

aliniat@aut.ac.ir

F5 +

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(K-Zn*Zn / Ni*Cu)

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() Pb*Zn / Co*Cu

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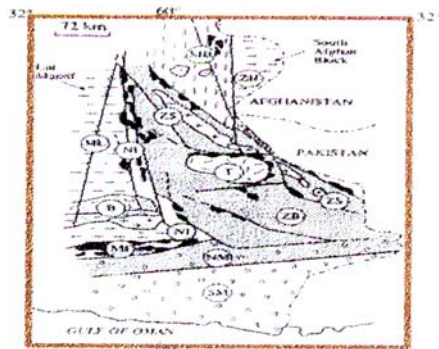
Regional Geochemistry Exploration And Applying Geochemical And Statistics Methods To Detect Cu Anomaly Region In Khorasan Deh- Salm

Regional geochemistry exploration in the Deh- Salm area was performed. 450 samples were taken from stream sediment. These samples analyzed with spectrographic methods after preparation. To each of samples, 33 elements were analyzed. Single and multi variable techniques were used to geochemical anomalies separation. A result of multi variable method (correlation coefficients, factor analysis and cluster analysis) is shown the corresponding with each other. Cu mineralization points was detected by mapping of determined exploration factor (K-Zn*Zn / Ni*Cu) and using the geostatistical methods.

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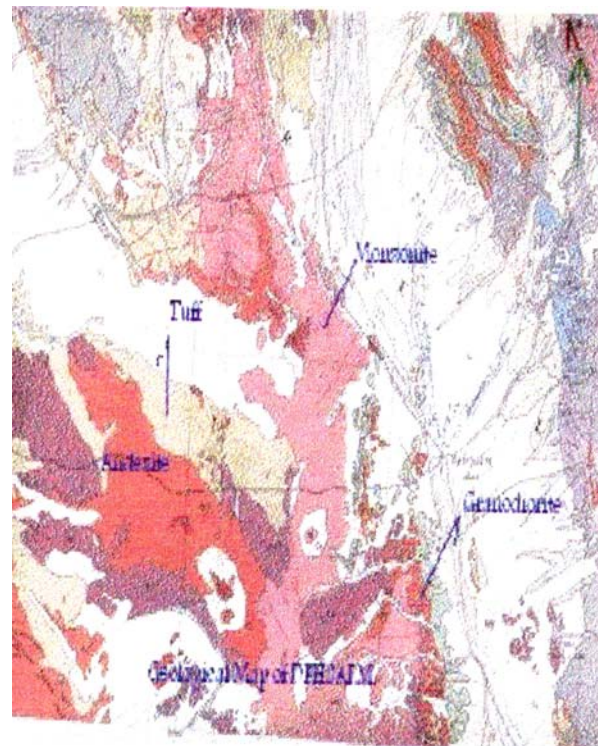
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Metamorphic subdivision of the Sistan-Baluchistan province, Iran. Rocks: (1) Upper Cretaceous and Upper Cretaceous-Paleocene ophiolites; (2) Upper Cretaceous-Paleocene volcanogenic-carbonate-terrestrial rocks; (3) Eocene flysch; (4) sedimentary melange and Eocene-Oligocene flysch; (5) Oligocene-Miocene flysch and Miocene coarse molasse; (6) Miocene-Quaternary rocks, occasionally with Pliocene volcanic flows within present-day tectonic depressions; (7) Quaternary volcanic rocks with Pliocene-Miocene and Paleocene-Saravali rocks in the basement; (8) granitoid plutons; (9) subalkaline-affinitive intrusives; (10) major faults. *Metamorphic zones and subzones* (shaded): (11) prehnite-pumpellyite zone; (12) chlorite zone; (13) Zafra-Helmand; (14) Mijab-Transtakht; (15) Cu-Makran zone with subzones; (16) North Makran; (17) Fe-U; (18) South Makran; (19) North Makran-Transtakht; (20) Cu-Min-Mg; (21) Marginal Unit (Cu); Sistan zone with subzones; (22) Zafra (Mg-Fe); (23) Zafra; (24) Au-Ag-Cu-Pb-Zn; (25) Mijab-Transtakht; (26) Cu-Au; (27) Au-Cu-U; (28) Au; (29) Au-Ag-Mg-Cu-Pb-Zn; (30) Asbestos; (31) ungrouped.

