UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

Gravity survey in the San Luis Valley area, Colorado

by

J. Robert Gaca and Daniel E. Karig

66-46

1965

Open-file report

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

Contents

ILLUSTRATIONS

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ABSTRACT

During the summers of 1963 and 1964, a regional gravity survey covering 6,000 square miles of the San Luis Valley and surrounding areas was made to determine subsurface basement configurations and to guide future crustal studies. The San Luis Valley, a large intermontane basin, is a segment of the Rio Grande trough, a rift system characterized by volcanism, normal faulting, and tilted fault blocks.

The gravity data, accurate to about 0.5 mgal, were reduced to complete-Bouguer anomaly values. The Bouguer-anomaly gravity map delineates a series of en-echelon gravity highs in the central and western San Luis Valley. These gravity highs are interpreted as horsts of Precambrian rock buried by basin fill. A series of en-echelon gravity lows along the eastern edge of the Valley is interpreted as a graben filled with sedimentary and igneous rock estimated to be up to 30,000 ft thick. The relatively high regional gravity over the Sangre de Cristo Mountains suggests that these mountains are locally uncompensated. A subcircular gravity low in the Bonanza area is interpreted as an indication of low-density volcanic rocks within a caldera structure.

INTRODUCTION

This report presents a description and interpretation of a regional gravity survey covering the San Luis Valley, Colorado, and surrounding geographic features. The survey was established: 1) to outline the general gravity field of the region; 2) to determine the subsurface structure of the basin and its relation to surrounding areas; and 3) to guide future crustal studies.

Preliminary field work was begun by R. R. Wahl in 1961. The remaining gravity data were collected and partially reduced by D. E. Karig in 1963. Further reduction of data and interpretation were performed by J. R. Gaca in 1964, under the general supervision of L. C. Pakiser, in cooperation with the Geophysics Department of the Colorado School of Mines.

Few gravity data have been published for the area. Holmer (1954) covered the area on a broad scale in a regional gravity survey of Colorado. De Noyer (1960) interpreted data from Huerfano Park to the San Luis Valley, but, as yet, results have been reported only in abstract form. Joesting and others (1961) have presented an interpretation of a gravity survey of the Rio Grande trough in the vicinity of Albuquerque, New Mexico. Case (1964) has described the results of a gravity survey along a segment of the Colorado mineral belt near Leadville to the north.

GEOGRAPHY

The surveyed area (Fig. 1) includes the San Luis Valley from the Colorado-New Mexico border north to Poncha Pass, and covers parts of the San Juan Mountains on the west, and the Sangre de Cristo Mountains, the Wet Mountain Valley, and parts of the Wet Mountains on the east. This region comprises 6,000 square miles which lie between lat 37°00' and 38°30'N, and long 105°00' and 106°30'W.

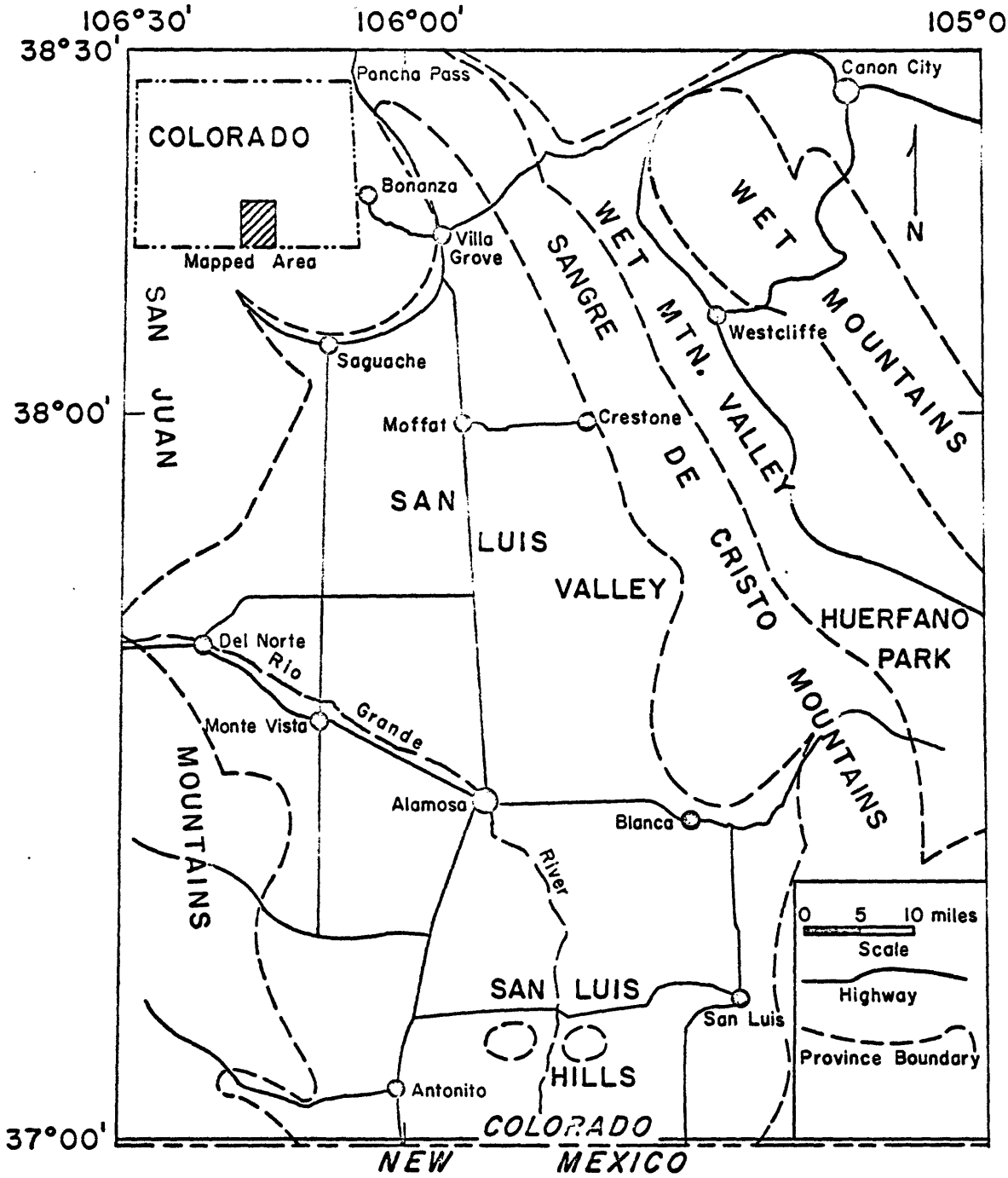

Figure 1 — Location Map

This report and/or map is preliminary and has not been edited or reviewed for conformity with Geological Survey standards or nomenclature.

Stations are located in Fremont, Saguache, Custer, Rio Grande, Alamosa, Conejos, Costilla, and Huerfano Counties, Colorado. Main access routes through the region are U.S. Highways 285 and 160, and Colorado Highways 17 and 69. Principal towns are Alamosa, Monte Vista, Del Norte, Saguache, and Westcliffe.

The San Luis Valley is a large, flat, intermontane basin, extending from Poncha Pass, Colorado, to Taos, New Mexico, a distance greater than 150 miles. It is one of a series of basins through which the Rio Grande River flows (Kelley, 1952). The Valley ranges from 20 miles wide at its north end to 50 miles wide near the Colorado-New Mexico border, and has an average altitude of about 7,700 ft above sea level. It is bordered on the west by the San Juan Mountains, and on the east by the steeply rising Sangre de Cristo Mountains. Both mountain ranges have peaks with altitudes in excess of 14,000 ft.

The San Luis Valley north of Alamosa is typified by widespread low-relief alluvial deposits. In the south, the Valley has been broken into small hills and valleys by late-Tertiary faulting with basalt and other volcanic rocks exposed at many localities (Upson, 1939).

The Valley is semi-arid and supports a high-desert growth of sage, cactus, and on the flanks, pinon. Sand sheets and dunes are common along the eastern border. Precipitation supports permanent streams in the mountain ranges, but very few streams maintain a perennial flow on the valley floor; however, an artesian water system allows portions of the western and central Valley to be irrigated.

The gravity survey covered the Huerfano Park-Wet Mountain Valley, which lies east of the narrow Sangre de Cristo Mountains. Huerfano Park is separated from the rest of the Wet Mountain Valley by a low drainage divide. The Wet Mountain Valley lies at an altitude of 6,000 to 9,000 ft above sea level. The Wet Mountains, which rise to more than 11,000 ft, separate the Wet Mountain Valley from the plains of eastern Colorado.

GENERAL GEOLOGY

The San Luis Valley (Fig. 2) is a unit of the Rio Grande trough, a rift system more than 500 miles long, extending from Mexico to the Arkansas Valley of Colorado. This system is characterized by late-Tertiary normal faulting resulting in deep filled grabens, bordered by fault-blocks, and by both silicic and mafic volcanism. The units of the system are en-echelon, with each unit trending more northwesterly than the system itself, and are separated from each other by risers of Precambrian rock extending from the bordering uplift (Kelley, 1956).

The Rio Grande trough should be differentiated from the intermontane park system of Colorado. Although both systems lie en-echelon, the park system, extending from Huerfano Park in the south to North Park, is an early-Laramide feature, with the intermontane basins bordered by thrusts or folds. The Rio Grande trough, however, is of late Miocene age and its features are consistent with the criteria used to define Basin and Range structure; i.e., normal faulting, filled grabens, and volcanism. The Rio Grande trough, however, is so distant from the Basin and Range province that it is convenient to consider it as a separate structure (Kelley, 1956).

Many workers have demonstrated that the region has repeatedly undergone uplift and deformation in early- to mid-Tertiary time. The Sangre de Cristo

Mountains are composed of Precambrian schist, gneiss, and granite, and Pennsylvanian sedimentary rocks folded and thrust to the east (Burbank and Goddard, 1937). The San Juan Mountains are a great pile of mid-Tertiary volcanic rocks overlying an earlier complex of uplifts (Larsen and Cross, 1956). The San Luis Valley is believed to be a down-faulted graben, hinged on the western side, and faulted along the eastern border (Siebenthal, 1910).

The San Luis Valley basin deposits, dated as Miocene to Recent in age, lie directly on the Precambrian basement. The deposits include a series of volcanic flows, tuffs, and volcanic-derived detritus, overlain by late-Pliocene to Pleistocene lake and stream deposits. Sources for the volcanic material are calderas identified at Creede, Silverton, Lake City, and possibly Bonanza; others probably exist but have not been identified. Other extrusive centers include the San Luis Hills, which lie in the center of the basin, south of Alamosa, and Recent volcanic cones that dot the valley floor just south of the Colorado-New Mexico border.

The Huerfano Park-Wet Mountain Valley is part of the Colorado intermontane park system. Huerfano Park, however, differs internally from the rest of the Wet Mountain Valley. Huerfano Park contains a thick sequence of Mesozoic and early-Tertiary sedimentary rocks, while the rest of the Wet Mountain Valley has only a thin veneer of Cenozoic sedimentary rocks overlying the Precambrian basement.

METHODS OF STUDY

Field procedure: Stations 1 to 202 and B-1 to B-6, occupied by Wahl in 1961, and stations 1043 to 1055, occupied in 1963, were established with La Coste Romberg gravity meter G-8. The remainder of the stations were

established by Karig in 1963 using Worden gravity meter E-134, which has a dial constant of about 0.5 mgal/scale division, and a range of 800 scale divisions. The Worden meter could be read to 0.1 scale division, with a reproducibility of about 0.1 scale division.

The general field procedure was to establish a base-station net concurrent with, but ahead of the general work, so that observations at all field stations could immediately be reduced to observed gravity. The initial base-station net was established by Wahl, using Woollard's Denver Airport station (Woollard, 1958) as the initial base. Wahl's base stations are at Alamosa, Del Norte, and Saguache, and are probably accurate to 0.1 mgal relative to the Denver Airport base. A new base station was considered established when 3 gravity differences between the new base station and established base stations (two different base stations if possible) were each less than 0.2 mgal. Following this procedure, additional base stations were established by Karig in 1963 at Poncha Pass, Moffat, Antonito, and Westcliffe. These base stations are also believed to have an accuracy of about 0.1 mgal relative to the Denver Airport base.

Daily procedure was to run two closed gravity traverses approximately 4-hours long. These were almost always tied to an established base station, although a few traverses were tied to previously occupied field stations located at benchmarks. If possible, a tie with another traverse and a repeat within the traverse were included in each run.

Instrument drift for the Worden meter was thought to reflect daily temperature variations, and generally ranged from + 0.1 to + 1.2 scale divisions per traverse. The drift was negative on only a few traverses run into the cooler mountain areas. Drift was assumed to be linear for each traverse, and repeats within the traverses showed deviations from linearity small enough to justify this assumption.

Information recorded in the field included: 1) time of observation, 2) station description, and 3) gravity-meter reading. The station position was plotted on a work map in the field, and, if necessary, altimeter readings were taken. The gravity data were reduced daily to observed gravity, and the altimeter data were reduced to altitudes. Daily results were checked by ties with earlier stations to maintain control of the survey accuracy.

Later these data were reduced to complete-Bouguer values using:

1. A combined free-air and slab correction of 0.06 mgal/ft. This value, based on a slab density of 2.67 gm/cm^3, was used to permit a direct tie with other gravity surveys in the region.

2. A latitude correction based on values of theoretical gravity from the International Gravity Formula (Nettleton, 1940).

3. Terrain corrections to zone O of the Hayford-Bowie system, again using a crustal density above sea level of 2.67 gm/cm^3 (Swick, 1942).

Terrain corrections to zone J were made by hand in 1964 by J. R. Gaca, assisted by R. N. Prince. Terrain corrections from zone K to zone O were made on an IBM 7090 computer using a program developed by J. R. Gaca and G. S. Moore. The computer program, based on an approach suggested by Bott (1958), and Kane (1962), uses geographic coordinates instead of arbitrary plane coordinates.

Principle facts for all stations are included at the end of this report (Appendix I).

Station control: The 1065 stations define the gravity field over a 6,000 square mile area with an average density of 1 station per 5.6 square miles. Coverage, however, was not uniform and depended both on available topographic control and anticipated anomalous gravity readings. As topography

has not been completely mapped at a large scale, lack of horizontal and vertical control were major problems in conducting the field work.

