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Supplement of

Trace element composition of size-fractionated suspended particulate matter samples from the Qatari Exclusive Economic Zone of the Arabian Gulf: the role of atmospheric dust

Oguz Yigiterhan et al.

Correspondence to: Oguz Yigiterhan (oguz@qu.edu.qa)

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Supplemental Materials:

Table S1 (next three pages): Data for the trace element composition of plankton from the **2012** cruise with **average leached Qatari dust** used for the lithogenic correction. The upper segment, results for bulk plankton collected with a 50 μm net tow, is separated from the lower segment showing data for the larger plankton collected with a 200 μm net tow. The 'CUMULATIVE' row is an average of both of these measurements. The distance column gives the shortest distance from land to each sampling location (in kilometers). The letters (R), (L), and (E) represent the values for raw data, the lithogenic correction (in this case with **average leached Qatari dust**), and the excess concentrations, respectively. All are measured in parts per million (ppm), or $\mu\text{g/g}$. Aluminum only has a raw data column because all of the aluminum in each sample was assumed to be of lithogenic origin, meaning that the lithogenic correction would be zero. The number in scientific notation in parenthesis adjacent to the (L) column is a numerical representation of the [Me]/Al ratio found in Qatari dust (Table 1 and Yigiterhan et al, 2018) used to determine the lithogenic correction. Certain elements have excess values, which are negative, indicating that there was an overcorrection for the lithogenic portion of the sample.

Sample #	Location	Distance (km)	Measurement	Al	As	As	As	Ba	Ba	Ba	Cd	Cd	Cd
				<i>R</i>	<i>R</i>	<i>L (1.63E-04)</i>	<i>E</i>	<i>R</i>	<i>L (1.09E-02)</i>	<i>E</i>	<i>R</i>	<i>L (5.48E-06)</i>	<i>E</i>
1	Doha	10.19	Bulk (50 µm)	2,590	31.4	0.42	31.0	14.1	28.1	-14.1	0.52	0.01	0.51
2	Khor Al-Odaid	0.23	Bulk (50 µm)	994	13.2	0.16	13.1	5.69	10.8	-5.10	1.01	0.005	1.01
3	Mesaieed	0.60	Bulk (50 µm)	3,010	8.58	0.49	8.09	17.9	32.7	-14.8	0.64	0.02	0.62
4	Shraawoo	59.60	Bulk (50 µm)	1,940	13.9	0.32	13.6	14.7	21.1	-6.39	1.11	0.01	1.10
5	Al-Edd Al-Gharbi	46.55	Bulk (50 µm)	480	6.57	0.08	6.49	53.4	5.21	48.1	0.81	0.003	0.81
6	Ash Shargi Oilfield	78.90	Bulk (50 µm)	1,830	9.19	0.30	8.89	26.8	19.9	6.89	2.71	0.01	2.70
7	Halul Island	84.05	Bulk (50 µm)	1,030	10.9	0.17	10.7	12.4	11.1	1.25	3.59	0.01	3.58
8	High North	74.55	Bulk (50 µm)	1,180	12.2	0.19	12.0	6.63	12.8	-6.20	2.03	0.01	2.02
9	Ras Laffan	11.40	Bulk (50 µm)	803	16.1	0.13	16.0	5.55	8.72	-3.17	1.56	0.004	1.56
10	Dukhan	0.02	Bulk (50 µm)	10,500	28.5	1.71	26.8	69.5	114	-44.7	0.36	0.06	0.30
11	Umm Bab	0.48	Bulk (50 µm)	7,230	19.3	1.18	18.1	42.5	78.4	-36.0	0.54	0.02	0.52
AVERAGE				2,870	15.4	0.468	15.0	24.5	31.2	-6.73	1.35	0.016	1.34

