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# Gold discovery on the Peel Fault east of Barraba, NSW

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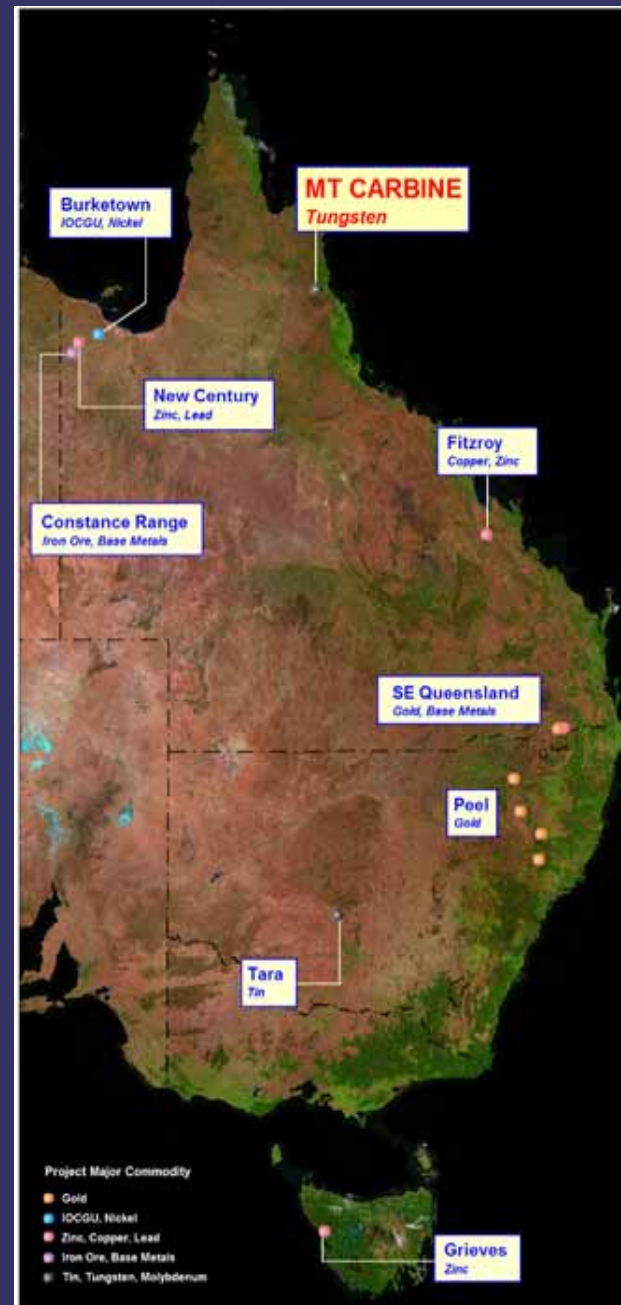
Icon Resources Ltd.

Icon projects:

Tungsten Mt  
Carbine, NQ.

Gold: SW New  
England

Tin: Tara,  
Wagga tin belt





# Mt Carbine W





# Exploration on the Peel

Exploration to test a model (and gold anomalies)

