

ADR

ATOMIC DIELECTRIC RESONANCE SPECTROSCOPY

Mr Gordon Stove



RESULTS

Dr Simon Richards

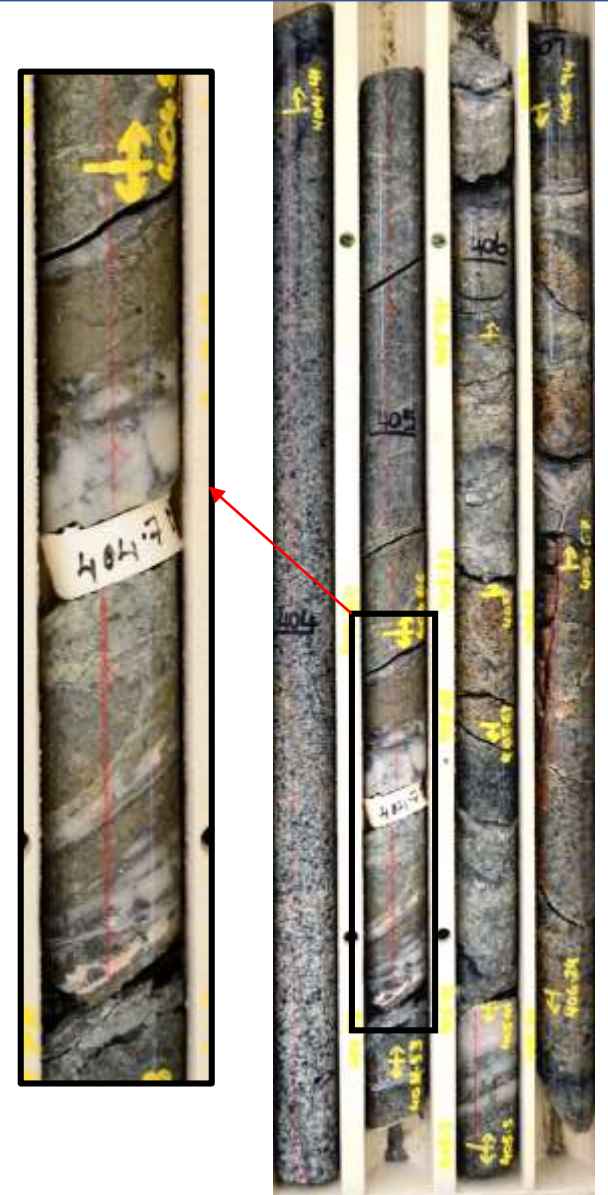
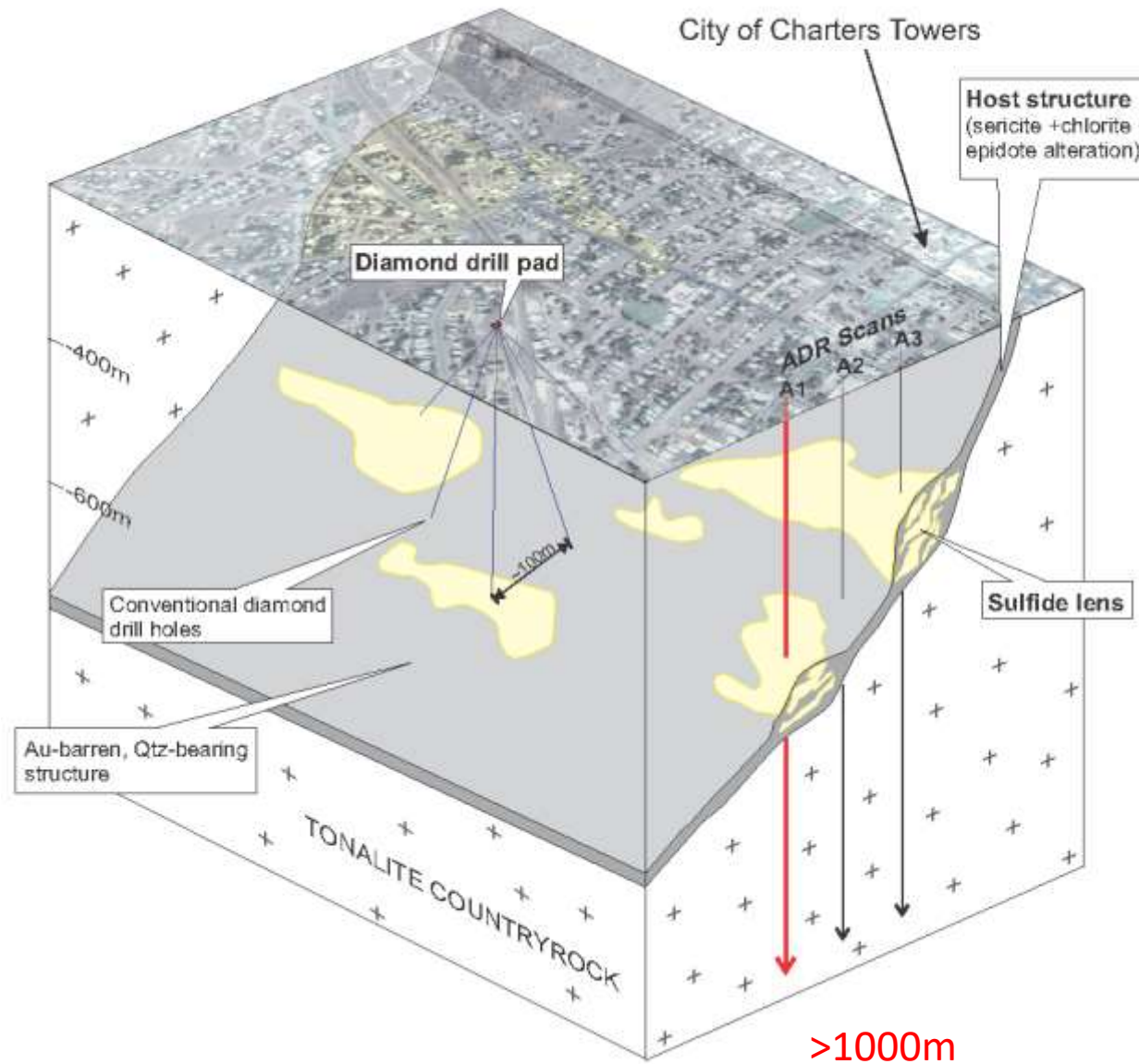
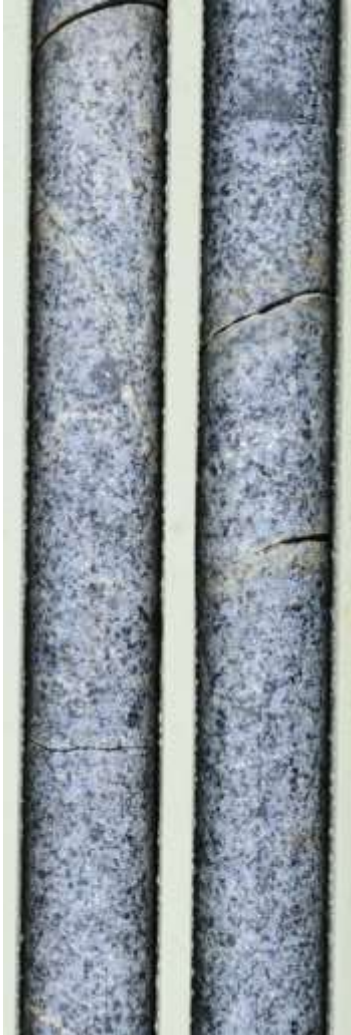
THE PROBLEM

**TO FIND A COST EFFICTIVE, RELIABLE,
PRECISE AND ACCURATE WAY OF
PINPOINTING "PODS" OF HIGH GRADE
GOLD AND SULFIDE ORE**

