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McCLATCHEY BROADCASTING COMPANY
STANDARD BROADCAST STATION KELP
1590 kHz 0.8/5.0 kW DA-2-U
EL PASO, TEXAS

AMENDED PROOF OF PERFORMANCE
NEW DIRECTIONAL ANTENNA
FCC File No. BMP-890215AB
BL-960530AD

15 JULY 1996

RF PROOF OF PERFORMANCE (Amended)
(Engineering Exhibit EE)
KELP 1590 kHz 0.8/5.0 kW DA-2-U
EL PASO, TEXAS
BMP-890215AB & BL-960530AD

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SECTION III - LICENSE APPLICATION ENGINEERING DATA

AMENDMENT

Name of Applicant

McCLATCHEY BROADCASTING COMPANY

PURPOSE OF AUTHORIZATION APPLIED FOR: (check one)

 Station License Direct Measurement of Power

1. Facilities authorized in construction permit					
Call Sign	File No. of Construction Permit (if applicable)	Frequency (kHz)	Hours of Operation	Power in kilowatts	
KELP	BMP-890215AB	1590	Unlimited	Night	Day
				0.8	5.0
2. Station location					
State			City or Town		
Texas			El Paso		
3. Transmitter location					
State	County	City or Town	Street address (or other identification)		
Texas	El Paso	El Paso	Springfield Rd. & Chamizal Border Hwy.		
4. Main studio location					
State	County	City or Town	Street address (or other identification)		
Texas	El Paso	El Paso	6900 Commerce El Paso, TX 79915		
5. Remote control point location (specify only if authorized directional antenna)					
State	County	City or Town	Street address (or other identification)		
Texas	El Paso	El Paso	(Same as Item 4)		

6. Has type-approved stereo generating equipment been installed?

 Yes No

7. Does the sampling system meet the requirements of 47 C.F.R. Section 73.68?

 Yes No Not Applicable

Attach as an Exhibit a detailed description of the sampling system as installed.

Exhibit No.
EE

8. Operating constants:						
RF common point or antenna current (in amperes) without modulation for night system			RF common point or antenna current (in amperes) without modulation for day system			
4.16 amp.			10.4 amp.			
Measured antenna or common point resistance (in ohms) at operating frequency			Measured antenna or common point reactance (in ohms) at operating frequency			
Night	50.0	Day	50.0	Night	0.0	Day
					0.0	
Antenna indications for directional operation						
Towers	Antenna monitor Phase reading(s) in degrees		Antenna monitor sample current ratio(s)		Antenna base currents (A)	
	Night	Day	Night	Day	Night	Day
1 (S)	+90.2	+126.8	0.704	1.005	0.80	3.48
2 (C)	0.0	0.0	1.000	1.000	1.22	3.50
3 (N)	+103.6	+ 94.9	1.304	0.291	1.40	1.13
Manufacturer and type of antenna monitor: Gorman-Redlich CMR-402						

SECTION III - Page 2

9. Description of antenna system ((f directional antenna is used, the information requested below should be given for each element of the array. Use separate sheets if necessary.)

Type Radiator (3) Tapered, self supporting, vertical steel tower with folded unipole.	Overall height in meters of radiator above base insulator, or above base, if grounded. 37.75 m.	Overall height in meters above ground (without obstruction lighting) 40.80 m.	Overall height in meters above ground (include obstruction lighting) 40.80 m.	If antenna is either top loaded or sectionalized, describe fully in an Exhibit. <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 0 auto;">Exhibit No. -----</div>
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Excitation Series Shunt (Folded Unipole)

Geographic coordinates to nearest second. For directional antenna give coordinates of center of array. For single vertical radiator give tower location.

North Latitude	31 °	44 '	38 "	West Longitude	106 °	23 '	45 "
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If not fully described above, attach as an Exhibit further details and dimensions including any other antenna mounted on tower and associated isolation circuits.

Exhibit No.
EE

Also, if necessary for a complete description, attach as an Exhibit a sketch of the details and dimensions of ground system.

Exhibit No.
EE

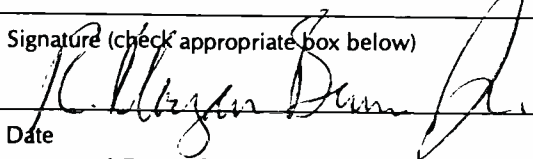
10. In what respect, if any, does the apparatus constructed differ from that described in the application for construction permit or in the permit?

Self-supporting towers installed instead of guyed towers.

11. Give reasons for the change in antenna or common point resistance.

New directional facility.

I certify that I represent the applicant in the capacity indicated below and that I have examined the foregoing statement of technical information and that it is true to the best of my knowledge and belief.

Name (Please Print or Type) R. Morgan Burrow, Jr., P.E.	Signature (check appropriate box below) 
Address (include ZIP Code) R. Morgan Burrow, PE & Assoc., P.C. 17221 Beauvoir Blvd. Derwood, MD 20855-1249	Date 15 July 1996
	Telephone No. (Include Area Code) (301) 948-3844 voice 330-5565 FAX

Technical Director Registered Professional Engineer

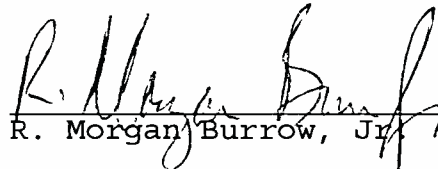
Chief Operator Technical Consultant

Other (specify)

DECLARATION OF ENGINEER

R. Morgan Burrow, Jr., declares and states that he is a graduate telecommunications consulting engineer (BSEE, University of Maryland, 1981), whose qualifications and experience are known to the Federal Communications Commission. His firm, R. Morgan Burrow, P.E. & Associates, P.C., has been retained by McClatchey Broadcasting Company, licensee of KERP, to prepare an engineering exhibit supporting KERP's request for program test authority and direct measurement of power for its new unlimited time directional transmitting facilities in El Paso, Texas.

Mr. Burrow further states that the various measurements, computations, and exhibits associated with the engineering statement were made or prepared by him personally or by Craig Rice and Ed Tomlin of KERP under his direct supervision. Mr. Burrow is a registered professional engineer in the state of Maryland, the Commonwealth of Virginia, and the District of Columbia. Declarant further states that all facts contained herein are true of his own knowledge, except where stated to be on information or belief, and, as to those facts, he believes them to be true. He believes under penalty of perjury that the foregoing is true and correct.


R. Morgan Burrow, Jr.

Executed on this the 15th day of July, 1996.

RF PROOF OF PERFORMANCE (Amended)
(Engineering Exhibit EE)
KELP 1590 kHz 0.8/5.0 kW DA-2-U
EL PASO, TEXAS
BMP-8990215AB & BL-960530AD

NARRATIVE STATEMENT

A. General:

McClatchey Broadcasting Company, licensee of KELP, 1590 kHz, El Paso, Texas, hereby submits this amended Proof of Performance in response to the Commission's letter dated June 19, 1996. The exhibits provided in this document supplement the information contained in KELP's May 27, 1996 filing. KELP requests program test authority to use its new facilities.

The undersigned requests waiver of certain sections of the Commission's rules and/or policy to obtain grant of this application. The waiver requests are minor and do not create and/or increase additional unlawful interference toward any known existing or proposed standard broadcast station. Waivers are specifically requested for the following:

1. Daytime measured pattern RMS is 83%; not minimum 85% of predicted daytime standard pattern. [Sect. 73.151 (a)]
2. Measurement distance intervals suggested in 73.186 of the Commission's rules are difficult to comply with due to the close proximity of the secured US/Mexican border to KELP's transmitter site and large holdings of private and commercial property on both sides of the international border to which access was not permitted.
3. Due to the close proximity of KELP's transmitter site to the United States/Mexico border, KELP proposes to place the three monitor points for its daytime directional pattern in Mexico. The 165.5 degree monitor point is located 4.87 mi. from KELP's transmitter. Waiver of the Commission's 1-4 mile monitor point policy is requested. The nearest tower of KELP is approximately 1000 feet from the United States/Mexico border.

Due to various extenuating circumstances, the Commission granted KELP extensions to its above-referenced construction permit to complete construction of the facilities and file for license. The array was adjusted initially in June and July 1992 by the undersigned and Ronald Haney, then KELP's contract engineer. The proof measurements were begun and in the process, a fire occurred in KELP's transmitter building which destroyed the transmitter and seriously damaged the phasing equipment. Delays occurred in the normal course of business adjusting and processing the permittee's insurance claim for repair and/or replacement of the equipment. The transmitter was replaced by a new type approved Broadcast Electronics type approved 5 kW solid state unit; the insurance company directed that the phasing equipment be remanufactured in the original enclosure and the monitoring equipment be repaired. The remanufacturing and repair directed by KELP's insurance company led to delays that would normally not occur if the equipment was simply replaced by available off the shelf gear. Naturally, additional time was required for KELP's contract technical help to reinstall the equipment after it was returned from repair. Nonetheless, the undersigned made two series of new adjustments to the refurbished equipment, once in April 1995, and the final work in January 1996. This Proof of Performance reflects the results of the measurements conducted this year on KELP.

A document furnished to the undersigned by Joseph Szczesny of the Commission's staff dated 5 March 1992 modified the bearings on which KELP was to specify monitor points. The revised list furnished by the Commission staff contains bearings to the south of the site for which monitor points are specified with locations in the Republic of Mexico. KELP's C. P. site is bounded to the south by the Chamizal Border Highway. Beyond the Chamizal Border Highway is the patrolled United States/Mexico border area, the Rio Grande River, and Mexican land area. The southernmost tower of KELP is approximately 1000 feet from the Mexican border. The KELP array is wide spaced; directional monitor points specified on the Chamizal Border Highway may be meaningless and not representative of the performance of the array due to proximity. The undersigned is aware that another El Paso AM broadcast station (KBNA, 920 kHz) has monitor points located on the Chamizal Border Highway. The KBNA transmitter site is located approximately one mile from the U.S./Mexico border, a "luxury" KELP does not have. Due to the lack of specific instructions concerning this situation, the undersigned has chosen readily accessible locations in Mexico that adequately represent the performance of KELP's array.

B. Specifications of KELP Directional Antenna:

The KELP directional antenna consists of three tapered, self supporting steel towers configured as three wire folded unipole antennas. Each tower is 124 ft (37.75 m) high and is installed atop a 10 ft (3.05 m) concrete pillar since the transmitter site is in a city ponding area. Ground system (120 1/4 wave radials at each tower) same as specified in CP. Directional common point impedance (day & night) 50+j0 ohms.

Theoretical Parameters, NIGHTTIME Operation
Spacing, orientation, and phase angle in degrees.

Tower	Field	Phase Angle	Spacing	Orient.
1(S)	1.629	+103.594	117.330	219.270
2(C)	1.000	0.000 (ref)	0.000	0.000
3(N)	1.848	+ 90.172	98.341	52.322

Operating Parameters, NIGHTTIME Operation (Common Pt. 4.16A)
(As indicated on Gorman Redlich CMR-402 antenna monitor)

Tower	Field	Phase Angle	Antenna Current (amp.)
1(S)	0.704	+ 90.2	0.80
2(C)	1.013	0.0 (ref.)	1.22
3(N)	1.304	+103.6	1.40

Theoretical Parameters, DAYTIME operation

Tower	Field	Phase Angle	Spacing	Orient.
1(S)	1.485	+116.204	116.204	219.270
2(C)	1.000	0.000 (ref.)	0.000	0.000
3(N)	0.138	+ 77.891	98.341	52.322

Operating Parameters, DAYTIME operation (Common Pt. 10.4A)

TOWER	Field	Phase Angle	Ant. Current (Amp.)
1(S)	1.005	+126.8	3.48
2(C)	1.000	0.0 (ref.)	3.50
3(N)	0.291	+ 94.9	1.13

Sample system utilizes Phasetek current transformers directly connected to the Gorman Redlich antenna monitor through phase stabilized Helix coaxial cable and meets the Commission's 73.68 criteria for an approved sample system.

C. Field Intensity Measurements:

Field Intensity measurements reported in this document were made by Craig Rice of KERP and Ed Tomlin, a contract engineer to KERP. These measurements were made using a recently calibrated Potomac Instruments FIM-21 field intensity meter. This instrument was compared on the job to a Potomac Instruments FIM-41 (sn 811) field intensity meter used by the undersigned during the adjustment of the array; both meters produced similar readings at multiple test locations.

Both Mr. Rice and Mr. Tomlin are qualified to make these measurements. Mr. Rice is familiar with this type of measurement work; Mr. Tomlin has many years of experience in broadcast transmission equipment and measurement work including the Voice of America's Mason, Ohio relay station.

The near field non-directional proximity measurements were made by R. Morgan Burrow, Jr., P.E., assisted by Craig Rice and Ed Tomlin.

Care was taken to find clear locations at approximate distance intervals specified in Section 73.186 of the Commission's rules. Due to the proximity of the site to the Mexican border, patrolled areas, and private property, measurements were taken at locations that were readily accessible on roads or public areas. Measurements on private property were avoided, especially in Mexico where that country's laws and enforcement differ significantly from those of the United States. Overhead power transmission and "spaghetti" residential/commercial power distribution is found in virtually all parts of the city of Ciudad Juarez, Chihuahua, Mexico, which is directly across the border from El Paso, Texas. The clustered power lines complicated selection of suitable measurement locations. KERP requests waiver of strict application of the distance intervals specified in Section 73.186 and accept the data at the locations specified in this document.

Mexico has two "boundaries" in the border area. The first boundary is the official United States/Mexico border. The second boundary is an internal boundary approximately 18 miles inside the country which is also fenced and patrolled. A second (and more rigorous) declaration and customs inspection is required to enter the inner country from the border area (frontal zone). No measurements on KERP were made within the inner boundary.

C. Field Intensity Measurements (continued)

A considerable number of measurements on the United States side of the border were made on Fort Bliss and other controlled access areas such as Biggs Field and/or the El Paso International Airport. KELP was granted permission to enter these areas (escorted as required) to make the measurements and minimize impact on commercial or military activities.

Most of the measurement locations were in barren, unmarked desert locations for which no landmarks exist. The locations in all areas including urban areas were verified by global positioning (GPS) receivers installed on the four-wheel drive vehicle. The vectors established for each measurement bearing were computed using NOAA's "FORWARD" computer program and the resulting coordinates were programmed into the GPS receivers as "waypoints". This enabled the measurements of all the bearings (including the fractional ones) with high accuracy.

The reproducibility of GPS access to measurement points is better than 50 feet. In some cases, pattern switching and talkback to the control operator via cellular phone was employed to make non-directional, day, and night directional measurements at the same location at approximately the same time of day. It is the undersigned's opinion that the use of the vector GPS technique and pattern switching enhanced the accuracy of the measurements reported herein.

D. Analysis of Field Intensity Measurement Data

The field intensity measurements were analyzed by R. Morgan Burrow, P.E. by ratioing the directional day or night measured value to the non-directional measured value on a point by point basis. The logarithm of each point ratio was computed; the inverse distance field for each bearing was determined from the antilog of the average logarithmic point ratios multiplied by the non-directional inverse distance field determined from the proximity measurements for each specified bearing.

The non-directional proximity measurement data tabulated in Figure 14 was analyzed by computer software which estimates an average inverse field for each measured bearing using the measurement data, frequency, power, and electrical characteristics of the radiating element.

D. Analysis of Field Intensity Data (continued)

The N-D inverse field used for bearings N 8.0, 22.0, 220.5, and 319.0 determined by graphical means does not agree with Figure 14 tabulated values. The N-D inverse field for these bearings was determined from the Figure 14 graphs and FIM plots. It is believed that reradiation from external structures is occurring; detuning of these structures is not possible. The non-directional field on the above bearings has been increased to account for this since practically all of the close-in points plot above the computed inverse field line. The computed N-D inverse was used on the remaining bearings, particularly on controlled bearings. The M-3 and R-2 conductivity maps show high conductivity in the Rio Grande Valley (15 and 10 mS/m respectively) for the area near KELP's transmitter site; this is clearly a situation where the high conductivity places the measurement points near the inverse field line to begin with.

The non-directional, directional day, and directional night measured inverse distance fields are tabulated for each measured bearing. Plots on log-log graphs are provided for each measured bearing and operation mode (non-directional, directional day, and directional night) from which the measured distance to a specified contour is determined.

The measured patterns (non-directional, directional day, and directional night) are summarized by appropriate tabulations and a polar plot for each measured pattern.

It is noted that the RMS (size) of the daytime measured pattern is 83%. There are several structures in the major lobe including a chimney for the Phelps Dodge copper plant, the Chevron oil refinery, and at least one large water tower that jointly or severally are affecting KELP's signal. It is not possible or economically feasible to detune any of these structures.

E. Monitor Points

KELP's construction permit specified three bearings daytime and three bearings nighttime that require monitor points. Directions to gain access to the monitor points and photographs of the points are shown on the appropriate figure for each bearing for which a monitor point is specified. The overall route map is provided in Appendix C.

E. Monitor Points (continued):

The nighttime monitor points are located on the United States side of the common border with Mexico. The nighttime monitor points meet location specifications described in the rules.

All of the three daytime monitor points are located in the Republic of Mexico due to the close proximity of the Mexican border to the south of the KERP site. The undersigned believes that monitor points located on the Border Highway would not be representative of the performance of KERP's directional antenna. The N-165.5 degree monitor point is located 4.87 miles from the transmitter and an appropriate waiver of the FCC's 1-4 mile policy is requested.

F. Antenna Impedance Measurements.

Impedance measurements were made on the non-directional tower and the daytime and nighttime common points. The best circularity of the non-directional mode was found with the north and south towers floating rather than detuned. Since the towers are configured as folded unipoles, the driving point impedance is high ($280 + j 15.1$ ohms). The high driving point impedance of the towers contributes to excellent bandwidth as shown by the appropriate tabulations and plots.

G. Proximity to AM Station KBNA:

KERP's construction permit specified that "before and after construction" measurements be made on KBNA. Unfortunately, the whereabouts of any such measurements following the transmitter fire is unknown. KERP proposes to submit in lieu of this the results of a partial proof on KBNA made in 1995 by GTE Mobilnet that documents the status of the KBNA antenna before and after the GTE Mobilnet cellular tower was erected across the street from KBNA's antenna. The measurements made by GTE Mobilnet show that the KBNA array was in compliance with its radiation limits prior to the erection of the cellular tower. The Mobilnet measurements therefore exonerate the electrically short (at 920 kHz) KERP towers as the source of any adverse effect to the KBNA directional antenna.

H. Radiation Hazard Compliance

The KERP transmitter site is located on city owned property in a ponding area. The towers are built atop 10 foot high concrete pillars. No climbing pegs are embedded in the concrete pillars; access to the towers for maintenance is via a portable ladder which is locked in the transmitter building. Since the towers are configured for folded unipole operation, the tower itself and the copper grounding straps on the concrete pillars are grounded. The nearest contact point for dangerous RF current for each tower is approximately 13 feet above ground which is out of reach of the average human.

The entire KERP site is surrounded by a eight foot high chain link fence topped with barbed wire. Under the new IEEE standards, the entire KERP transmitter site (including ground system) would be classed as a "controlled access" site not accessible to easy random access by people. The transmitter building, towers, and ground system are all contained within the perimeter fence which surrounds the ponding area. Access to the fenced area is cleared through KERP management or the El Paso water authority. Arrangements between KERP and the water authority forbid water authority workers to trespass on the leased area of KERP without clearance from KERP management. Due to the proximity of the city-owned site to the border, local and Federal law enforcement officers are constantly in the vicinity who will arrest trespassers. The perimeter fence as well as the transmitter building and towers are posted with radiation hazard warning signs in English and Spanish languages. A photograph of the KERP site is in Appendix B.


KERP is aware that maintenance on the towers will require de-energizing the tower undergoing maintenance by temporary switching to reduced power non-directional operation on another tower not undergoing maintenance. KERP is also aware that some types of maintenance will require the station to shut down completely to adequately protect workers.

I. Miscellaneous:

The location of measurement bearings and field intensity measurements made on each bearing are shown in the reduced copies of the U.S. and Mexican topographic maps provided in Appendix D.

SUMMARY:

The undersigned believes that the information presented herein is adequate to demonstrate to the Commission staff that construction and tuning of the array is essentially complete and the station is ready for license. The measurements presented herein adequately demonstrate that KELP's new facilities do not exceed the radiation limits of the authorized standard daytime and nighttime directional patterns and does not create unlawful interference to other stations. Grant of program test authority and modification of station license is hereby requested.


R. Morgan Burrow, P.E.
15 July 1996




Figure 1-A: Tabulation of Field Intensity Measurement Data

R. Morgan Burrow, P.E. & Associates, P.C.
17221 Beauvoir Blvd., Derwood, MD 20855

KELP 1590 kHz 0.8/5.0 kW DA-2-U El Paso, Texas Bearing: 8.0 deg. Modes: NDA, DA-Day, & DA-Night,

Pt. No.	Distance (Miles)	Non-DA (mV/m)	DA-D (mV/m)	DA-N (mV/m)	Log 10 DA-D/NDA	Log 10 DA-N/NDA	Point Description	Measurement Date & Time		GPS Coordinates
								NDA, DA-D, DA-N; Times MDT	(D,M,S - D,M,S)	
1	.17	1550.00	-----	670.00	-----	-.3643	7132 Date Tree, El Paso, TX	(2/14/96:1326; DNA	;2(13/96:1537)	31,44.747-106,23.654
2	.27	43 800.00	-----	315.00	-----	-.4048	7108 Banana Tree, El Paso, TX	(2/14/96:1331; DNA	;2(13/96:1533)	31,44.877-106,23.710
3	.31	50 580.00	-----	200.00	-----	-.4624	7104 Granite power line & bus stop	(2/14/96:1332; DNA	;2(13/96:1531)	31,44.855-106,23.702
4	.37	59 560.00	1150.00	180.00	.3125	-.4929	7100 Trangerine Pwe lines El Paso TX	(2/14/96:1334;2(13/96:1545;2(13/96:1529)		31,44.933-106,23.660
5	.42	68 520.00	1100.00	-----	.3254	-----	S.E. corner Sparrow & George Orr St, El P	(2/14/96:1335;2(13/96:1544; DNA	)	31,44.989-106,23.647
6	.62	99 350.00	750.00	145.00	.3310	-.3827	Canary St.,SE corner Oriole El Paso, TX	(2/14/96:1337;2(13/96:1549;2(13/96:1527)		31,45.169-106,23.640
7	.71	1.15 330.00	700.00	125.00	.3266	-.4216	End of Oriole,ST ,El Paso, TX	(2/14/96:1338;2(13/96:1550;2(13/96:1523)		31,45.242-106,23.640
8	.80	1.28 245.00	600.00	115.00	.3890	-.3285	706 Alameda, St at Macias car sales,EL P	(2/14/96:1343;2(13/96:1556;2(13/96:1519)		31,45.301-106,23.602
9	.90	1.45 250.00	480.00	102.00	.2833	-.3893	204 Little Flower El Paso, TX.	(2/14/96:1347;2(13/96:1600;2(13/36:1515)		31,45.393-106,23.626
10	.99	1.59 220.00	445.00	81.00	.3059	-.4339	SE Stiles,Woolpridge R&R El Paso TX	(2/14/96:1350;2(13/96:1602;2(13/96:1511)		31,45.478-106,23.565
11	1.13	1.81 200.00	412.00	84.00	.3139	-.3768	112 Miller Circle El Paso TX	(2/14/96:1352;2(13/96:1635;2(13/96:1509)		31,45.595-106,23.579
12	1.96	3.16 125.00	238.00	50.50	.2797	-.3936	6820 Market El Paso TX	(2/14/96:1400;2(13/96:1635;2(13/96:1500)		31,46.308-106,23.426
13	2.39	3.85 83.00	160.00	30.50	.2850	-.4348	Gateway West at 6767 Shell Pipe line CD	(2/14/96:1410;2(13/96:1240;2(13/96:1450)		31,46.677-106,23.396
14	2.71	4.36 79.00	168.00	26.50	.3277	-.4744	W H Burges 75 Ft E. of Apple El Paso TX	(2/14/96:1413;2(13/96:1231;2(13/96:1451)		31,46.998-106,23.351
15	2.82	4.54 69.00	141.00	24.50	.3104	-.4497	933 Apple El Paso TX	(2/14/96:1415;2(13/96:1226;2(13/96:1449)		31,47.030-106,23.355
16	2.83	4.56 71.00	145.00	26.00	.3101	-.4363	7309 Edgemere El Paso TX	(2/12/96:1420;2(14/96:1221;2(13/96:1447)		31,47.102-106,23.290
17	3.01	4.85 70.00	145.00	26.00	.3163	-.4301	7312 Bell Rose El Paso TX	(2/12/96:1424;2(14/96:1218;2(13/96:1444)		31,47.186-106,23.306
18	3.01	4.85 67.00	130.00	24.50	.2879	-.4369	NE corner of Elmhurst El Paso TX	(2/12/96:1426;2(14/96:1211;2(13/96:1441)		31,47.238-106,23.303
19	3.10	4.99 55.00	115.00	20.50	.3203	-.4286	3101 Elmhurst El Paso TX	(2/12/96:1428;2(14/96:1207;2(13/96:1439)		31,47.285-106,23.274
20	3.28	5.28 62.00	118.00	20.00	.2795	-.4914	50 FT WST of Elmhurst on Sunglow El Paso	(2/12/96:1430;2(14/96:1202;2(13/96:1437)		31,47.418-106,23.257
21	3.31	5.33 31.00	116.00	20.50	.5731	-.1796	85 Lockheed Between 7501 & 7505 El Paso	(2/12/96:1433;2(14/96:1156;2(13/96:1435)		31,47.478-106,23.240
22	3.48	5.60 32.00	98.00	14.50	.4861	-.3438	Air Port El Paso TX	(2/12/96:1052;2(14/96:1050;2(13/96:1054)		31,47.614-106,23.216
23	3.80	6.11 33.00	96.00	14.00	.4638	-.3724	Air Port El Paso TX	(2/12/96:1102;2(14/96:1104;2(13/96:1100)		31,48.883-106,23.176
24	4.72	7.60 33.50	83.00	14.50	.3940	-.3637	Air Port El Paso TX	(2/12/96:1027;2(14/96:1025;2(13/96:1029)		31,48.362-106,23.072
25	4.98	8.01 29.00	64.00	-----	.3438	-----	On Air Port El Paso TX	(2/12/96:0934;2(14/96:0932; DNA	)	31,48.911-106,23.641
26	5.29	8.52 23.50	51.00	7.50	.3365	-.4960	NE Walter Jones & Spur ST El Paso TX	(2/12/96:1604;2(14/96:1605;2(13/96:1604)		31,49.156-106,22.954
27	5.47	8.80 23.00	49.00	-----	.3285	-----	10881 Carswell loop El Paso TX	(2/12/96:1547;2(14/96:1541; DNA	)	31,49.317-106,22.808
28	5.82	9.37 19.80	51.00	7.00	.4109	-.4516	10881 Carswells & SGT Magor El Paso TX	(2/12/96:1529;2(14/96:1529;2(13/96:1526)		31,49.575-106,22.907
29	6.03	9.70 24.50	53.00	8.00	.3351	-.4861	Corner of Paecen,BLD 11765 El Paso TX	(2/12/96:1515;2(14/96:1515;2(13/96:1516)		31,49.802-106,22.871
30	6.16	9.91 16.50	50.00	-----	.4815	-----	PKG Lot Patterson ST EST Side El Paso TX	(2/12/96:1506;2(14/96:1507; DNA	)	31,49.950-106,22.864

Figure 1-A (continued): F.I. Measurement Data, KEMP Radial 008 degrees

Pt. No.	Distance (Miles)	Distance (km.)	Non-DA (mV/m)	DA-D (mV/m)	DA-N (mV/m)	Log 10 DA-D/NDA	Log 10 DA-N/NDA	Point Description	Measurement Date & Time (NDA, DA-D, DA-N)	GPS Coordinates (D,M,MMH - D,M,MMH)
31	6.28	10.10	12.30	-----	7.80	-----	-.1978	On Fire Line Biggs El Paso TX	(2/12/96:1402; DNA ;2/14/96:1404)	31,50.036-106,22.595
32	6.84	11.00	12.10	-----	6.00	-----	-.3046	No Address El Paso TX	(2/12/96:1416; DNA ;2/14/96:1412)	31,50.056-106,22.756
33	8.14	13.10	12.00	-----	4.60	-----	-.4164	Near Gate 12 Biggs Perimeter RD El Paso	(2/12/96:1425; DNA ;2/14/96:1429)	No GPS Readings
34	10.60	17.06	5.90	17.00	2.65	.4596	-.3476	GPS Location on Ft. Bliss Range	(2/12/96:1313;2/13/96:1313;2/14/96:1310)	31,53.045-106,22.268
35	13.24	21.31	4.00	10.50	1.65	.4191	-.3846	GPS Location; Ft. Bliss	(2/12/96:1250;2/13/96:1249;2/14/96:1251)	31,56.083-106,21.872
36	13.98	22.50	3.60	8.90	1.29	.3931	-.4457	GPS Location; Ft. Bliss	(2/12/96:1158;2/13/96:1159;2/14/96:1157)	31,56.692-106,21.746
37	15.29	24.61	2.20	6.80	.86	.4901	-.4079	Hwy 54 Marker on east side	(2/12/96:1145;2/13/96:1144;2/14/96:1146)	31,57.801-106,21.583
38	16.34	26.30	2.30	6.40	.88	.4445	-.4172	GPS Location; Ft. Bliss	(2/12/96:1124;2/13/36:1135;2/14/96:1130)	31,58.635-106,21.425
39	16.90	27.20	2.10	5.50	.99	.4181	-.3266	GPS Location on Ft. Bliss Range	(2/12/96:1121;2/13/96:1119;2/14/96:1023)	31,58.216-106,21.348
40	17.96	28.90	1.75	5.50	.81	.4973	-.3346	GPS Location on Ft. Bliss Range	(2/12/96:1030;2/13/96:1034;2/14/96:1038)	32,00.892-106,21.175
41	19.21	30.92	1.85	5.90	.91	.5037	-.3081	GPS Location on Ft. Bliss Range	(2/12/96:1058;2/13/96:1059;2/14/96:1054)	32,01.161-106,21.014
42	23.55	37.90	1.30	3.50	.58	.4301	-.3505	GPS Location on Ft. Bliss Range	(2/12/96:1006;2/13/96:1007;2/14/96:1003)	32,04.880-106,20.377

