

EL 4051 Eucla Basin SA

ANNUAL REPORT

2008

Author: Tara Smith

Bemax Resources Limited

Report Date: 25/03/2009

Licencee: Bemax Resource Limited

ABN: 60 009 247 858

SUMMARY

This annual report summarises exploration activities and results of work undertaken over Exploration Licence 4051 between the 25th February 2008 and the 24th February 2009.

Literature studies into available documents were completed.

Logistical reconnaissance took place across the tenement to investigate access. It was concluded that access throughout the tenement was quite good, with a number of public roads crisscrossing the tenement.

A drill program is proposed to begin during 2009 dependent on approvals, running in conjunction with drilling on associated joint venture tenements in the Eucla Basin.

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Figure 1:Location of EL5041

1. INTRODUCTION

This is the first renewal application for EL 4051

A brief description of exploration and expenditure in the current term and proposed exploration and expenditure in the proposed term is included with this application.

Bemax is the owner and operator of the licence.

2. TENURE AND LOCATION

2.1 Location

Exploration Licence 4051 lies approximately 30km northwest of Ceduna in the Charra area (Figure 1).

The licence covers approximately 177 Square Kilometres.

2.2 Tenure

EL4051 is held by Bemax Resources NL.

The licence was granted on the 25th of February 2008 for a period of one year.

Expenditure commitment was set at \$45,000.

3. EXPLORATION PROGRAM AND EXPENDITURE 2008 TO 2009

3.1 Exploration

Literature review and examination of available data has been undertaken.

The licence has been included in the regional study of the Eucla Basin undertaken by Bemax.

A field trip was undertaken in August 2008 to evaluate access to the licence for a potential drill program. There is excellent access throughout the licence via a network of public roads.

Review of DTM data in the area has identified the potential for an old shoreline in this area which is off the same age as that forming the Jacinth and Ambrosia deposits of Iluka Resources Limited further to the north west.

A short drill program is envisaged to assess the existence of the old shoreline marked by the presence of the host Ooldea Sands formation.

Regional studies and evaluation have continued to develop a drill proposal.

Bemax has successfully completed a Joint Venture agreement with Red Metals. The JV covers ELs 3147, 3495, 4189 and 4190 in the eastern part of Eucla Basin of South Australia. This JV gives Bemax an excellent opportunity to advance its exploration in the Eucla Basin of which EL 4051 is a component. Exploration and drilling completed on EL 4051 will be tied into access and timing associated with exploration programs and progress on the other tenements.

A major drilling campaign is planned for the first half of 2009.

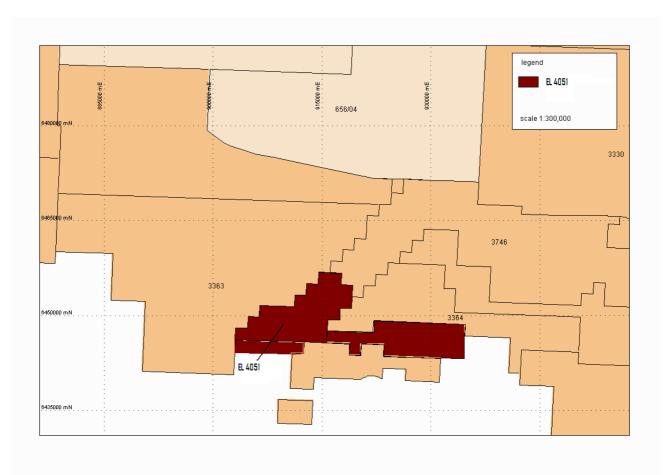


Figure 1. Location of EL4051

3.2 Expenditure

There has been no drilling completed by Bemax on the licence to date. Expenditure has been primarily associated with the regional review, and an on ground logistics assessment. Consequently, there has been only minimal expenditure undertaken to date.

Expenditure to the end of December 2008 has been \$12,468.

It is recognised this is well below the expenditure commitment. Work on this licence is planned to coincide with work on other licences in the Eucla basin (ie. with drilling planned for the first half of 2009.)

4 PROPOSED EXPLORATION PROGRAM AND EXPENDITURE 2009 TO 2010

As highlighted above a drill program is planned for 2009. This program will be run in conjunction with drilling on associated joint venture tenements in the Eucla Basin.

Drilling traverses are planned across the tenement to identify the potential contact between the prospective Ooldea Sandstone and the Nullabor Limestone. Drilling traverses will initially incorporate wide spaced drilling (holes 500 metres apart) which will be closed down if the prospective contact is identified.

Further assessment of potential and targets can then be undertaken.

A minimum program of 1,200 metres is envisaged at a cost of over \$60,000.

5. CONCLUSIONS

- Logistical investigations have taken place over the tenement with both 4WD vehicles and chartered flights used to evaluate the accessibility of the area.
- Literature studies have been conducted examining available data.
- Drill traverses are planned across the tenement, with the drilling scheduled to take place in 2009.
- This program will be run in conjunction with drilling on associated joint venture tenements in the Eucla Basin.

6. EXPENDITURE

A total of \$12,468 has been spent on EL4051 over the past twelve months to 25th Feb 2009. The majority of this expenditure has been associated with geological literature studies.

BIBLIOGRAPHY

Roberts, R (2009). EL4051 Renewal Report (Unpubl.)



EL 4051 Eucla Basin SA

ANNUAL REPORT

2010

Author: Tara Smith

Bemax Resources Limited

Report Date: 25/03/2010

Licencee: Bemax Resource Limited

ABN: 60 009 247 858

SUMMARY

This annual report summarises exploration activities and results of work undertaken over Exploration Licence 4051 between the 25th February 2009 and the 24th February 2010.

Review of DTM data in the area has identified the potential for an old shoreline representing the south east extension of the Ooldea Range (hosting the Jacinth and Ambrosia deposits of Iluka Resources Limited).

A drill program is intended to take place in conjunction with other Eucla Basin drilling in 2010. Bemax has recently submitted a PACE application to the government (PIRSA) for this drill program

The completion of this program would allow further assessment of the potential of the tenement and future targets could then be established.

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Figure 1:Location of EL5041

1. INTRODUCTION

This report summarises exploration activities and results of work undertaken over Exploration Licence 4051 between the 25th February 2009 and the 24th February 2010.

A brief description of exploration and expenditure in the current term and proposed exploration and expenditure in the proposed term is included with this application.

Bemax is the owner and operator of the licence.

2. TENURE AND LOCATION

2.1 Location

Exploration Licence 4051 lies approximately 30km northwest of Ceduna in the Charra area (Figure 1).

The licence covers approximately 177 Square Kilometres.

2.2 Tenure

EL4051 is held by Bemax Resources NL.

The licence was granted on the 25th of February 2008 for a period of one year.

Recently a renewal of the tenement was applied for with a 38% reduction. A total of 23 blocks were highlighted for relinquishment.