The gravity survey was performed in two phases. First, traverses along existing vertical control lines, supplemented by altimeter stations, were established, and the general gravity field was delineated. The second phase was then designed to map in more detail the gravity field in anomalous areas, as defined during the first phase. Both traverses and grid patterns based primarily on altimeter readings were established. Altimeter traverses were tied to established benchmarks, and, if possible, to other altimeter lines. To reduce the effects of atmospheric disturbances, the traverses were made as short in distance and time as possible. An average traverse in the second phase lasted less than one hour, and was about 10 miles long.

Lack of vertical control introduced, by far, the largest source of error into the gravity survey. About 300 stations were established at U. S. Geological Survey, U. S. Bureau of Public Roads, and U. S. Coast and Geodetic Survey benchmarks, about 150 stations were established at spot elevations shown on topographic maps, and the rest were established at altimeter-determined altitudes. Most of the altitude data have been graded as to probable accuracy into grades A through D in the table of principal facts (Appendix I). Grade A signifies altitudes at benchmarks and survey monuments, accurate to within 1 foot; grade B signifies spot elevations or closely-controlled altimeter stations, accurate to within 5 ft; grade C signifies altimeter stations accurate to within 20 ft; and grade D signifies stations whose altitudes are believed accurate to within 35 ft. A few stations are listed as unreliable.

Horizontal control for about half the survey area was established by visual positioning on 1:24,000, 1:62,500, or 1:125,000 scale topographic quadrangle maps; county-road maps and 1:250,000 scale Army Map Service sheets were used for the remaining area. Latitude control on the planimetric maps is often poor, with probable errors of 0.25 mile in some mountainous areas.

ACCURACY OF DATA

The Worden gravity meter used for much of this survey can be read to about 0.05 mgal, but to reduce rounding errors, computations for most stations were carried to 0.01 mgal. Internal accuracy of the survey was controlled by repeated readings within traverses and by repeated ties with other traverses. These repeated readings show an absolute average difference of 0.1 mgal. Of 109 repeated readings, 70 percent differ by 0.1 mgal or less, 19 percent differ by 0.1 to 0.2 mgal, 8 percent differ by 0.2 to 0.3 mgal, and 3 percent differ by 0.3 to 0.38 mgal.

External control was obtained through a base-station net. The base stations were repeatedly occupied until an accuracy of 0.2 mgal or better was established relative to Woollard's Denver Airport value. About nine stations of this survey were occupied by Holmer (1954). Comparison of the observed gravity values shows that values of this survey are consistently 2.0 to 2.4 mgals lower than Holmer's values for common stations.

Errors introduced by the uncertainties of vertical and horizontal control were larger than instrument errors. More than one-fourth of the stations (grade C and D) have an estimated accuracy of between 5 and 35 ft, although the repeated altimeter stations indicate an average error of about 12 ft. Few station altitudes introduce errors greater than 0.9 mgal into

the free-air correction. The stations with the greatest error are those in mountainous areas. Latitude errors for stations plotted on Army Map Service and county-road maps were found to be as much as 0.25 mile or 16', when compared to U. S. Geological Survey topographic sheets. This would correspond to an error of 0.2 mgal in Bouguer gravity.

Although the maximum error at any station could be as much as 2.9 mgals, the average error is probably less than 0.6 mgal. This would not change the mapped gravity pattern (Fig. 3) to any noticeable extent.

DESCRIPTION OF ANOMALIES

Complete-Bouguer values established in the Colorado part of the survey were plotted on a 1:250,000 scale base map and contoured with a 5-milligal interval (Fig. 3).

The major anomalies to be discussed are the series of en-echelon gravity lows along the eastern border of the San Luis Valley, the series of en-echelon gravity highs over the central and western parts of the Valley, a closed gravity low over the Bonanza area, and a regional gravity high over the Sangre de Cristo Mountains.

Major anomalies: A major feature of the Bouguer gravity map (Fig. 3) is a series of en-echelon gravity lows on the eastern flank of the San Luis Valley, parallel to the Sangre de Cristo Mountains. This series of gravity lows is made up of two segments trending about N20°W. The most northerly segment extends from a few miles northwest of Villa Grove to a point midway between Alamosa and Blanca. Maximum closure of this low is about 20 mgals, but total relief ranges from 60 mgals on the east to 45 mgals on the west. The series is linear, about 90 km long and 8 to 15 km wide. Gravity gradients range from 5 to 12 mgals/km on the eastern flank and from 3 to 5 mgals/km on

the western flank. The long axis of this gravity low is about 10 km distant from the southwestern edge of the Sangre de Cristo Mountains.

The southern continuation of this major gravity low lies en-echelon to the first, and runs from Blanca almost due south into New Mexico. This poorly-defined gravity low has a maximum closure of 5 to 10 mgals.

Parallel to and west of this series of gravity lows are two major gravity highs. The first is composed of 3 distinct segments separated by saddles. This gravity high forms a central linear belt, 6 to 20 km wide, running from northeast of Saguache to near Alamosa, a distance of 75 km. The maximum closure of this high is 30 mgal with a total gravity relief of 60 mgal, and gradients on the eastern and western flanks of 2 to 4 mgal/km.

Further south, a central gravity high extends from south of Alamosa into New Mexico. This gravity high is much broader, up to 40 km wide, and more nearly north trending than the gravity high north of Alamosa. Maximum closure is 23 mgals.

In the Bonanza area, north of Saguache, there is a closed circular gravity low. This low has a relief of nearly 20 mgals, with smaller segments having 10 to 12 mgals of closure. Gradients vary from 2 to 4 mgals/km.

The gravity field level over the Sangre de Cristo Mountains is high. There are series of poorly defined highs and lows that allow several contour options, but the general field level is high.

Minor anomalies: Minor gravity lows exist in Huerfano Park and the Wet Mountain Valley, along the eastern flank of the Sangre de Cristo Range. The low in the Wet Mountain Valley is approximately 35 km long and 10 km wide, having a maximum closure of 10 to 12 mgals, and gradients from 1 to

4 mgals/km. In Huerfano Park, the low is subcircular, being 30 km long and 25 km wide, and having a maximum closure of 17 mgals. These gravity lows are en-echelon and trend approximately N15°W.

West of the large gravity high over the San Luis Hills (south of Alamosa) there is a linear gravity low, with 10 mgals of closure, parallel to the edge of the San Juan Mountains. West of this gravity low there is a gravity high with 15 mgals of closure.

Another small gravity low is outlined north of Del Norte.

INTERPRETATION OF MAJOR ANOMALIES

The results of this study are dependent on the initial assumptions. All these assumptions are based on knowledge of local conditions, search of the available literature, and analysis of the data. Changes in the initial conditions would result in different interpretations. Therefore, the conclusions presented in this report should be viewed as possible situations, subject to change as more data become available.

Assumptions: For interpretive purposes, it was assumed that high-frequency perturbations in the gravity field were caused by relatively shallow features in the earth's crust. All low-frequency variations were assumed to be part of the "regional" gravity field, caused by relatively deep structures in the crust, and related to isostatic adjustment. The regional effect was subjectively eliminated by curve smoothing, and local anomalies were determined by subtracting the regional gravity from the measured gravity. Fallacies in this assumption are inherent in the non-uniqueness of the "regional" field; however, curve smoothing over large distances, with attention to local geology, results in a reasonable picture of shallow anomalies.

Surface and subsurface samples suggest that biotite granite gneiss underlies most of the area studied. Sample measurements of this granite by the Bear Creek Mining Company (Cook, 1960) gave a density of 2.70 g/cm^3. If the density of the basin fill is assumed to be 2.37 g/cm^3, the density contrast between low-density basin fill and the Precambrian basement is 0.33 g/cm^3. Considering compaction due to depth of burial, and the large amount of interbedded volcanic material, 2.37 g/cm^3 is believed to be a reasonable estimate for the average density of basin fill. In some areas of the San Luis Valley, however, a density contrast of 0.33 g/cm^3 is probably too low. This is especially true in the area near Villa Grove, where surface geology suggests that the section is composed of loose unconsolidated gravel, with little interbedded volcanic rocks. Here, density contrasts of 0.44 to 0.70 g/cm^3 were assumed to determine maximum and minimum depths to the Precambrian basement.

Interpretation of some of the gravity data was based on 2-dimensional analysis. To qualify for 2-dimensional analyses, a body must be infinite in the direction normal to its cross-section. It was assumed that the two major anomalies in the north half of the San Luis Valley were long enough in relation to their width to be considered caused by a 2-dimensional body. They are, in fact, quite suitable for this purpose.

Two-dimensional mass computations: Interpretation of 2-dimensional anomalies was made by comparing measured gravity with computed gravity over 2-dimensional models. The computed gravity was determined by an adaptation of the graticule method of Hubbert (1948).

Another method used for interpretation was a 2-dimensional mass-computation digital-computer program developed by the U. S. Geological Survey. This program

fits a large number of models to the data until it arrives at the model most nearly fitting the gravity anomaly.

Interpretive profiles: Five profiles across the major anomalies were interpreted (Fig. 3). On these profiles, the Bouguer-anomaly gravity values were plotted and a regional curve was fitted to, and subtracted from the data (Fig. 4). The residual gravity anomaly thus obtained was then plotted in Figures 5, 6, and 7.

In the San Luis Valley, profiles A-A', B-B' and C-C' cross the major en-echelon gravity highs and lows. These profiles were drawn over as long a distance as possible so the regional gravity could be more reasonably eliminated. Profiles showing residual gravity anomalies A"-A"' (Fig. 5), B"-B"' (Fig. 6), and C"-C"' (Fig. 7) were then drawn over the San Luis Valley proper, along profiles A-A', B-B', and C-C', respectively. The profiles appear, with reasonable certainty, to reflect the Precambrian basement-basin fill contact. Profile A"-A"' (Fig. 5) indicates a minimum depth of 16,000 feet of basin fill with an assumed density contrast of 0.70 g/cm^3. Two-dimensional analyses along profiles B-B' and C-C', on the portions B"-B"' (Fig. 6) and C"-C"' (Fig. 7), indicate the thickness of basin sediments to be 30,000 feet or the basin floor at 22,000 feet below sea level, assuming a density contrast of 0.33 g/cm^3. It should be pointed out that the thickness of 30,000 feet is a probable maximum and that a lesser thickness may be present if the density contrast is greater than 0.33 g/cm^3.

Deep wells in the Del Norte and Alamosa areas reveal a basement relief of nearly 5,000 feet. By means of 2-dimensional analysis, the major gravity high was interpreted to be the gravity expression of a horst of Precambrian rock surrounded and buried by basin fill. Computed maximum depth to the top of the

Precambrian horst ranges from 5,000 feet along profile C"-C"' (Fig. 7) to less than 600 feet along profile A"-A"' (Fig. 5). The linear low on the eastern edge of the San Luis Valley indicates a deep filled graben. Gradients on the eastern flank of this graben show the normal-fault which is near-vertical at the surface (Litsey, 1958), is stepped and dips less deeply with depth. In the western part of the valley, interpretation of profile A-A' shows an asymmetric graben buried under sediments up to 11,000 feet thick. This agrees with well information (Tennessee Gas #1 State B) which showed 10,000 feet of sedimentary rocks northeast of Del Norte.

Profile D-D' crosses the major gravity high over the San Luis Hills, south of Alamosa. Because the anomaly is broad with respect to its length, 2-dimensional analysis was not used. Interpreted qualitatively, the gravity high may reflect a rise in the Precambrian basement, but at least part, and perhaps all, of the anomaly is caused by the density contrast between the basin sediments and the more dense Tertiary extrusive rocks of the San Luis Hills, which have been faulted upward relative to the basin (Larsen and Cross, 1956).

Bonanza area: The subcircular gravity depression in the Bonanza area is interpreted to be the result of a caldera collapse structure similar to those at Silverton and Creede (Karig, 1965). The density contrast in this area is assumed to be primarily between the lighter volcanic rocks and sediments, and the surrounding Precambrian granite gneiss. Although geologic substantiation of a caldera in the Bonanza area is not available, Burbank (1932) believed the area had been domed and subsequently collapsed. Reconnaissance geology done during the gravity survey demonstrated that many of the volcanic units are welded tuffs and that most flank areas dip radially away from the central area.

Surface geology and steep gravity gradients point to faulting around the border of the collapse.

A 3-dimensional analysis using solid-angle charts described by Lachenbruch (1959) was employed to interpret the Bonanza anomaly (Fig. 8). A single density contrast of 0.2 g/cm^3 between the volcanic rocks and the enclosing Precambrian rocks was assumed. Paleozoic strata, which are present in some parts of this area to a thickness of 3,000 feet, are assumed to have a density very near that of the volcanic rocks, and were grouped with them. As only anomalies involving two media were treated by the method used, the entire anomaly was assumed to result from the density contrast between the volcanic rocks and the enclosing Precambrian rocks, although the presence of a large intrusive at depth is very likely. It may well be, however, that the density contrast between such an intrusive and the silicic Precambrian rocks of the Bonanza area is very small. This interpretation indicates that a subcircular collapse 8,000-feet deep could give rise to the observed gravity anomaly.

Sangre de Cristo Range: The gravity field level over the Sangre de Cristo Range is relatively high. Isostatic calculations reveal a positive free-air anomaly, perhaps as high as 80 mgals, based on the Airy-Heiskanen model of isostatic compensation. Interpretation of this anomaly indicates that the Sangre de Cristo Range is locally uncompensated and that the mountains are an excess mass being supported by the finite strength of the crust. Andreasen and Kane (1961) report a similar situation in the Sangre de Cristo Range of New Mexico.

INTERPRETATION OF MINOR ANOMALIES

The gravity lows in Huerfano Park and the Wet Mountain Valley apparently reflect sedimentary fill. As suggested by surface geology and gravity-anomaly values, the sedimentary sequence is much thicker in Huerfano Park than in the

rest of the Wet Mountain Valley. The low in the center of the Sangre de Cristo Range is caused by the thick sequence of Permian and Pennsylvanian sedimentary rocks. The trend of this low suggests that it is a continuation of the La Veta syncline which forms Huerfano Park. The Wet Mountain Valley is not an extension of this syncline, but lies on the east flank. The gentle gravity gradient on the east flank of the range is interpreted as evidence against the existence of large normal faults such as those on the west flank.

East of the San Luis Hills, the smaller highs and lows reflect the eastward tilted fault blocks exposed at the surface.

