

# **Open File Envelope**

## **No. 11,951**

**EL 4202**

**PINDA**

### **ANNUAL REPORTS AND FINAL REPORT TO LICENCE EXPIRY/SURRENDER, FOR THE PERIOD 10/11/2008 TO 9/11/2012**

Submitted by  
Archer Exploration Ltd  
2012

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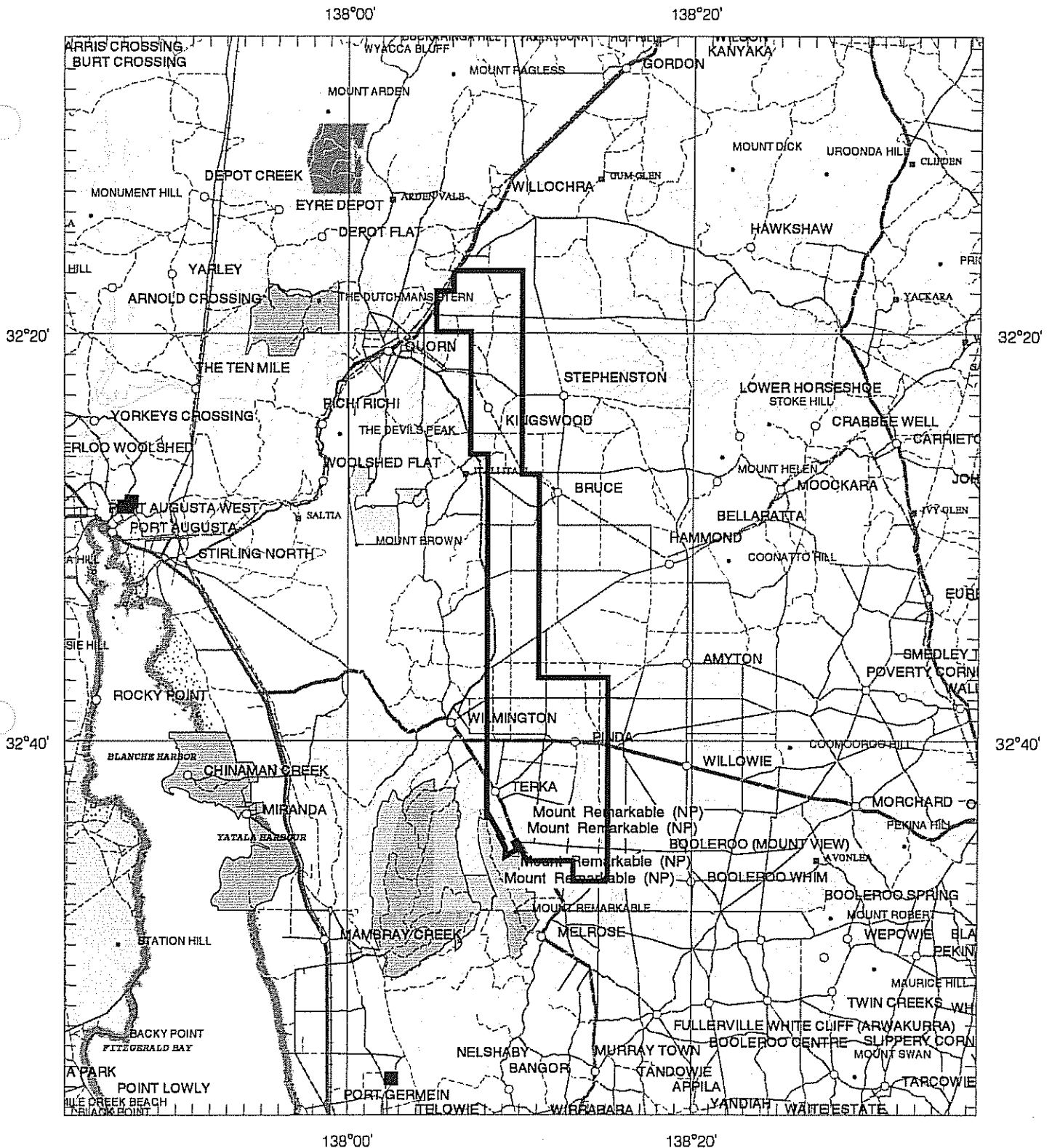
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**Government of South Australia**

Department for Manufacturing,  
Innovation, Trade, Resources and Energy

# SCHEDULE A



APPLICANT : **PIRIE RESOURCES PTY LTD**

FILE REF : **115/08**

TYPE : **MINERAL ONLY**

AREA : **367 km<sup>2</sup> (approx.)**

1:250000 MAPSHEETS : **ORROROO**

LOCALITY : **PINDA AREA - Approximately 35 km east of Port Augusta**

DATE GRANTED : **10-Nov-2008**

DATE EXPIRED : **09-Nov-2009**

EL NO : **4202**



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# Annual Technical Report For the period ending 9<sup>th</sup> November 2009

EL 4202 Pinda

Pirie Resources Pty Ltd  
Archer Exploration Limited

By W. Bollenhagen  
Archer Exploration Ltd

## Bibliographic Data

<b>Report Title</b>	Annual Report for Exploration Licence 4202 'Pinda' for the period 10 November 2008 to 9 November 2009
<b>Project Name</b>	Pinda
<b>Tenement Number</b>	EL 4202 'Pinda'
<b>Tenement Holder</b>	Pirie Resources Pty Ltd (wholly owned by Archer Exploration Limited)
<b>Operator</b>	Archer Exploration Limited
<b>Commodities</b>	Au, Cu
<b>Tectonic Unit</b>	Adelaide Geosyncline
<b>Stratigraphic Units</b>	
<b>1:250,000 Map Sheet</b>	SI 54-1 Orroroo
<b>1:100,000 Map Sheets</b>	6533 Quorn, 6532 Wilmington
<b>Keywords</b>	Transported Cover, magnetic interpretation

