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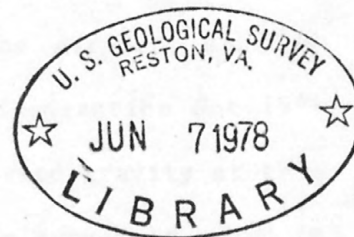
Principal facts for gravity stations in and adjacent
to the Superstition Mountains, Gila, Pinal, and
Maricopa Counties, Arizona

by

Jeffrey C. Wynn and Stephen A. Manydeeds

Open-File Report 78-566

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

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Introduction

A gravity survey was made in the Superstition Mountains in Gila, Pinal, and Maricopa Counties during November 1976 as part of a wilderness study being conducted by the U.S. Geological Survey and the U.S. Bureau of Mines. The purpose of the survey was to map buried structural boundaries and features (e.g. caldera margins) that are important in assessing the mineral potential of the area.

Data Collection

During November 1976, 98 gravity stations were established using helicopter support and LaCoste-Romberg gravimeter G-159.^{1/} The gravity stations were referenced to base station ACIC 3210-1 at the Globe airport, east of Globe, Arizona, a part of the International Gravity Standardization Net 1971 (Defense Mapping Agency Aerospace Center, 1974). The observed gravity at this base station is 979254.98 mGals. The area covered by the survey is shown in figure 1.

Station elevations were obtained from benchmarks and spot elevations on 1:24,000 scale topographic maps. Elevations are accurate to 1.0 meter, giving resultant maximum errors in the Bouguer anomaly that should not exceed

^{1/} Use of brand names in this report is for descriptive purposes only, and in no way constitutes endorsement by the U.S. Geological Survey.

