Tomingley Exposed

Changes in Geological Interpretation

ALKANE RESOURCES LTD

David Meates
Ian Chalmers

Acknowledgements

- Alkane employees
- Ex Alkane employees Terry Ransted and Rimas Kairaitis
- Dr Anthony Crawford (A & A Crawford Geological Research Consultants)
- Peter Schaubs (CSIRO)

Overview

1. **Background**

2. **Tomingley open cuts**

   - Any changes to our interpretations
   - Mine reconciliation vs exploration model

3. **Regional exploration**

   - El Paso prospect

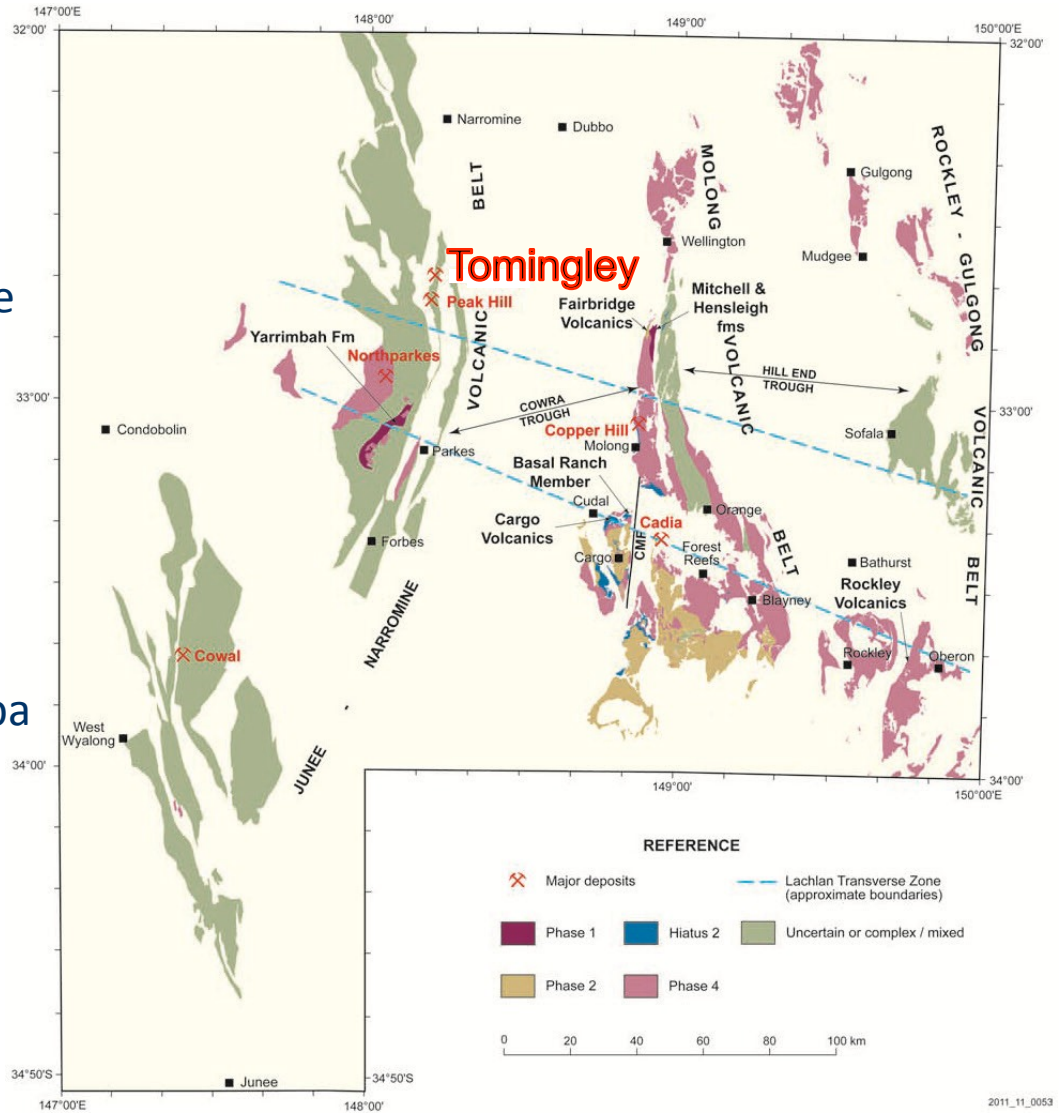
4. **Conclusions**

ALKANE RESOURCES LTD

Background

Background

- Significant orogenic gold in Ordovician volcanics (Mingelo Volcanics)
- Mingelo Volc. hosts Peak Hill high sulphidation epithermal gold mine and the Tomingley orogenic gold mine
- Global Resource (pre mining): 14.3Mt @ 2.0g/t Au (921,000oz)
- 4.5 year open cut mine life producing 50-70,000ozpa at 1Mtpa
- Open cut mining to July 2018, underground feasibility drilling ongoing

