

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Gravity survey data of seven wilderness
study areas in southwest Utah, Kane, and Garfield Counties, Utah

by

A. E. McCafferty and J. W. Cady

Open-File Report 87-200

1987

This report is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards. Any use of trade names is for descriptive purposes only and does not imply endorsement by the USGS.

Table of Contents

| | Page |
|-------------------------|------|
| Introduction | 1 |
| Data Collection | 1 |
| Elevation Control | 1 |
| Data Reduction | 1 |
| References | 2 |

Illustrations

| | |
|---|---|
| Figure 1.--Map showing the location of the gravity study area..... | 3 |
|---|---|

Appendices

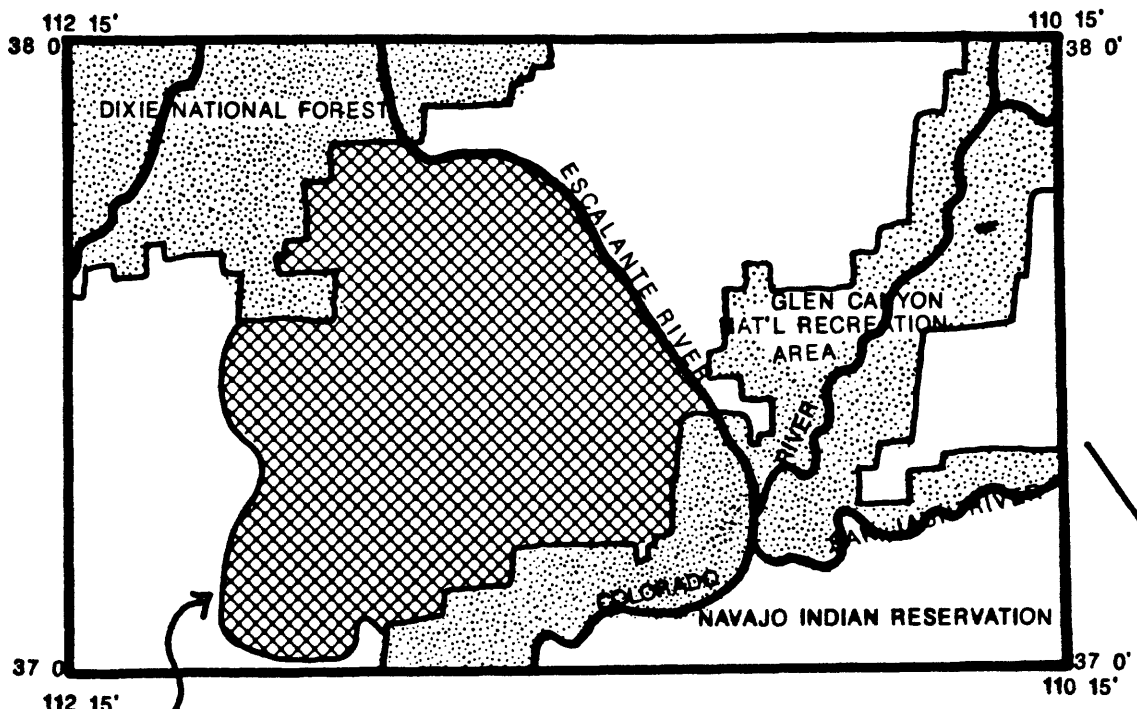
| | |
|---|---|
| Appendix A: Cedar City gravity base station description | 4 |
| B: Escalante gravity base station description..... | 5 |
| C: Hanksville gravity base station description..... | 6 |
| D: Principal facts of gravity data..... | 7 |

Dansereau, and R. R. Wahl (USGS, unpub. program, 1983) was used to reduce gravity meter-readings to observed-gravity values by calculating and correcting for earth-tide and linear meter-drift. The theoretical gravity value was calculated using the 1967 formula of the Geodetic Reference System (International Association of Geodesy, 1971). Mathematical equations are given in Cordell and others (1982).

Terrain corrections were computed using a program by R. H. Godson (USGS, unpub. program, 1978), correcting for the gravity effects of terrain from each station to a radial distance of 166.7 km (103.4 mi) using a modification of the method of Plouff (1977). Godson's program also calculates earth-curvature corrections and complete (terrain-corrected) Bouguer gravity anomaly values. These computed terrain corrections use mean-elevation data digitized on a 15-second grid for corrections from 0 to 5 km (3.1 mi), 1-minute terrain data for corrections from 5 to 21 km (13.0 mi), and 3-minute terrain data for corrections from 21 to 166.7 km (103.4 mi). A density of 2.67 g/cm^3 was used to calculate terrain corrections, giving the corrections and gravity anomaly values listed in Appendix D.

