GSA DATA REPOSITORY 2016136 **Goudge et al., 2016**

"Insights into surface runoff on early Mars from paleolake basin morphology and stratigraphy", DOI:10.1130/G37734.1.

ADDITIONAL DETAIL ON METHODS AND RESULTS:

The full results of our analysis, including paleolake valley morphology and basin degradation state for our entire catalog of 425 basins is shown in **Table DR1**. Our complete methods for obtaining these results are described further below.

Paleolake Valley Morphology

We assessed the morphology of the inlet and outlet valleys associated with our catalog of paleolakes based on their level of regional fluvial integration, amount of degradation, and their similarity in morphology to ancient valley networks (e.g., Howard et al., 2005; Irwin et al., 2005; Hynek et al., 2010). A primary metric used for determining the level of regional fluvial integration is the Strahler order, which is related to the number and scale of valley tributaries. A valley with no tributaries is assigned a value of 1, and when two 1st order valleys join they become a 2nd order valley. When two 2nd order valleys join, they become a 3rd order valley, and so on. Therefore, valleys with higher Strahler orders have more tributaries and are more integrated with the landscape (Strahler, 1952). Where possible, Strahler order values were taken from the Hynek et al. (2010) global catalog of valley networks, as referenced in **Table DR1**.

For our analysis, we determined the maximum Strahler order for the valley systems associated with the basin (**Table DR1**). We focused primarily on the Strahler order of the inlet valley; however, for many of the studied open-basin lakes, the basin watershed is too heavily eroded to confidently identify all inlet valleys and their tributaries. In many of these cases, we instead opted to use the Strahler order of the valley system that the basin outlet valley joins downstream. Such cases are noted in **Table DR1**. For open-basin lakes with eroded watersheds and outlet valleys that do not join major valley network systems downstream, we instead used the inlet valley Strahler order, although note that the values are uncertain and should be viewed as a lower-bound due to potential erosion of lower order valleys in the catchment.

In addition to the Strahler order, we also looked at the qualitative degradation state of the inlet and outlet valleys (i.e., how steep/sharp are the valley walls? do they display evidence for post-incision erosion, modification, or burial by younger material?). Using a combination of these two metrics, we assigned each of the basins in our catalog one of two classes: isolated inlet valleys (e.g., **Figures 1A, DR2**) or valley network-fed (e.g., **Figures 1B,C, DR1, DR3**).

Isolated inlet valley paleolakes are fed by valleys with sharply defined walls and minimal evidence for post-incision modification. Approximately 95% of these valleys have a Strahler order of 1, with the other ~5% having values of 2 (**Figure DR5A**). In the latter cases, the tributaries are often very short and do not extend further than a few kilometers from the main trunk valley.

Valley network-fed paleolakes are fed by more heavily eroded and modified valleys with less sharply defined walls. Approximately 90% of these valleys have a Strahler order ≥2, including over a dozen basins with values ≥5 (**Figure DR5A**). For valley network-fed paleolakes with a Strahler order of 1, the valleys are: (1) heavily eroded, and so the identification of all the related tributaries is highly uncertain, (2) the outlet of an open-basin lake directly upstream, i.e., they are contained within an integrated lake chain (Fassett and Head, 2008b), or (3) visibly buried by younger material.

We also note that our classification system is distinct from the inlet valley classification for closed-basin lakes presented by Goudge et al. (2015), which is based only on the length of the inlet valley. Goudge et al. (2015) classified basins as having either "long" (>20 km in length) or "short" (<20 km in length) inlet valleys. The classification presented here is instead based on the level of regional integration and degradation state of the valleys. While many of our isolated inlet valleys are classified as "short" by Goudge et al. (2015), and many of our valley network inlets are classified as "long" by Goudge et al. (2015), the relationship is not universal. The catalog presented here contains examples of both "short" (<20 km) inlet valleys classified as valley networks, and "long" (>20 km) inlet valleys classified as isolated inlet valleys.

Paleolake Basin Degradation State

We assessed the degradation state of the basins that host the 425 paleolakes in our catalog to help constrain the relative ages of these paleolakes. As the majority (~85%) of paleolake basins in our catalog are hosted by impact craters, a primary metric we used was the crater degradation state presented by Robbins and Hynek (2012). This degradation state is a qualitative assessment of the erosion and modification of the crater rim, ejecta, and interior, and is divided into four classes, with a value of 1 being assigned to the most degraded craters and 4 being assigned to the morphologically freshest craters (Robbins and Hynek, 2012). As younger craters tend to be less degraded than older craters of approximately the same diameter (e.g., Craddock et al., 1997; Craddock and

Howard, 2002; Mangold et al., 2012; Robbins and Hynek, 2012), higher Robbins and Hynek (2012) degradation state values tend to indicate geologically younger craters. The degradation state of the host basin for a paleolake acts as an upper bound on the relative age of that paleolake – no lake can be older than the basin in which it was contained.

Several (65) open-basin lakes in our catalog are not defined by single impact craters in the Robbins and Hynek (2012) database. Nine of these basins are contained within eroded, circular basins that appear to be heavily eroded craters not mapped by Robbins and Hynek (2012). However, the majority (56) of these basins are contained within heavily eroded inter-crater basins, such as the Eridania basin (Irwin et al., 2002).

Our results (**Figure DR5B**; **Table DR1**) show that approximately 90% of valley network-fed paleolakes are contained within: (1) craters with a Robbins and Hynek (2012) degradation state of 1, (2) an unmapped, heavily eroded impact crater, or (3) a heavily eroded inter-crater basin. This observation is consistent with our conclusion that valley network-fed paleolakes formed early in martian history, during the major era of valley network formation.

In contrast, >40% of isolated inlet valley paleolakes have a Robbins and Hynek (2012) basin degradation state of >1. This is consistent with our conclusion that isolated inlet valley paleolakes formed later in martian history, subsequent to the major era of valley network formation. Although a slight majority of isolated inlet valley paleolakes are contained within craters with a Robbins and Hynek (2012) basin degradation state of 1, this is still consistent with late fluvial activity – old craters can easily be breached by valleys associated with young fluvial activity (i.e., isolated inlet valleys). The important observation is that there are numerous less degraded (i.e., geologically younger) craters breached by isolated inlet valleys, which requires fluvial activity later in martian history, after these craters formed.

FIGURES:

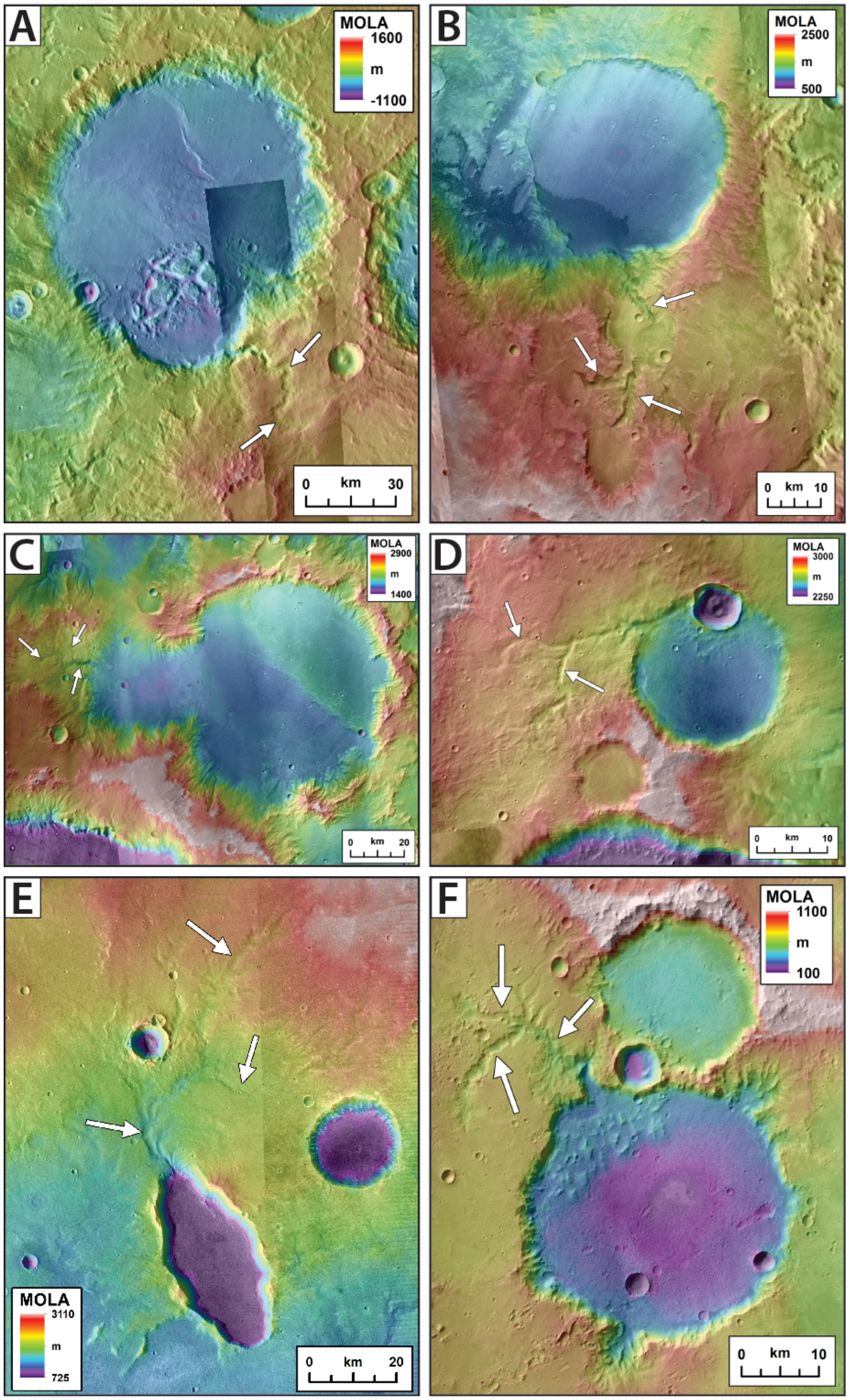

Figure DR1. Additional examples of valley network-fed closed-basin lakes. White arrows indicate inlet valleys. North is up in all images. **A:** Valley network-fed closed-basin lake at 7.1°N, 38.5°E. MOLA gridded topography overlain on a mosaic of CTX images D03_028576_1839 and P03_002072_1865 and the THEMIS ~100 m/pixel global daytime infrared mosaic. **B:** Valley network-fed closed-basin lake at −9.7°N, 129.4°E. MOLA gridded topography overlain on a mosaic of CTX images P22_009769_1686, P17_007765_1671, P16_007119_1701, P08_003994_1700, G13_023153_1702, and B17_016349_1690 and the THEMIS ~100 m/pixel global daytime infrared mosaic. **C:** Valley network-fed closed-basin lake at −11.3°N, 131.4°E. MOLA gridded topography overlain on a mosaic of CTX images B11_013738_1680, P22_009769_1686, P07_003928_1675, G14_023865_1699, G06_020674_1686, D21_035469_1695, D02_028032_1693, D02_027821_1713, B19_016850_1685, and B16_016072_1685 and the THEMIS ~100 m/pixel global daytime infrared mosaic. **D:** Valley network-fed closed-basin lake at −16.2°N, 45.9°E. MOLA gridded topography overlain on a mosaic of CTX images G22_026756_1645, D18_034259_1638, and B17_016418_1648 and the THEMIS ~100 m/pixel global daytime infrared mosaic. **E:** Valley network-fed closed-basin lake at −19.4°N, 53.8°E. MOLA gridded topography overlain on a mosaic of HRSC nadir images h2144_0000 and h7200_0000. **F:** Valley network-fed closed-basin lake at −19.7°N, 75.7°E. MOLA gridded topography overlain on a mosaic of CTX images P17_007767_1603, G21_026478_1603, and D16_033559_1585.

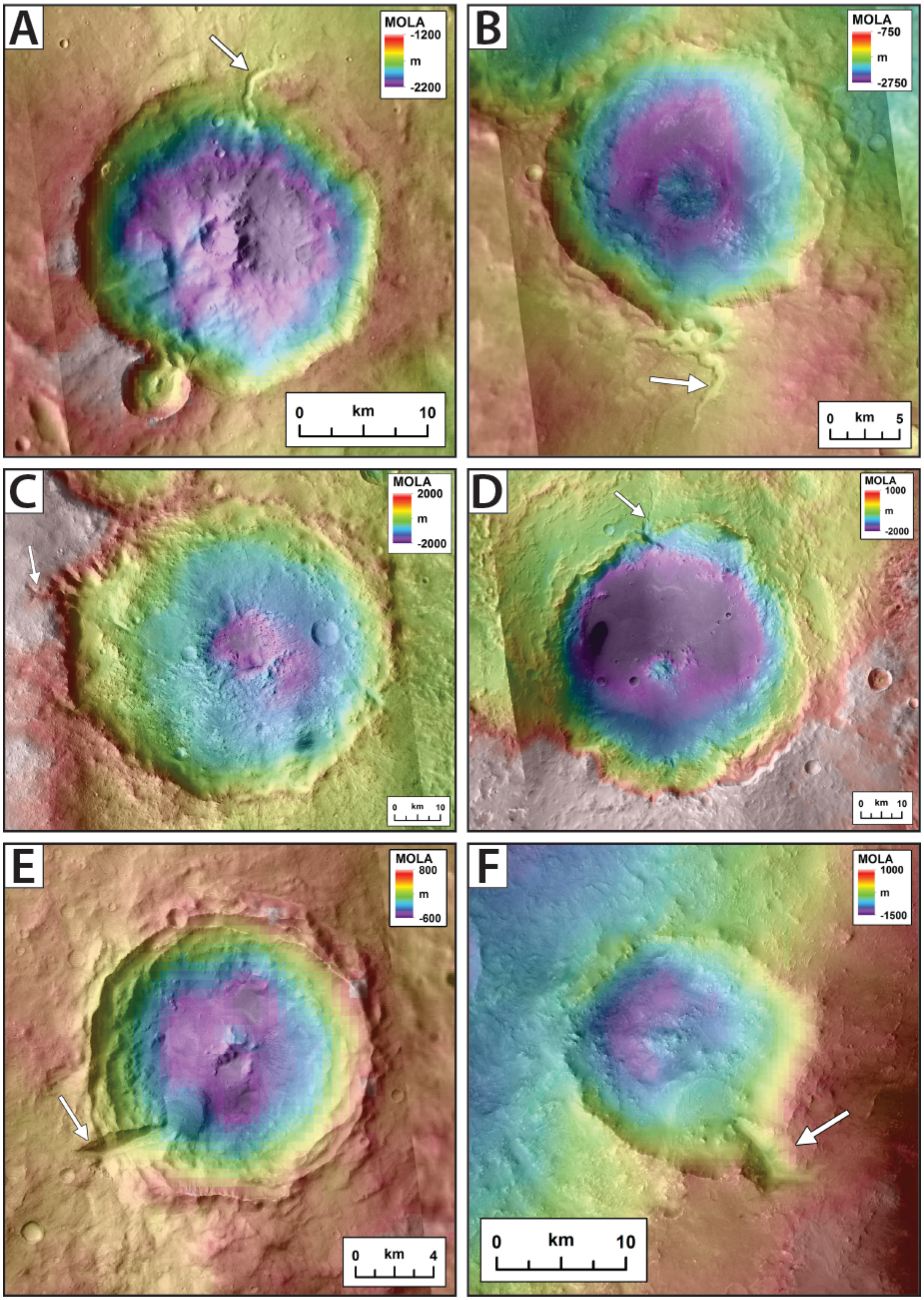

Figure DR2. Additional examples of isolated inlet valley closed-basin lakes. White arrows indicate inlet valleys. North is up in all images. **A:** Isolated inlet valley closed-basin lake at 26.2°N, 24.1°E. MOLA gridded topography overlain on a mosaic of CTX image G23_027350_2042 and the THEMIS ~100 m/pixel global daytime infrared mosaic. **B:** Isolated inlet valley closed-basin lake at 16.2°N, –53.2°E. MOLA gridded topography overlain on a mosaic of CTX image G14_023687_1963 and the THEMIS ~100 m/pixel global daytime infrared mosaic. **C:** Isolated inlet valley closed-basin lake at 21.4°N, 58.1°E. MOLA gridded topography overlain on a mosaic of CTX images P17_007807_2010, P16_007161_2011, P15_006871_2020, P14_006660_1996, P13_005948_2017 and the THEMIS ~100 m/pixel global daytime infrared mosaic. **D:** Isolated inlet valley closed-basin lake at 2.4°N, –51.6°E. MOLA gridded topography overlain on a mosaic of CTX image P06_003539_1825, G20_026166_1816, G18_025243_1835, and D04_028909_1829 and the THEMIS ~100 m/pixel global daytime infrared mosaic. **E:** Isolated inlet valley closed-basin lake at 1.5°N, 116.3°E. MOLA gridded topography overlain on a mosaic of CTX image B16_015967_1814 and the THEMIS ~100 m/pixel global daytime infrared mosaic. **F:** Isolated inlet valley closed-basin lake at 22.1°N, 66.8°E. MOLA gridded topography overlain on a mosaic of CTX images P14_006541_2031 and G02_019107_2021.