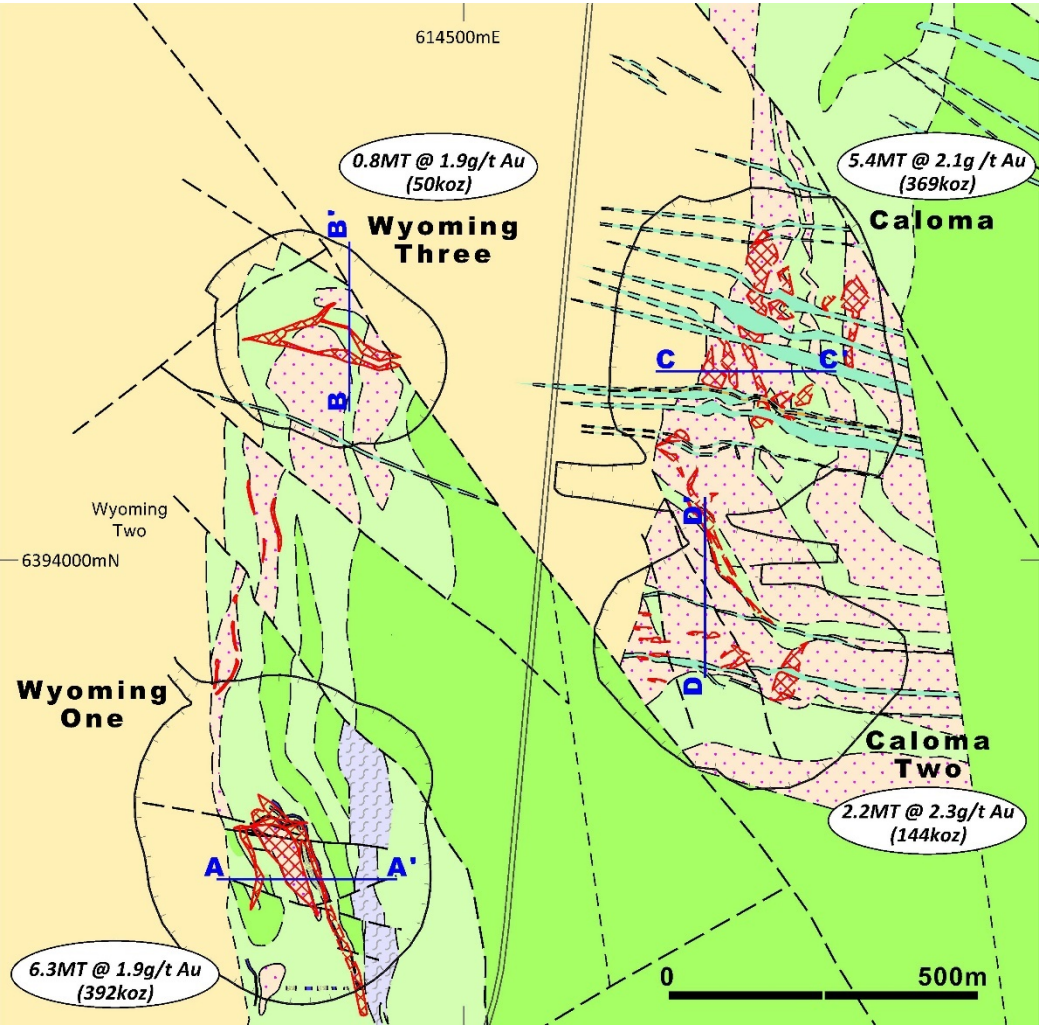


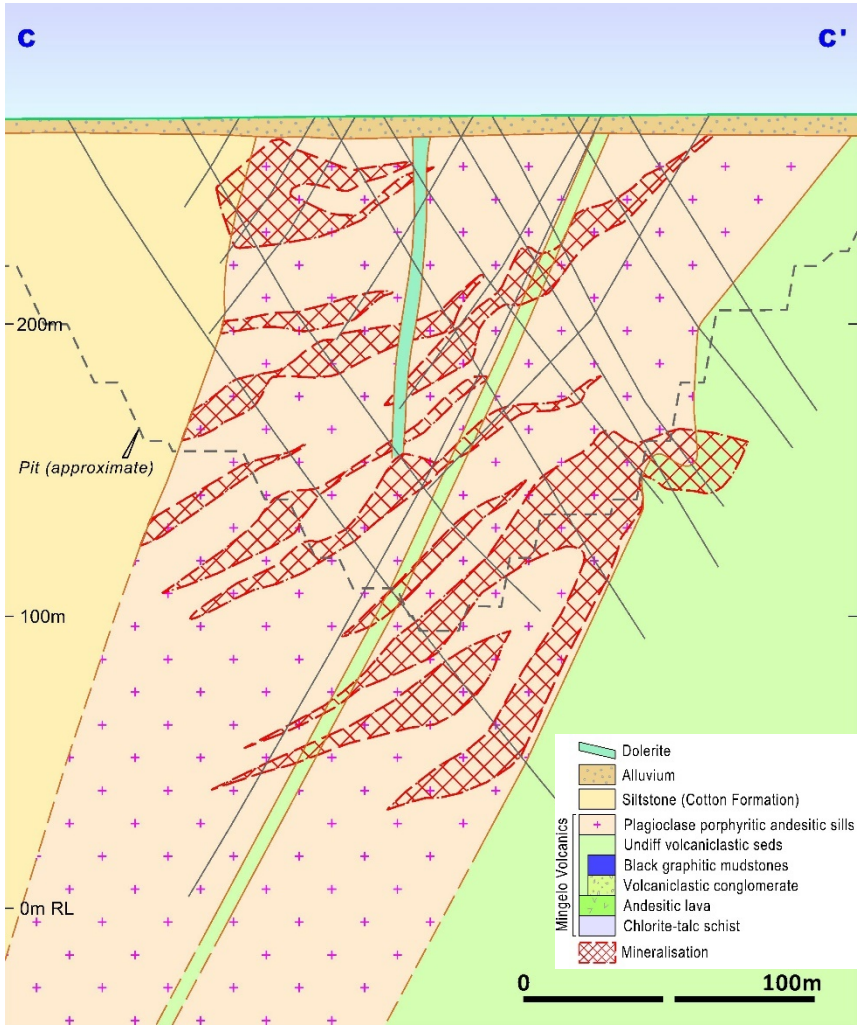
Glen et al 2012

Caloma

Goodbye cut at Caloma pit

Caloma


614500mE
0.8MT @ 1.9g/t Au
(50koz)
5.4MT @ 2.1g /t Au
(369koz)
Wyoming
Three
Caloma
B
B'
C
C'
D
D'
Wyoming
Two
6394000mN
Wyoming
One
Caloma
Two
2.2MT @ 2.3g/t Au
(144koz)
A
A'
6.3MT @ 1.9g/t Au
(392koz)
0
500m

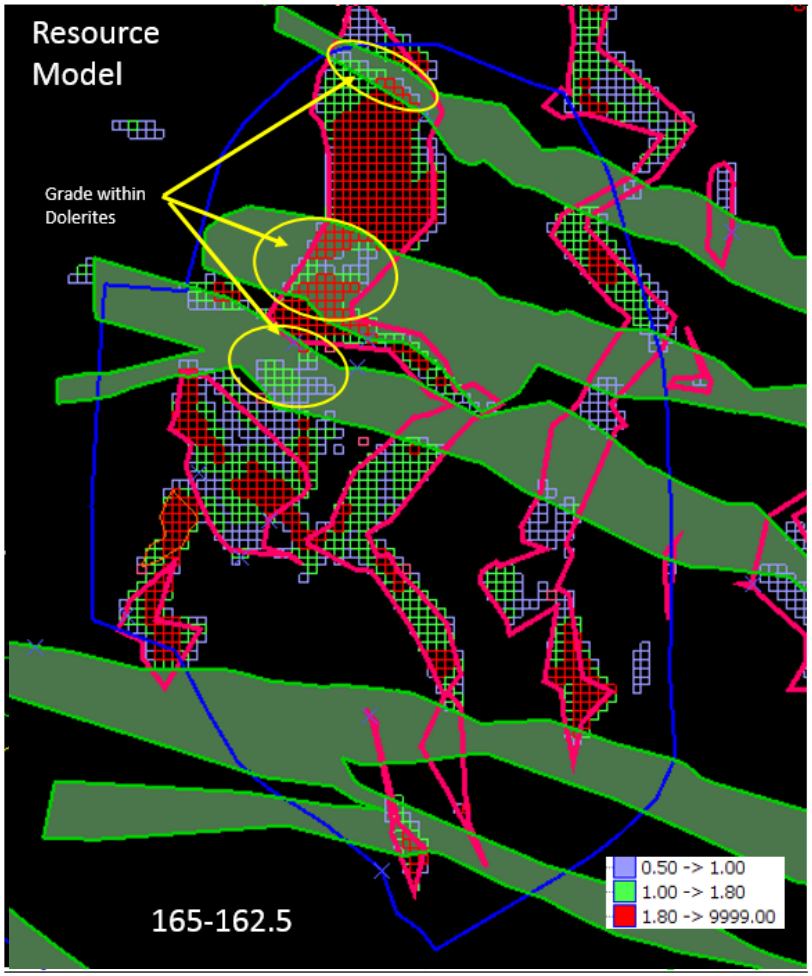

C
C'
200m
Pit (approximate)
100m
0m RL
Dolerite
Alluvium
Siltstone (Cotton Formation)
Mingelo Volcanics
Plagioclase porphyritic andesitic sills
Undiff volcaniclastic seds
Black graphitic mudstones
Volcaniclastic conglomerate
Andesitic lava
Chlorite-talc schist
Mineralisation
0
100m

