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Principal facts for gravity observations
in the Coso Hot Springs area, California

by

William F. Isherwood and Donald Plouff

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**UNIVERSITY OF UTAH
RESEARCH INSTITUTE
EARTH SCIENCE LAB.**

INTRODUCTION

Gravity observations were made at 292 locations in the Coso Hot Springs area, California (figs. 1 and 2). The field work was completed during June 1976 by William F. Isherwood and Jerry H. Hassemer using LaCoste-Romberg Gravity Meters G-131 and G-159. The purpose of the gravity survey is to provide background geophysical data to evaluate the geothermal potential of the area. The present survey fills in gaps of coverage on previous gravity maps of the region (Nilsen and Chapman, 1971, and Chapman and others, 1971).

OBSERVED GRAVITY

The values of observed gravity are tied to the International Gravity Standardization Net of 1971 (IGSN 71) described by Morelli (1974) by tying to base station ACIC 2016-1 (Jablonski, 1974). This base station is located at the site of the former Inyokern Railroad station. The reading point is at track level on the south end of a small concrete slab at the southeast entrance to the destroyed building. The value of observed gravity at this base station is 979,505.09 mgals (Jablonski, 1974).

GRAVITY ANOMALIES AND ACCURACY CODES

The location, elevation, observed gravity, free-air anomaly, and complete Bouguer anomaly are listed in Table 1 for each of the gravity stations. A four-digit accuracy code also is listed for every gravity station, so that the reliability of the value of the Bouguer anomaly at each station can be individually evaluated. The first digit is used to concisely describe the location and the type of elevation at the station (Table 2). The second digit provides an estimate of the elevation accuracy (Table 3) which relates to an appreciable source of error (0.2 mgal per meter) in calculating the Bouguer anomaly. The

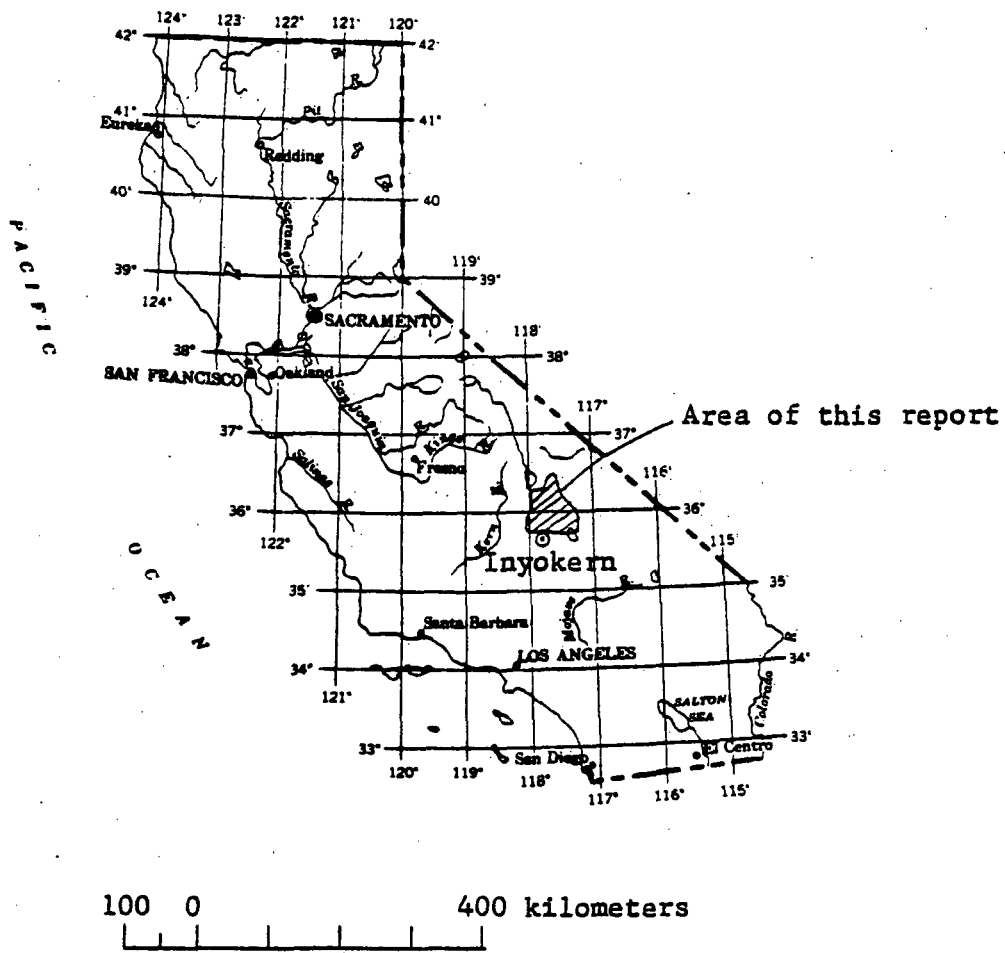


Figure 1. Location of Coso Hot Springs area, California.

118° 0'

117° 15'
36° 30'

