

## **2 Bob Mining**

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**EL 10172**

**2003/04 ANNUAL REPORT to 8<sup>th</sup> July 2004**

**Pine Creek Sheet 5270-IV  
Burrundie (14/6-IV) 1:50,000 scale map sheet**

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**Operator: 2 BOB MINING (Registered Business Name)  
(Bob Fisher & Bob Stroud)**

July 2004

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Submitted: - Wednesday, October 27, 2004

Dept. Business, Industry  
& Resource Development

**17 JAN 2005**

Received: Titles Division  
Minerals & Energy Group

CR2004 0606

CR2004 0606

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## **SUMMARY**

EL10172 is located approximately 8 kilometers north/north west of Emerald Springs on the Burrundie (14/6-IV) 1:50,000 scale map sheet. Exploration activities are based on further proving up of base-metals and gold traces found through previous exploration. First year exploration program covered library research plus detailed studies of aerial maps including magnetic image maps and slope vector maps. Field trips were carried out to investigate best possible methods for further exploration in the northern parts of the lease.

The area covered by the tenement is dominated by rocks of Upper Wildman Siltstone, the Lower to Upper Koolpin Formation, and the Gerowie Tuff. The sediments have been intruded by pre-orogenic sills of Zamu Dolerite and by granitic rocks of the syn-orogenic Cullen Batholith. The Margaret Anticline is the dominate structure in the area, trending north/north west through the tenement.

## **1.0 INTRODUCTION**

EL10172 is located approximately 8 kilometers north/north west of Emerald Springs, within the Cullen Mineral Field, on the Burrundie (14/6-IV) 1:50,000 scale map sheet. The tenement, which consists of 10 blocks, 33.39 square kilometers in area, lies between latitudes 13°32' South and 13°37' South and longitudes 131°35' East and 131°37' East (see Figure 1). EL10172 is situated within Pastoral Lease No 815, Mary River West, held by Equest Pty. Ltd.

Access is via the Stuart Highway to an easterly turn off, 2 kilometers north of Emerald Springs and then along tracks.

Exploration Licenses 4817, 4734, 7113, 7127, 9485 previously covered the area and considerable exploration has been carried out by various interests with the latest being Northern Gold N.L.

The proposed expenditure for the first year on the original application was \$8,000. Costs have increased considerably since the original application and this has reflected in expenditure for 2003/04 year of \$11,557.50.



## **2.0 GEOLOGY**

### **2.1 Regional Geology**

EL 10172 is situated within the Pine Creek Geosyncline, a tight to isoclinally folded sequence of mainly pelitic and psammitic Lower Proterozoic sediments with interlayered tuff units. All rocks in the area have been metamorphosed to low, and in places medium grade, metamorphic assemblages. For the purposes of this report the prefix "meta" is implied, but omitted from the rock names and descriptions.

The sequence has been intruded by pre-orogenic sills of the Zamu Dolerite and a number of late syn-orogenic to post-orogenic Proterozoic granitoids. Largely underformed Middle and Late Proterozoic, Palaeozoic and Mesozoic strata as well as Cenozoic sediments and laterite overlie the Pine Creek Geosyncline rocks.

### **2.1 Local Geology**

The area covered by the tenement is dominated by rocks of Upper Wildman Siltstone (Mt. Partridge Group), the Lower to Upper Koolpin Formation, and the Gerowie Tuff (South Alligator Group). The sediments have been intruded by pre-orogenic sills of Zamu Dolerite and by granitic rocks of the syn-orogenic Cullen Batholith (Hardy, 1994 and Holden, 1989).

The Margaret Anticline is the dominate structure in the area, trending north-north – west through the tenement. The western limb dips between 45° and 60° to the west with the eastern limb dipping slightly steeper between 60° and 70° to the east. The fold closure plunges at approximately 30° to the south-south – east. The Upper Wildman Siltstone represents the lower most rock unit in the core of the fold. The Wildman Siltstone is flanked by rocks of the Lower Koolpin Formation and two sills of Zamu Dolerite. The stratigraphically lower sill divides the upper sequence of the Wildman Siltstone, whereas the stratigraphically higher dolerite sill divides the contact between the upper Wildman Siltstone and the Lower Koolpin Formation.