Targeting work

Drilling

Conclusions

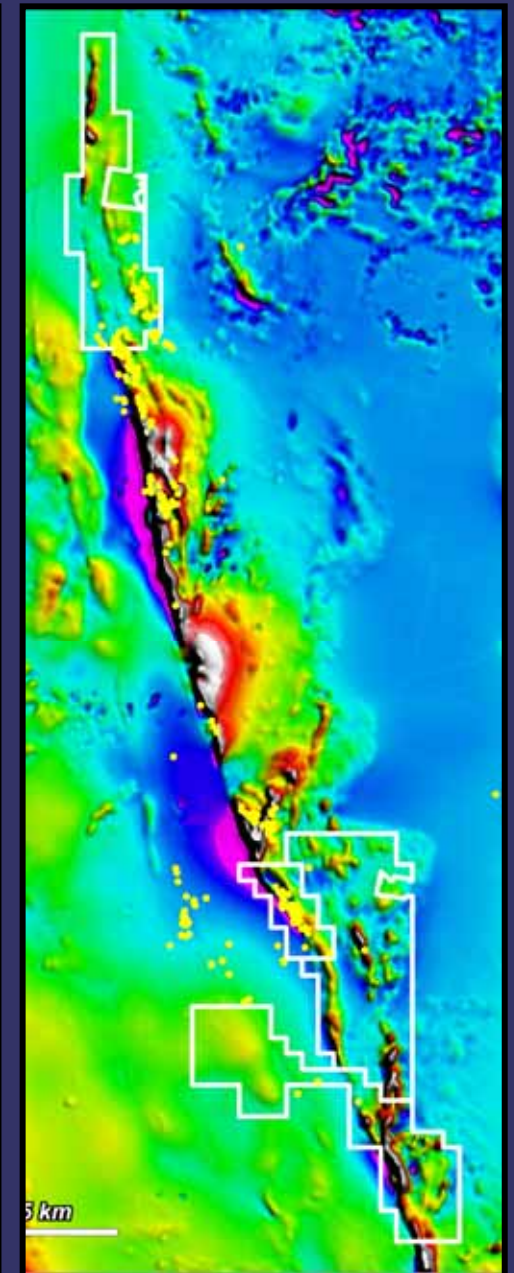
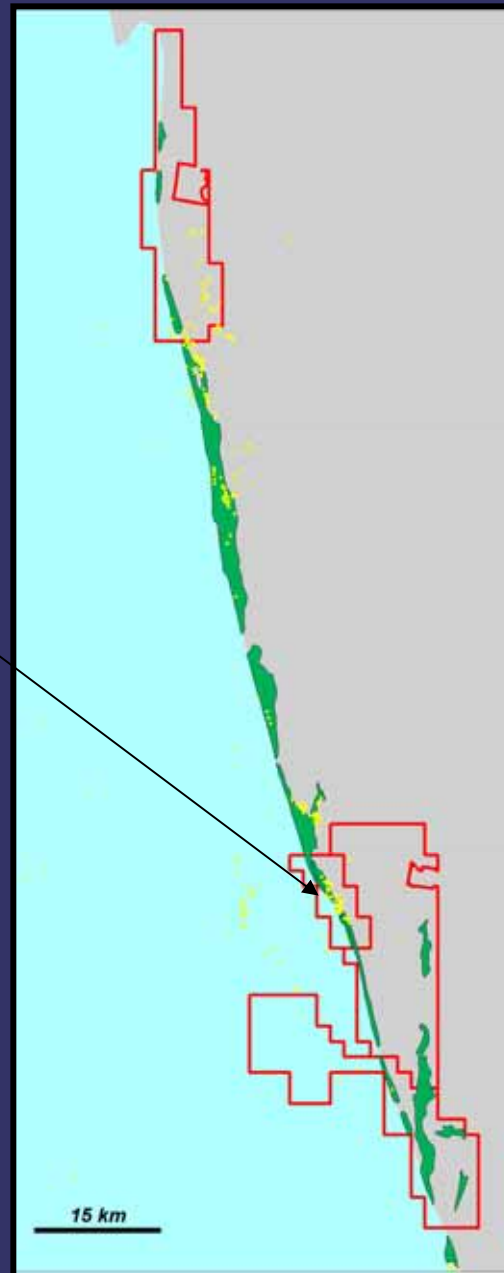
# Icon gold prospects

