



Corrigendum to **“Cosmogenic nuclide and solute flux data from central Cuban rivers emphasize the importance of both physical and chemical mass loss from tropical landscapes” published in *Geochronology*, 4, 435–453, 2022**

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These errors occurred during analysis before submission. Originally reported rock dissolution rates were not calculated according to the schematic laid out in the paper. While some numbers changed, the fundamental results of the paper do not change and the statistics for the paper are not appreciably different following this correction. In the original paper, evaporite dissolution rates used total magnesium instead of the calcium in the same amount as required to balance the SO₄. Magnesium, calcium, and sodium values were counted in evaporite dissolution and then again when calculating silicate weathering rather than counting only remaining amounts of these elements in silicate weathering. Silicate weathering did not partition magnesium and calcium as described in Erlanger et al. (2021) but instead included the total measured amount of those elements. In addition, only sodium was included as a cation rather than all cations that would arise from chemical weathering. In the corrected version, all these

items were corrected, and the sum of all these changes did not change calculated rates significantly.

The following changes are a result of the corrections to calculations reported in the text:

- First paragraph of the abstract: the sentence starting “Dissolved loads” should have (9–178 Mg km⁻² yr⁻¹; mean 90, median 92) instead of (10–176 Mg km⁻² yr⁻¹; mean 92, median 97).
- Third paragraph of the results: the sentence should read: “Rock dissolutions rates (Fig. 3) range from 9–178 Mg km⁻² yr⁻¹ (mean 90 ± 29, median 92) ...”. The next sentence should replace “2.05” for the median amount that dissolution rates are higher (instead of 2.15). Towards the end of the paragraph, the correlation between silicate dissolution rates and ¹⁰Be-determined

rates of erosion is $r^2 = 0.10$, $p = 0.14$ (instead of $r^2 = 0.18$, $p < 0.05$).

- Second to last paragraph of results: in the second to last sentence, for these basins dissolution rates are 1.6 to 29 times higher (instead of 1.7 to 29).
- First paragraph of Sect. 6.1: at the end of the paragraph, it should read 2.05 times higher instead of 2.15 times higher.
- Second to last paragraph of Sect. 6.1: it should be $< 38 \text{ Mg km}^{-2} \text{ yr}^{-1}$ (instead of 25) for silicate dissolution rates and < 25 instead of 35 for evaporite when excluding basins dominated by sedimentary rocks.
- Third paragraph of Sect. 6.3: median of 2.6 instead of 2.7. When excluding the evaporite basins, factor of 2.5 (median 2.4) instead of 2.6 and 2.5, respectively.
- Fourth paragraph of Sect. 6.3: correlations towards end of paragraph need to be corrected to report the sum of dissolution and be-10-derived erosion increase with slope ($r^2 = 0.20$, $p = 0.03$) and elevation ($r^2 = 0.18$, $p = 0.05$); previously we reported $r^2 = 0.19$, $p = 0.04$ and $r^2 = 0.17$, $p = 0.05$, respectively.
- Figures and Tables that are changed by these calculation corrections are below.
- The supplement file has been updated to include a new Supplement Fig. S1 and Table S13.

References

Erlanger, E., Rugenstein, J., Bufe, A., Picotti, V., and Willett, S.: Controls on Physical and Chemical Denudation in a Mixed Carbonate-Siliciclastic Orogen, *J. Geophys. Res.-Earth*, 126, e2021JF006064, <https://doi.org/10.1029/2021JF006064>, 2021.

