



# Evolution of Sorpresa Discovery and the Future

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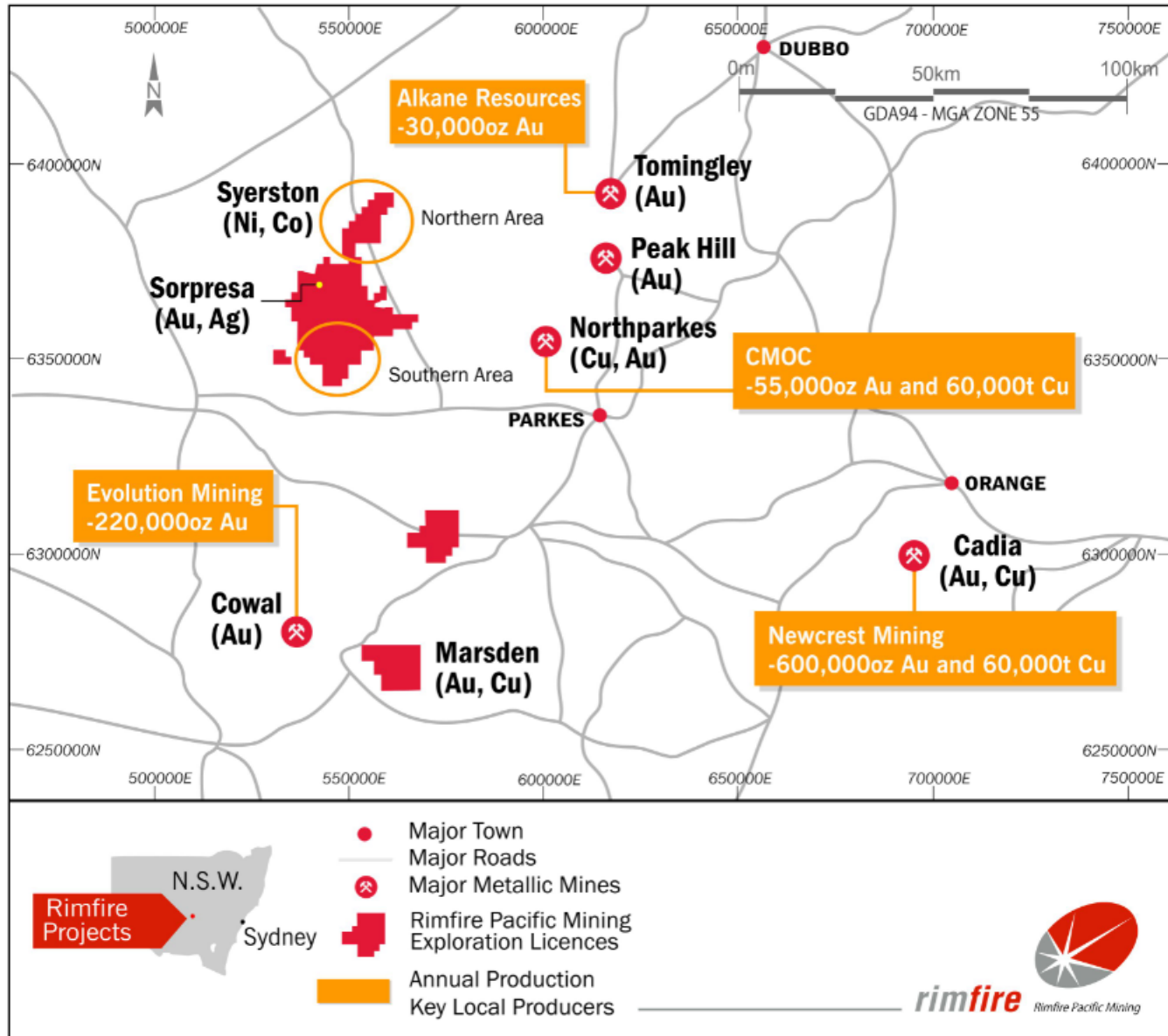
