3-D GEOPHYSICAL STUDIES OF THE UPPER BORREGO VALLEY FINAL REPORT

for

Kajima Engineering and Construction
Pasadena, California

by

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1. INTRODUCTION

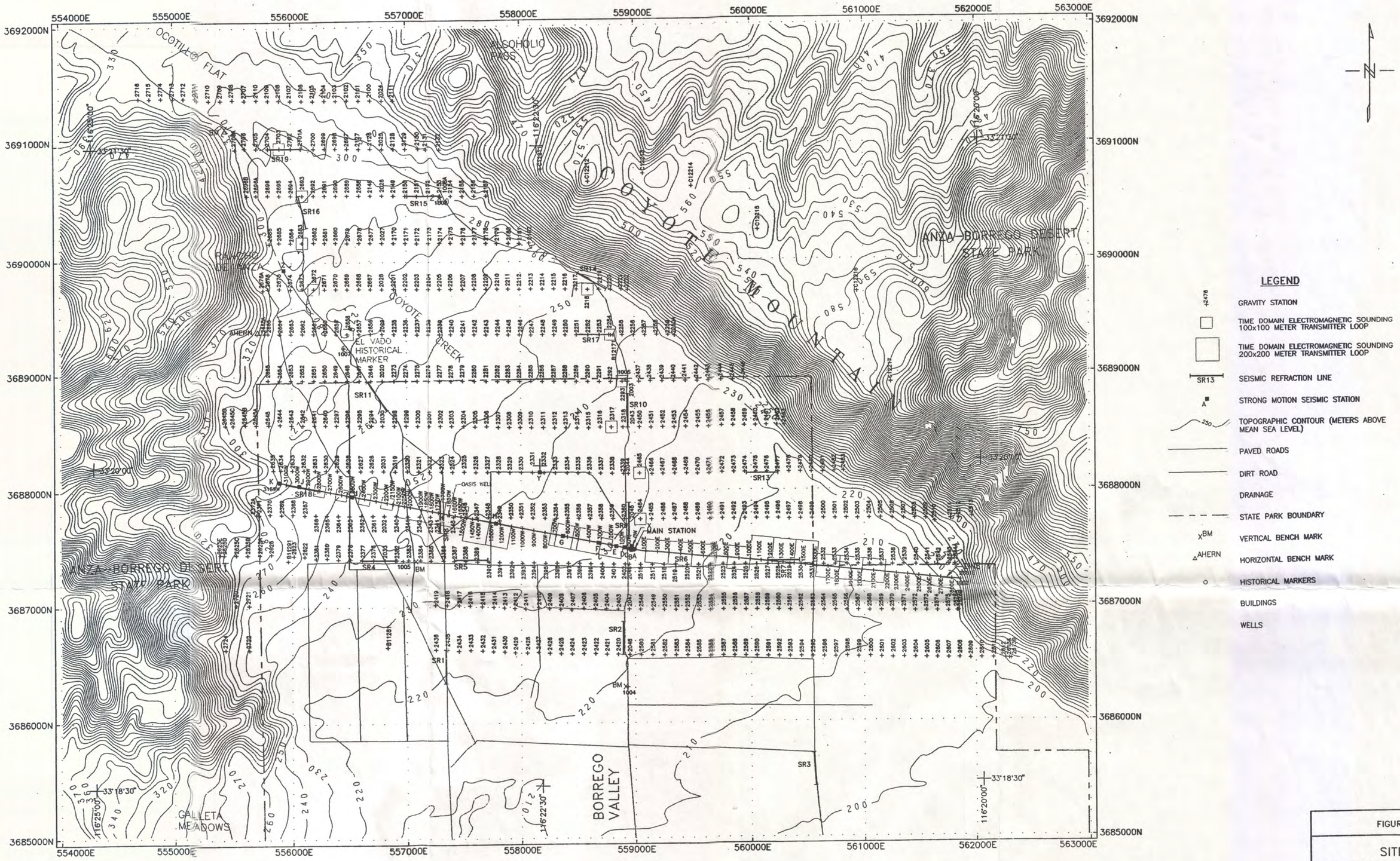
This report presents the results of the 3-D geophysical studies of the upper Borrego Valley conducted from September, 1995 to February, 1996. The purpose of the investigation was to generate a model of depth to groundwater and crystalline basement in the upper Borrego Valley. Several geophysical methods were used during this investigation including time-domain electromagnetic (TDEM), seismic refraction, and gravity methods. TDEM soundings were conducted to map depth to groundwater and basement. The seismic refraction survey was conducted primarily to map depth to groundwater and the gravity survey was conducted to map depth to bedrock. The geophysical data acquired during this investigation were combined with data acquired during the earlier investigation along the Borrego Valley Array (Agbabian Associates, 1995).

Sections 2.0- 5.0 discuss the surveying of the geophysical grid, TDEM survey, seismic refraction survey, and gravity survey, respectively.

2. LAND SURVEYING

A total of 557 gravity stations were staked on an approximately 100-by 400-meter grid by a licensed surveyor using a dual frequency differential GPS system operated in kinematic mode. This land survey is estimated to have 1-2 cm horizontal accuracy and 2-3 cm vertical accuracy. The endpoints of several seismic refraction lines were also surveyed during this phase. All other geophysical measurements were tied to the surveyed gravity stations. The geophysical stations along the horizontal array, established during the earlier investigation, were surveyed using a total station system and have estimated horizontal and vertical accuracy of about of 1 cm.

Figure 1 presents the locations of all geophysical measurement stations from the 2-D and 3-D investigations.



NOTE:
1) COORDINATE SYSTEM IS UNIVERSAL TRANSVERSE MERCATOR GRID SYSTEM–ZONE 11, NAD27
2) ROADS, DRAINAGES, WELLS, BUILDINGS, ETC. DIGITIZED FROM USGS 7.5 MINUTE, CLARK LAKE AND BORREGO PALM CANYON, CALIFORNIA QUADRANGLES
3) SURFACE TOPOGRAPHY BASED ON USGS DIGITAL ELEVATION MODELS FOR 7.5 MINUTE, CLARK LAKE AND BORREGO PALM CANYON, CALIFORNIA QUADRANGLES

SCALE
250 0 250 500 750 1000
(meters)

FIGURE – 1

SITE MAP
GEOPHYSICAL INVESTIGATION

Upper Borrego Valley
SAN DIEGO COUNTY, CALIFORNIA

AGBABIAN ASSOCIATES, INC.
engineers and consultants
1111 S. Arroyo Parkway, Suite 470, Pasadena, CA 91105

FEB. 28, 1998
C:\KAIMA\BORRO1.DWG

3. TIME DOMAIN ELECTROMAGNETIC SOUNDINGS

3.1. INTRODUCTION

TDEM soundings were conducted at selected locations to map depth to groundwater and basement. Saturated sediments have a much lower resistivity than unsaturated sediments and crystalline rock and, therefore, models of TDEM data should provide reasonable estimates of depth to groundwater and crystalline basement.

A total of 12 TDEM soundings were made in the upper Borrego Valley, from November 27 to December 1, 1995. These soundings were conducted at gravity stations 250W, 2484, 2465, 2317, 2293, 2254, 2218, 2703, 2693, 2683, 2672, and 2658 as shown in Figure 1. The models developed from these soundings and the models for the 24 soundings conducted during the 2-D geophysical studies along the horizontal array were used in conjunction with the seismic refraction data to develop a groundwater elevation model. The models were also used to constrain gravity modeling of basement depth.

3.2. FIELD PROCEDURES

A Geonics EM-57 and/or EM-47 transmitter (Tx) and a Protem digital receiver (Rx) were used for the soundings. A transmitter loop consisting of insulated 8 gauge copper wire was laid on the ground in a square loop with 100m or 200m sides. A portable Honda generator was used as a power source for the EM-57 Tx and supplied about 12.0 amps of current to the 100x100m Tx coil and 6.5 amps to the 200x200m Tx coil configuration. The EM-47 transmitter was powered by its own internal power source and was able to supply about 3 amps of current to a 100x100m Tx coil. A high and low frequency receiver coil was used with the EM-47 and EM-57 transmitters, respectively. The receiver coil was set up in the center of the transmitter loop during data recording. A wood leveling frame was used to orient the receiver coil horizontally, therefore allowing the vertical component of the resulting magnetic field to be recorded. A reference cable between the transmitter and receiver synchronized the system. The transmitter and receiver were operated in accordance with manufacturers operating instructions. Resulting data from each sounding was stored in the receiver's internal memory and periodically downloaded to a laptop computer.

3.3. DATA PROCESSING

TDEM sounding data were processed using the forward and inverse modeling computer program TEMIX-GL by Interpex Ltd. TEMIX-GL is a 1-D TDEM modeling program and, therefore assumes that the resistivity layers are horizontal, homogeneous, and isotropic. Data processing involved loading the field data into the computer program, entering header information and pertinent field parameters, masking noisy data values,

forward modeling to establish a realistic starting resistivity versus depth model, and inverse modeling to find a model which most closely fits the data in a least squares sense. Equivalence analysis was also performed on the inverse models to determine the range of models which fit the data with an error no more than 1 percent higher than that of the best fit model. Where possible a three layer resistivity model (layers for unsaturated alluvium, saturated alluvium, and basement) were fit to the field data.

TDEM data acquired during the earlier phase of the investigation were also reprocessed to take advantage of the known depth to water in a new water well (Oasis well) near station 1650W.

3.4. RESULTS AND CONCLUSIONS

Resistivity versus depth models for the TDEM Soundings are presented in Appendix A. These figures include a plot of apparent resistivity versus time for the field data, a theoretical resistivity-time curve for the best fit model, and a plot of resistivity versus depth for both the best fit and equivalent models.

The results of inverse modeling of the TDEM soundings are summarized in Table 1. The estimated errors in the depths of each layer are based on the equivalence analysis of the 1-D models. However, in some areas the errors may be greater due to 2 and 3-D effects. The models of TDEM data from sounding locations near the mountains, where bedrock is likely to have a steep dip, may have errors much larger than those resulting from the equivalence analysis because a 1-D model is invalid.

Modeled groundwater and basement depths at stations 1600W and 200W/200E agree well with known depths from the adjacent Oasis well and the Main Station, respectively. Estimated errors in depth to groundwater and depth to bedrock generally vary from about 5 to 15 percent and 10 to 15 percent of depth, respectively.

The TDEM models were used in conjunction with the seismic refraction data and water well measurements to develop a groundwater elevation model, as discussed in Section 4.4. A comparison of TDEM basement depths versus gravity basement depths is presented in Section 6.

Table 1
SUMMARY OF TDEM RESULTS

TDEM STATION	SURFACE ELEVATION (meters)	GROUNDWATER DEPTH (meters)	ESTIMATED ERROR GROUNDWATER DEPTH (meters)	ESTIMATED GROUND-WATER ELEVATION (meters above MSL)	BASEMENT DEPTH (meters)	ESTIMATED ERROR BASEMENT DEPTH (meters)	ESTIMATED BASEMENT ELEVATION (meters above MSL)
2484	229.44	90	5	139	270	25	-41
2465	231.73	87	5	145	248	40	-16
2317	236.27	97	10	139	168	30	68
2293	238.91	94	5	145	338	40	-99
2254	241.08	95	10	146	294	40	-53
2218	246.47	73	7	173	139	20	107
2703	297.45	79	6	218	141	22	156
2693	289.49	88	10	201	158	25	131
2683	282.65	79	6	204	106	14	177
2672	275.37	98	10	177	119	15	156
2658	267.43	124	15	143	144	21	123
2800W[1]	254.90	91	20	164	440	100	-185
1800W	242.63	109	15	134	231	45	12
1600W	241.18	106	15	135	271	45	-30
1400W	239.70	107	12	133	346	30	-106
1200W	238.76	103	14	136	344	25	-105
650W	233.54	95	15	139	225	25	9
600W	233.26	98	15	135	227	25	6
400W	231.35	96	12	135	238	25	-7
250W	229.85	97	15	133	244	30	-14
200W	229.48	95	12	134	243	30	-14
200E	225.94	96	13	130	292	30	-66
400E	224.48	91	13	133	339	32	-115
600E	222.43	87	12	135	391	50	-169
900E	219.79	86	15	134	373	40	-153
1100E	218.24	90	15	128			
1300E	215.69	93	15	123			
1500E	213.36	91	15	122			
1700E	212.34	85	20	127			
1900E	210.58	84	10	127			
2100E	209.02	67	15	142			
2300E	208.80	84	15	125			

[1] Results questionable due to cultural noise (i.e. powerlines)

4. SEISMIC REFRACTION SURVEY

4.1. INTRODUCTION

Seismic refraction soundings were conducted at 18 locations (SR1-SR11 and SR13-SR19) as shown in Figure 1. The purpose of the seismic refraction survey was to determine depth to groundwater and, where possible, depth to basement.

The water table was the primary target on seismic refraction lines SR1 to SR11, and SR13, 15, 16, 17, and 19. Bedrock was a target on lines SR14 and SR18.

Depth to groundwater data were combined with that determined from the TDEM soundings to provide a model of the approximate water table depth in the upper Borrego Valley.

4.2. FIELD PROCEDURES

Seismic refraction equipment used during this investigation consisted of a 48-channel Geometrics Strataview R48 signal enhancement seismograph, 8 Hz vertical geophones, and a Betsy Downhole Percussion Firing Rod (Betsy) with 500 and 400-grain black powder charges.

Each line consisted of 48 geophones spaced 20 feet (6.1 meters) apart for a total line length of 940 feet (286.5 meters). All geophone and shot point locations were measured using a 300-foot tape measure. The lines were either referenced to known gravity station locations or surveyed by a licensed surveyor. Elevations of each geophone location within each line were surveyed using a Nikon AP-7 automatic level.

Between 3 and 7 shots were conducted on each line. Three shots were recorded where the water table was the only visible target and 7 shots where bedrock was also visible in the data. The final seismic record at each shot location was the result of staking multiple shots to increase the signal to noise ratio. Paper copies of all seismic records were printed in the field, and data were also stored on floppy disk.

4.3. DATA PROCESSING

Seismic refraction data where the water table was the primary target were processed using the slope intercept method (Telford et al, 1990). This simple interpretation method assumes that all subsurface velocity layers are horizontal, a valid assumption for the water table beneath a short line. The first step in data processing consisted of picking the arrival time of the first energy received at each geophone (first break) for each shot. The first break arrivals on each seismic record were either a direct arrival from a

compressional wave (P-wave) traveling in the surface layer, or a refracted arrival from a subsurface layer with higher velocity. The first arrival times were picked using the computer program FIRSTPIX™ by Interpex Limited. The arrival times for each shot point were saved as ASCII files and imported into the computer program GRAPHER™ by Golden Software, Inc. where plots of travel time versus distance were made. The velocity and intercept times for each subsurface layer for calculated from the travel time plots and imported into an in-house computer program which calculated the thickness and depth of each layer.

Interpreted P-wave velocities of unsaturated sediments as determined from the seismic refraction data vary from about 325 m/s at the surface to as much as 1,250 m/s above the water table. Interpreted P-wave velocities of the saturated sediments as determined from the seismic refraction data vary from about 1,800 to 2,250 m/s. These velocity ranges appear to agree well with those determined from Oyo P-S Suspension logging at the Main Station and Oasis wells, submitted in previous reports.

The purpose of line SR14 which was conducted adjacent to Coyote Mountain was to determine if crystalline rock was present at shallow depth beneath the Tertiary continental deposits exposed at the surface on this portion of the mountain. Velocities of over 3,100 m/s in the travel time data for this line confirmed that only a thin layer of continental deposits overly crystalline rock at this location.

Line SR18 was not processed because the shotpoints on the eastern half of the line were not able to obtain first arrivals from the basement surface because of increasing depth to basement. Without first arrival data from forward and reverse shots a dipping refractor cannot be modeled. In general, a high explosive energy source would be required to map basement at this location. The black powder source used during this survey was only adequate to map a target to a depth of about 100 meters or less.

4.4. RESULTS AND CONCLUSIONS

The results of the seismic refraction soundings conducted to map depth to ground water are presented in Table 2. After processing the seismic refraction data it became evident that depth to groundwater in some areas was significantly underestimated. For example, the modeled depth to groundwater for SR8 was 93 meters whereas groundwater was measured at a depth of about 104 meters in the adjacent Oasis well, and the modeled depth to groundwater in SR9 and SR6 were 84 and 72 meters respectively while the approximate depth at the Main Station was 94 meters. These underestimates in depth to groundwater are caused by hidden layer problems. Because these hidden layers (layers with increasing velocity but not sufficient thickness to have associated first arrivals) were not resolved by the modeling, the depths to underlying layers are underestimated. To help compensate for this problem, the average P-wave velocity for the unsaturated sediments was calculated from the P-S Suspension logs at the Main Station and Oasis

well. The average velocity of the unsaturated sediments at the Main Station and Oasis well were 800 m/s and 835 m/s, respectively.

Each travel time data were remodeled using the average velocity of unsaturated sediments from the Main Station or Oasis well, depending on which was closest to the line, and the velocity and intercept time for the water table refractor calculated from the travel time data. Results of this modeling is also presented in Table 2. With the exception of the three seismic refraction soundings in the northernmost portion of the valley (SR15, 16, and 19) the depth to groundwater calculated using this method is always greater than that calculated directly from the travel time plots. Calculated depths to groundwater for lines SR8 and SR9 are much closer to that known from adjacent wells.

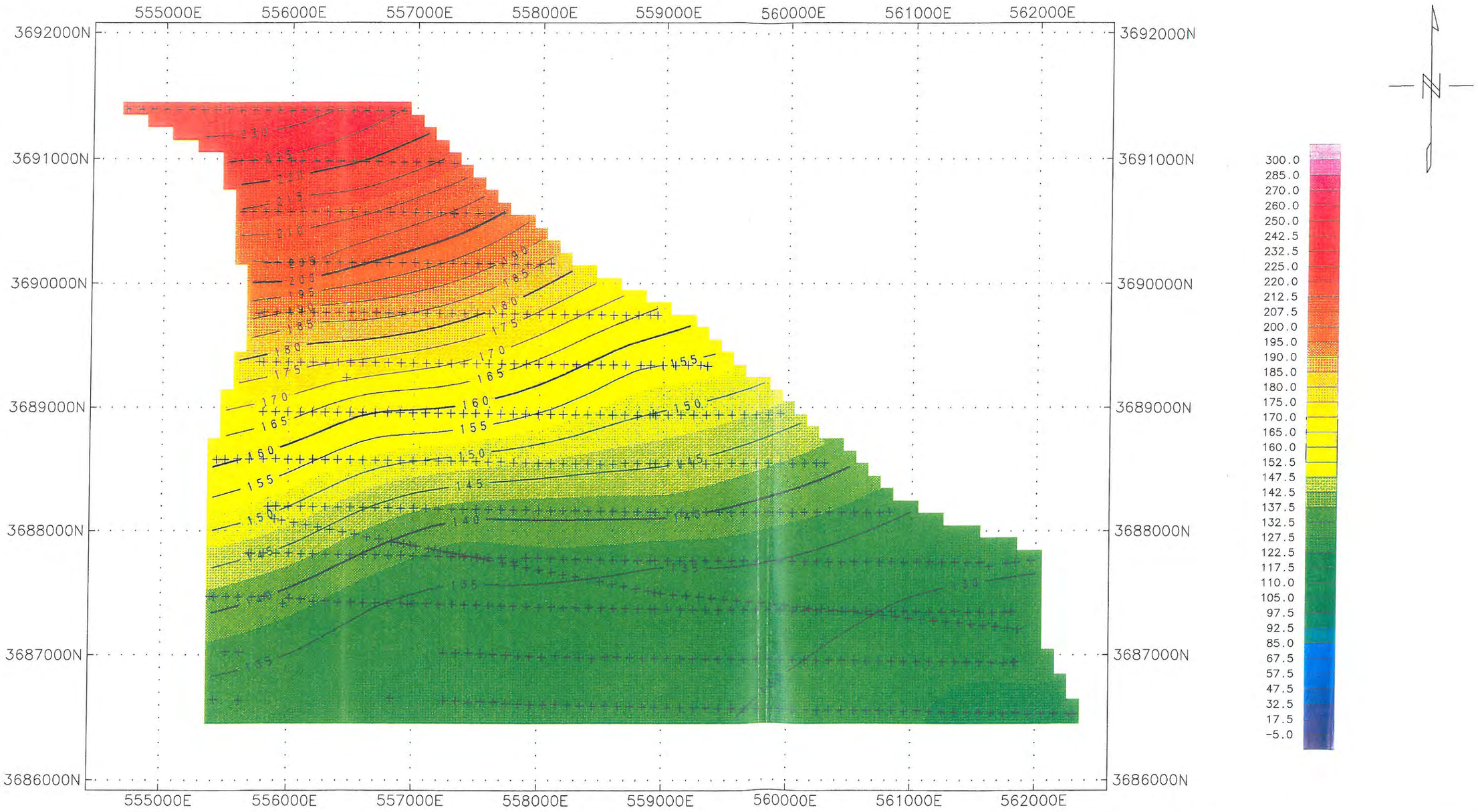
With the exception of lines SR15, 16, and 19 in the northern portion of the valley where the average velocity of the unsaturated sediments appears to be much higher, true depths to groundwater probably lie somewhere between that modeled directly from the travel time data and that modeled using the average velocity for unsaturated sediments from the P-S Suspension logs. Depth to groundwater at the locations of lines SR15, 16, and 19 is probably slightly greater than that modeled directly from the travel time data depending on the magnitude of the hidden layer problem.

A smooth groundwater elevation model was generated using the seismic refraction models, TDEM models, and known groundwater elevations at the Main Station, Oasis well, and a well located about 1.2 kilometers southeast of the Main Station which is being monitored by the County of San Diego, California. County records indicate that the groundwater elevation in the Borrego Valley is declining as much as one meter per year. It can therefore be assumed that the current groundwater elevation at the Main Station is about 2 meters lower that it was when the borehole was drilled. The resulting contour map of groundwater elevation is presented as Figure 2. Approximate groundwater depths were calculated by subtracting the groundwater elevation model from a surface topography model generated from surveyed gravity station elevations. A contour map of groundwater depth is presented as Figure 3. Errors in groundwater depth are estimated to be on the order of 10 meters with the errors greatest in the northern portion of the valley where there is the least amount of well control.

Table 2

SUMMARY OF SEISMIC REFRACTION RESULTS

SEISMIC REFRACTION LINE	APPROXIMATE SURFACE ELEVATION (meters)	GROUNDWATER DEPTH (meters) DIRECT MODELING	ESTIMATED GROUND-WATER ELEVATION (meters above MSL) DIRECT MODELING	GROUNDWATER DEPTH (meters) V_{ave}=800-835m/s	ESTIMATED GROUND-WATER ELEVATION (meters above MSL) V_{ave}=800-835 m/s
SR1	223.0	88	135	95	128
SR2	220.9	88	133	96	125
SR3	202.7	75	128	88	115
SR4	235.7	84	152	107	129
SR5	234.8	80	155	108	127
SR6	221.9	72	150	100	122
SR7	215.7	70	146	87	129
SR8	241.1	93	148	98	143
SR9	230.5	84	147	98	133
SR10	235.9	80	156	84	152
SR11	258.6	100	159	101	158
SR13	221.7	60	162	86	136
SR15	285.5	79	207	70	216
SR16	287.2	62	225	50	237
SR17	243.4	62	181	97	146
SR19	296.5	63	234	48	249



CONTOUR INTERVAL: 5 METERS
ELEVATION IN METERS ABOVE MEAN SEA LEVEL

Scale 1:32000

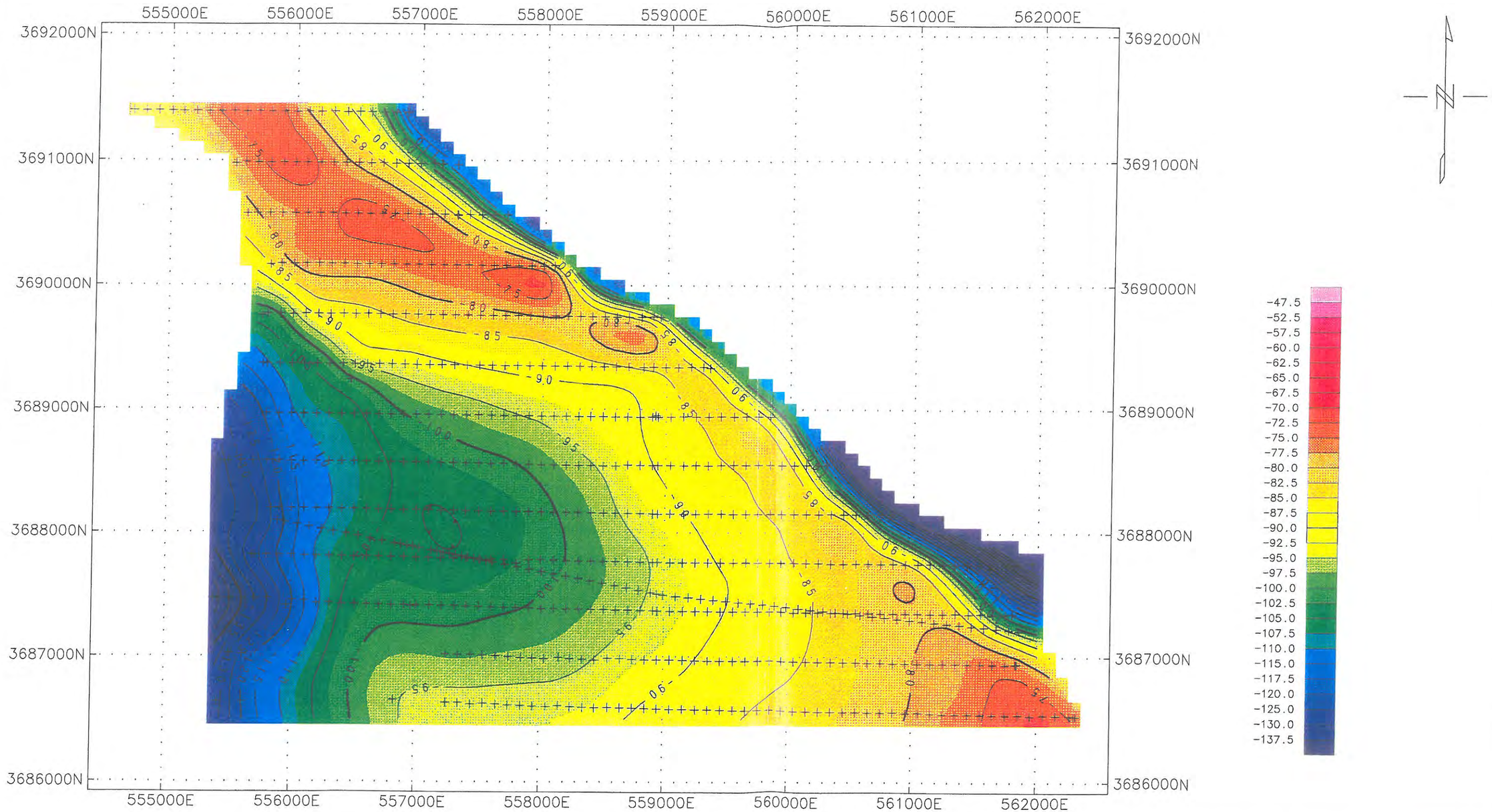
500 0 500 1000 1500
(metres)

NOTE: COORDINATES ARE IN UNIVERSAL TRANSVERSE MERCATOR GRID SYSTEM – ZONE 11, NAD 27

FIGURE 2
CONTOUR MAP
GROUNDWATER ELEVATION

Upper Borrego Valley
San Diego County, California

Agbabian Associates



CONTOUR INTERVAL: 5 METERS

Scale 1:32000

500 0 500 1000 1500

(metres)

NOTE: COORDINATES ARE IN UNIVERSAL TRANSVERSE MERCATOR GRID SYSTEM - ZONE 11, NAD 27

FIGURE 3
CONTOUR MAP
GROUNDWATER DEPTH

Upper Borrego Valley
San Diego County, California

Agbabian Associates

5. GRAVITY SURVEY

5.1. INTRODUCTION

A total of 557 gravity stations were occupied along an approximately 100-by 400-meter grid during this phase of the investigation. The location of these gravity stations and the 70 gravity stations along the horizontal array (Line 1) are shown in Figure 1. The purpose of the gravity survey was to map depth to crystalline basement.

5.2. FIELD PROCEDURES

A LaCoste & Romberg Model D gravity meter (serial number D-204) was used to measure the earth's relative gravitational field at 557 new gravity stations between November 13 and December 21, 1995. During the earlier investigation along the horizontal array, measurements were made at 100 meter intervals along the profile from June 8 - June 9, 1995 and from June 22 - June 30, 1995 using a L&R Model G gravity meter (D-22). Measurements were also made at several intermediate stations at 50 meter intervals on July 1, 1995 (Agbabian Associates, 1995).

Before beginning the gravity survey it was necessary to locate a base station with known absolute gravity. Using an absolute gravity base station as reference permits conversion of relative gravity field measurements to absolute gravity. The data can then be merged with publicly available absolute gravity data. The State of California maintains a network of gravity base stations where absolute gravity information is available. None of these base stations in the vicinity of the survey area could be located so an absolute gravity base station established by University of California, Riverside (UCR) at the Peg Leg Smith Monument (PEGLEG), located about 6 miles southeast of the survey line, was used for control. The PEGLEG base station is tied to Southern California Base (SCB) 330, in Indio, California. The base station used in the earlier investigation along the horizontal array (PLS) was about 60 feet away from the true PEGLEG base station. PLS was therefore tied to PEGLEG with 4 measurement loops and the earlier data reprocessed using the correct absolute gravity value for PLS so that it could be merged with the new gravity data.

Gravity measurements were made as follows. An aluminum base plate was placed on the ground adjacent to the survey station. The gravity meter was placed on the concave base plate and moved until the cross and long levels on the meter indicated that it was approximately level. The leveling was completed by adjusting the three leveling screws on the meter. The internal beam of the gravity meter was then released and the nulling dial adjusted until the forces on the internal mass were nulled as indicated by the electronic display (galvanometer) or by the optical system. The meter reading, in dial divisions, was recorded in a field note book along with station location, date, time of measurement, instrument height relative to the surveyed station, and miscellaneous

comments. At least two measurements were made at each station. If there was more than about 10 microgals difference in the two measurements, additional measurements were taken until a good average was obtained. The meter was lifted from the base plate, placed back on the plate, and releveled between repetitive measurements.

All gravity measurement loops began and ended at a base station so that corrections for instrument drift could be made. Generally, the base station was reoccupied at 2-3 hour intervals. Because PEGLEG is located about 6 miles away from the survey line, five local base stations (1004, 1005, 1006, 1007, 1008A) were established and tied to PEGLEG with 5 measurement loops. Although these base stations were used to dedrift all field measurements, PEGLEG was occupied at the beginning and end of each field day for additional control.

5.3. DATA REDUCTION AND MODELING

The steps involved in reduction of the gravity data are summarized below.

- Convert measurement in dial divisions to relative gravity in milligals.
- Average multiple measurements at each station.
- Make instrument height correction
- Remove tidal effects.
- Make drift corrections.
- Calculate absolute gravity.
- Apply latitude correction
- Apply free air correction
- Apply Bouguer correction
- Apply terrain correction.

The gravity measurements made at each station were first converted from dial divisions to milligals using the calibration table for D-204 and a calibration constant of 1.1625 for D-22. An average meter reading and time was then calculated for the multiple readings taken at each station and then corrected for instrument height by adding 0.0308596 times the instrument height in meters. These data were then input into a computer program which applied the corrections for earth tides, which result from the changing position of the earth relative to the moon and sun, and also corrected for instrument drift. After the tidal corrections were made the instrument drift rate for each loop was then calculated using the tide corrected base station reading at the beginning and end of the loop. A correction for the calculated drift was then applied to the field data. The result of these corrections was a dedrifted meter reading at each station in milligals. These readings were then converted to absolute gravity using the absolute gravity calculated at each local base station as reference. All local base stations were tied to PEGLEG which has an absolute gravity of 979.507 milligals.

The theoretical gravity was calculated on the earth's spheroid (an oblate ellipsoid that approximates the mean sea level surface) for each station location using the 1930 International Gravity Formula:

$$g_t = 978049\left[1 + 0.0052884\sin^2\phi + 0.0000059\sin^2(2\phi)\right]$$

where ϕ = *latitude in North American Datum(NAD) 1927 system*

The 1930 gravity formula was used over more recent formulas because publicly available data in the State of California, which will be used for regional control, was reduced with this formula. Before calculating the theoretical gravity at each station it was necessary to confirm that the surveyed station coordinates were in the NAD27 system and if not convert them. The theoretical gravity value calculated at each station was used to correct for latitude variations.

The free air correction, which compensates for the height of the survey station above the sea level reference datum, was made and the free air anomaly determined from the following equation:

$$g_{fa} = g_a - g_t + 0.308596h_s$$

where g_{fa} = *free air anomaly*
g_a = *absolute gravity*
g_t = *theoretical gravity*
h_s = *station elevation in meters*
$0.308596h_s$ = *free air correction*

After the free air anomaly was calculated, the Bouguer correction was determined and the Bouguer anomaly calculated using the following equation:

$$g_{ba} = g_{fa} - 0.0419088\rho h_s$$

where g_{ba} = *Bouguer anomaly*
g_{fa} = *free air anomaly*
ρ = *Bouguer density of rock in grams per cubic centimeter (2.67 g/cm^3)*
h_s = *station height in meters*

Finally, the terrain correction, which compensates for the effects of variations in terrain in the vicinity of the station, was determined and the Complete Bouguer Anomaly calculated using the following equation:

$$g_{cba} = g_{ba} + g_{tc}$$

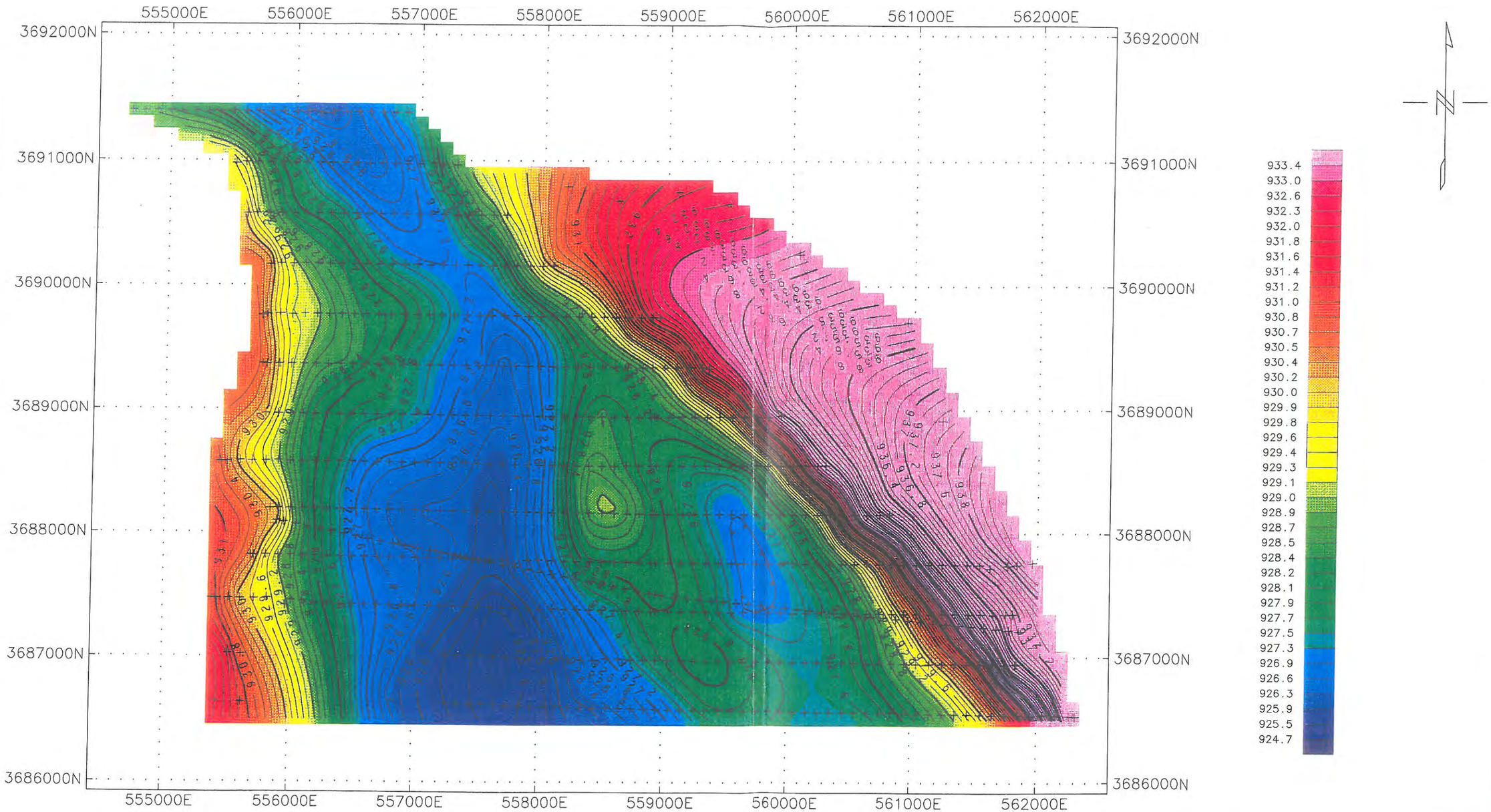
where g_{cba} = *complete Bouguer anomaly*
g_{ba} = *Bouguer anomaly*
g_{tc} = *terrain correction*

The terrain corrections were determined using a computer program, developed by University of California, Riverside, which uses the United States Geological Survey (USGS) 30 meter digital elevation models (DEMs) for terrain corrections out to a distance of 1 kilometer (km) from the station, and USGS 1° DEMs for terrain corrections from a distance of 1 to 22 km from the station. Where necessary, terrain corrections for the A and B Hammer zones (corrections for terrain from 0-2 meters and 2-16.6 meters from the station, respectively) were calculated in the field and added to the total terrain correction. Complete bouguer anomaly data in the California gravity data base are increased by 1000 milligals to ensure that the contours on California State gravity maps are always positive. The same adjustment was made to data acquired during this investigation. Reduction of the gravity data is summarized in Table B-1 (Appendix B).

A color enhanced contour map of the Complete Bouguer gravity anomaly is presented as Figure 4.

Before the gravity data can be modeled it is necessary to remove the regional gravity field so that only the effects of the structure of interest (in this case basement) are present in the data. Prior to calculating the regional gravity field the gravity data acquired during this investigation was combined with data from the State of California data base within 8 km of the perimeter of the study area. Measurements from the State data base within the survey area were deleted because the precision was generally not as high as measurements made during this investigation. The regional gravity field was calculated using a computer program based on the Griffin (1949) method and is presented as Figure 5. Due to sparse regional gravity coverage in the mountain ranges adjacent to the upper Borrego valley, calculation of a well constrained and accurate regional field was not possible. Calculation of an accurate regional field was further complicated by the fact that densities of basement rock in the ranges on each side of the valley may be significantly different.

The residual gravity anomaly was calculated by subtracting the complete Bouguer anomaly data from the regional field and is presented as Figure 6. Any errors in the calculated regional field will directly lead to errors in the residual gravity anomaly and resulting depth models.