## SUMMARY

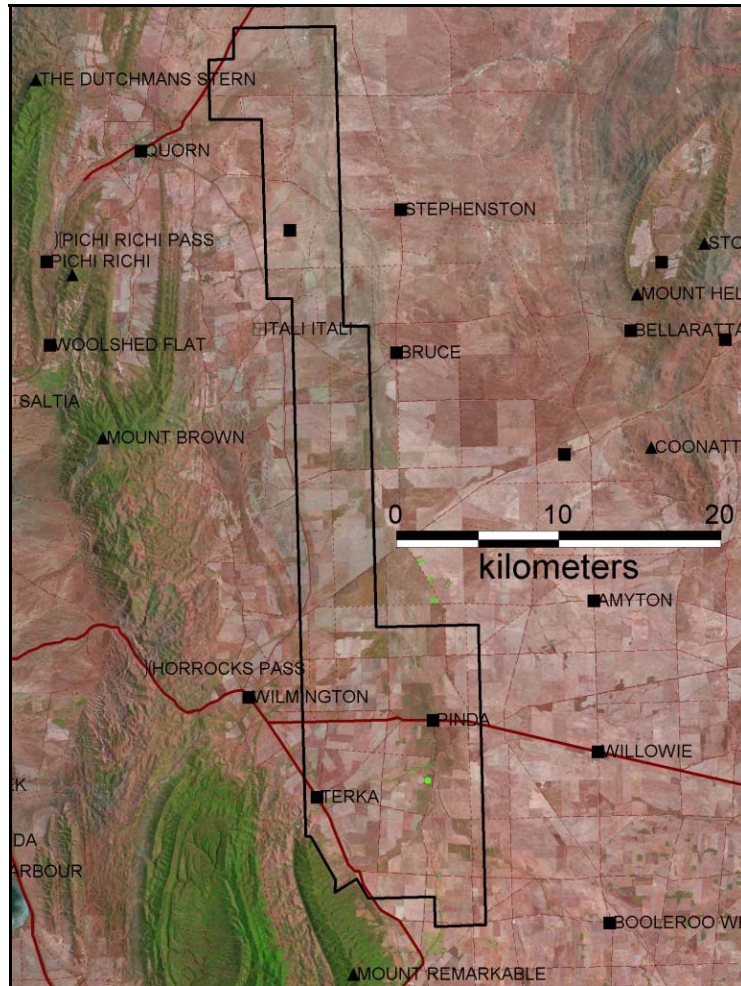
Exploration Licence 4202 'Pinda', held by Archer Exploration Limited (Archer) is located on the southern end of the Flinders Ranges, which lies on the eastern margin of the Gawler Craton.

Exploration has been limited over the year, to date activities have primarily been focussed on interpretation of reprocessed available magnetic data. Field work was limited to reconnaissance work to determine if the basement outcrops at any shallow position within creek systems. To date none was found and cover is anticipated to be thick.

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## Introduction

EL 4202 'Pinda' is located at over the township of Pinda in the Southern Flinders Ranges, approximately 40km East of Pt August (Figure 1). This report details exploration work completed by Archer Exploration between the 10<sup>th</sup> November 2008 and 9<sup>th</sup> November 2009.



**Figure 1: Location Map**

The tenement has not been explored in detail for any mineral commodity, a couple of stream samples taken by Cauldera Resources in 1995 are the only known samples taken.

Archer believes that potential economic gold and copper mineralisation lies at considerable depth below the cover.

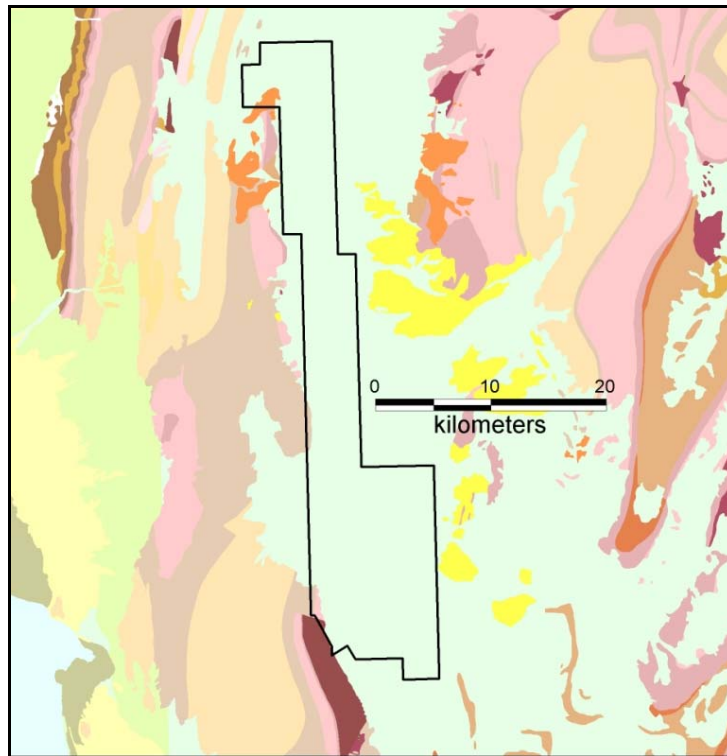
## 1 Tenure

EL 4202 'Pinda' covering 367 square kilometres was granted to Pirie Resources (a wholly owned subsidiary of Archer Exploration) on 10 November 2008 for a term of 1 year. A submission for renewal was lodged in October 2008.

