

Supplementary Table S1.

Compositions (wt%) for pyrite in the proximal alteration rock OGD Central YKMB, analyzed by EPMA.

№	Sample	Fe	S	As	Co	Ni	Cu	Sb	Pb	Σ content of			
										trace elements	Ni/Co	Fe/(S+As)	S/Fe
Metamorphic (Py2) pyrite, n=38													
1	S-141-18	45.95	53.92	0.02	0.01	0.05	0.03	bdl*	bdl	0.11	5.0	0.49	2.04
2	VZh-19-18	47.27	52.67	bdl	0.03	0.03	bdl	0.01	bdl	0.07	1.0	0.52	1.94
3	VZh-19-18	47.13	52.77	bdl	0.01	0.05	bdl	0.03	bdl	0.10	4.5	0.51	1.95
4	VZh-106-18	46.48	53.45	bdl	0.03	0.02	0.02	bdl	bdl	0.07	0.6	0.50	2.00
5	VZh-158-18	46.06	53.88	bdl	0.01	bdl	bdl	0.04	bdl	0.06	-	0.49	2.04
6	VZh-29-18	46.19	53.74	bdl	0.04	bdl	bdl	0.02	bdl	0.06	-	0.49	2.03
7	VZh-29-18	46.26	53.73	bdl	0.01	bdl	bdl	bdl	bdl	0.01	-	0.49	2.02
8	VZh-29-18	46.56	53.26	0.11	0.02	0.05	bdl	0.01	bdl	0.18	2.6	0.50	1.99
9	VK-83-18	46.62	53.05	bdl	0.22	0.08	0.02	0.02	bdl	0.34	0.3	0.50	1.98
10	VK-83-18	45.72	53.79	0.23	0.15	0.10	bdl	bdl	bdl	0.49	0.7	0.49	2.05
11	Kh-40-14	46.38	53.49	0.06	0.05	0.02	bdl	0.01	bdl	0.14	0.4	0.50	2.01
12	Kh-55-14	46.55	52.92	0.31	0.07	0.04	0.04	0.06	bdl	0.53	0.6	0.50	1.98
13	Kh-55-14	46.61	53.09	bdl	0.07	0.13	0.06	0.04	bdl	0.30	1.8	0.50	1.98
14	Kh-55-14	46.98	52.82	bdl	0.07	0.05	0.05	0.04	bdl	0.20	0.8	0.51	1.96
15	Kh-7-17	46.38	53.30	0.12	0.10	0.05	0.01	0.06	bdl	0.33	0.5	0.50	2.00
16	Kh-7-17	46.06	53.63	0.08	0.11	0.06	0.01	0.06	bdl	0.31	0.6	0.49	2.03
17	Kh-7-17	46.63	53.11	0.07	0.10	0.05	bdl	0.04	bdl	0.26	0.5	0.50	1.98
18	Kh-7-17	46.91	52.92	0.04	0.02	0.07	0.04	bdl	bdl	0.17	3.5	0.51	1.96
19	Kh-7-17	46.75	53.03	0.21	bdl	0.01	bdl	bdl	bdl	0.22		0.51	1.98
20	Kh-55-14	46.80	52.70	0.27	0.09	0.07	0.03	0.03	bdl	0.50	0.7	0.51	1.96
21	Kh-55-14	46.56	52.88	0.32	0.09	0.14	bdl	0.01	bdl	0.57	1.5	0.50	1.98
22	Kh-4-17	46.62	53.02	0.25	0.06	0.01	0.01	0.02	bdl	0.36	0.2	0.50	1.98
23	C-220A 1	46.54	53.29	0.06	0.06	0.01	0.05	bdl	bdl	0.17	0.1	0.50	1.99
24	C-220A 1	46.34	53.55	bdl	0.04	bdl	0.06	bdl	bdl	0.11	-	0.50	2.01
25	C-220A 1	46.83	53.10	bdl	0.05	0.02	bdl	bdl	bdl	0.08	0.4	0.51	1.97
26	YA-32-2	45.80	54.09	bdl	0.05	0.05	bdl	bdl	bdl	0.11	1.0	0.49	2.06
27	YA-32-2	46.07	53.84	bdl	0.05	0.04	bdl	bdl	bdl	0.09	0.7	0.49	2.04
28	YA-32-2	46.25	53.55	0.13	0.05	bdl	0.01	bdl	bdl	0.20	-	0.50	2.02
29	YA-32-2	46.86	53.02	bdl	0.06	0.05	bdl	bdl	bdl	0.11	0.8	0.49	1.97
30	YA-32-2	46.72	53.22	bdl	0.04	0.01	bdl	bdl	bdl	0.06	0.3	0.52	1.98

supplementary materials (continued)

