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164

UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

Principal facts for two-hundred-thirty-five gravity stations
near Craters of the Moon, Idaho

by

Carol Finn

D. R. Spydell

and

D. L. Williams

Open File Report 85-280

1985

This report is preliminary and has not been reviewed for
conformity with U.S. Geological Survey editorial standards.

Principal facts for 235 gravity stations near

Craters of the Moon, Idaho

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Explanation of the headings of the accompanying table of principal facts are as follows.

STATION IDENTIFICATION	All stations were taken with LaCoste and Romberg ¹ gravity meter G-550. For a complete description of the gravity reduction procedures currently in use by the U.S. Geological Survey (USGS) for defining the corrections and anomalies, see Cordell and others (1982).
LATITUDE AND LONGITUDE	Values listed are in degrees and minutes to the nearest one hundredth of a minute. These positions were surveyed in with a laser theodolite for all stations.
ELEVATION	Elevations are in feet to the nearest tenth. Most elevations were surveyed in with a laser theodolite and are accurate to the nearest tenth of a foot; others were on benchmarks, accurate to 0.5 ft.
OBSERVED GRAVITY	Values are to the nearest hundredth of a milligal. All stations are relative to IGSN-71 (Morelli, 1974) tied to a base at the Arco,

¹Use of trade names is for descriptive purposes only and does not imply endorsement by the U.S. Geological Survey.

	Idaho, Public School having observed gravity equal to 979998.15 mgals (base 93b of LaFehr (1961) with 14 mgals subtracted to update it to the 1967 datum).
THEORETICAL GRAVITY	Values were calculated using the Geodetic Reference System 1967 (International Association of Geodesy, 1971).
TERRAIN CORRECTIONS	Most of the stations were corrected for terrain by computer radially from 0 to 166.7 km (Richard Godson, unpublished program, U.S. Geological Survey), implementing the procedure of Plouff (1977). Some of the inner zone terrain corrections (Hammer zones D-F, Hammer, 1939) were done by template. The density used in these corrections was 2.67 g/cm^3 .
CURV	Curvature correction in milligals.
SPECIAL	Not used.
FREE-AIR ANOMALY	Free-air anomaly values are in milligals. The free-air correction was obtained by the following calculation: observed gravity - theoretical gravity - free-air anomaly = free-air correction.
COMPLETE BOUGUER ANOMALY	Complete Bouguer anomaly values are in milligals using densities of 2.67 and 2.43 g/cm^3 .

REFERENCES CITED

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- Hammer, Sigmund, 1939, Terrain corrections for gravimeter stations: Geophysics, v. 4, p. 184-194.
- International Association of Geodesy, 1971, Geodetic reference system 1967: International Association of Geodesy Special Publication no. 3 (Bureau Central Association International Geodesie, Paris), 116 p.
- LaFehr, T. R., 1961, Gravity survey in the eastern Snake River Plain, Idaho - A Progress Report: U.S. Geological Survey Open-File Report no. 62-74.
- Morelli, C., ed., 1974, The International Gravity Standardization Net 1971: International Association of Geodesy Special Publication no. 4, 194 p.
- Plouff, Donald, 1977, Preliminary documentation for a Fortran program to compute gravity-terrain corrections based on topography digitized on a geographic grid: U.S. Geological Survey Open-File Report 77-535, 45 p.

