

UNITED STATES DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

PRINCIPAL FACTS FOR GRAVITY STATIONS IN THE BIG MARIA,  
RIVERSIDE, AND WHIPPLE MOUNTAINS, CALIFORNIA

By

Thomas B. Gage and Robert W. Simpson

Open-File Report 81-30

1981

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

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Presented in table 1 are gravity stations obtained in March and April of 1980. An explanation of the headings for table 1 is as follows:

STATION IDENTIFICATION R = Riverside Mountains, BM = Big Maria Mountains,  
W and GW = Whipple Mountains, RV = Rice Valley.

LATITUDE North latitude in degrees, minutes, and hundredths of minutes.

LONGITUDE West longitude in degrees, minutes, and hundredths of minutes.

ELE Elevation in feet (to convert to meters, multiply by 0.3048).

Elevations were obtained by interpolating between contours on topographic maps and by using stereopairs of aerial photographs in a stereoptical device designed to give elevations from properly registered overlapping aerial photographs. We estimate from comparisons of the two techniques that most of the stations have elevations accurate to within  $\pm 20$  feet (corresponding to an elevation correction of  $\pm 1.2$  milligals).

ST State, all in California.

OBSERVED GRAVIT Relative to a value of 979583.42 milligals at Parker, Arizona. (Station site is located in Parker Municipal Airport terminal building, on floor in corner next to operations office). Value is consistent with the International Gravity Standardization Net of 1971 (Morelli, 1974). Relative precision of observed gravity values is estimated to be better than  $\pm 0.1$  milligals.

THEORETICAL GRAVITY	Calculated using the Geodetic Reference System 1967 (International Association of Geodesy, 1971).
TERRAIN CORRECTION	Terrain corrections have been calculated out to 166.7 km from a station using a modification of the terrain correction program of Plouff (1977).
BOUGUER CORRECTION	Simple Bouguer slab correction using a density of 2.67 g per cm <sup>3</sup> .
CURVATURE CORRECTION	Adjustment to Bouguer slab for curvature of earth (Lambert, 1930).
SPECIAL CORRECTION	Not used.
FREE AIR ANOMALY	Free air anomaly in milligals.
BOUGUER ANOMALY	Bouguer anomaly in milligals calculated using densities of 2.67 g per cm <sup>3</sup> and 2.50 g per cm <sup>3</sup> . Estimated error for most stations is thought to be on the order of $\pm$ 2 milligals. Stations with large terrain corrections may have larger errors.

#### REFERENCES

International Association of Geodesy, 1971, Geodetic reference system 1967:  
International Association of Geodesy Special Publication no. 3, 116 p.

Lambert, W. D., 1930, The reduction of observed values of gravity to sea level:  
Bulletin geodesique, no. 26, Avril-mai-juin, p. 107-181.

Morelli, C., (ed.), 1974, The international gravity standardization net 1971:  
International Association of Geodesy Special Publication no. 4, 194 p.

Plouff, D., 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 77-534, 45 p.

