

CR 11633

**EPM 14327, STRATHFIELD 6
BHP BILLITON MINERALS EXPLORATION
NORTHWEST QUEENSLAND**

RELINQUISHMENT REPORT FOR YEAR ENDED 28 FEBRUARY 2009

**Data presented in
GDA 94 Datum**

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SUMMARY

EPM14327("the EPM") is 100% owned and managed by BHP Billiton Minerals Pty Ltd (BHPB).

This relinquishment Report describes all exploration work carried out by BHP Billiton Minerals Pty Ltd (BHPB) from the 1/03/2004 until 28/2/2009 within the EPM, Strathfield, Northwest Queensland.

The EPM is located approximately 90 km north of the Cannington mine in northwestern Queensland. The principle exploration target within this EPM is Broken Hill type (BHt) Pb-Zn-Ag mineralisation (e.g. Broken Hill or Cannington).

Exploration work carried out by BHP Billiton in this time includes:

- Ground magnetic survey
- Airborne magnetic and ground magnetic data analysis and target generation
- 2 RC drill holes drilled in 2008, ESC8018 and ESC8019

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1. INTRODUCTION

This Relinquishment Report describes exploration work conducted by BHP Billiton Minerals Exploration Pty Ltd (BHPB) on the tenement holding EPM14327 - Strathfield ("the EPM"), Northwest Queensland.

The tenement holding is located approximately 90 km north of the Cannington mine-site in Northwest Queensland (**Figure 1**).

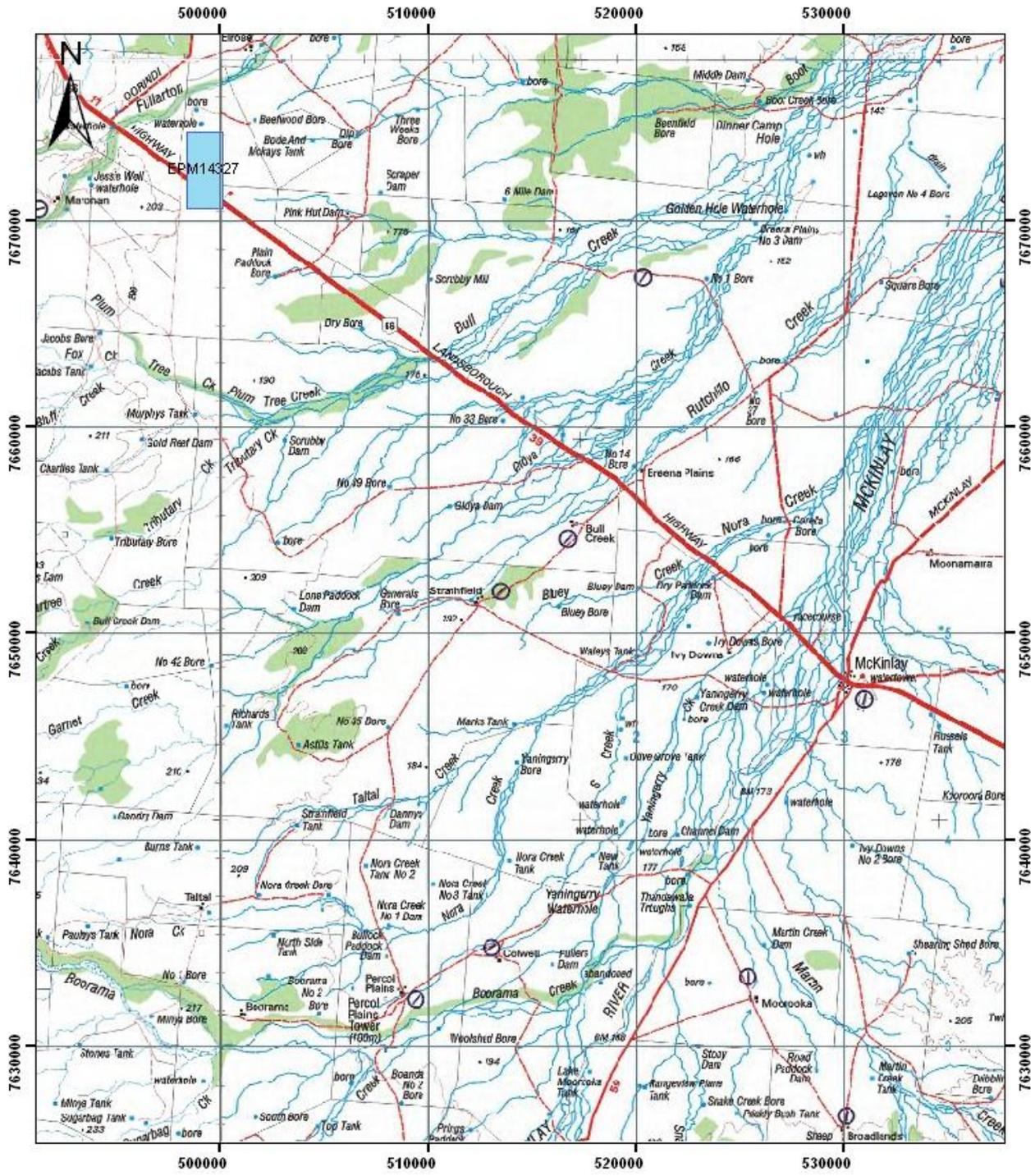
The principle exploration target within this EPM is Proterozoic, Broken Hill type (BHt) Pb - Zn - Ag mineralisation (e.g., Cannington).

