

A

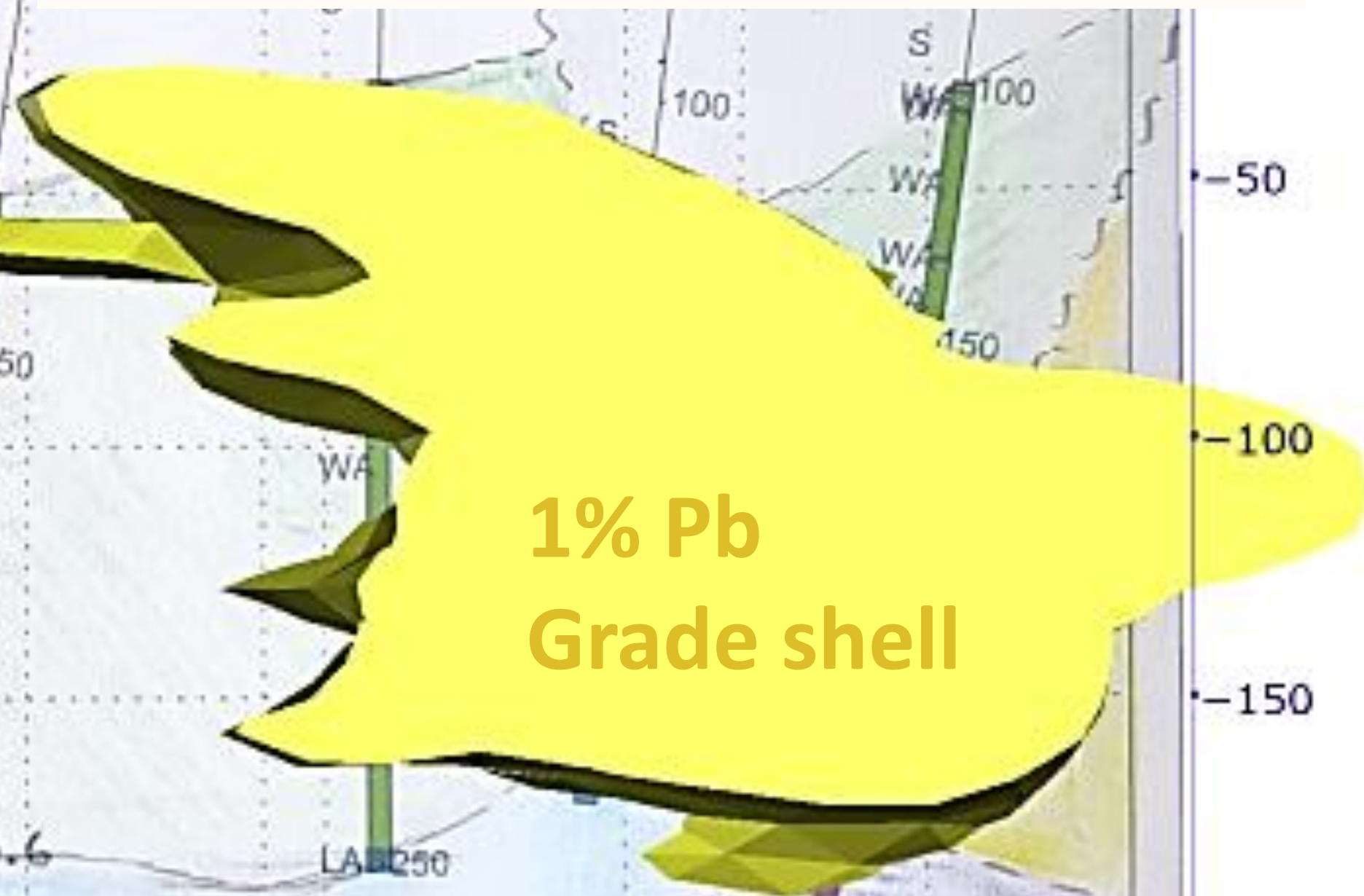
B

C

D

E

F



**1% Pb
Grade shell**

**DELINEATING
FAULTS AND
LITHOLOGICAL
BOUNDARIES USING
REFLECTED ENERGY**

(Part 1)

DELINEATING FAULTS AND LITHOLOGICAL BOUNDARIES USING REFLECTED ENERGY (Part 1)