Caloma

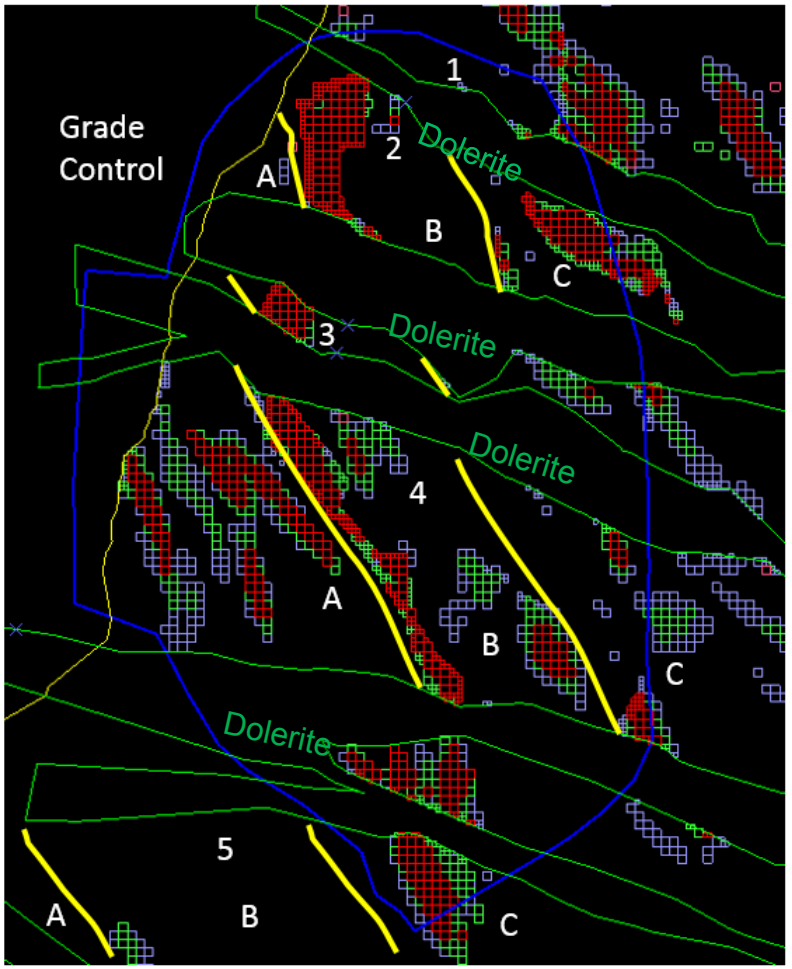
- Caloma produced 2.95Mt at 1.80g/t Au for 170,807oz
- Sheeted vein system focused on ‘brittle’ andesites bound by regional faults
- Lodes dip moderately to west
- Gold mineralisation associated with en echelon tension veins
- Veining ‘horsetails’ out in ductile metasediments

Caloma

Exploration Resource model at 165mRL



Grade Control model at 165mRL



- Caloma grade control model reconciles well, +7% tonnes, -5% grade and +1% total ounces