				<i>R</i>	<i>R</i>	<i>L (1.63E-04)</i>	<i>E</i>	<i>R</i>	<i>L (1.09E-02)</i>	<i>E</i>	<i>R</i>	<i>L (5.48E-06)</i>	<i>E</i>
12	Doha	10.19	Zooplankton (200 µm)	3,250	17.9	0.53	17.4	16.9	35.3	-18.4	0.70	0.0178	0.686
13	Khor Al-Odaid	0.23	Zooplankton (200 µm)	1,010	8.36	0.16	8.19	6.07	11.0	-4.91	1.17	0.0055	1.17
14	Mesaieed	0.60	Zooplankton (200 µm)	2,770	7.64	0.45	7.19	11.8	30.1	-18.3	0.62	0.01	0.61
15	Shraawoo	59.60	Zooplankton (200 µm)	722	10.7	0.12	10.5	4.77	7.83	-3.07	0.78	0.004	0.78
16	Al-Edd Al-Gharbi	46.55	Zooplankton (200 µm)	641	9.22	0.10	9.11	114	6.96	107	1.00	0.004	0.99
17	Ash Shargi Oilfield	78.90	Zooplankton (200 µm)	560	7.76	0.09	7.67	15.6	6.07	9.57	2.07	0.003	2.07
18	Halul Island	84.05	Zooplankton (200 µm)	335	12.1	0.05	12.0	12.8	3.63	9.15	2.74	0.002	2.74
19	High North	74.55	Zooplankton (200 µm)	1,020	14.5	0.17	14.3	6.68	11.1	-4.38	2.27	0.01	2.26
20	Ras Laffan	11.40	Zooplankton (200 µm)	418	19.4	0.07	19.3	2.78	4.54	-1.76	1.77	0.002	1.76
21	Dukhan	0.02	Zooplankton (200 µm)	5,560	19.5	0.90	18.6	37.6	60.3	-22.8	0.59	0.03	0.56
22	Umm Bab	0.48	Zooplankton (200 µm)	1,870	9.46	0.30	9.15	17.5	20.2	-2.77	0.43	0.01	0.42
AVERAGE				1,650	12.4	0.27	12.1	22.4	17.9	4.51	1.29	0.009	1.28

CUMULATIVE				2,260	13.9	0.37	13.6	23.4	24.6	-1.11	1.32	0.012	1.31
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Sample #	Co	Co	Co	Cr	Cr	Cr	Cu	Cu	Cu	Fe	Fe	Fe	Mn	Mn	Mn
	<i>R</i>	<i>L (2.30E-04)</i>	<i>E</i>	<i>R</i>	<i>L (3.42E-03)</i>	<i>E</i>	<i>R</i>	<i>L (1.12E-03)</i>	<i>E</i>	<i>R</i>	<i>L (6.06E-01)</i>	<i>E</i>	<i>R</i>	<i>L (6.74E-03)</i>	<i>E</i>
1	1.18	0.60	0.58	6.31	8.86	-2.55	9.28	2.91	6.37	1,360	1,570	-211	26.3	17.5	8.77
2	1.00	0.23	0.77	3.72	3.40	0.32	10.4	1.12	9.26	793	602	191	52.2	6.70	45.5
3	1.14	0.69	0.45	11.6	10.3	1.30	184	3.39	180	2,200	1,820	376	50.1	20.3	29.8
4	0.96	0.45	0.51	5.21	6.64	-1.42	82.3	2.18	80.2	1,020	1,180	-154	35.5	13.1	22.4
5	0.52	0.11	0.41	1.20	1.64	-0.44	10.8	0.54	10.2	239	291	-51.8	13.2	3.24	9.94
6	0.96	0.42	0.53	6.40	6.25	0.15	41.4	2.06	39.4	977	1,110	-131	31.7	12.3	19.3
7	1.02	0.24	0.78	8.51	3.51	5.01	13.9	1.15	12.8	437	621	-184	16.0	6.92	9.08
8	0.88	0.27	0.61	3.71	4.04	-0.33	11.2	1.33	9.89	526	716	-190	21.5	7.98	13.5
9	0.52	0.19	0.33	4.00	2.74	1.25	56.9	0.90	56.0	445	486	-41.1	12.8	5.42	7.36
10	3.00	2.42	0.58	24.9	36.0	-11.1	11.9	11.8	0.04	5,490	6,370	-879	133	71.0	61.7
11	2.38	1.66	0.72	17.6	24.7	-7.11	12.6	8.12	4.51	3,630	4,380	-748	88.6	48.7	39.8
AVERAGE	1.23	0.66	0.57	8.47	9.82	-1.36	40.4	3.23	37.2	1,560	1,740	-184	43.7	19.4	24.3

