



## QUARTERLY EXPLORATION AND ACTIVITIES REPORT

(For the period 1<sup>st</sup> July 2013 to 30<sup>th</sup> September 2013)

### **Drilling at Sorpresa Project Provides Excellent Grades of Gold and Silver - Mineralization Footprint at Fifield NSW Continues to Expand**

#### Highlights for the Quarter

- ❖ Successful \$3.3M (before costs) capital raising, provides impetus for next stage work plans
- ❖ Diamond drilling results confirm the great success of this program, which included bonanza grade (hole Fi 329: 1m @ 114g/t Au), 400m east of the main Sorpresa strike line
- ❖ Multiple new gold target areas have been established through extensive drilling (RAB, Auger, Percussion, Diamond) and surface mapping, enabling further growth potential at Sorpresa (Appendices 2 & 7)
  - Drilling continues at various locations within the 8km<sup>2</sup> wider Sorpresa area
- ❖ Step out percussion drilling at Roadside location demonstrates continuity, scale and 3D shape, in gold and silver mineralization (Appendices 3 to 6)
  - Dimension at Roadside is 350m strike x 350m down dip at the southern end, and remains open
- ❖ The wider Sorpresa area "Geological Model" has been updated indicating important advances in understanding of key components in the mineralizing system (Appendix 7)

#### **Diamond Drilling Assay Highlights at Sorpresa Project Reported in September Quarter**

Hole	Intersection details <sup>1</sup> (high grade component shown)	Including section	Result reporting dates
Fi 325 DDH	9m @ 3.41g/t Au from 14m AND 8m @ 17.9g/t Ag from 14m AND 10m @ 0.5g/t Au from 30m	2m @ 12.7g/t Au	Aug 2013
Fi 329 DDH	1m @ 114g/t Au from 159m AND 1m @ 33g/t Ag from 159m		July 2013
Fi 328 DDH	7m @ 4.24g/t Au from 87m AND 20m @ 97.6g/t Ag from 80m	1m @ 22.7g/t Au AND 1m @ 631g/t Ag	July 2013
Fi 327 DDH	1m @ 24.9g/t Au from 143m AND 10m @ 35.9g/t Ag from 121m, AND 3m @ 78.2g/t Ag from 135m		July 2013

During the period, Rimfire Pacific Mining NL (ASX:RIM) ("Rimfire" or "The Company") received excellent results from its first diamond drilling program (5 holes for 1,402m, in 3 locations, drilling completed May 2013), adding significantly to the prospective nature and understanding of the Sorpresa gold and silver project area (**Appendix 1**).

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

<sup>1</sup> Au was determined by fire assay method AA26 with AAS finish, and Ag used ME-ICP61 at ALS Laboratories – [Available Results Diamond Drilling](#)

the diamond drilling program in its entirety, important advances have occurred in the knowledge of the geology, alteration, mineralization, setting and style at Sorpresa.

**The Executive Chairman, John Kaminsky, stated:**

“We have made great strides in the September quarter on a number of important fronts in another very busy period.

**Diamond drilling has provided us with some excellent high grade gold and silver intersections** within the Sorpresa project area, boosting our overall understanding and has expanded the prospective areas for gold and silver well beyond the previously known positions at Sorpresa.

**The Company was able to raise sufficient working capital**, with minimal costs, in an extremely tough financial climate, and immediately put these funds to good use. The appointment of Darren Glover, as an experienced professional to the field team, combined with further investment in facilities and modelling capabilities has enabled us to visualise the mineralization better and lay the foundation for substantial drilling going forward. This will move us closer to establishing resource definitions in due course.



As a result, **multiple new drill plans have been designed and are undergoing phased implementation**, according to target readiness and access issues for the various styles of drilling.

In the post quarter period **we are seeing some solid results at Roadside location** growing the scale, continuity and potential of the emerging gold and silver system at Sorpresa. The latest series of results and geological observations are consistent with our previous work so this is very encouraging.

The range of high quality target areas available for wider spaced drilling, particularly south of Roadside, where we will be investigating the previous diamond drill hole intersections, will be exciting.

Shareholders are to be congratulated for their strong support in the recent capital raising conducted in the quarter and should be extremely pleased by the results achieved in the last quarter as we head towards the end of the year.”

**September Quarter Drilling**

Drill programs were conducted in the September quarter, using various techniques, including auger, RAB, RC and OHH. Having a portfolio of drill rig types has meant that weather and crop restrictions have been more easily mitigated. A brief summary of some of this work is provided.

**Rotary Air Blast (RAB) Drilling at Sorpresa**

In-fill RAB drilling was undertaken using the Rimfire owned and operated drill rig, approximately 1~2km to the south west of the known gold mineralized position at the Trench 31 location, within the wider Sorpresa project area.

This drilling was designed to provide additional information at shallow depths looking for subtle gold signatures and key pathfinder elements, complimenting the previous multiple traverse lines, conducted around this location.