BARB DIVERSITY ORG
Meter used: 9-550

4

STATION IDENTIFICATION	LATITUDE deg	LONGITUDE min	ELEVATION ft	STATION OBSERVED	THEORETICAL	TERRAIN CORRECTION (d1=2.67)	SPECIAL	ANOMALIES COMPLETE-MUGLER d1=2.67 d2=2.43							
BZCOM001	43	27.59	-113	34.18	1805.00	1d	979945.10	980479.73	1.15	-61.56	-0.70	0.00	22.28	-144.48	-161.91
BZCOM002	43	27.58	-113	33.82	1801.00	1d	979944.76	980479.72	1.06	-61.43	-0.70	0.00	20.74	-145.73	-153.14
BZCOM003	43	27.77	-113	33.66	1803.00	1d	979944.33	980480.00	1.03	-61.50	-0.70	0.00	20.54	-145.08	-163.50
BZCOM004	43	27.51	-113	34.22	1814.00	1d	979943.74	980479.61	1.02	-61.87	-0.70	0.00	23.67	-143.99	-161.51
BZCOM005	43	27.41	-113	34.32	1817.00	1d	979942.46	980479.45	0.95	-61.97	-0.70	0.00	23.05	-144.40	-161.97
BZCOM006	43	27.31	-113	34.42	1822.00	1d	979940.15	980479.31	0.92	-62.14	-0.70	0.00	22.92	-145.57	-163.19
BZCOM007	43	27.22	-113	34.50	1823.00	1d	979938.28	980479.18	0.92	-62.18	-0.70	0.00	21.56	-147.05	-164.67
BZCOM008	43	27.09	-113	34.87	1820.00	1d	979941.86	980478.98	0.96	-62.07	-0.70	0.00	24.40	-143.90	-161.49
BZCOM009	43	27.03	-113	35.02	1813.00	1d	979943.28	980478.89	0.97	-61.84	-0.70	0.00	23.56	-144.02	-161.59
BZCOM010	43	26.95	-113	35.22	1802.00	1d	979945.89	980478.77	1.02	-61.46	-0.70	0.00	23.19	-143.42	-160.84
BZCOM011	43	26.90	-113	35.44	1800.00	1d	979946.97	980478.69	1.02	-61.39	-0.70	0.00	23.69	-142.73	-160.13
BZCOM012a	43	26.51	-113	35.97	1796.00	1d	979951.54	980478.10	1.00	-61.26	-0.70	0.00	27.37	-138.62	-155.97
BZCOM012b	43	26.71	-113	31.29	1752.00	1d	979956.97	980478.41	0.51	-59.76	-0.68	0.00	19.13	-143.26	-160.24
BZCOM013	43	26.64	-113	31.60	1757.00	1d	979955.93	980478.30	0.54	-59.93	-0.68	0.00	19.78	-143.06	-160.08
BZCOM014	43	26.41	-113	33.45	1830.00	1d	979940.97	980477.96	0.83	-62.42	-0.71	0.00	27.71	-141.64	-159.35
BZCOM015	43	26.50	-113	33.42	1839.00	1d	979938.60	980478.09	0.90	-62.72	-0.71	0.00	27.85	-142.24	-160.02
BZCOM016	43	26.60	-113	33.33	1834.00	1d	979939.49	980478.23	0.85	-62.55	-0.71	0.00	27.00	-142.66	-160.39
BZCOM017	43	17.19	-113	22.72	1610.00	1d	979990.82	980464.07	0.10	-54.91	-0.63	0.00	23.61	-126.01	-141.65
BZCOM018	43	17.14	-113	22.85	1607.00	1d	979991.62	980464.00	0.08	-54.81	-0.63	0.00	23.55	-125.81	-141.43
BZCOM019	43	17.09	-113	23.01	1607.00	1d	979991.86	980463.92	0.08	-54.81	-0.63	0.00	23.77	-125.56	-141.17
BZCOM020	43	17.01	-113	23.22	1608.00	1d	979991.76	980463.80	0.10	-54.84	-0.63	0.00	23.98	-125.39	-141.01
BZCOM021	43	16.95	-113	23.49	1613.00	1d	979991.44	980463.71	0.15	-55.01	-0.63	0.00	25.44	-124.60	-140.06
BZCOM022	43	16.90	-113	23.59	1612.00	1d	979991.76	980463.64	0.16	-54.98	-0.63	0.00	25.37	-124.32	-139.97
BZCOM023	43	16.81	-113	23.73	1603.00	1d	979993.64	980463.50	0.11	-54.67	-0.63	0.00	24.64	-124.27	-139.84
BZCOM024	43	16.78	-113	23.81	1599.00	1d	979994.37	980463.46	0.10	-54.54	-0.63	0.00	24.40	-124.21	-139.75
BZCOM025	43	16.75	-113	23.89	1597.00	1d	979994.89	980463.41	0.04	-54.47	-0.63	0.00	24.31	-124.13	-139.64
BZCOM026	43	16.72	-113	23.99	1599.00	1d	979994.39	980463.37	0.11	-54.54	-0.63	0.00	24.32	-124.23	-139.70
BZCOM027	43	16.66	-113	24.12	1596.00	1d	979994.93	980463.27	0.09	-54.43	-0.63	0.00	24.01	-124.27	-139.77
BZCOM028	43	16.58	-113	24.28	1594.00	1d	979995.11	980463.15	0.09	-54.37	-0.63	0.00	23.75	-124.36	-139.85
BZCOM029	43	16.51	-113	24.44	1589.00	1d	979996.21	980463.05	0.07	-54.20	-0.63	0.00	23.36	-124.29	-139.73
BZCOM030	43	17.63	-113	22.42	1617.00	1d	979990.05	980464.73	0.11	-55.15	-0.64	0.00	24.06	-126.12	-141.42
BZCOM031	43	17.72	-113	22.34	1617.00	1d	979990.10	980464.87	0.12	-55.15	-0.64	0.00	24.07	-126.13	-141.43
BZCOM032	43	17.81	-113	22.32	1615.00	1d	979990.64	980465.00	0.10	-55.08	-0.64	0.00	24.01	-126.07	-141.40
BZCOM033	43	17.91	-113	22.25	1620.00	1d	979989.06	980465.16	0.13	-55.25	-0.64	0.00	24.26	-126.19	-141.92
BZCOM034	43	18.05	-113	22.23	1615.00	1d	979990.62	980465.37	0.10	-55.08	-0.64	0.00	23.53	-126.52	-142.21
BZCOM035	43	18.19	-113	22.32	1611.00	1d	979991.14	980465.58	0.08	-54.95	-0.63	0.00	22.62	-127.08	-142.73
BZCOM036	43	18.28	-113	22.29	1609.00	1d	979991.47	980465.72	0.07	-54.84	-0.63	0.00	22.25	-127.29	-142.97
BZCOM037	43	26.70	-113	31.40	1746.00	1d	979958.50	980478.39	0.51	-59.55	-0.68	0.00	18.89	-142.97	-159.89
BZCOM038	43	26.72	-113	31.06	1741.00	1d	979958.79	980478.41	0.49	-59.38	-0.68	0.00	17.65	-143.77	-160.05
BZCOM039	43	26.68	-113	30.93	1746.00	1d	979957.40	980478.37	0.49	-59.55	-0.68	0.00	17.82	-144.05	-160.95

