

Case Studies
where Adrok's
pre-drilling
prognosis was
followed-up by
drilling



Group Eleven Resources Drilling Results v Adrok Prognosis

Sites H1 to H8 at G11-1344-01 and G11-1344-02, Ballinalack, Ireland

Data Collected

Adrok is reporting on the total data collected in areas G11-1344-01 (holes H1, H2, H3, H4 & H5) and G11-1344-02 (H6, H7 & H8) – *Table 1*.

In total, data was collected for 8 sites across the two areas (Figure 2).

Site no.	Hole number (G11R)	Adrok hole name	Hole type	Hole depth (m)	Stares & WARRs
1	G11-1344-01	H1	Blind	800	<ul style="list-style-type: none"> • 13 stares (collected at 0m) • 3 WARRs (0-100m)
	G11-1344-01	H2	Blind	800	
	G11-1344-01	H4	Exploration	800	
	G11-1344-01	H5	Exploration	800	
	G11-1344-01	H6	Exploration	800	
2	G11-1344-02	H7	Exploration	800	
	G11-1344-02	H8	Exploration	800	
	G11-1344-02	H9	Exploration	800	

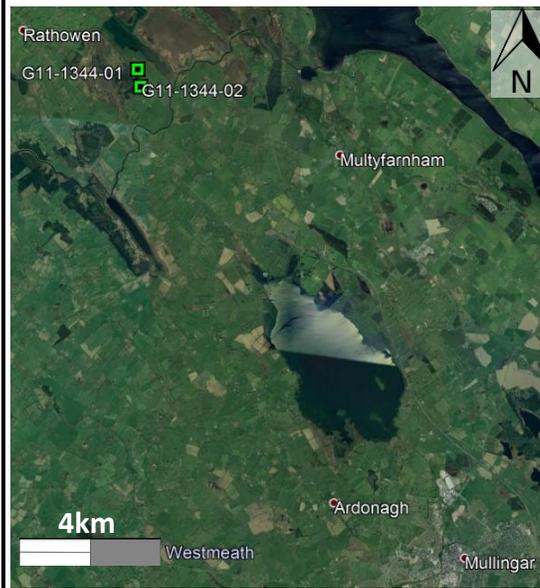
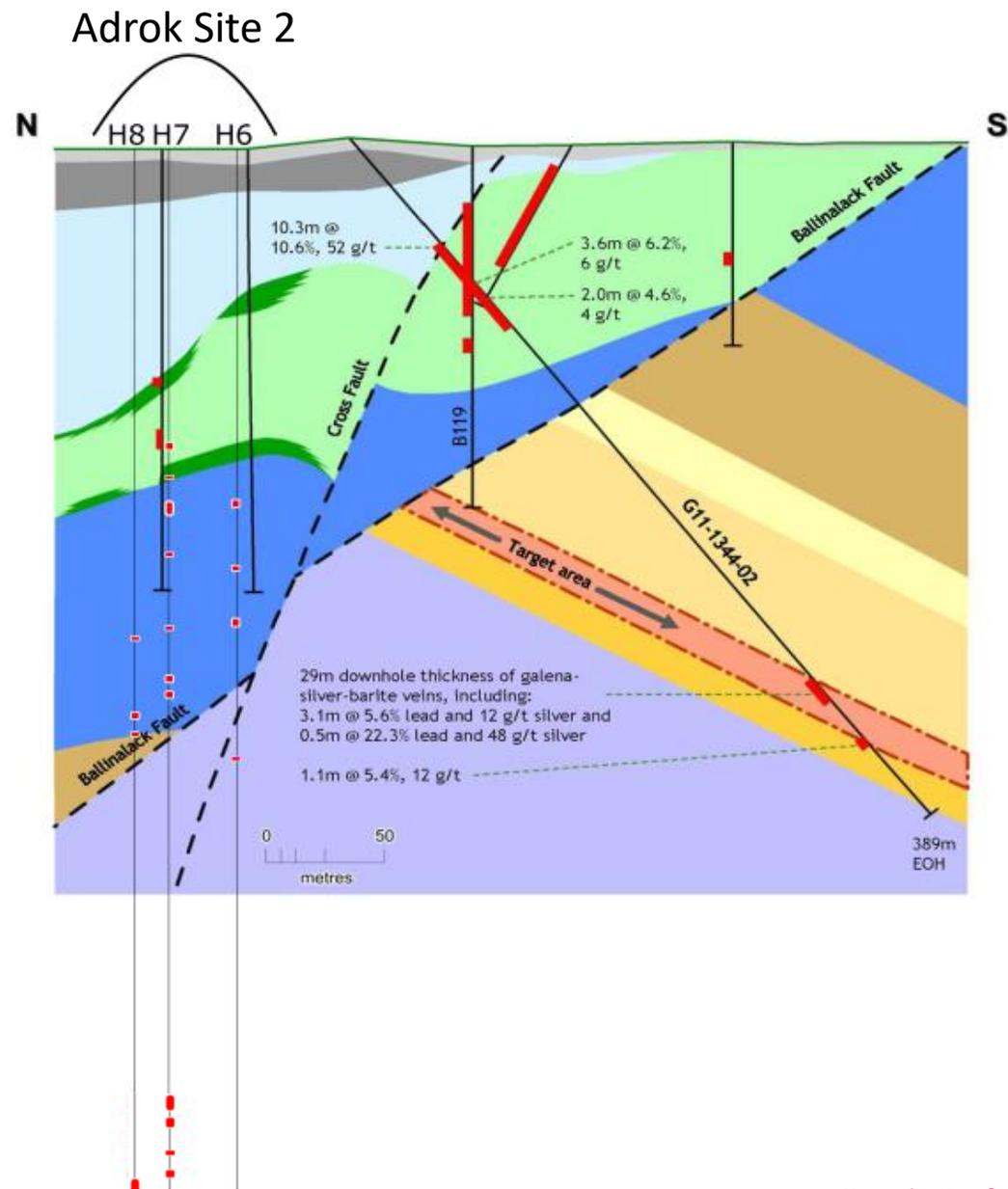
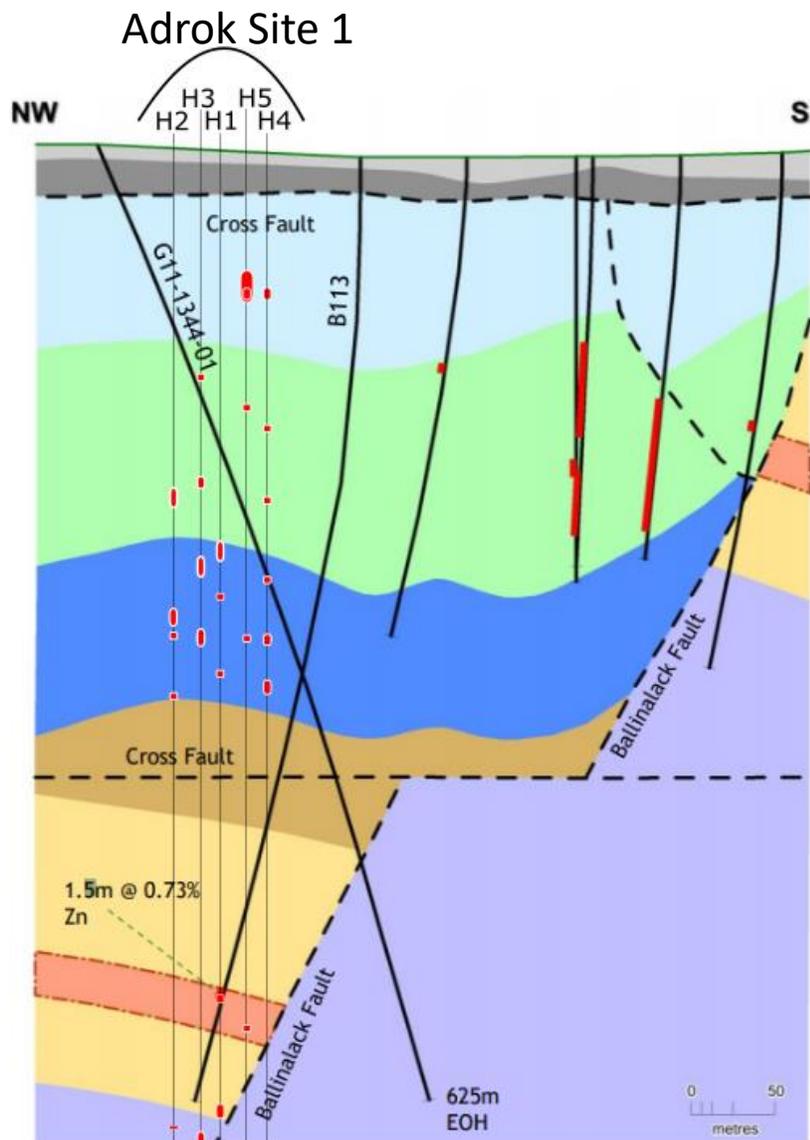


Table 1
Summary of the collected data during the field survey component of this project.

Figure 2
Maps showing the location of the collected data for this project

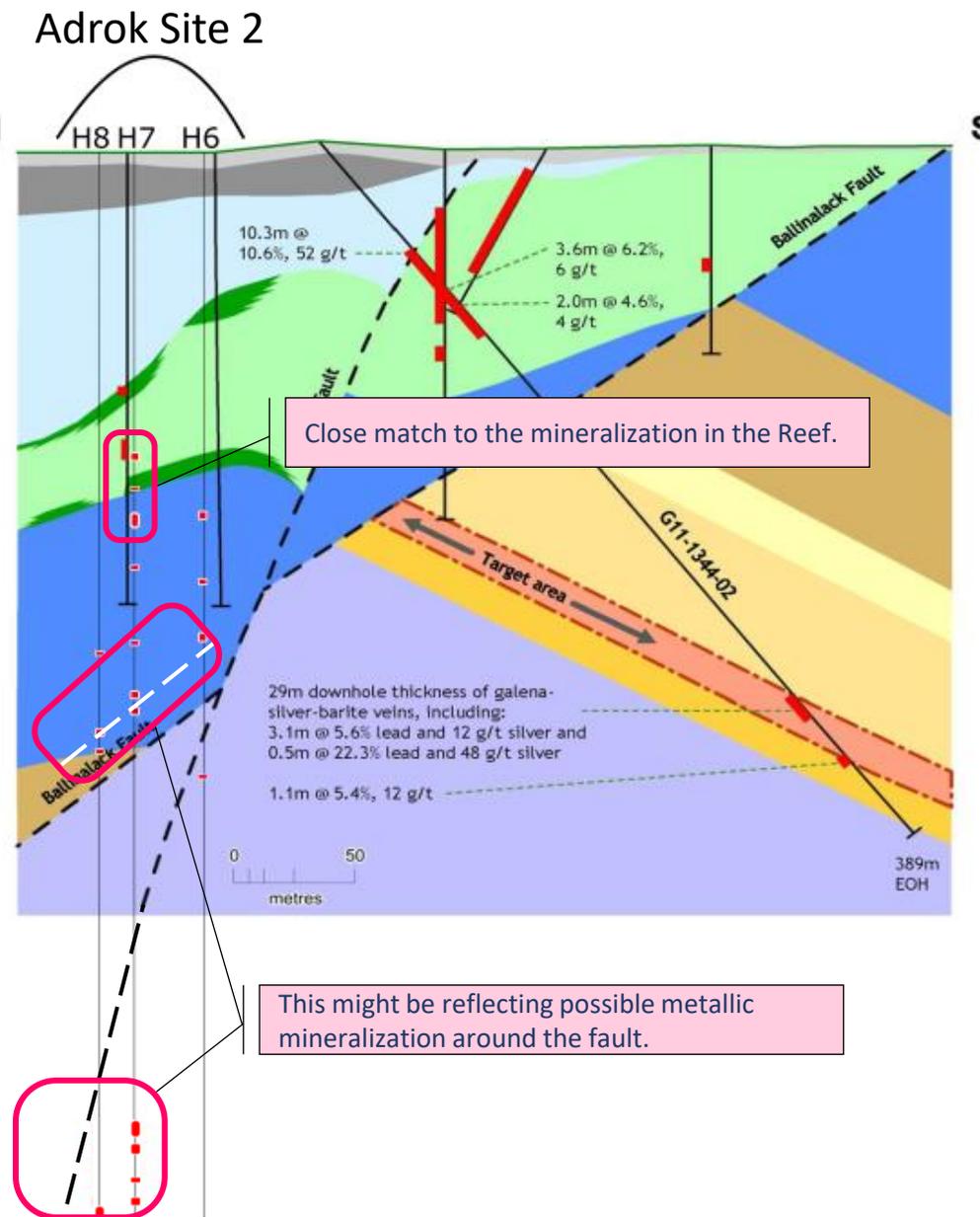
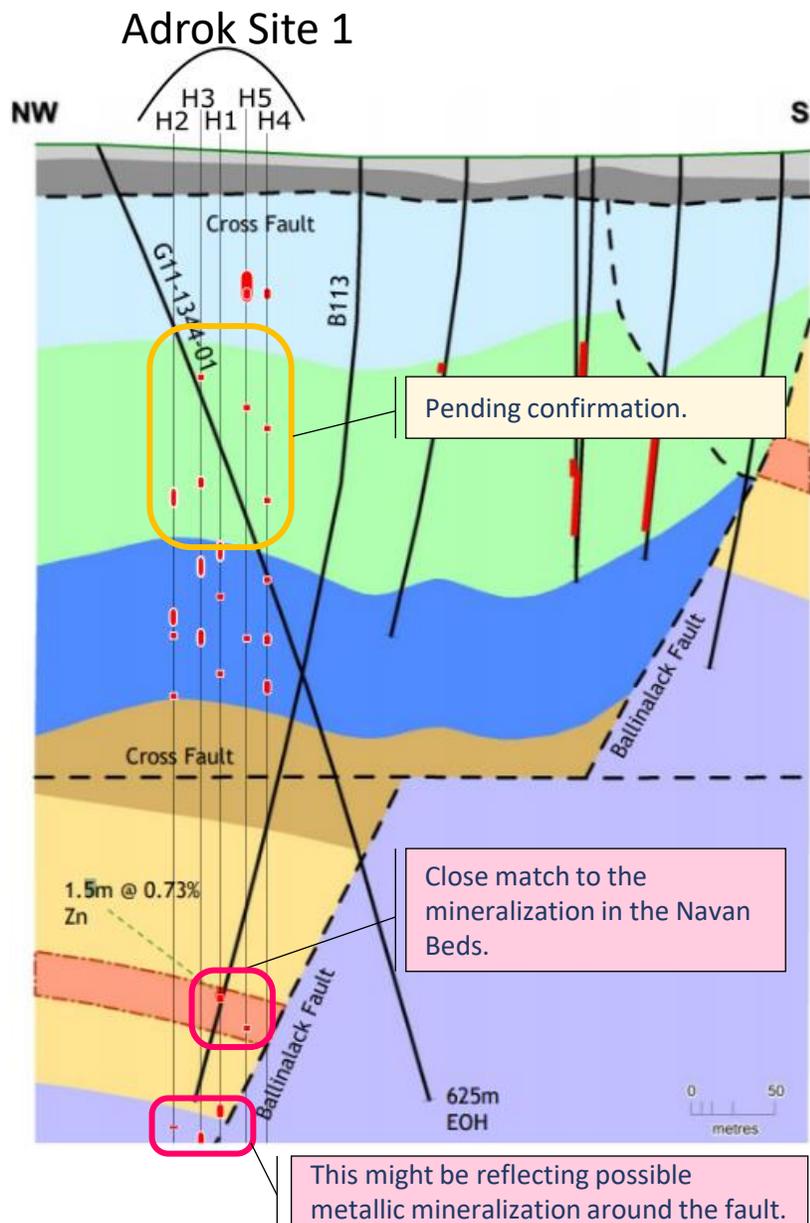
Comparison



Legend:

- Overburden
 - Tober Colleen
 - Upper ABL
 - Waulsortian Reef
 - Reef Equivalent
 - Lower ABL
 - Shaley Pales
 - Upper Pale Beds Sandstone
 - Mixed Pale Beds
 - Birdseye Micrite
 - Basal Clastics
 - Lower Paleozoics
 - Fault
 - Mineralised Zone
 - % Zinc + Lead Combined (unless otherwise noted)
 - g/t Silver Grade
- "Navan Beds"

Comparison - Annotated



"Navan Beds"

Cornish Lithium / Strongbow Exploratin Drilling Results v Adrok Prognosis

Adrok site UD-ST03 subsequently drill hole GWDD-002, Cornwall, England

Adrok recently completed an ADR survey for Cornish Lithium in 2020Q1. The aim of the survey was to help detect water and sulfide bearing fractures beneath the surface in an area where drilling (GWDD-002) was carried out after the survey was complete.



Drill hole assay results reported by

(www.strongbowexploration.com)
07 April 2020

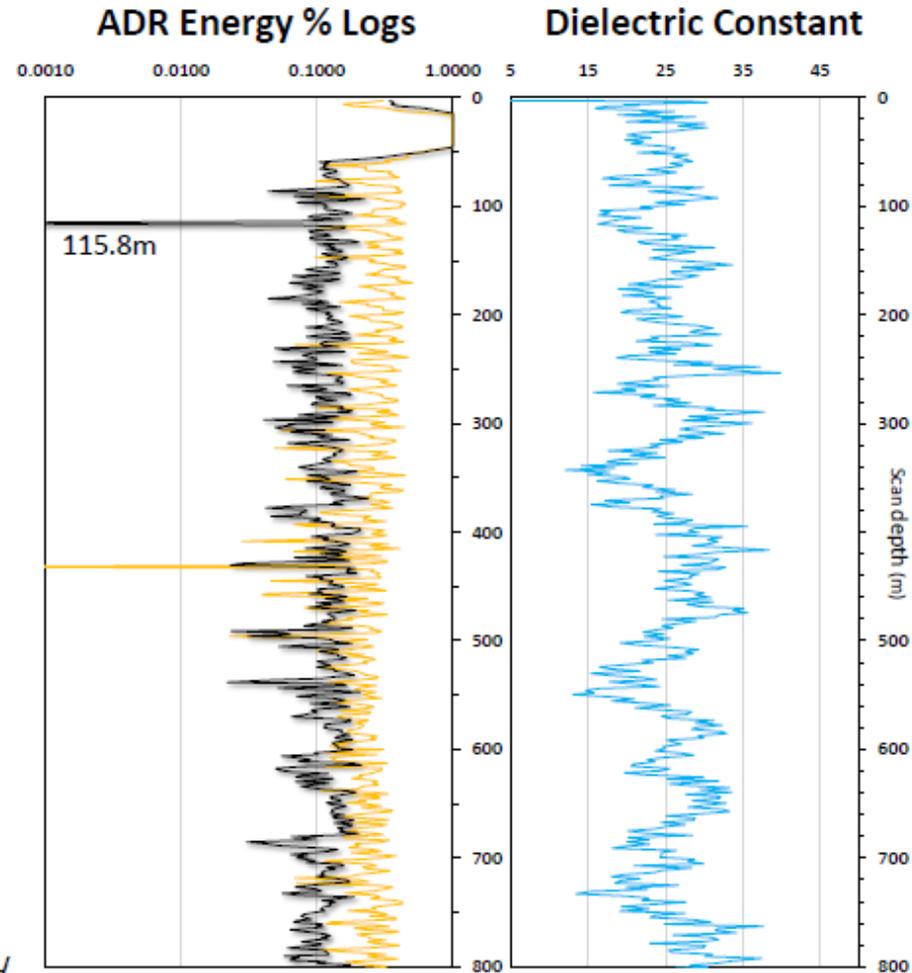
Diamond drill hole intercept depth:
90.6m-105.29m
Interval width: 14.69m
Cu: 7.46%
Sn: 1.19%

ADROK's ADR Energy results

(blind scan UD-ST03)

Energy response depth:
115.8m

ADR results: Maximum energy return from merged returned energy.
Scan angle: 85°→170 from vertical



-  Merged scans
-  Single scan SII-4
- Adrok scan ID number UD-ST03

The ADR survey results presented here are from blind ADR scan. Adrok had no information pertaining to the results from Strongbow Exploration Inc. until the public release of results from diamond drill hole GWDD-002 on April 7th 2020.



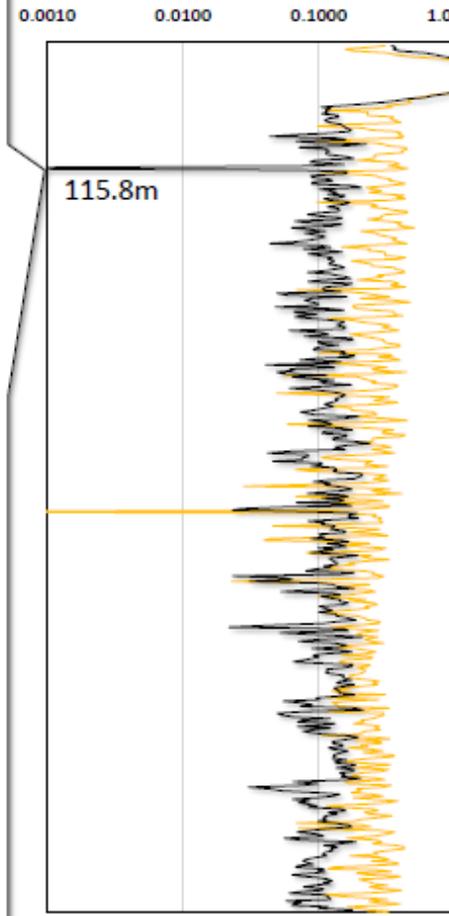
E% anomaly (<0.01) at 115.8m

A strong anomaly in the combined energy graph (black line) is indicative of a boundary between two layers with contrasting dielectric permittivity values (ϵ_r) such as meta-sediments and sulfides. Based on results from other studies of narrow vein gold + sulfide deposits (e.g. Charters Towers, Australia), these strong signals in the returned energy signal are likely to be sulfides. Adrok has previously shown that values less than 0.01 in the E%Log results are indicative of sulfides (the reader is directed to the case studies found at www.adrokgroup.com).

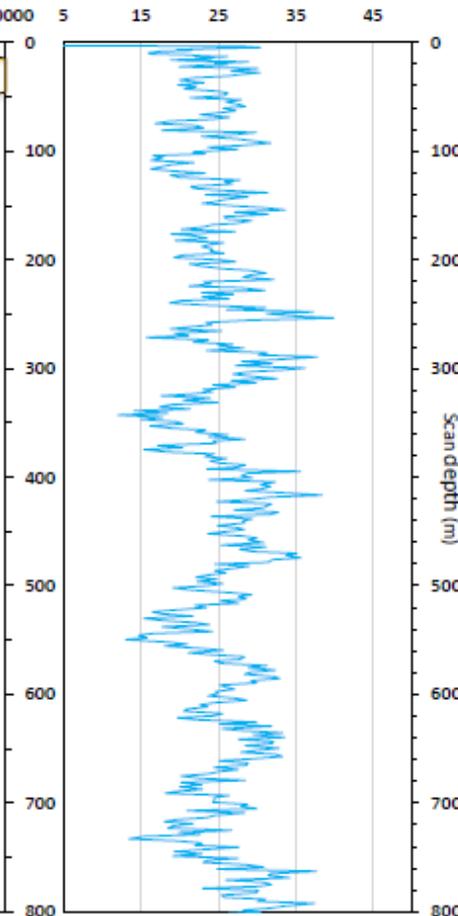
The anomaly found here corresponds well with the diamond drill results released by Strongbow Exploration Inc. in drill hole number GWDD-002. The results were released on 7 April 2020 whereas the results from the ADR scan, which was carried out at the same collar location, were finalised before the drilling had been completed and well before the results were simultaneously released to the public and to Adrok.

This represents another important result for Adrok.

Energy % Logs



Dielectric Constant



- Merged composite scans
 - Single scan SII-4
- Adrok scan ID number UD-ST03

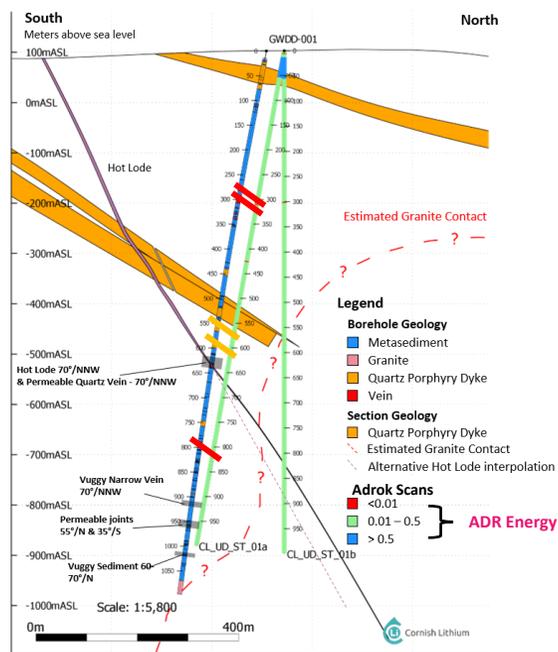
Proof of Adrok's success in GWDD_001

The results provided here are simply a reminder of what was delivered on February 2020, previous to any drilling confirmation. Now that we have access to the drilling results and your summary panel, we can truly show how our tools can be a precise and useful addition to your toolset.