	<i>R</i>	<i>L (2.30E-04)</i>	<i>E</i>	<i>R</i>	<i>L (3.42E-03)</i>	<i>E</i>	<i>R</i>	<i>L (1.12E-03)</i>	<i>E</i>	<i>R</i>	<i>L (6.06E-01)</i>	<i>E</i>	<i>R</i>	<i>L (6.74E-03)</i>	<i>E</i>
12	1.17	0.75	0.42	8.96	11.1	-2.15	12.9	3.66	9.23	1,770	1,970	-199	37.2	21.9	15.3
13	1.30	0.23	1.07	3.07	3.46	-0.39	9.75	1.14	8.61	817	613	205	75.3	6.82	68.5
14	1.93	0.64	1.29	11.9	9.48	2.39	14.1	3.12	10.9	2,000	1,680	322	57.1	18.7	38.4
15	0.58	0.17	0.41	1.93	2.47	-0.54	6.77	0.81	5.96	370	437	-67.5	27.0	4.87	22.2
16	0.68	0.15	0.53	2.40	2.19	0.21	35.5	0.72	34.8	315	388	-73.0	20.3	4.32	15.9
17	0.48	0.13	0.35	2.09	1.91	0.18	48.9	0.63	48.3	262	339	-77.0	15.3	3.77	11.5
18	0.43	0.07	0.36	2.65	1.14	1.51	12.7	0.38	12.3	136	203	-66.4	5.69	2.26	3.43
19	0.70	0.23	0.47	2.61	3.48	-0.87	13.1	1.15	12.0	484	617	-133	22.5	6.87	15.6
20	0.39	0.10	0.29	3.29	1.43	1.87	14.1	0.47	13.6	222	253	-31.4	7.74	2.82	4.91
21	2.28	1.28	1.00	14.4	19.0	-4.65	9.54	6.25	3.29	2,920	3,370	-443	79.2	37.5	41.7
22	1.39	0.43	0.96	4.62	6.37	-1.76	8.75	2.10	6.65	988	1,130	-141	82.5	12.6	69.9
AVERAGE	1.03	0.38	0.65	5.26	5.64	-0.38	16.9	1.86	15.1	935	1,000	-64.2	39.1	11.1	27.9