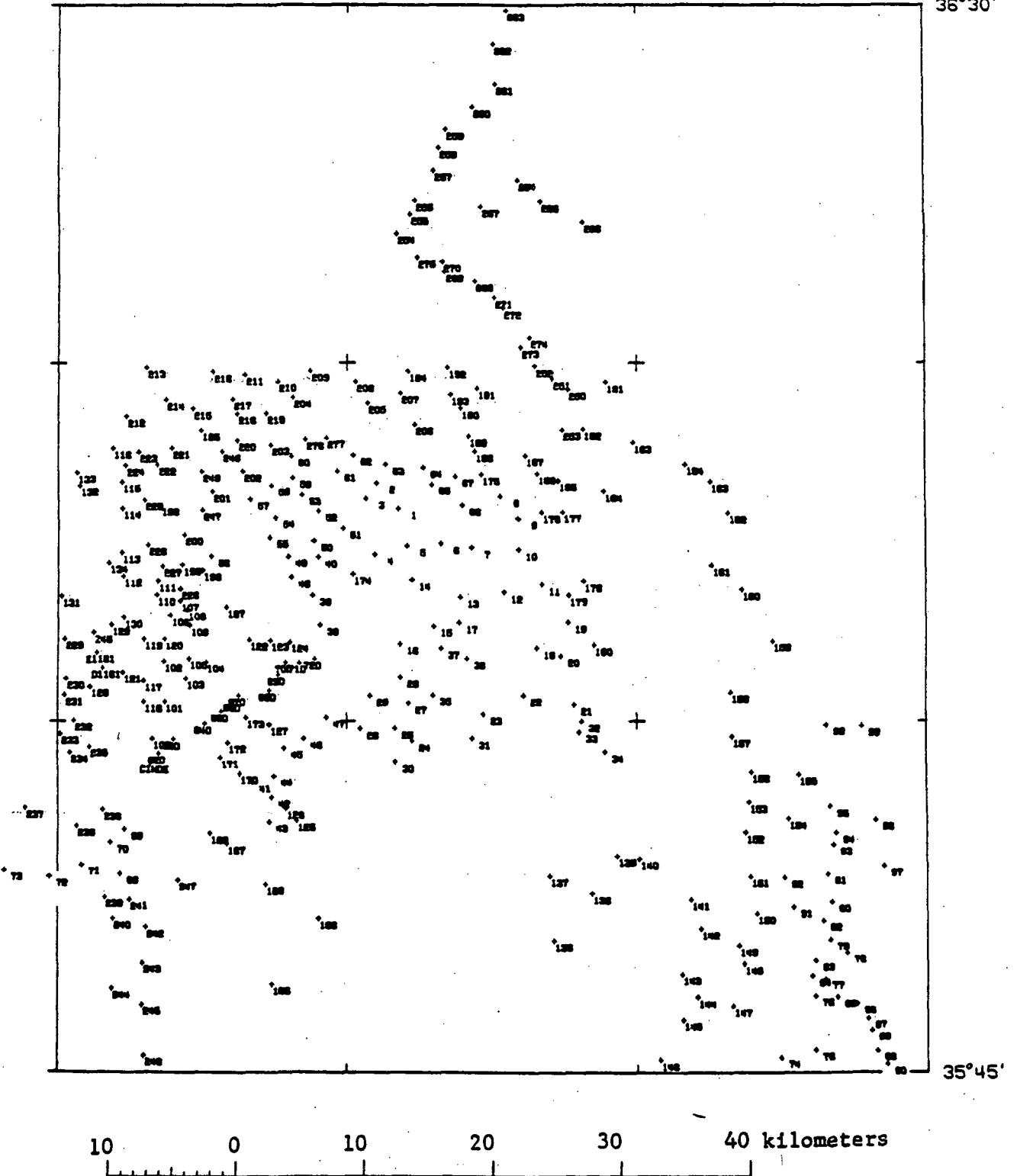


Figure 2. Locations of gravity stations in Coso Hot Springs area. Some prefixes and suffixes of station identifications are omitted for improved legibility.

third digit indicates the accuracy of the horizontal location (Table 4). The fourth digit refers to the accuracy of the value of observed gravity (Table 5). This code has little value in ascertaining the accuracy of the Bouguer anomaly except to identify the stations at which the gravity observations were verified by repeated readings.

Free-air gravity anomalies were determined by using the Geodetic Reference System 1967 (International Association of Geodesy, 1971), GRS 67, for the normal gravity on the ellipsoid and Swick's (1942, p. 65) formula for the free-air correction. Terrain corrections were determined to a distance of 0.895 km (symbolized by the letter "S" in Table 1) using conventional cylindrical templates (Hammer, 1939). Terrain corrections in the interval 0.895 to 166.7 km were determined with a computer program (Plouff, 1977) that used topography digitized with a combination of half-minute, one-minute, and three-minute grids. Bouguer, curvature, and terrain corrections were added to the free-air anomaly at each station to determine complete Bouguer gravity anomalies at reduction densities of 2.50 and 2.67 g/cm³.

The Bouguer gravity anomalies contoured on previous maps of the region (Nilsen and Chapman, 1971, and Chapman and others, 1971) were determined by using the observed gravity datum of Behrendt and Woollard (1961) and the theoretical value of gravity at sea level from the International Formula of 1930 (Lambert and Darling, 1931). The Bouguer gravity anomalies of the present report, using the IGSN-71 datum and the GRS 67 reduction formula, consequently are about 2.4 ± 0.4 milligals lower than those shown on previous gravity maps.

ACKNOWLEDGMENT

Dr. Carl Austin of the China Lake Naval Weapons Test Center provided valuable support by making the arrangements for access to Navy lands.

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TABLE 1. Principal facts and gravity anomalies, Coso Hot Springs area, California.