This RAB drilling forms part of an extensive and ongoing exploration campaign for gold under the shallow alluvium cover sequence and has already expanded the Sorpresa style of geology, beyond the main Sorpresa strike zone. The RAB drilling provides the foundation for additional tighter spaced and deeper RC drilling at a later stage, focusing on the best target areas identified.

**Percussion Drilling at the Roadside Location within the Sorpresa Project Area**

Further drilling was undertaken with a key emphasis on the silver dominant Roadside location. Results were received in the post quarter period and demonstrate that the gold and silver zones have been extended to surface in the northern part of Roadside, heading west.

In the southern part of Roadside, an extension of a further 100m, to 350m, down dip to the east was achieved and remains open.

The first 3D shapes for gold and silver mineralization at Sorpresa were generated in the post quarter period showing the mineralization is continuous, of considerable scale, desirable geometric shape, and still open in many directions at Roadside.

### **Post Quarter Reporting<sup>2</sup> - Assay Highlights from the Roadside Percussion Drilling:**

Hole	Main Intersection details	Including section
Fi 366	<b>21m @ 1.11g/t Au from 103m and</b> <b>12m @ 22g/t Ag from 104m and</b> 10m @ 0.30g/t Au from 128m	<b>12m @ 1.80g/t Au, 0.17% Pb and 0.38% Zn from 104m</b> <b>1m @ 4.57g/t Au, 311g/t Ag, and 0.81% Zn from 107m</b> 2m @ 0.64g/t Au, 0.12% Pb, 0.31% Zn from 130m
Fi 338	18m @ 0.22g/t Au from 12m <b>and</b> <b>18m @ 82.6g/t Ag from 18m and</b> <b>2m @ 59.8g/t Ag from 42m</b>	<b>6m @ 169.3g/t Ag from 20m</b>
Fi 369	<b>18m @ 0.50g/t Au and 18m @ 36g/t Ag from 117m and</b> 16m @ 0.19g/t Au from 138m <b>1m @ 0.14g/t Au, 0.49% Pb, 2.13% Zn from 153m</b>	<b>3m @ 1.72g/t Au and 139.7g/t Ag from 126m</b> <b>2m @ 0.72% Pb from 144m</b>
Fi 342	<b>8m @ 0.53g/t Au from 12m and</b> <b>8m @ 90.2g/t Ag from 16m</b>	<b>2m @ 206g/t Ag from 20m</b>
Fi 371	<b>26m @ 0.44g/t Au from 123m and</b> 7m @ 0.29g/t Au from 154m	<b>1m @ 2.16g/t Au, 0.22% Pb and 1.16% Zn from 128m</b>
Fi 370	11m @ 0.34g/t Au from 103m <b>and</b> <b>11m @ 33.7g/t Ag from 103m and</b> <b>2m @ 0.54g/t Au, 24.2g/t Ag, 1.0% Pb, 0.83% Zn from 140m</b>	<b>2m @ 0.82g/t Au, 98g/t Ag, and 0.23% Pb from 106m</b>
Fi 341	8m @ 0.45g/t Au from 6m <b>and</b> <b>8m @ 33.4g/t Ag from 6m</b>	
Fi 339	12m @ 0.23g/t Au from 4m <b>and</b> <b>2m @ 66.1g/t Ag from 12m</b>	

For location details refer to Appendix 3.

### **West of the Main Sorpresa Strike Line – Reconnaissance Drilling**

Reconnaissance drilling was undertaken in three locations (**Appendix 2**) with positive assay results and geological interpretation indications received in the post quarter period. Significant gold anomalism has been intersected in one location (Fi 352) west of the immediately known main gold strike line of Sorpresa. In the coming months, additional work is planned to investigate these areas further.

#### *1. 200m West of Boundary Gate*

A traverse of three percussion holes (OHH) focused on a previously identified area prospective for gold, located 200m west of the Boundary Gate location. Drill hole Fi 352 produced highly anomalous gold results over a combined 8m interval, giving **6m @ 0.41g/t Au** from 40m, **incl. 2m @ 0.91g/t Au** from 40m **and 2m @ 0.61g/t Au** from 50m.

#### *2. 1km South-West of Trench 31*

Two reconnaissance stratigraphic RC holes were completed, 1km south-west of Trench 31 location, with results expected in the next quarter. The holes were looking to confirm the possible continuation of the prospective Sorpresa stratigraphy, and also develop an understanding of the surface regolith conditions.

A highly encouraging intersection of the typical Sorpresa stratigraphy was achieved in RC hole Fi374. Identification of important geology was noted, including the quartz feldspar porphyry sill, and variable intensity silicification, brecciation and minor quartz carbonate sulphide veining.

The very shallow regolith intersected (<7m) demonstrates that the area is suitable for auger and RAB drilling to define geochemical gold targets. RAB drilling has already commenced based on this understanding.

