ILUKA RESOURCES LIMITED

TECHNICAL REPORT

ILUKA-TR-T18334

EL4449 Swan Reach
Annual and Final Report

15/03/2010– 20/02/2014

BY

Paul Smith

Date: 05/05/2014

AUTHOR KEYWORDS: Exploration, Murray Basin, Swan Reach, Delamerian, Heavy Minerals, Loxton Sand, Parilla Sand, Loxton-Parilla Sand, Blanchetown Clay, Geera Clay, North West Bend Formation

ACN: 34 008 675 018

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF DIGITAL DATA

EL4449_201402_F_01_Final_Report.pdf	Final Report
EL4449_201402_F_02_Plans.pdf	Location Plans
EL4449_201402_F_03_Appendix1	2012 Goldfields Australasia EL4449 Annual Technical Report
EL4449_201402_F_04_Verification_List.txt	File Verification

EXECUTIVE SUMMARY

The following report covers all work completed by Iluka Resources on Exploration Licence (EL) 4449 from the 15th of March 2010 to the 20th February 2014. The tenement was fully relinquished on the 24th of February 2014. This is the final report for EL4449.

EL4449 is located in Riverland district South Australia approximately 20 kilometres south of Morgan.

No drilling was undertaken by Iluka Resources. A total of 13 holes were drilled by previous tenement holders Goldfields Australasia for an advance of 2111.4m. Results of this drilling have previously been submitted to DMITRE.

Drilling undertaken in 2013 by Iluka Resources on tenements to the north (EL4452 and EL5069) revealed that the tenement holds no prospectivity for further mineral sands exploration and as a consequence has been fully relinquished.

1. INTRODUCTION

The following report is submitted to fulfil the annual reporting requirements for Exploration Licence (EL) 4449. It covers the work undertaken by Iluka Resources Ltd over the reporting period from 15th of March 2010 to the 20th February 2014.

1.1 Tenure

The EL4449 licence area was originally granted to Goldfields Australasia on the 15th of March 2010 for a period of two years over an area totalling 740 square kilometres. Ownership of the tenement was transferred to Iluka Resources Limited for heavy mineral sand exploration on the 8th of July 2013.

A full surrender of the tenement was undertaken on the 20th February 2014.

1.2 Location

EL4449 is located on the western margin of the Murray Basin, 20km south -south west of Morgan in the Riverland district of SA. The tenement is part of a suit of tenements known as the Delamerian tenements that extend north and east along the north-west margin of the Murray Basin. Access to the tenement is via the Sturt Hwy. Unsealed roads and tracks provide access to the drill targets. Table 1 shows the Map sheets and current coordinate extent of the license boundary.

Table 1: Map sheets enclosing EL4449 and coordinates of the tenement boundary.

Map Sheets			
1:250,000		***1:100,000***	
Adelaide	SI5409	Mannum	6728
Renmark	SI5410	Morgan	6829
		Swan Reach	6828
		Swan Reach	6729
Geographic Coordinates (MGA Zone 54, GDA94)			

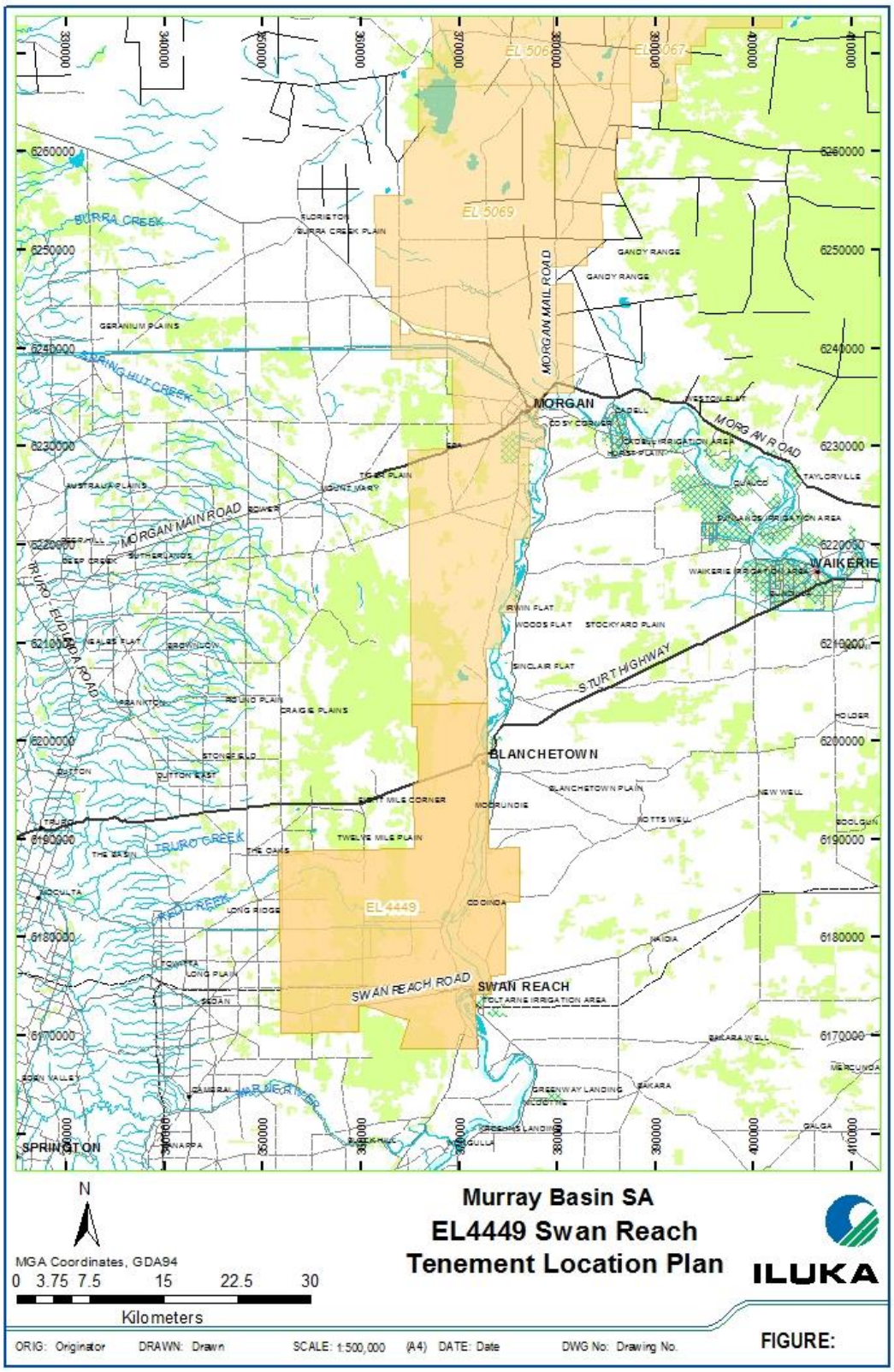


Figure 1: EL4449 Tenement Location Plan

1.3 Iluka's Exploration History and Rationale

Iluka Resources exploration rationale in the Murray Basin has been to target the mineralised Loxton-Parilla Sand (LPS) sediments deposited during the Pliocene marine regression, concentrating on higher grade, coarse-grained strands in regions of favourable mineral assemblage. The exploration for heavy mineral sand deposits has been performed using two techniques as described below;

The first technique utilises filtered airborne magnetics as a first pass coverage of the licence to delineate direct drill targets from magnetic anomalies. The magnetic information is derived from both airborne magnetic surveys commissioned by Iluka Resources, and state government based magnetic data.

The second technique involves the planning of drilling traverses based on previous drilling data, regional structural contour maps, detailed digital terrain models, and the utilisation of airborne magnetics. Drilling traverses usually commence with wide-spaced holes to investigate the broad geological setting, and then infilling to close-spaced drilling as required by geology and mineral intersections.

2. GEOLOGY

2.1 Regional Geology

The Murray Basin has been described as a shallow, intracratonic Cainozoic basin covering an area of 300,000 km^2 in south eastern South Australia, south-western New South Wales and north-western Victoria (Brown & Stephenson, 1991). The Murray Basin is flanked by low mountain ranges of Proterozoic and Palaeozoic rocks.

Much of the sedimentary sequence within the basin is the result of repeated marine incursions from the southwest, with the latest transgressive-regressive event resulting in deposition of the Late Miocene to Late Pliocene Loxton-Parilla Sand (LPS). These sediments were deposited in shallow-marine, littoral and fluvial conditions and comprise fine to coarse-grained, generally well-sorted sand, with minor clay, silt and gravel and host the Murray Basin mineral sand deposits (Brown & Stephenson, 1991).

Overlying the LPS in the northern and eastern Murray Basin is the Shepparton Formation. This deposit style consists of mixed fluvial channel and floodplain deposits, including some aeolian sediments. The lithology of the Shepparton Formation varies between gravel and clay. The source material varies between regions, leading to the subdivision of the unit based on geomorphic forms and soils, but all are consistent with Riverine Plain sedimentation (Brown & Stephenson, 1991).

A unit of greenish grey Blanchetown Clay disconformably overlies the Parilla Sand in many parts of the basin. The unconformity is often marked by a weathering profile that is locally siliceous or lateritic and termed the Karoonda Surface (Brown & Stephenson, 1991). The Blanchetown Clay is a fluvio-lacustrine deposit with most sedimentation taking place in a large freshwater lake. Within South Australia, the unit was deposited together with the Bungunnia Limestone (Douglas and Ferguson, 1988).

Disconformably overlying the Blanchetown Clays is the Quaternary Woorinen Formation. This formation is described as consisting of "red-brown siliceous silty sand, red calcareous silty clay and sandy clay" (Brown & Stephenson, 1991). It is generally 2-3m thick, but contains east-west longitudinal dunes that can locally be considerably thicker. The Woorinen Formation was deposited in an aeolian environment. Other aeolian landforms have been identified on the basin, particularly the Lowan/Molineaux Sands occurring in the western part of the Murray Basin. These Dune Fields occur as three tongues otherwise known as the Sunset Desert, Big Desert and Little Desert. The dune patterns and types are different from the tear shaped east-west dunes of the Woorinen Formation (Douglas and Ferguson, 1988).

Disconformably overlying the Blanchetown clay on the western and north western basin margins is the Pooraka Formation. This formation generally forms "low to high-angle alluvial and colluvial fans adjacent to basin margins" (Brown and Stephenson, 1991) and ranges from 1 to 5m in thickness. As the material within the Pooraka formation is sourced from the surrounding Curnamona Province and Adelaidean sediments it is classified as a composite morphotectonic unit.

2.2 Local Geology

Along the north western margin off the Murray Basin, Murray Basin sediments on-lap a succession of metasediments, volcanic and granite rocks of Neoproterozoic to Early Palaeozoic age of the Adelaide Geosyncline. Towards the end of late Cambrian times, folding metamorphism and emplacement of granite during the Delamerian Orogeny affected both the Cambrian and Precambrian rocks of the Adelaide Geosyncline west of the Torrens Hinge Zone. This zone is known as the Delamerian fold belt. Aeromagnetic images of the northern Murray Basin display a large arcuate zone of curvilinear magnetic high anomalies stretching from south of the Broken Hill Block to the southwest towards the eastern Mount Loft Ranges (Rankin et. al. 1991). It is likely that this structurally complex region was active during the deposition of the Murray Basin sediments. If the faults were active during the deposition of the Loxton-Parilla Sand (LPS), there is the potential for localised stacked sequences as a result of minor marine transgressions or still stand positions.

Exploration for heavy mineral sand within the Murray Basin is focused on intersecting the littoral marine sediments of the Pliocene aged Loxton-Parilla Sand, in particular sediment of relict strandlines that commonly host placer deposits of heavy mineral sand. This beach facies unit is very well developed, with well defined foreshore - surfzone - lowershore regressive sequence. The best heavy mineral accumulations manifest themselves within the foreshore within this unit. Unlike in the majority of the rest of the Murray Basin, on the northern margin of the Murray Basin the LPS may be separated into its separate components based on their mode of deposition. The Parilla Sand (PS) is the fluvial to fluvio-lacustrine portion of the LPS and the Loxton Sand (LS) is shallow marine to littoral portion of the LPS. In the tenement it is anticipated that the Loxton Sand as distinct form the LPS will be the target horizon for the program.

The diverse range of lithologies comprising the geosyncline includes many medium- to high-grade metamorphic and intrusive units that are unstable at surface conditions and therefore friable and readily eroded. These rocks could have made a significant contribution to the sediment load within the Murravian Gulf, including available heavy minerals.

3. EXPLORATION WORK COMPLETED

3.1 Drilling

No drilling activities were undertaken by Iluka Resources during the reporting period. Drilling undertaken in 2013 by Iluka Resources on tenements to the north (EL4452 and EL5069) and a detailed data review of previous mineral sands exploration in the region revealed that the tenement holds no prospectivity for further mineral sands exploration.

Previous tenement holders Goldfields Australasia Pty Ltd drilled a total of 13 aircore/ mud rotary/ diamond holes (Figure 2) for advance of 2111.4m as part of their Blanchetown Target (Dunn, 2012). Results of this program have been previously reported by Goldfields Australasia in Section 7.2.5.4 of the 2012 Delamerian Project annual report for EL3735, EL3736, EL3737, EL3970, EL4425, EL4449, EL4452, EL4842, EL4871 and EL4872 and are included with this report as Appendix 1.