STATION IDENTIFICATION	sta-ld	LATITUDE		LONGITUDE		ELEV (in ft)	ST OBSERVED	GRAVITY THEORETICAL	CORRECTIONS		FREQUENCY	ANOMALIES
		deg	min	deg	min				TERRAIN BINDER	SPECIAL		
82com040	43	26.66	-113	30.75		1752.00	14979956.14	980477.33	0.51	-59.76	-0.68	0.00
82com041	43	26.62	-113	30.59		1747.00	14979957.11	980478.27	0.47	-59.59	-0.68	0.00
82com042	43	26.70	-113	30.37		1741.00	14979958.76	980478.39	0.45	-59.38	-0.68	0.00
82com043	43	26.71	-113	32.17		1752.00	14979955.43	980478.41	0.62	-59.76	-0.68	0.00
82com044	43	26.58	-113	32.24		1758.00	14979954.78	980478.21	0.61	-59.96	-0.68	0.00
82com045	43	26.41	-113	32.47		1769.00	14979953.03	980477.96	0.64	-60.34	-0.69	0.00
82com046	43	26.51	-113	33.16		1827.00	14979940.87	980478.10	0.83	-62.31	-0.71	0.00
82com047	43	26.39	-113	33.18		1822.00	14979942.00	980477.92	0.80	-62.14	-0.70	0.00
82com048	43	26.34	-113	33.03		1789.00	14979949.04	980477.85	0.72	-61.02	-0.69	0.00
82com049	43	26.40	-113	32.60		1784.00	14979949.71	980477.94	0.66	-60.85	-0.67	0.00
82com050	43	8.00	-113	19.88		1456.00	14980016.89	980450.23	-0.07	-49.66	-0.58	0.00
82com051	43	8.05	-113	19.53		1457.00	14980016.41	980450.32	-0.05	-49.69	-0.58	0.00
82com052	43	8.10	-113	19.17		1463.00	14980014.87	980450.39	-0.06	-49.90	-0.58	0.00
82com053	43	8.23	-113	18.82		1464.00	14980014.01	980450.59	-0.03	-49.93	-0.58	0.00
82com054	43	8.35	-113	18.38		1468.00	14980012.32	980450.77	-0.04	-50.07	-0.56	0.00
82com055	43	7.97	-113	18.33		1467.00	14980012.41	980450.20	-0.04	-50.04	-0.58	0.00
82com056	43	10.03	-113	15.72		1513.00	14980002.42	980453.30	-0.06	-51.60	-0.60	0.00
82com057	43	9.48	-113	15.92		1499.00	14980004.32	980452.47	-0.04	-51.13	-0.60	0.00
82com058	43	9.08	-113	16.13		1493.00	14980005.11	980451.66	-0.04	-50.92	-0.59	0.00
82com059	43	8.55	-113	16.75		1489.00	14980006.53	980451.07	-0.07	-50.79	-0.59	0.00
82com060	43	8.16	-113	16.95		1472.00	14980007.58	980450.48	-0.01	-50.21	-0.59	0.00
82com061	43	7.83	-113	17.15		1468.00	14980008.10	980449.94	0.01	-50.07	-0.58	0.00
82com062	43	7.76	-113	17.38		1456.00	14980010.67	980449.86	0.14	-49.66	-0.58	0.00
82com063	43	7.66	-113	17.83		1454.00	14980011.53	980449.73	0.15	-49.59	-0.58	0.00
82com064	43	7.64	-113	18.20		1456.00	14980011.78	980449.70	0.08	-49.66	-0.58	0.00
82com065	43	7.74	-113	18.56		1457.00	14980012.11	980449.85	0.01	-49.69	-0.58	0.00
82com066	43	24.41	-113	31.45		1753.00	14979956.60	980474.94	0.44	-59.79	-0.68	0.00
82com067	43	24.15	-113	31.78		1752.00	14979957.21	980474.55	0.44	-59.76	-0.68	0.00
82com068	43	23.97	-113	32.13		1758.00	14979955.42	980474.28	0.56	-59.96	-0.68	0.00
82com069	43	24.77	-113	32.43		1733.00	14979960.42	980475.48	1.22	-59.11	-0.67	0.00
82com070	43	23.71	-113	32.64		1740.00	14979958.73	980473.89	0.46	-59.35	-0.68	0.00
82com071	43	23.66	-113	32.81		1743.00	14979958.58	980473.81	0.47	-59.45	-0.68	0.00
82com072	43	23.58	-113	33.00		1742.00	14979958.46	980473.70	0.47	-59.41	-0.68	0.00
82com073	43	23.48	-113	33.21		1741.00	14979958.82	980473.54	0.48	-59.38	-0.69	0.00
82com074	43	23.33	-113	33.46		1735.00	14979960.16	980473.31	0.45	-59.18	-0.68	0.00
82com075	43	23.23	-113	33.73		1731.00	14979961.57	980473.17	0.45	-59.04	-0.67	0.00
82com076	43	23.11	-113	33.99		1729.00	14979962.50	980472.98	0.45	-58.97	-0.67	0.00
82com077	43	23.03	-113	34.19		1728.00	14979963.10	980472.84	0.46	-58.94	-0.67	0.00
82com078	43	22.94	-113	34.47		1728.00	14979962.73	980472.73	0.47	-58.94	-0.67	0.00
82com079	43	22.82	-113	34.86		1719.00	14979965.55	980472.55	0.47	-58.83	-0.67	0.00

