USGS-OFR-92-450

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

GEODETIC LEVELING DATA USED TO DEFINE HISTORICAL HEIGHT CHANGES BETWEEN TONOPAH JUNCTION AND LAS VEGAS, NEVADA

By

Thomas D. Gilmore[1]

Open-File Report 92-450

Prepared in cooperation with the
Nevada Field Office
U.S. Department of Energy under
Interagency Agreement DE-AI08-92NV10874

Menlo Park, California
1992

[1] Current address: 260 Zayante School Road, Felton, California 95018

CONTENTS

FIGURES

TABLES

CONTENTS--continued

GEODETIC LEVELING DATA USED TO DEFINE HISTORICAL HEIGHT CHANGES BETWEEN TONOPAH JUNCTION AND LAS VEGAS, NEVADA

By Thomas D. Gilmore

ABSTRACT

This report documents geodetic leveling data for a survey route following U.S. Highway 95 from Tonopah Junction, approximately 50 km west of Tonopah, Nevada, to Las Vegas, Nevada. The survey route passes immediately south of the potential site for a high-level nuclear waste repository at Yucca Mountain in southern Nevada. Comparisons among the results of the several repeated levelings along this survey route provide a partial basis for evaluating contemporary crustal deformation patterns in the vicinity of the Yucca Mountain site and the relation between any such deformation and geologic structures known or suspected to have been active during Quaternary time.

INTRODUCTION

This report presents a compilation of historical geodetic leveling data for a survey route following U.S. Highway 95 from Tonopah Junction, approximately 50 km west of Tonopah, Nevada, to Las Vegas, Nevada (fig 1). Three separate surveys of this route were completed in 1907, 1915, and between 1980 and 1985 by the U.S. Geological Survey in the case of the 1907 leveling and the National Geodetic Survey in the case of the later relevelings. The survey route passes immediately south of the potential site for a high-level nuclear waste repository at Yucca Mountain in southern Nevada (fig. 2). This study is intended to assess the nature, magnitude, and timing of any height changes, of either local or regional extent, that may have occurred along the survey route during the twentieth century, particularly in the vicinity of the Yucca Mountain site. The results of the study provide a partial basis for evaluating contemporary crustal deformation patterns in the vicinity of the Yucca Mountain site and the relation between any such deformation and geologic structures known or suspected to have been active during Quaternary time. Geodetic data such as these provide a quantitative basis for assessing the nature, magnitude, and timing of contemporary tectonic activity in this region and, as such, could contribute to regulatory decisions and (or) the engineering design criteria for a repository. This study has been done as part of the Site Characterization Plan for the Yucca Mountain site (U.S. Department of Energy, 1988, p. 8.3.1.17-194 to 8.3.1.17-197).

The digital and archival geodetic data documented herein were initially compiled and analyzed between 1987 and 1990, while the author was employed by the U.S. Geological Survey. The present documentation of these data was compiled by the author in 1991 under contract to the U.S. Geological Survey (Contract No. 603847). Preliminary interpretations of the data were presented by Gilmore (1990). The purpose of the present report is to provide thorough documentation of the basic data used in the study, and the analysis thereof, in order to form a verifiable basis for further interpretation of the results. Consequently, the data are presented herein without extensive interpretation.

Generalized maps of the survey route are shown on figures 1 and 2. The principal results of the study are summarized as profiles of historical height changes based on comparisons of repeated geodetic levelings along the survey route (figs. 3 and 4). The basic geodetic leveling data used in constructing the height change profiles are summarized in tabular form in tables 1 to 17. In addition to section-by-section field elevation determinations, the tables contain all of the corrections applied to the raw field data for both the digital first-order data and the third-order data from archival summary books. Circuit misclosures for third-order levelings that include the 1907 survey segment used to construct the height change profile on figure 4 are shown on figure 5. This text describes principal aspects of the geodetic data and the procedures used in constructing the height change profiles.

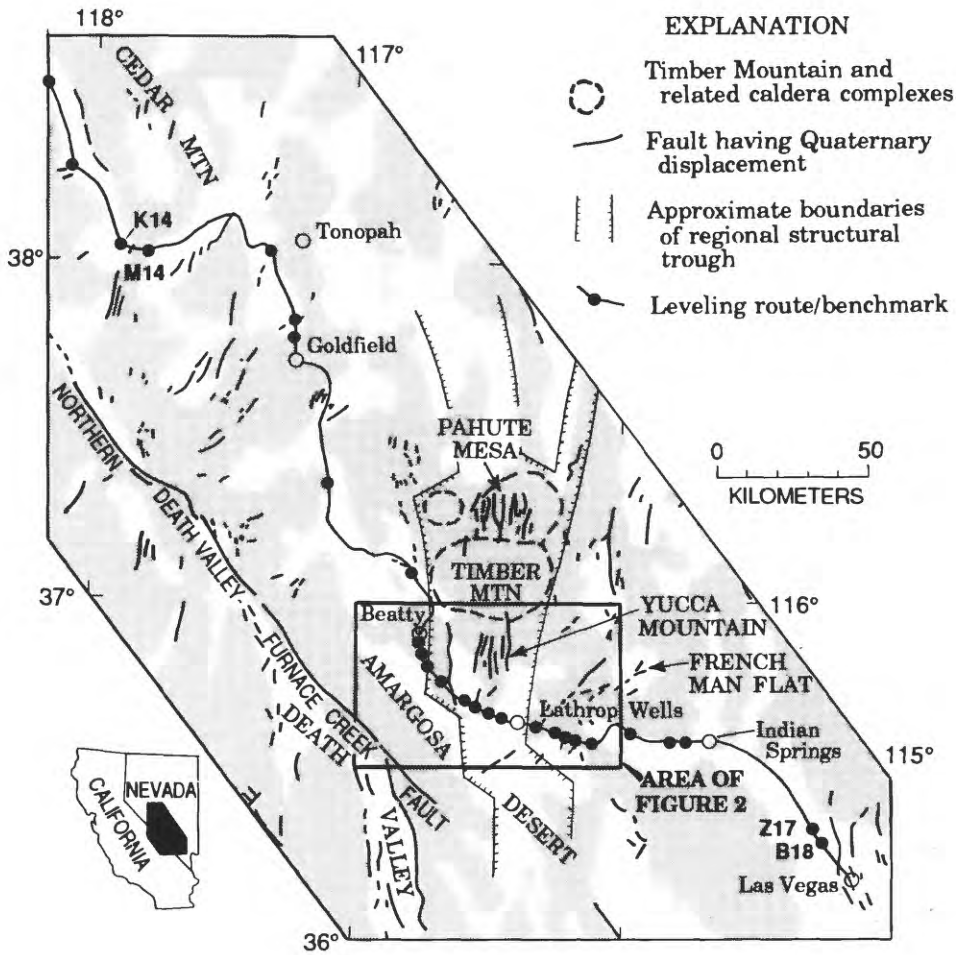

Figure 1. Generalized map showing faults with Quaternary rupture in southwestern Nevada and route of repeated geodetic levelings between Tonopah and Las Vegas. Bench marks used in 1915 to 1984 comparison (fig. 3) represented by dots along leveling route. Leveling route follows highway U.S. 95, shown as solid line connecting bench marks. Upland areas underlain by bedrock are shaded; Quaternary surficial deposits are unpatterned. Faults modified after Nakata and others (1982) and Reheis and Noller (1989).

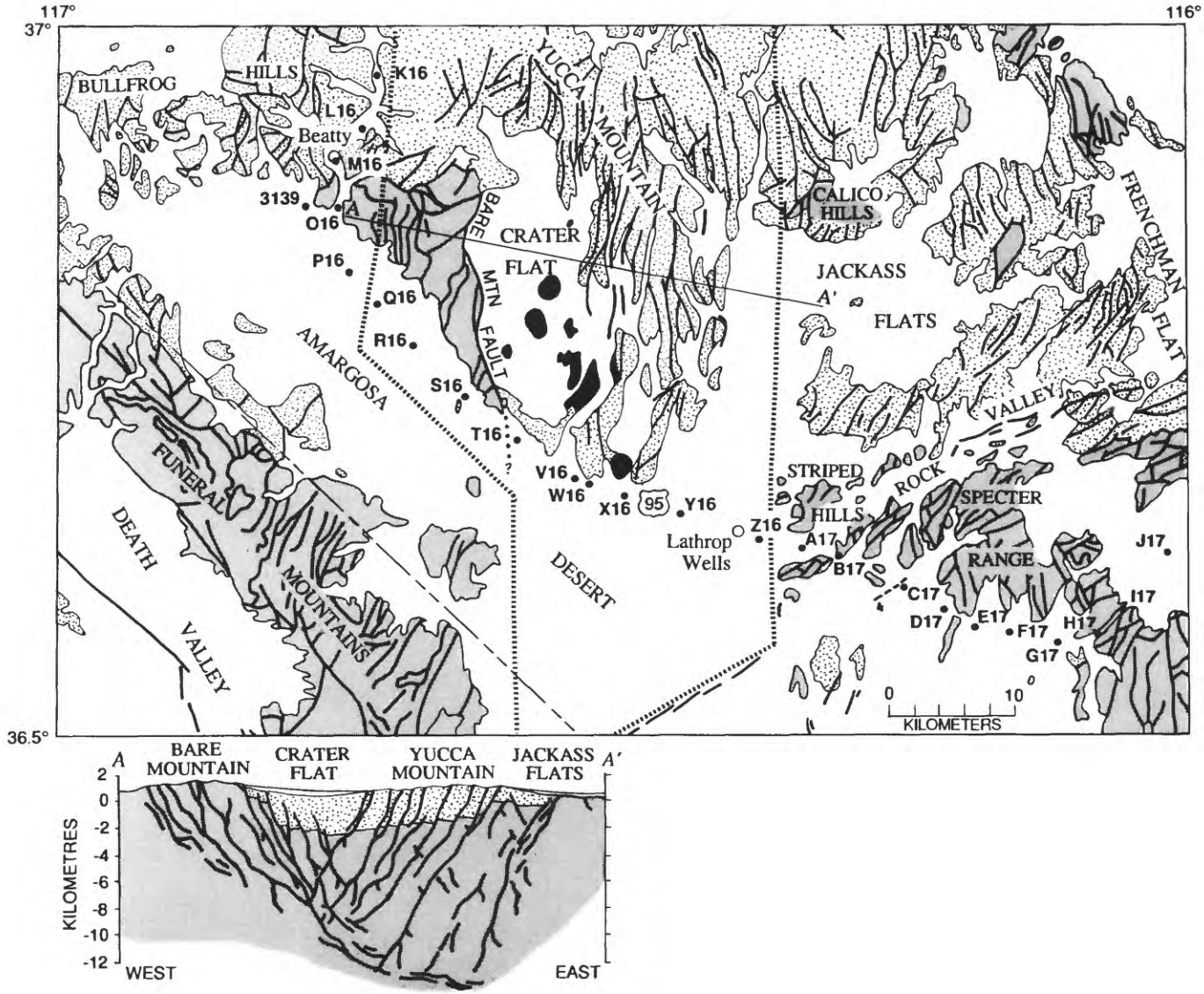

Figure 2. Generalized geologic map and section of Crater Flat/Yucca Mountain area and routes of repeated geodetic levelings in vicinity. Heavy dotted lines represent inferred boundaries of Crater Flat/Yucca Mountain structural depression. Bench marks represented by labeled dots (for example Y16) along Highway 95 leveling route. Southward projection of Bare Mountain fault represented by queried dotted line between bench marks S16 and T16. Patterns: Quaternary surficial deposits--unpatterned; Pleistocene and Pliocene basalt--black; Tertiary volcanic and sedimentary rocks--stippled; Paleozoic and Proterozoic sedimentary and metamorphic rocks--shaded. Generalized from Stewart and Carlson (1978).

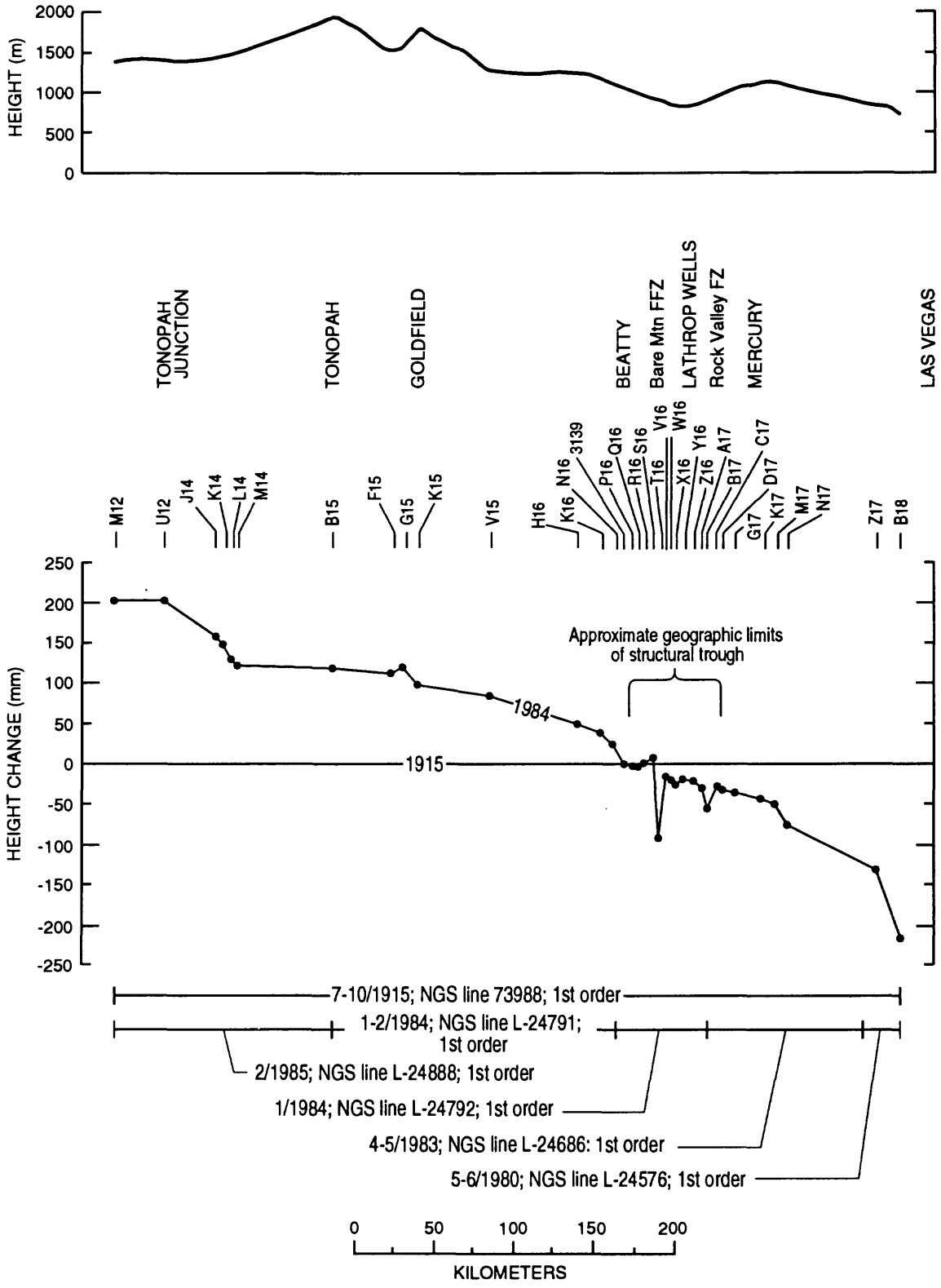

Figure 3. Profiles showing terrain and height changes with respect to 1915 baseline between Tonopah Junction and Las Vegas.

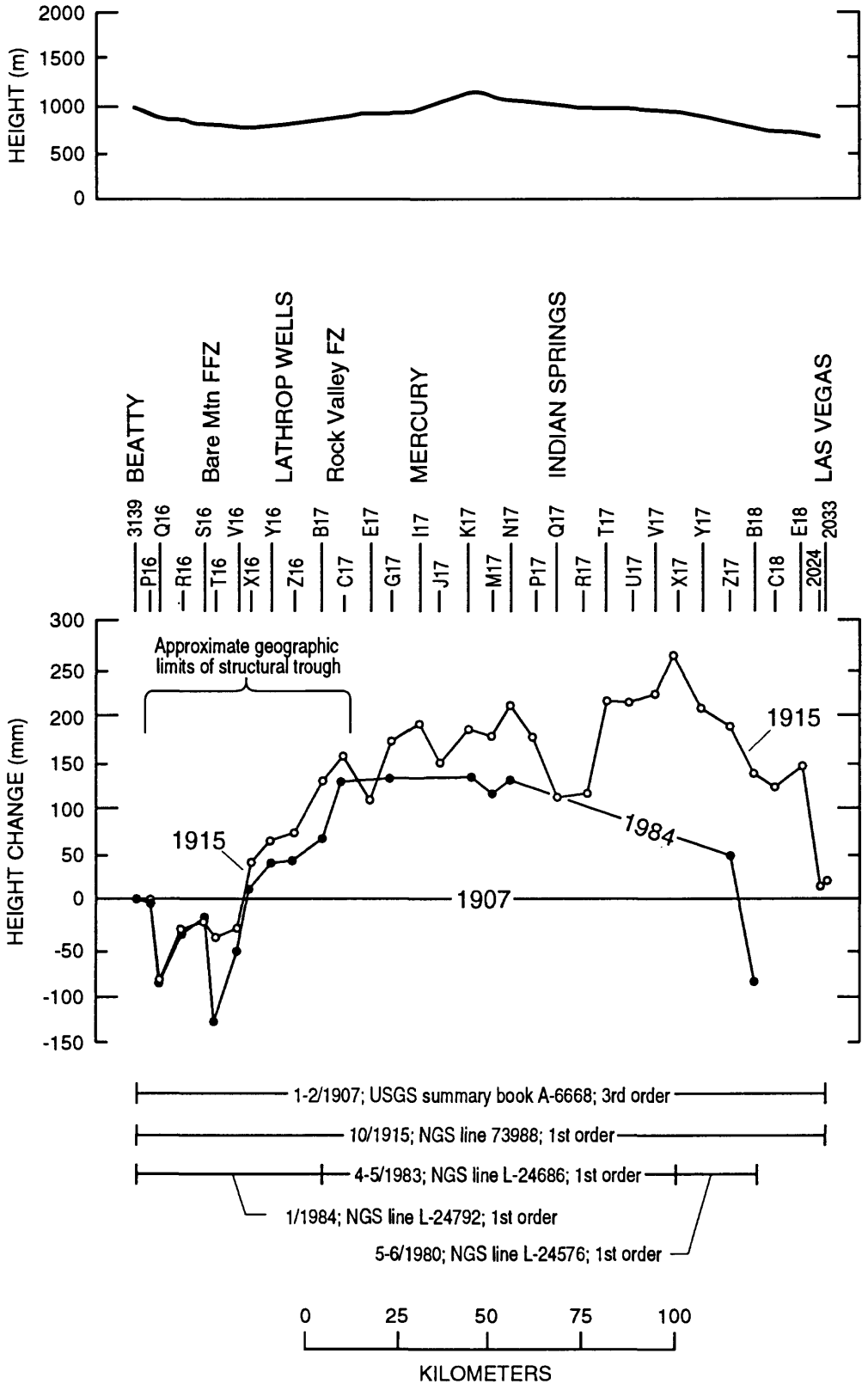

Figure 4. Profiles showing terrain and height changes with respect to 1907 baseline between Beatty and Las Vegas. Note that the horizontal scale of this figure is one half that of figure 3.

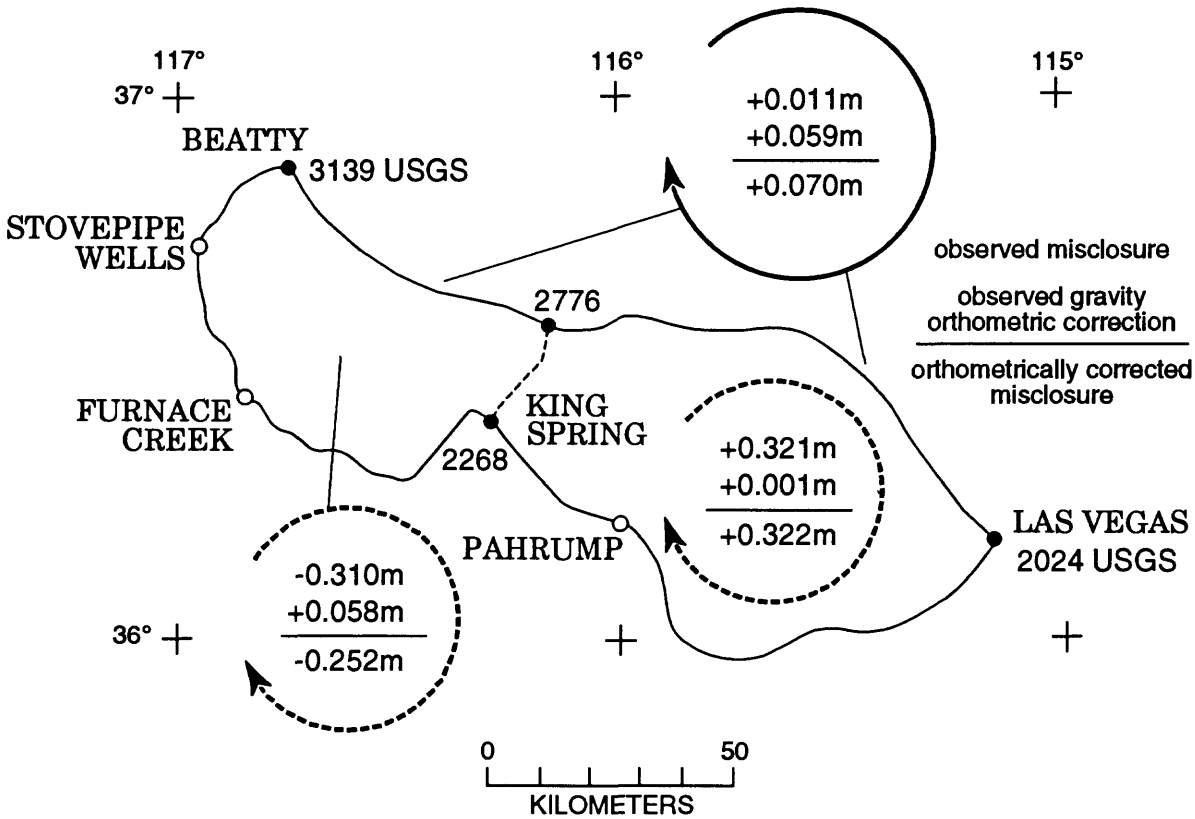

Figure 5. Misclosures around third-order 1907 circuits that include survey line between Beatty and Las Vegas. Solid-line misclosure is algebraic sum of the two adjoining dashed-line misclosures, each of which depends on the dashed-line survey segment common to both circuits. All misclosure summations are clockwise. Orthometric corrections based on observed or interpolated gravity.

Acknowledgements

The author gratefully acknowledges members of the U.S. Geological Survey who supported this study. M.K. Ko wrote the computer programs necessary to process and analyze the digital data supplied by the National Geodetic Survey. S.T. Arriola provided considerable help with managing the digital data files. G.C. Perasso recovered the summary books containing third-order leveling data from the U.S. Geological Survey National Mapping Division archives. Critical technical reviews by, and repeated discussions with, M.D. Carr, K.F. Fox, and R.K. Mark led to substantial improvements in the format of this report.

VERTICAL CONTROL DATA

Vertical control data used in this study are from two sources. In the case of first-order levelings, the original data were obtained as digital files from the National Geodetic Survey. In the case of third-order levelings, the data were compiled from handwritten summary books obtained from the U.S. Geological Survey National Mapping Division archives in Denver, Colorado. Data sources are referenced on the terrain and height change profiles (figs. 3 and 4) and in the tables either by the appropriate National Geodetic Survey line number or by the number of the U.S. Geological Survey archival summary book from which they were compiled.

National Geodetic Survey Digital Data

The first-order leveling data for the 11 National Geodetic Survey lines used in the present study were supplied by the National Geodetic Survey as two digital files, designated the observation and bench mark files. The observation files contain section-by-section elevation differences, corrections, distances, running directions, and sequence numbers. The bench mark files contain bench mark designations, approximate elevations, and bench mark positions by latitude and longitude. The two types of files are cross referenced by unique bench mark identification numbers (UID).

These digital data were combined, processed, and stored for the purposes of the present study in four types of derivative computer files, designated as: (1) *.pro, (2) *.ori, (3) *.dat, and (4)*.prn, where (*) represents the National Geodetic Survey line number in the individual file names. The data for each of the National Geodetic Survey lines are presented in tables 1 to 11. A description of each of the four types of data files follows below.

The *.pro files contain summary-sheet style abstract listings for each of the level lines (tables 1A to 11A). These files comprise the basic working data sets from which the height-change profiles have been constructed. The *.pro file for each National Geodetic Survey line contains the following data for each bench mark: (1) sequence number, (2) unique identification (UID) number, (3) bench mark designation (name), (4) spur code, (5) cumulative distance along the survey line in kilometers, (6) location of bench mark by latitude and longitude, (7) traditionally corrected observed elevation in meters, (8) observed-gravity orthometric height in meters, (9) cumulative refraction correction in millimeters, and (10) cumulative magnetic correction in millimeters. The *.pro files are the output of a data assembly program which combines data from the original observation and bench mark files supplied by the National Geodetic Survey.

The sequence numbers in the *.pro files are an arbitrarily assigned integer series used to determine line order and provide the principal basis for assembling data in the correct sequence. Except for post-1970 lines, sequence numbers usually are assigned in ascending order. Any integer series could have been assigned to the post-1970 lines, including random number series. An adaptable translation of the National Geodetic Survey line ordering program was not available for the present study; consequently, the method employed here to determine line order and assemble the data in proper sequence may differ from that of the National Geodetic Survey. The data assembly program used herein was developed by trial and error. Numerous comparisons were made between data sets produced by our developmental computer program and data sets produced by the National Geodetic Survey in order to ensure that consistent results were being obtained. The project was terminated, however, before documentation of our data assembly

program was completed, and no representation can be made that our results would, in all cases, be identical to data sets processed by the National Geodetic Survey method.

UID numbers are eight-digit numbers that uniquely identify each individual bench mark. A bench mark name is not necessarily a unique designation, but is the common or stamped designation of the bench mark. Bench marks in different areas may have identical name designations but are distinguished by different UID numbers. Reset bench marks, which may have the same name as the original mark, are given a different UID from that of the original mark. Aliases or alternative bench mark names may or may not be listed in the data base.

The spur code, which is entered manually into the data base, indicates those marks that comprise spurs off the main survey route or other spurs. Because of unresolved programming complexities, an adequate method never was devised to automatically encode this attribute. A spur off the main line is indicated by a single asterisk; a spur off a spur is indicated by a double asterisk. The bench mark immediately preceding any bench mark coded as a spur is the junction point from which the spur departs and from which the main line continues.

The distance values are cumulative distances measured along the length of the survey line. The distance values were derived by summing the individual section lengths listed in the National Geodetic Survey observation file. Distance values for each line always begin arbitrarily at 0.00. Distances along a spur continue to accumulate from the junction point; distances along the continuation of the main line also continue to accumulate from the junction point as if the spur did not exist.

Latitude and longitude positions for each bench mark are described in degrees, minutes, and seconds. They are read automatically from the digital bench mark source file supplied by National Geodetic Survey.

The observed elevation is accumulated on a section-by-section basis from the sum of the uncorrected field elevation difference averaged for of all runnings of a given section and the level, rod, temperature, and astronomic corrections for the section. All of the uncorrected field and correction values are supplied in the digital National Geodetic Survey observation file. The approximate elevation supplied in the National Geodetic Survey bench mark source file is used for the elevation of the initial bench mark in a given line; all other observed elevations are based on the algebraic sum of the initial elevation value and the averaged section-by-section corrected observed elevations differences.

Orthometric corrections are required to convert path-dependent observed elevations into uniquely defined true heights (independent of survey route). In the present study, the orthometric corrections are machine-integrated values, computed in all cases from observed or interpolated gravity values derived from the digital gravity data base of the U.S Geological Survey. The formulae used to compute the observed-gravity orthometric corrections, OC, are:

$$OC_{ij} = \Delta H^{D}_{ij} - \Delta l_{ij} + H_j \left\{\frac{g_R - \overline{g}_j}{\overline{g}_j}\right\} - H_i \left\{\frac{g_R - \overline{g}_i}{\overline{g}_i}\right\}, \text{ where}$$

$$\Delta H^{D}_{ij} = \frac{\Delta C_{ij}}{g_R},$$

$$\Delta C_{ij} = \sum_{k=i}^{j} \overline{g}_k dl_k, \text{ where } \overline{g}_k = \frac{(g_{k-1} + g_k)}{2},$$

$$dl_k = \Delta l_{ij} = H_j - H_i,$$

$$\overline{g}_{i,j} = g_{i,j} + 0.0424\,(H_{ij}), \text{ and}$$

$$g_R = 0.9806294 \text{ gal}$$

Only heights, H_i and H_j, in meters, and observed or interpolated gravity values, g_i and g_j, in gals, for any two successive bench marks, i and j, are required as input values; all other variables then can be calculated. The individual orthometric section-by-section corrections are accumulated along the length of the line and added to the corrected observed elevations to produce the observed-gravity orthometric heights shown on tables 1a to 11a.

Cumulative modeled refraction corrections were separately accumulated from the averaged sum of section-by-section values listed in the National Geodetic Survey observation source file. Because refraction corrections are direction dependent, the sign of the forward direction of running is adopted and the numerical value is the arithemetic average of all corrections determined for all runnings of that section. Similarly, cumulative magnetic corrections were separately accumulated from the averaged sum of section-by-section values in the National Geodetic Survey observation source file. Magnetic corrections typically apply only to post-1970 lines utilizing certain automatic instruments, such as the Zeiss Ni1, that appear to be particularly susceptible to the accumulation of this error. Because none of the lines included in the present study involved such instruments, the values listed in the cumulative magnetic correction columns on tables 1a to 11a are always zero.

The *.ori files (tables 1b to11b) are computer-generated, section-by-section listings of data from the National Geodetic Survey observation source files that were used to create the *.pro files (tables 1a to 11a). The *.ori files list: (1) to/from sequence numbers identical to those in the *.pro files, (2) uncorrected field elevation differences averaged for all runnings of the given section, (3) level corrections, (4) temperature corrections, (5) rod corrections, (6) astronomic corrections, (7) refraction corrections, (8) magnetic corrections, (9) traditionally corrected observed elevation differences, (10) cumulative observed elevations, (11)cumulative observed-gravity orthometric corrections, and (12) cumulative refraction corrections. Elevations and elevation differences are reported in meters, whereas corrections are reported in millimeters. The traditionally corrected observed elevation difference is the sum of the uncorrected field elevation difference and the level, temperature, rod, and astronomic corrections (Rappleye, 1948). The cumulative observed elevation for the first bench mark in each line is read directly from the *.pro file; all other values are accumulated by adding the successive corrected observed elevation differences along the length of the line.

Both the original National Geodetic Survey digital data files and the derivative *.pro files serve as input files to the computer program that creates the listings in the *.ori files. The *.pro file supplies the ordered to/from sequence numbers that dictate line order. The observed gravity orthometric corrections listed in the *.ori file are computed as the difference between the observed gravity orthometric height and the observed elevation values in the *.pro files. Other section-by-section values are derived, averaged, and accumulated from the original National Geodetic Survey data files. Although all section-by-section data listings for bench marks on the main survey route have been generated automatically, owing to unresolved programming problems, bench marks located on spurs from the main survey route could not be included in the input files used to generate the initial *.ori file listings. Consequently, values for all bench marks located on spurs have been separately computed. Most were computed by a series of automated computations for individual spurs or segments thereof. In a few cases, the values were generated by equivalent manual computations. The values then were manually entered into the main line master files in the appropriate location using a text editor.

The original observation files supplied in digital format by the National Geodetic Survey were available for the present study as series of computer files named *.dat. Because the format of these files is not conducive to producing manageable printed copy, the *.dat files were converted to *.pm files using a computer program that condenses the original 190-character wide *.dat files to print on standard 132-character wide computer paper without loss or alteration of any data. The *.prn provide exactly the same information, on two lines instead of one, as in the original *.dat files. The *.prn files are included herein as tables 1c to 11c to provide a written record of the original National Geodetic Survey data used for the study.

U.S. Geological Survey Archival Data

Tables 12 to 15 summarize archival third-order leveling data used for the study. They contain (1) the bench mark name (including aliases, where available), (2) distance along survey route in both miles and kilometers, (3) uncorrected field elevation in both feet and meters, (4) level and collimation corrections, in feet, either summed together or listed separately depending on the way in which they were listed in the original summary book (if available), (5) temperature correction in feet (if available), (6) rod correction in feet (if available), and (7) corrected observed elevation in feet and meters. The corrected observed elevation is computed as the sum of the uncorrected field elevation and the available corrections. If no corrections are available, then no corrected observed elevation value can be computed, and the uncorrected field elevation necessarily is used as the basis for constructing profiles of historical height changes.

The rod correction is computed by multiplying the rod excess value supplied in the summary book by the elevation of a given bench mark. The rod excess value is a dimensionless measure, typically in feet per foot. The rod excess values used for this study are specified and their source is referenced in the footnotes on the tables. In some cases, more than one rod excess value or computation method was used to compute rod corrections. The basis for each method of computation is described in the footnotes. In such cases, separate values of corrected observed elevations are listed on the table for each rod correction calculation method that is used. The specific rod correction and corrected observed elevation values used to construct the height change profiles also are specified. For example, detailed rod calibration information completed both before and after the survey run during the winter and spring of 1907 is included with U.S. Geological Survey Summary Book A-6668 and A-6667 (see table 16). Based on the author's examination of many turn-of-the-century U.S. Geological Survey summary books, the documentation of such specific quantitative rod calibration information is unusual. The availability of the information in this case is particularly fortuitous given the current importance of the 1907 survey in evaluating historical height changes in the Yucca Mountain area. Both rod corrections and corrected observed elevations for levelings based on this summary book have been computed using two (and, in one case, three) different methods. The first, and procedurally applicable (Rappleye, 1948), method is based on the average of the latest pre-survey calibrations for the rod pair (Method 1). The second method is based on the average of the post survey calibration values for the rod pair (Method 2). Because these two calibration values differ in both sign and magnitude, comparison of results from the two methods of computation provide an indication of the largest variability in corrected elevation values that may be expected. Only values computed by Method 1 have been used to construct the height-change profiles (fig. 4).

Uncorrected field elevations and level, collimation, and temperature corrections (where available) were read directly from listings in individual U.S. Geological Survey summary books and were compiled manually; rod corrections were manually computed as described above. In all cases, the uncorrected field elevations listed on the tables are the values originally recorded by the surveyor in the field prior to the application of any corrections or network adjustments. Original field elevations and corrections were listed in the summary books in feet, and distances were listed in miles. On the tables, the original values for all distances and elevations are listed in English units along with manually calculated equivalent metric values. The following conversion factors were used to convert from English to metric values:

1 foot = 0.30480061 meters, and
1 mile = 1.609 kilometers

The original field books containing detailed section-by-section information recorded during the 1907 third-order leveling could not be located and likely were discarded (G. Perasso, U.S. Geological Survey National Mapping Division, oral communication, 1991). Consequently, it is not possible to test for any of the following conditions, which otherwise might permit a more detailed and quantitative assessment of the potential contribution of various systematic error sources to the results of the third-order survey: 1) cumulative number of sections run in forward

versus backward directions, 2) cumulative setup imbalance in length of forward versus backward section runnings, (3) cumulative difference in the elevation difference of forward versus backward section runnings, 4) mean sight length, and 5) lowest rod readings made.

Reset Bench Marks

Established bench marks occasionally are moved or destroyed, often as a result of highway, railroad, and other types of construction or demolition projects. In many cases, a reset equivalent bench mark is established prior to the destruction of the original bench mark monument. It is then possible to measure directly the elevation difference between the reset and original marks. Alternatively, the elevation of a reset bench mark can be determined with respect to another nearby bench mark whose elevation was determined previously with respect to an original mark that no longer exists. This method requires an assumption of invariance for the time period between the respective levelings to the new and original bench marks. Such measurements provide a quantitative basis for directly relating previously determined elevations of an old mark to newly determined elevations of a reset mark. This provides a basis for including reset marks in comparisons between successive levelings. These procedures allow for greater historical continuity and consistency in comparing data from successive surveys, as well as for greater spatial and temporal detail.

The National Geodetic Survey maintains a record summarizing the measured elevation difference between original and reset bench marks along many of its primary routes. However, some of the information necessary to evaluate the quality of these measurements often is not recorded, such as the equipment and procedures used, standards of accuracy, and time elapsed between height determinations to the new and original marks.

Several reset bench marks exist along the Beatty to Las Vegas segment (fig. 2) of the survey route that is the focus of the present study. A number of the original bench marks established before the 1907 and/or 1915 surveys were reset prior to, and recovered during, the 1980/1984 relevelings. These marks provide the only basis for assessing short-wavelength, long-term historical height changes over the critical part of the survey route crossing the southward projection of active tectonic structures in Crater Flat/Yucca Mountain area. Table 17 lists height differences supplied by the National Geodetic Survey for reset bench marks that were used in constructing the height change profiles shown on figures 3 and 4.

REFERENCES CITED

Gilmore, T.D., 1990, Selected examples of historical height changes in the southern Great Basin (abs.) *in* Proceedings of the topical meeting on nuclear waste isolation in the unsaturated zone, Focus '89: American Nuclear Society, Inc., La Grange Park, Illinois, p. 335.

Nakata, J.K., Wentworth, C.M., and Machette, M.N., 1982, Quaternary fault map of the Basin and Range and Rio Grande Rift Provinces, western United States: U.S. Geological Survey Open-file Report 82-579, scale 1:2,500,000.

Rappleye, H.S., 1948, Manual of geodetic leveling: U.S. Coast and Geodetic Survey Special Publication 239, 94 p.

Reheis, M.C., and Noller, J.S., 1989, New perspectives on Quaternary faulting in the southern Walker Lane, Nevada and California, *in* Ellis, M.A., ed., Late Cenozoic evolution of the southern Great Basin: Nevada Bureau of Mines and Geology Open-file Report 89-1, p. 57-62.

Stewart, J.H., and Carlson, J.E., 1978, Geologic map of Nevada: U.S. Geological Survey, scale 1:500,000.

U.S. Department of Energy, 1988, Site Characterization Plan: Yucca Mountain Site, Nevada Research and Development Area, Nevada: U.S. Department of Energy, Office of Civilian Radioactive Management, Washington, D.C., Volume V, Part B, Chapter 8, Section 8.3.1.17.4.10, p. 8.3.1.17-194 to 8.3.1.17-197.

TABLES 1-17

Table 1a. National Geodetic Survey Line 73988B: File 73988B.pro

Seq No.	UID	Benchmark	Spur Code	Distance (km)	Latitude	Longitude	Observed Elevation (m)	Obs Grav Ortho Ht (m)	Cumul. Refr Cor. (mm)	Cumul. Magn Cor. (mm)
3	10339285	G 11		0.00	39 07 33	119 06 30	1313.32010	1313.32010	0.00	0.00
4	10849074	TBM 3		1.08	39 07 31	119 05 45	1314.86398	1314.86150	0.17	0.00
5	10849075	TBM 4		2.35	39 07 29	119 04 53	1313.99358	1313.98889	0.06	0.00
6	10849076	TBM 5		3.54	39 07 28	119 04 04	1314.85250	1314.84674	0.18	0.00
7	10849077	TBM 6		4.63	39 07 26	119 03 19	1317.83604	1317.83048	0.56	0.00
8	10849078	TBM 7		5.68	39 07 24	119 02 36	1316.17120	1316.16876	0.33	0.00
9	10849079	TBM 8		6.79	39 07 23	119 01 50	1315.03587	1315.03679	0.19	0.00
10	10849080	TBM 9		7.98	39 07 21	119 01 01	1313.95385	1313.95681	0.07	0.00
11	10337686	H 11		8.00	39 07 21	119 01 00	1313.95785	1313.96095	0.07	0.00
12	10849081	TBM 10		8.02	39 07 21	119 00 59	1313.90219	1313.90534	0.07	0.00
13	10849082	TBM 11		9.13	39 07 01	119 00 22	1315.70096	1315.71073	0.29	0.00
14	10849083	TBM 12		10.28	39 06 40	118 59 43	1305.20135	1305.21780	-0.96	0.00
15	10849084	TBM 13		11.35	39 06 21	118 59 07	1302.90225	1302.92587	-1.23	0.00
16	10328143	I 11		11.36	39 06 21	118 59 06	1302.92305	1302.94685	-1.23	0.00
17	10849085	TBM 14		11.38	39 06 21	118 59 06	1302.82743	1302.85119	-1.23	0.00
18	10849086	TBM 15		12.45	39 06 00	118 58 30	1302.86692	1302.89506	-1.23	0.00
19	10849087	TBM 16		13.55	39 05 39	118 57 53	1302.49384	1302.52245	-1.26	0.00
20	10849088	TBM 17		14.65	39 05 17	118 57 17	1302.34507	1302.37352	-1.28	0.00
21	10849089	TBM 18		15.72	39 04 57	118 56 41	1306.88835	1306.91704	-0.85	0.00
22	10849090	TBM 19		16.82	39 04 35	118 56 04	1309.29457	1309.32278	-0.59	0.00
23	10309585	J 11		16.83	39 04 35	118 56 04	1309.33694	1309.36519	-0.59	0.00
24	10849091	TBM 20		17.94	39 04 08	118 55 37	1317.90892	1317.93799	0.62	0.00
25	10849092	TBM 21		19.00	39 03 42	118 55 11	1324.24622	1324.27660	1.46	0.00
26	10849093	TBM 22		20.08	39 03 15	118 54 44	1332.83351	1332.86463	2.55	0.00
27	10849094	TBM 23		21.15	39 02 48	118 54 18	1336.64841	1336.68008	2.95	0.00
28	10285778	K 11		22.42	39 02 17	118 53 47	1332.21279	1332.24302	2.46	0.00
29	10849095	TBM 24		23.51	39 01 46	118 53 26	1331.52065	1331.55025	2.39	0.00
30	10849096	TBM 25		24.63	39 01 14	118 53 05	1346.23767	1347.39635	3.80	0.00
31	10849097	TBM 26		25.03	39 01 03	118 52 58	1347.12811	1348.28742	3.87	0.00
32	10849098	TBM 27		26.04	39 00 34	118 52 38	1331.32194	1332.48037	2.38	0.00
33	10264299	L 11		27.17	39 00 02	118 52 17	1318.75323	1319.91171	0.96	0.00
34	10849099	TBM 28		27.54	38 59 53	118 52 09	1313.20465	1313.25518	0.34	0.00
35	10849100	TBM 29		28.58	38 59 27	118 51 45	1298.21634	1298.26836	-1.24	0.00
36	10849101	TBM 30		29.71	38 58 59	118 51 20	1281.67927	1281.73474	-2.80	0.00
37	10849102	TBM 31		30.86	38 58 31	118 50 54	1263.29170	1263.34984	-4.80	0.00
38	10344169	M 11		31.96	38 58 04	118 50 29	1260.92716	1260.98821	-5.06	0.00
39	10849103	TBM 32		33.16	38 57 43	118 49 49	1258.78539	1258.84785	-5.36	0.00
40	10337646	N 11		34.24	38 57 24	118 49 12	1259.51976	1259.58303	-5.27	0.00
41	10332829	O 11 USGS		35.36	38 56 58	118 48 28	1256.68736	1256.75209	-5.51	0.00
42	10336119	P 11		36.30	38 57 19	118 49 03	1256.69453	1256.75774	-5.51	0.00

Table 1a. National Geodetic Survey Line 73988B: File 73988B.pro--Continued

Seq No.	UID	Benchmark	Spur Code	Distance (km)	Latitude	Longitude	Observed Elevation (m)	Obs Grav Ortho Ht (m)	Cumul. Refr Cor. (mm)	Cumul. Magn Cor. (mm)
43	10332842	Q 11		35.47	38 56 58	118 48 30	1256.87536	1256.93999	-5.50	0.00
44	10331298	R 11		36.25	38 56 43	118 48 02	1255.74733	1255.81339	-5.59	0.00
45	10849104	TBM 33		37.33	38 56 22	118 47 24	1255.37889	1255.44856	-5.62	0.00
46	10849105	TBM 34		38.38	38 56 02	118 46 47	1254.58931	1254.66104	-5.69	0.00
48	10321333	S 11		39.18	38 55 47	118 46 19	1254.53495	1254.60839	-5.69	0.00
49	10849106	TBM 35		40.24	38 55 29	118 45 42	1252.83443	1252.91011	-5.85	0.00
50	10314692	T 11		41.52	38 55 07	118 44 57	1252.26857	1252.34554	-5.90	0.00
51	10849107	TBM 36		42.63	38 54 44	118 44 22	1252.56375	1252.64054	-5.87	0.00
52	10849108	TBM 37		43.80	38 54 20	118 43 46	1252.10393	1252.17933	-5.91	0.00
53	10302871	U 11 USGS		44.87	38 53 58	118 43 12	1251.76549	1251.83935	-5.95	0.00
54	10849109	TBM 38		45.67	38 53 33	118 43 08	1252.32703	1252.40406	-5.89	0.00
55	10849110	TBM 39		46.79	38 52 58	118 43 02	1251.87918	1251.95962	-5.95	0.00
56	10287387	V 11		47.91	38 52 23	118 42 56	1254.90994	1254.99465	-5.58	0.00
57	10849111	TBM 40		48.16	38 52 16	118 42 55	1257.90530	1257.99110	-5.31	0.00
58	10849112	TBM 41		49.57	38 51 38	118 42 52	1267.57245	1267.66231	-4.15	0.00
59	10849113	TBM 42		50.64	38 51 08	118 42 49	1268.93270	1269.02452	-3.98	0.00
60	10849114	TBM 43		51.72	38 50 39	118 42 46	1266.10132	1266.19334	-4.32	0.00
61	10264284	W 11 USGS		52.84	38 50 08	118 42 43	1270.79016	1270.88222	-3.78	0.00
62	10849115	TBM 44		53.91	38 49 39	118 42 20	1267.18674	1267.27828	-4.06	0.00
63	10849116	TBM 45		54.99	38 49 09	118 41 56	1268.79641	1268.88710	-3.94	0.00
64	10849117	TBM 46		56.12	38 48 38	118 41 32	1267.53236	1267.62147	-4.13	0.00
65	10344168	X 11		57.23	38 48 08	118 41 08	1268.95656	1269.04462	-3.99	0.00
66	10849118	TBM 47		58.32	38 47 36	118 40 51	1265.17240	1265.25880	-4.70	0.00
67	10849119	TBM 48		59.42	38 47 03	118 40 34	1270.38436	1270.46701	-4.06	0.00
68	10849120	TBM 49		60.49	38 46 31	118 40 17	1268.45105	1268.52905	-4.36	0.00
69	10328111	Y 11 USGS		60.81	38 46 21	118 40 12	1266.80631	1266.88347	-4.60	0.00
70	10849121	TBM 50		61.97	38 45 50	118 39 59	1258.13762	1258.21420	-5.86	0.00
71	10849122	TBM 51		63.09	38 45 21	118 39 46	1252.56468	1252.64195	-6.48	0.00
72	10849123	TBM 52		64.18	38 44 52	118 39 34	1252.60086	1252.68063	-6.47	0.00
73	10849124	TBM 53		65.27	38 44 23	118 39 22	1251.85422	1251.93799	-6.57	0.00
74	10849125	TBM 54		66.41	38 43 52	118 39 09	1252.35115	1252.43926	-6.52	0.00
75	10302881	Z 11		66.42	38 43 52	118 39 09	1252.11346	1252.20157	-6.52	0.00
76	10849126	TBM 55		66.43	38 43 52	118 39 09	1252.34984	1252.43796	-6.52	0.00
77	10849127	TBM 56		67.48	38 43 12	118 39 06	1252.01427	1252.10725	-6.55	0.00
78	10849128	TBM 57		67.64	38 43 06	118 39 06	1252.53970	1252.63289	-6.52	0.00
79	10287386	A 12 USGS		68.81	38 42 22	118 39 03	1251.85622	1251.95002	-6.60	0.00
80	10849129	TBM 58		69.34	38 42 06	118 39 04	1251.77188	1251.86653	-6.61	0.00
81	10849130	TBM 59		70.40	38 41 36	118 39 07	1252.39233	1252.48951	-6.53	0.00
82	10849131	TBM 60		71.48	38 41 04	118 39 09	1252.24169	1252.34323	-6.55	0.00
83	10269399	B 12		72.58	38 40 32	118 39 12	1252.30073	1252.40702	-6.54	0.00
84	10849132	TBM 61		73.23	38 40 15	118 39 08	1252.61655	1252.72523	-6.50	0.00
85	10849133	TBM 62		74.36	38 39 45	118 39 00	1252.32347	1252.43611	-6.54	0.00

Table 1a. National Geodetic Survey Line 73988B: File 73988B.pro--Continued

Seq No.	UID	Benchmark	Spur Code	Distance (km)	Latitude	Longitude	Observed Elevation (m)	Obs Grav Ortho Ht (m)	Cumul. Refr Cor. (mm)	Cumul. Magn Cor. (mm)
86	10849134	TBM 63		75.49	38 39 15	118 38 52	1251.95812	1252.07298	-6.58	0.00
87	10350719	C 12 USGS		76.74	38 38 42	118 38 44	1252.90381	1253.02047	-6.48	0.00
88	10849135	TBM 64		77.90	38 38 13	118 38 14	1251.96224	1252.07935	-6.58	0.00
89	10849136	TBM 65		79.00	38 37 46	118 37 45	1252.33360	1252.45122	-6.54	0.00
90	10849137	TBM 66		80.17	38 37 17	118 37 15	1252.30496	1252.42305	-6.54	0.00
91	10331297	D 12		81.43	38 36 46	118 36 42	1259.22717	1259.34722	-5.62	0.00
92	10849138	TBM 67		82.45	38 36 32	118 36 04	1268.16507	1268.28653	-4.68	0.00
93	10849139	TBM 68		83.65	38 36 15	118 35 20	1279.76248	1279.88821	-3.65	0.00
94	10318074	E 12 USGS=4126.671 USGS		85.32	38 35 28	118 36 06	1257.80451	1257.93289	-4.78	0.00
95	10849140	TBM 69		84.76	38 36 00	118 34 39	1290.46259	1290.59172	-2.69	0.00
96	10849141	TBM 70		85.83	38 35 45	118 33 59	1301.57675	1301.70815	-1.40	0.00
97	10849142	TBM 71		86.92	38 35 29	118 33 18	1310.13786	1310.27146	-0.51	0.00
98	10849143	TBM 72		88.01	38 35 14	118 32 38	1318.21322	1318.34779	0.53	0.00
99	10849144	TBM 73		89.09	38 34 59	118 31 57	1325.86534	1326.00039	1.58	0.00
100	10849145	TBM 74		90.22	38 34 43	118 31 15	1337.71716	1337.85243	3.06	0.00
101	10307851	F 12		91.27	38 34 28	118 30 36	1348.67191	1348.80692	4.51	0.00
102	10849146	TBM 75		92.38	38 34 14	118 29 54	1360.46365	1360.59609	5.84	0.00
103	10849147	TBM 76		93.47	38 34 01	118 29 13	1362.72445	1362.85023	6.14	0.00
104	10849148	TBM 77		94.63	38 33 47	118 28 29	1358.60458	1358.72342	5.69	0.00
105	10849149	TBM 78		95.71	38 33 34	118 27 48	1362.27256	1362.39076	6.09	0.00
106	10849150	TBM 79		96.82	38 33 20	118 27 05	1362.54889	1362.66687	6.12	0.00
107	10295637	G 12 USGS		97.51	38 33 12	118 26 39	1363.12278	1363.24107	6.17	0.00
108	10849151	TBM 80		98.61	38 33 04	118 25 56	1372.84331	1372.96235	7.25	0.00
109	10849152	TBM 81		99.65	38 32 57	118 25 15	1379.54926	1379.66871	8.00	0.00
110	10849153	TBM 82		100.67	38 32 49	118 24 35	1366.34026	1366.45803	6.19	0.00
111	10849154	TBM 83		101.78	38 32 41	118 23 52	1346.91524	1347.03101	3.36	0.00
112	10288982	H 12 USGS		102.93	38 32 33	118 23 07	1334.02577	1334.14177	1.54	0.00
113	10849155	TBM 84		103.99	38 32 30	118 22 21	1333.95414	1334.07336	1.53	0.00
114	10287394	I 12		104.97	38 32 28	118 21 39	1334.68338	1334.80591	1.65	0.00
115	10849156	TBM 85		106.05	38 32 25	118 20 55	1336.55470	1336.68122	1.92	0.00
116	10287393	J 12 USGS		107.13	38 32 23	118 20 11	1338.88395	1339.01447	2.23	0.00
117	10849157	TBM 86		107.38	38 32 22	118 20 01	1339.45026	1339.58149	2.28	0.00
118	10849158	TBM 87		108.45	38 32 20	118 19 16	1344.02093	1344.15520	2.89	0.00
119	10849159	TBM 88		109.64	38 32 17	118 18 26	1348.69346	1348.82950	3.51	0.00
121	10849160	TBM 89		110.70	38 32 15	118 17 42	1351.15937	1351.29632	3.81	0.00
122	10285769	K 12		111.84	38 32 12	118 16 55	1358.51368	1358.65050	4.78	0.00
123	10849161	TBM 90		113.09	38 32 08	118 16 03	1366.79270	1366.93144	5.71	0.00
124	10849162	TBM 91		114.17	38 32 04	118 15 19	1371.38481	1371.52597	6.16	0.00
125	10849163	TBM 92		115.30	38 32 00	118 14 32	1380.54866	1380.69320	7.12	0.00
126	10849164	TBM 93		116.37	38 31 56	118 13 48	1386.85552	1387.00243	7.85	0.00
127	10282588	L 12 USGS		116.68	38 31 55	118 13 35	1388.22238	1388.36994	7.99	0.00
128	10849165	TBM 94		117.31	38 31 44	118 13 14	1388.73660	1388.88524	8.04	0.00

Table 1a. National Geodetic Survey Line 73988B: File 73988B.pro--Continued

Seq No.	UID	Benchmark	Spur Code	Distance (km)	Latitude	Longitude	Observed Elevation (m)	Obs Grav Ortho Ht (m)	Cumul. Refr Cor. (mm)	Cumul. Magn Cor. (mm)
129	10849166	TBM 95		118.38	38 31 24	118 12 37	1383.46881	1383.61655	7.43	0.00
130	10849167	TBM 96		119.45	38 31 05	118 12 01	1375.66126	1375.80699	6.45	0.00
131	10849168	TBM 97		120.57	38 30 45	118 11 23	1368.64400	1368.78891	5.47	0.00
132	10267794	M 12		121.69	38 30 25	118 10 44	1360.68609	1360.83243	4.53	0.00
133	10849169	TBM 98		122.81	38 29 54	118 10 21	1355.86261	1356.00710	3.99	0.00
134	10849170	TBM 99		123.93	38 29 23	118 09 57	1352.95842	1353.10334	3.66	0.00
135	10849171	TBM 100		125.04	38 28 52	118 09 33	1353.59800	1353.74341	3.74	0.00
136	10345715	N 12 USGS		126.31	38 28 18	118 09 05	1358.81994	1358.96421	4.52	0.00

Table 1b. National Geodetic Survey Line 73988B: File 73988B.ori

FROM SEQ NO.	TO SEQ NO.	UNCORRECTED FIELD ELEVATION DIFFERENCE (m)	LEVEL CORR. (mm)	ROD CORR. (mm)	ASTRO CORR. (mm)	TEMP. CORR. (mm)	REFR. CORR. (mm)	MAGN. CORR. (mm)	CORRECTED OBSERVED ELE. DIFFERENCE (m)	CUMULATIVE OBSERVED ELEVATION (OF TO SEQ NO) (m)	CUMULAT. OBS. GRAV ORTHO CORR. (mm)	CUMUL. REFR. CORR. (mm)
3										1313.32010	0.00	0.00
3	4	1.54360	0.00	0.03	0.24	0.01	0.17	0.00	1.54387	1314.86398	-2.48	0.17
4	5	-0.87015	-0.14	-0.01	-0.12	0.02	-0.11	0.00	-0.87040	1313.99358	-4.69	0.06
5	6	0.85880	0.00	0.01	0.12	-0.01	0.12	0.00	0.85892	1314.85250	-5.76	0.18
6	7	2.98310	0.00	0.05	0.41	-0.02	0.39	0.00	2.98354	1317.83604	-5.56	0.56
7	8	-1.66455	0.00	-0.03	-0.24	-0.02	-0.24	0.00	-1.66484	1316.17120	-2.44	0.33
8	9	-1.13285	0.00	-0.02	-0.16	0.00	-0.14	0.00	-1.13303	1315.03817	0.92	0.19
9	10	-1.08180	0.00	-0.02	-0.16	-0.04	-0.13	0.00	-1.08203	1313.95615	2.96	0.07
10	11	0.00400	0.00	0.00	0.00	0.00	0.00	0.00	0.00400	1313.96015	3.10	0.07
11	12	-0.05565	0.00	0.00	-0.01	0.00	0.00	0.00	-0.05566	1313.90449	3.15	0.07
12	13	1.79850	0.00	0.03	0.28	-0.03	0.22	0.00	1.79878	1315.70326	9.77	0.29
13	14	-10.49770	0.00	-0.17	-1.71	-0.03	-1.25	0.00	-10.49961	1305.20365	16.45	-0.96
14	15	-2.29865	-0.01	-0.04	-0.37	-0.03	-0.26	0.00	-2.29909	1302.90455	23.62	-1.23
15	16	0.02080	0.00	0.00	0.00	0.00	0.00	0.00	0.02080	1302.92535	23.80	-1.23
16	17	-0.09560	0.00	0.00	-0.02	0.00	0.00	0.00	-0.09562	1302.82973	23.76	-1.23
17	18	0.03950	0.00	0.00	0.01	-0.02	0.00	0.00	0.03949	1302.86922	28.14	-1.23
18	19	-0.37300	0.00	-0.01	-0.06	-0.01	-0.04	0.00	-0.37308	1302.49614	28.61	-1.26
19	20	-0.14875	0.00	0.00	-0.02	0.00	-0.02	0.00	-0.14877	1302.34736	28.45	-1.28
20	21	4.54250	0.00	0.08	0.70	0.01	0.44	0.00	4.54329	1306.89065	28.69	-0.85
21	22	2.40580	0.00	0.04	0.36	0.03	0.25	0.00	2.40622	1309.29687	28.21	-0.59
22	23	0.04235	0.00	0.00	0.01	0.00	0.00	0.00	0.04237	1309.33923	28.25	-0.59
23	24	8.57060	0.01	0.14	1.26	-0.03	1.21	0.00	8.57198	1317.91121	29.07	0.62
24	25	6.33630	0.00	0.11	0.93	-0.03	0.84	0.00	6.33731	1324.24852	30.38	1.46
25	26	8.58590	-0.02	0.14	1.32	-0.05	1.09	0.00	8.58729	1332.83580	31.12	2.55
26	27	3.81433	0.01	0.06	0.51	0.00	0.40	0.00	3.81491	1336.65071	31.67	2.95
27	28	-4.43475	-0.03	-0.07	-0.72	-0.06	-0.49	0.00	-4.43563	1332.21508	30.23	2.46
28	29	-0.69200	0.02	-0.01	-0.12	-0.03	-0.08	0.00	-0.69214	1331.52295	29.60	2.39
29	30	14.71445	0.02	0.24	2.31	0.00	1.42	0.00	14.71702	1346.23997	******	3.80
30	31	0.89030	0.00	0.01	0.13	0.00	0.07	0.00	0.89044	1347.13040	******	3.87
31	32	-15.80370	0.00	-0.26	-2.24	0.03	-1.49	0.00	-15.80617	1331.32423	******	2.38
32	33	-12.56670	0.00	-0.21	-1.83	0.03	-1.42	0.00	-12.56871	1318.75552	******	0.96
33	34	-5.54770	0.00	-0.09	-0.79	0.00	-0.63	0.00	-5.54858	1313.20694	50.53	0.34
34	35	-14.98600	0.01	-0.25	-2.09	0.02	-1.58	0.00	-14.98830	1298.21864	52.02	-1.24
35	36	-16.53450	0.00	-0.27	-2.32	0.01	-1.55	0.00	-16.53708	1281.68156	55.47	-2.80
36	37	-18.38480	0.00	-0.31	-2.47	0.00	-2.01	0.00	-18.38757	1263.29399	58.14	-4.80
37	38	-2.36420	0.00	-0.04	-0.30	0.00	-0.26	0.00	-2.36453	1260.92946	61.05	-5.06
38	39	-2.14145	-0.01	-0.04	-0.27	-0.01	-0.30	0.00	-2.14178	1258.78768	62.46	-5.36
39	40	0.73425	0.02	0.01	0.10	0.01	0.09	0.00	0.73438	1259.52206	63.27	-5.27
40	41	-2.83200	-0.02	-0.05	-0.35	0.02	-0.25	0.00	-2.83241	1256.68965	64.73	-5.51
41	42	0.00725	-0.01	0.00	0.00	-0.07	0.00	0.00	0.00717	1256.69682	63.21	-5.51
41	43	0.18800	-0.02	0.00	0.03	0.00	0.01	0.00	0.18801	1256.87766	64.63	-5.50
43	44	-1.12780	-0.02	-0.02	-0.16	-0.04	-0.09	0.00	-1.12804	1255.74962	66.06	-5.59
44	45	-0.36830	-0.01	-0.01	-0.06	-0.06	-0.03	0.00	-0.36844	1255.38119	69.67	-5.62
45	46	-0.78940	0.00	-0.01	-0.12	-0.06	-0.07	0.00	-0.78958	1254.59161	71.73	-5.69
46	48	-0.05430	0.00	0.00	-0.01	-0.06	0.00	0.00	-0.05437	1254.53724	73.44	-5.69
48	49	-1.70015	0.00	-0.03	-0.27	-0.07	-0.15	0.00	-1.70052	1252.83672	75.68	-5.85

Table 1b. National Geodetic Survey Line 73988B: File 73988B.ori--Continued

FROM SEQ NO.	TO SEQ NO.	UNCORRECTED FIELD ELEVATION DIFFERENCE (m)	LEVEL CORR. (mm)	ROD CORR. (mm)	ASTRO CORR. (mm)	TEMP. CORR. (mm)	REFR. CORR. (mm)	MAGN. CORR. (mm)	CORRECTED OBSERVED ELE. DIFFERENCE (m)	CUMULATIVE OBSERVED ELEVATION (OF TO SEQ NO) (m)	CUMULAT. OBS. GRAV ORTHO CORR. (mm)	CUMUL. REFR. CORR. (mm)
49	50	-0.56570	0.00	-0.01	-0.09	-0.07	-0.06	0.00	-0.56586	1252.27086	76.97	-5.90
50	51	0.29513	0.00	0.00	0.04	0.02	0.03	0.00	0.29519	1252.56605	76.79	-5.87
51	52	-0.45975	-0.02	-0.01	-0.08	0.03	-0.04	0.00	-0.45983	1252.10622	75.40	-5.91
52	53	-0.33840	-0.03	-0.01	-0.05	0.06	-0.03	0.00	-0.33843	1251.76779	73.86	-5.95
53	54	0.56140	0.01	0.01	0.09	0.03	0.06	0.00	0.56153	1252.32932	77.03	-5.89
54	55	-0.44780	0.00	-0.01	-0.07	0.03	-0.06	0.00	-0.44785	1251.88147	80.44	-5.95
55	56	3.03025	-0.01	0.05	0.44	0.03	0.37	0.00	3.03076	1254.91224	84.71	-5.58
56	57	2.99485	0.00	0.05	0.44	0.01	0.27	0.00	2.99535	1257.90759	85.80	-5.31
57	58	9.66550	0.01	0.16	1.46	0.03	1.16	0.00	9.66715	1267.57475	89.86	-4.15
58	59	1.36000	0.00	0.02	0.21	0.02	0.17	0.00	1.36025	1268.93500	91.82	-3.98
59	60	-2.83085	-0.05	-0.05	-0.46	0.03	-0.34	0.00	-2.83138	1266.10362	92.02	-4.32
60	61	4.68800	0.00	0.08	0.73	0.03	0.54	0.00	4.68884	1270.79245	92.06	-3.78
61	62	-3.60285	-0.02	-0.06	-0.51	0.03	-0.28	0.00	-3.60342	1267.18904	91.54	-4.06
62	63	1.60940	-0.01	0.03	0.24	0.01	0.12	0.00	1.60966	1268.79870	90.69	-3.94
63	64	-1.26380	-0.05	-0.02	-0.18	0.00	-0.19	0.00	-1.26405	1267.53466	89.11	-4.13
64	65	1.42400	-0.02	0.02	0.21	0.00	0.14	0.00	1.42420	1268.95886	88.06	-3.99
65	66	-3.78365	-0.03	-0.06	-0.43	0.00	-0.71	0.00	-3.78416	1265.17470	86.40	-4.70
66	67	5.21120	-0.01	0.09	0.67	0.00	0.64	0.00	5.21196	1270.38665	82.65	-4.06
67	68	-1.93303	0.00	-0.03	-0.25	0.00	-0.30	0.00	-1.93330	1268.45335	78.00	-4.36
68	69	-1.64450	0.00	-0.03	-0.22	0.00	-0.24	0.00	-1.64475	1266.80861	77.16	-4.60
69	70	-8.66750	0.02	-0.14	-1.07	0.00	-1.27	0.00	-8.66869	1258.13992	76.58	-5.86
70	71	-5.57200	0.00	-0.09	-0.83	-0.02	-0.62	0.00	-5.57294	1252.56698	77.27	-6.48
71	72	0.03620	-0.01	0.00	0.00	-0.02	0.00	0.00	0.03618	1252.60316	79.77	-6.47
72	73	-0.74650	0.00	-0.01	-0.11	-0.02	-0.10	0.00	-0.74664	1251.85652	83.77	-6.57
73	74	0.49685	0.01	0.01	0.07	-0.02	0.06	0.00	0.49692	1252.35345	88.11	-6.52
74	75	-0.23765	0.00	0.00	-0.03	0.00	0.00	0.00	-0.23769	1252.11576	88.11	-6.52
75	76	0.23635	0.00	0.00	0.03	0.00	0.00	0.00	0.23638	1252.35214	88.12	-6.52
76	77	-0.33550	-0.02	-0.01	-0.05	0.00	-0.03	0.00	-0.33557	1252.01657	92.98	-6.55
77	78	0.52535	0.01	0.01	0.07	0.00	0.03	0.00	0.52543	1252.54200	93.19	-6.52
78	79	-0.68340	0.00	-0.01	-0.10	0.02	-0.08	0.00	-0.68349	1251.85852	93.80	-6.60
79	80	-0.08435	0.01	0.00	-0.01	0.01	-0.01	0.00	-0.08434	1251.77418	94.65	-6.61
80	81	0.62035	-0.02	0.01	0.09	0.03	0.08	0.00	0.62045	1252.39463	97.18	-6.53
81	82	-0.15065	0.00	0.00	-0.02	0.03	-0.02	0.00	-0.15065	1252.24399	101.54	-6.55
82	83	0.05900	0.01	0.00	0.01	0.03	0.01	0.00	0.05905	1252.30303	106.29	-6.54
83	84	0.31575	0.00	0.01	0.05	0.01	0.04	0.00	0.31581	1252.61884	108.68	-6.50
84	85	-0.29305	0.00	0.00	-0.04	0.01	-0.03	0.00	-0.29308	1252.32577	112.64	-6.54
85	86	-0.36530	0.00	-0.01	-0.06	0.02	-0.04	0.00	-0.36535	1251.96041	114.86	-6.58
86	87	0.94555	-0.01	0.02	0.12	0.01	0.10	0.00	0.94569	1252.90610	116.66	-6.48
87	88	-0.94140	0.02	-0.02	-0.14	-0.02	-0.11	0.00	-0.94156	1251.96454	117.11	-6.58
88	89	0.37130	0.02	0.01	0.05	-0.02	0.04	0.00	0.37136	1252.33590	117.62	-6.54
89	90	-0.02865	0.02	0.00	0.00	-0.01	0.00	0.00	-0.02864	1252.30726	118.09	-6.54
90	91	6.92110	0.01	0.11	0.99	0.00	0.93	0.00	6.92221	1259.22946	120.05	-5.62
91	92	8.93645	0.00	0.15	1.32	-0.01	0.94	0.00	8.93790	1268.16737	121.46	-4.68
92	93	11.59560	-0.01	0.19	1.59	0.04	1.02	0.00	11.59741	1279.76478	125.73	-3.65
93	94	-21.95470	0.01	-0.36	-2.79	-0.11	-1.12	0.00	-21.95907	1257.80571	128.38	-4.78
93	95	10.69850	-0.01	0.18	1.36	0.08	0.96	0.00	10.70011	1290.46488	129.13	-2.69

Table 1b. National Geodetic Survey Line 73988B: File 73988B.ori--Continued

FROM SEQ NO.	TO SEQ NO.	UNCORRECTED FIELD ELEVATION DIFFERENCE (m)	LEVEL CORR. (mm)	ROD CORR. (mm)	ASTRO CORR. (mm)	TEMP. CORR. (mm)	REFR. CORR. (mm)	MAGN. CORR. (mm)	CORRECTED OBSERVED ELE. DIFFERENCE (m)	CUMULATIVE OBSERVED ELEVATION (OF TO SEQ NO) (m)	CUMULAT. OBS. GRAV ORTHO CORR. (mm)	CUMUL. REFR. CORR. (mm)
95	96	11.11255	-0.05	0.18	1.41	0.07	1.29	0.00	11.11416	1301.57905	131.40	-1.40
96	97	8.55985	-0.04	0.14	1.11	0.06	0.89	0.00	8.56112	1310.14016	133.60	-0.51
97	98	8.07400	-0.11	0.13	1.30	0.03	1.05	0.00	8.07536	1318.21552	134.57	0.53
98	99	7.65088	-0.04	0.13	1.11	0.06	1.04	0.00	7.65213	1325.86764	135.05	1.58
99	100	11.84965	-0.02	0.20	1.95	0.05	1.49	0.00	11.85182	1337.71946	135.27	3.06
100	101	10.95265	0.03	0.18	1.83	0.06	1.45	0.00	10.95474	1348.67421	135.01	4.51
101	102	11.78970	-0.12	0.20	1.93	0.03	1.33	0.00	11.79175	1360.46595	132.44	5.84
102	103	2.26035	0.00	0.04	0.39	0.03	0.30	0.00	2.26079	1362.72675	125.78	6.14
103	104	-4.11900	-0.13	-0.07	-0.70	0.03	-0.46	0.00	-4.11987	1358.60688	118.84	5.69
104	105	3.66725	0.05	0.06	0.61	0.01	0.40	0.00	3.66798	1362.27486	118.20	6.09
105	106	0.27630	-0.04	0.00	0.04	0.03	0.03	0.00	0.27633	1362.55119	117.98	6.12
106	107	0.57395	-0.16	0.01	0.10	0.00	0.05	0.00	0.57390	1363.12508	118.29	6.17
107	108	9.71890	-0.06	0.16	1.52	0.00	1.08	0.00	9.72053	1372.84561	119.04	7.25
108	109	6.70490	-0.05	0.11	0.99	-0.01	0.74	0.00	6.70595	1379.55156	119.45	8.00
109	110	-13.20688	-0.03	-0.22	-1.89	0.00	-1.81	0.00	-13.20900	1366.34256	117.77	6.19
110	111	-19.42155	-0.02	-0.32	-3.11	-0.03	-2.83	0.00	-19.42502	1346.91754	115.77	3.36
111	112	-12.88710	-0.05	-0.21	-2.09	-0.03	-1.82	0.00	-12.88947	1334.02807	116.00	1.54
112	113	-0.07160	0.01	0.00	-0.01	-0.03	-0.01	0.00	-0.07164	1333.95643	119.22	1.53
113	114	0.72920	-0.05	0.01	0.10	-0.03	0.12	0.00	0.72924	1334.68567	122.53	1.65
114	115	1.87095	-0.01	0.03	0.29	0.06	0.27	0.00	1.87132	1336.55699	126.52	1.92
115	116	2.32885	-0.07	0.04	0.37	0.06	0.31	0.00	2.32925	1338.88624	130.52	2.23
116	117	0.56620	0.00	0.01	0.09	0.02	0.05	0.00	0.56631	1339.45256	131.23	2.28
117	118	4.56980	0.00	0.08	0.73	0.07	0.61	0.00	4.57067	1344.02323	134.27	2.89
118	119	4.67165	-0.01	0.08	0.74	0.07	0.62	0.00	4.67253	1348.69576	136.04	3.51
119	121	2.46543	0.01	0.04	0.39	0.04	0.31	0.00	2.46591	1351.16166	136.95	3.81
121	122	7.35300	0.00	0.12	1.15	0.04	0.97	0.00	7.35431	1358.51598	136.82	4.78
122	123	8.27755	0.00	0.14	1.29	0.03	0.93	0.00	8.27902	1366.79499	138.74	5.71
123	124	4.59115	0.11	0.08	0.75	0.02	0.46	0.00	4.59212	1371.38711	141.16	6.16
124	125	9.16215	0.03	0.15	1.51	0.01	0.96	0.00	9.16385	1380.55095	144.54	7.12
125	126	6.30570	0.03	0.10	1.02	0.00	0.73	0.00	6.30686	1386.85781	146.91	7.85
126	127	1.36665	-0.03	0.02	0.22	0.00	0.14	0.00	1.36686	1388.22468	147.56	7.99
127	128	0.51400	0.11	0.01	0.08	0.02	0.06	0.00	0.51422	1388.73890	148.64	8.04
128	129	-5.26700	0.09	-0.09	-0.82	0.03	-0.62	0.00	-5.26780	1383.47110	147.74	7.43
129	130	-7.80615	-0.08	-0.13	-1.21	0.02	-0.98	0.00	-7.80755	1375.66356	145.73	6.45
130	131	-7.01600	-0.10	-0.12	-1.05	0.01	-0.99	0.00	-7.01726	1368.64630	144.91	5.47
131	132	-7.95665	0.00	-0.13	-1.14	0.00	-0.94	0.00	-7.95791	1360.68838	146.34	4.53
132	133	-4.82270	0.02	-0.08	-0.72	0.01	-0.54	0.00	-4.82347	1355.86491	144.49	3.99
133	134	-2.90368	-0.01	-0.05	-0.47	0.01	-0.33	0.00	-2.90420	1352.96071	144.92	3.66
134	135	0.63945	0.02	0.01	0.11	0.00	0.08	0.00	0.63959	1353.60030	145.41	3.74
135	136	5.22100	0.02	0.09	0.85	-0.02	0.78	0.00	5.22193	1358.82223	144.27	4.52

Table 1c. National Geodetic Survey Line 73988B: File 73988B.prn(=.dat)

112	73988/B		3	4191506191030			11 1	1.08	211G11	F
1.54430		MT	0.05	-0.08	0.03	0.25	0.00	0.17	0.001033928510849074	
412	73988/B		4	3191506191200			12 1	1.08	211G11	B
-1.54290		MT	-0.05	-0.08	-0.03	-0.22	-0.02	-0.16	0.001084907410339285	
212	73988/B		4	5191506191100			13 1	1.27	211G11	F
-0.87000		MT	0.06	-0.12	-0.01	-0.12	0.01	-0.10	0.001084907410849075	
312	73988/B		5	4191506191135			13 1	1.27	211G11	B
0.87030		MT	-0.06	0.15	0.01	0.12	-0.02	0.11	0.001084907510849074	
512	73988/B		5	619150621 905			10 1	1.19	211G11	F
0.85860		MT	0.06	0.01	0.01	0.11	-0.03	0.12	0.001084907510849076	
3912	73988/B		6	5191506221645			9 1	1.19	211G11	B
-0.85900		MT	-0.06	0.00	-0.01	-0.12	-0.01	-0.11	0.001084907610849075	
612	73988/B		6	719150621 935			10 1	1.09	211G11	F
2.98170		MT	0.05	0.00	0.05	0.40	-0.04	0.39	0.001084907610849077	
3812	73988/B		7	6191506221615			9 1	1.09	211G11	B
-2.98450		MT	-0.05	0.00	-0.05	-0.42	0.00	-0.39	0.001084907710849076	
712	73988/B		7	8191506211000			9 1	1.04	211G11	F
-1.66440		MT	0.05	0.00	-0.03	-0.23	-0.04	-0.26	0.001084907710849078	
3712	73988/B		8	7191506221550			9 1	1.05	211G11	B
1.66470		MT	-0.05	0.00	0.03	0.24	0.00	0.21	0.001084907810849077	
4012	73988/B		8	919150623 840			10 1	1.11	211G11	RF
-1.12600		MT	0.05	-0.01	-0.02	-0.13	0.02	-0.13	0.001084907810849079	
812	73988/B		8	9191506211025			10 1	1.11	211G11	F
-1.13130		MT	0.05	0.00	-0.02	-0.17	-0.04	-0.16	0.001084907810849079	
4112	73988/B		9	819150623 910			11 1	1.11	211G11	B
1.13770		MT	-0.05	-0.01	0.02	0.16	-0.01	0.12	0.001084907910849078	
3612	73988/B		9	8191506221525			10 1	1.11	211G11	B
1.13640		MT	-0.05	0.00	0.02	0.16	0.01	0.14	0.001084907910849078	
912	73988/B		9	10191506211050			12 1	1.19	211G11	F
-1.07960		MT	0.06	-0.01	-0.02	-0.16	-0.05	-0.13	0.001084907910849080	
3512	73988/B		10	9191506221445			12 1	1.19	211G11	B
1.08400		MT	-0.06	0.00	0.02	0.16	0.03	0.12	0.001084908010849079	
3112	73988/B		10	11191506221429			1 1	0.02	211G11	F
0.00400		MT	0.00	0.00	0.00	0.00	0.00	0.00	0.001084908010337686	
3312	73988/B		11	10191506221437			1 1	0.02	211G11	B
-0.00400		MT	0.00	0.00	0.00	0.00	0.00	0.00	0.001033768610849080	
3412	73988/B		11	12191506221440			1 1	0.02	211G11	F
-0.05530		MT	0.01	0.00	0.00	-0.01	0.00	0.00	0.001033768610849081	
3212	73988/B		12	11191506221435			1 1	0.02	211G11	B
0.05600		MT	-0.01	0.00	0.00	0.01	0.00	0.00	0.001084908110337686	
1012	73988/B		12	13191506211140			11 1	1.11	211G11	F
1.80060		MT	0.65	-0.01	0.03	0.28	-0.03	0.23	0.001084908110849082	
3012	73988/B		13	12191506221405			11 1	1.11	211G11	B
-1.79640		MT	-0.65	0.00	-0.03	-0.28	0.03	-0.21	0.001084908210849081	
1112	73988/B		13	14191506211310			12 1	1.16	211G11	F
-10.49770		MT	0.68	-0.01	-0.17	-1.72	-0.01	-1.23	0.001084908210849083	
2912	73988/B		14	13191506221230			12 1	1.16	211G11	B
10.49770		MT	-0.68	0.00	0.17	1.70	0.05	1.26	0.001084908310849082	
1212	73988/B		14	15191506211345			11 1	1.07	211G11	F
-2.29670		MT	0.62	-0.02	-0.04	-0.38	-0.01	-0.26	0.001084908310849084	
2812	73988/B		15	14191506221210			11 1	1.07	211G11	B
2.30060		MT	-0.62	0.00	0.04	0.36	0.04	0.27	0.001084908410849083	
2612	73988/B		15	16191506221204			1 1	0.01	211G11	F
0.02100		MT	0.01	0.00	0.00	0.00	0.00	0.00	0.001084908410328143	
2512	73988/B		16	15191506221202			1 1	0.01	211G11	B
-0.02060		MT	-0.01	0.00	0.00	0.00	0.00	0.00	0.001032814310849084	
2712	73988/B		16	17191506221205			1 1	0.01	211G11	F
-0.09560		MT	0.01	0.00	0.00	-0.02	0.00	0.00	0.001032814310849085	
2412	73988/B		17	16191506221200			1 1	0.01	211G11	B
0.09560		MT	-0.01	0.00	0.00	0.02	0.00	0.00	0.001084908510328143	
1312	73988/B		17	18191506211425			11 1	1.08	211G11	F
0.03870		MT	0.68	-0.01	0.00	0.01	0.01	0.00	0.001084908510849086	
2312	73988/B		18	17191506221130			11 1	1.08	211G11	B
-0.04030		MT	-0.68	0.00	0.00	-0.01	0.04	0.00	0.001084908610849085	
1412	73988/B		18	19191506211455			11 1	1.09	211G11	F
-0.37270		MT	0.69	-0.01	-0.01	-0.06	0.01	-0.04	0.001084908610849087	
2212	73988/B		19	18191506221100			11 1	1.09	211G11	B
0.37330		MT	-0.69	0.00	0.01	0.06	0.03	0.04	0.001084908710849086	
4212	73988/B		19	20191506231010			11 1	1.10	211G11	F
-0.14750		MT	0.70	0.00	0.00	-0.02	0.00	-0.02	0.001084908710849088	
1512	73988/B		19	20191506211525			11 1	1.10	211G11	F
-0.14680		MT	0.70	0.00	0.00	-0.02	0.02	-0.01	0.001084908710849088	
4312	73988/B		20	19191506231040			11 1	1.10	211G11	B
0.14910		MT	-0.70	0.00	0.00	0.02	0.01	0.02	0.001084908810849087	
2112	73988/B		20	19191506221025			11 1	1.10	211G11	B

