unit lithology? However chert is more abundant.							
F	MD	GRY	SCT							Chert mix with minor to non BMS; very low mineralization; carbonate still common in parts	BPK06-02	95.6	0.73	3.87	0.44	12.00	0.04
HOTS	MD	GRY	SCT								BPK06-03	96.6	0.32	1.65	0.06	4.00	0.53
											BPK06-04	97.5	0.45	2.03	0.13	7.00	0.14
											BPK06-05	98.1	1.23	5.94	0.31	22.00	0.15
HOMS	DK	GRY	MSS							BMS mix with minor Chert; Very high grade throughout	BPK06-06	98.7	5.74	10.60	1.83	55.00	0.30
											BPK06-07	99.0	17.90	34.20	1.49	155.00	0.57

	Delonite	Volcanic Conglomerate
	Interbedded siltstone/shale	Rhyolite
	Pyritic Black Shale	Volcanic Siltstone
	Shale	Volcanic Sandstone
	Sandstone	Interbedded VSG/VSL/VSM
	Volcanic Breccia	Undifferentiated Volcanic

Mineralisation	
	Background
	Elevated
	Anomalous
	Strongly anomalous
	Weakly mineralized
	Mineralized
	One

# 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)

Strat	Colour and Shade	Composition	Genetic Text	Coherent Text	Alt	Clastic Comp	LithoF	Alt	Min	Summary	Sample_ID	Depth From	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm
HOMS DK	GRY	MSS								BMS mix with minor Chert; Very high grade throughout	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
HOSM MD	GRY	SCT								common BMS; lower grade comparing to previous unit; however still relatively medium to high grade throughout	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
HOTS MD	GRY	SCT								Very low mineralization unit; starts to get very altered by bottom of unit; high carbonate content. Sphalerite in places.	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
FW	LT	PNK-GRY	VCF			fph				Starts to get to FW? Feldspar porphyry occur	BPK06-18	107.0	1.23	0.34	0.03	8.00	-0.01

Fault Breccia	Delonite	Volcanic Conglomerate
Clay	Interbedded siltstone/shale	Rhyolite
Fault Zone	Pyritic Black Shale	Volcanic Siltstone
Quartz Porphyry	Shale	Volcanic Sandstone
Quartz	Sandstone	Interbedded VSS/VSL/VSM
Chert	Volcanic Breccia	Undifferentiated Volcanic

Mineralisation
Background
Disseminated
Anomalous
Strongly anomalous
Weakly mineralised
Mineralised
One

# ROSEBERY VMS SUMMARY LOG

Hole ID: BPK007

Project: MTK

Prospect: BTB



Northing: 5383978.00

Easting: 377399.80

RL: 437.8 mRL

CoordSys: MGA55 (GDA94)

Dip: -74.10

MAG\_Azim: 271.30

Total Depth: 128.6 m

Strat	Colour and Shade	Composition	Genetic Text	Coherent Text	Alt	Clastic Comp	LithoF	Alt	Min	Summary	Sample_ID	Depth From	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm
	LT BRN	BPY							cb ch	Breccia: same litholog as seen on previous holes	BPK007_NR_55.3	0.0					
	LT GRN-GRY	VCI				fia			si se cb	Relatively better ground than previous holes. Altered Breccia VC; not much mineralization other than Carbonate dissements throughout unit. Some oxidization appear in unit; unit seems to be close to conglomerate by the end?							
	WHT	VCG		Clay					si cb	Unit is extremely broken; hard to define a certain lithology; Clayey with conglomerate. Traces of sulphur.							
	WHT-GRY	VCG		VolClas	qph	qph			cb qt ch	Mix of conglomerate at top of unit then becomes VC? Quartz veins are very common within unit; Sulphur throughout; some minor mineralization within.							
	LT GRN	VVL							cb ch	Undefined Volcanic Rock; possibly high altered VC? Carbonate very common in grains. Sharp boundary to VCG? At 31.5m where alteration seems to be very minor.							
	WHT	VCG		Clay					cb ch	Minor altered unit; very similar to unit 20-26.5m. Sandy within?							
		VVL								Same as the unit from 26.6-31.5m							
	WHT-GRY	VCG							cb ch	Oxidized veins within; slight alteration at bottom of unit.							
	MD GRN	VCM		VolClas	fia	qph			cb ch se si								

Mineralisation			
	Background		
	Elevated		
	Anomalous		
	Strongly anomalous		
	Weakly mineralized		
	Mineralized		
	One		