<sup>2</sup> Full results previously reported ASX October 21<sup>st</sup> 2013 [Results Confirm Extensions of Gold and Silver at Sorpresa Project](#)

### 3. 100m West of Trench 31

RC drill hole Fi 332 (drilled in the June quarter), located 100m to the west of the Trench 31, had the balance of the hole assayed as 4m composite intervals and produced a positive preliminary gold intersection of **8m @ 1.3g/t Au** from 34m. This result, which will be examined in the next period, makes this area heading west appear prospective.

#### **COMMODITY PRICING FOR THE SEPTEMBER 2013 QUARTER**

As at 25<sup>th</sup> October 2013, the trading prices ([www.kitco.com](http://www.kitco.com)) for precious metals had improved on low points and downward trends in the previous quarter.



As at 25<sup>th</sup> October 2013, the prices for metals in New York based on closing Ask in USD were as follows:

Gold	\$1,354/oz
Platinum	\$1,461/oz
Silver	\$22.70/oz

#### **CORPORATE ACTIVITIES**

##### **Tenement Position**

There is no change in the Company tenement position in the quarter.

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

As at 30<sup>th</sup> September 2013 the Company had approximately \$3.416M in cash.

##### **Issued Capital through Placement and SPP**

The number of new shares issued in the quarter was 76,384,519 at 4.3 cents per share. At the close of business on 30th September 2013 there were 686,914,495 ordinary shares on issue.