The low in the Del Norte area is indicative of thick basin deposits along the western edge of the Valley, shown by drill holes to be about 10,000 feet.

CONCLUSIONS

Gravity studies of the San Luis Valley and the surrounding mountains suggest the San Luis Valley is a large rift valley internally broken into many smaller horsts and grabens. Total displacement along the eastern border of the valley, near the Great Sand Dune National Monument, is interpreted to be 37,000 feet, based on an assumed density contrast of 0.33 g/cm^3.

The Sangre de Cristo Range is uncompensated locally, and represents an excess mass supported by the finite strength of the crust.

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APPENDIX I

GRAVITY DATA FOR THE SAN LUIS VALLEY AREA, COLORADO

STATION	LATITUDE	LONGITUDE	ELEVATION (feet)	OBSERVED GRAVITY (-978,000 milligals)	COMPLETE BOUGUER ANOMALY (2.67 gm/cm^3)
1	37°27.78'	105°52.46'	7541	1249.14	-255.70
3	37°28.64'	105°54.79'	7551	1252.39	-253.09
4	37°29.08'	105°55.69'	7552	1253.14	-252.93
5	37°29.48'	105°56.65'	7561	1253.75	-252.35
6	37°29.86'	105°57.52'	7572	1252.77	-253.23
7	37°30.22'	105°58.83'	7575	1250.82	-255.52
8	37°30.64'	105°59.85'	7579	1249.90	-256.82
9	37°31.04'	106°00.42'	7587	1247.97	-258.85
10	37°31.48'	106°01.46'	7595	1246.26	-260.72
11	37°32.18'	106°02.40'	7602	1244.40	-263.17
12	37°32.56'	106°03.26'	7612	1242.71	-264.79
13	37°32.92'	106°04.17'	7617	1241.71	-265.99
14	37°33.32'	106°05.22'	7624	1240.52	-267.33
15	37°33.58'	106°05.73'	7632	1239.54	-268.20
16	37°33.96'	106°06.78'	7640	1238.60	-269.18
17	37°34.20'	106°07.39'	7650	1237.10	-270.40
18	37°34.62'	106°08.88'	7663	1235.09	-272.21
19	37°35.06'	106°09.47'	7664	1235.84	-272.03
20	37°36.28'	106°12.38'	7706	1233.70	-273.30
21	37°37.52'	106°13.79'	7736	1233.73	-273.26
22	37°37.52'	106°13.79'	7735	1233.81	-273.24
23	37°38.14'	106°14.46'	7751	1233.67	-273.32
24	37°38.72'	106°14.88'	7759	1233.75	-273.62
25	37°39.14'	106°16.13'	7785	1232.48	-273.80
26	37°39.48'	106°17.18'	7808	1231.48	-274.02
27	37°39.72'	106°18.21'	7829	1230.28	-274.26
28	37°40.16'	106°19.03'	7847	1229.36	-279.72
29	37°40.58'	106°20.99'	7878	1229.38	-273.41
30	37°45.22'	106°06.99'	7645	1258.27	-265.62
31	37°40.92'	106°21.24'	7876	1230.34	-273.08
32	37°40.80'	106°22.31'	7900	1226.66	-275.09
33	37°40.54'	106°23.37'	7916	1227.71	-272.57
34	37°40.46'	106°24.55'	7942	1220.99	-277.57
35	37°40.56'	106°25.43'	7979	1213.05	-283.30
36	37°27.88'	105°51.85'	7544	1249.83	-254.98
37	37°27.58'	105°50.17'	7534	1250.81	-254.15
38	37°27.38'	105°46.37'	7531	1250.93	-253.37
39	37°27.00'	105°46.14'	7523	1246.99	-257.74
40	37°26.82'	105°45.08'	7550	1240.39	-262.44
41	37°26.58'	105°42.85'	7582	1232.98	-267.55
42	37°26.28'	105°40.65'	7608	1234.88	-263.52
43	37°25.88'	105°38.53'	7637	1236.02	-259.99
44	37°25.66'	105°35.61'	7665	1240.06	-253.85
45	37°25.44'	105°33.39'	7694	1237.19	-254.45
46	37°25.20'	105°30.71'	7755	1222.19	-265.44

STATION	LATITUDE	LONGITUDE	ELEVATION (feet)	OBSERVED GRAVITY (-978,000 milligals)	COMPLETE BOUGUER ANOMALY (2.67 gm/cm^3)
47	37°25.00'	105°28.76'	7796	1218.22	-266.55
48	37°24.82'	105°26.87'	7900	1214.91	-263.23
49	37°24.78'	105°26.14'	7930	1214.36	-261.91
50	37°25.08'	105°24.11'	7948	1221.17	-254.18
51	37°26.82'	105°21.36'	8071	1226.07	-244.13
52	37°28.34'	105°20.74'	8168	1230.71	-236.67
53	37°30.08'	105°00.45'	7011	1303.68	-234.55
54	37°10.64'	105°15.13'	9250	1128.54	-243.25
55	37°11.65'	105°13.37'	9895	1086.91	-246.42
56	37°12.92'	105°11.59'	10529	1052.01	-244.12
57	37°10.64'	105°19.31'	8517	1171.31	-247.39
58	37°10.24'	105°20.79'	8374	1175.36	-251.75
59	37°09.58'	105°22.95'	8163	1185.11	-254.54
60	37°10.08'	105°23.57'	8150	1186.37	-255.21
61	37°10.18'	105°23.96'	8044	1191.25	-256.85
62	37°11.84'	105°25.88'	7963	1199.03	-256.82
63	37°11.38'	105°28.80'	7933	1200.71	-256.37
64	37°10.48'	105°40.11'	7546	1222.54	-256.75
65	37°10.68'	105°37.71'	7594	1220.26	-256.44
66	37°11.02'	105°35.94'	7641	1215.09	-259.24
67	37°11.02'	105°32.18'	7813	1206.44	-257.45
68	37°10.48'	105°42.34'	7499	1229.84	-252.33
69	37°10.88'	105°44.21'	7471	1243.15	-241.30
70	37°10.32'	105°57.75'	7706	1233.43	-236.07
71	37°10.30'	105°55.87'	7683	1231.00	-239.88
72	37°10.30'	105°54.24'	7660	1242.31	-229.96
73	37°10.40'	105°47.94'	7873	1225.39	-233.86
74	37°10.76'	105°46.28'	7727	1232.97	-235.91
75	37°59.62'	105°54.73'	7561	1299.58	-250.09
76	38°15.24'	105°55.74'	7747	1288.82	-271.87
77	37°17.00'	106°08.86'	7883	1203.50	-264.90
78	37°16.90'	106°10.34'	7962	1202.05	-261.37
79	37°25.06'	106°27.73'	9114	1122.99	-273.71
80	37°24.42'	106°27.16'	9049	1124.60	-272.41
81	37°23.88'	106°26.23'	9025	1130.17	-270.14
82	37°23.62'	106°25.35'	8997	1135.42	-266.51
83	37°23.38'	106°24.53'	8947	1142.31	-264.65
84	37°23.44'	106°23.51'	8896	1147.56	-264.22
85	37°23.42'	106°22.46'	8765	1158.50	-261.83
86	37°22.98'	106°21.70'	8714	1164.68	-262.71
87	37°22.82'	106°20.93'	8668	1168.92	-258.38
88	37°22.62'	106°19.92'	8620	1174.45	-253.93
89	37°22.50'	106°18.90'	8638	1177.80	-251.31
90	37°22.24'	106°17.92'	8661	1177.75	-249.51
91	37°21.42'	106°16.97'	8574	1182.94	-249.10

STATION	LATITUDE	LONGITUDE	ELEVATION (feet)	QUALITY	OBSERVED GRAVITY (-978,000 milligals)	COMPLETE BOUGUER ANOMALY (2.67 gm/cm^3)
92	37°17.26'	106°11.24'	7945		1201.55	-263.39
93	37°17.44'	106°12.27'	8138		1198.60	-254.93
94	37°17.94'	106°12.99'	8244		1194.51	-253.35
95	37°18.52'	106°13.83'	8384		1190.46	-249.78
96	37°19.32'	106°14.08'	8429		1186.83	-251.49
97	37°20.04'	106°14.63'	8314		1192.74	-252.62
98	37°20.70'	106°15.35'	8299		1192.79	-255.03
99	37°21.20'	106°16.53'	8447		1187.44	-252.27
100	37°40.92'	106°21.14'	7874		1229.71	-273.83
180	38°05.62'	106°09.83'	7786		1290.44	-253.94
181	38°05.98'	106°10.78'	7839		1286.02	-255.55
182	38°06.48'	106°11.96'	7882		1281.25	-258.38
183	38°06.84'	106°12.99'	7895		1280.70	-258.49
184	38°06.88'	106°14.37'	7886		1284.75	-254.82
185	38°07.42'	106°15.30'	7918		1279.37	-258.90
186	38°07.96'	106°15.97'	7951		1281.32	-255.41
187	38°09.16'	106°17.04'	8067		1266.28	-265.08
188	38°09.58'	106°18.93'	8094		1260.30	-270.55
189	38°07.02'	106°21.57'	8198		1343.86	- -
190	38°07.68'	106°20.83'	8164		1253.55	-270.36
191	38°08.48'	106°20.44'	8127		1254.63	-272.37
192	38°09.12'	106°19.82'	8090		1258.88	-271.50
193	38°09.72'	106°17.88'	8062		1264.47	-267.90
194	38°08.56'	106°16.24'	7980		1272.14	-263.21
195	38°05.58'	106°07.66'	7714		1302.33	-246.73
196	38°05.52'	106°09.67'	7741		1290.55	-256.46
197	38°04.24'	106°08.68'	7706		1292.98	-254.42
198	38°03.44'	106°08.74'	7682		1294.39	-253.39
199	38°02.16'	106°08.59'	7655		1294.97	-252.76
200	38°01.26'	106°08.68'	7638		1344.83	- -
201	38°00.54'	106°08.63'	7648		1291.59	-254.59
202	37°59.64'	106°08.66'	7639		1294.20	-250.81
B1	37°28.28'	105°53.96'	7543		1250.81	-254.48
B3	37°51.21'	106°55.60'	8851		1143.04	-317.10
B6	38°10.14'	106°08.43'	7697		1297.90	-259.10
B7	38°25.34'	106°05.23'	9010	A	1221.9	-278.60
B8	37°59.53'	105°54.45'	7561	A	1299.5	-250.26
B9	37°04.45'	106°00.68'	7882	A	1217.24	-233.28
B10	38°08.07'	105°27.79'	8118	A	1320.81	-221.88
203	38°25.94'	106°04.16'	9215	B	1216.2	-270.60
204	38°26.22'	106°04.79'	9193	B	1218.0	-270.31
205	38°26.24'	106°05.86'	8818	B	1240.4	-270.74
206	38°26.10'	106°07.30'	8517	B	1248.4	-278.36
207	38°26.05'	106°08.22'	9275	C	1200.8	-281.82

STATION	LATITUDE	LONGITUDE	ELEVATION (feet)	QUALITY	OBSERVED GRAVITY (-978,000 milligals)	COMPLETE BOUGUER ANOMALY (2.67 gm/cm^3)
208	38°25.83'	106°09.02'	9459	B	1190.9	-280.30
209	38°25.85'	106°10.23'	9680	C	1179.3	-277.15
210	38°24.97'	106°10.57'	9912	B	1165.4	-275.83
211	38°24.28'	106°11.74'	10201	B	1145.3	-275.00
212	38°23.73'	106°13.84'	10670	C	1118.0	-276.93
213	38°23.47'	106°14.87'	10845	A	1100.9	-283.82
214	38°24.95'	106°04.46'	8825	C	1230.5	-278.78
215	38°24.45'	106°04.07'	8674	A	1239.1	-277.90
216	38°23.65'	106°03.49'	8818	C	1232.9	-274.85
217	38°22.90'	106°03.00'	8605	C	1241.5	-277.38
218	38°22.15'	106°02.32'	8536	A	1242.1	-279.84
219	38°21.57'	106°01.90'	8424	B	1248.2	-279.32
220	38°20.69'	106°01.32'	8390	A	1249.9	-278.54
221	38°20.04'	106°02.55'	8509	B	1246.9	-273.48
222	38°20.04'	106°01.65'	8865	C	1220.9	-277.69
223	38°19.83'	106°04.17'	9700	C	1160.3	-285.02
224	38°19.39'	106°05.38'	10934	B	1082.1	-285.63
225	38°15.08'	105°56.67'	7958	B	1269.5	-278.01
226	38°17.87'	105°59.17'	8132	A	1262.7	-277.80
227	38°19.18'	106°00.11'	8157	A	1264.5	-276.01
228	38°19.97'	106°00.72'	8277	B	1259.2	-275.08
229	38°16.98'	105°58.54'	8102	B	1263.2	-278.03
230	38°15.76'	105°57.58'	8055	B	1265.5	-277.10
231	38°05.75'	106°07.60'	7714	A	1302.3	-246.78
232	38°15.08'	105°59.57'	8076	B	1264.9	-275.66
233	38°14.83'	105°59.80'	8161	C	1261.6	-273.45
234	38°14.13'	106°01.90'	8262	C	1253.0	-275.47
235	38°13.50'	106°02.54'	8249	C	1250.7	-276.74
236	38°13.08'	106°03.67'	8214	C	1247.4	-280.77
237	38°13.11'	106°04.69'	8427	C	1239.1	-276.25
238	38°13.10'	106°05.25'	8476	C	1234.3	-278.45
239	38°17.31'	106°08.69'	9465	A	1165.7	-290.71
240	38°18.08'	106°09.01'	9595	B	1059.3	-289.47
241	38°19.23'	106°07.82'	10274	D	1096.9	- -
242	38°16.95'	106°08.72'	9280	C	1174.8	-291.86
243	38°15.68'	106°08.64'	9113	B	1186.3	-289.34
244	38°15.11'	106°08.06'	8929	C	1199.0	-286.62
245	38°14.46'	106°07.27'	8821	C	1207.4	-284.71
246	38°11.96'	106°05.88'	8608	B	1228.7	-274.51
247	38°15.23'	105°56.26'	7958	A	1269.2	-278.13
248	38°15.34'	105°55.92'	7912	B	1270.5	-280.10
249	38°15.62'	105°54.95'	7880	B	1275.2	-276.97
250	38°16.05'	105°54.03'	8005	B	1274.9	-269.85
251	38°16.53'	105°52.88'	8509	D	1253.2	-259.57
252	38°17.17'	105°51.79'	9633	C	1196.0	-244.90
253	38°17.57'	105°50.97'	10709	C	1132.2	-245.68