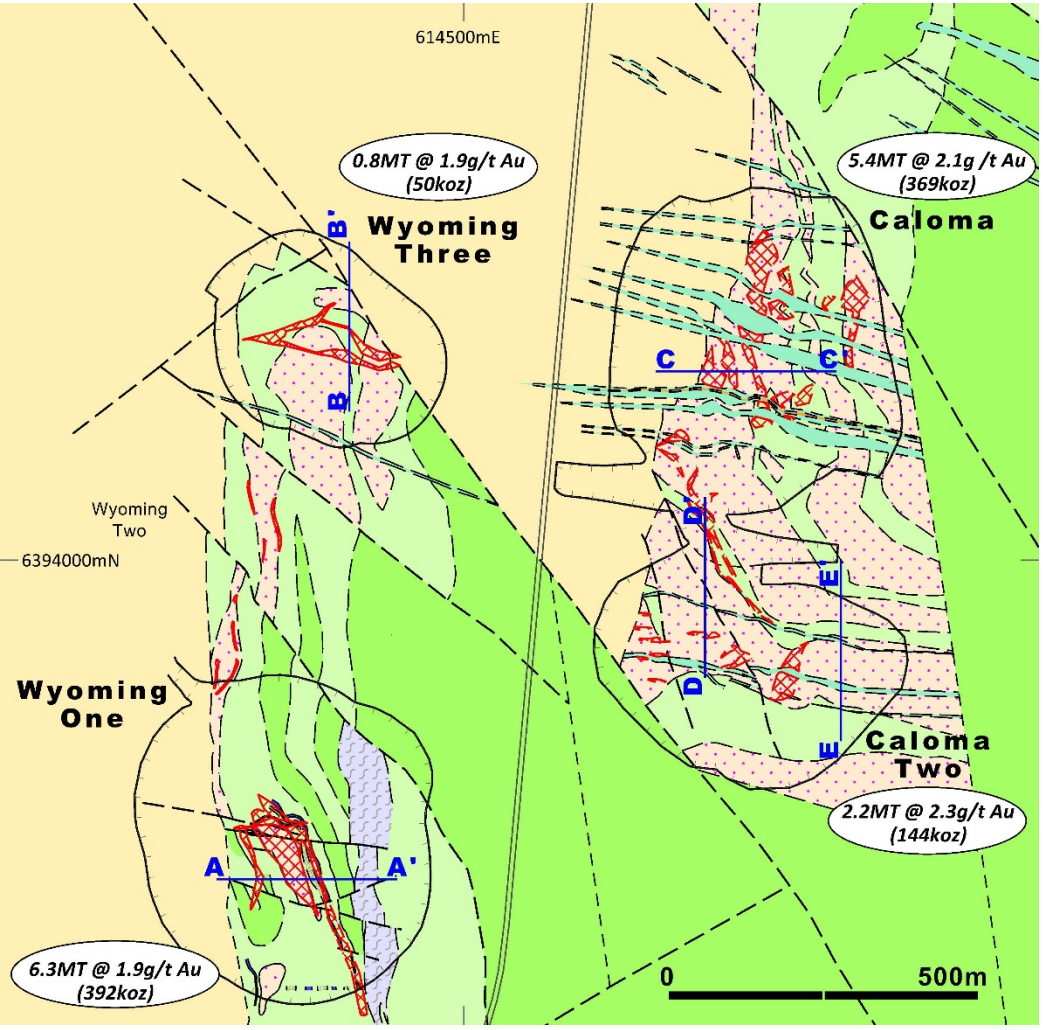
Caloma

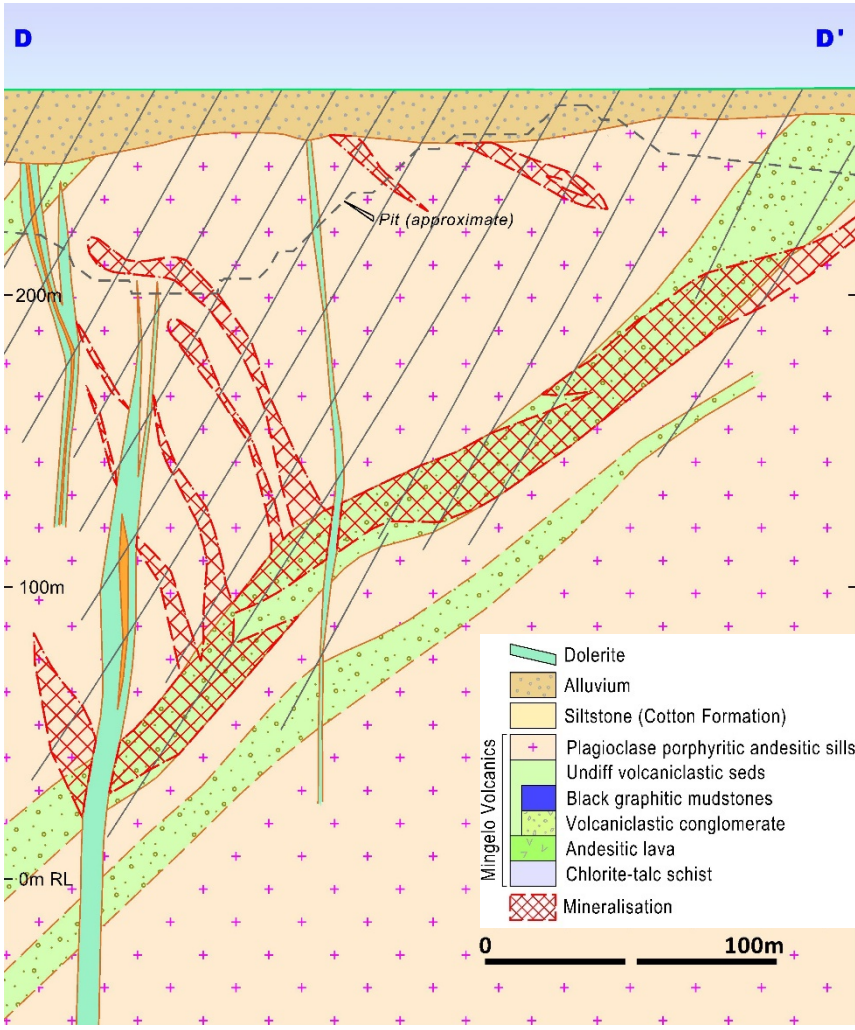
- Caloma North immediately south of regional NNW fault
- Lodes are rotated to dipping moderately to north
- Mineralised en echelon tension veins forming sinistrally
- Sinistral transpression during Bindian orogeny 420-400 Ma

Caloma Two

Current Caloma Two pit looking north

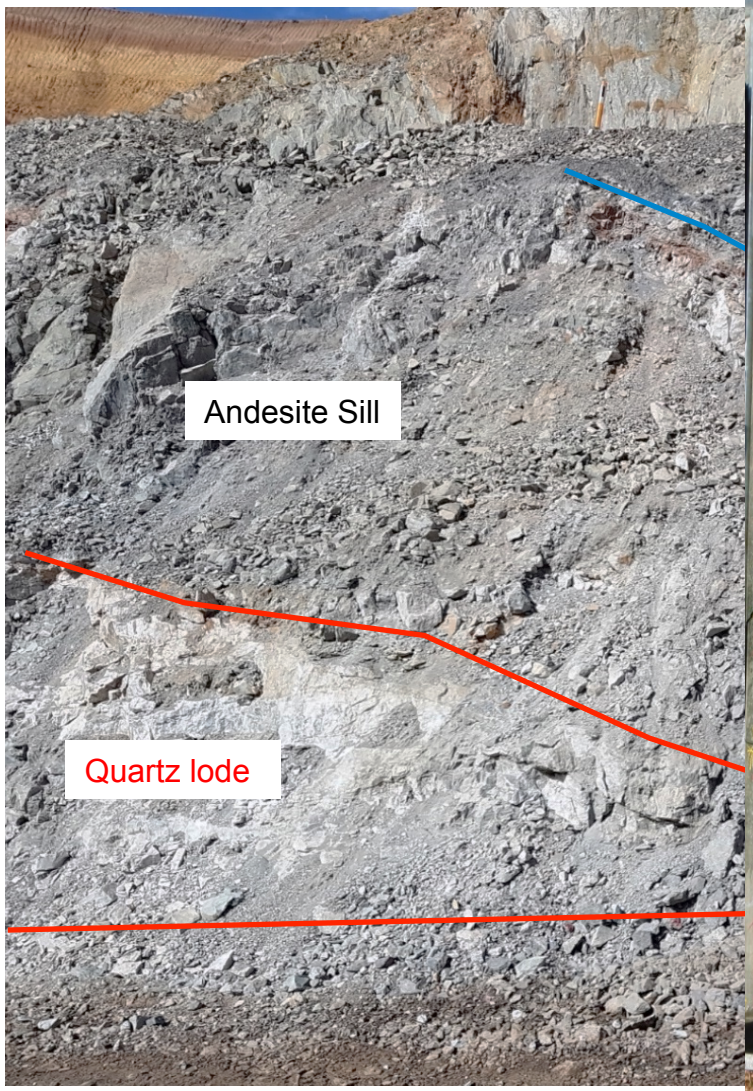
Caloma Two


614500mE
0.8MT @ 1.9g/t Au
(50koz)
5.4MT @ 2.1g /t Au
(369koz)
Wyoming
Three
Caloma
B
B'
C
C'
D
D'
E
E'
Wyoming
Two
6394000mN
Wyoming
One
Caloma
Two
2.2MT @ 2.3g/t Au
(144koz)
A
A'
6.3MT @ 1.9g/t Au
(392koz)
0
500m