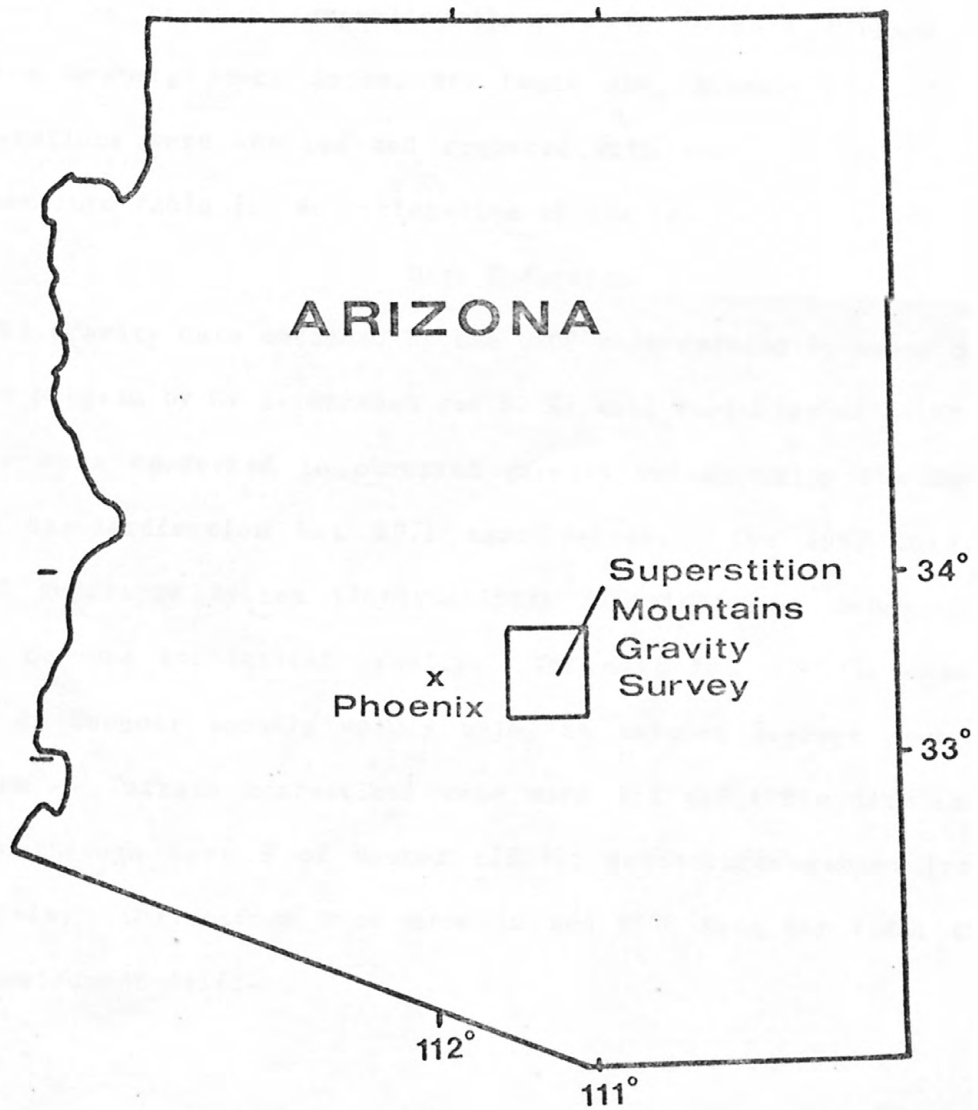


Figure 1. Location map for the Superstition Mountain gravity survey, Gila, Pinal, and Maricopa counties, Arizona.

0.60 mGals. Information from an additional 52 stations were obtained from the University of Arizona (unpublished) and the Defense Mapping Agency, DMA Aerospace Center, South Annex, St. Louis AFS, Missouri, 63125. Data from these stations were checked and compared with the USGS data, then combined with them into table 1. An explanation of the headings precedes table 1.

Data Reduction

The gravity data obtained by the USGS were reduced by means of a digital computer program by G. I. Evenden and R. R. Wahl (unpublished). Gravity meter readings were converted to observed gravity values using the International Gravity Standardization Net 1971 base values. The 1967 formula of the Geodetic Reference System (International Association of Geodesy, 1967) was used to compute theoretical gravity. The data from all three sources were reduced to Bouguer anomaly values using an assumed average rock density of 2.67 g/cm^3 . Terrain corrections were made for all three data sets by hand template through zone H of Hammer (1939); corrections ranged from 0.01 to 18.15 mGals. Corrections were made in the USGS data for tidal effects and linear instrument drift.

Explanation of Headings Used in Table 1.

STATION IDENTIFICATION	Gravity station number.
LATITUDE	North latitude in degrees, minutes, and hundredths of minutes.
LONGITUDE	West longitude in degrees, minutes, and hundredths of minutes.
ELEV	Elevation in meters.
ST	State of station (Arizona).
OBSERVED GRAVITY	Observed gravity in milligals.
THEORETICAL GRAVITY	Theoretical gravity in milligals.
TERRAIN	Terrain correction in milligals.
FREE-AIR	Free-air anomaly in milligals.
BOUGUER	Elevation and curvature correction in milligals.
BOUGUER ANOMALY	Bouguer anomaly in milligals for assumed average density of 2.67 g/cm^3 .

Superstition gravity, 1971 datum
 by j wynn and s manydeeds
 density: 2.67 date: 01/03/78