STATION	LATITUDE	LONGITUDE	ELEVATION (feet)	QUALITY	OBSERVED GRAVITY (-978,000 milligals)	COMPLETE BOUGUER ANOMALY (2.67 gm/cm^3)
254	38°14.67'	105°56.44'	7953	A	1270.2	-277.16
255	38°14.12'	105°56.33'	7932	A	1271.3	-276.53
256	38°13.26'	105°56.18'	7920	B	1272.7	-275.67
257	38°12.68'	105°56.07'	7858	A	1277.1	-273.18
258	38°11.54'	105°55.70'	7817	B	1282.3	-268.65
259	38°10.73'	105°55.70'	7765	A	1288.3	-264.84
260	38°10.24'	105°55.65'	7746	A	1288.8	-264.11
261	38°09.40'	105°55.49'	7710	B	1291.4	-263.14
262	38°08.53'	105°55.57'	7672	A	1291.2	-264.46
263	38°07.88'	105°55.54'	7659	A	1289.1	-266.36
264	38°06.87'	105°55.25'	7641	A	1292.0	-263.10
265	38°06.19'	105°55.28'	7628	A	1294.9	-260.02
266	38°04.98'	105°55.16'	7610	A	1298.7	-255.62
267	38°04.05'	105°55.06'	7608	B	1301.0	-252.14
268	38°03.24'	105°55.06'	7589	A	1302.5	-250.64
269	38°02.39'	105°54.98'	7580	A	1302.3	-250.22
270	38°01.45'	105°55.00'	7579	B	1302.0	-249.25
271	38°00.63'	105°54.96'	7581	B	1300.6	-249.37
272	38°00.69'	105°41.24'	8347	B	1249.0	-247.10
273	38°01.05'	105°40.28'	8834	C	1222.5	-240.57
274	37°59.28'	105°42.30'	7860	A	1278.6	-249.75
275	37°59.22'	105°43.47'	7710	A	1279.7	-258.31
276	37°59.22'	105°44.58'	7656	C	1274.7	-267.34
277	37°59.22'	105°45.60'	7646	C	1270.8	-272.48
278	37°59.22'	105°47.00'	7626	C	1270.1	-274.34
279	37°59.22'	105°48.33'	7602	C	1271.4	-274.72
280	37°59.22'	105°49.84'	7578	C	1276.3	-271.35
281	37°59.07'	105°50.51'	7572	C	1283.0	-264.88
282	37°59.53'	105°52.08'	7566	C	1289.5	-259.57
283	37°59.53'	105°53.26'	7584	C	1295.2	-252.89
284	37°58.35'	105°54.16'	7556	A	1298.9	-249.29
285	37°57.64'	105°54.27'	7555	B	1299.5	-245.92
286	37°56.76'	105°54.30'	7548	A	1301.7	-244.86
287	37°55.09'	105°54.19'	7544	B	1373.2	-242.50
288	37°55.99'	105°53.98'	7543	A	1302.1	-242.58
289	37°54.05'	105°54.00'	7544	B	1300.4	-242.45
290	37°53.30'	105°53.90'	7543	B	1297.2	-244.62
291	37°52.25'	105°53.79'	7539	A	1293.5	-247.19
292	37°51.62'	105°53.75'	7539	A	1290.3	-249.33
293	37°50.88'	105°53.56'	7539	A	1287.6	-250.94
294	37°50.02'	105°53.49'	7541	A	1283.7	-253.46
295	37°49.70'	105°53.49'	7542	A	1282.7	-253.97
296	37°48.41'	105°53.40'	7545	A	1279.3	-255.30
297	37°47.31'	105°53.33'	7544	A	1277.6	-255.46
298	37°46.84'	105°53.33'	7546	A	1277.0	-255.27

STATION	LATITUDE	LONGITUDE	ELEVATION (feet)	QUALITY	OBSERVED GRAVITY (-978,000 milligals)	COMPLETE BOUGUER ANOMALY (2.67 gm/cm^3)
299	37°45.57'	105°53.00'	7548	A	1275.9	-254.46
300	37°44.59'	105°53.00'	7557	A	1274.7	-253.66
301	37°43.79'	105°52.90'	7558	A	1274.4	-252.73
302	37°42.96'	105°52.80'	7555	B	1274.6	-251.79
303	37°42.04'	105°52.77'	7552	A	1274.8	-250.13
304	37°41.19'	105°52.73'	7552	B	1275.7	-248.14
305	37°40.21'	105°52.64'	7553	A	1275.3	-247.06
306	37°39.00'	105°52.50'	7554	B	1274.2	-246.23
307	37°38.45'	105°52.38'	7554	A	1273.1	-246.54
308	38°09.13'	105°56.63'	7746	A	1292.3	-259.81
309	38°08.44'	105°57.45'	7746	B	1292.3	-251.03
310	38°07.80'	105°58.12'	7745	A	1299.5	-250.98
311	38°07.19'	105°59.19'	7808	B	1303.0	-242.88
312	38°06.89'	106°00.50'	7778	A	1309.0	-238.28
313	37°39.36'	105°44.06'	7510	C	1250.3	-273.13
314	37°39.42'	105°42.90'	7526	B	1247.9	-274.60
315	37°39.39'	105°41.78'	7540	B	1245.7	-275.72
316	37°39.36'	105°40.62'	7558	A	1244.3	-275.88
317	37°39.40'	105°40°00'	7567	A	1244.3	-275.32
318	37°39.37'	105°39.61'	7581	B	1244.2	-274.45
319	37°39.33'	105°38.49'	7618	B	1245.1	-271.10
320	37°39.30'	105°37.39'	7658	B	1246.7	-266.39
321	37°39.29'	105°36.42'	7698	A	1251.8	-258.58
322	37°39.40'	105°35.47'	7752	A	1254.7	-252.13
323	37°39.54'	105°34.59'	7809	A	1255.4	-247.34
324	37°39.89'	105°34.00'	7894	B	1252.9	-245.03
325	37°40.23'	105°33.80'	7962	A	1249.9	-244.27
326	37°40.79'	105°33.52'	7983	B	1250.9	-242.70
327	37°41.42'	105°33.31'	8055	B	1251.4	-238.33
328	37°42.39'	105°32.88'	8099	A	1252.5	-235.14
329	37°42.95'	105°32.49'	8152	B	1254.6	-231.53
330	37°43.27'	105°32.00'	8265	B	1252.8	-226.34
331	37°44.08'	105°31.40'	8229	A	1253.6	-229.76
332	37°44.60'	105°31.40'	8315	A	1250.7	-228.23
333	37°45.59'	105°31.62'	8299	B	1254.3	-227.51
334	37°46.47'	105°31.92'	8266	B	1251.6	-234.08
335	37°47.37'	105°31.50'	8422	A	1246.2	-232.28
336	37°47.58'	105°31.06'	8571	B	1240.5	-227.45
337	37°47.89'	105°30.11'	8775	C	1227.8	-225.82
338	37°47.97'	105°29.47'	9052	C	1213.8	-223.57
339	37°48.56'	105°28.55'	9329	C	1195.1	-228.18
340	37°49.93'	105°27.82'	9925	D	1160.3	-228.95
341	37°45.13'	105°31.24'	8410	C	1247.9	-226.37
342	38°22.58'	106°02.15'	8639	B	1238.7	-277.77
343	38°23.40'	106°02.15'	8974	B	1222.8	-274.37
344	38°24.31'	106°02.15'	9382	B	1203.8	-269.59

STATION	LATITUDE	LONGITUDE	ELEVATION (feet)	QUALITY	OBSERVED GRAVITY (-978,000 milligals)	COMPLETE BOUGUER ANOMALY (2.67 gm/cm^3)
345	38°06.54'	106°01.88'	7895	B	1312.5	-227.26
346	38°06.48'	106°02.76'	7760	C	1316.0	-231.35
347	38°06.06'	106°03.44'	7741	C	1323.8	-223.98
348	38°05.80'	106°04.13'	7762	C	1321.5	-224.78
349	38°05.86'	106°04.87'	7746	C	1318.2	-229.18
350	38°05.81'	106°06.02'	7749	B	1313.2	-233.89
351	37°59.64'	106°08.66'	7639	A	1291.7	-253.38
352	37°58.79'	106°08.66'	7610	B	1297.0	-248.57
353	37°57.99'	"	7595	B	1298.2	-247.13
354	37°57.07'	"	7588	B	1296.8	-247.61
355	37°56.26'	106°09.07'	7587	A	1291.9	-251.38
356	37°58.52'	106°08.66'	7605	A	1297.7	-247.79
357	37°55.38'	106°08.66'	7591	B	1287.5	-254.30
358	37°55.00'	"	7591	A	1285.1	-256.15
359	37°53.67'	"	7604	A	1278.3	-260.29
360	37°52.77'	"	7608	B	1274.9	-262.18
361	37°51.91'	"	7614	A	1272.1	-263.38
362	37°51.00'	"	7619	B	1269.2	-264.66
363	37°50.26'	"	7629	A	1266.6	-265.59
364	37°49.35'	"	7635	B	1264.3	-266.21
365	37°48.34'	"	7640	B	1261.9	-266.88
366	37°47.46'	"	7645	B	1259.4	-267.77
367	37°46.59'	"	7650	B	1256.5	-269.11
368	37°45.72'	"	7659	B	1253.9	-269.91
369	37°44.80'	"	7661	B	1252.5	-269.84
370	37°44.08'	106°08.90'	7667	B	1250.9	-270.08
371	37°43.20'	"	7676	A	1248.7	-270.44
372	37°42.32'	"	7678	B	1247.5	-270.24
373	37°41.48'	"	7680	B	1245.7	-270.70
374	37°40.59'	"	7680	B	1243.6	-271.51
375	37°39.82'	"	7680	A	1241.7	-272.25
376	37°38.86'	"	7676	B	1240.2	-272.59
377	37°38.00'	"	7674	A	1238.7	-272.95
378	37°37.10'	"	7670	A	1237.4	-273.18
379	37°36.24'	"	7660	B	1237.1	-272.82
380	37°34.90'	106°08.70'	7658	A	1235.7	-272.42
381	38°08.48'	106°16.01'	7974	A	1272.8	-264.59
382	38°09.06'	106°16.60'	8067	A	1266.2	-266.51
383	38°09.68'	106°17.43'	8054	A	1264.5	-269.84
384	38°09.66'	106°18.92'	8094	A	1260.1	-271.82
385	38°09.35'	106°19.72'	8111	A	1258.0	-272.38
386	38°08.18'	106°20.75'	8138	A	1255.3	-271.81
387	38°07.10'	106°21.68'	8199	A	1250.0	-270.84
388	38°07.10'	106°22.77'	8223	A	1247.1	-272.09
389	38°07.25'	106°23.72'	8248	A	1243.8	-273.70
390	38°07.47'	106°24.80'	8269	B	1240.5	-276.60

STATION	LATITUDE	LONGITUDE	ELEVATION (feet)	QUALITY	OBSERVED GRAVITY (-978,000 milligals)	COMPLETE BOUGUER ANOMALY (2.67 gm/cm^3)
391	38°07.60'	106°25.86'	8370	A	1235.5	-276.20
392	38°07.85'	106°27.05'	8364	B	1237.8	-274.26
393	38°07.49'	106°27.73'	8407	A	1233.1	-275.91
394	37°44.60'	106°10.02'	7679	B	1249.53	-271.43
395	37°44.60'	106°11.13'	7691	B	1246.82	-273.40
396	"	106°12.19'	7709	A	1244.61	-274.51
397	"	106°13.32'	7727	B	1242.44	-275.58
398	"	106°14.41'	7739	B	1240.41	-276.87
399	"	106°15.38'	7756	A	1239.25	-276.99
400	"	106°16.34'	7769	B	1238.43	-276.94
401	37°43.96'	106°17.52	7803	B	1237.28	-275.14
402	37°43.56'	106°18.04'	7814	B	1236.89	-274.26
403	37°42.85'	106°18.50'	7834	B	1234.62	-274.38
404	37°42.06'	106°19.04'	7852	A	1230.28	-276.36
405	37°25.25'	105°31.20'	7746	B	1223.95	-264.47
406	37°44.60'	106°07.82'	7648	B	1255.17	-267.69
407	"	106°06.77'	7635	B	1259.36	-264.30
408	"	106°05.69'	7628	B	1261.44	-262.65
409	"	106°04.60'	7621	B	1264.86	-259.65
410	"	106°03.53'	7615	B	1268.38	-256.49
411	"	106°02.45'	7607	B	1271.33	-254.03
412	"	106°01.38'	7599	B	1274.60	-251.24
413	37°44.60'	106°00.30'	7591	B	1277.31	-249.01
414	"	105°59.20'	7581	A	1279.09	-244.76
415	"	105°58.15'	7575	B	1280.15	-247.10
416	"	105°57.02'	7574	B	1280.44	-246.87
417	"	105°56.30'	7575	B	1280.25	-247.01
418	"	105°55.90'	7573	A	1279.67	-247.77
419	"	105°54.84'	7569	B	1278.46	-249.16
420	"	105°53.70'	7567	B	1276.34	-251.40
421	38°07.87'	106°30.00'	8830	A	1200.38	-284.26
422	38°07.99'	106°31.25'	9084	A	1183.06	-285.58
423	38°08.53'	106°31.53'	9204	A	1174.87	-288.45
424	38°08.88'	106°32.16'	9130	A	1177.95	-290.18
425	38°09.22'	106°32.65'	9385	A	1161.65	-291.67
426	38°09.36'	106°33.70'	9661	A	1142.02	-294.93
427	38°10.15'	106°34.10'	10012	B	1131.46	-285.37
428	38°07.80'	106°29.15'	8594	A	1216.63	-282.21
429	38°10.67'	106°07.57'	9944	A	1158.32	-260.58
430	38°10.80'	106°06.58'	9762	Not reliable	1188.85	-242.41
431	38°12.07'	106°05.78'	8806	A	1223.77	-267.74
432	38°11.53'	106°06.20'	9174	C	1208.72	-259.94
433	37°53.66'	106°09.88'	7628	B	1275.67	-261.42
434	37°53.66'	106°11.00'	7659	B	1272.34	-262.80
435	37°52.80'	"	7663	B	1269.40	-264.29
436	"	106°12.70'	7736	B	1263.46	-265.77