# ROSEBERY VMS SUMMARY LOG

Hole ID: BPK007

Project: MTK

Prospect: BTB



Northing: 5383978.00

Easting: 377399.80

RL: 437.8 mRL

CoordSys: MGA55 (GDA94)

Dip: -74.10

MAG\_Azim: 271.30

Total Depth: 128.6 m

Strat	Colour and Shade	Composition	Genetic Text	Coherent Text	Alt	Comp	Clastic Lithof	Alt	Min	Summary	Sample_ID	Depth From	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm
	MD	GRN	VCM						cb ch se sil	Slight qt porphyry with abundant in patches. Unit is iron stained on surface; Sulphur is minor in parts.	BPK007_NR_55.3	0.0					
	SZ		VVL							Unit is totally broken and highly altered; probably VC? Can't define	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
	DK	GRN	VCM						sil fla por	Highly altered VC; slight qt and minor cb at top of unit then becomes very abundant at bottom of unit; slight feldspathic at 63.0m - 66m?	BPK007_NR_113.32	57.4					
	MD	GRN-PNK	VCI						se qt cb	Unit is close to previous unit; however; carbonate is more abundant within section; qt veins are spotted within;							
	LT	GRN-PNK	VCF						ch qt cb	Very close to previous unit however; carbonate is not as abundant. Some minor sphalerite is spotted in clasts. Unit is relatively solid. No sulphide seems occur							
	LT	BRN-GRY	VCF						qt	No mineralization can be identified from most of the unit as it is totally broken with only one metre solid between (99.6-100.4m)							

Fault Breccia	Delonite	Volcanic Conglomerate
Clay	Interbedded siltstone/shale	Rhyolite
Fault Zone	Pyritic Black Shale	Volcanic Siltstone
Quartz Porphyry	Shale	Volcanic Sandstone
Quartz	Sandstone	Interbedded VSS/VSL/VSM
Chart	Volcanic Breccia	Undifferentiated Volcanic

Background
Clavated
Anomalous
Strongly anomalous
Weakly mineralized
Mineralized
One

# ROSEBERY VMS SUMMARY LOG

Hole ID: **BPK007**

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)

Project: **MTK**

Prospect: **BTB**



Strat	Colour and Shade	Composition	Genetic Text	Coherent Text	Alt	Clastic Comp	Lithof	Alt	Min	Summary	Sample_ID	Depth From	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm
LT	BRN-GRY	VCF				fph			qt	No mineralization identified from most of the unit as it is totally broken with only one metre solid between (99.6-100.4m) Again very similar to the last two units; unit is very broken to 104.1m with a small layer of clayey sand	BPK007-NS_113.32	57.4					
LT	GRN-GRY	VCI															
DK	GRN	VCM				fph			cb se	unconsolidated from 101.5m-101.7m. Feldspar porphyry seems to be abundant by the end of the unit. Slightly altered. Altered VC; no mineralization within; seems like there might be a SZ @ 108-110m							
MD	YEL	VVL							cb fs	Unit is yellow; sulphur within? Carbonate is disseminated throughout and might have gone through a thermal event? Same as unit from 106-111m; except unit becomes slightly cherty; minor mineralization within Pyrite and Chalcopyrite. Unit is extremely broken	BPK07-03	113.3	1.77	2.35	0.20	12.00	0.07
		VCM									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
HOTS MD	GRY	SCT							si cb sp	Chert with very low mineralization; slightly altered and quartz? Veins throughout; some sphalerite disseminated through the unit	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
FW	LT BRN-PNK	VCI				fph fia por			se cb fs	Chert slightly with VC? Slight mineralization; FW							

	Delonite	Volcanic Conglomerate
	Interbedded siltstone/shale	Rhyolite
	Pyritic Black Shale	Volcanic Siltstone
	Shale	Volcanic Sandstone
	Sandstone	Interbedded VSS/VSL/VSM
	Volcanic Breccia	Undifferentiated Volcanic

	Background
	Disseminated
	Anomalous
	Strongly anomalous
	Weakly mineralized
	Mineralized
	One

# ROSEBERY VMS SUMMARY LOG

Hole ID: BPK008

Project: MTK

Prospect: BTB



Northing: 5383984.00

Easting: 377396.80

RL: 437.7 mRL

CoordSys: MGA55 (GDA94)

