COMMONWEALTH OF VIRGINIA
DEPARTMENT OF CONSERVATION
AND ECONOMIC DEVELOPMENT
DIVISION OF MINERAL RESOURCES

BOUGUER GRAVITY IN VIRGINIA

36° 30′ to 38° 00′ N.
80° 00′ to 81° 00′ W.

STANLEY S. JOHNSON

REPORT OF INVESTIGATIONS 43

VIRGINIA DIVISION OF MINERAL RESOURCES
James L. Calver
Commissioner of Mineral Resources and State Geologist

CHARLOTTESVILLE, VIRGINIA
1976

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CONTENTS

PAGE

Abstract 1

Introduction 2

Instrumentation and procedures 3

Observations 5

References 8

Appendix: Principal facts for points in Sheet 3 9

ILLUSTRATIONS

PAGE

PLATE

1. Major regional structures, superimposed on gravity contours, Sheet 3, Virginia ..... In pocket

SHEET

3. Bouguer gravity map (36°30′-38°00′ N., 80°00′-81°00′ W.) ..... In pocket

FIGURE

1. Location map 2
2. Gravity profile 7

BOUGUER GRAVITY IN VIRGINIA

36°30′ to 38°00′ N.

80°00′ to 81°00′ W.

By

Stanley S. Johnson

ABSTRACT

An area of approximately 3,850 square miles (9,971 sq km) in Virginia, bounded by 80°00′ and 81°00′ west longitudes, the Virginia-West Virginia boundary to the north, and the Virginia-North Carolina boundary to the south, was surveyed using gravimeter methods. A total of 1,070 stations, such as bench mark, checked spot, and bridge elevations were occupied. The reduced field data were computer contoured. The survey included areas in the Piedmont, Blue Ridge, and Valley and Ridge physiographic provinces. Precambrian and Paleozoic metamorphic and igneous rocks and Paleozoic sedimentary rocks are present.

Bouguer values in the Valley and Ridge physiographic province had a range of 22 milligals and in the Blue Ridge and Piedmont provinces a range of 57 milligals. Gradients in several areas of the Blue Ridge anticlinorium exceeded 2.0 milligals per mile (1.2 mgal/km).

Correlation was found to exist between gravity anomalies and geological structure. Large positive anomalies in the southeastern part of the area may be due to mafic rocks near the surface.

INTRODUCTION

The area of this gravity report consists of approximately 3,850 square miles (9,971 sq km) in Virginia, bounded by 80°00′ and 81°00′ west longitudes, the Virginia-West Virginia boundary to the north, and the Virginia-North Carolina boundary to the south. This area includes all or part of 16 counties located in the Piedmont, Blue Ridge, and Valley and Ridge physiographic provinces. The gravity map of this report consists of Sheet 3 and is west of the report area of Johnson (1972, Sheets 4 and 5) (Figure 1).

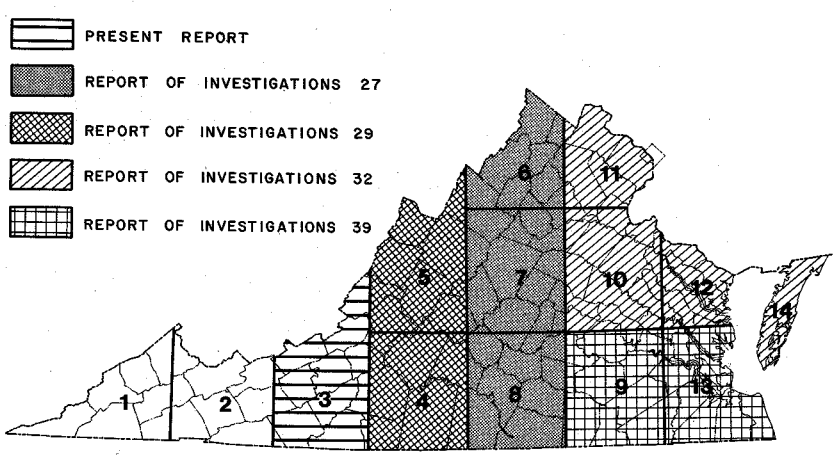

Figure 1. Location map showing area of investigation.

The regional gravity survey is part of the Division of Mineral Resources' geophysical program to obtain data that will aid in the interpretation of the geological framework of Virginia. Gravity methods are used predominantly in regional surveys to help determine the location of anomalous areas that may be further investigated by geological and other geophysical techniques. The variations in the earth's gravity field are caused by the latitude of the area, elevation, local terrain, earth tides, and rock density. The detail to which geologic features are determined depends in part on the number and distribution of gravity stations that are occupied in the field.

The contours (Sheet 3) have been traced from those that were originally computer contoured. A computer program written for the United States Air Force by Snowden (1970) was used to grid and contour the gravity data. Minor adjustments and smoothing procedures were followed in order to achieve matching of contours of adjacent maps and to remove minor angularities.

The writer appreciates the aid of members of the Virginia Division of Mineral Resources staff who contributed to the project. Jo W. Johnson occupied about 30 percent of the stations in the northern part of Sheet 3 during the spring of 1975; Ronald D. Kreisa occupied some stations in the southeastern area of the map.

INSTRUMENTATION AND PROCEDURES

Field observations were made utilizing a LaCoste and Romberg Model G geodetic gravity meter (number 77). This meter has a range of over 7,000 milligals and a reading accuracy of ±0.01 milligal. All observations were made utilizing a modified ladder-sequence loop technique. Each loop started and ended the same day from the established base station. Determination of gravity was made at 1,070 stations in the area covered by Sheet 3. Field observations were made on U. S. Geological Survey and National Ocean Survey (formerly U. S. Coast and Geodetic Survey) bench marks that had been established by first- through third-order leveling. Observations were also made at sites for which useful checked spot and bridge elevations have been determined by the U. S. Geological Survey. A valid observation consisted of the average field value that was obtained from two consecutive readings; these observations had a maximum spread no greater than 0.01 milligal. Previously occupied stations in a loop were generally reoccupied every three hours during the survey. Stations were plotted on 7.5-minute-series topographic maps. Established horizontal control was used for station coordinates where available; for all other stations, latitude and longitude were scaled from the topographic maps.

Seven base stations were used in the survey. Loops originated and ended at base stations in Clifton Forge, Figsboro, Floyd, Hillsville, Pearisburg, Salem, and Wytheville. The data given in the Appendix are referenced to base station values reported by

Johnson and Ziegler (1972). Exceptions are a few stations that utilized the Figsboro base station before a final network adjustment was made for the Virginia Gravity Base Net (Johnson and Ziegler, 1972). These stations (just west of 80°00′ longitude and south of 37°00′ latitude) were not adjusted for the −0.039 milligal difference between the preliminary and final base network adjustment.

The computation and reduction of field data was done on a CDC 6400 computer at the Division of Academic Computing, University of Virginia, Charlottesville, utilizing a modified GRAVAS program. The GRAVAS program is designed to reduce and correct field observations obtained with LaCoste and Romberg gravity meters and includes corrections for solar and lunar tides and instrument drift. A density of 2.67 g/cm^3 was used for computing the Bouguer values. Principle facts for each station are listed in the Appendix.

The base map was prepared from 1° x 2° topographic quadrangles, 1:250,000 Army Map Service series. The map and point plot used a transverse mercator projection. The map for Sheet 3 was photographically reduced approximately 0.5 inch (1.3 cm) in a north-south direction. The reduction was necessary in order to join and match adjoining gravity maps on the east. The "matching problem" between adjoining survey areas has occurred for several reasons. The scale conversion factor of 6.1237 miles per meter should have been 6.2137 miles per meter in the grid technique explained by Johnson, Huxsaw, and Thomas (1971). The incorrect scale factor was used to grid and contour the gravity data from 78°00′ to 80°00′ west longitude and published as Sheets 4, 5, 6, 7, and 8 (Johnson, 1971 and 1972) (Figure 1); Sheet 3 of this report joins Sheets 4 and 5. In addition to the scale error Sheets 4, 5, 6, 7, and 8 were gridded and computed using a polyconic projection. In 1973 a change was made from the gridding and contouring system (Johnson, Huxsaw, and Thomas, 1971) used by the Division in 1971 and 1972 to a more advanced gridding and contouring system developed by Snowden (1970). The more advanced program employs a transverse mercator projection instead of a polyconic projection. Thus, all gravity maps published since 1972 had to be photographically reduced to match the previously published data because of the scale factor error of 76.5 feet per

mile (14.4 m/km). The points (+) depicted on the map show the location of all field observations except those in North Carolina and West Virginia that were used for peripheral control.

OBSERVATIONS

The survey was done over areas of the Valley and Ridge, Blue Ridge, and Piedmont physiographic provinces. The Valley and Ridge is underlain by carbonates, shale, siltstone, and sandstone of Cambrian through Mississippian ages; the Blue Ridge by late Precambrian and early Paleozoic igneous intrusive, metavolcanic, and metasedimentary rocks; and the Piedmont mainly by Precambrian and Paleozoic metamorphic and igneous rocks.

Structurally, the Valley and Ridge province in the area of this report is typical of the folded and faulted rocks of the central Appalachian Mountains. The major folds are the Bane, Sinking Creek, and Draper Mountain anticlines; the Butt Mountain, Johns Creek, and Catawba synclines; and the Blacksburg synclinorium. Other major features are the Barringer, Christiansburg, and Price Mountain windows as well as the St. Clair, Narrows, Saltville, Pulaski, Salem, and Max Meadows thrust faults.

Structural features in the Blue Ridge and Piedmont are not as well defined as those in the Valley and Ridge. Major features in the southeastern half of the area are the Blue Ridge anticlinorium, the Smith River allochthon, and the Blue Ridge, Fries, and Bowens Creek faults. These structural features have the normal Appalachian northeasterly trend; the thrust faults have the upper sheet on the southeast. Plate 1 shows the relationship between the features and gravity contours.

The Bouguer gravity data (Appendix) show that values over the Blue Ridge and Piedmont range from −97.69 milligals northwest of Galax to −40.64 milligals south of Ferrum, a difference of 57.05 milligals in a distance of approximately 53 miles (85 km). Over the Valley and Ridge values range from −84.59 milligals south of Radford to −62.03 milligals north of Poplar Hill, a difference of 22.56 milligals in a distance of approximately 16 miles (26 km).

There is good correlation between gravity anomalies and geological structure (Plate 1). The Bane anticline has a gravity high associated with its anticlinal axis and closure (−64 milligals contour) on the southwestern end. The Sinking Creek anticline has a gravity high that is subparallel to its anticlinal axis. The Blacksburg synclinorium, Price Mountain anticline, Barringer window, and associated thrust faults in the Blacksburg-Radford-Christiansburg-Copper Valley area have a gravity low (below −80 milligals) contoured over a large percentage of the area. This large negative anomaly is probably due to a thick section of sedimentary rocks. Calculations and model studies are indicative of approximately 23,000 feet (7,010 m) of Paleozoic sedimentary rock that is present in the Blacksburg synclinorium (Sears and Robinson, 1971). Another area with negative gravity values (lower than −96 milligals) occurs in the vicinity of the Fries fault northwest of Galax. The highest Bouguer values are found over rocks in the Blue Ridge anticlinorium—particularly south of Ferrum (−44 milligals). Some relationships between the thrust faults and the gravity field are shown in Figure 2. In almost all cases the faults occur in "troughs" of low gravity values or on the flanks of increasingly lower gravity values; some examples are the Narrows, Pulaski, and Fries faults. The Blacksburg synclinorium is also quite evident. The regional gravity differences between the Valley and Ridge, Blue Ridge, and Piedmont provinces are indicated in Figure 2.

Steep gradients occur in the area of the Pearisburg syncline, especially along its axis southwest of Pearisburg. Similar gradients are present between the Pulaski and Saltville faults, and between the Laswell and Tract Mountain faults. The most pronounced gradients are in the Blue Ridge anticlinorium. Gradients beginning at the −76 milligal contour line southeast of Copper Valley to Charity (2.0 mgal/mi or 1.2 mgal/km) and between Cana and the area in the extreme southern part of Floyd County (2.3 mgal/mi or 1.4 mgal/km) are some of the best examples.

The large gravity anomalies (gradients and higher gravity field) in the southeastern part of the area (Sheet 3) may be due to mafic rocks near the surface. Their presence may be due to faulting of the simatic crust or intrusion of mafic rocks.

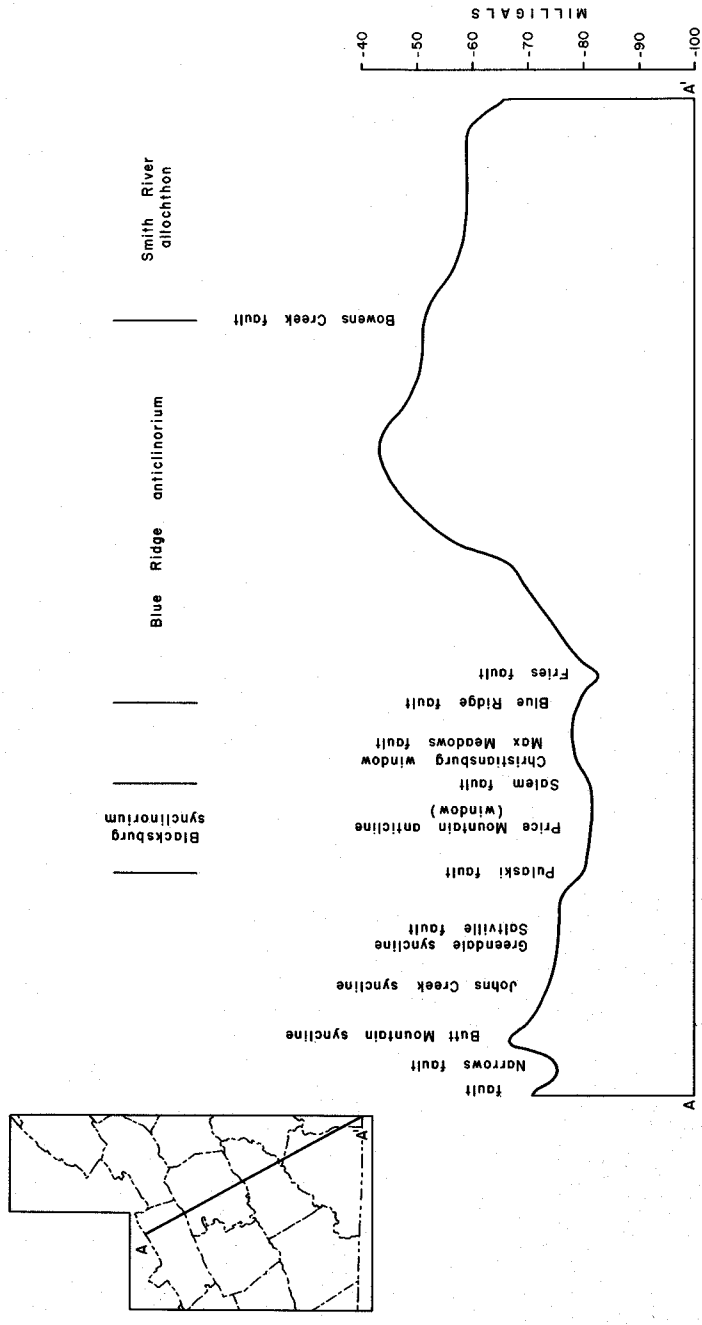

Figure 2. Gravity profile across sheet 3.