We can confirm and prove that we can reliably identify these three elements of a geothermal system:

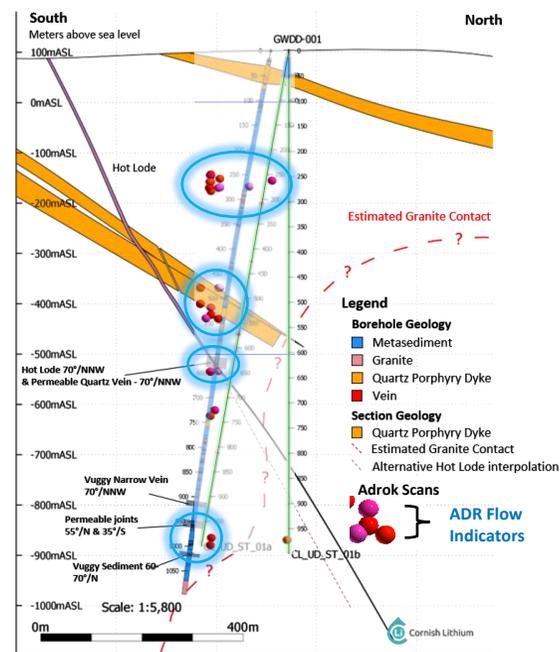
Structures

The ADR Energy readings under 0.01 offer a solid prediction of **Veins and Dykes**. It proves useful on determining sudden contrasts, as well as a useful indicator to determine the presence of the granite.



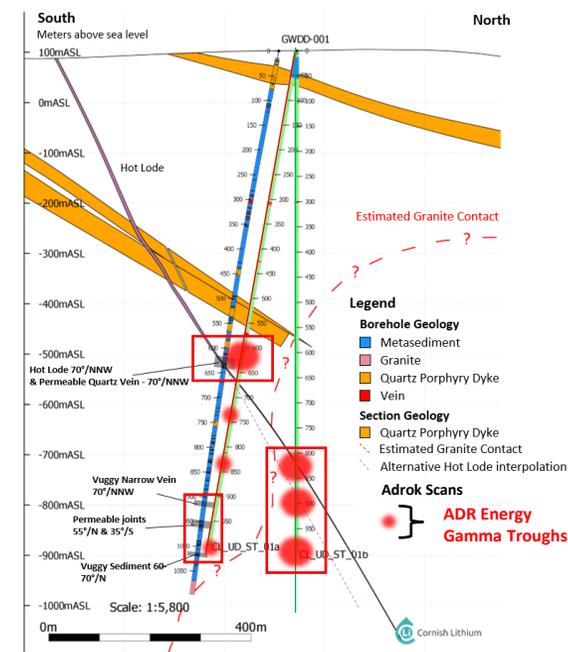
Flow

The ADR Standing Wave Oscillation **flow** readings coincide with the hot lode and **permeable joints**, the **flow** is also extinguished towards the granite.



Temperature

The ADR Energy Gamma **temperature** proxy has the widest troughs around the permeable sections, as well as within the estimated **thermal** granite.



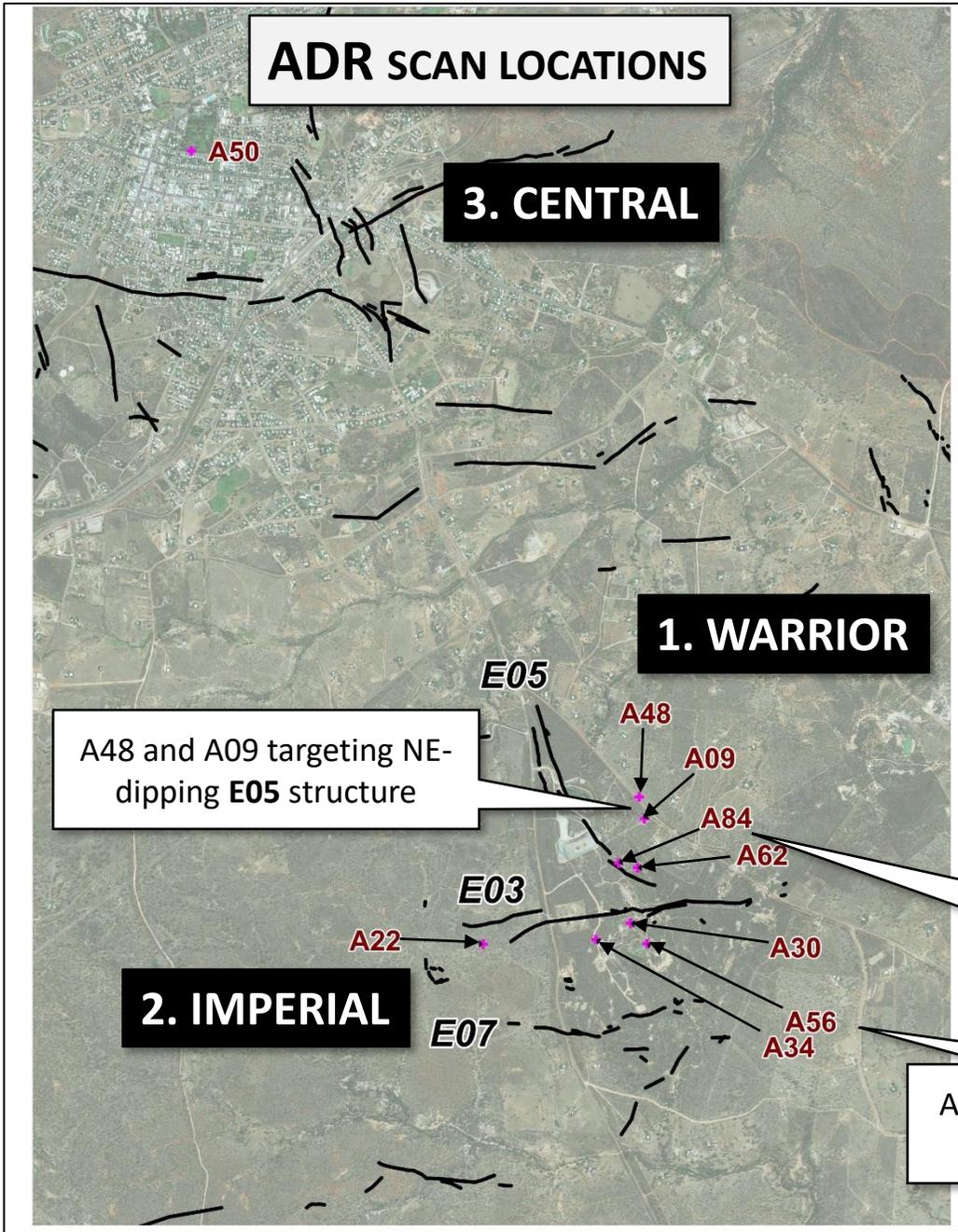
The combined potential of these three techniques adds a proven de-risking and prospect-defining tool to any onshore **geothermal** exploration project, as well to projects exploring for **veins and fractures, water or temperature**.

After working with Cornish Lithium during early 2020, Adrok has continued improving their thermal analysis tools (as part of the development of a neural network based approach), as well as of sulphide identification techniques.

CitiGold Drilling Results v Adrok Prognosis

Client drilled multiple holes on Adrok's prognosis, Queensland, Australia

RESULTS



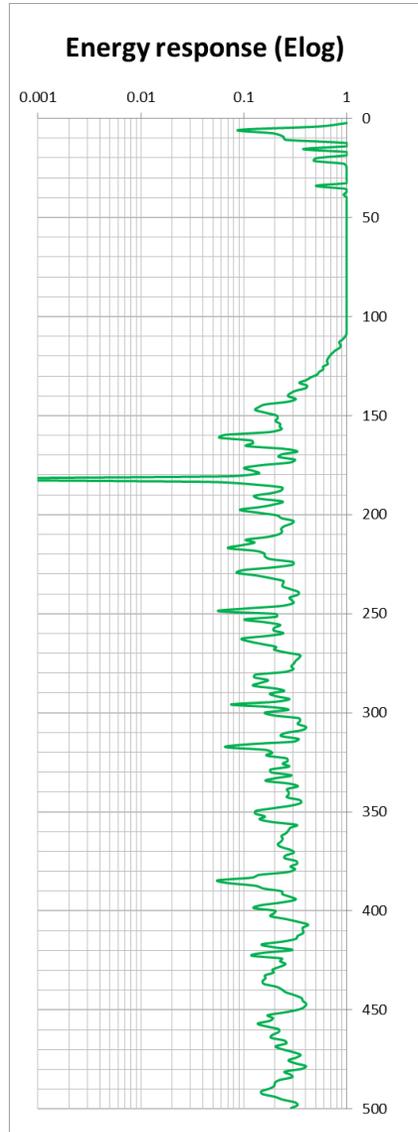
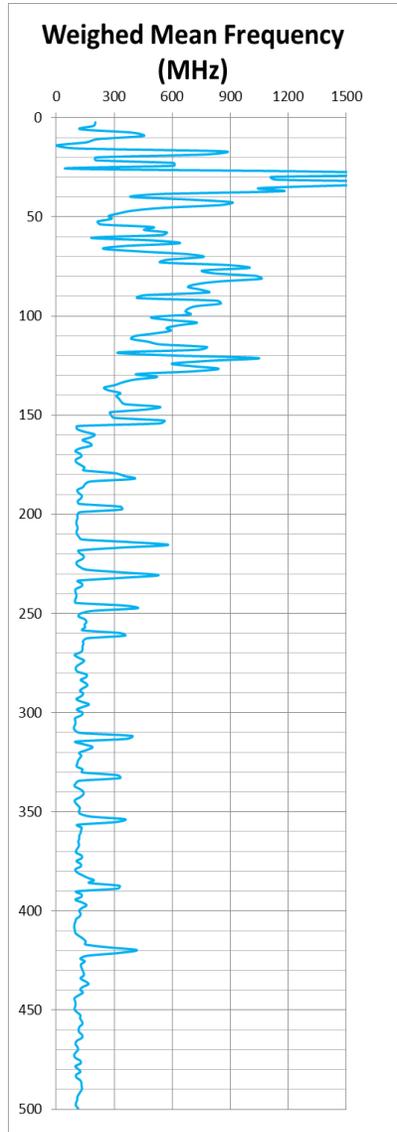
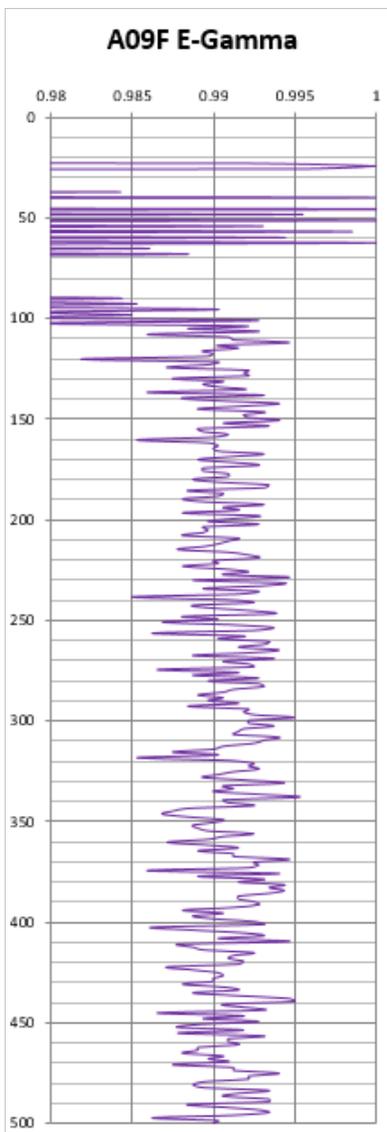
As this was a fully commercial test of the ADR technology by Citigold, only one drill core was provided to Adrok for training purposes. This allowed Adrok to establish settings and the background conditions of the survey which, for example, differs significantly from an oil-focused survey.

No further information regarding the location of sulfides was given to Adrok. Furthermore, several scans were carried (e.g. A56) out where even Citigold geologists had no knowledge of any sulfide mineralisation and where drilling was to commence AFTER the survey had been completed.

Finally, it should be explained that the target structures, while appearing superficially simple on basic maps, are complex at the tens of meters scale.

ADR RESULTS – HOW THE RESULTS ARE PRESENTED AND INTERPRETED

An example of some of the charts provided to Citigold by Adrok at the end of the processing



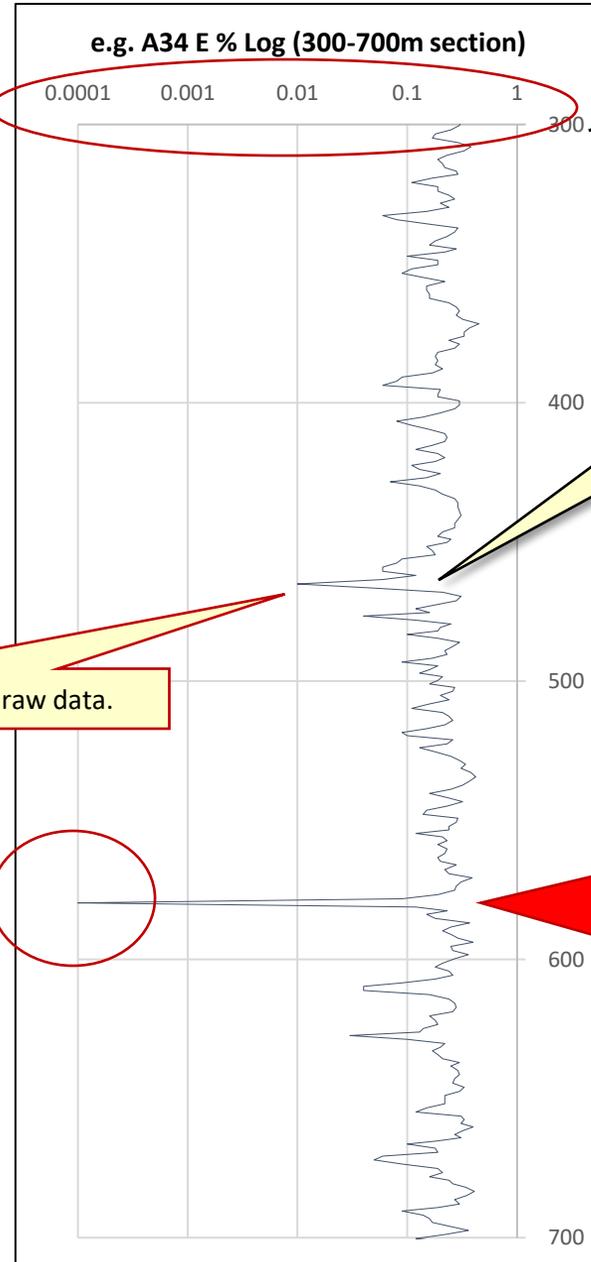
After examining the results presented by Adrok, it was determined that, as predicted by the physics, the interface between granite (DC= ~ 8) and the layer of massive sulfides (e.g, pyrite DC= >75), produced a strong reflection in the measured returned energy. Accordingly, the most useful result was the relative energy chart of which an annotated example is presented on the following page for scan A34.

Some features of the data need to be noted in order to understand the data as its presented over the page.

HOW TO READ A RELATIVE ENERGY CHART (E % Log) and what it means for sulfide potential

The X-axis plots RELATIVE ENERGY as a percentage and on a LOGARITHMIC SCALE. Accordingly, because the values are relative and scaled, the lowest value(s) will equal 0 and the highest value(s) equal to 1. HOWEVER, a value of 0 cannot be plotted on a log scale! To overcome this problem but retain the log scale, the lowest value of the series (which has been corrected to equal 0 in the processing), is assigned a value of 0.0001.

A LOW VALUE is equivalent to proportionally more energy (stronger returned/reflected signal) recorded at the receiver for that contact/boundary/change in DC.



Depth in meters below surface

At Charters Towers, 0.01 considered "anomalous and significant"

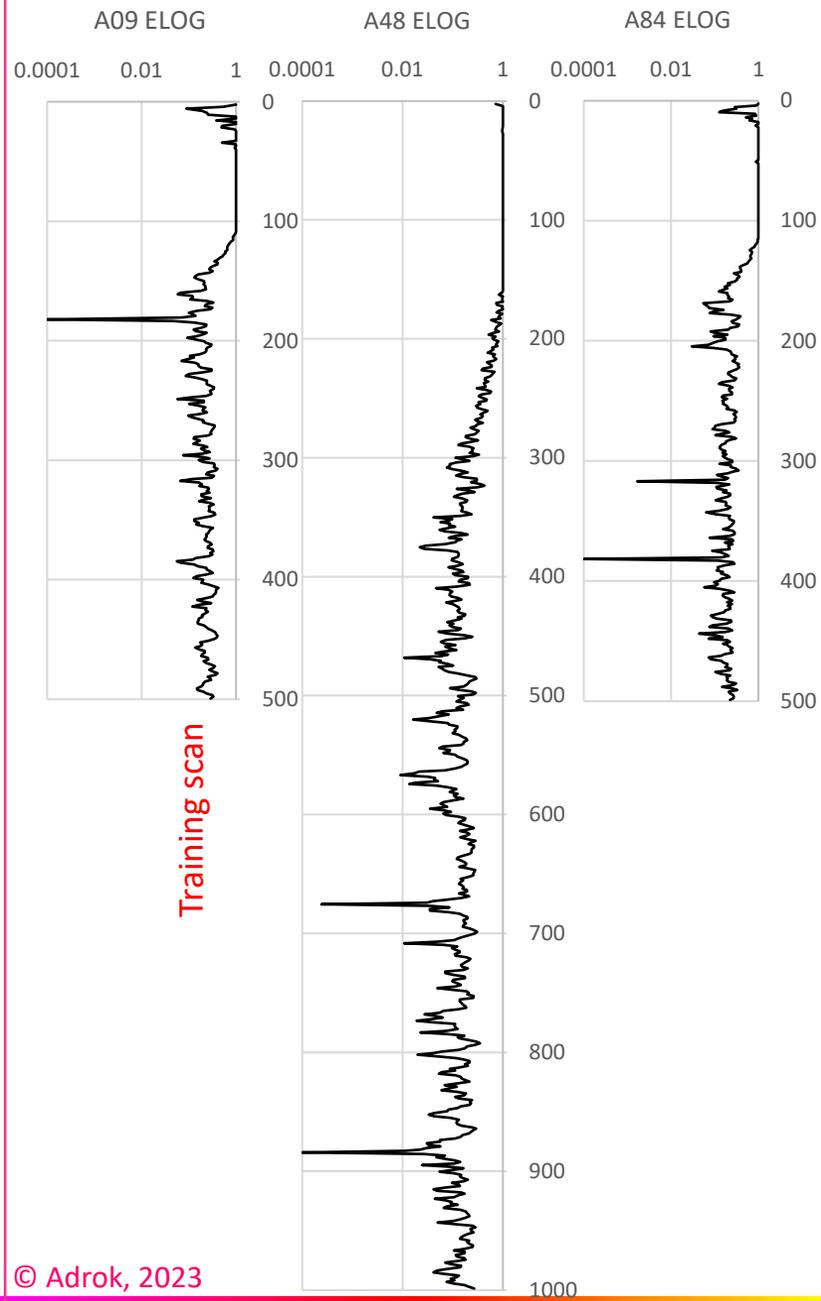
This is the second lowest value in the raw data.

In the raw data, this value will be the lowest returned energy. The "trough" is indicating a strong contrast in DC at this location/depth.

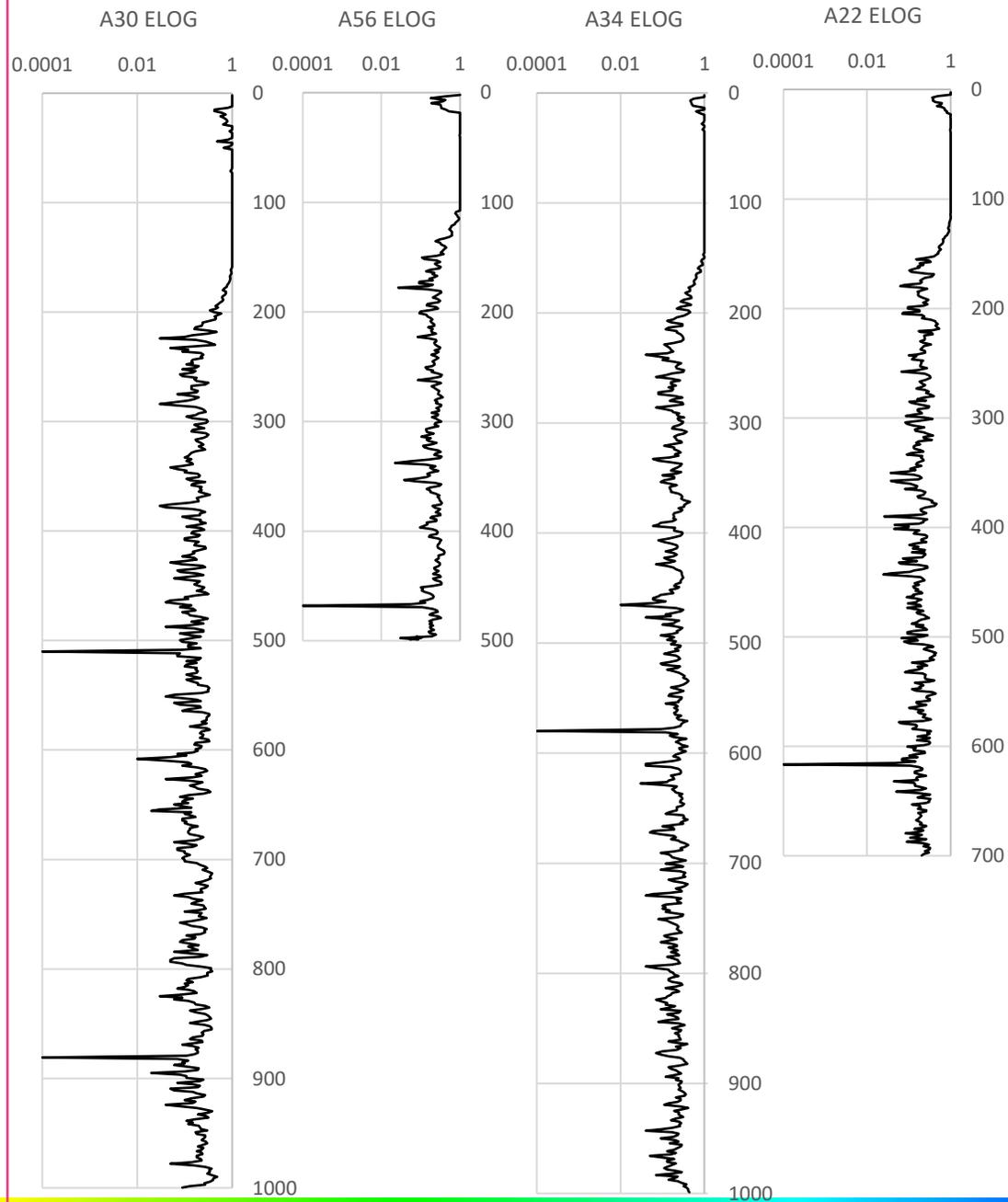
The host granite at Charters Towers is homogeneous so the major changes in DC are likely to be at the boundary with massive sulfides.

This response DOES NOT measure the thickness of the layer, simply the contact where there is a contrast between two layers with contrasting DC!