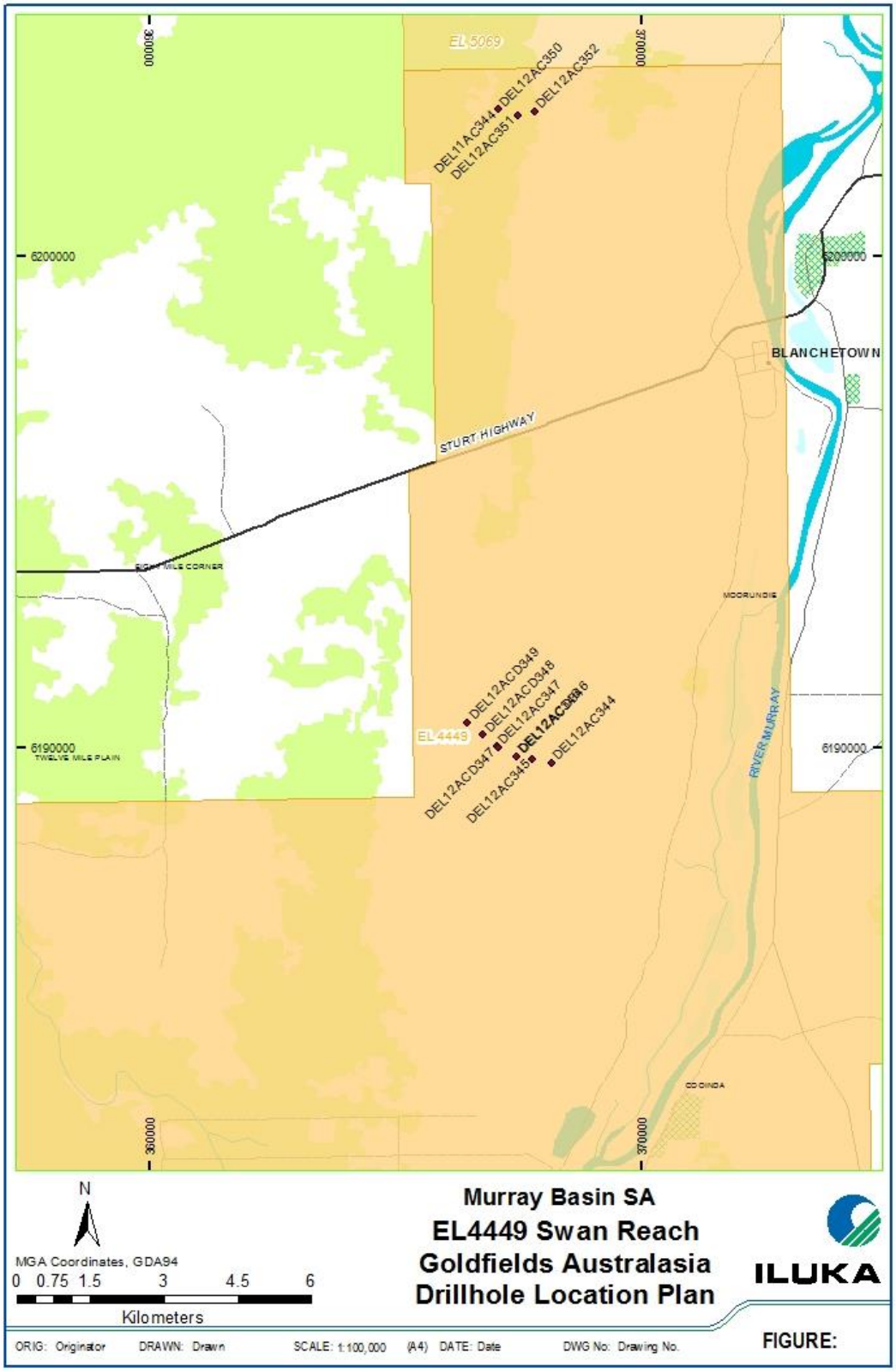


Figure 2: Goldfields Australia Drillhole Location Plan

4. CONCLUSION

No drilling was undertaken by Iluka Resources. A total of 13 holes were drilled by previous tenement holders Goldfields Australasia for an advance of 2111.4m. Results of this drilling have previously been submitted to DMITRE.

Drilling undertaken in 2013 by Iluka Resources on tenements to the north (EL4452 and EL5069) revealed that the tenement holds no prospectivity for further mineral sands exploration and as a consequence has been fully relinquished.

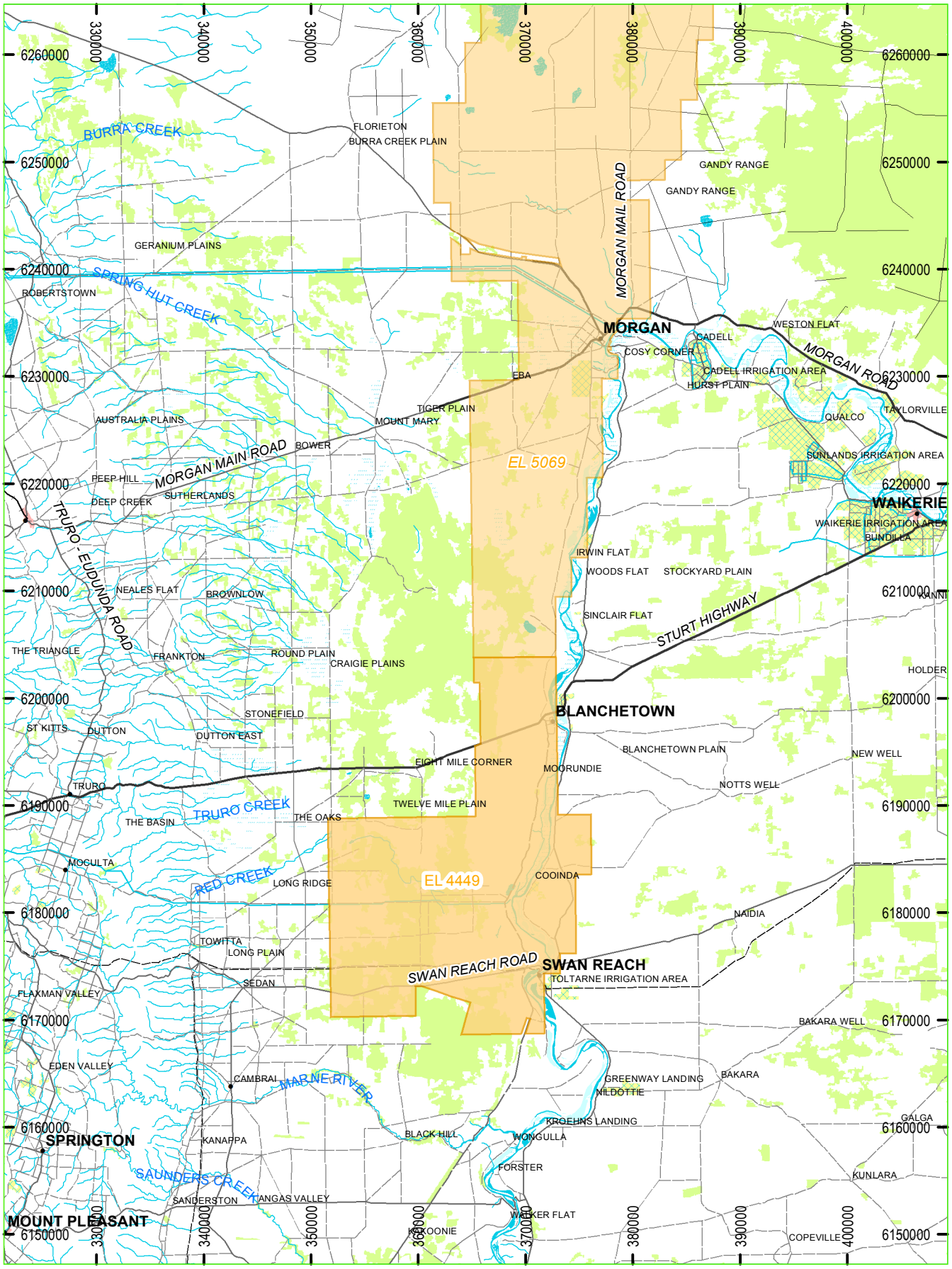
5. REFERENCES

Brown, C.M. and Stephenson, A.E., 1991. *Geology of the Murray Basin Southeastern Australia,* Bureau of Mineral Resources, Geology and Geophysics Bulletin 235

Dunn, A. 2012. Delamarian Project Annual Technical Report 2012. Goldfields Australasia Pty Ltd.

Douglas, J.G & Ferguson, J.A (Eds), 1988: *Chapter 8 – Tertiary* by C. Abele et al, in Geology of Victoria*,* Victorian Division Geological Society of Australia Incorporated, Melbourne, pp 265-272.

Rankin, L.R., Clough, B.J. and Gatehouse, C.G., 1991. *Mafic Suites in Basement Beneath the Murray Basin: New Data for the Early Palaeozoic History of the Tasman Orogenic Province.* PIRSA report book no 91/44 (DME 281/89)

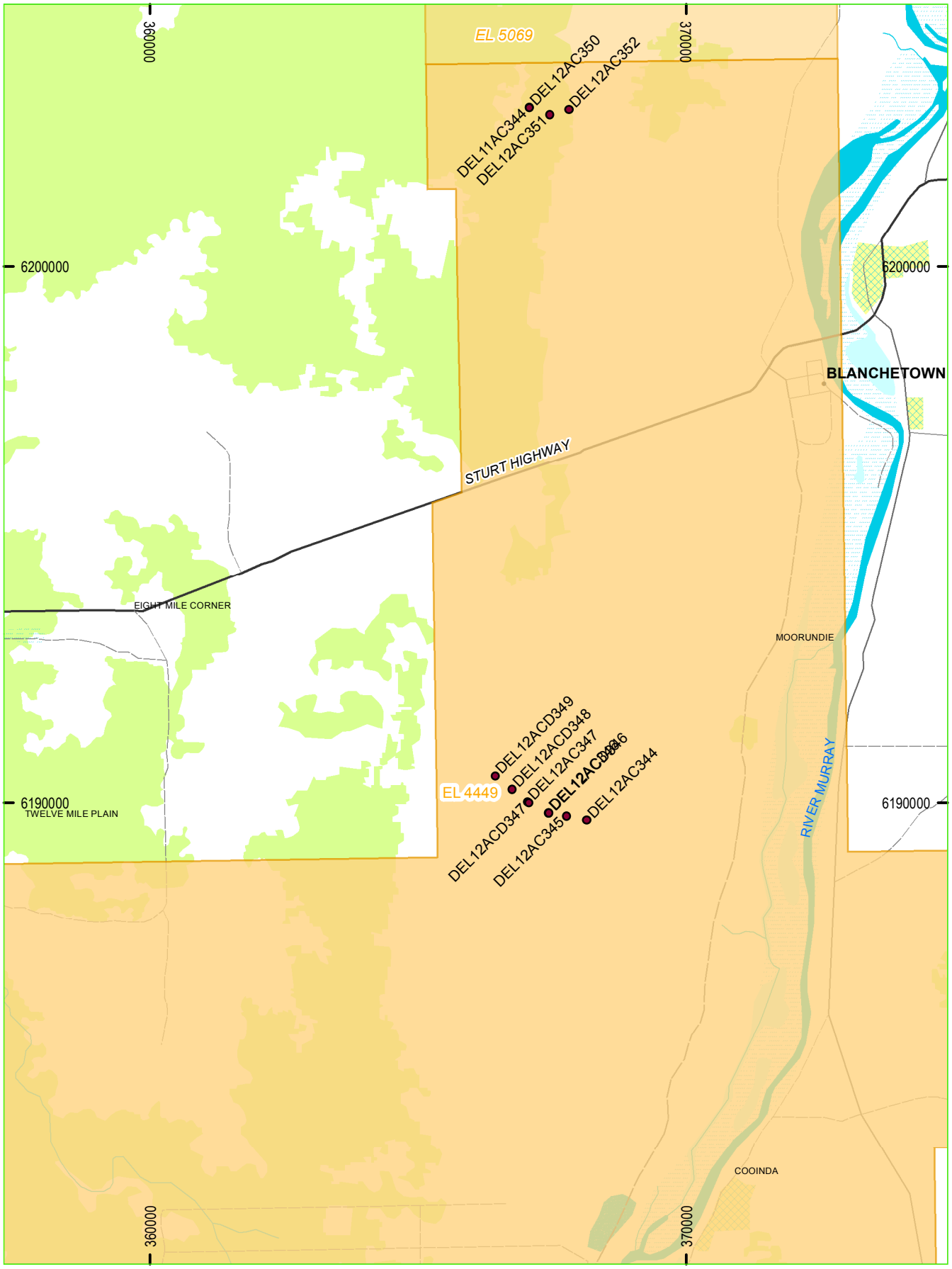


MB South Australia
EL4449 Swan Reach
Tenement Location Plan

ILUKA

ORIG: Originator DRAWN: Drawn SCALE: 1:500,000 (A4) DATE: Date DWG No: Drawing No.

FIGURE:



N

MGA Coordinates, GDA94

0 0.75 1.5 3 4.5 6

Kilometers

Murray Basin SA
EL4449 Swan Reach
Goldfields Australasia
Drillhole Location Plan

ILUKA

ORIG: Originator DRAWN: Drawn SCALE: 1:100,000 (A4) DATE: Date DWG No: Drawing No.