Table 1c. National Geodetic Survey Line 73988B: File 73988B.prn(=.dat)--Continued

```
   0.15160                MT -0.70  0.00  0.00  0.02  0.02  0.02  0.001084908810849087
   1612          73988/B      20  21191506211555       11 1  1.07                211G11        F
   4.54370                MT  0.68  0.00  0.08  0.74  0.03  0.39  0.001084908810849089
   2012          73988/B      21  20191506221000       11 1  1.07                211G11        B
  -4.54130                MT -0.68  0.00 -0.08 -0.65  0.01 -0.48  0.001084908910849088
   1712          73988/B      21  22191506211625       11 1  1.10                211G11        F
   2.40560                MT  0.70  0.00  0.04  0.38  0.04  0.20  0.001084908910849090
   1912          73988/B      22  2119150622 925       10 1  1.11                211G11        B
  -2.40600                MT -0.70  0.00 -0.04 -0.33 -0.01 -0.31  0.001084909010849089
   4412          73988/B      22  23191506231120        1 1  0.01                211G11        F
   0.04200                MT  0.01  0.01  0.00  0.01  0.00  0.00  0.001084909010309585
   1812          73988/B      23  2219150622 915        1 1  0.01                211G11        B
  -0.04270                MT -0.01  0.00  0.00 -0.01  0.00  0.00  0.001030958510849090
   4512          73988/B      23  24191506231125       11 1  1.11                211G11        F
   8.56990                MT  0.90  0.04  0.14  1.29 -0.01  1.11  0.001030958510849091
   6712          73988/B      24  23191506241545        9 1  1.11                211G11        B
  -8.57130                MT -0.90  0.02 -0.14 -1.23  0.05 -1.31  0.001084909110309585
   4612          73988/B      24  25191506231155       11 1  1.05                211G11        F
   6.33460                MT  0.86  0.01  0.11  0.96 -0.02  0.74  0.001084909110849092
   6612          73988/B      25  24191506241515        9 1  1.06                211G11        B
  -6.33800                MT -0.86  0.01 -0.11 -0.90  0.05 -0.94  0.001084909210849091
   4712          73988/B      25  26191506231340       11 1  1.08                211G11        F
   8.58580                MT  0.89 -0.02  0.14  1.34 -0.04  1.03  0.001084909210849093
   6512          73988/B      26  25191506241445       10 1  1.08                211G11        B
  -8.58600                MT -0.89  0.02 -0.14 -1.29  0.06 -1.15  0.001084909310849092
   4812          73988/B      26  27191506231405       11 1  1.08                211G11        F
   3.81130                MT  0.89  0.01  0.06  0.59 -0.04  0.43  0.001084909310849094
   6812          73988/B      26  27191506251020       12 1  1.07                211G11        F
   3.81230                MT  0.89  0.00  0.06  0.45  0.05  0.37  0.001084909310849094
   5512          73988/B      27  2619150624 920       11 1  1.07                211G11        B
  -3.81600                MT -0.89 -0.01 -0.06 -0.41 -0.05 -0.39  0.001084909410849093
   6412          73988/B      27  26191506241410       11 1  1.08                211G11        B
  -3.81770                MT -0.89 -0.01 -0.06 -0.59  0.05 -0.43  0.001084909410849093
   4912          73988/B      27  28191506231440       13 1  1.27                211G11        F
  -4.43700                MT  1.05 -0.06 -0.07 -0.75 -0.05 -0.46  0.001084909410285778
   6312          73988/B      28  27191506241330       13 1  1.27                211G11        B
   4.43250                MT -1.05  0.00  0.07  0.69  0.06  0.52  0.001028577810849094
   5012          73988/B      28  29191506231540       10 1  1.09                211G11        F
  -0.69130                MT  1.03  0.04 -0.01 -0.12 -0.02 -0.08  0.001028577810849095
   6212          73988/B      29  28191506241300       12 1  1.09                211G11        B
   0.69270                MT -1.03  0.01  0.01  0.11  0.03  0.07  0.001084909510285778
   5112          73988/B      29  30191506231610       11 1  1.12                211G11        F
  14.71640                MT  1.07  0.04  0.24  2.24 -0.01  1.44  0.001084909510849096
   6112          73988/B      30  29191506241130       13 1  1.12                211G11        B
 -14.71250                MT -1.07  0.00 -0.24 -2.38 -0.01 -1.39  0.001084909610849095
   6912          73988/B      30  31191506251055        5 1  0.40                211G11        F
   0.88900                MT  0.38 -0.01  0.01  0.11  0.01  0.07  0.001084909610849097
   6012          73988/B      31  30191506241115        5 1  0.39                211G11        B
  -0.89160                MT -0.38  0.00 -0.01 -0.14  0.00 -0.07  0.001084909710849096
   7012          73988/B      31  32191506251115       12 1  1.01                211G11        F
 -15.80350                MT  0.97  0.00 -0.26 -2.05  0.03 -1.55  0.001084909710849098
   5912          73988/B      32  31191506241035       12 1  1.01                211G11        B
  15.80390                MT -0.97  0.00  0.26  2.43 -0.03  1.43  0.001084909810849097
   7112          73988/B      32  33191506251145       13 1  1.13                211G11        F
 -12.56890                MT  1.06  0.01 -0.21 -1.73  0.02 -1.26  0.001084909810264299
   5812          73988/B      33  32191506241010       11 1  1.13                211G11        B
  12.56450                MT -1.06  0.01  0.21  1.93 -0.04  1.58  0.001026429910849098
   7212          73988/B      33  34191506251330        4 1  0.37                211G11        F
  -5.54870                MT  0.30  0.01 -0.09 -0.75 -0.01 -0.66  0.001026429910849099
   5712          73988/B      34  3319150624 955        4 1  0.37                211G11        B
   5.54670                MT -0.30  0.01  0.09  0.83 -0.01  0.59  0.001084909910264299
   8612          73988/B      34  35191506261105       12 1  1.04                211G11        F
 -14.98420                MT  0.84  0.01 -0.25 -2.07  0.04 -1.50  0.001084909910849100
   7312          73988/B      34  35191506251345       12 1  1.04                211G11        F
 -14.98860                MT  0.84  0.01 -0.25 -2.01 -0.04 -1.49  0.001084909910849100
   8512          73988/B      35  34191506261040       12 1  1.04                211G11        B
  14.98730                MT -0.84 -0.01  0.25  1.98 -0.05  1.47  0.001084910010849099
   5612          73988/B      35  3419150624 925       10 1  1.04                211G11        B
  14.98390                MT -0.84  0.00  0.25  2.28 -0.04  1.85  0.001084910010849099
   7412          73988/B      35  36191506251415       13 1  1.13                211G11        F
 -16.53400                MT  0.90  0.01 -0.27 -2.25 -0.05 -1.59  0.001084910010849101
   5412          73988/B      36  3519150624 850       12 1  1.14                211G11        B
  16.53500                MT -0.90  0.00  0.27  2.38 -0.06  1.52  0.001084910110849100
   7512          73988/B      36  37191506251445       12 1  1.15                211G11        F
 -18.38500                MT  0.90  0.01 -0.31 -2.54 -0.06 -2.09  0.001084910110849102
   5312          73988/B      37  3619150624 815       11 1  1.15                211G11        B
  18.38460                MT -0.90  0.00  0.31  2.39 -0.06  1.92  0.001084910210849101
```

```
   7612          73988/B        37  38191506251520      11 1  1.10                211G11      F
  -2.36250                   MT  0.85  0.00 -0.04 -0.33 -0.06 -0.25  0.00108491021034416 9
   5212          73988/B        38  3719150624 750       9 1  1.10                211G11      B
   2.36590                   MT -0.85 -0.01  0.04  0.27 -0.06  0.27  0.001034416910849102
   7712          73988/B        38  39191506251555      10 1  1.20                211G11      F
  -2.14160                   MT  0.66  0.02 -0.04 -0.27 -0.09 -0.29  0.001034416910849103
   8412          73988/B        39  38191506261000      11 1  1.20                211G11      B
   2.14130                   MT -0.66  0.04  0.04  0.27 -0.08  0.30  0.001084910310344169
   7812          73988/B        39  40191506251630       9 1  1.08                211G11      F
   0.73370                   MT  0.60  0.00  0.01  0.10 -0.07  0.09  0.001084910310337646
   8312          73988/B        40  3919150626 935      10 1  1.08                211G11      B
  -0.73480                   MT -0.60 -0.03 -0.01 -0.09 -0.08 -0.09  0.001033764610849103
   7912          73988/B        40  41191506251700      10 1  1.12                211G11      F
  -2.83140                   MT  0.82  0.01 -0.05 -0.36 -0.07 -0.24  0.001033764610332829
   8212          73988/B        41  4019150626 905      12 1  1.12                211G11      B
   2.83260                   MT -0.82  0.05  0.05  0.34 -0.10  0.25  0.001033282910337646
   8012          73988/B        41  4219150626 730      10 1  0.94                211G11      F
   0.00640                   MT -0.66 -0.01  0.00  0.00 -0.07  0.00  0.001033282910336119
   8712          73988/B        41  43191506261305       2 1  0.11                211G11      F
   0.18800                   MT  0.00 -0.04  0.00  0.03  0.00  0.01  0.001033282910332842
   8112          73988/B        42  4119150626 805      12 1  0.94                211G11      B
  -0.00810                   MT  0.66 -0.01  0.00  0.00  0.08  0.00  0.001033611910332829
  11112          73988/B        43  41191506281650       1 1  0.11                211G11      B
  -0.18800                   MT  0.00  0.00  0.00 -0.02  0.00 -0.01  0.001033284210332829
   8812          73988/B        43  44191506261315       9 1  0.78                211G11      F
  -1.12800                   MT  0.47 -0.02 -0.02 -0.16 -0.03 -0.11  0.001033284210331298
  11012          73988/B        44  43191506281630       6 1  0.78                211G11      B
   1.12760                   MT -0.47  0.02  0.02  0.15  0.05  0.06  0.001033129810332842
   8912          73988/B        44  45191506261355      11 1  1.08                211G11      F
  -0.36800                   MT  0.65 -0.01 -0.01 -0.06 -0.06 -0.04  0.001033129810849104
  10912          73988/B        45  44191506281615       7 1  1.08                211G11      B
   0.36860                   MT -0.65  0.01  0.01  0.05  0.06  0.03  0.001084910410331298
   9012          73988/B        45  46191506261425      12 1  1.05                211G11      F
  -0.79130                   MT  0.63  0.01 -0.01 -0.12 -0.07 -0.07  0.001084910410849105
  10812          73988/B        46  45191506281550       7 1  1.05                211G11      B
   0.78750                   MT -0.63  0.00  0.01  0.11  0.05  0.07  0.001084910510849104
   9212          73988/B        46  48191506261550       9 1  0.80                211G11      F
  -0.05430                   MT  0.48  0.00  0.00 -0.01 -0.07  0.00  0.001084910510321333
  10712          73988/B        48  46191506281530       6 1  0.80                211G11      B
0.05430                      MT -0.48  0.00  0.00  0.01  0.04  0.00  0.001032133310849105
   9112          73988/B        48  49191506261530      10 1  1.05                211G11      F
  -1.69890                   MT  0.57  0.01 -0.03 -0.26 -0.09 -0.19  0.001032133310849106
  10612          73988/B        49  48191506281505       8 1  1.06                211G11      B
   1.70140                   MT -0.57  0.02  0.03  0.28  0.04  0.12  0.001084910610321333
   9312          73988/B        49  50191506261600      12 1  1.29                211G11      F
  -0.56700                   MT  0.69  0.00 -0.01 -0.08 -0.11 -0.06  0.001084910610314692
  10512          73988/B        50  49191506281430      14 1  1.28                211G11      B
   0.56440                   MT -0.69 -0.01  0.01  0.10  0.02  0.05  0.001031469210849106
  11212          73988/B        50  5119150629 755      11 1  1.11                211G11      F
   0.29860                   MT  0.72  0.00  0.00  0.04  0.03  0.02  0.001031469210849107
  12712          73988/B        50  5119150630 750       9 1  1.11                211G11      F
   0.29390                   MT  0.72  0.00  0.00  0.04  0.01  0.03  0.001031469210849107
  10412          73988/B        51  50191506281400      13 1  1.10                211G11      B
  -0.29340                   MT -0.72  0.01  0.00 -0.05 -0.01 -0.02  0.001084910710314692
  12812          73988/B        51  5019150630 820       9 1  1.11                211G11      B
  -0.29460                   MT -0.72 -0.01  0.00 -0.04 -0.02 -0.04  0.001084910710314692
  11312          73988/B        51  5219150629 825      11 1  1.17                211G11      F
  -0.45960                   MT  0.76 -0.03 -0.01 -0.07  0.04 -0.04  0.001084910710849108
  10312          73988/B        52  51191506281330      13 1  1.17                211G11      B
   0.45990                   MT -0.76  0.01  0.01  0.08 -0.02  0.04  0.001084910810849107
  11412          73988/B        52  5319150629 900      10 1  1.07                211G11      F
  -0.33710                   MT  0.69 -0.05 -0.01 -0.05  0.05 -0.04  0.001084910810302871
  10212          73988/B        53  52191506281205      12 1  1.07                211G11      B
   0.33970                   MT -0.69  0.01  0.01  0.05 -0.06  0.03  0.001030287110849108
  11512          73988/B        53  5419150629 930       8 1  0.80                211G11      F
   0.56140                   MT  0.79  0.02  0.01  0.09  0.01  0.06  0.001030287110849109
  10112          73988/B        54  53191506281145       9 1  0.80                211G11      B
  -0.56140                   MT -0.79  0.00 -0.01 -0.09 -0.04 -0.06  0.001084910910302871
  11612          73988/B        54  5519150629 945      10 1  1.12                211G11      F
  -0.44830                   MT  1.10  0.01 -0.01 -0.07  0.02 -0.06  0.001084910910849110
  10012          73988/B        55  54191506281120      11 1  1.12                211G11      B
   0.44730                   MT -1.10  0.02  0.01  0.07 -0.05  0.06  0.001084911010849109
  11712          73988/B        55  56191506291015      11 1  1.12                211G11      F
   3.02980                   MT  1.10 -0.02  0.05  0.44  0.02  0.36  0.001084911010287387
   9912          73988/B        56  55191506281045      11 1  1.12                211G11      B
  -3.03070                   MT -1.10  0.00 -0.05 -0.45 -0.04 -0.37  0.001028738710849110
  11812          73988/B        56  57191506291045       3 1  0.25                211G11      F
```

Table 1c. National Geodetic Survey Line 73988B: File 73988B.prn(=.dat)--Continued

```
  2.99510                MT  0.22 -0.01  0.05  0.43  0.01  0.27  0.00102873871084911 1
  9812          73988/B      57  56191506281035       3 1  0.25                211G11      B
 -2.99460                MT -0.22 -0.01 -0.05 -0.46 -0.01 -0.27  0.00108491111028738 7
 11912          73988/B      57  58191506291055      15 1  1.41                211G11      F
  9.66530                MT  1.22  0.02  0.16  1.55  0.03  1.02  0.00108491111084911 2
  9712          73988/B      58  57191506281000      13 1  1.41                211G11      B
 -9.66570                MT -1.22  0.00 -0.16 -1.37 -0.02 -1.30  0.00108491121084911 1
 12012          73988/B      58  59191506291125      12 1  1.07                211G11      F
  1.35900                MT  0.93  0.00  0.02  0.23  0.03  0.13  0.00108491121084911 3
  9612          73988/B      59  5819150628 935       9 1  1.07                211G11      B
 -1.36100                MT -0.93  0.00 -0.02 -0.19 -0.01 -0.21  0.00108491131084911 2
 12112          73988/B      59  60191506291255      12 1  1.08                211G11      F
 -2.83040                MT  0.94 -0.05 -0.05 -0.55  0.04 -0.27  0.00108491131084911 4
  9512          73988/B      60  5919150628 910       9 1  1.08                211G11      B
  2.83130                MT -0.94  0.04  0.05  0.37 -0.01  0.41  0.00108491141084911 3
 12212          73988/B      60  61191506291345      13 1  1.12                211G11      F
  4.68860                MT  0.98  0.00  0.08  0.84  0.05  0.40  0.00108491141026428 4
  9412          73988/B      61  6019150628 840       9 1  1.13                211G11      B
 -4.68740                MT -0.98  0.00 -0.08 -0.62  0.00 -0.68  0.00102642841084911 4
 12312          73988/B      61  62191506291420      12 1  1.07                211G11      F
 -3.60260                MT  0.93 -0.03 -0.06 -0.63  0.04 -0.32  0.00102642841084911 5
 14212          73988/B      62  61191507061615       8 1  1.07                211G11      B
  3.60310                MT -0.93  0.00  0.06  0.40 -0.01  0.23  0.00108491151026428 4
 12412          73988/B      62  63191506291455      12 1  1.07                211G11      F
  1.60770                MT  0.93 -0.02  0.03  0.29  0.02  0.13  0.00108491151084911 6
 14112          73988/B      63  62191507061550       8 1  1.08                211G11      B
 -1.61110                MT -0.93  0.00 -0.03 -0.18  0.00 -0.11  0.00108491161084911 5
 12512          73988/B      63  64191506291530      11 1  1.13                211G11      F
 -1.26260                MT  0.98 -0.05 -0.02 -0.22  0.01 -0.12  0.00108491161084911 7
 14012          73988/B      64  63191507061525       8 1  1.13                211G11      B
  1.26500                MT -0.98  0.05  0.02  0.14  0.00  0.26  0.00108491171084911 6
 12612          73988/B      64  65191506291600      10 1  1.11                211G11      F
  1.42260                MT  0.96  0.00  0.02  0.24  0.00  0.15  0.00108491171034416 8
 13912          73988/B      65  64191507061500       8 1  1.11                211G11      B
 -1.42540                MT -0.96  0.04 -0.02 -0.17  0.01 -0.12  0.00103441681084911 7
 12912          73988/B      65  66191507061000      10 1  1.09                211G11      F
 -3.78200                MT  1.03 -0.02 -0.06 -0.37  0.01 -0.53  0.00103441681084911 8
 13612          73988/B      66  65191507061330       8 1  1.09                211G11      B
  3.78530                MT -1.03  0.03  0.06  0.48  0.01  0.89  0.00108491181034416 8
 13012          73988/B      66  67191507061025      12 1  1.10                211G11      F
  5.21050                MT  1.04 -0.03  0.09  0.65  0.01  0.52  0.00108491181084911 9
 13812          73988/B      67  66191507061405      10 1  1.10                211G11      B
 -5.21190                MT -1.04 -0.02 -0.09 -0.69  0.01 -0.76  0.00108491191084911 8
 14412          73988/B      67  68191507071120      10 1  1.07                211G11      F
 -1.93360                MT  1.02  0.01 -0.03 -0.23  0.00 -0.28  0.00108491191084912 0
 13112          73988/B      67  68191507061055      10 1  1.07                211G11      F
 -1.93120                MT  1.02 -0.02 -0.03 -0.25  0.00 -0.27  0.00108491191084912 0
 14512          73988/B      68  67191507071150      10 1  1.07                211G11      B
  1.93030                MT -1.02 -0.01  0.03  0.24  0.00  0.29  0.00108491201084911 9
 13712          73988/B      68  67191507061335       9 1  1.08                211G11      B
  1.93700                MT -1.02  0.00  0.03  0.26  0.01  0.34  0.00108491201084911 9
 13212          73988/B      68  69191507061120       3 1  0.32                211G11      F
 -1.64470                MT  0.31  0.01 -0.03 -0.21  0.00 -0.24  0.00108491201032811 1
 13512          73988/B      69  68191507061325       3 1  0.32                211G11      B
  1.64430                MT -0.31  0.01  0.03  0.22  0.00  0.24  0.00103281111084912 0
 13312          73988/B      69  70191507061130      11 1  1.16                211G11      F
 -8.66730                MT  0.97  0.01 -0.14 -1.07  0.00 -1.26  0.00103281111084912 1
 13412          73988/B      70  69191507061300      11 1  1.16                211G11      B
  8.66770                MT -0.97 -0.03  0.14  1.06  0.01  1.27  0.00108491211032811 1
 14612          73988/B      70  71191507071250      11 1  1.12                211G11      F
 -5.57130                MT  0.93  0.01 -0.09 -0.81 -0.01 -0.72  0.00108491211084912 2
 16912          73988/B      71  70191507081600      11 1  1.12                211G11      B
  5.57270                MT -0.93  0.02  0.09  0.85  0.02  0.51  0.00108491221084912 1
 14712          73988/B      71  72191507071325      10 1  1.09                211G11      F
  0.03570                MT  0.90 -0.02  0.00  0.00 -0.01  0.01  0.00108491221084912 3
 16712          73988/B      72  71191507081535      10 1  1.09                211G11      B
 -0.03670                MT -0.90  0.00  0.00 -0.01  0.02  0.00  0.00108491231084912 2
 14812          73988/B      72  73191507071350      10 1  1.09                211G11      F
 -0.74530                MT  0.91 -0.01 -0.01 -0.10 -0.01 -0.11  0.00108491231084912 4
 16612          73988/B      73  72191507081505      10 1  1.09                211G11      B
  0.74770                MT -0.91  0.00  0.01  0.11  0.02  0.09  0.00108491241084912 3
 14912          73988/B      73  74191507071420      11 1  1.14                211G11      F
  0.49670                MT  0.95  0.02  0.01  0.07 -0.01  0.06  0.00108491241084912 5
 16812          73988/B      74  73191507081535      11 1  1.14                211G11      B
 -0.49700                MT -0.95  0.00 -0.01 -0.07  0.02 -0.05  0.00108491251084912 4
 16412          73988/B      74  75191507081428       1 1  0.01                211G11      F
 -0.23760                MT  0.01  0.00  0.00 -0.04  0.00  0.00  0.00108491251030288 1
```

Table 1c. National Geodetic Survey Line 73988B: File 73988B.prn(=.dat)--Continued

```
  16312          73988/B        75  74191507081426       1 1  0.01                  211G11        B
   0.23770                    MT -0.01  0.00  0.00  0.03  0.00  0.00  0.001030288110849125
  16512          73988/B        75  76191507081429       1 1  0.01                  211G11        F
   0.23630                    MT  0.02  0.00  0.00  0.03  0.00  0.00  0.001030288110849126
  16212          73988/B        76  75191507081425       1 1  0.01                  211G11        B
  -0.23640                    MT -0.02  0.00  0.00 -0.03  0.00  0.00  0.001084912610302881
  15012          73988/B        76  77191507071550      10 1  1.05                  211G11        F
  -0.33640                    MT  1.24 -0.03 -0.01 -0.05  0.00 -0.03  0.001084912610849127
  16112          73988/B        77  76191507081355      11 1  1.05                  211G11        B
   0.33460                    MT -1.24  0.00  0.01  0.05  0.00  0.04  0.001084912710849126
  17012          73988/B        77  7819150709 820       2 1  0.16                  211G11        F
   0.52470                    MT  0.19  0.02  0.01  0.05  0.00  0.03  0.001084912710849128
  16012          73988/B        78  77191507081345       2 1  0.16                  211G11        B
  -0.52600                    MT -0.19  0.00 -0.01 -0.08  0.00 -0.04  0.001084912810849127
  19612          73988/B        78  79191507101435      13 1  1.17                  211G11        F
  -0.68240                    MT  1.37  0.02 -0.01 -0.11  0.00 -0.06  0.001084912810287386
  17412          73988/B        78  7919150709 940      11 1  1.17                  211G11        F
  -0.68540                    MT  1.37 -0.01 -0.01 -0.09  0.04 -0.08  0.001084912810287386
  17112          73988/B        78  7919150709 830       9 1  1.17                  211G11        F
  -0.68130                    MT  1.37  0.01 -0.01 -0.08  0.03 -0.10  0.001084912810287386
  15912          73988/B        79  78191507081310      11 1  1.17                  211G11        B
   0.68640                    MT -1.37  0.01  0.01  0.11 -0.01  0.09  0.001028738610849128
  17312          73988/B        79  7819150709 910      10 1  1.17                  211G11        B
   0.68050                    MT -1.37  0.01  0.01  0.08 -0.04  0.09  0.001028738610849128
  19512          73988/B        79  78191507101400      13 1  1.17                  211G11        B
   0.68440                    MT -1.37  0.00  0.01  0.11 -0.01  0.06  0.001028738610849128
  17212          73988/B        79  8019150709 850       5 1  0.53                  211G11        F
  -0.08470                    MT  0.49  0.01  0.00 -0.01  0.01 -0.01  0.001028738610849129
  15812          73988/B        80  79191507081200       5 1  0.53                  211G11        B
   0.08400                    MT -0.49 -0.01  0.00  0.01 -0.01  0.01  0.001084912910287386
  17512          73988/B        80  81191507091005      10 1  1.05                  211G11        F
   0.62170                    MT  0.96 -0.01  0.01  0.08  0.03  0.08  0.001084912910849130
  15712          73988/B        81  80191507081130      10 1  1.06                  211G11        B
  -0.61900                    MT -0.96  0.02 -0.01 -0.09 -0.02 -0.08  0.001084913010849129
  17612          73988/B        81  82191507091030      10 1  1.09                  211G11        F
  -0.14900                    MT  0.99  0.00  0.00 -0.02  0.03 -0.02  0.001084913010849131
  15612          73988/B        82  81191507081105      10 1  1.08                  211G11        B
   0.15230                    MT -0.99  0.01  0.00  0.02 -0.03  0.02  0.001084913110849130
  14312          73988/B        82  83191507071100      10 1  1.10                  211G11        F
   0.05700                    MT  1.00  0.03  0.00  0.01  0.02  0.01  0.001084913110269399
  15512          73988/B        83  82191507081030      10 1  1.10                  211G11        B
  -0.06100                    MT -1.00  0.01  0.00 -0.01 -0.03 -0.01  0.001026939910849131
  17712          73988/B        83  84191507091130       7 1  0.65                  211G11        F
   0.31910                    MT  0.54  0.00  0.01  0.04  0.01  0.03  0.001026939910849132
  19312          73988/B        83  84191507101315       6 1  0.65                  211G11        F
   0.31490                    MT  0.54  0.00  0.01  0.05  0.00  0.04  0.001026939910849132
  15412          73988/B        84  8319150708 930       6 1  0.65                  211G11        B
  -0.31470                    MT -0.54  0.00 -0.01 -0.04 -0.02 -0.04  0.001084913210269399
  19412          73988/B        84  83191507101330       6 1  0.65                  211G11        B
  -0.31430                    MT -0.54  0.00 -0.01 -0.05  0.00 -0.04  0.001084913210269399
  17912          73988/B        84  85191507091345      13 1  1.12                  211G11        F
-0.29150                      MT  0.93  0.02  0.00 -0.04 -0.01 -0.03  0.001084913210849133
  15312          73988/B        85  8419150708 905      10 1  1.13                  211G11        B
   0.29460                    MT -0.93  0.01  0.00  0.04 -0.03  0.04  0.001084913310849132
  17812          73988/B        85  86191507091320      13 1  1.13                  211G11        F
  -0.36430                    MT  0.93 -0.01 -0.01 -0.06  0.00 -0.03  0.001084913310849134
  15212          73988/B        86  8519150708 840       9 1  1.13                  211G11        B
   0.36630                    MT -0.93  0.00  0.01  0.05 -0.03  0.05  0.001084913410849133
  18012          73988/B        86  87191507091400      14 1  1.25                  211G11        F
   0.94570                    MT  1.04  0.00  0.02  0.14 -0.01  0.09  0.001084913410350719
  15112          73988/B        87  8619150708 800      10 1  1.26                  211G11        B
  -0.94540                    MT -1.04  0.02 -0.02 -0.10 -0.03 -0.11  0.001035071910849134
  18112          73988/B        87  88191507091438      13 1  1.16                  211G11        F
  -0.94180                    MT  0.90  0.02 -0.02 -0.14 -0.05 -0.08  0.001035071910849135
  19212          73988/B        88  87191507101145      11 1  1.17                  211G11        B
   0.94100                    MT -0.90 -0.01  0.02  0.14 -0.01  0.13  0.001084913510350719
  18212          73988/B        88  89191507091515      12 1  1.10                  211G11        F
   0.37100                    MT  0.85  0.01  0.01  0.05 -0.05  0.03  0.001084913510849136
  19112          73988/B        89  88191507101115      10 1  1.10                  211G11        B
  -0.37160                    MT -0.85 -0.02 -0.01 -0.05 -0.02 -0.05  0.001084913610849135
  18312          73988/B        89  90191507091540      11 1  1.16                  211G11        F
  -0.03000                    MT  0.90  0.03  0.00  0.00 -0.05  0.00  0.001084913610849137
  19012          73988/B        90  89191507101050      11 1  1.16                  211G11        B
   0.02730                    MT -0.90  0.00  0.00  0.00 -0.04  0.00  0.001084913710849136
  18412          73988/B        90  91191507091610      10 1  1.27                  211G11        F
   6.92200                    MT  0.99  0.02  0.11  1.04 -0.05  0.96  0.001084913710331297
  18912          73988/B        91  90191507101020      12 1  1.27                  211G11        B
```

Table 1c. National Geodetic Survey Line 73988B: File 73988B.prn(=.dat)--Continued

```
 -6.92020                MT -0.99  0.00 -0.11 -0.93 -0.05 -0.89  0.001033129710849137
 19712          73988/B      91  92191507101555       10 1  1.02                211G11          F
  8.93730                MT  0.45 -0.01  0.15  1.45 -0.06  0.84  0.001033129710849138
 18812          73988/B      92  9119150710 955       10 1  1.02                211G11          B
 -8.93560                MT -0.45  0.00 -0.15 -1.18 -0.05 -1.04  0.001084913810331297
 19812          73988/B      92  93191507101620       12 1  1.28                211G11          F
 11.59930                MT  0.52  0.00  0.19  1.90 -0.07  1.09  0.001084913810849139
 20012          73988/B      92  9319150712 800       11 1  1.17                211G11          F
 11.59700                MT  0.52  0.00  0.19  1.55  0.08  0.97  0.001084913810849139
 18712          73988/B      93  9219150710 925       11 1  1.17                211G11          B
-11.59210                MT -0.52  0.00 -0.19 -1.48 -0.07 -1.38  0.001084913910849138
 19912          73988/B      93  9219150712 730       11 1  1.17                211G11          B
-11.59400                MT -0.52  0.04 -0.19 -1.44 -0.07 -0.65  0.001084913910849138
 18512          73988/B      93  9419150710 730       19 1  1.67                211G11          F
-21.95240                MT -0.47  0.02 -0.36 -2.72 -0.11 -0.84  0.001084913910318074
 20112          73988/B      93  9519150712 830       11 1  1.10                211G11          F
 10.69800                MT  0.50  0.00  0.18  1.48  0.08  0.90  0.001084913910849140
 18612          73988/B      94  9319150710 825       19 1  1.66                211G11          B
 21.95700                MT  0.47  0.00  0.36  2.90  0.11  1.41  0.001031807410849139
 23012          73988/B      95  9319150714 855       11 1  1.11                211G11          B
-10.69900                MT -0.50  0.02 -0.18 -1.24 -0.07 -1.03  0.001084914010849139
 23112          73988/B      95  9619150714 940       10 1  1.07                211G11          F
 11.11300                MT  0.49 -0.05  0.18  1.40  0.07  1.38  0.001084914010849141
 20212          73988/B      95  9619150712 900       10 1  1.07                211G11          F
 11.11070                MT  0.49 -0.17  0.18  1.58  0.08  1.21  0.001084914010849141
 22912          73988/B      96  9519150714 830       10 1  1.07                211G11          B
-11.11660                MT -0.49 -0.05 -0.18 -1.27 -0.05 -1.11  0.001084914110849140
 23212          73988/B      96  95191507141000       10 1  1.07                211G11          B
-11.10990                MT -0.49  0.03 -0.18 -1.40 -0.08 -1.45  0.001084914110849140
 20312          73988/B      96  9719150712 925       10 1  1.09                211G11          F
  8.55830                MT  0.50 -0.03  0.14  1.27  0.08  1.02  0.001084914110849142
 22812          73988/B      97  9619150714 800       10 1  1.09                211G11          B
 -8.56140                MT -0.50  0.05 -0.14 -0.94 -0.04 -0.76  0.001084914210849141
 20412          73988/B      97  9819150712 950       10 1  1.09                211G11          F
  8.07200                MT  0.50 -0.23  0.13  1.24  0.08  1.00  0.001084914210849143
 22712          73988/B      98  97191507131350       10 1  1.09                211G11          B
 -8.07600                MT -0.50 -0.01 -0.13 -1.36  0.01 -1.09  0.001084914310849142
 20512          73988/B      98  99191507121015       10 1  1.08                211G11          F
  7.64670                MT  0.50 -0.19  0.13  1.18  0.07  0.98  0.001084914310849144
 23312          73988/B      98  99191507141040       10 1  1.08                211G11          F
  7.65140                MT  0.50  0.00  0.13  0.99  0.08  1.05  0.001084914310849144
 23412          73988/B      99  98191507141110       10 1  1.08                211G11          B
 -7.65400                MT -0.50  0.00 -0.13 -0.96 -0.08 -1.10  0.001084914410849143
 22612          73988/B      99  98191507131325       10 1  1.08                211G11          B
 -7.65140                MT -0.50 -0.02 -0.13 -1.29  0.00 -1.04  0.001084914410849143
 20612          73988/B      99 100191507121040       11 1  1.13                211G11          F
 11.84930                MT  0.53 -0.03  0.20  1.85  0.07  1.46  0.001084914410849145
 22512          73988/B     100  99191507131255       11 1  1.13                211G11          B
-11.85000                MT -0.53  0.01 -0.20 -2.04 -0.02 -1.51  0.001084914510849144
 20712          73988/B     100 101191507121105       10 1  1.05                211G11          F
 10.95200                MT  0.50  0.05  0.18  1.84  0.05  1.43  0.001084914510307851
 22412          73988/B     101 100191507131130       10 1  1.05                211G11          B
-10.95330                MT -0.50 -0.01 -0.18 -1.82 -0.06 -1.47  0.001030785110849145
 20812          73988/B     101 102191507121250       12 1  1.11                211G11          F
 11.79010                MT  0.46 -0.22  0.20  1.93  0.00  1.23  0.001030785110849146
 22312          73988/B     102 101191507131110       11 1  1.11                211G11          B
-11.78930                MT -0.46  0.02 -0.20 -1.93 -0.07 -1.43  0.001084914610307851
 20912          73988/B     102 103191507121325       10 1  1.09                211G11          F
  2.26000                MT  0.45 -0.02  0.04  0.39 -0.03  0.30  0.001084914610849147
 22212          73988/B     103 102191507131045       10 1  1.09                211G11          B
 -2.26070                MT -0.45 -0.01 -0.04 -0.38 -0.08 -0.30  0.001084914710849146
 21012          73988/B     103 104191507121355       11 1  1.16                211G11          F
 -4.11690                MT  0.48 -0.21 -0.07 -0.72 -0.04 -0.50  0.001084914710849148
 22112          73988/B     104 103191507131020       12 1  1.16                211G11          B
  4.12110                MT -0.48  0.05  0.07  0.67 -0.09  0.41  0.001084914810849147
 21112          73988/B     104 105191507121425       10 1  1.08                211G11          F
  3.66630                MT  0.45  0.13  0.06  0.63 -0.06  0.45  0.001084914810849149
 22012          73988/B     105 10419150713 955       11 1  1.08                211G11          B
 -3.66820                MT -0.45  0.03 -0.06 -0.59 -0.08 -0.36  0.001084914910849148
 21212          73988/B     105 106191507121450       10 1  1.11                211G11          F
  0.27410                MT  0.46 -0.19  0.00  0.05 -0.07  0.03  0.001084914910849150
 23512          73988/B     105 106191507141155       11 1  1.12                211G11          F
  0.27510                MT  0.46 -0.01  0.00  0.04  0.06  0.03  0.001084914910849150
 23612          73988/B     106 105191507141225       11 1  1.12                211G11          B
 -0.27630                MT -0.46 -0.01  0.00 -0.04 -0.05 -0.03  0.001084915010849149
 21912          73988/B     106 10519150713 935       10 1  1.12                211G11          B
 -0.27970                MT -0.46 -0.02  0.00 -0.04 -0.08 -0.03  0.001084915010849149
```

Table 1c. National Geodetic Survey Line 73988B: File 73988B.prn(=.dat)--Continued

```
 21312          73988/B       106 107191507121515       7 1  0.69                  211G11       F
  0.57460                   MT  0.29 -0.32  0.01  0.10 -0.05  0.05  0.001084915010295637
 21812          73988/B       107 10619150713 915       7 1  0.69                  211G11       B
 -0.57330                   MT -0.29  0.00 -0.01 -0.09 -0.05 -0.05  0.001029563710849150
 21412          73988/B       107 108191507121535      10 1  1.10                  211G11       F
  9.72070                   MT  0.27 -0.12  0.16  1.61 -0.08  1.11  0.001029563710849151
 21712          73988/B       108 10719150713 850      10 1  1.10                  211G11       B
 -9.71710                   MT -0.27 -0.01 -0.16 -1.44 -0.08 -1.05  0.001084915110295637
 21512          73988/B       108 109191507121600       9 1  1.04                  211G11       F
  6.70670                   MT  0.26 -0.10  0.11  1.10 -0.08  0.76  0.001084915110849152
 21612          73988/B       109 10819150713 825       9 1  1.04                  211G11       B
 -6.70310                   MT -0.26 -0.01 -0.11 -0.88 -0.07 -0.73  0.001084915210849151
 25512          73988/B       109 11019150716 910       9 1  1.01                  211G11       F
-13.20580                   MT  0.25 -0.06 -0.22 -1.72  0.03 -1.75  0.001084915210849153
 23712          73988/B       109 110191507141420       9 1  1.01                  211G11       F
-13.21030                   MT  0.25 -0.01 -0.22 -1.80 -0.02 -2.02  0.001084915210849153
 25612          73988/B       110 10919150716 930       9 1  1.01                  211G11       B
 13.20600                   MT -0.25  0.03  0.22  1.93 -0.03  1.80  0.001084915310849152
 25412          73988/B       110 109191507151525       9 1  1.01                  211G11       B
 13.20540                   MT -0.25  0.00  0.22  2.09  0.03  1.67  0.001084915310849152
 23812          73988/B       110 111191507141445      10 1  1.11                  211G11       F
-19.42340                   MT  0.27 -0.02 -0.32 -3.03 -0.04 -2.89  0.001084915310849154
 25312          73988/B       111 110191507151455      10 1  1.11                  211G11       B
 19.41970                   MT -0.27  0.01  0.32  3.18  0.02  2.77  0.001084915410849153
 23912          73988/B       111 112191507141515      10 1  1.15                  211G11       F
-12.88800                   MT  0.28 -0.02 -0.21 -2.09 -0.05 -1.71  0.001084915410288982
 25212          73988/B       112 111191507151420      10 1  1.15                  211G11       B
 12.88620                   MT -0.28  0.07  0.21  2.09  0.00  1.93  0.001028898210849154
 24012          73988/B       112 113191507141600       8 1  1.07                  211G11       F
 -0.07300                   MT  0.09 -0.02  0.00 -0.01 -0.07 -0.01  0.001028898210849155
 25112          73988/B       113 112191507151350       9 1  1.06                  211G11       B
  0.07020                   MT -0.09 -0.03  0.00  0.01 -0.01  0.01  0.001084915510288982
 24112          73988/B       113 114191507141625       7 1  0.98                  211G11       F
  0.73000                   MT  0.08 -0.05  0.01  0.10 -0.07  0.11  0.001084915510287394
 25012          73988/B       114 113191507151325       8 1  0.98                  211G11       B
 -0.72840                   MT -0.08  0.04 -0.01 -0.10 -0.02 -0.13  0.001028739410849155
 25712          73988/B       114 115191507161015       9 1  1.08                  211G11       F
  1.86960                   MT  0.08  0.02  0.03  0.28  0.05  0.29  0.001028739410849156
 24912          73988/B       115 114191507151200      10 1  1.08                  211G11       B
 -1.87230                   MT -0.08  0.04 -0.03 -0.31 -0.06 -0.25  0.001084915610287394
 25812          73988/B       115 116191507161040      10 1  1.08                  211G11       F
  2.32960                   MT  0.08 -0.10  0.04  0.37  0.05  0.30  0.001084915610287393
 24812          73988/B       116 115191507151130      10 1  1.08                  211G11       B
 -2.32810                   MT -0.08  0.04 -0.04 -0.37 -0.07 -0.32  0.001028739310849156
 25912          73988/B       116 117191507161105       3 1  0.25                  211G11       F
  0.56570                   MT  0.02 -0.04  0.01  0.09  0.01  0.05  0.001028739310849157
 24712          73988/B       117 116191507151120       3 1  0.25                  211G11       B
 -0.56670                   MT -0.02 -0.04 -0.01 -0.09 -0.02 -0.05  0.001084915710287393
 26012          73988/B       117 118191507161115      10 1  1.07                  211G11       F
  4.56960                   MT  0.08 -0.02  0.08  0.75  0.06  0.61  0.001084915710849158
 24612          73988/B       118 117191507151055      10 1  1.07                  211G11       B
 -4.57000                   MT -0.08 -0.01 -0.08 -0.71 -0.07 -0.61  0.001084915810849157
 26112          73988/B       118 119191507161140      11 1  1.19                  211G11       F
  4.67310                   MT  0.09  0.00  0.08  0.78  0.06  0.64  0.001084915810849159
 24512          73988/B       119 118191507151025      11 1  1.19                  211G11       B
 -4.67020                   MT -0.09  0.02 -0.08 -0.70 -0.08 -0.60  0.001084915910849158
 26212          73988/B       119 121191507161210      10 1  1.06                  211G11       F
  2.46270                   MT  0.08  0.04  0.04  0.42  0.05  0.32  0.001084915910849160
 27912          73988/B       119 121191507171420      10 1  1.06                  211G11       F
  2.46510                   MT  0.08  0.03  0.04  0.39  0.02  0.30  0.001084915910849160
 24412          73988/B       121 119191507151000      10 1  1.06                  211G11       B
 -2.46720                   MT -0.08  0.02 -0.04 -0.36 -0.07 -0.29  0.001084916010849159
 27812          73988/B       121 119191507171400      10 1  1.06                  211G11       B
 -2.46670                   MT -0.08  0.01 -0.04 -0.38 -0.03 -0.31  0.001084916010849159
 26312          73988/B       121 122191507161350      12 1  1.14                  211G11       F
  7.35270                   MT  0.09 -0.06  0.12  1.24  0.02  0.74  0.001084916010285769
 24312          73988/B       122 12119150715 930       9 1  1.14                  211G11       B
 -7.35330                   MT -0.09 -0.06 -0.12 -1.07 -0.06 -1.19  0.001028576910849160
 26412          73988/B       122 123191507161420      14 1  1.25                  211G11       F
  8.27970                   MT  0.15 -0.05  0.14  1.49  0.01  0.69  0.001028576910849161
 24212          73988/B       123 12219150715 850      10 1  1.25                  211G11       B
 -8.27540                   MT -0.15 -0.05 -0.14 -1.09 -0.06 -1.17  0.001084916110285769
 26512          73988/B       123 124191507161450      12 1  1.08                  211G11       F
  4.59200                   MT  0.13  0.01  0.08  0.82  0.00  0.37  0.001084916110849162
 27712          73988/B       124 123191507171210      11 1  1.08                  211G11       B
 -4.59030                   MT -0.13 -0.22 -0.08 -0.68 -0.04 -0.54  0.001084916210849161
 26612          73988/B       124 125191507161525      12 1  1.13                  211G11       F
```

Table 1c. National Geodetic Survey Line 73988B: File 73988B.prn(=.dat)--Continued

```
 9.16180                MT  0.14 -0.01  0.15  1.59 -0.02  0.75  0.001084916210849163
27612          73988/B      125 124191507171140       11 1  1.13                211G11        B
-9.16250               MT -0.14 -0.06 -0.15 -1.43 -0.04 -1.16  0.001084916310849162
26712          73988/B      125 126191507161555       10 1  1.07                211G11        F
 6.30630               MT  0.13  0.08  0.10  1.08 -0.03  0.61  0.001084916310849164
27512          73988/B      126 125191507171115       10 1  1.07                211G11        B
-6.30510               MT -0.13  0.01 -0.10 -0.96 -0.04 -0.85  0.001084916410849163
26812          73988/B      126 127191507161620        3 1  0.31                211G11        F
 1.36700               MT  0.04 -0.09  0.02  0.23 -0.01  0.11  0.001084916410282588
27412          73988/B      127 126191507171105        3 1  0.31                211G11        B
-1.36630               MT -0.04 -0.04 -0.02 -0.21 -0.01 -0.17  0.001028258810849164
28012          73988/B      127 128191507171505        6 1  0.63                211G11        F
 0.51370               MT  0.39  0.10  0.01  0.08  0.02  0.05  0.001028258810849165
27312          73988/B      128 127191507171050        6 1  0.63                211G11        B
-0.51430               MT -0.39 -0.12 -0.01 -0.08 -0.02 -0.06  0.001084916510282588
28112          73988/B      128 129191507171520       10 1  1.07                211G11        F
-5.26800               MT  0.66  0.07 -0.09 -0.87  0.03 -0.56  0.001084916510849166
27212          73988/B      129 128191507171028       10 1  1.07                211G11        B
 5.26600               MT -0.66 -0.11  0.09  0.78 -0.03  0.67  0.001084916610849165
28212          73988/B      129 130191507171550       10 1  1.06                211G11        F
-7.80500               MT  0.66 -0.05 -0.13 -1.28  0.02 -0.76  0.001084916610849167
27112          73988/B      130 129191507171000        9 1  1.07                211G11        B
 7.80730               MT -0.66  0.10  0.13  1.14 -0.02  1.19  0.001084916710849166
28312          73988/B      130 131191507171620        9 1  1.12                211G11        F
-7.01400               MT  0.69 -0.07 -0.12 -1.12  0.01 -0.84  0.001084916710849168
27012          73988/B      131 13019150717 935        9 1  1.12                211G11        B
 7.01800               MT -0.69  0.13  0.12  0.98 -0.01  1.13  0.001084916810849167
28412          73988/B      131 132191507171645        9 1  1.12                211G11        F
-7.95670               MT  0.69  0.01 -0.13 -1.23  0.00 -0.70  0.001084916810267794
26912          73988/B      132 13119150717 900        9 1  1.12                211G11        B
 7.95660               MT -0.69  0.00  0.13  1.05  0.00  1.18  0.001026779410849168
28512          73988/B      132 13319150719 810        9 1  1.12                211G11        F
-4.82440               MT  1.05  0.01 -0.08 -0.57  0.01 -0.57  0.001026779410849169
29212          73988/B      133 132191507201420       11 1  1.12                211G11        B
 4.82100               MT -1.05 -0.02  0.08  0.87 -0.01  0.51  0.001084916910267794
28612          73988/B      133 13419150719 835        9 1  1.12                211G11        F
-2.90030               MT  1.05 -0.02 -0.05 -0.42  0.00 -0.37  0.001084916910849170
29312          73988/B      133 134191507201505        9 1  1.13                211G11        F
-2.90460               MT  1.05 -0.02 -0.05 -0.51  0.02 -0.43  0.001084916910849170
29412          73988/B      134 133191507201530        8 1  1.13                211G11        B
 2.90070               MT -1.05 -0.01  0.05  0.43 -0.03  0.21  0.001084917010849169
29112          73988/B      134 133191507201350       11 1  1.12                211G11        B
 2.90910               MT -1.05  0.00  0.05  0.54  0.00  0.32  0.001084917010849169
28712          73988/B      134 13519150719 900        9 1  1.11                211G11        F
 0.64100               MT  1.04  0.04  0.01  0.10  0.00  0.09  0.001084917010849171
29012          73988/B      135 134191507201310       11 1  1.11                211G11        B
-0.63790               MT -1.04  0.00 -0.01 -0.12  0.01 -0.07  0.001084917110849170
28812          73988/B      135 136191507191025       11 1  1.27                211G11        F
 5.22100               MT  1.19  0.01  0.09  0.80 -0.01  0.76  0.001084917110345715
28912          73988/B      136 135191507201135       11 1  1.27                211G11        B
-5.22100               MT -1.19 -0.02 -0.09 -0.89  0.02 -0.80  0.001034571510849171
```

Table 2a. National Geodetic Survey Line 73988C: File 73988C.pro

Seq No.	UID	Benchmark	Spur Code	Distance (km)	Latitude	Longitude	Observed Elevation (m)	Obs Grav Ortho Ht (m)	Cumul. Refr Cor. (mm)	Cumul. Magn Cor. (mm)
3	10345715	N 12 USGS		0.00	38 28 18	118 09 05	1358.98900	1358.98900	0.00	0.00
4	10848947	TBM 1		1.09	38 27 44	118 08 48	1358.84553	1358.84645	-0.02	0.00
5	10848948	TBM 2		2.18	38 27 10	118 08 32	1361.63866	1361.64400	0.38	0.00
6	10848949	TBM 3		3.40	38 26 33	118 08 14	1364.79690	1364.80525	0.81	0.00
7	10323121	O 12		4.62	38 25 56	118 07 55	1371.15941	1371.17027	1.65	0.00
8	10848950	TBM 4		5.75	38 25 22	118 07 35	1376.36731	1376.38234	2.29	0.00
9	10848951	TBM 5		6.84	38 24 48	118 07 15	1379.43220	1379.44912	2.69	0.00
10	10848952	TBM 6		7.89	38 24 16	118 06 56	1381.39189	1381.41078	2.91	0.00
11	10848953	TBM 7		8.96	38 23 44	118 06 37	1382.57703	1382.59787	3.03	0.00
12	10297539	P 12		9.61	38 23 24	118 06 25	1385.98704	1386.00818	3.19	0.00
13	10297538	Q 12		9.85	38 23 27	118 06 22	1385.67245	1385.69397	3.17	0.00
14	10297540	R 12		9.88	38 23 27	118 06 22	1386.68930	1386.71090	3.18	0.00
15	10848954	TBM 8		11.04	38 22 48	118 06 19	1395.05821	1395.07909	3.96	0.00
16	10848955	TBM 9		12.10	38 22 13	118 06 16	1397.12494	1397.14644	4.18	0.00
17	10848956	TBM 10		13.13	38 21 38	118 06 14	1395.53387	1395.55740	4.02	0.00
18	10848957	TBM 11		14.19	38 21 02	118 06 11	1393.56895	1393.59019	3.80	0.00
19	10272836	S 12		14.46	38 20 53	118 06 10	1396.66371	1396.68486	4.01	0.00
20	10848958	TBM 12		15.62	38 20 14	118 06 09	1394.41735	1394.43949	3.79	0.00
21	10848959	TBM 13		16.69	38 19 37	118 06 08	1384.14623	1384.17236	2.77	0.00
22	10848960	TBM 14		17.75	38 19 01	118 06 07	1367.71662	1367.74437	0.87	0.00
23	10848961	TBM 15		18.88	38 18 22	118 06 05	1353.89588	1353.92504	-1.11	0.00
24	10345714	T 12 USGS		19.17	38 18 12	118 06 05	1351.07452	1351.10445	-1.41	0.00
25	10848962	TBM 16		20.19	38 17 42	118 06 00	1338.45938	1338.49401	-3.30	0.00
26	10848963	TBM 17		21.23	38 17 12	118 05 56	1333.87254	1333.91306	-3.93	0.00
27	10848964	TBM 18		22.32	38 16 41	118 05 51	1333.85336	1333.89836	-3.93	0.00
28	10848965	TBM 19		23.40	38 16 09	118 05 46	1337.13264	1337.17866	-3.53	0.00
29	10321335	U 12		24.24	38 15 45	118 05 42	1343.90853	1343.95369	-2.83	0.00
30	10321350	V 12		24.31	38 15 43	118 05 39	1344.61654	1344.66188	-2.80	0.00
31	10321349	W 12 USGS		24.33	38 15 43	118 05 39	1344.88944	1344.93482	-2.80	0.00
32	10848966	TBM 20		25.40	38 15 29	118 05 07	1346.49978	1346.54643	-2.59	0.00
33	10848967	TBM 21		26.53	38 15 15	118 04 32	1351.06541	1351.11326	-1.94	0.00
34	10848968	TBM 22		27.67	38 15 00	118 03 58	1371.82852	1371.87887	0.86	0.00
35	10311340	X 12 USGS		28.92	38 14 44	118 03 20	1395.45837	1395.51127	4.12	0.00
36	10848969	TBM 23		30.01	38 14 21	118 02 45	1416.72545	1416.77848	6.47	0.00
37	10848970	TBM 24		31.14	38 13 58	118 02 08	1439.83762	1439.89185	9.15	0.00
38	10848971	TBM 25		32.21	38 13 35	118 01 33	1462.43950	1462.49684	11.30	0.00
39	10848972	TBM 26		33.40	38 13 10	118 00 54	1486.63637	1486.69751	13.77	0.00
40	10848973	TBM 27		34.53	38 12 47	118 00 17	1511.29122	1511.35466	15.90	0.00
41	10288731	Y 12		35.23	38 12 32	117 59 54	1522.19245	1522.25849	16.85	0.00
42	10848974	TBM 28		36.44	38 12 05	117 59 21	1511.10621	1511.16867	15.84	0.00

Table 2a. National Geodetic Survey Line 73988C: File 73988C.pro--Continued

Seq No.	UID	Benchmark	Spur Code	Distance (km)	Latitude	Longitude	Observed Elevation (m)	Obs Grav Ortho Ht (m)	Cumul. Refr Cor. (mm)	Cumul. Magn Cor. (mm)
43	10848975	TBM 29		37.52	38 11 41	117 58 52	1500.94540	1501.00213	15.19	0.00
44	10848976	TBM 30		38.60	38 11 16	117 58 23	1492.18670	1492.23729	14.51	0.00
45	10848977	TBM 31		39.63	38 10 53	117 57 55	1472.10188	1472.14467	12.19	0.00
46	10267553	Z 12		40.81	38 10 27	117 57 23	1447.61026	1447.64794	9.59	0.00
47	10848978	TBM 32		41.89	38 09 54	117 57 07	1428.95026	1428.98736	7.51	0.00
48	10848979	TBM 33		42.97	38 09 21	117 56 52	1408.64584	1408.68257	5.11	0.00
49	10350485	A 13		44.09	38 08 46	117 56 41	1394.18944	1394.22612	3.42	0.00
50	10848980	TBM 34		45.17	38 08 14	117 56 21	1387.39505	1387.43415	2.56	0.00
51	10848981	TBM 35		46.25	38 07 41	117 56 05	1382.50244	1382.54748	2.00	0.00
52	10334313	B 13		47.36	38 07 08	117 55 50	1380.33941	1380.39123	1.78	0.00

Table 2b. National Geodetic Survey Line 73988C: File 73988C.ori

FROM SEQ NO.	TO SEQ NO.	UNCORRECTED FIELD ELEVATION DIFFERENCE (m)	LEVEL CORR. (mm)	ROD CORR. (mm)	ASTRO CORR. (mm)	TEMP. CORR. (mm)	REFR. CORR. (mm)	MAGN. CORR. (mm)	CORRECTED OBSERVED ELE. DIFFERENCE (m)	CUMULATIVE OBSERVED ELEVATION (OF TO SEQ NO) (m)	CUMULAT. OBS. GRAV ORTHO CORR. (mm)	CUMUL. REFR. CORR. (mm)
3										1358.98900	0.00	0.00
3	4	-0.14345	0.00	0.00	-0.02	0.00	-0.02	0.00	-0.14347	1358.84553	0.92	-0.02
4	5	2.79260	0.03	0.05	0.45	0.00	0.40	0.00	2.79313	1361.63866	5.34	0.38
5	6	3.15765	0.00	0.05	0.53	0.00	0.43	0.00	3.15824	1364.79689	8.35	0.81
6	7	6.36130	0.02	0.11	1.09	0.00	0.84	0.00	6.36251	1371.15940	10.86	1.65
7	8	5.20695	0.05	0.09	0.81	0.01	0.63	0.00	5.20790	1376.36730	15.03	2.29
8	9	3.06435	-0.03	0.05	0.51	0.02	0.41	0.00	3.06489	1379.43219	16.92	2.69
9	10	1.95930	0.02	0.03	0.33	0.02	0.22	0.00	1.95970	1381.39189	18.89	2.91
10	11	1.18495	-0.05	0.02	0.19	0.03	0.12	0.00	1.18514	1382.57703	20.84	3.03
11	12	3.40940	0.00	0.06	0.53	0.02	0.15	0.00	3.41001	1385.98703	21.14	3.19
12	13	-0.31450	-0.03	-0.01	-0.05	0.00	-0.02	0.00	-0.31459	1385.67245	21.52	3.17
13	14	1.01670	0.01	0.02	0.12	0.00	0.01	0.00	1.01685	1386.68930	21.60	3.18
14	15	8.36750	-0.05	0.14	1.30	0.02	0.78	0.00	8.36891	1395.05820	20.88	3.96
15	16	2.06635	0.01	0.03	0.33	0.01	0.23	0.00	2.06673	1397.12493	21.50	4.18
16	17	-1.59085	0.06	-0.03	-0.25	0.01	-0.17	0.00	-1.59107	1395.53386	23.53	4.02
17	18	-1.96460	0.03	-0.03	-0.32	0.01	-0.23	0.00	-1.96492	1393.56894	21.24	3.80
18	19	3.09415	0.01	0.05	0.55	0.00	0.22	0.00	3.09476	1396.66371	21.15	4.01
19	20	-2.24595	0.03	-0.04	-0.42	0.02	-0.23	0.00	-2.24636	1394.41735	22.14	3.79
20	21	-10.26910	-0.03	-0.17	-1.84	0.02	-1.02	0.00	-10.27113	1384.14622	26.13	2.77
21	22	-16.42675	-0.04	-0.27	-2.57	0.02	-1.90	0.00	-16.42961	1367.71662	27.75	0.87
22	23	-13.81830	0.00	-0.23	-2.23	0.02	-1.98	0.00	-13.82074	1353.89587	29.16	-1.11
23	24	-2.82080	-0.03	-0.05	-0.49	0.00	-0.30	0.00	-2.82136	1351.07451	29.93	-1.41
24	25	-12.61285	0.04	-0.21	-2.12	0.01	-1.90	0.00	-12.61513	1338.45938	34.63	-3.30
25	26	-4.58600	-0.03	-0.08	-0.76	0.02	-0.63	0.00	-4.58684	1333.87254	40.52	-3.93
26	27	-0.01920	0.01	0.00	0.00	0.02	0.00	0.00	-0.01918	1333.85336	45.00	-3.93
27	28	3.27870	0.00	0.05	0.51	0.02	0.41	0.00	3.27928	1337.13264	46.02	-3.53
28	29	6.77480	-0.01	0.11	0.98	0.02	0.70	0.00	6.77589	1343.90853	45.16	-2.83
29	30	0.70800	-0.09	0.01	0.09	0.00	0.03	0.00	0.70801	1344.61654	45.34	-2.80
30	31	0.27285	0.00	0.00	0.04	0.00	0.00	0.00	0.27290	1344.88944	45.38	-2.80
31	32	1.61005	0.04	0.03	0.25	-0.03	0.21	0.00	1.61034	1346.49978	46.65	-2.59
32	33	4.56485	-0.01	0.08	0.74	-0.03	0.65	0.00	4.56562	1351.06541	47.85	-1.94
33	34	20.75935	0.02	0.34	3.45	-0.04	2.80	0.00	20.76311	1371.82852	50.35	0.86
34	35	23.62555	-0.03	0.39	4.00	-0.06	3.27	0.00	23.62984	1395.45836	52.90	4.12
35	36	21.26343	0.03	0.35	3.28	0.01	2.34	0.00	21.26709	1416.72545	53.03	6.47
36	37	23.10785	0.03	0.38	3.98	-0.07	2.68	0.00	23.11217	1439.83761	54.23	9.15
37	38	22.59780	0.01	0.38	3.68	0.02	2.16	0.00	22.60188	1462.43950	57.34	11.30
38	39	24.19245	0.01	0.40	4.04	-0.03	2.47	0.00	24.19686	1486.63637	61.14	13.77
39	40	24.65025	0.00	0.41	4.21	-0.02	2.13	0.00	24.65485	1511.29122	63.44	15.90
40	41	10.89915	0.03	0.18	1.88	-0.01	0.95	0.00	10.90123	1522.19245	66.04	16.85
41	42	-11.08435	0.04	-0.18	-1.76	0.01	-1.01	0.00	-11.08624	1511.10621	62.46	15.84
42	43	-10.15915	-0.02	-0.17	-1.45	-0.02	-0.65	0.00	-10.16081	1500.94540	56.73	15.19
43	44	-8.75730	-0.01	-0.15	-1.26	0.01	-0.68	0.00	-8.75870	1492.18670	50.59	14.51
44	45	-20.08118	-0.05	-0.33	-3.28	0.01	-2.32	0.00	-20.08482	1472.10188	42.79	12.19
45	46	-24.48720	0.00	-0.41	-4.09	0.08	-2.60	0.00	-24.49162	1447.61026	37.68	9.59
46	47	-18.65675	-0.01	-0.31	-2.99	0.06	-2.08	0.00	-18.66000	1428.95025	37.10	7.51

Table 2b. National Geodetic Survey Line 73988C: File 73988C.ori--Continued

FROM SEQ NO.	TO SEQ NO.	UNCORRECTED FIELD ELEVATION DIFFERENCE (m)	LEVEL CORR. (mm)	ROD CORR. (mm)	ASTRO CORR. (mm)	TEMP. CORR. (mm)	REFR. CORR. (mm)	MAGN. CORR. (mm)	CORRECTED OBSERVED ELE. DIFFERENCE (m)	CUMULATIVE OBSERVED ELEVATION (OF TO SEQ NO) (m)	CUMULAT. OBS. GRAV ORTHO CORR. (mm)	CUMUL. REFR. CORR. (mm)
47	48	-20.30085	0.03	-0.34	-3.31	0.05	-2.40	0.00	-20.30442	1408.64584	36.73	5.11
48	49	-14.45385	0.03	-0.24	-2.37	0.04	-1.70	0.00	-14.45640	1394.18944	36.68	3.42
49	50	-6.79320	-0.01	-0.11	-1.10	0.03	-0.86	0.00	-6.79439	1387.39505	39.10	2.56
50	51	-4.89180	0.05	-0.08	-0.79	0.02	-0.57	0.00	-4.89260	1382.50245	45.04	2.00
51	52	-2.16265	-0.03	-0.04	-0.33	0.01	-0.22	0.00	-2.16303	1380.33942	51.82	1.78

Table 2c. National Geodetic Survey Line 73988C: File 73988C.prn(=.dat)

212	73988/C		3	419150719 955			9 1	1.09	211G11	F
-0.14190		MT	1.13	0.00	0.00	-0.02	0.00	-0.02	0.001034571510848947	
2012	73988/C		4	3191507201110			9 1	1.09	211G11	B
0.14500		MT	-1.13	-0.01	0.00	0.02	0.01	0.02	0.001084894710345715	
312	73988/C		4	5191507191020			10 1	1.09	211G11	F
2.79310		MT	1.13	0.04	0.05	0.46	0.00	0.35	0.001084894710848948	
1912	73988/C		5	4191507201045			9 1	1.09	211G11	B
-2.79210		MT	-1.13	-0.03	-0.05	-0.44	0.01	-0.45	0.001084894810848947	
112	73988/C		5	619150719 940			11 1	1.21	211G11	F
3.15700		MT	1.26	0.01	0.05	0.55	0.00	0.37	0.001084894810848949	
1812	73988/C		6	5191507201015			10 1	1.22	211G11	B
-3.15830		MT	-1.26	0.00	-0.05	-0.51	0.00	-0.49	0.001084894910848948	
412	73988/C		6	7191507191110			12 1	1.22	211G11	F
6.36130		MT	1.27	0.01	0.11	1.13	0.00	0.73	0.001084894910323121	
1712	73988/C		7	619150720 950			10 1	1.22	211G11	B
-6.36130		MT	-1.27	-0.02	-0.11	-1.04	0.00	-0.95	0.001032312110848949	
512	73988/C		7	8191507191250			11 1	1.13	211G11	F
5.20860		MT	1.18	0.01	0.09	0.79	0.02	0.65	0.001032312110848950	
1612	73988/C		8	719150720 920			10 1	1.13	211G11	B
-5.20530		MT	-1.18	-0.08	-0.09	-0.82	0.00	-0.62	0.001084895010323121	
612	73988/C		8	9191507191320			10 1	1.09	211G11	F
3.06270		MT	1.14	-0.04	0.05	0.54	0.02	0.41	0.001084895010848951	
1512	73988/C		9	819150720 900			9 1	1.09	211G11	B
-3.06600		MT	-1.14	0.02	-0.05	-0.47	-0.01	-0.40	0.001084895110848950	
712	73988/C		9	10191507191345			10 1	1.05	211G11	F
1.95830		MT	1.11	0.01	0.03	0.35	0.03	0.23	0.001084895110848952	
1412	73988/C		10	919150720 835			9 1	1.05	211G11	B
-1.96030		MT	-1.11	-0.03	-0.03	-0.30	-0.01	-0.21	0.001084895210848951	
812	73988/C		10	11191507191415			10 1	1.06	211G11	F
1.18290		MT	1.12	-0.10	0.02	0.20	0.04	0.14	0.001084895210848953	
1312	73988/C		11	1019150720 810			10 1	1.08	211G11	B
-1.18700		MT	-1.12	0.00	-0.02	-0.18	-0.02	-0.10	0.001084895310848952	
912	73988/C		11	12191507191440			10 1	0.65	211G11	F
3.40950		MT	0.68	-0.02	0.06	0.60	0.02	0.14	0.001084895310297539	
1212	73988/C		12	1119150720 750			7 1	0.66	211G11	B
-3.40930		MT	-0.68	-0.02	-0.06	-0.46	-0.01	-0.17	0.001029753910848953	
1012	73988/C		12	13191507191510			3 1	0.25	211G11	F
-0.31400		MT	-0.10	0.05	-0.01	-0.06	0.00	-0.02	0.001029753910297538	
1112	73988/C		13	1219150720 740			3 1	0.23	211G11	B
0.31500		MT	0.10	0.10	0.01	0.04	0.00	0.01	0.001029753810297539	
2212	73988/C		13	1419150721 755			1 1	0.03	211G11	F
1.01700		MT	0.00	0.01	0.02	0.12	0.00	0.01	0.001029753810297540	
2112	73988/C		14	1319150721 750			1 1	0.03	211G11	B
-1.01640		MT	0.00	-0.01	-0.02	-0.12	0.00	-0.01	0.001029754010297538	
2312	73988/C		14	1519150721 800			11 1	1.17	211G11	F
8.36830		MT	1.34	-0.06	0.14	1.14	0.04	0.66	0.001029754010848954	
5512	73988/C		15	14191507221450			11 1	1.15	211G11	B
-8.36670		MT	-1.34	0.04	-0.14	-1.46	0.01	-0.89	0.001084895410297540	
2412	73988/C		15	1619150721 840			9 1	1.06	211G11	F
2.06830		MT	1.24	0.00	0.03	0.30	0.03	0.23	0.001084895410848955	
5412	73988/C		16	15191507221425			10 1	1.06	211G11	B
-2.06440		MT	-1.24	-0.02	-0.03	-0.36	0.01	-0.23	0.001084895510848954	
2512	73988/C		16	1719150721 905			10 1	1.03	211G11	F
-1.59070		MT	1.21	0.02	-0.03	-0.24	0.03	-0.15	0.001084895510848956	
5312	73988/C		17	16191507221400			10 1	1.03	211G11	B
1.59100		MT	-1.21	-0.09	0.03	0.27	0.01	0.18	0.001084895610848955	
2612	73988/C		17	1819150721 925			10 1	1.06	211G11	F
-1.96560		MT	1.25	-0.02	-0.03	-0.31	0.03	-0.21	0.001084895610848957	
5212	73988/C		18	17191507221340			10 1	1.06	211G11	B
1.96360		MT	-1.25	-0.07	0.03	0.34	0.01	0.24	0.001084895710848956	
2712	73988/C		18	1919150721 955			3 1	0.27	211G11	F
3.09400		MT	0.32	0.00	0.05	0.55	0.01	0.26	0.001084895710272836	
5112	73988/C		19	18191507221330			4 1	0.27	211G11	B
-3.09430		MT	-0.32	-0.02	-0.05	-0.55	0.00	-0.17	0.001027283610848957	
2812	73988/C		19	20191507211040			11 1	1.15	211G11	F
-2.24690		MT	1.37	0.06	-0.04	-0.43	0.02	-0.25	0.001027283610848958	
5012	73988/C		20	19191507221150			13 1	1.16	211G11	B
2.24500		MT	-1.37	0.00	0.04	0.40	-0.01	0.20	0.001084895810272836	
2912	73988/C		20	21191507211110			11 1	1.07	211G11	F
-10.26960		MT	1.27	-0.05	-0.17	-1.89	0.01	-1.09	0.001084895810848959	
4912	73988/C		21	20191507221120			12 1	1.07	211G11	B
10.26860		MT	-1.27	0.01	0.17	1.79	-0.02	0.94	0.001084895910848958	
3012	73988/C		21	22191507211135			12 1	1.06	211G11	F
-16.42780		MT	1.24	0.00	-0.27	-2.96	0.01	-1.55	0.001084895910848960	
3812	73988/C		21	2219150722 750			9 1	1.07	211G11	F
-16.42910		MT	1.24	-0.07	-0.27	-2.07	0.03	-1.46	0.001084895910848960	
5812	73988/C		22	2119150723 905			9 1	1.07	211G11	B
16.42840		MT	-1.24	0.05	0.27	2.43	-0.03	2.35	0.001084896010848959	

```
 4812        73988/C       22  21191507221050     10 1  1.06               211G11      B
 16.42170                MT -1.24  0.04  0.27  2.82 -0.02  2.24  0.00108489601084895 9
 5612        73988/C       22  2319150723 820      9 1  1.13               211G11      F
-13.82030                MT  1.31  0.02 -0.23 -1.91  0.03 -1.79  0.00108489601084896 1
 3112        73988/C       22  23191507211310     11 1  1.13               211G11      F
-13.81930                MT  1.31 -0.08 -0.23 -2.63  0.00 -1.68  0.00108489601084896 1
 4712        73988/C       23  22191507221025      9 1  1.13               211G11      B
 13.81230                MT -1.31 -0.06  0.23  2.40 -0.03  2.49  0.00108489611084896 0
 5712        73988/C       23  2219150723 845      9 1  1.13               211G11      B
 13.82130                MT -1.31  0.01  0.23  1.99 -0.03  1.97  0.00108489611084896 0
 3212        73988/C       23  24191507211340      3 1  0.29               211G11      F
-2.82030                 MT  0.34 -0.05 -0.05 -0.50  0.00 -0.30  0.00108489611034571 4
 4612        73988/C       24  23191507221015      3 1  0.29               211G11      B
 2.82130                 MT -0.34  0.01  0.05  0.47 -0.01  0.29  0.00103457141084896 1
 3312        73988/C       24  25191507211350     10 1  1.02               211G11      F
-12.61470                MT  0.99 -0.04 -0.21 -2.14  0.00 -1.53  0.00103457141084896 2
 4512        73988/C       25  2419150722 955      8 1  1.02               211G11      B
 12.61100                MT -0.99 -0.11  0.21  2.09 -0.02  2.26  0.00108489621034571 4
 3412        73988/C       25  26191507211415     10 1  1.04               211G11      F
-4.58800                 MT  1.01 -0.06 -0.08 -0.78  0.00 -0.52  0.00108489621084896 3
 4412        73988/C       26  2519150722 930      8 1  1.04               211G11      B
 4.58400                 MT -1.01 -0.01  0.08  0.73 -0.03  0.74  0.00108489631084896 2
 3512        73988/C       26  27191507211440     10 1  1.09               211G11      F
-0.01880                 MT  1.05 -0.04  0.00  0.00  0.00  0.00  0.00108489631084896 4
 4312        73988/C       27  2619150722 905      9 1  1.09               211G11      B
 0.01960                 MT -1.05 -0.06  0.00  0.00 -0.03  0.00  0.00108489641084896 3
 3612        73988/C       27  28191507211515      9 1  1.08               211G11      F
 3.27900                 MT  1.04  0.01  0.05  0.53  0.01  0.44  0.00108489641084896 5
 4212        73988/C       28  2719150722 835      9 1  1.08               211G11      B
-3.27840                 MT -1.04  0.01 -0.05 -0.49 -0.03 -0.37  0.00108489651084896 4
 3712        73988/C       28  29191507211540      8 1  0.85               211G11      F
 6.77460                 MT  0.81 -0.05  0.11  1.06  0.01  0.68  0.00108489651032133 5
 4112        73988/C       29  2819150722 810      7 1  0.83               211G11      B
-6.77500                 MT -0.81 -0.03 -0.11 -0.89 -0.02 -0.71  0.00103213351084896 5
 3912        73988/C       29  3019150722 805      1 1  0.07               211G11      F
 0.70800                 MT  0.07 -0.09  0.01  0.09  0.00  0.03  0.00103213351032135 0
 4012        73988/C       30  2919150722 808      1 1  0.07               211G11      B
-0.70800                 MT -0.07  0.09 -0.01 -0.09  0.00 -0.03  0.00103213501032133 5
 5912        73988/C       30  31191507231000      1 1  0.02               211G11      F
 0.27270                 MT  0.00  0.01  0.00  0.04  0.00  0.00  0.00103213501032134 9
 8312        73988/C       31  30191507241620      1 1  0.02               211G11      B
-0.27300                 MT  0.00  0.00  0.00 -0.04  0.00  0.00  0.00103213491032135 0
 6012        73988/C       31  32191507231005      9 1  1.07               211G11      F
 1.60970                 MT  0.46  0.03  0.03  0.24  0.01  0.23  0.00103213491084896 6
 8212        73988/C       32  31191507241550      9 1  1.07               211G11      B
-1.61040                 MT -0.46 -0.05 -0.03 -0.26  0.06 -0.19  0.00108489661032134 9
 6112        73988/C       32  33191507231030      9 1  1.13               211G11      F
 4.56470                 MT  0.49 -0.01  0.08  0.70  0.00  0.78  0.00108489661084896 7
 8112        73988/C       33  32191507241525     10 1  1.13               211G11      B
-4.56500                 MT -0.49  0.01 -0.08 -0.78  0.07 -0.52  0.00108489671084896 6
 6212        73988/C       33  34191507231055     10 1  1.13               211G11      F
 20.75930                MT  0.49  0.01  0.34  3.28 -0.01  3.11  0.00108489671084896 8
 8012        73988/C       34  33191507241455     11 1  1.14               211G11      B
-20.75940                MT -0.49 -0.02 -0.34 -3.61  0.07 -2.49  0.00108489681084896 7
 6312        73988/C       34  35191507231120     12 1  1.25               211G11      F
 23.62600                MT  0.56 -0.03  0.39  3.83 -0.03  3.41  0.00108489681031134 0
 7912        73988/C       35  34191507241420     12 1  1.25               211G11      B
-23.62510                MT -0.56  0.04 -0.39 -4.16  0.08 -3.12  0.00103113401084896 8
 6412        73988/C       35  36191507231255     10 1  1.09               211G11      F
 21.26510                MT  0.80  0.04  0.35  3.36 -0.06  2.85  0.00103113401084896 9
 8412        73988/C       35  3619150726 825     10 1  1.09               211G11      F
 21.26570                MT  0.80  0.01  0.35  2.81  0.08  1.83  0.00103113401084896 9
 7812        73988/C       36  35191507241350     10 1  1.09               211G11      B
-21.25960                MT -0.80 -0.03 -0.35 -3.78  0.07 -2.64  0.00108489691031134 0
 8512        73988/C       36  3519150726 855     10 1  1.09               211G11      B
-21.26330                MT -0.80 -0.02 -0.35 -3.15 -0.09 -2.05  0.00108489691031134 0
 6512        73988/C       36  37191507231325     12 1  1.13               211G11      F
 23.11040                MT  0.84  0.02  0.38  3.93 -0.07  2.63  0.00108489691084897 0
 7712        73988/C       37  36191507241325     11 1  1.13               211G11      B
-23.10530                MT -0.84 -0.03 -0.38 -4.02  0.06 -2.73  0.00108489701084896 9
 6612        73988/C       37  38191507231405     12 1  1.08               211G11      F
 22.60170                MT  0.81 -0.02  0.38  3.93 -0.07  2.20  0.00108489701084897 1
 8612        73988/C       37  3819150726 930     11 1  1.07               211G11      F
 22.59570                MT  0.81 -0.01  0.37  3.52  0.09  2.15  0.00108489701084897 1
 8712        73988/C       38  37191507261000     11 1  1.07               211G11      B
-22.59470                MT -0.81 -0.06 -0.37 -3.57 -0.09 -2.31  0.00108489711084897 0
 7612        73988/C       38  37191507241255     13 1  1.07               211G11      B
-22.59910                MT -0.81 -0.01 -0.38 -3.71  0.04 -1.97  0.00108489711084897 0
```

Table 2c. National Geodetic Survey Line 73988C: File 73988C.prn(=.dat)--Continued

```
  6712          73988/C        38  39191507231440       13 1  1.19                  211G11        F
 24.19200                   MT  0.92  0.01  0.40  4.06 -0.08  2.32  0.001084897110848972
  7512          73988/C        39  38191507241120       13 1  1.20                  211G11        B
-24.19290                   MT -0.92 -0.01 -0.40 -4.02 -0.01 -2.61  0.001084897210848971
  6812          73988/C        39  40191507231515       11 1  1.13                  211G11        F
 24.65230                   MT  0.88 -0.01  0.41  4.24 -0.07  1.99  0.001084897210848973
  7412          73988/C        40  39191507241050       13 1  1.13                  211G11        B
-24.64820                   MT -0.88  0.00 -0.41 -4.19 -0.03 -2.27  0.001084897310848972
  6912          73988/C        40  41191507231550        7 1  0.70                  211G11        F
 10.90040                   MT  0.55  0.05  0.18  1.90 -0.04  0.97  0.001084897310288731
  7312          73988/C        41  40191507241030        8 1  0.70                  211G11        B
-10.89790                   MT -0.55 -0.02 -0.18 -1.85 -0.02 -0.93  0.001028873110848973
 10812          73988/C        41  42191507271600       12 1  1.21                  211G11        F
-11.08240                   MT  1.02  0.03 -0.18 -1.71 -0.04 -0.90  0.001028873110848974
  7212          73988/C        42  4119150724 945       12 1  1.21                  211G11        B
 11.08630                   MT -1.02 -0.05  0.18  1.80 -0.06  1.11  0.001084897410288731
 11212          73988/C        42  43191507271740        9 1  1.08                  211G11        F
-10.15900                   MT  0.91 -0.07 -0.17 -1.36 -0.04 -0.16  0.001084897410848975
 10912          73988/C        42  43191507271630        9 1  1.08                  211G11        F
-10.15700                   MT  0.91 -0.02 -0.17 -1.52 -0.04 -1.01  0.001084897410848975
  7112          73988/C        43  4219150724 915       10 1  1.08                  211G11        B
 10.16230                   MT -0.91  0.04  0.17  1.50 -0.06  1.11  0.001084897510848974
 11112          73988/C        43  42191507271720        9 1  1.08                  211G11        B
 10.15830                   MT -0.91 -0.04  0.17  1.42  0.05  0.32  0.001084897510848974
 11012          73988/C        43  44191507271655        9 1  1.08                  211G11        F
 -8.75560                   MT  0.90 -0.05 -0.15 -1.28 -0.05 -0.50  0.001084897510848976
  7012          73988/C        44  4319150724 845       10 1  1.08                  211G11        B
  8.75900                   MT -0.90 -0.04  0.15  1.23 -0.07  0.86  0.001084897610848975
  8812          73988/C        44  45191507261055       11 1  1.03                  211G11        F
-20.07690                   MT  0.85 -0.03 -0.33 -3.21  0.07 -2.21  0.001084897610848977
 10612          73988/C        44  45191507271450       10 1  1.03                  211G11        F
-20.08400                   MT  0.85 -0.05 -0.33 -3.29 -0.01 -2.36  0.001084897610848977
 10712          73988/C        45  44191507271515       10 1  1.02                  211G11        B
 20.08190                   MT -0.85  0.07  0.33  3.33  0.02  2.19  0.001084897710848976
 10512          73988/C        45  44191507271415       10 1  1.03                  211G11        B
 20.08190                   MT -0.85  0.03  0.33  3.29  0.00  2.53  0.001084897710848976
  8912          73988/C        45  46191507261125       13 1  1.18                  211G11        F
-24.48700                   MT  0.96 -0.01 -0.41 -4.16  0.07 -2.59  0.001084897710267553
 10212          73988/C        46  45191507271125       13 1  1.18                  211G11        B
 24.48740                   MT -0.96 -0.02  0.41  4.02 -0.08  2.61  0.001026755310848977
 10312          73988/C        46  47191507271305       12 1  1.08                  211G11        F
-18.65700                   MT  1.18 -0.10 -0.31 -2.87  0.06 -1.90  0.001026755310848978
  9012          73988/C        46  47191507261315       10 1  1.08                  211G11        F
-18.65490                   MT  1.18 -0.01 -0.31 -3.10  0.04 -2.79  0.001026755310848978
 10012          73988/C        47  46191507271055       12 1  1.08                  211G11        B
 18.66070                   MT -1.18 -0.06  0.31  3.02 -0.07  1.81  0.001084897810267553
 10412          73988/C        47  46191507271335       12 1  1.08                  211G11        B
 18.65440                   MT -1.18 -0.02  0.31  2.98 -0.05  1.83  0.001084897810267553
  9112          73988/C        47  48191507261345       10 1  1.07                  211G11        F
-20.30040                   MT  1.16 -0.02 -0.34 -3.41  0.02 -2.85  0.001084897810848979
  9912          73988/C        48  47191507271025       12 1  1.08                  211G11        B
 20.30130                   MT -1.16 -0.09  0.34  3.21 -0.07  1.94  0.001084897910848978
  9212          73988/C        48  49191507261415       11 1  1.11                  211G11        F
-14.45500                   MT  1.19 -0.01 -0.24 -2.46  0.01 -1.62  0.001084897910350485
 10112          73988/C        49  48191507271055       11 1  1.13                  211G11        B
 14.45270                   MT -1.19 -0.06  0.24  2.28 -0.07  1.77  0.001035048510848979
  9312          73988/C        49  50191507261445       10 1  1.08                  211G11        F
 -6.79310                   MT  1.14 -0.05 -0.11 -1.17  0.00 -0.77  0.001035048510848980
  9812          73988/C        50  4919150727 930        9 1  1.08                  211G11        B
  6.79330                   MT -1.14 -0.03  0.11  1.02 -0.05  0.94  0.001084898010350485
  9412          73988/C        50  51191507261515       10 1  1.08                  211G11        F
 -4.89170                   MT  1.13  0.07 -0.08 -0.86 -0.01 -0.51  0.001084898010848981
  9712          73988/C        51  5019150727 905        9 1  1.08                  211G11        B
  4.89190                   MT -1.13 -0.02  0.08  0.71 -0.04  0.62  0.001084898110848980
  9512          73988/C        51  52191507261545       10 1  1.09                  211G11        F
 -2.16320                   MT  1.14 -0.07 -0.04 -0.37 -0.02 -0.21  0.001084898110334313
  9612          73988/C        52  5119150727 840       10 1  1.13                  211G11        B
  2.16210                   MT -1.14 -0.02  0.04  0.28 -0.04  0.22  0.001033431310848981
```

Table 3a. National Geodetic Survey Line 73988D: File 73988D.pro

Seq No.	UID	Benchmark	Spur Code	Distance (km)	Latitude	Longitude	Observed Elevation (m)	Obs Grav Ortho Ht (m)	Cumul. Refr Cor. (mm)	Cumul. Magn Cor. (mm)
3	10334313	B 13		0.00	38 07 08	117 55 50	1379.94880	1379.94880	0.00	0.00
4	10848638	TBM 28		1.07	38 06 35	117 55 35	1380.99692	1381.00129	0.11	0.00
5	10848639	TBM 29		2.15	38 06 03	117 55 19	1383.81766	1383.82675	0.38	0.00
6	10848640	TBM 30		3.18	38 05 31	117 55 05	1384.20927	1384.22112	0.41	0.00
7	10848641	TBM 31		4.32	38 04 57	117 54 48	1381.38914	1381.40022	0.14	0.00
8	10307593	H 14		5.50	38 04 22	117 54 32	1380.80380	1380.81290	0.07	0.00
9	10848642	TBM 32		5.99	38 04 08	117 54 23	1381.88062	1381.88835	0.18	0.00
10	10848643	TBM 33		7.02	38 03 38	117 54 05	1384.71591	1384.71987	0.49	0.00
11	10848644	TBM 34		8.10	38 03 07	117 53 46	1387.62553	1387.62658	0.83	0.00
12	10848645	TBM 35		9.24	38 02 34	117 53 26	1398.69739	1398.69751	1.97	0.00
13	10848646	TBM 36		10.23	38 02 04	117 53 43	1392.83052	1392.83218	1.58	0.00
14	10279076	I 14		11.09	38 01 38	117 53 58	1398.54007	1398.54641	1.91	0.00
15	10848647	TBM 37		9.52	38 02 26	117 53 21	1400.68295	1400.68256	2.13	0.00
16	10282381	J 14		10.72	38 01 52	117 53 01	1415.71025	1415.70884	3.82	0.00
17	10848648	TBM 38		11.80	38 01 41	117 52 19	1434.18406	1434.18460	5.69	0.00
18	10848649	TBM 39		12.88	38 01 31	117 51 37	1452.32094	1452.32295	7.35	0.00
19	10848650	TBM 40		13.97	38 01 20	117 50 55	1471.56174	1471.56661	8.90	0.00
20	10848651	TBM 41		15.06	38 01 09	117 50 13	1490.26400	1490.27415	10.70	0.00
21	10274249	K 14		15.51	38 01 06	117 49 57	1496.31681	1496.32944	11.30	0.00
22	10848652	TBM 42		16.59	38 00 58	117 49 13	1494.91907	1494.93701	11.19	0.00
23	10848653	TBM 43		17.73	38 00 50	117 48 27	1482.25134	1482.27492	9.64	0.00
24	10848654	TBM 44		18.81	38 00 43	117 47 45	1477.18360	1477.21293	9.07	0.00
25	10848655	TBM 45		19.89	38 00 36	117 47 02	1471.16885	1471.20367	8.38	0.00
26	10269213	L 14		20.39	38 00 33	117 46 44	1468.26193	1468.29849	8.10	0.00
27	10269215	M 14		20.91	38 00 30	117 46 21	1467.48487	1467.52313	8.02	0.00
28	10848656	TBM 46		22.00	38 00 30	117 45 36	1463.76729	1463.80637	7.62	0.00
29	10848657	TBM 47		23.08	38 00 30	117 44 52	1463.83187	1463.87066	7.63	0.00
30	10848658	TBM 48		24.16	38 00 31	117 44 08	1460.98459	1461.02207	7.35	0.00
31	10269216	N 14		25.18	38 00 31	117 43 26	1458.62700	1458.66351	7.13	0.00
32	10848659	TBM 49		26.25	38 00 48	117 42 49	1461.72984	1461.76749	7.37	0.00
33	10848660	TBM 50		27.33	38 01 06	117 42 12	1465.90169	1465.94145	7.60	0.00
34	10848661	TBM 51		28.41	38 01 23	117 41 34	1464.96245	1465.00294	7.52	0.00
35	10848662	TBM 52		28.95	38 01 32	117 41 15	1463.18492	1463.22479	7.42	0.00
36	10280753	O 14		30.03	38 01 49	117 40 38	1462.72044	1462.75925	7.38	0.00
37	10848663	TBM 53		30.46	38 01 58	117 40 25	1461.18234	1461.21980	7.29	0.00
38	10848664	TBM 54		31.54	38 02 20	117 39 51	1460.68842	1460.72104	7.27	0.00
39	10848665	TBM 55		32.62	38 02 43	117 39 18	1458.99277	1459.01857	7.15	0.00
40	10848666	TBM 56		33.75	38 03 06	117 38 42	1453.18130	1453.19868	6.77	0.00
41	10299008	P 14		34.89	38 03 30	117 38 07	1445.29182	1445.30095	6.16	0.00
42	10848667	TBM 57		35.64	38 03 43	117 37 41	1442.54118	1442.54761	5.96	0.00

