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## **Sorpresa Fine Gold Prospect Further Examined at Fifield NSW** **- Confirmation of Additional Gold Mineralisation Zones**

Additional exploration work has been undertaken on the Sorpresa gold prospect as part of a continuing program on this area. Sampling activities included bedrock chemistry through auger traverses, rock chip examination of sub-crop, field mapping and extensive soil geochemistry sampling.

Executive Chairman, John Kaminsky stated *"Despite the ongoing rain our dedicated field staff have been able to gain access to the Sorpresa area and generate samples, with subsequent results that continue to enhance the prospect. What I find particularly pleasing is the consistency of these results with respect to the work already undertaken in recent months. It all points to a gold system of some significance that can be conventionally explored..."*

*...the work programs are ongoing with a proven methodology in place and we are quickly improving our understanding of the Sorpresa area, feeling excited about its potential as we move into 2011."*

### **Highlights of the current Exploration Program at the Sorpresa Gold Area**

- ◆ ***Gold mineralisation is likely extended south west by approx. 200m along strike from trench 31<sup>1</sup> into previously untested ground. The mineralisation remains open in this direction.***
  - The likely extension is confirmed in two separate auger traverses south of trench 31
  - Elevated Au in auger traverses show widths of approx 20~30m, with higher values ranging from 0.1g/t to 0.5g/t Au
  - Trenching on these new auger results and additional auger traverses will follow
- ◆ ***Within the previously defined Sorpresa Au anomaly<sup>2</sup> an auger traverse line has confirmed Au mineralisation in bedrock approx. 600m north east along strike from trench 31***
  - An elevated zone of Au across 30m occurs, including a value of 1.2g/t
- ◆ ***In addition, elevated values of Au (30~50ppb) in auger traverse zones in bedrock are also noted as potentially important***
- ◆ ***Sub-crop bedrock was tested within the known Sorpresa anomaly, in limited available exposures approx. 850m north east from trench 31, with values obtained including 3.0g/t and 1.4g/t***
  - The sub-crop generally is very limited in extent at Sorpresa
- ◆ ***An additional soil geochemistry grid (approx. 1.8km x 1km) conducted on east-west lines, overlapping and infilling the previous soil grid at Sorpresa has almost been completed***
  - This was designed to provide infill data on the previous grid
  - It will examine possible extensions of some of the previously identified areas "open" for Au mineralisation
  - 470 samples have been sent to the laboratory for assay



Rare Sub crop of Breccia Assayed

<sup>1</sup> Trench 31 is actually **the first trench** located at the Sorpresa Area

<sup>2</sup> Refer **Appendix 1**

- ◆ Permits have been granted at Sorpresa allowing greater access and probing of the near surface environment within the native vegetation areas
- ◆ Further detailed mapping of soil types, available geology and botany is underway
  - Understanding soils is important for correct interpretation of soil geochemistry
  - Botany can be an indicator of subsurface geological differences across Sorpresa, thereby assisting exploration

Assay results and the methods used are included in **Appendix 3** for the auger traverses and rock chips.

*It should be noted that the Company experience at Sorpresa to date demonstrates that soil chemistry results and auger bedrock results have been a successful proxy for greater values encountered in either RC drilling or trenching.*

*It is the Company's opinion, that the recently noted elevated auger bedrock results and the sub-crop rock chip results are consistent with previous work conducted on Sorpresa and are further confirmation of the Au mineralisation system being of considerable promise.*

In addition to the Sorpresa area, the Company has begun a review of similar areas previously encountered at Fifield that have also displayed characteristics of fine disseminated Au or historic workings for Au (**Appendix 2**). New exploration programmes are being developed for these areas.

(Previous details already announced to ASX on 13<sup>th</sup> October 2010<sup>3</sup> and 28<sup>th</sup> October 2010<sup>4</sup> provide important context to the ongoing programs at Sorpresa, giving results from the initial bedrock assessment by auger drill traverses).