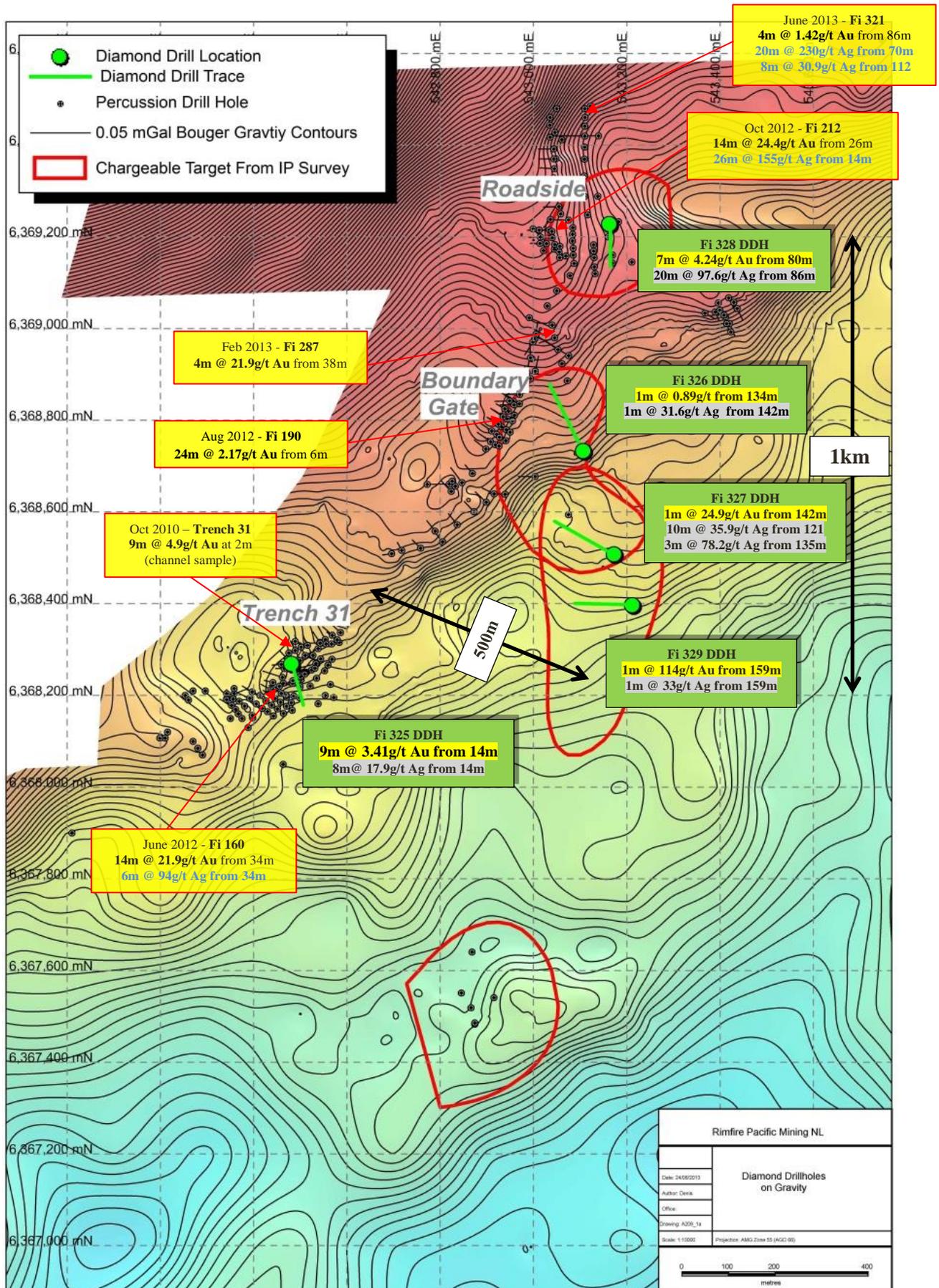
**JOHN KAMINSKY**  
Executive Chairman

*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.*

## APPENDIX 1

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

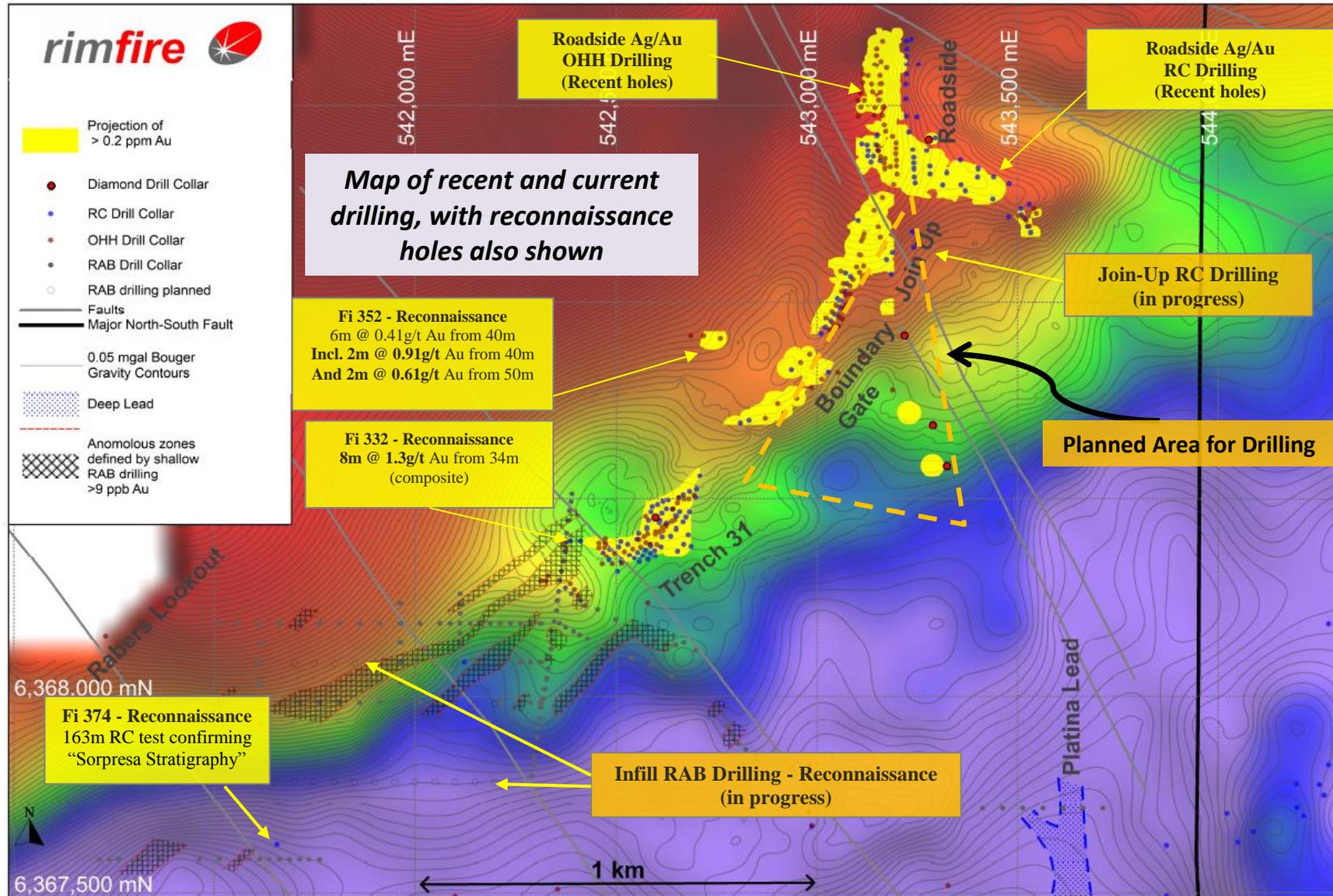
Selected reference assays are also shown for orientation. Refer previous publications for complete results.



Diamond Drilling was very successful and was reported in the September Quarter significantly expanding the known Sorpresa mineralization, whilst also producing high grade intersections.

