



21<sup>st</sup> October 2013  
Company Announcements Platform  
Australian Securities Exchange

## Results Confirm Extensions of Gold and Silver at Sorpresa Project Drilling continues, Fifield NSW

Rimfire Pacific Mining NL (ASX:RIM) is pleased to report further positive assay results from percussion drilling conducted mainly at the silver dominant Roadside location in the northern portion of the Sorpresa Project area. Additional targets were examined through reconnaissance drilling within the greater Sorpresa project area.

### Highlights of Drilling Programs

- Step-out drilling at south east Roadside extended down dip continuity of the mineralization by 100m to 350m and remains open
- Drilling at north west Roadside has tracked the mineralization to surface producing intersections
- Reconnaissance drilling <sup>1</sup> within the greater Sorpresa area successfully intersected the following:
  - Encouraging gold anomalism 200m west of the main Sorpresa line in hole Fi 352
  - The prospective Sorpresa stratigraphy 1km south-west of Trench 31 area, assays pending Fi 374
  - An 8m gold zone (hole Fi 332) 100m west of Trench 31 area
- Drilling remains ongoing within the greater Sorpresa Project area, with further results pending
- 3D Modelling of the currently defined mineralization at Roadside area has been completed revealing sizable mineralization with extensions and exploration targets ready for further drilling

### Assay Highlights from the Roadside Percussion Drilling were:

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

The appendices are important inclusions to this report and should be viewed for details of the drill locations, sections, models and tabulated significant intersections.

<sup>1</sup> See page 3 for assay highlights of reconnaissance drilling and Appendix 1 map for location details

## **Rimfire's Executive Chairman John Kaminsky reflected:**

"It is very pleasing to see an upscale in the level of exploration activity on multiple fronts across the wider Sorpresa area. We had a few clear objectives in this phase of the work program, all of which were satisfied:

- ✓ **Confirm the extension, predictability and orientation of the mineralized envelope down dip** at Roadside to the south east, **and achieve this with larger drill spacing** ( nominal 40m spacing was used) to an approximate 100m depth below surface elevation, (Appendices 2 to 5). The previous diamond drilling had already given us significant encouragement that the mineralized envelope can be targeted on a broader drill pattern and the latest RC drilling has reinforced this.
- ✓ **Have important input into the next larger scale drilling south of Roadside.** We can now aim to systematically and more rapidly scope out the key host geology and within this envelope identify the high grade gold and silver shoots as observed at various levels. We are working hard on the final design and refinement of this larger program, including the area around the previously reported high grade diamond drilling result in Fi 329 (1m @ 114g/t Au and 33g/t Ag).
- ✓ **Make progress with reconnaissance drilling to the west and south of the main Sorpresa mineralization strike line.** With very limited drilling, we have intersected important features of the Sorpresa style mineralization, including anomalous gold, so this has started very well. We have also identified an additional series of 5 targets to the west in the new prospect "**Rabers Lookout**" and are looking to add more prospective areas with additional RAB drilling.
- ✓ **Begin to develop 3D shapes of the mineralization to assist in program design and eventual resource establishment.** The first models produced are at the Roadside area, but we will be extending this to our other drilling areas in due course where sufficient drilling density allows.

The confidence gained from all the work programs to date, including the latest drilling, justifies immediate further drilling which continues at the time of writing. We will be using our field portable XRF analyser to good effect, which will enable us to immediately identify anomalous intersections encountered, and then infill with more drilling, which should ensure a steady news flow in the coming months."

## **Additional Notes on the Drilling Programs Reported**

The following notes provide more details on the programs undertaken.

### **Roadside area to the south east - RC Drilling**

Results from a 9 hole Reverse Circulation Drilling campaign for 1,335m have identified continuity in the mineralized horizon from surface to approximately 360m down dip (**Appendices 2, 3 and 5**) plus the intersection of multiple lodes, often returning different metal associations in Gold, Silver, Lead, Zinc, and key pathfinders Antimony and Arsenic. The higher levels of Zinc (Zn) were of particular note in a number of holes.

This is being interpreted as being multiple phases of mineralization representing exciting exploration targets and providing potential vectors to higher grades of gold and silver. The consistent widths of the mineralized envelope, albeit containing variable in grade at times, is considered highly encouraging for future targeting of gold and silver, within the mineralized envelope.

### **Roadside area in the north west - Percussion Drilling**

Assay results from the Company's in-house percussion drill rig gave significant shallow level Silver and Gold mineralization at the northern portion of Roadside. Solid Silver intersections such as **2m @ 206g/t Ag** from 20m (Fi 342) has confirmed the high grade silver dominant mineralization intersected at depth projects to surface. Modelling of the mineralization in 3D (**Appendices 3 & 4**) has revealed the silver dominant mineralization has a steeper dip to the East than the gold dominant mineralization further south. This change in dip and the Ag/Au and Au/Ag metal zonation is providing valuable insights to the style of mineralization.



