



20 Mart 2013

sayın: Kanaroğlu Madencilik

Göndermiş olduğunuz Numunelerin Kimyasal analiz sonuçları ektedir.

Saygılarımla

Bilgilerinize arz ederiz.

XRF ve ICP Sonuçları

	KANAROĞLU MUTKI-1	KANAROĞLU 0419	KANAROĞLU 0040	KANAROĞLU 120	KANAROĞLU 117	Feldspat	Mikaşist
Formula	Concentration	Concentration	Concentration	Concentration	Concentration	Conc.	Conc.
SiO ₂	62.476%	75.044%	71.705%	63.052%	67.678%	77.383%	58.40%
Al ₂ O ₃	7.165%	12.430%	17.593%	17.219%	19.929%	13.241%	26.62%
Fe ₂ O ₃	8.128%	2.112%	1.202%	3.166%	2.389%	0.038%	0.43%
MgO	2.005%	0.646%	0.415%	0.224%	1.012%		0.20%
CaO	1.492%	0.273%				0.076%	
Na ₂ O	1.881%	7.244%	0.388%	0.488%	0.709%	8.287%	1.16%
K ₂ O	1.008%	0.167%	5.603%	4.266%	4.913%	0.055%	7.00%
TiO ₂	0.234%	0.381%	0.303%	0.287%	0.369%	0.138%	0.35%
P ₂ O ₅	0.557%	0.004%	0.021%	0.048%	0.042%	0.012%	0.03%
MnO	0.026%						
Cr ₂ O ₃	0.008%						0.01%
SO ₃	9.990%			5.710%			
LOI	5.03%	1.70%	2.77%	5.54%	2.96%	0.77%	5.81%
TOPLAM	100%	100%	100%	100%	100%	100%	100%
Conc.	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Li	3.552	6.675	18.207	12.884	10.282		
Be	1.199	10.710	15.466	6.595	7.625		
V	1559.788	619.252	685.528	668.985	521.424		
Cr	791.482	186.484	722.415	830.064	794.437		
Mn	5312.759	144.650	80.958	208.038	149.336		
Co	115.354	64.578	46.956	87.168	89.178		
Ni	2155.136	1279.893	2300.946	2225.039	1972.305		
Cu	173.122	99.653	120.710	89.466	70.890		
Ag	14.352	0.170	0.351	0.237	0.885		
Au		0.002	0.002	ND	ND		
Pt	ND	ND	0.004	ND	ND		
Pd	2.331	0.989	1.44	1.201	0.738		
Zn	172.892	100.783	125.481	81.548	90.270		
Pb	1558.424	15.039	40.301	14.003	14.368		
Cd	2.773	0.560	2.249	2.046	1.690		

İmzasız ve mühürlü raporların hiçbir resmi geçerliliği yoktur.

ms nk



Ga	19.464	52.276	55.893	212.042	116.833		
As	132.840	48.191	55.177	61.243	62.701		
Se	6.762	13.283	15.414	23.938	13.781		
Rb	0.689	7.308	214.014	146.102	137.432		
Sr	9.321	28.905	46.954	9.176	7.090		
In	0.071	0.047	0.026	0.019	0.048		
Cs	0.116	0.463	0.959	0.579	0.379		
Ba	17.279	22.246	53.052	206.446	204.500		
Tl	0.035	0.019	0.339	0.250	0.179		
Bi	0.128	0.003	0.782	0.737	0.302		
U	0.207	1.025	0.872	2.647	5.993		
Concentration	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Ru	ND	ND	35.715	3.98	7.265		
Pd	2330.67	988.539	1439.492	1200.531	737.554		
Sn	11791.147	4481.945	33779.55	101325.764	40049.756		
Sb	5366.17	596.26	2882.183	2407.321	4315.876		
Te	108.673	32.266	1302.068	22.665	2117.668		
Hf	748.642	231.601	579.437	492.235	255.647		
Ir	13.943	14.392	166.996	40.687	16.514		
Rh	161.302	24.232	35.395	18.333	14.43		
Pt	ND	ND	4.022	ND	ND		

