

ONLINE SUPPLEMENTARY MATERIAL

to the paper

Laramide to Miocene syn-extensional plutonism in the Puerta del Sol area, central Sonora, Mexico

by

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Table S2. U-Pb geochronology data. LaserChron Center, University of Arizona.

	ISOTOPE RATIOS										APPARENT AGES (Ma)							
	U (ppm)	²⁰⁶ Pb/ ²³⁸ Pb	U/Th	²⁰⁶ Pb*/ ²⁰⁷ Pb*	± (%)	²⁰⁷ Pb*/ ²³⁵ U*	± (%)	²⁰⁶ Pb*/ ²³⁸ U	± (%)	error corr.	²⁰⁶ Pb*/ ²³⁸ U*	± (Ma)	²⁰⁷ Pb*/ ²³⁵ U	± (Ma)	²⁰⁶ Pb*/ ²⁰⁷ Pb*	± (Ma)	Best age (Ma)	± (Ma)
Zircon_202081_1	846	6415	12.543	23.678	9.373	0.038	9.440	0.007	1.120	0.119	41.831	0.467	37.781	3.501	-212.643	235.839	41.831	0.467
Zircon_2	796	130290	3.475	10.063	1.780	1.962	10.049	0.143	9.890	0.984	862.709	79.863	1102.607	67.688	1612.458	33.165	1612.458	33.165
Zircon_3	1232	7035	1.768	22.750	6.422	0.039	6.552	0.007	1.300	0.198	41.810	0.542	39.274	2.524	-113.102	158.338	41.810	0.542
Zircon_5	608	3580	9.349	21.348	9.779	0.042	10.069	0.006	2.400	0.238	41.697	0.997	41.689	4.113	41.187	234.324	41.697	0.997
Zircon_6	798	5595	1.237	22.246	3.940	0.049	4.065	0.008	1.000	0.246	50.261	0.501	48.101	1.910	-58.314	96.045	50.261	0.501
Zircon_8	166	1065	1.599	30.855	97.135	0.029	97.270	0.006	5.420	0.053	41.370	2.444	28.800	27.627	-927.728	1803.412	41.370	2.111
Zircon_10	1154	6380	1.160	22.290	5.159	0.040	5.255	0.006	1.000	0.190	41.490	0.414	39.766	2.049	-63.076	125.915	41.490	0.414
Zircon_11	246	95010	1.347	9.661	1.110	4.152	1.494	0.291	1.000	0.669	1645.987	14.527	1664.510	12.226	1687.941	20.481	1687.941	20.481
Zircon_12	333	2345	2.691	23.685	25.696	0.038	25.725	0.006	1.230	0.048	41.573	0.510	37.541	9.481	-213.381	654.554	41.573	0.510
Zircon_13	1141	9090	11.232	21.952	9.498	0.041	9.550	0.007	1.000	0.105	41.818	0.417	40.680	3.808	-25.899	230.489	41.818	0.417
Zircon_14	500	2255	0.472	23.433	13.274	0.038	13.738	0.007	3.540	0.258	41.769	1.474	38.112	5.139	-186.524	332.907	41.769	1.474
Zircon_16	279	87105	2.477	9.661	3.050	3.066	4.414	0.215	3.190	0.723	1254.635	36.369	1424.346	33.806	1687.991	56.285	1687.991	56.285
Zircon_17	754	5215	4.819	21.833	7.863	0.041	7.927	0.007	1.000	0.126	41.844	0.417	40.923	3.179	-12.716	190.220	41.844	0.417
Zircon_19	774	5000	2.484	20.288	9.652	0.056	9.704	0.008	1.000	0.103	53.332	0.531	55.766	5.266	161.586	226.170	53.332	0.531
Zircon_20	326	88625	1.677	9.653	1.840	3.328	2.094	0.233	1.000	0.477	1350.023	12.180	1487.534	16.352	1689.451	33.948	1689.451	33.948
Zircon_21	1318	7755	6.704	21.300	6.552	0.042	6.663	0.007	1.210	0.182	41.927	0.506	42.007	2.742	46.553	156.691	41.927	0.506
Zircon_22	1229	5035	0.751	20.197	4.723	0.056	6.062	0.008	3.800	0.627	52.359	1.982	55.012	3.246	172.091	110.297	52.359	1.982

