



*rimfire pacific mining nl*  
(ASX "RIM")

*Emerging Greenfields Gold & Silver Discovery in NSW*

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**7<sup>th</sup> Annual Mining NSW Conference Orange**  
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# Presentation Outline

## - Main Discussion Items

**Introduction to Company and Project Area**

**History of Fifield and Rimfire Gold and Silver Discovery**

**Recent Results and Work programs – Diamond Core**

**Geological Model Development and Scale**

**Looking Forward – Discovery and Delineation**

**Summary Position**



[Hyperlink: RFC Ambrian Analyst Report - June Site Visit](#)

# Rimfire Pacific Mining NL – Project Areas

## ❑ Fifeild Platinum and Gold Project Area

- ❑ Alluvial Gold Discovery 1880's
- ❑ Only dedicated Platinum mining in Australia, alluvial resource was not exhausted, hard rock was not understood
- ❑ Platinum 20,000oz recovered 1890's
  - ❑ Commonwealth's largest producer
- ❑ 2010 New Major Fine Gold and Silver Discovery – **Sorpresa Project**
- ❑ Base Metal Potential



# Company Profile

(as at 24th June 2013)

## Shares on Issue

- Placement and SPP 85M shares at 3.0 cents, Sept 2012, \$2.54M gross
- 610M Ordinary FP

Market Cap. Approx. \$29.9M @4.9 cents

## Share Price Movement

- 2011 High 6.0 cent, Low 3.1 cent
- 2012 High 9.3 cent (Oct), Low 2.5 cent
- 2013 High 7.5 cent, Low 4.6 cent

## Volume 2012

- Feb-Sept 2012 approx. 5m shares/mth
- October 132m shares
- Current is low

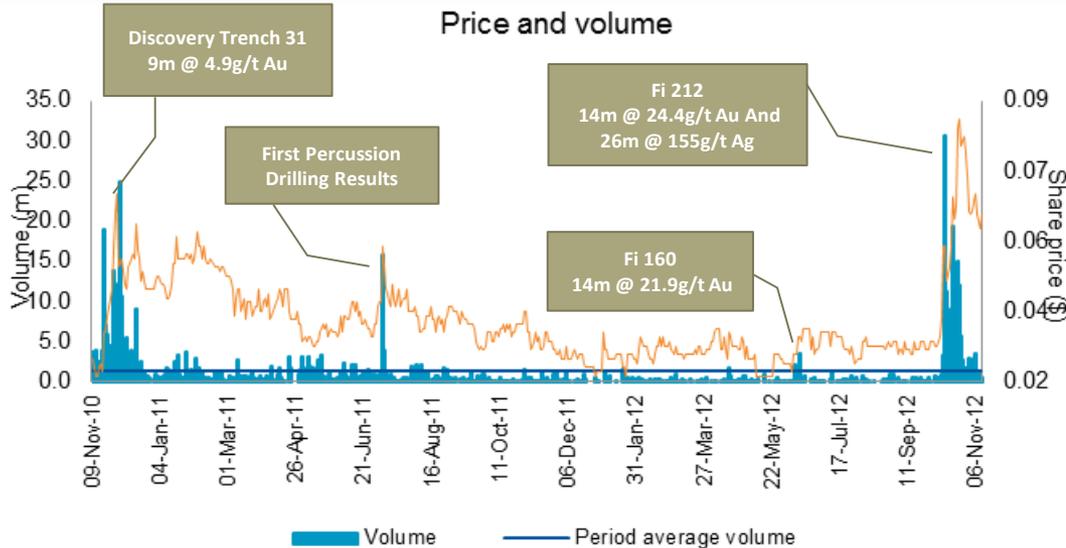
## Shareholders Profile

- Management 10%
- Top 20 Holders 35%
- Top 100 Holders 65% (cut-off 1.2M shares)
- 2,100 shareholders

## Cash Status 31 March 2013

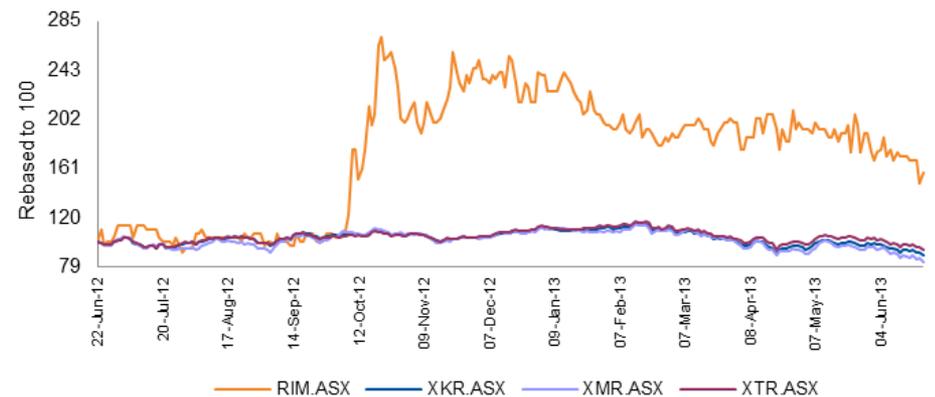
- \$2.02m

# Share Price Performance



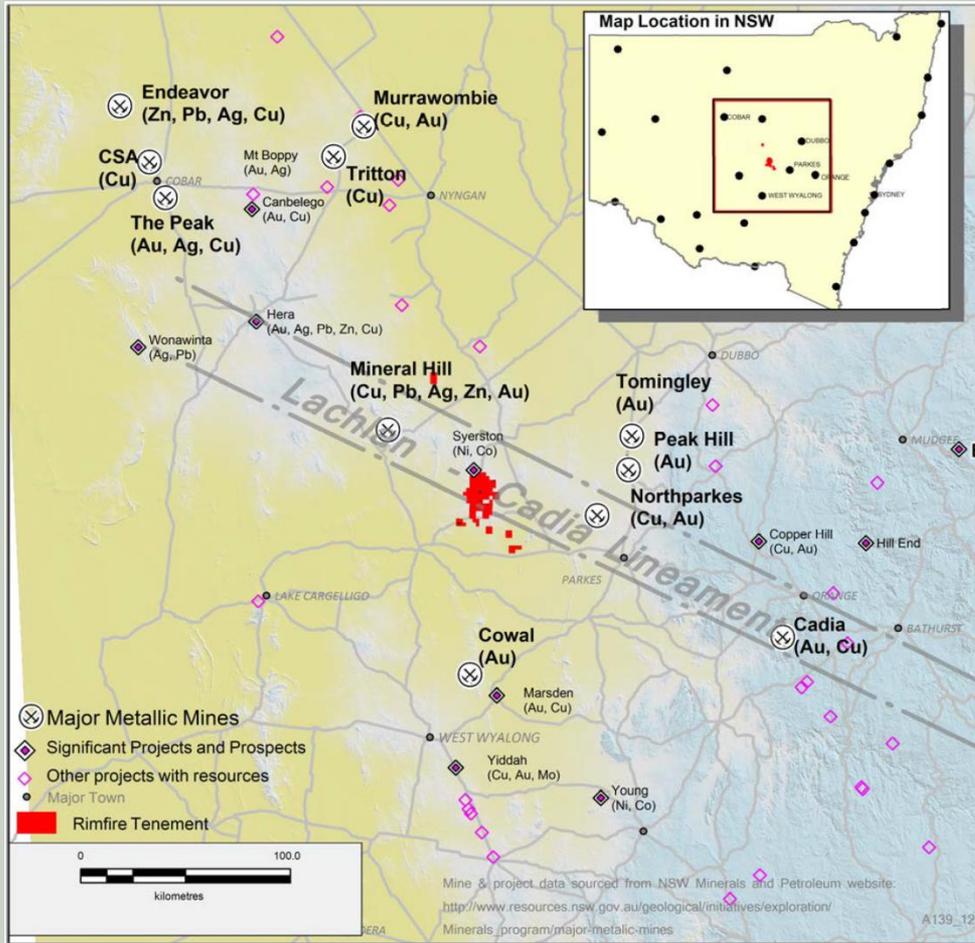
*Share price performance well above industry in tough markets*

Relative price performance  
To S&P/ASX MIDCAP RESOURCES



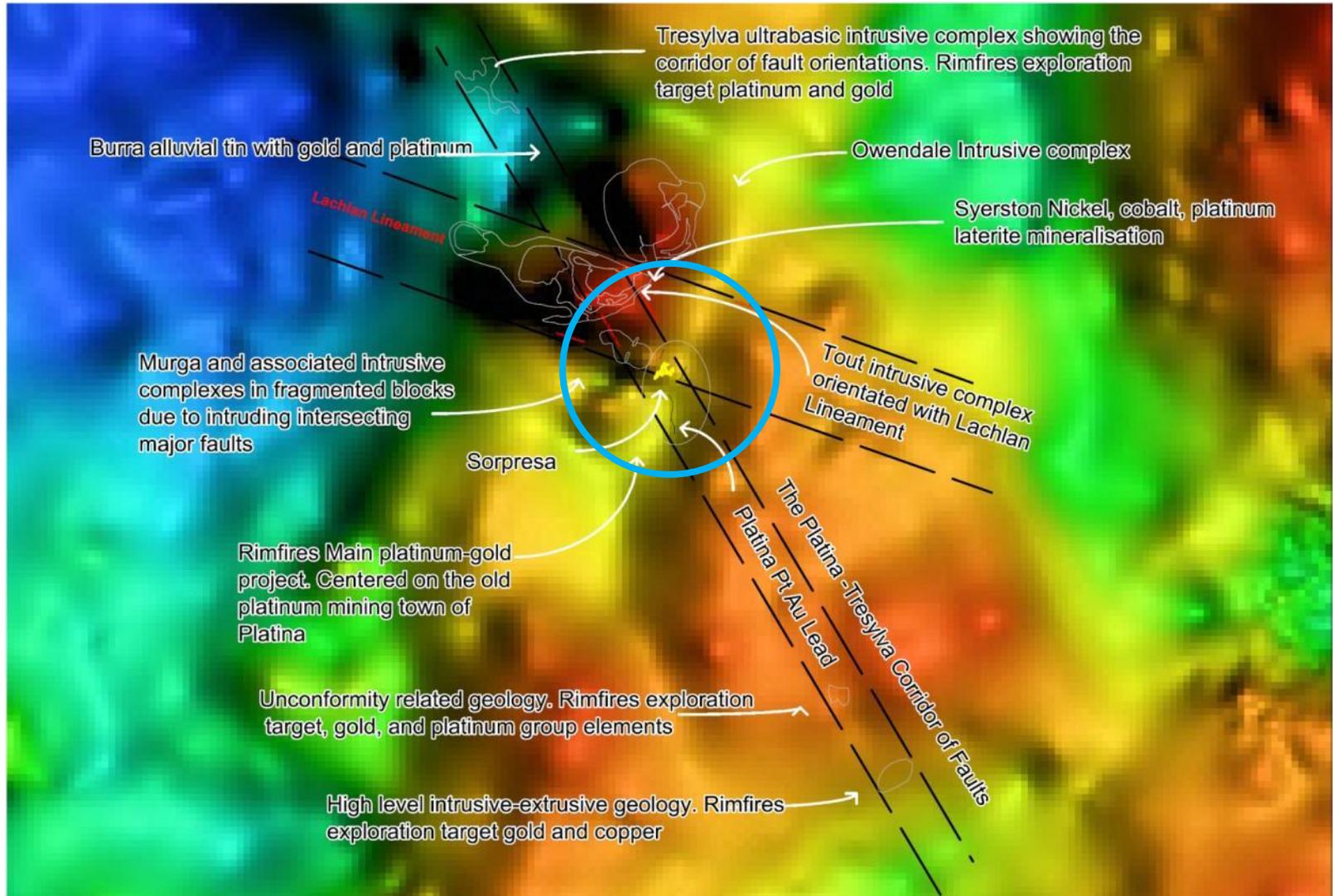
XAO is ALL ORDINARIES; XKR is S&P/ASX 300 RESOURCES; XMR is S&P/ASX MIDCAP RESOURCES