Table 3a. National Geodetic Survey Line 73988D: File 73988D.pro--Continued

Seq No.	UID	Benchmark	Spur Code	Distance (km)	Latitude	Longitude	Observed Elevation (m)	Obs Grav Ortho Ht (m)	Cumul. Refr Cor. (mm)	Cumul. Magn Cor. (mm)
43	10848668	TBM 58		36.77	38 04 03	117 37 02	1442.26734	1442.27219	5.95	0.00
44	10848669	TBM 59		37.85	38 04 22	117 36 25	1443.05157	1443.05742	6.03	0.00
45	10848670	TBM 60		38.87	38 04 40	117 35 50	1444.58176	1444.58717	6.21	0.00
46	10312795	Q 14		39.75	38 04 56	117 35 20	1445.56069	1445.56663	6.31	0.00
47	10848671	TBM 61		40.76	38 05 11	117 34 43	1448.17920	1448.18814	6.55	0.00
48	10848672	TBM 62		41.79	38 05 25	117 34 06	1450.48274	1450.49597	6.75	0.00
49	10848673	TBM 63		42.50	38 05 35	117 33 41	1450.78824	1450.80453	6.78	0.00
50	10848674	TBM 64		43.53	38 05 50	117 33 04	1451.99357	1452.01465	6.87	0.00
51	10324465	R 14		44.58	38 06 05	117 32 26	1452.66169	1452.68519	6.92	0.00
52	10848675	TBM 65		45.68	38 06 19	117 31 45	1453.60867	1453.63129	7.01	0.00
53	10848676	TBM 66		46.76	38 06 33	117 31 05	1455.38537	1455.40669	7.13	0.00
54	10848677	TBM 67		47.83	38 06 47	117 30 25	1456.29702	1456.31752	7.20	0.00
55	10848678	TBM 68		48.69	38 06 58	117 29 53	1456.88489	1456.90521	7.26	0.00
57	10848679	TBM 69		49.78	38 07 12	117 29 13	1460.07160	1460.09144	7.80	0.00
58	10848680	TBM 70		50.80	38 07 26	117 28 35	1464.59862	1464.61283	8.32	0.00
59	10848681	TBM 71		51.82	38 07 39	117 27 57	1475.27298	1475.28167	9.35	0.00
60	10340664	T 14		52.51	38 07 48	117 27 31	1479.34924	1479.35447	9.69	0.00
61	10848682	TBM 72		53.59	38 07 39	117 26 48	1484.31167	1484.31304	10.09	0.00
62	10848683	TBM 73		54.65	38 07 30	117 26 07	1496.12461	1496.12986	11.34	0.00
63	10848684	TBM 74		55.70	38 07 21	117 25 25	1501.19518	1501.21223	11.88	0.00
64	10848685	TBM 75		56.78	38 07 12	117 24 42	1508.97822	1509.00273	12.61	0.00
65	10334311	U 14		57.84	38 07 03	117 24 01	1515.80927	1515.84027	13.27	0.00
66	10848686	TBM 76		58.74	38 06 36	117 23 45	1525.28368	1525.31635	14.48	0.00
82	10848687	TBM 77		59.76	38 06 06	117 23 26	1534.35868	1534.39362	15.35	0.00
83	10848688	TBM 78		60.70	38 05 38	117 23 09	1543.92039	1543.95765	16.36	0.00
84	10848689	TBM 79		62.02	38 04 59	117 22 45	1558.65271	1558.69471	18.00	0.00
67	10307592	V 14		63.04	38 04 29	117 22 27	1570.64156	1570.68774	19.17	0.00
68	10848690	TBM 80		63.50	38 04 16	117 22 18	1575.84380	1575.89228	19.62	0.00
69	10848691	TBM 81		64.59	38 03 45	117 21 56	1587.77362	1587.82855	21.08	0.00
70	10848692	TBM 82		65.68	38 03 14	117 21 34	1598.59469	1598.65435	22.40	0.00
71	10848693	TBM 83		66.77	38 02 43	117 21 12	1606.48710	1606.54921	23.35	0.00
72	10848694	TBM 84		67.86	38 02 12	117 20 50	1613.91910	1613.98293	24.25	0.00
73	10280754	W 14		68.98	38 01 41	117 20 28	1613.44105	1613.50712	24.20	0.00
93	10848706	TBM 96		69.63	38 01 20	117 20 22	1617.72520	1617.79289	24.57	0.00
94	10848707	TBM 97		70.82	38 00 43	117 20 11	1615.44655	1615.51467	24.33	0.00
95	10848708	TBM 98		71.90	38 00 09	117 20 01	1610.39897	1610.46518	23.78	0.00
96	10848709	TBM 99		73.03	37 59 33	117 19 51	1600.90150	1600.96497	22.10	0.00
97	10848710	TBM 100		74.11	37 58 58	117 19 41	1588.06625	1588.12690	20.63	0.00
98	10347303	C 15		75.20	37 58 24	117 19 31	1573.58859	1573.64722	18.12	0.00
99	10848711	TBM 101		76.36	37 57 49	117 19 14	1557.94057	1557.99889	15.14	0.00
100	10848712	TBM 102		77.35	37 57 19	117 18 59	1546.69043	1546.75090	13.95	0.00

Table 3a. National Geodetic Survey Line 73988D: File 73988D.pro--Continued

Seq No.	UID	Benchmark	Spur Code	Distance (km)	Latitude	Longitude	Observed Elevation (m)	Obs Grav Ortho Ht (m)	Cumul. Refr Cor. (mm)	Cumul. Magn Cor. (mm)
101	10331097	D 15		78.43	37 56 46	117 18 43	1532.18278	1532.24248	12.36	0.00
74	10848695	TBM 85		69.85	38 02 05	117 20 13	1614.75292	1614.81640	24.35	0.00
75	10848696	TBM 86		70.94	38 02 36	117 19 55	1616.52402	1616.58397	24.55	0.00
76	10848697	TBM 87		71.94	38 03 04	117 19 37	1623.17634	1623.23467	25.23	0.00
77	10848698	TBM 88		73.01	38 03 34	117 19 19	1631.51178	1631.56880	26.13	0.00
78	10300887	X 14		73.30	38 03 42	117 19 14	1634.58778	1634.64435	26.39	0.00
79	10848699	TBM 89		73.81	38 03 53	117 18 58	1641.73957	1641.79448	27.06	0.00
80	10848700	TBM 90		74.94	38 04 17	117 18 23	1655.43239	1655.48504	28.42	0.00
81	10848701	TBM 91		75.98	38 04 39	117 17 51	1669.27689	1669.32720	29.35	0.00
85	10314502	Y 14		77.12	38 05 03	117 17 16	1687.88453	1687.93742	30.68	0.00
86	10311112	Z 14		78.18	38 04 49	117 16 40	1712.71977	1712.77510	32.25	0.00
87	10848702	TBM 92		79.24	38 04 39	117 16 00	1740.42767	1740.48509	33.61	0.00
88	10848703	TBM 93		80.35	38 04 28	117 15 17	1770.30036	1770.36208	34.90	0.00
89	10848704	TBM 94		81.50	38 04 17	117 14 33	1802.66989	1802.74044	36.05	0.00
90	10848705	TBM 95		82.28	38 04 09	117 14 04	1822.11548	1822.19365	37.06	0.00
91	10304316	A 15		82.73	38 04 05	117 13 47	1836.72401	1836.80841	37.44	0.00
92	10299009	B 15 USGS		84.06	38 03 39	117 13 08	1873.75139	1873.85067	39.27	0.00

Table 3b. National Geodetic Survey Line 73988D: File 73988D.ori

FROM SEQ NO.	TO SEQ NO.	UNCORRECTED FIELD ELEVATION DIFFERENCE (m)	LEVEL CORR. (mm)	ROD CORR. (mm)	ASTRO CORR. (mm)	TEMP. CORR. (mm)	REFR. CORR. (mm)	MAGN. CORR. (mm)	CORRECTED OBSERVED ELE. DIFFERENCE (m)	CUMULATIVE OBSERVED ELEVATION (OF TO SEQ NO) (m)	CUMULAT. OBS. GRAV ORTHO CORR. (mm)	CUMUL. REFR. CORR. (mm)
3										1379.94880	0.00	0.00
3	4	1.04785	0.00	0.02	0.17	0.07	0.11	0.00	1.04811	1380.99692	4.37	0.11
4	5	2.82015	0.00	0.05	0.48	0.06	0.27	0.00	2.82074	1383.81766	9.09	0.38
5	6	0.39150	0.00	0.01	0.07	0.05	0.03	0.00	0.39161	1384.20927	11.85	0.41
6	7	-2.81970	-0.03	-0.05	-0.38	0.04	-0.28	0.00	-2.82013	1381.38915	11.08	0.14
7	8	-0.58525	-0.02	-0.01	-0.09	0.03	-0.07	0.00	-0.58534	1380.80381	9.10	0.07
8	9	1.07660	-0.03	0.02	0.18	0.04	0.11	0.00	1.07681	1381.88062	7.73	0.18
9	10	2.83470	0.00	0.05	0.47	0.07	0.31	0.00	2.83529	1384.71590	3.96	0.49
10	11	2.90900	0.05	0.05	0.47	0.06	0.34	0.00	2.90962	1387.62552	1.05	0.83
11	12	11.06975	0.04	0.18	1.84	0.06	1.14	0.00	11.07187	1398.69739	0.12	1.97
12	13	-5.86610	0.02	-0.10	-0.75	0.06	-0.38	0.00	-5.86725	1392.83014	1.66	1.58
13	14	5.71068	0.03	0.09	0.74	0.03	0.38	0.00	5.71195	1398.54209	6.34	1.91
12	15	1.98515	0.03	0.03	0.35	0.00	0.16	0.00	1.98556	1400.68295	-0.39	2.13
15	16	15.02430	0.05	0.25	2.67	0.03	1.70	0.00	15.02730	1415.71024	-1.41	3.82
16	17	18.47045	-0.02	0.31	3.12	-0.05	1.87	0.00	18.47382	1434.18406	0.54	5.69
17	18	18.13350	0.03	0.30	3.09	-0.04	1.66	0.00	18.13688	1452.32094	2.01	7.35
18	19	19.23770	-0.09	0.32	2.85	0.03	1.55	0.00	19.24080	1471.56174	4.87	8.90
19	20	18.69910	-0.08	0.31	2.88	0.04	1.80	0.00	18.70226	1490.26399	10.15	10.70
20	21	6.05180	0.00	0.10	0.89	0.02	0.60	0.00	6.05281	1496.31680	12.63	11.30
21	22	-1.39755	-0.02	-0.02	-0.22	0.07	-0.11	0.00	-1.39774	1494.91907	17.94	11.19
22	23	-12.66560	-0.01	-0.21	-1.99	0.07	-1.55	0.00	-12.66773	1482.25133	23.58	9.64
23	24	-5.06685	-0.03	-0.08	-0.85	0.07	-0.57	0.00	-5.06774	1477.18360	29.33	9.07
24	25	-6.01375	-0.02	-0.10	-0.95	0.07	-0.69	0.00	-6.01475	1471.16885	34.82	8.38
25	26	-2.90650	0.05	-0.05	-0.45	0.03	-0.29	0.00	-2.90693	1468.26192	36.56	8.10
26	27	-0.77685	-0.09	-0.01	-0.13	0.03	-0.08	0.00	-0.77705	1467.48487	38.26	8.02
27	28	-3.71700	0.01	-0.06	-0.55	0.02	-0.40	0.00	-3.71759	1463.76728	39.08	7.62
28	29	0.06455	0.02	0.00	0.01	0.00	0.01	0.00	0.06459	1463.83187	38.79	7.63
29	30	-2.84675	0.00	-0.05	-0.47	-0.02	-0.27	0.00	-2.84728	1460.98459	37.48	7.35
30	31	-2.35715	0.03	-0.04	-0.41	-0.03	-0.22	0.00	-2.35759	1458.62700	36.51	7.13
31	32	3.10230	0.00	0.05	0.55	-0.06	0.24	0.00	3.10284	1461.72984	37.65	7.37
32	33	4.17105	0.05	0.07	0.74	-0.06	0.23	0.00	4.17185	1465.90169	39.76	7.60
33	34	-0.93905	0.03	-0.02	-0.16	-0.03	-0.08	0.00	-0.93924	1464.96245	40.49	7.52
34	35	-1.77723	-0.01	-0.03	-0.26	0.00	-0.10	0.00	-1.77753	1463.18492	39.87	7.42
35	36	-0.46440	0.01	-0.01	-0.08	0.00	-0.03	0.00	-0.46448	1462.72044	38.81	7.38
36	37	-1.53783	0.01	-0.03	-0.25	0.00	-0.09	0.00	-1.53810	1461.18234	37.46	7.29
37	38	-0.49383	0.00	-0.01	-0.08	0.00	-0.03	0.00	-0.49392	1460.68842	32.62	7.27
38	39	-1.69535	0.00	-0.03	-0.28	0.00	-0.11	0.00	-1.69565	1458.99277	25.80	7.15
39	40	-5.81045	0.02	-0.10	-0.93	0.00	-0.38	0.00	-5.81147	1453.18130	17.38	6.77
40	41	-7.88815	0.02	-0.13	-1.21	0.00	-0.62	0.00	-7.88948	1445.29181	9.13	6.16
41	42	-2.75015	0.00	-0.05	-0.44	0.00	-0.20	0.00	-2.75064	1442.54117	6.43	5.96
42	43	-0.27380	0.02	0.00	-0.04	-0.02	-0.02	0.00	-0.27384	1442.26733	4.85	5.95
43	44	0.78410	0.03	0.01	0.12	-0.03	0.08	0.00	0.78424	1443.05157	5.85	6.03
44	45	1.52995	0.01	0.03	0.23	-0.02	0.18	0.00	1.53019	1444.58176	5.41	6.21
45	46	0.97880	-0.01	0.02	0.14	-0.03	0.10	0.00	0.97893	1445.56069	5.94	6.31
46	47	2.61810	0.03	0.04	0.38	-0.03	0.25	0.00	2.61851	1448.17920	8.94	6.55
47	48	2.30320	0.00	0.04	0.33	-0.03	0.19	0.00	2.30353	1450.48274	13.23	6.75

Table 3b. National Geodetic Survey Line 73988D: File 73988D.ori--Continued

FROM SEQ NO.	TO SEQ NO.	UNCORRECTED FIELD ELEVATION DIFFERENCE (m)	LEVEL CORR. (mm)	ROD CORR. (mm)	ASTRO CORR. (mm)	TEMP. CORR. (mm)	REFR. CORR. (mm)	MAGN. CORR. (mm)	CORRECTED OBSERVED ELE. DIFFERENCE (m)	CUMULATIVE OBSERVED ELEVATION (OF TO SEQ NO) (m)	CUMULAT. OBS. GRAV ORTHO CORR. (mm)	CUMUL. REFR. CORR. (mm)
48	49	0.30545	0.02	0.00	0.05	-0.02	0.03	0.00	0.30550	1450.78824	16.29	6.78
49	50	1.20515	0.02	0.02	0.17	-0.03	0.09	0.00	1.20533	1451.99357	21.08	6.87
50	51	0.66805	0.00	0.01	0.09	-0.03	0.05	0.00	0.66812	1452.66169	23.50	6.92
51	52	0.94685	0.00	0.02	0.14	-0.03	0.09	0.00	0.94698	1453.60867	22.62	7.01
52	53	1.77645	0.00	0.03	0.24	-0.03	0.13	0.00	1.77669	1455.38537	21.32	7.13
53	54	0.91155	0.00	0.02	0.11	-0.02	0.07	0.00	0.91165	1456.29702	20.50	7.20
54	55	0.58780	0.00	0.01	0.09	-0.03	0.06	0.00	0.58786	1456.88489	20.32	7.26
55	57	3.18625	0.00	0.05	0.44	-0.03	0.54	0.00	3.18671	1460.07160	19.84	7.80
57	58	4.52630	0.00	0.08	0.67	-0.03	0.53	0.00	4.52702	1464.59862	14.21	8.32
58	59	10.67255	0.01	0.18	1.65	-0.03	1.02	0.00	10.67436	1475.27298	8.69	9.35
59	60	4.07555	0.00	0.07	0.67	-0.03	0.34	0.00	4.07626	1479.34924	5.23	9.69
60	61	4.96160	0.02	0.08	0.76	-0.03	0.41	0.00	4.96243	1484.31167	1.37	10.09
61	62	11.81100	0.00	0.20	1.76	-0.03	1.24	0.00	11.81294	1496.12461	5.25	11.34
62	63	5.06980	0.00	0.08	0.71	-0.02	0.54	0.00	5.07057	1501.19518	17.05	11.88
63	64	7.78185	0.02	0.13	1.07	-0.02	0.73	0.00	7.78304	1508.97822	24.51	12.61
64	65	6.83013	0.00	0.11	0.83	-0.02	0.65	0.00	6.83105	1515.80927	31.00	13.27
65	66	9.47305	0.04	0.16	1.15	0.00	1.22	0.00	9.47441	1525.28368	32.67	14.48
66	82	9.07383	0.05	0.15	0.95	0.02	0.87	0.00	9.07499	1534.35867	34.94	15.35
82	83	9.56035	0.00	0.16	1.20	0.00	1.01	0.00	9.56171	1543.92038	37.26	16.36
83	84	14.73020	0.02	0.24	1.86	0.02	1.64	0.00	14.73232	1558.65271	42.00	18.00
84	67	11.98698	0.06	0.20	1.60	0.01	1.17	0.00	11.98885	1570.64155	46.18	19.17
67	68	5.20150	-0.03	0.09	0.68	0.00	0.46	0.00	5.20225	1575.84380	48.48	19.62
68	69	11.92805	0.03	0.20	1.54	0.00	1.45	0.00	11.92982	1587.77362	54.93	21.08
69	70	10.81950	0.00	0.18	1.39	0.00	1.33	0.00	10.82107	1598.59469	59.66	22.40
70	71	7.89125	0.02	0.13	1.01	0.00	0.95	0.00	7.89241	1606.48710	62.11	23.35
71	72	7.43090	0.00	0.12	0.98	0.00	0.91	0.00	7.43200	1613.91910	63.83	24.25
72	73	-0.47795	-0.03	-0.01	-0.06	0.00	-0.06	0.00	-0.47805	1613.44105	66.07	24.20
73	93	4.28355	-0.03	0.07	0.54	0.02	0.37	0.00	4.28415	1617.72520	67.69	24.57
93	94	-2.27830	-0.06	-0.04	-0.29	0.04	-0.24	0.00	-2.27865	1615.44654	68.12	24.33
94	95	-5.04680	-0.11	-0.08	-0.63	0.05	-0.56	0.00	-5.04758	1610.39896	66.21	23.78
95	96	-9.49605	-0.08	-0.16	-1.24	0.06	-1.68	0.00	-9.49747	1600.90150	63.47	22.10
96	97	-12.83350	0.10	-0.21	-1.70	0.06	-1.46	0.00	-12.83525	1588.06625	60.65	20.63
97	98	-14.47580	0.05	-0.24	-1.76	0.08	-2.52	0.00	-14.47767	1573.98858	58.63	18.12
98	99	-15.64575	0.03	-0.26	-2.14	0.10	-2.98	0.00	-15.64802	1557.94056	58.32	15.14
99	100	-11.24858	0.01	-0.19	-1.45	0.07	-1.19	0.00	-11.25014	1546.69043	60.47	13.95
100	101	-14.50545	-0.08	-0.24	-1.95	0.07	-1.59	0.00	-14.50765	1532.18278	59.70	12.36
73	74	1.31175	-0.04	0.02	0.17	-0.03	0.16	0.00	1.31187	1614.75292	63.48	24.35
74	75	1.77085	0.03	0.03	0.22	-0.03	0.19	0.00	1.77110	1616.52401	59.95	24.55
75	76	6.65125	0.01	0.11	1.01	-0.05	0.69	0.00	6.65233	1623.17634	58.33	25.23
76	77	8.33420	-0.05	0.14	1.20	-0.05	0.90	0.00	8.33544	1631.51178	57.02	26.13
77	78	3.07550	0.01	0.05	0.45	-0.02	0.26	0.00	3.07600	1634.58777	56.57	26.39
78	79	7.15065	0.04	0.12	1.02	-0.03	0.67	0.00	7.15179	1641.73956	54.91	27.06
79	80	13.69080	-0.05	0.23	1.90	-0.06	1.37	0.00	13.69282	1655.43238	52.65	28.42
80	81	13.84240	0.03	0.23	1.89	-0.04	0.93	0.00	13.84451	1669.27689	50.31	29.35
81	85	18.60502	-0.03	0.31	2.34	0.00	1.34	0.00	18.60764	1687.88453	52.89	30.68
85	86	24.83155	0.01	0.41	3.21	0.07	1.57	0.00	24.83524	1712.71977	55.33	32.25

Table 3b. National Geodetic Survey Line 73988D: File 73988D.ori--Continued

FROM SEQ NO.	TO SEQ NO.	UNCORRECTED FIELD ELEVATION DIFFERENCE	LEVEL CORR.	ROD CORR.	ASTRO CORR.	TEMP. CORR.	REFR. CORR.	MAGN. CORR.	CORRECTED OBSERVED ELE. DIFFERENCE	CUMULATIVE OBSERVED ELEVATION (OF TO SEQ NO)	CUMULAT. OBS. GRAV ORTHO CORR.	CUMUL. REFR. CORR.
		(m)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(m)	(m)	(mm)	(mm)
86	87	27.70375	0.03	0.46	3.60	0.06	1.37	0.00	27.70789	1740.42767	57.42	33.61
87	88	29.86825	0.00	0.50	3.88	0.06	1.29	0.00	29.87269	1770.30036	61.72	34.90
88	89	32.36515	0.00	0.54	3.79	0.05	1.15	0.00	32.36953	1802.66989	70.55	36.05
89	90	19.44260	-0.01	0.32	2.71	-0.02	1.01	0.00	19.44559	1822.11548	78.17	37.06
90	91	14.60650	0.01	0.24	1.80	-0.02	0.39	0.00	14.60853	1836.72401	84.40	37.44
91	92	37.02165	0.01	0.61	5.15	-0.05	1.83	0.00	37.02738	1873.75139	99.28	39.27

Table 3c. National Geodetic Survey Line 73988D: File 73988D.prn(=.dat)

112	73988/D	3	4191508231130	12	1	1.07	211G11	F
1.04870	MT	1.12	-0.01	0.02	0.17	0.06	0.09	0.001033431310848638
1112	73988/D	4	3191508241050	10	1	1.07	211G11	B
-1.04700	MT	-1.12	-0.02	-0.02	-0.17	-0.08	-0.12	0.001084863810334313
212	73988/D	4	5191508231300	12	1	1.08	211G11	F
2.82030	MT	1.13	0.01	0.05	0.50	0.03	0.23	0.001084863810848639
1012	73988/D	5	4191508241025	10	1	1.08	211G11	B
-2.82000	MT	-1.13	0.00	-0.05	-0.46	-0.08	-0.31	0.001084863910848638
312	73988/D	5	6191508231345	12	1	1.03	211G11	F
0.39300	MT	1.08	0.01	0.01	0.07	0.01	0.03	0.001084863910848640
912	73988/D	6	5191508241000	10	1	1.03	211G11	B
-0.39000	MT	-1.08	0.02	-0.01	-0.06	-0.08	-0.04	0.001084864010848639
412	73988/D	6	7191508231415	11	1	1.13	211G11	F
-2.81800	MT	1.19	0.00	-0.05	-0.33	0.00	-0.30	0.001084864010848641
812	73988/D	7	619150824 930	11	1	1.14	211G11	B
2.82140	MT	-1.19	0.07	0.05	0.43	-0.08	0.25	0.001084864110848640
512	73988/D	7	8191508231445	9	1	1.13	211G11	F
-0.58590	MT	1.19	0.00	-0.01	-0.10	-0.01	-0.08	0.001084864110307593
612	73988/D	8	719150824 850	12	1	1.24	211G11	B
0.58460	MT	-1.19	0.04	0.01	0.08	-0.07	0.05	0.001030759310848641
2312	73988/D	8	9191508251155	5	1	0.49	211G11	F
1.07590	MT	0.49	0.01	0.02	0.18	0.04	0.11	0.001030759310848642
2212	73988/D	9	8191508251140	5	1	0.49	211G11	B
-1.07730	MT	-0.49	0.07	-0.02	-0.18	-0.04	-0.11	0.001084864210307593
2412	73988/D	9	10191508251315	10	1	1.03	211G11	F
2.83470	MT	1.02	0.04	0.05	0.48	0.05	0.31	0.001084864210848643
2112	73988/D	10	9191508251115	10	1	1.03	211G11	B
-2.83470	MT	-1.02	0.03	-0.05	-0.46	-0.08	-0.31	0.001084864310848642
2512	73988/D	10	11191508251340	10	1	1.08	211G11	F
2.90800	MT	1.07	0.07	0.05	0.48	0.04	0.34	0.001084864310848644
2012	73988/D	11	10191508251045	10	1	1.08	211G11	B
-2.91000	MT	-1.07	-0.02	-0.05	-0.45	-0.08	-0.34	0.001084864410848643
2612	73988/D	11	12191508251410	11	1	1.14	211G11	F
11.06820	MT	1.13	0.07	0.18	2.01	0.03	1.12	0.001084864410848645
1912	73988/D	12	11191508251015	11	1	1.14	211G11	B
-11.07130	MT	-1.13	-0.01	-0.18	-1.66	-0.09	-1.15	0.001084864510848644
1412	73988/D	12	13191508241340	10	1	0.99	211G11	F
-5.86590	MT	1.05	0.04	-0.10	-0.84	0.08	-0.60	0.001084864510848646
2712	73988/D	12	15191508251505	3	1	0.28	211G11	F
1.98600	MT	0.28	0.06	0.03	0.37	0.00	0.14	0.001084864510848647
1712	73988/D	13	12191508241605	9	1	0.99	211G11	B
5.86630	MT	-1.05	0.01	0.10	0.66	-0.04	0.17	0.001084864610848645
1512	73988/D	13	14191508241415	12	1	1.15	211G11	RF
5.71660	MT	0.91	0.06	0.09	0.73	0.06	0.52	0.001084864610279076
712	73988/D	13	1419150824 900	9	1	0.86	211G11	F
5.71020	MT	0.91	0.01	0.09	0.72	0.00	0.41	0.001084864610279076
1612	73988/D	14	13191508241520	8	1	0.87	211G11	B
-5.70790	MT	-0.91	-0.01	-0.09	-0.66	-0.05	-0.23	0.001027907610848646
1812	73988/D	14	1319150825 925	10	1	0.86	211G11	B
-5.70800	MT	-0.91	-0.01	-0.09	-0.83	0.00	-0.35	0.001027907610848646
1312	73988/D	15	12191508241330	3	1	0.28	211G11	B
-1.98430	MT	-0.28	0.00	-0.03	-0.32	-0.01	-0.18	0.001084864710848645
2812	73988/D	15	16191508251515	11	1	1.20	211G11	F
15.02500	MT	1.20	0.04	0.25	2.67	0.01	1.47	0.001084864710282381
1212	73988/D	16	15191508241300	11	1	1.19	211G11	B
-15.02360	MT	-1.20	-0.05	-0.25	-2.67	-0.05	-1.92	0.001028238110848647
2912	73988/D	16	17191508251540	10	1	1.08	211G11	F
18.47020	MT	0.37	0.02	0.31	3.03	-0.06	1.81	0.001028238110848648
6112	73988/D	17	16191508271515	10	1	1.08	211G11	B
-18.47070	MT	-0.37	0.06	-0.31	-3.21	0.03	-1.92	0.001084864810282381
3012	73988/D	17	18191508251610	10	1	1.08	211G11	F
18.13440	MT	0.38	0.04	0.30	2.94	-0.06	1.25	0.001084864810848649
6012	73988/D	18	17191508271445	10	1	1.08	211G11	B
-18.13260	MT	-0.38	-0.03	-0.30	-3.23	0.02	-2.07	0.001084864910848648
3112	73988/D	18	1919150826 835	10	1	1.09	211G11	F
19.23640	MT	0.39	-0.01	0.32	2.27	0.06	1.50	0.001084864910848650
5912	73988/D	19	18191508271415	12	1	1.09	211G11	B
-19.23900	MT	-0.39	0.18	-0.32	-3.42	0.00	-1.60	0.001084865010848649
3212	73988/D	19	2019150826 905	10	1	1.10	211G11	F
18.69770	MT	0.39	-0.05	0.31	2.58	0.07	1.94	0.001084865010848651
5812	73988/D	20	19191508271340	12	1	1.09	211G11	B
-18.70050	MT	-0.39	0.10	-0.31	-3.18	-0.01	-1.66	0.001084865110848650
3312	73988/D	20	2119150826 930	4	1	0.44	211G11	F
6.05160	MT	0.16	0.02	0.10	0.75	0.03	0.69	0.001084865110274249
5712	73988/D	21	20191508271325	5	1	0.45	211G11	B
-6.05200	MT	-0.16	0.02	-0.10	-1.03	-0.01	-0.51	0.001027424910848651
3412	73988/D	21	2219150826 940	11	1	1.09	211G11	F
-1.39710	MT	0.26	0.07	-0.02	-0.20	0.08	-0.12	0.001027424910848652

Table 3c. National Geodetic Survey Line 73988D: File 73988D.prn(=.dat)--Continued

```
  5612          73988/D        22  21191508271145      13 1  1.08                  211G11        B
  1.39800                   MT -0.26  0.10  0.02  0.23 -0.05  0.10  0.001084865210274249
  3512          73988/D        22  23191508261010      10 1  1.14                  211G11        F
-12.66390                   MT  0.28  0.04 -0.21 -1.92  0.08 -1.64  0.001084865210848653
  5512          73988/D        23  22191508271115      11 1  1.14                  211G11        B
 12.66730                   MT -0.28  0.06  0.21  2.05 -0.06  1.46  0.001084865310848652
  3612          73988/D        23  24191508261035      10 1  1.08                  211G11        F
 -5.06730                   MT  0.26  0.05 -0.08 -0.87  0.07 -0.56  0.001084865310848654
  5412          73988/D        24  23191508271045      10 1  1.08                  211G11        B
  5.06640                   MT -0.26  0.10  0.08  0.82 -0.06  0.58  0.001084865410848653
  3712          73988/D        24  25191508261100      10 1  1.08                  211G11        F
 -6.01360                   MT  0.26  0.11 -0.10 -0.96  0.07 -0.71  0.001084865410848655
  5312          73988/D        25  24191508271015      10 1  1.08                  211G11        B
  6.01390                   MT -0.26  0.15  0.10  0.93 -0.06  0.66  0.001084865510848654
  3812          73988/D        25  26191508261130       5 1  0.50                  211G11        F
 -2.90570                   MT  0.12  0.02 -0.05 -0.48  0.03 -0.30  0.001084865510269213
  5212          73988/D        26  25191508271005       5 1  0.50                  211G11        B
  2.90730                   MT -0.12 -0.07  0.05  0.42 -0.03  0.27  0.001026921310848655
  3912          73988/D        26  27191508261200       5 1  0.52                  211G11        F
 -0.77570                   MT  0.15 -0.07 -0.01 -0.14  0.02 -0.08  0.001026921310269215
  5112          73988/D        27  2619150827 950       5 1  0.52                  211G11        B
  0.77800                   MT -0.15  0.11  0.01  0.12 -0.03  0.07  0.001026921510269213
  4112          73988/D        27  28191508261315      10 1  1.09                  211G11        F
 -3.71630                   MT -0.02  0.00 -0.06 -0.54 -0.02 -0.46  0.001026921510848656
  5012          73988/D        28  2719150827 920      10 1  1.09                  211G11        B
  3.71770                   MT  0.02 -0.02  0.06  0.56 -0.05  0.35  0.001084865610269215
  4212          73988/D        28  29191508261340      10 1  1.08                  211G11        F
  0.06610                   MT -0.02  0.09  0.00  0.01 -0.03  0.01  0.001084865610848657
  4912          73988/D        29  2819150827 855       9 1  1.08                  211G11        B
 -0.06300                   MT  0.02  0.05  0.00 -0.01 -0.04 -0.01  0.001084865710848656
  7612          73988/D        29  30191508281455      10 1  1.08                  211G11        F
 -2.84430                   MT -0.02  0.00 -0.05 -0.50 -0.03 -0.27  0.001084865710848658
  4312          73988/D        29  30191508261405      10 1  1.08                  211G11        F
 -2.84400                   MT -0.02  0.08 -0.05 -0.48 -0.04 -0.31  0.001084865710848658
  7512          73988/D        30  29191508281430      10 1  1.08                  211G11        B
  2.84730                   MT  0.02  0.00  0.05  0.49  0.02  0.29  0.001084865810848657
  4812          73988/D        30  2919150827 830       9 1  1.08                  211G11        B
  2.85140                   MT  0.02  0.06  0.05  0.40 -0.03  0.22  0.001084865810848657
  4412          73988/D        30  31191508261430      10 1  1.03                  211G11        F
 -2.35500                   MT -0.02  0.05 -0.04 -0.40 -0.05 -0.22  0.001084865810269216
  7412          73988/D        31  30191508281410      10 1  1.02                  211G11        B
  2.35930                   MT  0.02 -0.02  0.04  0.41  0.01  0.22  0.001026921610848658
  4512          73988/D        31  32191508261525      10 1  1.07                  211G11        F
  3.10430                   MT -0.63  0.01  0.05  0.56 -0.08  0.26  0.001026921610848659
  7712          73988/D        31  32191508281540      10 1  1.07                  211G11        F
  3.10410                   MT -0.63  0.00  0.05  0.54 -0.06  0.25  0.001026921610848659
  7312          73988/D        32  31191508281340      12 1  1.07                  211G11        B
 -3.09910                   MT  0.63  0.00 -0.05 -0.55  0.04 -0.24  0.001084865910269216
  7812          73988/D        32  31191508281600      10 1  1.07                  211G11        B
 -3.10170                   MT  0.63  0.00 -0.05 -0.53  0.06 -0.19  0.001084865910269216
  4712          73988/D        32  33191508261645      10 1  1.08                  211G11        F
  4.17310                   MT -0.63  0.09  0.07  0.72 -0.07  0.13  0.001084865910848660
  4012          73988/D        33  32191508261305      12 1  1.07                  211G11        B
 -4.16900                   MT  0.63 -0.01 -0.07 -0.76  0.05 -0.33  0.001084866010848659
  4612          73988/D        33  34191508261610      10 1  1.07                  211G11        F
 -0.93810                   MT -0.63  0.03 -0.02 -0.16 -0.08 -0.05  0.001084866010848661
  7212          73988/D        34  33191508281130      10 1  1.08                  211G11        B
  0.94000                   MT  0.63 -0.02  0.02  0.16 -0.01  0.11  0.001084866110848660
  8112          73988/D        34  3519150830 840       5 1  0.55                  211G11        F
 -1.77760                   MT -0.32 -0.01 -0.03 -0.26 -0.01 -0.06  0.001084866110848662
  6312          73988/D        34  3519150828 810       5 1  0.55                  211G11        F
 -1.77500                   MT -0.32 -0.01 -0.03 -0.22  0.00 -0.10  0.001084866110848662
  8012          73988/D        35  3419150830 830       5 1  0.54                  211G11        B
  1.77730                   MT  0.32  0.02  0.03  0.25  0.01  0.04  0.001084866210848661
  7112          73988/D        35  34191508281120       5 1  0.54                  211G11        B
  1.77900                   MT  0.32  0.01  0.03  0.31  0.00  0.21  0.001084866210848661
  8212          73988/D        35  3619150830 850       9 1  1.08                  211G11        F
 -0.46420                   MT -0.63  0.01 -0.01 -0.07 -0.02 -0.02  0.001084866210280753
  7012          73988/D        36  35191508281050      10 1  1.08                  211G11        B
  0.46460                   MT  0.63 -0.01  0.01  0.08 -0.01  0.05  0.001028075310848662
  8312          73988/D        36  3719150830 915       4 1  0.43                  211G11        F
 -1.53630                   MT -0.33  0.01 -0.03 -0.24 -0.01 -0.06  0.001028075310848663
  8512          73988/D        36  3719150830 935       4 1  0.43                  211G11        F
 -1.53700                   MT -0.33  0.01 -0.03 -0.25  0.00 -0.06  0.001028075310848663
  8412          73988/D        37  3619150830 925       4 1  0.43                  211G11        B
  1.53770                   MT  0.33 -0.01  0.03  0.25  0.01  0.06  0.001084866310280753
  6912          73988/D        37  36191508281040       4 1  0.43                  211G11        B
  1.54030                   MT  0.33 -0.01  0.03  0.26  0.00  0.17  0.001084866310280753
```

8612	73988/D	37 3819150830 945	10 1 1.08	211G11	F
-0.49130		MT -0.81 0.00 -0.01 -0.08	-0.01 -0.02	0.001084866310848664	
8812	73988/D	37 38191508301035	10 1 1.08	211G11	F
-0.49340		MT -0.81 0.00 -0.01 -0.08	-0.01 -0.02	0.001084866310848664	
6812	73988/D	38 37191508281015	10 1 1.08	211G11	B
0.49730		MT 0.81 -0.01 0.01 0.08	-0.01 0.05	0.001084866410848663	
8712	73988/D	38 37191508301015	10 1 1.08	211G11	B
0.49330		MT 0.81 0.00 0.01 0.08	0.01 0.02	0.001084866410848663	
8912	73988/D	38 39191508301105	11 1 1.07	211G11	F
-1.69470		MT -0.81 0.01 -0.03 -0.29	-0.01 -0.06	0.001084866410848665	
6712	73988/D	39 3819150828 950	10 1 1.08	211G11	B
1.69600		MT 0.81 0.00 0.03 0.26	-0.01 0.17	0.001084866510848664	
9012	73988/D	39 40191508301130	14 1 1.13	211G11	F
-5.81070		MT -0.86 0.04 -0.10 -1.00	-0.01 -0.15	0.001084866510848666	
6612	73988/D	40 3919150828 925	10 1 1.13	211G11	B
5.81020		MT 0.86 0.01 0.10 0.87	-0.01 0.61	0.001084866610848665	
9112	73988/D	40 41191508301305	13 1 1.14	211G11	F
-7.88800		MT -0.85 -0.01 -0.13 -1.28	-0.02 -0.25	0.001084866610299008	
6512	73988/D	41 4019150828 905	9 1 1.14	211G11	B
7.88830		MT 0.85 -0.04 0.13 1.15	-0.01 0.98	0.001029900810848666	
9212	73988/D	41 42191508301340	8 1 0.75	211G11	F
-2.75100		MT -0.48 -0.01 -0.05 -0.48	-0.02 -0.09	0.001029900810848667	
6412	73988/D	42 4119150828 845	6 1 0.75	211G11	B
2.74930		MT 0.48 -0.01 0.05 0.39	-0.01 0.30	0.001084866710299008	
9312	73988/D	42 43191508301400	11 1 1.13	211G11	F
-0.27210		MT -0.72 0.02 0.00 -0.05	-0.03 -0.01	0.001084866710848668	
6212	73988/D	43 4219150828 805	9 1 1.13	211G11	B
0.27550		MT 0.72 -0.01 0.00 0.03	0.00 0.02	0.001084866810848667	
9412	73988/D	43 44191508301430	8 1 1.08	211G11	F
0.78540		MT -0.69 0.01 0.01 0.13	-0.03 0.05	0.001084866810848669	
10512	73988/D	44 43191508311020	9 1 1.08	211G11	B
-0.78280		MT 0.69 -0.05 -0.01 -0.11	0.02 -0.11	0.001084866910848668	
10612	73988/D	44 45191508311050	9 1 1.02	211G11	F
1.52930		MT -0.65 0.02 0.03 0.23	-0.02 0.19	0.001084866910848670	
9512	73988/D	44 45191508301450	7 1 1.02	211G11	F
1.53270		MT -0.65 0.01 0.03 0.23	-0.03 0.11	0.001084866910848670	
10712	73988/D	45 44191508311115	9 1 1.02	211G11	B
-1.53010		MT 0.65 0.03 -0.03 -0.24	0.02 -0.20	0.001084867010848669	
10412	73988/D	45 44191508311000	8 1 1.02	211G11	B
-1.52770		MT 0.65 -0.03 -0.03 -0.21	0.02 -0.23	0.001084867010848669	
9612	73988/D	45 46191508301510	6 1 0.88	211G11	F
0.97970		MT -0.56 0.01 0.02 0.14	-0.03 0.07	0.001084867010312795	
10312	73988/D	46 4519150831 935	7 1 0.88	211G11	B
-0.97790		MT 0.56 0.03 -0.02 -0.14	0.02 -0.13	0.001031279510848670	
9712	73988/D	46 47191508301540	7 1 1.01	211G11	F
2.62010		MT -0.52 0.02 0.04 0.38	-0.04 0.16	0.001031279510848671	
10212	73988/D	47 4619150831 915	8 1 1.01	211G11	B
-2.61610		MT 0.52 -0.03 -0.04 -0.38	0.02 -0.33	0.001084867110312795	
9812	73988/D	47 48191508301600	7 1 1.03	211G11	F
2.30330		MT -0.53 0.02 0.04 0.33	-0.04 0.11	0.001084867110848672	
10112	73988/D	48 4719150831 855	8 1 1.04	211G11	B
-2.30310		MT 0.53 0.01 -0.04 -0.32	0.03 -0.28	0.001084867210848671	
10812	73988/D	48 49191508311300	7 1 0.71	211G11	F
0.30360		MT -0.37 0.03 0.00 0.05	-0.01 0.03	0.001084867210848673	
10012	73988/D	49 4819150831 840	5 1 0.71	211G11	B
-0.30730		MT 0.37 -0.01 0.00 -0.04	0.02 -0.04	0.001084867310848672	
10912	73988/D	49 50191508311325	10 1 1.03	211G11	F
1.20660		MT -0.53 0.05 0.02 0.20	-0.02 0.13	0.001084867310848674	
9912	73988/D	50 4919150831 825	7 1 1.02	211G11	B
-1.20370		MT 0.53 0.01 -0.02 -0.14	0.03 -0.05	0.001084867410848673	
11012	73988/D	50 51191508311350	10 1 1.05	211G11	F
0.66740		MT -0.54 0.02 0.01 0.10	-0.02 0.07	0.001084867410324465	
7912	73988/D	51 5019150830 800	8 1 1.05	211G11	B
-0.66870		MT 0.54 0.02 -0.01 -0.07	0.03 -0.02	0.001032446510848674	
11112	73988/D	51 52191508311420	10 1 1.10	211G11	F
0.94770		MT -0.52 0.01 0.02 0.14	-0.02 0.11	0.001032446510848675	
12612	73988/D	52 5119150902 850	11 1 1.11	211G11	B
-0.94600		MT 0.52 0.01 -0.02 -0.13	0.03 -0.07	0.001084867510324465	
11212	73988/D	52 53191508311445	7 1 1.08	211G11	F
1.77600		MT -0.51 0.02 0.03 0.25	-0.02 0.15	0.001084867510848676	
12512	73988/D	53 5219150902 825	10 1 1.08	211G11	B
-1.77690		MT 0.51 0.01 -0.03 -0.22	0.03 -0.10	0.001084867610848675	
11312	73988/D	53 54191508311505	6 1 1.07	211G11	F
0.91000		MT -0.51 0.02 0.01 0.13	-0.02 0.10	0.001084867610848677	
12412	73988/D	54 5319150902 800	10 1 1.07	211G11	B
-0.91310		MT 0.51 0.02 -0.02 -0.09	0.02 -0.04	0.001084867710848676	
12712	73988/D	54 5519150902 925	8 1 0.86	211G11	F
0.58700		MT -0.40 -0.01 0.01 0.08	-0.03 0.05	0.001084867710848678	

Table 3c. National Geodetic Survey Line 73988D: File 73988D.prn(=.dat)--Continued

```
 12312          73988/D        55  54191509011335       8 1  0.86                  211G11          B
 -0.58860                    MT  0.40  0.00 -0.01 -0.09  0.02 -0.07  0.001084867810848677
 12812          73988/D        55  5719150902 945       7 1  1.10                  211G11          F
  3.18740                    MT -0.51 -0.01  0.05  0.46 -0.04  0.68  0.001084867810848679
 12212          73988/D        57  55191509011310      10 1  1.07                  211G11          B
 -3.18510                    MT  0.51  0.00 -0.05 -0.43  0.02 -0.39  0.001084867910848678
 12912          73988/D        57  58191509021010      10 1  1.03                  211G11          F
  4.52700                    MT -0.49  0.01  0.08  0.66 -0.04  0.44  0.001084867910848680
 12112          73988/D        58  57191509011125       9 1  1.02                  211G11          B
 -4.52560                    MT  0.49  0.00 -0.08 -0.68  0.03 -0.61  0.001084868010848679
 13012          73988/D        58  59191509021035      11 1  1.01                  211G11          F
 10.67280                    MT -0.48  0.02  0.18  1.62 -0.04  0.90  0.001084868010848681
 12012          73988/D        59  58191509011100      10 1  1.02                  211G11          B
-10.67230                    MT  0.48  0.00 -0.18 -1.69  0.03 -1.15  0.001084868110848680
 13112          73988/D        59  60191509021110       7 1  0.69                  211G11          F
  4.07540                    MT -0.33  0.00  0.07  0.66 -0.03  0.40  0.001084868110340664
 11912          73988/D        60  59191509011020       8 1  0.69                  211G11          B
 -4.07570                    MT  0.33  0.00 -0.07 -0.67  0.02 -0.28  0.001034066410848681
 13212          73988/D        60  61191509021140      12 1  1.08                  211G11          F
  4.96190                    MT  0.34  0.03  0.08  0.78 -0.03  0.41  0.001034066410848682
 11812          73988/D        61  6019150901 940      11 1  1.08                  211G11          B
 -4.96130                    MT -0.34  0.00 -0.08 -0.75  0.03 -0.40  0.001084868210340664
 13312          73988/D        61  62191509021325      10 1  1.06                  211G11          F
 11.81060                    MT  0.33  0.01  0.20  1.82 -0.02  1.41  0.001084868210848683
 11712          73988/D        62  6119150901 915      10 1  1.06                  211G11          B
-11.81140                    MT -0.33  0.00 -0.20 -1.70  0.03 -1.08  0.001084868310848682
 13412          73988/D        62  63191509021350       9 1  1.06                  211G11          F
  5.07140                    MT  0.33  0.00  0.08  0.74 -0.02  0.69  0.001084868310848684
 11612          73988/D        63  6219150901 850      10 1  1.05                  211G11          B
 -5.06820                    MT -0.33  0.00 -0.08 -0.68  0.02 -0.40  0.001084868410848683
 13512          73988/D        63  64191509021415      10 1  1.08                  211G11          F
  7.78440                    MT  0.34  0.04  0.13  1.17 -0.02  0.85  0.001084868410848685
 11512          73988/D        64  6319150901 830       9 1  1.08                  211G11          B
 -7.77930                    MT -0.34  0.00 -0.13 -0.96  0.02 -0.61  0.001084868510848684
 15412          73988/D        64  65191509031540       8 1  1.06                  211G11          F
  6.82940                    MT  0.33  0.00  0.11  0.78 -0.01  0.88  0.001084868510334311
 13612          73988/D        64  65191509021445       8 1  1.06                  211G11          F
  6.83340                    MT  0.33  0.02  0.11  0.89 -0.01  0.43  0.001084868510334311
 11412          73988/D        65  6419150901 800       9 1  1.05                  211G11          B
 -6.82670                    MT -0.33  0.00 -0.11 -0.79  0.02 -0.36  0.001033431110848685
 15312          73988/D        65  64191509031520       8 1  1.05                  211G11          B
 -6.83100                    MT -0.33  0.02 -0.11 -0.85  0.02 -0.94  0.001033431110848685
 13712          73988/D        65  66191509021510       7 1  0.90                  211G11          F
  9.47370                    MT  1.01  0.00  0.16  1.12  0.01  1.39  0.001033431110848686
 15212          73988/D        66  65191509031500       8 1  0.90                  211G11          B
 -9.47240                    MT -1.01 -0.08 -0.16 -1.19  0.00 -1.04  0.001084868610334311
 13812          73988/D        66  82191509021535       7 1  1.02                  211G11          F
  9.07730                    MT  1.15  0.01  0.15  0.91  0.02  0.62  0.001084868610848687
 15512          73988/D        66  8219150904 810       7 1  1.02                  211G11          F
  9.07460                    MT  1.15  0.07  0.15  0.80  0.04  0.90  0.001084868610848687
 15912          73988/D        67  6819150904 955       5 1  0.45                  211G11          F
  5.20130                    MT  0.51  0.02  0.09  0.64  0.01  0.40  0.001030759210848690
 14812          73988/D        67  84191509031315      10 1  1.02                  211G11          B
-11.98370                    MT -1.17  0.00 -0.20 -1.77  0.01 -1.32  0.001030759210848689
 17112          73988/D        67  84191509041605       7 1  1.02                  211G11          B
-11.98800                    MT -1.17  0.00 -0.20 -1.56  0.00 -1.33  0.001030759210848689
 14712          73988/D        68  67191509031155       5 1  0.47                  211G11          B
 -5.20170                    MT -0.51  0.07 -0.09 -0.71  0.00 -0.51  0.001084869010307592
 16012          73988/D        68  69191509041005      10 1  1.09                  211G11          F
 11.92900                    MT  1.22  0.11  0.20  1.53  0.02  1.36  0.001084869010848691
 14612          73988/D        69  68191509031125      10 1  1.09                  211G11          B
-11.92710                    MT -1.22  0.06 -0.20 -1.55  0.01 -1.55  0.001084869110848690
 16112          73988/D        69  70191509041030      10 1  1.09                  211G11          F
 10.81860                    MT  1.23  0.02  0.18  1.43  0.01  1.28  0.001084869110848692
 14512          73988/D        70  69191509031100      10 1  1.09                  211G11          B
-10.82040                    MT -1.23  0.02 -0.18 -1.34  0.00 -1.37  0.001084869210848691
 16212          73988/D        70  71191509041055      10 1  1.09                  211G11          F
  7.89290                    MT  1.23  0.05  0.13  1.06  0.01  0.95  0.001084869210848693
 14412          73988/D        71  70191509031035      10 1  1.09                  211G11          B
 -7.88960                    MT -1.23  0.02 -0.13 -0.96  0.00 -0.94  0.001084869310848692
 17012          73988/D        71  72191509041535       8 1  1.09                  211G11          F
  7.42930                    MT  1.24 -0.02  0.12  1.04 -0.01  0.99  0.001084869310848694
 16312          73988/D        71  72191509041115      10 1  1.09                  211G11          F
  7.43510                    MT  1.24  0.05  0.12  1.01  0.00  0.92  0.001084869310848694
 16912          73988/D        72  71191509041510       9 1  1.09                  211G11          B
 -7.42950                    MT -1.24 -0.02 -0.12 -0.98  0.01 -0.87  0.001084869410848693
 14312          73988/D        72  71191509031010      10 1  1.09                  211G11          B
 -7.42970                    MT -1.24  0.03 -0.12 -0.89  0.00 -0.84  0.001084869410848693
```

Table 3c. National Geodetic Survey Line 73988D: File 73988D.prn(=.dat)--Continued

```
  16412          73988/D        72  73191509041145      10 1  1.09                  211G11        F
  -0.47830                    MT  1.24 -0.02 -0.01 -0.06 -0.01 -0.06  0.001084869410280754
  14212          73988/D        73  7219150903 940      10 1  1.15                  211G11        B
   0.47760                    MT -1.24  0.04  0.01  0.06 -0.01  0.05  0.001028075410848694
  16512          73988/D        73  74191509041215       8 1  0.87                  211G11        F
   1.31240                    MT -0.98 -0.07  0.02  0.17 -0.03  0.16  0.001028075410848695
  21212          73988/D        73  9319150910 825       5 1  0.65                  211G11        F
4.28380                       MT  0.83 -0.01  0.07  0.44  0.02  0.35  0.001028075410848706
  14112          73988/D        74  7319150903 900       7 1  0.87                  211G11        B
  -1.31110                    MT  0.98  0.01 -0.02 -0.16  0.02 -0.15  0.001084869510280754
  16612          73988/D        74  75191509041335      10 1  1.08                  211G11        F
   1.76970                    MT -1.22  0.05  0.03  0.25 -0.03  0.20  0.001084869510848696
  14012          73988/D        75  7419150903 835       8 1  1.09                  211G11        B
  -1.77200                    MT  1.22 -0.01 -0.03 -0.18  0.03 -0.19  0.001084869610848695
  16712          73988/D        75  76191509041400      10 1  1.01                  211G11        F
   6.64730                    MT -1.13  0.03  0.11  0.93 -0.03  0.65  0.001084869610848697
  19412          73988/D        75  76191509081440       9 1  1.00                  211G11        F
   6.65230                    MT -1.13  0.04  0.11  1.05 -0.06  0.69  0.001084869610848697
  19312          73988/D        76  75191509081410       9 1  1.00                  211G11        B
  -6.65240                    MT  1.13  0.00 -0.11 -1.04  0.07 -0.75  0.001084869710848696
  19512          73988/D        76  75191509081500       9 1  1.00                  211G11        B
  -6.65300                    MT  1.13  0.02 -0.11 -1.00  0.05 -0.65  0.001084869710848696
  16812          73988/D        76  77191509041425      10 1  1.07                  211G11        F
   8.33370                    MT -1.21 -0.07  0.14  1.12 -0.02  0.88  0.001084869710848698
  19212          73988/D        77  76191509081345      10 1  1.07                  211G11        B
  -8.33470                    MT  1.21  0.02 -0.14 -1.27  0.08 -0.91  0.001084869810848697
  19612          73988/D        77  78191509081530       3 1  0.29                  211G11        F
   3.07640                    MT -0.34  0.08  0.05  0.43 -0.01  0.22  0.001084869810300887
  19112          73988/D        78  77191509081335       3 1  0.29                  211G11        B
  -3.07460                    MT  0.34  0.06 -0.05 -0.47  0.02 -0.30  0.001030088710848698
  19712          73988/D        78  79191509081540       5 1  0.51                  211G11        F
   7.15130                    MT -0.44  0.12  0.12  0.97 -0.03  0.54  0.001030088710848699
  19012          73988/D        79  78191509081300       5 1  0.51                  211G11        B
  -7.15000                    MT  0.44  0.05 -0.12 -1.07  0.04 -0.80  0.001084869910300887
  19812          73988/D        79  80191509081555       9 1  1.13                  211G11        F
  13.69170                    MT -0.98  0.00  0.23  1.86 -0.06  1.17  0.001084869910848700
  18912          73988/D        80  79191509081135      11 1  1.13                  211G11        B
 -13.68990                    MT  0.98  0.10 -0.23 -1.94  0.06 -1.56  0.001084870010848699
  19912          73988/D        80  81191509081620      10 1  1.04                  211G11        F
  13.84320                    MT -0.91  0.05  0.23  1.83 -0.04  0.54  0.001084870010848701
  18812          73988/D        81  80191509081105      11 1  1.04                  211G11        B
 -13.84160                    MT  0.91 -0.01 -0.23 -1.94  0.04 -1.31  0.001084870110848700
  20012          73988/D        81  85191509081650       9 1  1.14                  211G11        F
  18.60940                    MT -1.01 -0.02  0.31  2.46 -0.03  0.48  0.001084870110314502
  20212          73988/D        81  8519150909 845      10 1  1.14                  211G11        F
  18.60540                    MT -1.01  0.00  0.31  2.34  0.03  1.56  0.001084870110314502
  15112          73988/D        82  66191509031435      10 1  1.02                  211G11        B
  -9.07270                    MT -1.15  0.03 -0.15 -1.16  0.00 -0.86  0.001084868710848686
  15612          73988/D        82  6619150904 830       7 1  1.02                  211G11        B
  -9.07070                    MT -1.15 -0.14 -0.15 -0.93 -0.03 -1.10  0.001084868710848686
  13912          73988/D        82  83191509021600       7 1  0.94                  211G11        F
   9.56240                    MT  1.07  0.01  0.16  1.17  0.02  0.98  0.001084868710848688
  15012          73988/D        83  82191509031410       9 1  0.94                  211G11        B
  -9.55830                    MT -1.07  0.01 -0.16 -1.22  0.01 -1.04  0.001084868810848687
  15712          73988/D        83  8419150904 900      12 1  1.32                  211G11        F
  14.73180                    MT  1.51  0.04  0.24  1.71  0.04  1.39  0.001084868810848689
  17212          73988/D        84  67191509041625       7 1  1.02                  211G11        F
  11.98820                    MT  1.17  0.08  0.20  1.58  0.01  0.95  0.001084868910307592
  15812          73988/D        84  6719150904 930      10 1  1.03                  211G11        F
  11.98800                    MT  1.17  0.17  0.20  1.49  0.03  1.09  0.001084868910307592
  14912          73988/D        84  83191509031340      12 1  1.33                  211G11        B
 -14.72860                    MT -1.51  0.01 -0.24 -2.00  0.01 -1.88  0.001084868910848688
  18712          73988/D        85  81191509081035      11 1  1.14                  211G11        B
 -18.60030                    MT  1.01  0.04 -0.31 -2.53  0.03 -2.14  0.001031450210848701
  20112          73988/D        85  8119150909 815      10 1  1.14                  211G11        B
 -18.60500                    MT  1.01  0.06 -0.31 -2.01 -0.04 -1.16  0.001031450210848701
  17312          73988/D        85  8619150907 930      11 1  1.05                  211G11        F
  24.83270                    MT  0.59  0.00  0.41  3.23  0.06  1.47  0.001031450210311112
  18612          73988/D        86  85191509081005      11 1  1.06                  211G11        B
 -24.83040                    MT -0.59 -0.02 -0.41 -3.18 -0.07 -1.66  0.001031111210314502
  17412          73988/D        86  87191509071015      11 1  1.07                  211G11        F
  27.70490                    MT  0.44  0.03  0.46  3.82  0.04  1.38  0.001031111210848702
  18512          73988/D        87  8619150908 935      12 1  1.06                  211G11        B
 -27.70260                    MT -0.44 -0.02 -0.46 -3.38 -0.08 -1.35  0.001084870210311112
  17512          73988/D        87  88191509071045      12 1  1.11                  211G11        F
  29.86900                    MT  0.47  0.05  0.50  4.18  0.03  1.50  0.001084870210848703
  18412          73988/D        88  8719150908 900      12 1  1.11                  211G11        B
 -29.86750                    MT -0.47  0.05 -0.50 -3.58 -0.09 -1.08  0.001084870310848702
```

Table 3c. National Geodetic Survey Line 73988D: File 73988D.prn(=.dat)--Continued

```
  17612          73988/D        88  89191509071115       13 1  1.15                  211G11        F
  32.36470                   MT  0.50 -0.01  0.54  4.60  0.01  1.54  0.00104870310848704
  18312          73988/D        89  8819150908 825       14 1  1.15                  211G11        B
 -32.36560                   MT -0.50 -0.02 -0.54 -2.98 -0.09 -0.76  0.00104870410848703
  17712          73988/D        89  90191509071145       10 1  0.78                  211G11        F
  19.44240                   MT  0.34  0.06  0.32  2.84 -0.01  1.39  0.00104870410848705
  18212          73988/D        90  89191509071605       10 1  0.78                  211G11        B
 -19.44280                   MT -0.34  0.09 -0.32 -2.57  0.03 -0.62  0.00104870510848704
  17812          73988/D        90  91191509071313        8 1  0.46                  211G11        F
  14.60670                   MT  0.19  0.14  0.24  1.72 -0.02  0.56  0.00104870510304316
  18112          73988/D        91  90191509071540       10 1  0.44                  211G11        B
 -14.60630                   MT -0.19  0.11 -0.24 -1.87  0.02 -0.21  0.00103043161084870 5
  17912          73988/D        91  92191509071340       18 1  1.33                  211G11        F
  37.02120                   MT  1.20  0.17  0.61  5.18 -0.04  2.08  0.00103043161029900 9
  18012          73988/D        92  91191509071435       20 1  1.32                  211G11        B
 -37.02210                   MT -1.20  0.14 -0.61 -5.11  0.05 -1.57  0.00102990091030431 6
  21112          73988/D        93  73191509091545        5 1  0.65                  211G11        B
-4.28330                     MT -0.83  0.04 -0.07 -0.64 -0.01 -0.39  0.00104870610280754
  21312          73988/D        93  9419150910 855        6 1  1.19                  211G11        F
-2.27830                     MT  1.50 -0.08 -0.04 -0.23  0.06 -0.25  0.00104870610848707
  21012          73988/D        94  93191509091515       10 1  1.18                  211G11        B
2.27830                      MT -1.50  0.04  0.04  0.36 -0.02  0.22  0.00104870710848706
  21412          73988/D        94  9519150910 915        6 1  1.08                  211G11        F
-5.04720                     MT  1.37 -0.20 -0.08 -0.49  0.06 -0.52  0.00104870710848708
  20912          73988/D        95  94191509091445        9 1  1.08                  211G11        B
5.04640                      MT -1.37  0.03  0.08  0.77 -0.03  0.59  0.00104870810848707
  21512          73988/D        95  9619150910 935        7 1  1.14                  211G11        F
  -9.49570                   MT  1.44 -0.15 -0.16 -0.99  0.07 -2.28  0.00104870810848709
  20812          73988/D        96  95191509091420       10 1  1.13                  211G11        B
   9.49640                   MT -1.44  0.00  0.16  1.48 -0.04  1.08  0.00104870910848708
  21612          73988/D        96  9719150910 955        6 1  1.08                  211G11        F
 -12.83430                   MT  1.36  0.15 -0.21 -1.36  0.07 -1.47  0.00104870910848710
  20712          73988/D        97  96191509091350       10 1  1.08                  211G11        B
  12.83270                   MT -1.36 -0.04  0.21  2.03 -0.05  1.46  0.00104871010848709
  21712          73988/D        97  98191509101015        7 1  1.09                  211G11        F
 -14.47630                   MT  1.35 -0.07 -0.24 -1.56  0.08 -1.43  0.00104871010347303
  21912          73988/D        97  98191509101055        8 1  1.09                  211G11        F
 -14.47910                   MT  1.35  0.22 -0.24 -1.65  0.09 -3.13  0.00104871010347303
  21812          73988/D        98  97191509101035        7 1  1.08                  211G11        B
  14.47780                   MT -1.35 -0.08  0.24  1.56 -0.09  3.71  0.00103473031084871 0
  20612          73988/D        98  97191509091320       10 1  1.08                  211G11        B
  14.47000                   MT -1.35  0.03  0.24  2.26 -0.07  1.79  0.00103473031084871 0
  22012          73988/D        98  99191509101120        8 1  1.16                  211G11        F
 -15.64760                   MT  1.37 -0.01 -0.26 -1.78  0.10 -4.09  0.00103473031084871 1
  20512          73988/D        99  98191509091140       11 1  1.16                  211G11        B
  15.64390                   MT -1.37 -0.08  0.26  2.50 -0.09  1.87  0.00104871110347303
  22312          73988/D        99 100191509101355       10 1  0.99                  211G11        F
 -11.24860                   MT  1.16 -0.04 -0.19 -1.37  0.05 -1.11  0.00104871110848712
  22112          73988/D        99 100191509101305        7 1  0.99                  211G11        F
 -11.25210                   MT  1.16  0.11 -0.19 -1.28  0.07 -1.04  0.00104871110848712
  20412          73988/D       100  99191509091115       10 1  1.00                  211G11        B
11.24600                     MT -1.16  0.08  0.19  1.80 -0.08  1.17  0.00104871210848711
  22212          73988/D       100  99191509101330        9 1  0.98                  211G11        B
  11.24760                   MT -1.16 -0.05  0.19  1.33 -0.06  1.44  0.00104871210848711
  22412          73988/D       100 10119150911 905        9 1  1.08                  211G11        F
 -14.50560                   MT  1.26 -0.04 -0.24 -1.57  0.04 -1.73  0.00104871210331097
  20312          73988/D       101 100191509091055       11 1  1.08                  211G11        B
14.50530                     MT -1.26  0.12  0.24  2.32 -0.09  1.44  0.00103310971084871 2
```

Table 4a. National Geodetic Survey Line 73988E: File 73988E.pro

Seq No.	UID	Benchmark	Spur Code	Distance (km)	Latitude	Longitude	Observed Elevation (m)	Obs Grav Ortho Ht (m)	Cumul. Refr Cor. (mm)	Cumul. Magn Cor. (mm)
3	10331097	D 15		0.00	37 56 46	117 18 43	1532.49140	1532.49140	0.00	0.00
4	10848541	TBM 3		0.80	37 56 25	117 18 23	1524.28122	1524.28005	-0.89	0.00
5	10848542	TBM 4		1.86	37 55 58	117 17 56	1511.41394	1511.40989	-2.35	0.00
6	10848543	TBM 5		2.93	37 55 30	117 17 29	1499.62655	1499.61924	-4.39	0.00
7	10848544	TBM 6		4.01	37 55 02	117 17 01	1494.61154	1494.60130	-5.22	0.00
8	10848545	TBM 7		5.15	37 54 33	117 16 32	1496.76477	1496.75124	-4.85	0.00
9	10304300	E 15		6.39	37 54 01	117 16 01	1501.64218	1501.62399	-4.23	0.00
10	10848546	TBM 8		7.47	37 53 28	117 15 48	1498.40387	1498.38068	-4.62	0.00
11	10848547	TBM 9		8.55	37 52 56	117 15 36	1503.10308	1503.07877	-3.95	0.00
12	10848548	TBM 10		9.68	37 52 22	117 15 23	1509.20278	1509.17998	-3.20	0.00
13	10848549	TBM 11		10.82	37 51 47	117 15 09	1518.13223	1518.11417	-2.39	0.00
14	10848550	TBM 12		11.85	37 51 16	117 14 57	1527.99935	1527.99239	-1.70	0.00
15	10270923	F 15		12.82	37 50 45	117 14 44	1538.30015	1538.29746	-1.05	0.00
16	10848551	TBM 13		13.84	37 50 13	117 14 45	1544.26011	1544.25945	-0.65	0.00
17	10848552	TBM 14		14.98	37 49 36	117 14 44	1559.46632	1559.46841	0.42	0.00
18	10848553	TBM 15		15.59	37 49 16	117 14 44	1562.81108	1562.81344	0.62	0.00
19	10848554	TBM 16		16.17	37 48 56	117 14 43	1571.18546	1571.18876	1.20	0.00
20	10848555	TBM 17		17.19	37 48 23	117 14 42	1585.44587	1585.45094	2.49	0.00
21	10848556	TBM 18		18.38	37 47 43	117 14 41	1599.49297	1599.50155	3.63	0.00
22	10848557	TBM 19		19.45	37 47 08	117 14 40	1615.24666	1615.25995	5.25	0.00
23	10848558	TBM 20		20.52	37 46 32	117 14 40	1629.43598	1629.45015	6.86	0.00
24	10329472	G 15 USGS		20.82	37 46 32	117 14 04	1627.53374	1627.54425	6.76	0.00
25	10848559	TBM 21		21.64	37 45 55	117 14 39	1646.35726	1646.37237	8.90	0.00
26	10848560	TBM 22		22.68	37 45 21	117 14 38	1661.27238	1661.28624	10.57	0.00
27	10848561	TBM 23		23.80	37 44 44	117 14 37	1676.96667	1676.98166	12.23	0.00
28	10848562	TBM 24		24.93	37 44 06	117 14 36	1691.51199	1691.52772	13.65	0.00
29	10298997	H 15		26.04	37 43 30	117 14 35	1693.41172	1693.43061	13.86	0.00
30	10848563	TBM 25		26.59	37 43 21	117 14 19	1694.77301	1694.79043	13.97	0.00
31	10848564	TBM 26		27.76	37 42 52	117 14 18	1711.57629	1711.59914	15.32	0.00
32	10288725	I 15		28.68	37 42 30	117 14 18	1730.14554	1730.17421	15.84	0.00
33	10287153	J 15		28.84	37 42 28	117 14 10	1730.67540	1730.70338	15.85	0.00
34	10288716	K 15		28.91	37 42 30	117 14 06	1734.10953	1734.13731	15.88	0.00
35	10287153	J 15		29.15	37 42 28	117 14 10	1737.71775	1737.74573	15.97	0.00
36	10848565	TBM 27		27.66	37 43 04	117 13 47	1713.68688	1713.70478	15.76	0.00
37	10848566	TBM 28		28.78	37 42 46	117 13 14	1738.60525	1738.62690	17.53	0.00
38	10848567	TBM 29		30.04	37 42 26	117 12 39	1766.12383	1766.15081	19.61	0.00
39	10848568	TBM 30		31.19	37 42 08	117 12 05	1778.33174	1778.36234	20.93	0.00
40	10282370	M 15 USGS		31.87	37 41 57	117 11 45	1768.89704	1768.92641	20.09	0.00
41	10848569	TBM 31		33.07	37 41 40	117 11 05	1753.43582	1753.46353	18.94	0.00
42	10848570	TBM 32		34.22	37 41 24	117 10 27	1737.25063	1737.27712	17.17	0.00

Table 4a. National Geodetic Survey Line 73988E: File 73988E.pro--Continued

Seq No.	UID	Benchmark	Spur Code	Distance (km)	Latitude	Longitude	Observed Elevation (m)	Obs Grav Ortho Ht (m)	Cumul. Refr Cor. (mm)	Cumul. Magn Cor. (mm)
43	10848571	TBM 33		35.44	37 41 08	117 09 47	1719.40029	1719.42560	15.37	0.00
44	10848572	TBM 34		36.52	37 40 53	117 09 13	1699.32115	1699.34529	13.28	0.00
45	10848573	TBM 35		37.60	37 40 39	117 08 37	1676.60592	1676.62803	11.29	0.00
46	10267537	N 15		38.66	37 40 24	117 08 02	1655.10128	1655.12235	10.04	0.00
47	10848574	TBM 36		39.77	37 39 53	117 08 02	1633.65656	1633.68144	8.45	0.00
48	10848575	TBM 37		40.85	37 39 23	117 08 02	1613.48705	1613.51590	6.66	0.00
49	10848576	TBM 38		41.94	37 38 51	117 08 01	1594.22418	1594.25479	4.81	0.00
50	10848577	TBM 39		43.03	37 38 20	117 08 01	1570.41344	1570.44127	3.06	0.00
51	10340653	O 15		44.13	37 37 49	117 08 01	1547.29514	1547.31865	0.95	0.00
52	10848578	TBM 40		45.26	37 37 14	117 08 03	1527.97573	1527.99531	-0.86	0.00
53	10848579	TBM 41		46.27	37 36 43	117 08 04	1517.69497	1517.71158	-1.78	0.00
54	10848580	TBM 42		47.42	37 36 08	117 08 06	1503.81269	1503.82632	-2.94	0.00
55	10848581	TBM 43		48.53	37 35 34	117 08 08	1492.07925	1492.09094	-3.81	0.00
56	10316178	P 15		49.28	37 35 11	117 08 09	1482.65497	1482.66553	-4.86	0.00
57	10848582	TBM 44		50.34	37 34 41	117 08 25	1466.58557	1466.59479	-6.68	0.00
58	10848583	TBM 45		51.42	37 34 09	117 08 42	1454.39583	1454.40364	-8.03	0.00
59	10848584	TBM 46		52.51	37 33 37	117 08 59	1448.18912	1448.19580	-8.77	0.00
60	10297277	Q 15		52.97	37 33 23	117 09 06	1447.57837	1447.58485	-8.80	0.00
61	10848585	TBM 47		54.05	37 32 48	117 09 16	1444.55316	1444.55926	-9.05	0.00
62	10848586	TBM 48		55.14	37 32 13	117 09 26	1438.40769	1438.41085	-9.51	0.00
63	10848587	TBM 49		56.22	37 31 38	117 09 36	1435.45799	1435.46141	-9.81	0.00
64	10274242	R 15		57.28	37 31 04	117 09 46	1436.97298	1436.97947	-9.68	0.00
65	10848588	TBM 50		58.33	37 30 32	117 09 38	1431.35223	1431.35932	-10.24	0.00
66	10848589	TBM 51		59.42	37 29 58	117 09 29	1426.53247	1426.54013	-10.79	0.00
67	10848590	TBM 52		60.50	37 29 25	117 09 20	1423.72709	1423.73461	-11.16	0.00
68	10848591	TBM 53		61.59	37 28 51	117 09 12	1427.44764	1427.45616	-10.72	0.00
69	10345462	S 15		62.67	37 28 17	117 09 06	1427.47206	1427.48064	-10.72	0.00
70	10848592	TBM 54		63.76	37 27 46	117 08 43	1423.23601	1423.24526	-11.29	0.00
71	10848593	TBM 55		64.85	37 27 14	117 08 23	1418.11239	1418.12278	-11.94	0.00
72	10848594	TBM 56		65.94	37 26 43	117 08 03	1405.97836	1405.98569	-14.70	0.00
73	10326246	T 15		67.02	37 26 11	117 07 43	1399.95402	1399.95434	-15.90	0.00
74	10848595	TBM 57		68.06	37 25 38	117 07 36	1398.99593	1398.99791	-16.08	0.00
75	10848596	TBM 58		69.20	37 25 03	117 07 27	1399.95617	1399.96127	-15.87	0.00
76	10848597	TBM 59		70.29	37 24 28	117 07 20	1402.93377	1402.93897	-15.37	0.00
77	10848598	TBM 60		71.37	37 23 56	117 07 12	1396.15989	1396.15925	-15.83	0.00
78	10300877	U 15		71.80	37 23 42	117 07 09	1390.60477	1390.60279	-16.26	0.00
79	10848599	TBM 61		72.88	37 23 08	117 07 09	1374.18434	1374.18012	-17.58	0.00
80	10848600	TBM 62		73.93	37 22 35	117 07 08	1357.44477	1357.43984	-18.91	0.00
81	10848601	TBM 63		75.01	37 22 01	117 07 08	1341.54381	1341.53944	-19.96	0.00
82	10848602	TBM 64		75.98	37 21 31	117 07 07	1326.12855	1326.12356	-20.61	0.00
83	10272578	V 15 USGS		77.08	37 20 56	117 07 07	1324.28619	1324.28212	-20.80	0.00

Table 4a. National Geodetic Survey Line 73988E: File 73988E.pro--Continued

Seq No.	UID	Benchmark	Spur Code	Distance (km)	Latitude	Longitude	Observed Elevation (m)	Obs Grav Ortho Ht (m)	Cumul. Refr Cor. (mm)	Cumul. Magn Cor. (mm)
84	10848603	TBM 65		78.39	37 20 17	117 06 55	1310.84936	1310.84543	-22.55	0.00
85	10848604	TBM 66		79.57	37 19 41	117 06 43	1300.10060	1300.09573	-24.03	0.00
86	10353745	W 15		80.64	37 19 09	117 06 33	1293.67451	1293.66830	-24.89	0.00
87	10848605	TBM 67		81.09	37 18 54	117 06 31	1288.22984	1288.22308	-25.59	0.00
88	10848606	TBM 68		82.13	37 18 21	117 06 27	1280.84270	1280.83733	-26.53	0.00
89	10848607	TBM 69		83.20	37 17 46	117 06 22	1266.59246	1266.58861	-28.31	0.00
90	10848608	TBM 70		84.27	37 17 12	117 06 18	1255.79664	1255.79353	-29.46	0.00
91	10848609	TBM 71		85.34	37 16 37	117 06 13	1245.04255	1245.03797	-30.40	0.00
92	10327892	X 15		85.60	37 16 29	117 06 12	1244.51707	1244.51224	-30.44	0.00
93	10848610	TBM 72		86.76	37 15 51	117 06 20	1228.60384	1228.59570	-31.59	0.00
94	10848611	TBM 73		87.90	37 15 14	117 06 29	1216.69189	1216.68261	-32.92	0.00
95	10848612	TBM 74		88.97	37 14 39	117 06 36	1208.22503	1208.21598	-34.02	0.00
96	10304298	Y 15 USGS		90.06	37 14 03	117 06 44	1205.18812	1205.17989	-34.38	0.00
97	10300881	Z 15 USGS		90.54	37 13 46	117 06 46	1206.68910	1206.67872	-34.24	0.00
98	10848613	TBM 75		91.58	37 13 18	117 06 22	1207.87279	1207.86555	-34.14	0.00
99	10848614	TBM 76		92.78	37 12 46	117 05 54	1203.36615	1203.36163	-34.46	0.00
100	10848615	TBM 77		93.84	37 12 18	117 05 29	1202.81192	1202.80944	-34.51	0.00
101	10280747	A 16 USGS		94.91	37 11 49	117 05 04	1205.47081	1205.46966	-34.24	0.00
102	10848616	TBM 78		95.39	37 11 39	117 04 51	1206.20073	1206.20016	-34.15	0.00
103	10848617	TBM 79		96.46	37 11 17	117 04 21	1209.70723	1209.70714	-33.77	0.00
104	10848618	TBM 80		97.53	37 10 54	117 03 51	1210.08445	1210.08518	-33.73	0.00
105	10848619	TBM 81		98.65	37 10 30	117 03 19	1210.03811	1210.03992	-33.74	0.00
106	10264049	B 16 USGS		99.77	37 10 07	117 02 48	1207.39743	1207.40096	-34.04	0.00
107	10848620	TBM 82		100.89	37 09 45	117 02 10	1205.70597	1205.71241	-34.26	0.00
108	10848621	TBM 83		101.95	37 09 25	117 01 34	1206.16856	1206.17874	-34.22	0.00
109	10848622	TBM 84		103.18	37 09 01	117 00 53	1207.15802	1207.17181	-34.06	0.00
110	10348939	C 16 USGS		104.52	37 08 35	117 00 08	1207.17678	1207.19207	-34.06	0.00
111	10848623	TBM 85		105.58	37 08 23	116 59 28	1206.73744	1206.75123	-34.12	0.00
112	10848624	TBM 86		106.65	37 08 12	116 58 48	1206.46621	1206.47774	-34.16	0.00
113	10848625	TBM 87		107.83	37 07 59	116 58 04	1209.05620	1209.06576	-33.77	0.00
114	10848626	TBM 88		108.95	37 07 47	116 57 22	1210.18928	1210.19734	-33.60	0.00
115	10340660	D 16		109.49	37 07 41	116 57 02	1211.25480	1211.26205	-33.43	0.00
116	10848627	TBM 89		110.70	37 07 36	116 56 15	1213.68145	1213.68576	-33.06	0.00
117	10848628	TBM 90		111.77	37 07 31	116 55 34	1216.44136	1216.44156	-32.69	0.00
118	10848629	TBM 91		112.83	37 07 26	116 54 53	1217.85515	1217.85206	-32.53	0.00
119	10337451	E 16		114.21	37 07 20	116 54 00	1218.95394	1218.95137	-32.35	0.00
120	10848630	TBM 92		115.18	37 07 24	116 53 22	1218.39250	1218.39064	-32.44	0.00
121	10848631	TBM 93		116.30	37 07 29	116 52 38	1224.04930	1224.04857	-31.50	0.00
122	10848632	TBM 94		117.42	37 07 33	116 51 55	1226.47960	1226.48299	-31.16	0.00
123	10848633	TBM 95		118.54	37 07 38	116 51 11	1225.18741	1225.19141	-31.35	0.00
124	10340659	F 16		119.02	37 07 40	116 50 52	1225.92560	1225.93076	-31.27	0.00

Table 4a. National Geodetic Survey Line 73988E: File 73988E.pro--Continued

Seq No.	UID	Benchmark	Spur Code	Distance (km)	Latitude	Longitude	Observed Elevation (m)	Obs Grav Ortho Ht (m)	Cumul. Refr Cor. (mm)	Cumul. Magn Cor. (mm)
125	10848634	TBM 96		120.14	37 07 27	116 50 12	1226.65132	1226.65452	-31.16	0.00
126	10848635	TBM 97		121.26	37 07 14	116 49 32	1231.59120	1231.59293	-30.50	0.00
127	10848636	TBM 98		122.38	37 07 01	116 48 52	1227.93240	1227.93298	-30.89	0.00
128	10848637	TBM 99		122.75	37 06 57	116 48 38	1227.74336	1227.74334	-30.91	0.00
129	10331095	G 16		123.82	37 06 45	116 48 00	1227.39979	1227.39571	-30.94	0.00

Table 4b. National Geodetic Survey Line 73988E: File 73988E.ori

FROM SEQ NO.	TO SEQ NO.	UNCORRECTED FIELD ELEVATION DIFFERENCE (m)	LEVEL CORR. (mm)	ROD CORR. (mm)	ASTRO CORR. (mm)	TEMP. CORR. (mm)	REFR. CORR. (mm)	MAGN. CORR. (mm)	CORRECTED OBSERVED ELE. DIFFERENCE (m)	CUMULATIVE OBSERVED ELEVATION (OF TO SEQ NO) (m)	CUMULAT. OBS. GRAV ORTHO CORR. (mm)	CUMUL. REFR. CORR. (mm)
3										1532.49140	0.00	0.00
3	4	-8.20890	-0.04	-0.14	-1.15	0.06	-0.89	0.00	-8.21018	1524.28123	-1.17	-0.89
4	5	-12.86540	0.01	-0.21	-1.77	0.08	-1.46	0.00	-12.86729	1511.41394	-4.05	-2.35
5	6	-11.78605	0.06	-0.20	-1.27	0.08	-2.03	0.00	-11.78739	1499.62655	-7.31	-4.39
6	7	-5.01455	0.09	-0.08	-0.53	0.06	-0.84	0.00	-5.01501	1494.61155	-10.24	-5.22
7	8	2.15285	0.03	0.04	0.24	0.06	0.37	0.00	2.15323	1496.76478	-13.53	-4.85
8	9	4.87665	0.05	0.08	0.57	0.06	0.62	0.00	4.87740	1501.64218	-18.19	-4.23
9	10	-3.23795	0.03	-0.05	-0.38	0.05	-0.39	0.00	-3.23830	1498.40388	-23.19	-4.62
10	11	4.69845	0.13	0.08	0.51	0.04	0.67	0.00	4.69921	1503.10309	-24.31	-3.95
11	12	6.09885	0.08	0.10	0.65	0.03	0.76	0.00	6.09970	1509.20279	-22.80	-3.20
12	13	8.92835	0.05	0.15	0.88	0.02	0.81	0.00	8.92945	1518.13223	-18.06	-2.39
13	14	9.86605	0.03	0.16	0.87	0.01	0.69	0.00	9.86712	1527.99935	-6.96	-1.70
14	15	10.29970	-0.06	0.17	0.94	0.06	0.65	0.00	10.30080	1538.30015	-2.69	-1.05
15	16	5.95925	0.00	0.10	0.54	0.07	0.41	0.00	5.95996	1544.26011	-0.66	-0.65
16	17	15.20455	0.00	0.25	1.34	0.07	1.07	0.00	15.20621	1559.46632	2.09	0.42
17	18	3.34435	0.03	0.06	0.28	0.04	0.20	0.00	3.34476	1562.81108	2.36	0.62
18	19	8.37365	-0.11	0.14	0.68	0.02	0.58	0.00	8.37438	1571.18546	3.30	1.20
19	20	14.25885	-0.02	0.24	1.31	0.03	1.29	0.00	14.26042	1585.44587	5.07	2.49
20	21	14.04535	0.01	0.23	1.48	0.03	1.14	0.00	14.04710	1599.49297	8.58	3.63
21	22	15.75195	-0.08	0.26	1.53	0.02	1.62	0.00	15.75369	1615.24666	13.29	5.25
22	23	14.18780	-0.11	0.24	1.38	0.02	1.61	0.00	14.18933	1629.43598	14.17	6.86
23	24	-1.90185	-0.18	-0.03	-0.20	-0.03	-0.10	0.00	-1.90229	1627.53369	14.17	6.76
23	25	16.91945	-0.10	0.28	1.64	0.01	2.04	0.00	16.92128	1646.35726	15.11	8.90
25	26	14.91335	0.03	0.25	1.48	0.01	1.67	0.00	14.91512	1661.27238	13.86	10.57
26	27	15.69240	0.05	0.26	1.57	0.01	1.66	0.00	15.69429	1676.96667	14.99	12.23
27	28	14.54365	-0.11	0.24	1.53	0.01	1.42	0.00	14.54532	1691.51199	15.73	13.65
28	29	1.89945	0.07	0.03	0.18	0.02	0.22	0.00	1.89974	1693.41172	18.89	13.86
29	30	1.36120	-0.04	0.02	0.11	0.00	0.11	0.00	1.36128	1694.77301	17.42	13.97
30	31	16.80100	0.10	0.28	1.89	0.02	1.36	0.00	16.80329	1711.57629	22.85	15.32
31	32	18.56660	0.09	0.31	2.24	0.01	0.52	0.00	18.56925	1730.14554	28.67	15.84
32	33	0.53000	-0.19	0.01	0.06	-0.01	0.00	0.00	0.52986	1730.67540	27.98	15.85
33	34	3.43385	-0.11	0.06	0.33	-0.01	0.03	0.00	3.43413	1734.10953	27.78	15.88
34	35	3.60775	0.04	0.06	0.37	0.01	0.09	0.00	3.60823	1737.71775	27.98	15.97
30	36	18.91080	0.15	0.31	2.63	0.00	1.80	0.00	18.91387	1713.68688	17.90	15.76
36	37	24.91440	0.03	0.41	3.54	0.00	1.77	0.00	24.91837	1738.60525	21.65	17.53
37	38	27.51405	0.13	0.46	3.93	0.00	2.08	0.00	27.51858	1766.12383	26.98	19.61
38	39	12.20590	0.09	0.20	1.74	-0.01	1.33	0.00	12.20792	1778.33174	30.60	20.93
39	40	-9.43330	0.05	-0.16	-1.29	0.00	-0.85	0.00	-9.43471	1768.89704	29.37	20.09
40	41	-15.45923	-0.02	-0.26	-1.76	0.04	-1.14	0.00	-15.46121	1753.43582	27.71	18.94
41	42	-16.18285	0.03	-0.27	-2.09	-0.01	-1.77	0.00	-16.18520	1737.25063	26.49	17.17
42	43	-17.84760	-0.02	-0.30	-2.41	-0.02	-1.80	0.00	-17.85034	1719.40029	25.31	15.37
43	44	-20.07610	0.10	-0.33	-2.79	-0.02	-2.09	0.00	-20.07914	1699.32115	24.14	13.28
44	45	-22.71170	0.00	-0.38	-3.13	-0.02	-1.99	0.00	-22.71523	1676.60592	22.11	11.29
45	46	-21.50135	0.06	-0.36	-2.97	-0.02	-1.25	0.00	-21.50464	1655.10128	21.07	10.04
46	47	-21.44125	0.00	-0.36	-3.13	0.02	-1.59	0.00	-21.44473	1633.65656	24.88	8.45
47	48	-20.16620	-0.07	-0.33	-2.92	0.02	-1.79	0.00	-20.16951	1613.48705	28.85	6.66