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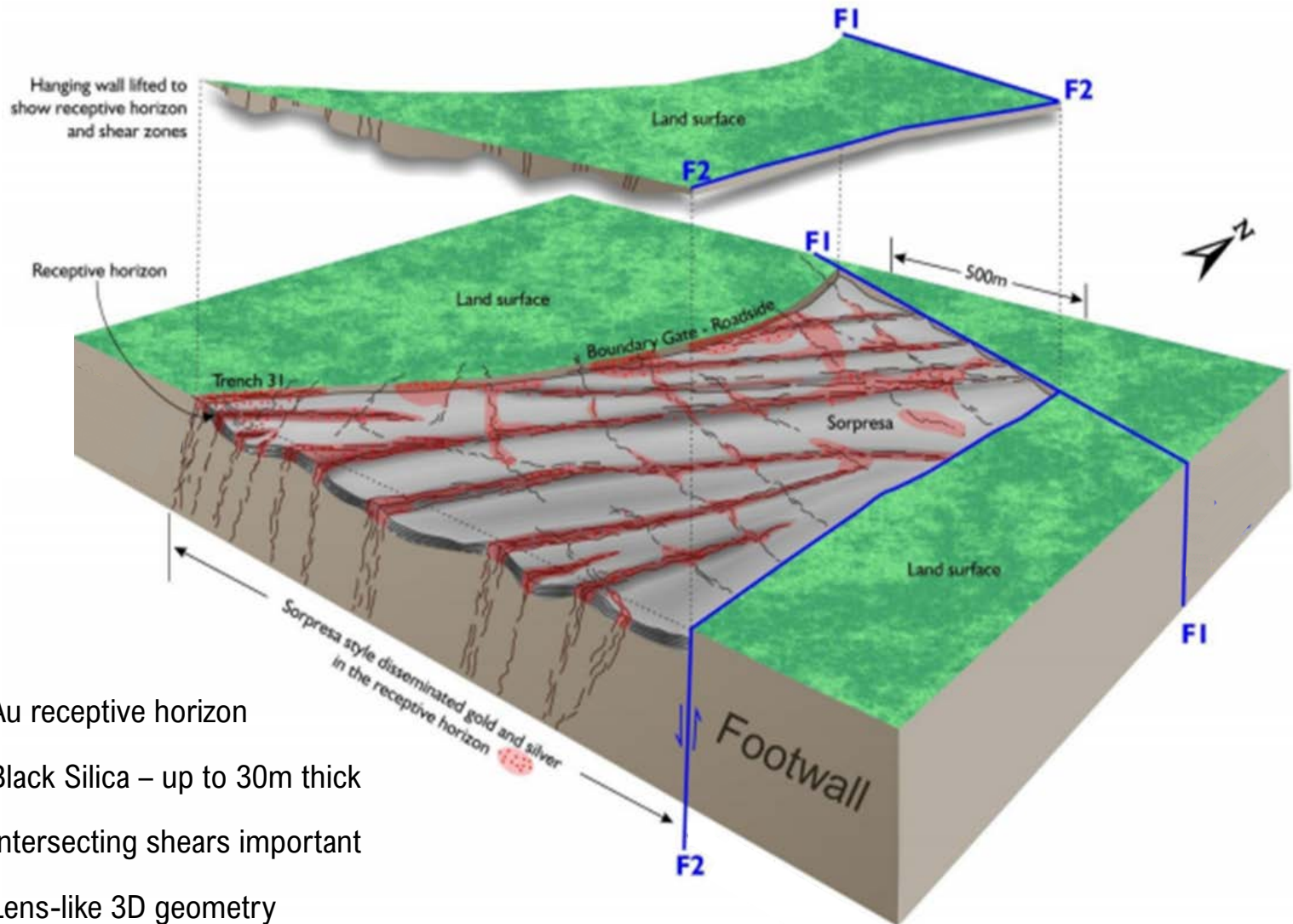
# Locality Map



