## Anglo American Exploration Australia Pty. Ltd. A.C.N. 006195982

| Project Name: | The Lynd Project, Yarraman. |
| :--- | :--- |
| Tenement Number/s: | EPM17983. |
| Tenement Operator: | Anglo American Exploration (Australia) Pty Ltd. |
| Tenement Holder: | Anglo American Exploration (Australia) Pty Ltd. |
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| 1:100 000 map sheet/s: | Ni, Cu, PGE. |
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## DISTRIBUTION:

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## SUMMARY

The tenement EPM17983, is part of the Lynd Project and is located within the Georgetown In lier, Queensland Au stralia. An glo American Exploration Australia Pty Ltd (AAEA) was granted the Licence on $19^{\text {th }}$ October 2010 for a period of five years.

AAEA is seeking to discover significant NiS deposits in the Lynd area using a variety of magmatic NiS related empirical criteria and models.

The t enement ar eac onsists d ominantly of $C$ ambrian $t$ o O rdovician metasediments in truded by a Silurian mafic complex with minor Quaternary cover. The targets are Voisey's Bay style NiS and the area has not previously seen NiS explor ation. Anglo Americ an h as the ri ghts to proprietary technology that we believe will be able to detect massive NiS at great depths.

Work completed in the second year of the tene ment has consisted of a site visit to inspect the ground geophysics survey target ar eas identified from the Spectrem Airborne geophysical survey.

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## 1. INTRODUCTION

EPM17983, Yarraman, is part of the Lynd Project, located approximately 100 km southwest of Greenvale and 280 km west of Townsville. Access to the tenement is from Townsville via the Gregory Development Rd that links Charters Towers to the Lynd Junction and then various station tracks. The tenement is si tuated on the Clarke Riv er (SE55-13) 1: 250,000 map s heet and the L yndhurst $(7,759)$ 1:100,000 map sheet.

Anglo American Exploration Australia Pty Ltd (AAEA) was granted the te nement on 18th October 2010 for a period of five years. EPM17983 covers an area of approximately $123 \mathrm{~km}^{2}$ within the Georgetown Inlier.

This $r$ eport summarises th e exploration activities conducted o $n$ EPM17983, during the reporting period 19th October 2011 to 18th October 2012.

## 2. TENURE

The t enement EPM179 83, wa s granted to AAEA on 30th Oc tober 2007 and consists of 38 graticule blocks covering an area of $123 \mathrm{~km}^{2}$. The tenement details are in Table 1 below and the tenement location plan is presented as Figure 1.

| Table 1: Tenements Details |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Tenement | Holder | Date <br> Granted | Expiry <br> Date | Area <br> Km $^{2}$ | No <br> Sub Blocks |  |
| EPM17983 A | AEA | $19 / 10 / 2010$ | $18 / 10 / 2015123$ |  | 38 |  |

Table 2 (below) and Figure 2 details the 38 sub blocks that comprise the lease.
Table 2: Sub-blocks that comprise EPM17983.

| 1:1,000,000 <br> Plan Name | Primary <br> Number | Graticular Section | No of <br> Blocks |
| :---: | :---: | :---: | :---: |
| Townsville | 2809 | dejkoptuyz | 10 |
|  | 2810 | abcdfghjlmoqrstwxy | 18 |
| 2 | 881 | d | 1 |
|  | 2882 | bcfghlm qr | 9 |
|  |  | Total | $\mathbf{3 8}$ |

## 3. REGIONAL GEOLOGY

EPM17983 is part of the Lynd Project, which lies within the Greenvale Province, defined as the eastern, an d youngest part of $t$ he Ge orgetown In lier. The Georgetown Inlier is located in the Ca irns-Townsville hinterland and co vers an area of about $50,000 \mathrm{~km} 2$. The Georgetown In lier contains the most eas tern occurrence of extensive Pre cambrian outcrops in Australia that ar e thought to represent the remnant ea stern margin of $t$ he Pr oterozoic A ustralian continent after the Neoproterozoic Rodinian b reakup. The eastern ma rgin of th e Georgetown In lier is in faulted contact wit h the Pa laeozoic T asman Or ogenic Zone and these boundary faults define the Tasman Line - the boundary between the Australian Craton in the west and the mobile orogenic belt to the east.