CHARTERS TOWERS

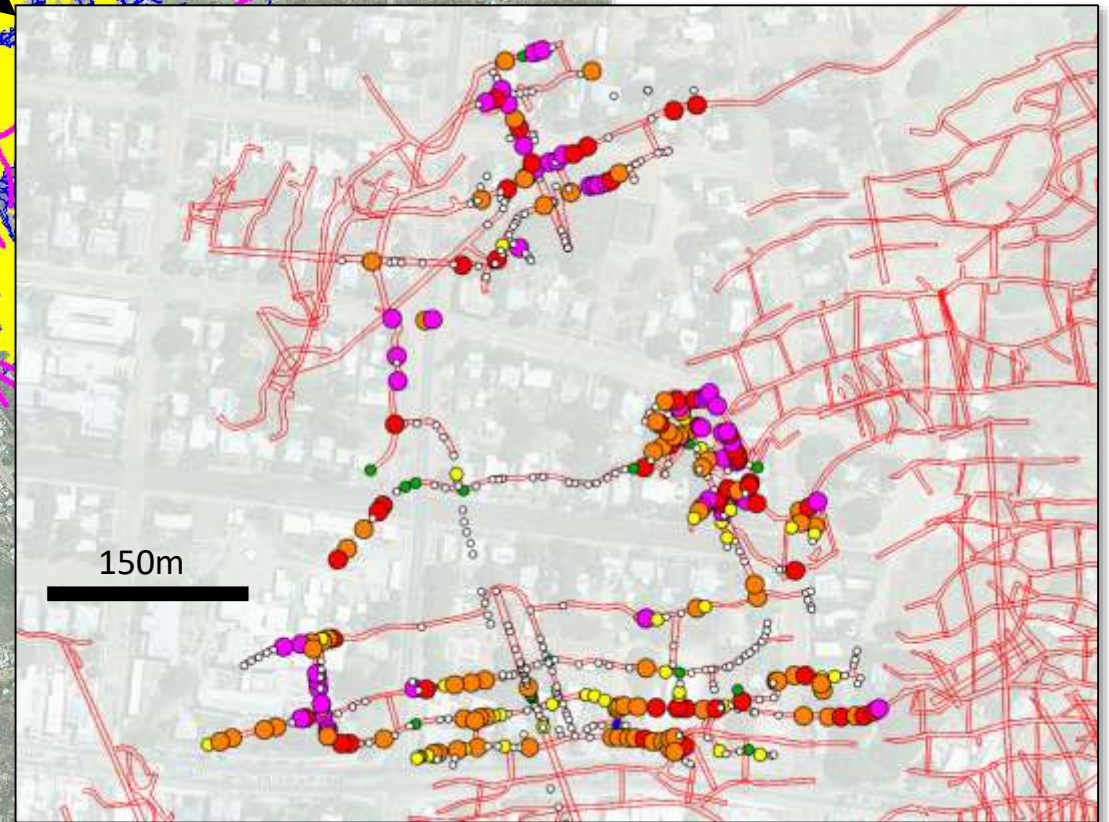
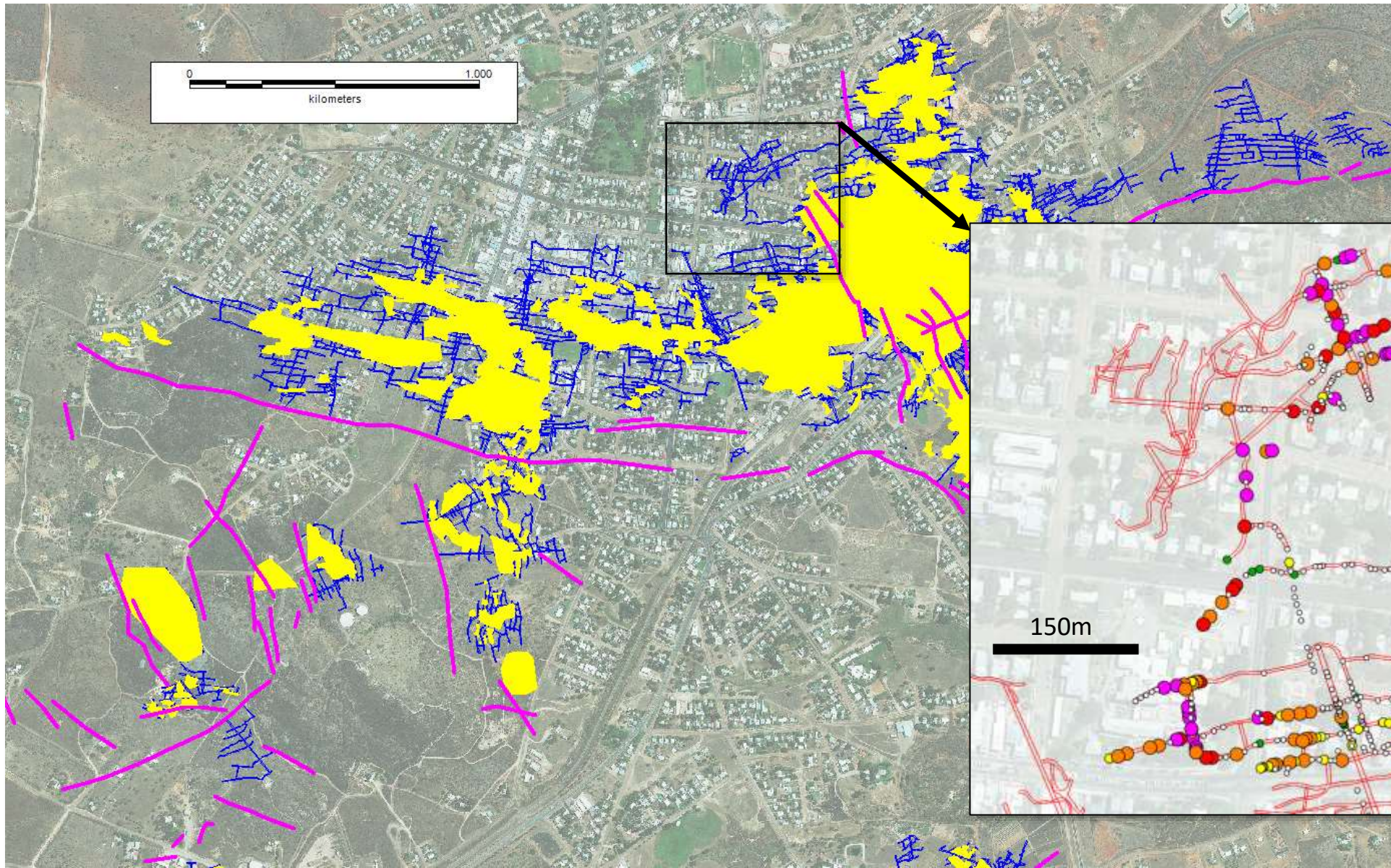
DEPOSIT STYLE