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# Sorpresa – Current Status



- ✓ Au receptive horizon
- ✓ Black Silica – up to 30m thick
- ✓ Intersecting shears important
- ✓ Lens-like 3D geometry

\*Conceptual model of the geological setting

# Sorpresa – High Grade Gold

numerous high-grade intersections, including

|       |   |
|-------|---|
| Fi60  | 14m @ 21.9g/t Au from 34m               |
| Fi212 | 14m @ 24.4g/t Au from 26m               |
| Fi241 | 10m @ 1.01g/t Au and 535g/t Ag from 70m |
| Fi329 | 1m @ 114g/t Au from 159m                |
| Fi689 | 9m @18.15g/t Au and 100g/t Ag from 18m  |
| Fi706 | 7m @13.41g/t Au and 751g/t Ag from 19m  |



# Sorpresa – JORC Estimate

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## **December 2014 JORC Maiden and Only Resource Estimate includes**

Inferred and Indicated Mineral Resource at 0.5g/t Au & 25g/t Ag cut-off

- 6.4Mt @ 0.61g/t Au and 38g/t Ag for 125Koz of gold and 7.9Moz of silver

Mineralization is continuous at a higher cut-off at 1.0g/t Au & 60g/t Ag cut off

- 1.9Mt @ 1.11g/t Au and 68g/t Ag for 68Koz gold and 4.2Moz silver

# Sorpresa - High Grade Focus?

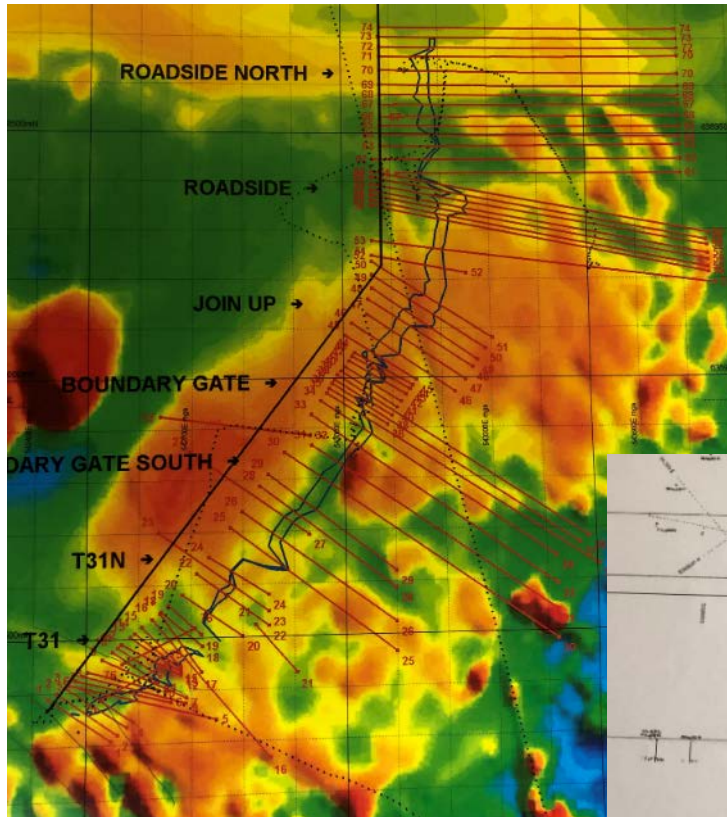


- Generate a complete set of Sorpresa drill sections and flitch plans that incorporate work done including drilling within the 4 years since the release of the Sorpresa Resource Estimate (Dec 2014)

| 2014  |              | 2015 - 2017 |              | Total |              |
|-------|--------------|-------------|--------------|-------|--------------|
| Holes | Drill metres | Holes       | Drill metres | Holes | Drill metres |
| 345   | 31,474       | 232         | 11,196       | 577   | 42,670       |

- Reinterpret the data and assess if the recognition of high grade zones allow definition of a higher grade core of gold +/- silver option that would allow development of a small mine (possible multiple open pits).
- Assuming the interpretation of data provides encouraging results focus on necessary baseline studies, including environmental, to allow commencement of a process to obtain formal approval from statutory authorities.

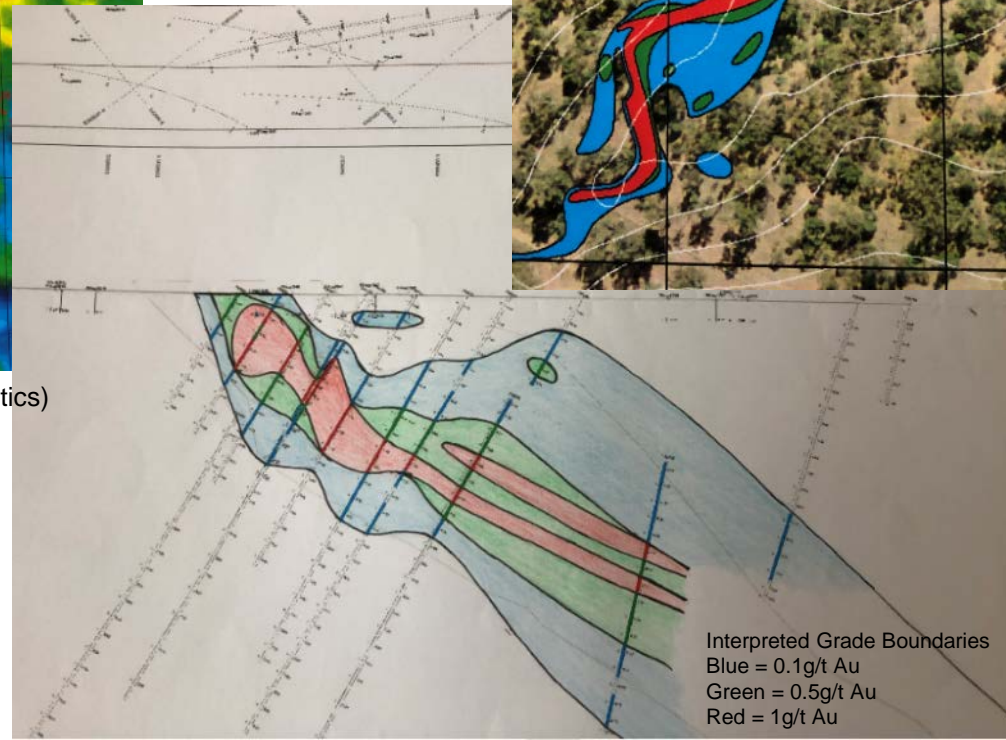
# Sorpresa – Reinterpretation



Geological Section Lines (draped on TMI magnetics)