## **Regional Reconnaissance Drilling and Other Results**

A single reconnaissance percussion drilling traverse of a coincident gold +/- lead in soil anomaly, with a deep magnetic high anomaly, and rimming thorium radiometric anomaly at a major structural intersection to the west of the main Sorpresa line of mineralization, has returned highly anomalous gold results over a combined 8m interval in Fi 352 (location map Appendix 1). Further targeting of this result is underway.

□ **Fi 352: 6m @ 0.41g/t Au from 40m, incl. 2m @ 0.91g/t Au from 40m and 2m @ 0.61g/t Au from 50m.**

Two reconnaissance stratigraphic RC holes for 269m have been completed with results pending (location map Appendix 1). The holes aimed at confirming the postulated south western continuation of the prospective Sorpresa stratigraphy, and gain an understanding of the surface regolith conditions in order to determine the best follow-up exploration methodology, either the applicability of soil sampling, auger and RAB drilling.

Encouragingly, very shallow transported and in-situ regolith was intersected (<7m) confirming the area is suitable for shallow auger and RAB drilling to define geochemical targets. Subsequently RAB drilling commenced immediately.

Highly encouraging was the intersection of the typical Sorpresa stratigraphy in RC hole Fi374, located approximately 1km to the south west of Trench 31 (Location Map Appendix 1), including identification of the quartz feldspar porphyry sill, and variable intensity silicification, brecciation and minor quartz carbonate sulphide veining. Assay results are pending.

A previously drilled reconnaissance RC drill hole, **Fi 332, located 100m to the west of the Trench 31 Extension area**, had the balance of the hole assayed as 4m composite intervals and produced an encouraging preliminary 8m gold intersection.

□ **Fi 332: 8m @ 1.3g/t Au from 34m**

The reconnaissance drilling in the three locations provides another important positive step in the advancement of the Sorpresa style of mineralization to the west, beyond the immediately known main strike area of Sorpresa. Additional work is planned in the coming months to investigate these areas further.