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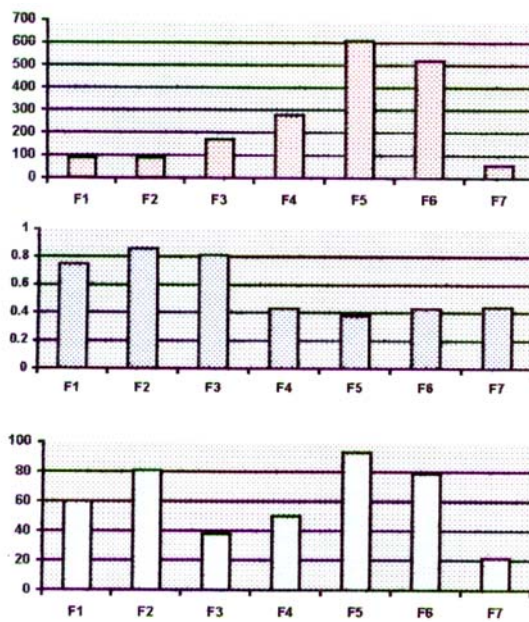


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$F1=-230, F2=-100+230, F3=-50+100, F4=-20+50, F5=-10+20, F6=-5+10, F7=-3+7$ mesh.

F4

Pb, Zn, Cu

F5

F5

Excel

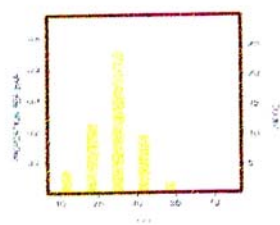
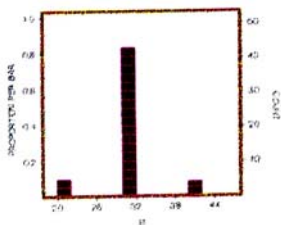
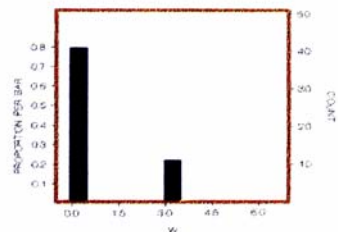
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spss

() Cu, B, Sn

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Cu, V, Zn, Ba, Sr, Co, Sn, W, Mo, B, Ag, Ni, Pb.

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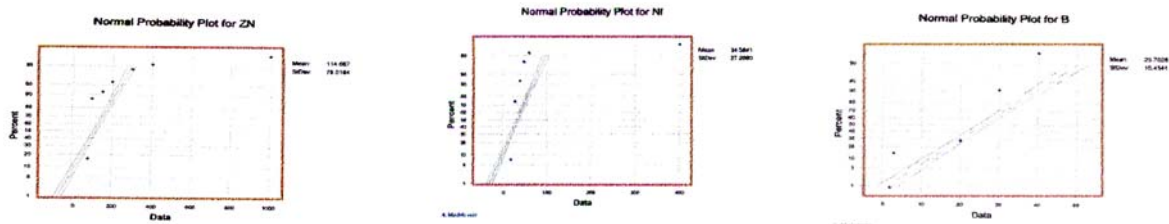
() B, Ag

:

() Cu, V, Ba, Co, Sn, Mo, W, Pb, :

() Sr,Na

:



Sr, Na

(Henly &

Windows

SPSS

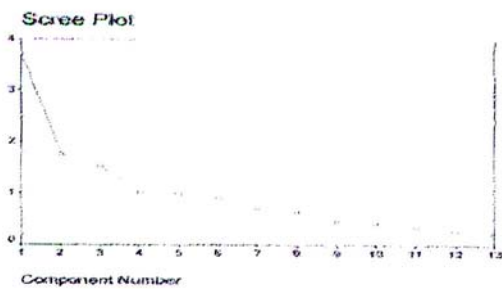
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Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Multiple Correlations			
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	
1	31996	28.431	28.431	31695	28.431	28.431	
2	17572	15.664	44.095	17572	15.664	44.095	
3	15239	13.641	57.737	15239	13.641	57.737	
4	1406	1.257	59.000	1406	1.257	59.000	
5	986	0.880	60.000	986	0.880	60.000	
6	912	0.816	60.816	912	0.816	60.816	
7	703	0.627	61.443	703	0.627	61.443	
8	645	0.579	62.022	645	0.579	62.022	
9	457	0.409	62.431	457	0.409	62.431	
10	415	0.370	62.801	415	0.370	62.801	
11	303	0.271	63.072	303	0.271	63.072	
12	287	0.258	63.330	287	0.258	63.330	
13	204	0.183	63.513	204	0.183	63.513	

Extraction Method: Principal Component Analysis



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±%

Mo, Co, Pb, Sn, V

/ :

B, Cu

/ :

Cu, Ni, W, Zn

/ :

W, Ni

/ :

W

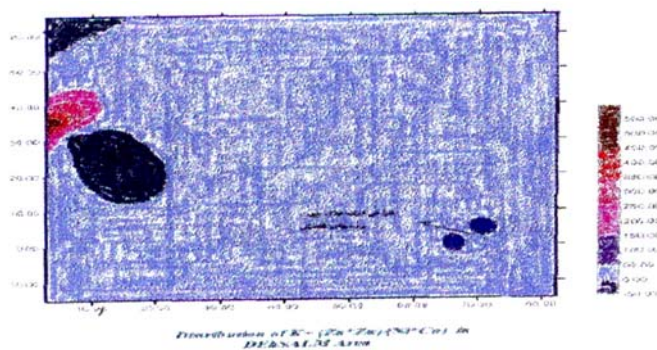
W, Zn

Ni, Cu

CO, Zn Cu, Ni

$$K = \frac{Zn^2}{Ni.Cu}$$

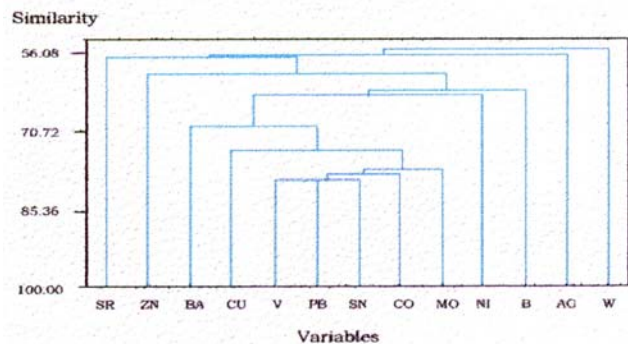
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Mo Co