CUMULATIVE	1.13	0.52	0.61	6.9	7.73	-0.87	28.7	2.54	26.1	1,250	1,370	-124	41.4	15.3	26.1
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Sample #	Mo	Mo	Mo	Ni	Ni	Ni	Pb	Pb	Pb	V	V	V	Zn	Zn	Zn
	<i>R</i>	<i>L (1.20E-03)</i>	<i>E</i>	<i>R</i>	<i>L (4.91E-03)</i>	<i>E</i>	<i>R</i>	<i>L (2.10E-04)</i>	<i>E</i>	<i>R</i>	<i>L (1.80E-03)</i>	<i>E</i>	<i>R</i>	<i>L (4.93E-03)</i>	<i>E</i>
1	117	3.11	114	5.99	12.7	-6.73	0.70	0.54	0.16	4.59	4.66	-0.06	25.5	12.8	12.7
2	2.59	1.19	1.40	2.94	4.88	-1.93	0.34	0.21	0.13	26.7	1.79	25.0	78.9	4.90	74.0
3	9.26	3.61	5.65	7.71	14.8	-7.07	3.01	0.63	2.38	18.7	5.41	13.3	185	14.9	170
4	17.6	2.33	15.2	4.77	9.53	-4.76	0.50	0.41	0.09	6.62	3.49	3.13	89.8	9.58	80.3
5	0.00	0.58	-0.58	1.17	2.36	-1.19	0.33	0.10	0.23	1.27	0.86	0.40	24.5	2.37	22.2
6	0.31	2.19	-1.88	5.27	8.98	-3.71	0.80	0.38	0.42	5.27	3.29	1.98	68.7	9.03	59.6
7	0.27	1.23	-0.96	5.20	5.04	0.16	0.19	0.23	-0.03	2.05	1.84	0.20	73.7	5.06	68.6
8	0.00	1.42	-1.42	4.26	5.80	-1.54	0.31	0.25	0.06	1.97	2.12	-0.15	36.6	5.83	30.7
9	0.34	0.96	-0.62	3.12	3.94	-0.82	0.80	0.17	0.63	2.08	1.44	0.64	98.8	3.96	94.8
10	0.18	12.60	-12.4	21.1	51.6	-30.6	3.03	2.21	0.82	27.3	18.9	8.41	48.5	51.9	-3.43
11	0.32	8.66	-8.34	14.1	35.5	-21.3	2.12	1.52	0.60	19.3	13.0	6.30	41.7	35.7	6.02
AVERAGE	13.4	3.44	9.98	6.87	14.1	-7.23	1.10	0.60	0.50	10.5	5.16	5.37	70.1	14.2	55.9

	<i>R</i>	<i>L (1.20E-03)</i>	<i>E</i>	<i>R</i>	<i>L (4.91E-03)</i>	<i>E</i>	<i>R</i>	<i>L (2.10E-04)</i>	<i>E</i>	<i>R</i>	<i>L (1.80E-03)</i>	<i>E</i>	<i>R</i>	<i>L (4.93E-03)</i>	<i>E</i>
12	66.1	3.90	62.3	7.30	16.0	-8.65	1.15	0.68	0.461	6.50	5.84	0.65	49.2	16.0	33.2
13	2.98	1.21	1.76	3.15	4.96	-1.81	0.18	0.21	-0.03	10.5	1.82	8.65	90.1	4.99	85.1
14	17.6	3.32	14.3	7.57	13.6	-6.04	2.03	0.58	1.44	9.69	4.98	4.71	74.6	13.7	60.9
15	17.7	0.87	16.9	1.73	3.54	-1.81	0.16	0.15	0.01	2.99	1.30	1.69	42.3	3.56	38.7
16	0.00	0.77	-0.77	1.58	3.15	-1.57	0.56	0.13	0.43	1.80	1.15	0.645	46.7	3.16	43.5
17	0.00	0.67	-0.67	1.55	2.74	-1.19	0.00	0.12	-0.12	1.88	1.01	0.878	61.7	2.76	59.0
18	0.10	0.40	-0.30	2.03	1.64	0.39	0.14	0.07	0.07	0.91	0.60	0.31	64.9	1.65	63.3
19	0.00	1.22	-1.22	3.90	5.00	-1.10	0.57	0.21	0.35	2.17	1.83	0.34	45.9	5.03	40.9
20	0.98	0.50	0.48	2.80	2.05	0.748	0.00	0.09	-0.09	1.22	0.75	0.47	80.6	2.06	78.6
21	0.00	6.66	-6.66	11.6	27.3	-15.70	1.58	1.17	0.41	14.7	9.99	4.68	67.3	27.4	39.9
22	0.00	2.24	-2.24	3.98	9.15	-5.17	0.89	0.39	0.50	5.30	3.35	1.95	41.8	9.20	32.6
AVERAGE	9.60	1.98	7.62	4.29	8.10	-3.81	0.66	0.35	0.31	5.24	2.97	2.27	60.5	8.14	52.3