References

- Briggs, I. C., 1974, Machine contouring using minimum curvature: *Geophysics*, v. 39, no. 1, p. 39-48.
- Cordell, Lindrith, Keller, G. R., and Hildenbrand, T. G., 1982, Bouguer gravity map of the Rio Grande Rift, Colorado, New Mexico, and Texas: U.S. Geological Survey Geophysical Investigations Series, Map GP-949, scale 1:1,000,000.
- Defense Mapping Agency, 1974, World Relative Gravity Reference Network, North America, Part 2: St. Louis, Missouri, Aerospace Center, DMAAC Reference Publication 25, with supplement updating gravity values to the International Gravity Standardization Net 1971, 1635 p.
- International Association of Geodesy, 1971, Geodetic Reference System, 1967: International Association of Geodesy Special Publication No. 3, 116 p.
- Morelli, Carlo, ed., 1974, The International Gravity Standardization Net 1971: International Association of Geodesy Special Publication No. 4, 194 p.
- Plouff, Donald, 1977, Preliminary documentation for a FORTRAN program to compute gravity terrain corrections based on topography digitized on a geographic grid: U.S. Geological Survey Open-File Report 77-535, 43 p.



WILDERNESS STUDY AREAS
SURVEY AREA

0 MI 30

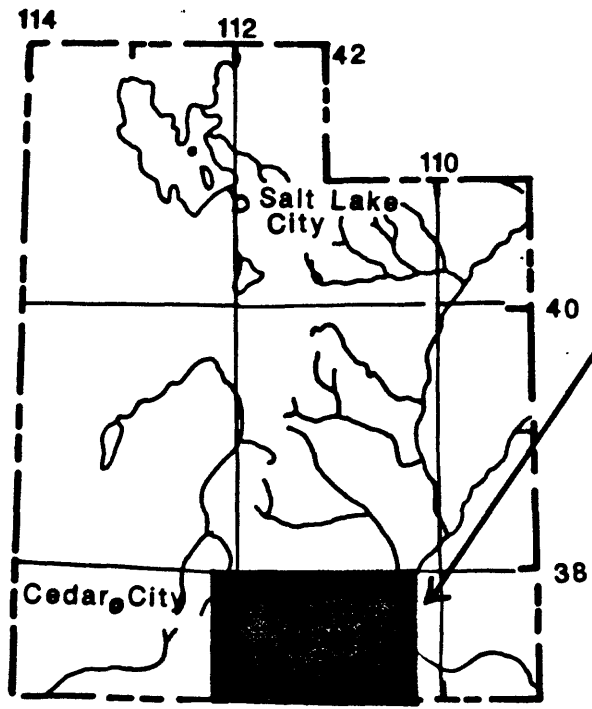
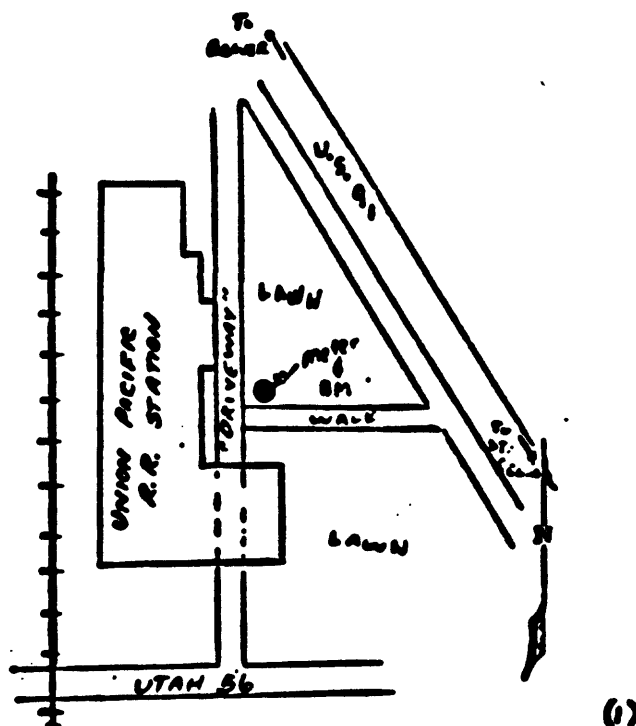


Figure 1 Map showing the general location of the Wilderness Study Areas.