Archer Exploration listed on the Australian Stock Exchange on 14 August 2007.

## 2 Geology

EL 4202 'Pinda' lies in the Adelaide Fold Belt, on the Eastern margin of the Gawler Craton (Figure 2).



**Figure 2: Geology Map (PIRSA).**

The presence of thick cover (+50m) makes geochemical exploration unviable as an exploration method for anomaly detection. Geophysics becomes the dominant technique for anomaly determination. This has been Archer's focus for the year.



## 3 Work Completed

### 3.1 Geophysics

Data collected in the previous reporting period were modelled for Archer and a number of images created after merging with regional data sets. The final data highlighted the strong magnetic responses from certain units. A number of these were determined as worthy of follow up drilling. Figure 3 below is one image generated from modelling.

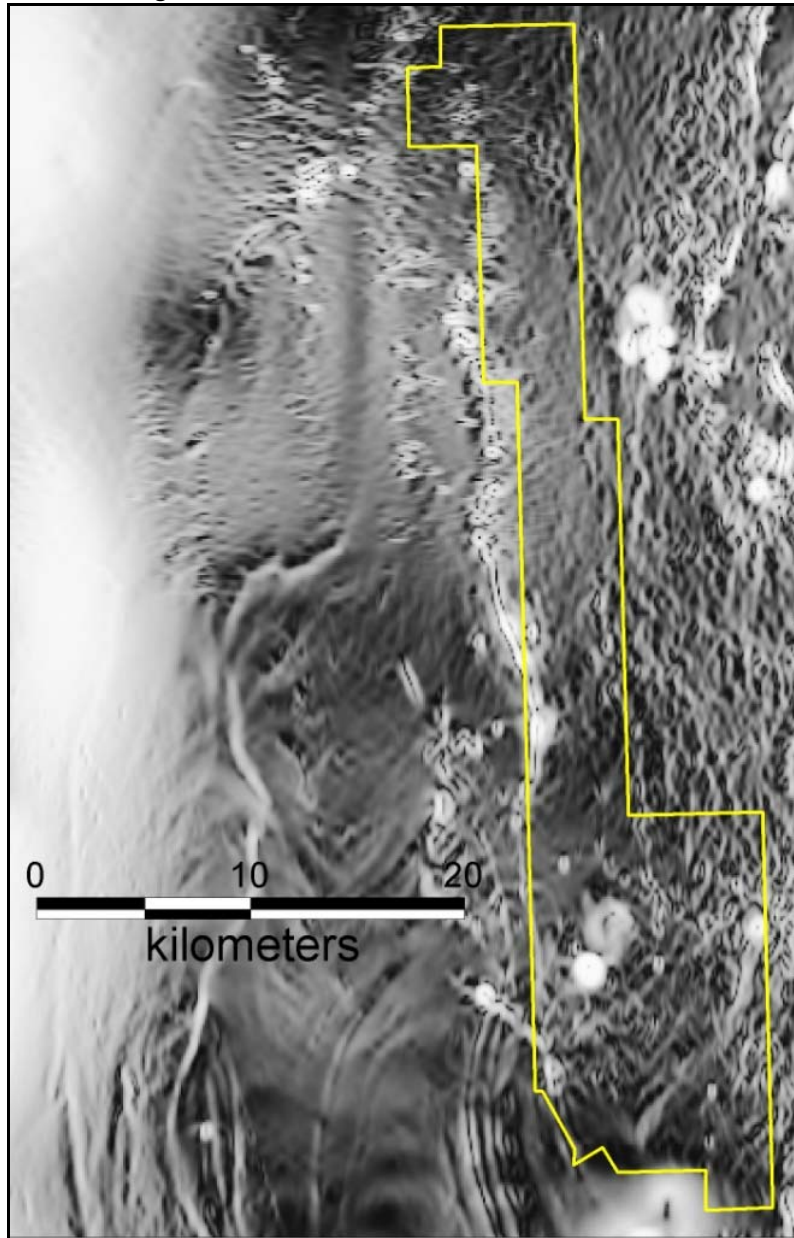


Figure 3: Magnetic image of EL 3711, with historical drill holes shown.



A suture exists on the western edge of the tenement, which may be a host to an economic deposit at depth, however a large part of this system lies outside of the tenement..

In the southern part of the tenement a number of circular magnetic highs exist, these are possible mafic intrusives. A gravity survey is necessary for improved understanding of mineral potential. Because of the density of property in the area, Archer has decided to wait till an appropriate Airborne technique becomes available. The cheapest available in SA has a BHP caveat over it until April 2010, after which it becomes free for other companies to use.

## **4 Environment**

No ground disturbing activities were performed during the period.



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# Annual Technical Report For the period ending 9<sup>th</sup> November 2010

EL 4202 Pinda

Pirie Resources Pty Ltd  
Archer Exploration Limited

By W. Bollenhagen  
Archer Exploration Ltd

## Bibliographic Data

<b>Report Title</b>	Annual Report for Exploration Licence 4202 'Pinda' for the period 10 November 2009 to 9 November 2010
<b>Project Name</b>	Pinda
<b>Tenement Number</b>	EL 4202 'Pinda'
<b>Tenement Holder</b>	Pirie Resources Pty Ltd (wholly owned by Archer Exploration Limited)
<b>Operator</b>	Archer Exploration Limited
<b>Commodities</b>	Au, Cu
<b>Tectonic Unit</b>	Adelaide Geosyncline
<b>Stratigraphic Units</b>	
<b>1:250,000 Map Sheet</b>	SI 54-1 Orroroo
<b>1:100,000 Map Sheets</b>	6533 Quorn, 6532 Wilmington
<b>Keywords</b>	Transported Cover, magnetic interpretation