Zircon_24	1274	9970	2.553	21.827	6.864	0.052	6.936	0.008	1.000	0.144	52.455	0.522	51.098	3.457	-12.110	165.988	52.455	0.522
Zircon_23	340	114265	4.682	9.641	2.820	3.487	3.228	0.244	1.570	0.486	1406.643	19.841	1524.345	25.475	1691.777	52.014	1691.777	52.014
Zircon_25	854	6260	11.899	22.948	9.527	0.039	9.619	0.007	1.330	0.138	42.062	0.558	39.172	3.696	-134.577	236.102	42.062	0.558
Zircon_0112083_1	488	4015	1.330	23.111	15.600	0.056	16.219	0.009	4.440	0.274	60.407	2.670	55.489	8.759	-152.067	389.140	60.407	2.670
Zircon_2	1809	16010	2.737	21.737	6.328	0.058	6.733	0.009	2.300	0.342	58.358	1.336	56.945	3.728	-2.114	152.699	58.358	1.336
Zircon_3	234	62130	1.960	9.639	2.570	3.513	3.456	0.246	2.310	0.668	1415.782	29.363	1530.194	27.320	1692.137	47.399	1692.137	47.399
Zircon_4	1113	13020	6.543	21.517	3.664	0.070	3.798	0.011	1.000	0.263	69.694	0.693	68.369	2.511	22.254	87.960	69.694	0.693
Zircon_5	837	6595	2.582	20.871	7.736	0.048	10.123	0.007	6.530	0.645	47.076	3.063	48.013	4.747	95.024	183.367	47.076	3.063
Zircon_5_1	1611	9205	3.378	20.557	7.391	0.050	7.636	0.007	1.920	0.251	48.007	0.918	49.673	3.702	130.777	174.006	48.007	0.918
Zircon_7	258	3235	2.522	31.782	31.119	0.034	32.459	0.008	9.230	0.284	50.546	4.647	34.097	10.884	-1014.836	943.467	50.546	4.647
Zircon_6	1531	8695	5.447	20.164	8.765	0.051	9.207	0.007	2.820	0.306	47.975	1.348	50.584	4.543	175.980	204.758	47.975	1.348
Zircon_8	1336	9970	3.980	21.576	4.197	0.048	4.911	0.008	2.550	0.519	48.491	1.232	47.849	2.295	15.768	100.880	48.491	1.232
Zircon_9	1104	42100	11.365	10.901	1.840	0.374	5.781	0.030	5.480	0.948	187.639	10.134	322.292	15.965	1461.838	34.979	187.639	10.134
Zircon_10	742	4235	2.858	19.248	6.756	0.054	6.854	0.007	1.160	0.169	48.126	0.556	53.092	3.546	283.348	154.684	48.126	0.556
Zircon_11	479	4280	3.025	21.103	10.604	0.049	12.575	0.007	6.760	0.538	47.716	3.214	48.129	5.911	68.745	252.910	47.716	3.214
Zircon_12	3574	27600	7.345	21.166	2.093	0.050	2.320	0.008	1.000	0.431	49.766	0.496	50.009	1.132	61.618	49.881	49.766	0.496
Zircon_13	564	5665	4.902	20.716	10.848	0.059	11.201	0.009	2.790	0.249	56.835	1.579	58.148	6.330	112.544	256.647	56.835	1.579
Zircon_15	439	3660	3.984	18.753	22.997	0.057	24.627	0.008	8.810	0.358	49.690	4.361	56.183	13.461	342.561	526.722	49.690	4.361
Zircon_16	3156	24945	9.704	20.286	2.190	0.052	2.447	0.008	1.090	0.446	48.932	0.531	51.268	1.223	161.860	51.227	48.932	0.531
Zircon_18	413	3015	2.984	19.970	16.013	0.054	16.415	0.008	3.610	0.220	50.461	1.815	53.649	8.578	198.450	374.045	50.461	1.815
Zircon_19	1381	10905	3.295	20.137	4.748	0.054	5.148	0.008	1.990	0.387	50.687	1.005	53.451	2.681	179.116	110.737	50.687	1.005
Zircon_20	662	4225	3.751	19.641	15.099	0.051	15.686	0.007	4.250	0.271	46.912	1.987	50.771	7.768	236.898	350.027	46.912	1.987
Zircon_21	1064	7765	6.700	21.737	9.175	0.050	9.229	0.008	1.000	0.108	50.571	0.504	49.498	4.459	-2.159	221.640	50.571	0.504
Zircon_22	393	3215	3.207	20.888	23.014	0.049	24.852	0.007	9.380	0.377	47.525	4.441	48.422	11.752	93.012	551.388	47.525	4.441
Zircon_22_1	830	6255	2.752	21.734	12.716	0.048	14.308	0.008	6.560	0.458	48.842	3.192	47.846	6.687	-1.796	307.662	48.842	3.192
Zircon_23	603	4900	3.709	19.149	22.010	0.055	22.582	0.008	5.050	0.224	48.810	2.456	54.099	11.897	295.073	507.831	48.810	2.456
Zircon_24	809	6055	2.879	19.759	7.020	0.052	7.479	0.007	2.580	0.345	47.704	1.226	51.310	3.742	223.120	162.516	47.704	1.226
Zircon_25	877	5930	3.365	20.413	7.989	0.050	8.718	0.007	3.490	0.400	47.719	1.659	49.719	4.230	147.213	187.589	47.719	1.659
Zircon_26	197	2040	2.852	49.291	59.614	0.021	60.077	0.007	7.440	0.124	47.190	3.498	20.657	12.285	-2573.354	102.919	47.190	3.498
Zircon_27	645	3990	1.811	19.336	10.697	0.054	10.976	0.008	2.460	0.224	48.212	1.182	52.950	5.663	272.938	245.765	48.212	1.182
Zircon_29	398	3380	3.451	20.487	13.099	0.053	13.271	0.008	2.130	0.161	50.437	1.070	52.306	6.766	138.756	308.759	50.437	1.070
Zircon_30	649	4965	2.235	19.965	13.562	0.052	13.661	0.007	1.640	0.120	47.982	0.784	51.083	6.806	199.061	316.265	47.982	0.784
Zircon_32	2874	30705	4.968	15.826	2.116	0.095	2.340	0.011	1.000	0.427	70.071	0.697	92.352	2.066	714.560	44.950	70.071	0.697
Zircon_36	614	5230	3.176	20.019	12.618	0.052	13.565	0.008	4.980	0.367	48.718	2.417	51.713	6.839	192.812	294.391	48.718	2.417
Zircon_EGB-12-37_12	4092	434972	54.565	20.972	0.598	0.061	1.457	0.009	1.329	0.912	59.197	0.783	59.787	0.846	83.474	14.182	59.197	0.783