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APPENDIX: PRINCIPAL FACTS FOR POINTS IN SHEET 3

Station Number	Latitude	Longitude	Elevation (Feet)	Observed Gravity	Free Air Gravity	Bouguer Gravity
18-A-1	36 37.83	-80 5.10	1018.76	979764.286	-24.91	-59.66
18-A-2	36 38.43	-80 4.38	859.87	979777.515	-27.49	-56.82
18-A-3	36 39.95	-80 3.93	1062.95	979766.572	-21.52	-57.77
18-A-4	36 42.60	-80 4.23	1048.87	979777.583	-16.40	-51.90
18-A-5	36 43.18	-80 3.60	1193.73	979769.157	-11.29	-52.00
18-A-6	36 41.08	-80 4.58	1088.98	979768.328	-18.94	-56.09
18-A-7	36 43.97	-80 7.12	1272.90	979764.858	-9.27	-52.68
18-A-8	36 41.70	-80 0.38	1044.85	979778.006	-14.30	-49.94
18-A-9	36 39.92	-80 0.00	1029.77	979776.260	-14.90	-50.02
18-A-10SE1	36 44.75	-80 4.77	1167.00	979772.047	-13.17	-52.97
18-A-11SE2	36 44.52	-80 0.18	772.00	979798.470	-23.56	-49.89
18-A-12SE3	36 42.68	-80 1.50	1079.00	979775.208	-15.31	-52.11
18-A-13SE4	36 40.70	-80 1.52	1066.00	979772.878	-16.00	-52.36
18-A-14SE5	36 37.65	-80 0.45	890.00	979782.096	-18.95	-49.31
18-A-15SE6	36 40.08	-80 7.15	1145.00	979759.665	-20.90	-59.95
18-B-1SE1	36 38.55	-80 14.87	1187.00	979752.307	-22.10	-62.58
18-B-2	36 38.43	-80 12.00	1256.68	979746.281	-21.40	-64.26
18-B-3	36 39.43	-80 12.02	1419.09	979738.457	-15.39	-63.79
18-B-4	36 39.23	-80 7.83	1181.43	979754.056	-21.86	-62.15
18-B-5	36 37.77	-80 8.67	1143.74	979752.680	-24.67	-63.68
18-B-GBR1	36 38.13	-80 10.53	1067.00	979757.281	-27.81	-64.20
18-B-7SE2	36 40.15	-80 10.12	1384.00	979742.997	-15.18	-62.39
18-B-8	36 40.67	-80 12.13	1543.00	979740.123	-3.84	-56.47
18-B-9SE3	36 39.92	-80 13.53	1588.00	979734.436	-4.22	-58.38
18-B-10	36 41.65	-80 11.00	1387.92	979751.727	-8.24	-55.58
18-B-11	36 42.38	-80 10.30	1459.75	979749.142	-5.13	-54.91
18-B-12	36 42.23	-80 9.17	1387.07	979752.667	-8.22	-55.53
18-B-13	36 40.78	-80 8.02	1124.96	979762.194	-21.26	-59.63
18-B-14	36 43.05	-80 8.45	1129.56	979770.327	-15.96	-54.49
18-B-15	36 44.28	-80 13.42	1559.89	979752.174	4.59	-48.62
18-B-16	36 44.12	-80 10.75	1608.05	979745.444	2.63	-52.22
18-C-1	36 32.62	-80 13.53	1212.75	979734.420	-29.03	-70.39
18-C-2SE1	36 36.45	-80 14.72	1332.00	979735.546	-22.20	-67.63
18-C-3SE2	36 34.53	-80 14.37	1229.00	979735.336	-29.34	-71.26
18-C-4	36 34.67	-80 11.55	1113.61	979745.646	-30.07	-68.06
18-C-5SE3	36 34.18	-80 9.95	1091.00	979747.701	-29.45	-66.66
18-C-6	36 33.42	-80 12.88	1175.52	979738.489	-29.61	-69.71
18-C-7SE4	36 32.60	-80 10.38	1158.00	979741.423	-27.15	-66.65
18-C-8	36 35.20	-80 8.37	1105.91	979749.563	-27.65	-65.37
18-C-9	36 32.58	-80 7.57	1032.48	979750.510	-29.85	-65.06
18-C-10	36 33.38	-80 8.22	1091.70	979747.971	-27.97	-65.20
18-C-11	36 34.27	-80 7.83	897.21	979760.814	-34.69	-65.29
18-C-12	36 36.37	-80 9.28	1133.71	979749.185	-27.09	-65.76
18-C-13	36 35.92	-80 10.40	963.92	979758.344	-33.26	-66.13
18-C-14SE5	36 37.13	-80 12.40	1216.00	979746.509	-23.13	-64.60
18-D-1	36 36.73	-80 4.63	884.10	979771.078	-29.20	-59.36
18-D-2	36 35.40	-80 6.17	1054.21	979756.231	-26.13	-62.09
18-D-3	36 32.00	-80 2.15	977.85	979749.537	-35.12	-68.47
18-D-4	36 31.08	-80 4.58	1042.64	979743.055	-34.19	-69.75
18-D-5SE1	36 37.20	-80 0.45	883.00	979782.030	-19.03	-49.14
18-D-6SE2	36 36.52	-80 2.67	908.00	979771.863	-25.86	-56.83
18-D-7SE3	36 36.75	-80 6.72	1061.00	979757.189	-26.48	-62.67
18-D-8SE4	36 34.90	-80 2.60	1002.00	979761.392	-25.16	-59.34
18-D-9SE5	36 34.00	-80 0.92	986.00	979760.688	-26.08	-59.71
18-D-10SE6	36 33.02	-80 2.05	871.00	979763.205	-32.96	-62.67
18-D-11SE7	36 33.08	-80 3.83	1001.00	979757.282	-26.75	-60.90
18-D-12SE8	36 33.33	-80 5.97	1044.00	979753.559	-26.79	-62.40
18-D-13SE9	36 31.95	-80 7.32	1057.00	979747.773	-29.37	-65.42
18-D-14SE10	36 31.25	-80 6.80	1062.00	979743.751	-31.91	-68.13

BR Bridge elevation

SE Checked spot elevation

Station Number	Latitude	Longitude	Elevation (Feet)	Observed Gravity	Free Air Gravity	Bouguer Gravity
18-D-15SE11	36 32.23	-80 1.18	964.00	979750.990	-35.31	-68.18
19-A-1SE1	36 44.60	-80 15.67	1434.00	979754.919	-4.96	-53.87
19-A-2SE2	36 44.27	-80 17.85	1409.00	979755.011	-6.74	-54.80
19-A-3	36 43.50	-80 22.12	2969.62	979660.912	47.06	-54.23
19-A-4SE3	36 44.95	-80 20.87	2970.00	979662.715	46.81	-54.49
19-A-5	36 40.82	-80 21.83	2823.41	979662.347	38.60	-57.70
19-A-6	36 42.72	-80 20.43	2903.33	979665.068	46.11	-52.92
19-A-7SE4	36 41.90	-80 17.18	1530.00	979746.784	-.18	-52.36
19-A-8	36 42.00	-80 15.25	1650.25	979737.076	1.28	-55.01
19-A-9	36 38.15	-80 16.17	1190.10	979749.978	-23.56	-64.15
19-A-10	36 40.90	-80 16.52	1420.61	979745.418	-10.40	-58.85
19-A-11	36 37.72	-80 16.35	1292.99	979741.407	-21.83	-65.93
19-A-12	36 38.23	-80 16.87	1232.16	979748.575	-21.13	-63.15
19-A-13	36 38.47	-80 18.02	1278.10	979747.186	-18.53	-62.12
19-A-14	36 38.30	-80 19.75	1485.41	979734.991	-18.98	-61.65
19-A-15	36 37.83	-80 20.63	1917.48	979707.731	3.07	-62.33
19-A-16	36 37.83	-80 21.25	1559.55	979727.059	-11.27	-64.46
19-A-17	36 38.18	-80 22.13	1538.50	979727.073	-13.74	-66.22
19-B-1BR1	36 37.62	-80 29.82	1537.00	979715.103	-25.04	-77.46
19-B-2	36 38.25	-80 28.48	2641.69	979652.265	15.12	-74.98
19-B-3	36 38.83	-80 28.18	2656.72	979654.581	18.01	-72.60
19-B-4	36 39.43	-80 28.38	2694.69	979656.192	22.33	-69.58
19-B-5	36 39.90	-80 28.95	2781.24	979652.471	26.08	-68.78
19-B-6BR2	36 40.55	-80 29.92	2642.00	979665.951	25.53	-64.58
19-B-7	36 40.33	-80 28.10	2786.40	979654.621	28.09	-66.95
19-B-8	36 44.10	-80 24.63	2948.22	979663.681	46.95	-53.61
19-B-9	36 42.98	-80 25.38	2804.12	979668.438	39.76	-55.88
19-B-10	36 42.82	-80 26.12	2869.56	979663.995	41.71	-56.16
19-B-11	36 41.12	-80 27.73	2909.90	979652.195	36.15	-63.10
19-B-12	36 39.22	-80 29.47	2679.97	979655.121	20.19	-71.22
19-B-13SE1	36 42.65	-80 28.08	2839.00	979666.446	41.53	-55.30
19-B-14SE2	36 41.43	-80 24.57	2858.00	979658.130	36.75	-60.73
19-B-15SE3	36 43.57	-80 29.33	2812.00	979670.248	41.47	-54.44
19-B-16	36 43.90	-80 27.95	2823.64	979670.428	41.98	-54.22
19-B-17	36 44.25	-80 23.58	2918.86	979667.233	47.52	-52.03
19-B-18SE4	36 42.93	-80 22.67	3023.00	979655.506	47.49	-55.62
19-B-19SE5	36 44.53	-80 25.92	2916.00	979667.714	47.33	-52.13
19-B-20	36 39.95	-80 23.27	2760.23	979657.503	29.06	-65.08
19-B-21SE6	36 38.38	-80 22.93	1553.00	979725.065	-14.67	-67.64
19-C-1	36 36.28	-80 28.62	1452.22	979720.792	-25.40	-74.93
19-C-2	36 35.03	-80 28.58	1567.53	979710.299	-23.25	-76.72
19-C-3SE1	36 34.22	-80 29.28	1554.00	979709.222	-24.43	-77.43
19-C-4	36 33.15	-80 28.82	1368.18	979720.233	-29.36	-76.03
19-C-5	36 33.32	-80 27.08	1400.91	979718.100	-28.66	-76.44
19-C-6	36 33.00	-80 25.97	1181.47	979729.271	-37.67	-77.97
19-C-7SE2	36 34.37	-80 27.15	1332.00	979724.466	-30.28	-75.71
19-C-8SE3	36 34.10	-80 23.67	1321.00	979722.740	-32.66	-77.72
19-C-9	36 37.03	-80 22.82	1387.58	979731.886	-21.47	-68.80
19-C-10	36 36.43	-80 23.67	1295.89	979734.588	-26.53	-70.73
19-C-11SE4	36 35.37	-80 25.13	1459.00	979719.965	-24.28	-74.04
19-C-12	36 35.77	-80 26.87	1243.82	979730.361	-34.69	-77.12
19-C-13	36 37.33	-80 28.75	1906.90	979692.238	-12.70	-77.74
19-D-1	36 37.47	-80 22.03	1441.54	979731.606	-17.30	-66.46
19-D-2	36 36.62	-80 21.87	1641.51	979718.358	-10.51	-66.50
19-D-3	36 35.22	-80 22.12	1330.63	979730.983	-25.12	-70.50
19-D-4	36 34.80	-80 21.33	1275.30	979733.662	-27.05	-70.54
19-D-5	36 34.38	-80 21.65	1263.94	979732.517	-28.66	-71.77
19-D-6	36 32.83	-80 22.17	1284.62	979723.214	-33.79	-77.60
19-D-7SE1	36 33.42	-80 19.97	1132.00	979736.890	-35.30	-73.91
19-D-8SE2	36 34.57	-80 18.28	1252.00	979734.522	-28.04	-70.74
19-D-9SE3	36 37.00	-80 16.20	1383.00	979732.606	-21.13	-68.30
19-D-10SE4	36 35.55	-80 15.12	1296.00	979734.233	-25.60	-69.81
19-D-11SE5	36 35.05	-80 16.72	1372.00	979728.209	-23.76	-70.55
19-D-12SE6	36 32.80	-80 17.70	1023.00	979742.528	-39.03	-73.92
19-D-13SE7	36 33.45	-80 15.15	1202.00	979733.372	-32.29	-73.28
19-D-14SE8	36 35.88	-80 18.75	1256.00	979742.481	-21.60	-64.44
20-A-1	36 44.53	-80 31.75	2407.74	979692.453	24.26	-57.86

Station Number	Latitude	Longitude	Elevation (Feet)	Observed Gravity	Free Air Gravity	Bouguer Gravity
20-A-2	36 43.07	-80 31.13	2771.94	979666.493	34.67	-59.88
20-A-3	36 42.93	-80 32.70	2828.29	979661.452	35.12	-61.35
20-A-4	36 43.42	-80 34.78	2365.82	979690.365	19.83	-60.86
20-A-5	36 43.60	-80 36.93	2626.15	979666.860	20.55	-69.02
20-A-6SE1	36 41.55	-80 37.27	2594.00	979661.493	15.11	-73.36
20-A-7SE2	36 41.70	-80 35.27	2537.00	979667.463	15.51	-71.02
20-A-8SE3	36 41.25	-80 33.62	2698.00	979658.752	22.59	-69.43
20-A-9SE4	36 41.07	-80 31.82	2630.00	979665.089	22.79	-66.91
20-A-10	36 40.93	-80 30.08	2727.94	979661.912	29.02	-64.02
20-A-11	36 39.37	-80 30.22	2688.49	979654.581	20.23	-71.46
20-A-12	36 39.13	-80 33.15	2814.79	979642.132	19.99	-76.01
20-A-13	36 38.72	-80 31.77	3035.38	979627.376	26.59	-76.94
20-A-14	36 39.60	-80 34.50	2696.59	979648.483	14.56	-77.41
20-A-15	36 39.78	-80 36.17	2661.55	979650.271	12.79	-77.99
20-A-16	36 38.67	-80 36.85	1693.87	979701.115	-25.78	-83.55
20-A-17	36 38.22	-80 36.28	1536.09	979709.520	-31.57	-83.96
20-A-18	36 37.52	-80 35.00	1451.95	979715.156	-32.84	-82.36
20-B-1SE1	36 38.42	-80 38.98	1666.00	979701.509	-27.65	-84.47
20-B-2	36 38.98	-80 41.73	2468.86	979653.426	-1.03	-85.24
20-B-3	36 39.70	-80 41.97	2929.87	979630.967	18.84	-81.09
20-B-4	36 38.05	-80 44.15	3008.34	979620.589	18.22	-84.38
20-B-5	36 38.78	-80 43.65	3059.71	979620.537	21.95	-82.41
20-B-6	36 39.15	-80 42.57	2893.23	979631.828	17.05	-81.63
20-B-7	36 40.22	-80 37.80	2761.29	979643.630	14.91	-79.27
20-B-8	36 40.08	-80 40.10	2905.72	979633.584	18.64	-80.47
20-B-9	36 41.30	-80 41.77	2866.49	979638.785	18.39	-79.37
20-B-10SE2	36 41.85	-80 40.05	2577.00	979662.872	14.46	-73.43
20-B-11SE3	36 42.92	-80 38.92	2483.00	979672.255	13.47	-71.22
20-B-12SE4	36 41.83	-80 37.87	2678.00	979655.778	16.89	-74.45
20-B-13SE5	36 40.42	-80 44.32	3250.00	979612.981	29.94	-80.91
20-B-14SE6	36 41.95	-80 44.13	2792.00	979645.918	17.59	-77.64
20-B-15SE7	36 43.22	-80 41.92	2838.00	979645.185	19.36	-77.44
20-B-16BR1	36 43.50	-80 44.17	2405.00	979670.742	3.78	-78.25
20-B-17SE8	36 44.50	-80 43.42	2674.00	979655.807	12.70	-78.50
20-B-18	36 44.27	-80 38.15	2430.94	979678.212	12.58	-70.33
20-B-19SE9	36 44.57	-80 40.57	2696.00	979657.735	16.61	-75.35
20-C-1SE1	36 34.87	-80 44.07	1472.00	979702.937	-39.36	-89.57
20-C-2	36 37.15	-80 41.55	1741.89	979692.818	-27.38	-86.79
20-C-3SE2	36 36.10	-80 42.77	1508.00	979704.975	-35.71	-87.14
20-C-4SE3	36 33.98	-80 42.45	1396.00	979705.888	-42.29	-89.90
20-C-5SE4	36 34.42	-80 40.92	1420.00	979705.776	-40.77	-89.20
20-C-6SE5	36 33.67	-80 39.22	1302.00	979711.082	-45.48	-89.89
20-C-7	36 35.25	-80 40.13	1399.37	979709.023	-40.66	-88.39
20-C-8SE6	36 37.07	-80 39.65	1528.00	979705.639	-34.56	-86.67
20-C-9SE7	36 36.13	-80 37.52	1465.00	979708.408	-36.37	-86.34
20-D-1SE1	36 37.05	-80 34.97	1632.00	979703.707	-26.68	-82.35
20-D-2SE2	36 36.40	-80 32.67	1428.00	979715.939	-32.70	-81.41
20-D-3	36 35.00	-80 32.18	1389.60	979715.966	-34.27	-81.67
20-D-4	36 35.08	-80 34.20	1324.53	979717.569	-38.91	-84.09
20-D-5SE3	36 35.32	-80 36.92	1410.00	979709.717	-39.06	-87.15
20-D-6SE4	36 37.03	-80 37.33	1575.00	979703.887	-31.84	-85.56
20-D-7SE5	36 33.48	-80 36.75	1312.00	979712.167	-43.19	-87.94
20-D-8SE6	36 33.55	-80 34.98	1271.00	979716.595	-42.72	-86.07
20-D-9	36 34.05	-80 33.03	1138.60	979728.736	-43.75	-82.58
20-D-10SE7	36 34.32	-80 30.35	1593.00	979706.834	-23.29	-77.62
20-D-11SE8	36 36.60	-80 30.58	1385.00	979721.624	-31.35	-78.59
21-A-1SE1	36 44.53	-80 52.28	2441.00	979661.007	-4.06	-87.32
21-A-2SE2	36 44.58	-80 46.48	2461.00	979664.275	1.02	-82.92
21-A-3	36 42.87	-80 46.73	2671.02	979651.953	10.92	-80.18
21-A-4	36 43.33	-80 49.38	2520.60	979659.315	3.47	-82.51
21-A-5	36 44.50	-80 49.82	2487.85	979660.959	.35	-84.51
21-A-6	36 42.83	-80 50.03	2333.98	979669.121	-3.56	-83.17
21-A-7	36 42.35	-80 51.12	2470.31	979658.354	-.81	-85.07
21-A-8SE3	36 40.22	-80 52.35	2868.00	979630.041	11.35	-86.47
21-A-9	36 42.63	-80 49.20	2387.96	979666.064	-1.26	-82.70
21-A-10	36 41.22	-80 49.62	2354.82	979664.486	-3.91	-84.23
21-A-11	36 39.93	-80 49.92	2488.92	979654.482	.55	-84.34