Rimfire has completed a re-interpretation of the Sorpresa Resource mineralisation

Example Slice Plan



Interpreted Grade Boundaries  
Blue = 0.1g/t Au  
Green = 0.5g/t Au  
Red = 1g/t Au



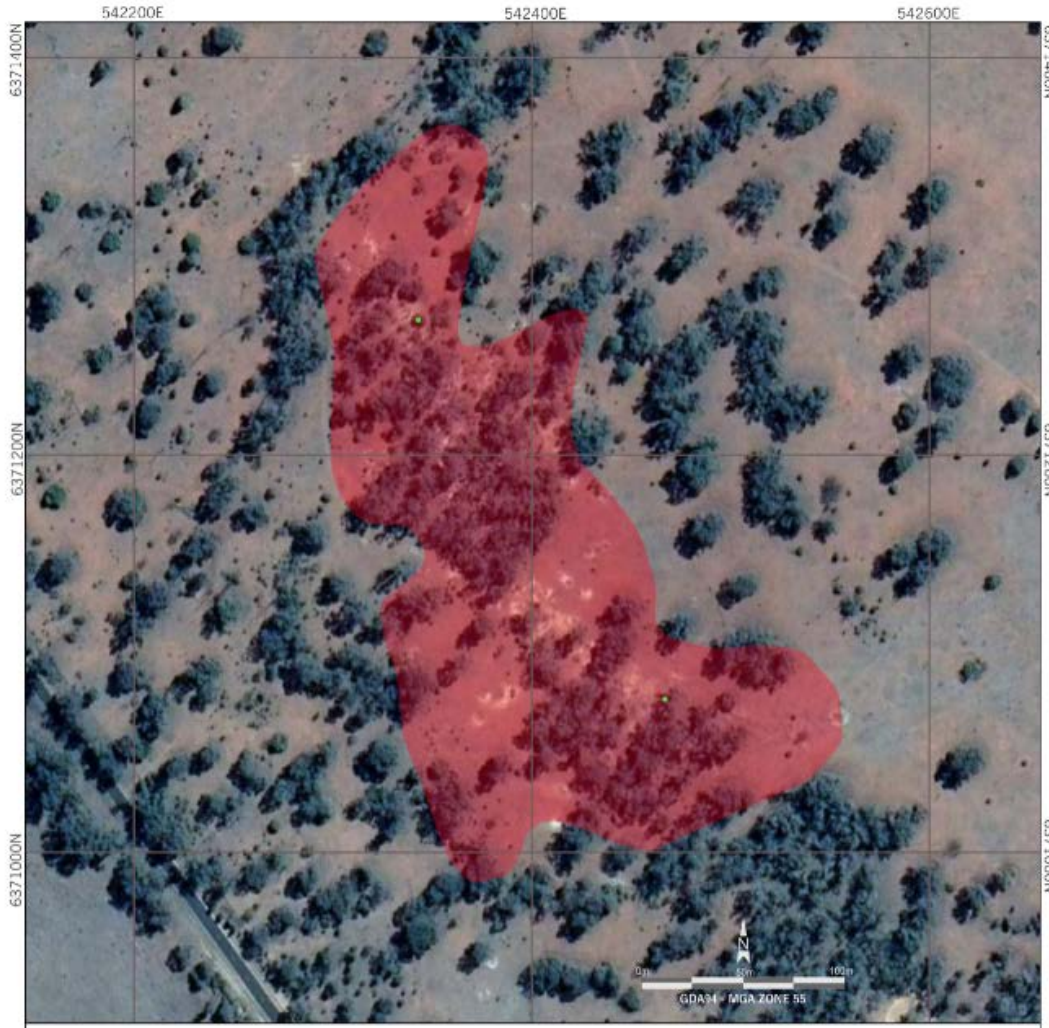
# Sorpresa – Modelling

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- H&S Consultants Pty Ltd (H&SC), who undertook the original Sorpresa resource estimation in 2014 will generate an independent updated resource estimate under JORC (2012).
- The preliminary updated H&S Consultants resource model was used by Australian Mine Design & Development (AMDAD) for initial pit optimisation analysis. The results of this work can be reported once H&S Consultants complete the updated JORC (2012) Resource Report for Sorpresa.
- Grade is commonly referred to as “king” and focussing on higher grade zones at Sorpresa will reduce the overall tonnage so addition of further tonnages from peripheral prospects such as Northern Gold have the potential to generate a more robust economic outcome.

