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Supplemental Material

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Table S1 U and Pb concentrations (ppm) in carbonate and barite samples from the Jiulingzi Zn-Pb deposit by LA-ICP-MS

Sample	No.	Mineral	^{206}Pb	^{207}Pb	^{208}Pb	^{238}U	$^{238}\text{U}/^{206}\text{Pb}$
J14-2	1	Dolomite	1.03	0.69	0.78	0.73	0.71
	2	Dolomite	0.49	0.34	0.32	0.56	1.14
	3	Dolomite	0.91	0.45	0.34	3.20	3.52
	4	Dolomite	0.46	0.24	0.18	0.65	1.41
	5	Dolomite	0.43	0.27	0.25	0.48	1.11
	6	Dolomite	0.44	0.23	0.22	0.58	1.32
	7	Dolomite	0.63	0.38	0.36	0.69	1.09
	8	Dolomite	0.60	0.34	0.35	0.62	1.04
	9	Dolomite	1.00	0.87	0.78	0.56	0.56
	10	Dolomite	3.14	2.76	3.32	0.59	0.19
	11	Dolomite	0.46	0.23	0.21	0.71	1.56
	12	Dolomite	15.6	15.6	14.9	0.48	0.03
	13	Dolomite	0.14	0.12	0.11	Bdl	-
	14	Dolomite	0.02	0.02	0.02	Bdl	-
	15	Dolomite	0.41	0.09	0.08	1.03	2.54
	16	Barite	0.15	0.13	0.11	0.01	0.04
	17	Barite	0.10	0.09	0.08	0.01	0.13
	18	Barite	0.04	0.04	0.03	0.04	1.05
	19	Barite	0.05	0.08	0.06	0.07	1.38
	20	Barite	1.30	1.22	1.20	0.11	0.08
	21	Barite	1.03	0.91	0.99	0.01	0.01
	22	Dolomite	0.64	0.40	0.37	0.88	1.38
	23	Dolomite	0.82	0.31	0.27	1.83	2.23
	24	Dolomite	0.26	0.12	0.14	0.42	1.64
	25	Dolomite	0.62	0.42	0.43	0.72	1.17
	26	Dolomite	1.41	1.05	1.02	1.34	0.95
	27	Dolomite	0.64	0.24	0.21	1.73	2.69
	28	Dolomite	1.55	1.21	1.07	0.80	0.51
	29	Dolomite	0.53	0.29	0.26	0.65	1.21
	30	Dolomite	1.03	0.71	0.70	0.82	0.80

Sample	No.	Mineral	^{206}Pb	^{207}Pb	^{208}Pb	^{238}U	$^{238}\text{U}/^{206}\text{Pb}$
J4a-1	1	Dolomite	3.98	3.90	3.89	Bdl	-
	2	Dolomite	0.07	0.07	0.05	Bdl	-
	3	Dolomite	0.02	0.04	0.04	Bdl	-
	4	Dolomite	0.62	0.49	0.50	Bdl	-
	5	Dolomite	0.05	Bdl	Bdl	Bdl	-
	6	Dolomite	0.11	0.13	0.12	Bdl	-
	7	Dolomite	0.02	Bdl	0.01	Bdl	-
	8	Dolomite	0.17	0.24	0.20	Bdl	-
	9	Dolomite	0.08	0.01	Bdl	Bdl	-
	10	Dolomite	0.01	Bdl	Bdl	Bdl	-
	11	Dolomite	Bdl	0.03	Bdl	Bdl	-
	12	Dolomite	0.02	0.02	Bdl	Bdl	-
	13	Dolomite	Bdl	0.02	0.02	Bdl	-
	14	Dolomite	0.02	0.01	Bdl	Bdl	-
	15	Dolomite	0.12	0.11	0.10	0.02	0.15
	16	Dolomite	0.08	0.07	0.08	Bdl	-
	17	Dolomite	0.03	0.02	0.03	Bdl	-
	18	Dolomite	0.02	Bdl	0.02	Bdl	-
	19	Dolomite	Bdl	Bdl	0.01	Bdl	-
	20	Dolomite	0.08	0.04	0.04	Bdl	-
	21	Dolomite	0.01	Bdl	Bdl	Bdl	-
	22	Dolomite	0.02	Bdl	0.01	Bdl	-
	23	Dolomite	Bdl	Bdl	Bdl	Bdl	-
	24	Dolomite	0.03	0.04	0.05	Bdl	-
	25	Dolomite	0.01	0.01	0.02	0.01	0.68
	26	Dolomite	0.01	0.02	Bdl	Bdl	-
	27	Dolomite	0.02	0.06	Bdl	Bdl	-
	28	Dolomite	Bdl	Bdl	Bdl	Bdl	-
	29	Dolomite	0.02	Bdl	Bdl	Bdl	-
	30	Dolomite	0.03	0.02	0.02	Bdl	-