# District Location – Excellent Address!

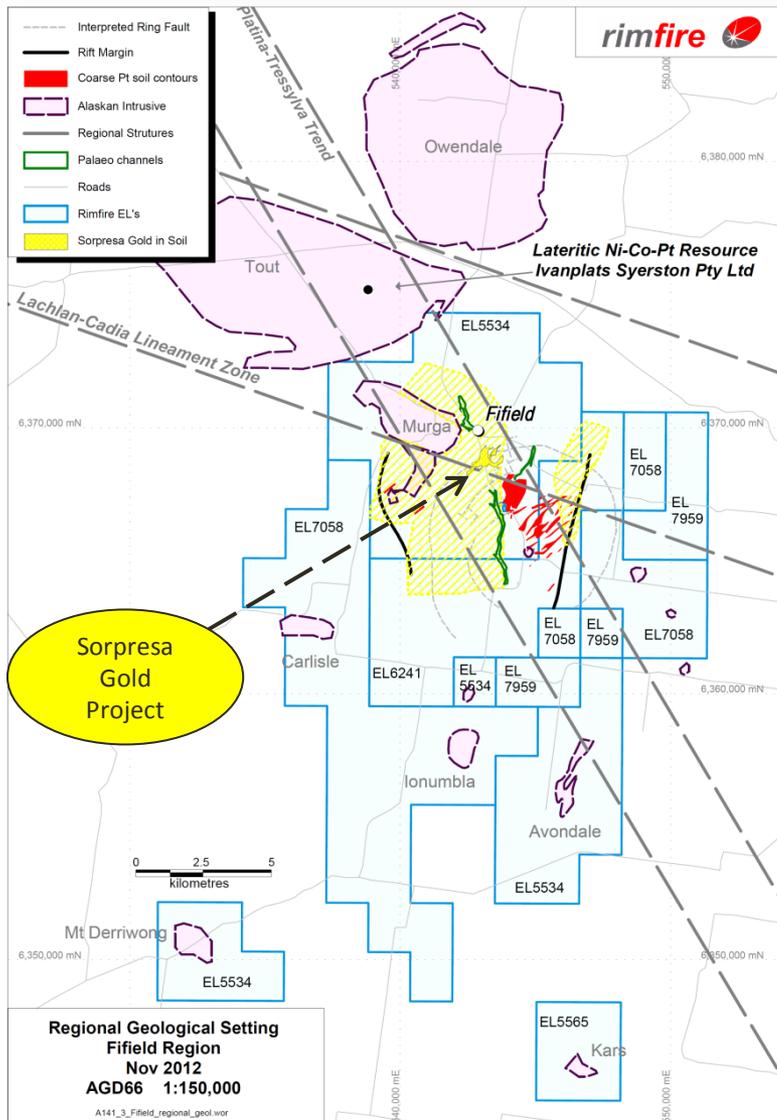


- **Lachlan Lineament**
  - Major Mineralized corridor
  - Large scale mines
- **Tout Complex at Fifield Orientation**
  - Confirms lineament position
- **Au and Pt in some Shears with this orientation at Fifield**
- **Newcrest Cadia, Rio North Parkes, IvanPlats Syerston, KBL Mining, YTC Resources, Cobar Consolidated**

# Gravity Interpretation of Regional Structure



# Fifield Rimfire Major Project Areas



## RIM has seven exploration licences

- Approx. 300 km<sup>2</sup>
- 2 Mineral claims (Mining Licences) and a Bulk Disturbance permit "Pit One"
- Permit for 6 x 100m trenches Platina Lead
- 210 Hectares of Freehold

## Platina- Tresylva Corridor of Faults

- Complex mineralized area
- Contains Platinum (Pt), Gold (Au), Silver (Ag)

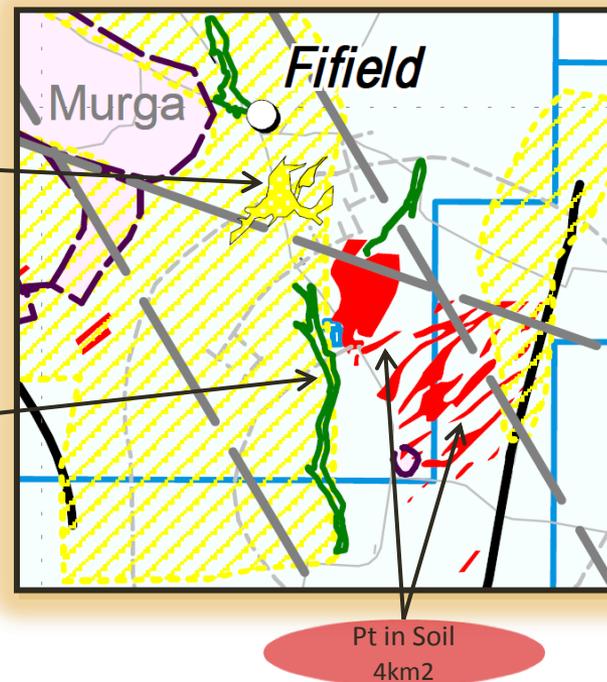
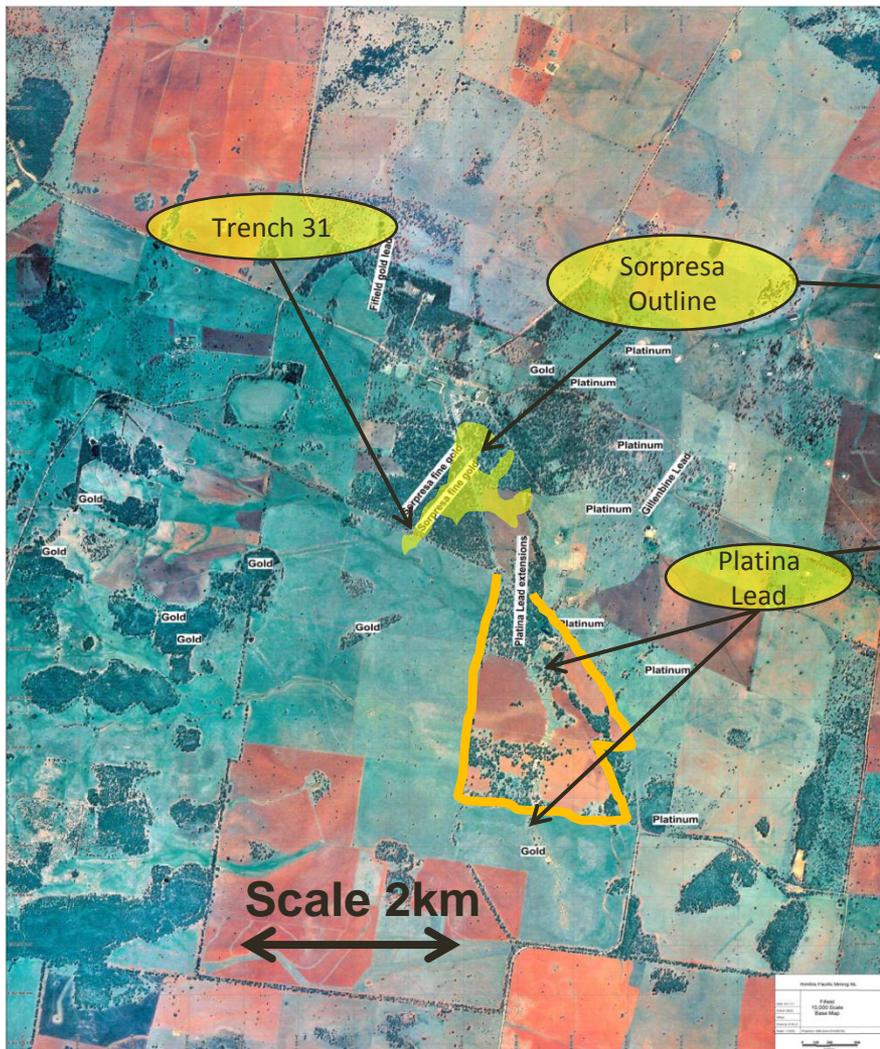
## Quality focus on 60km<sup>2</sup> area within this

## Good infrastructure (Road, Electricity, Land)



Platina Lead looking north - influenced by Platina-Tresylva trend

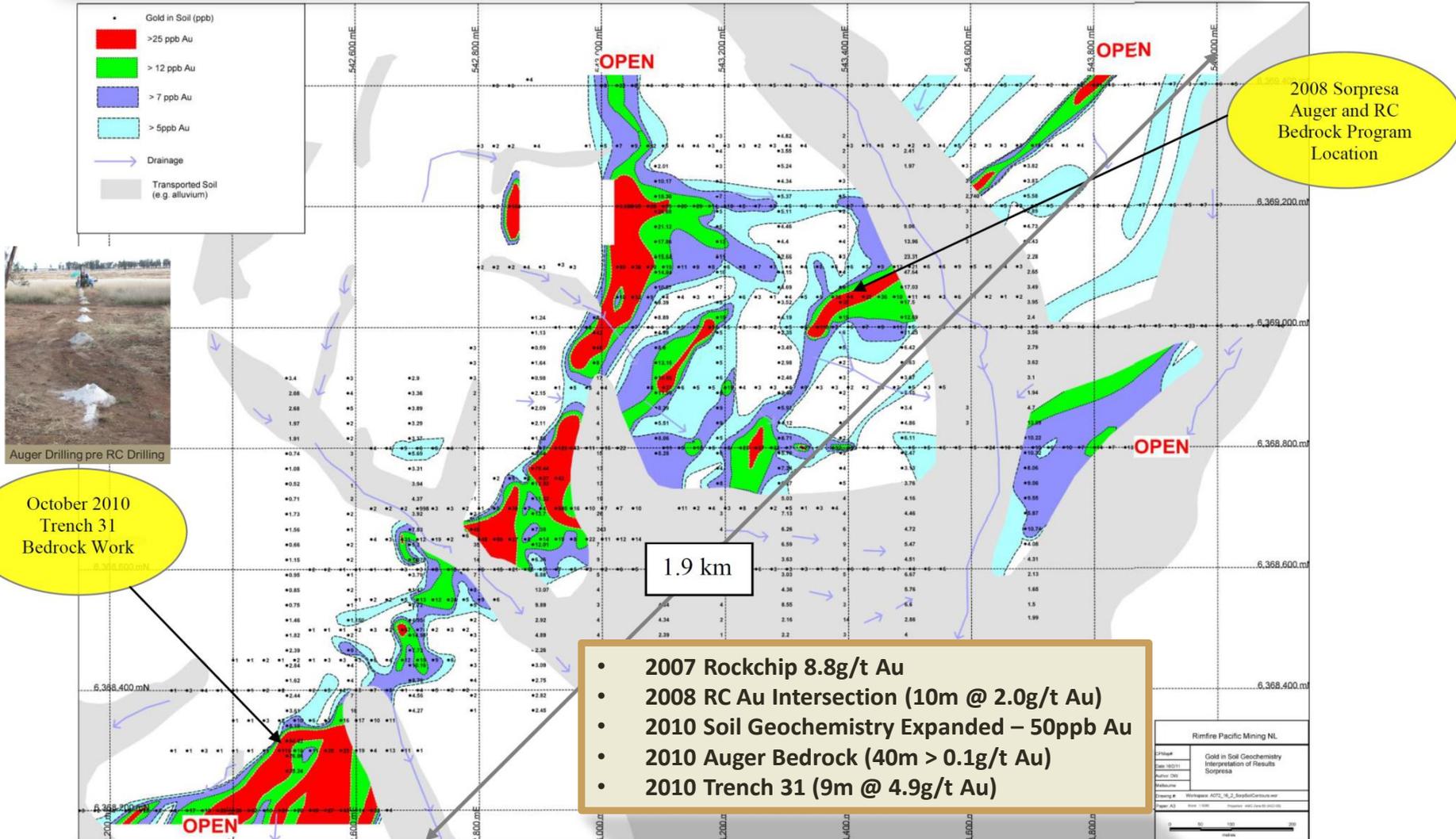
# Sorpresa Location at Fifield



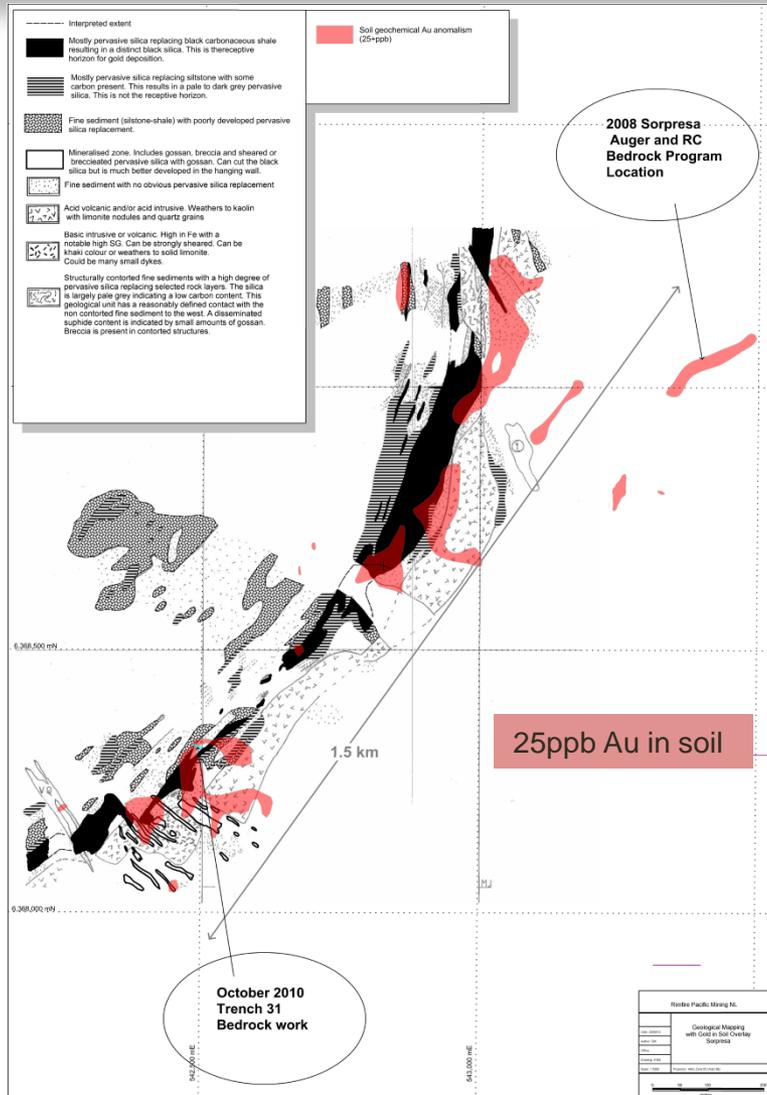
*In 2010 the Sorpresa geochemistry was discovered 800m north of Company freehold*