STATION IDENTIFICATION	LOCATION		ELEV	ST	GRAVITY		CORRECTIONS			SPECIAL	BOUGUER ANOMALY	spec
	LATITUDE	LONGITUDE			OBSERVED	THEORETICAL	TERRAIN	FREE-AIR	BOUGUER			
super.A-1	33 29.77	111 27.80	642.2	AZ	979365.93	-979606.47	0.18	198.18	-72.66	0.00	-114.84	
super.A-2	33 32.17	111 27.17	611.7	AZ	979363.63	-979609.80	0.61	188.77	-69.22	0.00	-126.00	
super.A-3	33 32.13	111 25.89	518.8	AZ	979377.11	-979609.73	1.26	160.09	-58.71	0.00	-129.99	
super.A-4	33 31.75	111 24.69	552.6	AZ	979366.12	-979609.21	2.03	170.53	-62.54	0.00	-133.07	
super.A-5	33 31.63	111 23.35	534.0	AZ	979367.59	-979609.05	2.21	164.79	-60.44	0.00	-134.89	
super.A-6	33 32.72	111 20.22	864.4	AZ	979296.36	-979610.55	2.92	266.73	-97.73	0.00	-142.27	
super.A-7	33 32.33	111 16.14	745.2	AZ	979329.76	-979610.02	3.12	229.97	-84.29	0.00	-131.46	
super.A-8	33 39.07	111 11.17	622.7	AZ	979356.34	-979619.38	2.62	-192.16	-70.46	0.00	-138.70	
super.A-9	33 39.28	111 6.35	737.9	AZ	979319.11	-979619.66	0.67	227.71	-83.46	0.00	-155.64	
super.A-10	33 37.05	111 3.11	757.1	AZ	979317.61	-979616.56	0.03	233.63	-85.63	0.00	-150.92	
super.B-1	33 24.95	111 21.88	1147.9	AZ	979244.07	-979599.79	1.34	354.18	-129.66	0.00	-129.86	
super.B-2	33 25.60	111 20.50	1153.7	AZ	979236.62	-979600.69	4.03	355.97	-130.31	0.00	-134.39	
super.B-3	33 25.95	111 21.04	1265.5	AZ	979210.13	-979601.17	5.06	390.47	-142.90	0.00	-138.41	
super.B-4	33 26.43	111 22.02	972.0	AZ	979280.05	-979601.84	0.80	299.93	-109.86	0.00	-130.92	
super.B-5	33 27.15	111 22.65	1022.3	AZ	979263.15	-979602.84	5.12	315.44	-115.52	0.00	-134.65	
super.B-6	33 26.33	111 21.29	1173.5	AZ	979227.45	-979601.70	1.28	362.08	-132.54	0.00	-143.44	
super.B-7	33 28.02	111 21.28	1111.9	AZ	979241.52	-979604.04	3.84	343.09	-125.61	0.00	-141.21	
super.B-8	33 29.73	111 21.03	1140.9	AZ	979231.20	-979606.41	6.34	352.02	-128.87	0.00	-145.72	
super.B-9	33 28.95	111 19.22	1460.0	AZ	979159.37	-979605.33	9.43	450.45	-164.76	0.00	-150.84	
