

Appendix 1—Locations and Dissolved Solids Concentrations of Existing Wells

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Appendix 1. Locations and dissolved solids concentrations of existing wells, Barton Springs segment of the Edwards aquifer, Travis and Hays Counties, Texas. [Link to Excel file](#)

Data Definitions:

Column 1, State well number—Unique identifier assigned by the State of Texas to location in study area where measurements or samples were taken.

Column 2, Northing—North State Plane Coordinate of north-south distance, in feet.

Column 3, Easting—North State Plane Coordinate of east-west distance, in feet.

Column 4, Altitude of land surface—Altitude of wells, in feet above NGVD 29 (--, not available).

Column 5, Dissolved solids concentration—Measured dissolved solids concentration, in milligrams per liter, in samples from wells; concentrations in bold computed from conductivity [dissolved solids = $0.6208(\text{conductivity}) - 33.317$].

Column 6, Source of data—TWDB, Texas Water Development Board (2006); BSEACD, Barton Springs Edwards Aquifer Conservation District (Hunt and others, 2006 [well locations]; Barton Springs/Edwards Aquifer Conservation District Well Database, unpublished, 2006 [dissolved solids concentrations]; USGS, U.S. Geological Survey (2006).

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Appendix 2—Geophysical Borehole Logs, Swinney Well

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Appendix 2. Geophysical borehole logs, Swinney Well. [Link to pdf file.](#)**Data Definitions:**

BSEACD—Barton Springs/Edwards Aquifer Conservation District

LSD—land surface datum

m—meters

GPS—Global Positioning System

cm—centimeters

N/A—not applicable

in—inch

Geol.—geologic

GAM(NAT)—natural gamma

CPS—counts per second

MS/M—millisiemens per second

I_Res—induction resistivity

OHM-M—ohm-meters

TDEM res—time-domain electromagnetic resistivity

DEL TEMP—delta temperature

DEG F—degrees Fahrenheit

RES(FL)—fluid resistivity

SP COND—specific conductance

US/CM—microsiemens per centimeter

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Appendix 3—Global Positioning System Online User Service (OPUS) Solutions

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Appendix 3. Global Positioning System Online Positioning User Service (OPUS) solutions, Travis and Hays Counties, Barton Springs segment of the Edwards aquifer.

FILE: BS200

NGS OPUS SOLUTION REPORT
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USER: jdpayne@usgs.gov DATE: September 26, 2006
 RINEX FILE: bs20265o.06o TIME: 12:10:40 UTC

SOFTWARE: page5 0601.10 master30.pl START: 2006/09/22 14:55:00
 EPHEMERIS: igr13935.eph [rapid] STOP: 2006/09/22 15:30:00
 NAV FILE: brdc2650.06n OBS USED: 935 / 963 : 97%
 ANT NAME: TRM5800 NONE # FIXED AMB: 13 / 15 : 87%
 ARP HEIGHT: 2.25 OVERALL RMS: 0.012 (m)

REF FRAME: NAD_83 (CORS96) (EPOCH:2002.0000) ITRF00 (EPOCH:2006.7250)

X:	-751254.551 (m)	0.253 (m)	-751255.228 (m)	0.253 (m)
Y:	-5470133.040 (m)	0.287 (m)	-5470131.588 (m)	0.287 (m)
Z:	3182416.624 (m)	0.290 (m)	3182416.448 (m)	0.290 (m)

LAT:	30 7 28.72829	0.169 (m)	30 7 28.74529	0.169 (m)
E LON:	262 10 48.21565	0.278 (m)	262 10 48.18322	0.278 (m)
W LON:	97 49 11.78435	0.278 (m)	97 49 11.81678	0.278 (m)
EL HGT:	167.536 (m)	0.359 (m)	166.283 (m)	0.359 (m)

ORTHO HGT: 193.304 (m) 0.360 (m) [Geoid03 NAVD88]

UTM COORDINATES STATE PLANE COORDINATES

	UTM (Zone 14)	SPC (4203 TX C)
Northing (Y) [meters]	3333184.923	3053506.978
Easting (X) [meters]	613675.561	942183.207
Convergence [degrees]	0.59231543	1.29454551
Point Scale	0.99975942	0.99999788
Combined Factor	0.99973312	0.99997157

US NATIONAL GRID DESIGNATOR: 14RPU1367633185 (NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE (m)
DG5767	TXSM SAN MARCOS CORS ARP	N295240.525	W0975409.650	28491.9
DF4373	TXAU AUSTIN RRP2 CORS ARP	N301842.088	W0974522.713	21621.8
DG5761	TXBS BASTROP CORS ARP	N300646.244	W0971726.172	51030.5

NEAREST NGS PUBLISHED CONTROL POINT

BM0659	Z 328	N300700.	W0974956.	1479.1
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

Appendix 3. Global Positioning System Online Positioning User Service (OPUS) solutions, Travis and Hays Counties, Barton Springs segment of the Edwards aquifer—Continued.

FILE: BS245

NGS OPUS SOLUTION REPORT
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USER: jdpayne@usgs.gov DATE: September 26, 2006
 RINEX FILE: bs24257s.06o TIME: 12:08:16 UTC

SOFTWARE: page5 0601.10 master25.pl START: 2006/09/14 18:22:00
 EPHEMERIS: igr13924.eph [rapid] STOP: 2006/09/14 18:56:00
 NAV FILE: brdc2570.06n OBS USED: 1256 / 1389 : 90%
 ANT NAME: TRM5800 NONE # FIXED AMB: 16 / 22 : 73%
 ARP HEIGHT: 2.25 OVERALL RMS: 0.015 (m)

REF FRAME: NAD_83 (CORS96) (EPOCH:2002.0000) ITRF00 (EPOCH:2006.7035)

X:	-749588.005 (m)	0.280 (m)	-749588.682 (m)	0.280 (m)
Y:	-5471283.236 (m)	0.315 (m)	-5471281.784 (m)	0.315 (m)
Z:	3180886.643 (m)	0.137 (m)	3180886.467 (m)	0.137 (m)

LAT:	30 6 30.87327	0.053 (m)	30 6 30.89027	0.053 (m)
E LON:	262 11 55.72855	0.263 (m)	262 11 55.69614	0.263 (m)
W LON:	97 48 4.27145	0.263 (m)	97 48 4.30386	0.263 (m)
EL HGT:	189.639 (m)	0.365 (m)	188.386 (m)	0.365 (m)

ORTHO HGT: 215.457 (m) 0.366 (m) [Geoid03 NAVD88]

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 14)	SPC (4203 TX C)
Northing (Y) [meters]	3331422.743	3051766.896
Easting (X) [meters]	615500.932	944030.485
Convergence [degrees]	0.60143975	1.30420471
Point Scale	0.99976459	1.00000217
Combined Factor	0.99973481	0.99997239

US NATIONAL GRID DESIGNATOR: 14RPU1550131423 (NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE (m)
DG5767	TXSM SAN MARCOS CORS ARP	N295240.525	W0975409.650	27380.5
DF4373	TXAU AUSTIN RRP2 CORS ARP	N301842.088	W0974522.713	22928.0
DG5761	TXBS BASTROP CORS ARP	N300646.244	W0971726.172	49213.1

NEAREST NGS PUBLISHED CONTROL POINT

BM0753	R 1305	N300645.	W0974825.	705.9
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

Appendix 3. Global Positioning System Online Positioning User Service (OPUS) solutions, Travis and Hays Counties, Barton Springs segment of the Edwards aquifer—Continued.

FILE: BS250

NGS OPUS SOLUTION REPORT
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USER: jdpayne@usgs.gov DATE: September 26, 2006
 RINEX FILE: bs25255t.06o TIME: 12:11:25 UTC

SOFTWARE: page5 0601.10 master30.pl START: 2006/09/12 19:27:00
 EPHEMERIS: igr13922.eph [rapid] STOP: 2006/09/12 20:04:00
 NAV FILE: brdc2550.06n OBS USED: 1118 / 1237 : 90%
 ANT NAME: TRM5800 NONE # FIXED AMB: 17 / 20 : 85%
 ARP HEIGHT: 2.25 OVERALL RMS: 0.023 (m)

REF FRAME: NAD_83 (CORS96) (EPOCH:2002.0000) ITRF00 (EPOCH:2006.6981)

X:	-749115.591 (m)	0.841 (m)	-749116.268 (m)	0.841 (m)
Y:	-5471322.845 (m)	1.158 (m)	-5471321.393 (m)	1.158 (m)
Z:	3180914.083 (m)	0.541 (m)	3180913.907 (m)	0.541 (m)

LAT:	30 6 32.04913	0.157 (m)	30 6 32.06612	0.157 (m)
E LON:	262 12 13.41109	0.709 (m)	262 12 13.37868	0.709 (m)
W LON:	97 47 46.58891	0.709 (m)	97 47 46.62132	0.709 (m)
EL HGT:	181.898 (m)	1.349 (m)	180.645 (m)	1.349 (m)

ORTHO HGT: 207.724 (m) 1.349 (m) [Geoid03 NAVD88]

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 14)	SPC (4203 TX C)
Northing (Y) [meters]	3331463.919	3051813.881
Easting (X) [meters]	615973.819	944502.943
Convergence [degrees]	0.60391047	1.30673459
Point Scale	0.99976594	1.00000208
Combined Factor	0.99973738	0.99997352

US NATIONAL GRID DESIGNATOR: 14RPU1597431464 (NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE (m)
DG5767	TXSM SAN MARCOS CORS ARP	N295240.525	W0975409.650	27587.0
DF4373	TXAU AUSTIN RRP2 CORS ARP	N301842.088	W0974522.713	22808.0
DG5761	TXBS BASTROP CORS ARP	N300646.244	W0971726.172	48738.6

NEAREST NGS PUBLISHED CONTROL POINT

BM0753	R 1305	N300645.	W0974825.	1102.8
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

3-8 Geophysical Delineation of the Freshwater/Saline-Water Transition Zone, Barton Springs Segment, Edwards Aquifer

Appendix 3. Global Positioning System Online Positioning User Service (OPUS) solutions, Travis and Hays Counties, Barton Springs segment of the Edwards aquifer—Continued.

FILE: BS260

NGS OPUS SOLUTION REPORT
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USER: jdpayne@usgs.gov DATE: September 26, 2006
RINEX FILE: bs26256o.06o TIME: 12:04:29 UTC

SOFTWARE: page5 0601.10 master2.pl START: 2006/09/13 14:38:00
EPHEMERIS: igr13923.eph [rapid] STOP: 2006/09/13 15:08:00
NAV FILE: brdc2560.06n OBS USED: 1093 / 1119 : 98%
ANT NAME: TRM5800 NONE # FIXED AMB: 18 / 21 : 86%
ARP HEIGHT: 2.25 OVERALL RMS: 0.015 (m)

REF FRAME: NAD_83 (CORS96) (EPOCH:2002.0000) ITRF00 (EPOCH:2006.7003)

X:	-748587.495 (m)	0.182 (m)	-748588.172 (m)	0.182 (m)
Y:	-5471472.458 (m)	0.179 (m)	-5471471.006 (m)	0.179 (m)
Z:	3180772.105 (m)	0.154 (m)	3180771.929 (m)	0.154 (m)
LAT:	30 6 26.81242	0.083 (m)	30 6 26.82942	0.083 (m)
E LON:	262 12 33.71133	0.203 (m)	262 12 33.67893	0.203 (m)
W LON:	97 47 26.28867	0.203 (m)	97 47 26.32107	0.203 (m)
EL HGT:	176.959 (m)	0.203 (m)	175.706 (m)	0.203 (m)
ORTHO HGT:	202.796 (m)	0.204 (m)	[Geoid03 NAVD88]	

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 14)	SPC (4203 TX C)
Northing (Y) [meters]	3331308.453	3051665.077
Easting (X) [meters]	616518.856	945049.975
Convergence [degrees]	0.60671362	1.30963898
Point Scale	0.99976750	1.00000247
Combined Factor	0.99973972	0.99997468

US NATIONAL GRID DESIGNATOR: 14RPU1651931308 (NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE (m)
DG5767	TXSM SAN MARCOS CORS ARP	N295240.525	W0975409.650	27645.9
DF4373	TXAU AUSTIN RRP2 CORS ARP	N301842.088	W0974522.713	22882.2
DG5761	TXBS BASTROP CORS ARP	N300646.244	W0971726.172	48197.7

NEAREST NGS PUBLISHED CONTROL POINT

BM0753	R 1305	N300645.	W0974825.	1668.2
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

Appendix 3. Global Positioning System Online Positioning User Service (OPUS) solutions, Travis and Hays Counties, Barton Springs segment of the Edwards aquifer—Continued.

FILE: BS320

NGS OPUS SOLUTION REPORT
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USER: jdpayne@usgs.gov DATE: September 26, 2006
RINEX FILE: bs32264m.06o TIME: 11:57:41 UTC

SOFTWARE: page5 0601.10 master10.pl START: 2006/09/21 12:26:00
EPHEMERIS: igr13934.eph [rapid] STOP: 2006/09/21 13:07:00
NAV FILE: brdc2640.06n OBS USED: 1289 / 1344 : 96%
ANT NAME: TRM5800 NONE # FIXED AMB: 16 / 20 : 80%
ARP HEIGHT: 2.25 OVERALL RMS: 0.015 (m)

REF FRAME: NAD_83 (CORS96) (EPOCH:2002.0000) ITRF00 (EPOCH:2006.7220)

X:	-752455.687 (m)	0.055 (m)	-752456.364 (m)	0.055 (m)
Y:	-5472190.085 (m)	0.171 (m)	-5472188.633 (m)	0.171 (m)
Z:	3178663.181 (m)	0.107 (m)	3178663.004 (m)	0.107 (m)

LAT:	30 5 7.42235	0.145 (m)	30 5 7.43929	0.145 (m)
E LON:	262 10 14.23138	0.070 (m)	262 10 14.19895	0.070 (m)
W LON:	97 49 45.76862	0.070 (m)	97 49 45.80105	0.070 (m)
EL HGT:	189.322 (m)	0.117 (m)	188.068 (m)	0.117 (m)
ORTHO HGT:	215.107 (m)	0.120 (m)	[Geoid03 NAVD88]	

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 14)	SPC (4204 TXSC)
Northing (Y) [meters]	3328825.634	4250159.529
Easting (X) [meters]	612810.717	712844.264
Convergence [degrees]	0.58688231	0.57350143
Point Scale	0.99975701	0.99994882
Combined Factor	0.99972728	0.99991909

US NATIONAL GRID DESIGNATOR: 14RPU1281128826 (NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE (m)
DG5767	TXSM SAN MARCOS CORS ARP	N295240.525	W0975409.650	24062.5
DF4373	TXAU AUSTIN RRP2 CORS ARP	N301842.088	W0974522.713	26055.1
DG5761	TXBS BASTROP CORS ARP	N300646.244	W0971726.172	52023.1

NEAREST NGS PUBLISHED CONTROL POINT

BM0750	G 1304	N300450.	W0974920.	875.0
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

Appendix 3. Global Positioning System Online Positioning User Service (OPUS) solutions, Travis and Hays Counties, Barton Springs segment of the Edwards aquifer—Continued.

FILE: BS340

NGS OPUS SOLUTION REPORT

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USER: jdpayne@usgs.gov DATE: September 26, 2006
 RINEX FILE: bs34258r.06o TIME: 12:05:23 UTC

SOFTWARE: page5 0601.10 master2.pl START: 2006/09/15 17:51:00
 EPHEMERIS: igr13925.eph [rapid] STOP: 2006/09/15 18:22:00
 NAV FILE: brdc2580.06n OBS USED: 1170 / 1354 : 86%
 ANT NAME: TRM5800 NONE # FIXED AMB: 18 / 21 : 86%
 ARP HEIGHT: 2.25 OVERALL RMS: 0.020 (m)

REF FRAME: NAD_83 (CORS96) (EPOCH:2002.0000) ITRF00 (EPOCH:2006.7062)

X:	-751003.512 (m)	0.127 (m)	-751004.189 (m)	0.127 (m)
Y:	-5472745.096 (m)	0.165 (m)	-5472743.644 (m)	0.165 (m)
Z:	3178078.449 (m)	0.103 (m)	3178078.272 (m)	0.103 (m)

LAT:	30 4 45.25798	0.022 (m)	30 4 45.27492	0.022 (m)
E LON:	262 11 10.77253	0.104 (m)	262 11 10.74011	0.104 (m)
W LON:	97 48 49.22747	0.104 (m)	97 48 49.25989	0.104 (m)
EL HGT:	201.011 (m)	0.208 (m)	199.757 (m)	0.208 (m)

ORTHO HGT: 226.831 (m) 0.210 (m) [Geoid03 NAVD88]

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 14)	SPC (4204 TXSC)
Northing (Y) [meters]	3328158.941	4249492.354
Easting (X) [meters]	614331.456	714365.134
Convergence [degrees]	0.59464773	0.58119594
Point Scale	0.99976127	0.99994742
Combined Factor	0.99972971	0.99991585

US NATIONAL GRID DESIGNATOR: 14RPU1433128159 (NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE (m)
DG5767	TXSM SAN MARCOS CORS ARP	N295240.525	W0975409.650	23912.9
DF4373	TXAU AUSTIN RRP2 CORS ARP	N301842.088	W0974522.713	26355.0
DG5761	TXBS BASTROP CORS ARP	N300646.244	W0971726.172	50559.2

NEAREST NGS PUBLISHED CONTROL POINT

BM0750	G 1304	N300450.	W0974920.	836.4
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

Appendix 3. Global Positioning System Online Positioning User Service (OPUS) solutions, Travis and Hays Counties, Barton Springs segment of the Edwards aquifer—Continued.