Table 4b. National Geodetic Survey Line 73988E: File 73988E.ori--Continued

FROM SEQ NO.	TO SEQ NO.	UNCORRECTED FIELD ELEVATION DIFFERENCE (m)	LEVEL CORR. (mm)	ROD CORR. (mm)	ASTRO CORR. (mm)	TEMP. CORR. (mm)	REFR. CORR. (mm)	MAGN. CORR. (mm)	CORRECTED OBSERVED ELE. DIFFERENCE (m)	CUMULATIVE OBSERVED ELEVATION (OF TO SEQ NO) (m)	CUMULAT. OBS. GRAV ORTHO CORR. (mm)	CUMUL. REFR. CORR. (mm)
48	49	-19.25970	0.03	-0.32	-2.89	0.02	-1.86	0.00	-19.26287	1594.22418	30.61	4.81
49	50	-23.80697	0.00	-0.40	-3.41	0.04	-1.75	0.00	-23.81074	1570.41344	27.83	3.06
50	51	-23.11425	-0.02	-0.38	-3.67	0.02	-2.11	0.00	-23.11830	1547.29514	23.51	0.95
51	52	-19.31600	-0.03	-0.32	-3.09	0.03	-1.80	0.00	-19.31941	1527.97573	19.58	-0.86
52	53	-10.27900	-0.03	-0.17	-1.59	0.03	-0.92	0.00	-10.28076	1517.69497	16.61	-1.78
53	54	-13.87995	0.00	-0.23	-2.14	0.04	-1.17	0.00	-13.88227	1503.81269	13.63	-2.94
54	55	-11.73155	0.02	-0.19	-1.76	0.04	-0.87	0.00	-11.73344	1492.07925	11.69	-3.81
55	56	-9.42285	0.07	-0.16	-1.39	0.05	-1.05	0.00	-9.42428	1482.65497	10.56	-4.86
56	57	-16.06680	-0.03	-0.27	-2.36	0.07	-1.82	0.00	-16.06941	1466.58557	9.22	-6.68
57	58	-12.18780	-0.04	-0.20	-1.77	0.07	-1.35	0.00	-12.18973	1454.39583	7.81	-8.03
58	59	-6.20570	-0.06	-0.10	-0.93	0.07	-0.74	0.00	-6.20671	1448.18912	6.68	-8.77
59	60	-0.61080	0.14	-0.01	-0.09	0.02	-0.03	0.00	-0.61075	1447.57837	6.48	-8.80
60	61	-3.02470	-0.03	-0.05	-0.46	0.03	-0.25	0.00	-3.02521	1444.55316	6.10	-9.05
61	62	-6.14450	0.04	-0.10	-0.93	0.03	-0.46	0.00	-6.14546	1438.40769	3.16	-9.51
62	63	-2.94940	0.16	-0.05	-0.44	0.03	-0.30	0.00	-2.94970	1435.45799	3.42	-9.81
63	64	1.51470	0.00	0.03	0.22	0.03	0.13	0.00	1.51499	1436.97298	6.49	-9.68
64	65	-5.61985	0.00	-0.09	-0.86	0.05	-0.56	0.00	-5.62076	1431.35223	7.09	-10.24
65	66	-4.81900	0.00	-0.08	-0.73	0.05	-0.54	0.00	-4.81976	1426.53247	7.66	-10.79
66	67	-2.80495	-0.01	-0.05	-0.43	0.05	-0.38	0.00	-2.80539	1423.72709	7.52	-11.16
67	68	3.71985	0.03	0.06	0.57	0.06	0.44	0.00	3.72056	1427.44764	8.52	-10.72
68	69	0.02435	0.00	0.00	0.00	0.07	0.00	0.00	0.02442	1427.47206	8.58	-10.72
69	70	-4.23530	-0.01	-0.07	-0.71	0.03	-0.57	0.00	-4.23606	1423.23601	9.25	-11.29
70	71	-5.12315	0.07	-0.08	-0.53	0.08	-0.65	0.00	-5.12362	1418.11239	10.39	-11.94
71	72	-12.13270	0.06	-0.20	-1.26	0.08	-2.76	0.00	-12.13403	1405.97836	7.33	-14.70
72	73	-6.02370	0.04	-0.10	-0.64	0.06	-1.20	0.00	-6.02435	1399.95402	0.32	-15.90
73	74	-0.95808	0.04	-0.02	-0.09	0.06	-0.18	0.00	-0.95808	1398.99594	1.98	-16.08
74	75	0.96000	0.06	0.02	0.09	0.07	0.21	0.00	0.96024	1399.95617	5.10	-15.87
75	76	2.97720	0.01	0.05	0.30	0.04	0.51	0.00	2.97760	1402.93377	5.20	-15.37
76	77	-6.77315	0.05	-0.11	-0.69	0.03	-0.46	0.00	-6.77387	1396.15990	-0.64	-15.83
77	78	-5.55450	0.00	-0.09	-0.54	0.02	-0.43	0.00	-5.55512	1390.60478	-1.98	-16.26
78	79	-16.41860	-0.07	-0.27	-1.53	0.03	-1.33	0.00	-16.42043	1374.18435	-4.22	-17.58
79	80	-16.73785	0.00	-0.28	-1.48	0.03	-1.33	0.00	-16.73958	1357.44477	-4.93	-18.91
80	81	-15.89950	0.03	-0.26	-1.26	0.03	-1.05	0.00	-15.90096	1341.54381	-4.37	-19.96
81	82	-15.41390	-0.06	-0.26	-1.05	0.01	-0.65	0.00	-15.41525	1326.12856	-4.99	-20.61
82	83	-1.84215	-0.03	-0.03	-0.21	0.05	-0.19	0.00	-1.84237	1324.28619	-4.07	-20.80
83	84	-13.43500	-0.10	-0.22	-1.57	0.07	-1.76	0.00	-13.43683	1310.84936	-3.93	-22.55
84	85	-10.74730	-0.04	-0.18	-1.30	0.07	-1.48	0.00	-10.74876	1300.10060	-4.87	-24.03
85	86	-6.42530	0.03	-0.11	-0.77	0.07	-0.87	0.00	-6.42609	1293.67451	-6.21	-24.89
86	87	-5.44400	0.07	-0.09	-0.68	0.03	-0.70	0.00	-5.44468	1288.22984	-6.76	-25.59
87	88	-7.38613	-0.02	-0.12	-0.93	0.06	-0.94	0.00	-7.38714	1280.84270	-5.37	-26.53
88	89	-14.24835	-0.08	-0.24	-1.63	0.06	-1.78	0.00	-14.25024	1266.59246	-3.85	-28.31
89	90	-10.79460	0.08	-0.18	-1.17	0.06	-1.15	0.00	-10.79582	1255.79664	-3.11	-29.46
90	91	-10.75285	0.02	-0.18	-1.12	0.05	-0.94	0.00	-10.75409	1245.04255	-4.58	-30.40
91	92	-0.52535	-0.07	-0.01	-0.07	0.01	-0.04	0.00	-0.52548	1244.51707	-4.83	-30.44
92	93	-15.91105	0.00	-0.26	-1.98	0.06	-1.15	0.00	-15.91323	1228.60384	-8.14	-31.59
93	94	-11.91015	-0.04	-0.20	-1.62	0.06	-1.33	0.00	-11.91195	1216.69189	-9.28	-32.92

Table 4b. National Geodetic Survey Line 73988E: File 73988E.ori--Continued

FROM SEQ NO.	TO SEQ NO.	UNCORRECTED FIELD ELEVATION DIFFERENCE (m)	LEVEL CORR. (mm)	ROD CORR. (mm)	ASTRO CORR. (mm)	TEMP. CORR. (mm)	REFR. CORR. (mm)	MAGN. CORR. (mm)	CORRECTED OBSERVED ELE. DIFFERENCE (m)	CUMULATIVE OBSERVED ELEVATION (OF TO SEQ NO) (m)	CUMULAT. OBS. GRAV ORTHO CORR. (mm)	CUMUL. REFR. CORR. (mm)
94	95	-8.46570	0.05	-0.14	-1.13	0.06	-1.11	0.00	-8.46686	1208.22503	-9.05	-34.02
95	96	-3.03650	-0.08	-0.05	-0.35	0.06	-0.36	0.00	-3.03691	1205.18812	-8.23	-34.38
96	97	1.50080	-0.05	0.02	0.19	0.02	0.14	0.00	1.50098	1206.68910	-10.38	-34.24
97	98	1.18340	0.09	0.02	0.15	0.03	0.10	0.00	1.18369	1207.87279	-7.24	-34.14
98	99	-4.50590	-0.15	-0.07	-0.55	0.03	-0.32	0.00	-4.50664	1203.36615	-4.52	-34.46
99	100	-0.55420	0.04	-0.01	-0.06	0.00	-0.05	0.00	-0.55423	1202.81192	-2.48	-34.51
100	101	2.65840	0.18	0.04	0.28	0.00	0.27	0.00	2.65890	1205.47081	-1.15	-34.24
101	102	0.72985	-0.02	0.01	0.08	0.00	0.09	0.00	0.72991	1206.20073	-0.57	-34.15
102	103	3.50610	-0.02	0.06	0.36	0.00	0.39	0.00	3.50650	1209.70723	-0.09	-33.77
103	104	0.37725	-0.08	0.01	0.04	0.00	0.03	0.00	0.37722	1210.08445	0.73	-33.73
104	105	-0.04620	-0.13	0.00	0.00	-0.01	0.00	0.00	-0.04634	1210.03811	1.81	-33.74
105	106	-2.64030	-0.04	-0.04	-0.29	0.00	-0.31	0.00	-2.64068	1207.39743	3.53	-34.04
106	107	-1.69115	-0.07	-0.03	-0.23	0.01	-0.22	0.00	-1.69147	1205.70597	6.44	-34.26
107	108	0.46255	-0.04	0.01	0.07	0.01	0.05	0.00	0.46260	1206.16856	10.18	-34.22
108	109	0.98930	-0.01	0.02	0.14	0.02	0.15	0.00	0.98946	1207.15802	13.79	-34.06
109	110	0.01875	0.01	0.00	0.00	0.00	0.00	0.00	0.01876	1207.17679	15.29	-34.06
110	111	-0.43915	-0.13	-0.01	-0.07	0.00	-0.06	0.00	-0.43935	1206.73744	13.79	-34.12
111	112	-0.27125	0.06	0.00	-0.04	0.00	-0.03	0.00	-0.27123	1206.46621	11.53	-34.16
112	113	2.58970	-0.11	0.04	0.37	0.00	0.39	0.00	2.58999	1209.05621	9.56	-33.77
113	114	1.13295	-0.06	0.02	0.17	0.00	0.17	0.00	1.13308	1210.18929	8.06	-33.60
114	115	1.06535	0.00	0.02	0.15	0.00	0.17	0.00	1.06552	1211.25480	7.25	-33.43
115	116	2.42630	-0.01	0.04	0.34	-0.03	0.37	0.00	2.42665	1213.68145	4.31	-33.06
116	117	2.75960	-0.12	0.05	0.39	-0.01	0.38	0.00	2.75991	1216.44136	0.20	-32.69
117	118	1.41355	0.04	0.02	0.19	-0.01	0.16	0.00	1.41379	1217.85515	-3.09	-32.53
118	119	1.09865	-0.01	0.02	0.16	-0.03	0.18	0.00	1.09879	1218.95394	-2.57	-32.35
119	120	-0.56135	0.04	-0.01	-0.09	-0.03	-0.09	0.00	-0.56144	1218.39250	-1.86	-32.44
120	121	5.65595	-0.03	0.09	0.82	-0.03	0.94	0.00	5.65680	1224.04930	-0.73	-31.50
121	122	2.42995	0.02	0.04	0.31	-0.03	0.34	0.00	2.43029	1226.47960	3.39	-31.16
122	123	-1.29200	0.04	-0.02	-0.19	-0.02	-0.19	0.00	-1.29219	1225.18741	4.00	-31.35
123	124	0.73815	-0.07	0.01	0.12	-0.01	0.08	0.00	0.73820	1225.92560	5.16	-31.27
124	125	0.72565	-0.05	0.01	0.12	0.00	0.11	0.00	0.72572	1226.65132	3.20	-31.16
125	126	4.93905	-0.02	0.08	0.77	0.00	0.67	0.00	4.93988	1231.59120	1.73	-30.50
126	127	-3.65815	-0.03	-0.06	-0.56	0.00	-0.40	0.00	-3.65880	1227.93240	0.58	-30.89
127	128	-0.18905	0.04	0.00	-0.03	0.00	-0.02	0.00	-0.18904	1227.74336	-0.02	-30.91
128	129	-0.34355	0.05	-0.01	-0.05	-0.01	-0.03	0.00	-0.34357	1227.39979	-4.08	-30.94

Table 4c. National Geodetic Survey Line 73988E: File 73988E.prn(=.dat)

```
    312          73988/E        3   4191509110945       7 1  0.80                  211G11        F
-8.20800                    MT  0.79 -0.06 -0.14 -1.03  0.05 -0.98  0.001033109710848541
    212          73988/E        4   3191509091035       8 1  0.80                  211G11        B
   8.20980                    MT -0.79  0.02  0.14  1.28 -0.07  0.80  0.001084854110331097
    412          73988/E        4   5191509111005       9 1  1.06                  211G11        F
 -12.86050                    MT  1.03  0.02 -0.21 -1.62  0.07 -1.76  0.001084854110848542
    612          73988/E        4   5191509111100      11 1  1.06                  211G11        F
 -12.86770                    MT  1.03  0.08 -0.21 -1.75  0.09 -1.26  0.001084854110848542
    512          73988/E        5   4191509111030      10 1  1.06                  211G11        B
  12.86600                    MT -1.03  0.03  0.21  1.72 -0.08  1.46  0.001084854210848541
    112          73988/E        5   4191509091010      10 1  1.06                  211G11        B
  12.86740                    MT -1.03  0.03  0.21  1.98 -0.09  1.37  0.001084854210848541
    712          73988/E        5   6191509111125      10 1  1.07                  211G11        F
 -11.78670                    MT  1.04  0.03 -0.20 -1.63  0.09 -1.46  0.001084854210848543
   2412          73988/E        6   5191509131210       8 1  1.07                  211G11        B
  11.78540                    MT -1.04 -0.08  0.20  0.90 -0.06  2.61  0.001084854310848542
   2512          73988/E        6   7191509131355       9 1  1.08                  211G11        F
  -5.01320                    MT  1.04  0.00 -0.08 -0.56  0.06 -0.70  0.001084854310848544
    812          73988/E        6   7191509111300      10 1  1.08                  211G11        F
  -5.01810                    MT  1.04  0.06 -0.08 -0.72  0.07 -0.59  0.001084854310848544
   2312          73988/E        7   6191509131145       7 1  1.08                  211G11        B
   5.01060                    MT -1.04 -0.06  0.08  0.39 -0.05  1.36  0.001084854410848543
   2612          73988/E        7   6191509131415       9 1  1.08                  211G11        B
   5.01630                    MT -1.04 -0.25  0.08  0.46 -0.06  0.69  0.001084854410848543
    912          73988/E        7   8191509111325      10 1  1.14                  211G11        F
   2.15070                    MT  1.09  0.02  0.04  0.32  0.07  0.27  0.001084854410848545
   2212          73988/E        8   7191509131125       8 1  1.13                  211G11        B
  -2.15500                    MT -1.09 -0.05 -0.04 -0.17 -0.05 -0.47  0.001084854510848544
   1012          73988/E        8   9191509111350      11 1  1.25                  211G11        F
   4.87600                    MT  1.19 -0.03  0.08  0.73  0.06  0.58  0.001084854510304300
   2112          73988/E        9   8191509131055      11 1  1.24                  211G11        B
  -4.87730                    MT -1.19 -0.14 -0.08 -0.40 -0.05 -0.66  0.001030430010848545
   1112          73988/E        9  10191509111425       9 1  1.08                  211G11        F
  -3.23790                    MT  1.21 -0.02 -0.05 -0.48  0.06 -0.40  0.001030430010848546
   2012          73988/E       10   9191509131020      10 1  1.08                  211G11        B
   3.23800                    MT -1.21 -0.07  0.05  0.27 -0.03  0.37  0.001084854610304300
   1212          73988/E       10  11191509111450       8 1  1.08                  211G11        F
   4.69890                    MT  1.22  0.15  0.08  0.65  0.06  0.70  0.001084854610848547
   1912          73988/E       11  1019150913 955       9 1  1.08                  211G11        B
  -4.69800                    MT -1.22 -0.11 -0.08 -0.37 -0.02 -0.63  0.001084854710848546
   1312          73988/E       11  12191509111520       9 1  1.13                  211G11        F
   6.09940                    MT  1.28  0.11  0.10  0.84  0.05  0.70  0.001084854710848548
   1812          73988/E       12  1119150913 925       9 1  1.13                  211G11        B
  -6.09830                    MT -1.28 -0.04 -0.10 -0.45 -0.01 -0.81  0.001084854810848547
   1412          73988/E       12  13191509111545       9 1  1.14                  211G11        F
   8.92870                    MT  1.29  0.09  0.15  1.14  0.04  0.78  0.001084854810848549
   1712          73988/E       13  1219150913 845       9 1  1.14                  211G11        B
  -8.92800                    MT -1.29  0.00 -0.15 -0.62  0.00 -0.84  0.001084854910848548
   1512          73988/E       13  14191509111610       8 1  1.03                  211G11        F
   9.86740                    MT  1.17  0.06  0.16  1.20  0.03  0.63  0.001084854910848550
   1612          73988/E       14  1319150913 815       8 1  1.03                  211G11        B
  -9.86470                    MT -1.17 -0.01 -0.16 -0.53  0.01 -0.74  0.001084855010848549
   2712          73988/E       14  15191509131505       7 1  0.97                  211G11        F
  10.29770                    MT  1.11 -0.08  0.17  0.80  0.06  0.69  0.001084855010270923
   4512          73988/E       15  14191509141550       9 1  0.97                  211G11        B
 -10.30170                    MT -1.11  0.04 -0.17 -1.07 -0.05 -0.61  0.001027092310848550
   2812          73988/E       15  16191509131530       7 1  1.02                  211G11        F
   5.95860                    MT  1.29  0.04  0.10  0.44  0.07  0.37  0.001027092310848551
   4412          73988/E       16  15191509141525      10 1  1.02                  211G11        B
  -5.95990                    MT -1.29  0.03 -0.10 -0.63 -0.06 -0.44  0.001084855110270923
   2912          73988/E       16  17191509131550       8 1  1.14                  211G11        F
  15.20400                    MT  1.45  0.01  0.25  1.03  0.07  0.75  0.001084855110848552
   4312          73988/E       17  16191509141455      11 1  1.13                  211G11        B
 -15.20510                    MT -1.45  0.00 -0.25 -1.64 -0.07 -1.39  0.001084855210848551
   3012          73988/E       17  18191509131615       4 1  0.61                  211G11        F
   3.34300                    MT  0.78  0.06  0.06  0.21  0.04  0.11  0.001084855210848553
   4212          73988/E       18  17191509141440       6 1  0.61                  211G11        B
  -3.34570                    MT -0.78  0.00 -0.06 -0.35 -0.04 -0.29  0.001084855310848552
   4612          73988/E       18  1919150915 800       5 1  0.58                  211G11        F
   8.37470                    MT  0.75 -0.21  0.14  0.49  0.01  0.41  0.001084855310848554
   4112          73988/E       19  18191509141425       6 1  0.58                  211G11        B
  -8.37260                    MT -0.75  0.01 -0.14 -0.87 -0.03 -0.75  0.001084855410848553
   4712          73988/E       19  2019150915 815       8 1  1.03                  211G11        F
  14.25870                    MT  1.33 -0.05  0.24  1.11  0.01  1.06  0.001084855410848555
   4012          73988/E       20  19191509141400      10 1  1.02                  211G11        B
 -14.25900                    MT -1.33 -0.02 -0.24 -1.51 -0.05 -1.51  0.001084855510848554
   4812          73988/E       20  2119150915 840      10 1  1.19                  211G11        F
  14.04400                    MT  1.55 -0.04  0.23  1.26  0.01  1.11  0.001084855510848556
```

Table 4c. National Geodetic Survey Line 73988E: File 73988E.prn(=.dat)--Continued

```
  3912          73988/E        21  20191509141330      13 1  1.18                  211G11        B
-14.04670                    MT -1.55 -0.06 -0.23 -1.69 -0.06 -1.18  0.001084855610848555
  4912          73988/E        21  2219150915 905       9 1  1.08                  211G11        F
 15.75260                    MT  1.42 -0.20  0.26  1.48  0.01  1.83  0.001084855610848557
  3812          73988/E        22  21191509141140      12 1  1.07                  211G11        B
-15.75130                    MT -1.42 -0.05 -0.26 -1.58 -0.03 -1.41  0.001084855710848556
  5012          73988/E        22  2319150915 930      10 1  1.07                  211G11        F
 14.18660                    MT  1.43 -0.22  0.24  1.42  0.01  1.41  0.001084855710848558
  3712          73988/E        23  22191509141100      10 1  1.07                  211G11        B
-14.18900                    MT -1.43 -0.01 -0.24 -1.33 -0.02 -1.80  0.001084855810848557
  5112          73988/E        23  24191509151000       4 1  0.29                  211G11        F
 -1.90200                    MT  0.01 -0.32 -0.03 -0.20 -0.03 -0.09  0.001084855810329472
  5312          73988/E        23  25191509151030      11 1  1.12                  211G11        F
 16.91930                    MT  1.50 -0.18  0.28  1.86  0.01  1.78  0.001084855810848559
  5212          73988/E        24  23191509151015       4 1  0.31                  211G11        B
  1.90170                    MT -0.01 -0.05  0.03  0.20  0.03  0.11  0.001032947210848558
  3612          73988/E        25  23191509141030      10 1  1.12                  211G11        B
-16.91960                    MT -1.50  0.02 -0.28 -1.42 -0.01 -2.31  0.001084855910848558
  5412          73988/E        25  26191509151105      10 1  1.04                  211G11        F
 14.91500                    MT  1.41  0.08  0.25  1.73  0.01  1.74  0.001084855910848560
  3512          73988/E        26  25191509141005      10 1  1.04                  211G11        B
-14.91170                    MT -1.41  0.02 -0.25 -1.22 -0.01 -1.60  0.001084856010848559
  5512          73988/E        26  27191509151135      12 1  1.12                  211G11        F
 15.69160                    MT  1.54  0.02  0.26  1.88  0.01  1.48  0.001084856010848561
  3412          73988/E        27  2619150914 940      10 1  1.12                  211G11        B
-15.69320                    MT -1.54 -0.08 -0.26 -1.26 -0.01 -1.84  0.001084856110848560
  5612          73988/E        27  28191509151235      11 1  1.13                  211G11        F
 14.54190                    MT  1.56 -0.27  0.24  2.01  0.02  1.61  0.001084856110848562
  3212          73988/E        28  2719150914 830       9 1  1.13                  211G11        B
-14.54540                    MT -1.56 -0.05 -0.24 -1.05  0.00 -1.22  0.001084856210848561
  5712          73988/E        28  29191509151300      10 1  1.11                  211G11        F
  1.89930                    MT  1.53  0.11  0.03  0.24  0.03  0.23  0.001084856210298997
  3312          73988/E        29  2819150914 840       8 1  1.10                  211G11        B
 -1.89960                    MT -1.53 -0.02 -0.03 -0.11  0.00 -0.20  0.001029899710848562
  5812          73988/E        29  30191509151340       5 1  0.55                  211G11        F
  1.36200                    MT  0.37 -0.04  0.02  0.17  0.01  0.15  0.001029899710848563
  3112          73988/E        30  2919150914 740       4 1  0.55                  211G11        B
 -1.36040                    MT -0.37  0.04 -0.02 -0.05  0.02 -0.06  0.001084856310298997
  5912          73988/E        30  3119150916 750      10 1  1.17                  211G11        F
 16.80170                    MT  1.21  0.15  0.28  1.44  0.02  0.64  0.001084856310848564
  6912          73988/E        30  36191509161350      11 1  1.07                  211G11        F
 18.91130                    MT  0.73  0.24  0.31  2.72 -0.01  1.82  0.001084856310848565
  6812          73988/E        31  30191509161200      11 1  1.18                  211G11        B
-16.80030                    MT -1.21 -0.04 -0.28 -2.35 -0.01 -2.07  0.001084856410848563
  6012          73988/E        31  3219150916 825      14 1  0.93                  211G11        F
 18.56870                    MT  0.96  0.13  0.31  2.04  0.01  0.36  0.001084856410288725
  6712          73988/E        32  31191509161100      15 1  0.91                  211G11        B
-18.56450                    MT -0.96 -0.04 -0.31 -2.45 -0.01 -0.68  0.001028872510848564
  6112          73988/E        32  3319150916 900       4 1  0.15                  211G11        F
  0.53130                    MT  0.09  0.07  0.01  0.06 -0.01  0.00  0.001028872510287153
  6612          73988/E        33  32191509161035       4 1  0.17                  211G11        B
 -0.52870                    MT -0.09  0.46 -0.01 -0.05  0.01 -0.01  0.001028715310288725
  6212          73988/E        33  3419150916 915       3 1  0.07                  211G11        F
  3.43400                    MT -0.09 -0.06  0.06  0.34 -0.01  0.02  0.001028715310288716
  6512          73988/E        34  3319150916 945       2 1  0.07                  211G11        B
 -3.43370                    MT  0.09  0.15 -0.06 -0.32  0.01 -0.04  0.001028871610287153
  6312          73988/E        34  3519150916 920       5 1  0.24                  211G11        F
  3.60680                    MT  0.09  0.11  0.06  0.36  0.01  0.07  0.001028871610287153
  6412          73988/E        35  3419150916 935       4 1  0.23                  211G11        B
 -3.60870                    MT -0.09  0.04 -0.06 -0.38 -0.01 -0.11  0.001028715310288716
  8412          73988/E        36  30191509171515      10 1  1.08                  211G11        B
-18.91030                    MT -0.73 -0.05 -0.31 -2.53  0.00 -1.77  0.001084856510848563
  7012          73988/E        36  37191509161425      11 1  1.12                  211G11        F
 24.91500                    MT  0.77  0.06  0.41  3.54  0.00  1.74  0.001084856510848566
  8312          73988/E        37  36191509171440      12 1  1.11                  211G11        B
-24.91380                    MT -0.77  0.01 -0.41 -3.54  0.01 -1.79  0.001084856610848565
  7112          73988/E        37  38191509161455      13 1  1.21                  211G11        F
 27.51520                    MT  0.85  0.25  0.46  3.80  0.01  1.80  0.001084856610848567
  8212          73988/E        38  37191509171410      13 1  1.31                  211G11        B
-27.51290                    MT -0.85 -0.02 -0.46 -4.07  0.02 -2.36  0.001084856710848566
  7212          73988/E        38  39191509161530      10 1  1.15                  211G11        F
 12.20800                    MT  0.82  0.20  0.20  1.66  0.02  1.10  0.001084856710848568
  8112          73988/E        39  38191509171340      10 1  1.16                  211G11        B
-12.20380                    MT -0.82  0.03 -0.20 -1.81  0.03 -1.55  0.001084856810848567
  7312          73988/E        39  40191509161600       6 1  0.67                  211G11        F
 -9.43290                    MT  0.48  0.07 -0.16 -1.26  0.01 -0.47  0.001084856810282370
  8012          73988/E        40  39191509171330       6 1  0.68                  211G11        B
```

Table 4c. National Geodetic Survey Line 73988E: File 73988E.prn(=.dat)--Continued

```
  9.43370                MT -0.48 -0.03  0.16  1.32  0.02  1.22  0.001028237010848568
 10012          73988/E      40  4119150920 810       10 1  1.20                211G11      F
-15.45910                MT  0.73  0.02 -0.26 -1.61  0.08 -0.84  0.001028237010848569
  8512          73988/E      40  4119150918 755       10 1  1.20                211G11      F
-15.46250                MT  0.73 -0.12 -0.26 -1.58  0.04 -0.69  0.001028237010848569
 11412          73988/E      41  4019150921 835       10 1  1.20                211G11      B
 15.46040                MT -0.73 -0.10  0.26  1.79 -0.09  1.11  0.001084856910282370
  7912          73988/E      41  40191509171300       11 1  1.20                211G11      B
 15.45490                MT -0.73  0.06  0.26  2.04  0.04  1.93  0.001084856910282370
  8612          73988/E      41  4219150918 845       10 1  1.15                211G11      F
-16.18330                MT  0.69  0.06 -0.27 -1.91  0.02 -1.24  0.001084856910848570
  7812          73988/E      42  41191509171125       10 1  1.15                211G11      B
 16.18240                MT -0.69  0.01  0.27  2.27  0.04  2.30  0.001084857010848569
  8712          73988/E      42  4319150918 910       11 1  1.25                211G11      F
-17.84590                MT  0.71 -0.02 -0.30 -2.32  0.01 -1.78  0.001084857010848571
  7712          73988/E      43  42191509171055       12 1  1.20                211G11      B
 17.84930                MT -0.71  0.01  0.30  2.50  0.04  1.83  0.001084857110848570
  8812          73988/E      43  4419150918 940       10 1  1.13                211G11      F
-20.07460                MT  0.60  0.21 -0.33 -2.77  0.00 -2.37  0.001084857110848572
  7612          73988/E      44  43191509171025       11 1  1.03                211G11      B
 20.07760                MT -0.60  0.01  0.33  2.81  0.03  1.80  0.001084857210848571
  8912          73988/E      44  45191509181000       11 1  1.08                211G11      F
-22.71280                MT  0.63  0.02 -0.38 -3.13 -0.01 -1.99  0.001084857210848573
  7512          73988/E      45  44191509171000       11 1  1.08                211G11      B
 22.71060                MT -0.63  0.02  0.38  3.13  0.03  2.00  0.001084857310848572
  9012          73988/E      45  46191509181025       11 1  1.07                211G11      F
-21.50210                MT  0.60  0.14 -0.36 -3.10 -0.02 -0.86  0.001084857310267537
  7412          73988/E      46  4519150917 915       10 1  1.05                211G11      B
 21.50060                MT -0.60  0.02  0.36  2.84  0.02  1.64  0.001026753710848573
  9112          73988/E      46  47191509181055       11 1  1.07                211G11      F
-21.44120                MT  1.24  0.02 -0.36 -3.17  0.03 -2.24  0.001026753710848574
 11312          73988/E      47  46191509201600       10 1  1.15                211G11      B
 21.44130                MT -1.24  0.02  0.36  3.09  0.00  0.94  0.001084857410267537
  9212          73988/E      47  48191509181125       11 1  1.08                211G11      F
-20.16530                MT  1.24 -0.17 -0.33 -2.98  0.03 -2.19  0.001084857410848575
 11212          73988/E      48  47191509201535       10 1  1.08                211G11      B
 20.16710                MT -1.24 -0.02  0.33  2.86  0.00  1.38  0.001084857510848574
  9312          73988/E      48  49191509181150       11 1  1.09                211G11      F
-19.25760                MT  1.24  0.06 -0.32 -2.89  0.02 -2.14  0.001084857510848576
 11112          73988/E      49  48191509201455       11 1  1.09                211G11      B
 19.26180                MT -1.24  0.01  0.32  2.89 -0.01  1.57  0.001084857610848575
 11512          73988/E      49  5019150921 930       10 1  1.09                211G11      F
-23.80760                MT  1.21 -0.08 -0.40 -3.05  0.06 -1.52  0.001084857610848577
  9412          73988/E      49  50191509181315       11 1  1.08                211G11      F
-23.80360                MT  1.21  0.03 -0.40 -3.67  0.01 -2.06  0.001084857610848577
 11612          73988/E      50  4919150921 955       10 1  1.09                211G11      B
 23.80810                MT -1.21 -0.06  0.40  3.24 -0.07  1.64  0.001084857710848576
 11012          73988/E      50  49191509201420       11 1  1.08                211G11      B
 23.80860                MT -1.21  0.00  0.40  3.67 -0.02  1.78  0.001084857710848576
  9512          73988/E      50  51191509181345       11 1  1.10                211G11      F
-23.11230                MT  1.21 -0.01 -0.38 -3.74  0.01 -2.12  0.001084857710340653
 10912          73988/E      51  50191509201350       11 1  1.10                211G11      B
 23.11620                MT -1.21  0.02  0.38  3.61 -0.03  2.10  0.001034065310848577
  9612          73988/E      51  52191509181435       11 1  1.13                211G11      F
-19.31520                MT  1.32 -0.05 -0.32 -3.21  0.01 -1.80  0.001034065310848578
 10812          73988/E      52  51191509201310       12 1  1.13                211G11      B
 19.31680                MT -1.32  0.00  0.32  2.97 -0.04  1.81  0.001084857810340653
  9712          73988/E      52  53191509181505        9 1  1.01                211G11      F
-10.27900                MT  1.17 -0.08 -0.17 -1.60  0.01 -0.96  0.001084857810848579
 10712          73988/E      53  52191509201145       11 1  1.01                211G11      B
 10.27900                MT -1.17 -0.01  0.17  1.58 -0.06  0.88  0.001084857910848578
  9812          73988/E      53  54191509181530       10 1  1.14                211G11      F
-13.87980                MT  1.31  0.00 -0.23 -2.08  0.01 -1.05  0.001084857910848580
 10612          73988/E      54  53191509201115       12 1  1.16                211G11      B
 13.88010                MT -1.31  0.00  0.23  2.19 -0.07  1.28  0.001084858010848579
  9912          73988/E      54  55191509181555       10 1  1.11                211G11      F
-11.73210                MT  1.27  0.01 -0.19 -1.67  0.01 -0.60  0.001084858010848581
 10512          73988/E      55  54191509201045       11 1  1.11                211G11      B
 11.73100                MT -1.27 -0.03  0.19  1.85 -0.07  1.14  0.001084858110848580
 11712          73988/E      55  56191509211040        7 1  0.75                211G11      F
 -9.42300                MT  0.85  0.13 -0.16 -1.32  0.05 -1.07  0.001084858110316178
 10412          73988/E      56  55191509201030        7 1  0.75                211G11      B
  9.42270                MT -0.85  0.00  0.16  1.45 -0.05  1.03  0.001031617810848581
 11812          73988/E      56  57191509211100       11 1  1.11                211G11      F
-16.06490                MT  1.10 -0.06 -0.27 -2.35  0.07 -1.69  0.001031617810848582
 10312          73988/E      57  56191509201005        9 1  1.01                211G11      B
 16.06870                MT -1.10  0.01  0.27  2.38 -0.06  1.95  0.001084858210316178
```

Table 4c. National Geodetic Survey Line 73988E: File 73988E.prn(=.dat)--Continued

```
 11912          73988/E        57  58191509211135       11 1  1.09                  211G11        F
-12.18770                    MT  1.16 -0.09 -0.20 -1.80  0.08 -1.22  0.001084858210848583
 10212          73988/E        58  5719150920 940        9 1  1.08                  211G11        B
 12.18790                    MT -1.16 -0.01  0.20  1.73 -0.06  1.47  0.001084858310848582
 12012          73988/E        58  59191509211305        9 1  1.09                  211G11        F
-6.20370                     MT  1.16 -0.09 -0.10 -0.98  0.08 -0.87  0.001084858310848584
 10112          73988/E        59  5819150920 910        9 1  1.08                  211G11        B
  6.20770                    MT -1.16  0.02  0.10  0.87 -0.05  0.62  0.001084858410848583
 12112          73988/E        59  60191509211335        5 1  0.47                  211G11        F
-0.61060                     MT  0.49  0.11 -0.01 -0.09  0.03 -0.05  0.001084858410297277
 12812          73988/E        60  59191509211630        4 1  0.46                  211G11        B
  0.61100                    MT -0.49 -0.16  0.01  0.09  0.00  0.01  0.001029727710848584
 12212          73988/E        60  61191509211400        9 1  1.07                  211G11        F
-3.02640                     MT  1.24 -0.05 -0.05 -0.47  0.06 -0.37  0.001029727710848585
 12712          73988/E        61  60191509211605        9 1  1.08                  211G11        B
  3.02300                    MT -1.24  0.02  0.05  0.45 -0.01  0.13  0.001084858510297277
 12512          73988/E        61  62191509211525        9 1  1.09                  211G11        F
-6.14340                     MT  1.25  0.02 -0.10 -0.93  0.03 -0.49  0.001084858510848586
 12612          73988/E        62  61191509211540        9 1  1.09                  211G11        B
  6.14560                    MT -1.25 -0.06  0.10  0.93 -0.02  0.42  0.001084858610848585
 12312          73988/E        62  63191509211450        9 1  1.08                  211G11        F
-2.94960                     MT  1.24  0.11 -0.05 -0.44  0.04 -0.32  0.001084858610848587
 12412          73988/E        63  62191509211515        9 1  1.08                  211G11        B
  2.94920                    MT -1.24 -0.21  0.05  0.45 -0.03  0.28  0.001084858710848586
 12912          73988/E        63  6419150922 900        8 1  1.06                  211G11        F
  1.51570                    MT  1.22  0.01  0.03  0.21  0.04  0.15  0.001084858710274242
 14212          73988/E        64  63191509221550        8 1  1.06                  211G11        B
-1.51370                     MT -1.22  0.00 -0.03 -0.23 -0.03 -0.10  0.001027424210848587
 13012          73988/E        64  6519150922 945        9 1  1.05                  211G11        F
-5.61770                     MT  1.15  0.01 -0.09 -0.85  0.08 -0.60  0.001027424210848588
 14112          73988/E        65  64191509221525        8 1  1.05                  211G11        B
  5.62200                    MT -1.15  0.01  0.09  0.87 -0.01  0.52  0.001084858810274242
 13212          73988/E        65  66191509221005        9 1  1.09                  211G11        F
-4.81730                     MT  1.19  0.04 -0.08 -0.68  0.08 -0.60  0.001084858810848589
 14012          73988/E        66  65191509221505        9 1  1.09                  211G11        B
  4.82070                    MT -1.19  0.03  0.08  0.77 -0.01  0.49  0.001084858910848588
 13312          73988/E        66  67191509221030        9 1  1.08                  211G11        F
-2.80510                     MT  1.18  0.00 -0.05 -0.40  0.08 -0.36  0.001084858910848590
 13912          73988/E        67  66191509221440        8 1  1.08                  211G11        B
  2.80480                    MT -1.18  0.02  0.05  0.45 -0.02  0.39  0.001084859010848589
 13112          73988/E        67  6819150922 955        9 1  1.09                  211G11        F
  3.72000                    MT  1.18  0.04  0.06  0.53  0.08  0.44  0.001084859010848591
 13812          73988/E        68  67191509221420        9 1  1.09                  211G11        B
-3.71970                     MT -1.18 -0.01 -0.06 -0.60 -0.03 -0.44  0.001084859110848590
 13412          73988/E        68  69191509221120        9 1  1.08                  211G11        F
  0.02700                    MT  1.17  0.02  0.00  0.00  0.08  0.00  0.001084859110345462
 14312          73988/E        68  69191509231030        9 1  1.08                  211G11        F
  0.02440                    MT  1.17  0.02  0.00  0.00  0.08  0.00  0.001084859110345462
 14412          73988/E        69  68191509231100       10 1  1.09                  211G11        B
-0.02430                     MT -1.17  0.04  0.00  0.00 -0.08  0.00  0.001034546210848591
 13712          73988/E        69  68191509221355        9 1  1.08                  211G11        B
-0.02170                     MT -1.17  0.00  0.00  0.00 -0.04  0.00  0.001034546210848591
 13512          73988/E        69  70191509221300        9 1  1.09                  211G11        F
-4.23700                     MT  1.12  0.00 -0.07 -0.73  0.04 -0.58  0.001034546210848592
 13612          73988/E        70  69191509221330        9 1  1.09                  211G11        B
  4.23360                    MT -1.12  0.02  0.07  0.69 -0.03  0.56  0.001084859210345462
 14512          73988/E        70  71191509231145        9 1  1.09                  211G11        F
-5.12200                     MT  1.12  0.08 -0.08 -0.73  0.08 -0.75  0.001084859210848593
 15812          73988/E        71  70191509241200        7 1  1.09                  211G11        B
  5.12430                    MT -1.12 -0.05  0.08  0.33 -0.08  0.55  0.001084859310848592
 14612          73988/E        71  72191509231210        9 1  1.09                  211G11        F
-12.13170                    MT  1.11  0.07 -0.20 -1.77  0.07 -1.87  0.001084859310848594
 15712          73988/E        72  71191509241140        7 1  1.09                  211G11        B
 12.13370                    MT -1.11 -0.04  0.20  0.75 -0.08  3.65  0.001084859410848593
 14712          73988/E        72  73191509231330        9 1  1.08                  211G11        F
-6.02300                     MT  1.10 -0.06 -0.10 -0.93  0.04 -0.80  0.001084859410326246
 15612          73988/E        73  72191509241115        7 1  1.08                  211G11        B
  6.02440                    MT -1.10 -0.13  0.10  0.35 -0.08  1.59  0.001032624610848594
 15912          73988/E        73  74191509241330        7 1  1.04                  211G11        F
-0.95890                     MT  1.13  0.07 -0.02 -0.08  0.07 -0.21  0.001032624610848595
 14912          73988/E        73  74191509231420        8 1  1.04                  211G11        F
-0.95430                     MT  1.13  0.09 -0.02 -0.14  0.04 -0.13  0.001032624610848595
 15512          73988/E        74  73191509241050        6 1  1.04                  211G11        B
  0.95970                    MT -1.13  0.02  0.02  0.05 -0.08  0.30  0.001084859510326246
 16012          73988/E        74  73191509241355        7 1  1.04                  211G11        B
  0.95940                    MT -1.13 -0.01  0.02  0.08 -0.06  0.08  0.001084859510326246
 14812          73988/E        74  75191509231350        8 1  1.14                  211G11        F
```

Table 4c. National Geodetic Survey Line 73988E: File 73988E.prn(=.dat)--Continued

```
 0.96100                MT  1.24 -0.02  0.02  0.14  0.06  0.17  0.001084859510848596
15412          73988/E      75  74191509241015       7 1  1.14                211G11        B
-0.95900                MT -1.24 -0.13 -0.02 -0.05 -0.07 -0.24  0.001084859610848595
15012          73988/E      75  76191509231520       7 1  1.09                211G11        F
 2.97770                MT  1.18 -0.01  0.05  0.42  0.02  0.40  0.001084859610848597
15312          73988/E      76  7519150924 940       7 1  1.09                211G11        B
-2.97670                MT -1.18 -0.03 -0.05 -0.18 -0.06 -0.61  0.001084859710848596
15112          73988/E      76  77191509231555       9 1  1.05                211G11        F
-6.77300                MT  1.13  0.05 -0.11 -0.92  0.01 -0.29  0.001084859710848598
15212          73988/E      77  7619150924 900       9 1  1.12                211G11        B
 6.77330                MT -1.13 -0.04  0.11  0.46 -0.05  0.63  0.001084859810848597
16112          73988/E      77  78191509241440       4 1  0.43                211G11        F
-5.55570                MT  0.47  0.02 -0.09 -0.39  0.02 -0.24  0.001084859810300877
17912          73988/E      78  77191509271020       4 1  0.43                211G11        B
 5.55330                MT -0.47  0.02  0.09  0.70 -0.01  0.62  0.001030087710848598
16212          73988/E      78  79191509241450       9 1  1.08                211G11        F
-16.41760               MT  1.16 -0.14 -0.27 -1.12  0.05 -0.90  0.001030087710848599
17812          73988/E      79  7819150927 950      10 1  1.08                211G11        B
16.41960                MT -1.16 -0.01  0.27  1.94 -0.02  1.75  0.001084859910300877
16312          73988/E      79  80191509241520       9 1  1.05                211G11        F
-16.73740               MT  1.12  0.04 -0.28 -1.14  0.04 -0.67  0.001084859910848600
17712          73988/E      80  7919150927 925       9 1  1.05                211G11        B
16.73830                MT -1.12  0.03  0.28  1.81 -0.01  1.99  0.001084860010848599
16412          73988/E      80  81191509241540       8 1  1.08                211G11        F
-15.90000               MT  1.13  0.08 -0.26 -0.95  0.04 -0.70  0.001084860010848601
17612          73988/E      81  8019150927 855       9 1  1.07                211G11        B
15.89900                MT -1.13  0.02  0.26  1.56 -0.01  1.40  0.001084860110848600
16512          73988/E      81  82191509241610       7 1  0.97                211G11        F
-15.41400               MT  1.00 -0.17 -0.26 -0.86  0.02 -0.25  0.001084860110848602
17512          73988/E      82  8119150927 825       8 1  0.97                211G11        B
15.41380                MT -1.00 -0.05  0.26  1.23  0.00  1.05  0.001084860210848601
18212          73988/E      82  83191509271135      10 1  1.10                211G11        F
-1.84130                MT  1.13 -0.08 -0.03 -0.24  0.05 -0.22  0.001084860210272578
18012          73988/E      82  83191509271040      10 1  1.10                211G11        F
-1.83920                MT  1.13 -0.08 -0.03 -0.23  0.03 -0.21  0.001084860210272578
17412          73988/E      83  82191509251455       8 1  1.11                211G11        B
 1.84440                MT -1.13 -0.11  0.03  0.12 -0.06  0.11  0.001027257810848602
18112          73988/E      83  82191509271115      10 1  1.10                211G11        B
 1.84370                MT -1.13  0.05  0.03  0.24 -0.04  0.21  0.001027257810848602
18312          73988/E      83  84191509271210      12 1  1.27                211G11        F
-13.43300               MT  1.26 -0.01 -0.22 -1.80  0.06 -1.58  0.001027257810848603
17312          73988/E      84  83191509251405      11 1  1.34                211G11        B
13.43700                MT -1.26  0.20  0.22  1.34 -0.07  1.93  0.001084860310272578
18412          73988/E      84  85191509271335      10 1  1.18                211G11        F
-10.74590               MT  1.16  0.02 -0.18 -1.46  0.06 -1.44  0.001084860310848604
17212          73988/E      85  84191509251335      10 1  1.18                211G11        B
10.74870                MT -1.16  0.10  0.18  1.14 -0.07  1.51  0.001084860410848603
18512          73988/E      85  86191509271400       9 1  1.07                211G11        F
-6.42600                MT  1.04  0.07 -0.11 -0.87  0.06 -0.80  0.001084860410353745
17112          73988/E      86  85191509251305       9 1  1.07                211G11        B
 6.42460                MT -1.04  0.02  0.11  0.67 -0.07  0.93  0.001035374510848604
18612          73988/E      86  87191509271420       4 1  0.45                211G11        F
-5.44330                MT  0.46  0.03 -0.09 -0.73  0.02 -0.62  0.001035374510848605
17012          73988/E      87  86191509251150       4 1  0.45                211G11        B
 5.44470                MT -0.46 -0.10  0.09  0.62 -0.03  0.78  0.001084860510353745
18912          73988/E      87  88191509271515       7 1  1.04                211G11        F
-7.38610                MT  1.07 -0.10 -0.12 -0.99  0.05 -0.97  0.001084860510848606
18712          73988/E      87  88191509271430       9 1  1.04                211G11        F
-7.38770                MT  1.07 -0.03 -0.12 -0.98  0.06 -0.82  0.001084860510848606
16912          73988/E      88  87191509251115       9 1  1.05                211G11        B
 7.38270                MT -1.07  0.04  0.12  0.77 -0.07  1.04  0.001084860610848605
18812          73988/E      88  87191509271500       8 1  1.05                211G11        B
 7.38800                MT -1.07 -0.10  0.12  0.98 -0.05  0.93  0.001084860610848605
19012          73988/E      88  89191509271535       8 1  1.07                211G11        F
-14.24810               MT  1.08 -0.03 -0.24 -1.85  0.05 -1.34  0.001084860610848607
16812          73988/E      89  88191509251050       9 1  1.07                211G11        B
14.24860                MT -1.08  0.13  0.24  1.40 -0.06  2.21  0.001084860710848606
19112          73988/E      89  90191509271550       8 1  1.07                211G11        F
-10.79480               MT  1.07  0.00 -0.18 -1.36  0.05 -0.76  0.001084860710848608
16712          73988/E      90  89191509251025       9 1  1.07                211G11        B
10.79440                MT -1.07 -0.16  0.18  0.99 -0.06  1.54  0.001084860810848607
19212          73988/E      90  91191509271610       8 1  1.07                211G11        F
-10.75330               MT  1.07  0.05 -0.18 -1.29  0.04 -0.49  0.001084860810848609
16612          73988/E      91  9019150925 950       9 1  1.07                211G11        B
10.75240                MT -1.07  0.02  0.18  0.95 -0.05  1.40  0.001084860910848608
19312          73988/E      91  92191509271625       2 1  0.26                211G11        F
-0.52500                MT  0.26 -0.01 -0.01 -0.06  0.01 -0.01  0.001084860910327892
```

Table 4c. National Geodetic Survey Line 73988E: File 73988E.prn(=.dat)--Continued

```
 20912          73988/E        92  91191509281445        2 1  0.26                  211G11        B
  0.52570                    MT -0.26  0.12  0.01  0.07 -0.01  0.07  0.001032789210848609
 19412          73988/E        92  93191509271635        8 1  1.16                  211G11        F
-15.91240                    MT  1.16  0.06 -0.26 -1.75  0.05 -0.35  0.001032789210848610
 20812          73988/E        93  92191509281420       10 1  1.16                  211G11        B
 15.90970                    MT -1.16  0.06  0.26  2.20 -0.06  1.95  0.001084861010327892
 21012          73988/E        93  94191509281455       10 1  1.14                  211G11        F
-11.90830                    MT  1.13 -0.04 -0.20 -1.62  0.06 -1.19  0.001084861010848611
 20712          73988/E        94  93191509281355       10 1  1.14                  211G11        B
 11.91200                    MT -1.13  0.04  0.20  1.62 -0.06  1.46  0.001084861110848610
 21112          73988/E        94  95191509281510        8 1  1.07                  211G11        F
 -8.46500                    MT  1.04  0.05 -0.14 -1.08  0.06 -1.08  0.001084861110848612
 20612          73988/E        95  94191509281335        9 1  1.07                  211G11        B
  8.46640                    MT -1.04 -0.05  0.14  1.17 -0.05  1.13  0.001084861210848611
 21212          73988/E        95  96191509281535        8 1  1.09                  211G11        F
 -3.03600                    MT  1.06 -0.11 -0.05 -0.37  0.06 -0.26  0.001084861210304298
 20512          73988/E        96  95191509281310        9 1  1.09                  211G11        B
  3.03700                    MT -1.06  0.04  0.05  0.32 -0.05  0.45  0.001030429810848612
 21312          73988/E        96  97191509281555        4 1  0.48                  211G11        F
  1.49990                    MT  0.51 -0.06  0.02  0.18  0.02  0.07  0.001030429810300881
 20412          73988/E        97  96191509281120        4 1  0.48                  211G11        B
 -1.50170                    MT -0.51  0.04 -0.02 -0.21 -0.01 -0.21  0.001030088110304298
 21412          73988/E        97  98191509281610        8 1  1.04                  211G11        F
  1.18480                    MT  0.83 -0.02  0.02  0.14  0.03  0.05  0.001030088110848613
 20312          73988/E        98  97191509281100        9 1  1.04                  211G11        B
 -1.18200                    MT -0.83 -0.20 -0.02 -0.16 -0.03 -0.15  0.001084861310300881
 21512          73988/E        98  99191509281640        8 1  1.20                  211G11        F
 -4.50660                    MT  0.95 -0.09 -0.07 -0.50  0.03 -0.05  0.001084861310848614
 20212          73988/E        99  98191509281035       10 1  1.20                  211G11        B
  4.50520                    MT -0.95  0.20  0.07  0.60 -0.02  0.59  0.001084861410848613
 21612          73988/E        99 10019150929 755        7 1  1.06                  211G11        F
 -0.55370                    MT  0.84  0.02 -0.01 -0.05 -0.02 -0.03  0.001084861410848615
 20112          73988/E       100  99191509281015        9 1  1.06                  211G11        B
  0.55470                    MT -0.84 -0.06  0.01  0.07 -0.02  0.07  0.001084861510848614
 21712          73988/E       100 10119150929 825        7 1  1.07                  211G11        F
  2.65960                    MT  0.85  0.11  0.04  0.23 -0.01  0.23  0.001084861510280747
 20012          73988/E       101 10019150928 955        9 1  1.07                  211G11        B
 -2.65720                    MT -0.85 -0.25 -0.04 -0.32 -0.01 -0.31  0.001028074710848615
 21812          73988/E       101 10219150929 845        3 1  0.48                  211G11        F
  0.73000                    MT  0.30 -0.01  0.01  0.07 -0.01  0.09  0.001028074710848616
 19912          73988/E       102 10119150928 945        4 1  0.47                  211G11        B
 -0.72970                    MT -0.30  0.03 -0.01 -0.09  0.00 -0.08  0.001084861610280747
 21912          73988/E       102 10319150929 850        7 1  1.07                  211G11        F
  3.50520                    MT  0.67  0.10  0.06  0.34 -0.01  0.41  0.001084861610848617
 19812          73988/E       103 10219150928 925        9 1  1.07                  211G11        B
 -3.50700                    MT -0.67  0.13 -0.06 -0.39  0.00 -0.36  0.001084861710848616
 22012          73988/E       103 10419150929 910        8 1  1.07                  211G11        F
  0.37930                    MT  0.67 -0.03  0.01  0.04 -0.01  0.04  0.001084861710848618
 19712          73988/E       104 10319150928 905        9 1  1.07                  211G11        B
 -0.37520                    MT -0.67  0.13 -0.01 -0.04  0.00 -0.03  0.001084861810848617
 22112          73988/E       104 10519150929 930        8 1  1.12                  211G11        F
 -0.04430                    MT  0.70 -0.05  0.00 -0.01 -0.01 -0.01  0.001084861810848619
 19612          73988/E       105 10419150928 845        8 1  1.12                  211G11        B
  0.04810                    MT -0.70  0.20  0.00  0.00  0.01  0.00  0.001084861910848618
 22212          73988/E       105 10619150929 955        8 1  1.12                  211G11        F
 -2.64060                    MT  0.70 -0.04 -0.04 -0.32  0.00 -0.43  0.001084861910264049
 19512          73988/E       106 10519150928 820        8 1  1.12                  211G11        B
  2.64000                    MT -0.70  0.04  0.04  0.26  0.01  0.18  0.001026404910848619
 22312          73988/E       106 107191509291015        8 1  1.12                  211G11        F
 -1.69070                    MT  0.65 -0.08 -0.03 -0.21  0.00 -0.29  0.001026404910848620
 24912          73988/E       107 106191509301530        8 1  1.12                  211G11        B
  1.69160                    MT -0.65  0.05  0.03  0.25 -0.02  0.15  0.001084862010264049
 22412          73988/E       107 108191509291035        8 1  1.07                  211G11        F
  0.46280                    MT  0.61 -0.01  0.01  0.06  0.00  0.07  0.001084862010848621
 25012          73988/E       108 107191509301605        8 1  1.06                  211G11        B
 -0.46230                    MT -0.61  0.07 -0.01 -0.07 -0.02 -0.02  0.001084862110848620
 22512          73988/E       108 109191509291055        9 1  1.23                  211G11        F
  0.98940                    MT  0.71 -0.06  0.02  0.12  0.01  0.17  0.001084862110848622
 24812          73988/E       109 108191509301440        9 1  1.23                  211G11        B
 -0.98920                    MT -0.71 -0.04 -0.02 -0.15 -0.02 -0.14  0.001084862210848621
 22612          73988/E       109 110191509291120       10 1  1.34                  211G11        F
  0.02360                    MT  0.77 -0.05  0.00  0.00  0.01  0.00  0.001084862210348939
 25112          73988/E       109 11019151001 905        9 1  1.34                  211G11        F
  0.01880                    MT  0.77  0.01  0.00  0.00 -0.02  0.00  0.001084862210348939
 25212          73988/E       110 10919151001 930        9 1  1.34                  211G11        B
 -0.01590                    MT -0.77  0.06  0.00  0.00  0.02  0.00  0.001034893910848622
 24712          73988/E       110 109191509301420       10 1  1.33                  211G11        B
```

Table 4c. National Geodetic Survey Line 73988E: File 73988E.prn(=.dat)--Continued

```
-0.01670                  MT -0.77 -0.16  0.00  0.00 -0.02  0.00  0.001034893910848622
22712          73988/E      110 111191509291315       9 1  1.06                211G11        F
-0.43900                  MT  0.34 -0.13 -0.01 -0.06  0.01 -0.06  0.001034893910848623
24612          73988/E      111 110191509301400       8 1  1.06                211G11        B
 0.43930                  MT -0.34  0.12  0.01  0.07  0.00  0.06  0.001084862310348939
22812          73988/E      111 112191509291340       9 1  1.07                211G11        F
-0.27050                  MT  0.35  0.08  0.00 -0.04  0.01 -0.03  0.001084862310848624
24512          73988/E      112 111191509301340       8 1  1.07                211G11        B
 0.27200                  MT -0.35 -0.03  0.00  0.04  0.00  0.04  0.001084862410848623
22912          73988/E      112 113191509291405       9 1  1.18                211G11        F
 2.59100                  MT  0.38 -0.17  0.04  0.36  0.01  0.37  0.001084862410848625
24412          73988/E      113 112191509301315       9 1  1.18                211G11        B
-2.58840                  MT -0.38  0.06 -0.04 -0.37  0.00 -0.41  0.001084862510848624
23012          73988/E      113 114191509291425       8 1  1.12                211G11        F
 1.13190                  MT  0.36 -0.05  0.02  0.16  0.01  0.17  0.001084862510848626
24312          73988/E      114 113191509301150       9 1  1.12                211G11        B
-1.13400                  MT -0.36  0.06 -0.02 -0.17  0.01 -0.17  0.001084862610848625
23112          73988/E      114 115191509291445       4 1  0.55                211G11        F
 1.06530                  MT  0.18 -0.09  0.02  0.14  0.00  0.15  0.001084862610340660
24212          73988/E      115 114191509301140       4 1  0.54                211G11        B
-1.06540                  MT -0.18 -0.09 -0.02 -0.16  0.01 -0.19  0.001034066010848626
25312          73988/E      115 116191510011020       8 1  1.21                211G11        F
 2.42600                  MT  0.16  0.03  0.04  0.32 -0.04  0.48  0.001034066010848627
23212          73988/E      115 116191509291530       8 1  1.21                211G11        F
 2.43010                  MT  0.16 -0.02  0.04  0.34  0.00  0.26  0.001034066010848627
25412          73988/E      116 115191510011040       9 1  1.21                211G11        B
-2.42540                  MT -0.16  0.02 -0.04 -0.35  0.04 -0.39  0.001084862710340660
24112          73988/E      116 115191509301115      10 1  1.21                211G11        B
-2.42370                  MT -0.16  0.03 -0.04 -0.36  0.02 -0.33  0.001084862710340660
23312          73988/E      116 117191509291550       6 1  1.07                211G11        F
 2.76170                  MT  0.14 -0.27  0.05  0.38  0.00  0.30  0.001084862710848628
24012          73988/E      117 116191509301055       8 1  1.07                211G11        B
-2.75750                  MT -0.14 -0.03 -0.05 -0.40  0.02 -0.45  0.001084862810848627
23412          73988/E      117 118191509291610       6 1  1.06                211G11        F
 1.41480                  MT  0.14  0.08  0.02  0.19  0.00  0.09  0.001084862810848629
23912          73988/E      118 117191509301035       8 1  1.06                211G11        B
-1.41230                  MT -0.14  0.00 -0.02 -0.20  0.02 -0.22  0.001084862910848628
25512          73988/E      118 119191510011115      10 1  1.38                211G11        F
 1.09730                  MT  0.18  0.00  0.02  0.16 -0.04  0.19  0.001084862910337451
23812          73988/E      119 118191509301010      10 1  1.38                211G11        B
-1.10000                  MT -0.18  0.02 -0.02 -0.16  0.03 -0.17  0.001033745110848629
25612          73988/E      119 120191510011140       7 1  0.96                211G11        F
-0.55940                  MT -0.12  0.03 -0.01 -0.09 -0.03 -0.10  0.001033745110848630
23712          73988/E      120 11919150930 950       7 1  0.97                211G11        B
 0.56330                  MT  0.12 -0.05  0.01  0.08  0.03  0.08  0.001084863010337451
25712          73988/E      120 121191510011205       8 1  1.12                211G11        F
 5.65560                  MT -0.14 -0.05  0.09  0.88 -0.03  1.08  0.001084863010848631
23612          73988/E      121 12019150930 925       8 1  1.12                211G11        B
-5.65630                  MT  0.14  0.00 -0.09 -0.75  0.03 -0.80  0.001084863110848630
25812          73988/E      121 122191510011330       8 1  1.12                211G11        F
 2.42960                  MT -0.14 -0.03  0.04  0.34 -0.02  0.43  0.001084863110848632
23512          73988/E      122 12119150930 900       8 1  1.12                211G11        B
-2.43030                  MT  0.14 -0.07 -0.04 -0.28  0.03 -0.25  0.001084863210848631
25912          73988/E      122 123191510011355       8 1  1.12                211G11        F
-1.29260                  MT -0.14 -0.06 -0.02 -0.19 -0.02 -0.21  0.001084863210848633
27012          73988/E      123 122191510021450       8 1  1.13                211G11        B
 1.29140                  MT  0.14 -0.14  0.02  0.20  0.01  0.17  0.001084863310848632
26012          73988/E      123 124191510011415       4 1  0.48                211G11        F
 0.73960                  MT -0.06  0.02  0.01  0.11 -0.01  0.08  0.001084863310340659
26912          73988/E      124 123191510021435       4 1  0.47                211G11        B
-0.73670                  MT  0.06  0.16 -0.01 -0.12  0.01 -0.08  0.001034065910848633
26112          73988/E      124 125191510011425       8 1  1.12                211G11        F
 0.72590                  MT  0.39 -0.07  0.01  0.11  0.00  0.11  0.001034065910848634
26812          73988/E      125 124191510021410       8 1  1.12                211G11        B
-0.72540                  MT -0.39  0.03 -0.01 -0.12  0.01 -0.11  0.001084863410340659
26212          73988/E      125 126191510011450       8 1  1.12                211G11        F
 4.94040                  MT  0.39 -0.02  0.08  0.74  0.01  0.69  0.001084863410848635
26712          73988/E      126 125191510021350       9 1  1.12                211G11        B
-4.93770                  MT -0.39  0.01 -0.08 -0.80  0.02 -0.64  0.001084863510848634
26312          73988/E      126 127191510011510       8 1  1.12                211G11        F
-3.65640                  MT  0.39  0.00 -0.06 -0.54  0.01 -0.39  0.001084863510848636
26612          73988/E      127 126191510021325      10 1  1.12                211G11        B
 3.65990                  MT -0.39  0.05  0.06  0.58  0.02  0.40  0.001084863610848635
27112          73988/E      127 128191510021530       3 1  0.37                211G11        F
-0.18870                  MT  0.13  0.11  0.00 -0.03  0.00 -0.01  0.001084863610848637
26512          73988/E      128 127191510021320       3 1  0.37                211G11        B
 0.18940                  MT -0.13  0.03  0.00  0.03  0.01  0.03  0.001084863710848636
```

Table 4c. National Geodetic Survey Line 73988E: File 73988E.prn(=.dat)--Continued

```
 27212          73988/E       128 129191510021540       8 1  1.07                  211G11       F
-0.34340                    MT  0.37  0.01 -0.01 -0.05  0.01 -0.02  0.001084863710331095
 26412          73988/E       129 128191510021250       9 1  1.07                  211G11       B
 0.34370                    MT -0.37 -0.09  0.01  0.05  0.03  0.04  0.001033109510848637
```

Table 5a. National Geodetic Survey Line 73988F: File 73988F.pro

Seq No.	UID	Benchmark	Spur Code	Distance (km)	Latitude	Longitude	Observed Elevation (m)	Obs Grav Ortho Ht (m)	Cumul. Refr Cor. (mm)	Cumul. Magn Cor. (mm)
3	10331095	G 16		0.00	37 06 45	116 48 00	1227.48550	1227.48550	0.00	0.00
4	10848440	TBM 100		0.59	37 06 27	116 47 52	1226.33440	1226.33288	-0.13	0.00
5	10848441	TBM 101		1.64	37 05 56	116 47 36	1229.39062	1229.38913	0.19	0.00
6	10848442	TBM 2		2.71	37 05 23	116 47 21	1231.75202	1231.74968	0.47	0.00
7	10848443	TBM 3		3.84	37 04 49	116 47 05	1221.98619	1221.98333	-0.89	0.00
1	10305985	H 16		4.95	37 04 16	116 46 49	1214.73408	1214.73310	-1.96	0.00
8	10848444	TBM 4		5.21	37 04 09	116 46 44	1210.98323	1210.98206	-2.22	0.00
9	10848445	TBM 5		6.33	37 03 38	116 46 21	1206.43248	1206.42882	-2.97	0.00
10	10848446	TBM 6		7.29	37 03 12	116 46 01	1197.81561	1197.80982	-3.91	0.00
11	10848447	TBM 7		8.41	37 02 41	116 45 39	1188.81472	1188.80801	-5.08	0.00
2	10283956	I 16		9.64	37 02 08	116 45 14	1176.64314	1176.63193	-6.89	0.00
12	10848448	TBM 8		10.75	37 01 44	116 44 46	1162.31669	1162.30189	-8.55	0.00
13	10848449	TBM 9		11.78	37 01 21	116 44 20	1145.93282	1145.91817	-10.47	0.00
14	10848450	TBM 10		12.91	37 00 56	116 43 52	1132.82788	1132.81083	-12.24	0.00
15	10848451	TBM 11		14.03	37 00 32	116 43 23	1124.93503	1124.91856	-13.26	0.00
16	10848452	TBM 12		14.46	37 00 22	116 43 12	1121.76723	1121.75250	-13.49	0.00
17	10267539	J 16		14.51	37 00 21	116 43 11	1121.61938	1121.60481	-13.49	0.00
18	10848453	TBM 13		14.56	37 00 19	116 43 11	1121.55659	1121.54205	-13.49	0.00
19	10848454	TBM 14		15.57	36 59 48	116 43 09	1107.14521	1107.12833	-14.72	0.00
20	10848455	TBM 15		16.58	36 59 17	116 43 08	1099.12762	1099.10937	-15.30	0.00
21	10848456	TBM 16		17.06	36 59 02	116 43 07	1096.43087	1096.41315	-15.62	0.00
22	10848457	TBM 17		18.18	36 58 28	116 43 06	1087.96217	1087.94587	-16.54	0.00
23	10342735	K 16		19.31	36 57 52	116 43 06	1075.43547	1075.42054	-18.57	0.00
24	10848458	TBM 18		19.68	36 57 43	116 43 09	1072.99328	1072.97862	-18.88	0.00
25	10848459	TBM 19		20.79	36 57 13	116 43 23	1060.17354	1060.15840	-20.87	0.00
26	10848460	TBM 20		21.89	36 56 43	116 43 37	1049.69647	1049.67951	-22.49	0.00
27	10848461	TBM 21		23.01	36 56 12	116 43 51	1043.36983	1043.35016	-23.34	0.00
28	10321566	L 16		24.13	36 55 42	116 44 05	1035.38567	1035.36121	-24.71	0.00
29	10848462	TBM 22		25.15	36 55 17	116 44 30	1022.87356	1022.84054	-26.28	0.00
30	10848463	TBM 23		26.21	36 54 52	116 44 55	1012.65033	1012.60779	-27.52	0.00
31	10308204	M 16		27.23	36 54 27	116 45 20	1001.04725	1001.00109	-28.79	0.00
32	10308203	N 16 USGS		27.61	36 54 22	116 45 37	1008.27644	1008.23368	-28.46	0.00
33	10848464	TBM 24		28.38	36 53 53	116 45 17	992.31894	992.27001	-29.21	0.00
34	10848465	TBM 25		29.66	36 53 15	116 45 13	977.38670	977.33376	-29.77	0.00
35	10848466	TBM 26		30.68	36 52 44	116 45 10	966.01200	965.95765	-30.41	0.00
36	10290869	O 16		30.72	36 52 43	116 45 10	965.63444	965.58010	-30.41	0.00
37	10848467	TBM 27		30.76	36 52 42	116 45 10	965.62261	965.56826	-30.41	0.00
38	10848468	TBM 28		31.85	36 52 05	116 45 04	955.65672	955.60158	-31.08	0.00
39	10848469	TBM 29		33.00	36 51 26	116 44 59	944.61958	944.56476	-32.45	0.00
40	10848470	TBM 30		34.09	36 50 50	116 44 54	935.49535	935.44054	-33.76	0.00

Table 5a. National Geodetic Survey Line 73988F: File 73988F.pro--Continued

Seq No.	UID	Benchmark	Spur Code	Distance (km)	Latitude	Longitude	Observed Elevation (m)	Obs Grav Ortho Ht (m)	Cumul. Refr Cor. (mm)	Cumul. Magn Cor. (mm)
41	10848471	TBM 31		35.18	36 50 13	116 44 48	925.24345	925.18930	-35.37	0.00
42	10360824	B 86 USGS		36.26	36 49 41	116 44 44	914.65373	914.59951	-37.16	0.00
43	10848472	TBM 32		36.64	36 49 28	116 44 33	910.35049	910.29573	-37.84	0.00
44	10848473	TBM 33		37.73	36 49 01	116 44 04	900.82272	900.76610	-39.18	0.00
45	10848474	TBM 34		38.81	36 48 34	116 43 35	891.34571	891.28710	-40.55	0.00
46	10848475	TBM 35		39.90	36 48 08	116 43 06	881.29726	881.23779	-41.98	0.00
47	10341122	B 87 USGS		40.98	36 47 41	116 42 37	872.77617	872.71701	-43.24	0.00
48	10848476	TBM 36		41.43	36 47 30	116 42 24	869.01022	868.95064	-43.83	0.00
49	10848477	TBM 37		42.52	36 47 05	116 41 54	859.74662	859.68499	-45.18	0.00
50	10848478	TBM 38		43.61	36 46 39	116 41 24	852.28032	852.21754	-46.18	0.00
51	10848479	TBM 39		44.70	36 46 14	116 40 54	845.52670	845.46160	-47.17	0.00
52	10321565	B 88 USGS		45.79	36 45 48	116 40 24	839.14672	839.08015	-47.89	0.00
53	10848480	TBM 40		46.56	36 45 31	116 40 01	834.08492	834.01814	-48.42	0.00
54	10848481	TBM 41		47.71	36 45 05	116 39 28	826.36724	826.30090	-49.17	0.00
55	10848482	TBM 42		48.41	36 44 49	116 39 07	822.54520	822.47947	-49.38	0.00
56	10848483	TBM 43		49.50	36 44 24	116 38 36	818.15197	818.08825	-49.77	0.00
57	10304804	B 89 USGS		50.59	36 44 00	116 38 04	811.54446	811.48104	-50.53	0.00
58	10848484	TBM 44		51.04	36 43 51	116 37 50	810.97854	810.91516	-50.58	0.00
59	10848485	TBM 45		52.13	36 43 30	116 37 16	800.10119	800.03609	-52.27	0.00
60	10848486	TBM 46		53.22	36 43 09	116 36 42	792.30026	792.23480	-53.53	0.00
61	10848487	TBM 47		54.31	36 42 48	116 36 08	785.54570	785.48140	-54.66	0.00
62	10287639	B 90 USGS		55.39	36 42 27	116 35 34	784.52492	784.46503	-54.82	0.00
63	10848488	TBM 48		56.16	36 42 12	116 35 09	785.24093	785.18382	-54.72	0.00
64	10282818	U 16		57.20	36 41 52	116 34 34	789.30706	789.25188	-54.10	0.00
65	10848489	TBM 49		57.64	36 41 44	116 34 19	787.72048	787.66582	-54.37	0.00
66	10848490	TBM 50		58.66	36 41 26	116 33 44	791.94743	791.89601	-53.71	0.00
67	10848491	TBM 51		59.75	36 41 07	116 33 07	788.21307	788.16213	-54.13	0.00
68	10273094	B 91 USGS		60.26	36 40 58	116 32 50	787.96968	787.91867	-54.15	0.00
69	10848492	TBM 52		61.36	36 40 43	116 32 11	782.16812	782.11675	-54.86	0.00
70	10269707	W 16		61.86	36 40 36	116 31 53	782.08562	782.03389	-54.87	0.00
71	10848493	TBM 53		62.96	36 40 22	116 31 10	775.56083	775.50820	-55.87	0.00
72	10848494	TBM 54		64.05	36 40 09	116 30 28	779.83361	779.77995	-55.36	0.00
73	10362534	B 92 USGS		65.07	36 39 56	116 29 48	786.73348	786.67842	-54.58	0.00
74	10848495	TBM 55		66.16	36 39 47	116 29 06	793.22303	793.16755	-53.25	0.00
75	10848496	TBM 56		67.25	36 39 39	116 28 23	796.94802	796.89209	-52.54	0.00
76	10848497	TBM 57		68.34	36 39 30	116 27 41	801.18890	801.13412	-51.74	0.00
77	10848498	TBM 58		69.41	36 39 22	116 26 59	805.39896	805.34573	-51.11	0.00
78	10355754	B 93 USGS		69.87	36 39 18	116 26 41	806.60889	806.55638	-50.91	0.00
79	10848499	TBM 59		70.96	36 39 08	116 25 59	808.57368	808.52285	-50.54	0.00
80	10848500	TBM 60		72.05	36 38 58	116 25 18	811.44726	811.39866	-50.03	0.00
81	10848501	TBM 61		73.20	36 38 47	116 24 33	810.68854	810.64250	-50.15	0.00

Table 5a. National Geodetic Survey Line 73988F: File 73988F.pro--Continued

Seq No.	UID	Benchmark	Spur Code	Distance (km)	Latitude	Longitude	Observed Elevation (m)	Obs Grav Ortho Ht (m)	Cumul. Refr Cor. (mm)	Cumul. Magn Cor. (mm)
82	10848502	TBM 62		74.29	36 38 37	116 23 52	810.16118	810.11627	-50.24	0.00
83	10848503	TBM 63		75.38	36 38 26	116 23 10	810.38641	810.33956	-50.21	0.00
84	10346005	B 94 USGS		76.16	36 38 19	116 22 40	809.85221	809.80260	-50.26	0.00
85	10848504	TBM 64		77.24	36 38 09	116 21 58	820.31821	820.26455	-49.42	0.00
86	10848505	TBM 65		78.33	36 37 59	116 21 15	835.99621	835.94034	-48.68	0.00
87	10341118	A 17		79.41	36 37 49	116 20 33	851.82527	851.77046	-47.03	0.00
88	10848506	TBM 66		80.50	36 37 44	116 19 51	865.29280	865.23843	-45.75	0.00
89	10848507	TBM 67		81.39	36 37 40	116 19 17	872.17594	872.12116	-44.76	0.00
90	10339504	B 95 USGS		82.52	36 37 35	116 18 34	866.32978	866.27655	-45.71	0.00
91	10848508	TBM 68		83.32	36 37 23	116 18 08	862.70852	862.65888	-46.20	0.00
92	10848509	TBM 69		84.46	36 37 05	116 17 30	860.62649	860.57623	-46.50	0.00
93	10848510	TBM 70		85.61	36 36 47	116 16 52	855.02136	854.96873	-47.21	0.00
94	10848511	TBM 71		86.76	36 36 29	116 16 14	846.81198	846.75777	-48.16	0.00
95	10848512	TBM 72		87.91	36 36 11	116 15 36	842.08501	842.03110	-47.37	0.00
96	10323333	B 96 2759.919=C 17		89.00	36 35 53	116 15 02	841.19162	841.13842	-47.48	0.00
97	10848513	TBM 73		89.97	36 35 41	116 14 23	841.59488	841.54236	-47.42	0.00
98	10848514	TBM 74		91.06	36 35 26	116 13 41	839.99042	839.93770	-47.81	0.00
99	10314951	D 17		92.26	36 35 09	116 12 55	840.29688	840.24425	-47.77	0.00
100	10848515	TBM 75		93.39	36 34 54	116 12 20	841.18046	841.12911	-47.63	0.00
101	10848516	TBM 76		94.40	36 34 41	116 11 50	842.56969	842.51999	-47.45	0.00
102	10308198	B 97 USGS		95.47	36 34 27	116 11 17	842.40675	842.35905	-47.47	0.00
103	10848517	TBM 77		95.73	36 34 26	116 11 06	842.35423	842.30682	-47.48	0.00
104	10848518	TBM 78		96.74	36 34 21	116 10 25	841.97357	841.92658	-47.53	0.00
105	10848519	TBM 79		97.97	36 34 16	116 09 34	844.57019	844.52246	-47.25	0.00
106	10306493	F 17		98.11	36 34 15	116 09 28	846.55960	846.51183	-46.99	0.00
107	10848520	TBM 80		99.25	36 34 07	116 08 43	848.93019	848.88099	-46.76	0.00
108	10848521	TBM 81		100.46	36 33 59	116 07 56	858.42531	858.37792	-45.66	0.00
109	10848522	TBM 82		101.55	36 33 52	116 07 13	865.09475	865.05056	-44.84	0.00
110	10301381	B 98 USGS		101.93	36 33 49	116 06 58	865.27191	865.22813	-44.82	0.00
111	10848523	TBM 83		103.01	36 33 50	116 06 16	862.04333	861.99817	-45.18	0.00
112	10848524	TBM 84		104.09	36 33 52	116 05 35	870.30711	870.26116	-44.27	0.00
113	10303128	H 17		105.12	36 33 53	116 04 55	882.96711	882.92240	-42.94	0.00
114	10848525	TBM 85		106.15	36 34 14	116 04 24	895.23219	895.18916	-41.66	0.00
115	10848526	TBM 86		107.34	36 34 37	116 03 50	910.19233	910.15142	-40.03	0.00
116	10314952	B 99 USGS		108.44	36 35 00	116 03 17	924.38320	924.34548	-38.68	0.00
117	10848527	TBM 87		109.39	36 35 23	116 02 58	935.30699	935.27138	-37.81	0.00
118	10848528	TBM 88		110.47	36 35 50	116 02 36	949.97627	949.94402	-36.15	0.00
119	10848529	TBM 89		111.63	36 36 18	116 02 13	963.61128	963.58254	-34.33	0.00
120	10848530	TBM 90		112.70	36 36 44	116 01 53	978.95180	978.92710	-32.11	0.00
121	10848531	TBM 91		113.79	36 37 10	116 01 31	995.16555	995.14413	-29.56	0.00
122	10339503	B 100 USGS		114.88	36 37 37	116 01 09	1011.50364	1011.48325	-26.85	0.00

Table 5a. National Geodetic Survey Line 73988F: File 73988F.pro--Continued

Seq No.	UID	Benchmark	Spur Code	Distance (km)	Latitude	Longitude	Observed Elevation (m)	Obs Grav Ortho Ht (m)	Cumul. Refr Cor. (mm)	Cumul. Magn Cor. (mm)
123	10848532	TBM 92		116.04	36 37 19	116 00 32	1028.25914	1028.24171	-24.33	0.00
124	10848533	TBM 93		117.13	36 37 02	115 59 56	1043.57337	1043.55513	-22.31	0.00
125	10848534	TBM 94		118.18	36 36 45	115 59 21	1058.91833	1058.90099	-20.55	0.00
126	10848535	TBM 95		119.30	36 36 28	115 58 45	1075.80969	1075.79367	-19.49	0.00
127	10848536	TBM 96		120.43	36 36 09	115 58 07	1090.83537	1090.82028	-18.05	0.00
128	10323089	K 17 USGS		121.44	36 35 53	115 57 33	1105.59446	1105.58268	-16.53	0.00
129	10848537	TBM 97		122.53	36 35 42	115 56 52	1108.05948	1108.05226	-16.26	0.00
130	10848538	TBM 98		123.62	36 35 31	115 56 11	1103.71804	1103.71369	-16.78	0.00
131	10318061	L 17 USGS		124.64	36 35 20	115 55 32	1101.57336	1101.56902	-17.06	0.00
132	10848539	TBM 99		125.73	36 35 08	115 54 50	1100.41414	1100.40942	-17.17	0.00
133	10848540	TBM 100		126.81	36 34 57	115 54 08	1095.66004	1095.65403	-17.86	0.00
134	10311294	M 17 USGS		127.83	36 34 46	115 53 28	1089.67579	1089.66783	-18.69	0.00

Table 5b. National Geodetic Survey Line 73988F: File 73988F.ori

FROM SEQ NO.	TO SEQ NO.	UNCORRECTED FIELD ELEVATION DIFFERENCE (m)	LEVEL CORR. (mm)	ROD CORR. (mm)	ASTRO CORR. (mm)	TEMP. CORR. (mm)	REFR. CORR. (mm)	MAGN. CORR. (mm)	CORRECTED OBSERVED ELE. DIFFERENCE (m)	CUMULATIVE OBSERVED ELEVATION (OF TO SEQ NO) (m)	CUMULAT. OBS. GRAV ORTHO CORR. (mm)	CUMUL. REFR. CORR. (mm)
3										1227.48550	0.00	0.00
3	4	-1.15100	0.05	-0.02	-0.14	0.02	-0.13	0.00	-1.15110	1226.33440	-1.52	-0.13
4	5	3.05580	-0.04	0.05	0.38	0.03	0.33	0.00	3.05622	1229.39061	-1.49	0.19
5	6	2.36100	0.03	0.04	0.30	0.03	0.28	0.00	2.36140	1231.75202	-2.34	0.47
6	7	-9.76440	-0.06	-0.16	-1.24	0.03	-1.37	0.00	-9.76583	1221.98619	-2.86	-0.89
7	1	-7.25115	0.08	-0.12	-0.94	0.03	-1.07	0.00	-7.25211	1214.73408	-0.98	-1.96
1	8	-3.75030	-0.02	-0.06	-0.48	0.00	-0.26	0.00	-3.75086	1210.98323	-1.17	-2.22
8	9	-4.55010	0.01	-0.08	-0.59	0.02	-0.76	0.00	-4.55075	1206.43248	-3.66	-2.97
9	10	-8.61560	-0.05	-0.14	-1.10	0.01	-0.94	0.00	-8.61688	1197.81561	-5.79	-3.91
10	11	-8.99965	0.03	-0.15	-1.13	0.01	-1.17	0.00	-9.00089	1188.81472	-6.71	-5.08
11	2	-12.16985	-0.06	-0.20	-1.48	0.01	-1.82	0.00	-12.17158	1176.64315	-11.21	-6.89
2	12	-14.32417	0.08	-0.24	-2.11	-0.02	-1.65	0.00	-14.32645	1162.31670	-14.80	-8.55
12	13	-16.38130	0.02	-0.27	-2.31	-0.02	-1.92	0.00	-16.38388	1145.93282	-14.65	-10.47
13	14	-13.10285	0.00	-0.22	-1.86	-0.01	-1.77	0.00	-13.10494	1132.82788	-17.05	-12.24
14	15	-7.89155	-0.04	-0.13	-1.12	-0.01	-1.02	0.00	-7.89285	1124.93503	-16.47	-13.26
15	16	-3.16725	-0.03	-0.05	-0.46	0.00	-0.24	0.00	-3.16780	1121.76723	-14.73	-13.49
16	17	-0.14780	-0.02	0.00	-0.03	0.00	0.00	0.00	-0.14785	1121.61939	-14.57	-13.49
17	18	-0.06280	0.02	0.00	-0.01	0.00	0.00	0.00	-0.06279	1121.55660	-14.54	-13.49
18	19	-14.40910	0.03	-0.24	-2.09	0.02	-1.23	0.00	-14.41138	1107.14522	-16.88	-14.72
19	20	-8.01630	-0.03	-0.13	-1.15	0.03	-0.58	0.00	-8.01759	1099.12762	-18.25	-15.30
20	21	-2.69635	-0.03	-0.04	-0.36	0.03	-0.32	0.00	-2.69675	1096.43087	-17.72	-15.62
21	22	-8.46740	-0.03	-0.14	-1.21	0.08	-0.92	0.00	-8.46870	1087.96217	-16.30	-16.54
22	23	-12.52480	-0.04	-0.21	-1.73	0.08	-2.03	0.00	-12.52670	1075.43547	-14.93	-18.57
23	24	-2.44185	0.02	-0.04	-0.34	0.03	-0.32	0.00	-2.44219	1072.99328	-14.66	-18.88
24	25	-12.81775	-0.02	-0.21	-1.83	0.07	-1.99	0.00	-12.81974	1060.17354	-15.14	-20.87
25	26	-10.47545	0.06	-0.17	-1.59	0.08	-1.61	0.00	-10.47708	1049.69647	-16.96	-22.49
26	27	-6.32565	-0.02	-0.10	-0.95	0.08	-0.86	0.00	-6.32664	1043.36983	-19.67	-23.34
27	28	-7.98295	-0.02	-0.13	-1.14	0.08	-1.37	0.00	-7.98416	1035.38567	-24.46	-24.71
28	29	-12.51020	-0.02	-0.21	-1.74	0.06	-1.58	0.00	-12.51212	1022.87356	-33.02	-26.28
29	30	-10.22170	-0.03	-0.17	-1.38	0.06	-1.24	0.00	-10.22323	1012.65033	-42.54	-27.52
30	31	-11.60135	-0.10	-0.19	-1.48	0.04	-1.27	0.00	-11.60308	1001.04725	-46.16	-28.79
31	32	7.22790	-0.01	0.12	1.13	0.03	0.32	0.00	7.22949	1008.27674	-45.84	-28.47
31	33	-8.72700	0.07	-0.14	-1.24	0.01	-0.43	0.00	-8.72831	992.31894	-48.93	-29.21
33	34	-14.93020	0.01	-0.25	-1.82	0.02	-0.54	0.00	-14.93224	977.38670	-52.94	-29.77
34	35	-11.37295	-0.09	-0.19	-1.50	0.03	-0.65	0.00	-11.37471	966.01200	-54.35	-30.41
35	36	-0.37750	0.00	-0.01	-0.05	0.00	0.00	0.00	-0.37756	965.63444	-54.34	-30.41
36	37	-0.01185	0.02	0.00	0.00	0.00	0.00	0.00	-0.01183	965.62261	-54.35	-30.41
37	38	-9.96467	0.07	-0.17	-1.14	0.04	-0.66	0.00	-9.96588	955.65672	-55.14	-31.08
38	39	-11.03550	0.10	-0.18	-1.62	0.05	-1.37	0.00	-11.03714	944.61958	-54.82	-32.45
39	40	-9.12280	0.03	-0.15	-1.37	0.06	-1.32	0.00	-9.12423	935.49535	-54.81	-33.76
40	41	-10.25030	0.09	-0.17	-1.58	0.06	-1.61	0.00	-10.25191	925.24345	-54.15	-35.37
41	42	-10.58785	-0.10	-0.18	-1.65	0.06	-1.79	0.00	-10.58972	914.65373	-54.22	-37.16
42	43	-4.30250	-0.01	-0.07	-0.67	0.01	-0.68	0.00	-4.30324	910.35049	-54.76	-37.84
43	44	-9.52615	-0.03	-0.16	-1.47	0.03	-1.34	0.00	-9.52778	900.82272	-56.62	-39.18
44	45	-9.47545	0.02	-0.16	-1.46	0.04	-1.37	0.00	-9.47701	891.34571	-58.61	-40.55
45	46	-10.04670	-0.02	-0.17	-1.58	0.03	-1.43	0.00	-10.04845	881.29726	-59.47	-41.98