STATION	LATITUDE	LONGITUDE	ELEVATION (feet)	QUALITY	OBSERVED GRAVITY (-978,000 milligals)	COMPLETE BOUGUER ANOMALY (2.67 gm/cm^3)
437	37°51.90'	106°14.32'	7794	C	1252.71	-271.68
438	"	106°16.00'	8073	C	1243.74	-263.59
439	37°53.67'	106°07.69'	7593	B	1281.12	-258.14
440	37°53.67'	106°06.60'	7589	B	1283.24	-256.29
441	37°53.67'	106°05.30'	7578	B	1286.42	-253.80
442	37°54.39'	106°04.19'	7570	B	1292.55	-249.24
443	37°54.39'	106°03.24'	7567	B	1296.60	-245.38
444	37°54.39'	106°02.17'	7560	B	1300.70	-241.73
445	37°55.23'	"	7575	B	1303.64	-238.97
446	37°56.11'	"	7560	B	1305.95	-239.58
447	37°57.00'	"	7560	B	1307.64	-238.82
448	37°57.94'	"	7561	B	1308.70	-239.32
449	37°58.74'	"	7555	B	1309.72	-241.19
450	37°59.53'	"	7560	B	1308.70	-239.05
451	37°59.53'	106°01.09'	7565	B	1309.62	-239.97
452	37°59.53'	105°58.91'	7559	B	1307.59	-242.45
453	37°59.53'	105°58.91'	7560	B	1304.46	-245.41
454	37°59.53'	105°57.85'	7559	B	1301.85	-248.08
455	37°59.53'	105°56.72'	7556	B	1300.50	-249.62
456	37°59.53'	105°55.59'	7560	B	1299.97	-249.90
457	37°26.48'	105°53.08'	7538	A	1248.59	-254.62
458	37°25.92'	105°53.16'	7537	B	1248.74	-253.71
459	37°24.96'	105°53.84'	7535	A	1247.96	-253.21
460	37°24.57'	105°54.10'	7538	B	1247.29	-253.12
461	37°23.62'	105°54.57'	7552	A	1245.41	-252.78
462	37°22.70'	105°55.11'	7561	A	1244.25	-252.07
463	37°21.85'	105°55.63'	7568	A	1243.09	-251.58
464	37°21.10'	105°55.97'	7569	A	1241.41	-252.09
465	37°20.35'	105°56.39'	7571	A	1240.25	-252.04
466	37°19.10'	105°57.09'	7582	B	1238.51	-251.31
467	37°17.99'	105°57.44'	7592	A	1236.68	-250.93
468	37°17.07'	105°57.63'	7599	B	1235.62	-250.22
469	37°16.00'	105°57.92'	7602	A	1234.80	-249.31
470	37°15.14'	105°58.20'	7611	A	1234.07	-248.25
471	37°14.18'	105°58.14'	7628	A	1233.59	-246.32
472	37°12.87'	105°58.70'	7645	A	1232.39	-244.58
473	37°12.17'	105°59.00'	7669	A	1230.89	-243.62
474	37°11.47'	105°59.17'	7696	A	1230.79	-241.05
475	37°10.38'	105°59.46'	7732	A	1229.51	-238.60
476	37°09.84'	105°59.62'	7747	B	1228.24	-238.19
477	37°09.18'	105°57.78'	7771	A	1227.27	-236.87
478	37°08.59'	105°59.92'	7803	A	1226.26	-234.96
479	37°07.43'	106°00.18'	7830	A	1224.72	-233.19
480	37°06.45'	106°00.47'	7861	A	1221.00	-233.62
481	36°59.74'	106°00.00'	8033	A	1196.31	-238.20

STATION	LATITUDE	LONGITUDE	ELEVATION (feet)	QUALITY	OBSERVED GRAVITY (-978,000 milligals)	COMPLETE BOUGUER ANOMALY (2.67 gm/cm^3)
482	37°00.51'	106°00.20'	8011	A	1199.98	-236.97
483	37°01.23'	106°00.40'	7968	A	1204.08	-236.52
484	37°02.05'	106°00.50'	7960	B	1207.21	-235.07
485	37°02.94'	106°00.60'	7916	A	1213.05	-233.18
486	37°03.80'	106°00.58'	7884	A	1217.10	-232.29
487	37°33.19'	106°08.90'	7655	B	1234.75	-271.02
488	37°32.29'	"	7654	B	1234.75	-269.76
489	37°31.40'	"	7655	B	1234.89	-268.24
490	37°30.10'	"	7654	B	1234.32	-266.98
491	37°29.25'	"	7654	A	1234.22	-265.84
492	37°28.40'	"	7644	B	1234.36	-265.01
493	37°27.53'	"	7660	B	1232.63	-264.57
494	37°26.71'	"	7692	B	1230.22	-263.85
495	37°25.80'	"	7738	B	1226.21	-263.76
496	37°24.93'	"	7800	B	1222.31	-262.69
497	37°23.88'	106°08.89'	7819	B	1218.69	-263.46
498	37°23.28'	106°09.00'	7870	B	1219.03	-259.34
499	37°22.37'	106°09.00'	7912	B	1210.35	-264.12
500	37°21.46'	106°09.00'	7975	B	1206.00	-263.37
501	37°20.62'	"	7989	B	1202.34	-264.97
502	37°19.72'	"	7970	B	1200.55	-266.61
503	37°18.80'	"	7979	B	1200.94	-264.38
504	37°18.02'	"	7938	B	1201.90	-264.76
505	37°38.08'	105°52.38'	7553	B	1271.50	-247.66
506	37°37.20'	105°52.20'	7551	A	1270.39	-247.60
507	37°35.84'	105°52.00'	7551	A	1267.98	-248.06
508	37°35.04'	105°51.90'	7550	B	1264.36	-250.58
509	37°34.15'	105°51.79'	7548	B	1260.89	-252.87
510	37°33.31'	105°51.70'	7547	A	1259.54	-253.06
511	37°32.33'	105°51.59'	7547	B	1259.11	-252.06
512	37°31.07'	105°51.39'	7545	A	1256.84	-252.61
513	37°29.80'	105°51.30'	7542	A	1255.01	-252.78
514	37°28.70'	105°51.18'	7536	B	1252.69	-253.86
515	37°39.36'	105°51.60'	7570	B	1271.98	-247.99
516	37°39.36'	105°50.57'	7563	B	1269.04	-251.32
517	37°39.36'	105°49.50'	7554	B	1266.53	-254.38
518	37°39.36'	105°48.38'	7543	B	1263.45	-258.10
519	37°39.36'	105°47.30'	7536	B	1260.02	-261.93
520	37°39.36'	105°46.25'	7524	A	1256.94	-265.72
521	37°39.36'	105°45.16'	7518	B	1253.66	-269.32
522	38°06.50'	106°10.38'	7902	C	1286.31	-252.36
523	38°07.34'	106°10.40'	8028	C	1277.05	-255.13
524	38°08.22'	106°10.10'	8179	C	1267.26	-256.91
525	38°09.09'	106°10.04'	8399	C	1256.26	-255.78
526	38°09.76'	106°09.66'	8661	C	1244.20	-251.87

STATION	LATITUDE	LONGITUDE	ELEVATION (feet)	QUALITY	OBSERVED GRAVITY (-978,000 milligals)	COMPLETE BOUGUER ANOMALY (2.67 gm/cm^3)
527	38°10.54'	106°09.44'	8949	C	1229.88	-249.55
528	38°10.78'	106°08.63'	9354	C	1202.44	-253.11
530	37°17.00'	106°07.80'	7847	B	1204.99	-265.69
531	37°17.00'	106°06.68'	7821	A	1207.74	-264.54
532	37°16.12'	"	7848	B	1206.05	-263.33
533	"	106°05.05'	7765	A	1212.47	-261.94
534	37°15.28'	106°03.64'	7710	B	1215.84	-260.68
535	37°14.45'	106°02.85'	7702	B	1217.97	-257.86
536	37°13.51'	106°01.99'	7685	B	1221.05	-254.44
537	37°12.62'	106°01.15'	7737	B	1223.99	-247.10
538	37°11.75'	106°00.09'	7700	B	1227.61	-244.41
539	37°23.88'	106°07.80'	7781	B	1220.80	-263.79
540	"	106°06.79'	7735	B	1223.08	-264.32
541	"	106°05.80'	7691	B	1225.68	-264.42
542	"	106°04.54'	7661	B	1228.43	-263.54
543	"	106°03.41'	7630	B	1231.08	-262.79
544	"	106°02.28'	7641	B	1233.54	-259.67
545	"	106°01.24'	7595	B	1235.86	-260.12
546	"	106°00.15'	7575	B	1237.59	-259.60
547	"	105°59.14'	7573	B	1239.57	-257.74
548	"	105°58.05'	7567	B	1242.23	-255.44
549	"	105°56.94'	7558	B	1244.01	-254.20
550	"	105°55.87'	7551	B	1244.64	-254.00
551	37°41.75'	105°41.12'	7548	A	1244.78	-279.52
552	37°41.02'	105°41.02'	7544	B	1245.55	-277.92
553	37°40.23'	105°41.42'	7542	B	1245.75	-276.78
554	37°39.42'	105°41.42'	7538	B	1245.89	-275.67
555	37°38.53'	105°41.77'	7527	B	1246.66	-274.45
556	37°37.69'	105°41.77'	7524	B	1246.42	-273.68
557	37°37.19'	"	7522	B	1246.18	-273.10
558	37°36.72'	"	7521	A	1244.68	-274.02
559	37°36.00'	105°41.39'	7522	B	1243.82	-273.91
560	38°24.57'	106°06.53'	9114	B	1207.81	-283.65
561	38°23.45'	106°05.41'	8923	B	1217.75	-283.05
562	38°20.05'	105°59.71'	8203	B	1264.73	-273.87
563	38°20.03'	105°58.60'	8269	B	1263.76	-270.24
564	38°19.16'	105°57.46'	8181	B	1266.41	-271.65
565	38°20.44'	105°56.85'	8991	B	1225.18	-262.35
566	38°18.26'	105°57.46'	8044	C	1269.98	-275.66
567	38°17.42'	"	7976	B	1270.32	-278.99
568	38°16.53'	105°55.19'	7944	B	1274.03	-275.55
569	38°15.33'	105°53.27'	8204	C	1267.48	-263.88
570	38°14.75'	105°53.10'	8132	C	1268.34	-266.69
571	38°13.82'	105°53.07'	8028	C	1271.48	-269.11

STATION	LATITUDE	LONGITUDE	ELEVATION (feet)	QUALITY	OBSERVED GRAVITY (-978,000 milligals)	COMPLETE BOUGUER ANOMALY (2.67 gm/cm^3)
572	38°17.96'	105°53.03'	7921	C	1273.75	-279.68
573	38°17.06'	"	7816	C	1273.94	-284.70
574	38°16.18'	"	7755	B	1273.26	-287.99
575	38°16.22'	105°54.17'	7729	C	1275.19	-288.00
576	38°00.76'	105°52.30'	7575	C	1291.20	-259.05
577	38°01.51'	105°52.17'	7584	C	1285.71	-265.02
578	38°02.28'	105°50.05'	7615	C	1281.70	-267.69
579	38°02.96'	105°49.47'	7629	C	1280.83	-268.47
580	38°03.98'	105°49.45'	7661	C	1280.88	-267.89
581	38°05.20'	105°49.97'	7675	C	1281.08	-268.54
582	38°06.07'	105°49.87'	7735	C	1280.69	-266.29
583	38°06.02'	105°48.75'	7901	C	1275.24	-261.51
584	38°06.12'	105°47.68'	8225	C	1271.53	-245.08
585	38°06.00'	105°46.75'	8599	C	1253.05	-239.25
586	38°06.35'	105°45.85'	8985	C	1228.12	-238.39
587	38°07.03'	105°49.90'	7921	C	1273.75	-263.46
588	38°07.81'	105°49.85'	8013	C	1269.69	-263.29
589	38°08.70'	105°49.82'	8129	C	1263.99	-262.78
590	38°08.68'	105°48.90'	8275	C	1260.39	-256.98
591	38°09.56'	105°48.70'	8558	C	1247.56	-253.33
592	38°10.32'	105°48.80'	8845	C	1234.68	-249.11
593	38°11.65'	105°49.15'	8831	C	1235.88	-250.11
594	38°11.12'	105°49.40'	8569	C	1246.35	-255.95
595	38°11.25'	105°51.40'	8105	C	1265.30	-266.75
596	38°10.42'	105°53.05'	7784	C	1272.83	-277.99
597	38°09.52'	105°53.10'	7745	C	1275.43	-276.61
598	38°08.62'	105°53.07'	7713	C	1278.62	-274.35
599	38°07.75'	"	7667	C	1282.52	-272.10
600	38°06.75'	"	7636	C	1285.47	-269.68
601	38°06.17'	105°54.27'	7628	C	1292.41	-262.46
602	38°06.13'	105°53.10'	7636	C	1287.73	-266.48
603	38°06.10'	105°52.00'	7649	C	1285.22	-268.01
604	38°06.07'	105°50.95'	7670	C	1284.16	-267.84
605	38°07.77'	105°50.90'	7804	C	1275.67	-269.84
606	38°07.80'	105°52.00'	7727	C	1279.63	-270.51
607	38°08.92'	105°54.20'	7694	C	1284.45	-270.32
608	38°24.95'	106°08.24'	8742	B	1226.14	-286.78
609	38°23.89'	106°07.87'	8841	C	1220.35	-282.47
610	38°23.34'	106°08.03'	8992	C	1211.96	-280.68
611	38°22.76'	106°09.84'	9167	C	1198.31	-284.96
612	38°21.79'	106°10.82'	9525	C	1171.30	-283.00
613	38°21.72'	106°11.47'	9826	C	1153.51	-284.13
614	38°22.83'	106°05.05'	9045	C	1208.49	-282.65
615	38°21.82'	106°06.95'	9975	C	1149.55	-280.93
616	37°49.93'	105°55.83'	7545	C	1290.77	-246.09

