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PRINCIPAL FACTS FOR GRAVITY STATIONS OBSERVED
DURING MARCH 1969 IN THE VICINITY OF
LUKE AIR FORCE BASE, MARICOPA COUNTY, ARIZONA
BY
DONALD L. PETERSON AND GORDON P. EATON
U.S. GEOLOGICAL SURVEY, DENVER, COLORADO

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ABBREVIATIONS USED ABOVE THE TABLES OF PRINCIPAL FACTS ARE EXPLAINED BELOW:

STATION	STATION NUMBER
LAT	NORTH LATITUDE IN DEGREES, MINUTES, AND HUNDREDTHS OF MINUTES
LONG	WEST LONGITUDE IN DEGREES, MINUTES, AND HUNDREDTHS OF MINUTES
ELEV (F)	ELEVATION IN FEET
OBS G	OBSERVED GRAVITY IN MILLIGALS MINUS 978 GALS
FAA	FREE AIR ANOMALY IN MILLIGALS
BA 2.67	SIMPLE BOUGUER ANOMALY IN MILLIGALS FOR ASSUMED DENSITY OF 2.67 G PER CC
BA (OPT)	SIMPLE BOUGUER ANOMALY IN MILLIGALS FOR ASSUMED DENSITY OF 2.40 G PER CC
CC	CURVATURE CORRECTION IN MILLIGALS

MEASUREMENTS WERE MADE WITH WORDEN GRAVITY METER NO. 90 WITH A SENSITIVITY OF 0.5380 MILLIGALS PER SCALE DIVISION. THE DATA ARE REFERENCED TO BASE STATION WA 2 AT SKY HARBOR AIRPORT, PHOENIX, ARIZONA (BEHRENDT AND WOOLLARD, 1961).

REFERENCE

BEHRENDT, J. C., AND WOOLLARD, G. P., 1961, AN EVALUATION OF THE GRAVITY CONTROL NETWORK IN NORTH AMERICA: GEOPHYSICS, V. 26, NO. 1, PP. 57-76.

