

Table S1. Hydrochemistry and stable isotope compositions of all water samples in the study area.

No.	Location	Water type	pH	Cond. (mS)	Depth (m)	Chemical type	TD S (g/L)	Ag (mg/L)	Al (mg/L)	As (mg/L)	B (mg/L)	Ba (mg/L)	Be (mg/L)	Bi (mg/L)	Ca (mg/L)	Cd (mg/L)	Co (mg/L)	Cr (mg/L)	Cu (mg/L)	Fe (mg/L)	K (mg/L)	Li (mg/L)	Mg (mg/L)	Mn (mg/L)	Mo (mg/L)	Na (mg/L)	Ni (mg/L)	P (mg/L)	Pb (mg/L)	Se (mg/L)	Si (mg/L)	Sn (mg/L)	Sr (mg/L)	Ti (mg/L)	V (mg/L)	Zn (mg/L)	F (mg/L)	Cl (mg/L)	NO ² (mg/L)	Br (mg/L)	NO ³ (mg/L)	SO ₄ (mg/L)	CO ₃ (mg/L)	HC O ₃ (mg/L)	Ion bal. error (%)	δD _{VSMOW} (‰)	δ ¹⁸ O _{VSMOW} (‰)	δ ³⁷ Cl (‰)
B1	119°39' 43.4357" 37°03'29.7521" 119°40' 55.4499"	Brine	6.84	74.00	28	Na-Mg-Cl	142.88	0.00	0.00	3.27	5.09	0.00	0.00	0.00	2334.72	0.08	0.30	0.00	0.15	0.26	1773.84	0.23	8107.68	1.14	0.00	4253.34	0.00	0.00	0.61	3.27	12.40	0.00	14.06	0.00	8.66	1.52	13.67	482.00	0.00	195.90	236.40	1179.00	0.00	1075.02	5.97	33.90	-3.30	0.34
B2	119°46' 35.7693" 37°06'00.5006" 119°46' 35.7693"	Brine	6.84	85.70	30	Na-Cl	123.78	0.00	0.00	0.27	6.69	0.00	0.00	0.00	1495.68	0.08	0.30	0.00	0.08	0.23	1255.52	0.30	5543.44	4.71	0.00	3933.00	0.00	0.00	0.23	0.84	8.27	0.00	14.59	0.00	8.82	0.68	12.46	6526.00	0.00	60.00	92.20	1016.00	0.00	578.29	4.90	32.60	-3.30	1.08
B3	119°50' 19.2478" 37°09'09.2279" 119°51' 22.6699"	Brine	7.77	39.10	30	Na-Cl	117.79	0.00	0.00	2.43	4.28	0.05	0.00	0.00	1425.60	0.00	0.14	0.00	0.14	0.63	1412.10	0.14	3726.00	0.45	0.00	3477.60	0.00	0.00	0.18	0.00	11.88	0.00	8.78	0.00	2.75	0.63	4.80	6605.00	24.00	223.50	150.95	550.00	0.00	461.52	3.64	31.10	-2.60	0.50
B4	119°50' 19.2478" 37°13'18.0137" 119°50' 19.2478"	Brine	7.12	35.20	20	Na-Cl	110.21	0.00	0.00	5.17	3.04	0.00	0.00	0.00	907.14	0.08	0.15	0.00	0.08	0.00	1529.73	0.23	3927.68	11.10	0.23	3228.70	0.00	0.61	0.53	0.00	10.34	0.00	8.28	0.00	2.51	0.68	4.00	6108.67	0.00	211.37	215.90	9576.67	0.00	453.73	3.23	35.60	-3.60	0.04
B5	119°55' 22.3167" 37°22'04.5985" 119°55' 22.3167"	Brine	8.24	38.40	70	Na-Cl	106.60	0.00	0.00	1.90	4.71	0.00	0.00	0.00	697.98	0.08	0.23	0.00	0.15	0.08	1829.47	0.38	3565.92	0.00	0.15	3147.31	0.00	0.00	0.53	2.74	9.30	0.00	8.06	0.00	2.43	0.30	11.00	5933.00	0.00	215.90	115.26	8896.67	0.00	466.34	3.44	33.10	-3.30	0.13
SE A1	120°04' 46.5707" 37°22'59.5169"	Seawater	8.44	36.80		Na-Cl	35.31	0.00	0.46	1.84	3.21	0.10	0.00	0.00	424.32	0.00	0.10	0.00	0.15	7.14	446.76	0.26	1009.80	0.56	0.10	9639.00	0.05	0.00	0.10	0.00	5.97	0.00	7.50	0.20	2.40	0.51	7.50	2045.00	0.00	74.07	157.00	63000.14	5192.76	9.11	10.90	-1.10	0.11	
SE A2	120°04' 46.5707" 37°22'59.5169"	Seawater	8.93	22.20		Na-Cl	30.53	0.00	0.00	4.65	3.75	2.25	0.00	0.00	445.50	0.45	0.45	0.00	0.75	0.45	468.00	1.05	1053.00	1.20	0.00	8550.00	0.30	0.00	0.00	0.00	2.85	0.00	10.35	0.15	2.85	3.30	16.00	1717.43	0.00	62.04	154.32	500.36	4181.64	4.62	-9.20	-0.80	0.22	

[illegible]