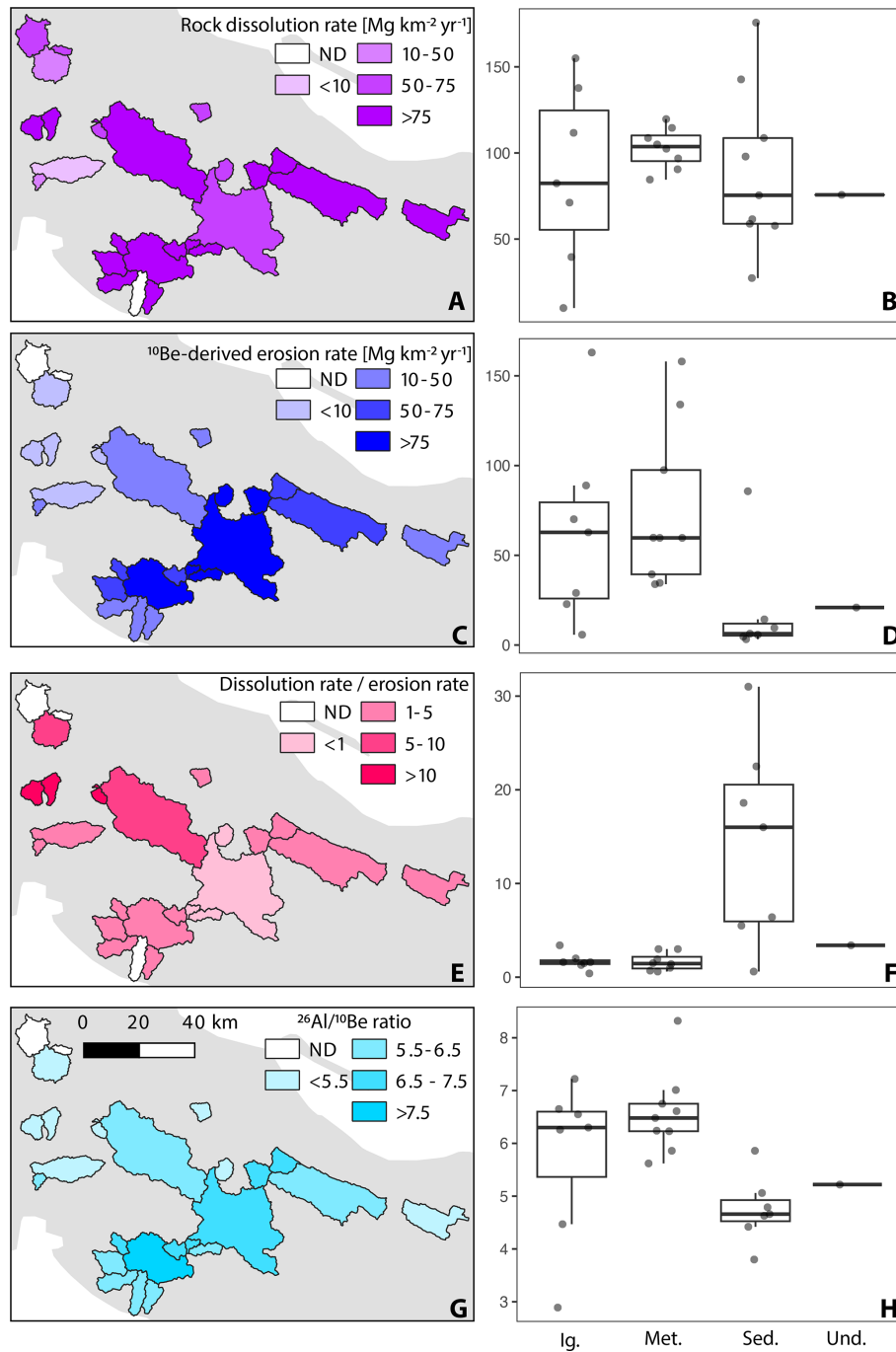


Figure 3. Maps showing rates of landscape change and isotopic data for each study watershed. (a, b) Rock dissolution rates. (c, d) ¹⁰Be-derived erosion rates. In both maps, darker colors in the basins indicate faster rates of landscape change. (e, f) Ratio between rock dissolution rates and ¹⁰Be-derived erosion rates; darker colors indicate larger ratios. (g, h) ²⁶Al / ¹⁰Be ratio. Darker colors are higher ratios. Box plots show the maximum and minimum values in the lines extending from the box; the upper side of the box represents the upper quartile, the line inside the box represents the median value, and the bottom of the box represents the lower quartile. Y-axis units are the same as shown in the corresponding map legend.