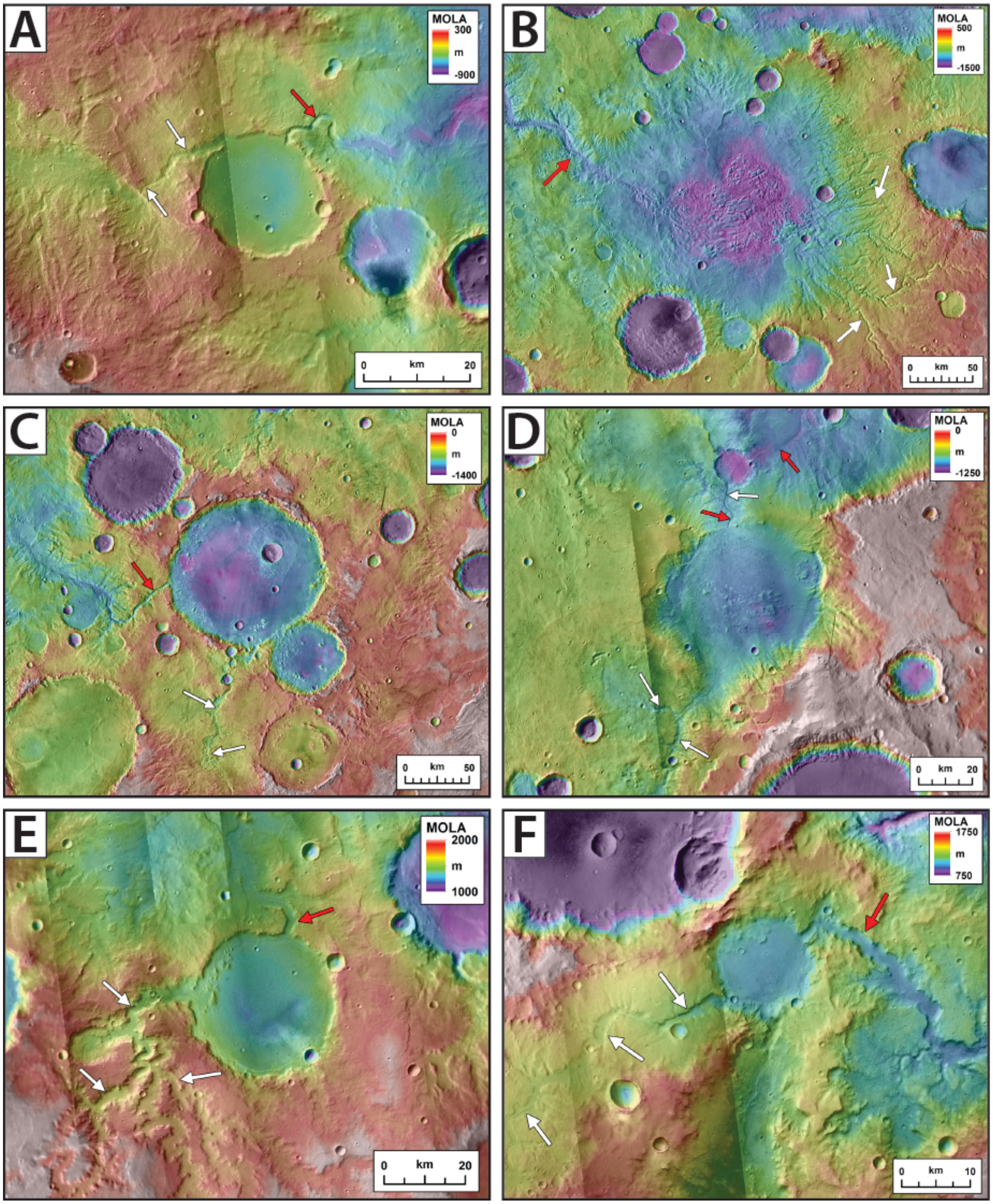

Figure DR3. Additional examples of valley network-fed open-basin lakes. White arrows indicate inlet valleys and red arrows indicate outlet valleys. North is up in all images. **A:** Valley network-fed open-basin lake at −12.4°N, 157.1°E. MOLA gridded topography overlain on a mosaic of CTX images P19_008555_1676, P12_005839_1672, G04_019750_1675, B22_018049_1678, and B20_017627_1676 and the THEMIS ~100 m/pixel global daytime infrared mosaic. **B:** Valley network-fed open-basin lake at −21.7°N, −12.3°E. MOLA gridded topography overlain on the THEMIS ~100 m/pixel global daytime infrared mosaic. **C:** Valley network-fed open-basin lake at −10.6°N, 2.8°E. MOLA gridded topography overlain on the THEMIS ~100 m/pixel global daytime infrared mosaic. **D:** Valley network-fed open-basin lakes at −23.1°N, −23.5°E (main basin) and −22.3°N, −23.6°E (smaller basin to north). Note that the outlet of the main basin directly feeds the smaller basin to the north. MOLA gridded topography overlain on a mosaic of CTX images G18_025163_1588, G16_024596_1573, B20_017515_1569, and B17_016170_1572 and the THEMIS ~100 m/pixel global daytime infrared mosaic. **E:** Valley network-fed open-basin lake at −6.4°N, 42.0°E. MOLA gridded topography overlain on a mosaic of CTX images P22_009759_1735, P05_002784_1732, G22_026822_1737, and D19_034536_1754 and the THEMIS ~100 m/pixel global daytime infrared mosaic. **F:** Valley network-fed open-basin lake at −7.3°N, 131.1°E. MOLA gridded topography overlain on a mosaic of CTX images G14_023865_1699, G04_019896_1734, G03_019474_1713, D13_032423_1735, D04_028665_1736, D02_027821_1713, and B21_017773_1752 and the THEMIS ~100 m/pixel global daytime infrared mosaic.

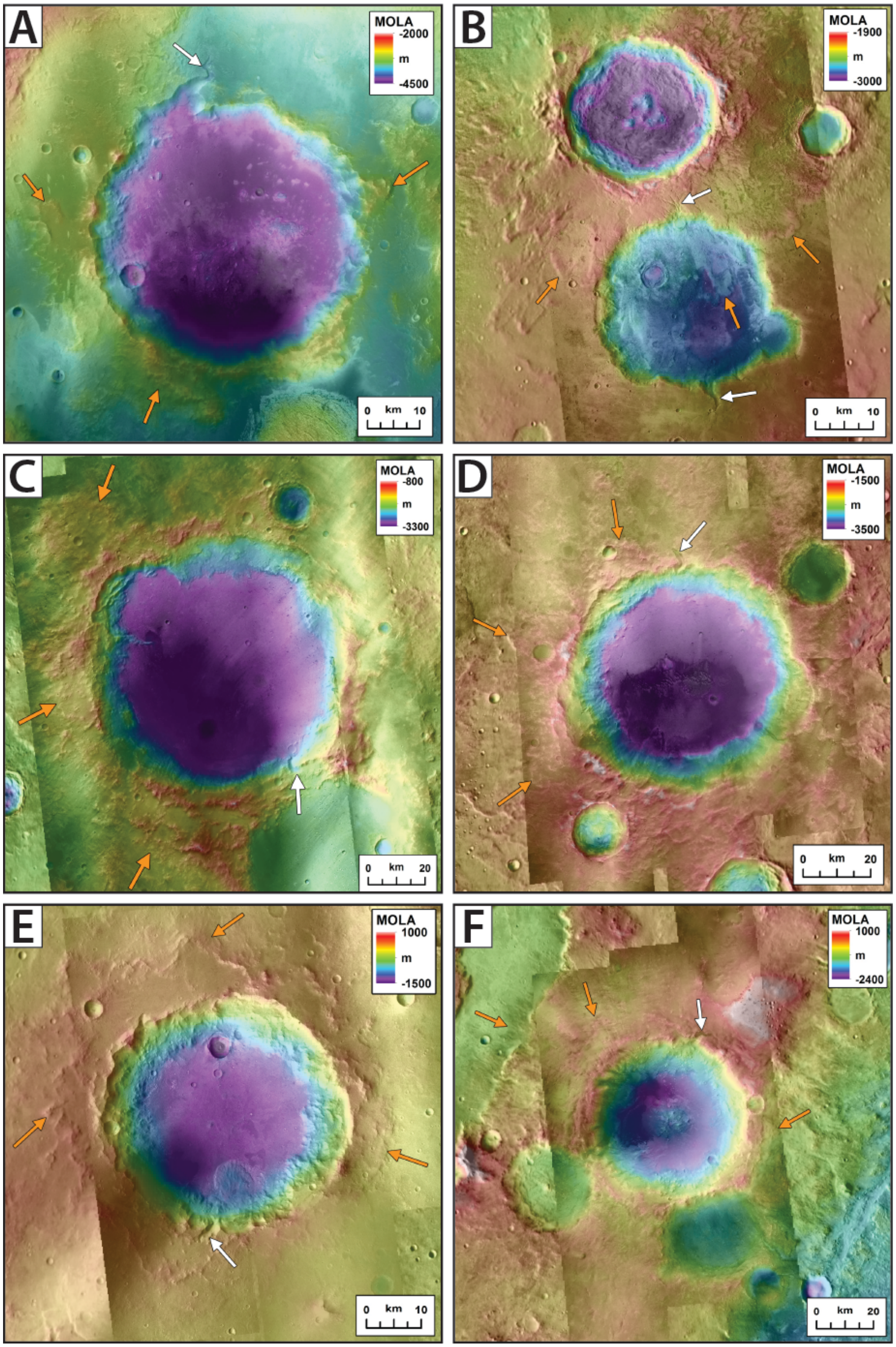

Figure DR4. Additional examples of closed-basin lakes with isolated inlet valleys (white arrows) hosted by, or crosscutting, impact craters with continuous ejecta deposits (orange arrows). **A:** Isolated inlet valley closed-basin lake at 22.1°N, –8.2°E. MOLA gridded topography overlain on a mosaic of CTX images P19_008495_2015, P17_007704_2014, P17_007493_2022, and P12_005845_2021. **B:** Isolated inlet valley closed-basin lake at