### **Explanation of Exploration Approach and Work to Follow**

An exploration program of soil geochemistry and bedrock geochemistry using auger traverses, followed by more detailed assessment using limited trenching and RC drilling with conventional fire assays has enabled the discovery at Sorpresa to take place to date.

**The exploration methodology going forward continues to focus on the following approach:**

- **In general, soil geochemistry will be used as a broad scale and sensitive scoping tool for elevated Au (>5ppb)**
  - This low cost method works well in the residual soils at Sorpresa and can be deployed rapidly
- **Auger traverses will test bedrock geochemistry associated with surface based Au anomalism in the soils**
  - This assists the understanding of geological association and 2D spatial definition of the Au mineralisation
- **Trenching will be applied to selected auger traverses and other areas as appropriate**
  - This provides continuous sections of geology to establish Au association to rock type and structure
  - The auger traverses can miss higher grade Au mineralised sections due to the discrete sampling method of the auger
  - Au grade can be established in large continuous sections, if present
  - Dip and orientation on Au mineralisation can be assessed to assist deeper RC drilling
- **Deeper RC drilling will be conducted once sufficient 2D data and orientation is established on the Au mineralisation**
  - This is necessary to be cost efficient, optimise intersections and minimise environmental impact
  - Some holes will be needed to gain greater geological insight and structural orientation
  - The goal is to intersect the higher grade Au mineralised zones and provide 3D orientation at depth



Trench 31 (remediated) within Previous Auger Traverse FiAug 816 to 828

<sup>3</sup> ASX Announcement – [13<sup>th</sup> October 2010 Bedrock Assays Confirm Sorpresa Fine Gold Potential at Fifield](#)

<sup>4</sup> ASX Announcement – [28<sup>th</sup> October 2010 Sorpresa Fine Gold Prospect Trench Produces Excellent Assay Results](#)

will be a feature of this work, testing both high and low grade Au results in the augered bedrock, to help determine better defined bedrock targets for deeper RC drilling.

*The approach being adopted represents conventional exploration. It should enable rapid exploration of Sorpresa over a large area, with focussed subsurface targets that are identified and tested quickly, in a fairly continuous manner.*

### **Sorpresa Au and Base Metal Area – Background Summary**

*Whilst it is still at an early stage, in the Company's opinion, the larger Sorpresa area is already established as a disseminated fine gold area of considerable promise. The mineralisation is amenable to both surface based geochemical prospecting and RC drill evaluation. This straightforward technical pathway greatly enhances the chance of economic success.*

The project area is located immediately south of the Township of Fifield NSW and sits within the well established, highly mineralised regional corridor, the Lachlan-Cadia Lineament<sup>5</sup>. This corridor includes the Riotinto owned North Parkes Copper-Au mine and the Newcrest owned Cadia Valley Au-Copper mines amongst others.

The larger Sorpresa area was covered with broad spaced lines of soil geochemistry earlier in 2010 (100m line spacings and 25m sample interval). This coverage was based on the early concept that the originally discovered Sorpresa style of mineralisation could be extensive, but unrecognised.

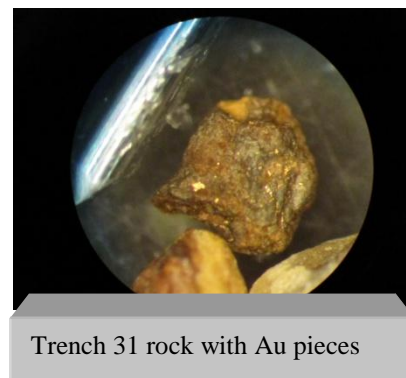
The assay data on the soil geochemistry combined with the October 2010 auger traverses and Trench 31 placed over selected Au anomalies within these soil results confirms that the larger Sorpresa area represents Au anomalism that is large and significant.

### ***Mineralisation***

As indicated by the soil geochemistry, the mineralisation seems to occur in three parallel lines dominated by breccia zones with associated disseminated sulphide gossan and alteration, but very low in vein quartz.