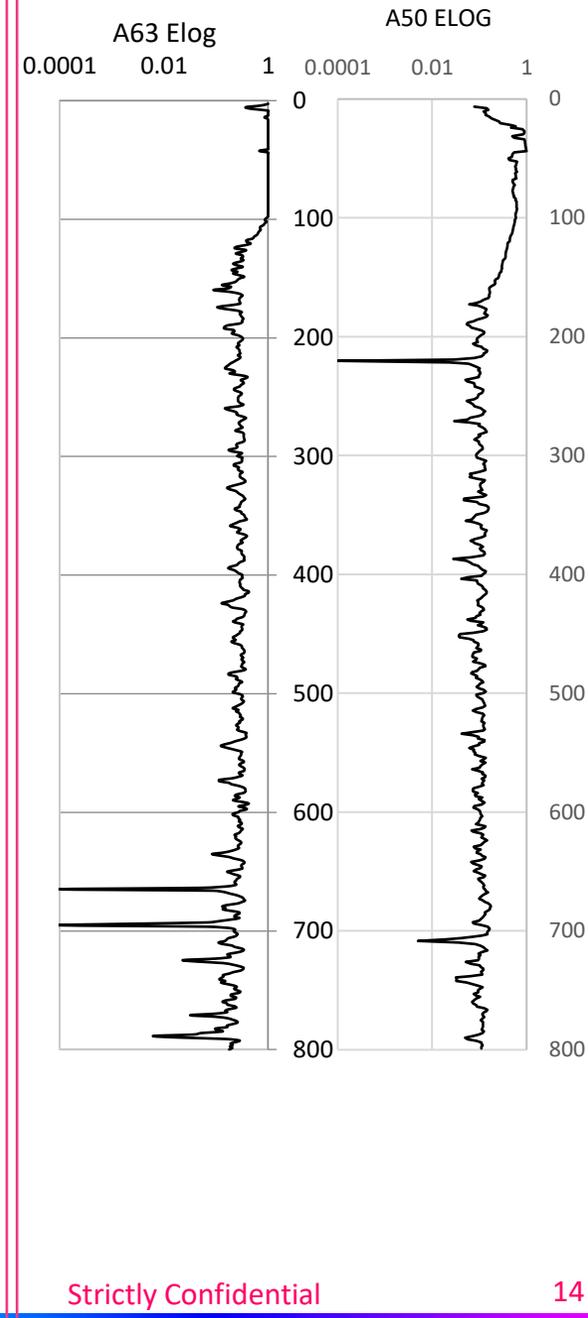
1. WARRIOR AREA – RESULTS SUMMARY



2. IMPERIAL AREA – RESULTS SUMMARY

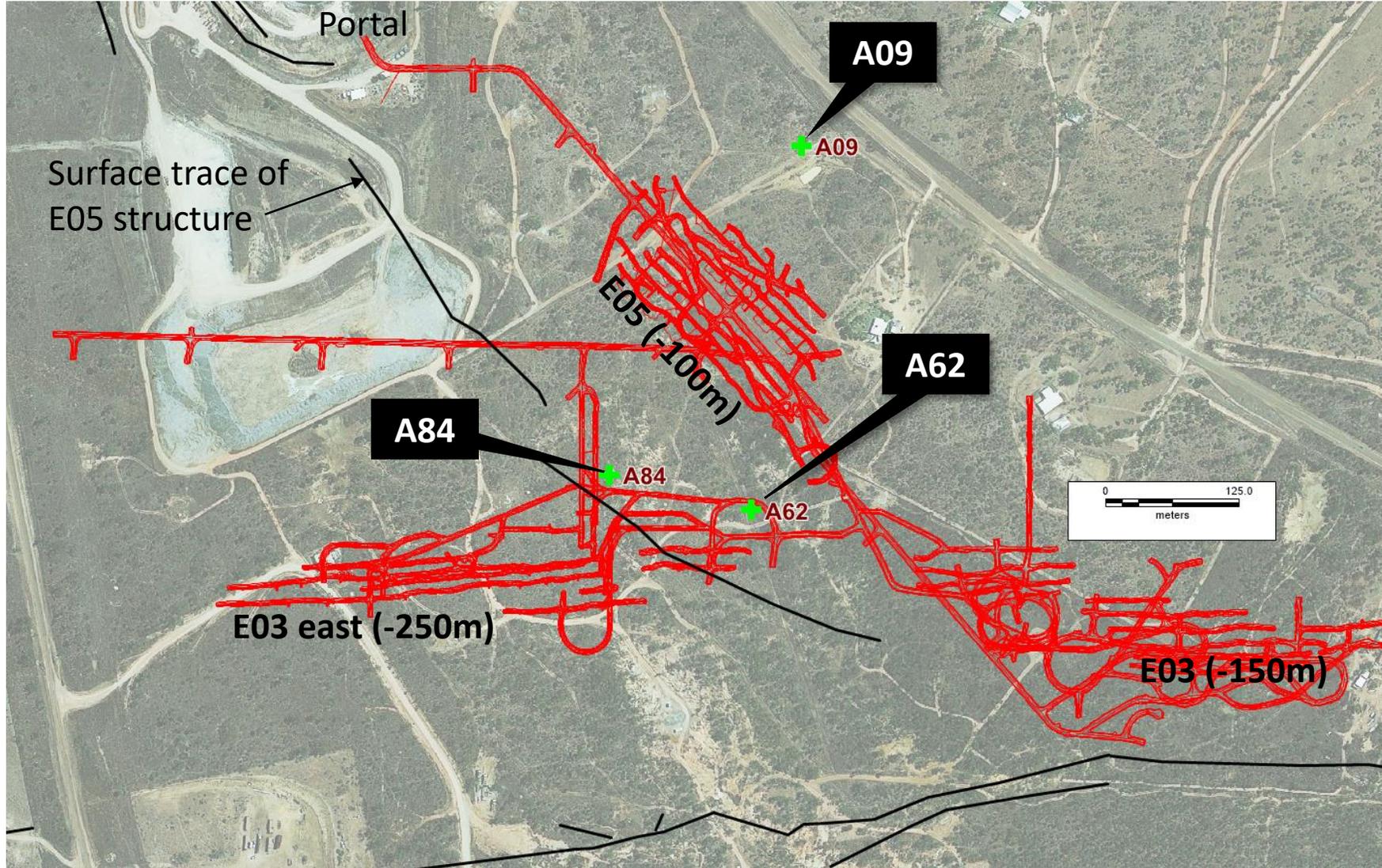


3. CENTRAL AREA – RESULTS SUMMARY



1. ADR scans competed in the “WARRIOR” area

Plan view of the underground mine at WARRIOR (red) superimposed on satellite photo



- Extensive drilling around mine.
- Sulfides remaining in pillars and unstopped areas of the mine – exact location known to Citigold only.

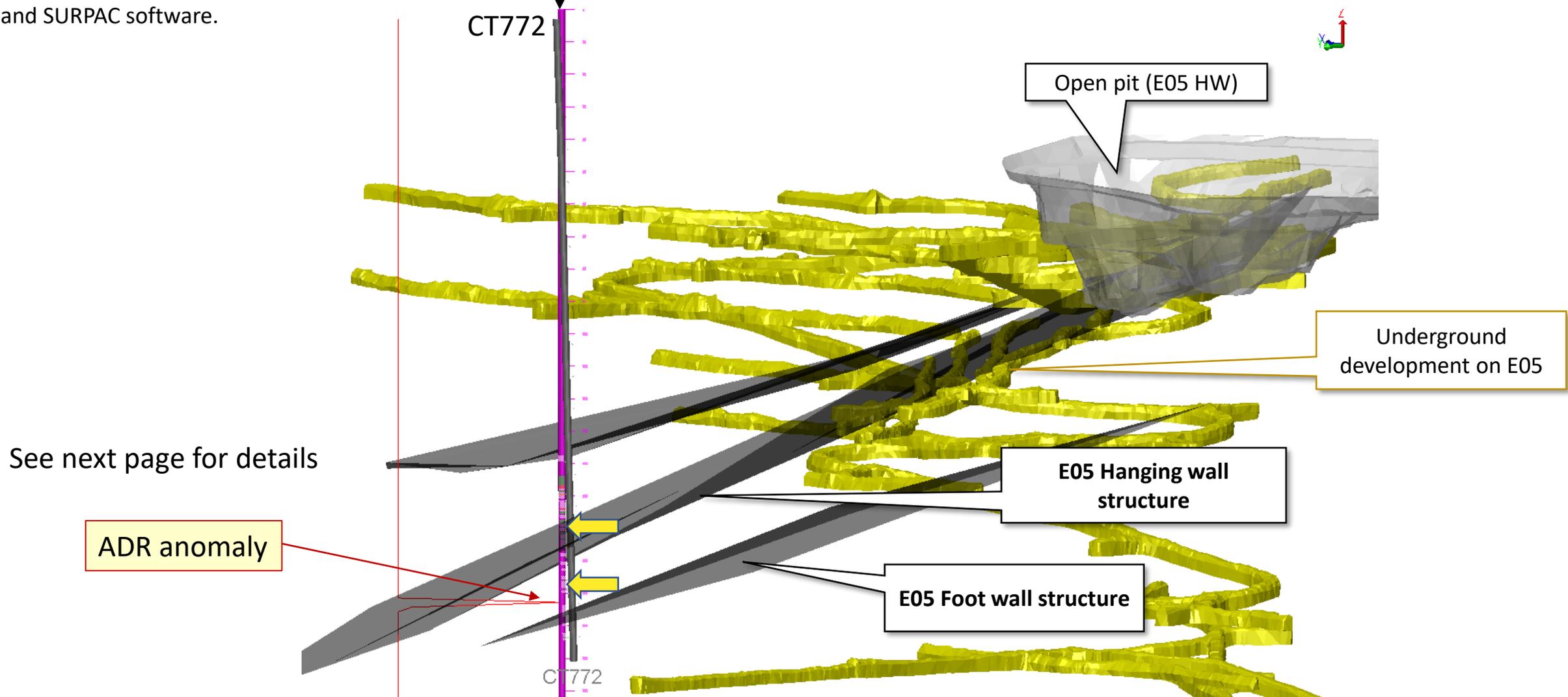
A09 – test/training scan targeting E05.

A84 and A62 – Scan targeting areas of known sulfides (A84) and inferred sulfides (A62) on the N-dipping E03 structure.

Surface trace of E03 structure at sfc. N-Dipping @ ~45 degrees.

*All 3D Mine models generated using 3DMine and SURPAC software.

A09 SCAN (purple) (collar – oblique view from 3D model without surface terrain so it appears above ground level)



See next page for details

ADR anomaly

Open pit (E05 HW)

Underground development on E05

E05 Hanging wall structure

E05 Foot wall structure

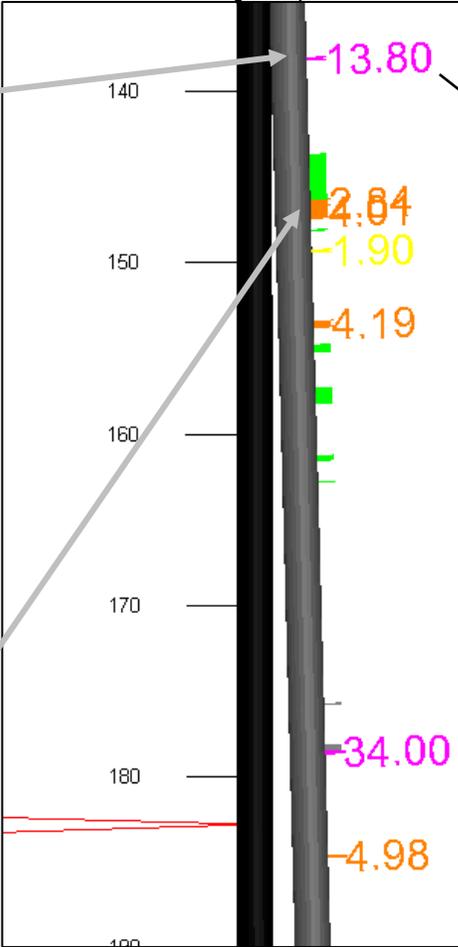
ADR A09

A09 Scan

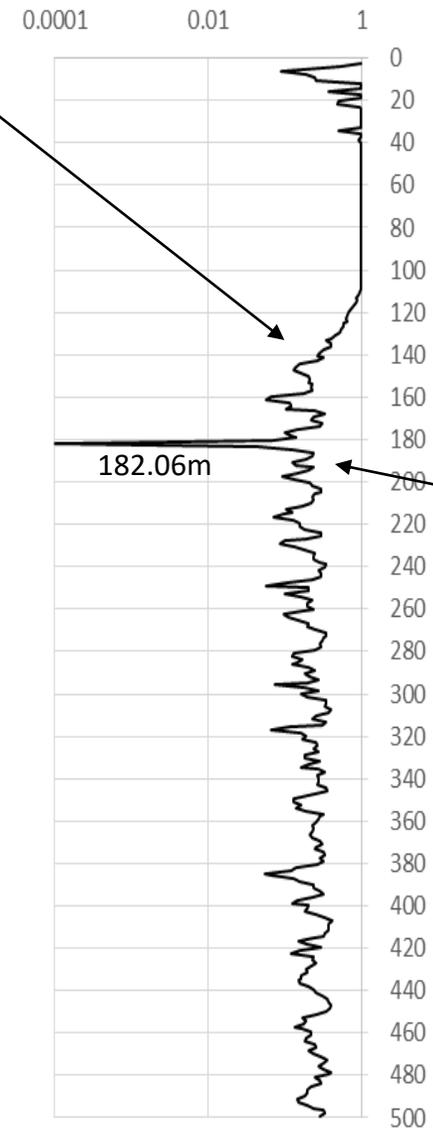
CT772

3. E05 intercept in drill core
High lead and gold

1. Small Intercept at 135m



ADR SCAN E % Log



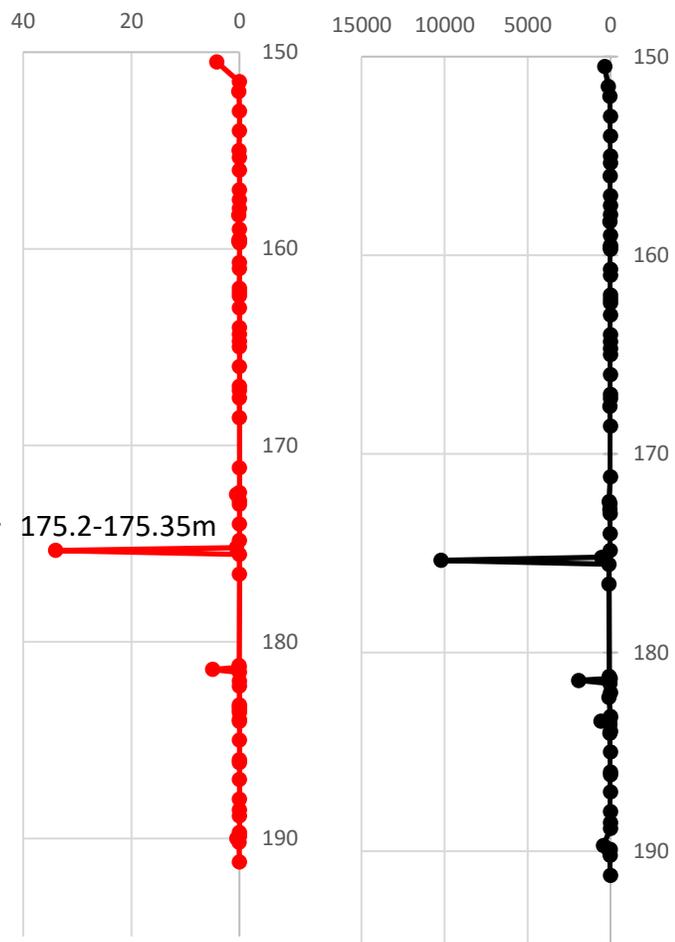
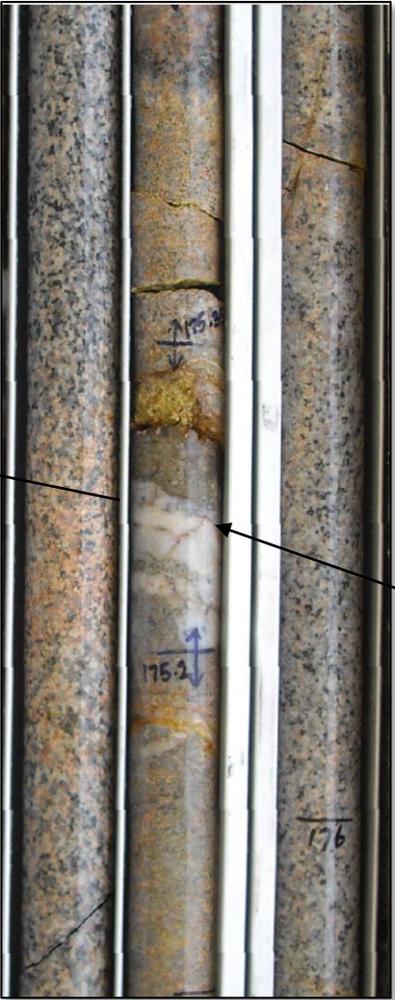
2. Intercept at 145m
No sulfides, Low-grade gold



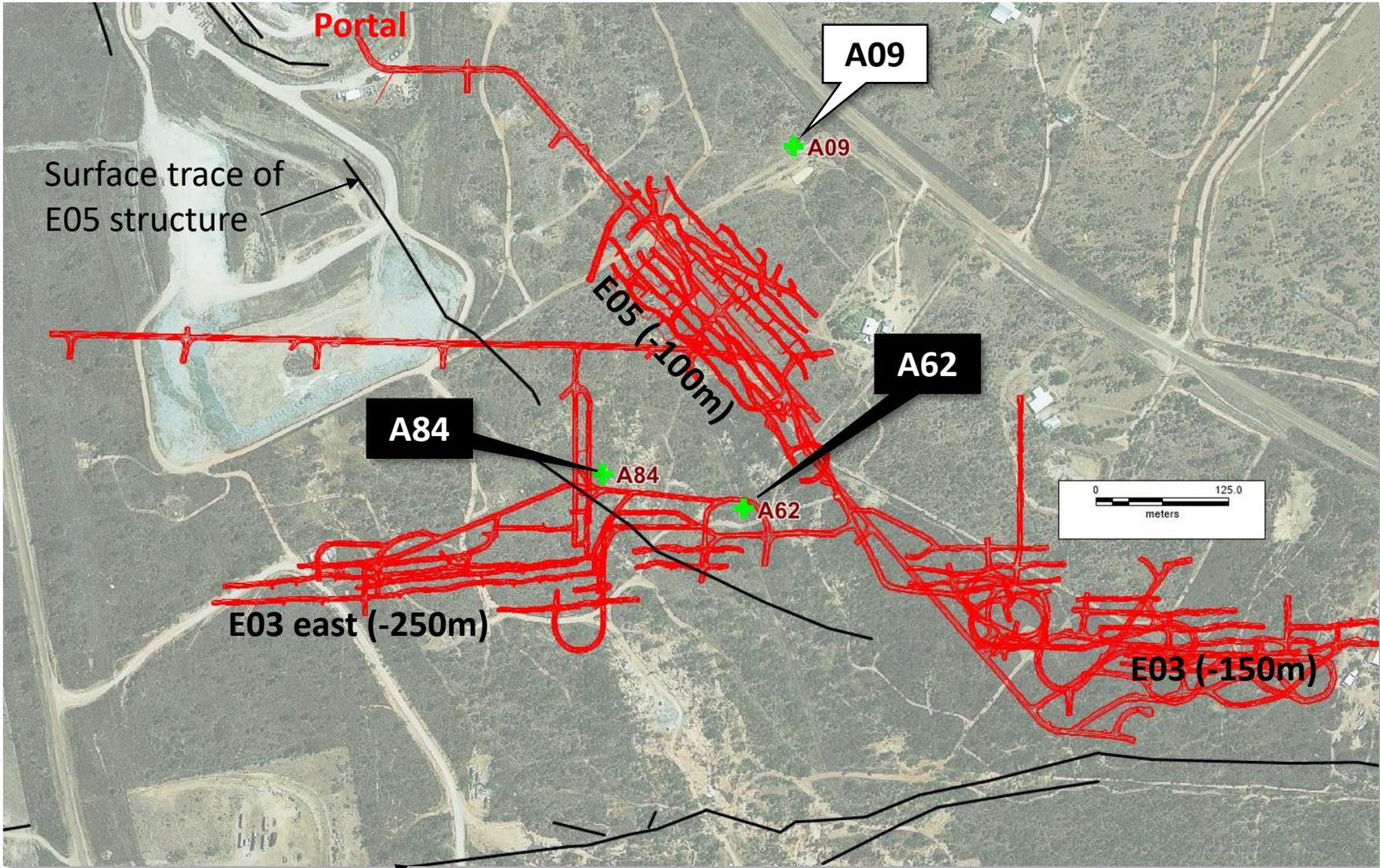
CT772 Au (ppm)

CT772 Pb (ppm)

Assay results



+7m



Scans A84 and A62 were carried out in areas where drilling had identified sulfides (A84) or where mining had not removed known sulfides for under ground support. Both of these scenarios were an ideal test for the ADR as the precise location of the remaining ore was only known to Citigold geologists and were not disclosed to Adrok. Furthermore, the sulfides were confirmed to be mine-grade and therefore also an ideal type of target material.

Wireframe model of underground level drives and access drives. E-W trending drive are lode-parallel with increasing depth (deeper) towards the north. Greyscale semi-transparent air photo overlaid for spatial reference.

Drill hole CT3067
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

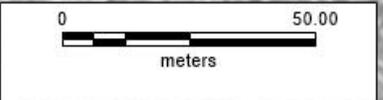
725

E03 RL 727

E03 RL 767

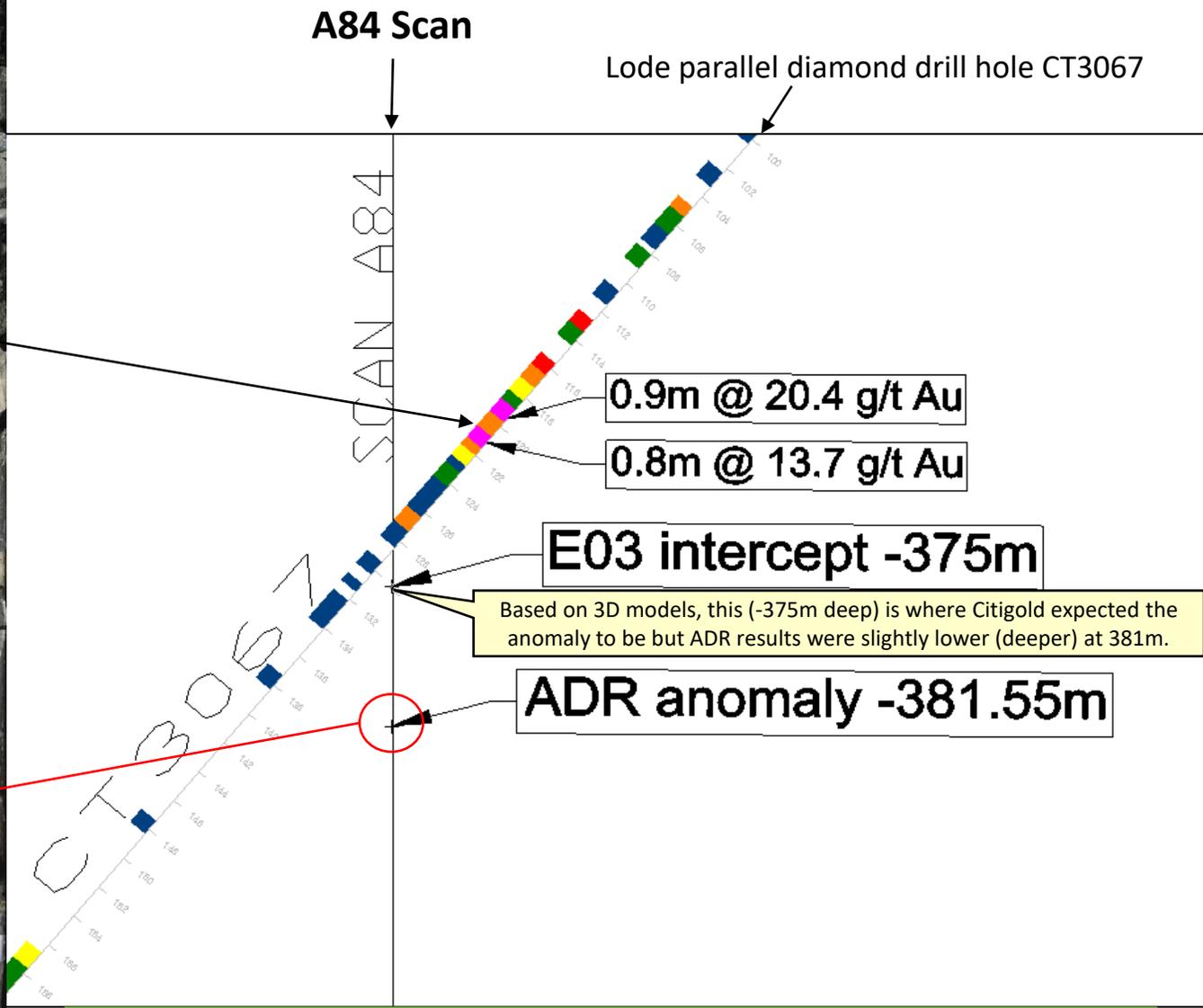
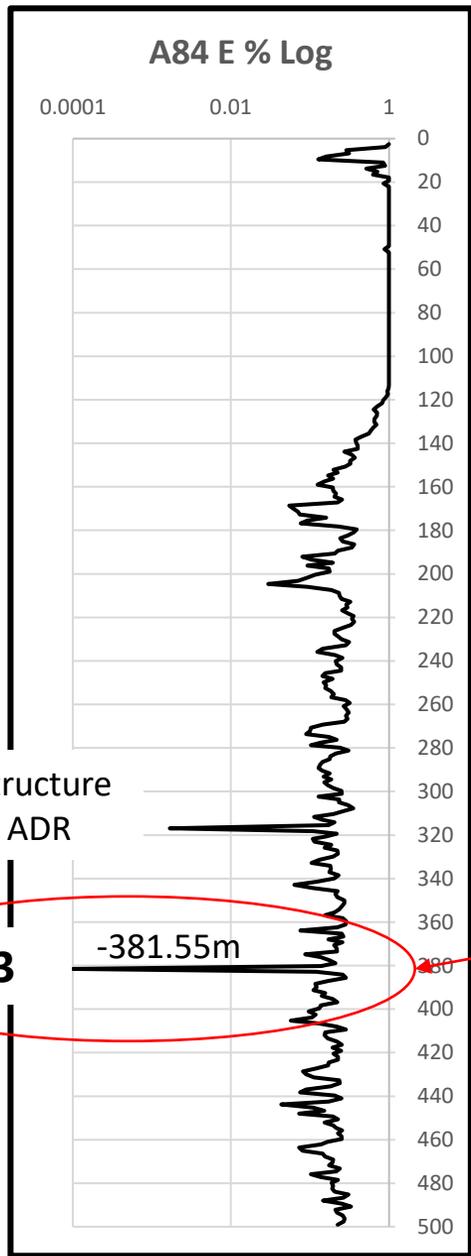
E05 surface trace

Surface RL 968m



This is a lode-parallel drill hole (CT3067) (plunging ~45 degrees down-dip) drilled from underground (red circle represents collar). The structure dips to the north and the drill hole follows the dip to the north.

CT3067



Screenshot from Surpac 3D Mine model - Cross-section (looking east) from the area where part of C3067 intercepts ADR scan A84 at around 370m depth

ADR A84

© Adrok, 2023

Screen capture from 3D mine model. View looking east along E03 structure (blue sfc labeled). The two scans, which were aimed at sulfides on the E03 structure are shown (black lines). The red lines parallel to the scans are the anomalous E % Log measurements. The depth where the peaks in the red lines touch the vertical scan trace are the depth at which the anomaly occurs.

