



27<sup>th</sup> April 2011

Company Announcement Office  
Australian Securities Exchange

Exchange Tower  
Suite 411  
530 Little Collins Street  
Melbourne Victoria  
Australia. 3000

Telephone 61 3 9620 5866  
Facsimile 61 3 9620 5822  
e-mail: [rimfire@rimfire.com.au](mailto:rimfire@rimfire.com.au)  
website: [www.rimfire.com.au](http://www.rimfire.com.au)

## QUARTERLY EXPLORATION AND ACTIVITIES REPORT

(For the period January 1<sup>st</sup> to March 31<sup>st</sup> 2011)

The focus during the quarter continued to be on the Sorpresa Gold prospect. Positive assay results for the soil and bedrock auger drill geochemistry programs conducted at the Sorpresa Fine Gold (Au) prospect demonstrated that Au mineralisation exists in coherent zones and has a degree of continuity in the tested areas.

The encouraging nature of these established bedrock gold zones was further enhanced with the observation of co-incident gravity anomalism obtained in the completed micro gravity survey conducted in the quarter.

The various work programs are providing a very powerful vector to the underlying gold mineralisation the Company plans to investigate with deeper RC drilling this week (**Appendix 1** highlights the 4 areas to be pursued).



Auger drilling into bedrock – Coherent Au zones established

### Highlights in the March Quarter at Fifield NSW include the following:

- Significant advancement of the Sorpresa fine gold project
  - East-West soil geochemistry gold results further enhanced the previous soil line exploration conducted
  - Approx. 20 additional bedrock auger traverse lines confirm gold zones of considerable promise and size
  - A Micro Gravity survey was completed and shows co-incident anomalism with the known gold zones
  - An RC Drill program of >2,000m has been designed to test 4 major gold zones
- A strong elevated silver zone within the gold zone has emerged in the NE corner of the Sorpresa Prospect
- Geological sampling of Trench 31 yielded grades in excess of 70g/t in two locations, showing a capacity for high grade at Sorpresa

### Post Quarter Announcements

- The Sorpresa fine gold area RC Drill program received permit approval and will commence 28<sup>th</sup> April 2011
- A placement of 60m shares was undertaken 20<sup>th</sup> April, at 3.7 cents per share, raising \$2.22m before costs
  - The Company is well funded on its current work programs and subsequent follow up activities

*The Company Chairman, John Kaminsky, stated “This has been an outstanding quarter for the Company, with strong interest shown in the results and high quality work conducted at Sorpresa. The first pass RC Drill program commencing shortly will provide an insight into the potential we have within this section of the Sorpresa prospect.*

*...what is really exciting, is we are just beginning the testing at Sorpresa, there is a much broader gold context to explore at Fifield in addition to our Platinum work there...”*

(A summary of the work performed at Sorpresa area in the quarter is shown in **Appendix 6**)

## **RC Drill program at Sorpresa Gold Prospect - due to commence end of April 2011**

The Company has engaged an RC drill contractor to conduct the first pass program on the Sorpresa gold project commencing end of April 2011. An initial program of >2,000m will be undertaken on the four prominent gold target areas already clearly identified in previous bedrock testing in auger drilling and trenching (**Appendix 1**).

The planned RC Drilling is an important next phase in the exploration at Sorpresa, where this area is already established as a disseminated fine gold area of considerable promise.

(The RC Drill permit application has now been approved, with drilling to start 28th April. The hole location details were released to the ASX on 20th April 2011 – with the hyperlink providing the RC drill program details shown:

Ctrl Click: [Share Placement - \\$2.22M Raised, Sorpresa RC Drilling Program Starts 28<sup>th</sup> April](#)

## **Geological Views on Sorpresa Mineralisation leading into the RC Drill Program**

The gold zones now seen at Sorpresa appear to have a definite structural control. The microgravity survey gives extra weight to the notion that mineralisation is steep dipping. High silver results were also obtained in the North East corner of Sorpresa. The microgravity survey shows strong gravity anomalies co-incident with this mineralisation also, leading to the view that the **highly zoned nature of the mineralisation has similarities to Cobar and Canbelego styles of mineralisation.**

Sorpresa is a large fault controlled mineralised system featuring disseminated gold in broad areas of replacement pervasive silica. The sulphide content is likely to be important, but remains largely unresolvable from soil and auger drilling alone.

The gold occurs in several mineralising episodes, some with base metals including silver (e.g. in the North East) and some areas with gold, but devoid of other metals (e.g. in the South West).

The broad areas of disseminated gold are well located by soil sampling and auger drill bedrock gold assays. The actual grade of these areas, including high grade areas with complex geometry, is best tested with reverse circulation (RC) drilling into reliable deeper zones. It is important to remember there is no past mining at Sorpresa, and no outcrop, so orientation guidance on the mineralisation is very limited to date.

## **The Bedrock Geochemistry Results at Sorpresa**

As already mentioned, the Company now has four clear RC drill targets within the Sorpresa project area, for RC drilling in April (**Appendix 1**).

Bedrock gold values consistent with previous auger drilling (2010) were seen in the interpreted coherent gold zones during the quarter, typically ranging from 0.1g/t to 1.5g/t. **A high value of 9.6g/t** was encountered towards the northern part of the prospect. A cut off grade of 50ppb Au in upper bedrock was used as determining the extent of the gold zones.



2<sup>nd</sup> Auger Rig Operating



New Important 40m zone north-east of Trench 31



Auger traverse 350m SW of  
Trench 31

The Company maintains the view that the near surface gold position in the bedrock auger drilling understates the gold potential, due to likely depletion in the more vulnerable Au positions.

