



Tectonics

Supporting Information for

Late Quaternary intraplate deformation defined by the Las Chacras Fault Zone, West-Central Argentina

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Introduction

This supporting information includes photos of sampling site (Figs. S1-S6) and the detailed cosmogenic age results (Figs. S7-S13) from the online calculator by Balco et al. (2008).

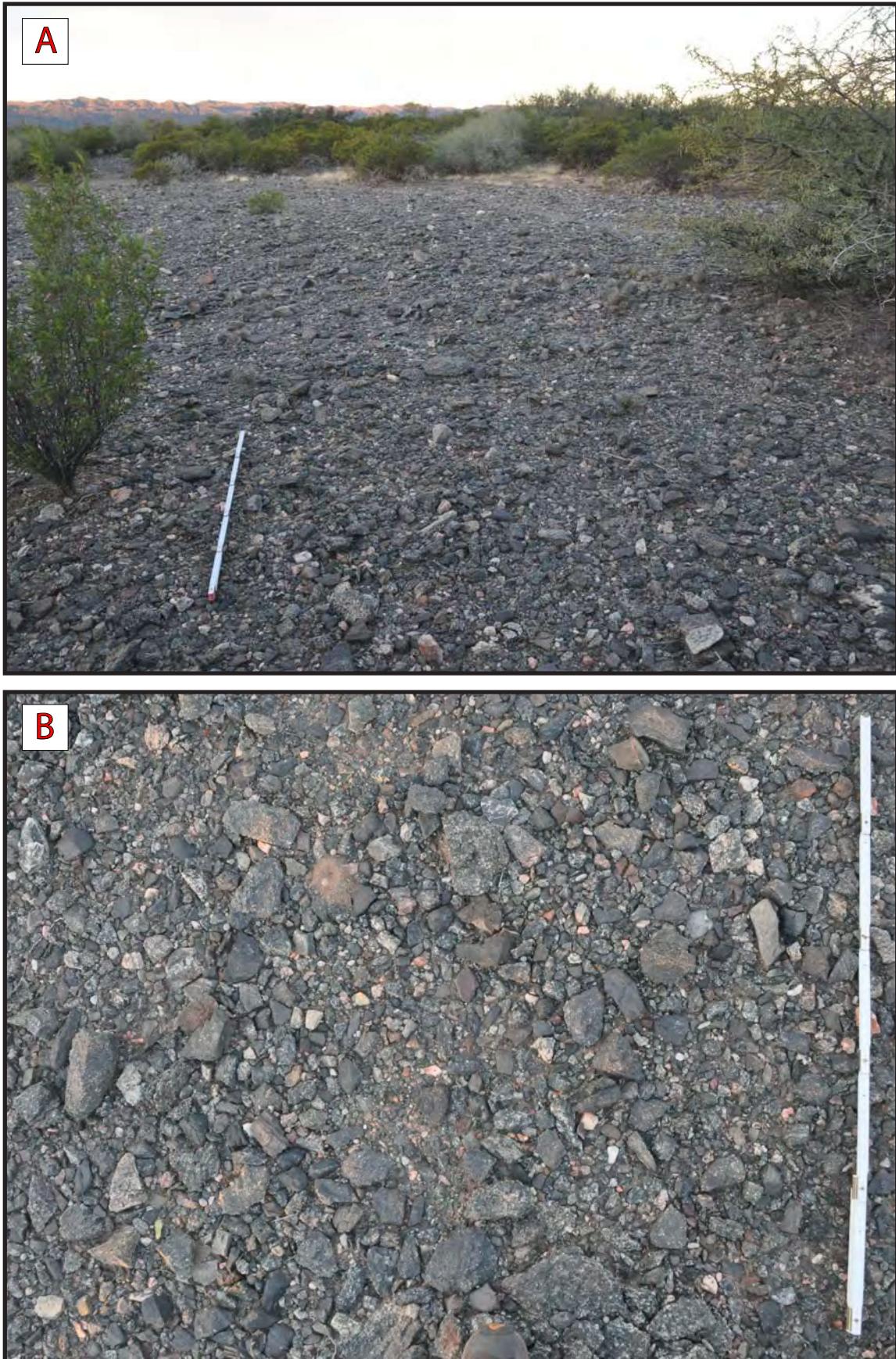


Figure S1. Q2 surface. A) Perspective view of Q2. B) Close-up view of Q2.