Dip: -56.80

MAG\_Azim: 268.80

Total Depth: 98.4 m

Strat	Colour and Shade	Composition	Genetic Text	Coherent Text	Alt	Clastic Comp	Lithof	Alt	Min	Summary	Sample_ID	Depth From	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm
		CLS															
LT	BRN	BPY							ch	Minor alteration breccia							
LT	BRN	BPY							si	Unit Extremely broken; minor alteration							
									cb								
LT	GRN-BRN	BPY		VolClas					ch	Unsure of chlorite alteration; unit is relatively solid for the first 1m then totally fracture; possible VC mix with Breccia?							
	WHT	CLA								Just white mush unit.							
		CLS															
LT	GRN-RED	VCI				qph			qt	Oxidized VC; extremely broken; quartz por at top of unit.							
		CLS							ch								
LT	YEL-BRN	LGV					sil		se	A layer of river sand with conglomerate. Unconsolidated							
LT	GRN	VCI							qt	Unit is broken; slightly altered; qt and carbonate seems abundant. Minor suloh							
									cb								
LT	WHT-GRY	VCG		VolClas	po	sil			se	Highly broken unit. Becomes more Volcaniclast at about 27.5.0m; with high carb. Content. Sulphidic? Very hard to define lithology boundary due to broken zones with unit							
					r				qt								
									cb								
MD	GRN	VCI							se	Unit is very broken at top then becomes relatively solid; carbonate grains throughout. Slightly altered.							
									cb								
MD	GRN	VCI							ch	Very similar to previous unit however carbonate is more abundant; slightly sulphuric? And slight oxidization on surface							
									se								
									cb								
DK	GRN	VCM				qph	sil	fla	qt								
									cb								
									se								

	Fault Breccia		Dolomite		Volcanic Conglomerate
	Clay		Interbedded siltstone/shale		Rhyolite
	Fault Zone		Pyritic Black Shale		Volcanic Siltstone
	Quartz Porphyry		Shale		Volcanic Sandstone
	Quartz		Sandstone		Interbedded VSS/VSL/VSM
	Chert		Volcanic Breccia		Undifferentiated Volcanic

	Background
	Elevated
	Anomalous
	Strongly anomalous
	Weakly mineralised
	Mineralised
	Ore

# 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)

Strat	Colour and Shade	Composition	Genetic Text	Coherent Text	Alt	Clastic Comp	Lithof	Alt	Min	Summary	Sample_ID	Depth From	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm
	DK GRN	VCM				qph sil fia			qt cb se	Volcaniclasts highly altered; carbonate very common in patches and disseminate; quartz porphyry is minor throughout. The unit seems to be more oxidized than previous one							
	LT GRY	VVL				qph			cb ch cb	Unsure of lithology; might be some Volcanic siltstone? Carbonate very common in patches. Alteration in places and minor oxidation on surface							
	LT GRY	VVL															
	MD GRN	VCI				fia sil			cb qt se	Possible Volcanic siltstone; not many features on rock; slightly altered. Unit seems to be harder than surrounding rock							
	DK GRN	VCM							se cb	Minor oxidation within the veins of carbonate. Sulphuric? Unit is highly altered; carbonate occur however not as common as previous unit							
	LT GRY-BRN	VVL							se cb	close to the lithology at 57.0m; carbonate is abundant							
	LT GRN-YEL	VCF				por qph por fia			se cb si qt								
	HW MD GRN	VCI				qph fia			cb se	Slight alteration; flame throughout; qt porphyry within unit. Minor Chert?							
F	HOTS MD GRY	VVL SCT							qt sp	Chert unit; trace of sulphur; relatively silicious from 78m to bottom. Minor mineralization throughout	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	
	FW DK GRN	VCI				fph fia			fs cb se	Volcaniclast; altered; FW; minor chert; extremely low sphalerite in part							
	FW LT GRY-PNK	VCF				fph fia											

# ROSEBERY VMS SUMMARY LOG

Hole ID: **BPK009**

Project: **MTK**

Prospect: **BTB**



Northing: 5383984.00

Easting: 377397.40

RL: 437.8 mRL

CoordSys: MGA55 (GDA94)