GRAVITY BASE STATION

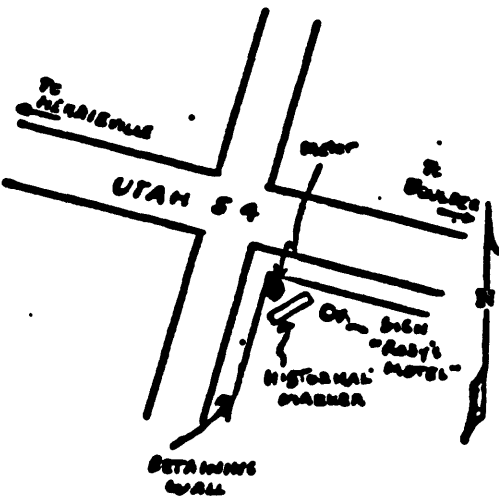
| DATE | TIME | LOCATION | WIND | WAVE | REMARKS |
|------------|------|-----------|-------|------|---------|
| 10/10/68 | 1400 | OFF SHORE | 10-15 | 1-2 | 10-15 |
| 10/10/68 | 1500 | OFF SHORE | 10-15 | 1-2 | 10-15 |
| 10/10/68 | 1600 | OFF SHORE | 10-15 | 1-2 | 10-15 |
| 10/10/68 | 1700 | OFF SHORE | 10-15 | 1-2 | 10-15 |
| 10/10/68 | 1800 | OFF SHORE | 10-15 | 1-2 | 10-15 |
| 10/10/68 | 1900 | OFF SHORE | 10-15 | 1-2 | 10-15 |
| 10/10/68 | 2000 | OFF SHORE | 10-15 | 1-2 | 10-15 |
| 10/10/68 | 2100 | OFF SHORE | 10-15 | 1-2 | 10-15 |
| 10/10/68 | 2200 | OFF SHORE | 10-15 | 1-2 | 10-15 |
| 10/10/68 | 2300 | OFF SHORE | 10-15 | 1-2 | 10-15 |
| 10/10/68 | 2400 | OFF SHORE | 10-15 | 1-2 | 10-15 |
| 10/10/68 | 2500 | OFF SHORE | 10-15 | 1-2 | 10-15 |
| 10/10/68 | 2600 | OFF SHORE | 10-15 | 1-2 | 10-15 |
| 10/10/68 | 2700 | OFF SHORE | 10-15 | 1-2 | 10-15 |
| 10/10/68 | 2800 | OFF SHORE | 10-15 | 1-2 | 10-15 |
| 10/10/68 | 2900 | OFF SHORE | 10-15 | 1-2 | 10-15 |
| 10/10/68 | 3000 | OFF SHORE | 10-15 | 1-2 | 10-15 |
| 10/10/68 | 3100 | OFF SHORE | 10-15 | 1-2 | 10-15 |
| 10/10/68 | 3200 | OFF SHORE | 10-15 | 1-2 | 10-15 |
| 10/10/68 | 3300 | OFF SHORE | 10-15 | 1-2 | 10-15 |
| 10/10/68 | 3400 | OFF SHORE | 10-15 | 1-2 | 10-15 |
| 10/10/68 | 3500 | OFF SHORE | 10-15 | 1-2 | 10-15 |
| 10/10/68</ | | | | | |

The station is located on USGS benchmark "H31 Reset", which is set in the top of a concrete post 54 feet east of the Cedar City Station, Union Pacific Railroad, near downtown Cedar City, Utah. The concrete post, 0.5 foot high, is located near the southwest corner of a grass lawn 6 feet north of the centerline of the concrete walk, and is across the street from the station. (1)



REFERENCE SOURCE

(1) 03685

| Appendix B | | GRAVITY BASE STATION | |
|--|----------------------|---|------------|
| LATITUDE | 37° 46.2'N (1) | STATION DESIGNATION ESCALANTE | |
| LONGITUDE | 111° 36.1'W (1) | | |
| ELEVATION | 5812' / 1771.5 m (1) | | |
| REFERENCE CODE NUMBERS | | COUNTRY/STATE | |
| ACIC 4627-1 | | USA/Utah | |
| | | ADOPTED GRAVITY VALUE | |
| | | g = 979 412.63 mgals | |
| | | ESTIMATED ACCURACY | DATE |
| | | ± 0.1 mgals | MONTH/YEAR |
| | | | 12/71 |
| DESCRIPTION AND/OR SKETCH | | | |
| <p>The station is located on USGS benchmark "83 WF", which is set in the top of the northwest corner of a low concrete retaining wall along Main Street in downtown Escalante, Utah. The retaining wall surrounds what is now Ruby's Motel and a private residence on the south side of Main Street (Utah Highway 54), with the brass disc immediately beneath a pioneer memorial constructed of petrified wood fragments. (1)</p> | | | |
|  | | | |
| REFERENCE SOURCE | | | |
| (1) 03685 | | | |

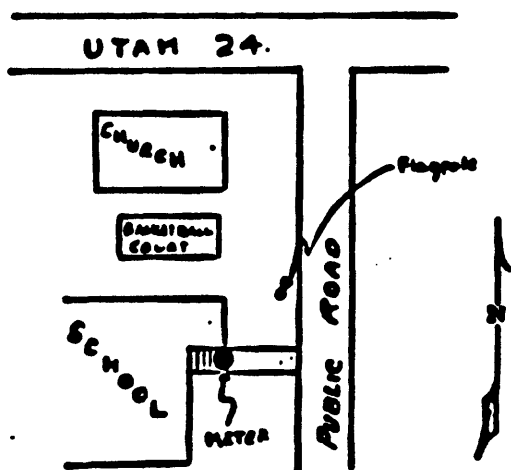
Appendix C

GRAVITY BASE STATION

| | | | |
|----------------------------------|--|---------------------------|---------------------|
| LATITUDE 38° 22.4'N (1) | | STATION DESIGNATION | |
| LONGITUDE 110° 42.8'W (1) | | HANKSVILLE | |
| ELEVATION 4306' / 1312.5m (1) | | COUNTRY/STATE USA/Utah | |
| REFERENCE CODE NUMBERS | | ADOPTED GRAVITY VALUE | |
| ACIC-4631-1 | | g = 979 569.72 mgals | |
| | | | |
| | | | |
| | | ESTIMATED ACCURACY | DATE |
| | | ± 0.1 mgals | MONTH/YEAR 12/71 |

DESCRIPTION AND/OR SKETCH

The station is located 2.4 feet below USC & GS benchmark "L111 1958" which is set vertically in east brick wall adjacent to the main entrance of the Hanksville Elementary School in downtown Hanksville, Utah. The station is on the concrete sidewalk at ground level, 1.2 feet south of the brass disc, and just east of the step leading to the entrance. The school is located about one block south of Utah Highway 24. (1)



