ANNUAL AND FINAL REPORT OF EL28844

BIRRINDUDU BASIN

Period from 5th March 2012 to 27th February 2019

VICTORIA RIVER DOWNS PROJECT NT

Victoria river downs  SE5204  1:250,000
Humbert          5065   1:100,000
Victoria river downs  5165   1:100,000

Titleholder: Australia Mining and Gemstone Co. Pty Ltd

Report No. 2019-10
Australia Mining and Gemstone Co. Pty Ltd
By Mingjin HOU & Shi HUANG
24th April 2019
CONTENTS

1. SUMMARY .................................................................................................................. 1
2. LOCATION AND ACCESS ....................................................................................... 2
3. TENEMENT STATUS AND OWNERSHIP ............................................................. 3
4. GEOLOGY .................................................................................................................... 5
5. PREVIOUS EXPLORATION ..................................................................................... 9
6. EXPLORATION DURING YEAR 1 ............................................................................. 11
7. EXPLORATION DURING YEAR 2 ............................................................................. 12
8. EXPLORATION DURING YEAR 3 ............................................................................. 12
9. EXPLORATION DURING YEAR 4 ............................................................................. 12
10. EXPLORATION DURING YEAR 5 ............................................................................ 12
11. EXPLORATION DURING YEAR 6 ............................................................................ 12
12. EXPLORATION DURING YEAR 7 ............................................................................ 12
13. EXPENDITURE ......................................................................................................... 13
14. CONCLUSION AND RECOMMENDATIONS ...................................................... 13
15. REFERENCES .......................................................................................................... 13

List of Figures

Figure 1 Location Map of EL28844 (blue blocks retained) ......................... 3
Figure 2: Graticular blocks covering EL28844 (blue blocks retained) .......... 4
Figure 3 Landholders and Lease Numbers displayed inside EL28844 ........... 5
Figure 4 Geological Map of EL28844 (1:250000 geologic map) ............... 8
Figure 5 Compilation of historical data on EL28844 ................................. 11

List of Tables

Table 1 Graticular blocks covering EL28844 .................................................... 3
Table 2 Local stratigraphic columns ................................................................. 7
Table 3 Expenditure on EL28844 ...................................................................... 13
1. SUMMARY

The Victoria River Downs Project area is located in the Northern Territory of Australia and situated about 425 kilometers south of Darwin. The project is made up of 5 exploration licenses, EL28844 lies central of these leases. EL28844 initial area is 85.73 square kilometers, after three times reduction, the EL’s area is 13.19 square kilometers now (4 blocks). Vehicle access to the project area is via the Victoria, Buchanan and Buntine Highways, thence station tracks.

The Proterozoic Victoria River Basin (VRB) consists of a 3.5km thick stratigraphic sequence of sandstone, shale and dolomitic sediments, covering an area of 160,000sq kms, overlying the Birrindudu Basin and has the potential for sedimentary hosted zinc dominated base metal deposits similar in style to the giant McArthur River, Cannington and Century deposits. The Bullita stratigraphic succession is considered to have potential to host stratiform sedimentary, Mississippi and Irish lead-zinc styles of mineralization. These deposits are associated with the fine grained clastic rocks (black shales) of a sedimentary package, which contains substantial dolomites and limestones, and are located near major regional structures with a halo of lead anomalism. The target size is in the order of 1-5 million tones at 10% combined Pb/Zn.

Age dating within these sequences suggest dates from 1,645my (Limbunya Group) to 1,610 – 1,570my (Bullita Group), which is within the age range of all major Australian SEDEX zinc deposits.

Throughout the Victoria River Basin the stratigraphy is generally flat lying or shallow dipping. However, there are a number of localized dome features adjacent to prominent faults or lineaments.

Previous base metal explorers include BHP, CRA, Rio Tinto, Anaconda, Anglo plus junior companies and diamond exploration has been undertaken by Stockdale, BHP and Ashton. These exploration programs for base metals include stream sediment sampling, Geotem and aeromagnetic surveys. Limited stratigraphic diamond drilling has been undertaken by BMR, NTGS and various exploration companies. A total of about 10 stratigraphic holes have been drilled around those lease.

In the past few years, Anglo Australian Resources NL(AAR) hold this area, AAR has reprocessed geochemical data and Geotem, gravity, aeromagnetic and Landsat images for
generating new exploration target in this area. BHP previously flew Geotem over about 20 percent of the VRB project area but conducted no significant ground follow up. This data has been reviewed by Southern Geoscience geophysical consultants identifying 17 prospective Geotem conductors at the southwest of EL28841, AAR included stream sediment, soil, rock chip sampling programs and helicopter-supported gravity survey. This work has been successful in that the stream sediment samples have confirmed the robustness of previous anomalies identified and highlighted prospective areas of interest in the vicinity of the Victoria River Downs Homestead.