The mineralisation decomposes to soil, leaving little or no trace of its presence on the surface. The Au being both very fine and disseminated did not suit the miners of past eras even if it had been located. Modern exploration and processing techniques make this mineralisation an ideal style to pursue.

The Au is very fine and disseminated through the breccia as confirmed with the Trench 31 sampling (October 2010) undertaken producing repeatable Au assays.



### ***Interpreting Trench 31 within the Sorpresa area***

- The high Au grade of Trench 31 confirms that the Sorpresa-Trench 31 corridor has a strength of gold mineralisation that is encouraging to the Company's opinion that this area is an unexplored gold field.
- Both tested areas of the currently known Sorpresa-Trench 31 corridor are centred on brecciated sediments, with fine gold contained in a strong mineralised zone with negligible vein quartz, 1.2km apart and open ended.
- The larger Sorpresa prospective gold area at December 2010 exceeds 1.7km x 0.4km and is essentially open ended

The Company has noted many fine disseminated gold occurrences focused on sediments in the Fifield district over a number of years, of which Sorpresa is only one such area.

### ***Earlier Background (2008) on Sorpresa Area<sup>6</sup>***

The Sorpresa prospect originally consisted of a relatively small Au and base metals in soil anomaly located near an historic shaft, after a rock chip from the shaft returned a value of 8.8g/t Au<sup>7</sup>. The prospect was RC drilled by Rimfire in 2008 and a body of Au mineralization inferred from the analyses of the RC drill hole samples. The host to mineralization was also a brecciated sediment with an uncertain size and orientation. The Company was of the view at that time that this mineralisation may not have occurred in isolation and this proven to be correct.

<sup>5</sup> See Appendix 4 – Location maps

<sup>6</sup> [Rimfire Exploration Report June Quarter 2008 pages 5~7](#)

<sup>7</sup> [Rimfire Exploration Report March Quarter 2009, pages 4~5](#)

*Explanatory video is provided by the Company for the purpose of better understanding the Sorpresa Area and style of work conducted.* These videos can be found on the Company website at [www.rimfire.com.au](http://www.rimfire.com.au) in the **Presentations and Videos** section.

### **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 4).*

*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.

**The spot closing metal prices as at 13<sup>th</sup> December 2010 in New York were Platinum USD\$1,695/oz and Gold USD\$1,395/oz (Reference KITCO.com).**



