



Diamond Hole Fi 325 DDH yields 9m @ 3.41g/t Gold **- 5 hole diamond program establishes the next stage of the Sorpresa Project, Fifield NSW**

Rimfire Pacific Mining NL (ASX:RIM) ("Rimfire" or "The Company") is pleased to announce further results from the first ever diamond drilling program at Sorpresa. Fi 325 DDH has produced **9m @ 3.41g/t Au¹**.

Four out of the five holes drilled have now returned significant gold (Au) and silver (Ag) intersections with all holes intersecting the target "black silica" stratigraphy, greatly expanding the exploration target area.

Diamond Drilling Significant Intersections:

☐ Newly Reported Intersection

- **Fi 325 DDH 9m @ 3.41g/t Au from 14m, including 2m @ 12.7g/t Au AND
8m @ 17.9g/t Ag from 14m AND
10m @ 0.50g/t Au from 30m**

☐ Previously Reported ([17th July 2013](#)) Intersections:

- **Fi 327 DDH 1m @ 24.9g/t Au from 143m,
10m @ 35.9g/t Ag from 121m, AND 3m @ 78.2g/t Ag from 135m**
- **Fi 328 DDH 7m @ 4.24g/t Au from 87m, including 1m @ 22.7g/t Au,
20m @ 97.6g/t Ag from 80m, including 1m @ 631g/t Ag**
- **FI 329 DDH 1m @ 114g/t Au from 159m,
1m @ 33g/t Ag**

(The appendices provide important context to this report and give details of hole locations, and assays)

Diamond Hole Fi 325 DDH was drilled within the Trench 31 area. The hole was designed to understand the orientation and controls on high grade gold mineralization, whilst also examining the gold position in the oxide zone. This was successfully achieved with mineralization identified in the "black silica" horizon associated with localized brecciation, silicification and carbonate alteration.

Taking the diamond drilling program as a whole, there have been significant advances in the knowledge of the geology, alteration, mineralization, setting and style at Sorpresa. When combined with the excellent intersections in four out of five of the diamond holes, Sorpresa has now dramatically elevated its status in the past few months, as an important component within a much larger area at Fifield.

Further work building upon these observations and constructing 3D models is advancing in preparation for rapid systematic exploration and step out drilling which will commence in the next few weeks.

The Executive Chairman, John Kaminsky, commented:



"The project's first ever diamond drilling campaign has been incredibly successful. Intersecting bonanza grade at **1m @ 114g/t Au**, and significant width and grade mineralization such as **7m @ 4.24g/t Au**, as previously reported, was very well complemented with **9m @ 3.41g/t Au** in hole Fi325 DDH. This is extremely pleasing to see.

The current funding rounds, including the placement and the **Share Purchase Plan (SPP)²**

¹ Au was determined by fire assay method AA26 with AAS finish, and Ag used ME-ICP61 at ALS Laboratories – [ASX 17 July Diamond Drilling Results](#)

will enable the Company to further develop the Sorpresa area. This will include systematic exploration east of the currently identified mineralization towards the successful reconnaissance diamond drill results and beyond.

The scale of the receptive geology and orientation of mineralisation especially in the Boundary Gate area has revealed significant scope for step out drill investigation and **commencement of a drill program is anticipated in the coming weeks.**

This is a very large and prospective area and we look forward to keeping shareholders informed through this next exciting stage.”

Technical Interpretations Involving the Sorpresa Mineralizing System

Interpretation of the results from the diamond drill program remain ongoing and have been assisted with recent petrology studies. The drill program has enabled a more holistic evaluation of the Sorpresa system, and provided a better comprehension of the style of mineralization operating at large. Advances in understanding include:

- Determination of host rock ‘**receptive horizon**’ orientation, thickness and continuity
- Definition of the extent, nature and **intense alteration of the overlying quartz porphyry ‘cap rock’ sill**
- Recognition of the alteration and metal association of mineralization, **greatly enhancing exploration targeting** of extensions to known mineralization, and identification of new targets
- Confirmation of a **high level epithermal mineralization** environment
- Underlying mafic to ultramafic fractionated and layered intrusions were intersected, potentially different to the Alaskan Ural Fiefeld complexes with implications for the style and level of the Sorpresa mineralization. **These intrusions contain elevated Platinum Group Elements (PGE’s), minor chalcopyrite and bornite copper mineralization up to 1m @ 900ppm Cu (440-441m)**
- Intersection of **propylitically altered** (chlorite, actinolite, epidote, magnetite) dolerite dykes and sills.
- Carbonate alteration and vein-located base metal sulphides** (pyrite, chalcopyrite, galena and Fe-poor Sphalerite) were also intersected

These observations hint at a potentially district scale influence, of which Sorpresa is but a small component.