craters of the moon
Idaho gravity data
Meter used: 9-550

6

STATION IDENTIFICATION	L deg	O min	C deg	A deg	I deg	L min	O min	S deg	ELE (in ft)	ST OBSERVED	GRAVITY THEORETICAL	TERRAIN BOUGUER	CURVE CURV	SPECIAL	FREE AIR	ADDITIONAL COMPLETE-BOUGUER
Sta-Id	deg	min	deg	deg	min	deg	min	deg				(d1=2.67)				d1=2.67 d2=2.64
83COM015	43	22.74	-113	35.15					1716.00	1d	979966.10	980472.43	0.44	-58.53	-0.67	0.00
83COM016	43	22.47	-113	35.49					1715.00	1d	979966.35	980472.02	0.44	-58.49	-0.67	0.00
83COM017	43	24.70	-113	31.06					1738.00	1d	979960.78	980475.34	0.45	-59.48	-0.68	0.00
83COM018	43	24.92	-113	30.59					1731.00	1d	979962.12	980475.71	0.42	-59.04	-0.67	0.00
83COM019	43	25.19	-113	29.98					1726.00	1d	979963.04	980476.12	0.40	-58.87	-0.67	0.00
83COM020	43	25.37	-113	29.61					1729.00	1d	979962.89	980476.34	0.40	-58.97	-0.67	0.00
83COM021	43	25.46	-113	29.61					1729.00	1d	979963.01	980476.52	0.39	-58.97	-0.67	0.00
83COM022	43	25.46	-113	28.96					1725.00	1d	979963.57	980476.52	0.39	-58.83	-0.67	0.00
83COM023	43	26.15	-113	28.64					1730.00	1d	979963.04	980477.50	0.44	-59.01	-0.67	0.00
83COM024	43	26.44	-113	28.10					1731.00	1d	979963.60	980478.00	0.44	-59.04	-0.67	0.00
83COM025	43	24.17	-113	31.34					1747.00	1d	979958.03	980474.56	0.46	-59.59	-0.68	0.00
83COM026	43	24.34	-113	31.91					1761.00	1d	979955.21	980474.84	0.53	-60.06	-0.68	0.00
83COM027	43	23.83	-113	30.65					1706.00	1d	979967.08	980474.07	0.41	-58.19	-0.67	0.00
83COM028	43	23.82	-113	29.94					1709.00	1d	979966.98	980474.05	0.34	-58.29	-0.67	0.00
83COM029	43	23.33	-113	29.59					1700.00	1d	979969.96	980473.31	0.31	-57.98	-0.66	0.00
83COM030	43	24.66	-113	31.79					1769.00	1d	979952.99	980475.32	0.55	-60.34	-0.69	0.00
83COM031	43	25.63	-113	32.66					1776.00	1d	979952.67	980476.76	0.64	-60.57	-0.69	0.00
83COM032	43	25.38	-113	33.00					1789.00	1d	979949.54	980476.41	0.66	-61.02	-0.69	0.00
83COM033	43	25.22	-113	33.25					1774.00	1d	979952.99	980476.16	0.72	-60.51	-0.69	0.00
83COM034	43	25.07	-113	33.54					1771.00	1d	979953.94	980475.93	0.62	-60.40	-0.69	0.00
83COM035	43	24.90	-113	33.90					1771.00	1d	979953.85	980475.66	0.60	-60.40	-0.69	0.00
83COM036	43	24.76	-113	34.27					1768.00	1d	979954.14	980475.47	0.60	-60.30	-0.69	0.00
83COM037	43	24.71	-113	34.54					1771.00	1d	979954.47	980475.39	0.63	-60.40	-0.69	0.00
83COM038	43	24.46	-113	34.79					1760.00	1d	979955.35	980475.02	0.64	-60.03	-0.68	0.00
83COM039	43	25.50	-113	32.80					1776.00	1d	979952.44	980476.59	0.67	-60.57	-0.69	0.00
83COM040	43	25.74	-113	32.49					1846.00	1d	979934.07	980476.95	1.08	-62.96	-0.71	0.00
83COM041	43	25.54	-113	32.38					1779.00	1d	979950.83	980476.76	0.61	-60.68	-0.69	0.00
83COM042	43	26.09	-113	32.51					1787.00	1d	979951.26	980477.47	0.63	-60.95	-0.69	0.00
83COM043	43	25.88	-113	32.13					1783.00	1d	979950.69	980477.16	0.59	-60.81	-0.69	0.00
83COM044	43	25.98	-113	31.90					1774.00	1d	979953.12	980477.30	0.56	-60.51	-0.69	0.00
83COM045	43	26.19	-113	31.58					1764.00	1d	979954.71	980477.63	0.53	-60.16	-0.68	0.00
83COM046	43	26.34	-113	31.21					1755.00	1d	979955.03	980477.85	0.50	-59.86	-0.68	0.00
83COM047	43	26.57	-113	30.84					1752.00	1d	979956.28	980478.20	0.50	-59.76	-0.68	0.00
83COM048	43	21.09	-113	27.97					1791.00	1d	979943.28	980478.95	2.90	-61.09	-0.69	0.00
83COM049	43	25.02	-113	32.28					1785.00	1d	979883.89	980475.86	9.12	-67.70	-0.70	0.00
83COM050	43	22.12	-113	28.92					1685.00	1d	979975.39	980471.50	0.27	-57.47	-0.66	0.00
83COM051	43	22.03	-113	29.09					1692.00	1d	979973.64	980471.36	0.27	-57.71	-0.66	0.00
83COM052	43	21.86	-113	29.42					1687.00	1d	979974.21	980471.10	0.26	-57.54	-0.66	0.00
83COM053	43	21.70	-113	29.73					1686.00	1d	979974.04	980470.87	0.27	-57.50	-0.66	0.00
83COM054	43	21.49	-113	30.07					1686.00	1d	979973.53	980470.55	0.27	-57.50	-0.66	0.00