FIGURE:

DELAMERIAN PROJECT– SOUTH AUSTRALIA

ANNUAL TECHNICAL REPORT

For the period
29th of August 2011 to 28thth of August 2012

FOR
EXPLORATION LICENCES

EL 3735 (Canegrass),
EL 3736 (Koomooloo),
EL 3737 (Morgan),
EL 3970 (Braemar)
EL 4425 (Sturt Vale)
EL 4449 (Swan Reach)
EL 4452 (Mt Mary),
EL 4842 (Quondong Vale),
EL 4871 (Oakbank) &
EL 4872 (Oakvale),

Owned and Operated by
GOLD FIELDS AUSTRALASIA PTY LTD
ABN 59 097 624 600

DISTRIBUTION:		COMPANY:	Gold Fields Australasia Pty Ltd
DMITRE	(1)	AUTHOR:	A. Dunn
Gold Fields Australasia Pty Ltd	(1)	DATE:	29th of September 2012
		PROJECT CODE:	

TABLE OF CONTENTS

The digital file name for all of the above items is: Delamerian_Project_JV_Annual_Report_2012_Text.pdf

LIST OF TABLES

LIST OF FIGURES

LIST OF DIGITAL FILES

File name	Description
Delamerian_Project_JV_Annual_Report_2012_Text.pdf	Gravity Readings
PV_SASG4_SGEO2012A.txt	Text, Figures & Tables
PV_SASL4_COLL2012A.txt	Drill Hole Collar Details
PV_SADL4_GEO2012A.txt	Drill Hole Lithology Details
PV_SADS4_SURV2012A.txt	Drill Hole Downhole Survey
PV_Verification_List_2012.txt	Verification List – 2012
LIB_Tables_for_Report.zip	Logging Codes

Key Words:

Gold Fields Australasia / Neoproterozoic / Kanmantoo / Canegrass / Florieton / Haylands South / Blanchetown / Gold / Orogenic / Nackara Arc / Murray Basin / Chowilla / Renmark / Air-core drilling / Mud-rotary drilling/ Diamond core drilling/

LIST OF APPENDICES: **FILE NAME:**

APPENDIX 1:	Drill Hole Collar Details	PV_SASL4_COLL2012A.txt
APPENDIX 2:	Gravity Readings	PV_SASG4_SGEO2012A.txt
APPENDIX 3:	Drill Hole Downhole Survey Details	PV_SADS4_SURV2012A.txt
APPENDIX 4:	Drill Hole Lithology Details	PV_SADL4_GEO2012A.txt

1 SUMMARY

The Delamerian Project is a belt-scale greenfields exploration project targeting multi-million ounce sediment hosted orogenic gold deposits. The project is comprised of tenements wholly held and operated by GFA as well as two Joint Venture (JV) agreements with Murray Zircon N.L, see Figure 1 for the location of these tenements. All of the technical details of the JVs will be submitted with Murray Zircon N.L. annual report as an appendix. Exploration on GFA tenements for the AEA period covered the Florieton and Canegrass prospects as well as Haylands South and Blanchetown target areas. The work carried out in the reporting period from the 29th of August 2011 until 28th of August 2012 comprised of ground magnetics and gravity surveys as well as drill testing all of the aforementioned targets.

A total of 205 line kilometres of ground magnetic data was collected over the Florieton prospect with 239gravity stations collected for both the Canegrass and Florieton prospects. 73 holes were completed for at total advancement of 8,909.4m, which comprised of 94.6m of diamond core, 1077.8m of Mud Rotary (MR) and 7917m of Air-Core (AC). Difficult ground conditions near Blanchetown necessitated the need to change some of the planned AC drilling to MR with short diamond core tails.

Results from this work illustrated that there were two separate mineralising events at the Florieton prospect and that the gold at the Canegrass prospect was related to a north-south trending arsenic and pyrite-rich zone. Copper and zinc anomalism was noted in the reconnaissance drilling near Blanchetown, which was coincident with breaks in the magnetic features. This area still remains prospective for VMS-style of mineralisation, however, the lack of gold anomalism is discouraging for locating an orogenic Au deposit.

TABLE 1: EXPLORATION ACTIVITIES FOR PERIOD 29TH OF AUGUST 2011 TO 30TH OF AUGUST 2012 BY TENEMENT

Tenements	AC Drill holes	AC Drill (metres)	MR/ DD Drill holes	MR Drill (metres)	DD Drill (metres)	Ground Magnetics (line kilometres)	Gravity (number of stations)
EL3735	18	3,617					132
EL3736							
EL3737	6	1,104					
EL3970	36	2,065				205	107
EL4425							
EL4449	9	1,131	4	1077.8	94.6		
EL4452							
EL4842							
EL4871							
EL4872							
Totals	**69**	**7,917**	**4**	**1077.8**	**94.6**	**205**	**239**

2 INTRODUCTION, HISTORY AND EXPLORATION RATIONALE

This report outlines exploration associated with the JVs for Delamerian Project undertaken during the period from 29th of August to 28th of August 2012. A total of $1,693,390 was spent on exploration activities for GFA's wholly owned and operated Delamerian Project during the reporting period.

The GFA Delamerian Project comprises ten exploration licences (ELs:, 3735, 3736, 3737, 3970, 4425, 4449, 4452, 4824, 4871 and 4872) that are owned and operated by Gold Fields Australasia Pty Ltd (GFA). Additionally, GFA entered into two Joint Ventures (Pine Valley and Pine Valley Number 2) which are currently held with Murray Zircon N.L. to expand its exploration rights over the Delamerian Orogen.

The GFA owned and operated tenements are located within the Delamerian sub province along the north-western margin of the Cenozoic Murray Basin. The area has been interpreted to be prospective for orogenic style gold mineralization hosted within Cambrian sediments and buried beneath the Cenozoic cover. This position was thought to be in a similar structural setting as the Paterson sub-province that hosts the large Telfer Au-Cu deposit (>26Moz deposit), which is the primary target analogue. Other parameters that are considered important in the formation of large sediment hosted orogenic gold deposits are also evident within the Delamerian Sub-province. These include cratonic margin mantle tapping structures; open folding of a thick sequence of back-arc basin turbidites (the Kanmantoo Group) which include reduced fine-grained sediments; major orocline subparallel fault structures; long lived intersecting large scale lineaments; and syn- to post-orogenic granitoid intrusions.

Exploration associated with the Delamerian Project also extends onto two Joint Ventures (JVs) with Murray Zircon NL. The original Joint Venture involved EL 3627 (now EL 4855) and EL 3539 (now EL4820) tenements, which were originally owned by Australian Zircon NL and Steiner Holdings Pty Ltd (a wholly owned subsidiary of Australian Zircon NL) respectively but are now operated by Murray Zircon NL. In November 2007, GFA executed an agreement with Australian Zircon NL in relation to these tenements. The Agreement entitles GFA as operator to earn an 80% participating interest in gold resources in the joint venture tenements by spending at least $1.8 million in exploration on these tenements within the next 5 years. In February 2012, GFA entered into a second agreement (PV JV#2) with Murray Zircon NL for the Exploration Licenses (EL3627, EL4820, EL4016, EL4017, EL4018, EL4180, EL3786 and EL4819). Any technical details for the JV tenements will be attached to Murray Zircon annual technical report.

3 TENURE

The current tenement holdings consist of 10 tenements for a combined total area of 8,463 km². A tenement location plan is presented in Figure 1 and the tenement details are outlined in Table 2.

TABLE 2: DELAMERIAN PROJECT TENEMENT DETAILS AS 28TH OF AUGUST 2012.

Lease	Lease Name	Current Area (Km2)	Application Date	Grant Date	Commitment	Expiry Date
EL3735	CANEGRASS	962	1/5/2012		$250,000	
EL3736	KOOMOOLOO	946	1/5/2012		$240,000	
EL3737	MORGAN	982	1/5/2012		$250,000	
EL3970	BRAEMAR	996	3/23/2007	11/5/2007	$125,000	11/4/2012
EL4425	STURT VALE	832	8/25/2009	1/27/2010	$110,000	1/26/2014
EL4449	SWAN REACH	655	8/31/2009	3/15/2010	$95,000	3/14/2014
EL4452	MOUNT MARY	740	8/31/2009	3/15/2010	$100,000	3/14/2014
EL4842	QUONDONG VALE	975	6/28/2011	3/14/2012	$250,000	3/13/2014
EL4871	OAKBANK	777	6/28/2011	8/29/2011	$210,000	8/28/2013
EL4872	OAKVALE	598	6/28/2011	8/29/2011	$180,000	8/28/2013
TOTAL		**8,463**			**$1,810,000**	

4 LOCATION AND ACCESS

The Delamerian Project tenements consist of a contiguous block of licences from the State border with New South Wales in the North Eastern Pastoral District of South Australia, through to Swan Reach in the Riverland District. Access can be gained from the Barrier Highway either via Burra or via Yunta, and from the Thiele Highway in the south via Morgan.

A relatively dense network of roads and unsealed farm tracks provide reasonably good access within the licence areas. The tenements are located on the following Map Sheets:

- 1:250,000 Sheet SI 54-02 (Olary)
  - Yunta (6832), Anabama (6932) and Oakvale (7032) 1:100k sheets
- 1:250,000 Sheet SI 54-06 (Chowilla)
  - Murkaby (6831), Lilydale (6931), Canopus (7031), Koomooloo (6830), Parcoola (6930) 1:100k sheets
- 1:250,000 Sheet SI 54-10 (Renmark)
  - Morgan (6829) and Swan Reach (2828) 1:100k Sheets
- 1:250,000 Sheet SI 54-5 (Burra)
  - Florieton (6730) and Caroona (6731) 1:100k Sheets
- 1:250,000 Sheet SI 54-9 (Adelaide)
  - Eudunda (2787) and Mannum (2827) 1:100k Sheets

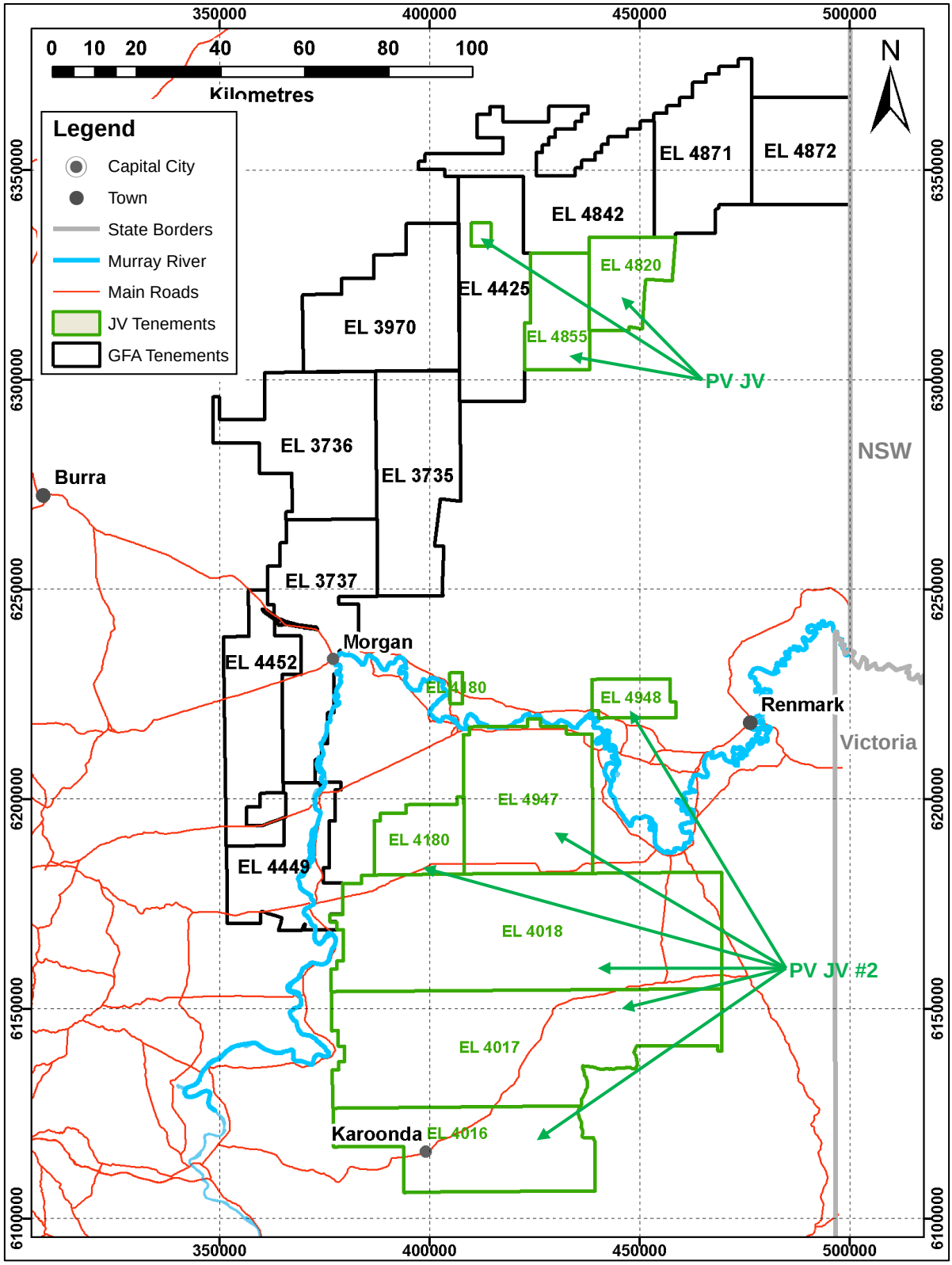


Figure 1 illustrates the location of the GFA's wholly owned and operated tenements (black outlines) along with Joint Venture tenements (green outlines). Coordinates on map are from the GDA 1994 spheroid with the Zone 54 projection.

5 REGIONAL GEOLOGY

The Delamerian Project tenements are located along the north-western margin of the Cenozoic Murray Basin. Cenozoic basin stratigraphy comprises a thin blanket of Quaternary sediments overlying Tertiary fluvial to shallow marine sediments that are flanked to the west and north by Neoproterozoic to Cambrian rocks of the Adelaide Geosyncline and Kanmantoo Group.

Basement geology under the Murray Basin is poorly understood and largely reliant on interpretation of aeromagnetic and gravity geophysical data. The basement in project area is interpreted to be largely comprised of the Cambrian Kanmantoo metasediments intercalated with magnetic volcanic and intrusive rocks, which are intruded by Cambro-Ordovician felsic (granitic) and mafic to intermediate (gabbro and diorite) intrusions as well as extrusive (basalt and dolerite) rocks.

GFA has identified the Delamerian fold and thrust belt sub-province, and in particular the region of maximum flexure (oroclinal bending) through the Nackara Arc region, as being highly prospective for sediment hosted orogenic style gold mineralization, potentially analogous to Telfer style Au-Cu mineralization (>26Moz deposit).