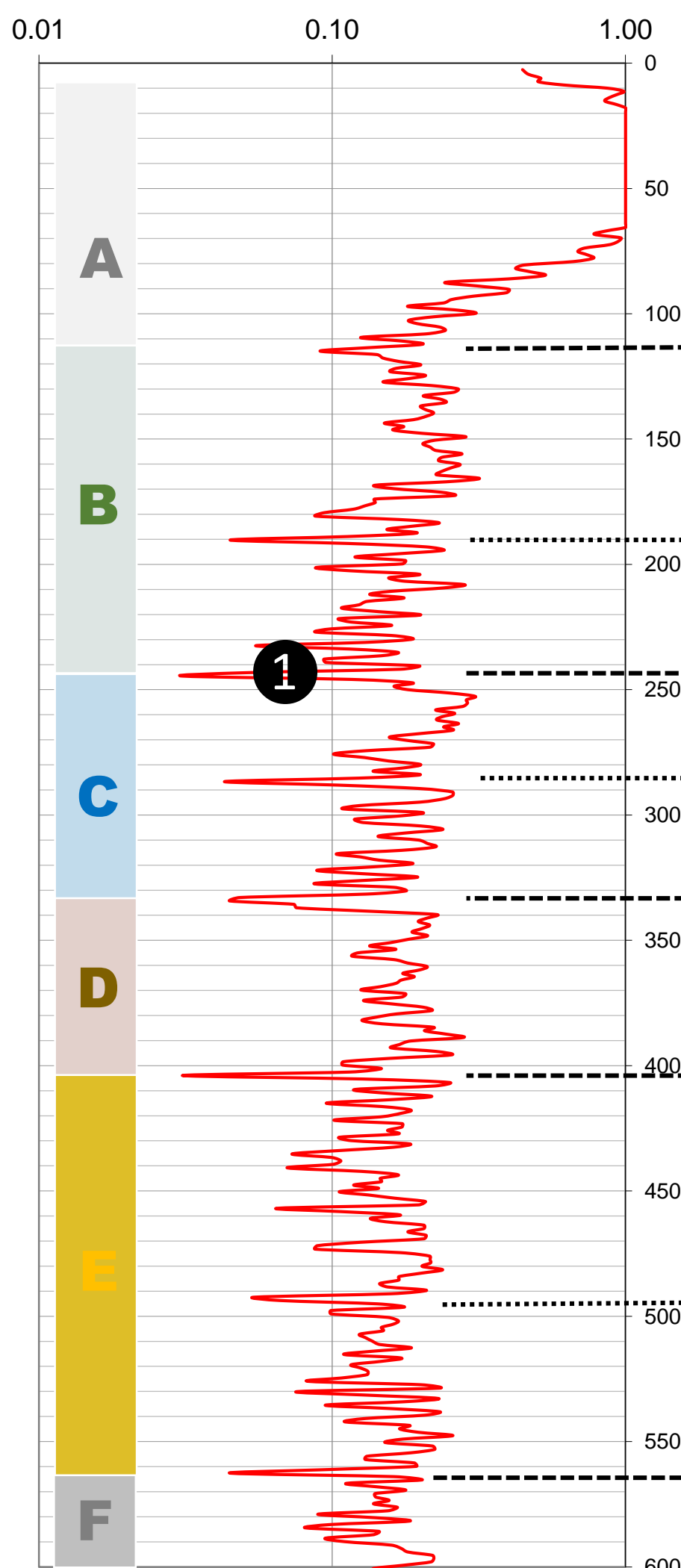
Adrok carried out 8 scans over a documented Pb-Zn deposit in Ireland. Two scans (H1 and H5 presented here) are located close to cross section X-3 (<50m) so an almost direct comparison can be made between the results and the lithology observed in drilling. Drilling undertaken by G11 (G11-1344-01) and previous tenement holders (holes B113 and B65) demonstrated that Adrok's scans were not positioned over mineralisation (see 1% Pb Grade shell shown on cross section below) therefore the lead-zinc signature was not obtained. Nevertheless, scan results were examined for boundaries (Part 1 – Faults and Lithological Boundaries) as well as internal layer lithology discrimination (Part 2). Lithological boundaries and faults are characterised by changes in the dielectric permittivity (ϵ_r) of the rock types on either side of the boundary. Accordingly, the boundaries act as "reflectors" to the pulsed radar signal. As predicted, changes in ϵ_r appear as the strongest return energy values in the received/reflected signal and correspond with major changes in rock-types or faults (or both as lithological contacts can be fault-bound). The contacts ($\Delta\epsilon_r$) are recorded as anomalies in the E-Log curve that trend towards lower values. The intensity of the anomaly (i.e. the lower the value of E-Log) is interpreted to be proportional to the absolute change in ϵ_r across the contact. The strongest reflected energy in both scans (H1 and H5 below) occurs at the contact in lithology between units **B** and **C** as marked on the results as **1**.