Table 5b. National Geodetic Survey Line 73988F: File 73988F.ori--Continued

FROM SEQ NO.	TO SEQ NO.	UNCORRECTED FIELD ELEVATION DIFFERENCE	LEVEL CORR.	ROD CORR.	ASTRO CORR.	TEMP. CORR.	REFR. CORR.	MAGN. CORR.	CORRECTED OBSERVED ELE. DIFFERENCE	CUMULATIVE OBSERVED ELEVATION (OF TO SEQ NO)	CUMULAT. OBS. GRAV ORTHO CORR.	CUMUL. REFR. CORR.
		(m)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(m)	(m)	(mm)	(mm)
46	47	-8.51985	-0.04	-0.14	-1.11	0.05	-1.26	0.00	-8.52109	872.77617	-59.16	-43.24
47	48	-3.76535	0.03	-0.06	-0.57	0.00	-0.60	0.00	-3.76596	869.01022	-59.58	-43.83
48	49	-9.26210	0.03	-0.15	-1.40	0.02	-1.35	0.00	-9.26360	859.74662	-61.63	-45.18
49	50	-7.46510	0.02	-0.12	-1.12	0.02	-1.01	0.00	-7.46630	852.28032	-62.78	-46.18
50	51	-6.75262	-0.03	-0.11	-0.91	0.06	-0.99	0.00	-6.75362	845.52670	-65.10	-47.17
51	52	-6.37895	-0.03	-0.11	-0.92	0.03	-0.72	0.00	-6.37998	839.14672	-66.57	-47.89
52	53	-5.06100	-0.03	-0.08	-0.71	0.02	-0.53	0.00	-5.06180	834.08492	-66.78	-48.42
53	54	-7.71655	-0.01	-0.13	-1.02	0.03	-0.75	0.00	-7.71768	826.36724	-66.34	-49.17
54	55	-3.82155	-0.02	-0.06	-0.40	0.00	-0.21	0.00	-3.82204	822.54520	-65.73	-49.38
55	56	-4.39270	0.02	-0.07	-0.48	0.00	-0.39	0.00	-4.39323	818.15197	-63.72	-49.77
56	57	-6.60675	0.08	-0.11	-0.75	0.01	-0.76	0.00	-6.60752	811.54446	-63.42	-50.53
57	58	-0.56580	-0.04	-0.01	-0.07	0.00	-0.05	0.00	-0.56592	810.97854	-63.38	-50.58
58	59	-10.87590	0.02	-0.18	-1.30	0.02	-1.70	0.00	-10.87735	800.10119	-65.10	-52.27
59	60	-7.79985	0.00	-0.13	-0.98	0.03	-1.26	0.00	-7.80094	792.30026	-65.46	-53.53
60	61	-6.75350	-0.07	-0.11	-0.92	0.03	-1.14	0.00	-6.75456	785.54570	-64.30	-54.66
61	62	-1.02070	0.03	-0.02	-0.14	0.04	-0.16	0.00	-1.02078	784.52492	-59.89	-54.82
62	63	0.71585	0.03	0.01	0.09	0.04	0.10	0.00	0.71601	785.24093	-57.11	-54.72
63	64	4.06550	-0.01	0.07	0.51	0.07	0.62	0.00	4.06613	789.30706	-55.18	-54.10
64	65	-1.58645	0.06	-0.03	-0.18	0.03	-0.27	0.00	-1.58658	787.72048	-54.66	-54.37
65	66	4.22620	0.11	0.07	0.51	0.06	0.66	0.00	4.22695	791.94743	-51.42	-53.71
66	67	-3.73385	-0.02	-0.06	-0.45	0.02	-0.42	0.00	-3.73436	788.21307	-50.94	-54.13
67	68	-0.24335	-0.02	0.00	-0.03	0.00	-0.02	0.00	-0.24339	787.96968	-51.01	-54.15
68	69	-5.80070	-0.02	-0.10	-0.75	0.00	-0.71	0.00	-5.80156	782.16812	-51.37	-54.86
69	70	-0.08250	0.01	0.00	-0.01	0.00	-0.01	0.00	-0.08250	782.08562	-51.73	-54.87
70	71	-6.52400	-0.01	-0.11	-0.70	0.02	-1.00	0.00	-6.52480	775.56083	-52.63	-55.87
71	72	4.27220	0.01	0.07	0.49	0.02	0.51	0.00	4.27279	779.83361	-53.66	-55.36
72	73	6.89890	0.01	0.11	0.83	0.02	0.79	0.00	6.89987	786.73348	-55.06	-54.58
73	74	6.48860	0.00	0.11	0.81	0.02	1.33	0.00	6.48955	793.22303	-55.48	-53.25
74	75	3.72445	0.00	0.06	0.46	0.02	0.71	0.00	3.72499	796.94802	-55.93	-52.54
75	76	4.24025	0.01	0.07	0.54	0.02	0.81	0.00	4.24089	801.18890	-54.78	-51.74
76	77	4.20945	0.01	0.07	0.52	0.01	0.63	0.00	4.21006	805.39896	-53.23	-51.11
77	78	1.20975	0.00	0.02	0.16	0.00	0.20	0.00	1.20993	806.60889	-52.51	-50.91
78	79	1.96450	0.00	0.03	0.25	0.00	0.38	0.00	1.96479	808.57368	-50.83	-50.54
79	80	2.87315	0.00	0.05	0.38	0.00	0.51	0.00	2.87358	811.44726	-48.60	-50.03
80	81	-0.75860	0.00	-0.01	-0.10	0.00	-0.12	0.00	-0.75872	810.68854	-46.04	-50.15
81	82	-0.52730	0.02	-0.01	-0.07	0.00	-0.09	0.00	-0.52737	810.16118	-44.91	-50.24
82	83	0.22520	0.02	0.00	0.03	-0.02	0.03	0.00	0.22524	810.38641	-46.85	-50.21
83	84	-0.53410	-0.02	-0.01	-0.07	-0.01	-0.05	0.00	-0.53420	809.85221	-49.61	-50.26
84	85	10.46460	0.00	0.17	1.24	-0.02	0.84	0.00	10.46600	820.31821	-53.66	-49.42
85	86	15.67615	0.00	0.26	1.62	-0.03	0.74	0.00	15.67800	835.99621	-55.87	-48.68
86	87	15.82705	0.00	0.26	1.74	0.01	1.65	0.00	15.82907	851.82527	-54.81	-47.03
87	88	13.46570	0.07	0.22	1.54	0.00	1.28	0.00	13.46752	865.29280	-54.37	-45.75
88	89	6.88220	-0.05	0.11	0.88	0.00	0.99	0.00	6.88315	872.17594	-54.78	-44.76
89	90	-5.84535	0.01	-0.10	-0.73	0.00	-0.95	0.00	-5.84617	866.32978	-53.23	-45.71
90	91	-3.62065	-0.08	-0.06	-0.48	0.01	-0.50	0.00	-3.62126	862.70852	-49.64	-46.20
91	92	-2.08170	-0.04	-0.03	-0.27	0.01	-0.29	0.00	-2.08203	860.62649	-50.26	-46.50

Table 5b. National Geodetic Survey Line 73988F: File 73988F.ori--Continued

FROM SEQ NO.	TO SEQ NO.	UNCORRECTED FIELD ELEVATION DIFFERENCE (m)	LEVEL CORR. (mm)	ROD CORR. (mm)	ASTRO CORR. (mm)	TEMP. CORR. (mm)	REFR. CORR. (mm)	MAGN. CORR. (mm)	CORRECTED OBSERVED ELE. DIFFERENCE (m)	CUMULATIVE OBSERVED ELEVATION (OF TO SEQ NO) (m)	CUMULAT. OBS. GRAV ORTHO CORR. (mm)	CUMUL. REFR. CORR. (mm)
92	93	-5.60440	0.02	-0.09	-0.67	0.01	-0.72	0.00	-5.60513	855.02136	-52.63	-47.21
93	94	-8.20830	-0.01	-0.14	-0.93	0.01	-0.95	0.00	-8.20938	846.81198	-54.21	-48.16
94	95	-4.72635	0.00	-0.08	-0.54	0.01	-0.79	0.00	-4.72697	842.08501	-53.91	-47.37
95	96	-0.89325	-0.03	-0.01	-0.09	-0.03	-0.11	0.00	-0.89340	841.19162	-53.20	-47.48
96	97	0.40325	0.00	0.01	0.04	-0.03	0.06	0.00	0.40326	841.59488	-52.52	-47.42
97	98	-1.60425	0.02	-0.03	-0.15	-0.04	-0.39	0.00	-1.60446	839.99042	-52.72	-47.81
98	99	0.30650	-0.03	0.00	0.03	-0.04	0.05	0.00	0.30646	840.29688	-52.63	-47.77
99	100	0.88350	0.00	0.01	0.10	-0.03	0.13	0.00	0.88358	841.18046	-51.35	-47.63
100	101	1.38910	-0.01	0.02	0.15	-0.03	0.19	0.00	1.38922	842.56969	-49.70	-47.45
101	102	-0.16285	-0.04	0.00	-0.02	-0.03	-0.03	0.00	-0.16293	842.40675	-47.70	-47.47
102	103	-0.05250	0.00	0.00	0.00	-0.01	0.00	0.00	-0.05252	842.35423	-47.41	-47.48
103	104	-0.38055	-0.02	-0.01	-0.03	-0.05	-0.06	0.00	-0.38066	841.97357	-46.99	-47.53
104	105	2.59640	-0.01	0.04	0.24	-0.05	0.28	0.00	2.59662	844.57019	-47.73	-47.25
105	106	1.98900	0.15	0.03	0.23	0.00	0.18	0.00	1.98941	846.55960	-47.77	-46.99
106	107	2.37020	0.04	0.04	0.29	0.02	0.19	0.00	2.37059	848.93019	-49.20	-46.76
107	108	9.49385	0.00	0.16	1.10	0.02	1.10	0.00	9.49513	858.42531	-47.39	-45.66
108	109	6.66850	0.03	0.11	0.78	0.02	0.82	0.00	6.66944	865.09475	-44.19	-44.84
109	110	0.17715	-0.02	0.00	0.02	0.00	0.02	0.00	0.17716	865.27191	-43.78	-44.82
110	111	-3.22820	0.05	-0.05	-0.38	0.00	-0.36	0.00	-3.22858	862.04333	-45.16	-45.18
111	112	8.26265	0.01	0.14	0.98	0.01	0.91	0.00	8.26379	870.30711	-45.95	-44.27
112	113	12.65830	-0.03	0.21	1.51	0.00	1.33	0.00	12.66000	882.96711	-44.71	-42.94
113	114	12.26345	0.03	0.20	1.42	-0.02	1.28	0.00	12.26508	895.23219	-43.03	-41.66
114	115	14.95820	0.00	0.25	1.72	-0.03	1.63	0.00	14.96014	910.19233	-40.91	-40.03
115	116	14.18905	0.05	0.24	1.56	-0.03	1.35	0.00	14.19087	924.38320	-37.72	-38.68
116	117	10.92255	-0.01	0.18	1.10	-0.03	0.87	0.00	10.92380	935.30699	-35.61	-37.81
117	118	14.66735	-0.02	0.24	1.75	-0.04	1.66	0.00	14.66928	949.97627	-32.25	-36.15
118	119	13.63320	-0.03	0.23	1.67	-0.05	1.82	0.00	13.63501	963.61128	-28.74	-34.33
119	120	15.33845	-0.05	0.25	1.92	-0.05	2.22	0.00	15.34052	978.95180	-24.70	-32.11
120	121	16.21155	0.03	0.27	1.96	-0.06	2.55	0.00	16.21375	995.16555	-21.42	-29.56
121	122	16.33595	0.00	0.27	1.93	-0.06	2.71	0.00	16.33808	1011.50364	-20.39	-26.85
122	123	16.75330	-0.02	0.28	1.95	-0.01	2.52	0.00	16.75550	1028.25914	-17.43	-24.33
123	124	15.31220	0.00	0.25	1.80	-0.02	2.03	0.00	15.31424	1043.57337	-18.24	-22.31
124	125	15.34295	0.02	0.25	1.75	-0.01	1.76	0.00	15.34496	1058.91833	-17.34	-20.55
125	126	16.88885	0.00	0.28	2.23	0.01	1.07	0.00	16.89136	1075.80969	-16.02	-19.49
126	127	15.02350	0.00	0.25	1.94	-0.01	1.44	0.00	15.02568	1090.83537	-15.09	-18.05
127	128	14.75685	0.00	0.24	2.01	-0.01	1.52	0.00	14.75909	1105.59446	-11.78	-16.53
128	129	2.46465	0.00	0.04	0.35	-0.02	0.28	0.00	2.46502	1108.05948	-7.22	-16.26
129	130	-4.34078	0.00	-0.07	-0.58	-0.01	-0.52	0.00	-4.34144	1103.71804	-4.35	-16.78
130	131	-2.14430	-0.03	-0.04	-0.30	-0.01	-0.28	0.00	-2.14468	1101.57336	-4.34	-17.06
131	132	-1.15900	-0.02	-0.02	-0.17	-0.02	-0.11	0.00	-1.15922	1100.41414	-4.72	-17.17
132	133	-4.75330	0.00	-0.08	-0.70	-0.02	-0.70	0.00	-4.75410	1095.66004	-6.01	-17.86
133	134	-5.98320	-0.03	-0.10	-0.90	-0.03	-0.83	0.00	-5.98425	1089.67579	-7.96	-18.69

Table 5c. National Geodetic Survey Line 73988F: File 73988F.prn(=.dat)

```
    512          73988/F        1   7191510021010       9 1  1.11                  211G11       B
7.2524                       MT -1.00 -0.13  0.12  1.07 -0.01  0.92  0.001030598510848443
   1612          73988/F        1   8191510041030       3 1  0.26                  211G11       F
-3.7493                      MT  0.21 -0.05 -0.06 -0.43  0.01 -0.27  0.001030598510848444
   2112          73988/F        2  11191510041335       9 1  1.23                  211G11       B
12.1694                      MT -0.97  0.01  0.20  1.58  0.01  2.18  0.001028395610848447
   1012          73988/F        2  1119151004 830       8 1  1.23                  211G11       B
12.1723                      MT -0.97  0.05  0.20  1.29 -0.06  1.18  0.001028395610848447
   2312          73988/F        2  12191510041425       8 1  1.11                  211G11       F
-14.3243                     MT  0.70  0.11 -0.24 -1.89 -0.02 -2.44  0.001028395610848448
   7212          73988/F        2  12191510061550       7 1  1.11                  211G11       F
 -14.32430                   MT  0.70  0.10 -0.24 -2.21 -0.01 -1.04  0.001028395610848448
   1112          73988/F        3   419151004 840       4 1  0.59                  211G11       F
-1.14970                     MT  0.54  0.01 -0.02 -0.10  0.03 -0.11  0.001033109510848440
    912          73988/F        4   3191510021140       5 1  0.59                  211G11       B
1.15230                      MT -0.54 -0.08  0.02  0.18  0.00  0.15  0.001084844010331095
   1212          73988/F        4   519151004 855       8 1  1.05                  211G11       F
3.05560                      MT  0.96 -0.01  0.05  0.29  0.05  0.26  0.001084844010848441
    812          73988/F        5   4191510021125       9 1  1.05                  211G11       B
-3.05600                     MT -0.96  0.07 -0.05 -0.47  0.00 -0.39  0.001084844110848440
   1312          73988/F        5   619151004 920       8 1  1.07                  211G11       F
   2.36000                   MT  0.98  0.04  0.04  0.24  0.05  0.26  0.001084844110848442
    712          73988/F        6   5191510021100       9 1  1.07                  211G11       B
  -2.36200                   MT -0.98 -0.03 -0.04 -0.36 -0.01 -0.30  0.001084844210848441
   1412          73988/F        6   719151004 940       8 1  1.13                  211G11       F
  -9.76570                   MT  1.03  0.05 -0.16 -1.02  0.05 -1.60  0.001084844210848443
   1512          73988/F        7   1191510041005       8 1  1.11                  211G11       F
-7.2499                      MT  1.00  0.02 -0.12 -0.80  0.04 -1.21  0.001084844310305985
    612          73988/F        7   6191510021040      10 1  1.13                  211G11       B
   9.76310                   MT -1.03  0.17  0.16  1.46 -0.01  1.13  0.001084844310848442
    412          73988/F        8   1191510021005       3 1  0.26                  211G11       B
3.7513                       MT -0.21 -0.01  0.06  0.53  0.00  0.25  0.001084844410305985
   1712          73988/F        8   9191510041045       8 1  1.12                  211G11       F
  -4.55030                   MT  0.91  0.02 -0.08 -0.54  0.02 -0.84  0.001084844410848445
    312          73988/F        9   819151002 940       8 1  1.12                  211G11       B
   4.54990                   MT -0.91  0.00  0.08  0.64 -0.01  0.67  0.001084844510848444
   1812          73988/F        9  10191510041105       9 1  0.96                  211G11       F
  -8.61430                   MT  0.78 -0.09 -0.14 -1.05  0.01 -0.97  0.001084844510848446
    212          73988/F       10   919151002 920       8 1  0.96                  211G11       B
   8.61690                   MT -0.78  0.01  0.14  1.14 -0.01  0.91  0.001084844610848445
   1912          73988/F       10  11191510041135      10 1  1.12                  211G11       F
  -8.99830                   MT  0.90 -0.01 -0.15 -1.12  0.01 -1.13  0.001084844610848447
   2212          73988/F       11   2191510041400       9 1  1.23                  211G11       F
-12.1713                     MT  0.97 -0.02 -0.20 -1.56 -0.01 -2.06  0.001084844710283956
   2012          73988/F       11   2191510041305      10 1  1.22                  211G11       F
-12.1664                     MT  0.97 -0.14 -0.20 -1.48 -0.01 -1.85  0.001084844710283956
    112          73988/F       11  1019151002 855       7 1  1.12                  211G11       B
   9.00100                   MT -0.90 -0.06  0.15  1.13 -0.01  1.20  0.001084844710848446
   7112          73988/F       12   2191510061515       8 1  1.11                  211G11       B
14.3239                      MT -0.70 -0.04  0.24  2.23  0.02  1.48  0.001084844810283956
   2412          73988/F       12  13191510041450       8 1  1.04                  211G11       F
 -16.38090                   MT  0.64 -0.01 -0.27 -2.06 -0.01 -2.16  0.001084844810848449
   7012          73988/F       13  12191510061455       8 1  1.03                  211G11       B
  16.38170                   MT -0.64 -0.05  0.27  2.56  0.02  1.68  0.001084844910848448
   2512          73988/F       13  14191510041515       8 1  1.13                  211G11       F
 -13.10400                   MT  0.69 -0.02 -0.22 -1.62  0.00 -1.49  0.001084844910848450
   6912          73988/F       14  13191510061435       8 1  1.13                  211G11       B
  13.10170                   MT -0.69 -0.02  0.22  2.10  0.02  2.06  0.001084845010848449
   2612          73988/F       14  15191510041535       7 1  1.12                  211G11       F
  -7.89140                   MT  0.68 -0.12 -0.13 -0.96  0.00 -0.83  0.001084845010848451
   6812          73988/F       15  14191510061420       8 1  1.12                  211G11       B
   7.89170                   MT -0.68 -0.04  0.13  1.28  0.02  1.20  0.001084845110848450
   2712          73988/F       15  16191510041555       3 1  0.43                  211G11       F
-3.16760                     MT  0.26  0.01 -0.05 -0.39  0.00 -0.18  0.001084845110848452
   6712          73988/F       16  15191510061410       4 1  0.43                  211G11       B
   3.16690                   MT -0.26  0.08  0.05  0.53  0.01  0.29  0.001084845210848451
   6512          73988/F       16  17191510061404       1 1  0.05                  211G11       F
-0.1473                      MT  0.03 -0.02  0.00 -0.02  0.00  0.00  0.001084845210267539
   6412          73988/F       17  16191510061402       1 1  0.05                  211G11       B
   0.14830                   MT -0.03  0.02  0.00  0.03  0.00  0.00  0.001026753910848452
   6612          73988/F       17  18191510061405       1 1  0.05                  211G11       F
-0.0633                      MT  0.05  0.02  0.00 -0.01  0.00  0.00  0.001026753910848453
   6312          73988/F       18  17191510061400       1 1  0.05                  211G11       B
   0.06230                   MT -0.05 -0.02  0.00  0.01  0.00  0.00  0.001084845310267539
   2812          73988/F       18  19191510041603       7 1  1.01                  211G11       F
 -14.40860                   MT  0.86 -0.04 -0.24 -1.73  0.01 -0.73  0.001084845310848454
   6212          73988/F       19  18191510061335       9 1  1.01                  211G11       B
  14.40960                   MT -0.86 -0.10  0.24  2.45 -0.03  1.72  0.001084845410848453
```

3012	73988/F		19 20191510041620	6 1 1.01		211G11	F
-8.01760		MT	0.84 0.00 -0.13 -0.98	0.01 -0.27	0.001084845410848455		
6112	73988/F		20 19191510061315	9 1 1.00		211G11	B
8.01500		MT	-0.84 0.06 0.13 1.33	-0.04 0.90	0.001084845510848454		
5012	73988/F		20 2119151006 835	3 1 0.48		211G11	F
-2.69670		MT	0.40 0.01 -0.04 -0.24	0.03 -0.28	0.001084845510848456		
6012	73988/F		21 20191510061305	4 1 0.48		211G11	B
2.69600		MT	-0.40 0.07 0.04 0.47	-0.02 0.35	0.001084845610848455		
7312	73988/F		21 2219151007 850	9 1 1.12		211G11	F
-8.46880		MT	0.93 -0.05 -0.14 -1.03	0.07 -0.60	0.001084845610848457		
5912	73988/F		22 21191510061135	9 1 1.12		211G11	B
8.46600		MT	-0.93 0.01 0.14 1.39	-0.08 1.24	0.001084845710848456		
7412	73988/F		22 2319151007 910	8 1 1.13		211G11	F
-12.52530		MT	0.93 0.04 -0.21 -1.48	0.08 -1.53	0.001084845710342735		
5812	73988/F		23 22191510061110	8 1 1.13		211G11	B
12.52430		MT	-0.93 0.11 0.21 1.98	-0.08 2.53	0.001034273510848457		
7512	73988/F		23 2419151007 930	3 1 0.37		211G11	F
-2.44130		MT	0.27 0.00 -0.04 -0.31	0.02 -0.28	0.001034273510848458		
5712	73988/F		24 23191510061100	3 1 0.37		211G11	B
2.44240		MT	-0.27 -0.03 0.04 0.37	-0.03 0.35	0.001084845810342735		
7812	73988/F		24 25191510071020	9 1 1.11		211G11	F
-12.81670		MT	0.79 -0.06 -0.21 -1.92	0.08 -1.78	0.001084845810848459		
7612	73988/F		24 2519151007 940	8 1 1.11		211G11	F
-12.81530		MT	0.79 -0.01 -0.21 -1.69	0.06 -2.06	0.001084845810848459		
7712	73988/F		25 24191510071000	9 1 1.11		211G11	B
12.81770		MT	-0.79 0.03 0.21 1.79	-0.07 1.70	0.001084845910848458		
5612	73988/F		25 24191510061040	8 1 1.11		211G11	B
12.82130		MT	-0.79 -0.01 0.21 1.92	-0.08 2.43	0.001084845910848458		
7912	73988/F		25 26191510071045	9 1 1.11		211G11	F
-10.47550		MT	0.78 0.03 -0.17 -1.63	0.08 -1.46	0.001084845910848460		
5512	73988/F		26 25191510061015	8 1 1.10		211G11	B
10.47540		MT	-0.78 -0.09 0.17 1.55	-0.07 1.77	0.001084846010848459		
8012	73988/F		26 27191510071105	10 1 1.12		211G11	F
-6.32530		MT	0.78 0.01 -0.10 -1.04	0.09 -0.72	0.001084846010848461		
5412	73988/F		27 2619151006 950	8 1 1.12		211G11	B
6.32600		MT	-0.78 0.05 0.10 0.85	-0.07 0.99	0.001084846110848460		
8112	73988/F		27 28191510071135	9 1 1.12		211G11	F
-7.98190		MT	0.77 -0.03 -0.13 -1.31	0.09 -1.17	0.001084846110321566		
5312	73988/F		28 2719151006 930	7 1 1.12		211G11	B
7.98400		MT	-0.77 0.00 0.13 0.97	-0.06 1.56	0.001032156610848461		
8212	73988/F		28 29191510071310	9 1 1.01		211G11	F
-12.50940		MT	0.62 -0.03 -0.21 -2.03	0.08 -1.55	0.001032156610848462		
5212	73988/F		29 2819151006 905	7 1 1.02		211G11	B
12.51100		MT	-0.62 0.01 0.21 1.45	-0.03 1.60	0.001084846210321566		
8312	73988/F		29 30191510071335	9 1 1.06		211G11	F
-10.22230		MT	0.65 -0.07 -0.17 -1.62	0.08 -1.30	0.001084846210848463		
5112	73988/F		30 2919151006 850	7 1 1.06		211G11	B
10.22110		MT	-0.65 0.00 0.17 1.14	-0.03 1.17	0.001084846310848462		
8412	73988/F		30 31191510071400	8 1 1.02		211G11	F
-11.60230		MT	0.61 -0.13 -0.19 -1.81	0.07 -1.70	0.001084846310308204		
4912	73988/F		31 3019151006 820	7 1 1.02		211G11	B
11.60040		MT	-0.61 0.07 0.19 1.14	-0.01 0.84	0.001030820410848463		
8512	73988/F		31 32191510071430	5 1 0.38		211G11	F
7.22860		MT	0.12 0.03 0.12 1.13	0.03 0.34	0.001030820410308203		
8712	73988/F		31 33191510071500	9 1 1.15		211G11	F
-8.72690		MT	0.84 0.11 -0.14 -1.36	0.02 -0.80	0.001030820410848464		
8612	73988/F		32 31191510071445	5 1 0.38		211G11	B
-7.22720		MT	-0.12 0.02 -0.12 -1.13	-0.03 -0.31	0.001030820310308204		
9012	73988/F		33 31191510071630	9 1 1.16		211G11	B
8.72710		MT	-0.84 -0.02 0.14 1.13	0.00 0.05	0.001084846410308204		
8812	73988/F		33 34191510071525	9 1 1.27		211G11	F
-14.92600		MT	0.92 0.10 -0.25 -2.24	0.01 -1.44	0.001084846410848465		
9112	73988/F		33 3419151008 745	9 1 1.27		211G11	F
-14.92870		MT	0.92 -0.01 -0.25 -1.40	0.04 -0.44	0.001084846410848465		
8912	73988/F		34 33191510071600	9 1 1.28		211G11	B
14.93180		MT	-0.92 -0.01 0.25 1.79	-0.01 0.30	0.001084846510848464		
4812	73988/F		34 33191510051640	7 1 1.28		211G11	B
14.93430		MT	-0.92 0.06 0.25 1.85	-0.01 -0.04	0.001084846510848464		
9212	73988/F		34 3519151008 825	7 1 1.02		211G11	F
-11.37330		MT	0.73 -0.05 -0.19 -1.36	0.05 -0.86	0.001084846510848466		
2912	73988/F		35 34191510041620	6 1 1.02		211G11	B
11.37260		MT	-0.73 0.14 0.19 1.64	-0.01 0.43	0.001084846610848465		
9312	73988/F		35 3619151008 845	1 1 0.04		211G11	F
-0.37730		MT	0.03 0.03 -0.01 -0.05	0.00 0.00	0.001084846610290869		
9612	73988/F		36 3519151008 850	1 1 0.04		211G11	B
0.37770		MT	-0.03 0.03 0.01 0.05	0.00 0.00	0.001029086910848466		
9412	73988/F		36 3719151008 847	1 1 0.04		211G11	F
-0.01170		MT	0.03 0.02 0.00 0.00	0.00 0.00	0.001029086910848467		

Table 5c. National Geodetic Survey Line 73988F: File 73988F.prn(=.dat)--Continued

```
  9512          73988/F        37  3619151008 848       1 1  0.04                    211G11          B
  0.01200                    MT -0.03 -0.02  0.00  0.00  0.00  0.00  0.001084846710290869
 11412          73988/F        37  3819151009 740       8 1  1.09                    211G11          F
 -9.96600                    MT  0.87  0.06 -0.17 -0.78  0.02 -0.20  0.001084846710848468
  9712          73988/F        37  3819151008 855       8 1  1.10                    211G11          F
 -9.96100                    MT  0.87  0.06 -0.17 -1.29  0.08 -0.92  0.001084846710848468
 11512          73988/F        38  3719151009 805       8 1  1.09                    211G11          B
  9.96460                    MT -0.87 -0.14  0.17  1.00 -0.04  0.44  0.001084846810848467
  4712          73988/F        38  37191510051530       7 1  1.10                    211G11          B
  9.96710                    MT -0.87  0.00  0.17  1.49 -0.01  1.09  0.001084846810848467
  9812          73988/F        38  3919151008 925       8 1  1.15                    211G11          F
-11.03470                    MT  0.90  0.17 -0.18 -1.52  0.09 -1.71  0.001084846810848469
  4612          73988/F        39  38191510051505       9 1  1.15                    211G11          B
 11.03630                    MT -0.90 -0.04  0.18  1.72 -0.01  1.03  0.001084846910848468
  9912          73988/F        39  4019151008 950       8 1  1.09                    211G11          F
 -9.12300                    MT  0.84 -0.02 -0.15 -1.31  0.10 -1.36  0.001084846910848470
  4512          73988/F        40  39191510051440       8 1  1.08                    211G11          B
  9.12260                    MT -0.84 -0.09  0.15  1.42 -0.01  1.27  0.001084847010848469
 10012          73988/F        40  41191510081010       8 1  1.09                    211G11          F
-10.25170                    MT  0.83  0.19 -0.17 -1.54  0.10 -1.65  0.001084847010848471
  4412          73988/F        41  40191510051420       8 1  1.09                    211G11          B
 10.24890                    MT -0.83  0.01  0.17  1.62 -0.01  1.57  0.001084847110848470
 10112          73988/F        41  42191510081035       8 1  1.08                    211G11          F
-10.58700                    MT  0.82 -0.20 -0.18 -1.65  0.10 -1.81  0.001084847110360824
  4312          73988/F        42  41191510051355       8 1  1.09                    211G11          B
 10.58870                    MT -0.82  0.00  0.18  1.65 -0.02  1.77  0.001036082410848471
 10212          73988/F        42  43191510081100       3 1  0.38                    211G11          F
 -4.30230                    MT  0.21  0.03 -0.07 -0.67  0.03 -0.70  0.001036082410848472
  4212          73988/F        43  42191510051345       3 1  0.38                    211G11          B
  4.30270                    MT -0.21  0.05  0.07  0.66  0.01  0.66  0.001084847210360824
 10312          73988/F        43  44191510081115       9 1  1.09                    211G11          F
 -9.52630                    MT  0.59 -0.04 -0.16 -1.51  0.08 -1.35  0.001084847210848473
  4112          73988/F        44  43191510051320       9 1  1.09                    211G11          B
  9.52600                    MT -0.59  0.01  0.16  1.43  0.02  1.33  0.001084847310848472
 10412          73988/F        44  45191510081135       9 1  1.08                    211G11          F
 -9.47460                    MT  0.59  0.00 -0.16 -1.50  0.07 -1.35  0.001084847310848474
  4012          73988/F        45  44191510051140       9 1  1.08                    211G11          B
  9.47630                    MT -0.59 -0.04  0.16  1.42 -0.01  1.39  0.001084847410848473
 10512          73988/F        45  46191510081300       9 1  1.08                    211G11          F
-10.04510                    MT  0.58 -0.04 -0.17 -1.65  0.03 -1.40  0.001084847410848475
  3912          73988/F        46  45191510051115       9 1  1.09                    211G11          B
 10.04830                    MT -0.58  0.00  0.17  1.51 -0.02  1.46  0.001084847510848474
 10612          73988/F        46  47191510081335       8 1  1.08                    211G11          F
 -8.51900                    MT  0.57 -0.01 -0.14 -1.40  0.01 -1.40  0.001084847510341122
 11612          73988/F        46  4719151009 845       7 1  1.08                    211G11          F
 -8.51860                    MT  0.57 -0.14 -0.14 -0.90  0.07 -0.94  0.001084847510341122
  3812          73988/F        47  46191510051055       8 1  1.08                    211G11          B
  8.52360                    MT -0.57  0.03  0.14  1.21 -0.03  1.52  0.001034112210848475
 11712          73988/F        47  4619151009 905       7 1  1.09                    211G11          B
  8.51820                    MT -0.57 -0.03  0.14  0.94 -0.08  1.16  0.001034112210848475
 10712          73988/F        47  48191510081355       3 1  0.45                    211G11          F
 -3.76500                    MT  0.23 -0.05 -0.06 -0.62  0.00 -0.74  0.001034112210848476
  3712          73988/F        48  47191510051045       4 1  0.45                    211G11          B
  3.76570                    MT -0.23 -0.10  0.06  0.53 -0.01  0.45  0.001084847610341122
 10812          73988/F        48  49191510081400       8 1  1.09                    211G11          F
 -9.26060                    MT  0.54  0.04 -0.15 -1.50  0.00 -1.47  0.001084847610848477
  3612          73988/F        49  48191510051020       9 1  1.09                    211G11          B
  9.26360                    MT -0.54 -0.02  0.15  1.30 -0.04  1.22  0.001084847710848476
 10912          73988/F        49  50191510081420       8 1  1.09                    211G11          F
 -7.46450                    MT  0.54  0.04 -0.12 -1.21 -0.01 -1.09  0.001084847710848478
  3512          73988/F        50  49191510051000       9 1  1.09                    211G11          B
  7.46570                    MT -0.54  0.00  0.12  1.03 -0.05  0.92  0.001084847810848477
 11012          73988/F        50  51191510081440       7 1  1.09                    211G11          F
 -6.75640                    MT  0.53  0.00 -0.11 -1.09 -0.01 -1.19  0.001084847810848479
 11812          73988/F        50  5119151009 940       8 1  1.09                    211G11          F
 -6.75200                    MT  0.53 -0.11 -0.11 -0.81  0.09 -0.98  0.001084847810848479
 11912          73988/F        51  50191510091000       8 1  1.09                    211G11          B
  6.75020                    MT -0.53  0.00  0.11  0.84 -0.09  1.05  0.001084847910848478
  3412          73988/F        51  5019151005 935       9 1  1.09                    211G11          B
  6.75190                    MT -0.53  0.01  0.11  0.90 -0.06  0.75  0.001084847910848478
 11112          73988/F        51  52191510081455       7 1  1.09                    211G11          F
 -6.37720                    MT  0.53 -0.01 -0.11 -1.01 -0.01 -0.88  0.001084847910321565
  3312          73988/F        52  5119151005 915       9 1  1.09                    211G11          B
  6.38070                    MT -0.53  0.04  0.11  0.83 -0.06  0.55  0.001032156510848479
 11212          73988/F        52  53191510081510       5 1  0.77                    211G11          F
 -5.06200                    MT  0.36 -0.07 -0.08 -0.79 -0.01 -0.62  0.001032156510848480
  3212          73988/F        53  5219151005 900       6 1  0.77                    211G11          B
  5.06000                    MT -0.36 -0.01  0.08  0.63 -0.05  0.44  0.001084848010321565
```

11312	73988/F		53 54191510081520	7 1 1.15	211G11	F
-7.71770		MT	0.53 -0.01 -0.13 -1.19	-0.02 -0.97	0.001084848010848481	
3112	73988/F		54 5319151005 820	8 1 1.15	211G11	B
7.71540		MT	-0.53 0.01 0.13 0.85	-0.08 0.53	0.001084848110848480	
13212	73988/F		54 5519151011 820	5 1 0.70	211G11	F
-3.82240		MT	0.32 0.05 -0.06 -0.28	0.00 -0.24	0.001084848110848482	
13112	73988/F		55 54191510091555	5 1 0.70	211G11	B
3.82070		MT	-0.32 0.09 0.06 0.53	0.01 0.18	0.001084848210848481	
13312	73988/F		55 5619151011 850	7 1 1.09	211G11	F
-4.39240		MT	0.49 0.02 -0.07 -0.34	0.02 -0.45	0.001084848210848483	
13012	73988/F		56 55191510091540	7 1 1.09	211G11	B
4.39300		MT	-0.49 -0.02 0.07 0.62	0.01 0.34	0.001084848310848482	
13412	73988/F		56 5719151011 915	8 1 1.09	211G11	F
-6.60690		MT	0.49 0.01 -0.11 -0.54	0.03 -0.73	0.001084848310304804	
12912	73988/F		57 56191510091515	7 1 1.09	211G11	B
6.60660		MT	-0.49 -0.16 0.11 0.96	0.01 0.78	0.001030480410848483	
13512	73988/F		57 5819151011 945	4 1 0.45	211G11	F
-0.56570		MT	0.17 -0.01 -0.01 -0.05	0.02 -0.06	0.001030480410848484	
12812	73988/F		58 57191510091500	4 1 0.45	211G11	B
0.56590		MT	-0.17 0.07 0.01 0.09	0.01 0.04	0.001084848410304804	
13612	73988/F		58 5919151011 955	8 1 1.09	211G11	F
-10.87520		MT	0.42 0.04 -0.18 -1.00	0.04 -1.84	0.001084848410848485	
12712	73988/F		59 58191510091440	8 1 1.09	211G11	B
10.87660		MT	-0.42 0.00 0.18 1.61	0.01 1.55	0.001084848510848484	
13712	73988/F		59 60191510111020	8 1 1.09	211G11	F
-7.79900		MT	0.41 0.01 -0.13 -0.76	0.05 -1.35	0.001084848510848486	
12612	73988/F		60 59191510091415	8 1 1.08	211G11	B
7.80070		MT	-0.41 0.01 0.13 1.20	0.00 1.16	0.001084848610848485	
13812	73988/F		60 61191510111045	8 1 1.09	211G11	F
-6.75460		MT	0.41 -0.02 -0.11 -0.66	0.06 -1.24	0.001084848610848487	
12512	73988/F		61 60191510091355	8 1 1.09	211G11	B
6.75240		MT	-0.41 0.11 0.11 1.17	-0.01 1.03	0.001084848710848486	
13912	73988/F		61 62191510111105	8 1 1.08	211G11	F
-1.02000		MT	0.40 0.00 -0.02 -0.11	0.06 -0.18	0.001084848710287639	
12412	73988/F		62 61191510091330	9 1 1.08	211G11	B
1.02140		MT	-0.40 -0.06 0.02 0.16	-0.02 0.13	0.001028763910848487	
14012	73988/F		62 63191510111125	6 1 0.77	211G11	F
0.71600		MT	0.29 -0.02 0.01 0.08	0.04 0.12	0.001028763910848488	
12312	73988/F		63 62191510091210	7 1 0.77	211G11	B
-0.71570		MT	-0.29 -0.07 -0.01 -0.10	-0.04 -0.08	0.001084848810287639	
14112	73988/F		63 64191510111145	8 1 1.04	211G11	F
4.06600		MT	0.39 -0.02 0.07 0.44	0.06 0.71	0.001084848810282818	
12212	73988/F		64 63191510091140	9 1 1.04	211G11	B
-4.06500		MT	-0.39 0.00 -0.07 -0.57	-0.07 -0.53	0.001028281810848488	
14212	73988/F		64 65191510111305	3 1 0.44	211G11	F
-1.58730		MT	0.15 0.01 -0.03 -0.14	0.02 -0.35	0.001028281810848489	
12112	73988/F		65 64191510091130	4 1 0.44	211G11	B
1.58560		MT	-0.15 -0.10 0.03 0.22	-0.03 0.19	0.001084848910282818	
14312	73988/F		65 66191510111315	8 1 1.02	211G11	F
4.22800		MT	0.35 0.04 0.07 0.47	0.04 0.67	0.001084848910848490	
12012	73988/F		66 65191510091105	8 1 1.02	211G11	B
-4.22440		MT	-0.35 -0.18 -0.07 -0.56	-0.07 -0.65	0.001084849010848489	
14412	73988/F		66 67191510111340	8 1 1.09	211G11	F
-3.73260		MT	0.37 -0.02 -0.06 -0.46	0.04 -0.62	0.001084849010848491	
15112	73988/F		67 66191510111550	7 1 1.09	211G11	B
3.73510		MT	-0.37 0.02 0.06 0.44	0.00 0.23	0.001084849110848490	
14512	73988/F		67 68191510111405	4 1 0.51	211G11	F
-0.24300		MT	0.17 -0.01 0.00 -0.03	0.01 -0.03	0.001084849110273094	
15012	73988/F		68 67191510111540	4 1 0.51	211G11	B
0.24370		MT	-0.17 0.02 0.00 0.03	0.00 0.01	0.001027309410848491	
14612	73988/F		68 69191510111415	8 1 1.10	211G11	F
-5.80040		MT	0.29 0.02 -0.10 -0.71	0.01 -0.90	0.001027309410848492	
14912	73988/F		69 68191510111515	8 1 1.10	211G11	B
5.80100		MT	-0.29 0.06 0.10 0.78	0.00 0.52	0.001084849210273094	
14712	73988/F		69 70191510111435	4 1 0.50	211G11	F
-0.08130		MT	0.13 0.00 0.00 -0.01	0.00 -0.01	0.001084849210269707	
14812	73988/F		70 69191510111505	4 1 0.50	211G11	B
0.08370		MT	-0.13 -0.02 0.00 0.01	0.00 0.01	0.001026970710848492	
15212	73988/F		70 7119151012 920	8 1 1.10	211G11	F
-6.52200		MT	0.26 0.02 -0.11 -0.70	0.00 -0.76	0.001026970710848493	
18512	73988/F		70 71191510131415	7 1 1.10	211G11	F
-6.52230		MT	0.26 -0.03 -0.11 -0.68	0.03 -1.37	0.001026970710848493	
18412	73988/F		71 70191510131350	7 1 1.10	211G11	B
6.52770		MT	-0.26 0.01 0.11 0.67	-0.03 0.59	0.001084849310269707	
18612	73988/F		71 70191510131430	7 1 1.10	211G11	B
6.52400		MT	-0.26 0.01 0.11 0.74	-0.02 1.28	0.001084849310269707	
15312	73988/F		71 7219151012 955	8 1 1.09	211G11	F
4.27070		MT	0.26 0.02 0.07 0.52	0.01 0.63	0.001084849310848494	

18312	73988/F		72	71191510131335			7 1	1.09		211G11	B
-4.27370		MT	-0.26	0.00	-0.07	-0.45	-0.03	-0.39	0.001084849410848493		
15412	73988/F		72	73191510121020			8 1	1.03		211G11	F
6.89950		MT	0.24	0.02	0.11	0.86	0.02	1.00	0.001084849410362534		
18212	73988/F		73	72191510131320			7 1	1.02		211G11	B
-6.89830		MT	-0.24	0.00	-0.11	-0.80	-0.02	-0.57	0.001036253410848494		
15512	73988/F		73	74191510121040			8 1	1.09		211G11	F
6.48760		MT	0.17	0.00	0.11	0.80	0.02	1.11	0.001036253410848495		
18112	73988/F		74	73191510131300			7 1	1.09		211G11	B
-6.48960		MT	-0.17	-0.01	-0.11	-0.82	-0.02	-1.55	0.001084849510362534		
15612	73988/F		74	75191510121100			9 1	1.09		211G11	F
3.72600		MT	0.17	-0.01	0.06	0.47	0.03	0.51	0.001084849510848496		
18012	73988/F		75	74191510131140			7 1	1.09		211G11	B
-3.72290		MT	-0.17	-0.01	-0.06	-0.45	-0.01	-0.90	0.001084849610848495		
15712	73988/F		75	76191510121130			9 1	1.09		211G11	F
4.24070		MT	0.17	0.02	0.07	0.56	0.03	0.60	0.001084849610848497		
17912	73988/F		76	75191510131125			7 1	1.09		211G11	B
-4.23980		MT	-0.17	0.00	-0.07	-0.51	-0.01	-1.01	0.001084849710848496		
15812	73988/F		76	77191510121310			9 1	1.07		211G11	F
4.21180		MT	0.17	0.03	0.07	0.61	0.02	0.55	0.001084849710848498		
18712	73988/F		76	77191510131500			7 1	1.08		211G11	F
4.20970		MT	0.17	0.00	0.07	0.49	0.01	0.55	0.001084849710848498		
18812	73988/F		77	76191510131520			7 1	1.08		211G11	B
-4.21100		MT	-0.17	0.01	-0.07	-0.49	-0.01	-0.44	0.001084849810848497		
17812	73988/F		77	76191510131105			7 1	1.07		211G11	B
-4.20530		MT	-0.17	0.00	-0.07	-0.50	0.00	-0.96	0.001084849810848497		
15912	73988/F		77	78191510121330			4 1	0.46		211G11	F
1.21120		MT	0.07	-0.02	0.02	0.16	0.01	0.14	0.001084849810355754		
17712	73988/F		78	77191510131055			3 1	0.46		211G11	B
-1.20830		MT	-0.07	-0.01	-0.02	-0.15	0.00	-0.26	0.001035575410848498		
16012	73988/F		78	79191510121340			8 1	1.09		211G11	F
1.96410		MT	0.20	0.00	0.03	0.27	0.02	0.32	0.001035575410848499		
17612	73988/F		79	78191510131035			7 1	1.09		211G11	B
-1.96490		MT	-0.20	0.00	-0.03	-0.24	0.01	-0.43	0.001084849910355754		
16112	73988/F		79	80191510121405			8 1	1.09		211G11	F
2.87340		MT	0.20	-0.02	0.05	0.39	0.02	0.43	0.001084849910848500		
17512	73988/F		80	79191510131020			7 1	1.09		211G11	B
-2.87290		MT	-0.20	-0.01	-0.05	-0.37	0.01	-0.59	0.001084850010848499		
16312	73988/F		80	81191510121425			8 1	1.15		211G11	F
-0.75720		MT	0.21	0.00	-0.01	-0.10	0.01	-0.12	0.001084850010848501		
17412	73988/F		81	80191510131000			8 1	1.15		211G11	B
0.76000		MT	-0.21	0.00	0.01	0.10	0.02	0.12	0.001084850110848500		
16412	73988/F		81	82191510121445			7 1	1.09		211G11	F
-0.52800		MT	0.20	0.04	-0.01	-0.07	0.01	-0.08	0.001084850110848502		
17312	73988/F		82	8119151013 945			7 1	1.09		211G11	B
0.52660		MT	-0.20	0.00	0.01	0.07	0.02	0.10	0.001084850210848501		
16512	73988/F		82	83191510121505			7 1	1.09		211G11	F
0.22460		MT	0.20	0.04	0.00	0.03	0.00	0.03	0.001084850210848503		
17212	73988/F		83	8219151013 925			7 1	1.08		211G11	B
-0.22580		MT	-0.20	0.00	0.00	-0.03	0.03	-0.03	0.001084850310848502		
16612	73988/F		83	84191510121525			5 1	0.78		211G11	F
-0.53490		MT	0.15	-0.04	-0.01	-0.07	0.00	-0.05	0.001084850310346005		
17112	73988/F		84	8319151013 910			6 1	0.78		211G11	B
0.53330		MT	-0.15	0.00	0.01	0.06	0.02	0.05	0.001034600510848503		
16712	73988/F		84	85191510121540			7 1	1.08		211G11	F
10.46440		MT	0.20	0.01	0.17	1.30	0.00	0.84	0.001034600510848504		
17012	73988/F		85	8419151013 850			8 1	1.08		211G11	B
-10.46480		MT	-0.20	0.00	-0.17	-1.19	0.04	-0.84	0.001084850410346005		
16812	73988/F		85	86191510121605			7 1	1.09		211G11	F
15.67800		MT	0.20	0.01	0.26	1.85	-0.01	0.49	0.001084850410848505		
16912	73988/F		86	8519151013 825			8 1	1.09		211G11	B
-15.67430		MT	-0.20	0.01	-0.26	-1.38	0.04	-0.99	0.001084850510848504		
18912	73988/F		86	87191510131600			7 1	1.08		211G11	F
15.82640		MT	0.21	-0.01	0.26	1.55	0.01	0.58	0.001084850510341118		
16212	73988/F		87	86191510121420			8 1	1.08		211G11	B
-15.82770		MT	-0.21	-0.02	-0.26	-1.93	-0.01	-2.72	0.001034111810848505		
19012	73988/F		87	88191510131620			7 1	1.09		211G11	F
13.46770		MT	0.10	0.02	0.22	1.32	0.00	0.21	0.001034111810848506		
20812	73988/F		88	87191510141355			8 1	1.09		211G11	B
-13.46370		MT	-0.10	-0.11	-0.22	-1.75	-0.01	-2.34	0.001084850610341118		
20912	73988/F		88	89191510141445			6 1	0.89		211G11	F
6.88270		MT	0.09	-0.06	0.11	0.83	0.01	0.96	0.001084850610848507		
20712	73988/F		89	88191510141335			7 1	0.90		211G11	B
-6.88170		MT	-0.09	0.03	-0.11	-0.92	0.00	-1.02	0.001084850710848506		
21012	73988/F		89	90191510141500			7 1	1.13		211G11	F
-5.84500		MT	0.11	0.00	-0.10	-0.72	0.01	-0.80	0.001084850710339504		
20612	73988/F		90	89191510141310			8 1	1.13		211G11	B
5.84570		MT	-0.11	-0.02	0.10	0.74	0.00	1.09	0.001033950410848507		

Table 5c. National Geodetic Survey Line 73988F: File 73988F.prn(=.dat)--Continued

```
21112          73988/F        90  91191510141520        5 1  0.80                  211G11          F
-3.62060                    MT  0.26 -0.09 -0.06 -0.45  0.02 -0.38  0.001033950410848508
20512          73988/F        91  90191510141145        6 1  0.79                  211G11          B
 3.62070                    MT -0.26  0.07  0.06  0.51  0.00  0.61  0.001084850810339504
21212          73988/F        91  92191510141530        7 1  1.15                  211G11          F
-2.08100                    MT  0.38  0.02 -0.03 -0.25  0.03 -0.19  0.001084850810848509
20412          73988/F        92  91191510141125        8 1  1.14                  211G11          B
 2.08240                    MT -0.38  0.10  0.03  0.29  0.01  0.40  0.001084850910848508
21312          73988/F        92  93191510141550        7 1  1.15                  211G11          F
-5.60400                    MT  0.38  0.06 -0.09 -0.63  0.03 -0.33  0.001084850910848510
20312          73988/F        93  92191510141110        8 1  1.15                  211G11          B
 5.60480                    MT -0.38  0.02  0.09  0.71  0.01  1.10  0.001084851010848509
21412          73988/F        93  94191510141605        7 1  1.15                  211G11          F
-8.20900                    MT  0.37  0.00 -0.14 -0.95  0.03 -0.27  0.001084851010848511
20212          73988/F        94  93191510141050        8 1  1.15                  211G11          B
 8.20760                    MT -0.37  0.02  0.14  0.92  0.02  1.63  0.001084851110848510
21512          73988/F        94  95191510141625        7 1  1.15                  211G11          F
-4.72600                    MT  0.37  0.02 -0.08 -0.55  0.03  0.00  0.001084851110848512
20112          73988/F        95  94191510141030        6 1  1.15                  211G11          B
 4.72670                    MT -0.37  0.02  0.08  0.53  0.02  1.59  0.001084851210848511
21612          73988/F        95  9619151015 805        6 1  1.09                  211G11          F
-0.89300                    MT  0.35  0.00 -0.01 -0.07 -0.02 -0.05  0.001084851210323333
20012          73988/F        96  95191510141015        7 1  1.09                  211G11          B
 0.89350                    MT -0.35  0.05  0.01  0.10  0.03  0.18  0.001032333310848512
22012          73988/F        96  9719151015 920        6 1  0.97                  211G11          F
 0.40130                    MT  0.28 -0.01  0.01  0.04 -0.03  0.06  0.001032333310848513
21712          73988/F        96  9719151015 830        5 1  0.97                  211G11          F
 0.40140                    MT  0.28  0.03  0.01  0.03 -0.03  0.04  0.001032333310848513
21912          73988/F        97  9619151015 905        6 1  0.97                  211G11          B
-0.40400                    MT -0.28  0.01 -0.01 -0.04  0.03 -0.05  0.001084851310323333
19912          73988/F        97  96191510141000        6 1  0.96                  211G11          B
-0.40630                    MT -0.28  0.02 -0.01 -0.04  0.03 -0.09  0.001084851310323333
21812          73988/F        97  9819151015 845        6 1  1.09                  211G11          F
-1.60400                    MT  0.31  0.02 -0.03 -0.14 -0.04 -0.19  0.001084851310848514
19812          73988/F        98  9719151014 945        5 1  1.09                  211G11          B
 1.60450                    MT -0.31 -0.01  0.03  0.17  0.04  0.59  0.001084851410848513
22112          73988/F        98  9919151015 945        8 1  1.20                  211G11          F
 0.30500                    MT  0.34  0.00  0.00  0.03 -0.04  0.05  0.001084851410314951
19712          73988/F        99  9819151014 920        8 1  1.20                  211G11          B
-0.30800                    MT -0.34  0.06  0.00 -0.03  0.04 -0.04  0.001031495110848514
22212          73988/F        99 100191510151010        7 1  1.13                  211G11          F
 0.88300                    MT  0.30 -0.01  0.01  0.09 -0.03  0.19  0.001031495110848515
19612          73988/F       100  9919151014 900        8 1  1.13                  211G11          B
-0.88400                    MT -0.30 -0.02 -0.01 -0.10  0.03 -0.08  0.001084851510314951
22312          73988/F       100 101191510151030        7 1  1.01                  211G11          F
 1.39000                    MT  0.27  0.00  0.02  0.15 -0.03  0.26  0.001084851510848516
19512          73988/F       101 10019151014 840        7 1  1.01                  211G11          B
-1.38820                    MT -0.27  0.02 -0.02 -0.14  0.03 -0.11  0.001084851610848515
22412          73988/F       101 102191510151055        7 1  1.07                  211G11          F
-0.16340                    MT  0.29 -0.01  0.00 -0.02 -0.03 -0.04  0.001084851610308198
19412          73988/F       102 10119151014 820        7 1  1.07                  211G11          B
 0.16230                    MT -0.29  0.07  0.00  0.01  0.03  0.01  0.001030819810848516
22512          73988/F       102 103191510151115        2 1  0.26                  211G11          F
-0.05300                    MT  0.02  0.01  0.00 -0.01 -0.01 -0.01  0.001030819810848517
19312          73988/F       103 10219151014 815        2 1  0.26                  211G11          B
 0.05200                    MT -0.02  0.02  0.00  0.00  0.01  0.00  0.001084851710308198
22612          73988/F       103 104191510151120        7 1  1.01                  211G11          F
-0.38020                    MT  0.09  0.00 -0.01 -0.04 -0.04 -0.08  0.001084851710848518
19212          73988/F       104 10319151014 800        5 1  1.01                  211G11          B
 0.38090                    MT -0.09  0.04  0.01  0.03  0.05  0.03  0.001084851810848517
22712          73988/F       104 105191510151145        9 1  1.23                  211G11          F
 2.59580                    MT  0.12 -0.03  0.04  0.29 -0.04  0.47  0.001084851810848519
19112          73988/F       105 10419151014 735        5 1  1.23                  211G11          B
-2.59700                    MT -0.12 -0.02 -0.04 -0.18  0.06 -0.09  0.001084851910848518
22812          73988/F       105 106191510151320        1 1  0.14                  211G11          F
 1.98900                    MT  0.01  0.00  0.03  0.25  0.00  0.44  0.001084851910306493
25812          73988/F       106 105191510161645        1 1  0.14                  211G11          B
-1.98900                    MT -0.01 -0.30 -0.03 -0.21  0.00  0.09  0.001030649310848519
22912          73988/F       106 107191510151325        8 1  1.13                  211G11          F
 2.36900                    MT  0.16  0.00  0.04  0.32 -0.01  0.42  0.001030649310848520
25712          73988/F       107 106191510161630        6 1  1.14                  211G11          B
-2.37140                    MT -0.16 -0.08 -0.04 -0.26 -0.04  0.03  0.001084852010306493
23012          73988/F       107 108191510151345        8 1  1.21                  211G11          F
 9.49470                    MT  0.17  0.01  0.16  1.08  0.00  1.98  0.001084852010848521
25612          73988/F       108 107191510161615        6 1  1.21                  211G11          B
-9.49300                    MT -0.17  0.02 -0.16 -1.12 -0.04 -0.22  0.001084852110848520
23112          73988/F       108 109191510151410        7 1  1.09                  211G11          F
 6.66860                    MT  0.16  0.00  0.11  0.76  0.00  1.33  0.001084852110848522
```

25512	73988/F	109 108191510161600	6 1 1.09	211G11	B
-6.66840		MT -0.16 -0.06 -0.11 -0.80	-0.03 -0.32	0.00108485221084852 1	
23212	73988/F	109 110191510151430	3 1 0.38	211G11	F
0.17700		MT 0.06 0.01 0.00 0.02	0.00 0.02	0.00108485221030138 1	
25412	73988/F	110 109191510161550	3 1 0.38	211G11	B
-0.17730		MT -0.06 0.04 0.00 -0.02	-0.01 -0.01	0.00103013811084852 2	
23312	73988/F	110 111191510151435	7 1 1.08	211G11	F
-3.22870		MT -0.03 0.00 -0.05 -0.36	0.00 -0.48	0.00103013811084852 3	
25312	73988/F	111 110191510161530	7 1 1.08	211G11	B
3.22770		MT 0.03 -0.09 0.05 0.40	-0.01 0.24	0.00108485231030138 1	
23412	73988/F	111 112191510151500	7 1 1.08	211G11	F
8.26360		MT -0.03 0.00 0.14 0.89	0.01 1.11	0.00108485231084852 4	
25212	73988/F	112 111191510161510	8 1 1.08	211G11	B
-8.26170		MT 0.03 -0.02 -0.14 -1.06	-0.01 -0.72	0.00108485241084852 3	
23512	73988/F	112 113191510151520	7 1 1.03	211G11	F
12.65930		MT -0.03 0.01 0.21 1.34	0.01 1.33	0.00108485241030312 8	
25112	73988/F	113 112191510161445	8 1 1.03	211G11	B
-12.65730		MT 0.03 0.06 -0.21 -1.67	0.00 -1.33	0.00103031281084852 4	
23612	73988/F	113 114191510151540	7 1 1.03	211G11	F
12.26530		MT -0.46 0.03 0.20 1.25	-0.02 0.87	0.00103031281084852 5	
25012	73988/F	114 113191510161420	8 1 1.03	211G11	B
-12.26160		MT 0.46 -0.03 -0.20 -1.59	0.02 -1.69	0.00108485251030312 8	
23712	73988/F	114 115191510151600	8 1 1.12	211G11	F
14.96000		MT -0.51 0.01 0.25 1.47	-0.02 0.55	0.00108485251084852 6	
24912	73988/F	115 114191510161355	9 1 1.26	211G11	B
-14.95640		MT 0.51 0.02 -0.25 -1.97	0.03 -2.71	0.00108485261084852 5	
23812	73988/F	115 116191510151625	7 1 1.11	211G11	F
14.19000		MT -0.51 -0.01 0.24 1.28	-0.02 0.01	0.00108485261031495 2	
24812	73988/F	116 115191510161330	8 1 1.10	211G11	B
-14.18810		MT 0.51 -0.10 -0.24 -1.84	0.03 -2.69	0.00103149521084852 6	
27812	73988/F	116 11719151019 815	6 1 0.95	211G11	F
10.92490		MT -0.53 -0.11 0.18 0.98	-0.03 0.71	0.00103149521084852 7	
25912	73988/F	116 11719151018 750	7 1 0.95	211G11	F
10.92570		MT -0.53 0.00 0.18 0.90	-0.03 0.24	0.00103149521084852 7	
24712	73988/F	117 116191510161310	8 1 0.95	211G11	B
-10.91900		MT 0.53 -0.08 -0.18 -1.42	0.03 -1.51	0.00108485271031495 2	
27912	73988/F	117 11619151019 835	6 1 0.95	211G11	B
-10.92060		MT 0.53 0.00 -0.18 -1.11	0.03 -1.02	0.00108485271031495 2	
26012	73988/F	117 11819151018 830	7 1 1.08	211G11	F
14.66820		MT -0.61 0.00 0.24 1.47	-0.04 1.09	0.00108485271084852 8	
24612	73988/F	118 117191510161150	9 1 1.08	211G11	B
-14.66650		MT 0.61 0.04 -0.24 -2.02	0.04 -2.23	0.00108485281084852 7	
26112	73988/F	118 11919151018 855	8 1 1.16	211G11	F
13.63240		MT -0.67 0.00 0.23 1.53	-0.05 1.34	0.00108485281084852 9	
24512	73988/F	119 118191510161125	9 1 1.16	211G11	B
-13.63400		MT 0.67 0.06 -0.23 -1.80	0.05 -2.30	0.00108485291084852 8	
26212	73988/F	119 12019151018 915	8 1 1.10	211G11	F
15.33980		MT -0.60 0.00 0.25 1.84	-0.05 1.74	0.00108485291084853 0	
24412	73988/F	120 119191510161100	8 1 1.03	211G11	B
-15.33710		MT 0.60 0.10 -0.25 -1.99	0.05 -2.70	0.00108485301084852 9	
26312	73988/F	120 12119151018 935	8 1 1.09	211G11	F
16.21100		MT -0.65 0.00 0.27 2.01	-0.06 2.06	0.00108485301084853 1	
24312	73988/F	121 120191510161035	8 1 1.09	211G11	B
-16.21210		MT 0.65 -0.06 -0.27 -1.91	0.05 -3.03	0.00108485311084853 0	
26412	73988/F	121 122191510181000	8 1 1.09	211G11	F
16.33420		MT -0.66 0.00 0.27 2.06	-0.07 2.60	0.00108485311033950 3	
24212	73988/F	122 121191510161015	8 1 1.09	211G11	B
-16.33770		MT 0.66 0.01 -0.27 -1.80	0.05 -2.82	0.00103395031084853 1	
26512	73988/F	122 123191510181025	9 1 1.09	211G11	F
16.75420		MT 0.44 0.00 0.28 2.11	0.00 2.33	0.00103395031084853 2	
24112	73988/F	123 12219151016 950	9 1 1.23	211G11	B
-16.75240		MT -0.44 0.03 -0.28 -1.78	0.02 -2.71	0.00108485321033950 3	
26612	73988/F	123 124191510181045	9 1 1.09	211G11	F
15.31270		MT 0.45 0.00 0.25 1.99	-0.01 2.15	0.00108485321084853 3	
24012	73988/F	124 12319151016 930	8 1 1.09	211G11	B
-15.31170		MT -0.45 0.01 -0.25 -1.62	0.02 -1.90	0.00108485331084853 2	
26712	73988/F	124 125191510181110	9 1 1.07	211G11	F
15.34220		MT 0.43 0.00 0.25 2.06	-0.01 2.14	0.00108485331084853 4	
23912	73988/F	125 12419151016 905	8 1 1.03	211G11	B
-15.34370		MT -0.43 -0.04 -0.25 -1.44	0.01 -1.37	0.00108485341084853 3	
26812	73988/F	125 126191510181140	10 1 1.09	211G11	F
16.88870		MT 0.46 0.00 0.28 2.36	-0.02 2.02	0.00108485341084853 5	
27712	73988/F	126 125191510181615	9 1 1.15	211G11	B
-16.88900		MT -0.46 0.00 -0.28 -2.09	-0.03 -0.11	0.00108485351084853 4	
26912	73988/F	126 127191510181320	9 1 1.13	211G11	F
15.02170		MT 0.48 0.00 0.25 1.95	-0.03 2.26	0.00108485351084853 6	
27612	73988/F	127 126191510181550	8 1 1.13	211G11	B
-15.02530		MT -0.48 0.00 -0.25 -1.92	-0.02 -0.62	0.00108485361084853 5	

Table 5c. National Geodetic Survey Line 73988F: File 73988F.prn(=.dat)--Continued

```
  27012          73988/F       127 128191510181345       8 1  1.02                  211G11        F
  14.75640                   MT  0.44  0.00  0.24  2.10 -0.03  2.18  0.001084853610323089
  27512          73988/F       128 127191510181535       7 1  1.01                  211G11        B
 -14.75730                   MT -0.44  0.00 -0.24 -1.92 -0.01 -0.85  0.001032308910848536
  27112          73988/F       128 129191510181410       8 1  1.09                  211G11        F
   2.46500                   MT  0.30  0.00  0.04  0.35 -0.03  0.33  0.001032308910848537
  27412          73988/F       129 128191510181515       7 1  1.09                  211G11        B
  -2.46430                   MT -0.30  0.00 -0.04 -0.34  0.00 -0.22  0.001084853710323089
  27212          73988/F       129 130191510181435       7 1  1.09                  211G11        F
  -4.34410                   MT  0.30  0.00 -0.07 -0.61 -0.02 -0.59  0.001084853710848538
  28012          73988/F       129 13019151019 930       8 1  1.09                  211G11        F
  -4.33930                   MT  0.30 -0.02 -0.07 -0.47  0.03 -0.46  0.001084853710848538
  27312          73988/F       130 129191510181455       7 1  1.09                  211G11        B
   4.33900                   MT -0.30  0.00  0.07  0.59  0.01  0.50  0.001084853810848537
  28912          73988/F       130 129191510201440       7 1  1.09                  211G11        B
   4.34070                   MT -0.30  0.00  0.07  0.66  0.03  0.54  0.001084853810848537
  28112          73988/F       130 13119151019 950       8 1  1.02                  211G11        F
  -2.14370                   MT  0.28 -0.05 -0.04 -0.27  0.02 -0.25  0.001084853810318061
  28812          73988/F       131 130191510201420       7 1  1.02                  211G11        B
   2.14490                   MT -0.28  0.01  0.04  0.33  0.04  0.30  0.001031806110848538
  28212          73988/F       131 132191510191010       8 1  1.09                  211G11        F
  -1.15630                   MT  0.31 -0.08 -0.02 -0.16  0.01 -0.16  0.001031806110848539
  29012          73988/F       131 132191510201505       7 1  1.09                  211G11        F
  -1.16060                   MT  0.31  0.00 -0.02 -0.16 -0.03 -0.05  0.001031806110848539
  28712          73988/F       132 131191510201400       8 1  1.09                  211G11        B
   1.16100                   MT -0.31 -0.02  0.02  0.18  0.04  0.16  0.001084853910318061
  29112          73988/F       132 131191510201525       7 1  1.09                  211G11        B
   1.15810                   MT -0.31  0.00  0.02  0.16  0.02  0.08  0.001084853910318061
  28312          73988/F       132 133191510191030       8 1  1.08                  211G11        F
 -4.75270                    MT  0.31  0.00 -0.08 -0.64  0.00 -0.72  0.001084853910848540
  28612          73988/F       133 132191510201340       8 1  1.08                  211G11        B
 4.75390                     MT -0.31  0.00  0.08  0.76  0.04  0.67  0.001084854010848539
  28412          73988/F       133 134191510191055       8 1  1.02                  211G11        F
 -5.98310                    MT  0.29  0.00 -0.10 -0.81 -0.01 -0.86  0.001084854010311294
  28512          73988/F       134 133191510201315       8 1  1.02                  211G11        B
 5.98330                     MT -0.29  0.05  0.10  0.99  0.04  0.80  0.001031129410848540
```

Table 6a. National Geodetic Survey Line 73988G: File 73988G.pro

Seq No.	UID	Benchmark	Spur Code	Distance (km)	Latitude	Longitude	Observed Elevation (m)	Obs Grav Ortho Ht (m)	Cumul. Refr Cor. (mm)	Cumul. Magn Cor. (mm)
3	10311294	M 17 USGS		0.00	36 34 46	115 53 28	1089.67450	1089.67450	0.00	0.00
4	10848375	TBM 101		1.09	36 34 38	115 52 45	1083.32328	1083.32030	-1.05	0.00
5	10848376	TBM 102		2.18	36 34 31	115 52 01	1078.50398	1078.49774	-1.85	0.00
6	10848377	TBM 3		3.27	36 34 23	115 51 18	1073.46054	1073.45381	-2.67	0.00
7	10848378	TBM 4		4.35	36 34 16	115 50 35	1066.09821	1066.09063	-3.82	0.00
8	10848379	TBM 5		5.43	36 34 08	115 49 52	1055.20633	1055.20078	-5.77	0.00
9	10304489	N 17 USGS		6.45	36 34 01	115 49 11	1045.46461	1045.46301	-7.20	0.00
10	10848380	TBM 6		7.50	36 34 06	115 48 28	1035.12421	1035.12328	-8.65	0.00
11	10848381	TBM 7		8.62	36 34 11	115 47 42	1023.79235	1023.79188	-10.02	0.00
12	10306173	O 17 USGS		9.64	36 34 15	115 47 00	1015.99093	1015.98844	-10.82	0.00
13	10848382	TBM 8		10.66	36 34 20	115 46 21	1008.62052	1008.61590	-11.16	0.00
14	10848383	TBM 9		11.81	36 34 26	115 45 37	1002.47407	1002.46713	-11.49	0.00
15	10309539	P 17 USGS		12.90	36 34 31	115 44 56	999.25428	999.24618	-11.59	0.00
16	10848384	TBM 10		13.93	36 34 33	115 44 15	993.07373	993.06490	-12.11	0.00
17	10848385	TBM 11		14.96	36 34 35	115 43 34	984.35242	984.34277	-12.96	0.00
18	10848386	TBM 12		16.04	36 34 37	115 42 50	974.36514	974.35553	-13.68	0.00
19	10848387	TBM 13		17.12	36 34 39	115 42 07	963.39141	963.38207	-14.71	0.00
20	10848388	TBM 14		18.21	36 34 41	115 41 24	953.66270	953.65334	-15.96	0.00
21	10311296	Q 17		19.30	36 34 43	115 40 40	955.41514	955.40636	-15.70	0.00
22	10848389	TBM 15		20.39	36 34 38	115 39 57	948.67964	948.67057	-16.89	0.00
23	10848390	TBM 16		21.47	36 34 34	115 39 14	952.71803	952.70976	-16.21	0.00
24	10848391	TBM 17		22.56	36 34 29	115 38 31	957.05298	957.04497	-15.44	0.00
25	10848392	TBM 18		23.65	36 34 25	115 37 48	958.50236	958.49424	-15.15	0.00
26	10848393	TBM 19		24.73	36 34 20	115 37 06	958.45601	958.44790	-15.16	0.00
27	10306166	R 17		25.81	36 34 16	115 36 23	959.03333	959.02597	-15.03	0.00
28	10848394	TBM 20		26.71	36 34 04	115 35 50	957.83190	957.82663	-15.20	0.00
29	10848395	TBM 21		27.86	36 33 48	115 35 08	951.88943	951.88986	-16.82	0.00
30	10299243	S 17 USGS		29.00	36 33 32	115 34 26	944.76337	944.76730	-18.76	0.00
31	10848396	TBM 22		29.96	36 33 17	115 33 52	940.64793	940.65297	-19.75	0.00
32	10848397	TBM 23		31.11	36 32 59	115 33 11	938.21404	938.22019	-20.28	0.00
33	10290563	T 17		32.20	36 32 42	115 32 33	936.78208	936.78906	-20.50	0.00
34	10848398	TBM 24		33.16	36 32 26	115 31 59	935.41145	935.41914	-20.75	0.00
35	10848399	TBM 25		34.25	36 32 08	115 31 22	934.66504	934.67421	-20.87	0.00
36	10848400	TBM 26		35.40	36 31 49	115 30 41	933.65013	933.66015	-21.07	0.00
37	10848401	TBM 27		36.43	36 31 32	115 30 06	932.89944	932.90997	-21.10	0.00
38	10848402	TBM 28		37.52	36 31 14	115 29 28	932.30298	932.31530	-21.16	0.00
39	10272793	U 17		38.61	36 30 56	115 28 50	932.98807	933.00268	-21.07	0.00
40	10848403	TBM 29		39.64	36 30 33	115 28 21	933.23226	933.24734	-21.04	0.00
41	10848404	TBM 30		40.73	36 30 09	115 27 50	934.21874	934.23344	-20.87	0.00
42	10848405	TBM 31		41.82	36 29 44	115 27 19	933.41861	933.43293	-21.04	0.00
43	10848406	TBM 32		42.85	36 29 21	115 26 50	931.40116	931.41486	-21.48	0.00
44	10848407	TBM 33		44.00	36 28 56	115 26 17	928.32624	928.33889	-22.14	0.00
45	10349108	V 17		45.06	36 28 32	115 25 47	923.03931	923.05111	-22.74	0.00

Table 6a. National Geodetic Survey Line 73988G: File 73988G.pro--Continued

Seq No.	UID	Benchmark	Spur Code	Distance (km)	Latitude	Longitude	Observed Elevation (m)	Obs Grav Ortho Ht (m)	Cumul. Refr Cor. (mm)	Cumul. Magn Cor. (mm)
46	10848408	TBM 34		46.08	36 28 05	115 25 23	916.88760	916.89845	-23.92	0.00
47	10848409	TBM 35		47.17	36 27 37	115 24 57	908.65044	908.66220	-25.79	0.00
48	10334501	W 17		48.26	36 27 08	115 24 31	897.55753	897.56968	-27.64	0.00
49	10848410	TBM 36		49.29	36 26 41	115 24 06	890.38627	890.39840	-29.06	0.00
50	10848411	TBM 37		50.36	36 26 13	115 23 41	883.60529	883.61470	-30.69	0.00
51	10321314	X 17		51.38	36 25 46	115 23 16	876.37041	876.37646	-32.23	0.00
52	10848412	TBM 38		52.54	36 25 16	115 22 48	868.55895	868.56161	-33.93	0.00
53	10848413	TBM 39		53.57	36 24 50	115 22 23	861.28826	861.28916	-35.19	0.00
54	10848414	TBM 40		54.66	36 24 22	115 21 56	854.91421	854.91376	-36.04	0.00
55	10848415	TBM 41		55.68	36 23 56	115 21 31	849.57414	849.57326	-36.34	0.00
56	10848416	TBM 42		56.68	36 23 31	115 21 06	847.84801	847.84751	-36.52	0.00
57	10293833	111 USGS		57.84	36 23 01	115 20 38	846.90742	846.90755	-36.63	0.00
58	10848417	TBM 43		58.93	36 22 35	115 20 08	844.02470	844.02503	-37.10	0.00
59	10848418	TBM 44		60.09	36 22 07	115 19 37	838.73275	838.73337	-38.05	0.00
60	10848419	TBM 45		61.25	36 21 39	115 19 05	831.83730	831.83823	-39.50	0.00
61	10848420	TBM 46		62.41	36 21 12	115 18 34	823.17944	823.18027	-41.52	0.00
62	10848421	TBM 47		63.55	36 20 44	115 18 03	812.93484	812.93549	-43.55	0.00
63	10267750	112 USGS		64.32	36 20 26	115 17 42	805.98416	805.98466	-44.85	0.00
64	10848422	TBM 48		65.41	36 19 54	115 17 23	795.10140	795.10169	-47.04	0.00
65	10848423	TBM 49		66.56	36 19 21	115 17 03	783.65669	783.65613	-49.56	0.00
66	10352350	A 18		67.58	36 18 51	115 16 45	775.32178	775.32183	-51.11	0.00
67	10848424	TBM 50		68.73	36 18 17	115 16 29	766.42533	766.42637	-52.69	0.00
68	10848425	TBM 51		70.03	36 17 40	115 16 12	753.90169	753.90382	-54.74	0.00
69	10336093	113 USGS		70.86	36 17 15	115 16 01	747.59180	747.59420	-55.57	0.00
70	10848426	TBM 52		72.09	36 16 43	115 15 37	734.52279	734.52435	-56.99	0.00
71	10848427	TBM 53		73.18	36 16 13	115 15 15	724.76411	724.76241	-57.90	0.00
72	10848428	TBM 54		74.26	36 15 44	115 14 54	717.11465	717.11040	-58.36	0.00
73	10848429	TBM 55		75.41	36 15 14	115 14 31	708.75475	708.74873	-59.76	0.00
74	10848430	TBM 56		76.44	36 14 46	115 14 10	706.27896	706.27135	-60.18	0.00
75	10306163	114 USGS		77.46	36 14 19	115 13 50	698.85565	698.84651	-61.47	0.00
76	10848431	TBM 57		78.61	36 13 49	115 13 22	690.24593	690.23632	-63.08	0.00
77	10848432	TBM 58		79.76	36 13 20	115 12 54	686.58855	686.57948	-63.73	0.00
78	10293836	D 18 USGS		80.48	36 13 01	115 12 37	680.90024	680.89142	-64.60	0.00
79	10848433	TBM 59		81.63	36 12 31	115 12 09	671.45968	671.45065	-66.42	0.00
80	10848434	TBM 60		82.65	36 12 03	115 11 44	664.54221	664.53236	-67.72	0.00
81	10279324	115 USGS		83.80	36 11 33	115 11 16	651.52592	651.51454	-70.00	0.00
82	10848435	TBM 61		85.02	36 11 11	115 10 47	641.17872	641.16601	-71.35	0.00
83	10848436	TBM 62		86.11	36 10 51	115 10 22	634.90415	634.89047	-72.01	0.00
84	10848437	TBM 63		87.00	36 10 35	115 10 01	630.14860	630.13380	-72.56	0.00
85	10848438	TBM 64		87.30	36 10 30	115 09 54	626.97147	626.95620	-72.89	0.00
86	10848439	TBM 65		88.35	36 10 11	115 09 30	622.17804	622.16167	-73.26	0.00

Table 6a. National Geodetic Survey Line 73988G: File 73988G.pro--Continued

Seq No.	UID	Benchmark	Spur Code	Distance (km)	Latitude	Longitude	Observed Elevation (m)	Obs Grav Ortho Ht (m)	Cumul. Refr Cor. (mm)	Cumul. Magn Cor. (mm)
87	10362254	O		89.44	36 09 51	115 09 04	618.31939	618.30202	-73.16	0.00
88	10264260	F 18		90.25	36 10 05	115 08 36	615.96121	615.94386	-73.13	0.00
89	10265994	2024 B		90.59	36 10 17	115 08 38	616.41784	616.40066	-73.13	0.00
90	10267749	P		90.94	36 10 24	115 08 31	615.32962	615.31239	-73.15	0.00
91	10266006	2033 B=116 USGS		91.41	36 10 18	115 08 46	619.14257	619.12564	-73.08	0.00

Table 6b. National Geodetic Survey Line 73988G: File 73988G.ori

FROM SEQ NO.	TO SEQ NO.	UNCORRECTED FIELD ELEVATION DIFFERENCE (m)	LEVEL CORR. (mm)	ROD CORR. (mm)	ASTRO CORR. (mm)	TEMP. CORR. (mm)	REFR. CORR. (mm)	MAGN. CORR. (mm)	CORRECTED OBSERVED ELE. DIFFERENCE (m)	CUMULATIVE OBSERVED ELEVATION (OF TO SEQ NO) (m)	CUMULAT. OBS. GRAV ORTHO CORR. (mm)	CUMUL. REFR. CORR. (mm)
3										1089.67450	0.00	0.00
3	4	-6.35015	-0.01	-0.11	-0.92	-0.03	-1.05	0.00	-6.35121	1083.32328	-2.98	-1.05
4	5	-4.81850	-0.01	-0.08	-0.70	-0.03	-0.79	0.00	-4.81930	1078.50398	-6.24	-1.85
5	6	-5.04265	-0.01	-0.08	-0.67	-0.03	-0.82	0.00	-5.04344	1073.46054	-6.73	-2.67
6	7	-7.36115	-0.02	-0.12	-1.02	-0.03	-1.15	0.00	-7.36233	1066.09822	-7.58	-3.82
7	8	-10.89015	-0.02	-0.18	-1.53	-0.02	-1.95	0.00	-10.89189	1055.20633	-5.55	-5.77
8	9	-9.74020	0.01	-0.16	-1.35	-0.01	-1.43	0.00	-9.74171	1045.46462	-1.60	-7.20
9	10	-10.33885	0.03	-0.17	-1.40	-0.02	-1.46	0.00	-10.34041	1035.12421	-0.93	-8.65
10	11	-11.33020	0.00	-0.19	-1.46	-0.01	-1.37	0.00	-11.33186	1023.79235	-0.47	-10.02
11	12	-7.80030	0.02	-0.13	-1.00	0.00	-0.80	0.00	-7.80141	1015.99093	-2.49	-10.82
12	13	-7.36943	-0.01	-0.12	-0.86	0.01	-0.25	0.00	-7.37041	1008.62052	-4.62	-11.16
13	14	-6.14565	-0.01	-0.10	-0.72	0.02	-0.33	0.00	-6.14646	1002.47407	-6.94	-11.49
14	15	-3.21945	0.04	-0.05	-0.36	0.03	-0.10	0.00	-3.21979	999.25428	-8.10	-11.59
15	16	-6.17950	-0.02	-0.10	-0.90	-0.03	-0.52	0.00	-6.18054	993.07373	-8.83	-12.11
16	17	-8.71990	0.02	-0.14	-1.26	-0.03	-0.85	0.00	-8.72131	984.35242	-9.65	-12.96
17	18	-9.98565	-0.03	-0.17	-1.40	-0.03	-0.73	0.00	-9.98729	974.36514	-9.61	-13.68
18	19	-10.97215	0.00	-0.18	-1.39	0.00	-1.03	0.00	-10.97373	963.39141	-9.34	-14.71
19	20	-9.72735	0.03	-0.16	-1.23	-0.01	-1.25	0.00	-9.72872	953.66270	-9.36	-15.96
20	21	1.75215	0.04	0.03	0.22	-0.01	0.26	0.00	1.75244	955.41514	-8.78	-15.70
21	22	-6.73455	0.03	-0.11	-0.87	0.01	-1.18	0.00	-6.73550	948.67964	-9.07	-16.89
22	23	4.03780	0.00	0.07	0.51	0.02	0.68	0.00	4.03840	952.71803	-8.27	-16.21
23	24	4.33430	-0.01	0.07	0.56	0.02	0.78	0.00	4.33495	957.05298	-8.01	-15.44
24	25	1.44915	0.00	0.02	0.19	0.03	0.29	0.00	1.44939	958.50236	-8.12	-15.15
25	26	-0.04635	-0.02	0.00	-0.01	0.02	-0.01	0.00	-0.04636	958.45601	-8.11	-15.16
26	27	0.57720	0.02	0.01	0.08	0.02	0.13	0.00	0.57733	959.03333	-7.36	-15.03
27	28	-1.20128	0.00	-0.02	-0.16	0.01	-0.16	0.00	-1.20144	957.83190	-5.27	-15.20
28	29	-5.94165	-0.02	-0.10	-0.76	0.05	-1.63	0.00	-5.94247	951.88943	0.43	-16.82
29	30	-7.12505	-0.03	-0.12	-0.90	0.05	-1.94	0.00	-7.12606	944.76337	3.93	-18.76
30	31	-4.11490	0.01	-0.07	-0.51	0.03	-0.99	0.00	-4.11544	940.64793	5.04	-19.75
31	32	-2.43355	-0.03	-0.04	-0.29	0.03	-0.53	0.00	-2.43388	938.21404	6.15	-20.28
32	33	-1.43178	0.00	-0.02	-0.18	0.00	-0.23	0.00	-1.43197	936.78208	6.98	-20.50
33	34	-1.37050	0.02	-0.02	-0.16	0.03	-0.25	0.00	-1.37063	935.41145	7.69	-20.75
34	35	-0.74635	-0.01	-0.01	-0.08	0.03	-0.11	0.00	-0.74641	934.66504	9.17	-20.87
35	36	-1.01470	-0.03	-0.02	-0.13	-0.02	-0.20	0.00	-1.01491	933.65013	10.02	-21.07
36	37	-0.75065	0.03	-0.01	-0.08	0.02	-0.03	0.00	-0.75070	932.89944	10.53	-21.10
37	38	-0.59635	-0.03	-0.01	-0.07	0.00	-0.06	0.00	-0.59645	932.30298	12.32	-21.16
38	39	0.68500	0.00	0.01	0.08	0.01	0.09	0.00	0.68509	932.98807	14.61	-21.07
39	40	0.24415	0.00	0.00	0.03	0.02	0.03	0.00	0.24419	933.23226	15.08	-21.04
40	41	0.98635	-0.03	0.02	0.12	0.02	0.17	0.00	0.98648	934.21874	14.70	-20.87
41	42	-0.80005	0.01	-0.01	-0.11	0.03	-0.17	0.00	-0.80013	933.41861	14.32	-21.04
42	43	-2.01720	0.01	-0.03	-0.25	0.03	-0.44	0.00	-2.01745	931.40116	13.70	-21.48
43	44	-3.07455	0.03	-0.05	-0.38	0.03	-0.66	0.00	-3.07492	928.32624	12.65	-22.14
44	45	-5.28623	0.03	-0.09	-0.68	0.03	-0.60	0.00	-5.28694	923.03931	11.80	-22.74
45	46	-6.15090	0.02	-0.10	-0.79	0.06	-1.18	0.00	-6.15171	916.88760	10.85	-23.92
46	47	-8.23600	-0.01	-0.14	-1.07	0.07	-1.87	0.00	-8.23716	908.65044	11.76	-25.79
47	48	-11.09122	-0.03	-0.18	-1.52	0.04	-1.85	0.00	-11.09291	897.55753	12.15	-27.64