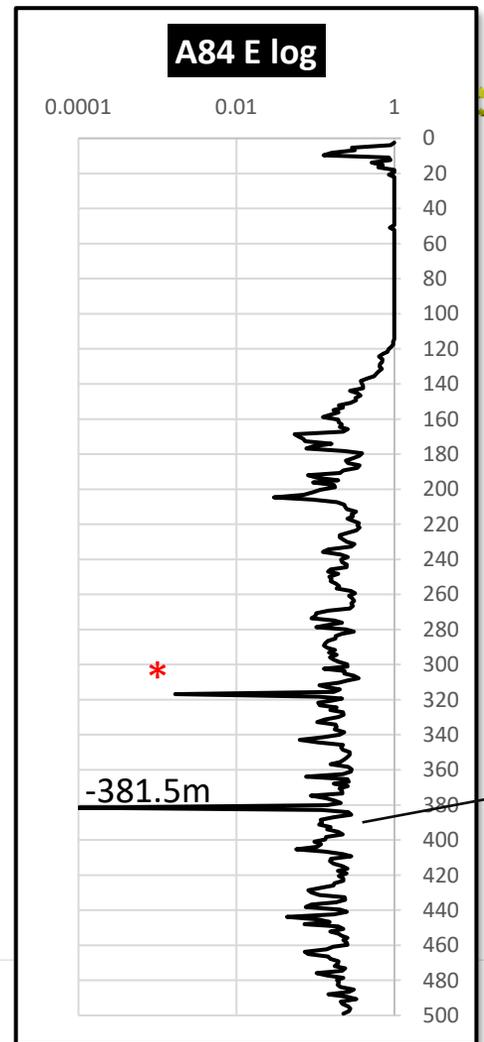


Warrior pit

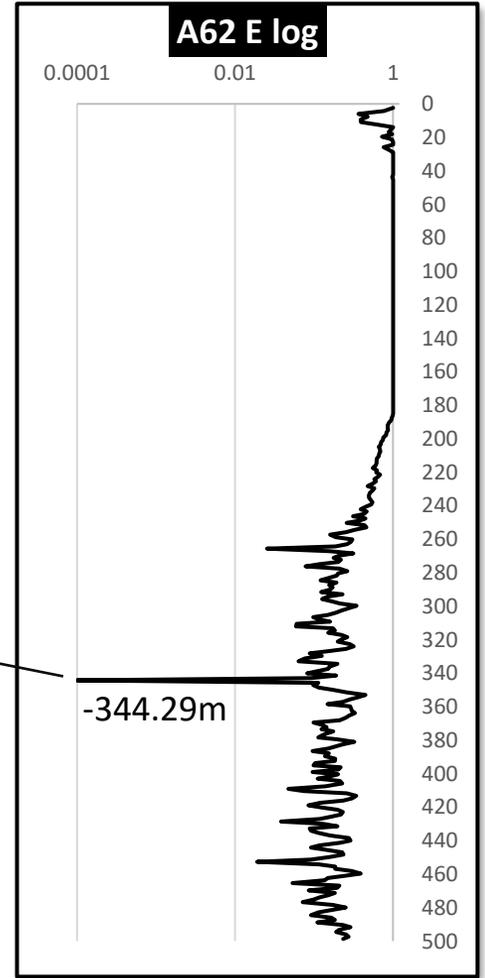
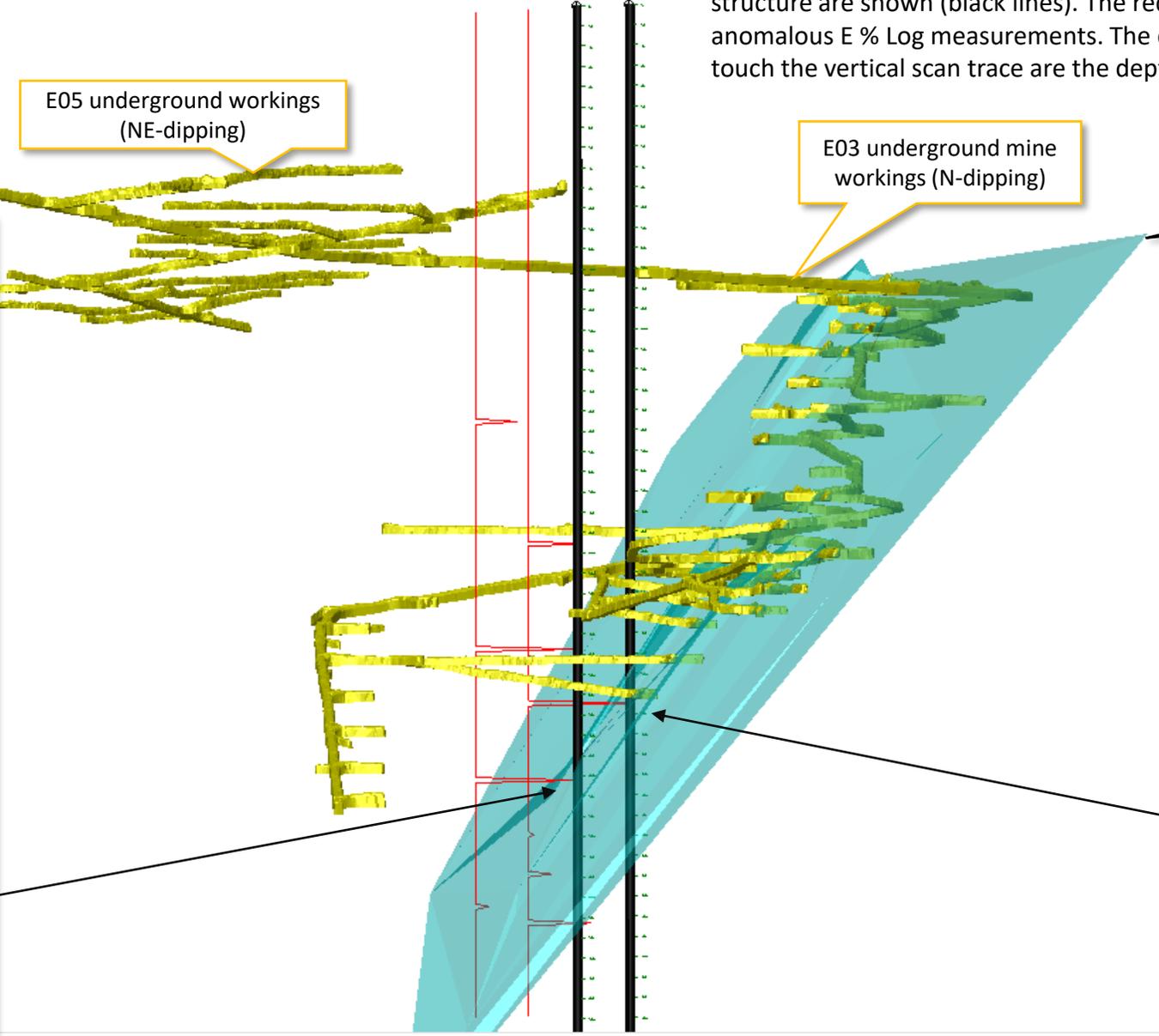
E05 underground workings (NE-dipping)

E03 underground mine workings (N-dipping)

Interpreted E03 structure



A84FA62F

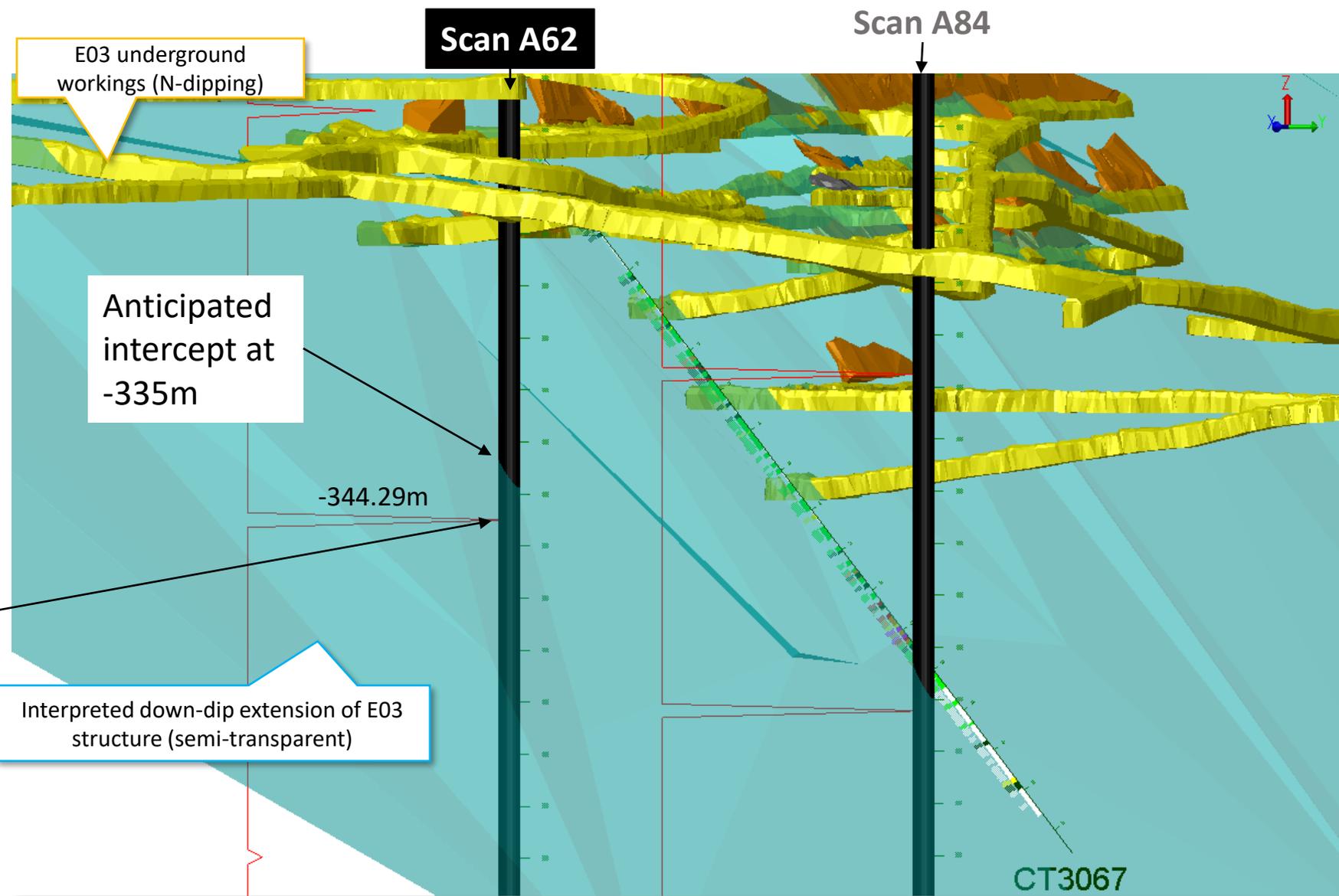
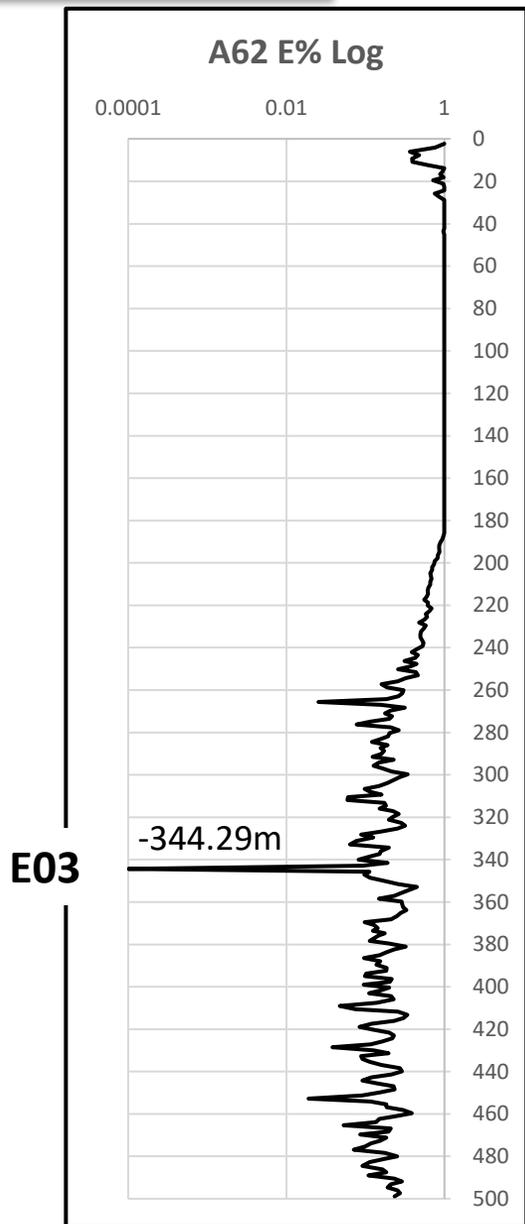


* Anomaly = unmined structure identified by ADR

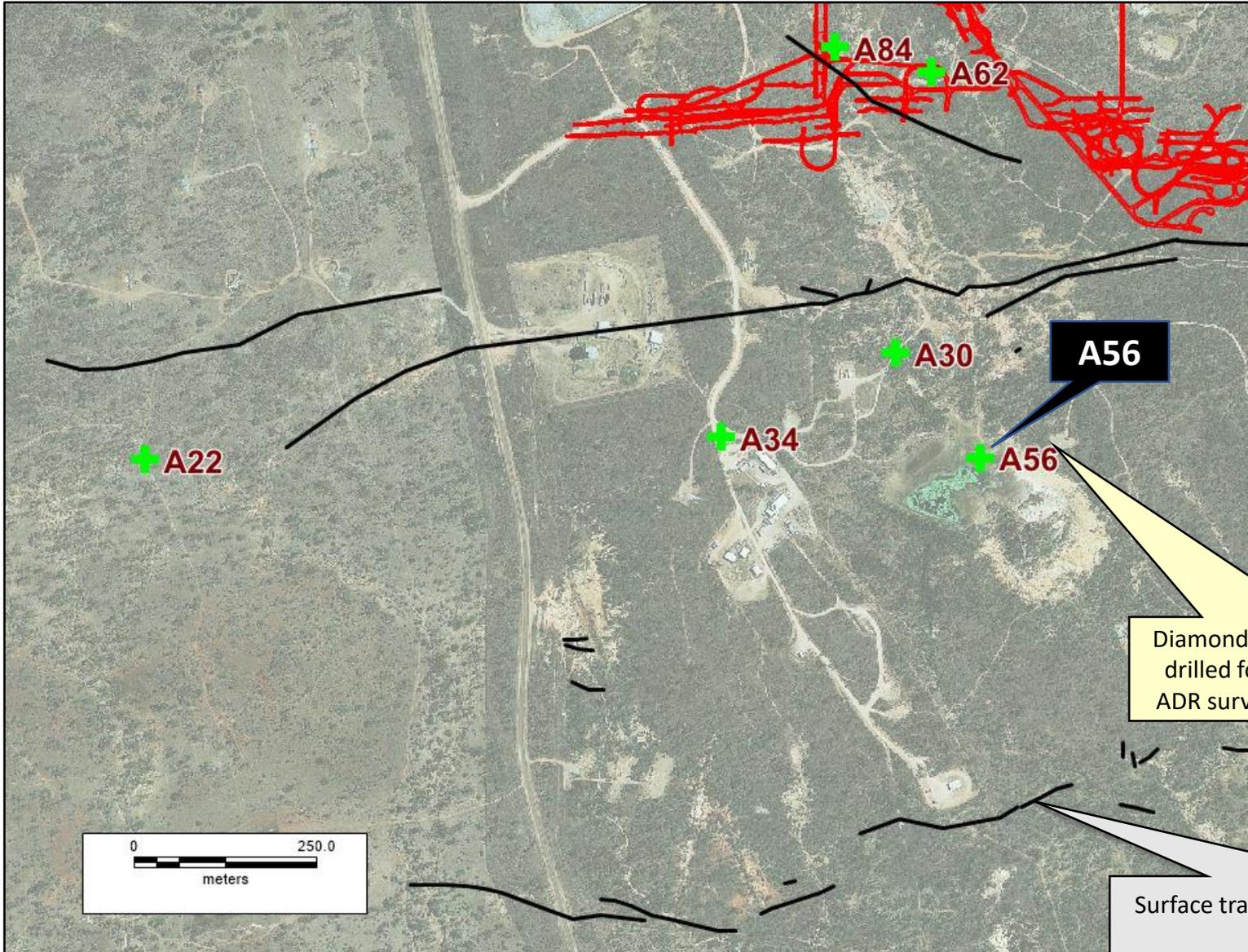
Strictly Confidential

ADR A62

Screen capture from Surpac 3D Mine model. View looking horizontally and to the SW across the face of the n-dipping E03 structure (blue transparent surface). Scans are shown in black. Underground mine workings in yellow and stoped (mined ore) shown in orange. CT3067 is lode-parallel diamond drill hole discussed on previous page.



2. ADR scans completed in the “IMPERIAL” area



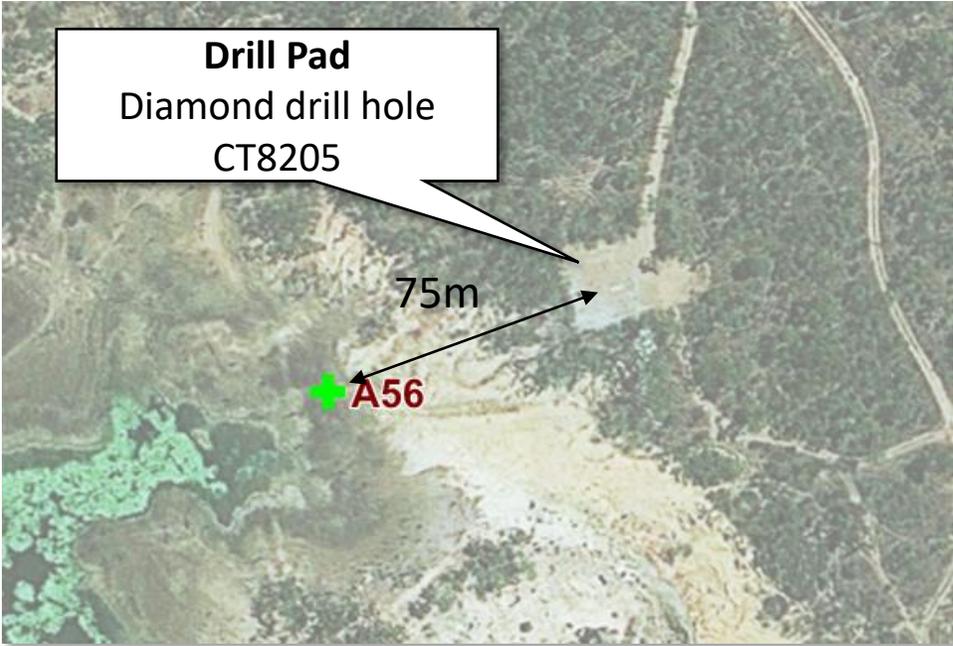
At the time the ADR geophysical survey was being carried out, Citigold had begun a drilling campaign to extend its known resources (near mine and new structures). Part of this drilling program involved several drill holes aimed at defining mineralisation on the N-dipping E07 structure. The area had some previous drilling, but the drilling was so sparse that little was known about the geometry of the structure and the distribution of gold, if any was present.

Once the results from Adrok were returned, A56 showed a strong anomaly that was interpreted to be sulfides. CT8205 was drilled in order to test whether the anomaly in the ADR scan could indicate the presence of sulfides in an area where very little was known about the structure. The depth of the structure was also not known as structural models were not well constrained.

Diamond drill hole CT8205 was to be drilled following completion of the ADR survey depending upon results.

Surface trace of the N-dipping E07 structure where it can be identified

ADR A56



Drill Pad
Diamond drill hole
CT8205

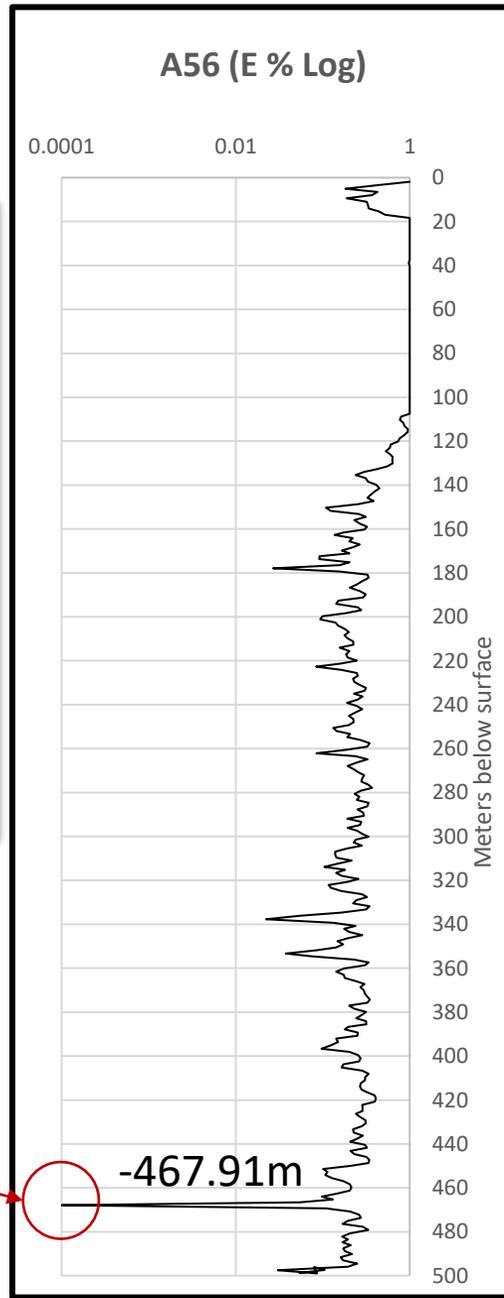
75m

A56

- Scan completed prior to drilling CT8205
- Single target identified at -467.91m
- Drilling confirmed target at -463m down hole

The lowest value in the scan (0) was assigned a value of 0.0001 as per methods described above. The anomaly at 467.91m in the ADR was indicative of a strongly reflective layer at depth below the collar at the surface. Based on the results from the Warrior area, Citigold was confident that this could be sulfides within the same homogeneous granite. Diamond drill hole CT8205 was drilled and confirmed the presence of high-grade gold and galena (PbS). An intercept of 37.9 g/t Au was returned from later assays

© Adrok, 2023

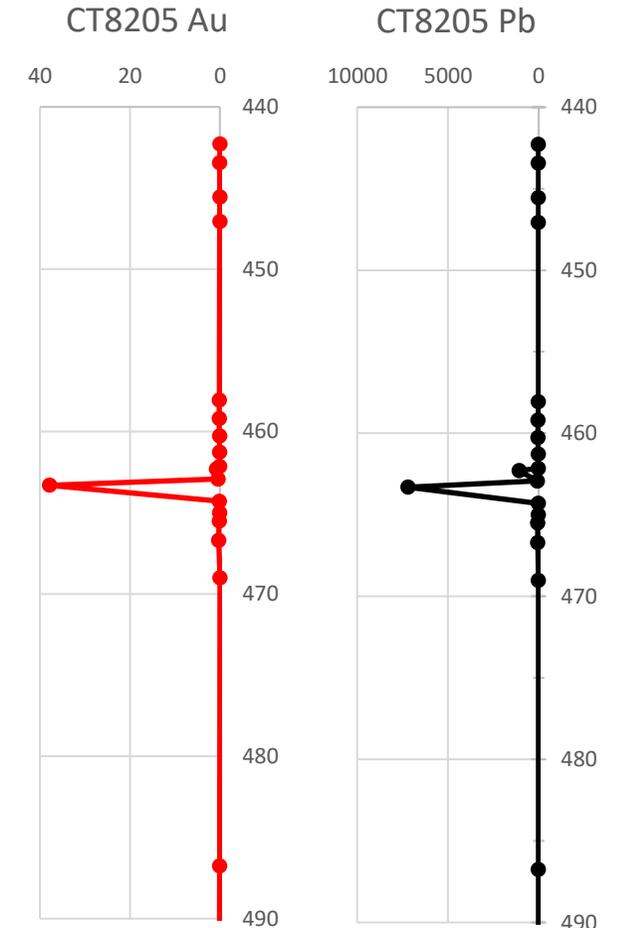


+5m (<2m - see next slide)

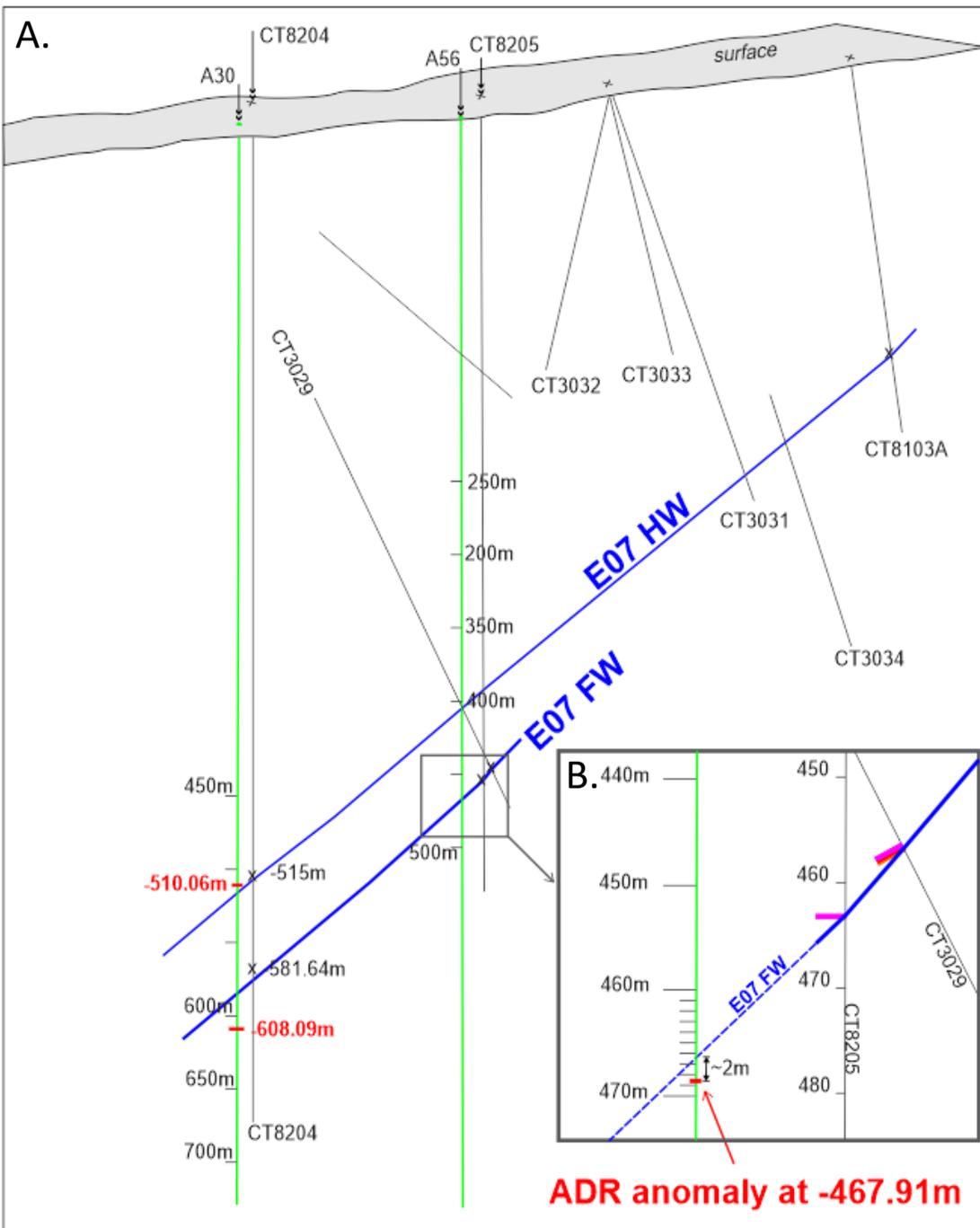


~40cm thick intercept at -463m

CT8205 assay results
37.9 g/t Au 7200ppm Pb



Strictly Confidential



Oblique cross-section slice from the Citigold 3D structure model for E07. View is looking approximately east. Sections of diamond drill holes (labeled) are shown where they lie within the sliced section.