Expenditure commitment is set at \$45,000.

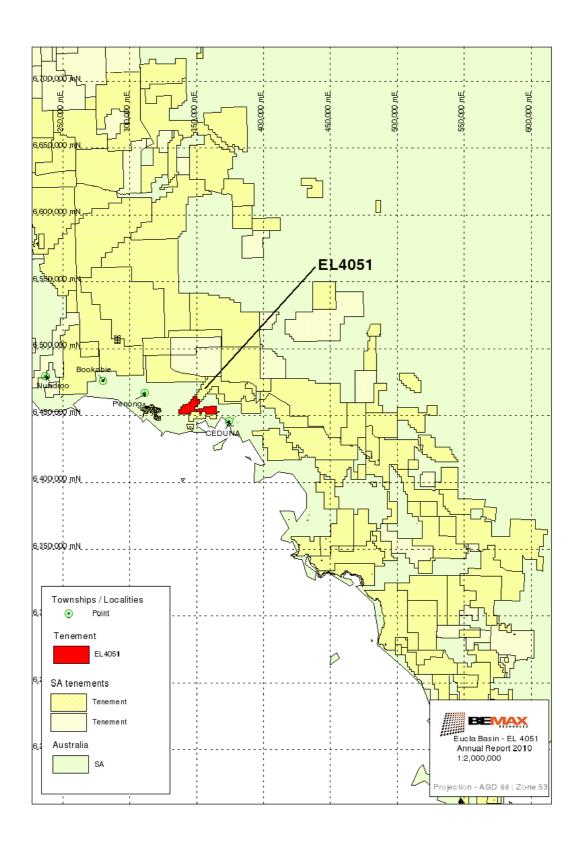


Figure 1: Location of EL4051

3. EXPLORATION PROGRAM AND EXPENDITURE 2009 TO 2010

3.1 Exploration

Bemax has successfully completed a Joint Venture agreement with Red Metal Limited. The JV covers ELs 3245, 3495 and ELA 385 / 09 in the eastern part of Eucla Basin of South Australia. This JV gives Bemax an excellent opportunity to advance its exploration in the Eucla Basin of which EL 4051 is a component. Exploration and drilling completed on EL 4051 could possibly be tied into access and timing associated with exploration programs and progress on the other tenements.

Review of DTM data in the area has identified the potential for an old shoreline representing the south east extension of the Ooldea Range (hosting the Jacinth and Ambrosia deposits of Iluka Resources Limited).

A drill program is intended to take place (together with a proposed program associated with the JV) mid-year. This program is intended to assess the existence of the old shoreline marked by the presence of the host Ooldea Sands formation.

3.2 Expenditure

There has been no drilling completed by Bemax on the licence to date. Expenditure has been primarily associated with a regional review, and an on ground logistics assessment. Consequently, there has been only minimal expenditure undertaken to date.

Expenditure from March 2009 to end of February 2010 has been \$12,717.

It is recognised that this is well below expenditure commitment. It is intended that this will be rectified during the upcoming drill program occurring mid 2010. Possibly in conjunction with drilling on other Eucla Basin EL's.

4 PROPOSED EXPLORATION PROGRAM AND EXPENDITURE 2010 TO 2011

As highlighted above a drill program is intended to be run in conjunction with drilling on associated joint venture tenements in the Eucla Basin.

Drilling traverses are planned across the tenement to identify the potential contact between the prospective Ooldea Sandstone and the Nullabor Limestone. Drilling traverses will initially incorporate wide spaced drilling (holes 500 metres apart) which will be closed down if the prospective contact is identified.

Further assessment of potential and targets can then be undertaken.

A minimum program of 1,200 metres is envisaged at a cost of over \$60,000.

5. CONCLUSIONS

- Review of DTM data in the area has identified the potential for an old shoreline representing the south east extension of the Ooldea Range (hosting the Jacinth and Ambrosia deposits of Iluka Resources Limited).
- A drill program is intended to take place in conjunction with other Eucla Basin drilling in 2010.
- At the completion of this program further assessment of the potential of the tenement and future targets can be completed

BIBLIOGRAPHY

Roberts, R (2009). EL4051 Renewal Report (Unpubl.)

Smith, T (2010) EL4051 Renewal Report (Unpubl)



EL 4051 Eucla Basin SA

ANNUAL REPORT

2011

Author: Tara Smith

Bemax Resources Limited

Report Date: 25/03/2011

Licencee: Bemax Resource Limited

ABN: 60 009 247 858

SUMMARY

This annual report summarises exploration activities and results of work undertaken over Exploration Licence 4051 between the 25th February 2010 and the 24th February 2011.

Review of DTM data in the area has identified the potential for an old shoreline representing the south east extension of the Ooldea Range (hosting the Jacinth and Ambrosia deposits of Iluka Resources Limited).

A drill program is intended to take place in conjunction with other Eucla Basin drilling in 2011.

The completion of this program would allow further assessment of the potential of the tenement and future targets could then be established.

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Figure 1: Location of EL5041

1. INTRODUCTION

This report summarises exploration activities and results of work undertaken over Exploration Licence 4051 between the 25th February 2010 and the 24th February 2011.

A brief description of exploration and expenditure in the current term and proposed exploration and expenditure in the proposed term is included with this application.

Bemax is the owner and operator of the licence.

2. TENURE AND LOCATION

2.1 Location

Exploration Licence 4051 lies approximately 30km northwest of Ceduna in the Charra area (Figure 1).

The licence covers approximately 111 Square Kilometres.

2.2 Tenure

EL4051 is held by Bemax Resources NL.

The licence was granted on the 25th of February 2008 for a period of one year.

As part of the renewal application in 2009 a 38% reduction of the tenement was completed. A total of 23 blocks were highlighted for relinquishment.

Bemax recently applied for a renewal of the licence for the period 2011 -2012 with no reduction.

Expenditure commitment is set at \$30,000.