Pb, Sn, V

Ni

Cu, Ba

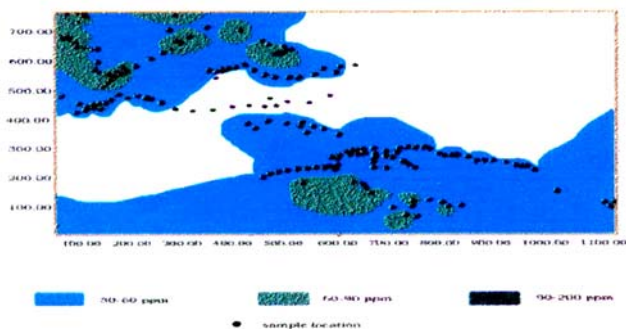
Zn, B

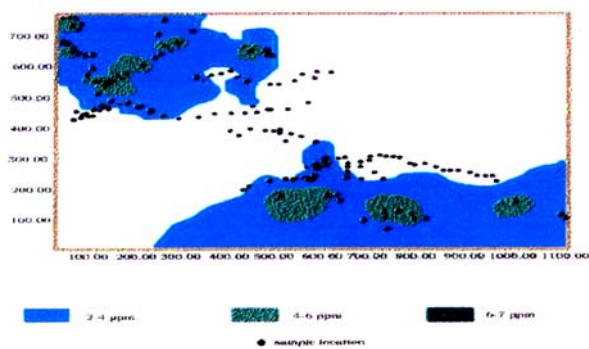
Sr

Ag, W

Pb*Zn/Cu*Mo

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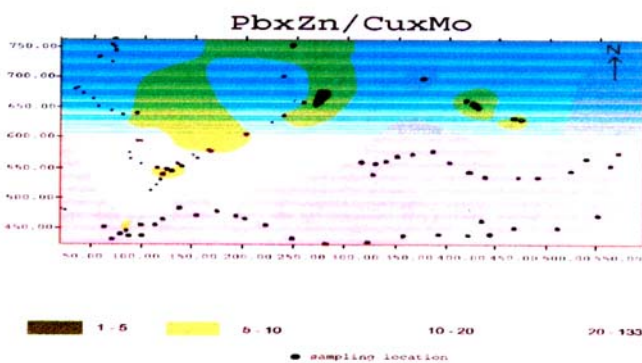
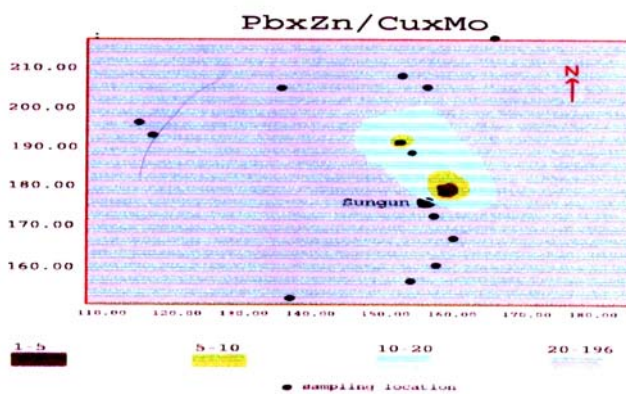