# Sorpresa Fine Au Discovery

## Subtle Soil Geochemistry



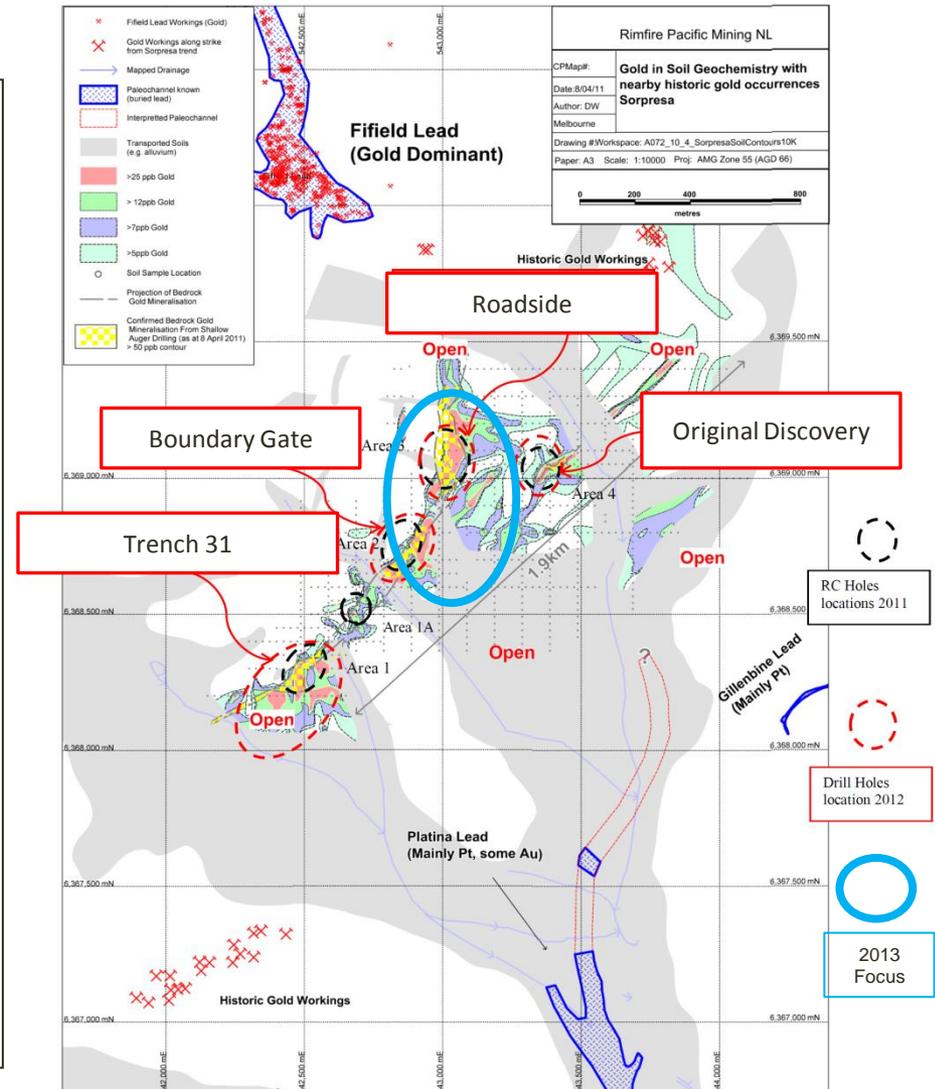
# Geology meets Au soil geochemistry



- ❑ Au Geochemistry in context
- ❑ Only shown on reliable soil areas
- ❑ Porphyry – a capping rock
- ❑ Au Geochemistry – Geology – IP – Gravity
  - ❑ A neat correlation
- ❑ Pathfinder elements Pb, As, Sb, Ag also present

# Drilling History in 2011 and 2012

- **3,500m in 2011 (40~80m depths)**
  - First pass
  - 34/56 holes had Au at 2m >1g/t
  - High grade 63g/t Au;
- **9,000m (est.) 2012**
  - High grades 2m @ 87.5g/t and 2m @118g/t Au (1.2km apart)
  - Some deeper holes (100~160m)
  - Stepout and scout
- **Moving beyond soil geochemistry**
- **IP Chargeability anomaly**
  - Shallow confirmation (Roadside)
  - Deeper test 150~350m confirmed
    - **Diamond drilling April/May 2013**



# Sorpresa Some Drilling Highlights

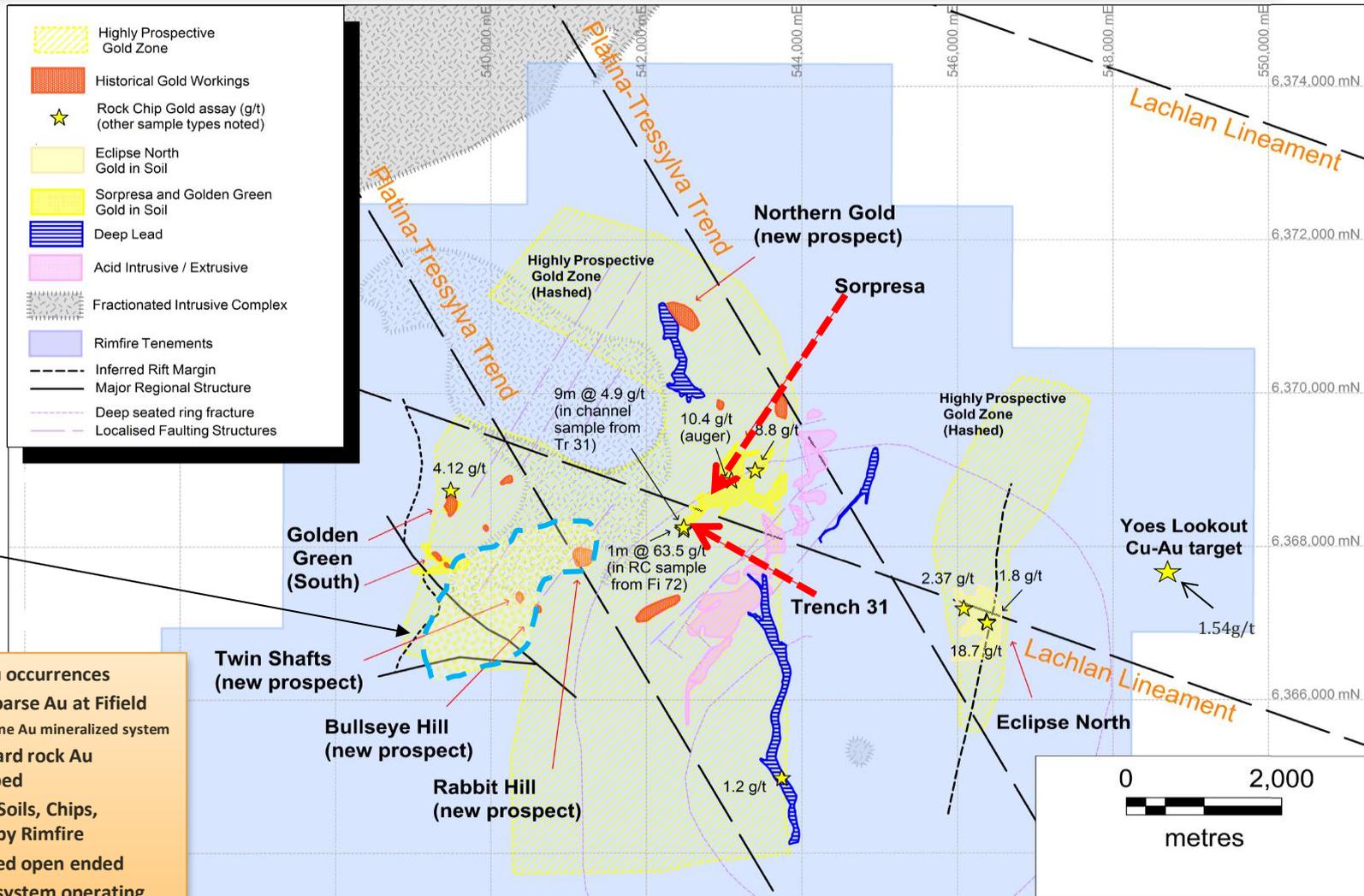
## ❑ *Percussion drilling*

- ❑ Sorpresa had 4 areas across strike length of 1.6km
- ❑ Strong pathfinders in real time, As, Pb, Sb, Ag
- ❑ Approx. 1/3 of 250 holes have Au at approx. 10 metres gold or better
- ❑ Intersection encountered below base of oxidation e.g. Fi107 (6m @ 6.5g/t Au)
- ❑ Strong Au Halo most holes 0.05 to 0.2g/t Au, **entire strike gold mineralized**

## ❑ *Two Australian Top 10 Au holes in 2012 for Greenfields Exploration*

- ❑ Fi 160 - Au 14m @ 21.9g/t (incl. 2m @ 87.5g/t Au) from 34m plus **Ag 6m @ 94g/t**
- ❑ Fi 212 - Au 14m @ 24.4g/t (incl. 2m @ 118g/t Au) from 26m plus **Ag 26m @ 155g/t**
- ❑ Fi 241 – **Ag 10m @ 535g/t** from 70m (incl. 2m @ 2020g/t **Ag** AND 10m @ 1.01g/t Au)
- ❑ Fi 321 – **Ag 20m @ 230g/t** from 70m (incl. 2m @ 934g/t **Ag**) **Plus additional 16m > 24g/t Ag**
- ❑ Fine disseminated Native Au repeats well
- ❑ In general, coarse Au fraction (~10-15%?) likely not captured in assays to date
- ❑ Roadside area at Sorpresa is Silver dominant

# Fifield Gold Observations – Wider Area

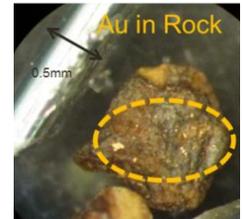


- Numerous Fine Au occurrences
- Different to the Coarse Au at Fifield
  - More than one Au mineralized system
- Noted historic "hard rock Au scratchings" mapped
- Mapping, Creeks, Soils, Chips, Bedrock sampled by Rimfire
- Sorpresa discovered open ended
- A much larger Au system operating

# Gold Receptive Horizon

## ➤ Gold Receptive “black silica” horizon

- ❑ Carbonaceous Sediments pervasively silicified, fractured, Au/Ag mineralized
- ❑ “Sorpresa-like” black silica continues to be sighted
- ❑ Along strike North and South from known Sorpresa
- ❑ “Only a small part of a likely much bigger gold system”
- ❑ Extensive mapped Geology in Syncline Rift Basin setting - 8km<sup>2</sup> Area and open
  - ❑ **Geological Concept Model established**