**It is anticipated that more gold zone targets will be generated on an ongoing basis using auger drilling as a precursor to additional RC drilling beyond the current April program.**

The bedrock position in the North-East corner at Sorpresa demonstrates both gold mineralisation and a high silver component, with values up to 20g/t silver. The 2008 RC drill holes located 400m to the east of the recent auger program, contained elevated silver also. An interpretation of this observation cannot be made at this point, but the possibility of highly zoned, Cobar Style mineralisation has not been discounted.

Results reflected as Au zones and the methods used are included in **Appendix 1** for the bedrock chemistry. Silver results are shown in **Appendix 3**.

The company provides the following video material for some field context discussion on the Sorpresa soil geochemistry and part of the recent bedrock auger drilling program in the quarter (the perspective is a geological assessment, prior to assay at that time).

**Ctrl Click** the Company video link: [Field Discussion at Sorpresa Gold Prospect Fifield NSW – February 2011](#)

(Previous details already announced to ASX on 13<sup>th</sup> October 2010<sup>1</sup>, 28<sup>th</sup> October 2010<sup>2</sup>, 15<sup>th</sup> December 2010<sup>3</sup> and 25<sup>th</sup> January 2011<sup>4</sup>, 21<sup>st</sup> February 2011<sup>5</sup>, 8<sup>th</sup> March 2011<sup>6</sup> and 12<sup>th</sup> April 2011<sup>7</sup> provide important context to the ongoing programs at Sorpresa **with hyperlinks below**).

### **Micro Gravity Survey on Sorpresa Gold Prospect – Interpretation of Co-incident Anomaly**

A “Micro Gravity” survey was undertaken (**Appendix 2**) to see whether the known geochemical expression (both soil and bedrock) could have a geophysical signature through differences in specific gravity of the underlying rocks. The gravity survey results were done on 10m sample spacings and showed very detailed data of excellent quality.

Although not fully resolved, the gold mineralisation at Sorpresa is relatively well known in terms of associated geology through the Company work programs. On this basis the Company feels it is able to offer a reasonable explanation as to the microgravity responses seen at Sorpresa.

**In the Company’s preliminary interpretation, there is a direct correlation between the gold position and the gravity signature.** The gravity anomaly highs tend to be around 70m widths, indicating mineralised source rocks about 30m widths. The source rocks appear to come virtually to surface and are likely steep dipping.

In particular, one of the key markers for the gold position has been gossan (with up to 50% pyrite) with brown pervasive silica associated with the gold positions at Sorpresa. It is the Company’s view that the most likely explanation for elevated specific gravity response in this survey is fine pyrite in steep dipping structures.



Mapping and sampling within Sorpresa

The RC drill hole placement for the forthcoming program takes specific account of the co-incident nature of the gold zones and the gravity signature of the underlying rocks.

### **The Completion of an East-West Soil Geochemistry Program in January Confirms an Extensive Gold Anomaly**

An East-West (E-W) soil line sampling program was completed involving approx. 500 samples and was taken, on 50m or 100m line spacings with 25m intervals on samples, sieved to -5mm. The results enhance and extend the earlier soil sampling programs conducted North-South (N-S) in 2010.

The Au in Soil anomaly remains open in several directions, and is currently occurring within an area of approx. 1.9km long x 0.5km wide. In addition, the entire soil grid area was geologically mapped for interpretation of soils, drainage patterns and geological structure. This information has provided important context and confidence levels to the soil geochemistry results obtained.

<sup>1</sup> ASX Announcement – [13<sup>th</sup> October 2010 Bedrock Assays Confirm Sorpresa Fine Gold Potential at Fifield](#)

<sup>2</sup> ASX Announcement – [28<sup>th</sup> October 2010 Sorpresa Fine Gold Prospect Trench Produces Excellent Assay Results](#)

<sup>3</sup> ASX Announcement – [15<sup>th</sup> December 2010 Sorpresa Fine Gold Prospect Further Examined at Fifield NSW](#)

<sup>4</sup> ASX Announcement – [25<sup>th</sup> January 2011 Gold Mineralisation Examined in more detail at Sorpresa Prospect](#)

<sup>5</sup> ASX Announcement – [21<sup>st</sup> February 2011 Positive Soil Line Assays At Sorpresa Gold Prospect](#)

<sup>6</sup> ASX Announcement – [8<sup>th</sup> March 2011 Bedrock Auger Drill Program Completed Sorpresa Gold Project](#)

<sup>7</sup> ASX Announcement – [12<sup>th</sup> April 2011 Sorpresa Bedrock Gold Zones Confirmed in Auger Drilling - RC Drill Program to Commence in April](#)

## **High Grade Gold Observed in Geological Mapping of Trench 31**

In the quarter, 39 samples of varying sizes (2~15kg gross then sub-sampled) were selected within the floor of Trench 31 based on visual geological interpretation. The samples were assayed to determine gold location within geology (values above 1g/t were repeat assayed). Good repeatability was achieved in assays, reinforcing the view that the Au is fine and disseminated.

**A high grade of 86g/t was seen in sample R12**, a mineralised, altered fine breccia and a third of the selected samples had grades in excess of 3g/t. The geology in Trench 31 appears extremely dynamic with a high degree of geometric complexity, which is not unexpected in a high grade system such as this. The Au mineralisation at Trench 31 resides within a broad, partly brecciated fault line.

## **COMMODITY PRICING FOR THE MARCH 2011 QUARTER**

The price of Platinum has fluctuated in the period, and was trading in the range of USD\$1,700 to USD\$1,850 per ounce during the period. The price of Gold has continued to strengthen in the period and was trading at above USD\$1,450 for the same period ([www.kitco.com](http://www.kitco.com)).