Metal Prices

As at 19th August 2013, **metal prices had shown some significant improvement**, with the approx. trading prices (Kitco.com) for metals in New York based on closing Ask in USD as follows:

Gold	\$1,373/oz
Platinum	\$1,519/oz
Silver	\$23/oz



JOHN KAMINSKY
Executive Chairman

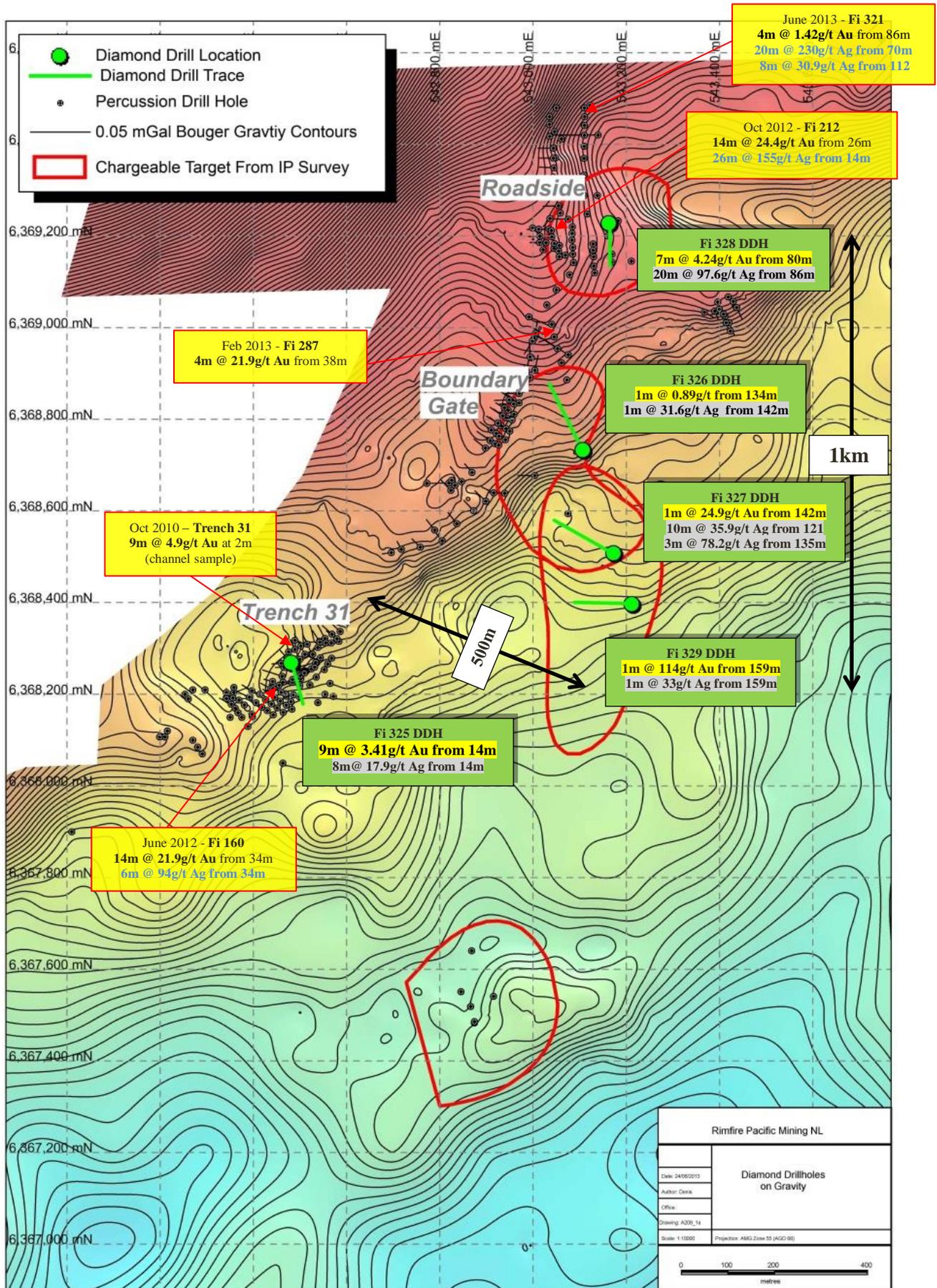
The information in the report to which this statement is attached that relates to Exploration Results is compiled by Mr Colin Plumridge, who is a Member of The Australian Institute of Mining and Metallurgy, with over 40 years experience in the mineral exploration and mining industry. Mr Plumridge is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