Sample	No.	Mineral	^{206}Pb	^{207}Pb	^{208}Pb	^{238}U	$^{238}\text{U}/^{206}\text{Pb}$
J2a-2	1	Barite	5.20	5.30	5.40	0.07	0.01
	2	Barite	4.07	3.92	4.02	0.09	0.02
	3	Barite	4.48	4.21	4.31	0.06	0.01
	4	Barite	5.56	5.32	5.39	0.29	0.05
	5	Barite	12.08	11.41	11.53	0.15	0.01
	6	Barite	9.13	8.94	8.94	0.13	0.01
	7	Barite	4.28	3.99	4.04	0.20	0.05
	8	Barite	6.10	5.80	5.80	0.34	0.06
	9	Barite	9.50	9.50	9.90	0.35	0.04
	10	Barite	6.40	6.10	6.10	0.06	0.01
	11	Dolomite	0.03	0.01	0.02	Bdl	-
	12	Barite	7.10	7.40	7.20	0.33	0.05
	13	Barite	7.60	7.70	8.00	0.36	0.05
	14	Dolomite	1.48	1.37	1.26	0.35	0.24
	15	Dolomite	1.10	0.92	0.90	0.40	0.37
	16	Dolomite	2.54	2.27	2.17	0.43	0.17
	17	Dolomite	1.60	1.34	1.33	0.64	0.4
	18	Dolomite	0.86	0.67	0.64	0.51	0.59
	19	Dolomite	0.61	0.50	0.52	0.15	0.25
	20	Dolomite	0.21	0.20	0.20	Bdl	-
	21	Dolomite	0.03	0.07	0.03	Bdl	-
	22	Barite	1.20	1.09	1.15	0.02	0.02
	23	Barite	1.21	1.18	1.25	0.02	0.01
	24	Barite	0.58	0.46	0.57	0.01	0.01
	25	Barite	3.55	3.44	3.49	0.11	0.03
	26	Barite	5.37	5.01	5.27	0.38	0.07
	27	Barite	4.21	3.69	3.66	0.29	0.07
	28	Calcite	9.30	8.00	8.50	0.39	0.04
	29	Calcite	6.30	6.00	6.03	0.36	0.06
	30	Barite	7.90	7.20	7.10	0.30	0.04

Bdl—below detection limit; Standard NIST 612 glass and NIST 614 glass were used as monitors for approximate quantification.