## **CORPORATE ACTIVITIES**

### **Tenement Position**

The Company tenement position remained unchanged.

### **Cash, Facilities and Investments**

As at 31<sup>st</sup> March 2011 the Company had approximately \$684,000 in cash.

### **Issued Capital**

The issued capital at the close of business at 31<sup>st</sup> March 2011 was:

439,016,550 ordinary shares

124,790,443 Listed Options "RIMO" exercise @ 4 cents expiry 31<sup>st</sup> August 2011

### **Post Quarter Capital Raising Event**

The Company concluded a capital raising on 20th April 2011, by issuing 60,000,000 new fully paid ordinary shares at a price of 3.7 cents per share. The gross proceeds, before costs, were \$2.22 million.

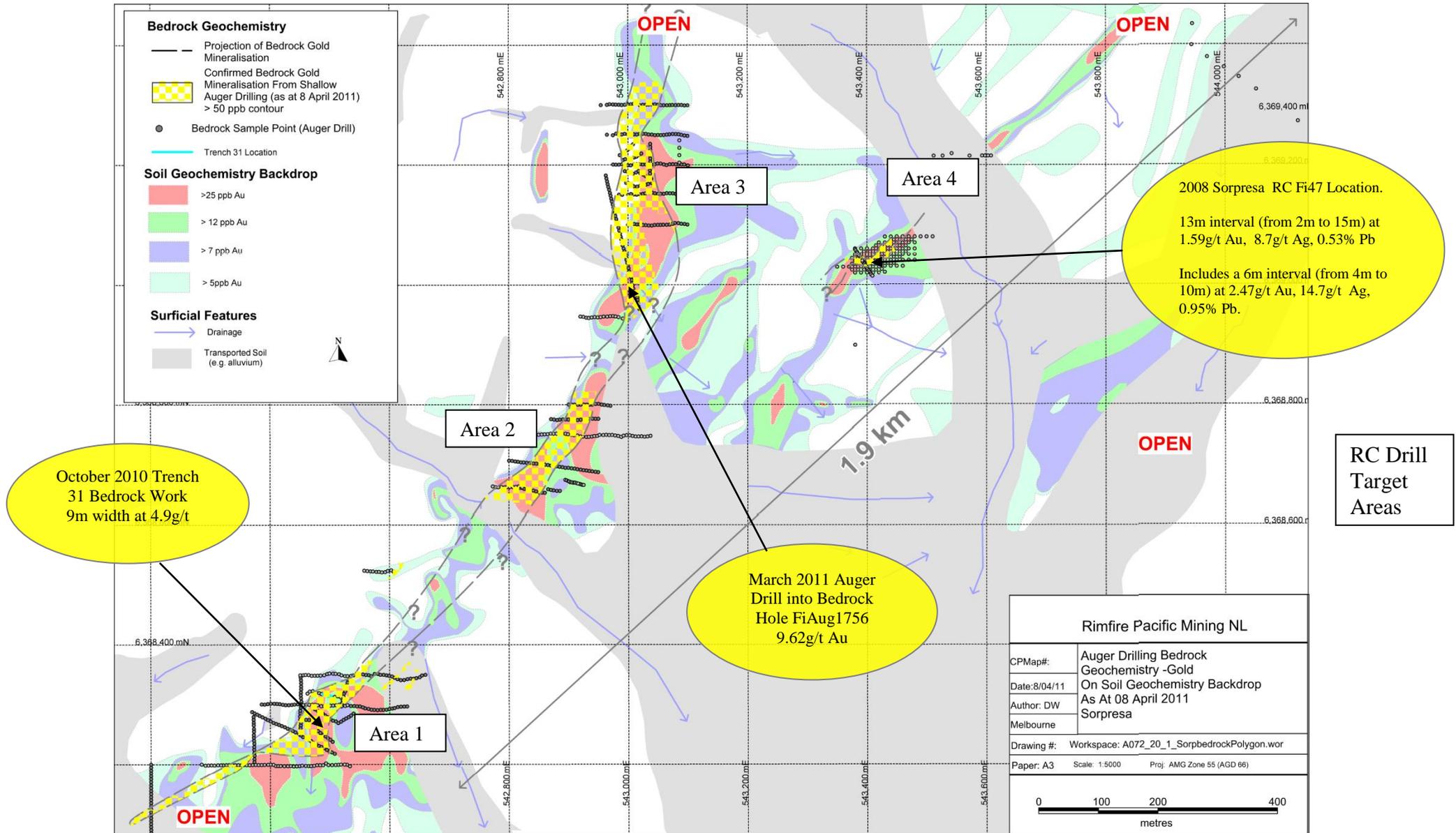
**JOHN KAMINSKY**  
Executive Chairman

*The information in the report to which this statement is attached that relates to Exploration Results is compiled by Mr Colin Plumridge, who is a Member of The Australian Institute of Mining and Metallurgy, each with over 30 years experience in the mineral exploration and mining industry. Mr Plumridge is employed by Plumridge & Associates Pty. Ltd. and is a consulting geologist to the Company. He has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity, which is being undertaken to qualify as Competent Persons as defined in the 2004 edition of the "Australian Code for Reporting of Mineral Resources and Ore reserves". Mr Plumridge consents to the inclusion in the report of the matters based on their information in the form and context in which it appears.*