FILE: BS360

NGS OPUS SOLUTION REPORT
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USER: jdpayne@usgs.gov DATE: September 26, 2006
RINEX FILE: bs36259m.06o TIME: 12:09:51 UTC

SOFTWARE: page5 0601.10 master24.pl START: 2006/09/16 12:24:00
EPHEMERIS: igr13926.eph [rapid] STOP: 2006/09/16 13:05:00
NAV FILE: brdc2590.06n OBS USED: 1286 / 1327 : 97%
ANT NAME: TRM5800 NONE # FIXED AMB: 18 / 20 : 90%
ARP HEIGHT: 2.25 OVERALL RMS: 0.013 (m)

REF FRAME: NAD_83 (CORS96) (EPOCH:2002.0000) ITRF00 (EPOCH:2006.7083)

X:	-749357.298 (m)	0.064 (m)	-749357.975 (m)	0.064 (m)
Y:	-5472722.947 (m)	0.080 (m)	-5472721.495 (m)	0.080 (m)
Z:	3178506.760 (m)	0.020 (m)	3178506.583 (m)	0.020 (m)

LAT:	30 5 1.28984	0.049 (m)	30 5 1.30679	0.049 (m)
E LON:	262 12 11.56094	0.074 (m)	262 12 11.52853	0.074 (m)
W LON:	97 47 48.43906	0.074 (m)	97 47 48.47147	0.074 (m)
EL HGT:	203.251 (m)	0.057 (m)	201.997 (m)	0.057 (m)

ORTHO HGT: 229.097 (m) 0.062 (m) [Geoid03 NAVD88]

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 14)	SPC (4204 TXSC)
Northing (Y) [meters]	3328669.474	4250002.597
Easting (X) [meters]	615953.726	715987.825
Convergence [degrees]	0.60319450	0.58946844
Point Scale	0.99976588	0.99994843
Combined Factor	0.99973397	0.99991651

US NATIONAL GRID DESIGNATOR: 14RPU1595428669 (NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE (m)
DG5767	TXSM SAN MARCOS CORS ARP	N295240.525	W0975409.650	24995.1
DF4373	TXAU AUSTIN RRP2 CORS ARP	N301842.088	W0974522.713	25574.6
DG5761	TXBS BASTROP CORS ARP	N300646.244	W0971726.172	48899.9

NEAREST NGS PUBLISHED CONTROL POINT

BM0751	T 1305	N300520.	W0974907.	2180.1
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

Appendix 3. Global Positioning System Online Positioning User Service (OPUS) solutions, Travis and Hays Counties, Barton Springs segment of the Edwards aquifer—Continued.

FILE: BS410

NGS OPUS SOLUTION REPORT
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USER: jdpayne@usgs.gov DATE: September 26, 2006
 RINEX FILE: bs41265n.06o TIME: 12:05:58 UTC

SOFTWARE: page5 0601.10 master4.pl START: 2006/09/22 13:07:00
 EPHEMERIS: igr13935.eph [rapid] STOP: 2006/09/22 13:34:00
 NAV FILE: brdc2650.06n OBS USED: 765 / 796 : 96%
 ANT NAME: TRM5800 NONE # FIXED AMB: 8 / 15 : 53%
 ARP HEIGHT: 2.25 OVERALL RMS: 0.010 (m)

REF FRAME: NAD_83 (CORS96) (EPOCH:2002.0000) ITRF00 (EPOCH:2006.7248)

X:	-754700.271 (m)	0.122 (m)	-754700.948 (m)	0.122 (m)
Y:	-5473850.616 (m)	0.526 (m)	-5473849.164 (m)	0.526 (m)
Z:	3175315.378 (m)	0.299 (m)	3175315.201 (m)	0.299 (m)

LAT:	30 3 1.58820	0.119 (m)	30 3 1.60511	0.119 (m)
E LON:	262 8 59.66887	0.060 (m)	262 8 59.63643	0.060 (m)
W LON:	97 51 0.33113	0.060 (m)	97 51 0.36357	0.060 (m)
EL HGT:	200.597 (m)	0.613 (m)	199.343 (m)	0.613 (m)

ORTHO HGT: 226.375 (m) 0.614 (m) [Geoid03 NAVD88]

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 14)	SPC (4204 TXSC)
Northing (Y) [meters]	3324931.758	4246265.353
Easting (X) [meters]	610853.574	710885.867
Convergence [degrees]	0.57588931	0.56335446
Point Scale	0.99975161	0.99994102
Combined Factor	0.99972011	0.99990952

US NATIONAL GRID DESIGNATOR: 14RPU1085424932 (NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE (m)
DG5767	TXSM SAN MARCOS CORS ARP	N295240.525	W0975409.650	19786.6
DF4373	TXAU AUSTIN RRP2 CORS ARP	N301842.088	W0974522.713	30337.6
DG5761	TXBS BASTROP CORS ARP	N300646.244	W0971726.172	54381.8

NEAREST NGS PUBLISHED CONTROL POINT

BM0661	A 329	N300328.	W0975124.	1033.6
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

Appendix 3. Global Positioning System Online Positioning User Service (OPUS) solutions, Travis and Hays Counties, Barton Springs segment of the Edwards aquifer—Continued.

FILE: BS440

NGS OPUS SOLUTION REPORT
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USER: jdpayne@usgs.gov DATE: September 26, 2006
RINEX FILE: bs44262s.06o TIME: 12:06:15 UTC

SOFTWARE: page5 0601.10 master3.pl START: 2006/09/19 18:18:00
EPHEMERIS: igr13932.eph [rapid] STOP: 2006/09/19 18:48:00
NAV FILE: brdc2620.06n OBS USED: 1025 / 1077 : 95%
ANT NAME: TRM5800 NONE # FIXED AMB: 17 / 20 : 85%
ARP HEIGHT: 2.25 OVERALL RMS: 0.016 (m)

REF FRAME: NAD_83 (CORS96) (EPOCH:2002.0000) ITRF00 (EPOCH:2006.7172)

X:	-753919.996 (m)	0.185 (m)	-753920.673 (m)	0.185 (m)
Y:	-5473805.046 (m)	0.230 (m)	-5473803.594 (m)	0.230 (m)
Z:	3175573.909 (m)	0.155 (m)	3175573.732 (m)	0.155 (m)

LAT:	30 3 11.32162	0.010 (m)	30 3 11.33854	0.010 (m)
E LON:	262 9 28.29104	0.169 (m)	262 9 28.25861	0.169 (m)
W LON:	97 50 31.70896	0.169 (m)	97 50 31.74139	0.169 (m)
EL HGT:	198.791 (m)	0.297 (m)	197.537 (m)	0.297 (m)

ORTHO HGT: 224.582 (m) 0.298 (m) [Geoid03 NAVD88]

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 14)	SPC (4204 TXSC)
Northing (Y) [meters]	3325239.117	4246572.603
Easting (X) [meters]	611617.049	711649.554
Convergence [degrees]	0.57991919	0.56724956
Point Scale	0.99975370	0.99994161
Combined Factor	0.99972249	0.99991039

US NATIONAL GRID DESIGNATOR: 14RPU1161725239 (NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE (m)
DG5767	TXSM SAN MARCOS CORS ARP	N295240.525	W0975409.650	20284.0
DF4373	TXAU AUSTIN RRP2 CORS ARP	N301842.088	W0974522.713	29830.5
DG5761	TXBS BASTROP CORS ARP	N300646.244	W0971726.172	53582.9

NEAREST NGS PUBLISHED CONTROL POINT

BM0747	W 1305	N300255.	W0975018.	624.0
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

Appendix 3. Global Positioning System Online Positioning User Service (OPUS) solutions, Travis and Hays Counties, Barton Springs segment of the Edwards aquifer—Continued.

FILE: BS460

NGS OPUS SOLUTION REPORT
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USER: jdpayne@usgs.gov DATE: September 26, 2006
RINEX FILE: bs46260m.06o TIME: 12:06:42 UTC

SOFTWARE: page5 0601.10 master3.pl START: 2006/09/17 12:57:00
EPHEMERIS: igr13930.eph [rapid] STOP: 2006/09/17 13:28:00
NAV FILE: brdc2600.06n OBS USED: 890 / 933 : 95%
ANT NAME: TRM5800 NONE # FIXED AMB: 12 / 15 : 80%
ARP HEIGHT: 2.25 OVERALL RMS: 0.011 (m)

REF FRAME: NAD_83 (CORS96) (EPOCH:2002.0000) ITRF00 (EPOCH:2006.7111)

X:	-752836.478 (m)	0.147 (m)	-752837.155 (m)	0.147 (m)
Y:	-5474103.708 (m)	0.620 (m)	-5474102.256 (m)	0.620 (m)
Z:	3175290.520 (m)	0.341 (m)	3175290.343 (m)	0.341 (m)

LAT:	30 3 0.94669	0.597 (m)	30 3 0.96361	0.597 (m)
E LON:	262 10 9.88032	0.196 (m)	262 10 9.84790	0.196 (m)
W LON:	97 49 50.11968	0.196 (m)	97 49 50.15210	0.196 (m)
EL HGT:	185.103 (m)	0.348 (m)	183.849 (m)	0.348 (m)
ORTHO HGT:	210.921 (m)	0.348 (m)	[Geoid03 NAVD88]	

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 14)	SPC (4204 TXSC)
Northing (Y) [meters]	3324931.070	4246264.250
Easting (X) [meters]	612734.054	712766.698
Convergence [degrees]	0.58565566	0.57290931
Point Scale	0.99975680	0.99994098
Combined Factor	0.99972773	0.99991192

US NATIONAL GRID DESIGNATOR: 14RPU1273424931 (NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE (m)
DG5765	TXJC JOHNSON CITY CORS ARP	N301559.202	W0982350.395	59626.3
DF4373	TXAU AUSTIN RRP2 CORS ARP	N301842.088	W0974522.713	29851.8
DG5761	TXBS BASTROP CORS ARP	N300646.244	W0971726.172	52519.9

NEAREST NGS PUBLISHED CONTROL POINT

BM0747	W 1305	N300255.	W0975018.	768.6
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

Appendix 3. Global Positioning System Online Positioning User Service (OPUS) solutions, Travis and Hays Counties, Barton Springs segment of the Edwards aquifer—Continued.

FILE: BS520

NGS OPUS SOLUTION REPORT
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USER: jdpayne@usgs.gov DATE: September 26, 2006
 RINEX FILE: bs52262m.06o TIME: 12:11:07 UTC

SOFTWARE: page5 0601.10 master25.pl START: 2006/09/19 12:54:00
 EPHEMERIS: igr13932.eph [rapid] STOP: 2006/09/19 13:29:00
 NAV FILE: brdc2620.06n OBS USED: 1016 / 1046 : 97%
 ANT NAME: TRM5800 NONE # FIXED AMB: 15 / 15 : 100%
 ARP HEIGHT: 2.25 OVERALL RMS: 0.012 (m)

REF FRAME: NAD_83 (CORS96) (EPOCH:2002.0000) ITRF00 (EPOCH:2006.7166)

X:	-755767.091 (m)	0.022 (m)	-755767.768 (m)	0.022 (m)
Y:	-5474684.986 (m)	0.047 (m)	-5474683.534 (m)	0.047 (m)
Z:	3173615.223 (m)	0.051 (m)	3173615.046 (m)	0.051 (m)

LAT:	30 1 57.98577	0.019 (m)	30 1 58.00266	0.019 (m)
E LON:	262 8 24.47919	0.017 (m)	262 8 24.44675	0.017 (m)
W LON:	97 51 35.52081	0.017 (m)	97 51 35.55325	0.017 (m)
EL HGT:	191.168 (m)	0.068 (m)	189.914 (m)	0.068 (m)

ORTHO HGT: 216.945 (m) 0.073 (m) [Geoid03 NAVD88]

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 14)	SPC (4204 TXSC)
Northing (Y) [meters]	3322964.434	4244297.857
Easting (X) [meters]	609930.697	709962.392
Convergence [degrees]	0.57068857	0.55856560
Point Scale	0.99974910	0.99993722
Combined Factor	0.99971908	0.99990720

US NATIONAL GRID DESIGNATOR: 14RPU0993122964 (NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE (m)
DG5767	TXSM SAN MARCOS CORS ARP	N295240.525	W0975409.650	17656.4
DF4373	TXAU AUSTIN RRP2 CORS ARP	N301842.088	W0974522.713	32489.5
DG5761	TXBS BASTROP CORS ARP	N300646.244	W0971726.172	55600.3

NEAREST NGS PUBLISHED CONTROL POINT

BM0662	B 329	N300214.	W0975151.	645.7
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

Appendix 3. Global Positioning System Online Positioning User Service (OPUS) solutions, Travis and Hays Counties, Barton Springs segment of the Edwards aquifer—Continued.

FILE: BS524

NGS OPUS SOLUTION REPORT
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USER: jdpayne@usgs.gov DATE: September 26, 2006
RINEX FILE: bs52264q.06o TIME: 12:00:15 UTC

SOFTWARE: page5 0601.10 master13.pl START: 2006/09/21 16:58:00
EPHEMERIS: igr13934.eph [rapid] STOP: 2006/09/21 17:34:00
NAV FILE: brdc2640.06n OBS USED: 1474 / 1731 : 85%
ANT NAME: TRM5800 NONE # FIXED AMB: 20 / 28 : 71%
ARP HEIGHT: 2.25 OVERALL RMS: 0.020 (m)

REF FRAME: NAD_83 (CORS96) (EPOCH:2002.0000) ITRF00 (EPOCH:2006.7225)

X:	-755225.737 (m)	0.183 (m)	-755226.414 (m)	0.183 (m)
Y:	-5474536.875 (m)	0.085 (m)	-5474535.423 (m)	0.085 (m)
Z:	3174024.952 (m)	0.179 (m)	3174024.775 (m)	0.179 (m)

LAT:	30 2 13.09255	0.132 (m)	30 2 13.10945	0.132 (m)
E LON:	262 8 43.73871	0.193 (m)	262 8 43.70628	0.193 (m)
W LON:	97 51 16.26129	0.193 (m)	97 51 16.29372	0.193 (m)
EL HGT:	205.161 (m)	0.131 (m)	203.908 (m)	0.131 (m)
ORTHO HGT:	230.945 (m)	0.133 (m)	[Geoid03 NAVD88]	

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 14)	SPC (4204 TXSC)
Northing (Y) [meters]	3323434.621	4244768.023
Easting (X) [meters]	610441.907	710473.798
Convergence [degrees]	0.57343960	0.56118657
Point Scale	0.99975049	0.99993812
Combined Factor	0.99971827	0.99990590

US NATIONAL GRID DESIGNATOR: 14RPU1044223435 (NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE (m)
DG5767	TXSM SAN MARCOS CORS ARP	N295240.525	W0975409.650	18233.9
DF4373	TXAU AUSTIN RRP2 CORS ARP	N301842.088	W0974522.713	31890.4
DG5761	TXBS BASTROP CORS ARP	N300646.244	W0971726.172	55017.2

NEAREST NGS PUBLISHED CONTROL POINT

BM0746	J 1307	N300208.	W0975043.	904.2
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

Appendix 3. Global Positioning System Online Positioning User Service (OPUS) solutions, Travis and Hays Counties, Barton Springs segment of the Edwards aquifer—Continued.

FILE: BS540

NGS OPUS SOLUTION REPORT
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USER: jdpayne@usgs.gov DATE: September 26, 2006
RINEX FILE: bs54263n.06o TIME: 12:07:50 UTC

SOFTWARE: page5 0601.10 master2.pl START: 2006/09/20 13:46:00
EPHEMERIS: igr13933.eph [rapid] STOP: 2006/09/20 14:18:00
NAV FILE: brdc2630.06n OBS USED: 1176 / 1234 : 95%
ANT NAME: TRM5800 NONE # FIXED AMB: 16 / 21 : 76%
ARP HEIGHT: 2.25 OVERALL RMS: 0.014 (m)

REF FRAME: NAD_83 (CORS96) (EPOCH:2002.0000) ITRF00 (EPOCH:2006.7194)

X:	-754171.866 (m)	0.038 (m)	-754172.543 (m)	0.038 (m)
Y:	-5474636.901 (m)	0.519 (m)	-5474635.449 (m)	0.519 (m)
Z:	3174076.660 (m)	0.215 (m)	3174076.483 (m)	0.215 (m)

LAT:	30 2 15.27498	0.101 (m)	30 2 15.29188	0.101 (m)
E LON:	262 9 23.21451	0.033 (m)	262 9 23.18208	0.033 (m)
W LON:	97 50 36.78549	0.033 (m)	97 50 36.81792	0.033 (m)
EL HGT:	192.234 (m)	0.557 (m)	190.980 (m)	0.557 (m)

ORTHO HGT: 218.040 (m) 0.557 (m) [Geoid03 NAVD88]

UTM COORDINATES STATE PLANE COORDINATES

	UTM (Zone 14)	SPC (4204 TXSC)
Northing (Y) [meters]	3323512.436	4244845.626
Easting (X) [meters]	611498.540	711530.645
Convergence [degrees]	0.57894075	0.56655871
Point Scale	0.99975338	0.99993825
Combined Factor	0.99972320	0.99990806

US NATIONAL GRID DESIGNATOR: 14RPU1149923512 (NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE (m)
DG5767	TXSM SAN MARCOS CORS ARP	N295240.525	W0975409.650	18595.9
DF4373	TXAU AUSTIN RRP2 CORS ARP	N301842.088	W0974522.713	31528.5
DG5761	TXBS BASTROP CORS ARP	N300646.244	W0971726.172	53961.8

NEAREST NGS PUBLISHED CONTROL POINT

BM0746	J 1307	N300208.	W0975043.	279.8
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

Appendix 3. Global Positioning System Online Positioning User Service (OPUS) solutions, Travis and Hays Counties, Barton Springs segment of the Edwards aquifer—Continued.