No. of day data points: 36

No. of night data points: 38

Non-Directional Inverse field (mV/m at 1 km): 353.00

Day Inverse Field (mV/m at 1 km) 837.80

Night Inverse Field (mV/m at 1 km) 142.52

KILOMETERS FROM ANTENNA

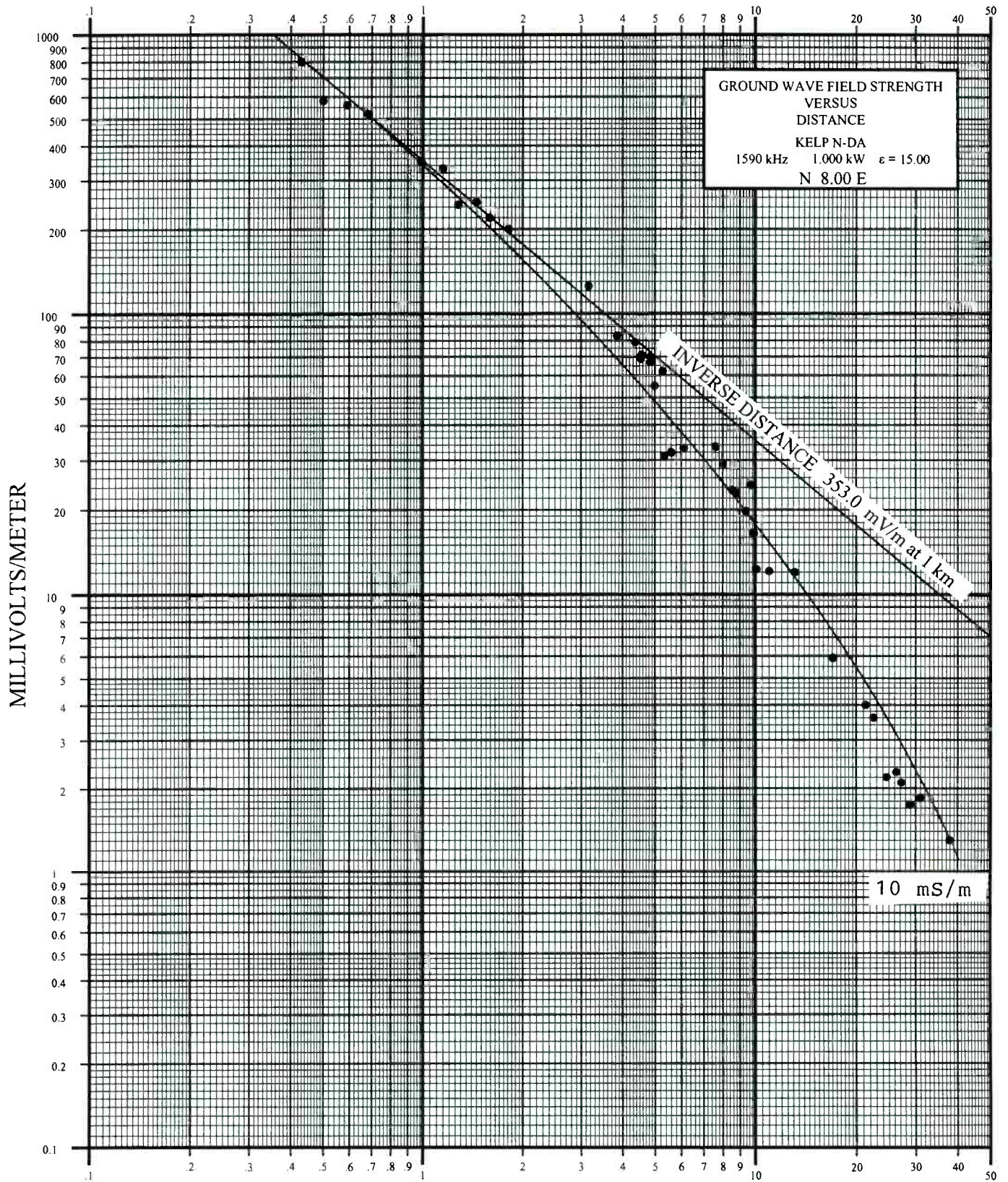


Figure 1-B

KILOMETERS FROM ANTENNA

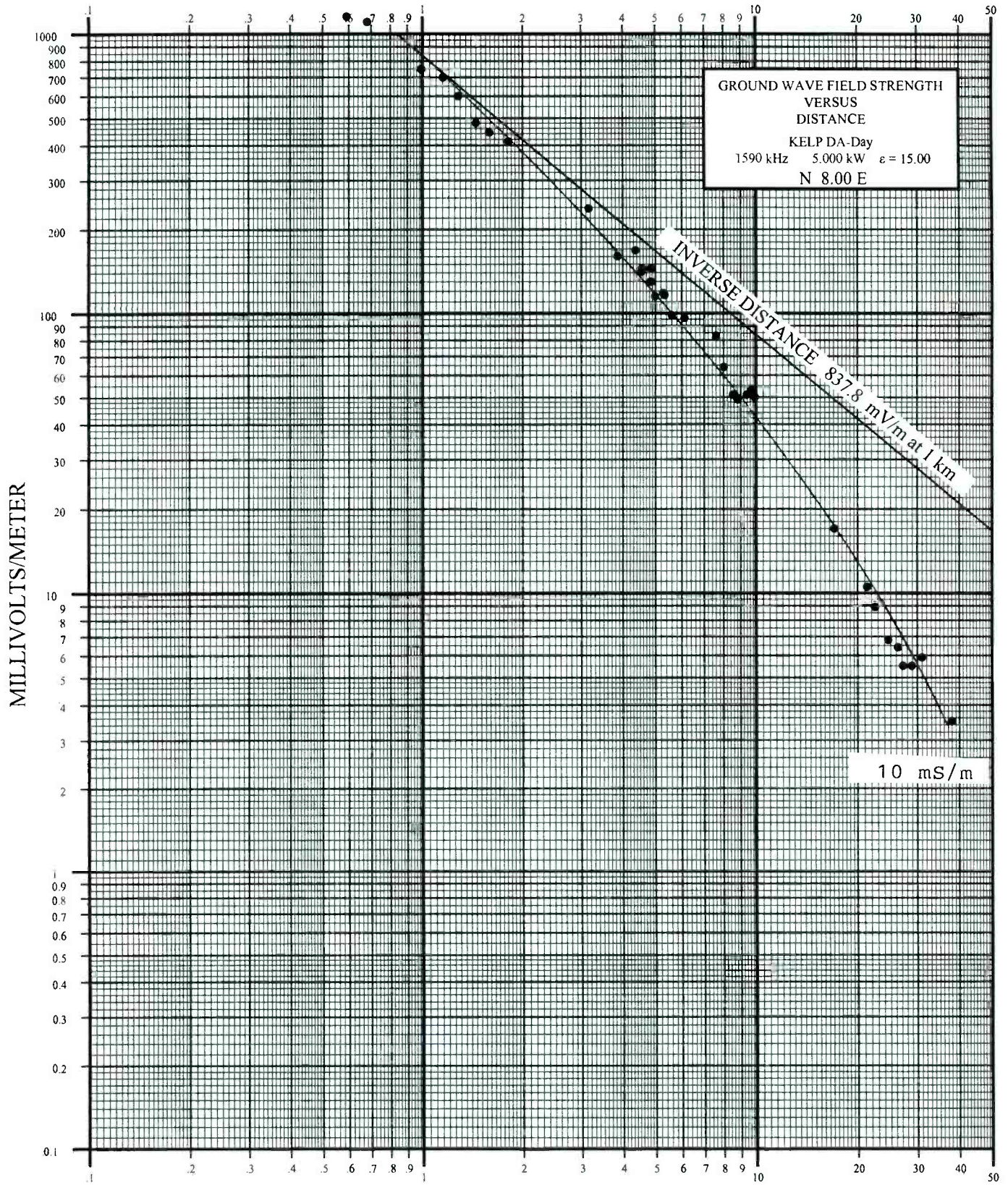


Figure 1-C

KILOMETERS FROM ANTENNA

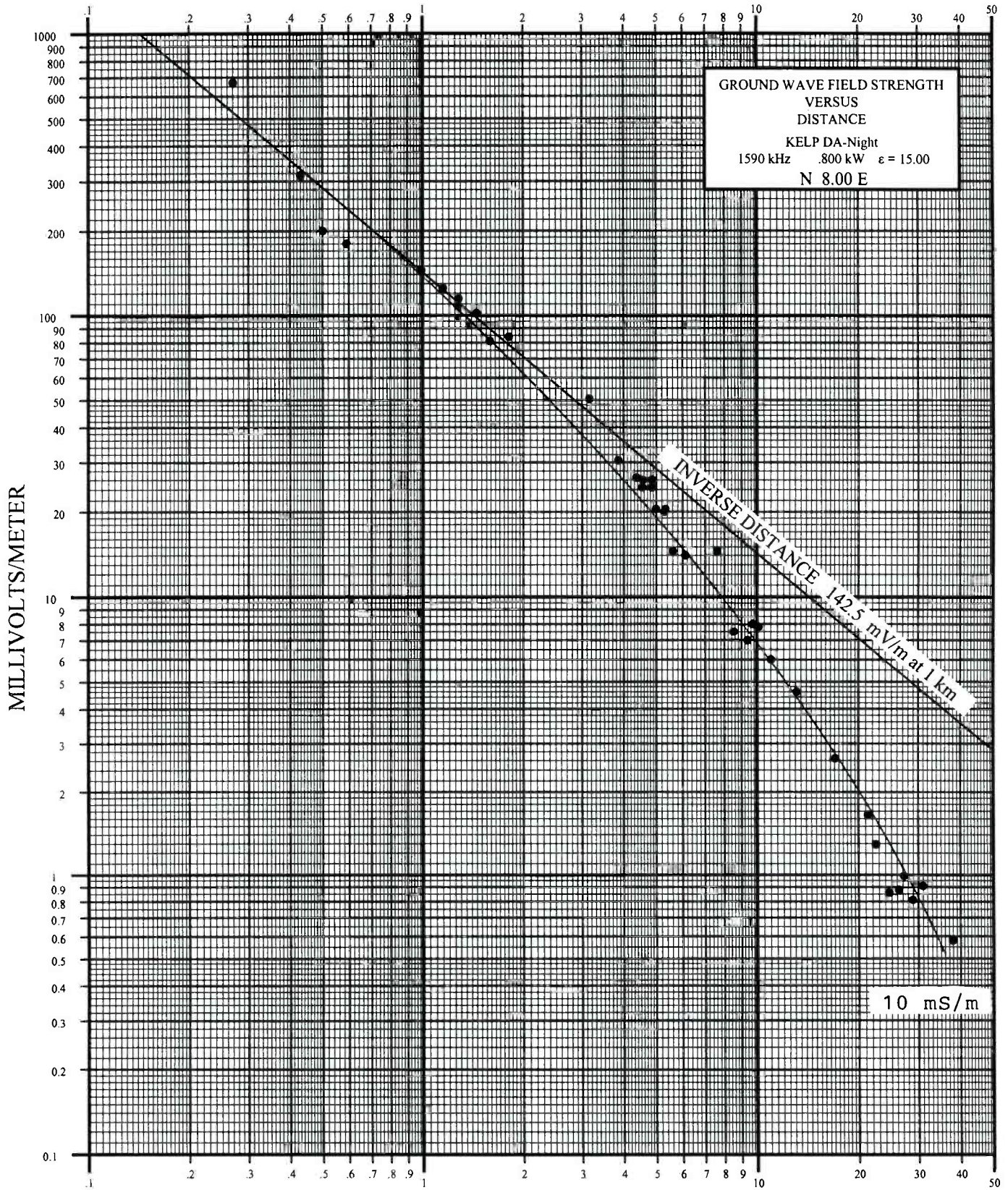


Figure 1-D

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KILOMETERS FROM ANTENNA

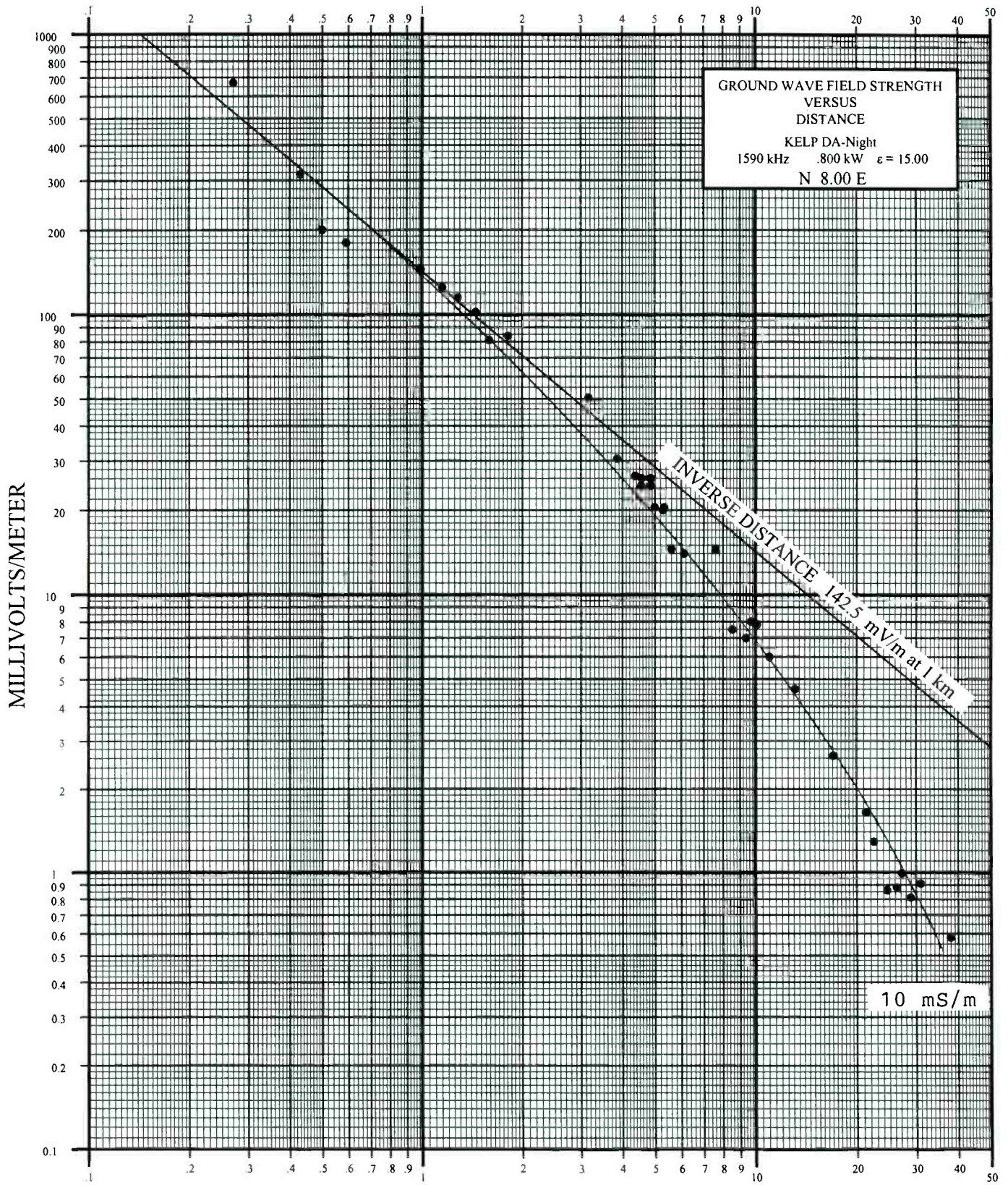


Figure 1-D

Figure 2-A: Tabulation of Field Intensity Measurement Data

R. Morgan Burrow, P.E. & Associates, P.C.
17221 Beauvoir Blvd., Derwood, MD 20855

KELP 1590 kHz 0.8/5.0 kW DA-2-U El Paso Texas Bearing: 22 deg. Modes: NDA & DA-Night

Pt No.	Distance (Miles)	Non-DA (mV/m)	DA-N (mV/m)	Log 10 Ratio	Point Description	NDA/DA Date & Time Times MST	GPS Coordinates (D,M,S - D,M,S)
1	.13	.21	1510.00	-----	7149 Date Tree	(2/08/96:1300;2/08/96:1648)	31,44.757-106,23.677
2	.20	.32	1200.00	-----	7149 Lemon Tree	(2/08/96:1305;2/08/96:1647)	31,44.797-106,23.624
3	.25	.41	810.00	-----	7145 Banana Tree w/m	(2/08/96:1314;2/08/96:1645)	31,44.824-106,23.658
4	.29	.47	630.00	-----	7141 Granite w/m	(2/08/96:1328;2/08/96:1642)	31,44.865-106,23.630
5	.32	.52	450.00	-.6620	7145 Tangerine	(2/08/96:1323;2/08/96:1640)	31,44.896-106,23.614
6	.40	.65	510.00	-.7076	7137 Sparrow	(2/08/96:1338;2/08/96:1636)	31,44.959-106,23.590
7	.44	.71	490.00	-.6488	7133 Orange Tree	(2/08/96:1343;2/08/96:1634)	31,44.980-106,23.567
8	.53	.85	420.00	-.6714	7121 Canary	(2/08/96:1347;2/08/96:1631)	31,45.063-106,23.550
9	.62	1.00	320.00	-.6539	7108 Alameda	(2/08/96:1352;2/08/96:1627)	31,45.134-106,23.507
10	.98	1.58	180.00	-.5878	On ditch N side Stiles - 100 ft W of Nichols	(2/08/96:1409;2/08/96:1619)	31,45.420-106,23.375
11	1.14	1.83	180.00	-.6069	New brick house on Dale Rd.	(2/08/96:1414;2/08/96:1612)	31,45.522-106,23.297
12	1.86	2.99	120.00	-.6168	Across from 6956 Marret	(2/08/96:1427;2/08/96:1611)	31,46.140-106,23.050
13	1.95	3.14	105.00	-.5819	At West end of Gray/White Bldg	(2/08/96:1436;2/08/96:1609)	31,46.220-106,23.014
14	2.10	3.38	92.00	-.5324	6971 Commerce St.	(2/08/96:1441;2/08/96:1604)	31,46.309-106,22.953
15	2.49	4.01	56.00	-.7844	NE corner Sears Parking Lot, space #13	(2/08/96:1455;2/08/96:1557)	31,46.266-106,22.797
16MP	3.04	4.89	46.00	-.6542	Night MP, Whitus & Catalpa NW corner	(2/08/96:1516;2/08/96:1549)	31,47.094-106,22.630
17	3.47	5.58	49.00	-.6859	Hopewell & Mettler middle of street	(2/08/96:1521;2/08/96:1545)	31,47.449-106,22.471
18	3.66	5.89	36.50	-.6647	SW corner Farah's factory store	(2/08/96:1533;2/08/96:1542)	31,47.584-106,22.398
19	3.85	6.20	33.00	-.5643	At storm drain on Hawkins Blvd.	(2/08/96:1535;2/08/96:1540)	31,47.737-106,22.308
20	4.04	6.50	39.00	-.4942	GPS Location on airport	(2/08/96:1040;2/08/96:1039)	31,47.673-106,22.156
21	4.87	7.84	28.00	-.5127	GPS Location on airport	(2/08/96:1013;2/08/96:1012)	31,48.546-106,21.849
22	5.86	9.43	22.00	-.4503	GPS Location on airport	(2/08/96:0950;2/08/96:0948)	31,49.351-106,21.520
23	5.15	8.29	18.50	-.5512	GPS Location on airport	(2/08/96:1000;2/08/96:1002)	31,50.395-106,21.058
24	9.38	15.10	10.10	-.5419	GPS Location on Ft. Bliss range	(2/08/96:1340;2/08/96:1341)	31,52.189-106,20.151
25	11.90	19.15	6.30	-.5563	GPS Location on Ft. Bliss range	(2/08/96:1400;2/08/96:1357)	31,53.656-106,19.485
26	12.50	20.12	5.40	-.6185	GPS Location on Ft. Bliss range	(2/08/96:1416;2/08/96:1418)	31,54.723-106,18.946
27	14.02	22.56	5.10	-.5462	GPS Location on Ft. Bliss range	(2/05/96:1438;2/08/96:1435)	31,55.963-106,18.924
28	18.70	30.09	2.70	-.4771	GPS Location on Ft. Bliss range	(2/05/96:1513;2/08/96:1515)	32,00.106-106,16.390

Figure 2-A (continued): KERP 1590 kHz F.I. Measurement Data, Radial 022 degrees

Pt. No.	(Miles)	Distance (km.)	N-DA (mV/m)	DA-N (mV/m)	Log 10 DA-N/ND	Point Description	NDA/DA Date & Time Times MST	GPS Coordinates (D,M,MMM - D,M,MMM)
29	21.10	33.96	1.85	.63	-.4678	GPS Location on Ft. Bliss range	(2/08/96:1548;2/08/96:1545)	32,01.684-106,15.654
30	24.90	40.07	1.30	.44	-.4705	GPS Location on Ft. Bliss range	(2/08/96:0937;2/08/96:0939)	32,04.766-106,15.179

No. of averaged points: 26
 Non-DA Inverse Field (mV/m at 1 km): 352.00
 Average log(da/nda) ratio: -.5888
 DA Inverse Field (mV/m at 1 km) 90.72

KILOMETERS FROM ANTENNA

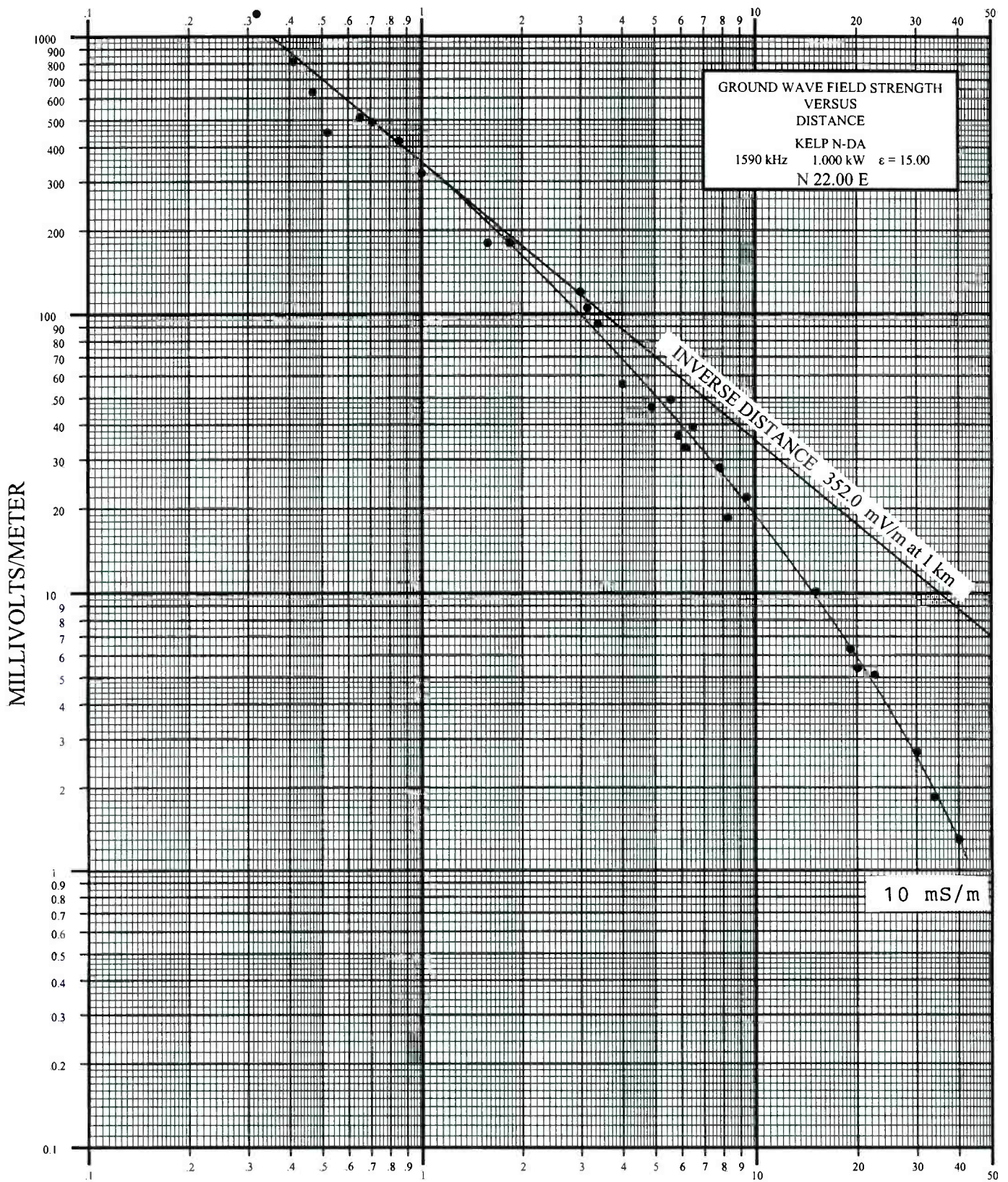


Figure 2-B

KILOMETERS FROM ANTENNA

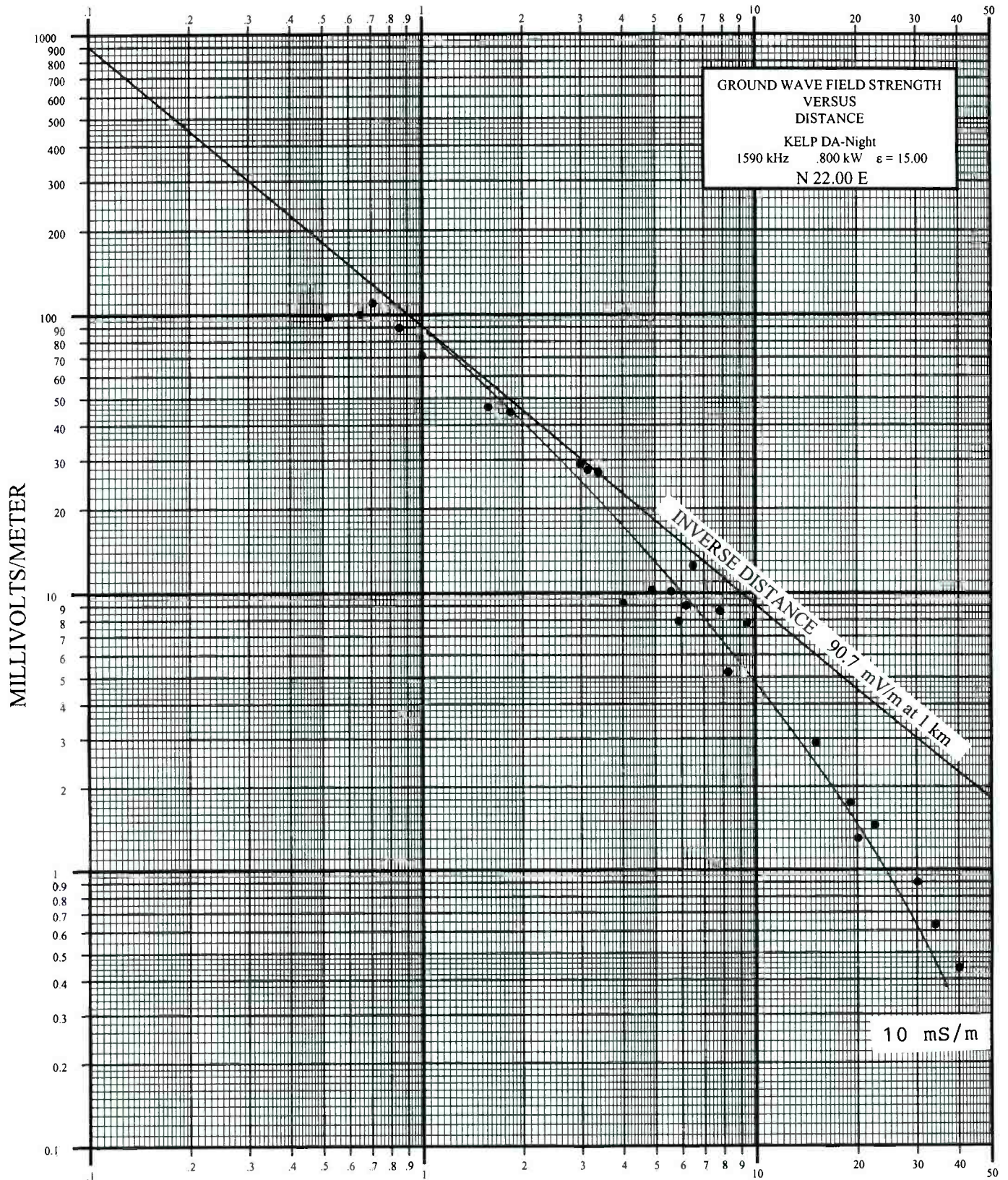


Figure 2-C

FIGURE 2-D

NIGHTTIME MONITOR POINT 22 DEGREES TRUE

From the KERP transmitter site, exit and proceed north on Springfield St. This turns into Croom Street; proceed to Alameda Avenue. Turn left on Alameda Avenue and proceed to Delta Street. Turn right on Delta and proceed to Trowbridge Drive. Turn left at the "Y" onto Trowbridge Drive and proceed to Gateway Blvd. east. Take Gateway Blvd. east to Hawkins Blvd. Turn left on Hawkins Blvd and proceed to Catalpa Lane. Turn left on Catalpa Lane and proceed to the intersection with Whitus Drive. The monitor point is located at the northwest corner of the intersection of Catalpa Lane and Whitus Drive. The distance from the transmitter is 3.04 miles (4.89 km). The GPS coordinates of this location are 31, 47', 5.6" N.Lat., 106, 22', 5.6" W. Lon. The measured nighttime field intensity at this location is 10.2 mV/m.



Figure 3-A: Tabulation of Field Intensity Measurement Data

R. Morgan Burrow, P.E. & Associates, P.C.
17221 Beauvoir Blvd., Derwood, MD 20855

KELP 1590 kHz 0.8/5.0 kW DA-2-U El Paso, Texas Bearing: 47 deg. Modes: Non-DA, DA-Day & DA-Night

Pt. No.	Distance (Miles)	Non-DA (mV/m)	DA-D (mV/m)	DA-N (mV/m)	Log 10 DA-D/NDA	Log 10 DA-N/NDA	Point Description	Measurement Date & Time	GPS Coordinates
1	.16	1250.00	2680.00	-----	.3312	-----	Date Tree RD 100 Ft E by bus stop	(5/11/96:1233;2/13/96:1453; DNA	) 31,44.712-106,23.577
2	.29	760.00	1550.00	-----	.3095	-----	Middle of street 7169 Granite	(5/11/96:1231;2/14/96:1451; DNA	) 31,44.800-106,23.529
3	.37	500.00	1150.00	-----	.3617	-----	174 Rio Monte	(5/11/96:1230;2/14/96:1449; DNA	) 31,44.808-106,23.450
4	.55	300.00	700.00	42.00	.3680	-.8539	Back of shoe store off Alameda	(5/11/96:1227;2/14/96:1445;5/11/96:1834)	31,44.974-106,23.450
5	.62	251.00	590.00	39.00	.3712	-.8086	7171 Alameda at Christian Ministries	(5/11/96:1226;2/14/96:1443;5/11/96:1833)	31,44.977-106,23.792
6	.93	180.00	415.00	28.00	.3628	-.8081	Franklin Rd. 50 ft. east of Bucher	(5/11/96:1218;5/11/96:1436;5/11/96:1827)	31,45.164-106,23.014
7	.99	120.00	270.00	23.50	.3522	-.7081	Bucher at Rena, Pink bldg Silver Platter	(5/11/96:1217;2/14/96:1434;2/14/96:1603)	31,45.245-106,22.975
8	1.03	115.00	260.00	24.50	.3543	-.6715	404 Bucher	(5/11/96:1215;2/14/96:1432;2/14/96:1605)	31,45.276-106,22.936
9	1.12	129.00	310.00	20.00	.3808	-.8096	Bucher SE corner North Loop	(5/11/96:1214;2/14/96:1431;5/11/96:1823)	31,45.294-106,22.897
10	1.37	111.00	285.00	26.00	.4095	-.6303	Commerce Queen Dr, marker on curb	(5/11/96:1209;2/13/96:1419;2/14/96:1610)	31,45.413-106,22.727
11	1.52	2.45	110.00	231.00	.3222	-.5643	China St, GPS location	(5/11/96:1207;2/13/96:1422;2/14/96:1613)	31,45.497-106,22.611
12	1.68	2.70	70.00	220.00	.4973	-.4058	Hawkins Blvd., second tree	(5/11/96:1201;2/13/96:1417;2/14/96:1615)	31,45.612-106,22.476
13	1.86	2.99	78.00	205.00	-----	-.4197	7213 Benson	(5/11/96:1156;2/13/96:1410; DNA	) 31,45.714-106,22.326
14	2.05	3.30	70.00	195.00	20.00	-.4449	7216 Flagstaff pwr lines	(5/11/96:1153;2/13/96:1407;2/14/96:1623)	31,45.842-106,22.196
15	2.22	3.57	51.00	129.00	10.90	-.4030	Winslow parking lot DPS nw corner	(5/11/96:1151;2/13/96:1404;2/14/96:1625)	31,45.924-106,22.054
16NP	2.31	3.72	88.00	135.00	18.00	-.1859	N-HP, Romeos, 9109 Gateway W., W sde bldg	(5/11/96:1147;2/13/96:1356;2/14/96:1629)	31,46.020-106,21.982
17	2.90	4.67	47.50	128.00	14.50	-.4305	2441 Cairlock	(5/11/96:1140;2/13/96:1350;2/14/96:1635)	31,46.354-106,21.062
19	3.88	6.24	36.00	83.00	7.80	-.6642	10104 Alburn, Church of Christ	(5/11/96:1135;2/13/96:1336;2/14/96:1643)	31,46.924-106,20.827
20	4.43	7.13	32.10	85.00	8.40	-.5822	3705 Limerick	(5/11/96:1128;2/13/96:1404;2/14/96:1625)	31,47.259-106,20.437
21	5.47	8.80	31.50	80.00	6.40	-.6921	10612 Drillstone	(5/11/96:1125;2/13/96:1325;2/14/96:1646)	31,47.599-106,19.076
22	5.60	9.01	25.90	58.00	5.10	-.7057	Middle of Montana marker on pole	(5/11/96:1120;2/13/96:1148;2/14/96:1647)	31,47.936-106,19.542
23	6.14	9.88	20.50	48.00	5.20	-.5958	GPS location in desert (painted stake)	(5/11/96:1115;2/13/96:1124;2/14/96:1226)	31,48.292-106,19.161
24	7.08	11.39	17.50	43.00	3.80	-.6633	GPS location in desert	(2/12/96:1241;2/13/96:1242;2/14/96:1239)	31,48.841-106,18.435
26	7.77	12.50	13.00	32.00	2.65	-.6907	S of Loop Range, S of pwr lines	(2/20/96:1459;2/20/96:1500;2/20/96:1458)	31,49.246-106,17.920
27	8.64	13.90	11.50	28.00	2.35	-.6896	GPS Location on range (New Mexico)	(2/20/96:1459;2/20/96:1448;2/20/96:1450)	31,49.767-106,17.270
28	8.89	14.31	11.50	29.50	2.70	-.6293	GPS Location on range	(2/20/96:1440;2/20/96:1441;2/20/96:1439)	31,49.000-106,17.093
29	10.20	16.42	9.80	23.00	2.25	-.6390	GPS Location on range	(2/20/96:1426;2/20/96:1425;2/20/96:1427)	31,50.663-106,16.119
30	11.40	18.35	6.80	16.50	1.30	-.7186	GPS Location on range	(2/20/96:1412;2/20/96:1413;2/20/96:1411)	31,51.359-106,15.242

Figure 3-A (continued): F.I.M. Data, KELP Radial 047 degrees

Pt. No.	Distance (Miles)	Distance (km.)	Non-DA (mV/m)	DA-D (mV/m)	DA-N (mV/m)	Log 10 DA-D/NDA	Log 10 DA-N/NDNA	Pt. Description	Measurement Date & Time	GPS Coordinates
31	15.30	24.62	3.70	9.80	.86	.4230	-.6337	GPS Location on range	(2/20/96:1349;2/20/96:1348;2/20/96:1350)	31,53.762-106,12.246
32	16.70	26.88	2.95	7.80	-----	.4223	-----	GPS Location on range	(2/20/96:1336;2/20/96:1338; DNA)	31,54.524-106,11.312
33	18.60	29.93	1.61	4.50	.36	.4464	-.6505	Corral tank range	(2/20/96:1241;2/20/96:1240;2/20/96:1243)	31,55.645-106,09.862
34	19.70	31.70	1.45	3.70	.33	.4068	-.6429	GPS Location on range	(2/20/96:1223;2/20/96:1224;2/20/96:1221)	31,56.331-106,09.862
35	20.30	32.67	1.35	3.50	.29	.4137	-.6679	GPS Location on range	(2/20/96:1207;2/20/96:1205;2/20/96:1208)	31,56.649-106,08.602
36	22.00	35.41	.96	2.25	.21	.3699	-.6601	GPS Location on range	(2/20/96:1144;2/20/96:1145;2/20/96:1142)	31,57.630-106,08.602