Peel Fault

Weabonga

Niangalla

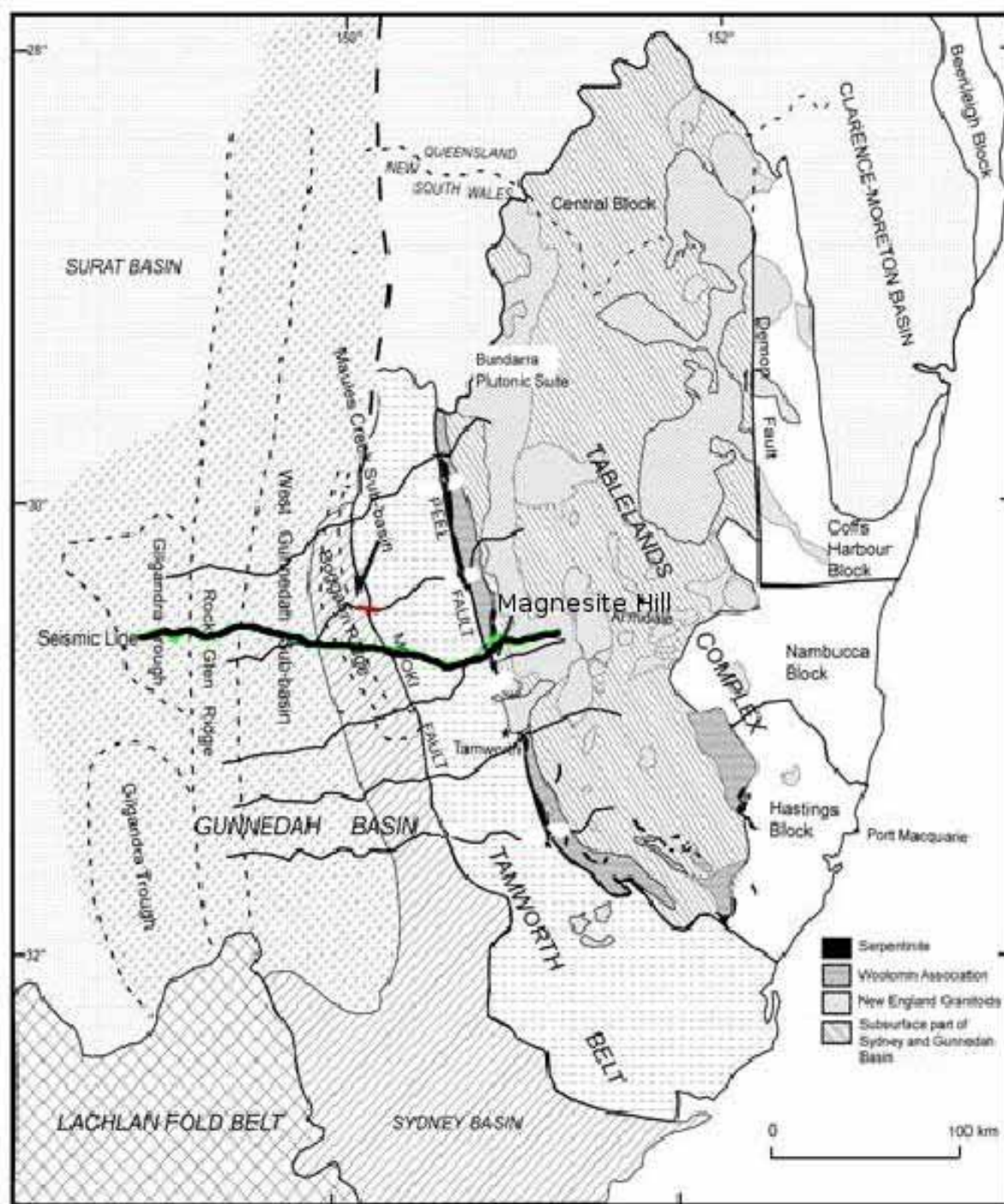
Upper Hunter





Location:

Magnesite Hill discovery, general geology of New England, location of Geoscience Australia (1990) seismic transect and Guo et al (2006) geophysical transects.

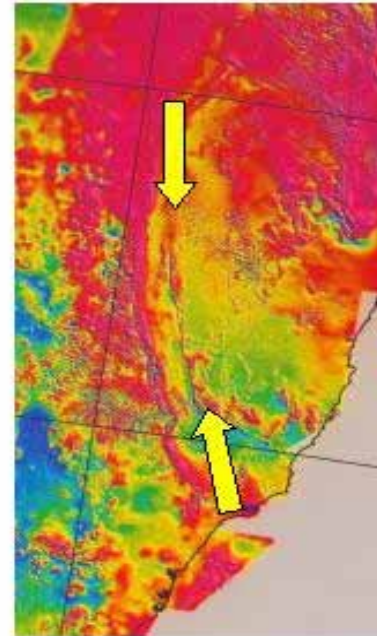
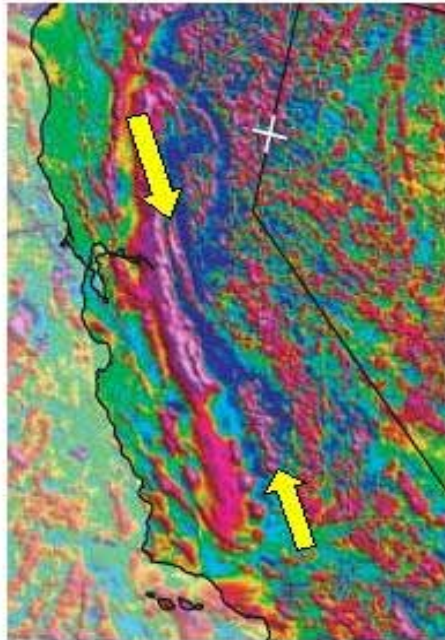




# Greenstone Belt model for gold exploration

- Half the world's gold comes from Archaean greenstone belts.
- Greenstone gold is not confined to Archaean eg., Mz Californian Motherlode (3800 tonnes Au).
- Gold associated with carbonate alteration of mafic and ultramafic rocks.
- Alteration signified by fuchsite, ankerite, sericite, quartz, pyrite, hematite alteration (listwanite)
- Gold late, with qtz, py, asp, wherever space existed.

# Comparison of GSB and Californian Motherlode belt



Comparison of Motherlode California (left) and Peel Fault, NSW., each located east of a major magnetic ridge (rift core?), and marked by a magnetic high on a shear fault >500km long.