- 1% Pb grade shell (data provided by G11)
- Lithological contact ($\Delta\epsilon_r$)
- Fault or fracture zone identified in drilling ($\Delta\epsilon_r$) by G11 geologists
- Lithological contact which may also be faulted
- Faults located within lithological units and not at lithological contacts

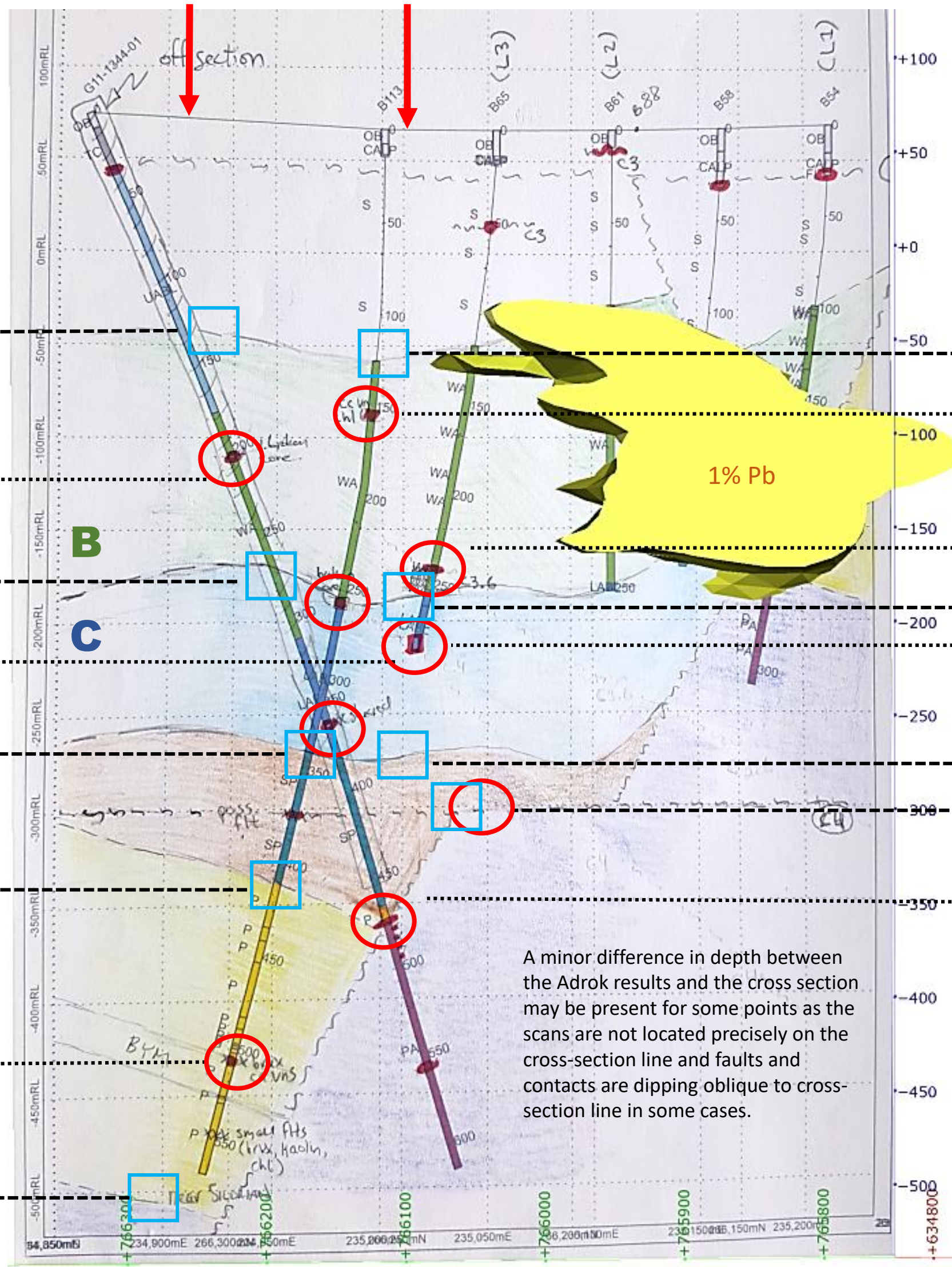
ADROK SCAN H1 (results)

