Supplementary Materials: The Use of Univariate and Multivariate Analyses in the Geochemical Exploration, Ravanj Lead Mine, Delijan, Iran

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Table S1. Results of Robust PC analyses of surface samples from Block A of the Ravanj deposit (using the broken-stick method, [45]). Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

Rotated Component Matrix					
Component	1	2	3	4	5
Ag	0.05	0.37	**0.81**	-0.02	0.16
As	**0.51**	0.11	**0.66**	0.06	0.22
Ba	0.13	**0.90**	0.14	-0.04	-0.04
Bi	**0.66**	0.04	0.01	0.19	-0.08
Cd	0.17	0.06	**0.60**	0.01	**0.50**
Co	**0.90**	0.09	0.13	0.09	0.00
Cu	0.37	0.28	**0.75**	0.02	-0.12
Fe	**0.84**	0.13	0.24	0.08	0.10
Mn	**0.76**	-0.05	0.14	-0.15	-0.13
Mo	**0.78**	0.12	0.00	0.03	0.13
Ni	**0.60**	0.08	0.35	0.38	0.10
Pb	0.05	**0.62**	0.27	0.03	0.40
S	0.06	**0.95**	0.17	0.04	0.01
Sb	0.05	0.19	**0.89**	-0.01	-0.02
Sr	0.02	**0.81**	0.18	0.01	0.08
Th	0.12	**0.92**	0.13	-0.06	0.00
Zn	0.16	0.28	**0.46**	0.14	**0.57**
Cr	0.24	-0.03	0.03	**0.55**	0.05
Be	0.09	0.08	-0.09	**0.73**	0.11
Ca	-0.09	-0.16	-0.19	-0.06	0.14
Ce	0.13	-0.04	0.04	**0.46**	0.08
K	-0.05	0.01	-0.04	**0.84**	-0.08
Ti	0.18	-0.05	0.26	0.39	-0.28
V	0.06	-0.02	0.02	**0.83**	0.13
W	0.03	0.03	0.05	0.09	0.08
P	0.02	-0.10	0.16	**0.70**	-0.04
Rb	-0.01	-0.19	-0.05	0.07	0.06
Mg	0.20	0.12	-0.08	-0.10	-0.06
Rotation Sums of Squared Loadings					
Component	Eigenvalues	% of Variance	Cumulative %		
1	4.13	14.75	14.75		
2	4.09	14.62	29.37		
3	3.57	12.73	42.10		
4	3.36	11.98	54.08		
5	1.67	5.95	60.04		

Figure S1. (**a**) Scree plot of parallel analysis (eigenvalues Mont-Carlo simulation) using PCA on CLR from the surface samples in Block A of the Ravanj deposit. Eigenvalues upper than raw data line are significant. (**b**) Biplot of PC1 vs. PC2. (**c**) Biplot of PC2 vs. PC3. (**d**) Biplot of PC3 vs. PC4.