² [Hyperlink](#) - the purchase price of the new Shares being offered under the SPP has been set at **4.3 cents per Share**

APPENDIX 1

Plan View Diamond Drill Holes with main Assay- Sorpresa Project (with Gravity and IP backdrop)

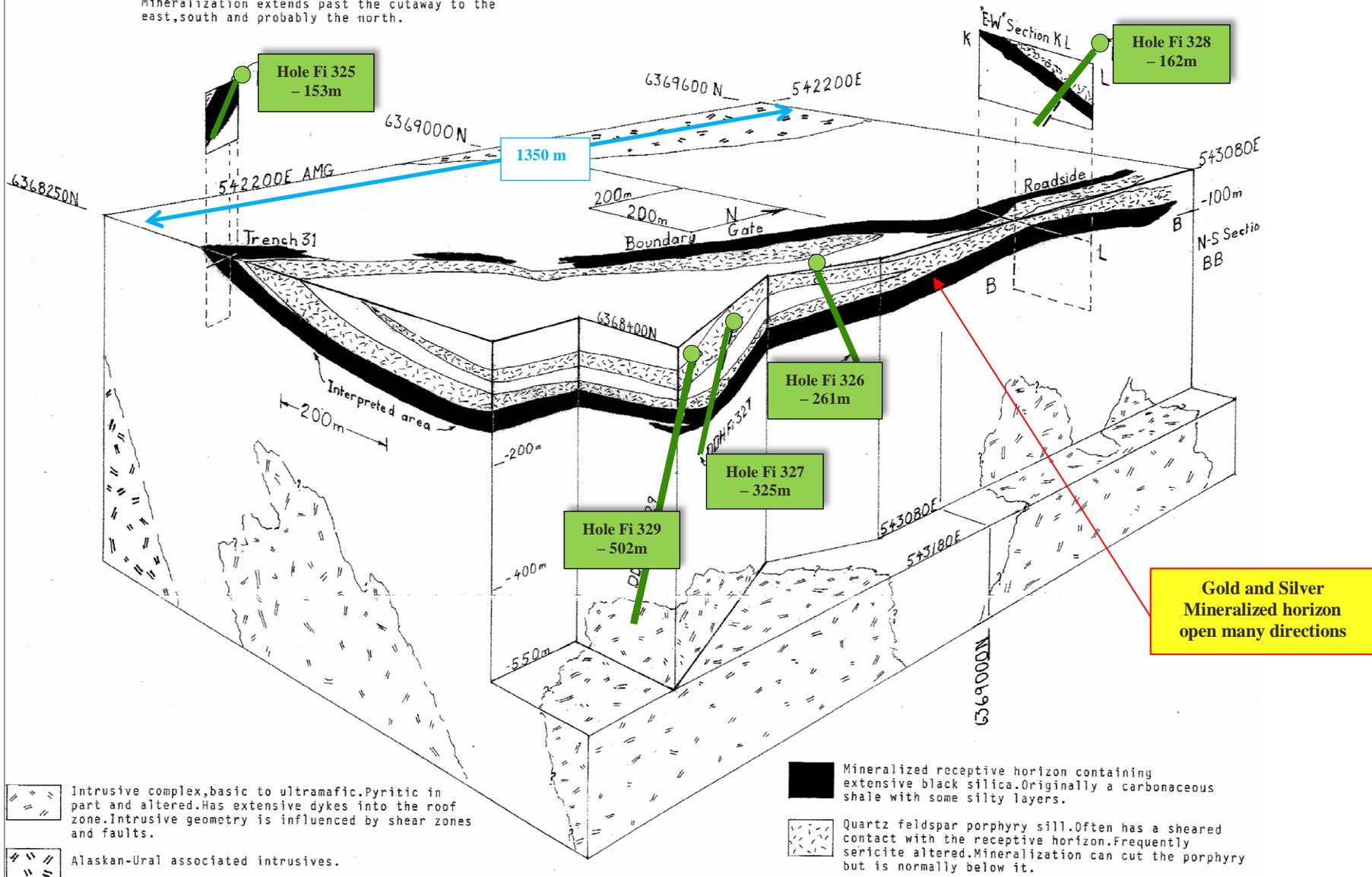
Selected reference assays are also shown for orientation. Refer tables (current and previous) for complete results.