Parameters considered important for the formation of large orogenic gold deposits, such as Telfer, that are evident within the Delamerian sub province, include:

- The deep marine host sediments of the Cambrian age Kanmantoo Group which have been inverted, folded and faulted in response to at least one major orogenic event, the Cambro-Ordovician Delamerian Orogeny.

- A second orogenic event, the Ordovician Benambran Orogeny, is also likely to have impacted on the Delamerian Sub-province. This second orogenic event is responsible for the vein hosted orogenic gold deposits in the Bendigo Zone of central Victoria (approximately 50Moz of gold production to date).

- The Delamerian Sub-province or Fold Belt takes the form of an oroclinal bend in response to cratonic buttressing from the Archaean to Proterozoic Gawler and Curnamona Cratons located to the west and north. This oroclinal bending is thought to focus deformation and thus potential gold bearing orogenic fluids migrated towards the axis of the bend.

- Other important parameters include major cratonic margin mantle tapping structures, open folding of the thick sequence of back-arc basin turbidites (the Kanmantoo Group) which are interpreted to include reduced fine grained sediments, along with sub marine lavas and intrusive, Greenschist Facies metamorphism, major orocline subparallel fault structures, long lived intersecting large scale lineaments or cross-orogen structures and the potential for syn to post-orogenic granitoid intrusions.

6 PREVIOUS EXPLORATION

A summary of relevant or related previous exploration prior to GFA's tenure is compiled from open file reports and is outlined in Anderson (2008).

6.1 Gold Fields Australasia Exploration (September 2006 – August 2007)

Exploration undertaken by GFA during the 2006/2007 reporting period comprised the following:

- Reprocessing and interpretation of existing open file geophysical (gravity and aeromagnetic) data.
- 'SkyTEM' time-domain electromagnetic trial survey over 156 line kilometres.
- Regional grid based helicopter supported gravity surveying (471 gravity stations over a 1.5 x 1.5 km grid).
- Review of environmental considerations.
- Air-core drilling (15 air-core holes for a total of 2539 m).
- Multi-element geochemical and petrographic analyses.

Details of this exploration activity can be found in Anderson (2008).

6.2 Gold Fields Australasia Exploration (September 2007 – August 2008)

Exploration activities undertaken by GFA during the reporting period comprised the following:

- Geophysical data manipulation.
- Native title negotiations.
- Joint Venture agreement negotiations.
- Air-core drilling.
- Down-hole geochemistry.
- Petrography.
- Ground water analysis.
- Regional targeting and interpretation.

These activities were a continuation of the exploration programme that commenced during the 2006/2007 reporting period.

Details of this exploration activity can be found in Wehrle (2008).

6.3 Gold Fields Australasia Exploration (September 2008 – August 2009)

Exploration activity was aimed at testing five out of 10 regional targets generated by desk-top interpretation and integration of multiple GIS layers (predominantly geophysical data). Exploration activities comprised the following:

- Regional targeting and interpretation.
- A 2km x 2km ground gravity survey.
- Geophysical data manipulation.
- Air-core drilling.
- Down hole geochemistry.
- Petrographic descriptions of drill chips.
- Ground water analysis.

Details of this exploration activity can be found in Wawryk (2009).

6.4 Gold Fields Australasia Exploration (September 2009 – August 2010)

Exploration activities were aimed at testing three targets generated from desk-top study and anomalies identified from previous GFA air-core drilling. Exploratory work comprised the following:

- Project-wide interpretation of a regional structural framework from geophysical data.
- Surface geochemical sampling and regolith mapping.
- Inspection of historic drill holes.
- Air-core drilling.
- Diamond drilling.

Details of this exploration activity can be found in Wawryk & Kitto (2010).

6.5 Gold Fields Australasia Exploration (September 2010 – August 2011)

Exploration work during this period primarily focused on air-core drill testing of the Florieton Fault prospect. Air-core drilling at the Florieton Fault prospect represents a continuation of the drilling campaign commenced during previous reporting period, which consisted of the majority of the activities. Exploration activities completed during the reporting period comprised:

- Rock chip sampling.
- ASD analysis.
- Petrographic descriptions of diamond drill core samples.
- Air-core drilling.

Details of this exploration activity can be found in Kitto (2011).

7 EXPLORATION WORK

Exploration activities for the reporting period from 29th of August 2011 to 28th of August 2012 were primarily focused on the Florieton and Canegrass prospects as well as reconnaissance on the southern tenements. This involved ground geophysical surveys and air-core drilling for the Florieton and Canegrass prospects as well as reconnaissance air-core/ mud rotary/ diamond drilling of Haylands South and Blanchetown targets in the southern tenements. At total of 73 air-core/ mud-rotary/ diamond holes were drilled for an advancement of 8,909.4m. A further 205 line km of ground magnetics and 239 gravity stations were collected.

7.1 Ground Geophysical Surveys

7.1.1 Florieton Gravity Survey

The proposed survey was designed and carried out on a 200x400m east-west grid to help delineate the structural elements present at the Florieton prospect. The Florieton semi detailed gravity survey was acquired during February 2012 and comprised a total of 107 stations. Elevation control was acquired using a Trimble R7/R7 Differential GPS operating in real time kinetic, broadcasting corrections in real time via the use of a 35W high frequency radio (+ or - repeater as necessary) elevation accuracies were generally in the order of sub 5cm. This survey was not tied into any other surveys or topographic benchmarks due to its isolation from other Gold Fields previous surveys. Gravity data was acquired using a Scintrex GC5 Autograv by averaging 3x20 second stacks, with all readings tied to a relative base set up immediately adjacent to the Woolgangi Station guest quarters main entrance.

The resultant images from this survey were used in the structural interpretation for prospect, see Figure 2. Notably the gold trend from the drilling was mapped out by a north to north-north-east trending gravity low and the north-west trending series of lows is coincident with features evident in the magnetic surveys, see Appendix X for full data.

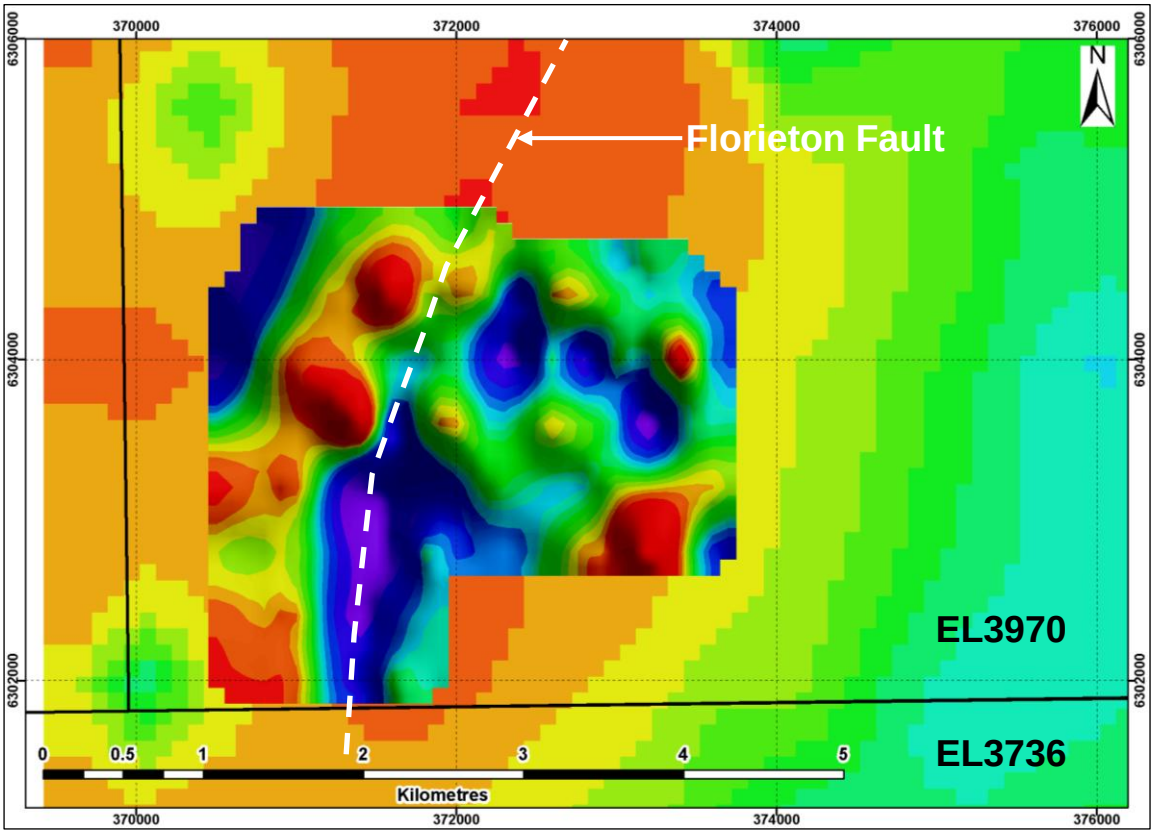


Figure 2 illustrates the Florieton first order residual gravity image from the recently completed survey on top of the regional dataset. Note that the interpreted Florieton Fault (dashed white line) is delineated by the gravity low trend. Coordinates on map are from the GDA 1994 spheroid with the Zone 54 projection.

7.1.2 Canegrass Gravity Survey

This survey was planned over the Canegrass prospect to resolve the gravity gradient evident in the regional datasets and was acquired on a 200x200m east-west oriented grid. The Canegrass semi detailed gravity survey was acquired during February 2012 and comprised a total of 132 stations. Elevation control was acquired using a Trimble R7/R7 Differential GPS operating in real time kinetic, broadcasting corrections in real time via use of a 35W high frequency radio (+ or - repeater as necessary) elevation accuracies were generally in the order of sub 5cm. This survey is yet to be not tied into any other surveys or topographic benchmarks due to its isolation from other Gold Fields Surveys. Gravity data were acquired using a Scintrex GC5 Autograv by averaging 3x20 second stacks, with all readings tied to a relative base, see Appendix X for full data.

The results from this survey illustrated that there was a subtle gravity ridge coincident with that seen in the regional image, see Figure 3. This gravity ridge was shown to be coincident with shallower depth to basement from the subsequent drilling data. It was also noted to be parallel to the identified pyrite-arsenic zone, which is interpreted to be associated with the mineralising event responsible to the deposition of gold.

Not Available - Survey Still Confidential

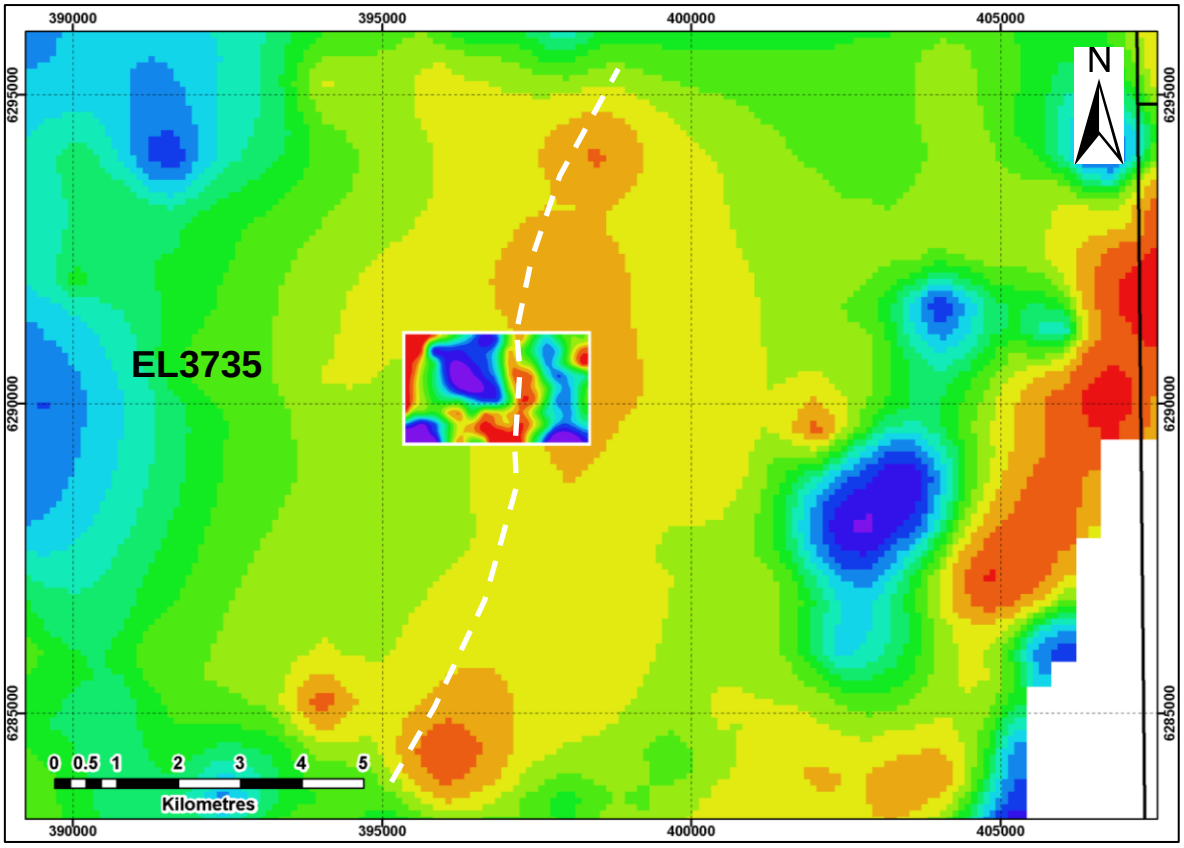


Figure 3 shows the second order residual image from the Canegrass prospect survey on top of the regional gravity image. Note that dashed white line represents the gravity gradient, which the prospect is at the flexure of it. Coordinates on map are from the GDA 1994 spheroid with the Zone 54 projection.