**JOHN KAMINSKY**  
**Executive Chairman**

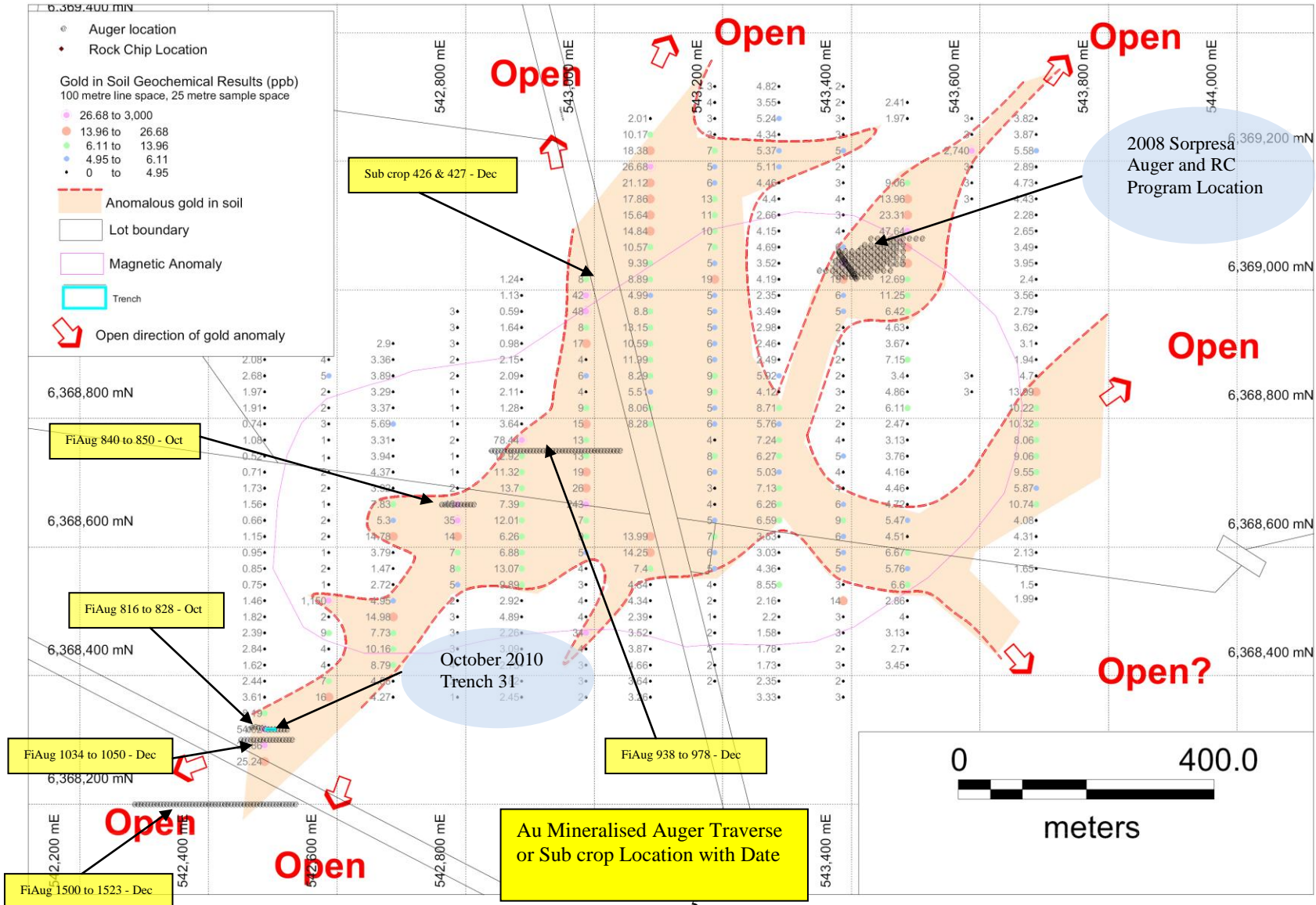
*The information in the report to which this statement is attached that relates to Exploration Results is compiled by Mr Colin Plumridge, who is a Member of The Australian Institute of Mining and Metallurgy, each with over 40 years experience in the mineral exploration and mining industry. Mr Plumridge 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.*