Gravities of the moon
Idaho gravity data
Meter used: g-550

STATION GRAVITY DATA

Date

4

STATION IDENTIFICATION Sta-ID	L deg	O min	C deg	A deg	T min	I min	D min	N min	S min	ST OBSERVED	THEORETICAL	TERRAIN CORRECTION (d1=2.07)	CURVE CORRECTION (d1=2.07)	SPECIAL	ANNUAL FREE AIR	GRAVITY COMPUTED d1=2.67 d2=2.43
83COM055	43	21.21	-113	30.50	1689.00	1d	979972.41	980470.13	0.30	-57.61	-0.66	0.00	23.46	-133.29	-149.64	
83COM056	43	20.97	-113	31.03	1684.00	1d	979973.44	980469.77	0.29	-57.44	-0.66	0.00	23.15	-133.10	-149.43	
83COM057	43	20.75	-113	31.67	1681.00	1d	979974.40	980469.43	0.31	-57.33	-0.66	0.00	23.58	-132.39	-148.70	
83COM058	43	20.48	-113	26.89	1682.00	1d	979980.82	980469.02	0.23	-56.69	-0.65	0.00	24.67	-129.65	-145.78	
83COM059	43	20.38	-113	27.07	1657.00	1d	979982.29	980468.88	0.20	-56.52	-0.65	0.00	24.54	-129.28	-145.35	
83COM060	43	20.30	-113	27.23	1655.00	1d	979982.39	980468.75	0.20	-56.45	-0.65	0.00	24.17	-129.47	-145.54	
83COM061	43	20.23	-113	27.45	1653.00	1d	979982.78	980468.65	0.20	-56.38	-0.65	0.00	24.02	-129.43	-145.47	
83COM062	43	20.13	-113	27.71	1651.00	1d	979982.85	980468.50	0.20	-56.31	-0.65	0.00	23.84	-129.49	-145.52	
83COM063	43	19.96	-113	28.13	1639.00	1d	979984.82	980468.24	0.20	-55.90	-0.64	0.00	22.21	-129.56	-145.87	
83COM064	43	19.75	-113	28.61	1645.00	1d	979985.75	980467.93	0.20	-56.11	-0.65	0.00	23.43	-129.34	-145.31	
83COM065	43	19.84	-113	29.20	1662.00	1d	979979.23	980468.00	0.24	-56.69	-0.65	0.00	24.02	-130.29	-146.42	
83COM066	43	19.29	-113	30.26	1654.00	1d	979980.93	980467.23	0.24	-56.41	-0.65	0.00	23.89	-129.62	-145.66	
83COM067	43	19.17	-113	30.83	1634.00	1d	979984.78	980467.05	0.23	-55.73	-0.64	0.00	22.00	-129.74	-145.60	
83COM068	43	19.79	-113	27.15	1639.00	1d	979984.66	980467.98	0.17	-55.90	-0.64	0.00	22.46	-129.78	-145.70	
83COM069	43	19.89	-113	26.58	1642.00	1d	979984.57	980468.14	0.17	-56.00	-0.64	0.00	23.18	-129.36	-145.30	
83COM070	43	22.15	-113	28.90	1685.00	1d	979973.78	980471.54	0.27	-57.47	-0.66	0.00	22.15	-134.25	-150.60	
83COM071	43	22.29	-113	28.71	1683.00	1d	979973.97	980471.75	0.27	-57.40	-0.66	0.00	21.42	-134.77	-151.09	
83COM072	43	22.45	-113	28.58	1679.00	1d	979975.05	980471.99	0.26	-57.27	-0.66	0.00	21.02	-134.80	-151.09	
83COM073	43	22.57	-113	28.37	1675.00	1d	979976.32	980472.17	0.25	-57.13	-0.66	0.00	20.97	-134.52	-150.77	
