PEGASUS GOLD AUSTRALIA PTY LTD

EL 9775 DRIFIELD
MT TODD DISTRICT, NT

ANNUAL REPORT FOR EXPLORATION
YEAR ONE OF TENURE

Distribution:  
NTDME x1  
Pegasus Gold Australia x1

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1. INTRODUCTION

Exploration Licence 9775 (Driffield) was granted to Pegasus Gold Australia Pty Ltd on 28 April 1997 for a period of six (6) years. The licence covers an area of approximately 6.5km², comprising 2 graticular blocks (see Figure 1).

Previous to EL9775 being granted, the area covered by the licence consisted of a number of Mineral Claims held by Kintaro Gold Mines.

2. LOCATION AND ACCESS

EL9775 (Driffield) is situated approximately 55km north of Katherine and is centred approximately 10km to the northeast of the Mt. Todd Gold Mine (Figure 1). Access is gained via Mt. Todd Mine access roads and exploration tracks north from the sealed Edith Falls Road.

Topography within EL9775 is considerably varied, ranging from low relief scree rises and black soil plains in the north and west, to moderate and high relief rocky ridges and deep valleys in the south and east. The region is traversed by a number of creeks and drainages, including the relatively major Driffield and Stow Creeks. Most of the licence is lightly timbered.

3. GEOLOGICAL SETTING

Driffield is located within the southeastern portion of the Early Proterozoic Pine Creek Geosyncline. Metasediments, granitoids, basic intrusives, acid and intermediate volcanic rocks occur within this geological province (Figure 2).

Within the Mt. Todd area the oldest outcropping rocks are assigned to the Burrell Creek Formation. These rocks consist primarily of interbedded greywackes, siltstones and shales of turbidite affinity, which are interdispersed with minor volcanics. The formation contains slump structures, flute casts, graded beds and occasional crossbeds.

Rocks of the Burrell Creek Formation have been folded about northerly trending F1 fold axes. The folds are open to closed style and have moderate to steep westerly dipping axial planes, with some rocks being overturned. A later north-south compression event resulted in east-west trending open style upright D2 folds.

Metasediments of the Burrell Creek Formation outcrop extensively throughout EL9775. Ridges and creeks host exposures of greywacke and siltstone, with lesser shale and minor tuff and feldspathic sandstone. These rocks have been folded into a series of tight anticlines and synclines with steep, westerly dipping axial planes trending 350° to 020° magnetic. These folds generally plunge steeply to either the south or north, and often
Figure 2. Regional Geological Setting
have an overturned eastern limb.

Quartz is abundant within the licence area, occurring as both massive, white, “bucky” veins and blows, and thin veinlets or stockworks. Three main structural trends are apparent over EL9775. A northwest structural trend is represented by a moderate to strong vertical joint set or foliation, striking 310° to 340° magnetic. A northeast trend hosts much of the massive white quartz veins, striking 030° to 060° magnetic. The third structural trend is near bedding-parallel, and often results in shearing and brecciation along bedding planes. Quartz veining exists along all of these structural trends. Pyrite pseudomorphs are often associated with sheared and brecciated quartz veins.

Several prospect pits and alluvial diggings are scattered throughout EL9775, with the abandoned Emerald Creek tin mine adjacent to the NE tenement boundary.

4. PREVIOUS EXPLORATION

Previous exploration by Kintaro was carried out on a moderate scale over the area now covered by EL9775. Work completed prior to EL9775 being granted consisted of:

- Geological reconnaissance
- Stream sediment sampling
- Rock chip sampling
- Soil sampling
- Gridding
- Bulldozer and excavator costeaming

This work delineated a number of prospective areas, which are being targeted by Pegasus for further exploration under EL9775.

5. EXPLORATION BY PEGASUS ON EL9775 – YEAR 1

Exploration undertaken by Pegasus on EL9775 during Year 1 consisted of:

- Collation and validation of all existing data
- Entry of all existing data into a computer database
- Acquisition of digital aerial photography
- Acquisition of digital Landsat imagery
- Grid and access refurbishment
Reconnaissance geological mapping

Compilation of all available geochemical exploration data into a single database was undertaken. Results from the previous exploration programs are shown on Figures 3 (Stream sediments), 4 (soil samples) and 5 (Rock chip samples).

5.1 GIS and Remote Sensing Studies

Pegasus completed a thorough compilation of a GIS database through the acquisition of digital data from various government and private companies. Data pertinent to the EL9775 region included combined Landsat/SPOT imagery at 1:50,000 scale and 1:25,000 scale digital photography and 5m contours over the Driffield area. Digital aerial photography at 1:60,000 scale with 5m contours and a regional airborne geophysical survey were obtained for the area north of EL9775 and were useful in defining and recognising regional trends.

All the digital data was manipulated in ARCVIEW with all geochemical data in a GEMCOM PCXPLOR database.

5.2 Geological Reconnaissance

Preliminary geological reconnaissance of the geochemical anomalies was undertaken in conjunction with the EL 9734 program.

6. REHABILITATION

No exploration activities were undertaken during the year that required rehabilitation.

7. CONCLUSIONS AND RECOMMENDATIONS

Exploration by Pegasus within EL9775 is targeting previously defined anomalous surface geochemistry in several areas.

Compilation of all geological mapping, stream sediment sampling, rock chip sampling and soil sampling has delineated several areas, which require further investigation. Also, much of EL9775 is still relatively unexplored even at a grass roots level, which only adds to the potential of the licence which is located in a major gold bearing region.

A systematic exploration approach is recommended for Year Two exploration on EL9775. This would be composed of grass roots exploration, including soil and rock chip sampling, geological mapping, and if warranted, RAB drilling, on the defined anomalous areas.
8. **PROPOSED EXPLORATION AND BUDGET**

Exploration proposed at EL9775 during the forthcoming year is as follows:

- Expanded Soil Sampling $5,000
- Geological Mapping and Rock Chip Sampling $5,000

**TOTAL** $10,000

9. **EXPENDITURE STATEMENT**

**EL9775 - DRIFIELD**
Total Expenditure for period 28th April 1997 - 27th April 1998

<table>
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<th>Description</th>
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**TOTAL** $10566
10. REFERENCES

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"Relinquishment Report, Year 5, EL2044 Driffield"
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