No. of day data points: 34

No. of night data points: 29

Non-Directional Inverse field (mV/m at 1 km): 331.40

Day Inverse Field (mV/m at 1 km) 800.90

Night Inverse Field (mV/m at 1 km) 72.13

KILOMETERS FROM ANTENNA

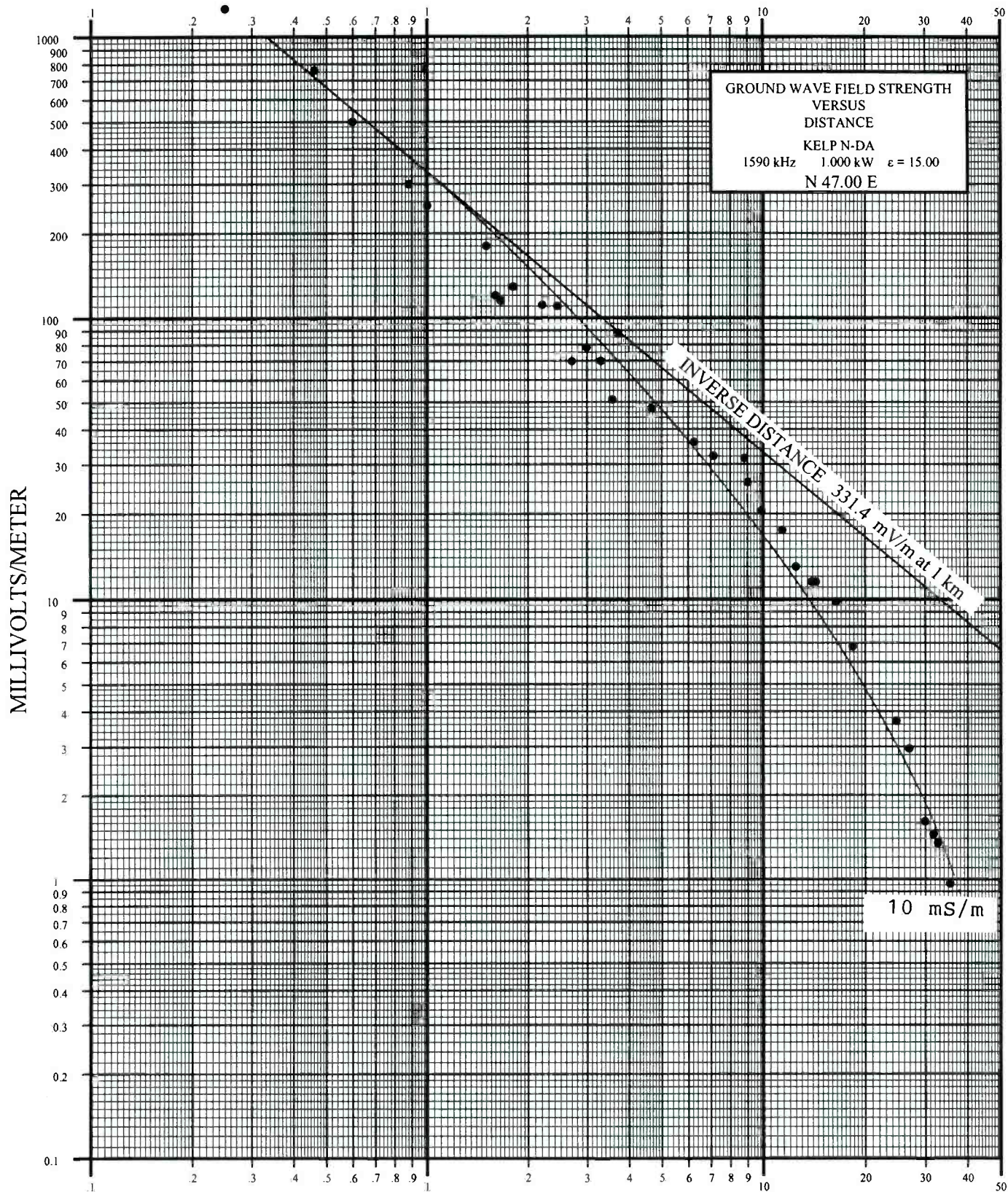


Figure 3-B

KILOMETERS FROM ANTENNA

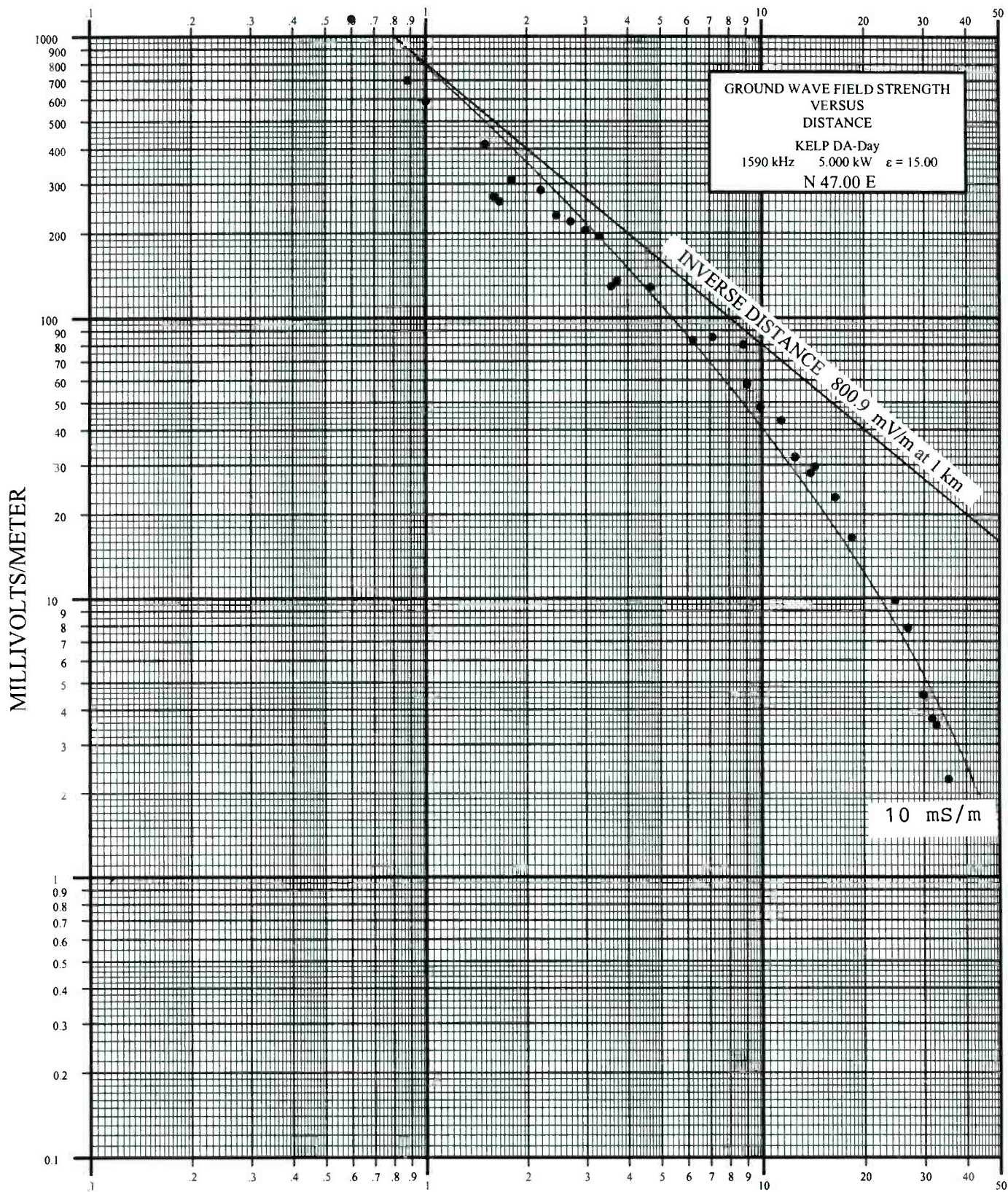


Figure 3-C

KILOMETERS FROM ANTENNA

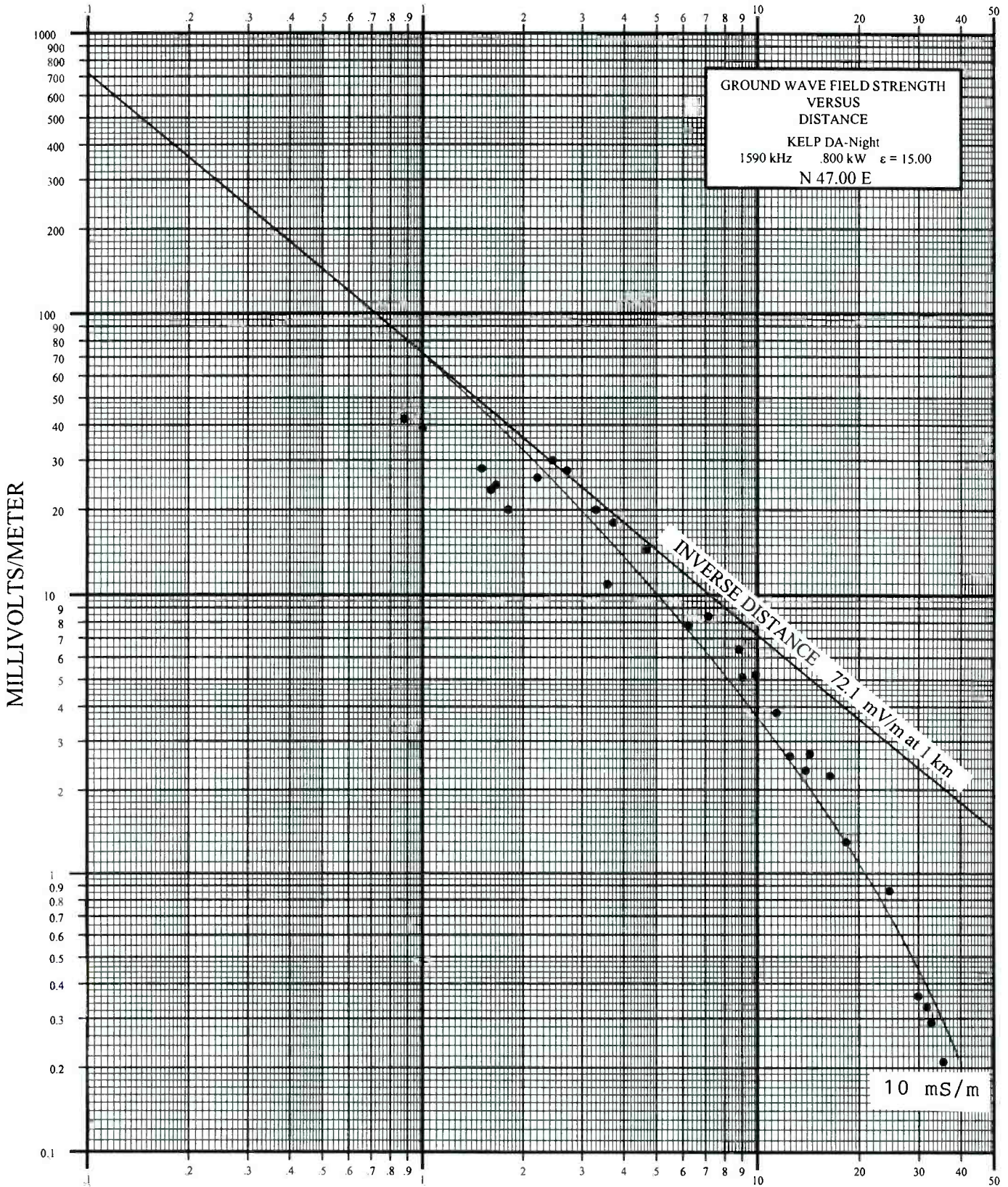


Figure 3-D

FIGURE 3-E

NIGHTTIME MONITOR POINT N-47 DEGREES TRUE

From Monitor Point 22 degrees true, proceed east on Catalpa Lane and return to Hawkins Blvd. Turn right on Hawkins Blvd. and proceed south to Viscount Blvd. Turn left on Viscount Blvd. and proceed east to Gateway Blvd. West. Turn right on Gateway Blvd. West and proceed to the front of Romeo's night club at 9101 Gateway Blvd. West. The monitor point is at a marked location at the west edge of the parking lot directly left (west) of the front of the building near a small pine tree. The distance from the transmitter is 2.31 miles (3.72 km). The GPS coordinates at this location are 31, 46', 01.2" N. Lat., 106, 21', 58.9" W. Lon. The nighttime field intensity at this location is 18 mV/m.



Figure 4-R: Tabulation of Field Intensity Measurement Data

R. Morgan Burrow, P.E. & Associates, P.C.
17221 Beauvoir Blvd., Derwood, MD 20855

KELP 1590 kHz 0.8/5.0 kW DA-2-U El Paso, Texas Bearing: 72 deg. Mode: Night

Pt No.	Distance (Miles)	Non-DA (mV/m)	DA-N (mV/m)	Log 10 Ratio	Point Description	NDA/DA Date & Time Times MST	GPS Coordinates (D,M,MMM - D,M,MMM)
1	.12	20	1160.00	----	300 ft off Buse, S side Ponce (All pts on radial in US)	(2/06/96:1219; DNA	) 31,44.647-106,23.646
2	.32	.52	500.00	----	170 Polo Inn corner of lot	(2/06/96:1224; DNA	) 31,44.721-106,23.443
3	.44	.71	445.00	----	7313 Barker	(2/06/96:1228; DNA	) 31,44.729-106,23.729
4	.65	1.04	301.00	108.00	157 Wanner St corner house	(2/06/96:1232;2/08/96:1000)	31,44.807-106,23.126
5	.73	1.17	252.00	79.00	Parking lot Motel N side of Alameda	(2/06/96:1245;2/08/96:0953)	31,44.879-106,23.066
6	1.12	1.80	154.00	50.00	GPS location, Man hole cover Franklin RD	(2/06/96:1255;2/08/96:0943)	31,44.938-106,23.668
7	1.42	2.29	117.00	44.00	North loop (Rt 375) 150 ft from stop light	(2/06/96:1308;2/08/96:1641)	31,45.024-106,22.394
8	1.57	2.53	105.00	33.00	At ent, of Sadance saver center	(2/06/96:1316;2/08/96:1611)	31,45.056-106,22.266
9 MP	1.86	2.99	118.00	39.00	N-WP, Marked loc in parking lot, EPCC Valle Verde Campus	(2/06/96:1320;2/08/96:1638)	31,45.148-106,21.588
10	2.88	4.63	68.00	24.40	Hacienda Packpod	(2/06/96:1345;2/08/96:1633)	31,45.283-106,21.315
11	3.06	4.92	51.00	18.40	Corner of Cackile Wood 100 E Sumac	(2/06/96:1352;2/08/96:1624)	31,45.454-106,20.842
12	3.73	6.00	47.00	15.00	NE corner of Vista Algne	(2/06/96:1359;2/08/96:1618)	31,45.638-106,20.147
13	4.19	6.74	26.50	10.00	Apt. in front of 142 Casa del Sol	(2/06/96:1447;2/08/96:1611)	31,45.752-106,19.685
14	4.59	7.39	33.00	11.60	2244 Rocky Mountain Mortgage	(2/06/96:1423;2/08/96:1604)	31,45.890-106,19.310
15	5.62	9.04	17.00	6.70	South side of Target store on median	(2/06/96:1434;2/08/96:1588)	31,46.455-106,18.318
16	6.46	10.40	24.00	8.50	11561 Townlake & Lee	(2/06/96:1441;2/08/96:1550)	31,46.348-106,17.497
17	7.52	12.10	16.50	5.70	East desert by Jobe Concrete	(2/06/96:1453;2/08/96:1537)	31,46.677-106,16.410
18	9.60	15.45	8.40	2.70	6 miles south on Zaragosa	(2/06/96:1539;2/08/96:1444)	31,47.320-106,14.502
19	10.40	16.74	9.10	3.65	GPS location on gas line road, SE of Montana Ave	(2/06/96:1602;2/08/96:1513)	31,47.452-106,13.603
20	12.11	19.49	6.20	2.30	GPS location, goat trail SE Montana	(2/06/96:1646;2/08/96:1651)	31,47.897-106,11.961
21	13.80	22.21	4.90	1.74	In center of street, corner of John Henry	(2/06/96:1119;2/08/96:1344)	31,48.716-106,10.976
22	14.20	22.85	4.70	1.65	100 ft N of Santa Ban Permendoas	(2/06/96:1110;2/08/96:1349)	31,48.428-106,10.095
23	15.00	24.14	3.90	1.42	Achia off Bleau	(2/06/96:1149;2/08/96:1330)	31,48.685-106,09.166
24	17.20	27.68	1.65	.52	GPS location, Goat trail N.Red Sands, S Montana	(2/06/96:1230;2/08/96:1300)	31,49.335-106,07.064
25	18.50	29.77	1.15	.35	GPS location, Desert Storm Rd.	(2/06/96:1312;2/08/96:1312)	31,49.567-106,05.892

No. of averaged points: 22
 Non-DA Inverse Field (mV/m at 1 km): 280.79
 Average log(da/nda) ratio: -.4593
 DA Inverse Field (mV/m at 1 km) 97.51

KILOMETERS FROM ANTENNA

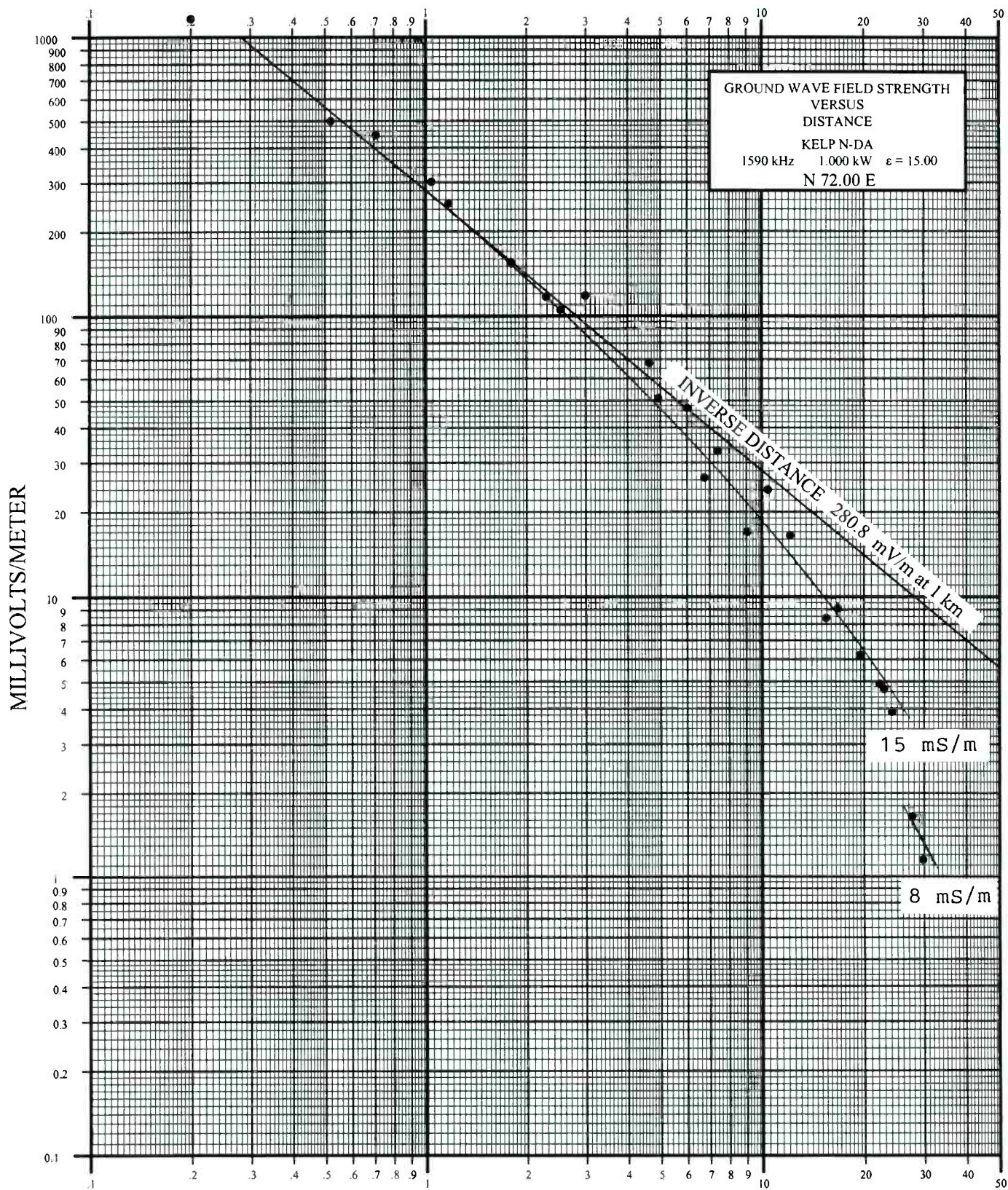


Figure 4-B

KILOMETERS FROM ANTENNA

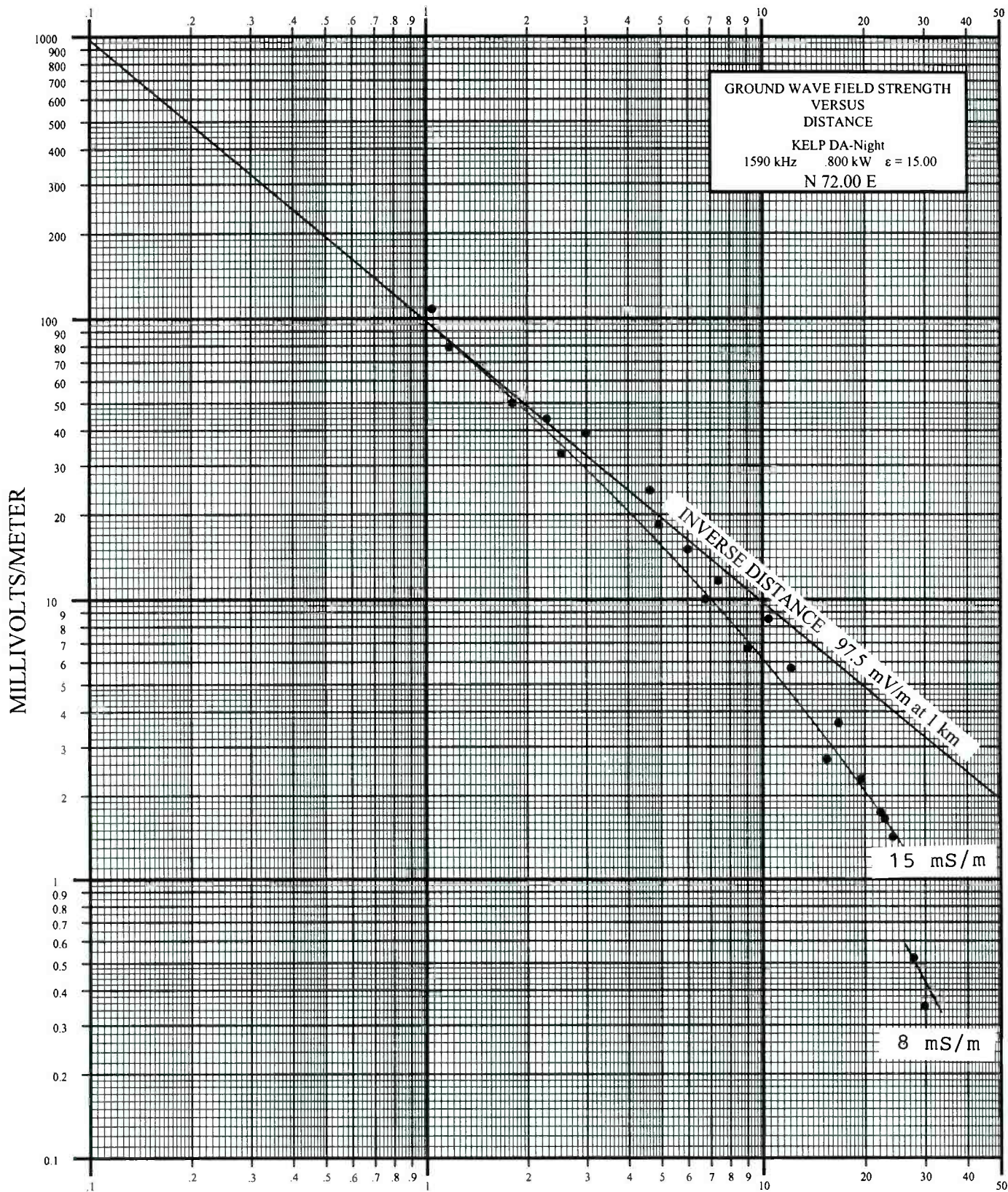


Figure 4-C

FIGURE 4-D

NIGHTTIME MONITOR POINT N-72 DEGREES TRUE

From the nighttime 47 degree monitor point, proceed west on Gateway Blvd. West to Larry Mahan Drive. Turn right on Larry Mahan Drive and proceed to Viscount Blvd. Turn right on Viscount Blvd. Proceed south on Viscount Blvd. under Interstate 10. Viscount Blvd. changes name to Hunter Drive south of Interstate 10. Proceed on Hunter Drive to the entrance of the Valle Verde campus of the El Paso Community College. The monitor point is marked with paint in the southeast student parking lot. The distance from the transmitter is 1.86 miles (2.99 km). The GPS coordinates at this location are 31, 45', 8.9" N. Latitude; 106, 21', 35.3" W. Longitude. The field intensity at this location is 39 mV/m.



Figure 5-A: Tabulation of Field Intensity Measurement Data

KELP 1590 kHz 0.8/5.0 kW DA-2-U El Paso, Texas Bearing: 90 deg. Modes: Non-DA, DA-Day, DA-Night

Pt. No.	Distance (Miles)	Non-DA (mV/m)	DA-D (mV/m)	DA-N (mV/m)	Log 10 DA-D/NDA	Log 10 DA-N/DA	Point Description	Measurement Date & Time NDA, DA-D, DA-N; Times MST/MDT	GPS Coordinates (D,M,MMN - D,M,MMH)
1	.05	.08	1800.00	-----	-----	-----	7159 Fatima El Paso, Tx	(2/19/96:1349; DNA ; DNA)	31,44.614-106,23.681
2	.19	.31	1150.00	-----	-----	-----	Int. 20 ft.S. Rio Monte & Founce, El Pas	(2/19/96:1352; DNA ; DNA)	31,44.621-106,23.598
3	.27	.44	570.00	-----	-----	-----	192 Polo Inn	(2/19/96:1345; DNA ; DNA)	31,44.614-106,23.437
4	.50	.81	350.00	900.00	.4102	-.2540	160 Barker, front	(2/19/96:1343;5/16/96:1148;2/19/96:1406)	31,44.611-106,23.201
5	.71	1.15	240.00	710.00	.4710	-.5351	143 Coronado, front	(2/19/96:1336;5/16/96:1141;5/16/96:1531)	31,44.615-106,23.985
6	.85	1.36	230.00	600.00	.4164	-.1915	(Marked) Durrill back gate, trailer lot	(2/19/96:1329;5/16/96:1138;2/19/96:1410)	31,44.636-106,22.836
7	1.29	2.08	160.50	440.00	.4380	-.2012	7440 Stiles marker at spd. N. side	(2/19/96:1326;5/16/96:1135;2/19/96:1419)	31,44.263-106,22.394
8	1.34	2.16	140.50	370.00	.4205	-.2132	1026 fire hydrant NW side Franklin Cir.	(2/19/96:1321;5/16/96:1131;2/19/96:1422)	31,44.635-106,22.351
9	1.86	2.99	90.00	230.00	.4075	-.1654	Off N. Loop (Rt 375) 45 Half Moon	(2/19/96:1318;5/16/96:1103;2/19/96:1427)	31,44.620-106,21.819
10	2.49	4.01	60.30	180.00	.4750	-.1176	SE corner Hacienda & Giles	(2/19/96:1308;5/16/96:1058;5/16/96:1515)	31,44.611-106,21.201
11	2.97	4.78	60.20	170.00	.4509	-.2233	SE corner Hermosillo & Yarbrough	(2/19/96:1220;5/16/96:1055;2/19/96:1435)	31,44.626-106,20.679
12	3.51	5.65	40.20	120.00	.4750	-.2151	SE corner at Gilbert & Stanley	(2/19/96:1216;5/16/96:1050;2/19/96:1439)	31,44.612-106,20.136
13	4.14	6.66	28.50	91.00	.5042	-.2645	Rojas N of Carquest C-12	(2/19/96:1212;5/16/96:1042;2/19/96:1444)	31,44.620-106,19.479
14	4.93	7.93	30.00	90.00	.4771	-.3010	1451 Goodyear, east side of street	(2/19/96:1204;5/16/96:1038;2/19/96:1448)	31,44.628-106,18.699
15	5.52	8.88	20.10	70.00	.5419	-.2989	Left side of Pelicano 100' George Dieter	(2/19/96:1201;5/16/96:1036;2/19/96:1453)	31,44.618-106,18.033
16	6.16	9.91	15.50	52.00	.5257	-.2361	11824 W corner of Circle Prado del Sol	(2/19/96:1156;5/16/96:1033;2/19/96:1455)	31,44.631-106,17.429
17	7.52	12.10	13.20	33.50	.4045	-.2068	1/2 mi N of school on North Loop 375	(2/19/96:1141;2/17/96:1301;2/19/96:1507)	31,44.607-106,16.006
18	9.57	15.40	8.60	20.50	.3773	-.2443	GPS location on Rd. inter. on desert	(2/19/96:1325;2/17/96:1321;2/19/96:1324)	31,44.641-106,13.974
19	10.70	17.22	8.60	22.00	.4079	-.2102	GPS location, desert Rd. N/S	(2/19/96:1341;2/17/96:1342;2/19/96:1340)	31,44.615-106,12.945
20	13.24	21.31	4.70	12.00	.4071	-.2571	GPS location, desert trail	(2/19/96:1408;2/17/96:1407;2/19/96:1409)	31,44.625-106,10.258
21	14.23	22.90	3.51	10.05	.4569	-.1836	GPS location, desert trail	(2/19/96:1420;2/17/96:1421;2/19/96:1418)	31,44.605-106,09.237
22	15.80	25.43	2.50	7.20	.4594	-.1938	GPS location, desert trail	(2/19/96:1435;2/17/96:1434;2/19/96:1436)	31,44.612-106,07.621
23	17.60	28.32	1.65	4.90	.4727	-----	GPS location, desert trail	(2/19/96:1503;2/17/96:1506; DNA)	31,44.597-106,05.004
24	18.60	29.93	1.45	3.90	.4297	-----	GPS location, desert trail	(2/19/96:1516;2/17/96:1514; DNA)	31,44.602-106,04.792
25	20.31	32.69	1.16	2.90	.3979	-----	GPS location, desert trail	(2/19/96:1530;2/17/96:1531; DNA)	31,44.808-106,03.031
27	22.00	35.41	.72	1.99	.4415	-.1946	GPS location on desert trail impassable	(2/19/96:1604;2/17/96:1606;2/19/96:1603)	31,44.590-106,01.294

No. of day data points: 23
 No. of night data points: 20
 Non-Directional Inverse field (mV/m at 1 km): 277.87
 Day Inverse Field (mV/m at 1 km) 776.56
 Night Inverse Field (mV/m at 1 km) 161.58

KILOMETERS FROM ANTENNA

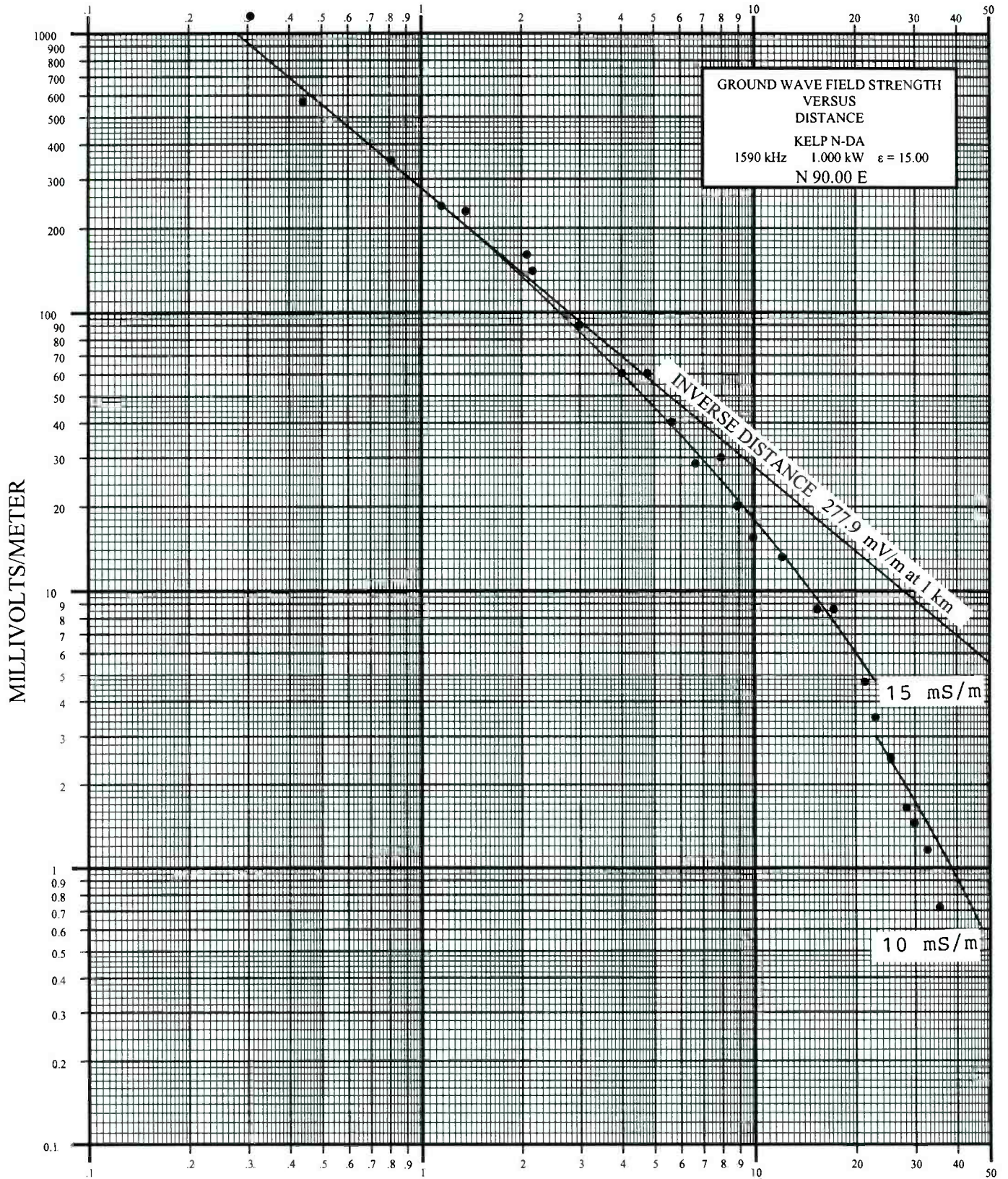


Figure 5-B

KILOMETERS FROM ANTENNA

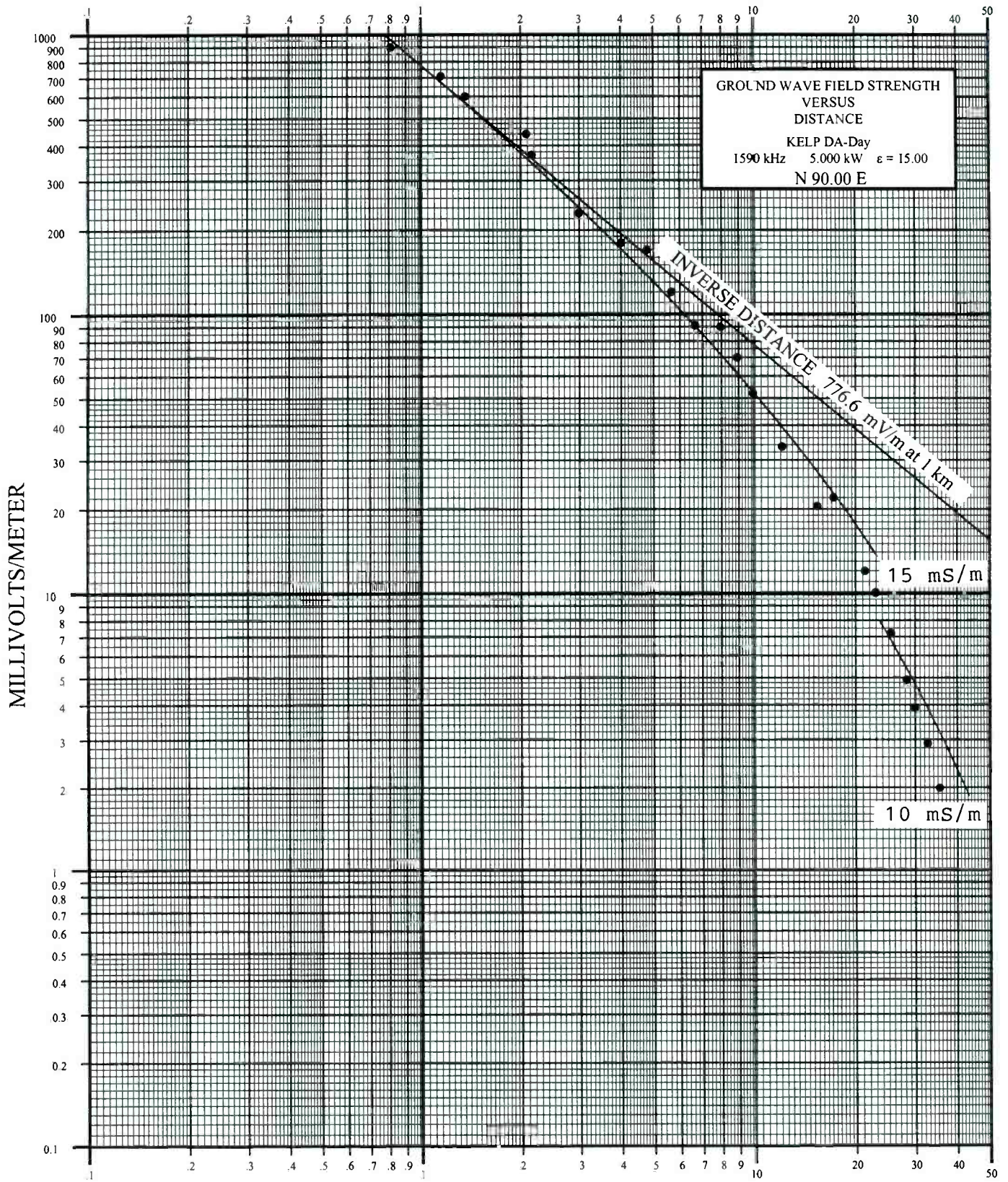


Figure 5-C

KILOMETERS FROM ANTENNA

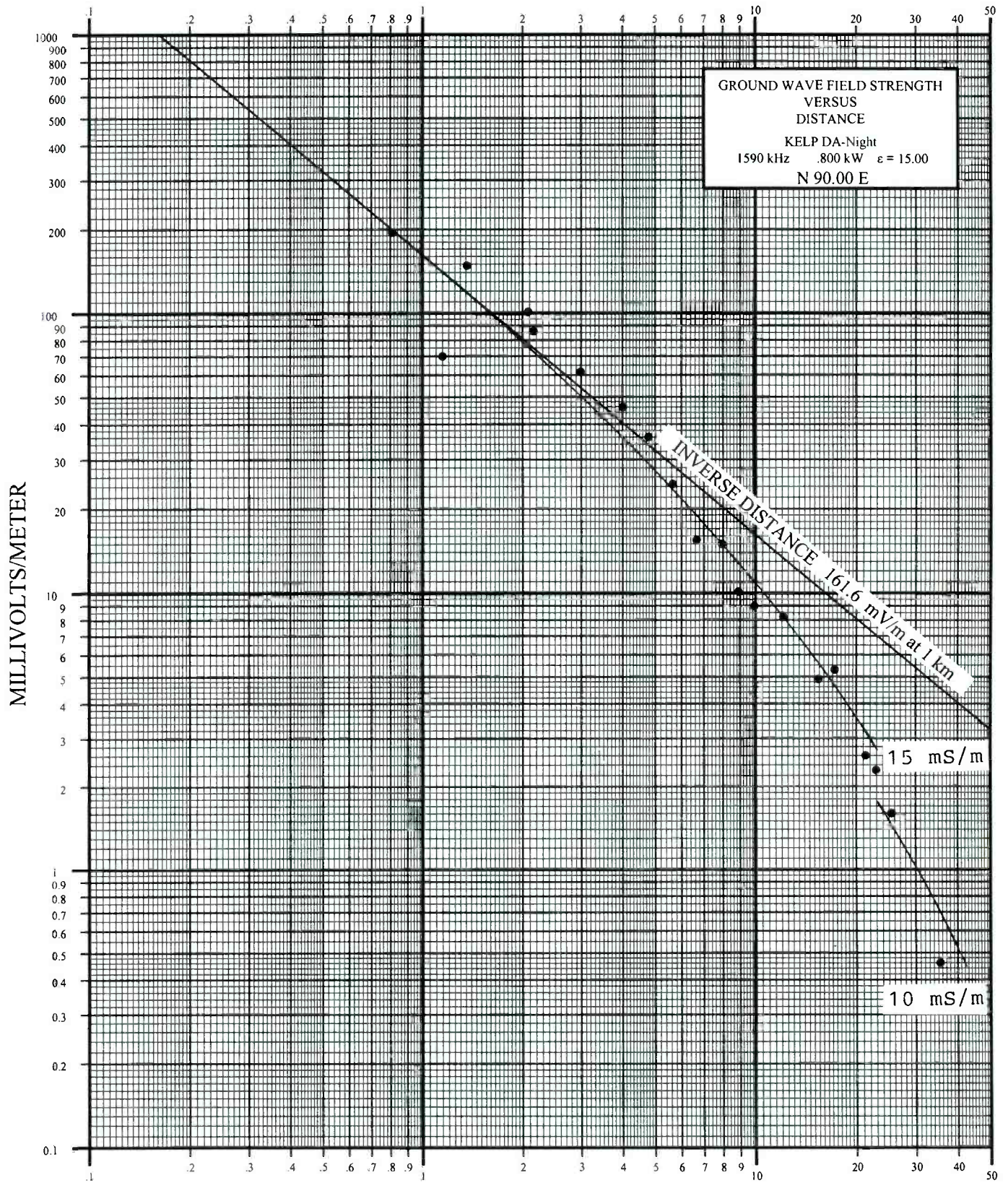


Figure 5-D

Figure 6-A: Tabulation of Field Intensity Measurement Data

R. Morgan Burrow, P.E. & Associates, P.C.
17221 Beauvoir Blvd., Derwood, MD 20855

KELP 1590 kHz 0.8/5.0 kW DA-2-U El Paso, Texas Bearing: 131.0 deg. Modes: Non-DA, DA-Day, DA-Night