Zircon_7	915	629477	41.319	20.556	1.786	0.066	2.167	0.010	1.228	0.566	63.303	0.773	65.080	1.366	130.885	41.983	63.303	0.773
Zircon_25	3917	1069149	56.724	21.193	0.727	0.065	2.504	0.010	2.396	0.957	64.130	1.529	63.987	1.553	58.657	17.305	64.130	1.529
Zircon_23	544	136275	57.456	20.299	3.004	0.068	5.245	0.010	4.299	0.820	64.677	2.767	67.267	3.414	160.378	70.258	64.677	2.767
Zircon_4	793	304330	40.981	20.261	1.329	0.069	2.530	0.010	2.152	0.851	65.006	1.392	67.724	1.657	164.778	31.079	65.006	1.392
Zircon_13	831	261661	84.321	20.886	1.542	0.069	2.844	0.010	2.390	0.840	67.092	1.595	67.812	1.866	93.265	36.528	67.092	1.595
Zircon_20	497	123727	35.610	19.911	1.605	0.073	5.288	0.010	5.039	0.953	67.209	3.369	71.140	3.633	205.369	37.232	67.209	3.369
Zircon_11	1152	256188	116.697	19.468	8.404	0.076	44.330	0.044	44.607	0.840	68.544	7.940	74.072	10.237	257.352	193.451	68.544	7.940
Zircon_3	624	163405	67.832	20.313	1.407	0.075	3.225	0.011	2.902	0.900	70.783	2.043	73.378	2.283	158.725	32.957	70.783	2.043
Zircon_26	868	234603	26.141	15.954	9.187	0.148	14.008	0.017	10.575	0.755	109.232	11.454	139.870	18.305	697.392	196.096	109.232	11.454
Zircon_6	700	554433	15.956	11.022	4.880	0.374	14.980	0.030	14.163	0.945	189.756	26.483	322.398	41.402	1440.908	93.055	189.756	26.483
Zircon_19	524	909803	9.501	10.387	2.861	0.558	10.911	0.042	10.529	0.965	265.478	27.384	450.274	39.701	1553.108	53.724	265.478	27.384
Zircon_28	741	1037923	12.108	10.655	0.847	0.712	7.837	0.055	7.791	0.994	345.499	26.210	546.206	33.119	1505.109	16.000	345.499	26.210
Zircon_22	354	362450	9.582	10.265	0.850	0.895	3.812	0.067	3.716	0.975	415.750	14.963	648.951	18.282	1575.240	15.908	415.750	14.963
Zircon_16	625	903735	8.439	10.306	0.902	0.930	8.242	0.069	8.193	0.994	433.121	34.320	667.520	40.345	1567.827	16.906	433.121	34.320
Zircon_18	675	1002972	7.736	10.177	0.557	1.249	1.979	0.092	1.899	0.960	568.270	10.329	822.755	11.158	1591.399	10.403	568.270	10.329
Zircon_29	683	2696463	5.498	10.174	0.965	1.322	4.231	0.098	4.120	0.974	600.232	23.611	855.599	24.469	1591.929	18.032	600.232	23.611
Zircon_30	438	2084398	4.410	9.853	0.631	2.130	2.658	0.152	2.582	0.971	913.228	21.983	1158.491	18.366	1651.570	11.704	913.228	21.983
Zircon_14	419	3061568	2.559	9.688	0.771	3.504	1.498	0.246	1.285	0.857	1418.877	16.362	1528.095	11.837	1682.752	14.240	1418.877	16.362
