



EL 26035 DOUGLAS HOT SPRINGS NT

**ANNUAL REPORT FOR THE SECOND YEAR
OF EXPLORATION ENDING 4TH SEPTEMBER 2009**

Report prepared for Outback Metals Limited

By

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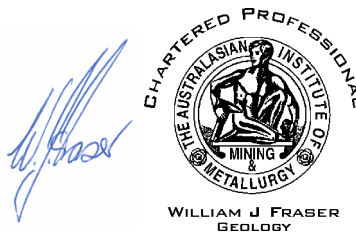
The potential geological and geophysical situations, the opinions, interpretations and estimates contained in this report are speculative and high risk.

1:100 000 Geological Map Series

TIPPERARY 5170

1:250 000 Geological Map Series

PINE CREEK SD5208



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1. EXECUTIVE SUMMARY

During the second year of exploration Outback Metals examined the previous exploration reports in more detail and carried out modelling of the existing airborne geophysical data. Further work was delayed until the results of the GA AEM survey became available in September 2009.

A detailed interpretation of the GA AEM data may confirm the presence of paleo-drainages and permeable sandstone horizons in the Cambrian sediments. Following that potential targets should be investigated by drilling.

The south western, relinquished portion of the EL is considered to have no immediate exploration potential

2. INTRODUCTION

EL 26035 of 41 sub-blocks was first granted to Corporate Developments Pty Ltd on 5th September 2007. Preparatory to the ASX listing Outback Metals Limited (OUM) made an outright purchase of Corporate Developments.

At the end of the second year the EL was reduced to 23 sub-blocks as shown in Fig 1.

The EL is located about 155km south east of Darwin between the Douglas River and Hayes Creek drainages in rolling hill country used for cattle grazing on TIPPERARY 1:100 000 scale map sheet. (Figs 1 to 2 refer). The relinquished portion of the EL is an NT Conservation Reserve..

Previous exploration was carried out by:

- IMC 1976-77 on EL 1322 for uranium
- CRA Exploration 1979-80 on EL 1743 for base metals
- Northern Cement 1979-81 on EL 1748 for limestone suitable for cement manufacture
- Adelaide Brighton Cement 1981-82 on EL 2052 for limestone suitable for cement manufacture
- Newmont 1988-90 on EL 5767 for gold
- Mount Grace Resources 2000-03 on EL 10422 for limestone flux for magnesium smelting

There are no mineral occurrences within the EL as listed in the NTGS MODAT database.

During the second year of tenure OUM carried out a review of the historical exploration, geological and geophysical interpretation of the data available in the various NTGS databases and downloaded the September release of relevant data from the completed 2009 Geoscience Australia Airborne Electromagnetic Survey (GA AEM), Rum Jungle portion. The mineral commodities considered were uranium and base metals.

3. GEOLOGY

In 1987-88 NTGS carried out field geological mapping and airphoto interpretation of TIPPERARY 1:100 000 scale geological map sheet (Kruse et al, 1990). The published map (refer to the portion shown on Fig 3) shows that the EL comprises scattered outcrops of the Middle-Upper Cambrian Tindall Limestone of the Daly River Group. The remainder of the EL has extensive cover of Quaternary and Cainozoic sediments with occasional outcrop of silicified Cretaceous claystones.

The unconformable contact between the Daly River Group and the Paleoproterozoic metasediments of the Pine Creek Orogen lies only a few kilometres to the north west.

4. AIRBORNE GEOPHYSICS

4.1 NTGS Magnetism

There are no prominent magnetic dipoles on the EL or the relinquished portion. However there are two zones of “worm-like” traces which may be caused by paleo-relief or paleo-drainages at the Cambrian-Paleoproterozoic unconformity (Fig 4). In filtering the TMI using the first vertical derivative (1VD) this interpretation is confirmed and it highlights the paleo-drainages and also what might be paleo-sand dune ridges.

4.2 NTGS Radiometrics

There are no moderate to strong total count radiometric anomalies and the few anomalies and trends of lesser magnitude that are present are probably caused by present day drainages and outcrops of silicified Cretaceous claystones.

In examining the eU radiometric image a similar pattern is observed but it is very unlikely that there is any correlation with features visible on the 1VD magnetic image Fig 5.