№	Sample	Fe	S	As	Co	Ni	Cu	Sb	Pb	Σ content of			
										trace elements	Ni/Co	Fe/(S+As)	S/Fe
31	MT-171	46.57	53.33	bdl	0.07	0.04	bdl	bdl	bdl	0.103	0.6	0.49	1.99
32	MT-87-2	46.15	53.72	0.04	0.06	0.03	bdl	bdl	bdl	0.13	0.4	0.51	2.03
33	MT-87-2	47.29	52.64	bdl	0.04	0.03	bdl	bdl	bdl	0.07	0.7	0.50	1.94
34	MT-171	46.54	53.30	bdl	0.04	0.10	0.02	bdl	bdl	0.158	2.7	0.52	1.99
35	MT-171	46.99	52.98	bdl	0.02	0.01	bdl	bdl	bdl	0.030	0.7	0.50	1.96
36	MT-97-2	46.32	53.61	bdl	0.07	0.01	bdl	bdl	bdl	0.077	0.1	0.50	2.02
37	MT-97-2	46.30	53.59	0.05	0.05	bdl	0.01	bdl	bdl	0.106	-	0.51	2.02
38	MT-97-2	46.51	53.36	0.02	0.07	0.03	0.02	bdl	bdl	0.131	0.4	0.50	2.00
Hydrothermal Py3 of the of sediment-hosted orogenic gold deposits													
<i>Deposit Malo-Taryn, n=23</i>													
41	MT-76-22	46.67	52.68	0.58	0.06	bdl	bdl	bdl	bdl	0.64	-	0.51	1.97
42	MT-76-22	46.00	53.05	0.91	0.03	0.01	0.00	bdl	bdl	0.95	0.4	0.49	2.01
43	MT-76-22	46.32	52.67	0.95	0.05	0.01	bdl	bdl	bdl	1.01	0.1	0.50	1.98
44	MT-76-22	46.58	53.05	0.31	0.06	bdl	bdl	bdl	bdl	0.37	-	0.50	1.98
45	MT-76-22	46.53	53.05	0.33	0.07	0.02	bdl	bdl	bdl	0.42	0.3	0.50	1.99
46	MT-76-22	46.11	53.56	0.31	0.02	0.00	0.00	bdl	bdl	0.33	0.3	0.49	2.02
47	MT-76-22	45.88	53.66	0.38	0.08	bdl	bdl	bdl	bdl	0.46	-	0.49	2.04
48	MT-13-20	46.55	53.04	0.36	0.04	0.01	bdl	bdl	bdl	0.41	0.2	0.50	1.98
49	MT-13-20	46.14	53.43	0.35	0.08	bdl	0.01	bdl	bdl	0.43	-	0.49	2.02
50	MT-13-20	45.61	53.73	0.63	0.03	bdl	bdl	bdl	bdl	0.66	-	0.49	2.05
51	MT-13-20	46.66	53.25	0.05	0.04	bdl	bdl	bdl	bdl	0.09	-	0.52	1.99
52	MT-86-22	47.66	51.24	1.06	0.04	bdl	0.02	bdl	bdl	1.11	-	0.51	1.87
53	MT-86-22	46.85	51.61	1.46	0.05	bdl	0.02	bdl	bdl	1.52	-	0.50	1.92
54	MT-86-22	46.98	51.75	1.20	0.03	bdl	0.04	bdl	bdl	1.27	-	0.50	1.92
55	MT-86-22	46.11	52.57	1.22	0.04	0.03	0.03	bdl	bdl	1.32	0.8	0.50	1.99
56	MT-86-22	46.64	52.05	1.24	0.04	bdl	0.04	bdl	bdl	1.32	-	0.51	1.94
57	MT-86-22	46.15	52.41	1.36	0.05	bdl	0.03	bdl	bdl	1.44	-	0.49	1.98
58	MT-86-22	46.41	52.35	1.14	0.02	0.02	0.07	bdl	bdl	1.24	0.8	0.50	1.96
59	MT-86-22	46.21	52.40	1.31	0.05	0.00	0.02	bdl	bdl	1.39	0.1	0.50	1.97
60	MT-86-22	46.20	53.01	0.70	0.07	bdl	0.03	bdl	bdl	0.80	-	0.50	2.00
61	MT-86-22	45.97	52.98	0.98	0.05	bdl	0.03	bdl	bdl	1.05	-	0.49	2.01
62	YAP-14-1	46.81	52.80	0.32	0.03	0.02	0.02	bdl	bdl	0.39	0.8	0.49	1.96

supplementary materials (continued)