CUMULATIVE	11.5	2.71	8.80	5.58	11.1	-5.52	0.88	0.48	0.40	7.89	4.06	3.82	65.3	11.2	54.1
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Table S2 (next three pages): Data for the trace element composition of plankton from the **2014** cruise with **average leached Qatari dust** used for the lithogenic correction. The upper segment, results for bulk plankton collected with a 50 μm net tow, is separated from the lower segment showing data for the larger plankton collected with a 200 μm net tow. The ‘CUMULATIVE’ row is an average of both of these measurements. The distance column gives the shortest distance from land to each sampling location (in kilometers). The letters (R), (L), and (E) represent the values for raw data, the lithogenic correction (in this case with **average leached Qatari dust**), and the excess concentrations, respectively. All are measured in parts per million (ppm), or $\mu\text{g/g}$. Aluminum only has a raw data column because all of the aluminum in each sample was assumed to be of lithogenic origin, meaning that the lithogenic correction would be zero. The number in scientific notation in parenthesis adjacent to the (L) column is a numerical representation of the [Me]/Al ratio found in Qatari dust (Yigiterhan et al, in preparation) used to determine the lithogenic correction. Certain elements have excess values which are negative, indicating that there was an overcorrection for the lithogenic portion of the sample.

				R	R	L (1.63E-04)	E	R	L (1.09E-02)	E	R	L (5.48E-06)	E
Sample	Location	Distance (km)	Measurement	Al	As	As	As	Ba	Ba	Ba	Cd	Cd	Cd
23	Dukhan	8.77	Bulk (50 µm)	4,190	8.72	0.68	8.04	22.9	45.4	-22.6	0.84	0.02	0.81
24	Dukhan	8.77	Bulk (50 µm)	4,070	8.07	0.66	7.41	21.0	44.2	-23.2	0.76	0.02	0.74
25	Dukhan	6.78	Bulk (50 µm)	3,950	9.72	0.64	9.07	22.1	42.9	-20.8	0.79	0.02	0.77
26	Dukhan	6.78	Bulk (50 µm)	4,110	9.51	0.67	8.84	21.2	44.7	-23.5	0.80	0.02	0.77
27	Dukhan	1.31	Bulk (50 µm)	8,480	14.9	1.38	13.5	43.5	92.1	-48.6	0.19	0.05	0.14
28	Dukhan	1.31	Bulk (50 µm)	8,330	14.0	1.36	12.7	40.9	90.4	-49.5	0.19	0.05	0.15
29	Doha	6.54	Bulk (50 µm)	4,400	3.87	0.72	3.15	28.6	47.8	-19.2	0.26	0.02	0.24
30	Doha	2.20	Bulk (50 µm)	3,380	2.04	0.55	1.49	13.0	36.7	-23.7	0.08	0.02	0.06
31	Doha	2.20	Bulk (50 µm)	3,150	1.97	0.51	1.46	12.1	34.2	-22.1	0.09	0.02	0.07
32	Doha	0.06	Bulk (50 µm)	14,400	4.43	2.34	2.09	65.6	156	-90.4	0.12	0.08	0.04
33	Doha	0.06	Bulk (50 µm)	14,600	4.66	2.38	2.28	73.4	159	-85.3	0.09	0.08	0.01
AVERAGE				6,640	7.44	1.08	6.36	33.1	72.1	-39.0	0.38	0.04	0.35

				Al	As	As	As	Ba	Ba	Ba	Cd	Cd	Cd
34	Dukhan	8.77	Zooplankton (200 µm)	2,050	7.04	0.33	6.70	14.1	22.3	-8.16	0.77	0.01	0.75
35	Dukhan	6.78	Zooplankton (200 µm)	4,450	5.83	0.72	5.10	78.4	48.3	30.1	0.29	0.02	0.27
36	Dukhan	1.31	Zooplankton (200 µm)	4,190	5.17	0.68	4.49	33.9	45.5	-11.6	0.12	0.02	0.10
37	Doha	6.54	Zooplankton (200 µm)	3,730	4.10	0.61	3.49	22.0	40.5	-18.5	0.62	0.02	0.60
38	Doha	2.20	Zooplankton (200 µm)	7,630	2.45	1.24	1.20	40.9	82.9	-42.0	0.37	0.04	0.32
39	Doha	0.06	Zooplankton (200 µm)	5,750	5.10	0.94	4.17	24.6	62.4	-37.9	0.31	0.03	0.28
40	Doha	0.06	Zooplankton (200 µm)	5,260	4.62	0.86	3.76	25.1	57.1	-32.1	0.34	0.03	0.31
AVERAGE				4,720	4.90	0.769	4.13	34.1	51.3	-17.1	0.40	0.03	0.38