CONTOUR INTERVAL: 0.2 MILLIGALS
1000 MILLIGALS ADDED TO COMPLETE BOUGUER ANOMALY

Scale 1:32000

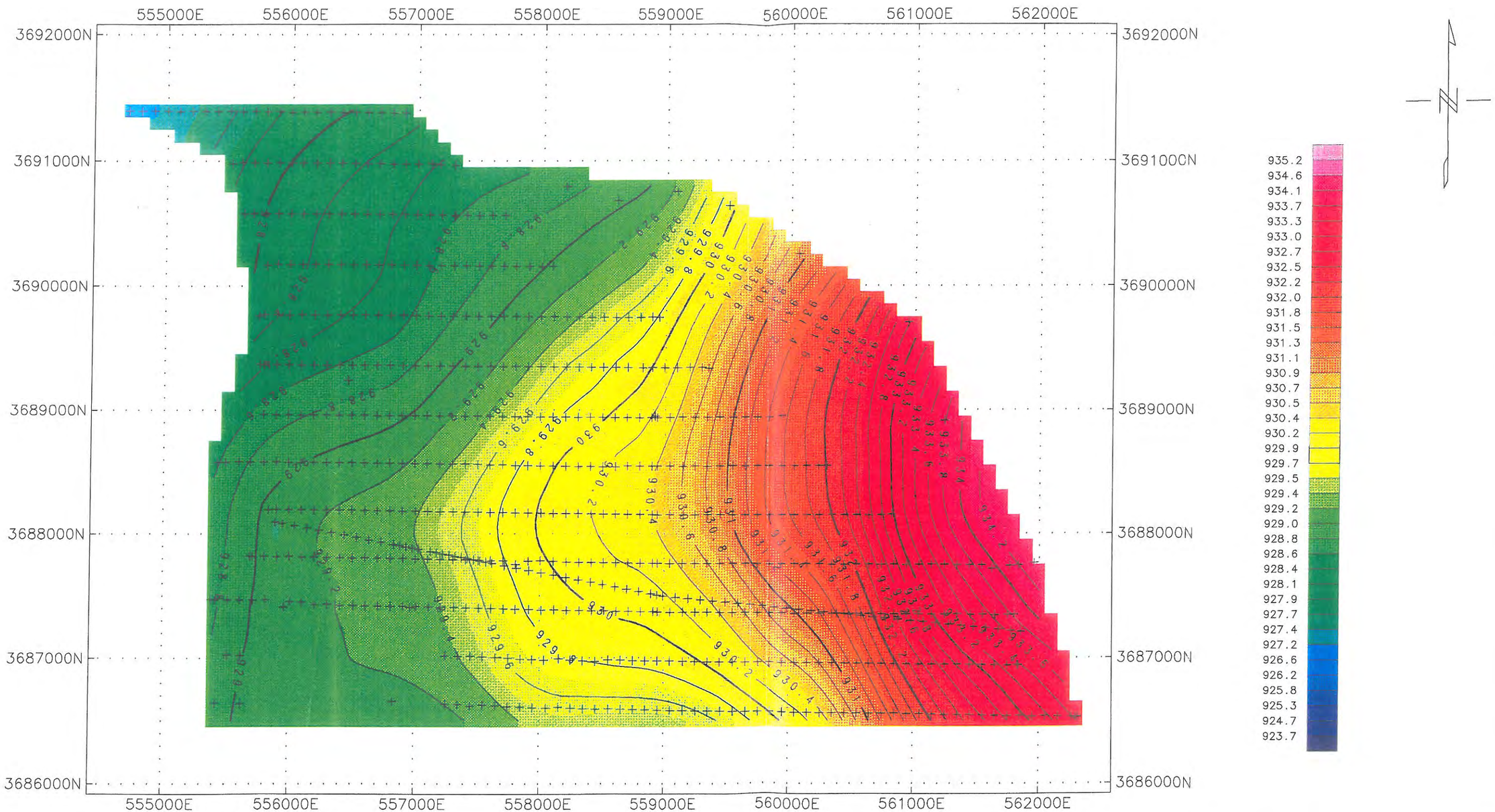
500 0 500 1000 1500
(metres)

NOTE: COORDINATES ARE IN UNIVERSAL TRANSVERSE MERCATOR GRID SYSTEM – ZONE 11, NAD 27

FIGURE 4
CONTOUR MAP
COMPLETE BOUGUER ANOMALY

Upper Borrego Valley
San Diego County, California

Agbabian Associates



CONTOUR INTERVAL: 0.2 MILLIGALS
1000 MILLIGALS ADDED TO REGIONAL GRAVITY ANOMALY

Scale 1:32000

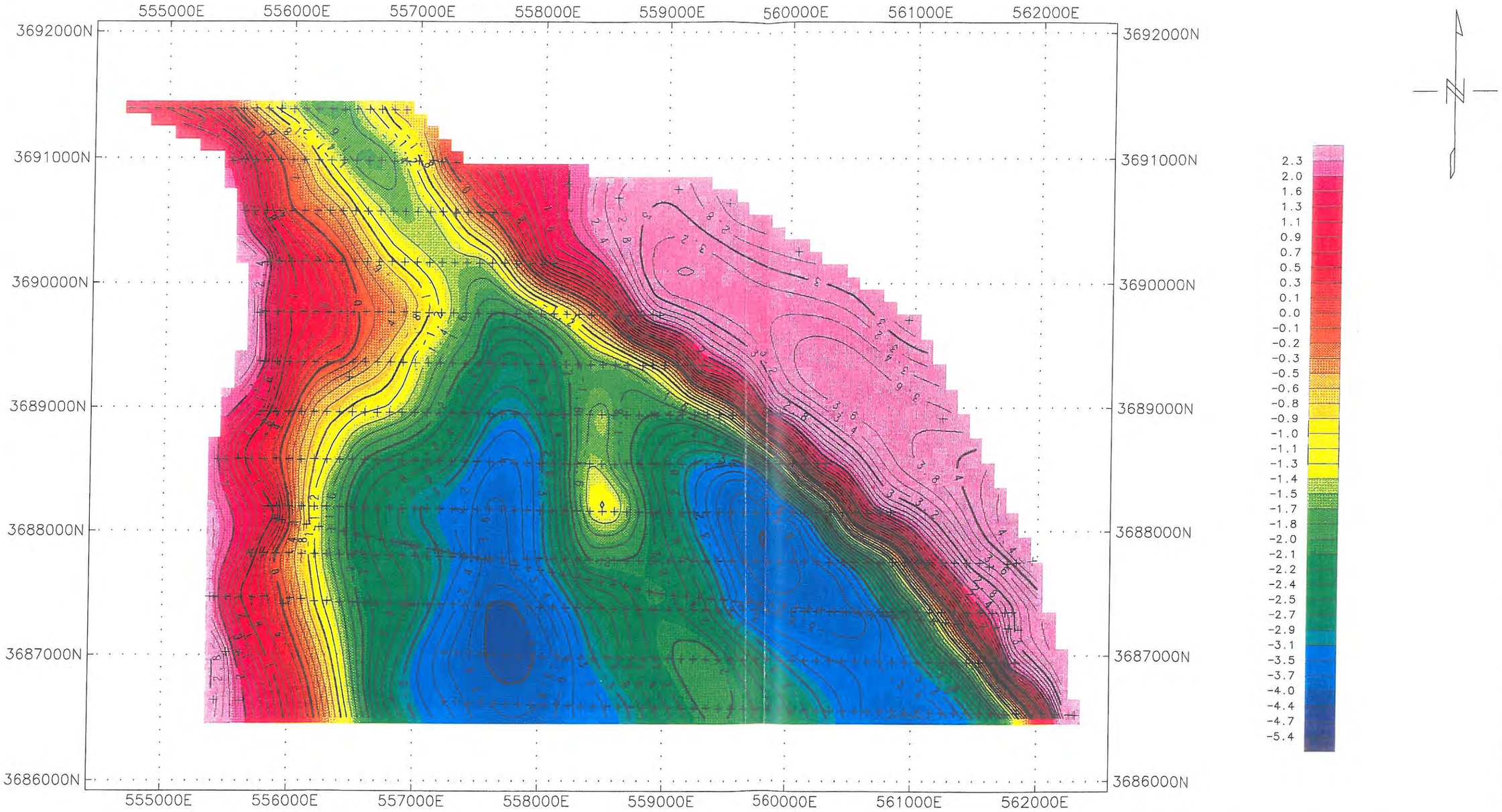
500 0 500 1000 1500
(metres)

NOTE: COORDINATES ARE IN UNIVERSAL TRANSVERSE MERCATOR GRID SYSTEM - ZONE 11, NAD 27

FIGURE 5
CONTOUR MAP
REGIONAL GRAVITY ANOMALY

Upper Borrego Valley
San Diego County, California

Agbabian Associates



CONTOUR INTERVAL: 0.2 MILLIGALS

Scale 1:32000

500 0 500 1000 1500

(metres)

NOTE: COORDINATES ARE IN UNIVERSAL TRANSVERSE MERCATOR GRID SYSTEM - ZONE 11, NAD 27

FIGURE 6
CONTOUR MAP
RESIDUAL GRAVITY ANOMALY

Upper Borrego Valley
San Diego County, California

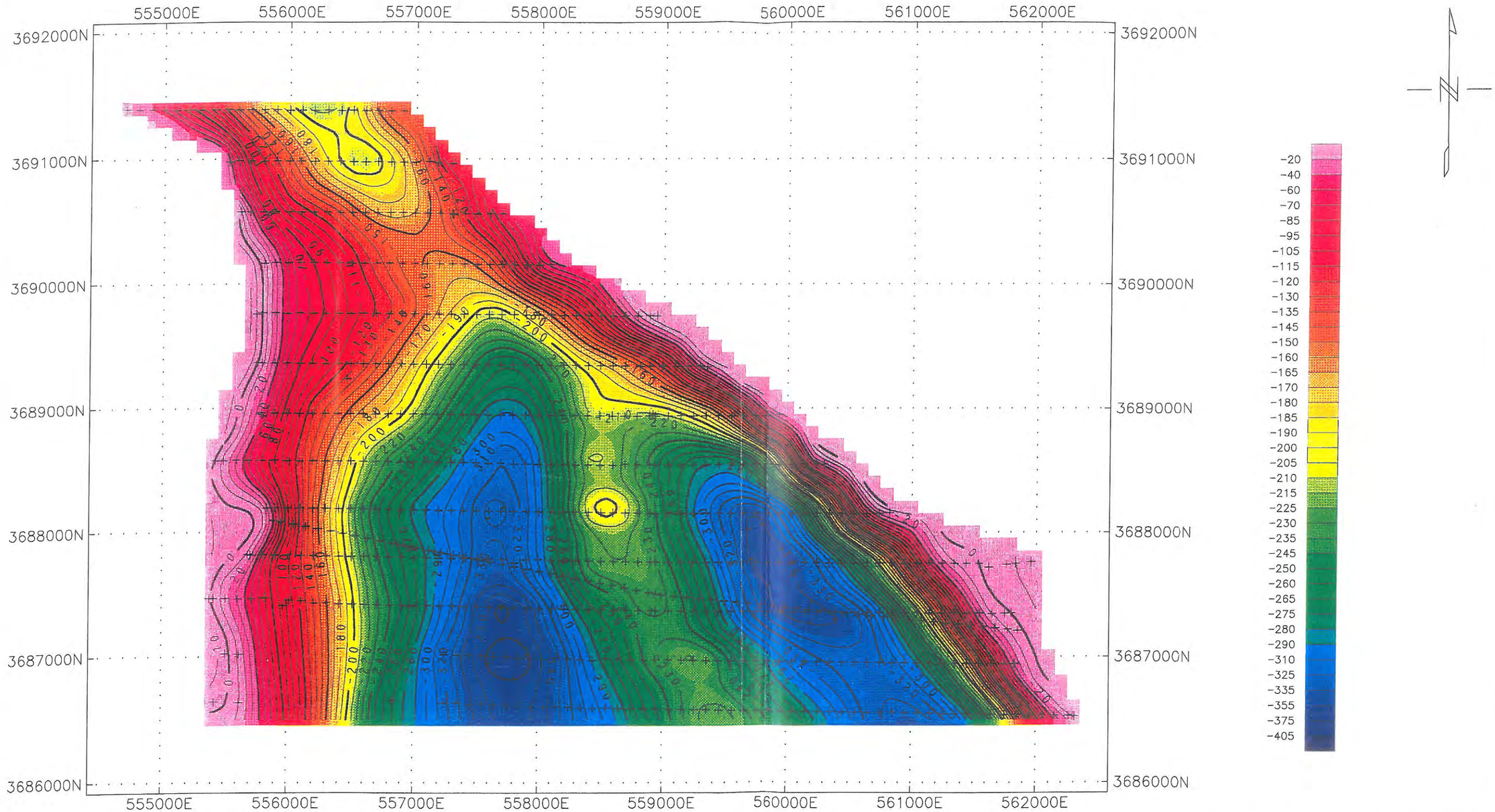
Agbabian Associates

A 3-D inversion of the residual gravity anomaly was made using a computer program developed at UCR. This program assumes a hyperbolic increase in density with depth and implements the inversion using a method similar to that of Bott (1960). The hyperbolic density-depth function is determined using the method of Litinsky (1989) with input information being a surface density contrast, known depth to basement, residual gravity anomaly at that location, and residual gravity anomaly equal to zero basement depth. Errors in this depth inversion are expected to be on the order of 15 percent with basement depths being underestimated in the middle of the basin and overestimated on the basin margins.

5.4. RESULTS AND CONCLUSIONS

Figure 7 presents a model of basement depth (note that basement depths are presented as negative numbers so the color scale is consistent with that of previous figures). Errors in the basement depth model are estimated to be the greater of 25 meters or 15 percent of depth. Figure 8 presents a model of basement elevation calculated by adding the basement depth model to a surface elevation model calculated from the 7.5 minute digital elevation models of the Borrego Palm Canyon and Clark Lake, California quadrangles.

In analyzing the basement elevation contour map, it appears that there are two distinct basins in the southern portion of the survey area. On the west site of the upper Borrego valley there is a south-north trending basin with a maximum depth of about 370 meters and on the east side of the valley a southeast-northwest trending basin subparallel to the Coyote Creek Fault. These two basins are separated by a bedrock ridge which in the southernmost portion of the survey area appears to be trending southeast-northwest and in the central portion of the survey area is trending south-north. In the northern portion of the survey area these two basins merge into a southeast-northwest trending basin parallel to the Coyote Creek Fault.



CONTOUR INTERVAL: 10 METERS

Scale 1:32000

500 0 500 1000 1500

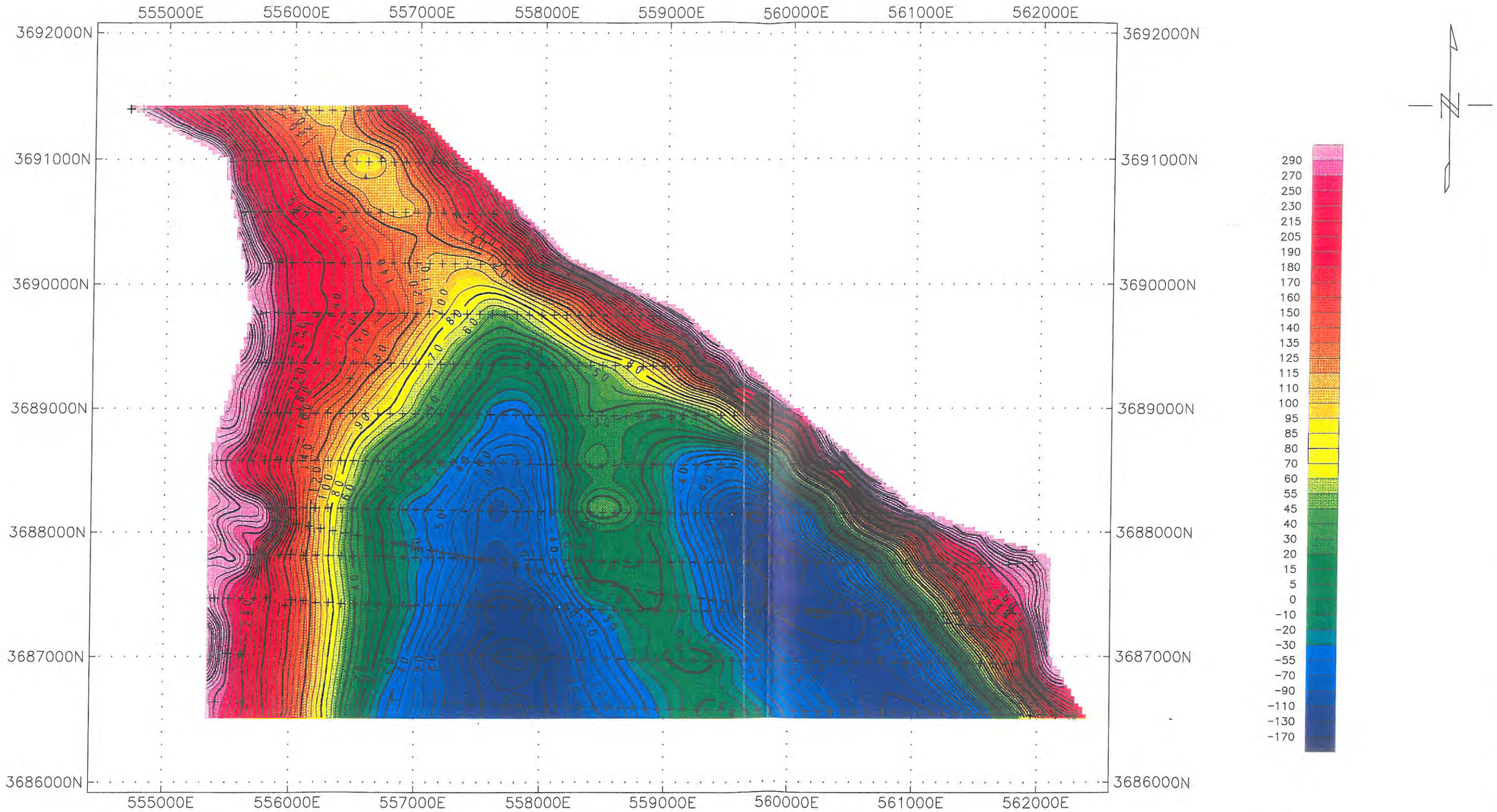
(metres)

NOTE: COORDINATES ARE IN UNIVERSAL TRANSVERSE MERCATOR GRID SYSTEM – ZONE 11, NAD 27

FIGURE 7
CONTOUR MAP
BASEMENT DEPTH

Upper Borrego Valley
San Diego County, California

Agbabian Associates



CONTOUR INTERVAL: 10 METERS
ELEVATION IN METERS ABOVE MEAN SEA LEVEL

Scale 1:32000

500 0 500 1000 1500
(metres)

NOTE: COORDINATES ARE IN UNIVERSAL TRANSVERSE MERCATOR GRID SYSTEM - ZONE 11, NAD 27

FIGURE 8
CONTOUR MAP
BASEMENT ELEVATION

Upper Borrego Valley
San Diego County, California

Agbabian Associates

6. CONCLUSIONS

A comparison of basement depths calculated from the TDEM soundings and the gravity model is presented as Table 3. The table also compares the known basement depths at the Main Station and Oasis well to those in the gravity basement model.

Of the 25 TDEM basement depths, 10 are within 20 meters of the gravity basement depth, 13 are within the error bounds of one of the methods, and a depth could be determined for 21 of the locations which satisfies the error of each method. The four stations which do not fit the above criteria include 2293, 2254, 2218 and 2800W. The TDEM sounding data for 2800W appears to be affected by the same cultural noise that affected soundings 2600W, 2400W, 2200W and 2000W which were never modeled. TDEM sounding 2218 is close to Coyote Mountain and the TDEM model may have significant error due to the dipping bedrock surface. The models for TDEM soundings 2293 and 2254 indicate a significantly greater depth to basement than that indicated by the gravity model. These sounding locations are near the intersection of the southeast basin and the south-north trending bedrock ridge. It is possible that the bedrock ridge does not intersect Coyote Mountain and that the southeastern basin connects to the northernmost basin. The gravity basement depth at the Main Station was controlled based on the known depth and the modeled gravity basement depth at the Oasis well is about 33 meters deeper than the known depth.

The uncertainty in the regional gravity field may be responsible for some of the differences in depth between the TDEM and gravity basement depths. Better gravity coverage in the mountain ranges around the perimeter of the survey area would be required to calculate a more accurate regional gravity field. Additionally, accurate depths to bedrock in selected portions of the valley could also be used to refine the gravity model. If refinements to the groundwater or basement models are made in the future, they will be submitted as an addendum.

Table 3
COMPARISON OF TDEM AND GRAVITY BASEMENT DEPTHS

TDEM STATION/ WELL	SURFACE ELEVATION (meters)	BASEMENT DEPTH-TDEM (meters)	ESTIMATED ERROR BASEMENT DEPTH-TDEM (meters)	ESTIMATED BASEMENT ELEVATION-TDEM (meters above MSL)	BASEMENT DEPTH-GRAVITY (meters)	ESTIMATED ERROR BASEMENT DEPTH-GRAVITY (meters)	ESTIMATED BASEMENT ELEVATION-GRAVITY (meters above MSL)	DEPTH DIFFERENCE GRAVITY-TDEM (meters)
2484	229.44	270	25	-41	240	36	-11	-30
2465	231.73	248	40	-16	255	38	-23	7
2317	236.27	168	30	68	230	35	6	62
2293	238.91	338	40	-99	215	32	24	-123
2254	241.08	294	40	-53	150	25	91	-144
2218	246.47	139	20	107	70	25	176	-69
2703	297.45	141	22	156	130	25	167	-11
2693	289.49	158	25	131	115	25	174	-43
2683	282.65	106	14	177	75	25	208	-31
2672	275.37	119	15	156	75	25	200	-44
2658	267.43	144	21	123	125	25	142	-19
2800W[1]	254.90	440	100	-185	160	25	95	-280
1800W	242.63	231	45	12	290	44	-47	59
1600W	241.18	271	45	-30	305	46	-64	34
1400W	239.70	346	30	-106	335	50	-95	-11
1200W	238.76	344	25	-105	325	49	-86	-19
650W	233.54	225	25	9	245	37	-11	20
600W	233.26	227	25	6	240	36	-7	13
400W	231.35	238	25	-7	235	35	-4	-3
250W	229.85	244	30	-14	230	35	0	-14
200W	229.48	243	30	-14	228	34	1	-15
200E	225.94	292	30	-66	245	37	-19	-47
400E	224.48	339	32	-115	270	41	-46	-69
600E	222.43	391	50	-169	310	47	-88	-81
900E	219.79	373	40	-153	340	51	-120	-33
Main Station	227.36	228	0	-1	228	34	-1	0
Oasis Well	241.21	267	0	-26	300	45	-59	33

[1] Results questionable due to cultural noise (i.e. powerlines)

7. REFERENCES

Agbabian Associates, 1995, 2-D Geophysical Studies for the Borrego Valley Array, report submitted to Kajima Corporation, October 24, 1995.

Bott, M.H.P., 1960, The use of rapid digital computing methods for direct gravity interpretation of sedimentary basins, Geophysical Journal of the Royal Astronomical Society, 3, 63-67.

Griffin, W.R., 1949, Residual gravity in theory and practice, Geophysics, 14, 39-56.

Litinsky, V.A., 1989, Concept of Effective Gravity: Key to gravity depth determinations of sedimentary basins, Geophysics, 54, 1474-1482.

Telford, W.M., Geldart, L.P., and R.E. Sheriff, 1990, "Applied Geophysics", Second Edition, Cambridge University Press, New York, NY.

APPENDIX A

TIME DOMAIN ELECTROMAGNETIC MODELS

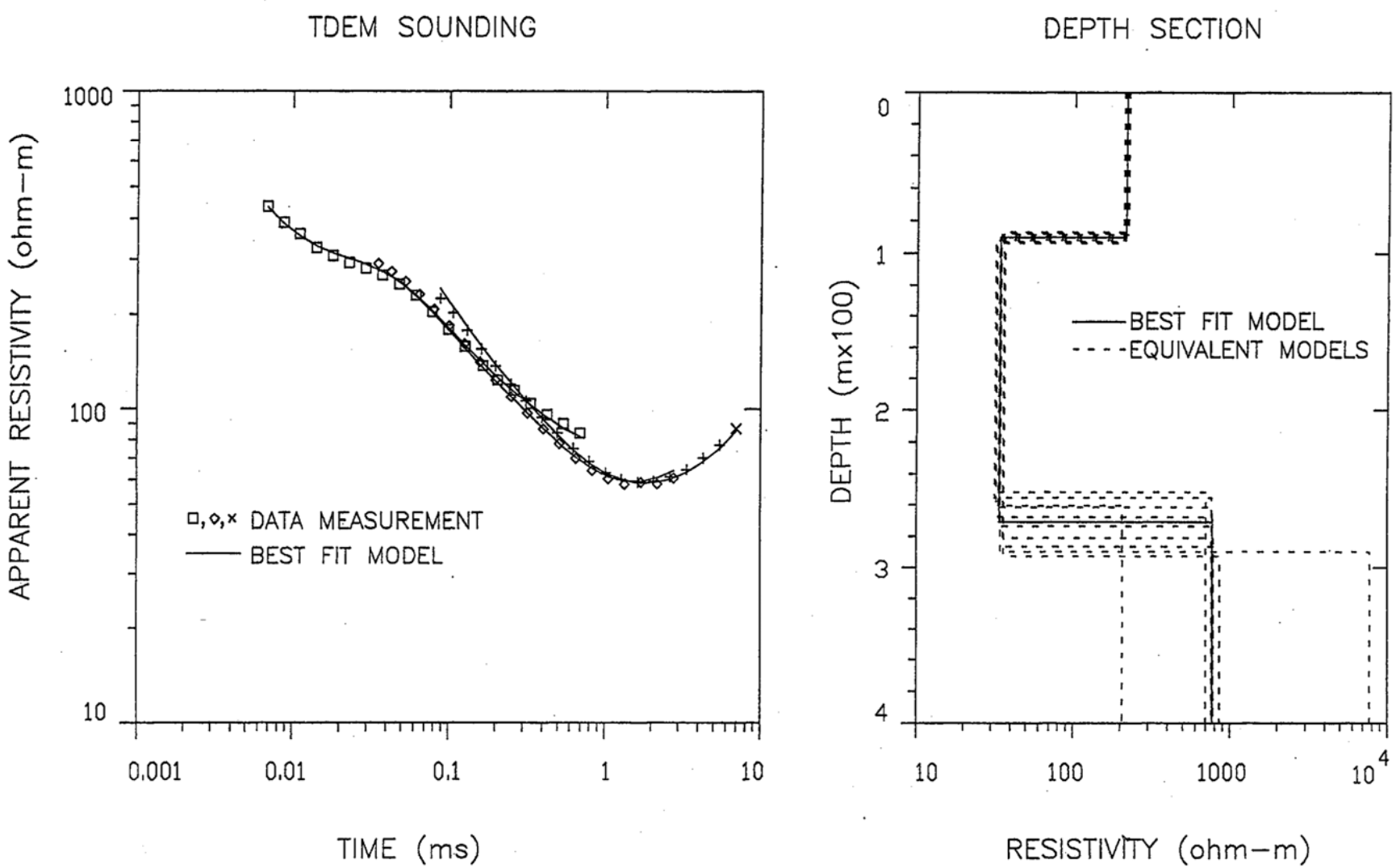


FIGURE A-1
TDEM MODEL-STATION 2484

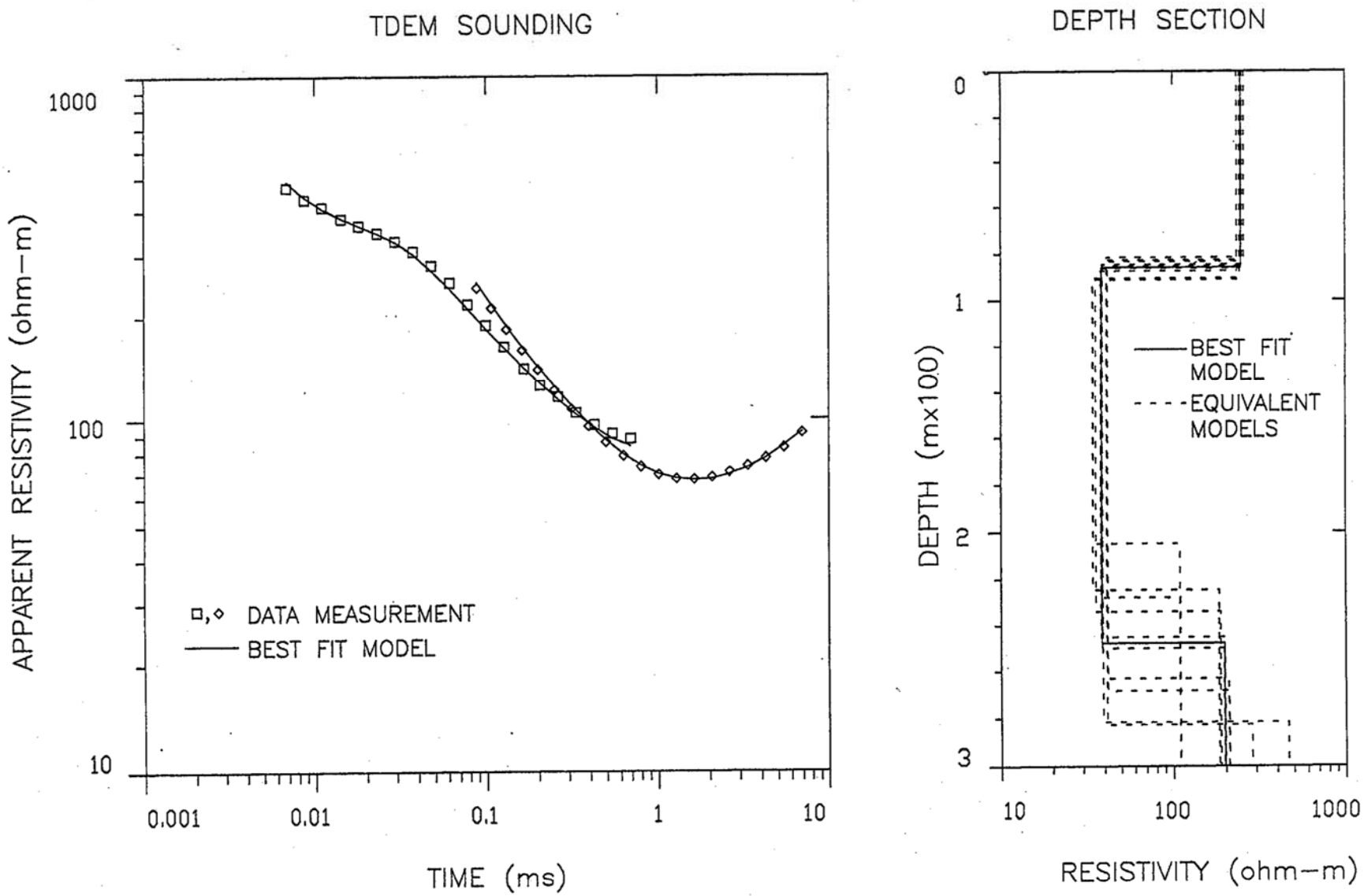
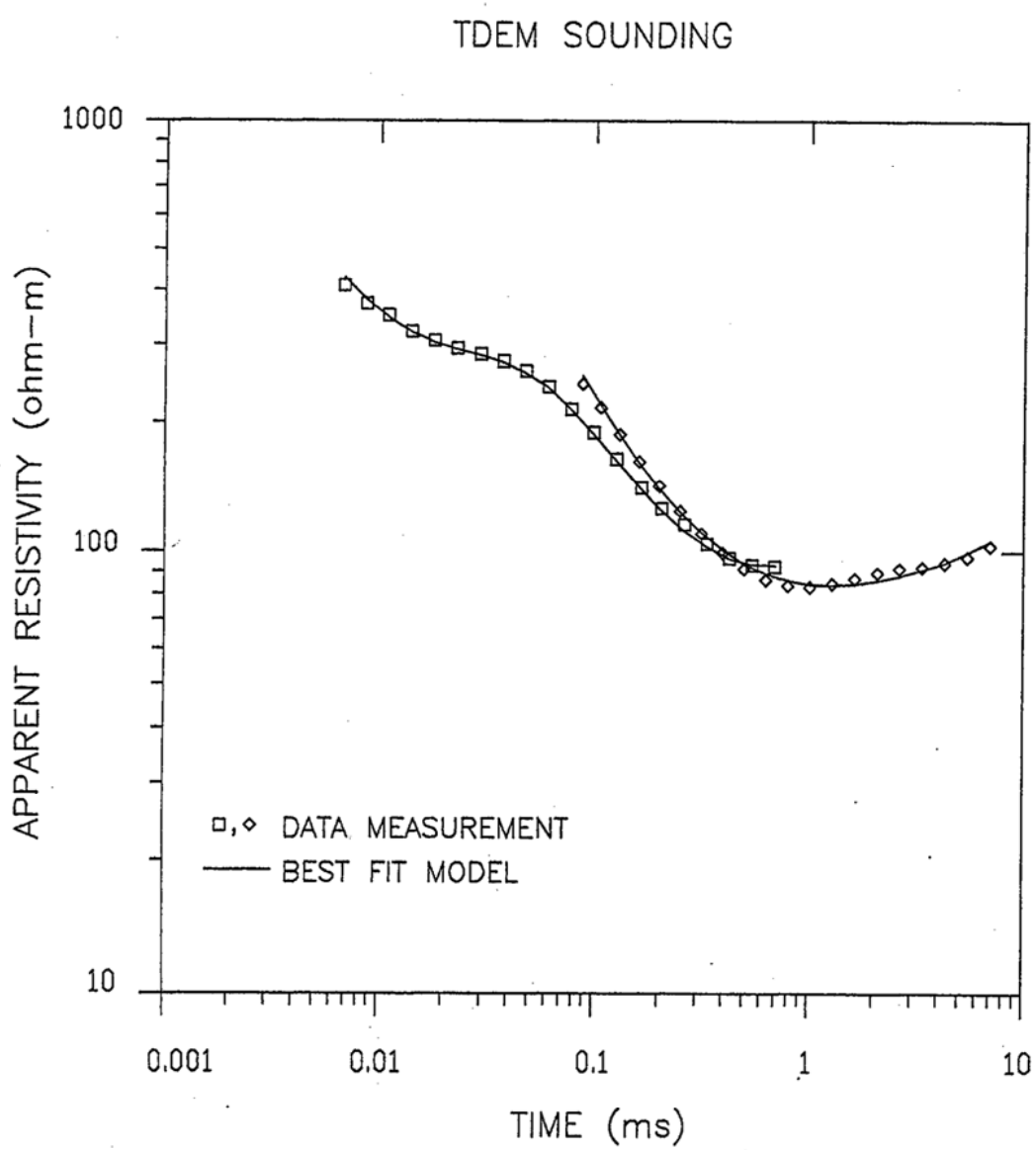