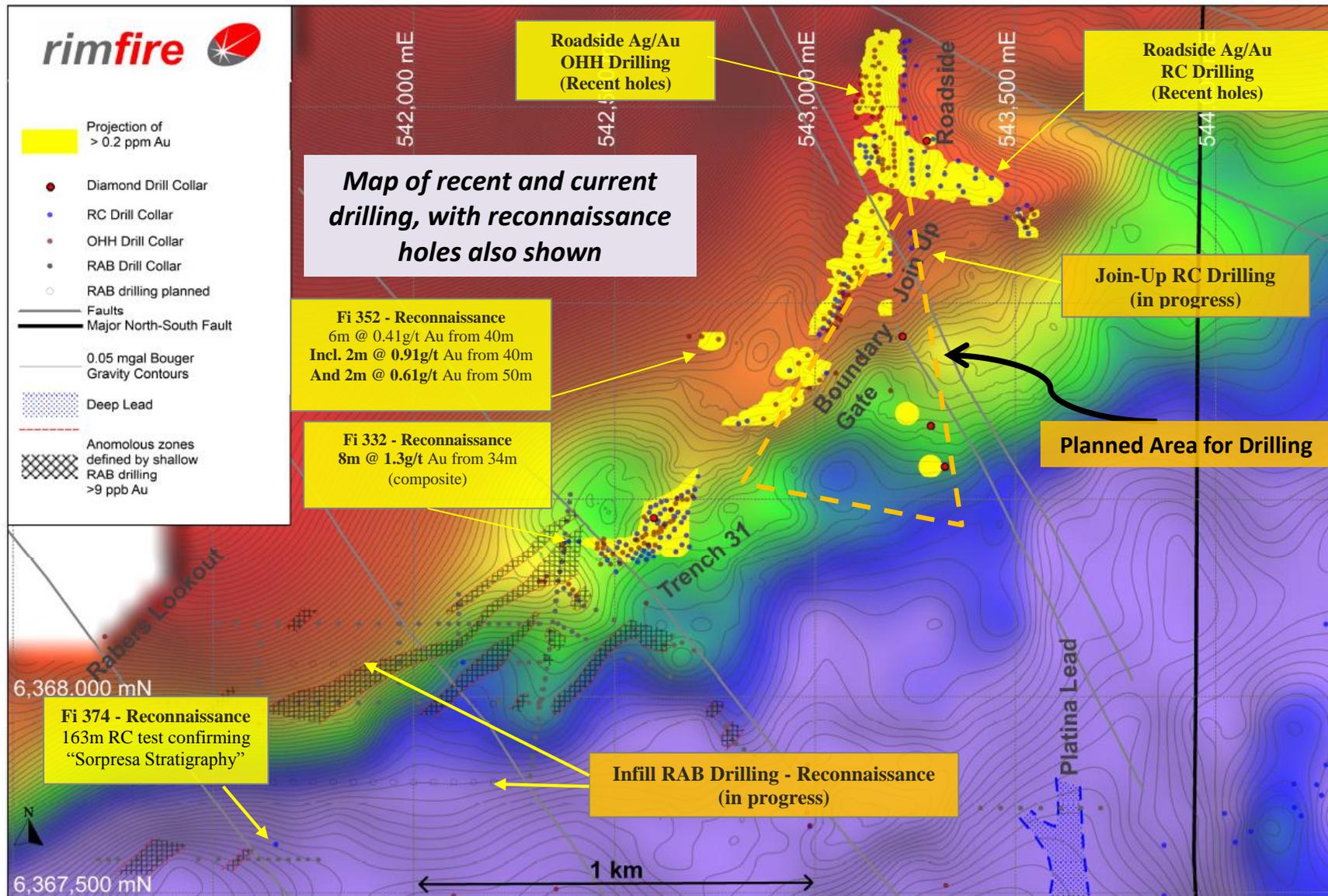


**JOHN KAMINSKY**  
**Executive Chairman**

*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.*

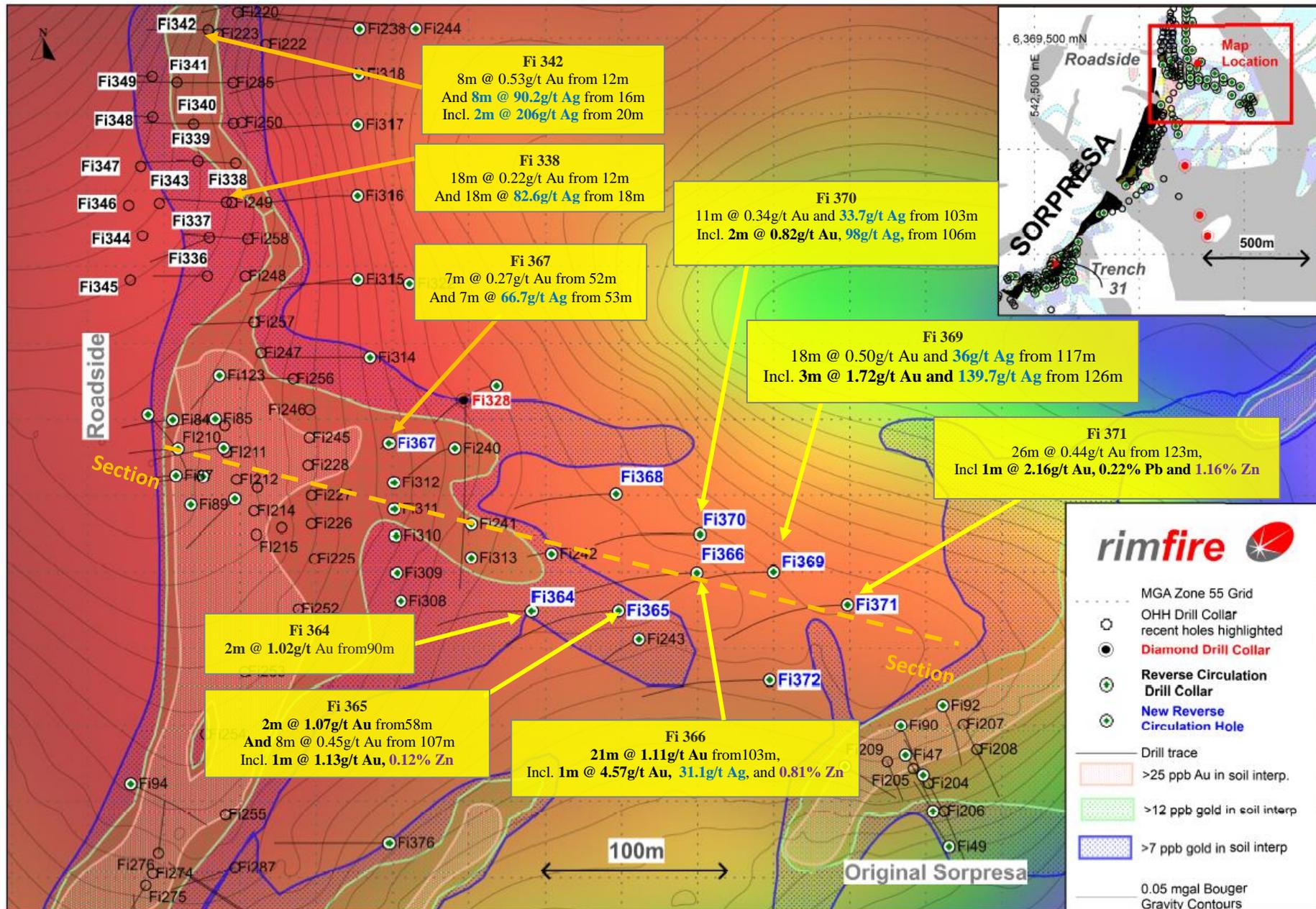
## Appendix 1 – Greater Sorpresa Project plan view