Station Number	Latitude	Longitude	Elevation (Feet)	Observed Gravity	Free Air Gravity	Bouguer Gravity
21-A-12	36 38.62	-80 50.33	2805.69	979635.220	12.97	-82.72
21-A-13	36 39.22	-80 49.65	2609.57	979647.941	6.38	-82.62
21-A-14SE4	36 38.98	-80 48.07	2555.00	979651.703	5.35	-81.79
21-A-15SE5	36 40.80	-80 46.07	2916.00	979634.600	19.59	-79.87
21-A-16SE6	36 38.03	-80 46.37	2922.00	979626.847	16.38	-83.28
21-A-17SE7	36 39.70	-80 46.83	2796.00	979637.192	12.48	-82.89
21-A-18	36 37.57	-80 49.37	2972.54	979622.353	17.31	-84.07
21-A-19	36 37.77	-80 50.65	2605.50	979646.316	6.46	-82.40
21-A-20	36 37.55	-80 45.02	2924.17	979624.976	15.41	-84.32
21-B-1SE1	36 43.65	-80 53.27	2532.00	979653.213	-2.02	-88.38
21-B-2SE2	36 44.87	-80 54.83	2538.00	979652.048	-4.38	-90.94
21-B-3SE3	36 44.98	-80 56.27	2517.00	979650.601	-7.97	-93.81
21-B-4SE4	36 42.75	-80 55.95	2662.00	979639.751	-1.96	-92.75
21-B-5SE5	36 41.18	-80 56.57	2690.00	979635.478	-1.34	-93.09
21-B-6	36 42.97	-80 58.75	2182.06	979664.276	-22.89	-97.32
21-B-7SE6	36 44.33	-80 59.63	2390.00	979655.121	-14.46	-95.97
21-B-8	36 39.70	-80 55.50	2381.86	979654.573	-9.10	-90.34
21-B-9SE7	36 40.25	-80 57.42	2302.00	979657.175	-14.80	-93.31
21-B-10	36 38.80	-80 58.73	2240.29	979657.871	-17.82	-94.23
21-B-11SE8	36 41.13	-80 59.98	2449.00	979645.261	-14.16	-97.69
21-B-12	36 37.60	-80 55.28	2560.73	979643.998	.18	-87.16
21-B-13	36 38.48	-80 54.42	2379.11	979656.002	-6.18	-87.32
21-B-14	36 41.85	-80 52.88	2490.92	979654.492	-2.02	-86.97
21-B-15	36 40.80	-80 54.45	2513.05	979650.114	-2.80	-88.51
21-B-16SE9	36 39.88	-80 52.77	2835.00	979630.993	9.68	-87.01
21-C-1SE1	36 37.23	-80 59.67	2471.00	979642.242	-9.49	-93.77
21-C-2	36 37.30	-80 58.22	2325.50	979654.632	-10.89	-90.20
21-C-3	36 36.12	-80 58.18	2425.69	979650.090	-4.30	-87.03
21-C-4	36 34.53	-80 59.10	2814.86	979622.370	6.86	-89.14
21-C-5SE2	36 34.08	-80 56.48	2678.00	979630.232	2.50	-88.84
21-C-6	36 34.48	-80 53.62	2490.18	979642.813	-3.16	-88.10
21-C-7	36 33.08	-80 53.87	2301.63	979648.689	-13.01	-91.51
21-C-8	36 35.10	-80 53.33	2580.60	979638.773	.42	-87.60
21-C-9	36 35.58	-80 52.62	2672.51	979634.591	4.18	-86.97
21-C-10SE3	36 36.55	-80 53.25	2661.00	979636.472	3.59	-87.17
21-C-11SE4	36 36.73	-80 55.28	2488.00	979646.791	-2.63	-87.49
21-D-1	36 37.42	-80 51.20	2542.34	979648.138	2.85	-83.86
21-D-2	36 36.58	-80 49.40	2896.93	979624.384	13.65	-85.16
21-D-3	36 36.13	-80 52.40	2563.00	979642.993	1.49	-85.92
21-D-4	36 37.03	-80 46.62	2760.21	979633.054	8.81	-85.33
21-D-5	36 36.43	-80 47.30	2736.10	979631.751	6.10	-87.22
21-D-6	36 36.17	-80 50.15	2736.03	979633.212	7.94	-85.38
21-D-7	36 35.60	-80 50.73	2723.50	979631.545	5.91	-86.98
21-D-8	36 34.93	-80 51.43	2548.45	979639.989	-1.15	-88.07
21-D-9	36 34.22	-80 51.57	2577.14	979636.746	-.67	-88.57
21-D-10	36 34.33	-80 52.47	2752.88	979626.003	4.95	-88.94
21-D-11SE1	36 33.77	-80 49.33	3389.00	979579.641	19.24	-96.35
21-D-12	36 35.05	-80 45.70	1478.88	979701.778	-40.14	-90.58
21-D-13	36 33.70	-80 47.57	1524.42	979695.723	-39.97	-91.96
50-A-1	36 55.27	-80 0.78	1300.04	979784.680	-3.19	-47.53
50-A-2	36 53.78	-80 0.12	1147.23	979790.725	-9.37	-48.50
50-A-3	36 53.15	-80 3.88	1324.55	979782.553	0.05	-45.13
50-A-4SE1	36 53.98	-80 6.02	1264.00	979788.255	-1.15	-44.26
50-A-5SE2	36 55.05	-80 3.80	1294.00	979786.627	-1.49	-45.63
50-A-6SE3	36 55.47	-80 2.38	1378.00	979780.195	-0.63	-47.63
50-A-7SE4	36 55.85	-80 7.30	1407.00	979776.634	-2.01	-50.00
50-A-8SE5	36 57.22	-80 6.07	1558.00	979767.237	0.82	-52.32
50-A-9SE6	36 56.58	-80 3.35	1326.00	979783.322	-4.00	-49.23
50-A-10SE7	36 57.18	-80 2.00	1223.00	979789.190	-8.69	-50.40
50-A-11SE8	36 58.40	-80 1.72	1358.00	979782.461	-4.48	-50.79
50-A-12SE9	36 58.33	-80 3.98	1463.00	979774.248	-2.72	-52.62
50-A-13SE10	36 58.62	-80 5.93	1499.00	979768.575	-5.41	-56.54
50-B-1	36 52.70	-80 12.32	1511.50	979765.385	1.11	-50.44
50-B-2SE1	36 55.03	-80 7.60	1266.00	979785.533	-5.20	-48.38
50-B-3SE2	36 53.07	-80 7.98	1406.00	979776.630	1.91	-46.05
50-B-4SE3	36 53.92	-80 9.32	1219.00	979785.722	-7.82	-49.39
50-B-5	36 52.55	-80 11.15	1309.24	979779.801	-3.28	-47.93

Station Number	Latitude	Longitude	Elevation (Feet)	Observed Gravity	Free Air Gravity	Bouguer Gravity
50-B-6SE4	36 52.90	-80 14.93	2555.00	979709.366	42.96	-44.18
50-B-7	36 55.28	-80 11.98	2447.04	979712.464	32.46	-51.00
50-B-8	36 55.95	-80 11.20	2543.84	979706.729	34.87	-51.89
50-B-9	36 57.22	-80 9.78	2702.08	979693.923	35.12	-57.04
50-B-10	36 58.22	-80 9.87	2467.01	979711.253	28.89	-55.25
50-B-11SE5	36 55.62	-80 14.08	2461.00	979711.958	32.79	-51.15
50-B-12	36 58.23	-80 8.33	2560.59	979704.002	30.42	-56.91
50-B-13SE6	36 59.43	-80 8.33	2530.00	979708.373	30.18	-56.11
50-B-14SE7	36 59.97	-80 10.08	2521.00	979703.813	24.01	-61.98
50-B-15	36 59.72	-80 11.97	2516.46	979702.631	22.76	-63.07
50-B-16	36 59.43	-80 12.95	2586.73	979697.143	24.29	-63.94
50-B-17	36 58.78	-80 10.73	2340.07	979715.157	20.04	-59.77
50-B-18SE8	36 57.78	-80 12.08	2456.00	979709.580	26.81	-56.95
50-B-19	36 58.50	-80 14.37	2278.48	979716.176	15.68	-62.04
50-B-20	36 57.52	-80 14.78	2249.66	979719.586	17.80	-58.93
50-B-21	36 59.07	-80 14.72	2485.82	979701.746	19.93	-64.85
50-B-22SE9	36 54.22	-80 13.83	2616.00	979702.558	39.99	-49.23
50-C-1	36 46.08	-80 11.55	1530.62	979757.468	4.54	-47.67
50-C-2	36 45.75	-80 13.93	1507.78	979752.508	-2.09	-53.52
50-C-3SE1	36 46.93	-80 7.75	1137.00	979779.962	-11.22	-50.00
50-C-4	36 47.05	-80 10.83	1363.87	979767.418	-2.59	-49.11
50-C-5	36 48.37	-80 10.63	1495.77	979759.197	-.31	-51.32
50-C-6	36 48.63	-80 8.78	1301.49	979773.328	-4.83	-49.22
50-C-7	36 48.32	-80 12.05	1158.78	979780.232	-10.90	-50.42
50-C-8	36 49.32	-80 12.90	1234.15	979781.636	-3.85	-45.94
50-C-9SE2	36 49.73	-80 14.32	1502.00	979765.637	4.75	-46.48
50-C-10SE3	36 47.97	-80 14.78	1443.00	979766.554	2.67	-46.55
50-C-11SE4	36 50.85	-80 10.22	1088.00	979789.992	-11.45	-48.55
50-C-12SE5	36 51.95	-80 8.85	1280.00	979781.868	-3.10	-46.75
50-C-13	36 50.30	-80 13.03	1482.66	979769.142	5.62	-44.95
50-D-1	36 50.15	-80 1.28	1173.70	979782.567	-9.80	-49.83
50-D-2	36 52.10	-80 5.37	1263.85	979786.128	-0.57	-43.68
50-D-3	36 50.77	-80 6.20	999.82	979796.879	-12.73	-46.83
50-D-4	36 47.28	-80 0.55	803.20	979803.125	-19.96	-47.35
50-D-5	36 46.60	-80 0.70	1047.42	979787.609	-11.52	-47.24
50-D-6	36 45.10	-80 5.98	1386.87	979760.551	-4.49	-51.79
50-D-7	36 45.03	-80 4.38	1274.46	979765.595	-9.92	-53.39
50-D-8SE1	36 49.52	-80 3.02	1228.00	979787.593	1.25	-40.64
50-D-9SE2	36 51.67	-80 2.62	1131.00	979796.116	-2.46	-41.03
50-D-10SE3	36 46.83	-80 5.52	1503.00	979756.519	-0.09	-51.36
50-D-11SE4	36 47.67	-80 3.67	1182.00	979778.932	-9.07	-49.39
50-D-12SE5	36 47.52	-80 6.98	1030.00	979788.182	-13.91	-49.04
50-D-13SE6	36 48.92	-80 6.83	1134.00	979782.737	-11.59	-50.26
51-A-1 BASE	36 54.67	-80 19.22	2496.02	979702.199	27.70	-57.44
51-A-2SE1	36 59.93	-80 22.20	2305.00	979701.946	1.87	-76.75
51-A-3	36 58.50	-80 21.48	2132.43	979711.481	-2.76	-75.49
51-A-4	36 55.92	-80 20.08	2188.79	979714.678	9.47	-65.18
51-A-5SE2	36 57.22	-80 18.73	2307.00	979708.135	12.17	-66.51
51-A-6	36 58.88	-80 20.05	2229.93	979708.478	2.86	-73.20
51-A-7	36 59.75	-80 17.63	2510.86	979695.944	15.50	-70.14
51-A-8SE3	36 58.38	-80 16.95	2317.00	979706.782	10.07	-68.95
51-A-9	36 55.92	-80 16.83	2273.25	979718.538	21.28	-56.26
51-A-10	36 55.52	-80 17.60	2379.35	979711.837	25.13	-56.02
51-A-11	36 52.53	-80 22.42	2422.93	979699.659	21.36	-61.28
51-A-12SE4	36 53.70	-80 21.35	2501.00	979697.384	24.74	-60.56
51-A-13	36 53.52	-80 19.53	2312.20	979711.080	20.94	-57.92
51-A-14SE5	36 52.95	-80 16.50	2603.00	979701.760	39.80	-48.99
51-A-15SE6	36 54.07	-80 15.55	2412.50	979714.884	33.39	-48.89
51-B-1	36 54.90	-80 29.13	2600.96	979678.183	13.22	-75.50
51-B-2SE1	36 53.37	-80 27.77	2815.00	979669.191	26.57	-69.44
51-B-3SE2	36 54.12	-80 25.78	2517.00	979690.410	18.67	-67.17
51-B-4SE3	36 55.10	-80 23.28	2396.00	979699.731	15.19	-66.53
51-B-5	36 55.98	-80 27.03	2638.80	979676.409	13.43	-76.57
51-B-6SE4	36 57.13	-80 28.68	2644.00	979676.923	12.78	-77.40
51-B-7	36 58.65	-80 28.07	2436.58	979689.116	3.27	-79.83
51-B-8	36 59.75	-80 25.62	2151.81	979709.307	-4.91	-78.31
51-B-9SE5	36 58.28	-80 26.43	2606.00	979680.236	10.86	-78.03