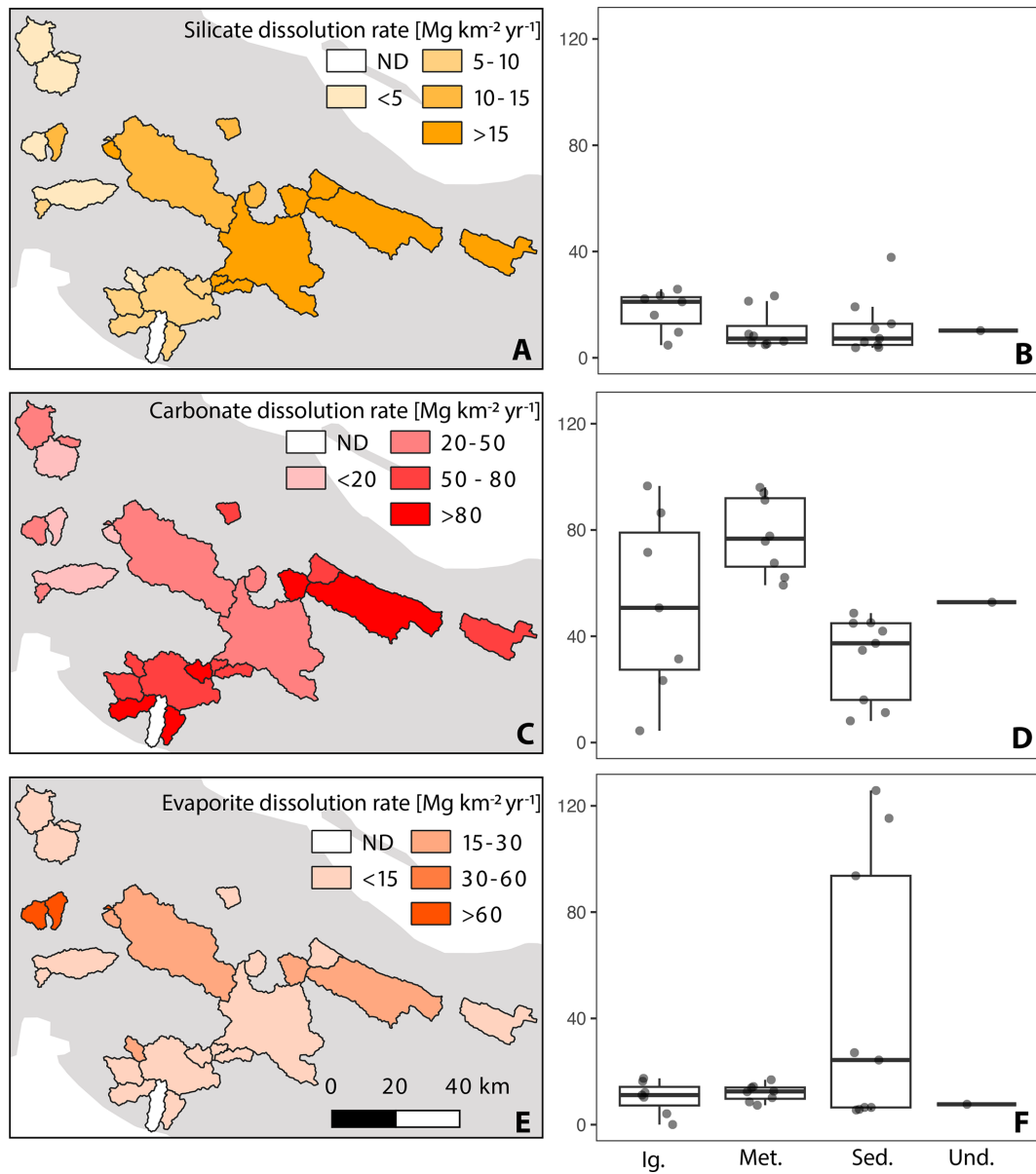


Figure 4. Dissolution rates partitioned by lithology. (a, b) Silicate. (c, d) Carbonate. (e, f) Evaporite. Darker colors represent higher rates. Box plots show the maximum and minimum values in the lines extending from the box; the upper side of the box represents the upper quartile, the line inside the box represents the median value, and the bottom of the box represents the lower quartile.