# Northern Gold



- ✓ Northern Gold is 2km north of Sorpresa Resource and success offers synergies for any monetisation scenario
- ✓ An extensive area covering +350m strike length and 80m width of shallow (<6m) historical workings
- ✓ No historical drilling of the bedrock in vicinity of extensive surface workings

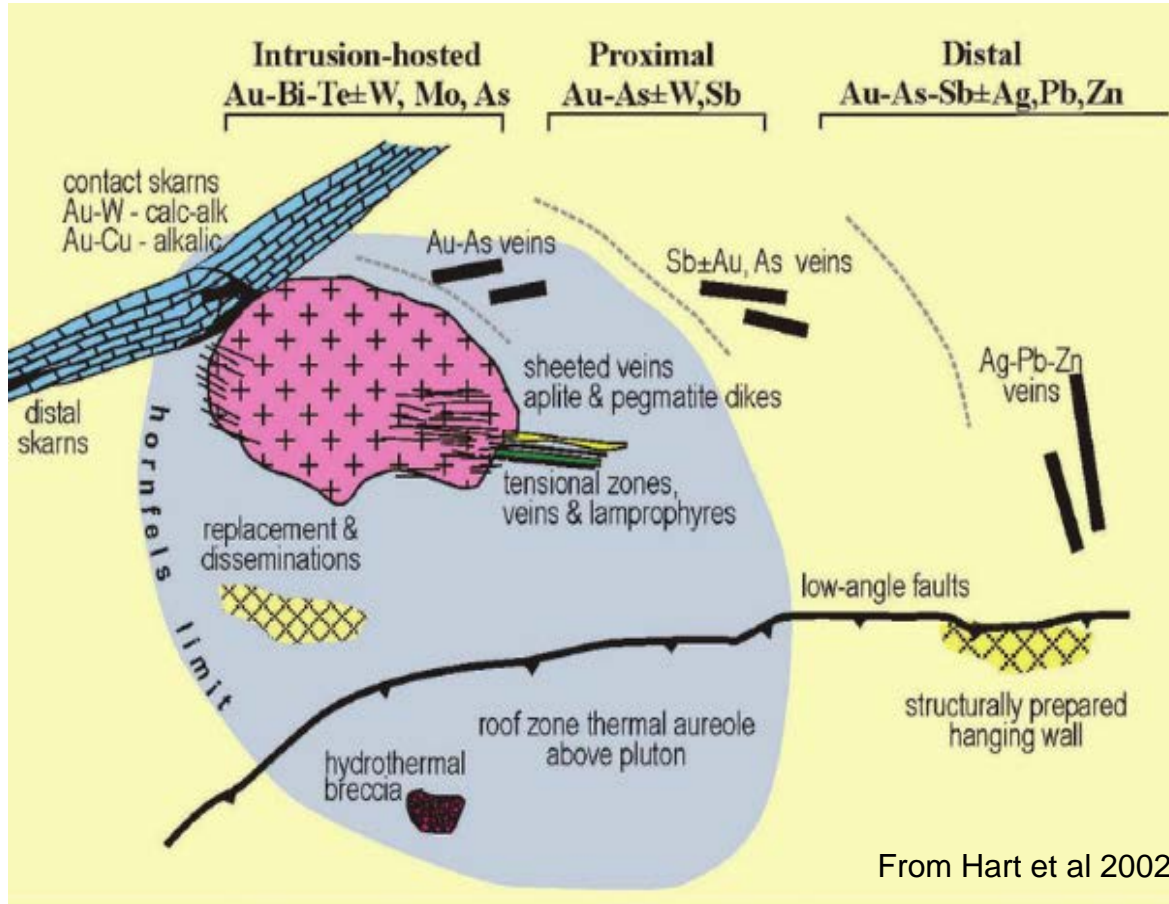
# Evolution of Thinking - IRGS

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- Initial analysis of LAG anomaly at Fortuna led to observation of similarities to Mt Leyshon and Kidston.
- A gravity survey over the broader Fortuna area was planned with the view a Felsic intrusive driver to mineralization would be visible. Survey results support the interpretation.
- Further investigation of the characteristics of IRGS's and cross referencing to existing Rimfire exploration data was completed supporting the concept that mineralisation in the area around Fortuna and extending south to Sorpresa and east to Transit as part of an IRGS
- The geochemistry of the Sorpresa Resource is as expected in a distal and intermediate position to a source intrusive i.e. more distal (Ag, Pb, Zn, +/- Au) correlating to the Roadside end of the resource, and more intermediate (Au, As, Sb +/-Ag) correlating to Trench 31.