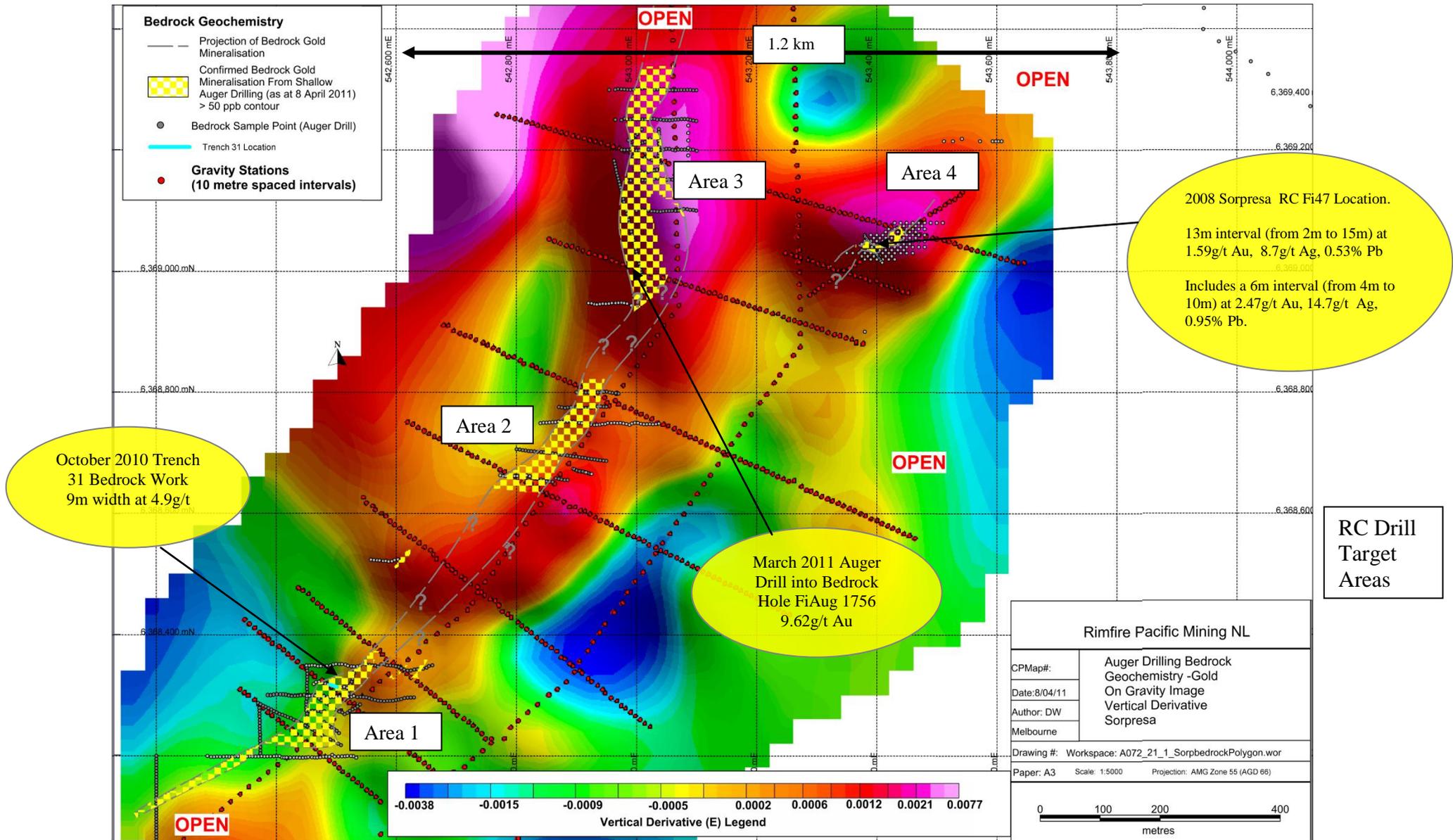
# Appendix 1

## Sorpresa Bedrock Auger Drilling - Gold Zones with 50ppb cut-off – RC Drill Target Areas Established

Assays were carried out by independent laboratory, ALS Laboratories, using standard Fire Assay Methods for Gold, namely Au-AA22 (for Au values below 1g/t) and Au-AA26 (for Au values above 1g/t). The sample charge size for assay was 50g. Location details for samples are shown below with values.