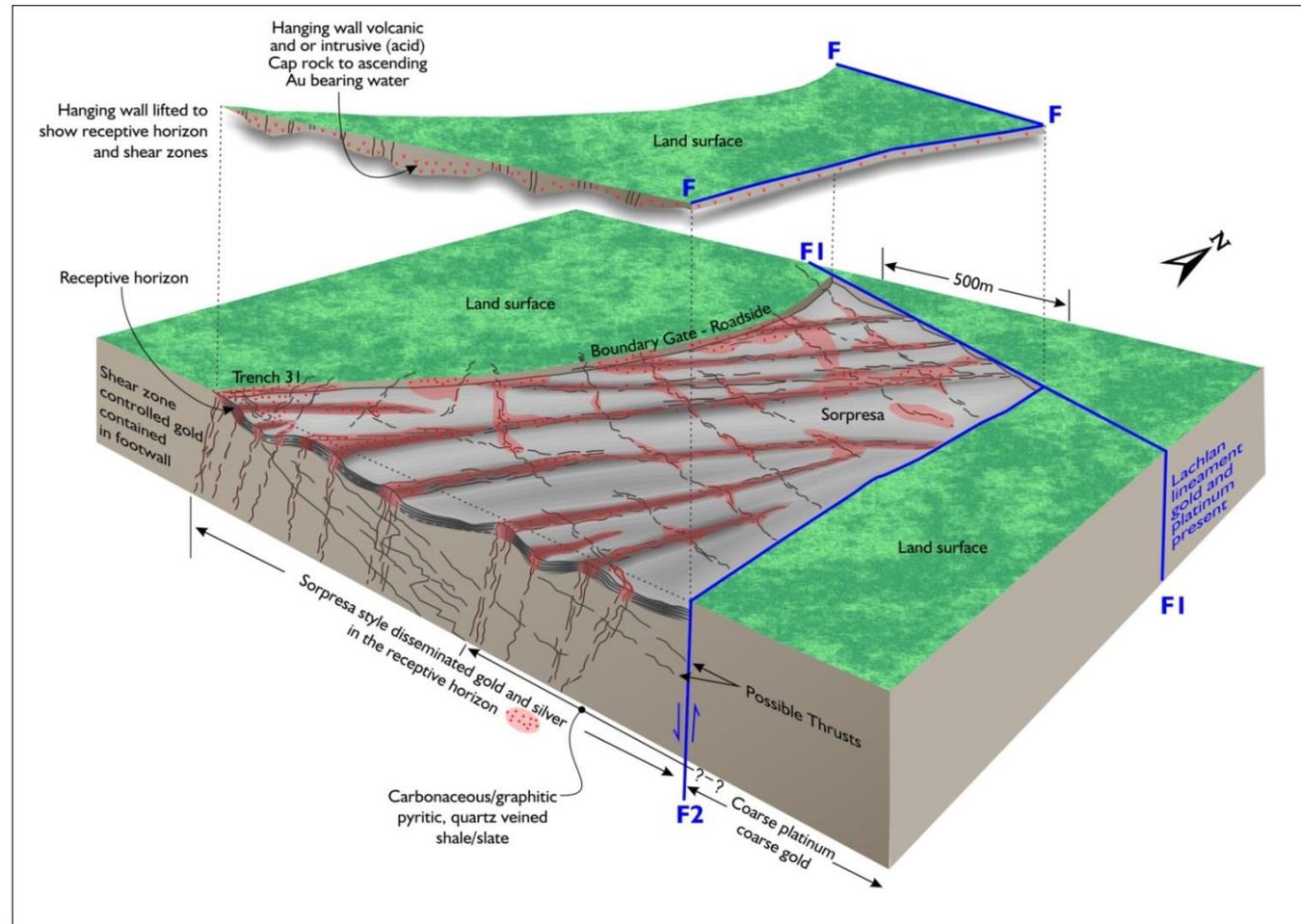


Various styles of Black Silica, Sheared, Brecciated

# Importance of Black Silica Geology Association

## Model Development

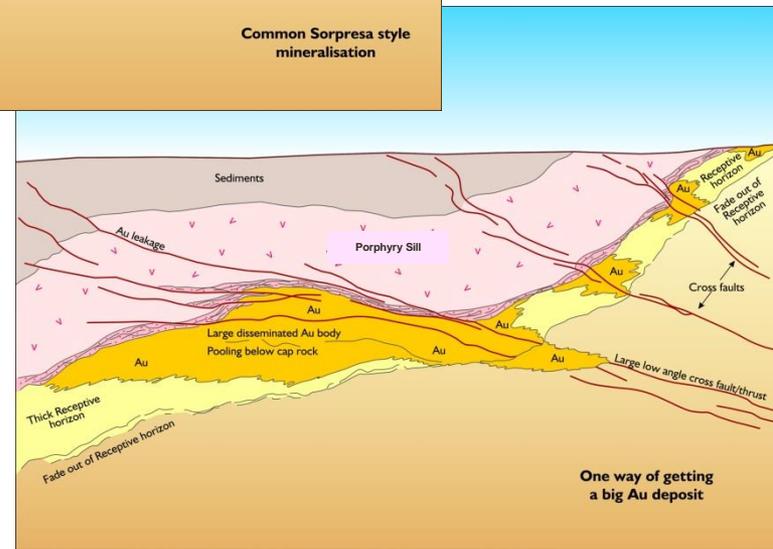
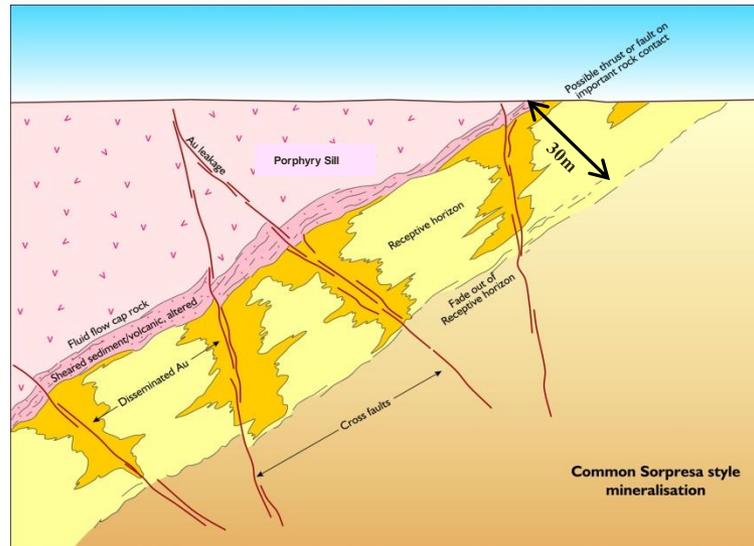
- ❑ Au receptive horizon 20~40m thick
- ❑ Black Silica
- ❑ Porphyry Capping Rock
- ❑ Shear zone control
- ❑ Intersecting shears important
- ❑ Pod-like 3D geometry
- ❑ Probable pooling
- ❑ Evidence of a huge “plumbing system” to great depths



# Model Cross Sections Inferred

## Model Development

- Tr 31 Example
  - Au receptive horizon
  - Black Silica
  - Porphyry Sill Capping Rock
  - Shear zone control
  - Intersecting shears important
  - Pod-like 3D geometry
- 
- Porphyry Sill Capping Rock
  - Leakage anomaly
  - Thicker part of Au Receptive horizon
  - Probable pooling under domes
  - Huge “plumbing system” to great depths



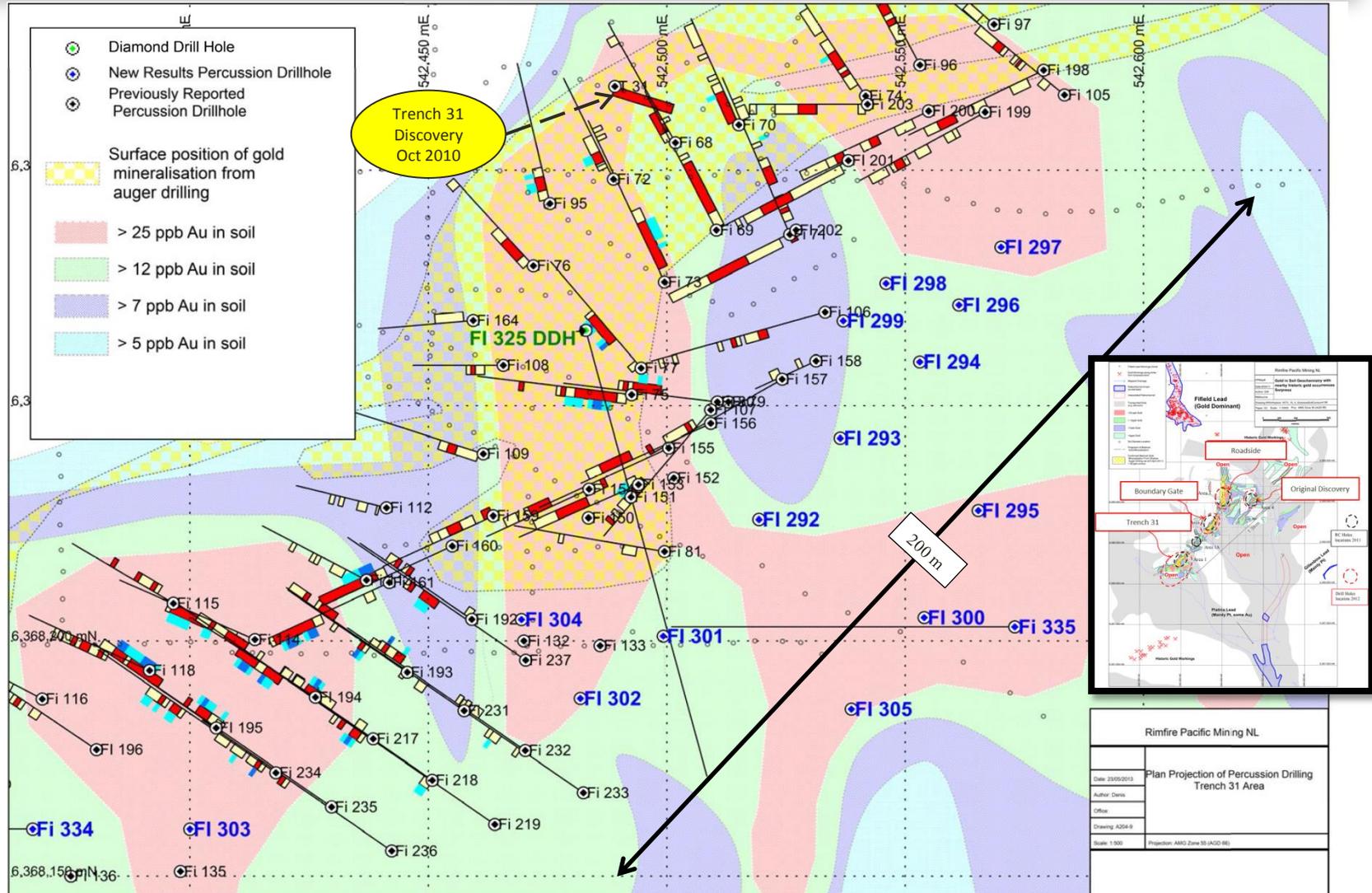
# Tentative Concepts on the Deposit Origin mineralized System at Fifield – Geology Notes

- ❑ Hot fluids charged with Au, Ag ascend in fracture channels
- ❑ A huge “plumbing system at depths”
- ❑ Low flow in impervious porphyry layer – precipitates Au, Ag
- ❑ High Carbon and pyrite content in rock layer below porphyry sill promotes deposition in restricted flow positions
- ❑ Fracturing and intersections of fracturing critical to focusing mineralization within the receptive carbonaceous horizon
- ❑ Accompanying silica pervades the carbonaceous sediments resulting in the common and important “black silica” host