D
D'
Pit (approximate)
200m
100m
0m RL
Dolerite
Alluvium
Siltstone (Cotton Formation)
Mingelo Volcanics
Plagioclase porphyritic andesitic sills
Undiff volcaniclastic seds
Black graphitic mudstones
Volcaniclastic conglomerate
Andesitic lava
Chlorite-talc schist
Mineralisation
0
100m

Caloma Two

- Andesite positioned in core of synform near regional NW fault
- Upper lodes rotated to dipping moderately north
- Lower lodes near fold closure dip shallowly west
- Weakly brecciating textures in quartz lodes
- Grade control 10m x 10m drill spacing realised +41% grade, +39% ounces, -1% tonnes

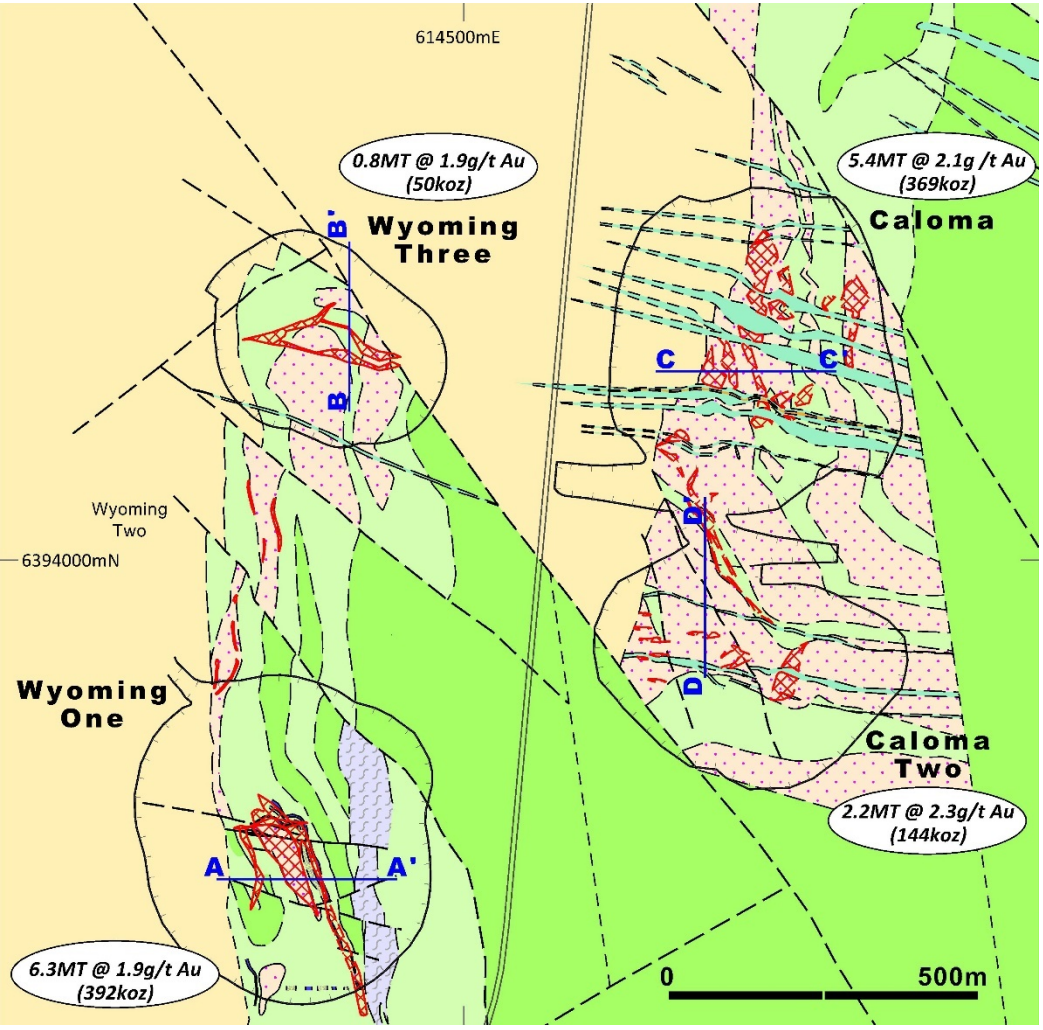


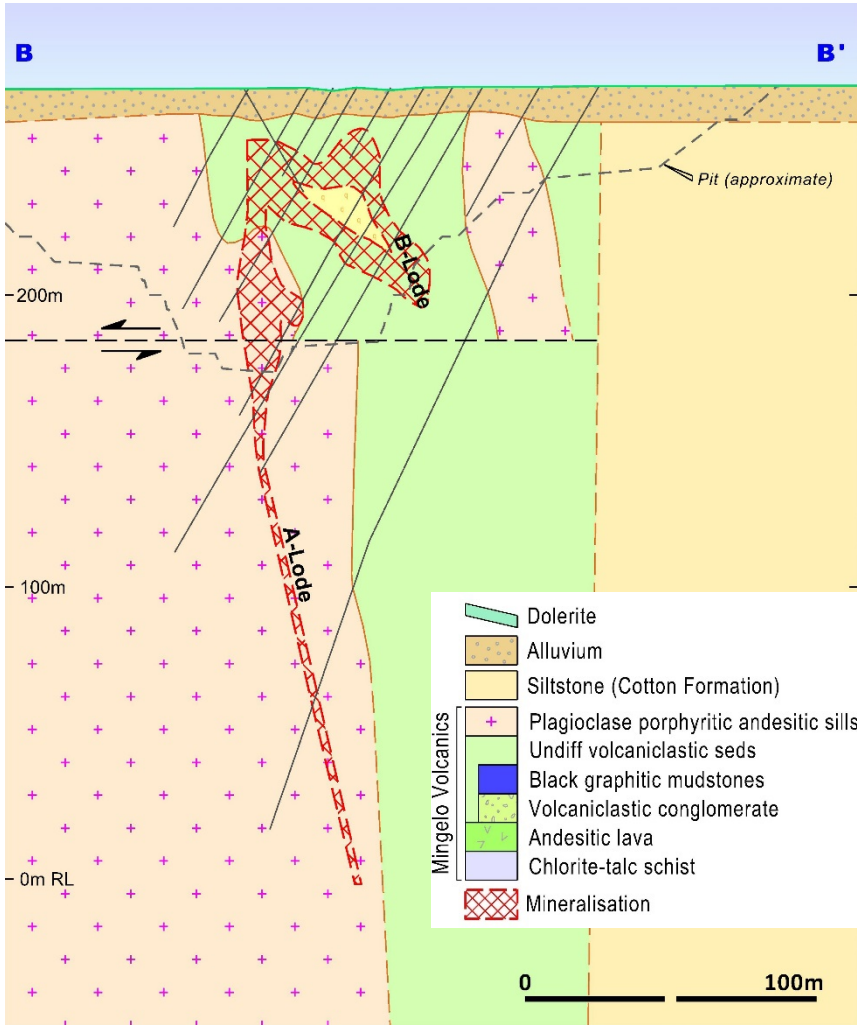
Caloma Two looking east

Wyoming Three

Wyoming Three pit looking east

Wyoming Three





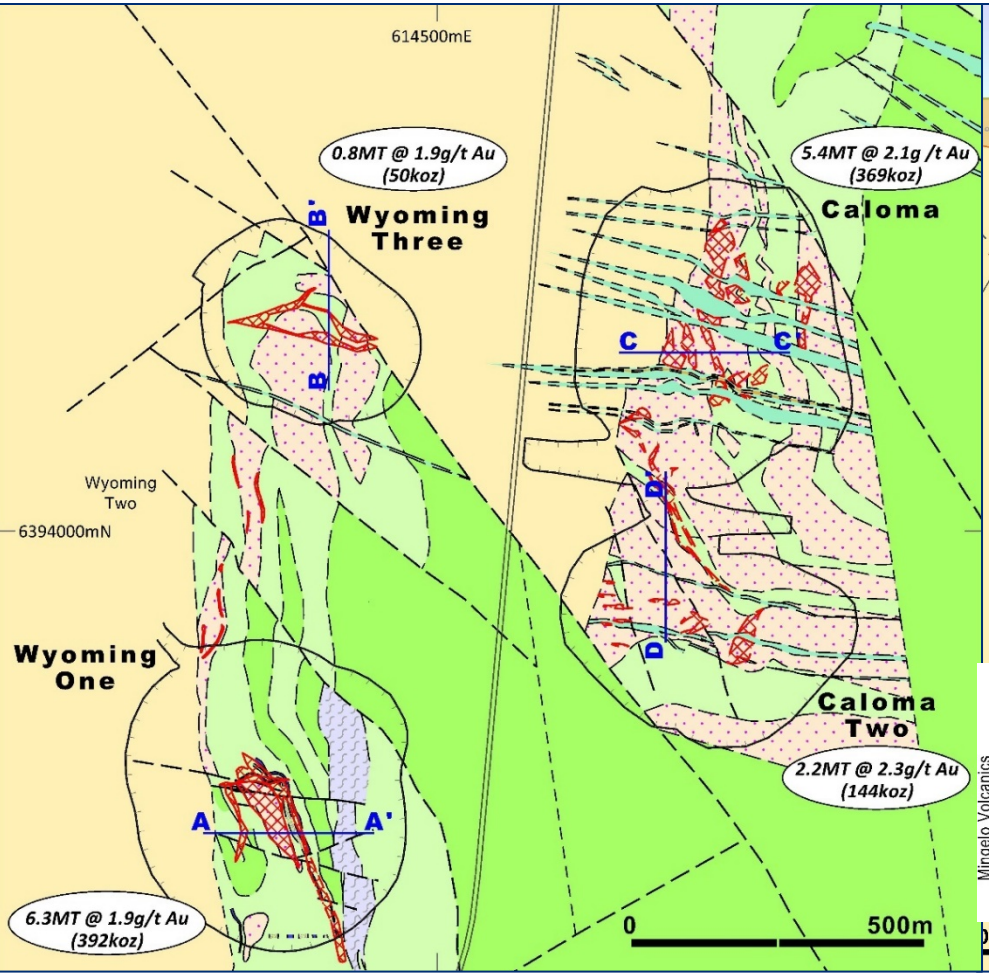
Wyoming Three

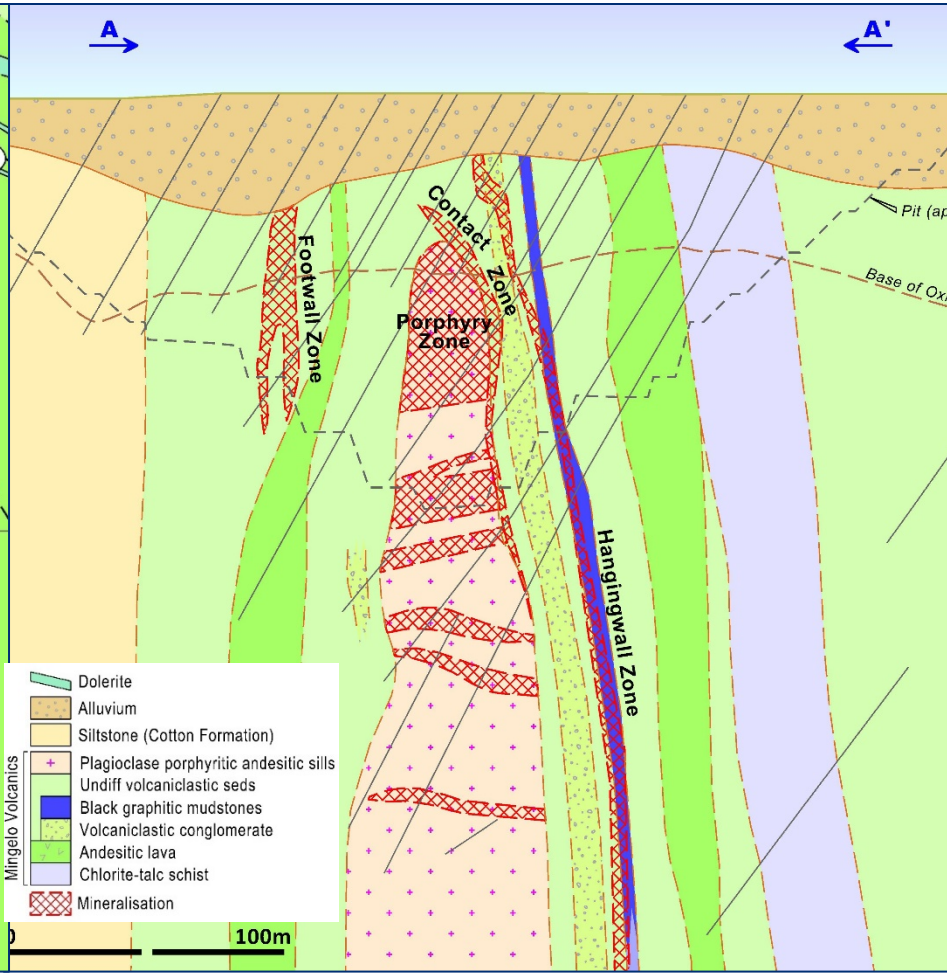
- Wyoming Three produced 0.66Mt at 2.1g/t Au for 44,489oz
- Andesite positioned in core of steeply plunging anticline near regional NW fault
- Two sub-vertical lodes striking 105°
- Mining reconciliation vs exploration model realised +32% grade and +30% ounces