EL28844 is granted to Australia Mining and Gemstone Co. Pty. Ltd (AMG) in March 2012, AMG collated and replotted historic data in the MapInfo. During the August 2012, AMG staffs taken a field trip on the bedrocks at western of EL28844.

EL28844 was surrendered on 27 February 2019.

2. LOCATION AND ACCESS

EL28844 is located 425 kilometers south 178 degree of Darwin in Victoria River Downs ranges, about 240 kilometers southwest of Katherine in the Northern Territory (Figures 1).

The project area is accessible from Darwin via the sealed Victoria River Highway and the unsealed Buchanan and Buntine Highways, and is situated on the Victoria River Downs 250,000 sheets. Station tracks provide four-wheel drive access to the project area, much of which is essentially inaccessible, except via helicopter.

The wet season normally lasts from November to March. The annual rainfall ranges from 38-51 centimetres. The evaporation rate is 260 centimeters per annum. During the summer months the daily maximum temperature usually exceeds 38 degrees Celsius. In July the daily temperature range is 10-27 degrees Celsius. The six-month exploration field season usually extends from April to September.
3. TENEMENT STATUS AND OWNERSHIP

EL28844 was granted to Australia Mining and Gemstone Co. Pty Ltd on 5th March 2012 for a term of 6 years, it comprises 26 graticular blocks (85.73 sqkm) at first. After three times reduction, the EL’s area is 13.19 square kilometers now (4 graticular blocks retained), see Figure 2. There are no other mining leases or mineral claims within the License area. List of Graticular blocks covering EL28844 shows in Table 1.

Table 1 Graticular blocks covering EL28844

<table>
<thead>
<tr>
<th>SE52276E</th>
<th>SE52276K</th>
<th>SE52277A</th>
<th>SE52277F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Background land tenure under EL28844 is part of Victoria river downs station (Figure 3), contact details being:

Heytesbury Cattle company  
Address: PMB 19, via Katherine, Northern Territory 0852  
Tel:+61 08 8975 0795  
rusty.richter@heytesburycattle.com.au

The station establish access gates at some tracks, it was necessary to approach the homestead directly to make contact with the proprietors, though the proprietors were contacted by telephone.
4. GEOLOGY

4.1 REGIONAL GEOLOGY

4.1.1 Introduction
The project area is located in the Victoria River region, whole within the Victoria River Basin (VRB), which overlies the basement Sturt block and consists of a 3.5km thick sequence of little deformed sedimentary rocks that cover ~160,000 sqkms.

The stratigraphic sequence from the basement Invery Metamorphics and Pine Creek volcanics upwards, consists of the Proterozoic Birrindudu and Limbunya Group sediments which form the lower Birrindudu Basin, which is overlain by the sediments of the Victoria River Basin consisting of the Wattie, Bullita, Tijunna and Avergne Groups.
The VRB is bounded to the northwest by the Fitzmaurice mobile zone, to the southwest by the Ord Basin, to the south by the Carpentarian Birrindudu Basin, and to the southeast by Paleozoic Wiso Basin, to the Northeast by the Pine Creek geosyncline. Birrindudu Basin was accompanied by regionally extensive north-trending growth faults. Deposition in both Birrindudu and Victoria river Basins includes several phases of intra-cratonic sag. Strata dip away from the centres of depositional basins and is attributed to basement uplift.

The major structural elements are shown on the various 1:250,000 geological plans. This data has been supplemented by lineament studies completed from aeromagnetic, Geotem, gravity and Landsat data.

The imaged Geotem has enhanced the presence of a north trending 50km long by 5km wide structural corridor, which isn’t evident from mapping or other geophysical surveys. For this study this feature has been referred to as the Victoria River Trough (VRT).

This structural corridor is truncated north and south by WNW trending regional lineaments, such as the Limbunya Fault in the south and, with sub-parallel Gill and GB faults. Other major structural directions include the NW, NE and E-W lineaments.

4.1.2 Regional Structure

Major anticlinal and synclinal structures with N-S orientated axial planes, have been mapped at Bullita Station and the Fitzgerald Range near Victoria River downs. These may reflect extended periods of E-W compression that may have existed during deposition and post consolidation of the stratigraphic column.

This E-W stress regime may have generated E-W orientated extensional normal faults that may have existed during sedimentation so as to generate growth fault environments.

The McArthur River and Mississippi styles of base metal mineralization are strongly influenced by structure. Thus it’s essential that the major structural controls are well documented and robust geological models are generated for the evolution of the Victoria River Basin sedimentation as it has been influenced by faulting within the basement rocks.
4.1.3 Alternative Structural Models

Given the strong development of the NW (315 degree) trending lineaments, this fault orientation could be indicative of a Southeast – Northwest compression direction, which would generate normal faults and potentially growth faults in this orientation. This model fits the gross geometry of the stratigraphy with the oldest rock types outcropping in the Southwest and Younging towards the northeast i.e. a general northeast block down sense of displacement.