Tonalite host rocks



THE PROBLEM

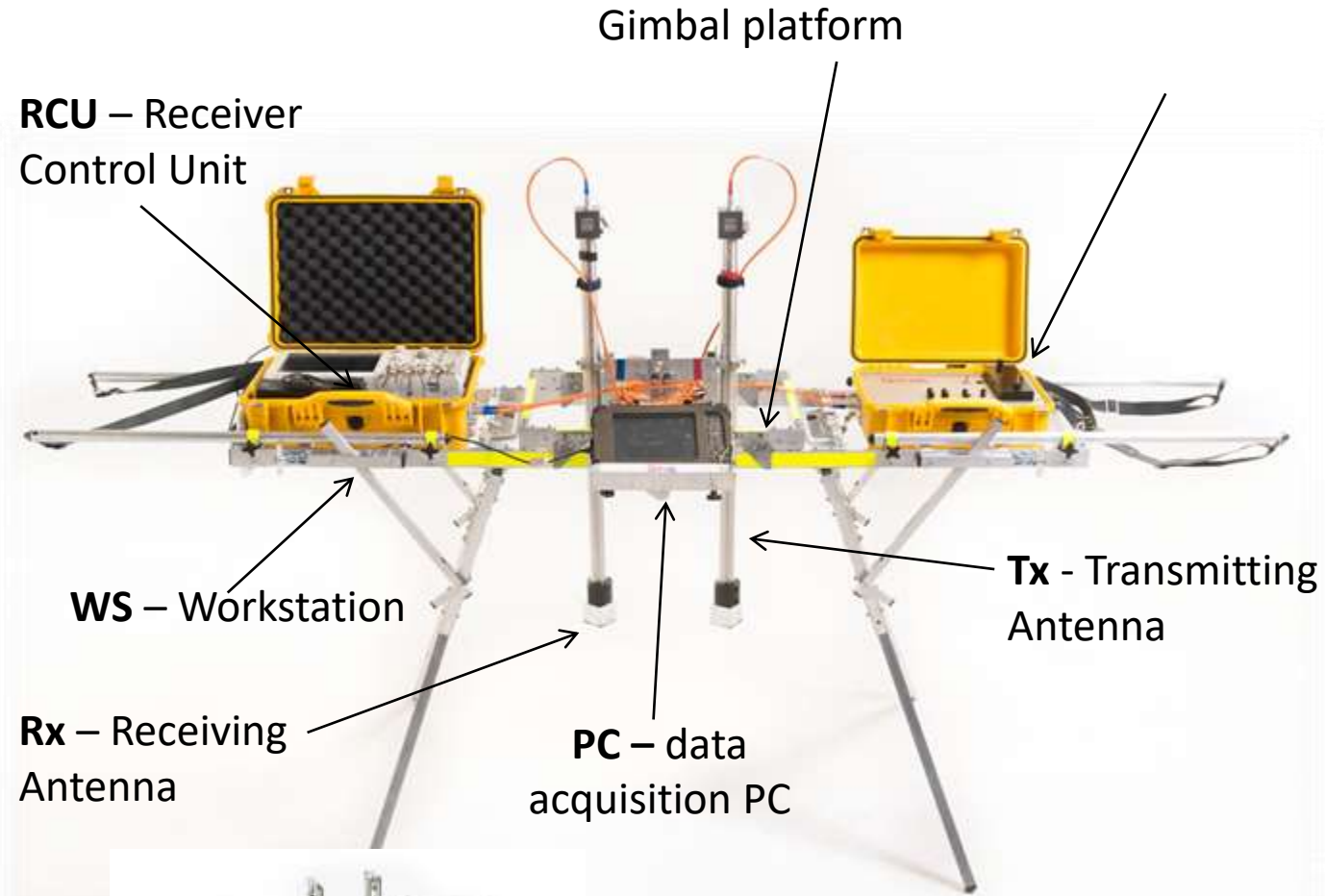
GEOLOGY



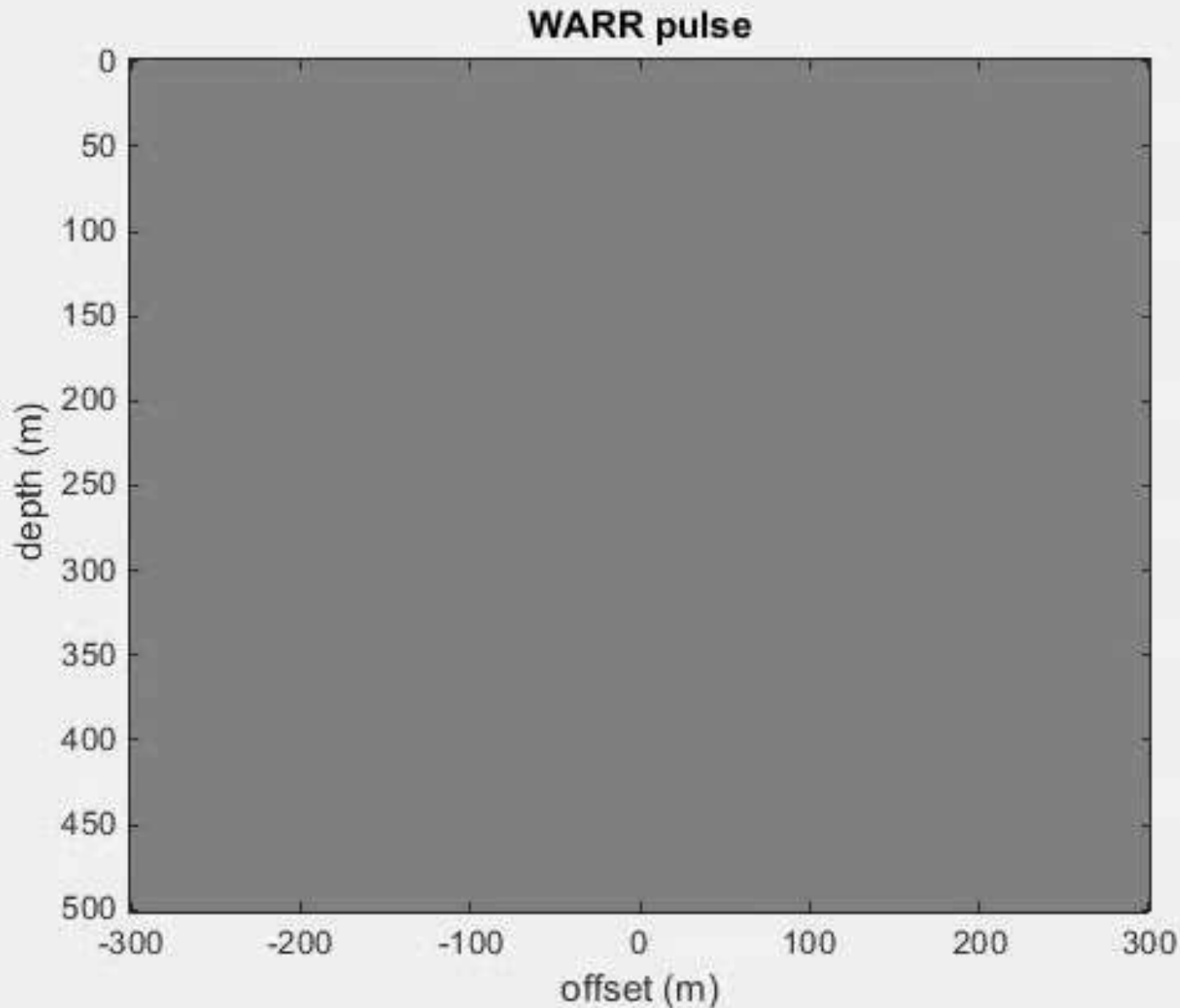
- 🌈 **LOCATED IN THE MIDDLE OF A CITY**
 - 🌈 **DRILLING (NOISE, CLEARING PADS, LOCATIONS UNAVAILABLE, DEEP DRILL HOLES, COST)**
 - 🌈 **TEM & SEM, MAGNETICS, GRAVITY and IP & DHIP** (size & depth of gold-bearing pods)
- 🌈 **TIME AND COST ARE EXCESSIVE**
 - 🌈 **15M/DAY, \$130/M, average 500m deep holes, 20 drill holes for 6 positive returns = \$1.3 million and over 2 years of drilling.**

THE SETUP

FIELD & LAB



THE MODEL RESULTS

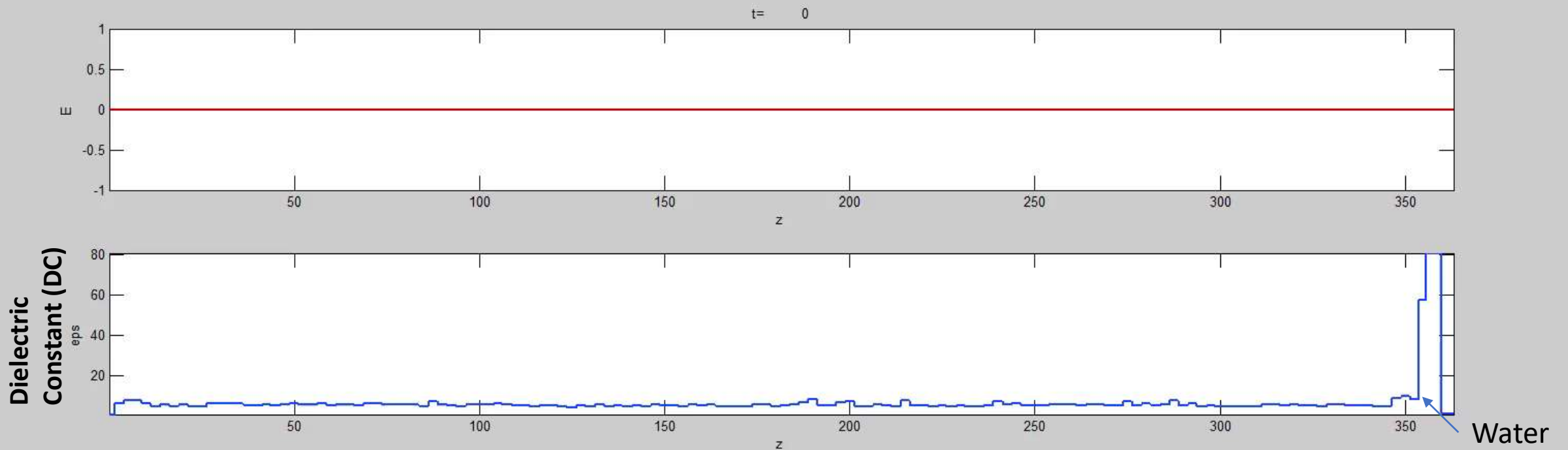


- 🌈 **LINE OF TRANSMITTERS IN WARR CREATES BEAM (SYNTHETIC APERTURE RADAR, SAR)**
- 🌈 **NOTE: IN ANIMATION PULSE WAVELET STAYS COHERENT**

THE MODEL RESULTS

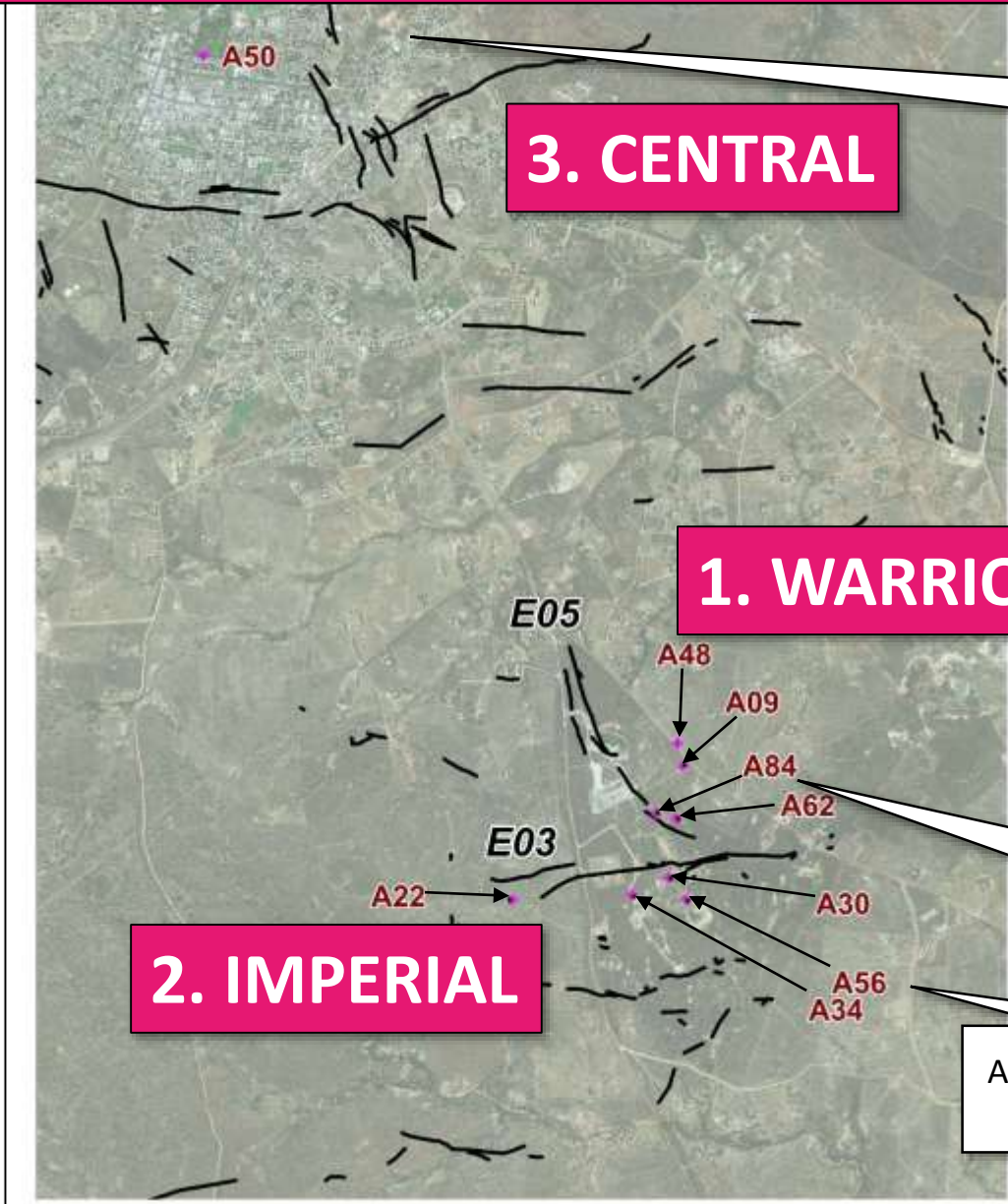
- 🌈 **ELECTRIC FIELD ANIMATED IN TOP GRAPH**
- 🌈 **WE OBSERVE PULSE TRAVELING DOWN (LEFT TO RIGHT)**
- 🌈 **SMALL IRREGULARITIES IN DC CAUSE BACKSCATTER**
- 🌈 **BIG REFLECTION AT JUMP IN DC - PROPAGATES BACK TO SURFACE**

Lab measured DC of Charters Towers Rocks (CSIRO)
Granite av; 3 samples = 7.99 @ 1Mhz
Pyrite ore; 1sample = 73.63 @ 1Mhz