H1 E-Log (relative energy %)



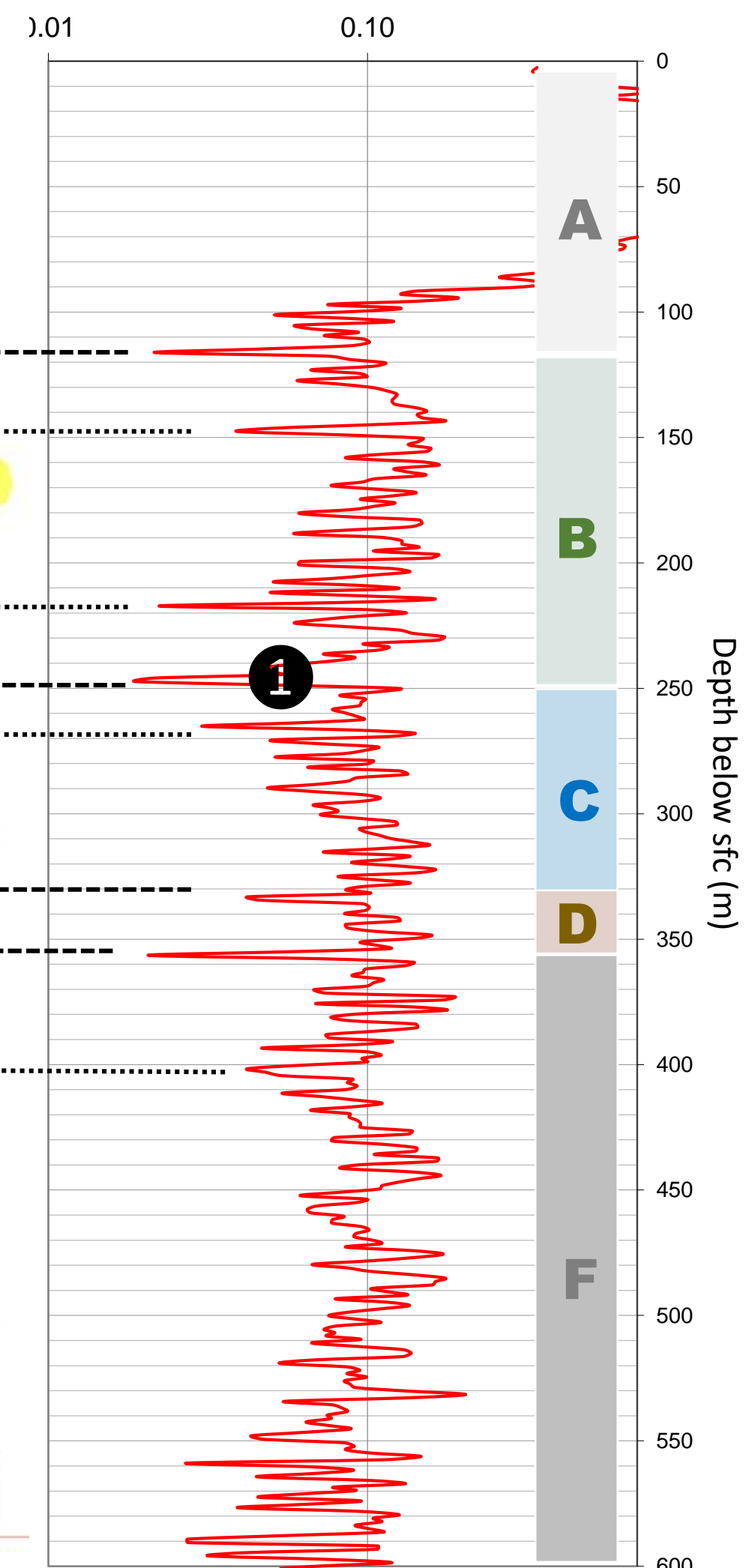
H1

H5



ADROK SCAN H5 (results)

H5 E-Log (relative energy %)



Geological cross-section X-3 (NE-SW) provided by G11. Cross section is constructed from multiple drill holes. Faults and unit boundaries may be dipping in 3rd dimension. V=H