STATION	LAT	LONG	ELEV (F)	DBS G	FAA	BA2.67	BA(OPT)	CG
RASF 33	29.95	112 21.70	1044.0	1466.45	-55.05	-90.66	-87.06	0.39
S1 33	34.53	112 22.00	1104.0	1457.46	-64.73	-102.39	-98.58	0.41
S2 33	34.71	112 21.75	1120.0	1454.50	-66.44	-104.64	-100.78	0.42
S3 33	33.98	112 19.62	1042.0	1458.69	-68.57	-104.11	-100.52	0.39
S4 33	31.63	112 20.57	1131.0	1449.81	-65.83	-104.41	-100.51	0.42
S5 33	33.08	112 20.47	1088.0	1455.02	-66.67	-103.78	-100.02	0.40
S6 33	33.08	112 21.30	1097.0	1459.86	-60.98	-98.40	-94.61	0.41
S7 33	33.92	112 21.30	1117.0	1461.48	-58.65	-96.75	-92.90	0.42
S8 33	33.92	112 20.45	1102.0	1457.28	-64.26	-101.85	-98.05	0.41
S9 33	35.67	112 20.48	1135.0	1452.17	-58.69	-97.40	-93.48	0.42
S10 33	35.67	112 21.50	1152.0	1464.75	-54.51	-93.80	-89.83	0.43
S11 33	37.40	112 21.53	1188.0	1469.32	-48.95	-89.47	-85.37	0.44
S12 33	37.42	112 22.54	1208.0	1468.67	-47.74	-88.94	-84.78	0.45
S13 33	35.69	112 22.55	1171.0	1467.00	-50.50	-90.44	-86.40	0.43
S14 33	35.70	112 23.59	1185.0	1469.68	-46.51	-86.93	-82.84	0.44
S15 33	27.85	112 21.45	992.0	1481.47	-42.02	-75.85	-72.43	0.37
S16 33	27.85	112 20.43	995.0	1477.49	-45.72	-79.65	-76.22	0.37
S17 33	28.72	112 20.43	1010.0	1471.47	-51.53	-85.98	-82.50	0.38
S19 33	28.72	112 19.72	998.0	1470.45	-53.68	-87.72	-84.27	0.37
S20 33	27.83	112 19.37	987.0	1475.19	-48.74	-82.41	-79.00	0.37
S21 33	27.88	112 17.35	1013.0	1472.88	-48.68	-83.23	-79.73	0.38
S22 33	27.90	112 15.28	1025.0	1472.78	-47.68	-82.64	-79.10	0.38
S23 33	27.11	112 14.23	1027.0	1472.69	-46.49	-81.52	-77.97	0.38
S24 33	27.09	112 13.21	1035.0	1472.47	-45.92	-81.22	-77.65	0.39
S25 33	26.21	112 13.23	1023.0	1475.51	-42.79	-77.69	-74.16	0.38
S26 33	26.21	112 14.26	1009.0	1475.89	-43.73	-78.15	-74.67	0.38
S27 33	26.15	112 15.28	1001.0	1476.49	-43.81	-77.95	-74.49	0.37
S28 33	26.12	112 17.35	992.0	1478.05	-43.05	-76.83	-73.46	0.37
S29 33	26.10	112 19.37	969.0	1481.87	-41.36	-74.41	-71.07	0.36
S30 33	26.12	112 21.45	963.0	1489.25	-34.58	-67.42	-64.10	0.36
S31 33	26.12	112 22.25	977.0	1490.97	-31.54	-64.86	-61.49	0.36
S32 33	29.68	112 24.53	1049.0	1480.00	-40.66	-76.44	-72.82	0.39
S33 33	29.68	112 25.56	1069.0	1483.33	-35.45	-71.91	-68.22	0.40
S34 33	29.68	112 27.68	1112.0	1489.62	-25.11	-63.04	-59.20	0.41
S35 33	29.68	112 28.68	1157.0	1490.42	-20.08	-59.54	-55.55	0.43

