

# **2005 Annual Report**

# On

# **EXPLORATION LICENCE, EL 23174**

# **AuQuest Project**

Period Beginning 19<sup>th</sup> September 2004 And the Period Ending 18<sup>th</sup> September 2005.

LICENCEE \ OPERATOR: STANDARD 1:250,000 SHEET: STANDARD 1:100,000 SHEET: AUTHOR: DATE: DISTRIBUTION: Renison Consolidated Mines NL SD5204 Darwin Noonamah 5172 Scott Hall Project Geologist. October 2005 NT Department of Mines & Energy. Renison Consolidated Mines NL, Brisbane. Renison Consolidated Mines NL, Tom's Gully.

# **Tenement Details**

The tenement comprises 21 blocks covering 58.44 km<sup>2</sup> and is located immediately north of Tom's Gully Mine, and next to the Arnhem Highway.

#### **Tenement History**

#### Table 1 Tenure Details EL 23174

Date of Grant		19	19 <sup>th</sup> September 2003		
Period of Grant		6	6 Years		
Year of Tenure	Period	Blocks		Blocks	Expenditure
		Surrende	ered	Retained	Covenant
1	2003/2004	0		21	\$8,000
2	2004/2005	0		21	\$8,000
3	2005/2006	0		21	\$10,500

## SUMMARY

Renison Consolidated Mines NL has been developing an exploration strategy in the Northern Territory since 1999 targeting dislocations within regional structures that intersect known stratigraphical and structural features that host economic gold mineralisation within the Pine Creek Geosyncline. EL 23174 forms a part of a regional package of tenements (AuQuest Project) that have a northwest trend, which covers what the Company has called the Noonamah-Corroboree trend. It is expected that exploration on these EL's will find additional open cut ores which can be treated through the Tom's Gully plant and exploration will focus on these EL's and targets now mining has commenced on the underground orebody at Tom's Gully.

Over the past two years, the Company's focus in the Northern Territory has been on the resource drilling, feasibility studies and development of the underground mine and mill upgrade at Tom's Gully which will produce approximately 45,000ozpa of gold from early 2006. During this time approximately \$3 million has been spent on ground at Tom's Gully and other tenements within the AuQuest Project, as part of the company's exploration strategy.

Work completed on this tenement has comprised rock chipping, field mapping, literature reviews and data entry to GIS of historical work.

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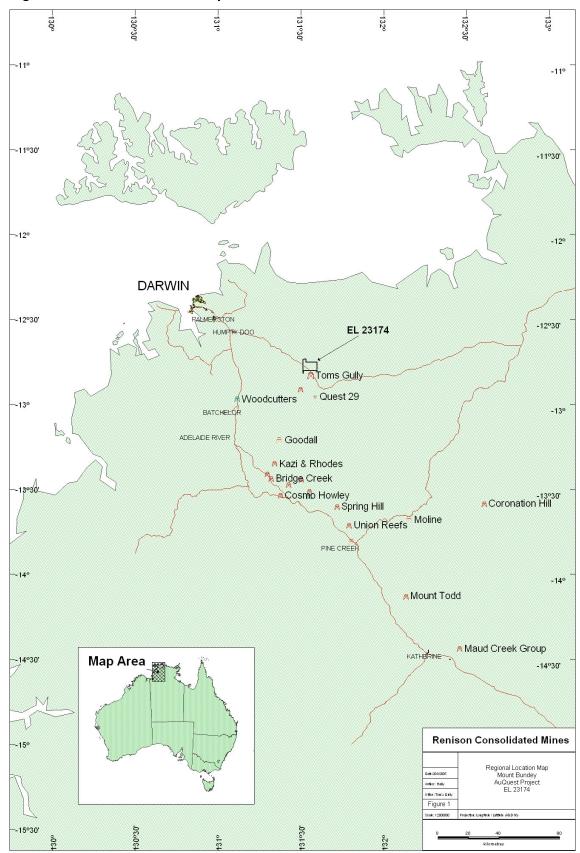
## **1. INTRODUCTION**

All previous exploration work on the ground covered by EL 23174 has been compiled into GIS format for interpretation and target generation. The tenement covers ground several kilometres north of the Toms Gully goldmine; inspection of the Mary River – Point Stuart 1:100,000 scale geological sheet indicates the Wildman Siltstone as the dominant stratigraphic package throughout the region.