REAL WORLD RESULTS

NARROW VEIN GOLD



A63 targeting C05 – Brilliant East

ADR SCAN LOCATION SELECTION

A84 – WARRIOR

A56 – IMPERIAL

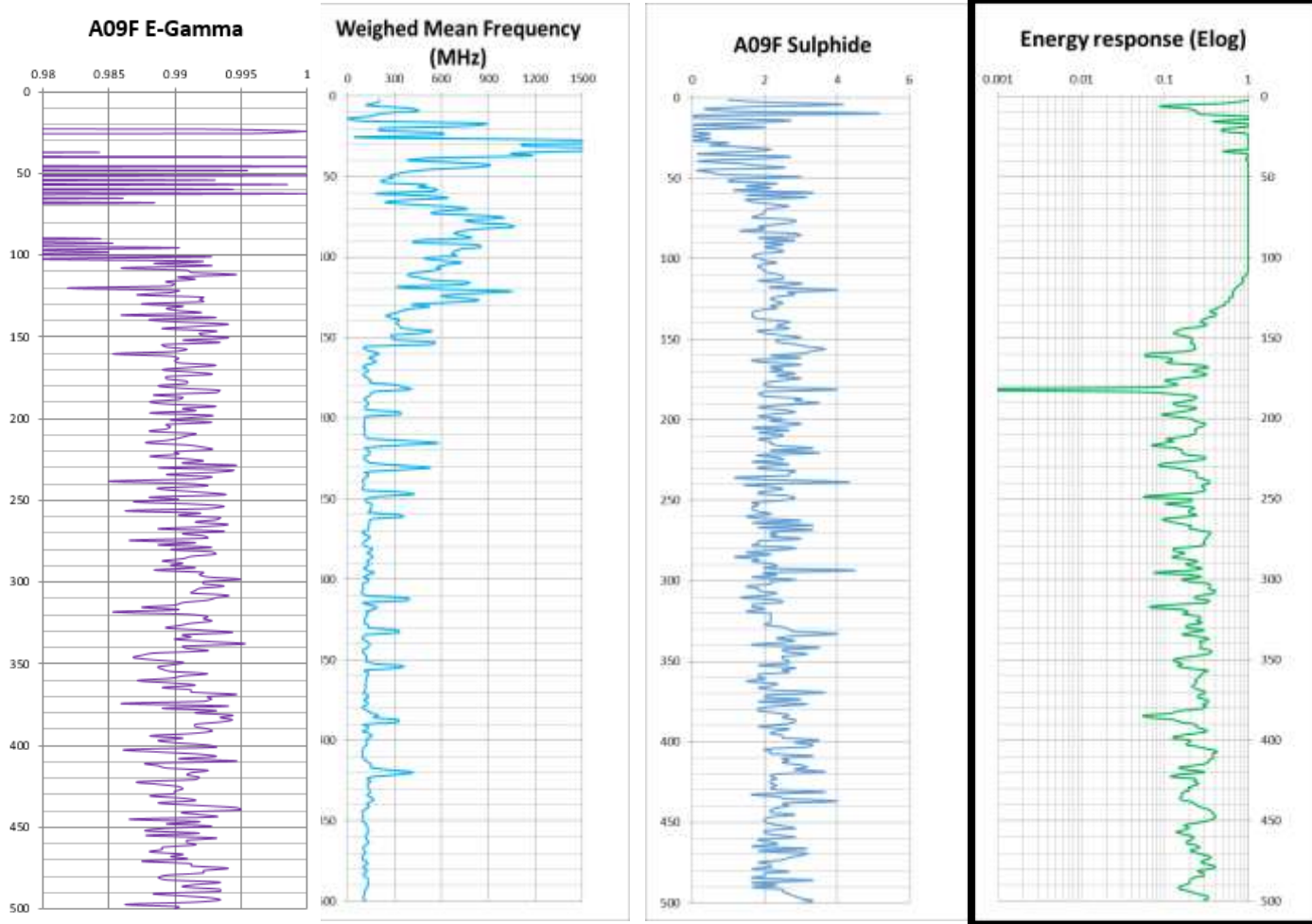
A63 – CENTRAL

A84 and A62 targeting N-dipping **E03** structure

A30, **A56**, A34 and A22 targeting NE-dipping **E07** structure

REAL WORLD RESULTS

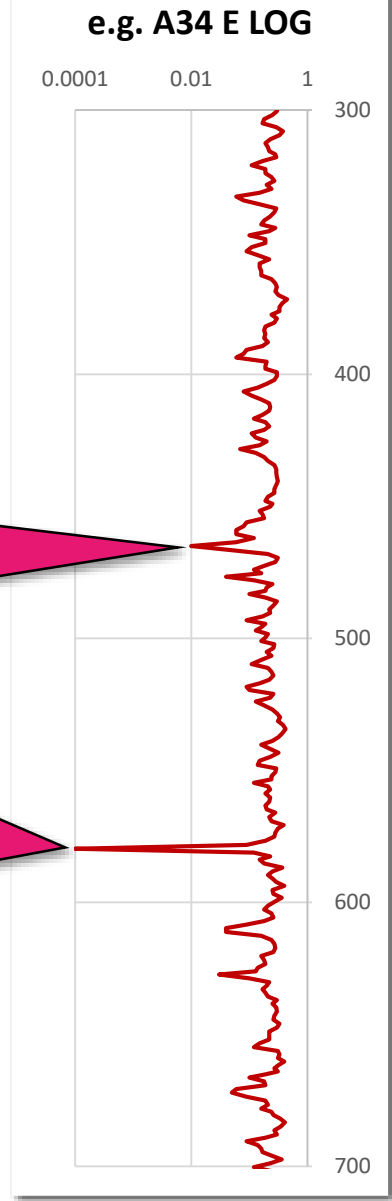
SCAN INTERPRETATION



Lowest value assigned a value of 0.001 resulting in artificial exaggeration of apparent anomaly when plotted

0.01 considered "anomalous and significant"

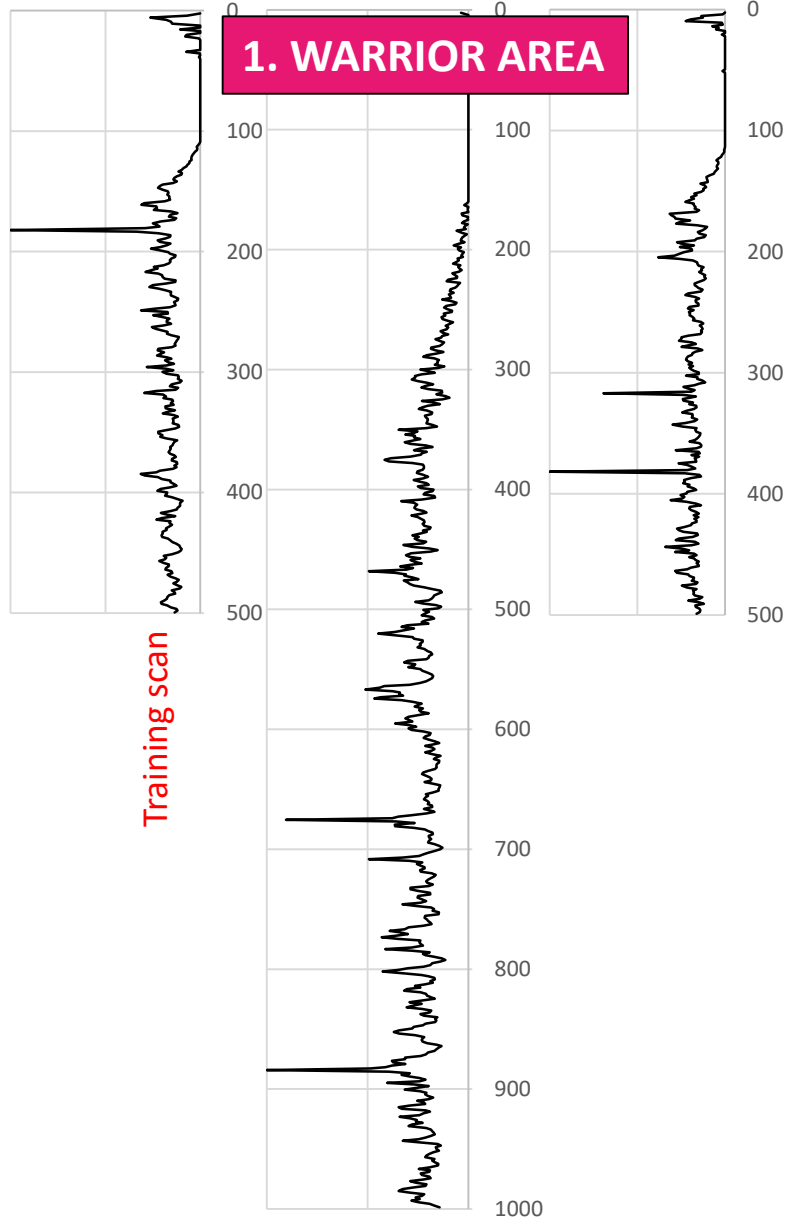
Lowest value(s) considered major anomalies