Table S2 U-Pb isotope data of carbonates and barite from the Jiulingzi Zn-Pb deposit

No.	Mineral	$^{238}\text{U}/^{206}\text{Pb}$	2σ	$^{207}\text{Pb}/^{206}\text{Pb}$	2σ
J14-2-3	Dolomite	3.991	0.098	0.589	0.008
J14-2-4	Dolomite	3.583	0.089	0.617	0.008
J14-2-5	Dolomite	5.657	0.126	0.491	0.009
J14-2-6	Dolomite	7.476	0.282	0.411	0.009
J14-2-7	Dolomite	4.513	0.149	0.559	0.011
J14-2-8	Dolomite	2.939	0.165	0.660	0.011
J14-2-12	Dolomite	6.665	0.359	0.414	0.016
J14-2-13	Dolomite	3.569	0.110	0.625	0.013
J14-2-14	Dolomite	6.188	0.099	0.465	0.008
J14-2-16	Dolomite	7.887	0.203	0.367	0.014
J14-2-15	Dolomite	8.472	0.347	0.369	0.011
J14-2-17	Dolomite	6.415	0.157	0.451	0.009
J14-2-18	Dolomite	4.767	0.225	0.551	0.011
J14-2-21	Dolomite	4.109	0.114	0.580	0.010
J14-2-22	Dolomite	5.216	0.153	0.522	0.010
J14-2-23	Dolomite	5.048	0.195	0.550	0.013
J14-2-24	Dolomite	4.777	0.238	0.544	0.012
J14-2-25	Dolomite	8.834	0.324	0.327	0.012
J14-2-26	Dolomite	4.518	0.117	0.567	0.009
J14-2-27	Dolomite	6.311	0.242	0.500	0.013
J14-2-30	Dolomite	5.074	0.214	0.568	0.012
J14-2-31	Dolomite	3.298	0.134	0.638	0.009
J14-2-34	Dolomite	2.574	0.164	0.679	0.010
J14-2-32	Dolomite	2.900	0.113	0.654	0.010
J14-2-33	Calcite	10.306	0.286	0.376	0.008
J14-2-35	Dolomite	5.618	0.191	0.537	0.009
J14-2-36	Calcite	9.433	0.270	0.401	0.010
J14-2-40	Calcite	9.058	0.295	0.431	0.011
J14-2-42	Calcite	9.796	0.248	0.389	0.007
J14-2-44	Calcite	4.662	0.268	0.619	0.012
J14-2-45	Dolomite	1.247	0.087	0.764	0.012
J14-2-50	Dolomite	0.054	0.006	0.845	0.004
J14-2-51	Dolomite	4.813	0.338	0.562	0.015
J14-2-52	Dolomite	5.144	0.288	0.553	0.012
J14-2-53	Dolomite	5.524	0.123	0.536	0.008
J14-2-54	Dolomite	3.162	0.091	0.637	0.009
J14-2-57	Dolomite	4.070	0.154	0.615	0.008
J14-2-58	Dolomite	3.695	0.307	0.601	0.021
J14-2-59	Dolomite	5.219	0.233	0.535	0.012
J14-2-60	Dolomite	4.497	0.318	0.552	0.017
J14-2-63	Barite	0.187	0.013	0.846	0.005
J14-2-66	Barite	0.083	0.012	0.841	0.006
J14-2-67	Barite	0.222	0.008	0.840	0.004
J14-2-68	Barite	0.195	0.010	0.845	0.004
J14-2-69	Barite	0.232	0.011	0.837	0.005
J14-2-70	Barite	0.236	0.010	0.840	0.005
J14-2-71	Barite	0.200	0.011	0.841	0.005

Table S3 *In situ* LA–MC–ICP–MS sulfur isotope data of sulfides and sulfate from the Jiulingzi Zn–Pb deposit