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



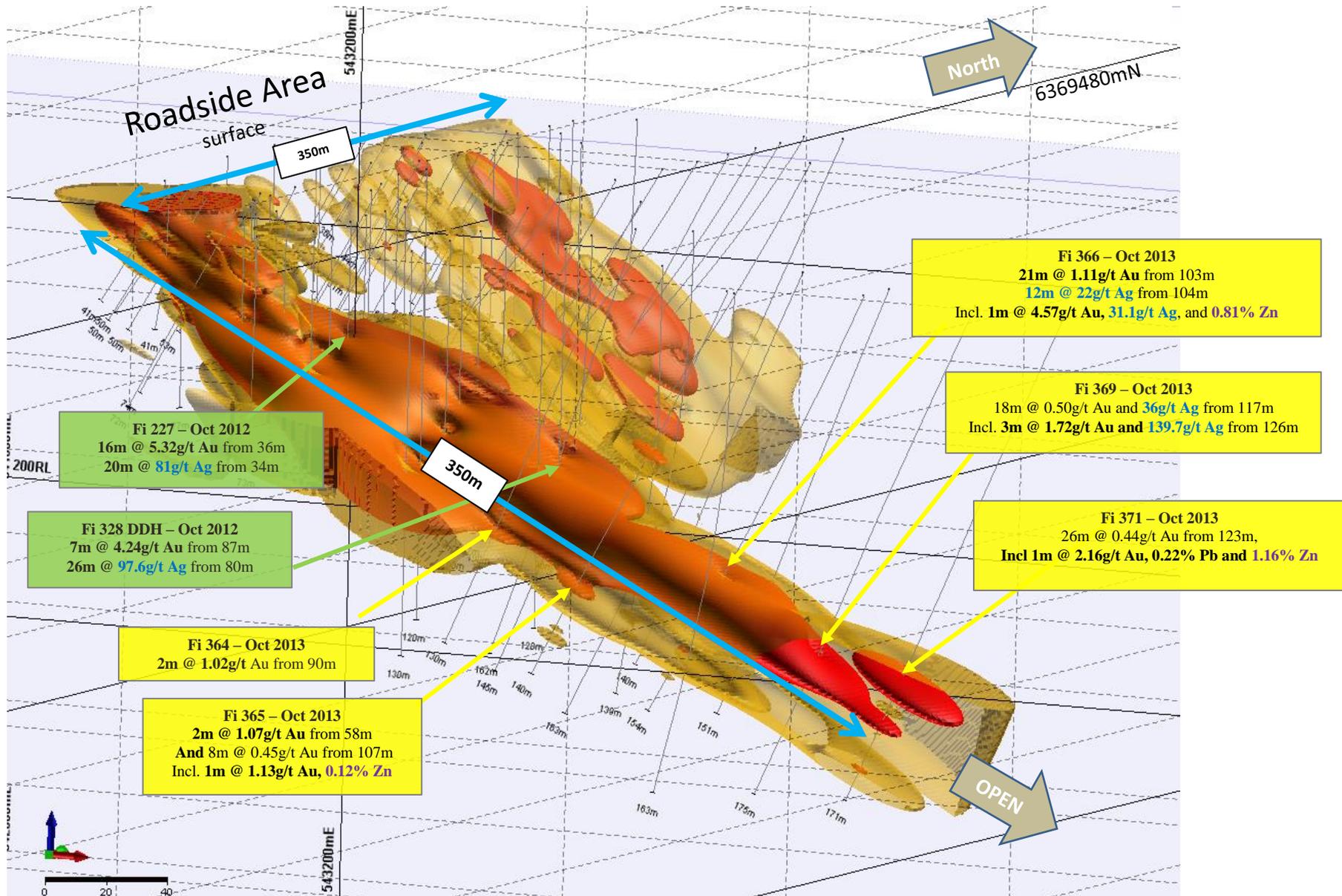
## Appendix 2 – Roadside Drilling location plan with selection of recent intersections on Bouger Gravity image

(Section Line Applies to Appendices 3, 4 & 5)