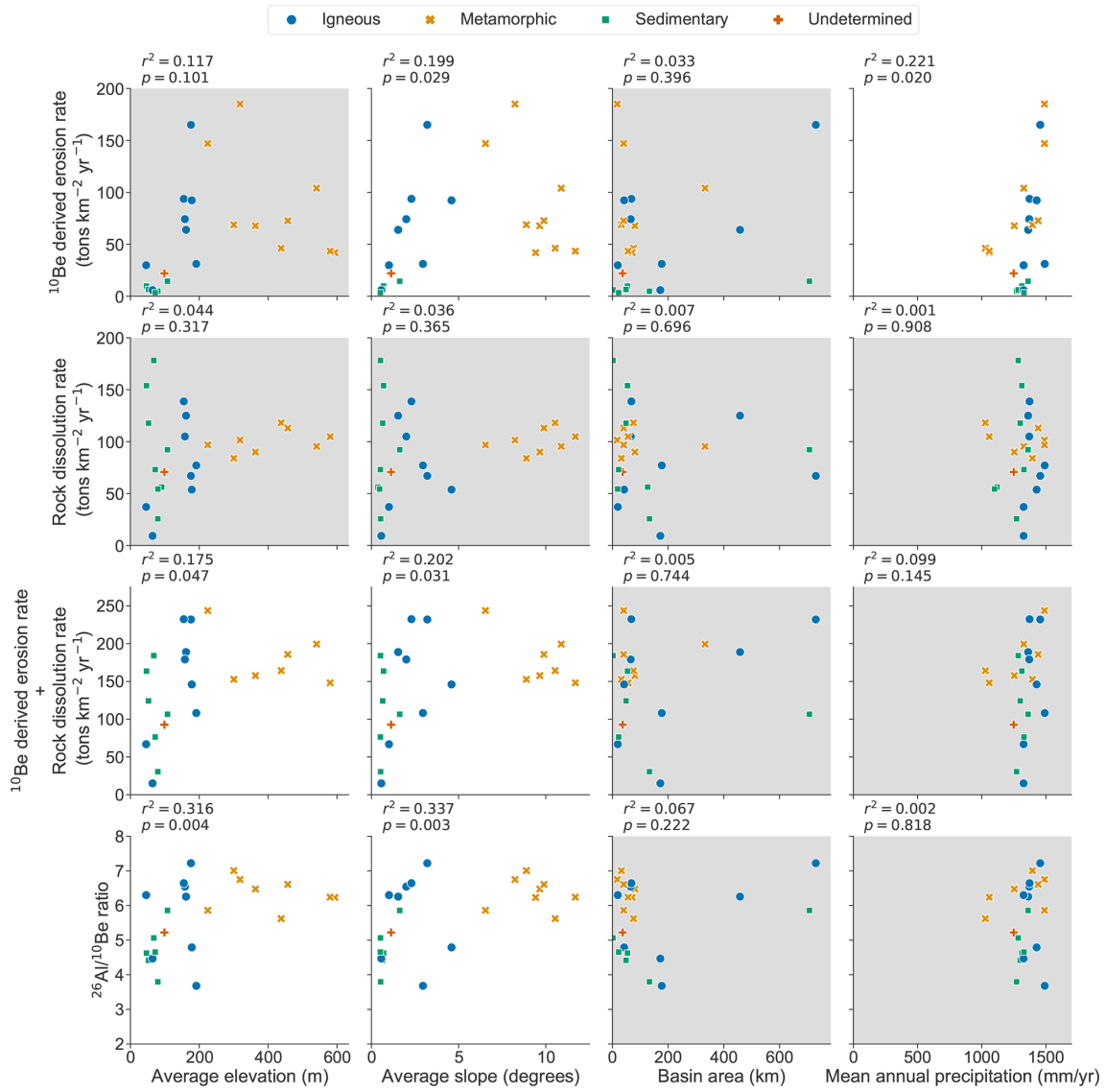


Figure 6. Relationship of measured ^{10}Be -derived erosion rates, chemical denudation rates, and the sum of chemical denudation rates and ^{10}Be -derived erosion rates to basin characteristics. Differently shaped and colored points represent the dominant underlying rock type in that basin. Plots with $p > 0.05$ are shown with a gray background. Small numbers in the upper right are R^2 values; * indicates $p \leq 0.05$, $p < 0.01$.