# The Peel Fault

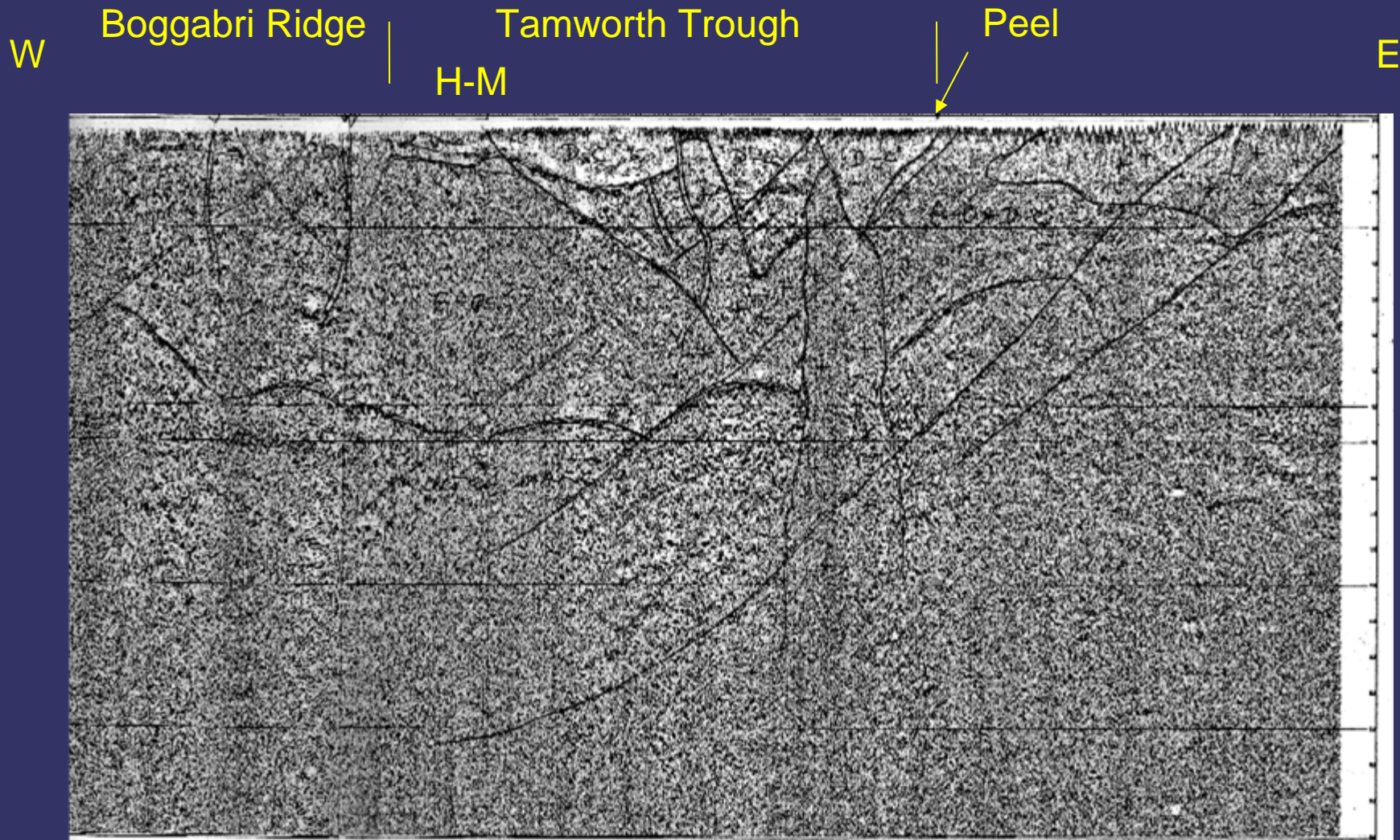
- Deep crustal seismic indicates Peel is a west-dipping listric fault tapping the mantle.
- Range of partly serpentinitised intrusive types (?layered ultra mafics) occurs along the fault.
- Peel separates mid to late Devonian turbidites/marine delta sediments on the west from ?Cambrian - ?Silurian deep sea radiolarian cherts and pillow lavas on the east.
- Part of surmised “basin and range” tectonic setting.