№	Sample	Fe	S	As	Co	Ni	Cu	Sb	Pb	Σ content of	Ni/Co	Fe/(S+As)	S/Fe
										trace elements			
Deposit Badran, n=60													
63	YAP-14-1	46.71	52.86	0.36	0.07	bdl	bdl	bdl	bdl	0.43	-	0.49	1.97
64	B-10/1-19	45.40	51.87	2.18	0.16	0.27	bdl	0.11	bdl	2.73	1.8	0.49	1.99
65	B-10/1-19	45.92	52.40	1.62	0.03	bdl	bdl	0.03	bdl	1.69	-	0.50	1.99
66	B-10/1-19	45.96	52.55	1.48	0.01	bdl	bdl	bdl	bdl	1.49	-	0.50	1.99
67	B-10/1-19	45.97	51.82	2.16	0.04	bdl	bdl	0.01	bdl	2.21	-	0.50	1.96
68	B-14/1-19	46.07	52.81	1.00	0.04	bdl	bdl	0.08	bdl	1.12	-	0.50	2.00
69	B-14/1-19	46.09	51.65	2.12	0.04	bdl	bdl	0.09	bdl	2.26	-	0.50	1.95
70	B-14/1-19	46.73	51.97	1.12	0.04	bdl	bdl	0.13	bdl	1.30	-	0.51	1.94
71	B-14/1-19	46.42	52.09	1.31	0.06	bdl	bdl	0.11	bdl	1.49	-	0.51	1.95
72	B-17-19	46.33	52.84	0.74	0.05	bdl	bdl	0.04	bdl	0.83	-	0.50	1.99
73	B-17-19	45.71	52.71	1.36	0.03	bdl	bdl	0.18	bdl	1.58	-	0.49	2.01
74	B-17-19	45.96	52.40	1.56	0.04	bdl	bdl	0.05	bdl	1.64	-	0.50	1.99
75	B-17-19	46.27	52.92	0.64	0.05	bdl	bdl	0.13	bdl	0.81	-	0.50	1.99
76	B-17-19	46.20	53.49	0.18	0.02	bdl	bdl	0.11	bdl	0.32	-	0.50	2.02
77	B-17-19	46.43	52.71	0.66	0.05	bdl	bdl	0.15	bdl	0.86	-	0.49	1.98
78	B-17-19	45.40	52.16	2.24	0.04	bdl	bdl	0.17	bdl	2.45	-	0.49	2.00
79	B-17-19	45.56	52.84	1.37	0.02	bdl	bdl	0.21	bdl	1.60	-	0.50	2.02
80	B-24/1-19	45.50	52.89	1.56	0.05	bdl	bdl	bdl	bdl	1.61	-	0.47	2.02
81	B-24/1-19	44.65	53.50	1.80	0.05	bdl	bdl	bdl	bdl	1.85	-	0.49	2.09
82	B-24/1-19	45.74	52.93	1.22	0.05	0.01	bdl	0.05	bdl	1.33	0.1	0.48	2.02
83	B-24/1-19	45.11	53.82	1.01	0.02	0.01	bdl	0.04	bdl	1.08	0.5	0.49	2.08
84	B-24/1-19	45.85	53.10	0.98	0.04	0.02	bdl	0.01	bdl	1.05	0.4	0.50	2.02
85	B-24/1-19	46.13	52.84	0.98	0.02	bdl	bdl	0.03	bdl	1.03	-	0.49	1.99
86	B-24/1-19	45.52	53.32	1.11	0.03	bdl	bdl	0.02	bdl	1.17	-	0.50	2.04
87	B-41-19	46.17	53.00	0.76	0.04	bdl	bdl	0.02	bdl	0.83	0.1	0.49	2.00
88	B-41-19	45.94	52.97	0.97	0.05	0.02	bdl	0.05	bdl	1.09	0.5	0.50	2.01
89	B-41-19	46.09	52.81	1.05	0.03	0.02	bdl	bdl	bdl	1.10	0.7	0.49	2.00
90	B-41-19	46.09	53.48	0.33	0.06	0.02	bdl	0.03	bdl	0.44	0.4	0.49	2.02
91	B-46-19	45.72	52.66	1.56	0.05	0.02	bdl	0.01	bdl	1.63	0.3	0.49	2.01
92	B-46-19	45.36	52.24	2.27	0.07	bdl	bdl	0.06	bdl	2.40	-	0.49	2.01

supplementary materials (continued)

№	Sample	Fe	S	As	Co	Ni	Cu	Sb	Pb	Σ content of			
										trace elements	Ni/Co	Fe/(S+As)	S/Fe
93	B-46-19	45.38	51.49	3.07	0.01	0.02	bdl	0.03	bdl	3.14	1.7	0.49	1.98
94	B-46-19	46.14	52.09	1.66	0.04	0.06	bdl	0.01	bdl	1.77	1.7	0.50	1.97
95	B-46-19	45.77	51.93	2.13	0.06	0.06	bdl	0.05	bdl	2.30	1.1	0.50	1.98
96	B-46-19	45.58	52.51	1.86	0.02	bdl	bdl	0.02	bdl	1.91	-	0.49	2.01
97	B-52-19	45.84	52.70	1.42	0.03	bdl	bdl	0.01	bdl	1.45	-	0.49	2.00
98	B-52-19	45.88	52.47	1.60	0.03	bdl	bdl	0.02	bdl	1.65	-	0.50	1.99
99	B-52-19	46.30	52.40	1.21	0.03	0.01	bdl	0.04	bdl	1.29	0.5	0.50	1.97
100	B-52-19	46.35	52.63	1.01	0.01	bdl	bdl	bdl	bdl	1.03	-	0.50	1.98
101	B-52-19	46.02	53.18	0.67	0.04	0.06	bdl	0.03	bdl	0.80	1.6	0.49	2.01
102	B-52-19	46.56	52.20	1.20	0.03	bdl	bdl	0.01	bdl	1.24	-	0.51	1.95
103	B-52-19	46.09	52.28	1.50	0.07	0.07	bdl	bdl	bdl	1.63	1.0	0.50	1.98
104	B-52-19	46.48	52.33	1.14	0.02	bdl	bdl	0.03	bdl	1.19	-	0.51	1.96
105	B-35/1-19	47.00	51.97	0.92	0.08	bdl	0.03	bdl	bdl	1.03	-	0.52	1.93
106	B-35/1-19	47.47	51.17	1.30	0.05	bdl	bdl	0.02	bdl	1.36	-	0.53	1.88
107	B-35/1-19	46.98	52.14	0.79	0.07	bdl	bdl	0.02	bdl	0.88	-	0.51	1.93
108	B-35/1-19	46.88	52.07	0.99	0.06	bdl	bdl	bdl	bdl	1.05	-	0.51	1.93
109	B-51-19	46.67	52.19	1.10	0.04	bdl	bdl	bdl	bdl	1.14	-	0.51	1.95
110	B-51-19	46.73	51.77	1.45	0.05	bdl	bdl	bdl	bdl	1.50	-	0.51	1.93
111	B-54/1-19	46.69	52.23	1.03	0.05	bdl	bdl	bdl	bdl	1.08	-	0.51	1.95
112	B-54/1-19	46.07	52.33	1.55	0.05	bdl	bdl	bdl	bdl	1.60	-	0.50	1.98
113	B-54/1-19	46.88	51.74	1.28	0.06	0.02	0.02	bdl	bdl	1.38	0.3	0.51	1.92
114	B-54/1-19	46.17	52.42	1.31	0.06	bdl	bdl	0.03	bdl	1.40	-	0.50	1.98
115	B-54/1-19	47.41	51.30	1.17	0.06	0.06	bdl	bdl	bdl	1.29	0.9	0.53	1.88
116	B-54/1-19	46.56	52.18	1.19	0.04	bdl	bdl	0.04	bdl	1.27	-	0.51	1.95
117	B-54/1-19	46.21	51.62	2.02	0.07	0.02	0.05	0.01	bdl	2.17	0.2	0.51	1.95
118	B-54/1-19	47.50	51.42	0.94	0.07	0.07	bdl	bdl	bdl	1.08	1.1	0.53	1.89
119	B-56/1-19	45.14	53.08	1.59	0.12	0.06	0.01	0.01	bdl	1.78	0.5	0.48	2.05
120	B-56/1-19	45.99	52.15	1.65	0.09	0.10	0.02	bdl	bdl	1.85	1.2	0.50	1.97
121	B-56/1-19	45.14	53.08	1.59	0.12	0.06	0.01	0.01	bdl	1.78	0.5	0.48	2.05
122	B-56/1-19	45.99	52.15	1.65	0.09	0.10	0.02	bdl	bdl	1.85	1.2	0.50	1.97
123	B-56/1-19	46.16	52.47	1.33	0.04	bdl	bdl	0.01	bdl	1.37	-	0.50	1.98
124	B-56/1-19	46.35	52.39	1.13	0.09	0.04	bdl	bdl	bdl	1.26	0.4	0.50	1.97