Wyoming One

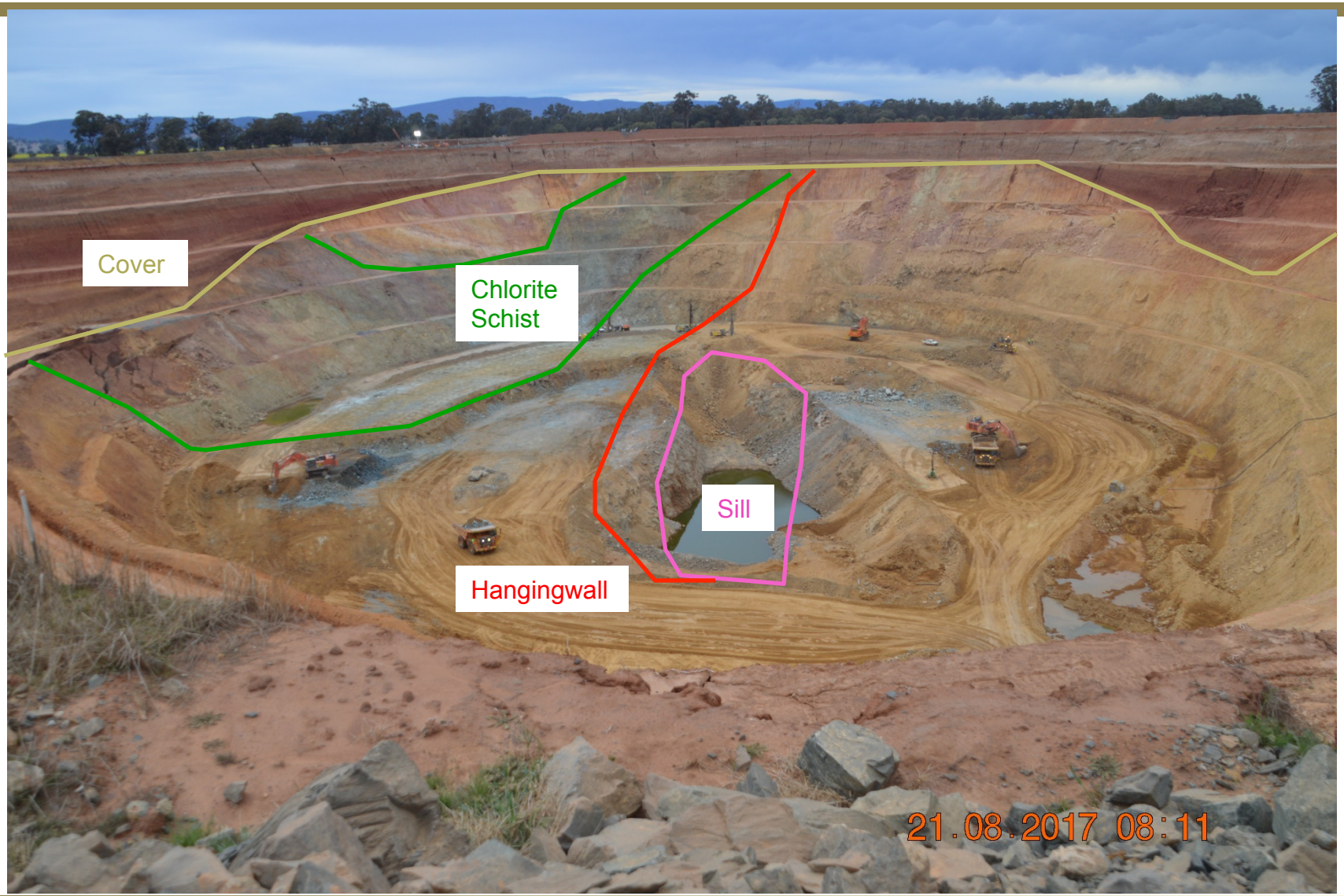
Wyoming One pit looking north

Wyoming One


614500mE
0.8MT @ 1.9g/t Au
(50koz)
Wyoming
Three
5.4MT @ 2.1g /t Au
(369koz)
Caloma
B
B'
C
C'
D
D'
Wyoming
Two
6394000mN
Wyoming
One
Caloma
Two
2.2MT @ 2.3g/t Au
(144koz)
A
A'
6.3MT @ 1.9g/t Au
(392koz)
0
500m


A
A'
Footwall Zone
Contact Zone
Porphyry Zone
Hangingwall Zone
Pit (ap
Base of Oxi
Dolerite
Alluvium
Siltstone (Cotton Formation)
Mingelo Volcanics
Plagioclase porphyritic andesitic sills
Undiff volcaniclastic seds
Black graphitic mudstones
Volcaniclastic conglomerate
Andesitic lava
Chlorite-talc schist
Mineralisation
0
100m

Wyoming One



Wyoming One pit looking south

Wyoming One

Wyoming One underground targets

Contact zone –

- Strong grades in large quartz dilatory structures – WY823D 44.3m@1.82g/t Au incl. 7.2m@3.16g/t Au
- Forming along eastern and northern contact of andesitic porphyry sill

Hangingwall zone –

- Focused on a thin graphitic mudstone unit
- Gold mineralisation forming with coarse pyrite and arsenopyrite, only minor quartz veining
- Plunging 40^{o} to south ore shoot parallels parasitic fold axes
- WY945D 19m @ 4.37g/t Au

Regional Exploration

El Paso – it's south of Wyoming!