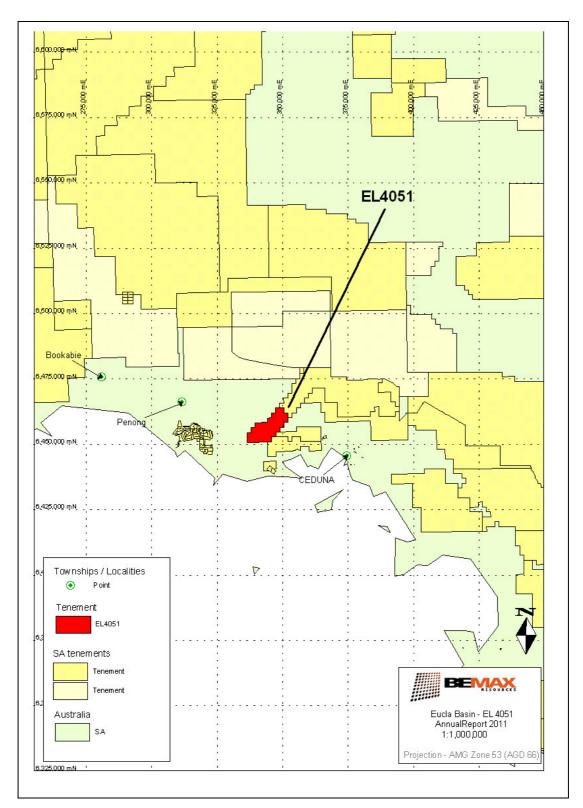


Figure 1: Location of EL4051

3. EXPLORATION PROGRAM AND EXPENDITURE 2010 TO 2011

3.1 Exploration (No Field Work)

Bemax has successfully completed a Joint Venture agreement with Red Metals Limited. The JV covers ELs 3147, 3495, 4189 and 4190 in the eastern part of Eucla Basin of South Australia. This JV gives Bemax an excellent opportunity to advance its exploration in the Eucla Basin of which EL 4051 is a component. Exploration and drilling completed on EL 4051 will be tied into access and timing associated with exploration programs and progress on the other tenements.

Review of DTM data in the area has identified the potential for an old shoreline. The south east extension of the Ooldea Range (hosting the Jacinth and Ambrosia deposits of Iluka Resources Limited).

This drill program is scheduled to take place (together with a proposed program associated with the JV) in the latter part of this year. This program is intended to assess the existence of the old shoreline marked by the presence of the host Ooldea Sands formation.

3.2 Expenditure

There has been no drilling completed by Bemax on the licence to date. Expenditure has been primarily associated with the regional review, and an on ground logistics assessment. Consequently, there has been only minimal expenditure undertaken to date.

Expenditure to the end of February 2011 has been \$4,634.

It is recognised this is well below expenditure commitment, it is intended that this will be rectified during the upcoming drill program occurring mid 2011.

4 PROPOSED EXPLORATION PROGRAM AND EXPENDITURE 2011 TO 2012

As highlighted above a drill program is intended to be run in conjunction with drilling on associated joint venture tenements in the Eucla Basin.

Drilling traverses are planned across the tenement to identify the potential contact between the prospective Ooldea Sands and the Nullabor Limestone. Drilling traverses will initially incorporate wide spaced drilling (holes 500 metres apart) which will be closed down if the prospective contact is identified.

Further assessment of potential and targets can then be undertaken.

A minimum program of 500-1,000 metres is envisaged at an estimated cost of up to \$50,000.

5. CONCLUSIONS

- Review of DTM data in the area has identified the potential for an old shoreline representing the south east extension of the Ooldea Range (hosting the Jacinth and Ambrosia deposits of Iluka Resources Limited).
- A drill program is intended to take place in conjunction with other Eucla Basin drilling in 2011.
- At the completion of this program further assessment of the potential of the tenement and future targets can be completed

BIBLIOGRAPHY

Roberts, R (2009). EL4051 Renewal Report (Unpubl.)

Smith, T (2010) EL4051 Renewal Report (Unpubl)



EL 4051 Eucla Basin SA

ANNUAL REPORT

2012

Author: Tara Smith

Bemax Resources Limited

Report Date: 25/03/2012

Licencee: Bemax Resource Limited

ABN: 60 009 247 858

SUMMARY

This annual report summarises exploration activities and results of work undertaken over Exploration Licence 4051 between the 25th February 2011 and the 24th February 2012.

Review of DTM data in the area has identified the potential for an old shoreline representing the south east extension of the Ooldea Range (hosting the Jacinth and Ambrosia deposits of Iluka Resources Limited).

A drill program is intended to take place in conjunction with other Eucla Basin drilling in September 2012. Bemax has budgeted for over 3,000m to be drilled within EL4051 (totalling 60 holes).

The completion of this program would allow further assessment of the potential of the tenement and future targets could then be established.

Work progressing approvals has begun.

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Figure 1: Location of EL5041 Figure 2: Proposed traverses across EL4051

1. INTRODUCTION

This report summarises exploration activities and results of work undertaken over Exploration Licence 4051 between the 25th February 2011 and the 24th February 2012.

A brief description of exploration and expenditure in the current term and proposed exploration and expenditure in the proposed term is included with this application.

Bemax is the owner and operator of the licence.

2. TENURE AND LOCATION

2.1 Location

Exploration Licence 4051 lies approximately 30km northwest of Ceduna in the Charra area (Figure 1).

The licence covers approximately 111 Square Kilometres.

2.2 Tenure

EL4051 is held by Bemax Resources Limited.

The licence was granted on the 25th of February 2008 for a period of one year. A renewal was submitted in 2009 and granted. In 2010 a reduction of 38% of the tenement was completed. 23 blocks were highlighted for relinquishment.

Expenditure commitment is set at \$30,000 pa. A shortfall in expenditure during previous renewals means an expenditure commitment sits at \$125,000 for the next renewal period.

Bemax recently applied for a renewal with no reduction. Bemax at this moment is not in a position to relinquish any units from EL4051. A large reduction (50%) will be made during the next renewal.

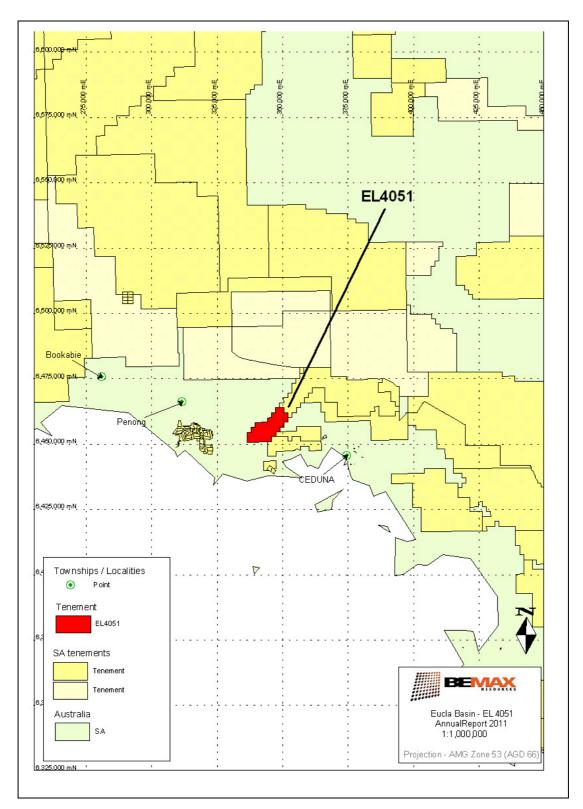


Figure 1: Location of EL4051

3. EXPLORATION PROGRAM AND EXPENDITURE 2011 TO 2012

3.1 Exploration

Work during the last year has focussed on reviewing data from the previous program completed within the Eucla Basin in EL3495. This program successfully discovered the 'Barton' prospect. The successful discovery of mineralisation within the Eucla Basin has further strengthened Bemax's commitment to the Eucla Basin. As a result of this discovery, Bemax committed its resources towards clarifying results and completing work investigating characteristics of this deposit. This has helped Bemax gain knowledge of the geology and helped with a better understanding for the planning of logistics for the next scheduled exploration program.