Pt. No.	Distance (Miles)	Non-DA (mV/m)	DA-D (mV/m)	DA-N (mV/m)	Log 10 DA-D/NDA	Log 10 DA-N/DA	Point Description	Measurement Date & Time		GPS Coordinates (D,M,S - D,M,S)
								NDA, DA-D, DA-N; Times MDT		
1	.72	281.00	450.00	320.00	.2045	.0564	Border Hwy between Midway marker on road	(5/17/96:0919;5/17/96:1140;5/17/96:1303)	31,44.196-106,23.229	
2	1.57	120.00	260.00	145.00	.3358	.0822	7757 Hockney on W/M	(5/17/96:0926;5/17/96:1137;5/17/96:1313)	31,43.737-106,22.568	
3	1.62	115.00	250.00	130.00	.3372	.0532	433 Bernadine	(5/17/96:0927;5/17/96:1135;5/17/96:1314)	31,43.700-106,22.539	
4	1.65	112.00	240.00	150.00	.3310	.1269	421 Bissonet	(5/17/96:0929;5/17/96:1134;5/17/96:1316)	31,43.669-106,22.486	
5	1.83	101.00	231.00	130.00	.3593	.1096	W at Knight St South middle of tennis ct	(5/17/96:0931;5/17/96:1130;5/17/96:1318)	31,43.567-106,22.370	
6	1.10	177.00	210.00	130.00	.3222	.1139	7937 Jersey	(5/17/96:0934;5/17/96:1129;5/17/96:1320)	31,43.488-106,22.272	
7	2.00	109.00	220.00	131.00	.3050	.0798	7925 Broadway	(5/17/96:0936;5/17/96:1127;5/17/96:1322)	31,43.482-106,22.228	
8	2.21	3.56	90.00	190.00	.115.00	.3245	404 Bawia Kinon	(5/17/96:0946;5/17/96:1124;5/17/96:1324)	31,43.345-106,22.089	
9	2.50	4.02	62.00	160.00	100.00	.4117	429 Riverside Dr	(5/17/96:0949;5/17/96:1122;5/17/96:1326)	31,43.177-106,21.870	
10	2.81	4.52	48.00	80.00	90.00	.2218	8104 Starn	(5/17/96:0955;5/17/96:1119;5/17/96:1330)	31,42.998-106,21.619	
11	3.11	5.01	46.00	120.00	100.00	.4164	525 Gregerson	(5/17/96:0958;5/17/96:1114;5/17/96:1333)	31,42.843-106,21.591	
12	3.40	5.47	44.00	111.00	115.00	.4019	Corner of Valley View W of MLE	(5/17/96:1002;5/17/96:1112;5/17/96:1336)	31,42.668-106,21.191	
13	3.80	6.12	34.00	86.00	86.00	.4030	204 Whittier	(5/17/96:1005;5/17/96:1110;5/17/96:1338)	31,42.493-106,20.979	
14	4.50	7.24	30.00	65.00	64.00	.3358	Corner Irwin & Dorbrandt	(5/17/96:1010;5/17/96:1059;5/17/96:1344)	31,42.047-106,20.370	
15	4.93	7.93	24.50	50.00	50.00	.3098	8817 Old Country Rd	(5/17/96:1017;5/17/96:1056;5/17/96:1348)	31,41.755-106,20.030	
16	5.60	9.01	29.50	56.00	56.00	.2784	Parking lot of East Wings 3rd know	(5/17/96:1024;5/17/96:1052;5/17/96:1352)	31,41.426-106,19.654	
17	6.20	9.98	22.50	43.00	43.00	.2813	938 Karnes W side of road	(5/17/96:1029;5/17/96:1048;5/17/96:1355)	31,41.031-106,19.018	
18	7.00	11.27	19.00	38.00	30.00	.3010	100 yd. of Glenwood pump plant	(5/17/96:1033;5/17/96:1043;5/17/96:1402)	31,40.508-106,17.033	
19	7.83	12.60	11.50	33.00	19.80	.4578	Neuarez J&S salvage 150 ft	(5/17/96:1037;5/17/96:1040;5/17/96:1406)	31,40.062-106,16.037	
20	8.90	14.32	13.10	28.00	14.50	.3299	200 ft N of RR Rio Vista	(2/09/96:1431;2/10/96:1237;2/11/96:1559)	31,39.425-106,16.037	
21	11.31	18.20	7.40	15.50	9.60	.3211	Robert Lojas off of Baum Rd	(2/09/96:1446;2/10/96:1247;2/11/96:1550)	31,38.039-106,15.196	
22	12.40	19.96	7.70	14.00	9.90	.2596	683 Worsham Rd	(2/09/96:1454;2/10/96:1303;2/11/96:1545)	31,37.431-106,14.421	
23	13.60	21.89	6.00	11.50	7.80	.2825	GPS location, Young John Rd (Sugden)	(2/09/96:1504;2/10/96:1256;2/11/96:1541)	31,36.680-106,13.454	
24	15.20	24.46	5.80	10.80	7.10	.2700	GPS loc., KPAS FM mark at spot SW of twr	(2/09/96:1520;2/10/96:1315;2/11/96:1421)	31,35.778-106,12.320	
25	16.20	26.07	4.10	7.20	5.00	.2445	GPS loc., goat trail E of KPAS tower	(2/09/96:1546;2/10/96:1335;2/11/96:1340)	31,35.229-106,11.529	
26	17.14	27.58	3.10	6.20	3.50	.3010	GPS location at stake marker	(2/09/96:1645;2/09/96:1645;2/10/96:1350)	31,34.611-106,10.621	
27	18.10	29.13	2.50	4.70	3.00	.2742	4 miles W of mile post 46 on I-10 west	(2/09/96:1632;2/09/96:1501;2/10/96:1503)	31,34.072-106,10.108	
28	22.30	35.89	1.10	2.50	1.20	.3565	San Filepe Rd N of Fabens, Tx	(2/09/96:1613;2/09/96:1452;2/10/96:1448)	31,31.647-106,06.942	

No. of day data points: 28

No. of night data points: 28

Non-Directional Inverse field (mV/m at 1 km): 276.93

Day Inverse Field (mV/m at 1 km) 579.38

Night Inverse Field (mV/m at 1 km) 408.34

KILOMETERS FROM ANTENNA

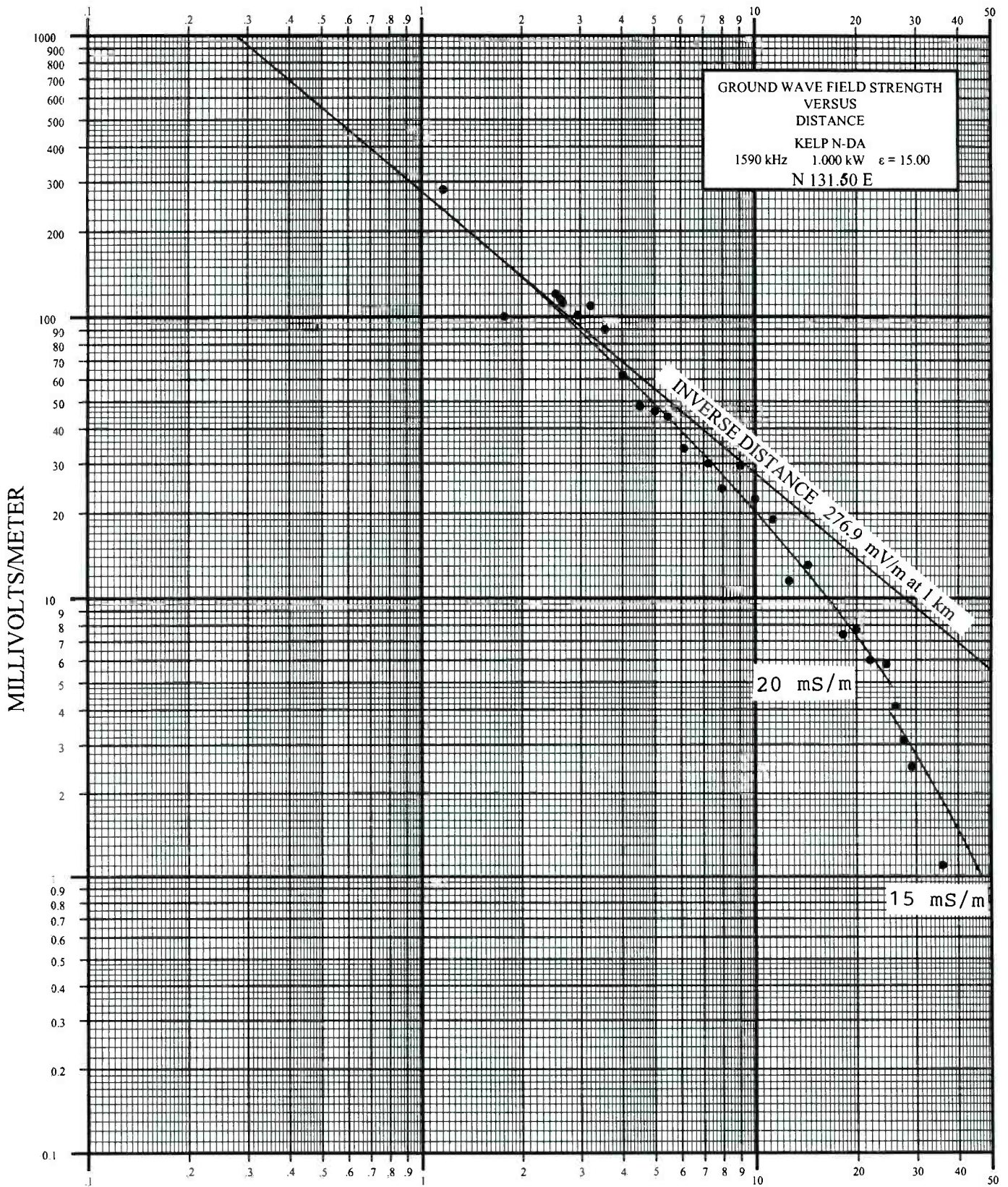


Figure 6-B

KILOMETERS FROM ANTENNA

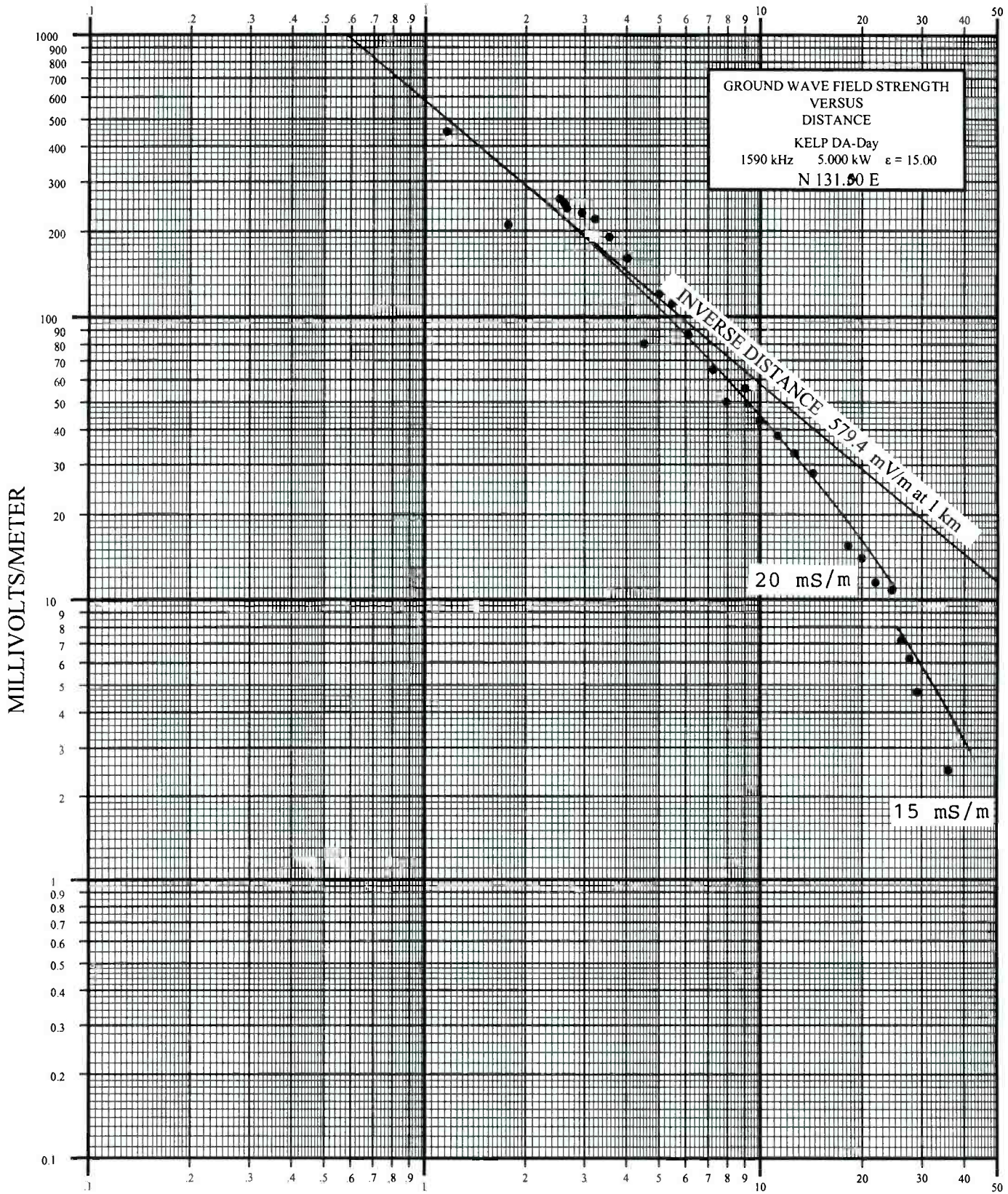


Figure 6-C

KILOMETERS FROM ANTENNA

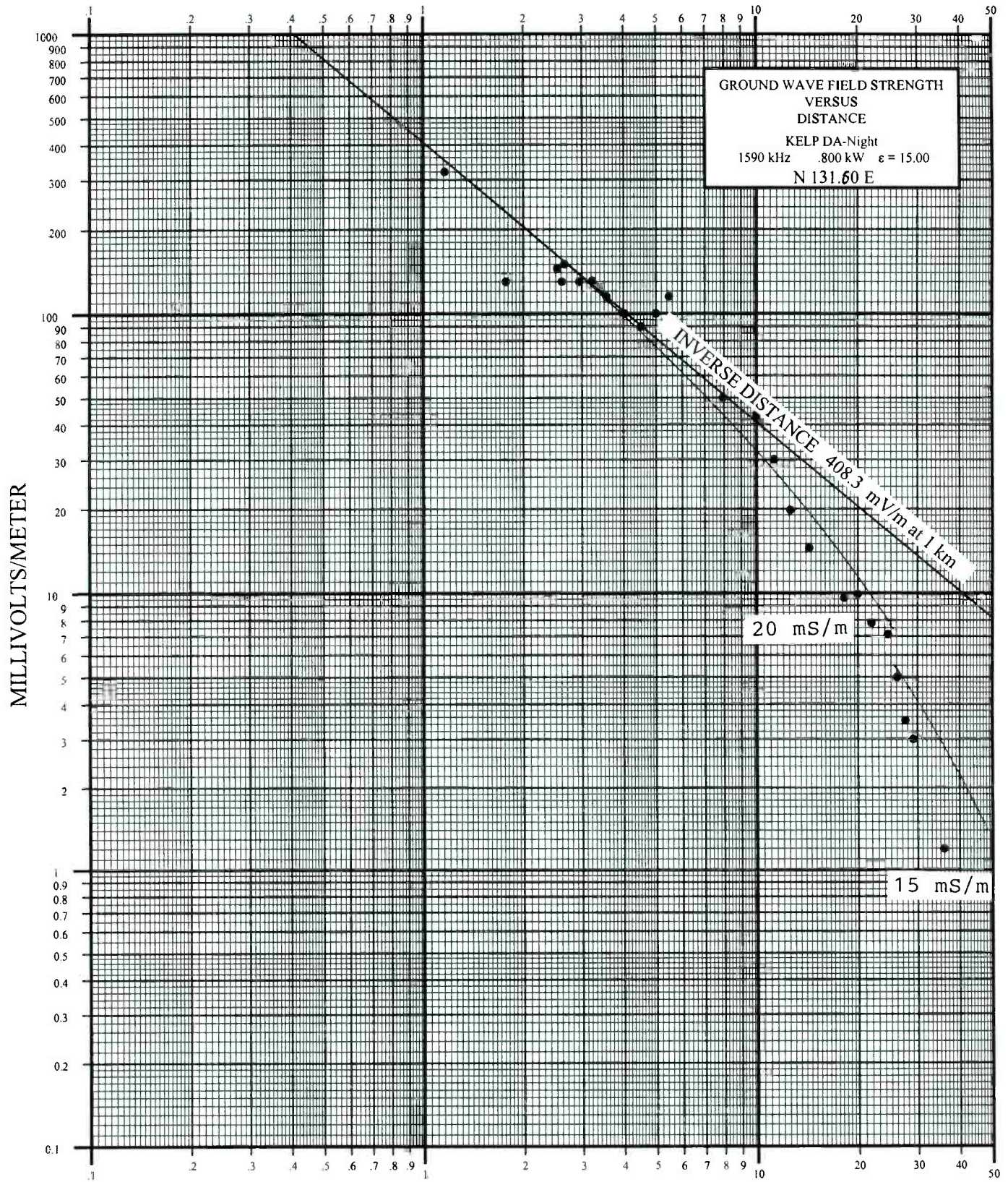


Figure 6-D

Figure 7-A: Tabulation of Field Intensity Measurement Data

R. Morgan Burrow, P.E. & Associates, P.C.
17221 Beauvoir Blvd., Derwood, MD 20855

KELP 1590 kHz 0.8/5.0 kW DA-2-U El Paso, Texas Bearing: 165.5 deg. Mode: Non-DA, DA-Day, DA-Night

Pt. No.	Distance (Miles)	Km.	Non-DA (mV/m)	DA-D (mV/m)	DA-N (mV/m)	Log 10 DA-D/NDA	Log 10 DA-N/NDA	Point Description	Measurement Date & Time	GPS Coordinates
1	.38	.61	319.00	220.00	226.00	-.1614	-.1497	At broken wall on ext.	(2/09/96:1156;2/10/96:0937;2/10/96:1527)	31,44.299-106,23.628
2	.54	.87	299.50	150.00	229.00	-.3003	-.1166	Dakota & Florida (Juarez, Mexico)	(2/09/96:1207;2/10/96:0947;2/10/96:1525)	31,44.161-106,23.621
3	.62	1.00	190.00	107.00	-----	-.2494	-----	Virginia at end of rt w of school	(2/09/96:1213;2/10/96:0949; DNA)	31,44.110-106,23.575
4	.76	1.22	120.00	50.00	100.00	-.3802	-.0792	305 Zuentos-Alameda	(2/09/96:1218;2/10/96:0952;2/10/96:1521)	31,43.987-106,23.522
5	1.00	1.61	190.00	140.00	-----	-.1326	-----	101 Carrigos	(2/09/96:1223;2/10/96:0956; DNA)	31,43.784-106,23.470
6	1.34	2.16	23.00	21.50	-----	-.0293	-----	At w/edge Cemetery near microwave tower	(2/09/96:1230;2/10/96:0958; DNA)	31,43.493-106,23.391
7	1.57	2.53	58.00	49.50	-----	-.0688	-----	Industrial area & Leon, Satellite, Chih.,	(2/09/96:1234;2/10/96:1002; DNA)	31,43.304-106,23.338
8	1.80	2.90	53.00	37.00	-----	-.1561	-----	In vacant field	(2/09/96:1239;2/10/96:1005; DNA)	31,43.157-106,23.250
9	1.94	3.12	53.00	34.00	-----	-.1928	-----	In cotton field	(2/09/96:1227;2/10/96:1010; DNA)	31,43.012-106,23.242
10	2.91	4.68	26.00	24.50	-----	-.0258	-----	On irrigation ditch	(2/09/96:1305;2/10/96:1022; DNA)	31,42.163-106,22.971
11	3.82	6.15	16.10	13.00	14.00	-.0929	-.0607	Grile 2 frace Crodero	(2/09/96:1323;2/10/96:1027;2/10/96:1029)	31,41.414-106,22.725
12	4.37	7.03	14.50	10.00	-----	-.1614	-----	1882 Calle Neptuno	(2/09/96:1327;2/10/96:1037; DNA)	31,40.957-106,22.609
13MP	4.87	7.84	16.10	7.40	13.50	-.3376	-.0765	Day MP, Ave Jesus Chavez nr Y int & ditch	(2/09/96:1335;2/10/96:1047;2/10/96:1049)	31,40.553-106,22.536
14	5.32	8.56	15.50	9.00	-----	-.2361	-----	No name farm rd	(2/09/96:1348;2/10/96:1058; DNA)	31,40.155-106,22.369
15	5.53	8.90	11.50	5.90	11.10	-.2898	-.0154	Farm rd on n. side of pecan orchard	(2/09/96:1357;2/10/96:1105;2/10/96:1107)	31,39.920-106,22.281
16	6.34	10.20	13.90	5.80	12.50	-.3796	-.0461	Jilo Tete (GPS location)	(2/09/96:1405;2/10/96:1113;2/10/96:1111)	31,38.282-106,22.121
17	7.60	12.23	9.80	4.80	7.80	-.3100	-.0991	San Miqure & Santa Chara	(2/09/96:1435;2/10/96:1121;2/10/96:1123)	31,38.273-106,21.803
18	8.51	13.70	9.60	4.00	8.60	-.3802	-.0478	GPS Location in desert	(2/09/96:1503;2/10/96:1505;2/10/96:1506)	31,37.465-106,21.535
19	8.90	14.32	9.70	3.60	8.20	-.4305	-.0730	GPS Location in desert	(2/09/96:1533;2/10/96:1532;2/10/96:1534)	31,37.143-106,21.459
20	10.10	16.25	8.60	2.50	7.00	-.5366	-.0894	GPS Location in desert	(2/09/96:1624;2/10/96:1625;2/10/96:1623)	31,36.159-106,21.171
21	11.50	18.51	6.50	3.60	5.60	-.2566	-.0647	GPS Location in desert	(2/09/96:1650;2/10/96:1648;2/10/96:1651)	31,34.929-106,20.799
22	16.90	27.20	2.45	1.85	-----	-.1220	-----	GPS Location in desert	(2/09/96:1207;2/10/96:1206; DNA)	31,30.353-106,19.428
23	18.50	29.77	2.30	1.65	-----	-.1442	-----	GPS Location in desert	(2/09/96:1227;2/10/96:1226; DNA)	31,29.067-106,19.066
24	20.70	33.31	1.98	2.50	-----	.1013	-----	GPS Location (in the middle of nowhere)	(2/09/96:1326;2/10/96:1328; DNA)	31,27.225-106,18.479

No. of day data points: 24

No. of night data points: 12

Non-Directional Inverse field (mV/m at 1 km): 262.94

Day Inverse Field (mV/m at 1 km) 158.52

Night Inverse Field (mV/m at 1 km) 220.44

KILOMETERS FROM ANTENNA

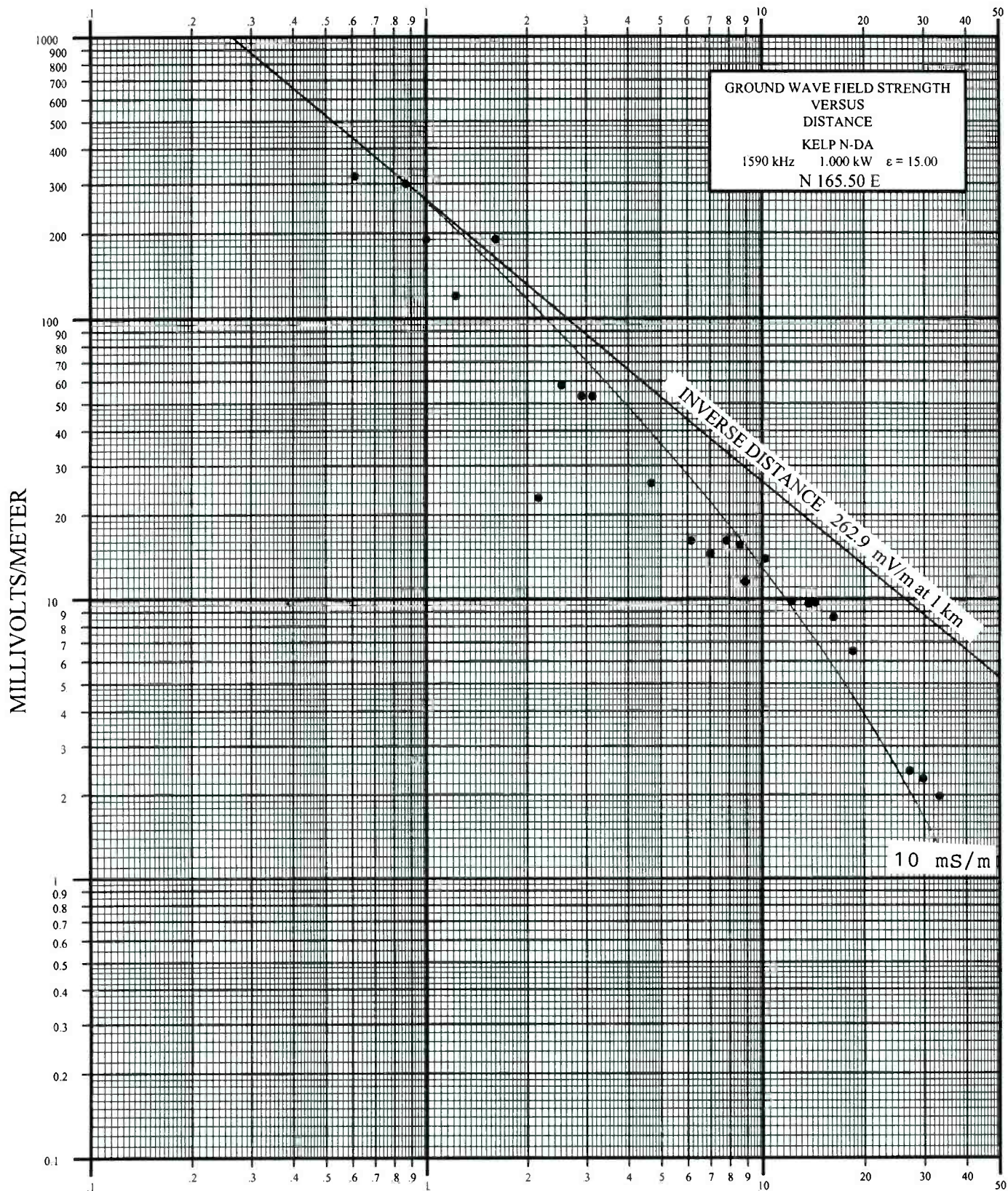


Figure 7-B

KILOMETERS FROM ANTENNA

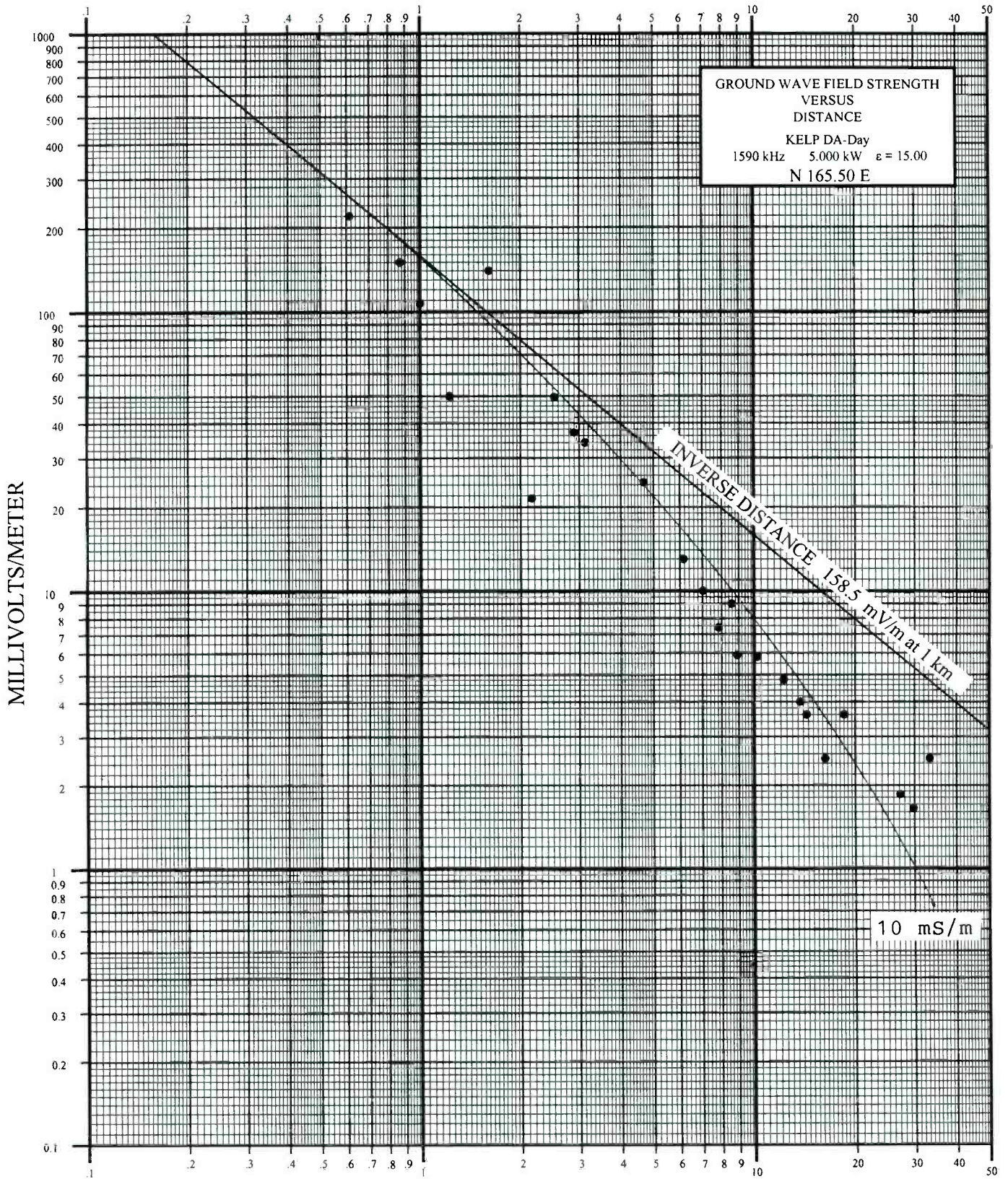


Figure 7-C

KILOMETERS FROM ANTENNA

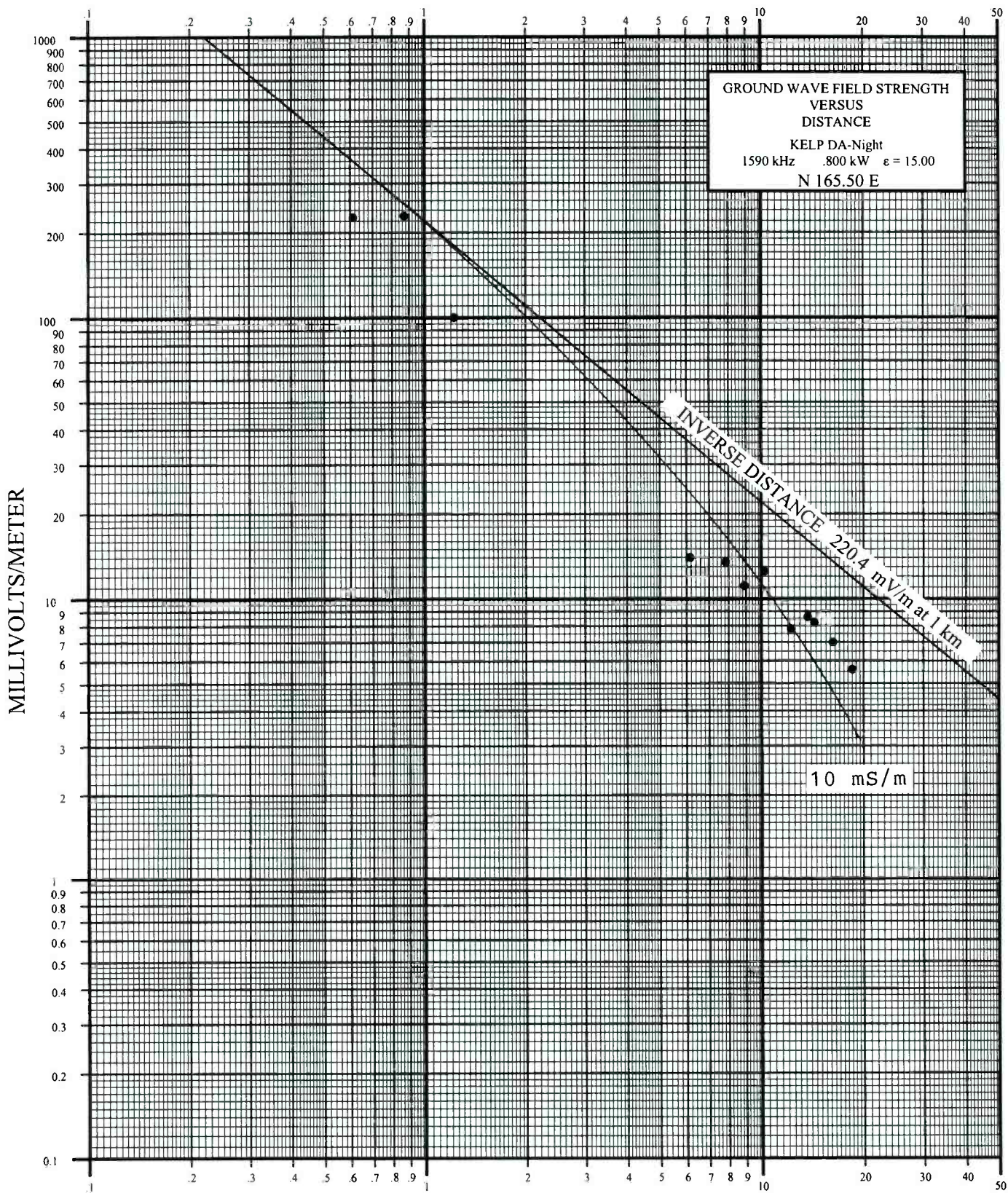


Figure 7-D

FIGURE 7-E

DAYTIME MONITOR POINT 165.5 DEGREES TRUE

It is suggested that field intensity measuring equipment be placed in the vehicle trunk prior to proceeding into Mexico.

From the KERP transmitter, proceed north on Springfield Avenue. Springfield Avenue turns into Croom Street. Proceed on Croom Street to Alameda Avenue. Turn right onto Alameda Avenue and proceed to Zaragosa Road. Turn right on Zaragosa Road and proceed into Mexico. After clearing Mexican customs, proceed south on Ave. Zaragosa to Blvd. Manuel Gomez Morin. Cross over Blvd. Manuel Gomez Morin onto a dirt road; this is Ave. Jesus Chavez. Proceed on Ave. Jesus Chavez approximately 0.6 km (0.4 mile). The monitor point is on Ave. Jesus Chavez at a marked location approximately 100 feet east of the intersection of Ave. Jesus Chavez and another dirt road crossing the drainage ditch leading to Calle Urano. The GPS coordinates at this location are 31, 40', 33.2" N Lat., 106, 22', 32.2" W. Longitude. This location is 4.87 miles (7.84 km) from the KERP transmitter. The daytime field intensity at this location is 7.4 mV/m.