Dip: -66.70

MAG\_Azim: 268.30

Total Depth: 106.6 m

Strat	Colour and Shade	Composition	Genetic Text	Coherent Text	Alt	Clastic Comp	LithoF	Alt	Min	Summary	Sample_ID	Depth From	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm	
	LT BRN	BPY							ch	Slightly altered; minor Volcaniclast within? Extremely broken	NR_92.2	0.0						
	LT BRN	LGV CLS								Gravelly sand								
	LT GRN-WHT	VCG								Unconsolidated clayey and sandy unit; extremely broken; same as top of hole BPK008. Slightly become Volcaniclast @ 21.40m ?								
	MD GRN	VCI							cb ch se qt	Carbonate becomes more common at 28.30m where the unit becomes darker then. Broken unit								
	LT GRN	VCF				qph fia			cb ch	Volcaniclastic unit; moderately broken throughout; flame in parts?								
	LT GRN-BRN	VVL							qt qt	No definite lithology within unit as it is extremely broken; comprised of conglomerate sandy at top? Then VC from 39.1m? It seems like it is in a shearzone As the previous Volcaniclastic unit from 39.1-37m								
	LT GRN-PNK	VCI				qph por			qt se cb sp	Uncertain of lithology; however, seems harder than usual Volcaniclast; possible cherty? Extremely broken from 43.6-44.3m. Minor sphalerite spotted in places. Slightly alter at top of unit								
	MD GRN	VCI							cb	Very weak unit; highly altered; shear zone? Unsure of lithology; hard unit; chert?								
	MD GRN	VVL																
	MD GRN-WHT	VCI				qph												

	Delonite	
	Interbedded siltstone/shale	
	Pyritic Black Shale	
	Shale	
	Sandstone	
	Volcanic Breccia	

	Background
	Elevated
	Anomalous
	Strongly anomalous
	Weakly mineralised
	Mineralised
	Ore

# 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)

Strat	Colour and Shade	Composition	Genetic Text	Coherent Text Alt	Clastic Comp	LithoF Alt	Min	Summary	Sample_ID	Depth From	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm
		VVL						Extremely broken unit comprised of different lithologies that can't be separated. Sandy layer in the middle; highly altered VC at bottom; and conglomerate within		0.0					
MD	GRN	VCI			qph sil fia		qt cb se sp	Volcaniclast unit; moderately broken; at top then extremely broken from 68.5-69.4m. High carbonate content from 63.0m and slightly more sulphuric at 60.00m							
LT	GRY-GRN	VCI			qph		cb cb qt	Similar to previous unit; slightly less altered at bottom of unit; starts to become extremely broken at bottom of unit							
SZ	GRY-GRY	VVL					cb	Undefined unit due to the nature of it. Totally broken; again cannot be defined in different lithologies. It comprised of gravel; sand (minor); VC; clay?							
F	MD	GRN	VCF		qph sil		cb qt se	Highly silicious at top; slight mineralization of pyrite; sphalerite	BPK09-01	92.2	0.61	3.59	0.30	9.00	0.05
HOTS	MD	GRY	VVL SCT						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
								Chert; medium grade; higher than previous unit.	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
HOSM	DK	GRY	SCT					Mineralization disseminated throughout; slightly medium to mainly low grade	BPK09-07	97.6	2.48	5.31	0.32	13.00	0.02
HOTS	MD	GRY	SCT						BPK09-08	98.5	1.26	4.26	0.31	12.00	0.03
HOMS	DK	GRY	MSS						BPK09-09	99.3	10.57	19.36	1.21	85.00	0.15
HOTS	MD	GRY	SCT						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)

Strat	Colour and Shade	Composition	Genetic Text	Coherent Text	Alt	Clastic Comp	Lithof	Alt	Min	Summary	Sample_ID	Depth From	Pb pct	Zn pct	Cu pct	Ag ppm	Au ppm
HOTS MD	GRY	SCT								Mineralization disseminated throughout; slightly medium to mainly low grade mix with chert slightly Chert; with medium - low mineralization Unit undergone thermal contraction? Comprised of carbonate veins; silica and alteration on surface. Mineralization still exist within However, minor - Altered mainly chert; starts to become VC; more like a FW??	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
HOMS DK	GRY	MSS									BPK09-12	101.5	2.72	7.53	0.24	30.00	0.53
HOSM MD	GRY	SCT									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
HOTS LT	GRY-WHT	VVL							cb		BPK09-15	103.5	1.24	4.44	0.24	19.00	0.13
									qt		BPK09-16	103.9	1.74	0.33	0.01	13.00	-0.01
									sp		BPK09-17	104.5	1.43	0.34	0.05	22.00	-0.01
									se								
FW LT	GRY	SCT															
FW LT	GRY-GRN	VCF							fph por								
									cb								

	Fault Breccia		Dolomite		Volcanic Conglomerate
	Clay		Interbedded siltstone/shale		Rhyolite
	Fault Zone		Pyritic Black Shale		Volcanic Siltstone
	Quartz Porphyry		Shale		Volcanic Sandstone
	Quartz		Sandstone		Interbedded VSG/VSL/VSM
	Chert		Volcanic Breccia		Undifferentiated Volcanic

	Background
	Elevated
	Anomalous
	Strongly anomalous
	Weakly mineralised
	Mineralised
	One