(1)

REFERENCE SOURCE

(1) 03685

BOUGUER GRAVITY DATA

South Central Utah Bouguer Gravity Data
John Cady, 1986

20-24 elevat gus=01 stcrme 0-1 q-x Date: 10-JUN-1986 15:51:09.61

| STATION IDENTIFICATION | proj | LATITUDE deg | C A F I O N S | LONGITUDE deg | ELE (in ft) | ST OBSERVED | GRAVITY | THEORETICAL | TERRAIN BOUGUER CURV (d1=2.67) | CORRECTION | SPECIAL | ANOMALIES | FREE COMPLETE-BOUGUER AIR | SPEC FIELDS | |
|------------------------|------|--------------|---------------|---------------|-------------|-------------|---------|-------------|--------------------------------|------------|---------|-----------|---------------------------|-------------|---------|
| thnks | | 37 22.40 | -110 42.80 | | 4306.00 | 979569.72 | | 980024.91 | -0.06 | -146.87 | -1.31 | 0.00 | -50.28 | -198.50 | -200.17 |
| tsu01 | | 37 51.49 | -111 6.17 | | 6755.00 | 979378.98 | | 979980.25 | 1.51 | -230.39 | -1.52 | 0.00 | 33.81 | -196.59 | -199.18 |
| tsu02 | | 37 49.29 | -111 6.05 | | 6510.00 | 979386.98 | | 979976.45 | 1.28 | -222.04 | -1.51 | 0.00 | 22.59 | -199.68 | -202.18 |
| tsu03 | | 37 46.32 | -111 5.51 | | 6300.00 | 979390.66 | | 979972.12 | 1.33 | -214.87 | -1.51 | 0.00 | 10.87 | -204.18 | -206.60 |
| tsu04 | | 37 47.41 | -111 8.94 | | 5843.00 | 979416.31 | | 979973.71 | 0.85 | -199.29 | -1.49 | 0.00 | -8.02 | -207.94 | -210.19 |
| tsu05 | | 37 44.26 | -111 5.43 | | 5720.00 | 979420.86 | | 979969.11 | 0.78 | -195.09 | -1.48 | 0.00 | -10.43 | -206.22 | -208.42 |
| tsu06 | | 37 43.22 | -111 7.63 | | 5320.00 | 979436.43 | | 979967.54 | 2.64 | -181.45 | -1.45 | 0.00 | -30.54 | -210.40 | -212.82 |
| tsu07 | | 37 41.81 | -111 10.47 | | 4960.00 | 979451.55 | | 979965.54 | 3.41 | -169.17 | -1.41 | 0.00 | -47.60 | -214.77 | -216.65 |
| tsu08 | | 37 40.96 | -111 11.45 | | 4800.00 | 979456.56 | | 979964.33 | 3.45 | -163.71 | -1.39 | 0.00 | -56.42 | -218.07 | -219.88 |
| tsu10 | | 37 58.79 | -111 12.28 | | 6255.00 | 979414.72 | | 979990.33 | 1.56 | -213.34 | -1.51 | 0.00 | 12.49 | -200.00 | -203.20 |
| tsu11 | | 37 58.56 | -111 10.09 | | 6260.00 | 979414.86 | | 979989.95 | 1.40 | -213.51 | -1.51 | 0.00 | 13.44 | -199.78 | -202.18 |
| tsu12 | | 37 57.80 | -111 8.13 | | 6122.00 | 979409.61 | | 979988.88 | 1.44 | -215.63 | -1.51 | 0.00 | 15.12 | -200.57 | -203.00 |
| tsu13 | | 37 55.77 | -111 10.33 | | 6315.00 | 979411.43 | | 979985.91 | 0.92 | -215.39 | -1.51 | 0.00 | 19.25 | -196.72 | -199.15 |
| tsu14 | | 37 55.06 | -111 12.10 | | 5960.00 | 979429.75 | | 979984.86 | 1.05 | -203.28 | -1.49 | 0.00 | 5.24 | -198.48 | -200.77 |
| tsu15 | | 37 55.54 | -111 13.20 | | 5935.00 | 979432.27 | | 979985.58 | 1.65 | -202.43 | -1.49 | 0.00 | 4.72 | -197.55 | -199.82 |
| tsu16 | | 37 46.20 | -111 36.10 | | 5812.00 | 979412.63 | | 979971.95 | 1.30 | -198.23 | -1.48 | 0.00 | -12.85 | -211.26 | -213.49 |
| tsu17 | | 37 52.41 | -111 21.61 | | 5270.00 | 979432.76 | | 979951.84 | 0.62 | -179.74 | -1.44 | 0.00 | -23.56 | -204.12 | -206.15 |
| tsu18 | | 37 53.72 | -111 19.09 | | 4940.00 | 979448.72 | | 979953.75 | 0.73 | -168.49 | -1.40 | 0.00 | -40.52 | -209.68 | -211.59 |