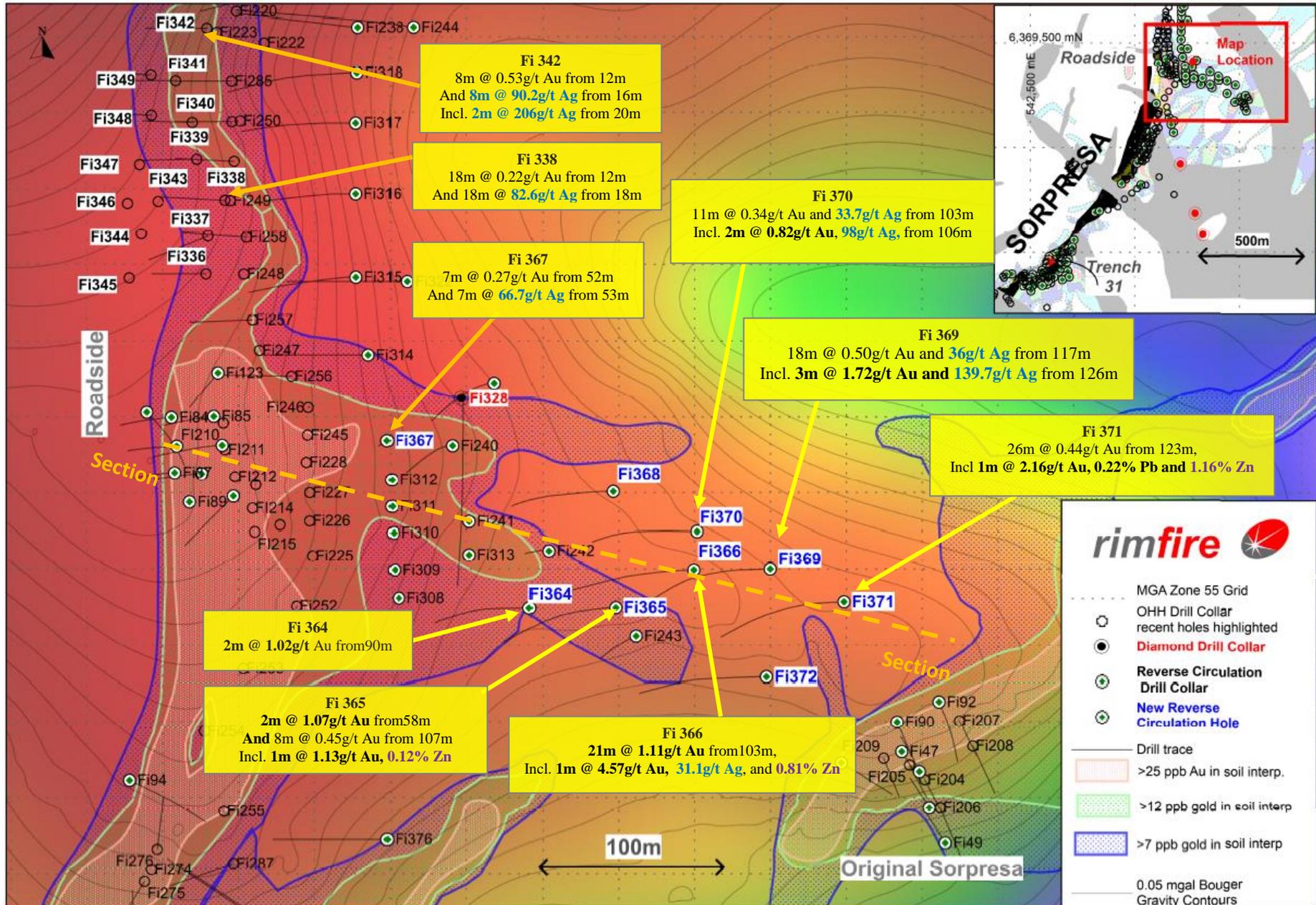
## Appendix 2 – Greater Sorpresa Project plan view

On Bouguer gravity image illustrating interpreted gold (>0.2g/t Au) outline projection (yellow)  
and location of recent Roadside Drilling, Regional Drilling results and drilling currently underway or planned