## SUMMARY

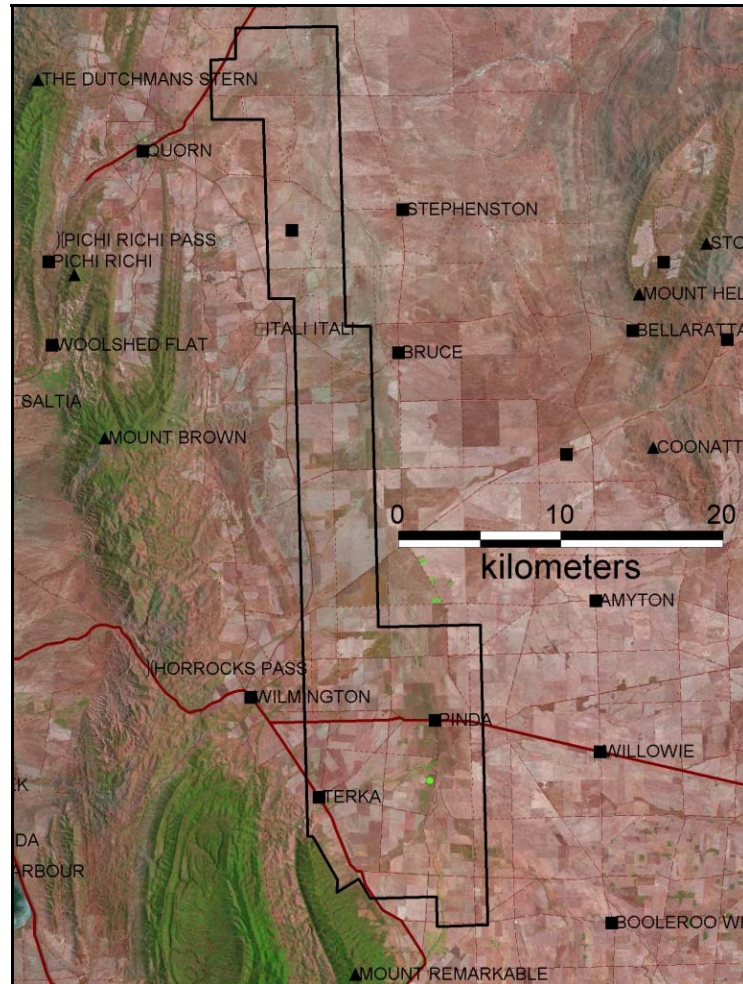
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Exploration has been limited over the period; activities have primarily been focussed on interpretation of reprocessed available magnetic data. Field work was limited to reconnaissance work to determine if the basement outcrops at any shallow position within creek systems.

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## Introduction

EL 4202 'Pinda' is located at over the township of Pinda in the Southern Flinders Ranges, approximately 40km East of Pt August (Figure 1). This report details exploration work completed by Archer Exploration between the 10<sup>th</sup> November 2009 and 9<sup>th</sup> November 2010.



**Figure 1: Location Map**

The tenement has not been explored in detail for any mineral commodity, a couple of stream samples taken by Cauldera Resources in 1995 are the only known samples taken.

Archer believes that potential economic gold and copper mineralisation lies at considerable depth below the cover adjacent to the Mt Remarkable National Park.

## 1 Tenure

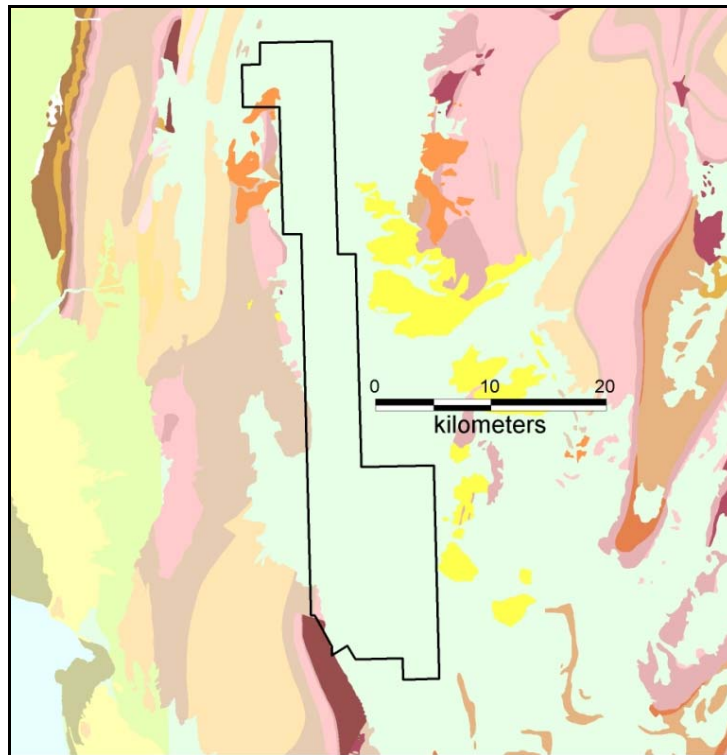
EL 4202 'Pinda' covering 367 square kilometres was granted to Pirie Resources (a wholly owned subsidiary of Archer Exploration Ltd) on 10 November 2008 for a term of 3 years.

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Archer Exploration listed on the Australian Stock Exchange on 14 August 2007.

## 2 Geology

EL 4202 'Pinda' lies in the Adelaide Fold Belt, on the Eastern margin of the Gawler Craton (Figure 2).