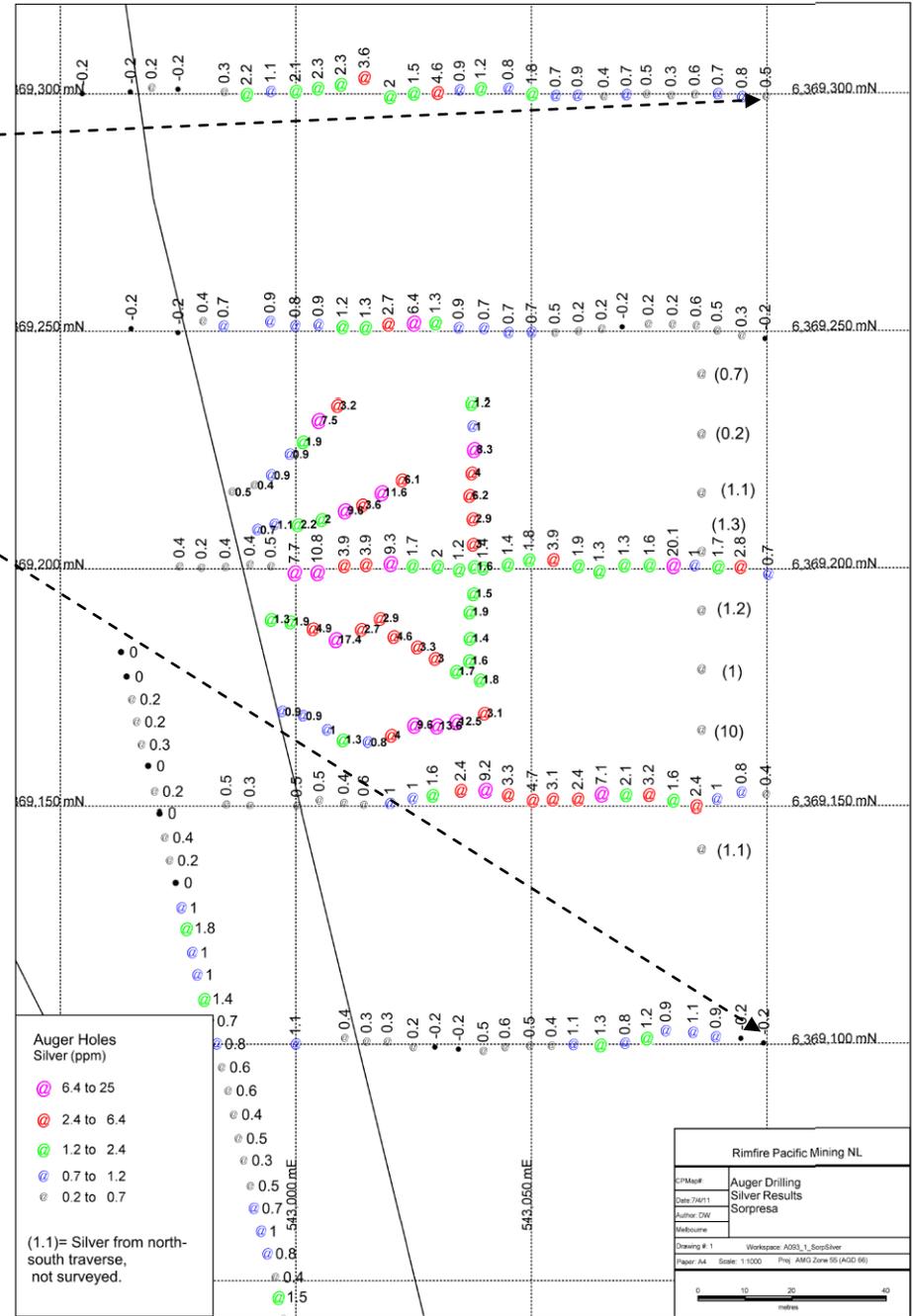
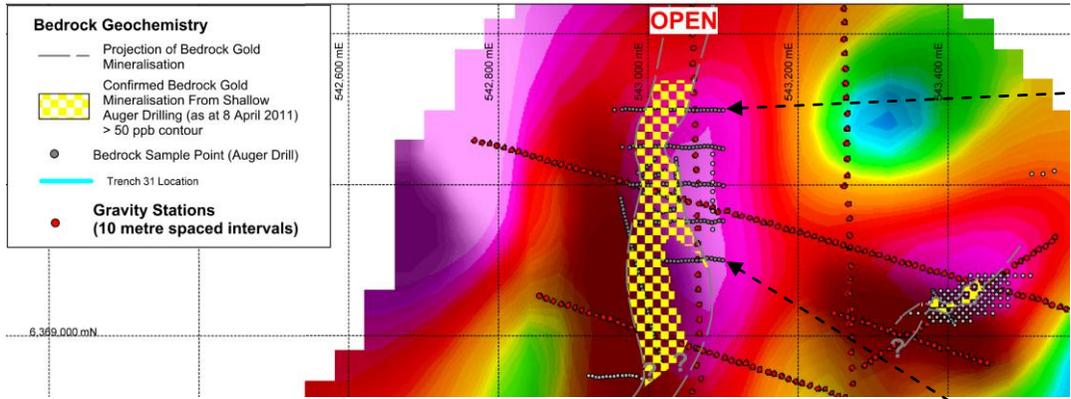


# The Sorpresa Micro Gravity Survey with Anomalous Bedrock Gold Zone Identified to Date



APPENDIX 3

**The Sorpresa Micro Gravity Survey with Anomalous Bedrock Gold/Silver Zone Identified to Date**



Recent silver geochemistry results in shallow auger drilling into bedrock in the North East of the Sorpresa Gold anomaly.