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	S36	33	29.68	112	29.75	1205.0	1492.89	-13.09	-54.19	-50.04	0.45
	S37	33	29.20	112	29.74	1195.0	1492.51	-13.75	-54.51	-50.39	0.44
	S38	33	30.49	112	28.14	1149.0	1490.50	-21.87	-61.06	-57.09	0.43
	S39	33	30.49	112	25.56	1087.0	1480.12	-38.09	-75.16	-71.41	0.40
	S40	33	30.49	112	24.53	1068.0	1474.73	-45.26	-81.69	-78.00	0.40
	S41	33	30.50	112	21.42	1065.0	1460.68	-59.61	-95.93	-92.26	0.40
	S42	33	31.38	112	16.30	1059.0	1467.55	-54.51	-90.63	-86.98	0.39
	S43	33	31.33	112	17.35	1042.0	1461.85	-61.75	-97.29	-93.70	0.39
	S44	33	30.50	112	17.35	1035.0	1463.83	-59.28	-94.58	-91.01	0.39
	S45	33	30.50	112	16.30	1044.0	1468.78	-53.49	-89.09	-85.49	0.39
	S46	33	30.53	112	15.25	1057.0	1473.67	-47.41	-83.46	-79.82	0.39
	S47	33	30.53	112	14.23	1077.0	1477.16	-42.04	-78.77	-75.06	0.40
	S48	33	31.39	112	15.26	1069.0	1473.98	-47.16	-83.62	-79.94	0.40
	S49	33	30.54	112	13.19	1069.0	1479.03	-40.94	-77.40	-73.71	0.40
	S50	33	33.11	112	14.24	1103.0	1482.49	-37.83	-75.45	-71.65	0.41
	S51	33	33.10	112	15.25	1096.0	1476.62	-44.34	-81.72	-77.94	0.41
	S52	33	33.08	112	16.30	1078.0	1468.66	-53.98	-90.74	-87.02	0.40
	S53	33	33.06	112	17.35	1092.0	1459.56	-61.73	-98.97	-95.21	0.41
	S54	33	33.06	112	18.38	1065.0	1455.79	-68.04	-104.36	-100.69	0.40
	S55	33	33.95	112	16.22	1093.0	1470.68	-51.74	-89.02	-85.25	0.41
	S56	33	33.97	112	15.25	1112.0	1478.32	-42.35	-80.28	-76.44	0.41
	S57	33	35.73	112	14.23	1155.0	1490.47	-28.59	-67.98	-64.00	0.43
	S58	33	34.87	112	13.18	1154.0	1489.12	-28.85	-68.21	-64.22	0.43
	S59	33	35.73	112	15.25	1139.0	1484.38	-36.19	-75.04	-71.11	0.42
	S60	33	33.96	112	22.54	1131.0	1465.80	-53.07	-91.64	-87.74	0.42
	S61	33	33.96	112	23.58	1143.0	1470.47	-47.26	-86.25	-82.31	0.42
	S62	33	33.98	112	24.54	1163.0	1472.57	-43.32	-82.98	-78.97	0.43
	S63	33	33.98	112	25.56	1192.0	1477.83	-35.32	-75.98	-71.87	0.44
	S64	33	33.95	112	27.95	1280.0	1488.53	-16.31	-59.96	-55.55	0.47
	S65	33	33.10	112	25.58	1157.0	1478.62	-36.61	-76.07	-72.08	0.43
	S66	33	28.75	112	25.56	1045.0	1487.91	-31.84	-67.48	-63.87	0.39
	S67	33	28.75	112	24.53	1030.0	1485.60	-35.56	-70.69	-67.14	0.38
	S68	33	27.88	112	24.53	1010.0	1489.63	-32.21	-66.65	-63.17	0.38
	S69	33	26.13	112	24.53	971.0	1495.71	-27.38	-60.50	-57.15	0.36
	S70	33	26.13	112	25.56	963.0	1498.45	-25.39	-58.23	-54.91	0.36
	S71	33	27.88	112	25.56	1017.0	1492.53	-28.65	-63.33	-59.83	0.38
	S72	33	28.90	112	15.28	1038.0	1472.29	-48.32	-83.72	-80.14	0.39

