Table S1- Representative physical and chemical data of groundwater samples from Santiago Island [39] collected in two field work campaigns in 2003. The aquifer units stands for BUf – Base Unit formation; MUF – Middle Unit Formation and RUf – Recent Unit formation. Sp stands for spring and B for borehole. The chemical parameters are in mg/L; **b.d.** stands for below the detection limits. EC stands for electrical conductivity and $\sum_{cat}$ stands for cations sum and $\sum_{ani}$.stands for anions sum. The charge balance (Error in %) was estimated using Appleo & Postma equation [56].

Ref	Aquifer Unit	Type	pH	EC (µS/cm)	Na^+ (mg/L)	K^+ (mg/L)	Ca^{2+} (mg/L)	Mg^{2+} (mg/L)	Cl^- (mg/L)	SO_4^{2-} (mg/L)	HCO_3^- (mg/L)	F^- (mg/L)	NO_3^- (mg/L)	SiO_2 (mg/L)	$\sum_{cat}$ (meq/L)	$\sum$ani (meq/L)	Error (%)
49-18	BUf	Sp	6.80	2750	477.0	26.8	41.6	75.8	638.1	100.2	278.3	0.52	5.4	25.25	29.74	24.74	9.19
49-18	MUf	Sp	6.60	2120	393.8	51.7	59.2	58.3	524.7	91.1	327.1		16.1	24.35	26.20	22.30	8.05
SST-10	MUf	B	7.20	1362	146.0	30.8	56.0	53.5	241.1	36.4	244.1	b.d.	26.8	31.11	14.33	11.98	8.93
SST-10	MUf	B	6.90	3100	196.9	15.9	52.8	58.3	241.1	45.5	390.5		32.2	31.56	16.40	14.66	5.61
FT-29	MUf	B	7.75	920	136.3	20.8	30.4	27.2	191.4	18.2	187.9		10.7	33.81	10.22	9.03	6.19
FT-29	MUf	B	7.00	963	147.7	25.8	33.6	26.2	170.2	18.2	231.9	b.d.	16.1	36.07	10.92	9.23	8.37
SST-21	MUf	B	7.30	504	77.9	12.9	17.6	15.6	70.9	0.0	185.5	0.09	21.5	35.62	5.87	5.39	4.31
SST-21	MUf	B	6.80	515	98.4	30.8	19.2	17.5	56.7	9.1	266.0		16.1	34.26	7.47	6.41	7.64
49-16	MUf	Sp	6.98	2020	379.6	9.9	25.6	45.7	205.6	127.5	537.0	2.96	48.3	24.35	21.80	18.18	9.04
49-16	MUf	Sp	6.64	2020	443.0	24.9	30.4	43.7	326.1	145.7	546.7		5.4	27.95	25.01	21.27	8.09
FBE-150	MUf	B	7.60	478	58.4	30.8	16.0	10.7	49.6	9.1	187.9	b.d	21.5	22.54	5.01	5.01	-0.08
FBE-150	MUf	B	6.70	464	108.3	7.0	17.6	12.6	120.5	9.1	241.6		32.2	36.07	6.80	8.07	-8.48
FBE-131	MUf	B	6.33	396	68.1	10.9	17.6	13.6	42.5	36.4	163.5	0.07	10.7	32.46	5.24	4.81	4.24
FBE-131	MUf	B	6.73	400	78.8	8.9	19.2	13.6	49.6	9.1	278.3		10.7	33.81	5.73	6.32	-4.90
FBE-113	MUf	B	7.10	459	77.9	15.9	20.8	8.7	49.6	9.1	195.3	0.08	16.1	31.56	5.55	5.05	4.70
FBE-113	MUf	B	7.05	460	88.6	16.9	20.8	13.6	49.6	27.3	283.1		16.1	34.26	6.44	6.87	-3.19
FBE-161	MUf	B	7.50	617	97.3	21.8	20.8	15.6	78.0	0.0	183.1		42.9	43.28	7.11	5.89	9.38