7.1.3 Florieton Ground Magnetic Survey

The Florieton Ground magnetic survey was conducted from June 14 through until June 25th, 2012, during which time a total of approximately 205 line-km of data was collected. Data was acquired using a Geometircs G859 alkali vapour magnetometer along 50m spaced EW survey lines. Data readings were acquired at 1Hz, corresponding to an along line sample density of 1 reading per metre, with a corresponding GPS position being collected in tandem with each reading. A Geometrics G856 was utilised as a base station, with diurnal correction of the data being performed on a daily basis. Care was taken in survey planning and during data acquisition to avoid aboriginal heritage areas present in the area. All data were compiled on a daily basis, with a final Quality control check and any additional manual despiking was performed at the conclusion of the project to produce the final TMI database. This was the basis of later derivatives and further processing to create a suite of images, see Appendix X for the full data.

The resultant images illustrated that there were very high amplitude features across the survey area. This has been interpreted to be surficial maghemite that is observed at surface and is evident in the magnetic susceptibility readings in the first three metres of drilling. Upward projections of 5, 10 and 15m was applied to the data to minimise the interference from maghemite. The bend in magnetic features that was evident in the regional surveys is also present in the ground magnetic survey, however, it appears that there are two features at this junction, see Figure 4. Thus may represent a thrust repetition of this magnetic unit at the Florieton prospect. Along with this there appears to be north-west trending features that are interpreted to be axial planar to the bend in the Nackara Arc, if projected to north-west they transect known intrusions.

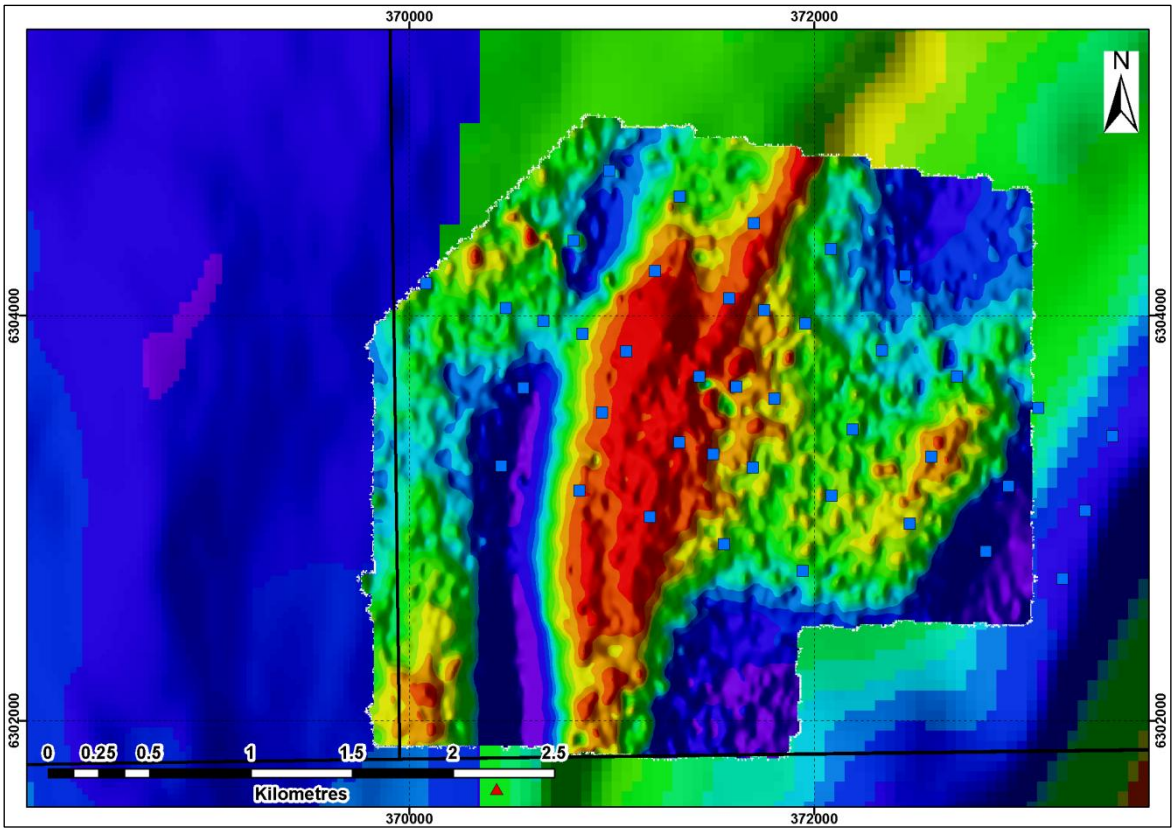


Figure 4 shows the image of the 15m upward projection of the Reduced To Pole (RTP) magnetic image from the Florieton prospect survey on top of the regional magnetic RTP images. Note that dashed white line represents the gravity gradient, which the prospect is at the flexure of it. Coordinates on map are from the GDA 1994 spheroid with the Zone 54 projection.

7.2 Drilling

A total of 73 air-core/ mud-rotary / diamond holes were completed for an advancement of 8,909.4m during the reporting period. Drilling concentrated on the Canegrass and Florieton prospects as well as reconnaissance drilling for the Blanchetown and Haylands South target areas, see Figure 5 for the drill locations. Due to the difficult ground conditions near Blanchetown some of the planned air-core holes were extend or re-drilled with mud rotary pre-collar and a short diamond core tail. A summary of the drilling can be found in Table 3 with the full drill information located in Appendices 2 to 5.

TABLE 3. DRILLING FOR THE REPORTING PERIOD AND DELAMERIAN PROJECT TO DATE DRILLING; METRES BY TENEMENT

Tenement Name	Tenement	2012 Reporting Period		Project-to-date	
		Metres	Holes	Metres	Holes
Canegrass	**EL3735**	**3,629.0**	**18**	**9,626.0**	**48**
Koomooloo	EL3736			3,652.0	46
Morgan	**EL3737**	**1,104.0**	**6**	**8,888.7**	**44**
Braemar	**EL3970**	**2,065.0**	**36**	**4,349.2**	**104**
Sturt Vale	EL4425			3,937.0	21
Swan Reach	**EL4449**	**2,111.4**	**13**	**2,111.4**	**13**
Quondong/Pine Valley	EL3623			225.0	1
	EL3624			9,214.0	50
	EL3627			2,247.0	13
	EL3539			208.0	1
Total		**8,909.4**	**73**	**44,458.3**	**341**

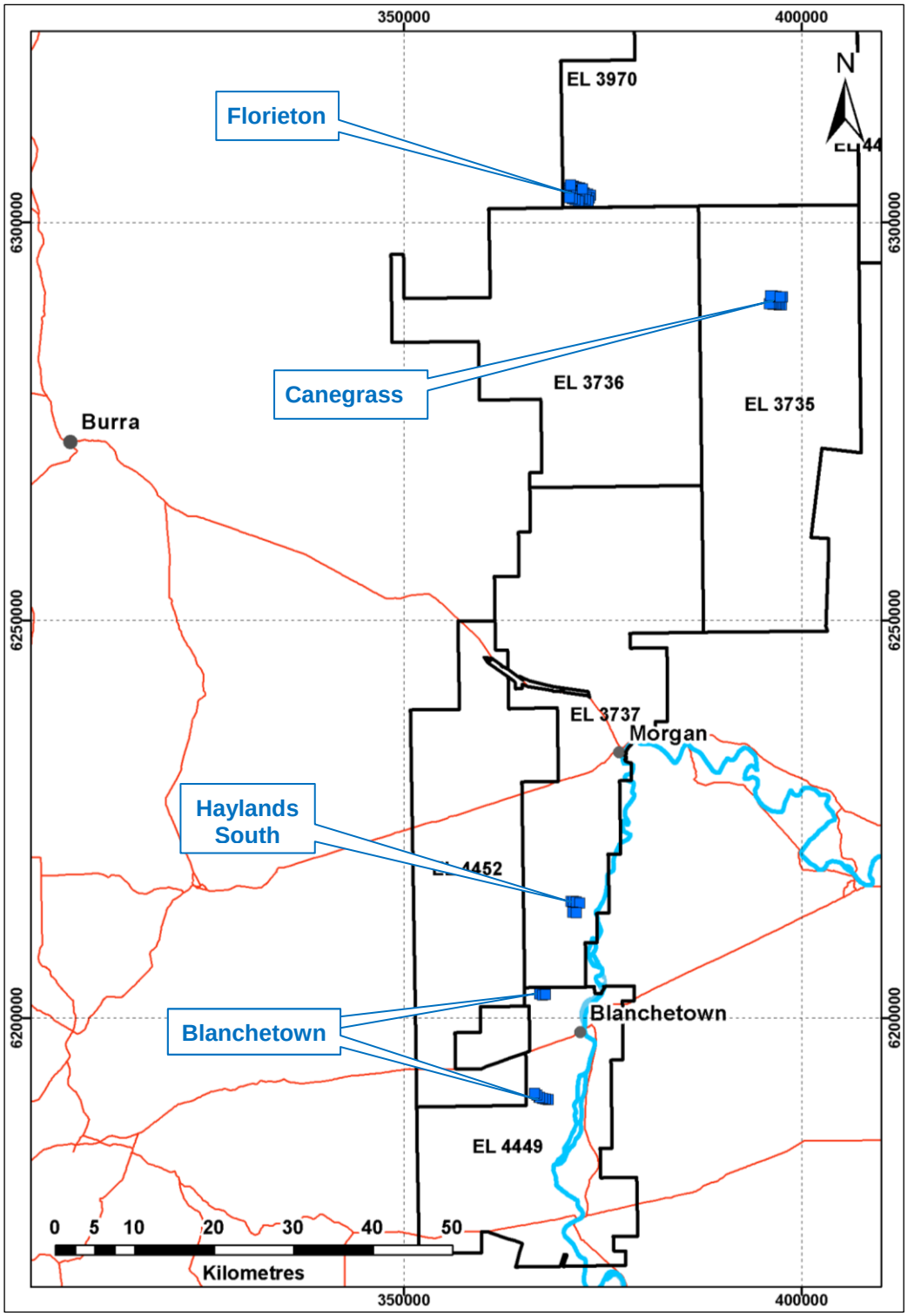


Figure 5 illustrates the location of drilling (blue squares) conducted during the reporting period. Coordinates on map are from the GDA 1994 spheroid with the Zone 54 projection.

7.2.1 Drilling Operations

7.2.1.1 Air-core - 2011

Drilling operations that were carried out during 2011 were completed by Drillit Exploration Services of Parkes, NSW. The air-core drilling utilised a truck mounted Hydco 1200H drill rig using 4.5" drill rods and three blade AC bit. This rig used an auxiliary Sullair 1150cfm x 350 PSI air compressor, supported by a Mitsubishi Canter 6x6 wheel drive truck carrying a 600L capacity of diesel fuel, and a Toyota Land Cruiser 4X4 for couriering personnel. Diesel fuel consumption averaged 600 litres per shift.

7.2.1.2 Air-core, Mud Rotary and Diamond - 2012

The Epsom (Victoria) based Australian Mineral and Waterwell Drilling Company (AMWD) was contracted to carry out the proposed drilling during 2012. They supplied a truck mounted Sandvik DE810 (equivalent to a UDR650) multipurpose rig to carry out the drilling of holes for the Canegrass prospect, Haylands South and Blanchetown target areas. The air-core and reverse circulation drilling utilised the onboard compressor as well as an auxiliary 1150cfm x 350psi air compressor, supported by a Mitsubishi Canter 6x6 wheel-drive truck and Scandia flat top truck with a carrying capacity of 9000L of water and 3500L of diesel fuel.

The mud-rotary drilling also utilised the Sandvik DE810 drill rig along with a Gardner Denver 5"x 6" mud pump and EMU 500 Mud unit (an environment mud re-cycler and sampling system) to collect any samples. The diamond drilling was carried out with the Sandvik DE810 multipurpose rig utilising the mud-rotary pre-collar lined with HQ size casing. Drilling was conducted using NQ2 size drill rods and generally 10 to 20m of core was collected for each hole drilled.

7.2.2 Drilling Effectiveness

Drilling effectiveness varied between the end of 2011 and the 2012 field season. The main reasons for this were the changes in ground conditions, drill capacity and drilling experience. At the end of 2011 and the 2012 field season there was a shift away from the shallow drilling at the Florieton prospects to the more deeply covered targets. In the more deeply covered areas flowing sands, plastic clays and aquifers interfered with the air-core drilling. This created difficult ground conditions which lead to the switch from air-core drilling at the Blanchetown target to the utilisation of Mud Rotary/ Diamond method.

A total of 66 out of the 73 air-core holes drilled, successfully intersected basement rocks. However, the majority of holes that failed to intersect Neoproterozoic-Cambrian basement were due to poor ground conditions which consisted of thick intervals of running sand, aquifers, bands of silcrete and partially lithified Tertiary sedimentary sequences. A reverse circulation hammer bit was used to penetrate the consolidated silcrete bands and lithified Tertiary cover sequence. However, difficulties were encountered in the aquifers with a build of air occurring in them whilst drilling and when the air pressure was released to change rods, the mixture of air, water and silt/ sand blocked the airways. A summary of hole terminations is provided at Table 4.