FILE: BS560

NGS OPUS SOLUTION REPORT

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USER: jdpayne@usgs.gov DATE: September 26, 2006
RINEX FILE: bs56263s.06o TIME: 12:15:13 UTC

SOFTWARE: page5 0601.10 master29.pl START: 2006/09/20 18:40:00
EPHEMERIS: igr13933.eph [rapid] STOP: 2006/09/20 19:05:00
NAV FILE: brdc2630.06n OBS USED: 675 / 731 : 92%
ANT NAME: TRM5800 NONE # FIXED AMB: 12 / 16 : 75%
ARP HEIGHT: 2.25 OVERALL RMS: 0.013 (m)

REF FRAME: NAD_83 (CORS96) (EPOCH:2002.0000) ITRF00 (EPOCH:2006.7200)

X:	-753327.144 (m)	0.061 (m)	-753327.821 (m)	0.061 (m)
Y:	-5474682.990 (m)	0.448 (m)	-5474681.538 (m)	0.448 (m)
Z:	3174204.266 (m)	0.348 (m)	3174204.089 (m)	0.348 (m)

LAT:	30 2 19.99304	0.081 (m)	30 2 20.00995	0.081 (m)
E LON:	262 9 54.68306	0.082 (m)	262 9 54.65064	0.082 (m)
W LON:	97 50 5.31694	0.082 (m)	97 50 5.34936	0.082 (m)
EL HGT:	195.897 (m)	0.555 (m)	194.643 (m)	0.555 (m)
ORTHO HGT:	221.720 (m)	0.556 (m)	[Geoid03 NAVD88]	

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 14)	SPC (4204 TXSC)
Northing (Y) [meters]	3323666.223	4244999.258
Easting (X) [meters]	612339.905	712372.198
Convergence [degrees]	0.58334079	0.57084116
Point Scale	0.99975570	0.99993853
Combined Factor	0.99972494	0.99990776

US NATIONAL GRID DESIGNATOR: 14RPU1234023666 (NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE (m)
DG5767	TXSM SAN MARCOS CORS ARP	N295240.525	W0975409.650	19008.3
DF4373	TXAU AUSTIN RRP2 CORS ARP	N301842.088	W0974522.713	31173.6
DG5761	TXBS BASTROP CORS ARP	N300646.244	W0971726.172	53106.5

NEAREST NGS PUBLISHED CONTROL POINT

BM0746	J 1307	N300208.	W0975043.	1074.8
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

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Appendix 4—Raw Time-Domain Electromagnetic Voltages and Computed Standard Deviations

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Appendix 4. Raw time-domain electromagnetic voltages and computed standard deviations for soundings, Barton Springs segment of the Edwards aquifer, Travis and Hays Counties, Texas. [Link to Excel file.](#)

[Voltages in nanovolts; ms, milliseconds; h, high; m, medium; l, low; u, ultra-high; v, very high]

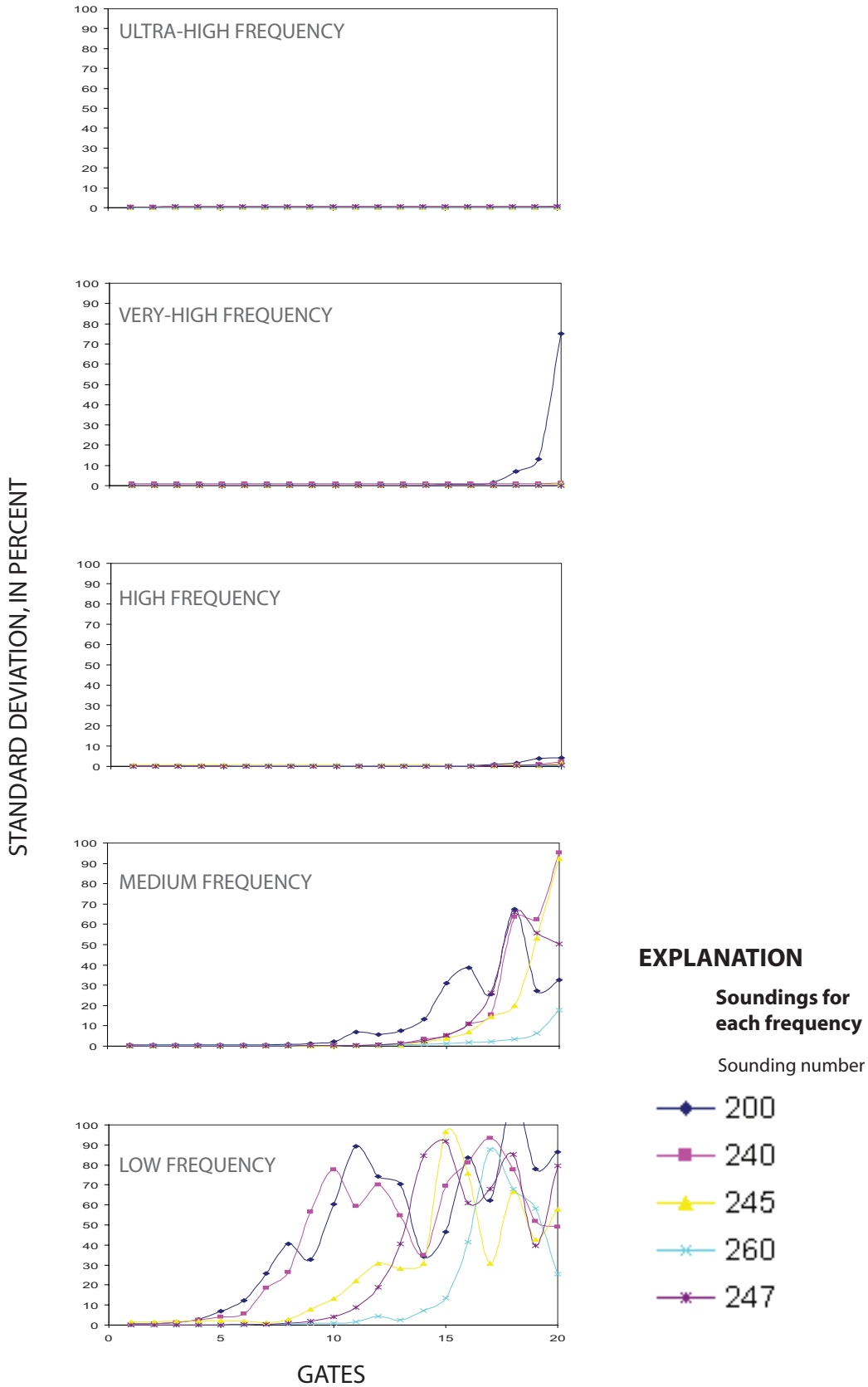


Figure 4.1. Percentage standard deviation of the average voltages of the ultra-high, very-high, high, medium, and low frequency data collected from time-domain electromagnetic soundings along profile 2, Barton Springs segment of the Edwards aquifer, Travis and Hays Counties, Texas.

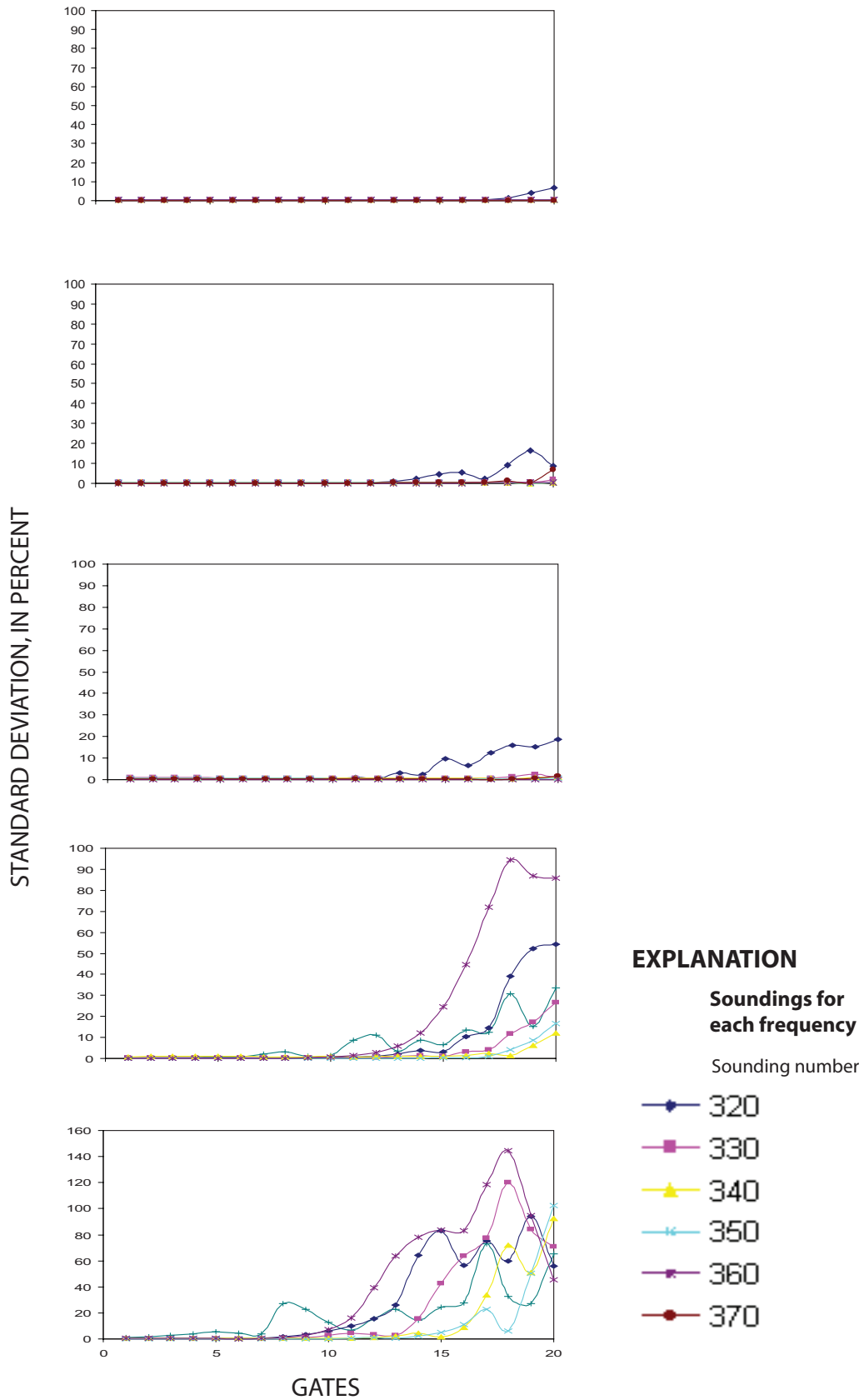


Figure 4.2. Percentage standard deviation of the average voltages of the ultra-high, very-high, high, medium, and low frequency data collected from time-domain electromagnetic soundings along profile 3, Barton Springs segment of the Edwards aquifer, Travis and Hays Counties, Texas.

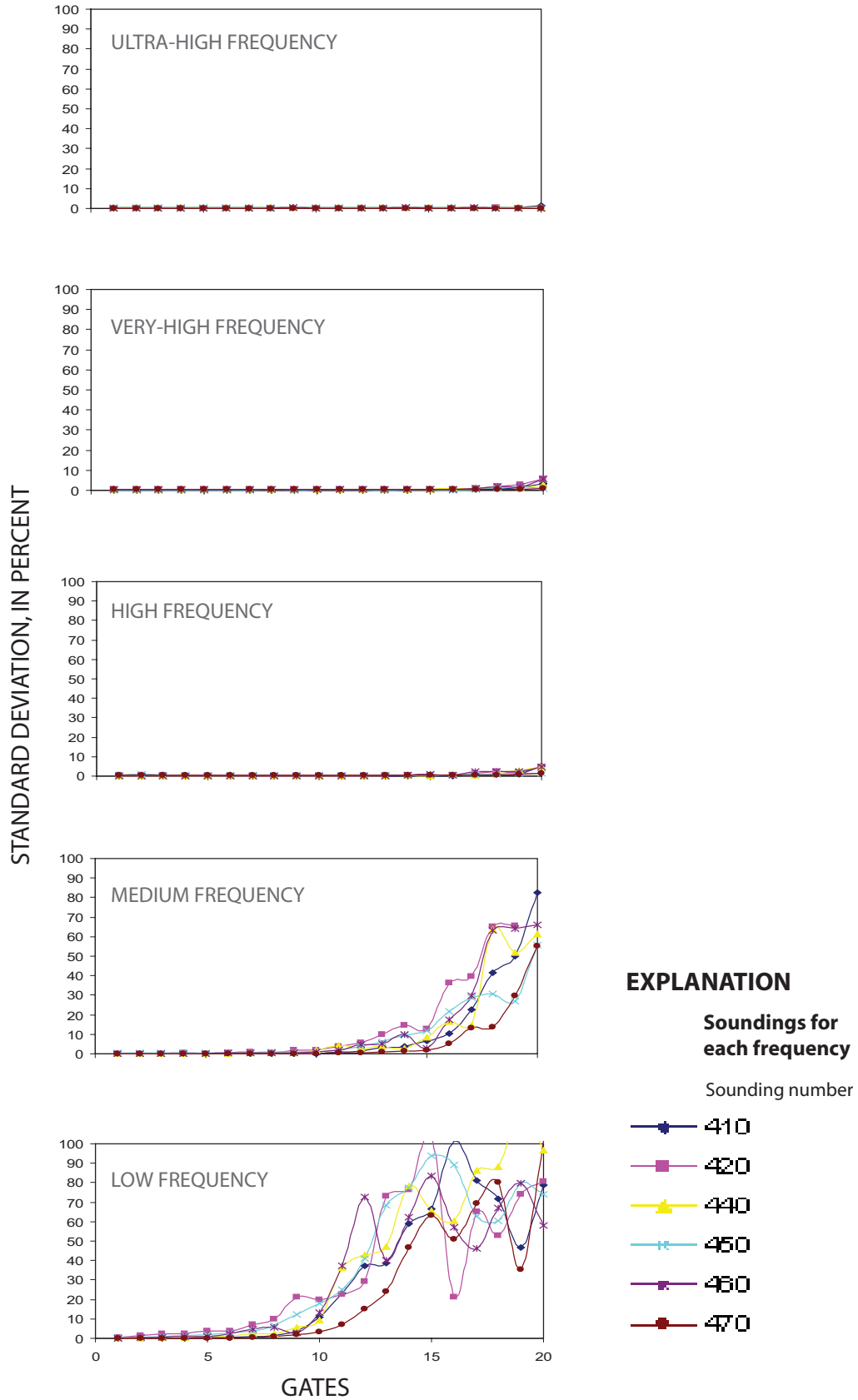


Figure 4.3. Percentage standard deviation of the average voltages of the ultra-high, very-high, high, medium, and low frequency data collected from time-domain electromagnetic soundings along profile 4, Barton Springs segment of the Edwards aquifer, Travis and Hays Counties, Texas.

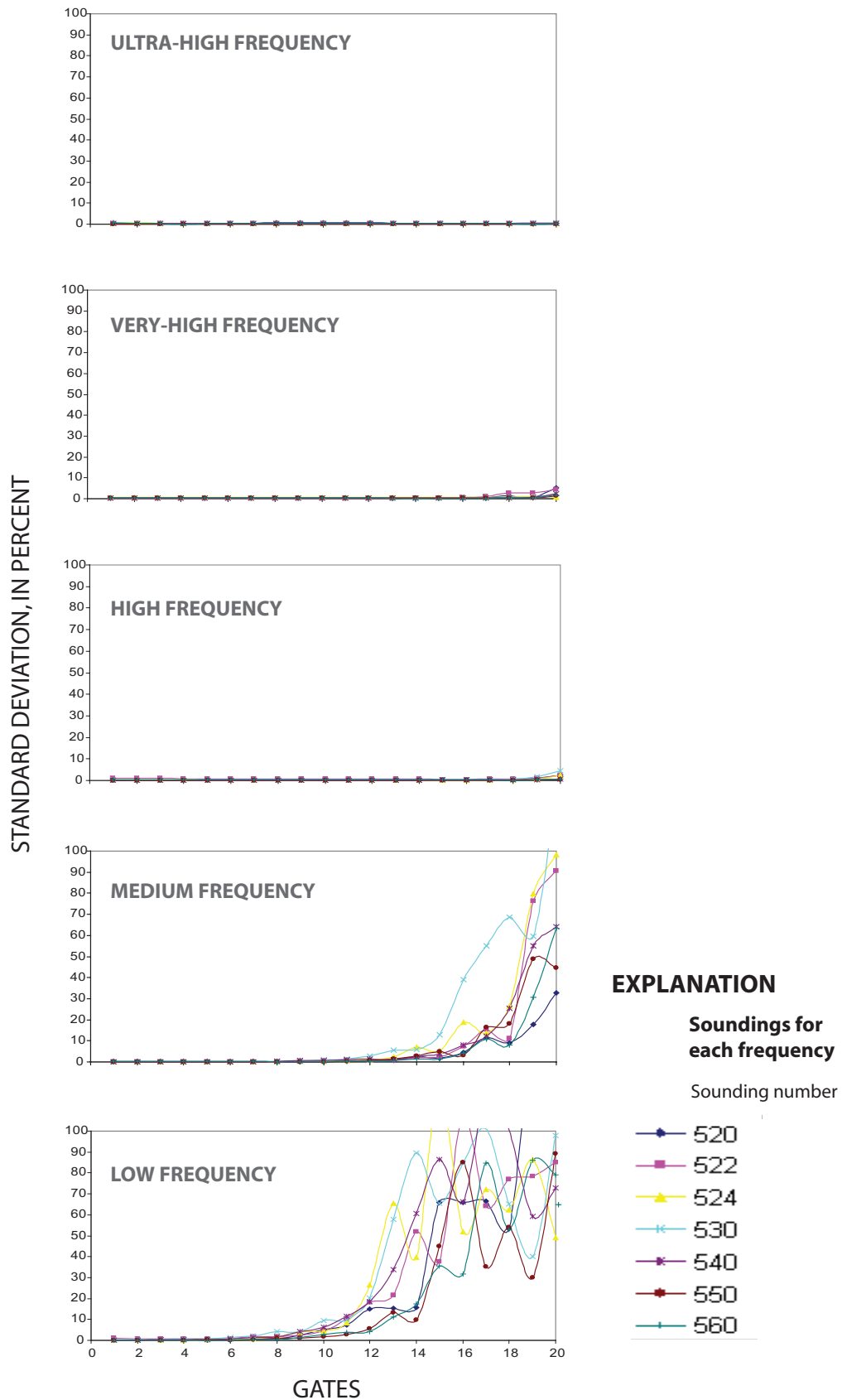


Figure 4.4. Percentage standard deviation of the average voltages of the ultra-high, very-high, high, medium, and low frequency data collected from time-domain electromagnetic soundings along profile 5, Barton Springs segment of the Edwards aquifer, Travis and Hays Counties, Texas.