Previous work has included a review of DTM data in the area which has identified the potential for an old shoreline. The south east extension of the Ooldea Range (hosting the Jacinth and Ambrosia deposits of Iluka Resources Limited).

A drill program has been designed to target this area and is intended to take place during September 2012.

3.2 Expenditure

There has been no drilling completed by Bemax on the licence to date. Expenditure has been primarily associated with the regional review, and an on ground logistics assessment. Consequently, there has been only minimal expenditure undertaken to date.

Expenditure to the end of February 2021 has been \$3,842.

It is recognised this is well below expenditure commitment and shortfall, it is intended that this will be rectified during the upcoming drill program occurring in 2012.

4 PROPOSED EXPLORATION PROGRAM AND EXPENDITURE 2012 TO 2014

As highlighted above a drill program is intended to be run in conjunction with drilling on associated joint venture tenements in the Eucla Basin.

Drilling traverses are planned across the tenement to identify the potential contact between the prospective Ooldea Sands and the Nullabor Limestone.

Bemax has budgeted for over 3,000m to be drilled within EL4051 (totalling 60 holes). This program will aim at covering the length of the tenement to assess Heavy Mineral potential. Three traverses have been designed at 3.5km line distances with hole distances of 200-400m (depending on stratigraphy) with a total line distance of 20km (shown in figure attached). Expenditure during this program is estimated to be over \$150,000.

Further assessment of potential and targets can then be undertaken.

Work progressing approvals has begun.

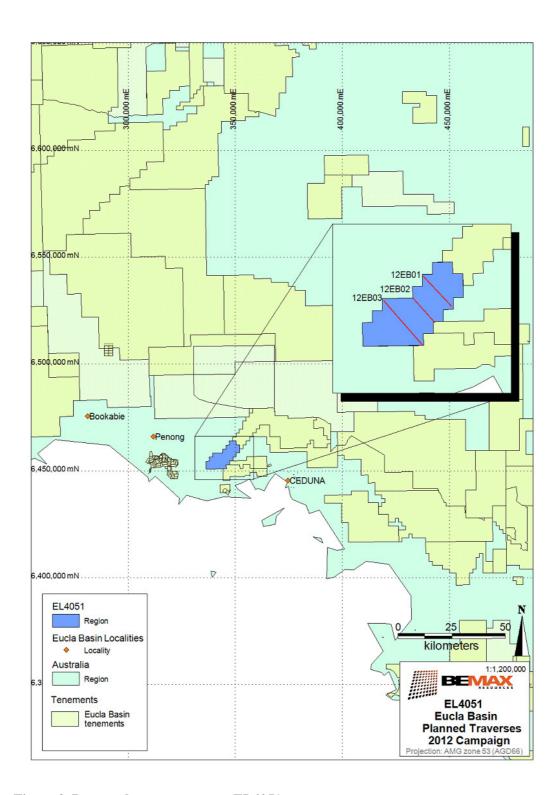


Figure 2. Proposed traverses across EL4051

5. CONCLUSIONS

- Review of DTM data in the area has identified the potential for an old shoreline representing the south east extension of the Ooldea Range (hosting the Jacinth and Ambrosia deposits of Iluka Resources Limited).
- A drill program is intended to take place in conjunction with other Eucla Basin drilling in 2012.
- Work progressing approvals has begun.
- At the completion of this program further assessment of the potential of the tenement and future targets can be completed

BIBLIOGRAPHY

Roberts, R (2009). EL4051 Renewal Report (Unpubl.)

Smith, T (2011) EL4051 Renewal Report (Unpubl)





EL 4051 Eucla Basin SA

ANNUAL REPORT

2013

Author: Tara Smith

Cristal Mining Australia Limited

Report Date: 30/05/2013

Licencee: Cristal Mining Australia Limited

ABN: 60 009 247 858

SUMMARY

This annual report summarises exploration activities and results of work undertaken over Exploration Licence 4051 between the 25th February 2013 and the 24th February 2013.

Review of DTM data in the area has identified the potential for an old shoreline representing the south east extension of the Ooldea Range (hosting the Jacinth and Ambrosia deposits of Iluka Resources Limited).

A radiometric survey will be taking place across Cristal held tenements during June 2013. Results from this survey will be interpreted and prospective areas highlighted. A drill program is intended to take place in conjunction with other Eucla Basin drilling in September 2013. Cristal Mining Australia Limited ('Cristal') has budgeted for over 3,000m to be drilled within EL4051 (totalling 60 holes).

The completion of this program would allow further assessment of the potential of the tenement and future targets could then be established.

Work progressing approvals has begun.

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Figure 1: Proposed traverses across EL4051

1. INTRODUCTION

This report summarises exploration activities and results of work undertaken over Exploration Licence 4051 between the 25th February 2012 and the 24th February 2013.

A brief description of exploration and expenditure in the current term and proposed exploration and expenditure in the proposed term is included with this application.

Cristal Mining Australia Limited ('Cristal') is the owner and operator of the licence.

2. TENURE AND LOCATION

2.1 Location

Exploration Licence 4051 lies approximately 30km northwest of Ceduna in the Charra area (Figure 1).

The licence covers approximately 111 Square Kilometres.

2.2 Tenure

EL4051 is held by Cristal Mining Australia Limited.

The licence was granted on the 25th of February 2008 for a period of one year. A renewal was submitted in 2009 and granted. In 2010 a reduction of 38% of the tenement was completed. 23 blocks were highlighted for relinquishment.

In 2012 Cristal applied for a subsequent renewal. This renewal was offered to Cristal on the 22nd of April 2013. Cristal accepted this offer. The licence was granted for 1 year.

Expenditure commitment is set at \$200,000 pa.

3. EXPLORATION PROGRAM AND EXPENDITURE 2012 TO 2013

3.1 Exploration

Heritage and environmental surveys are being prepared in preparation for an upcoming drill program that is scheduled to take place in September 2013 across Cristal operated tenements.

Timing issues have thus far prevented Cristal from conducting an on-ground program to date.

The completion of this program would allow further assessment of the potential within the tenement and future targets could then be established.

3.2 Expenditure

There has been no drilling completed by Cristal on the licence to date. Expenditure has been primarily associated with regional reviews. Consequently, there has been only minimal expenditure to date.

Expenditure for the 12 months ending February 2013 has been \$6,424.

It is recognised this is well below expenditure commitment. It is intended that this will be rectified during the upcoming radiometric survey and drill program occurring during the later part of 2013, possibly in conjunction with drilling on other Eucla Basin EL's.