STATION	LATITUDE	LONGITUDE	ELEVATION (feet)	QUALITY	OBSERVED GRAVITY (-978,000 milligals)	COMPLETE BOUGUER ANOMALY (2.67 gm/cm^3)
617	37°48.20'	105°55.90'	7547	C	1285.27	-248.92
618	37°46.47'	105°55.95'	7552	C	1281.22	-250.14
619	37°46.45'	105°58.13'	7558	C	1282.14	-248.81
620	37°48.20'	105°58.08'	7556	C	1286.86	-246.78
621	37°49.95'	105°58.04'	7555	C	1292.99	-243.16
622	37°49.95'	106°00.20'	7559	B	1289.32	-246.68
623	37°49.97'	106°02.38'	7577	B	1282.14	-253.35
624	37°48.25'	106°02.40'	7588	B	1277.17	-254.67
625	37°48.25'	106°02.27'	7568	B	1284.11	-248.93
626	37°46.50'	106°02.47'	7595	B	1274.61	-254.24
627	37°46.50'	106°00.27'	7581	B	1280.06	-249.62
628	37°47.38'	106°05.58'	7625	C	1266.27	-262.05
629	37°49.99'	106°05.53'	7604	C	1773.65	-259.72
630	37°51.73'	106°05.52'	7590	C	1279.97	-256.76
631	"	106°02.35'	7569	C	1289.18	-248.84
632	37°53.44'	106°02.30'	7565	B	1296.65	-244.08
633	37°55.20'	106°05.45'	7580	C	1292.60	-249.73
634	37°57.90'	106°06.57'	7594	C	1301.86	-243.47
635	37°57.87'	106°04.38'	7594	C	1304.42	-240.98
636	37°59.67'	106°06.53'	7608	C	1297.43	-249.62
637	37°59.67'	106°04.36'	7604	C	1303.36	-244.04
638	37°57.90'	106°00.00'	7594	C	1310.45	-235.01
639	38°01.20'	105°56.70'	7567	C	1303.26	-248.59
640	38°01.57'	105°58.87'	7577	C	1308.23	-243.55
641	38°02.62'	105°59.90'	7579	C	1315.08	-238.10
642	38°04.22'	105°59.85'	7590	C	1319.71	-253.03
643	38°06.15'	105°59.82'	7597	C	1315.99	-241.05
644	38°06.15'	105°57.62'	7617	C	1304.95	-250.86
645	38°04.33'	106°02.03'	7650	C	1322.75	-228.60
646	"	106°04.27'	7629	C	1319.13	-233.43
647	38°02.62'	106°03.20'	7646	C	1313.29	-235.86
648	38°00.86'	106°03.23'	7646	C	1307.51	-239.10
649	38°00.86'	106°05.40'	7633	C	1298.54	-248.77
650	38°07.62'	106°05.38'	7646	C	1307.17	-248.96
651	38°04.33'	106°06.65'	7663	C	1307.46	-242.98
652	38°05.20'	106°22.10'	8546	D	1224.50	-272.20
653	38°03.37'	106°24.02'	9182	D	1174.49	-278.41
654	38°01.80'	106°24.65'	9829	D	1125.53	-289.23
655	38°00.10'	106°26.60'	10258	D	1098.00	-288.32
656	37°57.95'	106°25.35'	9405	D	1148.25	-286.46
657	37°55.92'	106°25.30'	8889	D	1174.25	-286.69
658	37°54.26'	106°28.70'	8727	D	1196.34	-273.51
659	37°52.11'	106°21.10'	8377	D	1216.83	-271.99
660	37°51.46'	106°18.20'	8113	D	1232.04	-270.39
661	37°50.33'	106°15.40'	7810	C	1246.35	-274.58
662	37°50.16'	106°12.10'	7675	B	1257.78	-271.37

STATION	LATITUDE	LONGITUDE	ELEVATION (feet)	QUALITY	OBSERVED GRAVITY (-978,000 milligals)	COMPLETE BOUGUER ANOMALY (2.67 gm/cm^3)
663	38°15.34'	105°59.44'	8293	B	1253.92	-273.87
664	38°15.68'	106°00.56'	8515	B	1243.99	-270.83
665	38°16.07'	106°01.43'	8761	B	1228.60	-271.33
666	38°16.16'	106°02.73'	9036	C	1205.40	-276.66
667	38°19.27'	106°09.53'	9915	B	1143.14	-290.14
668	38°19.32'	106°10.43'	10214	C	1119.46	-295.25
669	38°19.83'	106°11.27'	10785	C	1090.04	-291.26
670	38°16.09'	106°10.43'	10035	C	1128.77	-292.79
671	38°15.73'	106°11.80'	11350	C	1051.79	-285.62
672	38°16.11'	106°12.92'	10800	C	1088.69	-286.04
673	38°07.27'	106°03.45'	7892	C	1305.14	-235.10
674	38°07.86'	106°04.30'	8044	C	1293.42	-238.34
675	38°08.63'	106°04.25'	8329	D	1272.68	-242.85
676	38°08.40'	106°04.95'	8584	D	1257.59	-242.14
677	38°08.66'	106°06.00'	8834	D	1238.68	-245.70
678	37°57.54'	105°43.23'	7629	C	1275.92	-264.61
679	37°58.03'	105°40.42'	8246	C	1267.52	-234.23
680	37°57.15'	105°39.70'	8430	C	1260.96	-227.66
681	37°56.02'	105°38.70'	8577	C	1255.03	-221.96
682	37°53.93'	105°38.79'	7901	C	1278.42	-238.91
683	37°53.07'	105°38.73'	7849	C	1276.06	-244.79
684	37°52.56'	105°36.82'	8259	C	1262.94	-230.92
685	37°51.67'	105°35.75'	8507	C	1253.01	-223.38
686	37°51.48'	105°37.57'	7919	C	1261.35	-252.90
687	37°51.05'	105°39.38'	7744	C	1252.23	-273.41
688	37°50.30'	105°42.15'	7649	C	1244.76	-285.87
689	37°50.12'	105°42.90'	7625	A	1245.05	-286.69
690	37°51.55'	105°42.94'	7632	C	1249.00	-284.19
691	37°53.56'	105°43.40'	7633	C	1255.27	-280.55
692	37°55.17'	105°44.12'	7638	C	1264.39	-273.48
693	37°56.74'	105°43.34'	7671	C	1273.21	-264.77
694	37°57.55'	105°46.85'	7549	C	1268.78	-277.91
695	37°55.70'	105°46.85'	7555	C	1267.04	-276.74
696	37°54.20'	105°47.25'	7556	C	1265.69	-276.10
697	37°52.32'	105°47.70'	7558	C	1266.99	-272.28
698	37°50.60'	105°47.85'	7561	C	1267.91	-268.37
699	37°49.05'	105°48.75'	7557	C	1268.25	-266.43
700	37°47.30'	105°50.40'	7556	C	1270.85	-261.43
701	37°44.65'	105°50.65'	7580	C	1268.05	-258.99
702	37°44.15'	105°48.65'	7590	C	1262.65	-263.02
703	37°43.80'	105°46.60'	7580	C	1257.78	-267.95
704	37°42.90'	105°45.10'	7580	C	1254.89	-269.47
705	37°42.87'	105°42.95'	7570	C	1248.57	-276.27
706	37°32.40'	105°48.25'	7534	C	1263.67	-248.34
707	37°32.30'	105°45.05'	7524	A	1247.99	-264.42
708	37°33.05'	105°42.30'	7524	C	1242.78	-270.60
709	37°29.75'	105°45.00'	7523	A	1246.25	-262.49

STATION	LATITUDE	LONGITUDE	ELEVATION (feet)	QUALITY	OBSERVED GRAVITY (-978,000 milligals)	COMPLETE BOUGUER ANOMALY (2.67 gm/cm^3)
710	37°24.45'	105°32.07'	7737	C	1228.19	-259.61
711	37°23.75'	105°32.43'	7747	C	1231.86	-260.30
712	37°22.87'	105°33.07'	7746	A	1232.00	-253.10
713	37°22.22'	105°33.33'	7727	C	1231.18	-254.14
714	37°21.30'	105°33.55'	7755	C	1233.25	-249.09
715	37°20.36'	105°33.50'	7751	C	1231.86	-249.35
716	37°19.53'	105°33.20'	7736	C	1228.96	-251.98
717	37°19.00'	105°33.22'	7728	C	1228.91	-251.77
718	37°18.10'	105°33.30'	7742	C	1226.94	-251.61
719	37°17.35'	105°33.40'	7745	A	1222.95	-254.30
720	37°16.55'	105°33.50'	7746	B	1219.22	-256.86
721	37°15.87'	105°33.55'	7747	A	1217.92	-257.13
722	37°15.10'	105°33.65'	7749	B	1216.66	-257.12
723	37°14.32'	105°33.75'	7751	A	1214.73	-257.81
724	37°13.57'	105°33.90'	7735	B	1213.77	-258.64
725	37°12.68'	105°33.97'	7731	A	1212.27	-259.09
726	37°11.87'	"	7742	B	1211.74	-257.80
727	37°11.08'	105°34.50'	7723	A	1208.13	-261.40
728	37°10.18'	105°35.40'	7730	B	1207.02	-260.80
729	37°09.57'	105°35.62'	7723	A	1207.93	-259.42
730	37°08.47'	105°35.97'	7709	B	1208.30	-255.81
731	37°07.58'	105°35.95'	7697	B	1208.90	-257.11
732	37°06.73'	105°35.95'	7685	B	1207.69	-257.86
733	37°06.17'	105°36.65'	7673	B	1206.92	-258.53
734	37°04.95'	105°36.97'	7643	A	1206.34	-259.15
735	37°03.10'	105°38.18'	7576	A	1209.43	-257.40
736	37°01.90'	105°38.20'	7568	A	1206.68	-258.87
737	37°00.25'	105°37.55'	7587	B	1198.58	-263.35
738	37°00.67'	105°35.07'	7648	B	1194.72	-264.04
739	37°00.67'	105°33.30'	7700	B	1194.04	-261.53
740	36°59.78'	105°32.30'	7747	A	1190.96	-260.10
741	37°04.70'	105°59.20'	7839	B	1222.93	-230.47
742	"	105°56.75'	7778	A	1228.24	-228.85
743	"	105°54.85'	7752	B	1229.54	-229.11
744	"	105°53.70'	7737	A	1231.27	-228.30
745	37°04.87'	105°52.25'	7728	B	1232.67	-227.71
746	37°04.95'	105°51.35'	7739	B	1232.34	-227.49
747	37°04.97'	105°49.85'	7778	B	1229.10	-228.40
748	37°04.87'	105°47.40'	7596	B	1234.80	-233.51
749	37°04.43'	105°45.40'	7454	A	1236.82	-239.40
750	"	105°43.80'	7564	B	1223.32	-246.26
751	"	105°42.40'	7614	B	1213.29	-253.27
752	"	105°40.80'	7614	B	1209.38	-257.16
753	"	105°39.35'	7609	B	1210.44	-256.38
754	37°01.75'	105°39.55'	7526	A	1209.81	-258.12

STATION	LATITUDE	LONGITUDE	ELEVATION (feet)	QUALITY	OBSERVED GRAVITY (-978,000 milligals)	COMPLETE BOUGUER ANOMALY (2.67 gm/cm^3)
755	36°58.00'	105°31.30'	7907	C	1187.14	-250.51
756	36°56.90'	105°27.95'	8119	C	1166.84	-255.96
757	36°58.28'	105°25.80'	8467	C	1139.59	-264.72
758	37°00.85'	105°24.25'	8427	C	1145.28	-262.01
759	37°03.12'	105°23.67'	8437	C	1148.61	-264.90
760	37°05.48'	105°23.10'	8327	C	1161.97	-262.53
761	37°07.93'	105°23.20'	8135	C	1183.82	-255.58
762	37°04.27'	106°03.95'	7998	B	1198.57	-244.04
763	37°03.55'	106°05.70'	8071	B	1187.05	-253.75
764	37°03.28'	106°06.57'	8095	B	1181.07	-254.68
765	37°02.94'	106°07.80'	8138	B	1174.94	-257.39
766	37°02.61'	106°09.07'	8170	B	1170.41	-259.55
767	37°02.50'	106°10.15'	8218	B	1166.50	-260.06
768	37°02.62'	106°10.80'	8265	B	1165.10	-258.56
769	37°03.28'	106°11.37'	8281	B	1163.90	-258.75
770	37°04.05'	106°12.10'	8343	C	1162.35	-258.31
771	37°04.13'	106°13.70'	8397	C	1162.50	-255.22
772	37°04.13'	106°14.75'	8404	C	1162.55	-254.06
773	37°21.17'	106°31.45'	9843	A	1082.29	-271.01
774	37°22.10'	106°32.58'	10340	C	1049.69	-276.69
775	37°22.37'	106°33.80'	9810	C	1076.75	-277.67
776	37°20.77'	106°30.25'	9758	C	1083.93	-272.87
777	37°20.00'	106°28.35'	9688	C	1090.88	-268.28
778	37°18.35'	106°28.70'	9498	C	1101.87	-266.85
779	37°16.34'	106°23.65'	9323	A	1112.58	-261.04
780	37°15.10'	106°28.30'	9467	C	1103.22	-261.89
781	37°13.94'	106°27.77'	9152	A	1120.64	-261.02
782	37°12.64'	106°27.07'	8937	C	1132.31	-260.32
783	37°11.31'	106°26.68'	8854	C	1132.60	-262.30
784	37°10.07'	106°26.35'	8784	C	1136.50	-259.96
785	37°09.30'	106°25.30'	8779	C	1139.16	-258.41
786	37°08.25'	106°23.75'	8774	A	1142.87	-254.14
787	37°07.93'	106°22.70'	8715	C	1150.39	-249.83
788	37°08.13'	106°21.55'	8650	A	1151.84	-251.79
789	37°07.95'	106°20.55'	8665	A	1151.60	-246.12
790	37°07.33'	106°19.67'	8631	A	1151.12	-250.09
791	37°06.68'	106°19.10'	8649	A	1149.57	-251.40
792	37°06.02'	106°18.57'	8643	A	1150.63	-250.72
793	37°05.27'	106°18.10'	8609	A	1151.16	-251.56
794	37°04.75'	106°17.45'	8648	C	1150.97	-249.94
795	37°04.35'	106°15.55'	8446	C	1162.02	-251.94
796	37°34.47'	106°12.20'	7767	C	1230.79	-270.01
797	37°33.82'	106°15.08'	8081	C	1212.18	-268.57
798	37°32.07'	106°16.90'	8452	D	1192.21	-263.08
799	37°31.97'	106°19.75'	9020	D	1161.92	-258.44