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Appendix 5—Graphs Showing Time-Domain Electromagnetic Resistivity From Field Measurements as a Function of Time and Inverse Modeling Results (Smooth Models)

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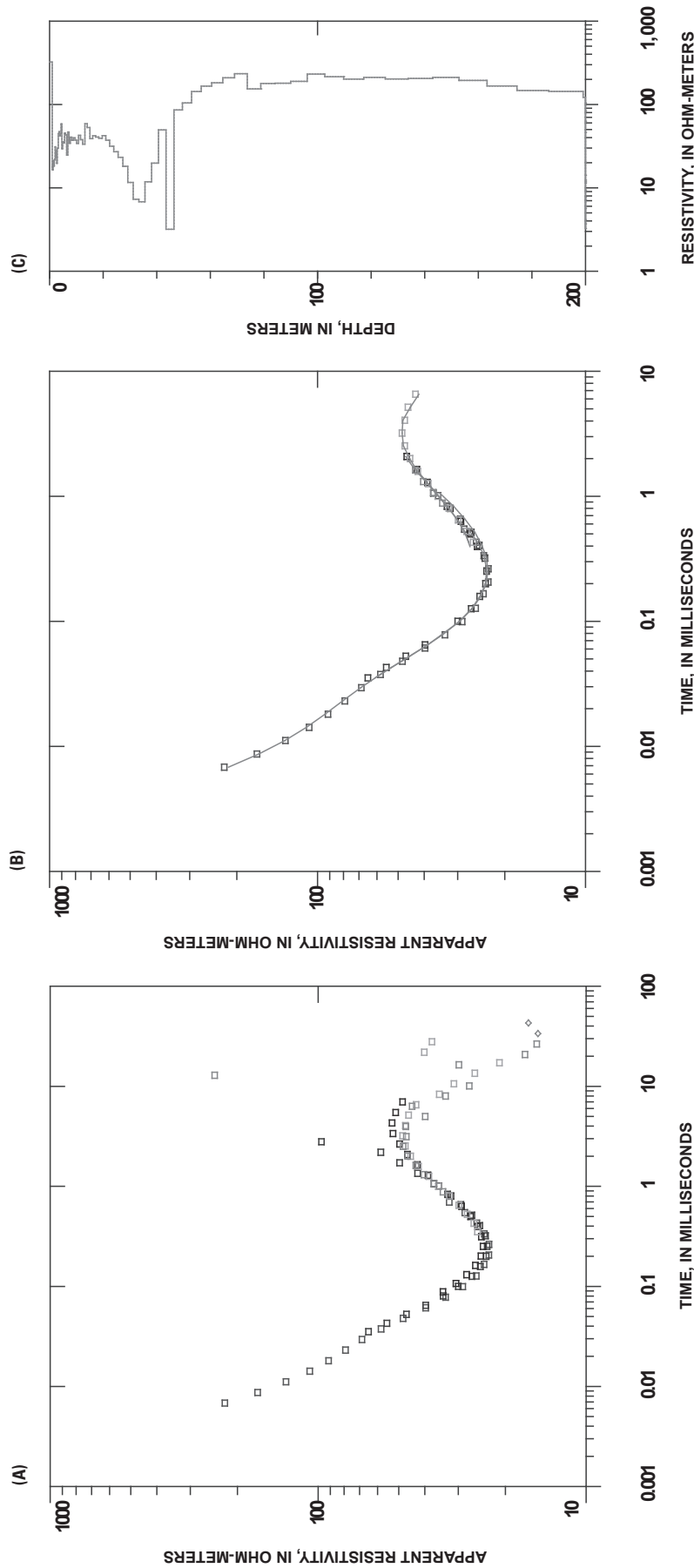


Figure 5.1. Sounding site 200: (A) time-domain electromagnetic (TDEM) sounding raw data (apparent resistivity from field measurements) as a function of time; (B) TDEM sounding smooth data (apparent resistivity from field measurements) as a function of time; and (C) inverse modeling results (smooth model of estimated true resistivity as a function of depth).

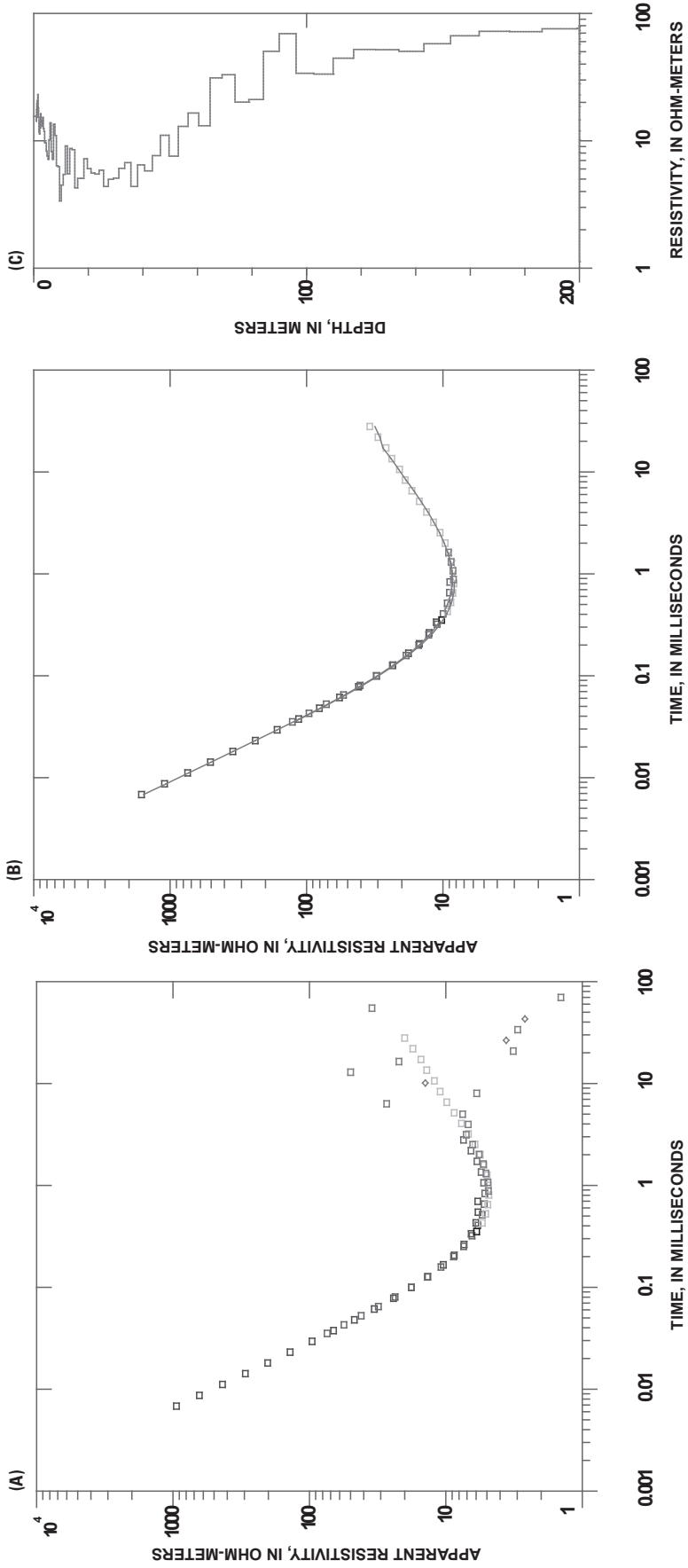


Figure 5.2. Sounding site 240: (A) time-domain electromagnetic (TDEM) sounding raw data (apparent resistivity from field measurements) as a function of time; (B) TDEM sounding smooth data (apparent resistivity from field measurements) as a function of time; and (C) inverse modeling results (smooth model of estimated true resistivity as a function of depth).

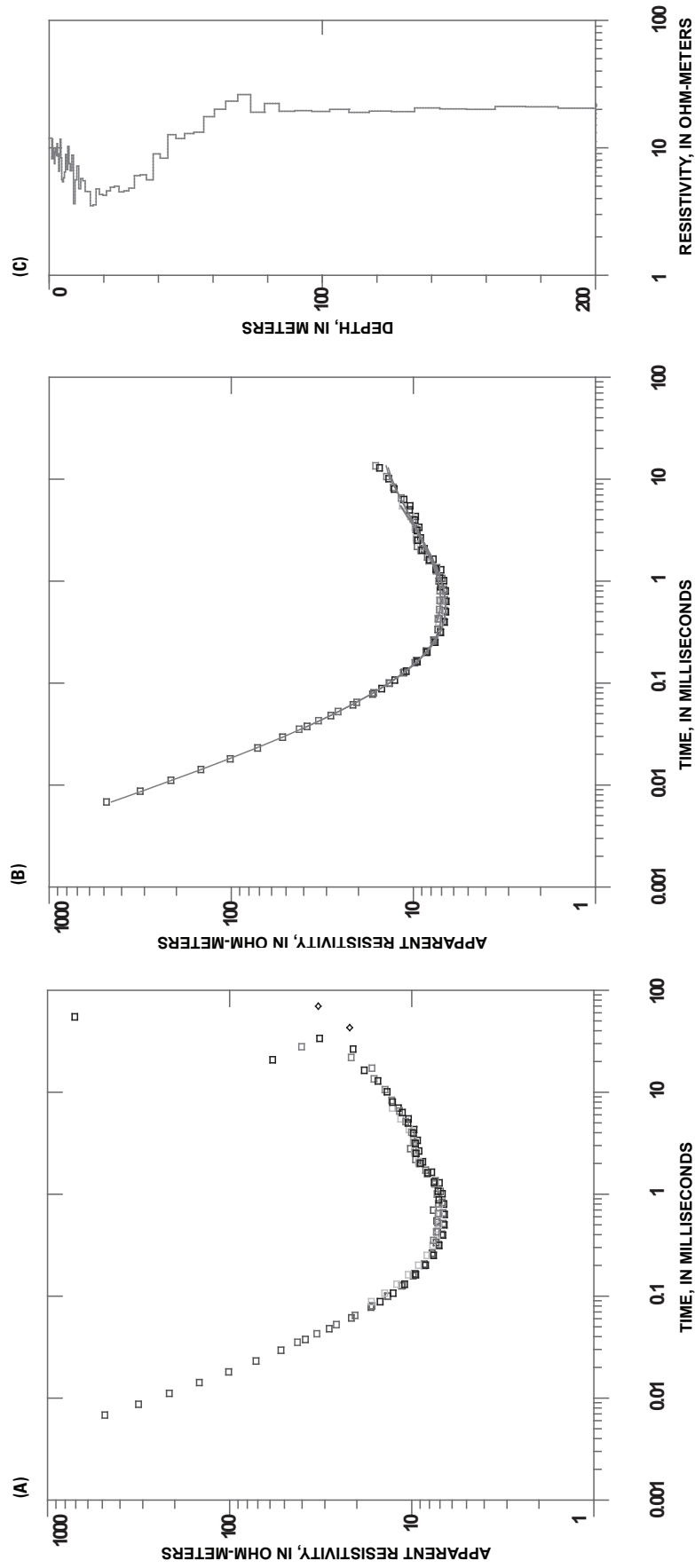


Figure 5.3. Sounding site 245: (A) time-domain electromagnetic (TDEM) sounding raw data (apparent resistivity from field measurements) as a function of time; (B) TDEM sounding smooth data (apparent resistivity from field measurements); and (C) inverse modeling results (smooth model of estimated true resistivity as a function of depth).

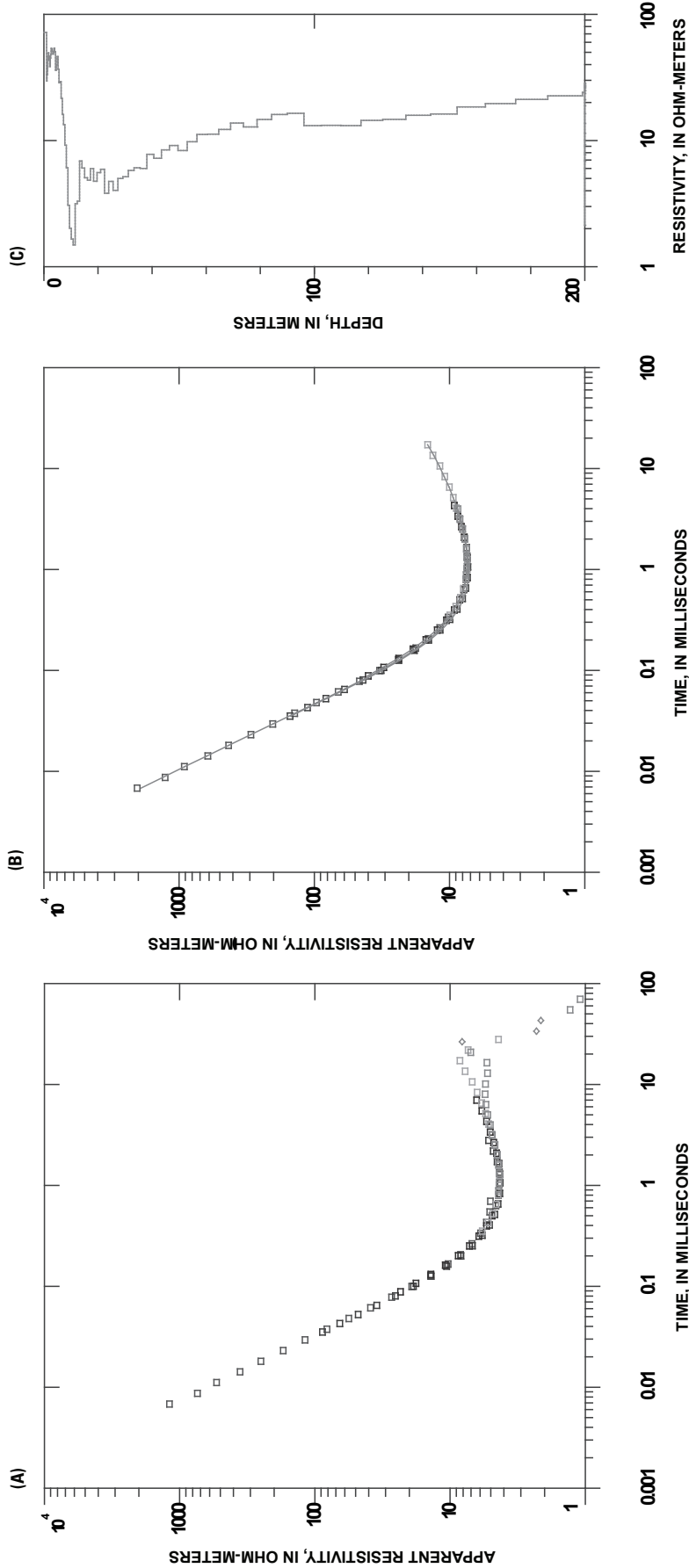


Figure 5.4. Sounding site 247: (A) time-domain electromagnetic (TDEM) sounding raw data (apparent resistivity from field measurements) as a function of time; (B) TDEM sounding smooth data (apparent resistivity from field measurements) as a function of time; and (C) inverse modeling results (smooth model of estimated true resistivity as a function of depth).

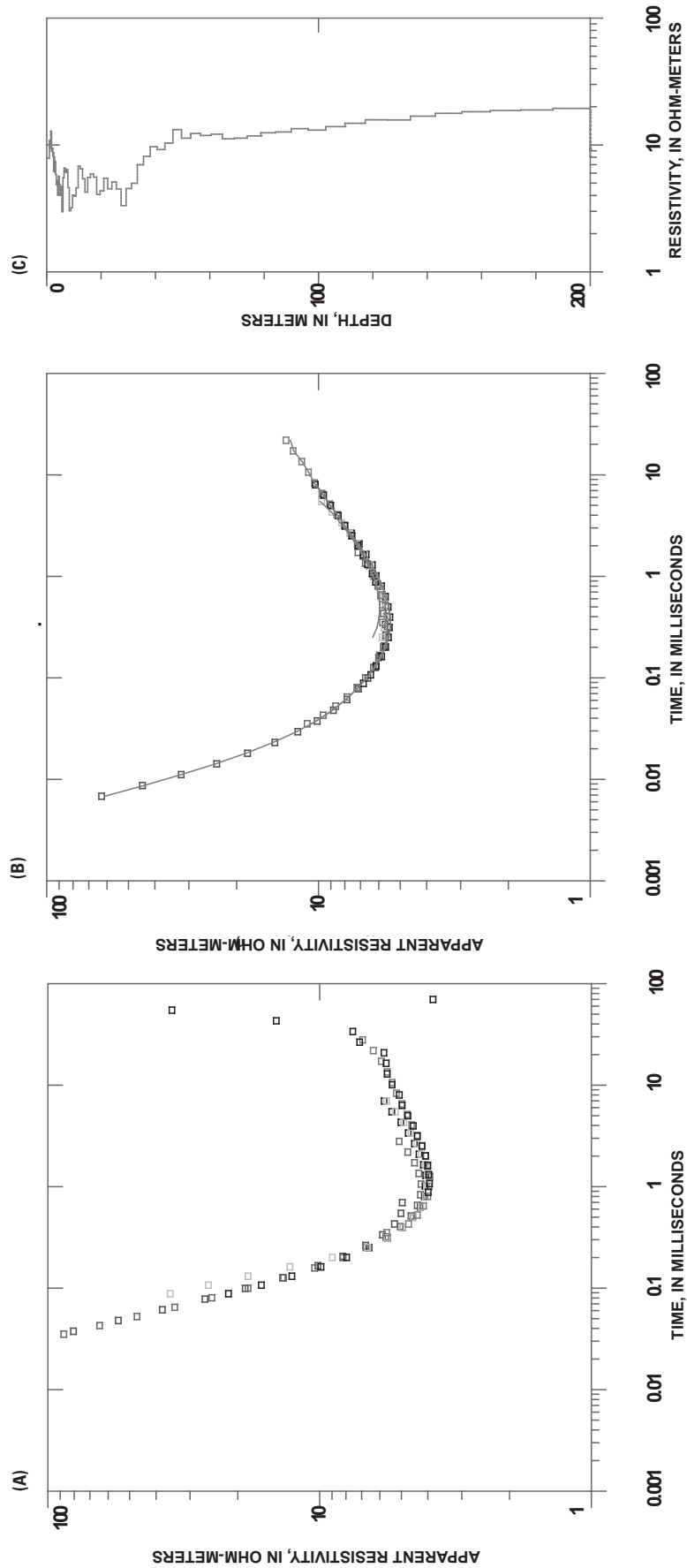


Figure 5.5. Sounding site 250: (A) time-domain electromagnetic (TDEM) sounding raw data (apparent resistivity from field measurements) as a function of time; (B) TDEM sounding smooth data (apparent resistivity from field measurements) as a function of time; and (C) inverse modeling results (smooth model of estimated true resistivity as a function of depth).