Fieldwork during the 2005 Dry season included reconnaissance ground traverses along existing tracks and cross country by 4WD throughout the tenement. Significant exposures of Laterite and residual soils dominate the western, central, and northern areas; the eastern part of the tenement has been extensively dissected by creeks draining into the Mary River. Several more resistant exposures of arenaceous lithology are located in cuttings along the Arnhem Highway.

Access to the tenement is directly from the Arnhem Highway which then links to station tracks and secondary tracks. These provide good access for 4WD vehicles during the dry season, although finding places to cross the numerous creeks makes walking a more efficient means of travel for mapping and sampling. However these tracks become impassable after heavy rain and therefore no access is possible throughout the wet season.

**Figure 1 Tenement Location Map** 



# 2. REGIONAL GEOLOGY

EL23174 is located within the Pine Creek Geosyncline, which has been interpreted as an intracratonic basin lying on an Archaen basement, and containing a 14 km thick sequence of Proterozoic sediments, accompanied by lesser volcanics, granitic plutons and dolerite intrusions. The Northern portions of the project area contain the oldest sediments The Mount Partridge Group that is unconformably overlain by the South Alligator Group, which comprises most of the tenement areas. The southern portion of the Project area is comprised of Burrell Creek Formation, which conformably overlies The South Alligator Group. Tertiary and Quaternary Soils and Gravel's unconformably overlie all the lower lying portions of the tenement areas, generally referred to as "Black Soils Regions". All of the Early Proterozoic sediments and volcanics in the Mount Bundey area were folded in a major deformation event dated around 1800 million years. The fold axes trend north-northeast, and generally plunging gently to the south, as can be seen in Figure 2.

#### 2.1 The Mount Partridge Group

#### 2.1.1 Wildman Siltstone

The Mount Partridge Group is represented by the Wildman Siltstone, which is interpreted to be up to 1500m thick. In the Mount Bundey Region the Wildman Siltstone consists of laminated and banded shale, carbonaceous and often pyritic siltstone inter bedded with undifferentiated volcanics in up to 100m interbeds, minor dolomitic sediments may also be present. The sediments near the granite intrusion may also be hornfelsed. The Wildman Siltstone is interpreted to be prospective for large tonnage, low-grade gold deposits and small tonnage, high-grade deposits. Wildman Siltstone hosts the Tom's Gully gold deposit.

#### 2.2 The South Alligator Group

The Koolpin Formation, Gerowie Tuff and the Mount Bonnie Formation represent the South Alligator Group. The rocks of the South Alligator Group are considered to be prospective for either large tonnage, low grade gold deposits (such as that at the nearby Rustler's Roost gold mine) or small tonnage, high grade deposits.

#### 2.2.1 Koolpin Formation

The Koolpin Formation comprises ferruginous siltstone and shale, which is commonly carbonaceous and pyritic. Chert bands and nodular horizons are common and lenses of ironstone occur occasionally, as haematitic breccias throughout the sequence into undisturbed quartz-veined siltstone and shale. Minor components of dolomite can also occur. The Koolpin is one of the most prospective units in the Mount Bundey Region for hosting mineralisation (West Koolpin, Taipan, BHS and North Koolpin Open Pits at Quest 29 are all within Koolpin sediments)

#### 2.2.2 Gerowie Tuff

The Gerowie Tuff conformably overlies the Koolpin and has similar characteristics of siltstones and shales but is not as iron rich. Within the Mount Bundey Region it is dominated by graded beds of siliceous tuffaceous mudstones grading to greywacke and arenite, diagenetically altered, up to 600m thick, and generally poorly mineralised. The highly siliceous component of the tuffs and arenites make them resistant to erosion, and they tend to form areas of high relief.