The lack of drilling and structural control at depth made interpretation of the structure prior to CT8205 and ADR scans A56 and A30 difficult. Drilling and geophysics combined demonstrated two structures were present at 400-475m depth. These were temporarily referred to as HW (hanging wall) and FW (foot wall) structures but are two separate structures.

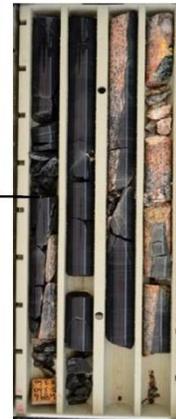
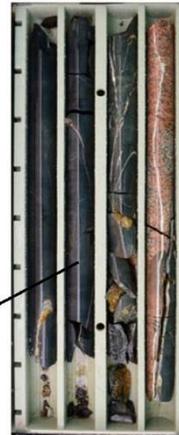
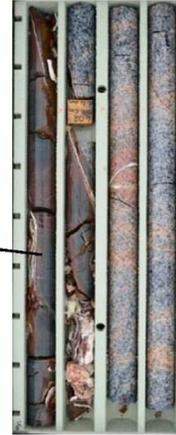
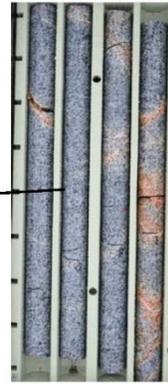
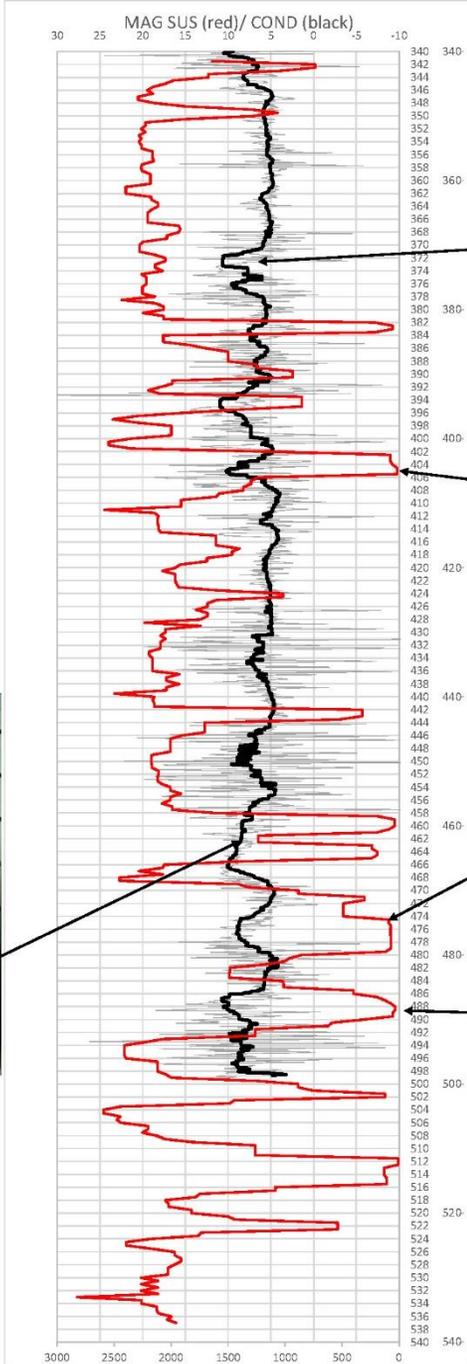
Following drilling of CT8205, the dip of the E07 structure could be extended and projected laterally with more confidence. If, as shown in inset B, the dip of the structure is extended to the location where it should intersect the A56 scan (green vertical line), the ADR scan predicted almost precisely the location where the structure and associated sulfides should be. Further drilling is required to re-certify these results, but according to the evidence available, the drilling and ADR are in support and the ADR was able to correctly pinpoint sulfide and gold mineralisation.

If the E07 surface is used, the difference between the ADR anomaly and the expected intersection is <2m.

DH CONDUCTIVITY CT8205 – E07

Magnetic susceptibility
 Conductivity

Sulfides and Au

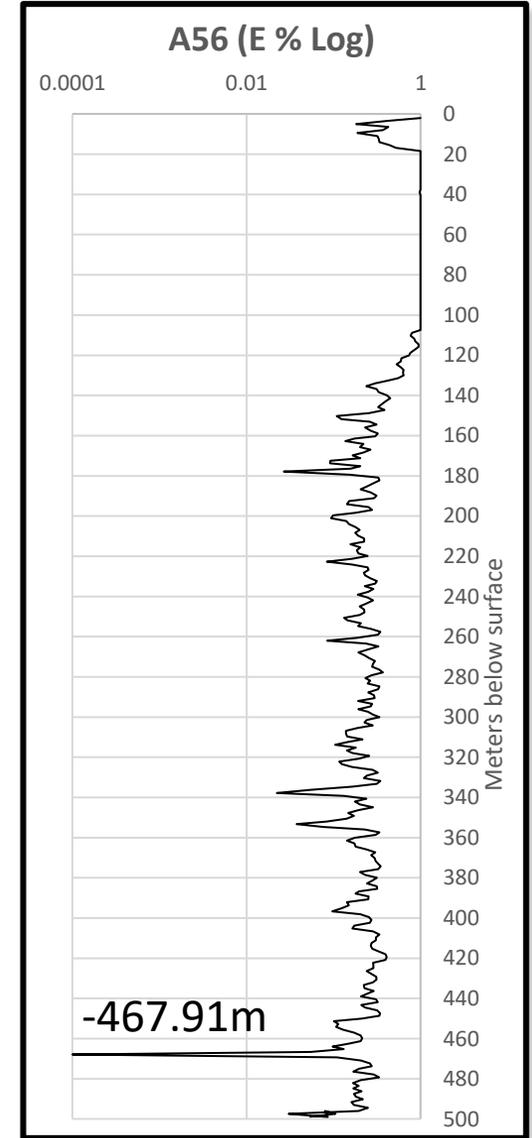


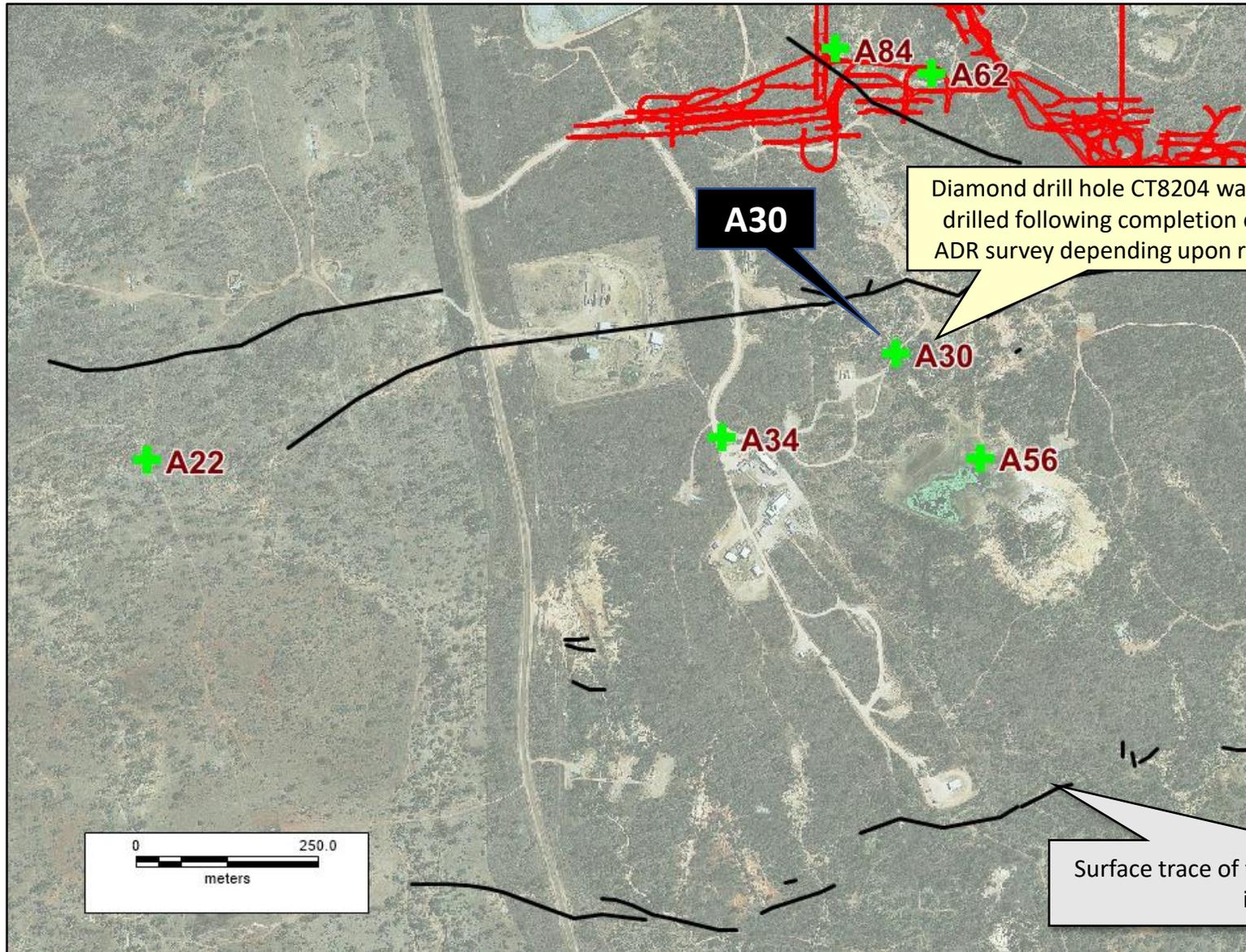
CT8205 was lined with PVC and subsequent DH geophysics (mag and conductivity) were completed. Neither Mag sus nor conductivity could identify the sulfides.

CT8205 DH Conductivity and Magnetic susceptibility

Data collected using a Mount Sopris 2PIA-100/2PIA-1000 and Matrix winch. Scanned twice at 5cm intervals.

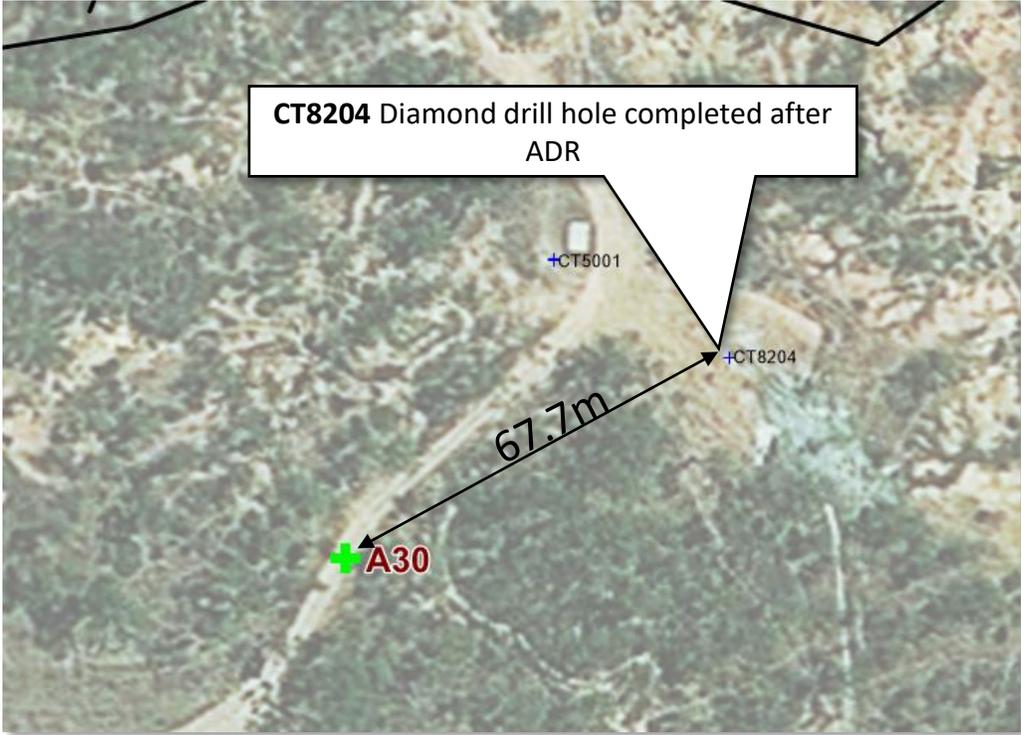
Mag lows and conductivity anomalies identify variations in rock type, in particular, mafic dykes.





Similarly to CT8205, CT8204 was drilled as part of Citigold's resource expansion exercise. Also similarly to CT8205 and A56 discussed previously, the E07 structure here was very poorly known until drilling CT8204 had been completed. Drilling confirmed the presence of two approximately parallel structures dipping to the north and separated by approximately 100m. The upper structure has a shallower dip than the lower structure so with increasing depth, the distance between the two increases.

ADR A30 – E07

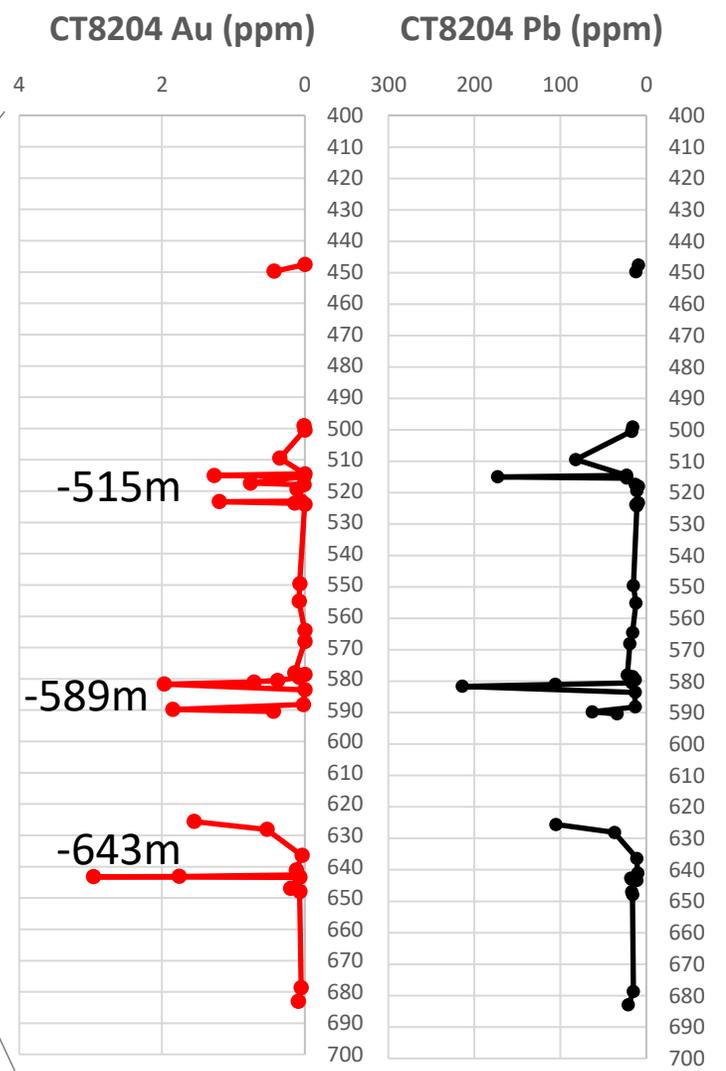
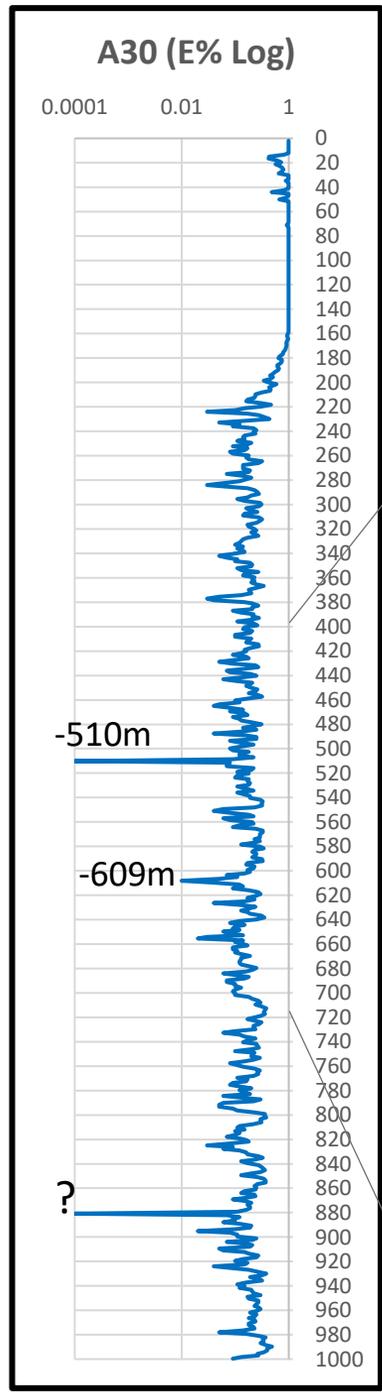
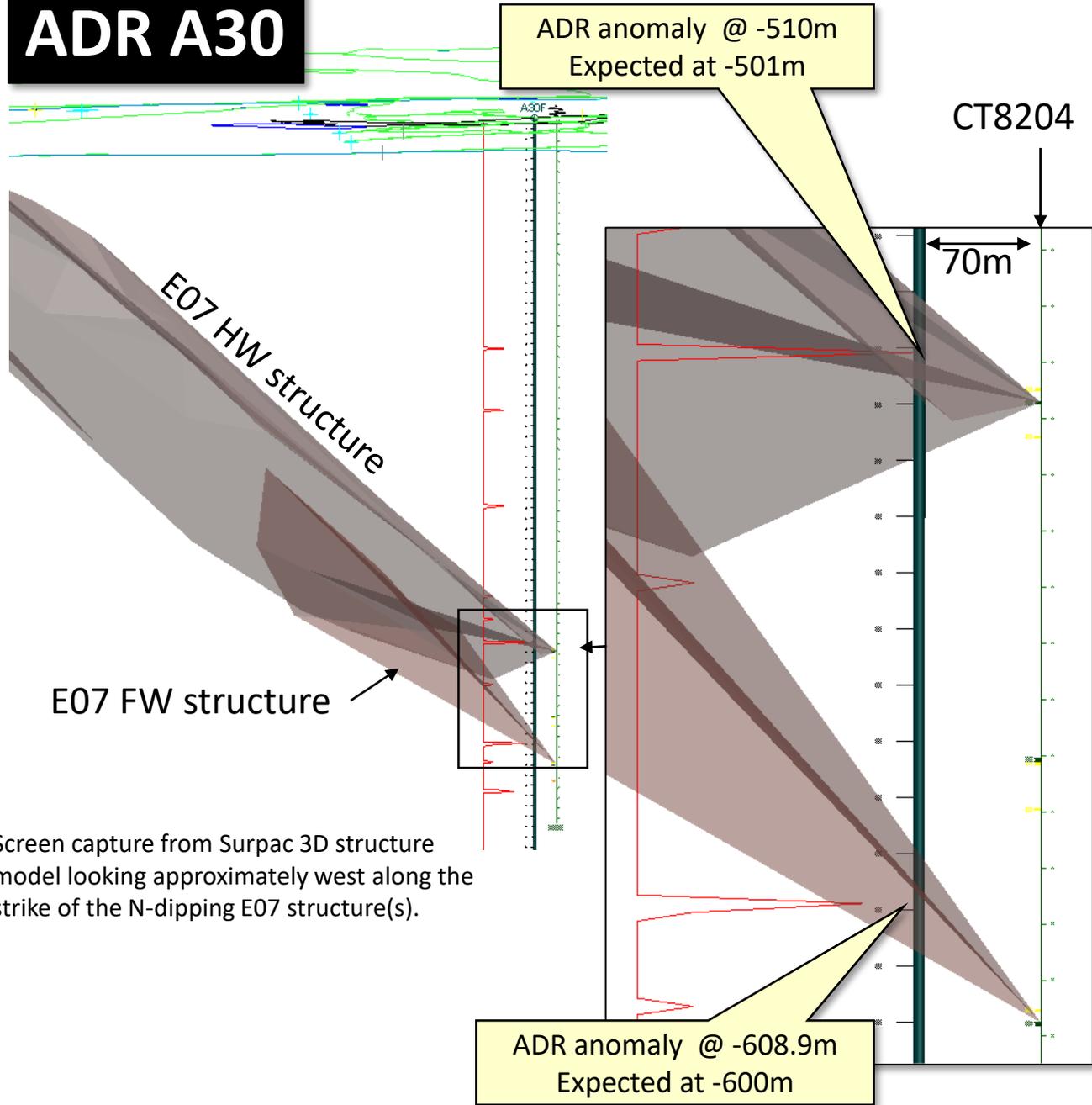


Diamond drilling intercepted two structures:

- E07 Hanging wall (-514.27m)
- New E07 Footwall (-589.5m)



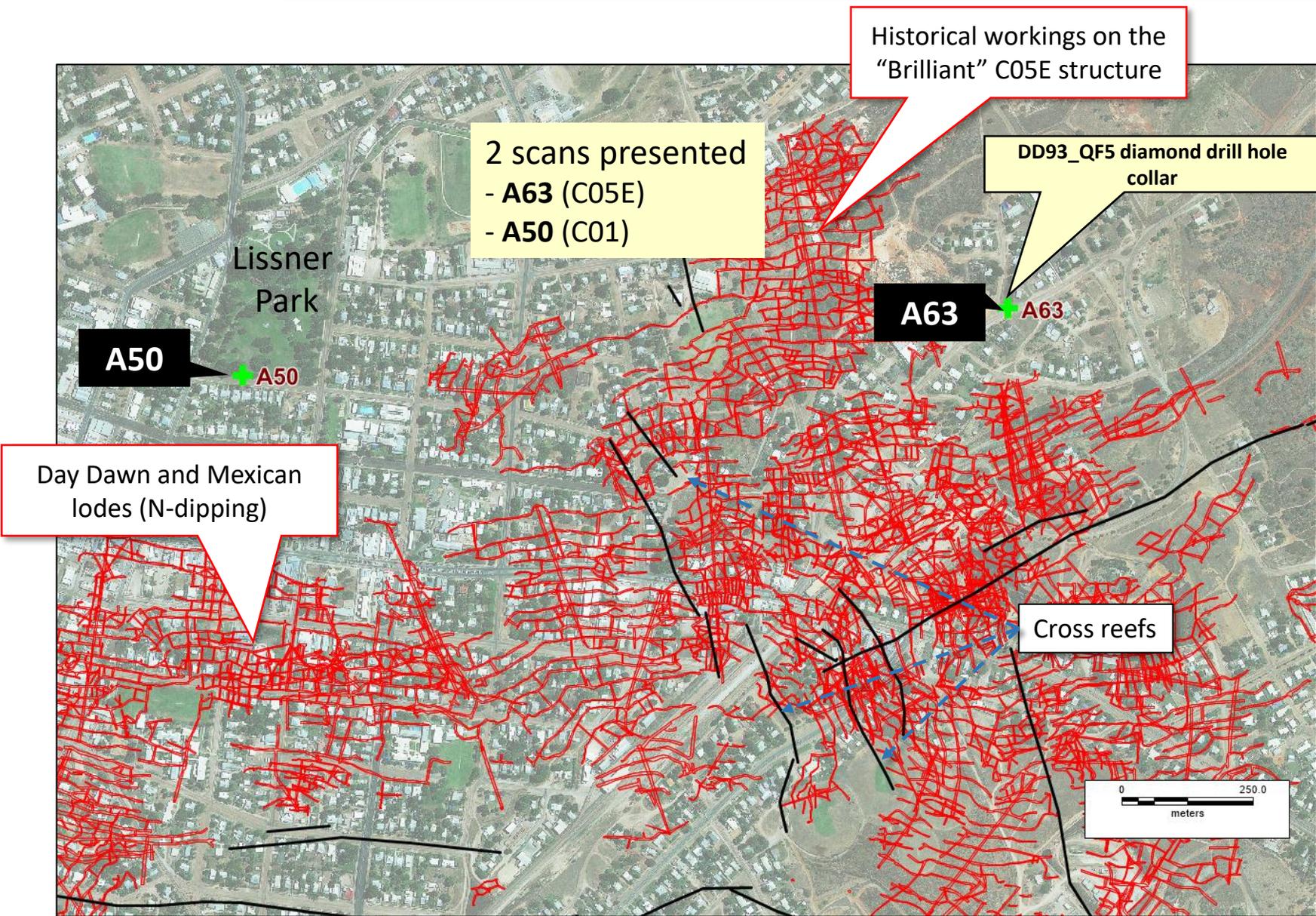
ADR A30



Screen capture from Surpac 3D structure model looking approximately west along the strike of the N-dipping E07 structure(s).