# The Peel Fault

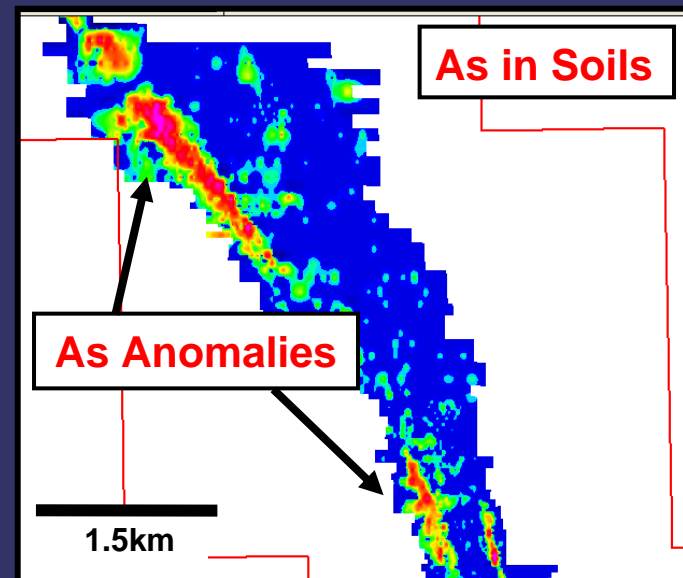
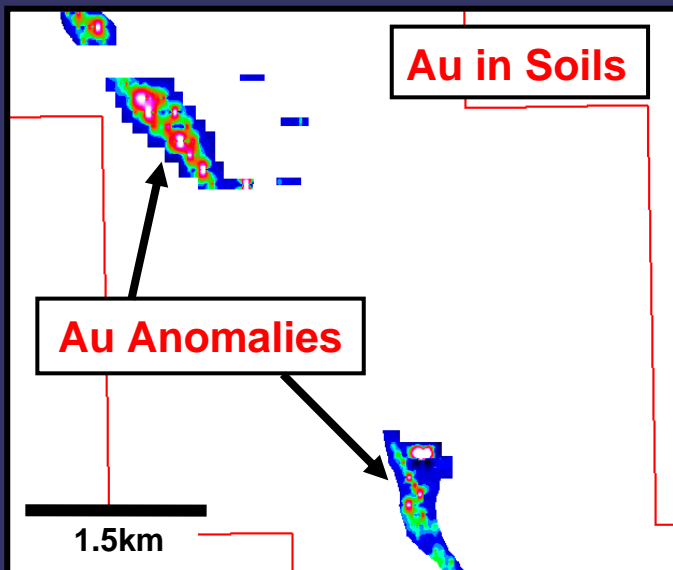
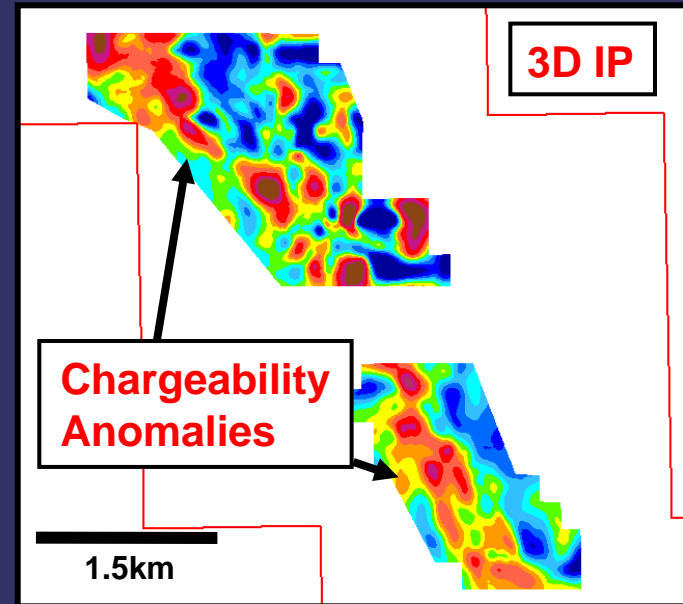
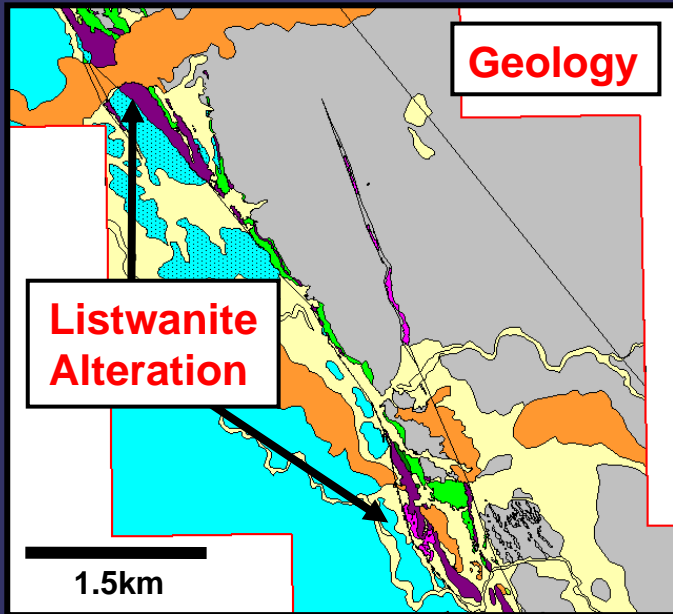
- Probable 100's km sinistral transcurrent displacement on Peel.
- Moved until at least late Permian, maybe early Triassic.
- Always thought to be east dipping thrust.
- Little explored – only 40 shallow drill holes over 100km strike length north of Attunga.
- Numerous >100yo gold workings in close proximity to Peel, one mining claim still producing (?) at Bingara.
- Historically, produced ~11 tonnes of gold.

