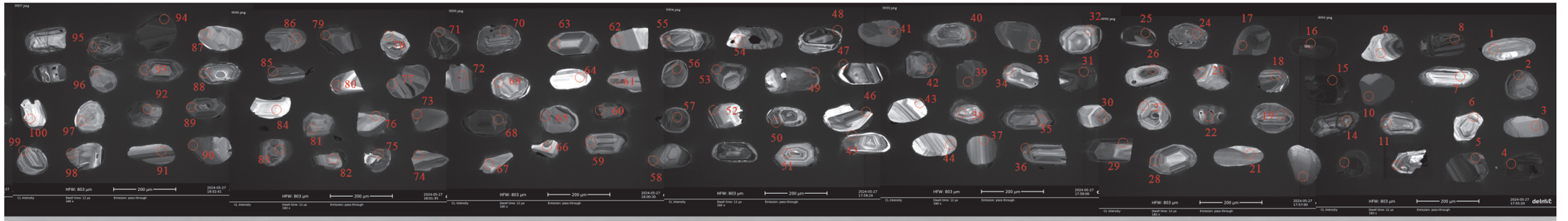
Figure S3. A) Cathodoluminescence (CL), B) transmitted-light optical, and C) reflected-light optical images of zircon grains obtained from sample IGH-08 (Medium to coarse-grained quartzite collected from the Quartz Sandstone Unit; equivalent of the Oumoula Formation) showing their internal texture, spots (red circles), and (D) apparent ages in Ma (1 error).

Sample IGH-08

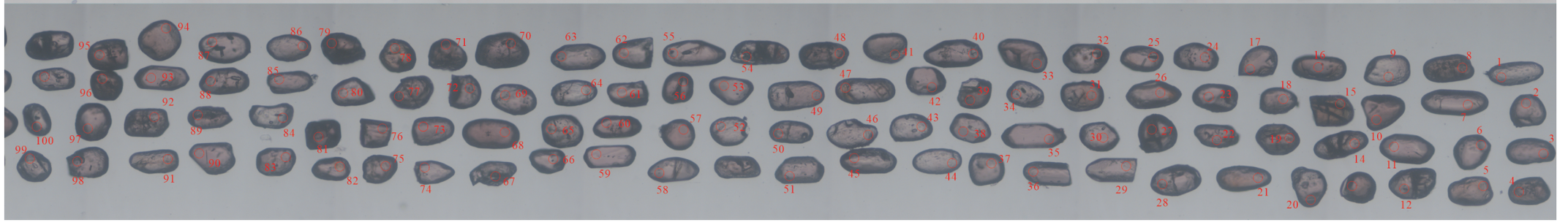
A



B



C



D

Spot	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Age (Ma)	2024	2024	1987	1983	1969	2025	2085	2255	1939	2000	2070	2085	2102	2065	1988	2002	1989	2409	2061	2013
1 sigma	26	27	25	19	22	30	33	20	32	16	28	32	22	22	21	22	56	23	22	22
Spot	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Age (Ma)	1992	2361	2033	2161	2124	2052	2074	2027	2031	2115	1910	2161	1966	1946	2000	2016	1966	2054	1931	2035
1 sigma	27	22	23	31	28	24	25	27	27	28	29	27	23	27	26	26	27	27	23	26
Spot	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Age (Ma)	1936	2013	2420	1944	2711	1880	2290	2332	2394	2339	2168	2235	2026	1991	2024	2167	2031	2028	2025	2020
1 sigma	27	28	31	31	16	30	26	28	26	23	26	26	28	32	30	24	24	25	28	27
Spot	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
Age (Ma)	1998	2366	2010	1954	1994	2009	2020	1929	2029	2009	2050	1920	1969	1987	2073	2009	1987	2020	2017	1917
1 sigma	26	24	28	36	28	34	31	27	29	26	29	33	30	31	22	25	30	31	27	32
Spot	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
Age (Ma)	1999	1979	1965	2044	1921	1961	1969	2088	2029	1683	1902	2307	1961	1954	2231	1966	1974	1972	2010	2026
1 sigma	29	30	29	38	29	21	30	27	26	29	27	24	26	24	26	27	32	26	26	47