

# **ANNUAL EXPLORATION REPORT EL28944**

## **BURT PLAIN**

**5<sup>th</sup> March 2013 to 4<sup>th</sup> March 2014**

**Aileron Project NT**

<b>NAPPERBY</b>	<b>SF5309</b>	<b>1:250,000</b>
<b>HERMANSBURG</b>	<b>SF5313</b>	<b>1:250,000</b>
<b>AILERON</b>	<b>5552</b>	<b>1:100,000</b>
<b>ANBURLA</b>	<b>5551</b>	<b>1:100,000</b>

**Datum: GDA 94 zone 53**

**Titleholder: Australia Mining and Gemstone Co. Pty. Ltd**  
**ABN: 86 114 395 247**

**Report No. 2014-013**  
**Australia Mining and Gemstone Co. Pty. Ltd**  
**By Xianneng Zhang**  
**21<sup>th</sup> April 2014**

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## **1. SUMMARY**

Aileron Project is situated south of Central Desert Shire in the central part of Northern Territory, approximately 105 kilometres northwest of Alice Springs (Figure 1). Historical exploration focused on uranium.

EL28944 was granted in March 2012, covering 51 graticular blocks in the Aileron region, located about 40km Southwest of Aileron roadhouse in the Northern Territory of Australia. Northern areas of EL28944 located in Aileron station and southern areas of EL28944 belong Amburla station, the EL28944 is cover with aeolian sand, just low outcrop basement rocks is Palaeoproterozoic gneiss. There are many station tracks and fence lines crossing the tenement.

During the second year, no work was completed as AMG focused its attention on the Kurinelli goldfield.

## **2. LOCATION AND ACCESS**

EL28944 is located in the northern part of Burt Plain and southwest of Aileron, about 105 kilometres northwest of Alice springs in the Northern Territory (Figures 1).

The exploration license is accessed by unsealed roads and station tracks from the Amburla and Aileron Station Roads, this roads connect to Tanami Road and Stuart Highway, the Tanami Road crossing with Stuart Highway at 20 kilometres north of Alice springs. Between Alice springs and Yuendunu road was seal with pitch.