4 PROPOSED EXPLORATION PROGRAM AND EXPENDITURE 2013 TO 2014

As mentioned above, a drill program is intended to be run in conjunction with drilling on associated joint venture tenements in the Eucla Basin.

A Radiometric and aeromag survey is planned for June 2013 (UTS). This will cover a total of 1,500 line kilometres and will involve detailed interpretation and modelling of results. This survey will cost approximately \$60,000. Further expenditure will relate to geological interpretation of results.

Drilling traverses will be based on results of the geophysical surveys and located across the tenement to identify the potential contact between the prospective Ooldea Sands and the Nullabor Limestone.

Cristal has budgeted for over 3,000m to be drilled within EL4051 (totalling 60 holes). This program will aim at covering the length of the tenement to assess Heavy Mineral potential. Three traverses have been designed at 3.5km line distances with hole distances of 200-400m (depending on stratigraphy) with a total line distance of 20km (shown in figure attached). These traverses may be altered depending on the results of the radiometric survey. Expenditure during this program is estimated to be over \$200,000.

Further assessment of potential and targets can then be undertaken.

Work progressing approvals has begun.

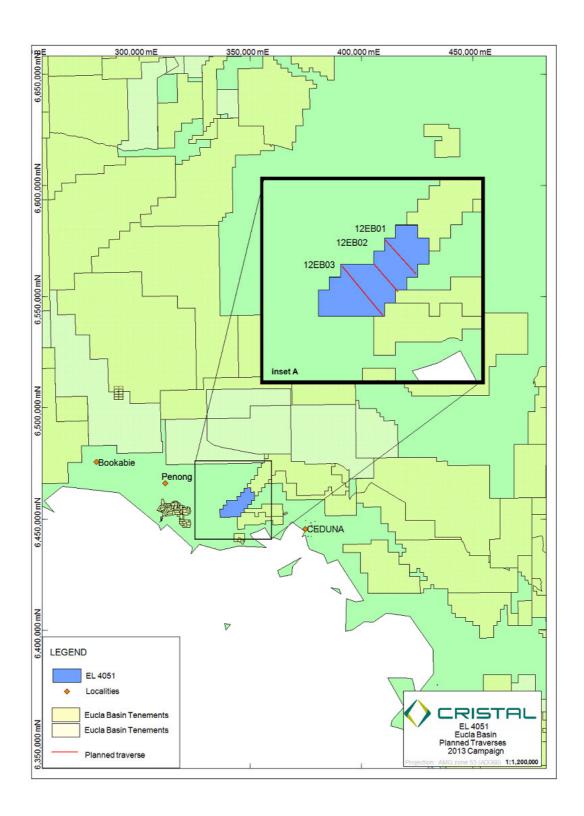


Figure 1. Proposed traverses across EL4051





EL 5253 Eucla Basin SA

ANNUAL REPORT

2014

Author: Tara Thompson

Cristal Mining Australia Limited

Report Date: 25/03/2014

Licencee: Cristal Mining Australia Limited

ABN: 60 009 247 858

SUMMARY

This annual report summarises exploration activities and results of work undertaken over Exploration Licence 5253 between the 25th February 2013 and the 24th February 2014.

In July of 2013 Cristal notified DMITRE of its intention to conduct an airborne survey of EL 5253.

The survey was flown by UTS Geophysics Pty Ltd using a Cessna 206-H. The airborne survey was commissioned to collect both aeromagnetic and radiometric data.

(UTS data - see Government of South Australia Mineral Resources Website)

Preliminary results show anomalous radiometric (particularly thorium) lineaments oriented west-northwest to east-southeast. A drill program consisting of three traverses has been designed to test these results.

Cristal intends to pursue approval requirements during the next five months for a drilling program scheduled for Q3 2014.

Expenditure for the 12 months ending February 2014 has been \$87,817.

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Figure 1: EL 5253 location

Figure 2: Aeromagnetic image (TMI RTP) showing the strong basement magnetics overlain by subtler linear anomalies (black dashed lines provide guidance as to the orientation)

Figure 3: Semi-transparent image of the Thorium channel of the radiometric data. The dashed black lines shown in Figure 2 have been retained for reference.

1. INTRODUCTION

This report summarises exploration activities and results of work undertaken over Exploration Licence 5253 between the 25th February 2013 and the 24th February 2014.

A brief description of exploration and expenditure in the current term and proposed exploration and expenditure in the proposed term is included with this application.

Cristal Mining Australia Limited ('Cristal') is the owner and operator of the licence.

2. TENURE AND LOCATION

2.1 Location

Exploration Licence 5253 lies approximately 30km northwest of Ceduna in the Charra area (Figure 1).

The licence covers approximately 111 Square Kilometres (figure 1).

2.2 Tenure

EL5253 is held by Cristal Mining Australia Limited.

The licence was granted on the 25th of February 2013 for a period of one year. A renewal was submitted in December of 2013.

Expenditure commitment is set at \$200,000 for the term of the licence.

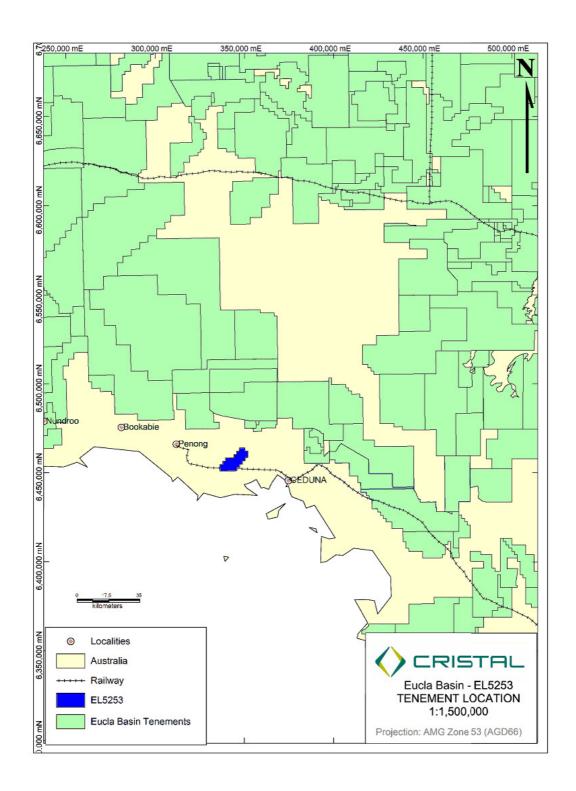


Figure 1. EL 5253 location

3. EXPLORATION PROGRAM AND EXPENDITURE 2013 TO 2014

3.1 Exploration

In July of 2013 Cristal notified DMITRE of its intention to conduct an airborne survey of EL 5253. In preparation for that survey Cristal conducted a site visit to the area within EL 5253 to speak to landholders and investigate the terrain in preparation of the survey which took place during late July 2013.