No.	Sample ID	Mineral	$\delta^{34}\text{S} (\text{\textperthousand})$
1	J16a-Py-1	Py(s)	+18.6
2	J16a-Py-2	Py(s)	+17.7
3	J16a-Py-3	Py(s)	+19.3
4	J9b-Py-2	Py(a)	+21.6
5	J9b-Py-3	Py(a)	+21.0
6	J9b-Py-4	Py(a)	+17.5
7	J9b-Py-5	Py(a)	+20.3
8	J9b-Py-6	Py(a)	+18.8
9	J9b-Py-7	Py(a)	+20.6
10	J9b-Py-8	Py(a)	+19.6
11	J9b-Py-9	Py(a)	+20.1
12	J9b-Py-14	Py(a)	+20.1
13	J9b-Py-15	Py(a)	+24.5
14	J10c-Py-1	Py(a)	+21.1
15	J10c-Py-2	Py(a)	+22.0
16	J10c-Py-3	Py(a)	+23.7
17	J2a-Sp-1	Sp(a)	+18.2
18	J2a-Sp-2	Sp(a)	+19.1
19	J2a-Sp-3	Sp(a)	+18.0
20	J10c-Sp-4	Sp(a)	+18.7
21	J10c-Sp-5	Sp(a)	+18.9
22	J10c-Sp-6	Sp(a)	+17.9
23	J9b-Sp-1	Sp(a)	+18.4
24	J9b-Sp-10	Sp(a)	+18.9
25	J9b-Sp-11	Sp(a)	+18.7
26	J9b-Sp-12	Sp(a)	+18.6
27	J9b-Sp-13	Sp(a)	+17.3
28	J2a-Py-4	Py(b)	+19.4
29	J2a-Py-5	Py(b)	+19.2
30	J2a-Py-6	Py(b)	+19.9
31	J9-Py-1	Py(b)	+14.6
32	J9-Py-3	Py(b)	+19.7
33	J9-Py-4	Py(b)	+17.9
34	J9-Py-5	Py(b)	+17.8
35	J9-Py-6	Py(b)	+19.9
36	J3b-Sp-1	Sp(b)	+18.2
37	J3b-Sp-2	Sp(b)	+18.5
38	J3b-Sp-3	Sp(b)	+18.8
39	J3b-Sp-4	Sp(b)	+18.7
40	J3b-Sp-5	Sp(b)	+18.3
41	J9-Sp-7	Sp(b)	+17.2

42	J9-Sp-8	Sp(b)	+17.4
43	J10a-Sp-1	Sp(b)	+18.2
44	J10a-Sp-2	Sp(b)	+18.5
45	J10a-Sp-3	Sp(b)	+18.6
46	J10b-Sp-1	Sp(b)	+16.8
47	J10b-Sp-2	Sp(b)	+17.5
48	J10b-Sp-3	Sp(b)	+17.8
49	J16-Sp-1	Sp(b)	+17.8
50	J16-Sp-2	Sp(b)	+17.6
51	J10-B-1	Barite	+29.8
52	J10-B-2	Barite	+29.5
53	J10-B-3	Barite	+32.2
54	J10-B-4	Barite	+29.8
55	J10-B-5	Barite	+29.5
56	J10-B-6	Barite	+34.2
57	J10-B-7	Barite	+31.7
58	J10-B-8	Barite	+30.7
59	J10d-B-1	Barite	+29.2
60	J10d-B-2	Barite	+29.0
61	J10d-B-3	Barite	+29.5
62	J10d-B-4	Barite	+30.1
63	J10d-B-5	Barite	+33.8
64	J10d-B-6	Barite	+31.5
65	J10d-B-7	Barite	+32.2
66	J10d-B-8	Barite	+32.2
67	J10d-B-9	Barite	+35.1
68	J10d-B-10	Barite	+29.5
69	J10d-B-11	Barite	+34.8
70	J10d-B-12	Barite	+33.8

Py(s)—fine-grained pyrite from the pre-ore stage; Py(a)—medium-grained pyrite from the early-ore stage; Py(b)—coarse-grained pyrite from the main-ore stage; Sp(a) — fine-grained yellow sphalerite from the early-ore stage; Sp(b)—coarse-grained light-brown to dark-brown sphalerite from the main-ore stage.