FBE-161	MUf	B	7.57	632	128.0	16.9	22.4	14.6	70.9	9.1	278.3		64.4	39.67	8.32	7.79	3.28
FBE-117	MUf	B	7.20	448	68.1	9.9	17.6	12.6	63.8	13.7	100.1		59.0	54.10	5.14	4.67	4.70
FBE-117	MUf	B	7.62	438	68.9	11.9	20.8	13.6	56.7	9.1	173.3		42.9	40.58	5.46	5.32	1.29
51-123	MUf	Sp	7.60	506	97.3	7.9	32.0	24.3	49.6	63.7	227.0	b.d.	8.0	28.85	8.03	6.58	9.97
51-123	MUf	Sp	7.36	449	59.1	10.9	25.6	18.5	49.6	9.1	246.5		16.1	20.74	5.65	5.89	-2.10

FBE-188	MUf	B	7.00	627	68.1	7.9	43.2	29.2	70.9	18.2	227.0		26.8	29.76	7.72	6.53	8.36
FBE-188	MUf	B	6.75	629	68.9	25.8	41.6	28.2	78.0	9.1	270.9		32.2	28.85	8.05	7.35	4.59
51-201	MUf	Sp	7.20	527	77.9	8.9	27.2	23.3	56.7	9.1	219.7		21.5	36.07	6.89	5.73	9.17
51-201	MUf	Sp	7.30	532	78.8	9.9	12.8	24.3	56.7	18.2	253.8		26.8	30.66	6.32	6.57	-1.96
SP-12	RUf	B	6.78	2680	262.8	22.8	108.8	115.7	638.1	81.9	109.8		42.9	27.95	26.96	22.17	9.74
SP-12	RUf	B	6.75	2520	226.4	9.9	54.4	107.9	567.2	72.8	168.4		37.5	25.25	21.69	20.86	1.96
FBE-145	BUf	B	7.34	1380	243.4	46.6	22.4	30.1	226.9	72.8	305.1		5.4	35.17	15.37	13.00	8.38
FBE-145	BUf	B	7.24	1202	167.3	9.9	16.8	43.7	170.2	36.4	295.3		21.5	26.15	11.97	10.74	5.42
FT-40	MUf	B	7.20	1394	136.3	8.9	72.0	59.3	283.6	45.5	161.1	b.d.	37.5	38.32	14.63	12.18	9.12
FT-40	MUf	B	7.09	1400	147.7	10.9	44.8	61.2	262.3	27.3	217.2		21.5	27.95	13.98	11.87	8.17
FT-44	MUf	B	7.14	2060	292.0	16.9	75.2	66.1	510.5	72.8	163.5		24.1	31.56	22.32	18.97	8.13
FT-44	MUf	B	7.20	2030	285.5	24.9	52.8	70.0	482.1	36.4	192.8		18.8	32.01	21.44	17.80	9.28
54-6	MUf	Sp	7.20	949	87.6	16.9	51.2	38.9	99.3	54.6	268.5		21.5	33.36	10.00	8.68	7.04
54-6	MUf	Sp	6.90	1100	147.7	19.9	28.8	48.6	127.6	100.2	297.8		21.5	24.35	12.37	10.91	6.27
54-128	MUf	Sp	8.00	545	77.9	18.9	25.6	15.6	70.9	4.6	126.9	b.d.	96.5	40.58	6.43	5.73	5.73
54-128	MUf	Sp	7.50	520	88.6	21.9	22.4	17.5	63.8	18.2	209.9		53.6	27.05	6.97	6.48	3.63
FBE-74	BUf	B	6.90	1756	194.7	41.7	88.0	73.9	312.0	81.9	317.3		75.1	49.59	20.00	16.91	8.39
FBE-74	BUf	B	7.07	1780	206.7	37.8	9.6	104.0	177.3	9.1	644.4		16.1	29.76	19.00	16.01	8.54
FT-81	BUf	B	6.89	1282	155.7	11.9	78.4	46.7	226.9	91.1	288.0	b.d.	59.0	38.32	14.83	13.96	3.02
FT-81	BUf	B	7.11	1270	157.5	10.9	41.6	47.6	205.6	81.9	227.0		48.3	27.95	13.12	12.00	4.48
FT-78	MUf	B	6.95	2980	243.4	11.9	131.2	138.0	751.5	10.0	90.3	b.d.	53.6	38.32	28.79	23.72	9.65