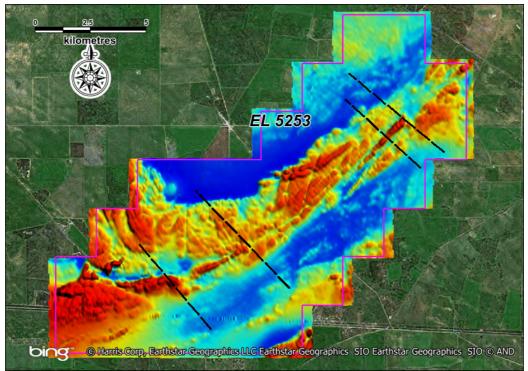
The survey was flown by UTS Geophysics Pty Ltd using a Cessna 206-H. The airborne survey was commissioned to collect both aeromagnetic and radiometric data. That data was received by Cristal in early October 2013 and then sent to Vector Research Pty Ltd in Perth for post-processing. The processed data was received from Vector Research in early January 2014 and an analysis of the data is currently underway

Preliminary results show anomalous radiometric (particularly thorium) lineaments oriented west-northwest to east-southeast. That orientation is sub-parallel to the orientation of the tertiary barrier/shoreline position as shown on SARIG data.

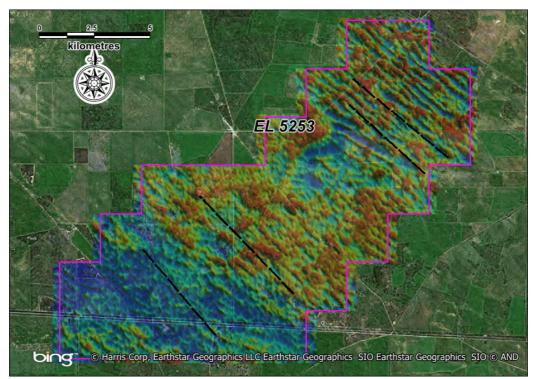
The airborne magnetic data also shows some subtle lineaments aligned in the same direction as the above mentioned lineaments, as shown in Figure 2. While it may be possible that the radiometric anomalies are simply reflecting the Holocene dunefield which comprises the current topography, the coincident magnetic anomalies generate (Figure 3) much interest and constitute valid mineral sands exploration targets.

(UTS data - see Government of South Australia Mineral Resources Website)

A drill program to follow up on results of the airborne survey has been designed. This program includes a total of three lines (Figure 4). A total of 94 holes for 3,102 metres is planned.



<u>Figure 2.</u> Aeromagnetic image (TMI RTP) showing the strong basement magnetics overlain by subtler linear anomalies (black dashed lines provide guidance as to the orientation)



<u>Figure 3.</u> Semi-transparent image of the Thorium channel of the radiometric data. The dashed black lines shown in Figure 2 have been retained for reference.

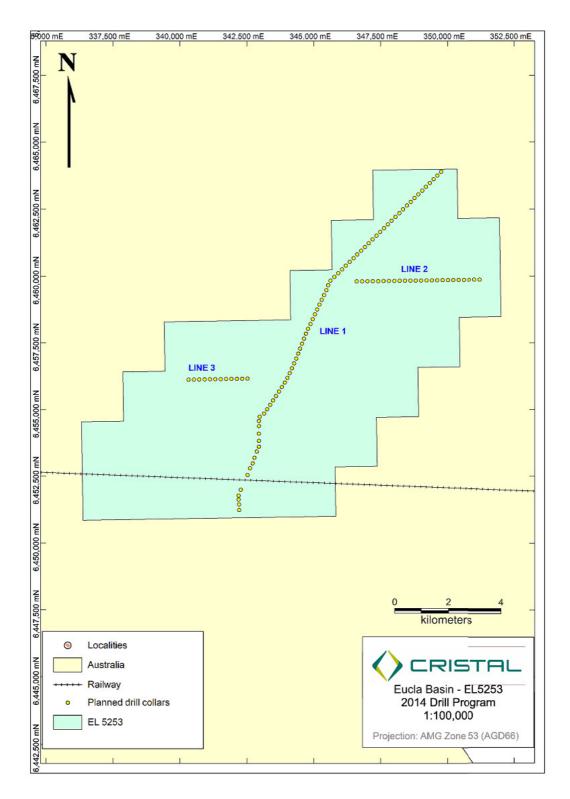


Figure 4. 2014 Planned drill program

3.2 Expenditure

There has been no drilling completed by Cristal on the licence to date. Expenditure has been primarily associated with regional reviews and airborne surveys. Consequently, there has been only minimal expenditure to date.

Expenditure for the 12 months ending February 2014 has been \$87,817.

Table 1. Expenditure

Task	Expenditure
Geology	\$ 69,416
Drilling	\$ 0
Laboratory	\$ 0
Logistics	\$ 5,883
Mineralogy	\$ 0
Tenement	\$ 0
Vehicles	\$ 4,535
Administration (10%)	\$ 7,983
Total	\$ 87,817

It is recognised this is well below expenditure commitment. It is intended that this will be rectified during the upcoming drill program occurring during the later part of 2014, possibly in conjunction with drilling on other Eucla Basin EL's.

4 PROPOSED EXPLORATION PROGRAM AND EXPENDITURE 2014 TO 2015

Cristal intends to pursue approval requirements during the next five months for a drilling program scheduled for Q3 2014. Data obtained during the recent airborne survey was used to design drill traverses, targeting anomalies highlighted in the data. The main work will be conducted along a significant track (shown in Figure 3) which runs at an angle favourable to covering the tenement and all of the contained anomalies. Drilling traverses will initially incorporate wide spaced drilling (holes 200 metres apart) which will be reduced where the prospective sand is identified.

Further assessment of potential and targets can then be undertaken.

A minimum program of 3,000 metres of drilling and sampling is planned at an estimated cost of over \$200,000.

Table 2. Planned expenditure

Task	Expenditure		
Geology	\$57,200		
Drilling	\$47,190		
Laboratory	\$40,040		
Logistics	\$44,044		
Administration (10%)	\$18,847		
Total	\$207,321		





EL5253 Charra

Final and Annual Report

For the period ending 25th of February 2015

Fowler SH53-13, Childara SH53-14,

Author: Jodi Reynolds

Cristal Mining Australia Limited

Report Date: 16/04/2015

Licencee: Cristal Mining Australia Limited

ACN: 009 247 858

SUMMARY

This final report summarises work conducted on Exploration Licence (EL) 5253 Charra

during the period from 25th February 2008 to the 24th February 2015.

Exploration was focussed on the discovery of heavy mineral sand deposits (rutile, zircon,

and ilmenite). These are hosted in mid to late Eocene coastal sands, deposited during

seafloor spreading as Antarctica separated from Australia. Eustatic sea level changes,

resulting in two marine transgressions which deposited marine clastics, provided the

environment required for the deposition of heavy mineral sands.

Work conducted to date includes literature reviews, a field trip and an airbourne

geophysical survey. The final conclusion is that the area represents such low

prospectivity that Cristal Mining has relinquished the tenement.