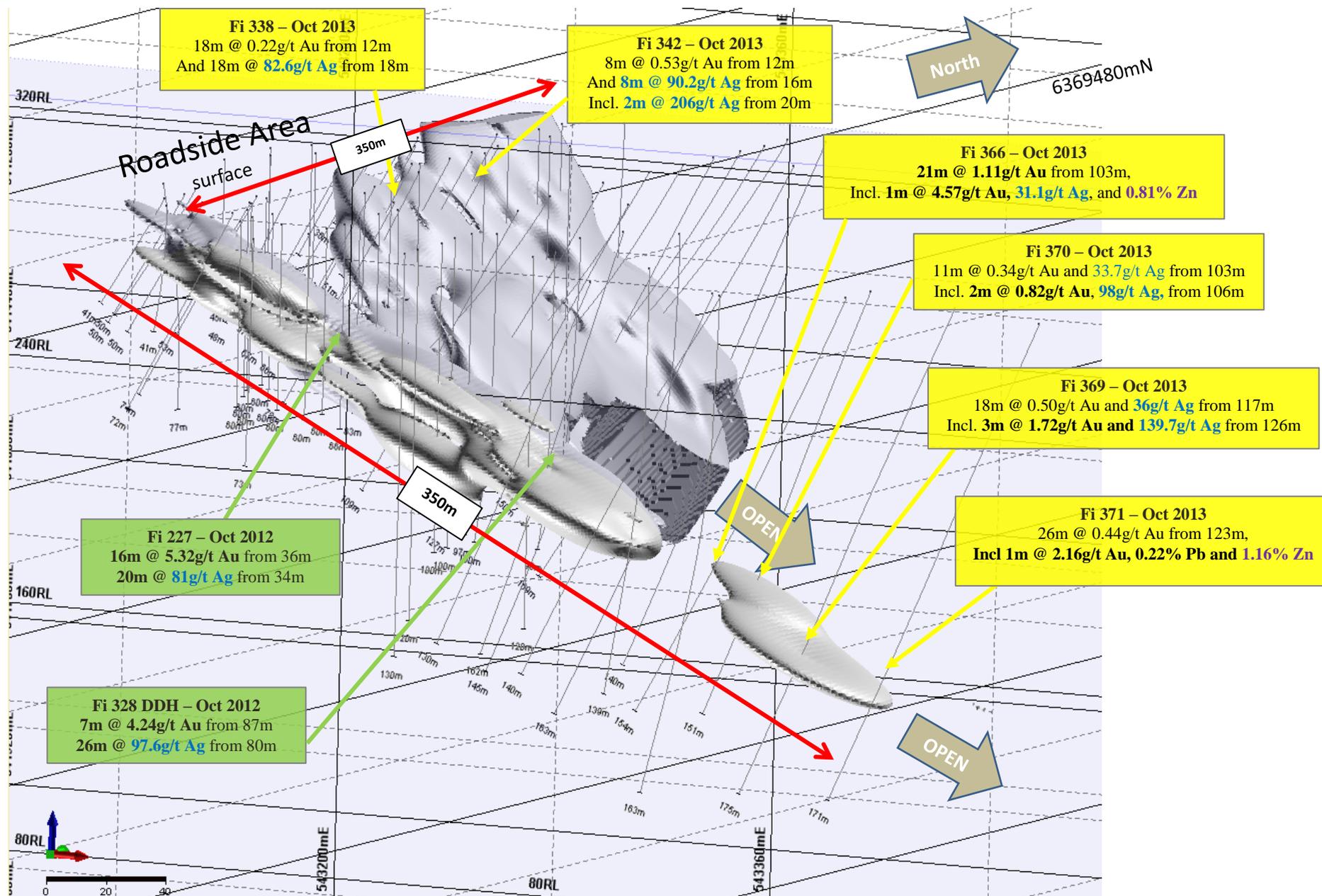


### Appendix 3 – Interpreted Gold at Roadside Location

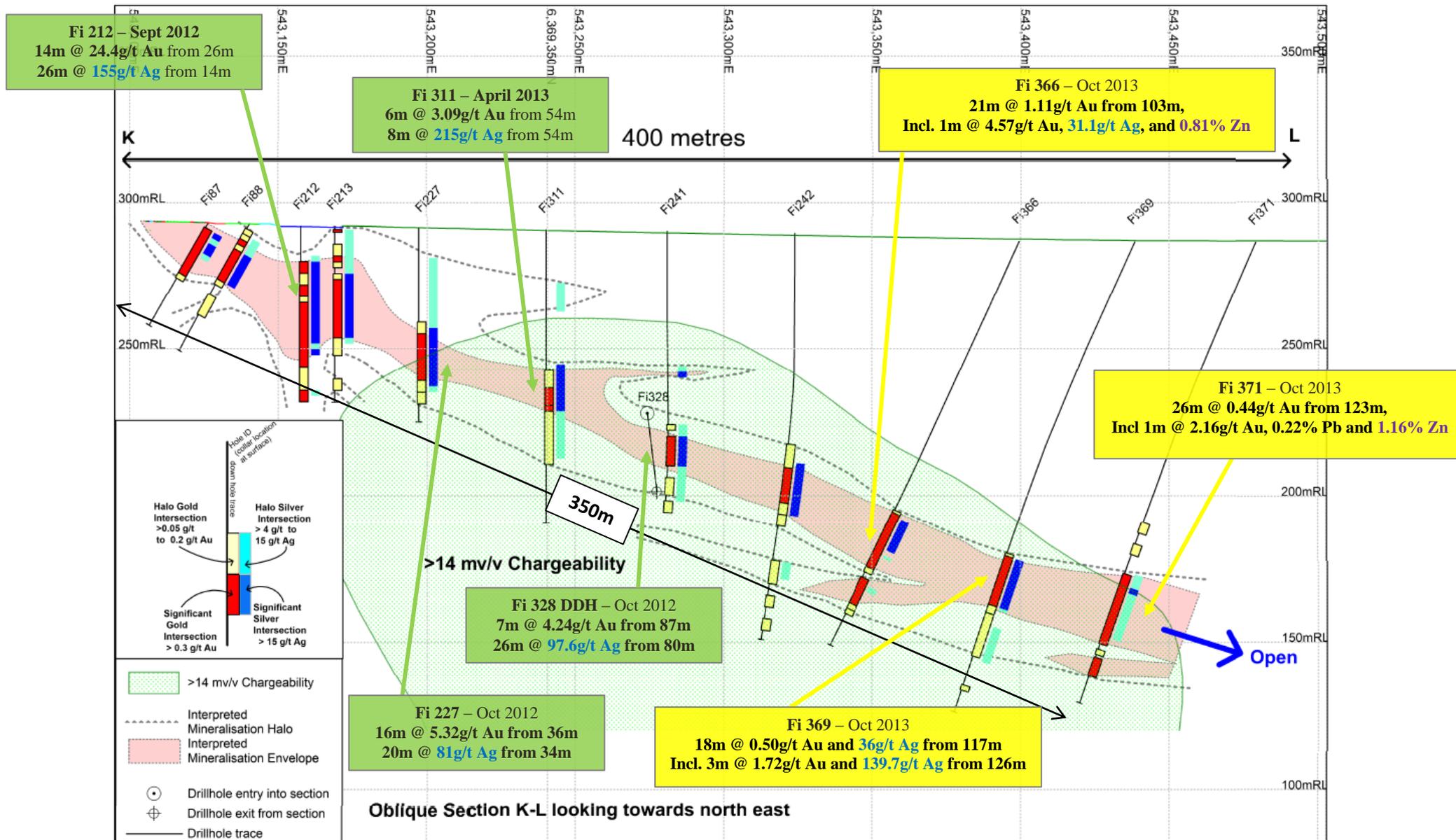
Orthogonal 3D Section looking north-west illustrating interpreted Gold >0.2g/t Au (yellow) and >0.5g/t Au (red) outlines and the down dip continuity of the mineralized horizon. Refer to Appendix 2 for location of the section



**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 2 for location of the section**



**Appendix 5 –Section looking north east illustrating interpreted Gold & Silver mineralization at the Roadside Location**  
**Down dip continuity remains open - Refer to Appendix 2 for location of the section**  
 (Selected historic assays shown with recent assays only)



**APPENDIX 6**

**Drilling - Collar Location and Detailed Au, Ag, Pb and Zn Assays, since last assay report date 21<sup>st</sup> August 2013**

Hole ID	Easting (m GDA94)	Northing (m GDA94)	Survey Method	RL (approx. mAHD)	Dip (°)	GDA Azimuth (°)	Depth (m)	Drilling Type	Prospect	From (m)	To (m)	Width (m)	Au (g/t)	Ag (g/t)	Pb (%)	Zn (%)
Fi332*	542384	6368396	GPS	290	-60	270	109	RC	Trench 31 West Scout	78	86	8	1.30			
Fi336	543143	6369475	GPS	292	-60	270	57	OHH	Roadside North	4	8	4		5.4		