2. TENURE

A tenement location map is included as **Figure 1**; tenement and sub-block details are shown in Table 1 below:

Table 1: Tenement Details

EPM	Name	No. Sub – Blocks	Grant Date	Expiry Date
14327	Strathfield 6	2	1 March 2004	28 February 2009



Legend 0 3 6 12 Kilometers 1:250,000

EPM 14327

<p>Date: 17/01/2009</p> <p>Author: D. Huisman</p> <p>Drawing No. A4 - 013</p>	<p>FIGURE 1</p> <p>TENEMENT LOCATION MAP</p> <p>EPM 14327</p> <p>STRATHFIELD, NW QUEENSLAND</p>
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3. GEOLOGY

In the area of the EPM, the dominant lithologies in the Soldiers Cap Group are meta-siliciclastics which include planar bedded pelitic schists with graded bedding; thin units of cross-bedded immature quartzo-feldspathic meta-arenites and orthoquartzites; and intervals of more abundant interbedded basic volcanics and basic sills with minor carbonaceous schists, calc-silicates and quartzites. Overall there is a distinctive absence of significant carbonate sequences or acid volcanics, and a dominance of immature clastics. Thin horizons of banded iron formation associated with small base-metal showings occur at restricted stratigraphic levels, generally within the Mt Norna Quartzite.

Metamorphic grade in the project area ranges from largely greenschist facies with abundant relict sedimentary textures in the north. However, metamorphic grade increases to the south and southeast towards Cannington, with metamorphic grade reaching to upper amphibolite facies, resulting in widespread sillimanite-K feldspar-bearing schists and migmatitic gneisses.

The differences in metamorphic grade and poor outcrop, complicates clear correlation of these higher grade metamorphic sequences with the previously defined Soldiers Cap Group around Cloncurry. Interpretation of unpublished regional magnetic surveys indicates that the higher metamorphic grade sequences within the Soldiers Cap Group extend for up to 50 kilometres under cover to the east and southeast. Many of the lithostratigraphic units interpreted from the magnetic data, are not well represented in areas of outcrop. The Cannington Deposit occurs within these undercover extensions, and is interpreted to lie within broad litho-magnetic equivalents of the Mt Norna Quartzite of the Soldiers Cap Group. However, given lack of outcrop, complex deformation and high-grade metamorphism, detailed correlations are still uncertain.

Beardsmore et al. (1988) proposed an informal stratigraphic scheme for the Eastern Succession. Higher-grade metamorphics south of Cloncurry were assigned to the Fullarton River Group, overlain by components of the previously defined Soldiers Cap Group, with the two groups included in a newly defined Maronan Supergroup. However, type sections, critical age relationships and contacts have not been formally defined. Host lithologies evident in drilling from the Cannington area, are comparable with units of the proposed Fullarton River Group in this informal terminology. Based on broad litho-stratigraphic and geophysical similarities between the Soldiers Cap Group and the Fullarton River Group, the authors believe they are directly correlatable sequences.

Recent dating of a garnetiferous felsic gneiss from the proposed Fullarton River Group (some 30 km north of Cannington), has given an age of 1677 ± 9 Ma (Page, 1993), which would imply an age equivalence with Cover Sequence 3.

A range of small Ag-Pb-Zn prospects with Broken Hill-type affinities occur within the outcropping higher-grade metamorphics within the Soldiers Cap Group (Dingo, Maramungee, Fairmile, Black Rock, Pegmont), as well as in under-covered equivalents (Altia, Maronan, Cannington). Interestingly, all of these prospects are hosted within psammite-rich packages that are correlated with the Mt Norna Quartzite.

