
The data were referenced to the International Gravity Standardization Net 1971 (IGSN71) datum and the reference ellipsoid is the Geodetic Reference System 1967 (GRS67). The free-air anomalies were calculated using a modified version of formulas from Swick (1942). The complete Bouguer anomalies were calculated from the free-air anomalies using the Bouguer correction, terrain corrections, a curvature correction, and a reduction density of 2670 kg/m³. Isostatic corrections were calculated using an Airy-Heiskanen model of isostatic compensation. The depth of the crust-mantle boundary was controlled using the following parameters: a crustal thickness at sea level of 25 km, a density contrast of 400 kg/m³ between the crust and mantle, and a crustal density of 2670 kg/m³.

Elevation control was from postprocessing of Trimble handheld GPS devices and accuracy is estimated to be 1 meter or less (generally 0.3 m or 1 ft). Data were tied to the base station at Burney, California that we established by tying into Chapman base 17 in Fall River Mills (Chapman, 1966, p. 18; ch17 in data table below). The base station (burney) is located at the entrance of the Burney cemetery near the intersection of Mountain View and Erie streets in Burney. Place meter at the base of the west column of the entrance to read. See pictures at end of document.

Terrain corrections were calculated using 10- and 30-m digital elevation models out to a distance of 2000 m (code M). The horizontal and vertical locations for the stations are on the North American Datum 1927 (NAD27) and the North American Vertical Datum 1929 (NAVD29), respectively.

**EXPLANATION OF FORMAT FOR GRAVITY MEASUREMENTS**

**Item:** Explanation

**STATION:** An alphanumeric combination of up to 8 characters used for station identification. Columns 0-8

**LATD:** Degree latitude. Columns 10-11

**LATM:** Minute latitude. Columns 13-17

**LOND:** Degree longitude. Columns 19-21

**LONM:** Minute latitude. Columns 23-27

**ELEV:** Elevation. Columns 29-35

**OG:** Observed gravity. Columns 37-45

**FAA:** Free-air anomaly. Columns 53-58

**SBA:** Simple Bouguer anomaly. Columns 60-66

**ITC:** Inner terrain correction out to a radius of various distances (see TC CODE) from the station, for a density of 2.67 g/cc. Columns 68-73

**TC:** Total terrain correction from the station to 166.7 km for a density of 2.67 g/cc. Columns 75-80

**CODE:** Letter denoting the extent of the inner-zone correction, according to the Hayford-Bowie and Hammer templates (M=2000 meters). See Spielman and Ponce (1984) for additional explanation. Column 82

**CBA:** Complete Bouguer anomaly reduced for a density of 2.67 g/cc. Columns 84-90

**ISO:** Isostatic residual anomaly values. Columns 92-98.

Example of format for gravity file

```
11hc001  41  0.54 121 26.08  3323.7  979914.18       -32.38 -145.74   0.08   0.32 M -146.54  -18.22
```

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