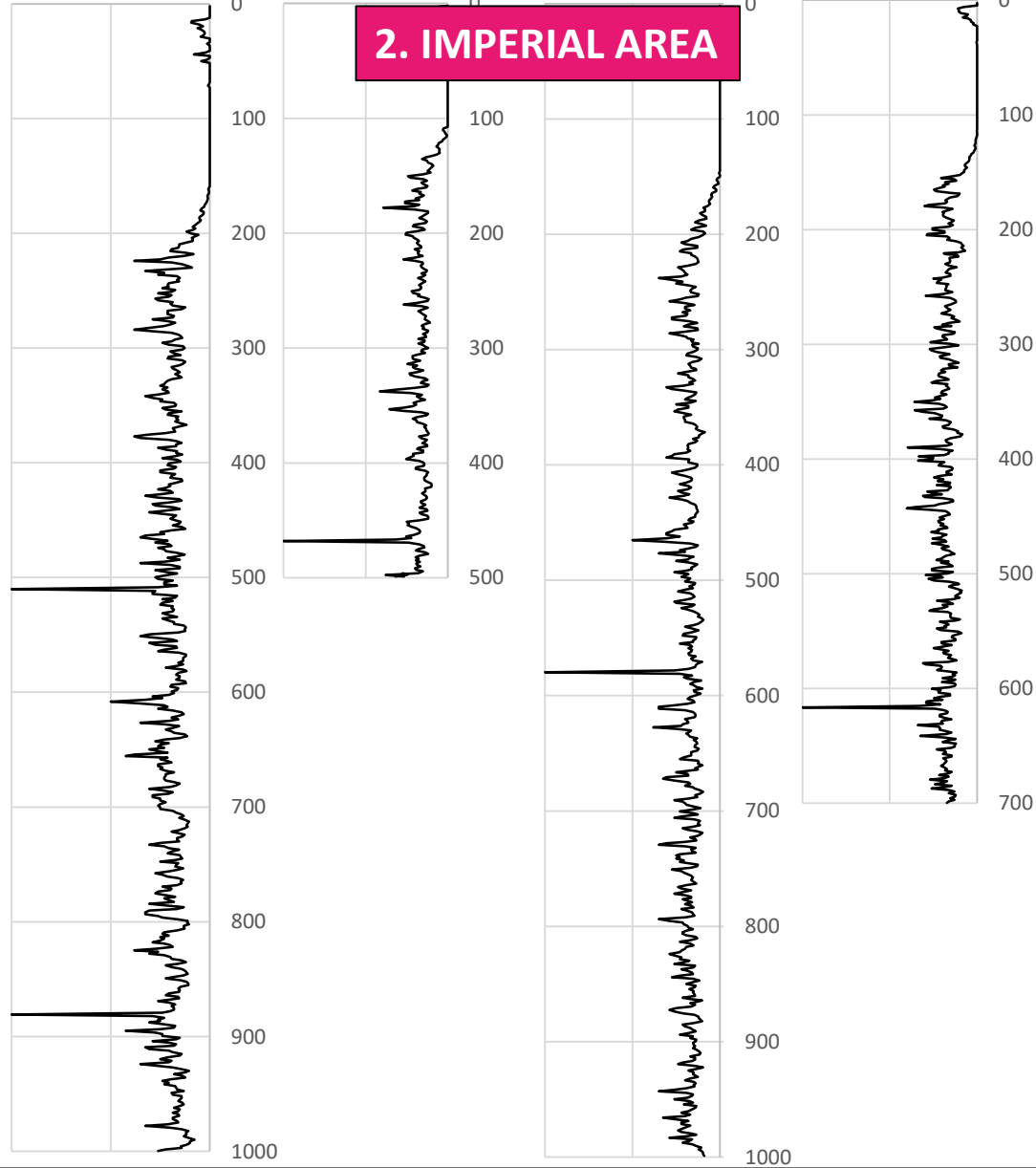
REAL WORLD RESULTS

SCANS

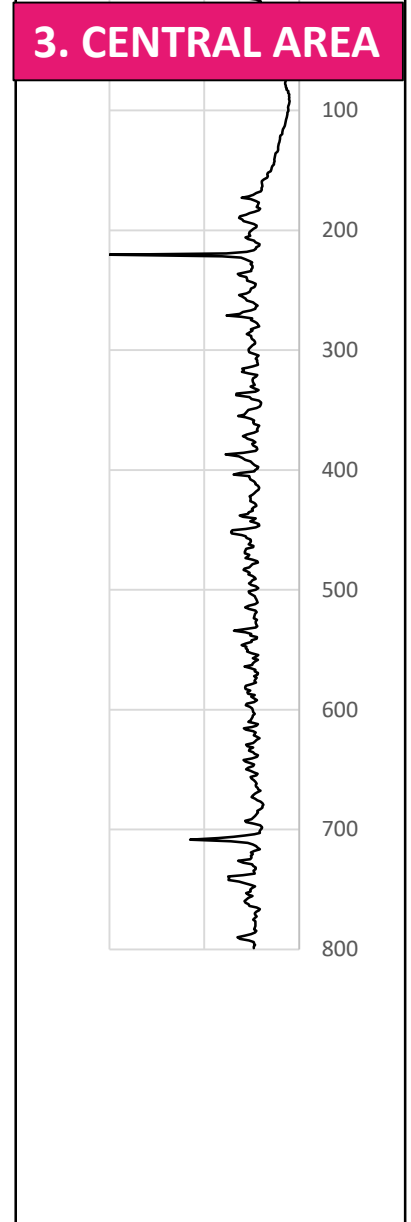
1. WARRIOR AREA



2. IMPERIAL AREA

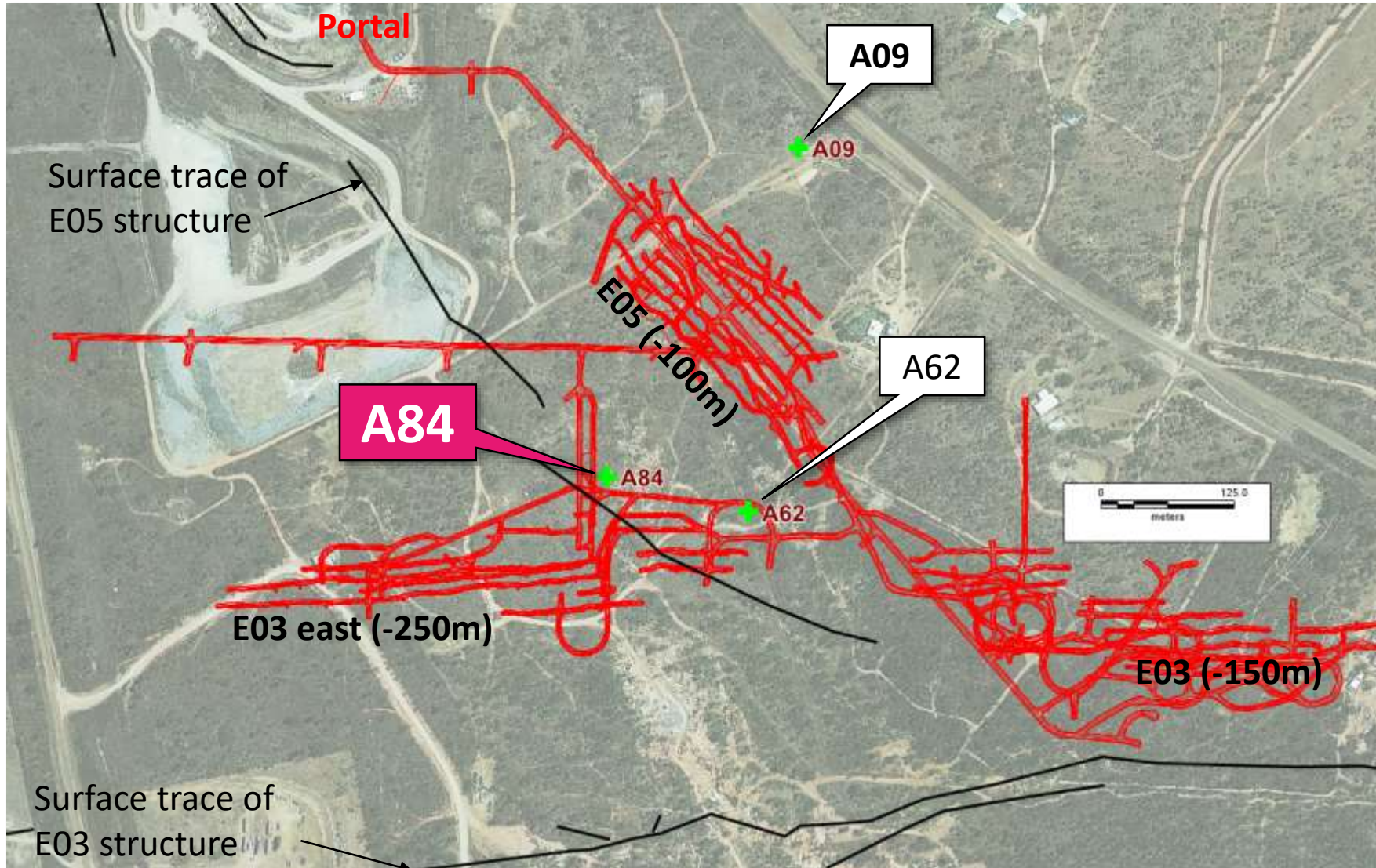


3. CENTRAL AREA



REAL WORLD RESULTS

WARRIOR MINE



**DIAMOND DRILL HOLE
CT3067**

**E05 INTERCEPT =
0.9m @ 20.4 g/t Au
0.8m @ 13.7 g/t Au**

CT3067 lode parallel drill hole -500

+ A84

0.9m @ 20.4 g/t Au