KEY WORDS: Eucla Basin, Strandlines, Heavy Mineral Sands, Rutile, Zircon, Ilmenite, Altered Ilmenite, Leucoxene, Titanium Minerals,

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1. INTRODUCTION

This report summarises the exploration activity that was completed within exploration licence (EL) 5253 between the time of its grant in 2008 and its relinquishment in 2015.

The target of exploration was accumulations of heavy mineral sands (rutile, zircon and ilmenite) in the Tertiary Eucla Basin sediments.

2. TENURE AND LOCATION

2.1. Tenure

Table 1. Tenement History

Tenement	Date Granted	Original Size (Km²)	Operators	Commodities Sought
EL2195	30/08/1996	1762	Aurora Gold	All
EL2870	30/11/2001	588	lluka	Chromium, Nickel
EL3364	06/06/2005	273	Red Metal	HMS
EL4051 Charra	25/02/2008	177	Bemax Resources Limited	HMS
EL5253 Charra	25/02/2013	111	Cristal Mining Australia	HMS

2.2 Access and Location

Exploration Licence 5253 lies approximately 30km northwest of Ceduna in the Charra area. Access is via the Eyre Highway, which runs along the northern boundary of the tenement, and numerous farm tracks.

The licence most recently covered approximately 111 Square Kilometres.

2.3 Topography

The area has been influenced by pastoral activity, including substantial clearing and cereal crops production.

Remnant native vegetation exists at the roadsides and along fencelines in some areas.

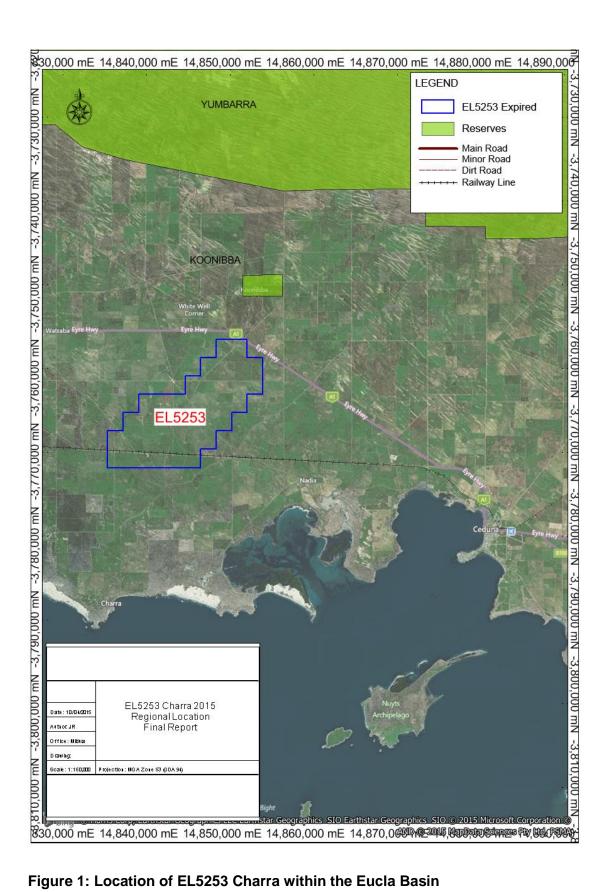


Figure 1: Location of EL5253 Charra within the Eucla Basin

3. GEOLOGY

3.1. Regional Geology

Charra is situated on the South Eastern edge of the Eucla Basin, a thick sequence (up to 300m) of Tertiary sediments overlying the Gawler Craton. The basin contains the preserved system of Cainozoic coastal barriers, beach, shoreface and lagoon facies, which were formed as Antartica was separating from Australia. Numerous paleochannels drained areas of cratonic basement suppling vast quantities of sediment to the basin (Ferris, 1994) over a period of about 50 million years. Eustatic sea-level was an important control on the deposition and distribution of the Tertiary marine sediments, in particular two significant sea level transgressions during the mid to late Eocene.

This environment was perfect for coastal dune formation and the development of heavy mineral sand beach placers, several deposits of which have been discovered in the basin. The area has been prospected for heavy mineral sands since the 1980's, with successful drilling intercepts tending to occur in the upper part of thick barrier-dune sand bodies close to an erosional bedrock contacts (Hou et al, 2005). The Jacinth and Ambrosia deposits, for example, were discovered by Iluka in September 2004 and are situated in the Ooldea sand barrier.

Locally, a thick marine sand sequence of medium-grained, poorly cemented beach barrier, possibly the Barton Sand, overlies the carbonaceous Pidinga Formation and the basement. This unit underlies the more widely distributed Mid-Middle Eocene Hampton Sand, a calcareous shallow marine sandstone, comprising coarse, poorly sorted, commonly gritty and red (iron oxide) stained sands. The Hampton unit has also been known to contain heavy minerals.

The Ooldea Sands are known to host deposits of heavy mineral sands. They are littoral to near shore marine deposits, commonly forming strand lines. Locally they are well sorted, fine to very fine quartz sands, occasionally iron oxide stained. The contact with the underlying Hampton sands is usually well defined, however the top contact is often reworked by surface mechanisms and capped by silcrete.

In the south of the basin is a sequence of poorly consolidated, fine to coarse fossiliferous calcareous sands, calcarenite and limestone, locally capped by calcrete interpreted as

the Bridgewater Formation. The Bridgewater Formation occurs along much of the eastern coastline of South Australia and extends into Victoria, as a preserved coastal beach and associated aeolian dune. Red Metal, in their final report on EL3364, notes that the unit appears to onlap the Ooldea Sand with an erosional unconformity at the contact.

Quaternery Aeolian sands or fluvial sediments form the top of the sequence.

3.1. Local Geology

While no exploratory drilling has been conducted on EL5253, several water bore holes were drilled in the 1950's and Red Metal conducted exploratory drilling on historic tenements adjacent to EL5253.

Holes drilled in the 1950's were prospecting for water and reached a depth of approx. 16m. Three Drillholes record a thin layer of sand or alluvial clay (1 to 2m thick) overlying a limestone described as a barrier shoreline deposit capped by calcrete, of approximately 10m thick. This inturn overlies what was interpreted as the Pidinga formation, consisting of iron stained fine to medium grained uncemented sand. In one of the holes the basement is intercepted at approx. 12m from the surface.

Drilling campaigns were conducted by Red Metal in 2006 in close proximity to EL5253. Red Metal found that the basement is overlain by thin and patchy sequences of poorly sorted, clayey fluvial sands and lag interpreted as Hampton Sands passing into variable thicknesses of clean well sorted, fine sands interpreted as Ooldea Sands. The Ooldea Sand is generally capped by a silcrete and overlain by varying thicknesses of Quaternary aeolian sand, calcrete, silcrete and clayey sands flanking a present-day basement high. Bridgewater Formation calc-aeolianite is mentioned as present in the south of the tenement area.