Table 6b. National Geodetic Survey Line 73988G: File 73988G.ori--Continued

FROM SEQ NO.	TO SEQ NO.	UNCORRECTED FIELD ELEVATION DIFFERENCE (m)	LEVEL CORR. (mm)	ROD CORR. (mm)	ASTRO CORR. (mm)	TEMP. CORR. (mm)	REFR. CORR. (mm)	MAGN. CORR. (mm)	CORRECTED OBSERVED ELE. DIFFERENCE (m)	CUMULATIVE OBSERVED ELEVATION (OF TO SEQ NO) (m)	CUMULAT. OBS. GRAV ORTHO CORR. (mm)	CUMUL. REFR. CORR. (mm)
48	49	-7.17030	0.02	-0.12	-0.93	0.07	-1.42	0.00	-7.17126	890.38627	12.13	-29.06
49	50	-6.78005	0.05	-0.11	-0.93	0.07	-1.64	0.00	-6.78099	883.60529	9.41	-30.69
50	51	-7.23385	0.04	-0.12	-1.00	0.06	-1.54	0.00	-7.23488	876.37041	6.05	-32.23
51	52	-7.81030	-0.03	-0.13	-1.06	0.06	-1.71	0.00	-7.81146	868.55895	2.66	-33.93
52	53	-7.26970	0.05	-0.12	-0.97	0.05	-1.26	0.00	-7.27070	861.28826	0.90	-35.19
53	54	-6.37320	0.01	-0.11	-0.79	0.05	-0.85	0.00	-6.37404	854.91421	-0.45	-36.04
54	55	-5.33935	0.03	-0.09	-0.68	0.02	-0.31	0.00	-5.34008	849.57414	-0.88	-36.34
55	56	-1.72587	-0.03	-0.03	-0.21	0.01	-0.18	0.00	-1.72613	847.84801	-0.50	-36.52
56	57	-0.94050	0.03	-0.02	-0.13	0.03	-0.12	0.00	-0.94059	846.90742	0.13	-36.63
57	58	-2.88230	-0.02	-0.05	-0.39	0.03	-0.46	0.00	-2.88272	844.02470	0.33	-37.10
58	59	-5.29120	0.04	-0.09	-0.74	0.04	-0.96	0.00	-5.29195	838.73275	0.62	-38.05
59	60	-6.89448	0.03	-0.11	-0.92	0.03	-1.45	0.00	-6.89545	831.83730	0.93	-39.50
60	61	-8.65650	-0.08	-0.14	-1.20	0.05	-2.02	0.00	-8.65787	823.17944	0.83	-41.52
61	62	-10.24310	0.05	-0.17	-1.42	0.05	-2.03	0.00	-10.24460	812.93484	0.65	-43.55
62	63	-6.94975	0.12	-0.12	-0.97	0.03	-1.30	0.00	-6.95068	805.98416	0.50	-44.85
63	64	-10.88110	-0.01	-0.18	-1.52	0.06	-2.19	0.00	-10.88276	795.10140	0.29	-47.04
64	65	-11.44295	-0.01	-0.19	-1.63	0.06	-2.52	0.00	-11.44472	783.65669	-0.56	-49.56
65	66	-8.33363	-0.02	-0.14	-1.15	0.03	-1.55	0.00	-8.33491	775.32178	0.05	-51.11
66	67	-8.89515	0.03	-0.15	-1.23	0.05	-1.58	0.00	-8.89646	766.42533	1.04	-52.69
67	68	-12.52175	-0.07	-0.21	-1.65	0.04	-2.05	0.00	-12.52364	753.90169	2.13	-54.74
68	69	-6.30900	0.01	-0.10	-0.82	0.03	-0.84	0.00	-6.30989	747.59180	2.40	-55.57
69	70	-13.06725	0.10	-0.22	-1.67	0.03	-1.42	0.00	-13.06901	734.52279	1.56	-56.99
70	71	-9.75730	-0.03	-0.16	-1.20	0.02	-0.90	0.00	-9.75868	724.76411	-1.70	-57.90
71	72	-7.64855	0.09	-0.13	-0.88	0.01	-0.46	0.00	-7.64947	717.11465	-4.25	-58.36
72	73	-8.35860	0.07	-0.14	-1.26	0.04	-1.40	0.00	-8.35990	708.75475	-6.02	-59.76
73	74	-2.47545	0.04	-0.04	-0.38	0.03	-0.42	0.00	-2.47579	706.27896	-7.61	-60.18
74	75	-7.42215	0.09	-0.12	-1.17	0.03	-1.29	0.00	-7.42331	698.85565	-9.14	-61.47
75	76	-8.60842	0.09	-0.14	-1.28	0.04	-1.61	0.00	-8.60972	690.24593	-9.61	-63.08
76	77	-3.65680	0.02	-0.06	-0.58	0.04	-0.65	0.00	-3.65738	686.58855	-9.07	-63.73
77	78	-5.68745	0.04	-0.09	-0.83	0.02	-0.87	0.00	-5.68831	680.90024	-8.82	-64.60
78	79	-9.43895	-0.12	-0.16	-1.36	0.03	-1.83	0.00	-9.44056	671.45968	-9.03	-66.42
79	80	-6.91640	-0.03	-0.11	-0.96	0.03	-1.30	0.00	-6.91747	664.54221	-9.85	-67.72
80	81	-13.01420	-0.12	-0.22	-1.77	0.03	-2.28	0.00	-13.01629	651.52592	-11.38	-70.00
81	82	-10.34565	0.00	-0.17	-1.40	0.02	-1.36	0.00	-10.34720	641.17872	-12.71	-71.35
82	83	-6.27370	0.08	-0.10	-0.87	0.01	-0.65	0.00	-6.27458	634.90415	-13.68	-72.01
83	84	-4.75695	-0.05	-0.08	-0.60	0.02	-0.40	0.00	-4.75766	630.14649	-14.80	-72.56
84	85	-3.17665	-0.02	-0.05	-0.42	0.00	-0.33	0.00	-3.17714	626.96935	-15.27	-72.89
85	86	-4.79290	0.16	-0.08	-0.62	0.01	-0.37	0.00	-4.79343	622.17592	-16.37	-73.26
86	87	-3.85820	0.07	-0.06	-0.46	0.01	-0.06	0.00	-3.85864	618.31728	-17.37	-73.16
87	88	-2.35790	-0.01	-0.04	-0.21	-0.03	0.02	0.00	-2.35818	615.95910	-17.35	-73.13
88	89	0.45630	0.29	0.01	0.04	0.00	0.00	0.00	0.45663	616.41573	-17.18	-73.13
89	90	-1.08815	0.06	-0.02	-0.10	-0.01	-0.03	0.00	-1.08822	615.32751	-17.23	-73.15
90	91	3.81250	0.03	0.06	0.33	0.02	0.07	0.00	3.81295	619.14046	-16.93	-73.08

Table 6c. National Geodetic Survey Line 73988G: File 73988G.prn(=.dat)

```
   112          73988/G        3   4191510191110      8 1  1.09                 211G11       F
 -6.34900                   MT  0.20  0.00 -0.11 -0.89 -0.03 -1.05  0.001031129410848375
  2412          73988/G        4   3191510201145      8 1  1.09                 211G11       B
  6.35130                   MT -0.20  0.02  0.11  0.95  0.02  1.06  0.001084837510311294
   212          73988/G        4   5191510191130      8 1  1.09                 211G11       F
 -4.81970                   MT  0.20 -0.05 -0.08 -0.69 -0.03 -0.80  0.001084837510848376
  2312          73988/G        5   4191510201125      8 1  1.09                 211G11       B
  4.81730                   MT -0.20 -0.04  0.08  0.70  0.02  0.79  0.001084837610848375
   312          73988/G        5   6191510191305      8 1  1.09                 211G11       F
 -5.04370                   MT  0.20  0.00 -0.08 -0.61 -0.05 -0.83  0.001084837610848377
  2212          73988/G        6   5191510201105      8 1  1.08                 211G11       B
  5.04160                   MT -0.20  0.02  0.08  0.73  0.01  0.81  0.001084837710848376
   412          73988/G        6   7191510191330      8 1  1.08                 211G11       F
 -7.36060                   MT  0.20  0.00 -0.12 -1.00 -0.05 -1.14  0.001084837710848378
  2112          73988/G        7   6191510201045      8 1  1.08                 211G11       B
  7.36170                   MT -0.20  0.03  0.12  1.03  0.00  1.16  0.001084837810848377
   512          73988/G        7   8191510191350      7 1  1.08                 211G11       F
-10.89030                   MT  0.20  0.00 -0.18 -1.57 -0.05 -2.20  0.001084837810848379
  2012          73988/G        8   7191510201020      8 1  1.08                 211G11       B
 10.89000                   MT -0.20  0.03  0.18  1.48 -0.02  1.70  0.001084837910848378
   612          73988/G        8   9191510191410      7 1  1.02                 211G11       F
 -9.74200                   MT  0.18  0.03 -0.16 -1.40 -0.04 -1.60  0.001084837910304489
  1912          73988/G        9   8191510201000      8 1  1.02                 211G11       B
  9.73840                   MT -0.18  0.02  0.16  1.30 -0.02  1.25  0.001030448910848379
   712          73988/G        9  10191510191430      7 1  1.05                 211G11       F
-10.33670                   MT -0.12  0.04 -0.17 -1.49 -0.04 -1.40  0.001030448910848380
  1812          73988/G       10   919151020 940      7 1  1.05                 211G11       B
 10.34100                   MT  0.12 -0.03  0.17  1.32 -0.01  1.51  0.001084838010304489
   812          73988/G       10  11191510191455      7 1  1.12                 211G11       F
-11.33100                   MT -0.12  0.01 -0.19 -1.54 -0.03 -1.49  0.001084838010848381
  1712          73988/G       11  1019151020 920      8 1  1.12                 211G11       B
 11.32940                   MT  0.12  0.02  0.19  1.38 -0.02  1.25  0.001084838110848380
   912          73988/G       11  12191510191515      6 1  1.02                 211G11       F
 -7.80100                   MT -0.11  0.03 -0.13 -1.06 -0.02 -0.86  0.001084838110306173
  1612          73988/G       12  1119151020 900      7 1  1.02                 211G11       B
  7.79960                   MT  0.11  0.00  0.13  0.94 -0.02  0.74  0.001030617310848381
  2512          73988/G       12  13191510201610      5 1  1.02                 211G11       F
-7.37030                    MT -0.12 -0.04 -0.12 -0.83  0.00 -0.09  0.001030617310848382
  1012          73988/G       12  13191510191535      6 1  1.02                 211G11       F
 -7.36660                   MT -0.12  0.04 -0.12 -0.97 -0.01 -0.53  0.001030617310848382
  2612          73988/G       13  12191510201625      5 1  1.02                 211G11       B
  7.36970                   MT  0.12  0.01  0.12  0.83 -0.01 -0.18  0.001084838210306173
  1512          73988/G       13  1219151020 840      7 1  1.02                 211G11       B
  7.37110                   MT  0.12  0.04  0.12  0.81 -0.03  0.55  0.001084838210306173
  1112          73988/G       13  14191510191550      6 1  1.15                 211G11       F
 -6.14430                   MT -0.14  0.00 -0.10 -0.80  0.00 -0.35  0.001084838210848383
  1412          73988/G       14  1319151020 820      8 1  1.15                 211G11       B
  6.14700                   MT  0.14  0.02  0.10  0.63 -0.04  0.31  0.001084838310848382
  1212          73988/G       14  15191510191605      6 1  1.09                 211G11       F
 -3.22000                   MT -0.13  0.06 -0.05 -0.41  0.01 -0.07  0.001084838310309539
  1312          73988/G       15  1419151020 755      6 1  1.09                 211G11       B
  3.21890                   MT  0.13 -0.02  0.05  0.30 -0.04  0.13  0.001030953910848383
  4712          73988/G       15  16191510211535      6 1  1.03                 211G11       F
 -6.17940                   MT -0.05 -0.02 -0.10 -0.88 -0.02 -0.41  0.001030953910848384
  4612          73988/G       16  15191510211515      6 1  1.03                 211G11       B
  6.17960                   MT  0.05  0.01  0.10  0.93  0.03  0.63  0.001084838410309539
  4812          73988/G       16  17191510211550      5 1  1.03                 211G11       F
 -8.72070                   MT -0.05  0.00 -0.14 -1.20 -0.02 -0.54  0.001084838410848385
  4512          73988/G       17  16191510211500      6 1  1.03                 211G11       B
  8.71910                   MT  0.05 -0.03  0.14  1.31  0.04  1.16  0.001084838510848384
  4912          73988/G       17  18191510211605      6 1  1.08                 211G11       F
 -9.98600                   MT -0.05 -0.02 -0.17 -1.30 -0.01 -0.16  0.001084838510848386
  4412          73988/G       18  17191510211440      7 1  1.08                 211G11       B
  9.98530                   MT  0.05  0.05  0.17  1.50  0.05  1.29  0.001084838610848385
  5012          73988/G       18  1919151022 800      7 1  1.08                 211G11       F
-10.97330                   MT -0.05  0.00 -0.18 -1.08  0.05 -0.41  0.001084838610848387
  4312          73988/G       19  18191510211420      7 1  1.08                 211G11       B
 10.97100                   MT  0.05  0.00  0.18  1.71  0.05  1.65  0.001084838710848386
  5112          73988/G       19  2019151022 825      7 1  1.09                 211G11       F
 -9.72730                   MT -0.05  0.05 -0.16 -0.95  0.05 -0.67  0.001084838710848388
  4212          73988/G       20  19191510211400      7 1  1.09                 211G11       B
  9.72740                   MT  0.05  0.00  0.16  1.50  0.06  1.83  0.001084838810848387
  5212          73988/G       20  2119151022 840      6 1  1.09                 211G11       F
  1.75100                   MT -0.05  0.07  0.03  0.17  0.05  0.19  0.001084838810311296
  4112          73988/G       21  20191510211340      7 1  1.09                 211G11       B
 -1.75330                   MT  0.05 -0.01 -0.03 -0.28  0.06 -0.33  0.001031129610848388
  5312          73988/G       21  2219151022 900      6 1  1.09                 211G11       F
 -6.73240                   MT  0.11  0.06 -0.11 -0.66  0.06 -1.01  0.001031129610848389
```

```
 4012        73988/G        22  21191510211315       7 1  1.09                    211G11      B
 6.73670                 MT -0.11  0.01  0.11  1.08  0.05  1.36  0.001084838910311296
 5412        73988/G        22  2319151022 915       7 1  1.09                    211G11      F
 4.03830                 MT  0.10  0.01  0.07  0.42  0.05  0.48  0.001084838910848390
 3912        73988/G        23  22191510211155       7 1  1.08                    211G11      B
-4.03730                 MT -0.10  0.02 -0.07 -0.61  0.02 -0.87  0.001084839010848389
 5512        73988/G        23  2419151022 935       7 1  1.09                    211G11      F
 4.33500                 MT  0.11 -0.03  0.07  0.49  0.05  0.61  0.001084839010848391
 3812        73988/G        24  23191510211135       7 1  1.09                    211G11      B
-4.33360                 MT -0.11 -0.02 -0.07 -0.63  0.01 -0.94  0.001084839110848390
 5612        73988/G        24  2519151022 950       7 1  1.09                    211G11      F
 1.44860                 MT  0.11  0.00  0.02  0.16  0.05  0.26  0.001084839110848392
 3712        73988/G        25  24191510211120       7 1  1.09                    211G11      B
-1.44970                 MT -0.11 -0.01 -0.02 -0.21  0.00 -0.31  0.001084839210848391
 5712        73988/G        25  26191510221010       6 1  1.08                    211G11      F
-0.04800                 MT  0.11 -0.02  0.00 -0.01  0.04 -0.01  0.001084839210848393
 3612        73988/G        26  25191510211100       7 1  1.08                    211G11      B
 0.04470                 MT -0.11  0.01  0.00  0.01  0.00  0.01  0.001084839310848392
 5812        73988/G        26  27191510221030       6 1  1.08                    211G11      F
 0.57710                 MT  0.11  0.03  0.01  0.07  0.03  0.15  0.001084839310306166
 3512        73988/G        27  26191510211045       7 1  1.08                    211G11      B
-0.57730                 MT -0.11 -0.01 -0.01 -0.08 -0.01 -0.11  0.001030616610848393
 5912        73988/G        27  28191510221055       5 1  0.90                    211G11      F
-1.19970                 MT  0.29  0.05 -0.02 -0.16  0.04 -0.33  0.001030616610848394
 7212        73988/G        27  28191510221555       4 1  0.90                    211G11      F
-1.19930                 MT  0.29 -0.01 -0.02 -0.15 -0.01 -0.04  0.001030616610848394
 7112        73988/G        28  27191510221545       4 1  0.90                    211G11      B
 1.20000                 MT -0.29 -0.01  0.02  0.15  0.02  0.07  0.001084839410306166
 3412        73988/G        28  27191510211025       6 1  0.89                    211G11      B
 1.20610                 MT -0.29  0.04  0.02  0.16 -0.04  0.21  0.001084839410306166
 6012        73988/G        28  29191510221110       6 1  1.15                    211G11      F
-5.94100                 MT  0.37 -0.02 -0.10 -0.75  0.04 -2.00  0.001084839410848395
 3312        73988/G        29  28191510211005       7 1  1.15                    211G11      B
 5.94230                 MT -0.37  0.01  0.10  0.76 -0.06  1.25  0.001084839510848394
 6112        73988/G        29  30191510221130       6 1  1.14                    211G11      F
-7.12370                 MT  0.37 -0.04 -0.12 -0.93  0.03 -2.46  0.001084839510299243
 3212        73988/G        30  2919151021 945       7 1  1.14                    211G11      B
 7.12640                 MT -0.37  0.02  0.12  0.88 -0.06  1.41  0.001029924310848395
 6212        73988/G        30  31191510221300       5 1  0.96                    211G11      F
-4.11620                 MT  0.35  0.05 -0.07 -0.53  0.00 -1.37  0.001029924310848396
 3112        73988/G        31  3019151021 930       6 1  0.96                    211G11      B
 4.11360                 MT -0.35  0.03  0.07  0.49 -0.06  0.61  0.001084839610299243
 6312        73988/G        31  32191510221320       6 1  1.15                    211G11      F
-2.43170                 MT  0.41 -0.05 -0.04 -0.32 -0.01 -0.75  0.001084839610848397
 3012        73988/G        32  3119151021 910       7 1  1.15                    211G11      B
 2.43540                 MT -0.41  0.02  0.04  0.27 -0.08  0.31  0.001084839710848396
 6412        73988/G        32  33191510221335       6 1  1.09                    211G11      F
-1.42860                 MT  0.39  0.05 -0.02 -0.19 -0.01 -0.38  0.001084839710290563
 7012        73988/G        32  33191510221515       6 1  1.09                    211G11      F
-1.43210                 MT  0.39 -0.04 -0.02 -0.19 -0.02 -0.14  0.001084839710290563
 2912        73988/G        33  3219151021 855       6 1  1.09                    211G11      B
 1.43330                 MT -0.39 -0.01  0.02  0.15 -0.07  0.19  0.001029056310848397
 6912        73988/G        33  32191510221500       6 1  1.09                    211G11      B
 1.43310                 MT -0.39  0.01  0.02  0.18  0.02  0.19  0.001029056310848397
 6512        73988/G        33  34191510221355       5 1  0.96                    211G11      F
-1.37230                 MT  0.37  0.03 -0.02 -0.18 -0.01 -0.39  0.001029056310848398
 2812        73988/G        34  3319151021 835       6 1  0.96                    211G11      B
 1.36870                 MT -0.37  0.00  0.02  0.13 -0.07  0.11  0.001084839810290563
 6612        73988/G        34  35191510221405       6 1  1.09                    211G11      F
-0.74540                 MT  0.41  0.02 -0.01 -0.09 -0.02 -0.18  0.001084839810848399
 2712        73988/G        35  3419151021 810       6 1  1.09                    211G11      B
 0.74730                 MT -0.41  0.03  0.01  0.06 -0.08  0.05  0.001084839910848398
 6712        73988/G        35  36191510221425       6 1  1.15                    211G11      F
-1.01340                 MT  0.44 -0.02 -0.02 -0.13 -0.02 -0.21  0.001084839910848400
 6812        73988/G        36  35191510221440       6 1  1.16                    211G11      B
 1.01600                 MT -0.44  0.05  0.02  0.13  0.02  0.19  0.001084840010848399
 7312        73988/G        36  3719151023 805       6 1  1.02                    211G11      F
-0.75160                 MT  0.39  0.02 -0.01 -0.06  0.05 -0.03  0.001084840010848401
 9112        73988/G        37  36191510231530       6 1  1.03                    211G11      B
 0.74970                 MT -0.39 -0.04  0.01  0.10  0.02  0.04  0.001084840110848400
 9212        73988/G        37  3819151025 830       6 1  1.09                    211G11      F
-0.59600                 MT  0.41 -0.09 -0.01 -0.05  0.02 -0.05  0.001084840110848402
 9012        73988/G        38  37191510231510       6 1  1.09                    211G11      B
 0.59670                 MT -0.41 -0.03  0.01  0.08  0.02  0.06  0.001084840210848401
 9312        73988/G        38  3919151025 850       6 1  1.09                    211G11      F
 0.68500                 MT  0.41 -0.02  0.01  0.07  0.03  0.08  0.001084840210272793
 8912        73988/G        39  38191510231455       6 1  1.09                    211G11      B
-0.68500                 MT -0.41 -0.01 -0.01 -0.09  0.02 -0.09  0.001027279310848402
```

Table 6c. National Geodetic Survey Line 73988G: File 73988G.prn(=.dat)--Continued

```
  9412          73988/G        39  4019151025 905       6 1  1.03                  211G11        F
  0.24400                    MT  0.52 -0.01  0.00  0.02  0.03  0.03  0.001027279310848403
  8812          73988/G        40  39191510231440        6 1  1.03                  211G11        B
 -0.24430                    MT -0.52  0.00  0.00 -0.03  0.00 -0.03  0.001084840310272793
  9512          73988/G        40  4119151025 920       6 1  1.09                  211G11        F
  0.98700                    MT  0.56 -0.09  0.02  0.10  0.04  0.16  0.001084840310848404
  8712          73988/G        41  40191510231425        6 1  1.09                  211G11        B
 -0.98570                    MT -0.56 -0.03 -0.02 -0.14  0.00 -0.18  0.001084840410848403
  9612          73988/G        41  4219151025 935       6 1  1.09                  211G11        F
 -0.80000                    MT  0.56  0.01 -0.01 -0.09  0.04 -0.15  0.001084840410848405
  8612          73988/G        42  41191510231410        6 1  1.09                  211G11        B
  0.80010                    MT -0.56 -0.01  0.01  0.12 -0.01  0.18  0.001084840510848404
  9712          73988/G        42  4319151025 950       6 1  1.03                  211G11        F
 -2.01660                    MT  0.52  0.01 -0.03 -0.23  0.04 -0.43  0.001084840510848406
  8512          73988/G        43  42191510231350        6 1  1.03                  211G11        B
  2.01780                    MT -0.52 -0.01  0.03  0.28 -0.01  0.45  0.001084840610848405
  9812          73988/G        43  44191510251005        7 1  1.15                  211G11        F
 -3.07500                    MT  0.59  0.06 -0.05 -0.35  0.05 -0.64  0.001084840610848407
  8412          73988/G        44  43191510231330        7 1  1.15                  211G11        B
  3.07410                    MT -0.59  0.00  0.05  0.41 -0.02  0.68  0.001084840710848406
 11212          73988/G        44  45191510251600        6 1  1.06                  211G11        F
 -5.28600                    MT  0.53  0.06 -0.09 -0.69  0.00 -0.08  0.001084840710349108
  9912          73988/G        44  45191510251025        7 1  1.06                  211G11        F
 -5.28470                    MT  0.53  0.05 -0.09 -0.63  0.05 -1.00  0.001084840710349108
  8312          73988/G        45  44191510231205        7 1  1.06                  211G11        B
  5.28710                    MT -0.53  0.00  0.09  0.70 -0.05  1.11  0.001034910810848407
 11112          73988/G        45  44191510251545        6 1  1.06                  211G11        B
  5.28710                    MT -0.53 -0.02  0.09  0.69  0.00  0.23  0.001034910810848407
 10012          73988/G        45  46191510251045        7 1  1.02                  211G11        F
 -6.14910                    MT  0.60 -0.01 -0.10 -0.75  0.06 -1.14  0.001034910810848408
  8212          73988/G        46  45191510231145        7 1  1.02                  211G11        B
  6.15270                    MT -0.60 -0.04  0.10  0.82 -0.06  1.21  0.001084840810349108
 10112          73988/G        46  47191510251100        7 1  1.09                  211G11        F
 -8.23570                    MT  0.64 -0.03 -0.14 -1.04  0.06 -1.85  0.001084840810848409
  8112          73988/G        47  46191510231125        7 1  1.09                  211G11        B
  8.23630                    MT -0.64 -0.01  0.14  1.10 -0.07  1.89  0.001084840910848408
 10212          73988/G        47  48191510251120        7 1  1.09                  211G11        F
-11.08730                    MT  0.63 -0.01 -0.18 -1.40  0.06 -2.67  0.001084840910334501
 11012          73988/G        47  48191510251515        7 1  1.09                  211G11        F
-11.09200                    MT  0.63 -0.02 -0.18 -1.62  0.02 -0.91  0.001084840910334501
  8012          73988/G        48  47191510231110        7 1  1.09                  211G11        B
 11.09330                    MT -0.63 -0.01  0.18  1.46 -0.07  2.64  0.001033450110848409
 10912          73988/G        48  47191510251500        7 1  1.09                  211G11        B
 11.09230                    MT -0.63  0.08  0.18  1.62 -0.02  1.18  0.001033450110848409
 10312          73988/G        48  49191510251135        7 1  1.03                  211G11        F
 -7.17030                    MT  0.59  0.01 -0.12 -0.92  0.06 -1.46  0.001033450110848410
  7912          73988/G        49  48191510231050        7 1  1.03                  211G11        B
  7.17030                    MT -0.59 -0.03  0.12  0.93 -0.07  1.38  0.001084841010334501
 10412          73988/G        49  50191510251300        7 1  1.07                  211G11        F
 -6.78180                    MT  0.61  0.05 -0.11 -1.00  0.05 -1.39  0.001084841010848411
  7812          73988/G        50  49191510231030        6 1  1.07                  211G11        B
  6.77830                    MT -0.61 -0.04  0.11  0.87 -0.08  1.88  0.001084841110848410
 10512          73988/G        50  51191510251320        7 1  1.03                  211G11        F
 -7.23500                    MT  0.58  0.06 -0.12 -1.09  0.04 -1.30  0.001084841110321314
  7712          73988/G        51  50191510231015        6 1  1.02                  211G11        B
  7.23270                    MT -0.58 -0.02  0.12  0.91 -0.07  1.77  0.001032131410848411
 10612          73988/G        51  52191510251335        7 1  1.16                  211G11        F
 -7.81130                    MT  0.63 -0.10 -0.13 -1.14  0.04 -1.75  0.001032131410848412
  7612          73988/G        52  5119151023 955        7 1  1.16                  211G11        B
  7.80930                    MT -0.63 -0.03  0.13  0.97 -0.08  1.66  0.001084841210321314
 10712          73988/G        52  53191510251355        7 1  1.03                  211G11        F
 -7.27000                    MT  0.56  0.09 -0.12 -1.05  0.03 -1.21  0.001084841210848413
  7512          73988/G        53  5219151023 935        6 1  1.03                  211G11        B
  7.26940                    MT -0.56  0.00  0.12  0.89 -0.07  1.30  0.001084841310848412
 10812          73988/G        53  54191510251415        7 1  1.09                  211G11        F
 -6.37340                    MT  0.59  0.03 -0.11 -0.90  0.03 -0.94  0.001084841310848414
  7412          73988/G        54  5319151023 910        7 1  1.09                  211G11        B
  6.37300                    MT -0.59  0.01  0.11  0.69 -0.07  0.76  0.001084841410848413
 11312          73988/G        54  5519151026 850        7 1  1.02                  211G11        F
 -5.33900                    MT  0.55  0.01 -0.09 -0.60  0.01 -0.42  0.001084841410848415
 14812          73988/G        55  54191510271545        6 1  1.02                  211G11        B
  5.33970                    MT -0.55 -0.04  0.09  0.76 -0.03  0.19  0.001084841510848414
 11412          73988/G        55  5619151026 930        7 1  0.99                  211G11        F
 -1.72360                    MT  0.53 -0.03 -0.03 -0.22  0.02 -0.18  0.001084841510848416
 15012          73988/G        55  5619151028 935        6 1  1.00                  211G11        F
 -1.72600                    MT  0.53  0.01 -0.03 -0.19  0.00 -0.26  0.001084841510848416
 14912          73988/G        56  5519151028 850        6 1  1.00                  211G11        B
  1.72590                    MT -0.53  0.03  0.03  0.18  0.01  0.17  0.001084841610848415
```

Table 6c. National Geodetic Survey Line 73988G: File 73988G.prn(=.dat)--Continued

```
 14712          73988/G        56  55191510271530       6 1  1.00                  211G11        B
  1.72800                    MT -0.53  0.05  0.03  0.25 -0.03  0.10  0.001084841610848415
 11512          73988/G        56  5719151026 945       7 1  1.16                  211G11        F
 -0.94000                    MT  0.61 -0.03 -0.02 -0.12  0.03 -0.15  0.001084841610293833
 14612          73988/G        57  56191510271510       7 1  1.16                  211G11        B
  0.94100                    MT -0.61 -0.09  0.02  0.14 -0.03  0.08  0.001029383310848416
 11612          73988/G        57  58191510261005       7 1  1.09                  211G11        F
 -2.88190                    MT  0.54  0.00 -0.05 -0.34  0.04 -0.54  0.001029383310848417
 14512          73988/G        58  57191510271455       6 1  1.09                  211G11        B
  2.88270                    MT -0.54  0.03  0.05  0.43 -0.03  0.39  0.001084841710293833
 11712          73988/G        58  59191510261020       7 1  1.16                  211G11        F
 -5.29100                    MT  0.57 -0.05 -0.09 -0.66  0.04 -1.19  0.001084841710848418
 14412          73988/G        59  58191510271435       7 1  1.16                  211G11        B
  5.29140                    MT -0.57 -0.12  0.09  0.81 -0.04  0.72  0.001084841810848417
 15112          73988/G        59  60191510281005       7 1  1.16                  211G11        F
 -6.89470                    MT  0.57  0.02 -0.11 -0.85  0.01 -1.47  0.001084841810848419
 11812          73988/G        59  60191510261045       7 1  1.16                  211G11        F
 -6.89760                    MT  0.57  0.01 -0.11 -0.87  0.05 -1.65  0.001084841810848419
 15212          73988/G        60  59191510281025       7 1  1.16                  211G11        B
  6.89500                    MT -0.57 -0.07  0.11  0.88 -0.01  1.56  0.001084841910848418
 14312          73988/G        60  59191510271410       7 1  1.16                  211G11        B
  6.89060                    MT -0.57 -0.03  0.11  1.09 -0.04  1.12  0.001084841910848418
 11912          73988/G        60  61191510261105       7 1  1.15                  211G11        F
 -8.65630                    MT  0.56 -0.09 -0.14 -1.07  0.05 -2.20  0.001084841910848420
 14212          73988/G        61  60191510271350       7 1  1.16                  211G11        B
  8.65670                    MT -0.56  0.06  0.14  1.32 -0.04  1.83  0.001084842010848419
 12012          73988/G        61  62191510261125       7 1  1.14                  211G11        F
-10.24270                    MT  0.55 -0.01 -0.17 -1.31  0.05 -2.67  0.001084842010848421
 14112          73988/G        62  61191510271325       9 1  1.15                  211G11        B
 10.24350                    MT -0.55 -0.10  0.17  1.52 -0.04  1.39  0.001084842110848420
 12112          73988/G        62  63191510261145       5 1  0.77                  211G11        F
 -6.95070                    MT  0.36 -0.01 -0.12 -0.92  0.04 -1.60  0.001084842110267750
 14012          73988/G        63  62191510271305       6 1  0.77                  211G11        B
  6.94880                    MT -0.36 -0.25  0.12  1.01 -0.03  1.00  0.001026775010848421
 12212          73988/G        63  64191510261310       7 1  1.09                  211G11        F
-10.88130                    MT  0.62  0.04 -0.18 -1.44  0.06 -2.47  0.001026775010848422
 13912          73988/G        64  63191510271150       8 1  1.09                  211G11        B
 10.88090                    MT -0.62  0.06  0.18  1.61 -0.05  1.91  0.001084842210267750
 12312          73988/G        64  65191510261330       7 1  1.15                  211G11        F
-11.44470                    MT  0.65 -0.03 -0.19 -1.56  0.06 -2.79  0.001084842210848423
 13812          73988/G        65  64191510271130       8 1  1.15                  211G11        B
 11.44120                    MT -0.65 -0.02  0.19  1.69 -0.05  2.25  0.001084842310848422
 15312          73988/G        65  66191510281105       7 1  1.02                  211G11        F
 -8.33290                    MT  0.56 -0.01 -0.14 -1.08  0.02 -1.62  0.001084842310352350
 12412          73988/G        65  66191510261355       7 1  1.02                  211G11        F
 -8.33500                    MT  0.56  0.00 -0.14 -1.08  0.05 -1.40  0.001084842310352350
 13712          73988/G        66  65191510271110       7 1  1.01                  211G11        B
  8.33030                    MT -0.56  0.08  0.14  1.23 -0.04  1.58  0.001035235010848423
 15412          73988/G        66  65191510281125       7 1  1.02                  211G11        B
  8.33630                    MT -0.56  0.00  0.14  1.22 -0.03  1.62  0.001035235010848423
 12512          73988/G        66  67191510261415       7 1  1.15                  211G11        F
 -8.89670                    MT  0.64  0.03 -0.15 -1.17  0.05 -1.53  0.001035235010848424
 13612          73988/G        67  66191510271050       8 1  1.15                  211G11        B
  8.89360                    MT -0.64 -0.02  0.15  1.28 -0.04  1.62  0.001084842410352350
 12612          73988/G        67  68191510261440       8 1  1.34                  211G11        F
-12.52160                    MT  0.69 -0.03 -0.21 -1.60  0.05 -1.94  0.001084842410848425
 13512          73988/G        68  67191510271030       9 1  1.26                  211G11        B
 12.52190                    MT -0.69  0.10  0.21  1.70 -0.03  2.16  0.001084842510848424
 12712          73988/G        68  69191510261505       5 1  0.83                  211G11        F
 -6.30930                    MT  0.45  0.05 -0.10 -0.81  0.03 -0.70  0.001084842510336093
 13412          73988/G        69  68191510271010       6 1  0.83                  211G11        B
  6.30870                    MT -0.45  0.04  0.10  0.83 -0.02  0.97  0.001033609310848425
 12812          73988/G        69  70191510261520       8 1  1.25                  211G11        F
-13.06680                    MT  0.58  0.02 -0.22 -1.67  0.03 -1.00  0.001033609310848426
 13312          73988/G        70  6919151027 950       9 1  1.21                  211G11        B
 13.06770                    MT -0.58 -0.19  0.22  1.67 -0.02  1.84  0.001084842610336093
 12912          73988/G        70  71191510261540       7 1  1.09                  211G11        F
 -9.75800                    MT  0.52  0.02 -0.16 -1.21  0.02 -0.41  0.001084842610848427
 13212          73988/G        71  7019151027 930       7 1  1.09                  211G11        B
  9.75660                    MT -0.52  0.09  0.16  1.19 -0.01  1.40  0.001084842710848426
 13012          73988/G        71  72191510261600       7 1  1.09                  211G11        F
 -7.64970                    MT  0.51  0.04 -0.13 -0.93  0.02 -0.08  0.001084842710848428
 13112          73988/G        72  7119151027 905       7 1  1.08                  211G11        B
  7.64740                    MT -0.51 -0.14  0.13  0.84  0.00  0.84  0.001084842810848427
 15512          73988/G        72  73191510281300       8 1  1.15                  211G11        F
 -8.35940                    MT  0.53  0.02 -0.14 -1.25  0.04 -1.50  0.001084842810848429
 18412          73988/G        73  72191510291350       8 1  1.15                  211G11        B
  8.35780                    MT -0.53 -0.11  0.14  1.27 -0.04  1.31  0.001084842910848428
```

15612	73988/G	73 74191510281320	7 1 1.02	211G11	F
-2.47460		MT 0.47 -0.07 -0.04 -0.37	0.04 -0.43	0.00108484291084843 0	
18212	73988/G	74 73191510291330	7 1 1.03	211G11	B
2.47630		MT -0.47 -0.15 0.04 0.38	-0.03 0.41	0.00108484301084842 9	
15712	73988/G	74 75191510281335	7 1 1.02	211G11	F
-7.42360		MT 0.47 -0.02 -0.12 -1.14	0.04 -1.26	0.00108484301030616 3	
18112	73988/G	75 74191510291315	7 1 1.02	211G11	B
7.42070		MT -0.47 -0.20 0.12 1.19	-0.03 1.32	0.00103061631084843 0	
18512	73988/G	75 76191510291415	7 1 1.15	211G11	F
-8.60970		MT 0.50 0.06 -0.14 -1.21	0.04 -1.41	0.00103061631084843 1	
15812	73988/G	75 76191510281355	7 1 1.15	211G11	F
-8.60910		MT 0.50 -0.01 -0.14 -1.33	0.04 -1.79	0.00103061631084843 1	
18612	73988/G	76 75191510291435	7 1 1.15	211G11	B
8.61100		MT -0.50 -0.30 0.14 1.19	-0.04 1.22	0.00108484311030616 3	
18012	73988/G	76 75191510291300	7 1 1.15	211G11	B
8.60390		MT -0.50 0.01 0.14 1.38	-0.03 2.02	0.00108484311030616 3	
15912	73988/G	76 77191510281415	7 1 1.15	211G11	F
-3.65790		MT 0.50 0.02 -0.06 -0.56	0.04 -0.56	0.00108484311084843 2	
18312	73988/G	77 76191510291340	7 1 1.15	211G11	B
3.65570		MT -0.50 -0.01 0.06 0.60	-0.04 0.74	0.00108484321084843 1	
16012	73988/G	77 78191510281435	5 1 0.73	211G11	F
-5.68800		MT 0.31 0.01 -0.09 -0.85	0.03 -0.63	0.00108484321029383 6	
17912	73988/G	78 77191510291140	5 1 0.72	211G11	B
5.68690		MT -0.31 -0.07 0.09 0.81	-0.01 1.10	0.00102938361084843 2	
16112	73988/G	78 79191510281445	7 1 1.15	211G11	F
-9.44030		MT 0.50 0.02 -0.16 -1.43	0.04 -1.22	0.00102938361084843 3	
17812	73988/G	79 78191510291125	7 1 1.15	211G11	B
9.43760		MT -0.50 0.26 0.16 1.28	-0.02 2.43	0.00108484331029383 6	
16212	73988/G	79 80191510281505	6 1 1.02	211G11	F
-6.91750		MT 0.44 0.00 -0.11 -1.02	0.04 -0.73	0.00108484331084843 4	
17712	73988/G	80 79191510291110	6 1 1.02	211G11	B
6.91530		MT -0.44 0.06 0.11 0.89	-0.01 1.87	0.00108484341084843 3	
16312	73988/G	80 81191510281520	7 1 1.15	211G11	F
-13.01640		MT 0.49 0.02 -0.22 -1.85	0.04 -1.06	0.00108484341027932 4	
17612	73988/G	81 80191510291050	7 1 1.15	211G11	B
13.01200		MT -0.49 0.27 0.22 1.69	-0.01 3.49	0.00102793241084843 4	
16412	73988/G	81 82191510281535	7 1 1.22	211G11	F
-10.34570		MT 0.35 0.03 -0.17 -1.47	0.03 -0.57	0.00102793241084843 5	
17512	73988/G	82 81191510291035	8 1 1.22	211G11	B
10.34560		MT -0.35 0.03 0.17 1.32	0.00 2.14	0.00108484351027932 4	
16512	73988/G	82 83191510281555	6 1 1.09	211G11	F
-6.27510		MT 0.31 0.00 -0.10 -0.84	0.02 -0.12	0.00108484351084843 6	
17412	73988/G	83 82191510291015	7 1 1.09	211G11	B
6.27230		MT -0.31 -0.17 0.10 0.90	0.00 1.19	0.00108484361084843 5	
16612	73988/G	83 84191510281610	5 1 0.89	211G11	RF
-4.76330		MT 0.25 -0.06 -0.08 -0.58	0.02 0.04	0.00108484361084843 7	
18712	73988/G	83 84191510291510	5 1 0.89	211G11	F
-4.75510		MT 0.25 -0.12 -0.08 -0.57	0.02 -0.51	0.00108484361084843 7	
17312	73988/G	84 83191510291000	6 1 0.89	211G11	B
4.75340		MT -0.25 0.08 0.08 0.64	0.00 0.79	0.00108484371084843 6	
18812	73988/G	84 83191510291525	5 1 0.89	211G11	B
4.75600		MT -0.25 -0.08 0.08 0.61	-0.02 0.36	0.00108484371084843 6	
19012	73988/G	84 85191510291545	2 1 0.29	211G11	F
-3.17630		MT 0.08 -0.23 -0.05 -0.42	0.01 -0.08	0.00108484371084843 8	
17212	73988/G	85 8419151029 955	2 1 0.30	211G11	B
3.17700		MT -0.08 -0.18 0.05 0.41	0.00 0.58	0.00108484381084843 7	
18912	73988/G	85 86191510291545	6 1 1.05	211G11	F
-4.79440		MT 0.29 0.14 -0.08 -0.58	0.03 -0.16	0.00108484381084843 9	
17112	73988/G	86 8519151029 930	7 1 1.05	211G11	B
4.79140		MT -0.29 -0.18 0.08 0.66	0.01 0.57	0.00108484391084843 8	
19112	73988/G	86 87191510291610	6 1 1.09	211G11	F
-3.86030		MT 0.30 0.12 -0.06 -0.46	0.03 0.04	0.00108484391036225 4	
17012	73988/G	87 8619151029 835	9 1 1.10	211G11	B
3.85610		MT -0.30 -0.01 0.06 0.46	0.01 0.16	0.00103622541084843 9	
19212	73988/G	87 88191510291630	9 1 0.80	211G11	F
-2.35820		MT -0.21 -0.10 -0.04 -0.24	-0.02 0.04	0.00103622541026426 0	
19312	73988/G	88 8719151030 740	6 1 0.81	211G11	B
2.35760		MT 0.21 -0.09 0.04 0.18	0.03 0.01	0.00102642601036225 4	
19412	73988/G	88 8919151030 815	3 1 0.34	211G11	F
0.45700		MT -0.18 0.33 0.01 0.04	-0.01 0.01	0.00102642601026599 4	
16912	73988/G	89 8819151029 800	4 1 0.35	211G11	B
-0.45560		MT 0.18 -0.24 -0.01 -0.04	0.00 0.00	0.00102659941026426 0	
19512	73988/G	89 9019151030 830	3 1 0.36	211G11	F
-1.08830		MT -0.11 0.08 -0.02 -0.11	-0.01 -0.04	0.00102659941026774 9	
16812	73988/G	90 8919151029 750	3 1 0.33	211G11	B
1.08800		MT 0.11 -0.03 0.02 0.08	0.01 0.01	0.00102677491026599 4	
19612	73988/G	90 9119151030 835	4 1 0.46	211G11	F
3.81300		MT 0.09 0.07 0.06 0.43	0.02 0.14	0.00102677491026600 6	

Table 6c. National Geodetic Survey Line 73988G: File 73988G.prn(=.dat)--Continued

```
  16712          73988/G         91  9019151029 735       4 1  0.49                  211G11        B
  -3.81200                    MT -0.09  0.00 -0.06 -0.24 -0.02  0.00  0.001026600610267749
```

Table 7a. National Geodetic Survey Line L24888: File L24888.pro

Seq No.	UID	Benchmark	Spur Code	Distance (km)	Latitude	Longitude	Observed Elevation (m)	Obs Grav Ortho Ht (m)	Cumul. Refr Cor. (mm)	Cumul. Magn Cor. (mm)
9946	10297286	C 410		0.00	38 03 22	117 12 57	1895.62490	1895.62490	0.00	0.00
9945	10299012	B 410		0.71	38 03 38	117 13 10	1876.37913	1876.37249	-0.11	0.00
9944	10302637	A 410		1.25	38 03 50	117 13 21	1865.08145	1865.07020	-0.20	0.00
601	10304317	H 128		2.17	38 04 05	117 13 48	1837.86958	1837.84746	-0.27	0.00
602	10305998	C 349		2.96	38 04 19	117 14 10	1815.17256	1815.13843	-0.05	0.00
603	10309375	S 429		4.20	38 04 39	117 14 52	1781.60803	1781.56662	-0.14	0.00
604	10311108	TONOPAH RM 3		5.34	38 04 49	117 15 36	1758.07209	1758.02921	-0.24	0.00
605	10312796	P 348		6.39	38 04 50	117 16 10	1727.78870	1727.73918	-1.12	0.00
606	10316191	T 429		8.22	38 05 12	117 17 14	1689.54318	1689.48957	-1.92	0.00
607	10319510	U 429		10.27	38 05 38	117 18 28	1644.51813	1644.45922	-3.73	0.00
608	10324471	V 429		12.41	38 06 02	117 19 50	1602.13392	1602.07205	-5.37	0.00
609	10327901	W 429		14.42	38 06 27	117 21 06	1563.12056	1563.05419	-5.83	0.00
610	10332636	X 429		16.53	38 06 52	117 22 26	1532.65769	1532.58725	-7.60	0.00
611	10335930	Y 429		18.57	38 07 16	117 23 43	1514.26961	1514.19641	-7.60	0.00
612	10340672	Z 429		20.86	38 07 43	117 25 07	1495.75214	1495.66718	-7.70	0.00
613	10345472	A 433		23.13	38 08 10	117 26 32	1475.39072	1475.28937	-7.90	0.00
614	10347324	A 432		24.35	38 08 28	117 27 12	1468.23602	1468.13310	-8.27	0.00
615	10347317	G 349		24.62	38 08 27	117 27 23	1468.05028	1467.94793	-8.28	0.00
616	10348946	1 NVDH		25.11	38 08 33	117 27 41	1466.55132	1466.45081	-8.26	0.00
617	10348945	2 NVDH		25.88	38 08 33	117 28 12	1465.14528	1465.04750	-8.36	0.00
618	10347316	MILLERS AZ MK		26.71	38 08 29	117 28 43	1463.90295	1463.80785	-8.38	0.00
619	10347314	91 NVDH		27.34	38 08 26	117 29 06	1462.09737	1462.00398	-8.43	0.00
620	10347313	4 NVDH		27.60	38 08 25	117 29 16	1461.92594	1461.83321	-8.42	0.00
621	10347312	7 K NVDH		28.14	38 08 21	117 29 37	1461.54053	1461.44900	-8.42	0.00
622	10347309	MILLERS		28.24	38 08 21	117 29 44	1461.86359	1461.77253	-8.43	0.00
623	10345470	5 NVDH		29.18	38 08 14	117 30 23	1460.09947	1460.01015	-8.40	0.00
624	10345469	6 NVDH		29.77	38 08 11	117 30 47	1459.31463	1459.22590	-8.35	0.00
625	10343993	93 NVDH		30.09	38 08 09	117 31 00	1458.88914	1458.80064	-8.32	0.00
626	10343992	7 NVDH		30.58	38 08 06	117 31 20	1458.31650	1458.22833	-8.24	0.00
627	10343991	H 349		30.86	38 08 05	117 31 31	1457.48416	1457.39591	-8.21	0.00
628	10343990	8 NVDH		31.13	38 08 04	117 31 41	1457.53311	1457.44483	-8.21	0.00
629	10343989	18 NVDH		31.40	38 08 02	117 31 52	1457.09095	1457.00252	-8.21	0.00
630	10342326	9 NVDH		32.02	38 07 58	117 32 17	1456.09694	1456.00717	-8.24	0.00
631	10340667	J 349		33.31	38 07 48	117 33 07	1455.05409	1454.96216	-8.22	0.00
632	10340666	K 349		35.00	38 07 41	117 34 14	1454.36842	1454.27157	-8.22	0.00
633	10337453	Z 349		36.44	38 07 21	117 35 07	1456.32739	1456.22394	-8.20	0.00
634	10334314	L 349		37.23	38 07 04	117 35 32	1458.15052	1458.03987	-8.21	0.00
635	10327902	B 433		39.01	38 06 20	117 36 18	1456.65095	1456.53657	-8.19	0.00
636	10321079	N 349		40.51	38 05 42	117 36 55	1456.24725	1456.13188	-8.19	0.00
637	10314503	P 349		42.07	38 05 02	117 37 32	1463.70381	1463.59028	-7.88	0.00

Table 7a. National Geodetic Survey Line L24888: File L24888.pro--Continued

Seq No.	UID	Benchmark	Spur Code	Distance (km)	Latitude	Longitude	Observed Elevation (m)	Obs Grav Ortho Ht (m)	Cumul. Refr Cor. (mm)	Cumul. Magn Cor. (mm)
638	10307595	MCLEANS RM 2		43.32	38 04 29	117 37 58	1468.91534	1468.80567	-7.93	0.00
639	10304319	MCLEANS AZ MK		44.62	38 04 00	117 38 33	1454.80869	1454.70035	-7.99	0.00
640	10297285	Q 349		46.16	38 03 20	117 39 11	1468.48569	1468.39440	-7.69	0.00
641	10288736	R 349		47.78	38 02 38	117 39 51	1469.12895	1469.05121	-7.70	0.00
642	10285569	S 349		49.36	38 02 14	117 40 48	1479.01954	1478.95048	-7.44	0.00
643	10283965	T 349		50.95	38 02 01	117 41 50	1499.53662	1499.47232	-7.16	0.00
644	10280755	U 349		52.59	38 01 47	117 42 54	1505.41326	1505.34843	-7.25	0.00
645	10279077	V 349		54.01	38 01 36	117 43 50	1505.12736	1505.06137	-7.32	0.00
646	10277404	X 349		55.68	38 01 24	117 44 56	1500.56342	1500.49735	-7.60	0.00
647	10275833	Y 349		57.33	38 01 12	117 46 01	1491.20103	1491.13259	-8.65	0.00
648	10274251	BLAIR AZ MK		58.13	38 01 08	117 46 32	1489.14936	1489.07958	-8.75	0.00
649	10274254	B 432		58.32	38 01 03	117 46 30	1485.72695	1485.65731	-8.82	0.00
650	10269215	M 14		59.42	38 00 30	117 46 21	1467.71049	1467.64208	-9.69	0.00
651	10269213	L 14		59.97	38 00 33	117 46 41	1468.49592	1468.42613	-9.63	0.00
687	10358650	A 181		61.06	37 59 38	117 46 10	1454.05626	1453.98899	-9.39	0.00
652	10274250	A 350		59.74	38 01 05	117 47 38	1490.65800	1490.58099	-8.77	0.00
653	10272587	B 350		61.32	38 00 58	117 48 41	1489.56163	1489.47666	-8.79	0.00
654	10272586	C 350		62.17	38 00 58	117 49 16	1495.43669	1495.34748	-8.46	0.00
655	10274249	K 14		63.26	38 01 06	117 49 57	1496.56830	1496.47413	-8.37	0.00
656	10275832	D 350		64.93	38 01 11	117 51 03	1472.48556	1472.38396	-9.45	0.00
657	10277403	E 350		66.67	38 01 26	117 52 12	1441.51149	1441.40630	-10.84	0.00
659	10282379	COALDALE		68.29	38 01 51	117 53 09	1412.78695	1412.67908	-13.01	0.00
658	10282381	J 14		68.50	38 01 52	117 53 01	1415.97331	1415.86512	-12.67	0.00
660	10285572	C 432		69.00	38 02 10	117 53 22	1402.93667	1402.82961	-13.82	0.00
661	10288735	COALDALE AZ MK		69.73	38 02 32	117 53 33	1397.91412	1397.80816	-14.22	0.00
662	10288734	F 350		69.95	38 02 33	117 53 40	1393.58377	1393.47800	-14.47	0.00
663	10295385	H 350		71.37	38 03 15	117 54 01	1385.71452	1385.60789	-15.11	0.00
664	10304322	C 433		72.98	38 04 02	117 54 28	1380.63491	1380.53609	-15.42	0.00
665	10312798	K 350		74.57	38 04 50	117 54 47	1380.68060	1380.58491	-15.40	0.00
666	10319506	L 350		76.13	38 05 37	117 55 09	1383.87821	1383.78325	-15.16	0.00
667	10327897	M 350		77.71	38 06 25	117 55 32	1381.52959	1381.42837	-15.29	0.00
668	10335925	N 350		79.24	38 07 12	117 55 55	1379.90815	1379.80066	-15.41	0.00
669	10342325	P 350		80.78	38 07 59	117 56 16	1383.55837	1383.44093	-15.29	0.00
670	10350491	D 433		82.28	38 08 45	117 56 36	1393.64656	1393.52484	-14.78	0.00
671	10350484	ROCKHILL		82.37	38 08 47	117 56 38	1393.70923	1393.58737	-14.78	0.00
672	10358661	ROCKHILL AZ MK		83.93	38 09 33	117 57 02	1427.69104	1427.57078	-13.11	0.00
673	10265797	Q 350 RESET 1972		85.35	38 10 16	117 57 22	1441.55750	1441.43574	-12.30	0.00
674	10272585	R 350 RESET 1972		86.88	38 10 50	117 58 03	1489.57395	1489.46051	-10.77	0.00
675	10275835	E 433		88.24	38 11 16	117 58 47	1539.70336	1539.60452	-9.50	0.00
676	10282377	T 350 RESET 1972		89.84	38 11 54	117 59 25	1510.41911	1510.32167	-10.67	0.00
677	10288733	U 350 RESET 1972		91.36	38 12 33	117 59 55	1522.97487	1522.88271	-10.04	0.00

Table 7a. National Geodetic Survey Line L24888: File L24888.pro--Continued

Seq No.	UID	Benchmark	Spur Code	Distance (km)	Latitude	Longitude	Observed Elevation (m)	Obs Grav Ortho Ht (m)	Cumul. Refr Cor. (mm)	Cumul. Magn Cor. (mm)
678	10292352	REDLICK AZ MK 1952 1972		92.07	38 12 50	118 00 12	1515.33314	1515.23889	-10.52	0.00
679	10295638	V 350 RESET 1972		93.17	38 13 18	118 00 31	1488.59760	1488.49863	-11.52	0.00
680	10302883	F 433		94.89	38 13 56	118 01 16	1456.99375	1456.89128	-14.28	0.00
681	10307870	X 350 RESET 1972		96.68	38 14 25	118 02 16	1420.67390	1420.56872	-17.22	0.00
682	10311335	F 359		98.27	38 14 42	118 03 16	1405.49719	1405.39291	-18.02	0.00
683	10314708	G 359 RESET 1972		99.87	38 15 03	118 04 13	1363.16173	1363.05210	-19.73	0.00
684	10316392	H 359 RESET 1982		100.91	38 15 18	118 04 51	1347.39255	1347.28051	-19.40	0.00
685	10321335	U 12		102.56	38 15 45	118 05 42	1343.82369	1343.71043	-19.39	0.00
9953	10326461	G 433		103.66	38 16 13	118 05 49	1337.10527	1336.99284	-19.29	0.00
9954	10331311	H 433		104.66	38 16 44	118 05 53	1334.48462	1334.37091	-19.49	0.00
686	10331300	P 359		104.90	38 16 45	118 06 02	1335.67027	1335.55567	-19.43	0.00
9955	10336120	J 433		105.94	38 17 16	118 06 06	1336.31003	1336.19064	-19.41	0.00

Table 7b. National Geodetic Survey Line L24888: File L24888.ori

FROM SEQ NO.	TO SEQ NO.	UNCORRECTED FIELD ELEVATION DIFFERENCE (m)	LEVEL CORR. (mm)	ROD CORR. (mm)	ASTRO CORR. (mm)	TEMP. CORR. (mm)	REFR. CORR. (mm)	MAGN. CORR. (mm)	CORRECTED OBSERVED ELE. DIFFERENCE (m)	CUMULATIVE OBSERVED ELEVATION (OF TO SEQ NO) (m)	CUMULAT. OBS. GRAV ORTHO CORR. (mm)	CUMUL. REFR. CORR. (mm)
9946										1895.62490	0.00	0.00
9946	9945	-19.24600	-0.01	-0.79	1.07	-0.04	-0.11	0.00	-19.24577	1876.37913	-6.64	-0.11
9945	9944	-11.29787	-0.01	-0.38	0.62	-0.04	-0.09	0.00	-11.29768	1865.08145	-11.25	-0.20
9944	601	-27.21201	0.00	-0.91	1.08	-0.03	-0.07	0.00	-27.21188	1837.86957	-22.12	-0.27
601	602	-22.69742	0.00	-0.70	1.12	-0.02	0.22	0.00	-22.69702	1815.17255	-34.13	-0.05
602	603	-33.56497	0.00	-1.12	1.57	-0.01	-0.09	0.00	-33.56453	1781.60802	-41.41	-0.14
603	604	-23.53620	0.00	-0.82	1.05	0.03	-0.10	0.00	-23.53594	1758.07208	-42.88	-0.24
604	605	-30.28377	0.00	-1.13	1.48	0.03	-0.88	0.00	-30.28339	1727.78869	-49.52	-1.12
605	606	-38.24605	0.01	-1.33	1.87	-0.02	-0.80	0.00	-38.24552	1689.54317	-53.61	-1.92
606	607	-45.02530	0.00	-1.82	2.16	-0.09	-1.81	0.00	-45.02505	1644.51812	-58.91	-3.73
607	608	-42.38452	0.00	-1.57	2.03	-0.15	-1.64	0.00	-42.38421	1602.13392	-61.87	-5.37
608	609	-39.01395	0.00	-1.43	2.12	-0.10	-0.46	0.00	-39.01336	1563.12055	-66.37	-5.83
609	610	-30.46350	0.00	-1.09	1.76	-0.04	-1.77	0.00	-30.46287	1532.65768	-70.44	-7.60
610	611	-18.38800	-0.01	-0.99	0.93	-0.01	0.00	0.00	-18.38808	1514.26960	-73.20	-7.60
611	612	-18.51727	0.00	-0.95	0.87	-0.12	-0.10	0.00	-18.51747	1495.75213	-84.96	-7.70
612	613	-20.36095	0.00	-1.14	0.83	-0.16	-0.20	0.00	-20.36142	1475.39071	******	-7.90
613	614	-7.15447	0.01	-0.45	0.28	-0.07	-0.37	0.00	-7.15470	1468.23601	******	-8.27
614	615	-0.18580	0.00	0.05	0.01	0.00	-0.01	0.00	-0.18574	1468.05027	******	-8.28
615	616	-1.49892	0.00	-0.08	0.06	-0.02	0.02	0.00	-1.49896	1466.55131	******	-8.26
616	617	-1.40612	0.00	0.02	0.05	0.01	-0.10	0.00	-1.40604	1465.14527	-97.78	-8.36
617	618	-1.24235	0.00	0.00	0.05	-0.03	-0.02	0.00	-1.24233	1463.90294	-95.10	-8.38
618	619	-1.80557	0.00	-0.08	0.09	-0.02	-0.05	0.00	-1.80558	1462.09736	-93.39	-8.43
619	620	-0.17138	0.00	-0.05	0.01	-0.01	0.01	0.00	-0.17143	1461.92593	-92.73	-8.42
620	621	-0.38540	0.00	-0.02	0.02	-0.01	0.00	0.00	-0.38541	1461.54052	-91.53	-8.42
621	622	0.32312	0.00	-0.04	-0.02	0.00	-0.01	0.00	0.32306	1461.86358	-91.06	-8.43
622	623	-1.76412	0.00	-0.09	0.09	0.00	0.03	0.00	-1.76412	1460.09946	-89.32	-8.40
623	624	-0.78477	0.00	-0.11	0.04	0.00	0.05	0.00	-0.78484	1459.31462	-88.73	-8.35
624	625	-0.42542	0.00	-0.09	0.02	0.00	0.03	0.00	-0.42549	1458.88913	-88.50	-8.32
625	626	-0.57260	0.00	-0.08	0.03	0.01	0.08	0.00	-0.57264	1458.31649	-88.17	-8.24
626	627	-0.83230	0.00	-0.09	0.05	0.00	0.03	0.00	-0.83234	1457.48415	-88.25	-8.21
627	628	0.04900	0.00	-0.05	0.00	0.00	0.00	0.00	0.04895	1457.53310	-88.28	-8.21
628	629	-0.44210	0.00	-0.10	0.03	0.01	0.00	0.00	-0.44216	1457.09094	-88.43	-8.21
629	630	-0.99402	-0.01	-0.06	0.06	0.02	-0.03	0.00	-0.99401	1456.09693	-89.77	-8.24
630	631	-1.04287	0.00	-0.06	0.05	0.03	0.02	0.00	-1.04285	1455.05408	-91.93	-8.22
631	632	-0.68573	0.00	0.00	0.03	0.03	0.00	0.00	-0.68567	1454.36841	-96.85	-8.22
632	633	1.95887	0.01	0.14	-0.08	0.03	0.02	0.00	1.95897	1456.32738	******	-8.20
633	634	1.82305	0.01	0.12	-0.07	0.02	-0.01	0.00	1.82313	1458.15051	******	-8.21
634	635	-1.49957	-0.01	-0.07	0.05	0.03	0.02	0.00	-1.49957	1456.65094	******	-8.19
635	636	-0.40362	0.00	-0.11	0.01	0.02	0.00	0.00	-0.40370	1456.24724	******	-8.19
636	637	7.45645	0.00	0.33	-0.21	-0.01	0.31	0.00	7.45656	1463.70380	******	-7.88
637	638	5.21135	0.01	0.32	-0.14	-0.01	-0.05	0.00	5.21153	1468.91533	******	-7.93
638	639	-14.10645	0.01	-0.54	0.35	-0.02	-0.06	0.00	-14.10665	1454.80868	******	-7.99
639	640	13.67672	0.01	0.62	-0.33	-0.02	0.30	0.00	13.67700	1468.48568	-91.29	-7.69
640	641	0.64315	0.00	0.08	-0.02	0.05	-0.01	0.00	0.64326	1469.12894	-77.74	-7.70
641	642	9.89052	0.01	0.37	-0.35	0.04	0.26	0.00	9.89059	1479.01953	-69.06	-7.44
642	643	20.51725	0.00	0.61	-0.81	0.03	0.28	0.00	20.51708	1499.53661	-64.30	-7.16

Table 7b. National Geodetic Survey Line L24888: File L24888.ori--Continued

FROM SEQ NO.	TO SEQ NO.	UNCORRECTED FIELD ELEVATION DIFFERENCE (m)	LEVEL CORR. (mm)	ROD CORR. (mm)	ASTRO CORR. (mm)	TEMP. CORR. (mm)	REFR. CORR. (mm)	MAGN. CORR. (mm)	CORRECTED OBSERVED ELE. DIFFERENCE (m)	CUMULATIVE OBSERVED ELEVATION (OF TO SEQ NO) (m)	CUMULAT. OBS. GRAV ORTHO CORR. (mm)	CUMUL. REFR. CORR. (mm)
643	644	5.87662	0.01	0.23	-0.25	0.03	-0.09	0.00	5.87664	1505.41325	-64.83	-7.25
644	645	-0.28585	0.00	-0.03	0.01	-0.03	-0.07	0.00	-0.28590	1505.12735	-65.99	-7.32
645	646	-4.56387	0.02	-0.18	0.12	-0.03	-0.28	0.00	-4.56394	1500.56341	-66.07	-7.60
646	647	-9.36215	0.03	-0.51	0.25	-0.01	-1.05	0.00	-9.36239	1491.20102	-68.44	-8.65
647	648	-2.05175	0.01	-0.01	0.07	0.01	-0.10	0.00	-2.05167	1489.14935	-69.78	-8.75
648	649	-3.42240	0.00	-0.10	0.10	0.00	-0.07	0.00	-3.42240	1485.72695	-69.64	-8.82
649	650	-18.01639	0.02	-0.59	0.47	0.03	-0.87	0.00	-18.01647	1467.71048	-68.41	-9.69
650	687	-13.65444	0.00	-0.52	0.63	0.10	-0.05	0.00	-13.65423	1454.05626	-67.27	-9.39
650	651	0.78545	0.00	0.01	-0.02	0.00	0.06	0.00	0.78543	1468.49591	-69.79	-9.63
648	652	1.50857	0.00	0.13	-0.06	0.00	-0.02	0.00	1.50864	1490.65799	-77.01	-8.77
652	653	-1.09627	0.01	-0.17	0.04	0.02	-0.02	0.00	-1.09637	1489.56162	-84.97	-8.79
653	654	5.87495	0.00	0.28	-0.18	0.01	0.33	0.00	5.87506	1495.43668	-89.21	-8.46
654	655	1.13170	0.00	0.00	-0.04	-0.05	0.09	0.00	1.13161	1496.56829	-94.17	-8.37
655	656	-24.08255	0.00	-1.06	0.94	-0.07	-1.08	0.00	-24.08274	1472.48555	******	-9.45
656	657	-30.97390	0.00	-1.00	0.92	-0.09	-1.39	0.00	-30.97407	1441.51148	******	-10.84
657	659	-28.72437	0.00	-0.84	0.76	-0.09	-2.17	0.00	-28.72454	1412.78694	******	-13.01
659	658	3.18628	0.00	0.16	-0.08	0.00	0.34	0.00	3.18636	1415.97330	******	-12.67
659	660	-9.84997	0.00	-0.45	0.17	-0.03	-0.81	0.00	-9.85028	1402.93666	******	-13.82
660	661	-5.02248	0.00	-0.12	0.09	-0.04	-0.40	0.00	-5.02255	1397.91411	******	-14.22
661	662	-4.33035	0.00	-0.07	0.07	0.00	-0.25	0.00	-4.33035	1393.58376	******	-14.47
662	663	-7.86905	0.00	-0.26	0.12	-0.06	-0.64	0.00	-7.86925	1385.71451	******	-15.11
663	664	-5.07947	0.01	-0.19	0.08	-0.04	-0.31	0.00	-5.07961	1380.63490	-98.82	-15.42
664	665	0.04567	0.01	0.04	0.00	-0.03	0.02	0.00	0.04569	1380.68059	-95.69	-15.40
665	666	3.19765	0.00	0.13	-0.09	-0.08	0.24	0.00	3.19761	1383.87820	-94.96	-15.16
666	667	-2.34847	0.00	-0.16	0.07	-0.06	-0.13	0.00	-2.34862	1381.52958	******	-15.29
667	668	-1.62136	0.00	-0.06	0.05	-0.07	-0.12	0.00	-1.62144	1379.90814	******	-15.41
668	669	3.65027	0.01	0.09	-0.08	-0.07	0.12	0.00	3.65022	1383.55836	******	-15.29
669	670	10.08805	0.01	0.43	-0.21	-0.09	0.51	0.00	10.08819	1393.64655	******	-14.78
670	671	0.06270	0.00	-0.03	0.00	0.00	0.00	0.00	0.06267	1393.70922	******	-14.78
671	672	33.98142	0.01	1.29	-0.80	-0.11	1.67	0.00	33.98181	1427.69103	******	-13.11
672	673	13.86650	0.00	0.31	-0.32	-0.03	0.81	0.00	13.86646	1441.55749	******	-12.30
673	674	48.01620	-0.01	1.30	-0.98	-0.05	1.53	0.00	48.01646	1489.57395	******	-10.77
674	675	50.12922	-0.01	1.19	-0.94	-0.06	1.27	0.00	50.12940	1539.70335	-98.84	-9.50
675	676	-29.28422	0.00	-0.78	0.79	-0.04	-1.17	0.00	-29.28425	1510.41910	-97.44	-10.67
676	677	12.55572	0.00	0.41	-0.33	-0.04	0.63	0.00	12.55576	1522.97486	-92.16	-10.04
677	678	-7.64177	0.00	-0.13	0.19	-0.02	-0.48	0.00	-7.64173	1515.33313	-94.25	-10.52
678	679	-26.73527	0.02	-0.70	0.45	-0.04	-1.00	0.00	-26.73554	1488.59759	-98.97	-11.52
679	680	-31.60355	-0.01	-0.74	0.53	-0.08	-2.76	0.00	-31.60385	1456.99374	******	-14.28
680	681	-36.31957	0.00	-0.77	0.57	-0.08	-2.94	0.00	-36.31985	1420.67389	******	-17.22
681	682	-15.17687	0.00	-0.07	0.29	-0.06	-0.80	0.00	-15.17671	1405.49718	******	-18.02
682	683	-42.33515	0.01	-1.14	0.88	-0.05	-1.71	0.00	-42.33545	1363.16173	******	-19.73
683	684	-15.76915	-0.01	-0.40	0.41	-0.03	0.33	0.00	-15.76918	1347.39255	******	-19.40
684	685	-3.56872	-0.01	-0.20	0.10	-0.03	0.01	0.00	-3.56886	1343.82369	******	-19.39
685	9953	-6.71837	-0.01	-0.26	0.23	-0.02	0.10	0.00	-6.71843	1337.10526	******	-19.29
9953	9954	-2.62067	0.00	0.03	0.04	-0.05	-0.20	0.00	-2.62065	1334.48461	******	-19.49
9954	686	1.18560	0.01	0.07	-0.02	-0.01	0.06	0.00	1.18565	1335.67026	******	-19.43

Table 7b. National Geodetic Survey Line L24888: File L24888.ori--Continued

FROM SEQ NO.	TO SEQ NO.	UNCORRECTED FIELD ELEVATION DIFFERENCE (m)	LEVEL CORR. (mm)	ROD CORR. (mm)	ASTRO CORR. (mm)	TEMP. CORR. (mm)	REFR. CORR. (mm)	MAGN. CORR. (mm)	CORRECTED OBSERVED ELE. DIFFERENCE (m)	CUMULATIVE OBSERVED ELEVATION (OF TO SEQ NO) (m)	CUMULAT. OBS. GRAV ORTHO CORR. (mm)	CUMUL. REFR. CORR. (mm)
686	9955	0.63977	0.00	0.04	-0.01	-0.04	0.02	0.00	0.63976	1336.31002	******	-19.41

Table 7c. National Geodetic Survey Line L24888: File L24888.prn(=.dat)

```
   112          L24888       9946994519850206 9451023U 14 1  0.71                    233456579    F
-19.24600                   MT -0.75 -0.01 -0.79  1.07 -0.04 -0.11  0.001029728610299012
   212          L24888       9945994419850206102410 58U  8 1  0.54                    233456579    F
-11.29787                   MT -0.56 -0.01 -0.38  0.62 -0.04 -0.09  0.001029901210302637
   312          L24888        9944 60119850206110012000U 18 1  0.94                    233456579    F
-27.21130                   MT -0.69  0.00 -0.83  1.42 -0.06 -0.09  0.001030263710304317
   412          L24888         601 60219850206132514 10U 14 1  0.79                    233456579    F
-22.69742                   MT -0.64  0.00 -0.70  1.12 -0.02  0.22  0.001030431710305998
   512          L24888         602 60319850206141214 55U 20 1  1.23                    233456579    F
-33.56497                   MT -0.89  0.00 -1.12  1.57 -0.01 -0.09  0.001030599810309375
   612          L24888         603 60419850206150015 50U 17 1  1.14                    233456579    F
-23.53620                   MT -0.44  0.00 -0.82  1.05  0.03 -0.10  0.001030937510311108
   912          L24888         608 60719850207102811 25U 23 1  2.14                    233456579    B
 42.38452                   MT  0.97  0.00  1.57 -2.03  0.15  1.64  0.001032447110319510
   812          L24888         609 60819850207 9051005U 22 1  2.01                    233456579    B
 39.01395                   MT  0.98  0.00  1.43 -2.12  0.10  0.46  0.001032790110324471
   712          L24888         610 60919850207 8030855U 20 1  2.11                    233456579    B
 30.46350                   MT  0.96  0.00  1.09 -1.76  0.04  1.77  0.001033263610327901
  1212          L24888         605 60419850207151116 00U 18 1  1.05                    233456579    B
 30.28377                   MT  0.04  0.00  1.13 -1.48 -0.03  0.88  0.001031279610311108
  1112          L24888         606 60519850207135815 10U 29 1  1.83                    233456579    B
 38.24605                   MT  0.94 -0.01  1.33 -1.87  0.02  0.80  0.001031619110312796
  1012          L24888         607 60619850207125213 45U 29 1  2.05                    233456579    B
 45.02530                   MT  1.08  0.00  1.82 -2.16  0.09  1.81  0.001031951010316191
  1312          L24888         610 61119850208 8000902U 29 1  2.04                    233456579    F
-18.38800                   MT -0.91 -0.01 -0.99  0.93 -0.01  0.00  0.001033263610335930
  1412          L24888         611 61219850208 9451050U 33 1  2.29                    233456579    F
-18.51727                   MT -1.01  0.00 -0.95  0.87 -0.12 -0.10  0.001033593010340672
  1512          L24888         612 61319850208111112 05U 25 1  2.27                    233456579    F
-20.36095                   MT -1.00  0.00 -1.14  0.83 -0.16 -0.20  0.001034067210345472
  1712          L24888         615 61619850208135714 23U  5 1  0.49                    233456579    F
 -1.49892                   MT -0.22  0.00 -0.08  0.06 -0.02  0.02  0.001034731710348946
  1612          L24888         614 61519850208133813 55U  3 1  0.27                    233456579    F
 -0.18580                   MT  0.04  0.00  0.05  0.01  0.00 -0.01  0.001034732410347317
  1812          L24888         616 61719850208142514 58U  9 1  0.77                    233456579    F
 -1.40612                   MT  0.00  0.00  0.02  0.05  0.01 -0.10  0.001034894610348945
  1912          L24888         630 62919850211 8040827U  6 1  0.62                    233456579    B
  0.99402                   MT -0.14  0.01  0.06 -0.06 -0.02  0.03  0.001034232610343989
  2012          L24888         629 62819850211 8290837U  3 1  0.27                    233456579    B
  0.44210                   MT -0.07  0.00  0.10 -0.03 -0.01  0.00  0.001034398910343990
  2112          L24888         628 62719850211 8380848U  3 1  0.27                    233456579    B
 -0.04900                   MT -0.04  0.00  0.05  0.00  0.00  0.00  0.001034399010343991
  2212          L24888         627 62619850211 8490857U  3 1  0.28                    233456579    B
  0.83230                   MT -0.04  0.00  0.09 -0.05  0.00 -0.03  0.001034399110343992
  2312          L24888         626 62519850211 9000911U  5 1  0.49                    233456579    B
  0.57260                   MT -0.11  0.00  0.08 -0.03 -0.01 -0.08  0.001034399210343993
  2412          L24888         625 62419850211 9250941U  3 1  0.32                    233456579    B
  0.42542                   MT -0.07  0.00  0.09 -0.02  0.00 -0.03  0.001034399310345469
  2512          L24888         624 62319850211 9421001U  5 1  0.59                    233456579    B
  0.78477                   MT -0.11  0.00  0.11 -0.04  0.00 -0.05  0.001034546910345470
  2612          L24888         623 62219850211 10021023U  8 1  0.94                    233456579    B
  1.76412                   MT -0.25  0.00  0.09 -0.09  0.00 -0.03  0.001034547010347309
  2712          L24888         622 62119850211 10341040U  1 1  0.10                    233456579    B
 -0.32312                   MT  0.00  0.00  0.04  0.02  0.00  0.01  0.001034730910347312
  2812          L24888         621 62019850211 10421058U  5 1  0.54                    233456579    B
  0.38540                   MT -0.15  0.00  0.02 -0.02  0.01  0.00  0.001034731210347313
  2912          L24888         620 61919850211 11100 1114U  3 1  0.26                    233456579    B
  0.17138                   MT -0.04  0.00  0.05 -0.01  0.01 -0.01  0.001034731310347314
  3012          L24888         619 61819850211 11116 1133U  6 1  0.63                    233456579    B
  1.80557                   MT -0.11  0.00  0.08 -0.09  0.02  0.05  0.001034731410347316
  3112          L24888         618 61719850211 12431 325U 10 1  0.83                    216202310    B
  1.24235                   MT -0.15  0.00  0.00 -0.05  0.03  0.02  0.001034731610348945
  3212          L24888         614 61319850211 13301 425U 13 1  1.22                    216202310    B
  7.15447                   MT  0.66 -0.01  0.45 -0.28  0.07  0.37  0.001034732410345472
  3812          L24888         635 63619850212 10491 120U 14 1  1.50                    233456579    F
 -0.40362                   MT  1.38  0.00 -0.11  0.01  0.02  0.00  0.001032790210321079
  3712          L24888         634 63519850212 10171 047U 16 1  1.78                    233456579    F
 -1.49957                   MT  1.60 -0.01 -0.07  0.05  0.03  0.02  0.001033431410327902
  3612          L24888         633 63419850212 10001 015U  7 1  0.79                    233456579    F
  1.82305                   MT  0.62  0.01  0.12 -0.07  0.02 -0.01  0.001033745310334314
  3512          L24888         632 63319850212 9160940U 13 1  1.44                    233456579    F
  1.95887                   MT  0.72  0.01  0.14 -0.08  0.03  0.02  0.001034066610337453
  3412          L24888         631 63219850212 8460914U 15 1  1.69                    233456579    F
 -0.68573                   MT  0.25  0.00  0.00  0.03  0.03  0.00  0.001034066710340666
  3312          L24888         630 63119850212 8170844U 12 1  1.29                    233456579    F
 -1.04287                   MT  0.36  0.00 -0.06  0.05  0.03  0.02  0.001034232610340667
  4212          L24888         639 64019850212144015 15U 16 1  1.54                    233456579    F
 13.67672                   MT  1.45  0.01  0.62 -0.33 -0.02  0.30  0.001030431910297285
```

4112	L24888	638 6391985021213431424U 17 1 1.30	233456579	F
-14.10645		MT 1.05 0.01 -0.54 0.35 -0.02 -0.06	0.001030759510304319	
4012	L24888	637 6381985021213021342U 16 1 1.25	233456579	F
5.21135		MT 1.20 0.01 0.32 -0.14 -0.01 -0.05	0.001031450310307595	
3912	L24888	636 6371985021212251300U 16 1 1.56	233456579	F
7.45645		MT 1.45 0.00 0.33 -0.21 -0.01 0.31	0.001032107910314503	
4312	L24888	644 64319850213 8250855U 16 1 1.64	233456579	B
-5.87662		MT -0.52 -0.01 -0.23 0.25 -0.03 0.09	0.001028075510283965	
4412	L24888	643 64219850213 9000930U 16 1 1.59	233456579	B
-20.51725		MT -0.48 0.00 -0.61 0.81 -0.03 -0.28	0.001028396510285569	
4512	L24888	642 64119850213 9451020U 15 1 1.58	233456579	B
-9.89052		MT -0.88 -0.01 -0.37 0.35 -0.04 -0.26	0.001028556910288736	
4612	L24888	641 6401985021310221100U 16 1 1.62	233456579	B
-0.64315		MT -1.53 0.00 -0.08 0.02 -0.05 0.01	0.001028873610297285	
4712	L24888	647 6461985021312101245U 17 1 1.65	233456579	B
9.36215		MT -0.45 -0.03 0.51 -0.25 0.01 1.05	0.001027583310277404	
4812	L24888	646 6451985021312471322U 18 1 1.67	233456579	B
4.56387		MT -0.45 -0.02 0.18 -0.12 0.03 0.28	0.001027740410279077	
4912	L24888	645 6441985021313241401U 15 1 1.42	233456579	B
0.28585		MT -0.41 0.00 0.03 -0.01 0.03 0.07	0.001027907710280755	
5412	L24888	651 6501985021413451415U 7 1 0.56	233456579	B
-0.78520		MT 0.11 0.01 0.00 0.02 0.01 -0.02	0.001026921310269215	
5312	L24888	650 6511985021412151245U 6 1 0.54	233456579	F
0.78570		MT -0.11 0.00 0.02 -0.02 0.00 0.10	0.001026921510269213	
5512	L24888	650 6491985021414171500U 11 1 1.09	233456579	B
18.01587		MT -1.21 -0.02 0.61 -0.39 -0.01 1.43	0.001026921510274254	
5112	L24888	648 6491985021411041118U 3 1 0.22	233456579	F
-3.42225		MT 0.18 -0.02 -0.09 0.11 0.01 -0.02	0.001027425110274254	
5212	L24888	649 6501985021411201210U 12 1 1.10	233456579	F
-18.01690		MT 1.21 0.01 -0.57 0.55 0.04 -0.30	0.001027425410269215	
5612	L24888	649 6481985021415051520U 2 1 0.17	233456579	B
3.42255		MT -0.18 -0.01 0.11 -0.08 0.00 0.12	0.001027425410274251	
5012	L24888	647 6481985021410241100U 9 1 0.80	233456579	F
-2.05175		MT 0.15 0.01 -0.01 0.07 0.01 -0.10	0.001027583310274251	
5712	L24888	650 68719850215 8210858U 17 1 1.65	233456579	F
-13.65490		MT 1.89 0.00 -0.46 0.66 0.09 0.25	0.001026921510358650	
6112	L24888	653 6541985021511011120U 9 1 0.85	233456579	F
5.87495		MT 0.00 0.00 0.28 -0.18 0.01 0.33	0.001027258710272586	
6012	L24888	652 6531985021510251100U 16 1 1.58	233456579	F
-1.09627		MT 0.26 0.01 -0.17 0.04 0.02 -0.02	0.001027425010272587	
5912	L24888	648 65219850215 9511024U 17 1 1.61	233456579	F
1.50857		MT 0.11 0.00 0.13 -0.06 0.00 -0.02	0.001027425110274250	
6212	L24888	6019944198502151230 1319U 19 1 0.91	233456579	B
27.21272		MT 0.69 -0.01 0.99 -0.73 0.01 0.05	0.001030431710302637	
5812	L24888	687 65019850215 9000933U 16 1 1.64	233456579	B
13.65397		MT -1.89 -0.01 0.58 -0.60 -0.10 0.35	0.001035865010269215	
6412	L24888	655 65419850219 9150940U 11 1 1.09	233456579	B
-1.13170		MT 0.30 0.00 0.00 0.04 0.05 -0.09	0.001027424910272586	
6312	L24888	656 65519850219 8250913U 21 1 1.67	233456579	B
24.08255		MT 0.18 0.00 1.06 -0.94 0.07 1.08	0.001027583210274249	
6512	L24888	656 6571985021910071045U 21 1 1.74	233456579	F
-30.97390		MT -0.54 0.00 -1.00 0.92 -0.09 -1.39	0.001027583210277403	
6612	L24888	657 6591985021910471129U 18 1 1.62	233456579	F
-28.72437		MT -0.92 0.00 -0.84 0.76 -0.09 -2.17	0.001027740310282379	
6712	L24888	659 6581985021911311138U 2 1 0.21	233456579	F
3.18635		MT 0.00 0.00 0.15 -0.08 0.00 0.34	0.001028237910282381	
6812	L24888	658 6591985021911401150U 2 1 0.21	233456579	B
-3.18620		MT 0.00 -0.01 -0.16 0.07 0.00 -0.34	0.001028238110282379	
6912	L24888	659 6601985021913101330U 8 1 0.71	233456579	F
-9.84997		MT -0.63 0.00 -0.45 0.17 -0.03 -0.81	0.001028237910285572	
7012	L24888	660 6611985021913321345U 8 1 0.73	233456579	F
-5.02248		MT -0.77 0.00 -0.12 0.09 -0.04 -0.40	0.001028557210288735	
7212	L24888	662 6631985021913581427U 15 1 1.42	233456579	F
-7.86905		MT -1.45 0.00 -0.26 0.12 -0.06 -0.64	0.001028873410295385	
7112	L24888	661 6621985021913481356U 3 1 0.22	233456579	F
-4.33035		MT -0.03 0.00 -0.07 0.07 0.00 -0.25	0.001028873510288734	
7312	L24888	663 6641985021914401510U 17 1 1.61	233456579	F
-5.07947		MT -1.62 0.01 -0.19 0.08 -0.04 -0.31	0.001029538510304322	
7412	L24888	664 6651985021915121540U 15 1 1.59	233456579	F
0.04567		MT -1.65 0.01 0.04 0.00 -0.03 0.02	0.001030432210312798	
7712	L24888	666 6651985022210101050U 15 1 1.56	233456579	B
-3.19765		MT 1.62 0.00 -0.13 0.09 0.08 -0.24	0.001031950610312798	
7612	L24888	667 66619850222 9220955U 15 1 1.59	233456579	B
2.34847		MT 1.65 0.00 0.16 -0.07 0.06 0.13	0.001032789710319506	
7812	L24888	667 6681985022210561133U 15 1 1.53	233456579	F
-1.62155		MT -1.61 0.00 0.00 0.05 -0.10 -0.16	0.001032789710335925	
7512	L24888	668 66719850222 8500920U 13 1 1.52	233456579	B
1.62117		MT 1.61 0.00 0.12 -0.05 0.04 0.08	0.001033592510327897	