supplementary materials (continued)

№	Sample	Fe	S	As	Co	Ni	Cu	Sb	Pb	Σ content of			
										trace elements	Ni/Co	Fe/(S+As)	S/Fe
Deposit Khangalas, n=47													
125	Kh-32-14	46.23	52.01	1.70	0.05	bdl	bdl	0.01	bdl	1.76	-	0.50	1.96
126	Kh-51-14	46.48	52.21	1.21	0.09	0.01	0.01	bdl	bdl	1.32	0.1	0.51	1.96
127	Kh-51-14	46.36	51.79	1.65	0.12	0.06	0.02	bdl	bdl	1.85	0.5	0.51	1.95
126	Kh-51-14	46.60	51.88	1.41	0.11	bdl	bdl	0.01	bdl	1.53	0.0	0.51	1.94
130	Kh-51-14	46.25	52.52	1.11	0.10	0.01	0.02	bdl	bdl	1.24	0.1	0.50	1.98
131	Kh-51-14	46.74	52.14	0.93	0.14	0.02	0.03	bdl	bdl	1.12	0.1	0.51	1.94
132	Kh-52-14	46.66	51.16	1.99	0.07	0.11	0.03	bdl	bdl	2.20	1.6	0.52	1.91
133	Kh-52-14	46.19	52.36	1.34	0.07	0.03	0.01	bdl	bdl	1.45	0.5	0.50	1.97
134	Kh-55-14	46.43	52.93	0.48	0.07	0.04	0.03	0.02	bdl	0.65	0.6	0.50	1.99
135	Kh-55-14	46.47	52.40	1.00	0.07	0.01	bdl	0.05	bdl	1.13	0.2	0.51	1.96
136	Kh-55-14	46.81	52.03	0.80	0.22	0.10	bdl	0.06	bdl	1.17	0.4	0.51	1.94
137	Kh-55-14	46.99	51.99	0.88	0.06	0.03	bdl	0.05	bdl	1.02	0.4	0.52	1.93
138	Kh-61-14	45.93	53.08	0.83	0.05	0.04	0.02	0.05	bdl	0.99	0.8	0.49	2.01
139	Kh-61-14	46.84	51.17	1.83	0.07	0.01	0.01	0.07	bdl	1.99	0.2	0.52	1.90
140	Kh-9-17/1	46.00	52.92	0.93	0.07	0.02	0.02	0.04	bdl	1.07	0.3	0.50	2.00
141	Kh-9-17/1	46.53	52.96	0.38	0.07	0.03	0.03	0.02	bdl	0.52	0.4	0.50	1.98
142	Kh-9-17/1	45.99	52.47	1.40	0.08	bdl	0.02	0.05	bdl	1.54	0.0	0.50	1.99
143	Kh-9-17/1	46.05	53.27	0.57	0.06	bdl	0.02	0.03	bdl	0.68	0.0	0.49	2.01
144	Kh-4-17	46.61	52.70	0.60	0.04	0.03	0.02	0.01	bdl	0.69	0.8	0.51	1.97
145	Kh-4-17	45.91	52.72	0.83	0.13	0.38	0.01	0.02	bdl	1.37	2.8	0.50	2.00
146	Kh-35-17	47.11	52.06	0.71	0.06	0.03	0.01	0.02	0.01	0.83	0.5	0.52	1.92
147	Kh-35-17	46.67	52.65	0.51	0.06	0.01	bdl	0.04	0.07	0.61	0.2	0.51	1.96
148	Kh-35-17	46.55	52.02	1.20	0.06	0.08	bdl	0.05	0.04	1.39	1.4	0.51	1.95
149	Kh-35-17	46.72	51.70	1.33	0.06	0.08	0.01	0.03	0.07	1.51	1.2	0.51	1.93
150	KhG-12-19	46.43	53.05	0.32	0.04	0.02	bdl	0.02	0.11	0.41	0.5	0.50	1.99
151	KhG-13-19	45.74	51.89	2.19	0.08	0.03	0.04	0.03	0.02	2.36	0.3	0.50	1.98
152	KhG-13-19	46.14	52.99	0.74	0.07	0.01	0.04	0.01	bdl	0.87	0.1	0.50	2.00
153	KhG-13-19	46.64	52.09	1.13	0.07	0.02	0.03	0.02	bdl	1.28	0.3	0.51	1.95
154	KhG-18-19	46.59	52.51	0.56	0.11	0.18	bdl	0.05	bdl	0.91	1.6	0.51	1.96
155	KhG-18-19	45.88	52.18	1.81	0.06	bdl	bdl	0.06	bdl	1.93	0.0	0.50	1.98
156	KhG-29-19	46.25	52.92	0.59	0.05	0.01	0.06	0.03	0.08	0.74	0.3	0.50	1.99

supplementary materials (continued)