Zircon_4	198	2361127	2.366	9.669	0.737	3.979	3.504	0.279	3.426	0.978	1586.508	48.184	1629.941	28.444	1686.441	13.599	1586.508	48.184
Zircon_2	141	1771818	2.412	9.673	0.619	4.065	2.641	0.285	2.568	0.972	1617.310	36.726	1647.253	21.525	1685.651	11.418	1617.310	36.726
Zircon_7	167	614891	2.245	9.704	0.520	4.122	3.495	0.290	3.456	0.989	1641.996	50.091	1658.610	28.562	1679.697	9.610	1641.996	50.091
Zircon_17	109	891478	1.570	9.603	0.893	4.387	1.810	0.306	1.574	0.870	1718.584	23.749	1709.819	14.966	1699.082	16.451	1718.584	23.749
Zircon_10	211	2800624	2.577	9.700	0.558	4.365	2.207	0.307	2.135	0.968	1726.227	32.341	1705.676	18.236	1680.508	10.306	1726.227	32.341
Zircon_EGB12-24_18	612	351489	41.322	17.043	14.648	0.070	26.176	0.009	21.694	0.829	55.480	44.984	68.634	47.373	555.096	321.116	55.480	44.984
Zircon_12	1457	305065	39.091	20.680	1.933	0.059	2.566	0.009	1.688	0.658	56.545	0.950	57.957	1.445	116.736	45.576	56.545	0.950
Zircon_19	1402	370863	22.503	20.884	0.910	0.060	4.753	0.009	4.665	0.982	58.057	2.696	58.905	2.720	93.532	21.531	58.057	2.696
Zircon_8	611	265511	50.169	19.802	1.762	0.064	3.104	0.009	2.555	0.823	59.315	1.509	63.337	1.906	218.137	40.791	59.315	1.509
Zircon_30	2242	527153	15.047	18.687	9.043	0.069	44.100	0.009	40.818	0.767	60.168	6.479	67.930	9.265	350.604	204.749	60.168	6.479
Zircon_5	798	61194	71.230	19.213	6.672	0.071	7.159	0.010	2.595	0.363	63.231	1.633	69.399	4.802	287.535	152.647	63.231	1.633
Zircon_28	1171	291726	79.609	20.490	0.738	0.068	2.317	0.010	2.197	0.948	65.153	1.424	67.138	1.505	138.417	17.328	65.153	1.424
Zircon_10	918	100818	75.305	20.810	0.890	0.069	1.649	0.010	1.389	0.842	66.957	0.925	67.919	1.084	101.923	21.044	66.957	0.925
Zircon_14	983	264681	49.962	20.416	1.409	0.071	4.309	0.011	4.072	0.945	67.595	2.738	69.826	2.908	146.954	33.035	67.595	2.738
Zircon_25	876	347176	62.468	18.564	8.543	0.079	40.697	0.044	6.438	0.602	68.033	4.357	77.018	7.934	365.553	492.876	68.033	4.357
Zircon_6	853	130885	36.252	19.841	3.155	0.074	5.294	0.011	4.251	0.803	68.257	2.886	72.460	3.702	213.499	73.087	68.257	2.886
Zircon_15	1216	224700	64.193	20.730	1.150	0.073	1.699	0.011	1.250	0.736	70.662	0.878	71.835	1.178	111.040	27.173	70.662	0.878
Zircon_17	903	161734	204.418	20.226	3.575	0.076	3.846	0.011	1.417	0.369	71.091	1.002	73.994	2.744	168.786	83.511	71.091	1.002