FIGURE A-2
TDEM MODEL-STATION 2465



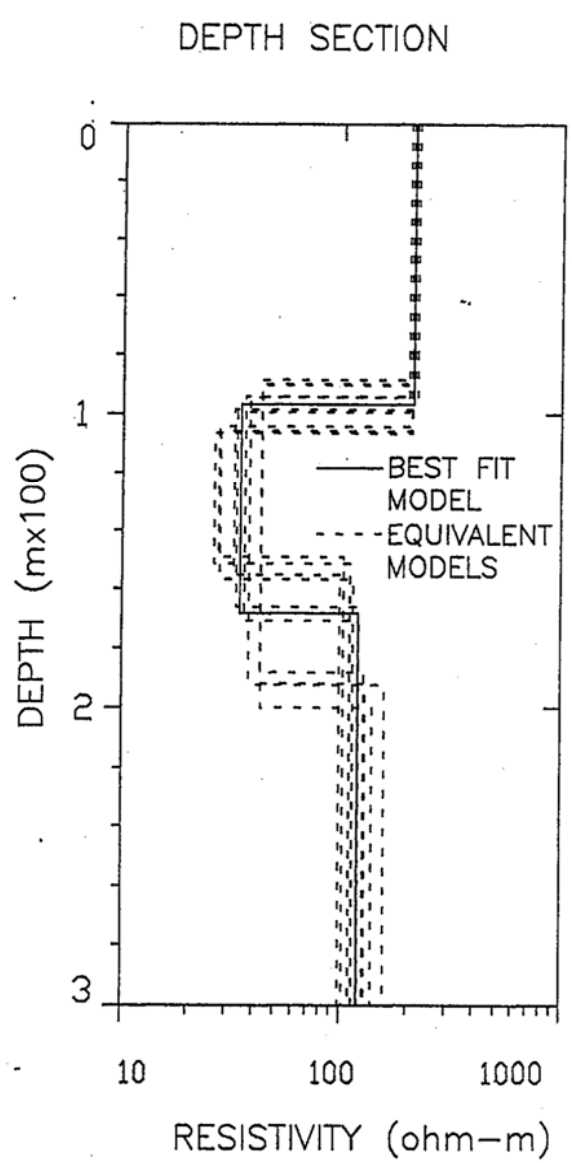


FIGURE A-3
TDEM MODEL-STATION 2317

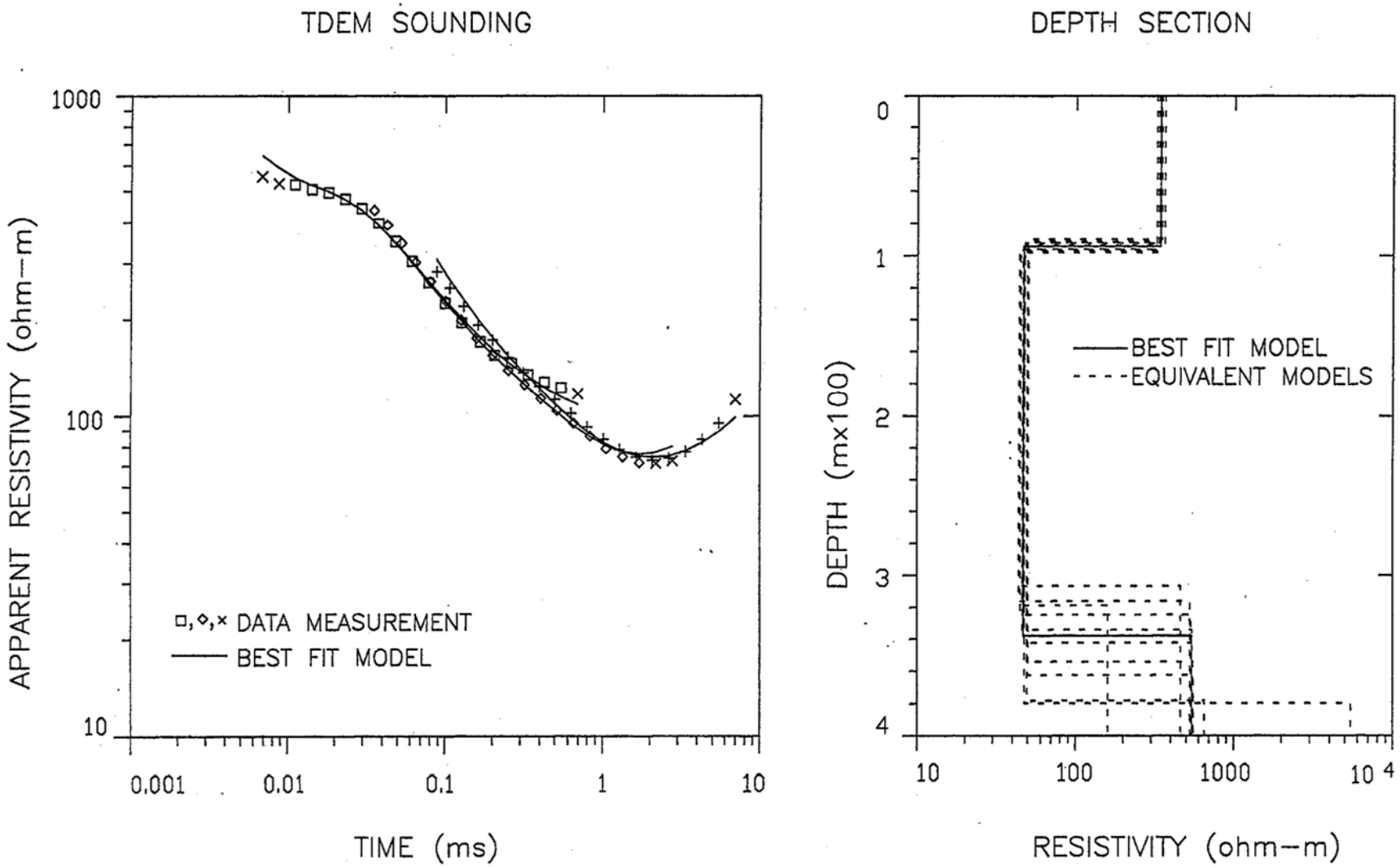


FIGURE A-4
TDEM MODEL-STATION 2293

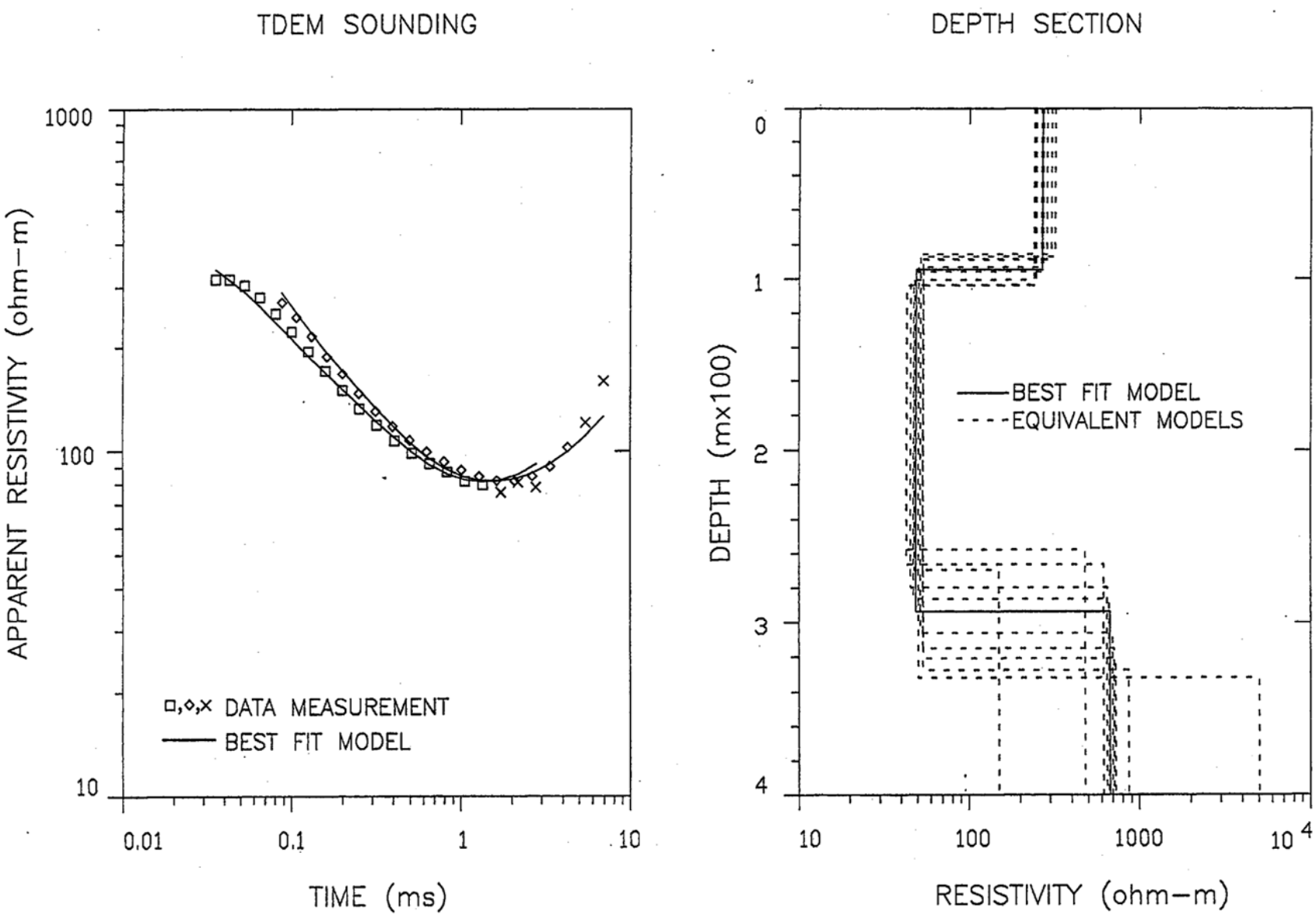
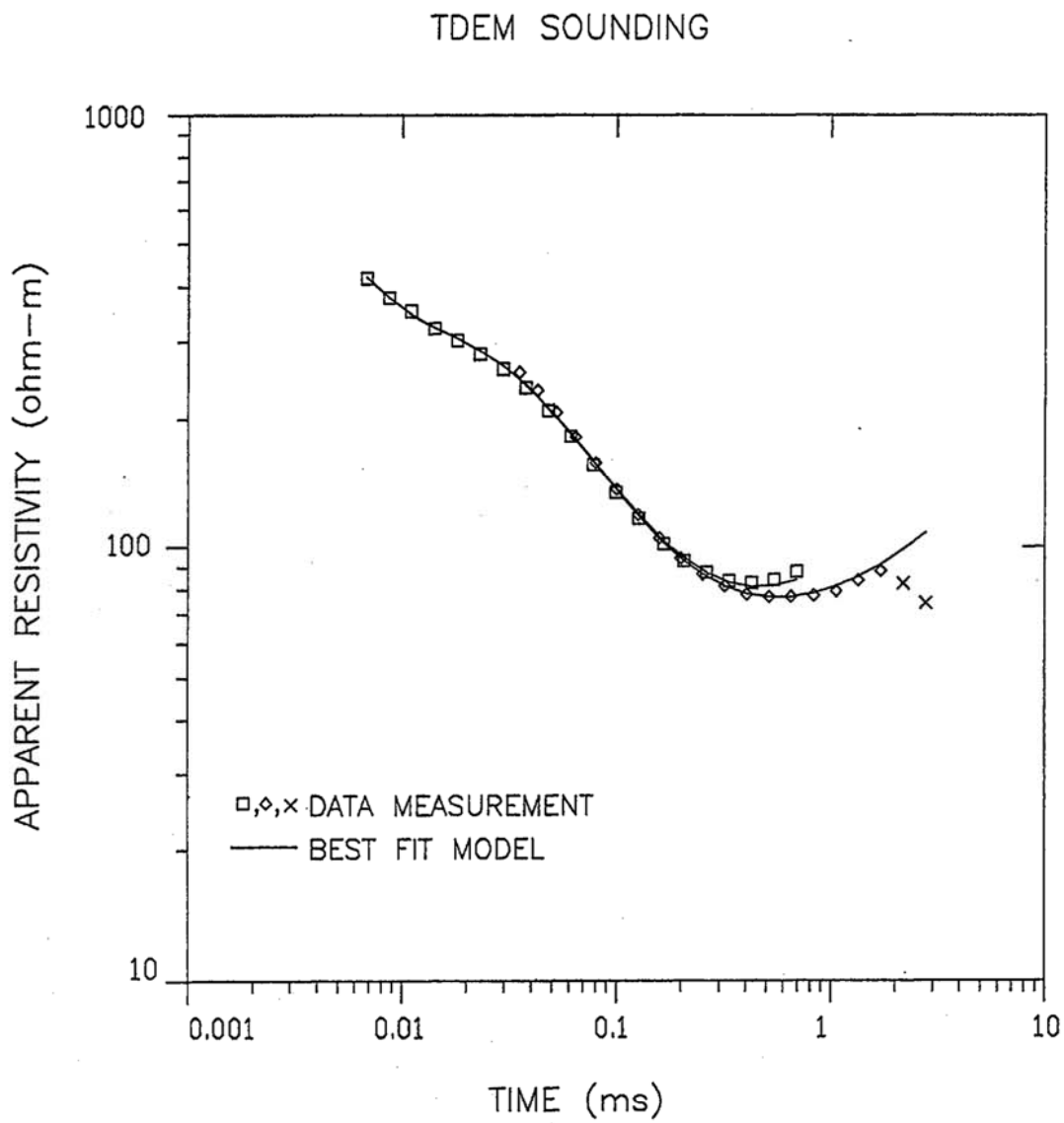


FIGURE A-5
TDEM MODEL-STATION 2254



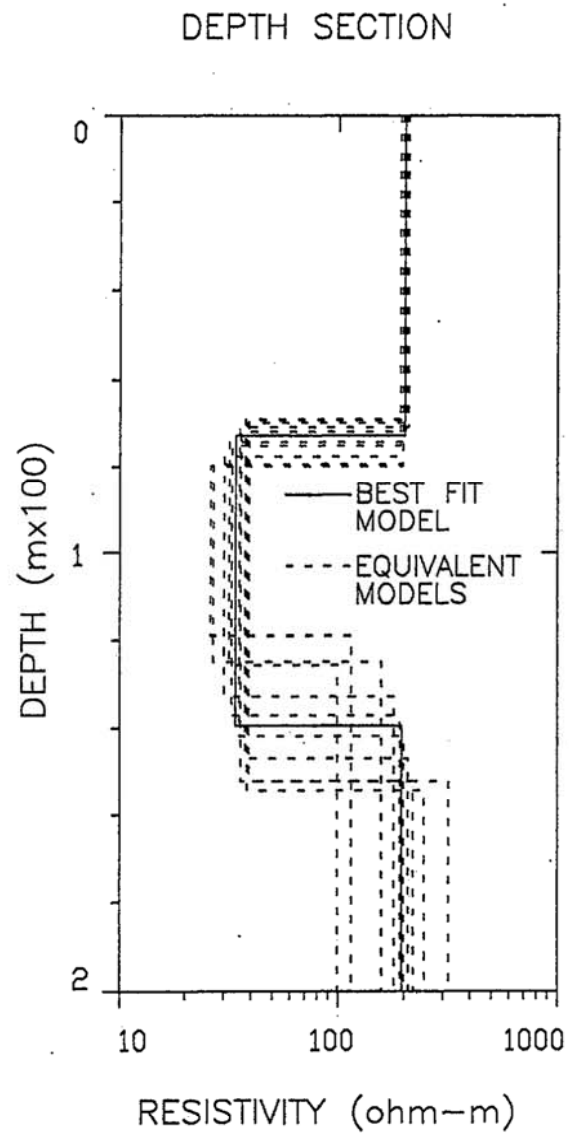
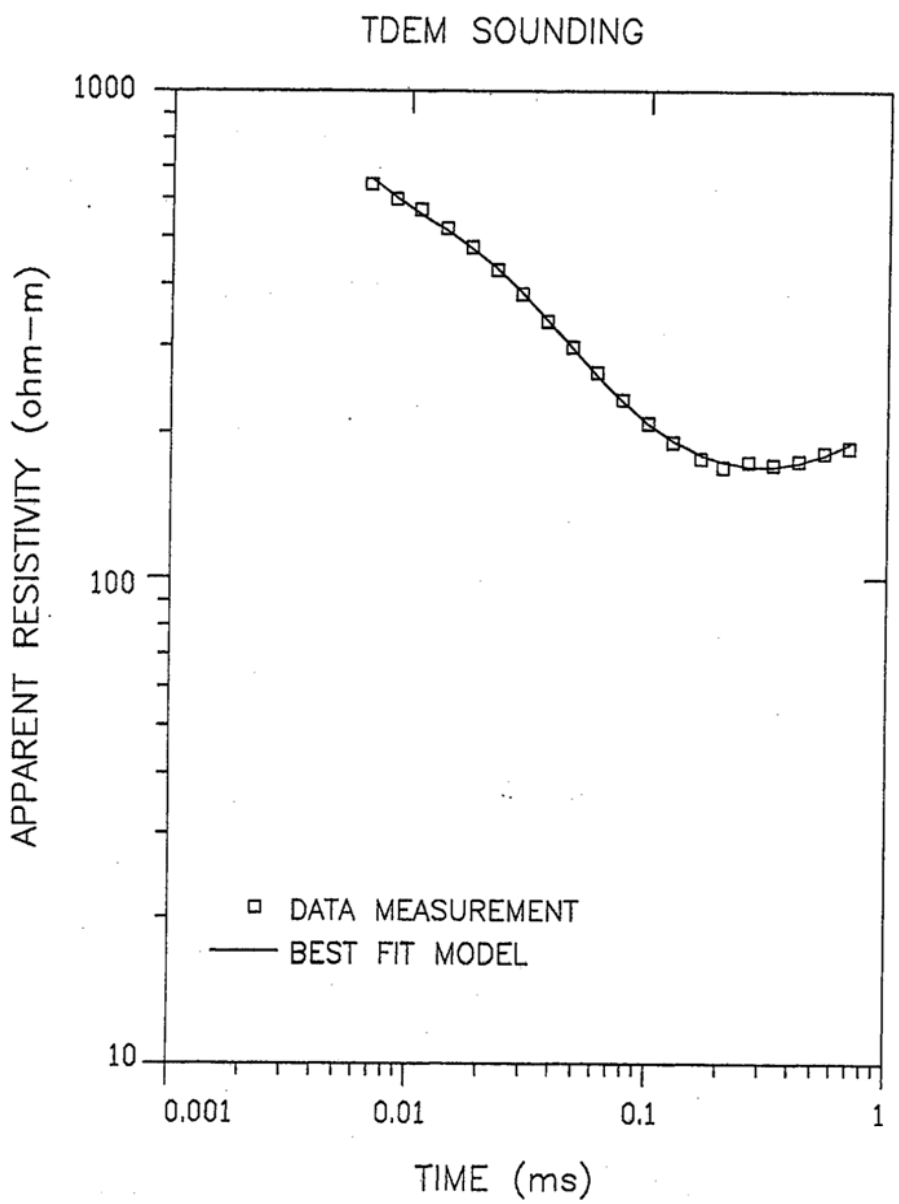


FIGURE A-6
TDEM MODEL-STATION 2218



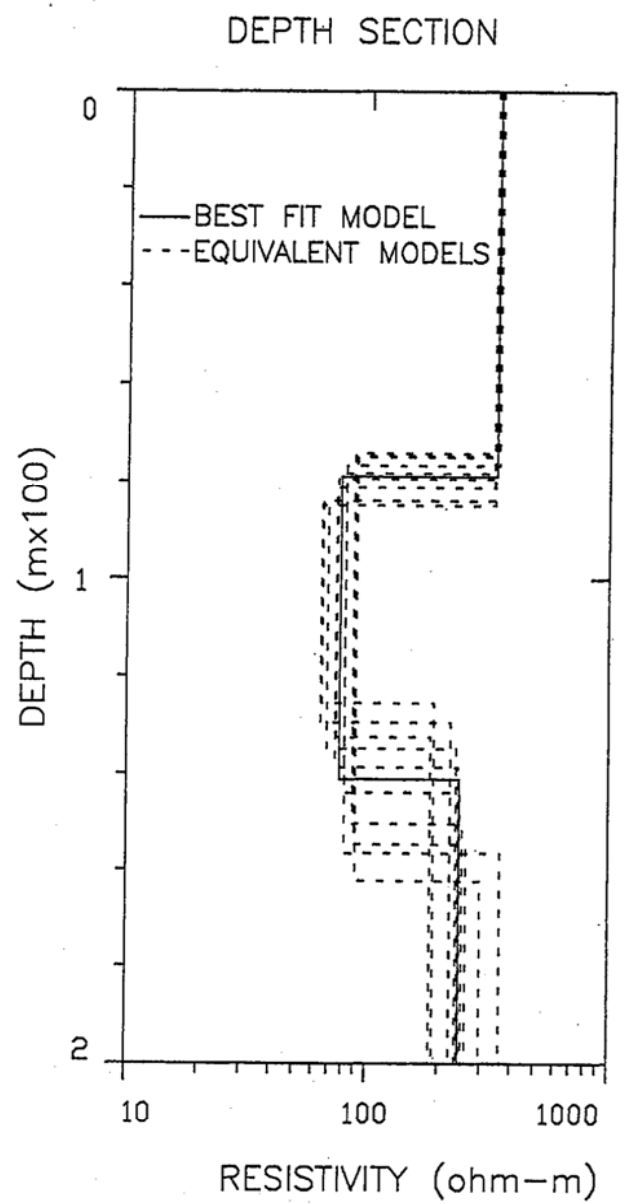


FIGURE A-7
TDEM MODEL-STATION 2703

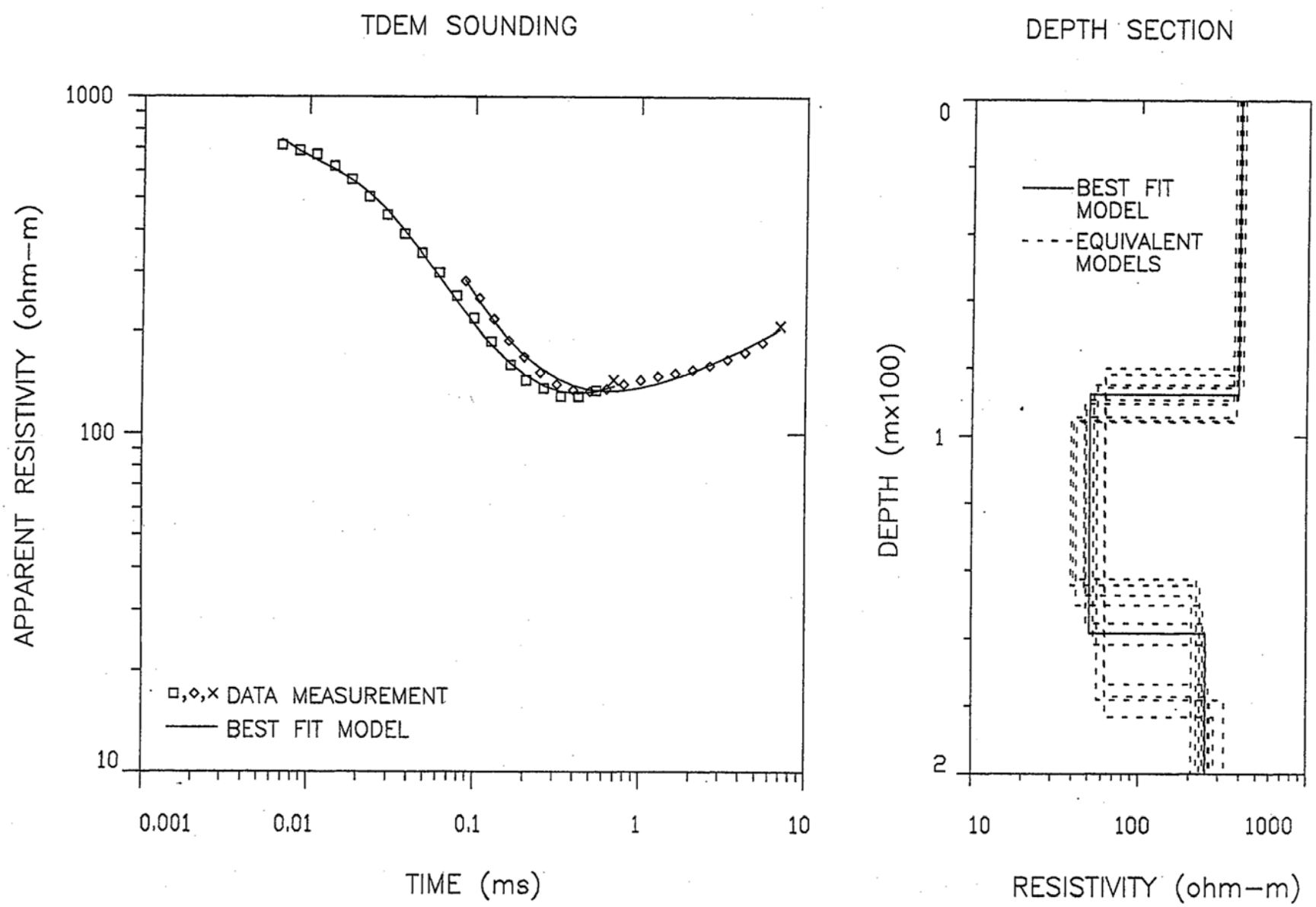
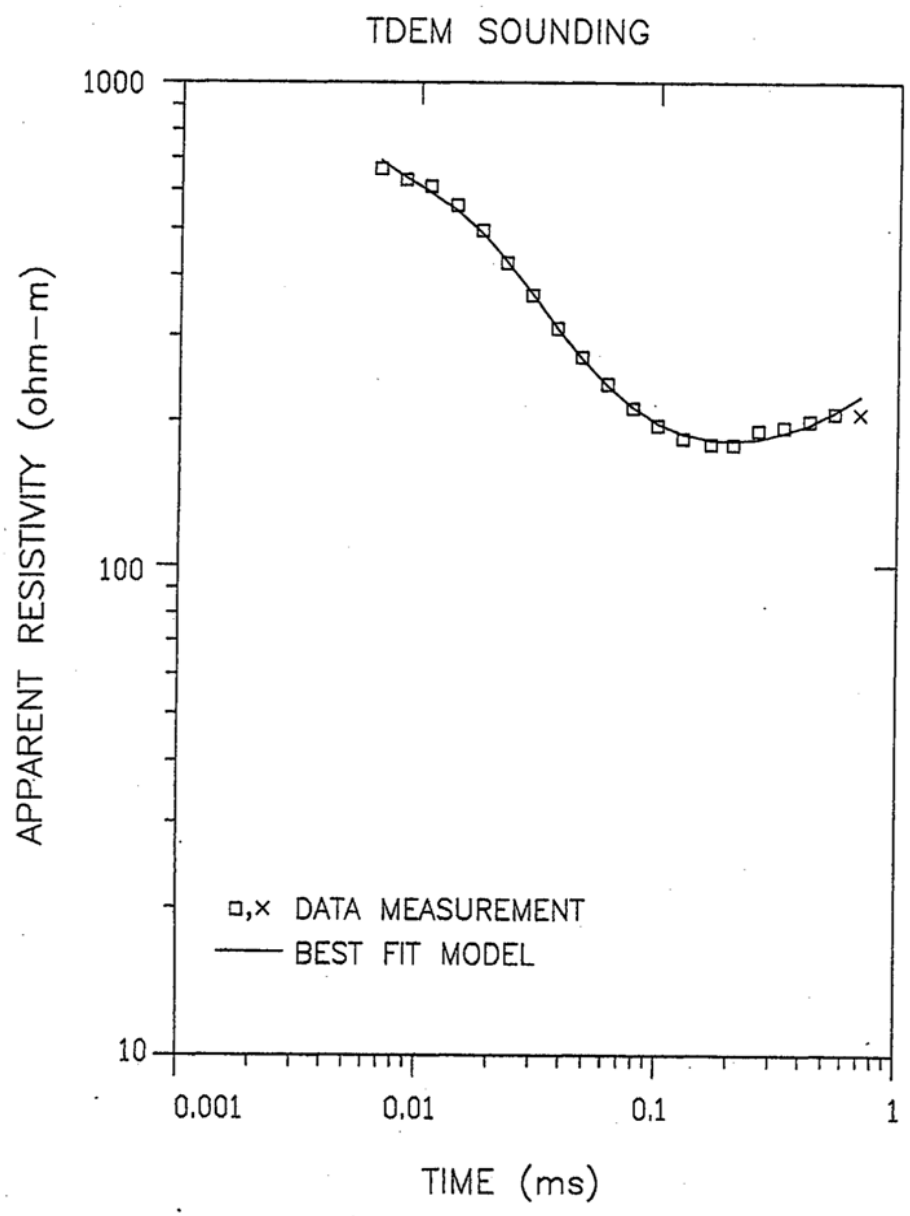


FIGURE A-8
TDEM MODEL-STATION 2693



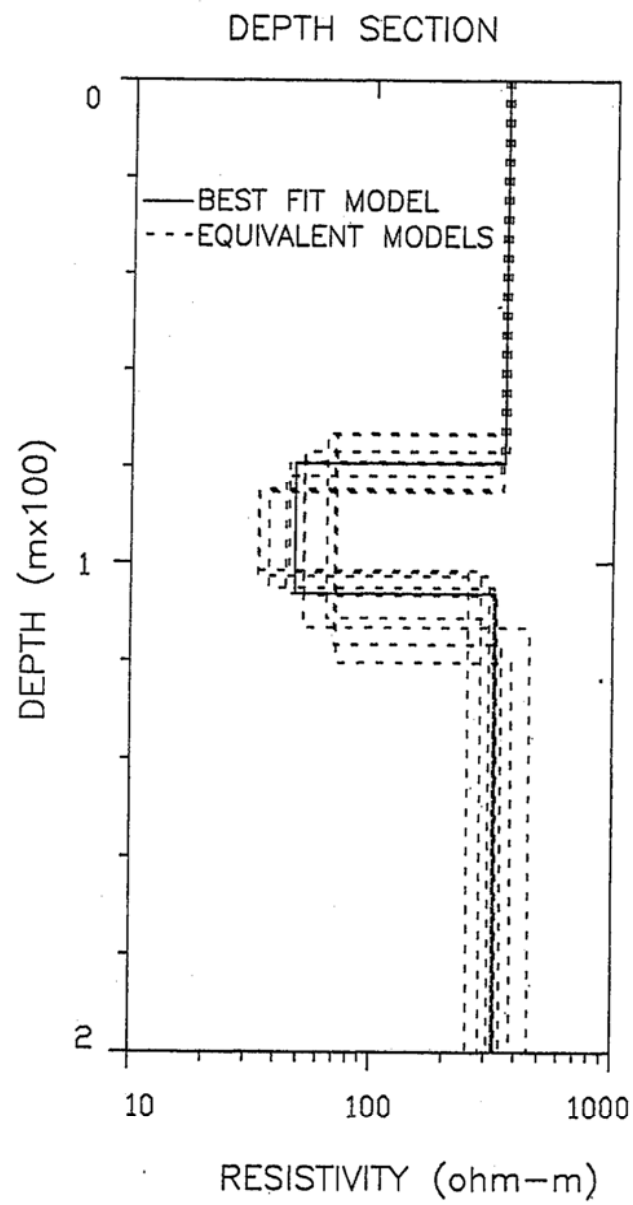
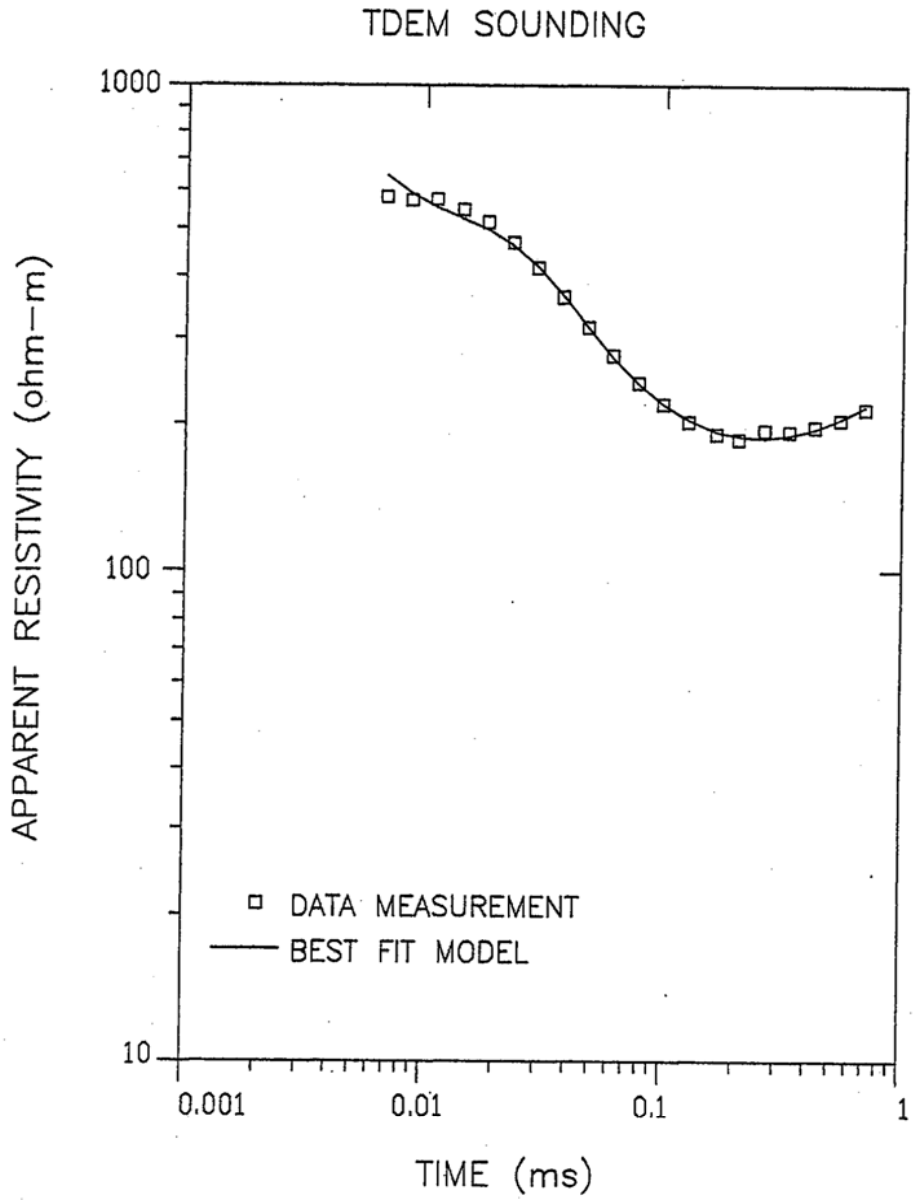


FIGURE A-9
TDEM MODEL-STATION 2683



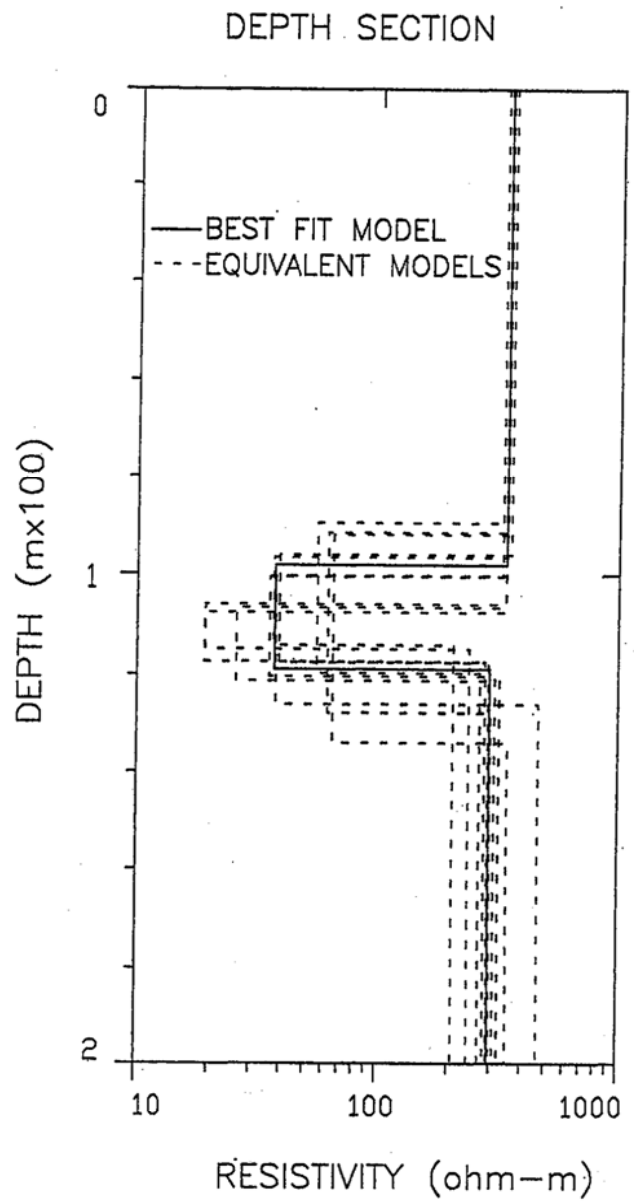
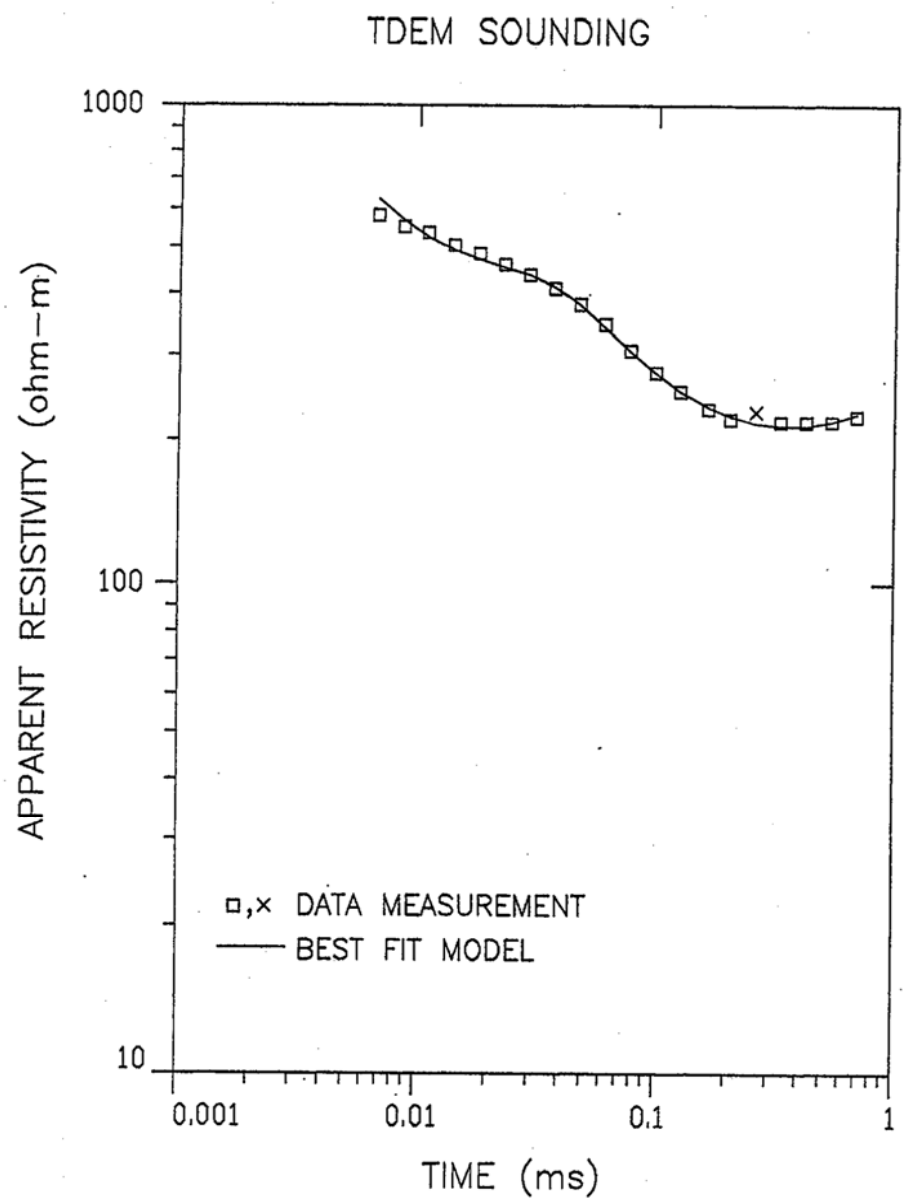