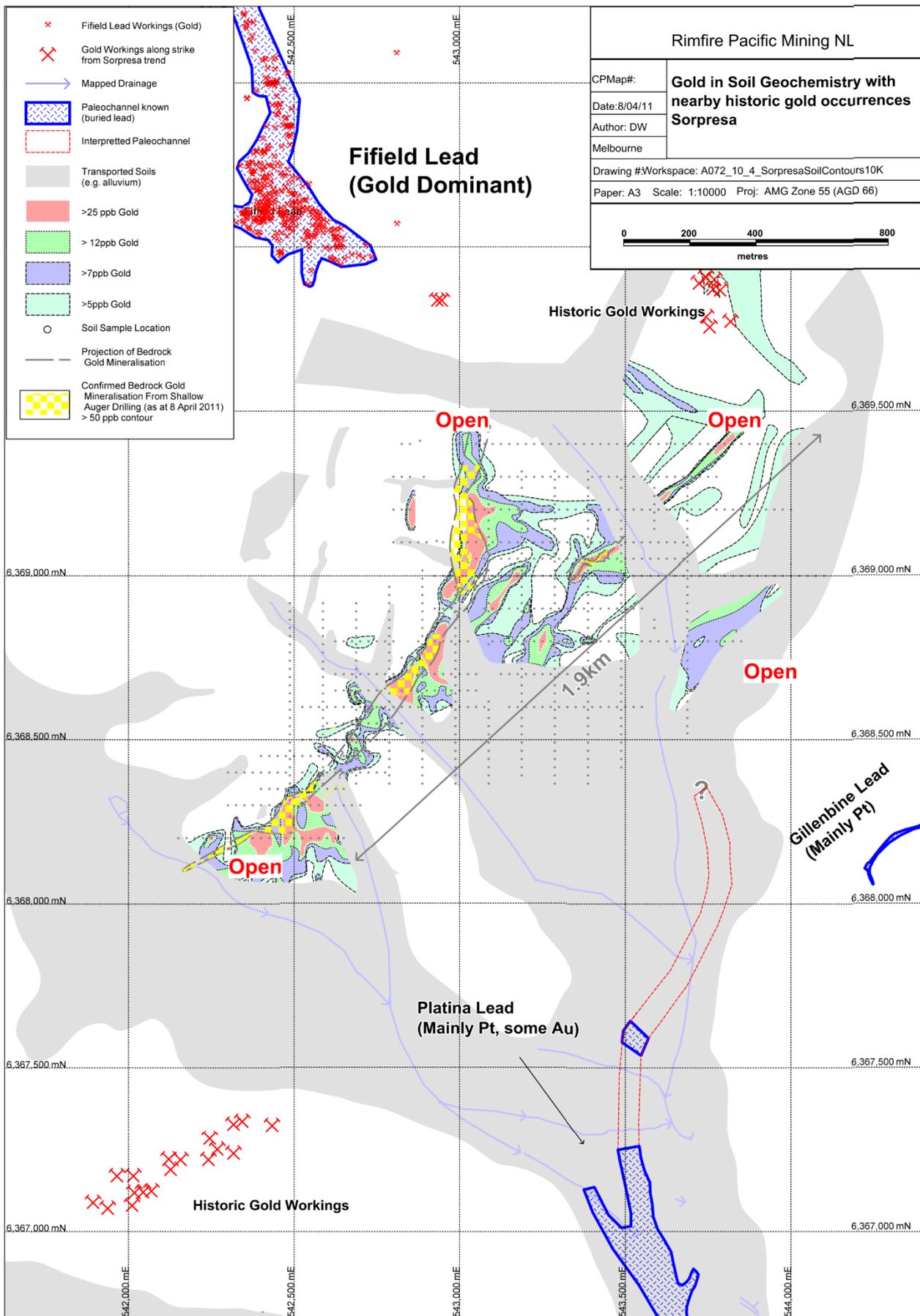
Distinct metal zoning is noted, with elevated silver values up to 20g/t Ag seen in the near surface bedrock.

Interpretation of silver values is not concluded, but it was noted that silver was seen with gold in the RC drill holes in 2008, 400m east of the current 2011 auger drill location.