№	Sample	Fe	S	As	Co	Ni	Cu	Sb	Pb	Σ content of	Ni/Co	Fe/(S+As)	S/Fe
										trace elements			
157	KhG-29-19	46.05	52.09	1.44	0.13	0.23	0.01	0.02	0.04	1.82	1.7	0.50	1.97
158	KhG-29-19	46.36	51.79	1.74	0.04	bdl	0.03	0.03	0.01	1.84	0.0	0.51	1.95
159	KhG-30-19	46.70	52.51	0.64	0.05	0.03	0.03	bdl	0.04	0.75	0.6	0.51	1.96
160	KhG-30-19	46.47	52.68	0.59	0.05	0.13	0.01	0.02	0.05	0.80	2.4	0.50	1.97
161	KhG-30-19	46.63	52.57	0.65	0.05	0.02	0.02	0.02	0.04	0.75	0.4	0.51	1.96
162	KhG-30-19	46.92	52.41	0.51	0.04	0.05	0.01	0.02	0.04	0.63	1.1	0.51	1.95
163	KhPr2-4-14	46.93	52.27	0.70	0.04	bdl	bdl	0.04	0.02	0.78	0.0	0.51	1.94
164	KhPr2-4-14	46.92	52.31	0.71	0.06	0.01	bdl	bdl	bdl	0.78	0.1	0.51	1.94
165	KhPr2-4-14	46.93	52.07	0.94	0.04	bdl	bdl	0.03	bdl	1.01	-	0.51	1.93
166	KhPr2-4-14	47.18	51.99	0.74	0.05	bdl	0.02	0.01	bdl	0.83	-	0.52	1.92
167	Khg-30-19	46.92	52.41	0.51	0.04	0.05	0.01	0.02	0.04	0.63	1.1	0.51	1.95
168	Kh-7-17	46.58	52.14	1.23	0.02	0.01	0.01	bdl	bdl	1.28	0.4	0.51	1.95
169	Kh-7-17	45.74	52.83	1.39	0.02	0.01	0.02	bdl	bdl	1.44	0.6	0.49	2.01
170	Kh-7-17	45.98	52.18	1.84	bdl	bdl	bdl	bdl	bdl	1.84	-	0.50	1.98
171	Kh-5-14/1	46.38	52.92	0.54	0.08	0.08	bdl	bdl	bdl	0.70	0.9	0.50	1.99
172	Kh-5-14/1	46.10	53.29	0.53	0.05	0.02	0.01	bdl	bdl	0.61	0.5	0.49	2.01

Hydrothermal Py3 of the of intrusion-hosted orogenic gold deposits

Deposit V'yun, dikes, n=38

173	B-21-18	46.83	52.18	1.10	0.02	bdl	bdl	bdl	bdl	1.12	0.02	0.51	1.94
174	B-21-18	46.31	52.19	1.26	0.01	bdl	0.02	bdl	bdl	1.29	0.03	0.50	1.96
175	B-21-18	46.68	52.63	1.56	0.02	bdl	bdl	bdl	bdl	1.58	0.02	0.50	1.96
176	B-21-18	46.88	52.71	0.54	bdl	bdl	bdl	bdl	bdl	0.54	-	0.51	1.96
177	B-21-18	46.41	52.66	1.11	bdl	bdl	0.05	bdl	bdl	1.16	-	0.50	1.98
178	B-21-18	46.67	52.26	1.09	0.03	0.01	bdl	bdl	bdl	1.13	0.33	0.51	1.95
179	B-21-18	45.82	51.86	1.42	0.01	0.02	0.02	bdl	bdl	1.47	0.05	0.50	1.97
180	B-21-18	46.12	52.08	1.06	bdl	bdl	bdl	bdl	bdl	1.06	-	0.50	1.98
181	B-21-18	46.21	52.55	1.05	bdl	bdl	bdl	bdl	bdl	1.05	-	0.50	1.98
182	B-21-18	46.44	52.65	1.38	0.01	bdl	0.02	bdl	bdl	1.41	-	0.51	1.94
183	VF-39-1	46.74	52.58	1.03	0.05	bdl	bdl	bdl	bdl	1.08	-	0.50	1.96
184	VF-39-1	46.89	53.14	0.21	0.07	bdl	bdl	0.08	bdl	0.28	-	0.50	1.96
185	VF-39-1	45.25	52.94	0.60	0.05	bdl	bdl	0.00	bdl	0.65	-	0.51	1.96
186	VF-39-1	46.88	53.01	0.13	0.03	bdl	0.03	0.05	bdl	0.19	-	0.50	1.98

supplementary materials (continued)