Table S4 *In situ* Sr isotopic compositions of carbonates and barite from the Jiulingzi Zn-Pb deposit

No.	Stage	Number	Minerals	$^{87}\text{Sr}/^{86}\text{Sr}$	2σ
1	Pre-ore stage	J9-1-3	Dolomite	0.7064	0.0014
2	Pre-ore stage	J9-1-4	Dolomite	0.7037	0.0015
3	Pre-ore stage	J9-1-5	Dolomite	0.7040	0.0021
4	Pre-ore stage	J9-1-6	Dolomite	0.7044	0.0025
5	Main-ore stage	J14-2-1	Dolomite	0.7099	0.0004
6	Main-ore stage	J14-2-2	Dolomite	0.7075	0.0008
7	Main-ore stage	J14-2-3	Dolomite	0.7057	0.0016
8	Main-ore stage	J14-2-4	Dolomite	0.7056	0.0011
9	Main-ore stage	J2a-2-1	Calcite	0.7105	0.0003
10	Main-ore stage	J2a-2-2	Calcite	0.7071	0.0012
11	Main-ore stage	J2a-2-3	Calcite	0.7088	0.0010
12	Post-ore stage	J14-2-5	Barite	0.7185	0.0001
13	Post-ore stage	J14-2-6	Barite	0.7167	0.0001
14	Post-ore stage	J2a-2-4	Barite	0.7155	0.0007
15	Post-ore stage	J2a-2-5	Barite	0.7141	0.0001
16	Post-ore stage	J2a-2-6	Barite	0.7136	0.0001
17	Post-ore stage	J2a-2-7	Barite	0.7137	0.0004
18	Post-ore stage	J7b-1	Barite	0.7171	0.0001
19	Post-ore stage	J7b-2	Barite	0.7176	0.0001
20	Post-ore stage	J7b-3	Barite	0.7164	0.0001
21	Post-ore stage	J7b-4	Barite	0.7134	0.0001
22	Post-ore stage	J7b-5	Barite	0.7163	0.0001
23	Post-ore stage	J7b-6	Barite	0.7183	0.0001
24	Post-ore stage	J7b-7	Barite	0.7149	0.0001
25	Post-ore stage	J7b-8	Barite	0.7172	0.0001
26	Post-ore stage	J7b-9	Barite	0.7164	0.0001
27	Post-ore stage	J7b-10	Barite	0.7185	0.0001

Table S5 Pb isotopic composition of sulfides from the Zn-Pb deposits in the Mayuan district