super.B-10	33 28.52	111 17.28	1125.9	AZ	979243.43	-979604.73	1.90	347.41	-127.19	0.00	-139.19	
super.B-11	33 26.55	111 17.65	1225.0	AZ	979216.38	-979602.01	4.71	377.97	-138.34	0.00	-141.29	
super.B-12	33 26.83	111 18.48	1177.1	AZ	979225.55	-979602.39	4.88	363.21	-132.96	0.00	-141.70	
super.B-13	33 24.72	111 18.72	1142.4	AZ	979239.05	-979599.47	6.07	352.49	-129.04	0.00	-130.90	
super.B-14	33 23.03	111 19.22	976.9	AZ	979280.34	-979597.13	6.74	301.43	-110.41	0.00	-119.02	
super.B-15	33 25.10	111 16.58	1335.3	AZ	979188.68	-979600.00	4.72	412.00	-150.75	0.00	-145.35	
super.C-1	33 24.43	111 14.29	1107.9	AZ	979241.88	-979599.07	6.80	341.87	-125.17	0.00	-133.69	
super.C-2	33 26.33	111 14.25	1546.6	AZ	979141.59	-979601.70	6.11	477.15	-174.48	0.00	-151.33	
super.C-3	33 27.00	111 13.01	1542.6	AZ	979151.11	-979602.63	5.66	475.93	-174.03	0.00	-143.96	
super.C-4	33 27.88	111 15.00	1401.2	AZ	979178.51	-979603.84	3.37	432.31	-158.15	0.00	-147.80	
super.C-5	33 29.67	111 13.57	1460.6	AZ	979170.34	-979606.33	7.12	450.64	-164.83	0.00	-143.06	
super.C-6	33 28.53	111 12.54	1413.1	AZ	979179.77	-979604.75	3.85	435.97	-159.48	0.00	-144.64	
super.C-7	33 27.72	111 10.86	1859.3	AZ	979078.07	-979603.63	6.26	573.59	-209.55	0.00	-155.26	
super.C-8	33 29.20	111 9.45	1648.7	AZ	979138.55	-979605.67	3.88	508.64	-185.94	0.00	-140.54	
super.C-9	33 29.82	111 6.72	1741.6	AZ	979112.23	-979606.53	5.61	537.31	-196.37	0.00	-147.75	
super.C-10	33 28.80	111 8.15	1822.7	AZ	979100.84	-979605.13	2.95	562.31	-205.46	0.00	-144.47	
super.C-11	33 25.97	111 10.19	1844.0	AZ	979082.80	-979601.20	7.16	568.89	-207.85	0.00	-150.20	
super.C-12	33 24.28	111 9.24	1691.6	AZ	979117.18	-979598.86	4.19	521.90	-190.76	0.00	-146.35	
super.C-13	33 22.83	111 9.32	1513.6	AZ	979147.86	-979596.85	10.82	467.00	-170.78	0.00	-141.96	
super.C-14	33 22.75	111 14.43	1407.6	AZ	979168.98	-979596.74	18.15	434.29	-158.87	0.00	-134.20	
super.C-15	33 25.48	111 12.41	1172.0	AZ	979234.30	-979600.52	1.83	361.61	-132.37	0.00	-135.15	

