



**ANGLO
AMERICAN**

Suite 1,16 Brodie Hall Drive
Bentley, WA, Australia, 6102.
PO Box 1067 Technology Park DC
Bentley, WA, Australia, 6983.
Tel: +61 8 6250 8100
Fax: +61 8 6250 8199

**Anglo American Exploration Australia Pty. Ltd.
A.C.N. 006 195 982**

**EL23942 “Glyde”
First Annual Report
For the Period 22/01/2004 – 21/01/2005**

Volume 1 of 1

**Tenure
Holder:** Anglo American Exploration (Australia) Pty
Ltd
**Tenement
Operator:** Anglo American Exploration (Australia) Pty
Ltd
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Distribution

***Department of Business Industry and Resource Development, NT -
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SUMMARY

Exploration Lease 23942 “Glyde” covers an area of 391km² and is located within the McArthur Basin near the Gulf of Carpentaria, Northern Territory, approximately 70 km south of Borroloola, on the Bauhinia Downs 1:250,000 map sheet. Anglo American Exploration (Australia) Pty Ltd was granted the lease on 22nd January 2004 for a period of six years. The lease now forms part of a regional exploration project that Anglo American Exploration (Australia) Pty Ltd is undertaking within the Batten Trough.

The exploration target is sediment hosted massive sulphide Zn-Pb deposits. Results of previous exploration by Rio Tinto Exploration in the area have confirmed the favourable geological setting and Zn-Pb prospectivity of the sub-basin. The sub-basin remains a quality “grassroots” exploration target that Anglo American Exploration (Australia) Pty Ltd intends to test as part of their larger Batten Trough Project.

During the first year of the lease work conducted has comprised of a review of all previous exploration in the Batten Trough dating back over 40 years, reinterpretation of this data and selection of suitable target areas with the potential to host ‘world-class’ orebodies. This has involved data gathering and review, geoscientific desktop studies, study of drill core from previous exploration, organising ground access and logistical preparation for the next field season.

Keywords

EL23942, Glyde, Middle Proterozoic, McArthur Basin, Batten Trough, Zinc, Lead, Base Metals, Emu Fault Zone, Batten Subgroup, Umbolooga Subgroup, Roper Group, Bukalara Sandstone, Tooganinie Formation, Leila Sandstone, Myrtle Shale, Mara Dolomite Member, Mitchell Yard, Dolomite Member, Barney Creek Formation, Reward Dolomite, Caranbirini Member, Hot Spring Member, Lynott Formation, McArthur River (HYC) Zn-Pb-Ag deposit.

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1. INTRODUCTION

This report outlines the exploration activities conducted on EL23942 “Glyde” during the period 22nd January 2004 to 21st January 2005. Anglo American Exploration (Australia) Pty Ltd (AAEA) was granted the lease on 22nd January 2004 for a period of six years. EL23942 now forms part of a regional exploration project that Anglo American Exploration (Australia) Pty Ltd is undertaking within the McArthur Basin. The other leases within the Project include EL23496, EL23497 and EL23635 held by AAEA and EL7294, EL10103, EL10317, EL10329, EL10316 and EL23676 being explored in Joint Venture with Rio Tinto Exploration Pty Ltd (North Mining Limited).

EL23942 is located approximately 70km south of Borroloola and 25 km east of McArthur River in the Northern Territory on the Bauhinia Downs (SE53-03) 1:250,000 map sheet and the Glyde (6164) 1:100,000 map sheet. The Carpentaria Highway is located to the northwest of the project area and station tracks give access to the lease. Off road vehicle access is difficult in parts due to the rugged terrain.

Results of previous exploration by Rio Tinto Exploration Pty Limited's in the area have confirmed the favourable geological setting and Zn-Pb prospectivity of the sub-basin. The sub-basin remains a quality “grassroots” exploration target that Anglo American Exploration (Australia) Pty Ltd intends to test as part of its larger Batten Trough Project.

2. TENURE

Figure 1 shows the Lease Plan and the table below shows the 119 sub blocks, on the Bauhinia Downs 1:250,000 map sheet, that comprise the lease.