A geology map of EL 7754 is presented as Figure 2 in Socic, 1996.

To the south/west of the tenement a course porphyritic adamellite, cross cuts all Proterozoic sedimentary rocks, and is commonly covered by sandy alluvium and soils. Medium grade contact metamorphism has occurred along this granite/sediment contact zone and is best observed as hornfels and chistolic hornfels in carbonaceous siltstones of the Lower Koolpin Formation (Hardy, 1995).

Numerous north/east to south/west and east/west cross cut and offset the Margaret Anticline. The faults are preserved as haematite-rich breccias with minor quartz filling (Holden 1989). Large quartz ridges parallel the hinge of the Margaret Anticline.

### **3.0 PREVIOUS EXPLORATION**

The earliest work in the area covered by EL 10172 was conducted by the Chinese in the late 19<sup>th</sup> Century. They mainly targeted alluvial Au in drainage system along the hinge of the Margaret Anticline. There is no documentation of Au being mined from quartz reefs or lode system in the same area. However, specimens of quartz containing coarse Au from the area suggest that the primary reef Au may have been mined from similar quartz leaders (Hardy, 1995).

Nord Resources Exploration Pty. Ltd. held part of MCNs 117,118 and 119 as EL 1601 in 1977 which is adjacent to the south/west boundary of EL 10172. Nord Resources conducted extensive searches for base-metals, uranium and gold. From an undisclosed area of the Margaret Anticlinal closure, twelve samples were collected and yielded assay results greater than 0.1g/t Au and up to 5.1g/t Au. These results are reported in the Annual Report for EL 1601.

Calvert River Manganese was granted EL 5006 in October 1987, which is also adjacent to the western boundary of EL10172 and incorporated MCNs 117, 118 and 119. Calvert River exploration included air photo interpretation, litho logical mapping and rock sampling (Holden 1989). Rock chip sampling returned encouraging results with samples from a shear zone in the fold hinge, returning assay values between 3.0g/t AU and 7g/t Au. However, no agreement was made between the title holders of MCNs 117, 118 and 119 and Calvert River Manganese to continue exploration within these mineral claims. Subsequently EL 5006 was relinquished in 1989 on the grounds that there was insufficient geological evidence, outside the existing mineral claims, to justify further exploration.

Northern Gold N.L. completed an extensive exploration program over EL7754 which also 345borders on EL10172 during the 1994/95 field season. Exploration included surveying, infill soil sampling, geological mapping, rock chip sampling and scout RC drilling.

The soil sampling program targeted two previously identified anomalies. A total of 402 samples were collected. The results return indicated a relatively strong elliptical anomaly in the east, with peak values of 295 ppb Au, 240 ppm As and 230 ppm Cu. In the west of the tenement a weaker elongated anomaly was identified, returning peak values of 45 ppb Au, 220 ppm As and 198 ppm Cu. A spot high of 1315 ppb Au was returned from the west (Hardy, 1995).

Twenty five regional rock chip samples were collected from the central and northern blocks of the tenement. The results indicated that gold mineralization in the area is associated with gossanous quartz breccias (Hardy, 1995).

A total of 34 RC drill holes were completed for 1,281 metres along six northing lines and one easting line. The program intersected low-grade bedrock mineralization at Margaret Diggings. Of the 34 RC holes, nine returned intersections between 0.70g/t AU and 2.72g/t Au (Hardy, 1995).

The drilling identified two north-northwest striking echelon zones of Au mineralization, which have been offset by an east-west fault, along the western limb of the Margaret Anticline (Hardy, 1995).

During 1996, Northern Gold N.L. completed a work program based on digital data acquisition and manipulation. Landsat Imagery, SPOT Imagery and AGSO mapping were obtained and used in conjunction with aerial mapping and previous exploration to determine the best method of exploration to be used on the licence. GIS and satellite imagery were used to log soil types and to interpret the structural geology of the region (Socic, 1996).