## BOUGUER GRAVITY DATA

page 1

BIGMARIA-RIVERSIDE-WHIPPLE - CA

ONFEDLE24

Meter ID: a-24 Date: 10/23/80

STATION	L	O	C	A	T	I	O	N	S	ELE	ST	G	R	A	V	I	T	Y	TERRAIN	C	O	R	R	E	C	T	I	O	N	S	SPECIAL	FREE	A	N	O	M	A	L	I	E	S	COMPLETE-ROUGUER	SPEC	
IDENTIFICATION	lat	lon	lat	lon	lon	deg	min	deg	min	(ft)	CA	OBSERVED	THEORETICAL	TERRAIN	BOUGUER	CURV	CURV	BOUGUER	AIR	BOUGUER	BOUGUER	BOUGUER	BOUGUER	BOUGUER	BOUGUER	BOUGUER	BOUGUER	BOUGUER	BOUGUER	BOUGUER	BOUGUER	BOUGUER	BOUGUER	BOUGUER	BOUGUER	BOUGUER	BOUGUER	BOUGUER	BOUGUER	BOUGUER	BOUGUER	BOUGUER	BOUGUER	BOUGUER
R 1	33	58.00	-114	31.50	440.0	CA	979581.09	979645.73	0.02	-15.01	-0.19	0.00	0.00	0.00	0.00	0.00	0.00	-23.25	-36.43	-37.46																								
R 2	33	58.31	-114	32.60	510.0	CA	979578.96	979646.17	0.08	-17.39	-0.22	0.00	0.00	0.00	0.00	0.00	0.00	-19.23	-36.77	-35.65																								
R 3	33	58.27	-114	34.12	640.0	CA	979570.70	979646.11	0.04	-21.83	-0.27	0.00	0.00	0.00	0.00	0.00	0.00	-15.21	-37.27	-35.86																								
R 4	33	59.17	-114	33.95	680.0	CA	979568.18	979647.37	0.15	-23.19	-0.29	0.00	0.00	0.00	0.00	0.00	0.00	-15.22	-38.56	-37.07																								
R 6	33	59.18	-114	30.80	480.0	CA	979588.00	979647.38	0.40	-16.37	-0.21	0.00	0.00	0.00	0.00	0.00	0.00	-14.23	-30.41	-29.38																								
R 7	33	59.10	-114	30.30	440.0	CA	979587.44	979647.27	0.20	-15.01	-0.19	0.00	0.00	0.00	0.00	0.00	0.00	-18.44	-33.44	-32.49																								
R 9	34	0.70	-114	36.45	1130.0	CA	979547.61	979649.51	0.31	-38.54	-0.46	0.00	0.00	0.00	0.00	0.00	0.00	4.40	-34.30	-31.83																								
R 10	34	0.45	-114	36.07	1060.0	CA	979549.40	979649.16	0.67	-36.15	-0.44	0.00	0.00	0.00	0.00	0.00	0.00	-0.05	-35.97	-33.68																								
R 11	34	0.37	-114	34.07	880.0	CA	979562.74	979649.05	0.22	-30.01	-0.37	0.00	0.00	0.00	0.00	0.00	0.00	-3.53	-33.69	-31.77																								
R 12	34	0.34	-114	33.22	760.0	CA	979570.52	979649.00	0.14	-25.92	-0.32	0.00	0.00	0.00	0.00	0.00	0.00	-6.99	-33.09	-31.43																								
R 13	34	0.19	-114	32.96	760.0	CA	979571.29	979648.80	0.12	-25.92	-0.32	0.00	0.00	0.00	0.00	0.00	0.00	-6.01	-32.13	-30.47																								
R 14	34	0.40	-114	32.45	840.0	CA	979567.23	979649.09	0.23	-28.65	-0.35	0.00	0.00	0.00	0.00	0.00	0.00	-2.84	-31.61	-29.78																								
R 15	34	0.95	-114	32.85	870.0	CA	979566.26	979649.85	0.23	-29.67	-0.36	0.00	0.00	0.00	0.00	0.00	0.00	-1.76	-31.56	-29.67																								
R 17	34	1.10	-114	33.47	620.0	CA	979565.91	979650.06	0.56	-27.97	-0.34	0.00	0.00	0.00	0.00	0.00	0.00	-7.01	-34.77	-33.00																								
R 18	34	2.85	-114	33.56	1000.0	CA	979550.54	979652.51	0.09	-34.11	-0.41	0.00	0.00	0.00	0.00	0.00	0.00	1.10	-33.33	-31.14																								
R 21	34	3.67	-114	30.56	840.0	CA	979574.52	979653.66	1.05	-28.65	-0.35	0.00	0.00	0.00	0.00	0.00	0.00	-0.12	-28.07	-26.29																								
R 22	34	3.40	-114	31.09	980.0	CA	979565.76	979653.27	0.90	-33.42	-0.41	0.00	0.00	0.00	0.00	0.00	0.00	4.66	-28.27	-26.17																								
R 8A	34	1.85	-114	36.40	1245.0	CA	979539.39	979651.11	0.27	-42.46	-0.50	0.00	0.00	0.00	0.00	0.00	0.00	5.39	-37.31	-34.59																								