Block	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
626						X	X	X			X	X	X			X	X	X	X	X	X	X	X	X	X
627																X					X				
698	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
699	X					X					X					X					X				
770	X	X	X	X	X	X	X	X	X	X		X	X	X	X		X	X	X	X		X	X	X	X
771	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
772																X					X				
842		X	X	X	X		X	X	X	X				X	X										
843	X	X	X	X	X	X	X	X			X	X	X												
844	X																								

Table 1. Sub-blocks that comprise EL23942.

3. EXPENDITURE

Expenditure for the current year is included in Appendix 1.

4. REGIONAL GEOLOGY

EL23942 “Glyde” is located within the Middle Proterozoic McArthur Basin of northern Australia. The Batten Trough is a 70km wide north-trending syn-sedimentary graben or half-graben that is defined to the east by the Emu Fault Zone. The McArthur Group sediments within the Trough are comprised of the Batten and Umbolooga Subgroups and are approximately 4.5km thick. The onlapping Younger Roper Group sediments obscure the western margin. Generally the Proterozoic rocks have only undergone minor folding and faulting. The basin sediments were generally deposited in shallow water marine to sabka environments.

The following geological descriptions are from the Bauhinia Downs 1:250,000 map sheet (De Ross, G, et al., 1992). The Cambrian Bukalara Sandstone, a fine- to very coarse-grained friable sandstone that is thin to very thick bedded, dominates the lease area. In the south of the lease and along drainage systems there are occurrences of Cainozoic gravel, sand, silt and alluvium. The following Proterozoic units represent the Umbolooga Subgroup within the lease. There are small outcrops of the Tooganinie Formation in the centre and southwest portion of the lease. This unit contains dololomite, stromatolitic dololomite, dolomitic shale and siltstone. A minor outcrop in the southwest of the lease represents the Leila Sandstone. This unit consists of dark grey-weathering dolomitic sandstone; fine- to coarse-grained, poorly sorted, thin- to medium-bedded, commonly cross-bedded and rippled. Thin interbeds of sandy dolostone also occur. The Myrtle Shale crops out in the southwest of the lease. It is a thin-bedded to laminated, commonly dolomitic siltstone, shale, dololomite (in places stromatolitic) and fine-grained sandstone. Halite casts are also common. There are small outcrops of the Mara Dolomite Member in the centre and the southwest of the lease. This unit is comprised of dololomite, stromatolitic dololomite, dolomitic siltstone, dolarenite and dolomitic breccia. The central west of the lease contains outcrops of the Mitchell Yard Dolomite Member. This is a massive, dark grey, karstic-weathering crystalline dololomite. The Barney Creek Formation is represented by a small occurrence in the central eastern portion of the lease. This unit is a thin-bedded to laminated, dolomitic, carbonaceous and pyritic shale and siltstone with dololomite and rare breccia and sandstone. Minor outcrops of the Reward Dolomite crop out on the central eastern margin of the lease. This unit consists of dololomite, stromatolitic dololomite, silty dololomite and dolarenite with lesser sandy dolarenite, dolerudite and sandstone; laminated, thin- to massive-bedded, cross-bedded, brecciated and slumped.

The Caranbirini Member and Hot Spring Member of the Lynott Formation represent the Batten Subgroup. There are minor occurrences of the Caranbirini Member on the central/eastern margin of the lease. This unit is a thin-bedded dolomitic siltstone and shale (in part carbonaceous and pyritic), with silty dololomite, dololomite, minor fine-grained dolarenite and lenses of slump breccia. The Hot Spring Member crops out in the northeast of the lease as minor occurrences. This is a thin-bedded dolomitic siltstone and silty dololomite with interbeds of fine-grained sandstone, chertified stromatolitic dolostone, dolarenite, sandy dolarenite and dolomitic sandstone.

Government mapped geology is included as Figure 2.

5. EXPLORATION RATIONALE

Previous exploration results by other companies in the area had confirmed the favourable geological setting and Zn-Pb prospectivity of the sub-basin. The target sought is sediment hosted massive sulphide Zn-Pb deposits similar to those that occur at Mt Isa, Century (within the Lawn Hill Formation) or the McArthur River mine. The sub-basin remains a quality “grassroots” exploration target that Anglo American Exploration (Australia) Pty Ltd intends to test as part of their larger Batten Trough Project.