№	Sample	Fe	S	As	Co	Ni	Cu	Sb	Pb	Σ content of			
										trace elements	Ni/Co	Fe/(S+As)	S/Fe
187	VF-39-1	47.16	53.11	0.63	0.06	bdl	bdl	0.02	bdl	0.68	-	0.51	1.95
188	VF-39-1	47.11	52.39	0.58	0.03	0.07	bdl	0.02	bdl	0.63	3.20	0.50	1.97
189	VF-39-1	46.42	53.04	0.76	0.08	bdl	bdl	0.04	bdl	0.86	0.30	0.50	1.97
190	VF-39-1	46.4	53.76	0.16	0.05	0.02	bdl	0.09	bdl	0.32	0.31	0.50	1.98
191	BK-125-18	47.01	53.61	bdl	0.07	bdl	bdl	0.04	bdl	0.11	-	0.50	1.97
192	BK-125-18	46.84	53.85	bdl	0.03	bdl	bdl	0.02	bdl	0.05	-	0.51	1.96
193	BK-125-18	47.08	52.79	bdl	0.04	bdl	bdl	0.01	bdl	0.05	-	0.51	1.97
194	BK-125-18	46.95	53.36	bdl	0.11	bdl	bdl	0.02	bdl	0.13	-	0.49	2.04
195	BK-125-18	47.18	53.51	bdl	0.03	bdl	bdl	0.05	bdl	0.08	-	0.51	1.97
196	BK-125-18	46.86	53.38	bdl	0.07	bdl	0.01	0.12	bdl	0.20	-	0.51	1.96
197	BK-125-18	47.15	53.53	bdl	0.03	bdl	bdl	0.05	bdl	0.08	-	0.51	1.94
198	B-43-18	44.27	53.99	0.04	0.87	1.6	0.01	0.03	bdl	2.55	1.8	0.50	1.99
199	B-43-18	46.33	54.08	bdl	0.38	bdl	0.02	0.11	bdl	0.51	-	0.49	2.02
200	B-43-18	46.75	53.76	bdl	0.13	bdl	0.04	0.06	bdl	0.23	-	0.50	1.99
201	B-43-18	47.00	53.79	bdl	0.14	bdl	bdl	0.05	bdl	0.19	-	0.50	2.00
202	B-43-18	46.78	53.95	bdl	0.10	bdl	0.05	0.07	bdl	0.22	-	0.51	1.95
203	B-43-18	46.73	53.99	bdl	0.10	0.06	bdl	0.05	bdl	0.21	-	0.51	1.98
204	B-43-18	46.61	54.04	bdl	0.08	0.02	bdl	0.02	bdl	0.12	-	0.51	1.98
205	B-37-18	46.55	52.90	bdl	0.04	bdl	0.01	bdl	bdl	0.05	-	0.50	1.98
206	B-37-18	46.10	52.05	2.07	0.02	bdl	bdl	bdl	bdl	2.09	-	0.51	1.98
207	B-37-18	46.79	52.96	bdl	0.04	0.07	bdl	bdl	bdl	0.11	1.8	0.47	2.12
208	B-37-18	46.47	52.60	bdl	0.04	bdl	bdl	bdl	bdl	0.04	-	0.49	2.03
209	B-37-18	46.17	52.98	bdl	0.11	bdl	bdl	bdl	bdl	0.11	-	0.50	2.00
210	B-21-18	46.44	52.65	1.38	0.01	bdl	0.02	bdl	bdl	1.41	-	0.50	1.99
<i>Deposit Shumnyi, dikes, n=32</i>													
211	S-113-18 1	47.16	53.24	0.33	0.01	0.01	bdl	bdl	bdl	0.35	1.0	0.51	1.97
212	S-113-18 1	46.48	52.02	0.56	0.01	bdl	0.09	bdl	bdl	0.66	-	0.51	1.95
213	S-113-18 1	46.93	53.06	0.04	0.01	bdl	0.07	bdl	bdl	0.12	-	0.51	1.97
214	S-113-18 1	47.2	52.3	0.67	0.03	bdl	0.03	bdl	bdl	0.73	-	0.52	1.93
215	S-113-18 1	47.13	52.78	bdl	bdl	bdl	0.02	bdl	bdl	0.02	-	0.51	1.95
216	S-113-18 1	47.5	51.79	0.93	bdl	bdl	bdl	bdl	bdl	0.93	-	0.52	1.90
217	S-113-18 1	46.64	51.01	1.45	bdl	bdl	bdl	bdl	bdl	1.45	-	0.52	1.90

supplementary materials (continued)