TABLE 1. PRINCIPAL FACTS FOR GRAVITY STATIONS IN AND ADJACENT TO THE SUPERSTITION MOUNTAINS, GILA, PINAL, AND MARICOPA COUNTIES, ARIZONA.

Superstition gravity, 1971 datum
 by j wynn and s manydeeds
 density: 2.67 date: 01/03/78

STATION IDENTIFICATION	LOCATION		ELEV	ST	GRAVITY		CORRECTIONS			BOUGUER ANOMALY	spec
	LATITUDE	LONGITUDE			OBSERVED	THEORETICAL	TERRAIN	FREE-AIR	BOUGUER		
super.C-16	33 25.02	111 7.35	1456.9	AZ	979171.18	-979599.88	4.64	449.51	-164.41	0.00	-138.97
super.C-17	33 24.28	111 5.47	1673.7	AZ	979115.34	-979598.86	4.55	516.35	-188.74	0.00	-151.36
super.C-18	33 24.47	111 4.61	1659.6	AZ	979118.38	-979599.13	8.70	512.03	-187.17	0.00	-147.19
super.C-19	33 25.30	111 2.38	1358.8	AZ	979188.83	-979600.27	3.98	419.24	-153.39	0.00	-141.61
super.C-20	33 22.67	111 5.82	1475.8	AZ	979159.15	-979596.63	6.85	455.34	-166.54	0.00	-141.83
super.D-1	33 26.53	111 16.00	1144.8	AZ	979239.48	-979601.98	1.71	353.24	-129.32	0.00	-136.86
super.D-2	33 26.20	111 23.35	1220.1	AZ	979222.20	-979601.52	8.28	376.46	-137.79	0.00	-132.36
super.D-3	33 28.45	111 24.50	868.9	AZ	979301.77	-979604.63	0.52	268.12	-98.24	0.00	-132.45
super.D-4	33 32.13	111 29.21	795.2	AZ	979323.61	-979609.73	5.50	245.39	-89.93	0.00	-125.16
super.D-5	33 34.37	111 27.84	632.2	AZ	979367.83	-979612.84	2.77	195.08	-71.52	0.00	-118.69
super.D-6	33 34.48	111 24.46	935.1	AZ	979288.09	-979613.00	6.17	288.55	-105.70	0.00	-135.89
super.D-7	33 30.23	111 25.62	806.8	AZ	979310.82	-979607.10	3.50	248.96	-91.23	0.00	-135.05
super.D-8	33 30.60	111 22.87	1069.5	AZ	979248.29	-979607.62	3.71	330.02	-120.84	0.00	-146.45
super.D-9	33 29.15	111 22.65	887.0	AZ	979286.09	-979605.61	7.50	273.69	-100.27	0.00	-138.59
super.D-10	33 30.07	111 20.22	1397.8	AZ	979169.84	-979606.88	5.95	431.27	-157.77	0.00	-157.59
super.D-11	33 33.90	111 21.45	1021.4	AZ	979259.94	-979612.20	10.51	315.16	-115.42	0.00	-142.01
super.D-12	33 33.28	111 17.93	1094.8	AZ	979254.55	-979611.34	3.99	337.82	-123.69	0.00	-138.67
super.D-13	33 30.68	111 17.02	1349.0	AZ	979186.77	-979607.73	7.24	416.23	-152.29	0.00	-149.78