R17A	34	1.84	-114	34.42	1190.0	CA	979543.68	979651.09	0.20	-40.59	-0.48	0.00	0.00	0.00	0.00	0.00	0.00	4.52	-36.35	-33.75																								
R18A	34	1.70	-114	31.97	1160.0	CA	979550.58	979650.90	0.73	-39.56	-0.47	0.00	0.00	0.00	0.00	0.00	0.00	8.79	-30.52	-28.01																								
BM 1	33	43.20	-114	31.67	297.0	CA	979567.58	979625.12	0.03	-10.13	-0.13	0.00	0.00	0.00	0.00	0.00	0.00	-29.60	-39.83	-39.18																								
BM 2	33	43.20	-114	32.62	375.0	CA	979564.58	979625.12	0.10	-12.79	-0.16	0.00	0.00	0.00	0.00	0.00	0.00	-25.26	-38.11	-37.30																								
BM 3	33	42.58	-114	33.60	366.0	CA	979563.96	979624.26	0.07	-12.48	-0.16	0.00	0.00	0.00	0.00	0.00	0.00	-25.86	-38.44	-37.63																								
BM 4	33	42.86	-114	34.07	471.0	CA	979560.30	979624.64	0.14	-16.06	-0.20	0.00	0.00	0.00	0.00	0.00	0.00	-20.04	-36.17	-35.14																								
BM 5	33	42.60	-114	34.43	396.0	CA	979561.75	979624.28	0.07	-13.51	-0.17	0.00	0.00	0.00	0.00	0.00	0.00	-25.28	-38.89	-38.02																								
BM 6	33	43.42	-114	34.88	591.0	CA	979553.30	979625.42	0.35	-20.16	-0.25	0.00	0.00	0.00	0.00	0.00	0.00	-16.47	-36.53	-35.25																								
BM 7	33	43.40	-114	35.55	552.0	CA	979555.28	979625.39	0.27	-18.83	-0.24	0.00	0.00	0.00	0.00	0.00	0.00	-18.19	-36.98	-35.78																								
BM 8	33	42.11	-114	34.73	314.0	CA	979559.67	979623.60	0.01	-10.71	-0.14	0.00	0.00	0.00	0.00	0.00	0.00	-34.39	-45.23	-44.54																								
BM 9	33	41.96	-114	35.78	340.0	CA	979554.30	979623.39	0.00	-11.60	-0.15	0.00	0.00	0.00	0.00	0.00	0.00	-37.11	-48.86	-48.11																								
BM 10	33	44.36	-114	36.53	734.0	CA	979549.55	979626.73	0.55	-25.03	-0.31	0.00	0.00	0.00	0.00	0.00	0.00	-8.14	-32.93	-31.35																								
BM 11	33	44.40	-114	37.09	641.0	CA	979552.59	979626.79	0.49	-21.86	-0.27	0.00	0.00	0.00	0.00	0.00	0.00	-13.89	-35.54	-34.16																								
BM 12	33	45.38	-114	37.27	840.0	CA	979544.82	979628.15	0.54	-28.65	-0.35	0.00	0.00	0.00	0.00	0.00	0.00	-4.31	-32.77	-30.96																								
BM 14	33	47.06	-114	36.97	990.0	CA	979534.33	979630.48	1.16	-33.77	-0.41	0.00	0.00	0.00	0.00	0.00	0.00	-3.03	-36.05	-33.95																								
BM 16	33	48.28	-114	36.58	1070.0	CA	979530.86	979632.19	2.92	-36.50	-0.44	0.00	0.00	0.00	0.00	0.00	0.00	-0.68	-34.69	-32.52																								
BM 17	33	48.60	-114	35.45	740.0	CA	979545.46	979632.63	3.08	-25.24	-0.31	0.00	0.00	0.00	0.00	0.00	0.00	-17.56	-40.03	-38.60																								
BM 18	33	50.14	-114	36.13	870.0	CA	979542.29	979634.77	2.21	-29.67	-0.36	0.00	0.00	0.00	0.00	0.00	0.00	-10.65	-38.47	-36.70																								
BM 20	33	49.95	-114	34.48	560.0	CA	979559.31	979634.51	0.53	-19.10	-0.24	0.00	0.00	0.00	0.00	0.00	0.00	-22.52	-41.33	-40.13																								
BM 21	33	44.35	-114	32.32	520.0	CA	979557.34	979626.72	0.31	-17.74	-0.22	0.00	0.00	0.00	0.00	0.00	0.00	-20.46	-38.10	-36.98																								
BM 22	33	44.67	-114	32.42	590.0	CA	979553.25	979627.44	0.43	-20.12	-0.25	0.00	0.00	0.00	0.00	0.00	0.00	-18.69	-38.63	-37.36																								
BM 23	33	45.34	-114	33.20	745.0	CA	979546.31	979628.09	0.67	-25.41	-0.31	0.00	0.00	0.00	0.00	0.00	0.00	-11.70	-36.75	-35.16																								