Zircon_16	780	127093	49.853	20.577	1.095	0.076	2.820	0.011	2.598	0.922	72.872	1.883	74.542	2.027	128.455	25.760	72.872	1.883
Zircon_31	1217	241887	59.921	16.464	8.480	0.101	9.430	0.012	4.125	0.437	77.177	3.165	97.571	8.773	629.912	182.995	77.177	3.165
Zircon_9	1111	382020	37.507	16.546	6.472	0.102	15.163	0.012	13.712	0.904	78.410	10.687	98.601	14.249	619.265	139.794	78.410	10.687
Zircon_4	902	574038	19.257	11.020	2.450	0.499	3.498	0.040	2.497	0.714	251.988	6.171	410.879	11.822	1441.291	46.700	251.988	6.171
Zircon_21	823	459964	7.621	10.843	2.020	0.708	6.079	0.056	5.734	0.943	349.182	19.489	543.428	25.588	1472.008	38.349	349.182	19.489
Zircon_26	562	1617475	13.169	10.297	0.975	0.970	2.098	0.072	1.858	0.885	450.763	8.087	688.393	10.489	1569.505	18.270	1569.505	18.270
Zircon_22	388	896754	4.885	9.947	0.566	1.616	9.212	0.117	9.195	0.998	711.020	61.901	976.608	57.850	1634.004	10.517	1634.004	10.517
Zircon_11	755	2722835	5.494	9.859	0.904	2.099	2.488	0.150	2.318	0.932	901.314	19.496	1148.357	17.110	1650.414	16.753	1650.414	16.753
Zircon_6	720	2463783	2.539	9.825	1.556	2.648	1.785	0.189	0.875	0.490	1114.387	8.953	1314.197	13.156	1656.911	28.819	1656.911	28.819
Zircon_3	256	1103011	1.872	9.654	0.592	3.726	1.757	0.261	1.654	0.941	1494.375	22.058	1576.978	14.063	1689.300	10.925	1689.300	10.925
Zircon_7	253	1395232	1.503	9.630	0.600	4.187	2.515	0.292	2.443	0.971	1653.664	35.629	1671.509	20.619	1693.973	11.060	1693.973	11.060
Zircon_6	98	323944	2.708	9.643	0.658	4.293	2.530	0.300	2.443	0.966	1692.483	36.368	1691.990	20.840	1691.363	12.129	1691.363	12.129
Zircon_5	197	1169833	1.707	9.674	0.527	4.471	1.607	0.314	1.518	0.945	1758.726	23.371	1725.553	13.336	1685.532	9.722	1685.532	9.722