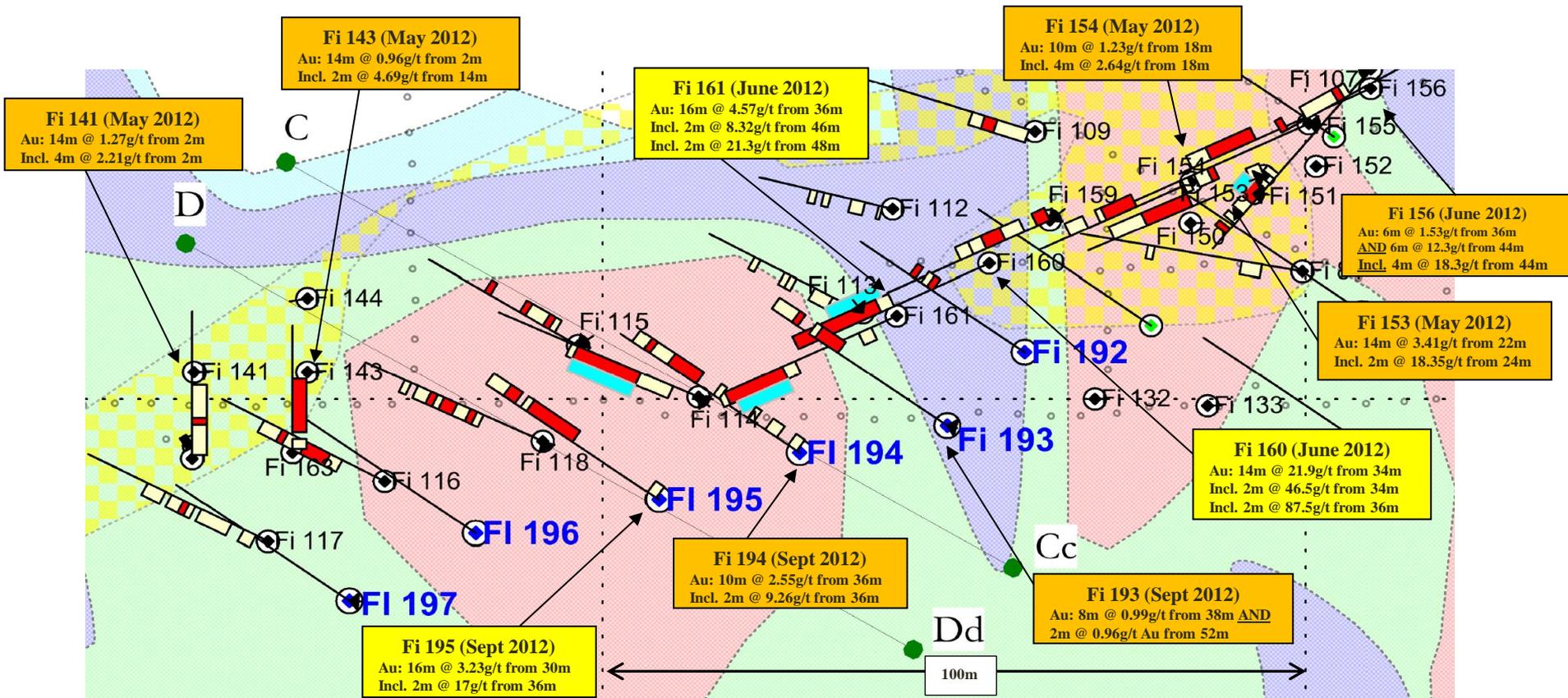
# Sorpresa Trench 31 Area Drilling

## on Soil and Bedrock Geochemistry

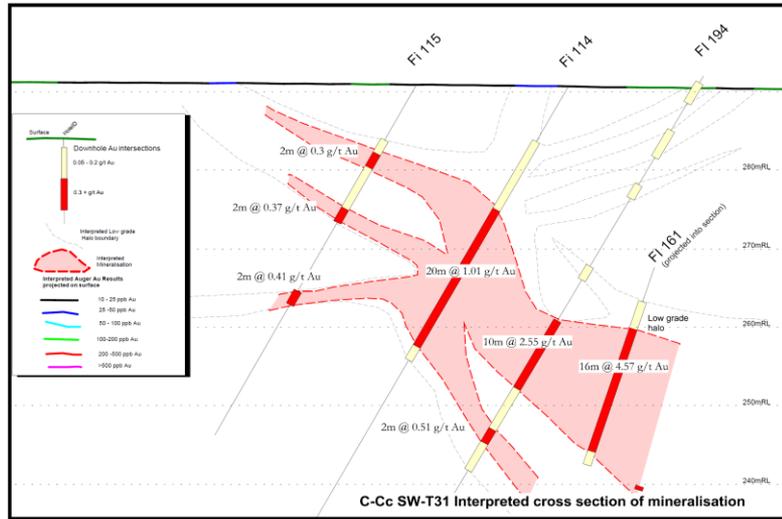


# Sorpresa Trench 31 Area Drilling

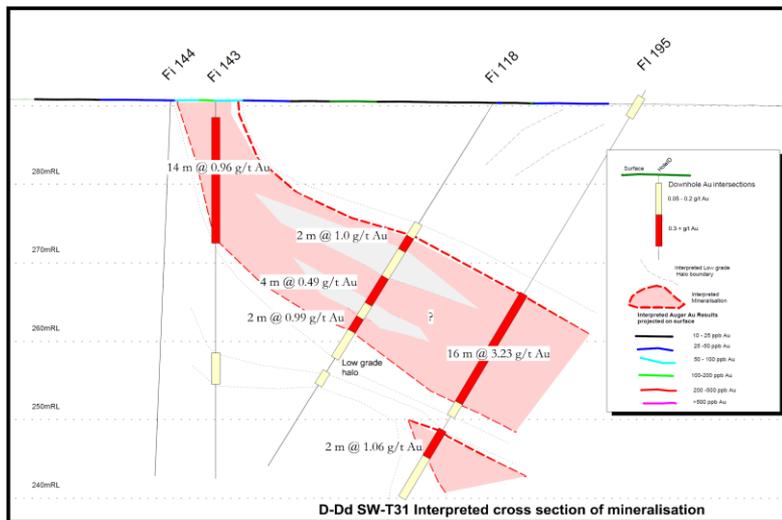
## on Soil and Bedrock Geochemistry



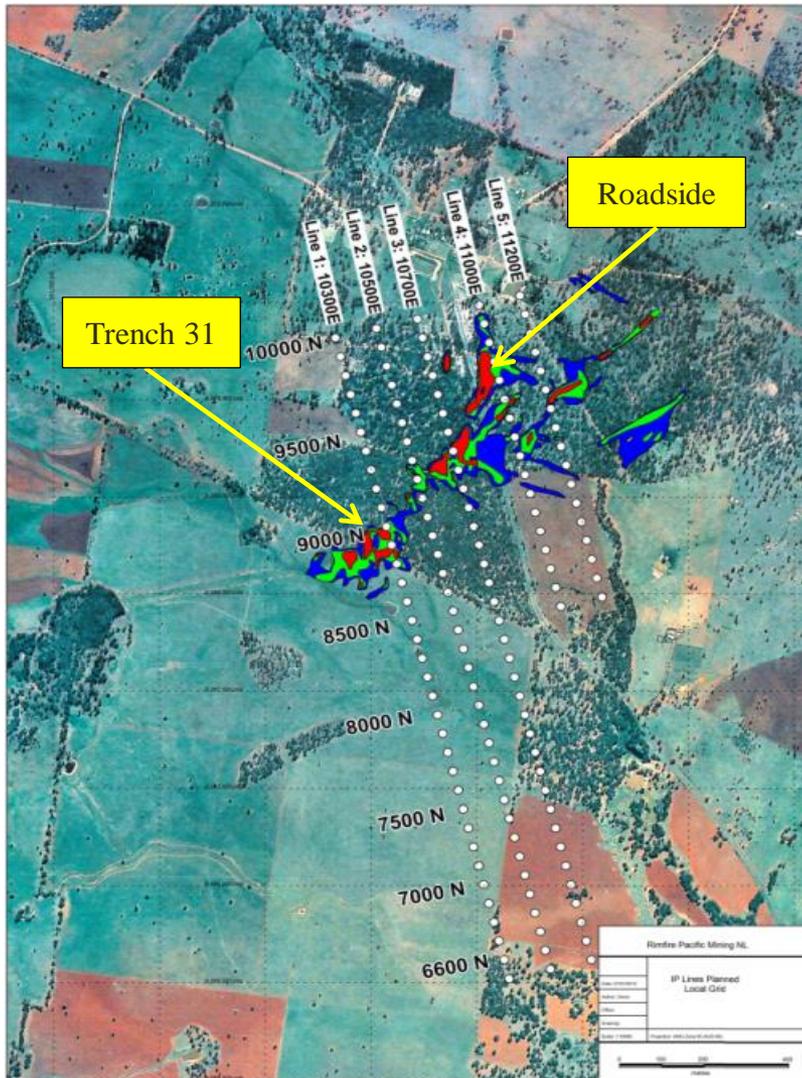
# Sections started to be built at Trench 31



- More drilling required
- Quite a complex cross faulted area
  - No surface outcrop or historic assistance
- Working towards resource estimations
  - More advanced areas at Sorpresa
  - Tr31, Boundary gate and Roadside

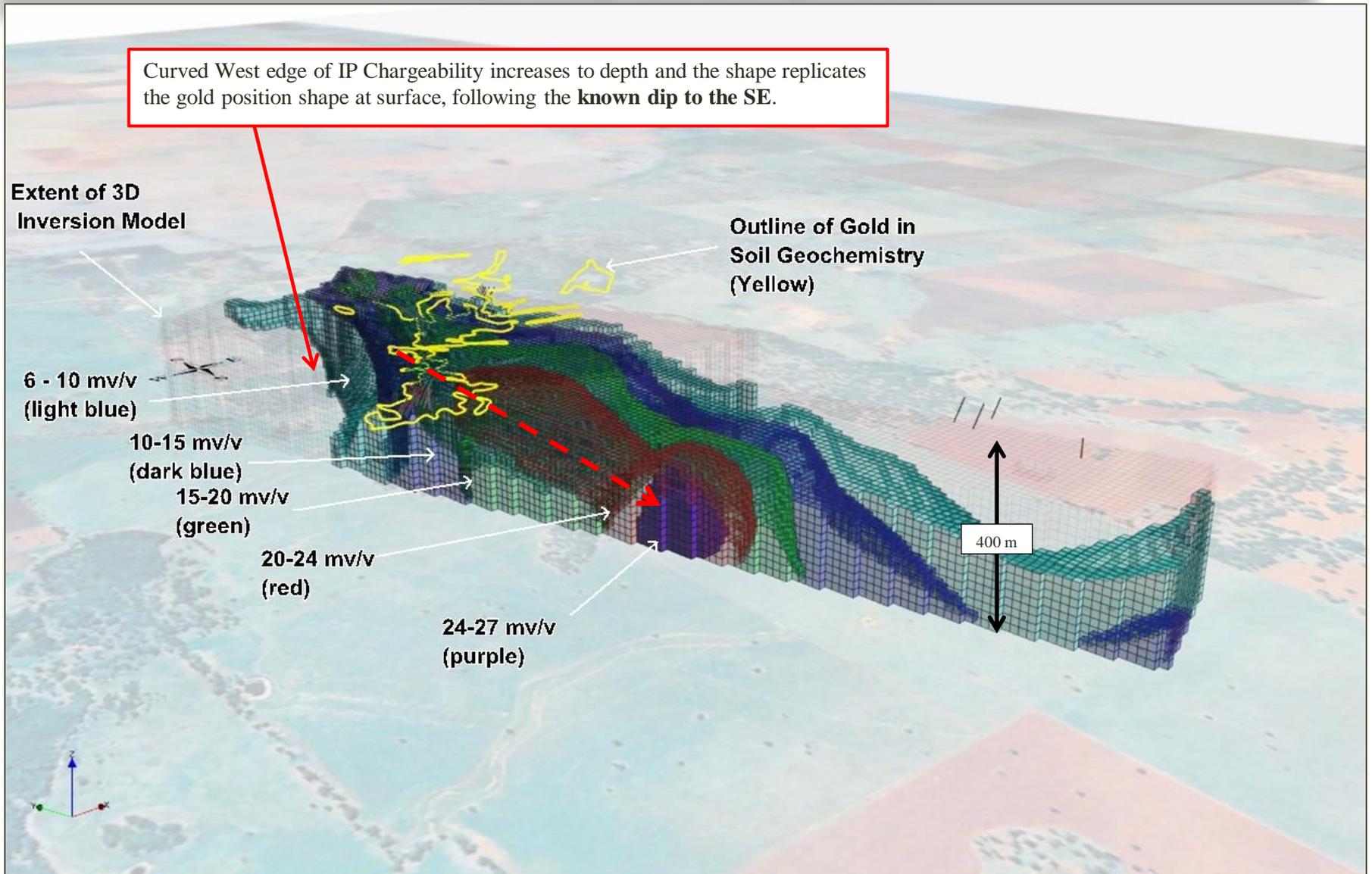


# IP Survey at Sorpresa

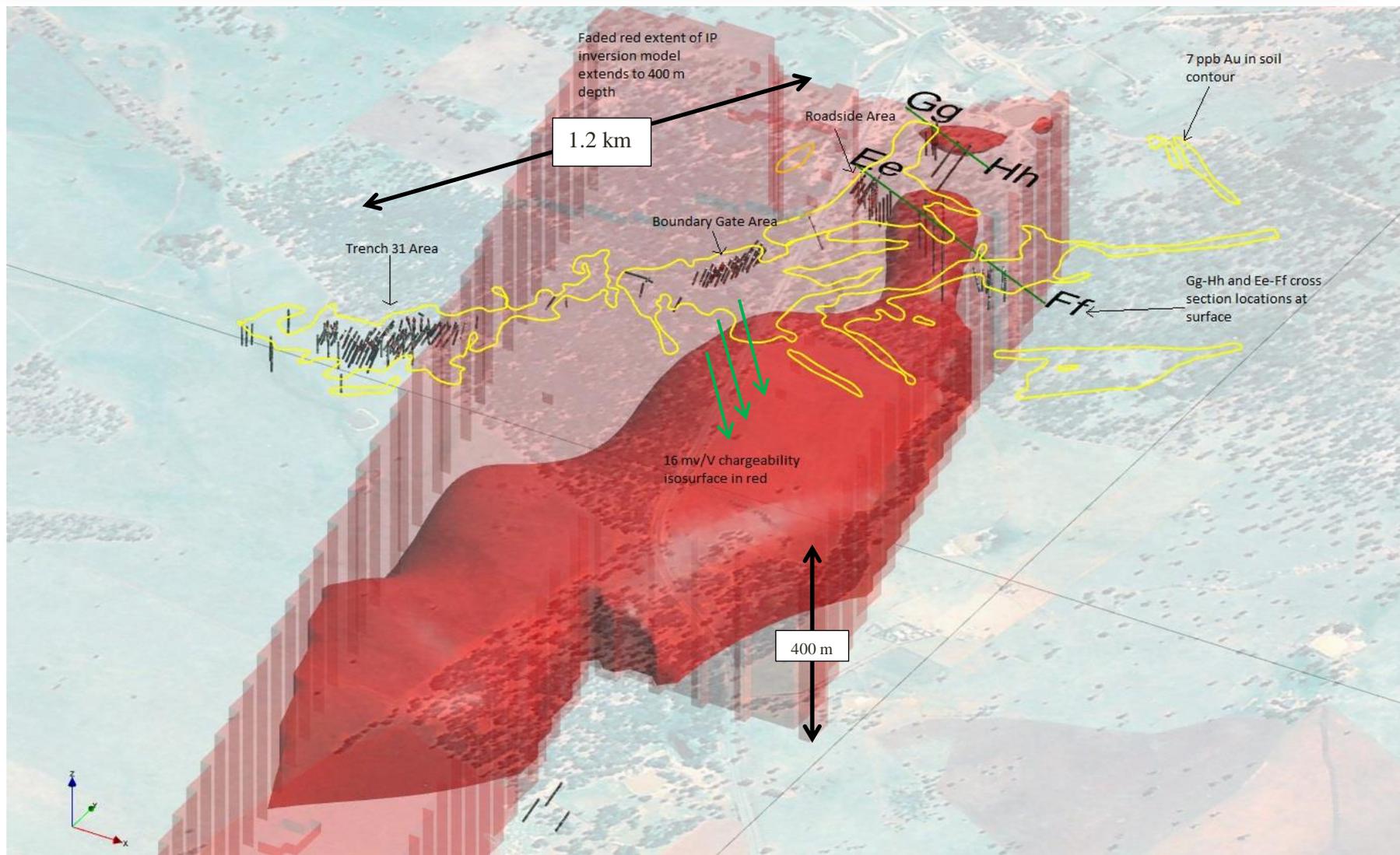


- Limited pole-dipole survey **first half 2012** partly over geochemistry
- 100m spaced readings, 200m spaced lines
- IP Anomaly is large
- Chargeability values generally increase with depth **in known dip direction**
- **Unusual curved face** of geochemistry mirrored in IP survey
- **Roadside Area IP is closer to surface**
  - Preliminary basis for chargeable values seen in the geology
  - Sulphides, graphite present
  - Mineralization associated with IP, confirmed late 2012