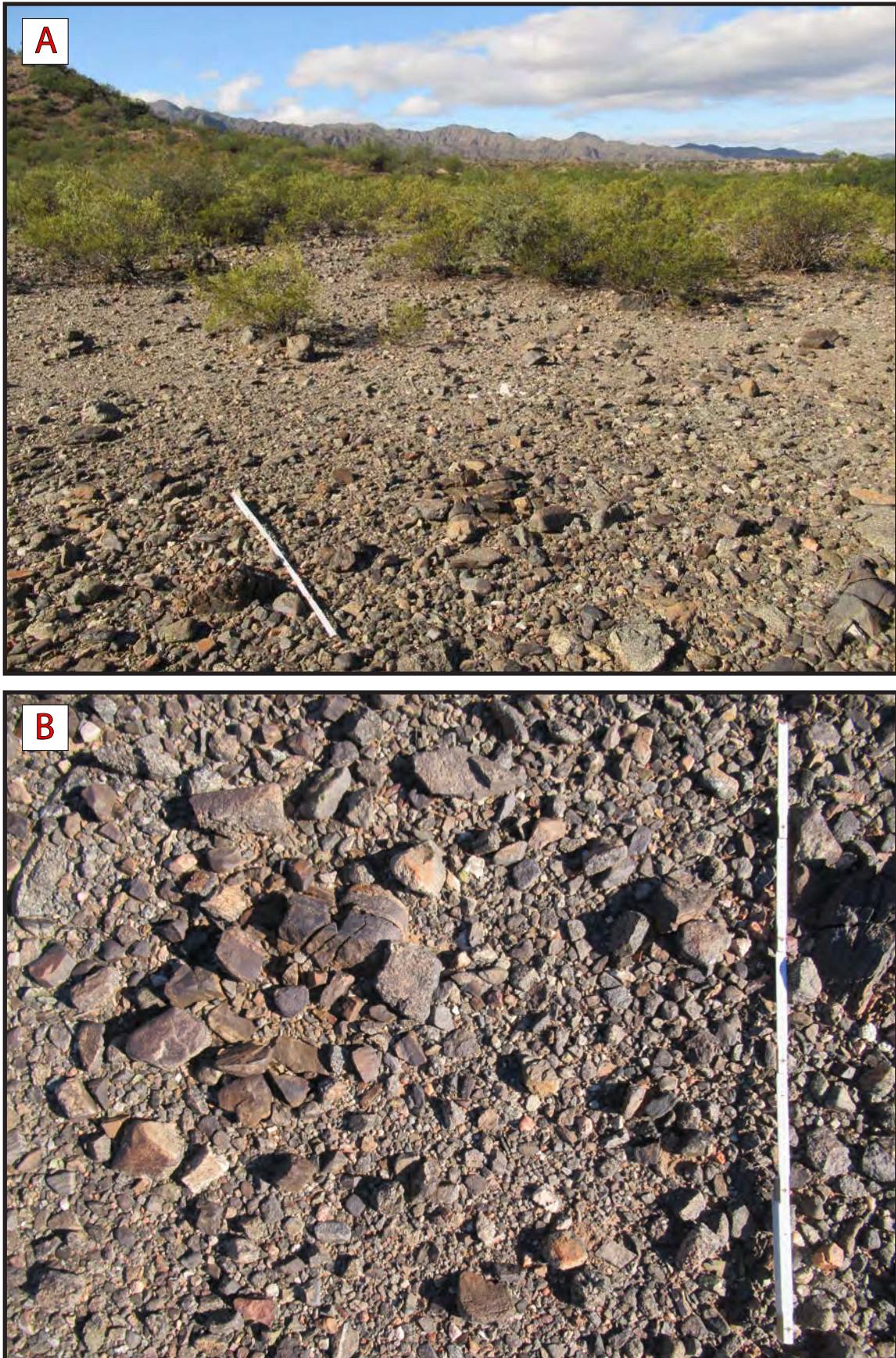


Figure S2. Q3 surface. A) Perspective view of Q3. B) Close-up view of Q3.