STATION	CODE	LATITUDE		LONGITUDE		ELEVATION METERS	OBSERVED	FREE AIR	TERRAIN	BOUGUER ANOMALY		
		DEG	MIN	DEG	MIN		GRAVITY MGAL	(1967) MGAL	HAND TOTAL MGAL	2.67 MGAL	2.50 MGAL	
CINDE	C721	35	58.21	117	55.16	1016.5	979456.23	-45.90	0.01S	4.75	-156.02	-149.01
62DOR	B121	35	58.61	117	54.75	1017.0	979457.84	-44.71	0.01S	4.07	-155.56	-148.50
63DOR	B121	35	59.20	117	53.97	1011.9	979460.26	-44.71	0.01S	3.43	-155.63	-148.57
64DOR	B121	35	59.87	117	52.35	1071.0	979448.34	-39.35	0.01S	2.60	-157.76	-150.23
65DOR	B121	36	0.40	117	51.49	1090.1	979445.94	-36.64	0.04S	2.54	-157.25	-149.57
66DOR	B121	36	0.85	117	50.84	1091.3	979448.34	-34.51	0.21S	2.95	-154.85	-147.19
67DOR	B121	36	1.06	117	50.58	1106.3	979446.04	-32.47	0.33S	3.15	-154.31	-146.55
68DOR	B121	36	1.28	117	49.02	1259.5	979415.84	-15.74	1.50S	3.70	-154.25	-145.44
69DOR	B121	36	1.94	117	48.55	1289.6	979407.90	-15.35	1.04S	3.19	-157.76	-148.69
70DOR	B121	36	2.46	117	48.17	1258.9	979412.58	-20.89	0.17S	2.43	-160.61	-151.71
71DOR	B121	36	2.44	117	47.48	1212.2	979422.42	-25.41	0.51S	2.97	-159.33	-150.81
72DOR	B121	36	2.60	117	46.68	1159.9	979431.58	-32.61	0.58S	3.44	-160.18	-152.06
D1161	B123	36	2.23	117	57.66	1084.0	979432.58	-54.50	0.17S	6.82	-170.15	-162.78
E1161	B123	36	2.87	117	57.97	1097.6	979429.45	-54.34	0.16S	6.94	-171.40	-163.95
S47	B123	35	53.25	117	53.72	855.7	979495.40	-49.23	0.03S	5.49	-140.49	-134.68
Z45	B123	36	3.67	117	58.13	1112.7	979425.35	-54.94	0.42S	6.94	-173.70	-166.14
CB1	V324	36	8.87	117	42.36	2304.9	979202.30	82.19	6.83S	18.83	-158.39	-143.07
CB2	A744	36	9.95	117	43.46	2243.9	979217.40	76.95	3.22S	10.77	-164.88	-149.48
CB3	A744	36	9.31	117	44.03	2083.0	979251.75	62.60	0.89S	6.61	-165.39	-150.87
CB4	A744	36	6.93	117	43.58	1794.4	979308.05	33.32	1.00S	5.97	-162.98	-150.48
CB5	V324	36	7.31	117	41.90	1909.0	979293.98	54.04	0.87S	5.69	-155.38	-142.05
CB6	F634	36	7.39	117	40.15	2027.5	979272.37	68.87	3.15S	9.59	-149.93	-136.00
CB7	F644	36	7.22	117	38.55	1878.2	979307.07	57.77	1.84S	5.42	-148.48	-135.34
CB8	V324	36	9.41	117	37.03	1880.6	979303.97	52.28	2.99S	7.64	-152.03	-139.02
CB9	F634	36	8.47	117	36.13	1817.5	979317.60	47.80	2.54S	6.78	-150.29	-137.67
CB10	F634	36	7.15	117	36.09	1845.4	979315.34	56.03	3.05S	7.18	-144.78	-131.99
CB11	F634	36	5.69	117	34.90	1771.8	979335.38	55.47	1.11S	4.35	-139.93	-127.49
CB12	F634	36	5.36	117	36.85	1913.5	979299.92	64.19	2.38S	7.05	-144.39	-131.11
CB13	F634	36	5.17	117	39.13	1895.9	979301.26	60.35	1.67S	6.52	-146.78	-133.59
CB14	F634	36	5.89	117	41.63	1646.8	979345.04	26.31	0.94S	4.22	-155.20	-143.65
CB15	F634	36	3.94	117	40.53	1733.7	979328.98	39.83	2.10S	6.49	-149.15	-137.12
CB16	A754	36	3.23	117	42.26	1483.2	979369.19	3.80	0.51S	3.73	-159.83	-149.41
CB17	F634	36	4.09	117	39.19	1778.1	979327.34	51.65	1.62S	5.48	-143.32	-130.90
CB18	F634	36	3.05	117	35.20	1923.6	979299.29	69.97	1.41S	6.51	-140.27	-126.89
CB19	F634	36	4.10	117	33.57	2046.7	979270.52	77.66	3.84S	11.34	-141.54	-127.58
CB20	F634	36	2.73	117	33.91	1938.5	979297.33	73.08	3.10S	8.32	-137.03	-123.65
CB21	F634	36	0.66	117	33.23	1952.2	979291.17	74.11	3.22S	10.25	-135.61	-122.25
CB22	F634	36	1.09	117	35.85	1735.5	979341.98	57.48	2.22S	6.29	-131.91	-119.85
CB23	F744	36	0.28	117	37.93	1578.9	979369.62	37.97	0.09S	3.54	-136.60	-125.48
CB24	F634	35	59.15	117	41.62	1353.0	979385.90	-13.79	4.45S	11.20	-155.32	-146.31
CB25	F744	35	59.68	117	42.52	1139.3	979436.08	-30.27	3.03S	6.29	-152.68	-144.88
CB26	A754	35	59.65	117	44.31	940.0	979473.18	-54.62	0.10S	3.09	-157.77	-151.21
CB27	F634	36	0.72	117	41.80	1343.6	979398.75	-6.10	1.66S	5.04	-152.73	-143.40
CB28	F634	36	1.83	117	42.23	1449.3	979378.03	4.21	0.59S	4.23	-155.12	-144.98
CB29	A754	36	1.05	117	43.82	1182.9	979425.64	-29.23	1.15S	3.83	-159.00	-150.74
CB30	G744	35	58.23	117	42.49	832.7	979496.76	-62.10	0.34S	4.08	-152.17	-146.43
CB31	N223	35	59.24	117	38.52	1792.5	979302.37	38.10	7.47S	20.33	-143.64	-132.07
CB32	F634	35	59.96	117	32.86	1933.4	979296.29	74.41	4.10S	10.54	-132.90	-119.70
CB33	F634	35	59.51	117	32.98	2012.6	979272.98	76.18	3.59S	12.54	-138.01	-124.37
CB34	F634	35	58.67	117	31.63	2027.5	979278.49	87.50	2.53S	11.16	-129.73	-115.90