super.D-14	33 30.43	111 15.03	1505.7	AZ	979153.95	-979607.38	7.90	464.55	-169.89	0.00	-150.87
super.D-15	33 30.48	111 12.70	1557.8	AZ	979152.37	-979607.45	8.37	480.63	-175.74	0.00	-141.83
super.D-16	33 32.03	111 13.19	1234.4	AZ	979225.77	-979609.60	5.50	380.88	-139.40	0.00	-136.85
super.D-17	33 32.22	111 10.80	1218.9	AZ	979231.55	-979609.86	2.06	376.09	-137.65	0.00	-137.82
super.E-1	33 27.30	111 9.30	1791.0	AZ	979102.38	-979603.05	6.53	552.54	-201.90	0.00	-143.51
super.E-2	33 26.82	111 7.12	1429.8	AZ	979178.36	-979602.38	2.37	441.15	-161.37	0.00	-141.87
super.E-3	33 26.33	111 6.08	1120.8	AZ	979240.20	-979601.70	1.01	345.81	-126.61	0.00	-141.29
super.E-4	33 23.37	111 2.59	1522.2	AZ	979143.48	-979597.60	8.00	469.63	-171.74	0.00	-148.23
super.E-5	33 26.43	111 1.51	1315.5	AZ	979196.36	-979601.84	5.50	405.89	-148.52	0.00	-142.61
super.E-6	33 27.87	111 4.65	1393.2	AZ	979183.48	-979603.84	5.25	429.86	-157.26	0.00	-142.49
super.E-7	33 27.80	111 6.53	1677.3	AZ	979126.95	-979603.73	2.83	517.48	-189.15	0.00	-145.64
super.E-8	33 30.57	111 1.80	1374.6	AZ	979185.63	-979607.58	9.45	424.13	-155.17	0.00	-143.54
super.E-9	33 31.23	111 3.67	1556.3	AZ	979148.51	-979608.49	10.74	480.16	-175.57	0.00	-144.66
super.E-10	33 33.03	111 7.23	1491.1	AZ	979173.34	-979610.98	1.82	460.04	-168.25	0.00	-144.03
super.E-11	33 33.55	111 9.12	1193.9	AZ	979235.32	-979611.71	4.33	368.38	-134.84	0.00	-138.52
super.E-12	33 34.80	111 10.17	914.1	AZ	979293.33	-979613.45	7.54	282.06	-103.33	0.00	-133.84
super.E-13	33 35.47	111 9.01	1244.5	AZ	979225.66	-979614.38	3.97	383.99	-140.53	0.00	-141.30
super.E-14	33 36.22	111 10.05	1338.4	AZ	979195.80	-979615.41	9.95	412.94	-151.09	0.00	-147.81
super.E-15	33 36.60	111 6.48	1358.5	AZ	979195.15	-979615.94	11.89	419.14	-153.35	0.00	-143.11
super.E-16	33 34.55	111 3.11	934.5	AZ	979280.77	-979613.09	0.82	288.36	-105.63	0.00	-148.78
super.E-17	33 34.12	111 5.04	1052.8	AZ	979258.09	-979612.50	3.31	324.85	-118.96	0.00	-145.21
super.E-18	33 31.17	111 7.78	1514.3	AZ	979165.57	-979608.41	2.36	467.19	-170.85	0.00	-144.14