Interpretation of the GIS and remote sensing imagery showed anticlinal structures trending north-west to south-east through the tenement. Along the anticlinal fold axis, extensive outcrops of Zamu Dolerite are present, bounded by the sub cropping Koolpin Formation and the Mount Bonnie Formation (Socic, 1996).

Recent alluvial mining activity exposed bed rock in several areas at the Margaret Diggings. Geological mapping of these areas was carried out in an attempt to identify the source of the alluvial gold mineralization (Socic, 1996).

A regional RAB drilling program was also completed by Northern Gold N.L. targeting regional soil gold anomalies and testing for strike extensions of high grade soil anomalies. A total of 105 holes were drilled (MN01 – MN62, MN65 – MN84, MN86 – MN108) for 738 metres.

#### **4.0 2003/04 EXPLORATION PROGRAM**

During the 2003/04 exploration season 2 Bob Mining, completed a work program involving library research plus detailed studies of aerial maps including magnetic image maps and slope vector maps. The data obtained was used in conjunction with aerial mapping, site visits and previous digital data interpretations, to determine the best method of exploration to be used on the licence area in the 2004/05 dry season periods.

There was no soil sampling or rock chip sampling carried out.

#### **5.0 CONCLUSION**

Interpretation of the data indicates further investigation to be carried out in the south west areas of the block. Further geological mapping and sampling is required in this region to determine the extent of mineralisation in the area.



Figure 1 EL 10172 – Burrundie (14/6-IV) 1:50,000 scale map.