Appendix 2
Diamond Drill Holes on Cutaway Perspective View

SORPRESA CUTAWAY PERSPECTIVE VIEW

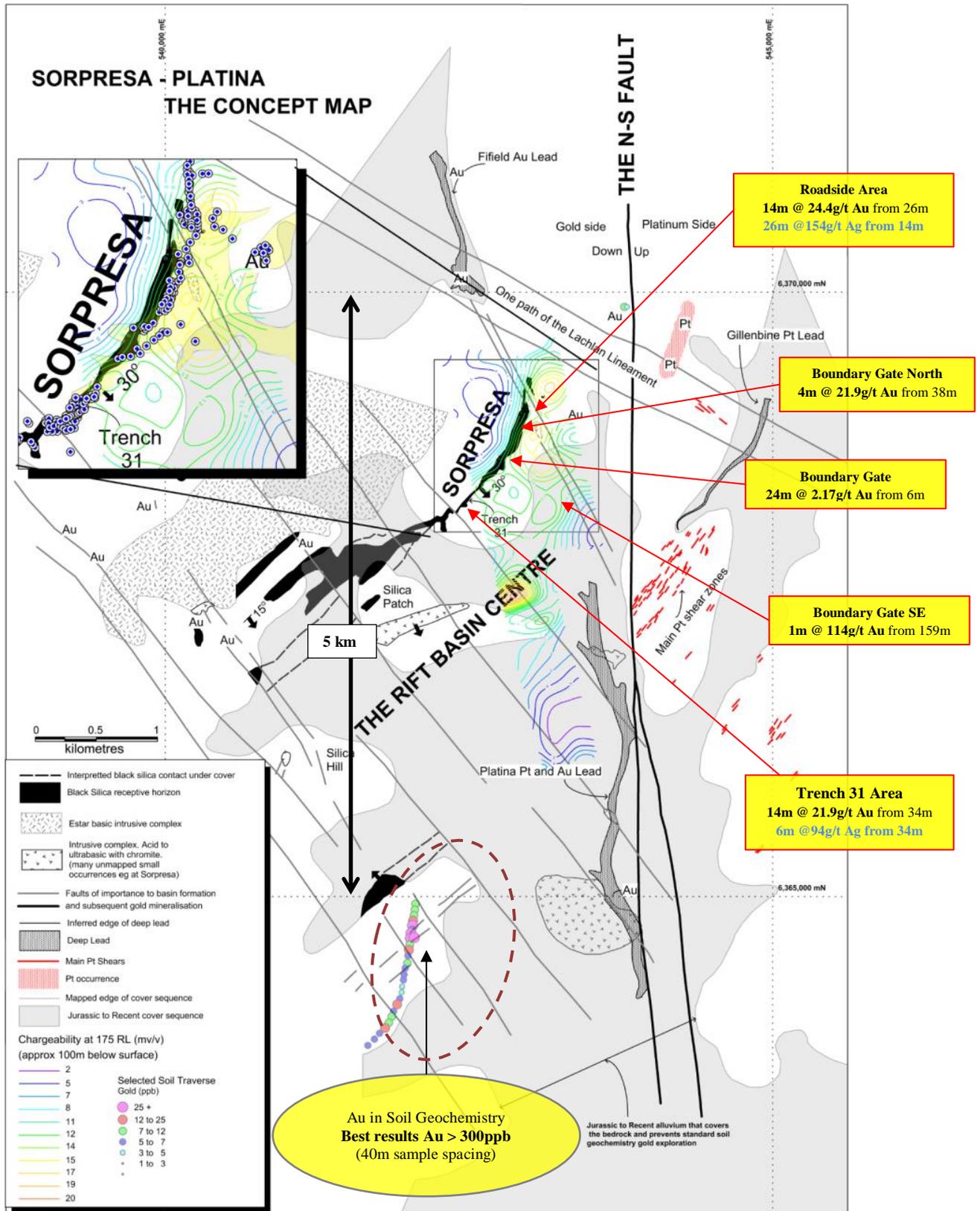
Mineralization extends past the cutaway to the east, south and probably the north.



Appendix 3

The Geological Concept Model – Syncline Rift Basin in Plan View

(Note that the IP survey response at approx. 100m depth is overlaid, selected assays for orientation shown)