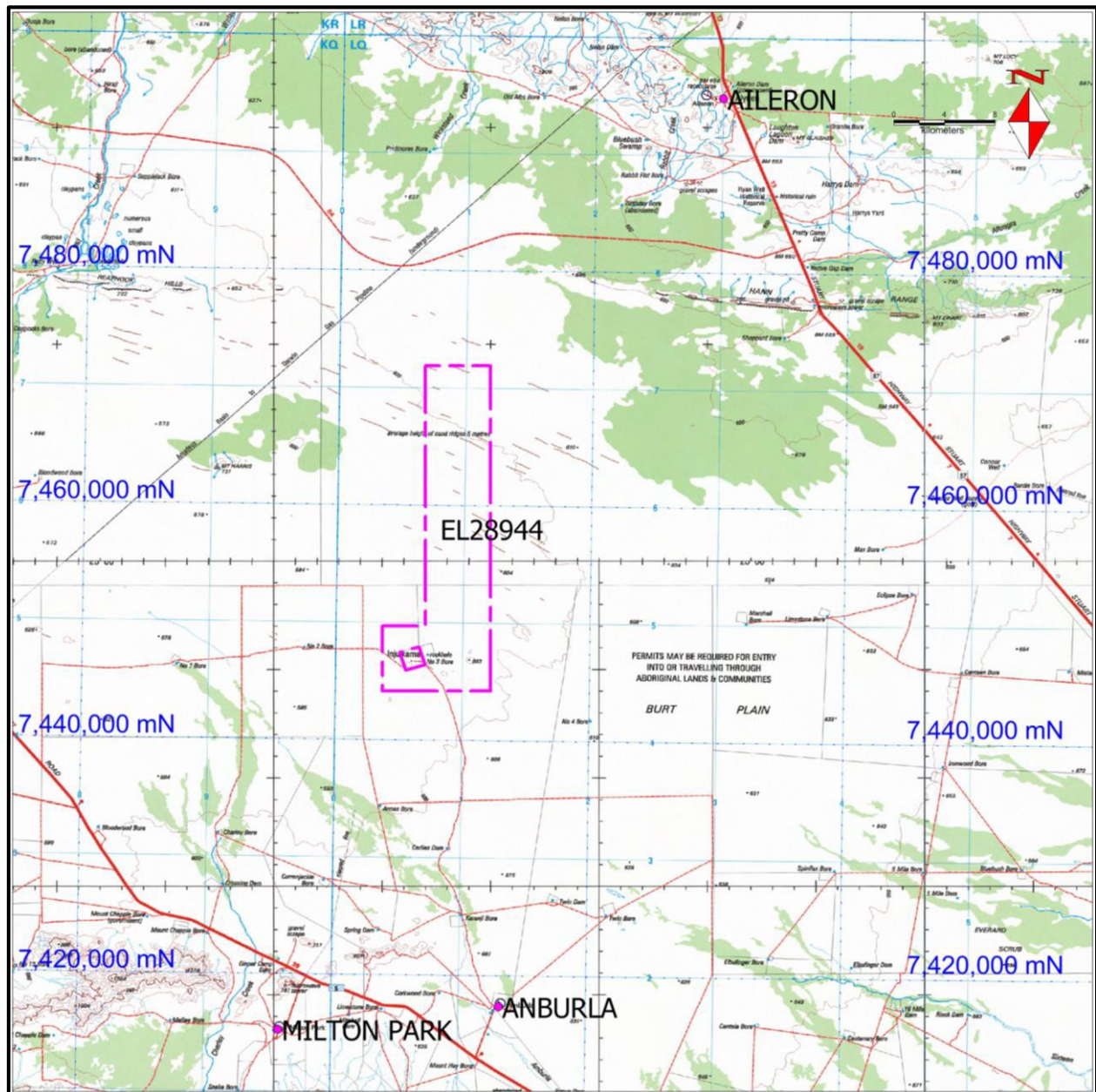


Figure 1 Location Map of EL28944

The station homestead is a long way south of the tenement via a dirt track. The station keeps access gates closed and it was necessary to approach the homestead directly to make contact with the proprietors.

### 3. TENEMENT STATUS AND OWNERSHIP

EL28944 was granted Australia Mining and Gemstone Co. Pty. Ltd on 5<sup>th</sup> March 2012 for

a term of six (6) years. EL28944 comprises 51 graticular blocks (161.26 sqkm, Figure 2). There are no other mining leases or mineral claims within the License area. List of Graticular blocks covering EL28944 in Table 1.