FIGURE A-10
TDEM MODEL-STATION 2672



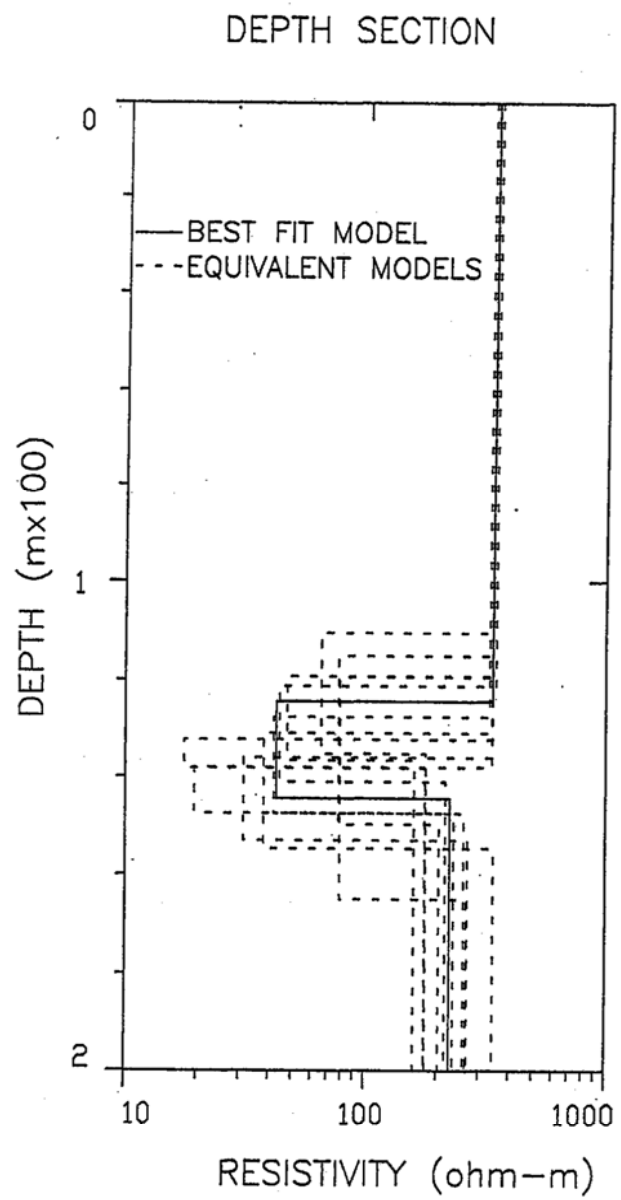


FIGURE A-11
TDEM MODEL-STATION 2658

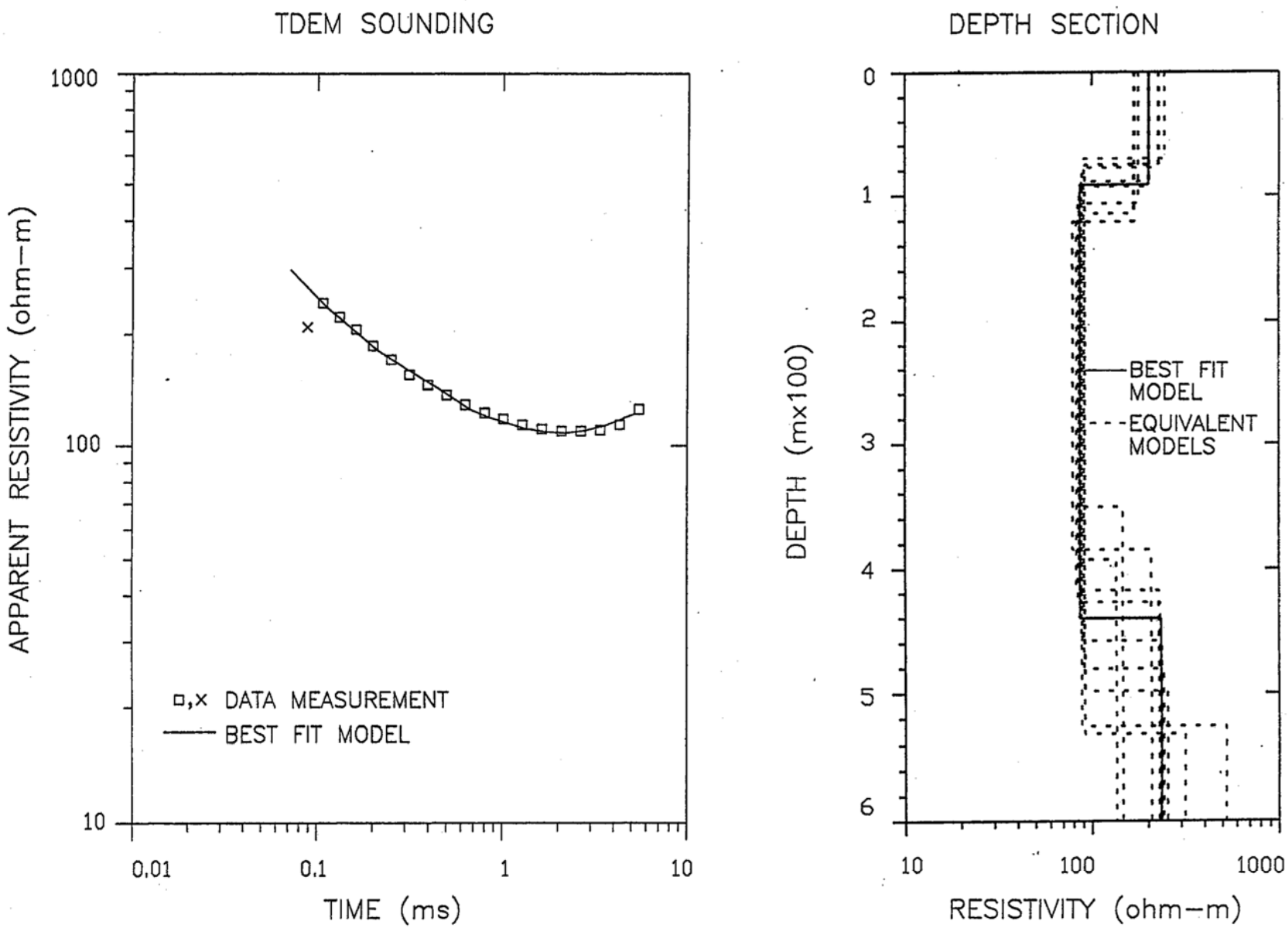
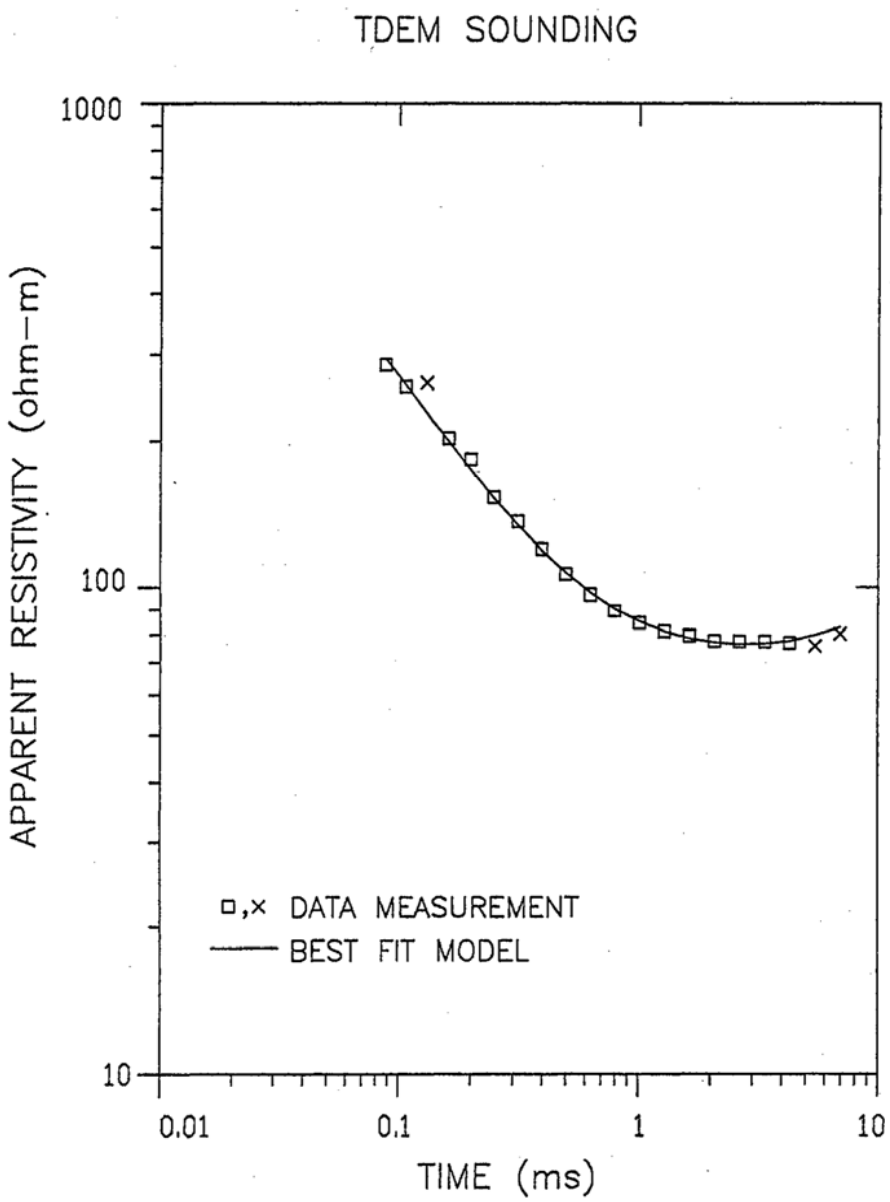


FIGURE A-12
TDEM MODEL-STATION 2800W



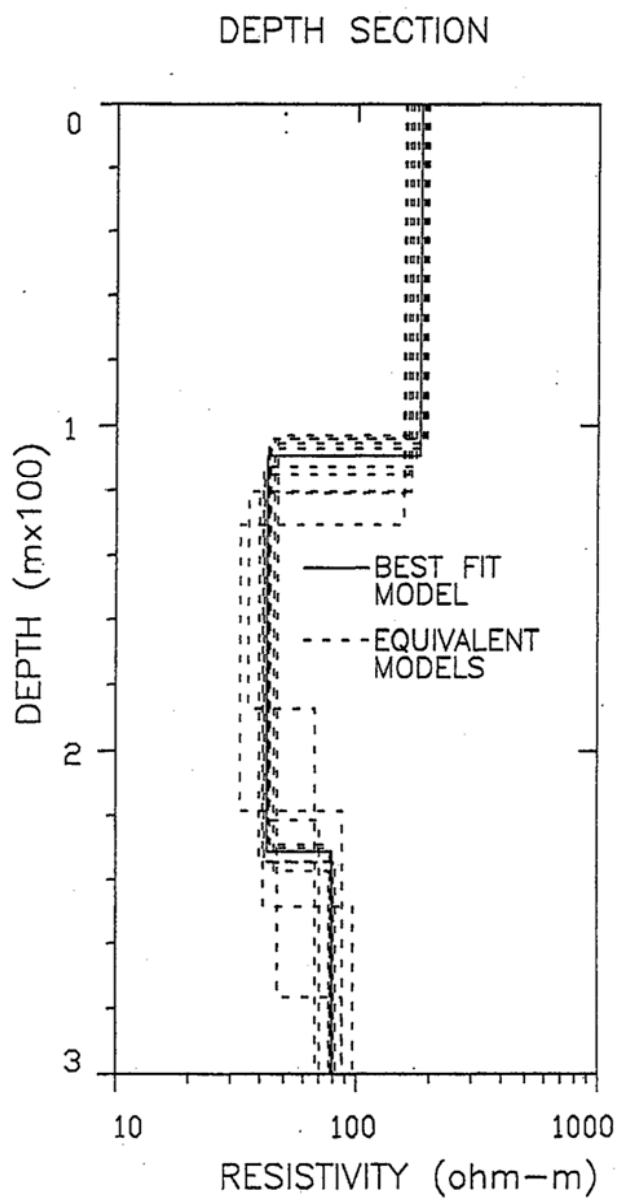


FIGURE A-13
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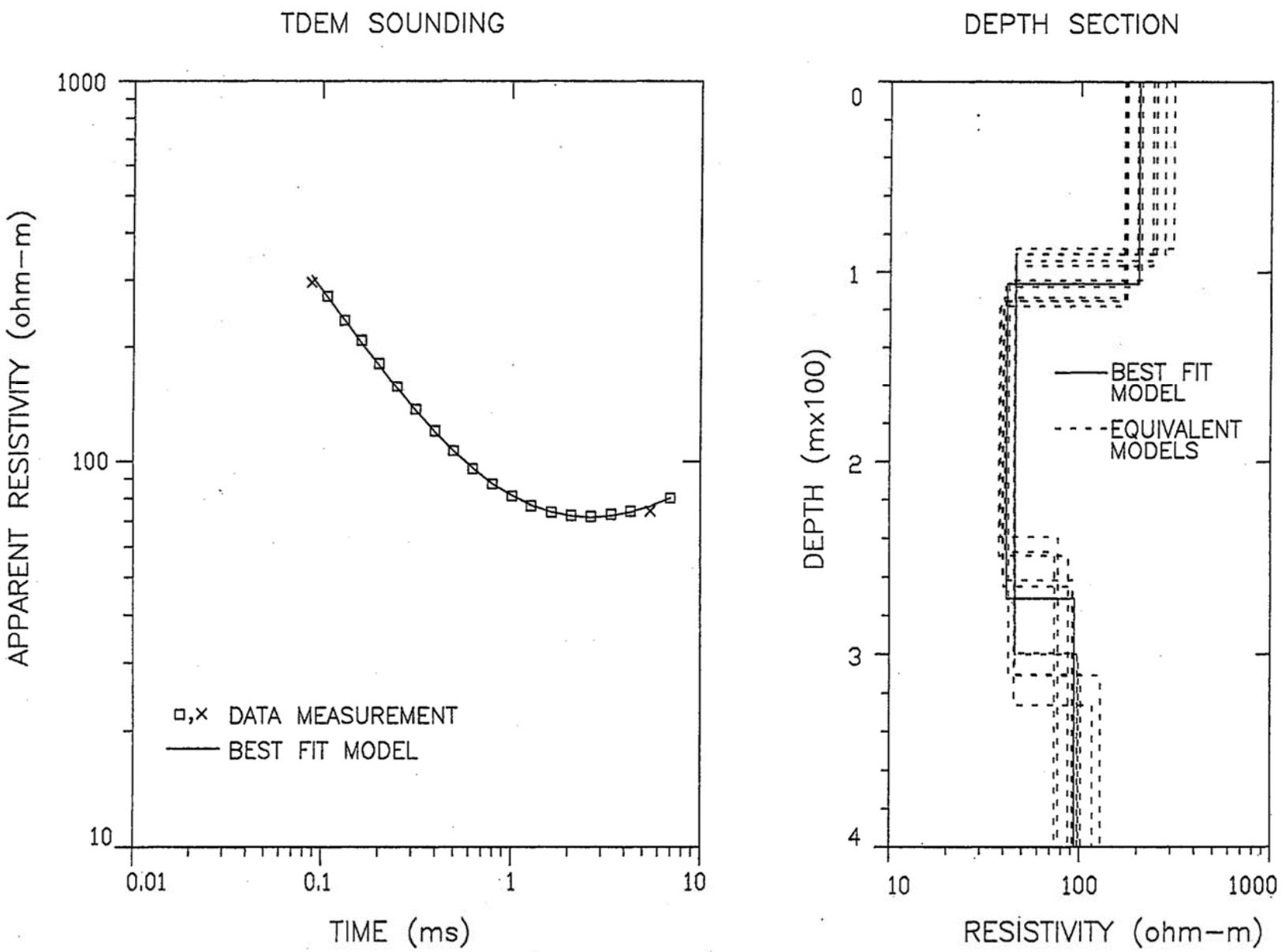

FIGURE A-14
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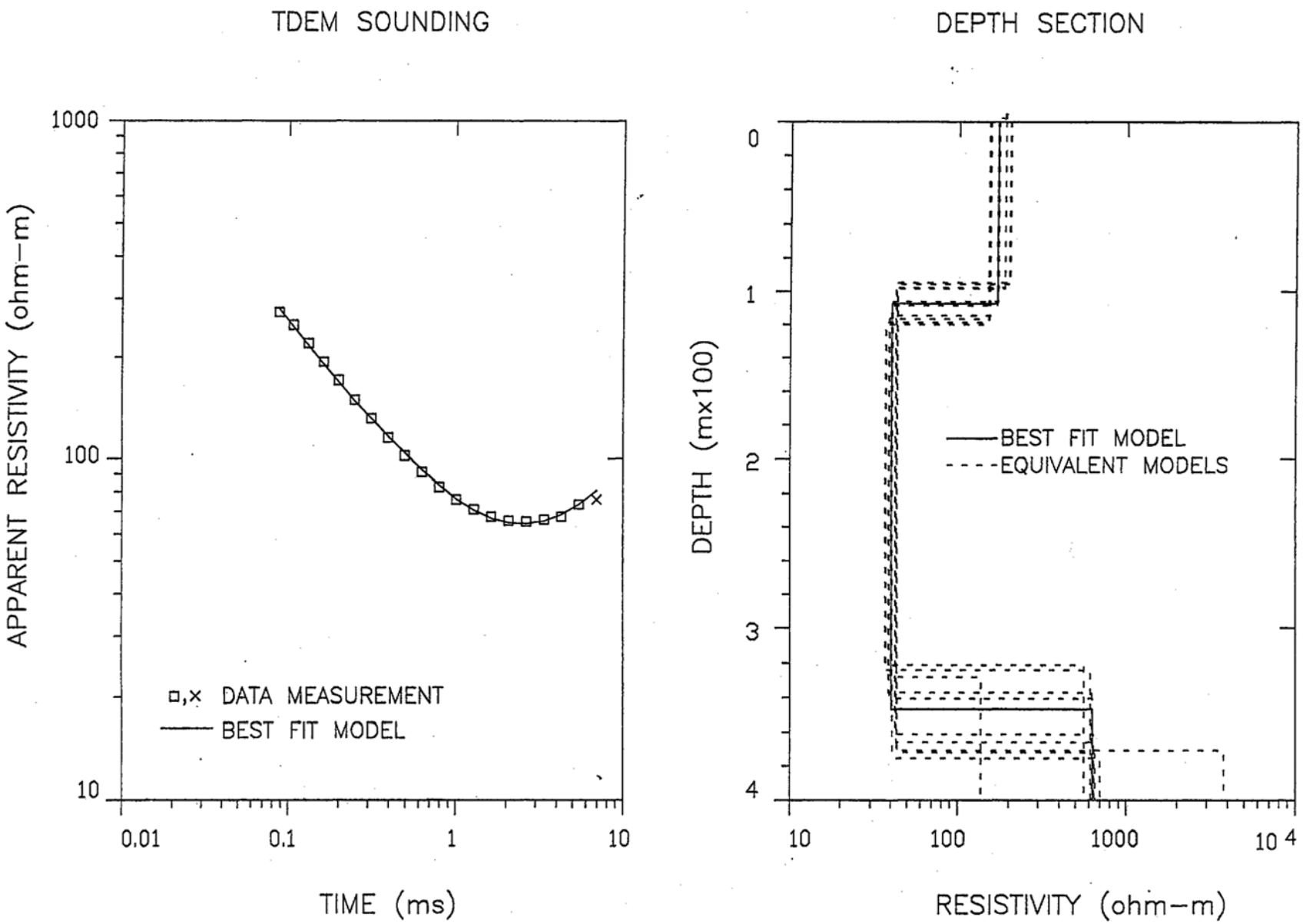

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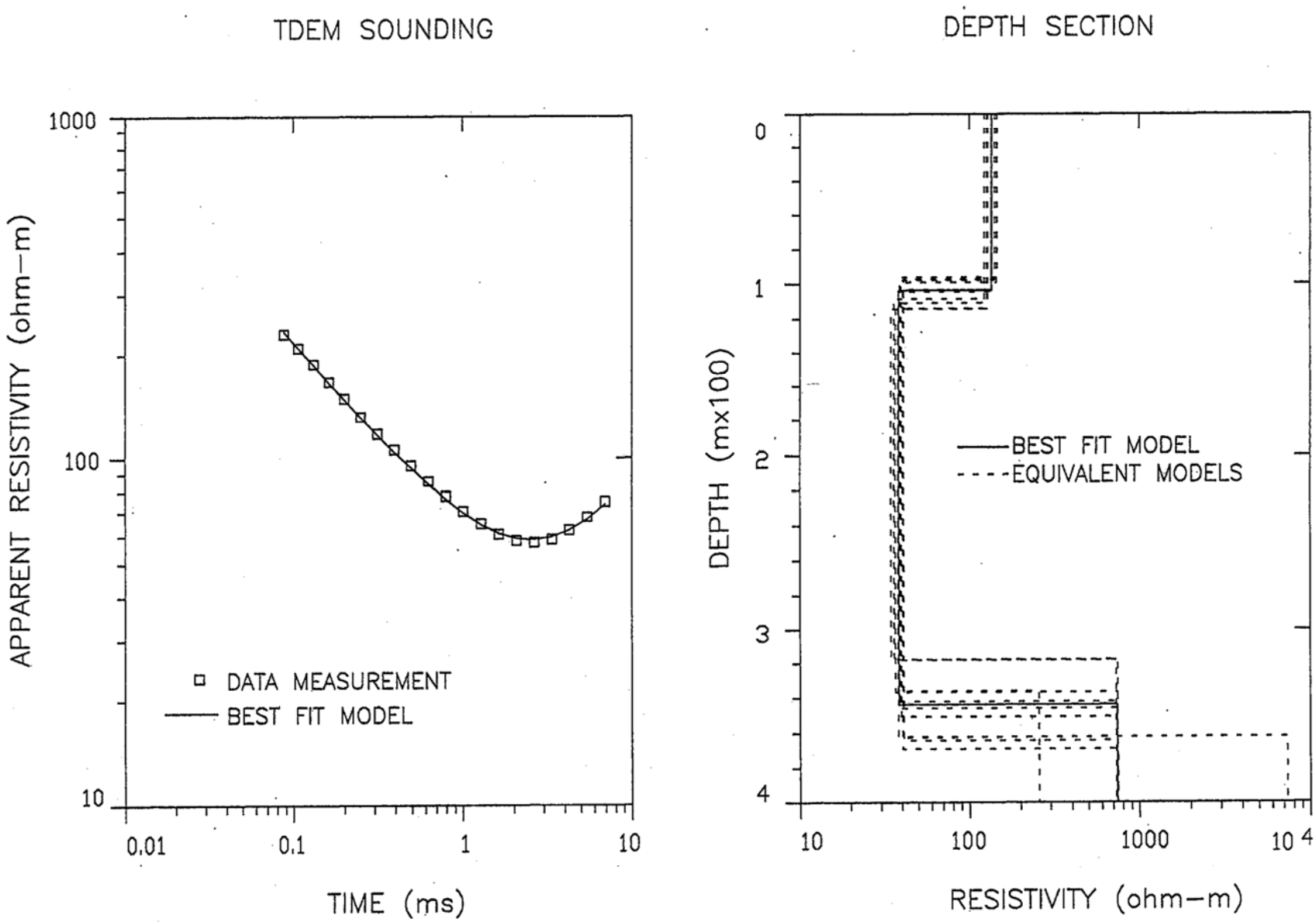

FIGURE A-16
TDEM MODEL-STATION 1200W

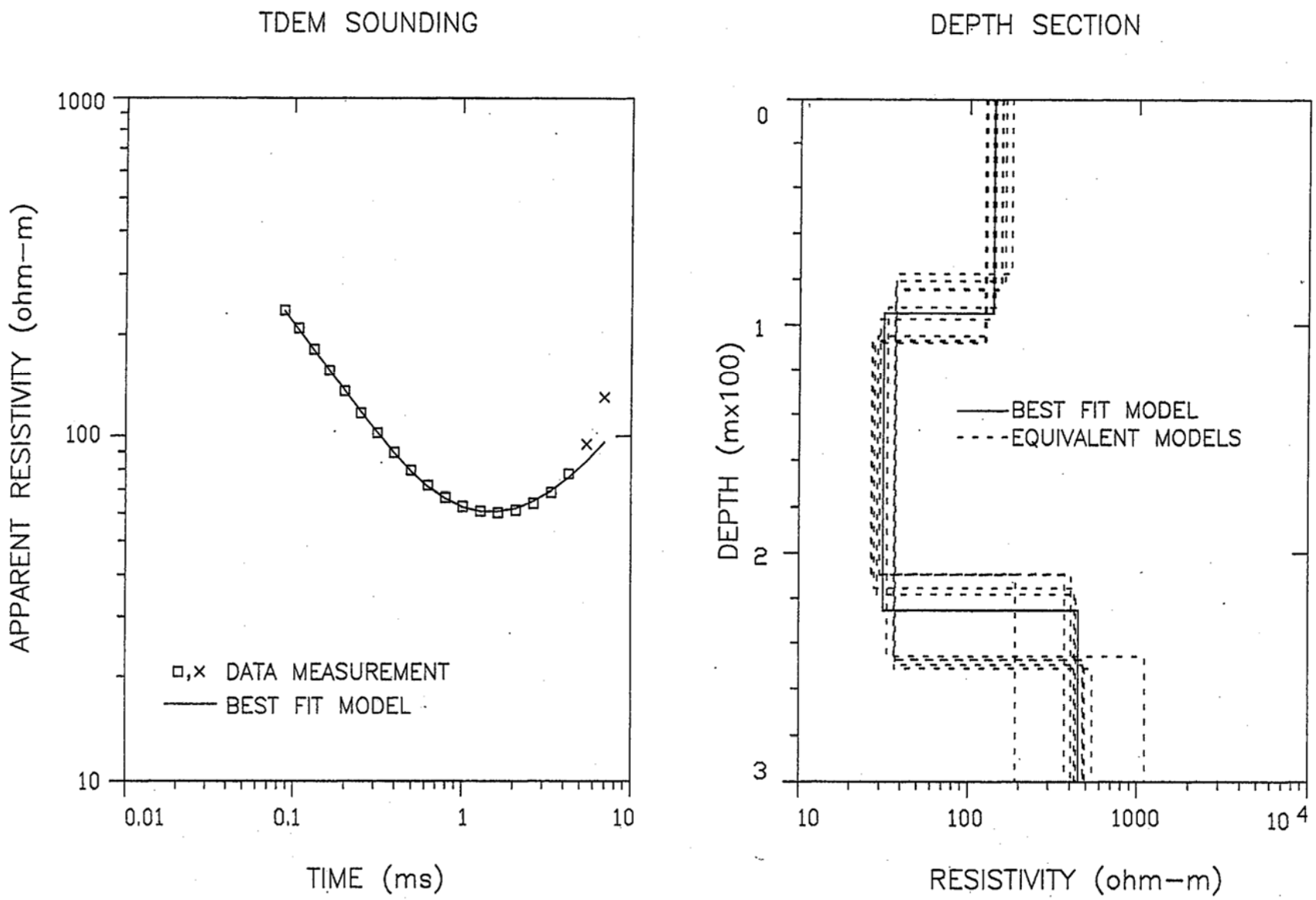

FIGURE A-17
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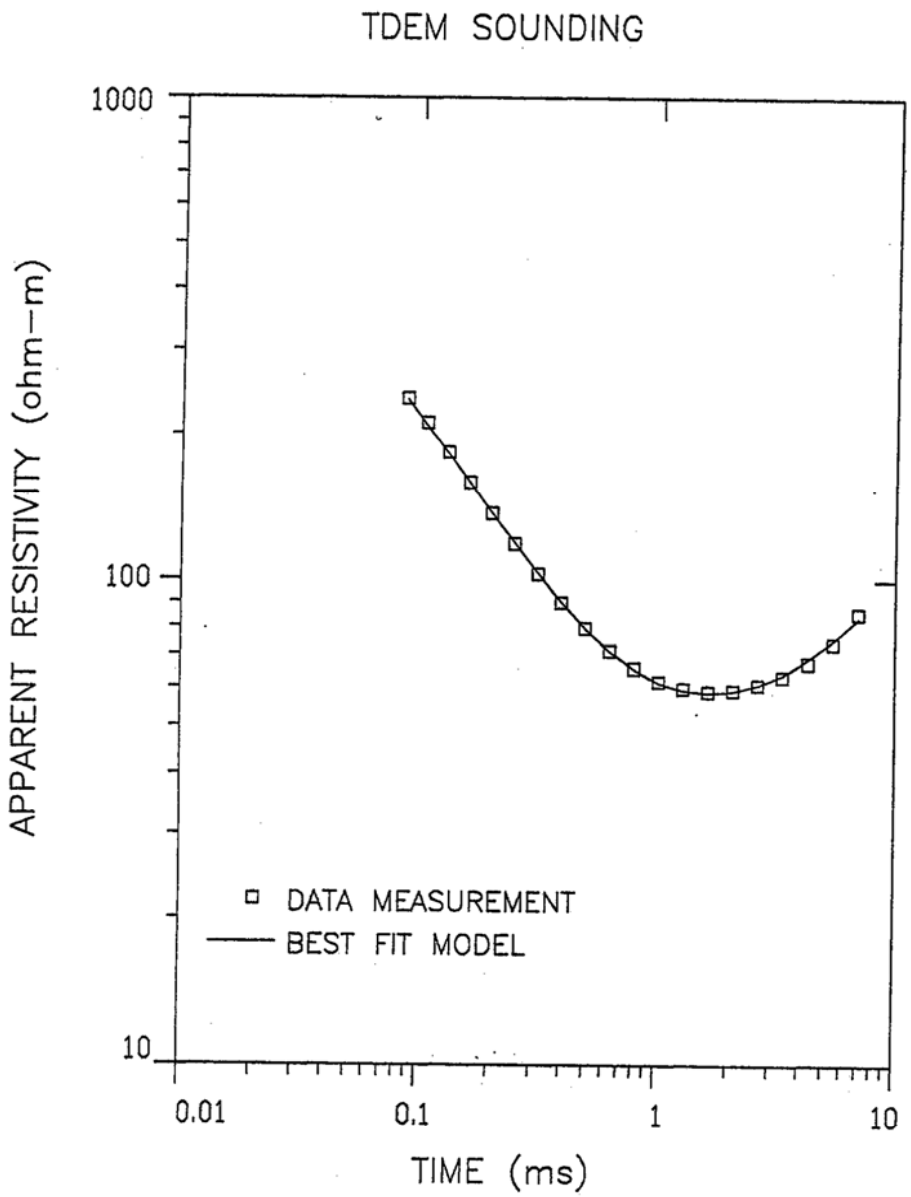


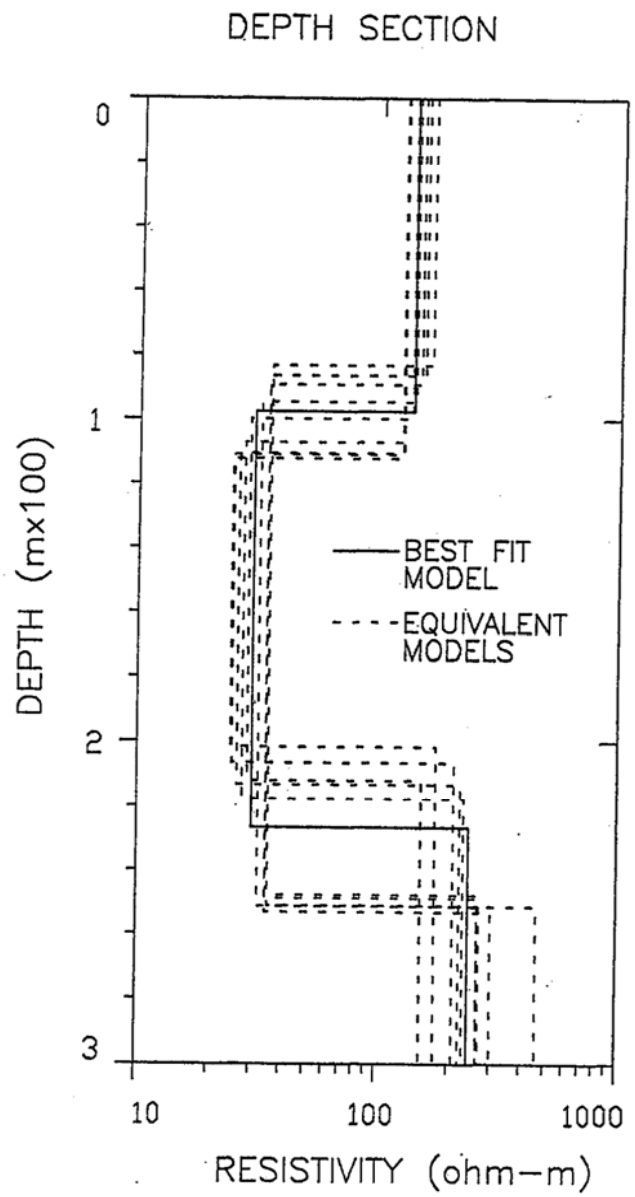


FIGURE A-18
TDEM MODEL-STATION 600W

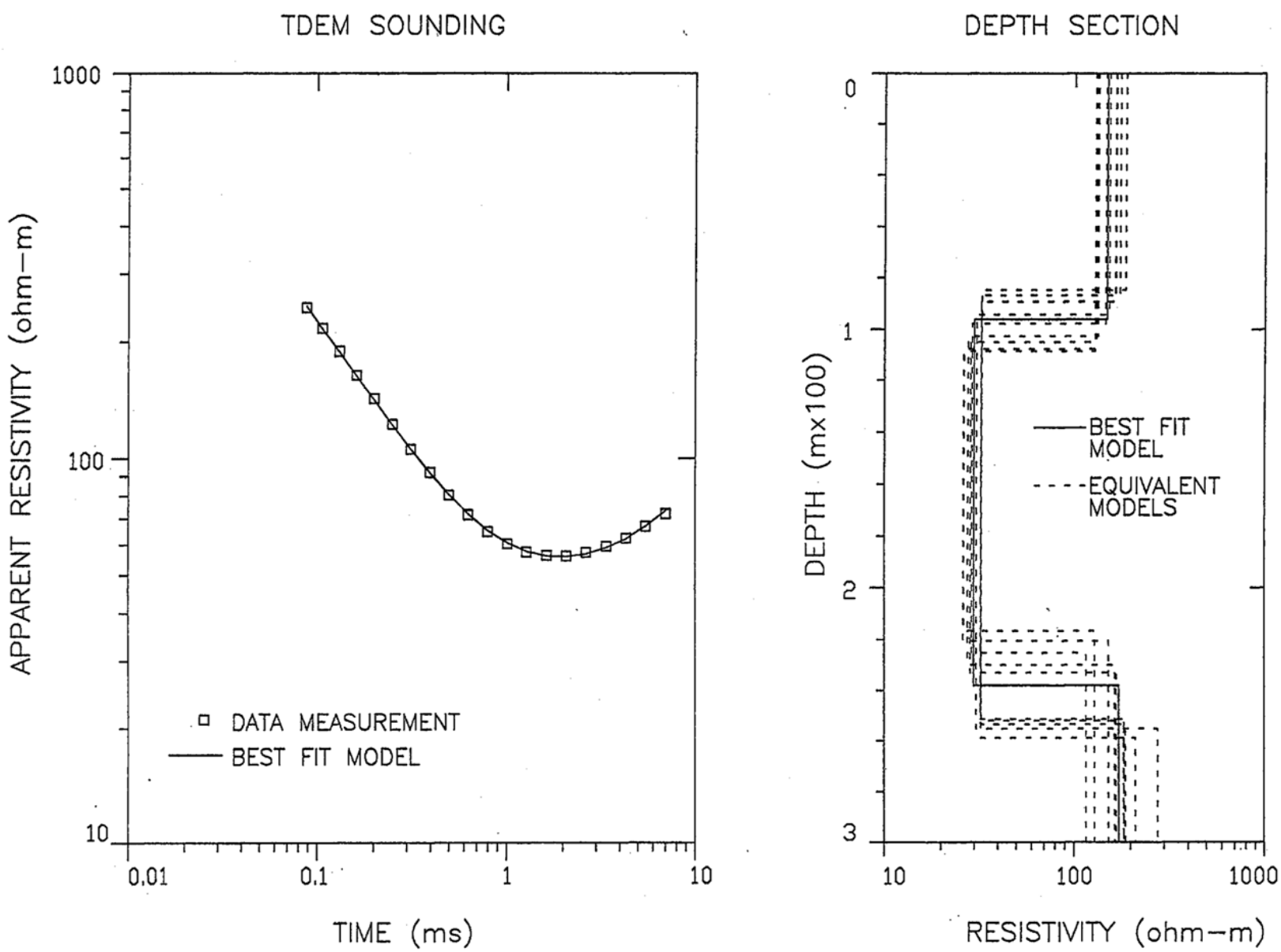
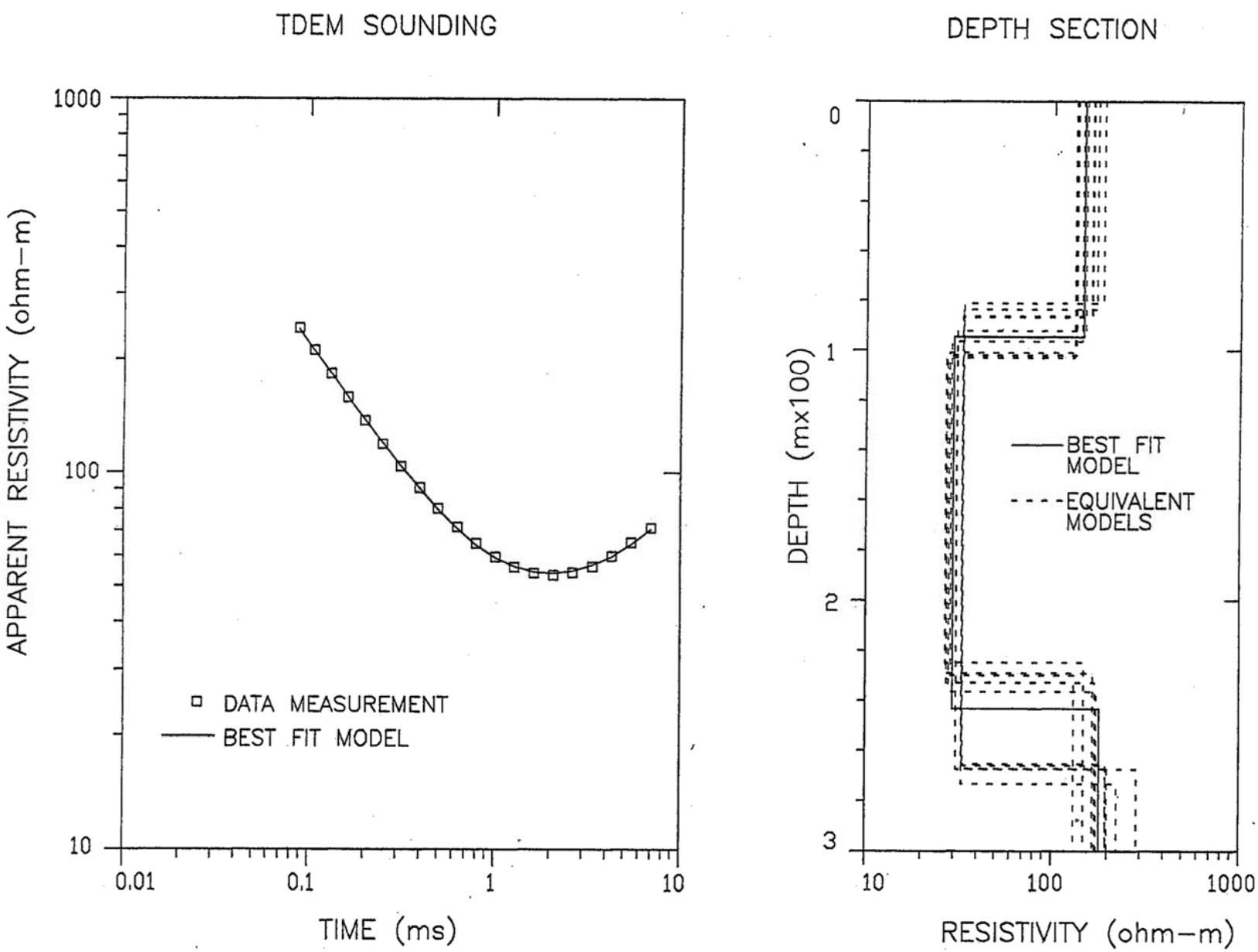


FIGURE A-19
TDEM MODEL-STATION 400W



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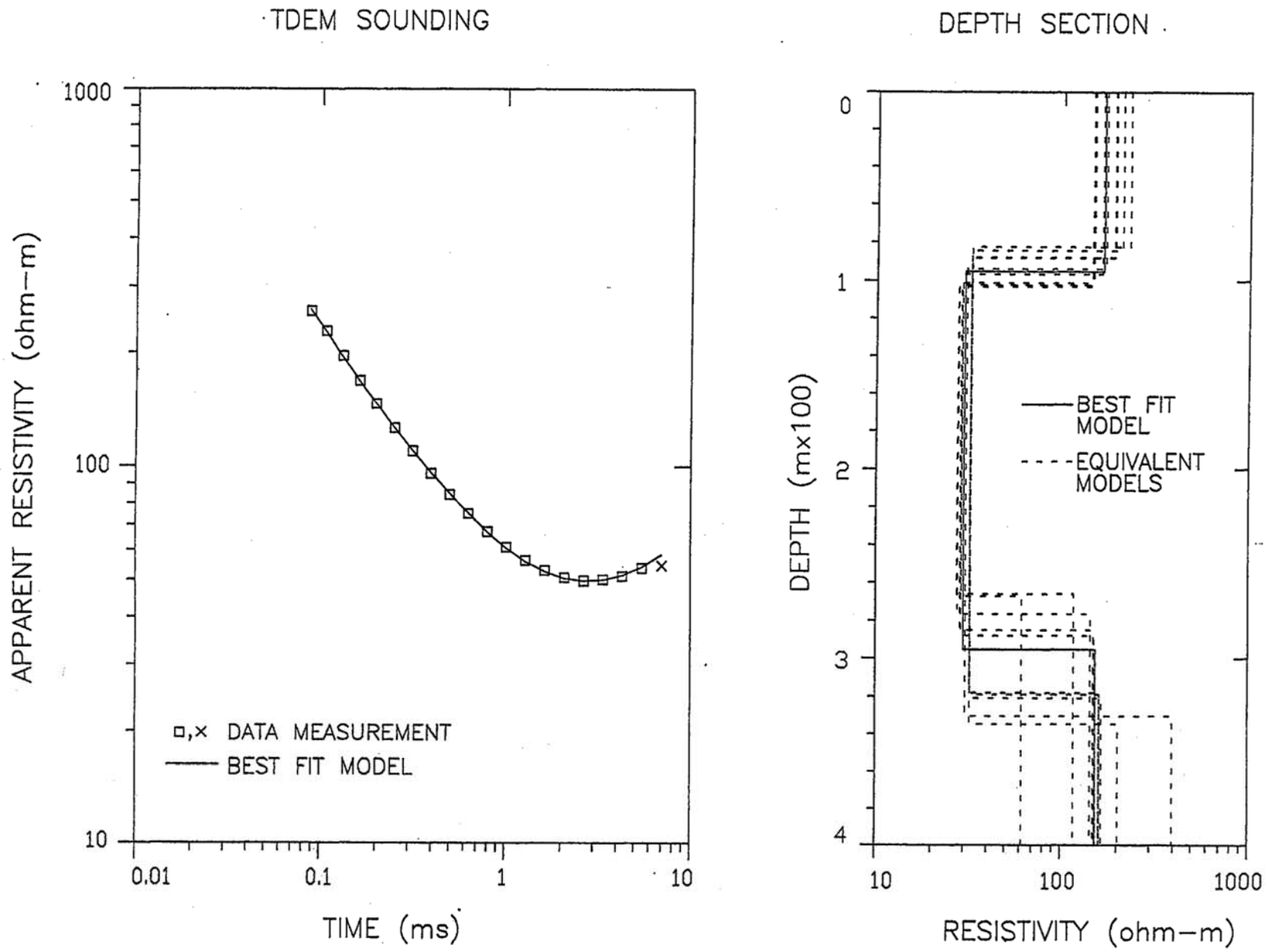