									and	8	14	6	0.14			
									and	18	20	2	0.18	7.5		
									and	26	28	2		9.2		
									and	38	40	2		6.3		
									and	44	46	2	0.12	4.9		
Fi337	543144	6369495	GPS	292	-60	248	67	OHH	Roadside North	6	12	6		4.6		
									and	8	22	14	0.25			
									and	12	16	4		17.4		
									and	16	24	8		10.9		
									and	24	36	12	0.14	20.0		
									and	36	40	4		8.3		
Fi338	543153	6369514	GPS	292	-60	273	66	OHH	Roadside North	12	30	18	0.22			
									and	18	36	18		82.6		
									incl.	20	26	6		169.3		
									and	42	44	2		59.8		
Fi339	543138	6369535	GPS	292	-60	269	60	OHH	Roadside North	4	16	12	0.23			
									incl.	12	14	2	0.49	66.1		
Fi340	543136	6369555	GPS	292	-59	272	51	OHH	Roadside North	4	16	12	0.34			
									incl.	12	16	4		24.5		
									and	26	28	2		38.4		
Fi341	543127	6369577	GPS	292	-60	270	44	OHH	Roadside North	6	14	8	0.45		33.4	
Fi342	543143	6369604	GPS	291	-61	270	66	OHH	Roadside North	12	20	8	0.53			
									and	16	24	8		90.2		
									incl.	20	22	2		206.0		
									and	38	42	4	0.39	23.0		
Fi343	543118	6369513	GPS	293	-90	0	51	OHH	Roadside North	12	16	4	0.42		34.5	
Fi344	543109	6369496	GPS	293	-90	0	45	OHH	Roadside North	12	16	4		15.8		
									and	14	18	4	0.51			
									and	22	24	2	0.24			