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STATION IDENTIFICATION	LOCATION		ELEV	ST	GRAVITY		CORRECTIONS			BOUGUER ANOMALY	spec
	LATITUDE	LONGITUDE			OBSERVED	THEORETICAL	TERRAIN	FREF-AIR	BOUGUER		
super.E-19	33 25.28	111 10.82	1571.9	AZ	979145.80	-979600.24	3.88	484.95	-177.32	0.00	-142.92
super.F-1	33 25.67	111 14.05	1201.8	AZ	979219.95	-979600.79	5.76	370.82	-135.73	0.00	-139.99
super.F-2	33 27.83	111 18.80	1186.3	AZ	979228.22	-979603.77	1.83	366.03	-133.98	0.00	-141.68
super.F-3	33 23.43	111 23.75	857.1	AZ	979309.83	-979597.69	9.52	264.48	-96.90	0.00	-110.76
super.F-4	33 24.17	111 26.00	736.1	AZ	979335.62	-979598.71	2.13	227.15	-83.25	0.00	-117.07
super.F-5	33 25.72	111 26.75	1112.2	AZ	979255.33	-979600.85	2.88	343.18	-125.65	0.00	-125.11
super.F-6	33 25.65	111 25.98	1330.4	AZ	979201.12	-979600.76	5.45	410.50	-150.20	0.00	-133.89
super.F-7	33 26.82	111 26.75	1189.6	AZ	979234.27	-979602.38	5.08	367.06	-134.36	0.00	-130.33
super.F-8	33 26.77	111 27.32	1272.5	AZ	979213.55	-979602.31	5.83	392.64	-143.69	0.00	-133.99
super.F-9	33 27.48	111 27.13	840.9	AZ	979313.66	-979603.29	2.19	259.49	-95.08	0.00	-123.02
super.F-10	33 26.60	111 24.72	989.4	AZ	979276.34	-979602.07	4.16	305.29	-111.81	0.00	-128.09
super.F-11	33 31.20	111 21.27	908.3	AZ	979281.16	-979608.45	4.76	280.27	-102.68	0.00	-144.93
super.F-12	33 30.67	111 19.42	1084.2	AZ	979243.95	-979607.71	3.30	334.53	-122.49	0.00	-148.43
super.F-13	33 31.63	111 9.07	1506.3	AZ	979165.84	-979609.05	1.81	464.74	-169.96	0.00	-146.62
super.F-14	33 28.03	111 11.50	1653.5	AZ	979127.58	-979604.05	2.52	510.15	-186.49	0.00	-150.30
super.F-15	33 23.95	111 11.62	1026.0	AZ	979257.19	-979598.41	1.43	316.57	-115.94	0.00	-139.15
super.F-16	33 24.95	111 4.88	1553.9	AZ	979135.13	-979599.79	0.82	479.41	-175.30	0.00	-159.73
super.F-17	33 23.40	111 6.15	1499.6	AZ	979153.36	-979597.64	4.29	462.68	-169.21	0.00	-146.52
super. 4-35-6	33 19.93	111 8.30	836.4	AZ	979300.94	-979592.84	1.10	258.08	-94.57	0.00	-127.29
super. 5-4-5	33 20.08	111 13.73	701.0	AZ	979338.11	-979593.05	2.50	216.33	-79.30	0.00	-115.40
super. 5-4-8	33 21.12	111 7.88	877.8	AZ	979279.55	-979594.49	2.54	270.87	-99.24	0.00	-140.77
super. 5-4-3	33 21.74	111 16.17	757.9	AZ	979330.09	-979595.34	0.54	233.86	-85.71	0.00	-116.57
super. 0683	33 21.83	111 23.17	621.2	AZ	979383.52	-979595.47	0.11	191.69	-70.28	0.00	-90.43
super. 0591	33 21.87	111 28.53	531.6	AZ	979398.05	-979595.52	0.02	164.04	-60.16	0.00	-93.57
super. 0687	33 22.18	111 25.90	577.6	AZ	979389.52	-979595.95	0.10	178.24	-65.36	0.00	-93.45
super. 4-35-14	33 22.80	111 26.00	595.6	AZ	979381.08	-979596.81	0.06	183.79	-67.39	0.00	-99.27
super. 1-4-1	33 23.20	111 11.70	872.9	AZ	979287.41	-979597.37	2.20	269.37	-98.69	0.00	-137.08
super. 5-4-1	33 23.50	111 21.13	696.5	AZ	979347.54	-979597.78	1.10	214.92	-78.78	0.00	-113.00
super. 5-4-4	33 23.53	111 16.88	762.0	AZ	979326.20	-979597.82	1.32	235.14	-86.18	0.00	-121.34
super. 5-5-1	33 26.92	111 1.00	1030.2	AZ	979253.95	-979602.52	1.41	317.89	-116.41	0.00	-145.68
super. 5-4-6	33 24.53	111 13.21	951.0	AZ	979276.48	-979599.21	1.06	293.44	-107.49	0.00	-135.71
super. 5-4-7	33 25.55	111 10.38	1488.3	AZ	979168.34	-979600.62	1.78	459.20	-167.94	0.00	-139.25
super. 1-4-2	33 25.60	111 0.20	958.3	AZ	979267.16	-979600.69	1.25	295.70	-108.31	0.00	-144.89
super. 1-4-3	33 26.20	111 4.20	1051.3	AZ	979255.16	-979601.52	1.79	324.38	-118.78	0.00	-138.97
super. 5-5-2	33 28.20	111 2.30	969.3	AZ	979272.63	-979604.29	2.25	299.08	-109.55	0.00	-139.88
super. APACHE T	33 28.20	111 28.30	635.5	AZ	979362.04	-979604.29	0.30	196.11	-71.90	0.00	-117.74
super. 5-5-3	33 29.36	111 4.07	1133.9	AZ	979243.44	-979605.90	1.81	349.86	-128.08	0.00	-138.88
super. 5-5-12	33 29.95	111 17.92	938.8	AZ	979277.84	-979606.72	1.82	289.68	-106.11	0.00	-143.50
super. 5-5-11	33 30.76	111 10.88	1447.8	AZ	979185.55	-979607.84	0.81	446.69	-163.39	0.00	-138.17
super. 1-4-5	33 31.20	111 27.40	702.3	AZ	979346.75	-979608.45	0.56	216.71	-79.44	0.00	-123.86

