### **Dear Editor**

I should say thank you again for kindly praised and nice recommendations. New descriptions about the first reviewer recommendations are in <u>green</u> color and the second reviewer recommendations are in <u>red</u> color. We added our new descriptions about recommendations in our manuscript.

The recommendations and responses for the second reviewer are as follows in red color:

1- The authors say: "where A(ρ) denotes the area with concentration values greater than the contour value ρ; v represents the threshold; and a1 and a2 are characteristic exponents." (page 1139, lines 25-26);

it is necessary to insert a new table (see i.e. the below Table 1 by Cheng et al., 1994) with results obtained by using the power law method; al and a2 are the exponents of the power-law relation for concentration values less and greater than the threshold value (v), respectively; and it is necesary to show in figure 5 of the manuscript the relative five equations (see i.e. eqs. 12-15 and Fig.6 by Afzal et. al., Journal of Geochemical Exploration , **108** (2011) 220-232, Delineation of mineralization zones in porphyry Cu deposits by fractal concentration–volume modeling)

**Response 1in page 5)** Pairs of estimated exponents and corresponding optimum thresholds for RTP-MA are presented in Table 2. The thresholds delineate anomalous areas. Comparison of the areas above and below the threshold of 6022 nT on the contour map (Fig. 3) with the RTP map shows significant spatial correlation between the areas with RTP-MA concentration above 6022 nT.

Table 2. Results obtained by using the power law method and weights of evidence procedure;  $\alpha_1$  and  $\alpha_2$  are the exponents of the power-law relation for concentration values less and greater than the threshold value (u), respectively.

	Power law		W. of T
intensity U	$\alpha_1$	α <sub>2</sub>	U
60022	0.0116	0.0458	60022
	U 60022	Power law υ α <sub>1</sub> 60022 0.0116	Power law   υ α1 α2   60022 0.0116 0.0458



Figure 6. Log-log plot for RTP-MA data in Qoja-Kandi.

2- The authors say: "Statistical results reveal that RTP-MA mean value is 48 441 nT, as depicted in Fig. 4, and the RTP-MA domain shows a wide range." (page 1143, lines 8-9); in Fig. 4 it is necessary to explain the role of histogram and of Gaussian curve, because in the text this role is not clearly described. In particular I strongly suggest to insert (a) for histogram and (b) for Gaussian curve in Fig. 4 caption.

**Response 2 in page 5)C-A Modeling** overcomes the distortion effects of outliers on the traditional techniques and makes it unnecessary to determine whether the concentration data are drawn from a normal (i.e., Gaussian) distribution or log-normal distribution, and this advances the analysis resolution of anomalies (Fig. 5).



Figure 4. Histogram of RTP-MA data in Qoja-Kandi.





# Other recommendations are as follows, which we added all of them to our new manuscript.

### $\S\ 2$ The concentration-area fractal method

page 1139, line 24:

insert exact symbol of proportional ( $\propto$ ) in eq. (1) A( $\rho \le \nu$ )  $\propto \rho_{-a1}$ ; A( $\rho > \nu$ )  $\propto \rho_{-a2}$ ,

# $\S\ 2$ The concentration-area fractal method

page 1140, line 14:

"The study area and geological setting" is the title of § 3 and not a sentence of § 2,

so we have:

# $\S~3$ The study area and geological setting

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# § 4 Ground magnetic data analysis

... and so on for all following paragraphs and subparagraphs.

Also all of the figures and tables number were updated due to our new figures and tables.

# Kind regards,

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