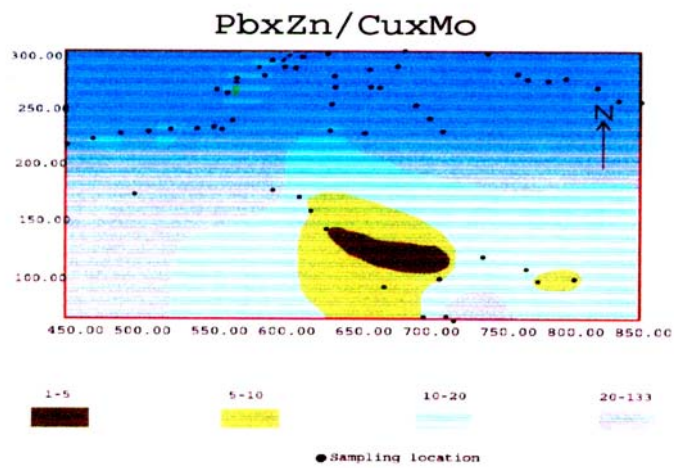


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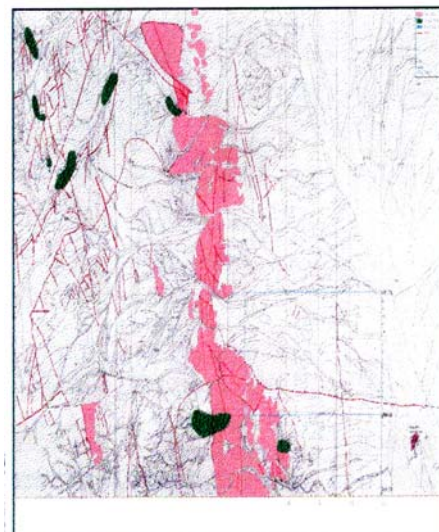
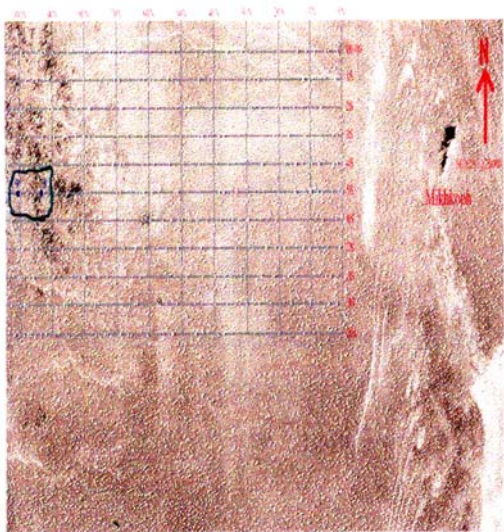


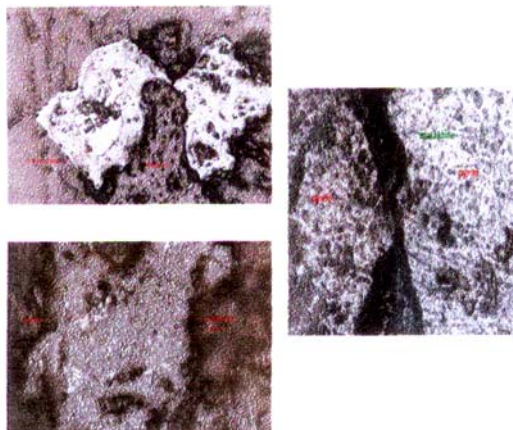
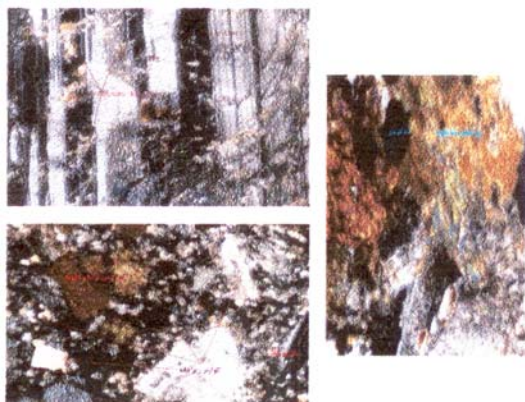
	Pb	Zn	Cu	Mo
	30	70	50	3
	20	50	50	2
	20	50	50	2
	23.3	56.7	50	2.3

$K = Pb * Zn / Cu * Co = 11.5 :$

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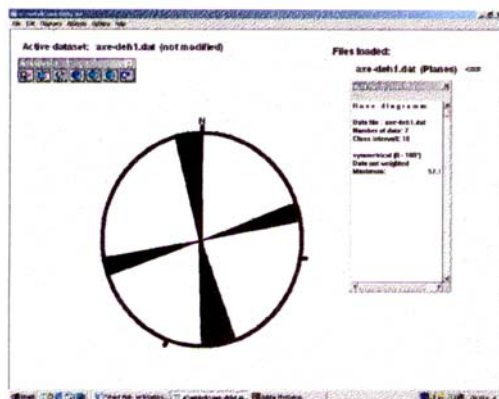
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- [3] Basine & Hobner "Copper Accurance in IRAN", 1968.
- [4] Solovov, A.P, "Geochemical Prospecting for Mineral Depodit", 1985, pub: Mir
- [5] Grigorian, S.V, "Scientific Fundamental & Practical Effectiveness of Lithogeochemical Exploration Methods",Seminar,2002.