Strictly Confidential

3. ADR scans completed in the "CENTRAL" area

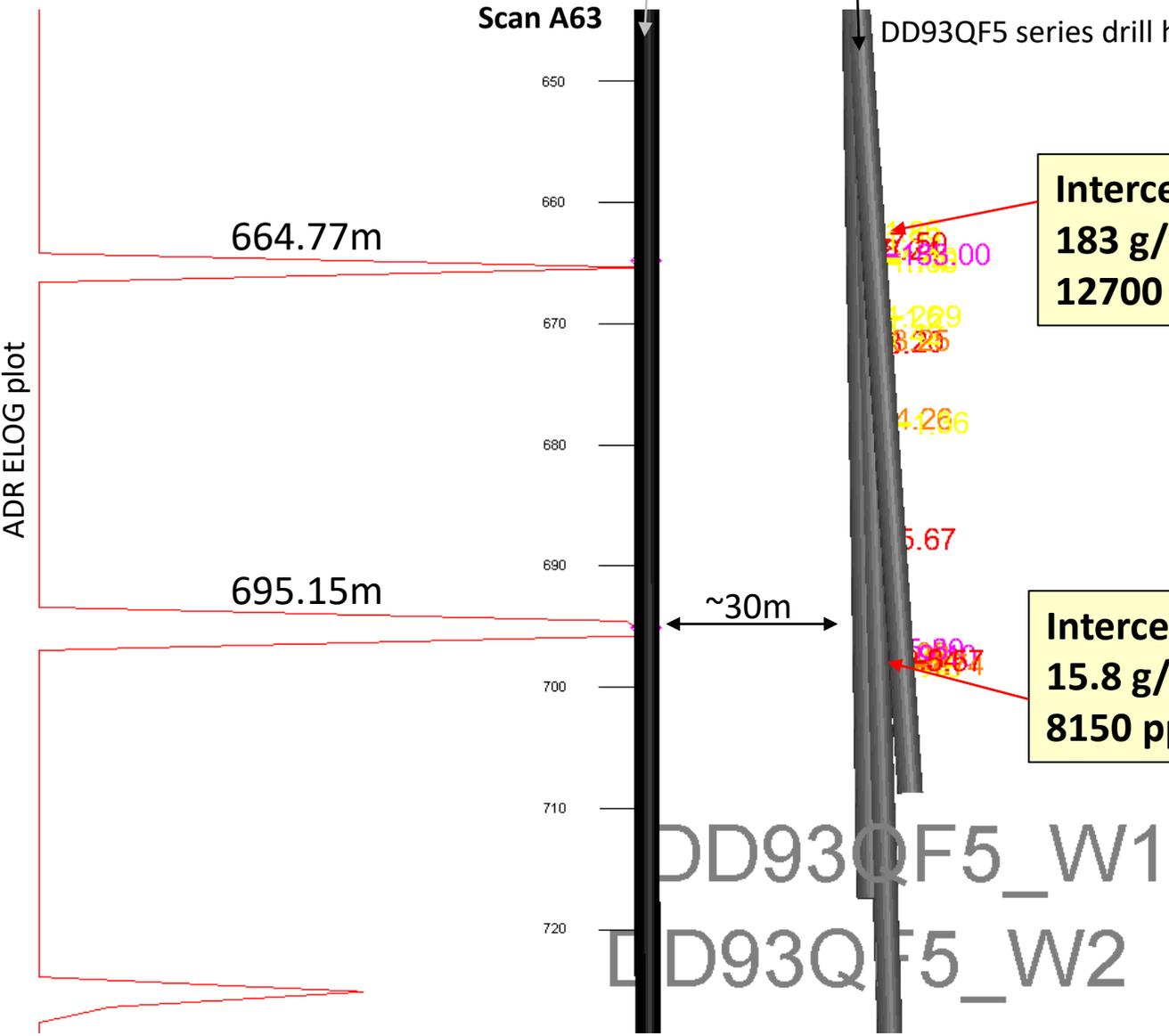


The "Central" area of Charters Towers is well-known globally because this part of the field produced over 6 Moz of Gold since ca. 1890. The area is still highly prospective BUT there is extreme difficulty in defining resources and reserves here because of the lack of area to undertake drilling. Drilling can be completed but it has to be extremely well-planned and constrained so that it only targets the BEST POSSIBLE AREAS. Historically resource drilling has been limited to "drill and see" philosophy. The pods of sulfides described throughout are too unpredictable to be able to confidently vector drilling to high grade targets. In addition, most geophysics techniques won't operate in the middle of a city owing to significant land access limitations and anthropogenic sources of EM radiation or false responses from historical underground infrastructure.

One of the reasons for trialling ADR here is 1) due to the known existence of sulfides at >500m depth and 2) to test the equipment in difficult-to-access areas. One scan took place in the central park in town, Lissner Park.

ADR A63

Screen capture from Surpac 3D Mine model between ~635m and 730m depth showing just the drill hole trace (DD93_QF5) and ADR Scan 63 trace. Intercept grades are labeled. The two lowest values in ADR E% Log plot correspond with high grade lead and gold values in drill core.



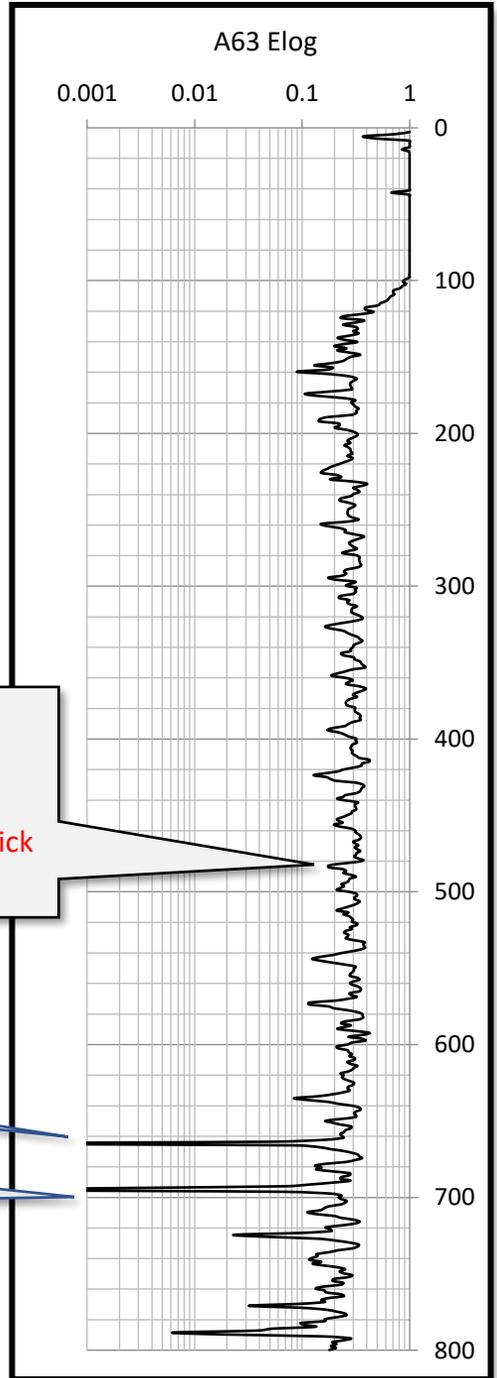
Intercept - 664m
183 g/t Au
12700 ppm Pb

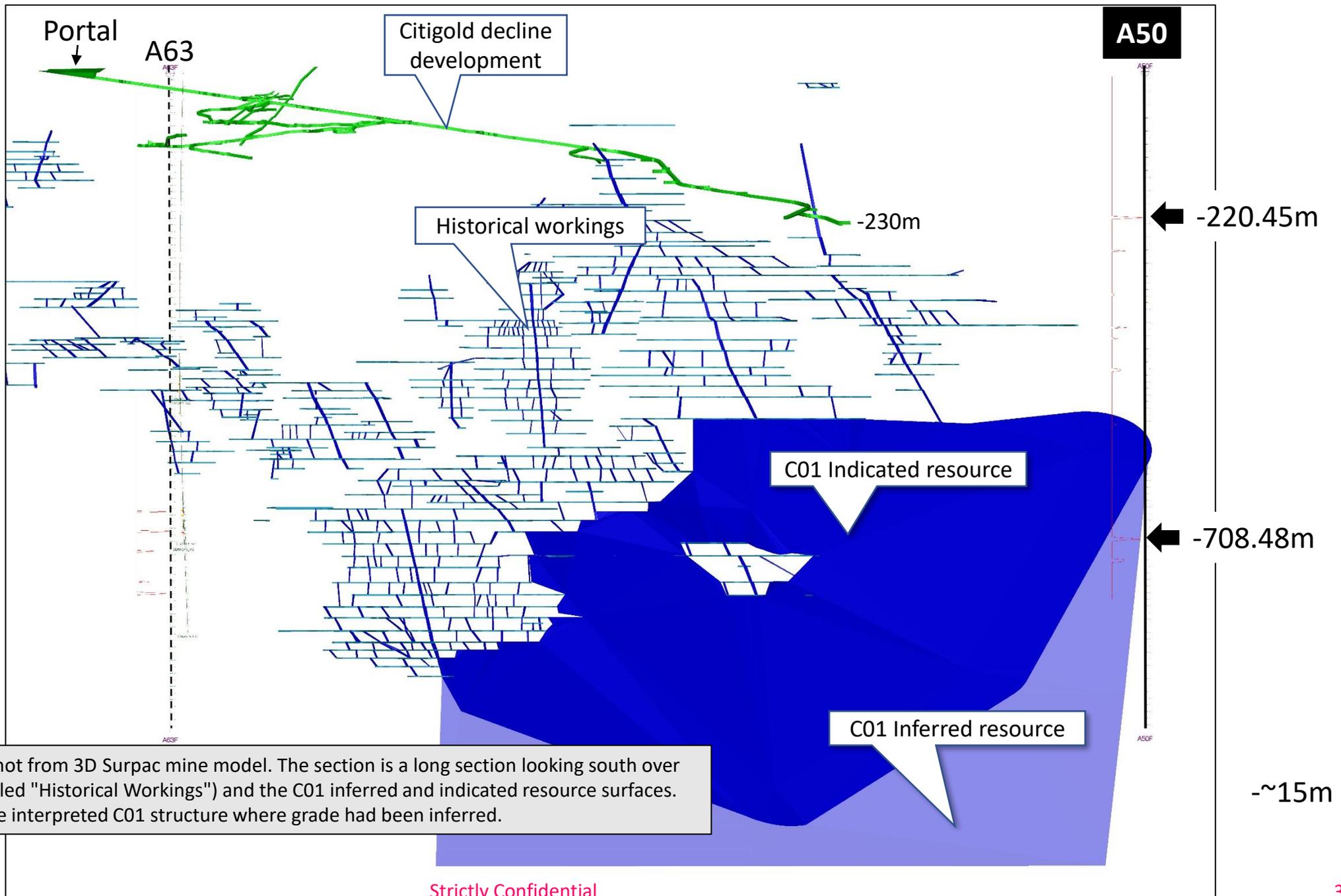
Intercept - 696m
15.8 g/t Au
8150 ppm Pb

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

Brilliant (C05) Hanging wall

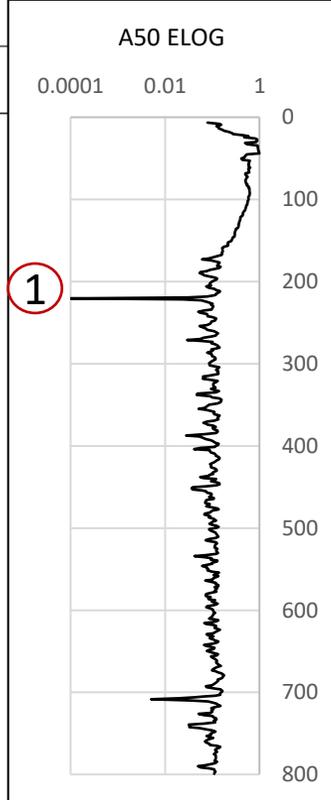
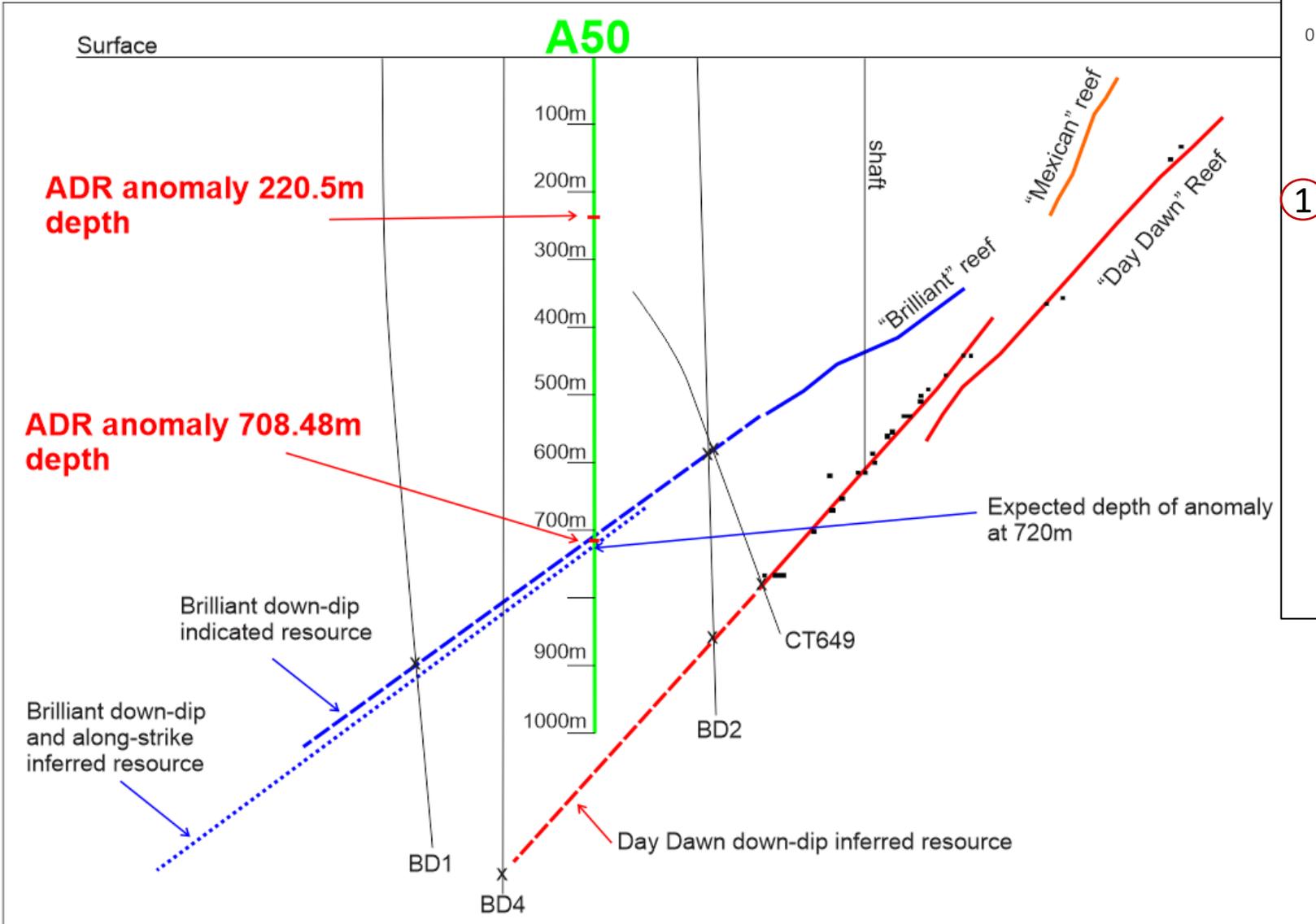
Brilliant (C05) Foot wall





Background image is a screenshot from 3D Surpac mine model. The section is a long section looking south over the Brilliant E05 structure (labeled "Historical Workings") and the C01 inferred and indicated resource surfaces. A50 scan aimed to intercept the interpreted C01 structure where grade had been inferred.

Image is an annotated screen capture from 3D Surpac mine model. Cross section view looking approximately East across the N-dipping Brilliant and Day Dawn structures.



The ADR results show an anomaly in the E% Log chart at 220.5m and a second anomaly at 708.48. The anomalies are similar to those from the Warrior and imperial areas and indicate a reflective layer within homogeneous granites.

Scan A50 (vertical green trace) intercepts the brilliant reef at an expected depth of 720m which is approximately 12m deeper than the anomaly depth.

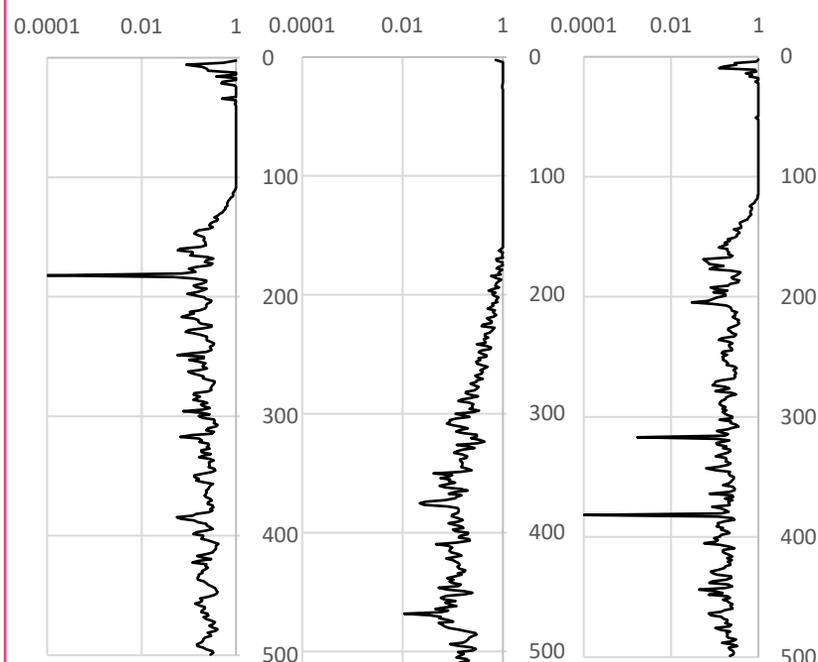
① The anomaly at ~220.5m has been un-drilled as it lies beneath the city central park reserve, Lissner Park.

1. WARRIOR AREA – RESULTS SUMMARY

A09 ELOG

A48 ELOG

A84 ELOG



Training scan

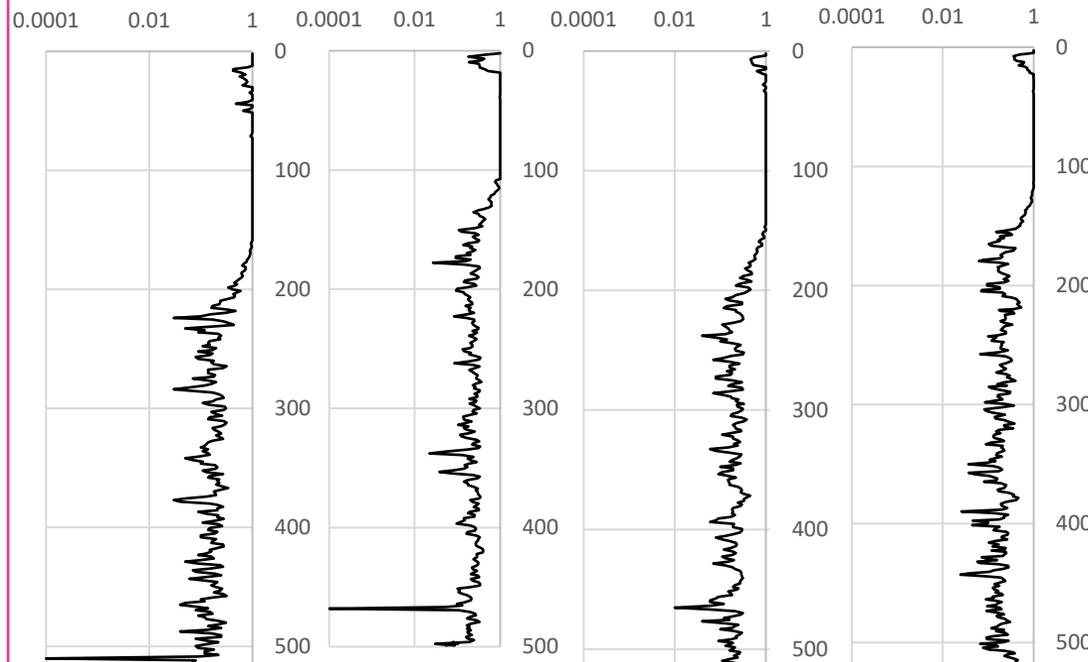
2. IMPERIAL AREA – RESULTS SUMMARY

A30 ELOG

A56 ELOG

A34 ELOG

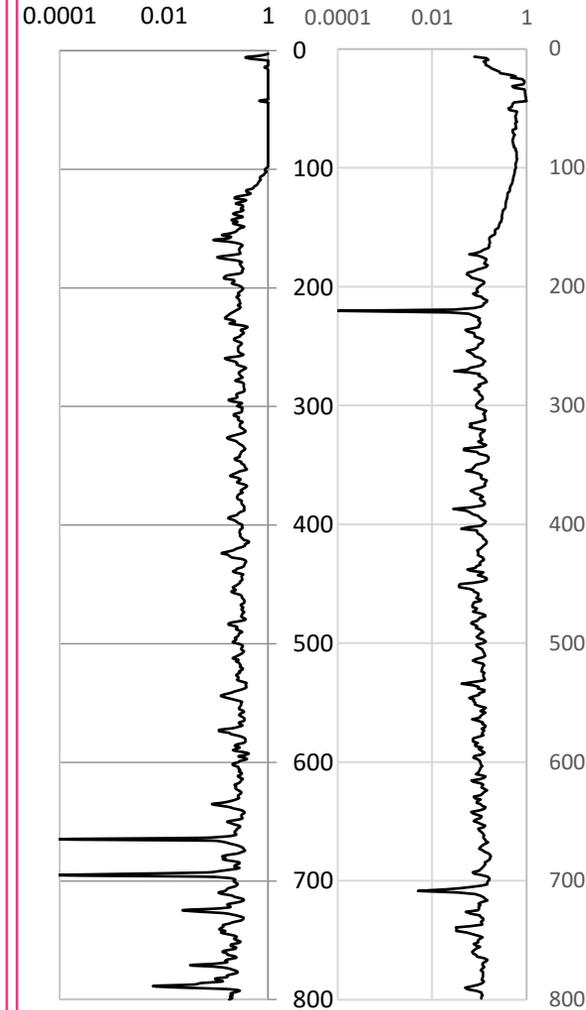
A22 ELOG



3. CENTRAL AREA – RESULTS SUMMARY

A63 Elog

A50 ELOG

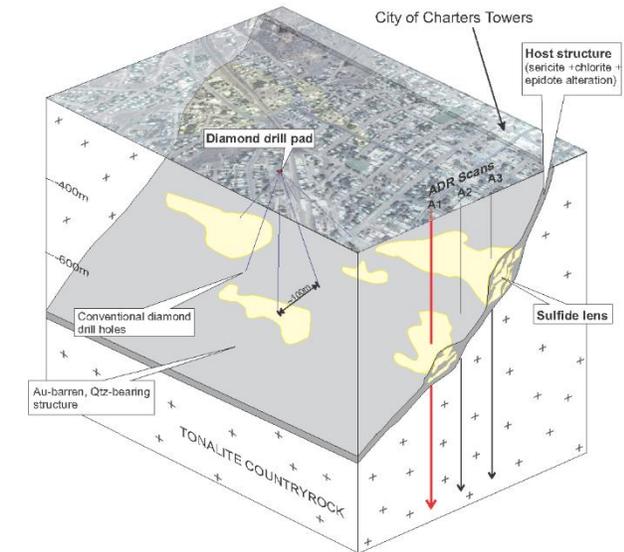


CONCLUSIONS

Charters Towers type narrow vein gold is a relatively unique style of mineralisation and one that, due to both geological and environmental conditions, requires a different approach to exploration and resource definition.

