

# **Relinquishment Report**

# SEL 24768 - Toko

# Marqua Project

Reporting Period: 09.08.2006 - 08.08.2008

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Map Sheets:	1:250,000 Tobermorey
	1:250,000 Hay River –Mount Whelan Area
	1:250,000 Hay River
Copy to:	1. Mines and Energy Department, Darwin, Northern Territory
	2. Uramet Minerals Ltd, Perth Office
	3. Austwide Mining Title Consultants, Wangara, WA

#### **Table of Contents**

Summary					.3
	1.	Introductio	on		.4
	2.	Geology			.4
		2.1.	Regional Geology		.4
		2.2.	Tenement Geology		.5
	3.	Previous I	Exploration Work		.6
	4.	Second Y	ear Exploration Progra	am	.7
		4.1.	Desktop Review		.7
		4.2.	Reconnaissance wor	rk	.7
		4.3.	Geochemistry		.8
	5.	Conclusio	ns		.9
6. References			es		.9

Appendix - digital data files	
Surface Lab Geochem	- SEL24768_2008_P_02_SurfaceLabChem.txt

#### Summary

Uramet Minerals Ltd previously identified the potential for base metals and phosphorite in the Marqua project area which incorporates SEL24768 located approximately 550km east of Alice Springs, NT.

This report details all exploration work carried out by Uramet Minerals Ltd within the relinquished portion of the Toko tenement (SEL24768, Fig. 1) in the Northern Territory. The tenement was transferred from Elkedra Diamonds NL during the 2007 season and covers an area of 794km<sup>2</sup>.

Exploration consisted of regional reconnaissance work and sampling carried out between May and July 2008 with outcrops of phosphatic and potash-bearing rocks being located.

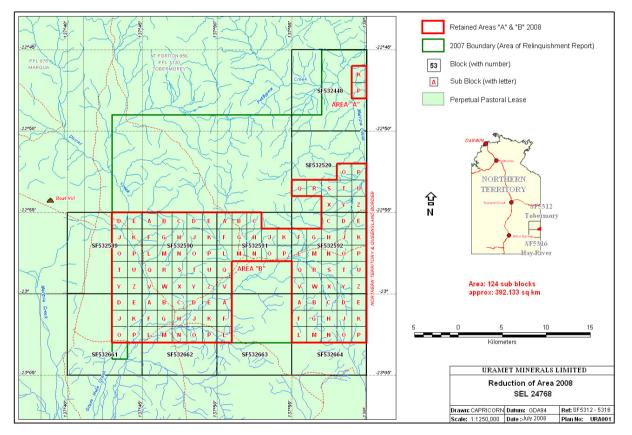


Figure 1. Location plan for SEL24768

### 1. Introduction

Exploration License EL24768 covers the Uramet Mineral Ltd's Marqua base metal project and Marqua phosphate project. As the tenement has passed it's second anniversary year, in accordance with Northern Territory government regulations the area has been reduced in size by 50%. This report details all work carried out on the relinquished portion of the Toko tenement up until 08 August 2008 by Uramet Minerals Ltd.

The Marqua project area is located approximately 550km east of Alice Springs, NT, with good road access 40km off the Plenty Highway and a network of established minor roads and station tracks. The Toko tenement is approximately 27km in length and 29km in width.

An Aboriginal Areas Protection Authority (AAPA) clearance survey was conducted over the tenement prior to field work and any area of cultural significance was avoided.

# 2. Geology

# 2.1. Regional Geology

The project area is part of the southern Georgina Basin, comprising Neoproterozoic to Cambro-Ordovician platform cover of sedimentary rocks (dominantly sandstone, shale, limestone, dolostone) overlying the Precambrian basement of the Northern Australian Craton. This Precambrian basement is exposed along major fault systems on the southern margin of the basin.

The Northern Territory Geological Survey (NTGS) has recognised the mineral potential of the southern Georgina Basin and recently prepared a comprehensive review of both government and private exploration undertaken, and has now developed from various authoritative sources applicable ore genesis models (Dunster et al., 2007).

Since the 1960's, the basin has been considered prospective mainly for Mississippi Valley Type (MVT) lead-zinc mineralisation. More recently, however, the potential for other commodities in a variety of geological settings has been investigated, and the basin is now regarded as having potential for several styles of mineralisation. For example:

- Mississippi Valley Type Pb-Zn (MVT),
- Carbonate-Hosted Pb-Zn (Irish Type),
- Stratiform Shale-Hosted Base Metals,

The area is also envisaged as having potential for phosphate hosted Cambrian limestone. In 1969 exploration in the southern Georgina Basin identified locally phosphatic intervals in the Arthur Creek Formation and the Thorntonia Limestone in the Ammaroo area. In the NT part of the Georgina basin the Wonarah deposit was discovered in the early 1970's.