Station Number	Latitude	Longitude	Elevation (Feet)	Observed Gravity	Free Air Gravity	Bouguer Gravity
51-B-10	36 56.57	-80 25.20	2464.50	979687.869	7.66	-76.40
51-B-11	36 57.92	-80 22.53	2169.86	979708.033	-1.84	-75.85
51-B-12SE6	36 58.45	-80 23.97	2468.00	979689.953	7.35	-76.82
51-C-1	36 45.05	-80 24.40	2854.75	979670.192	43.30	-54.07
51-C-2	36 46.45	-80 24.32	2964.88	979664.705	46.15	-54.97
51-C-3	36 47.55	-80 23.55	3449.44	979630.266	55.71	-61.94
51-C-4	36 46.10	-80 25.50	2888.26	979672.051	46.80	-51.71
51-C-5	36 45.05	-80 28.18	2602.32	979686.212	35.57	-53.18
51-C-6BR1	36 46.12	-80 27.53	2621.00	979687.980	37.56	-51.83
51-C-7	36 46.60	-80 29.07	2815.84	979672.574	39.79	-56.25
51-C-8BR2	36 48.12	-80 25.43	2820.00	979673.777	39.19	-56.99
51-C-9BR3	36 50.85	-80 22.78	2556.00	979689.217	25.86	-61.32
51-C-10SE1	36 49.77	-80 23.68	2908.00	979667.014	38.33	-60.85
51-C-11BR4	36 49.65	-80 26.97	2701.00	979679.343	31.36	-60.77
51-C-12SE2	36 49.67	-80 24.87	2723.00	979680.207	34.27	-58.61
51-C-13	36 52.02	-80 24.95	2593.68	979686.849	25.36	-63.11
51-C-14	36 51.98	-80 24.20	2449.56	979695.375	20.37	-63.17
51-C-15	36 51.37	-80 29.13	2802.64	979667.819	26.92	-68.68
51-C-16	36 52.30	-80 26.82	2872.07	979667.005	31.29	-66.67
51-C-17	36 48.77	-80 29.25	2556.96	979690.645	30.38	-56.83
51-C-18	36 52.43	-80 29.70	2673.11	979675.437	20.81	-70.36
51-D-1	36 52.32	-80 20.02	2399.83	979706.356	26.20	-55.66
51-D-2	36 51.62	-80 19.43	2486.03	979699.260	28.22	-56.57
51-D-3SE1	36 52.17	-80 17.03	2481.00	979705.541	33.23	-51.39
51-D-4	36 50.02	-80 19.67	2867.65	979672.173	39.34	-58.48
51-D-5	36 49.40	-80 20.53	3380.24	979636.417	52.68	-62.61
51-D-6	36 48.27	-80 21.73	3392.13	979632.920	51.94	-63.76
51-D-7	36 50.68	-80 19.10	2677.37	979686.061	34.36	-56.96
51-D-8SE2	36 51.40	-80 22.27	2648.00	979685.775	30.28	-60.04
51-D-9SE3	36 50.67	-80 21.07	2756.00	979679.407	35.13	-58.87
51-D-10	36 47.78	-80 17.40	1459.73	979761.862	-.19	-49.98
51-D-11SE4	36 48.42	-80 18.45	1634.00	979747.885	1.31	-54.42
51-D-12SE5	36 48.78	-80 15.02	1328.00	979772.325	-3.56	-48.85
51-D-13SE6	36 50.48	-80 15.53	1499.00	979765.273	3.02	-48.10
51-D-14SE7	36 46.08	-80 16.22	1272.00	979770.029	-7.23	-50.61
51-D-15SE8	36 46.17	-80 18.53	1595.00	979746.026	-.97	-55.37
51-D-16SE9	36 46.87	-80 19.98	3173.00	979648.769	49.19	-59.03
51-D-17SE10	36 46.75	-80 22.27	3132.00	979654.581	51.32	-55.51
51-D-18SE11	36 45.38	-80 22.22	2928.00	979665.830	45.35	-54.52
52-A-1	36 57.77	-80 37.15	2888.58	979662.283	20.23	-78.29
52-A-2	36 57.10	-80 35.63	3129.00	979645.848	27.37	-79.35
52-A-3	36 56.00	-80 36.15	2810.57	979664.663	17.82	-78.04
52-A-4SE1	36 55.10	-80 35.13	2746.00	979667.824	16.21	-77.45
52-A-5SE2	36 55.98	-80 33.80	2755.00	979668.669	16.62	-77.34
52-A-6	36 57.63	-80 33.45	2593.90	979679.641	10.06	-78.41
52-A-7	36 54.57	-80 32.72	2703.28	979669.296	14.44	-77.77
52-A-8SE3	36 59.82	-80 31.33	1916.00	979720.118	-16.38	-81.73
52-A-9	36 58.88	-80 30.93	2014.83	979714.727	-11.13	-79.85
52-A-10	36 58.33	-80 31.70	2097.01	979709.377	-7.95	-79.47
52-A-11	36 57.02	-80 31.48	2334.35	979694.631	1.53	-78.09
52-A-12	36 53.18	-80 30.50	2709.71	979672.350	20.09	-72.33
52-A-13	36 55.43	-80 30.97	2325.90	979693.562	1.95	-77.38
52-A-14	36 52.75	-80 34.77	2295.66	979692.365	1.78	-76.52
52-A-15SE4	36 53.87	-80 34.05	2658.00	979671.304	13.19	-77.47
52-A-16SE5	36 53.00	-80 32.13	2481.00	979683.839	10.33	-74.29
52-B-1	36 53.32	-80 37.92	2118.90	979700.761	-7.27	-79.54
52-B-2	36 55.08	-80 37.75	2406.43	979686.044	2.51	-79.57
52-B-3	36 52.67	-80 43.92	2279.96	979689.202	-2.74	-80.50
52-B-4	36 53.37	-80 43.43	1917.47	979710.266	-16.78	-82.18
52-B-5	36 54.65	-80 43.90	1894.36	979713.691	-17.38	-81.99
52-B-6	36 59.12	-80 41.45	1882.40	979722.626	-16.02	-80.22
52-B-7	36 55.62	-80 44.80	1858.00	979719.510	-16.38	-79.75
52-B-8SE1	36 57.92	-80 42.92	1918.00	979717.229	-16.34	-81.75
52-B-9	36 58.08	-80 40.27	2029.52	979710.316	-13.00	-82.22
52-B-10SE2	36 56.53	-80 41.32	2646.00	979672.878	9.79	-80.46
52-B-11	36 59.77	-80 40.72	2013.18	979716.355	-10.93	-79.59
52-B-12	36 58.05	-80 38.95	2544.42	979683.839	9.00	-77.78

Station Number	Latitude	Longitude	Elevation (Feet)	Observed Gravity	Free Air Gravity	Bouguer Gravity
52-C-1 BASE	36 45.97	-80 44.20	2564.93	979660.529	5.05	-82.43
52-C-2	36 45.60	-80 41.50	2668.76	979660.247	15.07	-75.96
52-C-3	36 45.48	-80 39.33	2384.28	979676.823	5.05	-76.27
52-C-4	36 46.37	-80 38.58	2547.05	979667.380	9.65	-77.23
52-C-5	36 47.23	-80 40.82	2557.64	979666.320	8.33	-78.90
52-C-6	36 47.67	-80 38.95	2141.77	979693.109	-4.62	-77.67
52-C-7SE1	36 49.92	-80 39.93	2288.00	979685.709	-1.51	-79.55
52-C-8	36 50.60	-80 38.85	2273.19	979688.700	-.90	-78.43
52-C-9	36 48.20	-80 43.12	2593.31	979662.373	6.35	-82.11
52-C-10	36 46.85	-80 42.77	2598.04	979661.034	7.40	-81.21
52-C-11	36 49.83	-80 41.88	2532.12	979670.252	6.12	-80.25
52-C-12SE2	36 52.47	-80 38.70	2434.00	979681.401	4.24	-78.78
52-C-13SE3	36 51.40	-80 38.00	2463.00	979679.569	6.67	-77.33
52-C-14	36 49.65	-80 43.90	2719.61	979657.404	11.17	-81.59
52-C-15SE4	36 51.75	-80 43.08	2636.00	979667.362	10.23	-79.67
52-C-16SE5	36 52.22	-80 44.92	2406.00	979680.161	.72	-81.34
52-C-17SE6	36 49.97	-80 37.93	2599.00	979670.240	12.20	-76.44
52-D-1SE1	36 52.08	-80 32.10	2775.00	979666.284	21.75	-72.90
52-D-2	36 51.22	-80 30.88	2681.29	979672.949	20.85	-70.60
52-D-3	36 50.15	-80 32.08	2786.04	979665.623	24.91	-70.11
52-D-4	36 48.57	-80 31.75	2453.06	979689.638	19.89	-63.77
52-D-5	36 48.83	-80 34.33	2557.66	979676.617	16.33	-70.91
52-D-6	36 50.65	-80 33.23	2633.50	979672.480	16.70	-73.12
52-D-7	36 50.32	-80 35.25	2752.31	979663.225	19.10	-74.77
52-D-8	36 51.90	-80 35.12	2657.93	979670.572	15.29	-75.36
52-D-9	36 51.97	-80 37.33	2408.52	979684.127	5.29	-76.86
52-D-10	36 49.05	-80 36.67	2657.56	979667.090	15.89	-74.75
52-D-11SE2	36 50.48	-80 36.83	2693.00	979665.812	15.87	-75.98
52-D-12SE3	36 46.97	-80 35.92	2265.00	979692.783	7.65	-69.60
52-D-13SE4	36 45.78	-80 34.87	2773.00	979666.804	31.16	-63.41
52-D-14	36 45.75	-80 32.93	2674.16	979677.302	32.42	-58.80
52-D-15	36 47.52	-80 33.42	2346.72	979693.711	15.48	-64.56
52-D-16SE5	36 47.35	-80 30.32	2940.00	979666.140	43.95	-56.32
52-D-17SE6	36 46.65	-80 31.05	2816.00	979672.612	39.77	-56.28
53-A-1	36 59.98	-80 46.53	2129.66	979713.218	-3.42	-76.06
53-A-2	36 59.57	-80 47.52	2118.53	979714.095	-2.99	-75.25
53-A-3SE1	36 54.92	-80 52.18	1972.00	979709.125	-15.03	-82.29
53-A-4	36 57.48	-80 51.70	2211.53	979701.451	-3.88	-79.31
53-A-5	36 58.65	-80 50.08	2139.26	979711.534	-2.28	-75.24
53-A-6	36 59.38	-80 48.62	2179.99	979710.007	-1.03	-75.39
53-A-7SE2	36 58.55	-80 47.38	2033.00	979715.047	-8.62	-77.96
53-A-8SE6	36 59.32	-80 45.38	1974.00	979721.203	-9.12	-76.45
53-A-9SE3	36 56.85	-80 47.40	1925.00	979716.963	-14.40	-80.06
53-A-10	36 55.18	-80 49.67	1916.44	979713.914	-15.85	-81.22
53-A-11SE4	36 53.67	-80 49.10	2170.00	979697.311	-6.42	-80.43
53-A-12	36 54.37	-80 46.53	1934.20	979712.189	-14.73	-80.70
53-A-13SE5	36 52.87	-80 46.40	2039.00	979701.413	-13.48	-83.03
53-A-14SE7	36 57.38	-80 45.05	1957.00	979716.228	-12.90	-79.65
53-A-15SE8	36 55.52	-80 47.15	2145.00	979701.545	-7.20	-80.36
53-B-1	36 57.08	-80 53.20	2140.14	979703.746	-7.73	-80.57
53-B-2	36 56.92	-80 55.02	2008.18	979710.269	-13.37	-81.86
53-B-3SE1	36 58.42	-80 54.25	2300.00	979699.205	.85	-77.60
53-B-4SE2	36 59.75	-80 53.35	2318.00	979701.106	2.52	-76.54
53-B-5BR1	36 59.73	-80 55.12	2174.00	979710.563	-1.55	-75.69
53-B-6	36 58.13	-80 57.05	2024.00	979714.176	-9.73	-78.76
53-B-7SE3	36 59.68	-80 57.50	2100.00	979714.811	-4.19	-75.81
53-B-8SE4	36 58.78	-80 59.28	2192.00	979706.934	-2.11	-76.87
53-B-9	36 56.42	-80 58.60	2132.93	979703.096	-8.09	-80.83
53-B-10SE5	36 55.87	-80 53.97	1995.00	979706.065	-17.30	-85.34
53-B-11	36 56.83	-80 55.93	2029.00	979709.657	-11.90	-81.11
53-B-12	36 55.17	-80 56.90	2155.34	979695.333	-11.94	-85.45
53-B-13	36 53.90	-80 58.17	2154.84	979695.369	-10.12	-83.62
53-B-14	36 55.20	-80 56.02	2085.87	979698.349	-15.51	-86.65
53-B-15	36 56.25	-80 59.62	2263.36	979695.342	-3.33	-80.53
53-B-16SE6	36 54.15	-80 54.92	2099.00	979698.248	-12.85	-84.44
53-B-17SE7	36 53.00	-80 55.92	2065.00	979699.679	-12.96	-83.39
53-B-18SE8	36 52.88	-80 53.63	1972.00	979706.884	-14.34	-81.60

Station Number	Latitude	Longitude	Elevation (Feet)	Observed Gravity	Free Air Gravity	Bouguer Gravity
53-C-1SE1	36 52.20	-80 54.23	1960.00	979704.206	-17.16	-84.01
53-C-2	36 51.58	-80 58.88	1992.77	979701.870	-15.53	-83.49
53-C-3SE2	36 51.95	-80 56.78	2054.00	979697.919	-14.24	-84.30
53-C-4SE3	36 50.40	-80 58.03	2059.00	979696.991	-12.46	-82.69
53-C-5	36 49.20	-80 57.60	2114.98	979687.835	-14.62	-86.76
53-C-6	36 48.47	-80 58.47	2430.18	979667.941	-3.81	-86.70
53-C-7SE4	36 47.23	-80 57.17	2507.00	979661.364	-1.39	-86.89
53-C-8	36 46.75	-80 59.98	2303.99	979672.118	-9.03	-87.61
53-C-9	36 45.75	-80 58.88	2352.55	979663.088	-12.05	-92.29
53-C-10SE5	36 50.75	-80 54.75	2070.00	979696.280	-12.65	-83.25
53-C-11SE6	36 49.73	-80 55.50	2231.00	979683.608	-8.71	-84.80
53-C-12SE7	36 51.62	-80 53.05	2159.00	979692.722	-9.08	-82.72
53-C-13	36 48.05	-80 54.95	2031.41	979690.892	-17.77	-87.05
53-C-14SE8	36 47.32	-80 52.78	2664.00	979650.905	2.80	-88.06
53-C-15	36 46.23	-80 53.57	2459.72	979659.968	-5.79	-89.68
53-C-16SE9	36 45.15	-80 55.33	2576.00	979649.060	-4.20	-92.06
53-C-17SE10	36 47.02	-80 55.00	2418.00	979663.861	-6.95	-89.42
53-D-1	36 51.30	-80 45.82	2213.07	979690.108	-6.15	-81.63
53-D-2SE1	36 50.43	-80 46.22	2536.00	979669.575	4.94	-81.56
53-D-3SE2	36 51.93	-80 49.53	2122.00	979694.798	-10.94	-83.32
53-D-4	36 50.90	-80 51.40	2012.89	979698.137	-16.38	-85.03
53-D-5	36 51.45	-80 51.72	1995.95	979702.573	-14.33	-82.40
53-D-6	36 52.35	-80 52.17	1948.22	979705.324	-17.36	-83.81
53-D-7	36 49.62	-80 51.75	2443.25	979671.906	-.28	-83.61
53-D-8	36 48.78	-80 51.83	2619.82	979659.096	4.72	-84.63
53-D-9	36 47.53	-80 51.93	2705.38	979650.140	5.62	-86.66
53-D-10	36 47.83	-80 51.02	2682.07	979652.995	5.85	-85.63
53-D-11SE3	36 48.05	-80 49.62	2594.00	979659.689	3.94	-84.53
53-D-12	36 50.32	-80 50.88	2102.42	979691.286	-13.96	-85.67
53-D-13	36 49.90	-80 49.02	2306.53	979681.114	-4.34	-83.01
53-D-14	36 46.77	-80 50.27	2769.42	979645.399	8.00	-86.45
53-D-15SE4	36 45.73	-80 46.75	2581.00	979659.040	5.41	-82.62
53-D-16SE5	36 46.47	-80 47.97	2727.00	979648.829	7.88	-85.13
53-D-17SE6	36 49.65	-80 46.77	2195.00	979687.091	-8.49	-83.36
53-D-18SE7	36 47.18	-80 46.95	2647.00	979654.715	5.21	-85.08
53-D-19	36 45.32	-80 50.05	2570.49	979656.088	2.07	-85.60
53-D-20	36 45.38	-80 52.07	2599.92	979651.596	.25	-88.42
80-A-1	37 12.47	-80 1.47	1183.27	979796.293	-27.42	-67.78
80-A-2	37 11.93	-80 3.28	1255.60	979790.940	-25.20	-68.02
80-A-3	37 11.67	-80 5.22	1472.05	979776.796	-18.59	-68.80
80-A-4	37 13.27	-80 5.90	1978.13	979746.884	-3.22	-70.69
80-A-5	37 10.20	-80 6.90	2672.00	979704.693	24.30	-66.84
80-A-6	37 8.47	-80 7.18	2616.99	979704.460	21.39	-67.86
80-A-7	37 9.13	-80 5.45	2824.23	979693.466	28.93	-67.40
80-A-8	37 8.62	-80 0.18	1368.14	979783.561	-17.19	-63.85
80-A-9SE1	37 8.23	-80 1.37	1641.00	979765.240	-9.29	-65.26
80-A-10SE2	37 9.35	-80 2.47	1910.00	979748.320	-2.52	-67.67
80-A-11SE3	37 14.07	-80 2.58	1511.00	979777.329	-17.87	-69.41
80-B-1SE1	37 13.13	-80 9.83	1507.00	979770.103	-24.12	-75.52
80-B-2	37 14.08	-80 11.47	1219.20	979787.536	-35.13	-76.72
80-B-3	37 13.62	-80 12.52	1236.98	979785.122	-35.20	-77.39
80-B-4	37 13.32	-80 13.18	1291.64	979781.369	-33.38	-77.43
80-B-5SE2	37 9.18	-80 8.27	2640.00	979703.094	21.16	-68.89
80-B-6	37 8.17	-80 10.47	2471.60	979710.484	14.18	-70.12
80-B-7	37 9.20	-80 10.72	2757.31	979694.074	23.15	-70.90
80-B-8	37 10.57	-80 11.10	3313.18	979658.830	38.21	-74.79
80-B-9	37 11.20	-80 9.67	3780.37	979629.891	52.30	-76.64
80-B-10	37 10.97	-80 8.38	2801.84	979694.679	25.38	-70.18
80-B-11	37 11.85	-80 9.17	3762.84	979626.480	46.30	-82.04
80-B-12	37 12.93	-80 13.93	1274.33	979781.606	-34.22	-77.68
80-B-13	37 11.48	-80 12.62	1634.97	979760.518	-19.28	-75.05
80-B-14	37 10.82	-80 12.13	2155.23	979725.730	-4.17	-77.68
80-B-15	37 11.95	-80 14.15	1280.12	979778.370	-35.48	-79.14
80-B-16	37 10.98	-80 14.20	1316.08	979776.285	-32.79	-77.67
80-B-17	37 10.35	-80 14.60	1408.58	979771.094	-28.36	-76.40
80-B-18SE3	37 8.93	-80 14.80	1446.00	979767.099	-26.79	-76.10
80-C-1	37 6.97	-80 8.88	2765.76	979691.771	24.87	-69.46