**Figure 2: Geology Map (PIRSA).**

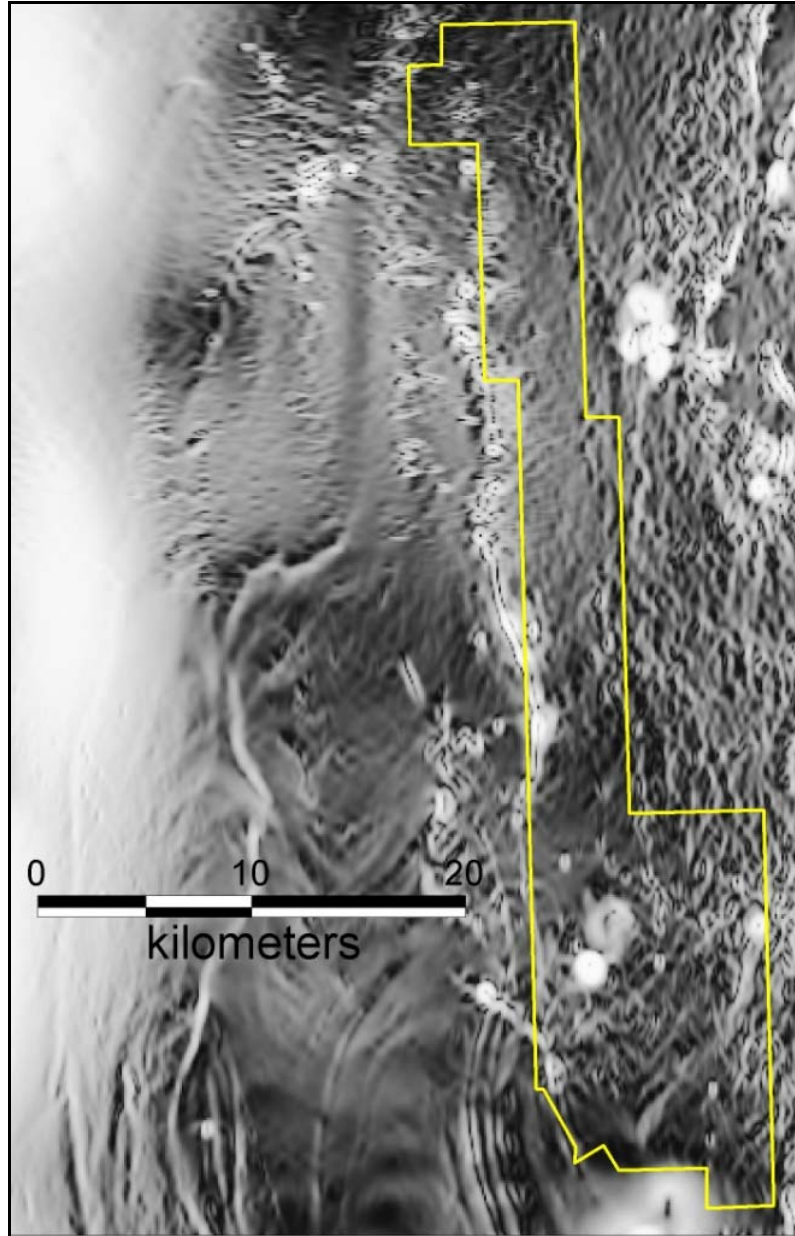
The presence of thick cover (+50m) makes geochemical exploration unviable as an exploration method for anomaly detection. Geophysics becomes the dominant technique for anomaly determination.

The strategy to move forward with many landowners at once to perform the geophysical surveys has been the most difficult, as an aerial survey is the most pragmatic way of reducing interference with the landowners.

## 3 Work Completed

### 3.1 Geophysics

Data collected in the previous reporting period were modelled for Archer and a number of images created after merging with regional data sets. The final data highlighted the strong magnetic responses from certain units. A number of these were determined as worthy of follow up drilling. Figure 3 below is one image generated from modelling.



**Figure 3: Magnetic image of EL 3711, with historical drill holes shown.**

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In the southern part of the tenement a number of circular magnetic highs exist, these are possible mafic intrusives. The caveat has been removed from the Falcon airborne gravity technique and hence has been



heavily booked by explorers wishing to take advantage of the system. As such the contractor has not been available to quote on the project.

## **4 Environment**

No ground disturbing activities were performed during the period.



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# Annual Technical Report For the period ending 9<sup>th</sup> November 2011

EL 4202 Pinda

Pirie Resources Pty Ltd  
Archer Exploration Limited

By W. Bollenhagen  
Archer Exploration Ltd

## Bibliographic Data

<b>Report Title</b>	Annual Report for Exploration Licence 4202 'Pinda' for the period 10 November 2010 to 9 November 2011
<b>Project Name</b>	Pinda
<b>Tenement Number</b>	EL 4202 'Pinda'
<b>Tenement Holder</b>	Pirie Resources Pty Ltd (wholly owned by Archer Exploration Limited)
<b>Operator</b>	Archer Exploration Limited
<b>Commodities</b>	Au, Cu
<b>Tectonic Unit</b>	Adelaide Geosyncline
<b>Stratigraphic Units</b>	
<b>1:250,000 Map Sheet</b>	SI 54-1 Orroroo
<b>1:100,000 Map Sheets</b>	6533 Quorn, 6532 Wilmington
<b>Keywords</b>	Transported Cover, magnetic interpretation