Prospective ground for phosphate rock within Middle Cambrian units can be defined along the margin of the basin and on basement highs within the basin.

The Ordovician Mithaka Formation and Nora Formation have been mentioned previously as potential phosphatic units.

#### 2.2. Tenement Geology

The Toko tenement at the Marqua project area is located in the structurally complex southeastern portion of the Georgina Basin, which is comprised of basement granitoids, Neoproterozoic tillites and arkosic sedimentary rocks, overlain by Cambrian and Cambro-Ordovician limestone, dolostone, shale and clastic sedimentary rocks of the Toko Syncline (Fig.2). These units have been disrupted by multiple folding and faulting events. Faulting in the project area generally trends northwest and individual faults have been locally offset by later northeast trending faults.

Part of the regionally significant Toomba Fault Zone lies in the western part of the Toko tenement and segregates a structurally complex zone dominated by arkosic sediments to the southwest from limestone, dolostone and sandstone of the Toko Syncline to the north. The Toomba Fault Zone is a reverse fault which dips ~45° towards the southwest and lies in close proximity to a number of parallel folds and faults including the Field River Anticline.

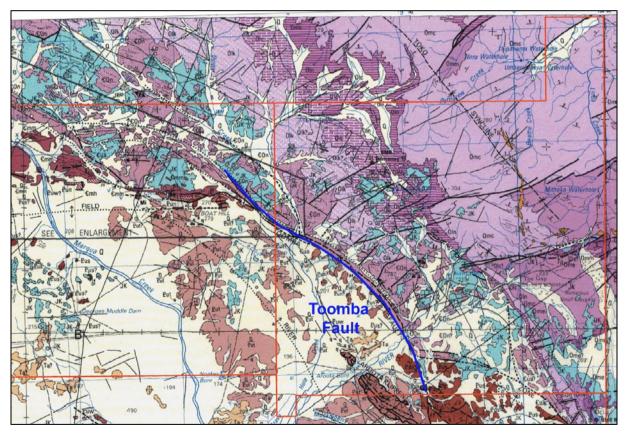


Figure 2. Geological map of the Toko tenement area.

The Neoproterozoic Yardida Tillite, which comprises diamictite, siltstone, sandstone, and arkose, is exposed within the Field River Anticline core and the younger Black Stump arkose crops out further to the east.

Younger rock units that typically form hill capping plateaus and mesas include the Tertiary Austral Downs limestone, a partly silicified lacustrine limestone underlain by a lateritic palaeosol, and Cretaceous clastic sedimentary rocks. The Cretaceous beds are commonly associated with zones of silicification both within beds and penetrating the underlying Cambro-Ordovician strata.

#### 3. Previous Exploration Work

The Marqua project area has been subject to lead-zinc exploration for over 30 years. Mapping of the Marqua area (Tobermorey map sheet) was carried out by BMR 1959-1960 and subsequent re-mapping was done throughout the 1970's and 1980's. Exploration for base metals during that time was mainly focusing on rock chip and stream sampling. During 1977-1978 and 1983 BMR drilled several cored stratigraphic holes in the area. Anomalous zinc levels were found in these holes (BMR1979/36).

Subsequently Agip showed interest in base metal exploration in 1981 covering the tenement area (CR19830328). Reconnaissance mapping and rock chip sampling demonstrated that base metals are anomalous within the Late Proterozoic Wonnadinna Dolostone and Thorntonia Limestone. Sixteen holes were drilled during 1982 to test the zinc anomalies over a strike length of 8km.

Saracen Minerals drilled nineteen percussion holes in 1988 (CR19880057) with the aim of detecting possible platinum-group element mineralisation. No platinum group elements were detected.

MIM explored the area in the early 1990's to test for Pb, Zn and Carlin-style Au and Pt (CR19920506). Re-assays of Saracen Minerals percussion drill holes and ten additional drill holes within the prospective units concluded that mineralisation is structurally controlled.

In conjunction with regional re-mapping of the Tobermorey map sheet, NTGS drilled cored stratigraphic hole NTGS99/1 west of the Toko tenement area.

The NTGS re-evaluated the area as part of the southern Georgina Basin Geology and Resource Potential Report in 2007 and concluded that the Marqua area remains prospective for base metals since the lithostratigraphy of the area was not fully understood until recently (Dunster et al., 2007).

