Table S1. Bulk geochemical analyses of major, trace and rare earth elements of analyzed samples from Gerakario. b.d.l. = below detection limit; n.a. = not analyzed.

	Two-mica gneiss	
	Sericitic alteration	
	Quartz-stibnite veins	
	Ger 3.1	**Ger 05**
	Major elements (wt.%)	
Al	0.04	0.01
Ca	0.33	0.46
Fe	0.36	0.2
K	0.02	b.d.l.
Mg	b.d.l.	b.d.l.
Na	0.02	0.03
S	16	19
Ti	b.d.l.	b.d.l.

	Ger 3.1	**Ger 05**		**Ger 3.1**	**Ger 05**
	Trace elements (ppm)				
Ag	0.98	1.2	Pb	22	20
As	6.2	4.6	Pr	b.d.l.	b.d.l.
Au	0.05	0.04	Rb	0.9	0.4
B	12	28	Re	b.d.l.	b.d.l.
Ba	b.d.l.	b.d.l.	Sb	326,000	574,000
Be	b.d.l.	b.d.l.	Sc	b.d.l.	b.d.l.
Bi	0.02	0.03	Se	b.d.l.	b.d.l.
Cd	0.05	0.04	Sm	b.d.l.	b.d.l.
Ce	0.09	0.12	Sn	0.5	0.6
Co	1.8	0.9	Sr	17	22
Cr	202	97	Ta	b.d.l.	b.d.l.
Cs	0.15	0.18	Tb	b.d.l.	b.d.l.
Cu	27	31	Te	b.d.l.	b.d.l.
Dy	b.d.l.	b.d.l.	Th	b.d.l.	b.d.l.
Er	b.d.l.	b.d.l.	Ti	b.d.l.	b.d.l.
Eu	b.d.l.	b.d.l.	Tl	0.81	0.86
Ga	0.16	0.07	Tm	b.d.l.	b.d.l.
Gd	b.d.l.	b.d.l.	U	0.09	0.13
Ge	b.d.l.	b.d.l.	V	b.d.l.	b.d.l.
Hf	b.d.l.	b.d.l.	W	b.d.l.	b.d.l.
Hg	b.d.l.	b.d.l.	Y	0.16	0.13
Ho	b.d.l.	b.d.l.	Yb	b.d.l.	b.d.l.
In	b.d.l.	b.d.l.	Zn	6	b.d.l.
La	0.4	0.4	Zr	b.d.l.	b.d.l.
Li	0.1	b.d.l.			
Lu	b.d.l.	b.d.l.			
Mn	33	20			
Mo	0.12	0.09			
Nb	b.d.l.	b.d.l.			
Nd	b.d.l.	b.d.l.			
Ni	5.9	3.6			
P	12	14			
Pb	22	20			
Pr	b.d.l.	b.d.l.			

Table S2. The average values of the SEM-EDS analyses conducted on stibnite and arsenopyrite from Gerakario. AVG = average value, b.d.l. = below detection limit, MAX = maximum value, MIN = minimum value, n. = number of analyses, n.a. = not applicable, STDEV = standard deviation.

Hydrothermal alteration	**Sericitic**			
Host rock	**Two-mica gneiss**			
Mineralization style	**Stb1; Vein (n = 33)**			
Element	**MIN**	**MAX**	**STDEV**	**AVG**
S	28.02	29.20	0.52	28.53
V	b.d.l.	b.d.l.	n.a.	n.a.
Fe	b.d.l.	0.18	0.08	0.11
Co	b.d.l.	b.d.l.	n.a.	n.a.
Ni	b.d.l.	b.d.l.	n.a.	n.a.
Cu	b.d.l.	0.20	0.09	0.13
Zn	b.d.l.	0.13	0.06	0.05
As	b.d.l.	0.23	0.10	0.12
Ag	0.08	1.33	0.57	0.50
Te	b.d.l.	b.d.l.	n.a.	n.a.
Sb	69.47	71.08	0.75	70.56
Total	97.57	102.36	2.17	100

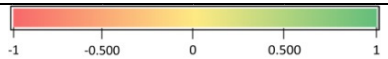
Table S3. The full list of the LA-ICP-MS data acquired from the analyzed stibnite from Gerakario. b.d.l. = below detection limit, n. = number of analyses, n.a. = not applicable.