BOUGUER GRAVITY DATA

BIGNARIA-RIVERSIDE-WHIPPLE - CA  
 ONEEDLE24  
 Meter ID: a-24 Date: 10/23/80

STATION IDENTIFICATION	L U C A T I O N S	G R A V I T Y	C O R R E C T I O N S	A N O M A L I E S
proj sta-id	LATITUDE deg min	LONGITUDE deg min	ELE ST (in ft)	OBSERVED THEORETICAL TERRAIN BOUGUER CURV SPECIAL AIR COMPLETE-BOUGUER SPEC
	deg min	deg min	(in ft)	d1=2.67 d2=2.50 FIELDS
: RM 25	33 45.70	-114 31.69	325.0 CA	979569.00 979628.59 0.52 -11.0A -0.14 0.00 -29.02 -39.73 -39.05
: RM 26	33 46.28	-114 31.93	310.0 CA	979572.98 979629.40 0.87 -10.57 -0.14 0.00 -27.25 -37.09 -36.47
: RM 27	33 47.05	-114 33.17	593.0 CA	979556.44 979630.48 0.77 -20.23 -0.25 0.00 -18.25 -37.96 -36.71
: RM 28	33 46.28	-114 33.34	675.0 CA	979552.28 979629.40 1.02 -23.02 -0.29 0.00 -13.62 -35.91 -34.49
: RM 29	33 46.37	-114 34.35	830.0 CA	979542.77 979629.52 2.02 -28.31 -0.35 0.00 -8.68 -35.32 -33.62
: RM 31	33 51.11	-114 35.08	610.0 CA	979561.11 979636.13 0.92 -20.81 -0.26 0.00 -17.64 -37.78 -36.50
: RM 32	33 51.50	-114 34.78	580.0 CA	979561.73 979636.67 0.41 -19.78 -0.25 0.00 -20.38 -40.00 -38.75
: RM 33	33 52.10	-114 36.82	991.0 CA	979539.23 979637.51 1.58 -33.80 -0.41 0.00 -5.05 -37.68 -35.61
: RM 34	33 52.05	-114 37.30	1046.0 CA	979532.77 979637.44 2.04 -35.68 -0.43 0.00 -6.27 -40.34 -38.17
: RM 35	33 52.22	-114 38.48	1235.0 CA	979523.36 979637.67 3.31 -42.12 -0.50 0.00 1.85 -37.46 -34.96
: RM 36	33 52.48	-114 37.63	1094.0 CA	979531.95 979638.04 2.52 -37.31 -0.45 0.00 -3.18 -38.42 -36.18
: RM 37	33 52.03	-114 39.15	1372.0 CA	979511.87 979637.41 4.75 -46.80 -0.55 0.00 3.51 -39.08 -36.37
: RM 38	33 51.41	-114 37.85	1193.0 CA	979525.44 979636.55 1.99 -40.69 -0.49 0.00 1.11 -38.07 -35.58
: RM 39	33 51.08	-114 37.80	1270.0 CA	979519.68 979636.09 3.49 -43.32 -0.51 0.00 3.06 -37.28 -34.72
: RM 40	33 48.20	-114 39.35	1106.0 CA	979528.09 979632.07 4.15 -37.72 -0.45 0.00 0.06 -33.97 -31.80
: RM 41	33 53.96	-114 46.69	951.0 CA	979536.72 979640.10 1.16 -32.44 -0.39 0.00 -13.93 -45.60 -43.58
: RM 42	33 54.30	-114 45.88	1046.0 CA	979534.82 979640.57 0.74 -35.68 -0.43 0.00 -7.36 -42.73 -40.48
: RM 43	33 53.98	-114 45.30	1200.0 CA	979526.19 979640.13 1.47 -40.93 -0.49 0.00 -1.06 -41.01 -38.47
: RM 44	33 54.43	-114 44.51	1000.0 CA	979537.46 979640.76 1.30 -34.11 -0.41 0.00 -9.23 -42.45 -40.33
: RM 45	33 54.49	-114 44.32	980.0 CA	979540.49 979640.84 1.12 -33.42 -0.41 0.00 -8.16 -40.87 -38.79
: RM 46	33 46.99	-114 38.86	840.0 CA	979541.48 979630.39 2.14 -28.65 -0.35 0.00 -9.89 -36.75 -35.04
: RM 47	33 47.85	-114 39.93	874.0 CA	979537.07 979631.59 2.60 -29.81 -0.36 0.00 -12.30 -39.88 -38.12
: RM 48	33 48.43	-114 41.40	860.0 CA	979539.43 979632.39 0.97 -29.33 -0.36 0.00 -12.07 -40.79 -38.96
: RM 49	33 49.39	-114 41.47	965.0 CA	979534.68 979633.73 1.19 -32.91 -0.40 0.00 -8.28 -40.40 -38.36
: RM 50	33 49.16	-114 40.76	1077.0 CA	979528.18 979633.41 1.66 -36.73 -0.44 0.00 -3.92 -39.44 -37.18
: RM 51	33 49.42	-114 40.40	1122.0 CA	979522.87 979633.77 2.02 -38.27 -0.46 0.00 -5.36 -42.07 -39.73
: RM 52	33 50.30	-114 39.94	1281.0 CA	979515.15 979635.00 4.36 -43.69 -0.52 0.00 0.65 -39.20 -36.67
: RM 54	33 50.50	-114 40.91	1121.0 CA	979524.68 979635.28 2.43 -38.23 -0.46 0.00 -5.15 -41.42 -39.11
: RM 55	33 50.59	-114 41.15	1122.0 CA	979522.77 979635.41 1.93 -38.27 -0.46 0.00 -7.09 -43.89 -41.54
: RM 56	33 51.58	-114 41.83	1195.0 CA	979521.43 979636.78 1.78 -40.76 -0.49 0.00 -2.95 -42.41 -39.90
: RM 57	33 51.64	-114 43.01	1167.0 CA	979523.13 979636.87 1.36 -39.80 -0.48 0.00 -3.96 -42.88 -40.40
: RM 58	33 51.56	-114 43.46	1150.0 CA	979525.18 979636.76 1.01 -39.22 -0.47 0.00 -3.40 -42.08 -39.62
: RM 59	33 51.02	-114 44.47	928.0 CA	979536.77 979636.00 0.47 -31.65 -0.39 0.00 -11.94 -43.50 -41.49
: RM 60	33 51.53	-114 44.60	1015.0 CA	979533.62 979636.71 0.85 -34.62 -0.42 0.00 -7.62 -41.81 -39.63
: RM 61	33 52.73	-114 46.39	1213.0 CA	979518.85 979638.38 2.00 -41.37 -0.49 0.00 -5.44 -45.30 -42.76
: RM 62	33 52.43	-114 46.18	1112.0 CA	979525.75 979637.97 2.20 -37.93 -0.46 0.00 -7.62 -43.80 -41.50
: RM 63	33 51.83	-114 45.19	1072.0 CA	979530.36 979637.13 1.22 -31.56 -0.44 0.00 -5.93 -41.72 -39.44
: RM 64	33 54.04	-114 43.73	1070.0 CA	979533.43 979640.21 0.57 -36.50 -0.44 0.00 -6.13 -42.50 -40.18
: RM 65	33 53.72	-114 43.28	1080.0 CA	979532.29 979639.77 0.80 -36.84 -0.44 0.00 -5.89 -42.37 -40.04
: RM 66	33 53.44	-114 42.73	1030.0 CA	979531.50 979639.38 1.66 -35.13 -0.42 0.00 -10.99 -44.88 -42.73