| tsu19 | | 37 59.05 | -111 16.68 | | 5140.00 | 979441.68 | | 979961.52 | 0.85 | -175.31 | -1.43 | 0.00 | -36.53 | -212.42 | -214.39 |
| tsu20 | | 37 54.31 | -111 15.42 | | 5240.00 | 979429.41 | | 979954.61 | 0.65 | -178.72 | -1.44 | 0.00 | -32.09 | -211.60 | -213.61 |
| tsu21 | | 37 55.54 | -111 13.04 | | 5640.00 | 979405.27 | | 979956.40 | 1.85 | -192.36 | -1.47 | 0.00 | -20.82 | -212.81 | -214.97 |
| tsu22 | | 37 56.66 | -111 14.23 | | 5845.00 | 979390.77 | | 979958.03 | 1.58 | -199.36 | -1.49 | 0.00 | -17.69 | -216.95 | -219.19 |
| tsu17 | | 37 52.41 | -111 21.61 | | 5270.00 | 979432.82 | | 979951.84 | 0.62 | -179.74 | -1.44 | 0.00 | -23.50 | -204.06 | -206.09 |
| tsu23 | | 37 20.44 | -111 5.32 | | 4562.00 | 979457.25 | | 979934.43 | 2.12 | -155.60 | -1.35 | 0.00 | -48.20 | -203.03 | -204.77 |
| tsu24 | | 37 20.34 | -111 5.02 | | 4537.00 | 979458.78 | | 979934.29 | 2.22 | -154.74 | -1.35 | 0.00 | -48.88 | -202.75 | -204.48 |
| tsu25 | | 37 18.75 | -111 2.28 | | 4220.00 | 979477.03 | | 979931.98 | 1.76 | -143.93 | -1.30 | 0.00 | -58.12 | -201.59 | -203.20 |
| tsu26 | | 37 15.14 | -110 58.38 | | 4316.00 | 979468.83 | | 979926.73 | 2.31 | -147.21 | -1.31 | 0.00 | -52.05 | -198.26 | -199.90 |
| tsu27 | | 37 15.39 | -110 53.96 | | 4331.00 | 979469.13 | | 979927.09 | 0.78 | -147.72 | -1.32 | 0.00 | -50.44 | -198.69 | -200.36 |
| tsu28 | | 37 21.72 | -111 6.85 | | 4780.00 | 979446.13 | | 979936.29 | 1.61 | -163.03 | -1.38 | 0.00 | -40.68 | -203.49 | -205.32 |
| tsu29 | | 37 22.99 | -111 4.20 | | 4816.00 | 979445.05 | | 979938.14 | 2.14 | -164.26 | -1.39 | 0.00 | -40.24 | -203.75 | -205.58 |
| tsu30 | | 37 23.41 | -111 2.02 | | 4735.00 | 979451.55 | | 979938.75 | 0.66 | -161.50 | -1.38 | 0.00 | -41.96 | -204.18 | -206.00 |
| tsu31 | | 37 24.41 | -111 0.86 | | 4683.00 | 979457.63 | | 979940.20 | 0.66 | -159.72 | -1.37 | 0.00 | -42.22 | -202.65 | -204.45 |
| tsu32 | | 37 25.87 | -111 8.35 | | 4480.00 | 979461.21 | | 979942.33 | 0.74 | -152.80 | -1.34 | 0.00 | -39.85 | -193.25 | -194.97 |
| tsu33 | | 37 26.70 | -111 6.40 | | 4645.00 | 979462.45 | | 979940.63 | 0.50 | -158.43 | -1.36 | 0.00 | -41.39 | -200.68 | -202.47 |
| tsu34 | | 37 23.58 | -111 4.55 | | 4826.00 | 979448.58 | | 979939.00 | 1.05 | -164.60 | -1.39 | 0.00 | -36.63 | -201.57 | -203.42 |
| tsu35 | | 37 25.26 | -111 9.66 | | 4580.00 | 979470.64 | | 979941.44 | 0.79 | -156.21 | -1.36 | 0.00 | -40.13 | -196.90 | -198.66 |
| tsu36 | | 37 28.08 | -111 13.40 | | 4884.00 | 979457.95 | | 979945.42 | 0.56 | -166.58 | -1.40 | 0.00 | -28.22 | -195.84 | -197.52 |
| tsu37 | | 37 24.70 | -111 6.40 | | 4645.00 | 979462.68 | | 979940.63 | 0.50 | -158.43 | -1.36 | 0.00 | -41.16 | -200.46 | -202.25 |
| tsu38 | | 37 31.90 | -111 11.52 | | 5478.00 | 979418.39 | | 979951.10 | 1.37 | -186.84 | -1.46 | 0.00 | -17.63 | -204.56 | -206.66 |
| tsu39 | | 37 46.20 | -111 36.10 | | 5812.00 | 979412.63 | | 979971.95 | 1.30 | -198.23 | -1.48 | 0.00 | -12.85 | -211.26 | -213.49 |