	kanaroglu masif	kanaroglu bantlı	kanaroglu 1	kanaroglu 2	kanaroglu 3	kanaroglu 4
Formula	Concentration	Concentration	Concentration	Concentration	Concentration	Concentration
SiO ₂	8.900%	21.383%	21.694%	17.448%	18.056%	13.057%
Al ₂ O ₃	0.562%	1.322%	5.012%	3.965%	4.208%	4.040%
Fe ₃ O ₄	83.635%	44.704%	57.776%	65.230%	64.286%	76.289%
MgO	3.870%	6.597%	4.408%	3.990%	4.062%	3.258%
CaO	1.513%	14.320%	5.330%	4.486%	4.424%	0.810%
Na ₂ O	0.530%	2.088%	1.394%	1.033%	1.074%	0.603%
K ₂ O	0.012%	0.043%	0.082%	0.066%	0.067%	0.074%
TiO ₂	0.067%	0.381%	0.415%	0.391%	0.397%	1.046%
P ₂ O ₅	0.827%	8.981%	3.768%	3.262%	3.273%	0.629%
MnO	0.069%	0.137%	0.087%	0.085%	0.084%	0.152%
Cr ₂ O ₃	0.02%	0.046%	0.036%	0.045%	0.036%	0.041%
TOPLAM	100%	100%	100%	100%	100%	100%
Concentration	ppm	ppm	ppm	ppm	ppm	ppm
Li		9.605	15.968	14.462	15.515	11.008
Be		8.779	10.135	9.783	10.448	4.723
V		2295.017	1983.846	2169.706	2085.667	2016.749
Cr		720.386	952.681	543.649	522.055	578.260
Mn		4788.636	3568.452	3969.942	3756.040	5013.209



Co		100.997	102.380	108.230	103.436	103.940
Ni		2112.361	2562.856	2173.513	2129.703	2153.970
Cu		534.920	66.939	69.006	55.950	21.148
Ag		51.014	0.594	0.511	0.394	0.332
Zn		581.308	361.143	385.307	380.928	571.201
Pb		3054.302	31.581	24.972	18.351	20.748
Cd		8.233	1.665	1.048	1.070	1.217
Ga		33.491	43.220	46.841	45.446	37.217
As		239.957	130.274	117.387	128.305	85.533
Se		51.451	16.677	16.338	15.130	10.168
Rb		1.815	2.233	2.146	2.116	2.843
Sr		76.192	43.607	37.461	37.898	9.120
In		0.349	0.373	0.360	0.332	0.320
Cs		0.237	0.290	0.292	0.287	0.352
Ba		35.218	28.053	32.819	30.806	10.928
Tl		0.069	0.012	0.011	0.011	0.019
Bi		0.418	0.131	0.110	0.083	0.120
U		2.157	1.981	1.880	1.665	0.806
Concentration	ppb	ppb	ppb	ppb	ppb	ppb
Ru		ND	ND	ND	ND	ND
Pd		11395.597	1163.239	1027.155	1056.108	746.819
Sn		15789.62	5825.022	6113.805	5942.543	10717.197
Sb		22378.217	760.456	801.562	750.312	650.226
Te		96.599	334.526	193.536	256.303	197.4
Hf		3954.723	215.461	213.914	216.212	151.679
Ir		36.649	265.376	62.296	31.645	22.257
Rh		335.613	51.62	33.328	29.859	26.164
Pt		116.908	47.417	11.446	ND	ND