# GA Seismic section – evidence of true nature of Peel Fault

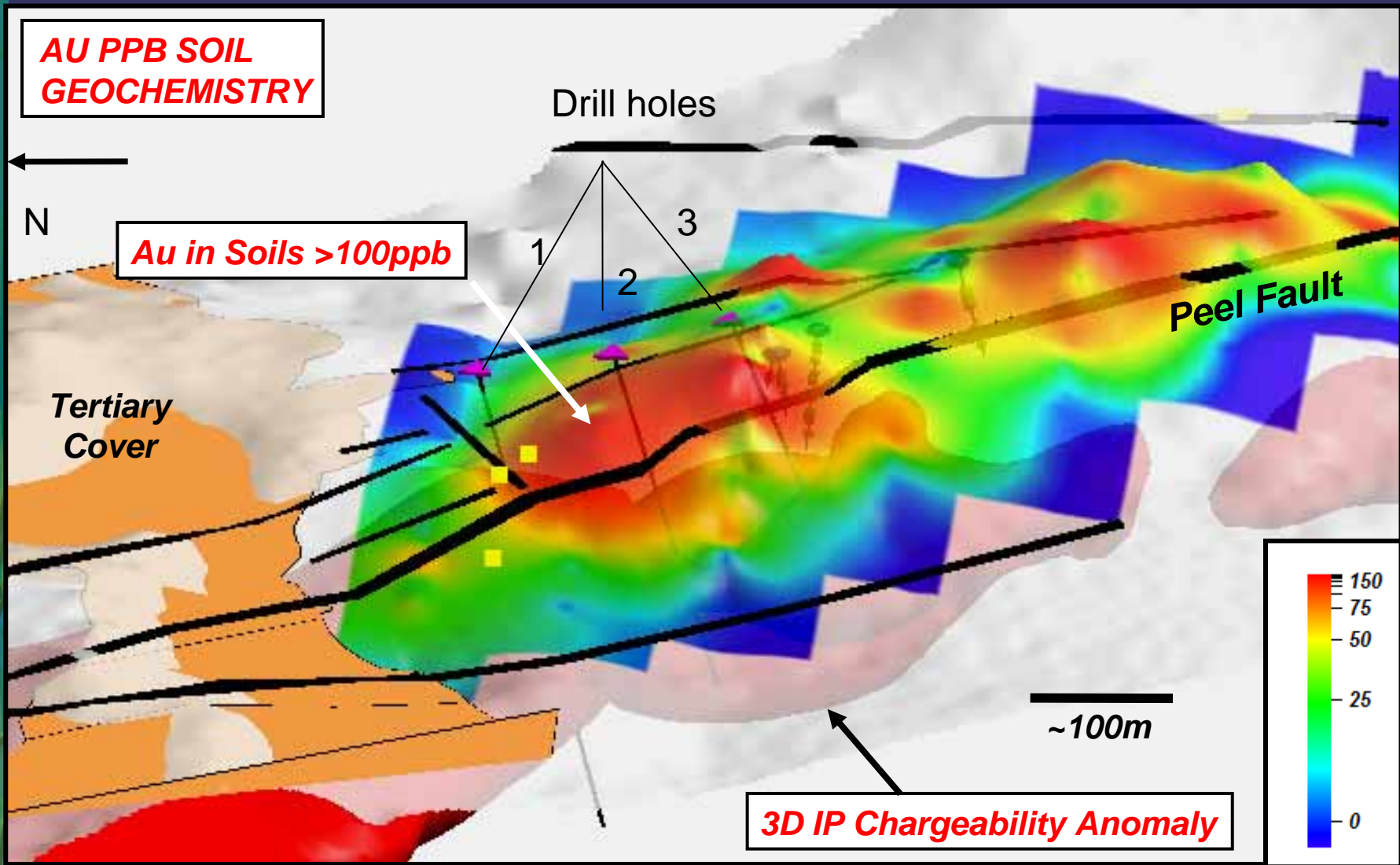




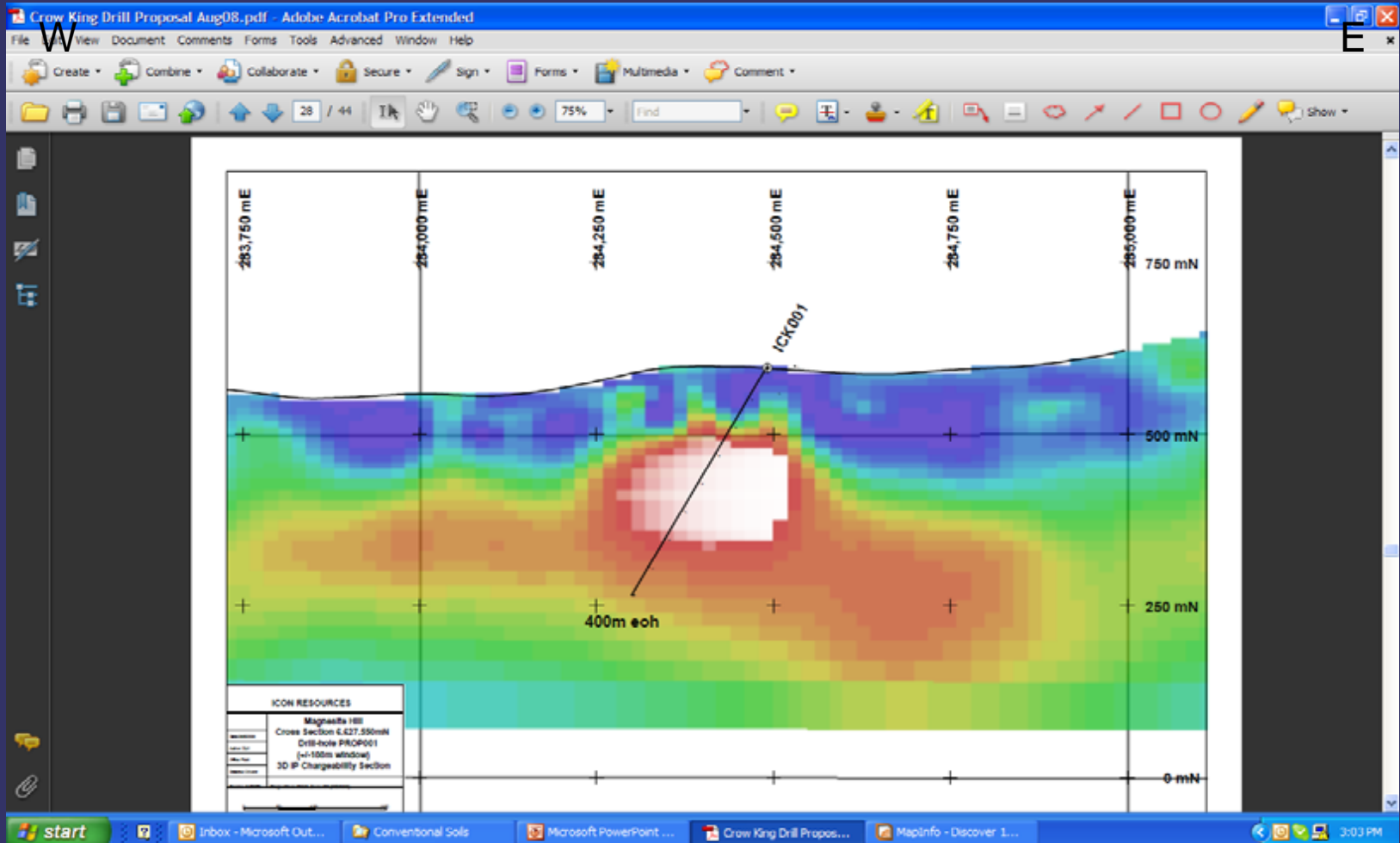
# Exploration Results at Magnesite Hill



# Magnesite Hill Au Prospect



# Magnesite Hill Prospect IP

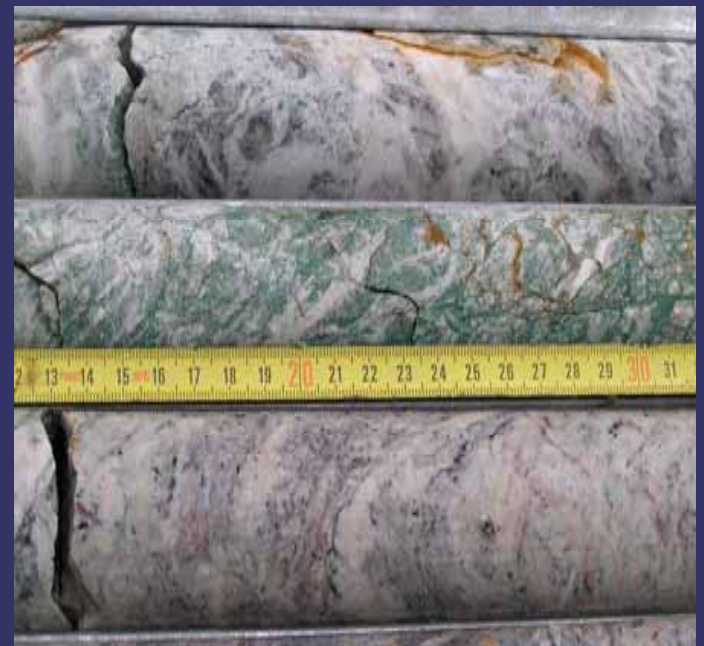






Serpentinised harzburgite:  
talc/serpentine/sericite.

Carbonate altered serpentine:  
listwanite – fuchsite,  
ankerite, quartz, hematite,  
sericite.





Peel Fault: gouge ~20m wide, carbonaceous rock flour with bleached listwanite fragments

Dykes intruding fault:  
?mafic to intermediate,  
brecciated, sericite/qtz/  
biotite/pyrite alteration