STATION	LATITUDE	LONGITUDE	ELEVATION (feet)	QUALITY	OBSERVED GRAVITY (-978,000 milligals)	COMPLETE BOUGUER ANOMALY (2.67 gm/cm^3)
800	37°31.35'	106°22.53'	9895	D	1109.69	-256.11
801	37°39.45'	105°55.90'	7574	B	1274.39	-245.47
802	37°42.08'	"	7574	B	1278.88	-244.78
803	37°41.02'	105°59.20'	7599	B	1273.53	-247.09
804	37°42.28'	106°02.45'	7617	B	1266.82	-254.59
805	"	106°05.70'	7634	B	1257.32	-263.05
806	37°42.33'	106°13.43'	7751	B	1238.27	-275.04
807	37°39.72'	106°13.40'	7758	B	1233.93	-275.14
808	37°39.70'	106°05.70'	7643	B	1251.58	-264.47
809	37°39.72'	106°02.45'	7613	B	1259.88	-258.01
810	37°38.57'	105°59.20'	7603	B	1263.59	-253.25
811	37°36.80'	105°55.90'	7590	B	1267.26	-247.81
812	37°35.93'	105°59.20'	7610	B	1258.33	-254.29
813	37°37.07'	106°02.45'	7620	B	1253.32	-260.34
814	"	106°05.70'	7635	B	1246.42	-266.30
815	37°34.55'	106°02.45'	7602	B	1248.11	-263.01
816	37°34.17'	105°59.20'	7590	B	1254.48	-256.78
817	37°34.15'	105°55.90'	7562	B	1259.68	-253.25
818	37°31.54'	"	7570	B	1258.53	-250.10
819	36°38.62'	105°57.90'	8078	A	1168.00	-233.09
820	36°36.80'	105°57.75'	8036	A	1166.26	-234.73
821	36°34.70'	105°57.00'	7988	A	1157.15	-243.64
822	36°41.25'	105°58.15'	8096	A	1167.23	-236.59
823	36°43.00'	105°58.45'	8175	A	1162.64	-238.96
824	36°44.75'	105°58.85'	8224	C	1160.91	-240.26
825	36°46.95'	105°58.95'	8381	C	1154.40	-240.68
826	36°48.75'	105°59.05'	8461	C	1156.28	-235.95
827	36°50.30'	105°58.90'	8483	A	1158.79	-234.87
828	36°51.85'	105°58.20'	8404	C	1165.30	-235.37
829	36°53.35'	105°57.85'	8325	A	1168.53	-239.08
830	36°54.80'	105°58.60'	8239	A	1174.56	-240.35
831	36°56.35'	105°59.10'	8232	A	1178.80	-238.79
832	36°58.30'	105°59.40'	8138	A	1187.14	-238.96
833	37°07.47'	106°22.07'	8726	A	1144.61	-253.45
834	37°06.80'	106°22.50'	8988	A	1128.06	-255.23
835	37°06.15'	106°22.37'	9314	A	1106.02	-257.67
836	37°05.58'	106°22.65'	9649	A	1084.22	-258.80
837	37°05.00'	106°23.00'	9957	A	1063.39	-261.60
838	37°04.53'	106°23.33'	10170	A	1048.00	-263.65
839	37°04.15'	106°23.75'	10145	A	1048.29	-264.40
840	37°03.45'	106°23.85'	10017	A	1055.52	-263.50
841	37°02.72'	106°24.50'	9708	B	1079.83	-256.25
842	37°01.92'	"	9783	B	1073.47	-257.74
843	37°01.20'	106°24.93'	9982	B	1066.96	-254.29
844	37°01.22'	106°26.95'	10015	A	1065.41	-250.72

STATION	LATITUDE	LONGITUDE	ELEVATION (feet)	QUALITY	OBSERVED GRAVITY (-978,000 milligals)	COMPLETE BOUGUER ANOMALY (2.67 gm/cm^3)
845	37°00.20'	106°28.50'	9478	C	1091.70	-254.54
846	36°58.85'	106°31.40'	8883	A	1125.55	-256.09
847	36°56.40'	106°33.30'	8127	C	1177.69	-245.80
848	36°54.35'	106°34.65'	7856	A	1183.82	-243.00
849	37°16.07'	105°55.85'	7594	C	1238.80	-245.90
850	37°15.15'	105°53.82'	7601	C	1241.74	-241.19
851	"	105°51.57'	7601	C	1244.78	-238.15
852	37°14.82'	105°49.45'	7671	C	1242.03	-236.21
853	37°13.20'	105°46.70'	7727	C	1234.65	-237.37
854	37°14.20'	105°45.80'	7492	C	1242.56	-245.54
855	37°16.83'	105°45.00'	7505	C	1244.39	-246.74
856	37°18.57'	105°43.43'	7510	C	1244.73	-248.60
857	37°18.55'	105°41.45'	7550	C	1237.93	-252.95
858	37°18.53'	105°39.33'	7616	C	1232.67	-254.21
859	37°18.50'	105°37.18'	7656	C	1235.62	-248.69
860	37°16.83'	105°36.05'	7726	C	1225.39	-252.36
861	37°16.77'	105°31.25'	7802	C	1209.43	-263.54
862	37°16.73'	105°29.20'	7876	C	1201.76	-266.65
863	37°16.68'	105°26.42'	8002	C	1195.20	-265.17
864	37°14.40'	105°25.85'	8134	C	1195.54	-253.70
865	37°07.38'	106°02.24'	7882	B	1214.49	-240.20
866	37°09.14'	"	7820	C	1216.71	-244.27
867	37°10.89'	106°02.25'	7761	C	1221.00	-246.09
868	37°11.42'	106°03.93'	7873	C	1206.92	-254.20
869	37°12.00'	106°05.68'	7823	C	1212.13	-252.76
870	37°15.53'	106°09.82'	8000	C	1194.48	-264.75
871	37°13.17'	106°10.95'	8039	D	1188.11	-265.31
872	37°10.80'	106°12.60'	8181	D	1178.08	-262.40
873	37°09.60'	106°13.37'	8243	D	1167.51	-266.04
874	37°09.00'	106°13.47'	8306	D	1165.25	-265.58
875	37°08.92'	106°14.90'	8706	B	1166.12	-257.72
876	37°03.05'	106°02.76'	7955	A	1202.29	-241.73
877	37°02.62'	106°03.65'	7999	A	1194.67	-246.02
878	37°01.25'	106°05.00'	8143	A	1179.86	-250.16
879	36°59.70'	106°08.60'	8675	B	1132.64	-263.02
880	36°59.65'	106°10.60'	8790	A	1124.16	-264.48
881	36°59.50'	106°12.25'	9105	A	1108.38	-260.50
882	36°59.35'	106°13.75'	9263	A	1103.08	-255.65
883	37°00.00'	106°19.92'	9384	C	1096.18	-254.84
884	37°00.83'	106°20.10'	9637	B	1081.71	-256.52
885	37°16.00'	106°59.60'	7075	A	1243.19	-271.44
886	37°19.50'	106°57.40'	7317	C	1230.12	-273.30
887	37°22.55'	106°58.85'	7625	D	1204.84	-283.21
888	37°27.25'	106°53.00'	8449	D	1138.63	-301.60
889	37°28.65'	106°51.65'	9382	D	1081.28	-309.33

STATION	LATITUDE	LONGITUDE	ELEVATION (feet)	QUALITY	OBSERVED GRAVITY (-978,000 milligals)	COMPLETE BOUGUER ANOMALY (2.67 gm/cm^3)
890	37°31.75'	106°46.10'	9198	D	1097.20	-307.45
891	37°35.00'	106°44.20'	8523	D	1146.20	-301.64
892	37°37.10'	106°41.00'	8375	D	1162.74	-300.98
894	37°30.30'	105°19.03'	8163	B	1234.85	-234.37
895	37°32.05'	105°17.60'	8392	B	1234.32	-223.57
896	37°33.55'	105°17.00'	8533	A	1224.09	-226.97
897	37°34.57'	105°15.70'	8821	B	1204.17	-230.00
898	37°35.67'	105°13.85'	9090	B	1190.52	-230.49
899	37°34.97'	105°12.43'	9382	B	1171.91	-230.54
900	37°34.67'	105°11.21'	8825	B	1203.93	-229.62
901	37°33.62'	105°10.07'	8420	B	1224.14	-231.22
902	37°32.60'	105°07.57'	7964	B	1249.80	-234.12
903	37°31.90'	105°04.33'	7457	C	1279.02	-205.43
904	37°21.18'	105°53.73'	7540	C	1247.48	-247.89
905	37°21.15'	105°51.53'	7535	C	1250.13	-245.50
906	37°21.12'	105°49.48'	7520	C	1250.52	-245.96
907	37°22.05'	105°47.80'	7511	C	1246.52	-251.85
908	37°21.57'	105°43.52'	7555	C	1242.03	-252.94
909	37°21.28'	105°41.50'	7583	C	1238.27	-254.57
910	37°21.75'	105°39.45'	7625	C	1236.05	-254.94
911	37°22.37'	105°37.30'	7654	C	1236.10	-253.94
912	37°22.57'	105°34.95'	7681	C	1241.60	-247.03
913	37°27.85'	105°36.37'	7668	B	1231.90	-264.75
914	37°29.45'	"	7670	C	1234.89	-264.89
915	37°31.30'	105°36.36'	7676	C	1243.04	-257.09
916	37°33.07'	"	7698	C	1248.45	-252.43
917	37°34.78'	105°36.35'	7691	C	1253.37	-248.84
918	37°36.60'	105°36.35'	7692	C	1253.37	-252.99
919	37°37.97'	105°35.55'	7748	C	1253.37	-250.85
920	38°08.11'	105°25.25'	8118	B	1308.46	-219.27
921	38°08.23'	105°23.51'	8285	B	1305.57	-213.30
922	38°09.07'	105°21.58'	8467	B	1302.63	-205.52
923	38°08.63'	105°19.64'	8740	B	1285.89	-204.87
924	38°09.87'	105°17.22'	9081	B	1270.26	-201.66
925	38°09.58'	105°15.57'	8985	B	1277.45	-199.98
926	38°07.65'	105°19.75'	9036	B	1260.57	-211.01
927	38°07.12'	105°19.30'	9111	B	1260.47	-206.27
928	38°06.72'	105°19.50'	9255	B	1249.52	-207.64
929	38°05.88'	105°20.18'	8818	B	1271.90	-210.88
930	38°05.52'	105°21.07'	8710	B	1275.52	-212.85
931	38°05.25'	105°21.97'	8540	B	1283.82	-214.43
932	38°05.02'	105°22.61'	8445	B	1286.66	-217.03
933	38°04.95'	105°23.71'	8407	B	1290.57	-216.03
934	38°05.13'	105°24.79'	8255	B	1297.76	-217.10

STATION	LATITUDE	LONGITUDE	ELEVATION (feet)	QUALITY	OBSERVED GRAVITY (-978,000 milligals)	COMPLETE BOUGUER ANOMALY (2.67 gm/cm^3)
935	38°05.16'	105°25.91'	8127	B	1301.23	-221.10
936	38°05.21'	105°27.26'	7949	A	1307.98	-224.86
937	38°05.22'	105°28.11'	7914	B	1306.58	-228.24
938	38°05.27'	105°29.24'	8009	B	1296.12	-232.85
939	38°05.30'	105°30.33'	8114	A	1285.46	-236.77
940	38°05.33'	105°31.44'	8254	B	1272.53	-240.64
941	38°05.13'	105°32.54'	8446	B	1257.53	-242.62
942	38°05.38'	105°33.65'	8820	B	1232.79	-244.03
943	38°08.68'	105°28.58'	7811	A	1324.57	-222.12
944	38°10.18'	105°29.98'	7785	A	1333.78	-216.72
945	38°10.75'	105°30.38'	7769	A	1335.71	-216.58
946	38°12.22'	105°32.21'	7906	A	1323.94	-222.33
947	38°13.70'	105°33.28'	7710	A	1337.84	-222.01
948	38°14.97'	105°34.47'	7570	A	1340.29	-229.26
949	38°17.02'	105°36.93'	7440	A	1347.43	-233.20
950	38°24.18'	105°35.03'	6269	A	1425.42	-234.16
951	38°23.38'	105°34.72'	6467	A	1415.44	-231.90
952	38°21.98'	105°35.17'	6727	A	1398.85	-231.79
953	38°20.08'	105°35.87'	6872	B	1386.79	-232.67
954	38°18.76'	105°36.68'	7181	B	1365.52	-233.67
955	38°23.60'	105°37.60'	6256	B	1420.31	-239.66
956	38°23.32'	105°39.30'	6301	B	1412.30	-243.48
957	38°22.37'	105°41.60'	6380	B	1405.79	-243.97
958	38°21.80'	105°43.27'	6421	B	1399.42	-244.70
959	38°21.68'	105°45.65'	6631	B	1382.26	-252.20
960	38°21.02'	105°46.18'	6851	C	1367.21	-252.71
961	38°20.55'	105°46.97'	7068	C	1353.41	-251.58
962	38°20.18'	105°48.05'	7248	C	1340.54	-250.79
963	38°19.83'	105°48.93'	7551	C	1321.44	-250.64
964	38°19.42'	105°49.67'	8446	C	1266.89	-252.96
965	38°18.81'	105°50.20'	9491	C	1198.45	-253.15
966	38°11.58'	105°31.38'	7875	A	1328.86	-218.25
967	38°11.42'	105°30.10'	7821	A	1335.47	-214.88
968	38°11.71'	105°29.02'	7730	B	1341.60	-214.73
969	38°12.66'	105°27.93'	7761	B	1347.34	-208.65
970	38°12.96'	105°26.91'	7760	B	1351.48	-205.10
971	38°11.90'	105°32.32'	7831	B	1322.93	-227.42
972	38°11.93'	105°33.49'	7835	B	1315.17	-234.24
973	38°11.80'	105°34.55'	7927	C	1298.72	-244.57
974	38°11.48'	105°35.70'	8410	C	1268.43	-244.48
975	38°11.42'	105°36.62'	8720	D	1244.65	-248.51
976	38°07.00'	105°27.62'	7908	A	1318.74	-219.41
977	38°03.93'	105°25.43'	8020	A	1306.58	-220.39
978	38°02.56'	105°24.08'	8099	A	1300.51	-219.91
979	38°07.93'	105°30.81'	7877	A	1308.13	-232.91