4.2 LOCAL GEOLOGY

4.2.1 Stratigraphy

The EL28844 area is located in the Victoria River region, outcropping is a 3.5km thick sequence of little deformed sedimentary rocks that cover ~160,000 sqkms. Quaternary and Cenozoic Unconsolidated Material was less covered northeastern and northwestern area of EL28844 (Figure 4), Proterozoic sedimentary outcrop in the most area of the EL (table 2).

**TABLE 2 LOCAL STRATIGRAPHIC COLUMNS**

**Lower Proterozoic: Bullita Group**

*Bynoe Formation (Pby)* 190-243m thick.

The basal part contains green and purplish micaceous siltstones and shales with few sandstone and dolomite interbeds.

The rest of the Formation consists of thinly bedded sandstone and slightly micaceous siltstone.

*Supplejack Dolomite Member (Pbu)* 17-28m thick.

Massive thickly bedded dolomite and dolarenite within 60m of the top of the Skull Ck Fm. Stromatolititc near the top. Rare disseminated pyrite and galena occur. Upper and lower contacts are regionally anomalous in base metals. Epigenetic galena is commonly visible.

*Skull Creek Formation (Pbs)* 162-229m thick.

Predominantly dolomitic with silty upper and lower parts. The lower contact is defined by a 3m thick stromatolitic horizon. It contains pyrobitumen and disseminated pyrite. The
formation has undergone varying degrees of dolomitisation.

The project is targeting sedex-style zinc-lead deposits in the Victoria River Basin. The Basin has strong similarities to the MacArthur and Nicholson Basins which host the giant MacArthur River and Century SEDEX-style zinc deposits. The project, located 200 km east of Kununurra (WA) and 240 km southwest of Katherine (NT), covers a sequence of Proterozoic sediments dominated by dolomititic carbonates and other fine-grained sediments. The sediments are generally flat lying with an overall very shallow south-easterly dip. The Mount Sanford Formation (Wattie Group) and the Timber Creek Formation (Bulita Group) are considered the most prospective for SEDEX style of mineralisation targeted by former lease (Anglo
Australian Resources NL), particularly adjacent to interpreted growth faults.

4.2.3 Structure

Fault and lineation was widely, main direction is north-northwest and northeast, there is syscline at southwest of the EL.

5. PREVIOUS EXPLORATION

Little advanced exploration has been carried out in the Victoria River Basin. Most of the work has consisted of early stage exploration consisting of stream sediment sampling and rock chip sampling. Large areas of stream sediment anomalism have had limited follow up. BHP completed a Geotem survey but no on ground follow-up.

The most extensive base metal exploration was completed by Hooker Mining / Australasian Minerals during the period 1969 -1972. Exploration included very detailed stream sediment sampling, VLFEM and IP follow-up at the Colt Prospect and Area 2. Exploration reports detail the mapping and geochemical sampling of 18 prospects in the Victoria River Basin area, which were either domal, monoclonal or fault structures, though several were flat basinal sag structures.

The areal extent of outcropping mineralization is never greater than several square kms and is often related to faults and joints. The most common occurrence of base metals is in the coarse grained dolomites, particularly just above or below the Supplejack dolomite Member of the Skull Creek Formation and in the thick dolomite of the Lower Marker within the Timber Creek Formation. Near the Depot Creek-Wickham River intersection, within the Lower Marker sequence are 10cm thick bands of 30-40% galena. At Charlies Prospect (Area 4-T146), widespread disseminated galena, sphalerite and pyrite occur just above the Supplejack Dolomite Member of the Skull Creek Formation. This mineralization is 1-2m thick, and can be traced laterally for 300m. Fairly extensive disseminated pyrite, chalcopyrite and galena mineralization has been found at Area 14 within the Battle Creek Formation.

A massive barite vein outcrops at Location C199, measuring 1.5m thick and 800m long. Manganese nodules and stains have been reported around Battle Creek within the Battle Creek Formation.
Four percussion holes were drilled targeting IP anomalies corresponding to geochem anomalous lead and zinc stream sediment geochemistry. Values of up to 9000 ppm Pb, 740 ppm Zn and 500 ppm Cu have been recorded. In 2007, former lease holder carry out reconnaissance program, stream sediment, rock chip and reconnaissance soil sampling. Stream sediment sampling confirmed previous lead anomalism with assays up to 5700 ppm Pb and 130 ppm Zn associated with the Skull Creek Formation and the Bynoe Formation within the Bullita Group. Highly anomalous levels of lead (up to 3300 ppm Pb) and zinc (up to 1100 ppm Zn) were returned from rock chips of dolomitic sediments. Anomalous levels (up to 500 ppm) of lead were also returned from widely spaced reconnaissance soil traverses. The values and the extent of anomalism (up to 12 x 3 km in dimension) are encouraging, as the deposit models guiding the exploration suggest lead anomalism may be the surface expression of an alteration halo of a base metal mineralised
In 2012-2014 Australia Mining and Gemstone Co. Pty Ltd exploration consisted of historic data compilation including tenure, datasets, open file reports and geo-referencing of relevant maps. This enabled an informed review of the tenements prospectively in regards to Pb, Zn, Cu and Ag.