Figure S3. Q4 surface. A) Perspective view of Q4. B) Close-up view of Q4.

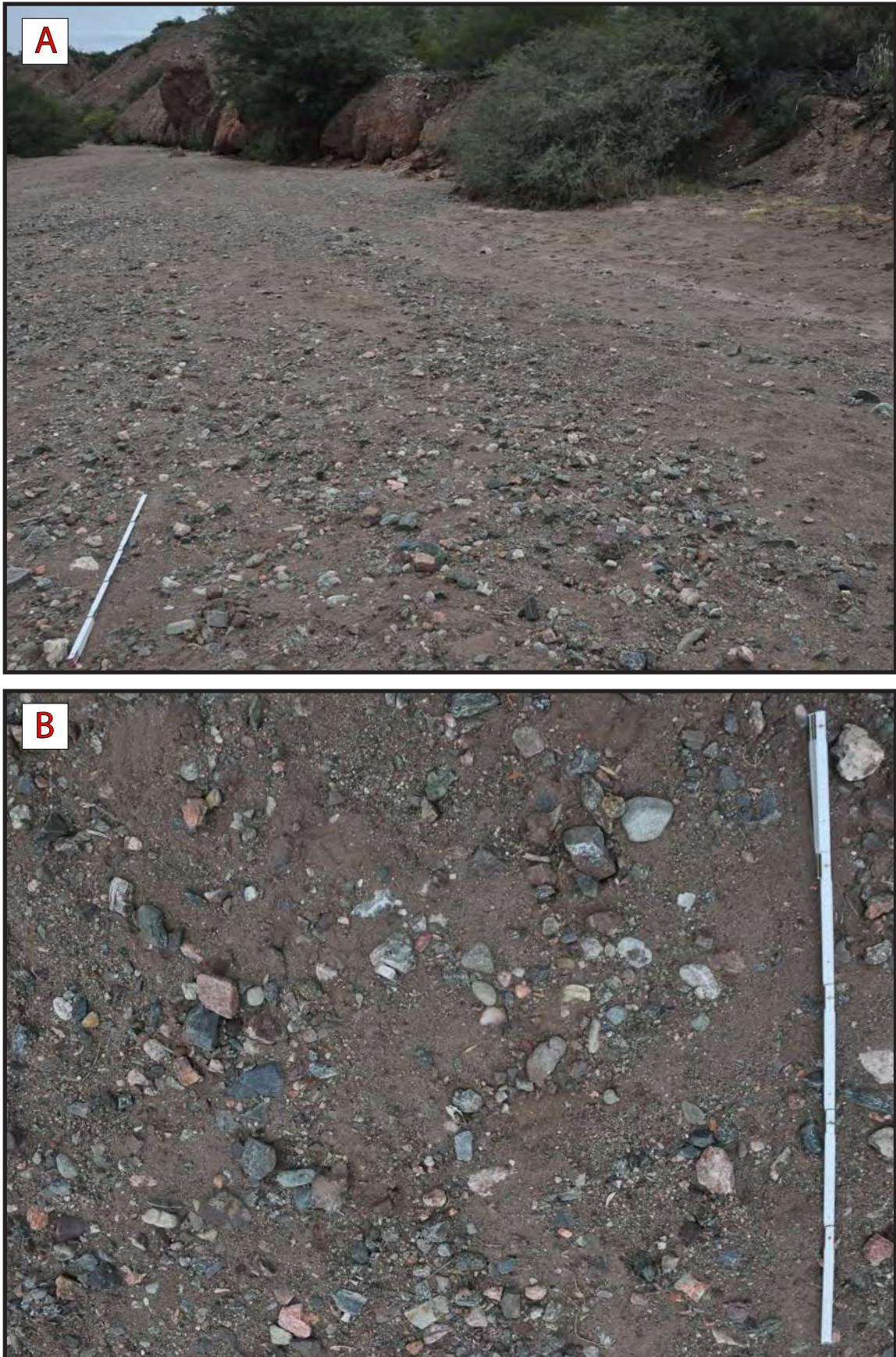


Figure S4. Q2C surface. A) Perspective view of Q2C. B) Close-up view of Q2C.