CUMULATIVE				5,900	6.46	0.960	5.50	33.5	64.0	-30.5	0.39	0.03	0.36
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	R	L (2.30E-04)	E	R	L (3.42E-03)	E	R	L (1.12E-03)	E	R	L (6.06E-01)	E	R	L (6.74E-03)	E
Sample	Co	Co	Co	Cr	Cr	Cr	Cu	Cu	Cu	Fe	Fe	Fe	Mn	Mn	Mn
23	1.84	0.96	0.88	9.86	14.3	-4.45	28.4	4.71	23.6	2,520	2,540	-12.4	45.7	28.2	17.4
24	1.70	0.94	0.77	10.3	13.9	-3.64	43.6	4.58	39.1	2,190	2,460	-271	42.5	27.5	15.1
25	1.69	0.91	0.78	8.76	13.5	-4.76	65.3	4.45	60.9	2,300	2,390	-90	43.6	26.7	16.9
26	1.67	0.95	0.72	8.92	14.1	-5.14	65.1	4.63	60.5	2,110	2,490	-378	42.6	27.8	14.9
27	2.68	1.95	0.73	17.1	29.0	-11.9	17.2	9.54	7.70	4,430	5,140	-701	70.9	57.2	13.7
28	2.56	1.92	0.64	16.3	28.5	-12.1	26.1	9.36	16.7	4,080	5,040	-962	66.0	56.2	9.83
29	1.78	1.01	0.77	15.0	15.0	-0.08	311	4.95	306	2,600	2,660	-62	40.1	29.7	10.4
30	1.44	0.78	0.66	9.43	11.5	-2.12	26.1	3.80	22.3	1810	2,050	-240	24.3	22.8	1.50
31	1.38	0.73	0.66	8.31	10.8	-2.47	63.5	3.55	60.0	1,700	1,910	-211	22.5	21.3	1.24
32	3.74	3.31	0.43	42.9	49.1	-6.24	37.8	16.2	21.6	7,020	8,700	-1,680	147	96.9	50.5
33	3.97	3.37	0.61	45.1	49.9	-4.83	34.0	16.4	17.6	7,390	8,850	-1,460	153	98.6	54.5
AVERAGE	2.22	1.53	0.69	17.4	22.7	-5.25	65.3	7.47	57.8	3,470	4,020	-552	63.5	44.8	18.7

	Co	Co	Co	Cr	Cr	Cr	Cu	Cu	Cu	Fe	Fe	Fe	Mn	Mn	Mn
34	2.45	0.47	1.98	-27.2	7.02	-34.2	31.9	2.31	29.6	1,760	1,240	513	45.8	13.9	32.0
35	1.75	1.02	0.72	17.5	15.2	2.28	6.87	5.00	1.87	3,280	2,690	582	83.4	30.0	53.4
36	2.15	0.97	1.19	12.6	14.3	-1.74	125	4.71	120	3,300	2,540	762	70.3	28.3	42.0
37	1.79	0.86	0.93	12.7	12.7	-0.01	368	4.19	363	2,870	2,260	617	45.6	25.1	20.4
38	4.25	1.76	2.49	44.4	26.1	18.3	28	8.58	19.4	5,930	4,620	1,310	184	51.5	133
39	4.50	1.32	3.18	25.1	19.7	5.48	26.8	6.47	20.4	3,540	3,480	54.3	494	38.8	455
40	4.18	1.21	2.97	22.2	18.0	4.22	32.2	5.91	26.3	3,330	3,190	145	471	35.5	435
AVERAGE	3.01	1.09	1.92	15.3	16.1	-0.82	88.3	5.31	83.0	3,430	2,860	569	199	31.9	167