<sup>8</sup> Appendix 4 for details of locations

**APPENDIX 1**

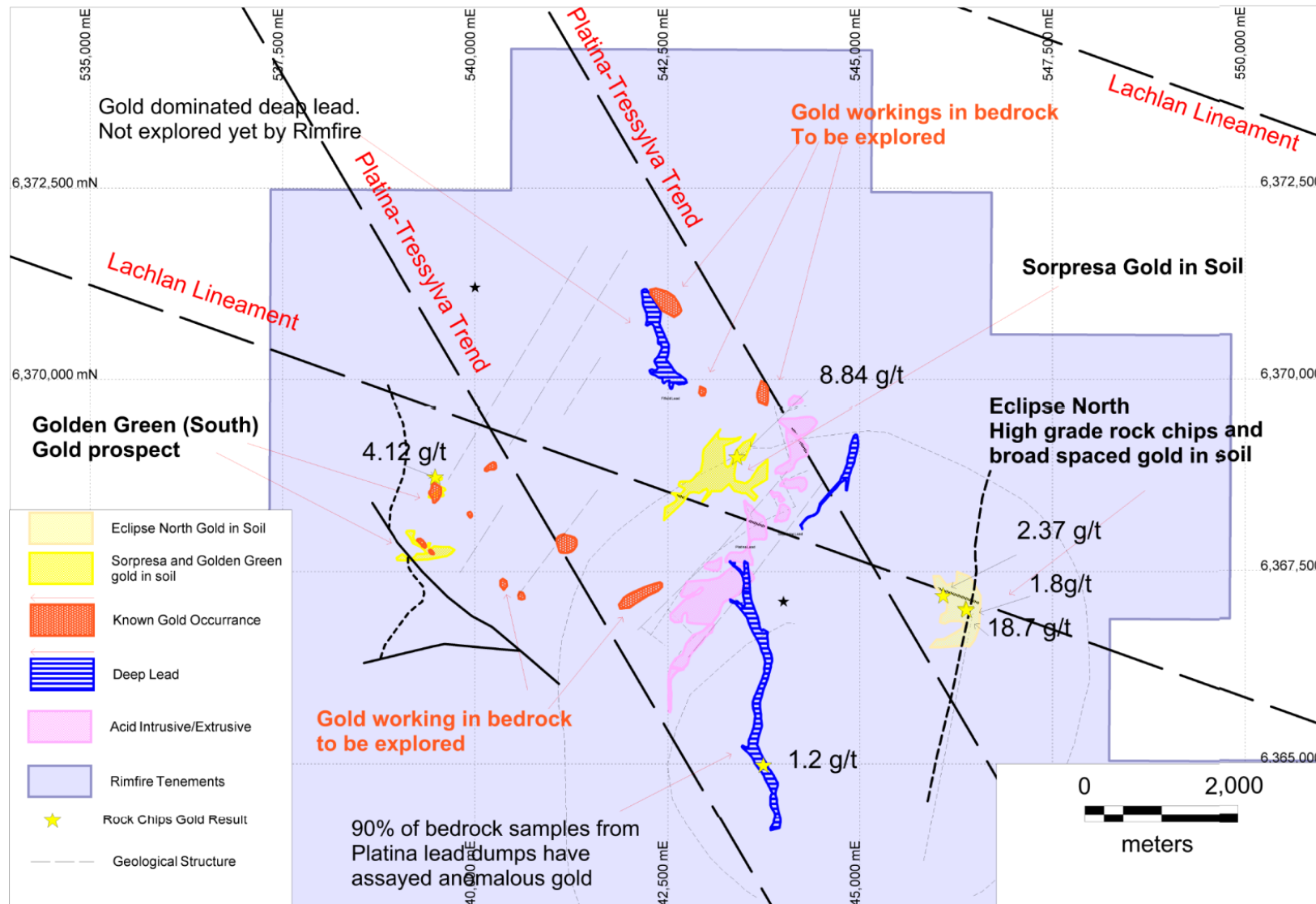
**The Sorpresa Area Anomalous Gold Zone – Additional Auger Traverses**

**(Soil Geochemistry Lines with Trench 31 Location and RC Program (2008) shown as context)**



**APPENDIX 2**

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



**Gold Features**

### Appendix 3

#### Sorpresa Auger Traverses (December 2010) into Bedrock - Gold and Multi-Element Assays

Assays were carried out by independent laboratory, ALS Laboratories Orange, using standard Fire Assay Methods for Gold, namely Au-AA22 (for Au values below 1ppm) and Au-AA26 (for Au values above 1ppm). Multi-element method ME-ICP41 was used for other elements. The sample charge size for assay was 50g. Location details for samples are shown Appendix 1.