TABLE 4: SUMMARY OF HOLE TERMINATIONS FOR THE WYNARKA TARGET

Prospect	Hole_ID	EOH Depth	Comment
Florieton	DEL11AC302	39	Black shale
Florieton	DEL11AC303	50	Schist
Florieton	DEL11AC304	39	Schist
Florieton	DEL11AC305	80	Schist
Florieton	DEL11AC306	40	Schist
Florieton	DEL11AC307	64	Schist
Florieton	DEL11AC308	96	Schist
Florieton	DEL11AC309	57	Schist
Florieton	DEL11AC310	78	Schist
Florieton	DEL11AC311	65	Schist
Florieton	DEL11AC312	62	Schist
Florieton	DEL11AC313	27	Schist
Florieton	DEL11AC314	65	Schist
Florieton	DEL11AC315	53	Schist
Florieton	DEL11AC316	36	Quartzite
Florieton	DEL11AC317	107	Schist
Florieton	DEL11AC318	37	Black shale
Florieton	DEL11AC319	42	Black shale
Florieton	DEL11AC320	48	Black shale
Florieton	DEL11AC321	55	Black shale
Florieton	DEL11AC322	32	Black shale
Florieton	DEL11AC323	19	Schist
Florieton	DEL11AC324	12	Schist
Florieton	DEL11AC325	42	Black shale
Florieton	DEL11AC326	66	Shale
Florieton	DEL11AC327	108	Shale
Florieton	DEL11AC328	90	Schist
Florieton	DEL11AC329	89	Schist
Florieton	DEL11AC330	51	Schist
Florieton	DEL11AC331	42	Schist
Florieton	DEL11AC332	60	Schist
Florieton	DEL11AC333	45	Shale
Florieton	DEL11AC334	66	Schist
Florieton	DEL11AC335	60	Schist
Florieton	DEL11AC336	65	Schist
Florieton	DEL11AC337	78	Schist
Haylands South	DEL11AC338	216	Slate
Haylands South	DEL11AC339	150	Saprolite
Haylands South	DEL11AC340	110	Andesite
Haylands South	DEL11AC341	220	Partially lithified cover sequence?
Haylands South	DEL11AC342	174	Andesitic Sandstone
Haylands South	DEL11AC343	234	Schist
Blanchetown	DEL11AC344	40	Mechanical failure of rig caused abandonment of hole and program
Blanchetown	DEL12AC344	173	Andesite
Blanchetown	DEL12AC345	181	Andesite
Blanchetown	DEL12AC346	131	Hole failed in sands and gravels.
Blanchetown	DEL12AC347	192	Rods became irretrievably bogged.

Prospect	Hole_ID	EOH Depth	Comment
Blanchetown	Relief hole	192	Relief hole for DEL12AC347. No sample return.
Blanchetown	DEL12AC350	116	Laminated Mudstone
Blanchetown	DEL12AC351	132	Laminated Mudstone
Blanchetown	DEL12AC352	166	Hole failed in sands and gravels
Canegrass	DEL12AC356	210	Schist
Canegrass	DEL12AC357	162	Hole failed in saprolite.
Canegrass	DEL12AC358	210	Schist
Canegrass	DEL12AC359	216	Schist
Canegrass	DEL12AC360	211	Schist
Canegrass	DEL12AC361	210	Schist
Canegrass	DEL12AC362	200	Schist
Canegrass	DEL12AC363	186	Schist
Canegrass	DEL12AC364	226	Schist
Canegrass	DEL12AC365	200	Schist
Canegrass	DEL12AC366	216	Schist
Canegrass	DEL12AC367	178	Schist
Canegrass	DEL12AC368	204	Schist
Canegrass	DEL12AC369	192	Schist
Canegrass	DEL12AC370	204	Schist
Canegrass	DEL12AC371	210	Slate
Canegrass	DEL12AC372	202	Schist
Canegrass	DEL12AC373	180	Andesite
Blanchetown	DEL12ACD346	183	Basaltic andesite
Blanchetown	DEL12ACD347	219.2	Andesite
Blanchetown	DEL12ACD348	219.3	Andesite
Blanchetown	DEL12ACD349	178.9	Basaltic andesite

7.2.2.1 Air-core - 2011

The Hydco 1200H supplied by Drillit Exploration Services Pty. Ltd. had a larger capacity to lift samples from depth and to pull rods through swelling clays than AMWD's Sandvik DE810 multi-purpose drill rig. Penetration rates of air-core drilling varied greatly depending on rock type and depth of drilling. The average penetration rate of the Hydco 1200H was greater than 12/m per hour but was dependent on thickness of the cover sequence and oxidised basement. The overall daily average of metres drilled was 144m, but shifts of 180 to 216m occurred when the bit and rod string did not become blocked.

7.2.2.2 Air-core/ Mud Rotary/ Diamond Drilling - 2012

Penetration rates of the drilling varied greatly depending on the ground conditions with the average production rate of approximately 46/m per day for the AMWD's Sandvik DE810 at the Blanchetown drill sites and 48m/ day at the Canegrass prospect. At both of these drill locations a significant amount of time was spent pulling rods to unblock the air-ways, freeing rods/ conditioning the hole whilst drilling air-core through the flowing sands. Due to the problems with the ground conditions a decision was made to switch from air-core drilling to the mud rotary/ diamond method at the Blanchetown prospect. The presence of a flowing aquifer caused significant water loss during the mud rotary drilling and created a reliance on continual cartage of water. This lead to delays when the water exhausted before another load was delivered and stoppages while mixing the muds for each load of water.

7.2.3 Sampling

7.2.3.1 Air-core

Air-core drill samples were collected from a cyclone at one-metre intervals into plastic bags by a driller's offsider, and laid out in rows for sampling by geological staff. Dry samples were speared, while wet samples were taken as a grab sample from the plastic bag. Duplicate field samples, field blanks and certified standards were inserted every 50th sample, for quality assurance.

The drill crew cleaned the cyclone as soon as was practicable after drilling through the Quaternary and Tertiary cover sequence; stopping drilling directly at the unconformity usually resulted in the drill string getting blocked. Thus there was often some contamination in the first 2-4m of basement sample with material from the cover sequence.

7.2.3.2 Mud Rotary

Due to the highly contaminated nature of this drilling along with the lack of sample return from weathered basement intervals none of the mud rotary drilling was sampled. Instead a short diamond core tail was utilised to obtain reliable samples from the basement.

7.2.3.3 Diamond

The diamond core was re-assembled and marked with a cut line to ensure that core could be cut consistently. Subsequent to this the down hole depth was marked at one metre increments and geologically logged. Where practical the entire diamond core was cut in half using a diamond saw at the ALS facility and one side was submitted for analysis while the other side was retained. Where saprolite or strongly weathered basement was cored then the entire sample was sampled.

7.2.4 Assay Analysis

A total of 1067 samples (drill samples and inserted QAQC samples) were submitted to the ALS Chemex laboratory ('ALS') in Adelaide for preparation. Multi-element geochemical analyses were carried out at ALS Chemex Australian Laboratory Services Pty Ltd in Perth. A summary of samples submitted to ALS by tenement is at Table 7. All of these samples were submitted for the following analysis (detection limits in brackets, units in ppm unless otherwise stated):

- Au by fire assay, solvent extraction and AAS, 50 gram nominal sample weight (ALS Code: AU-AA22) all holes submitted;
- Multi-element analysis by HF-HNO3-HClO4 acid digestion, HCl leach followed by ICP-AES and ICP-MS analysis (ALS Code ME-MS61); all holes submitted for suite:

Ag(0.01)-Al(0.01%)-As(0.2)-Ba(10)-Be(0.05)-Bi(0.01)-Ca(0.01%)-Cd(0.02)-Ce(0.01)-Co(0.1)-Cr(1)-Cs(0.05)-Cu(0.2)-Fe(0.01%)-Ga(0.05)-Ge(0.05)-Hf(0.1)-In(0.005)-K(0.01%)-La(0.5)-Li(0.2)-Mg(0.01%)-Mn(5)-Mo(0.05)-Na(0.01%)-Nb(0.1)-Ni(0.2)-P(10)-Pb(0.5)-Rb(0.1)-Re(0.002)-S(0.01%)-Sb(0.05)-Sc(0.1)-Se(1)-Sn(0.2)-Sr(0.2)-Ta(0.05)-Te(0.05)-Th(0.2)-Ti(0.005%)-TI(0.02)-U(0.1)-V(1)-W(0.1)-Y(0.1)-Zn(2)-Zr(0.5)

7.2.5 Results and Discussions

7.2.5.1 Florieton Prospect

Drilling for this prospect commenced on 14th of October 2011 and was completed on the 31st of October 2011. In this period a total of 36 AC holes were drilled for an advancement of 2,065m. This drilling was planned to completed 400mx400m grid over the prospect to follow up on previously intersected mineralisation with 200x400m spacing for the most anomalous gold zone, see Figure 6.

A thin veneer (0 to 20m) of tertiary sediments was drilled before intersecting the residual basement. The cover sequence consisted of poorly to moderately consolidated calcrete at surface with clays, silts and sands underneath this. Also multiple silcrete bands were drilled which inhibited the penetration rates of these holes. The basement lithologies intersected in the drill programme comprised of metasediments ranging graphitic shales to meta-sandstones. The eastern most portion of the drilling intersected graphitic shales and to the west of this there were interbedded meta-mudstones, meta-siltstones and meta-sandstones, which are interpreted to be part of Umberatana Group sediments.

Trace to weak foliation was pervasive throughout all of the holes with it more becoming more intense near the contact of lithological units and the gold anomalism (Florieton fault). Alteration observed in the programme was generally weak intensity sericite± pyrite and becoming more intense and with the addition of quartz-carbonate veins near the Florieton Fault. Rarely, silica-pyrite alteration was noted were the quartz veining was more intense.

The drilling to date defined gold anomalism in one hole over two lines with a spacing of 400m, on a north to north-north-east trend. In this prospect there is coincident copper-molybdenum anomalism that appears to have a north-west strike. A review of the geochemical drill data indicates that gold anomalism and copper-molybdenum mineralisation are generated by two separate events. The most significant anomalism returned during the reporting for the Florieton prospect is shown in Table 5.

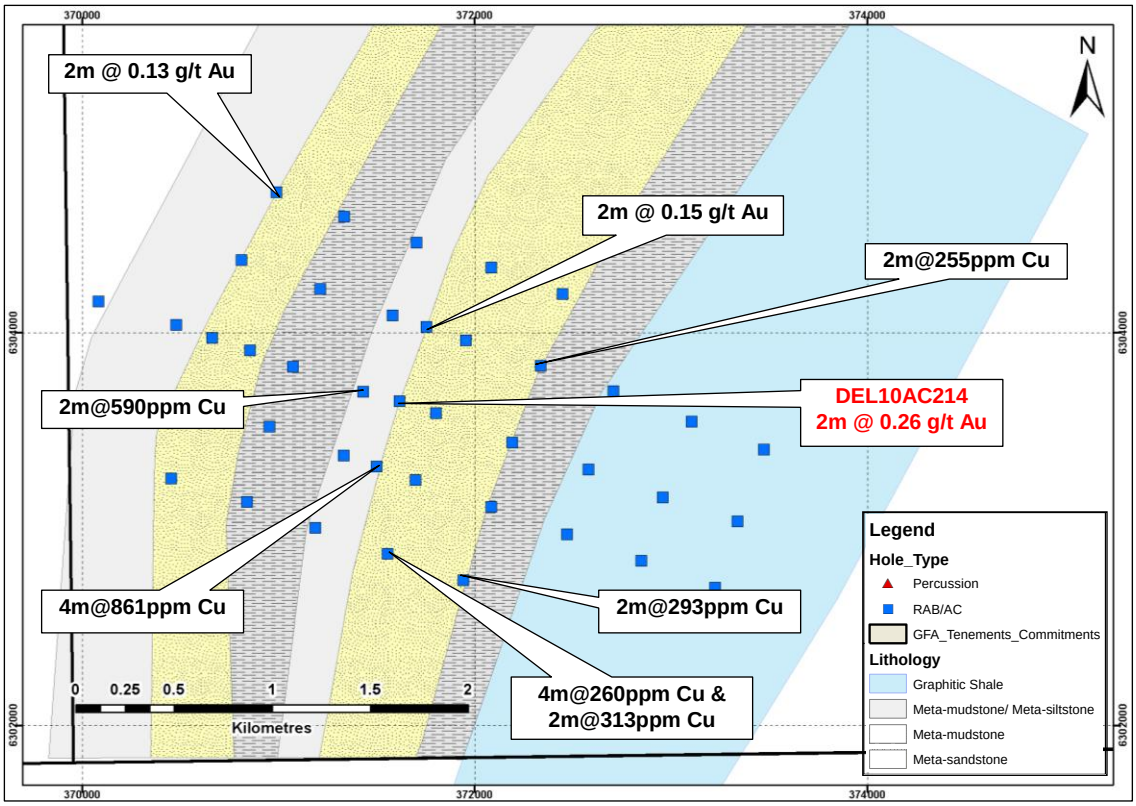


Figure 6 illustrates the location of drilling conducted at Florieton prospect to date with the significant drill intersections on top of the interpreted basement geology. Coordinates on map are from the GDA 1994 spheroid with the Zone 54 projection.

TABLE 5: SIGNIFICANT ANOMALISM RETURN FROM FLORIETON PROSPECT DURING THE REPORTING PERIOD.

Hole ID	From (m)	To (m)	Int. (m)	Au (ppb)	Cu (ppm)	Mo (ppm)	Ag (ppm)	Zn (ppm)	Pb (ppm)	As (ppm)
DEL11AC305	66	68	2	96	94	6	0.2	62	5	2
DEL11AC305	72	74	2	4	590	19	0.1	97	6	4
DEL11AC309	56	57	1	<2	347	63	0.7	125	6	7
DEL11AC315	37	39	2	151	135	16	0.3	160	144	4
DEL11AC315	51	53	2	55	135	23	0.5	61	11	5
DEL11AC317	23	25	2	2	255	16	0.1	76	17	50
DEL11AC317	39	41	2	57	22	2	0.1	86	5	20
DEL11AC319	6	8	2	2	173	26	0.4	227	28	77
DEL11AC321	54	55	1	<2	198	39	0.5	129	20	8
DEL11AC323	2	4	2	<2	198	42	<0.1	80	8	495
DEL11AC324	0	2	2	2	147	29	0.3	67	7	17
DEL11AC328	48	52	4	4	861	2	0.1	73	26	4
DEL11AC332	30	32	2	129	98	3	0.1	93	25	11
DEL11AC333	16	18	2	2	293	120	0.1	120	30	51
DEL11AC334	14	16	2	63	313	13	0.7	186	61	168
DEL11AC334	28	32	4	<2	260	6	0.5	147	50	37
DEL11AC334	42	44	2	60	90	4	0.1	172	48	18

Significant anomalism from the Florieton prospect drilling conducted in October 2011. Intersections are based on a minimum 1m interval with a maximum of 2m internal dilution using cut-off grades of; 250ppm for Cu, 50ppb for Au and 25ppm for Mo.