STATION	LATITUDE	LONGITUDE	ELEVATION (feet)	QUALITY	OBSERVED GRAVITY (-978,000 milligals)	COMPLETE BOUGUER ANOMALY (2.67 gm/cm^3)
980	38°07.97'	105°32.48'	8093	B	1291.05	-236.43
981	38°07.98'	105°33.60'	8353	B	1272.10	-239.06
982	38°07.73'	105°34.77'	8765	B	1241.38	-243.11
983	38°07.15'	105°35.82'	9574	B	1188.47	-244.81
984	38°06.03'	105°36.52'	10240	B	1150.17	-237.92
985	38°05.52'	105°37.87'	11360	D	1083.90	-237.80
986	38°05.69'	105°38.62'	11900	Not reliable	1045.37	
987	38°01.31'	105°22.76'	8224	A	1295.44	-215.80
988	37°59.88'	105°21.73'	8293	A	1290.28	-214.88
989	37°58.88'	105°20.63'	8379	A	1286.08	-212.50
990	37°57.13'	105°19.57'	8509	A	1271.71	-216.59
991	37°55.21'	105°19.64'	8398	A	1269.78	-222.05
992	37°53.55'	105°19.89'	8170	A	1272.29	-230.46
993	37°51.33'	105°19.55'	7890	A	1283.77	-232.56
995	37°49.65'	105°18.65'	7708	A	1290.09	-235.05
996	37°48.63'	105°17.05'	7532	A	1296.55	-237.63
997	37°48.07'	105°15.45'	7398	B	1304.60	-236.94
998	37°47.88'	105°13.95'	7266	B	1316.42	-232.83
999	37°47.00'	105°12.15'	7091	B	1329.15	-229.48
1000	37°46.42'	105°10.35'	6966	A	1338.66	-226.76
1001	37°46.38'	105°12.30'	7134	B	1323.75	-231.42
1002	37°46.15'	105°13.40'	7199	C	1316.61	-234.26
1003	37°45.77'	105°14.35'	7270	C	1309.23	-236.81
1004	37°45.20'	105°15.15'	7356	C	1299.78	-240.21
1005	37°44.77'	105°16.25'	7476	C	1290.96	-241.06
1006	37°44.50'	105°17.20'	7565	C	1285.12	-241.07
1007	37°43.80'	105°17.90'	7674	C	1278.61	-239.97
1008	37°43.75'	105°18.95'	7814	C	1271.76	-238.24
1009	37°43.75'	105°20.05'	7976	C	1263.13	-237.09
1010	37°43.67'	105°21.40'	8086	C	1256.04	-236.48
1011	37°42.75'	105°22.30'	8293	C	1243.98	-233.97
1012	37°42.80'	105°23.35'	8406	C	1235.97	-236.66
1013	37°43.65'	105°24.45'	8616	C	1223.67	-237.85
1014	37°43.65'	105°25.65'	8949	C	1198.69	-242.74
1015	37°43.65'	105°26.70'	9076	C	1191.02	-242.30
1016	37°43.85'	105°27.75'	9713	C	1161.51	-233.28
1017	37°43.25'	105°28.55'	9438	C	1179.88	-230.04
1018	37°59.56'	105°20.58'	8406	B	1286.86	-211.10
1019	37°59.25'	105°19.49'	8525	B	1281.31	-209.16
1020	37°59.08'	105°18.42'	8650	B	1273.21	-209.52
1021	37°58.54'	105°17.38'	8790	B	1266.21	-206.98
1022	37°58.42'	105°16.17'	8916	B	1261.39	-203.75
1023	37°57.57'	105°15.48'	9190	B	1241.71	-205.84
1024	37°56.88'	105°15.14'	9230	B	1231.05	-213.07

STATION	LATITUDE	LONGITUDE	ELEVATION (feet)	QUALITY	OBSERVED GRAVITY (-978,000 milligals)	COMPLETE BOUGUER ANOMALY (2.67 gm/cm^3)
1025	37°56.07'	105°14.43'	8870	B	1259.85	-204.78
1026	38°02.82'	105°26.57'	8025	B	1297.95	-226.70
1027	38°01.28'	105°26.61'	8159	B	1285.31	-228.72
1028	37°59.57'	105°26.73'	8323	B	1275.28	-226.41
1029	37°58.46'	105°26.83'	8495	B	1264.14	-225.39
1030	37°57.38'	105°26.90'	8599	B	1256.33	-224.70
1031	37°56.53'	105°27.37'	8942	B	1236.65	-221.56
1032	37°56.08'	105°27.30'	9190	B	1221.17	-221.87
1033	37°55.79'	105°28.45'	10265	B	1153.98	-221.85
1034	37°55.46'	105°29.34'	10705	B	1123.45	-222.10
1035	37°55.65'	105°30.25'	11350	Not reliable	1077.06	-233.68
1036	37°45.55'	105°07.90'	6855	A	1349.03	-221.92
1037	37°44.63'	105°05.70'	6755	A	1363.35	-212.15
1038	37°44.10'	105°03.77'	6673	A	1368.56	-210.67
1039	37°43.55'	105°02.15'	6503	A	1385.44	-203.74
1040	37°43.07'	105°00.23'	6457	A	1384.00	-207.29
1041	37°42.45'	104°58.50'	6443	A	1386.26	-205.04
1042	37°39.10'	104°47.25'	6274	A	1385.15	- -
1043	38°17.32'	106°13.67'	11881	B	1011.8	-291.45
1044	38°17.69'	106°12.92'	12197	B	994.1	-287.96
1045	38°18.50'	106°13.58'	12730	B	955.6	-288.20
1046	38°18.65'	106°12.86'	12490	B	975.3	-287.50
1047	38°20.52'	106°13.64'	11927	B	1017.0	-289.28
1048	38°20.55'	106°14.80'	11689	B	1034.7	-287.33
1049	38°17.41'	106°02.62'	9340	B	1184.6	-280.77
1050	38°18.29'	106°03.79'	9732	B	1167.9	-274.09
1051	38°17.28'	106°09.58'	9378	B	1169.9	-291.54
1052	38°17.51'	106°10.46'	9748	B	1143.9	-298.60
1053	38°18.96'	106°11.31'	10600	B	1102.3	-288.02
1054	38°19.10'	106°06.89'	12030	B	1007.6	-284.19
1055	38°19.30'	106°06.38'	12142	B	1002.3	-284.25

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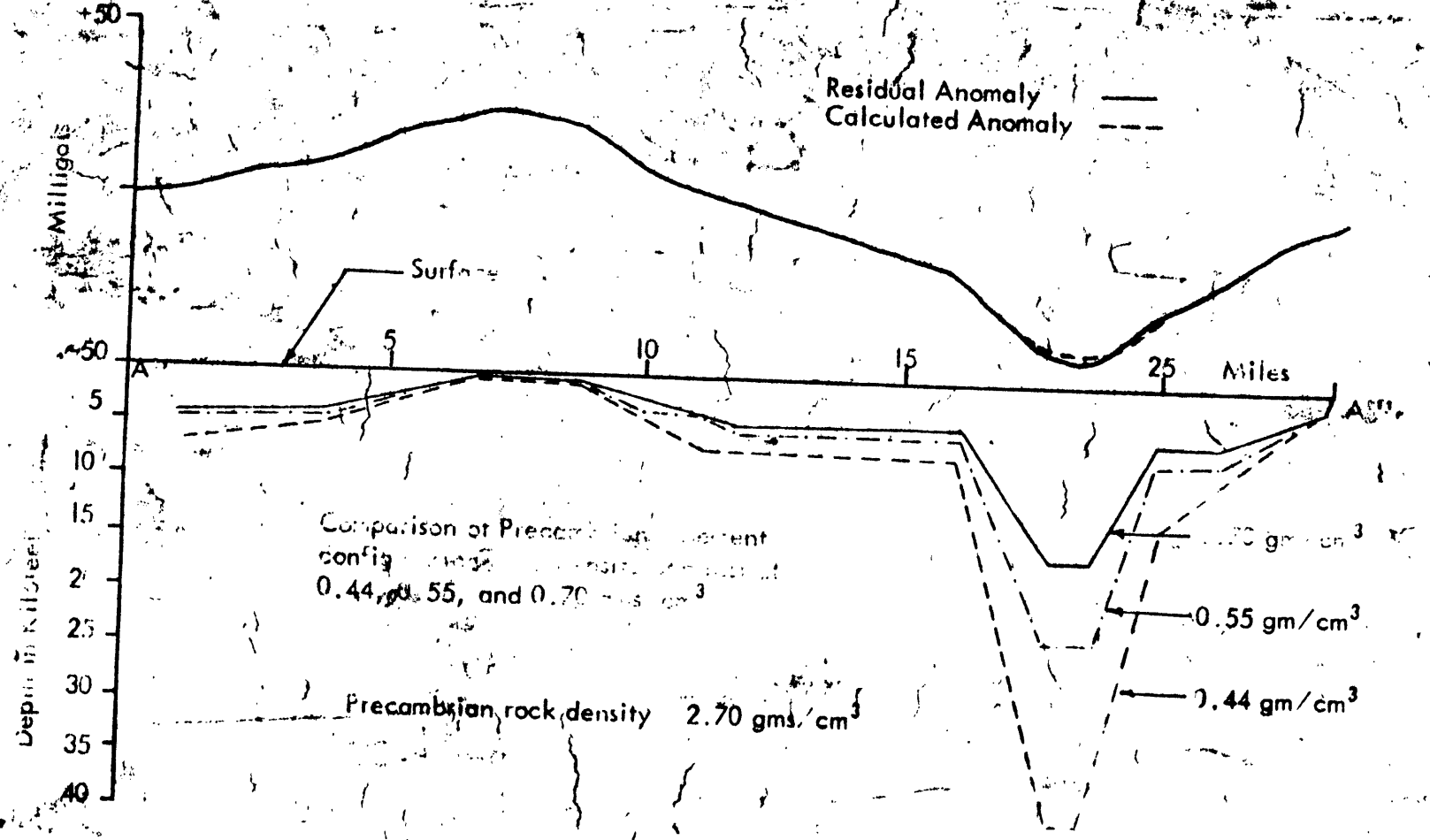

Figure 5- Interpretive Profile A'' - A''

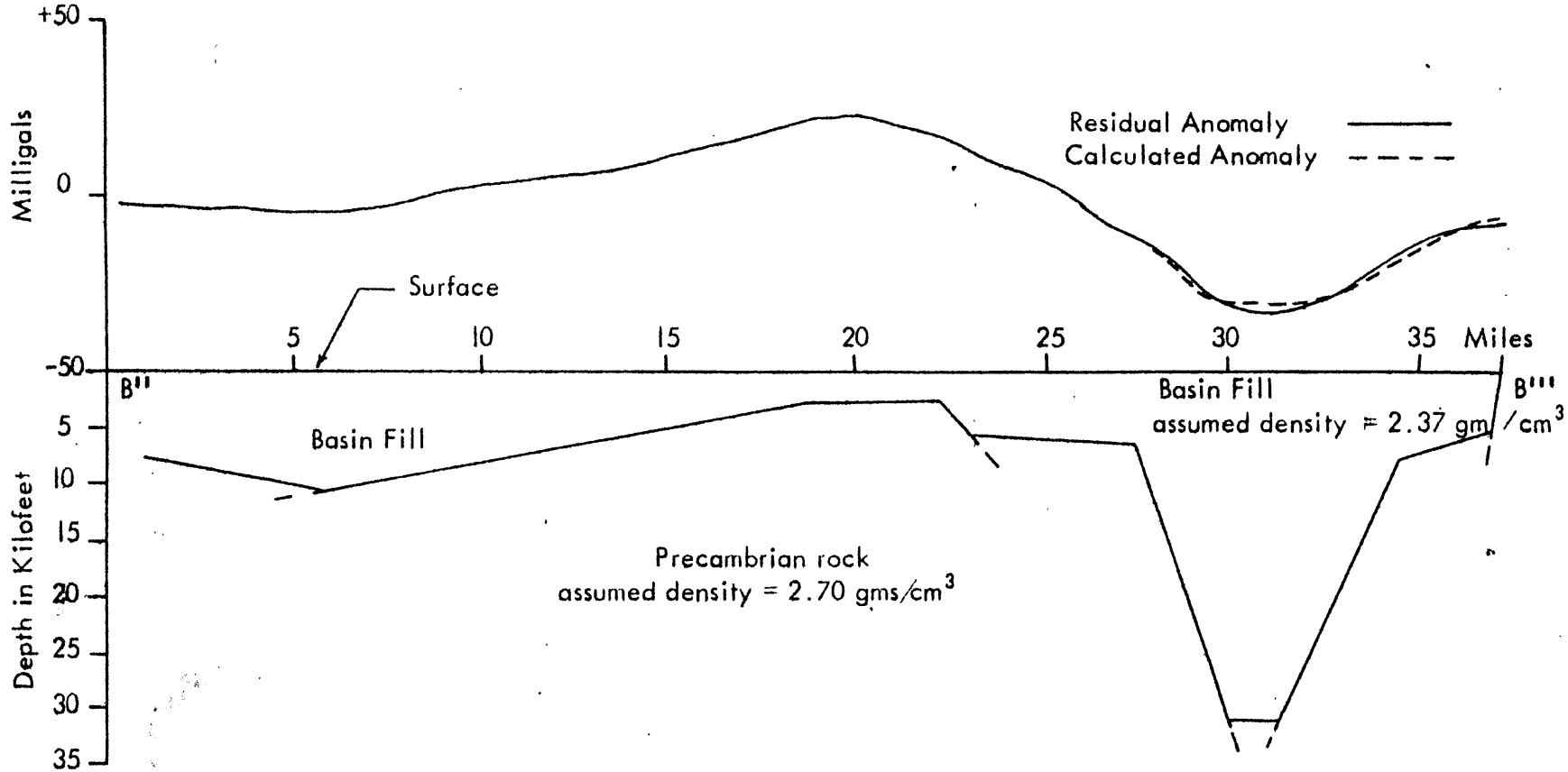

Figure 6 - Interpretive Profile B'' - B'''