34.4°N, 3.2°E. MOLA gridded topography overlain on a mosaic of CTX images B18_016749_2126, B16_015971_2144, and B02_010591_2152 and the THEMIS ~100 m/pixel global daytime infrared mosaic. **C:** Isolated inlet valley closed-basin lake at 10.9°N, −14.0°E. MOLA gridded topography overlain on a mosaic of CTX images P22_009761_1897, P22_009550_1916, D01_027457_1902, B20_017475_1901, B08_012596_1930, B02_010473_1885, and B02_010328_1898 and the THEMIS ~100 m/pixel global daytime infrared mosaic. **D:** Isolated inlet valley closed-basin lake at 8.5°N, −15.8°E. MOLA gridded topography overlain on a mosaic of CTX images P19_008614_1892, P16_007467_1875, P12_005542_1864, D14_032771_1886, D08_030490_1890, and B11_013796_1898 and the THEMIS ~100 m/pixel global daytime infrared mosaic. **E:** Isolated inlet valley closed-basin lake at 7.0°N, −53.5°E. MOLA gridded topography overlain on a mosaic of CTX images B10_013626_1882, G14_023753_1841, G04_019784_1869, and B07_012281_1881 and the THEMIS ~100 m/pixel global daytime infrared mosaic. **F:** Isolated inlet valley closed-basin lake at 20.7°N, 75.8°E. MOLA gridded topography overlain on a mosaic of CTX images P15_006778_2002, D15_033137_1996, and B02_010272_2009 and the THEMIS ~100 m/pixel global daytime infrared mosaic.

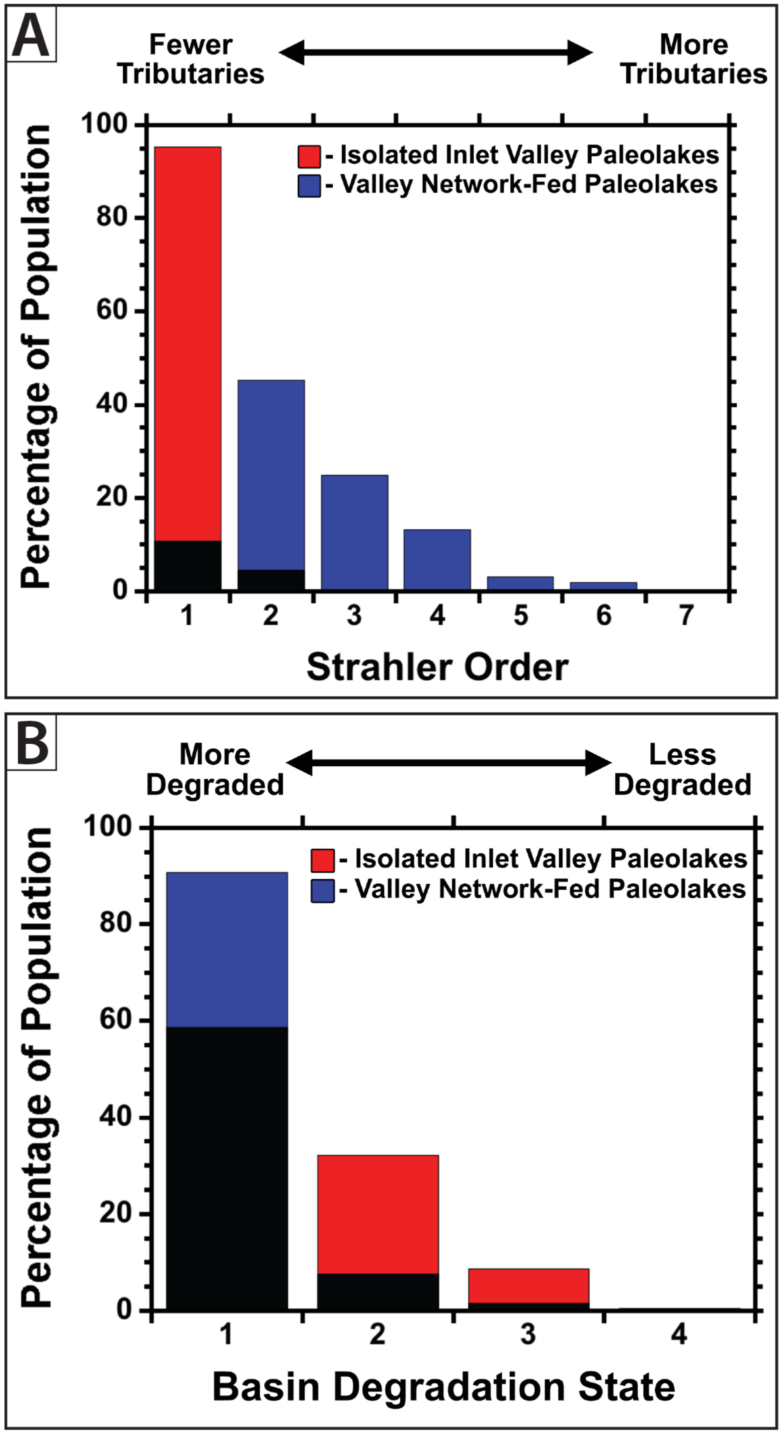

Figure DR5. **A:** Histogram of associated valley Strahler order for isolated inlet valley paleolakes (red) and valley network-fed paleolakes (blue). See also **Table DR1**. **B:** Histogram of host basin degradation state from Robbins and Hynek (2012) for isolated inlet valley paleolakes (red) and valley network-fed paleolakes (blue). Paleolakes not contained in impact craters classified by Robbins and Hynek (2012) are primarily contained within heavily degraded inter-crater basins, so are assigned a value of 1 for this histogram. See also **Table DR1**.

TABLES

TABLE DR1. CATALOG OF STUDIED PALEOLAKES.

Basin Type*	Basin #†	Lat. (°N)	Lon. (°E)	Valley Type§	Basin Degradation State#	Notes on Basin Degradation	Strahler Order	Notes on Strahler Order	Strahler Order Reference
CBL	1	36.0	-8.1	II	1		1		
CBL	2	22.1	-8.2	II	2		1		
CBL	3	14.8	-51.7	II	2		1		
CBL	4	12.0	-52.7	II	1		1		Hynek et al., 2010
CBL	5	10.2	-16.6	II	2		1		Hynek et al., 2010
CBL	6	7.1	38.5	VN	1		2		Hynek et al., 2010
CBL	7	5.3	-58.6	VN	3		2		Hynek et al., 2010
CBL	8	-3.3	88.3	VN	1		4		Hynek et al., 2010
CBL	9	-5.8	42.8	VN	1		2		Hynek et al., 2010
CBL	10	-5.9	-149.5	II	1		1		Hynek et al., 2010
CBL	11	-7.0	31.8	II	1		1		
CBL	12	-7.8	25.3	II	2		1		Hynek et al., 2010
CBL	13	-8.3	128.7	VN	1		6		Hynek et al., 2010
CBL	14	-9.7	129.4	VN	2		3		Hynek et al., 2010
CBL	15	-13.3	176.6	VN	1		2		Hynek et al., 2010

CBL	16	-13.8	142.5	II	1		1		Hynek et al., 2010
CBL	17	-15.2	61.3	VN	1		2		Hynek et al., 2010
CBL	18	-18.8	59.2	VN	2		3		Hynek et al., 2010
CBL	19	-19.4	52.0	VN	1		2		Hynek et al., 2010
CBL	20	-20.2	172.0	II	2		1		
CBL	21	55.0	-84.4	II	3		1		
CBL	22	47.5	-68.7	VN	1		2		Hynek et al., 2010
CBL	23	44.2	-57.1	II	1		1		Hynek et al., 2010
CBL	24	41.1	-2.9	II	3		1		Hynek et al., 2010
CBL	25	38.0	38.0	II	1		1		
CBL	26	38.4	47.4	VN	1		2		
CBL	27	37.9	54.6	VN	1		2		
CBL	28	37.1	12.5	II	1		1		
CBL	29	35.8	-12.1	II	1		1		
CBL	30	35.7	-55.2	II	1		1		
CBL	31	36.0	-141.8	II	2		1		
CBL	32	34.7	-137.4	II	1		1		
CBL	33	34.7	-55.3	II	1		1		
CBL	34	33.3	-54.7	II	1		1		
CBL	35	33.1	-9.2	II	1		1		
CBL	36	34.4	3.2	II	1	Basin is more heavily degraded than inlet valley.	1		