# IP Survey at Sorpresa

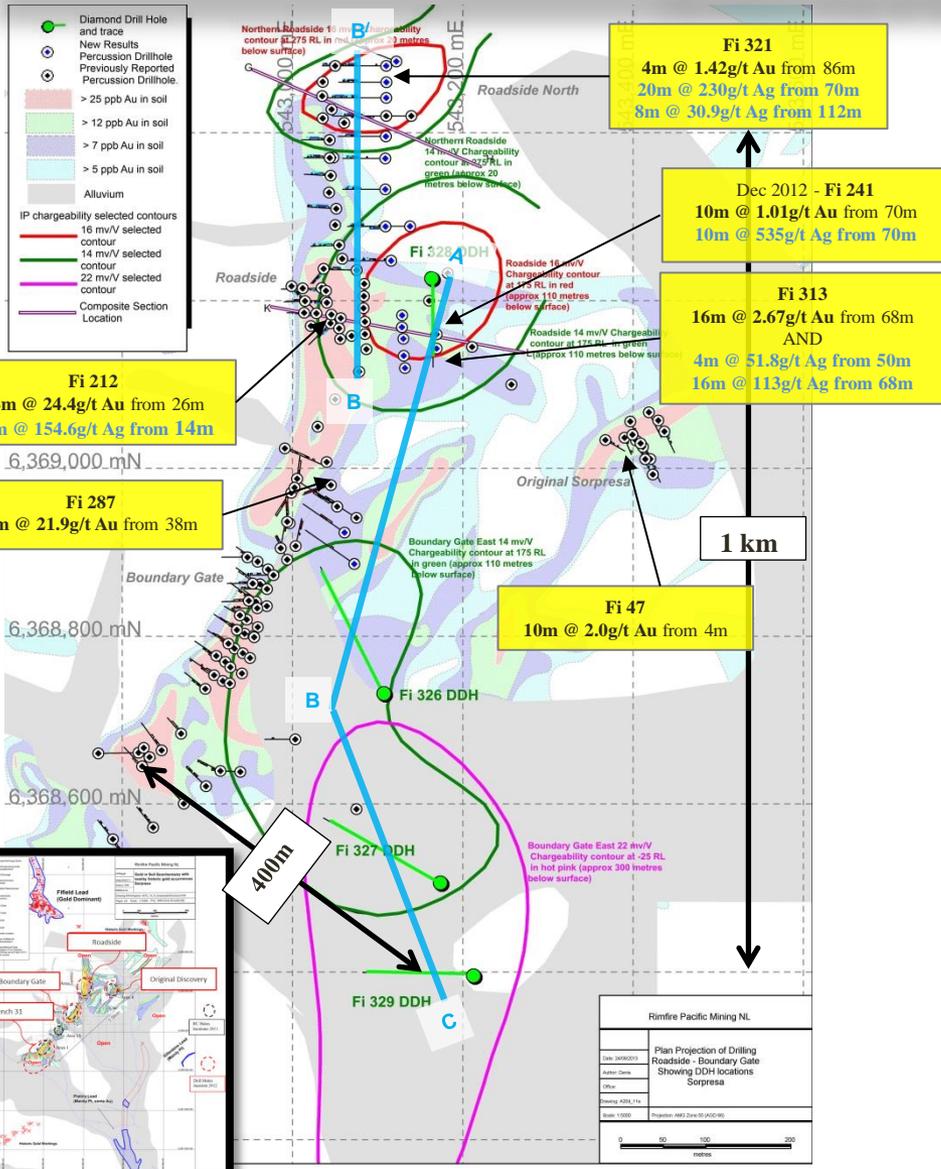


# IP Chargeability 16mv/V isosurface



# IP Response at Roadside Area

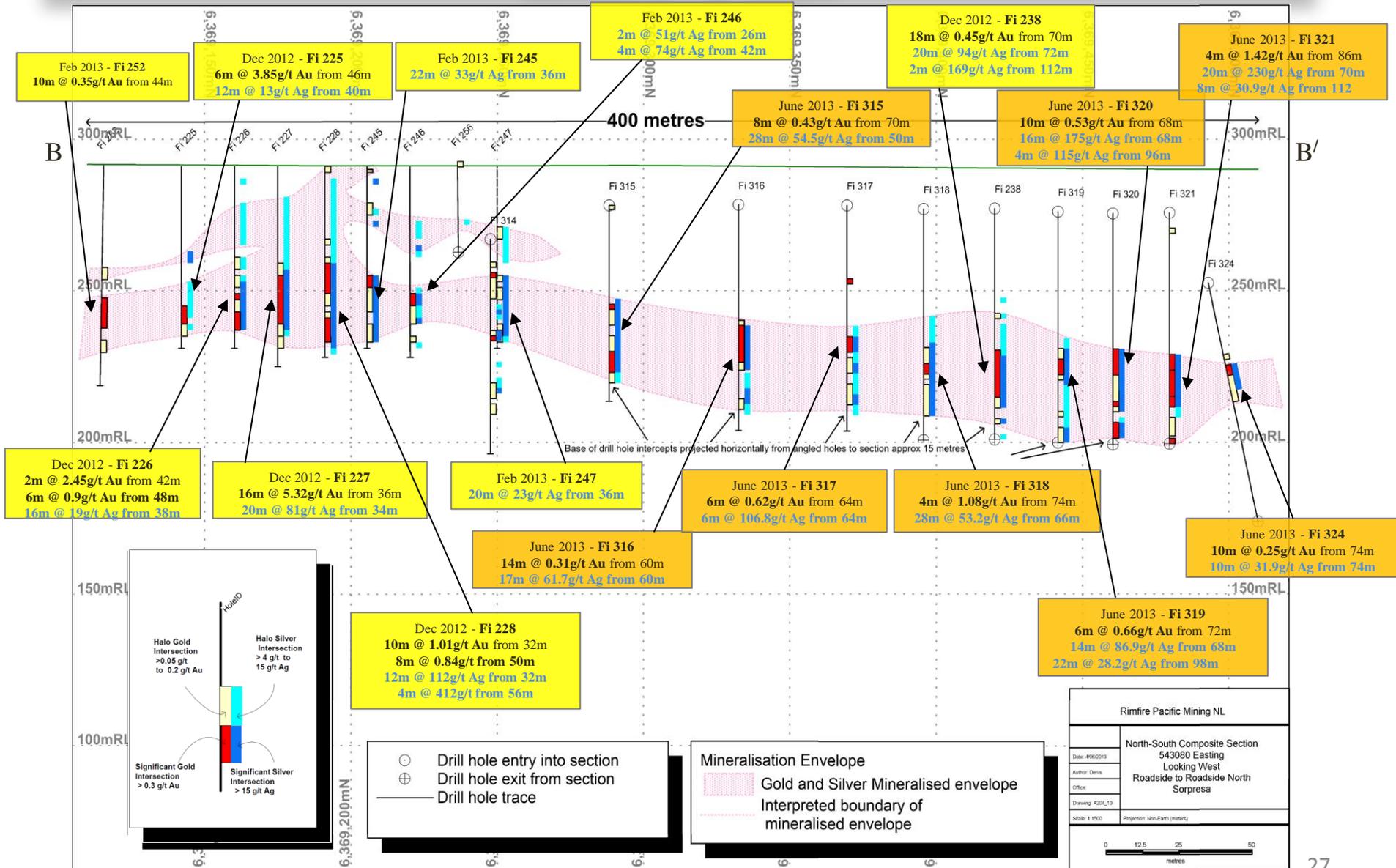
(Northern End of Sorpresa)



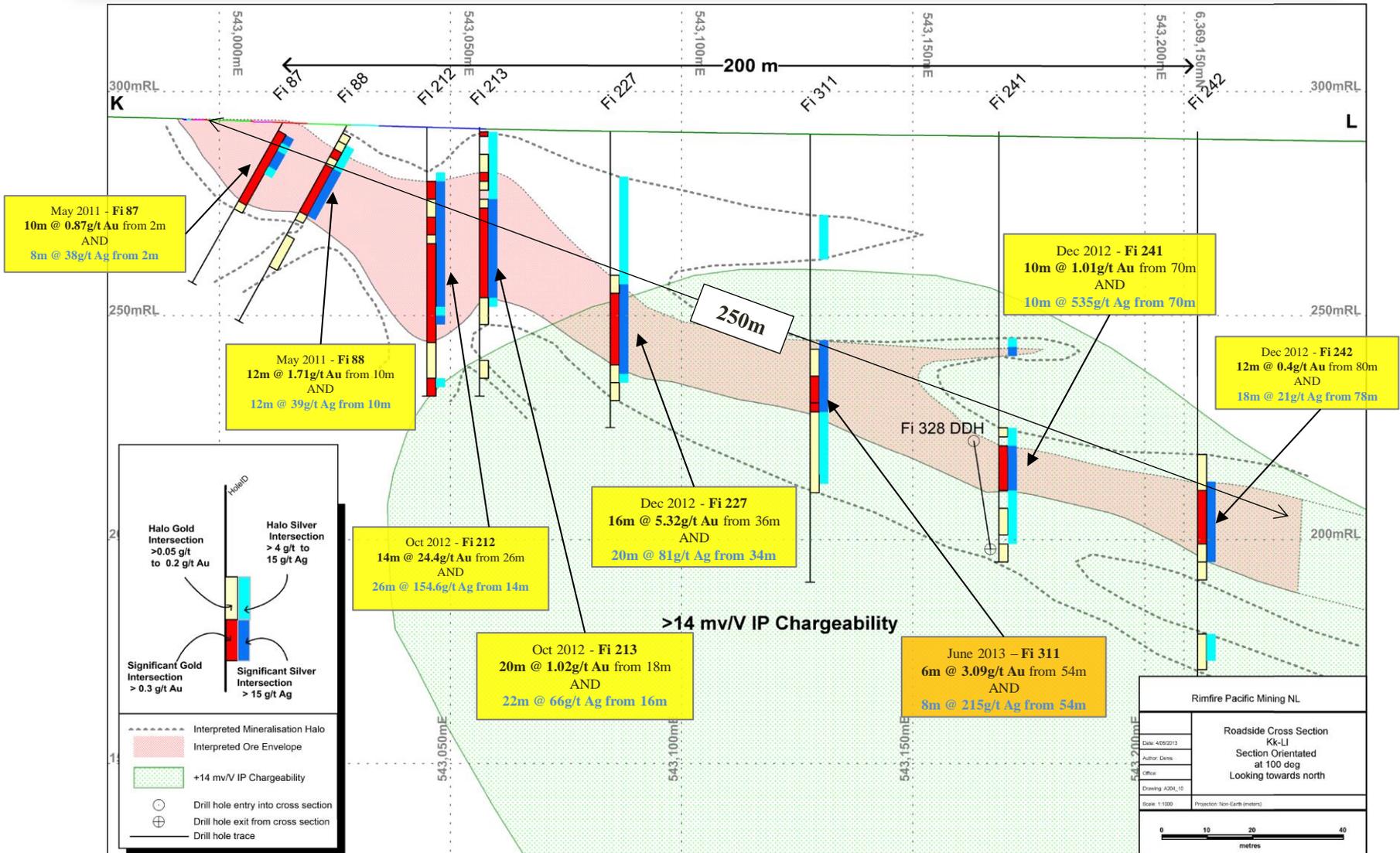
- ❑ Silver with Gold Credits Zone
  - ❑ 400m open strike mineralization (Nth-Sth)
  - ❑ 10~40m thick
  - ❑ Grades to surface
  - ❑ Down Dip 20 deg, approx. 250m in the south
- ❑ IP projects closest to surface here
  - ❑ 2 locations
  - ❑ Drilling confirms connection of mineralization to IP locality
- ❑ High Grade Fi 241 south
  - ❑ 14m @ 24.4g/t Au and 26m @ 155g/t Ag from 14m
  - ❑ 10m @ 1.0g/t Au and 535g/t Ag from 70m
- ❑ High Grade Fi 321 north
  - ❑ 20m @ 230g/t Ag from 70m, plus Au credits
- ❑ New Step out Drilling plans
- ❑ “Joins Up” Boundary Gate to the South
  - ❑ Gold mineralization again dominant
  - ❑ Also NW-SE Trend to “Original Discovery” 200m