Appendix 4
Fi 325 DDH - Diamond Drilling Assays Sorpresa Gold and Silver Project

Hole ID	Easting (AGD66)	Northing (AGD66)	RL (AHD) (approx)	Dip	Grid Azimuth (°)	Depth	Drilling Type	Metres Assayed	% Assayed	Area Name	Gold Section Result	Gold Section Depth From	and silver	Silver Section Result	Silver Section Depth From
(units)	(m)	(m)	(m)	(°)	(°)	(m)					(m)				(m)
Fi 325 DDH	542483	6368266	292	-50	165	152.6	DD	144.6	94.8%	Trench 31	4m @ 0.12g/t Au	10			
										and	9m @ 3.41g/t Au	14	and	8m @ 17.9g/t Ag	14m
										incl.	2m @ 12.7g/t Au	15			
										and	3m @ 0.26g/t Au	23	and	5m @ 5.7g/t Ag	22m
										and	1m @ 0.15g/t Au	29			
										and	9m @ 0.54g/t Au	30			
										and	1m @ 0.15g/t Au	39			
										and	1m @ 0.13g/t Au	67			
										and	4m @ 0.37g/t Au	68			
										and	1m @ 0.1g/t Au	75			
										and	2m @ 0.18g/t Au	80			
										and	4m @ 0.5g/t Au	98			
										and	2m @ 0.2g/t Au	121			
										and	1m @ 0.12g/t Au	127			
										and	1m @ 0.15g/t Au	129			
										and	1m @ 0.19g/t Au	138			

Legend: NS = No section; Pending = Assays due, not done yet; NA = No Assays performed; Incl. = Included in section above

Method: Samples were taken on 1m intervals, and submitted in most instances as whole core to the laboratory. Gold Fire assay Method AA26 (ALS Laboratories) was performed on 50g subsamples. For Silver, methods ME-ICP61 (<100g/t Ag) and Ag-OG46 (>100g/t Ag), Aqua regia Digest were used.

Some of the mineralization is in sheared and brecciated high carbon areas that are prone to core loss. The 30% core loss in 14.7m to 15.5m could have taken gold out of the intersection.

Appendix 5 - Sorpresa Project Information Thread

The Company provides a **hyperlink thread** of the Sorpresa Gold Mineralization area of recent ASX and video materials as follows. The thread provides important views previously expressed, that will assist the reader with understanding the Company's technical consideration and outlook for the work it is undertaking:

1. ASX July 31st 2013 [Exploration Report June 2103 Quarter](#)
2. ASX July 17th 2013 [Diamond Drilling Reveals Bonanza Grade of 1m @ 114g/t Au](#)
3. ASX June 13th 2013 [Further Positive RC Drilling Results at Sorpresa Project](#)
4. ASX May 23rd 2013 [Diamond and RC Drilling Completed, RAB Drilling Extended](#)
5. ASX April 26th 2013 [Mineralized Zones Intersected in Diamond Drilling](#)
6. ASX April 12th 2013 [RAB Drilling program Commences at Sorpresa](#)
7. ASX April 5th 2013 [Diamond Drilling and RC Drilling Commences at Sorpresa Gold Project](#)
8. ASX March 27th 2013 [Additional Assays at Sorpresa Gold Project](#)
9. ASX March 13th 2013 [Sorpresa Gravity Geophysical Survey Commences](#)
10. ASX February 19th 2013 [Continuous 350m Section Established at Roadside Area & New Gold Zone Intersected](#)
11. ASX January 31st 2013 [Quarterly Exploration Activities December 2012](#)
12. ASX December 18th 2012 [Sorpresa Project Produces More Encouraging Results](#)
13. ASX November 22nd 2012 [Presentation for 2012 AGM](#)
14. ASX November 5th 2012 [Best Silver Grades to Date Seen at Sorpresa Project Area](#)
15. ASX October 10th 2012 [Highest Gold and Silver Grades seen to date at Sorpresa Project](#)
16. ASX September 17th 2012 [First Gold Sections Created at Sorpresa Project – New Assay Results](#)
17. ASX August 31st 2012 [New Gold in Soil Zones Located 4km South of Sorpresa](#)
18. ASX July 31st 2012 [Quarterly Exploration Activities June 2012](#)
19. ASX July 26th 2012 [Successful Intersections at Sorpresa Gold Project](#)
20. ASX June 13th 2012 [High Grade Gold Intersection Sorpresa Project – Fifield NSW](#)
21. ASX May 28th 2012 [Sorpresa Gold Project has Increased Potential at Depth](#)

A video link is provided to a [3D model of the IP Anomaly at Sorpresa \(click here\)](#).
22. ASX April 30th 2012 [Quarterly Exploration Activities March 2012](#)
23. ASX January 31st 2012 ([Quarterly Exploration Activities December 2011](#))
24. A video link is provided [January 2012 Sorpresa Gold Project – Trench 31 Area Review Video](#)
25. ASX 28th November 2011 [AGM Exploration Presentation – Including Key Summary Assay results of Sorpresa](#)
26. Rimfire Website Summary [Brief history of Sorpresa Mineralization discovery and style \(to September 2011\)](#)
27. ASX [Assays Confirm Significant Gold and Silver at Sorpresa Project 6th July 2011](#)