0.8m @ 13.7 g/t Au

+ A62

7775250°N

425750°E

E03 RL 676

710

725

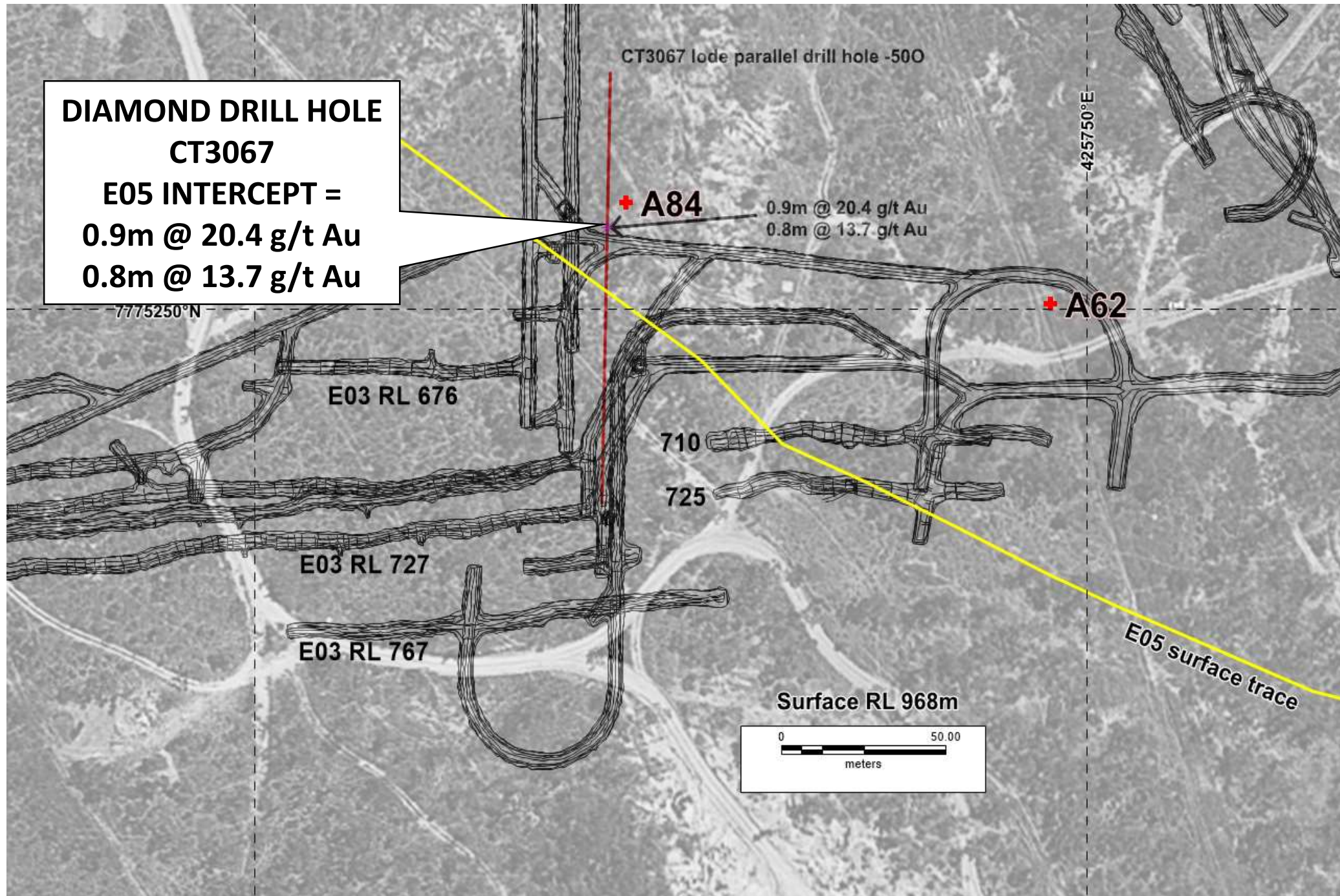
E03 RL 727

E03 RL 767

Surface RL 968m

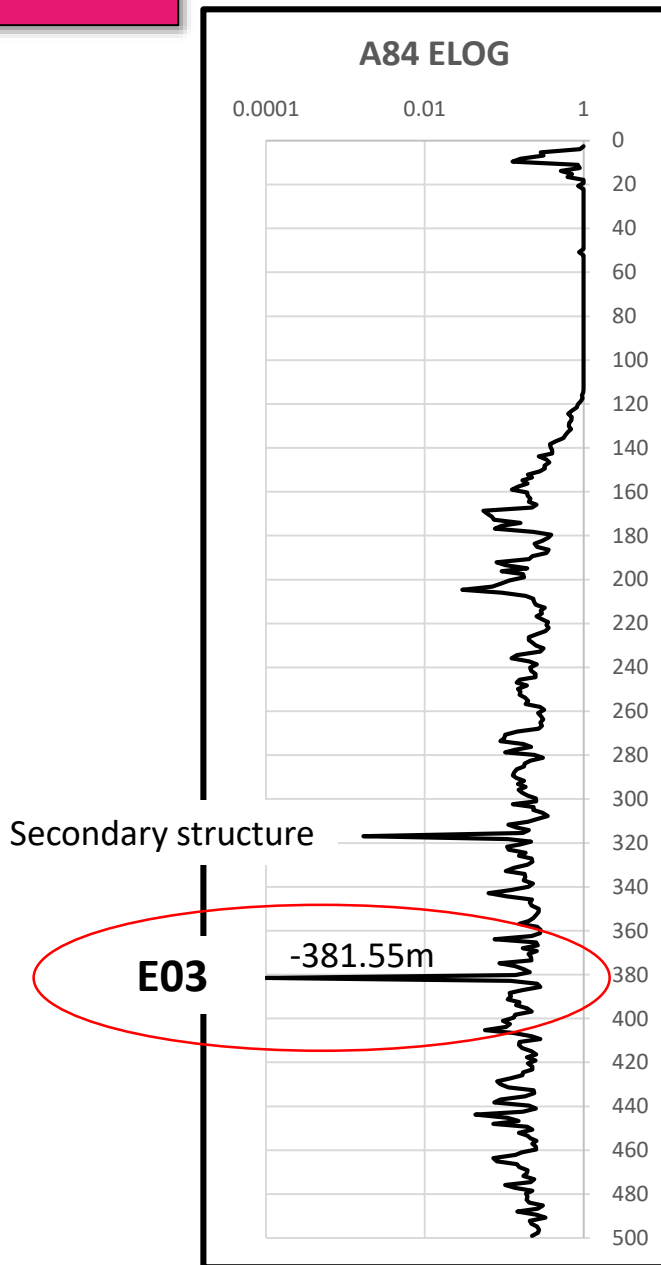
0 50.00
meters

E05 surface trace

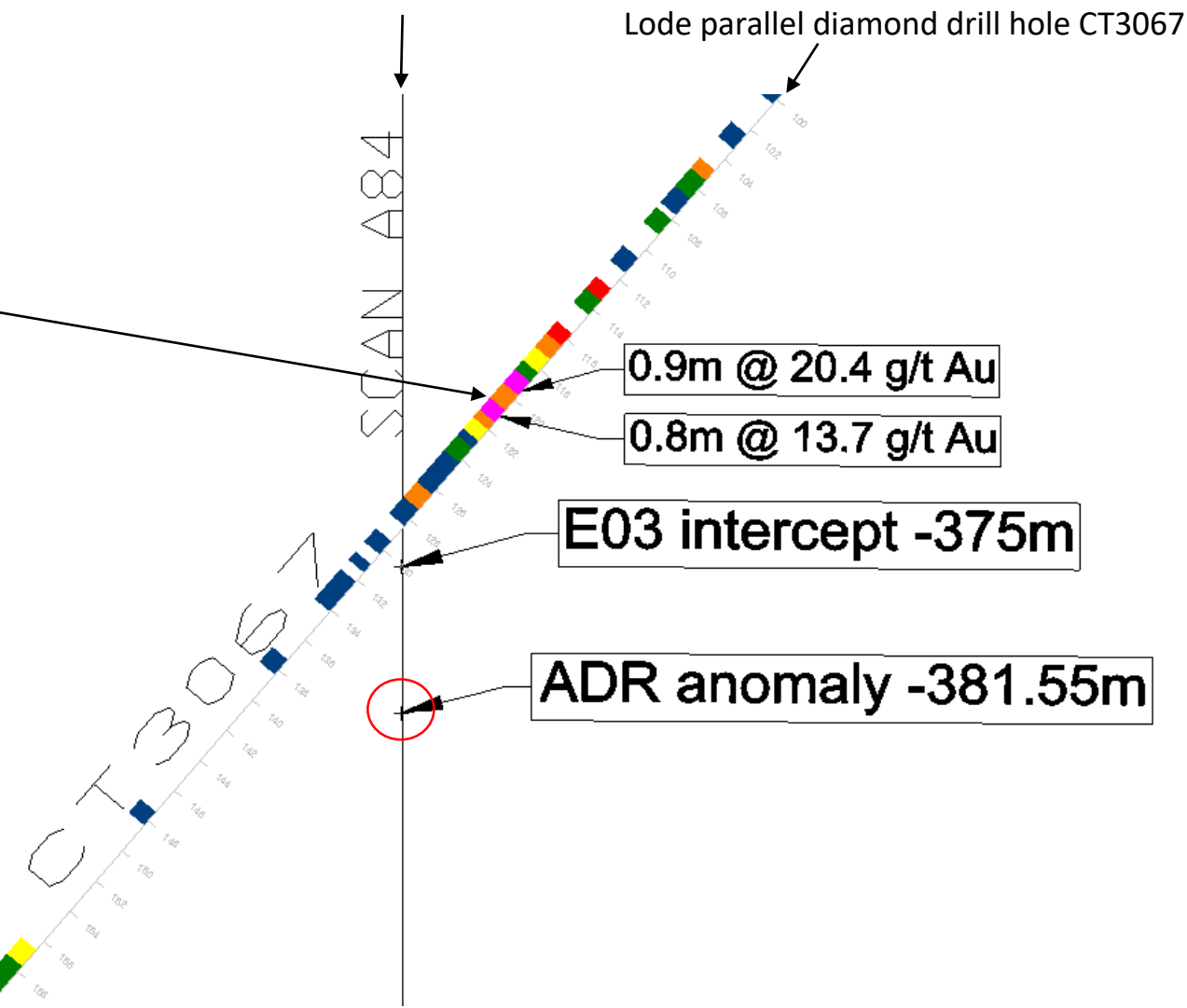


ADR A84

CT3067



A84 Scan



+6.5m

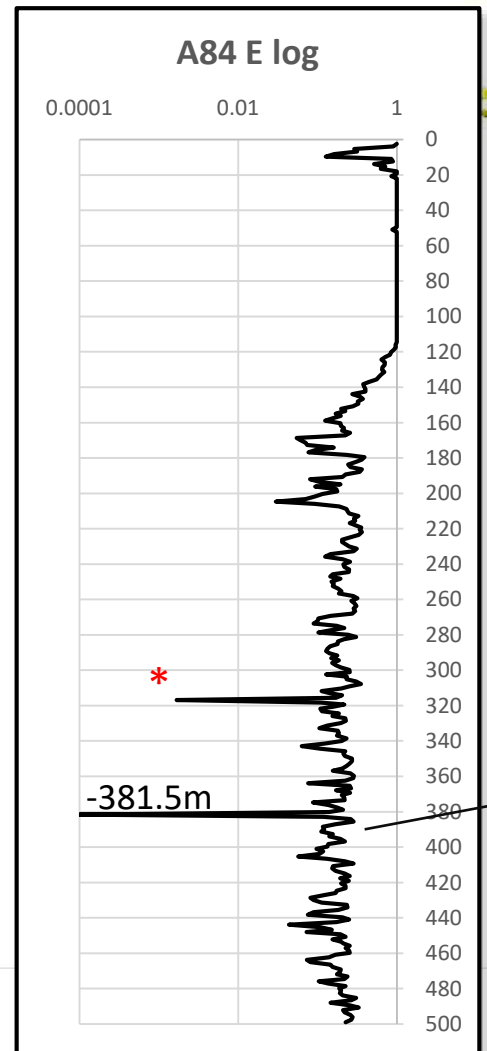
ADR A84

Warrior pit

E05 underground workings (NE-dipping)