Table 2 below, compares the lithology and geophysical expressions of the Soldiers Cap Group.

Table 2: Lithostratigraphic and geophysical comparison between the Soldiers Cap Group and Fullarton River Group.

Soldiers Cap Group			Fullarton River Group	
Stratigraphic Unit	Lithology	Geophysical Expression	Lithology	Geophysical Expression
Toole Creek Volcanics	Mafic volcanics, mafic sills interbedded with carbonaceous slates/phyllites. Minor BIFs at base	Non-weakly magnetic. Dense packages due to mafics. Regionally extensive formational conductors	Amphibolite intercalated with graphitic schist-gneiss	Non-weakly magnetic, although amphibolite commonly contain post-tectonic albite-magnetite-amphibole alteration. Dense packages due to mafics. Regionally extensive formational conductors
Mt Norna Quartzite	Well bedded. Graded bedding of feldspathic quartzite and wackes with subordinate pelitic mudstones/siltstone. Contains minor-moderate basic sills and thin BIFs	Non magnetic package with short-strike length magnetic units (basic sills and BIFs). Low-moderate density. Non-conductive	Intercalated pelites and psammities. Moderate amphibolite with minor BIFs	Non magnetic package with short-strike length magnetic units (basic sills and BIFs). Low-moderate density. Non-conductive
Llewellyn Creek Formation	Bedded quartz-mica psammite and pelite with graded turbiditic cycles	Non-magnetic. Density is low-moderate. Non-conductive	Pelitic and psammitic gneiss grading into migmatitic quartzo-feldspathic gneiss. Minor amphibolite	Non-magnetic. Density is low-moderate. Non-conductive

Jurassic to Cretaceous cover sediments are present over the EPM. The thickness of the cover sediments is approximately 100m. The cover sediments consist of basal pebbly sands from a few to 30m thick that change to monotonous mudstones with minor muddy limestone and black organic rich shale before the unconformity.

4. EXPLORATION WORK COMPLETED DURING THE PERIOD

4.1 Introduction

Exploration work carried out by BHP Billiton on the EPM in this time includes:

- Ground magnetic survey
- Airborne magnetic and ground magnetic data analysis and target generation
- 2 RC drill holes drilled in 2008, ESC8018 and ESC8019

4.2 Ground Magnetic Survey

In 2008 BHP conducted a GPS based ground magnetic survey over the EPM. The ground magnetic survey was an exercise to back up airborne works and provide more detailed data over the EPM. Figure 2 shows the location of the ground magnetic survey lines. Ground magnetic data is attached as appendix 1.