No.	Location	Sample ID	Mineral	$^{208}\text{Pb}/^{204}\text{Pb}$	1 σ	$^{207}\text{Pb}/^{204}\text{Pb}$	1 σ	$^{206}\text{Pb}/^{204}\text{Pb}$	1 σ	Method	Data source
1	Jiulingzi	J3a-Py1	Py(s)	38.139	0.005	15.697	0.002	18.737	0.003	<i>In situ</i> analysis	This study
2	Jiulingzi	J3a-Py2	Py(s)	38.175	0.007	15.709	0.003	18.853	0.006	<i>In situ</i> analysis	This study
3	Jiulingzi	J4a-Py1	Py(s)	37.854	0.033	15.650	0.008	18.643	0.007	<i>In situ</i> analysis	This study
4	Jiulingzi	J4a-Py2	Py(a)	37.649	0.015	15.617	0.004	18.073	0.005	<i>In situ</i> analysis	This study
5	Jiulingzi	J4a-Sp1	Sp(a)	37.915	0.003	15.653	0.001	17.913	0.001	<i>In situ</i> analysis	This study
6	Jiulingzi	J4a-Sp2	Sp(a)	37.940	0.003	15.661	0.001	17.888	0.001	<i>In situ</i> analysis	This study
7	Jiulingzi	J2a-Sp1	Sp(b)	37.966	0.004	15.664	0.002	18.015	0.002	<i>In situ</i> analysis	This study
8	Jiulingzi	J2a-Sp2	Sp(b)	37.976	0.007	15.669	0.003	18.071	0.003	<i>In situ</i> analysis	This study
9	Jiulingzi	J2a-Sp3	Sp(b)	37.982	0.008	15.668	0.003	18.077	0.004	<i>In situ</i> analysis	This study
10	Jiulingzi	J3a-Sp1	Sp(b)	37.937	0.009	15.649	0.003	18.023	0.004	<i>In situ</i> analysis	This study
11	Jiulingzi	J3a-Sp2	Sp(b)	37.986	0.005	15.665	0.002	18.147	0.003	<i>In situ</i> analysis	This study
12	Jiulingzi	J3a-Sp3	Sp(b)	37.989	0.007	15.663	0.003	18.167	0.004	<i>In situ</i> analysis	This study
13	Jiulingzi	J10b-Sp1	Sp(b)	37.956	0.004	15.660	0.002	17.991	0.002	<i>In situ</i> analysis	This study
14	Jiulingzi	J10b-Sp2	Sp(b)	37.969	0.006	15.662	0.002	18.048	0.003	<i>In situ</i> analysis	This study
15	Jiulingzi	J10b-Sp3	Sp(b)	37.957	0.006	15.661	0.002	17.982	0.003	<i>In situ</i> analysis	This study
16	Jiulingzi	JL-16	Sphalerite	37.870		15.638		17.871		Bulk analysis	Gao et al., 2016
17	Nananshan	SJ-06	Sphalerite	37.862		15.632		17.908		Bulk analysis	Gao et al., 2016
18	Nanmushu	MY-17	Sphalerite	37.924		15.643		17.906		Bulk analysis	Gao et al., 2016
19	Nanmushu	MY-41	Sphalerite	37.828		15.628		17.887		Bulk analysis	Gao et al., 2016
20	Nanmushu	MY-57	Sphalerite	38.046		15.694		17.918		Bulk analysis	Gao et al., 2016
21	Nanmushu	MY-66	Sphalerite	37.771		15.609		17.858		Bulk analysis	Gao et al., 2016
22	Nanmushu	MVB103	Sphalerite	37.901		15.647		17.880		Bulk analysis	Wang et al., 2017
23	Nanmushu	MVB141	Sphalerite	37.891		15.646		17.930		Bulk analysis	Wang et al., 2017
24	Nanmushu	MVB160	Sphalerite	37.808		15.622		17.890		Bulk analysis	Wang et al., 2017
25	Nanmushu	MVB161	Sphalerite	37.878		15.636		17.880		Bulk analysis	Wang et al., 2017
26	Kongxigou	KX-07	Sphalerite	37.756		15.603		17.858		Bulk analysis	Gao et al., 2016
27	Kongxigou	K8-py1	Pyrite	37.919	0.005	15.654	0.002	17.901	0.002	<i>In situ</i> analysis	Xiong et al., 2019
28	Kongxigou	K8-py2	Pyrite	37.914	0.005	15.650	0.002	17.897	0.002	<i>In situ</i> analysis	Xiong et al., 2019