Station Number	Latitude		Longitude		Elevation (Feet)	Observed Gravity	Free Air Gravity	Bouguer Gravity
80-C-2	37	6.73	-80	10.62	2607.23	979701.073	19.60	-69.33
80-C-3SE1	37	5.47	-80	9.55	2429.00	979711.018	14.61	-68.24
80-C-4	37	4.58	-80	8.28	2741.33	979694.368	28.61	-64.88
80-C-5	37	6.05	-80	7.88	2637.94	979702.175	24.58	-65.40
80-C-6	37	2.95	-80	9.57	2697.87	979693.592	26.11	-65.91
80-C-7SE2	37	1.82	-80	7.87	2589.00	979699.955	23.87	-64.43
80-C-8SE3	37	.35	-80	7.93	2691.00	979697.235	32.86	-58.92
80-C-9SE4	37	.35	-80	10.40	2458.00	979707.005	20.72	-63.12
80-C-10SE5	37	.77	-80	12.15	2725.00	979687.604	25.83	-67.11
80-C-11	37	.30	-80	14.03	2489.24	979700.872	17.60	-67.30
80-C-12	37	2.57	-80	11.35	2631.94	979695.738	22.61	-67.16
80-C-13	37	2.25	-80	12.27	2607.66	979697.549	22.59	-66.35
80-C-14SE6	37	2.27	-80	14.58	2686.00	979689.571	21.96	-69.65
80-C-15SE7	37	3.37	-80	15.00	2732.00	979684.514	19.64	-73.54
80-C-16	37	4.15	-80	12.95	1922.21	979734.864	-7.31	-72.87
80-C-17SE8	37	5.57	-80	12.43	1637.00	979750.708	-20.34	-76.17
80-C-18	37	5.92	-80	14.15	1491.72	979760.034	-25.19	-76.07
80-D-1	37	0.68	-80	2.92	1202.13	979788.037	-16.86	-57.86
80-D-2	37	0.15	-80	1.37	1232.86	979791.342	-9.89	-51.94
80-D-3	37	3.63	-80	1.27	1428.24	979771.618	-16.56	-65.28
80-D-4	37	3.25	-80	5.23	1426.99	979768.751	-18.70	-67.37
80-D-5	37	7.30	-80	4.53	1429.56	979775.110	-17.96	-66.72
80-D-6	37	1.78	-80	4.30	1374.71	979774.093	-16.16	-63.05
80-D-7	37	6.07	-80	3.28	1379.72	979777.349	-18.62	-65.68
80-D-8SE1	37	5.13	-80	2.35	1257.00	979781.480	-24.69	-67.56
80-D-9	37	7.42	-80	2.75	1816.10	979754.007	-2.87	-64.81
80-D-10	37	6.72	-80	5.77	2045.83	979741.022	6.76	-63.01
80-D-11SE2	37	3.37	-80	3.48	1331.00	979776.096	-20.56	-65.95
80-D-12SE3	37	0.33	-80	5.50	1495.00	979767.168	-9.67	-60.67
80-D-13SE4	37	1.90	-80	1.27	1285.00	979782.262	-16.60	-60.43
80-D-14SE5	37	1.33	-80	7.00	2694.00	979693.965	28.46	-63.43
80-D-15SE6	37	3.93	-80	6.82	2849.00	979685.531	30.85	-66.33
80-D-16SE7	37	5.05	-80	6.68	2822.00	979689.629	30.79	-65.46
81-A-1SE1	37	12.83	-80	22.02	1532.00	979766.220	-25.22	-77.47
81-A-2	37	11.45	-80	22.10	1551.60	979763.751	-23.84	-76.76
81-A-3	37	11.20	-80	21.17	1451.05	979768.327	-28.36	-77.85
81-A-4	37	11.73	-80	19.50	1430.95	979769.800	-29.55	-78.36
81-A-5	37	12.37	-80	17.67	1337.89	979775.191	-33.83	-79.46
81-A-6	37	14.25	-80	16.17	1253.81	979785.095	-34.56	-77.33
81-A-7	37	13.97	-80	15.30	1254.02	979784.637	-34.59	-77.36
81-A-8SE2	37	13.85	-80	18.08	1465.00	979771.055	-28.16	-78.13
81-A-9	37	7.75	-80	22.48	2215.05	979718.980	-.86	-76.40
81-A-10	37	8.32	-80	20.63	2158.86	979722.759	-3.18	-76.81
81-A-11	37	8.42	-80	19.50	2157.07	979725.114	-1.14	-74.71
81-A-12	37	9.02	-80	18.78	1937.27	979739.317	-8.48	-74.55
81-A-13	37	9.47	-80	18.28	1680.39	979752.530	-20.08	-77.39
81-A-14	37	9.90	-80	17.53	1581.10	979757.594	-24.98	-78.91
81-A-15	37	10.18	-80	16.73	1530.81	979760.537	-27.18	-79.39
81-A-16	37	10.13	-80	15.72	1450.24	979766.524	-28.70	-78.16
81-A-17	37	8.48	-80	15.93	1379.90	979770.696	-28.76	-75.82
81-A-18	37	8.20	-80	16.08	1387.16	979769.661	-28.70	-76.01
81-B-1	37	13.73	-80	24.85	2077.05	979731.467	-10.01	-80.85
81-B-2 BASE	37	7.78	-80	24.53	2088.73	979727.027	-4.73	-75.99
81-B-2A	37	7.80	-80	24.57	2083.29	979727.249	-5.05	-76.11
81-B-3	37	14.17	-80	27.00	2068.01	979730.706	-12.25	-82.78
81-B-4	37	14.25	-80	28.47	1904.81	979743.095	-15.33	-80.30
81-B-5	37	13.92	-80	29.30	1945.87	979740.439	-13.64	-80.01
81-B-6	37	12.92	-80	28.15	2016.08	979733.674	-12.35	-81.12
81-B-7	37	11.93	-80	24.32	2144.09	979727.527	-5.04	-78.16
81-B-8	37	10.80	-80	24.75	2099.28	979727.337	-7.80	-79.40
81-B-9SE2	37	11.32	-80	27.07	2453.00	979706.010	3.40	-80.27
81-B-10	37	9.75	-80	25.45	2079.19	979724.904	-10.60	-81.52
81-B-11SE3	37	9.87	-80	27.17	2024.00	979729.534	-11.33	-80.37
81-B-12SE4	37	10.23	-80	29.70	2010.00	979731.440	-11.27	-79.83
81-B-13	37	9.03	-80	24.35	2150.61	979721.841	-5.91	-79.26
81-B-14	37	8.48	-80	24.13	2024.16	979728.254	-10.60	-79.64
81-B-15	37	8.42	-80	24.92	2022.23	979728.397	-10.54	-79.51

Station Number	Latitude	Longitude	Elevation (Feet)	Observed Gravity	Free Air Gravity	Bouguer Gravity
81-B-16	37 7.67	-80 24.95	2112.44	979724.215	-5.15	-77.20
81-B-17	37 7.82	-80 29.40	1843.25	979737.144	-17.76	-80.63
81-B-18	37 7.88	-80 28.27	2056.08	979724.382	-10.60	-80.73
81-B-19	37 7.80	-80 27.00	2143.02	979722.136	-4.55	-77.64
81-B-20	37 7.87	-80 23.62	2099.76	979725.890	-4.96	-76.58
81-B-21SE5	37 10.42	-80 22.57	1547.00	979762.118	-24.41	-77.18
81-B-22SE6	37 14.78	-80 23.28	1978.00	979742.629	-9.68	-77.15
81-C-1	37 7.30	-80 29.87	1996.28	979728.289	-11.47	-79.56
81-C-2	37 6.80	-80 23.58	2205.14	979716.495	-2.90	-78.11
81-C-3	37 5.50	-80 23.42	1825.28	979736.400	-16.84	-79.10
81-C-4	37 4.70	-80 23.03	1963.90	979726.345	-12.70	-79.69
81-C-5SE1	37 3.90	-80 22.50	2303.00	979701.655	-4.34	-82.89
81-C-6	37 7.18	-80 25.65	2301.74	979710.937	.08	-78.43
81-C-7	37 5.90	-80 26.67	2154.94	979715.736	-7.08	-80.58
81-C-8	37 5.33	-80 27.08	2103.72	979718.367	-8.44	-80.20
81-C-9	37 4.57	-80 28.70	2088.83	979718.305	-8.80	-80.04
81-C-10SE2	37 3.82	-80 27.67	2047.00	979718.976	-10.98	-80.80
81-C-11SE3	37 3.03	-80 29.87	1984.00	979722.776	-11.97	-79.64
81-C-12SE4	37 4.23	-80 24.60	1911.00	979727.005	-16.34	-81.52
81-C-13	37 3.40	-80 26.48	2048.56	979716.980	-12.23	-82.10
81-C-14	37 1.92	-80 26.42	2291.49	979702.531	-1.68	-79.84
81-C-15SE5	37 .97	-80 23.83	2266.00	979704.374	-.86	-78.15
81-C-16SE6	37 1.75	-80 28.27	2287.00	979701.348	-3.04	-81.05
81-D-1	37 7.42	-80 16.10	1405.82	979767.975	-27.49	-75.44
81-D-2	37 6.97	-80 17.00	1437.82	979763.837	-27.98	-77.02
81-D-3	37 6.67	-80 15.37	1449.42	979763.519	-26.77	-76.20
81-D-4	37 6.18	-80 16.23	1522.32	979757.627	-25.10	-77.02
81-D-5	37 5.43	-80 17.75	2698.77	979681.979	10.99	-81.05
81-D-6	37 3.75	-80 17.17	2478.79	979700.610	11.37	-73.18
81-D-7BR1	37 2.33	-80 22.08	2190.00	979711.346	-3.01	-77.71
81-D-8SE3	37 1.88	-80 18.75	2407.77	979700.248	7.02	-75.10
81-D-9	37 2.75	-80 16.75	2492.05	979698.246	11.69	-73.30
81-D-10	37 2.75	-80 15.87	2660.05	979688.582	17.83	-72.89
81-D-11	37 1.53	-80 15.85	2578.67	979694.490	17.84	-70.11
81-D-12SE1	37 3.30	-80 18.72	2358.00	979704.806	4.85	-75.57
81-D-13SE2	37 4.75	-80 19.88	2556.00	979692.122	8.70	-78.48
81-D-14	37 5.67	-80 22.03	1751.11	979740.589	-19.87	-79.60
81-D-15	37 6.72	-80 18.75	1521.66	979757.988	-25.57	-77.47
82-A-1	37 14.32	-80 36.27	1668.62	979761.620	-19.12	-76.03
82-A-2	37 14.78	-80 34.25	1979.84	979743.186	-8.95	-76.48
82-A-3SE1	37 12.97	-80 35.47	1983.00	979739.208	-10.00	-77.64
82-A-4	37 13.77	-80 31.38	1954.82	979740.708	-12.31	-78.99
82-A-5	37 12.35	-80 33.30	1733.75	979748.802	-22.96	-82.09
82-A-6	37 12.60	-80 31.12	1960.60	979734.566	-16.22	-83.09
82-A-7	37 11.73	-80 30.58	1721.53	979747.138	-24.88	-83.60
82-A-8	37 7.72	-80 30.38	1802.80	979739.522	-19.04	-80.53
82-A-9	37 7.92	-80 31.20	1763.68	979741.069	-21.46	-81.62
82-A-10	37 8.13	-80 32.50	1767.62	979741.206	-21.27	-81.56
82-A-11	37 8.45	-80 33.28	1783.81	979741.971	-19.44	-80.28
82-A-12	37 8.28	-80 34.05	1789.82	979740.989	-19.62	-80.66
82-A-13	37 8.38	-80 34.57	1805.46	979738.494	-20.78	-82.36
82-A-14	37 7.77	-80 35.55	1744.10	979740.678	-23.48	-82.97
82-A-15SE2	37 9.97	-80 35.28	1893.00	979737.796	-15.54	-80.10
82-A-16SE3	37 10.27	-80 36.65	1862.00	979740.448	-16.24	-79.74
82-A-17SE4	37 10.65	-80 32.37	1915.00	979735.783	-16.47	-81.79
82-A-18	37 11.03	-80 37.42	1752.12	979748.342	-19.79	-79.55
82-A-19	37 11.40	-80 36.02	1714.06	979749.963	-22.28	-80.74
82-A-20	37 12.20	-80 36.62	1702.35	979755.226	-19.27	-77.34
82-A-21	37 14.43	-80 31.75	1881.31	979745.927	-14.97	-79.14
82-B-1	37 14.53	-80 39.02	2012.46	979746.559	-2.15	-70.79
82-B-2SE1	37 14.90	-80 41.03	1827.00	979759.345	-7.34	-69.65
82-B-3	37 13.07	-80 44.37	1807.83	979760.558	-5.27	-66.93
82-B-4SE2	37 14.32	-80 44.80	1991.00	979753.916	3.50	-64.40
82-B-5SE3	37 14.42	-80 42.50	1726.00	979765.909	-9.57	-68.44
82-B-6SE4	37 11.68	-80 44.07	1841.00	979751.931	-8.78	-71.57
82-B-7	37 11.12	-80 44.97	1925.69	979747.128	-4.80	-70.48
82-B-8	37 9.53	-80 41.57	2050.14	979729.409	-8.52	-78.44