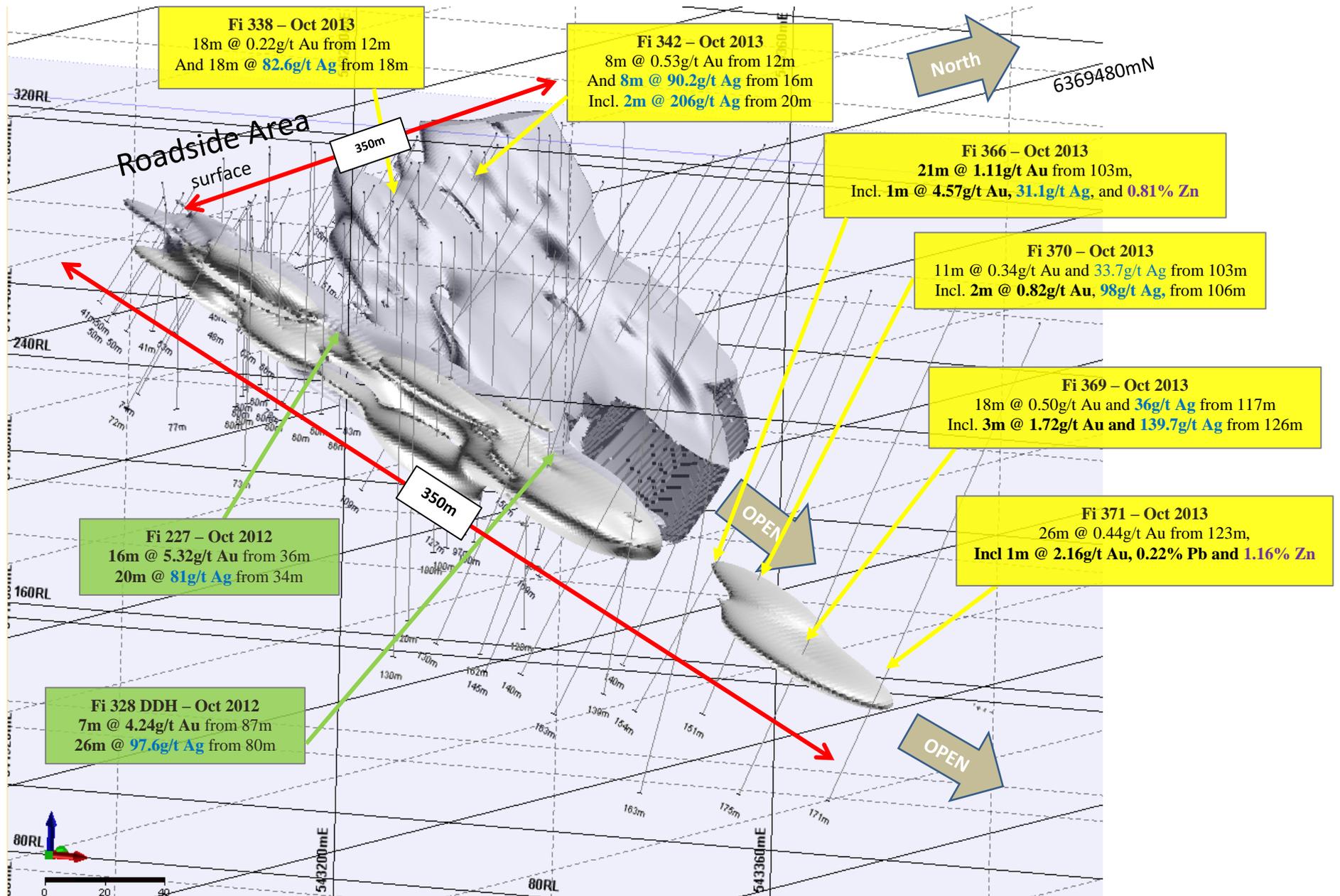


# Appendix 3 – Roadside Drilling location plan with selection of recent intersections on Bouguer Gravity image

(Section Line Applies to Appendices 4, 5 & 6)

