

METANA MINERALS N.L.

Tennant Creek Gold Joint Venture

MCC 367 to 376

"MT SAMUEL WEST"

SUMMARY REPORT ON EXPLORATION

FOR THE PERIOD ENDING 1st MARCH 1989

Geological 1:250,000 Tennant Creek Sheet

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## **1. INTRODUCTION.**

Mineral Claims 367 and 376 are held by Tennant Creek Gold Ltd and have been explored by Metana Minerals N.L under a joint venture agreement. The leases were granted on the 9th February 1988 for 5 years. The Mines Department expenditure covenant is \$25,000 total.

The project area is located approximately 6 kilometres south west of the Tennant Creek township. It is situated west of Mt Samuel along the Mt Samuel to Skipper line of hills, see figure 1 and covers a total area of 184 hectares. Access via sealed and dirt roads is good.

Approximately half the area covered by the leases lie within the Marla Marla-Kantaji sacred site. The site is under application for declaration, so all exploration has been suspended. The only work so far has been an aeromagnetic interpretation.

## **2. REGIONAL GEOLOGY**

The regional geology will not be repeated here as it has been adequately described in numerous previous publications. For example the Geological Survey, 1:250,000 series Tennant Creek Sheet explanatory notes. Figure 2 shows a regional geology map taken from Le Messurier et al, "The Tennant Creek Inlier : Regional Geology and Mineralisation": in Economic Geology of Australia and Papua New Guinea - Metals. In Press.

## **3. AEROMAGNETIC INTERPRETATION**

A geophysical interpretation was made on the data that was purchased by Metana from Austirex International Limited. An airborne geophysical survey was conducted by Austirex between June & July 1984. The flight lines were spaced by 200 metres, with tie lines separated by 4000 metres. A proton precession magnetometer was used for data collection. This had a resolution of 0.1 nano Tesla, a cycle rate of 0.5 seconds and a sample interval of 30 metres.

The Mineral Claims lie within the Black Eye Member of the Carraman Formation. The interpretation shown on figure 3 indicates that the leases are situated on east west striking magnetic units to the north of an east west trending, prominent structural break. There is a "bulls eye" type anomaly within MCC's 368 and 369. A north west trending dextral strike slip fault crosses the south west corner of MCC 376

#### 4. CONCLUSIONS AND RECOMMENDATIONS

Exploration will not be able to continue on those leases within the sacred site until successful negotiations have been completed with the custodians. Future exploration work should include a photogeological interpretation, a ground inspection and geological mapping. Ground magnetic traverses and modelling should be carried out to accurately locate and better define the aeromagnetic anomaly. Reconnaissance bedrock traverses should be drilled to investigate the underlying lithology and geochemistry and to determine the potential for shallow mineralisation. Deeper reverse circulation holes will be necessary to drill any target modelled by the ground magnetic traverses.