CBL	37	33.6	37.9	VN	1		2		Hynek et al., 2010
CBL	38	32.2	52.0	II	1		1		Hynek et al., 2010
CBL	39	32.3	40.1	II	1		1		
CBL	40	31.6	-5.7	II	2		1		
CBL	41	29.1	17.1	II	1		1		
CBL	42	29.6	56.5	II	1		1		
CBL	43	26.5	43.9	II	2		1		
CBL	44	26.2	37.5	II	2		1		
CBL	45	26.2	24.1	II	2		1		
CBL	46	27.1	21.4	II	2		1		Hynek et al., 2010
CBL	47	26.5	19.1	II	2		1		
CBL	48	26.1	10.0	II	2		1		Hynek et al., 2010
CBL	49	27.7	-124.5	II	3		1		
CBL	50	25.1	-97.5	II	3		2	Valley formation associated with geothermal heat from Ceraunius Tholus (Fassett and Head, 2007).	Hynek et al., 2010
CBL	51	31.4	-12.9	II	3		1		Hynek et al., 2010
CBL	52	26.3	-7.8	II	1		1		
CBL	53	23.8	42.0	II	1		1		
CBL	54	21.4	58.1	II	2		1		
CBL	55	21.4	37.8	II	2		1		
CBL	56	20.4	-20.9	II	1		1		
CBL	57	18.1	-23.0	II	1	Basin is more heavily	1		

						degraded than inlet valley.			
CBL	58	19.2	-18.6	II	1		1		
CBL	59	17.7	3.8	VN	1		2		Hynek et al., 2010
CBL	60	19.0	4.9	II	2		1		
CBL	61	19.9	12.0	II	2		2		Hynek et al., 2010
CBL	62	16.7	26.9	II	1		1		
CBL	63	16.2	-53.2	II	2		1		Hynek et al., 2010
CBL	64	14.3	-24.4	II	1	Basin is more heavily degraded than inlet valley.	1		
CBL	65	13.0	-14.2	II	1		1		
CBL	66	13.2	9.2	II	3		2		
CBL	67	12.8	56.4	II	1		1		
CBL	68	10.6	39.5	VN	1		2		Hynek et al., 2010
CBL	69	10.9	-14.0	II	2		1		
CBL	70	12.5	-49.0	II	1	Basin is more heavily degraded than inlet valley.	1		
CBL	71	11.6	-51.3	II	2		1		
CBL	72	8.4	-56.9	II	1		1		
CBL	73	8.2	-49.3	II	2		1		
CBL	74	9.9	-46.6	II	3		1		
CBL	75	7.8	-39.1	II	2		1		
CBL	76	8.0	-26.2	II	1		1		Hynek et al., 2010
CBL	77	8.5	-15.8	II	2		1		
CBL	78	5.8	107.4	II	2		1		

CBL	79	7.0	106.8	II	2		1		
CBL	80	5.0	28.2	II	1		1		
CBL	81	5.1	-50.8	II	1		1		
CBL	82	7.0	-53.5	II	3		1		
CBL	83	2.4	-51.6	II	3		2	Inlet valley has only very minor tributaries.	
CBL	84	4.1	-40.5	II	1		1		
CBL	85	3.5	-40.2	II	1		1		
CBL	86	4.0	-38.6	II	1		1		
CBL	87	3.1	35.2	VN	1		2		
CBL	88	3.9	33.3	II	1		1		
CBL	89	3.0	45.5	VN	1		2		Hynek et al., 2010
CBL	90	3.2	101.4	II	2		1		
CBL	91	3.7	113.5	II	3		1		
CBL	92	1.5	116.3	II	4		1		
CBL	93	-1.7	-49.2	II	1		1		
CBL	94	-1.4	-39.7	II	2		2	Inlet valley has only very minor tributaries.	Hynek et al., 2010
CBL	95	-1.4	-36.9	II	2		1		
CBL	96	-2.9	67.7	II	2		1		
CBL	97	-5.2	137.8	VN	2		4		Hynek et al., 2010
CBL	98	-6.3	40.6	II	1		1		
CBL	99	-4.8	2.0	II	2		1		Hynek et al., 2010
CBL	100	-6.3	-4.4	II	1		1		
CBL	101	-9.3	- 159.4	II	1		1		
CBL	102	-8.2	- 159.4	II	1		1		

CBL	103	-9.9	-158.1	II	2		1		
CBL	104	-9.5	-148.0	II	1		1		
CBL	105	-7.7	-146.6	II	1		1		
CBL	106	-10.0	-53.7	II	2		1		
CBL	107	-9.6	-11.1	II	2		1		
CBL	108	-8.2	3.0	II	1		1		
CBL	109	-7.8	30.4	II	1		1		
CBL	110	-9.0	38.1	II	1		1		
CBL	111	-9.6	144.1	II	3		1		Hynek et al., 2010
CBL	112	-9.4	148.8	II	2		1		Hynek et al., 2010
CBL	113	-10.6	139.7	II	2		1		Hynek et al., 2010
CBL	114	-10.8	136.4	II	1		1		
CBL	115	-11.3	131.4	VN	2	Level of basin degradation is more consistent with a Robbins and Hynek (2012) basin degradation state of 1.	2		Hynek et al., 2010
CBL	116	-11.5	124.6	II	1		1		
CBL	117	-12.0	123.7	II	1		1		
CBL	118	-10.8	91.2	II	2		1		
CBL	119	-11.1	18.8	II	1		1		
CBL	120	-11.6	16.5	II	1		1		Hynek et al., 2010
CBL	121	-11.6	12.0	II	2		1		
CBL	122	-12.2	-17.0	II	1		1		

CBL	123	-12.1	-163.4	II	2		1		
CBL	124	-13.7	6.8	II	1		1		
CBL	125	-13.9	40.4	II	1		1		
CBL	126	-13.3	50.5	VN	2		3		
CBL	127	-13.9	78.5	II	2		1		
CBL	128	-13.8	99.1	II	1		1		
CBL	129	-13.4	124.9	II	1		1		
CBL	130	-16.7	169.4	II	2		1		
CBL	131	-15.6	79.3	II	1		1		
CBL	132	-16.2	45.9	VN	1		2		
CBL	133	-16.9	45.9	II	2		1		
CBL	134	-17.5	44.9	II	1		1		
CBL	135	-16.7	28.9	II	1		1		
CBL	136	-16.5	25.7	II	1		1		
CBL	137	-16.9	-37.8	II	1		1		
CBL	138	-15.5	-155.5	II	2		1		
CBL	139	-19.5	-13.3	II	1		1		
CBL	140	-19.9	-2.9	II	1		1		
CBL	141	-19.6	46.2	II	2		2		
CBL	142	-19.4	53.8	VN	3	Level of basin degradation is more consistent with a Robbins and Hynek (2012) basin degradation state of 2.	3		Hynek et al., 2010
CBL	143	-19.7	75.7	VN	1		3		Hynek et al., 2010
CBL	144	-18.2	79.8	II	1		1		

CBL	145	-19.6	84.3	II	2		1		
CBL	146	-20.4	176.9	II	1		1		
CBL	147	-21.8	162.7	VN	1		2		
CBL	148	-20.5	47.4	II	1		1		Hynek et al., 2010
CBL	149	-22.6	-56.6	II	2		1		Hynek et al., 2010
CBL	150	-23.4	-169.1	II	1		1		
CBL	151	-24.2	-44.9	II	1		1		
CBL	152	-25.1	-8.4	II	1		1		
CBL	153	-23.8	52.6	II	3		1		
CBL	154	-25.3	71.8	II	1		1		Hynek et al., 2010
CBL	155	-24.4	86.6	II	2		1		Hynek et al., 2010
CBL	156	-27.6	141.5	II	1		1		Hynek et al., 2010
CBL	157	-27.3	127.7	VN	1		3		Hynek et al., 2010
CBL	158	-25.7	97.5	VN	3	Level of basin degradation is more consistent with a Robbins and Hynek (2012) basin degradation state of 1.	3		Hynek et al., 2010
CBL	159	-27.4	67.5	II	1		1		
CBL	160	-25.8	-173.8	II	1		1		
CBL	161	-28.6	-167.2	II	1		1		
CBL	162	-29.3	-32.1	II	1		1		
CBL	163	-28.8	-6.6	II	1		1		Hynek et al., 2010

CBL	164	-29.0	139.1	II	1		1		
CBL	165	-31.5	128.3	VN	1		2		Hynek et al., 2010
CBL	166	-30.9	35.8	II	1		1		
CBL	167	-30.1	32.5	II	1		1		
CBL	168	-31.3	20.1	II	1		1		
CBL	169	-32.5	10.6	II	1		2	Inlet valley has only very minor tributaries.	Hynek et al., 2010
CBL	170	-31.4	-10.9	II	1		1		
CBL	171	-31.5	-20.3	II	1		1		
CBL	172	-32.0	-22.2	II	1		1		
CBL	173	-30.7	-102.9	II	1		1		
CBL	174	-33.8	-48.6	II	1		1		Hynek et al., 2010
CBL	175	-34.9	-48.0	II	1		1		Hynek et al., 2010
CBL	176	-33.2	-32.4	II	1		1		
CBL	177	-34.6	-31.9	II	1		1		
CBL	178	-34.4	-13.0	II	2		1		Hynek et al., 2010
CBL	179	-34.3	15.2	II	2		1		
CBL	180	-34.2	18.2	II	2		1		
CBL	181	-33.9	45.3	II	2		1		
CBL	182	-33.6	48.1	II	2		1		
CBL	183	-37.7	37.5	II	1		1		
CBL	184	-37.4	10.5	II	1		1		
CBL	185	-36.4	-7.5	II	1		1		
CBL	186	-37.9	-69.1	II	2		1		
CBL	187	-36.6	-72.8	II	1		1		Hynek et al., 2010