FIGURE A-22
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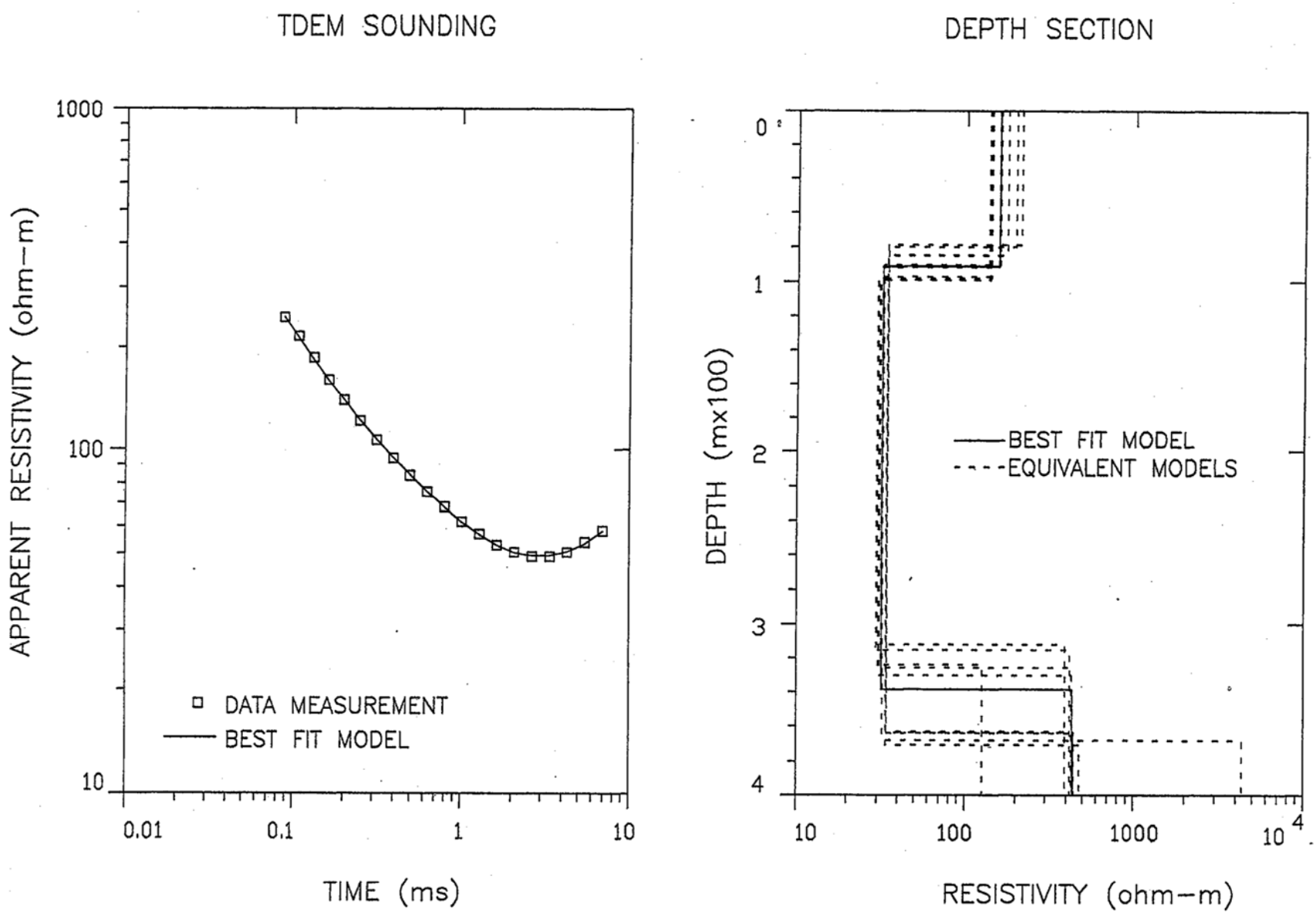

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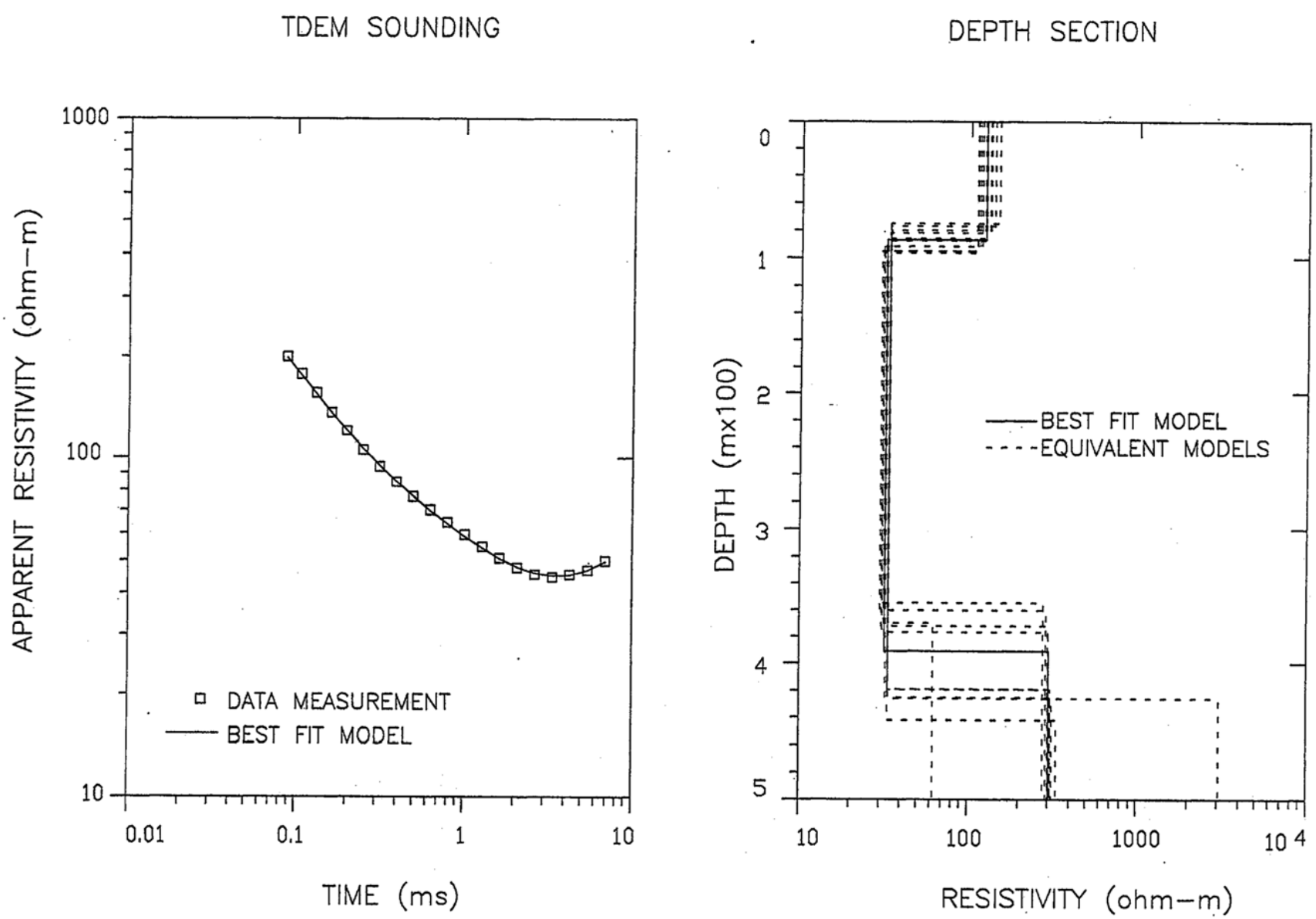


FIGURE A-24
TDEM MODEL-STATION 600E

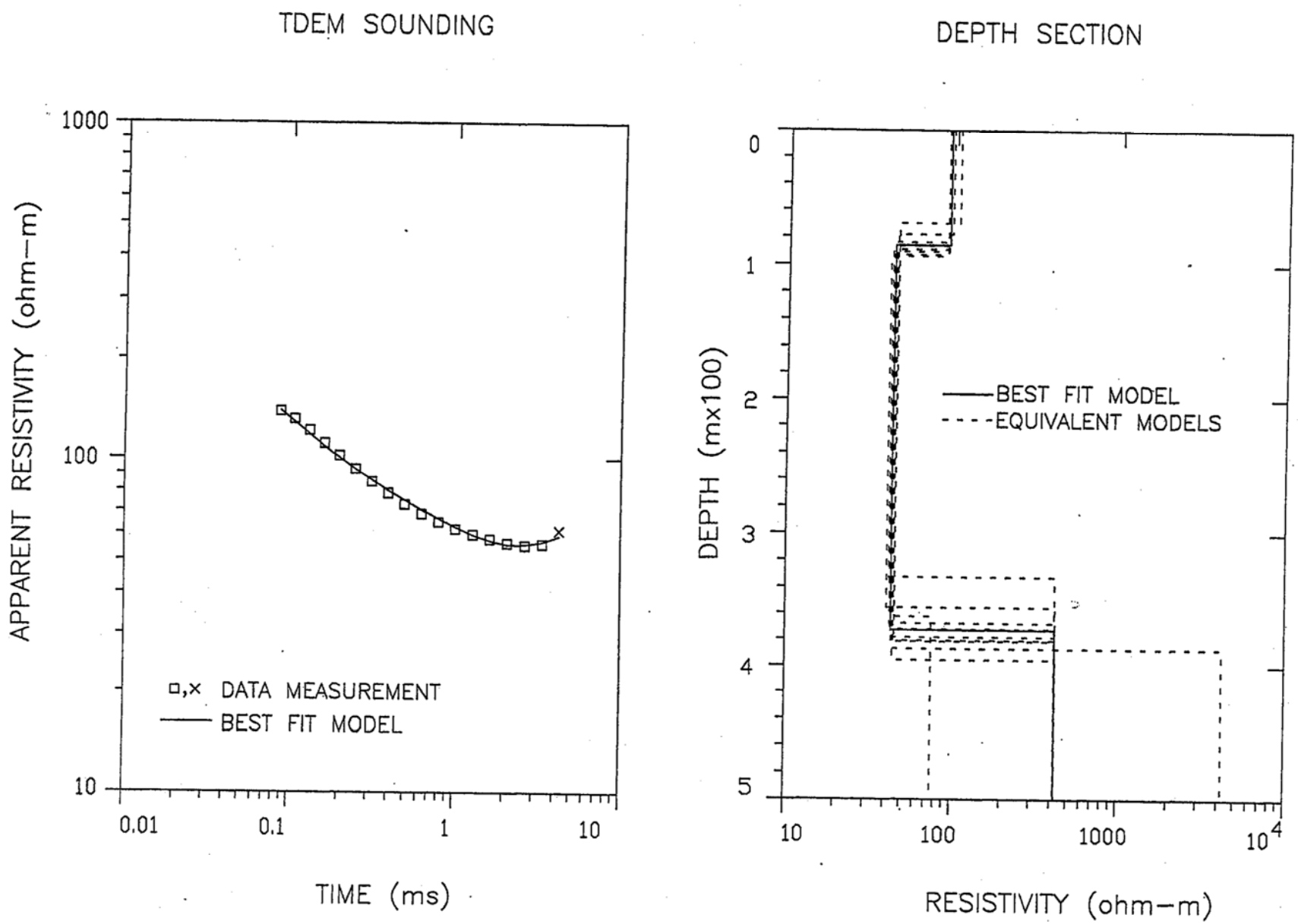


FIGURE A-25
TDEM MODEL-STATION 900E

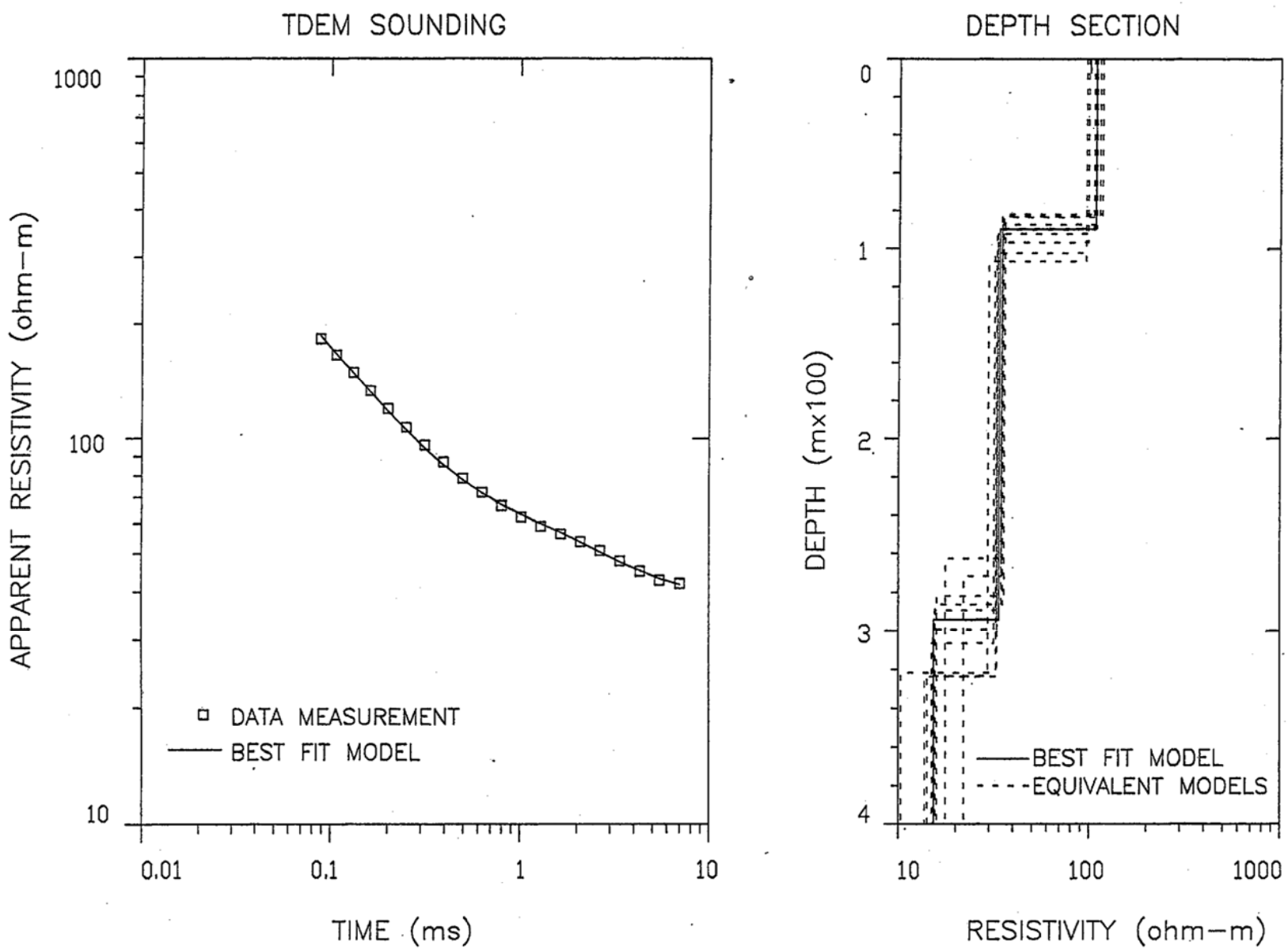
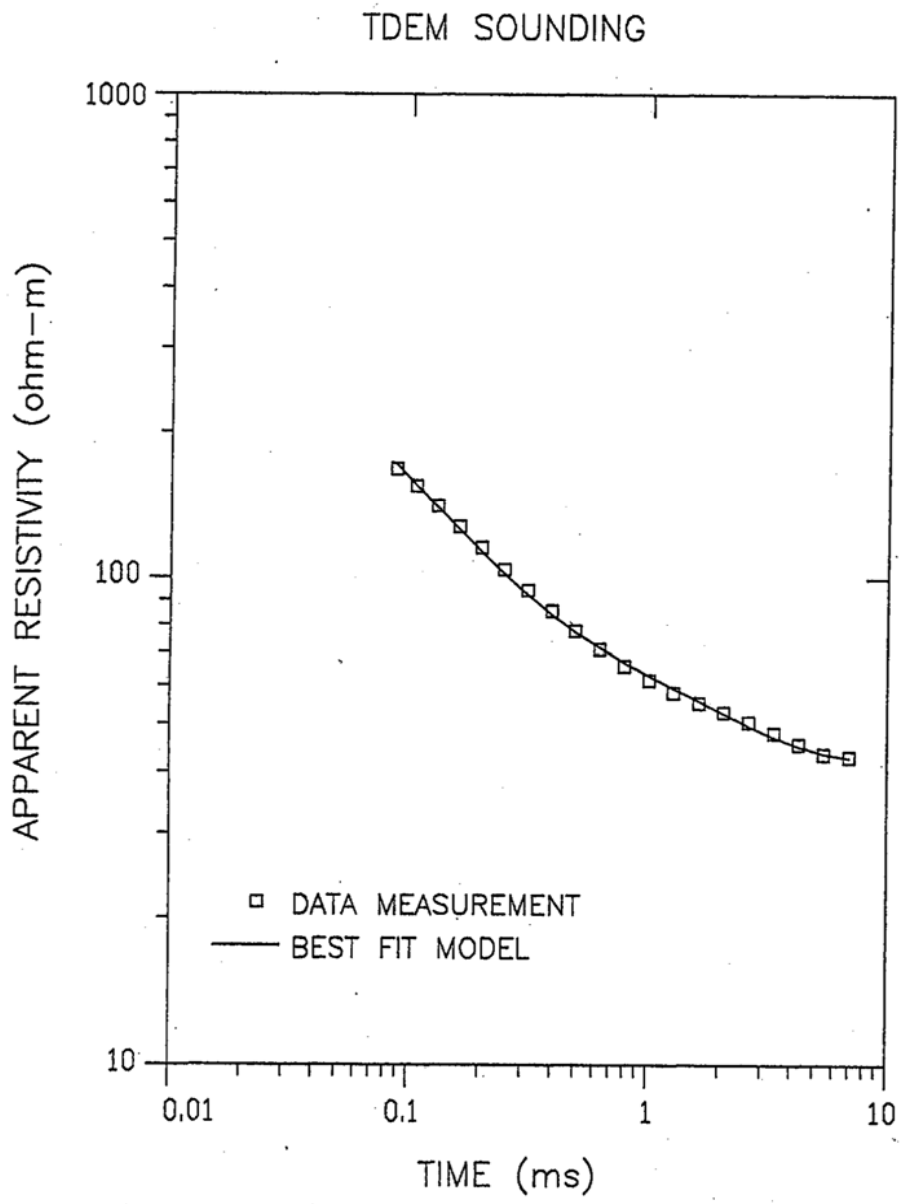


FIGURE A-26
TDEM MODEL-STATION 1100E



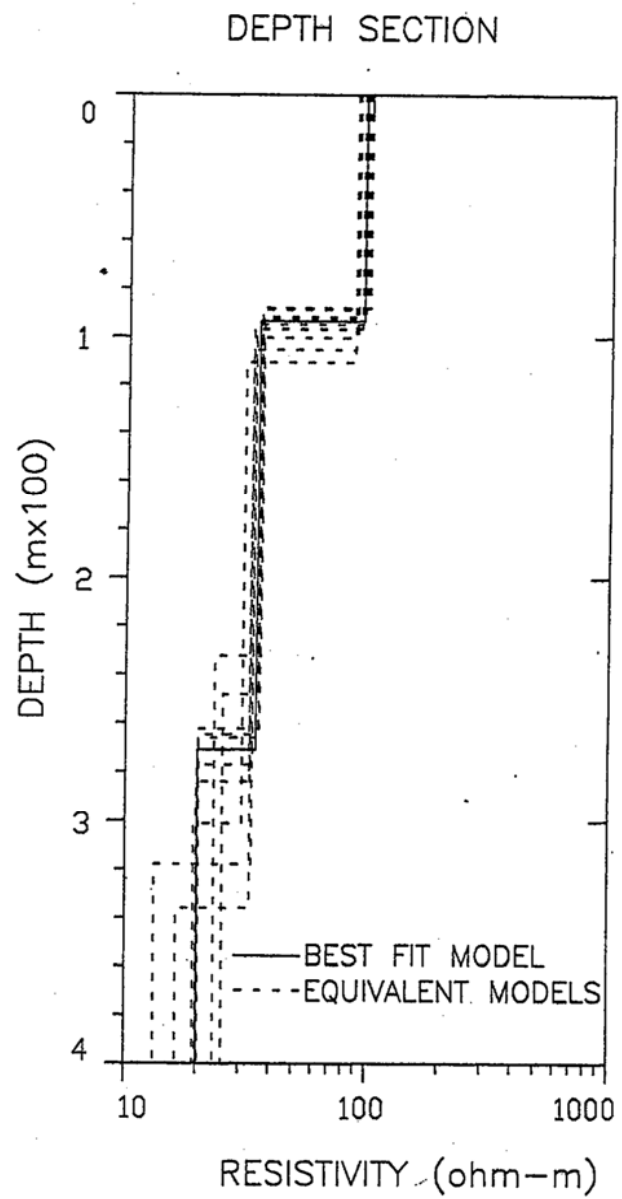
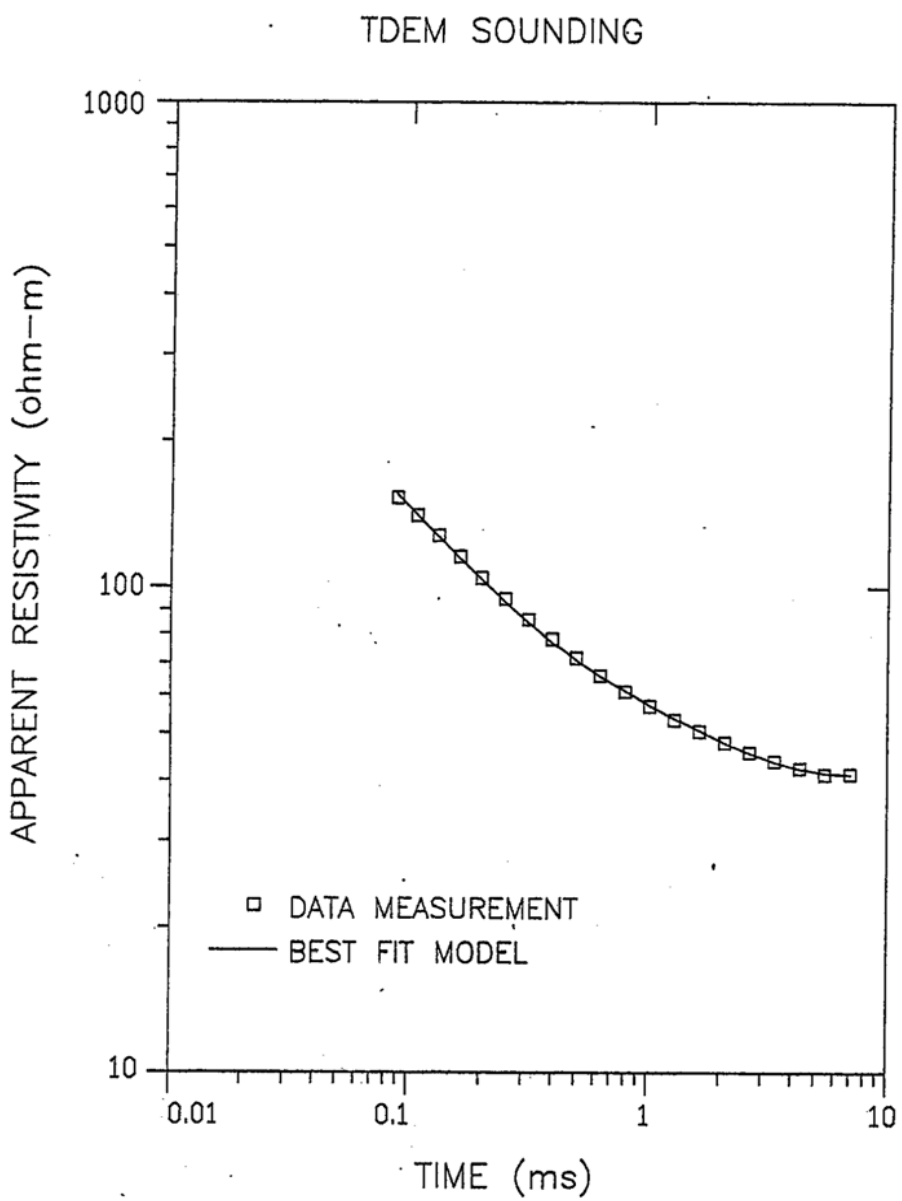


FIGURE A-27
TDEM MODEL-STATION 1300E



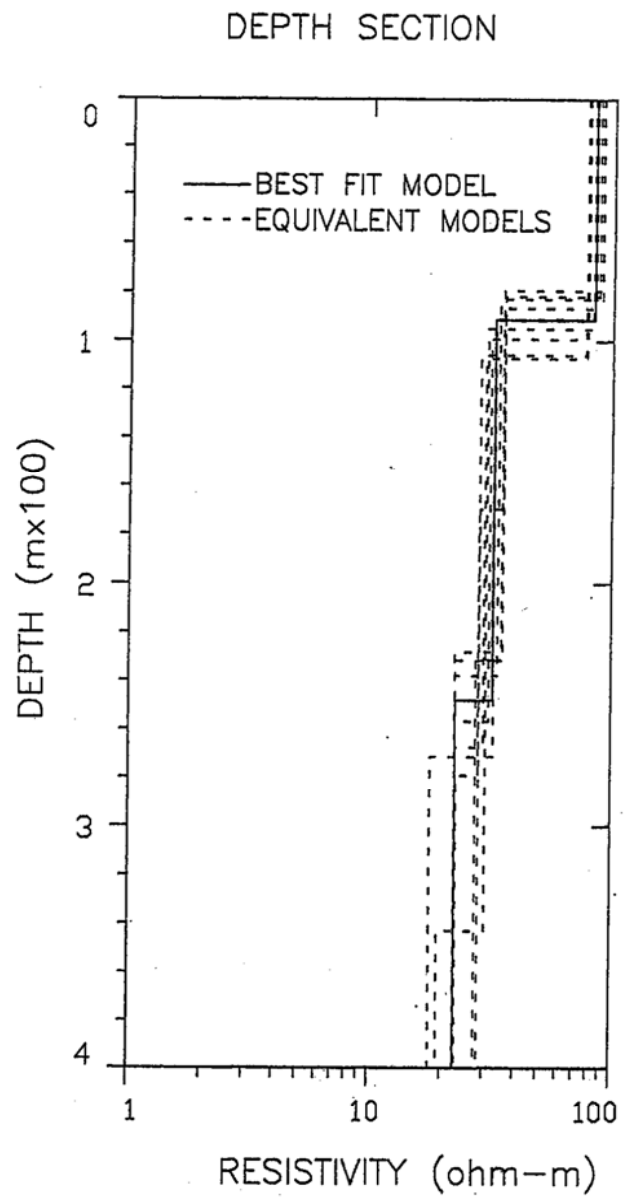


FIGURE A-28
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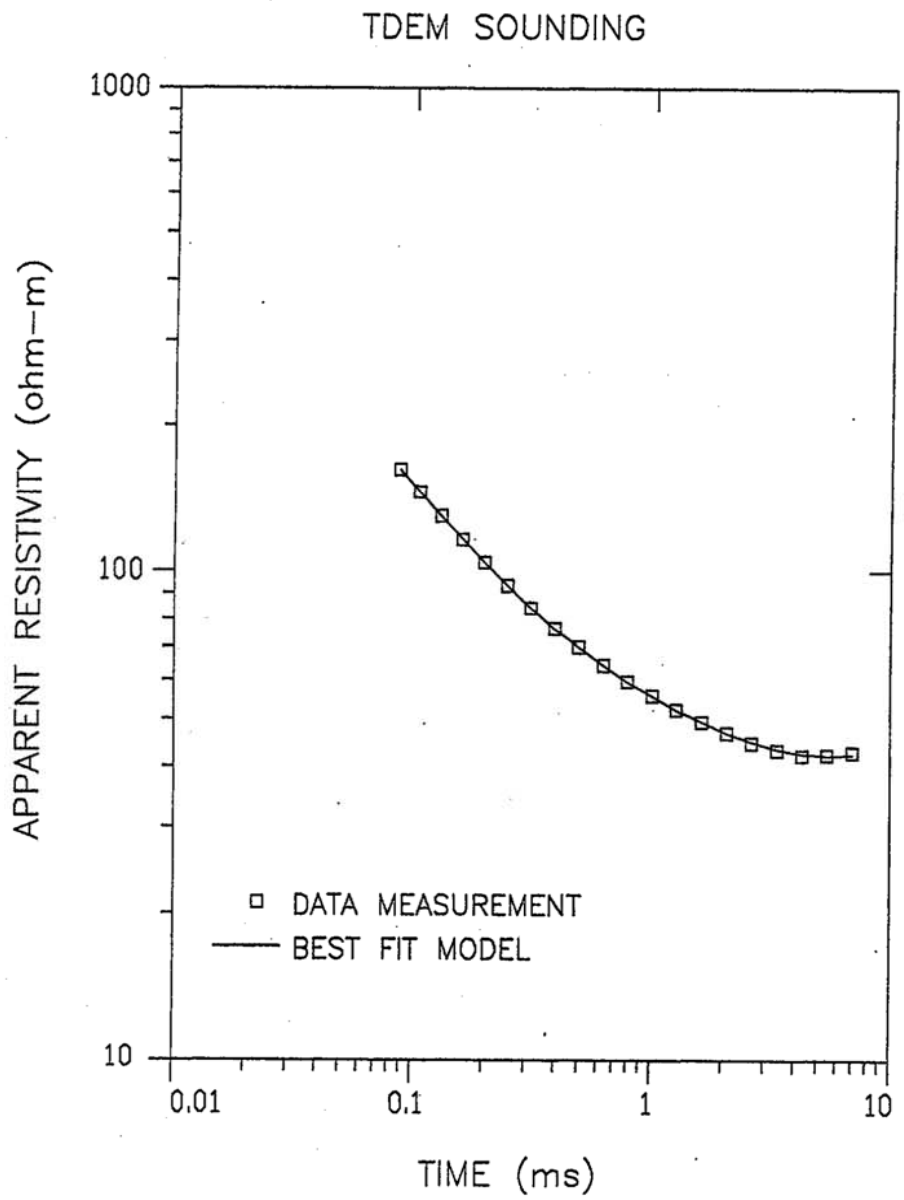


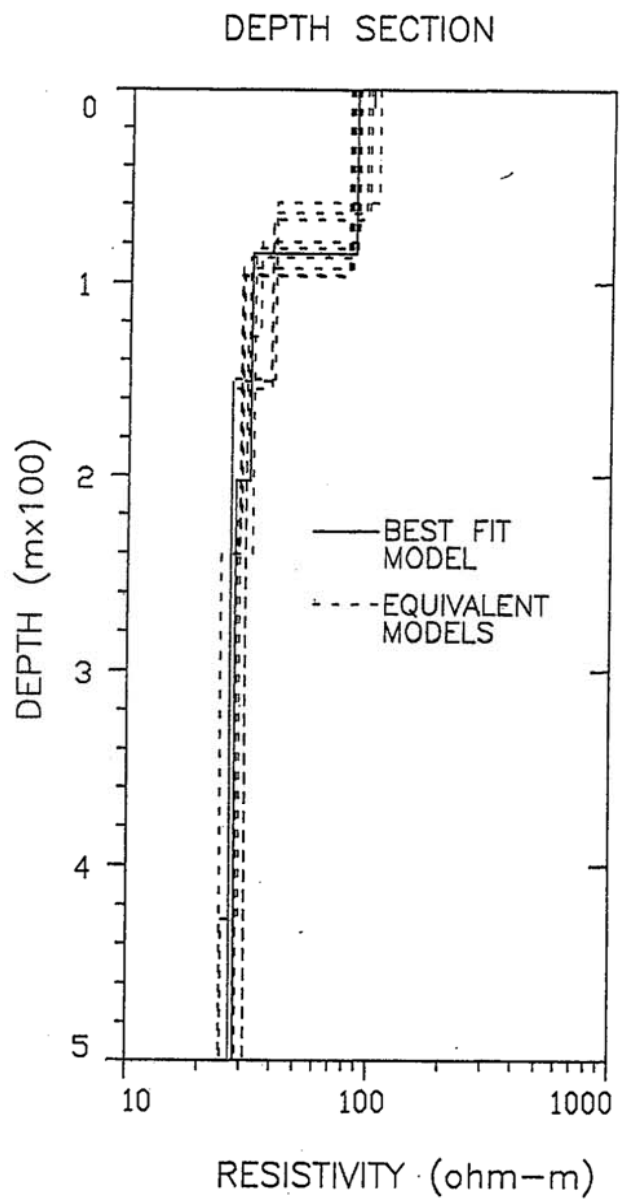
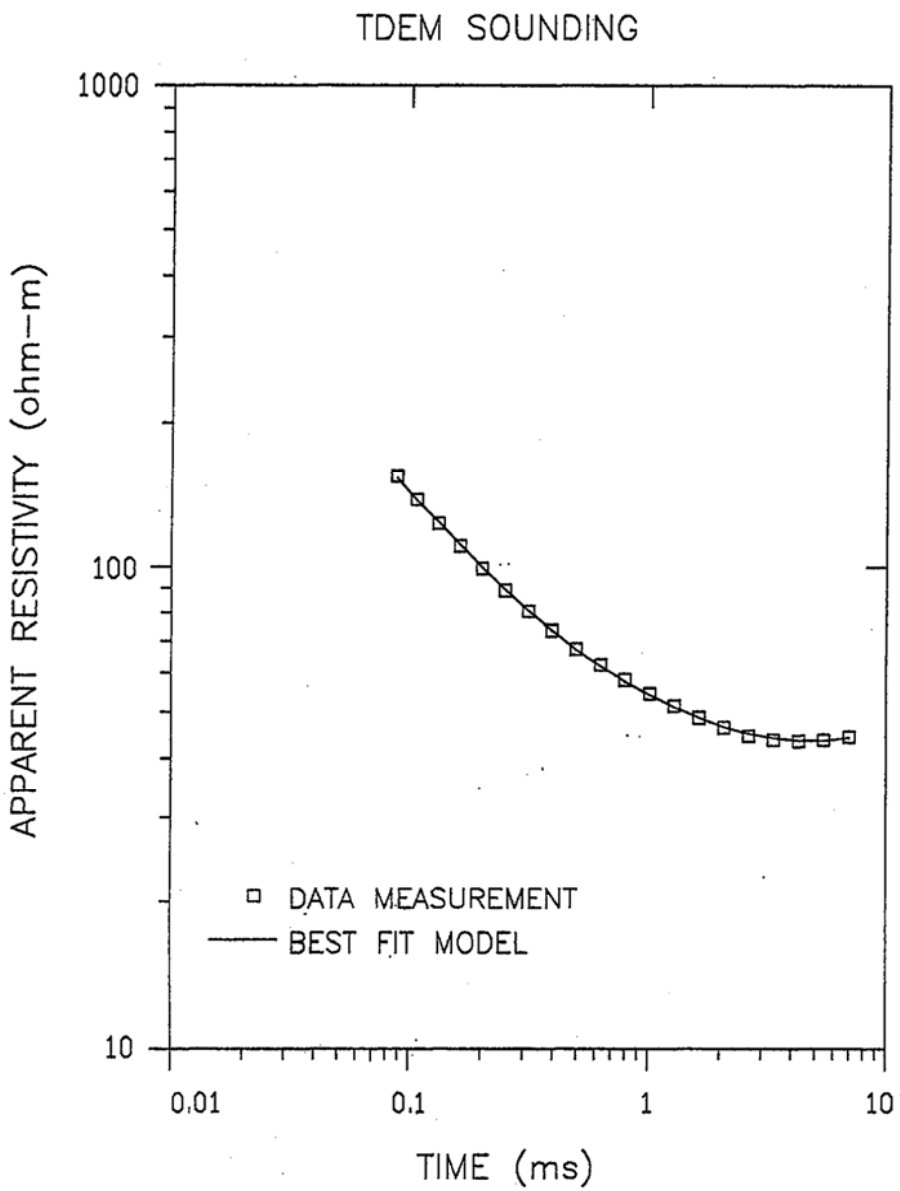