Figure S5. Q3C surface. A) Perspective view of Q3C. B) Close-up view of Q3C.

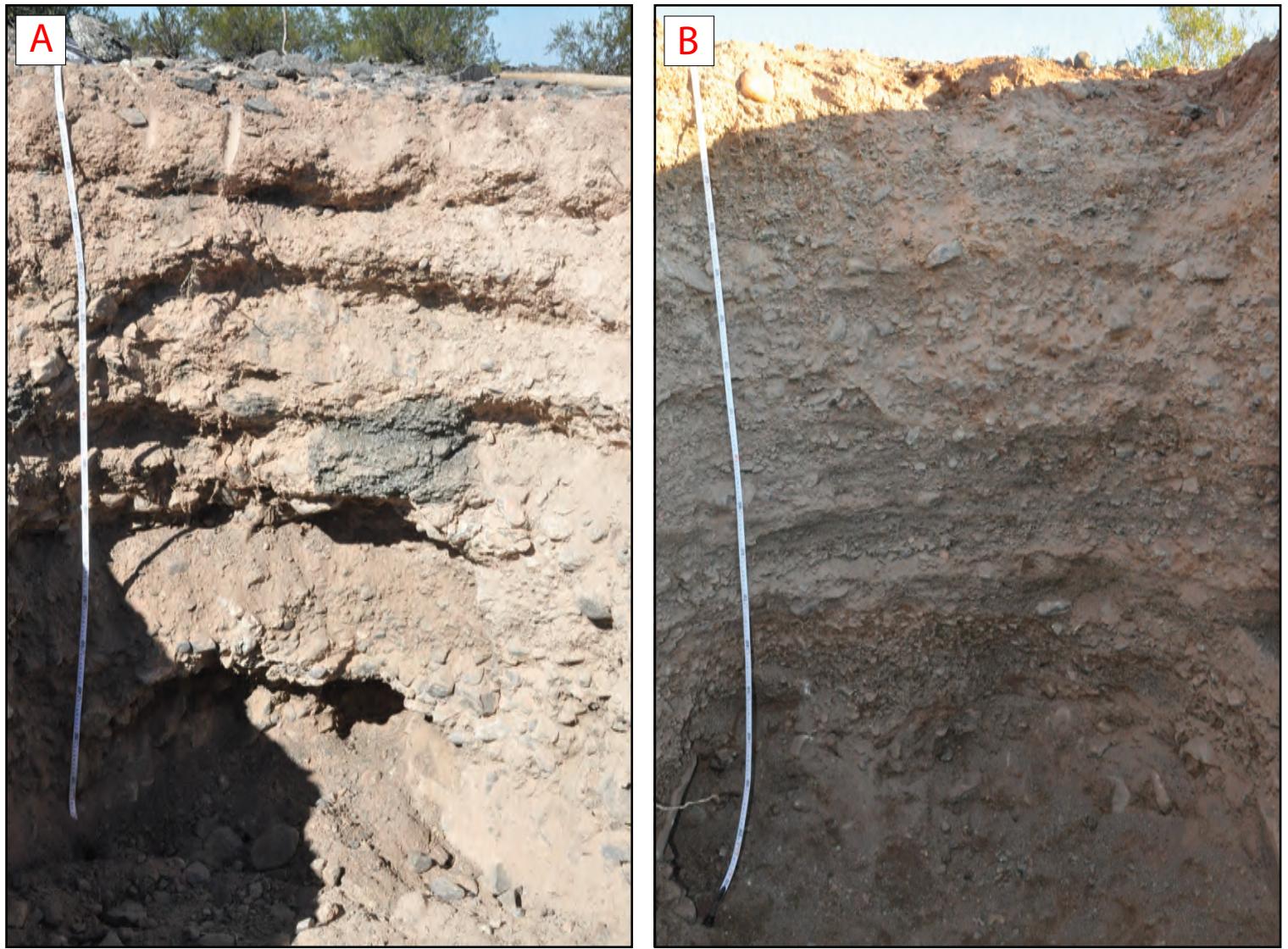


Figure S6. Depth profiles A) Q1 surface at Quebrada del Barro. B) Q2 surface at El Carrizal.