CBL	188	-39.5	-12.6	II	1		1		Hynek et al., 2010
CBL	189	-39.1	23.9	II	2		1		
CBL	190	-40.7	43.6	II	2		1		Hynek et al., 2010
CBL	191	-41.5	-0.5	II	1		1		
CBL	192	-41.3	-62.5	II	2		2		Hynek et al., 2010
CBL	193	-41.4	-76.3	II	2		1		
CBL	194	-42.5	-150.7	II	1		1		
CBL	195	-45.3	122.8	II	1		1		
CBL	196	-46.3	-163.8	II	1		1		
CBL	197	-48.3	-13.2	II	1		1		Hynek et al., 2010
CBL	198	-54.4	-100.4	II	1		1		
CBL	199	22.1	66.8	II	3		1		
CBL	200	-9.9	144.5	VN	1		2		Hynek et al., 2010
CBL	201	-12.0	125.1	II	1		1		
CBL	202	-37.5	-158.8	II	3		1		
CBL	203	-24.0	-33.3	VN	1		3		
CBL	204	-26.0	-34.0	VN	2		4		Hynek et al., 2010
CBL	205	20.7	75.8	II	3		1		
OBL	1	1.5	116.9	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	3		Hynek et al., 2010
OBL	2	-9.3	151.8	VN	1		3	Value taken from outlet valley system.	
OBL	3	-15.2	166.8	VN	N/A	Paleolake is contained	2		Hynek et al.,

						within a heavily eroded inter-crater basin.			2010
OBL	4	-14.6	-174.9	VN	1		2		Hynek et al., 2010
OBL	5	-10.3	-161.6	VN	2	Level of basin degradation is more consistent with a Robbins and Hynek (2012) basin degradation state of 1.	4		Hynek et al., 2010
OBL	6	-11.5	152.8	VN	1		2		Hynek et al., 2010
OBL	7	-12.4	157.1	VN	1		5		Hynek et al., 2010
OBL	8	18.3	42.2	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	4	Value taken from outlet valley system.	Hynek et al., 2010
OBL	9	27.5	59.7	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	3	Value taken from outlet valley system.	Hynek et al., 2010
OBL	10	21.1	60.9	VN	1		N/A	Insufficient image coverage to confidently assign a Strahler order.	
OBL	11	26.6	63.0	VN	1		1	Paleolake is directly fed by the outlet of open-basin lake #10.	
OBL	12	-1.3	101.0	VN	N/A	Paleolake is contained within a heavily degraded crater not mapped by Robbins and Hynek (2012).	3		Hynek et al., 2010
OBL	13	0.9	102.0	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	3		Hynek et al., 2010
OBL	14	2.4	102.4	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	2		Hynek et al., 2010

OBL	15	-18.3	-169.2	VN	1		3	Value taken from outlet valley system.	Hynek et al., 2010
OBL	16	-21.7	-12.3	VN	N/A	Paleolake is contained within a heavily degraded crater not mapped by Robbins and Hynek (2012).	6		Hynek et al., 2010
OBL	17	25.6	-8.6	VN	1		2		Hynek et al., 2010
OBL	18	-8.8	-7.2	VN	1		3		Hynek et al., 2010
OBL	19	-10.6	2.8	VN	1		5		Hynek et al., 2010
OBL	20	31.3	60.1	VN	1		2		Hynek et al., 2010
OBL	21	30.9	63.0	VN	1		3	Value taken from outlet valley system.	Hynek et al., 2010
OBL	22	-3.7	78.4	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	2	Value taken from outlet valley system.	Hynek et al., 2010
OBL	23	-2.4	85.0	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	4		Hynek et al., 2010
OBL	24	-4.5	85.0	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	2		
OBL	25	-0.1	89.7	VN	1		2		Hynek et al., 2010
OBL	26	-4.6	90.0	VN	1		5		Hynek et al., 2010
OBL	27	-2.8	108.2	VN	1		3		Hynek et al., 2010
OBL	28	-4.0	109.2	VN	1		3	Value taken from outlet valley system.	Hynek et al., 2010
OBL	29	-2.7	110.9	VN	1		4		Hynek et al., 2010

OBL	30	-11.7	144.1	VN	1		2		Hynek et al., 2010
OBL	31	-10.8	154.5	VN	1		1	Inlet valley is clearly buried by younger material.	Hynek et al., 2010
OBL	32	-23.1	-23.5	VN	1		2		Hynek et al., 2010
OBL	33	-5.5	-5.3	VN	1		2		Hynek et al., 2010
OBL	34	-3.4	102.3	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	3	Inlet valleys are heavily eroded/modified, so value is uncertain.	
OBL	35	-27.9	3.9	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	4	Value taken from outlet valley system.	Hynek et al., 2010
OBL	36	13.2	31.0	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	3		Hynek et al., 2010
OBL	37	10.0	31.6	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	6		Hynek et al., 2010
OBL	38	1.3	35.5	VN	1		4		Hynek et al., 2010
OBL	39	-6.4	42.0	VN	1		4		Hynek et al., 2010
OBL	40	29.9	25.6	VN	1		1	Paleolake is directly fed by the outlet of open-basin lake #117.	Hynek et al., 2010
OBL	41	24.4	31.7	VN	1		2	Inlet valleys are heavily eroded/modified, so value is uncertain.	Hynek et al., 2010
OBL	42	20.0	36.4	VN	1		4		Hynek et al., 2010
OBL	43	19.0	35.1	VN	1		2		Hynek et al., 2010
OBL	44	16.7	33.6	VN	N/A	Paleolake is contained	3		

						within a heavily eroded inter-crater basin.			
OBL	45	18.4	77.7	VN	1		3		Schon et al., 2012
OBL	46	-10.3	127.2	VN	N/A	Paleolake is contained within a heavily degraded crater not mapped by Robbins and Hynek (2012).	3		Hynek et al., 2010
OBL	47	-10.4	128.0	VN	1		3		Hynek et al., 2010
OBL	48	-7.3	131.1	VN	1		3		Hynek et al., 2010
OBL	49	-4.6	127.1	VN	1		5		Hynek et al., 2010
OBL	50	-14.4	175.4	VN	1		5		Hynek et al., 2010
OBL	51	-30.1	176.6	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	3		Hynek et al., 2010
OBL	52	8.5	-48.0	VN	1		3		Hynek et al., 2010
OBL	53	33.8	17.1	VN	1		3		Hynek et al., 2010
OBL	54	34.6	18.2	VN	1		2		Hynek et al., 2010
OBL	55	34.2	18.0	VN	1		2		Hynek et al., 2010
OBL	56	-12.1	-155.8	VN	1		1	Inlet valley is clearly buried by younger material.	Hynek et al., 2010
OBL	57	-15.4	-158.6	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	2		Hynek et al., 2010
OBL	58	27.9	26.6	VN	1		1	Inlet valley is clearly buried by younger	Hynek et al., 2010

								material.	
OBL	59	-20.3	59.6	VN	1		3	Inlet valleys are heavily eroded/modified, so value is uncertain.	
OBL	60	-21.0	60.6	VN	1		2	Inlet valleys are heavily eroded/modified, so value is uncertain.	
OBL	63	-0.8	125.2	VN	1		4		Hynek et al., 2010
OBL	64	-1.6	126.6	VN	1		4		Hynek et al., 2010
OBL	65	-23.4	-12.3	VN	1		2		Hynek et al., 2010
OBL	66	-19.4	-6.3	VN	1		4		Hynek et al., 2010
OBL	67	-21.5	4.1	VN	1		2		Hynek et al., 2010
OBL	68	-10.3	151.4	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	1	Value taken from outlet valley system.	
OBL	69	27.3	61.4	VN	1		1	Paleolake is directly fed by the outlet of open-basin lake #11.	
OBL	70	-6.9	135.4	VN	1		3		Hynek et al., 2010
OBL	71	-6.7	136.5	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	4		Hynek et al., 2010
OBL	72	-9.4	134.9	VN	1		4		Hynek et al., 2010
OBL	73	-11.2	134.1	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	4		Hynek et al., 2010
OBL	74	-9.5	-167.2	VN	2		2	Inlet valleys are heavily eroded/modified, so value is uncertain.	