FIGURE A-29
TDEM MODEL-STATION 1700E



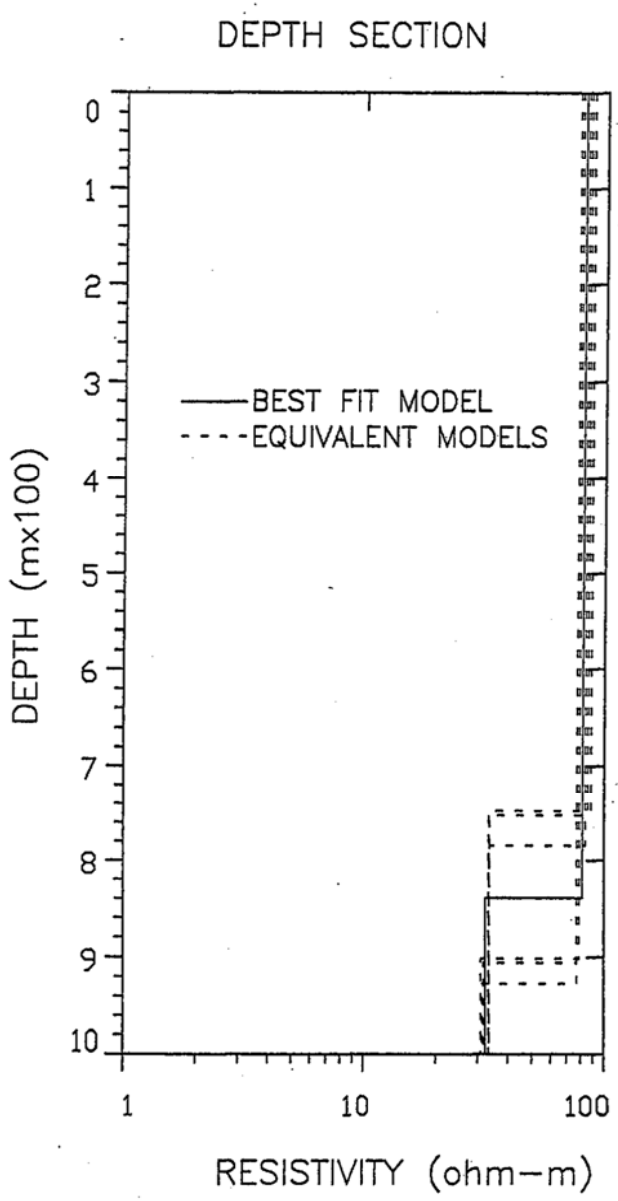


FIGURE A-30
TDEM MODEL-STATION 1900E

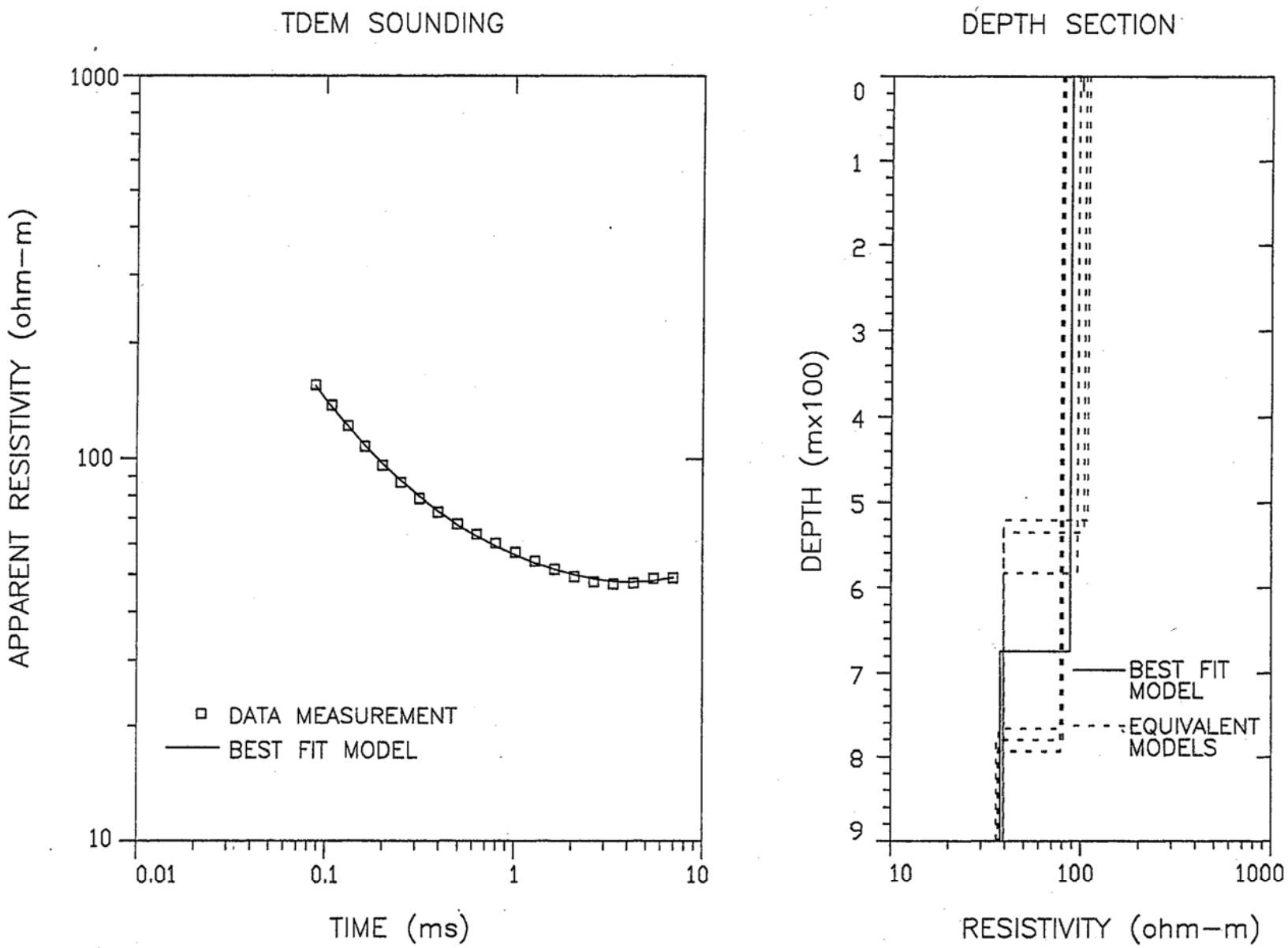


FIGURE A-31
TDEM MODEL-STATION 2100E

APPENDIX B

GRAVITY DATA REDUCTION

TABLE B-1
GRAVITY DATA REDUCTION

STATION	LATITUDE NAD27 (deg., min., sec.)	LONGITUDE NAD27 (deg., min., sec.)	UTM Northing (meters)	UTM Easting (meters)	ELEVATION (meters)	OBSERVED GRAVITY[1] (mGals)	THEORETICAL GRAVITY[1] (mGals)	FREE AIR ANOMALY (mGals)	BOUGUER ANOMALY[2] (mGals)	TERRAIN CORRECTION (mGals)	COMPLETE BOUGUER ANOMALY[3] (mGals)
1004	33 18 57.59940 N	116 22 0.71960 W	3686306.25	558934.74	217.831	1485.665	1604.533	-51.647	-76.021	2.25	926.229
1005	33 19 33.65569 N	116 23 16.58509 W	3687404.93	556966.56	236.000	1482.353	1605.362	-50.180	-76.588	3.25	926.662
1006	33 20 23.42458 N	116 22 0.75279 W	3688949.31	558917.83	238.269	1484.301	1606.506	-48.676	-75.337	3.51	928.173
1007	33 20 33.28712 N	116 23 35.66232 W	3689238.45	556462.64	273.059	1477.475	1606.733	-44.993	-75.547	3.63	928.083
1008	33 21 15.97954 N	116 23 3.00811 W	3690558.15	557298.96	290.346	1474.411	1607.714	-43.703	-76.192	3.82	927.628
1008A	33 21 16.17486 N	116 23 2.90714 W	3690564.18	557301.54	290.954	1474.317	1607.719	-43.614	-76.171	3.81	927.639
2003	33 20 23.00000 N	116 22 0.00000 W	3688936.36	558937.37	238.312	1484.260	1606.496	-48.694	-75.360	3.52	928.160
2020	33 20 24.02808 N	116 23 22.99160 W	3688955.21	556791.84	260.323	1479.534	1606.520	-46.651	-75.780	3.41	927.630
2024	33 21 42.76949 N	116 23 22.23547 W	3691380.25	556797.18	325.152	1468.126	1608.330	-39.863	-76.247	3.66	927.413
2025	33 21 29.55504 N	116 23 22.25732 W	3690973.30	556799.00	304.672	1471.076	1608.026	-42.930	-77.021	3.68	926.659
2026	33 21 16.51045 N	116 23 22.46241 W	3690571.55	556796.05	285.007	1474.790	1607.726	-44.984	-76.876	3.72	926.844
2027	33 21 3.36415 N	116 23 22.63803 W	3690166.67	556793.89	275.745	1477.081	1607.424	-45.249	-76.104	3.54	927.436
2028	33 20 50.23304 N	116 23 22.74867 W	3689762.26	556793.40	270.749	1478.560	1607.122	-45.010	-75.306	3.50	928.194
2029	33 20 37.17499 N	116 23 22.85504 W	3689360.11	556793.00	265.731	1479.080	1606.822	-45.738	-75.473	3.37	927.897
2030	33 20 11.48119 N	116 23 22.92705 W	3688568.84	556795.77	255.685	1479.422	1606.231	-47.906	-76.516	3.39	926.874
2031	33 19 59.00798 N	116 23 22.70300 W	3688184.75	556803.81	248.314	1480.333	1605.945	-48.983	-76.768	3.33	926.562
2032	33 19 46.53551 N	116 23 22.63047 W	3687800.66	556807.94	241.539	1481.477	1605.658	-49.643	-76.670	3.39	926.720
2033	33 19 33.95738 N	116 23 22.54360 W	3687413.32	556812.45	236.007	1482.508	1605.369	-50.030	-76.438	3.33	926.892
2043	33 20 10.26179 N	116 22 0.01837 W	3688544.07	558939.28	235.728	1484.662	1606.203	-48.797	-75.174	3.02	927.846
2044	33 19 57.50004 N	116 22 0.00000 W	3688151.06	558942.14	233.219	1485.349	1605.910	-48.591	-74.687	2.80	928.113
2045	33 19 44.76617 N	116 21 59.95059 W	3687758.92	558945.80	230.764	1485.649	1605.617	-48.755	-74.577	2.67	928.093
2046	33 19 32.02686 N	116 22 0.03489 W	3687366.59	558946.00	226.639	1486.300	1605.325	-49.085	-74.445	2.46	928.015
2047	33 19 19.29884 N	116 22 0.07132 W	3686974.61	558947.44	223.836	1486.285	1605.032	-49.672	-74.719	2.41	927.691
2048	33 19 6.50047 N	116 22 0.01535 W	3686580.48	558951.28	219.805	1486.110	1604.738	-50.797	-75.392	2.34	926.948
2100	33 21 42.82595 N	116 23 26.11109 W	3691381.41	556697.01	326.162	1467.606	1608.331	-40.073	-76.569	3.53	926.961
2101	33 21 42.82813 N	116 23 30.01565 W	3691380.88	556596.10	322.198	1468.187	1608.331	-40.715	-76.768	3.60	926.832
2102	33 21 42.97724 N	116 23 33.84115 W	3691384.90	556497.21	321.242	1468.070	1608.335	-41.131	-77.077	3.65	926.573
2103	33 21 42.92436 N	116 23 37.61693 W	3691382.70	556399.64	317.896	1468.279	1608.334	-41.953	-77.525	3.82	926.295
2104	33 21 43.04408 N	116 23 41.57017 W	3691385.79	556297.46	315.279	1468.601	1608.336	-42.442	-77.720	3.87	926.150
2105	33 21 43.01776 N	116 23 45.64343 W	3691384.37	556192.19	314.497	1468.778	1608.336	-42.505	-77.696	3.86	926.164
2106	33 21 43.09120 N	116 23 49.46223 W	3691386.06	556093.49	312.529	1469.141	1608.337	-42.751	-77.722	3.97	926.248
2107	33 21 43.07690 N	116 23 53.21995 W	3691385.06	555996.38	310.085	1469.849	1608.337	-42.797	-77.495	4.02	926.525

TABLE B-1
GRAVITY DATA REDUCTION

STATION	LATITUDE NAD27 (deg., min., sec.)	LONGITUDE NAD27 (deg., min., sec.)	UTM Northing (meters)	UTM Easting (meters)	ELEVATION (meters)	OBSERVED GRAVITY[1] (mGals)	THEORETICAL GRAVITY[1] (mGals)	FREE AIR ANOMALY (mGals)	BOUGUER ANOMALY[2] (mGals)	TERRAIN CORRECTION (mGals)	COMPLETE BOUGUER ANOMALY[3] (mGals)
2108	33 21 43.20623 N	116 23 57.08751 W	3691388.47	555896.40	307.029	1470.389	1608.340	-43.203	-77.559	4.03	926.471
2109	33 21 43.23664 N	116 24 0.89789 W	3691388.84	555797.93	305.155	1470.910	1608.341	-43.261	-77.407	4.16	926.753
2110	33 21 43.37944 N	116 24 4.76772 W	3691392.66	555697.89	307.147	1470.723	1608.344	-42.837	-77.205	4.14	926.935
2111	33 21 42.71461 N	116 23 18.55167 W	3691379.12	556892.39	350.916	1463.025	1608.329	-37.013	-76.279	3.71	927.431
2126	33 21 29.69317 N	116 23 26.19597 W	3690976.96	556697.18	303.899	1471.118	1608.029	-43.129	-77.135	3.66	926.525
2127	33 21 29.68768 N	116 23 30.14456 W	3690976.19	556595.13	302.266	1471.374	1608.029	-43.377	-77.200	3.64	926.440
2128	33 21 29.54947 N	116 23 18.46779 W	3690973.70	556896.94	308.087	1470.598	1608.026	-42.354	-76.828	3.76	926.932
2129	33 21 29.52374 N	116 23 14.64578 W	3690973.49	556995.73	312.530	1470.027	1608.025	-41.553	-76.524	3.80	927.276
2130	33 21 29.65449 N	116 23 10.31644 W	3690978.17	557107.59	321.691	1468.632	1608.028	-40.124	-76.120	3.88	927.760
2131	33 21 29.39961 N	116 23 7.71039 W	3690970.72	557174.99	323.969	1468.456	1608.023	-39.591	-75.842	4.01	928.168
2132	33 21 29.17885 N	116 23 3.06455 W	3690964.63	557295.10	327.053	1468.276	1608.018	-38.814	-75.410	4.33	928.920
2148	33 21 16.54449 N	116 23 26.36101 W	3690572.00	556695.29	282.469	1475.428	1607.727	-45.130	-76.738	3.73	926.992
2149	33 21 16.47530 N	116 23 18.62024 W	3690571.05	556895.36	284.402	1474.879	1607.725	-45.081	-76.905	3.74	926.835
2150	33 21 16.40272 N	116 23 14.79018 W	3690569.39	556994.37	282.316	1475.393	1607.724	-45.209	-76.799	3.81	927.011
2151	33 21 16.37384 N	116 23 10.89511 W	3690569.09	557095.04	283.641	1475.210	1607.723	-44.983	-76.721	3.82	927.099
2152	33 21 16.32682 N	116 23 7.08834 W	3690568.23	557193.44	287.005	1474.795	1607.722	-44.358	-76.473	3.81	927.337
2153	33 21 16.27538 N	116 23 3.12221 W	3690567.25	557295.96	291.152	1474.273	1607.721	-43.600	-76.178	3.82	927.642
2154	33 21 16.20593 N	116 22 59.32859 W	3690565.69	557394.02	292.763	1474.383	1607.719	-42.991	-75.750	3.90	928.150
2155	33 21 16.14320 N	116 22 55.48534 W	3690564.35	557493.36	293.139	1474.680	1607.718	-42.576	-75.378	4.05	928.672
2156	33 21 16.14256 N	116 22 51.57034 W	3690564.93	557594.55	310.844	1471.138	1607.718	-40.655	-75.437	4.01	928.573
2157	33 21 16.13031 N	116 22 47.59550 W	3690565.16	557697.28	305.683	1472.259	1607.718	-41.126	-75.331	4.77	929.439
2170	33 21 3.33407 N	116 23 18.72157 W	3690166.33	556895.12	274.460	1477.233	1607.423	-45.493	-76.204	3.57	927.366
2171	33 21 3.27017 N	116 23 14.89561 W	3690164.95	556994.02	272.758	1477.443	1607.422	-45.807	-76.327	3.60	927.273
2172	33 21 3.15097 N	116 23 11.02526 W	3690161.86	557094.08	270.916	1477.705	1607.419	-46.111	-76.425	3.63	927.205
2173	33 21 3.17115 N	116 23 7.09296 W	3690163.08	557195.71	270.897	1477.691	1607.420	-46.131	-76.443	3.64	927.197
2174	33 21 3.13417 N	116 23 3.25564 W	3690162.53	557294.90	268.970	1478.039	1607.419	-46.377	-76.473	3.70	927.227
2175	33 21 3.15416 N	116 22 59.49119 W	3690163.72	557392.20	267.960	1478.188	1607.419	-46.540	-76.524	3.80	927.276
2176	33 21 3.01404 N	116 22 55.52289 W	3690160.01	557494.79	266.559	1478.486	1607.416	-46.671	-76.498	3.74	927.242
2177	33 21 2.97931 N	116 22 51.60790 W	3690159.54	557595.99	265.495	1478.797	1607.415	-46.687	-76.395	3.81	927.415
2178	33 21 2.94160 N	116 22 47.83677 W	3690158.96	557693.47	264.136	1479.284	1607.414	-46.619	-76.175	3.97	927.795
2179	33 21 2.85440 N	116 22 44.07645 W	3690156.86	557790.67	261.209	1480.155	1607.412	-46.649	-75.878	4.43	928.552
2180	33 21 2.86484 N	116 22 40.05624 W	3690157.80	557894.58	259.955	1480.579	1607.413	-46.612	-75.701	4.80	929.099

TABLE B-1
GRAVITY DATA REDUCTION

STATION	LATITUDE NAD27 (deg., min., sec.)	LONGITUDE NAD27 (deg., min., sec.)	UTM Northing (meters)	UTM Easting (meters)	ELEVATION (meters)	OBSERVED GRAVITY[1] (mGals)	THEORETICAL GRAVITY[1] (mGals)	FREE AIR ANOMALY (mGals)	BOUGUER ANOMALY[2] (mGals)	TERRAIN CORRECTION (mGals)	COMPLETE BOUGUER ANOMALY[3] (mGals)
2181	33 21 2.74290 N	116 22 36.26891 W	3690154.63	557992.49	256.545	1481.181	1607.410	-47.060	-75.766	5.55	929.784
2182	33 21 2.86284 N	116 22 32.87580 W	3690158.85	558080.17	255.008	1481.220	1607.412	-47.498	-76.033	6.37	930.337
2201	33 20 50.25488 N	116 23 18.86023 W	3689763.53	556893.90	269.242	1478.712	1607.123	-45.324	-75.451	3.51	928.059
2202	33 20 50.15308 N	116 23 14.99228 W	3689760.98	556993.90	268.052	1478.737	1607.120	-45.664	-75.658	3.51	927.852
2203	33 20 50.10305 N	116 23 11.12942 W	3689760.02	557093.75	266.673	1478.889	1607.119	-45.936	-75.776	3.50	927.724
2204	33 20 50.03297 N	116 23 7.26848 W	3689758.45	557193.56	265.939	1478.777	1607.118	-46.273	-76.030	3.50	927.470
2205	33 20 50.00531 N	116 23 3.40867 W	3689758.19	557293.33	264.679	1478.913	1607.117	-46.525	-76.142	3.52	927.378
2206	33 20 49.97480 N	116 22 59.58529 W	3689757.84	557392.17	263.416	1479.032	1607.116	-46.795	-76.270	3.54	927.270
2207	33 20 49.90283 N	116 22 55.65794 W	3689756.22	557493.69	262.037	1479.223	1607.115	-47.028	-76.349	3.40	927.051
2208	33 20 49.85719 N	116 22 51.79813 W	3689755.41	557593.47	260.849	1479.352	1607.113	-47.265	-76.453	3.36	926.907
2209	33 20 49.83764 N	116 22 47.90273 W	3689755.40	557694.16	259.489	1479.624	1607.113	-47.412	-76.448	3.43	926.982
2210	33 20 49.81737 N	116 22 44.09672 W	3689755.36	557792.54	258.826	1479.833	1607.113	-47.407	-76.369	3.53	927.161
2211	33 20 49.73502 N	116 22 40.33933 W	3689753.41	557889.68	256.807	1480.349	1607.111	-47.512	-76.248	3.63	927.382
2212	33 20 49.62935 N	116 22 36.36960 W	3689750.77	557992.31	254.901	1480.878	1607.108	-47.569	-76.091	3.76	927.669
2213	33 20 49.67720 N	116 22 32.48337 W	3689752.84	558092.75	253.665	1481.225	1607.109	-47.604	-75.989	3.95	927.961
2214	33 20 49.62952 N	116 22 28.53533 W	3689751.98	558194.81	252.341	1481.614	1607.108	-47.623	-75.859	4.11	928.251
2215	33 20 49.57953 N	116 22 24.70528 W	3689751.04	558293.81	250.939	1482.005	1607.107	-47.663	-75.743	4.33	928.587
2216	33 20 49.49461 N	116 22 20.86406 W	3689749.02	558393.12	249.240	1482.508	1607.105	-47.683	-75.572	4.64	929.068
2217	33 20 49.44411 N	116 22 16.98856 W	3689748.07	558493.30	247.324	1483.109	1607.104	-47.672	-75.346	4.79	929.444
2218	33 20 49.32909 N	116 22 13.12719 W	3689745.13	558593.13	246.469	1483.542	1607.101	-47.500	-75.079	5.03	929.951
2219	33 20 49.33808 N	116 22 9.33227 W	3689746.00	558691.22	245.504	1484.128	1607.102	-47.212	-74.683	5.75	931.067
2220	33 20 49.32138 N	116 22 5.37202 W	3689746.11	558793.59	245.064	1484.455	1607.101	-47.020	-74.442	6.21	931.768
2221	33 20 49.40198 N	116 22 1.74016 W	3689749.16	558887.45	249.329	1483.675	1607.103	-46.486	-74.385	6.76	932.375
2222	33 20 49.22447 N	116 21 59.57595 W	3689744.03	558943.42	253.664	1482.759	1607.099	-46.060	-74.444	7.11	932.666
2235	33 20 37.07520 N	116 23 18.96100 W	3689357.63	556893.68	265.081	1479.033	1606.820	-45.984	-75.645	3.33	927.685
2236	33 20 36.97060 N	116 23 15.19856 W	3689354.98	556990.95	264.498	1478.981	1606.817	-46.213	-75.810	3.30	927.490
2237	33 20 36.99588 N	116 23 11.23801 W	3689356.36	557093.32	262.388	1479.297	1606.818	-46.549	-75.909	3.32	927.411
2238	33 20 36.97506 N	116 23 7.43037 W	3689356.30	557191.75	261.394	1479.371	1606.817	-46.781	-76.030	3.32	927.290
2239	33 20 36.88187 N	116 23 3.52680 W	3689354.02	557292.67	260.463	1479.366	1606.815	-47.071	-76.216	3.32	927.104
2240	33 20 36.85379 N	116 22 59.67679 W	3689353.75	557392.19	259.343	1479.475	1606.815	-47.307	-76.327	3.32	926.993
2241	33 20 36.80408 N	116 22 55.79889 W	3689352.81	557492.44	257.873	1480.190	1606.813	-47.045	-75.900	3.14	927.240
2242	33 20 36.75628 N	116 22 51.95824 W	3689351.93	557591.73	257.272	1479.636	1606.812	-47.783	-76.571	3.07	926.499

TABLE B-1
GRAVITY DATA REDUCTION

STATION	LATITUDE NAD27 (deg., min., sec.)	LONGITUDE NAD27 (deg., min., sec.)	UTM Northing (meters)	UTM Easting (meters)	ELEVATION (meters)	OBSERVED GRAVITY[1] (mGals)	THEORETICAL GRAVITY[1] (mGals)	FREE AIR ANOMALY (mGals)	BOUGUER ANOMALY[2] (mGals)	TERRAIN CORRECTION (mGals)	COMPLETE BOUGUER ANOMALY[3] (mGals)
2243	33 20 36.70510 N	116 22 48.07273 W	3689350.95	557692.17	255.844	1479.893	1606.811	-47.966	-76.594	3.10	926.506
2244	33 20 36.70340 N	116 22 44.17661 W	3689351.49	557792.88	254.551	1480.201	1606.811	-48.057	-76.540	3.14	926.600
2245	33 20 36.60969 N	116 22 40.35282 W	3689349.20	557891.74	253.275	1480.590	1606.809	-48.059	-76.400	3.19	926.790
2246	33 20 36.57233 N	116 22 36.48421 W	3689348.65	557991.75	252.360	1480.951	1606.808	-47.980	-76.218	3.25	927.032
2247	33 20 36.46296 N	116 22 32.57113 W	3689345.88	558092.92	251.386	1481.347	1606.806	-47.882	-76.011	3.30	927.289
2248	33 20 36.51695 N	116 22 28.67771 W	3689348.15	558193.55	249.525	1481.984	1606.807	-47.820	-75.741	3.37	927.629
2249	33 20 36.42744 N	116 22 24.82816 W	3689345.99	558293.07	248.132	1482.359	1606.805	-47.873	-75.638	3.46	927.822
2250	33 20 36.38789 N	116 22 21.01048 W	3689345.37	558391.76	246.769	1482.797	1606.804	-47.855	-75.468	3.57	928.102
2251	33 20 36.36256 N	116 22 17.14193 W	3689345.19	558491.77	245.163	1483.231	1606.803	-47.916	-75.349	3.46	928.111
2252	33 20 36.30350 N	116 22 13.24170 W	3689343.98	558592.60	243.910	1483.512	1606.802	-48.020	-75.313	3.44	928.127
2253	33 20 36.25151 N	116 22 9.38126 W	3689342.98	558692.39	242.902	1483.781	1606.801	-48.061	-75.241	3.62	928.379
2255	33 20 36.17817 N	116 22 1.63535 W	3689341.93	558892.63	239.808	1484.551	1606.799	-48.244	-75.078	4.05	928.972
2256	33 20 36.10334 N	116 21 57.81274 W	3689340.23	558991.46	239.289	1484.824	1606.797	-48.130	-74.905	4.38	929.475
2257	33 20 36.05664 N	116 21 53.96971 W	3689339.40	559090.80	238.074	1485.382	1606.796	-47.946	-74.585	4.58	929.995
2258	33 20 36.14301 N	116 21 50.05303 W	3689342.67	559192.03	237.444	1486.025	1606.798	-47.499	-74.068	5.32	931.252
2259	33 20 36.05467 N	116 21 46.27914 W	3689340.55	559289.60	235.907	1486.765	1606.796	-47.231	-73.628	6.15	932.522
2273	33 20 23.94357 N	116 23 19.13504 W	3688953.19	556891.54	259.390	1479.654	1606.518	-46.817	-75.842	3.37	927.528
2274	33 20 23.92245 N	116 23 15.25677 W	3688953.13	556991.80	258.273	1479.807	1606.517	-47.008	-75.908	3.34	927.432
2275	33 20 23.91237 N	116 23 11.40235 W	3688953.41	557091.43	257.849	1479.763	1606.517	-47.183	-76.035	3.33	927.295
2276	33 20 23.81574 N	116 23 7.56518 W	3688951.01	557190.66	257.485	1479.667	1606.515	-47.389	-76.201	3.30	927.099
2277	33 20 23.76935 N	116 23 3.66925 W	3688950.18	557291.38	256.136	1479.802	1606.514	-47.669	-76.330	3.30	926.970
2278	33 20 23.69097 N	116 22 59.78629 W	3688948.36	557391.77	255.269	1479.815	1606.512	-47.922	-76.486	3.30	926.814
2279	33 20 23.73907 N	116 22 55.98429 W	3688950.43	557490.03	255.054	1479.740	1606.513	-48.064	-76.604	3.09	926.486
2280	33 20 23.65943 N	116 22 52.07252 W	3688948.58	557591.17	253.126	1480.099	1606.511	-48.299	-76.622	3.04	926.418
2281	33 20 23.58476 N	116 22 48.19162 W	3688946.88	557691.50	251.781	1480.345	1606.510	-48.466	-76.639	3.07	926.431
2282	33 20 23.50559 N	116 22 44.32412 W	3688945.03	557791.49	251.847	1480.312	1606.508	-48.477	-76.658	3.07	926.412
2283	33 20 23.49722 N	116 22 40.46310 W	3688945.37	557891.30	249.895	1480.923	1606.508	-48.468	-76.430	3.11	926.680
2284	33 20 23.45322 N	116 22 36.59526 W	3688944.61	557991.29	249.495	1481.174	1606.507	-48.339	-76.257	3.14	926.883
2285	33 20 23.39791 N	116 22 32.72824 W	3688943.51	558091.27	247.954	1481.804	1606.505	-48.184	-75.929	3.19	927.261
2286	33 20 23.34386 N	116 22 28.86725 W	3688942.44	558191.08	246.490	1482.472	1606.504	-47.966	-75.548	3.25	927.702
2287	33 20 23.30868 N	116 22 24.98653 W	3688941.96	558291.41	244.552	1483.226	1606.503	-47.809	-75.174	3.29	928.116
2288	33 20 23.26900 N	116 22 21.16334 W	3688941.33	558390.24	244.470	1483.368	1606.502	-47.692	-75.047	3.35	928.303

TABLE B-1
GRAVITY DATA REDUCTION

STATION	LATITUDE NAD27 (deg., min., sec.)	LONGITUDE NAD27 (deg., min., sec.)	UTM Northing (meters)	UTM Easting (meters)	ELEVATION (meters)	OBSERVED GRAVITY[1] (mGals)	THEORETICAL GRAVITY[1] (mGals)	FREE AIR ANOMALY (mGals)	BOUGUER ANOMALY[2] (mGals)	TERRAIN CORRECTION (mGals)	COMPLETE BOUGUER ANOMALY[3] (mGals)
2289	33 20 23.20728 N	116 22 17.30100 W	3688940.03	558490.10	242.555	1484.398	1606.501	-47.251	-74.392	3.21	928.818
2290	33 20 23.10397 N	116 22 13.41662 W	3688937.46	558590.53	242.072	1483.921	1606.498	-47.875	-74.962	3.12	928.158
2291	33 20 23.06421 N	116 22 9.55180 W	3688936.84	558690.44	241.433	1483.995	1606.498	-47.997	-75.013	3.21	928.197
2292	33 20 23.02014 N	116 22 5.65870 W	3688936.09	558791.09	240.298	1484.094	1606.497	-48.248	-75.136	3.32	928.184
2293	33 20 23.02568 N	116 22 1.80164 W	3688936.86	558890.79	238.907	1484.195	1606.497	-48.576	-75.309	3.45	928.141
2294	33 20 11.55749 N	116 23 26.70686 W	3688570.62	556698.05	257.000	1479.252	1606.233	-47.672	-76.429	3.42	926.991
2295	33 20 11.62068 N	116 23 30.60907 W	3688571.97	556597.16	258.752	1478.939	1606.235	-47.446	-76.399	3.48	927.081
2296	33 20 11.70896 N	116 23 34.48530 W	3688574.11	556496.94	260.307	1478.672	1606.237	-47.235	-76.362	3.67	927.308
2297	33 20 11.73166 N	116 23 38.34076 W	3688574.23	556397.27	262.252	1478.389	1606.237	-46.918	-76.263	3.93	927.667
2298	33 20 11.41907 N	116 23 18.99883 W	3688567.52	556897.33	254.265	1479.744	1606.230	-48.021	-76.472	3.35	926.878
2299	33 20 11.41427 N	116 23 15.15791 W	3688567.95	556996.62	253.868	1479.801	1606.230	-48.086	-76.493	3.31	926.817
2300	33 20 11.31725 N	116 23 11.31500 W	3688565.55	557095.99	253.123	1479.932	1606.228	-48.183	-76.506	3.28	926.774
2301	33 20 11.26931 N	116 23 7.36195 W	3688564.68	557198.18	251.947	1480.125	1606.226	-48.352	-76.544	3.27	926.726
2302	33 20 11.21007 N	116 23 3.54309 W	3688563.43	557296.92	251.373	1480.165	1606.225	-48.487	-76.615	3.26	926.645
2303	33 20 11.18775 N	116 22 59.66454 W	3688563.34	557397.19	250.866	1480.170	1606.225	-48.638	-76.709	3.25	926.541
2304	33 20 11.12827 N	116 22 55.74334 W	3688562.11	557498.56	249.741	1480.370	1606.223	-48.784	-76.729	3.05	926.321
2305	33 20 10.95347 N	116 22 51.95796 W	3688557.31	557596.45	249.636	1480.407	1606.219	-48.776	-76.709	2.94	926.231
2306	33 20 10.98195 N	116 22 48.15253 W	3688558.77	557694.82	249.047	1480.528	1606.220	-48.837	-76.704	2.95	926.246
2307	33 20 10.72213 N	116 22 44.17067 W	3688551.38	557797.80	247.759	1480.921	1606.214	-48.835	-76.559	2.88	926.321
2308	33 20 10.65976 N	116 22 40.32960 W	3688550.05	557897.11	246.920	1481.265	1606.212	-48.749	-76.378	2.90	926.522
2309	33 20 10.59951 N	116 22 36.50399 W	3688548.78	557996.02	245.941	1481.734	1606.211	-48.581	-76.101	2.90	926.799
2310	33 20 10.52976 N	116 22 32.66320 W	3688547.23	558095.32	244.894	1482.323	1606.209	-48.313	-75.716	2.92	927.204
2311	33 20 10.45466 N	116 22 28.70852 W	3688545.53	558197.57	243.393	1483.249	1606.208	-47.849	-75.083	2.96	927.877
2312	33 20 10.35797 N	116 22 24.87765 W	3688543.15	558296.62	242.415	1483.977	1606.205	-47.420	-74.546	3.00	928.454
2313	33 20 10.33470 N	116 22 21.04096 W	3688543.03	558395.81	241.911	1484.434	1606.205	-47.118	-74.187	3.04	928.853
2314	33 20 10.23510 N	116 22 17.19980 W	3688540.56	558495.12	240.496	1484.801	1606.203	-47.186	-74.096	2.87	928.774
2315	33 20 10.16971 N	116 22 13.27434 W	3688539.16	558596.61	239.567	1484.804	1606.201	-47.468	-74.274	2.77	928.496
2316	33 20 10.39862 N	116 22 9.40665 W	3688546.81	558696.55	237.530	1484.982	1606.206	-47.924	-74.502	2.85	928.348
2317	33 20 10.33516 N	116 22 5.53676 W	3688545.46	558796.61	236.273	1484.954	1606.205	-48.338	-74.776	2.91	928.134
2318	33 20 10.29622 N	116 22 1.66150 W	3688544.87	558896.79	234.821	1484.981	1606.204	-48.758	-75.034	3.00	927.966
2319	33 19 58.85884 N	116 23 18.90557 W	3688180.73	556902.01	247.410	1480.504	1605.941	-49.087	-76.772	3.30	926.528
2320	33 19 58.86301 N	116 23 14.91136 W	3688181.46	557005.27	248.404	1480.225	1605.941	-49.060	-76.855	3.25	926.395

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GRAVITY DATA REDUCTION

STATION	LATITUDE NAD27 (deg., min., sec.)	LONGITUDE NAD27 (deg., min., sec.)	UTM Northing (meters)	UTM Easting (meters)	ELEVATION (meters)	OBSERVED GRAVITY[1] (mGals)	THEORETICAL GRAVITY[1] (mGals)	FREE AIR ANOMALY (mGals)	BOUGUER ANOMALY[2] (mGals)	TERRAIN CORRECTION (mGals)	COMPLETE BOUGUER ANOMALY[3] (mGals)
2321	33 19 58.80673 N	116 23 11.14928 W	3688180.30	557102.54	247.889	1480.326	1605.940	-49.116	-76.854	3.22	926.366
2322	33 19 58.68046 N	116 23 7.30369 W	3688177.00	557201.98	247.165	1480.514	1605.937	-49.149	-76.806	3.20	926.394
2323	33 19 58.63663 N	116 23 3.30949 W	3688176.26	557305.24	247.083	1480.520	1605.936	-49.167	-76.815	3.17	926.355
2324	33 19 58.53170 N	116 22 59.57935 W	3688173.60	557401.69	245.649	1480.853	1605.934	-49.274	-76.762	3.19	926.428
2325	33 19 58.51109 N	116 22 55.68777 W	3688173.56	557502.30	245.082	1480.949	1605.933	-49.353	-76.777	2.94	926.163
2326	33 19 58.39046 N	116 22 51.83593 W	3688170.43	557601.90	244.987	1480.984	1605.930	-49.344	-76.758	2.81	926.052
2327	33 19 58.37327 N	116 22 47.95437 W	3688170.50	557702.25	244.275	1481.254	1605.930	-49.294	-76.627	2.81	926.183
2328	33 19 58.31250 N	116 22 44.11906 W	3688169.22	557801.42	244.600	1481.358	1605.929	-49.088	-76.458	2.81	926.352
2329	33 19 58.25042 N	116 22 40.26189 W	3688167.90	557901.14	243.412	1481.854	1605.927	-48.957	-76.194	2.82	926.626
2330	33 19 58.17716 N	116 22 36.31541 W	3688166.26	558003.18	242.197	1482.354	1605.926	-48.830	-75.931	2.83	926.899
2331	33 19 58.10204 N	116 22 32.48660 W	3688164.53	558102.18	241.117	1482.933	1605.924	-48.583	-75.563	2.84	927.277
2332	33 19 58.02056 N	116 22 28.62626 W	3688162.62	558201.99	240.625	1483.525	1605.922	-48.141	-75.066	2.86	927.794
2333	33 19 57.98358 N	116 22 24.82294 W	3688162.08	558300.32	239.495	1484.338	1605.921	-47.676	-74.475	2.90	928.425
2334	33 19 57.90423 N	116 22 20.83691 W	3688160.25	558403.38	238.530	1485.065	1605.919	-47.245	-73.936	2.93	928.994
2335	33 19 57.83751 N	116 22 17.00621 W	3688158.79	558502.43	237.274	1485.585	1605.918	-47.111	-73.661	2.74	929.079
2336	33 19 57.77348 N	116 22 13.16027 W	3688157.42	558601.87	235.764	1485.954	1605.916	-47.206	-73.588	2.63	929.042
2337	33 19 57.69576 N	116 22 9.31634 W	3688155.63	558701.26	235.120	1485.884	1605.914	-47.473	-73.782	2.67	928.888
2338	33 19 57.62401 N	116 22 5.41081 W	3688154.03	558802.24	234.164	1485.686	1605.913	-47.965	-74.167	2.72	928.553
2339	33 19 57.52855 N	116 22 1.56458 W	3688151.69	558901.69	233.248	1485.507	1605.911	-48.424	-74.524	2.78	928.256
2340	33 19 46.49945 N	116 23 18.72349 W	3687800.14	556908.95	241.734	1481.422	1605.657	-49.637	-76.686	3.34	926.654
2341	33 19 46.27308 N	116 23 14.90621 W	3687793.75	557007.68	241.504	1481.485	1605.652	-49.640	-76.663	3.29	926.627
2342	33 19 46.24401 N	116 23 11.00339 W	3687793.45	557108.59	241.528	1481.443	1605.651	-49.674	-76.700	3.25	926.550
2343	33 19 46.17474 N	116 23 7.22413 W	3687791.89	557206.30	241.693	1481.371	1605.650	-49.693	-76.738	3.22	926.482
2344	33 19 46.07412 N	116 23 3.27910 W	3687789.39	557308.31	241.393	1481.375	1605.647	-49.779	-76.790	3.19	926.400
2345	33 19 46.01252 N	116 22 59.44291 W	3687788.08	557407.50	240.860	1481.459	1605.646	-49.859	-76.810	3.18	926.370
2346	33 19 45.93868 N	116 22 55.54612 W	3687786.40	557508.26	240.511	1481.504	1605.644	-49.920	-76.832	2.93	926.098
2347	33 19 45.76233 N	116 22 51.70564 W	3687781.56	557607.58	240.045	1481.608	1605.640	-49.955	-76.815	2.82	926.005
2348	33 19 45.76640 N	116 22 47.83545 W	3687782.24	557707.64	239.147	1481.864	1605.640	-49.976	-76.736	2.80	926.064
2349	33 19 44.71713 N	116 22 43.98402 W	3687750.56	557807.40	238.713	1482.161	1605.616	-49.789	-76.500	2.79	926.290
2350	33 19 45.61485 N	116 22 40.12889 W	3687778.80	557906.90	238.559	1482.483	1605.637	-49.535	-76.229	2.80	926.571
2351	33 19 45.68842 N	116 22 36.43446 W	3687781.64	558002.40	238.180	1482.807	1605.638	-49.330	-75.982	2.81	926.828
2352	33 19 45.44194 N	116 22 32.49633 W	3687774.65	558104.26	237.243	1483.264	1605.633	-49.157	-75.703	2.82	927.117