4.3 2009 Geoscience Australia Airborne Electromagnetic Survey (GA AEM)

During September the 2009 raw and processed AEM data became available from the GA Rum Jungle survey. There are eight relevant flight lines spaced about 1.75km apart which cover EL 26035 (Fig 8 refers). The data pertaining to the retained portion of the EL are presently being interpreted.

5. EXPLORATION POTENTIAL

The paleo-drainages at the base of the Cambrian may have potential to host sandstone style uranium mineralisation.

6. CONCLUSIONS AND RECOMMENDATIONS

A detailed interpretation of the GA AEM data may confirm the presence of paleo-drainages and permeable sandstone horizons in the Cambrian sediments. Following that potential targets should be investigated by drilling.

7. REFERENCES

Kruse PD, Whitehead BR and Mulder CA 1990. TIPPERARY 5170 1:100 000 Geological Map and Explanatory Notes. NT Department of Mines And Energy, Darwin.

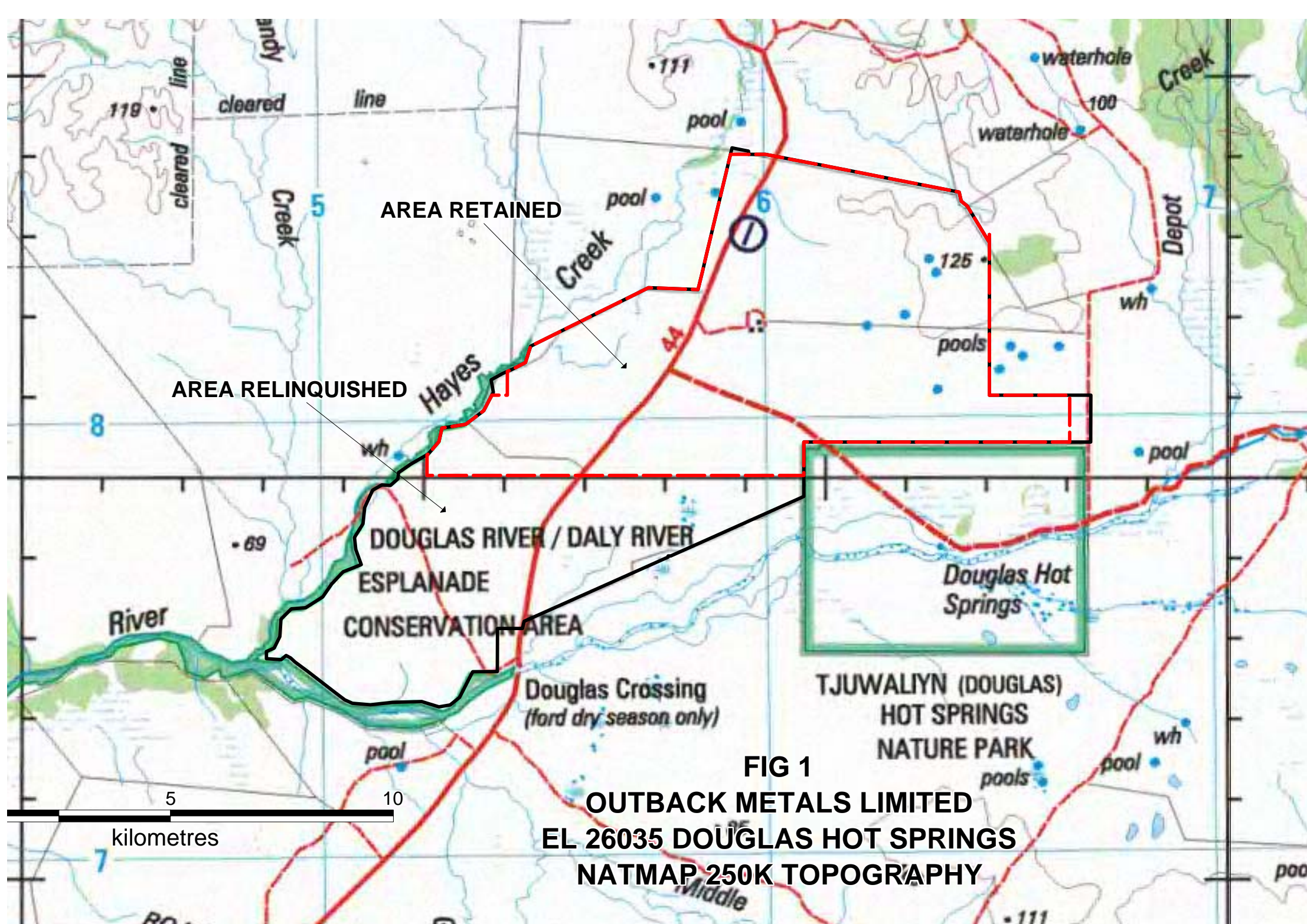


FIG 1
OUTBACK METALS LIMITED
EL 26035 DOUGLAS HOT SPRINGS
NATMAP 250K TOPOGRAPHY

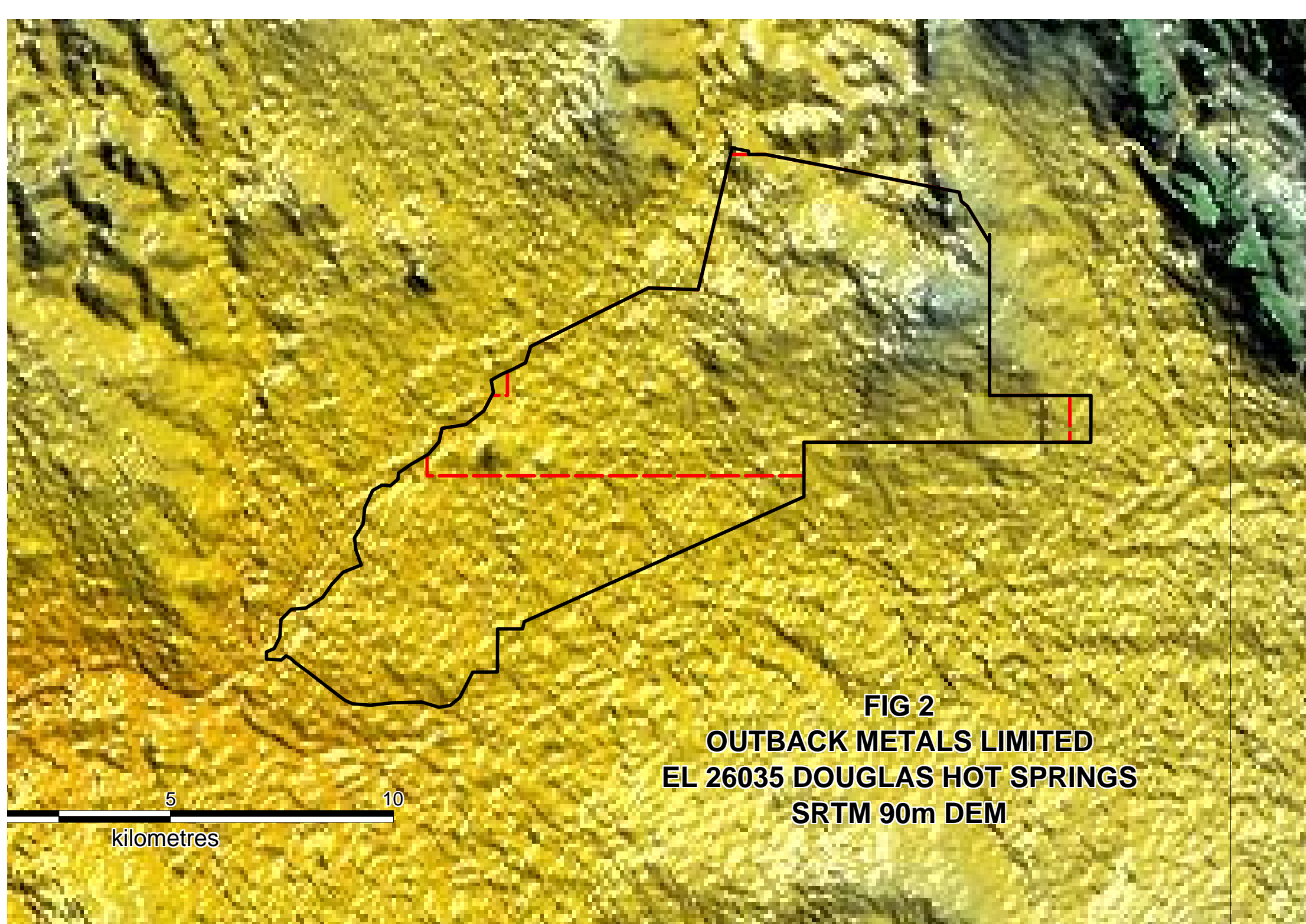
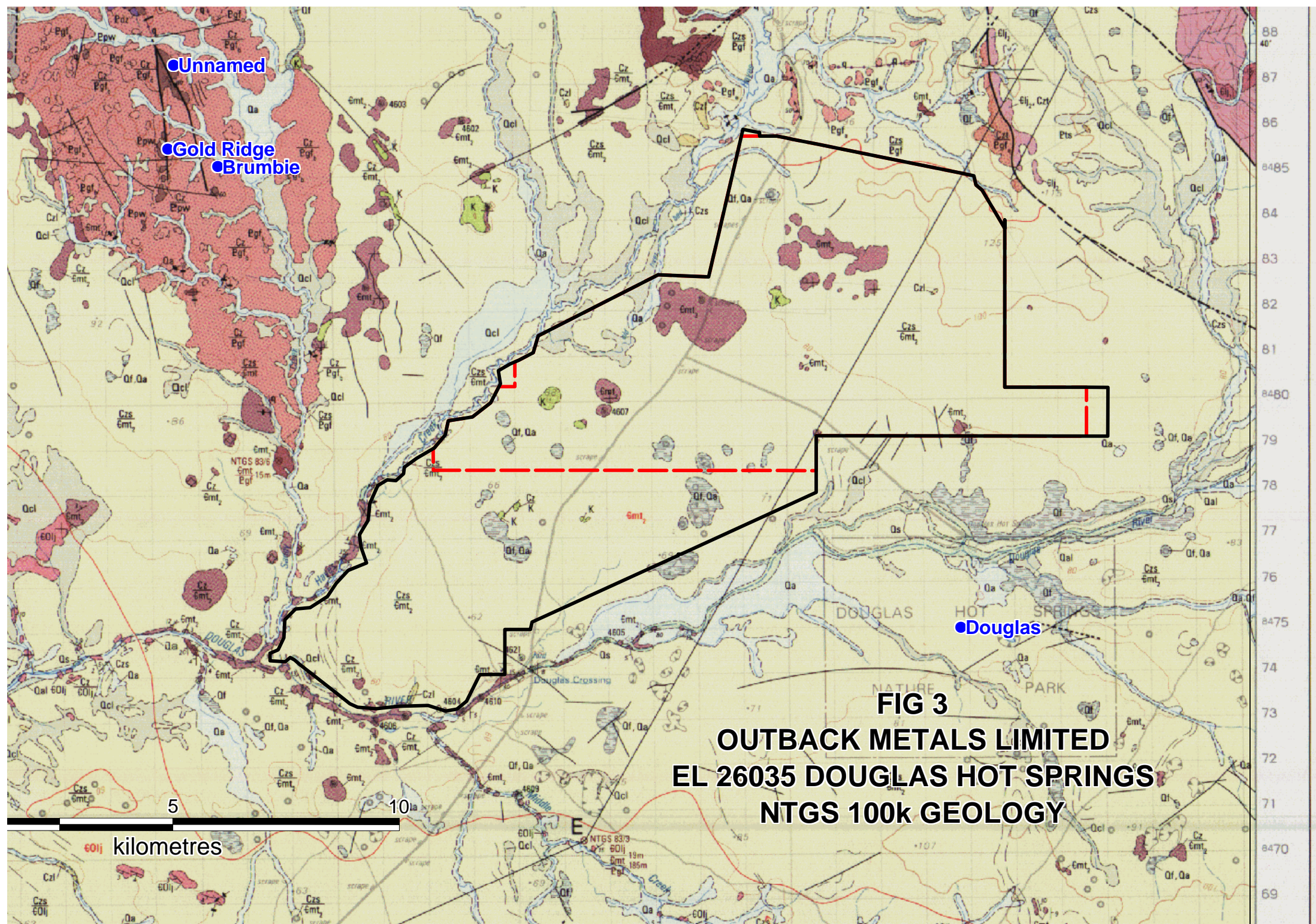
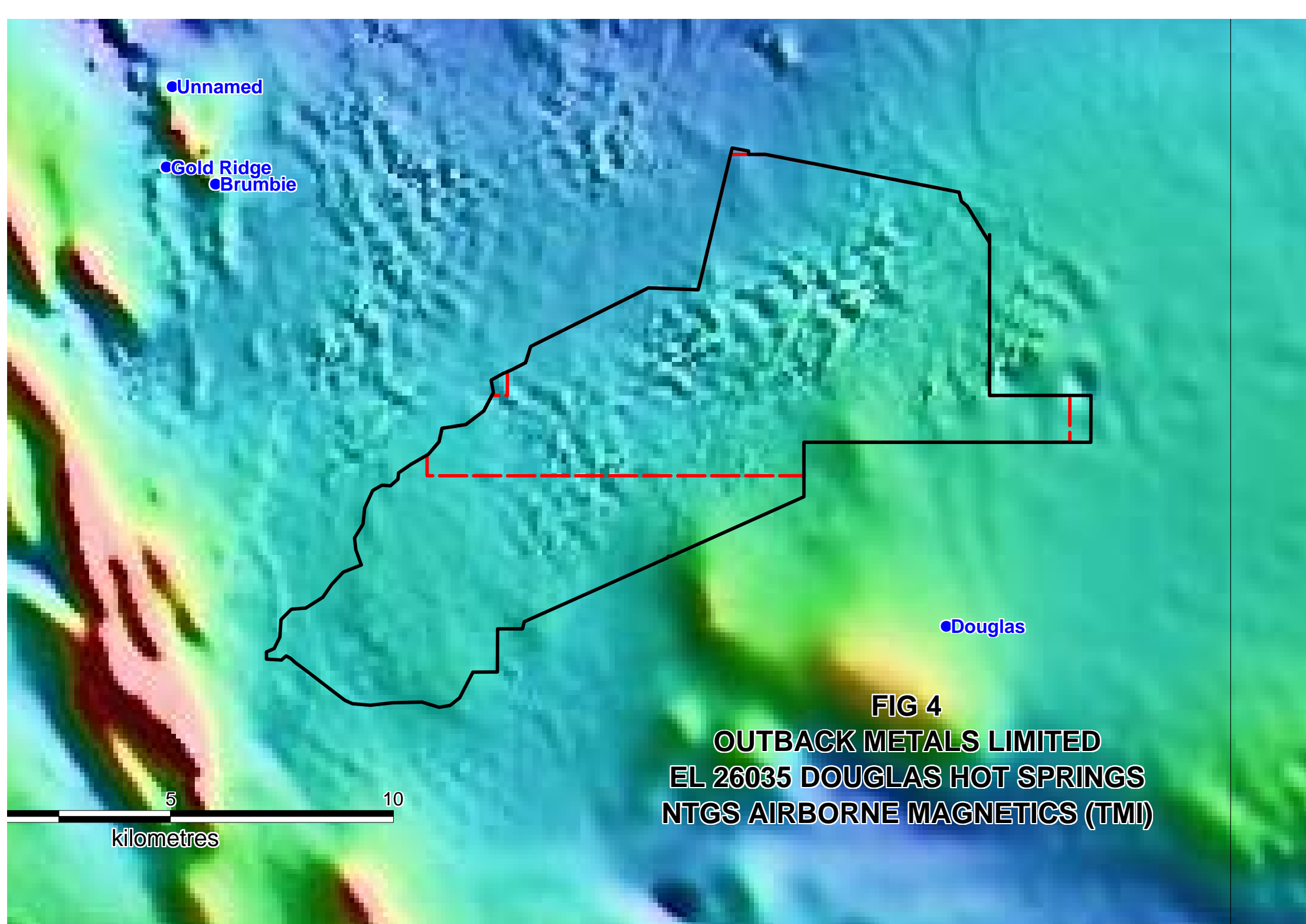