	S73	33	28.60	112	17.35	1017.0	1470.19	-51.98	-86.67	-83.16	0.39
	S74	33	28.78	112	14.23	1053.0	1472.99	-46.05	-81.96	-78.33	0.39
	S75	33	28.80	112	13.20	1066.0	1474.12	-43.72	-80.08	-76.41	0.40
	S76	33	28.83	112	11.14	1085.0	1475.25	-40.85	-77.86	-74.11	0.40
	S77	33	30.55	112	12.16	1109.0	1479.82	-36.40	-74.22	-70.40	0.41
	S78	33	32.30	112	12.15	1132.0	1482.83	-33.65	-72.25	-68.35	0.42
	S79	33	32.30	112	10.08	1166.0	1484.76	-28.51	-68.28	-64.26	0.43
	S80	33	32.32	112	8.00	1185.0	1489.77	-21.75	-62.17	-58.08	0.44
	S81	33	33.19	112	8.00	1202.0	1492.88	-18.24	-59.23	-55.09	0.45
	S82	33	33.18	112	9.05	1193.0	1488.53	-23.43	-64.12	-60.00	0.44
	S83	33	34.91	112	9.05	1227.0	1490.68	-20.48	-62.32	-58.09	0.46
	S84	33	34.91	112	8.00	1242.0	1486.85	-22.89	-65.25	-60.96	0.46
	S85	33	35.78	112	8.00	1256.0	1483.52	-26.11	-68.95	-64.62	0.47
	S86	33	35.60	112	9.05	1242.0	1484.86	-25.83	-68.19	-63.91	0.46
	S87	33	35.76	112	12.13	1184.0	1489.81	-26.56	-66.94	-62.86	0.44
	S88	33	35.75	112	13.16	1168.0	1492.18	-25.69	-65.52	-61.50	0.43
	S89	33	37.37	112	13.15	1204.0	1491.64	-25.08	-66.15	-62.00	0.45
7	S90	33	38.29	112	14.21	1206.0	1488.62	-29.18	-70.32	-66.16	0.45
	S91	33	38.28	112	15.75	1203.0	1487.28	-30.80	-71.83	-67.68	0.45
6	S92	33	38.33	112	18.40	1160.0	1479.96	-42.23	-81.79	-77.79	0.43
5	S93	33	27.88	112	29.75	1100.0	1497.07	-16.30	-53.82	-50.02	0.41
	S94	33	28.56	112	30.76	1184.0	1496.64	-9.77	-50.15	-46.07	0.44
4	S95	33	29.61	112	30.78	1310.0	1488.41	-7.60	-52.28	-47.76	0.49
	S96	33	29.53	112	32.94	1578.0	1472.65	1.96	-51.86	-46.42	0.58
3	S97	33	31.55	112	31.45	1590.0	1452.27	-20.09	-74.32	-68.84	0.59
	S98	33	30.85	112	30.28	1330.0	1490.09	-5.75	-51.12	-46.53	0.49
2	S99	33	31.35	112	29.75	1272.0	1492.52	-9.48	-52.86	-48.47	0.47
	S100	33	31.36	112	25.56	1111.0	1479.02	-38.13	-76.03	-72.19	0.41
	S101	33	31.35	112	24.53	1089.0	1472.78	-46.43	-83.57	-79.11	0.41
	S102	33	33.10	112	24.53	1140.0	1472.51	-44.32	-83.20	-79.27	0.42
	S103	33	33.10	112	23.56	1120.0	1469.39	-49.32	-87.52	-83.66	0.42
	S104	33	35.70	112	24.49	1206.0	1471.38	-42.84	-83.97	-79.81	0.45
	S105	33	35.71	112	26.06	1231.0	1474.45	-37.43	-79.42	-75.17	0.46
	S106	33	35.70	112	28.01	1333.0	1481.28	-20.99	-66.45	-61.86	0.49
	S107	33	36.58	112	27.49	1328.0	1475.60	-27.36	-72.65	-68.07	0.49
	S108	33	37.45	112	25.56	1270.0	1470.47	-40.15	-83.47	-79.08	0.47
	S109	33	37.45	112	24.51	1255.0	1469.13	-42.90	-85.71	-81.38	0.47
	S110	33	37.44	112	23.59	1231.0	1469.13	-45.15	-87.13	-82.89	0.46
	S111	33	37.40	112	20.48	1168.0	1471.34	-48.81	-88.65	-84.62	0.43
	S112	33	37.40	112	19.42	1151.0	1474.19	-47.56	-86.81	-82.84	0.43

S113	33	28.72	112	22.48	1012.0	1479.46	-43.35	-77.87	-74.38	0.39
S114	33	27.85	112	22.48	999.0	1484.40	-38.43	-72.50	-69.05	0.37
S115	33	38.32	112	18.25	1178.0	1476.96	-43.52	-83.70	-79.64	0.44
S117	33	37.42	112	15.50	1180.0	1486.95	-32.10	-72.34	-68.27	0.44
S118	33	36.55	112	15.78	1156.0	1483.77	-36.33	-75.75	-71.77	0.43
S116	33	37.42	112	16.30	1177.0	1484.23	-35.10	-75.24	-71.18	0.44

Errata sheet

STATION	LAT	LONG	ELEV(F)	OBS G	FAA	BA2.67	BA(OPT)	CC
S1	33 31.03	112 22.00	1104.0	1457.46	-59.89	-97.54	-93.74	0.41
S2	33 31.22	112 21.75	1120.0	1454.50	-61.61	-99.81	-95.94	0.42
S3	33 30.46	112 19.62	1042.0	1458.69	-63.70	-99.24	-95.65	0.39