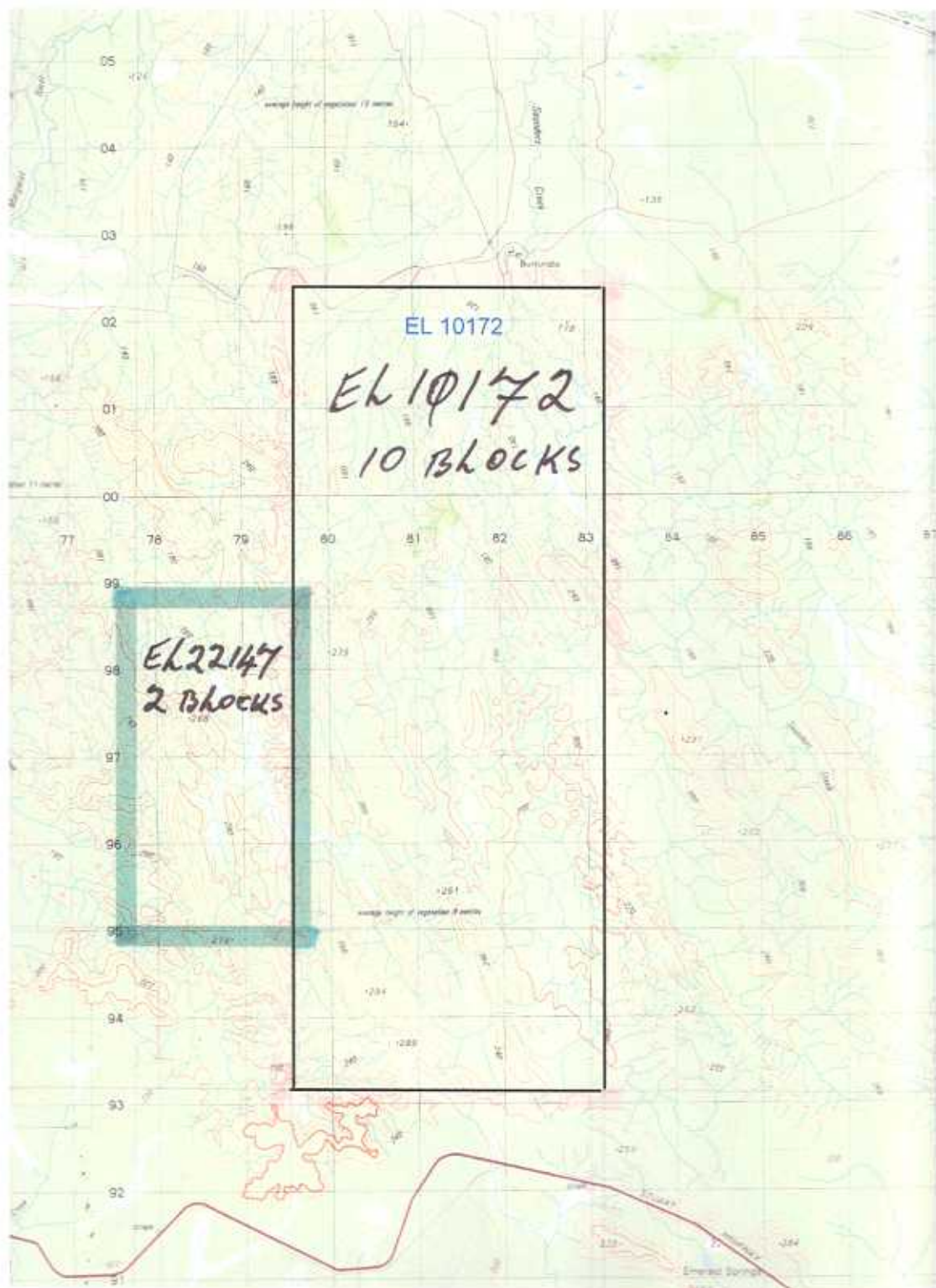
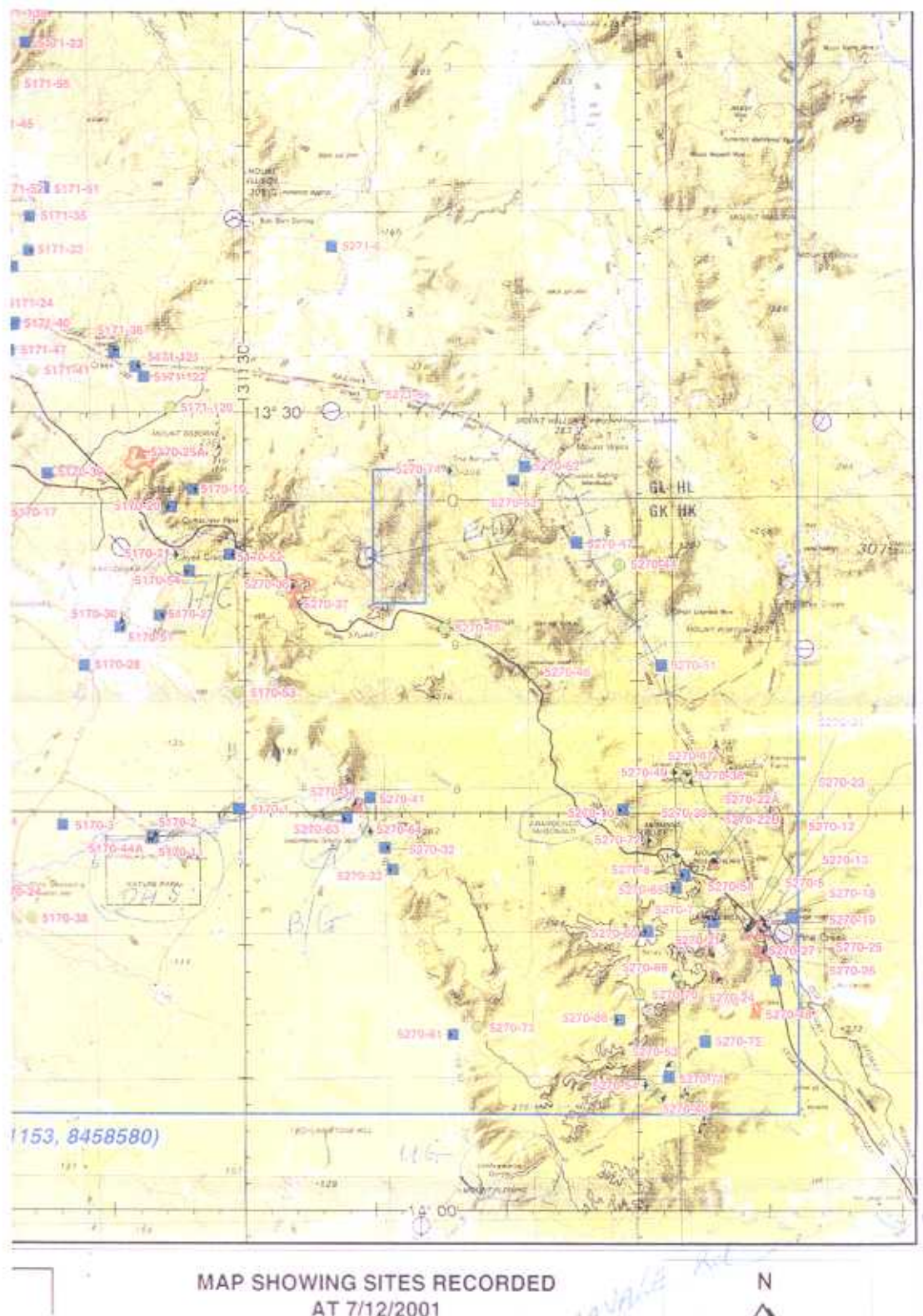


