Copper-Bearing Magnetite and Delafossite in Copper Smelter Slags

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Table S1. Samples and analytical methods.

Slabs (S)	Crt No.	Section ID	OM	SEM	μXRF	AM	EMPA	FIB-SEM & HAADF STEM
S #1	1	FF21-A	X	X			X	X
	2	FF21-B	X	X	X	X	X	X
	3	FF21-C	X	X	X			
	4	FF21-D	X	X				
S #2	5	FF21-2	X	X		X	X	
S #3	6	FF21-3A	X	X			X	
	7	FF21-3B	X	X	X		X	

OM=optical microscopy; SEM=Scanning electron microscopy; μXRF= Micro-X-ray fluorescence; AM= Automated Mineralogy; EPMA=electron probe microanalysis; FIB-SEM=Focused Ion Beam-SEM; HAADF STEM=high-angle annular dark field scanning transmission electron microscopy.

Table S2. Modal mineralogy for two sections.

	FF21-B				FF21-B	FF21-2	Average 2 samples	
	A	B	C	TOP				
Magnetite	48.1	47.2	45.6	48.2	47.3	50.3	**48.8**	Magnetite
Copper	11.6	11.1	11.2	10.6	11.1	14.1	**12.6**	Copper
Delafossite	8.6	9.1	10.5	8.7	9.2	6.7	**8.0**	Delafossite
Glass1	19.7	21.1	20.6	20.9	20.6	20.1	**20.3**	Glass1
Glass2	5.6	5.4	4.9	5.5	5.3	2.1	**3.7**	Glass2
Cuprite	3.6	3.2	2.9	2.5	3.1	2.8	**2.9**	Cuprite
SiO2	1	0.7	1.2	1	1.0	1.1	**1.0**	SIO2
Others	1.84	2.18	3.12	2.6	2.4	2.8	**2.6**	Others
	100	100	99.99	100	100	100	**100**	