# Evolution of Thinking - IRGS



Guide for Exploration Targeting

Common features of IRGS Gold Deposits (Hart et al 2002) include

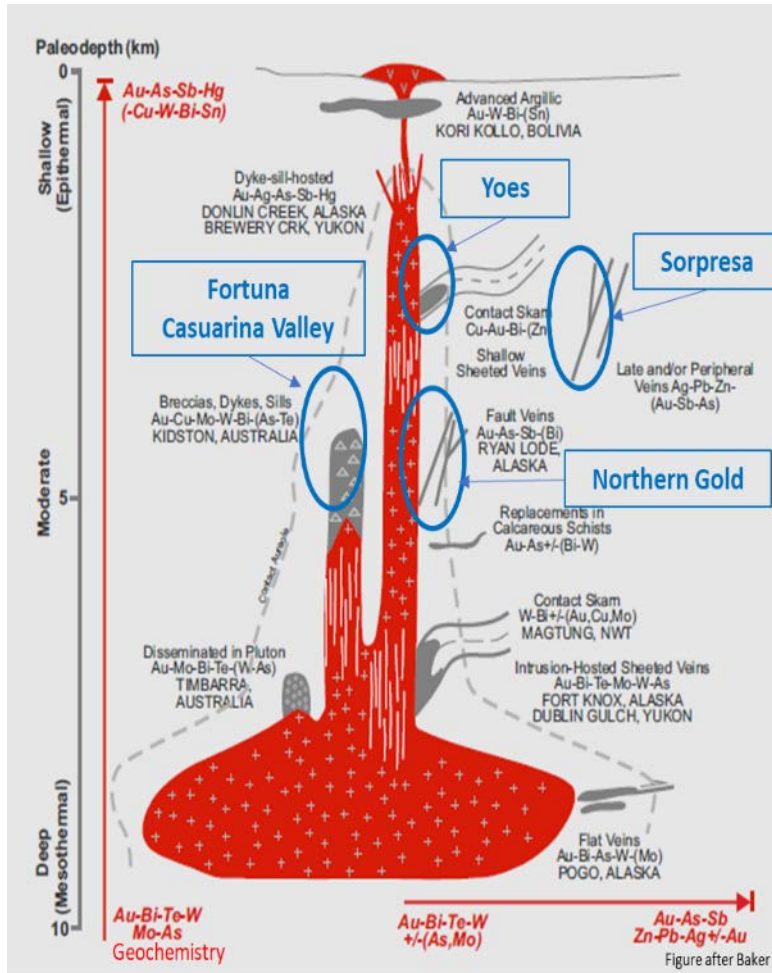
1. Inland side of accreted terranes
2. Spatial link to granitic plutons
3. Post deformation influx of gold
4. Extremely low sulfide content

## Sorpresa Area Similarities

1. Geological setting is back arc setting of an accreted terrane
2. Geological, gravity and magnetic survey data support presence of granitic intrusions
3. Gold at Sorpresa is interpreted to be post deformation
4. Assay data confirms sulphide content of rocks is very low

Schematic Model of an Intrusion Related Gold System (IRGS)