83COM074	43	22.73	-113	28.12	1685.00	1d	979972.54	980472.41	0.25	-57.47	-0.66	0.00	19.91	-130.46	-152.81	
83COM075	43	22.92	-113	27.77	1669.00	1d	979977.79	980472.70	0.23	-56.92	-0.65	0.00	20.06	-134.88	-151.08	
83COM076	43	23.12	-113	27.37	1669.00	1d	979978.19	980473.60	0.23	-56.92	-0.65	0.00	20.26	-134.72	-150.92	
83COM077	43	23.38	-113	26.77	1674.00	1d	979977.14	980473.40	0.25	-57.10	-0.65	0.00	20.33	-135.09	-151.34	
83COM078	43	23.61	-113	26.26	1670.00	1d	979974.86	980473.73	0.21	-56.96	-0.65	0.00	16.28	-138.74	-154.95	
83COM079	43	23.82	-113	25.63	1680.00	1d	979976.25	980474.05	0.25	-57.30	-0.66	0.00	20.56	-135.39	-151.69	
83COM080	43	22.31	-113	24.06	1646.00	1d	979983.10	980471.76	0.14	-56.14	-0.65	0.00	19.29	-133.63	-149.62	
83COM081	43	22.21	-113	23.98	1650.00	1d	979982.46	980471.63	0.15	-56.28	-0.65	0.00	19.91	-133.33	-149.36	
83COM082	43	21.86	-113	24.84	1653.00	1d	979982.39	980471.10	0.15	-56.38	-0.65	0.00	21.24	-132.27	-148.32	
83COM083	43	21.68	-113	25.15	1648.00	1d	979983.87	980470.83	0.15	-56.21	-0.65	0.00	21.44	-131.60	-147.60	
83COM084	43	21.46	-113	25.58	1647.00	1d	979984.29	980470.50	0.15	-56.17	-0.65	0.00	21.83	-131.11	-147.10	
83COM085	43	21.24	-113	26.00	1644.00	1d	979985.03	980470.17	0.16	-56.07	-0.64	0.00	22.10	-130.59	-146.55	
83COM086	43	20.92	-113	26.57	1648.00	1d	979984.10	980469.69	0.17	-56.21	-0.65	0.00	22.94	-130.12	-146.13	
83COM087	43	20.75	-113	26.80	1649.00	1d	979983.37	980469.43	0.18	-56.24	-0.65	0.00	22.56	-130.53	-146.53	
83COM088	43	20.64	-113	26.94	1659.00	1d	979981.03	980469.27	0.20	-56.58	-0.65	0.00	23.72	-130.35	-146.96	
83COM089	43	20.52	-113	27.10	1664.00	1d	979980.40	980469.09	0.23	-56.75	-0.65	0.00	24.75	-129.71	-145.89	
83COM090	43	20.38	-113	27.27	1661.00	1d	979981.23	980468.88	0.22	-56.65	-0.65	0.00	24.89	-129.33	-145.46	
83COM091	43	19.41	-113	26.27	1636.00	1d	979986.94	980467.41	0.14	-55.80	-0.64	0.00	24.29	-127.91	-143.52	
83COM092	43	19.50	-113	26.10	1636.00	1d	979986.80	980467.55	0.16	-55.80	-0.64	0.00	24.05	-127.91	-143.52	
83COM093	43	19.50	-113	25.99	1635.00	1d	979986.93	980467.70	0.15	-55.77	-0.64	0.00	23.00	-128.24	-144.11	
83COM094	43	19.74	-113	25.70	1635.00	1d	979986.78	980467.96	0.15	-55.77	-0.64	0.00	23.16	-128.67	-144.35	