RIGNARIA-RIVERSIDE-WHIPPLE - CA  
 ONFEDLE24  
 Meter ID: a-24 Date: 10/23/80

STATION	L O C A T I O N S	G R A V I T Y	C O R R E C T I O N S	A N O M A L I E S					
IDENTIFICATION	L A T I T U D E	LONGITUDE	TERRAIN BOUGUER CURV	FREE COMPLETE-BOUGUER SPEC					
proj sta-id	deg min	deg min	TERRAIN BOUGUER CURV	AIR d1=2.67 d2=2.50 FIELDS					
	(in ft)								
: RM 67	33 52.84	-114 42.30	1.42	-40.93 -0.49	0.00	0.00	-1.23	-41.23	-38.68
: RM 68	33 52.69	-114 41.77	1.82	-43.66 -0.52	0.00	0.00	2.72	-39.64	-36.94
: RM 69	33 53.81	-114 41.66	1.68	-36.84 -0.44	0.00	0.00	-4.69	-40.29	-38.03
: RM 70	33 54.60	-114 40.90	0.99	-37.52 -0.45	0.00	0.00	3.95	-33.03	-30.68
: RM 71	33 54.67	-114 40.40	1.05	-37.52 -0.45	0.00	0.00	2.04	-34.87	-32.52
: RM 72	33 53.78	-114 39.15	3.24	-50.48 -0.59	0.00	0.00	13.68	-34.15	-31.10
: RM 73	33 54.02	-114 38.59	1.94	-48.77 -0.57	0.00	0.00	13.14	-34.26	-31.24
: RM 76	33 54.43	-114 37.16	5.45	-30.01 -0.37	0.00	0.00	-15.88	-40.82	-39.23
: RM 78	33 53.33	-114 35.90	0.55	-30.01 -0.37	0.00	0.00	-7.94	-37.78	-35.88
: RM 79	33 53.05	-114 34.84	0.30	-24.90 -0.31	0.00	0.00	-17.12	-42.02	-40.44
: RM 80	33 54.13	-114 34.90	0.44	-26.60 -0.33	0.00	0.00	-9.50	-36.00	-34.31
: RM 81	33 55.50	-114 33.80	0.20	-18.42 -0.23	0.00	0.00	-12.20	-30.65	-29.48
: RM 83	33 55.95	-114 34.82	0.37	-24.39 -0.30	0.00	0.00	-12.52	-36.84	-35.29
: RM 84	33 55.80	-114 37.12	1.34	-47.75 -0.56	0.00	0.00	14.48	-32.49	-29.50
: RM 3A	33 44.14	-114 33.83	1.05	-25.41 -0.31	0.00	0.00	-11.80	-36.48	-34.91
: RM 9A	33 42.80	-114 36.68	0.01	-16.06 -0.20	0.00	0.00	-29.87	-46.13	-45.09
: RM13A	33 45.90	-114 36.23	2.28	-35.47 -0.43	0.00	0.00	2.62	-31.00	-28.86
: RM20A	33 43.97	-114 30.60	-0.03	-9.89 -0.13	0.00	0.00	-31.23	-41.27	-40.63
: RM29A	33 47.17	-114 35.23	1.07	-41.10 -0.49	0.00	0.00	6.78	-33.74	-31.16
: RM30A	33 49.37	-114 32.17	0.13	-10.40 -0.13	0.00	0.00	-37.58	-47.98	-47.32
: RM32A	33 51.25	-114 36.35	2.22	-28.99 -0.36	0.00	0.00	-10.43	-37.56	-35.83
: RM51A	33 49.39	-114 38.32	5.71	-55.42 -0.64	0.00	0.00	22.47	-27.88	-24.68
: RM56A	33 51.58	-114 41.85	5.63	-31.79 -0.39	0.00	0.00	-15.43	-41.97	-40.28
: RM75A	33 55.65	-114 38.40	0.50	-42.63 -0.51	0.00	0.00	4.40	-38.24	-35.53
: RM78A	33 52.95	-114 37.09	1.78	-41.61 -0.50	0.00	0.00	0.78	-39.55	-36.98
: RM94A	33 54.97	-114 36.82	13.08	-77.01 -0.84	0.00	0.00	30.34	-34.43	-30.31
: RM13B	33 45.67	-114 36.52	1.00	-36.84 -0.44	0.00	0.00	-0.14	-36.42	-34.11
: RM30P	33 48.34	-114 31.70	0.10	-12.14 -0.15	0.00	0.00	-35.31	-47.51	-46.73
: RV 1	34 4.07	-114 51.37	0.01	-28.10 -0.35	0.00	0.00	-34.47	-62.91	-61.10
: RV 2	34 2.32	-114 50.92	0.14	-24.28 -0.30	0.00	0.00	-40.21	-64.66	-63.10
: RV 3	34 0.77	-114 50.66	-0.04	-24.39 -0.30	0.00	0.00	-39.96	-64.68	-63.11
: RV 4	33 59.12	-114 49.84	-0.07	-25.58 -0.32	0.00	0.00	-38.25	-64.22	-62.56
: RV 5	33 57.35	-114 49.31	-0.05	-27.63 -0.34	0.00	0.00	-34.24	-62.25	-60.47
: RV 6	33 55.67	-114 47.93	0.01	-27.90 -0.34	0.00	0.00	-29.03	-57.26	-55.47
: RV 7	33 54.41	-114 47.12	0.66	-29.40 -0.36	0.00	0.00	-20.61	-49.71	-47.86
: RV 8	34 1.57	-114 40.09	0.15	-39.50 -0.47	0.00	0.00	-9.22	-49.04	-46.51
: RV 9	34 1.88	-114 43.46	-0.03	-28.17 -0.35	0.00	0.00	-38.53	-67.18	-65.36
: RV 10	34 0.40	-114 41.62	0.01	-32.20 -0.39	0.00	0.00	-25.49	-58.07	-56.00
: RV 11	34 3.28	-114 48.80	-0.01	-25.92 -0.32	0.00	0.00	-36.74	-62.99	-61.32
: RV 12	34 1.61	-114 46.54	-0.07	-24.18 -0.30	0.00	0.00	-38.92	-63.47	-61.91