BOUGUEN GRAVITY DATA

South Central Ocean Bouguer Gravity Data
John Cady, 1986
28-24

elevation = 0.1 station = A-1 Date: 10-JUN-1986 15:51:11.42

| STATION IDENTIFICATION proj sta-1d | L deg | U min | C deg | A deg | T min | I deg | U min | S deg | ST ELEV (in ft) | GRAVITY OBSERVED | THEORETICAL | COORRECTED (d1=2.67) | BOUGER CORRECTION | SPECIAL | FREE AIR | ANOMALY COMPLETE-BOUGER d1=2.67 d2=2.70 | SPEC FIELDS |
|--|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------------------|---------------------|-------------|-------------------------|----------------------|---------|-------------|---|----------------|
| 180601 | 37 | 46.20 | -111 | 36.10 | 5812.00 | UC | 979412.63 | 979971.95 | 1.30 | -198.23 | -1.48 | 0.00 | -12.85 | -211.26 | -213.49 | | |
| 180602 | 37 | 46.20 | -111 | 36.10 | 5812.00 | UC | 979412.63 | 979971.95 | 1.30 | -198.23 | -1.48 | 0.00 | -12.85 | -211.26 | -213.49 | | |
| 180603 | 37 | 27.63 | -111 | 28.62 | 6425.00 | UC | 979355.61 | 979944.88 | 2.11 | -219.14 | -1.51 | 0.00 | 14.41 | -203.73 | -206.19 | | |
| 180604 | 37 | 26.17 | -111 | 27.21 | 6360.00 | UC | 979358.21 | 979942.77 | 1.12 | -217.60 | -1.51 | 0.00 | 15.30 | -202.70 | -205.15 | | |
| 180605 | 37 | 25.04 | -111 | 26.78 | 6385.00 | UC | 979359.67 | 979941.12 | 1.27 | -217.77 | -1.51 | 0.00 | 16.88 | -199.14 | -201.59 | | |
| 180606 | 37 | 23.84 | -111 | 26.08 | 6450.00 | UC | 979345.72 | 979939.38 | 2.11 | -219.99 | -1.51 | 0.00 | 12.78 | -206.42 | -208.88 | | |
| 180607 | 37 | 22.56 | -111 | 25.22 | 6540.00 | UC | 979338.05 | 979937.52 | 2.95 | -223.06 | -1.51 | 0.00 | 15.42 | -206.20 | -208.69 | | |
| 180608 | 37 | 22.60 | -111 | 25.12 | 5730.00 | UC | 979338.12 | 979937.57 | 2.13 | -195.43 | -1.48 | 0.00 | -10.69 | -205.47 | -207.66 | | |
| 180609 | 37 | 22.45 | -111 | 21.52 | 6185.00 | UC | 979359.37 | 979937.35 | 1.48 | -210.95 | -1.50 | 0.00 | 3.54 | -207.03 | -209.40 | | |
| 180610 | 37 | 19.61 | -111 | 20.39 | 6320.00 | UC | 979343.21 | 979933.23 | 4.82 | -215.56 | -1.51 | 0.00 | 4.20 | -208.05 | -210.43 | | |
| 180611 | 37 | 20.50 | -111 | 21.10 | 6440.00 | UC | 979327.81 | 979934.52 | 3.97 | -219.65 | -1.51 | 0.00 | -1.21 | -218.40 | -220.84 | | |
| 180612 | 37 | 21.31 | -111 | 21.49 | 6634.00 | UC | 979325.08 | 979935.70 | 6.18 | -226.27 | -1.52 | 0.00 | 13.11 | -208.50 | -210.99 | | |
| 180613 | 37 | 22.56 | -111 | 24.22 | 6540.00 | UC | 979338.09 | 979937.52 | 2.95 | -223.06 | -1.51 | 0.00 | 15.47 | -206.16 | -208.65 | | |
| 180614 | 37 | 20.33 | -111 | 24.51 | 6004.00 | UC | 979365.87 | 979934.27 | 2.54 | -204.78 | -1.50 | 0.00 | -3.89 | -207.62 | -209.91 | | |
| 180615 | 37 | 17.28 | -111 | 22.10 | 5823.00 | UC | 979369.86 | 979929.84 | 3.12 | -198.61 | -1.49 | 0.00 | -12.48 | -209.45 | -211.66 | | |
| 180616 | 37 | 15.84 | -111 | 21.23 | 5480.00 | UC | 979388.93 | 979927.75 | 3.04 | -186.91 | -1.46 | 0.00 | -23.55 | -208.88 | -210.96 | | |
| 180617 | 37 | 14.36 | -111 | 20.32 | 4180.00 | UC | 979464.81 | 979925.60 | 5.30 | -141.89 | -1.29 | 0.00 | -69.60 | -207.47 | -209.02 | | |
| 180618 | 37 | 7.79 | -111 | 29.68 | 3900.00 | UC | 979480.56 | 979916.07 | 1.49 | -133.02 | -1.24 | 0.00 | -68.76 | -201.53 | -203.02 | | |