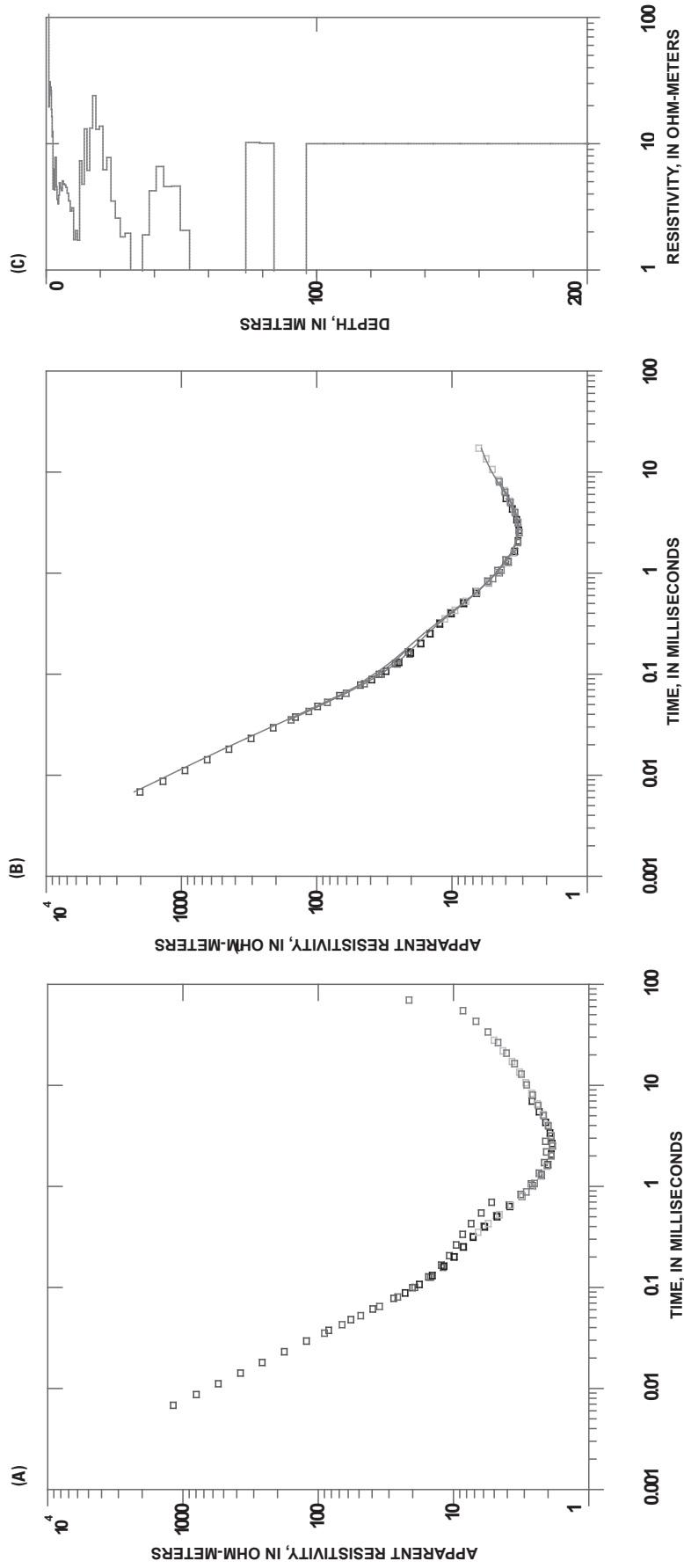


Figure 5.6. Sounding site 260: (A) time-domain electromagnetic (TDEM) sounding raw data (apparent resistivity from field measurements) as a function of time; (B) TDEM sounding smooth data (apparent resistivity from field measurements) as a function of time; and (C) inverse modeling results (smooth model of estimated true resistivity as a function of depth).

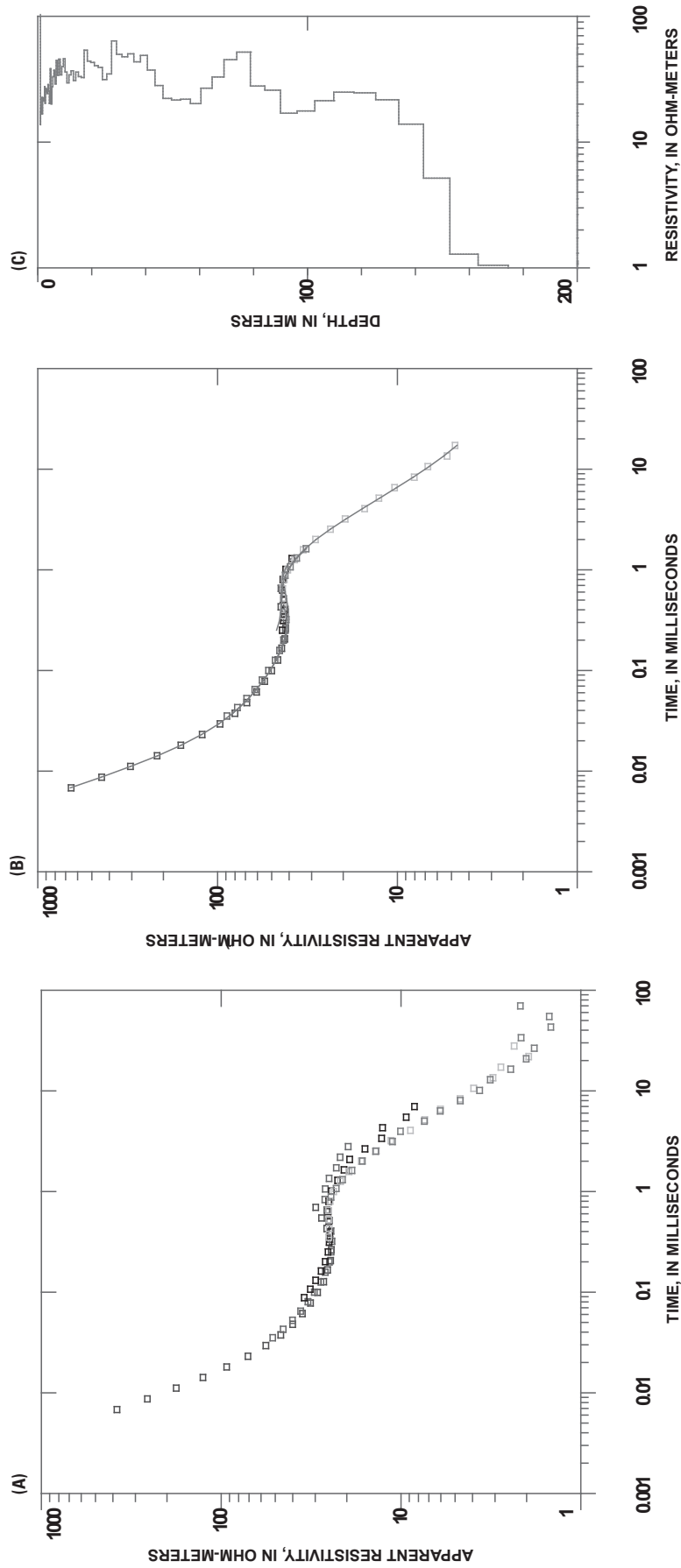


Figure 5.7. Sounding site 320: (A) time-domain electromagnetic (TDEM) sounding raw data (apparent resistivity from field measurements) as a function of time; (B) TDEM sounding smooth data (apparent resistivity from field measurements) as a function of time; and (C) inverse modeling results (smooth model of estimated true resistivity as a function of depth).

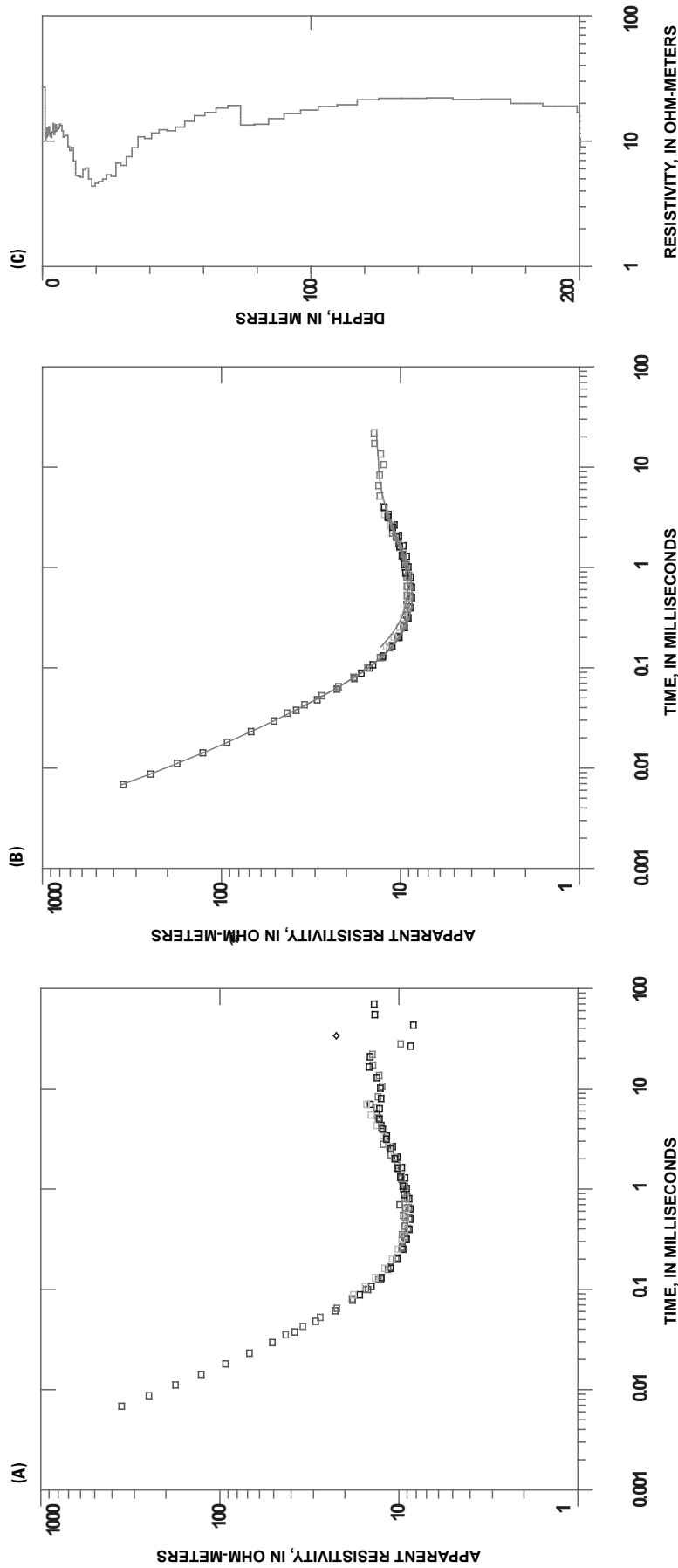


Figure 5.8. Sounding site 330: (A) time-domain electromagnetic (TDEM) sounding raw data (apparent resistivity from field measurements) as a function of time; (B) TDEM sounding smooth data (apparent resistivity from field measurements) as a function of time; and (C) inverse modeling results (smooth model of estimated true resistivity as a function of depth).

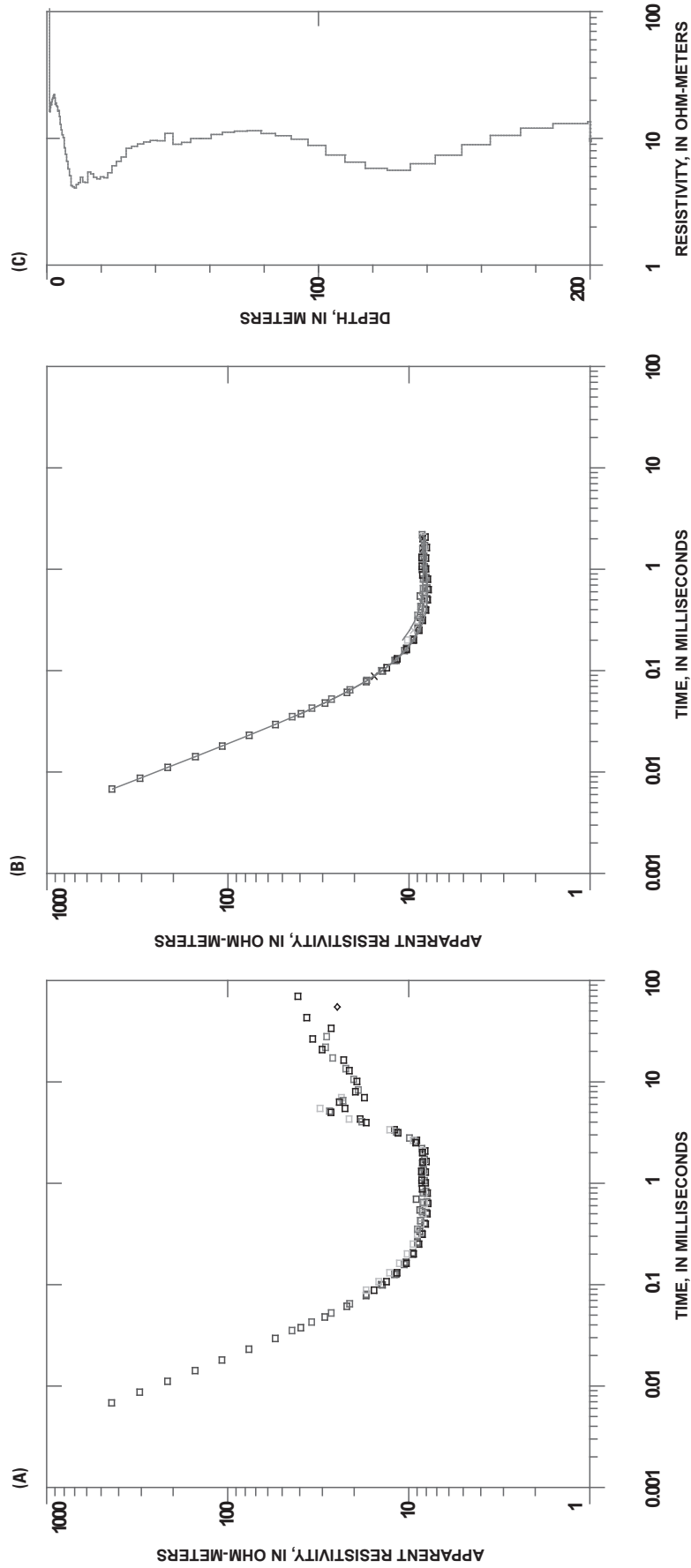


Figure 5.9. Sounding site 340: (A) time-domain electromagnetic (TDEM) sounding raw data (apparent resistivity from field measurements) as a function of time; (B) TDEM sounding smooth data (apparent resistivity from field measurements) as a function of time; and (C) inverse modeling results (smooth model of estimated true resistivity as a function of depth).

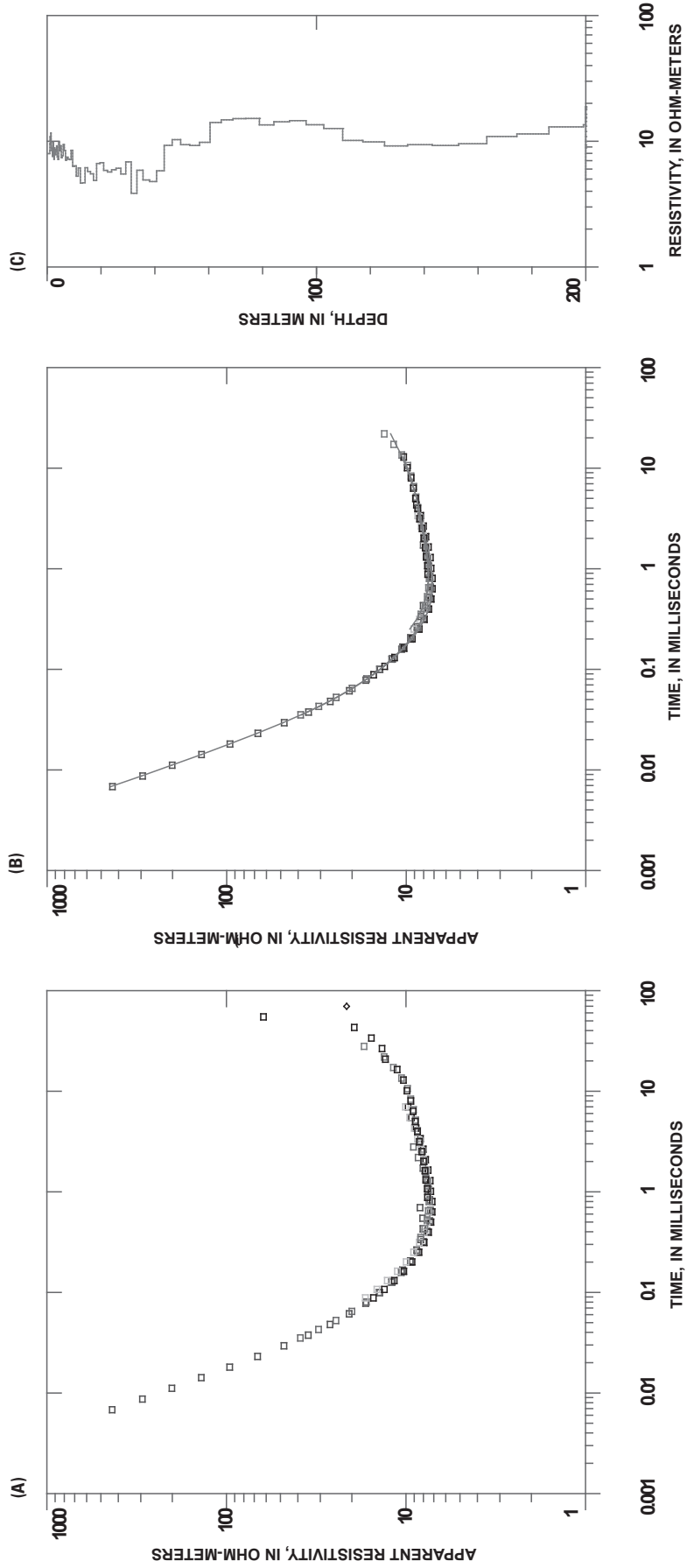


Figure 5.10. Sounding site 350: (A) time-domain electromagnetic (TDEM) sounding raw data (apparent resistivity from field measurements) as a function of time; (B) TDEM sounding smooth data (apparent resistivity from field measurements) as a function of time; and (C) inverse modeling results (smooth model of estimated true resistivity as a function of depth).