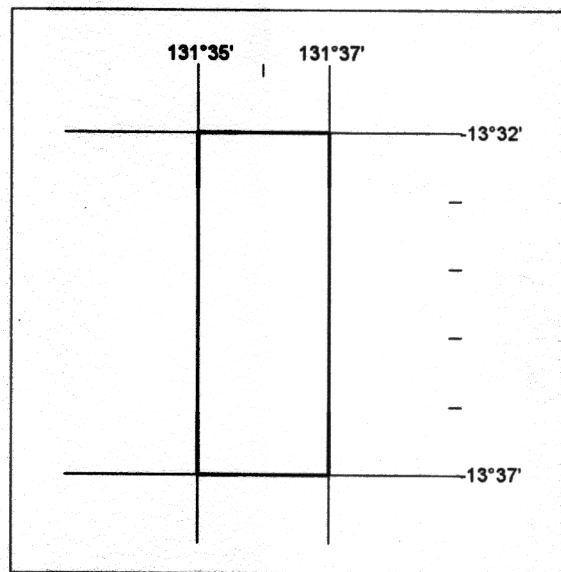
Figure 2 Recorded Cultural Features and Sites.





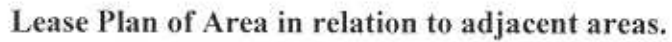
**Figure 3      Lease Plan of Area.**

Third Schedule  
(Plan of Area)



**EL10172**  
**10 Blocks**  
**33.39 sq kms**

Figure 4



## 6.0 2003/04 EXPENDITURE

Expenditure on EL 10172 during the 2003/04 year of tenure totaled \$11,770.25. Details of this expenditure are listed as Table 1.

Table 1

Cost Items	Amount
Aerial Photographs	\$ 500.00
Library Research	\$1,000.00
Field Survey Costs	\$3,000.00
Report Compilation	\$ 150.00
Tenement Management	\$ 100.00
Data Review	\$
Photocopying	\$ 50.00
Stationary and Office Expenses	\$ 185.00
Computing	\$ 250.00
Motor Vehicle Expenses and Fuel	\$1,200.00
Wages	\$3,800.00
Subtotal	\$10,235.00
Administration @15%	\$ 1,535.25
Total	\$11,770.25

## 6.0 REFERENCES

HARDY, A. L. (1994) EL 7754, Annual Exploration Report to July 1994. Northern Territory Department of Mines, Open File Report.

HARDY, A. L. (1995) EL 7754 (including MCN's 117, 118, 119), Annual Exploration Report to July 1994. Northern Territory Department of Mines, Open File Report.

HOLDEN, D. (1989) Annual Report for Calvert River Manganese Pty. Ltd. EL 5006-Emerald Springs East Pine Creek Area, NT. Northern Territory Department of Mines, Open File Report.

SOCIĆ, N. (1996). EL 7754 (including MCN's 117, 118, 119), Annual Report to 2<sup>nd</sup> July 1996.

Sincerely



Bob Stroud