Figure 8-A: Tabulation of Field Intensity Measurement Data

KEJLP 1590 kHz 0.8/5.0 kW DA-2-U El Paso, Texas Bearing: 181 deg. Modes: Non-DA, DA-Day, DA-Night

Pt. No.	Distance (Miles)	Non-DA (mV/m)	DA-D (mV/m)	DA-N (mV/m)	Log 10 DA-D/NDA	Log 10 DA-N/NDA	Point Description	Measurement Date & Time		GPS Coordinates
								NDA, DA-D, DA-N;	Times MST/MDT	
1	.62	210.00	181.00	120.00	-.0645	-.2430	8908 Del Rio 75 ft w pwr lines Mexico	(5/18/96:1122;5/18/96:1124;5/17/96:0843)		31,44.084-106,23.742
2	.94	190.00	141.00	90.00	-.1295	-.3245	In park Cente Gureid & Alameda Mexico	(5/18/96:1127;5/18/96:1120;5/17/96:0850)		31,43.816-106,23.342
3	1.29	110.00	120.00	62.00	.0378	-.2490	Arc Less components, Arnesses de Juarez	(5/18/96:1211;5/18/96:1116;5/17/96:0855)		31,43.487-106,23.761
4	1.62	98.00	80.00	47.00	-.0881	-.3191	ACSA (Appliance Components), Calle Kelvin	(5/18/96:1215;5/18/96:1114;5/17/96:0858)		31,43.229-106,23.746
5	1.78	86.00	86.00	38.50	.0000	-.3490	Corner of fence & Da La Industrial	(5/18/96:1217;5/18/96:1112;5/17/96:0902)		31,43.092-106,23.369
6	1.94	60.00	70.00	41.00	.0669	-.1654	Ave. Antonio J. Bermudez, Park. Lot SE/C	(5/18/96:1219;5/18/96:1110;5/17/96:0902)		31,42.997-106,23.768
7	2.30	3.70	44.00	18.50	-----	-.3763	W side private prop. vacant field	(2/29/96:1444;2/29/96:1007; DNA)		31,42.634-106,23.718
8	2.49	4.01	25.00	17.50	-.1549	-.3372	GPS location marked on Dios Rd.	(5/18/96:1230;5/18/96:1104;5/17/96:0913)		31,42.458-106,23.773
9	3.03	4.88	60.00	42.00	-.1549	-.4771	Blvd. Gomez Morin 0.2 mi E of VW dealer	(5/18/96:1233;5/18/96:1100;5/17/96:0917)		31,41.983-106,23.771
10	3.50	5.63	50.00	27.00	-.2676	-.3372	Calle Montessuris off Morid	(5/18/96:1237;5/18/96:1055;5/17/96:0922)		31,41.602-106,23.753
11	4.44	7.15	32.00	18.50	-.2380	-.3912	Corner S Antcard & San Andress	(5/18/96:1249;5/18/96:1048;5/17/96:0930)		31,40.367-106,23.811
12	4.92	7.92	25.00	17.20	-.1624	-.1938	Corner S Antino Soledad one half bk w	(5/18/96:1253;2/29/96:1102;5/17/96:0933)		31,40.367-106,23.798
13	5.20	8.37	28.00	15.50	-.2568	-.3502	Fire hydrant Las Palmas	(5/18/96:1357;2/29/96:1133;5/17/96:0954)		31,40.118-106,23.821
14	5.70	9.17	21.00	8.90	-.3728	-.2808	NW corner Platano	(5/18/96:1400;2/29/96:1140;5/17/96:0958)		31,39.686-106,23.848
15	5.60	9.01	20.00	7.40	-.4318	-.1549	945 Asfodelo	(5/18/96:1402;2/29/96:1145;5/17/96:1002)		31,39.882-106,23.927
16	6.40	10.30	12.00	7.00	-.2341	-.0969	6801 E.C. Ledozma & Airaezya	(2/29/96:1332;2/29/96:1149;3/01/96:1230)		31,39.092-106,23.818
17	7.27	11.70	15.00	7.00	-.3310	-.1347	Estrada & Gonzales	(2/29/96:1322;2/29/96:1157;3/01/96:1242)		31,38.293-106,23.860
18	9.57	15.40	7.40	6.10	-.0839	-.1289	Liebre Merro Aureopurete	(2/29/96:1318;2/29/96:1210;3/01/96:1253)		31,36.336-106,23.892

No. of day data points: 18

No. of night data points: 17

Non-Directional Inverse field (mV/m at 1 km): 248.59

Day Inverse Field (mV/m at 1 km) 164.14

Night Inverse Field (mV/m at 1 km) 134.48

KILOMETERS FROM ANTENNA

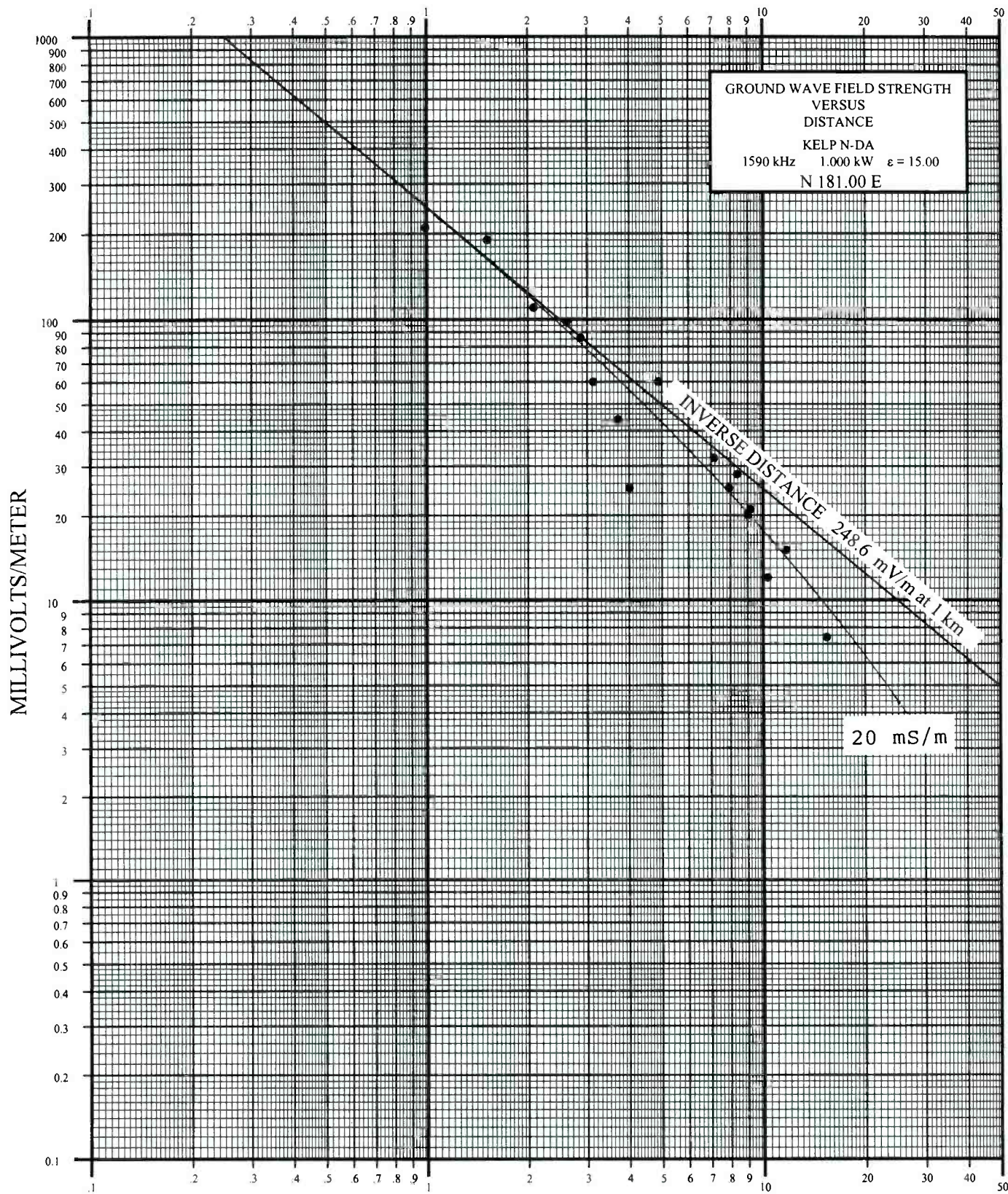


Figure 8-B

KILOMETERS FROM ANTENNA

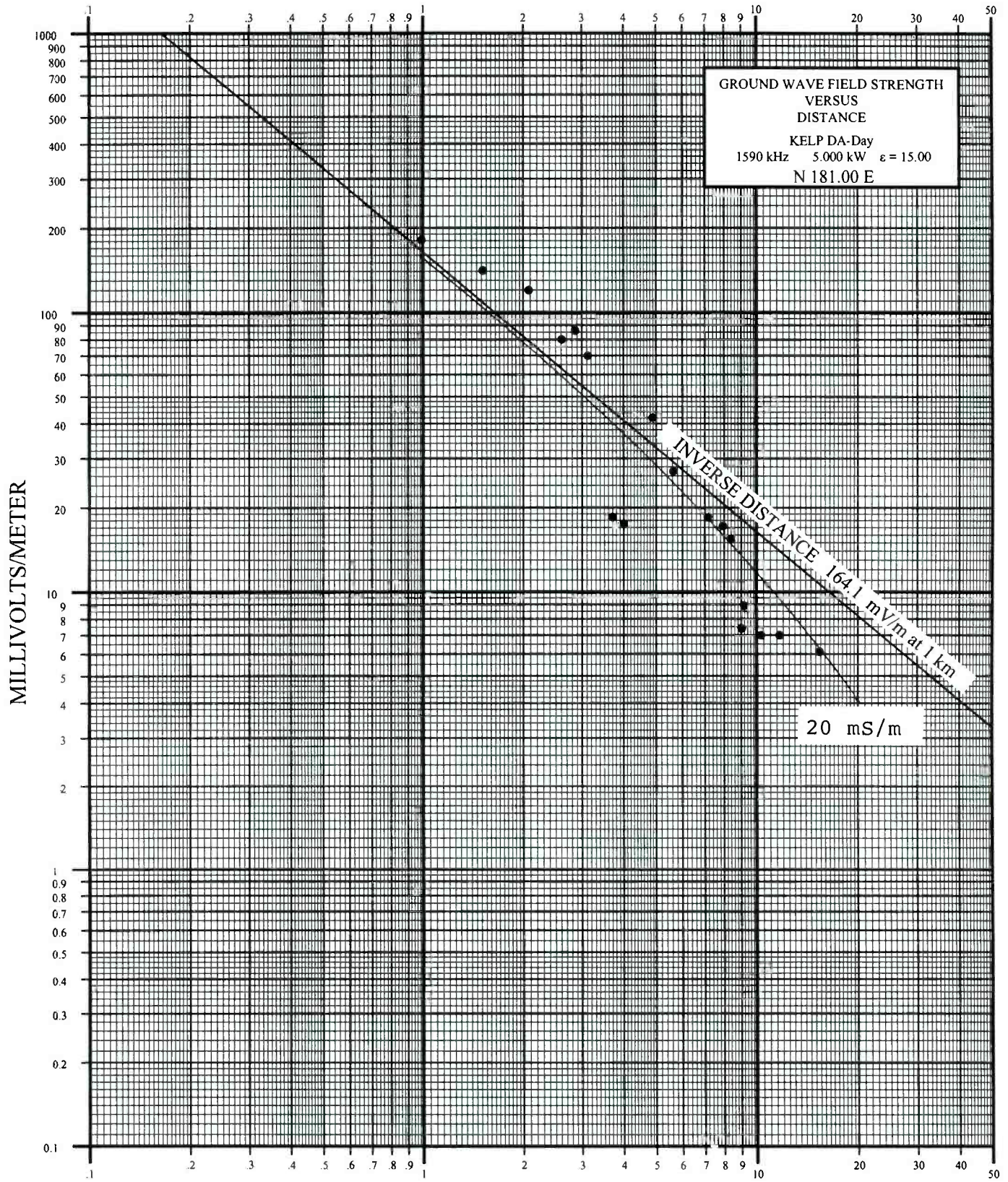


Figure 8-C

KILOMETERS FROM ANTENNA

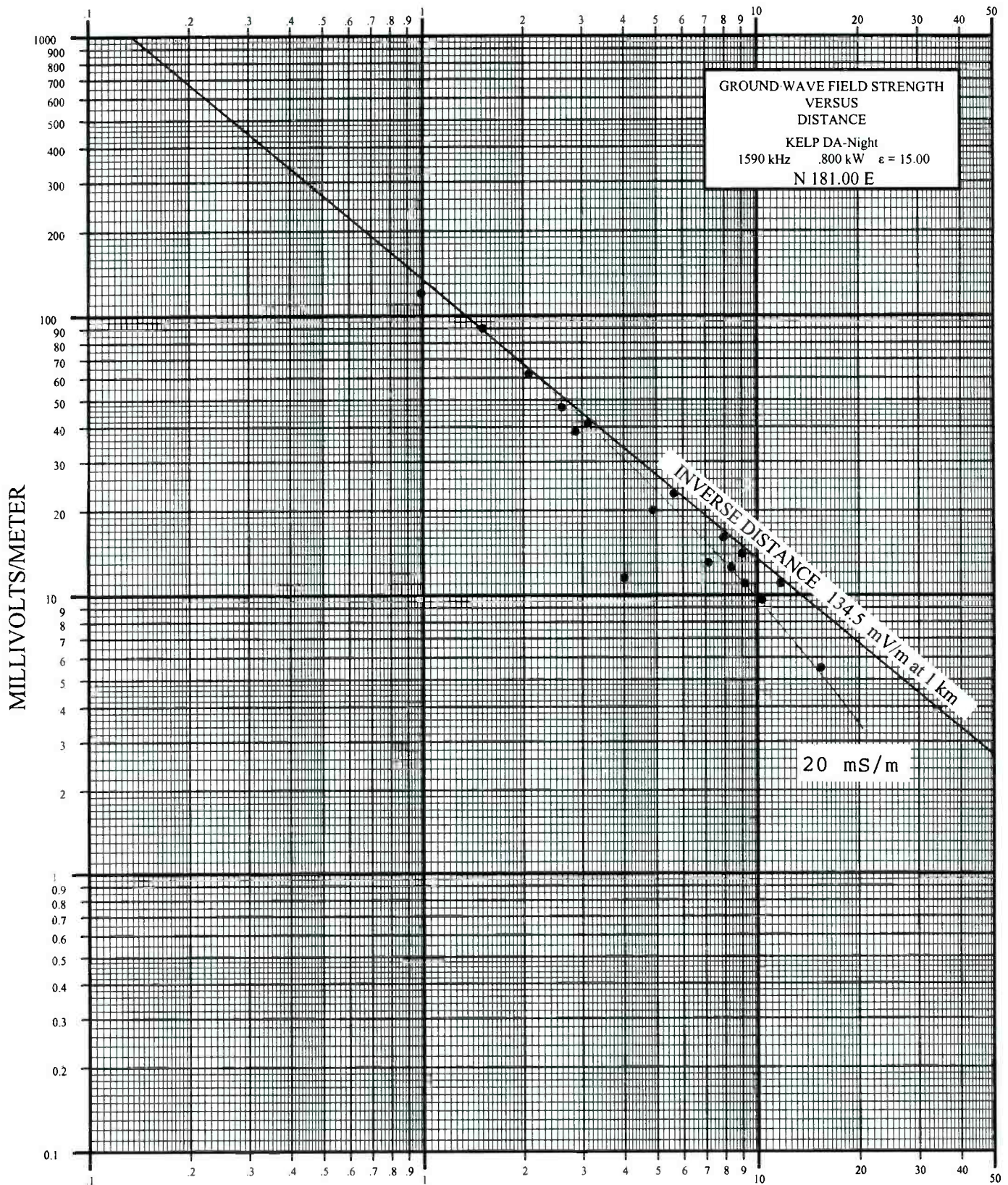


Figure 8-D

Figure 9-A: Tabulation of Field Intensity Measurement Data

R. Morgan Burrow, P.E. & Associates, P.C.
17221 Beauvoir Blvd., Derwood, MD 20855

KELP 1590 kHz 0.8/5.0 kW DA-2-U El Paso, Texas Bearing: 220.5 deg. Modes: Non-DA, DA-Day, DA-Night

Pt. No.	Distance (Miles)	Distance (km.)	Non-DA (mV/m)		DA-D (mV/m)		DA-N (mV/m)		Log 10 DA-D/DA-N	Log 10 DA-N/DA-N	Point Description	Measurement Date & Time		GPS Coordinates
			(mV/m)	(mV/m)	(mV/m)	(mV/m)	NDA, DA-D, DA-N; Times MST	(D, M, MM - D, M, MM)						
1	.31	.50	320.00	550.00	105.00	.2352	-.4840				Macrons Drgon	(3/09/96:1017:3/04/96:1704;3/04/96:1245)	31,44.423-106,23.932	
2	.47	.76	309.00	560.00	-----	.2582	-----			5729 Montana		(3/09/96:1020:3/04/96:1703; DNA)	31,44.305-106,24.022	
3	.54	.86	210.00	315.00	68.00	.1761	-.4897			403 Alaska (El Paso, Texas, USA)		(3/09/96:1022:3/04/96:1701;3/04/96:1249)	31,44.824-106,24.065	
4	.62	1.00	115.00	224.50	47.50	.2905	-.3840			SW corner 8316 Del Rio circle (Mexico)		(3/09/96:1025:3/04/96:4659;3/04/96:1252)	31,44.245-106,24.130	
5	.73	1.18	114.90	200.50	40.00	.2418	-.4583			Calle Tersa & Gomez Vabeta		(3/09/96:1031:3/04/96:1656;3/04/96:1256)	31,44.177-106,24.201	
6	.98	1.58	110.50	230.00	43.50	.3184	-.4049			8150 Vincente Gusrro		(3/09/96:1033:3/04/96:1653;3/04/96:1301)	31,43.974-106,24.359	
7	1.19	1.92	63.00	120.10	25.00	.2802	-.4014			7948 Carque Oe Flores		(3/09/96:1037:3/04/96:1651;3/04/96:1307)	31,43.877-106,24.359	
8	1.34	2.16	66.50	130.00	32.50	.2911	-.3109			Center vacant lot/Goltcores		(3/09/96:1040:3/04/96:1648;3/04/96:1313)	31,43.760-106,24.619	
9	1.58	2.54	50.00	105.00	31.50	.3222	-.2007			903 Mananetal w/cor		(3/09/96:1043:3/04/96:1644;3/04/96:1315)	31,43.593-106,24.761	
10MP	1.75	2.82	66.50	92.00	27.50	.1410	-.3835			Day MP, acr from 1020 San Miguel Allende		(3/09/96:1045:3/04/96:1642;3/04/96:1325)	31,43.478-106,24.895	
11	2.00	3.22	42.00	86.00	-----	.3112	-----			Del Alvarado by Blvd. M. Gomez Marin		(3/09/96:1048:3/04/96:1638; DNA)	31,43.300-106,25.026	
12	2.65	4.26	20.00	40.00	12.50	.3010	-.2041			1669 Ave. Tecnologica		(3/09/96:1052:3/04/96:1634;3/04/96:1336)	31,42.884-106,25.481	
13	3.17	5.10	22.90	54.00	11.50	.3726	-.2991			Camiao Viegs San Tose near 6245		(3/09/96:1056:3/04/96:1626;3/04/96:1404)	31,42.536-106,25.823	
14	3.84	6.18	15.50	22.50	5.20	.1619	-.4743			Corner Justina Cothnajo/Valentie Fuentes		(3/09/96:1102:3/04/96:1617;3/04/96:1413)	31,42.108-106,26.823	
15	5.19	8.35	12.90	17.10	6.50	.1224	-.2977			Near brick kilns Mex 68		(3/04/96:1602:3/04/96:1609;3/04/96:1437)	31,47.192-106,27.154	
16	5.57	8.96	14.50	22.00	4.60	.1811	-.4986			7618 Maria de Jesus		(3/04/96:1555:3/04/96:1554;3/04/96:1454)	31,40.922-106,27.476	
17	6.28	10.11	13.50	18.50	5.10	.1368	-.4228			Gral O Pereya/Maqimo Castillo		(3/04/96:1509:3/04/96:1510;3/04/96:1507)	31,40.467-106,27.898	
18	7.50	12.07	12.00	18.50	4.40	.1880	-.4357			Primatiro Uro at end		(3/04/96:1523:3/04/96:1521;3/04/96:1524)	31,39.695-106,28.641	
19	8.20	13.20	7.50	12.00	2.45	.2041	-.4859			1337 Indo Geironimo		(3/04/96:1537:3/04/96:1538;3/04/96:1535)	31,39.208-106,29.094	

No. of day data points: 19

No. of night data points: 17

Non-Directional Inverse field (mV/m at 1 km): 270.00

Day Inverse Field (mV/m at 1 km) 467.72

Night Inverse Field (mV/m at 1 km) 109.91

KILOMETERS FROM ANTENNA

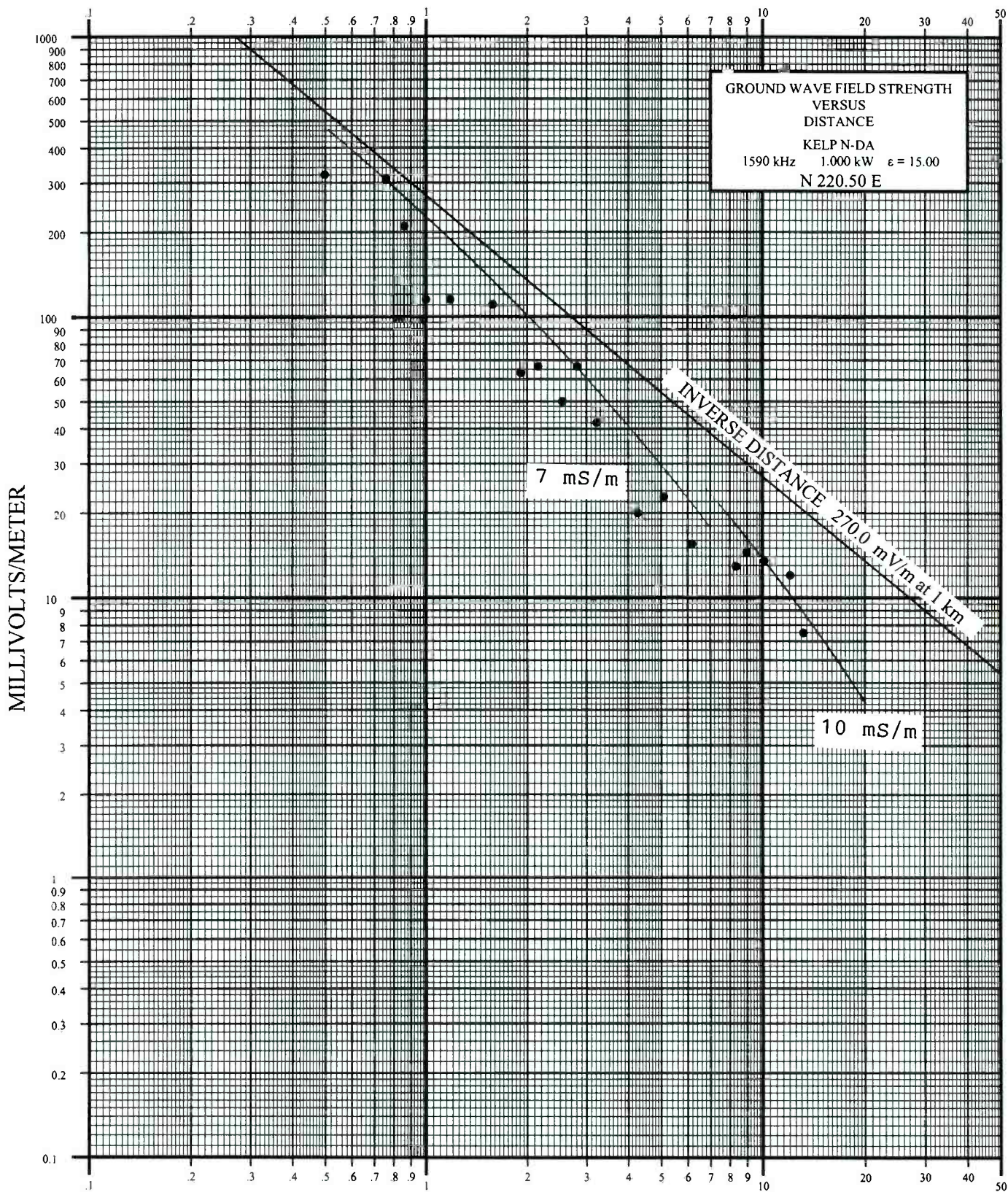


Figure 9-B

KILOMETERS FROM ANTENNA

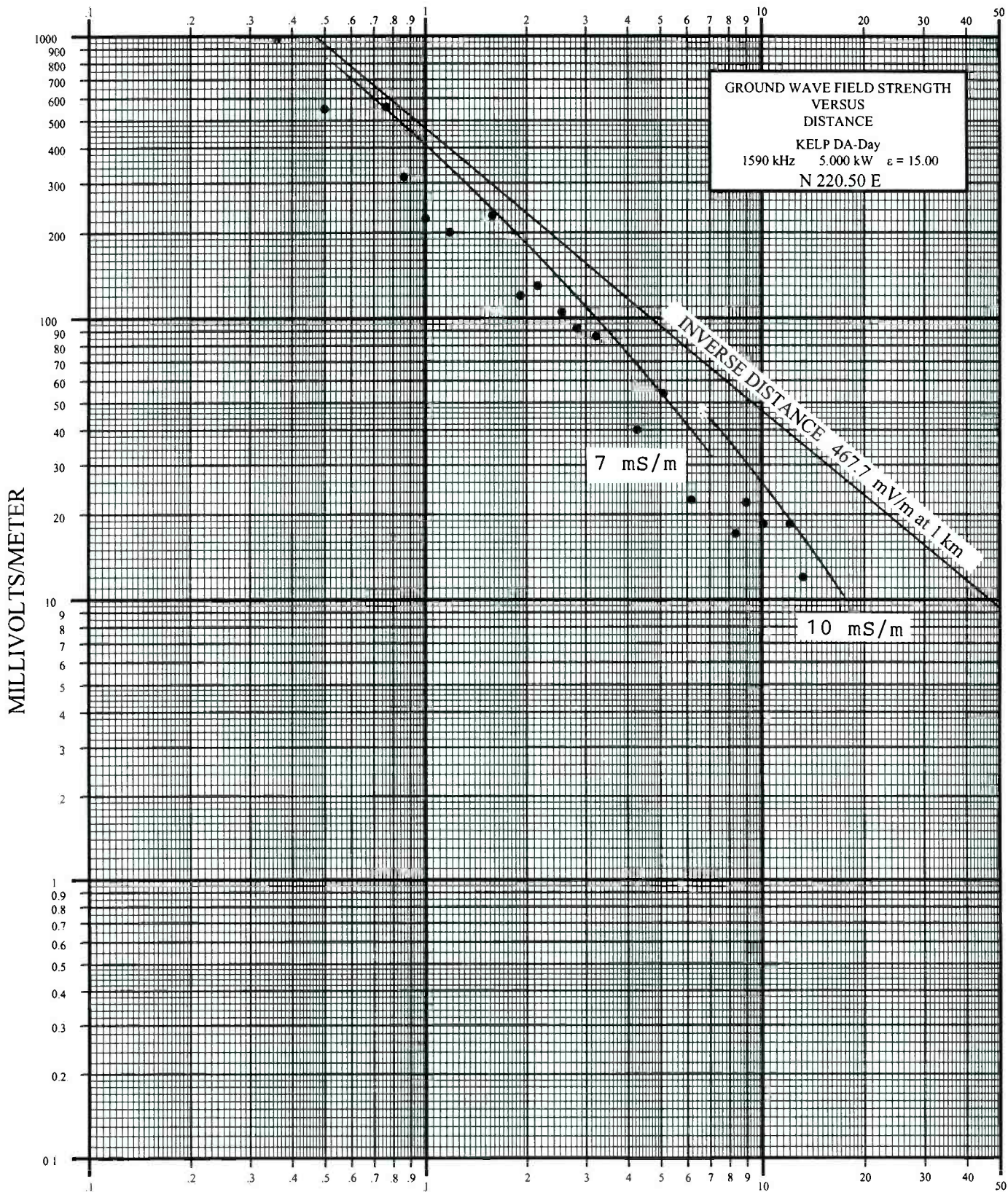


Figure 9-C

KILOMETERS FROM ANTENNA

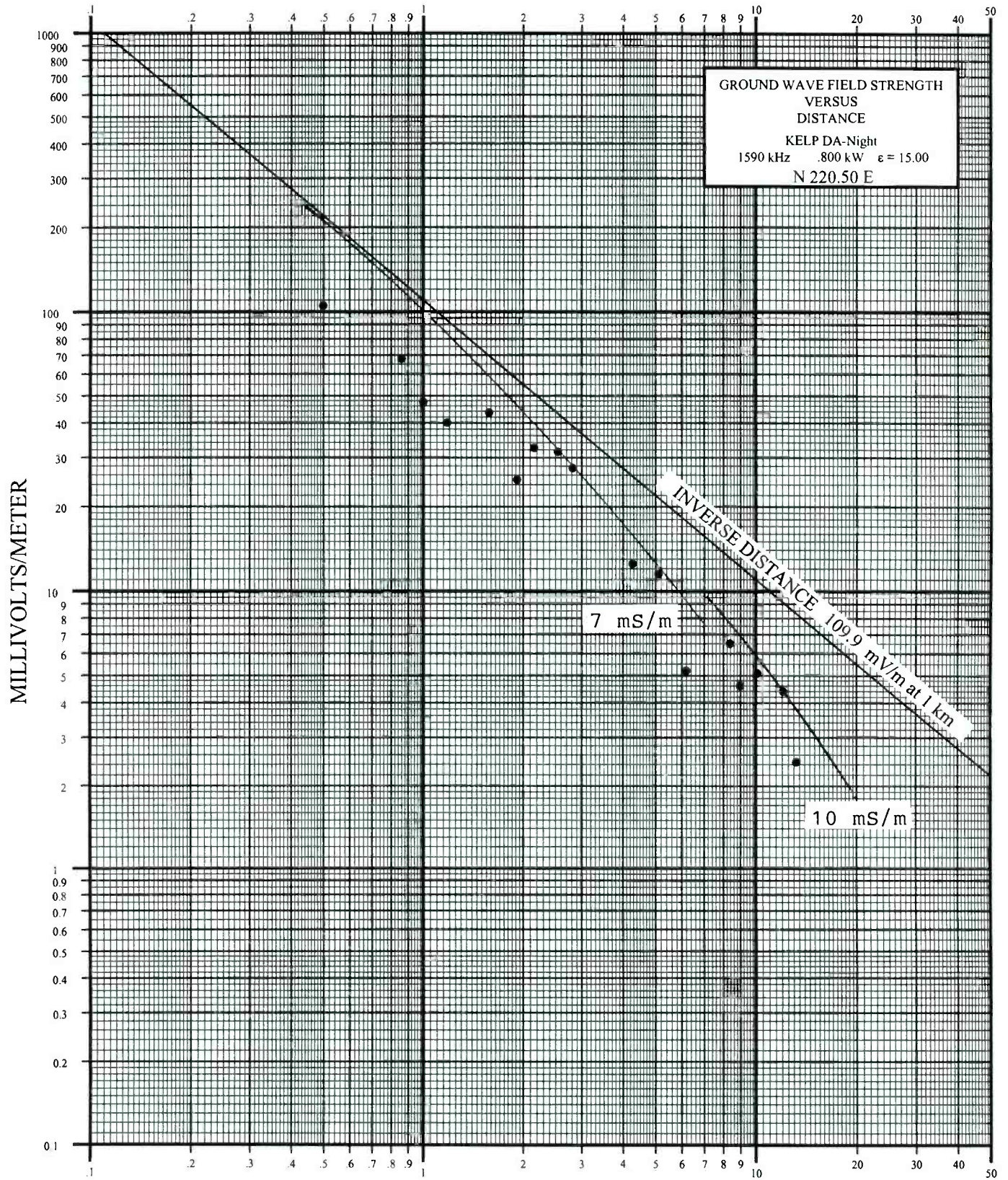


Figure 9-D

FIGURE 9-E

DAYTIME MONITOR POINT N-220.5 DEGREES TRUE

From the KELP N-165.5 degree monitor point, turn right onto the dirt road from Avenida Jesus Chavez and cross the drainage ditch. Turn left on Calle Urano immediately after crossing the drainage ditch and proceed to Calle Neptuno. Turn right on Calle Neptuno and proceed north to Blvd. Manuel Gomez Morin. Turn left on Blvd. Manuel Gomez Morin and proceed to Calle San Miguel Allende. Turn right; the monitor point is located on the sidewalk across from 1020 San Miguel Allende. The distance from the transmitter is 1.75 miles (2.82 km). The GPS coordinates at this location are 31, 43', 28.7" N. Lat., 106, 24', 53.7" W. Lon. The daytime field intensity at this location is 92 mV/m.