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GRAVITY DATA REDUCTION

STATION	LATITUDE NAD27 (deg., min., sec.)	LONGITUDE NAD27 (deg., min., sec.)	UTM Northing (meters)	UTM Easting (meters)	ELEVATION (meters)	OBSERVED GRAVITY[1] (mGals)	THEORETICAL GRAVITY[1] (mGals)	FREE AIR ANOMALY (mGals)	BOUGUER ANOMALY[2] (mGals)	TERRAIN CORRECTION (mGals)	COMPLETE BOUGUER ANOMALY[3] (mGals)
2353	33 19 45.27180 N	116 22 28.46123 W	3687770.04	558208.61	236.616	1483.730	1605.629	-48.880	-75.357	2.83	927.473
2354	33 19 45.18182 N	116 22 24.61026 W	3687767.87	558308.19	235.611	1484.282	1605.627	-48.636	-75.000	2.85	927.850
2355	33 19 45.11977 N	116 22 20.75114 W	3687766.56	558407.97	234.918	1484.741	1605.625	-48.390	-74.676	2.87	928.194
2356	33 19 45.05204 N	116 22 16.92126 W	3687765.07	558507.00	233.927	1485.146	1605.624	-48.289	-74.465	2.67	928.205
2357	33 19 44.99297 N	116 22 13.05168 W	3687763.85	558607.05	233.218	1485.382	1605.623	-48.270	-74.367	2.54	928.173
2358	33 19 44.92551 N	116 22 9.17381 W	3687762.38	558707.32	232.279	1485.578	1605.621	-48.363	-74.354	2.57	928.216
2359	33 19 44.85027 N	116 22 5.33022 W	3687760.66	558806.70	231.927	1485.609	1605.619	-48.438	-74.390	2.61	928.220
2360	33 19 44.77438 N	116 22 1.48091 W	3687758.93	558906.23	230.234	1485.832	1605.617	-48.736	-74.499	2.66	928.161
2361	33 19 46.59414 N	116 23 26.50384 W	3687801.88	556707.79	242.642	1481.281	1605.659	-49.500	-76.651	3.44	926.789
2362	33 19 46.70569 N	116 23 30.32171 W	3687804.74	556609.06	244.907	1480.987	1605.662	-49.098	-76.502	3.50	926.998
2363	33 19 46.66917 N	116 23 34.27002 W	3687803.02	556506.99	245.517	1480.759	1605.661	-49.136	-76.609	3.72	927.111
2364	33 19 46.74249 N	116 23 38.04235 W	3687804.71	556409.45	246.837	1480.522	1605.663	-48.968	-76.588	4.01	927.422
2365	33 19 46.91195 N	116 23 41.94933 W	3687809.34	556308.42	249.107	1480.222	1605.667	-48.571	-76.445	4.10	927.655
2366	33 19 46.99343 N	116 23 45.87238 W	3687811.26	556206.98	251.140	1480.098	1605.668	-48.070	-76.171	4.20	928.029
2367	33 19 46.99883 N	116 23 49.62184 W	3687810.87	556110.04	253.654	1479.793	1605.669	-47.599	-75.982	4.32	928.338
2368	33 19 47.27675 N	116 23 53.60231 W	3687818.83	556007.09	257.897	1479.206	1605.675	-46.883	-75.741	4.46	928.719
2369	33 19 47.24628 N	116 23 57.48422 W	3687817.31	555906.73	262,697	1478.385	1605.674	-46.222	-75.617	4.59	928.973
2370	33 19 47.34572 N	116 24 1.37747 W	3687819.80	555806.06	265.876	1477.943	1605.677	-45.685	-75.436	4.92	929.484
2371	33 19 47.27793 N	116 24 5.11940 W	3687817.15	555709.34	265.881	1478.292	1605.675	-45.333	-75.084	5.36	930.276
2376	33 19 34.04689 N	116 23 26.40833 W	3687415.49	556712.51	236.150	1482.524	1605.371	-49.972	-76.396	3.39	926.994
2377	33 19 34.14443 N	116 23 30.25076 W	3687417.91	556613.15	237.479	1482.279	1605.373	-49.809	-76.382	3.46	927.078
2378	33 19 34.28155 N	116 23 34.09586 W	3687421.56	556513.72	238.707	1482.035	1605.376	-49.677	-76.388	3.72	927.332
2379	33 19 34.27433 N	116 23 38.08537 W	3687420.73	556410.57	240.472	1481.774	1605.376	-49.393	-76.301	4.00	927.699
2380	33 19 34.60702 N	116 23 41.92275 W	3687430.40	556311.30	243.949	1481.189	1605.384	-48.913	-76.210	4.10	927.890
2381	33 19 34.56123 N	116 23 45.76022 W	3687428.42	556212.10	248.515	1480.497	1605.383	-48.195	-76.003	4.15	928.147
2382	33 19 33.87727 N	116 23 18.65477 W	3687411.44	556913.00	236.086	1482.419	1605.367	-50.093	-76.510	3.27	926.760
2383	33 19 33.85735 N	116 23 14.76851 W	3687411.41	557013.49	235.638	1482.426	1605.367	-50.224	-76.591	3.23	926.639
2384	33 19 33.81760 N	116 23 10.78092 W	3687410.80	557116.59	236.147	1482.148	1605.366	-50.344	-76.768	3.17	926.402
2385	33 19 33.68321 N	116 23 7.04857 W	3687407.23	557213.11	235.604	1482.154	1605.363	-50.502	-76.865	3.15	926.285
2386	33 19 33.63580 N	116 23 2.93484 W	3687406.39	557319.48	236.112	1481.920	1605.361	-50.578	-76.998	3.11	926.112
2387	33 19 33.51183 N	116 22 59.29178 W	3687403.13	557413.69	236.084	1481.875	1605.359	-50.629	-77.046	3.09	926.044
2388	33 19 33.35386 N	116 22 55.44134 W	3687398.86	557513.27	235.036	1482.026	1605.355	-50.798	-77.098	2.86	925.762

TABLE B-1
GRAVITY DATA REDUCTION

STATION	LATITUDE NAD27 (deg., min., sec.)	LONGITUDE NAD27 (deg., min., sec.)	UTM Northing (meters)	UTM Easting (meters)	ELEVATION (meters)	OBSERVED GRAVITY[1] (mGals)	THEORETICAL GRAVITY[1] (mGals)	FREE AIR ANOMALY (mGals)	BOUGUER ANOMALY[2] (mGals)	TERRAIN CORRECTION (mGals)	COMPLETE BOUGUER ANOMALY[3] (mGals)
2389	33 19 33.25303 N	116 22 51.58344 W	3687396.34	557613.03	234.794	1482.045	1605.353	-50.851	-77.124	2.71	925.586
2390	33 19 33.15865 N	116 22 47.71525 W	3687394.03	557713.05	234.770	1482.063	1605.351	-50.838	-77.108	2.71	925.602
2391	33 19 33.00433 N	116 22 44.08068 W	3687389.84	557807.05	234.430	1482.288	1605.347	-50.715	-76.947	2.69	925.743
2392	33 19 32.92616 N	116 22 39.86646 W	3687388.08	557916.02	233.924	1482.606	1605.345	-50.551	-76.726	2.68	925.954
2393	33 19 32.70133 N	116 22 36.16566 W	3687381.73	558011.74	233.176	1482.981	1605.340	-50.402	-76.493	2.68	926.187
2394	33 19 32.82621 N	116 22 32.28553 W	3687386.17	558112.04	232.437	1483.361	1605.343	-50.253	-76.262	2.69	926.428
2395	33 19 32.60880 N	116 22 28.36986 W	3687380.09	558213.31	231.982	1483.726	1605.338	-50.023	-75.981	2.70	926.719
2396	33 19 32.57764 N	116 22 24.52223 W	3687379.72	558312.80	231.664	1484.069	1605.337	-49.778	-75.700	2.71	927.010
2397	33 19 32.51333 N	116 22 20.66422 W	3687378.34	558412.56	230.785	1484.512	1605.336	-49.604	-75.428	2.73	927.302
2398	33 19 32.44552 N	116 22 16.78730 W	3687376.86	558512.80	230.388	1484.883	1605.334	-49.354	-75.134	2.51	927.376
2399	33 19 32.30079 N	116 22 12.95324 W	3687373.00	558611.96	229.740	1485.216	1605.331	-49.218	-74.925	2.36	927.435
2400	33 19 32.23002 N	116 22 9.07118 W	3687371.43	558712.34	229.274	1485.499	1605.329	-49.077	-74.732	2.39	927.658
2401	33 19 32.14262 N	116 22 5.19803 W	3687369.34	558812.49	228.231	1485.891	1605.327	-49.005	-74.543	2.42	927.877
2402	33 19 32.11010 N	116 22 1.36370 W	3687368.94	558911.63	227.055	1486.217	1605.326	-49.041	-74.448	2.45	928.002
2403	33 19 19.27302 N	116 22 3.84247 W	3686973.22	558849.94	223.988	1486.162	1605.031	-49.748	-74.811	2.39	927.579
2404	33 19 19.42467 N	116 22 7.72893 W	3686977.28	558749.43	224.163	1485.931	1605.035	-49.928	-75.011	2.38	927.369
2405	33 19 19.56605 N	116 22 11.59623 W	3686981.03	558649.41	225.140	1485.506	1605.038	-50.055	-75.247	2.35	927.103
2406	33 19 19.66787 N	116 22 15.45187 W	3686983.57	558549.70	226.249	1485.016	1605.040	-50.205	-75.521	2.49	926.969
2407	33 19 19.30085 N	116 22 19.57599 W	3686971.62	558443.14	226.793	1484.581	1605.032	-50.464	-75.841	2.71	926.869
2408	33 19 19.45524 N	116 22 23.40731 W	3686975.78	558344.05	227.470	1484.188	1605.036	-50.651	-76.104	2.70	926.596
2409	33 19 19.67552 N	116 22 27.21991 W	3686981.97	558245.44	228.164	1483.789	1605.041	-50.841	-76.372	2.70	926.328
2410	33 19 20.03885 N	116 22 30.74224 W	3686992.61	558154.30	228.847	1483.361	1605.049	-51.067	-76.674	2.69	926.016
2411	33 19 19.70514 N	116 22 35.27822 W	3686981.64	558037.08	228.918	1483.121	1605.041	-51.277	-76.892	2.69	925.798
2412	33 19 19.88203 N	116 22 38.91966 W	3686986.52	557942.90	228.683	1483.008	1605.045	-51.467	-77.056	2.70	925.644
2413	33 19 20.05556 N	116 22 42.55060 W	3686991.30	557848.99	229.570	1482.699	1605.049	-51.506	-77.194	2.70	925.506
2414	33 19 20.25937 N	116 22 46.25689 W	3686997.01	557753.12	229.486	1482.678	1605.054	-51.558	-77.236	2.72	925.484
2415	33 19 20.49715 N	116 22 50.22709 W	3687003.72	557650.43	229.657	1482.604	1605.060	-51.584	-77.282	2.73	925.448
2416	33 19 20.68424 N	116 22 54.19460 W	3687008.88	557547.81	230.248	1482.459	1605.064	-51.551	-77.315	2.88	925.565
2417	33 19 20.87671 N	116 22 57.88334 W	3687014.24	557452.40	230.288	1482.449	1605.068	-51.553	-77.322	2.89	925.568
2418	33 19 20.94049 N	116 23 1.79600 W	3687015.60	557351.23	230.784	1482.349	1605.070	-51.502	-77.326	3.14	925.814
2419	33 19 21.04428 N	116 23 5.69575 W	3687018.22	557250.39	230.642	1482.336	1605.072	-51.561	-77.369	3.18	925.811
2420	33 19 6.61782 N	116 22 3.86369 W	3686583.49	558851.76	220.264	1485.879	1604.741	-50.889	-75.536	2.33	926.794

TABLE B-1
GRAVITY DATA REDUCTION

STATION	LATITUDE NAD27 (deg., min., sec.)	LONGITUDE NAD27 (deg., min., sec.)	UTM Northing (meters)	UTM Easting (meters)	ELEVATION (meters)	OBSERVED GRAVITY[1] (mGals)	THEORETICAL GRAVITY[1] (mGals)	FREE AIR ANOMALY (mGals)	BOUGUER ANOMALY[2] (mGals)	TERRAIN CORRECTION (mGals)	COMPLETE BOUGUER ANOMALY[3] (mGals)
2421	33 19 6.72785 N	116 22 7.68466 W	3686586.28	558752.94	221.245	1485.477	1604.743	-50.991	-75.747	2.32	926.573
2422	33 19 6.86219 N	116 22 11.54941 W	3686589.81	558652.98	221.892	1485.165	1604.746	-51.106	-75.935	2.30	926.365
2423	33 19 6.92612 N	116 22 15.46477 W	3686591.17	558551.74	222.377	1484.938	1604.748	-51.185	-76.068	2.46	926.392
2424	33 19 6.86244 N	116 22 19.51472 W	3686588.58	558447.03	223.475	1484.518	1604.746	-51.265	-76.271	2.44	926.169
2425	33 19 7.00265 N	116 22 23.33475 W	3686592.30	558348.23	223.366	1484.388	1604.749	-51.432	-76.425	2.68	926.255
2426	33 19 7.16074 N	116 22 27.15624 W	3686596.58	558249.39	223.797	1484.139	1604.753	-51.551	-76.593	2.68	926.087
2427	33 19 7.46520 N	116 22 30.95570 W	3686605.37	558151.10	224.301	1483.898	1604.760	-51.644	-76.742	2.68	925.938
2428	33 19 7.34409 N	116 22 34.73773 W	3686601.05	558053.33	224.697	1483.595	1604.757	-51.822	-76.964	2.69	925.726
2429	33 19 7.41140 N	116 22 38.86990 W	3686602.49	557946.47	224.313	1483.609	1604.759	-51.928	-77.028	2.69	925.662
2430	33 19 7.65284 N	116 22 42.57881 W	3686609.35	557850.53	224.736	1483.452	1604.764	-51.960	-77.107	2.70	925.593
2431	33 19 7.73412 N	116 22 46.47120 W	3686611.25	557749.87	224.621	1483.402	1604.766	-52.047	-77.181	2.71	925.529
2432	33 19 8.02853 N	116 22 50.22821 W	3686619.74	557652.68	224.938	1483.316	1604.773	-52.042	-77.212	2.73	925.518
2433	33 19 8.18139 N	116 22 54.08981 W	3686623.86	557552.80	225.203	1483.197	1604.777	-52.083	-77.282	2.87	925.588
2434	33 19 7.97995 N	116 22 58.00412 W	3686617.05	557451.63	225.505	1483.053	1604.772	-52.129	-77.362	2.90	925.538
2435	33 19 8.38047 N	116 23 1.81941 W	3686628.80	557352.91	225.097	1483.134	1604.781	-52.183	-77.371	3.16	925.789
2436	33 19 8.44798 N	116 23 5.66674 W	3686630.30	557253.42	225.170	1483.107	1604.783	-52.189	-77.385	3.22	925.835
2437	33 20 23.00344 N	116 21 56.13646 W	3688937.07	559037.24	236.530	1484.583	1606.496	-48.921	-75.388	3.69	928.302
2438	33 20 23.06860 N	116 21 52.32890 W	3688939.68	559135.66	235.307	1484.847	1606.498	-49.036	-75.366	3.81	928.444
2439	33 20 22.99831 N	116 21 48.39680 W	3688938.13	559237.31	234.701	1485.020	1606.496	-49.048	-75.310	4.01	928.700
2440	33 20 23.00010 N	116 21 44.54409 W	3688938.80	559336.91	233.514	1485.408	1606.496	-49.027	-75.156	4.22	929.064
2441	33 20 23.02369 N	116 21 40.70169 W	3688940.13	559436.23	231.247	1486.109	1606.497	-49.026	-74.901	4.53	929.629
2442	33 20 22.96511 N	116 21 36.71791 W	3688938.96	559539.22	231.597	1486.299	1606.495	-48.726	-74.641	4.78	930.139
2443	33 20 23.02722 N	116 21 32.92783 W	3688941.47	559637.18	230.507	1486.912	1606.497	-48.451	-74.244	5.18	930.936
2444	33 20 22.94132 N	116 21 29.09080 W	3688939.44	559736.39	230.426	1487.443	1606.495	-47.943	-73.727	5.76	932.033
2445	33 20 22.96892 N	116 21 25.20401 W	3688940.91	559836.86	234.188	1487.130	1606.495	-47.096	-73.301	6.66	933.359
2446	33 20 23.29001 N	116 21 21.32768 W	3688951.41	559937.00	242.249	1485.409	1606.503	-46.337	-73.444	7.62	934.176
2450	33 20 10.27320 N	116 21 56.12301 W	3688545.03	559039.98	233.650	1484.920	1606.204	-49.180	-75.325	3.11	927.785
2451	33 20 10.17140 N	116 21 52.21235 W	3688542.51	559141.09	233.274	1484.817	1606.201	-49.397	-75.499	3.19	927.691
2452	33 20 10.23198 N	116 21 48.40232 W	3688544.98	559239.57	231.707	1484.952	1606.203	-49.747	-75.674	3.29	927.616
2453	33 20 10.12768 N	116 21 44.58110 W	3688542.37	559338.37	230.235	1485.195	1606.200	-49.956	-75.718	3.41	927.692
2454	33 20 10.18219 N	116 21 40.67420 W	3688544.67	559439.36	229.308	1485.349	1606.201	-50.089	-75.748	3.55	927.802
2455	33 20 10.27088 N	116 21 36.71919 W	3688548.03	559541.59	228.845	1485.489	1606.203	-50.094	-75.701	3.52	927.819

TABLE B-1
GRAVITY DATA REDUCTION

STATION	LATITUDE NAD27 (deg., min., sec.)	LONGITUDE NAD27 (deg., min., sec.)	UTM Northing (meters)	UTM Easting (meters)	ELEVATION (meters)	OBSERVED GRAVITY[1] (mGals)	THEORETICAL GRAVITY[1] (mGals)	FREE AIR ANOMALY (mGals)	BOUGUER ANOMALY[2] (mGals)	TERRAIN CORRECTION (mGals)	COMPLETE BOUGUER ANOMALY[3] (mGals)
2456	33 20 10.19463 N	116 21 32.98121 W	3688546.27	559638.23	228.305	1485.682	1606.202	-50.066	-75.612	3.58	927.968
2457	33 20 10.20769 N	116 21 29.08467 W	3688547.29	559738.96	227.477	1486.066	1606.202	-49.938	-75.391	3.81	928.419
2458	33 20 10.16703 N	116 21 25.22023 W	3688546.66	559838.87	225.778	1486.756	1606.201	-49.771	-75.035	4.15	929.115
2459	33 20 10.14459 N	116 21 21.31806 W	3688546.59	559939.75	225.462	1487.352	1606.201	-49.272	-74.500	4.50	930.000
2460	33 20 10.08524 N	116 21 17.47385 W	3688545.37	560039.14	223.641	1488.452	1606.199	-48.733	-73.757	5.05	931.293
2461	33 20 10.14367 N	116 21 13.65784 W	3688547.79	560137.78	229.119	1488.109	1606.201	-47.386	-73.024	5.42	932.396
2462	33 20 10.09334 N	116 21 9.94670 W	3688546.83	560233.72	234.227	1487.393	1606.199	-46.525	-72.734	6.33	933.596
2463	33 20 10.07472 N	116 21 7.41887 W	3688546.66	560299.07	251.491	1483.824	1606.199	-44.766	-72.907	6.69	933.783
2465	33 19 57.56211 N	116 21 56.20187 W	3688153.57	559040.32	231.734	1485.367	1605.911	-49.032	-74.962	2.86	927.898
2466	33 19 57.39415 N	116 21 52.05682 W	3688149.05	559147.51	229.931	1485.457	1605.908	-49.495	-75.223	2.93	927.707
2467	33 19 57.44224 N	116 21 48.38842 W	3688151.11	559242.34	230.031	1485.198	1605.909	-49.724	-75.464	2.99	927.526
2468	33 19 57.49274 N	116 21 44.48520 W	3688153.28	559343.23	228.929	1485.232	1605.910	-50.031	-75.648	3.07	927.422
2469	33 19 57.47195 N	116 21 40.56130 W	3688153.26	559444.68	227.751	1485.292	1605.909	-50.334	-75.819	2.99	927.171
2470	33 19 57.35440 N	116 21 36.85010 W	3688150.23	559540.64	226.241	1485.470	1605.907	-50.620	-75.935	3.09	927.155
2471	33 19 57.33524 N	116 21 32.96562 W	3688150.26	559641.07	225.041	1485.662	1605.906	-50.797	-75.979	3.09	927.111
2472	33 19 57.31439 N	116 21 29.06973 W	3688150.23	559741.79	224.046	1485.869	1605.906	-50.897	-75.967	3.25	927.283
2473	33 19 57.32106 N	116 21 25.09284 W	3688151.07	559844.60	223.301	1486.072	1605.906	-50.924	-75.911	3.41	927.499
2474	33 19 57.27203 N	116 21 21.31091 W	3688150.17	559942.38	223.156	1486.203	1605.905	-50.837	-75.807	3.59	927.783
2475	33 19 57.24405 N	116 21 17.47632 W	3688149.92	560041.52	223.233	1486.410	1605.904	-50.605	-75.584	3.80	928.216
2476	33 19 57.21974 N	116 21 13.59690 W	3688149.79	560141.82	222.007	1486.904	1605.904	-50.489	-75.331	4.02	928.689
2477	33 19 57.19558 N	116 21 9.72611 W	3688149.67	560241.89	221.075	1487.383	1605.903	-50.297	-75.035	4.31	929.275
2478	33 19 57.24645 N	116 21 5.87070 W	3688151.85	560341.55	219.434	1488.214	1605.904	-49.974	-74.528	4.82	930.292
2479	33 19 57.19030 N	116 21 1.95437 W	3688150.75	560442.81	219.258	1489.259	1605.903	-48.982	-73.516	5.36	931.844
2480	33 19 57.12645 N	116 20 58.18504 W	3688149.39	560540.27	219.681	1490.050	1605.901	-48.059	-72.640	5.79	933.150
2481	33 19 57.05568 N	116 20 54.32660 W	3688147.84	560640.03	232.423	1488.132	1605.900	-46.043	-72.050	6.41	934.360
2482	33 19 57.12691 N	116 20 50.42516 W	3688150.66	560740.88	251.152	1484.850	1605.901	-43.547	-71.650	6.53	934.880
2483	33 19 57.29065 N	116 20 47.29753 W	3688156.21	560821.70	263.975	1482.361	1605.905	-42.083	-71.620	7.01	935.390
2484	33 19 44.68323 N	116 21 56.13012 W	3687756.96	559044.59	229.437	1485.799	1605.615	-49.013	-74.686	2.72	928.034
2485	33 19 44.64837 N	116 21 52.31593 W	3687756.49	559143.20	227.713	1486.001	1605.615	-49.342	-74.823	2.77	927.947
2486	33 19 44.64312 N	116 21 48.45803 W	3687756.94	559242.94	227.510	1485.850	1605.614	-49.556	-75.013	2.82	927.807
2487	33 19 44.62271 N	116 21 44.55710 W	3687756.92	559343.80	226.284	1485.879	1605.614	-49.905	-75.225	2.88	927.655
2488	33 19 44.57873 N	116 21 40.66740 W	3687756.19	559444.37	224.832	1485.986	1605.613	-50.245	-75.403	2.96	927.557

TABLE B-1
GRAVITY DATA REDUCTION

STATION	LATITUDE NAD27 (deg., min., sec.)	LONGITUDE NAD27 (deg., min., sec.)	UTM Northing (meters)	UTM Easting (meters)	ELEVATION (meters)	OBSERVED GRAVITY[1] (mGals)	THEORETICAL GRAVITY[1] (mGals)	FREE AIR ANOMALY (mGals)	BOUGUER ANOMALY[2] (mGals)	TERRAIN CORRECTION (mGals)	COMPLETE BOUGUER ANOMALY[3] (mGals)
2489	33 19 44.60881 N	116 21 36.73584 W	3687757.73	559546.01	224.492	1485.831	1605.614	-50.505	-75.625	2.84	927.215
2490	33 19 44.53202 N	116 21 32.84367 W	3687755.99	559646.65	223.704	1485.865	1605.612	-50.713	-75.744	2.81	927.066
2491	33 19 44.47464 N	116 21 29.13600 W	3687754.81	559742.51	223.057	1485.914	1605.611	-50.862	-75.821	2.91	927.089
2492	33 19 44.37877 N	116 21 25.22619 W	3687752.48	559843.61	222.040	1486.070	1605.608	-51.018	-75.863	3.00	927.137
2493	33 19 44.37273 N	116 21 21.42027 W	3687752.90	559942.01	219.981	1486.503	1605.608	-51.220	-75.835	3.13	927.295
2494	33 19 44.37625 N	116 21 17.48455 W	3687753.64	560043.76	219.763	1486.600	1605.608	-51.190	-75.781	3.24	927.459
2495	33 19 44.34411 N	116 21 13.61142 W	3687753.27	560143.90	218.902	1486.826	1605.608	-51.229	-75.724	3.36	927.636
2496	33 19 44.32945 N	116 21 9.73729 W	3687753.44	560244.06	217.547	1487.280	1605.607	-51.193	-75.536	3.47	927.934
2497	33 19 44.17612 N	116 21 5.92780 W	3687749.33	560342.58	217.827	1487.383	1605.604	-51.000	-75.374	3.59	928.216
2498	33 19 44.16460 N	116 21 2.00922 W	3687749.61	560443.89	217.331	1487.802	1605.603	-50.734	-75.053	3.62	928.567
2499	33 19 44.16258 N	116 20 58.11656 W	3687750.17	560544.53	216.677	1488.315	1605.603	-50.423	-74.668	3.87	929.202
2500	33 19 44.19812 N	116 20 54.24850 W	3687751.89	560644.52	215.380	1489.015	1605.604	-50.124	-74.224	4.09	929.866
2501	33 19 44.09839 N	116 20 50.34173 W	3687749.45	560745.55	213.872	1489.828	1605.602	-49.774	-73.705	4.29	930.585
2502	33 19 44.12363 N	116 20 46.50068 W	3687750.85	560844.85	214.508	1490.208	1605.603	-49.198	-73.201	4.68	931.479
2503	33 19 43.98054 N	116 20 42.72007 W	3687747.06	560942.62	213.369	1491.110	1605.599	-48.644	-72.520	5.01	932.490
2504	33 19 44.04459 N	116 20 38.80502 W	3687749.66	561043.82	213.603	1492.057	1605.601	-47.627	-71.528	5.33	933.802
2505	33 19 44.06167 N	116 20 34.97705 W	3687750.81	561142.78	218.910	1492.068	1605.601	-45.978	-70.474	5.52	935.046
2506	33 19 43.94069 N	116 20 31.02700 W	3687747.73	561244.93	227.705	1490.649	1605.598	-44.680	-70.160	5.86	935.700
2507	33 19 43.86061 N	116 20 27.15921 W	3687745.90	561344.94	239.185	1488.574	1605.596	-43.211	-69.975	5.97	935.995
2508	33 19 43.87093 N	116 20 23.34395 W	3687746.84	561443.58	246.709	1487.518	1605.597	-41.945	-69.551	6.24	936.689
2509	33 19 43.78121 N	116 20 19.49278 W	3687744.71	561543.16	255.689	1485.841	1605.595	-40.849	-69.460	6.84	937.380
2510	33 19 42.87494 N	116 20 16.38794 W	3687717.31	561623.61	264.831	1484.257	1605.574	-39.591	-69.225	6.51	937.285
2511	33 19 43.63157 N	116 20 10.78499 W	3687741.53	561768.31	287.919	1479.662	1605.591	-37.079	-69.296	7.17	937.874
2512	33 19 43.77269 N	116 20 8.04316 W	3687746.33	561839.17	296.997	1477.998	1605.594	-35.944	-69.177	7.57	938.393
2513	33 19 44.23332 N	116 20 3.34424 W	3687761.29	561960.56	328.060	1472.009	1605.605	-32.358	-69.067	8.47	939.403
2516	33 19 31.95868 N	116 21 56.13999 W	3687365.10	559046.72	226.004	1486.391	1605.323	-49.188	-74.477	2.49	928.013
2517	33 19 31.91625 N	116 21 52.22643 W	3687364.41	559147.91	225.195	1486.483	1605.322	-49.345	-74.543	2.53	927.987
2518	33 19 31.87460 N	116 21 48.38522 W	3687363.73	559247.23	224.646	1486.466	1605.321	-49.530	-74.667	2.57	927.903
2519	33 19 31.87623 N	116 21 44.56389 W	3687364.38	559346.02	223.758	1486.521	1605.321	-49.749	-74.787	2.61	927.823
2520	33 19 31.77047 N	116 21 40.67162 W	3687361.74	559446.68	222.958	1486.556	1605.319	-49.959	-74.907	2.46	927.553
2521	33 19 31.72161 N	116 21 36.81227 W	3687360.85	559546.47	221.756	1486.580	1605.317	-50.304	-75.118	2.53	927.412
2522	33 19 31.69700 N	116 21 32.92922 W	3687360.71	559646.86	220.968	1486.589	1605.317	-50.538	-75.264	2.45	927.186

TABLE B-1
GRAVITY DATA REDUCTION

STATION	LATITUDE NAD27 (deg., min., sec.)	LONGITUDE NAD27 (deg., min., sec.)	UTM Northing (meters)	UTM Easting (meters)	ELEVATION (meters)	OBSERVED GRAVITY[1] (mGals)	THEORETICAL GRAVITY[1] (mGals)	FREE AIR ANOMALY (mGals)	BOUGUER ANOMALY[2] (mGals)	TERRAIN CORRECTION (mGals)	COMPLETE BOUGUER ANOMALY[3] (mGals)
2523	33 19 31.62860 N	116 21 29.06433 W	3687359.22	559746.80	220.207	1486.685	1605.315	-50.675	-75.316	2.50	927.184
2524	33 19 31.58458 N	116 21 25.20498 W	3687358.48	559846.59	219.700	1486.711	1605.314	-50.805	-75.388	2.58	927.192
2525	33 19 31.57554 N	116 21 21.35085 W	3687358.81	559946.24	218.998	1486.830	1605.314	-50.902	-75.407	2.65	927.243
2526	33 19 31.40923 N	116 21 17.48810 W	3687354.31	560046.14	217.951	1487.067	1605.310	-50.985	-75.372	2.71	927.338
2527	33 19 31.46953 N	116 21 13.59293 W	3687356.79	560146.84	217.477	1487.168	1605.312	-51.031	-75.366	2.77	927.404
2528	33 19 31.39245 N	116 21 9.74854 W	3687355.03	560246.24	216.210	1487.427	1605.310	-51.161	-75.355	2.85	927.495
2529	33 19 31.33360 N	116 21 5.86139 W	3687353.84	560346.76	214.892	1487.750	1605.309	-51.244	-75.289	2.94	927.651
2530	33 19 31.30948 N	116 21 1.98112 W	3687353.72	560447.08	213.852	1488.085	1605.308	-51.229	-75.158	2.91	927.752
2531	33 19 31.26276 N	116 20 58.14184 W	3687352.90	560546.35	213.444	1488.329	1605.307	-51.110	-74.994	3.02	928.026
2532	33 19 31.22471 N	116 20 54.28473 W	3687352.35	560646.08	212.706	1488.747	1605.306	-50.919	-74.720	3.05	928.330
2533	33 19 31.18179 N	116 20 50.38132 W	3687351.66	560747.01	212.353	1489.201	1605.305	-50.573	-74.334	3.18	928.846
2534	33 19 31.12646 N	116 20 46.40984 W	3687350.60	560849.70	210.919	1489.929	1605.304	-50.286	-73.887	3.36	929.473
2535	33 19 31.11244 N	116 20 42.67122 W	3687350.78	560946.37	210.631	1490.457	1605.303	-49.847	-73.415	3.53	930.115
2536	33 19 31.04450 N	116 20 38.86497 W	3687349.30	561044.79	210.447	1491.026	1605.302	-49.333	-72.881	3.66	930.779
2537	33 19 30.95063 N	116 20 34.94830 W	3687347.05	561146.07	209.811	1491.845	1605.300	-48.708	-72.185	3.77	931.585
2538	33 19 30.93437 N	116 20 31.08079 W	3687347.18	561246.07	209.004	1492.836	1605.299	-47.966	-71.352	3.95	932.598
2539	33 19 30.98738 N	116 20 27.16839 W	3687349.45	561347.21	209.460	1493.589	1605.301	-47.073	-70.511	4.14	933.629
2540	33 19 30.86427 N	116 20 23.02796 W	3687346.34	561454.28	213.012	1493.914	1605.298	-45.649	-69.484	4.32	934.836
2541	33 19 30.89339 N	116 20 19.29080 W	3687347.85	561550.90	221.319	1492.651	1605.298	-44.349	-69.114	4.47	935.356
2542	33 19 30.70216 N	116 20 15.44186 W	3687342.59	561650.45	230.263	1491.199	1605.294	-43.037	-68.802	4.62	935.818
2543	33 19 30.80306 N	116 20 11.52283 W	3687346.34	561751.75	241.161	1489.267	1605.296	-41.608	-68.593	5.16	936.567
2548	33 19 19.23201 N	116 21 56.20909 W	3686973.16	559047.31	223.097	1486.589	1605.030	-49.595	-74.558	2.44	927.882
2549	33 19 19.17123 N	116 21 52.18029 W	3686971.92	559151.49	222.102	1486.918	1605.029	-49.571	-74.424	2.47	928.046
2550	33 19 19.07092 N	116 21 48.42274 W	3686969.42	559248.66	221.193	1487.182	1605.027	-49.585	-74.336	2.49	928.154
2551	33 19 18.96054 N	116 21 44.54155 W	3686966.64	559349.03	220.521	1487.358	1605.024	-49.614	-74.290	2.53	928.240
2552	33 19 18.88427 N	116 21 40.85089 W	3686964.87	559444.47	219.679	1487.481	1605.022	-49.749	-74.331	2.56	928.229
2553	33 19 18.90477 N	116 21 36.80530 W	3686966.14	559549.07	218.864	1487.602	1605.023	-49.880	-74.371	2.41	928.039
2554	33 19 18.81871 N	116 21 32.95230 W	3686964.11	559648.70	218.040	1487.586	1605.021	-50.149	-74.547	2.33	927.783
2555	33 19 18.76511 N	116 21 28.99577 W	3686963.08	559751.01	217.911	1487.501	1605.020	-50.272	-74.656	2.37	927.714
2556	33 19 18.71719 N	116 21 25.19217 W	3686962.21	559849.37	216.898	1487.553	1605.019	-50.532	-74.802	2.43	927.628
2557	33 19 18.62795 N	116 21 21.29904 W	3686960.09	559950.04	215.870	1487.603	1605.017	-50.797	-74.952	2.49	927.538
2558	33 19 18.61612 N	116 21 17.44832 W	3686960.34	560049.61	215.244	1487.599	1605.016	-50.994	-75.079	2.54	927.461

TABLE B-1
GRAVITY DATA REDUCTION

STATION	LATITUDE NAD27 (deg., min., sec.)	LONGITUDE NAD27 (deg., min., sec.)	UTM Northing (meters)	UTM Easting (meters)	ELEVATION (meters)	OBSERVED GRAVITY[1] (mGals)	THEORETICAL GRAVITY[1] (mGals)	FREE AIR ANOMALY (mGals)	BOUGUER ANOMALY[2] (mGals)	TERRAIN CORRECTION (mGals)	COMPLETE BOUGUER ANOMALY[3] (mGals)
2559	33 19 18.56644 N	116 21 13.59287 W	3686959.43	560149.30	215.048	1487.552	1605.015	-51.100	-75.163	2.58	927.417
2560	33 19 18.52270 N	116 21 9.78466 W	3686958.69	560247.77	214.235	1487.677	1605.014	-51.225	-75.197	2.63	927.433
2561	33 19 18.44380 N	116 21 5.81384 W	3686956.90	560350.45	213.941	1487.826	1605.012	-51.165	-75.104	2.68	927.576
2562	33 19 18.37623 N	116 21 1.90972 W	3686955.44	560451.41	212.806	1488.206	1605.011	-51.134	-74.946	2.62	927.674
2563	33 19 18.31692 N	116 20 58.01052 W	3686954.25	560552.24	211.655	1488.555	1605.009	-51.139	-74.822	2.72	927.898
2564	33 19 18.24942 N	116 20 54.34689 W	3686952.76	560646.97	210.599	1488.859	1605.008	-51.159	-74.724	2.72	927.996
2565	33 19 18.19246 N	116 20 50.41421 W	3686951.64	560748.67	208.847	1489.419	1605.007	-51.138	-74.507	2.84	928.333
2566	33 19 18.14600 N	116 20 46.55655 W	3686950.83	560848.42	209.316	1489.476	1605.006	-50.935	-74.357	2.94	928.583
2567	33 19 18.08600 N	116 20 42.69709 W	3686949.61	560948.22	208.667	1489.828	1605.004	-50.782	-74.131	3.07	928.939
2568	33 19 17.99257 N	116 20 38.86594 W	3686947.36	561047.29	207.276	1490.399	1605.002	-50.638	-73.832	3.17	929.338
2569	33 19 17.97826 N	116 20 34.87839 W	3686947.57	561150.39	206.823	1490.848	1605.002	-50.329	-73.472	3.24	929.768
2570	33 19 17.93340 N	116 20 31.06618 W	3686946.81	561248.97	206.240	1491.341	1605.001	-50.015	-73.092	3.32	930.228
2571	33 19 17.87960 N	116 20 27.11381 W	3686945.79	561351.17	206.485	1491.741	1604.999	-49.538	-72.643	3.43	930.787
2572	33 19 17.79993 N	116 20 23.37093 W	3686943.95	561447.96	205.885	1492.362	1604.998	-49.100	-72.138	3.46	931.322
2573	33 19 17.73796 N	116 20 19.48341 W	3686942.68	561548.49	204.725	1493.205	1604.996	-48.614	-71.522	3.71	932.188
2574	33 19 17.68470 N	116 20 15.62886 W	3686941.67	561648.16	203.604	1494.207	1604.995	-47.957	-70.739	3.96	933.221
2575	33 19 17.57227 N	116 20 11.72152 W	3686938.85	561749.21	202.960	1495.257	1604.992	-47.103	-69.813	4.47	934.657
2580	33 19 6.42759 N	116 21 56.14901 W	3686578.84	559051.27	219.499	1486.349	1604.736	-50.651	-75.212	2.36	927.148
2581	33 19 6.40766 N	116 21 52.32393 W	3686578.83	559150.17	218.938	1486.664	1604.736	-50.508	-75.007	2.38	927.373
2582	33 19 6.25654 N	116 21 48.32129 W	3686574.81	559253.69	218.456	1486.903	1604.732	-50.415	-74.859	2.40	927.541
2583	33 19 6.23144 N	116 21 44.53662 W	3686574.63	559351.56	217.309	1487.368	1604.732	-50.303	-74.619	2.43	927.811
2584	33 19 6.17272 N	116 21 40.67720 W	3686573.44	559451.36	217.109	1487.495	1604.730	-50.236	-74.530	2.26	927.730
2585	33 19 6.04748 N	116 21 36.80715 W	3686570.19	559551.45	215.252	1487.926	1604.727	-50.376	-74.462	2.30	927.838
2586	33 19 5.95905 N	116 21 32.90257 W	3686568.09	559652.42	215.224	1487.905	1604.725	-50.403	-74.486	2.19	927.704
2587	33 19 5.94514 N	116 21 29.07653 W	3686568.27	559751.35	214.407	1488.048	1604.725	-50.512	-74.503	2.22	927.717
2588	33 19 5.87696 N	116 21 25.21175 W	3686566.78	559851.30	213.951	1488.070	1604.724	-50.629	-74.570	2.26	927.690
2589	33 19 5.80836 N	116 21 21.34830 W	3686565.29	559951.20	213.690	1487.990	1604.722	-50.788	-74.699	2.29	927.591
2590	33 19 5.67779 N	116 21 17.47976 W	3686561.89	560051.26	213.271	1487.945	1604.719	-50.959	-74.824	2.33	927.506
2591	33 19 5.64055 N	116 21 13.56285 W	3686561.37	560152.54	213.142	1487.918	1604.718	-51.025	-74.875	2.35	927.475
2592	33 19 5.58747 N	116 21 9.69057 W	3686560.35	560252.68	212.218	1488.020	1604.717	-51.207	-74.954	2.38	927.426
2593	33 19 5.53268 N	116 21 5.89711 W	3686559.27	560350.77	211.692	1488.142	1604.716	-51.246	-74.934	2.42	927.486
2594	33 19 5.46009 N	116 21 2.02064 W	3686557.66	560451.02	210.925	1488.353	1604.714	-51.270	-74.872	2.34	927.468