№	Sample	Fe	S	As	Co	Ni	Cu	Sb	Pb	Σ content of			
										trace elements	Ni/Co	Fe/(S+As)	S/Fe
218	S-113-18 1	46.54	51.06	1.84	bdl	0.03	0.02	bdl	bdl	1.88	-	0.52	1.91
219	S-113-18 1	46.63	53.25	0.24	bdl	bdl	0.03	bdl	bdl	0.34	-	0.50	1.99
220	S-113-18 1	46.76	52.8	0.56	0.01	bdl	bdl	bdl	bdl	0.57	-	0.51	1.97
221	SH-26-1	47.01	52.79	0.57	0.05	bdl	bdl	0.04	bdl	0.62	-	0.51	1.96
222	SH-26-1	46.51	52.57	0.99	0.10	0.07	0.00	0.08	bdl	1.16	0.7	0.50	1.97
223	SH-26-1	46.06	52.14	2.02	0.06	0.04	0.01	0.02	bdl	2.15	0.6	0.50	1.97
224	SH-26-1	46.42	52.41	1.09	0.02	bdl	bdl	0.04	bdl	1.11	-	0.50	1.97
225	SH-26-1	46.1	52.81	0.13	0.04	bdl	bdl	0.08	bdl	0.16	-	0.50	1.99
226	SH-26-1	44.22	53.39	bdl	0.44	1.77	0.11	0.08	bdl	2.31	4.1	0.48	2.10
227	SH-26-1	43.72	53.38	bdl	0.18	3.52	0.03	0.10	bdl	3.73	19.1	0.47	2.13
228	SH-26-1	44.98	52.75	bdl	0.63	0.56	0.86	0.07	bdl	2.06	0.9	0.49	2.04
229	SH-26-1	44.63	51.06	0.92	0.16	0.24	2.31	0.10	bdl	3.87	1.5	0.50	1.99
230	SH-75-1	46.73	52.44	bdl	0.05	0.01	bdl	bdl	bdl	0.06	0.2	0.51	1.95
231	SH-75-1	46.5	52.55	bdl	0.05	0.01	bdl	bdl	bdl	0.06	0.2	0.51	1.97
232	SH-75-1	46.12	53.25	bdl	0.04	bdl	bdl	bdl	bdl	0.04	-	0.50	2.01
233	SH-75-1	46.66	52.34	bdl	0.03	bdl	bdl	bdl	bdl	0.03	-	0.51	1.95
234	SH-75-1	46.54	52.76	bdl	0.02	bdl	bdl	bdl	bdl	0.02	-	0.51	1.97
235	SH-75-1	46.78	52.39	bdl	0.03	bdl	bdl	bdl	bdl	0.03	-	0.51	1.95
236	SH-75-1	45.47	52.79	bdl	0.06	bdl	bdl	bdl	bdl	0.06	-	0.49	2.02
237	SH-36-1	46.15	52.82	bdl	0.08	0.02	bdl	bdl	bdl	0.10	0.3	0.50	1.99
238	SH-36-1	46.28	52.99	0.47	0.05	bdl	bdl	bdl	bdl	0.52	-	0.50	1.99
239	SH-36-1	46.48	52.9	bdl	0.06	bdl	bdl	bdl	bdl	0.06	-	0.50	1.98
240	SH-36-1	46.49	52.61	0.19	0.04	bdl	bdl	bdl	bdl	0.23	-	0.51	1.97
241	SH-36-1	46.46	52.98	bdl	0.03	bdl	bdl	bdl	bdl	0.03	-	0.50	1.99
<i>Deposit V'yun, sandstones in dike exocontacts, n=53</i>													
242	VK-12-18	45.46	52.18	2.14	0.06	0.13	bdl	0.02	bdl	2.35	2.3	0.49	2.00
243	VK-12-18	46.25	53.43	0.30	0.01	bdl	0.01	bdl	bdl	0.32	-	0.50	2.01
244	VK-12-18	45.8	51.74	2.39	bdl	0.03	0.02	0.02	bdl	2.46	-	0.50	1.97
245	VK-12-18	45.99	52.14	1.84	bdl	bdl	0.04	bdl	bdl	1.87	-	0.50	1.97
246	VK-12-18	45.99	51.91	2.09	bdl	bdl	0.01	bdl	bdl	2.10	-	0.50	1.97
247	VK-12-18	46.59	51.74	1.65	0.01	0.08	0.02	bdl	bdl	1.68	8	0.51	1.93
248	VK-12-18	44.86	52.7	2.42	bdl	bdl	0.02	bdl	bdl	2.44	-	0.48	2.05

supplementary materials (continued)

№	Sample	Fe	S	As	Co	Ni	Cu	Sb	Pb	Σ content of			
										trace elements	Ni/Co	Fe/(S+As)	S/Fe
249	VK-12-18	45.81	51.92	2.25	bdl	0.01	0.01	0.01	bdl	2.27	-	0.50	1.97
250	VK-12-18	45.52	52.03	2.32	0.01	0.12	bdl	bdl	bdl	2.46	11.8	0.49	1.99
251	V-125-18	47.27	50.58	2.12	bdl	0.02	bdl	0.01	bdl	2.15	-	0.53	1.86
252	V-125-18	46.65	50.44	2.88	0.01	0.02	0.01	bdl	bdl	2.91	2	0.52	1.88
253	V-125-18	47.12	50.29	2.57	0.02	0.03	bdl	0.01	bdl	2.63	1.3	0.53	1.86
254	V-125-18	47.03	50.9	2.02	bdl	0.02	bdl	0.03	bdl	2.07	-	0.52	1.88
255	V-125-18	46.83	51.62	1.53	bdl	bdl	bdl	0.02	bdl	1.55	-	0.51	1.92
256	V-125-18	46.48	50.05	3.16	0.05	0.24	bdl	0.01	bdl	3.45	4.7	0.52	1.88
257	V-125-18	46.81	50.78	2.36	bdl	bdl	0.04	0.02	bdl	2.41	-	0.52	1.89
258	V-98-18	47.4	52.03	0.54	bdl	bdl	0.01	0.02	bdl	0.57	-	0.52	1.91
259	V-98-18	47.21	52.36	0.43	bdl	bdl	bdl	0.01	bdl	0.44	-	0.52	1.93
260	V-98-18	46.89	52.38	0.66	bdl	0.01	bdl	0.06	bdl	0.72	-	0.51	1.95
261	V-98-18	47.32	51.77	0.82	bdl	0.03	bdl	0.06	bdl	0.91	-	0.52	1.91
262	V-98-18	47.4	52.11	0.45	bdl	0.03	bdl	bdl	bdl	0.49	2.3	0.52	2.00
263	V-98-18	47.29	52.27	0.40	0.01	0.01	0.02	bdl	bdl	0.44	-	0.52	1.91
264	V-98-18	47.02	52.36	0.61	0.02	0.01	bdl	bdl	bdl	0.62	0.5	0.51	1.92
265	V-98-18	47.19	52.14	0.55	0.01	0.06	0.01	0.01	bdl	0.67	6	0.52	1.94
266	V-98-18	47.22	52.12	0.64	bdl	bdl	0.01	0.01	bdl	0.66	-	0.52	1.92
267	V-98-18	47.37	51.94	0.67	bdl	bdl	bdl	0.02	bdl	0.69	-	0.52	1.92
268	V-98-18	47	51.62	1.32	bdl	0.01	0.02	0.03	bdl	1.38	-	0.52	1.91
269	V-98-18	47.57	52.11	0.31	0.01	0.02	bdl	bdl	bdl	0.32	2	0.52	1.91
270	V-92-18	47.08	50.91	1.98	bdl	0.01	0.01	bdl	bdl	2.01	-	0.52	1.91
271	V-92-18	47.42	51.79	0.79	bdl	bdl	bdl	0.00	bdl	0.79	-	0.52	1.88
272	V-92-18	47.17	50.26	2.57	bdl	0.01	0.00	bdl	bdl	2.57	-	0.53	1.90
273	V-92-18	47.36	50.77	1.84	bdl	bdl	0.02	bdl	bdl	1.87	-	0.53	1.86
274	V-92-18	47.17	51.07	1.73	0.01	0.07	0.01	bdl	bdl	1.76	7	0.52	1.87
275	V-92-18	47.54	51.44	1.02	0.01	bdl	0.00	bdl	bdl	1.02	-	0.53	1.89
276	V-92-18	46.75	51.06	2.17	bdl	bdl	0.01	0.01	bdl	2.19	-	0.52	1.88
277	V-92-18	47.2	50.71	2.07	bdl	bdl	0.00	0.02	bdl	2.09	-	0.53	1.90
278	V-92-18	46.86	50.67	2.40	bdl	0.01	0.01	0.05	bdl	2.47	-	0.52	1.87
279	V-92-18	46.84	51.25	1.90	bdl	bdl	bdl	bdl	bdl	1.90	-	0.52	1.88
280	V-86-18	46.53	52.51	0.90	0.02	0.01	bdl	0.03	bdl	0.95	0.4	0.51	1.91