XRF TRACE

K19		K18		HP13		P9		P13	
Formula	Conc.	Formula	Conc.	Formula	Conc.	Formula	Conc.	Formula	Conc.
TiO2	0.02%	Sc	1 PPM	Sc	4 PPM	Sc	8 PPM	Sc	20 PPM
Sr	0.002%	TiO2	0.05%	TiO2	0.18%	TiO2	0.47%	TiO2	0.41%
V	2 PPM	V	1 PPM	V	3 PPM	V	8 PPM	V	120 PPM
Y	7 PPM	Cr	7 PPM	Cr	2 PPM	MnO	0.01%	Cr	44 PPM
Cr	3 PPM	MnO	0.001%	MnO	0.01%	Fe2O3	3.29%	MnO	0.03%
Zr	187 PPM	Fe2O3	0.08%	Fe2O3	1.96%	Co	38 PPM	Fe2O3	8.49%
MnO	0.004%	Co	15 PPM	Co	17 PPM	Ni	7 PPM	Co	89 PPM
Fe2O3	0.23%	Ni	2 PPM	Ni	6 PPM	Zn	4 PPM	Ni	83 PPM
Co	25 PPM	Zn	1 PPM	Zn	5 PPM	Ga	20 PPM	Cu	128 PPM
Sn	3 PPM	Ga	20 PPM	Ga	20 PPM	As	7 PPM	Zn	23 PPM
Ni	4 PPM	As	4 PPM	As	4 PPM	Sr	28 PPM	Ga	26 PPM
Sb	5 PPM	Sr	47 PPM	Rb	1 PPM	Y	80 PPM	As	8 PPM
Zn	4 PPM	Y	8 PPM	Sr	35 PPM	Zr	483 PPM	Rb	3 PPM

(Handwritten signatures)



Ba	17 PPM	Zr	350 PPM	Y	85 PPM	Nb	20 PPM	Sr	40 PPM
Ga	8 PPM	Nb	3 PPM	Zr	348 PPM	Sn	5 PPM	Y	16 PPM
La	2 PPM	Sn	1 PPM	Nb	19 PPM	Sb	7 PPM	Zr	148 PPM
As	5 PPM	Sb	6 PPM	Sn	12 PPM	Cs	3 PPM	Nb	13 PPM
Ce	8 PPM	Cs	1 PPM	Sb	5 PPM	Ba	100 PPM	Mo	52 PPM
Pb	4 PPM	Ba	37 PPM	Cs	1 PPM	La	51 PPM	Sn	1 PPM
		La	4 PPM	Ba	19 PPM	Ce	114 PPM	Sb	2 PPM
		Ce	2 PPM	La	30 PPM	Pb	11 PPM	Cs	7 PPM
		Pb	6 PPM	Ce	58 PPM	Th	9 PPM	Ba	29 PPM
				Pb	6 PPM	U	1 PPM	Ce	10 PPM
				Th	12 PPM			Pb	8 PPM
				U	2 PPM			Th	58 PPM
								U	1 PPM

ICP MS

ppm	S9-A	S9-B	P-9	K-19	HP-13	K-18	P-13
Cu	105.4	273.3	12.17	12.37	9.34	9.37	128.64
Ag	92.15	306.77	0.19	0.066	0.2	0.079	0.35
Pb	5.86	6.58	8.46	1.45	1.96	1.45	1.85
Cd	0.26	0.38	0.63	0.28	0.3	0.86	0.25
Li	1.65	1.19	4.17	3.34	3.19	0.71	14.06
Be	0.41	0.26	2.49	1.37	1.98	1.58	1.39
Sr	4.79	2.53	26.41	17.97	26.06	39.71	25.89
Bi	2.04	2.45	0.14	0.052	0.028	0.303	57.32
U	2.12	1.22	0.62	0.076	0.68	0.08	0.97
Au					42,088ppb		41,59 ppb

S1(51m)

ICP-MS	İTÜ	ACME
ppm	S-15 51 m	S-15 51 m
Cu	29.82	1.5
Ag	2.58	8 ppb
Pb	12.47	0.58
Cd	1.39	0
Li	46.63	0.8
Be	11.85	0
Sr	42.67	1
Bi	3.45	1.04
U	3.28	0.5
Au	50 ppb	2,1 ppb