# M E T A N A      M I N E R A L S      N L

## TENNANT CREEK GOLD JOINT VENTURE MT SAMUEL WEST PROSPECT EXPENDITURE

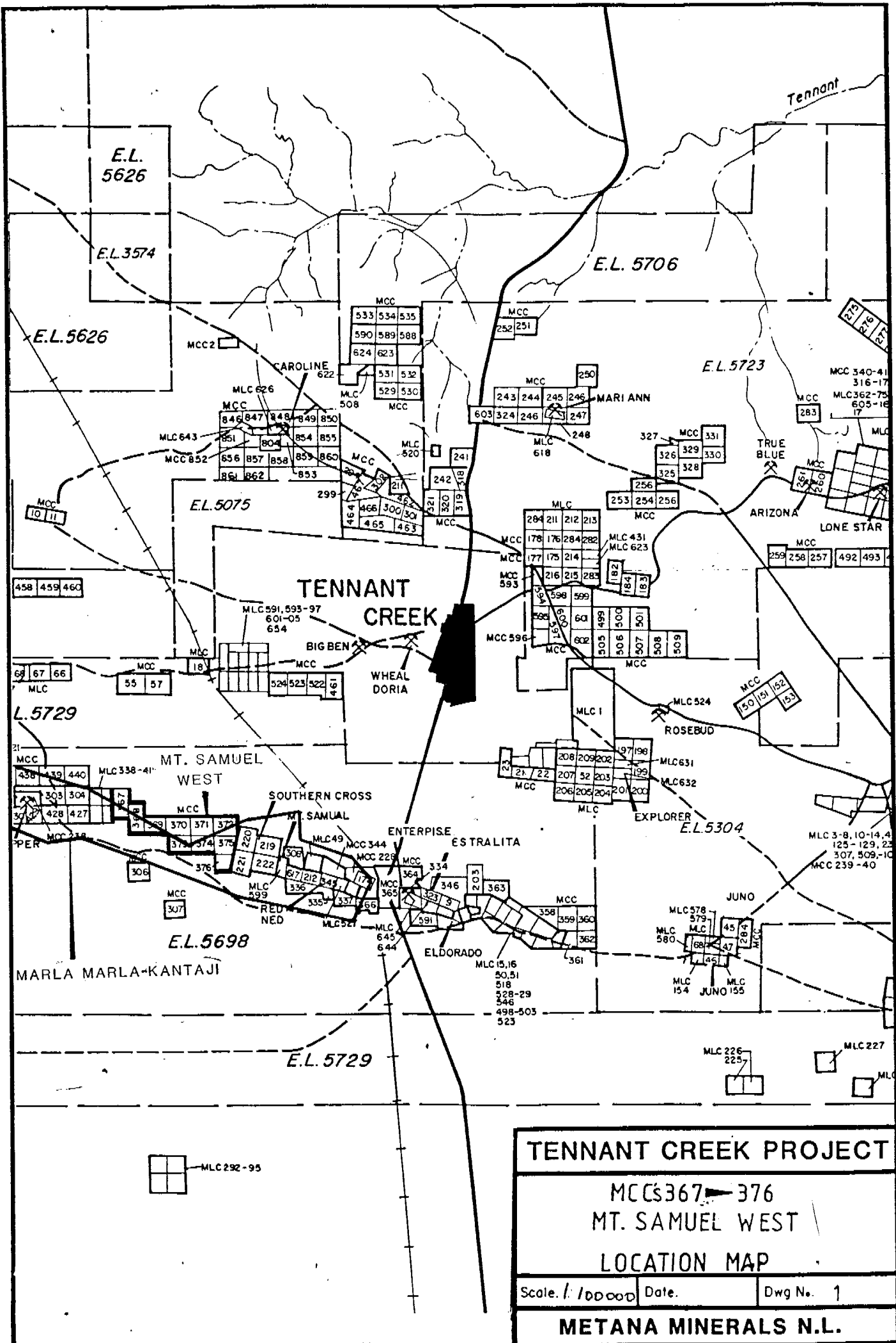
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Legal Fees and Stamp Duty	4360.31
Pegging Costs	
Tenement Fees, Rents and Rates	1627.49
Vendor Payments	11996.35
Head Office costs	60.00
Insurance	8.98
Labour Staff Management	799.51
Maps, Plans, Searches and books	167.23
Telephone	44.99
Hire	560.37
Operating Costs	788.87
Repairs and Maintenance	760.44
Accomodation, Hotels and Meals	1734.02
Freight and Cartage	95.09
Stores and Consumables	893.51
Travelling Expenses	2280.12
Aerial Photography	528.41
Drilling Bedrock (Geochem)	
Drilling Non-Core (Percussion)	
Drilling Core (Diamond)	
Drafting and Computing	242.18
Field Materials	978.54
Geological Services Field	4139.34
Geological Services Office	1317.40
Geophysical Survey and Interpretation	346.83
Gridding	
Labour Operating	
Petrology and Mineragraphy	
Report Preparation	4.34
Sample Analysis and Preparation	