The assay method for Ag was ME-ICP41, performed by ALS Laboratories

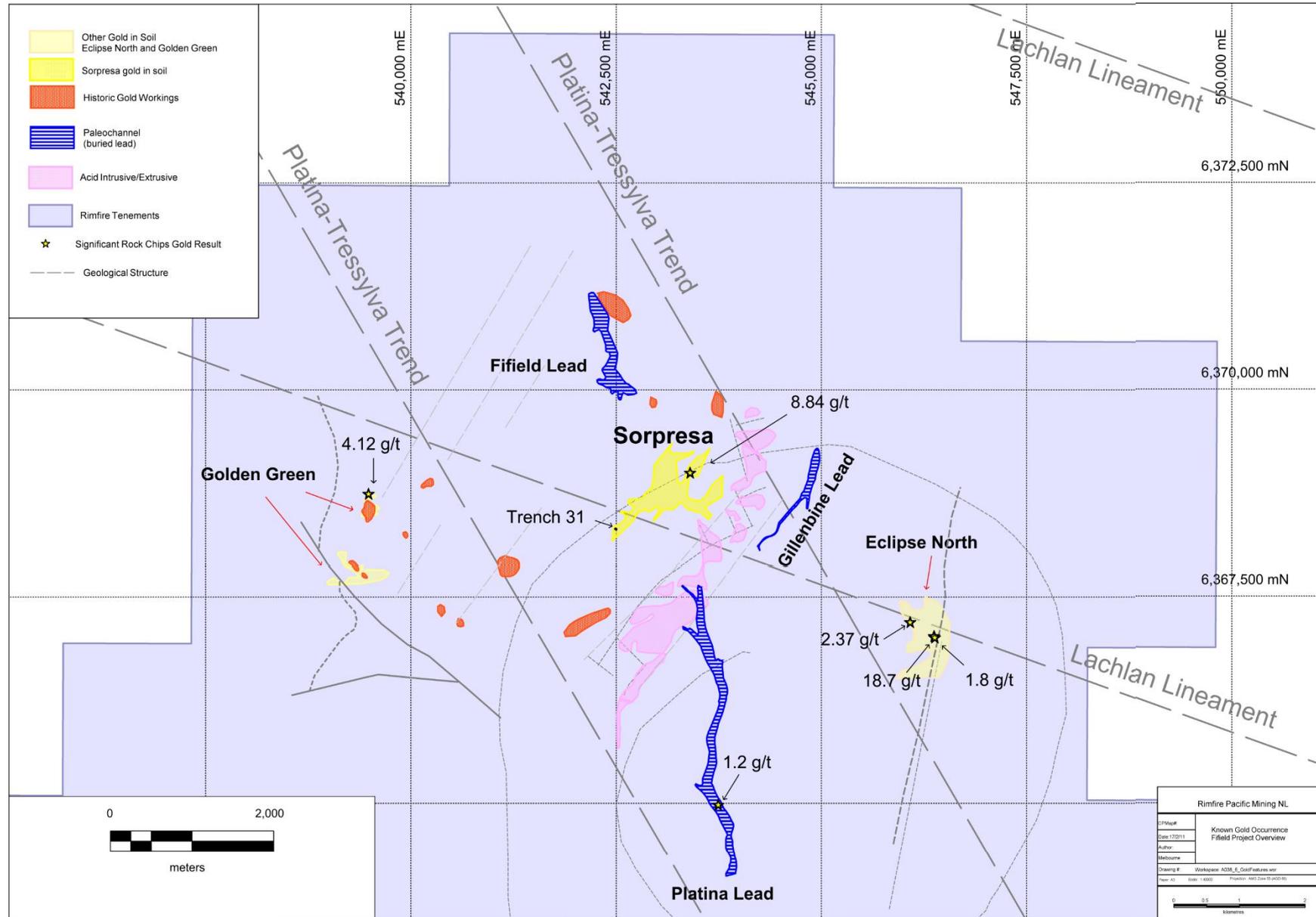
## Appendix 4

# Sorpresa Gold in Soil Anomaly in a wider Context – Untested Areas and Adjacent Historic Workings



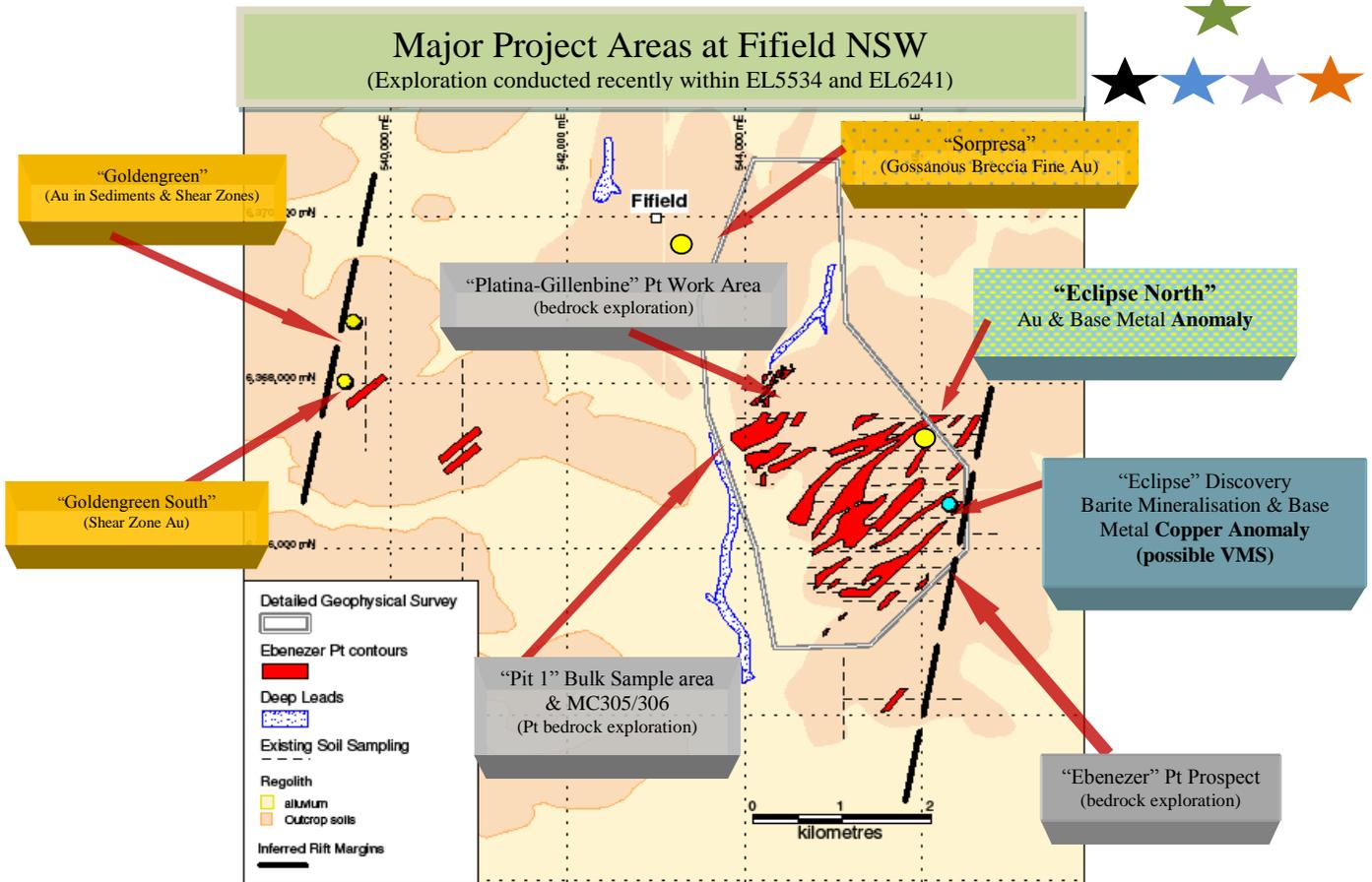
**APPENDIX 5**

**The Sorpresa Area Anomalous Gold Zone – within the wider Fifield Gold Observations**

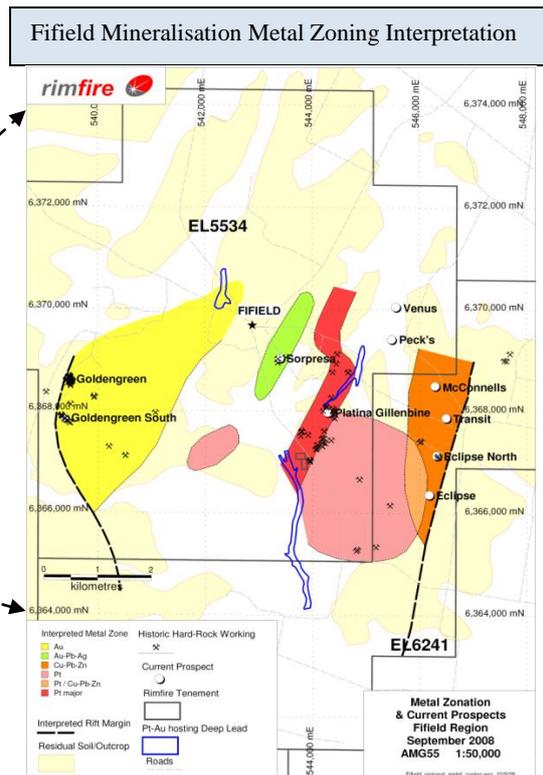
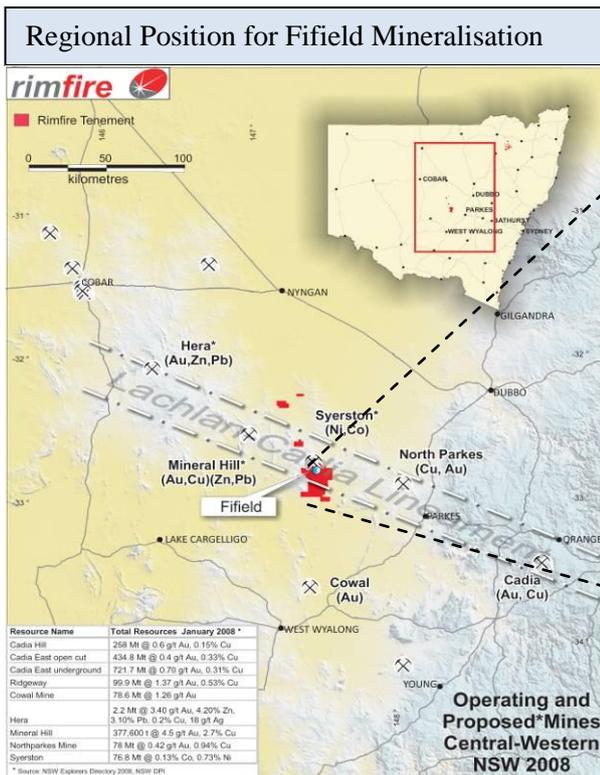


## Appendix 6

### Project Locations at Fifield NSW and Metal Zoning Interpretations



★ Auger Drill    
 ★ RC drilling April 2011    
 ★ Trenching    
 ★ Mapping    
 ★ Assays



## **Appendix 7**

### **Project and Mineralisation Background – Fifield NSW**

The systematic exploration by Rimfire within the immediate Fifield region has continued to develop a wide variety of mineralised prospects. Each prospect has a strong geochemical surface expression, a highly relevant geological context and favourable development criteria.

There is a significant variation in mineralisation styles at Fifield, which includes Au, Pt and Cu/Base Metal prospects, with these occurring across a zone of less than 10km width. This observation also provides further support to the interpretation of the region as being a complex volcanic rift setting, with evidence for multiple, polymetallic mineralisation events associated with sub-volcanic intrusives, shearing and brecciation at various scales.

*Accordingly, the exploration shows that metal zoning remains an important feature of the regional geology at Fifield. The under explored Fifield area represents an excellent exploration setting for discovery of commercial mineralisation in the Company's view (Appendix 6).*

*The major mineralisation target for exploration by the Company at Fifield remains focused on gravity recoverable coarse grain Platinum. The Platina-Gillenbine area is of particular importance in understanding and delineating the bedrock mineralisation.*