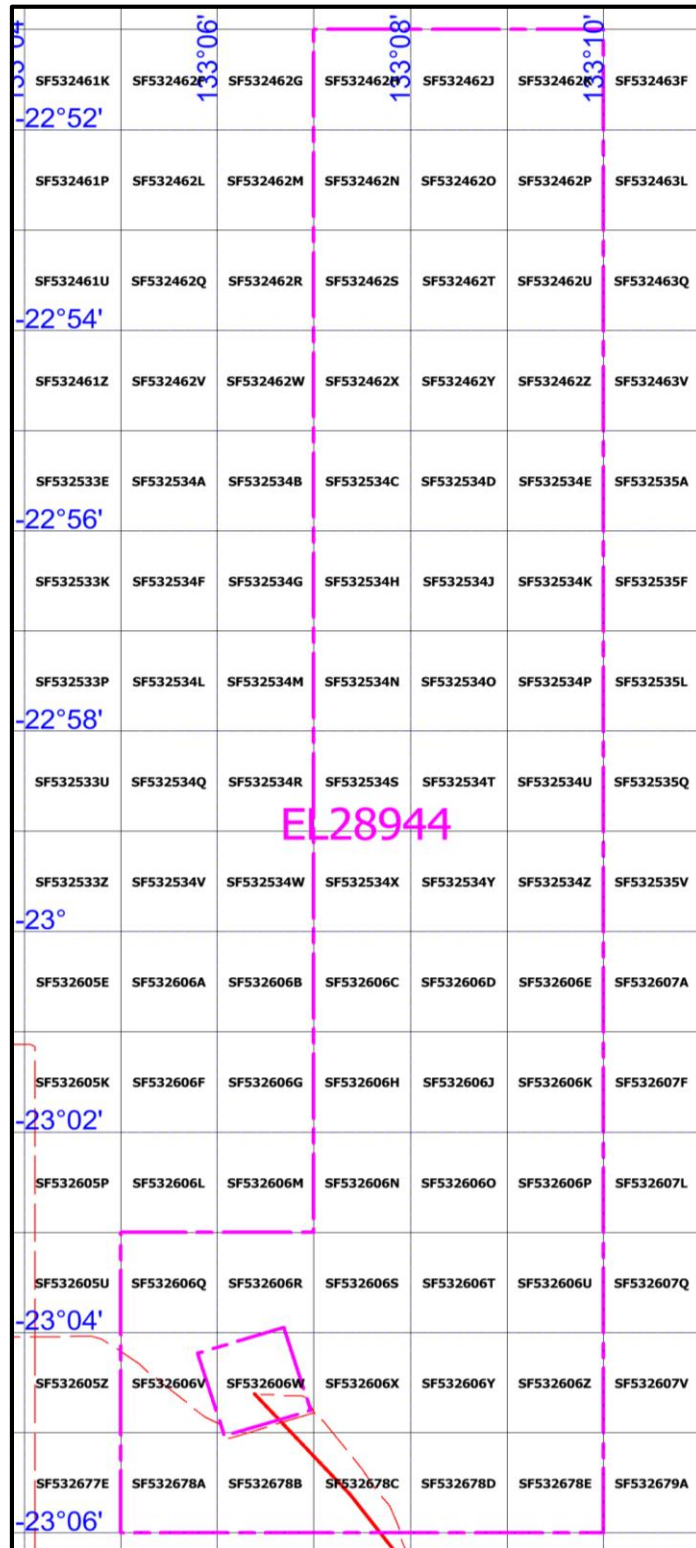


Figure 2: Graticular blocks covering EL28944

Table 1 Graticular blocks covering EL28944

SF532462H	SF532462X	SF532534N	SF532606C	SF532606Q	SF532606Z
SF532462J	SF532462Y	SF532534O	SF532606D	SF532606R	SF532678A
SF532462K	SF532462Z	SF532534P	SF532606E	SF532606S	SF532678B
SF532462N	SF532534C	SF532534S	SF532606H	SF532606T	SF532678C
SF532462O	SF532534D	SF532534T	SF532606J	SF532606U	SF532678D
SF532462P	SF532534E	SF532534U	SF532606K	SF532606V	SF532678E
SF532462S	SF532534H	SF532534X	SF532606N	SF532606W	
SF532462T	SF532534J	SF532534Y	SF532606O	SF532606X	
SF532462U	SF532534K	SF532534Z	SF532606P	SF532606Y	

Background land tenure under EL28944 is part of Aileron station and Amburla station (Figure 3) , The Rubunja Community had been excised from the lease.