#### 2.2.3 Mount Bonnie Formation

The Mount Bonnie Formation conformable overlies the Gerowie Tuff and is dominated by a shallow marine sequence of interbedded and graded siltstone, chert and greywacke with occasional BIF's. The unit can be up to 600m thick and is generally iron rich and may be siliceous in places. The Mount Bonnie Formation hosts the Rustler's Roost deposit.

#### 2.3 Finniss River Group

#### 2.3.1 Burrell Creek Formation

Conformably overlying the Mount Bonnie Formation is the Burrell Creek Formation interpreted as a flysch sequence of fine to coarse marine sediments and appears to be part of continuous sedimentation process. Due to the lack of marker horizons and poor exposure the width of the unit is unknown but is thought to be >1000m. This Formation is considered prospective for large low-grade gold deposits as typified by the Batman deposit of Mount Todd. The potential also exists for small high-grade deposits similar to Possum and Happy Valley with John Shields GIGIAC Theory (Gold in Greywacke in Anticlinal Crests). Also high-grade deposits such as Bandicoot, Marrakai and the Ringwood line which all lie on a major deep-seated magnetic trend, Figure 3.

#### 2.4 Intrusives

#### 2.4.1 Zamu Dolerite

The Zamu Dolerite occurs as small bodies that are poorly exposed, as a result of its weathering, some rubble boulders may be present at surface. It consists of altered quartz dolerite and gabbro and is generally narrow and broadly conformable to bedding as thin sills. The Zamu Dolerite is the only known suite of mafic intrusives that were emplaced prior to regional metamorphism and deformation. The Zamu Dolerite appears to have a controlling influence on the mineralisation at Quest 29 within the Koolpin sediments but this is not fully understood at this stage. Mineralisation is also hosted within this unit at Quest 29 and also at Chinese Howley.

#### 2.4.2 Mount Bundey Granite & Mount Goyder Syenite

The sedimentary sequences and the Zamu Dolerite are intruded by the Proterozoic Mount Goyder Syenite and Mount Bundey Granite which form a co genetic complex which crops out over about an 80km area. This intrusion is believed to have been the heat and fluid source for the mineralisation, which occurs throughout the local region. Their mineralogy and geochemistry suggests they are both differentiated from a common magma, which intruded into the gently south plunging folded belt of sediments.

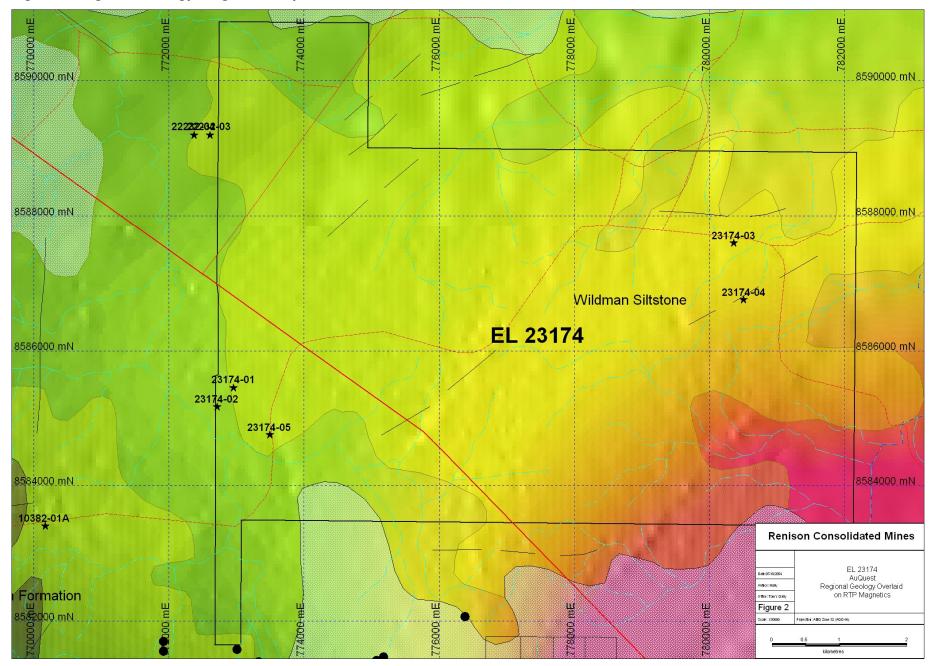
A thermal metamorphic overprint associated with the southern margin of the Mount Bundey Granite intrusive has resulted in the development of both cordierite and andalusite, and probably was the generator for the local gold mineralisation. Further to the south of the Mount Bundey and Mount Goyder intrusive is possibly a second deep-seated pluton to the south as indicated by a roughly circular magnetic feature (Discussions with Williams Resources 1998).

