Table 1 Whole-rock major and trace elements compositions of sulfide ores in the Hongtoushan VMS deposit.

Sample	HTM-1	HTM-2	HTM-3	HTM-4	HTD-1	HTD-2	HTD-4	HTD-5	HTB-2	HTB-2^{-re}	HTB-3	HTB-4	HTB-6
Type	Semimassive-massive				Disseminated-stockwork-veinlet				Bedded				
wt %													
TiO_2	0.07	0.09	0.07	0.02	0.17	0.04	0.01	0.13	0.15	0.14	0.18	0.20	0.16
Al_2O_3	2.87	3.15	3.42	3.53	7.12	6.38	4.61	4.72	8.53	9.07	14.8	11.5	12.2
Fe_2O_3	48.5	52.5	58.2	51.2	25.9	23.5	24.5	18.4	13.6	14.6	23.0	26.5	10.4
MnO	0.14	0.04	0.13	0.03	0.10	0.05	0.20	0.10	0.12	0.13	0.12	0.06	0.03
MgO	0.14	0.04	0.13	0.03	0.10	0.05	0.20	0.10	0.12	0.13	0.12	0.06	0.03
CaO	1.46	0.45	0.92	1.06	2.91	1.23	2.20	0.50	1.36	1.48	0.10	0.83	0.17
Na_2O	0.19	0.16	0.22	0.78	1.93	1.19	0.72	0.51	1.03	0.89	0.26	0.78	1.55
K_2O	0.18	0.07	0.48	0.17	0.63	0.50	0.13	0.83	1.05	1.00	1.65	0.97	0.94
P_2O_5	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.08
S	>10.0	>10.0	>10.0	>10.0	9.76	9.34	8.13	7.28	7.57	8.32	3.94	4.67	5.10
ppm													
Cu	56,300	42,800	23,400	66,300	16,500	14,600	12,700	11,000	12,200	13,500	5,270	3,880	670
Zn	39,000	40,300	19,200	49,760	8,500	5,900	4,300	4,340	34,000	23,700	31,000	14,800	6,090
Pb	241	318	187	171	192	309	158	34.8	44.5	47.4	64.1	397	562
Ag	>100	80.3	66.3	>100	40.9	26.7	50.5	25.4	14.7	16.3	5.90	8.30	7.16
Au	/	0.78	1.26	1.44	/	0.19	0.26	0.10	0.08	0.05	0.03	/	/
Cr	7.00	11.0	11.0	11.0	9.00	13.0	10.0	9.00	17.0	18.0	16.0	9.00	11.0
V	4.00	11.0	7.00	3.00	24.0	3.00	3.00	6.00	4.00	5.00	7.00	8.00	15.0
Co	125	85.4	15.7	173	286	168	217	199	47.5	68.0	40.0	23.5	16.5
Ni	9.20	12.3	13.1	8.10	3.80	6.10	2.30	6.80	2.80	8.00	21.5	5.30	17.6
Rb	5.80	1.90	13.4	4.90	18.2	13.9	3.70	18.3	26.8	25.1	13.3	27.6	73.0
Sr	16.5	2.60	10.3	11.5	93.2	26.6	49.9	4.80	10.0	8.70	9.50	57.4	55.0

Zr	2.60	1.90	8.40	2.80	2.60	3.80	3.40	2.30	23.5	23.4	3.20	6.90	0.80
Ba	20.0	10.0	40.0	20.0	120	50.0	30.0	40.0	80.0	70.0	90.0	100	60.0
U	0.10	0.10	0.20	0.20	0.10	0.20	0.10	0.10	0.30	0.30	0.10	0.20	0.10
Th	0.21	0.40	0.30	1.07	0.27	2.21	0.20	1.18	1.92	1.84	1.24	2.20	2.57
Y	8.90	7.00	9.40	6.90	10.9	5.60	7.90	9.30	13.1	16.9	8.00	17.6	2.20
Nb	2.40	1.90	1.90	0.70	2.80	0.70	0.20	1.90	5.60	5.30	2.80	4.70	1.10
Cu/Cu+Zn	0.59	0.52	0.55	0.57	0.66	0.71	0.75	0.72	0.26	0.36	0.15	0.21	0.10

Notes: "-re" means retest of the same sample; "/" means data not analyzed; contents for oxides were calculated from their element concentrations.