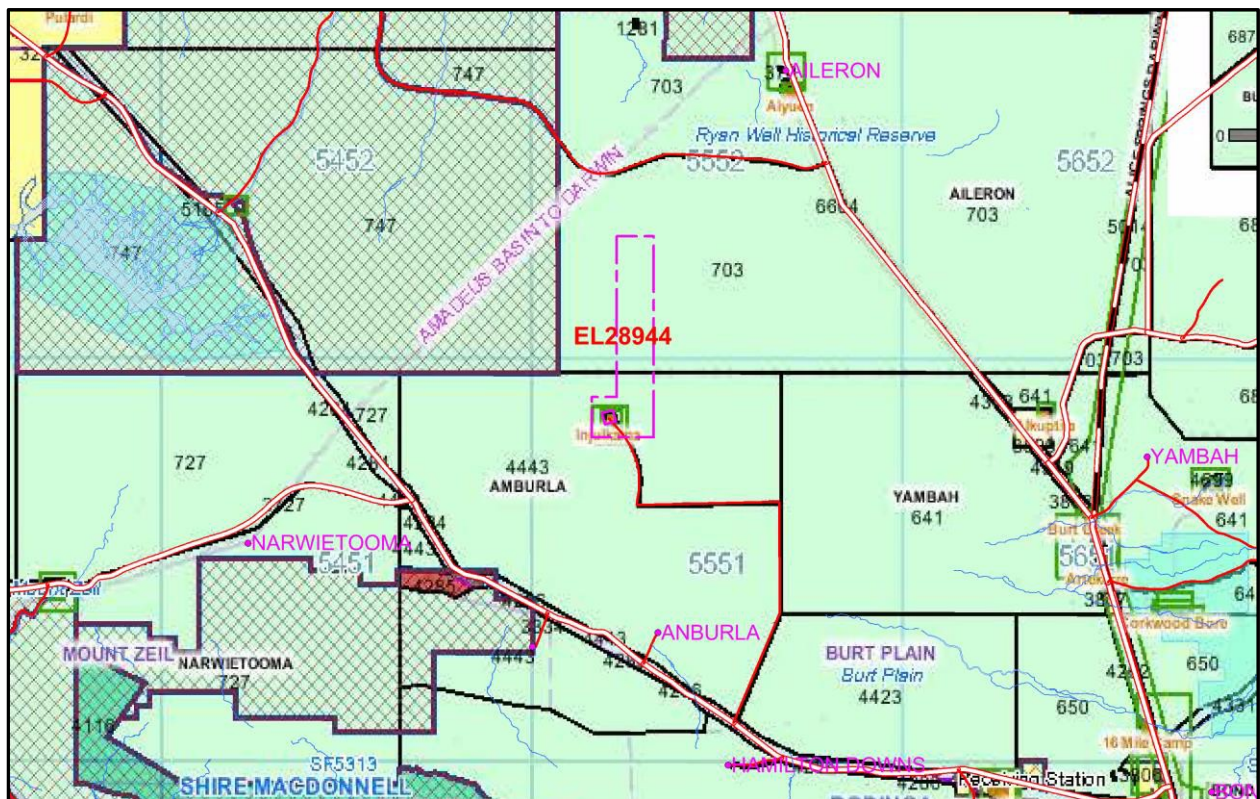


Figure 3 Landholders and Lease Numbers displayed inside EL28944

contact details being: **Aileron Station**(Waite River Holdings Pty Ltd);Phone:08 8956 9705; fax 08 8956 8535.

**Amburla Station:** Tanami Downs, NT 0872; phone: 08 8956 8527.

The region has a semi-arid continental climate. This following description is drawn from Stewart (1982): “The climate is characterised by long hot summers when temperatures regularly exceed 40 °C, and short mild winters. The average rainfall is about 280mm, most of which falls between November and March, but both frequency and amount are erratic.” (Stewart, 1982)

## **4. GEOLOGY**

### REGIONAL GEOLOGY

EL28944 is situated in the Aileron Province of the Arunta Region in the southern part of the Northern Territory, deformed and metamorphosed Palaeoproterozoic orogenic rocks older than 1800 million years crop out as major tectonic units surrounded by younger rocks and essentially form the recognition and inferred basement to the North Australian Craton. These Palaeoproterozoic rocks form the Pine Creek Orogen, Tanami Region, northern Arunta Province, and Tennant, Murphy and Arnhem Inliers. They include remnants of Archean rocks, which have been dated at 2500 million years.

To the south, the rocks of the North Australian Craton pass into the Central Australian Mobile Belts of the Proterozoic Orogens of the Arunta Region and Musgrave Block, consisting of granulite and amphibolite facies, metamorphosed sediments and mafic volcanics intruded by granitoids. In the southern Arunta Province, episodic igneous activity took place between 1880-1050 million years and deformation included a series of major tectonic events, including retrogressive metamorphism in the Proterozoic and Palaeozoic. These basement rocks are exposed in the southern of the license.

Proterozoic-Palaeozoic basins form part of the North Australian platform cover and comprise mildly deformed, largely unmetamorphosed predominantly sedimentary successions unconformably overlying the Proterozoic Orogens. This includes the Ngalia and Georgina Basins in the Aileron region. These rocks are absent here.

A system of major west-northwest trending and north-northeast dipping thrust faults and shear zones affects the Arunta Region. The associated shear zones can be up to hundreds of metres in width and extend for several kilometres, and are thought to have formed during the 400-300 Ma Alice Springs Orogeny (Cartwright et al., 1999). The Palaeoproterozoic basement rocks of the Arunta Region have been thrust over the younger sediments of the Ngalia Basin along the Napperby and Yuendumu Thrusts.