| 180619 | 37 | 9.72 | -111 | 31.99 | 4060.00 | UC | 979471.40 | 979918.47 | 2.69 | -139.16 | -1.27 | 0.00 | -63.80 | -201.54 | -203.09 | | |
| 180620 | 37 | 12.30 | -111 | 36.24 | 4936.00 | UC | 979439.75 | 979922.61 | 0.43 | -168.35 | -1.40 | 0.00 | -18.72 | -188.05 | -189.95 | | |
| 180621 | 37 | 14.75 | -111 | 37.23 | 4863.00 | UC | 979434.16 | 979926.16 | 0.82 | -165.86 | -1.39 | 0.00 | -34.73 | -201.17 | -203.04 | | |
| 180622 | 37 | 9.84 | -111 | 35.70 | 5032.00 | UC | 979414.70 | 979915.04 | 0.37 | -171.63 | -1.41 | 0.00 | -31.17 | -203.85 | -205.79 | | |
| 180623 | 37 | 9.39 | -111 | 37.61 | 5205.00 | UC | 979401.26 | 979918.39 | 1.18 | -177.53 | -1.43 | 0.00 | -27.71 | -205.49 | -207.49 | | |
| 180624 | 37 | 11.43 | -111 | 39.67 | 4805.00 | UC | 979430.11 | 979921.93 | 0.53 | -163.88 | -1.39 | 0.00 | -40.00 | -204.74 | -206.59 | | |
| 180625 | 37 | 12.51 | -111 | 40.23 | 4962.00 | UC | 979422.86 | 979922.91 | 0.55 | -169.24 | -1.41 | 0.00 | -33.47 | -203.57 | -205.48 | | |
| 180626 | 37 | 13.43 | -111 | 41.34 | 5050.00 | UC | 979416.13 | 979924.83 | 1.30 | -172.24 | -1.42 | 0.00 | -33.84 | -206.20 | -208.14 | | |
| 180627 | 37 | 14.97 | -111 | 42.48 | 5243.00 | UC | 979406.26 | 979926.48 | 1.48 | -178.82 | -1.44 | 0.00 | -27.23 | -206.01 | -208.02 | | |
| 180628 | 37 | 15.20 | -111 | 44.19 | 5180.00 | UC | 979409.02 | 979926.42 | 0.90 | -176.67 | -1.43 | 0.00 | -30.73 | -207.93 | -209.92 | | |
| 180629 | 37 | 13.41 | -111 | 46.11 | 4960.00 | UC | 979423.16 | 979924.22 | 4.55 | -169.17 | -1.41 | 0.00 | -34.67 | -200.70 | -202.56 | | |
| 180630 | 37 | 17.18 | -111 | 46.12 | 4820.00 | UC | 979435.08 | 979929.70 | 3.56 | -164.40 | -1.39 | 0.00 | -41.38 | -203.61 | -205.43 | | |
| 180631 | 37 | 14.73 | -111 | 45.84 | 4670.00 | UC | 979441.73 | 979926.14 | 2.30 | -159.28 | -1.37 | 0.00 | -45.28 | -203.63 | -205.41 | | |
| 180632 | 37 | 12.43 | -111 | 43.35 | 4480.00 | UC | 979450.31 | 979923.38 | 2.73 | -152.80 | -1.34 | 0.00 | -51.80 | -203.21 | -204.91 | | |
| 180633 | 37 | 10.57 | -111 | 42.84 | 4310.00 | UC | 979458.52 | 979920.10 | 1.07 | -147.00 | -1.31 | 0.00 | -58.29 | -203.53 | -205.19 | | |
| 180634 | 37 | 10.09 | -111 | 45.14 | 4580.00 | UC | 979441.43 | 979919.41 | 0.47 | -156.21 | -1.36 | 0.00 | -47.30 | -204.40 | -206.16 | | |
| 180635 | 37 | 10.05 | -111 | 44.20 | 4556.00 | UC | 979442.03 | 979919.34 | 0.85 | -155.46 | -1.35 | 0.00 | -48.71 | -204.67 | -206.42 | | |
| 180636 | 37 | 11.52 | -111 | 47.59 | 4756.00 | UC | 979431.40 | 979921.48 | 1.17 | -162.21 | -1.38 | 0.00 | -42.36 | -204.78 | -206.61 | | |
| 180637 | 37 | 12.72 | -111 | 48.88 | 5591.00 | UC | 979379.43 | 979923.22 | 3.84 | -190.69 | -1.47 | 0.00 | -14.09 | -206.44 | -208.52 | | |
| 180638 | 37 | 14.36 | -111 | 47.40 | 5197.00 | UC | 979412.34 | 979925.60 | 1.55 | -177.25 | -1.43 | 0.00 | -24.59 | -201.73 | -203.72 | | |
| 180639 | 37 | 13.51 | -111 | 49.41 | 5590.00 | UC | 979388.64 | 979924.37 | 2.10 | -190.66 | -1.47 | 0.00 | -10.08 | -200.11 | -202.24 | | |
| 180640 | 37 | 15.03 | -111 | 50.70 | 5040.00 | UC | 979417.14 | 979926.57 | 1.40 | -171.90 | -1.42 | 0.00 | -35.52 | -207.43 | -209.36 | | |