#### 2.5 Deformation & Metamorphism

Regional deformation with north-northeast folding plunging gently south occurred around 1800 My, based on a rubidium-strontium analysis, causing metamorphism to greenschist, and sometimes higher to amphibolite facies. This event also resulted in the intrusion of thin sills of Zamu Dolerite, and the post – tectonic emplacement of the Mount Bundey Granite and Mount Goyder Syenite is a comparable cogenetic pluton dated at 1790 + 110 My in the region. Structural deformation of the metasediments is complex.

The major folding episode resulted in tight folds whose axes plunge southwest. However within these major folds the more incompetent beds, i.e. carbonaceous shales, have been deformed into localised complex structures. The granitic emplacement has also influenced the fold structures as can be seen on the regional geological map. Metamorphism to greenschist facies through dynamic compression associated with intense folding is common. The granitic emplacement and the associated structural deformation and generation of hydrothermal fluids are thought to have been responsible for most of the gold enrichment throughout the Pine Creek Geosyncline. e.g. Cosmo Howley, Rustlers Roost, Toms Gully, Moline, Mt Todd and Quest 29.

#### Figure 2. Regional Geology, Magnetics Map & GIS Data.



## **3. PREVIOUS EXPLORATION**

The earliest record of exploration in this area of the Mount Bundey region was by Geopeko from 1974 until 1977. They were primarily looking for uranium and base metals using costeaning and the sampling of rock chips within EL142, however results form these samples were poor, with no economic value. Four costeans were completed in 1975, along with seven diamond drill holes and the collection of soil and rock chip samples. One further diamond hole was drilled in 1976.

During the 1980's and into 1990 Western Mining Corporation used stream sediment sampling, trenching, and drilling to explore for gold and abase metals in EL4720. Carpentaria Gold was also collecting stream sediments samples in 1989, within EL6223 following the discovery of Tom's Gully by this method in 1987.

In 1992 Mount Isa Mines held the EL7554 tenure, and in 1993 Poseidon Exploration used stream sediment samples for location of gold anomalies in EL7568. From 1994 - 95 Normandy Exploration held the EL7568 and EL8019 tenures, using stream sediment samples, and drilling in their exploration. In 1995 they completed three hundred twenty five RAB holes, and ten Percussion holes with diamond tails.

This work has been compiled into GIS format for target generation and to prevent repetition with follow up work.

## **4. CURRENT EXPLORATION**

Initial work on EL 23174 comprised in-house interpretation of processed aeromagnetics and radiometric data. Subtle north to north-east trending magnetic anomalies reflect lithological and structural trends in the Wildman Siltstone. A north-east/south-west oriented magnetic linear feature in the south-eastern sector of the tenement probably indicates a deep seated dyke. Regionally, this feature passes just to the west of Toms Gully and continues to the south-west to underlie the Bandicoot and Williams gold occurrences.