## SUMMARY

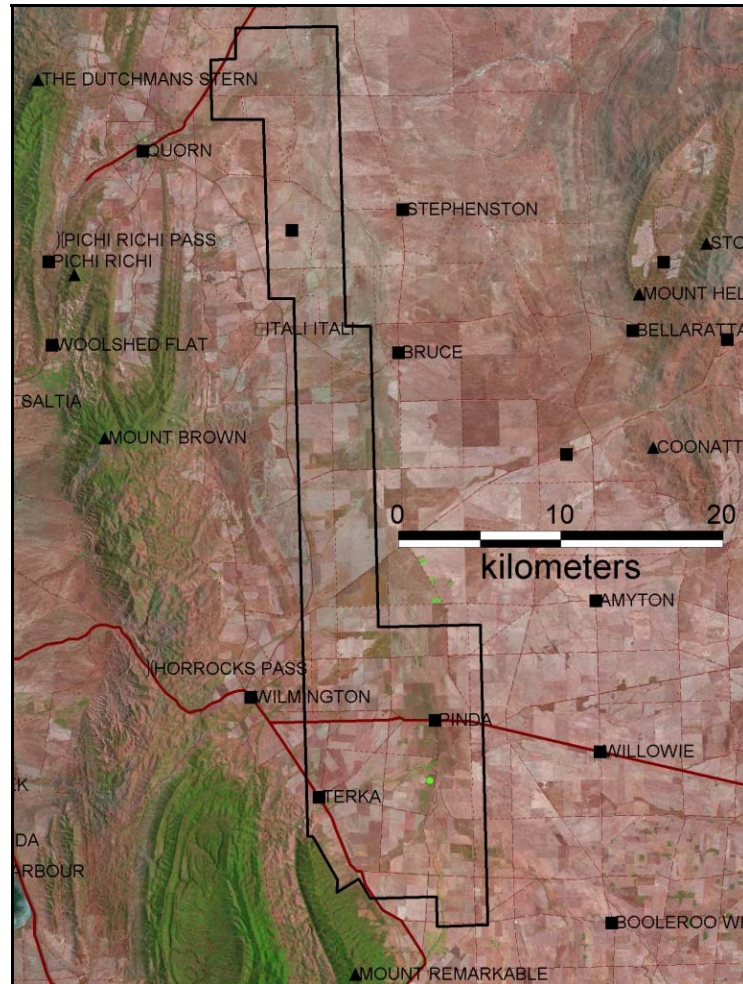
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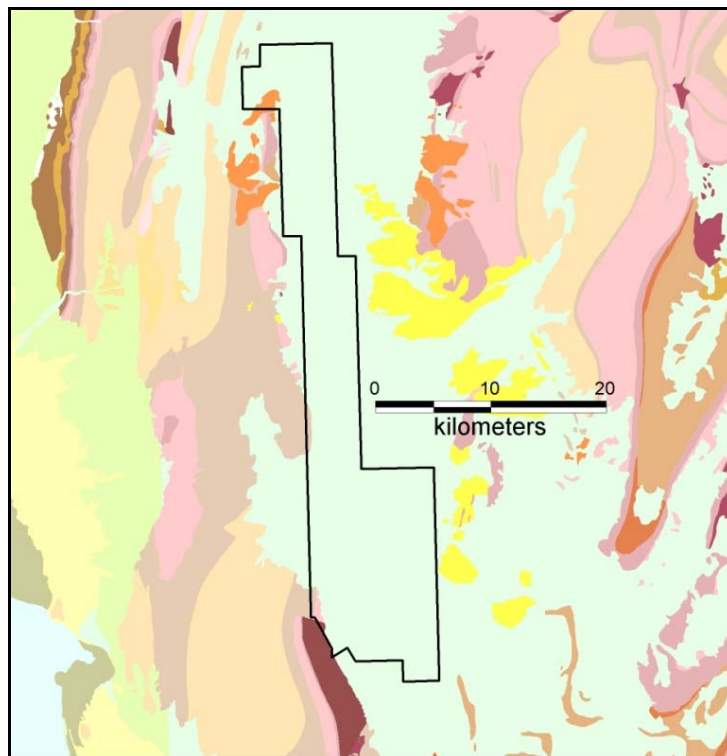
## 1 Tenure

EL 4202 'Pinda' covering 367 square kilometres was granted to Pirie Resources (a wholly owned subsidiary of Archer Exploration Ltd) on 10 November 2008 for a term of 3 years. A relinquishment and renewal for the EL was made in September 2011.

Archer Exploration listed on the Australian Stock Exchange on 14 August 2007.

## 2 Geology

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**Figure 2: Geology Map (PIRSA).**