BOUGUER GRAVITY DATA

RIGMARIA-RIVERSIDE-WHIPPLE - CA  
ONEEDLE24  
Meter ID: q-24 Date: 10/23/80

STATION IDENTIFICATION	L U C A T I O N S	G R A V I T Y	C O R R E C T I O N S	A N O M A L I E S									
proj ste-id	LATITUDE deg min sec	LONGITUDE deg min sec	ELE (in ft)	ST	OSERVED	THEORETICAL	TERRAIN	BOUGUER	CURV	SPECIAL	FREE	COMPLETE-BOUGUER	SPEC
	deg min sec	deg min sec	(in ft)	CA	979544.82	979644.69	0.14	-30.36	-0.37	0.00	-16.15	-46.74	-44.79
: RV 14	33 57.25	-114 40.05	890.0	CA	979544.82	979644.69	0.14	-30.36	-0.37	0.00	-16.15	-46.74	-44.79
: RV 15	33 58.85	-114 39.30	982.0	CA	979538.46	979646.92	0.00	-33.49	-0.41	0.00	-16.09	-49.99	-47.83
: W 1	34 20.92	-114 18.88	1995.0	CA	979495.87	979677.81	3.20	-67.70	-0.76	0.00	4.76	-60.50	-56.34
: W 5	34 19.61	-114 24.64	2910.0	CA	979445.26	979675.98	5.33	-99.25	-1.02	0.00	42.97	-51.97	-45.92
: W 6	34 18.98	-114 24.02	3645.0	CA	979391.77	979675.09	8.97	-124.32	-1.19	0.00	59.48	-57.06	-49.64
: W 7	34 23.14	-114 20.78	903.0	CA	979569.77	979680.93	1.09	-30.80	-0.38	0.00	-26.21	-56.30	-54.38
: W 8	34 24.02	-114 22.31	966.0	CA	979566.89	979682.16	0.37	-32.95	-0.40	0.00	-24.40	-57.38	-55.28
: W 9	34 24.95	-114 23.81	836.0	CA	979577.56	979683.47	0.22	-28.51	-0.35	0.00	-27.27	-55.91	-54.09
: W 10	34 26.63	-114 28.67	765.0	CA	979584.67	979685.83	0.12	-26.09	-0.32	0.00	-29.20	-55.49	-53.82
: W 11	34 26.12	-114 27.10	851.0	CA	979578.56	979685.11	0.04	-29.02	-0.36	0.00	-26.50	-55.84	-53.97
: W 12	34 24.35	-114 26.21	1002.0	CA	979567.16	979682.63	0.15	-34.18	-0.41	0.00	-21.21	-55.65	-53.46
: W 13	34 23.00	-114 27.28	1236.0	CA	979552.37	979680.73	0.24	-42.16	-0.50	0.00	-12.10	-54.52	-51.82
: W 15	34 24.08	-114 29.87	1055.0	CA	979557.14	979682.25	0.03	-35.98	-0.43	0.00	-25.87	-62.26	-59.94
: W 16	34 22.70	-114 30.90	1233.0	CA	979544.91	979680.31	0.12	-42.05	-0.50	0.00	-19.42	-61.85	-59.15
: W 17	34 22.18	-114 31.33	1308.0	CA	979539.59	979679.58	0.18	-44.61	-0.53	0.00	-16.95	-61.91	-59.05
: W 18	34 20.45	-114 30.94	1537.0	CA	979519.23	979677.15	0.30	-52.42	-0.61	0.00	-13.35	-66.08	-62.72
: W 19	34 18.92	-114 30.56	1721.0	CA	979511.52	979675.01	0.68	-58.70	-0.67	0.00	-1.61	-60.30	-56.56
: W 21	34 17.98	-114 15.20	1213.0	CA	979534.72	979673.69	0.84	-41.37	-0.49	0.00	-24.87	-65.90	-63.28
: W 22	34 17.51	-114 16.58	1526.0	CA	979517.95	979673.03	1.05	-52.05	-0.60	0.00	-11.57	-63.14	-59.86
: W 23	34 16.99	-114 16.87	1368.0	CA	979524.70	979672.30	1.22	-46.66	-0.55	0.00	-18.92	-64.91	-61.98
: W 24	34 15.97	-114 16.16	1122.0	CA	979538.61	979670.87	1.47	-38.27	-0.46	0.00	-26.72	-63.98	-61.61
: W 25	34 15.19	-114 16.85	1031.0	CA	979547.55	979669.77	0.84	-35.16	-0.43	0.00	-25.25	-60.00	-57.79
: GW 1	34 18.35	-114 11.48	896.0	CA	979552.83	979674.20	1.34	-30.56	-0.37	0.00	-37.10	-66.69	-64.80
: GW 2	34 18.67	-114 17.07	998.0	CA	979547.85	979674.66	0.85	-34.04	-0.41	0.00	-32.93	-66.53	-64.39
: GW 3	34 17.44	-114 10.27	736.0	CA	979561.50	979672.93	0.46	-25.17	-0.31	0.00	-42.01	-67.03	-65.44
: GW 4	34 19.20	-114 13.42	1019.0	CA	979546.45	979675.40	1.46	-34.76	-0.42	0.00	-33.09	-66.81	-64.66
: GW 5	34 19.24	-114 13.93	1120.0	CA	979541.75	979675.45	0.94	-38.20	-0.46	0.00	-28.35	-66.07	-63.67
: GW 6	34 20.03	-114 14.78	1200.0	CA	979536.91	979676.56	1.07	-40.93	-0.49	0.00	-26.77	-67.12	-64.55
: GW 7	34 20.92	-114 14.87	970.0	CA	979549.57	979677.81	0.83	-33.08	-0.40	0.00	-37.00	-69.65	-67.57
: GW 8	34 20.29	-114 15.23	1312.0	CA	979530.21	979676.93	1.10	-44.75	-0.53	0.00	-23.31	-67.48	-64.67
: GW 9	34 21.37	-114 16.82	730.0	CA	979570.00	979678.45	1.77	-24.90	-0.31	0.00	-39.77	-63.21	-61.72
: GW 10	34 20.95	-114 16.97	750.0	CA	979567.68	979677.85	2.38	-25.58	-0.32	0.00	-39.62	-63.14	-61.64
: GW 11	34 20.57	-114 17.05	780.0	CA	979561.66	979677.32	5.49	-26.60	-0.33	0.00	-42.29	-63.73	-62.36
: GW 12	34 21.50	-114 17.33	880.0	CA	979562.10	979678.63	1.90	-30.01	-0.37	0.00	-33.75	-62.23	-60.41
: GW 13	34 22.20	-114 18.13	950.0	CA	979560.69	979679.61	1.74	-32.40	-0.39	0.00	-29.56	-60.61	-58.64
: GW 16	34 13.15	-114 23.02	1050.0	CA	979544.67	979666.92	0.38	-35.81	-0.43	0.00	-23.48	-59.34	-57.06
: GW 18	34 14.73	-114 23.78	1380.0	CA	979528.28	979669.13	0.66	-47.07	-0.55	0.00	-11.05	-58.01	-55.02
: GW 20	34 18.25	-114 13.45	1570.0	CA	979518.24	979674.06	2.47	-53.55	-0.62	0.00	-8.15	-59.85	-56.55
: GW 21	34 15.67	-114 25.69	1520.0	CA	979520.12	979670.45	1.11	-51.84	-0.60	0.00	-7.56	-58.69	-55.43
: GW 22	34 16.27	-114 25.60	1690.0	CA	979512.71	979671.29	1.98	-57.64	-0.66	0.00	0.38	-55.94	-52.35