Aerial Photo interpretation using 1:20,000 colour photographs were used concurrently with field reconnaissance trips. Residual lateritic soils are present in the topographically flat land surface in the west and north-west of the tenement. Occaisional outcrops of Laterite are also present scattered throughout this sector. The central and eastern areas of EL 23174 are presently undergoing active dissection during the Monsoonal wet season. The topographically flat lateritic duricrust over the licence is being gullied and eroded away by creeks draining to the north-east and east into the Mary River, and to the south west into Scott Creek.

A prominent topographic ridgeline trending north-east with incised gullies draining east is present in the eastern sector of the licence. Saprolitic Wildman Siltstone weathered maroon-orange in colour crops out along this ridgeline. Occaisional more ferruginous bands are also present.

Rock chips were collected throughout the licence wherever saprolite, saprock, and ferruginous bands outcropped. Results were generally at or below detection for gold. As there were few samples taken in the central and western areas of the licence, due to the extensive laterite cover, it was noted that a regularly spaced laterite sampling programme would be more amenable to detect anomalous gold.

Several roadside cuttings along the Arnhem Highway have exposed more resistant arenaceous/sandstone interbeds within the Wildman Siltstone.

#### Table 2. Rock Chip Locations & Results.

AU2PPM
0.01

### **5. REHABILITATION & ENVIRONMENTAL PROTECTION**

Access to EL 23174 was through existing station fenceline tracks and along the old Marrakai track; where sampling of outcrops and prominent ridges necessitated cross country travel, vegetation disturbance was kept to a minimum. Trees, bushes and saplings were avoided in favour of more open country.

# 6. EXPENDITURE DETAILS for EL23174 DURING 2004/2005

Expenditure Type	EL 23174
Covenant	\$ 8,000.00
Accommodation, Messing & Travel Total	\$ 985.00
Acquisition of imagery, maps & literature Total	\$ 455.00
Administration Total	\$ 450.00
Analysis of Data \ Results Total	\$ 144.00
Assaying Total	\$ 56.50
Computers & Software Total	\$ 0.00
Consultants Total	\$ 385.00
Consumables Total	\$ 72.50
Data Entry Total	\$ 33.00
Drilling Total	\$ 0.00
Earthworks Total	\$ 0.00
Fuel Total	\$ 175.50
Geo-Physics Total	\$ 0.00
Geological Personnel Total	\$ 4,651.20
Miscellaneous Total	\$ 0.00
Rehabilitation Total	\$ 0.00
Reporting Total	\$ 850.00
Road works Total	\$ 0.00
Site office costs Total	\$ 656.00
Vehicle Expenses Total	\$ 125.00
Grand Total	\$9,038.70

I certify that the information contained herein, is a true statement of the operations carried out and the monies expended on the above mentioned tenement during the period specified as required under the *Northern Territory Mining Act* and the Regulations thereunder.

X I have attached the Technical Report		
1. Name:	Scott Hall	
Position:	Project Manager	
Signature:	Sect Hall	
Date:	01/11/2005	

# 7. CONCLUSION AND PROPOSALS

First pass reconnaissance of EL 23174 indicates an extensive laterite palaeosurface which is being actively eroded. A regularly spaced Laterite sampling programme is recommended. Initial rockchip results have been disappointing, however they were taken in the zone of maximum gold depletion. Outcrop is sparse throughout the tenement; further work should include soil and laterite geochemistry and gully sediment sampling. The deep seated linear magnetic feature in the south-east corner of the tenement may be a conduit for gold mineralising fluids, and should be tested with a RAB drilling programme. Potential for finding further minable resources within the Mount Bundey Area is still considered very high.

Section 7.2 Work program for the next twelve months:		
Activities proposed (please mark with an "X")	: X Drilling and/or costeaning	
X Literature review	? Airborne geophysics	
X Geological mapping	? Ground geophysics	
X Rock/soil/stream sediment sampling Other:		
Estimated Cost:	\$10,500	

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