TABLE 1--CONTINUED

STATION	CODE	LATITUDE		LONGITUDE		ELEVATION METERS	OBSERVED	FREE AIR	TERRAIN		BOUGUER ANOMALY	
		DEG	MIN	DEG	MIN		GRAVITY MGAL	(1967) MGAL	HAND	TOTAL MGAL	2.67	2.50 MGAL
CB35	A754	36	1.08	117	40.54	1420.4	979387.97	6.29	0.79S	3.93	-150.08	-140.13
CB36	F634	36	2.61	117	38.80	1734.0	979336.92	49.77	0.91S	5.04	-140.70	-128.57
CB37	F644	36	3.04	117	40.14	1650.8	979346.21	32.79	0.47S	3.93	-149.46	-137.86
CB38	F634	36	4.00	117	46.41	1510.6	979359.90	1.86	4.60S	9.46	-159.12	-148.87
CB39	F634	36	5.23	117	46.79	1812.0	979292.47	25.63	5.22S	15.19	-163.44	-151.40
CB40	F634	36	6.82	117	46.49	1909.3	979275.92	36.78	4.23S	13.15	-165.22	-152.36
CB41	V324	35	57.40	117	49.89	1631.3	979320.22	8.86	6.50S	16.28	-158.84	-148.16
CB42	F634	35	56.74	117	48.91	1462.1	979362.00	-0.58	3.42S	9.47	-156.11	-146.21
CB43	F634	35	55.72	117	49.02	1381.7	979373.66	-12.28	3.82S	10.16	-158.07	-148.79
CB44	F634	35	57.65	117	48.79	1544.7	979351.64	13.23	2.73S	9.49	-151.55	-141.05
CB45	F634	35	58.82	117	48.24	1469.1	979369.77	6.37	3.41S	8.86	-150.55	-140.56
CB46	F634	35	59.23	117	47.23	1271.0	979412.97	-12.12	2.66S	6.23	-149.40	-140.66
CB47	F634	36	0.13	117	46.06	1151.8	979436.65	-26.49	2.26S	5.10	-151.50	-143.54
CB48	A744	36	5.97	117	47.89	1537.4	979354.00	1.41	0.09S	2.68	-169.36	-158.49
CB49	A754	36	6.84	117	48.05	1538.6	979350.77	-2.69	0.14S	2.95	-173.33	-162.47
CB50	F634	36	7.51	117	46.72	1905.0	979281.39	39.94	1.54S	9.34	-166.39	-153.25
CB51	G744	36	8.05	117	45.23	1838.6	979294.47	31.76	1.75S	6.43	-169.04	-156.25
CB52	F634	36	8.79	117	46.49	1834.3	979295.77	30.68	1.05S	4.99	-171.08	-158.24
CB53	F634	36	9.45	117	47.34	2136.0	979225.97	52.97	1.95S	10.38	-177.18	-162.53
CB54	F634	36	8.49	117	48.70	1755.0	979307.16	18.06	2.70S	6.64	-173.17	-160.99
CB55	A744	36	7.64	117	49.01	1552.3	979345.78	-4.60	0.09S	2.95	-176.77	-165.81
CB56	F634	36	6.85	117	52.02	1762.7	979295.73	11.34	3.85S	9.56	-177.82	-165.78
CB57	F634	36	9.27	117	50.00	1841.5	979288.28	24.71	1.95S	6.71	-176.13	-163.34
CB58	F634	36	9.85	117	48.92	2045.2	979242.67	41.09	3.55S	10.84	-178.44	-164.46
CB59	F634	36	10.17	117	47.82	2262.8	979201.61	66.67	4.66S	15.74	-172.30	-157.09
CB60	F634	36	11.08	117	47.88	2248.2	979204.80	64.04	3.77S	12.79	-176.24	-160.94
CB61	F634	36	10.46	117	45.51	2188.8	979223.63	65.44	3.04S	10.02	-170.97	-155.92
CB62	F634	36	11.14	117	44.66	2232.1	979217.40	71.58	0.98S	7.52	-172.17	-156.65
CB63	F634	36	10.72	117	42.98	2398.8	979183.24	89.42	3.56S	14.22	-166.26	-149.98
CB64	F634	36	10.61	117	41.03	2145.2	979246.61	74.77	1.82S	8.27	-158.53	-143.67
CB65	F634	36	9.91	117	40.61	2169.0	979238.80	75.29	3.74S	11.48	-157.45	-142.63
CB66	F634	36	8.99	117	39.02	1938.8	979291.91	58.77	3.05S	7.44	-152.26	-138.82
CB67	F634	36	10.23	117	39.39	1917.8	979296.14	54.74	1.94S	6.17	-155.20	-141.83
CB68	F634	35	53.54	117	56.76	1607.8	979341.39	28.32	8.39S	15.77	-137.26	-126.72
CB69	F634	35	55.41	117	56.52	2014.4	979246.74	56.37	7.82S	27.48	-143.07	-130.37
CB70	F634	35	54.85	117	57.27	1954.4	979266.44	58.36	9.13S	22.04	-139.80	-127.18
CB71	F634	35	53.91	117	58.75	2196.7	979214.35	82.33	8.83S	24.30	-140.69	-126.49
CB72	F634	35	53.40	118	0.43	2084.8	979244.52	78.74	2.14S	8.54	-147.53	-133.12
CB73	F634	35	53.66	118	2.77	2321.1	979190.98	97.66	4.93S	13.69	-149.87	-134.11
CB74	N223	35	45.64	117	22.56	505.4	979593.06	-48.79	0.02S	1.73	-104.25	-100.72
CB75	X323	35	45.98	117	20.79	494.1	979589.77	-56.04	0.05S	1.32	-110.64	-107.17
CB76	0434	35	48.31	117	20.79	508.1	979589.49	-55.32	0.01S	1.94	-110.90	-107.36
CB77	B124	35	49.02	117	20.28	514.2	979586.26	-57.69	0.01S	1.93	-113.96	-110.37
CB78	F334	35	50.15	117	19.17	557.8	979572.73	-59.39	0.01S	1.77	-120.74	-116.83
CB79	F334	35	50.69	117	20.03	578.2	979570.24	-56.35	0.01S	1.98	-119.79	-115.75
CB80	F333	35	52.33	117	19.95	656.2	979555.82	-49.04	0.04S	2.06	-121.22	-116.62
CB81	B124	35	53.51	117	20.16	717.2	979543.39	-44.35	0.04S	2.16	-123.31	-118.29
CB82	B124	35	51.52	117	20.42	624.2	979562.13	-51.44	0.02S	2.20	-119.87	-115.51
CB83	B124	35	49.82	117	20.80	540.7	979581.07	-55.84	0.02S	2.31	-114.72	-110.97
CB84	B124	35	49.15	117	20.97	527.0	979584.20	-55.98	0.01S	2.20	-113.43	-109.77