SAMPLE DESCRIPTION (Auger holes are placed at 5m intervals)	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	Au-AA22	Au-AA26
	Ag ppm	As ppm	Bi ppm	Cu ppm	Mo ppm	Pb ppm	Sb ppm	Tl ppm	Zn ppm	Au ppm	Au ppm	
Auger Traverse Number (sample taken in bedrock @2.5m depth EOH)												
FiAug 938 :2-2.5	<0.2	2	<2	43	<1	6	<2	<10	3	0.009		
FiAug 939 :2-2.5	<0.2	3	<2	17	<1	7	<2	<10	3	0.015		
FiAug 940 :2-2.5	0.2	10	<2	19	<1	12	<2	<10	5	0.011		
FiAug 941 :2-2.5	<0.2	3	<2	7	<1	5	<2	<10	2	0.005		
FiAug 942 :2-2.5	<0.2	4	<2	7	<1	6	<2	<10	2	0.019		
FiAug 943 :2-2.5	0.4	4	<2	8	<1	15	<2	<10	3	0.04		
FiAug 944 :2-2.5	<0.2	4	<2	14	<1	20	<2	<10	3	0.019		
FiAug 945 :2-2.5	0.2	5	<2	15	<1	32	<2	<10	5	0.041		
FiAug 946 :2-2.5	0.6	39	<2	21	<1	679	8	<10	7	>1.00	1.21	
FiAug 947 :2-2.5	0.2	10	<2	13	<1	71	2	<10	9	0.133		
FiAug 948 :2-2.5	0.4	5	<2	11	<1	57	<2	<10	6	0.136		
FiAug 949 :2-2.5	0.4	5	<2	12	<1	33	<2	<10	7	0.137		
FiAug 950 :2-2.5	0.2	2	<2	8	<1	15	<2	<10	4	0.059		
FiAug 951 :2-2.5	0.4	7	<2	9	<1	38	<2	<10	16	0.165		
FiAug 952 :2-2.5	0.5	2	2	6	<1	18	<2	<10	3	0.025		
FiAug 953 :2-2.5	0.4	11	<2	8	<1	23	2	<10	8	0.05		
FiAug 954 :2-2.5	0.6	9	<2	6	<1	27	<2	<10	4	0.031		
FiAug 955 :2-2.5	0.5	12	2	7	<1	21	<2	<10	7	0.062		
FiAug 956 :2-2.5	0.2	5	<2	5	<1	31	2	<10	6	0.048		
FiAug 957 :2-2.5	<0.2	90	<2	14	<1	19	5	<10	10	0.032		
FiAug 958 :2-2.5	<0.2	38	<2	8	<1	8	2	<10	4	0.012		

**Appendix 3 (cont.)**

SAMPLE DESCRIPTION (Auger holes are placed at 5m intervals)	ME-ICP41 Ag ppm	ME-ICP41 As ppm	ME-ICP41 Bi ppm	ME-ICP41 Cu Ppm	ME-ICP41 Mo Ppm	ME-ICP41 Pb ppm	ME-ICP41 Sb ppm	ME-ICP41 Tl ppm	ME-ICP41 Zn ppm	Au-AA22 Au ppm
Auger Traverse Number (sample taken in bedrock @2.5m depth EOH)										
FiAug 1500 :2-2.5	0.2	83	<2	13	<1	7	6	<10	7	0.026
FiAug 1501 :2-2.5	0.2	50	<2	16	<1	6	6	<10	6	0.013
FiAug 1502 :2-2.5	0.2	47	<2	17	<1	11	9	<10	8	0.019
FiAug 1503 :2-2.5	0.5	17	<2	8	<1	112	5	<10	7	0.023
FiAug 1504 :2-2.5	<0.2	13	<2	10	<1	13	4	<10	7	0.018
FiAug 1505 :2-2.5	<0.2	8	<2	10	<1	5	5	<10	6	0.011
FiAug 1506 :2-2.5	<0.2	12	<2	8	<1	9	2	<10	10	0.008
FiAug 1507 :2-2.5	<0.2	26	<2	6	<1	7	4	<10	5	0.009
FiAug 1508 :2-2.5	<0.2	295	2	52	1	83	17	<10	19	0.025
FiAug 1509 :2-2.5	0.2	38	<2	12	1	37	9	<10	10	0.024
FiAug 1510 :2-2.5	0.5	48	<2	11	<1	24	6	<10	4	0.089
FiAug 1511 :2-2.5	0.7	91	<2	24	1	36	13	<10	10	0.308
FiAug 1512 :2-2.5	1.3	64	<2	16	1	25	8	<10	4	0.092
FiAug 1513 :2-2.5	2.3	32	<2	13	1	36	3	<10	7	0.477
FiAug 1514 :2-2.5	0.4	55	<2	22	<1	14	7	<10	9	0.074
FiAug 1515 :2-2.5	0.4	27	<2	14	1	22	5	<10	9	0.059
FiAug 1516 :2-2.5	<0.2	15	<2	9	1	13	4	<10	7	0.016
FiAug 1517 :2-2.5	0.2	30	<2	10	<1	13	5	<10	5	0.015
FiAug 1518 :2-2.5	0.2	15	<2	7	1	32	4	<10	5	0.007
FiAug 1519 :2-2.5	0.2	22	<2	6	<1	44	3	<10	4	0.014
FiAug 1520 :2-2.5	0.2	28	<2	10	<1	17	6	<10	8	0.003
FiAug 1521 :2-2.5	0.2	34	<2	8	<1	9	5	<10	4	0.002
FiAug 1522 :2-2.5	<0.2	36	<2	10	1	5	5	<10	6	0.005
FiAug 1523 :2-2.5	<0.2	30	<2	12	<1	9	4	<10	6	0.06