**APPENDIX 6 (cont.)**

**Drilling - Collar Location and Detailed Au, Ag, Pb and Zn Assays, since last assay report date 21<sup>st</sup> August 2013**

Hole ID	Easting (m GDA94)	Northing (m GDA94)	Survey Method	RL (approx. mAHD)	Dip (°)	GDA Azimuth (°)	Depth (m)	Drilling Type	Prospect	From (m)	To (m)	Width (m)	Au (g/t)	Ag (g/t)	Pb (%)	Zn (%)
FI345	543102	6369473	GPS	293	-90	0	45	OHH	Roadside North	8	12	4	0.13			
									and	8	14	6		8.8		
									and	24	26	2	0.21			
FI346	543101	6369512	GPS	293	-90	0	42	OHH	Roadside North	6	8	2	0.19			
									and	10	12	2	0.19			
									and	10	14	4		6.2		
									and	34	36	2	0.11			
FI347	543108	6369532	GPS	293	-90	0	48	OHH	Roadside North	10	14	4		4.7		
									and	18	20	2	0.11			
									and	18	22	4		10.3		
									and	30	34	4		11.7		
FI348	543114	6369558	GPS	292	-60	273	45	OHH	Roadside North	4	8	4	0.12			
									and	4	16	12		4.8		
FI349	543114	6369580	GPS	292	-58	273	36	OHH	Roadside North	4	16	12		11.7		
									and	6	8	2	0.10			
									and	20	22	2	0.10			
									and	24	26	2	0.10			
FI350	542685	6368916	GPS	298	-60	287	75	OHH	BGate West	NS						
FI351	542717	6368916	GPS	297	-60	277	72	OHH	BGate West	NS						
FI352	542759	6368909	GPS	296	-60	275	72	OHH	BGate West	40		6	0.41			
									and	40	42	2	0.91			
									and	50	52	2	0.61			
FI353	543825	6366315	GPS	273	-60	268	42	RAB	Platina	NS						
FI354	543804	6366318	GPS	273	-60	268	55	RAB	Platina	NS						
FI355	543781	6366320	GPS	273	-60	268	38	RAB	Platina	NS						
FI356	543761	6366323	GPS	273	-60	268	50	RAB	Platina	NS						

**APPENDIX 6 (cont.)**

**Drilling - Collar Location and Detailed Au, Ag, Pb and Zn Assays, since last assay report date 21<sup>st</sup> August 2013**

Hole ID	Easting (m GDA94)	Northing (m GDA94)	Survey Method	RL (approx. mAHD)	Dip (°)	GDA Azimuth (°)	Depth (m)	Drilling Type	Prospect	From (m)	To (m)	Width (m)	Au (g/t)	Ag (g/t)	Pb (%)	Zn (%)
FI357	543738	6366329	GPS	273	-60	268	40.5	RAB	Platina	NS						
FI358	543719	6366329	GPS	273	-60	268	52	RAB	Platina	NS						
FI359	543694	6366333	GPS	273	-60	268	52	RAB	Platina	NS						
FI360	543665	6366333	GPS	274	-60	268	51.5	RAB	Platina	NS						
FI361	543639	6366341	GPS	274	-60	268	40	RAB	Platina	NS						
FI362	543622	6366342	GPS	274	-60	268	58	RAB	Platina	NS						
FI363	543604	6366346	GPS	274	-60	268	54	RAB	Platina	NS						
FI364	543313	6369300	DGPS	288	-65	270	130	RC	Roadside and	50 90	54 92	4 2		26.1 1.02		
FI365	543358	6369300	DGPS	287	-65	270	140	RC	Roadside and	58 107	60 115	2 8	1.07 0.45			0.1
									incl.	107	110	3		19.4		
									incl.	109	110	1	1.13			0.12
									and	122	128	6	0.22			
FI366	543400	6369320	DGPS	287	-65	270	154	RC	Roadside	103	124	21	1.11			
									incl.	104	116	12	1.80	22.0	0.17	0.38
									incl.	107	108	1	4.57	31.1		0.81
									and	128	138	10	0.30			
									incl.	130	132	2	0.64		0.12	0.31
									and	140	142	2	0.24			0.1
FI367	543238	6369388	DGPS	288	-90	0	100	RC	Roadside and	52 53	59 60	7 7	0.27			
									incl.	56	58	2			0.2	0.27
										80	86	6		11.2		
									incl.	82	86	4	0.12			
									incl.	84	86	2				0.1