TABLE 1--CONTINUED

STATION	CODE	LATITUDE		LONGITUDE		ELEVATION METERS	OBSERVED	FREE AIR	TERRAIN	BOUGUER ANOMALY		
		DEG	MIN	DEG	MIN		GRAVITY MGAL	(1967) MGAL	HAND TOTAL MGAL	2.67 MGAL	2.50 MGAL	
CB85	D534	35	48.23	117	19.67	500.5	979586.76	-60.29	0.01S	1.68	-115.26	-111.76
CB86	B124	35	47.96	117	18.66	498.0	979584.26	-63.16	0.01S	1.68	-117.85	-114.37
CB87	D534	35	47.32	117	18.09	500.5	979585.91	-59.84	0.01S	1.60	-114.89	-111.38
CB88	B124	35	46.82	117	17.90	499.6	979585.54	-59.78	0.01S	1.50	-114.82	-111.32
CB89	N223	35	45.94	117	17.60	499.9	979582.02	-61.95	0.01S	1.34	-117.19	-113.67
CB90	B124	35	45.35	117	17.10	499.0	979579.81	-63.60	0.01S	1.35	-118.72	-115.21
CB91	X324	35	52.10	117	21.93	747.1	979542.20	-34.31	0.56S	3.63	-115.17	-110.02
CB92	F644	35	53.35	117	22.39	1066.5	979474.84	-4.92	4.87S	8.65	-116.76	-109.64
CB93	B124	35	54.76	117	19.87	718.7	979543.48	-45.58	0.03S	2.35	-124.52	-119.50
CB94	F524	35	55.27	117	19.73	726.6	979542.50	-44.84	0.03S	2.40	-124.63	-119.55
CB95	D534	35	56.36	117	20.04	779.7	979534.67	-37.87	0.05S	2.69	-123.35	-117.91
CB96	F634	35	55.80	117	17.67	995.5	979481.69	-23.48	3.09S	8.94	-127.04	-120.44
CB97	H324	35	53.83	117	17.26	1205.2	979439.00	1.34	3.40S	13.51	-121.27	-113.46
CB98	F524	35	59.85	117	20.19	605.6	979559.14	-72.10	0.05S	3.85	-136.77	-132.65
CB99	N224	35	59.80	117	18.37	507.5	979579.41	-82.04	0.06S	3.26	-136.22	-132.77
CB100	F634	35	59.25	117	55.06	1204.6	979404.09	-41.52	5.21S	9.79	-167.78	-159.74
CB101	X634	36	0.80	117	54.43	1016.5	979451.88	-53.96	0.01S	3.49	-165.34	-158.25
CB102	X634	36	2.51	117	54.47	1052.5	979443.18	-54.02	0.02S	3.39	-169.55	-162.19
CB103	X644	36	1.79	117	53.33	1043.9	979453.89	-44.91	0.01S	3.04	-159.83	-152.51
CB104	F634	36	2.46	117	52.28	1193.0	979425.83	-27.96	2.58S	5.26	-157.44	-149.19
CB105	X634	36	2.62	117	53.19	1097.3	979445.86	-37.68	0.02S	2.93	-158.71	-151.00
CB106	F634	36	4.41	117	54.13	1281.7	979402.20	-27.02	1.96S	5.53	-166.20	-157.34
CB107	F634	36	4.99	117	53.62	1371.0	979382.01	-20.50	1.41S	5.00	-170.25	-160.72
CB108	F634	36	4.63	117	53.27	1341.4	979390.10	-21.01	0.95S	4.23	-168.22	-158.85
CB109	F634	36	3.98	117	53.13	1310.3	979397.62	-22.15	3.28S	6.58	-163.51	-154.51
CB110	F634	36	5.24	117	54.83	1303.6	979384.88	-38.77	2.69S	6.71	-179.24	-170.30
CB111	F634	36	5.83	117	54.78	1453.9	979356.02	-22.13	2.24S	7.32	-178.88	-168.90
CB112	X744	36	6.04	117	56.60	1091.8	979421.59	-68.54	0.05S	5.19	-186.70	-179.18
CB113	V324	36	7.02	117	56.67	1346.3	979370.19	-42.85	2.00S	6.63	-188.20	-178.94
CB114	W534	36	8.88	117	56.63	1145.6	979415.67	-61.94	0.13S	5.00	-186.35	-178.43
CB115	W534	36	10.00	117	56.66	1145.6	979413.77	-65.45	0.22S	4.80	-190.06	-182.12
CB116	W534	36	11.42	117	57.13	1145.7	979417.32	-63.89	0.72S	5.30	-188.01	-180.11
CB117	X534	36	1.67	117	55.51	1018.9	979441.30	-65.04	0.01S	4.18	-176.00	-168.93
CB118	X544	36	0.79	117	55.51	1015.6	979445.67	-60.44	0.01S	4.33	-170.87	-163.84
CB119	X434	36	3.42	117	55.52	1028.4	979438.67	-67.26	0.01S	4.22	-179.25	-172.12
CB120	A754	36	3.43	117	54.46	1097.3	979439.18	-45.52	0.08S	3.45	-166.04	-158.36
CB121	F634	36	2.05	117	56.60	1028.1	979437.25	-66.81	0.01S	5.29	-177.70	-170.64
CB122	G644	36	3.39	117	50.06	1315.8	979400.08	-17.15	0.17S	2.57	-163.13	-153.84
CB123	G644	36	3.38	117	48.96	1329.2	979398.04	-15.04	0.78S	3.11	-161.99	-152.63
CB124	A754	36	3.30	117	47.96	1349.7	979396.11	-10.56	0.24S	2.58	-160.34	-150.80
CB125	X424	35	55.75	117	47.62	1243.6	979404.01	-24.56	3.25S	9.23	-155.76	-147.40
CB126	F634	35	56.28	117	48.17	1261.0	979406.72	-17.25	1.32S	5.29	-154.34	-145.61
CB127	F634	35	59.84	117	49.00	1517.6	979353.94	4.03	4.59S	10.23	-156.97	-146.72
CB128	G644	36	1.45	117	58.31	1215.8	979413.82	-31.47	0.36S	8.28	-160.49	-152.28
CB129	F634	36	4.00	117	57.21	1046.7	979429.47	-71.65	0.01S	5.55	-184.37	-177.19
CB130	X424	36	4.31	117	56.56	1035.7	979429.96	-74.99	0.01S	5.00	-187.03	-179.89
CB131	G634	36	5.19	117	59.79	1362.8	979384.28	-21.06	0.66S	8.45	-166.43	-157.18
CB132	F634	36	9.85	117	58.86	1235.4	979397.56	-53.76	0.09S	5.69	-187.57	-179.05
CB133	X424	36	10.39	117	59.00	1242.1	979395.90	-54.13	0.08S	5.77	-188.61	-180.05
CB134	X524	36	6.60	117	57.33	1091.5	979421.80	-69.23	0.58S	6.28	-186.27	-178.81