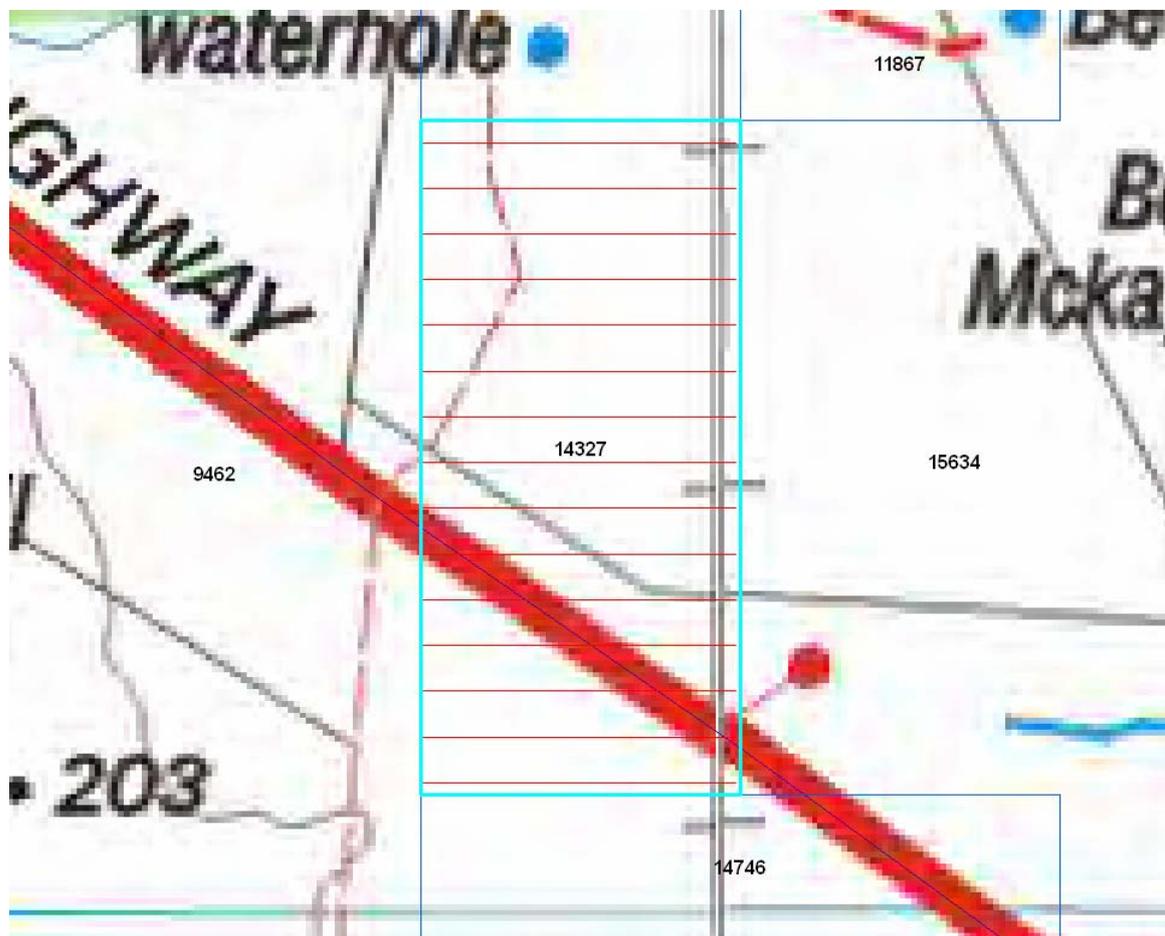


Figure 2: The ground magnetic survey lines within EPM14327 are shown by the thin red lines in the diagram above.

4.3 Airborne Magnetic and Ground Magnetic Data Analysis and Target Generation

Interpretation and modelling was completed in early 2008 on magnetic data that was collected over the EPM (see appendix 1). Two drill holes were designed to target anomalous magnetic features identified from ground and airborne magnetic data.

4.4 Drilling

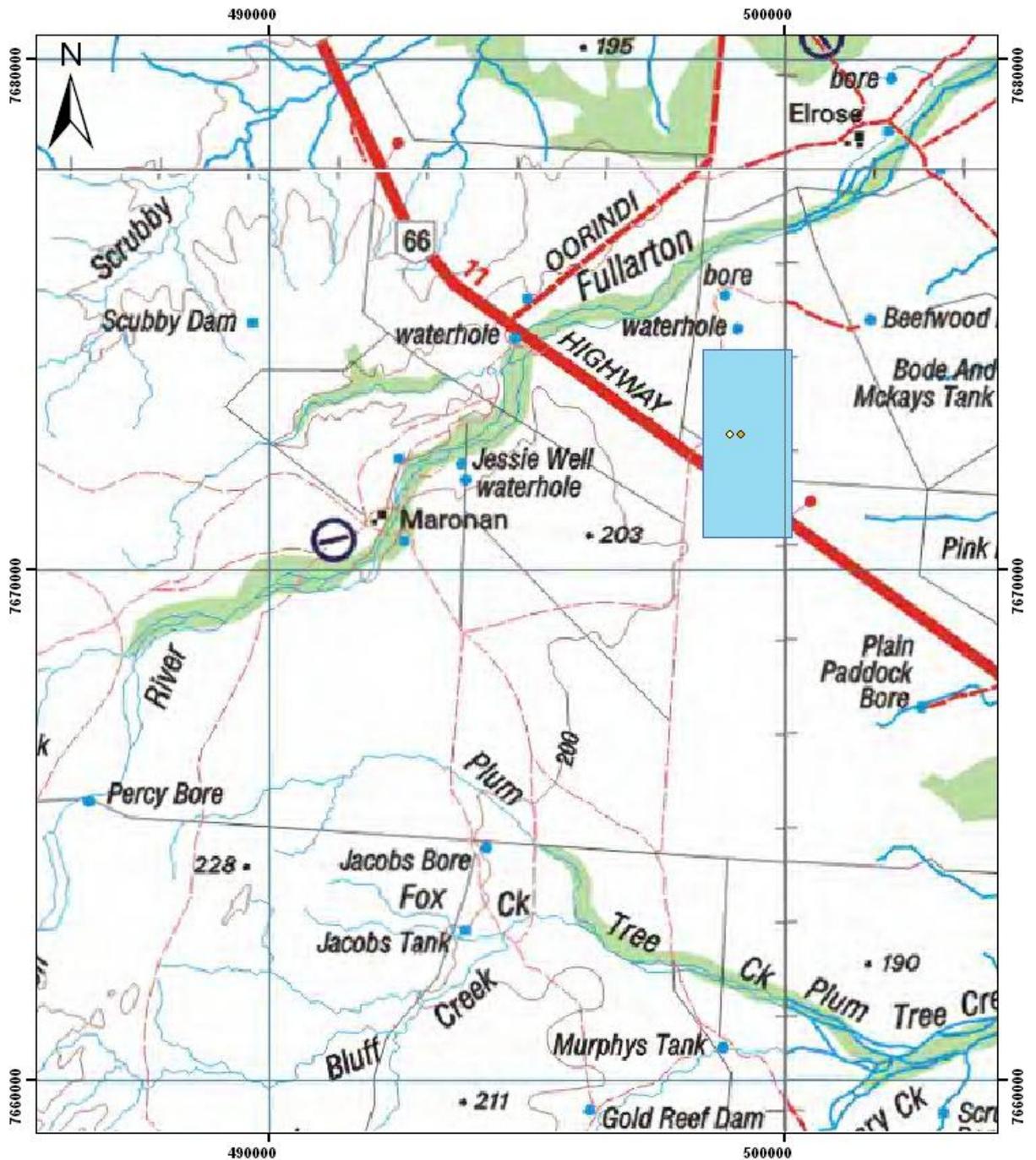
Two RC drill holes were drilled on the EPM in 2008 targeting anomalous magnetic features; ESC8018 and ESC8019. There were no significant intersections nor was there any significance in the geology in relation to proximity to Ag- Pb- Zn mineralised BHT in either of these drill holes. Refer to appendix 2 for collar, assay, mag sus, lithology and survey data for both holes. Figure 3 below shows drill hole locations within the tenement and tables 3 and 4 summarises ESC8018 and ESC8019.