Traditional geophysical techniques are not suitable and have been unsuccessful due to:

- 1) the small size of gold-bearing lenses (meters to tens of meters scale),
 - 2) the presence of a town over the primary target area,
 - 3) the depth of mineralisation (>400m),
 - 4) other masking factors including dykes, altered faults.
- According to the results from a trial carried out by Citigold in Charters Towers, the ADR technique appears to have successfully identified sulfides on target structures in three separate locations.
 - **Averaging 8 scans per day with >80 scans completed in 2 weeks – equivalent to 80,000m of drilling (~2300 days (>6 years) of continuous drilling with one diamond rig). Only those processed by Adrok are presented here. Many scans, while collected in the field, were not processed by Citigold.**
 - **Testing** of the geophysics by drilling has **confirmed** the presence of gold and sulfides indicated by ADR. It was concluded at the end of the trial that the returned relative energy (presented as E % Log) gave the best indication of sulfides. The response is interpreted to be the results of a reflection from the sharp contrast in DC at the boundary between massive sulfides and the host granite.
 - No false anomalies were recorded such that, in every case tested, the significant anomaly in energy corresponded with sulfides and in the scans there are no anomalous energy responses in the remainder of the scan.
 - Simple geology and markedly different dielectric properties between the host granite and Galena (Pb)-bearing sulfides may be key to the success.



Geothermal Drilling Results v Adrok Prognosis

Sites at United Downs and Eden Project, Cornwall, England



00253 Report
***Adrok Geothermal Potential
and Validation Evidence at
United Downs, Cornwall, UK.***
Inhouse Desktop Project (ER)

17/12/2021

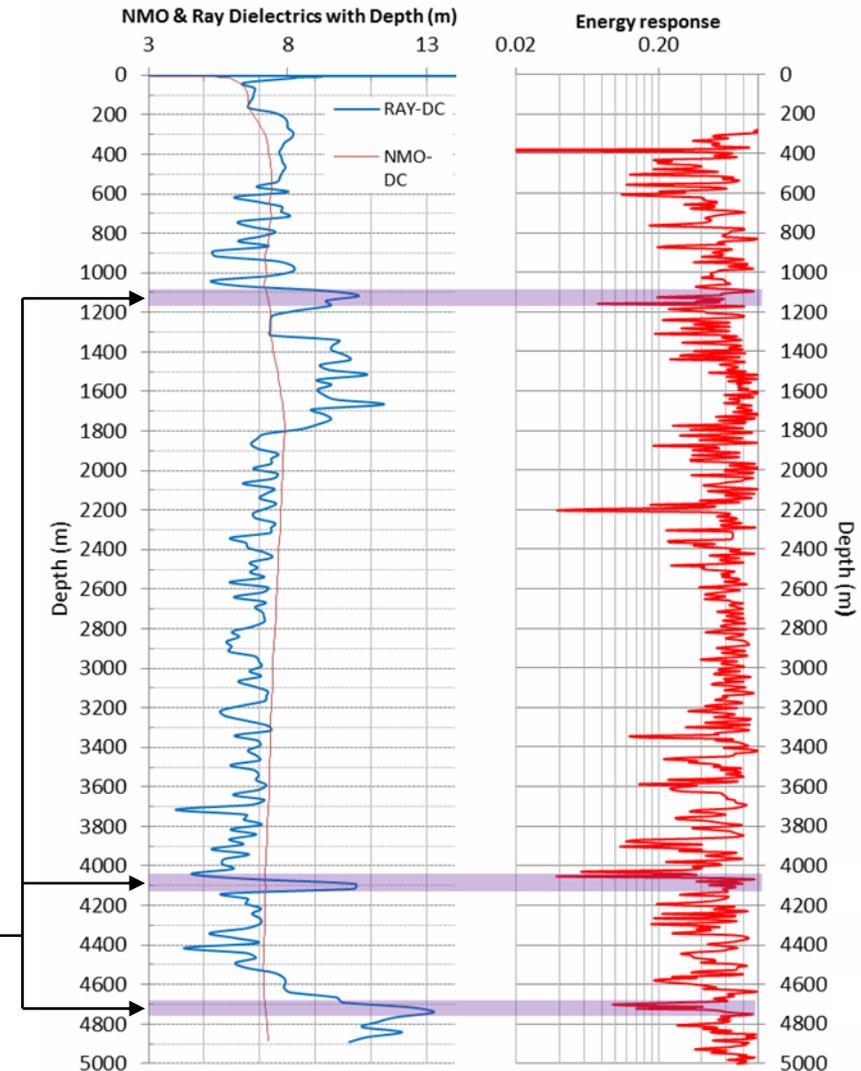
United Downs: Adrok survey 2014-2015

- Adrok completed an internally funded R&D geophysical survey at United Downs on 07/11/2014 on behalf of GeoScience Ltd.
- The survey was designed as research to test the application and capabilities of ADR, in the context of Hot Dry Rock (HDR) geothermal resource classification.
- Adrok collected 15 Stares, 5 WARRs and 5 P-Scans in the United Downs industrial estate. Only 1 V-Bore (C2) was processed.
- The primary conclusions are that within the granite pluton itself, two areas have been identified as possible permeable zones, which are at the depths of 4100m and 4700m. At 1100m depth there is one more area of interest as a possible permeable zone, which could be heavily fractured and saturated.
- This report was delivered to GeoScience Ltd on 14/09/2015, however, no feedback was ever received back.



Adroks 00156-3 United Downs Survey, 2014.

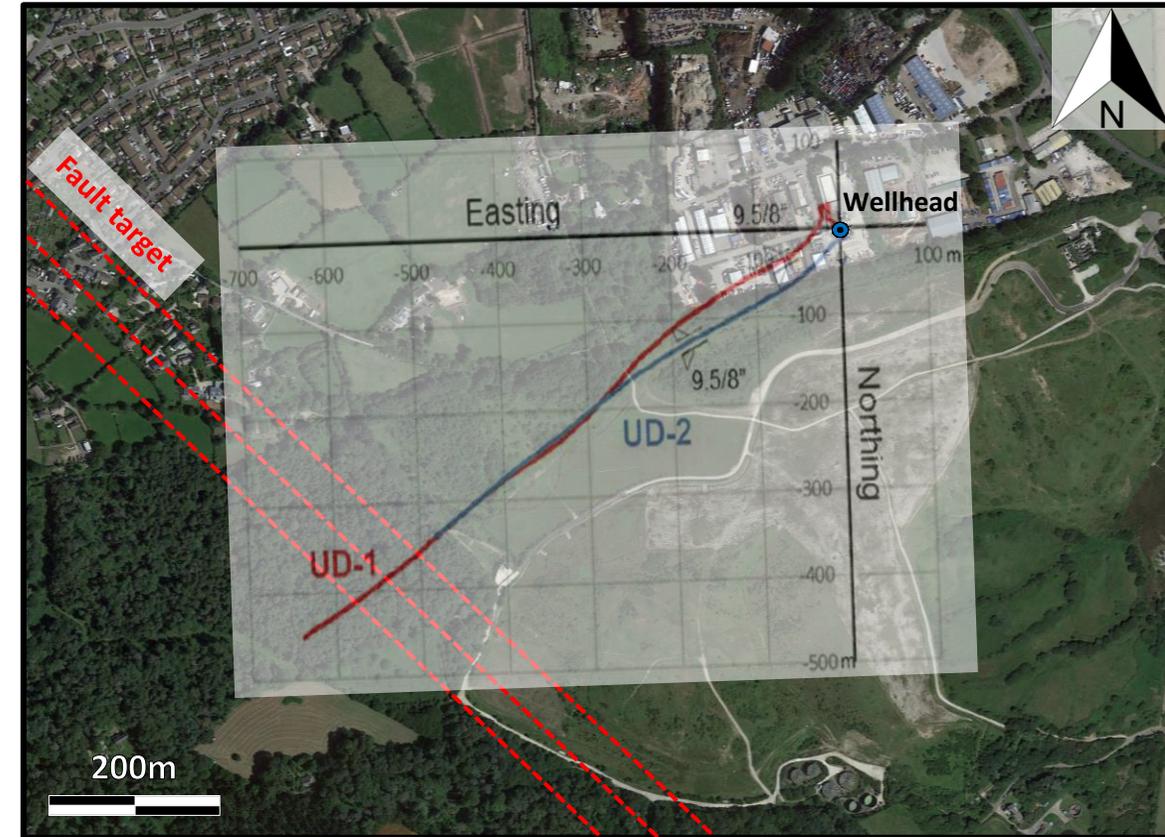
Areas of highly increased RDP and low energy response are together interpreted as possible zones of secondary permeability in the subsurface host structure. These are located at approximately 1100m, 4100m and 4700m.



Adrok 00156-3 United Downs Geothermal Results. From Adrok (2015).

United Downs: Drilling 2018-2019

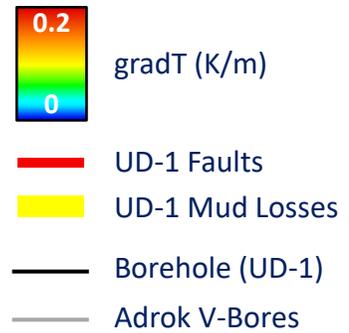
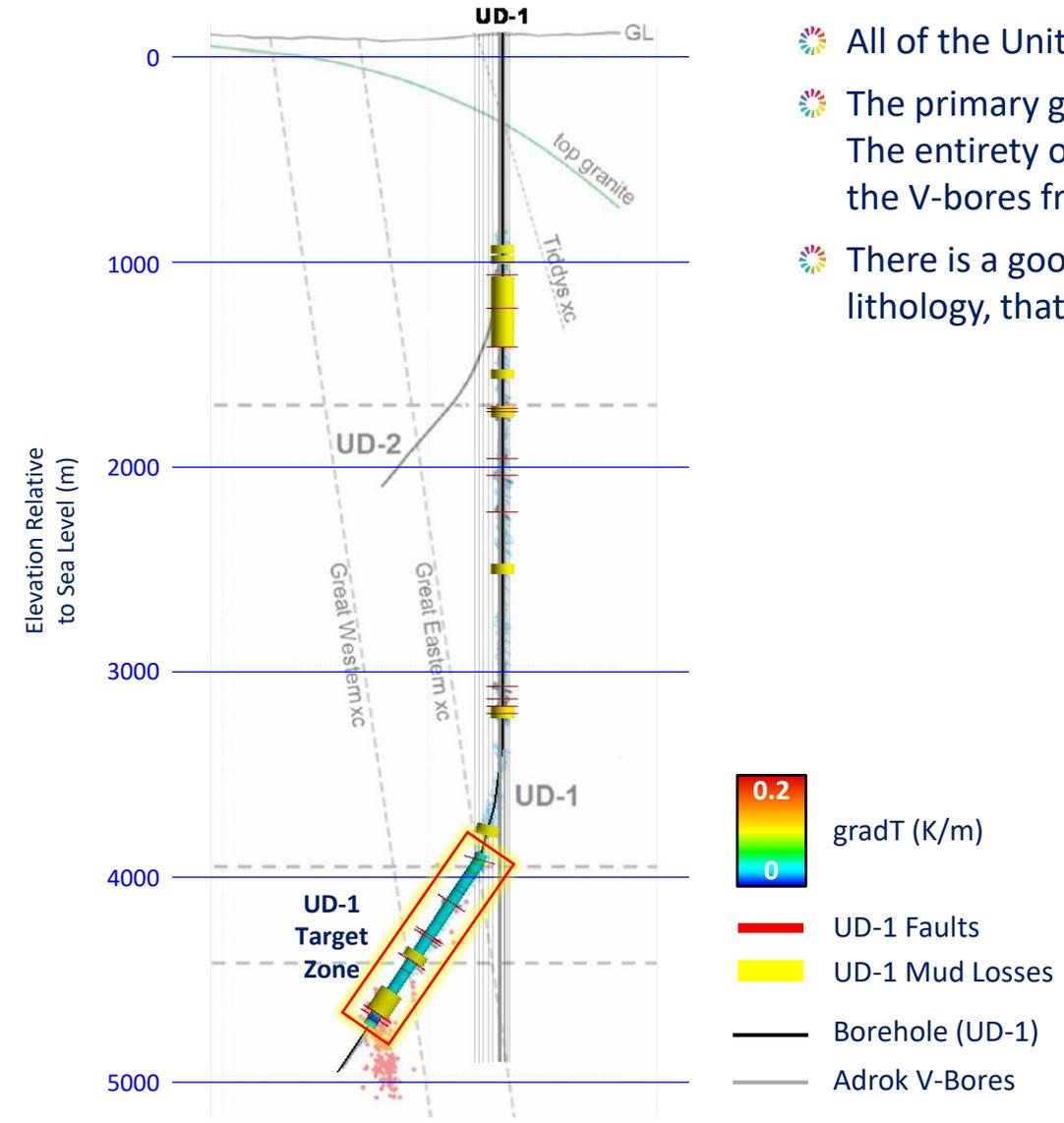
- The United Downs site was selected and acquired in 2010, with the specific drill site identified within a brownfield site in the United Downs Industrial Estate.
- The well was planned with a WSW deviation and a maximum inclination of around 35° at >4 km depth in order to make an intersection with the target NNW-SSE striking, 80° ENE dipping Porthtowan Fault Zone, and thus provide a good open hole intersection length through the structure (Reinecker *et al.*, 2021).
- Between November 2018 – June 2019, Geothermal Engineering Ltd completing the drilling of two wells at the UDDGP. The first is a production well, UD-1, that reaches a depth of 5,275m MD (5,058 m TVD) and the second is an injection well, UD-2, that reaches a depth of 2,393m MD (2,214m TVD; Reinecker *et al.*, 2021).
- Drill cuttings were sampled and analysed every 10m (5m in zones of interest) by the onsite geologists. Wireline logging was also performed at UD-1 and comprised of gamma-ray, caliper, resistivity, sonic, laterolog, compensated neutron and litho-density logs. Production logging for temperature and pressure was also carried out (Reinecker *et al.*, 2021).
- Geothermal Engineering Ltd plan to start construction of a geothermal binary power plant in 2022.



Map of the UDDGP area, with well trajectories in map view (scale in meters from wellhead) of UD-1 and UD-2. From Reinecker *et al.* (2021).

United Downs: Proximity of ADR data to validated drill data

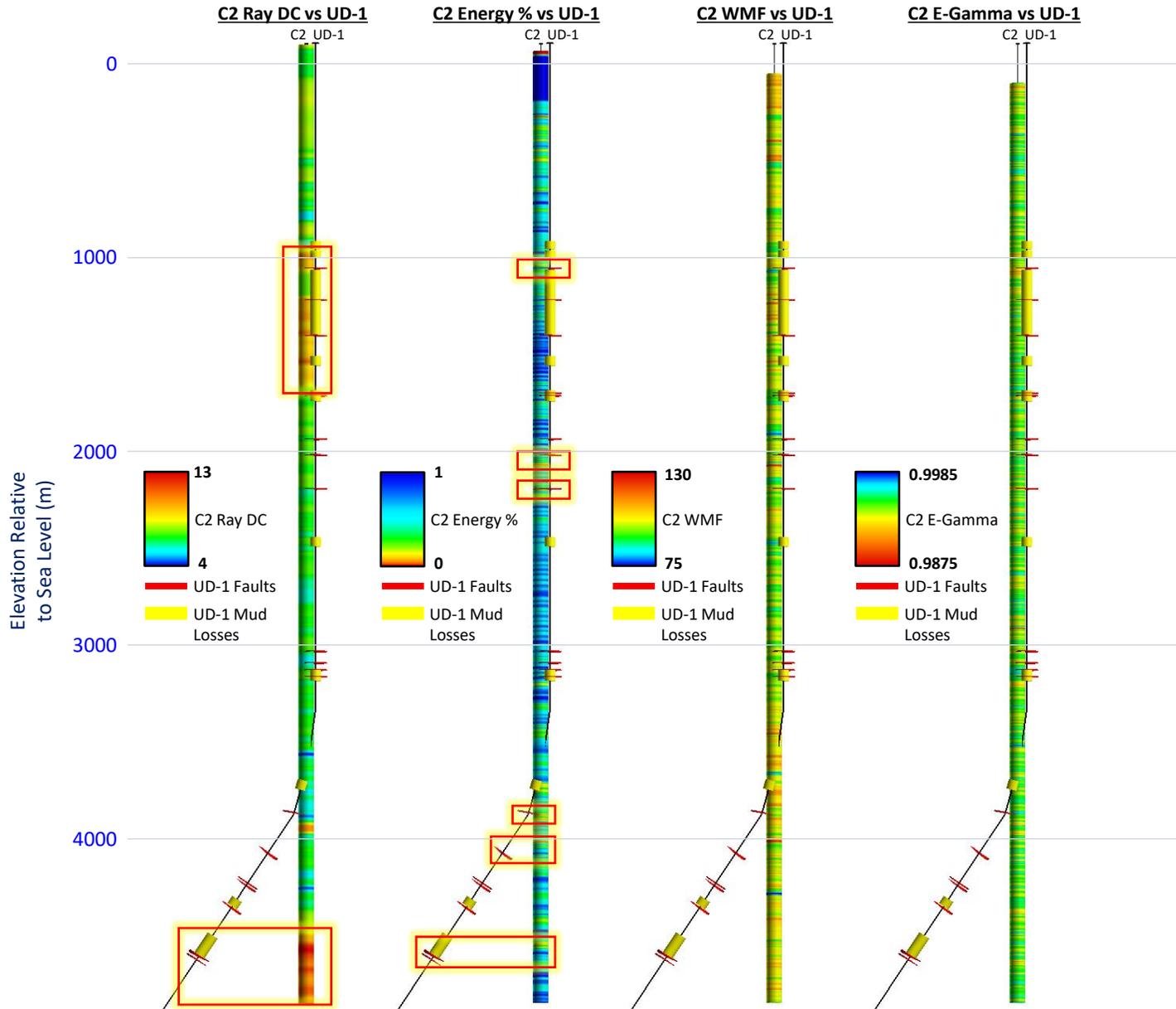
- All of the United Downs V-Bores are vertical and within 180m of UD-1 at surface level.
- The primary geothermal target for UD-1 (The Porthtownan Fault Zone) is from 4,000-5,100m MD. The entirety of this section is along the deviated drill path towards the SW. This means that none of the V-bores from Adroks 2014 survey are intersecting with the target zone in the validation data.
- There is a good amount of vertical validation data available from UD-1, e.g., mud losses, faults and lithology, that can be compared to the V-Bores from ground level to ~4000m depth.



- V-Bores (red circle)
- UD-1 Wellhead (blue circle)

Map of the UDDGP area, with well trajectories in map view (scale in meters from wellhead) of UD-1 and UD-2. From Reinecker et al. (2021).

United Downs: Existing ADR results vs current Validation

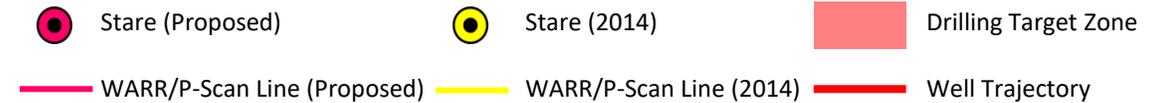


- Only 1 V-bore in United Downs has been processed. This was hole C2 in project 00156-3 that was processed and used as a case study in 2014.
- Ray DC, Energy %, WMF and E-Gamma logs are available down to 5000m TVD depth. These can be compared with the vertical section of the UD-1 well from 0-4000m TVD depth.
- There is some good correlation between high DC in C2 and significant mud losses in UD-1, in particular at 1070-1800m and 4540-5010m TVD where DC is highest.
- The most significant Energy % troughs also correlate well with some of the measured faults in UD-1, as highlighted in the adjacent figures.
- The WMF and E-Gamma logs do not show as good correlation with the training data. It should be noted that the windowing size for E-Gamma processing is unknown, so this may not be using the 8192px that we typically use for temperature processing.

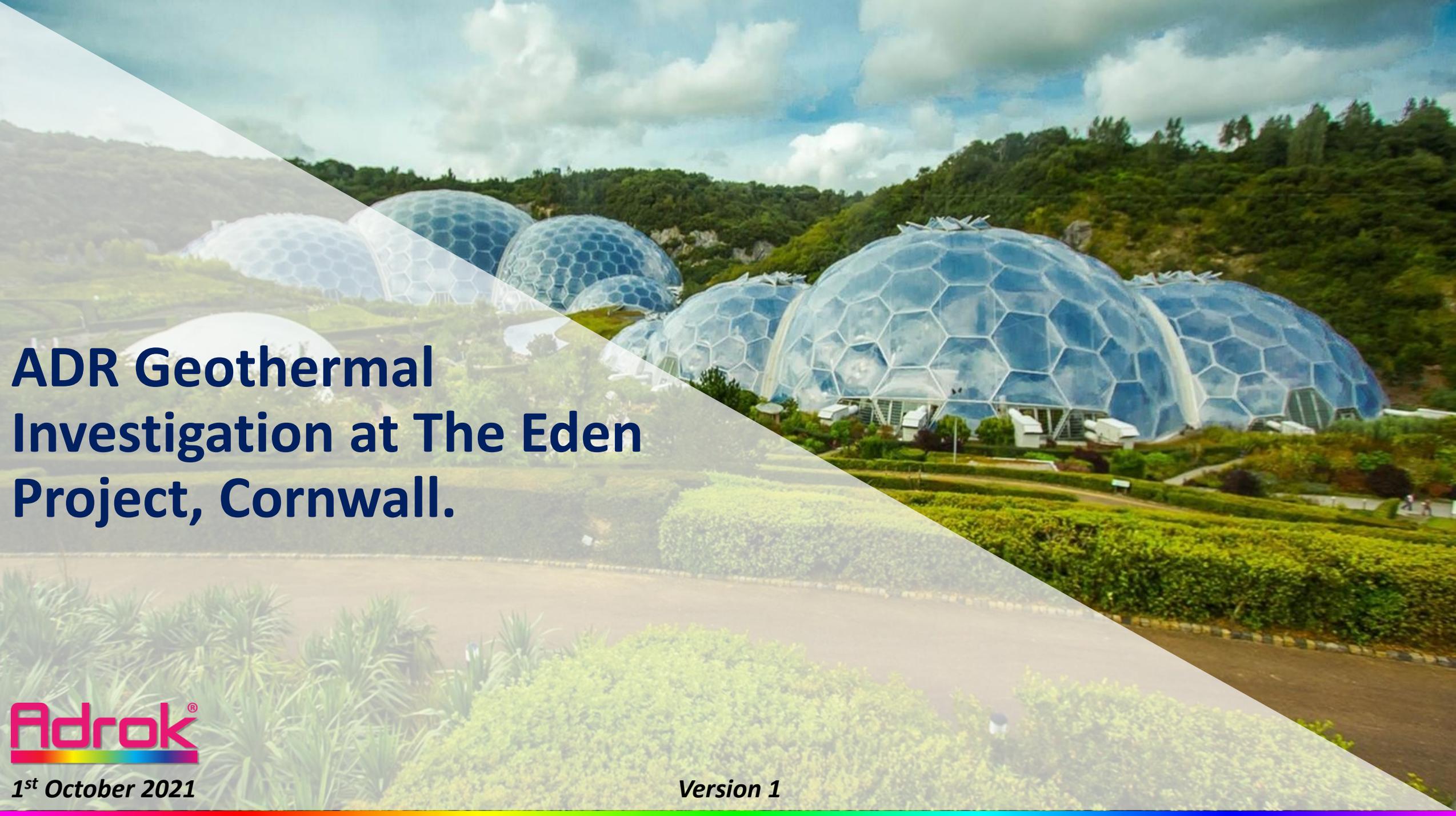


Future ADR survey proposal: United Downs

- A follow-up survey would be required at United Downs in order to full assess the capabilities of ADR’s deep geothermal applications, particularly in the Cornwall granites.
- The 2014 survey was focussed in the area of the wellhead for UD-1, whereas a future survey would be focussed towards the UD-1 target zone, where the deviated well trajectory intersects the Porthtowan Fault Zone at depth. This new survey is located approximately 600m to the SW of the 2014 survey and Ud-1 wellhead.
- The scan locations are along private roads/tracks and fields, therefore, communications to Geothermal Engineering Ltd and land owners will be required.



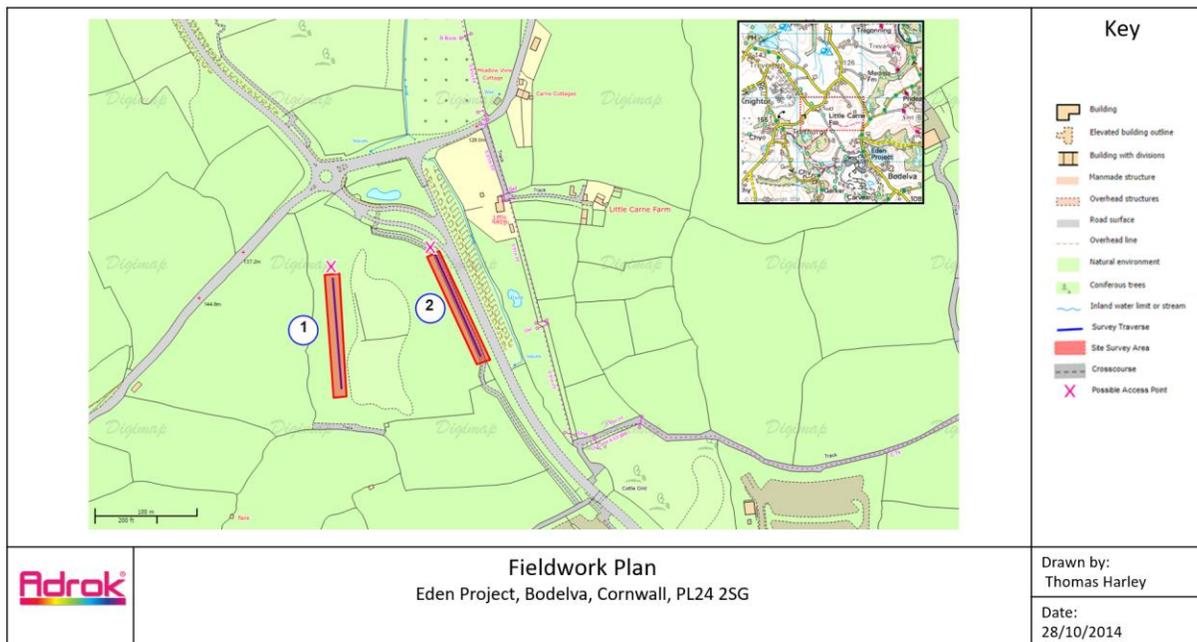
Stares	P-Scans (100m)	WARRs (100m)	Time Required
18	5	5	3 Field Days



ADR Geothermal Investigation at The Eden Project, Cornwall.