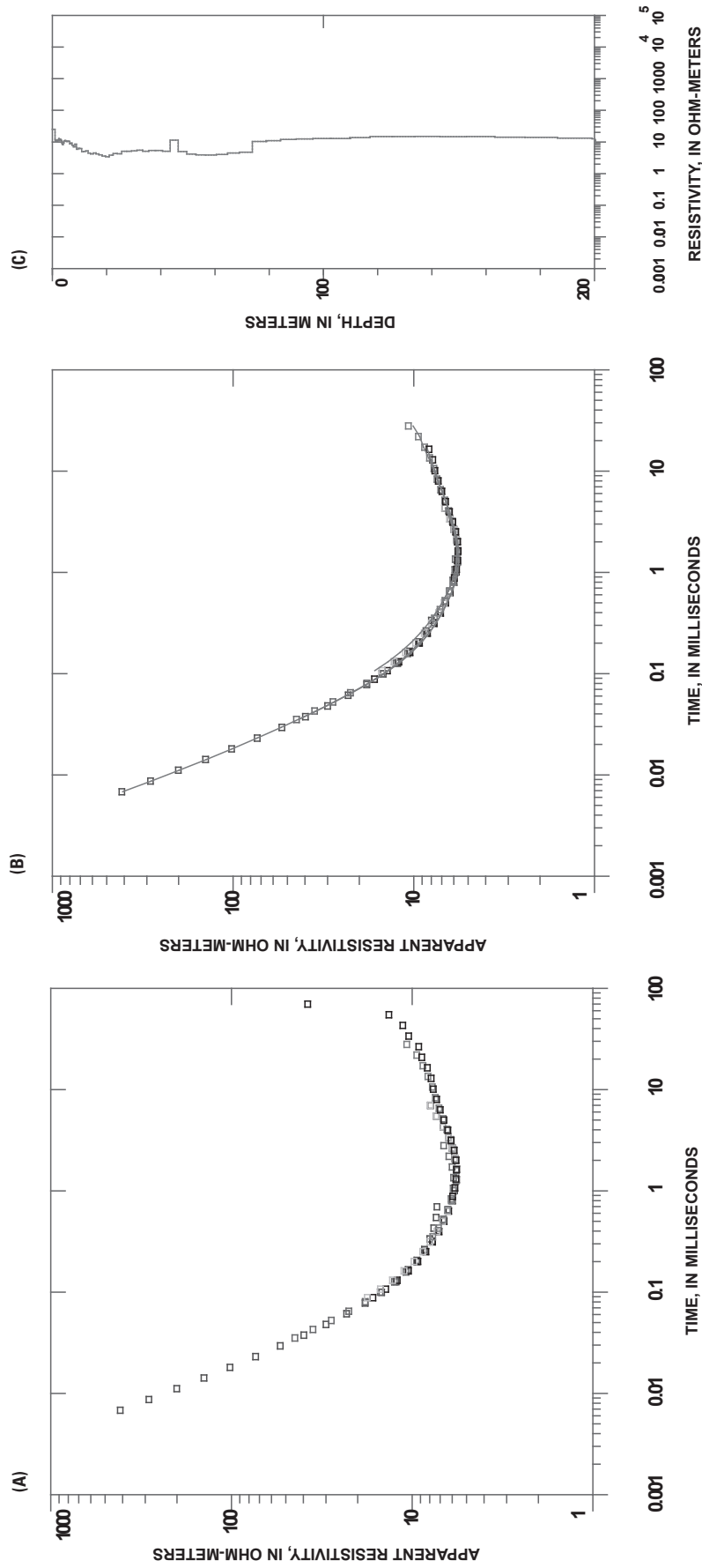


Figure 5.11. Sounding site 360: (A) time-domain electromagnetic (TDEM) sounding raw data (apparent resistivity from field measurements) as a function of time; (B) TDEM sounding smooth data (apparent resistivity from field measurements) as a function of time; and (C) inverse modeling results (smooth model of estimated true resistivity as a function of depth).

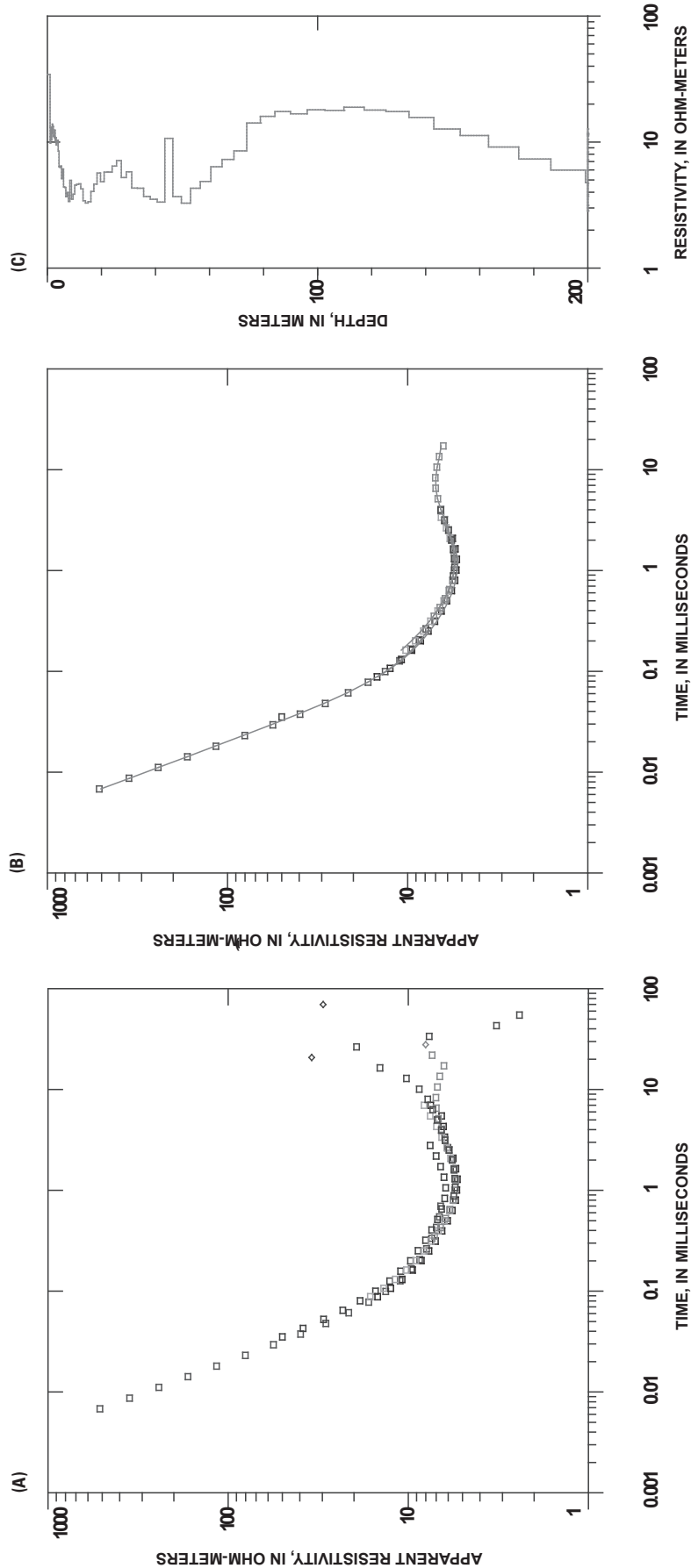


Figure 5.12. Sounding site 370: (A) time-domain electromagnetic (TDEM) sounding raw data (apparent resistivity from field measurements) as a function of time; (B) TDEM sounding smooth data (apparent resistivity from field measurements) as a function of time; and (C) inverse modeling results (smooth model of estimated true resistivity as a function of depth).

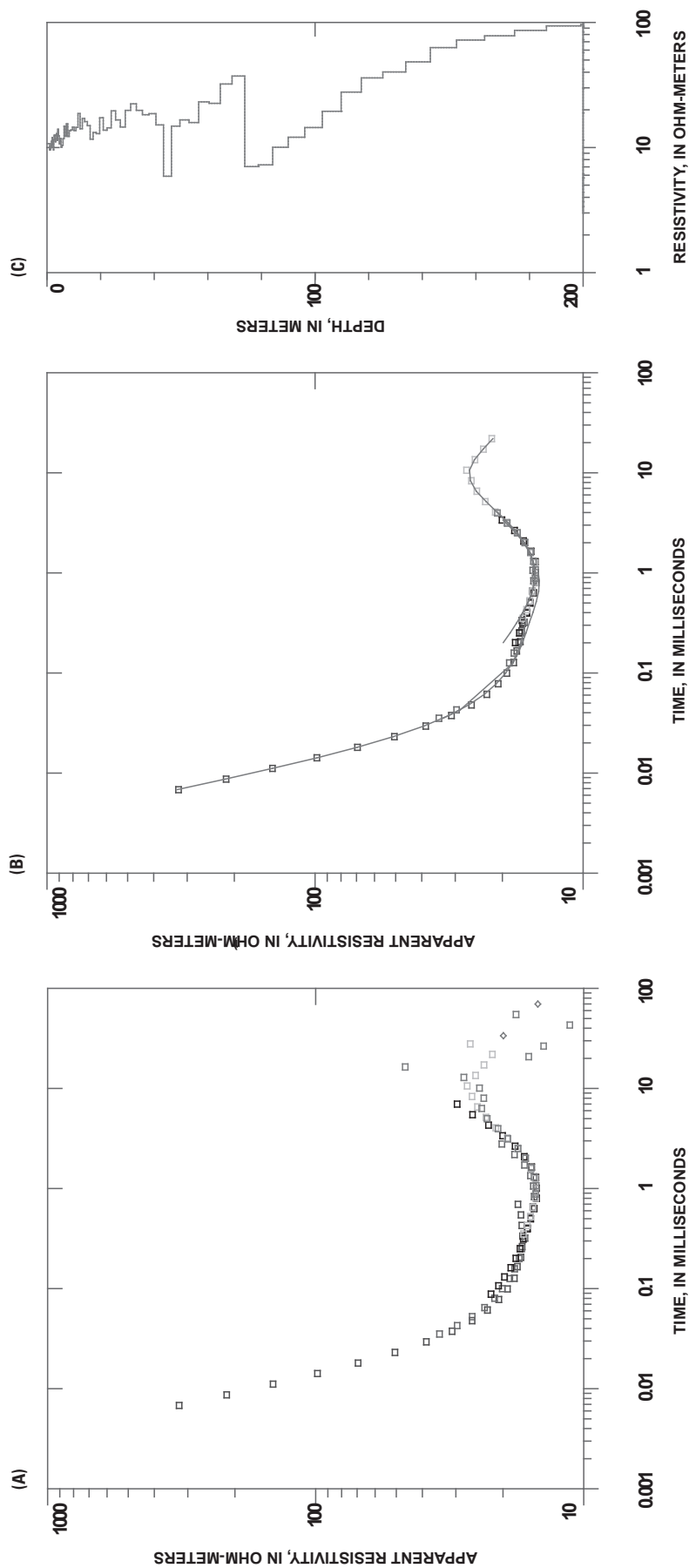


Figure 5.13. Sounding site 410: (A) time-domain electromagnetic (TDEM) sounding raw data (apparent resistivity from field measurements) as a function of time; (B) TDEM sounding smooth data (apparent resistivity from field measurements) as a function of time; and (C) inverse modeling results (smooth model of estimated true resistivity as a function of depth).

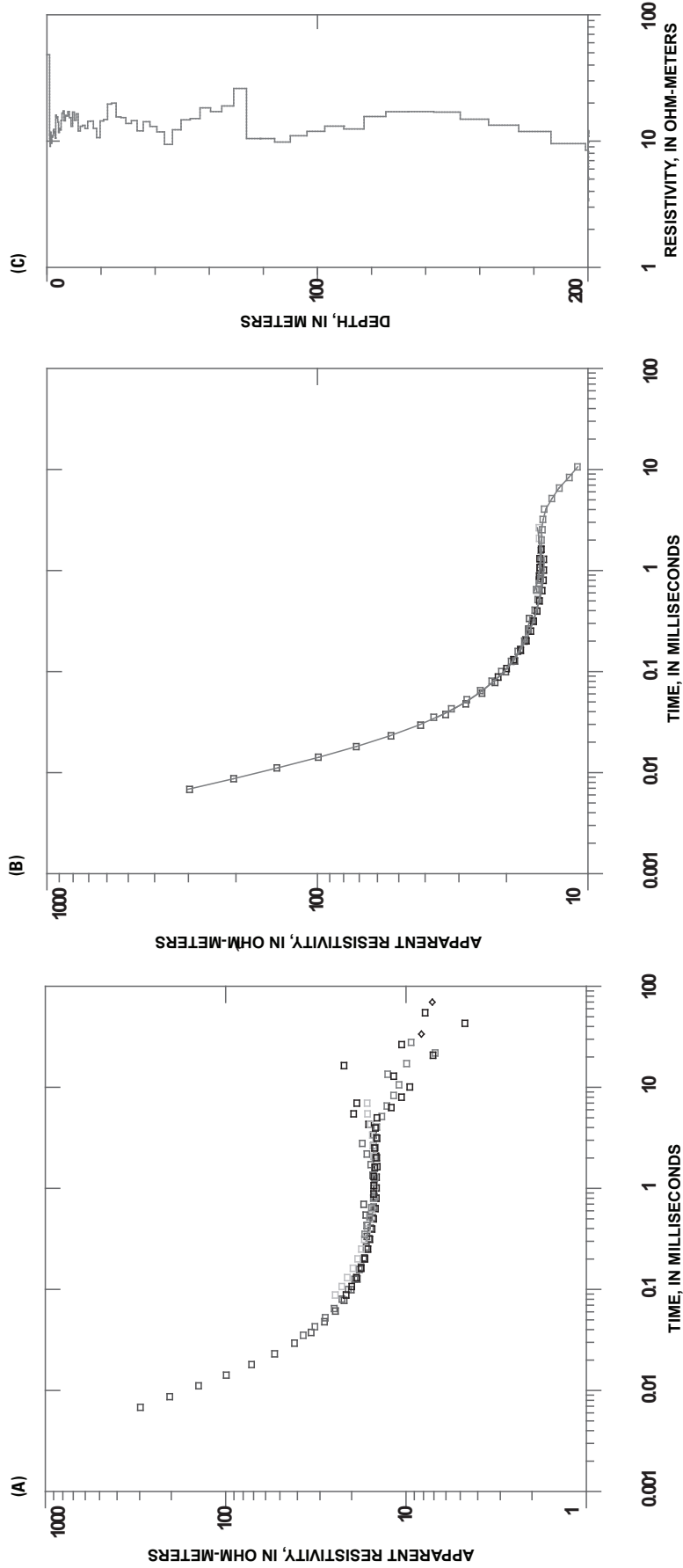


Figure 5.14. Sounding site 420: (A) time-domain electromagnetic (TDEM) sounding raw data (apparent resistivity from field measurements) as a function of time; (B) TDEM sounding smooth data (apparent resistivity from field measurements) as a function of time; and (C) inverse modeling results (smooth model of estimated true resistivity as a function of depth).

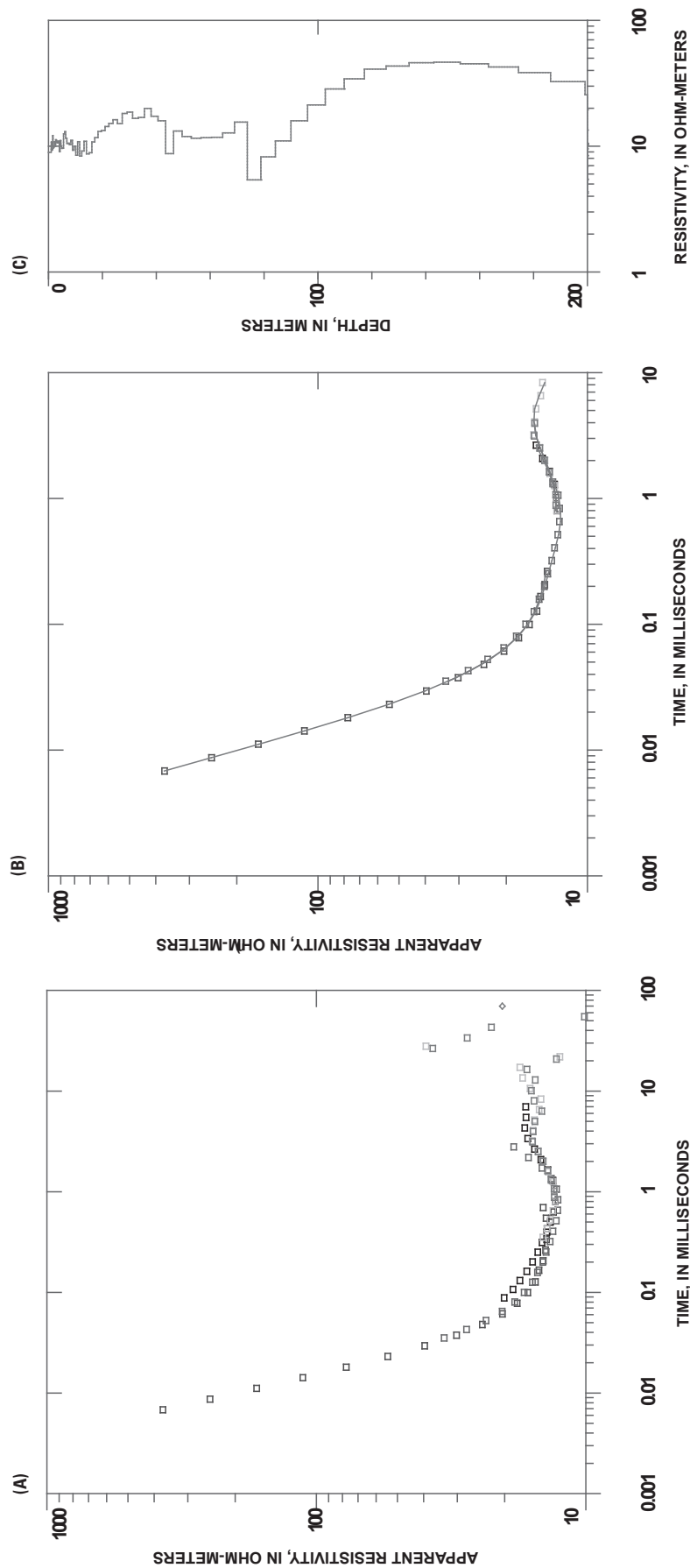


Figure 5.15. Sounding site 440: (A) time-domain electromagnetic (TDEM) sounding raw data (apparent resistivity from field measurements) as a function of time; (B) TDEM sounding smooth data (apparent resistivity from field measurements) as a function of time; and (C) inverse modeling results (smooth model of estimated true resistivity as a function of depth).

