



SANDFIRE RESOURCES NL

**ANNUAL MINERAL EXPLORATION REPORT
BORROLOOLA PROJECT MLN624
TENEMENT HOLDER: SANDFIRE RESOURCES NL
OPERATOR: SANDFIRE RESOURCES NL
REPORTING PERIOD: 1 JANUARY TO 31 DECEMBER 2009**

8 April 2010

1:250,000: MOUNT YOUNG (SD53-15)

1:100,000: Tawallah Range (6066)

Target Commodity: Cu

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TITLE PAGE

Project Name	Borroloola Project
Report Number	2010NT02
Tenement Numbers	MLN624
Tenement Operator	Sandfire Resources NL
Tenement Holder	Sandfire Resources NL
Report Type	Annual
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Target Commodity	Cu
Keywords	Nil Activity
Tenement Manager	Cristel Woelful Senior Tenement Consultant Australian Mining & Exploration Title Services PO Box 2495 PARAP NT 0804. T: 08 8981 8322 F: 08 8981 8344
Contact Details	Allan Wynne Office Administrator Sandfire Resources NL PO Box 1495 WEST PERTH WA 6872
Email for technical details	aw@sandfire.com.au
Email for expenditure	aw@sandfire.com.au

ABSTRACT

Location	Gordon's Prospect north-west of Borroloola, NT
Geology	Middle Proterozoic sediments of the McArthur and Roper Groups of the McArthur Basin, and Cretaceous and Tertiary cover sediments.
Work done	Nil Field Activity; desktop interpretation of the Airborne VTEM geophysical survey.
Prospects drilled	
List of Assays	

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Summary

MLN624 makes up part of Sandfire Resources's Borroloola Project, currently 18 tenements, which cover approximately 13,000 sq km (Figure 1).

Exploration on MLN624 continues an integrated exploration program for base metals along the Coppermine Creek Fault Zone which began in 2004 on EL10121, and continues on current SEL26938.

Following tenement acquisition in 2004, geological mapping and research of historical exploration were carried out prior to a ground IP survey and drilling. RC / diamond drill hole BRCD1, completed in September 2004, intersected copper sulphide mineralisation along a steeply dipping structure within units of the Proterozoic McArthur Group sequence (Vieru, 2004, and Vieru, Roberts and Wynne, 2005). An infill ground IP was carried out during 2006 (Vieru and. Algie, 2007).

Integration and re-interpretation of prior airborne Magnetic – Radiometric and EM surveys over the McArthur Basin sequence within the Borroloola Project tenement area was completed during 2007 (Lauricella and Algie, 2008).

Orthophotos derived from the aerial photography acquired and processed during 2008, (Wynne, Lewis and Algie, 2009), are included as Appendix 1 to the 2009 Combined Annual and Surrender Report C068/09 (Algie, et.al., 2009). Interpretation by CSIRO of the helicopter borne versatile time domain electromagnetic (VTEM) survey, which was flown along the Coppermine Creek Fault Zone in July and August 2008, is included in Appendix E of the same report.

Forty-five trays of diamond cored interval in BRCD1 between 132.00m and 405.20m were notified and offered to the NTGS Core Library, Darwin in 2008. These trays were not accepted so were subsequently transported to Sandfire Resources's Katherine storage shed in November 2008.

No field activities were undertaken on MLN624 during the period from 1 January to 31 December 2009. Desktop based interpretation of the Airborne VTEM geophysical survey, and tenement statutory reporting, were carried out. The annual expenditure Report for the reporting period 1 January to 31 December 2009 is included as Appendix 1.