29	Kongxigou	K10b-py1	Pyrite	37.902	0.003	15.645	0.001	17.911	0.001	<i>In situ</i> analysis	Xiong et al., 2019
30	Kongxigou	K10b-py2	Pyrite	37.895	0.004	15.645	0.001	17.897	0.001	<i>In situ</i> analysis	Xiong et al., 2019
31	Kongxigou	K10b-py3	Pyrite	37.967	0.008	15.645	0.003	17.937	0.004	<i>In situ</i> analysis	Xiong et al., 2019
32	Kongxigou	K10b-py4	Pyrite	37.919	0.010	15.635	0.002	17.905	0.004	<i>In situ</i> analysis	Xiong et al., 2019
33	Kongxigou	K14a-sp1	Sphalerite	37.919	0.004	15.655	0.002	17.888	0.002	<i>In situ</i> analysis	Xiong et al., 2019
34	Kongxigou	K14a-sp2	Sphalerite	37.933	0.005	15.659	0.002	17.914	0.002	<i>In situ</i> analysis	Xiong et al., 2019
35	Kongxigou	K14a-sp3	Sphalerite	37.923	0.021	15.655	0.009	17.905	0.010	<i>In situ</i> analysis	Xiong et al., 2019
36	Kongxigou	K14a-py1	Pyrite	37.979	0.004	15.646	0.002	17.945	0.002	<i>In situ</i> analysis	Xiong et al., 2019
37	Kongxigou	K11-py2	Pyrite	37.924	0.008	15.650	0.003	17.937	0.004	<i>In situ</i> analysis	Xiong et al., 2019
38	Kongxigou	K10a-py1	Pyrite	37.943	0.006	15.661	0.002	18.004	0.003	<i>In situ</i> analysis	Xiong et al., 2019
39	Kongxigou	K10a-py2	Pyrite	37.933	0.007	15.657	0.003	17.935	0.003	<i>In situ</i> analysis	Xiong et al., 2019
40	Kongxigou	K10a-sp1	Sphalerite	37.937	0.011	15.657	0.004	18.101	0.005	<i>In situ</i> analysis	Xiong et al., 2019
41	Kongxigou	K10a-sp2	Sphalerite	37.916	0.019	15.648	0.007	18.034	0.009	<i>In situ</i> analysis	Xiong et al., 2019
42	Kongxigou	K10b-sp1	Sphalerite	37.923	0.007	15.655	0.003	17.891	0.003	<i>In situ</i> analysis	Xiong et al., 2019
43	Kongxigou	K10b-sp2	Sphalerite	37.931	0.004	15.657	0.002	17.902	0.002	<i>In situ</i> analysis	Xiong et al., 2019
44	Kongxigou	K10b-sp3	Sphalerite	37.906	0.011	15.649	0.005	17.885	0.005	<i>In situ</i> analysis	Xiong et al., 2019
45	Kongxigou	K11-sp1	Sphalerite	37.919	0.004	15.654	0.001	17.919	0.001	<i>In situ</i> analysis	Xiong et al., 2019
46	Kongxigou	K11-sp2	Sphalerite	37.932	0.003	15.659	0.001	17.907	0.001	<i>In situ</i> analysis	Xiong et al., 2019
47	Kongxigou	K11-sp3	Sphalerite	37.909	0.005	15.649	0.002	17.900	0.002	<i>In situ</i> analysis	Xiong et al., 2019
48	Kongxigou	K11-sp4	Sphalerite	37.909	0.004	15.650	0.002	17.903	0.002	<i>In situ</i> analysis	Xiong et al., 2019
49	Kongxigou	K11-gn1	Galena	37.885	0.003	15.643	0.001	17.904	0.001	<i>In situ</i> analysis	Xiong et al., 2019
50	Kongxigou	K11-gn2	Galena	37.886	0.004	15.645	0.001	17.902	0.001	<i>In situ</i> analysis	Xiong et al., 2019
51	Kongxigou	K14a-gn1	Galena	37.901	0.003	15.651	0.001	17.892	0.001	<i>In situ</i> analysis	Xiong et al., 2019
52	Kongxigou	K14a-gn2	Galena	37.902	0.003	15.650	0.001	17.893	0.001	<i>In situ</i> analysis	Xiong et al., 2019
53	Kongxigou	K10b-gn1	Galena	37.865	0.004	15.638	0.001	17.885	0.001	<i>In situ</i> analysis	Xiong et al., 2019
54	Kongxigou	K10b-gn2	Galena	37.874	0.003	15.640	0.001	17.920	0.001	<i>In situ</i> analysis	Xiong et al., 2019

Py(s)—fine-grained pyrite from the pre-ore stage; Py(a)—medium-grained pyrite from the early-ore stage; Sp(a)—fine-grained yellow sphalerite from the early-ore stage; Sp(b)—coarse-grained light-brown to dark-brown sphalerite from the main-ore stage.

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