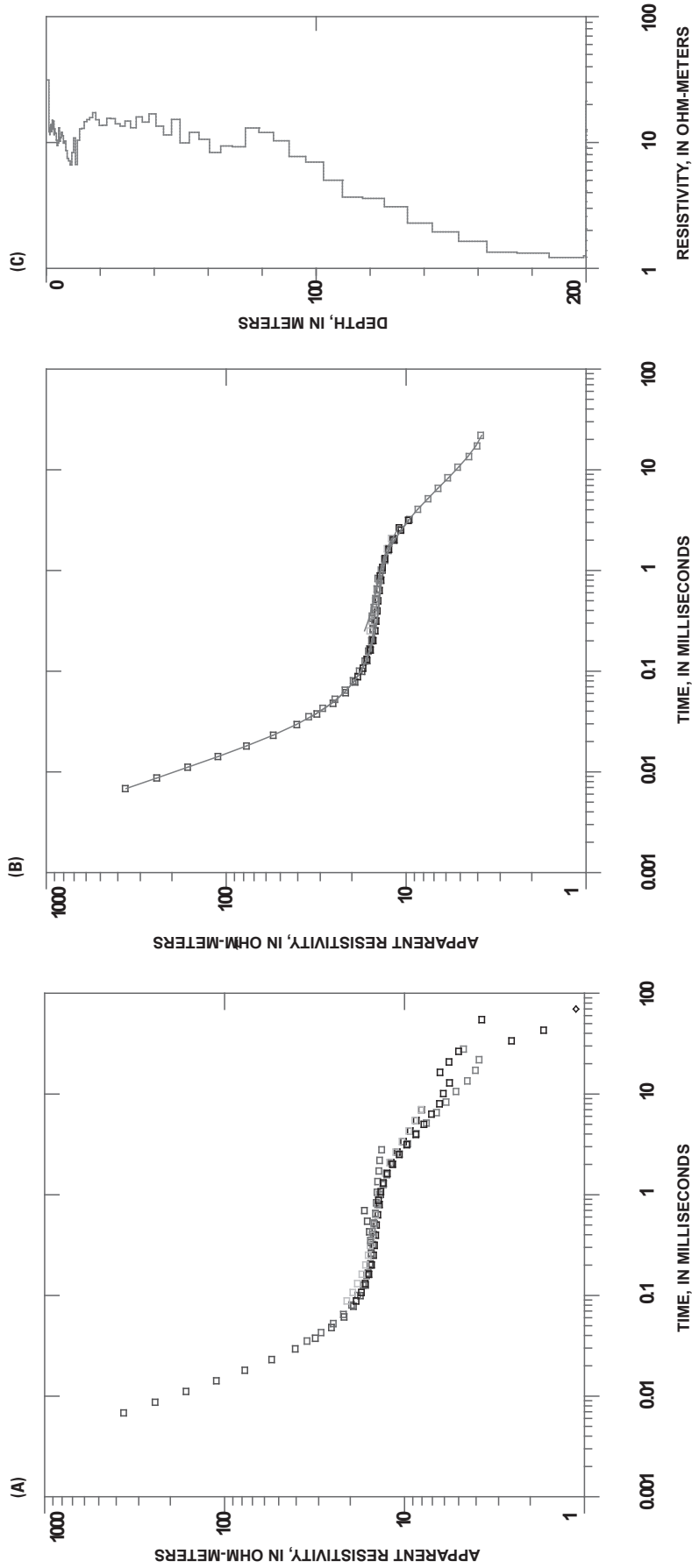


Figure 5.16. Sounding site 450: (A) time-domain electromagnetic (TDEM) sounding raw data (apparent resistivity from field measurements) as a function of time; (B) TDEM sounding smooth data (apparent resistivity from field measurements) as a function of time; and (C) inverse modeling results (smooth model of estimated true resistivity as a function of depth).

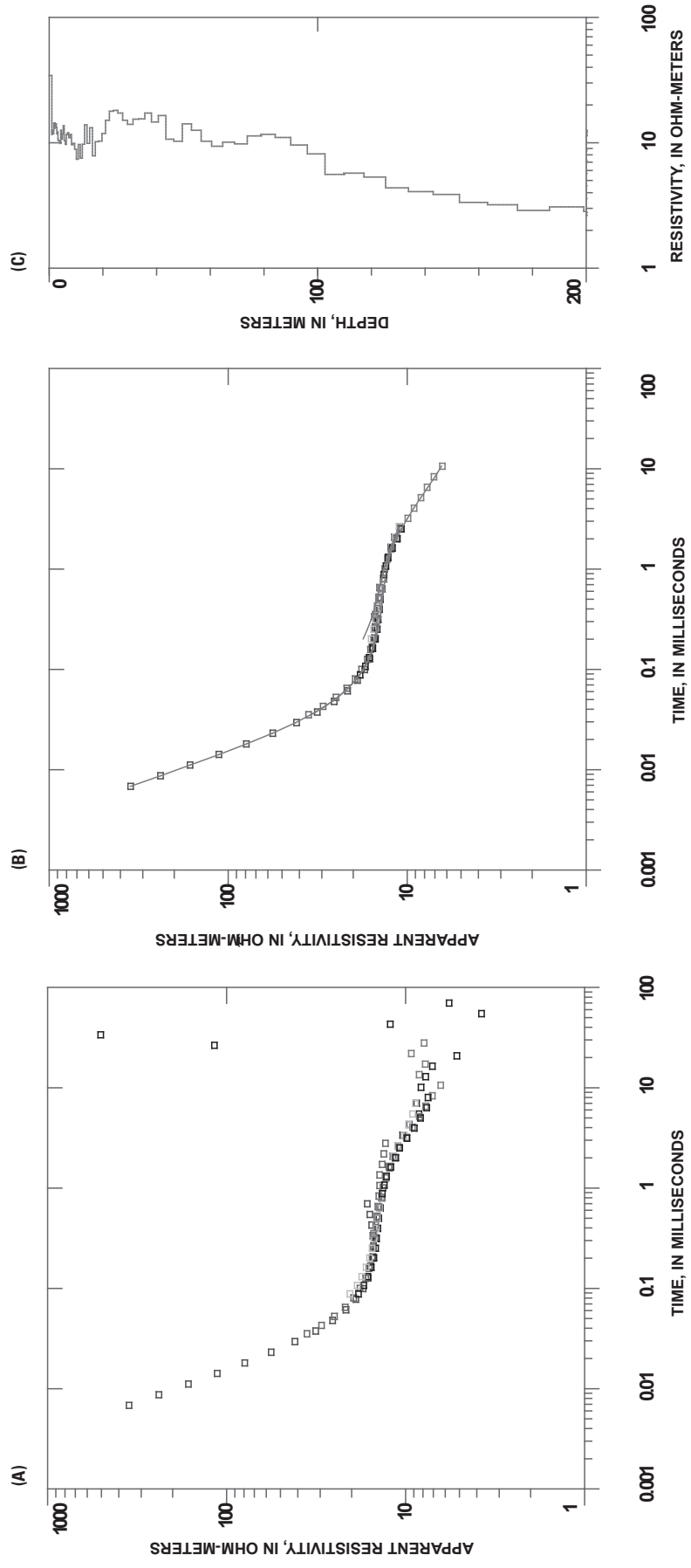


Figure 5.17. Sounding site 460: (A) time-domain electromagnetic (TDEM) sounding raw data (apparent resistivity from field measurements) as a function of time; (B) TDEM sounding smooth data (apparent resistivity from field measurements) as a function of time; and (C) inverse modeling results (smooth model of estimated true resistivity as a function of depth).

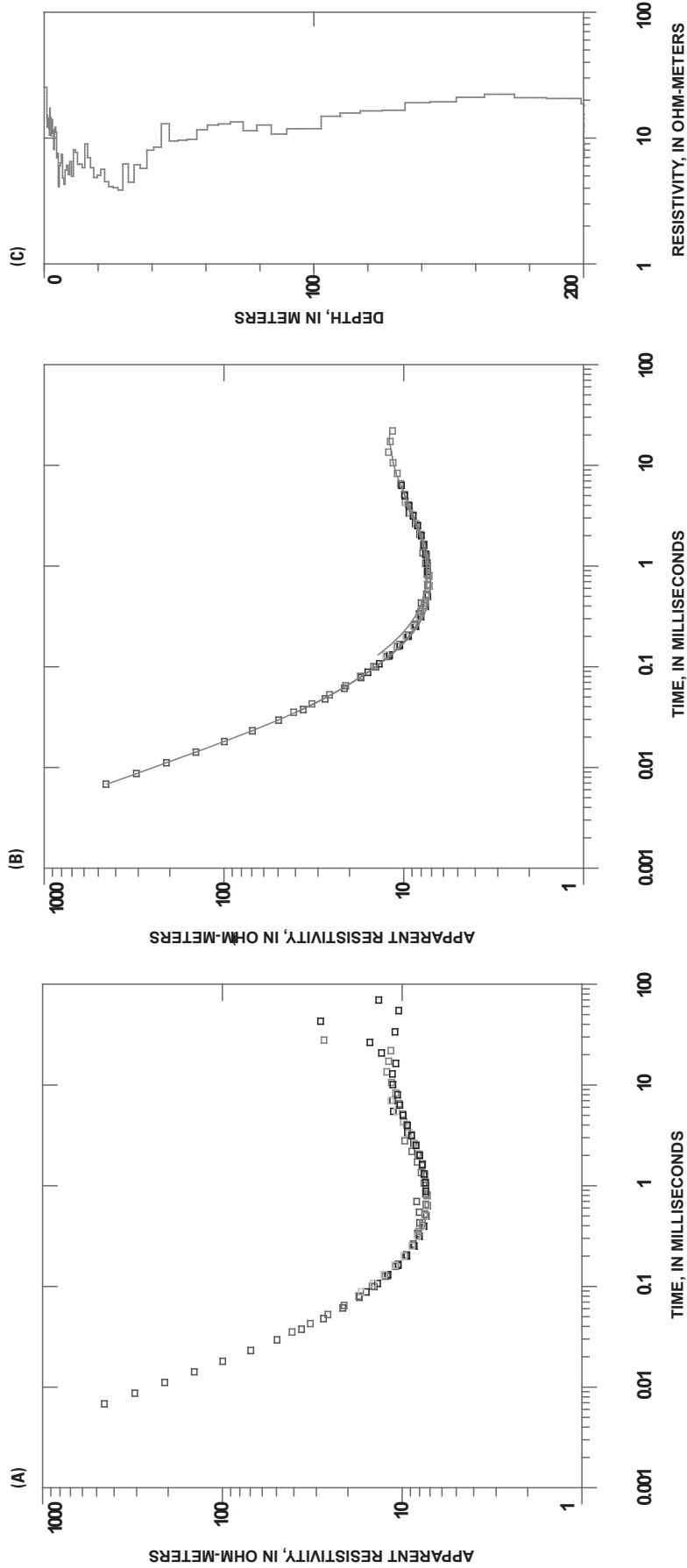


Figure 5.18. Sounding site 470: (A) time-domain electromagnetic (TDEM) sounding raw data (apparent resistivity from field measurements) as a function of time; (B) TDEM sounding smooth data (apparent resistivity from field measurements) as a function of time; and (C) inverse modeling results (smooth model of estimated true resistivity as a function of depth).

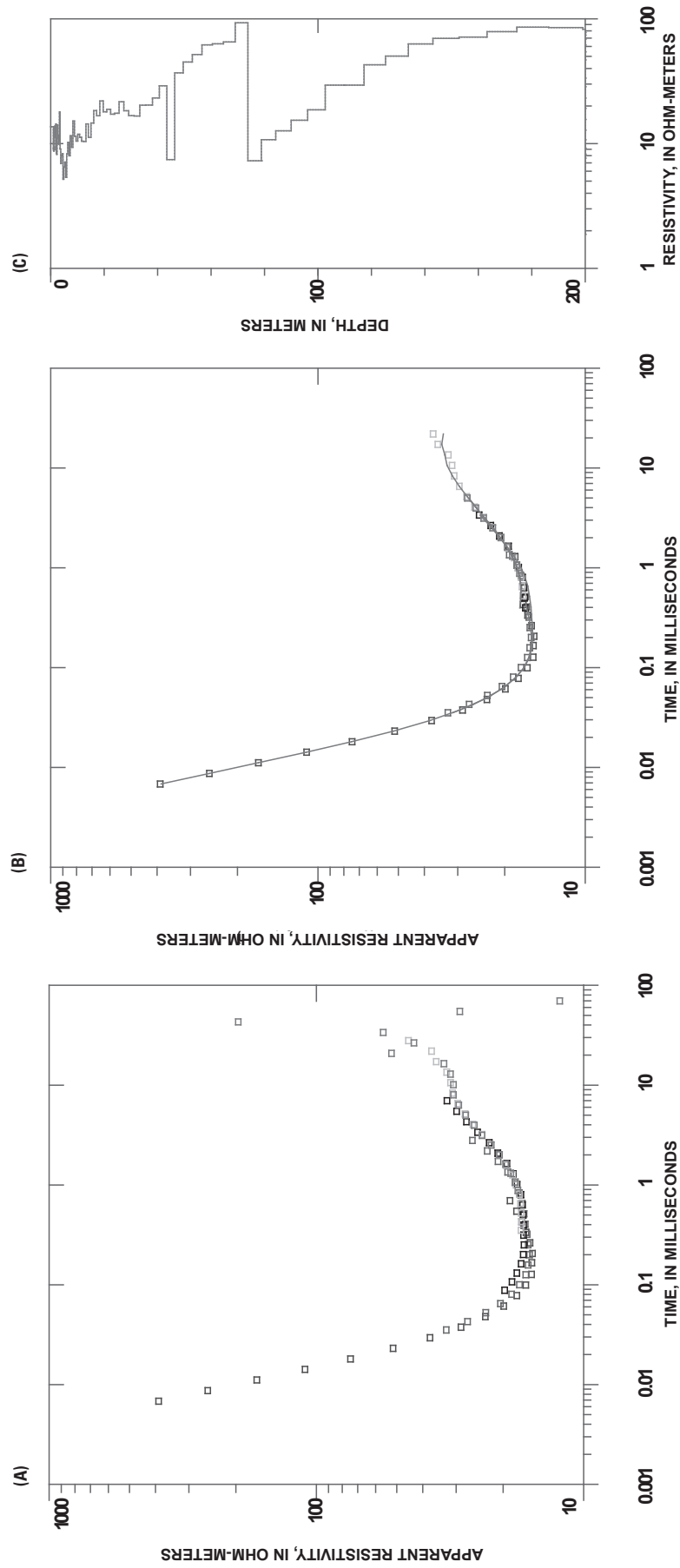


Figure 5.19. Sounding site 520: (A) time-domain electromagnetic (TDEM) sounding raw data (apparent resistivity from field measurements) as a function of time; (B) TDEM sounding smooth data (apparent resistivity from field measurements) as a function of time; and (C) inverse modeling results (smooth model of estimated true resistivity as a function of depth).

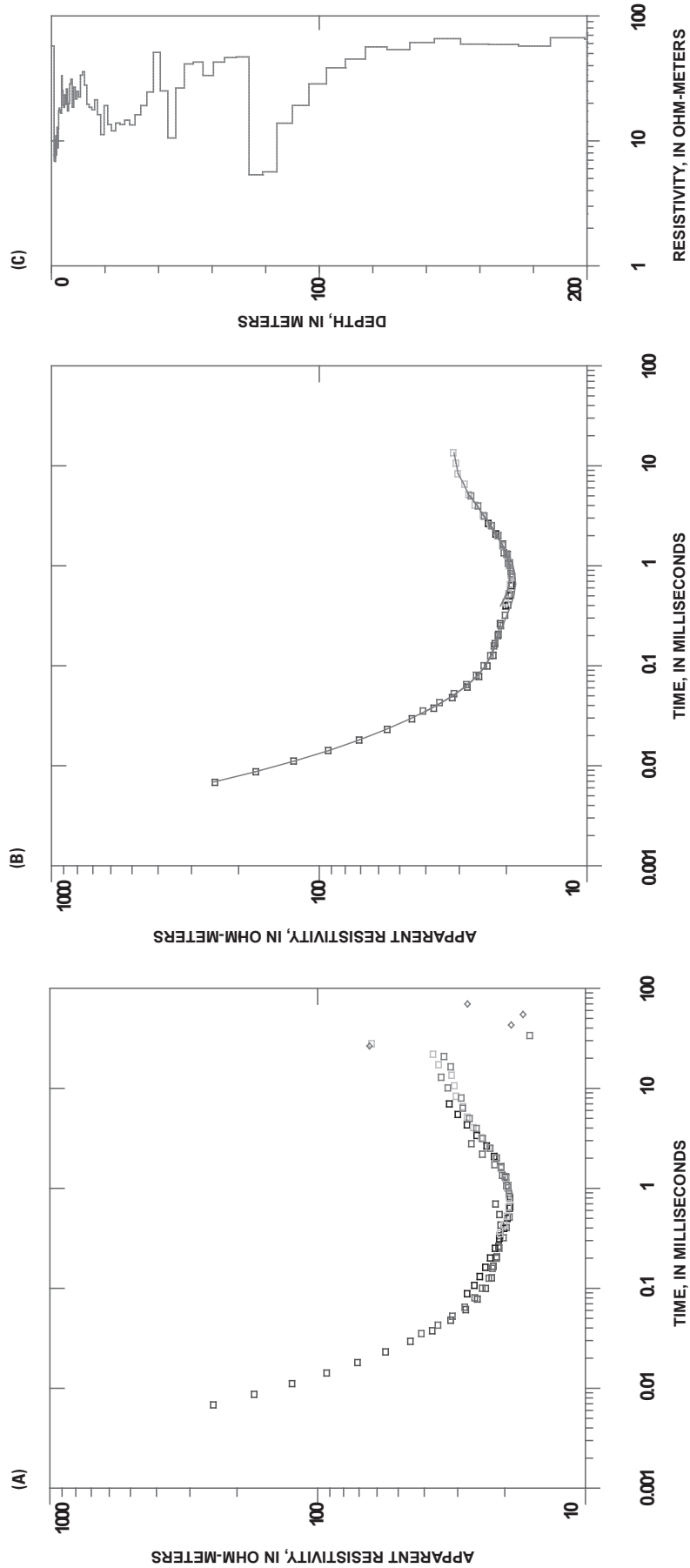


Figure 5.20. Sounding site 522: (A) time-domain electromagnetic (TDEM) sounding raw data (apparent resistivity from field measurements) as a function of time; (B) TDEM sounding smooth data (apparent resistivity from field measurements) as a function of time; and (C) inverse modeling results (smooth model of estimated true resistivity as a function of depth).