		Hydrothermal alteration	Sericitic alteration														
		Host rock	Two-mica gneiss														
		Sample	Ger 02					Ger 05									
		n.	1	2	3	4	5	1	2	3	4	5	6	7	8	9	10
		Mineralization style	Stb1; Vein														
		Average detection limit															
^{34}S	ppm	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	325,100	326,461	312,332	323,054	306,726	298,248	287,051	291,923	285,300	272,881
^{49}Ti	ppm	n.a.	12	16	13	9.7	14	13	13	11	12	11	18	14	16	11	11
^{51}V	ppm	0.52	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.
^{53}Cr	ppm	6.8	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.
^{55}Mn	ppm	1	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.
^{57}Fe	ppm	33	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.
^{59}Co	ppm	0.25	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.
^{60}Ni	ppm	1.6	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	0.43	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.
^{65}Cu	ppm	n.a.	51	48	51	55	48	40	41	39	33	32	35	35	33	30	29
^{66}Zn	ppm	4	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.
^{71}Ga	ppm	0.85	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.
^{73}Ge	ppm	2.5	n.a.	n.a.	n.a.	n.a.	n.a.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.
^{75}As	ppm	n.a.	231	117	198	40	33	111	51	33	26	21	22	14	12	13	12
^{77}Se	ppm	5.8	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.
^{93}Nb	ppm	0.08	n.a.	n.a.	n.a.	n.a.	n.a.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.
^{95}Mo	ppm	0.81	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	0.23	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.
^{107}Ag	ppm	0.3	b.d.l.	0.58	b.d.l.	0.61	b.d.l.	0.70	0.91	b.d.l.	0.12	b.d.l.	0.22	0.62	0.37	0.14	0.22
^{111}Cd	ppm	0.9	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.

^{115}In	ppm	0.06	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.
^{118}Sn	ppm	0.57	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	0.66	b.d.l.	0.64	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.
^{121}Sb	ppm	n.a.	716,500	712,700	714,600	710,800	710,800	711,200	711,200	711,200	711,200	711,200	711,200	711,200	711,200	711,200	711,200
^{125}Te	ppm	1.6	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.
^{139}La	ppm	n.a.	86	82	82	82	81	24	26	24	26	24	24	25	24	24	24
^{140}Ce	ppm	n.a.	0.32	0.32	0.26	0.31	0.26	0.17	0.19	0.14	0.17	0.13	0.09	0.13	0.19	0.19	0.14
^{145}Nd	ppm	0.56	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.
^{147}Sm	ppm	0.33	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	0.10	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.
^{157}Gd	ppm	0.33	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.
^{182}W	ppm	0.33	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.
^{185}Re	ppm	0.06	n.a.	n.a.	n.a.	n.a.	n.a.	0.03	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.
^{197}Au	ppm	0.24	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.
^{202}Hg	ppm	0.27	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.
^{205}Tl	ppm	0.32	b.d.l.	b.d.l.	b.d.l.	0.35	b.d.l.	b.d.l.	0.54	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	0.56	b.d.l.	b.d.l.
^{208}Pb	ppm	n.a.	151	151	148	165	152	117	114	113	111	108	105	104	102	98	98
^{209}Bi	ppm	0.24	b.d.l.	0.20	b.d.l.	0.33	0.26	0.19	0.20	0.16	0.18	0.17	0.19	0.21	0.17	0.21	0.15
^{232}Th	ppm	0.06	0.02	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.
^{238}U	ppm	0.04	n.a.	n.a.	n.a.	n.a.	n.a.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.	b.d.l.

Table S4. Heatmap of Pearson's correlation coefficients of selected critical and rare metals detected in stibnite from Gerakario after LA-ICP-MS analyses.

Correlations																	
	Ag	Bi	Cd	Ce	Co	Ga	Ge	Hg	In	La	Nb	Sb	Se	Te	Ti	V	W
Ag	1																
Bi	0.413	1															
Cd	0.250	0.317	1														
Ce	0.094	0.231	-0.309	1													
Co	-0.113	0.163	0.252	0.153	1												
Ga	0.102	0.223	0.283	0.332	0.431	1											
Ge	-0.066	0.146	0.263	0.159	**0.985**	0.459	1										
Hg	-0.035	0.259	0.144	0.268	**0.853**	0.289	**0.814**	1									
In	-0.367	-0.004	-0.174	0.123	0.443	0.327	0.437	0.378	1								
La	-0.055	0.212	-0.446	**0.919**	0.107	0.299	0.097	0.203	0.191	1							
Nb	0.062	-0.224	0.455	**-0.913**	-0.107	-0.289	-0.095	-0.200	-0.189	**-0.999**	1						
Sb	-0.241	-0.564	-0.492	0.563	-0.087	0.031	-0.057	-0.024	0.108	0.589	-0.569	1					
Se	-0.093	0.258	0.132	0.238	**0.837**	0.252	**0.769**	**0.982**	0.371	0.196	-0.196	-0.061	1				
Te	0.234	0.419	0.099	-0.072	-0.075	-0.259	-0.078	-0.024	0.156	-0.016	0.012	-0.241	-0.024	1			
Ti	0.170	-0.169	-0.083	-0.059	-0.062	0.290	-0.118	0.083	0.010	0.038	-0.038	0.079	0.132	-0.270	1		
V	0.234	0.419	0.099	-0.072	-0.075	-0.259	-0.078	-0.024	0.156	-0.016	0.012	-0.241	-0.024	1	-0.270	1	
W	0.222	0.438	0.138	-0.045	-0.075	-0.271	-0.080	-0.002	0.136	-0.005	0.001	-0.244	-0.002	**0.995**	-0.283	**0.995**	1

**. Correlation is significant at the 0.01 level (2-tailed).

***. Correlation is significant at the 0.05 level (2-tailed).**