Table 7c. National Geodetic Survey Line L24888: File L24888.prn(=.dat)--Continued

```
  8212          L24888        669 66819850222144815260U 16 1  1.54                  233456579    B
 -3.65027                    MT  1.62 -0.01 -0.09  0.08  0.07 -0.12  0.001034232510335925
  8012          L24888        671 67019850222135113550U  1 1  0.09                  233456579    B
 -0.06270                    MT  0.07  0.00  0.03  0.00  0.00  0.00  0.001035048410350491
  8112          L24888        670 66919850222135614330U 16 1  1.50                  233456579    B
-10.08805                    MT  1.59 -0.01 -0.43  0.21  0.09 -0.51  0.001035049110342325
  7912          L24888        672 67119850222125513500U 24 1  1.56                  233456579    B
-33.98142                    MT  1.62 -0.01 -1.29  0.80  0.11 -1.67  0.001035866110350484
  8412          L24888        673 67419850225 93010300U 28 1  1.53                  233430028    F
 48.01620                    MT -1.24 -0.01  1.30 -0.98 -0.05  1.53  0.001026579710272585
  8512          L24888        674 67519850225104811420U 29 1  1.36                  233430028    F
 50.12922                    MT -0.98 -0.01  1.19 -0.94 -0.06  1.27  0.001027258510275835
  8312          L24888        672 67319850225 85209290U 18 1  1.42                  233430028    F
 13.86650                    MT -1.54  0.00  0.31 -0.32 -0.03  0.81  0.001035866110265797
  8612          L24888       9953995419850225133514300U 13 1  1.00                  233430028    F
 -2.62067                    MT -1.03  0.00  0.03  0.04 -0.05 -0.20  0.001032646110331311
  8812          L24888        686995519850225150215440U 11 1  1.04                  233430028    F
  0.63977                    MT -1.03  0.00  0.04 -0.01 -0.04  0.02  0.001033130010336120
  8712          L24888       9954 68619850225143214440U  3 1  0.24                  233430028    F
  1.18560                    MT -0.03  0.01  0.07 -0.02 -0.01  0.06  0.001033131110331300
  9312          L24888        682 68119850226111411480U 18 1  1.59                  233430028    B
 15.17687                    MT  0.60  0.00  0.07 -0.29  0.06  0.80  0.001031133510307870
  9212          L24888        683 68219850226102911130U 22 1  1.60                  233430028    B
 42.33515                    MT  0.72 -0.01  1.14 -0.88  0.05  1.71  0.001031470810311335
  9112          L24888        684 68319850226100510270U 11 1  1.04                  233430028    B
 15.76915                    MT  0.51  0.01  0.40 -0.41  0.03 -0.33  0.001031639210314708
  9012          L24888        685 68419850226 91509500U 17 1  1.65                  233430028    B
  3.56872                    MT  0.91  0.01  0.20 -0.10  0.03 -0.01  0.001032133510316392
  8912          L24888       9953 68519850226 83409130U 10 1  1.10                  233430028    B
  6.71837                    MT  0.94  0.01  0.26 -0.23  0.02 -0.10  0.001032646110321335
  9612          L24888        679 67819850226144515200U 17 1  1.10                  233430028    B
 26.73527                    MT  1.05 -0.02  0.70 -0.45  0.04  1.00  0.001029563810292352
  9512          L24888        680 67919850226135314270U 20 1  1.72                  233430028    B
 31.60355                    MT  1.39  0.01  0.74 -0.53  0.08  2.76  0.001030288310295638
  9412          L24888        681 68019850226131713520U 22 1  1.79                  233430028    B
 36.31957                    MT  1.04  0.00  0.77 -0.57  0.08  2.94  0.001030787010302883
  9712          L24888        675 67619850227 84809300U 20 1  1.60                  233430028    F
-29.28422                    MT -1.44  0.00 -0.78  0.79 -0.04 -1.17  0.001027583510282377
  9812          L24888        676 67719850227 93110050U 17 1  1.52                  233430028    F
 12.55572                    MT -1.47  0.00  0.41 -0.33 -0.04  0.63  0.001028237710288733
  9912          L24888        677 67819850227102410500U  9 1  0.71                  233430028    F
 -7.64177                    MT -0.64  0.00 -0.13  0.19 -0.02 -0.48  0.001028873310292352
```

Table 8a. National Geodetic Survey Line L24791: File L24791.pro

Seq No.	UID	Benchmark	Spur Code	Distance (km)	Latitude	Longitude	Observed Elevation (m)	Obs Grav Ortho Ht (m)	Cumul. Refr Cor. (mm)	Cumul. Magn Cor. (mm)
9941	10303136	Q 408		0.00	36 53 59	116 47 30	1096.88280	1096.88280	0.00	0.00
9942	10306501	R 408		0.77	36 54 11	116 47 07	1084.54450	1084.54346	-0.13	0.00
9943	10306500	S 408		2.14	36 54 10	116 46 17	1042.71916	1042.71451	-0.25	0.00
5301	10308203	N 16 USGS		3.27	36 54 22	116 45 37	1008.27623	1008.26875	-0.70	0.00
5401	10316617	J 409		5.46	36 55 15	116 44 44	1020.79572	1020.79809	-0.63	0.00
5402	10323337	K 409		7.34	36 55 54	116 43 52	1040.72846	1040.74301	0.01	0.00
5403	10331535	L 409		9.39	36 56 48	116 42 56	1054.42122	1054.43937	0.20	0.00
5404	10342741	M 409		11.47	36 57 53	116 43 04	1075.03011	1075.05036	2.01	0.00
5405	10342735	K 16		11.47	36 57 52	116 43 03	1075.44393	1075.46433	2.01	0.00
5406	10342742	HOT SPRING		11.57	36 57 55	116 43 05	1076.44080	1076.46105	2.03	0.00
5407	10350998	N 409		13.23	36 58 48	116 43 23	1094.28801	1094.30605	3.04	0.00
5408	10359215	P 409		14.79	36 59 39	116 43 25	1104.86802	1104.88545	3.44	0.00
5409	10270928	Q 409		16.75	37 00 40	116 43 38	1130.34298	1130.36035	4.10	0.00
5410	10277394	R 409		18.54	37 01 20	116 44 33	1153.11137	1153.13253	4.63	0.00
5411	10280749	S 409		20.09	37 01 46	116 45 21	1173.86974	1173.89159	5.03	0.00
5412	10287155	T 409		21.39	37 02 21	116 45 44	1183.67495	1183.70061	5.37	0.00
5413	10292106	U 409		23.06	37 02 58	116 46 19	1199.80041	1199.83049	5.83	0.00
5414	10297283	7 RBR USGS		23.87	37 03 23	116 46 28	1202.53110	1202.56175	5.94	0.00
5415	10305985	H 16		25.63	37 04 16	116 46 49	1214.75628	1214.79108	6.37	0.00
5416	10314493	X 330 RESET 1962		27.37	37 05 06	116 47 17	1235.94316	1235.97656	8.56	0.00
5417	10322869	W 330 RESET 1962		28.99	37 05 55	116 47 44	1235.34122	1235.37564	8.54	0.00
5418	10327894	V 409		30.02	37 06 24	116 48 02	1234.08366	1234.11921	8.52	0.00
5419	10334305	W 409		31.78	37 07 01	116 48 53	1233.80101	1233.84206	8.52	0.00
5420	10337444	U 330 RESET 1962		32.89	37 07 21	116 49 31	1230.34898	1230.39159	8.39	0.00
5421	10342318	N 412		34.67	37 07 54	116 50 31	1220.67067	1220.71688	8.39	0.00
5422	10347301	S 330		35.77	37 08 28	116 50 12	1222.29413	1222.34303	8.47	0.00
5424	10347305	X 409		36.12	37 08 20	116 51 16	1218.02077	1218.06474	8.28	0.00
5425	10352152	Y 409		38.36	37 08 56	116 52 32	1213.48945	1213.53277	8.18	0.00
5426	10358657	Z 409		40.05	37 09 30	116 53 25	1218.63778	1218.68218	8.15	0.00
5427	10362092	A 412		41.62	37 09 58	116 54 16	1226.23730	1226.28184	8.07	0.00
5428	10269208	B 412		43.47	37 10 33	116 55 16	1231.35600	1231.40044	7.96	0.00
5429	10274246	C 412		45.11	37 11 05	116 56 05	1235.42450	1235.46612	7.96	0.00
5430	10279072	D 412		46.46	37 11 37	116 56 42	1242.71687	1242.75694	8.85	0.00
5431	10285559	E 412		48.29	37 12 19	116 57 28	1261.46552	1261.50827	9.68	0.00
5432	10290362	GAP		49.42	37 12 48	116 57 55	1266.70899	1266.75017	10.17	0.00
5433	10293631	F 412		50.02	37 13 02	116 58 12	1261.37699	1261.41927	9.74	0.00
5434	10300883	G 412		51.66	37 13 40	116 58 50	1242.55483	1242.60107	7.97	0.00
5435	10305987	H 412		53.18	37 14 19	116 59 31	1222.87601	1222.92333	7.08	0.00
5436	10312790	J 412		54.81	37 14 58	117 00 09	1206.95648	1207.00352	6.93	0.00
5437	10321076	K 412		56.55	37 15 40	117 00 53	1210.91588	1210.96335	7.10	0.00

Table 8a. National Geodetic Survey Line L24791: File L24791.pro--Continued

Seq No.	UID	Benchmark	Spur Code	Distance (km)	Latitude	Longitude	Observed Elevation (m)	Obs Grav Ortho Ht (m)	Cumul. Refr Cor. (mm)	Cumul. Magn Cor. (mm)
5438	10327895	L 412		58.34	37 16 24	117 01 37	1218.93220	1218.97751	7.74	0.00
5453	10327896	SARCOBATUS		58.46	37 16 27	117 01 36	1219.42652	1219.47158	7.74	0.00
5439	10335918	M 412		60.41	37 17 14	117 02 27	1228.55646	1228.60086	8.21	0.00
5440	10342319	P 412		62.03	37 17 55	117 03 09	1236.85269	1236.89464	8.37	0.00
5441	10348940	Q 412		63.50	37 18 32	117 03 41	1246.30778	1246.34585	8.45	0.00
5442	10356980	R 412		65.59	37 19 22	117 04 37	1255.63882	1255.67205	8.73	0.00
5443	10362093	SARCO		66.84	37 19 53	117 05 05	1268.97778	1269.00959	9.30	0.00
5444	10264074	S 412		67.29	37 20 05	117 05 17	1273.31572	1273.34715	9.64	0.00
5445	10270929	T 412		69.03	37 20 47	117 06 00	1294.85256	1294.88481	13.05	0.00
5446	10277395	U 412		70.61	37 21 25	117 06 40	1319.59696	1319.63101	14.59	0.00
5449	10272578	V 15 USGS		71.79	37 20 56	117 07 07	1324.42636	1324.46211	14.74	0.00
5448	10277389	T 133		72.78	37 21 27	117 07 06	1324.44110	1324.47570	14.77	0.00
5447	10282369	S 133		73.80	37 21 59	117 07 16	1341.26292	1341.29826	16.41	0.00
5450	10288726	V 412		75.36	37 22 39	117 07 55	1373.49915	1373.53653	16.94	0.00
5451	10295379	W 412		76.79	37 23 14	117 08 32	1424.52655	1424.57568	17.25	0.00
5452	10295380	PASS		77.07	37 23 13	117 08 25	1445.27982	1445.33223	17.32	0.00
5454	10305988	X 412		78.66	37 24 12	117 08 53	1418.68428	1418.73681	16.71	0.00
5455	10314499	Y 412		80.52	37 25 06	117 09 20	1412.33052	1412.38290	16.38	0.00
5456	10324458	Z 412		82.26	37 26 01	117 09 35	1403.92802	1403.97851	16.09	0.00
5457	10329484	COLINE		83.53	37 26 38	117 09 52	1404.39296	1404.44239	16.14	0.00
5458	10334306	A 413		84.31	37 27 03	117 10 04	1406.60666	1406.65160	16.19	0.00
5459	10342320	B 413		85.82	37 27 50	117 10 19	1407.43207	1407.47580	16.23	0.00
5460	10348941	C 413		87.32	37 28 34	117 10 38	1409.29243	1409.33645	16.45	0.00
5461	10356981	D 413		88.83	37 29 24	117 10 48	1414.50567	1414.55030	16.69	0.00
5653	10264045	LIDA		90.35	37 30 08	117 11 00	1431.50330	1431.54915	17.01	0.00
5654	10265792	T 410		90.42	37 30 10	117 11 01	1431.90633	1431.95216	17.03	0.00
5655	10275829	J 411		92.39	37 31 14	117 11 22	1460.42068	1460.46746	17.85	0.00
5656	10285560	H 411		94.32	37 32 17	117 11 35	1492.71857	1492.76542	18.85	0.00
5657	10295381	G 411		96.02	37 33 12	117 11 56	1515.84027	1515.89062	20.10	0.00
5658	10305989	F 411		97.90	37 34 12	117 12 04	1544.28995	1544.34626	21.21	0.00
5659	10316183	E 411		99.83	37 35 15	117 12 24	1586.84462	1586.90949	23.90	0.00
5660	10326247	D 411		101.69	37 36 14	117 12 46	1618.70458	1618.76994	26.24	0.00
5661	10335919	C 411		103.51	37 37 10	117 13 06	1647.49282	1647.55745	28.68	0.00
5662	10340661	B 411		104.57	37 37 46	117 13 00	1649.43870	1649.50573	28.97	0.00
5663	10347306	A 411		105.76	37 38 26	117 13 02	1672.03559	1672.10918	30.81	0.00
5664	10356982	Z 410		107.61	37 39 26	117 12 56	1716.91861	1716.99648	33.97	0.00
5665	10267546	Y 410		109.49	37 40 26	117 13 13	1782.63243	1782.72323	35.79	0.00
5666	10274247	X 410		111.05	37 41 03	117 13 50	1829.41335	1829.51171	36.56	0.00
5667	10280750	W 410		112.51	37 41 46	117 14 06	1779.38376	1779.46681	35.65	0.00
5668	10287147	T 134		114.15	37 42 28	117 13 54	1737.51492	1737.58182	35.03	0.00
5669	10288716	K 15		114.40	37 42 30	117 14 06	1734.25920	1734.32662	35.02	0.00

Table 8a. National Geodetic Survey Line L24791: File L24791.pro--Continued

Seq No.	UID	Benchmark	Spur Code	Distance (km)	Latitude	Longitude	Observed Elevation (m)	Obs Grav Ortho Ht (m)	Cumul. Refr Cor. (mm)	Cumul. Magn Cor. (mm)
5670	10293632	S 134 RESET 1979		115.83	37 43 06	117 14 32	1718.14676	1718.21119	34.81	0.00
5671	10304309	R 134 RESET 1979		117.58	37 44 06	117 14 36	1699.57579	1699.63262	33.48	0.00
5672	10312783	12 NVDH		119.17	37 44 58	117 14 32	1681.84603	1681.90115	32.19	0.00
5673	10319504	K 411		120.41	37 45 34	117 14 28	1660.91528	1660.96848	30.99	0.00
5674	10321077	Q 134 RESET 1979		120.75	37 45 44	117 14 26	1657.76265	1657.81625	30.99	0.00
5675	10329473	P 134		122.28	37 46 32	117 14 12	1630.69452	1630.74586	30.26	0.00
5676	10329472	G 15 USGS		122.58	37 46 32	117 14 04	1627.70236	1627.75247	30.04	0.00
5677	10337442	N 134		123.88	37 47 20	117 14 14	1607.80857	1607.85757	29.38	0.00
5678	10347307	M 134 RESET 1979		125.71	37 48 20	117 14 20	1581.85233	1581.89426	28.22	0.00
5679	10356975	24 NVDH		127.51	37 49 23	117 14 20	1564.70999	1564.74915	27.57	0.00
5680	10264075	L 134 RESET 1979		128.92	37 50 02	117 14 24	1543.93612	1543.97159	26.96	0.00
5684	10270930	S 410		130.21	37 50 44	117 14 24	1538.49072	1538.52450	26.77	0.00
5682	10270923	F 15		130.72	37 50 45	117 14 44	1538.46163	1538.49838	26.76	0.00
5683	10270922	FAYET		130.73	37 50 45	117 14 45	1538.16487	1538.20169	26.76	0.00
5681	10270925	A 179		131.14	37 50 47	117 15 00	1529.81921	1529.85583	26.64	0.00
5685	10283957	V 410		132.58	37 52 00	117 14 30	1520.05164	1520.06459	26.30	0.00
5686	10295382	U 410		134.92	37 53 14	117 14 26	1525.36841	1525.37732	26.43	0.00
5687	10307585	R 410		137.03	37 54 24	117 14 30	1544.96246	1544.97256	27.79	0.00
5688	10316184	Q 410		138.87	37 55 18	117 15 00	1566.77038	1566.80128	28.91	0.00
5689	10324459	P 410		140.29	37 56 08	117 15 18	1571.69678	1571.74079	29.09	0.00
5690	10334307	N 410		142.44	37 57 09	117 15 58	1593.93849	1593.98218	31.58	0.00
5691	10348942	M 410		144.84	37 58 30	117 16 18	1638.46538	1638.50921	37.10	0.00
5692	10353746	L 410		145.93	37 59 08	117 16 20	1659.19218	1659.23314	37.39	0.00
5693	10358658	K 410		147.25	37 59 39	117 16 14	1696.47899	1696.52142	37.72	0.00
5694	10265800	J 410		148.63	38 00 12	117 15 56	1734.62990	1734.68416	37.90	0.00
5695	10275834	H 410		150.78	38 01 18	117 14 59	1778.75403	1778.80751	38.33	0.00
5696	10280758	G 410		152.15	38 01 48	117 14 14	1812.19559	1812.25962	38.85	0.00
5697	10283967	F 410		153.21	38 02 08	117 13 37	1837.54672	1837.61978	39.13	0.00
5698	10290372	E 410		154.54	38 02 45	117 13 02	1894.42718	1894.51628	40.82	0.00
5699	10293638	D 410		155.12	38 03 00	117 12 53	1904.37402	1904.46501	41.44	0.00
9946	10297286	C 410		155.83	38 03 22	117 12 57	1895.88705	1895.97268	41.42	0.00
9945	10299012	B 410		156.52	38 03 38	117 13 10	1876.63988	1876.71887	41.46	0.00
5700	10299009	B 15 USGS		156.59	38 03 39	117 13 08	1874.22873	1874.30706	41.46	0.00
9944	10302637	A 410		157.00	38 03 50	117 13 21	1865.34081	1865.41519	41.51	0.00

Table 8b. National Geodetic Survey Line L24791: File L24791.ori

FROM SEQ NO.	TO SEQ NO.	UNCORRECTED FIELD ELEVATION DIFFERENCE (m)	LEVEL CORR. (mm)	ROD CORR. (mm)	ASTRO CORR. (mm)	TEMP. CORR. (mm)	REFR. CORR. (mm)	MAGN. CORR. (mm)	CORRECTED OBSERVED ELE. DIFFERENCE (m)	CUMULATIVE OBSERVED ELEVATION (OF TO SEQ NO) (m)	CUMULAT. OBS. GRAV ORTHO CORR. (mm)	CUMUL. REFR. CORR. (mm)
9941										1096.88280	0.00	0.00
9941	9942	-12.33830	-0.01	-0.31	0.35	-0.03	-0.13	0.00	-12.33830	1084.54450	-1.04	-0.13
9942	9943	-41.82527	0.00	-1.19	1.13	-0.01	-0.12	0.00	-41.82534	1042.71916	-4.65	-0.25
9943	5301	-34.44267	0.01	-0.98	0.76	-0.05	-0.45	0.00	-34.44293	1008.27623	-7.48	-0.70
5301	5401	12.51962	0.00	0.22	-0.27	-0.08	0.07	0.00	12.51949	1020.79572	2.37	-0.63
5401	5402	19.93280	0.01	0.39	-0.43	-0.03	0.64	0.00	19.93274	1040.72846	14.55	0.01
5402	5403	13.69262	0.00	0.44	-0.31	0.01	0.19	0.00	13.69276	1054.42122	18.15	0.20
5403	5404	20.60915	0.00	0.44	-0.55	-0.15	1.81	0.00	20.60889	1075.03011	20.25	2.01
5404	5405	0.41385	0.00	-0.02	-0.01	0.00	0.00	0.00	0.41382	1075.44393	20.40	2.01
5405	5406	0.99690	0.00	0.01	-0.03	-0.01	0.02	0.00	0.99687	1076.44080	20.25	2.03
5406	5407	17.84742	0.00	0.43	-0.51	-0.13	1.01	0.00	17.84721	1094.28801	18.04	3.04
5407	5408	10.58017	0.00	0.27	-0.34	-0.09	0.40	0.00	10.58001	1104.86802	17.43	3.44
5408	5409	25.47550	0.01	0.41	-0.87	-0.09	0.66	0.00	25.47496	1130.34298	17.37	4.10
5409	5410	22.76887	0.00	0.53	-0.94	-0.07	0.53	0.00	22.76839	1153.11137	21.16	4.63
5410	5411	20.75887	0.00	0.41	-0.83	-0.08	0.40	0.00	20.75837	1173.86974	21.85	5.03
5411	5412	9.80555	0.00	0.12	-0.38	-0.08	0.34	0.00	9.80521	1183.67495	25.66	5.37
5412	5413	16.12585	0.00	0.33	-0.61	-0.11	0.46	0.00	16.12546	1199.80041	30.08	5.83
5413	5414	2.73062	0.00	0.23	-0.10	-0.06	0.11	0.00	2.73069	1202.53110	30.65	5.94
5414	5415	12.22522	0.00	0.53	-0.43	-0.14	0.43	0.00	12.22518	1214.75628	34.80	6.37
5415	5416	21.18730	0.00	0.43	-0.72	-0.13	2.19	0.00	21.18688	1235.94316	33.40	8.56
5416	5417	-0.60193	0.00	0.05	0.02	-0.08	-0.02	0.00	-0.60194	1235.34122	34.42	8.54
5417	5418	-1.25743	0.00	-0.13	0.04	-0.04	-0.02	0.00	-1.25756	1234.08366	35.55	8.52
5418	5419	-0.28243	-0.01	-0.22	0.01	0.00	0.00	0.00	-0.28265	1233.80101	41.05	8.52
5419	5420	-3.45185	0.00	-0.29	0.10	0.01	-0.13	0.00	-3.45203	1230.34898	42.61	8.39
5420	5421	-9.67825	0.00	-0.37	0.29	0.02	0.00	0.00	-9.67831	1220.67067	46.21	8.39
5421	5424	-2.64987	0.00	-0.01	0.07	-0.09	-0.11	0.00	-2.64990	1218.02077	43.97	8.28
5424	5425	-4.53120	0.00	-0.11	0.13	-0.14	-0.10	0.00	-4.53132	1213.48945	43.32	8.18
5425	5426	5.14867	0.00	-0.06	-0.16	-0.12	-0.03	0.00	5.14833	1218.63778	44.40	8.15
5426	5427	7.59962	0.00	0.26	-0.27	-0.09	-0.08	0.00	7.59952	1226.23730	44.54	8.07
5427	5428	5.11898	0.00	0.00	-0.19	-0.09	-0.11	0.00	5.11870	1231.35600	44.44	7.96
5428	5429	4.06852	0.00	0.20	-0.17	-0.05	0.00	0.00	4.06850	1235.42450	41.62	7.96
5429	5430	7.29270	0.00	-0.03	-0.20	-0.10	0.89	0.00	7.29237	1242.71687	40.07	8.85
5430	5431	18.74920	0.00	0.11	-0.54	-0.12	0.83	0.00	18.74865	1261.46552	42.75	9.68
5431	5432	5.24350	0.00	0.20	-0.17	-0.06	0.49	0.00	5.24347	1266.70899	41.18	10.17
5432	5433	-5.33192	0.00	-0.23	0.18	-0.03	-0.43	0.00	-5.33200	1261.37699	42.28	9.74
5433	5434	-18.82245	0.00	-0.30	0.64	-0.05	-1.77	0.00	-18.82216	1242.55483	46.24	7.97
5434	5435	-19.67895	0.00	-0.52	0.68	-0.03	-0.89	0.00	-19.67882	1222.87601	47.32	7.08
5435	5436	-15.91960	0.00	-0.49	0.57	-0.01	-0.15	0.00	-15.91953	1206.95648	47.04	6.93
5436	5437	3.95927	0.00	0.28	-0.10	-0.05	0.17	0.00	3.95940	1210.91588	47.47	7.10
5437	5438	8.01587	0.01	0.72	-0.20	-0.08	0.64	0.00	8.01632	1218.93220	45.31	7.74
5438	5453	0.49435	-0.01	0.00	-0.01	-0.01	0.00	0.00	0.49432	1219.42652	45.06	7.74
5453	5439	9.12940	0.01	0.87	-0.22	-0.12	0.47	0.00	9.12994	1228.55646	44.40	8.21
5439	5440	8.29627	0.00	0.28	-0.20	-0.12	0.16	0.00	8.29623	1236.85269	41.95	8.37
5440	5441	9.45510	0.00	0.27	-0.27	-0.01	0.08	0.00	9.45509	1246.30778	38.07	8.45
5441	5442	9.33092	0.00	0.39	-0.25	-0.02	0.28	0.00	9.33104	1255.63882	33.23	8.73
5442	5443	13.33905	0.00	0.28	-0.35	-0.02	0.57	0.00	13.33896	1268.97778	31.81	9.30

Table 8b. National Geodetic Survey Line L24791: File L24791.ori--Continued

FROM SEQ NO.	TO SEQ NO.	UNCORRECTED FIELD ELEVATION DIFFERENCE (m)	LEVEL CORR. (mm)	ROD CORR. (mm)	ASTRO CORR. (mm)	TEMP. CORR. (mm)	REFR. CORR. (mm)	MAGN. CORR. (mm)	CORRECTED OBSERVED ELE. DIFFERENCE (m)	CUMULATIVE OBSERVED ELEVATION (OF TO SEQ NO) (m)	CUMULAT. OBS. GRAV ORTHO CORR. (mm)	CUMUL. REFR. CORR. (mm)
5443	5444	4.33797	0.00	0.09	-0.11	-0.01	0.34	0.00	4.33794	1273.31572	31.43	9.64
5444	5445	21.53710	0.01	0.31	-0.53	-0.05	3.41	0.00	21.53684	1294.85256	32.25	13.05
5445	5446	24.74465	0.00	0.42	-0.61	-0.06	1.54	0.00	24.74440	1319.59696	34.05	14.59
5446	5449	4.82920	0.00	0.25	-0.05	0.00	0.15	0.00	4.82940	1324.42636	35.75	14.74
5449	5448	0.01477	0.00	0.00	0.00	-0.03	0.03	0.00	0.01474	1324.44110	34.60	14.77
5448	5447	16.82170	0.00	0.39	-0.24	-0.03	1.64	0.00	16.82182	1341.26292	35.34	16.41
5447	5450	32.23612	0.00	0.65	-0.51	-0.03	0.53	0.00	32.23623	1373.49915	37.38	16.94
5450	5451	51.02682	0.00	1.56	-0.96	-0.02	0.31	0.00	51.02740	1424.52655	49.13	17.25
5451	5454	-5.84190	0.00	-0.45	0.15	-0.07	-0.54	0.00	-5.84227	1418.68428	52.53	16.71
5454	5455	-6.35342	0.00	-0.44	0.15	-0.05	-0.33	0.00	-6.35376	1412.33052	52.38	16.38
5455	5456	-8.40200	0.00	-0.63	0.19	-0.06	-0.29	0.00	-8.40250	1403.92802	50.49	16.09
5456	5457	0.46485	0.00	0.13	-0.01	-0.03	0.05	0.00	0.46494	1404.39296	49.43	16.14
5457	5458	2.21360	0.00	0.16	-0.04	-0.02	0.05	0.00	2.21370	1406.60666	44.94	16.19
5458	5459	0.82533	0.00	0.13	-0.01	-0.04	0.04	0.00	0.82541	1407.43207	43.73	16.23
5459	5460	1.86032	0.01	0.10	-0.03	-0.04	0.22	0.00	1.86036	1409.29243	44.02	16.45
5460	5461	5.21295	0.00	0.40	-0.07	-0.04	0.24	0.00	5.21324	1414.50567	44.63	16.69
5461	5653	16.99745	0.00	0.43	-0.21	-0.04	0.32	0.00	16.99763	1431.50330	45.85	17.01
5653	5654	0.40297	0.00	0.07	-0.01	0.00	0.02	0.00	0.40303	1431.90633	45.83	17.03
5654	5655	28.51442	0.00	0.34	-0.34	-0.07	0.82	0.00	28.51435	1460.42068	46.78	17.85
5655	5656	32.29787	0.01	0.49	-0.41	-0.07	1.00	0.00	32.29789	1492.71857	46.85	18.85
5656	5657	23.12194	0.00	0.38	-0.55	-0.06	1.26	0.00	23.12170	1515.84027	50.35	20.10
5657	5658	28.45007	0.00	0.68	-1.02	-0.05	1.11	0.00	28.44968	1544.28995	56.31	21.21
5658	5659	42.55472	0.00	1.08	-1.06	-0.07	2.69	0.00	42.55467	1586.84462	64.87	23.90
5659	5660	31.86020	0.01	0.66	-0.86	-0.05	2.34	0.00	31.85996	1618.70458	65.36	26.24
5660	5661	28.78852	0.00	0.59	-0.83	-0.04	2.44	0.00	28.78824	1647.49282	64.63	28.68
5661	5662	1.94607	-0.01	-0.09	-0.05	-0.04	0.29	0.00	1.94588	1649.43870	67.03	28.97
5662	5663	22.59717	-0.01	0.45	-0.67	-0.05	1.84	0.00	22.59689	1672.03559	73.59	30.81
5663	5664	44.88317	0.01	1.28	-1.37	-0.07	3.16	0.00	44.88302	1716.91861	77.87	33.97
5664	5665	65.71420	0.00	1.71	-2.01	-0.08	1.82	0.00	65.71382	1782.63243	90.80	35.79
5665	5666	46.78075	0.00	1.80	-1.55	-0.08	0.77	0.00	46.78092	1829.41335	98.36	36.56
5666	5667	-50.02975	0.00	-1.64	1.84	-0.04	-0.92	0.00	-50.02959	1779.38376	83.05	35.65
5667	5668	-41.86937	0.00	-1.08	1.66	-0.05	-0.62	0.00	-41.86884	1737.51492	66.90	35.03
5668	5669	-3.25582	-0.02	0.00	0.12	0.00	-0.01	0.00	-3.25572	1734.25920	67.42	35.02
5669	5670	-16.11240	-0.01	-0.58	0.58	-0.03	-0.21	0.00	-16.11244	1718.14676	64.43	34.81
5670	5671	-18.57107	-0.02	-0.47	0.64	-0.05	-1.33	0.00	-18.57097	1699.57579	56.83	33.48
5671	5672	-17.73012	0.04	-0.22	0.58	-0.04	-1.29	0.00	-17.72976	1681.84603	55.12	32.19
5672	5673	-20.93095	-0.03	-0.38	0.63	-0.02	-1.20	0.00	-20.93075	1660.91528	53.20	30.99
5673	5674	-3.15267	0.00	-0.04	0.09	-0.01	0.00	0.00	-3.15263	1657.76265	53.60	30.99
5674	5675	-27.06840	0.00	-0.47	0.76	-0.02	-0.73	0.00	-27.06813	1630.69452	51.34	30.26
5675	5676	-2.99238	0.00	0.02	0.07	0.01	-0.22	0.00	-2.99238	1627.70214	50.11	30.04
5675	5676	-2.99225	0.00	0.02	0.07	0.01	-0.22	0.00	-2.99216	1627.70237	50.11	30.04
5675	5677	-22.88632	-0.01	-0.08	0.49	-0.03	-0.88	0.00	-22.88595	1607.80857	49.00	29.38
5677	5678	-25.95645	0.00	-0.28	0.54	-0.05	-1.16	0.00	-25.95624	1581.85233	41.93	28.22
5678	5679	-17.14222	0.01	-0.43	0.35	-0.05	-0.65	0.00	-17.14234	1564.70999	39.16	27.57
5679	5680	-20.77385	0.00	-0.41	0.42	-0.03	-0.61	0.00	-20.77387	1543.93612	35.47	26.96
5680	5684	-5.44530	0.00	-0.18	0.11	-0.03	-0.19	0.00	-5.44540	1538.49072	33.78	26.77

Table 8b. National Geodetic Survey Line L24791: File L24791.ori--Continued

FROM SEQ NO.	TO SEQ NO.	UNCORRECTED FIELD ELEVATION DIFFERENCE (m)	LEVEL CORR. (mm)	ROD CORR. (mm)	ASTRO CORR. (mm)	TEMP. CORR. (mm)	REFR. CORR. (mm)	MAGN. CORR. (mm)	CORRECTED OBSERVED ELE. DIFFERENCE (m)	CUMULATIVE OBSERVED ELEVATION (OF TO SEQ NO) (m)	CUMULAT. OBS. GRAV ORTHO CORR. (mm)	CUMUL. REFR. CORR. (mm)
5684	5682	-0.02914	0.01	0.04	0.00	0.00	0.00	0.00	-0.02909	1538.46163	36.75	26.76
5682	5683	-0.29676	0.00	-0.01	0.01	0.00	0.00	0.00	-0.29676	1538.16487	36.82	26.76
5683	5681	-8.34567	0.00	-0.24	0.25	0.00	-0.11	0.00	-8.34566	1529.81921	36.62	26.64
5684	5685	-18.43887	0.01	-0.53	0.38	-0.07	-0.47	0.00	-18.43908	1520.05164	12.95	26.30
5685	5686	5.31660	0.00	0.34	-0.11	-0.06	0.13	0.00	5.31677	1525.36841	8.91	26.43
5686	5687	19.59420	-0.01	0.50	-0.51	-0.13	1.36	0.00	19.59405	1544.96246	10.10	27.79
5687	5688	21.80830	-0.01	0.35	-0.61	-0.11	1.12	0.00	21.80792	1566.77038	30.90	28.91
5688	5689	4.92645	0.00	0.20	-0.15	-0.10	0.18	0.00	4.92640	1571.69678	44.01	29.09
5689	5690	22.24175	-0.01	0.80	-0.74	-0.09	2.49	0.00	22.24171	1593.93849	43.69	31.58
5690	5691	44.52747	0.00	1.23	-1.66	-0.15	5.52	0.00	44.52689	1638.46538	43.83	37.10
5691	5692	20.72662	0.00	0.59	-0.41	0.00	0.29	0.00	20.72680	1659.19218	40.96	37.39
5692	5693	37.28677	0.00	0.83	-0.78	-0.01	0.33	0.00	37.28681	1696.47899	42.43	37.72
5693	5694	38.15062	0.00	1.09	-0.78	-0.02	0.18	0.00	38.15091	1734.62990	54.26	37.90
5694	5695	44.12422	0.00	0.96	-0.97	-0.08	0.43	0.00	44.12413	1778.75403	53.48	38.33
5695	5696	33.44150	0.00	0.92	-0.81	-0.05	0.52	0.00	33.44156	1812.19559	64.03	38.85
5696	5697	25.35120	0.00	0.59	-0.62	-0.04	0.28	0.00	25.35113	1837.54672	73.06	39.13
5697	5698	56.87992	0.00	1.67	-1.14	0.01	1.69	0.00	56.88046	1894.42718	89.10	40.82
5698	5699	9.94670	0.00	0.34	-0.20	0.00	0.62	0.00	9.94684	1904.37402	90.99	41.44
5699	9946	-8.48702	0.00	-0.20	0.28	-0.03	-0.02	0.00	-8.48697	1895.88705	85.63	41.42
9946	9945	-19.24715	0.00	-0.61	0.62	-0.03	0.04	0.00	-19.24717	1876.63988	78.99	41.46
9945	5700	-2.41120	0.00	-0.03	0.08	0.00	0.00	0.00	-2.41115	1874.22873	78.33	41.46

Table 8c. National Geodetic Survey Line L24791: File L24791.prn(=.dat)

```
   112          L24791       9941994219840116102610530 12 1  0.77                  233456615    F
-12.33830                   MT -0.32 -0.01 -0.31  0.35 -0.03 -0.13  0.001030313610306501
   212          L24791       9942994319840116105511490 26 1  1.37                  233456615    F
-41.82527                   MT  0.03  0.00 -1.19  1.13 -0.01 -0.12  0.001030650110306500
   312          L24791       9943530119840116130413370 17 1  1.13                  233456615    F
-34.44267                   MT -0.30  0.01 -0.98  0.76 -0.05 -0.45  0.001030650010308203
   412          L24791       5301540119840116134314330 24 1  2.19                  233456615    F
 12.51962                   MT -1.32  0.00  0.22 -0.27 -0.08  0.07  0.001030820310316617
   512          L24791       5401540219840116144515200 18 1  1.88                  233456615    F
 19.93280                   MT -0.99  0.01  0.39 -0.43 -0.03  0.64  0.001031661710323337
   612          L24791       5402540319840116152215580 19 1  2.05                  233456615    F
 13.69262                   MT -1.39  0.00  0.44 -0.31  0.01  0.19  0.001032333710331535
   712          L24791       5409540819840117 8050847U 19 1  1.96                  233456615    B
-25.47550                   MT  1.68 -0.01 -0.41  0.87  0.09 -0.66  0.001027092810359215
  1112          L24791       5405540419840117115211540 1 1  0.00                  233456615    B
 -0.41385                   MT  0.00  0.00  0.02  0.01  0.00  0.00  0.001034273510342741
  1212          L24791       5404540319840117115612480 24 1  2.08                  233456615    B
-20.60915                   MT  1.70  0.00 -0.44  0.55  0.15 -1.81  0.001034274110331535
  1012          L24791       5406540519840117114211500 2 1  0.10                  233456615    B
 -0.99690                   MT  0.08  0.00 -0.01  0.03  0.01 -0.02  0.001034274210342735
   912          L24791       5407540619840117110111400 19 1  1.66                  233456615    B
-17.84742                   MT  1.39  0.00 -0.43  0.51  0.13 -1.01  0.001035099810342742
   812          L24791       5408540719840117 9000932U 14 1  1.56                  233456615    B
-10.58017                   MT  1.38  0.00 -0.27  0.34  0.09 -0.40  0.001035921510350998
  1312          L24791       5409541019840118 8100850U 19 1  1.79                  233456615    F
 22.76887                   MT -1.12  0.00  0.53 -0.94 -0.07  0.53  0.001027092810277394
  1412          L24791       5410541119840118 8520920U 16 1  1.55                  233456615    F
 20.75887                   MT -0.75  0.00  0.41 -0.83 -0.08  0.40  0.001027739410280749
  1512          L24791       5411541219840118 9220949U 14 1  1.30                  233456615    F
  9.80555                   MT -1.02  0.00  0.12 -0.38 -0.08  0.34  0.001028074910287155
  1612          L24791       5412541319840118100210450 16 1  1.67                  233456615    F
 16.12585                   MT -1.09  0.00  0.33 -0.61 -0.11  0.46  0.001028715510292106
  1712          L24791       5413541419840118104711000 8 1  0.81                  233456615    F
  2.73062                   MT -0.74  0.00  0.23 -0.10 -0.06  0.11  0.001029210610297283
  1812          L24791       5414541519840118110211320 16 1  1.76                  233456615    F
 12.22522                   MT -1.58  0.00  0.53 -0.43 -0.14  0.43  0.001029728310305985
  1912          L24791       5415541619840118113312150 18 1  1.74                  233456615    F
 21.18730                   MT -1.51  0.00  0.43 -0.72 -0.13  2.19  0.001030598510314493
  2012          L24791       5416541719840118133014090 18 1  1.62                  233456615    F
 -0.60193                   MT -1.49  0.00  0.05  0.02 -0.08 -0.02  0.001031449310322869
  2112          L24791       5417541819840118141114340 11 1  1.03                  233456615    F
 -1.25743                   MT -0.88  0.00 -0.13  0.04 -0.04 -0.02  0.001032286910327894
  2212          L24791       5418541919840118143615200 19 1  1.76                  233456615    F
 -0.28243                   MT -1.13 -0.01 -0.22  0.01  0.00  0.00  0.001032789410334305
  2312          L24791       5419542019840118152315400 10 1  1.11                  233456615    F
 -3.45185                   MT -0.61  0.00 -0.29  0.10  0.01 -0.13  0.001033430510337444
  2412          L24791       5420542119840118154216110 16 1  1.78                  233456615    F
 -9.67825                   MT -1.00  0.00 -0.37  0.29  0.02  0.00  0.001033744410342318
  2612          L24791       5428542719840119 9070940U 17 1  1.85                  233456615    B
 -5.11898                   MT  1.06  0.00  0.00  0.19  0.09  0.11  0.001026920810362092
  2512          L24791       5429542819840119 8210905U 17 1  1.64                  233456615    B
 -4.06852                   MT  0.97  0.00 -0.20  0.17  0.05  0.00  0.001027424610269208
  3012          L24791       5424542119840119114412120 16 1  1.45                  233456615    B
  2.64987                   MT  0.78  0.00  0.01 -0.07  0.09  0.11  0.001034730510342318
  2912          L24791       5425542419840119110111420 24 1  2.24                  233456615    B
  4.53120                   MT  1.08  0.00  0.11 -0.13  0.14  0.10  0.001035215210347305
  2812          L24791       5426542519840119102510580 18 1  1.69                  233456615    B
 -5.14867                   MT  1.02  0.00  0.06  0.16  0.12  0.03  0.001035865710352152
  2712          L24791       5427542619840119 9421011U 17 1  1.57                  233456615    B
 -7.59962                   MT  0.84  0.00 -0.26  0.27  0.09  0.08  0.001036209210358657
  3112          L24791       5421542219840119131213370 11 1  1.10                  233456615    F
  1.62328                   MT -1.02  0.00  0.18 -0.03 -0.10  0.07  0.001034231810347301
  3212          L24791       5422542119840119135214150 11 1  1.10                  233456615    B
 -1.62360                   MT  1.02  0.00 -0.13  0.03  0.10 -0.10  0.001034730110342318
  3912          L24791       5430542919840120110611400 18 1  1.35                  233456615    B
 -7.29270                   MT  0.98  0.00  0.03  0.20  0.10 -0.89  0.001027907210274246
  3812          L24791       5431543019840120103311050 18 1  1.83                  233456615    B
-18.74920                   MT  1.30  0.00 -0.11  0.54  0.12 -0.83  0.001028555910279072
  3712          L24791       5432543119840120100910310 10 1  1.13                  233456615    B
 -5.24350                   MT  0.90  0.00 -0.20  0.17  0.06 -0.49  0.001029036210285559
  3612          L24791       5433543219840120 9370953U 6 1  0.60                  233456615    B
  5.33192                   MT  0.44  0.00  0.23 -0.18  0.03  0.43  0.001029363110290362
  3512          L24791       5434543319840120 9130935U 14 1  1.64                  233456615    B
 18.82245                   MT  1.17  0.00  0.30 -0.64  0.05  1.77  0.001030088310293631
  3412          L24791       5435543419840120 8520911U 13 1  1.52                  233456615    B
 19.67895                   MT  1.19  0.00  0.52 -0.68  0.03  0.89  0.001030598710300883
  3312          L24791       5436543519840120 8240850U 14 1  1.63                  233456615    B
 15.91960                   MT  1.17  0.00  0.49 -0.57  0.01  0.15  0.001031279010305987
```

Table 8c. National Geodetic Survey Line L24791: File L24791.prn(=.dat)--Continued

```
  4412          L24791       5437543619840120151415 41U 15 1  1.74                  233456615    B
 -3.95927                    MT  1.25  0.00 -0.28  0.10  0.05 -0.17  0.001032107610312790
  4312          L24791       5438543719840120142415 12U 16 1  1.79                  233456615    B
 -8.01587                    MT  1.32 -0.01 -0.72  0.20  0.08 -0.64  0.001032789510321076
  4212          L24791       5453543819840120141114 15U  2 1  0.12                  233456615    B
 -0.49435                    MT  0.12  0.01  0.00  0.01  0.01  0.00  0.001032789610327895
  4112          L24791       5439545319840120133014 09U 21 1  1.95                  233456615    B
 -9.12940                    MT  1.39 -0.01 -0.87  0.22  0.12 -0.47  0.001033591810327896
  4012          L24791       5440543919840120125013 27U 18 1  1.62                  233456615    B
 -8.29627                    MT  1.25  0.00 -0.28  0.20  0.12 -0.16  0.001034231910335918
  4912          L24791       5444544519840123103511 00U 15 1  1.74                  233456615    F
 21.53710                    MT -1.33  0.01  0.31 -0.53 -0.05  3.41  0.001026407410270929
  5012          L24791       5445544619840123110211 34U 18 1  1.58                  233456615    F
 24.74465                    MT -1.23  0.00  0.42 -0.61 -0.06  1.54  0.001027092910277395
  4512          L24791       5440544119840123 8500918U 13 1  1.47                  233456615    F
  9.45510                    MT -1.13  0.00  0.27 -0.27 -0.01  0.08  0.001034231910348940
  4612          L24791       5441544219840123 9200954U 19 1  2.09                  233456615    F
  9.33092                    MT -1.55  0.00  0.39 -0.25 -0.02  0.28  0.001034894010356980
  4712          L24791       5442544319840123100410 21U 11 1  1.25                  233456615    F
 13.33905                    MT -1.00  0.00  0.28 -0.35 -0.02  0.57  0.001035698010362093
  4812          L24791       5443544419840123102210 33U  4 1  0.45                  233456615    F
  4.33797                    MT -0.35  0.00  0.09 -0.11 -0.01  0.34  0.001036209310264074
  5112          L24791       5451545419840125 8500919U 17 1  1.87                  233456615    F
 -5.84190                    MT -2.04  0.00 -0.45  0.15 -0.07 -0.54  0.001029537910305988
  5212          L24791       5454545519840125 9210945U 16 1  1.86                  233456615    F
 -6.35342                    MT -1.89  0.00 -0.44  0.15 -0.05 -0.33  0.001030598810314499
  5312          L24791       5455545619840125 9471008U 15 1  1.74                  233456615    F
 -8.40200                    MT -1.92  0.00 -0.63  0.19 -0.06 -0.29  0.001031449910324458
  5412          L24791       5456545719840125 10181038U 11 1  1.27                  233456615    F
  0.46485                    MT -1.28  0.00  0.13 -0.01 -0.03  0.05  0.001032445810329484
  5512          L24791       5457545819840125 10401052U  7 1  0.78                  233456615    F
  2.21360                    MT -0.87  0.00  0.16 -0.04 -0.02  0.05  0.001032948410334306
  5612          L24791       5458545919840125 10541114U 13 1  1.51                  233456615    F
  0.82533                    MT -1.64  0.00  0.13 -0.01 -0.04  0.04  0.001033430610342320
  5712          L24791       5459546019840125 11161136U 13 1  1.50                  233456615    F
  1.86032                    MT -1.53  0.01  0.10 -0.03 -0.04  0.22  0.001034232010348941
  6012          L24791       5653565419840125 13451346U  1 1  0.07                  233456615    F
  0.40297                    MT -0.04  0.00  0.07 -0.01  0.00  0.02  0.001026404510265792
  6112          L24791       5654565519840125 13481422U 21 1  1.97                  233456615    F
 28.51442                    MT -2.29  0.00  0.34 -0.34 -0.07  0.82  0.001026579210275829
  6212          L24791       5655565619840125 14301513U 20 1  1.93                  233456615    F
 32.29787                    MT -2.30  0.01  0.49 -0.41 -0.07  1.00  0.001027582910285560
  6312          L24791       5656565719840125 15181600U 18 1  1.71                  233456615    F
 23.12140                    MT -2.05  0.00  0.36 -0.32 -0.07  0.85  0.001028556010295381
  5812          L24791       5460546119840125 12371306U 15 1  1.51                  233456615    F
  5.21295                    MT -1.75  0.00  0.40 -0.07 -0.04  0.24  0.001034894110356981
  5912          L24791       5461565319840125 13081343U 16 1  1.52                  233456615    F
 16.99745                    MT -1.58  0.00  0.43 -0.21 -0.04  0.32  0.001035698110264045
  6712          L24791       5450544719840124 10301101U 20 1  1.56                  233456615    B
-32.23612                    MT  1.34  0.00 -0.65  0.51  0.03 -0.53  0.001028872610282369
  6612          L24791       5451545019840124 9401025U 25 1  1.43                  233456615    B
-51.02682                    MT  1.21  0.00 -1.56  0.96  0.02 -0.31  0.001029537910288726
  6412          L24791       5451545219840124 8370908U 12 1  0.28                  233456615    F
 20.75292                    MT  0.04  0.00  0.69 -0.48  0.00  0.08  0.001029537910295380
  6512          L24791       5452545119840124 9100933U 12 1  0.28                  233456615    B
-20.75315                    MT -0.04  0.00 -0.72  0.45  0.00 -0.07  0.001029538010295379
  7012          L24791       5449544619840124 13201350U 14 1  1.18                  233456615    B
 -4.82920                    MT -0.95  0.00 -0.25  0.05  0.00 -0.15  0.001027257810277395
  6912          L24791       5448544919840124 12301302U 11 1  0.99                  233456615    B
 -0.01477                    MT  1.01  0.00  0.00  0.00  0.03 -0.03  0.001027738910272578
  6812          L24791       5447544819840124 12021227U 10 1  1.02                  233456615    B
-16.82170                    MT  1.05  0.00 -0.39  0.24  0.03 -1.64  0.001028236910277389
  7312          L24791       5659565819840221 10311110U 23 1  1.93                  233456615    B
-42.55472                    MT  2.44  0.00 -1.08  1.06  0.07 -2.69  0.001031618310305989
  7212          L24791       5660565919840221 9541028U 19 1  1.86                  233456615    B
-31.86020                    MT  2.34 -0.01 -0.66  0.86  0.05 -2.34  0.001032624710316183
  7112          L24791       5661566019840221 9260950U 19 1  1.82                  233456615    B
-28.78852                    MT  2.27  0.00 -0.59  0.83  0.04 -2.44  0.001033591910326247
  7612          L24791       5667566619840222 10351130U 27 1  1.46                  233456615    B
 50.02975                    MT  1.92  0.00  1.64 -1.84  0.04  0.92  0.001028075010274247
  7512          L24791       5657565619840222 9301007U 18 1  1.70                  233456615    B
-23.12247                    MT  2.05  0.00 -0.39  0.79  0.04 -1.66  0.001029538110285560
  7412          L24791       5658565719840222 8270915U 20 1  1.88                  233456615    B
-28.45007                    MT  2.27  0.00 -0.68  1.02  0.05 -1.11  0.001030598910295381
  7812          L24791       5665566419840222 13331422U 34 1  1.88                  233456615    B
-65.71420                    MT  2.60  0.00 -1.71  2.01  0.08 -1.82  0.001026754610356982
  7712          L24791       5666566519840222 12351330U 29 1  1.56                  233456615    B
-46.78075                    MT  1.66  0.00 -1.80  1.55  0.08 -0.77  0.001027424710267546
```

Table 8c. National Geodetic Survey Line L24791: File L24791.prn(=.dat)--Continued

```
  8112          L24791       566256611984022215251538U 11 1  1.06                    233456615    B
 -1.94607                    MT  1.47  0.01  0.09  0.05  0.04 -0.29  0.001034066110335919
  8012          L24791       566356621984022215031523U 13 1  1.19                    233456615    B
-22.59717                    MT  1.65  0.01 -0.45  0.67  0.05 -1.84  0.001034730610340661
  7912          L24791       566456631984022214321500U 23 1  1.85                    233456615    B
-44.88317                    MT  2.52 -0.01 -1.28  1.37  0.07 -3.16  0.001035698210347306
  8212          L24791       5667566819840223 8200911U 26 1  1.64                    233456615    F
-41.86937                    MT -1.83  0.00 -1.08  1.66 -0.05 -0.62  0.001028075010287147
  8312          L24791       5668566919840223 9130929U  6 1  0.25                    233456615    F
 -3.25582                    MT -0.09 -0.02  0.00  0.12  0.00 -0.01  0.001028714710288716
  8412          L24791       5669567019840223 9311008U 19 1  1.43                    233456615    F
-16.11240                    MT -1.54 -0.01 -0.58  0.58 -0.03 -0.21  0.001028871610293632
  8512          L24791       567056711984022310171041U 16 1  1.75                    233456615    F
-18.57107                    MT -2.54 -0.02 -0.47  0.64 -0.05 -1.33  0.001029363210304309
  8612          L24791       567156721984022310431107U 16 1  1.59                    233456615    F
-17.73012                    MT -2.18  0.04 -0.22  0.58 -0.04 -1.29  0.001030430910312783
  8712          L24791       567256731984022311101126U 13 1  1.24                    233456615    F
-20.93095                    MT -1.49 -0.03 -0.38  0.63 -0.02 -1.20  0.001031278310319504
  8812          L24791       567356741984022311271136U  4 1  0.34                    233456615    F
 -3.15267                    MT -0.41  0.00 -0.04  0.09 -0.01  0.00  0.001031950410321077
  8912          L24791       567456751984022311381203U 17 1  1.53                    233456615    F
-27.06840                    MT -1.96  0.00 -0.47  0.76 -0.02 -0.73  0.001032107710329473
  9112          L24791       567656751984022313181327U  4 1  0.30                    233456615    B
  2.99210                    MT  0.00  0.00 -0.01 -0.07 -0.01  0.24  0.001032947210329473
  9012          L24791       567556761984022313041316U  4 1  0.30                    233456615    F
 -2.99240                    MT  0.00  0.00  0.02  0.07  0.01 -0.20  0.001032947310329472
  9212          L24791       567556771984022313311358U 17 1  1.60                    233456615    F
-22.88632                    MT -1.93 -0.01 -0.08  0.49 -0.03 -0.88  0.001032947310337442
  9312          L24791       567756781984022314001428U 19 1  1.83                    233456615    F
-25.95645                    MT -2.37  0.00 -0.28  0.54 -0.05 -1.16  0.001033744210347307
  9412          L24791       567856791984022314301459U 19 1  1.80                    233456615    F
-17.14222                    MT -2.46  0.01 -0.43  0.35 -0.05 -0.65  0.001034730710356975
  9612          L24791       568056841984022315311549U 12 1  1.29                    233456615    F
 -5.44530                    MT -1.61  0.00 -0.18  0.11 -0.03 -0.19  0.001026407510270930
  9712          L24791       568456851984022315531623U 21 1  2.37                    233456615    F
-18.43887                    MT -2.89  0.01 -0.53  0.38 -0.07 -0.47  0.001027093010283957
  9812          L24791       568556861984022316251656U 20 1  2.34                    233456615    F
  5.31660                    MT -2.80  0.00  0.34 -0.11 -0.06  0.13  0.001028395710295382
  9512          L24791       567956801984022315051528U 15 1  1.41                    233456615    F
-20.77385                    MT -1.50  0.00 -0.41  0.42 -0.03 -0.61  0.001035697510264075
 10312          L24791       5683568219840224 9400950U  1 1  0.01                    233456615    B
  0.29685                    MT -0.04  0.00  0.04 -0.01  0.00  0.00  0.001027092210270923
 10112          L24791       5683568119840224 8570917U  6 1  0.41                    233456615    F
 -8.34582                    MT -0.04  0.00 -0.23  0.26  0.00 -0.09  0.001027092210270925
 10012          L24791       5682568319840224 8450855U  1 1  0.01                    233456615    F
 -0.29667                    MT  0.04  0.00  0.02  0.01  0.00  0.00  0.001027092310270922
 10412          L24791       5682568419840224 9551010U  5 1  0.52                    233456615    B
  0.02823                    MT  0.11 -0.02  0.02  0.00  0.00  0.02  0.001027092310270930
 10512          L24791       5682568419840224102710400U  6 1  0.50                    233456615    B
  0.02810                    MT  0.11  0.00 -0.05  0.00  0.00 -0.01  0.001027092310270930
 10212          L24791       5681568319840224 9230940U  6 1  0.41                    233456615    B
  8.34552                    MT  0.04  0.01  0.24 -0.24  0.00  0.14  0.001027092510270922
  9912          L24791       5684568219840224 8200840U  5 1  0.52                    233456615    F
 -0.03113                    MT -0.11  0.02  0.06  0.00  0.00 -0.01  0.001027093010270923
 10612          L24791       5684568219840224104511000U  6 1  0.50                    233456615    F
 -0.02912                    MT -0.11  0.00  0.08  0.00  0.00  0.00  0.001027093010270923
 10812          L24791       5698569719840224133314170U 28 1  1.33                    233456615    B
-56.87992                    MT  1.72  0.00 -1.67  1.14 -0.01 -1.69  0.001029037210283967
 10712          L24791       5699569819840224130913270U  8 1  0.58                    233456615    B
 -9.94670                    MT  0.71  0.00 -0.34  0.20  0.00 -0.62  0.001029363810290372
 11312          L24791       5687568619840227102410550U 18 1  2.11                    233456615    B
-19.59420                    MT  2.67  0.01 -0.50  0.51  0.13 -1.36  0.001030758510295382
 11212          L24791       5688568719840227 9581021U 16 1  1.84                    233456615    B
-21.80830                    MT  2.09  0.01 -0.35  0.61  0.11 -1.12  0.001031618410307585
 11112          L24791       5689568819840227 9220944U 13 1  1.42                    233456615    B
 -4.92645                    MT  1.95  0.00 -0.20  0.15  0.10 -0.18  0.001032445910316184
 11012          L24791       5690568919840227 9500919U 19 1  2.15                    233456615    B
-22.24175                    MT  2.40  0.01 -0.80  0.74  0.09 -2.49  0.001033430710324459
 10912          L24791       5691569019840227 8110947U 24 1  2.40                    233456615    B
-44.52747                    MT  3.25  0.00 -1.23  1.66  0.15 -5.52  0.001034894210334307
 11712          L24791       5694569319840227140214340U 21 1  1.38                    233456615    B
-38.15062                    MT  1.41  0.00 -1.09  0.78  0.02 -0.18  0.001026580010358658
 11612          L24791       5695569419840227131814000U 28 1  2.15                    233456615    B
-44.12422                    MT  2.88  0.00 -0.96  0.97  0.08 -0.43  0.001027583410265800
 11512          L24791       5696569519840227124313160U 21 1  1.37                    233456615    B
-33.44150                    MT  1.34  0.00 -0.92  0.81  0.05 -0.52  0.001028075810275834
 11412          L24791       5697569619840227121212400U 17 1  1.06                    233456615    B
-25.35120                    MT  0.91  0.00 -0.59  0.62  0.04 -0.28  0.001028396710280758
```

Table 8c. National Geodetic Survey Line L24791: File L24791.prn(=.dat)--Continued

```
 11912          L24791       5692569119840227152215 46U 12 1  1.09                    233456615    B
-20.72662                    MT  1.56  0.00 -0.59  0.41  0.00 -0.29  0.001035374610348942
 11812          L24791       5693569219840227144515 20U 22 1  1.32                    233456615    B
-37.28677                    MT  1.29  0.00 -0.83  0.78  0.01 -0.33  0.001035865810353746
 12012          L24791       5699994619840228 7550812U  9 1  0.71                    233456615    F
 -8.48702                    MT -1.04  0.00 -0.20  0.28 -0.03 -0.02  0.001029363810297286
 12112          L24791       9946994519840228 8140843U 12 1  0.69                    233456615    F
-19.24715                    MT -0.75  0.00 -0.61  0.62 -0.03  0.04  0.001029728610299012
 12312          L24791       5700994519840228 8520854U  2 1  0.07                    233456615    B
  2.41112                    MT  0.05  0.00  0.04 -0.07  0.00  0.00  0.001029900910299012
 12212          L24791       9945570019840228 8450850U  2 1  0.07                    233456615    F
 -2.41127                    MT -0.05  0.00 -0.02  0.08  0.00  0.00  0.001029901210299009
 12412          L24791       9945994419840228 8560913U  6 1  0.48                    233456615    F
-11.29902                    MT -0.56  0.00 -0.37  0.35 -0.03  0.05  0.001029901210302637
```

Table 9a. National Geodetic Survey Line L24792: File L24792.pro

Seq No.	UID	Benchmark	Spur Code	Distance (km)	Latitude	Longitude	Observed Elevation (m)	Obs Grav Ortho Ht (m)	Cumul. Refr Cor. (mm)	Cumul. Magn Cor. (mm)
9930	10336367	S 405		0.00	36 37 11	116 17 20	864.94850	864.94850	0.00	0.00
9929	10337888	R 405		0.90	36 37 20	116 17 54	861.71512	861.71488	-0.09	0.00
9928	10339510	Q 405		1.85	36 37 32	116 18 30	862.54045	862.54393	0.04	0.00
1531	10339509	B 17 USGS RESET 1977		2.12	36 37 35	116 18 33	865.78689	865.79156	0.13	0.00
1530	10342740	P 405		3.41	36 37 53	116 19 20	870.93371	870.93315	0.13	0.00
1529	10342739	A 17 RESET 1977		5.29	36 37 53	116 20 35	851.52515	851.52323	-0.32	0.00
1528	10344380	N 405		6.84	36 38 02	116 21 38	829.08752	829.08487	-0.70	0.00
1527	10346022	Z 16 USGS RESET 1980		8.56	36 38 18	116 22 40	809.17106	809.17451	-1.07	0.00
1526	10349424	B 333		10.60	36 38 39	116 23 58	810.62782	810.63658	-0.98	0.00
5342	10349427	B 333 RESET 1980		10.61	36 38 39	116 23 58	810.64114	810.64990	-0.98	0.00
5341	10350996	H 409		11.06	36 38 42	116 24 14	811.05559	811.06393	-0.96	0.00
5340	10354228	C 333 RESET 1980		13.23	36 39 03	116 25 37	810.65987	810.66381	-0.98	0.00
5339	10355761	Y 16 USGS RESET 1980		14.95	36 39 17	116 26 43	805.76252	805.76346	-1.25	0.00
5338	10359213	F 409		16.66	36 39 32	116 27 47	800.20073	800.19925	-1.33	0.00
5337	10359214	DUNE		16.86	36 39 34	116 27 53	800.49173	800.49013	-1.33	0.00
5336	10362538	E 409		18.34	36 39 50	116 28 49	795.57502	795.57306	-1.39	0.00
5335	10264590	X 16 USGS RESET 1980		19.87	36 40 02	116 29 49	786.20254	786.20109	-1.67	0.00
5334	10266353	D 409		21.31	36 40 18	116 30 41	777.80764	777.80809	-1.94	0.00
5333	10269713	W 16 RESET 1980		23.15	36 40 33	116 31 55	780.38255	780.38357	-1.82	0.00
5332	10273097	V 16 USGS RESET 1980		24.78	36 40 58	116 32 50	786.48752	786.48979	-1.20	0.00
5331	10273094	B 91 USGS		24.81	36 40 58	116 32 50	788.01359	788.01599	-1.20	0.00
5330	10277858	C 409		26.67	36 41 29	116 33 53	790.76297	790.76417	-1.13	0.00
5329	10282820	B 409		28.15	36 41 54	116 34 42	786.55218	786.54941	-1.26	0.00
5328	10287643	T 16 USGS RESET 1978		29.79	36 42 24	116 35 34	783.85319	783.84602	-1.35	0.00
5327	10294193	A 409		32.01	36 43 07	116 36 43	792.06921	792.05719	0.10	0.00
5326	10295922	ASHTON		32.55	36 43 11	116 37 07	795.39007	795.37876	0.16	0.00
5325	10301391	Z 408		34.06	36 43 45	116 37 30	818.23511	818.22600	0.91	0.00
5324	10304807	S 16 USGS RESET 1978		35.19	36 44 00	116 38 07	810.79338	810.78306	0.80	0.00
5323	10308206	Y 408		36.49	36 44 28	116 38 44	818.11513	818.10446	1.03	0.00
5322	10316616	G 409		38.21	36 45 12	116 39 31	827.43599	827.42400	1.03	0.00
5320	10323336	R 16 USGS RESET 1978		40.06	36 45 52	116 40 24	838.90284	838.89053	0.85	0.00
5321	10321569	RAYET		40.20	36 45 49	116 40 28	854.19696	854.18642	0.87	0.00
5319	10328351	X 408		41.70	36 46 27	116 41 08	847.69035	847.68053	0.66	0.00
5318	10334759	W 408		43.20	36 47 02	116 41 46	858.12427	858.11987	0.60	0.00
5317	10341126	Q 16 USGS RESET 1978		44.94	36 47 44	116 42 39	872.28072	872.27526	0.60	0.00
5316	10347771	X 338 RESET 1978		46.41	36 48 20	116 43 14	885.11681	885.11137	0.81	0.00
5315	10350997	C 23 RESET 1978		47.54	36 48 47	116 43 48	894.32090	894.31635	0.77	0.00
5314	10360829	P 16 USGS RESET 1978		49.71	36 49 41	116 44 42	914.15317	914.15189	0.92	0.00
5313	10360827	PAYET		49.74	36 49 40	116 44 43	914.33845	914.33725	0.92	0.00
5312	10268071	V 338 RESET 1978		51.14	36 50 25	116 45 01	927.39677	927.39571	1.14	0.00

Table 9a. National Geodetic Survey Line L24792: File L24792.pro--Continued

Seq No.	UID	Benchmark	Spur Code	Distance (km)	Latitude	Longitude	Observed Elevation (m)	Obs Grav Ortho Ht (m)	Cumul. Refr Cor. (mm)	Cumul. Magn Cor. (mm)
5311	10274671	U 338 RESET 1978		52.23	36 51 04	116 45 18	937.29257	937.29075	1.36	0.00
5310	10279622	D 23		53.30	36 51 30	116 45 28	945.26854	945.26661	1.52	0.00
5304	10286007	V 408		54.53	36 52 10	116 45 14	957.69745	957.69431	2.97	0.00
5305	10284432	3139 USGS		55.59	36 52 03	116 45 57	956.34623	956.34371	2.82	0.00
5306	10284431	Q 338		55.74	36 52 07	116 45 57	956.41579	956.41329	2.82	0.00
5303	10292592	U 408		55.94	36 52 54	116 45 07	972.03322	972.03291	4.22	0.00
5302	10303135	T 408		57.99	36 53 53	116 45 07	993.48413	993.48926	5.48	0.00
5301	10308203	N 16 USGS		59.34	36 54 22	116 45 37	1008.36750	1008.37780	6.16	0.00
9943	10306500	S 408		60.45	36 54 10	116 46 17	1042.80838	1042.82151	7.07	0.00
9942	10306501	R 408		61.81	36 54 11	116 47 07	1084.63617	1084.65290	8.32	0.00
9941	10303136	Q 408		62.58	36 53 59	116 47 30	1096.97562	1096.99340	8.45	0.00

Table 9b. National Geodetic Survey Line L24792: File L24792.ori

FROM SEQ NO.	TO SEQ NO.	UNCORRECTED FIELD ELEVATION DIFFERENCE (m)	LEVEL CORR. (mm)	ROD CORR. (mm)	ASTRO CORR. (mm)	TEMP. CORR. (mm)	REFR. CORR. (mm)	MAGN. CORR. (mm)	CORRECTED OBSERVED ELE. DIFFERENCE (m)	CUMULATIVE OBSERVED ELEVATION (OF TO SEQ NO) (m)	CUMULAT. OBS. GRAV ORTHO CORR. (mm)	CUMUL. REFR. CORR. (mm)
9930										864.94850	0.00	0.00
9930	9929	-3.23322	0.00	-0.20	0.05	-0.01	-0.09	0.00	-3.23338	861.71512	-0.24	-0.09
9929	9928	0.82545	0.00	-0.10	-0.01	-0.01	0.13	0.00	0.82533	862.54045	3.48	0.04
9928	1531	3.24645	0.00	0.04	-0.05	0.00	0.09	0.00	3.24644	865.78689	4.67	0.13
1531	1530	5.14677	0.00	0.13	-0.08	0.00	0.00	0.00	5.14682	870.93371	-0.56	0.13
1530	1529	-19.40857	0.00	-0.32	0.30	0.03	-0.45	0.00	-19.40856	851.52515	-1.92	-0.32
1529	1528	-22.43752	0.00	-0.53	0.39	0.03	-0.38	0.00	-22.43763	829.08752	-2.65	-0.70
1528	1527	-19.91637	0.00	-0.52	0.40	0.03	-0.37	0.00	-19.91646	809.17106	3.45	-1.07
1527	1526	1.45685	0.00	0.02	-0.02	-0.09	0.09	0.00	1.45676	810.62782	8.76	-0.98
1526	5342	0.01335	0.00	-0.03	0.00	0.00	0.00	0.00	0.01332	810.64114	8.76	-0.98
5342	5341	0.41447	0.00	0.01	-0.01	-0.02	0.02	0.00	0.41445	811.05559	8.34	-0.96
5341	5340	-0.39567	0.00	0.03	0.00	-0.08	-0.02	0.00	-0.39572	810.65987	3.94	-0.98
5340	5339	-4.89690	0.00	-0.45	0.05	-0.05	-0.27	0.00	-4.89735	805.76252	0.94	-1.25
5339	5338	-5.56165	0.00	-0.28	0.12	0.02	-0.08	0.00	-5.56179	800.20073	-1.48	-1.33
5338	5337	0.29095	0.00	0.06	-0.01	0.00	0.00	0.00	0.29100	800.49173	-1.60	-1.33
5337	5336	-4.91687	0.00	0.04	0.10	0.02	-0.06	0.00	-4.91671	795.57502	-1.96	-1.39
5336	5335	-9.37245	0.00	-0.22	0.17	0.02	-0.28	0.00	-9.37248	786.20254	-1.45	-1.67
5335	5334	-8.39470	0.00	-0.34	0.14	0.00	-0.27	0.00	-8.39490	777.80764	0.45	-1.94
5334	5333	2.57473	0.00	0.22	-0.04	0.00	0.12	0.00	2.57491	780.38255	1.02	-1.82
5333	5332	6.10470	0.00	0.39	-0.08	-0.04	0.62	0.00	6.10497	786.48752	2.27	-1.20
5332	5331	1.52600	0.00	0.09	-0.02	0.00	0.00	0.00	1.52607	788.01359	2.40	-1.20
5331	5330	2.74935	0.00	0.14	-0.04	-0.07	0.07	0.00	2.74938	790.76297	1.20	-1.13
5330	5329	-4.21065	0.00	-0.14	0.06	-0.06	-0.13	0.00	-4.21079	786.55218	-2.77	-1.26
5329	5328	-2.69887	0.00	-0.08	0.04	-0.08	-0.09	0.00	-2.69899	783.85319	-7.17	-1.35
5328	5327	8.21580	0.00	0.46	-0.13	-0.11	1.45	0.00	8.21602	792.06921	-12.02	0.10
5327	5326	3.32085	0.00	0.09	-0.08	0.00	0.06	0.00	3.32086	795.39007	-11.31	0.16
5326	5325	22.84505	0.00	0.59	-0.57	-0.03	0.75	0.00	22.84504	818.23511	-9.11	0.91
5325	5324	-7.44182	0.00	-0.11	0.20	0.00	-0.11	0.00	-7.44173	810.79338	-10.32	0.80
5324	5323	7.32180	0.00	0.16	-0.19	-0.02	0.23	0.00	7.32175	818.11513	-10.67	1.03
5323	5322	9.32065	0.00	0.52	-0.27	-0.04	0.00	0.00	9.32086	827.43599	-11.99	1.03
5322	5320	11.46680	0.00	0.44	-0.36	-0.03	-0.18	0.00	11.46685	838.90284	-12.31	0.85
5320	5319	8.78725	0.00	0.52	-0.19	-0.07	-0.19	0.00	8.78751	847.69035	-9.82	0.66
5319	5318	10.43365	0.00	0.55	-0.22	-0.06	-0.06	0.00	10.43392	858.12427	-4.40	0.60
5318	5317	14.15627	0.00	0.56	-0.31	-0.07	0.00	0.00	14.15645	872.28072	-5.46	0.60
5317	5316	12.83602	0.00	0.39	-0.28	-0.04	0.21	0.00	12.83609	885.11681	-5.44	0.81
5316	5315	9.20415	0.00	0.18	-0.21	-0.03	-0.04	0.00	9.20409	894.32090	-4.55	0.77
5315	5314	19.83250	0.00	0.51	-0.64	-0.10	0.15	0.00	19.83227	914.15317	-1.28	0.92
5314	5313	0.18528	0.00	0.02	-0.01	-0.01	0.00	0.00	0.18528	914.33845	-1.20	0.92
5313	5312	13.05862	0.00	0.16	-0.39	-0.07	0.22	0.00	13.05832	927.39677	-1.06	1.14
5312	5311	9.89592	0.00	0.23	-0.28	-0.07	0.22	0.00	9.89580	937.29257	-1.82	1.36
5311	5310	7.97597	0.00	0.26	-0.22	-0.04	0.16	0.00	7.97597	945.26854	-1.93	1.52
5310	5304	12.42895	0.00	0.37	-0.34	-0.07	1.45	0.00	12.42891	957.69745	-3.14	2.97
5304	5305	-1.35112	0.00	-0.13	0.04	-0.02	-0.16	0.00	-1.35122	956.34623	-2.52	2.82
5305	5306	0.06957	0.00	0.00	0.00	-0.01	0.00	0.00	0.06956	956.41578	-2.50	2.82
5304	5303	14.33585	0.00	0.36	-0.37	-0.07	1.25	0.00	14.33577	972.03322	-0.31	4.22
5303	5302	21.45100	0.00	0.48	-0.53	-0.04	1.26	0.00	21.45091	993.48413	5.13	5.48

Table 9b. National Geodetic Survey Line L24792: File L24792.ori--Continued

FROM SEQ NO.	TO SEQ NO.	UNCORRECTED FIELD ELEVATION DIFFERENCE (m)	LEVEL CORR. (mm)	ROD CORR. (mm)	ASTRO CORR. (mm)	TEMP. CORR. (mm)	REFR. CORR. (mm)	MAGN. CORR. (mm)	CORRECTED OBSERVED ELE. DIFFERENCE (m)	CUMULATIVE OBSERVED ELEVATION (OF TO SEQ NO) (m)	CUMULAT. OBS. GRAV ORTHO CORR. (mm)	CUMUL. REFR. CORR. (mm)
5302	5301	14.88322	0.00	0.52	-0.35	-0.02	0.68	0.00	14.88337	1008.36750	10.30	6.16
5301	9943	34.44040	0.00	1.26	-0.76	-0.02	0.91	0.00	34.44088	1042.80838	13.13	7.07
9943	9942	41.82750	0.00	1.37	-1.03	-0.05	1.25	0.00	41.82779	1084.63617	16.73	8.32
9942	9941	12.33950	0.00	0.31	-0.38	0.02	0.13	0.00	12.33945	1096.97562	17.78	8.45

Table 9c. National Geodetic Survey Line L24792: File L24792.prn(=.dat)

```
   712        L24792      9929993019840110111011140U  9 1  0.90          233456615   B
 3.23322                 MT  0.19  0.00  0.20 -0.05  0.01  0.09  0.001033788810336367
   512        L24792      1531992819840110103610440U  3 1  0.27          233456615   B
-3.24645                 MT  0.06  0.00 -0.04  0.05  0.00 -0.09  0.001033950910339510
   612        L24792      9928992919840110104611080U 10 1  0.95          233456615   B
-0.82545                 MT  0.25  0.00  0.10  0.01  0.01 -0.13  0.001033951010337888
   312        L24792      152915301984011O 9471013U 17 1  1.88          233456615   B
19.40857                 MT  0.00  0.00  0.32 -0.30 -0.03  0.45  0.001034273910342740
   412        L24792      1530153119840110101510330U 12 1  1.29          233456615   B
-5.14677                 MT  0.38  0.00 -0.13  0.08  0.00  0.00  0.001034274010339509
   212        L24792      1528152919840110 9100932U 14 1  1.55          233456615   B
22.43752                 MT  0.19  0.00  0.53 -0.39 -0.03  0.38  0.001034438010342739
   112        L24792      1527152819840110 8370907U 15 1  1.72          233456615   B
19.91637                 MT  0.32  0.00  0.52 -0.40 -0.03  0.37  0.001034602210344380
  1212        L24792      1526152719840110141814530U 18 1  2.04          233456615   B
-1.45685                 MT  0.42  0.00 -0.02  0.02  0.09 -0.09  0.001034942410346022
  1112        L24792      5342152619840110141214150U  1 1  0.01          233456615   B
-0.01335                 MT  0.00  0.00  0.03  0.00  0.00  0.00  0.001034942710349424
  1012        L24792      5341534219840110135414100U  4 1  0.45          233456615   B
-0.41447                 MT  0.06  0.00 -0.01  0.01  0.02 -0.02  0.001035099610349427
   912        L24792      5340534119840110131213390U 19 1  2.17          233456615   B
 0.39567                 MT  0.42  0.00 -0.03  0.00  0.08  0.02  0.001035422810350996
   812        L24792      5339534019840110124013100U 15 1  1.72          233456615   B
 4.89690                 MT  0.28  0.00  0.45 -0.05  0.05  0.27  0.001035576110354228
  1712        L24792      5335533419840111102910550U 15 1  1.44          233456615   F
-8.39470                 MT -0.31  0.00 -0.34  0.14  0.00 -0.27  0.001026459010266353
  1812        L24792      5334533319840111105811270U 19 1  1.84          233456615   F
 2.57473                 MT -0.29  0.00  0.22 -0.04  0.00  0.12  0.001026635310269713
  1912        L24792      5333533219840111124313150U 17 1  1.63          233456615   F
 6.10470                 MT -0.48  0.00  0.39 -0.08 -0.04  0.62  0.001026971310273097
  2112        L24792      5331533019840111132313590U 20 1  1.86          233456615   F
 2.74935                 MT -0.60  0.00  0.14 -0.04 -0.07  0.07  0.001027309410277858
  2012        L24792      5332533119840111131713210U  1 1  0.03          233456615   F
 1.52600                 MT  0.00  0.00  0.09 -0.02  0.00  0.00  0.001027309710273094
  2212        L24792      5330532919840111141214450U 16 1  1.48          233456615   F
-4.21065                 MT -0.48  0.00 -0.14  0.06 -0.06 -0.13  0.001027785810282820
  2312        L24792      5329532819840111144715190U 17 1  1.64          233456615   F
-2.69887                 MT -0.58  0.00 -0.08  0.04 -0.08 -0.09  0.001028282010287643
  2412        L24792      5328532719840111152115560U 20 1  2.22          233456615   F
 8.21580                 MT -0.83  0.00  0.46 -0.13 -0.11  1.45  0.001028764310294193
  1312        L24792      5339533819840111 8200855U 18 1  1.71          233456615   F
-5.56165                 MT -0.30  0.00 -0.28  0.12  0.02 -0.08  0.001035576110359213
  1412        L24792      5338533719840111 9040913U  2 1  0.20          233456615   F
 0.29095                 MT -0.04  0.00  0.06 -0.01  0.00  0.00  0.001035921310359214
  1512        L24792      5337533619840111 9150944U 15 1  1.48          233456615   F
-4.91687                 MT -0.31  0.00  0.04  0.10  0.02 -0.06  0.001035921410362538
  1612        L24792      5336533519840111 9471014U 16 1  1.53          233456615   F
-9.37245                 MT -0.23  0.00 -0.22  0.17  0.02 -0.28  0.001036253810264590
  3212        L24792      5326532719840112113011550U  6 1  0.54          233456615   B
-3.32085                 MT  0.08  0.00 -0.09  0.08  0.00 -0.06  0.001029592210294193
  3112        L24792      5325532619840112104511280U 17 1  1.51          233456615   B
-22.84505                MT  0.67  0.00 -0.59  0.57  0.03 -0.75  0.001030139110295922
  3012        L24792      5324532519840112101510430U 12 1  1.13          233456615   B
 7.44182                 MT  0.30  0.00  0.11 -0.20  0.00  0.11  0.001030480710301391
  2912        L24792      5323532419840112 9421000U 12 1  1.30          233456615   B
-7.32180                 MT  0.56  0.00 -0.16  0.19  0.02 -0.23  0.001030820610304807
  2812        L24792      5322532319840112 9140940U 15 1  1.72          233456615   B
-9.32065                 MT  0.89  0.00 -0.52  0.27  0.04  0.00  0.001031661610308206
  2612        L24792      5321532019840112 8320842U  8 1  0.14          233456615   B
-15.29427                MT -0.06  0.00 -0.46  0.51 -0.01 -0.03  0.001032156910323336
  2712        L24792      5320532219840112 8450912U 16 1  1.85          233456615   B
-11.46680                MT  0.82  0.00 -0.44  0.36  0.03  0.18  0.001032333610316616
  2512        L24792      5320532119840112 8090830U  8 1  0.14          233456615   F
15.29407                 MT  0.06  0.00  0.46 -0.53  0.01  0.02  0.001032333610321569
  3712        L24792      5319532019840112152215460U 15 1  1.64          233456615   B
-8.78725                 MT  0.73  0.00 -0.52  0.19  0.07  0.19  0.001032835110323336
  3612        L24792      5318531919840112145315200U 16 1  1.50          233456615   B
-10.43365                MT  0.73  0.00 -0.55  0.22  0.06  0.06  0.001033475910328351
  3512        L24792      5317531819840112140814410U 18 1  1.74          233456615   B
-14.15627                MT  0.89  0.00 -0.56  0.31  0.07  0.00  0.001034112610334759
  3412        L24792      5316531719840112134214060U 15 1  1.47          233456615   B
-12.83602                MT  0.78  0.00 -0.39  0.28  0.04 -0.21  0.001034777110341126
  3312        L24792      5315531619840112131913400U 12 1  1.13          233456615   B
-9.20415                 MT  0.59  0.00 -0.18  0.21  0.03  0.04  0.001035099710347771
  4112        L24792      5312531119840113 9020924U 10 1  1.09          233456615   F
 9.89592                 MT -0.89  0.00  0.23 -0.28 -0.07  0.22  0.001026807110274671
  4212        L24792      5311531019840113 9391005U 12 1  1.07          233456615   F
 7.97597                 MT -0.60  0.00  0.26 -0.22 -0.04  0.16  0.001027467110279622
```

```
 4312         L24792       531053041984011310071039U 12 1  1.23                  233456615    F
12.42895                  MT -0.94  0.00  0.37 -0.34 -0.07  1.45  0.001027962210286007
 4412         L24792       530453031984011310441110U 14 1  1.41                  233456615    F
14.33585                  MT -1.04  0.00  0.36 -0.37 -0.07  1.25  0.001028600710292592
 3812         L24792       5315531419840113 7520826U 20 1  2.17                  233456615    F
19.83250                  MT -1.20  0.00  0.51 -0.64 -0.10  0.15  0.001035099710360829
 4012         L24792       5313531219840113 8340900U 13 1  1.40                  233456615    F
13.05862                  MT -0.91  0.00  0.16 -0.39 -0.07  0.22  0.001036082710268071
 3912         L24792       5314531319840113 8290831U  1 1  0.03                  233456615    F
 0.18528                  MT -0.09  0.00  0.02 -0.01 -0.01  0.00  0.001036082910360827
 4512         L24792       530353021984011312361314U 19 1  2.05                  233456615    F
21.45100                  MT -1.43  0.00  0.48 -0.53 -0.04  1.26  0.001029259210303135
 4612         L24792       530253011984011313161354U 16 1  1.35                  233456615    F
14.88322                  MT -0.71  0.00  0.52 -0.35 -0.02  0.68  0.001030313510308203
 4812         L24792       994399421984011314481548U 25 1  1.36                  233456615    F
41.82750                  MT -0.03  0.00  1.37 -1.03 -0.05  1.25  0.001030650010306501
 4712         L24792       530199431984011313591438U 16 1  1.11                  233456615    F
34.44040                  MT  0.30  0.00  1.26 -0.76 -0.02  0.91  0.001030820310306500
 5112         L24792       5306530519840116 8560900U  2 1  0.15                  233456615    B
-0.06963                  MT  0.09  0.00  0.00  0.00  0.01  0.00  0.001028443110284432
 5012         L24792       5305530619840116 8490854U  2 1  0.15                  233456615    F
 0.06950                  MT -0.09  0.00  0.00  0.00 -0.01  0.00  0.001028443210284431
 5212         L24792       5305530419840116 9020928U 13 1  1.06                  233456615    B
 1.35052                  MT -0.16  0.00  0.11 -0.04  0.01  0.15  0.001028443210286007
 4912         L24792       5304530519840116 8150847U 13 1  1.06                  233456615    F
-1.35172                  MT  0.16  0.00 -0.14  0.04 -0.02 -0.16  0.001028600710284432
 5312         L24792       9942994119840116 9531018U 12 1  0.77                  233456615    F
12.33950                  MT  0.32  0.00  0.31 -0.38  0.02  0.13  0.001030650110303136
```