ROUGUER GRAVITY DATA

BIGMARIA-RIVERSIDE-WHIPPLE - CA  
ONEEDLE24  
Meter ID: a-24 Date: 10/23/80

STATION	L	U	C	A	T	I	O	N	S	ELE	ST	G	R	A	V	I	T	Y	TERRAIN	C	O	R	R	E	C	T	I	O	N	S	SPECIAL	FREE	A	N	O	M	A	L	I	E	S	SPEC
IDENTIFICATION	deg	min	deg	min	deg	min	deg	min	deg	(in ft)	CA	Observed	Theoretical	Bouguer	Curv	Special	Air	Complete-Bouguer	d1=2.67	d2=2.50	Fields																					
: GW 65	34	22.55	-114	24.75	1200.0	CA	979558.22	979680.10	0.81	-40.93	-0.49	0.00	-9.00	-49.61	-47.03																											
: GW 66	34	23.17	-114	24.47	1110.0	CA	979565.25	979680.97	0.53	-37.86	-0.45	0.00	-11.31	-49.09	-46.69																											
: GW 67	34	24.56	-114	23.86	830.0	CA	979579.01	979682.92	0.53	-28.31	-0.35	0.00	-25.84	-53.97	-52.18																											
: GW 68	34	23.17	-114	23.02	1035.0	CA	979565.14	979680.97	0.89	-35.30	-0.43	0.00	-18.47	-53.31	-51.09																											
: GW 69	34	22.28	-114	22.16	1120.0	CA	979555.99	979679.72	1.87	-38.20	-0.46	0.00	-18.37	-55.16	-52.82																											
: GW 71	34	16.90	-114	13.09	1160.0	CA	979546.14	979672.17	0.92	-39.56	-0.47	0.00	-16.92	-56.04	-53.55																											
: GW 72	34	21.50	-114	26.53	1470.0	CA	979543.80	979678.63	0.64	-50.14	-0.59	0.00	3.44	-46.64	-43.45																											
: GW 73	34	21.19	-114	26.74	1510.0	CA	979537.86	979678.19	0.75	-51.50	-0.60	0.00	1.70	-49.65	-46.38																											
: GW 74	34	20.51	-114	26.29	1670.0	CA	979528.57	979677.23	1.28	-56.96	-0.65	0.00	8.42	-47.92	-44.33																											
: GW 75	34	20.70	-114	25.57	1630.0	CA	979531.05	979677.50	1.74	-55.59	-0.64	0.00	6.86	-47.63	-44.16																											
: GW 76	34	22.42	-114	25.84	1230.0	CA	979556.34	979679.91	0.74	-41.95	-0.50	0.00	-7.88	-49.59	-46.93																											
: GW 77	34	19.85	-114	26.29	1910.0	CA	979514.33	979676.31	2.26	-65.14	-0.73	0.00	17.67	-45.95	-41.90																											
: GW 78	34	19.82	-114	26.57	1865.0	CA	979516.78	979676.27	1.65	-63.61	-0.72	0.00	15.93	-46.75	-42.76																											
: GW 79	34	19.03	-114	26.59	2085.0	CA	979494.57	979675.16	2.07	-71.11	-0.79	0.00	15.52	-54.31	-49.87																											
: GW 80	34	19.43	-114	27.35	1830.0	CA	979506.71	979675.72	1.02	-62.42	-0.71	0.00	3.12	-58.99	-55.03																											
: GW 81	34	20.30	-114	28.35	1635.0	CA	979526.31	979676.94	0.80	-55.77	-0.64	0.00	3.16	-52.45	-48.91																											
: GW 83	34	19.69	-114	28.80	1755.0	CA	979518.37	979676.09	1.11	-59.86	-0.68	0.00	7.35	-52.08	-48.29																											
: GW 85	34	19.10	-114	28.37	1835.0	CA	979508.62	979675.26	0.97	-62.59	-0.71	0.00	5.96	-56.37	-52.40																											
: GW 86	34	18.70	-114	27.98	1900.0	CA	979504.25	979674.70	1.20	-64.80	-0.73	0.00	8.26	-56.07	-51.97																											
: GW 87	34	18.94	-114	27.55	1955.0	CA	979502.03	979675.03	1.09	-66.68	-0.75	0.00	10.88	-55.46	-51.23																											
: GW 88	34	18.86	-114	27.77	1910.0	CA	979504.48	979674.92	1.09	-65.14	-0.73	0.00	9.21	-55.57	-51.45																											
: GW 91	34	17.38	-114	26.74	2020.0	CA	979496.33	979672.84	2.19	-68.90	-0.77	0.00	13.48	-53.99	-49.70																											
: GW 92	34	17.53	-114	26.48	2070.0	CA	979489.77	979673.05	3.84	-70.60	-0.78	0.00	11.42	-56.13	-51.83																											
: GW 95	34	17.35	-114	28.35	1750.0	CA	979510.32	979672.80	0.84	-59.69	-0.68	0.00	2.12	-57.41	-53.62																											
: GW 96	34	17.27	-114	28.60	1700.0	CA	979515.48	979672.70	0.75	-57.98	-0.66	0.00	2.69	-55.20	-51.52																											
: GW 98	34	12.92	-114	23.92	1060.0	CA	979550.41	979666.59	0.32	-36.15	-0.44	0.00	-16.47	-52.74	-50.43																											
: GW 99	34	12.90	-114	24.71	1080.0	CA	979550.30	979666.57	0.30	-36.84	-0.44	0.00	-14.68	-51.66	-49.31																											
: GW 100	34	13.33	-114	25.37	1020.0	CA	979552.36	979667.17	1.31	-34.79	-0.42	0.00	-18.86	-52.76	-50.61																											
: GW 101	34	13.93	-114	25.78	1195.0	CA	979540.03	979668.01	0.37	-40.76	-0.49	0.00	-15.57	-56.45	-53.84																											
: GW 102	34	14.18	-114	26.38	1190.0	CA	979538.53	979668.36	0.40	-40.59	-0.48	0.00	-17.90	-58.57	-55.98																											
: GW 103	34	14.14	-114	27.15	1190.0	CA	979535.17	979668.30	0.27	-40.59	-0.48	0.00	-21.20	-62.00	-59.40																											
: GW 104	34	14.32	-114	27.28	1240.0	CA	979532.16	979668.55	0.29	-42.29	-0.50	0.00	-19.76	-62.26	-59.55																											
: GW 105	34	15.58	-114	28.03	1403.0	CA	979526.37	979670.32	0.46	-47.85	-0.56	0.00	-11.99	-59.94	-56.89																											
: GW 107	34	15.82	-114	28.24	1420.0	CA	979528.09	979670.66	0.62	-48.43	-0.57	0.00	-9.00	-57.38	-54.30																											
: GW 109	34	16.09	-114	29.05	1435.0	CA	979530.53	979671.04	0.50	-48.94	-0.57	0.00	-5.53	-54.54	-51.42																											
: GW 111	34	16.48	-114	29.70	1750.0	CA	979510.76	979671.59	1.18	-59.69	-0.68	0.00	3.78	-55.41	-51.64																											
: GW 112	34	16.30	-114	27.64	1590.0	CA	979522.14	979671.33	0.66	-54.23	-0.63	0.00	0.36	-53.83	-50.38																											
: GW 113	34	26.21	-114	27.83	840.0	CA	979580.91	979685.23	0.03	-28.65	-0.35	0.00	-25.31	-54.28	-52.44																											
: GW 114	34	24.86	-114	28.25	995.0	CA	979566.13	979683.34	0.03	-33.94	-0.41	0.00	-23.61	-57.93	-55.75																											
: GW 115	34	24.75	-114	28.80	1000.0	CA	979564.87	979683.19	0.02	-34.11	-0.41	0.00	-24.26	-58.76	-56.56																											