Eden Project: Adrok survey 2014-2015

- Adrok completed an internally funded R&D geophysical survey at The Eden Project on 03/11/2014 on behalf of EGS Energy Ltd.
- The survey was designed as research to test the application and capabilities of ADR, in the context of Hot Dry Rock (HDR) geothermal resource classification.
- Adrok collected 6 Stares, 2 WARRs and 2 P-Scans in the Eden Geothermal site, however, the data was not processed during the original project 00156-3. Instead, it was processed during September 2021 for project 00249.
- The primary goals were to map the underlying granite to a depth of 5km and try to identify inferred steeply dipping fault structures, as identified by BGS and EGS Energy.



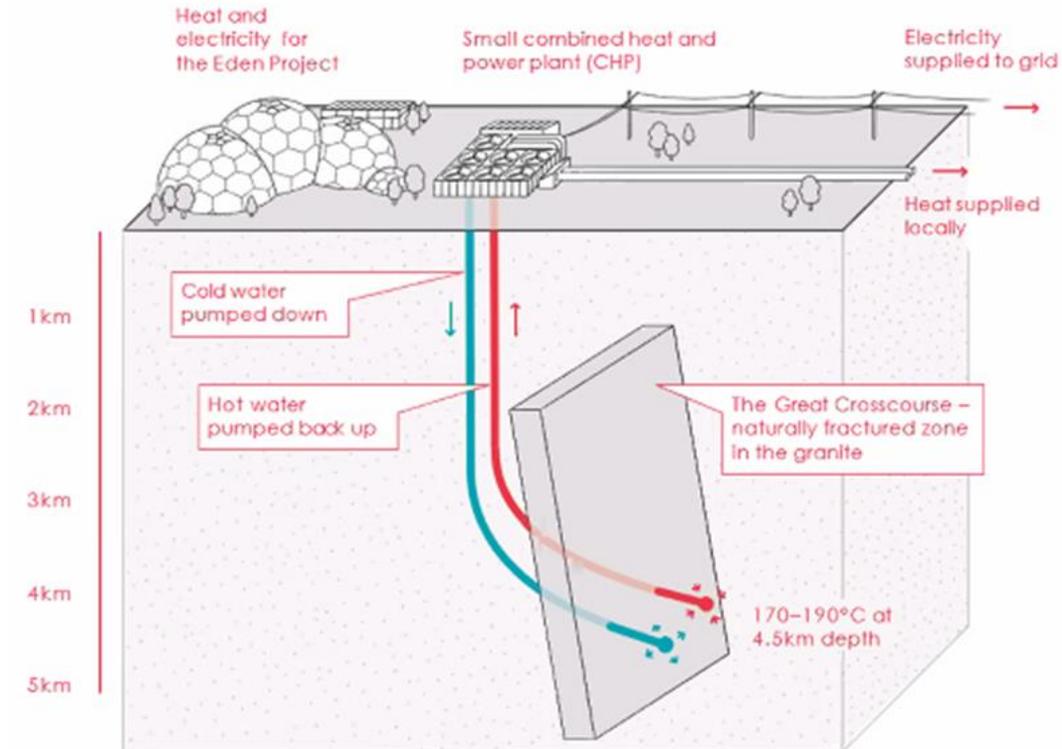
Adroks 00156-3 Eden Project Survey Plan, 2014.



Adroks 00156-3 Eden Project Survey, 2014.

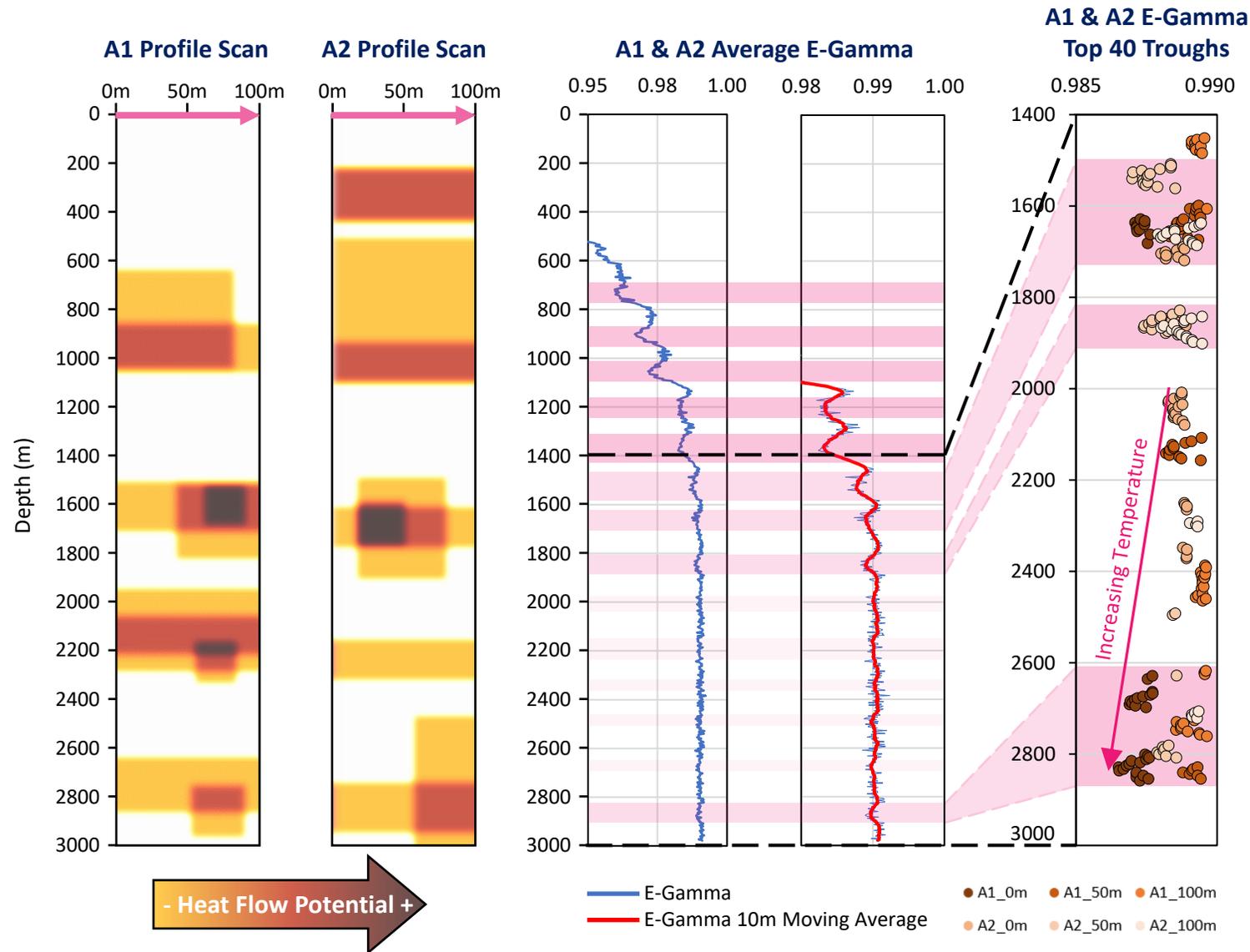
Eden Project: Drilling 2021

- 🌻 The Eden Geothermal drill site is located 800m to the NW of The Eden Project, in Bodelva.
- 🌻 Between May 2021 – October 2021, Eden Geothermal completed the first well at the Eden Project. EG-1 is a production well that reaches 5,277m MD (4,871m TVD). The well was planned with a ENE deviation of around 35° at >4km depth (increased to 40° if the first target is missed) in order to make an intersection with the target NNW-SSE striking, 80° ENE dipping Great Cross-Course fault zone (Well, 2020).
- 🌻 Rock cuttings were analysed at regular intervals in order to create lithology profiles. Wireline logging will also take place to measure flow and temperature conditions.
- 🌻 Before the injection well, EG-2, is drilled in late 2022, well testing will be carried out at EG-1 to provide Eden Geothermal with more details about the permeability and water flow characteristics of the target zone. This will yield a greater understanding of the geothermal resource at this location.
- 🌻 Once EG-2 is in place, a small combined heat and power plant will be constructed at the surface in order to supply heat and electricity to the Eden project and surrounding homes (Eden Geothermal, 2021).



Schematic 3D Model of the proposed Eden Geothermal drilling programme and power plant. From Eden Geothermal (2021).

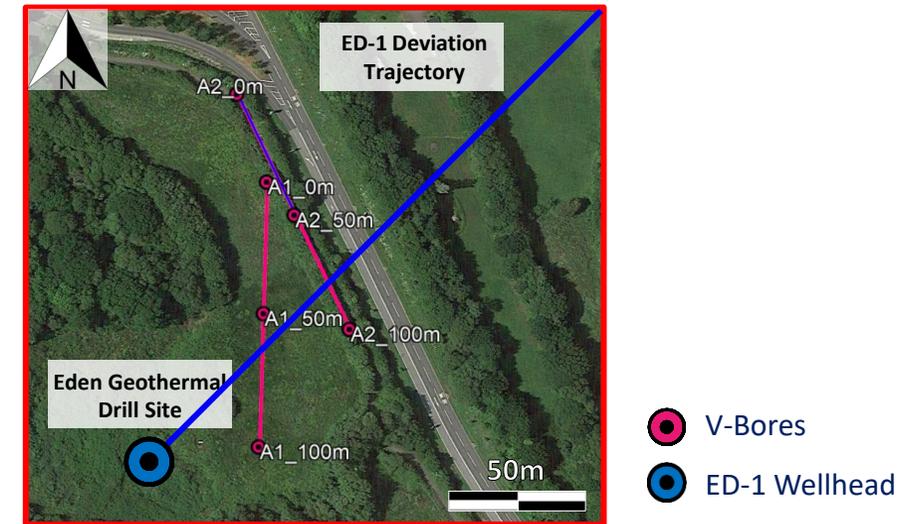
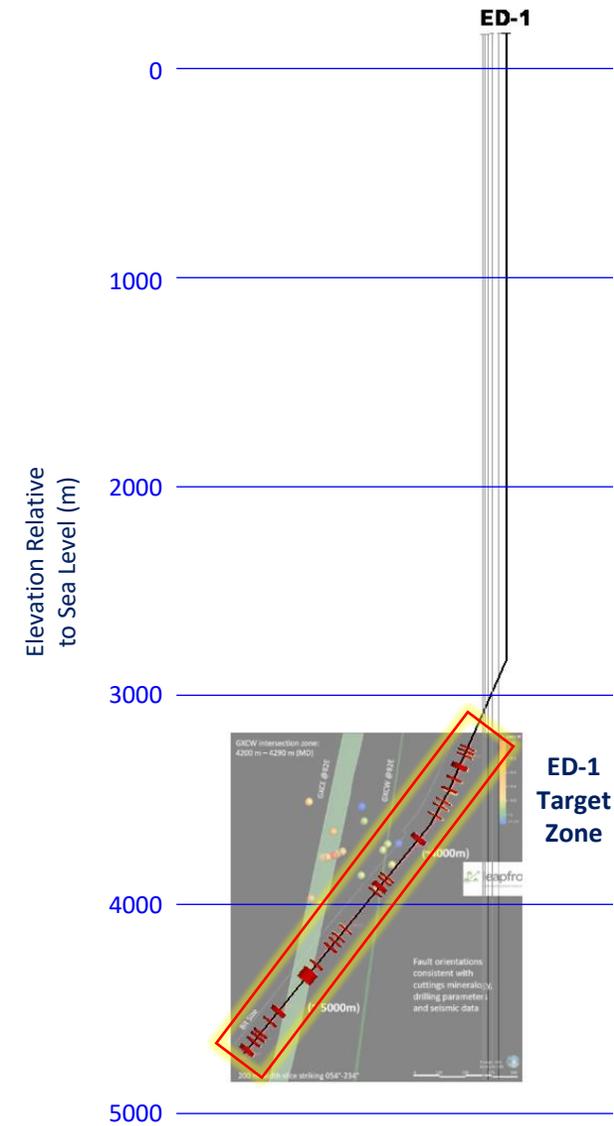
Eden Project: Adrok survey conclusions 2021



- The E-Gamma results in the A1 and A2 staves host an abundance of troughs, suggesting intervals of high temperature throughout the full 3000m scan.
- As the signal travels deeper beneath the surface, variations become smaller, however, the significance of the E-Gamma troughs does not decrease.
- Once the E-Gamma becomes stable below 2000m, the E-Gamma troughs shows a strong geothermal gradient trend. This is a similar trend to what Adrok have observed and ground-truthed at the Science Central Geothermal Borehole, in Newcastle.
- The Profile Scans provide insights into where high temperature flow may be present. Significant zones with high potential for heat flow are present at 850-1050m, 1500-1800m, 2100-2300m and 2750-2950m.
- Adrok have detected high geothermal potential at The Eden Project by identifying high thermal anomalies, via E-Gamma, coupled with areas of high resultant flow.**

Eden Project: Proximity of ADR data to validated drill data

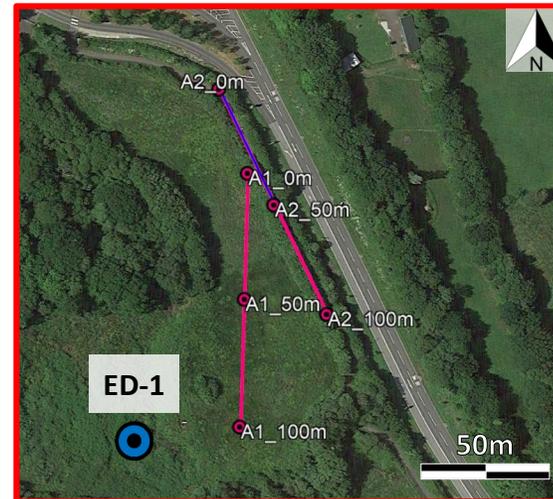
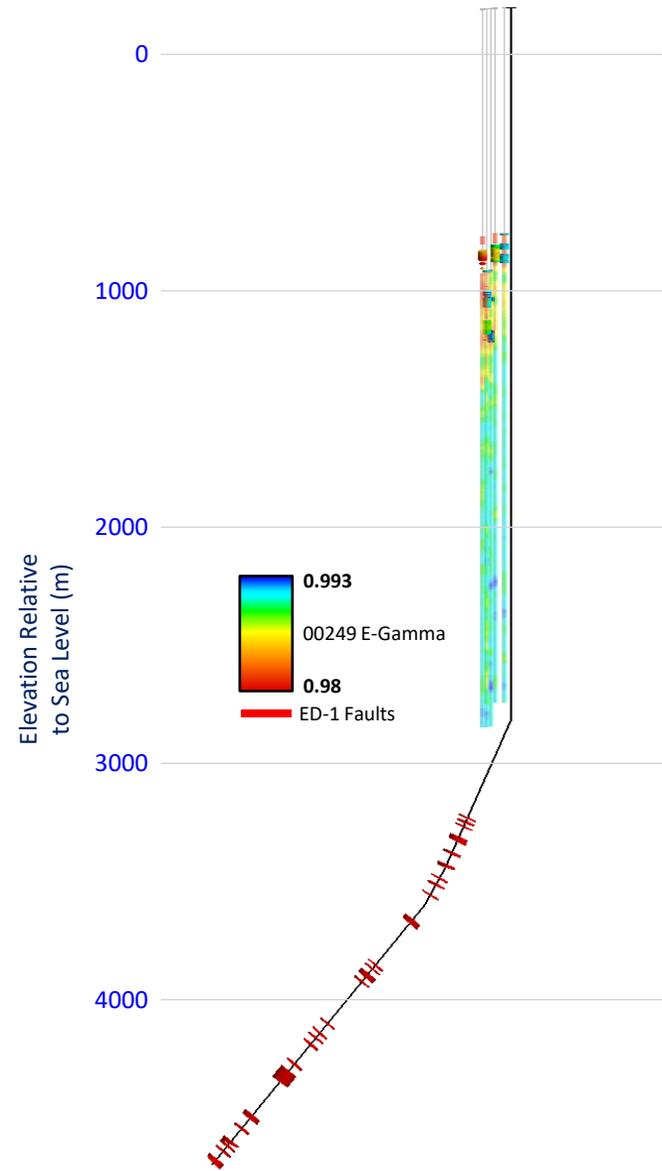
- All of the Eden Project V-Bores are vertical and within 140m of ED-1 at surface level.
- The primary geothermal target for ED-1 (The Great Cross-Course) is from 3,500-5,300m MD. The entirety of this section is along the deviated drill path towards the NE. This means that none of the V-bores from Adroks 2014 survey are intersecting with the target zone in the validation data.
- There is currently not any validation data available from the vertical section of ED-1 that can be used and correlated with the vertical V-Bores. This may change in the future if Eden Geothermal release more drilling results.



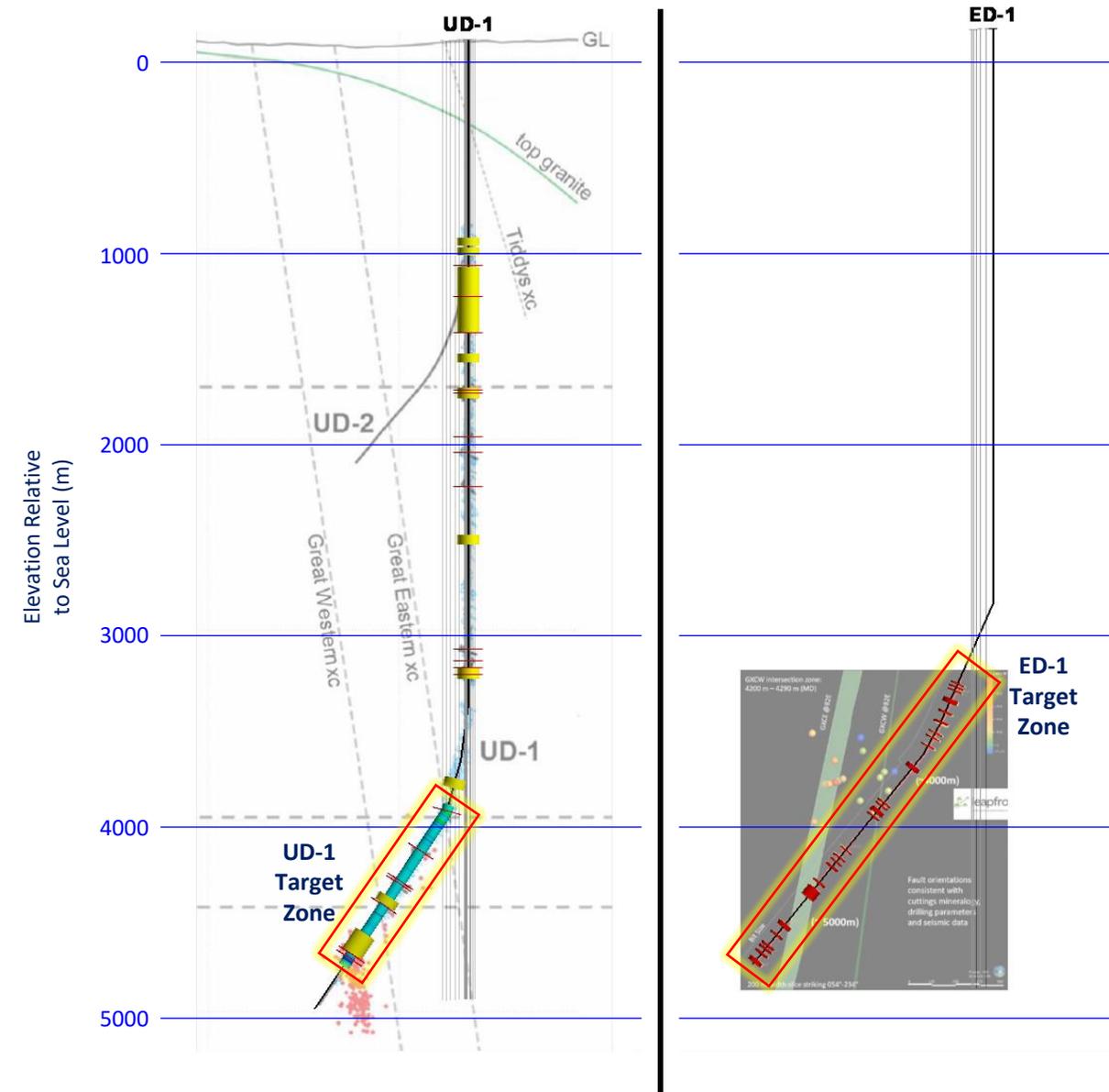
Map of the Eden Geothermal area, with estimated trajectories in map view of ED-1.

Eden Project: Existing ADR results vs current Validation

- At The Eden Project, 6 V-Bores and 2 100m P-Scans have been processed down to 3000m TVD depth during 2021 in project 00249.
- For this geothermal project, the E-Gamma was processed using 8192px windows, as well as the heat flow potential in the P-Scans by combining SWO flow analysis and E-Gamma Troughs.
- Currently, there is not any available training for ED-1 from 0-3000m TVD (in the vertical section of ED-1) that can be compared to the ADR results.
- The data could be re-processed without the leapfrog method in order to get deeper data, however, this would still not intersect the training data from the target zone that is along the deviated well path.
- In order to move forward with validation for Adroks Eden Project geothermal results, we must wait until training data becomes available in the vertical section of ED-1.



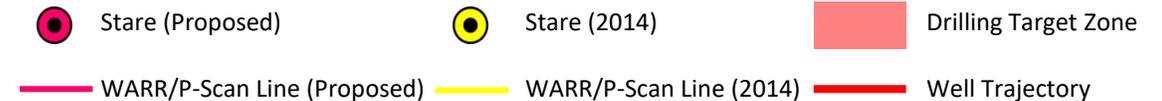
Eden Project: Conclusions 2022



- A good wealth of validation data has been discovered and established for both United Downs and The Eden Project. The validation data comes from a range of sources of different ages, from pre-Adrok mapping data, to post-Adrok drilling data.
- A strong inventory has been built up for both sites, including maps, drill results and profiles.
- However, the target zones in both drillholes UD-1 (United Downs) and ED-1 (Eden Project) are not intersected by the vertical V-Bores, due to the deviated well paths at depth.
- Validation can be assessed in the vertical section of UD-1, with high Ray DC correlation with significant mud losses and Energy % troughs correlating with faults. Validation cannot be assessed at ED-1 due to a lack of intersecting training data in the vertical section.
- Also, the depth of these target zones is from 3,500-5,000m depth. Current processing of the Eden Project ADR data only reaches 3,000m depth. In order to reach 5,000m depth, WARR tracking methods will need to be processed using manual tracking instead of the leapfrog method.
- **Overall, despite the strong validation inventory that has been established in United Downs and The Eden Project, there is a lack of intersection between the target zones and the ADR data due to deviated drill paths.**
- **Future processing can only be validated along the vertical drill paths of UD-1 and ED-1.**
- **Adrok now has a readily available 3D model of the geological and geothermal settings at the two deep geothermal sites in Cornwall. This can be used to validate our current datasets in the vertical paths, or be used as training data for future ADR surveys in these locations.**

Future ADR survey proposal: Eden Project (option 1)

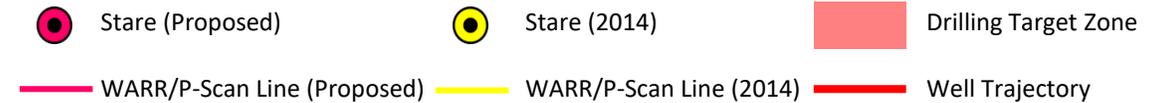
- A follow-up survey would be required at The Eden Project in order to full assess the capabilities of ADR's deep geothermal applications, particularly in the Cornwall granites.
- The 2014 survey was focussed in the area of the wellhead for ED-1, whereas a future survey would be focussed towards the ED-1 target zone, where the deviated well trajectory intersects the Great Cross-Course Fault Zone at depth. This new survey is located approximately 1km to the ENE of the 2014 survey and ED-1 wellhead.
- The initial scan locations are along public roads, therefore, we would not require permission for these scans.



Stares	P-Scans (100m)	WARRs (100m)	Time Required
23	5	5	4 Field Days

Future ADR survey proposal: Eden Project (option 2)

- A follow-up survey would be required at The Eden Project in order to full assess the capabilities of ADR's deep geothermal applications, particularly in the Cornwall granites.
- The 2014 survey was focussed in the area of the wellhead for ED-1, whereas a future survey would be focussed towards the ED-1 target zone, where the deviated well trajectory intersects the Great Cross-Course Fault Zone at depth. This new survey is located approximately 1km to the ENE of the 2014 survey and ED-1 wellhead.
- The initial scan locations are along public roads, therefore, we would not require permission for these scans.
- A second batch of potential scan locations are located within fields that are adjacent to the public roads. In order to complete these scans, communications to Eden Geothermal Ltd and land owners will be required.



Stares	P-Scans (100m)	WARRs (100m)	Time Required
43	12	12	7 Field Days

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