FT-78	MUf	B	6.77	2900	255.9	15.9	155.2	130.2	744.5	45.5	163.5		37.5	28.85	30.00	25.20	8.69
PT-29	BUf	B	7.00	2110	438.0	9.9	8.0	43.7	127.6	227.6	661.5		21.5	45.09	23.30	19.52	8.81
PT-29	BUf	B	6.63	2010	118.1	14.9	48.0	52.5	262.3	91.1	341.7		2.7	35.62	12.23	14.93	-9.93
55-472	MUf	Sp	7.72	438	48.7	9.9	20.0	20.9	56.7	0.0	178.2	b.d.	18.8	34.72	5.09	4.82	2.70
55-472	MUf	Sp	6.60	460	68.9	8.9	24.0	22.4	42.5	9.1	268.5		18.8	26.60	6.26	6.09	1.38
55-555	MUf	Sp	8.00	433	37.0	10.9	19.2	20.4	70.9	18.2	175.7	b.d.	16.1	38.32	4.53	5.52	-9.86
55-555	MUf	Sp	6.64	440	98.4	10.9	22.4	19.4	49.6	9.1	263.6		16.1	22.54	7.28	6.17	8.25
FT-23	BUf	B	7.20	1041	165.5	17.9	40.0	31.1	106.4	63.7	312.4		53.6	35.62	12.21	10.31	8.43
FT-23	BUf	B	6.60	1100	78.8	11.9	28.8	49.6	113.4	54.6	231.9		26.8	23.44	9.25	8.57	3.82

FT-21	MUf	B	7.10	1351	243.4	24.8	6.4	53.5	85.1	81.9	566.3		0.0	36.07	15.94	13.39	8.70
FT-21	MUf	B	6.56	880	98.4	12.9	75.2	45.7	92.2	27.3	366.1		48.3	18.48	12.12	9.95	9.87
FT-63	MUf	B	7.05	1029	107.1	9.9	36.8	44.7	156.0	36.4	163.5	b.d.	53.6	38.77	10.43	8.70	9.04
FT-63	MUf	B	7.00	1150	118.1	10.9	44.8	50.5	156.0	54.6	217.2		48.3	32.46	11.81	9.87	8.95
FT-9	MUf	B	7.10	1020	97.3	7.9	35.2	39.9	141.8	36.4	156.2		59.0	33.81	9.47	8.26	6.81
FT-9	MUf	B	7.00	1260	98.4	9.9	51.2	50.5	141.8	45.5	217.2		53.6	30.66	11.25	9.37	9.12
FT-12	MUf	B	7.05	1311	107.1	8.9	35.2	60.3	226.9	27.3	175.7	b.d.	37.5	35.62	11.60	10.45	5.24
FT-12	MUf	B	7.10	1440	137.8	10.9	43.2	64.2	248.2	36.4	212.3		26.8	31.56	13.71	11.66	8.06
FT-59	MUf	B	7.00	913	77.9	9.9	72.0	45.7	113.4	27.3	314.9		37.5	37.87	10.99	9.53	7.12
FT-59	MUf	B	7.10	950	78.8	10.9	70.4	40.8	113.4	36.4	266.0		32.2	31.11	10.58	8.83	8.98
58-56	MUf	Sp	7.20	606	68.1	9.9	28.8	28.2	85.1	0.0	197.7		16.1	33.81	6.97	5.90	8.37
58-56	MUf	Sp	7.00	624	78.8	11.9	30.4	30.1	92.2	9.1	219.7		16.1	26.15	7.73	6.65	7.52
FT-202	MUf	B	7.20	384	58.4	11.9	17.6	15.6	49.6	4.6	148.9		16.1	37.87	5.00	4.19	8.81
FT-202	MUf	B	6.91	450	59.1	12.9	20.8	14.6	42.5	9.1	170.9		10.7	30.66	5.14	4.36	8.16
FBE-58	MUf	B	7.30	362	68.1	6.9	19.2	14.6	49.6	45.5	144.0		16.1	36.97	5.30	4.97	3.24
FBE-58	MUf	B	7.00	420	78.8	15.9	14.4	14.6	42.5	18.2	200.1		10.7	19.39	5.75	5.03	6.67
51-6/7/8	MUf	Sp	7.62	695	97.3	31.8	30.4	20.4	78.0	63.7	246.5	b.d.	42.9	40.13	8.24	8.26	-0.08