(Handwritten signatures)



XRF Majör

S9		K19		K18		HP13		P9		P13	
Formula	Conc.	Formula	Conc.	Formula	Conc.	Formula	Conc.	Formula	Conc.	Formula	Conc.
SiO2	4.587%	SiO2	88.423%	SiO2	73.376%	SiO2	72.203%	SiO2	69.423%	SiO2	52.621%
Al2O3	1.841%	Al2O3	5.846%	Al2O3	15.101%	Al2O3	14.138%	Al2O3	14.285%	Al2O3	14.451%
Fe2O3	51.656%	Fe2O3	0.314%	Fe2O3	0.105%	Fe2O3	2.404%	Fe2O3	3.578%	Fe2O3	8.529%
MgO	0.324%	MgO	0.061%	MgO	0.066%	MgO	0.831%	MgO	0.209%	MgO	9.346%
CaO	0.119%	CaO	0.158%	CaO	0.327%	CaO	0.145%	CaO	0.221%	CaO	0.340%
Na2O	0.122%	Na2O	3.238%	Na2O	8.973%	Na2O	7.559%	Na2O	8.607%	Na2O	3.804%
K2O	0.176%	K2O	0.093%	K2O	0.155%	K2O	0.117%	K2O	0.050%	K2O	0.105%
TiO2	0.418%	TiO2	0.029%	TiO2	0.044%	TiO2	0.175%	TiO2	0.464%	TiO2	0.413%
P2O5	0.044%	MnO	0.005%	Pd	38 PPM	P2O5	0.015%	P2O5	0.145%	P2O5	0.221%
MnO	0.105%	Se	18 PPM	Ga	19 PPM	MnO	0.005%	MnO	0.009%	MnO	0.030%
Cr2O3	0.030%	Co	34 PPM	Cl	107 PPM	S	75 PPM	Ga	20 PPM	Cr2O3	0.010%
SO3	40.160%	Cu	22 PPM	Cu	21 PPM	Zr	410 PPM	Sr	23 PPM	Mo	56 PPM
Ag	138 PPM	S	304 PPM	Zr	436 PPM	W	246 PPM	W	296 PPM	Nb	11 PPM
Co	1252 PPM	Sr	15 PPM	Ce	124 PPM	Cu	19 PPM	Cu	17 PPM	Zn	37 PPM
Se	62 PPM	W	448 PPM	Se	9 PPM	Ag	42 PPM	S	164 PPM	Cu	164 PPM
Y	155 PPM	Zr	226 PPM	S	146 PPM	Ga	18 PPM	Ag	43 PPM	SO3	3.630%
V	286 PPM	LOI	1.66%	Sr	48 PPM	Zn	11 PPM	Ni	14 PPM	Ga	26 PPM
Cu	166 PPM			Co	23 PPM	Sr	32 PPM	Ba	657 PPM	V	151 PPM
Nb	15 PPM			W	258 PPM	Ce	157 PPM	Y	82 PPM	Sr	32 PPM
Ni	330 PPM			LOI	1.68%	Y	97 PPM	Cl	99 PPM	Zr	143 PPM
As	50 PPM					Cl	86 PPM	Zr	530 PPM	W	179 PPM
W	295 PPM					LOI	2.25%	Nb	14 PPM	Ni	89 PPM
Zr	385 PPM							LOI	2.75%	LOI	6.38%
LOI	26.68%										


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20 Mart 2013
Mühür & Tarih



İTÜ – ICP sonuçları

ppm	masif	bantlı
Au	42,09	71,39
Ag	15	45,95
Ba	10,09	28,99
Be	1,15	2,5
Bi	0,216	0,361
Cd	2,35	5,7
Co	56,7	34,17
Cu	84,7	254,81
Ga	10,68	20,84
V	538,15	986,4
Sr	7,92	65,46
Zn	77,55	304,07


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Mühür & Tarih