The G eorgetown In lier c omprises mu ltiple deformed an d polymetamophic Palaeoproterozoic $t$ o Me soproterozoic rocks of dominan tly s edimentary and volcanic origin which have been divided into five mai $n$ Groups - the Dargalong Metamorphic Group, McDevitt Metamorphics, Etheridge Group, Langlovale Group and Croyden Volcanic Group. These have been s ubjected to five sepa rate tectonothermal events, including regional metamorphism up to a mphibolite grade related to the Cambrian Delamerian Orogeny.

The package has been intruded by contemporaneous mafic and felsic magmas during three major events that occurred in the Mesoproterozoic, Siluro-Devonian and P ermo-Carboniferous. These batholiths occur throughout the In lier (an d predominantly co mprise $t$ onalite, trond hjemite a nd gr anodiorite). The Did o Batholith has been the focus of Anglo American's exploration efforts.

The Dido Batholith was intruded into Earl y Palaeozoic suprac rustal rocks of the Greenvale Prov ince during the Sil urian and is c lassified as part of the Pama Province granites. It forms a large NNE trending batholith at least 90km long and up to 30 km wide, a nd is divided into two parts by a narrow ( $1-3 \mathrm{~km}$ ) screen of metamorphic rocks. This screen separates clearly distinct lithologies - to the west the rocks are predominantly biotite tonalite to granodiorite and hornblende-biotite tonalite, whereas to the east more melanocratic quartz diorite, diorite and lesser hypersthene gabbro, olivine gabbro and troctolite. The Dido Bath olith is the most mafic of the Pama Province granites in the region.

The dominant lithostructural trend in the area is NNE - SSW. The Prot erozoic metasediments are generally magnetically quiet with minor linear, often folded, magnetic highs defining lithological layering. The Silurian intrusives typically occur as NE - NNE trending, elongate lensoidal bodies of vary ing magnetic character. They often appear to be in fault contact with the older metasediments.

In parts of the Geor getown Inlier, the ab ove mentioned geology is o verlain by Mesozoic sedimentary cov er s equences and Cainozoic basalt ( of which the Undara Lava tubes is the most we ll k nown ex ample). Th e government and mapped geology is included as Figures 3 and 4.

## 4. PREVIOUS EXPLORATION

Exploration carried out during the first year of the tenement, 2010-2011, was a Spectrem Airborne Geophysics Survey covering the entire tenement.

## 5. EXPLORATION CONDUCTED

Exploration work c arried out o n EPM1 7983, d uring the s econd y ear of the tenement, has consisted of a site $v$ isit to inspect the ground geophysics survey target areas identified from the Spectrem Airborne geophysical survey (Figure 5).

In June 2012, a field visit took place to scout out the Lynd Project area before the geophysics crew mobilised to the project to commencea $g$ round ge ophysical survey. It was determined that EPM17983 would be difficult country to undertake a g round geophysical survey. An attem pt was made in e arly Ju ly to start the survey $b$ ut was abandoned due to ex cessive $r$ ain a nd gr ound flooding. $T$ he surveys were focus ed on te nements within the Lyn d project that were n ot so inundated with rain. It is ho pe that he gr ound geophysics survey within EPM17983 will be completed at a later date pending ground conditions.

## 6. PROPOSED EXPLORATION

Exploration in the third ye ar of the $p$ ermit will inc lude the comp letion of the proposed ground geophysical survey (Figures 6 and 7).

## 7. CONCLUSION

During the second year of the tenement, exploration activities consisted of a site visit to inspect the groun d geophysical target areas identifi ed from the Spectrem Airborne geophysical survey.

## 8. REFERENCES

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