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33768.95

Plus Administration Charge

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37034.84  
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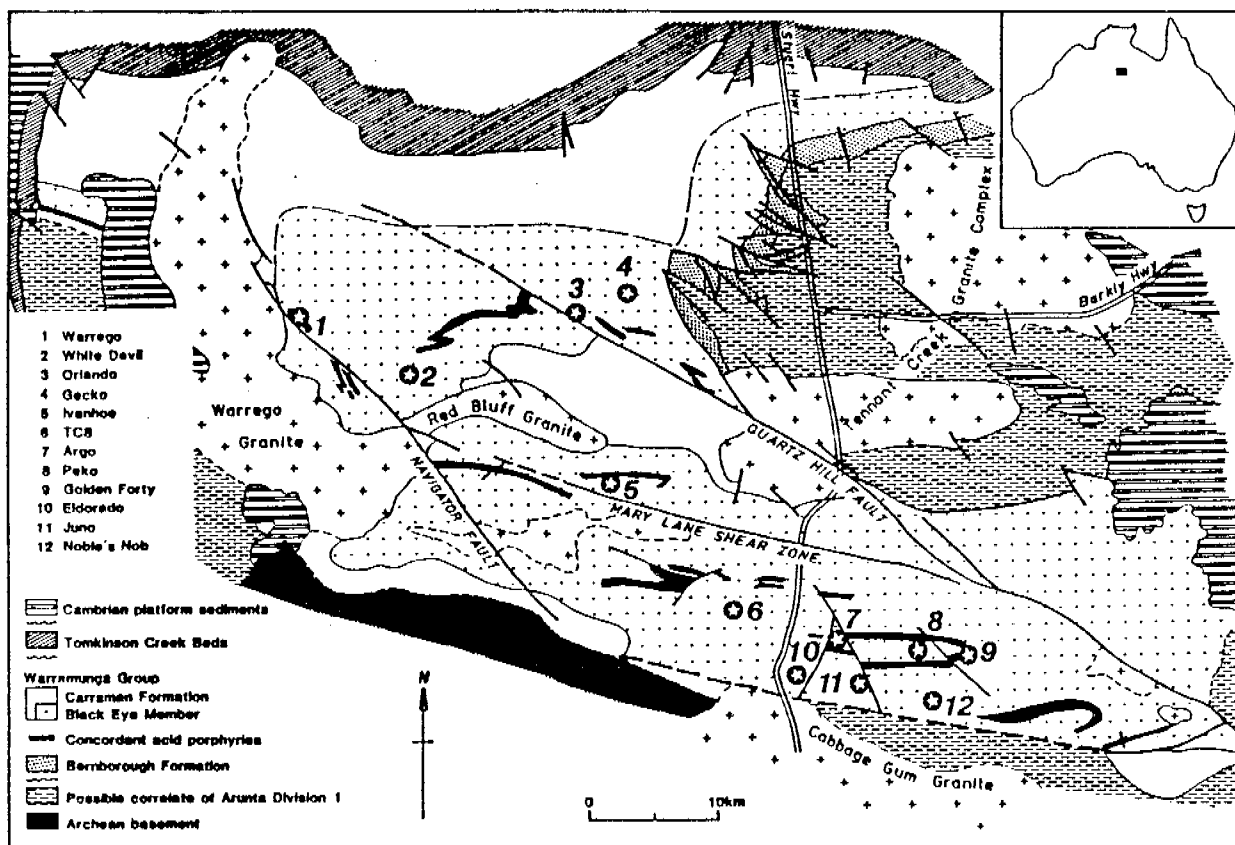
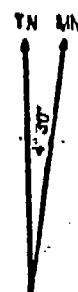
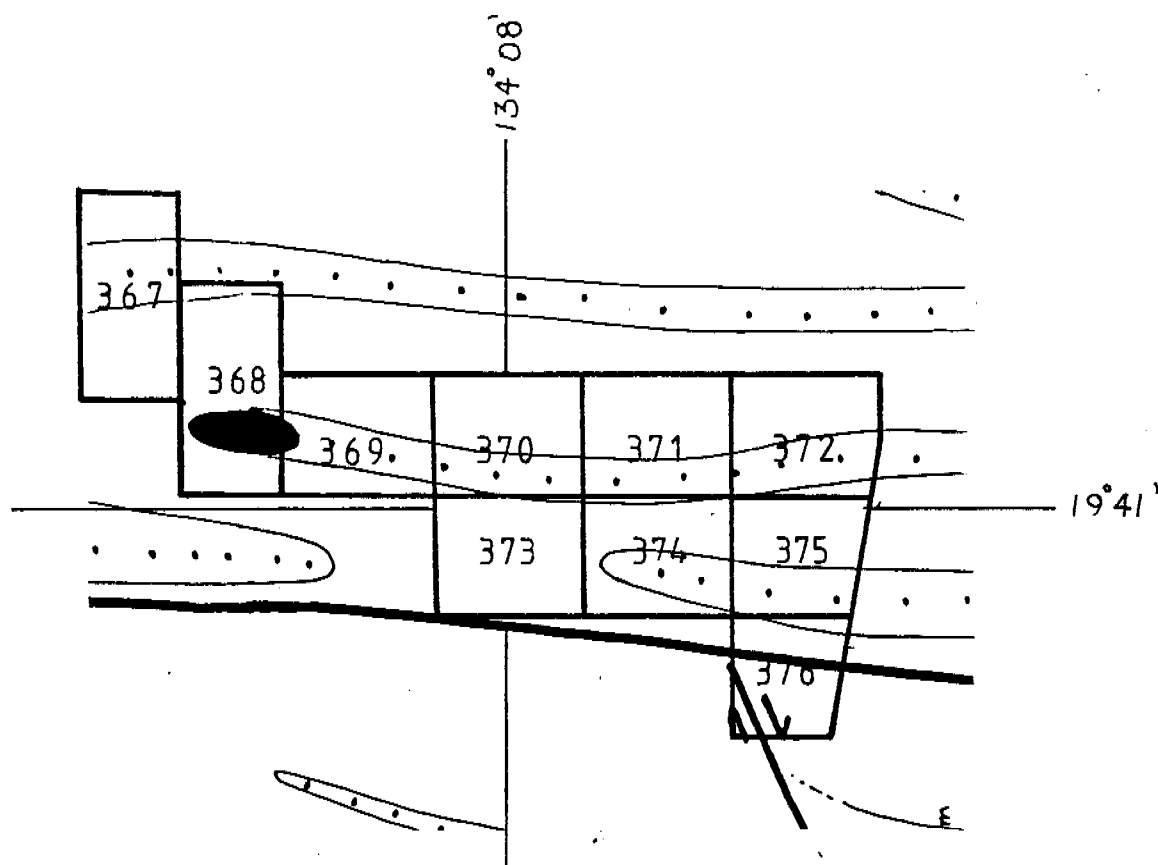


Figure 2: GEOLOGY OF THE TENNANT CREEK MINERAL FIELD.

Adapted from Le Messurier et al., in press.



# TENNANT CREEK PROJECT

MCCs367-376  
MT. SAMUEL WEST  
AEROMAGNETIC INTERPRETATION

Scale. 1:25000

Date.

Figure 3

METANA MINERALS N.L.