Regional Exploration

Tomingley Two

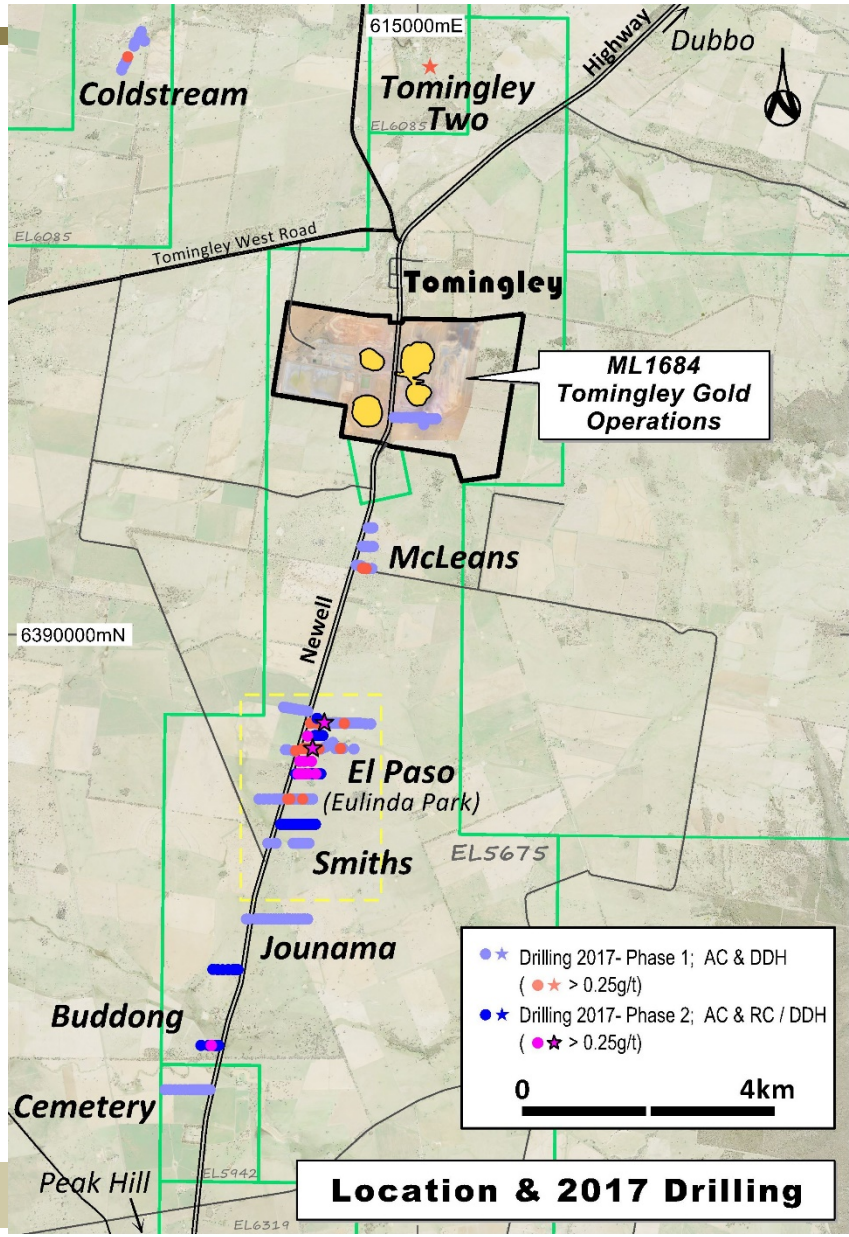
- Forbes Group? sediments, Hangingwall look alike
- TO225D 4m @ 1.90g/t Au, 3.9m @ 2.40g/t Au and 6.8m @ 1.52g/t Au

McLeans

- Hosted in porphyritic volcanics, Caloma look alike
- MCAC059 9m @ 0.88g/t Au
- Mineralisation at southern property boundary

El Paso

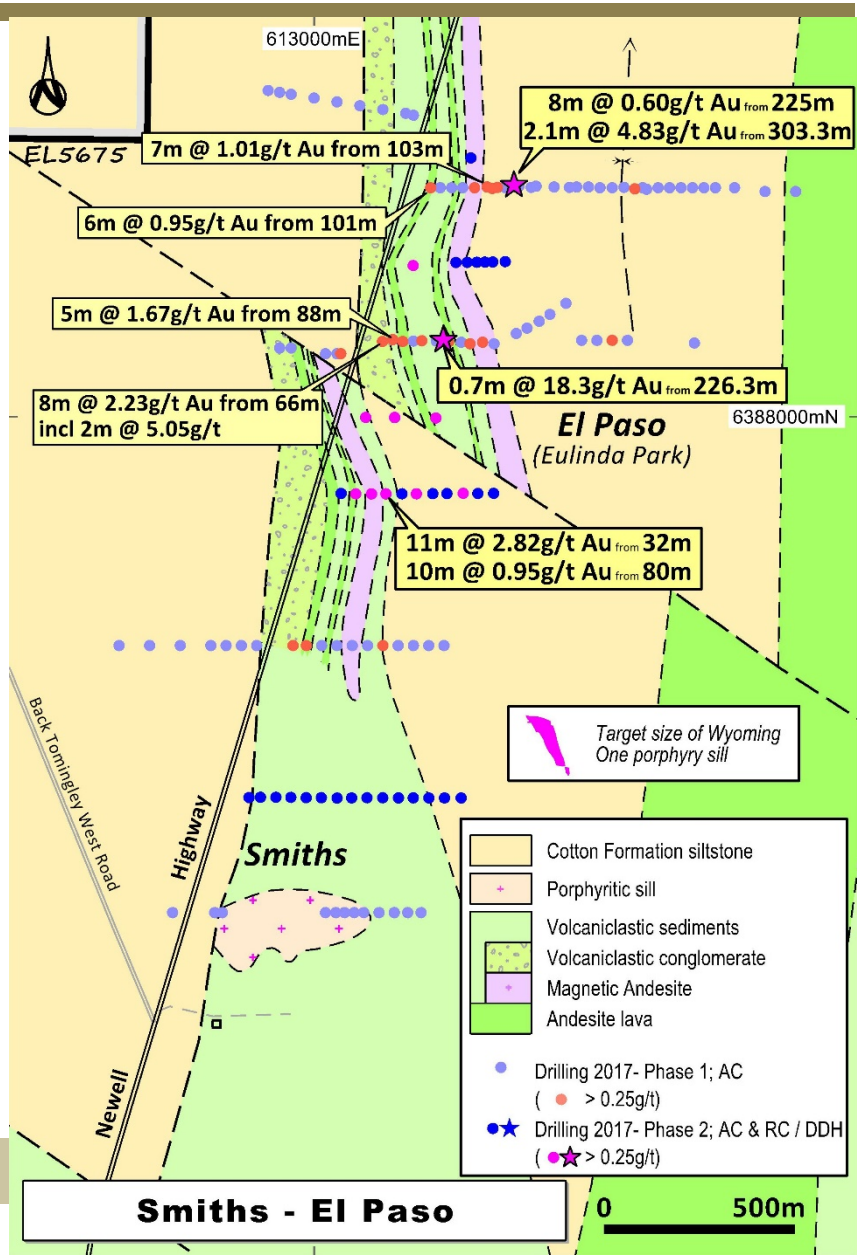
- Hosted in Mingelo Volcanics
- EPAC089 11m @ 2.82g/t Au
- 1.2km strike gold mineralisation open to north



Regional Exploration

El Paso

- Mingelo statigraphy including 40m thick “brittle” magnetic andesite
- NW trending “gold” structure as observed at Tomingley
- Ore grade intercepts
- Tomingley arsenic signature
- Epithermal overprint. Peak Hill?
- Sandy cover sequence of 25m - 60m
- Small target size, Wyoming One porphyry sill = 40m x 200m



Conclusions

- Significant gold mineralisation (~1Mo) defined as a orogenic gold style within Ordovician volcanics of the Eastern Lachlan Fold Belt.

- Minor changes to exploration model since mining:
  - Caloma lodes rotated slightly between major late dykes
  - Caloma Two and Wyoming Three increase of approximate +35% grade and ounces

- Early sinistral transpression event a significant structural control to mineralisation, likely Bindian Orogeny.

- Ongoing exploration:
  - Underground feasibility drilling at Wyoming One
  - Regional drilling defining similar targets as to Tomingley

ALKANE
RESOURCES LTD