Station Number	Latitude	Longitude	Elevation (Feet)	Observed Gravity	Free Air Gravity	Bouguer Gravity
82-B-9	37 10.23	-80 40.18	2002.36	979733.625	-9.81	-78.10
82-B-10	37 9.90	-80 38.73	1831.87	979741.624	-17.36	-79.84
82-B-11	37 8.32	-80 40.87	2090.99	979725.014	-7.31	-78.63
82-B-12BR1	37 8.78	-80 42.77	1946.00	979734.439	-12.20	-78.57
82-B-13SE5	37 10.08	-80 42.20	1936.00	979740.663	-8.80	-74.83
82-B-14	37 7.83	-80 38.07	1898.65	979736.383	-13.33	-78.09
82-B-15SE6	37 8.00	-80 44.50	1976.00	979732.288	-10.39	-77.79
82-C-1	37 4.85	-80 40.25	2057.56	979721.760	-8.70	-78.87
82-C-2	37 5.23	-80 39.68	2038.54	979723.490	-9.31	-78.84
82-C-3	37 5.38	-80 38.92	1992.83	979726.196	-11.12	-79.09
82-C-4	37 5.35	-80 37.75	1966.10	979726.062	-13.72	-80.78
82-C-5	37 4.72	-80 40.80	2144.62	979716.889	-5.18	-78.33
82-C-6	37 4.32	-80 41.68	2132.14	979716.962	-5.71	-78.43
82-C-7SE1	37 6.90	-80 42.33	2185.00	979720.304	-1.13	-75.65
82-C-8SE2	37 2.60	-80 39.33	1937.00	979723.479	-15.06	-81.13
82-C-9	37 3.55	-80 42.33	1906.70	979727.920	-14.85	-79.88
82-C-10	37 3.08	-80 42.72	1862.12	979729.632	-16.65	-80.16
82-C-11	37 2.68	-80 42.73	1866.76	979728.713	-16.56	-80.23
82-C-12	37 2.17	-80 43.42	1916.68	979724.349	-15.48	-80.85
82-C-13	37 1.25	-80 43.03	2132.35	979711.194	-7.02	-79.75
82-C-14	37 .23	-80 41.08	1861.14	979726.807	-15.45	-78.93
82-C-15SE3	37 .60	-80 39.43	2062.00	979715.094	-8.80	-79.13
82-C-16SE4	37 1.68	-80 38.50	1882.00	979726.932	-15.46	-79.65
82-C-17	37 1.50	-80 43.63	2019.61	979715.982	-13.20	-82.08
82-C-18	37 3.80	-80 43.70	1993.25	979724.350	-10.64	-78.62
82-C-19	37 2.53	-80 44.53	1932.75	979724.093	-14.75	-80.67
82-C-20	37 .98	-80 44.10	2183.55	979708.825	-4.19	-78.67
82-C-21	37 .32	-80 44.88	2142.67	979711.831	-4.07	-77.15
82-C-22SE5	37 6.18	-80 44.77	2040.00	979726.230	-7.81	-77.38
82-C-23SE6	37 6.83	-80 40.18	2028.00	979728.660	-7.44	-76.61
82-D-1	37 5.28	-80 37.25	2027.06	979720.991	-12.96	-82.10
82-D-2	37 5.32	-80 36.48	1986.56	979721.769	-16.04	-83.79
82-D-3	37 5.95	-80 35.95	1947.16	979724.252	-18.18	-84.59
82-D-4SE1	37 7.05	-80 33.33	1873.00	979732.689	-18.31	-82.19
82-D-5	37 6.08	-80 30.93	2089.55	979722.422	-6.81	-78.08
82-D-6	37 6.57	-80 30.12	2080.83	979723.236	-7.51	-78.48
82-D-7	37 3.97	-80 32.70	1809.34	979734.396	-18.13	-79.84
82-D-8SE2	37 2.80	-80 31.08	2033.00	979718.629	-11.17	-80.51
82-D-9	37 3.50	-80 30.23	1925.02	979726.688	-14.28	-79.94
82-D-10	37 1.18	-80 31.95	1864.92	979726.530	-16.75	-80.35
82-D-11	37 3.87	-80 34.38	1950.67	979727.563	-11.52	-78.06
82-D-12	37 4.22	-80 35.58	1849.27	979731.128	-18.00	-81.08
82-D-13	37 2.57	-80 33.78	1819.62	979729.915	-19.62	-81.68
82-D-14SE3	37 2.90	-80 35.95	2003.00	979720.047	-12.72	-81.04
82-D-15SE4	37 .75	-80 35.07	2065.00	979714.410	-9.42	-79.85
82-D-16	37 1.15	-80 36.78	2078.44	979714.844	-8.30	-79.19
83-A-1SE1	37 12.78	-80 45.82	1983.00	979751.128	2.18	-65.45
83-A-2SE2	37 12.45	-80 48.07	1901.00	979754.730	-1.45	-66.28
83-A-3	37 11.53	-80 50.28	1926.27	979751.247	-1.23	-66.92
83-A-4SE3	37 12.07	-80 49.33	1971.00	979749.756	.72	-66.51
83-A-5SE4	37 10.77	-80 52.20	2172.00	979737.711	9.46	-64.62
83-A-6SE5	37 14.52	-80 51.87	3752.00	979648.619	63.56	-64.41
83-A-7	37 9.80	-80 47.60	1908.04	979747.326	-4.35	-69.43
83-A-8	37 8.57	-80 48.03	2834.51	979685.692	22.94	-73.73
83-A-9	37 8.83	-80 49.90	1971.44	979741.812	-2.50	-69.75
83-B-1	37 10.22	-80 53.17	1998.71	979747.117	3.36	-64.81
83-B-2SE1	37 10.57	-80 54.53	2053.00	979744.081	4.93	-65.09
83-B-3SE2	37 11.95	-80 53.12	2408.00	979727.363	19.60	-62.53
83-B-4SE3	37 14.20	-80 52.88	3608.00	979657.036	58.89	-64.17
83-B-5SE4	37 13.08	-80 54.55	2963.00	979695.730	38.53	-62.53
83-B-6	37 10.97	-80 57.45	2107.42	979742.468	7.86	-64.02
83-B-7	37 12.95	-80 58.03	2166.23	979740.771	8.82	-65.06
83-B-8	37 13.67	-80 57.22	2238.94	979737.109	10.96	-65.40
83-B-9	37 14.05	-80 56.48	2304.06	979734.556	13.98	-64.61
83-B-10	37 14.45	-80 55.73	2402.64	979729.383	17.50	-64.45
83-B-11SE5	37 12.72	-80 59.05	2162.00	979740.903	8.89	-64.85
83-B-12	37 10.63	-80 58.93	2096.92	979741.745	6.63	-64.89

Station Number	Latitude	Longitude	Elevation (Feet)	Observed Gravity	Free Air Gravity	Bouguer Gravity
83-B-13	37 10.12	-80 57.42	2076.64	979742.897	6.62	-64.21
83-B-14	37 9.30	-80 57.75	2202.77	979733.356	10.12	-65.01
83-B-15	37 8.78	-80 58.83	2289.54	979726.894	12.57	-65.52
83-B-16SE6	37 8.60	-80 55.48	2099.00	979739.750	7.77	-63.82
83-B-17SE7	37 7.68	-80 55.08	2468.00	979715.664	19.72	-64.46
83-B-18SE8	37 8.22	-80 53.32	2319.00	979724.610	13.88	-65.22
83-C-1SE1	37 6.92	-80 59.55	2373.00	979717.599	13.83	-67.11
83-C-2	37 7.35	-80 53.82	3224.53	979661.950	37.65	-72.33
83-C-3SE2	37 6.47	-80 53.50	2054.00	979735.566	2.44	-67.62
83-C-4SE3	37 5.63	-80 56.52	2177.00	979727.560	7.21	-67.04
83-C-5	37 4.33	-80 57.63	2175.57	979725.169	6.56	-67.64
83-C-6SE4	37 3.95	-80 59.30	2266.00	979719.136	9.59	-67.70
83-C-7SE5	37 .40	-80 53.27	2377.00	979700.709	6.73	-74.34
83-C-8	37 2.33	-80 53.88	2175.75	979719.058	3.36	-70.85
83-C-9SE6	37 1.92	-80 55.88	2246.00	979714.388	5.90	-70.71
83-C-10SE7	37 .30	-80 57.20	2188.00	979711.980	.37	-74.26
83-C-11SE8	37 2.32	-80 59.78	2637.00	979694.979	22.69	-67.25
83-D-1	37 7.45	-80 52.03	2050.95	979736.965	2.13	-67.82
83-D-2SE1	37 5.93	-80 51.43	2283.00	979718.487	7.67	-70.20
83-D-3SE2	37 5.40	-80 48.85	2046.00	979726.803	-5.53	-75.32
83-D-4SE3	37 6.43	-80 49.45	2153.00	979721.729	-2.04	-75.47
83-D-5SE4	37 4.70	-80 51.12	2078.00	979727.245	-1.07	-71.95
83-D-6	37 6.80	-80 46.73	2213.11	979715.570	-3.06	-78.54
83-D-7SE5	37 6.28	-80 45.48	2044.00	979725.579	-8.22	-77.94
83-D-8SE6	37 4.63	-80 45.10	2009.00	979724.189	-10.52	-79.04
83-D-9SE7	37 5.28	-80 46.48	2170.00	979716.541	-3.96	-77.98
83-D-10	37 2.75	-80 46.77	1912.31	979727.116	-13.97	-79.19
83-D-11	37 2.75	-80 47.55	1937.03	979727.351	-11.41	-77.47
83-D-12SE8	37 1.87	-80 49.32	2184.00	979713.007	-1.24	-75.73
83-D-13SE9	37 2.88	-80 49.42	2222.00	979713.119	.97	-74.81
83-D-14	37 .20	-80 45.67	2070.08	979716.001	-6.56	-77.16
83-D-15	37 .07	-80 46.23	2075.99	979716.021	-5.79	-76.59
110-A-1	37 23.13	-80 6.22	1733.51	979775.603	-11.80	-70.93
110-A-2	37 23.87	-80 4.43	1655.47	979782.167	-13.65	-70.11
110-A-3	37 24.83	-80 3.08	1709.99	979780.823	-11.26	-69.59
110-A-4	37 26.52	-80 1.83	1546.78	979792.657	-17.22	-69.98
110-A-5	37 28.10	-80 0.37	1312.39	979807.923	-26.30	-71.06
110-A-6	37 26.17	-80 1.23	1486.15	979795.780	-19.30	-69.98
110-A-7	37 24.27	-80 3.05	1588.01	979786.668	-16.07	-70.23
110-A-8	37 27.08	-80 6.77	1332.30	979803.176	-27.70	-73.14
110-A-9SE1	37 26.50	-80 5.78	1366.00	979801.494	-25.37	-71.96
110-A-10	37 27.53	-80 3.67	1488.85	979795.601	-21.20	-71.98
110-A-11SE2	37 28.58	-80 2.82	1625.00	979788.340	-17.18	-72.60
110-A-12SE3	37 29.35	-80 6.30	1309.00	979808.561	-27.80	-72.44
110-B-1	37 22.68	-80 8.12	1927.37	979763.350	-5.17	-70.91
110-B-2	37 23.53	-80 9.37	1553.28	979784.132	-20.81	-73.79
110-B-3	37 24.58	-80 9.78	1411.84	979795.448	-24.32	-72.47
110-B-4	37 24.47	-80 10.67	1419.08	979793.745	-25.17	-73.57
110-B-5	37 23.00	-80 14.43	1510.40	979785.547	-22.65	-74.17
110-B-6	37 24.63	-80 13.80	1918.01	979761.147	-11.08	-76.50
110-B-7	37 23.20	-80 11.62	1556.88	979782.307	-21.81	-74.91
110-B-8	37 23.98	-80 12.53	1474.10	979789.940	-23.10	-73.38
110-B-9	37 25.02	-80 8.90	1385.34	979797.606	-25.28	-72.53
110-B-10	37 28.83	-80 8.25	2119.59	979758.865	-.50	-72.79
110-B-11	37 28.13	-80 9.50	2570.48	979732.524	16.59	-71.08
110-B-12	37 27.32	-80 11.50	2518.40	979735.860	16.21	-69.68
110-B-13	37 26.13	-80 14.47	2643.76	979725.056	18.92	-71.25
110-B-14	37 26.67	-80 13.60	2586.87	979729.232	17.16	-71.14
110-C-1	37 22.50	-80 8.95	1786.30	979769.580	-11.94	-72.87
110-C-2	37 21.05	-80 10.43	2048.76	979753.229	-1.51	-71.38
110-C-3	37 22.12	-80 11.37	1913.27	979762.086	-6.94	-72.20
110-C-4	37 20.50	-80 13.03	2197.43	979742.503	2.55	-72.40
110-C-5	37 19.05	-80 14.77	1850.28	979759.703	-10.80	-73.91
110-C-6	37 19.75	-80 9.78	1791.35	979763.255	-13.81	-74.91
110-C-7	37 17.20	-80 14.53	1388.83	979781.038	-30.19	-77.56
110-C-8	37 17.95	-80 13.52	1491.56	979776.857	-25.80	-76.67
110-C-9	37 18.50	-80 14.07	2316.47	979728.658	2.80	-76.21