BOUGUER GRAVITY DATA

South Central Utah Bouguer Gravity Data
John Cady, 1986
29-24

element gus-01 stc-01 g-r Date: 10-JUN-1986 15:51:13.15

| STATION IDENTIFICATION proj sta-1d | L deg | U min | C deg | A deg | T min | I min | U min | S min | ST OBSERVED | GRAVITY THEORETICAL | TERRAIN BOUGUER CURV (dl=2.67) | CORRECTED BOUGUER CURV (dl=2.67) | SPECIAL | FREE AIR | ANOMALIES COMPLETE-BOUGUER dl=2.67 dz=2.70 | SPEC FIELDS |
|--|----------|----------|----------|----------|----------|----------|-----------|-----------|----------------|------------------------|--------------------------------------|--|---------|-------------|--|----------------|
| 88077 | 37 | 14.49 | -111 | 51.94 | 5245.00 | UC | 979409.59 | 979925.79 | 0.65 | -178.89 | -1.44 | 0.00 | -23.01 | -202.69 | -204.71 | |
| 88078 | 37 | 13.41 | -111 | 55.44 | 4655.00 | UC | 979438.08 | 979924.22 | 3.80 | -158.77 | -1.37 | 0.00 | -47.61 | -203.95 | -205.70 | |
| 88079 | 37 | 10.94 | -111 | 54.91 | 4554.00 | UC | 979440.16 | 979920.64 | 1.03 | -155.32 | -1.45 | 0.00 | -52.26 | -207.10 | -208.84 | |
| 88080 | 37 | 8.64 | -111 | 54.76 | 4576.00 | UC | 979435.49 | 979917.30 | 0.53 | -156.07 | -1.35 | 0.00 | -51.11 | -208.01 | -209.77 | |
| 88081 | 37 | 6.07 | -111 | 40.51 | 3997.00 | UC | 979470.68 | 979913.57 | 0.88 | -136.33 | -1.26 | 0.00 | -67.02 | -203.73 | -205.26 | |
| 88082 | 37 | 0.04 | -111 | 42.54 | 4484.00 | UC | 979448.49 | 979916.43 | 0.61 | -152.94 | -1.34 | 0.00 | -46.29 | -199.96 | -201.68 | |
| 88083 | 37 | 9.28 | -111 | 44.33 | 4591.00 | UC | 979439.17 | 979914.23 | 1.54 | -156.59 | -1.36 | 0.00 | -47.35 | -203.75 | -205.51 | |
| 88084 | 37 | 10.93 | -111 | 50.12 | 4588.00 | UC | 979442.13 | 979920.63 | 0.88 | -155.80 | -1.35 | 0.00 | -44.95 | -205.42 | -207.18 | |
| 88085 | 37 | 7.84 | -111 | 50.58 | 4714.00 | UC | 979428.55 | 979916.14 | 0.63 | -160.92 | -1.37 | 0.00 | -43.95 | -205.61 | -207.43 | |
| 88086 | 37 | 40.90 | -113 | 3.70 | 5800.00 | UC | 979415.42 | 979964.21 | 0.43 | -197.82 | -1.48 | 0.00 | -3.45 | -202.32 | -204.56 | |
| 88087 | 37 | 14.26 | -111 | 57.47 | 4834.00 | UC | 979441.49 | 979925.45 | 0.94 | -164.87 | -1.39 | 0.00 | -29.41 | -194.74 | -196.59 | |
| 88088 | 37 | 25.93 | -111 | 45.98 | 5810.00 | UC | 979386.90 | 979942.41 | 0.51 | -198.16 | -1.44 | 0.00 | -9.23 | -208.37 | -210.61 | |
| 88089 | 37 | 25.45 | -111 | 42.85 | 5840.00 | UC | 979385.18 | 979941.72 | 0.44 | -199.19 | -1.49 | 0.00 | -7.44 | -207.63 | -209.48 | |
| 88090 | 37 | 23.41 | -111 | 41.91 | 5640.00 | UC | 979392.03 | 979934.75 | 0.48 | -193.73 | -1.48 | 0.00 | -12.65 | -207.38 | -209.57 | |
| 88091 | 37 | 21.12 | -111 | 40.52 | 6140.00 | UC | 979380.43 | 979935.42 | 0.85 | -209.42 | -1.50 | 0.00 | 2.31 | -207.76 | -210.12 | |
| 88092 | 37 | 20.22 | -111 | 43.72 | 6155.00 | UC | 979358.13 | 979934.11 | 1.08 | -209.93 | -1.50 | 0.00 | 2.73 | -207.62 | -209.98 | |
| 88093 | 37 | 16.40 | -111 | 44.30 | 6300.00 | UC | 979335.62 | 979928.56 | 7.52 | -214.87 | -1.51 | 0.00 | -0.61 | -209.47 | -211.82 | |
| 88094 | 37 | 18.16 | -111 | 44.73 | 6150.00 | UC | 979353.74 | 979931.12 | 3.23 | -209.76 | -1.50 | 0.00 | 0.90 | -207.13 | -209.47 | |
| 88095 | 37 | 46.20 | -111 | 36.10 | 5812.00 | UC | 979412.63 | 979971.55 | 1.30 | -198.23 | -1.48 | 0.00 | -12.85 | -211.26 | -213.49 | |
| 88096 | 37 | 46.20 | -111 | 36.10 | 5812.00 | UC | 979412.63 | 979971.95 | 1.30 | -198.23 | -1.48 | 0.00 | -12.85 | -211.26 | -213.49 | |
| 88097 | 38 | 22.40 | -110 | 42.80 | 4306.00 | UC | 979569.72 | 980024.91 | -0.04 | -146.87 | -1.31 | 0.00 | -50.28 | -198.50 | -200.17 | |