Figure 10-A: Tabulation of Field Intensity Measurement Data

R. Morgan Burrow, P.E. & Associates, P.C.
17221 Beauvoir Blvd., Derwood, MD 20855

KEIP 1590 kHz 0.8/5.0 kW DA-2-U El Paso, Texas Bearing: 265.5 deg. Modes: Non-DA, DA-Day, DA-Night

Pt. No.	Distance (Miles)	Non-DA (mV/m)	DA-D (mV/m)	DA-N (mV/m)	Log 10 DA-D/NDA	Log 10 DA-N/NDA	Point Description	Measurement Date & Time		GPS Coordinates
								NDA, DA-D, DA-N;	Times MST	
1	.56	.90	215.00	160.00	90.00	-.1283	De las Pinas & Nacional Requiional, Mexico	(3/02/96:1551:3/03/96:0917;3/04/96:1148)	31,41.588-106,24.270	
2	.68	1.09	160.00	90.00	74.00	-.2499	7636 Serricer Pasty	(3/02/96:1555:3/03/96:0919;3/04/96:1146)	31,41.583-106,24.401	
3	.82	1.32	152.00	68.00	74.00	-.3493	610 Telegraficas	(3/02/96:1600:3/03/96:0921;3/04/96:1144)	31,41.572-106,24.577	
4	1.04	1.67	130.50	72.00	66.00	-.2583	In vacant field	(3/02/96:1624:3/03/96:0928;3/04/96:1141)	31,41.546-106,24.775	
5	1.18	1.90	121.00	74.00	80.00	-.2136	Magnolia Ent. caval de la Mancha	(3/02/96:1630:3/03/96:0931;3/04/96:1132)	31,41.529-106,24.927	
6	1.31	2.11	75.00	39.00	45.00	-.2840	Mayuela Sab Drisim cor. bldg, 3-A SE	(3/02/96:1641:3/03/96:0932;3/04/96:1139)	31,44.540-106,25.052	
7	1.44	2.32	110.50	47.00	53.00	-.3713	Nieto San Lorenzi (soccer field)	(3/02/96:1607:3/03/96:0939;3/04/96:1125)	31,44.523-106,25.180	
8	2.00	3.22	79.50	21.50	44.00	-.5679	Filosafia top of ramp	(3/02/96:0957:3/03/96:1019;3/04/96:1120)	31,44.483-106,25.755	
9	2.07	3.33	61.00	14.00	34.00	-.6392	418 Arquitectura	(3/02/96:1000:3/03/96:1024;3/04/96:1118)	31,44.474-106,25.818	
10	2.21	3.56	50.00	16.10	27.00	-.4921	#30 Condominios Monte Carle	(3/02/96:1003:3/03/96:1032;3/04/96:1116)	31,44.469-106,25.962	
11	2.43	3.91	45.00	10.50	32.00	-.6320	495 Miguel de Cervantes	(3/02/96:1005:3/03/96:1038;3/04/96:1113)	31,44.452-106,26.169	
12	3.09	4.97	31.00	9.40	-----	-.5182	# 30 Seneca	(3/02/96:1012:3/03/96:1043; DNA)	31,44.399-106,26.855	
13	3.75	6.04	18.90	12.10	15.00	-.1937	Carlos Villa Real Ramerriez SW corner	(3/02/96:1017:3/03/96:1105;3/04/96:1102)	31,44.374-106,27.522	
14	4.40	7.08	23.50	9.50	14.00	-.3933	Peru 1005 off Ave. 16 de Septiembre	(3/02/96:1020:3/03/96:1127;3/04/96:1058)	31,44.315-106,28.148	
15	4.92	7.92	36.00	9.20	-----	-.5925	Quintanara Rd. off Ave. 16 de Septiembre	(3/02/96:1025:3/03/96:1132; DNA)	31,44.297-106,28.705	
16	5.64	9.08	9.00	2.20	6.00	-.6118	427 Alta Mirand	(3/02/96:1031:3/03/96:1148;3/04/96:1049)	31,44.247-106,29.458	
17	7.83	12.60	6.10	2.20	3.35	-.4429	2216 Chiapas & Merdes	(3/02/96:1214:3/03/96:1212;3/04/96:1215)	31,44.087-106,31.715	
18	8.51	13.70	12.20	4.60	7.40	-.4236	GPS location, Cemetery Road	(3/02/96:1259:3/03/96:1300;3/04/96:1257)	31,44.027-106,32.351	
19	8.64	13.90	10.00	3.75	5.70	-.4260	Back edge of cemetery (GPS location)	(3/02/96:1305:3/03/96:1304;3/04/96:1306)	31,44.028-106,32.484	
20	12.30	19.79	7.00	4.10	.94	-.2323	GPS location in desert	(3/02/96:1412:3/03/96:1413;3/04/96:1414)	31,43.817-106,36.206	
21	14.54	23.40	1.15	.59	.60	-.2898	GPS location in desert	(3/02/96:1445:3/03/96:1443;3/04/96:1443)	31,43.608-106,38.502	
22	17.10	27.52	.90	.31	.66	-.4629	GPS location on Santa Teresa Road	(3/02/96:1603:3/03/96:1604;3/04/96:1605)	31,43.447-106,41.028	

No. of day data points: 22

No. of night data points: 20

Non-Directional Inverse field (mV/m at 1 km): 270.59

Day Inverse Field (mV/m at 1 km) 107.99

Night Inverse Field (mV/m at 1 km) 143.92

KILOMETERS FROM ANTENNA

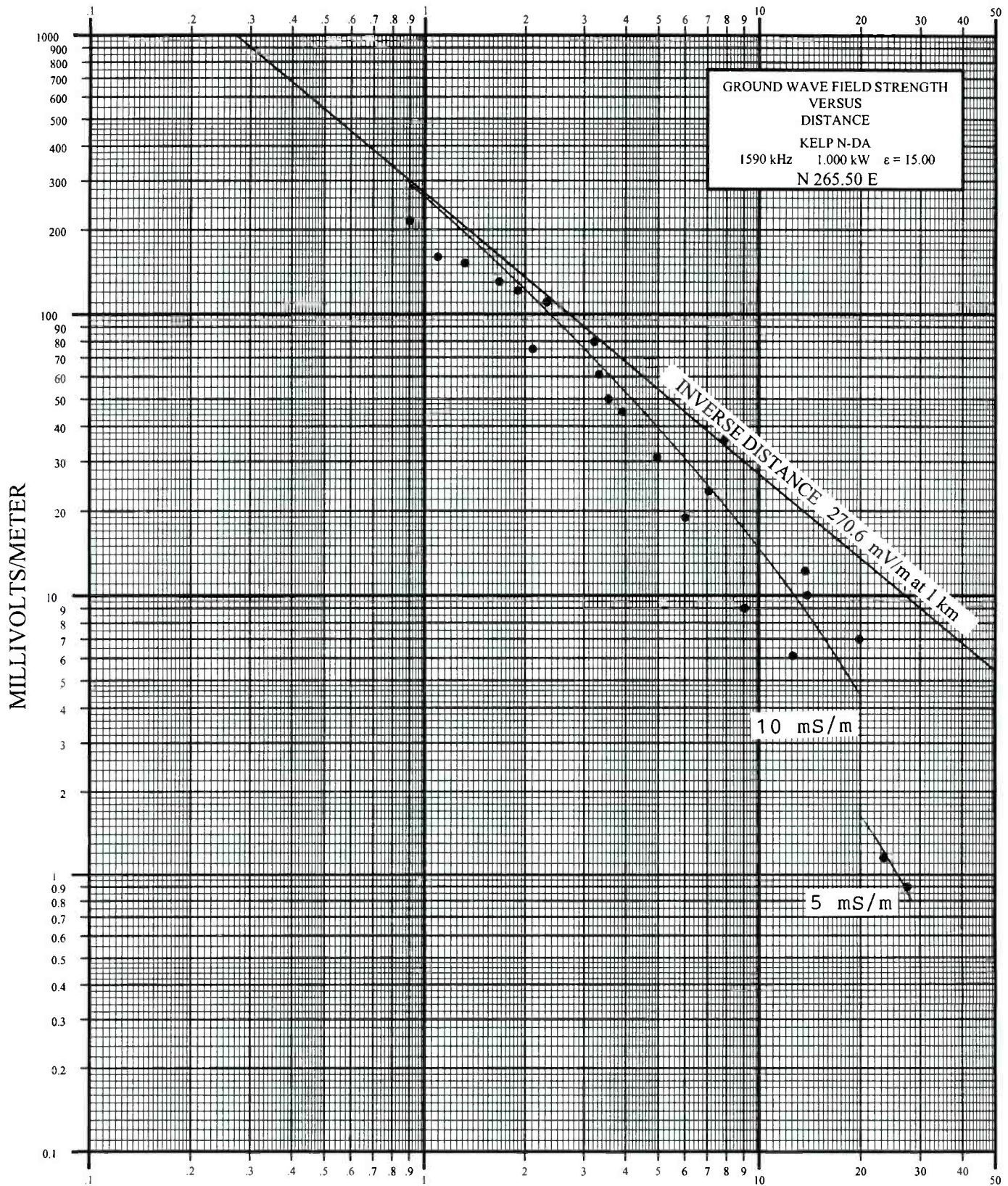


Figure 10-B

KILOMETERS FROM ANTENNA

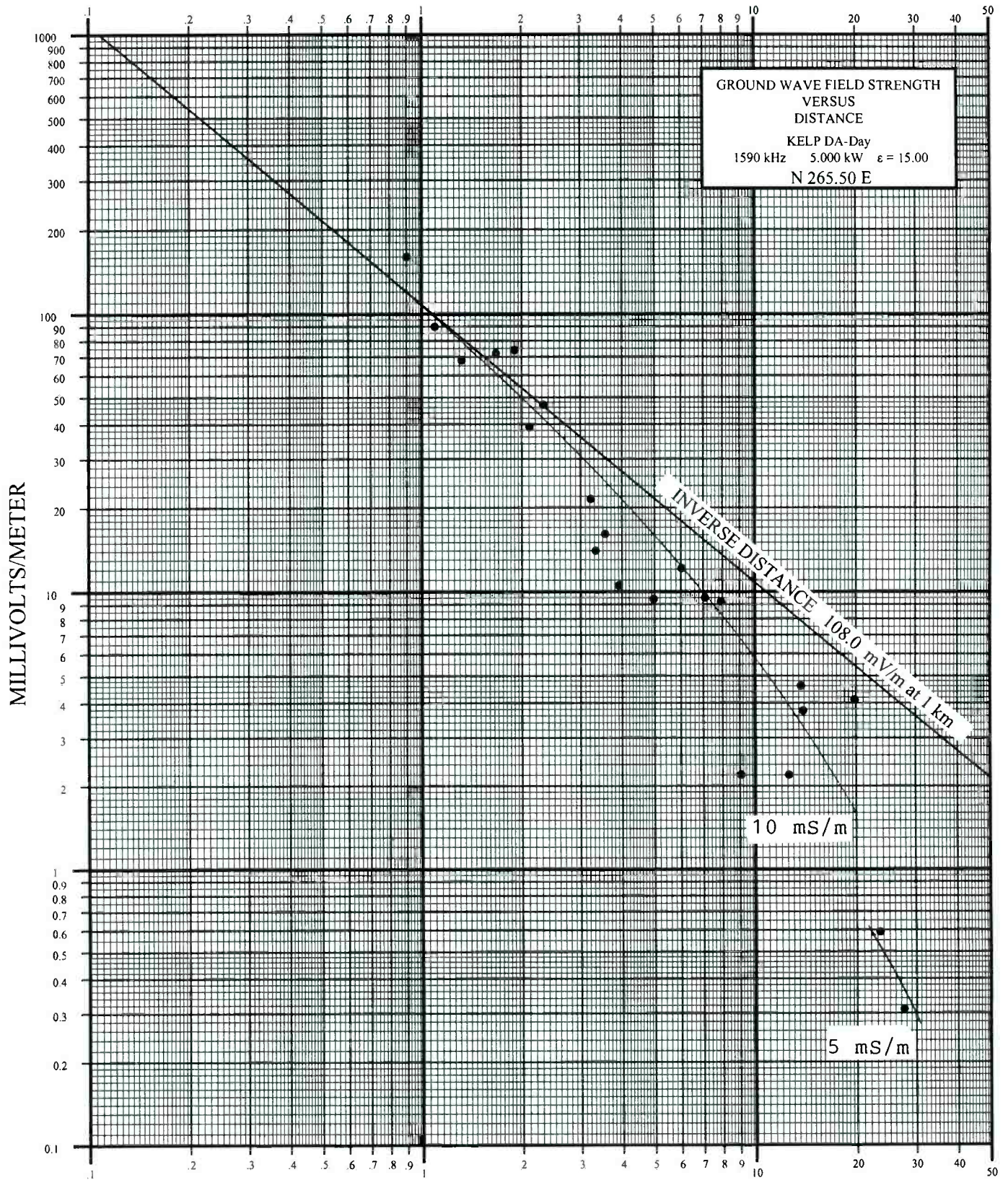


Figure 10-C

KILOMETERS FROM ANTENNA

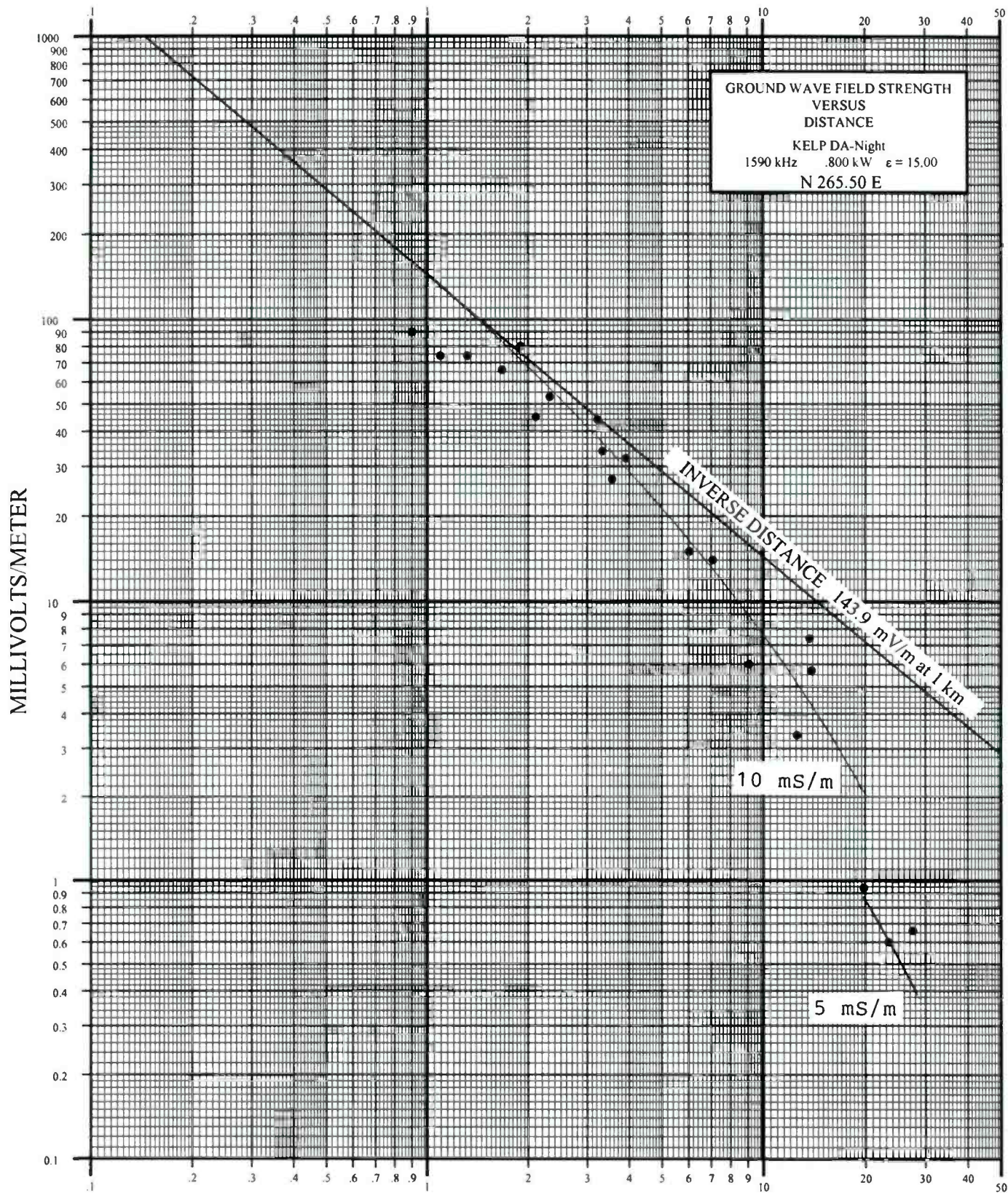


Figure 10-D

Figure 11-A: Tabulation of Field Intensity Measurement Data

R. Morgan Burrow, P.E. & Associates, P.C.
17221 Beauvoir Blvd., Derwood, MD 20855

KLFP 1590 kHz 0.8/5.0 kW DA-2-U El Paso, Texas Bearing: 276.0 deg. Modes: Non-DA, DA-Day, DA-Night

Pt. No.	Distance (Miles)	Non-DA (mV/m)	DA-D (mV/m)	DA-N (mV/m)	Log 10 DA-D/NDA	Log 10 DA-N/NDA	Point Description	Measurement Date & Time		GPS Coordinates
								NDA, DA-D, DA-N; Times MST	(D,M,MM - D,M,MM)	
1	.72	140.50	58.00	-----	-3842	-----	Relographia & Regional (Cd. Juarez, Chih	(3/02/96:1540:3/01/96:1646;	DNA	) 31,44.656-106,24.443
2	.77	1.24	136.00	-----	-2197	-----	7548 Regional	(3/02/96:1538:3/01/96:1644;	DNA	) 31,44.710-106,24.499
3	.88	1.42	90.00	48.00	-2730	-1797	Agricultores & Impresonas	(3/02/96:1535:3/01/96:1642;3/01/96:1433)		31,44.714-106,24.610
4	.99	1.60	100.00	105.00	-.0212	-----	773 Calle Crt	(3/02/96:1531:3/01/96:1639;	DNA	) 31,44.730-106,24.733
5	1.34	2.16	120.50	83.00	-----	-1619	Delas Palmas & Del Madzal 50 ft south	(3/02/96:1528:3/01/96:1636;	DNA	) 31,44.750-106,25.053
6NP	1.42	2.29	129.00	90.00	-1563	-1194	Day M.P., Paseo del Rio at fence corner	(3/02/96:1526:3/01/96:1634;3/01/96:1453)		31,44.768-106,25.195
7	1.68	2.70	64.00	29.50	-3364	-1434	Marked post Hnos. Escobar	(3/02/96:1525:3/01/96:1631;3/01/96:1500)		31,44.791-106,25.449
8	1.99	3.20	44.00	26.50	-----	-2202	Hnos Escobar SW cor of SI bldg	(3/02/96:1521:3/01/96:1628;	DNA	) 31,44.785-106,25.745
9	2.26	3.64	40.00	38.00	-----	-0223	Hnos Escobar Ave Charro	(3/02/96:1517:3/01/96:1627;	DNA	) 31,44.812-106,26.004
10	2.60	4.18	54.00	34.50	-1946	-0792	Hnos Escobar at end of wall	(3/02/96:1514:3/01/96:1624;3/01/96:1520)		31,44.849-106,26.342
11	2.90	4.67	47.00	25.90	-2588	-1807	Near end of Estocolmo	(3/02/96:1512:3/01/96:1620;3/01/96:1533)		31,44.895-106,26.636
12	3.11	5.01	44.00	12.00	-5643	-1451	1789 Lopez Mateos Chamizal shopping ctr	(3/02/96:1505:3/01/96:1618;3/01/96:1539)		31,44.885-106,26.898
13	3.36	5.41	29.50	11.50	-4091	-0807	3490 Zempoala at trees	(3/02/96:1502:3/01/96:1614;3/01/96:1542)		31,44.921-106,27.094
14	3.75	6.04	37.00	20.00	-2672	-1368	150 ft S on I Ramirez & Artigas	(3/02/96:1459:3/01/96:1611;3/01/96:1549)		31,44.982-106,27.408
15	4.21	6.78	29.00	13.10	-3451	-1007	East end of park. for Expo grounds (Mex)	(3/02/96:1455:3/01/96:1607;3/01/96:1604)		31,44.943-106,27.916
16	4.78	7.70	24.20	13.50	-2535	-0938	50 ft E of St Vrain off 9th St (Texas)	(2/25/96:1204:2/25/96:1042;2/25/96:1202)		31,45.061-106,28.575
17	4.85	7.81	29.10	16.80	-2386	-1315	100 ft N of 9th St on Virginia wht. hous	(2/25/96:1205:2/25/96:1049;2/25/96:1201)		31,45.064-106,28.631
18	4.92	7.92	30.50	16.00	-2802	-1226	1006 Ochoa	(2/25/96:1207:2/25/96:1053;2/25/96:1200)		31,45.062-106,28.701
19	5.05	8.13	26.50	9.50	-4455	-1010	50 ft south of 7th on Campbell	(2/25/96:1209:2/25/96:1102;2/25/96:1154)		31,45.084-106,28.848
20	5.15	8.29	21.50	7.50	-----	-4574	NW corner of Kansas & 7th	(2/25/96:1211:2/25/96:1107;	DNA	) 31,45.104-106,28.930
21	5.19	8.35	25.50	6.70	-5805	-1513	SW corner of 7th & Stanton	(2/25/96:1212:2/25/96:1113;2/25/96:1152)		31,45.092-106,28.985
22	5.28	8.50	18.50	8.50	-3378	-0911	SE of Mesa & 6th	(2/25/96:1214:2/25/96:1118;2/25/96:1150)		31,45.105-106,29.067
23	5.36	8.63	17.50	7.10	-3918	-0969	NW on 6th and Oregon	(2/25/96:1216:2/25/96:1121;2/25/96:1148)		31,45.106-106,29.150
24	5.40	8.69	25.00	13.10	-2807	-0862	50 ft N NE corner El Paso & Stiles 816	(2/25/96:1218:2/25/96:1124;2/25/96:1146)		31,45.117-106,28.204
25	5.51	8.87	14.50	11.00	-----	-1200	Inside ent. of SantaFe Park. (El Paso TX)	(2/25/96:1139:2/25/96:1130;	DNA	) 31,45.115-106,28.310
26	6.10	9.82	13.50	4.80	-4491	-0929	Blvd Frouser 150-shopping ctr. (Mexico)	(3/02/96:1359:3/01/96:0949;3/01/96:1357)		31,45.176-106,29.903
27	6.40	10.30	18.50	5.90	-4963	-1532	HI Irogeno/gerarroe	(3/02/96:1351:3/01/96:0956;3/01/96:1352)		31,45.217-106,30.227
28	6.60	10.62	12.10	6.90	-2439	-1051	Dallas/Cafeterio	(3/02/96:1347:3/01/96:1003;3/01/96:1346)		31,45.228-106,30.544

Figure 11-A (continued): F.I.M. Data, KELP 1590 kHz Radial 276 degrees

Pt. No.	Distance (miles)	(km.)	Non-DA (mV/m)	DA-D (mV/m)	DA-N (mV/m)	Log 10 DA-D/ND	Log 10 DA-N/ND	Point Description	Measurement Date & Time Times MST	GPS Coordinates (D,M,MMH - D,M,MMH)
29	7.21	11.60	10.50	6.00	7.60	-.2430	-.1404	Gardenias/Higuerra	(3/02/96:1340;3/01/96:1007;3/01/96:1340)	31,45.281-106,31.008
30	7.46	12.01	11.50	4.30	8.90	-.4272	-.1113	Arayo de la Vinros at the Y	(3/02/96:1334;3/01/96:1015;3/01/96:1333)	31,45.293-106,31.257
31	8.70	14.00	10.50	6.10	9.10	-.2359	-.0621	Desert/quarry dump	(3/02/96:1320;3/01/96:1058;3/01/96:1321)	31,45.430-106,32.496
32	11.62	18.70	4.00	5.40	2.45	.1303	-.2129	GPS location in desert	(3/02/96:1201;3/01/96:1202;3/01/96:1204)	31,45.684-106,35.487
33	17.10	27.52	1.85	.59	.60	-.4963	-.4890	On hwy., 50 ft fr Santa Teresa Crossing	(3/02/96:1232;3/01/96:1234;3/01/96:1231)	31,46.166-106,41.032

No. of day data points: 33

No. of night data points: 25

Non-Directional Inverse field (mV/m at 1 km): 254.14

Day Inverse Field (mV/m at 1 km) 129.69

Night Inverse Field (mV/m at 1 km) 185.66

KILOMETERS FROM ANTENNA

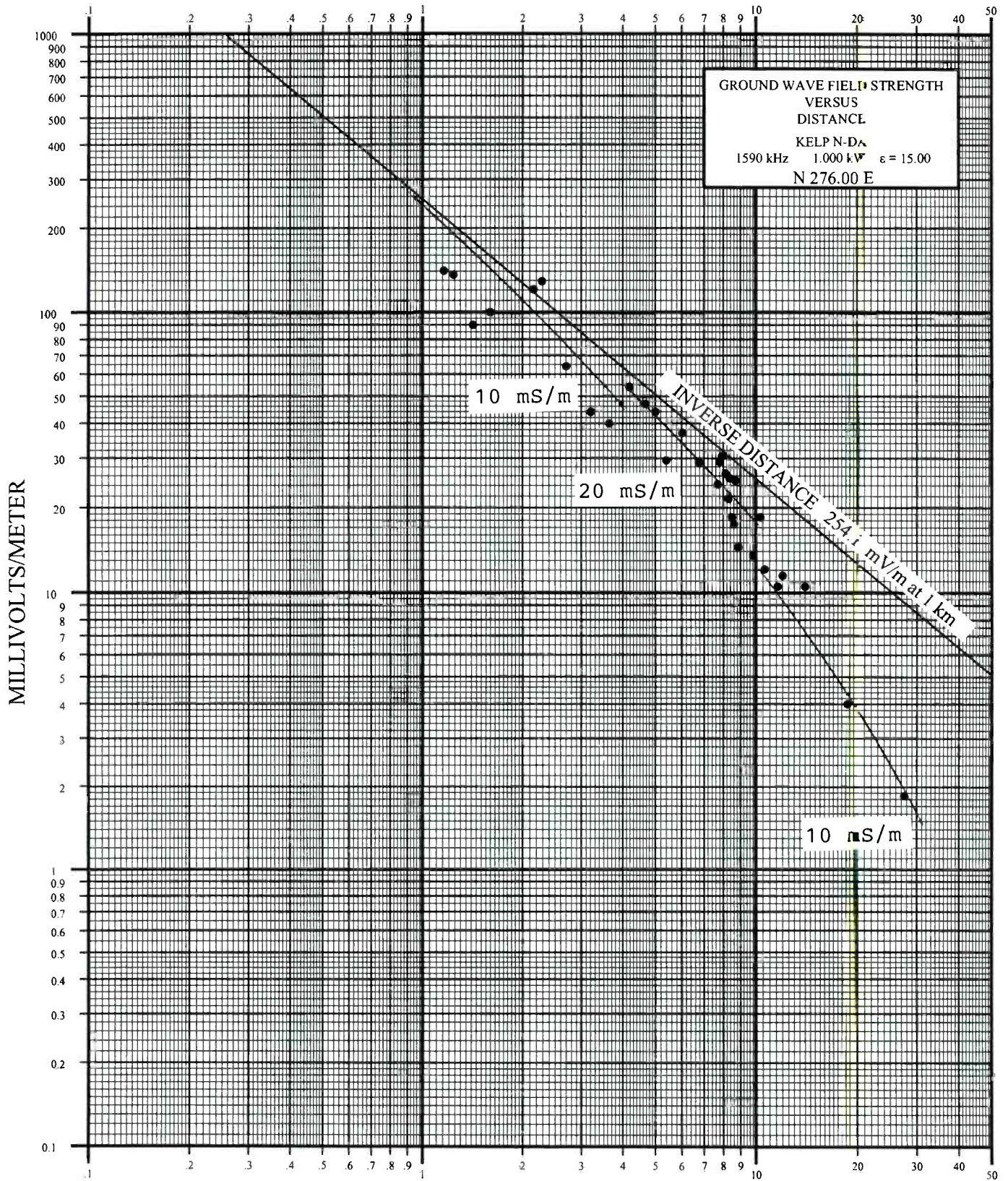


Figure 11-B

KILOMETERS FROM ANTENNA

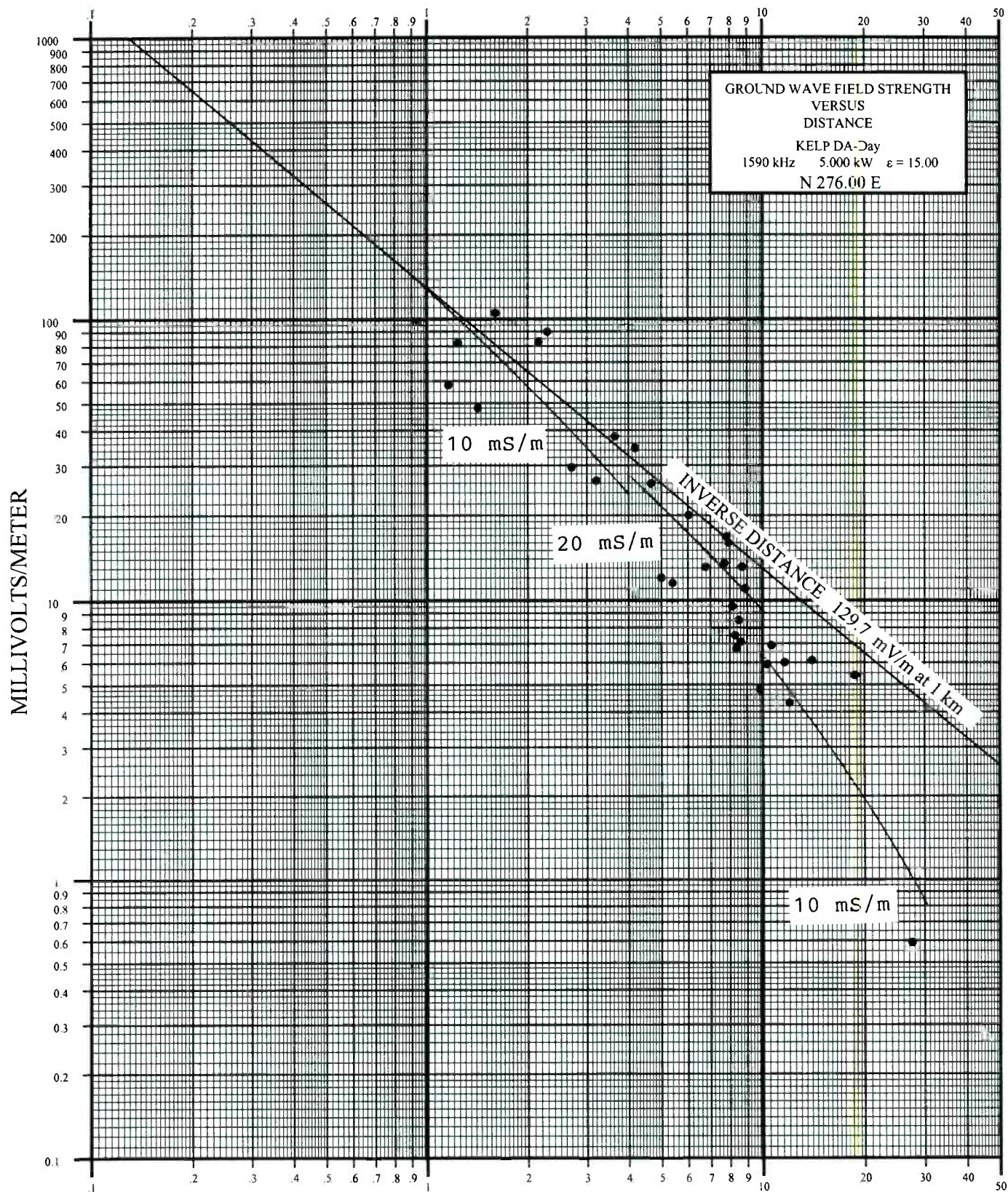


Figure 11-C

KILOMETERS FROM ANTENNA

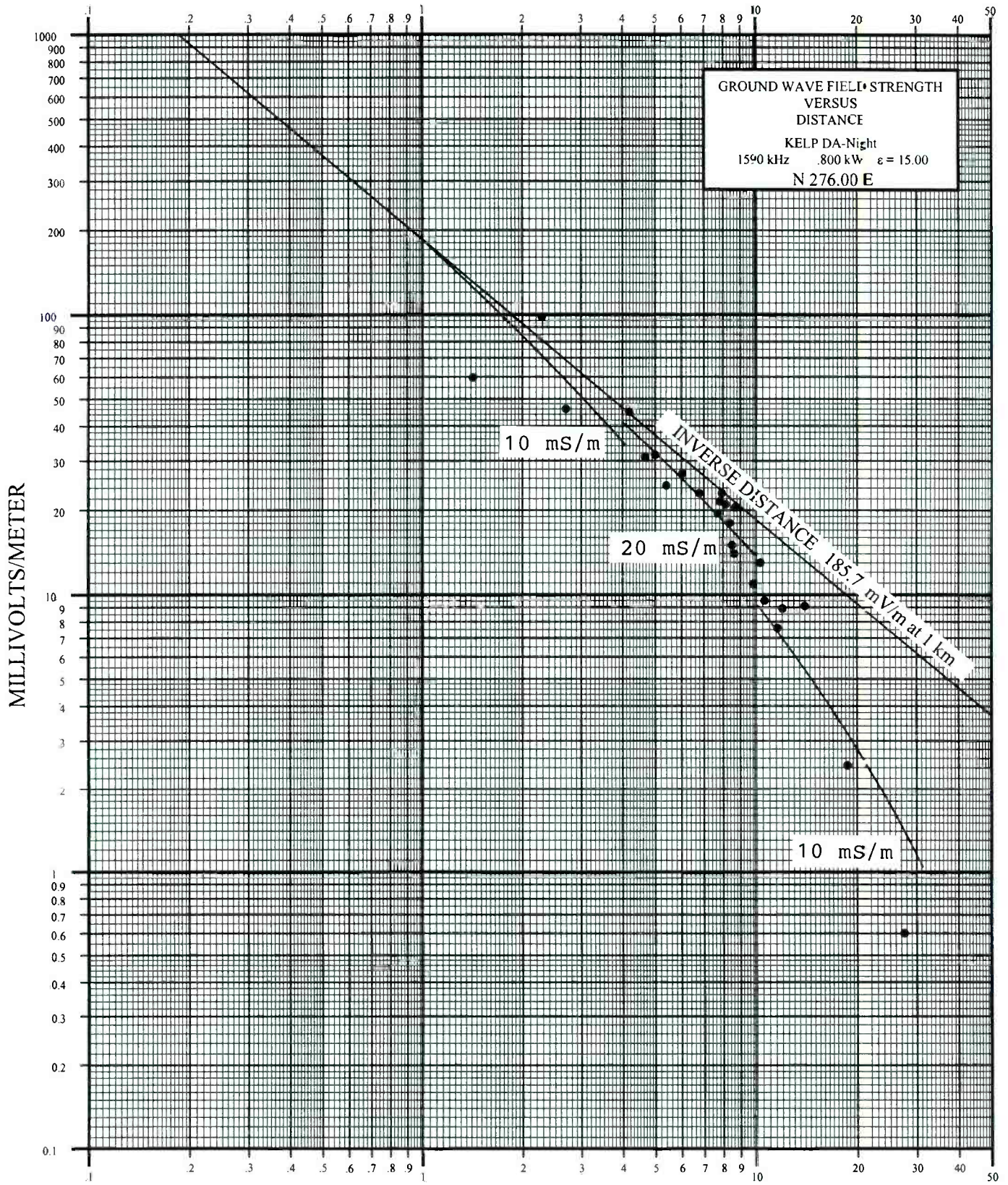


Figure 11-D

FIGURE 11-E

DAYTIME MONITOR POINT N-276 DEGREES TRUE

From the N-220.5 degree monitor point, return to Blvd. Manuel Gomez Morin. Turn right on Blvd. Manuel Gomez Morin and proceed to Ave. Tecnologico. Turn right on Ave. Tecnologico and proceed north to Ave. Hernandos Escobar. Turn right on Ave. Hernandos Escobar and proceed east to Paseo del Rio. Turn right on Paseo del Rio; the monitor point is located at a marked location near the junction of two fences near a factory. The distance from the transmitter is 1.42 miles (2.29 km). The GPS coordinates at this location are 31, 44', 46.1" N. Latitude, 106, 25', 11.7" W. Longitude. The daytime field intensity at this location is 90 mV/m.