6. EXPLORATION DURING YEAR 1

During Year one, all available historical data was compiled into one database (displayed in Figure 5). From 20th to 26th of August 2012, AMG staffs traversed bedrock at western of EL.

Figure 5 Compilation of historical data on EL28844
7. EXPLORATION DURING YEAR 2

During the second year, AMG continues to dispose all historic data of the EL. AMG pay attention on the Kurinelli goldfield in Davenport range of Barkly region. Because the lease was outcrop approximate flat attitude strata, there is no useful tectonic activated, so AMG decided to surrender the western and northern area of this tenement.

8. EXPLORATION DURING YEAR 3

During the third year, AMG didn’t implement field work on EL28844, because AMG geologists carry out two projects exploration about copper with Panda Mining Pty Ltd in Flinders ranges of the South Australia in 2014.

9. EXPLORATION DURING YEAR 4

Work done during Year 4 included: All data review and some geological survey.

10. EXPLORATION DURING YEAR 5

During the fifth year, AMG didn’t implement field work, AMG geologists mainly do office works, such as review all collected Geological data processing, geochemical data processing and Geophysical data processing and interpretation.

11. EXPLORATION DURING YEAR 6

Work done during Year 6 included:
All data review, including geological, geophysical, geochemical date and former industry report we obtained from the web.

12. EXPLORATION DURING YEAR 7

During the seventh year (5th March 2018 to 27th February 2019), Literature search, Database compilation, report preparation, desktop studies was taken by AMG’s geologists. We revalued the potential of the EL.
Concerning the budget reduce of our company, AMG finally decided to surrender EL28844.

13. EXPENDITURE

During all of seven years (period 5\textsuperscript{th} March 2012 to 27\textsuperscript{th} February 2019), All expenditures on EL28844 is $121,000 (as supplied by Australia Mining and Gemstone Co. Pty Ltd), consisted of:

<table>
<thead>
<tr>
<th>Table 3 Expenditure on EL28844 During seven years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Office Studies</td>
</tr>
<tr>
<td>field reconnaissance</td>
</tr>
<tr>
<td>Geological data processing</td>
</tr>
<tr>
<td>Geophysical data processing</td>
</tr>
<tr>
<td>Overheads</td>
</tr>
<tr>
<td>Others</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

14. CONCLUSION AND RECOMMENDATIONS

The exploration target is sediment hosted stratiform Pb–Zn–Ag deposits, however throughout analysis historic exploration data and superficial traversing the EL28844 property, this lease area is gentle dip bedrock outcrop at hills, it is absence black siltstones and major regional basically faults, in other words, no metalliferous brines and hydrothermal source were activated.

In 2018, AMG revalued the potential of EL28844 and finally decided to surrender this Exploration License.

15. REFERENCES

1998  Lindsay J.F.
1999  Holm O. et al  
Basins, Fluids and Zn-Pb Ores; CODES Special Publications 2: By Centre for Ore Deposit Research University of Tasmania.

1999  Berryman AK et al  

2000  Beyer P.R. et al  

2002  Beyer P.R. et al  
Victoria River Downs, Northern Territory, SE52-4 NTGS 1:250,000 Geological Map Series Explanatory Notes.

2002  Dunster J.N and Cutovinos A.  
Drill Hole Completion Report, 99VRNTGSDD1 and 99VRNTGSDD2 Victoria River Downs, Northern Territory, NTGS record 2002-006

2008  ANGLO AUSTRALIA RESOURCES NL.  
2008 ANNUAL REPORT for EL25422&EL25423&EL25728 (Phil Mattinson AIG).
Copyright

This document and its content are the copyright of Australia Mining and Gemstone Co. Pty Ltd. The document has been written by Australia Mining and Gemstone Co. Pty Ltd for submission to the Department of PRIMARY INDUSTRY AND RESOURCES of Northern Territory as part of the tenement reporting requirements of the Minerals Titles Act 2010.

Any information included in the report that originates from historical reports or other sources is listed in the “References” section at the end of the document.

I authorize the Department to copy and distribute the report and associated data.