## LOCAL GEOLOGY

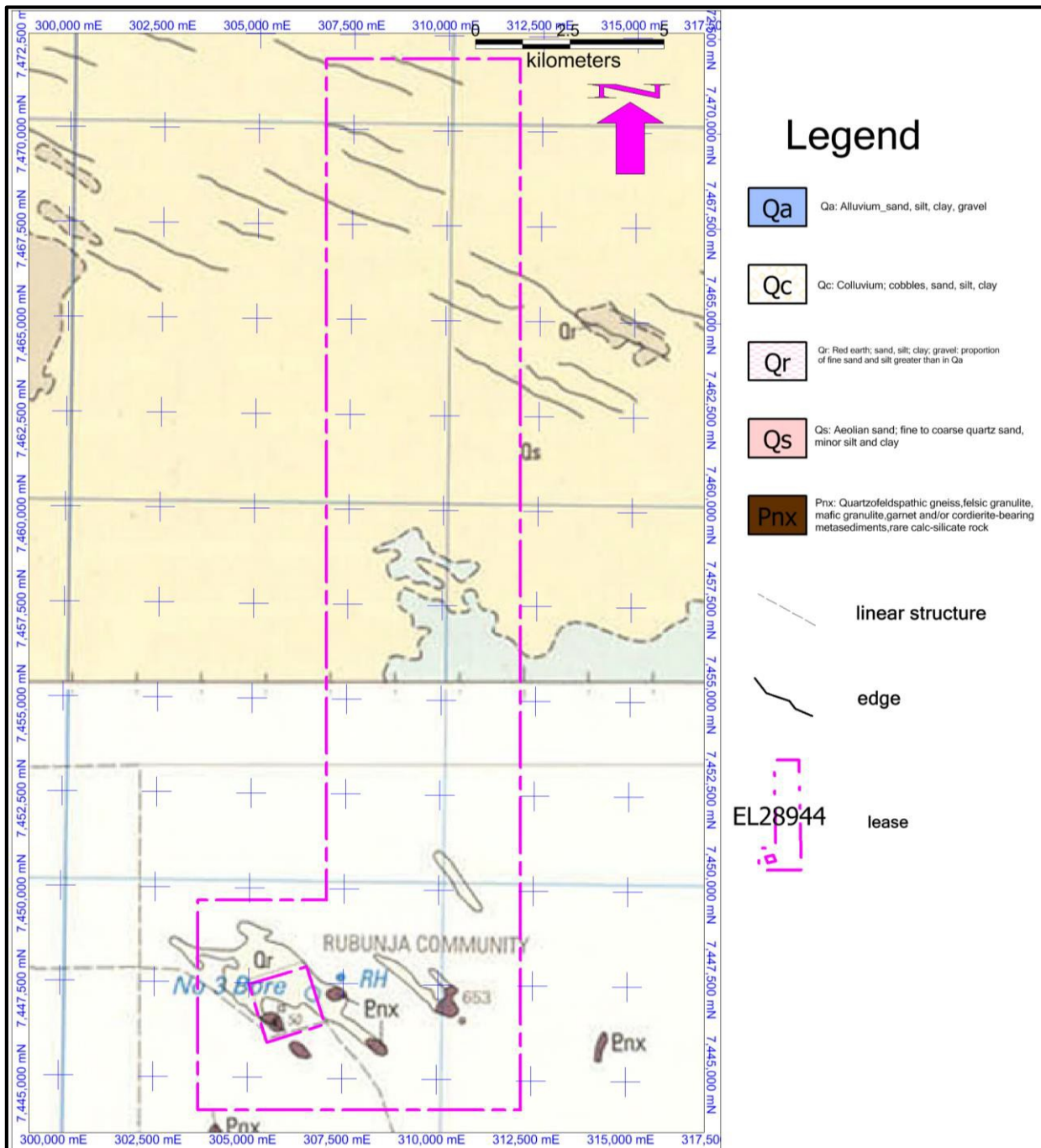
The tenement is underlain by basement rocks of the Aileron Province (According to the web-site of the NTGS (December, 2004)) basement rocks in the Aileron region comprise part of: "... the Arunta Region, a complex basement inlier in central Australia that has undergone a prolonged history of sedimentation, magmatism and tectonism extending from the Palaeoproterozoic to the Palaeozoic. The Arunta Region can be subdivided into the three, largely fault bounded terranes with distinct geological histories: the Aileron, Warumpi and Irindina Provinces. The Aileron Province comprises greenschist to granulite facies metamorphic rocks with protolith ages in the range 1865 -1710 Ma. It forms part of the North Australian Craton and is geologically continuous with the gold-bearing Tanami and Tennant Regions to the north. In contrast, the Warumpi Province comprises amphibolite to granulite facies rocks with protolith ages in the range 1690-1600 Ma, and is interpreted to be an exotic terrane that accreted to the southern margin of the North Australian Craton at 1640 Ma. The Irindina Province in the Harts Range region comprises Neoproterozoic to Cambrian metasediments that formed in a major depocentre within the Centralian Superbasin. It underwent high-grade metamorphism and deformation during Ordovician" (480 - 450 Ma).