6. PREVIOUS EXPLORATION

A number of companies have conducted base metal and diamond exploration in the Glyde River region. The following is a brief synopsis of the most recent base metal exploration that covers part of the current EL23942. In addition CRA Exploration conducted exploration for diamond deposits.

BHP minerals conducted exploration on a number of leases from 1994 to 1997. The leases included EL9503 (covering the western edge of EL23942), EL9120 (covering the southeast portion of EL23942), EL8629 (including the southern/central portion of EL23942) and EL8133, which covered the majority of the western half of EL23942 and was conducted in joint venture with Ashton Mining. An airborne EM survey was flown but no conductors were identified. As part of this programme EL7575 was also explored. This lease covered the northwest corner of AAEA’s current lease. Exploration included airborne EM and ground TEM surveys, rock chip and soil sampling (97 samples over seven lines) with no significant results. A TEM anomaly was tested by one percussion hole (BDP010) however no prospective lithologies were intersected. Stream sediment sampling identified a large low-level Pb anomaly at Little Creek. Soil sampling followed this up along with six RC drill holes (628m) however no elevated geochemistry was revealed in the drill samples.

Ashton Mining and BHP Minerals explored EL7269 during 1991 to 1995. This lease covered the western half of AAEA's current lease. Airborne EM was flown however no targets were defined. Geochemical surveys also failed to identify any significant anomalies.

EL5788 was explored in the early 1990's by a consortium including Quilpie, Top End Resources, Noranda Pty Ltd, Perilya Mines, Lindner, T.P. and MIM Limited. EL5788 only covered the small northern portion of current EL23942. Work on this lease included aeromagnetic and QUESTEM surveys, rock chip and soil sampling. Aeromagnetic surveys defined a number of structures in the Myrtle Sub-basin parallel to the Emu Fault and a number of magnetic responses that required further investigation. Twenty-seven stream sediment surveys were completed and 226 soil samples were collected as follow up. However the lease was relinquished due to lack of significant results.

In 1982 EL2588 (covering the northern portion of EL23942) was explored for base metals by a joint venture of Ashton Mining, The Shell Company of Australia Limited – Minerals, AO Australia, Electrolytic Zinc Company, Penarroya Australia and Preussag Australia. The lease was relinquished due to the extensive cover of Bukalara Sandstone making exploration difficult.

The Shell Company of Australia explored EL2423, covering only a small portion of the southwest corner of EL23942, during 1982. Activities included soil and rock chip sampling for base metals. Exploration confirmed the high background base metal values of the Wollogorang Formation.

Amoco Minerals Australia Company, The Shell Company of Australia – Minerals, CRA Exploration and Kennecott Exploration (Australia) explored the base metal and petroleum/gas potential of a number of leases in the area between 1979 and 1986. EL1331 and EL1330 together covered the whole of current EL23942. Aerial EM and gravity surveys were flown. Drilling for petroleum was also conducted but it was concluded that there was little potential for stratiform base metal ores.

7. EXPLORATION CONDUCTED

Work carried out on EL 23942 since the lease was granted has comprised of a review of all previous exploration in the Batten Trough dating back over 40 years, reinterpretation of this data and selection of suitable target areas with the potential to host 'world-class' orebodies. This has involved data gathering and review, geoscientific desktop studies, study of drill core from previous exploration, organising ground access and logistical preparation for the next field season.

8. PROPOSED FUTURE EXPLORATION

Future work planned on this lease includes compilation of geological data sets, geological mapping and reconnaissance investigations with subsequent regional stream sediment and rock chip sampling and ground TEM surveys; see Appendix 1.

9. CONCLUSION

EL 23942 is being explored for Zn-Pb deposits of the Mt Isa, Century (within the Lawn Hill Formation) or the McArthur River mine type. Work carried out since the lease was granted has comprised of a review of all previous exploration in the Batten Trough dating back over 40 years, reinterpretation of this data and selection of suitable target areas with the potential to host 'world-class' orebodies confirming the prospectivity of the region. Future work planned may include further compilation of geological data sets, geological mapping and reconnaissance investigations with subsequent regional stream sediment and rock chip sampling and ground geophysical surveys.

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