Table 3: ESC 8018 Summary.

Hole ID	Tenement	Collar Co- Ordinates	Depth (Metres)	Geology
ESC8018	14327	499140 E	0 – 6	Mudstone
		7672650 N	6 – 22	Indurated Clays
			22 – 28	Indurated Clays
			28 – 86	Biotite – Qtz rock
			86 – 116	Psammo– Pelitic Gniess
			116 – 230	Biotite – Qtz rock
			230 - 300	Biotite – Qtz rock

Table 4: ESC 8019 Summary.

Hole ID	Tenement	Collar Co- Ordinates	Depth (Metres)	Geology
ESC8019	14327	498940 E	0 - 8	Overburden
		7672650 N	8 - 172	Biotite – Qtz rock



Legend

- ◇ ESC8019
- ◇ ESC8018
- EPM14327

0 1.25 2.5 5 Kilometers

1:100,000

	Date: 2/02/2009	<p>FIGURE 3</p> <p>DRILL HOLE LOCATION MAP</p> <p>EPM 14327</p> <p>STRATHFIELD, NW QUEENSLAND</p>
Author: D. Huisman		
Drawing No. A4 - 023		

5. CONCLUSION

The EPM is 100% owned and managed by BHP Billiton Minerals Pty Ltd (BHPB).

This relinquishment Report describes all exploration work carried out by BHP Billiton Minerals Pty Ltd (BHPB) from the 1/03/2004 until 28/02/2009 within the EPM, Strathfield, Northwest Queensland. The principle exploration target within this EPM is Broken Hill type (Bht) Pb-Zn-Ag mineralisation (e.g. Broken Hill or Cannington).

Exploration work carried out by BHP Billiton in this time includes:

- Ground magnetic survey
- Airborne magnetic and ground magnetic data analysis and target generation
- 2 RC drill holes drilled in 2008, ESC8018 and ESC8019

In March 2008, BHP conducted a GPS based ground magnetic survey over the EPM. The ground magnetic survey was an exercise to back up airborne works and provide more detailed data over the tenement. Interpretation and modelling was completed in early 2008 on the magnetic data that was collected over the EPM. Two drill holes were designed to target anomalous magnetic features identified from ground and airborne magnetic data.

There were no significant intersections nor was there any real significance in the geology in relation to proximity to Ag- Pb- Zn mineralised Bht in either of these drill holes.

Due to the insignificant results found in ESC8018 and ESC8019, BHP Billiton recommends no further exploration work to be done over the EPM.

APPENDIX 1

GPS Based Ground Magnetic Data

APPENDIX 2

Drill hole Collar, Survey, Mag Sus, Lithology and Assay Data