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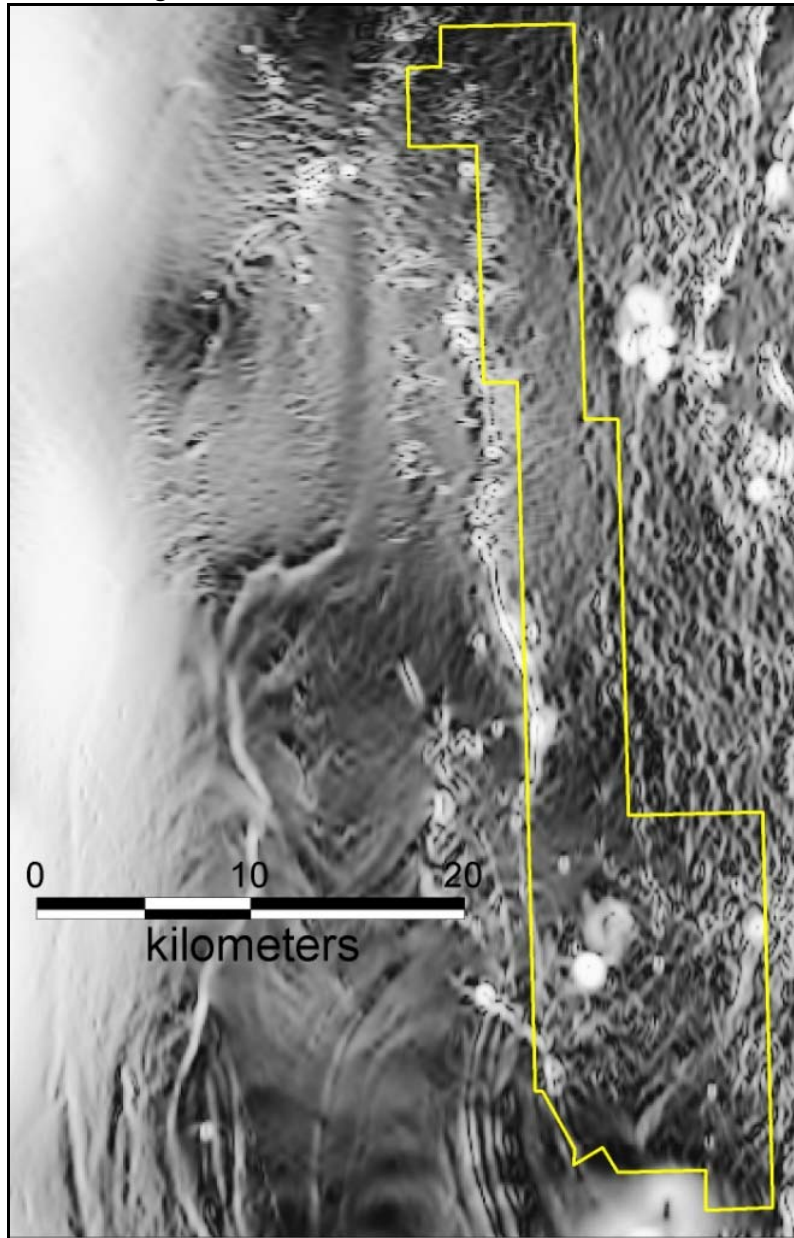


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In the southern part of the tenement a number of circular magnetic highs exist, these are possible mafic intrusives. The caveat has been removed from the Falcon airborne gravity technique and hence has been heavily booked by explorers wishing to take advantage of the system. As such the contractor has not been available to quote on the project.

## **4 Environment**

No ground disturbing activities were performed during the period.

# Surrender Report 2012

EL 4202 Pinda

SA Exploration Pty Ltd  
Archer Exploration Limited

By W. Bollenhagen  
Archer Exploration  
21/08/2012

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## Bibliographic Data

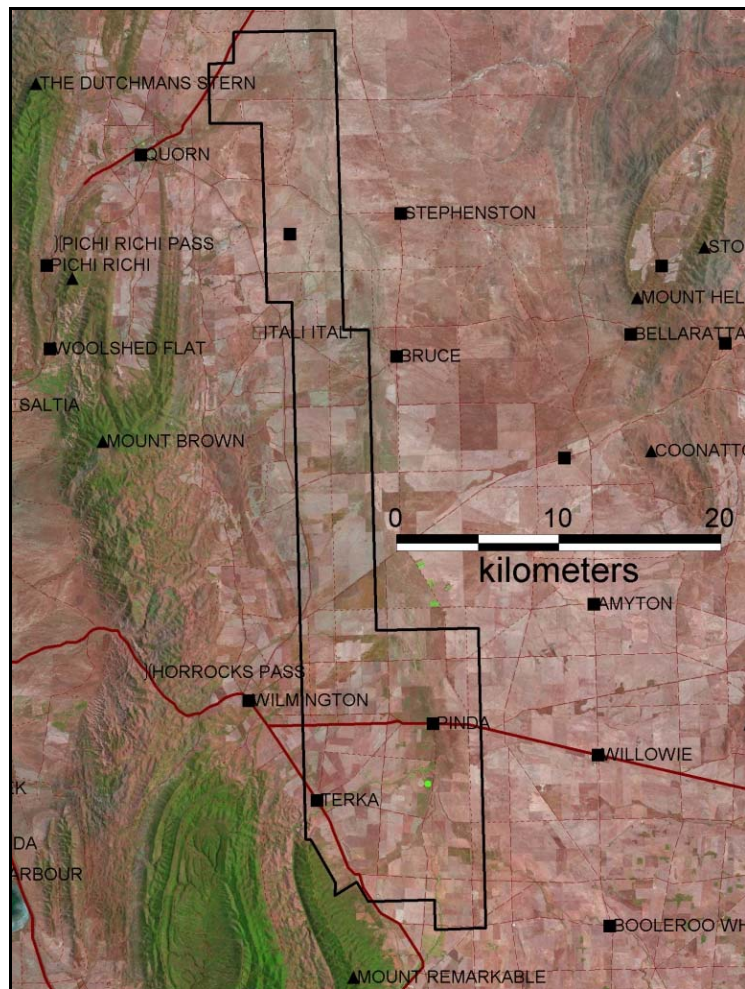
<b>Report Title</b>	Surrender Report for Exploration Licence 4201 'Pinda' for the period 10 November 2008 to 9 November 2012.
<b>Project Name</b>	Pinda
<b>Tenement Number</b>	EL 4202 'Pinda
<b>Tenement Holder</b>	Pirie Resources Pty Ltd (wholly owned by Archer Exploration Limited)
<b>Operator</b>	Archer Exploration Limited
<b>Commodities</b>	Au, Cu
<b>Tectonic Unit</b>	Adelaide Fold Belt
<b>Stratigraphic Units</b>	
<b>1:250,000 Map Sheet</b>	SI 54-1 Orroroo, SI 54-5 Burra
<b>1:100,000 Map Sheets</b>	6532 Wilmington, 6531 Pirie
<b>Keywords</b>	Transported Cover, magnetic interpretation

## **SUMMARY**

Exploration Licence 4202 'Pinda', held by SA Exploration Pty Ltd (Archer) is located on the southern end of the Flinders Ranges, which lies on the eastern margin of the Gawler Craton.