Online exposure age calculator v3 results (0 mm/kyr erosion, inheritance-corrected)

Version info:
wrapper: 3.0.2
get_age: 3.0.2
muons: 1A, alpha = 1
validate: validate_v3_input.m - 3.0
consts: 2020-08-26

Diagnostics:

Calibration data:
Calibration data set: Default calibration data set
Trace string:

Exposure age results:

Sample name	Nuclide	St			Lm			LSDn			Ag		
		Age (yr)	Interr (yr)	Exterr (yr)	Age (yr)	Interr (yr)	Exterr (yr)	Age (yr)	Interr (yr)	Exterr (yr)	Age (yr)	Interr (yr)	Exterr (yr)
Q2	Be-10 (qtz)	37756	2050	3643	35759	1941	3330	40431	2197	3261	--	--	--
Q2SA	Be-10 (qtz)	25491	1298	2407	24452	1245	2226	27765	1415	2173	--	--	--
Q2SB	Be-10 (qtz)	17905	1078	1783	17900	1078	1726	20401	1229	1724	--	--	--
Q2SC	Be-10 (qtz)	31977	1573	2993	30140	1482	2717	34860	1716	2692	--	--	--
Q2SD	Be-10 (qtz)	23428	1313	2278	22654	1269	2129	25646	1438	2094	--	--	--
Q3	Be-10 (qtz)	19562	1268	2005	19345	1254	1923	21718	1409	1909	--	--	--
Q4	Be-10 (qtz)	8634	701	979	9362	760	1036	10747	873	1080	--	--	--

Figure S7. Exposure ages calculated assuming 0 mm/kyr erosion and significant inheritance.

Online exposure age calculator v3 results (0 mm/kyr erosion, 0 inheritance)

Version info:
 wrapper: 3.0.2
 get_age: 3.0.2
 muons: 1A, alpha = 1
 validate: validate_v3_input.m - 3.0
 consts: 2020-08-26

Diagnostics:

Calibration data:
 Calibration data set: Default calibration data set
 Trace string:

Exposure age results:

Sample name	Nuclide	St			Lm			LSDn			Ag		
		Age (yr)	Interr (yr)	Exterr (yr)	Age (yr)	Interr (yr)	Exterr (yr)	Age (yr)	Interr (yr)	Exterr (yr)	Age (yr)	Interr (yr)	Exterr (yr)
Q2	Be-10 (qtz)	43371	1978	3989	40520	1847	3583	45830	2092	3443	--	--	--
Q2SA	Be-10 (qtz)	31071	1178	2740	29369	1113	2482	34051	1291	2403	--	--	--
Q2SB	Be-10 (qtz)	23464	928	2083	22686	897	1932	25681	1017	1833	--	--	--
Q2SC	Be-10 (qtz)	37575	1475	3340	35583	1397	3033	40295	1583	2877	--	--	--
Q2SD	Be-10 (qtz)	29003	1194	2598	27538	1133	2368	31468	1296	2276	--	--	--
Q2C	Be-10 (qtz)	5625	560	715	6325	630	789	7193	717	833	--	--	--
Q3C	Be-10 (qtz)	4308	448	563	5007	520	642	5691	591	680	--	--	--
Q3	Be-10 (qtz)	23845	1191	2238	22954	1146	2076	25808	1289	2003	--	--	--
Q4	Be-10 (qtz)	12912	544	1159	13354	563	1152	15030	634	1093	--	--	--

Figure S8. Exposure ages calculated assuming 0 mm/kyr erosion and 0 inheritance.