Figure 12-A: Tabulation of Field Intensity Measurement Data

R. Morgan Burrow, P.E. & Associates, P.C.
17221 Beauvoir Blvd., Derwood, MD 20855

KELP 1590 kHz 0.8/5.0 kW DA-2-U El Paso, Texas Bearing: 319 deg. Mode: Day,

Pt. No.	Distance (Miles)	Non-DA (mV/m)	DA-D (mV/m)	DA-N (mV/m)	Log 10 DA-D/NDA	Log 10 DA-N/NDA	Point Description	Measurement Date & Time NDA, DA-D, DA-N; Times MST & MDT	GPS Coordinates (D,M,MM - D,M,MM)
1	.24	.39	820.00	2320.00	-----	.4517	323 George Orr	(5/12/96:1110;2/21/96:1035; DNA)	31,44.787-106,23.872
2	.32	.51	480.00	1490.00	800.00	.4919	7075 Becky	(5/12/96:1114;2/21/96:1041;5/12/96:1608)	31,44.831-106,23.927
3	.40	.64	349.00	1100.00	500.00	.4986	313 Ben Swain	(5/12/96:1116;2/21/96:1048;5/12/96:1610)	31,44.883-106,23.977
4	1.02	1.64	115.00	450.00	210.00	.5925	Parking lot golf course Marker at spot	(5/12/96:1123;2/21/96:1103;5/12/96:1617)	31,45.224-106,24.314
5	1.57	2.53	60.00	225.00	135.00	.5740	264 Nauasota	(5/12/96:1130;2/21/96:1115;5/12/96:1623)	31,45.654-106,24.771
6	1.81	2.91	74.00	225.00	125.00	.4830	On Geiger 50 ft W of Maryland	(5/12/96:1134;2/21/96:1120;5/12/96:1625)	31,45.811-106,24.915
7	2.05	3.30	68.00	190.00	120.00	.4462	Middle of back park. lot off Aubrey	(5/12/96:1138;2/21/96:1129;5/12/96:1627)	31,45.968-106,25.087
8	2.41	3.88	74.00	160.00	110.00	.3349	Back lot N of power pole Fox Plaza	(2/23/96:1032;2/21/96:1147;2/24/96:1057)	31,46.210-106,25.341
9	2.51	4.04	48.00	129.00	77.00	.4293	5539 El Paso Dr at corner of wall NW	(5/12/96:1144;2/21/96:1152;2/24/96:1101)	31,46.272-106,25.386
10	2.80	4.51	51.00	150.00	85.00	.4685	60 ft N of gate ALLstar Van Storage Co.	(5/12/96:1148;2/21/96:1159;2/24/96:1109)	31,46.471-106,25.575
11	3.01	4.84	49.00	120.50	68.00	.3908	SE of Revene and Gateway East	(5/12/96:1153;2/21/96:1208;2/24/96:1114)	31,46.584-106,25.722
12	3.38	5.44	46.50	120.00	69.00	.4117	Ellis off Vandell 50 ft south	(5/12/96:1159;2/21/96:1220;2/24/96:1119)	31,46.837-106,25.965
13	3.70	5.95	33.00	82.00	45.50	.3953	1029 Redford	(5/12/96:1202;2/21/96:1223;2/24/96:1123)	31,47.051-106,26.185
14	4.23	6.81	33.00	83.00	42.50	.4006	75 ft S of SE corner Chester & Boone	(5/12/96:1230;2/21/96:1232;2/24/96:1130)	31,47.403-106,26.553
15	4.84	7.79	43.00	96.00	-----	.3488	3621 Altura	(5/12/96:1235;2/21/96:1239; DNA)	31,47.787-106,26.963
16	5.45	8.77	23.00	54.00	31.50	.3707	3209 Hamilton	(5/12/96:1241;2/21/96:1247;2/21/96:1152)	31,48.206-106,27.350
17	5.90	9.50	20.00	44.50	27.50	.3473	NE corner Piedras & Nations	(5/12/96:1243;2/21/96:1251;2/21/96:1155)	31,48.474-106,27.635
18	6.40	10.30	17.50	35.00	-----	.3010	IWA W on Harrison Cor & Alabama	(5/12/96:1247;2/21/96:1315; DNA)	31,48.834-106,27.906
19	10.37	16.69	1.25	3.10	1.75	.3945	Mia Grande & Casitas Coronado	(2/21/96:1358;2/21/96:1356;2/21/96:1400)	31,51.441-106,30.666
20	10.75	17.30	1.25	2.85	1.60	.3579	GPS location on side of Franklin Mtn	(2/21/96:1419;2/21/96:1420;2/21/96:1418)	31,51.683-106,30.921
21	11.31	18.20	1.31	2.90	-----	.3451	GPS location in middle of desert	(2/21/96:1431;2/21/96:1429; DNA)	31,52.037-106,31.294
22	11.80	18.99	1.10	2.90	1.55	.4210	GPS location on mtn desert	(2/21/96:1500;2/21/96:1501;2/21/96:1459)	31,52.376-106,31.639
23	12.18	19.60	.94	2.80	1.31	.4740	GPS location on mtn; desert	(2/21/96:1521;2/21/96:1519;2/21/96:1522)	31,52.605-106,31.866
24	13.50	21.73	1.10	2.41	-----	.3406	GPS location on dry wash	(2/21/96:1245;2/21/96:1249; DNA)	31,53.458-106,32.750
25	13.85	22.29	.90	1.90	-----	.3245	GPS location in field	(2/21/96:1324;2/21/96:1319; DNA)	31,53.718-106,32.498
26	14.90	23.98	.90	1.95	1.50	.3358	GPS location; mark on Trans Mountain Rd.	(2/21/96:1610;2/21/96:1611;2/21/96:1610)	31,54.386-106,33.687
27	16.83	27.09	.48	1.21	.68	.4015	GPS location	(2/21/96:1430;2/21/96:1431;2/21/96:1429)	31,55.656-106,34.960
28	18.52	29.81	.50	1.40	.71	.4472	Mark on west bound lane Doniphan West	(2/21/96:1440;2/21/96:1441;2/21/96:1440)	31,56.757-106,36.110
29	23.17	37.29	.45	1.21	.73	.4296	Farm road 1905 & Farm Road 28 NW corner	(2/21/96:1502;2/21/96:1503;2/21/96:1504)	31,59.852-106,39.270

No. of day data points: 29

No. of night data points: 23

Non-Directional Inverse field (mV/m at 1 km): 300.00

Day Inverse Field (mV/m at 1 km) 778.42

Night Inverse Field (mV/m at 1 km) 456.13

KILOMETERS FROM ANTENNA

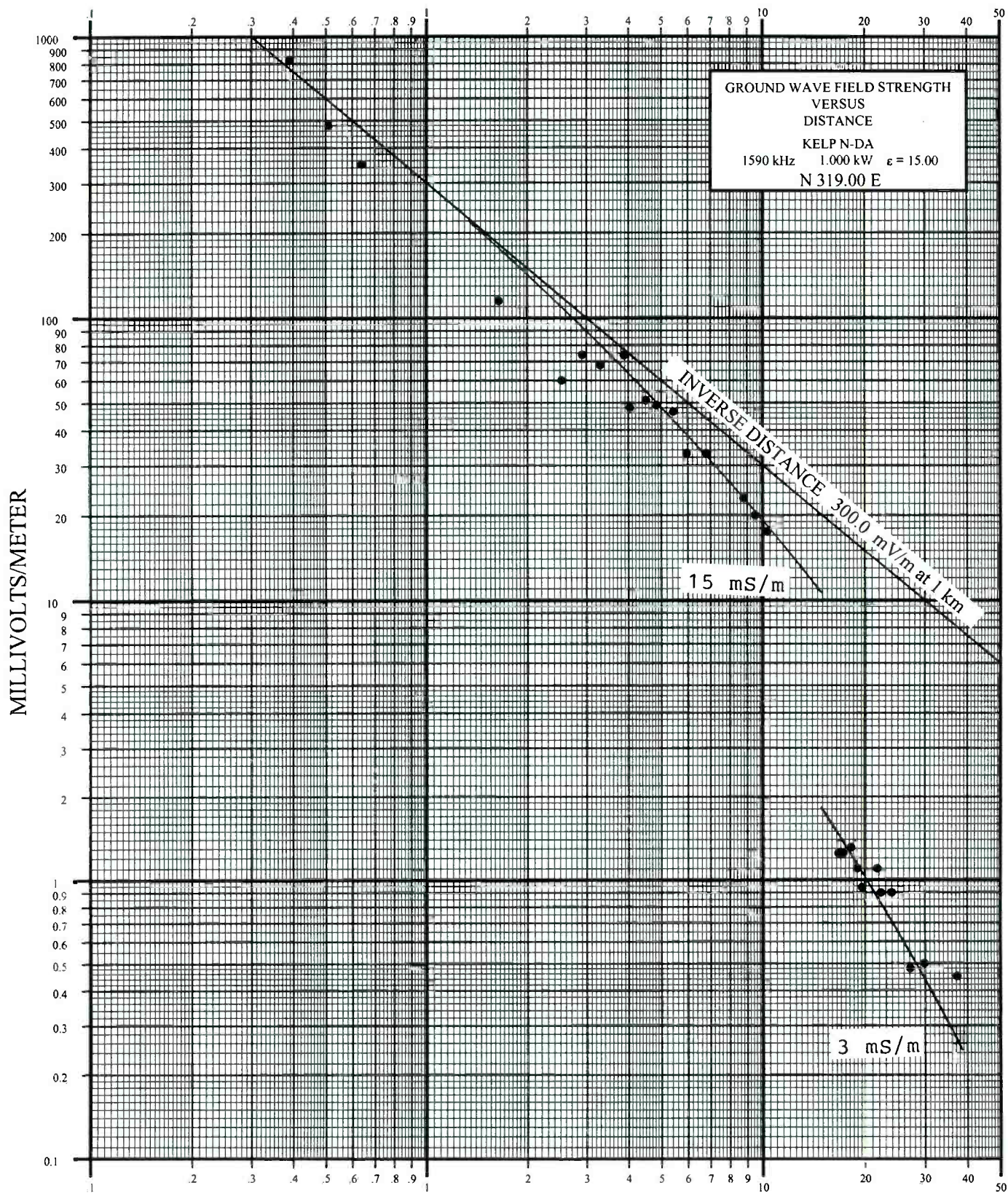


Figure 12-B

KILOMETERS FROM ANTENNA

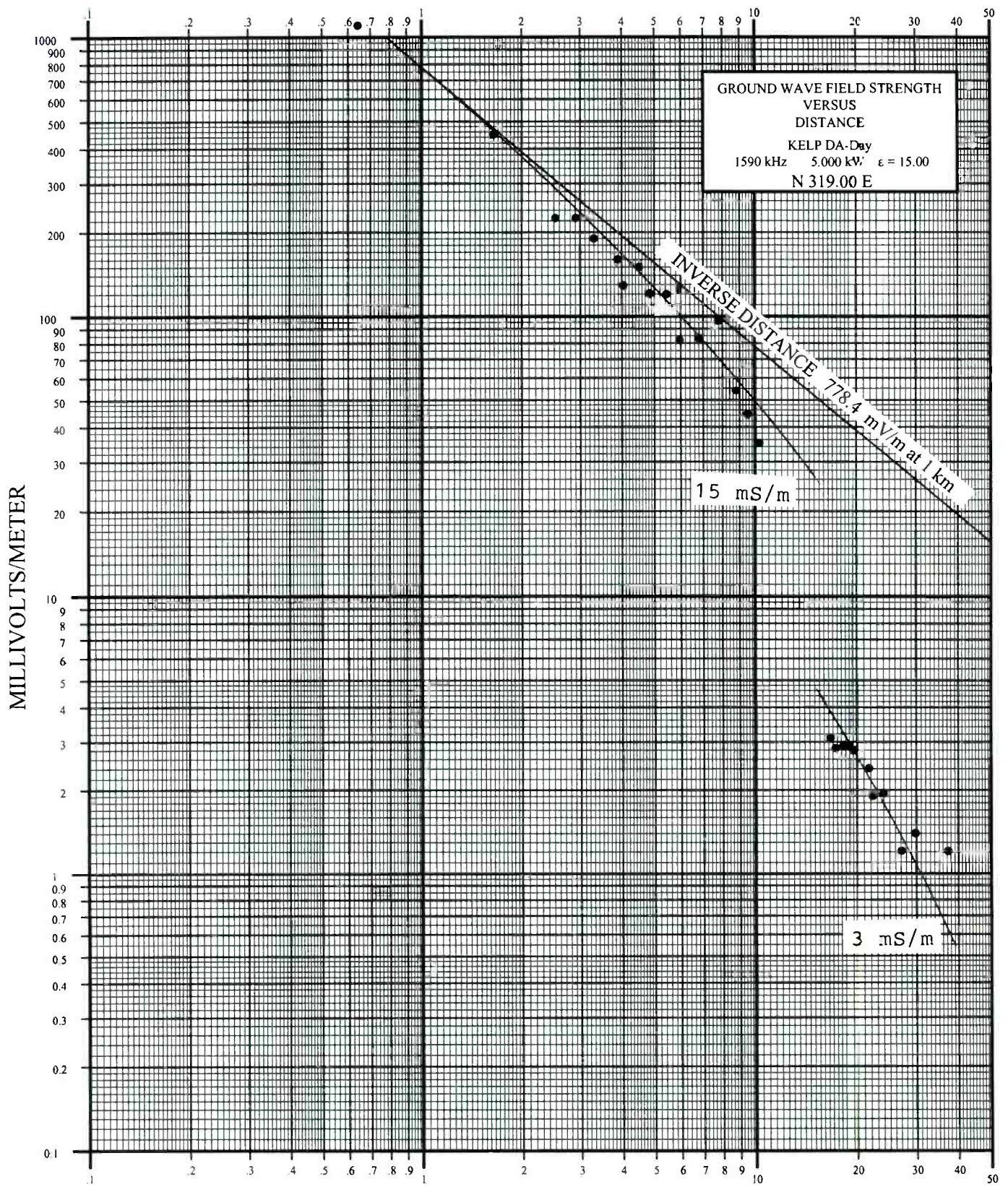


Figure 12-C

KILOMETERS FROM ANTENNA

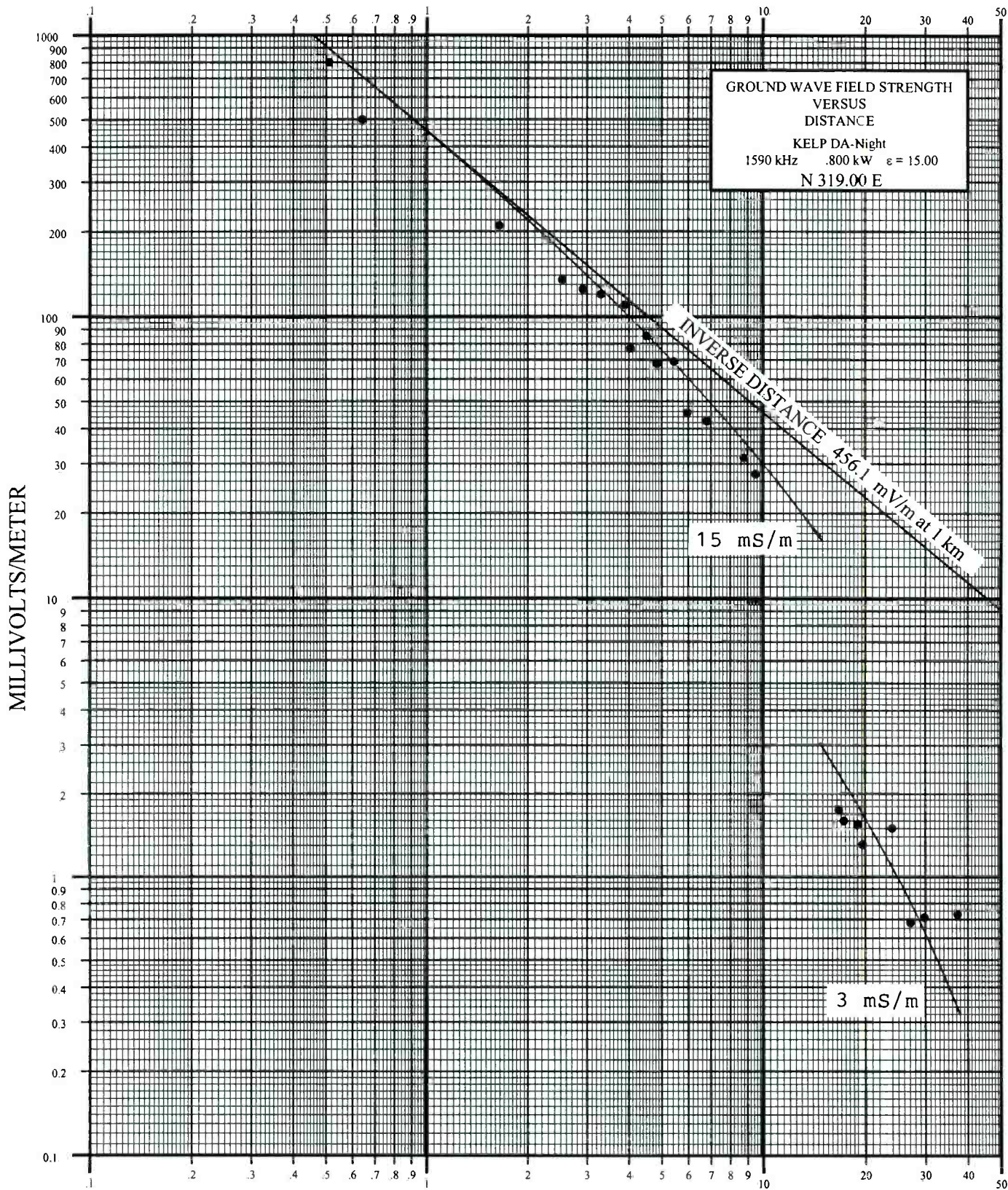
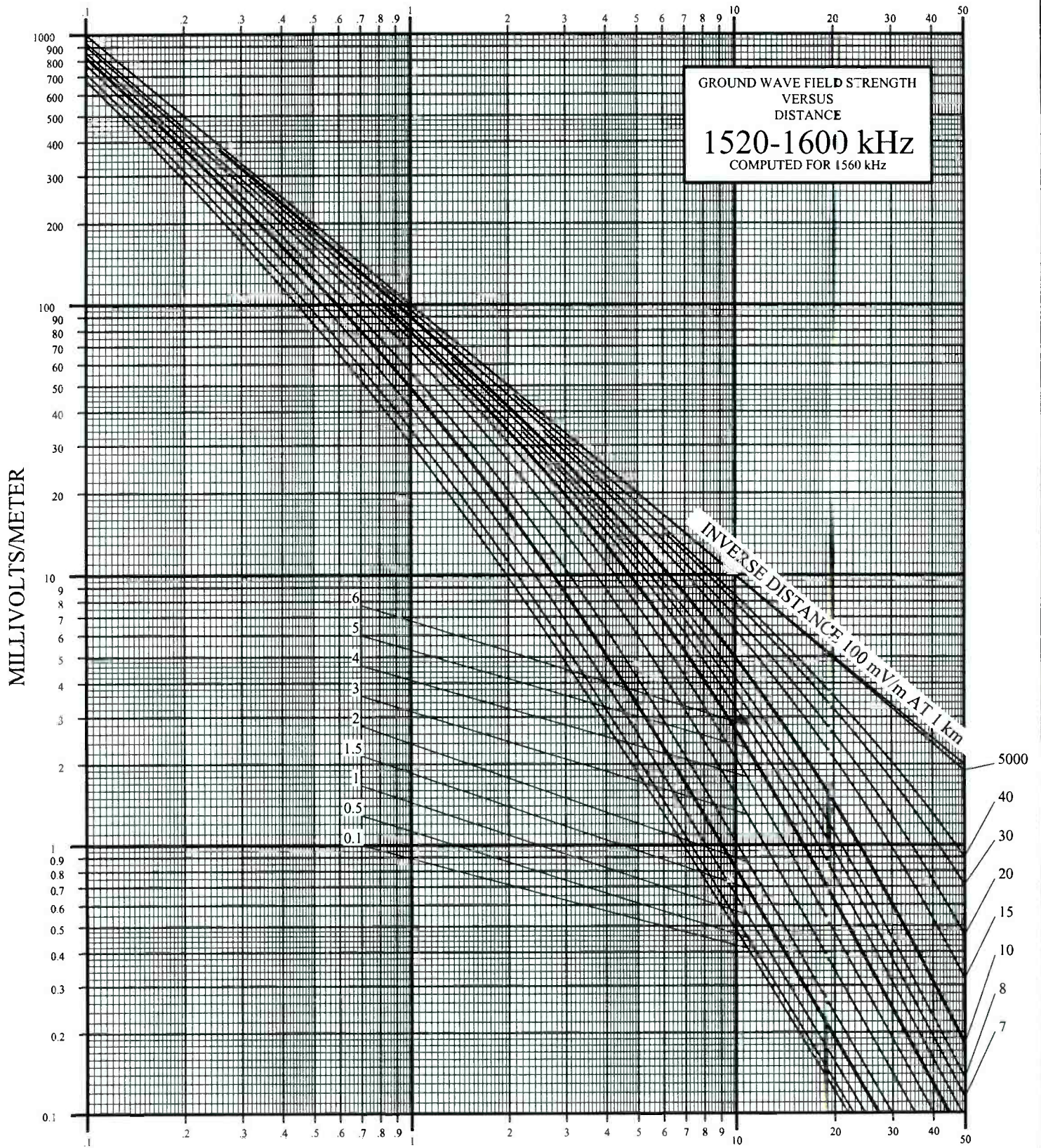


Figure 12-D

KILOMETERS FROM ANTENNA



GRAPH 19-A

FIGURE 13

Standard Conductivity Curves

FIGURE 14: KELP Non-Directional Proximity Measurements

Non-Directional Tower 2 [Twr. 1 & 3 floating] (Page 1 of 5)

Azimuth 8 deg T		Azimuth 22 deg T		Azimuth 47 deg T	
Field (mV/m)	Distance from twr.	Field (mv/m)	Distance from twr.	Field (mv/m)	Distance from twr
10000	102 ft.	10000	98 ft.	10000	111 ft.
9800	105	9800	100	9950	115
9000	110	9250	105	9800	120
8250	115	8900	110	9650	125
7700	120	8400	115	9400	130
7300	125	8000	120	9200	135
7000	130	7750	125	9000	140
6650	135	7400	130	8800	145
6400	140	7000	135	8400	150
6200	145	6500	140	7750	155
5900	150	6250	145	7300	160
5750	155	5950	150	7150	165
5600	160	5700	155	7250	170
5400	165	5600	160	6900	175
5200	170	5500	165	6600	180
5025	175	5375	170	6200	185
4900	180	5200	175	5950	190
4800	185	5000	180	5700	195
4720	190	4850	185	5500	200
4600	195	4750	190	5200	210
4480	200	4650	195	4900	220
4250	210	4525	200	4650	230
4100	220	4300	210	4400	240
3475	230	4100	220	4170	250
3870	240	4020	230	3980	260
3770	250	3880	240	3900	270
3640	260	3750	250	3820	280
3530	270	3650	260	3730	290
3430	280	3550	270	3650	300
3310	290	3490	280	3500	310
3260	300	3400	290	3420	320
3100	310	3310	300	3300	330
3030	320	3230	310	3170	340
2950	330	3170	320	3050	350
2860	340	3100	330		

N-D INVERSE FIELD
(THIS BEARING)
269.302 mV/m @ 1 km
167.373 mV/m @ 1 mi

N-D INVERSE FIELD
(THIS BEARING)
272.71 mV/m @ 1 km
169.49 mV/m @ 1 mi

N-D INVERSE FIELD
(THIS BEARING)
331.405 mV/m @ 1 km
205.970 mV/m @ 1 mi

Fig. 14: KELP NON-DIRECTIONAL PROXIMITY MEASUREMENTS (page 2 of 5)

Azimuth 72 deg T		Azimuth 90 deg T		Azimuth 131 deg T	
Field (mV/m)	Distance from twr.	Field (mv/m)	Distance from twr.	Field (mv/m)	Distance from twr.
10000	102 ft.	10000	93 ft.	10000	95 ft.
9800	105	9900	95	9600	100
9350	110	9400	100	9100	105
8800	115	8600	105	8800	110
8300	120	8375	110	8450	115
7800	125	8000	115	8000	120
7400	130	7700	120	7700	125
7100	135	7500	125	7400	130
6650	140	7350	130	7150	135
6350	145	7175	135	6900	140
6000	150	7000	140	6600	145
5725	155	6800	145	6450	150
5600	160	6600	150	6250	155
5400	165	6500	155	6000	160
5250	170	6350	160	5800	165
5175	175	6175	165	5600	170
5025	180	5990	170	5450	175
4900	185	5800	175	5250	180
4800	190	5600	180	5100	185
4720	195	5450	185	5000	190
4600	200	5250	190	4950	195
4430	210	5100	195	4850	200
4325	220	4950	200	4750	205
4250	230	4630	210	4675	210
4050	240	4350	220	4575	215
3900	250	4100	230	4500	220
3750	260			4405	225
3680	270	N-D INVERSE FIELD		N-D INVERSE FIELD	
3550	280	(THIS BEARING)		(THIS BEARING)	
3490	290	277.872 mV/m @ 1 km		276.930 mV/m @ 1 km	
3440	300	172.698 mV/m @ 1 mi		172.113 mV/m @ 1 mi	
3350	310				
3300	320				
3200	330				
3250	340				
N-D INVERSE FIELD					
(THIS BEARING)					
280.792 mV/m @ 1 km					
174.513 mV/m @ 1 mi					

Fig. 14: KELP NON-DIRECTIONAL PROXIMITY MEASUREMENTS (Page 3 of 5)

Azimuth 165.5 deg T		Azimuth 181 deg T		Azimuth 220.5 deg T	
Field (mV/m)	Distance from twr.	Field (mv/m)	Distance from twr	Field (mv/m)	Distance from twr
10000	91 ft.	10000	83 ft.	10000	84 ft.
9600	95	9900	85	9400	90
9050	100	9450	90	8800	95
8600	105	8950	95	8400	100
8200	110	8600	100	8000	105
7800	115	8200	105	7750	110
7500	120	7850	110	7550	115
7200	125	7400	115	7400	120
6900	130	7050	120	7300	125
6650	135	6700	125	7250	130
6450	140	6500	130	7300	135 T
6200	145	6300	135	7400	140 T
6050	150	6175	140	7400	145 T
5850	155	5900	145	7550	150 T
5700	160	5800	150	7800	155 T
5500	165	5700	155	8200	160 T
5375	170	5450	160	8650	165 T
5200	175	5250	165	9250	170 T
5025	180	5100	170	10000	175 T
4900	185	4975	175	10000	180 T
4825	190	4800	180	10000	185 T
4725	195	4650	185	10000	190 T
4650	200	4525	190	9600	195 T
4450	210	4440	195	6500	200 T
4200	220	4300	200	6600	205 T
3980	230	4050	210	7400	210 T
3830	240	3810	220	6500	215 T
3700	250	3620	230	5650	220 T
3525	260	3430	240	5100	225 T
3440	270	3300	250	4400	230
3325	280	3220	260	3800	235
3270	290	3110	270	3380	240
		2990	280	3100	245
		2890	290	2850	250
		2820	300	2680	255
		2700	310	2540	260

N-D INVERSE FIELD
 (THIS BEARING)
 262.939 mV/m @ 1 km
 163.418 mV/m @ 1 mi

(continued)

(continued)

Azimuth 181 deg T		Azimuth 220.5 deg T	
Field (mV/m)	Distance (feet)	Field (mV/m)	Distance (feet)
2560	320	2410	265
2450	330	2290	270
2330	340	2230	275
2100	350	2160	280
2080	360	2070	290
1870	370	1980	300
1850	380	1890	310
1770	390	1830	320
1710	400	1790	330
N-D INVERSE FIELD		1740	340
(THIS BEARING)		1710	350
248.590 mV/m @ 1 km		1680	360
148.528 mV/m @ 1 mi		1640	370
		1610	380
		1560	390
		1520	400
N-D INVERSE FIELD		N-D INVERSE FIELD	
(THIS BEARING)		(THIS BEARING)	
248.590 mV/m at 1 km		241.72 mV/m @ 1 km	
149.528 mV/m at 1 mi		150.23 mV/m @ 1 mi	

T - Measurements made in vicinity of another tower in array.

Fig. 14:

KELP N-D PROXIMITY MEASUREMENTS

(Page 5 of 5)

Azimuth 265.5 deg T

Azimuth 276 deg T

Azimuth 319 deg T

Field Distance
(mV/m) from twr.

Field Distance
(mv/m) from twr

Field Distance
(mv/m) from twr

10000 91 feet
9800 95
9300 100
8950 105
8500 110
8150 115
7750 120
7400 125
7200 130
6950 135
6600 140
6450 145
6350 150
6200 155
6000 160
5825 165
5700 170
5600 175
5425 180
5300 185
5150 190
5025 195
4875 200
4600 210
4375 220
4075 230

10000 88 feet
9800 90
9450 95
9000 100
8600 105
8000 110
7700 115
7400 120
7050 125
6700 130
6450 135
6300 140
6200 145
6000 150
5825 155
5700 160
5550 165
5460 170
5225 175
5150 180
5000 185
4875 190
4750 195
4600 200
4350 210
4050 220
3825 230

10000 93 ft.
9975 95
9600 100
9200 105
8600 110
8375 115
8000 120
7800 125
7400 130
7200 135
7000 140
6750 145
6550 150
6400 155
6200 160
6000 165
5825 170
5780 175
5650 180
5550 185
5450 190
5375 195
5250 200
5150 205
5050 210

N-D INVERSE FIELD
(THIS BEARING)

270.594 mV/m at 1 km
168.176 mV/m at 1 mile

N-D INVERSE FIELD
(THIS BEARING)

254.143 mV/m at 1 km
157.951 mV/m at 1 mile

N-D INVERSE FIELD
(THIS BEARING)

283.225 mV/m at 1 km
176.025 mV/m at 1 mi

KILOMETERS FROM ANTENNA

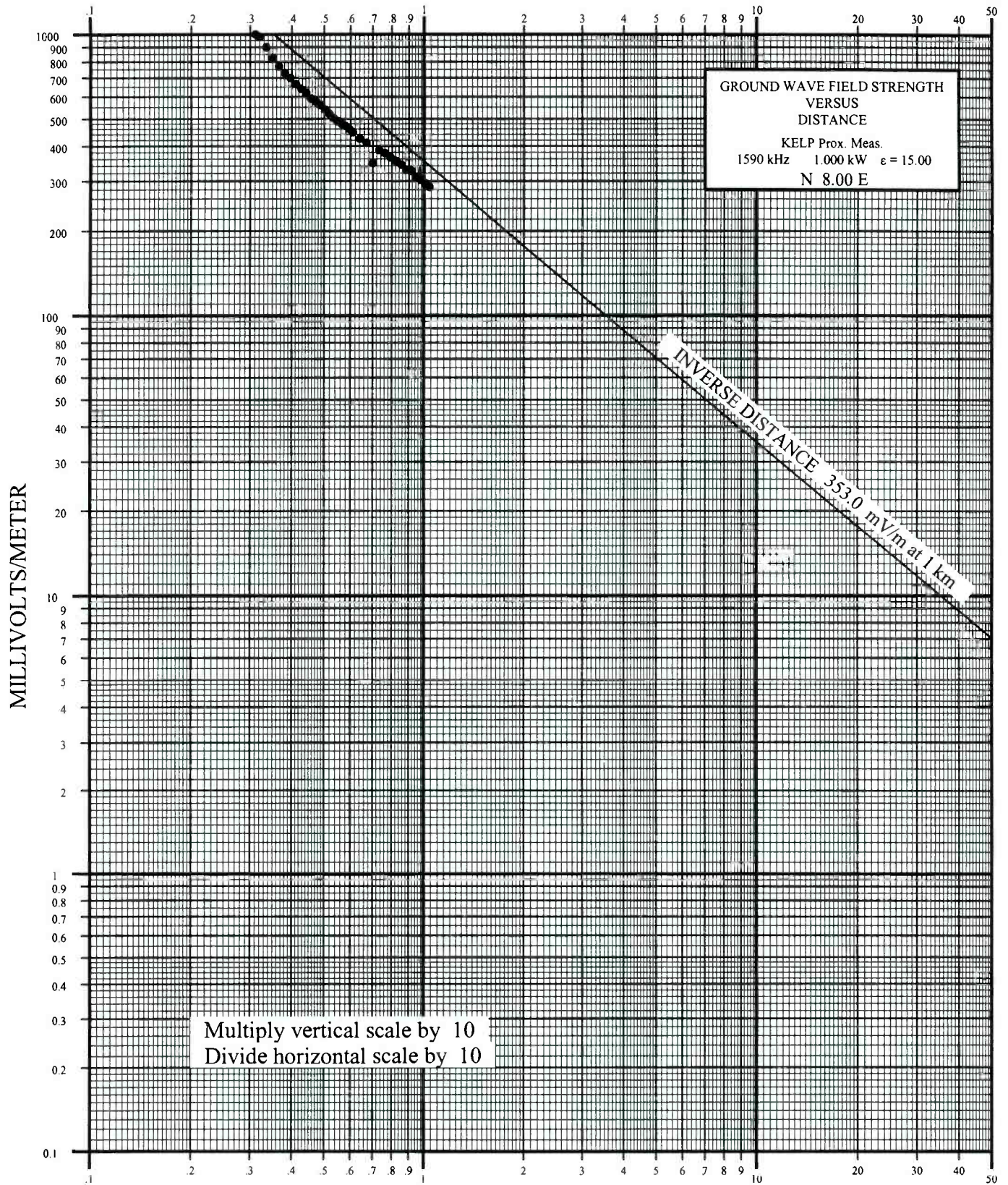


Fig. 14 (a)

KILOMETERS FROM ANTENNA

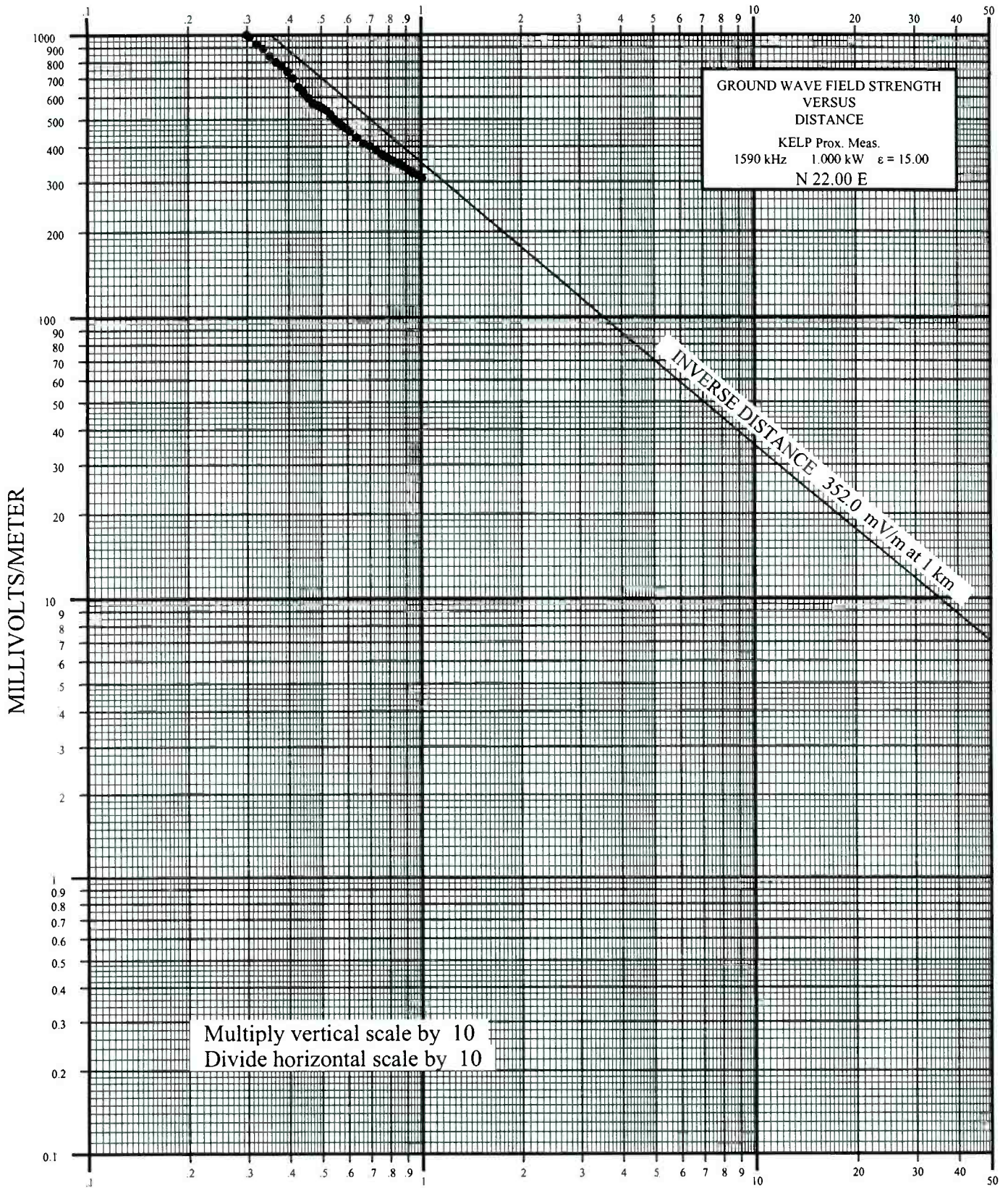


Fig. 14 (b)