Superstition gravity, 1971 datum

by j wynn and s manydeeds

density: 2.67 date: 01/03/78

STATION IDENTIFICATION	LATITUDE	LOCATION LONGITUDE	ELEV	ST	GRAVITY		CORRECTIONS			SPECIAL	BOUGUER ANOMALY	spec
					OBSERVED	THEORETICAL	TERRAIN	FREE-AIR	BOUGUER			
super. 1-4-8	33 31.50	111 18.40	681.2	AZ	979331.84	-979608.87	8.91	210.22	-77.06	0.00	-134.96	
super. 5-5-6	33 31.65	111 4.97	1008.9	AZ	979270.27	-979609.07	2.22	311.31	-114.01	0.00	-139.29	
super. 1-4-6	33 32.10	111 22.70	562.4	AZ	979358.69	-979609.70	1.06	173.55	-63.64	0.00	-140.04	
super. 5-5-10	33 32.82	111 11.40	1351.8	AZ	979206.04	-979610.70	2.66	417.08	-152.60	0.00	-137.52	
super. 5-5-7	33 33.04	111 1.99	1082.6	AZ	979250.88	-979611.00	0.85	334.06	-122.32	0.00	-147.53	
super. 5-5-9	33 33.32	111 14.95	778.2	AZ	979326.34	-979611.39	1.72	240.12	-88.00	0.00	-131.21	
super. 1-4-9	33 34.60	111 15.30	583.4	AZ	979365.19	-979613.16	0.82	180.03	-66.02	0.00	-133.14	
super. 5-5-8	33 35.89	111 12.15	615.4	AZ	979359.59	-979614.95	1.83	-189.90	-69.63	0.00	-133.26	
super. RV-8	33 36.60	111 1.00	691.9	AZ	979325.30	-979615.94	0.18	213.51	-78.27	0.00	-155.21	
super. 5-5-5	33 36.61	111 5.42	879.3	AZ	979298.26	-979615.95	0.32	271.34	-99.41	0.00	-145.45	
super. 5-5-4	33 36.93	111 1.83	742.5	AZ	979316.88	-979616.40	1.47	229.12	-83.98	0.00	-152.91	
super. 1-4-10	33 38.20	111 11.80	645.3	AZ	979353.95	-979618.16	0.94	199.12	-73.00	0.00	-137.15	
super. TERRAIN	33 38.41	111 23.82	1036.3	AZ	979283.80	-979618.45	1.96	319.77	-117.10	0.00	-130.03	
super. 6/14/2	33 38.49	111 5.02	717.8	AZ	979324.16	-979618.56	0.14	221.50	-81.19	0.00	-153.95	
super. RV-7	33 38.50	111 6.80	862.6	AZ	979301.70	-979618.58	3.03	266.17	-97.52	0.00	-145.20	
super. 6/14/1	33 40.06	111 8.04	675.1	AZ	979337.47	-979620.75	0.47	208.34	-76.37	0.00	-150.85	
super. RV-6	33 40.30	111 9.70	652.6	AZ	979346.48	-979621.08	2.69	201.38	-73.83	0.00	-144.35	
super. 6/14/4	33 40.56	111 13.62	1044.9	AZ	979275.95	-979621.45	1.75	322.40	-118.06	0.00	-139.41	
super. 4	33 23.30	111 27.28	586.1	AZ	979357.76	-979597.51	0.10	180.87	-66.32	0.00	-125.10	
super. 5	33 23.30	111 29.90	520.0	AZ	979387.05	-979597.51	0.01	160.47	-58.85	0.00	-108.83	
super. 6	33 23.75	111 28.58	554.1	AZ	979364.58	-979598.13	0.06	170.99	-62.71	0.00	-125.20	
super. 8	33 24.94	111 29.30	559.3	AZ	979368.51	-979599.77	0.07	172.60	-63.29	0.00	-121.89	
super. 10	33 26.10	111 28.85	613.9	AZ	979357.41	-979601.38	0.73	189.44	-69.46	0.00	-123.25	
super. 12	33 26.54	111 29.48	591.0	AZ	979367.27	-979601.99	0.10	182.38	-66.87	0.00	-119.11	
super. 13	33 26.93	111 29.98	592.2	AZ	979367.97	-979602.53	0.08	182.75	-67.01	0.00	-118.74	
super. 14	33 27.17	111 29.65	601.4	AZ	979365.45	-979602.86	1.74	185.59	-68.05	0.00	-118.13	
super. 18	33 31.20	111 27.40	702.3	AZ	979333.02	-979608.45	0.64	216.72	-79.44	0.00	-137.50	
super. 26	33 34.90	111 12.70	709.0	AZ	979325.94	-979613.58	1.27	218.79	-80.20	0.00	-147.78	
super. 31	33 37.30	111 11.80	628.2	AZ	979341.66	-979616.91	0.62	193.86	-71.08	0.00	-151.85	

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