No work was performed on the tenement that is required to be reported. No assays were collected, no ground disturbing activities occurred during the tenement period. All ground is relinquished.

### Exploration Index Map



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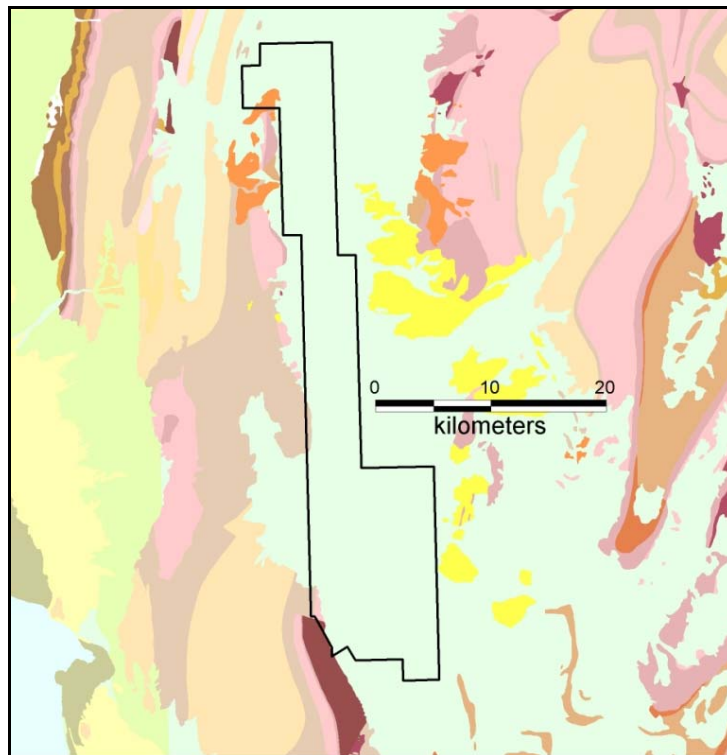
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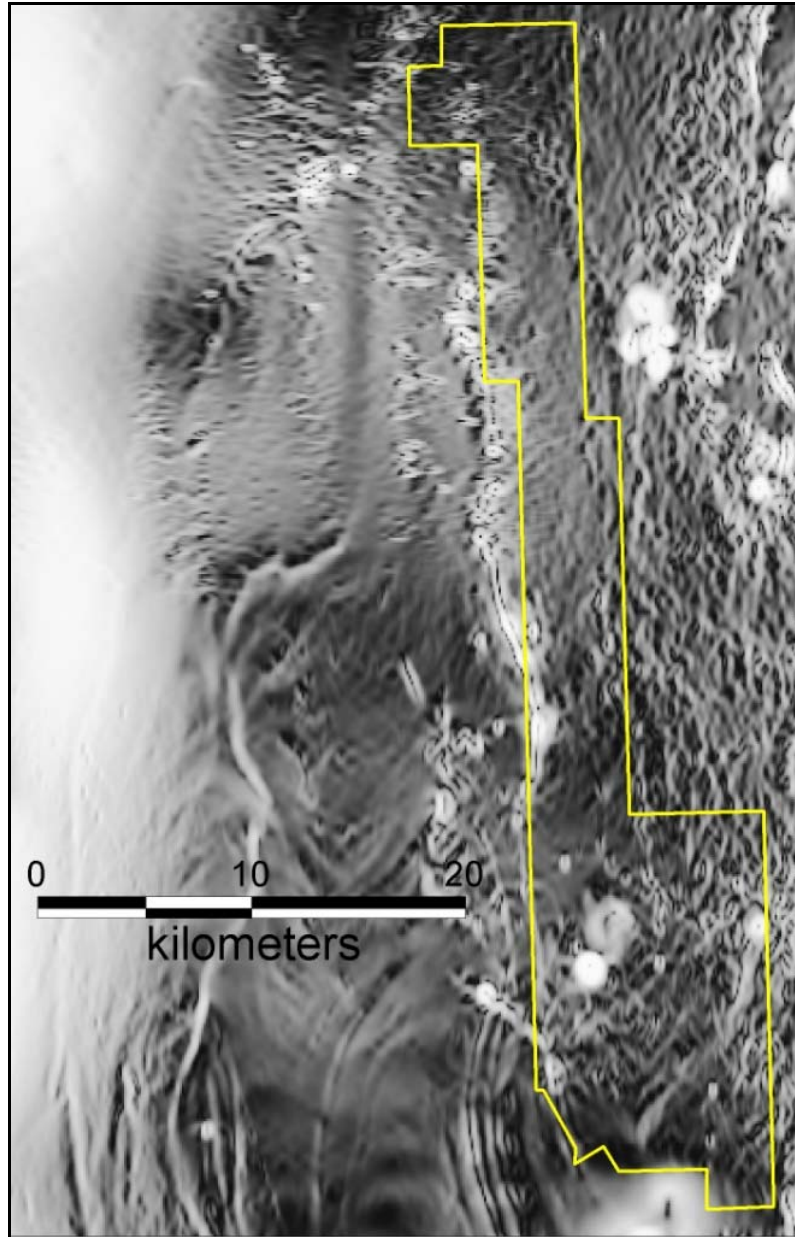
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## 3 Work Completed



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## **4 Environment**

No ground disturbing activities were performed during the period.