Exploration Activity	MLN624
VTEM Survey	Project scale desktop interpretation

Table 1 Exploration Activities

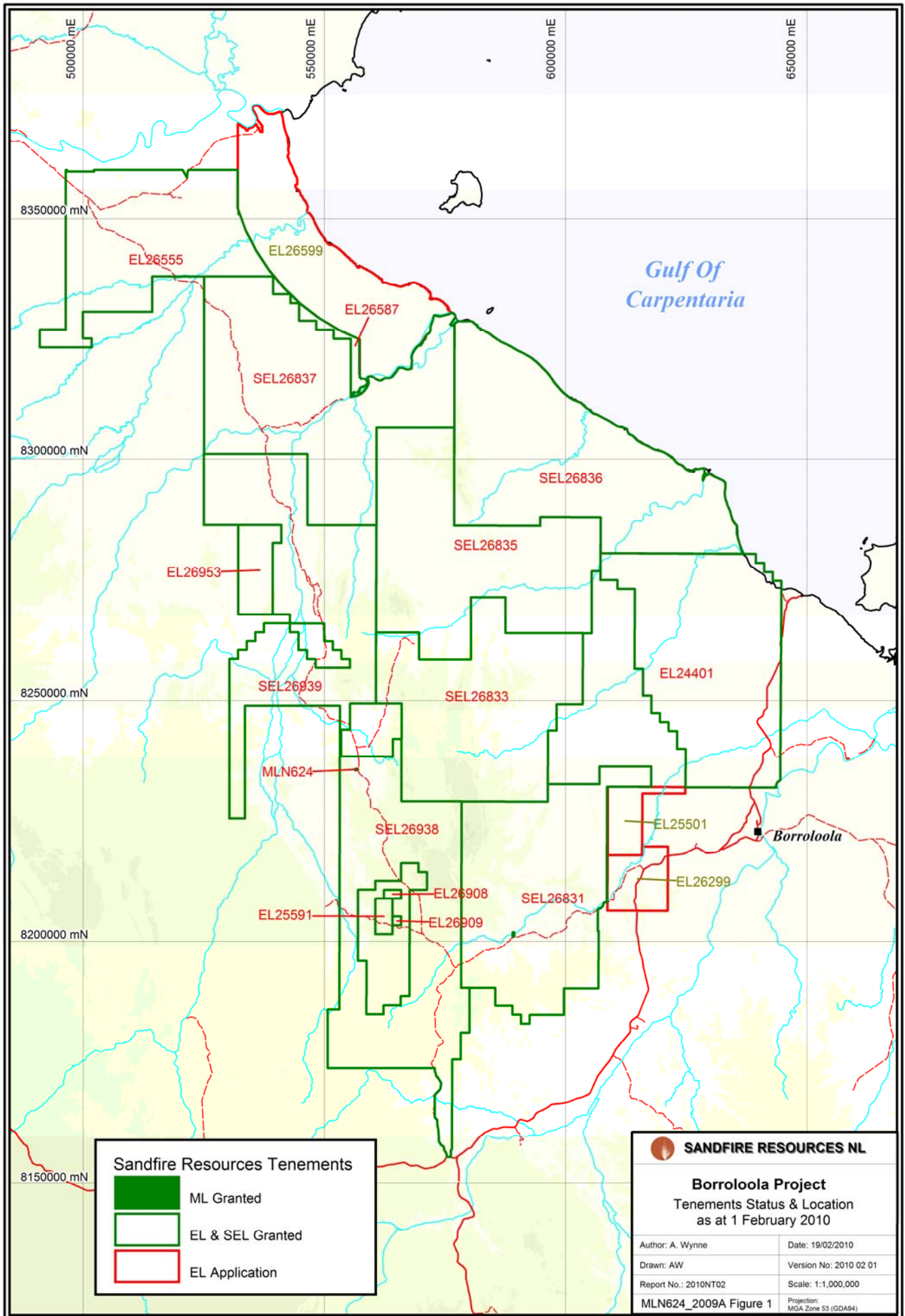


Figure 1. Tenement Location

1 Location

MLN624 covers the Gordons Copper Prospect and is located about 660 km southeast of Darwin, 85 km west of Borroloola and 100 km north of Cape Crawford in the Gulf Country of the Northern Territory (Figure 1).

Access from Darwin is by travelling about 590 km southwards along the Stuart Highway to Daly Waters and then eastwards along Carpentaria Highway to Cape Crawford (270 km). The unsealed Roper Bar Road crosses the tenement area approximately 100 km north of Cape Crawford, and continues north and west to Katherine, providing an alternate access route during the dry season.

2 Tenure

Mineral Lease MLN624 was granted on 4th August 1971. In accordance with a sale agreement of 18th November 2003, title was transferred from Robert Michael Biddlecombe to Sandfire Resources NL on 16th April 2004 (Dealing No. 91953). Successful applications have been made for renewal: 22nd March 2002 for 5 years to 31st December 2006, and 9th May 2007 for a further 25 years until 31st December 2031.

3 Cadastre and Native Title

MLN624 lies within the Perpetual Pastoral Lease PPL1069 [BILLENGARAH], held by the NT Land Corporation.

With respect to exploration activities including grading of access tracks and test drilling, Authority Certificate 48146 from the Aboriginal Areas Protection Authority was granted on 30 September 2004.

4 References

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Lauricella, P., and Algie, C., 2008 Annual Report MLN624 Borrooloola Project McArthur Basin, NT Reporting Period 31 December 2006 to 31 December 2007 Sandfire Resources NL Report No. 2008NT01

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Vieru, C. and Algie, C., 2007 Annual Report MLN624 Borrooloola Project McArthur Basin, NT Sandfire Resources NL Reporting Period 31 December 2005 to 31 December 2006 Report No. 2007NT01

Wynne, A., Lewis, T., Hansen, A., and Algie, C. 2009 Annual Mineral Exploration Report Borrooloola Project MLN624 Reporting Period: 1 January to 31 December 2008 Sandfire Resources NL Report No. 2009NT01

Appendix 1

MLN624 Expenditure Report 1 January to 31 December 2009