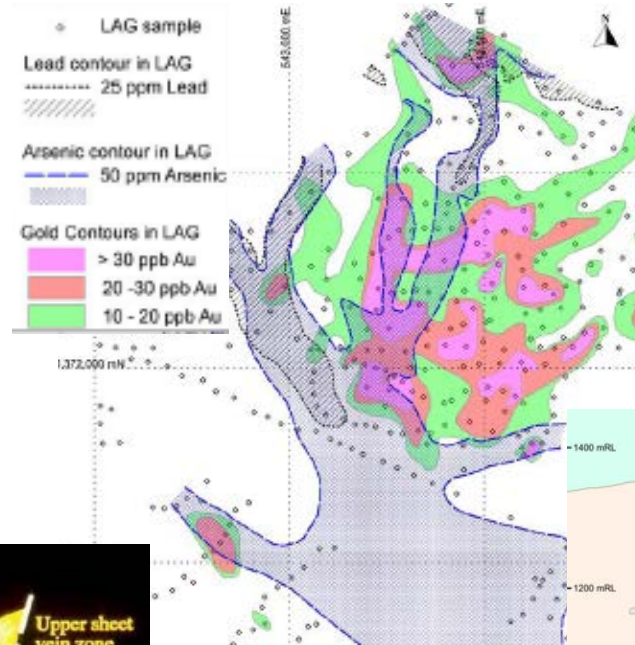
# The Broader Setting



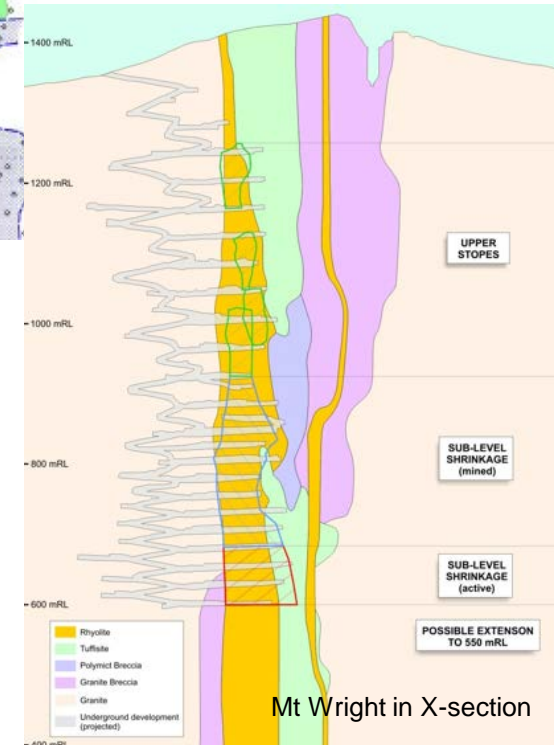
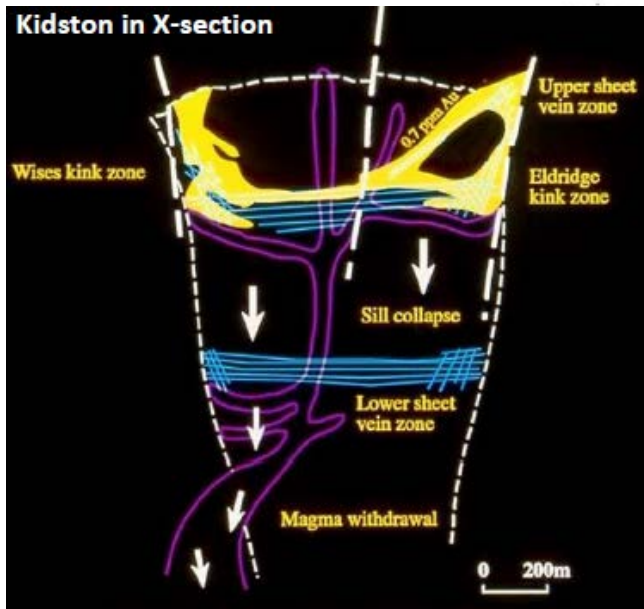
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IRGS Genetic Model and Conceptual Position of Some Rimfire Prospects

# The Big Picture Possibilities



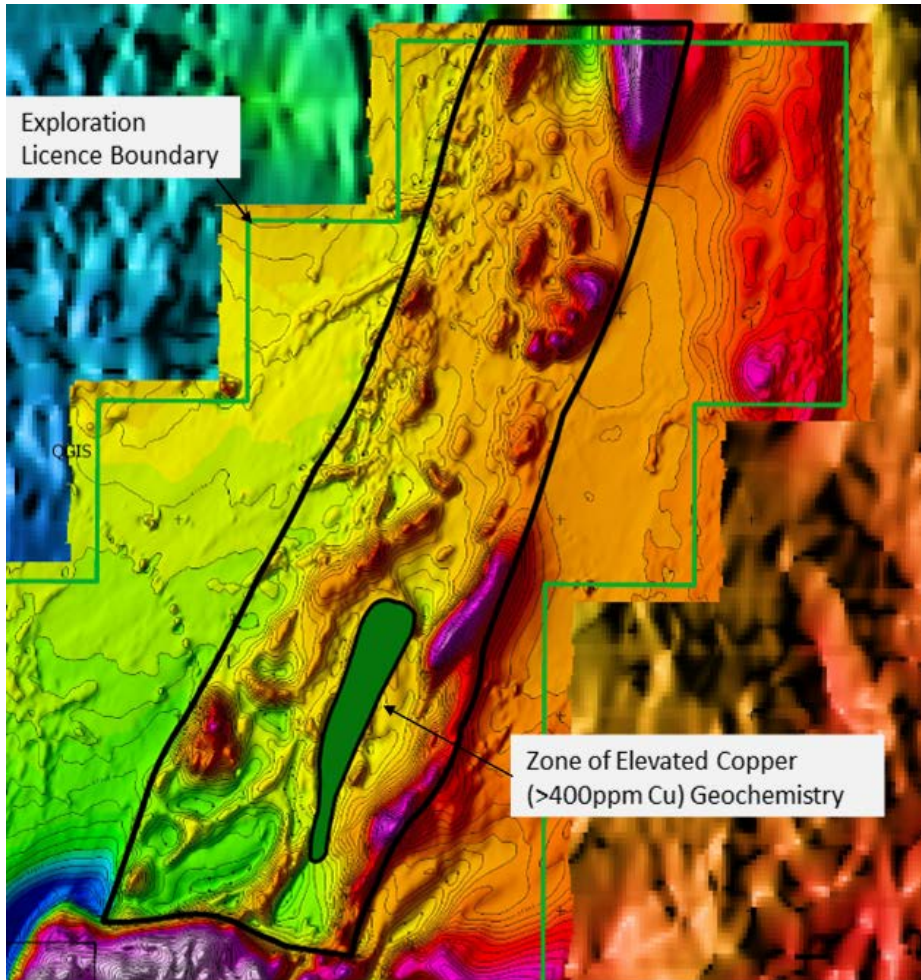
Fortuna, Casuarina Valley and Northern Gold



Mt Wright in X-section

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# Exploration - Northern Area