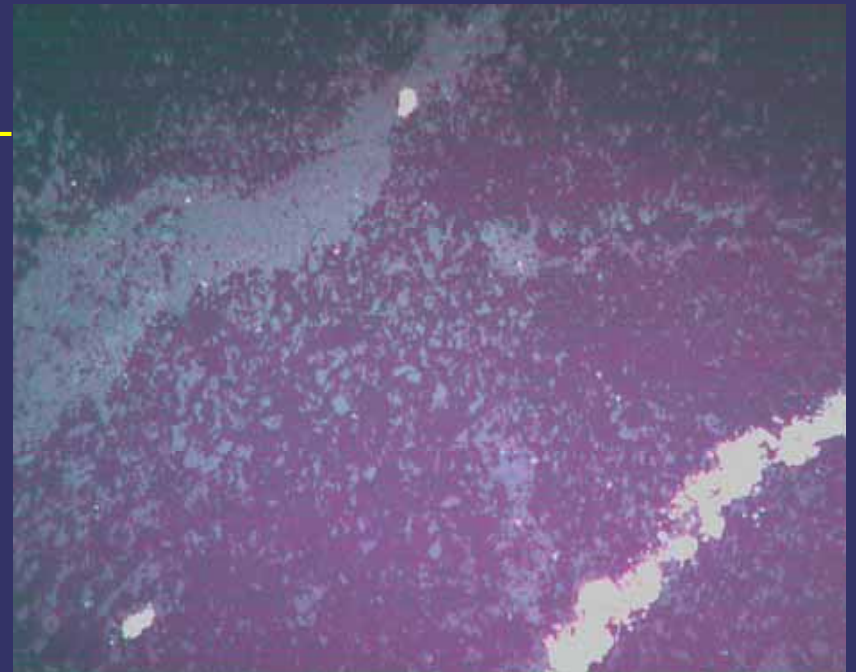
Devonian siltstones:  
intruded by dyke,  
crackle brecciated,  
qtz, py-ser veining and  
sericite alteration.



TPL



RPL







# Drilling results

- 3 holes, drilled at  $50^{\circ}$  towards  $235^{\circ}$  for total 684m.
- 8m @ 1.27g/t Au in hole 1 from 140m (54m @0.45g/t from 117m).
- 14m @ 1g/t Au in hole 2 from 137m incl 2m @ 3.69g/t from 139m.
- The gold is in the altered Devonian sediments: Carlin style mineralisation of carbonate-rich, carbonaceous sediments.

# Implications

- Greenstone gold might not be the only model to test on the Peel.
- Listwanites are Late Permian or Early Triassic at Nundle (Ashley & Brownlow, 1993).
- The fault gouge contains listwanite fragments: last movement on fault post Early Triassic.
- The phyllic altered dykes clearly post-date major movement on the fault, and could be associated with post orogenic porphyry style mineralisation.
- The Devonian is carbonate-rich, carbonaceous.
- **Ideal host for Carlin-style gold mineralisation.**



# Future

- Icon has extensive ELs and applications north from Attunga.
- With this encouragement, planning expanded exploration program of
  - Drilling at Magnesite Hill to extend discovery
  - Other tenements: Detailed mapping, geochemistry (Niton) for pathfinder elements Sb, As, Hg, Bi, plus gold assays
  - Drilling.