supplementary materials (continued)

№	Sample	Fe	S	As	Co	Ni	Cu	Sb	Pb	Σ content of			
										trace elements	Ni/Co	Fe/(S+As)	S/Fe
281	V-86-18	46.05	52.07	1.84	bdl	0.00	bdl	0.04	bdl	1.88	-	0.50	1.97
282	V-86-18	45.82	51.27	2.78	bdl	0.13	bdl	bdl	bdl	2.90	-	0.50	1.97
283	V-86-18	46.42	52.48	1.07	0.01	bdl	0.01	0.01	bdl	1.11	-	0.50	1.95
284	V-86-18	46.45	52.61	0.92	bdl	bdl	bdl	0.01	bdl	0.93	-	0.50	1.97
285	V-86-18	46.52	52.95	0.51	0.01	bdl	bdl	0.01	bdl	0.53	-	0.50	1.97
286	V-86-18	45.82	51.32	2.84	0.01	bdl	bdl	0.00	bdl	2.86	-	0.50	1.98
287	S-69-18	45.87	52.62	1.34	0.02	0.15	0.00	0.02	bdl	1.52	0.8	0.50	1.96
288	S-69-18	46.04	52.57	1.36	0.01	0.01	0.02	bdl	bdl	1.39	1.0	0.50	2.01
289	S-69-18	45.35	53.18	1.42	0.02	0.01	0.02	bdl	bdl	1.47	0.5	0.48	2.00
290	S-69-18	45.31	52.73	1.84	0.04	0.06	0.03	bdl	bdl	1.96	1.5	0.49	1.97
299	S-69-18	45.43	53.53	1.01	0.01	0.01	bdl	0.01	bdl	1.04	1.0	0.48	2.04
300	S-69-18	45.08	53.12	1.38	0.13	0.22	0.07	bdl	bdl	1.80	1.7	0.48	1.99
301	S-69-18	45.74	52.35	1.86	0.01	bdl	0.02	0.02	bdl	1.89	-	0.49	1.99
302	S-69-18	45.91	52.39	1.63	0.03	0.02	0.03	0.00	bdl	1.71	0.7	0.50	1.99
303	S-109-18	46.37	52.68	0.76	0.07	0.09	0.02	0.01	bdl	0.95	1.3	0.50	1.98
304	S-109-18	46.18	52.76	0.86	0.07	0.13	bdl	0.01	bdl	1.06	2	0.50	1.99
305	S-109-18	46.68	52.94	0.33	0.03	bdl	0.01	bdl	bdl	0.37	-	0.50	1.98
306	S-109-18	46.16	52.79	0.97	0.04	0.03	0.01	bdl	bdl	1.05	0.9	0.50	1.99
307	S-109-18	46.35	52.38	1.18	0.04	0.05	bdl	0.01	bdl	1.27	1.2	0.50	1.97
308	S-109-18	46.44	52.68	0.81	0.04	0.02	0.01	bdl	bdl	0.88	0.5	0.50	1.98
309	S-109-18	45.9	53.28	0.79	0.02	bdl	0.01	bdl	bdl	0.82	-	0.49	2.02
310	S-109-18	46.21	52.59	1.16	0.04	bdl	bdl	0.00	bdl	1.20	-	0.50	1.98
311	S-109-18	46.62	53.02	0.31	0.05	bdl	bdl	bdl	bdl	0.36	-	0.50	1.98
312	S-109-18	46.59	52.81	0.56	0.03	bdl	0.01	bdl	bdl	0.60	-	0.50	1.97
313	S-109-18	46.99	52.44	0.38	0.06	0.10	0.02	0.02	bdl	0.57	1.6	0.51	1.94
314	S-109-18	46.1	52.48	1.34	0.04	bdl	bdl	0.04	bdl	1.42	-	0.50	1.98
315	BS-21/3	46.43	52.69	0.83	0.04	0.01	bdl	bdl	bdl	0.89	0.3	0.50	1.98
316	BS-21/3	46.64	52.83	0.47	0.05	bdl	0.01	0.01	bdl	0.54	-	0.50	1.97
317	BS-21/3	46.7	52.92	0.35	0.02	bdl	bdl	0.01	bdl	0.38	-	0.51	1.97

bdl - concentration below detection limit.