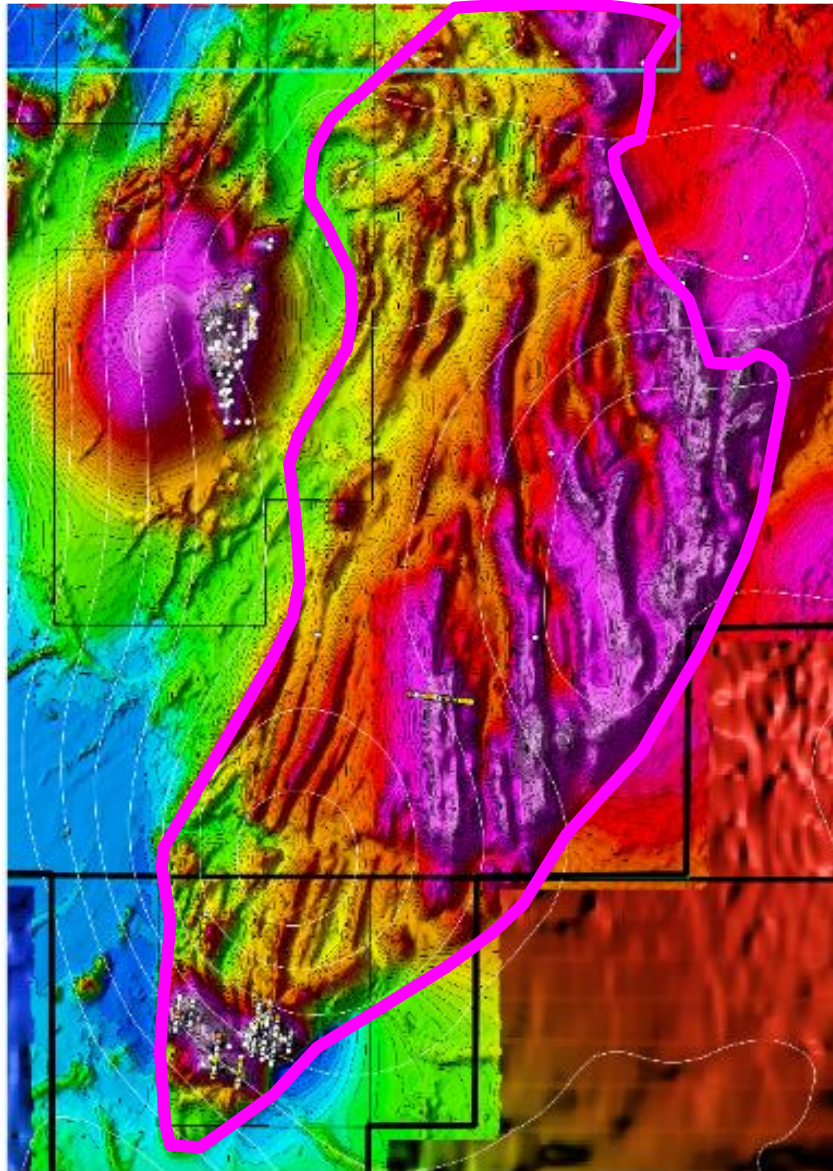
- ✓ Disruptive Thinkers and Genetic Models = New Successes
- ✓ Interpreting previously unrecognised Ordovician Age Volcanics under cover (~10m)
- ✓ Potential to host large scale porphyry Cu / Au and Au style deposits
- ✓ Reconnaissance Mapping - 40km<sup>2</sup> Complete
- ✓ Zone of elevated copper geochemistry is from historical copper bedrock drilling results

## Legend

- ✓ Black outline is Interpreted Ordovician



# Exploration - Southern Area



- ✓ Disruptive Thinkers and Genetic Models = New Successes
- ✓ Interpreting previously unrecognised Ordovician Age Volcanics under cover (~40m)
- ✓ Potential to host large scale porphyry Cu / Au and Au style deposits
- ✓ Reconnaissance Mapping - 100km<sup>2</sup> Complete

## Legend

- ✓ Blue outline is Interpreted Ordovician



# Rimfire Contact Information

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# Acknowledgements



**Mick Love**

Geology consultant

- Headed the team that discovered gold at Evolution Mining's Cowal Project.
- Extensive experience in evaluation of large, prospective areas.



**Colin Plumridge**

Geology consultant

- The discoverer of Sorpresa mineralised system.
- Expert prospector with many discoveries.

# Acknowledgements



**Todd Axford**

Geology consultant  
Geko-Co Pty Ltd

- Engaged on the project by New Gold in March 2017.
- Has maintained a technical involvement helping to plan guide and interpret exploration on the project.
- Acts as Competent Person for public reporting.



**Tom Bartschi**

Geology consultant  
Geko-Co Pty Ltd

- Project Leader for execution and management of field activities.
- GIS and Database specialist
- Based in central NSW with extensive local experience and knowledge.