4. EXPLORATION

4.1. Previous Exploration

4.1.1. Aurora Gold 1996-2000

Joint venture exploration over an area extending for 40, 35 and 50 km respectively west, north and east of Ceduna targeted Archaean and Proterozoic Yarlbrinda - style Au and Ernest Henry / Olympic Dam style Cu-Au associated with shear zones and syndeformational Hiltaba Suite plutonism. Regional and infill calcrete sampling defined several Au anomalies and a broad area of Cu anomalism. Ground magnetic surveys were followed by RAB and aircore drilling which intersected only low order Cu and Au values. No extensive sericite development or brecciation was encountered. Strongly anomalous Ag was attributed to sample contamination.

4.1.2. Iluka 2001-2006

Iluka's was granted EL2900 in March 2002, and the Jacinth and Ambrosia deposits were subsequently discovered in September 2004, three weeks after the commencement of exploration drilling by Iluka.. Regional Exploration activities discovered further anomalous HM occurrences including: the Tripitaka Deposit, approximately 90km SE of Jacinth; the Dromedary Prospect, approximately 50km ENE of Ceduna; the Typhoon Prospect, approximately 5km SE of Jacinth; the Mojave Prospect, approximately 80km east of Jacinth and; the Gulliver's Prospect.

4.1.3. Red Metal 2005-2009

Extensive drill programs were conducted on EL3364 and other tenements in the area. Results showed unprospective sands with low-grade mineralised zones.

4.1.4. Cristal 2008-2013

EL5253 was first granted as EL4051 on the 25th of February 2008. In August of that year logistical reconnaissance took place across the tenement to investigate access. Literature reviews were also undertaken.

In 2009 the tenement was reduced by 38% or 23 blocks.

Between 2010 and 2012 work focussed on reviewing data from the previous program completed within the Eucla Basin in EL3495. This program successfully discovered the 'Barton' prospect. As a result of this discovery, Bemax committed its resources towards clarifying results and completing work investigating characteristics of this deposit.

An air-bourne survey was flown by UTS Geophysics Pty Ltd using a Cessna 206-H in 2013. The survey was commissioned to collect both aeromagnetic and radiometric data. That data was received by Cristal in early October 2013 and then sent to Vector Research Pty Ltd in Perth for post-processing. The processed data was received from Vector Research in early January 2014.

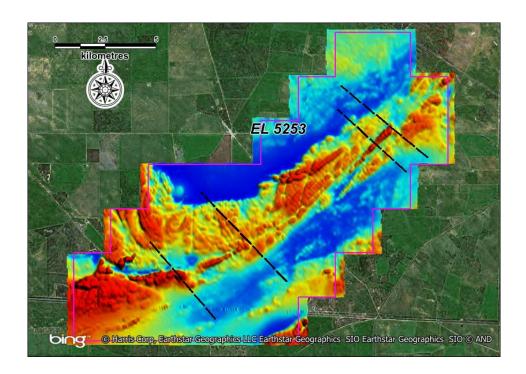
SURVEY SPECIFICATIONS

The survey was flown using the MGA94 coordinate system (a Universal Transverse Mercator projection) derived from the Geocentric Datum of Australia and was contained within zone 52 with a central meridian of 129 degrees and zone 53 with a central meridian of 135 degrees.

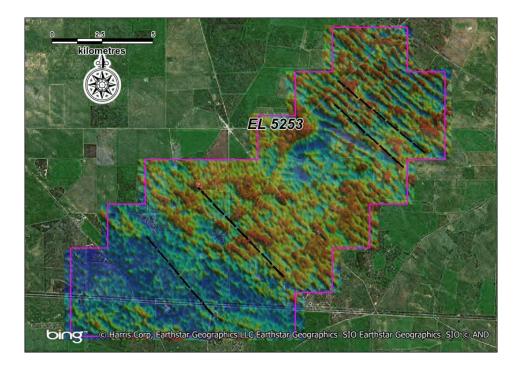
Table 2. Airbourne Survey Specifications.

PROJECT NAME	LINE SPACING	LINE DIRECTION	TIE LINE SPACING	TIE LINE DIRECTION	SENSOR HEIGHT	TOTAL LINE KM
Area 1	100m	090-270	1000m	000-180	20m	1,499
Area 2	100m	090-270	1000m	000-180	20m	6,699
Area 3	100m	090-270	1000m	000-180	20m	1,414
Area 4	100m	090-270	1000m	000-180	20m	1,334
TOTAL						10,946

Results show anomalous radiometric (particularly thorium) lineaments oriented westnorthwest to east-southeast. That orientation is sub-parallel to the orientation of the tertiary barrier/shoreline position as shown on SARIG data.



<u>Figure 2.</u> Aeromagnetic image (TMI RTP) showing the strong basement magnetics overlain by subtler linear anomalies (black dashed lines provide guidance as to the orientation)



<u>Figure 3.</u> Semi-transparent image of the Thorium channel of the radiometric data. The dashed black lines shown in Figure 2 have been retained for reference.

5. RESULTS AND INTERPRETATIONS

The airborne magnetic data also shows some subtle lineaments aligned in the same direction as the above mentioned lineaments, as shown in Figure 2. It may be possible that the radiometric anomalies are simply reflecting the Holocene dunefield which comprises the current topography.

Historic drilling in the area infers that the majority of the (Ooldea) sands in the tenement area represent offshore marine facies and that conditions for significant heavy mineral concentration were not well developed. Dark heavy minerals are always present but usually at very low concentrations (generally less than 0.1% visual estimate).

6. CONCLUSIONS

This area was acquired as it appears to encompass a topographic feature that resembles the paleo-shoreline that hosts the Jacinth-Ambrosia and Tripitaka deposits. During 2014 Cristal staff prepared for the intrusive exploration program that formed part of our budgeted work program. A site visit was undertaken by senior staff and access to the public road reserves as a site for drilling was sought and approved by the Manager, Technical Services & Works for the District Council of Ceduna. That visit also saw the assessment of the surface geology as mentioned above. Further, a Plan for Environmental Protection and Rehabilitation (PEPR) was prepared by Cristal for PIRSA. Finally, information was requested of the SA utilities suppliers as to the location of underground services such as power, water, gas and telecommunications.

During July 2014 a more detailed review of the local geology was undertaken and it was during that time that unprospective nature of the geology of the district was discovered. The geological logs created by Red Metal, and the interpretation discussed by both Red Metal and Iluka geologists highlight the lack of what could be interpreted as a prospective beach sand unit.

In light of that review the decision was taken that it was not in Cristal's interest to spend money on drilling in an area with such low prospectivity and so the planned drilling was cancelled.

The licence is due for renewal in late January 2015 and, given that it is extremely unlikely that PIRSA will renew the licence, and that it has such low prospectivity, it was decided to surrender the licence in total.