

SUPPLEMENTARY MATERIAL

to the manuscript

Integrated gold prospectivity mapping in Um Garayat, Egypt

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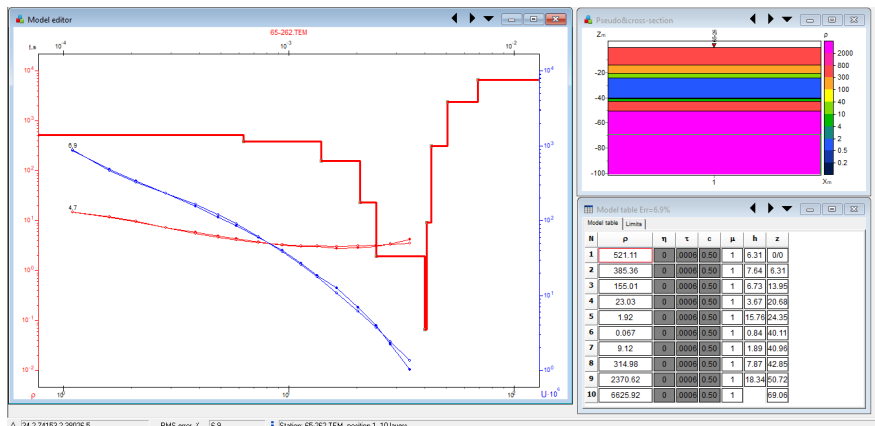


Fig. S1. Example of Inverted TEM VES No. 65 model (logarithmic depth-resistivity) graph (left), layers colour resistivity depth model (upper right) and inverted parameter table (lower right).

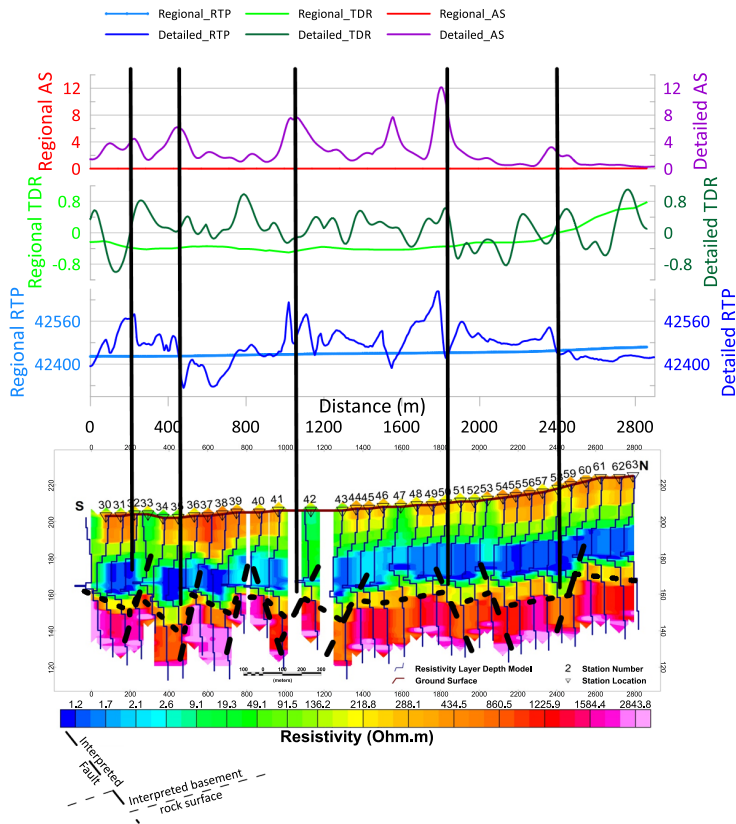


Fig. S2. Constructed geo-electric section no. 2 (lower panel) from inverted TEM measurements, the vertical scale is exaggerated, the upper panel shows magnetic RTP signal, TDR, and AS.

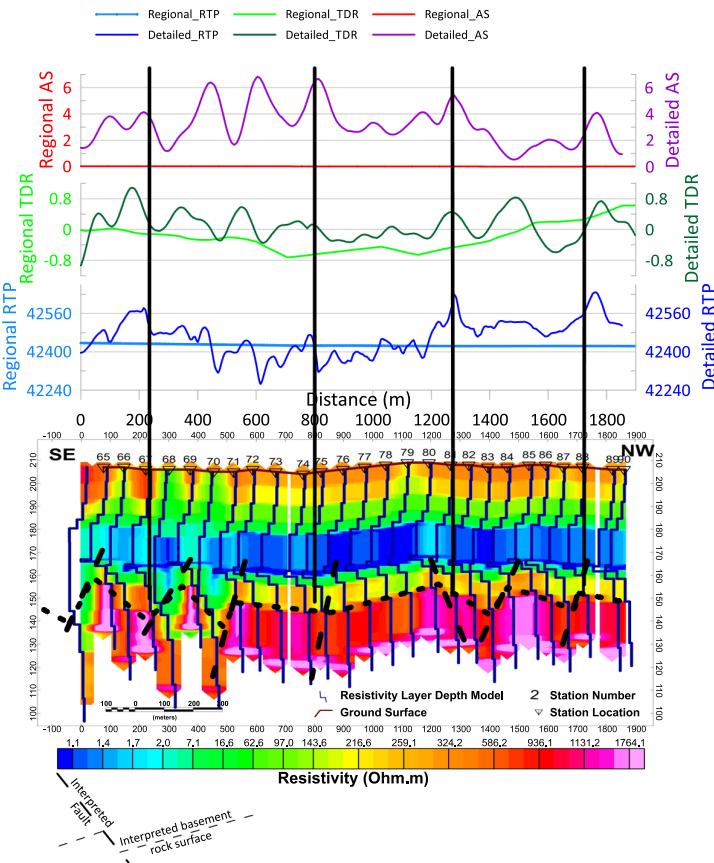


Fig. S3. Constructed geo-electric section no. 3 (lower panel) from inverted TEM measurements, the vertical scale is exaggerated, the upper panel shows magnetic RTP signal, TDR, and AS.

Table S1. Ratio indices of some alteration minerals from Aster image.

Mineral	Band combination	References
Biotite-epidote-chlorite-amphibole index	$(\text{band6} + \text{band9}) / (\text{band7} + \text{band8})$	Ref1, Ref2
Iron oxide index	$(\text{band2} / \text{band1})$	
OH-bearing minerals (OHI)	$(\text{band7} / \text{band6}) * (\text{band4} / \text{band6})$	
index of kaolinite minerals (KLI)	$(\text{band4} / \text{band5}) * (\text{band8} / \text{band6})$	

Ref1 = *Hewson et al., 2001*Ref2 = *Abou El-Magd et al., 2015*

References

- Abou El-Magd I., Mohy H., Basta F., 2015: Application of remote sensing for gold exploration in the Fawakhir area, Central Eastern Desert of Egypt. *Arab. J. Geosc.*, **8**, 6, 3523–3536, <https://doi.org/10.1007/s12517-014-1429-4>.
- Hewson R. D., Cudahy T. J., Huntington J. F., 2001: Geologic and alteration mapping at Mt Fitton, South Australia, using ASTER satellite-borne data. IGARSS 2001, Scanning the Present and Resolving the Future, Proceedings, IEEE 2001 International Geoscience and Remote Sensing Symposium (Cat. No.01CH37217), Sydney, NSW, Australia, pp. 724–726, **2**, <https://doi.org/10.1109/IGARSS.2001.976615>.