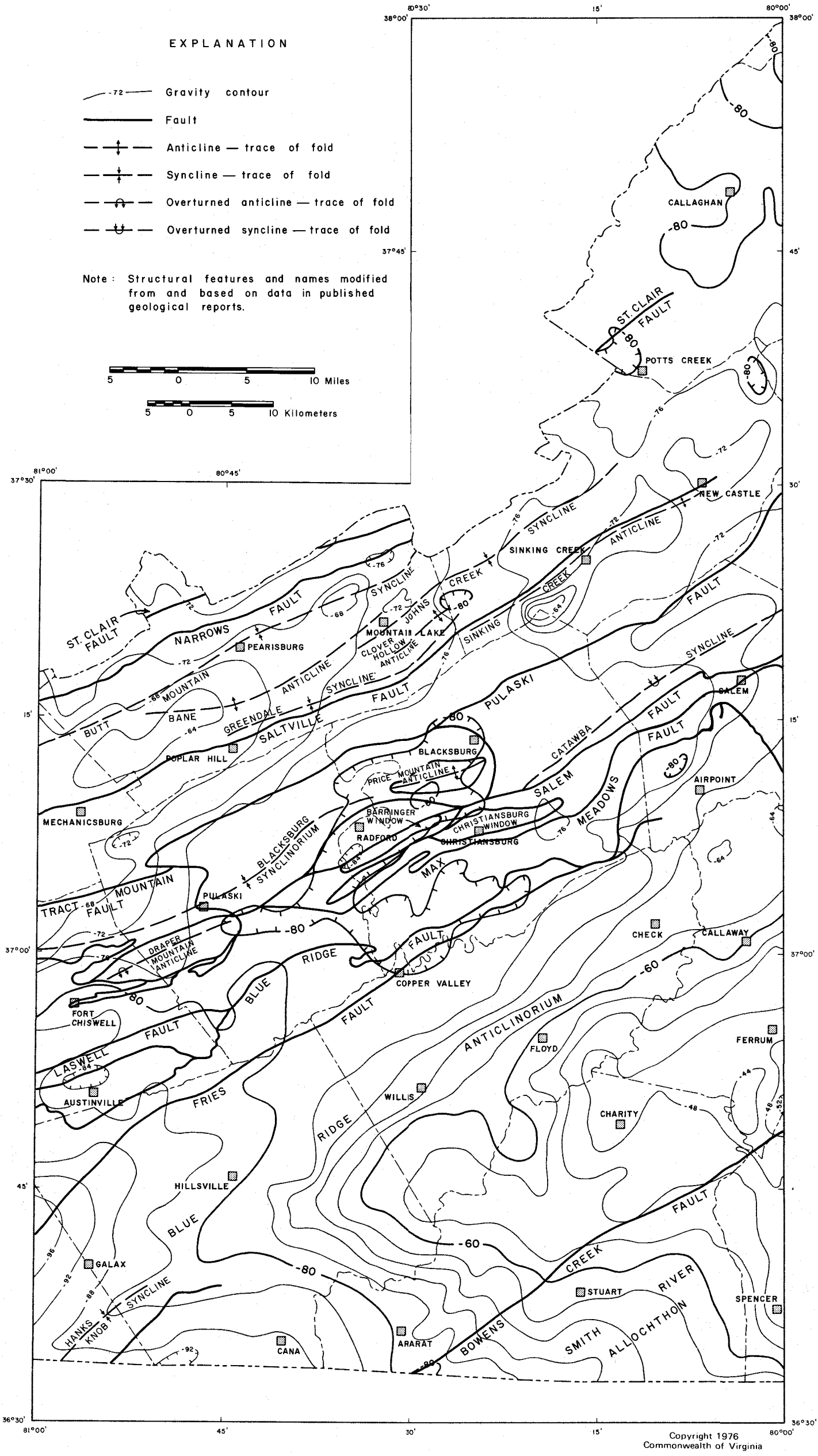
Station Number	Latitude	Longitude	Elevation (Feet)	Observed Gravity	Free Air Gravity	Bouguer Gravity
110-C-10	37 16.28	-80 8.38	1088.52	979796.942	-41.21	-78.33
110-C-11	37 15.82	-80 9.28	1156.43	979793.314	-37.77	-77.21
110-C-12	37 15.55	-80 10.15	1336.51	979782.353	-31.41	-76.99
110-D-1	37 17.97	-80 1.32	1097.83	979806.438	-33.27	-70.72
110-D-2 BASE	37 17.80	-80 3.37	1097.17	979803.980	-35.55	-72.97
110-D-3	37 17.63	-80 3.32	1073.36	979805.114	-36.42	-73.03
110-D-4	37 15.95	-80 4.90	1351.60	979785.760	-27.16	-73.26
110-D-5	37 16.88	-80 6.67	1067.94	979800.225	-40.73	-77.15
110-D-6	37 17.27	-80 5.72	1039.71	979803.693	-40.47	-75.93
110-D-7	37 17.43	-80 4.27	1032.19	979807.006	-38.11	-73.31
110-D-8	37 18.12	-80 4.17	1145.02	979802.300	-33.19	-72.24
110-D-9	37 17.18	-80 3.15	1042.86	979807.497	-36.25	-71.82
110-D-10	37 16.27	-80 1.73	994.02	979811.426	-35.59	-69.49
110-D-11	37 17.85	-80 1.80	1027.04	979809.431	-36.77	-71.80
110-D-12	37 17.82	-80 0.47	1012.71	979812.439	-35.06	-69.60
110-D-13	37 18.93	-80 0.28	1059.31	979812.574	-32.16	-68.29
110-D-14	37 19.00	-80 0.75	1059.00	979812.336	-32.53	-68.65
110-D-15	37 19.77	-80 1.02	1102.03	979810.487	-31.44	-69.03
110-D-16	37 19.93	-80 0.60	1147.76	979808.572	-29.29	-68.44
110-D-17	37 20.05	-80 0.13	1202.24	979805.964	-26.95	-67.95
110-D-18	37 18.07	-80 2.98	1097.97	979805.932	-33.91	-71.36
110-D-19	37 18.72	-80 3.17	1165.46	979803.002	-31.43	-71.19
110-D-21SE1	37 19.62	-80 6.67	2336.00	979730.863	5.22	-74.45
110-D-22SE2	37 18.87	-80 5.25	1339.00	979790.460	-27.87	-73.54
110-D-23	37 22.33	-80 1.48	1301.72	979798.746	-28.12	-72.51
110-D-24	37 21.77	-80 3.18	1229.13	979801.384	-31.49	-73.41
110-D-25	37 21.93	-80 3.45	1245.54	979800.645	-30.92	-73.40
110-D-26	37 21.75	-80 6.35	1357.66	979792.997	-27.78	-74.09
111-A-1	37 29.50	-80 15.65	1807.04	979776.335	-13.37	-75.01
111-A-2	37 28.13	-80 17.97	1738.69	979779.263	-14.91	-74.21
111-A-3SE1	37 27.10	-80 19.50	1757.00	979776.777	-14.18	-74.10
111-A-4	37 26.03	-80 21.62	1776.72	979772.754	-14.80	-75.39
111-A-5	37 25.75	-80 15.92	2389.38	979737.750	8.24	-73.26
111-A-6	37 25.10	-80 15.97	2468.73	979734.527	13.42	-70.78
111-A-7	37 24.50	-80 15.28	2996.13	979698.231	27.61	-74.58
111-A-8	37 23.98	-80 19.80	2330.94	979736.083	3.64	-75.86
111-A-9SE1	37 25.18	-80 18.25	2351.00	979737.663	5.36	-74.82
111-A-10	37 23.05	-80 21.73	2279.12	979737.450	1.49	-76.25
111-A-11	37 23.77	-80 20.93	2361.33	979733.379	4.11	-76.43
111-B-1	37 25.43	-80 22.87	1808.70	979769.671	-14.00	-75.69
111-B-2	37 24.62	-80 23.90	1846.24	979765.497	-13.46	-76.43
111-B-3	37 23.95	-80 25.52	1944.33	979758.628	-10.13	-76.45
111-B-4	37 23.55	-80 27.32	2043.20	979752.442	-6.44	-76.13
111-B-5	37 22.83	-80 26.77	2746.03	979705.361	13.63	-80.03
111-B-6	37 23.88	-80 23.23	2218.59	979740.811	-2.06	-77.73
111-B-7	37 22.90	-80 23.12	2598.88	979715.649	9.98	-78.66
111-B-8	37 26.58	-80 24.00	2019.49	979757.680	-7.83	-76.71
111-B-9	37 27.12	-80 24.53	2536.52	979726.442	8.79	-77.72
111-B-10SE1	37 28.10	-80 26.70	2264.00	979744.513	-.20	-77.42
111-B-11	37 28.63	-80 25.20	2188.57	979750.368	-2.21	-76.86
111-B-12SE2	37 26.83	-80 29.63	2810.00	979712.622	21.10	-74.74
111-B-13	37 29.33	-80 24.72	2165.33	979753.083	-2.70	-76.56
111-C-1	37 17.65	-80 29.73	1936.91	979751.909	-8.42	-74.48
111-C-2	37 20.50	-80 29.43	2187.57	979741.278	.40	-74.21
111-C-3	37 21.65	-80 27.60	2510.08	979722.697	10.48	-75.13
111-C-4	37 19.00	-80 27.83	2064.34	979744.782	-5.52	-75.92
111-C-5	37 19.93	-80 26.22	2064.75	979745.110	-6.50	-76.92
111-C-6	37 21.13	-80 23.68	2095.76	979746.257	-4.18	-75.66
111-C-7	37 22.13	-80 23.13	2245.02	979736.557	-1.29	-77.86
111-C-8	37 17.80	-80 26.50	2092.73	979739.688	-6.20	-77.58
111-C-9SE1	37 19.08	-80 23.07	1847.00	979756.048	-14.77	-77.76
111-C-10	37 17.12	-80 27.43	2266.78	979728.745	.22	-77.10
111-C-11	37 15.80	-80 24.38	2168.97	979730.728	-5.10	-79.07
111-C-12SE2	37 16.62	-80 23.67	2161.00	979733.309	-4.44	-78.15
111-D-1	37 19.83	-80 15.35	2222.67	979738.380	1.77	-74.04
111-D-2SE1	37 18.42	-80 15.83	1782.00	979761.403	-14.61	-75.39
111-D-3SE2	37 17.40	-80 17.62	1668.00	979765.573	-19.69	-76.58

Station Number	Latitude	Longitude	Elevation (Feet)	Observed Gravity	Free Air Gravity	Bouguer Gravity
111-D-4SE3	37 15.87	-80 19.75	1561.00	979768.695	-24.41	-77.65
111-D-5SE4	37 16.05	-80 21.52	1830.00	979752.425	-15.64	-78.06
111-D-6SE5	37 17.90	-80 20.50	1966.00	979747.277	-10.68	-77.73
111-D-7	37 17.67	-80 22.33	1969.06	979745.490	-11.84	-78.99
111-D-8	37 16.95	-80 22.38	2180.67	979732.073	-4.32	-78.68
111-D-9	37 16.52	-80 15.15	1399.02	979779.182	-30.10	-77.82
111-D-10SE6	37 21.33	-80 21.87	2297.00	979732.441	.65	-77.70
111-D-11SE7	37 22.05	-80 20.75	2392.00	979742.573	18.67	-62.91
111-D-12	37 21.92	-80 16.45	1594.37	979778.182	-20.55	-74.93
111-D-13	37 19.48	-80 21.93	1827.95	979758.073	-15.16	-77.51
112-A-1	37 25.05	-80 36.58	2330.26	979737.842	3.79	-75.69
112-A-2	37 25.40	-80 33.25	2555.00	979724.289	10.86	-76.28
112-A-3	37 22.53	-80 31.57	3831.54	979648.394	59.21	-71.49
112-A-4	37 23.40	-80 30.53	3718.50	979655.809	54.73	-72.10
112-A-5SE1	37 25.48	-80 30.75	3159.00	979690.156	33.42	-74.32
112-A-6	37 22.98	-80 33.87	3105.62	979691.278	33.15	-72.77
112-A-7SE2	37 27.45	-80 36.70	2472.00	979736.514	12.31	-72.01
112-A-8	37 28.75	-80 34.07	2736.35	979720.828	19.60	-73.73
112-A-9	37 26.32	-80 30.90	2682.69	979718.243	15.51	-75.99
112-A-10	37 27.05	-80 31.60	3157.95	979691.605	32.50	-75.20
112-A-11	37 27.93	-80 33.40	3350.97	979681.964	39.73	-74.56
112-A-12	37 27.78	-80 32.80	3062.05	979699.627	30.44	-74.00
112-A-13SE3	37 23.00	-80 36.43	3794.00	979658.107	64.71	-64.70
112-B-1SE1	37 24.37	-80 38.40	2098.00	979751.005	-3.91	-75.46
112-B-2SE2	37 23.42	-80 39.58	1883.00	979762.482	-11.28	-75.50
112-B-3	37 25.48	-80 43.80	1889.34	979769.725	-6.43	-70.87
112-B-4	37 26.33	-80 41.67	1895.58	979770.297	-6.51	-71.16
112-B-5	37 27.22	-80 40.18	1994.49	979765.848	-2.93	-70.96
112-C-1 BASE	37 19.60	-80 44.10	1804.40	979768.822	-6.79	-68.34
112-C-2	37 19.55	-80 42.98	1817.75	979767.996	-6.29	-68.29
112-C-3	37 19.65	-80 42.40	1921.88	979762.049	-2.59	-68.14
112-C-4	37 19.98	-80 41.48	1887.58	979762.686	-5.66	-70.04
112-C-5	37 19.97	-80 40.53	1658.17	979775.407	-14.50	-71.05
112-C-6SE1	37 21.72	-80 39.88	2048.00	979753.486	-2.29	-72.14
112-C-7	37 21.20	-80 41.42	1601.32	979779.545	-17.49	-72.11
112-C-8	37 19.08	-80 39.17	1779.85	979768.166	-9.01	-69.72
112-C-9	37 19.22	-80 37.80	1697.43	979772.710	-12.41	-70.31
112-C-10	37 19.87	-80 44.48	1818.33	979767.691	-7.00	-69.02
112-C-11BR1	37 20.88	-80 44.53	1611.00	979776.533	-19.14	-74.08
112-C-12SE2	37 16.45	-80 44.30	1841.00	979764.718	-2.89	-65.68
112-C-13SE3	37 16.00	-80 39.48	2018.00	979750.661	.35	-68.48
112-C-14SE4	37 17.38	-80 39.47	2072.00	979747.527	.29	-70.38
112-C-15SE5	37 17.62	-80 40.95	2162.00	979743.611	4.50	-69.24
112-C-16BR2	37 17.80	-80 42.38	1645.00	979775.558	-12.44	-68.55
112-C-17BR3	37 16.03	-80 42.12	1695.00	979770.871	-9.87	-67.68
112-D-1	37 19.28	-80 35.93	2036.71	979752.580	-.73	-70.19
112-D-2	37 18.02	-80 33.53	1754.54	979762.639	-15.37	-75.22
112-D-3	37 18.18	-80 32.33	1793.90	979760.247	-14.31	-75.49
112-D-4	37 18.45	-80 30.90	1831.90	979759.460	-11.90	-74.39
112-D-5	37 19.88	-80 31.25	2397.74	979728.432	8.21	-73.57
112-D-6	37 21.83	-80 32.17	3886.64	979643.127	60.13	-72.43
112-D-7SE5	37 17.43	-80 35.42	1955.00	979750.188	-8.12	-74.80
112-D-8	37 17.05	-80 37.02	1656.90	979769.830	-15.97	-72.48
112-D-9	37 15.15	-80 36.58	1671.96	979764.932	-16.70	-73.72
112-D-10SE2	37 16.25	-80 33.78	1945.00	979750.413	-7.13	-73.46
112-D-11SE3	37 16.60	-80 31.77	2132.00	979739.608	-.85	-73.57
112-D-12SE4	37 18.63	-80 34.80	1936.00	979755.458	-6.38	-72.41
112-D-13	37 20.50	-80 34.00	2492.82	979723.688	11.52	-73.50
112-D-14	37 15.02	-80 31.77	1946.84	979743.536	-12.04	-78.44
113-A-1	37 24.27	-80 45.60	1829.34	979771.550	-8.49	-70.88
113-A-2	37 23.25	-80 48.95	1624.40	979781.587	-16.25	-71.66
113-A-3	37 23.85	-80 48.05	1611.60	979784.007	-15.91	-70.87
113-A-4	37 23.73	-80 46.78	1725.07	979782.878	-6.19	-65.03
113-A-5SE1	37 24.47	-80 49.50	2150.00	979753.426	3.26	-70.07
113-A-6	37 23.37	-80 50.03	1655.98	979778.373	-16.66	-73.15
113-A-7	37 22.90	-80 50.83	1659.19	979776.994	-17.07	-73.66
113-C-1	37 21.00	-80 54.80	1660.00	979775.047	-16.18	-72.80