7.2.5.2 Canegrass Prospect

This drill programme commenced on 8th of May 2012 after the postponement due to localised flooding cutting off access routes to the drill site in 2011. At total of 18 holes were drilled to extend previously intersected Au and Zn-Cu mineralisation for an advancement of 3,629m, which one of these holes failed to penetrate to basement. This drilling infilled the previous programmes to 250m holes spacing as well as drilling a further line 500m north and south of the initial line.

The drilling encountered a thick (126 to 142m) cover sequence of Tertiary sediments that overlies a thickly developed saprolite (34 to 96m) before intersecting a variable deformed meta-mudstone. The tertiary cover sequence was comprised of a thin veneer of silts and clays on top of the Loxton-Parilla (very fine to very coarse and flowing) sands, Murray Group Limestone (unconsolidated to weakly cemented fossiliferous silts), Ettrick Formation (slightly fossiliferous, plastic clays with minor sand lenses) and Renmark Beds (carbonaceous, fossiliferous, silts and sands, with minor lignite). Drilling intersected basement lithology of a variably deformed meta-mudstone occasionally with pyrite present along the foliation, this is interpreted to be the Kanmantoo Group sediments.

Weak to moderate sericite± pyrite alteration was observed in most holes with the intensity of alteration generally linked to the strength of foliation. Chlorite alteration was sporadic and only seen in the presence quartz-chlorite veins. Rare quartz-carbonate-galena veins were noted in DEL12AC368 which returned elevated Pb values.

Gold mineralisation is coincident with a pyrite-arsenic rich zone that mimics the north-south trending gravity ridge that is evident in the prospect scale survey, see Figure 7. The most significant Au anomalism was observed at a consistent level in the saprolite and is thought to be remobilised to this position, see Table 6 for most significant assays. The most anomalous end-of-hole gold assay was 10ppb in DEL12AC359, which indicates that either Au mineralisation is not pervasive or that the mineralisation is restricted to narrow intervals of veining. Zn anomalism in the western portion of the drilling is interpreted to be a supergene plume with zinc stripped from the deeply weathered profile and precipitated near the palaeo-water table level.

TABLE 6: SIGNIFICANT ANOMALISM RETURN FROM CANEGRSS PROSPECT DURING THE REPORTING PERIOD.

Hole ID	From (m)	To (m)	Int. (m)	Au (ppb)	As (ppm)	S (%)	Zn (ppm)	Cu (ppm)	Bi (ppm)
DEL12AC356	134	136	2	49	12	0.1	9	5	0.9
DEL12AC356	178	192	14	4	18	0.1	280	144	0.6
Including	178	180	2	2	44	<0.1	521	378	0.2
DEL12AC359	163	216	53	7	39	0.7	164	56	4.0
Including	163	171	8	6	28	0.8	303	60	0.8
Including	195	199	4	6	28	0.7	95	59	40.0
DEL12AC360	139	210	71	4	20	0.2	112	56	0.6
DEL12AC363	130	186	56	6	45	0.3	153	45	0.8
Including	164	166	2	119	29	<0.1	106	48	0.8
DEL12AC364	147	157	10	3	7	<0.1	476	56	0.7
DEL12AC365	181	193	12	3	10	<0.1	380	73	0.8
DEL12AC368	132	204	72	4	53	0.1	77	54	0.9
Including	164	166	2	49	44	<0.1	46	44	0.9
DEL12AC369	169	177	8	<2	26	<0.1	681	56	0.7
DEL12AC370	165	167	2	2	1	<0.1	526	86	0.7

Significant anomalism from the Canegrass prospect drilling conducted in 2012. Intersections are based on a minimum 1m interval with a maximum of 2m internal dilution using cut-off grades of; 250ppm for Cu and Zn, 40ppb for Au and 25ppm for As.

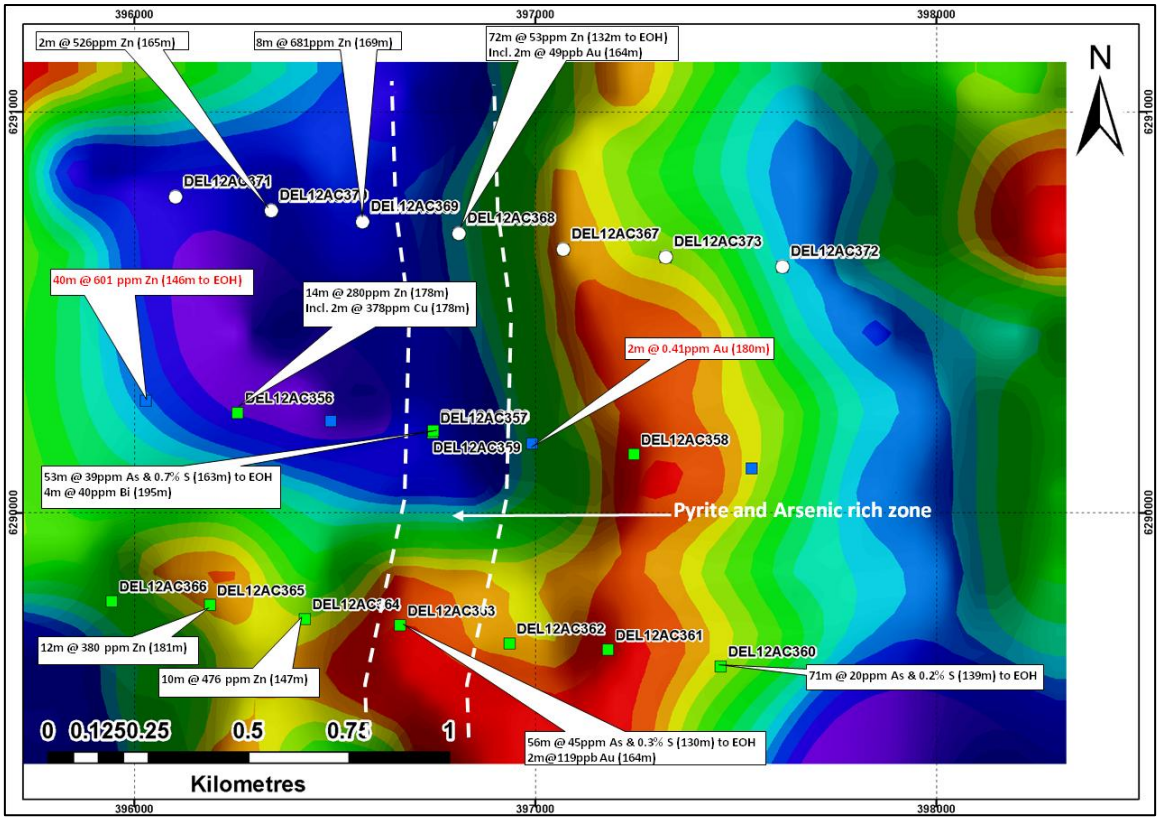


Figure 7 illustrates the location of drilling conducted on the Canegrass prospect along the new intersections (black text) and the previous results (red text) on top of the prospect scale 2nd order residual gravity image. Coordinates on map are from the GDA 1994 spheroid with the Zone 54 projection.

7.2.5.3 Haylands South Target

Air-core drilling commenced on the 18th of November and concluded on 23rd of November 2011 after the completion of 6 holes for 1,104m, which two of these holes failed to reach basement. This programme was designed to test areas of thickened volcanic sequence especially, at fold nose of an interpreted anticline for both orogenic Au and VMS styles of mineralisation.

Drilling intersected a moderately thick cover sequence of tertiary sediments that deepened to the east toward the Murray River. These cover sediments were comprised of a weak to strongly developed calcrete horizon with clays and silts at surface, which overlaid the Murray Group Limestone (unconsolidated to weakly cemented fossiliferous silts), Ettrick Formation (slightly fossiliferous, plastic clays with minor sand lenses) and Renmark Beds (carbonaceous, fossiliferous, silts and sands, with minor lignite). Variably deformed meta-mudstones, schists, andesite and andesitic volcaniclastics were intersected in the basement.

Weak to moderate foliation was observed in DEL11AC342, which lies near the interpreted position of the Morgan Fault. The depth to residual basement varies from 126 m in DEL11AC342 to 207m in DEL11AC343, which is consistent with the throw interpreted by CRA from their drilling from 1981 to 1983. Alteration is predominately weak cl-ep-(py) with weak to moderate cl-(ep) alteration associated with Morgan Fault.

The most significant gold mineralisation is located in the tertiary cover sequence (DEL11AC338: 2m@103ppb Au and 2m@53ppb Au), which confirms the Au anomalism intersected in similar position in historic drilling (82FS3RM1), see Figure 8. Due to the large gap between the Au values above the base of transported material, it is difficult to infer transport distance or direction. Significant low grade zinc anomalism 44m@345ppm (from 130m to EOH) was noted in

DEL11AC342, which is coincident with the interpreted Morgan Fault. This may represent base-metals that have been remobilised from the volcanic pile and have been deposited in structural sites or reactive horizons. A list of the significant assays intersected in the Haylands South drilling is given in Table 7.

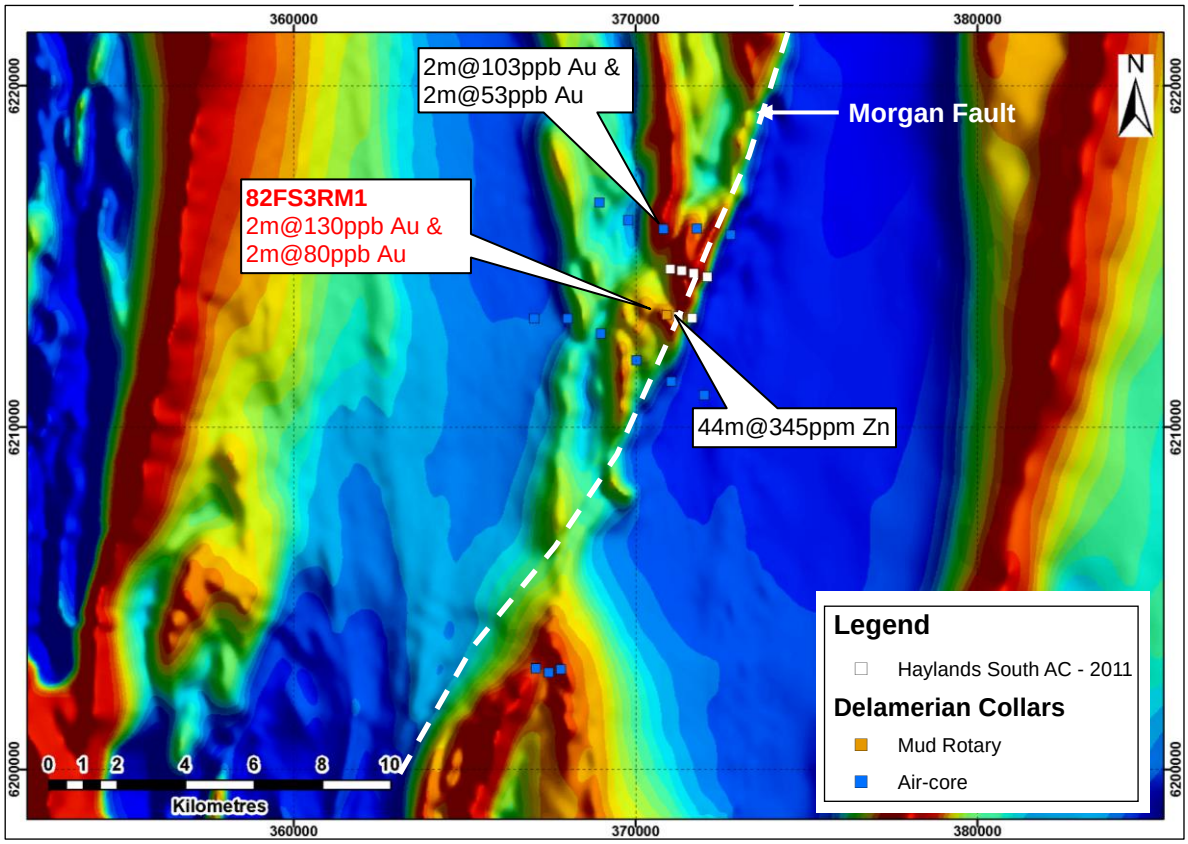


Figure 8 illustrates the location of drilling conducted on the Haylands South target in this reporting period (white squares) along the new intersection (black text) and the historic results (red text). Coordinates on map are from the GDA 1994 spheroid with the Zone 54 projection.

TABLE 7: SIGNIFICANT ANOMALISM RETURN FROM HAYLANDS SOUTH TARGET DURING THE REPORTING PERIOD.

Hole ID	From (m)	To (m)	Int. (m)	Au (ppb)	As (ppm)	S (%)	Zn (ppm)	Cu (ppm)	Sb (ppm)
DEL11AC338	65	67	2	53	78	0.21	61	19	2.0
DEL11AC338	77	79	2	103	57	0.47	72	45	0.9
DEL11AC338	183	185	2	<2	6	0.01	349	128	0.7
DEL11AC339	149	150	1	<2	7	0.08	460	40	16.2
DEL11AC341	189	191	2	<2	12	0.10	332	19	5.3
DEL11AC342	132	174	42	<2	6	0.12	352	26	2.6
DEL11AC343	189	191	2	<2	16	0.19	250	23	4.7

Significant anomalism from the Haylands South air-core drilling conducted in November 2011. Intersections are based on a minimum 1m interval with a maximum of 2m internal dilution using cut-off grades of; 250ppm for Cu and Zn, 50ppb for Au and 10ppm for Sb.