TABLE 1--CONTINUED

STATION	CODE	LATITUDE		LONGITUDE		ELEVATION METERS	OBSERVED	FREE AIR	TERRAIN	BOUGUER ANOMALY		
		DEG	MIN	DEG	MIN		GRAVITY MGAL	(1967) MGAL	HAND MGAL	TOTAL MGAL	2.67 MGAL	2.50 MGAL
CB136	F634	35	50.65	117	34.29	1213.1	979451.65	20.98	2.41S	7.13	-108.89	-100.62
CB137	F634	35	53.44	117	34.51	1317.3	979417.36	14.85	3.38S	8.63	-125.24	-116.32
CB138	F634	35	52.64	117	32.31	1289.6	979434.87	24.95	1.05S	4.96	-115.70	-106.74
CB139	F634	35	54.28	117	31.01	1767.8	979338.76	73.98	1.38S	7.97	-117.35	-105.17
CB140	V324	35	54.15	117	29.86	1933.4	979300.03	86.47	3.27S	12.68	-118.69	-105.63
CB141	F634	35	52.42	117	27.21	1811.3	979317.94	69.21	4.96S	16.15	-118.80	-106.83
CB142	F634	35	51.15	117	26.71	1998.3	979266.02	76.77	7.72S	32.40	-115.95	-103.68
CB143	V324	35	49.22	117	27.68	1739.8	979328.85	62.66	6.03S	21.55	-111.95	-100.83
CB144	F634	35	48.22	117	26.88	1630.4	979353.29	54.79	4.72S	19.96	-109.14	-98.70
CB145	F634	35	47.25	117	27.62	1302.1	979432.46	34.10	4.23S	9.60	-103.30	-94.55
CB146	F634	35	45.54	117	28.80	1069.5	979483.26	15.61	1.99S	4.24	-100.99	-93.56
CB147	F634	35	47.84	117	25.05	1223.5	979443.53	20.07	3.39S	10.27	-107.83	-99.68
CB148	F634	35	49.66	117	24.48	1101.9	979468.99	5.42	2.64S	7.39	-111.67	-104.21
CB149	F634	35	50.43	117	24.74	1322.5	979420.99	24.38	3.84S	10.96	-113.97	-105.16
CB150	F634	35	51.81	117	23.83	1296.6	979423.36	16.79	4.83S	11.97	-117.64	-109.08
CB151	F634	35	53.41	117	24.16	1240.2	979439.02	12.77	4.63S	8.98	-118.30	-109.96
CB152	F634	35	55.28	117	24.40	1619.4	979363.34	51.35	2.49S	11.98	-119.32	-108.46
CB153	F634	35	56.56	117	24.21	1446.6	979403.06	35.94	1.01S	6.12	-121.19	-111.18
CB154	F634	35	55.84	117	22.19	1188.7	979446.77	1.15	3.98S	9.02	-124.08	-116.11
CB155	V324	35	57.73	117	21.63	1138.3	979458.64	-5.24	3.46S	8.68	-125.15	-117.51
CB156	F634	35	57.84	117	24.08	1180.8	979452.32	1.39	3.16S	7.56	-124.41	-116.40
CB157	F634	35	59.32	117	25.08	1582.8	979373.71	44.66	3.46S	10.92	-122.97	-112.29
CB158	V324	36	1.19	117	25.14	1541.1	979377.12	32.51	3.66S	10.97	-130.38	-120.01
CB159	F634	36	3.36	117	22.99	930.6	979500.07	-35.96	1.92S	7.09	-134.05	-127.81
CB160	F634	36	5.48	117	24.56	1219.5	979441.25	-8.69	4.51S	12.32	-134.08	-126.10
CB161	F634	36	6.50	117	26.13	1777.9	979326.49	47.30	4.10S	17.05	-136.08	-124.40
CB162	F634	36	8.69	117	25.28	1323.6	979424.73	2.29	3.81S	12.20	-134.94	-126.20
CB163	F634	36	10.02	117	26.19	1358.6	979414.21	0.67	5.65S	14.36	-138.33	-129.48
CB164	F634	36	10.74	117	27.47	1520.3	979391.74	27.04	7.14S	16.76	-127.73	-117.88
CB165	A744	35	48.78	117	48.87	719.3	979503.79	-76.53	0.02S	1.70	-156.19	-151.11
CB166	A744	35	51.60	117	46.47	798.6	979503.37	-56.53	0.05S	1.47	-145.37	-139.71
CB167	F634	35	54.81	117	51.21	1115.1	979451.10	-15.75	3.26S	6.53	-135.19	-127.59
CB168	A744	35	53.08	117	49.21	851.9	979497.32	-48.24	0.06S	2.10	-142.46	-136.46
CB169	F634	35	55.23	117	52.08	1453.0	979377.99	14.75	4.54S	12.80	-136.42	-126.79
CB170	F634	35	57.75	117	50.55	1473.4	979357.21	-3.34	3.10S	8.22	-161.38	-151.32
CB171	F634	35	58.44	117	51.55	1254.3	979408.22	-20.91	1.88S	4.70	-157.84	-149.12
CB172	A744	35	59.08	117	51.16	1159.5	979430.63	-28.65	0.10S	2.62	-157.00	-148.83
CB173	F634	36	0.15	117	50.24	1281.1	979408.27	-15.04	2.34S	4.84	-154.84	-145.94
CB174	F634	36	6.10	117	44.72	1498.1	979360.31	-4.59	1.95S	5.67	-167.96	-157.56
CB175	F634	36	10.31	117	38.03	1798.0	979321.20	42.74	2.66S	5.96	-153.98	-141.45
CB176	X424	36	8.73	117	34.90	1526.7	979379.08	19.24	0.15S	3.16	-149.85	-139.09
CB177	A754	36	8.75	117	33.82	1440.2	979394.55	7.98	0.07S	3.21	-151.34	-141.19
CB178	F524	36	5.82	117	32.76	1820.6	979319.94	54.88	0.86S	5.26	-145.07	-132.34
CB179	F634	36	5.25	117	33.50	1877.0	979307.88	61.03	1.31S	5.86	-144.64	-131.55
CB180	F634	36	3.19	117	32.23	2062.7	979267.11	80.49	4.03S	11.71	-140.13	-126.08
CB181	F634	36	14.18	117	31.60	1412.4	979415.06	12.14	1.54S	5.34	-141.93	-132.12
CB182	X424	36	12.20	117	32.76	1306.4	979420.32	-12.47	0.08S	3.11	-156.85	-147.66
CB183	F634	36	11.66	117	30.18	1966.0	979291.70	63.09	4.87S	17.62	-140.78	-127.80
CB184	X424	36	9.60	117	31.68	1456.9	979389.93	7.31	0.15S	4.39	-152.71	-142.52
CB185	F634	36	10.04	117	34.04	1676.1	979340.92	25.26	4.27S	9.24	-154.52	-143.07

