AFMECO MINING AND EXPLORATION PTY LTD

Exploration Licence 3347

Arnhem Land, Northern Territory

Fourth Annual Report

28 July 2000 – 27 July 2001

DARWIN NT

AUGUST 2001

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AFMEX Report 2001/10

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Summary

Exploration Licence 3347 is located in Arnhem Land approximately 300km east of Darwin. The exploration licence is being explored in joint venture by AFmeco Mining and EXploration Pty Ltd (operator), SAE Australia Pty Ltd, Kumagai Gumi Co Ltd, UAL Pty Ltd, Pasminco Exploration Pty Ltd, and Kunbohwinjgu Land Corporation Pty Ltd.

Due to a number of factors including budget re-allocation, imminent changes in the structure of the joint venture partnership, and ongoing re-evaluation of the tenement by the operator, no fieldwork was conducted during the fourth year of exploration.

1. INTRODUCTION

The exploration licence is being explored in joint venture by AFmeco Mining and EXploration Pty Ltd (operator), SAE Australia Pty Ltd, UAL Pty Ltd,, and Kunbohwinjgu Land Corporation Pty Ltd.

The tenement is located within the Arnhem Land Aboriginal Reserve and is shown on figure 1.

This report details the work carried out during the exploration year 2000-2001.

2. LOCATION AND ACCESS

The tenement is located in West Arnhem Land approximately 300 km east of Darwin in the Northern Territory of Australia.

Access is either by air to the Nabarlek or Mamadawerre airstrips, or by road via the Arnhem Highway to Jabiru and then via Cahills Crossing and unsealed roads to Mamadawerre outstation. Much of the tenement comprises sandstone escarpment and hence most exploration is helicopter supported.

3. TENURE

Exploration Licence (EL) 3347 was granted on 28th July 1997 for a period of six years. The tenement is currently being explored in joint venture by AFmeco Mining and EXploration Pty Ltd – operator (40.7%), SAE Australia Pty Ltd (40.7%), UAL Pty Ltd (16.6%), and Kunbohwinjgu Land Corporation Pty Ltd (2%).

EL 3347 covers 385.7 km^2 (from an original 771.6 km^2) and consists of 115 blocks. Following a waiver of reduction in 1999 (third year), the tenement was partially

relinquished in the fourth year as per section 26 of the NT Mining Act. AFmeco Mining and EXploration Pty Ltd, as the operator of the joint venture, have requested in 2001 a waiver of reduction for the fifth year of exploration.

4. GEOLOGY

The regional geology of West Arnhem Land has been described in detail in many previous reports and only a brief overview will be given here. The regional geology is shown on figure 2 and a stratigraphic chart is shown on figure 3.

The oldest rocks exposed in the area are gneisses belonging to the Mount Howship Gneiss of the Kakadu Group of lower Palaeoproterozoic age. Further to the west in the Alligator Rivers uranium field, similar rocks overlie the Archaean Nanambu complex. Kudjumarndi Quartzite, one of the main marker horizons in the region, overlies the Mount Howship Gneiss.

The psammitic rocks of the Kakadu Group are overlain by the Cahill Formation also of lower Palaeoproterozoic age, which is the host of the main uranium ore bodies in the area. The Lower Cahill Formation consists of a basal calcareous unit, which is overlain by a sequence of pelitic schists, meta-arkose and amphibolite. A well-defined amphibolitic unit at the top of the Lower Cahill Formation hosts the Nabarlek uranium deposit. The Upper Cahill Formation and Nourlangie Schist consist of a monotonous sequence of meta-arkose, schist and amphibolite.

East and south of the area of the Palaeoproterozoic sediments lie the granitoid rocks of the Nimbuwah Complex. These granitoids are the result of an extensive migmatisation during the Top End Orogeny, which is dated at about 1800my. The relationship between the Cahill Formation and the Nimbuwah Complex is little known. Limited field observations seem to indicate the contact is gradational and migmatitic in nature.

Later post-orogenic Proterozoic granites (1780-1750My), such as the Nabarlek and Tin Camp Granites have intruded the meta-sediments in the east of the area.

The upper Palaeoproterozoic Kombolgie Subgroup overlies the older rocks unconformably. This formation consists of sandstones with a prominent basaltic horizon (Nungbalgarri Volcanic Member). These flat-lying sandstones form the Arnhem Land escarpment.

The Oenpelli Dolerite (1700my) intrudes the early Palaeoproterozoic metasediments and the Kombolgie Subgroup, and forms large lopolithic bodies. It is the youngest Precambrian rock outcropping in the area.

5. PREVIOUS WORK

The area covered by the tenement had not been explored prior to the EL being granted in 1997.

Work completed during the life of the tenement has included airborne and ground geophysical surveys, helicopter-assisted diamond drilling, stream sediment sampling and ground reconnaissance. Details of this work can be found in previous annual reports submitted to the NT Department of Mines and Energy.

6. WORK COMPLETED DURING 2000-2001

One helicopter-assisted diamond drillhole was planned in 2000. This drillhole is located in the southwest of the tenement and two sites were anthropologically cleared by the NLC in May 2000 (figure 4). Due to a number of factors including budget re-allocation, imminent changes in the structure of the joint venture partnership, and ongoing re-evaluation of the tenement by the operator, exploration work on the tenement in the 2000-2001 field season was not conducted.

7. CONCLUSIONS

For the reasons mentioned earlier, exploration was not conducted on EL 3347 during the 2000-2001 field season. Evaluation of the tenement prospectivity using knowledge gained to date is ongoing.