7.2.5.4 Blanchetown Target

This program was initiated on the 11th of November 2011, however, mechanical failure of the drill rig saw the postponement until another drill contractor could be sourced. On 13th of March 2012 the drilling program re-commenced with Sandvik DE810 multipurpose rig. Due to the difficult ground conditions (flowing sands, hard pans, plastic clays and dual aquifers) the rods often became bogged and the airways blocked, which caused five holes to fail to reach basement. This necessitated a switch in drill method on those holes that failed to reach basement with the used mud rotary drilling with short diamond core tails. A total of 13 air-core/ mud rotary/ diamond holes were completed for an advancement of 2,111.4m, see Figure 9. This reconnaissance air-core program was designed to test the fold nose of the inferred anticline at an interpreted structurally thickened zone for both orogenic Au and VMS styles of mineralisation.

Drilling intersected a thick (131m to 156m) cover sequence of tertiary sediments that comprised of a weak to strongly developed calcrete horizon with clays and silts at surface that overlaid the Murray Group Limestone (unconsolidated to weakly cemented fossiliferous silts), Ettrick Formation (slightly fossiliferous, plastic clays with minor sand lenses) and Renmark Beds (carbonaceous, fossiliferous, silts and sands, with minor lignite). Andesitic to basaltic-andesite volcanics and minor volcaniclastics were intersected in the basement, which are interpreted to be Truro Volcanics or their equivalents.

The development of significant structural features was limited to DEL12ACD348, which weak foliation developed and the intensity increased towards end-of-hole. Associated with this foliation was patchy hematite-carbonate alteration which increased intensity and pervasiveness with its strength. Significant stringer pyrite veining was present in DEL12AC344 within the saprolite/ saprock position.

The most prevalent alteration noted in drilling was weak chlorite-epidote-carbonate which has been interpreted to be propylitic alteration associated with regional metamorphism. Apart from this and the aforementioned hematite-carbonate assemblage a small interval in DEL12ACD346 was noted to contain magnetite-pyrite-chalcopyrite which was overprinted by the patchy hematite-epidote alteration. This alteration is interpreted to be related with fluids from a moderately oxidised intrusion migrating to the hinge of the anticline prior to peak metamorphism.

Gold anomalism peaked at 11 ppb in DEL12AC347 (failed hole), however, several intervals of elevated Cu and Zn were intersected in the drilling. The zinc anomalism was only observed in the saprolite and was coincident with disruptions of magnetic features, see Figure 8. Significant Cu was intersected in the diamond core which was in the aforementioned magnetite-pyrite-chalcopyrite alteration or close association with epidote-carbonate veining, in which native copper being the only visible copper species. The stringer pyrite veining observed in DEL12AC344 had elevated Cu and anomalous Zn associated with it, which may represent a stringer vein zone associated with VMS style of mineralisation.

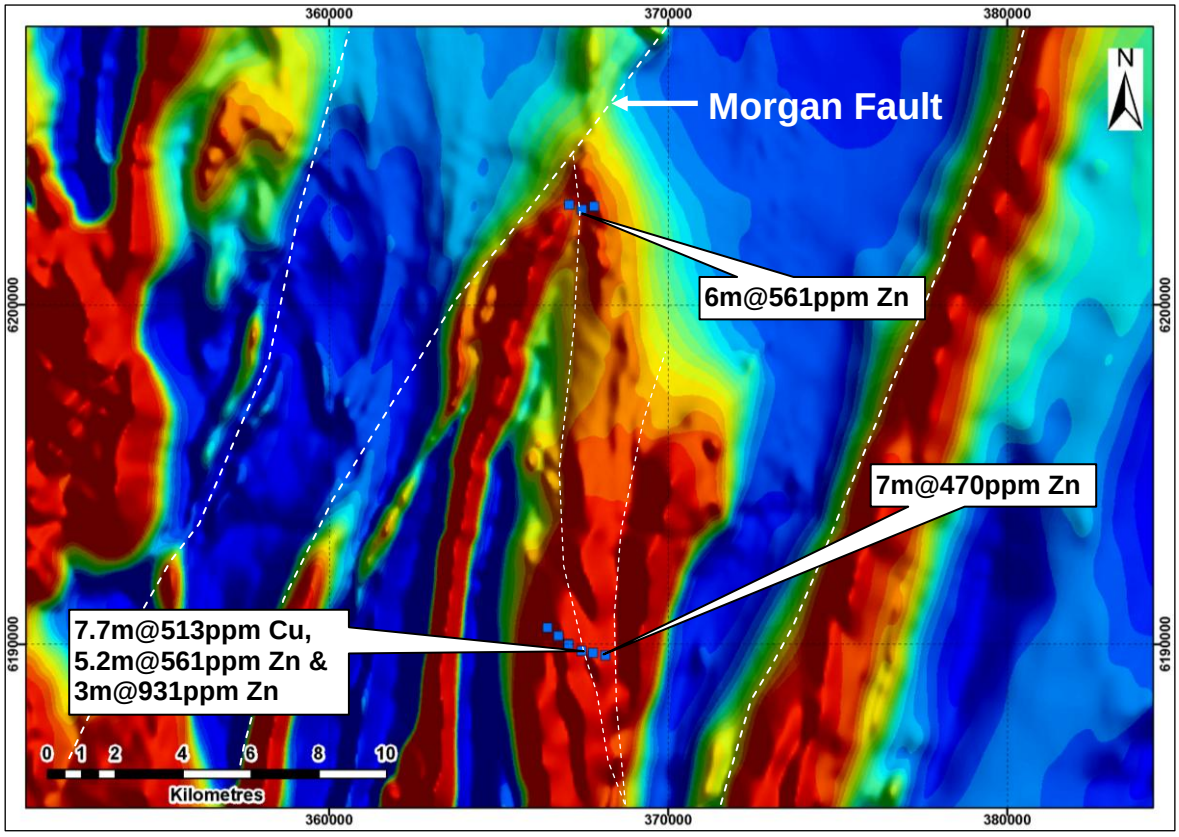


Figure 9 illustrates the location of drilling conducted on the Blanchetown target (blue squares) along the anomalous intersections (black text). Coordinates on map are from the GDA 1994 spheroid with the Zone 54 projection.

TABLE 8: SIGNIFICANT ANOMALISM RETURN FROM BLANCHETOWN TARGET DURING THE REPORTING PERIOD.

Hole ID	From (m)	To (m)	Int. (m)	Au (ppb)	As (ppm)	S (%)	Zn (ppm)	Cu (ppm)	Sb (ppm)
DEL12AC344	161	168	7	<2	14	0.76	470	81	32
DEL12AC345	171	175	4	<2	6	0.02	72	68	2
DEL12AC347	177	179	2	<2	7	0.04	460	30	6
DEL12AC347	187	192	5	<2	7	0.03	332	48	5
Including.	189	192	3	<2	5	0.03	931	513	2
DEL12AC351	91	97	6	3	46	0.30	561	55	3
DEL12ACD347	185.1	203	16.9	<2	5	0.02	393	384	1
Including.	185.1	192.8	7.7	<2	5	0.03	293	513	1

Significant anomalism from the Blanchetown drilling conducted in November 2011. Intersections are based on a minimum 1m interval with a maximum of 2m internal dilution using cut-off grades of; 250ppm for Cu and Zn, 50ppb for Au and 10ppm for Sb.

8 ENVIRONMENT

8.1 Rehabilitation

Rehabilitation of all air-core sites was undertaken at the Florieton prospect and Haylands South target. All of the Blanchetown target drill sites have been rehabilitated except for the bogged rods in the failed hole DEL12AC347. This is awaiting availability of a larger rig to attempt their removal. The rehabilitation of the holes at the Canegrass prospect is scheduled to be completed in October as long as weather conditions permit access. Where necessary, GFA has also undertaken repair and/or grading of farm tracks and unsealed roads.

Upon completion of air-core drilling at the Florieton prospect, Haylands South and Blanchetown target the rehabilitation works comprised of:

- The removal of all plastic and polyweave bags and disposal at the Morgan waste disposal facility.
- Dry sample was returned down hole. Wet samples were dumped in the sump.
- Octoplugs will be inserted at the top of each hole approximately 1m below surface and then back filled.
- G.L Hausler Contracting from Morgan was contracted to complete the rehabilitation of each drill site. Excess drill cuttings were placed into sumps then back filled with stock piled top soil and the disturbed ground re-contoured.

Approval to submit a single, annual photographic rehabilitation status report was granted by PIRSA in July 2009, and is due on 28 February 2013.

9 EXPENDITURE STATEMENT

A total expenditure of $1,693,389.98 was spent on exploration on the Delamerian Project for the period of 29th of August 2011 to 28th of August 2012. The expenditure breakdown for this is given in Table 9 below.

TABLE 9: EXPENDITURE STATEMENT (AUSTRALIAN $) FOR GFA'S DELAMERIAN PROJECT

EXPENDITURE ITEMS	Last Period Expenditure 2010/2011	This Period Expenditure 2011/2012
Exploration Tenement cost – rental/legal/management/Part9B	89,521	56,891.71
Environmental Health and Safety	4,209	1,045.26
Consultants – geophysical surveys, petrological, GIS	12,304	20,041.25
Consultants – IT software/consult	6,390	9,280.06
Contractor – Other Exploration	6,146	87,460.24
Exploration field staff – geology/geotechnical	166,921	244,284.44
Drill assay contractor	58,812	53,447.85
Airborne geophysics	-	0.00
Exploration – field camp costs (accomm/mess/equip)	5,815	40,841.75
Exploration – drilling (AC, RC, DDH)	276,367	1,006,860.45
Exploration – drill site access, preparation and rehabilitation	37,023	65,324.54
Exploration – field supplies and equipment	2,949	27,835.46
Vehicle expenses – hire/fuel	12,542	38,083.14
Travel expenses – accomm/meals/sundry	24,195	19,190.73
Exploration geosciences data purchases	-	192.20
Communication	792	3,945.95
Freight costs	-	662.96
Office expenses/services/rental	8,568	18,001.99
Water supplies and cartage	Included in drill site access	Included in drill site access
TOTAL EXPENDITURE	**$712,554.00**	**$1,693,389.98**

10 CONCLUSIONS

Work completed by Gold Fields Australasia during the reporting period has included ground geophysical surveys along with drilling operation to test two prospects and two targets. The geophysical surveys were useful in aiding the interpretation of the structural settings, however, the anomalies in the gravity are most likely to reflect the thickness in the unconsolidated material rather than primary changes in lithology. The ground magnetic survey at the Florieton prospect illustrated that the magnetic anomalies present in previous airborne surveys are significantly thinner, also there was a strong interference from surficial maghemite that masked some of the magnetic anomalies.

The air-core drilling at both the Florieton and Canegrass prospects failed to upgrade the previous mineralisation, however, this drilling helped in defining the orientation of the mineralisation and interpretation of primary controls on it. Reconnaissance drilling of the Haylands South and Blanchetown target areas failed to locate any gold mineralisation in the basement. Notably, several intersections of zinc anomalism were noted along with one intercept of anomalous copper. The anomalous zinc intercepts were noted to be coincident with breaks in the magnetic features, which the elevated zinc intervals maybe interpreted to be remobilised from the volcanic pile.

Exploration for the next reporting period should focus on areas within the oroclinal bend that have not been previously drill tested, preferably in areas of thinner Tertiary cover.

11 REFERENCES

Anderson, B.E. 2008. Delamerian Project: Annual Technical Report for the period 29 August 2006 to 28 August 2007 for Exploration Licences 3624, 3625, 3626, 3735, 3736, 3737, and 3970. Annual Technical Report submitted to PIRSA, for Gold Fields Australasia Pty Ltd, Report No DEL07/01, January 2008.

Kitto, J.C. Delamerian Project: Annual Technical Report for the period 29 August 2010 to 28 August 2011 for Exploration Licences 3624, 3625, 3626, 3735, 3736, 3737, 3970, 4425, 4449, 4450, 4452 and 4506. Annual Technical Report submitted to PIRSA, for Gold Fields Australasia Pty Ltd, Report No DEL11/01 , October, 2011.

McCallum, W.S., Hill, P., Janz, J.K. & Crettenden, P.P. 1993. Report Book 93/26. Pilpara – Kia Ora – Bendigo Bedrock Drilling Programme, 1992 Volume 1. Department of Mines and Energy, Geological Survey South Australia.

Wawryk, C. M. 2009. Delamerian Project: Annual Technical Report for the period 29 August 2008 to 28 August 2009 for Exploration Licences 3624, 3625, 3626, 3735, 3736, 3737, and 3970. Annual Technical Report submitted to PIRSA, for Gold Fields Australasia Pty Ltd, Report No DEL09/01, October 2009.

Wawryk, C.M. & Kitto, J.C. Delamerian Project: Annual Technical Report for the period 29 August 2008 to 28 August 2009 for Exploration Licences 3624, 3625, 3626, 3735, 3736, 3737, and 3970. Annual Technical Report submitted to PIRSA, for Gold Fields Australasia Pty Ltd, Report No DEL10/01, October 2010.

Wehrle, A. C. 2008. Delamerian Project: Annual Technical Report for the period 29 August 2007 to 28 August 2008 for Exploration Licences 3624, 3625, 3626, 3735, 3736, 3737, and 3970. Annual Technical Report submitted to PIRSA, for Gold Fields Australasia Pty Ltd, Report No DEL08/01 November 2008.