TABLE B-1
GRAVITY DATA REDUCTION

STATION	LATITUDE NAD27 (deg., min., sec.)	LONGITUDE NAD27 (deg., min., sec.)	UTM Northing (meters)	UTM Easting (meters)	ELEVATION (meters)	OBSERVED GRAVITY[1] (mGals)	THEORETICAL GRAVITY[1] (mGals)	FREE AIR ANOMALY (mGals)	BOUGUER ANOMALY[2] (mGals)	TERRAIN CORRECTION (mGals)	COMPLETE BOUGUER ANOMALY[3] (mGals)
2595	33 19 5.39077 N	116 20 58.15559 W	3686556.15	560550.97	210.126	1488.565	1604.712	-51.303	-74.816	2.40	927.584
2596	33 19 5.31669 N	116 20 54.29117 W	3686554.49	560650.90	209.963	1488.601	1604.711	-51.316	-74.810	2.36	927.550
2597	33 19 5.24974 N	116 20 50.42594 W	3686553.06	560750.86	209.308	1488.843	1604.709	-51.275	-74.695	2.37	927.675
2598	33 19 5.37580 N	116 20 46.50397 W	3686557.57	560852.24	208.731	1489.092	1604.712	-51.207	-74.563	2.52	927.957
2599	33 19 5.10639 N	116 20 42.66727 W	3686549.90	560951.50	208.226	1489.289	1604.706	-51.159	-74.459	2.52	928.061
2600	33 19 5.20949 N	116 20 38.70293 W	3686553.72	561053.98	207.253	1489.645	1604.708	-51.106	-74.297	2.59	928.293
2601	33 19 4.98057 N	116 20 34.93840 W	3686547.28	561151.36	206.117	1490.045	1604.703	-51.051	-74.115	2.64	928.525
2602	33 19 4.81737 N	116 20 31.12049 W	3686542.88	561250.11	204.811	1490.479	1604.699	-51.016	-73.934	2.70	928.766
2603	33 19 4.85064 N	116 20 27.24264 W	3686544.53	561350.38	204.062	1490.867	1604.700	-50.860	-73.694	2.78	929.086
2604	33 19 4.76090 N	116 20 23.36684 W	3686542.40	561450.61	203.490	1491.245	1604.698	-50.657	-73.427	2.77	929.343
2605	33 19 4.68360 N	116 20 19.50488 W	3686540.66	561550.48	202.074	1491.944	1604.696	-50.393	-73.004	2.90	929.896
2606	33 19 4.60260 N	116 20 15.68837 W	3686538.79	561649.18	202.055	1492.329	1604.694	-50.012	-72.621	2.97	930.349
2607	33 19 4.48203 N	116 20 11.75493 W	3686535.72	561750.91	201.513	1492.911	1604.692	-49.594	-72.143	3.17	931.027
2608	33 19 4.50251 N	116 20 7.84430 W	3686537.00	561852.02	200.088	1493.805	1604.692	-49.141	-71.530	3.40	931.870
2609	33 19 4.27834 N	116 20 4.07117 W	3686530.71	561949.62	199.211	1494.668	1604.687	-48.543	-70.834	3.68	932.846
2610	33 19 4.36877 N	116 20 0.20950 W	3686534.14	562049.46	198.828	1495.699	1604.689	-47.632	-69.881	4.13	934.249
2611	33 19 4.27722 N	116 19 56.29444 W	3686531.96	562150.70	198.636	1496.723	1604.687	-46.666	-68.892	4.49	935.598
2612	33 19 4.18057 N	116 19 52.15590 W	3686529.67	562257.73	199.878	1497.333	1604.685	-45.670	-68.036	4.93	936.894
2622	33 19 35.17525 N	116 23 49.71498 W	3687446.74	556109.74	254.153	1479.670	1605.397	-47.296	-75.735	4.23	928.495
2623	33 19 35.41114 N	116 23 53.33212 W	3687453.46	556016.18	259.329	1478.936	1605.402	-46.438	-75.456	4.31	928.854
2625	33 19 35.95773 N	116 24 0.99804 W	3687469.15	555817.89	272.389	1476.967	1605.415	-44.390	-74.869	4.47	929.601
2626	33 19 59.06930 N	116 23 26.61712 W	3688186.04	556702.61	249.917	1480.068	1605.946	-48.755	-76.719	3.39	926.671
2627	33 19 59.09596 N	116 23 30.42842 W	3688186.29	556604.08	251.804	1479.766	1605.947	-48.475	-76.651	3.45	926.799
2628	33 19 59.22525 N	116 23 34.45929 W	3688189.66	556499.85	253.739	1479.448	1605.950	-48.199	-76.591	3.66	927.069
2629	33 19 59.28311 N	116 23 38.21265 W	3688190.88	556402.81	255.730	1479.152	1605.951	-47.882	-76.497	3.91	927.413
2630	33 19 59.32977 N	116 23 42.12338 W	3688191.73	556301.70	258.251	1478.833	1605.952	-47.424	-76.321	3.98	927.659
2631	33 19 59.39861 N	116 23 45.93761 W	3688193.28	556203.08	260.561	1478.572	1605.954	-46.974	-76.129	4.07	927.941
2632	33 19 59.48669 N	116 23 49.81617 W	3688195.41	556102.80	263.158	1478.354	1605.956	-46.392	-75.839	4.20	928.361
2633	33 19 59.55409 N	116 23 53.67648 W	3688196.91	556002.99	265.920	1478.354	1605.957	-45.541	-75.297	4.39	929.093
2634	33 19 59.63433 N	116 23 57.56731 W	3688198.80	555902.39	267.861	1478.629	1605.959	-44.669	-74.642	4.67	930.028
2635	33 19 59.58909 N	116 24 0.10406 W	3688197.03	555836.82	280.339	1476.061	1605.958	-43.385	-74.754	4.83	930.076
2640	33 20 11.77961 N	116 23 42.18206 W	3688575.13	556297.96	263.887	1478.151	1606.238	-46.653	-76.181	3.99	927.809

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GRAVITY DATA REDUCTION

STATION	LATITUDE NAD27 (deg., min., sec.)	LONGITUDE NAD27 (deg., min., sec.)	UTM Northing (meters)	UTM Easting (meters)	ELEVATION (meters)	OBSERVED GRAVITY[1] (mGals)	THEORETICAL GRAVITY[1] (mGals)	FREE AIR ANOMALY (mGals)	BOUGUER ANOMALY[2] (mGals)	TERRAIN CORRECTION (mGals)	COMPLETE BOUGUER ANOMALY[3] (mGals)
2641	33 20 11.86233 N	116 23 46.08740 W	3688577.09	556196.98	265.319	1477.991	1606.240	-46.373	-76.061	4.10	928.039
2642	33 20 11.82799 N	116 23 50.02313 W	3688575.44	556095.25	269.001	1477.443	1606.239	-45.784	-75.884	4.20	928.316
2643	33 20 11.93452 N	116 23 53.80561 W	3688578.16	555997.45	272.979	1476.900	1606.242	-45.102	-75.647	4.28	928.633
2644	33 20 12.14063 N	116 23 57.72432 W	3688583.92	555896.11	277.261	1476.318	1606.246	-44.367	-75.391	4.43	929.039
2645	33 20 12.07613 N	116 24 1.59334 W	3688581.36	555796.10	282.924	1475.342	1606.245	-43.594	-75.252	4.53	929.278
2646	33 20 24.00188 N	116 23 26.77567 W	3688953.84	556694.03	260.625	1479.515	1606.519	-46.576	-75.739	3.47	927.731
2647	33 20 24.09024 N	116 23 30.73086 W	3688955.97	556591.77	266.250	1478.307	1606.521	-46.050	-75.843	3.46	927.617
2648	33 20 24.16172 N	116 23 34.59713 W	3688957.58	556491.81	268.283	1477.890	1606.523	-45.842	-75.862	3.65	927.788
2649	33 20 24.12074 N	116 23 38.48382 W	3688955.74	556391.35	269.932	1477.473	1606.522	-45.749	-75.953	3.89	927.937
2650	33 20 24.22521 N	116 23 42.32034 W	3688958.38	556292.16	270.910	1477.185	1606.524	-45.738	-76.051	3.99	927.939
2651	33 20 24.28130 N	116 23 46.20540 W	3688959.52	556191.72	272.189	1476.980	1606.526	-45.549	-76.006	4.11	928.104
2652	33 20 24.30550 N	116 23 50.04728 W	3688959.69	556092.40	273.777	1476.898	1606.526	-45.142	-75.776	4.25	928.474
2653	33 20 24.39261 N	116 23 53.91675 W	3688961.80	555992.36	275.270	1476.911	1606.528	-44.670	-75.472	4.43	928.958
2654	33 20 24.40571 N	116 23 57.82324 W	3688961.62	555891.38	280.476	1476.141	1606.528	-43.834	-75.218	4.62	929.402
2655	33 20 24.52028 N	116 24 1.76033 W	3688964.56	555789.58	290.072	1474.707	1606.531	-42.309	-74.767	4.89	930.123
2656	33 20 37.18576 N	116 23 26.78037 W	3689359.85	556691.53	266.171	1479.134	1606.822	-45.549	-75.332	3.41	928.078
2657	33 20 37.22107 N	116 23 30.68466 W	3689360.35	556590.61	267.181	1478.980	1606.823	-45.392	-75.289	3.46	928.171
2658	33 20 37.26483 N	116 23 34.47324 W	3689361.13	556492.67	267.434	1478.994	1606.824	-45.301	-75.226	3.69	928.464
2659	33 20 37.31588 N	116 23 38.20548 W	3689362.14	556396.18	269.570	1478.467	1606.825	-45.170	-75.334	3.99	928.656
2660	33 20 37.31100 N	116 23 42.17543 W	3689361.39	556293.56	279.627	1476.478	1606.825	-44.055	-75.345	3.89	928.545
2661	33 20 37.40240 N	116 23 46.07841 W	3689363.62	556192.66	280.965	1476.300	1606.827	-43.822	-75.261	4.02	928.759
2662	33 20 37.44931 N	116 23 49.94374 W	3689364.49	556092.74	281.700	1476.214	1606.828	-43.683	-75.204	4.20	928.996
2663	33 20 37.49807 N	116 23 53.81225 W	3689365.41	555992.73	283.389	1475.839	1606.829	-43.538	-75.248	4.42	929.172
2664	33 20 37.54166 N	116 23 57.67766 W	3689366.18	555892.81	284.475	1475.725	1606.830	-43.318	-75.149	4.84	929.691
2665	33 20 37.57267 N	116 24 1.63260 W	3689366.54	555790.57	286.584	1475.675	1606.831	-42.717	-74.785	5.45	930.665
2667	33 20 50.29669 N	116 23 26.61719 W	3689763.64	556693.39	272.188	1478.323	1607.124	-44.804	-75.261	3.51	928.249
2668	33 20 50.38856 N	116 23 30.54417 W	3689765.87	556591.87	273.646	1478.086	1607.126	-44.594	-75.214	3.54	928.326
2669	33 20 50.36632 N	116 23 34.34251 W	3689764.62	556493.70	274.143	1477.945	1607.125	-44.581	-75.256	3.72	928.464
2670	33 20 50.45881 N	116 23 38.15278 W	3689766.89	556395.19	274.573	1477.875	1607.127	-44.520	-75.244	3.97	928.726
2671	33 20 50.43019 N	116 23 42.12514 W	3689765.41	556292.52	274.925	1477.832	1607.127	-44.454	-75.217	4.11	928.893
2672	33 20 50.51369 N	116 23 45.91557 W	3689767.42	556194.53	275.373	1477.776	1607.129	-44.374	-75.187	4.25	929.063
2673	33 20 50.57152 N	116 23 49.83586 W	3689768.61	556093.19	276.150	1477.524	1607.130	-44.387	-75.287	4.52	929.233

TABLE B-1
GRAVITY DATA REDUCTION

STATION	LATITUDE NAD27 (deg., min., sec.)	LONGITUDE NAD27 (deg., min., sec.)	UTM Northing (meters)	UTM Easting (meters)	ELEVATION (meters)	OBSERVED GRAVITY[1] (mGals)	THEORETICAL GRAVITY[1] (mGals)	FREE AIR ANOMALY (mGals)	BOUGUER ANOMALY[2] (mGals)	TERRAIN CORRECTION (mGals)	COMPLETE BOUGUER ANOMALY[3] (mGals)
2674	33 20 50.46965 N	116 23 53.73803 W	3689764.89	555992.35	288.209	1474.934	1607.128	-43.253	-75.503	4.61	929.107
2675	33 20 50.66674 N	116 23 57.55772 W	3689770.39	555893.58	292.803	1474.128	1607.132	-42.646	-75.410	4.87	929.460
2676	33 20 50.67657 N	116 24 1.49576 W	3689770.11	555791.79	296.942	1473.437	1607.132	-42.060	-75.287	5.39	930.103
2677	33 21 3.41792 N	116 23 26.51839 W	3690167.43	556693.59	276.955	1477.052	1607.425	-44.906	-75.896	3.54	927.644
2678	33 21 3.47248 N	116 23 30.35045 W	3690168.84	556594.53	277.791	1477.071	1607.427	-44.630	-75.714	3.56	927.846
2679	33 21 3.46913 N	116 23 34.20756 W	3690168.15	556494.83	279.490	1476.850	1607.426	-44.327	-75.601	3.69	928.089
2680	33 21 3.57315 N	116 23 38.09723 W	3690170.77	556394.28	279.965	1476.844	1607.429	-44.189	-75.516	3.92	928.404
2681	33 21 3.60118 N	116 23 41.94091 W	3690171.06	556294.93	281.911	1476.468	1607.429	-43.965	-75.510	3.98	928.470
2682	33 21 3.70694 N	116 23 45.78827 W	3690173.74	556195.47	282.500	1476.444	1607.432	-43.810	-75.420	4.12	928.700
2683	33 21 3.67405 N	116 23 49.73352 W	3690172.13	556093.50	282.647	1476.412	1607.431	-43.795	-75.423	4.33	928.907
2684	33 21 3.68968 N	116 23 53.55529 W	3690172.04	555994.72	283.735	1476.074	1607.431	-43.798	-75.547	4.57	929.023
2685	33 21 3.78421 N	116 23 57.47549 W	3690174.37	555893.38	285.135	1475.795	1607.434	-43.647	-75.553	5.13	929.577
2686	33 21 3.46149 N	116 24 0.83962 W	3690163.93	555806.49	290.259	1474.850	1607.426	-43.003	-75.482	5.98	930.498
2688	33 21 16.57834 N	116 23 30.22915 W	3690572.46	556595.31	283.534	1475.299	1607.728	-44.931	-76.658	3.73	927.072
2689	33 21 16.64801 N	116 23 34.06195 W	3690574.03	556496.23	285.289	1475.154	1607.729	-44.536	-76.459	3.80	927.341
2690	33 21 16.68233 N	116 23 37.95987 W	3690574.50	556395.48	284.836	1475.425	1607.730	-44.406	-76.278	3.97	927.692
2691	33 21 16.73946 N	116 23 41.87525 W	3690575.67	556294.28	287.066	1475.065	1607.732	-44.079	-76.201	4.00	927.799
2692	33 21 16.80107 N	116 23 45.73481 W	3690576.99	556194.51	288.026	1474.930	1607.733	-43.919	-76.148	4.09	927.942
2693	33 21 16.81346 N	116 23 49.56092 W	3690576.80	556095.62	289.490	1474.605	1607.733	-43.793	-76.186	4.16	927.974
2694	33 21 16.87653 N	116 23 53.41539 W	3690578.17	555995.99	290.625	1474.380	1607.735	-43.669	-76.189	4.30	928.111
2695	33 21 16.92588 N	116 23 57.33339 W	3690579.10	555894.72	291.097	1474.281	1607.736	-43.623	-76.196	4.54	928.344
2696	33 21 16.99717 N	116 24 1.21274 W	3690580.72	555794.44	292.171	1474.185	1607.737	-43.390	-76.083	4.89	928.807
2697	33 21 29.79692 N	116 23 33.87267 W	3690978.99	556498.76	302.104	1471.380	1608.032	-43.424	-77.228	3.71	926.482
2698	33 21 29.83489 N	116 23 37.88848 W	3690979.56	556394.97	300.316	1471.765	1608.033	-43.591	-77.196	3.87	926.674
2699	33 21 29.88791 N	116 23 41.64581 W	3690980.63	556297.85	298.775	1472.204	1608.034	-43.629	-77.061	3.92	926.859
2700	33 21 29.90534 N	116 23 45.54968 W	3690980.58	556196.96	297.825	1472.608	1608.034	-43.519	-76.844	3.98	927.136
2702	33 21 30.01273 N	116 23 53.29317 W	3690982.73	555996.81	295.861	1473.362	1608.037	-43.373	-76.479	4.19	927.711
2703	33 21 30.10826 N	116 23 57.12029 W	3690985.10	555897.88	297.447	1473.198	1608.039	-43.050	-76.333	4.27	927.937
2704	33 21 30.09359 N	116 24 1.01089 W	3690984.07	555797.34	299.154	1473.109	1608.039	-42.612	-76.086	4.33	928.244
2705	33 21 30.13413 N	116 24 5.00331 W	3690984.72	555694.15	300.121	1473.202	1608.040	-42.221	-75.804	4.51	928.706
2706	33 21 30.27731 N	116 24 8.75641 W	3690988.57	555597.12	301.910	1473.028	1608.043	-41.847	-75.629	4.92	929.291
2707	33 21 43.31821 N	116 24 8.66302 W	3691390.20	555597.23	306.708	1471.052	1608.343	-42.642	-76.961	4.22	927.259

TABLE B-1
GRAVITY DATA REDUCTION

STATION	LATITUDE NAD27 (deg., min., sec.)	LONGITUDE NAD27 (deg., min., sec.)	UTM Northing (meters)	UTM Easting (meters)	ELEVATION (meters)	OBSERVED GRAVITY[1] (mGals)	THEORETICAL GRAVITY[1] (mGals)	FREE AIR ANOMALY (mGals)	BOUGUER ANOMALY[2] (mGals)	TERRAIN CORRECTION (mGals)	COMPLETE BOUGUER ANOMALY[3] (mGals)
2708	33 21 43.51942 N	116 24 12.50345 W	3691395.82	555497.95	306.932	1471.227	1608.347	-42.402	-76.747	4.43	927.683
2709	33 21 43.40099 N	116 24 16.40944 W	3691391.60	555397.02	309.080	1470.837	1608.345	-42.127	-76.712	4.63	927.918
2710	33 21 43.43049 N	116 24 20.23428 W	3691391.94	555298.17	311.529	1470.501	1608.345	-41.708	-76.567	4.71	928.143
2711	33 21 43.51328 N	116 24 24.14657 W	3691393.92	555197.05	313.282	1470.153	1608.347	-41.517	-76.572	4.79	928.218
2712	33 21 43.52318 N	116 24 28.09404 W	3691393.64	555095.03	316.346	1469.546	1608.347	-41.178	-76.576	4.87	928.294
2713	33 21 43.55536 N	116 24 31.70829 W	3691394.10	555001.62	316.724	1469.517	1608.348	-41.091	-76.532	4.95	928.418
2714	33 21 43.66555 N	116 24 35.70599 W	3691396.91	554898.29	318.465	1469.178	1608.351	-40.896	-76.531	5.04	928.509
2715	33 21 43.66069 N	116 24 39.61261 W	3691396.19	554797.33	318.451	1469.131	1608.351	-40.947	-76.580	5.17	928.590
2716	33 21 43.70539 N	116 24 43.46197 W	3691397.00	554697.84	320.197	1468.762	1608.352	-40.778	-76.607	5.19	928.583
2720	33 19 21.58156 N	116 24 12.79837 W	3687024.68	555515.34	266.957	1476.933	1605.084	-45.770	-75.641	7.18	931.539
2721	33 19 21.43001 N	116 24 8.70014 W	3687020.61	555621.32	255.410	1479.317	1605.081	-46.945	-75.525	6.11	930.585
2722	33 19 8.93225 N	116 24 8.72197 W	3686635.73	555622.96	249.053	1481.001	1604.794	-46.936	-74.804	5.88	931.076
2724	33 19 9.09189 N	116 24 16.43500 W	3686639.51	555423.51	268.282	1476.862	1604.797	-45.145	-75.165	7.05	931.885
2260A	33 20 35.84260 N	116 21 44.18485 W	3689334.35	559343.77	237.155	1486.664	1606.791	-46.942	-73.479	5.98	932.501
2372A	33 19 47.31163 N	116 24 5.97946 W	3687818.06	555687.09	268.692	1477.636	1605.676	-45.123	-75.188	5.61	930.422
2544A	33 19 30.84869 N	116 20 9.40844 W	3687348.09	561806.41	248.191	1487.830	1605.297	-40.877	-68.648	5.29	936.642
2576A	33 19 17.61760 N	116 20 8.60204 W	3686940.76	561829.85	201.717	1496.202	1604.993	-46.542	-69.114	5.15	936.036
2576B	33 19 17.68339 N	116 20 8.24037 W	3686942.85	561839.19	204.735	1495.585	1604.995	-46.229	-69.139	5.60	936.461
2613A	33 19 4.12312 N	116 19 50.86380 W	3686528.12	562291.15	203.384	1496.755	1604.683	-45.165	-67.923	5.09	937.167
2613B	33 19 4.05976 N	116 19 50.27969 W	3686526.26	562306.27	208.715	1495.742	1604.682	-44.531	-67.886	5.09	937.204
2625A	33 19 35.84681 N	116 24 4.92947 W	3687465.15	555716.27	277.677	1475.910	1605.412	-43.812	-74.883	4.67	929.787
2625B	33 19 35.86921 N	116 24 9.01901 W	3687465.23	555610.53	281.892	1474.935	1605.413	-43.487	-75.030	4.88	929.850
2625C	33 19 35.97994 N	116 24 12.69394 W	3687468.10	555515.50	289.396	1473.351	1605.415	-42.758	-75.140	5.41	930.270
2625D	33 19 35.97174 N	116 24 16.61197 W	3687467.27	555414.21	295.321	1472.083	1605.415	-42.197	-75.243	6.47	931.227
2625E	33 19 36.04929 N	116 24 17.82288 W	3687469.48	555382.89	298.052	1471.365	1605.417	-42.074	-75.425	6.66	931.235
2645A	33 20 12.05615 N	116 24 5.85315 W	3688580.11	555685.99	286.274	1474.768	1606.245	-43.134	-75.167	4.81	929.643
2645B	33 20 12.15438 N	116 24 9.43800 W	3688582.60	555593.30	289.514	1474.102	1606.247	-42.802	-75.198	5.04	929.842
2645C	33 20 12.02313 N	116 24 13.36090 W	3688577.98	555491.91	290.481	1473.808	1606.244	-42.794	-75.298	5.54	930.242
2645D	33 20 12.06785 N	116 24 15.88086 W	3688578.99	555426.76	301.718	1471.505	1606.245	-41.631	-75.392	6.29	930.898
2665A	33 20 37.61460 N	116 24 2.83425 W	3689367.65	555759.50	293.784	1474.294	1606.832	-41.877	-74.751	5.49	930.739
2676A	33 20 50.29477 N	116 24 3.18927 W	3689758.10	555748.08	292.959	1474.144	1607.124	-42.574	-75.355	6.23	930.875
2696A	33 21 16.99567 N	116 24 5.17536 W	3690580.08	555692.02	293.766	1473.913	1607.737	-43.169	-76.041	5.29	929.249

TABLE B-1
GRAVITY DATA REDUCTION

STATION	LATITUDE NAD27 (deg., min., sec.)	LONGITUDE NAD27 (deg., min., sec.)	UTM Northing (meters)	UTM Easting (meters)	ELEVATION (meters)	OBSERVED GRAVITY[1] (mGals)	THEORETICAL GRAVITY[1] (mGals)	FREE AIR ANOMALY (mGals)	BOUGUER ANOMALY[2] (mGals)	TERRAIN CORRECTION (mGals)	COMPLETE BOUGUER ANOMALY[3] (mGals)
2696B	33 21 16.90154 N	116 24 8.19035 W	3690576.74	555614.12	295.849	1473.177	1607.735	-43.260	-76.365	6.43	930.065
2701A	33 21 29.99256 N	116 23 49.84747 W	3690982.62	556085.87	294.142	1473.586	1608.036	-43.679	-76.593	4.11	927.517
2706A	33 21 29.95997 N	116 24 11.81846 W	3690978.35	555518.04	303.687	1472.629	1608.036	-41.690	-75.671	5.31	929.639
B11281	33 19 9.19714 N	116 23 21.85567 W	3686650.91	556834.70	226.183	1483.119	1604.800	-51.882	-77.191	3.39	926.199
B11291	33 19 34.01150 N	116 23 55.27967 W	3687410.07	555966.08	262.460	1478.479	1605.370	-45.897	-75.265	4.34	929.075
B12171	33 20 36.09901 N	116 22 4.68981 W	3689339.02	558813.69	240.738	1484.282	1606.797	-48.224	-75.162	3.87	928.708
C12211	33 21 23.51243 N	116 22 28.71450 W	3690795.42	558183.91	518.956	1430.636	1607.887	-17.104	-75.173	5.89	930.717
C12212	33 21 19.76944 N	116 22 12.70128 W	3690682.64	558598.48	608.712	1411.244	1607.801	-8.711	-76.824	8.60	931.776
C12213	33 21 21.93315 N	116 21 54.08803 W	3690752.19	559079.14	582.434	1421.062	1607.851	-7.052	-72.224	4.39	932.166
C12214	33 21 18.19168 N	116 21 38.00764 W	3690639.51	559495.45	572.639	1423.913	1607.765	-7.138	-71.214	3.61	932.396
C12215	33 21 5.52266 N	116 21 16.04499 W	3690252.86	560065.50	572.678	1424.782	1607.474	-5.965	-70.046	3.66	933.614
C12216	33 20 47.64220 N	116 20 42.11749 W	3689707.68	560945.88	592.813	1421.748	1607.063	-2.375	-68.709	4.08	935.371
C12217	33 20 21.78741 N	116 20 31.05271 W	3688913.26	561236.91	646.329	1408.730	1606.468	1.716	-70.606	8.11	937.504
0W	33 19 36.15770 N	116 21 58.23050 W	3687494.08	558991.88	227.357	1486.304	1605.419	-48.954	-74.394	2.52	928.126
100E	33 19 35.81860 N	116 21 54.38540 W	3687484.24	559091.36	226.633	1486.310	1605.412	-49.164	-74.523	2.56	928.037
200E	33 19 35.47950 N	116 21 50.54030 W	3687474.41	559190.83	225.942	1486.276	1605.404	-49.403	-74.685	2.59	927.905
300E	33 19 35.14040 N	116 21 46.69520 W	3687464.57	559290.31	224.997	1486.335	1605.396	-49.628	-74.804	2.63	927.826
400E	33 19 34.80130 N	116 21 42.85020 W	3687454.73	559389.78	224.476	1486.294	1605.388	-49.822	-74.940	2.68	927.740
500E	33 19 34.46210 N	116 21 39.00510 W	3687444.90	559489.25	223.521	1486.267	1605.380	-50.136	-75.147	2.55	927.403
600E	33 19 34.12290 N	116 21 35.16010 W	3687435.06	559588.73	222.434	1486.319	1605.373	-50.411	-75.301	2.45	927.149
700E	33 19 33.78360 N	116 21 31.31500 W	3687425.22	559688.20	221.457	1486.417	1605.365	-50.607	-75.387	2.50	927.113
800E	33 19 33.44430 N	116 21 27.47000 W	3687415.39	559787.68	220.860	1486.520	1605.357	-50.681	-75.394	2.56	927.166
900E	33 19 33.10500 N	116 21 23.62500 W	3687405.55	559887.15	219.785	1486.686	1605.349	-50.839	-75.432	2.63	927.198
1000E	33 19 32.76570 N	116 21 19.77990 W	3687395.72	559986.63	218.955	1486.805	1605.341	-50.968	-75.468	2.70	927.232
1100E	33 19 32.42630 N	116 21 15.93490 W	3687385.88	560086.10	218.239	1486.949	1605.334	-51.037	-75.457	2.75	927.293
1200E	33 19 32.08690 N	116 21 12.08990 W	3687376.04	560185.58	216.940	1487.234	1605.326	-51.145	-75.420	2.83	927.410
1300E	33 19 31.74740 N	116 21 8.24490 W	3687366.21	560285.05	215.691	1487.509	1605.318	-51.248	-75.383	2.90	927.517
1400E	33 19 31.40800 N	116 21 4.40000 W	3687356.37	560384.53	214.620	1487.827	1605.310	-51.252	-75.268	2.98	927.712
1500E	33 19 31.06840 N	116 21 0.55500 W	3687346.53	560484.00	213.364	1488.282	1605.302	-51.177	-75.052	2.95	927.898
1600E	33 19 30.72890 N	116 20 56.71000 W	3687336.69	560583.47	213.391	1488.404	1605.295	-51.039	-74.917	2.96	928.043
1700E	33 19 30.38930 N	116 20 52.86510 W	3687326.86	560682.95	212.342	1488.924	1605.287	-50.835	-74.595	3.06	928.465
1800E	33 19 30.04970 N	116 20 49.02010 W	3687317.02	560782.42	211.461	1489.488	1605.279	-50.535	-74.197	3.19	928.993

TABLE B-1
GRAVITY DATA REDUCTION

STATION	LATITUDE NAD27 (deg., min., sec.)	LONGITUDE NAD27 (deg., min., sec.)	UTM Northing (meters)	UTM Easting (meters)	ELEVATION (meters)	OBSERVED GRAVITY[1] (mGals)	THEORETICAL GRAVITY[1] (mGals)	FREE AIR ANOMALY (mGals)	BOUGUER ANOMALY[2] (mGals)	TERRAIN CORRECTION (mGals)	COMPLETE BOUGUER ANOMALY[3] (mGals)
1900E	33 19 29.71000 N	116 20 45.17520 W	3687307.18	560881.90	210.583	1490.062	1605.271	-50.224	-73.788	3.35	929.562
2000E	33 19 29.37040 N	116 20 41.33020 W	3687297.35	560981.37	209.972	1490.639	1605.263	-49.828	-73.323	3.49	930.167
2100E	33 19 29.03060 N	116 20 37.48530 W	3687287.51	561080.85	209.023	1491.354	1605.256	-49.398	-72.787	3.59	930.803
2200E	33 19 28.69090 N	116 20 33.64040 W	3687277.67	561180.32	209.212	1491.920	1605.248	-48.766	-72.176	3.70	931.524
2300E	33 19 28.35110 N	116 20 29.79550 W	3687267.84	561279.80	208.795	1492.750	1605.240	-48.057	-71.420	3.80	932.380
2400E	33 19 28.01130 N	116 20 25.95060 W	3687258.00	561379.28	207.812	1493.687	1605.232	-47.415	-70.669	4.02	933.351
2500E	33 19 27.67150 N	116 20 22.10570 W	3687248.16	561478.75	208.159	1494.546	1605.224	-46.441	-69.734	4.10	934.366
2600E	33 19 27.33160 N	116 20 18.26080 W	3687238.33	561578.22	213.363	1494.044	1605.217	-45.330	-69.204	4.28	935.076
2700E	33 19 26.99170 N	116 20 14.41590 W	3687228.49	561677.70	219.365	1493.179	1605.209	-44.335	-68.881	4.54	935.659
2800E	33 19 26.65170 N	116 20 10.57100 W	3687218.65	561777.17	220.682	1493.046	1605.201	-44.053	-68.747	5.32	936.573
2881E	33 19 26.37780 N	116 20 7.47250 W	3687210.73	561857.34	224.997	1491.904	1605.195	-43.858	-69.034	6.05	937.016
50W	33 19 36.47620 N	116 22 0.12600 W	3687503.59	558942.82	228.086	1486.156	1605.427	-48.884	-74.406	2.50	928.094
100W	33 19 36.79470 N	116 22 2.02150 W	3687513.10	558893.75	228.114	1486.165	1605.434	-48.874	-74.399	2.49	928.091
200W	33 19 37.43170 N	116 22 5.81260 W	3687532.13	558795.62	229.481	1485.879	1605.449	-48.753	-74.431	2.46	928.029
300W	33 19 38.06860 N	116 22 9.60370 W	3687551.15	558697.48	230.276	1485.641	1605.463	-48.760	-74.527	2.43	927.903
400W	33 19 38.70560 N	116 22 13.39470 W	3687570.17	558599.35	231.352	1485.295	1605.478	-48.789	-74.676	2.49	927.814
500W	33 19 39.34240 N	116 22 17.18590 W	3687589.19	558501.22	232.440	1484.949	1605.493	-48.814	-74.823	2.63	927.807
600W	33 19 39.97930 N	116 22 20.97700 W	3687608.21	558403.09	233.258	1484.548	1605.507	-48.977	-75.078	2.85	927.772
700W	33 19 40.61610 N	116 22 24.76810 W	3687627.24	558304.95	234.202	1484.143	1605.522	-49.105	-75.311	2.83	927.519
800W	33 19 41.25290 N	116 22 28.55930 W	3687646.26	558206.82	235.278	1483.687	1605.537	-49.244	-75.570	2.81	927.240
900W	33 19 41.88970 N	116 22 32.35040 W	3687665.28	558108.69	235.944	1483.328	1605.551	-49.412	-75.813	2.80	926.987
1000W	33 19 42.52640 N	116 22 36.14160 W	3687684.30	558010.56	236.757	1482.960	1605.566	-49.544	-76.036	2.80	926.764
1100W	33 19 43.16310 N	116 22 39.93280 W	3687703.33	557912.42	237.491	1482.578	1605.580	-49.714	-76.288	2.79	926.502
1200W	33 19 43.79980 N	116 22 43.72400 W	3687722.35	557814.29	238.756	1482.177	1605.595	-49.739	-76.455	2.79	926.335
1300W	33 19 44.43640 N	116 22 47.51520 W	3687741.37	557716.16	239.010	1481.898	1605.610	-49.954	-76.699	2.80	926.101
1400W	33 19 45.07300 N	116 22 51.30650 W	3687760.39	557618.03	239.701	1481.692	1605.624	-49.962	-76.783	2.81	926.027
1450W	33 19 45.39130 N	116 22 53.20210 W	3687769.90	557568.96	240.083	1481.543	1605.632	-50.000	-76.864	2.81	925.946
1500W	33 19 45.70960 N	116 22 55.09770 W	3687779.42	557519.89	240.262	1481.579	1605.639	-49.916	-76.801	2.93	926.129
1550W	33 19 46.02780 N	116 22 56.99340 W	3687788.93	557470.83	240.543	1481.532	1605.646	-49.884	-76.800	2.94	926.140
1600W	33 19 46.34610 N	116 22 58.88900 W	3687798.44	557421.76	241.175	1481.436	1605.654	-49.792	-76.779	3.17	926.391
1650W	33 19 46.66440 N	116 23 0.78460 W	3687807.95	557372.69	241.298	1481.432	1605.661	-49.765	-76.766	3.18	926.414
1700W	33 19 46.98260 N	116 23 2.68030 W	3687817.46	557323.63	241.707	1481.376	1605.668	-49.702	-76.749	3.19	926.441

TABLE B-1
GRAVITY DATA REDUCTION

STATION	LATITUDE NAD27 (deg., min., sec.)	LONGITUDE NAD27 (deg., min., sec.)	UTM Northing (meters)	UTM Easting (meters)	ELEVATION (meters)	OBSERVED GRAVITY[1] (mGals)	THEORETICAL GRAVITY[1] (mGals)	FREE AIR ANOMALY (mGals)	BOUGUER ANOMALY[2] (mGals)	TERRAIN CORRECTION (mGals)	COMPLETE BOUGUER ANOMALY[3] (mGals)
1750W	33 19 47.30080 N	116 23 4.57590 W	3687826.97	557274.56	242.177	1481.298	1605.676	-49.643	-76.741	3.20	926.459
1800W	33 19 47.61910 N	116 23 6.47160 W	3687836.48	557225.50	242.633	1481.212	1605.683	-49.595	-76.745	3.21	926.465
1850W	33 19 47.93730 N	116 23 8.36730 W	3687845.99	557176.43	242.484	1481.262	1605.690	-49.599	-76.732	3.22	926.488
1900W	33 19 48.25550 N	116 23 10.26290 W	3687855.50	557127.36	242.516	1481.278	1605.697	-49.580	-76.717	3.24	926.523
2000W	33 19 48.89190 N	116 23 14.05420 W	3687874.52	557029.23	242.761	1481.220	1605.712	-49.577	-76.741	3.29	926.549
2050W	33 19 49.21010 N	116 23 15.94990 W	3687884.04	556980.16	242.770	1481.233	1605.719	-49.569	-76.734	3.33	926.596
2100W	33 19 49.52830 N	116 23 17.84560 W	3687893.55	556931.10	243.077	1481.176	1605.727	-49.538	-76.738	3.32	926.582
2150W	33 19 49.84650 N	116 23 19.74130 W	3687903.06	556882.03	243.267	1481.138	1605.734	-49.525	-76.746	3.34	926.594
2200W	33 19 50.16460 N	116 23 21.63700 W	3687912.57	556832.97	243.164	1481.185	1605.741	-49.517	-76.726	3.38	926.654
2300W	33 19 50.80100 N	116 23 25.42830 W	3687931.59	556734.84	244.760	1480.886	1605.756	-49.338	-76.726	3.42	926.694
2400W	33 19 51.43720 N	116 23 29.21970 W	3687950.62	556636.70	246.860	1480.523	1605.771	-49.068	-76.690	3.47	926.780
2500W	33 19 52.07350 N	116 23 33.01110 W	3687969.64	556538.57	248.589	1480.245	1605.785	-48.827	-76.643	3.70	927.057
2600W	33 19 52.70970 N	116 23 36.80260 W	3687988.66	556440.44	250.703	1479.858	1605.800	-48.576	-76.629	3.97	927.341
2700W	33 19 53.34590 N	116 23 40.59400 W	3688007.68	556342.31	252.879	1479.589	1605.814	-48.188	-76.484	4.02	927.536
2800W	33 19 53.98200 N	116 23 44.38550 W	3688026.70	556244.17	254.902	1479.408	1605.829	-47.759	-76.282	4.12	927.838
2900W	33 19 54.61810 N	116 23 48.17690 W	3688045.73	556146.04	257.685	1479.139	1605.844	-47.184	-76.018	4.24	928.222
3000W	33 19 55.25420 N	116 23 51.96840 W	3688064.75	556047.91	261.077	1479.079	1605.858	-46.212	-75.426	4.36	928.934
3100W	33 19 55.89030 N	116 23 55.75990 W	3688083.77	555949.78	264.019	1479.371	1605.873	-45.027	-74.570	4.68	930.110
3159W	33 19 56.26820 N	116 23 58.01300 W	3688095.07	555891.46	284.000	1475.336	1605.882	-42.904	-74.683	4.53	929.847

Notes: [1] 978,000 milligals subtracted from observed and theoretical gravity
[2] Bouguer reduction density = 2.67 g/cc
[3] 1,000 milligals added to complete Bouguer anomaly