FIG 2
OUTBACK METALS LIMITED
EL 26035 DOUGLAS HOT SPRINGS
SRTM 90m DEM





●Unnamed

●Gold Ridge
●Brumby

●Douglas

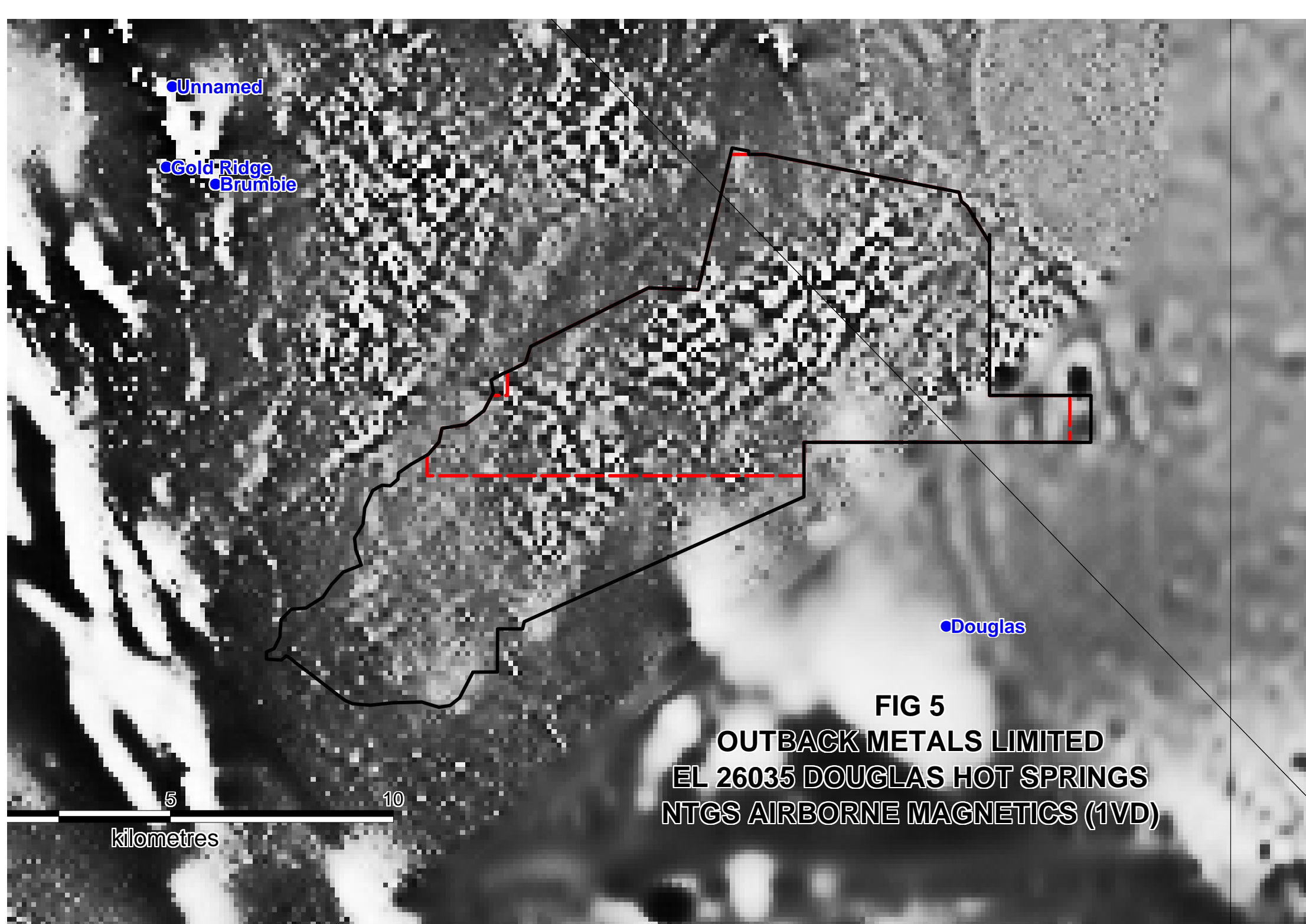
FIG 4

**OUTBACK METALS LIMITED
EL 26035 DOUGLAS HOT SPRINGS
NTGS AIRBORNE MAGNETICS (TMI)**

5

10

kilometres



●Unnamed

●Gold Ridge

●Brumby

●Douglas

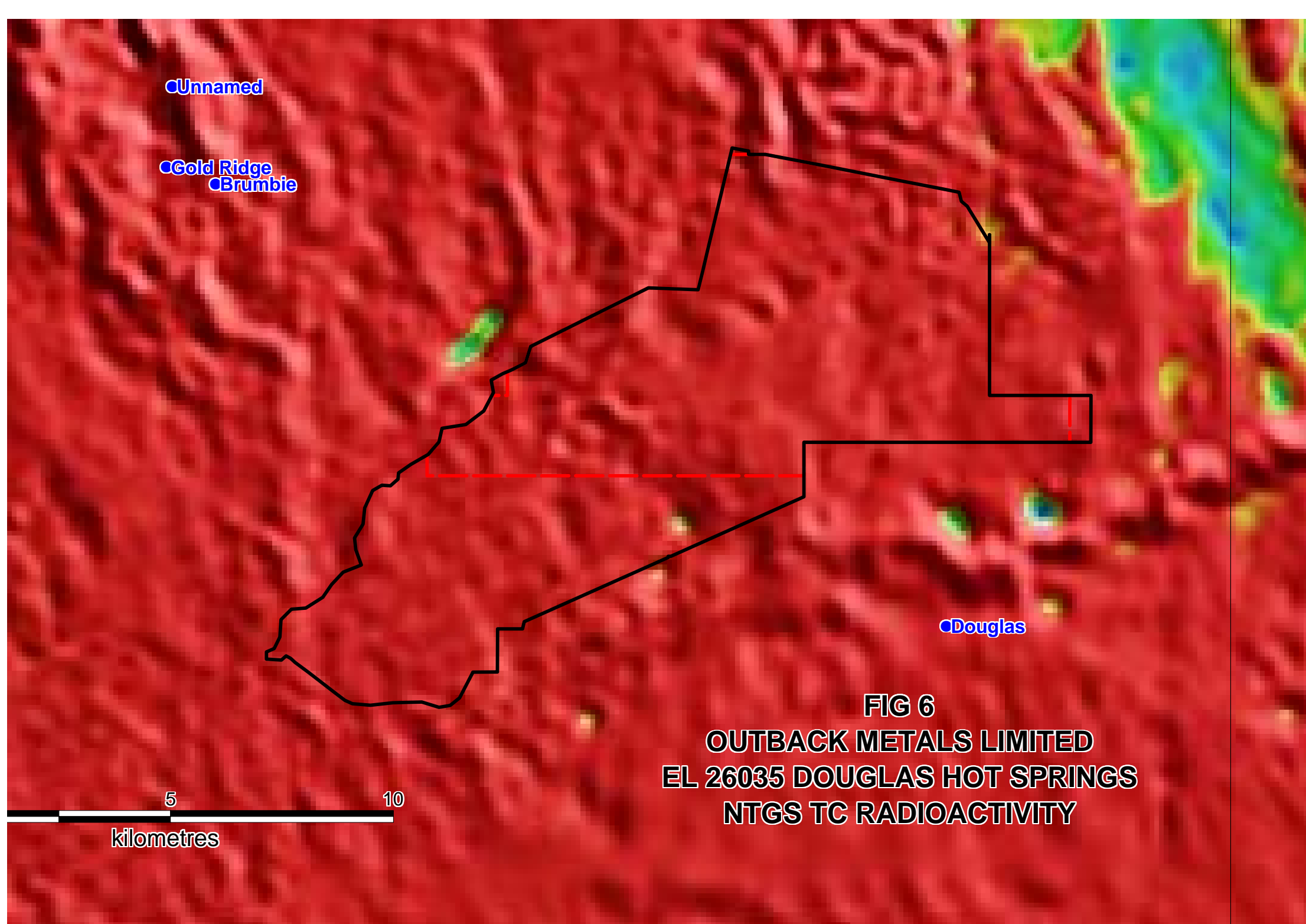
FIG 5

**OUTBACK METALS LIMITED
EL 26035 DOUGLAS HOT SPRINGS
NTGS AIRBORNE MAGNETICS (1VD)**

5

10

kilometres



● Unnamed

● Gold Ridge
● Brumby

● Douglas

FIG 6
OUTBACK METALS LIMITED
EL 26035 DOUGLAS HOT SPRINGS
NTGS TC RADIOACTIVITY

5

10

kilometres

• Unnamed

• Gold Ridge
• Brumby

• Douglas

5

10

kilometres

FIG 7
OUTBACK METALS LIMITED
EL 26035 DOUGLAS HOT SPRINGS
NTGS eU RADIOACTIVITY