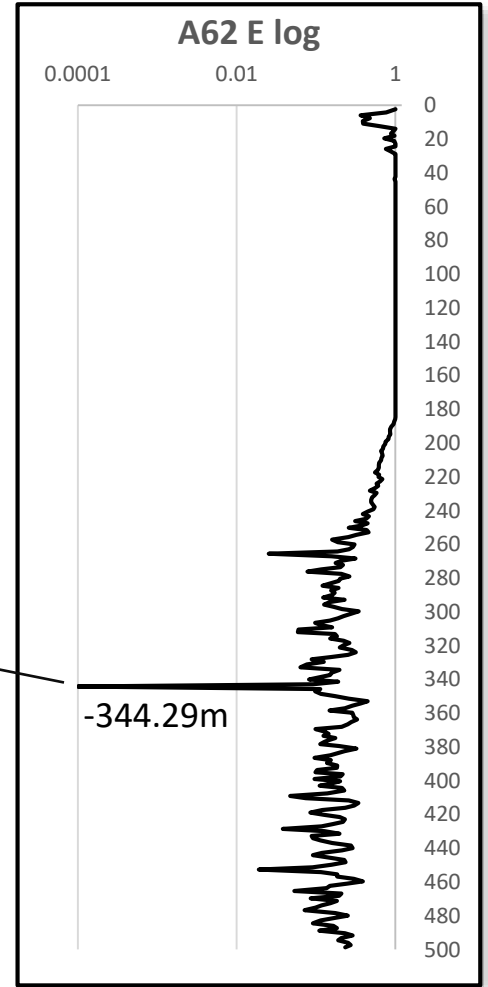
E03 underground workings (N-dipping)