# Roadside Area North - South

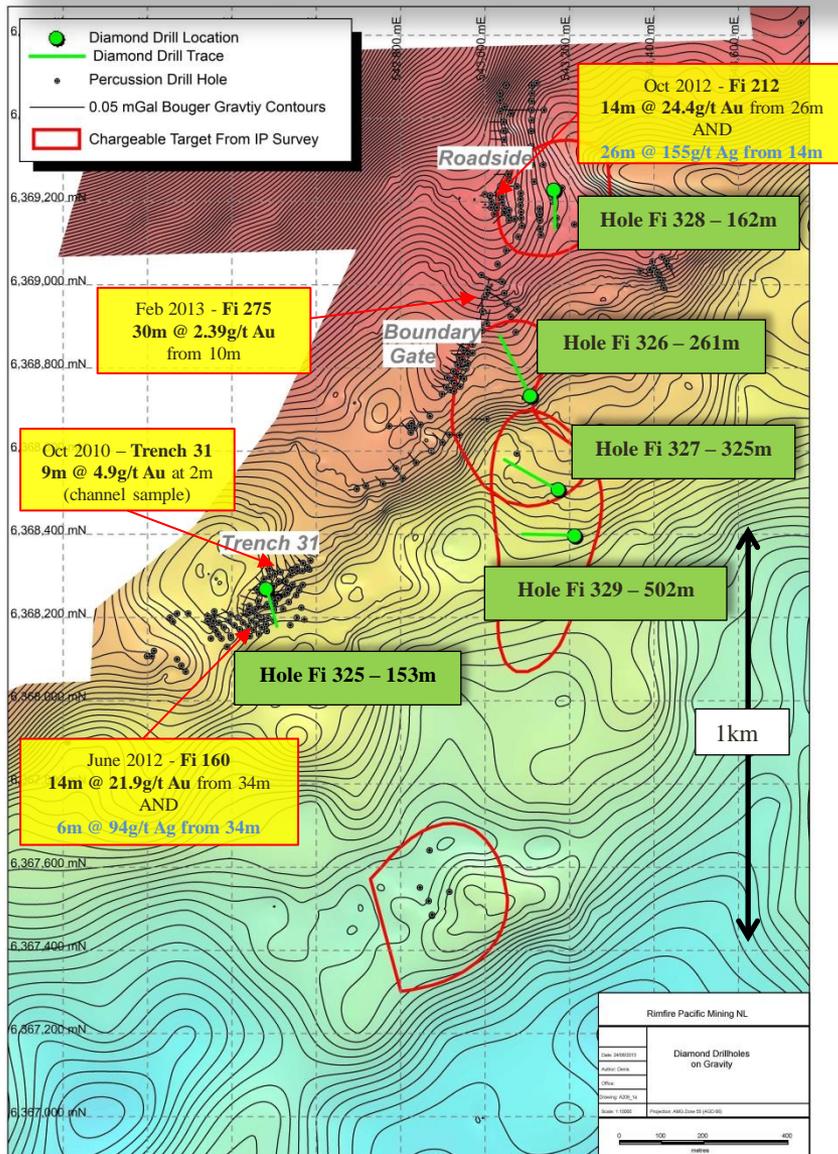
## Section B – B' / 400m



# Roadside Area South End East - West Section K - L (250m)



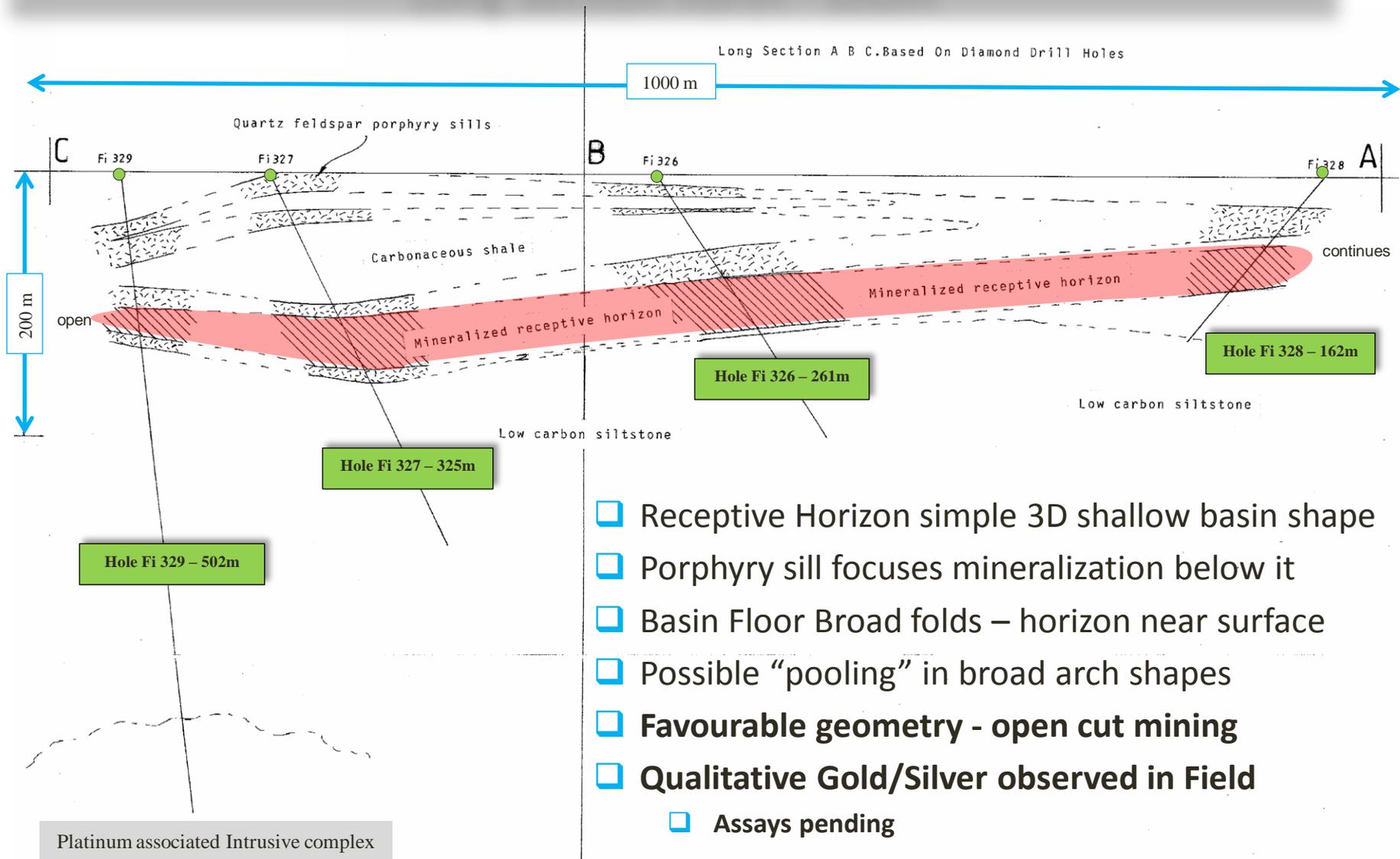
# Gravity Survey on IP – First Diamond Drilling Program



- ❑ First Diamond Drilling at Fifield, 5 holes for 1400m
- ❑ 1 hole Roadside 162m – Ag-Au mineralization
- ❑ 3 holes Boundary Gate East
  - ❑ Gravity-IP-Structure-Au Trend-Multi element
- ❑ 1 hole Trench 31, 153m – Au mineralization
- ❑ Finished drilling May 2013 – Assays pending
- ❑ Geological units common to each hole
- ❑ Porphyry Sill, Carbonaceous Receptive Horizon
- ❑ All holes are mineralized
- ❑ Field Observation, Gold is present in each hole
- ❑ **Major Expansion in Mineralized System Size with DDH**

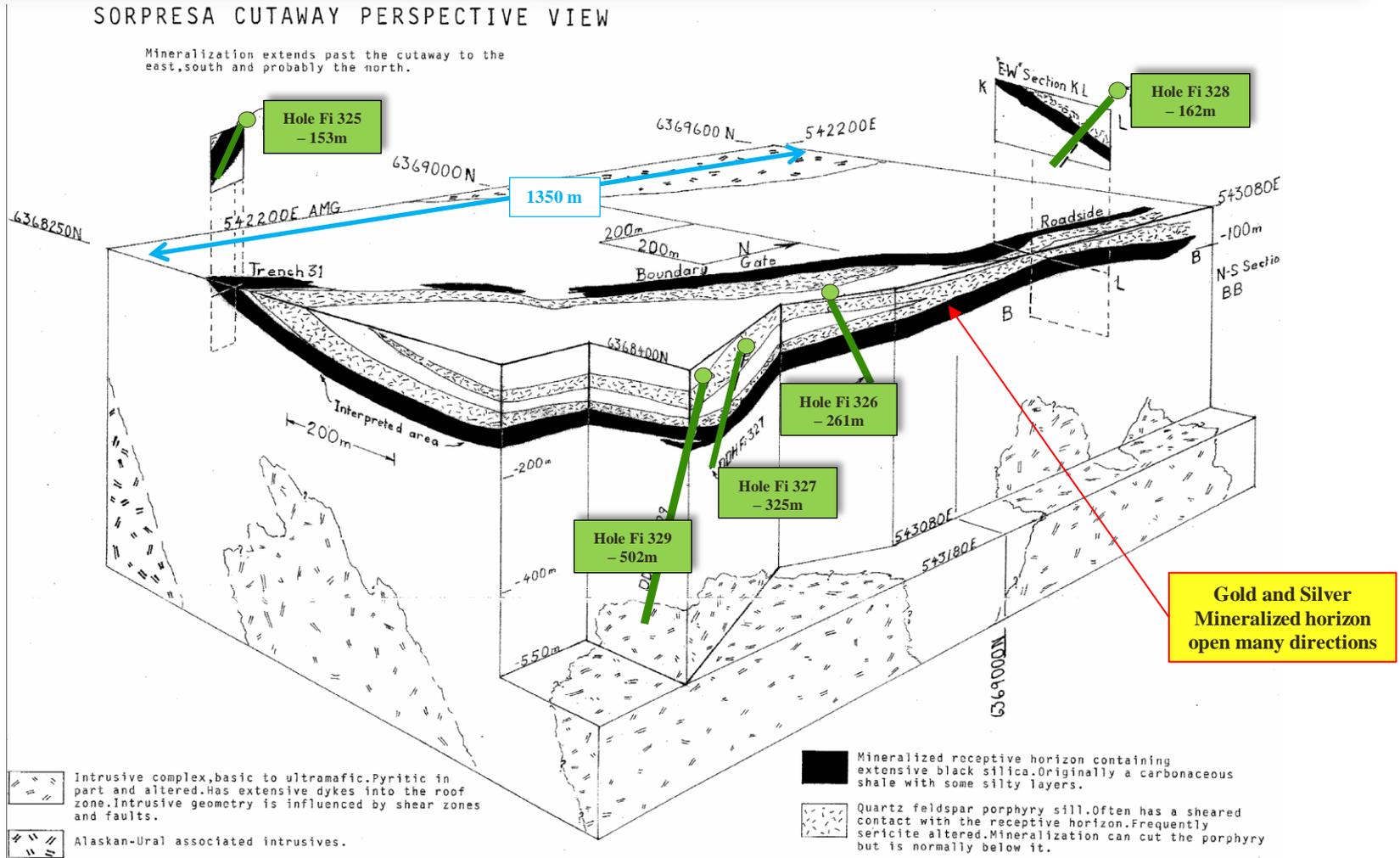
# Diamond Drilling – First Drill program

## Long Section north - south



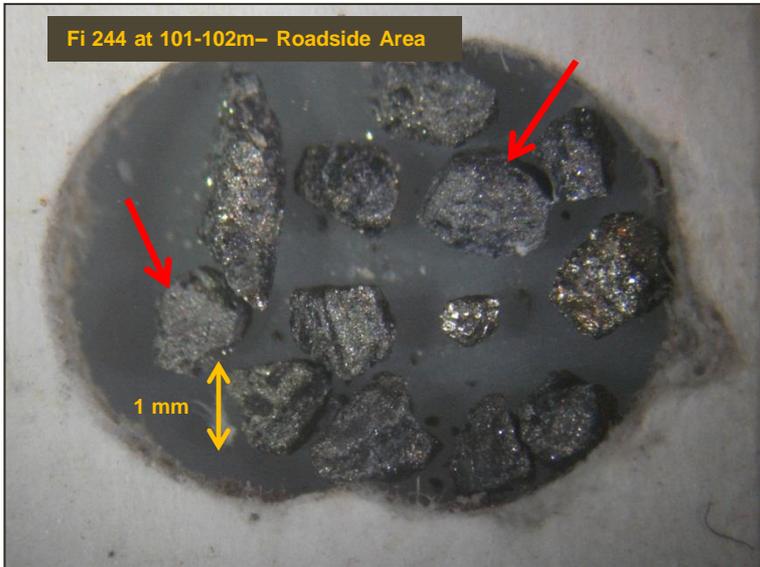
# Diamond Drilling – Shape and Continuity