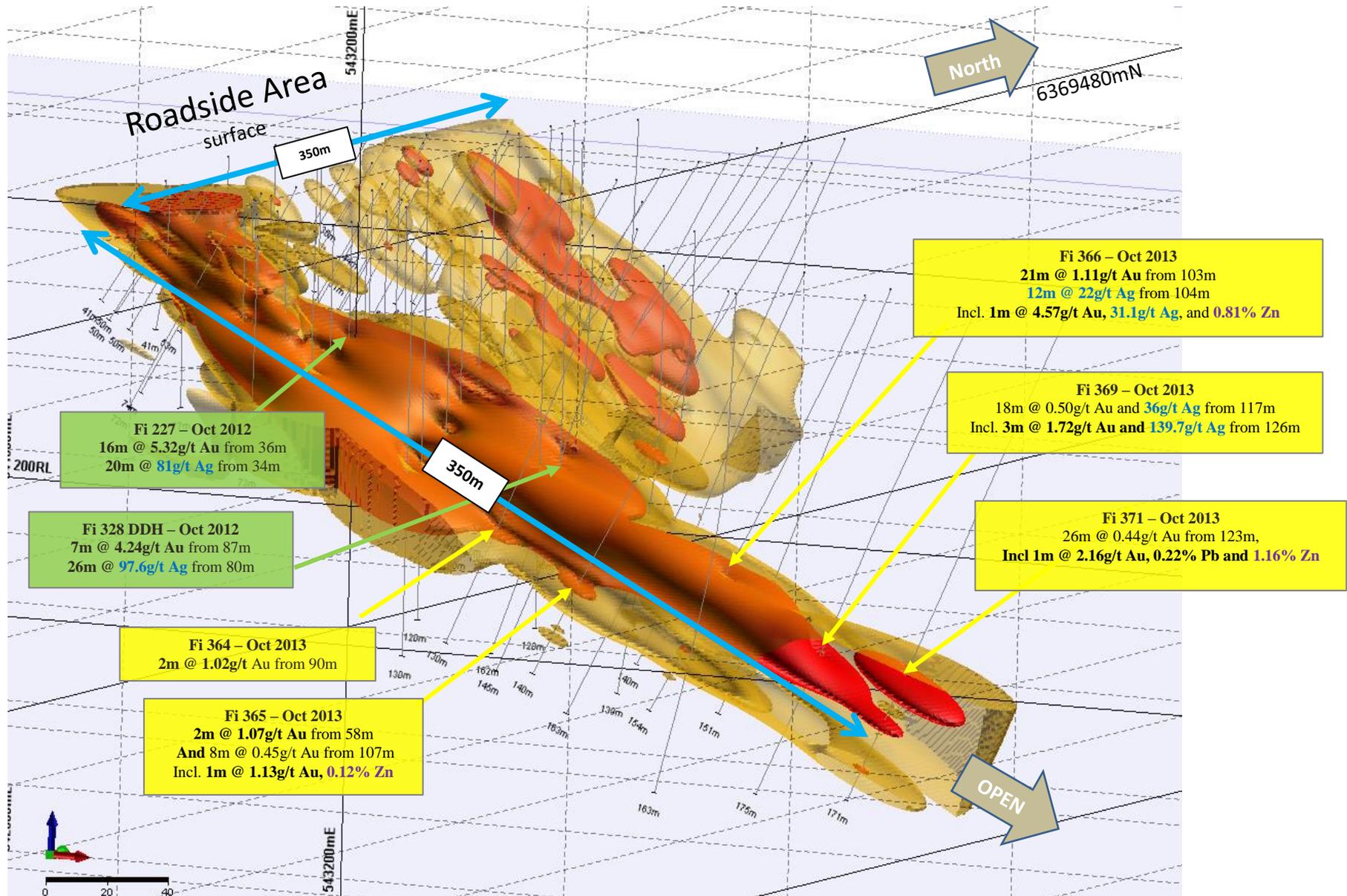


**Appendix 4 – Orthogonal 3D Section looking north-west illustrating interpreted Silver mineralization (>31g/t Ag outline) at the Roadside prospect and the down dip continuity which remains open. Refer to Appendix 3 for location of the section**



## Appendix 5 – Interpreted Gold at Roadside Location

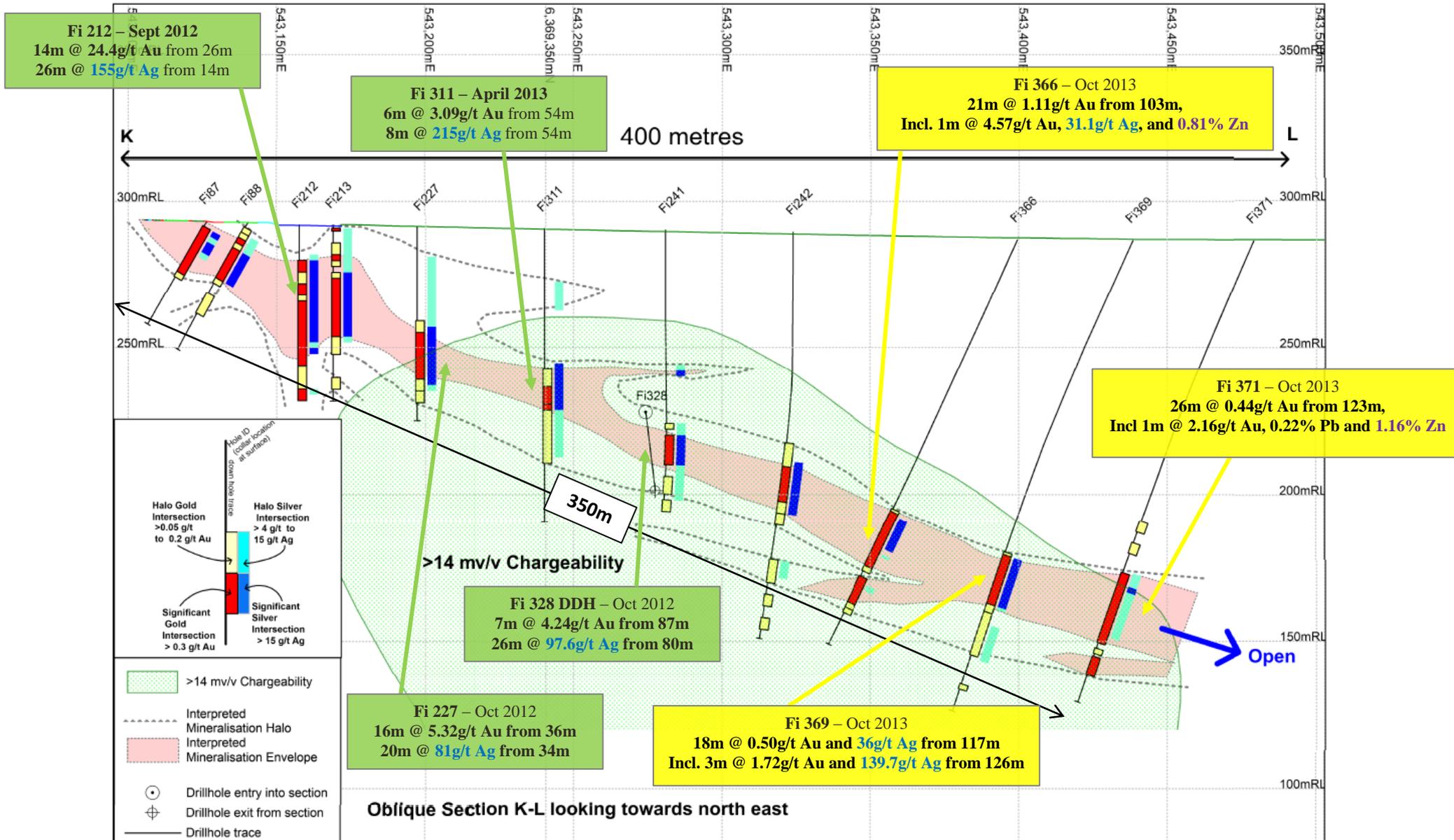
Orthogonal 3D Section looking north-west illustrating interpreted Gold >0.2g/t Au (yellow) and >0.5g/t Au (red) outlines and the down dip continuity of the mineralized horizon. Refer to Appendix 3 for location of the section