TABLE 1--CONTINUED

STATION	CODE	LATITUDE		LONGITUDE		ELEVATION METERS	OBSERVED	FREE AIR	TERRAIN	BOUGUER ANOMALY		
		DEG	MIN	DEG	MIN		GRAVITY MGAL	(1967) MGAL	HAND TOTAL MGAL	2.67 MGAL	2.50 MGAL	
CB186	F634	36	10.36	117	35.13	1795.0	979316.42	36.95	2.20S	7.90	-157.49	-145.11
CB187	F634	36	11.11	117	35.74	1708.1	979336.85	29.52	2.53S	6.57	-156.51	-144.67
CB188	F634	36	11.28	117	38.35	1907.7	979299.88	53.87	3.38S	8.73	-152.38	-139.25
CB189	F634	36	11.93	117	38.70	1903.2	979300.05	51.69	3.49S	8.81	-153.97	-140.87
CB190	F634	36	13.07	117	39.11	1842.2	979313.28	44.49	3.88S	8.30	-154.85	-142.16
CB191	F634	36	13.93	117	38.25	1696.8	979347.54	32.68	1.78S	4.87	-153.79	-141.91
CB192	F634	36	14.78	117	39.78	1873.6	979309.34	47.77	3.34S	8.02	-155.36	-142.43
CB193	F634	36	13.66	117	39.64	1848.6	979313.96	46.29	2.80S	6.93	-155.13	-142.31
CB194	F634	36	14.64	117	41.86	1828.2	979312.00	36.63	1.20S	5.48	-163.96	-151.19
CB195	X424	36	12.17	117	52.54	1397.8	979378.93	-25.61	0.02S	4.45	-178.94	-169.17
CB196	F634	36	9.02	117	54.64	1815.1	979279.97	8.63	10.17S	21.55	-174.42	-162.77
CB197	F634	36	4.74	117	51.24	1562.3	979340.18	-2.99	3.16S	7.67	-171.56	-160.83
CB198	F634	36	6.28	117	52.47	1685.2	979307.93	0.48	2.48S	7.63	-181.93	-170.31
CB199	F634	36	6.51	117	53.52	1865.4	979266.39	14.16	4.54S	15.41	-180.66	-168.26
CB200	V324	36	7.79	117	53.43	1854.7	979276.80	19.44	4.62S	12.71	-176.88	-164.38
CB201	F634	36	9.58	117	51.96	1719.1	979316.55	14.80	2.86S	7.32	-171.72	-159.84
CB202	F634	36	10.44	117	50.39	1761.3	979309.35	19.38	1.73S	5.93	-173.26	-160.99
CB203	F634	36	11.57	117	48.95	2156.5	979223.15	53.40	2.02S	10.41	-179.00	-164.20
CB204	F634	36	13.55	117	47.80	2362.2	979187.68	78.52	3.13S	13.34	-173.96	-157.88
CB205	F634	36	13.31	117	43.94	2334.2	979200.27	82.81	3.08S	12.85	-167.03	-151.12
CB206	F634	36	12.41	117	41.50	2190.6	979231.99	71.56	4.57S	12.82	-162.25	-147.36
CB207	F634	36	13.72	117	42.22	2285.7	979211.38	78.39	6.61S	18.48	-160.40	-145.19
CB208	F634	36	14.21	117	44.57	2090.0	979250.42	56.40	2.27S	7.66	-171.33	-156.83
CB209	F634	36	14.66	117	46.92	2159.8	979235.04	61.89	1.47S	7.79	-173.51	-158.52
CB210	F634	36	14.23	117	48.58	2283.0	979206.53	71.96	0.95S	9.24	-175.76	-159.99
CB211	V324	36	14.50	117	50.30	2284.5	979200.03	65.54	2.84S	14.30	-177.29	-161.83
CB212	X524	36	12.75	117	56.42	1305.5	979381.57	-52.29	0.71S	4.26	-195.42	-186.31
CB213	X524	36	14.80	117	55.38	1458.2	979353.73	-35.98	0.72S	4.53	-196.00	-185.81
CB214	F634	36	13.44	117	54.36	1533.8	979348.06	-16.38	1.26S	5.18	-184.24	-173.56
CB215	F634	36	13.06	117	52.95	1654.8	979319.83	-6.75	3.46S	8.50	-184.87	-173.53
CB216	F634	36	14.63	117	51.96	1957.4	979264.84	29.33	5.45S	13.21	-178.00	-164.80
CB217	F634	36	13.48	117	50.91	1980.9	979262.46	35.84	0.80S	7.24	-180.10	-166.35
CB218	F634	36	12.85	117	50.68	1982.1	979261.47	36.13	0.54S	7.21	-179.96	-166.20
CB219	F634	36	12.88	117	49.17	2220.8	979212.35	60.55	2.07S	10.38	-179.07	-163.82
CB220	F634	36	11.75	117	50.66	1923.4	979269.08	27.23	5.26S	12.72	-176.79	-163.80
CB221	F634	36	11.42	117	54.07	1582.2	979338.83	-7.77	4.90S	9.68	-176.57	-165.82
CB222	F634	36	10.72	117	54.82	1462.7	979361.42	-21.02	0.98S	4.69	-181.39	-171.18
CB223	X424	36	11.27	117	55.79	1240.2	979396.98	-54.87	0.09S	3.82	-191.11	-182.43
CB224	G734	36	10.69	117	56.47	1185.1	979405.33	-62.71	0.08S	4.18	-192.38	-184.12
CB225	F634	36	9.24	117	55.50	1365.5	979378.23	-32.07	1.55S	5.46	-180.75	-171.28
CB226	F634	36	7.34	117	55.31	1731.6	979293.11	-1.57	4.48S	14.17	-182.64	-171.11
CB227	F634	36	6.46	117	54.54	1588.6	979326.22	-11.28	1.69S	7.18	-183.30	-172.35
CB228	F634	36	5.52	117	53.62	1692.6	979305.44	1.34	4.09S	13.38	-176.15	-164.85
CB229	G744	36	3.44	117	59.64	1378.6	979384.40	-13.54	2.17S	10.44	-158.71	-149.46
CB230	F634	36	1.76	117	59.55	1645.0	979330.91	17.54	4.83S	13.71	-154.28	-143.34
CB231	F634	36	1.06	117	59.61	1783.1	979302.92	33.13	5.76S	15.46	-152.42	-140.61
CB232	V324	36	0.02	117	59.15	1868.4	979282.67	40.68	6.65S	18.05	-151.84	-139.58
CB233	F634	35	59.45	117	59.83	2268.9	979199.93	82.25	6.72S	24.05	-149.09	-134.37
CB234	F634	35	58.65	117	59.36	2005.6	979255.29	57.56	7.67S	18.90	-149.48	-136.30
CB235	F634	35	58.93	117	58.33	1770.3	979303.08	32.39	2.79S	13.83	-153.36	-141.53