The Arunta Basement in this region is further subdivided into the Central and Southern Provinces by the Redbank Thrust Zone, a major north dipping crustal-scale northwest trending structure. The oldest rocks of the Central Province that underlies Burt Plain are mafic and felsic granulites of the Strangways and Narwietooma Metamorphic Complexes that were deformed, metamorphosed and intruded by megacrystic syntectonic granites during the Strangways Orogeny around 1760-1750Ma. Rocks of the Narwietooma



Complex are more widespread comprising mafic granulites.

The EL28944 area is typified by flat sandy plains overlying gneiss and granites of the Arunta Block (Figure 4). Sandy and calcrete soils are found extensively within the Ngalia basin to the North and overlying the Arunta Block of the tenement area. A number of isolated gneiss hills emerge from the plain within southern of EL28944 area, especially



**Figure 4 Geological Map of EL28944 (1:250000 geologic map)**

around The Rubunja Community. The vegetation in the area consists of acacia scrubland associated with grasslands and minimally modified pastures in places. Taller eucalypts are present within and along the main drainage systems.

Except aeolian sands covered in EL28944, basement rock is Narwietooma Metamorphic Complex (Pnx), its outcrop in southern of EL28944, petrology was consisting of Quartzofeldspathic gneiss, felsic granulite, mafic granulite, garnet and cordierite-bearing metasediments, and rare calc-silicate rock, it are less outcrop over the lease area.

## **5. PREVIOUS EXPLORATION**

No MODAT occurrences are located on EL28944, nor NTGS open-file data on previous exploration covered EL28944, Much lease of the work undertaken was outside of EL28944. The historic tenements, their report numbers and comments from abstracts are listed below.

CRA Exploration Pty Ltd holded EL753 in 1973, This license covered a large area of Burt Plain from Mt Harris west of Native Gap, east to the low hills southwest of Sheppards Bore. CRA's interest in Burt Plain was for sedimentary uranium. Mapping of the outcrops SW of Sheppard's Bore, recognized as potential sources for secondary uranium, found foliated granite with common quartz-haematite-pyrite veins. Scintillometer readings up to 2000cpm were recorded but assays returned up to 36ppm U and 50ppm Th. Grades were too low for primary targets, no secondary (calcrete) mineralisation was found and the area was relinquished.

Imperial Granite and Minerals Pty Ltd holded EL24746 on 13<sup>th</sup> April 2006 for a period of six years, the property was purchased from them by Northern Mining Ltd during and explore for energy minerals. From the airborne EM survey that was completed in 2008 it has been possible to identify areas of little prospectivity for relinquishment. A total of 198 blocks covering 625.19 square kilometres and representing approximately 49% of the total area of the license were proposed for relinquishment on 11<sup>th</sup> March 2009.

## 6. EXPLORATION DURING YEAR 1

In the first year of tenure, work on EL28944 was limited to desktop reviews and reconnaissance field trips. These field trip traverses included discussions with pastoralists. Access around the area was also assessed. The lease almost cover of with aeolian sand, there is a little bit Palaeoproterozoic gneiss (photo1) around The Rubunja Community. No sampling was undertaken.



Photo1 Palaeoproterozoic gneiss (southern of EL28944)

## 7. EXPLORATION DURING YEAR 2

During the second year, no work was completed as AMG focused its attention on the Kurinelli goldfield. Because 99 percent of the lease is covered by Aeolian sands, AMG has decided to surrender the northern area of this tenement.

## 8. PLANNED EXPLORATION FOR YEAR 3

Exploration is planned to target gold and Copper. AMG programme will include Auger drilling and basement rock geological mapping.

A cost for the total proposal \$20,500.

## 9. EXPENDITURE

Expenditure (as supplied by Australia Mining and Gemstone Co. Pty Ltd) consisted of:

Table 2 Expenditure on EL28944

Expense	\$
Office Studies	\$9,000.00
Geological data processing	\$6,000.00
Geophysical data processing and interpretation	\$8,000.00
Overheads	\$2,000.00
<b>TOTAL</b>	<b>\$25,000.00</b>

## 10. CONCLUSION AND RECOMMENDATIONS

The area is considered prospective for gold and copper. At present, AMG geologist can't infer the potential in this lease.

## 11. REFERENCES

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Hughes, F.E., 1972. Final Report on EL 753, Mount Harris, NT. Annual Report to the Dept. Minerals and Energy, CRA Exploration Ltd. (CR 1973\_0121).

Andrew Taylor, 2010, Partial Relinquishment report on EL 24746, Milton Park, NT. Annual Report to the Dept. Minerals and Energy, Northern Mining Limited. (CR 20110431).

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