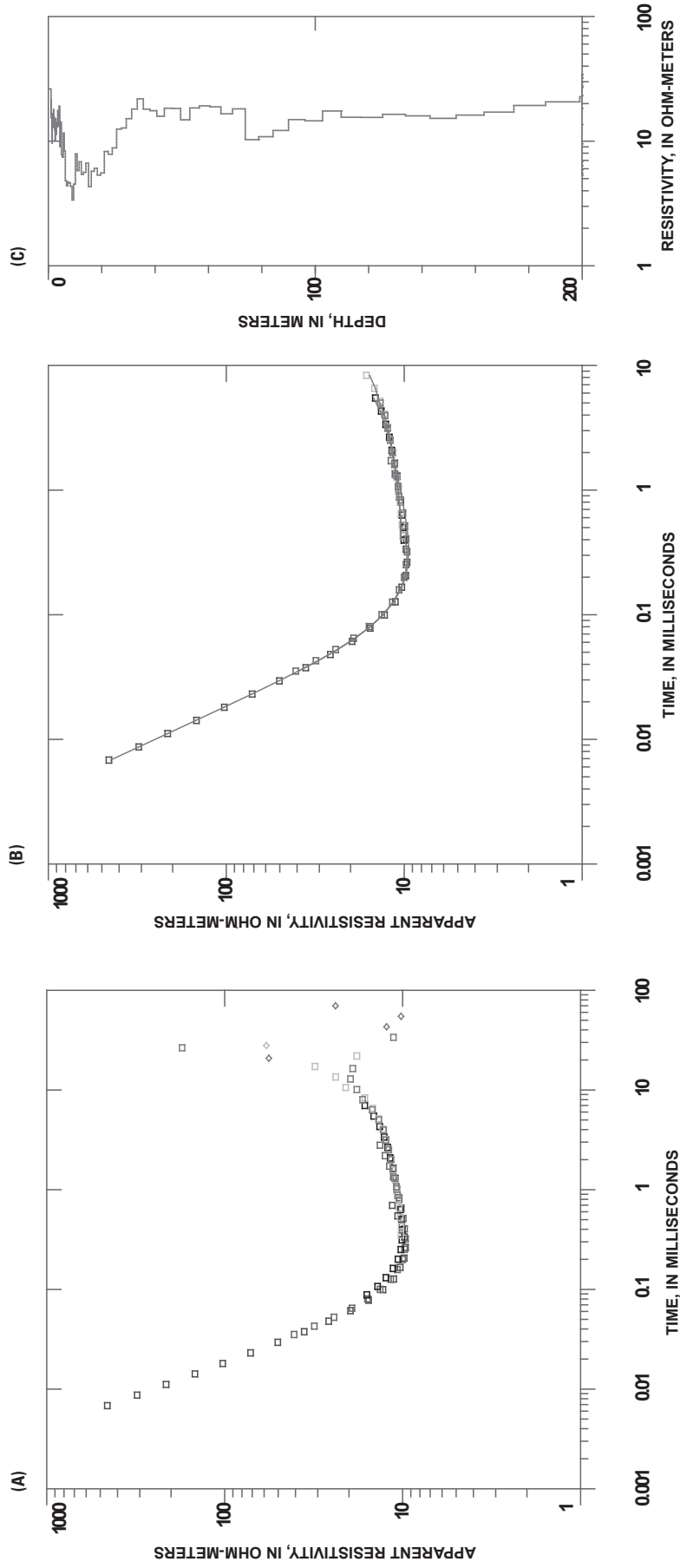


Figure 5.21. Sounding site 524: (A) time-domain electromagnetic (TDEM) sounding raw data (apparent resistivity from field measurements) as a function of time; (B) TDEM sounding smooth data (apparent resistivity from field measurements) as a function of time; and (C) inverse modeling results (smooth model of estimated true resistivity as a function of depth).

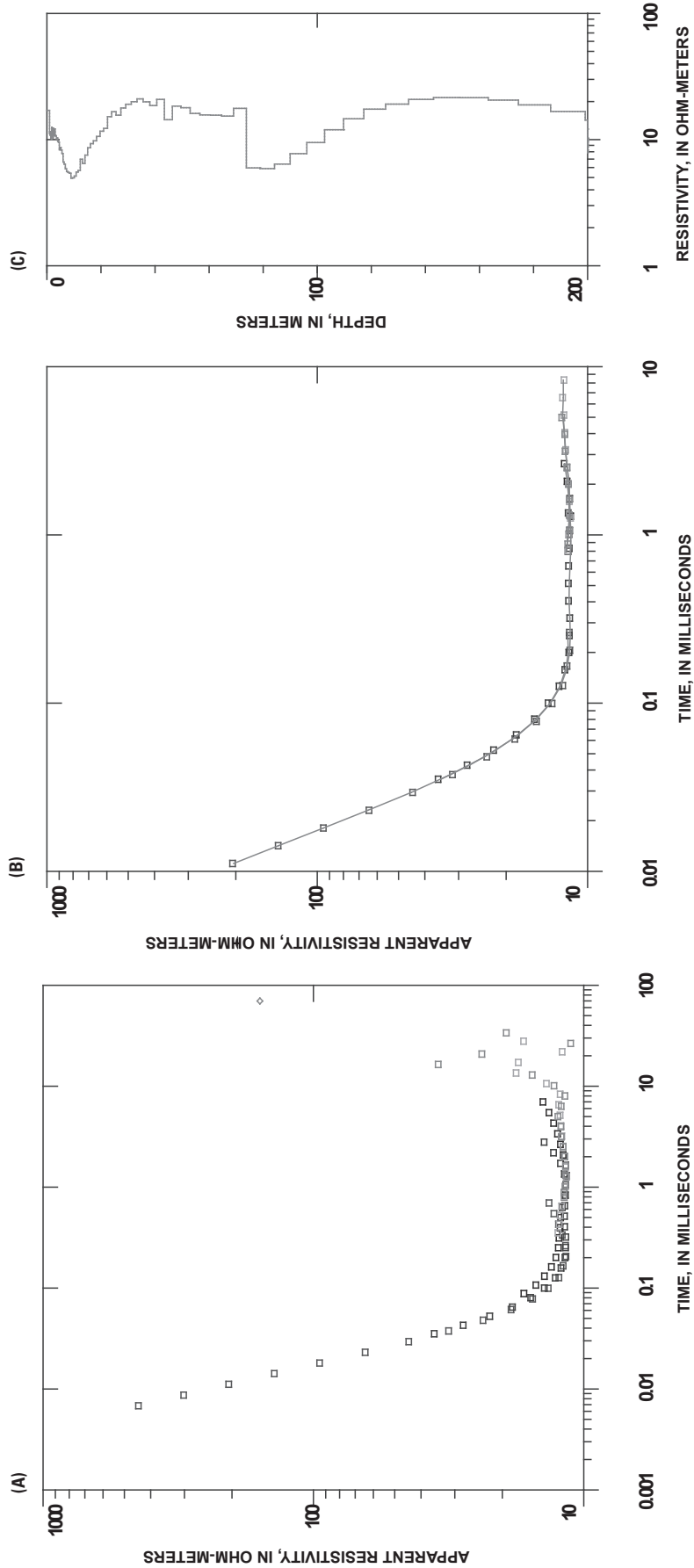


Figure 5.22. Sounding site 530: (A) time-domain electromagnetic (TDEM) sounding raw data (apparent resistivity from field measurements) as a function of time; (B) TDEM sounding smooth data (apparent resistivity from field measurements) as a function of time; and (C) inverse modeling results (smooth model of estimated true resistivity as a function of depth).

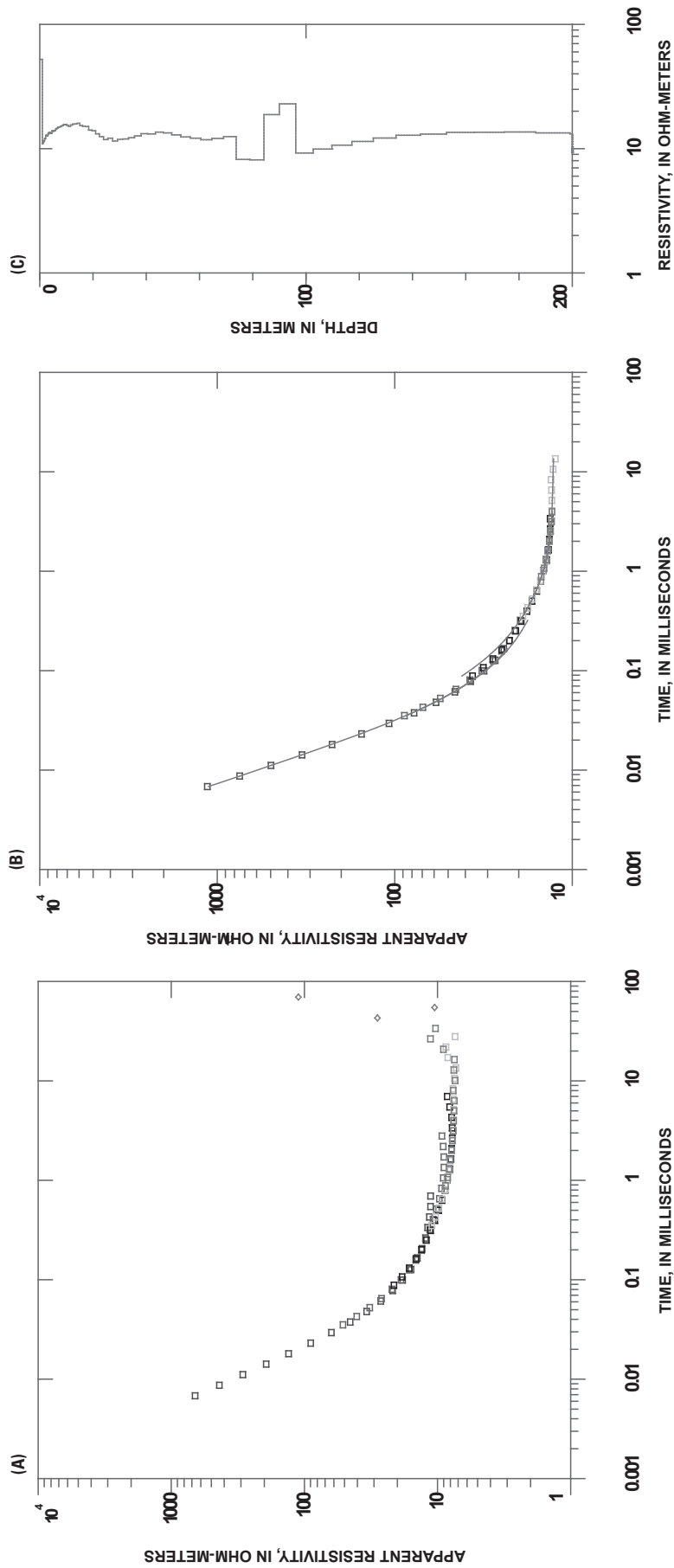


Figure 5.23. Sounding site 540: (A) time-domain electromagnetic (TDEM) sounding raw data (apparent resistivity from field measurements) as a function of time; (B) TDEM sounding smooth data (apparent resistivity from field measurements) as a function of time; and (C) inverse resistivity from field measurements (smooth model of estimated true resistivity as a function of depth).

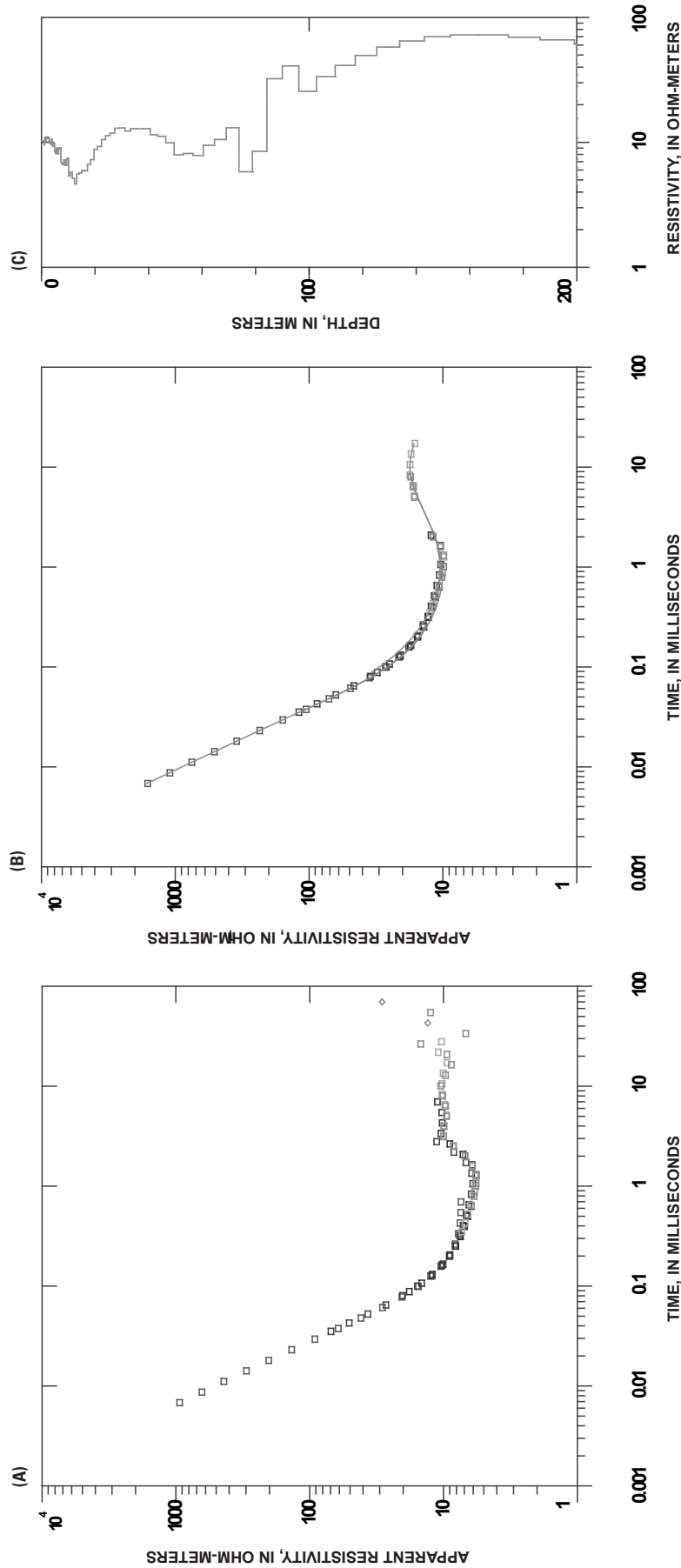


Figure 5.24. Sounding site 550: (A) time-domain electromagnetic (TDEM) sounding raw data (apparent resistivity from field measurements) as a function of time; (B) TDEM sounding smooth data (apparent resistivity from field measurements) as a function of time; and (C) inverse modeling results (smooth model of estimated true resistivity as a function of depth).

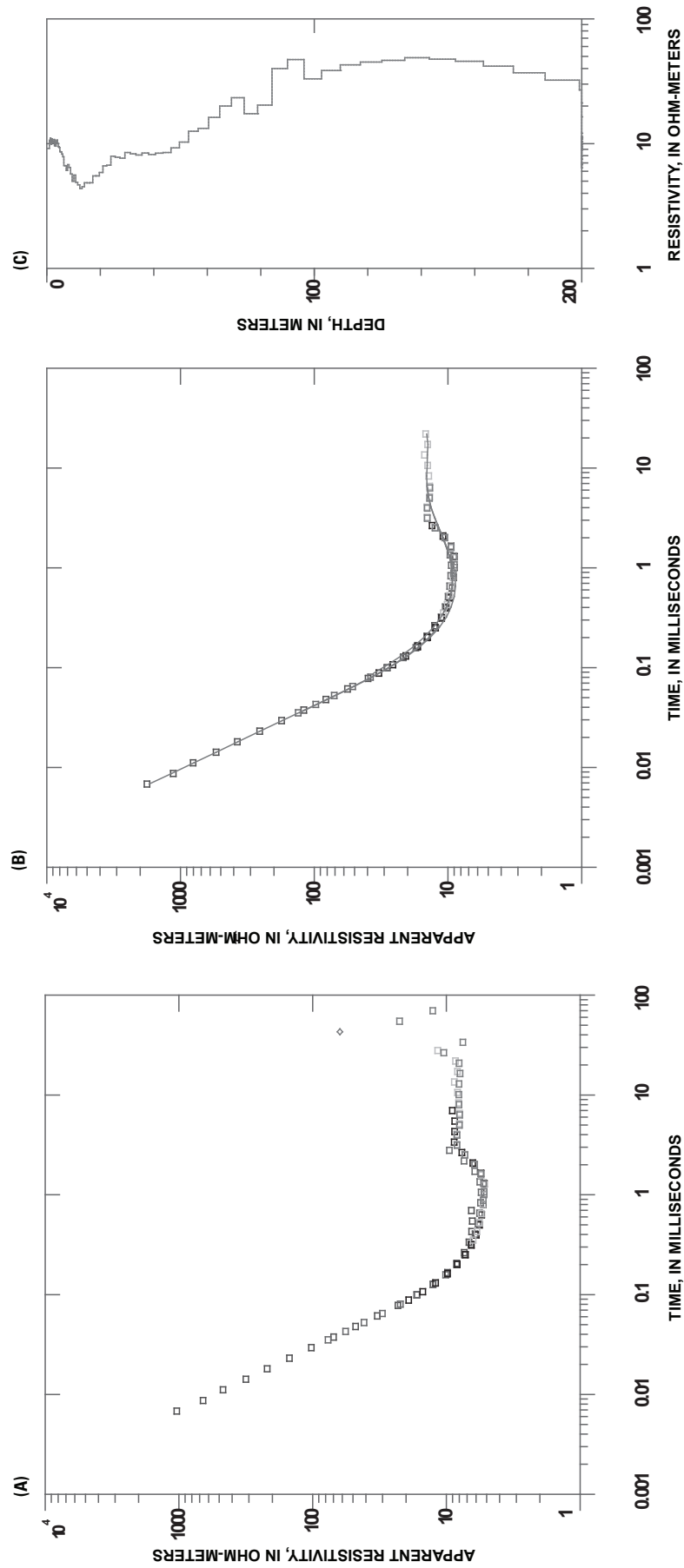


Figure 5.25. Sounding site 560: (A) time-domain electromagnetic (TDEM) sounding raw data (apparent resistivity from field measurements) as a function of time; (B) TDEM sounding smooth data (apparent resistivity from field measurements) as a function of time; and (C) inverse modeling results (smooth model of estimated true resistivity as a function of depth).

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Appendix 6—Datasets of Raw and Processed Time-Domain Electromagnetic Data

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Appendix 6. Datasets of raw and processed time-domain electromagnetic data.

Data Files:

Raw_TEM—Includes all .TEM files created using the program TEM2IX1D. A .TEM file was created for each duty cycle of the Protem 47 and 57. Link to zipped Raw_TEM files.

Processed_TEM—Includes the .IXP file that can be opened in IX1D. The files include all final inversion figures of each sounding. Also included for each sounding is the .usf file that can be imported into IX1D as raw data. Link to zipped Processed_TEM files.

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