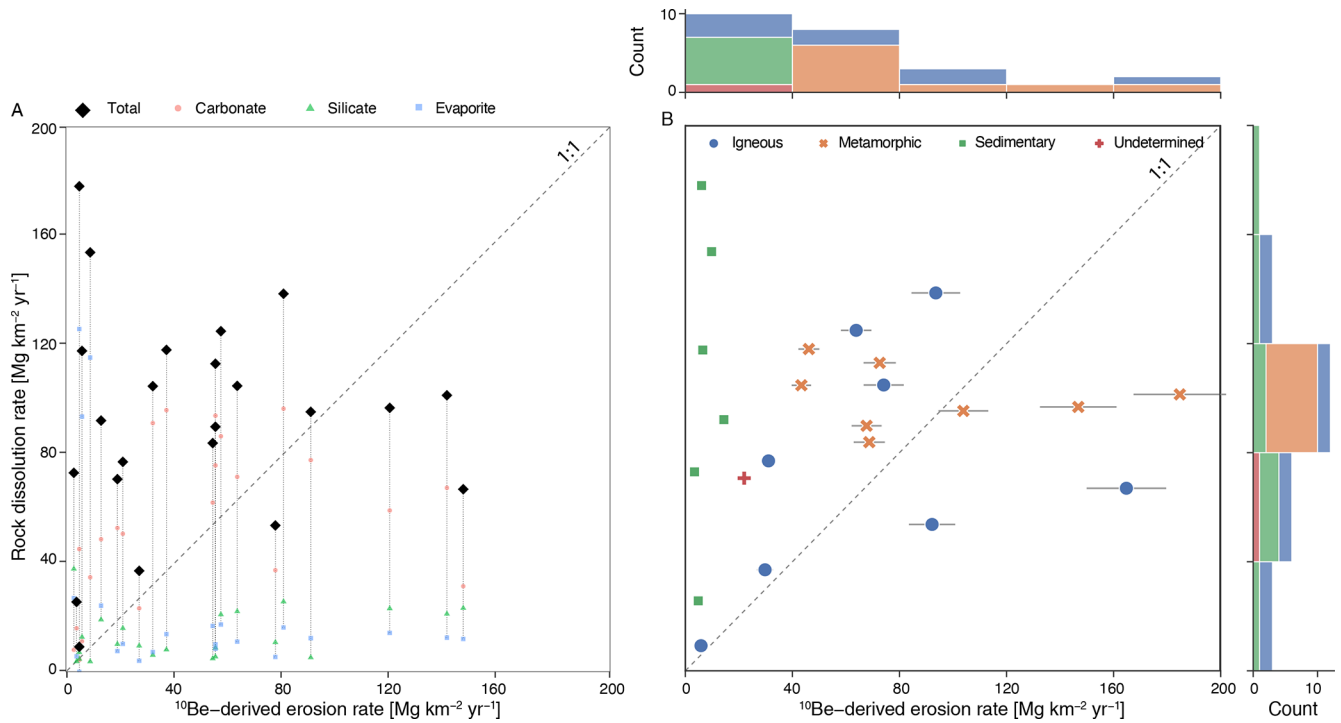


Figure 7. Scatterplot of rock dissolution rates vs. ¹⁰Be-derived erosion rates. **(a)** Data shown for calculations of carbonate, silicate, and evaporite dissolution rates. **(b)** Data shown for dominant lithologies underlying each sampled basin. Horizontal lines extending from the points demonstrate the uncertainty associated with the calculation of ¹⁰Be-derived erosion rates. Histograms on axes show the distribution of data. The dashed line is 1 : 1.

Table 1. Summary of Central Cuban Drainage Basin Data.