OBL	75	-10.2	-165.6	VN	1		3		Hynek et al., 2010
OBL	76	-5.9	-162.9	VN	N/A	Paleolake is contained within a heavily degraded crater not mapped by Robbins and Hynek (2012).	2		Hynek et al., 2010
OBL	77	-23.2	134.5	VN	1		3	Inlet valleys are heavily eroded/modified, so value is uncertain.	
OBL	78	0.1	123.3	VN	2		4	Value taken from outlet valley system.	Hynek et al., 2010
OBL	79	-14.0	161.1	VN	1		2	Inlet valleys are heavily eroded/modified, so value is uncertain.	
OBL	80	-22.8	159.5	VN	1		2		Hynek et al., 2010
OBL	81	-4.2	-1.7	VN	1		4		Hynek et al., 2010
OBL	82	-2.6	62.2	VN	2	Level of basin degradation is more consistent with a Robbins and Hynek (2012) basin degradation state of 1.	4	Value taken from outlet valley system.	Hynek et al., 2010
OBL	83	-26.9	-18.3	VN	1		3		Hynek et al., 2010
OBL	84	-20.5	87.0	VN	1		4		Hynek et al., 2010
OBL	85	-13.3	96.5	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	2		Hynek et al., 2010
OBL	86	-21.6	56.2	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	2	Value taken from outlet valley system.	Hynek et al., 2010
OBL	87	-6.3	94.3	VN	1		4	Value taken from outlet	Hynek et al.,

								valley system.	2010
OBL	88	-8.7	149.4	VN	1		1	Value taken from outlet valley system.	Hynek et al., 2010
OBL	89	-16.0	167.3	VN	1		2	Inlet valleys are heavily eroded/modified, so value is uncertain.	
OBL	90	-20.0	170.7	VN	1		3		Hynek et al., 2010
OBL	91	-17.4	171.3	VN	1		1	Paleolake is directly fed by the outlet of open-basin lake #92.	Hynek et al., 2010
OBL	92	-18.2	171.3	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	1	Value taken from outlet valley system.	Hynek et al., 2010
OBL	93	-12.8	16.4	VN	1		2		Hynek et al., 2010
OBL	94	-53.4	-13.7	VN	1		2		Hynek et al., 2010
OBL	95	-22.5	-20.5	VN	1		4		Hynek et al., 2010
OBL	96	-29.8	147.2	VN	1		2		
OBL	97	-29.9	147.6	VN	1		1	Paleolake is directly fed by the outlet of open-basin lake #96.	
OBL	98	-19.7	78.1	VN	1		2		Hynek et al., 2010
OBL	99	-18.9	77.6	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	3		Hynek et al., 2010
OBL	100	-23.4	71.0	VN	1		2		Hynek et al., 2010
OBL	101	-23.1	76.5	VN	1		2		
OBL	102	-23.2	75.6	VN	1		2	Inlet valleys are heavily eroded/modified, so value is uncertain.	
OBL	103	-22.1	75.9	VN	N/A	Paleolake is contained	2	Inlet valleys are heavily	

						within a heavily eroded inter-crater basin.		eroded/modified, so value is uncertain.	
OBL	104	-20.1	78.2	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	3		Hynek et al., 2010
OBL	105	-41.1	-3.0	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	2		Hynek et al., 2010
OBL	106	-63.2	-22.3	VN	N/A	Paleolake is contained within a heavily degraded crater not mapped by Robbins and Hynek (2012).	2		Hynek et al., 2010
OBL	107	-62.9	-20.0	VN	N/A	Paleolake is contained within a heavily degraded crater not mapped by Robbins and Hynek (2012).	2		Hynek et al., 2010
OBL	108	-55.2	-24.4	VN	1		1	Paleolake is directly fed by the outlet of open-basin lake #109.	
OBL	109	-54.7	-24.4	VN	1		3		Hynek et al., 2010
OBL	110	-52.9	-19.0	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	3		Hynek et al., 2010
OBL	111	-12.7	11.7	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	5		Hynek et al., 2010
OBL	112	13.2	19.5	VN	1		3		Hynek et al., 2010
OBL	113	-59.7	-32.4	VN	1		1	Paleolake is directly fed by the outlet of open-basin lake #122.	
OBL	114	-37.2	-9.8	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	1	Value taken from outlet valley system.	Hynek et al., 2010

OBL	115	26.8	74.4	VN	1		2	Inlet valleys are heavily eroded/modified, so value is uncertain.	
OBL	116	-3.8	93.4	VN	1		2		Hynek et al., 2010
OBL	117	28.7	26.2	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	1	Value taken from outlet valley system.	Hynek et al., 2010
OBL	118	32.0	68.9	VN	1		2	Inlet valleys are heavily eroded/modified, so value is uncertain.	
OBL	120	30.3	68.0	VN	1		1	Inlet valleys are heavily eroded/modified, so value is uncertain.	Hynek et al., 2010
OBL	121	-16.1	-174.5	VN	1		2	Value taken from outlet valley system.	Hynek et al., 2010
OBL	122	-60.1	-31.7	VN	N/A	Paleolake is contained within a heavily degraded crater not mapped by Robbins and Hynek (2012).	2		Hynek et al., 2010
OBL	123	-20.4	-21.7	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	6		Hynek et al., 2010
OBL	124	26.7	33.1	VN	1		2	Inlet valleys are heavily eroded/modified, so value is uncertain.	
OBL	125	18.9	36.1	VN	1		2	Value taken from outlet valley system.	
OBL	126	-21.6	57.6	VN	1		2		Hynek et al., 2010
OBL	127	2.2	115.9	VN	1		2	Inlet valleys are heavily eroded/modified, so value is uncertain.	
OBL	128	-33.8	80.9	VN	1		2		Hynek et al., 2010

OBL	129	-11.9	-4.9	VN	1		3	Value taken from outlet valley system.	Hynek et al., 2010
OBL	130	-12.0	-177.9	VN	2	Level of basin degradation is more consistent with a Robbins and Hynek (2012) basin degradation state of 1.	3		Hynek et al., 2010
OBL	131	-5.0	22.3	VN	1		2	Inlet valleys are heavily eroded/modified, so value is uncertain.	
OBL	132	-18.0	24.7	VN	1		3		Hynek et al., 2010
OBL	133	31.0	19.0	VN	1		3		Hynek et al., 2010
OBL	134	-13.4	161.3	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	2		Hynek et al., 2010
OBL	135	-39.2	-103.3	VN	2		2		Hynek et al., 2010
OBL	136	-38.6	-100.7	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	2	Value taken from outlet valley system.	Hynek et al., 2010
OBL	137	-26.1	85.4	VN	1		2	Inlet valleys are heavily eroded/modified, so value is uncertain.	
OBL	138	-19.0	-6.3	VN	N/A	Paleolake is contained within a heavily degraded crater not mapped by Robbins and Hynek (2012).	1	Paleolake is directly fed by the outlet of open-basin lake #66.	Hynek et al., 2010
OBL	139	0.0	28.8	VN	1		4		Hynek et al., 2010
OBL	140	-0.4	38.1	VN	1		4	Value taken from outlet valley system.	Hynek et al., 2010
OBL	141	-15.0	-22.2	VN	2	Level of basin	3		Hynek et al.,

						degradation is more consistent with a Robbins and Hynek (2012) basin degradation state of 1.			2010
OBL	142	-48.5	-151.0	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	4	Value taken from outlet valley system.	Hynek et al., 2010
OBL	143	-53.9	14.7	VN	1		N/A	Insufficient image coverage to confidently assign a Strahler order.	Hynek et al., 2010
OBL	144	-36.3	-11.5	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	3		Hynek et al., 2010
OBL	145	-31.5	-14.0	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	6	Value taken from outlet valley system.	Hynek et al., 2010
OBL	146	-22.3	-23.6	VN	1		3		Hynek et al., 2010
OBL	147	-26.5	-4.0	VN	1		2		Hynek et al., 2010
OBL	148	-26.8	-11.1	VN	1		2	Inlet valleys are heavily eroded/modified, so value is uncertain.	
OBL	149	-10.0	41.1	VN	1		2		Hynek et al., 2010
OBL	150	-9.0	41.5	VN	1		4		Hynek et al., 2010
OBL	151	26.4	66.7	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	2	Inlet valleys are heavily eroded/modified, so value is uncertain.	
OBL	152	27.7	67.2	VN	1		1	Paleolake is directly fed by the outlet of open-basin lake #151.	
OBL	153	3.1	86.6	VN	1		2		

OBL	154	-18.7	174.9	VN	1		3		Hynek et al., 2010
OBL	155	-11.6	-159.6	VN	1		3		
OBL	156	-11.2	-159.8	VN	N/A	Paleolake is contained within a heavily degraded crater not mapped by Robbins and Hynek (2012).	1	Paleolake is directly fed by the outlet of open-basin lake #155.	
OBL	157	-40.4	-54.9	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	2		
OBL	158	-45.2	-58.4	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	2		Hynek et al., 2010
OBL	159	-37.5	-45.7	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	3		Hynek et al., 2010
OBL	160	-36.7	-45.2	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	2		
OBL	161	-36.2	-44.6	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	3		Hynek et al., 2010
OBL	162	-35.7	-44.6	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	3		Hynek et al., 2010
OBL	163	-37.4	-45.3	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	2		
OBL	164	-11.2	15.7	VN	1		3		Hynek et al., 2010
OBL	165	20.8	39.1	VN	1		2	Inlet valleys are heavily eroded/modified, so value is uncertain.	