A key feature of the exploration landscape at Fifield NSW is the minimal outcrop available for examination. However, in many instances the depth to bedrock is less than two metres, so a combination of soil geochemistry assays, auger drilling and trenching to bedrock with complementary bulk sampling is rapid and effective way to explore for significant mineralisation. These activities are also relatively low cost to undertake.

*Historic Pt mining at Fifield yielded in excess of a reported 20,000 oz of Pt from the deep leads and surface soil mining (circa. 1890~1930). The major deep lead was the Platina Lead, worked at a depth from 12m to 25m over a length of 2.8km with a reported grade of approx. 15g/t gravity recovered Pt equivalent.*

The northern extent of the Platina Lead was not able to be defined historically. This northern section represents an important component of the Pt bearing alluvial system, both with respect to its commercial potential and the exploration knowledge base the lead provides, in relation to the source area(s) for Pt entering the alluvial system along the full extent of the Platina Lead. *A further 500m of the Platina Lead has now been demonstrated to be present (2009), but this un-mined section has not yet been tested by the Company.*

The Company's key overall objective remains, "to establish a potential open cut minable resource(s) within the various project areas including the Sorpresa Gold area and also the 6km<sup>2</sup> zone of currently identified Pt mineralisation noted within the Platina-Gillenbine and Ebenezer project areas"<sup>8</sup>, which includes both alluvial targets and the greater bedrock system.

---

<sup>8</sup> Appendix 6 for details of locations