Craters of the Moon
Idaho gravity data
Meter used: 9-550

STATION IDENTIFICATION sta-id	L O C A T I O N S LATITUDE deg min	A T I U N S LONGITUDE deg min	E L E (in ft)	G R A V I T Y OBSERVED THEORETICAL	TERRAIN BOUNGUM CURV (dl=2.67)	SPECIAL	A N U M A L I E S FREE COMPLETE-BOUGUM AIR dl=2.07 dl2=2.03
83com095	43 19.98	-113 25.33	1632.00	1d 979987.23	980468.27	0.14	-55.65 -0.64 0.00 22.40 -129.17 -145.01
83com096	43 20.19	-113 25.14	1630.00	1d 979987.93	980468.59	0.13	-55.59 -0.64 0.00 22.23 -129.18 -145.01
83com097	43 23.09	-113 29.25	1785.00	1d 979944.87	980472.95	2.26	-60.86 -0.69 0.00 22.62 -141.35 -158.49
83com098	43 23.73	-113 29.05	1698.00	1d 979969.96	980473.92	0.29	-57.91 -0.66 0.00 19.83 -137.71 -151.19
83com099	43 23.69	-113 29.15	1701.00	1d 979968.96	980473.45	0.29	-58.02 -0.66 0.00 19.80 -138.02 -154.52
83com100	43 23.63	-113 29.28	1697.00	1d 979969.94	980473.77	0.30	-57.88 -0.66 0.00 19.83 -137.65 -154.13
83com101	43 23.58	-113 29.38	1698.00	1d 979969.85	980473.70	0.31	-57.91 -0.66 0.00 19.94 -137.54 -154.05
83com102	43 23.53	-113 29.49	1700.00	1d 979969.57	980473.62	0.30	-57.98 -0.66 0.00 20.51 -137.25 -153.74
83com103	43 23.47	-113 29.59	1703.00	1d 979968.42	980473.53	0.31	-58.08 -0.66 0.00 20.38 -137.65 -154.19
83com104	43 23.42	-113 29.70	1702.00	1d 979968.73	980473.45	0.31	-58.05 -0.66 0.00 20.28 -137.61 -154.12
83com105	43 23.37	-113 29.78	1704.00	1d 979968.47	980473.38	0.32	-58.12 -0.67 0.00 20.75 -137.33 -153.85
83com106	43 23.32	-113 29.86	1704.00	1d 979968.58	980473.30	0.32	-58.12 -0.67 0.00 20.84 -137.21 -153.73
83com107	43 23.28	-113 29.95	1711.00	1d 979966.62	980473.24	0.33	-58.36 -0.67 0.00 21.10 -137.59 -154.18
83com108	43 23.22	-113 30.06	1713.00	1d 979966.28	980473.15	0.34	-58.43 -0.67 0.00 21.67 -137.26 -153.87
83com109	43 23.14	-113 30.20	1701.00	1d 979969.18	980473.03	0.32	-58.02 -0.66 0.00 20.97 -136.86 -153.36
83com110	43 23.08	-113 30.34	1700.00	1d 979969.18	980472.95	0.32	-57.98 -0.66 0.00 20.64 -137.06 -153.55
83com111	43 22.99	-113 30.55	1699.00	1d 979969.11	980472.80	0.32	-57.95 -0.66 0.00 20.38 -137.22 -153.70
83com112	43 22.94	-113 30.76	1707.00	1d 979967.21	980472.73	0.34	-58.22 -0.67 0.00 21.03 -137.30 -153.85
83com113	43 23.00	-113 29.81	1725.00	1d 979963.35	980472.82	0.41	-58.83 -0.67 0.00 22.74 -137.23 -153.95
83com114	43 22.85	-113 29.70	1760.00	1d 979953.57	980472.59	1.24	-60.03 -0.68 0.00 24.05 -138.49 -155.48
83com115	43 22.55	-113 29.22	1692.00	1d 979972.29	980472.14	0.30	-57.71 -0.66 0.00 22.24 -134.79 -151.20
83com116	43 22.64	-113 28.91	1684.00	1d 979973.73	980472.27	0.29	-57.44 -0.66 0.00 21.09 -135.21 -151.55
83com117	43 22.75	-113 28.57	1678.00	1d 979975.46	980472.45	0.27	-57.23 -0.66 0.00 20.82 -134.94 -151.23
83com118	43 23.19	-113 28.72	1689.00	1d 979971.82	980473.11	0.28	-57.61 -0.66 0.00 19.72 -137.00 -153.38
83com119	43 23.29	-113 28.30	1686.00	1d 979973.40	980473.26	0.27	-57.50 -0.66 0.00 20.19 -136.25 -152.60
83com120	43 23.53	-113 28.00	1679.00	1d 979974.82	980473.62	0.26	-57.27 -0.66 0.00 19.36 -136.52 -152.81
83com121	43 24.22	-113 29.51	1705.00	1d 979967.82	980474.66	0.33	-58.15 -0.67 0.00 19.10 -139.05 -155.59
83com122	43 24.72	-113 30.09	1825.00	1d 979934.97	980475.41	2.91	-62.25 -0.71 0.00 22.52 -144.60 -162.07
83com123	43 24.17	-113 30.61	1750.00	1d 979953.60	980474.58	0.56	-59.69 -0.68 0.00 18.94 -143.21 -160.17
83com124	43 24.12	-113 31.28	1767.00	1d 979952.10	980474.51	0.63	-60.27 -0.69 0.00 22.71 -140.89 -158.30
83com125	43 23.66	-113 30.66	1779.00	1d 979956.42	980473.81	1.51	-60.68 -0.69 0.00 31.41 -132.02 -149.77
83com126	43 23.51	-113 30.12	1704.00	1d 979968.14	980473.59	0.32	-58.12 -0.67 0.00 20.24 -137.84 -154.37
83com127	43 23.50	-113 29.78	1701.00	1d 979968.61	980473.54	0.32	-58.02 -0.66 0.00 19.43 -137.99 -154.46
83com128	43 26.62	-113 33.57	1880.00	1d 979925.15	980478.27	1.60	-64.12 -0.72 0.00 20.79 -146.49 -164.50
83com129	43 27.83	-113 31.08	1743.00	1d 979961.21	980460.09	0.52	-59.45 -0.65 0.00 18.84 -142.69 -159.57
83com130	43 27.76	-113 31.29	1747.00	1d 979960.57	980479.94	0.56	-59.59 -0.68 0.00 19.63 -142.76 -159.19
83com131	43 27.64	-113 31.55	1748.00	1d 979959.51	980479.81	0.57	-59.62 -0.68 0.00 18.88 -143.01 -159.97
83com132	43 27.51	-113 31.78	1752.00	1d 979958.11	980479.61	0.60	-59.76 -0.68 0.00 19.09 -143.73 -160.20
83com133	43 27.20	-113 32.12	1744.00	1d 979958.60	980479.14	0.63	-59.62 -0.68 0.00 18.75 -144.16 -160.20
83com134	43 27.08	-113 32.27	1747.00	1d 979958.46	980478.96	0.64	-59.59 -0.68 0.00 18.58 -144.23 -160.14