## Cut away perspective north - south



# Mineral Observations Chips from the Field

Fi 244 at 101-102m- Roadside Area



- Oxide zone
- Nodular Ag halides
- 943g/t Ag  
20~22m

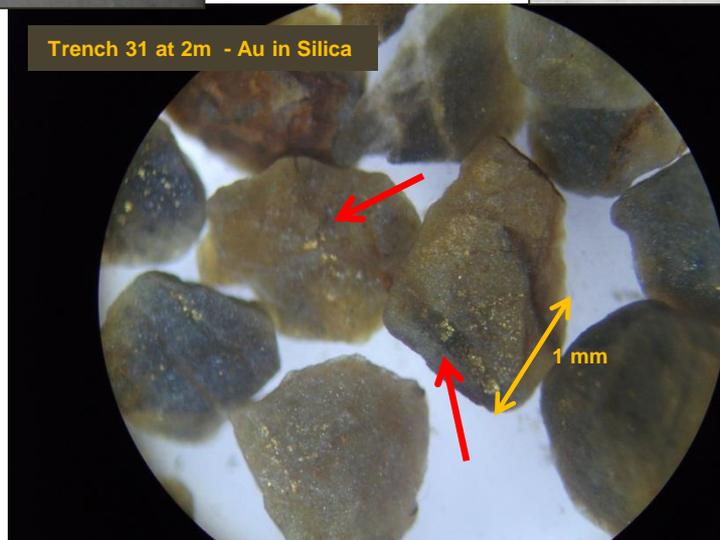


Fi 214 at 21- 22m- Roadside Area

- Primary mineralization
- Pb, Ag Sulphides
- Massive Veinlets
- Metallurgy positive implications – gravity concs

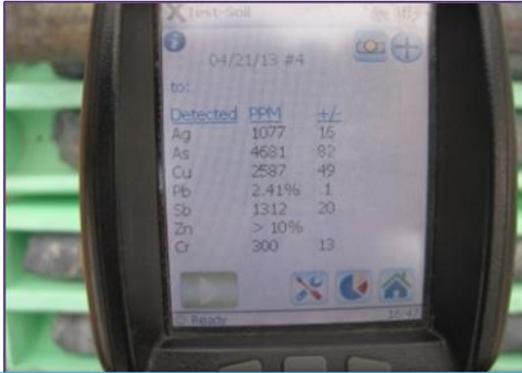
Mineralogy, metallurgy and petrology pending

Trench 31 at 2m - Au in Silica



- Fine Native Au in Silica
- Multiple phases including some sulphide veins
- High grade Au no upper limit in theory

# Diamond Core



Fi 328 core shown from 90~93m depth – Spot XRF values on core surface include 1077 g/t Silver at 90.7m



Fractured Core Fi 327 Boundary Gate SE



Part of the “receptive horizon” in Fi 325



Part of the mineralization in Fi 328



Diamond Drilling Core Yard Logging

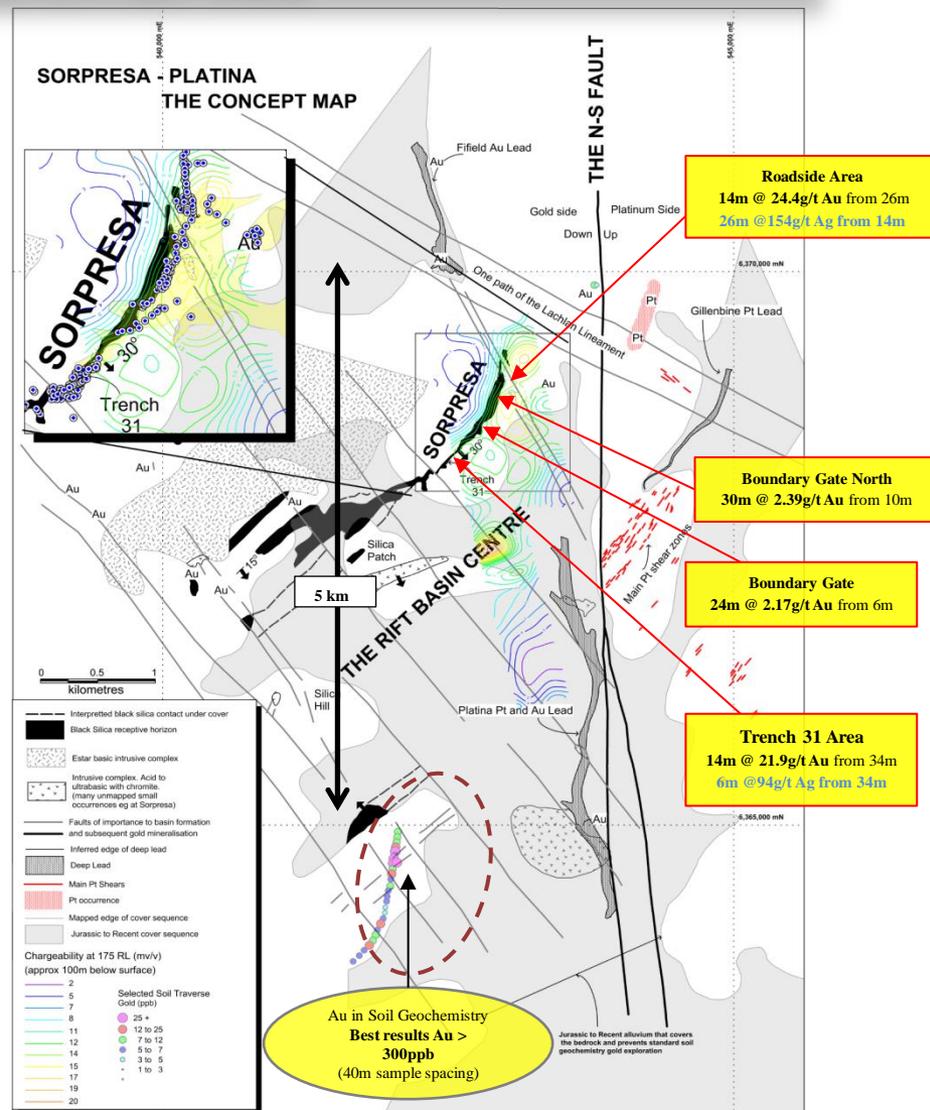


Porphyry Sill and Receptive Horizon in Fi 329

# Geological Concept Map

– Syncline Rift Basin in Plan View

- Sorpresa at the margin only
- Key marker Geology “Black Silica”
- Strongly gold mineralized system
  - Cross cutting faults and shears
  - Potential for pooled mineralization
- Extensive Area 8km<sup>2</sup> and open
- Discovery occurred at eroded positions – Trench 31
- Most of the area is under light alluvium
- Likely best Au zones not yet seen
  - Thicker sections in Basin Centre
- Integrated Model compelling for multi-million ounce Au potential



# Sorpresa Fine Au Discovery

## Important Lessons

- ❑ **Subtle mineralization Expression**
  - ❑ Only discovered due to eroded lenses at surface in geochemistry
- ❑ **High Grades for Au and Ag, we have not seen the best grades yet**
  - ❑ Most of the area (8km<sup>2</sup>) subdued with shallow alluvium
  - ❑ Fine disseminated Gold and Silver
- ❑ **Metal Zoning, Au, Ag and pathfinders (Pb, As, Sb) aid discovery**
- ❑ **Deeper Connection for the mineralization suggested by IP**
  - ❑ Huge Structural plumbing system from great depth
- ❑ **Conventional style of exploration program - Au Assays**
  - ❑ Coarse Au fraction encountered to date (<15%?), not included in grade
- ❑ **Other Au noted at Fifield outside Sorpresa Area**

# Delineation & Exploration Programs 2013/14

## ▶ Drilling Plans and Geophysics - Ideally

- In-house percussion Rig approx. 10,000m, mainly discovery and scout
- Contract RC Rigs approx. 10~15,000m delineation and deeper capacity
  - 4,200m completed May 2013
- Diamond Program 1,400m (5 holes, 3 locations)
- Likely some more Gravity, IP and Radiometrics



## ▶ Target Types

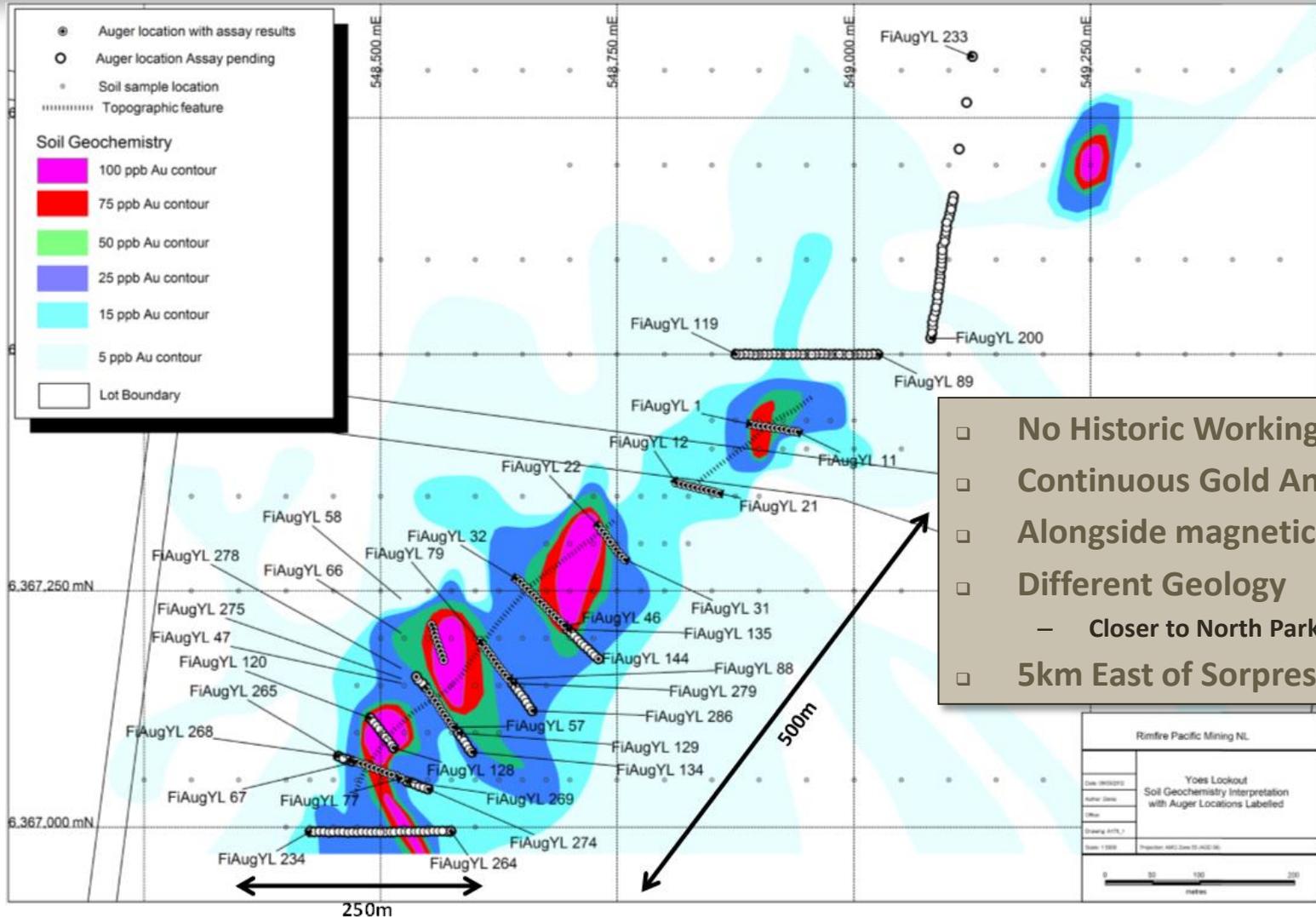
- Current Sorpresa and its expansion in the 8km<sup>2</sup> Basin Area
- IP (and Gravity) Anomaly under Sorpresa – 150m to 350m depth range
- Regional Targets –all Drill ready e.g. Eclipse North, etc.
- Line drilling in alluvium covered areas within the Basin - RAB Commenced
- Possible Deep Trenching Platina Lead

# Major Gold Areas of Focus Fifield



Regional Prospecting - Au in Creeks 4km South of Sorpresa, Black Silica present

# Yoes Lookout Gold in Soil Anomaly - Contours



- ❑ No Historic Working
- ❑ Continuous Gold Anomaly
- ❑ Alongside magnetics
- ❑ Different Geology
  - Closer to North Parkes style
- ❑ 5km East of Sorpresa

# Objectives for 2013/14

- ▶ **Expansion of Sorpresa**
- ▶ **Discoveries beyond current Sorpresa**
- ▶ **Continue towards Maiden Resource Definition(s)**
- ▶ **Build on the confirmed IP connection**
- ▶ **Metallurgical testing**

**Requires further investment in management and greater use of capital going forward**

# Why Support Rimfire?

## Key Points for Sorpresa and Surrounding Area

**Sorpresa Demonstrates Grade, Shape and Scale (>1.6km Strike, shallow dip to surface)**

**Obvious Areas for immediate expansion**

**Very Large Mineralization Footprint > 8km<sup>2</sup> Multimillion Ounce Potential**

**Excellent Geological Setting – More discoveries**

**World Class Potential**

**Diverse Group of Commodities**

**Infrastructure is well placed – “Google Streetview”**



# Contact us Thankyou



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Colin Plumridge  
Senior Geologist

Head of Exploration

*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. Mr Plumridge 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 a 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.*