TABLE 1--CONTINUED

STATION	CODE	LATITUDE		LONGITUDE		ELEVATION METERS	OBSERVED	FREE AIR	TERRAIN	BOUGUER ANOMALY		
		DEG	MIN	DEG	MIN		GRAVITY MGAL	(1967) MGAL	HAND TOTAL MGAL	2.67 MGAL	2.50 MGAL	
CB236	F634	35	56.22	117	57.64	1909.6	979276.00	52.15	6.77S	18.78	-144.26	-131.76
CB237	F634	35	56.29	118	1.68	2439.0	979177.58	116.85	3.64S	14.33	-143.20	-126.64
CB238	F634	35	55.55	117	59.01	2406.1	979176.16	106.35	3.34S	23.06	-141.31	-125.54
CB239	F634	35	52.54	117	57.53	1735.8	979317.11	44.95	2.70S	10.51	-140.25	-128.46
CB240	V424	35	51.60	117	57.11	1940.1	979259.67	51.83	7.83S	25.65	-141.12	-128.84
CB241	G744	35	52.44	117	56.23	1646.8	979330.42	30.96	7.45S	17.79	-136.98	-126.29
CB242	F634	35	51.23	117	55.40	1410.0	979377.02	6.25	4.13S	11.58	-141.31	-131.91
CB243	F634	35	49.73	117	55.56	1715.4	979299.69	25.25	8.42S	25.81	-142.36	-131.69
CB244	F634	35	48.61	117	57.16	1976.0	979241.64	49.16	9.33S	28.17	-145.30	-132.91
CB245	F634	35	47.91	117	55.58	1909.6	979250.79	38.82	10.43S	34.69	-141.67	-130.18
CB246	V324	35	45.72	117	55.47	1563.9	979336.32	20.90	6.26S	17.34	-138.19	-128.06
CB247	F634	36	8.82	117	52.50	1642.3	979332.38	8.03	2.05S	5.12	-172.07	-160.60
CB248	X424	36	11.30	117	51.46	1500.5	979362.18	-9.44	0.50S	4.85	-173.89	-163.42
CB249	X424	36	10.44	117	52.51	1435.3	979379.25	-11.25	0.12S	3.33	-169.90	-159.80
CB250	G634	36	13.87	117	33.56	1290.8	979432.95	-7.03	0.03S	2.57	-150.21	-141.09
CB251	G634	36	14.33	117	34.36	1324.4	979428.14	-2.16	0.06S	2.51	-149.17	-139.81
CB252	G634	36	14.85	117	35.27	1376.8	979419.63	4.75	0.07S	2.45	-148.21	-138.47
CB253	X524	36	12.21	117	33.84	1353.0	979414.96	-3.46	0.05S	2.68	-153.51	-143.96
CB254	N223	36	20.40	117	42.47	1477.1	979399.85	7.92	0.04S	2.06	-156.70	-146.21
CB255	F533	36	21.20	117	41.75	1483.2	979402.96	11.76	0.12S	2.44	-153.16	-142.66
CB256	N223	36	21.75	117	41.48	1500.2	979401.36	14.63	0.27S	2.77	-151.87	-141.27
CB257	N223	36	23.02	117	40.50	1567.0	979393.70	25.73	0.02S	2.33	-148.71	-137.60
CB258	F533	36	23.96	117	40.25	1562.4	979396.99	26.26	0.01S	2.52	-147.48	-136.42
CB259	N223	36	24.75	117	39.90	1563.3	979398.99	27.40	0.01S	2.49	-146.46	-135.39
CB260	N223	36	25.69	117	38.48	1575.2	979403.14	33.86	0.07S	2.37	-141.46	-130.30
CB261	N223	36	26.66	117	37.33	1638.7	979396.81	45.72	0.29S	2.84	-136.26	-124.67
CB262	N223	36	28.34	117	37.43	1604.2	979400.73	36.57	0.01S	2.63	-141.75	-130.39
CB263	B123	36	29.80	117	36.72	1668.5	979388.83	42.40	0.20S	3.27	-142.49	-130.72
CB264	F533	36	22.63	117	36.15	1482.9	979420.59	27.24	0.21S	2.49	-137.60	-127.11
CB265	X423	36	21.73	117	34.94	1410.0	979428.72	14.19	0.96S	3.88	-141.07	-131.18
CB266	X423	36	20.88	117	32.79	1258.8	979471.10	11.17	0.89S	4.42	-126.55	-117.79
CB267	F523	36	21.52	117	38.06	1508.2	979410.66	26.70	0.08S	2.13	-141.33	-130.63
CB268	B123	36	18.42	117	38.40	1659.6	979367.61	34.83	0.07S	2.47	-149.87	-138.11
CB269	N223	36	18.79	117	39.95	1611.5	979372.95	24.79	0.01S	2.08	-154.89	-143.45
CB270	F633	36	19.20	117	40.05	1596.5	979378.41	25.05	0.02S	2.04	-153.00	-141.66
CB271	F633	36	17.71	117	37.36	1532.5	979393.82	22.86	0.13S	2.56	-147.48	-136.63
CB272	B123	36	17.29	117	36.90	1516.4	979397.06	21.73	0.07S	2.52	-146.84	-136.11
CB273	X423	36	15.65	117	36.00	1421.3	979409.59	7.28	0.03S	2.43	-150.69	-140.63
CB274	N223	36	16.07	117	35.53	1446.6	979409.42	14.31	0.30S	2.68	-146.26	-136.03
CB275	B123	36	19.39	117	41.38	1565.5	979382.94	19.72	0.12S	2.15	-154.73	-143.62
CB276	D524	36	11.80	117	47.15	2336.6	979186.62	72.08	4.78S	14.97	-175.90	-160.11
CB277	F634	36	11.85	117	46.07	2258.0	979209.21	70.35	4.68S	12.05	-171.76	-156.34

Table 2. Location description code (digit one).

[The number after the alphabetical code indicates the total number of gravity stations for which the code was used.]

B	28	On level-line bench mark or other permanent marks incorporated into U.S. Geological Survey vertical control system.
N	13	Near level-line bench mark.
V	14	On vertical angle bench mark.
H	1	Near vertical angle bench mark.
X	27	Near location markers such as section corners, wells, or windmills.
D	5	Near assumed location of any of the above markers that was destroyed or not found.
F	171	Near a location with or without a marker at which a surveyed elevation is indicated on a published topographic map.
G	12	Near a location (on a manuscript map or a published map) at which spot elevations are determined by photogrammetry or near a doubtful F-location.
W	3	Near edge of lake, canal, or reservoir; interpolated elevation or elevation given for water or dam frequently at unknown height relative to present level.
C	1	Topographic contour line interpolation not along stream.
A	17	Elevation determined by using altimetry.

Table 3. Accuracy of elevation (digit two)

[The number after the numerical code indicates the total number of stations for which the code was used. Note that uncertainty of horizontal location tends to reduce the elevation accuracy.]

<u>Code</u>	<u>Number</u>	<u>Error estimate (meters)</u>	<u>Bouguer anomaly (milligal)</u>	<u>Examples</u>
1	28	0.0	0.01	On or tied to bench mark by surveying.
2	13	0.1	0.03	Elevation difference hand-leveled to nearby bench mark.
3	19	0.3	0.06	Near bench mark.
4	16	0.6	0.12	Near assumed location of bench mark that was not found.
5	20	1.5	0.3	Near or tied to surveyed spot elevation indicated on USGS topographic map.
6	170	3	0.6	Photogrammetric elevation of precise location such as fence corner.
7	26	6	1.2	Photogrammetric elevation on map with a 40-foot contour interval or altimetry used.

Table 4. Accuracy of horizontal location (digit three)

[The number after the numerical code indicates the total number of stations for which the code was used. The error of the Bouguer anomaly is based on the assumption that all of the location error is along a north-south component of direction.]

<u>Code</u>	<u>Number</u>	<u>Error estimate (meters)</u>	<u>Bouguer anomaly (milligals)</u>	<u>Examples</u>
2	81	26	0.02	Near section corners, bench marks, road intersections, or stream crossings.
3	179	64	0.05	Sharp road curve; uncertain spot elevation location.
4	24	128	0.1	Broad road curve or gentle hillcrest.
5	8	512	0.2	Location depends on odometer measurement or other estimate

Table 5. Accuracy of observed gravity (digit four)

[The number after the numerical code indicates the total number of stations for which the code was used. Accuracies are relative to base station at Inyokern.]

<u>Code</u>	<u>Number</u>	<u>Error estimate (milligals)</u>	<u>Examples</u>
1	12	0.01	Several repeated readings with two gravity meters.
3	31	0.05	Repeated reading.
4	249	0.10	Non-repeated reading.