Table 10a. National Geodetic Survey Line L24686: File L24686.pro

Seq No.	UID	Benchmark	Spur Code	Distance (km)	Latitude	Longitude	Observed Elevation (m)	Obs Grav Ortho Ht (m)	Cumul. Refr Cor. (mm)	Cumul. Magn Cor. (mm)
1863	10312986	D 371		0.00	36 24 54	115 27 03	1066.07810	1066.07810	0.00	0.00
1862	10312985	C 371		0.05	36 24 55	115 27 01	1057.89590	1057.89502	0.00	0.00
1861	10312984	B 371		0.13	36 24 56	115 27 00	1054.40819	1054.40693	0.00	0.00
1860	10316377	A 371		0.85	36 25 10	115 26 39	1023.02778	1023.02362	-0.84	0.00
1859	10319685	Z 370		2.36	36 25 32	115 25 44	950.14313	950.13376	-2.31	0.00
1858	10319687	R 398		2.82	36 25 35	115 25 26	930.79961	930.79016	-2.70	0.00
1857	10328098	Y 406		4.49	36 26 24	115 25 49	946.64257	946.63627	-2.05	0.00
1856	10336097	Z 406		6.15	36 27 11	115 26 17	958.20313	958.19974	-1.74	0.00
1855	10342518	X 406		7.99	36 27 59	115 26 54	974.63440	974.63273	-1.19	0.00
1854	10349111	A 407		10.06	36 28 37	115 28 01	1009.03297	1009.03428	-0.21	0.00
1853	10355509	B 407		11.78	36 29 10	115 28 52	1002.78439	1002.78734	-0.39	0.00
1852	10358897	C 407		13.40	36 29 38	115 29 43	992.02605	992.02876	-0.79	0.00
1851	10266002	D 407		15.09	36 30 11	115 30 39	975.09487	975.09577	-1.34	0.00
1850	10271102	E 407		16.90	36 30 44	115 31 36	962.21422	962.20863	-1.76	0.00
1849	10276044	F 407		18.35	36 31 11	115 32 24	959.07279	959.06337	-1.83	0.00
1848	10280951	G 407		20.08	36 31 42	115 33 16	969.72046	969.71183	-1.54	0.00
1847	10285741	H 407		21.72	36 32 11	115 34 07	975.51038	975.50106	-1.37	0.00
1846	10290565	J 407		23.46	36 32 42	115 35 01	982.16263	982.15321	-1.19	0.00
1845	10295603	K 407		25.08	36 33 11	115 35 50	986.73616	986.72409	-1.11	0.00
1844	10301085	L 407		26.71	36 33 40	115 36 40	983.42734	983.41096	-1.14	0.00
1843	10306169	M 407		28.46	36 34 17	115 37 44	970.12804	970.10855	-1.68	0.00
1842	10309541	N 407		30.01	36 34 36	115 38 39	956.83684	956.81656	-2.02	0.00
1841	10311298	P 407		31.60	36 34 40	115 39 45	950.06606	950.04430	-2.17	0.00
1866	10312990	T 296		33.11	36 34 52	115 40 32	950.40508	950.38258	-2.11	0.00
1840	10311299	Q 407		35.24	36 34 48	115 41 49	958.31428	958.29160	-1.90	0.00
1839	10311300	R 407		36.93	36 34 46	115 42 55	974.31743	974.29389	-1.53	0.00
1838	10309542	S 407		38.59	36 34 38	115 43 59	988.29680	988.27420	-1.06	0.00
1837	10309543	T 407		40.18	36 34 30	115 45 02	997.86126	997.84001	-0.82	0.00
1836	10307819	U 407		41.84	36 34 23	115 46 07	1005.32487	1005.30529	-0.62	0.00
1835	10306170	V 407		43.56	36 34 15	115 47 12	1016.31435	1016.29929	-0.30	0.00
1834	10304491	W 407		45.41	36 34 06	115 48 15	1031.71548	1031.70245	0.17	0.00
1833	10304489	N 17 USGS		46.81	36 34 01	115 49 11	1045.50349	1045.49244	0.60	0.00
1832	10306171	X 407		48.64	36 34 13	115 50 22	1060.80433	1060.78783	0.93	0.00
1831	10306172	Y 407		49.83	36 34 18	115 51 08	1073.15117	1073.13147	1.27	0.00
1830	10307820	Z 407		51.42	36 34 25	115 52 11	1080.02934	1080.01144	1.48	0.00
1829	10311294	M 17 USGS		53.48	36 34 46	115 53 28	1089.73713	1089.72391	1.81	0.00
1828	10314672	A 408		55.35	36 35 06	115 54 34	1098.06770	1098.05686	2.13	0.00
1827	10318057	B 408		57.09	36 35 24	115 55 38	1101.15139	1101.14150	2.21	0.00
1826	10321316	C 408		58.80	36 35 43	115 56 40	1106.95929	1106.94716	2.38	0.00
1825	10323089	K 17 USGS		60.07	36 35 53	115 57 33	1105.66148	1105.64540	2.31	0.00

Table 10a. National Geodetic Survey Line L24686: File L24686.pro--Continued

Seq No.	UID	Benchmark	Spur Code	Distance (km)	Latitude	Longitude	Observed Elevation (m)	Obs Grav Ortho Ht (m)	Cumul. Refr Cor. (mm)	Cumul. Magn Cor. (mm)
1868	10324690	U 327 RESET 1963		60.75	36 36 06	115 57 57	1101.94110	1101.92261	2.22	0.00
1824	10324692	D 408		62.20	36 36 04	115 58 49	1070.62529	1070.60404	0.20	0.00
1867	10324688	V 327 RESET 1963		62.28	36 36 05	115 58 52	1068.22971	1068.20826	-0.12	0.00
1864	10331282	W 327		63.67	36 36 41	115 58 58	1065.16344	1065.14114	-0.42	0.00
1865	10332809	X 327		64.51	36 36 58	115 59 26	1053.35089	1053.32767	-0.85	0.00
1823	10323091	E 408		63.85	36 35 53	115 59 51	1055.65675	1055.63434	-0.62	0.00
1822	10321567	F 408		65.45	36 35 43	116 00 47	1027.89523	1027.86845	-2.56	0.00
1821	10319951	G 408		67.20	36 35 31	116 01 53	971.39840	971.36321	-5.40	0.00
1820	10316615	H 408		68.82	36 35 19	116 02 53	944.53615	944.49357	-7.15	0.00
1819	10313241	J 408		70.40	36 34 52	116 03 51	911.64519	911.59743	-9.14	0.00
1818	10309842	K 408		71.19	36 34 36	116 04 08	904.99866	904.95099	-9.49	0.00
1817	10303129	H 17 RESET 1962		72.75	36 33 58	116 04 52	884.16955	884.12058	-10.51	0.00
1816	10301390	L 408		74.57	36 33 43	116 05 53	864.34033	864.28760	-12.25	0.00
1814	10301381	B 98 USGS		76.28	36 33 49	116 06 58	865.35093	865.30164	-12.17	0.00
1815	10303127	G 17 USGS RESET 1962		76.32	36 33 51	116 07 00	863.84468	863.79531	-12.20	0.00
1813	10303134	M 408		77.75	36 33 56	116 07 53	858.28777	858.23503	-12.41	0.00
1812	10304806	N 408		79.06	36 34 00	116 08 40	845.81539	845.76005	-12.89	0.00
1811	10306499	F 17 RESET 1977		80.43	36 34 12	116 09 30	846.71441	846.66092	-12.83	0.00
1810	10308205	P 408		82.08	36 34 21	116 10 31	846.17831	846.12595	-12.85	0.00
1809	10309843	X 405		83.51	36 34 33	116 11 27	851.38661	851.33316	-12.68	0.00
1808	10313242	W 405		84.89	36 34 57	116 12 14	848.98944	848.93296	-12.69	0.00
1807	10314951	D 17		86.35	36 35 09	116 12 55	840.38037	840.32204	-12.63	0.00
1806	10321568	V 405		88.30	36 35 43	116 14 05	846.37388	846.31604	-11.96	0.00
1803	10323333	C 17=B 96 USGS		89.80	36 35 53	116 14 59	841.28088	841.22158	-12.19	0.00
1802	10326686	U 405		90.90	36 36 19	116 15 29	843.11408	843.05433	-12.08	0.00
1801	10331534	T 405		92.36	36 36 40	116 16 18	853.34864	853.28913	-11.96	0.00
9930	10336367	S 405		94.21	36 37 11	116 17 20	865.00474	864.94551	-11.62	0.00
9929	10337888	R 405		95.15	36 37 20	116 17 54	861.76954	861.71007	-11.71	0.00
9928	10339510	Q 405		96.10	36 37 32	116 18 30	862.59417	862.53842	-11.63	0.00

Table 10b. National Geodetic Survey Line L24686: File L24686.ori

FROM SEQ NO.	TO SEQ NO.	UNCORRECTED FIELD ELEVATION DIFFERENCE (m)	LEVEL CORR. (mm)	ROD CORR. (mm)	ASTRO CORR. (mm)	TEMP. CORR. (mm)	REFR. CORR. (mm)	MAGN. CORR. (mm)	CORRECTED OBSERVED ELE. DIFFERENCE (m)	CUMULATIVE OBSERVED ELEVATION (OF TO SEQ NO) (m)	CUMULAT. OBS. GRAV ORTHO CORR. (mm)	CUMUL. REFR. CORR. (mm)
1863										1066.07810	0.00	0.00
1863	1862	-8.18195	-0.02	-0.36	0.13	0.00	0.00	0.00	-8.18220	1057.89590	-0.88	0.00
1862	1861	-3.48765	0.00	-0.12	0.06	0.00	0.00	0.00	-3.48771	1054.40819	-1.26	0.00
1861	1860	-31.37977	0.01	-1.28	0.64	-0.02	-0.84	0.00	-31.38041	1023.02778	-4.16	-0.84
1860	1859	-72.88365	0.00	-2.85	1.84	0.01	-1.47	0.00	-72.88465	950.14313	-9.37	-2.31
1859	1858	-19.34317	0.00	-0.74	0.40	-0.01	-0.39	0.00	-19.34352	930.79961	-9.45	-2.70
1858	1857	15.84280	0.00	0.37	-0.20	-0.01	0.65	0.00	15.84296	946.64257	-6.30	-2.05
1857	1856	11.56035	-0.01	0.39	-0.17	0.00	0.31	0.00	11.56056	958.20313	-3.39	-1.74
1856	1855	16.43107	0.00	0.47	-0.24	-0.03	0.55	0.00	16.43127	974.63440	-1.67	-1.19
1855	1854	34.39725	-0.01	2.10	-0.65	-0.12	0.98	0.00	34.39857	1009.03297	1.31	-0.21
1854	1853	-6.24835	0.00	-0.24	0.15	-0.14	-0.18	0.00	-6.24858	1002.78439	2.95	-0.39
1853	1852	-10.75827	-0.01	-0.21	0.26	-0.11	-0.40	0.00	-10.75834	992.02605	2.71	-0.79
1852	1851	-16.93070	0.00	-0.66	0.32	-0.14	-0.55	0.00	-16.93118	975.09487	0.90	-1.34
1851	1850	-12.88040	0.00	-0.29	0.16	-0.12	-0.42	0.00	-12.88065	962.21422	-5.59	-1.76
1850	1849	-3.14142	0.00	-0.03	0.03	-0.01	-0.07	0.00	-3.14143	959.07279	-9.42	-1.83
1849	1848	10.64755	0.00	0.19	-0.05	-0.02	0.29	0.00	10.64767	969.72046	-8.63	-1.54
1848	1847	5.78993	-0.02	0.11	-0.04	-0.06	0.17	0.00	5.78992	975.51038	-9.32	-1.37
1847	1846	6.65240	-0.02	0.07	-0.08	-0.12	0.18	0.00	6.65225	982.16263	-9.42	-1.19
1846	1845	4.57375	-0.01	-0.04	-0.06	-0.11	0.08	0.00	4.57353	986.73616	-12.07	-1.11
1845	1844	-3.30880	0.00	0.01	0.06	-0.09	-0.03	0.00	-3.30882	983.42734	-16.38	-1.14
1844	1843	-13.29917	0.01	-0.38	0.34	-0.10	-0.54	0.00	-13.29930	970.12804	-19.49	-1.68
1843	1842	-13.29090	0.01	-0.54	0.33	-0.10	-0.34	0.00	-13.29120	956.83684	-20.28	-2.02
1842	1841	-6.77082	0.00	-0.02	0.18	-0.12	-0.15	0.00	-6.77078	950.06606	-21.76	-2.17
1841	1866	0.33907	0.01	-0.03	-0.01	-0.02	0.06	0.00	0.33902	950.40508	-22.50	-2.11
1866	1840	7.90905	0.00	0.31	-0.11	-0.05	0.21	0.00	7.90920	958.31428	-22.68	-1.90
1840	1839	16.00285	0.00	0.46	-0.11	-0.05	0.37	0.00	16.00315	974.31743	-23.54	-1.53
1839	1838	13.97910	0.00	0.36	-0.05	-0.04	0.47	0.00	13.97937	988.29680	-22.60	-1.06
1838	1837	9.56455	0.02	0.03	-0.13	-0.01	0.24	0.00	9.56446	997.86126	-21.25	-0.82
1837	1836	7.46367	0.00	0.03	-0.07	-0.02	0.20	0.00	7.46361	1005.32487	-19.58	-0.62
1836	1835	10.98952	0.00	0.11	-0.15	0.00	0.32	0.00	10.98948	1016.31435	-15.06	-0.30
1835	1834	15.40117	0.00	0.25	-0.30	0.01	0.47	0.00	15.40113	1031.71548	-13.03	0.17
1834	1833	13.78795	0.00	0.38	-0.32	0.00	0.43	0.00	13.78801	1045.50349	-11.05	0.60
1833	1832	15.30038	0.02	0.82	-0.37	-0.01	0.33	0.00	15.30084	1060.80433	-16.50	0.93
1832	1831	12.34690	-0.02	0.24	-0.29	0.01	0.34	0.00	12.34684	1073.15117	-19.70	1.27
1831	1830	6.87815	0.01	0.10	-0.11	0.02	0.21	0.00	6.87817	1080.02934	-17.90	1.48
1830	1829	9.70780	0.02	0.11	-0.14	0.00	0.33	0.00	9.70779	1089.73713	-13.22	1.81
1829	1828	8.33052	0.00	0.05	-0.08	0.08	0.32	0.00	8.33057	1098.06770	-10.84	2.13
1828	1827	3.08355	0.01	0.10	-0.04	0.07	0.08	0.00	3.08369	1101.15139	-9.89	2.21
1827	1826	5.80785	0.00	0.15	-0.09	-0.01	0.17	0.00	5.80790	1106.95929	-12.13	2.38
1826	1825	-1.29780	0.01	-0.01	0.02	-0.03	-0.07	0.00	-1.29781	1105.66148	-16.08	2.31
1825	1868	-3.72023	0.02	-0.24	0.07	0.00	-0.09	0.00	-3.72038	1101.94110	-18.49	2.22
1868	1824	-31.31525	0.00	-1.36	0.86	-0.06	-2.03	0.00	-31.31581	1070.62529	-21.25	0.20
1824	1867	-2.39550	0.00	-0.13	0.06	0.00	-0.32	0.00	-2.39558	1068.22971	-21.45	-0.12
1867	1864	-3.06610	0.00	-0.17	0.05	-0.05	-0.30	0.00	-3.06627	1065.16344	-22.30	-0.42
1864	1865	-11.81222	0.00	-0.54	0.18	0.03	-0.43	0.00	-11.81255	1053.35089	-23.22	-0.85
1867	1823	-12.57237	0.00	-0.75	0.26	-0.10	-0.50	0.00	-12.57296	1055.65675	-22.41	-0.62

Table 10b. National Geodetic Survey Line L24686: File L24686.ori--Continued

FROM SEQ NO.	TO SEQ NO.	UNCORRECTED FIELD ELEVATION DIFFERENCE (m)	LEVEL CORR. (mm)	ROD CORR. (mm)	ASTRO CORR. (mm)	TEMP. CORR. (mm)	REFR. CORR. (mm)	MAGN. CORR. (mm)	CORRECTED OBSERVED ELE. DIFFERENCE (m)	CUMULATIVE OBSERVED ELEVATION (OF TO SEQ NO) (m)	CUMULAT. OBS. GRAV ORTHO CORR. (mm)	CUMUL. REFR. CORR. (mm)
1823	1822	-27.76090	-0.01	-0.89	0.31	-0.03	-1.94	0.00	-27.76152	1027.89523	-26.78	-2.56
1822	1821	-56.49522	0.00	-2.74	1.18	-0.05	-2.84	0.00	-56.49683	971.39840	-35.19	-5.40
1821	1820	-26.86187	0.00	-0.52	0.22	-0.08	-1.75	0.00	-26.86225	944.53615	-42.58	-7.15
1820	1819	-32.88982	0.00	-1.21	0.12	-0.05	-1.99	0.00	-32.89096	911.64519	-47.76	-9.14
1819	1818	-6.64635	0.00	-0.17	0.00	-0.01	-0.35	0.00	-6.64653	904.99866	-47.67	-9.49
1818	1817	-20.82847	0.00	-0.64	0.03	-0.03	-1.02	0.00	-20.82911	884.16955	-48.97	-10.51
1817	1816	-19.82867	0.00	-0.65	0.11	-0.01	-1.74	0.00	-19.82922	864.34033	-52.73	-12.25
1816	1814	1.01040	0.00	0.21	-0.01	0.00	0.08	0.00	1.01060	865.35093	-49.29	-12.17
1814	1815	-1.50620	0.00	-0.07	0.02	0.00	-0.03	0.00	-1.50625	863.84468	-49.37	-12.20
1815	1813	-5.55695	0.00	-0.03	0.06	0.01	-0.21	0.00	-5.55691	858.28777	-52.74	-12.41
1813	1812	-12.47202	0.00	-0.44	0.07	0.01	-0.48	0.00	-12.47238	845.81539	-55.34	-12.89
1812	1811	0.89881	0.00	0.21	0.00	0.00	0.06	0.00	0.89902	846.71441	-53.49	-12.83
1811	1810	-0.53615	0.00	0.07	0.00	-0.02	-0.02	0.00	-0.53610	846.17831	-52.36	-12.85
1810	1809	5.20830	0.00	0.03	0.01	-0.04	0.17	0.00	5.20830	851.38661	-53.45	-12.68
1809	1808	-2.39695	-0.01	-0.15	-0.01	-0.05	-0.01	0.00	-2.39717	848.98944	-56.48	-12.69
1808	1807	-8.60857	0.00	-0.42	-0.08	0.00	0.06	0.00	-8.60907	840.38037	-58.33	-12.63
1807	1806	5.99332	0.00	0.16	0.02	0.01	0.67	0.00	5.99351	846.37388	-57.84	-11.96
1806	1803	-5.09277	0.00	-0.24	0.00	0.01	-0.23	0.00	-5.09300	841.28088	-59.30	-12.19
1803	1802	1.83317	-0.02	0.08	0.00	-0.03	0.11	0.00	1.83320	843.11408	-59.75	-12.08
1802	1801	10.23437	0.04	0.22	-0.16	0.09	0.12	0.00	10.23456	853.34864	-59.51	-11.96
1801	9930	11.65577	0.03	0.44	-0.20	0.06	0.34	0.00	11.65610	865.00474	-59.23	-11.62
9930	9929	-3.23520	0.07	-0.12	0.07	-0.02	-0.09	0.00	-3.23520	861.76954	-59.47	-11.71
9929	9928	0.82470	0.04	-0.02	-0.02	-0.07	0.08	0.00	0.82463	862.59417	-55.75	-11.63

Table 10c. National Geodetic Survey Line L24686: File L24686.prn(=.dat)

```
   312          L24686       18611860198304221336150 5U 16 1  0.71                    216202315    F
-31.37812                    MT -0.36  0.02 -1.18  0.46 -0.01 -1.00  0.001031298410316377
   212          L24686       18621861198304221314132 8U  2 1  0.08                    216202315    F
 -3.48765                    MT -0.03  0.00 -0.12  0.06  0.00  0.00  0.001031298510312984
   112          L24686       18631862198304221238131 1U  4 1  0.05                    216202315    F
 -8.18195                    MT -0.03 -0.02 -0.36  0.13  0.00  0.00  0.001031298610312985
   712          L24686       18611860198304251315141 8T 16 1  0.72                    216202315    F
-31.37952                    MT -0.36  0.00 -1.42  0.53 -0.06 -0.74  0.001031298410316377
   412          L24686       1860186119830425 8300934T 15 1  0.73                    216202315    B
 31.38167                    MT  0.36  0.00  1.23 -0.94 -0.02  0.78  0.001031637710312984
   512          L24686       1860185919830425 9511137T 37 1  1.51                    216202315    F
-72.88365                    MT -0.53  0.00 -2.85  1.84  0.01 -1.47  0.001031637710319685
   612          L24686       18591858198304251140121 5T 11 1  0.46                    216202315    F
-19.34317                    MT -0.07  0.00 -0.74  0.40 -0.01 -0.39  0.001031968510319687
   812          L24686       18581857198304251435154 8T 18 1  1.67                    216202315    F
 15.84280                    MT -1.13  0.00  0.37 -0.20 -0.01  0.65  0.001031968710328098
  1212          L24686       18231822198305161350154 6T 24 1  1.60                    216191674    F
-27.76090                    MT  0.26 -0.01 -0.89  0.31 -0.03 -1.94  0.001032309110321567
  1112          L24686       18671823198305161105125 0T 22 1  1.57                    216191674    F
-12.57237                    MT  0.31  0.00 -0.75  0.26 -0.10 -0.50  0.001032468810323091
   912          L24686       1867182419830516 9250937T  1 1  0.08                    216191674    B
  2.39585                    MT  0.03  0.01  0.16 -0.07  0.00  0.49  0.001032468810324692
  1012          L24686       1824186819830516 9401100T 16 1  1.44                    216191674    B
 31.31455                    MT -0.05  0.01  0.97 -0.84  0.07  3.55  0.001032469210324690
  1512          L24686       18201819198305171357152 3T 23 1  1.58                    216191674    F
-32.88982                    MT  0.61  0.00 -1.21  0.12 -0.05 -1.99  0.001031661510313241
  1412          L24686       18211820198305171230135 6T 23 1  1.62                    216191674    F
-26.86187                    MT  0.28  0.00 -0.52  0.22 -0.08 -1.75  0.001031995110316615
  1312          L24686       1822182119830517 9301131T 26 1  1.75                    216191674    F
-56.49522                    MT  0.29  0.00 -2.74  1.18 -0.05 -2.84  0.001032156710319951
  1712          L24686       1814181619830518 9211025T 18 1  1.71                    216191674    B
 -1.01040                    MT  0.13  0.00 -0.21  0.01  0.00 -0.08  0.001030138110301390
  1812          L24686       18161817198305181026113 1T 19 1  1.82                    216191674    B
 19.82867                    MT -0.32  0.00  0.65 -0.11  0.01  1.74  0.001030139010303129
  1612          L24686       1815181419830518 9130920T  1 1  0.04                    216191674    B
  1.50620                    MT  0.04  0.00  0.07 -0.02  0.00  0.03  0.001030312710301381
  1912          L24686       18171818198305181231133 5T 17 1  1.56                    216191674    B
 20.82847                    MT -0.83  0.00  0.64 -0.03  0.03  1.02  0.001030312910309842
  2012          L24686       18181819198305181337145 0T 10 1  0.79                    216191674    B
  6.64635                    MT -0.36  0.00  0.17  0.00  0.01  0.35  0.001030984210313241
  2412          L24686       18071808198305201348151 6T 21 1  1.46                    216191674    B
  8.60857                    MT  0.25  0.00  0.42  0.08  0.00 -0.06  0.001031495110313242
  2312          L24686       18061807198305201234134 7T 23 1  1.95                    216191674    B
 -5.99332                    MT  0.70  0.00 -0.16 -0.02 -0.01 -0.67  0.001032156810314951
  2212          L24686       18031806198305201026113 4T 17 1  1.50                    216191674    B
  5.09277                    MT  0.23  0.00  0.24  0.00 -0.01  0.23  0.001032333310321568
  2112          L24686       1802180319830520 9401025T 11 1  1.10                    216191674    B
 -1.83317                    MT  0.52  0.02 -0.08  0.00  0.03 -0.11  0.001032668610323333
  2812          L24686       18561857198304261454155 1T 15 1  1.66                    216202315    B
-11.56035                    MT  1.10  0.01 -0.39  0.17  0.00 -0.31  0.001033609710328098
  2712          L24686       18551856198304261335144 3T 20 1  1.84                    216202315    B
-16.43107                    MT  1.14  0.00 -0.47  0.24  0.03 -0.55  0.001034251810336097
  2612          L24686       18541855198304261108123 5T 23 1  2.07                    216202315    B
-34.39725                    MT  0.92  0.01 -2.10  0.65  0.12 -0.98  0.001034911110342518
  2512          L24686       1853185419830426 9161058T 19 1  1.72                    216202315    B
  6.24835                    MT  0.81  0.00  0.24 -0.15  0.14  0.18  0.001035550910349111
  3112          L24686       18511850198304271110121 9T 20 1  1.81                    216202315    F
-12.88040                    MT -0.78  0.00 -0.29  0.16 -0.12 -0.42  0.001026600210271102
  3212          L24686       18501849198304271319143 0T 15 1  1.45                    216202315    F
 -3.14142                    MT -0.64  0.00 -0.03  0.03 -0.01 -0.07  0.001027110210276044
  2912          L24686       1853185219830427 8470955T 17 1  1.62                    216202315    F
-10.75827                    MT -0.68 -0.01 -0.21  0.26 -0.11 -0.40  0.001035550910358897
  3012          L24686       1852185119830427 9561109T 19 1  1.69                    216202315    F
-16.93070                    MT -0.80  0.00 -0.66  0.32 -0.14 -0.55  0.001035889710266002
  3712          L24686       18481849198304281334143 9T 19 1  1.73                    216202315    B
-10.64755                    MT  0.73  0.00 -0.19  0.05  0.02 -0.29  0.001028095110276044
  3612          L24686       18471848198304281248133 3T 16 1  1.64                    216202315    B
 -5.78993                    MT  0.69  0.02 -0.11  0.04  0.06 -0.17  0.001028574110280951
  3512          L24686       18461847198304281049114 8T 16 1  1.74                    216202315    B
 -6.65240                    MT  0.74  0.02 -0.07  0.08  0.12 -0.18  0.001029056510285741
  3412          L24686       1845184619830428 9511043T 15 1  1.62                    216202315    B
 -4.57375                    MT  0.70  0.01  0.04  0.06  0.11 -0.08  0.001029560310290565
  3312          L24686       1844184519830428 8520950T 16 1  1.63                    216202315    B
  3.30880                    MT  0.70  0.00 -0.01 -0.06  0.09  0.03  0.001030108510295603
  3812          L24686       1844184319830429 9020959T 16 1  1.75                    216202315    F
-13.29917                    MT -0.89  0.01 -0.38  0.34 -0.10 -0.54  0.001030108510306169
  3912          L24686       18431842198304291000104 0T 14 1  1.55                    216202315    F
-13.29090                    MT -0.45  0.01 -0.54  0.33 -0.10 -0.34  0.001030616910309541
```

Table 10c. National Geodetic Survey Line L24686: File L24686.prn(=.dat)--Continued

```
  4012          L24686       184218411983042910411130T 14 1  1.59                    216202315    F
 -6.77082                    MT -0.09  0.00 -0.02  0.18 -0.12 -0.15  0.001030954110311298
  4112          L24686       1841186619830503 9201048T 17 1  1.51                    216202315    F
  0.33907                    MT -0.28  0.01 -0.03 -0.01 -0.02  0.06  0.001031129810312990
  4312          L24686       184018391983050313201430T 20 1  1.69                    216202315    F
 16.00285                    MT  0.05  0.00  0.46 -0.11 -0.05  0.37  0.001031129910311300
  4412          L24686       183918381983050314321545T 20 1  1.66                    216202315    F
 13.97910                    MT  0.19  0.00  0.36 -0.05 -0.04  0.47  0.001031130010309542
  4212          L24686       186618401983050310501220T 25 1  2.13                    216202315    F
  7.90905                    MT  0.09  0.00  0.31 -0.11 -0.05  0.21  0.001031299010311299
  4512          L24686       1838183719830504 9251155T 20 1  1.59                    216202315    F
  9.56455                    MT  0.19  0.02  0.03 -0.13 -0.01  0.24  0.001030954210309543
  4612          L24686       1833183419830505 9171019T 15 1  1.40                    216202315    B
-13.78795                    MT -0.13  0.00 -0.38  0.32  0.00 -0.43  0.001030448910304491
  4712          L24686       183418351983050510201132T 20 1  1.85                    216202315    B
-15.40117                    MT -0.23  0.00 -0.25  0.30 -0.01 -0.47  0.001030449110306170
  4812          L24686       183518361983050512021340T 20 1  1.72                    216202315    B
-10.98952                    MT -0.20  0.00 -0.11  0.15  0.00 -0.32  0.001030617010307819
  4912          L24686       183618371983050513471517T 19 1  1.66                    216202315    B
 -7.46367                    MT -0.17  0.00 -0.03  0.07  0.02 -0.20  0.001030781910309543
  5012          L24686       1833183219830506 9321048T 20 1  1.83                    216202315    F
 15.30038                    MT -0.31  0.02  0.82 -0.37 -0.01  0.33  0.001030448910306171
  5112          L24686       183218311983050610491140T 14 1  1.19                    216202315    F
 12.34690                    MT -0.13 -0.02  0.24 -0.29  0.01  0.34  0.001030617110306172
  5212          L24686       183118301983050612401346T 19 1  1.59                    216202315    F
  6.87815                    MT -0.18  0.01  0.10 -0.11  0.02  0.21  0.001030617210307820
  5312          L24686       183018291983050613471521T 25 1  2.06                    216202315    F
  9.70780                    MT -0.56  0.02  0.11 -0.14  0.00  0.33  0.001030782010311294
  5812          L24686       182818291983050914321545T 22 1  1.87                    216202315    B
 -8.33052                    MT  0.54  0.00 -0.05  0.08 -0.08 -0.32  0.001031467210311294
  5712          L24686       182718281983050913181430T 20 1  1.74                    216202315    B
 -3.08355                    MT  0.49 -0.01 -0.10  0.04 -0.07 -0.08  0.001031805710314672
  5612          L24686       182618271983050911121218T 18 1  1.71                    216202315    B
 -5.80785                    MT  0.51  0.00 -0.15  0.09  0.01 -0.17  0.001032131610318057
  5512          L24686       182518261983050910271111T 13 1  1.27                    216202315    B
  1.29780                    MT  0.27 -0.01  0.01 -0.02  0.03  0.07  0.001032308910321316
  5412          L24686       1868182519830509 9411026T  7 1  0.68                    216202315    B
  3.72000                    MT  0.35 -0.04  0.24 -0.08  0.04  0.05  0.001032469010323089
  6312          L24686       182518681983051015041541T  8 1  0.68                    216202315    F
 -3.72045                    MT -0.35  0.00 -0.24  0.06  0.03 -0.12  0.001032308910324690
  6112          L24686       186718641983051012271351T 20 1  1.39                    216202315    F
 -3.06610                    MT -0.94  0.00 -0.17  0.05 -0.05 -0.30  0.001032468810331282
  5912          L24686       1868182419830510 9411110T 20 1  1.45                    216202315    F
-31.31595                    MT  0.05  0.00 -1.74  0.88 -0.05 -0.50  0.001032469010324692
  6012          L24686       182418671983051011111127T  1 1  0.08                    216202315    F
 -2.39515                    MT -0.03  0.00 -0.10  0.05  0.00 -0.15  0.001032469210324688
  6212          L24686       186418651983051013521440T 11 1  0.84                    216202315    F
-11.81222                    MT -0.44  0.00 -0.54  0.18  0.03 -0.43  0.001033128210332809
  6712          L24686       180118021983051113421510U 20 1  1.46                    216202315    B
-10.23437                    MT  0.44 -0.04 -0.22  0.16 -0.09 -0.12  0.001033153410326686
  6612          L24686       993018011983051112381340U 22 1  1.85                    216202315    B
-11.65577                    MT  0.65 -0.03 -0.44  0.20 -0.06 -0.34  0.001033636710331534
  6512          L24686       992999301983051110491138U 11 1  0.94                    216202315    B
  3.23520                    MT  0.19 -0.07  0.12 -0.07  0.02  0.09  0.001033788810336367
  6412          L24686       992899291983051110041048T 11 1  0.95                    216202315    B
 -0.82470                    MT  0.25 -0.04  0.02  0.02  0.07 -0.08  0.001033951010337888
  6812          L24686       1815181319830519 9181022T 15 1  1.43                    216191674    F
 -5.55695                    MT -0.11  0.00 -0.03  0.06  0.01 -0.21  0.001030312710303134
  6912          L24686       181318121983051910231116T 14 1  1.31                    216191674    F
-12.47202                    MT -0.08  0.00 -0.44  0.07  0.01 -0.48  0.001030313410304806
  7012          L24686       181218111983051911171220T 15 1  1.37                    216191674    F
  0.89881                    MT -0.25  0.00  0.21  0.00  0.00  0.06  0.001030480610306499
  7112          L24686       181118101983051912051403T 18 1  1.65                    216191674    F
 -0.53615                    MT -0.19  0.00  0.07  0.00 -0.02 -0.02  0.001030649910308205
  7212          L24686       181018091983051914041458T 16 1  1.43                    216191674    F
  5.20830                    MT -0.25  0.00  0.03  0.01 -0.04  0.17  0.001030820510309843
  7312          L24686       180918081983051914591606T 15 1  1.38                    216191674    F
 -2.39695                    MT -0.50 -0.01 -0.15 -0.01 -0.05 -0.01  0.001030984310313242
```

Table 11a. National Geodetic Survey Line L24576: File L24576.pro

Seq No.	UID	Benchmark	Spur Code	Distance (km)	Latitude	Longitude	Observed Elevation (m)	Obs Grav Ortho Ht (m)	Cumul. Refr Cor. (mm)	Cumul. Magn Cor. (mm)
9000	10276043	N 399		0.00	36 11 18	115 08 25	601.94180	601.94180	0.00	0.00
9001	10272796	Z 399		0.82	36 10 51	115 08 28	611.07882	611.07915	0.06	0.00
2034	10269371	P 314 RESET 1965		1.30	36 10 38	115 08 37	615.15588	615.15638	0.30	0.00
9002	10269380	V 398		1.87	36 10 38	115 09 00	620.89416	620.89515	0.64	0.00
1000	10269372	Q 365		2.18	36 10 37	115 09 11	621.58782	621.58894	0.67	0.00
1001	10269381	W 398		3.62	36 10 38	115 10 08	630.77206	630.77465	1.73	0.00
1002	10272797	X 398		4.79	36 10 52	115 10 41	638.57080	638.57459	2.53	0.00
1003	10279327	Y 398		6.36	36 11 32	115 11 20	650.68954	650.69514	3.44	0.00
1004	10282563	S 365		7.33	36 11 58	115 11 41	660.00347	660.01042	4.37	0.00
1005	10285738	P 169		8.07	36 12 18	115 11 59	667.59602	667.60390	5.07	0.00
1006	10290564	U 398		9.28	36 12 48	115 12 29	674.49907	674.50724	5.70	0.00
1007	10299241	T 398		11.13	36 13 38	115 13 13	687.27014	687.27765	6.47	0.00
1008	10301081	Q 169		11.39	36 13 44	115 13 18	687.36533	687.37273	6.47	0.00
1009	10307818	T 365 RESET 1964		12.88	36 14 23	115 13 54	697.87764	697.88550	7.14	0.00
1010	10314668	R 169 RESET 1964		14.44	36 15 05	115 14 29	707.11694	707.12735	8.13	0.00
1011	10323088	S 169 RESET 1963		16.19	36 15 51	115 15 12	718.34566	718.35898	9.34	0.00
1012	10328097	U 365		17.55	36 16 24	115 15 47	731.00478	731.02152	10.34	0.00
1013	10329668	S 398		18.06	36 16 38	115 15 58	737.13157	737.14961	10.85	0.00
1015	10336093	113 USGS		19.23	36 17 15	115 16 01	747.50426	747.52382	11.79	0.00
1016	10344150	U 169		20.93	36 18 07	115 16 24	763.95620	763.97484	12.65	0.00
1018	10352351	V 365		22.36	36 18 51	115 16 45	774.88202	774.89923	13.42	0.00
1017	10352350	A 18		22.37	36 18 51	115 16 45	775.28957	775.30682	13.42	0.00
1019	10360557	V 169		24.05	36 19 41	115 17 11	790.55401	790.57122	14.62	0.00
1020	10267750	112 USGS		25.60	36 20 26	115 17 42	805.98503	806.00271	16.39	0.00
1022	10276042	W 365		27.42	36 21 12	115 18 28	822.62164	822.63951	18.18	0.00
1021	10276041	X 314		27.44	36 21 12	115 18 28	822.49136	822.50924	18.18	0.00
1023	10280949	W 314		28.84	36 21 45	115 19 08	833.03155	833.04968	19.27	0.00
1024	10287365	V 314		30.42	36 22 23	115 19 52	841.43277	841.45062	20.08	0.00
1025	10288927	S 370		32.04	36 22 34	115 20 40	859.98764	860.00657	21.53	0.00
1026	10282565	T 370		33.60	36 21 57	115 21 22	903.59022	903.61379	23.22	0.00
1027	10288930	A 399		35.17	36 22 34	115 22 05	902.51778	902.53988	23.13	0.00
1028	10295602	Z 398		36.74	36 23 10	115 22 50	894.93158	894.95104	22.30	0.00
1029	10301082	W 370		38.35	36 23 48	115 23 36	881.32738	881.34362	21.02	0.00
1030	10309538	X 370		40.18	36 24 30	115 24 27	877.77264	877.78597	20.69	0.00
1031	10314669	Y 370		41.75	36 25 06	115 25 10	918.33761	918.35393	22.74	0.00
1032	10319687	R 398		42.73	36 25 35	115 25 26	930.81155	930.83279	23.55	0.00
1033	10319685	Z 370		43.20	36 25 32	115 25 44	950.15604	950.17736	23.66	0.00
1034	10316377	A 371		44.68	36 25 10	115 26 39	1023.04202	1023.06855	25.43	0.00
1035	10312984	B 371		45.38	36 24 56	115 27 00	1054.42493	1054.45436	25.95	0.00
1036	10312985	C 371		45.46	36 24 55	115 27 01	1057.91288	1057.94268	25.96	0.00

Table 11a. National Geodetic Survey Line L24576: File L24576.pro--Continued

Seq No.	UID	Benchmark	Spur Code	Distance (km)	Latitude	Longitude	Observed Elevation (m)	Obs Grav Ortho Ht (m)	Cumul. Refr Cor. (mm)	Cumul. Magn Cor. (mm)
1037	10312986	D 371		45.50	36 24 54	115 27 03	1066.09523	1066.12591	25.98	0.00

Table 11b. National Geodetic Survey Line L24576: File L24576.ori

FROM SEQ NO.	TO SEQ NO.	UNCORRECTED FIELD ELEVATION DIFFERENCE (m)	LEVEL CORR. (mm)	ROD CORR. (mm)	ASTRO CORR. (mm)	TEMP. CORR. (mm)	REFR. CORR. (mm)	MAGN. CORR. (mm)	CORRECTED OBSERVED ELE. DIFFERENCE (m)	CUMULATIVE OBSERVED ELEVATION (OF TO SEQ NO) (m)	CUMULAT. OBS. GRAV ORTHO CORR. (mm)	CUMUL. REFR. CORR. (mm)
9000										601.94180	0.00	0.00
9000	9001	9.13692	0.00	0.17	-0.08	0.01	0.06	0.00	9.13702	611.07882	0.33	0.06
9001	2034	4.07695	0.01	0.08	-0.01	0.03	0.24	0.00	4.07706	615.15588	0.50	0.30
2034	9002	5.73817	0.01	0.11	-0.01	0.00	0.34	0.00	5.73828	620.89416	0.99	0.64
9002	1000	0.69364	0.00	0.01	0.01	0.00	0.03	0.00	0.69366	621.58782	1.12	0.67
1000	1001	9.18399	0.00	0.17	0.09	0.00	1.06	0.00	9.18424	630.77206	2.59	1.73
1001	1002	7.79858	0.00	0.14	0.03	-0.01	0.80	0.00	7.79874	638.57080	3.79	2.53
1002	1003	12.11848	-0.01	0.22	0.08	-0.04	0.91	0.00	12.11874	650.68954	5.60	3.44
1003	1004	9.31375	0.00	0.17	0.03	-0.03	0.93	0.00	9.31393	660.00347	6.95	4.37
1004	1005	7.59240	0.00	0.14	0.03	-0.02	0.70	0.00	7.59256	667.59602	7.88	5.07
1005	1006	6.90289	0.00	0.13	0.06	-0.03	0.63	0.00	6.90305	674.49907	8.17	5.70
1006	1007	12.77091	0.00	0.24	-0.05	-0.03	0.77	0.00	12.77107	687.27014	7.51	6.47
1007	1008	0.09519	0.00	0.00	0.00	0.00	0.00	0.00	0.09519	687.36533	7.40	6.47
1008	1009	10.51217	0.01	0.19	-0.05	-0.02	0.67	0.00	10.51231	697.87764	7.86	7.14
1009	1010	9.23916	0.00	0.17	0.02	-0.05	0.99	0.00	9.23930	707.11694	10.41	8.13
1010	1011	11.22856	0.00	0.21	0.03	-0.09	1.21	0.00	11.22872	718.34566	13.32	9.34
1011	1012	12.65890	0.00	0.23	0.06	-0.06	1.00	0.00	12.65912	731.00478	16.74	10.34
1012	1013	6.12671	-0.01	0.11	0.00	-0.03	0.51	0.00	6.12679	737.13157	18.04	10.85
1013	1015	10.37256	-0.01	0.19	-0.03	-0.02	0.94	0.00	10.37269	747.50426	19.56	11.79
1015	1016	16.45180	0.00	0.30	-0.11	-0.06	0.86	0.00	16.45194	763.95620	18.64	12.65
1016	1018	10.92573	0.00	0.20	-0.04	-0.07	0.77	0.00	10.92582	774.88202	17.21	13.42
1018	1017	0.40754	0.00	0.01	0.00	0.00	0.00	0.00	0.40755	775.28957	17.25	13.42
1018	1019	15.67187	0.00	0.29	-0.10	-0.06	1.21	0.00	15.67200	790.55401	17.21	14.62
1019	1020	15.43075	-0.01	0.29	0.06	-0.06	1.77	0.00	15.43102	805.98503	17.68	16.39
1020	1022	16.63648	0.00	0.31	-0.09	-0.10	1.80	0.00	16.63660	822.62164	17.87	18.18
1022	1021	-0.13028	0.00	0.00	0.00	0.00	0.00	0.00	-0.13028	822.49136	17.88	18.18
1022	1023	10.40988	0.00	0.19	-0.06	-0.10	1.09	0.00	10.40991	833.03155	18.13	19.27
1023	1024	8.40121	0.00	0.16	-0.05	-0.11	0.81	0.00	8.40122	841.43277	17.85	20.08
1024	1025	18.55449	0.00	0.34	0.07	-0.02	1.45	0.00	18.55487	859.98763	18.93	21.53
1025	1026	43.60170	0.00	0.81	0.04	0.04	1.69	0.00	43.60259	903.59022	23.57	23.22
1026	1027	-1.07237	0.00	-0.02	0.00	-0.05	-0.09	0.00	-1.07244	902.51778	22.10	23.13
1027	1028	-7.58599	0.00	-0.14	-0.03	-0.05	-0.82	0.00	-7.58620	894.93158	19.46	22.30
1028	1029	-13.60386	0.00	-0.25	-0.05	-0.05	-1.28	0.00	-13.60420	881.32738	16.24	21.02
1029	1030	-3.55459	0.00	-0.07	-0.06	-0.03	-0.33	0.00	-3.55475	877.77263	13.33	20.69
1030	1031	40.56370	0.00	0.75	0.55	-0.03	2.05	0.00	40.56498	918.33761	16.32	22.74
1031	1032	12.47359	0.00	0.23	0.15	-0.03	0.81	0.00	12.47394	930.81154	21.24	23.55
1032	1033	19.34412	0.00	0.36	0.00	0.01	0.11	0.00	19.34449	950.15604	21.32	23.66
1033	1034	72.88325	0.00	1.35	1.43	-0.04	1.77	0.00	72.88598	1023.04202	26.53	25.43
1034	1035	31.38204	0.00	0.58	0.29	0.00	0.52	0.00	31.38291	1054.42493	29.43	25.95
1035	1036	3.48787	0.00	0.06	0.02	0.00	0.02	0.00	3.48795	1057.91288	29.80	25.96
1036	1037	8.18216	0.00	0.15	0.04	0.00	0.02	0.00	8.18235	1066.09523	30.68	25.98

Table 11c. National Geodetic Survey Line L24576: File L24576.prn(=.dat)

```
    512          L24576       1035103619800519 9470957T  4 1  0.08                    233456616    F
   3.48787                   MT  0.03  0.00  0.06  0.03  0.00  0.02  0.001031298410312985
    312          L24576       1035103419800519 8090905T 18 1  0.70                    233456616    B
 -31.38162                   MT -0.36  0.00 -0.58 -0.20 -0.01 -0.47  0.001031298410316377
    212          L24576       1036103519800519 7540809T  4 1  0.08                    233456616    B
  -3.48787                   MT -0.03  0.00 -0.06  0.00  0.00 -0.01  0.001031298510312984
    612          L24576       1036103719800519 9571008T  4 1  0.04                    233456616    F
   8.18210                   MT  0.03  0.00  0.15  0.07  0.00  0.02  0.001031298510312986
    112          L24576       1037103619800519 7400754T  4 1  0.04                    233456616    B
  -8.18222                   MT -0.03  0.00 -0.15 -0.01  0.00 -0.01  0.001031298610312985
    412          L24576       1034103519800519 9060947T 18 1  0.70                    233456616    F
  31.38245                   MT  0.36  0.01  0.58  0.37  0.00  0.57  0.001031637710312984
    712          L24576       10341033198005191013115 7T 38 1  1.48                    233456616    B
 -72.88420                   MT -0.53  0.00 -1.35 -1.26  0.03 -1.71  0.001031637710319685
    812          L24576       10331034198005191203134 5T 38 1  1.48                    233456616    F
  72.88230                   MT  0.53  0.00  1.35  1.59 -0.05  1.83  0.001031968510316377
   1312          L24576       1030103119800520 9291034T 24 1  1.57                    233456616    F
  40.56280                   MT -0.79  0.00  0.75  0.66 -0.02  2.29  0.001030953810314669
   1212          L24576       1031103019800520 8200929T 24 1  1.57                    233456616    B
 -40.56460                   MT  0.79  0.00 -0.75 -0.44  0.03 -1.81  0.001031466910309538
   1412          L24576       10311032198005201034111 0T 12 1  0.98                    233456616    F
  12.47317                   MT -0.66  0.00  0.23  0.23 -0.02  1.13  0.001031466910319687
   1012          L24576       1033103219800520 7240748T 12 1  0.47                    233456616    B
 -19.34407                   MT -0.07  0.00 -0.36 -0.04 -0.01 -0.14  0.001031968510319687
   1112          L24576       1032103119800520 7480820T 12 1  0.98                    233456616    B
 -12.47400                   MT  0.66  0.00 -0.23 -0.06  0.03 -0.49  0.001031968710314669
    912          L24576       1032103319800520 6550724T 12 1  0.47                    233456616    F
  19.34417                   MT  0.07  0.00  0.36 -0.04  0.01  0.08  0.001031968710319685
   1512          L24576       10301029198005201120123 5T 22 1  1.83                    233456616    B
   3.55583                   MT  0.90  0.00  0.07  0.07  0.04  0.35  0.001030953810301082
   1812          L24576       1027102819800521 8450928T 14 1  1.57                    233456615    F
  -7.58545                   MT -0.79  0.00 -0.14 -0.03 -0.04 -0.93  0.001028893010295602
   1712          L24576       1028102719800521 7580844T 14 1  1.57                    233456615    B
   7.58652                   MT  0.79  0.00  0.14  0.03  0.05  0.72  0.001029560210288930
   1912          L24576       1028102919800521 9281015T 14 1  1.60                    233456615    F
 -13.60435                   MT -0.83  0.00 -0.25 -0.09 -0.03 -2.12  0.001029560210301082
   1612          L24576       1029102819800521 7000757T 16 1  1.62                    233456615    B
  13.60337                   MT  0.83  0.00  0.25  0.00  0.06  0.44  0.001030108210295602
   2112          L24576       10271026198005211135124 0T 16 1  1.57                    233456615    B
   1.07163                   MT  0.82  0.00  0.02  0.02  0.02  0.15  0.001028893010282565
   2012          L24576       10291030198005211017112 6T 22 1  1.83                    233456615    F
  -3.55335                   MT -0.90  0.00 -0.07 -0.04 -0.02 -0.32  0.001030108210309538
   2212          L24576       1026102519800522 6450752T 24 1  1.56                    233456615    B
 -43.60267                   MT -0.80  0.00 -0.81  0.16 -0.03 -0.62  0.001028256510288927
   2412          L24576       1024102519800522 8510955T 18 1  1.62                    233456615    F
  18.55415                   MT -0.23  0.00  0.34  0.08 -0.01  1.67  0.001028736510288927
   2512          L24576       1025102619800522 9561111T 24 1  1.56                    233456615    F
  43.60072                   MT  0.80  0.00  0.81  0.24  0.05  2.76  0.001028892710282565
   2312          L24576       1025102419800522 7520850T 18 1  1.62                    233456615    B
 -18.55482                   MT  0.23  0.00 -0.34 -0.05  0.03 -1.22  0.001028892710287365
   3012          L24576       1021102219800527 9350940T  2 1  0.02                    233456615    B
   0.13035                   MT  0.00  0.00  0.00  0.00  0.00  0.00  0.001027604110276042
   3112          L24576       1022102019800527 9401035T 18 1  1.81                    233456615    B
 -16.63647                   MT  0.92  0.01 -0.31  0.08  0.11 -2.20  0.001027604210267750
   2912          L24576       1022102119800527 9300935T  2 1  0.02                    233456615    F
  -0.13020                   MT  0.00  0.00  0.00  0.00  0.00  0.00  0.001027604210276041
   2812          L24576       1023102219800527 8480930T 14 1  1.42                    233456615    B
 -10.40935                   MT  0.67  0.00 -0.19  0.04  0.10 -1.12  0.001028094910276042
   2612          L24576       1026102719800527 6500735T 14 1  1.57                    233456615    F
  -1.07312                   MT -0.82  0.01 -0.02  0.01 -0.07 -0.03  0.001028256510288930
   2712          L24576       1024102319800527 7550848T 16 1  1.58                    233456615    B
  -8.40225                   MT  0.78  0.01 -0.16  0.04  0.10 -0.66  0.001028736510280949
   3212          L24576       10201019198005271040115 7T 18 1  1.56                    233456615    B
 -15.43222                   MT  0.88  0.01 -0.29 -0.03  0.08 -1.72  0.001026775010360557
   3312          L24576       10191020198005271200130 0T 18 1  1.56                    233456615    F
  15.42927                   MT -0.88 -0.01  0.29  0.08 -0.04  1.81  0.001036055710267750
   3512          L24576       1020102219800528 7400833T 16 1  1.82                    233456615    F
  16.63650                   MT -0.92  0.00  0.31 -0.09 -0.09  1.39  0.001026775010276042
   3612          L24576       1022102319800528 8330915T 14 1  1.42                    233456615    F
  10.41040                   MT -0.67  0.00  0.19 -0.08 -0.09  1.06  0.001027604210280949
   3712          L24576       1023102419800528 9151008T 16 1  1.58                    233456615    F
   8.40017                   MT -0.78  0.01  0.16 -0.05 -0.11  0.96  0.001028094910287365
   3412          L24576       1018101919800528 6410735T 16 1  1.69                    233456615    F
  15.67192                   MT -0.96  0.00  0.29 -0.19 -0.03  0.39  0.001035235110360557
   4012          L24576       10171018198005281157120 2T  2 1  0.01                    233456615    B
  -0.40763                   MT  0.00  0.00 -0.01  0.00  0.00  0.00  0.001035235010352351
   4112          L24576       10181016198005281205125 5T 16 1  1.43                    233456615    B
 -10.92520                   MT  0.83  0.00 -0.20 -0.01  0.06 -1.37  0.001035235110344150
```

3912	L24576	101810171980052811501156T 2 1 0.01	233456615	F
0.40745		MT 0.00 0.00 0.01 0.00 0.00 0.00	0.001035235110352350	
3812	L24576	101910181980052810401148T 18 1 1.68	233456615	B
-15.67182		MT 0.96 0.01 -0.29 0.01 0.09 -2.02	0.001036055710352351	
4512	L24576	1012101319800529 9250944T 6 1 0.51	233456615	F
6.12542		MT -0.25 0.00 0.11 0.00 -0.03 0.53	0.001032809710329668	
4412	L24576	1013101219800529 9000925T 6 1 0.51	233456615	B
-6.12800		MT 0.25 0.02 -0.11 -0.01 0.03 -0.49	0.001032966810328097	
4612	L24576	1013101519800529 9441022T 12 1 1.17	233456615	F
10.37290		MT -0.67 -0.01 0.19 0.02 -0.03 1.25	0.001032966810336093	
4312	L24576	1015101319800529 7470825T 12 1 1.17	233456615	B
-10.37222		MT 0.67 0.01 -0.19 0.08 0.00 -0.63	0.001033609310329668	
4712	L24576	101510161980052910221125T 18 1 1.69	233456615	FF
16.45832		MT -0.96 0.00 0.30 0.07 -0.09 2.06	0.001033609310344150	
4212	L24576	1016101519800529 6470747T 16 1 1.70	233456615	B
-16.44997		MT 0.96 0.01 -0.30 0.21 0.02 -0.53	0.001034415010336093	
5112	L24576	1010100919800530 9081005T 16 1 1.56	233456615	B
-9.23862		MT 0.72 -0.01 -0.17 -0.02 0.08 -1.01	0.001031466810307818	
5012	L24576	1011101019800530 8220908T 16 1 1.76	233456615	B
-11.22925		MT 0.80 0.01 -0.21 0.00 0.07 -1.26	0.001032308810314668	
4912	L24576	1012101119800530 6450822T 12 1 1.36	233456615	B
-12.65812		MT 0.58 0.01 -0.23 0.00 0.03 -0.65	0.001032809710323088	
4812	L24576	1015101619800530 6420735T 16 1 1.71	233456615	F
16.44892		MT -0.96 0.00 0.30 -0.13 0.00 0.42	0.001033609310344150	
5212	L24576	101010111980053010081112T 20 1 1.75	233456615	F
11.22787		MT -0.80 0.02 0.21 0.07 -0.11 1.16	0.001031466810323088	
5312	L24576	101110121980053011151214T 16 1 1.35	233456615	F
12.65967		MT -0.58 0.00 0.23 0.12 -0.08 1.35	0.001032308810328097	
5612	L24576	1007100619800602 8030913T 18 1 1.85	233456615	B
-12.77042		MT 0.83 0.01 -0.24 -0.03 0.02 -1.20	0.001029924110290564	
5512	L24576	1008100719800602 7500803T 4 1 0.26	233456615	B
-0.09517		MT 0.10 0.00 0.00 0.00 0.00 0.00	0.001030108110299241	
5412	L24576	1009100819800602 6550750T 14 1 1.49	233456615	B
-10.51267		MT 0.66 -0.01 -0.19 0.06 0.01 -0.38	0.001030781810301081	
6012	L24576	1000100119800604 9281025T 14 1 1.44	233456615	F
9.18382		MT -0.02 -0.01 0.17 0.11 0.00 1.16	0.001026937210269381	
5912	L24576	1001100019800604 8340928T 14 1 1.44	233456615	B
-9.18415		MT 0.02 0.00 -0.17 -0.07 -0.01 -0.96	0.001026938110269372	
6112	L24576	100110021980060410251107T 12 1 1.17	233456615	F
7.79885		MT -0.22 0.00 0.14 0.06 -0.02 1.01	0.001026938110272797	
5812	L24576	1002100119800604 8030834T 12 1 1.16	233456615	B
-7.79830		MT 0.22 0.00 -0.14 0.00 0.00 -0.59	0.001027279710269381	
5712	L24576	1003100219800604 7050802T 16 1 1.57	233456615	B
-12.11790		MT 0.63 0.01 -0.22 -0.03 0.04 -0.46	0.001027932710272797	
6212	L24576	100210031980060411111232T 18 1 1.57	233456615	F
12.11907		MT -0.63 -0.01 0.22 0.14 -0.04 1.36	0.001027279710279327	
7012	L24576	100090021980060511101130T 6 1 0.31	233456615	B
-0.69357		MT -0.02 0.00 -0.01 -0.01 0.00 -0.03	0.001026937210269380	
7112	L24576	900210001980060511301200T 6 1 0.31	233456615	F
0.69370		MT 0.02 0.00 0.01 0.01 0.00 0.03	0.001026938010269372	
6712	L24576	1003100419800605 9110948T 10 1 0.97	233456615	F
9.31370		MT -0.42 0.00 0.17 0.04 -0.02 1.00	0.001027932710282563	
6612	L24576	1004100319800605 8400910T 10 1 0.97	233456615	B
-9.31380		MT 0.42 0.00 -0.17 -0.03 0.03 -0.86	0.001028256310279327	
6812	L24576	1004100519800605 9481013T 8 1 0.75	233456615	F
7.59217		MT -0.32 0.00 0.14 0.03 -0.01 0.84	0.001028256310285738	
6512	L24576	1005100419800605 8150840T 8 1 0.74	233456615	B
-7.59262		MT 0.32 -0.01 -0.14 -0.03 0.02 -0.56	0.001028573810282563	
6912	L24576	100510061980060510131055T 12 1 1.20	233456615	F
6.90290		MT -0.49 0.00 0.13 0.08 -0.01 0.90	0.001028573810290564	
6412	L24576	1006100519800605 7380815T 12 1 1.22	233456615	B
-6.90287		MT 0.49 -0.01 -0.13 -0.03 0.04 -0.37	0.001029056410285738	
6312	L24576	1016101819800605 6420725T 14 1 1.44	233456615	F
10.92625		MT -0.83 0.00 0.20 -0.09 -0.08 0.17	0.001034415010352351	
7412	L24576	2034900119800606 8200847T 6 1 0.48	233456615	B
-4.07695		MT -0.19 -0.01 -0.08 0.01 -0.03 -0.24	0.001026937110272796	
7312	L24576	9002203419800606 7550820T 6 1 0.57	233456615	B
-5.73817		MT 0.00 -0.01 -0.11 0.01 0.00 -0.34	0.001026938010269371	
7212	L24576	1016101519800606 6400735T 16 1 1.70	233456615	B
-16.45000		MT 0.96 0.00 -0.30 0.15 0.11 -0.42	0.001034415010336093	
7512	L24576	9001900019800609 6250655T 8 1 0.82	233456615	B
-9.13692		MT -0.40 0.00 -0.17 0.08 -0.01 -0.06	0.001027279610276043	
7612	L24576	1006100719800603 6420742T 18 1 1.84	233456615	F
12.77140		MT -0.83 0.00 0.24 -0.13 -0.03 0.34	0.001029056410299241	
7712	L24576	1007100819800603 7420752T 4 1 0.26	233456615	F
0.09520		MT -0.10 0.00 0.00 0.00 0.00 0.00	0.001029924110301081	
7812	L24576	1008100919800603 7520848T 14 1 1.49	233456615	F
10.51167		MT -0.66 0.01 0.19 -0.03 -0.02 0.96	0.001030108110307818	

Table 11c. National Geodetic Survey Line L24576: File L24576.prn(=.dat)--Continued

```
7912          L24576       1009101019800603 8480958T 16 1  1.56                  233456615    F
9.23970                   MT -0.72  0.00  0.17  0.01 -0.02  0.96  0.001030781810314668
```

TABLE 12: THIRD-ORDER LEVELING
USGS Summary Book A-6668, pp. 27-37
January to February 1907
Beatty to Las Vegas, Nevada
Amargosa Valley/Las Vegas Valley

bm (=alias)	DISTANCE		UNCORRECTED FIELD ELEVATION[1]		LEVEL+ COLLIMATION CORRECTION[1]	TEMPERATURE CORRECTION[1]	ROD CORRECTION[2] METHOD 1	ROD CORRECTION[2] METHOD 2	CORRECTED OBSERVED ELEVATION[3], USING METHOD 1 ROD CORRECTION		CORRECTED OBSERVED ELEVATION[3], USING METHOD 2 ROD CORRECTION	
	(mi)	(km)	(ft)	(m)	(ft)	(ft)	(ft)	(ft)	(ft)	(m)	(ft)	(m)
3139	0.0	0.0	3138.860	956.726	-0.157	+0.054	-0.110	+0.440	3138.647	956.662	3139.197	956.829
3002=P16=86	2.0	3.2	3002.285	915.098	-.154	+.042	-.105	+.420	3002.068	915.032	3002.593	915.192
2865=Q16=87	5.0	3.0	2865.149	873.299	-.155	+.031	-.100	+.401	2864.925	873.231	2865.426	873.384
2755=R16=88	8.0	12.9	2754.656	839.621	-.154	+.020	-.096	+.386	2754.426	839.551	2754.908	839.698
2664=S16=89	11.0	17.7	2664.079	812.013	-.154	+.013	-.093	+.373	2663.845	811.942	2664.311	812.083
2575=T16=90	14.0	22.5	2575.483	785.009	-.153	+.006	-.090	+.361	2575.246	784.937	2575.697	785.074
2587=V16=91	17.0	27.3	2587.261	788.599	-.151	+.006	-.091	+.362	2587.025	788.527	2587.478	788.665
2582=X16=92	20.0	32.2	2582.473	787.139	-.150	+.006	-.090	+.362	2582.239	787.068	2582.691	787.206
2648=Y16=93	23.0	37.0	2647.594	806.988	-.147	+.013	-.093	+.371	2647.367	806.919	2647.831	807.061
2658=Z16=94	27.0	43.4	2658.227	810.229	-.143	+.015	-.093	+.372	2658.006	810.162	2658.471	810.304
2843=B17=95	31.0	49.8	2843.331	866.649	-.137	+.023	-.100	+.398	2843.117	866.584	2843.615	866.736
2761=C17=96	35.0	56.3	2760.762	841.482	-.135	+.016	-.097	+.387	2760.546	841.416	2761.030	841.564
2765=E17=97	39.0	62.7	2764.919	842.749	-.134	+.016	-.097	+.387	2764.704	842.684	2765.188	842.831
2776	40.7	65.4	2775.753	846.051	-.133	+.016	-.097	+.389	2775.539	845.986	2776.025	846.134
2781	41.0	65.9	2780.934	847.630	-.133	+.016	-.098	+.389	2780.719	847.565	2781.206	847.713
2840=G17=98	43.0	69.1	2839.726	865.550	-.132	+.018	-.099	+.398	2839.513	865.485	2840.010	865.637
3034=I17=99	47.0	75.6	3033.597	924.642	-.130	+.036	-.106	+.425	3033.397	924.581	3033.928	924.743
3320=J17=100	51.0	82.0	3319.570	1011.807	-.125	+.070	-.116	+.465	3319.399	1011.755	3319.980	1011.932
3628=K17=101	55.0	88.4	3628.144	1105.861	-.118	+.095	-.127	+.508	3627.994	1105.815	3628.629	1106.008
3576=M17=102	59.0	94.9	3575.945	1089.950	-.118	+.091	-.125	+.501	3575.793	1089.904	3576.419	1090.095
3431=N17=103	63.0	101.3	3430.782	1045.704	-.118	+.083	-.120	+.480	3430.627	1045.657	3431.227	1045.840
3279=P17=104	67.0	107.7	3279.293	999.531	-.117	+.068	-.115	+.459	3279.129	999.481	3279.673	999.646
3136=Q17=105	71.0	114.2	3135.677	955.756	-.114	+.052	-.110	+.439	3135.505	955.704	3136.054	955.871
3148=R17=106	75.0	120.6	3147.537	959.379	-.112	+.052	-.110	+.441	3147.367	959.319	3147.918	959.487
3084=T17=107	79.0	127.0	3074.211	937.021	-.113	+.057	-.108	+.432	3074.047	936.971	3074.587	937.136
3062=V17=108	83.0	133.5	3061.772	933.230	-.112	+.055	-.107	+.429	3061.608	933.180	3062.144	933.343
3029=V17=109	87.0	139.9	3029.089	923.268	-.113	+.051	-.106	+.424	3028.921	923.217	3029.451	923.379
2876=X17=110	91.0	146.3	2875.843	876.559	-.112	+.044	-.101	+.403	2875.674	876.507	2876.178	876.661
2779=Y17=111	95.0	152.8	2779.366	847.153	-.112	+.038	-.097	+.389	2779.195	847.100	2779.681	847.249
2645=Z17=112	99.0	159.2	2645.183	806.253	-.112	+.025	-.093	+.371	2645.003	806.199	2645.467	806.340
2454=B18=113	103.0	165.6	2453.759	747.907	-.112[4]	+.004	-.086	+.344	2453.565	747.848	2453.995	747.979
2294=C18=114	107.0	172.1	2293.907	699.184	-.112	-.007	-.080	+.321	2293.708	699.124	2294.109	699.246
2139=E18=115	111.0	178.5	2138.553	651.832	-.112	-.016	-.075	+.299	2138.350	651.770	2138.724	651.884
2033B=116	114.9	184.8	2032.725	619.576	-.112	-.023	-.071	+.285	2032.519	619.513	2032.875	619.622
2024B=117	115.3	185.6	2023.784	616.851	-.112	-.024	-.071	+.283	2023.577	616.788	2023.931	616.895

1/ The uncorrected field elevation, level + collimation, and temperature corrections are from U.S. Geological Survey Summary Book A-6668, pp. 27-37. The uncorrected field elevations are the original values recorded in the field as entered in the summary book.

2/ Rod corrections are computed by two different methods.

Method 1 is based on the latest available presurvey rod calibrations and is the procedurally applicable method specified by Rappleye (1948). The latest presurvey rod calibrations for the rod pair (22+24) used in this survey were done in 1905. The rod excess value is the average of the measured rod calibration values for each rod, which for the 1905 calibration is:

(-0.00001)+(-0.00006) = (-0.00007) + 2 = -0.000035

Method 2 is based on the earliest available postsurvey rod calibrations. Postsurvey rod calibrations for rod pair 22+24 were done in 1908. The postsurvey rod excess value also is the average of the measured rod calibration values for each rod, which for the 1908 calibration is:

(+0.00014) + (+0.00014) = (+0.00028) + 2 = +0.00014

Only rod corrections determined by Method 1 were used to compute values for plotting height change profiles and circuit misclosures in this report.

3/ The corrected observed elevation is the sum of the uncorrected field elevation, level + collimation, temperature, and respective rod corrections.

4/ The level + collimation correction for benchmark 2454 is not indicated in A-6668 (p. 36); the value shown is assumed to be equivalent to values for adjoining sections.

TABLE 13: THIRD-ORDER LEVELING
USGS Summary Book A-6668, pp. 47-51
March 1907

King Spring, Nevada to Furnace Creek, California
Amargosa Valley/Furnace Creek Wash Area

bm	DISTANCE		UNCORRECTED FIELD ELEVATION[1]		LEVEL+ COLLIMATION CORRECTION[1]	TEMPERATURE CORRECTION[1]	ROD CORRECTION[2] METHOD 1	METHOD 2	METHOD 3	CORRECTED OBSERVED ELEVATION[3], USING METHOD 1 ROD CORRECTION		CORRECTED OBSERVED ELEVATION[3], USING METHOD 2 ROD CORRECTION		CORRECTED OBSERVED ELEVATION[3] USING METHOD 3 ROD CORRECTION	
	(mi)	(km)	(ft)	(m)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(m)	(ft)	(m)	(ft)	(m)
2268	0.0	0.0	2266.521	690.837	-0.226	+0.062	-0.079	+0.317	+0.454	2266.278	690.763	2266.674	690.884	2266.811	690.925
2172	2.9	4.7	2172.394	662.147	-.226	+.057	-.076	+.304	+.434	2172.149	662.072	2172.529	662.188	2172.659	662.228
2101	8.5	13.7	2101.300	640.478	-.220	+.051	-.074	+.294	+.420	2101.057	640.404	2101.425	640.516	2101.551	640.554
2117	11.7	18.8	2117.083	645.288	-.221	+.051	-.074	+.296	+.423	2116.839	645.214	2117.209	645.327	2117.336	645.365
2180	13.4	21.5	2179.501	664.313	-.223	+.057	-.076	+.305	+.436	2179.259	664.240	2179.640	664.356	2179.771	664.396
2572	17.9	28.8	2572.122	783.984	-.227	+.078	-.090	+.360	+.514	2571.883	783.912	2572.333	784.049	2572.487	784.096
2864	20.6	33.1	2864.275	873.033	-.238	+.097	-.100	+.401	+.573	2864.034	872.959	2864.535	873.112	2864.707	873.164
3041	22.1	35.5	3041.157	926.947	-.242	+.110	-.106	+.426	+.608	3040.919	926.874	3041.451	927.036	3041.633	927.092
2701	25.7	41.3	2700.932	823.246	-.234	+.088	-.095	+.378	+.540	2700.691	823.172	2701.164	823.316	2701.326	823.366
1938	29.9	48.1	1938.458	590.843	-.208	+.036	-.068	+.271	+.388	1938.218	590.770	1938.557	590.873	1938.674	590.909
1330	33.4	53.7	1330.443	405.520	-.193	+.002	-.047	+.186	+.266	1330.205	405.447	1330.438	405.518	1330.518	405.543
283	39.0	62.7	282.878	86.221	-.170	-.100	-.010	+.040	+.057	282.598	86.136	282.648	86.151	282.665	86.157
-178	41.5	66.7	-178.932	-54.5386	-.159	-.140	+.006	-.025	-.036	-179.225	-54.628	-179.256	-54.637	-179.267	-54.641

1/ The uncorrected field elevation, level + collimation, and temperature corrections are from U.S. Geological Survey Summary Book A-6668, pp. 47-51. The uncorrected field elevations are the original values recorded in the field as entered in the summary book.

2/ Rod corrections are computed by two different methods.

Method 1 is based on the latest available presurvey rod calibrations and is the procedurally applicable method specified by Rappleye (1948). The latest presurvey rod calibrations for the rod pair (22+24) used in this survey were done in 1905. The rod excess value is the average of the measured rod calibration values for each rod, which for the 1905 calibration is:

$$(-0.00001) + (-0.00006) = (+0.00028) \div 2 = -0.000035$$

Method 2 is based on the earliest available postsurvey rod calibrations. Postsurvey rod calibrations for rod pair 22+24 were done in 1908. The postsurvey rod excess value also is the average of the measured rod calibration values for each rod, which for the 1908 calibration is:

$$(+0.0000) + (+0.00014) = (+0.00028) \div 2 = +0.00014$$

Only the rod corrections determined by Method 1 were used to compute values for plotting height change profiles and circuit misclosures in this report.

3/ The corrected observed elevation is the sum of the uncorrected field elevation, level + collimation, temperature, and respective rod corrections.

TABLE 14: THIRD-ORDER LEVELING
USGS Summary Book A-6668, pp. 20-27
January to March 1907

Death Valley, California via Daylight Pass to Beatty, Nevada
Central and Northern Death Valley and Grapevine Mountains

bm	DISTANCE		LEVEL+ UNCORRECTED FIELD ELEVATION[1]		COLLIMATION CORRECTION[1]	TEMPERATURE CORRECTION[1]	ROD CORRECTION[2] METHOD 1	ROD CORRECTION[2] METHOD 2	CORRECTED OBSERVED ELEVATION[3], USING METHOD 1 ROD CORRECTION		CORRECTED OBSERVED ELEVATION[3], USING METHOD 2 ROD CORRECTION	
(mi)	(km)	(ft)	(m)	(ft)	(ft)	(ft)	(ft)	(ft)	(m)	(ft)	(ft)	(m)
-215	0.0	0.0	-214.668	-65.431	-0.281	-0.175	+0.008	-0.030	-215.116	-65.568	-215.154	-65.579
-224	2.9	4.7	-224.187	-68.332	-.277	-.175	+.008	-.031	-224.631	-68.468	-224.670	-68.480
-235	6.0	9.6	-234.593	-71.504	-.275	-.176	+.008	-.033	-235.036	-71.639	-235.077	-71.652
-244	9.0	14.5	-243.965	-74.361	-.270	-.176	+.009	-.034	-244.402	-74.494	-244.445	-74.507
-248	12.0	19.3	-248.065	-75.610	-.251	-.176	+.009	-.035	-248.483	-75.738	-248.527	-75.751
-276	16.0	25.7	-265.918	-81.052	-.233	-.177	+.010	-.039	-266.318	-81.174	-266.367	-81.189
-260	19.5	31.4	-249.752	-76.125	-.235	-.176	+.010	-.036	-250.153	-76.247	-250.199	-76.261
-253	23.0	37.0	-243.448	-74.203	-.233	-.174	+.009	-.036	-243.846	-74.324	-243.891	-74.338
-263	26.0	41.8	-252.928	-77.093	-.229	-.175	+.009	-.037	-253.323	-77.213	-253.369	-77.227
-283	28.5	45.2	-273.689	-83.421	-.230	-.176	+.010	-.040	-274.085	-83.541	-274.135	-83.557
-233	31.0	49.8	-222.675	-67.872	-.228	-.175	+.008	-.033	-223.070	-67.992	-233.111	-68.004
-227	34.0	54.7	-217.083	-66.167	-.226	-.172	+.008	-.032	-217.473	-66.286	-217.513	-66.298
-188(=-178)	37.2	59.8	-177.883	-54.219	-.217	-.167	+.006	-.026	-178.261	-54.334	-178.293	-54.344
-262	41.5	66.7	-252.889	-77.081	-.215	-.175	+.010	-.037	-253.269	-77.197	-253.316	-77.211
-258	45.5	77.2	-248.109	-75.624	-.213	-.176	+.009	-.036	-248.489	-75.740	-248.534	-75.735
-248	49.0	78.8	-237.935	-72.523	-.213	-.176	+.009	-.035	-238.315	-72.639	-238.359	-72.652
1	51.0	82.0	11.199	3.414	-.202	-.160	0.000	-.000	10.837	3.303	10.837	3.303
669	55.0	88.4	678.624	206.845	-.189	-.095	_.023	+.094	678.317	206.751	678.434	206.787
2253	59.3	95.3	2263.207	689.827	-.161	+.017	_.079	+.315	2263.080	689.788	2262.984	689.759
3117	61.9	99.5	3127.206	953.174	-.138	+.072	_.109	+.436	3127.031	953.121	3127.576	953.287
4307	68.7	110.5	4317.330	1315.925	-.117	+.132	_.151	+.603	4317.194	1315.883	4317.948	1316.113
3560	72.7	116.9	3569.986	1088.134	-.160	+.091	_.125	+.498	3569.792	1088.075	3570.415	1088.265
3472	75.8	121.9	3481.662	1061.213	-.156	+.085	_.122	+.486	3481.469	1061.154	3482.077	1061.339
3561	77.4	124.5	3571.188	1088.500	-.150	+.089	_.125	+.499	3571.002	1088.444	3571.626	1088.634
3139	81.9	131.7	3138.860	956.726	-.157	+.054	_.110	+.440	3138.647	956.662	3139.197	956.829

1/ The uncorrected field elevation, level + collimation correction, and temperature correction are from U.S. Geological Survey Summary Book A-6668, p. 20-27. The uncorrected field elevations are the original values recorded in the field as entered in the summary book.

2/ Rod corrections are computed by two different methods.
Method 1 is based on the latest available presurvey rod calibrations and is the proceedurally applicable method specified by Rappleye (1948). Presurvey rod calibrations for the rod pair (22+24) used in this survey were done in 1905. The rod excess value is the average of the measured rod calibration values for each rod, which for the 1905 calibration is:

(-0.00001)+(-0.00006) = (-0.00007) + 2 = -0.000035

Method 2 is based on the earliest available postsurvey rod calibrations. Postsurvey rod calibrations for this rod pair were done in 1908. The postsurvey rod excess value also is the average of the measured rod calibration values for each rod, which for the 1908 calibrations is:

(+0.00014) + (+0.00014) = (+0.00028) + 2 = +0.00014

Only the rod corrections determined by Method 1 were used to compute values for plotting the height change profiles and circuit misclosures in this report.

3/ The corrected observed elevation is the sum of the uncorrected field elevation, level + collimation, temperature, and respective rod corrections.

TABLE 15: THIRD-ORDER LEVELING
USGS Summary Book A-6668, pp. 37-47
February to March 1907

Las Vegas via Pahrump and King Spring to Amargosa Valley, Nevada
Amargosa Valley/Pahrump Valley

bm	DISTANCE		UNCORRECTED FIELD ELEVATION[1]		LEVEL + COLLIMATION CORRECTION	TEMPERATURE CORRECTION[1]	ROD CORRECTION[2] METHOD 1	METHOD 2	CORRECTED OBSERVED ELEVATION[3], UING METHOD 1 ROD CORRECTION		CORRECTED OBSERVED ELEVATION[3], USING METHOD 2 ROD CORRECTION	
	(mi)	(km)	(ft)	(m)	(ft)	(ft)	(ft)	(ft)	(ft)	(m)	(ft	(m)
2024B	0.0	0.0	2023.784	616.851	-0.112	-0.024	-0.071	+0.283	2023.577	616.788	2023.931	616.895
2136	4.4	7.1	2135.656	650.949	-.112	-.016	-.075	+.299	2135.453	650.887	2135.827	651.001
2336	8.4	13.5	2336.028	712.923	-.112	+.003	-.082	+.327	2335.837	711.965	2336.827	712.089
2631	12.3	19.8	2631.293	802.020	-.108	+.030	-.092	+.368	2631.123	801.968	2631.583	802.108
3036	16.9	27.2	3036.062	925.394	-.097	+.059	-.106	+.425	3035.918	925.350	3036.444	925.512
3493	20.4	32.8	3492.764	1064.597	-.090	+.094	-.122	+.489	3492.646	1064.561	3493.257	1064.747
4557	24.7	39.7	4557.222	1389.044	-.053	+.173	-.160	+.638	4557.182	1389.032	4557.980	1389.275
5504	28.4	45.7	5503.324	1677.417	-.026	+.261	-.193	+.770	5503.366	1677.427	5504.329	1677.723
4556	32.3	51.9	4556.005	1388.673	-.116	+.231	-.160	+.638	4555.960	1388.659	4556.758	1388.903
3909	36.1	58.0	3909.506	1191.620	-.153	+.177	-.137	+.547	3909.343	1191.585	3910.077	1191.794
3162	41.5	66.7	3162.324	963.878	-.256	+.115	-.111	+.443	3162.072	963.802	3162.626	963.970
2809	46.5	74.8	2808.535	856.043	-.301	+.083	-.098	+.393	2808.219	855.947	2808.710	856.097
2929	52.7	84.7	2929.297	892.852	-.306	+.090	-.103	+.410	2928.978	892.754	2929.491	892.911
2776	60.7	97.6	2775.775	846.058	-.309	+.082	-.097	+.389	2775.451	845.959	2775.937	846.107
2668	66.9	107.6	2667.505	813.057	-.315	+.077	-.093	+.373	2667.174	812.956	2667.640	813.098
2566	72.7	116.9	2565.875	782.080	-.315	+.075	-.090	+.359	2565.545	781.980	2565.994	782.117
2503	81.0	130.2	2503.360	763.026	-.248	+.075	-.088	+.350	2503.099	762.946	2503.537	763.080
2315	88.4	142.1	2315.183	705.669	-.229	+.065	-.081	+.324	2314.938	705.595	2315.343	705.718
2268	89.9	144.6	2267.521	691.142	-.222	+.06	-.079	+.317	2267.280	691.068	2267.676	691.189
2488	92.0	147.9	2488.481	758.491	-.214	+.073	-.087	+.348	2488.253	758.421	2488.688	758.554
2331	96.2	154.7	2330.857	710.447	-.213	+.059	-.082	+.326	2330.621	710.375	2331.029	710.499
2430	100.3	161.3	2429.832	740.614	-.216	+.064	-.085	+.340	2429.595	740.542	2430.020	740.672
2776	104.2	167.6	2776.828	846.3779	-.229	+.091	-.097	+.389	2776.593	846.307	2777.079	846.455
2781	104.5	168.0	2782.007	847.957	-.230	+.096	-.097	+.390	2781.776	847.887	2782.263	848.036

1/ The uncorrected field elevation, level + collimation correction, and temperature correction are from U.S. Geological Survey Summary Book A-6668, p. 20-27. The uncorrected field elevations are the original values recorded in the field as entered in the summary book.

2/ Rod corrections are computed by two different methods.

Method 1 is based on the latest available presurvey rod calibrations and is the proceedurally applicable method specified by Rappleye (1948). Presurvey rod calibrations for the rod pair (22+24) used in this survey were done in 1905. The rod excess value is the average of the measured rod calibration values for each rod, which for the 1905 calibration is:

$$(-0.00001)+(-0.00006)=(-0.00007)+2=-0.000035$$

Method 2 is based on the earliest available postsurvey rod calibrations. Postsurvey rod calibrations for this rod pair were done in 1908. The postsurvey rod excess value also is the average of the measured rod calibration values for each rod, which for the 1908 calibrations is:

$$(+0.00014)+(+0.00014)=(+0.00028)+2=+0.00014$$

Only the rod corrections determined by Method 1 were used to compute values for plotting the height change profiles and circuit misclosures in this report.

3/ The corrected observed elevation is the sum of the uncorrected field elevation, level + collimation, temperature, and respective rod corrections.

Table 16. Rod calibration data for third order leveling

[Sources of data: U.S. Geological Survey summary books A-6667 and A-6668; Dates of leveling: January 3 to April 13, 1907; Rod numbers: 22 (BS35) and 24 (BS37)]

Rod 22

Date of calibration	Temperature	Rod excess value
November 10, 1905	21°C	-0.00006[1/]
October 10, 1908	20°C	+0.00014
February 18, 1910	21°C	-0.00030

Rod 24

Date of calibration	Temperature	Rod excess value
November 10, 1905	21°C	-0.00001[1/]
October 10, 1908	21°C	+0.00014
February 19, 1910	21°C	-0.00031

[1/] 1905 values appended in summary book as "not used".

Table 17. List of reset benchmark equivalent values

[Source of data: Emery I. Balazs, National Geodetic Survey N/CG132, National Oceanic and Atmospheric Administration, Rockville, Maryland, written communication, May 16, 1989]

Benchmark name from	to	Height difference (Δh) in meters
W16	W16 reset 1980	-1.746
V16 (B91 USGS)	V16 reset 1980	-1.525
P16	P16 reset 1978	-0.564
Q16	Q16 reset 1978	-0.554
C23	C23 reset 1978	-0.390
U338	U338 reset 1978	-2.064
V338	V338 reset 1978	0.018
R16	R16 reset 1978	-0.308
T16	T16 reset 1978	-0.646[1/]
S16	S16 reset 1978	-0.820
Z16 (B94 USGS)	Z16 reset 1980	-0.721
B333	B333 reset 1980	0.012
X16 (B92 USGS)	X16 reset 1980	-0.568
Y16 (B93 USGS)	Y16 reset 1980	-0.885
F17	F17 reset 1977	0.072
A17	A17 reset 1977	-0.331
B17 (B95 USGS)	B17 reset 1977	-0.547
X338	X338 reset 1978	-0.338
G17	G17 reset 1962	-1.502
H17	H17 reset 1962	1.139

[1/] 1984 leveling indicates either movement or error in reset Δh.

National Geodetic Survey could not recover any reset information for benchmarks C333 or 90 USGS reset 1942.