### 4. Second Year Exploration Program

#### 4.1. Desktop Review

## 4.1.1. Marqua Project - Base Metals

The compilation of historical data focusing on base metal potential within the project area was continued during the reporting period.

Work by previous exploration companies has shown that base metal anomalies occur within the Cambrian Thorntonia Limestone, Red Heart Dolostone and Arthur Creek Formation and the Late Proterozoic Wonnadinna Dolomite.

# 4.1.2. Marqua Project - Phosphate

The Ordovician Mithaka Formation and Nora Formation (Fig.3) that outcrop within the Toko SEL were targeted for phosphate exploration within the tenement. The prospective Nora limestone units outcrop over 20km along the Toomba Fault system. Sandstone and mudstone of the Mithaka Formation covers an area of 10km by 6km in the eastern part of the tenement but is largely concealed under thin regolith cover.

The formation of high-grade phosphate rock (known as phosphorite if it contains greater than 15%  $P_2O_5$ ) requires a generally shallow deposition and slow accumulation rate of sediment and the existence of a trap favouring accumulation of organic matter.

Regions favourable to a large-scale phosphate deposition occur along an ocean margin where deep upwelling currents trap phosphate rich waters in lagoons and embayment. In this environment phosphate accumulates at the water-sediment interface in association with thick layers of organic sediment (black shales).

# 4.2. Reconnaissance work

Reconnaissance work was carried between May and July 2007.

The Nora and Mithaka Formation were investigated for their phosphate potential during the field season. Phosphatic, shell-rich zones have been identified and sampled for commercial laboratory assaying.

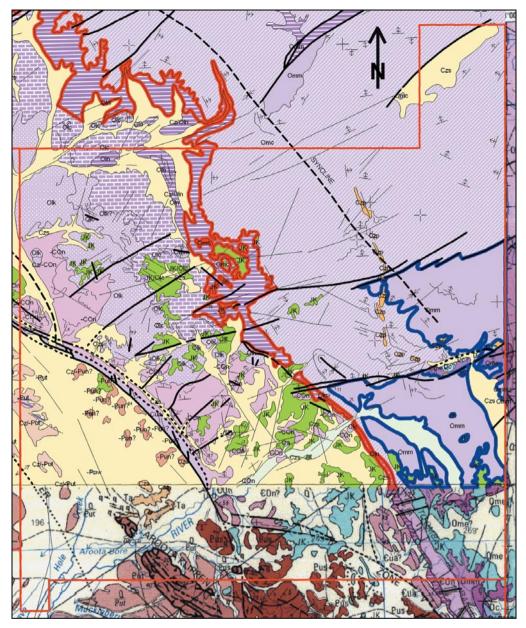


Figure 3. Mithaka and Nora Formation outcrop that contains shelly beds. Note red outline – Nora Formation, blue outline – Mithaka Formation.

#### 4.3. Geochemistry

Laboratory geochemical analyses were undertaken on 3 samples collected from 3 sites (Fig. 4) within the Nora Formation. Samples were analysed at Genalysis Laboratory in Perth, W.A. for Ag, Al, As, Ba, Ca, Ce, Cu, Fe, K, Mg, Mo, Ni, P, Pb, S, Sr, U, V and Zn. The elements were determined by multi-acid digestion and ICPOES/ICPMS. The results (included in full in digital form as appendix 1) do not indicate any potential for economic phosphate deposits.

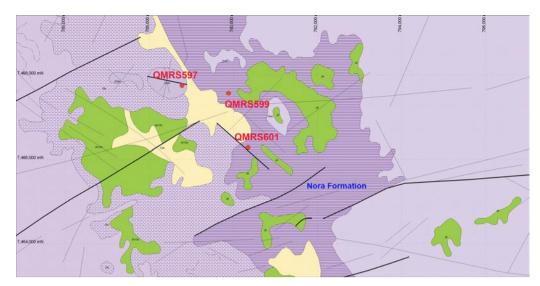


Figure 4. Location map of analysed Nora Formation samples.

#### 5. Conclusion

No substantial phosphatic rocks were located in the relinquished area during the field program. With the Nora Formation not being considered prospective for phosphate within the tenement, nor the relinquished ground considered prospective for base metals no further work by Uramet is warranted.

#### 6. References

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Dunster JN, Kruse PD, Duffett ML and Ambrose GJ. 2007. Geology and resource potential of the southern Georgina Basin, Northern Territory, NTGS