Interpreted E03 structure



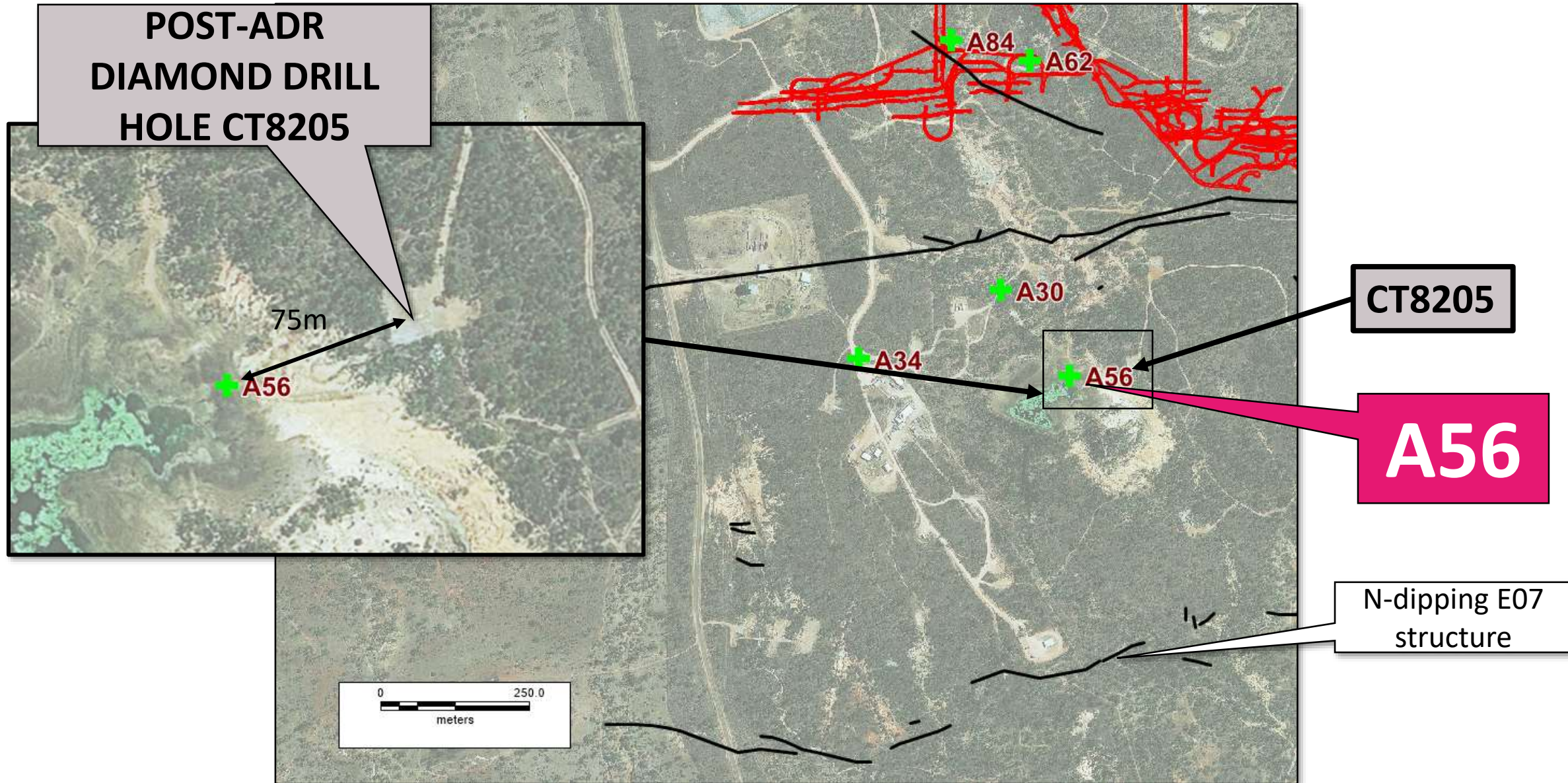
* Anomaly = unmined structure

A84FA62F

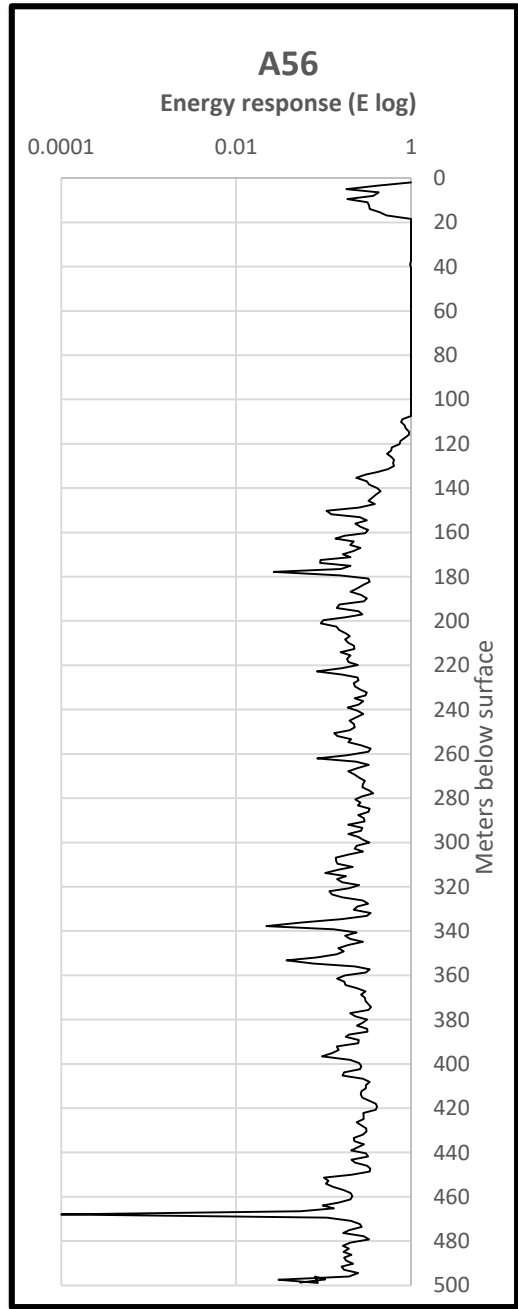


REAL WORLD RESULTS

IMPERIAL PROJECT

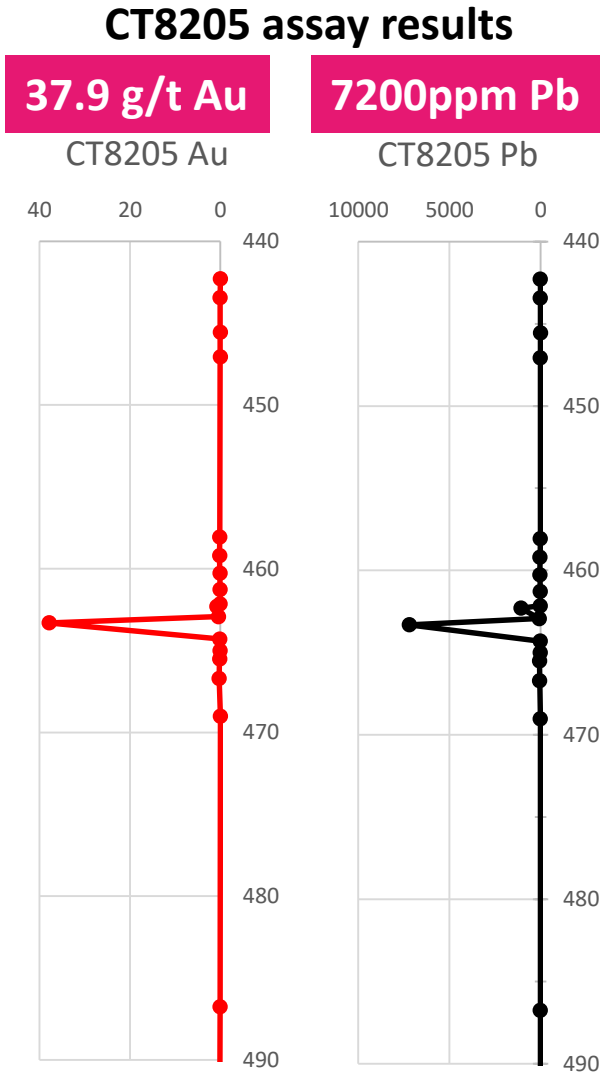


ADR A56



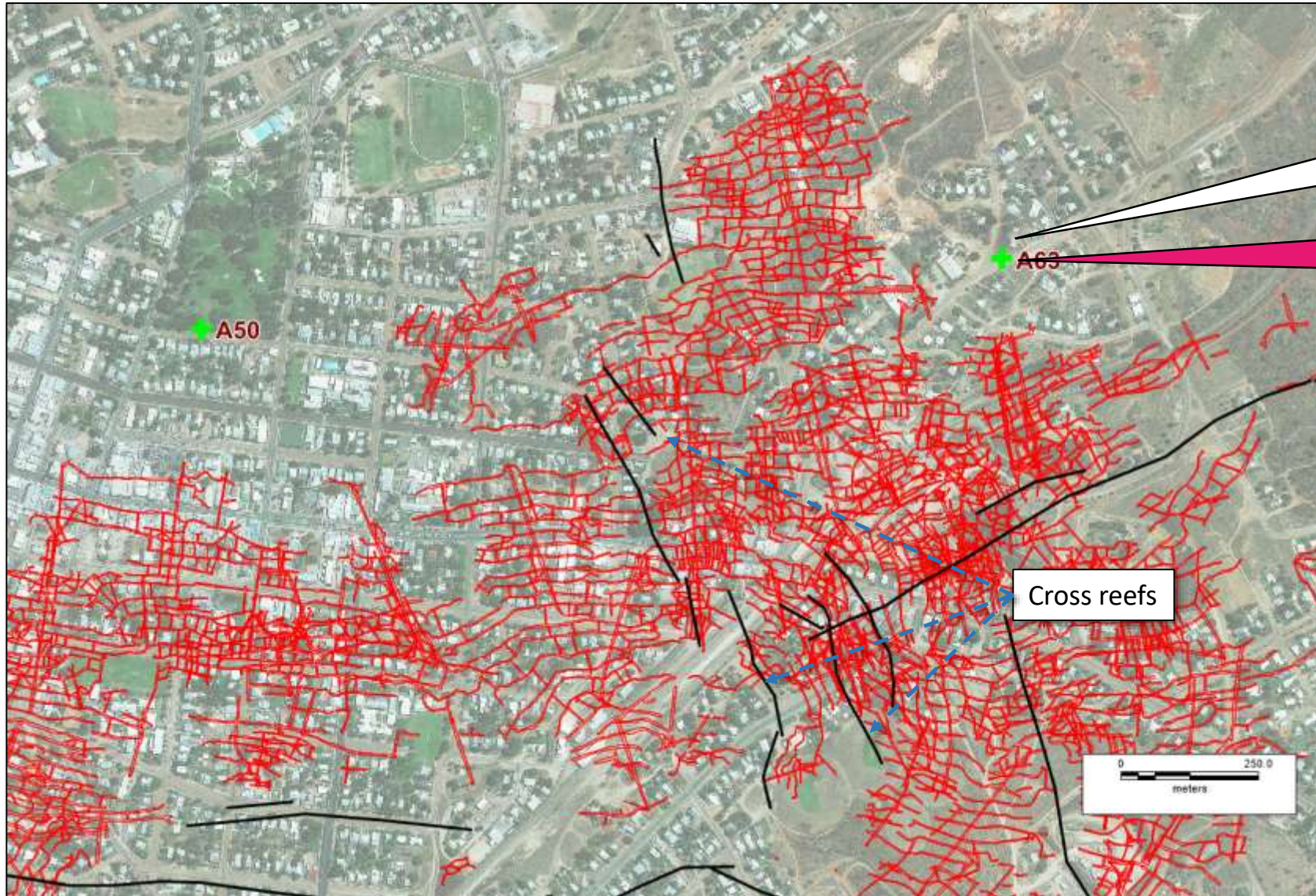
~40cm thick intercept at **-463m**

-467.91m



REAL WORLD RESULTS

CENTRAL MINE



DD93QF5

A63

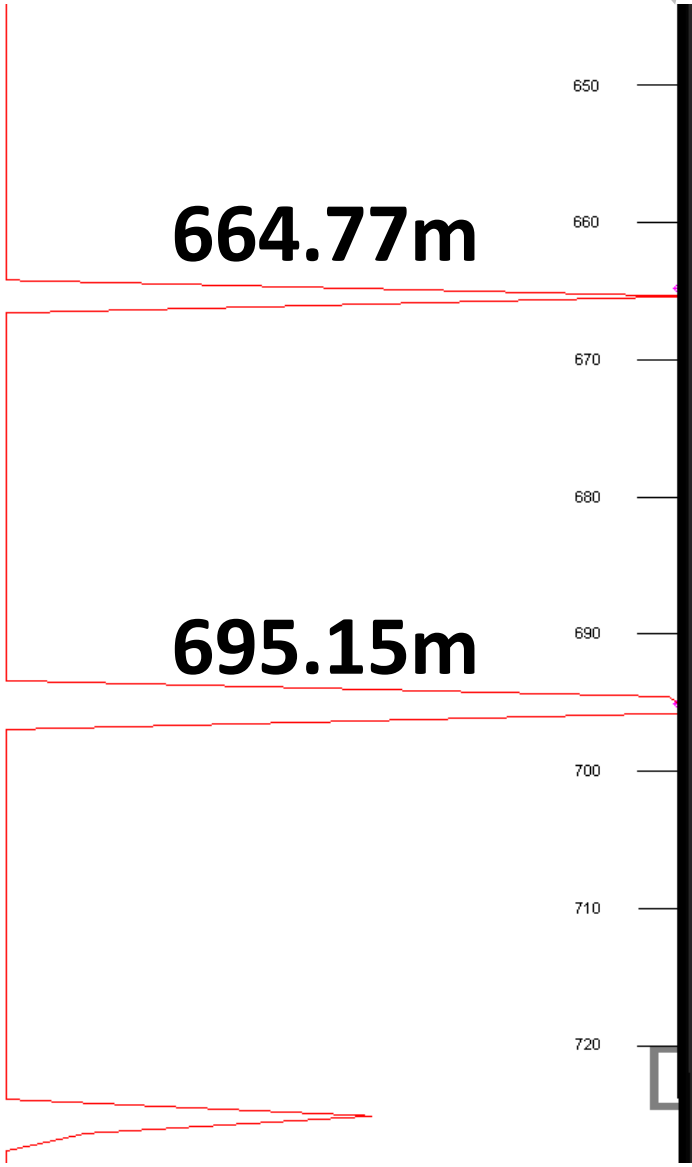
**TESTING THE
BRILLIANT EAST
(C05E) STRUCTURE**

ADR A63

Scan A63

DD93QF5 series drill holes

SECTION OF ADR ELOG plot



DD93QF5_W1

DD93QF5_W2

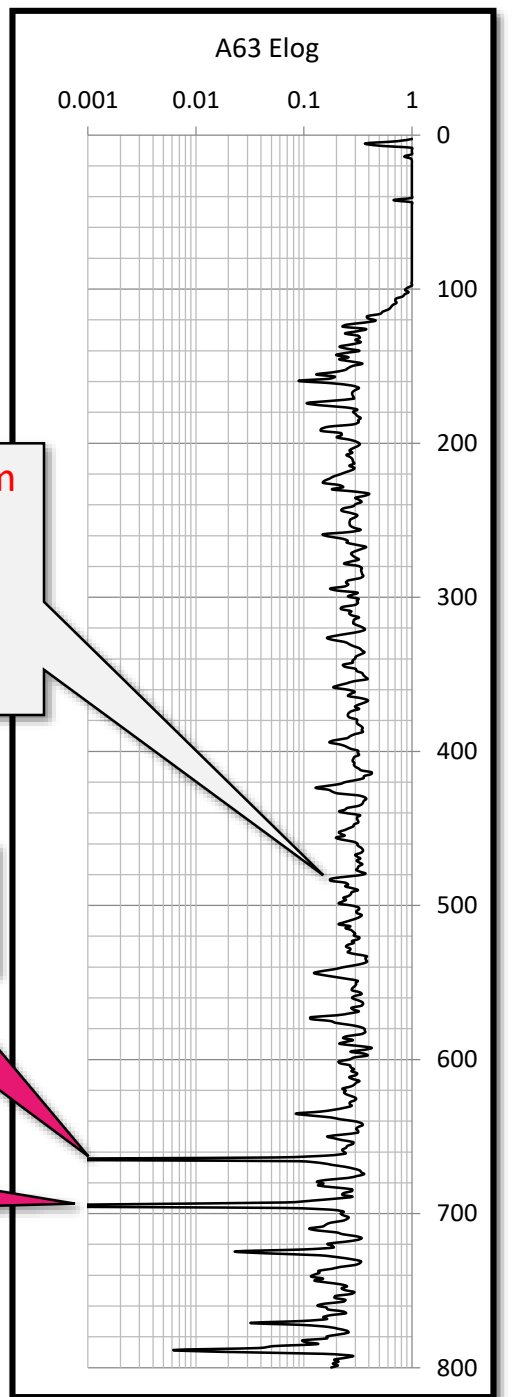
+0.8m and -0.9m

4.86
3.20
4.15
4.209
3.25
4.266
5.67

Intercept - 664m
183 g/t Au
12700 ppm Pb

Intercept - 696m
15.8 g/t Au
8150 ppm Pb

~30m



Intercept - 483.1m
858 g/t Au
7230 ppm Pb
Vis gold in 5cm thick intercept