RIGMARIA-RIVERSIDE-WHIPPLE - CA  
 ONEEDLE24  
 Meter ID: a-24 Date: 10/23/80

STATION IDENTIFICATION	proj	sta-id	L O C A T I O N S	ELE (in ft)	ST	GRAVITY	TERRAIN	C O R R E C T I O N S	SPECIAL	FREE AIR	A N O M A L I E S				
			LATITUDE deg min	LONGITUDE deg min		OBSERVED	THEORETICAL	TERRAIN BOUGUER CURV	SPECIAL	FREE AIR	COMPLETE-ROUGUER				
											d1=2.67 d2=2.50 FIELDS				
: GW 116			34 24 32	-114 28.99	1020.0	CA	979561.22	979682.59	0.05	-34.79	-0.42	0.00	-25.42	-60.58	-58.34
: GW 117			34 23 74	-114 29.15	1075.0	CA	979559.15	979681.77	0.15	-36.67	-0.44	0.00	-21.50	-58.46	-56.11
: GW 118			34 23 18	-114 29.12	1155.0	CA	979556.65	979680.98	0.15	-39.39	-0.47	0.00	-15.69	-55.41	-52.88
: GW 119			34 23 70	-114 26.00	1060.0	CA	979564.07	979681.71	0.26	-36.15	-0.44	0.00	-17.93	-54.26	-51.95
: GW 120			34 23 92	-114 27.23	1115.0	CA	979558.11	979682.02	0.15	-38.03	-0.46	0.00	-19.03	-57.37	-54.93
: GW 121			34 24 34	-114 24.81	915.0	CA	979571.56	979682.61	0.22	-31.21	-0.38	0.00	-24.98	-56.35	-54.35
: GW 122			34 24 33	-114 24.50	920.0	CA	979571.19	979682.59	0.23	-31.38	-0.38	0.00	-24.87	-56.40	-54.39
: GW 124			34 25 43	-114 25.35	814.0	CA	979578.38	979684.14	0.12	-27.76	-0.34	0.00	-29.19	-57.17	-55.39
: GW 125			34 22 82	-114 25.93	1180.0	CA	979559.85	979680.48	0.42	-40.25	-0.48	0.00	-9.63	-49.94	-47.37
: GW 126			34 22 40	-114 30.38	1195.0	CA	979548.83	979679.89	0.43	-40.76	-0.49	0.00	-18.65	-59.47	-56.87