CUMULATIVE	2.53	1.36	1.17	16.6	20.1	-3.53	74.3	6.63	67.6	3,450	3,570	-116	116	39.8	76.5
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	R	L (1.20E-03)	E	R	L (4.91E-03)	E	R	L (2.10E-04)	E	R	L (1.80E-03)	E	R	L (4.93E-03)	E
Sample	Mo	Mo	Mo	Ni	Ni	Ni	Pb	Pb	Pb	V	V	V	Zn	Zn	Zn
23	0.27	5.02	-4.75	10.2	20.5	-10.4	1.55	0.88	0.67	17.8	7.52	10.3	111	20.7	90.4
24	0.29	4.88	-4.59	9.27	20.0	-10.7	1.05	0.86	0.19	16.1	7.31	8.83	120	20.1	100
25	0.07	4.74	-4.67	9.27	19.4	-10.1	1.21	0.83	0.38	16.8	7.10	9.66	78.3	19.5	58.8
26	0.22	4.93	-4.71	9.14	20.2	-11.0	5.53	0.87	4.67	16.6	7.39	9.25	75.3	20.3	55.0
27	-0.06	10.2	-10.2	16.1	41.6	-25.5	2.90	1.78	1.12	21.8	15.2	6.61	30.1	41.8	-11.7
28	0.10	9.98	-9.88	14.9	40.9	-26.0	2.55	1.75	0.80	20.5	15.0	5.49	30.8	41.1	-10.3
29	0.48	5.27	-4.79	9.67	21.6	-11.9	108	0.93	107.00	11.1	7.91	3.22	147	21.7	125
30	-0.11	4.05	-4.16	6.46	16.6	-10.1	1.55	0.71	0.84	8.58	6.07	2.51	36.2	16.7	19.5
31	-0.28	3.78	-4.06	6.53	15.5	-8.95	2.95	0.66	2.28	8.05	5.67	2.38	54.2	15.6	38.6
32	0.41	17.2	-16.8	18.9	70.5	-51.6	7.10	3.02	4.08	47.1	25.8	21.3	66.1	70.9	-4.75
33	0.40	17.5	-17.1	20.7	71.7	-51.0	5.28	3.07	2.21	49.7	26.3	23.4	68.4	72.1	-3.65
AVERAGE	0.16	7.96	-7.80	11.9	32.6	-20.7	12.7	1.40	11.30	21.3	11.9	9.36	74.4	32.8	41.6

	Mo	Mo	Mo	Ni	Ni	Ni	Pb	Pb	Pb	V	V	V	Zn	Zn	Zn
34	-1.67	2.46	-4.13	20.9	10.1	10.8	1.07	0.432	0.554	16.8	3.69	13.1	60.4	10.1	50.3
35	-1.78	5.33	-7.11	16.9	21.8	-4.87	-0.72	0.94	-1.82	49.9	7.99	41.9	35.0	21.9	13.0
36	-1.33	5.02	-6.35	14.1	20.6	-6.42	26.7	0.88	25.7	14.9	7.53	7.40	140	20.7	119
37	-0.11	9.15	-9.26	24.3	37.5	-13.2	129	1.61	127	32.9	13.7	19.1	134	37.7	96.7
38	-0.795	4.47	-5.26	17.2	18.3	-1.11	1,770	0.78	1,770	13.5	6.70	6.80	472	18.4	454
39	0.694	6.89	-6.20	15.5	28.2	-12.7	295	1.21	293	26.6	10.3	16.2	365	28.4	337
40	0.453	6.31	-5.85	14.2	25.8	-11.6	11.0	1.11	9.69	25.5	9.45	16.0	394	26.0	368
AVERAGE	-0.649	5.66	-6.31	17.6	23.2	-5.59	318	0.99	317	25.7	8.49	17.2	229	23.3	205

CUMULATIVE	-0.153	7.07	-7.22	14.1	28.9	-14.8	132	1.24	130	23.0	10.6	12.4	134	29.1	105
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