OBL	166	-6.4	24.4	VN	1		2		Hynek et al., 2010
OBL	167	-1.9	102.8	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	2		
OBL	168	9.6	-46.2	VN	3	Level of basin degradation is more consistent with a Robbins and Hynek (2012) basin degradation state of 1.	2		Hynek et al., 2010
OBL	169	-8.6	139.7	VN	1		1	Inlet valley is clearly buried by younger material.	
OBL	170	-10.3	142.4	VN	1		3		Hynek et al., 2010
OBL	171	-21.3	-5.3	VN	1		4		Hynek et al., 2010
OBL	172	-10.1	131.8	VN	1		3	Value taken from outlet valley system.	Hynek et al., 2010
OBL	173	-10.5	131.4	VN	2		3	Value taken from outlet valley system.	Hynek et al., 2010
OBL	174	-10.7	132.5	VN	1		4	Value taken from outlet valley system.	Hynek et al., 2010
OBL	175	-22.0	132.5	VN	1		3		Hynek et al., 2010
OBL	176	-27.1	142.1	VN	1		2		Hynek et al., 2010
OBL	177	-26.9	141.3	VN	1		1	Inlet valleys are heavily eroded/modified, so value is uncertain.	
OBL	178	27.3	37.1	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	2	Value taken from outlet valley system.	Hynek et al., 2010
OBL	179	20.6	32.3	VN	N/A	Paleolake is contained within a heavily eroded	2	Inlet valleys are heavily eroded/modified, so	

						inter-crater basin.		value is uncertain.	
OBL	180	-34.0	179.1	VN	1		2	Inlet valleys are heavily eroded/modified, so value is uncertain.	
OBL	181	-5.7	46.6	VN	1		4	Value taken from outlet valley system.	Hynek et al., 2010
OBL	182	-5.6	57.3	VN	1		2		Hynek et al., 2010
OBL	183	-5.1	43.8	VN	1		5	Value taken from outlet valley system.	Hynek et al., 2010
OBL	184	-2.8	33.6	VN	1		4		Hynek et al., 2010
OBL	185	2.2	45.5	VN	1		2		Hynek et al., 2010
OBL	186	0.5	42.9	VN	1		2		
OBL	187	-7.2	43.0	VN	1		4		Hynek et al., 2010
OBL	188	13.1	36.1	VN	1		3	Inlet valleys are heavily eroded/modified, so value is uncertain.	Hynek et al., 2010
OBL	189	14.9	38.4	VN	1		1	Value taken from outlet valley system.	
OBL	190	-16.5	-18.1	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	7	Value taken from outlet valley system.	Hynek et al., 2010
OBL	191	-24.9	6.1	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	3	Value taken from outlet valley system.	Hynek et al., 2010
OBL	192	-23.5	6.7	VN	1		3		Hynek et al., 2010
OBL	193	-4.5	22.0	VN	1		1	Paleolake is directly fed by the outlet of open-basin lake #131.	Hynek et al., 2010
OBL	194	3.0	86.9	VN	1		1	Value taken from outlet valley system.	
OBL	195	3.5	83.2	VN	1		2		

OBL	196	0.6	91.3	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	2	Inlet valleys are heavily eroded/modified, so value is uncertain.	
OBL	197	3.3	89.8	VN	2	Level of basin degradation is more consistent with a Robbins and Hynek (2012) basin degradation state of 1.	2	Value taken from outlet valley system.	
OBL	198	5.8	94.6	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	1	Value taken from outlet valley system.	
OBL	199	-22.9	158.5	VN	1		2	Value taken from outlet valley system.	Hynek et al., 2010
OBL	200	1.1	102.5	VN	1		1	Value taken from outlet valley system.	
OBL	201	-2.4	112.1	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	3		Hynek et al., 2010
OBL	202	5.2	39.7	VN	1		2	Value taken from outlet valley system.	Hynek et al., 2010
OBL	203	-3.8	126.6	VN	1		5	Value taken from outlet valley system.	Hynek et al., 2010
OBL	204	-41.2	-23.2	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	2	Value taken from outlet valley system.	Hynek et al., 2010
OBL	205	-31.1	25.5	VN	1		2	Value taken from outlet valley system.	Hynek et al., 2010
OBL	206	-30.6	21.2	VN	1		2	Value taken from outlet valley system.	
OBL	207	-32.8	25.3	VN	2	Level of basin degradation is more consistent with a Robbins and Hynek (2012) basin degradation state of 1.	2		

OBL	208	-17.1	161.0	VN	1		2	Value taken from outlet valley system.	
OBL	209	-0.9	101.6	VN	1		3	Value taken from outlet valley system.	Hynek et al., 2010
OBL	210	-5.1	-4.5	VN	1		2		Hynek et al., 2010
OBL	211	-28.3	73.7	VN	1		2	Inlet valleys are heavily eroded/modified, so value is uncertain.	
OBL	212	-27.7	76.1	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	2		Hynek et al., 2010
OBL	214	-27.0	-32.1	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	2	Inlet valleys are heavily eroded/modified, so value is uncertain.	
OBL	215	-30.1	73.4	VN	2		1	Paleolake is directly fed by the outlet of open-basin lake #211.	
OBL	216	35.1	21.7	VN	1		2	Inlet valleys are heavily eroded/modified, so value is uncertain.	
OBL	217	35.6	24.8	VN	1		2	Value taken from outlet valley system.	
OBL	219	-37.2	102.3	VN	1		2		Hynek et al., 2010
OBL	221	-36.5	164.5	VN	N/A	Paleolake is contained within a heavily eroded inter-crater basin.	2	Inlet valleys are heavily eroded/modified, so value is uncertain.	Hynek et al., 2010
OBL	222	-3.2	-26.4	VN	2	Level of basin degradation is more consistent with a Robbins and Hynek (2012) basin degradation state of 1.	2		Hynek et al., 2010
OBL	223	-2.9	-26.3	VN	1		4	Value taken from outlet valley system.	Hynek et al., 2010

OBL	224	-38.2	102.2	VN	1		2		Hynek et al., 2010
OBL	225	35.2	21.2	VN	2		3		Hynek et al., 2010
OBL	226	-29.8	-77.1	VN	1		2		

*CBL = closed-basin lake, OBL = open-basin lake.
†Closed-basin lake basin numbers are from Goudge et al. (2015), open-basin lake basin numbers are from Fassett and Head (2008b) and Goudge et al. (2012).
§II = isolated inlet valley, VN = valley network.
#Values are from Robbins and Hynek (2012).

TABLE DR2. CLOSED-BASIN LAKES WITH STRATIGRAPHIC RELATIONSHIPS TO CONTINUOUS EJECTA DEPOSITS.

Basin Number[*]	**Inlet Type**	**Lat. (°N)**	**Lon. (°E)**	**Crater Ejecta Degradation State**
2	Isolated Inlet	22.1	-8.2	Largely eroded.
3	Isolated Inlet	14.8	-51.7	Largely eroded.
5	Isolated Inlet	10.2	-16.7	Minimally eroded.
12	Isolated Inlet	-7.8	25.3	Largely eroded.
21	Isolated Inlet	55.0	-84.4	Partially eroded.
24	Isolated Inlet	41.1	-2.9	Partially eroded.
36[†]	Isolated Inlet	34.4	3.2	Minimally eroded.
40	Isolated Inlet	31.6	-5.7	Largely eroded.
44	Isolated Inlet	26.2	37.5	Largely eroded.
45	Isolated Inlet	26.2	24.1	Largely eroded.
46	Isolated Inlet	27.1	21.4	Largely eroded.
49	Isolated Inlet	27.7	-124.5	Minimally eroded.
50	Isolated Inlet	25.1	-97.5	Minimally eroded.
51	Isolated Inlet	31.4	-13.0	Minimally eroded.
54	Isolated Inlet	21.4	58.1	Largely eroded.
55	Isolated Inlet	21.4	37.8	Largely eroded.
61	Isolated Inlet	19.9	12.0	Largely eroded.
63	Isolated Inlet	16.2	-53.2	Minimally eroded.
66	Isolated Inlet	13.2	9.2	Almost completely eroded.
69	Isolated Inlet	10.9	-14.0	Minimally eroded.
73	Isolated Inlet	8.2	-49.3	Almost completely eroded.
74	Isolated Inlet	9.9	-46.6	Almost completely eroded.
75	Isolated Inlet	7.8	-39.1	Almost completely eroded.
77	Isolated Inlet	8.5	-15.8	Partially eroded.
82	Isolated Inlet	7.0	-53.6	Largely eroded.
83	Isolated Inlet	2.4	-51.6	Minimally eroded.
92	Isolated Inlet	1.5	116.3	Minimally eroded.
94	Isolated Inlet	-1.4	-39.7	Largely eroded.
96	Isolated Inlet	-2.9	67.7	Largely eroded.
97	Valley Network	-5.2	137.8	Largely eroded.
99	Isolated Inlet	-4.8	2.0	Partially eroded.
103	Isolated Inlet	-10.0	-158.1	Largely eroded.
113	Isolated Inlet	-10.6	139.7	Largely eroded.
117	Isolated Inlet	-12.0	123.7	Largely eroded.
118	Isolated Inlet	-10.8	91.2	Partially eroded.
138	Isolated Inlet	-15.5	-155.5	Largely eroded.

149	Isolated Inlet	-22.6	-56.6	Partially eroded.
154	Isolated Inlet	-25.3	71.9	Largely eroded.
196	Isolated Inlet	-46.3	-163.8	Largely eroded.
199	Isolated Inlet	22.1	66.8	Largely eroded.
202	Isolated Inlet	-37.5	-158.8	Minimally eroded.
203[†]	Valley Network	-24.0	-33.3	Largely eroded.
204	Valley Network	-26.0	-34.0	Largely eroded.
205	Isolated Inlet	20.7	75.8	Minimally eroded.

[*]Basin number is from Goudge et al. (2015).
[†]Inlet valley incises ejecta from nearby crater.

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