**Appendix 3 (Cont.)**

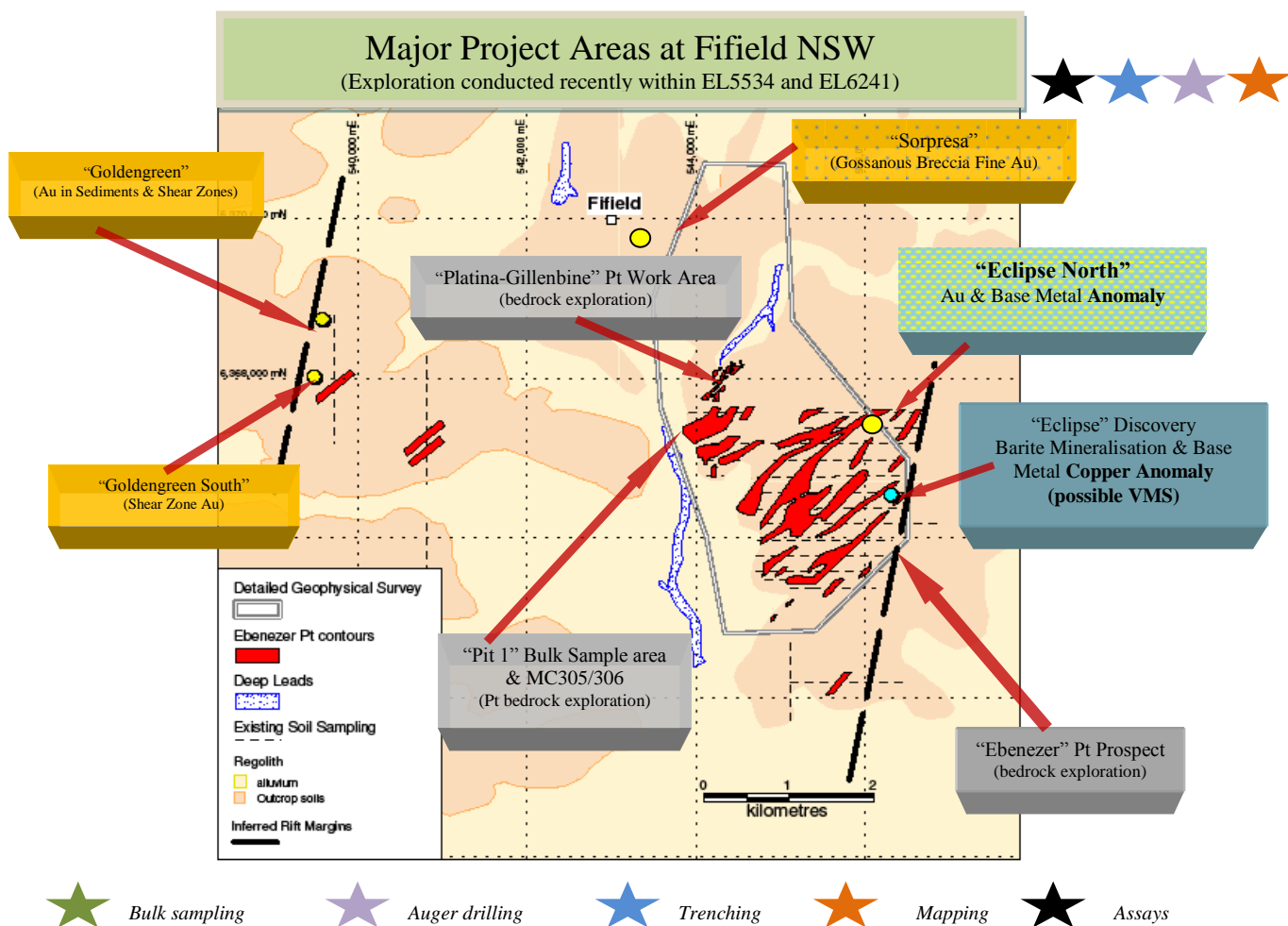
SAMPLE DESCRIPTION	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	Au-AA22
	Ag ppm	As ppm	Bi ppm	Cu Ppm	Mo Ppm	Pb ppm	Sb ppm	Tl ppm	Zn ppm	Au ppm
Auger Traverse Number (sample taken in bedrock @2.5m)										
FiAug 1034 :2-2.5	<0.2	47	2	43	1	31	<2	<10	12	0.01
FiAug 1035 :2-2.5	<0.2	42	2	32	<1	47	<2	<10	12	0.033
FiAug 1036 :2-2.5	<0.2	68	2	34	1	117	<2	<10	8	0.029
FiAug 1037 :2-2.5	0.2	92	<2	49	1	112	<2	<10	14	0.227
FiAug 1039 :2-2.5	0.3	8	<2	10	<1	31	<2	<10	9	0.108
FiAug 1040 :2-2.5	0.3	20	<2	17	1	53	2	<10	8	0.055
FiAug 1041 :2-2.5	0.4	25	<2	17	<1	40	2	<10	6	0.05
FiAug 1042 :2-2.5	0.3	34	<2	23	<1	22	2	<10	9	0.048
FiAug 1044 :2-2.5	0.2	27	<2	15	<1	29	2	<10	9	0.044
FiAug 1045 :2-2.5	0.3	40	<2	17	<1	45	2	<10	7	0.024
FiAug 1046 :2-2.5	0.6	81	<2	38	<1	34	3	<10	11	0.207
FiAug 1047 :2-2.5	0.2	60	<2	24	1	21	3	<10	10	0.141
FiAug 1049 :2-2.5	0.3	158	2	38	1	55	9	<10	11	0.032
FiAug 1050 :2-2.5	0.3	83	<2	26	1	14	3	<10	13	0.024

**Sub Crop Samples – Rock Chips Sorpresa**

SAMPLE DESCRIPTION	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	Au-AA22	Au-AA26
	Ag ppm	As ppm	Cu ppm	Pb ppm	Zn ppm	Au ppm	Au ppm
FIR 426	0.5	37	30	31	8	>1.00	3.00
FIR 427	0.4	12	18	24	6	>1.00	1.37

# Appendix 4

## Project Areas Fifield NSW and Metal Zoning Interpretations



Regional Position for Fifield Mineralisation

Fifield Mineralisation Metal Zoning Interpretation