**Appendix 6 –Section looking north east illustrating interpreted Gold & Silver mineralization at the Roadside Location**

**Down dip continuity remains open - Refer to Appendix 3 for location of the section**

(Selected historic assays shown with recent assays only)





## [Appendix 8 - 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 October 21<sup>st</sup> 2013 [Results Confirm Extensions of Gold and Silver at Sorpresa Project](#)
  2. ASX August 21<sup>st</sup> 2013 [Diamond Hole Fi 325 yields 9m @ 3.42g/t Gold](#)
  3. ASX July 31<sup>st</sup> 2013 [Exploration Report June 2103 Quarter](#)
  4. ASX July 17<sup>th</sup> 2013 [Diamond Drilling Reveals Bonanza Grade of 1m @ 114g/t Au](#)
  5. ASX June 13<sup>th</sup> 2013 [Further Positive RC Drilling Results at Sorpresa Project](#)
  6. ASX May 23<sup>rd</sup> 2013 [Diamond and RC Drilling Completed, RAB Drilling Extended](#)
  7. ASX April 26<sup>th</sup> 2013 [Mineralized Zones Intersected in Diamond Drilling](#)
  8. ASX April 12<sup>th</sup> 2013 [RAB Drilling program Commences at Sorpresa](#)
  9. ASX April 5<sup>th</sup> 2013 [Diamond Drilling and RC Drilling Commences at Sorpresa Gold Project](#)
  10. ASX March 27<sup>th</sup> 2013 [Additional Assays at Sorpresa Gold Project](#)
  11. ASX March 13<sup>th</sup> 2013 [Sorpresa Gravity Geophysical Survey Commences](#)
  12. ASX February 19<sup>th</sup> 2013 [Continuous 350m Section Established at Roadside Area & New Gold Zone Intersected](#)
  13. ASX January 31<sup>st</sup> 2013 [Quarterly Exploration Activities December 2012](#)
  14. ASX December 18<sup>th</sup> 2012 [Sorpresa Project Produces More Encouraging Results](#)
  15. ASX November 22<sup>nd</sup> 2012 [Presentation for 2012 AGM](#)
  16. ASX November 5<sup>th</sup> 2012 [Best Silver Grades to Date Seen at Sorpresa Project Area](#)
  17. ASX October 10<sup>th</sup> 2012 [Highest Gold and Silver Grades seen to date at Sorpresa Project](#)
  18. ASX September 17<sup>th</sup> 2012 [First Gold Sections Created at Sorpresa Project – New Assay Results](#)
  19. ASX August 31<sup>st</sup> 2012 [New Gold in Soil Zones Located 4km South of Sorpresa](#)
  20. ASX July 31<sup>st</sup> 2012 [Quarterly Exploration Activities June 2012](#)
  21. ASX July 26<sup>th</sup> 2012 [Successful Intersections at Sorpresa Gold Project](#)
  22. ASX June 13<sup>th</sup> 2012 [High Grade Gold Intersection Sorpresa Project – Fifield NSW](#)
  23. ASX May 28<sup>th</sup> 2012 [Sorpresa Gold Project has Increased Potential at Depth](#)
- A video link is provided to a [3D model of the IP Anomaly at Sorpresa \(click here\)](#).
24. ASX April 30<sup>th</sup> 2012 [Quarterly Exploration Activities March 2012](#)
  25. ASX January 31<sup>st</sup> 2012 ([Quarterly Exploration Activities December 2011](#))
  26. A video link is provided [January 2012 Sorpresa Gold Project – Trench 31 Area Review Video](#)
  27. ASX 28th November 2011 [AGM Exploration Presentation – Including Key Summary Assay results of Sorpresa](#)
  28. Rimfire Website Summary [Brief history of Sorpresa Mineralization discovery and style \(to September 2011\)](#)
  29. ASX [Assays Confirm Significant Gold and Silver at Sorpresa Project 6<sup>th</sup> July 2011](#)