51-6/7/8	MUf	Sp	7.02	410	118.1	35.8	33.6	21.4	70.9	27.3	280.7		48.3	29.76	9.49	7.95	8.86
FBE-170	MUf	B	7.70	1343	175.2	39.7	38.4	53.5	148.9	109.3	346.6		16.1	29.76	14.95	12.41	9.29
FBE-170	MUf	B	6.99	1350	187.0	44.7	49.6	53.5	156.0	81.9	429.6		10.7	28.85	16.15	13.32	9.63
FBE-201	MUf	B	7.00	1929	262.8	36.7	8.0	108.9	170.2	100.2	705.4	b.d.	2.7	42.38	21.73	18.49	8.06
FBE-201	MUf	B	7.01	1540	177.2	44.7	80.0	66.1	248.2	100.2	344.2		37.5	39.67	18.28	15.32	8.81
58-53	MUf	Sp	7.10	417	68.1	9.9	22.4	14.6	56.7	18.2	144.0	0.08	18.8	33.81	5.53	4.64	8.74
58-53	MUf	Sp	7.01	420	59.1	11.9	19.2	18.5	56.7	27.3	183.1		16.1	28.85	5.35	5.43	-0.70
58-257	BUf	Sp	7.20	440	58.4	10.9	19.2	14.6	49.6	4.6	163.5		13.4	35.17	4.98	4.39	6.27
58-257	BUf	Sp	6.96	450	68.9	12.9	22.4	16.5	49.6	27.3	207.5		5.4	26.15	5.81	5.45	3.12
58-1	MUf	Sp	7.40	410	34.1	6.0	24.0	16.5	56.7	4.6	161.1	b.d.	16.1	32.46	4.19	4.59	-4.57
58-1	MUf	Sp	6.94	410	39.4	8.0	25.6	17.5	49.6	9.1	163.5		10.7	28.85	4.63	4.44	2.11
FT-353	MUf	B	7.40	761	87.6	26.8	17.6	27.2	78.0	4.6	236.8		18.8	28.85	7.61	6.48	8.08
FT-353	MUf	B	7.01	865	98.4	32.8	14.4	37.9	92.2	27.3	285.6		16.1	24.80	8.96	8.11	5.00

58-23	MUf	Sp	7.30	405	68.1	8.9	17.6	15.6	56.7	9.1	161.1		16.1	33.81	5.35	4.69	6.60
58-23	MUf	Sp	6.97	410	49.2	10.9	22.4	15.6	42.5	9.1	185.5		10.7	23.44	4.82	4.60	2.30
FBE-1	MUf	B	7.90	366	30.2	6.9	20.8	14.6	42.5	0.0	144.0	b.d.	16.1	30.66	3.73	3.82	-1.20
FBE-1	MUf	B	6.99	370	39.4	7.0	25.6	13.6	35.5	13.7	173.3		10.7	30.66	4.29	4.30	-0.11
58-10/11	MUf	Sp	7.60	384	36.0	6.9	20.8	13.6	49.6	0.0	144.0	b.d.	13.4	19.84	3.90	3.98	-0.93
58-10/11	MUf	Sp	6.97	390	39.4	8.0	24.0	14.6	42.5	9.1	195.3		10.7	18.94	4.31	4.76	-4.94
FT-39	MUf	B	6.90	1439	175.2	13.9	54.4	69.0	262.3	54.6	275.8	b.d.	21.5	42.83	16.37	13.39	9.99
FT-39	MUf	B	6.98	1290	196.9	15.9	57.6	61.2	219.8	45.5	405.2		16.1	35.17	16.88	14.04	9.19
FT-109	MUf	B	6.81	8180	590.6	14.9	880.0	396.1	2623.3	364.2	158.7		26.8	27.95	102.57	84.51	9.65
FBE-138	BUf	B	7.04	760	78.8	21.9	22.4	29.2	63.8	18.2	209.9	b.d.	59.0	29.31	7.50	6.57	6.63
59-24	MUf	Sp	6.98	1800	275.6	24.9	49.6	66.1	382.9	127.5	227.0	b.d.	0.0	27.95	20.54	17.16	8.96
FT-153	BUf	B	7.40	987	77.9	16.9	27.2	47.6	106.4	18.2	249.0	b.d.	10.7	36.07	9.10	7.63	8.77
FT-47	BUf	B	7.22	1622	175.2	22.8	36.8	82.6	297.8	63.7	222.1		48.3	36.97	16.84	14.13	8.73