stations of the moon
 Idaho gravity data
 Meter used: 9-550

MOON GRAVITY DATA

STATION IDENTIFICATION	LATITUDE	LONGITUDE	ELEVATION	STATION OBSERVED	THEORETICAL	TERRAIN MODIFIER	CURVATURE	SPECIAL	ALTIMETER	COMPLETION	REMARKS
Sta-Id	deg	min	deg	min	(in etc)						
83com135	43	26.96	-113	32.50	1754.00	1d	979955.25	980476.78	0.74	-59.82	-0.68
83com136	43	26.87	-113	32.98	1804.00	1d	979942.24	980478.64	0.80	-61.53	-0.70
83com137	43	26.93	-113	33.28	1817.00	1d	979940.19	980478.73	0.82	-61.97	-0.70
83com138	43	26.92	-113	33.43	1833.00	1d	979936.25	980478.73	0.86	-62.52	-0.71
83com139	43	26.94	-113	33.65	1832.00	1d	979938.48	980478.75	0.84	-62.48	-0.71
83com140	43	26.68	-113	34.02	1918.00	1d	979915.69	980478.37	3.13	-65.42	-0.74
83com141	43	26.60	-113	34.33	1838.00	1d	979938.65	980478.23	0.90	-62.69	-0.71
83com142	43	26.46	-113	34.47	1825.00	1d	979941.73	980478.03	0.83	-62.25	-0.71
83com143	43	26.38	-113	34.56	1817.00	1d	979943.50	980477.91	0.80	-61.97	-0.70
83com144	43	26.24	-113	34.71	1807.00	1d	979946.78	980477.76	0.79	-61.63	-0.70
83com145	43	26.18	-113	34.96	1802.00	1d	979947.60	980477.60	0.81	-61.46	-0.70
83com146	43	26.14	-113	35.19	1894.00	1d	979949.71	980477.55	3.28	-64.60	-0.73
83com147	43	26.04	-113	35.40	1792.00	1d	979949.64	980477.40	0.84	-61.12	-0.69
83com148	43	25.89	-113	35.76	1781.00	1d	979951.69	980477.17	0.89	-60.74	-0.69
83com149	43	25.74	-113	36.15	1766.00	1d	979955.64	980476.95	0.92	-60.23	-0.69
83com150	43	25.50	-113	36.74	1764.00	1d	979956.85	980476.55	1.06	-60.16	-0.68
83com151	43	25.85	-113	34.61	1785.00	1d	979952.60	980477.11	0.75	-60.88	-0.69
83com152	43	26.05	-113	34.53	1794.00	1d	979950.18	980477.41	0.76	-61.19	-0.69
83com153	43	26.03	-113	34.20	1797.00	1d	979949.35	980477.38	0.76	-61.29	-0.70
83com154	43	26.12	-113	33.82	1799.00	1d	979948.30	980477.52	0.75	-61.36	-0.70
83com155	43	26.09	-113	33.52	1797.00	1d	979948.74	980477.47	0.71	-61.29	-0.70
83com156	43	26.24	-113	33.36	1790.00	1d	979949.49	980477.70	0.79	-61.05	-0.69
83com157	43	27.29	-113	33.74	1779.00	1d	979950.22	980479.27	1.36	-60.88	-0.69
83com158	43	27.36	-113	33.63	1779.00	1d	979950.82	980479.38	1.21	-60.88	-0.69
83com159	43	27.52	-113	33.50	1775.00	1d	979951.98	980479.63	1.06	-60.54	-0.69
83com160	43	27.69	-113	33.38	1767.00	1d	979954.23	980479.68	1.18	-60.27	-0.69
83com161	43	28.24	-113	33.03	1752.00	1d	979961.03	980480.71	0.98	-59.76	-0.68
83com162	43	28.20	-113	34.59	1938.00	1d	979908.90	980480.65	3.50	-66.10	-0.74
83com163	43	28.02	-113	35.17	1811.00	1d	979943.93	980480.38	2.33	-61.77	-0.70
83com164	43	27.62	-113	34.87	1807.00	1d	979943.73	980479.77	1.37	-61.63	-0.70
83com165	43	27.32	-113	35.36	1925.00	1d	979914.39	980479.32	3.18	-65.66	-0.74
83com166	43	26.69	-113	34.69	1937.00	1d	979909.26	980478.38	4.45	-66.07	-0.74
83com167	43	27.02	-113	34.96	1809.00	1d	979943.92	980478.87	0.97	-61.70	-0.70
83com168	43	26.79	-113	34.51	1864.00	1d	979929.78	980478.52	1.35	-63.58	-0.72
83com169	43	27.66	-113	33.79	1805.00	1d	979944.57	980479.84	1.04	-61.56	-0.70