Station Number	Latitude	Longitude	Elevation (Feet)	Observed Gravity	Free Air Gravity	Bouguer Gravity
113-C-2	37 19.98	-80 58.08	1728.43	979769.415	-13.90	-72.86
113-C-3	37 17.83	-80 52.68	1650.99	979771.871	-15.62	-71.93
113-C-4SE2	37 17.42	-80 53.95	1736.00	979767.648	-11.24	-70.45
113-C-5	37 16.82	-80 55.40	1712.40	979766.876	-13.36	-71.77
113-C-6	37 16.13	-80 57.20	1774.32	979760.974	-12.45	-72.97
113-C-7	37 15.85	-80 58.98	1830.34	979758.166	-9.58	-72.01
113-D-1	37 20.32	-80 45.38	1604.31	979777.047	-18.43	-73.15
113-D-2	37 21.00	-80 45.90	1620.54	979775.268	-19.67	-74.94
113-D-3	37 21.25	-80 48.65	1605.83	979775.139	-21.55	-76.32
113-D-4SE1	37 22.27	-80 48.12	2107.00	979751.759	.74	-71.12
113-D-5	37 22.33	-80 49.15	1544.82	979783.888	-20.11	-72.80
113-D-6	37 22.12	-80 52.08	1520.56	979785.204	-20.76	-72.62
113-D-7	37 22.37	-80 51.65	1525.10	979785.954	-19.95	-71.96
113-D-8SE2	37 21.23	-80 51.18	2133.00	979748.184	1.11	-71.64
113-D-9	37 19.73	-80 48.97	1555.83	979777.845	-21.35	-74.41
113-D-10	37 19.12	-80 50.23	1579.23	979776.653	-19.44	-73.31
113-D-11	37 17.73	-80 51.83	1635.52	979773.607	-15.19	-70.97
113-D-12SE3	37 17.95	-80 49.62	2122.00	979748.770	5.42	-66.96
113-D-13	37 20.27	-80 47.43	1560.56	979778.657	-20.86	-74.09
113-D-14SE4	37 17.65	-80 45.28	2218.00	979743.976	10.09	-65.56
113-D-15SE5	37 16.78	-80 46.72	2148.00	979748.448	9.23	-64.03
113-D-16	37 15.38	-80 47.98	2160.54	979747.605	11.59	-62.09
113-D-17	37 15.27	-80 45.87	1896.39	979761.520	.83	-63.85
113-D-18	37 15.18	-80 50.45	2970.76	979697.030	37.52	-63.80
113-D-19SE6	37 20.52	-80 49.38	1888.00	979759.335	-9.75	-74.14
137-A-1	37 44.77	-80 2.05	1301.73	979825.883	-33.56	-77.96
137-A-2	37 43.33	-80 2.58	1308.31	979823.421	-33.32	-77.94
137-A-3	37 42.62	-80 3.98	1384.88	979818.113	-30.38	-77.62
137-A-4	37 43.65	-80 6.40	1859.45	979785.350	-20.01	-83.43
137-A-5	37 41.72	-80 5.32	1437.32	979813.898	-28.36	-77.38
137-A-6	37 40.55	-80 6.68	1506.56	979807.745	-26.30	-77.68
137-A-7SE1	37 39.33	-80 5.42	1689.00	979794.680	-20.43	-78.04
137-A-8	37 40.83	-80 0.87	1766.00	979794.608	-15.45	-75.68
137-A-9	37 39.43	-80 1.23	2594.81	979745.578	15.52	-72.98
137-A-10SE2	37 40.70	-80 4.28	1545.00	979806.512	-24.13	-76.83
137-B-1	37 44.82	-80 14.40	2050.75	979780.301	-8.76	-78.71
137-B-2	37 43.17	-80 12.27	1652.98	979801.384	-22.69	-79.07
137-B-3	37 44.87	-80 9.45	1526.34	979809.697	-28.77	-80.82
137-B-4	37 44.33	-80 11.05	1643.01	979803.851	-22.86	-78.90
137-B-5	37 39.95	-80 13.78	1948.08	979777.373	-14.27	-80.71
137-B-6SE1	37 40.67	-80 14.00	1775.00	979790.977	-17.99	-78.53
137-B-7	37 40.13	-80 12.55	2174.70	979766.596	-4.00	-78.17
137-B-8	37 40.92	-80 11.15	2216.30	979766.682	-1.14	-76.73
137-B-9	37 42.58	-80 7.63	2476.95	979753.029	7.30	-77.18
137-B-10	37 41.92	-80 9.58	2596.69	979743.193	9.70	-78.87
137-B-11	37 37.62	-80 14.77	2028.89	979768.655	-11.99	-81.19
137-B-12	37 38.27	-80 14.38	1990.38	979771.643	-13.57	-81.46
137-B-13SE2	37 39.45	-80 14.17	1937.00	979778.113	-13.84	-79.91
137-B-14SE3	37 37.77	-80 10.72	1602.00	979796.415	-24.61	-79.25
137-B-15SE4	37 38.22	-80 8.35	1848.00	979784.139	-14.40	-77.43
137-C-1	37 37.32	-80 11.15	1667.04	979793.075	-21.17	-78.03
137-C-2	37 37.27	-80 9.52	2096.44	979767.427	-6.36	-77.86
137-C-3	37 35.98	-80 9.30	3316.92	979692.709	35.59	-77.54
137-C-4	37 35.10	-80 8.83	2763.83	979729.278	21.41	-72.85
137-C-5	37 34.68	-80 7.57	1985.12	979774.045	-6.46	-74.17
137-C-6SE1	37 34.83	-80 14.65	1829.00	979779.598	-15.82	-78.20
137-C-7	37 36.47	-80 14.47	2978.98	979711.970	22.36	-79.25
137-C-8	37 37.08	-80 14.68	2287.89	979753.956	-1.56	-79.59
137-C-9SE2	37 33.18	-80 14.60	2099.00	979765.022	-2.59	-74.18
137-C-10	37 32.10	-80 14.22	3453.82	979678.502	39.90	-77.90
137-C-11	37 30.58	-80 11.68	1588.47	979794.047	-17.81	-71.99
137-C-12	37 31.50	-80 12.80	2127.34	979760.953	-1.55	-74.11
137-C-13	37 31.67	-80 14.52	2935.81	979713.003	26.30	-73.83
137-C-14	37 30.43	-80 11.02	1565.39	979794.974	-18.84	-72.23
137-C-15SE3	37 32.50	-80 13.08	3606.00	979667.942	43.07	-79.92
137-C-16	37 31.62	-80 9.42	1583.72	979795.863	-17.94	-71.96
137-C-17	37 30.10	-80 8.92	1579.47	979793.384	-18.62	-72.49

Station Number	Latitude	Longitude	Elevation (Feet)	Observed Gravity	Free Air Gravity	Bouguer Gravity
137-C-18SE4	37 32.83	-80 8.10	1597.00	979797.050	-17.27	-71.74
137-C-19SE5	37 32.62	-80 10.50	1834.00	979780.924	-10.79	-73.35
137-C-20	37 30.30	-80 12.20	1630.02	979791.079	-16.46	-72.06
137-D-1	37 30.22	-80 6.58	1310.31	979810.779	-26.71	-71.40
137-D-2	37 31.12	-80 5.07	1274.74	979815.946	-26.20	-69.68
137-D-3	37 32.93	-80 3.40	1270.75	979817.271	-27.89	-71.23
137-D-4SE1	37 33.32	-80 4.50	1334.00	979812.229	-27.54	-73.03
137-D-5	37 34.00	-80 2.07	1282.15	979817.430	-28.20	-71.93
137-D-6SE2	37 35.55	-80 0.13	1158.00	979825.922	-33.64	-73.14
137-D-7SE3	37 33.50	-80 1.43	1215.00	979821.333	-29.89	-71.33
137-D-8	37 32.83	-80 7.33	1556.69	979798.882	-19.23	-72.33
137-D-9	37 35.60	-80 5.30	1786.56	979787.012	-13.50	-74.43
137-D-10	37 37.20	-80 3.97	2053.28	979772.645	-5.10	-75.14
137-D-11SE4	37 36.88	-80 2.23	3553.00	979676.523	40.30	-80.88
137-D-12SE5	37 35.35	-80 4.32	2487.00	979744.862	10.60	-74.23
137-D-13	37 30.12	-80 1.13	2118.43	979761.475	0.14	-72.11
138-A-1SE1	37 39.52	-80 15.13	1846.00	979784.745	-15.87	-78.83
138-A-2	37 43.35	-80 15.28	3205.76	979708.293	30.01	-79.33
138-A-3SE2	37 42.68	-80 15.90	2990.00	979722.967	25.35	-76.63
138-A-4	37 41.87	-80 16.55	2699.19	979739.687	15.91	-76.15
138-A-5	37 41.48	-80 17.45	2981.43	979722.319	25.65	-76.04
138-A-6	37 40.32	-80 17.95	2243.43	979763.345	-1.05	-77.57
138-D-1	37 35.13	-80 15.18	2412.31	979747.940	6.96	-75.31
138-D-2	37 36.82	-80 15.93	2109.58	979763.167	-8.73	-80.68
138-D-3	37 36.02	-80 17.38	2239.11	979758.472	-.08	-76.45
138-D-4	37 35.23	-80 19.18	2505.33	979743.355	10.98	-74.47
138-D-5	37 34.42	-80 21.07	2561.11	979738.858	12.92	-74.43
138-D-6	37 33.18	-80 22.33	2574.11	979737.212	14.29	-73.51
138-D-7	37 32.90	-80 21.33	3490.04	979677.137	40.78	-78.26
138-D-8	37 32.33	-80 21.55	2868.64	979715.692	21.71	-76.14
138-D-9	37 31.90	-80 20.85	2036.95	979764.409	-7.18	-76.65
138-D-10	37 30.55	-80 19.85	2399.41	979741.768	6.24	-75.60
138-D-11BR1	37 33.47	-80 17.32	1926.00	979774.350	-9.95	-75.64
138-D-12	37 33.62	-80 15.15	1986.28	979770.743	-8.10	-75.85
138-D-13	37 32.48	-80 15.93	2530.08	979738.665	12.62	-73.68
138-D-14	37 31.55	-80 15.03	3095.39	979703.233	31.72	-73.87
138-D-15	37 31.08	-80 16.75	3806.13	979652.415	48.43	-81.39
138-D-16	37 30.05	-80 18.90	3467.59	979674.621	40.29	-77.98
160-A-1	37 53.83	-80 6.28	1867.91	979800.717	-18.67	-82.38
160-A-2	37 56.50	-80 4.50	2605.50	979763.630	9.73	-79.13
160-A-3	37 56.97	-80 5.10	2318.31	979780.470	-1.12	-80.19
160-A-4	37 58.08	-80 3.47	2591.45	979767.087	9.56	-78.83
160-A-5	37 56.60	-80 6.13	2168.84	979788.055	-7.06	-81.03
160-A-6SE1	37 54.80	-80 4.48	2277.00	979780.702	-1.62	-79.28
160-A-7SE2	37 53.32	-80 0.47	1671.00	979815.391	-21.77	-78.76
160-C-1	37 48.63	-80 11.42	2222.83	979776.167	-2.27	-78.08
160-C-2	37 49.17	-80 10.60	2227.91	979775.474	-3.26	-79.24
160-C-3	37 46.33	-80 13.97	2333.64	979767.359	2.70	-76.90
160-C-4	37 45.58	-80 14.43	2159.90	979776.698	-3.21	-76.88
160-C-5SE1	37 45.35	-80 8.55	1534.00	979809.025	-29.42	-81.74
160-D-1	37 52.05	-80 1.42	1480.82	979821.967	-31.24	-81.74
160-D-2SE1	37 50.38	-80 3.55	1525.94	979818.481	-28.05	-80.10
160-D-3	37 48.40	-80 4.00	1369.13	979823.692	-34.70	-81.40
160-D-4	37 45.08	-80 1.83	1240.06	979829.165	-36.54	-78.84
160-D-5	37 45.20	-80 0.58	1213.42	979830.906	-37.47	-78.86
160-D-6	37 47.78	-80 0.57	1403.51	979823.142	-31.12	-78.99
160-D-7	37 48.47	-80 2.18	1341.09	979827.032	-34.10	-79.84
160-D-8	37 48.05	-80 1.42	1361.04	979825.745	-32.90	-79.32
160-D-9	37 48.08	-80 2.87	1320.30	979825.979	-36.55	-81.58
160-D-10SE2	37 46.70	-80 4.12	1740.00	979800.314	-20.72	-80.07
160-D-11	37 48.82	-80 4.63	1405.56	979824.324	-31.25	-79.19
160-D-12	37 48.87	-80 5.58	1426.95	979822.753	-30.88	-79.55
160-D-13	37 50.60	-80 7.42	1568.86	979814.835	-27.97	-81.48
160-D-14	37 49.83	-80 7.27	1522.22	979817.387	-28.69	-80.61
160-D-15	37 49.02	-80 6.73	1522.18	979817.240	-27.65	-79.57
160-D-16	37 48.98	-80 6.40	1461.23	979820.756	-29.82	-79.66
160-D-17	37 48.00	-80 4.58	1410.79	979821.527	-32.37	-80.48

Station Number	Latitude	Longitude	Elevation (Feet)	Observed Gravity	Free Air Gravity	Bouguer Gravity
160-D-18	37 47.47	-80 5.73	1417.40	979820.930	-31.56	-79.91
160-D-19	37 47.27	-80 6.47	1552.76	979813.268	-26.20	-79.16
160-D-20	37 47.00	-80 6.18	1447.66	979818.056	-30.92	-80.29
160-D-21	37 45.92	-80 7.12	1453.75	979815.654	-31.16	-80.75
160-D-22SE3	37 50.90	-80 5.55	1616.00	979813.142	-25.67	-80.79
160-D-23SE4	37 52.13	-80 6.15	1845.00	979799.919	-19.15	-82.08



MAJOR REGIONAL STRUCTURES SUPERIMPOSED ON GRAVITY CONTOURS, SHEET 3, VIRGINIA

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT
DIVISION OF MINERAL RESOURCES
James L. Calver
Commissioner of Mineral Resources and State Geologist

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BOUGUER GRAVITY MAP

SHEET 3, VIRGINIA

By Stanley S. Johnson and David A. Hubbard, Jr.

5 0 5 10 Miles
5 0 5 10 Kilometers

CONTOUR INTERVAL 4 MILLIGALS

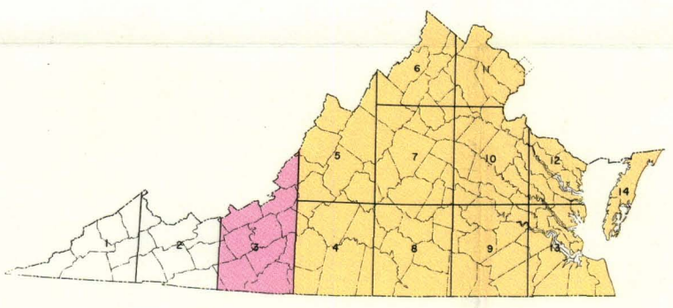
1976

EXPLANATION

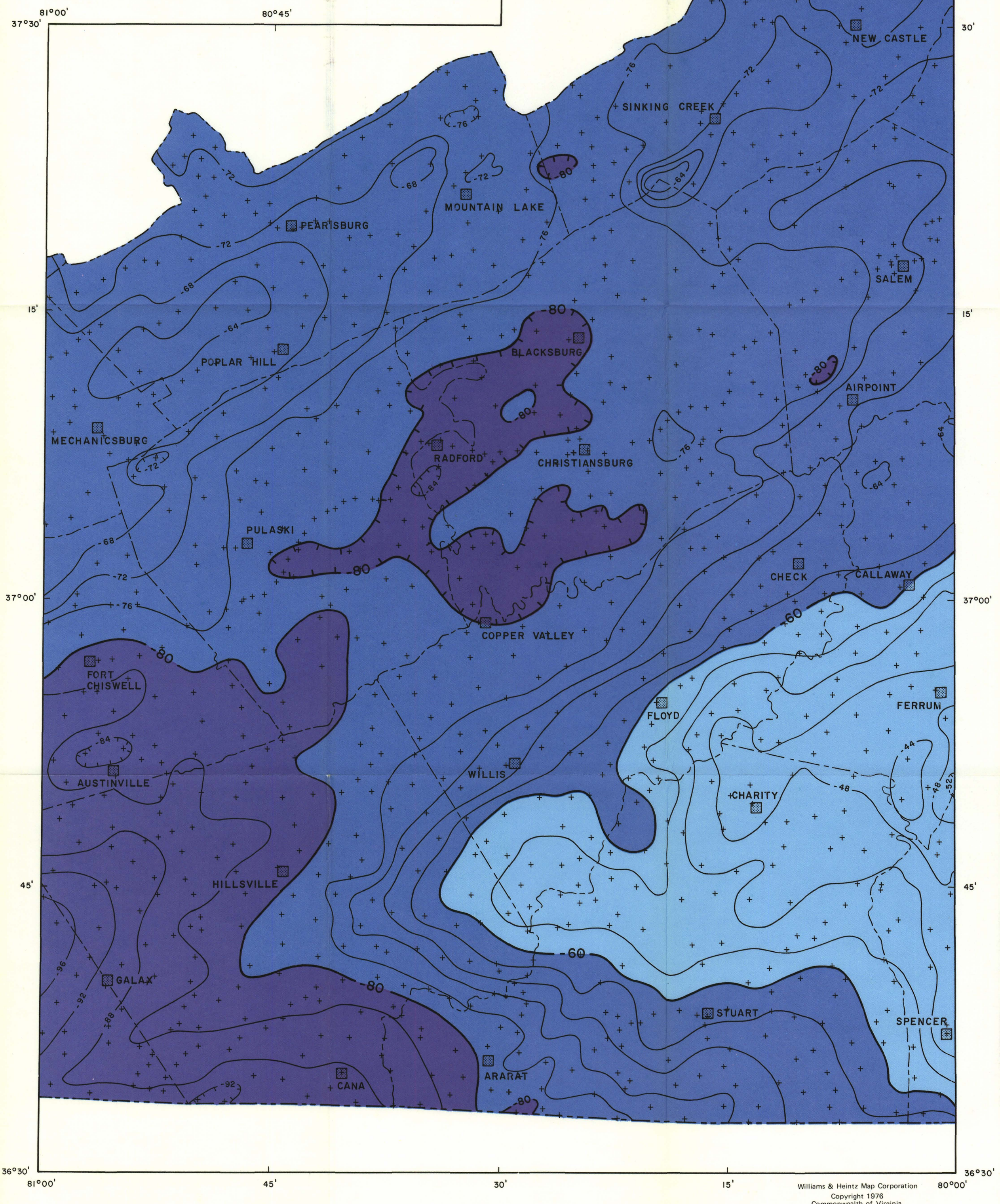
Machine contoured map; reduction density, 2.67 g/cm^3; datum, 980, 118,000 milligals; no terrain correction; gravity station indicated by +.

Milligals

−100 −80 −60 −40



Index to published maps



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