Sample	Lithology	Latitude (°N)	Longitude (°W)	Slope (°)	Area (km ²)	MAP (mm yr ⁻¹)	10Be Erosion rate (Mg km ⁻² yr ⁻¹)	±	26Al Erosion rate (Mg km ⁻² yr ⁻¹)	±	²⁶ Al/ ¹⁰ Be	±	Total Disol (Mg km ⁻² yr ⁻¹)	diss/ ¹⁰ Be erosion	max rate (¹⁰ Be + diss)
CU-014	Igneous	22.0662	-79.7962	3.2	730	1456	163.0	14.6	161.0	21.2	7.15	0.64	67.0	0.41	230.0
CU-015	Igneous	22.1485	-79.4231	1.5	458	1362	64.5	5.7	71.4	8.3	6.32	0.38	125.0	1.94	189.5
CU-016	Igneous	22.2090	-79.0172	3.0	177	1491	31.2	2.7	61.6	7.1	3.69	0.19	77.1	2.47	108.3
CU-101	Metamorphic	22.0526	-80.2922	9.7	81	1254	67.7	5.6	73.0	8.2	6.46	0.27	89.9	1.33	157.6
CU-102	Sedimentary	22.3011	-80.5004	1.0	19	1327	30.3	3.0	32.2	5.3	6.41	0.84	37.1	1.22	67.4
CU-104	Sedimentary	22.7587	-80.3621	0.4	127	1120	ND	ND	ND	ND	ND	ND	56.2	ND	ND
CU-106	Igneous	22.7068	-80.3667	0.5	133	1272	4.8	0.5	9.0	1.2	3.80	0.15	25.7	5.31	30.5
CU-107	Undetermined	22.5354	-79.8796	1.1	37	1250	22.3	2.1	29.2	4.6	5.30	0.60	70.7	3.17	93.0
CU-108	Igneous	22.3924	-79.6691	2.0	66	1370	76.5	7.7	79.0	18.5	6.74	1.44	104.9	1.37	181.4
CU-109	Igneous	22.3570	-79.7612	2.3	68	1373	96.1	9.3	98.5	12.9	6.81	0.64	138.7	1.44	234.8
CU-110	Metamorphic	21.9187	-80.2659	10.5	76	1029	46.6	4.0	57.5	6.5	5.66	0.26	118.1	2.53	164.7
CU-111	Metamorphic	22.0895	-79.9169	8.2	17	1489	189.0	17.7	193.0	23.4	6.91	0.54	101.5	0.54	290.5
CU-112	Metamorphic	21.8326	-80.1503	9.4	71	1059	42.0	3.7	46.4	5.3	6.26	0.31	ND	ND	ND
CU-113	Metamorphic	21.8376	-80.1045	11.7	56	1059	43.3	3.6	48.3	5.4	6.23	0.24	104.8	2.42	148.1
CU-114	Metamorphic	22.1056	-80.2253	8.9	32	1395	68.3	5.8	67.9	7.9	6.99	0.38	83.9	1.23	152.2
CU-115	Metamorphic	22.1106	-80.1291	10.9	333	1328	106.0	9.4	86.5	9.9	8.42	0.50	95.4	0.90	201.4
CU-116	Metamorphic	22.0277	-79.9889	9.9	40	1440	72.4	6.0	76.6	9.2	6.59	0.39	113.1	1.56	185.5
CU-117	Metamorphic	22.0494	-79.8431	6.5	40	1489	145.0	14.1	178.0	24.8	5.80	0.62	96.9	0.67	241.9
CU-118	Igneous	22.3751	-79.8175	4.6	42	1428	94.3	8.8	139.0	28.9	4.89	0.90	53.7	0.57	148.0
CU-119	Sedimentary	22.5668	-80.2220	1.6	707	1361	14.5	1.2	16.6	2.0	5.87	0.27	92.2	6.36	106.7
CU-120	Sedimentary	22.4431	-80.4809	0.7	54	1313	9.8	0.9	14.7	1.8	4.63	0.18	153.9	15.72	163.7
CU-121	Sedimentary	22.4442	-80.4448	0.6	49	1300	6.5	0.6	10.1	1.3	4.42	0.15	117.8	18.09	124.3
CU-122	Sedimentary	22.5047	-80.2907	0.5	2	1285	6.0	4.9	7.9	1.0	5.06	3.58	178.1	29.49	184.2
CU-124	Sedimentary	22.7587	-80.3621	0.5	19	1100	ND	ND	ND	ND	ND	ND	54.4	ND	ND
CU-131	Igneous	22.3547	-80.5088	0.6	172	1326	5.9	0.5	9.0	1.2	4.48	0.19	9.2	1.58	15.1
CU-132	Sedimentary	22.4918	-80.2963	0.5	23	1329	3.4	3.0	4.8	0.7	4.65	3.29	73.0	21.42	76.5

ND = no data.