**APPENDIX 6 (cont.)**

**Drilling - Collar Location and Detailed Au, Ag, Pb and Zn Assays, since last assay report date 21<sup>st</sup> August 2013**

Hole ID	Easting (m GDA94)	Northing (m GDA94)	Survey Method	RL (approx. mAHD)	Dip (°)	GDA Azimuth (°)	Depth (m)	Drilling Type	Prospect	From (m)	To (m)	Width (m)	Au (g/t)	Ag (g/t)	Pb (%)	Zn (%)
Fi368	543357	6369361	DGPS	287	-65	270	140	RC	Roadside	8	12	4	0.14			
									and	88	94	6		8.1		
									and	120	124	4	0.22			
Fi369	543440	6369320	DGPS	287	-65	270	175	RC	Roadside	117	135	18	0.50	36.0		
									incl.	125	130	5			0.65	0.98
									incl.	126	129	3	1.72	139.7		
									and	138	154	16	0.19			
									incl.	138	148	10	0.28			
									incl.	142	154	12		5.1		
									incl.	144	146	2	0.48		0.14	0.72
									incl.	150	152	2			0.11	
									incl.	153	154	1	0.14		0.49	2.13
									and	154	155	1		17.7	0.44	
and	154	156	2				0.78									
Fi370	543401	6369340	DGPS	287	-67	271	151	RC	Roadside	103	114	11	0.34	33.7		
									incl.	104	108	4				0.15
									incl.	106	108	2	0.82	98.0	0.23	
									and	140	142	2	0.54	24.2	1	0.83
									and	143	145	2				0.2
Fi371	543479	6369303	DGPS	286	-65	257	171	RC	Roadside	104	108	4	0.12			
									and	123	149	26	0.44			
									incl.	127	129	2		30.8		
									incl.	128	129	1	2.16		0.22	1.16
									incl.	141	146	5				0.13
and	154	161	7	0.29												
Fi372	543438	6369263	DGPS	286	-67	270	175	RC	Roadside	122	124	2	0.24			
									and	134	135	1	0.22	18.0		0.11
									and	135	136	1			0.16	
Fi373	541517	6367939	DGPS	296	-60	270	106	RC	Rabers Lookout	Pending						
Fi374	541656	6367623	DGPS	293	-60	270	163	RC	Rabers Lookout	Pending						

**APPENDIX 6 (cont.)**

**Drilling - Collar Location and Detailed Au, Ag, Pb and Zn Assays, since last assay report date 21<sup>st</sup> August June 2013**

Hole ID	Easting (m GDA94)	Northing (m GDA94)	Survey Method	RL (approx. mAHD)	Dip (°)	GDA Azimuth (°)	Depth (m)	Drilling Type	Prospect	From (m)	To (m)	Width (m)	Au (g/t)	Ag (g/t)	Pb (%)	Zn (%)
Fi375	543241	6369140	DGPS	289	-60	270	139	RC	Joinup	Pending						
Fi376	543238	6369178	DGPS	289	-60	270	120	RC	Joinup	Pending						
Fi377	543240	6369220	GPS	289	-60	270	109	RC	Joinup	Pending						
Fi378	543240	6369260	GPS	289	-60	270	136	RC	Joinup	Pending						
Fi379	543240	6369060	GPS	289	-60	305	154	RC	Joinup	Pending						

Notes:

- (1) 3738 m drilled since last release of percussion drilling results to ASX (13th June 2013)
- (2) \* Sample from Fi332 is a 4m composite result, riffle split 1m samples are in progress with results awaited.

**Legend:** NS = No significant result; Pending = Results awaited;

**Method:** RC Samples are collected at 1m intervals and riffle split. Samples are submitted as 1m intervals or composited to 2m to produce a bulk 2kg sample. RAB and OHH samples are collected on 1m intervals and composited at 2m and 4m intervals to produce a bulk 2kg sample. RC and OHH samples are despatched to ALS Laboratories with Au determined by fire assay method Au\_AA26 (50g charge) to 0.01 ppm. Silver, Lead and Zinc analysis are via Aqua Regia Digest methods ME-ICP41 (<100g/t Ag, <1% Pb and <1% Zn) and Ag-OG46 (>100g/t Ag), Pb-OG46 (>1%Pb), Zn-OG46 (>1%Zn). RAB samples are despatched to ALS Laboratories with Au determined by fire assay method Au\_AA22 (50g charge) to 0.002 ppm.

## Appendix 7

### The Geological Concept Model – Syncline Rift Basin in Plan View

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