Online exposure age calculator v3 results (1 mm/kyr erosion, 0 inheritance)

Version info:
wrapper: 3.0.2
get_age: 3.0.2
muons: 1A, alpha = 1
validate: validate_v3_input.m - 3.0
consts: 2020-08-26

Diagnostics:

Calibration data:
Calibration data set: Default calibration data set
Trace string:

Exposure age results:

Sample name	Nuclide	St			Lm			LSDn			Ag		
		Age (yr)	Interr (yr)	Exterr (yr)	Age (yr)	Interr (yr)	Exterr (yr)	Age (yr)	Interr (yr)	Exterr (yr)	Age (yr)	Interr (yr)	Exterr (yr)
Q2	Be-10 (qtz)	45004	2133	4300	41699	1969	3819	48445	2304	3793	--	--	--
Q2SA	Be-10 (qtz)	31896	1242	2889	30067	1168	2606	34887	1363	2535	--	--	--
Q2SB	Be-10 (qtz)	23930	966	2167	23104	932	2006	26206	1060	1912	--	--	--
Q2SC	Be-10 (qtz)	38792	1574	3563	36681	1485	3225	41283	1680	3052	--	--	--
Q2SD	Be-10 (qtz)	29720	1254	2730	28173	1187	2481	32499	1376	2416	--	--	--
Q3	Be-10 (qtz)	24327	1240	2330	23386	1191	2157	26330	1345	2089	--	--	--
Q4	Be-10 (qtz)	13051	556	1184	13493	575	1177	15190	649	1118	--	--	--

Figure S9. Exposure ages calculated assuming 1 mm/kyr erosion and 0 inheritance.

Online exposure age calculator v3 results (2 mm/kyr erosion, 0 inheritance)

Version info:
 wrapper: 3.0.2
 get_age: 3.0.2
 muons: 1A, alpha = 1
 validate: validate_v3_input.m - 3.0
 consts: 2020-08-26

Diagnostics:

Calibration data:
 Calibration data set: Default calibration data set
 Trace string:

Exposure age results:

Sample name	Nuclide	St			Lm			LSDn			Ag		
		Age (yr)	Interr (yr)	Exterr (yr)	Age (yr)	Interr (yr)	Exterr (yr)	Age (yr)	Interr (yr)	Exterr (yr)	Age (yr)	Interr (yr)	Exterr (yr)
Q2	Be-10 (qtz)	46814	2313	4664	43210	2120	4112	51158	2549	4197	--	--	--
Q2SA	Be-10 (qtz)	32782	1313	3056	30895	1233	2751	35974	1450	2698	--	--	--
Q2SB	Be-10 (qtz)	24421	1007	2259	23548	969	2087	26790	1110	2000	--	--	--
Q2SC	Be-10 (qtz)	40120	1687	3818	37849	1584	3441	42678	1803	3276	--	--	--
Q2SD	Be-10 (qtz)	30486	1321	2876	28848	1246	2605	33639	1467	2576	--	--	--
Q3	Be-10 (qtz)	24835	1293	2431	23832	1238	2244	26951	1409	2189	--	--	--
Q4	Be-10 (qtz)	13194	569	1211	13633	588	1203	15377	665	1147	--	--	--

Figure S10. Exposure ages calculated assuming 2 mm/kyr erosion and 0 inheritance.

Online exposure age calculator v3 results (3 mm/kyr erosion, 0 inheritance)

Version info:
wrapper: 3.0.2
get_age: 3.0.2
muons: 1A, alpha = 1
validate: validate_v3_input.m - 3.0
consts: 2020-08-26

Diagnostics:

Calibration data:
Calibration data set: Default calibration data set
Trace string:

Exposure age results:

Sample name	Nuclide	St			Lm			LSDn			Ag		
		Age (yr)	Interr (yr)	Exterr (yr)	Age (yr)	Interr (yr)	Exterr (yr)	Age (yr)	Interr (yr)	Exterr (yr)	Age (yr)	Interr (yr)	Exterr (yr)
Q2	Be-10 (qtz)	48834	2527	5095	44944	2300	4461	54363	2858	4705	--	--	--
Q2SA	Be-10 (qtz)	33738	1394	3243	31851	1309	2920	37158	1550	2884	--	--	--
Q2SB	Be-10 (qtz)	24940	1051	2359	24001	1009	2172	27457	1166	2101	--	--	--
Q2SC	Be-10 (qtz)	41578	1817	4113	39049	1694	3679	44377	1955	3551	--	--	--
Q2SD	Be-10 (qtz)	31307	1396	3038	29565	1311	2741	34586	1556	2733	--	--	--
Q3	Be-10 (qtz)	25374	1351	2540	24299	1290	2338	27608	1479	2298	--	--	--
Q4	Be-10 (qtz)	13342	582	1239	13772	601	1230	15578	683	1178	--	--	--

Figure S11. Exposure ages calculated assuming 3 mm/kyr erosion and 0 inheritance.

Online exposure age calculator v3 results (4 mm/kyr erosion, 0 inheritance)

Version info:
wrapper: 3.0.2
get_age: 3.0.2
muons: 1A, alpha = 1
validate: validate_v3_input.m - 3.0
consts: 2020-08-26

Diagnostics:

Calibration data:
Calibration data set: Default calibration data set
Trace string:

Exposure age results:

Sample name	Nuclide	St			Lm			LSDn			Ag		
		Age (yr)	Interr (yr)	Exterr (yr)	Age (yr)	Interr (yr)	Exterr (yr)	Age (yr)	Interr (yr)	Exterr (yr)	Age (yr)	Interr (yr)	Exterr (yr)
Q2	Be-10 (qtz)	51110	2784	5613	47348	2542	4932	57467	3207	5279	--	--	--
Q2SA	Be-10 (qtz)	34772	1484	3454	32941	1397	3116	38396	1661	3091	--	--	--
Q2SB	Be-10 (qtz)	25490	1100	2468	24485	1052	2266	28126	1225	2209	--	--	--
Q2SC	Be-10 (qtz)	43189	1968	4456	40257	1815	3941	46587	2151	3907	--	--	--
Q2SD	Be-10 (qtz)	32191	1479	3219	30310	1383	2891	35587	1656	2908	--	--	--
Q3	Be-10 (qtz)	25944	1415	2660	24795	1346	2440	28281	1556	2417	--	--	--
Q4	Be-10 (qtz)	13494	595	1268	13901	614	1256	15786	702	1210	--	--	--

Figure S12. Exposure ages calculated assuming 4 mm/kyr erosion and 0 inheritance.

Online exposure age calculator v3 results (5 mm/kyr erosion, 0 inheritance)

Version info:
wrapper: 3.0.2
get_age: 3.0.2
muons: 1A, alpha = 1
validate: validate_v3_input.m - 3.0
consts: 2020-08-26

Diagnostics:

Calibration data:
Calibration data set: Default calibration data set
Trace string:

Exposure age results:

Sample name	Nuclide	St			Lm			LSDn			Ag		
		Age (yr)	Interr (yr)	Exterr (yr)	Age (yr)	Interr (yr)	Exterr (yr)	Age (yr)	Interr (yr)	Exterr (yr)	Age (yr)	Interr (yr)	Exterr (yr)
Q2	Be-10 (qtz)	53701	3098	6248	50197	2848	5526	60668	3619	5957	--	--	--
Q2SA	Be-10 (qtz)	35897	1588	3694	34073	1494	3334	39540	1779	3310	--	--	--
Q2SB	Be-10 (qtz)	26074	1153	2587	24992	1100	2368	28834	1291	2328	--	--	--
Q2SC	Be-10 (qtz)	44982	2147	4861	41518	1950	4235	49545	2417	4390	--	--	--
Q2SD	Be-10 (qtz)	33146	1573	3424	31239	1469	3071	36813	1777	3121	--	--	--
Q3	Be-10 (qtz)	26551	1485	2791	25316	1408	2551	29001	1640	2548	--	--	--
Q4	Be-10 (qtz)	13651	609	1298	14045	628	1285	16013	723	1246	--	--	--

Figure S13. Exposure ages calculated assuming 5 mm/kyr erosion and 0 inheritance.