KILOMETERS FROM ANTENNA

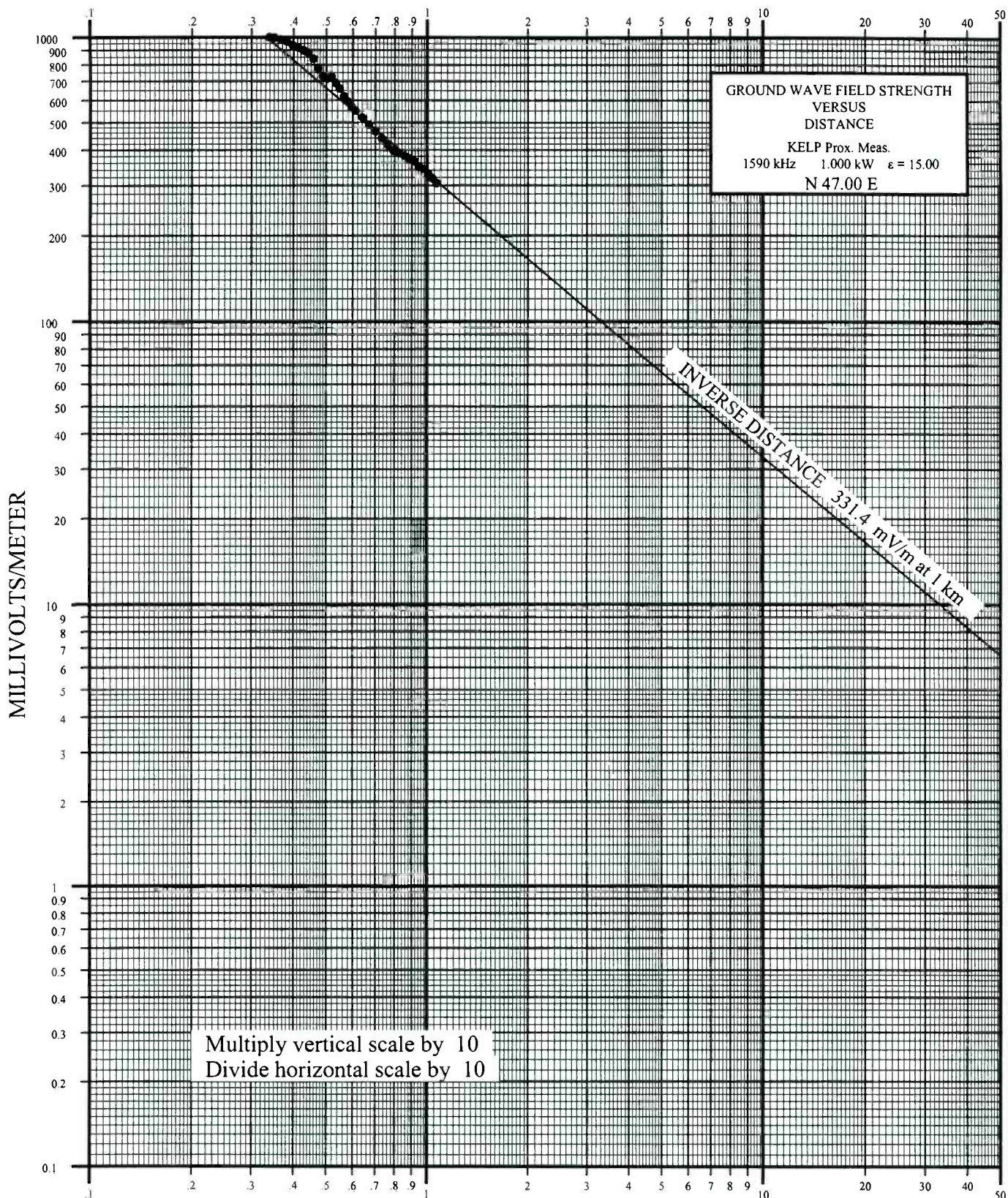


Fig. 14 (c)

KILOMETERS FROM ANTENNA

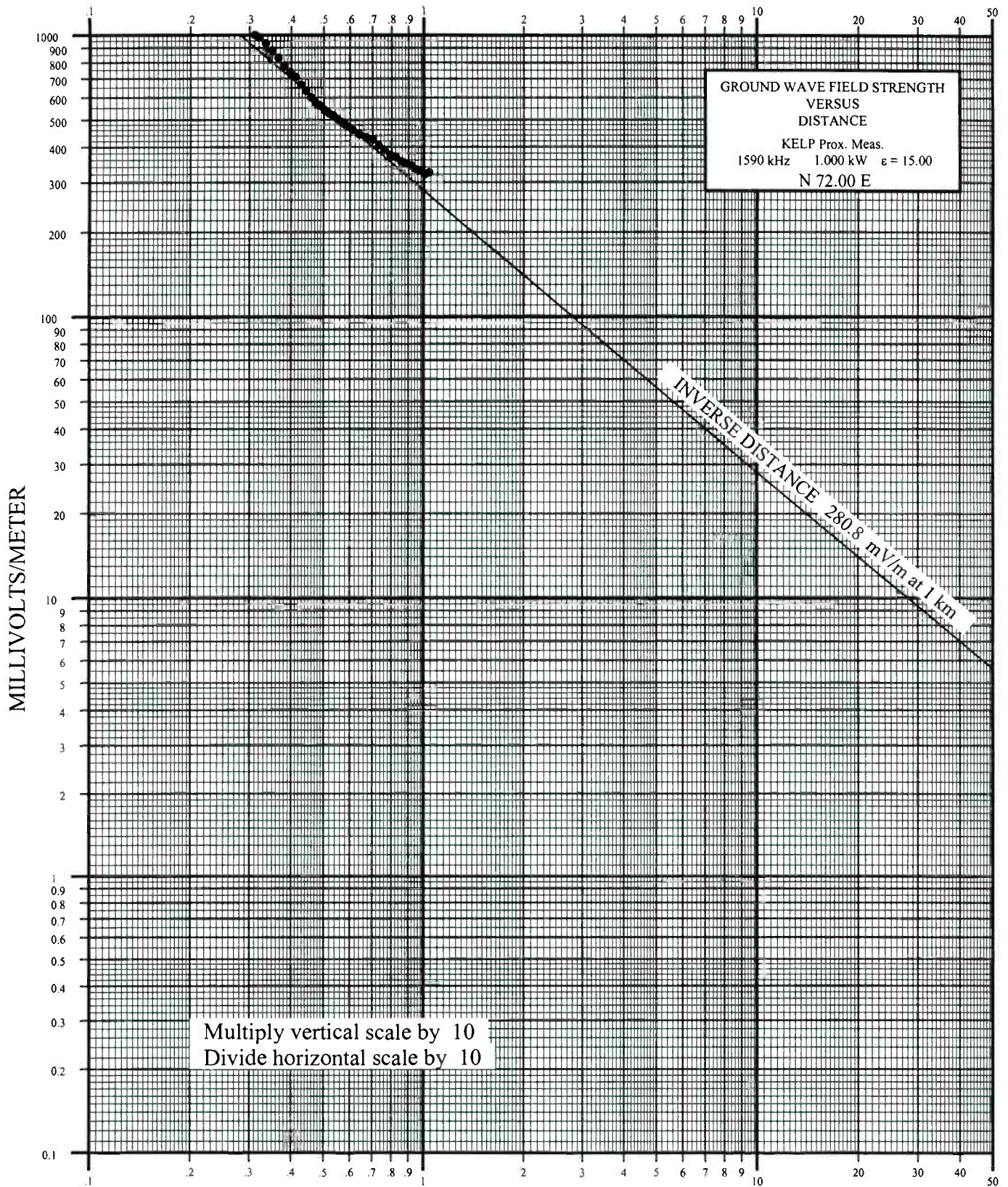


Fig. 14 (d)

KILOMETERS FROM ANTENNA

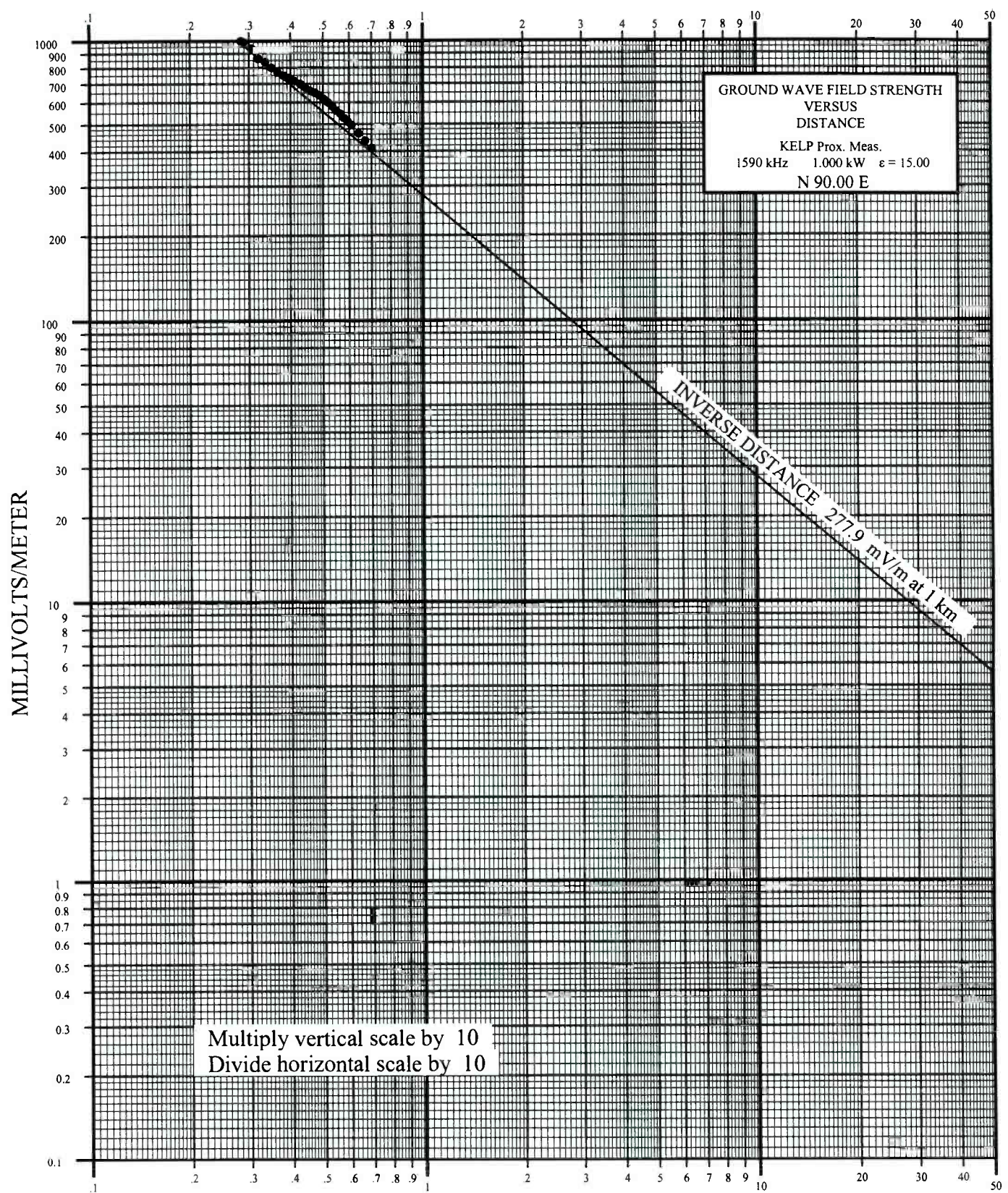


Fig. 14 (e)

KILOMETERS FROM ANTENNA

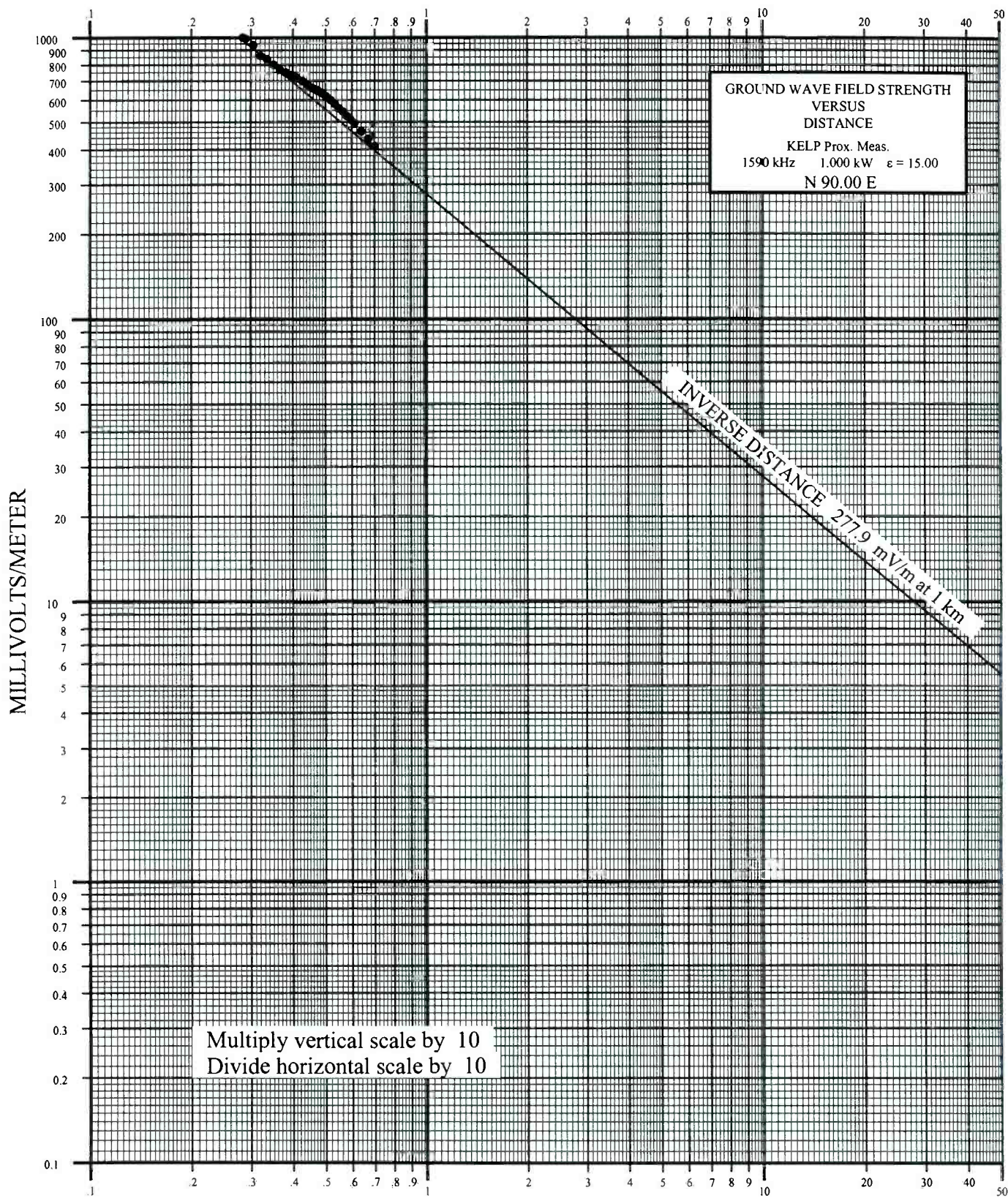


Fig. 14 (e)

KILOMETERS FROM ANTENNA

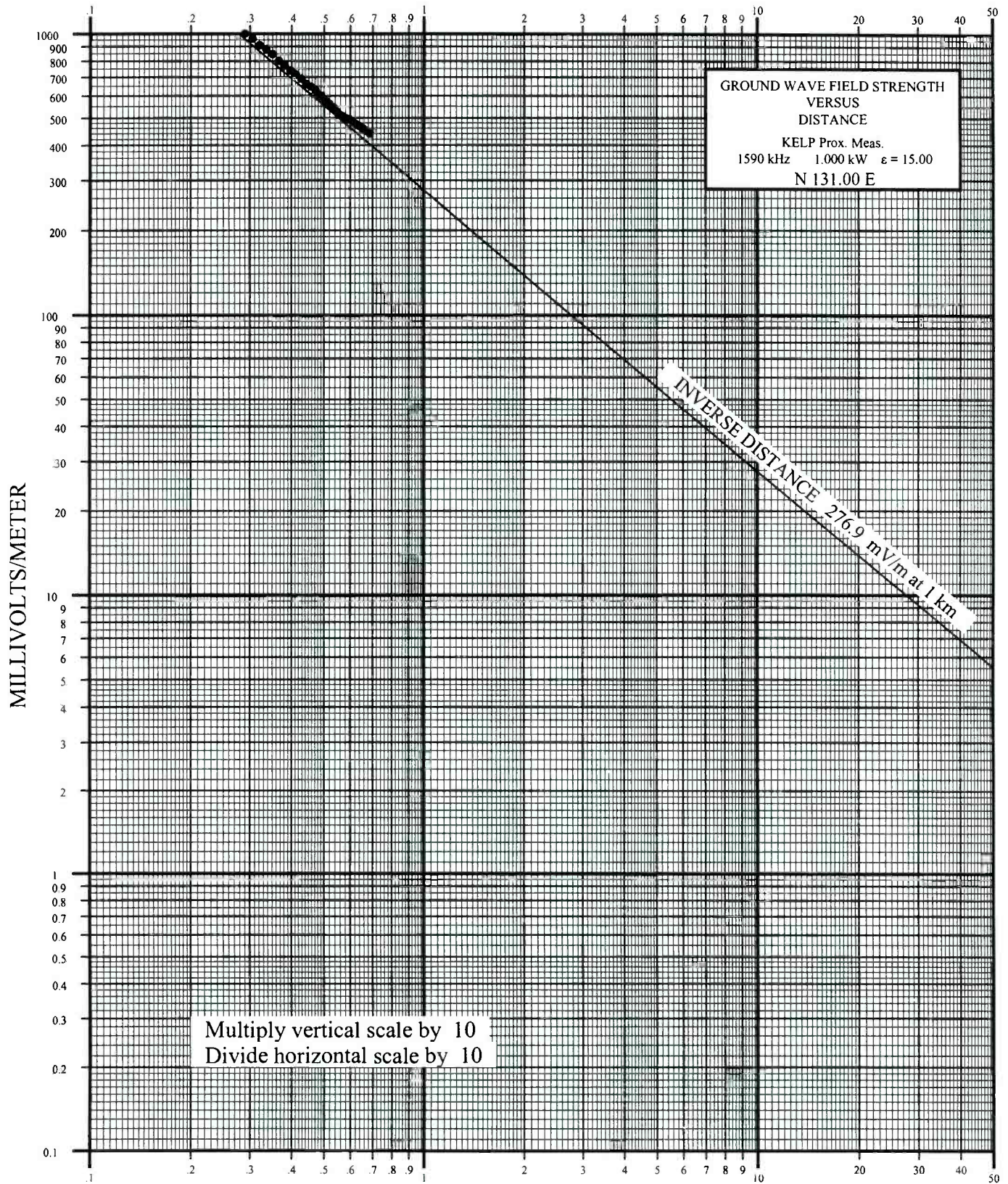


Fig. 14 (f)

KILOMETERS FROM ANTENNA

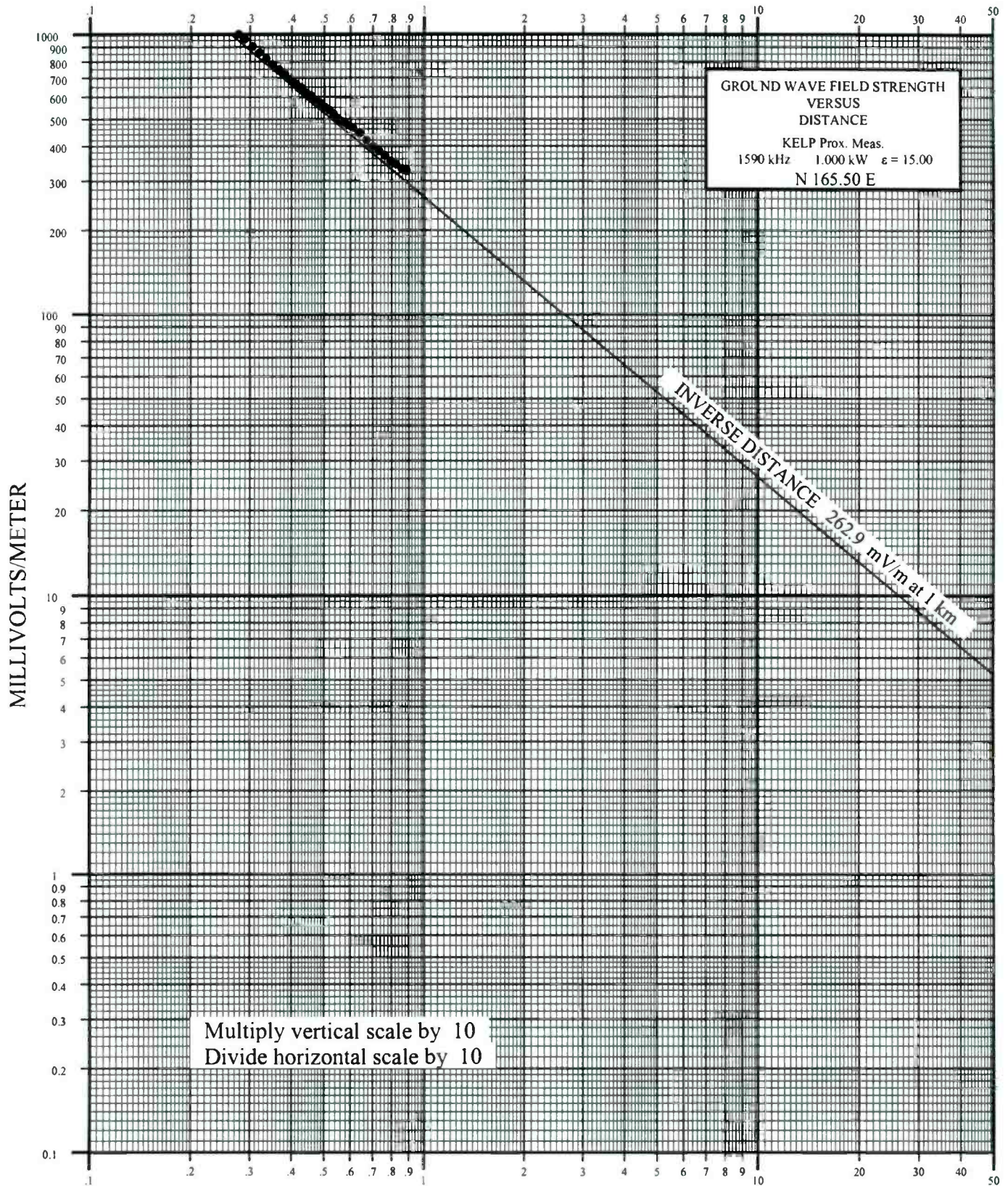


Fig. 14 (g)

KILOMETERS FROM ANTENNA

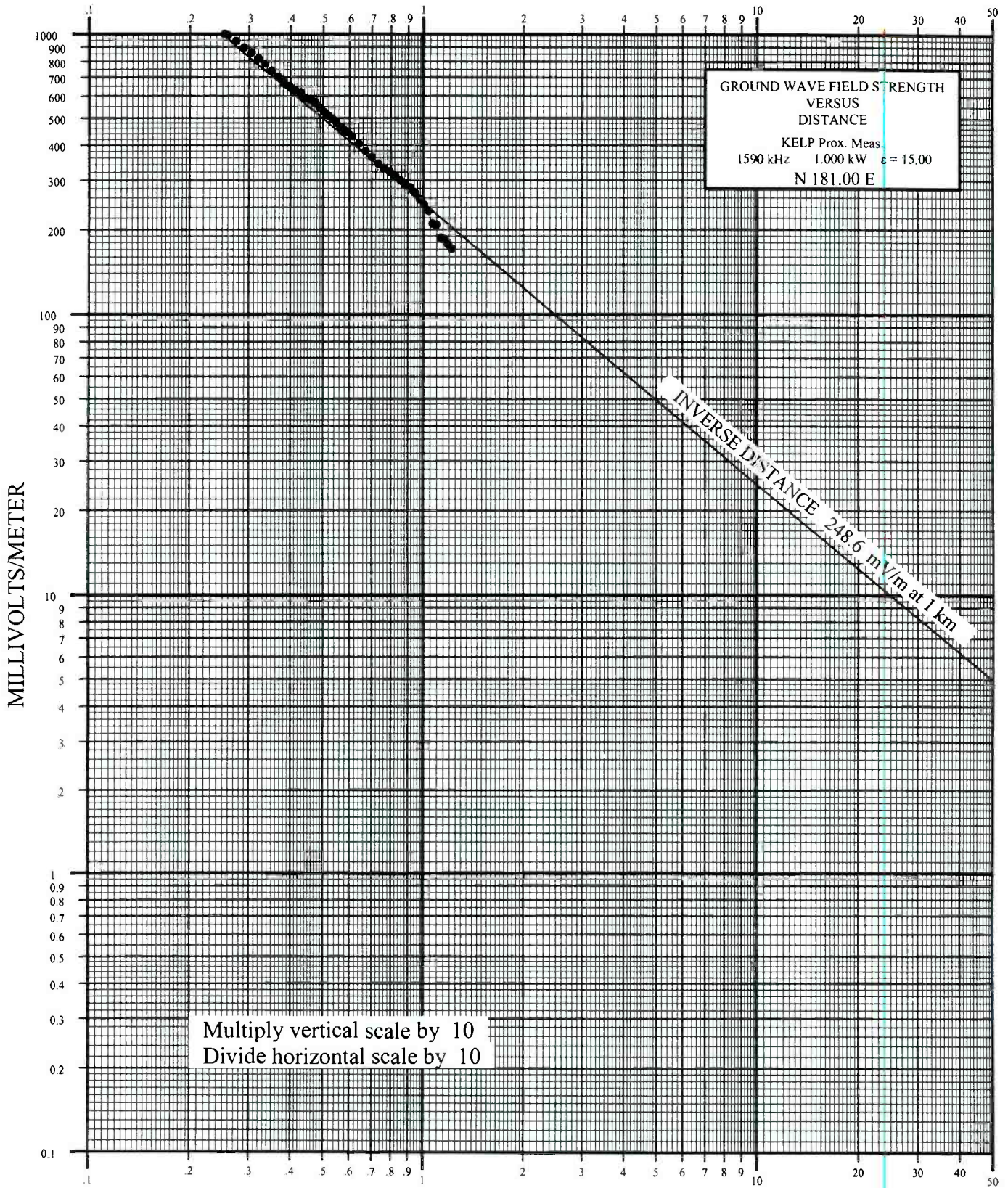


Fig. 14 (h)

KILOMETERS FROM ANTENNA

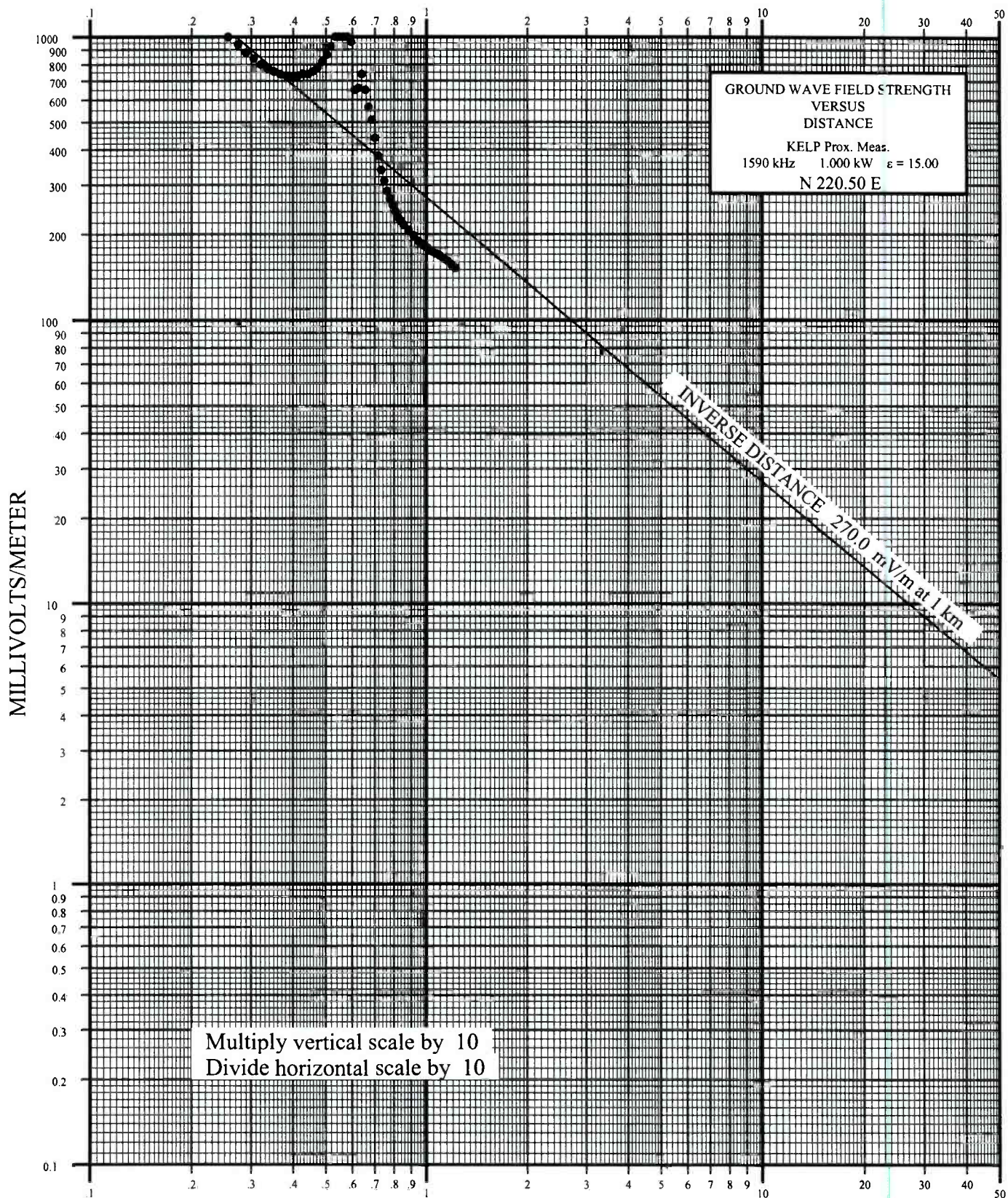


Fig. 14 (i)

KILOMETERS FROM ANTENNA

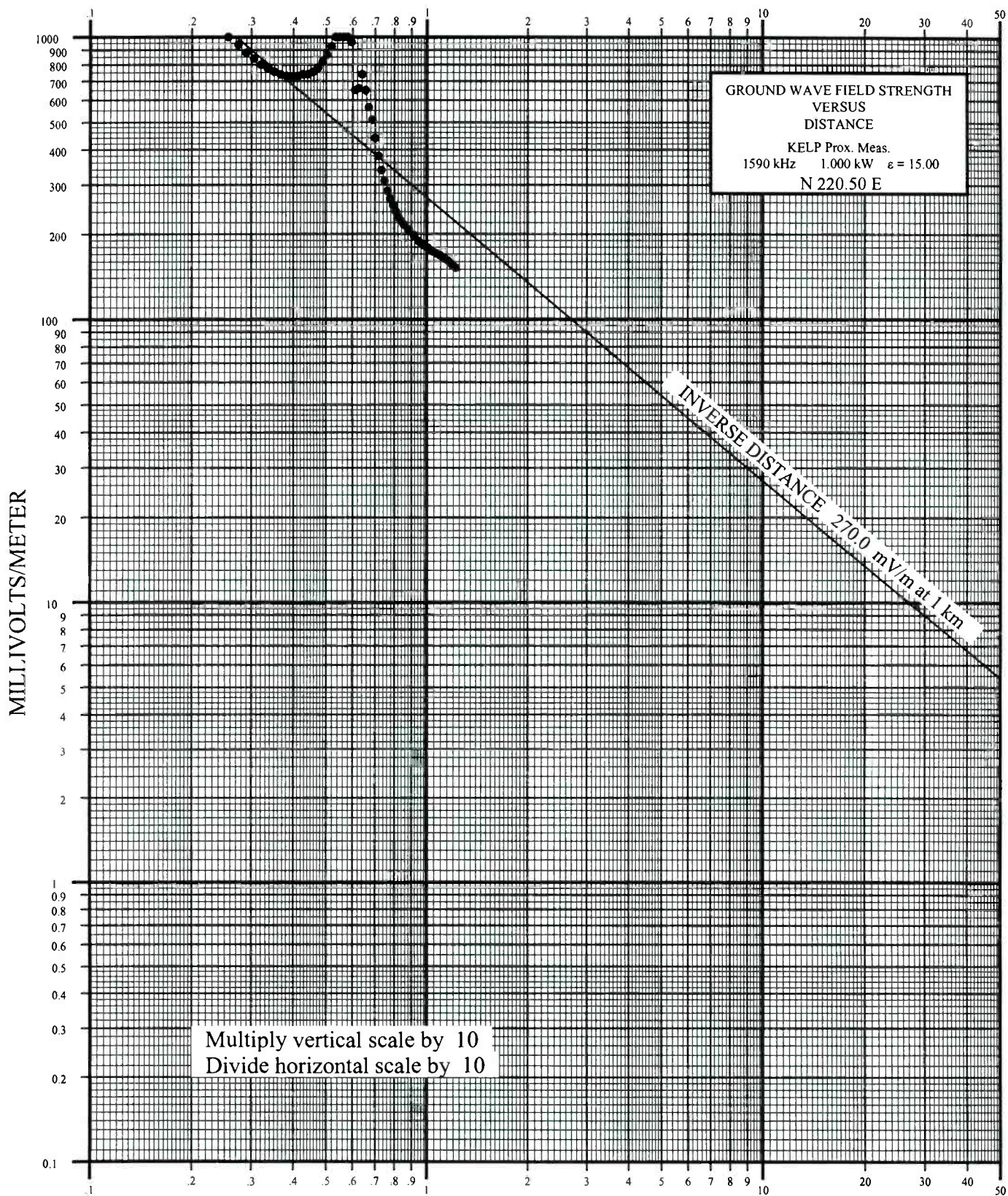


Fig. 14 (i)

KILOMETERS FROM ANTENNA

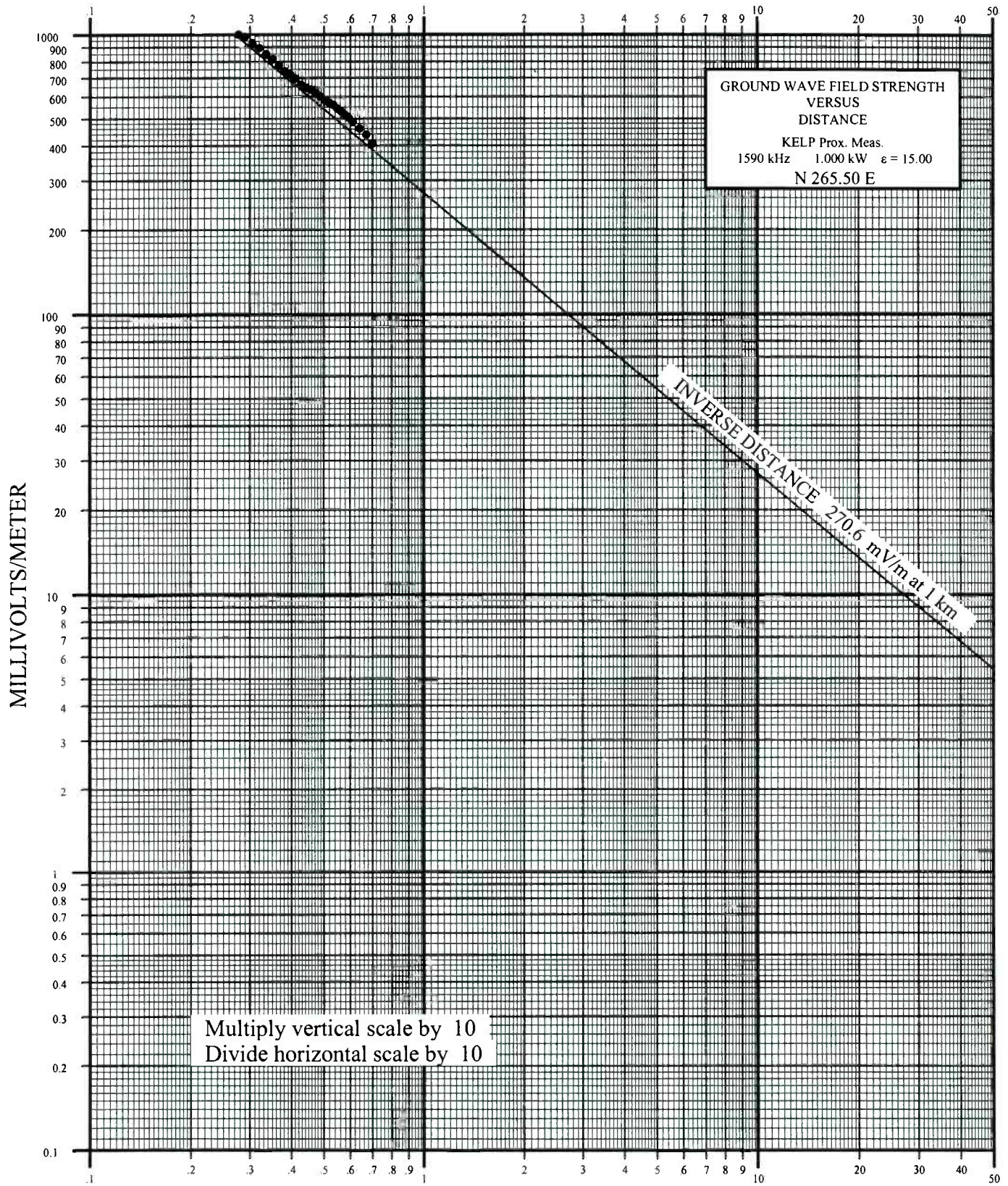


Fig. 14 (j)

KILOMETERS FROM ANTENNA

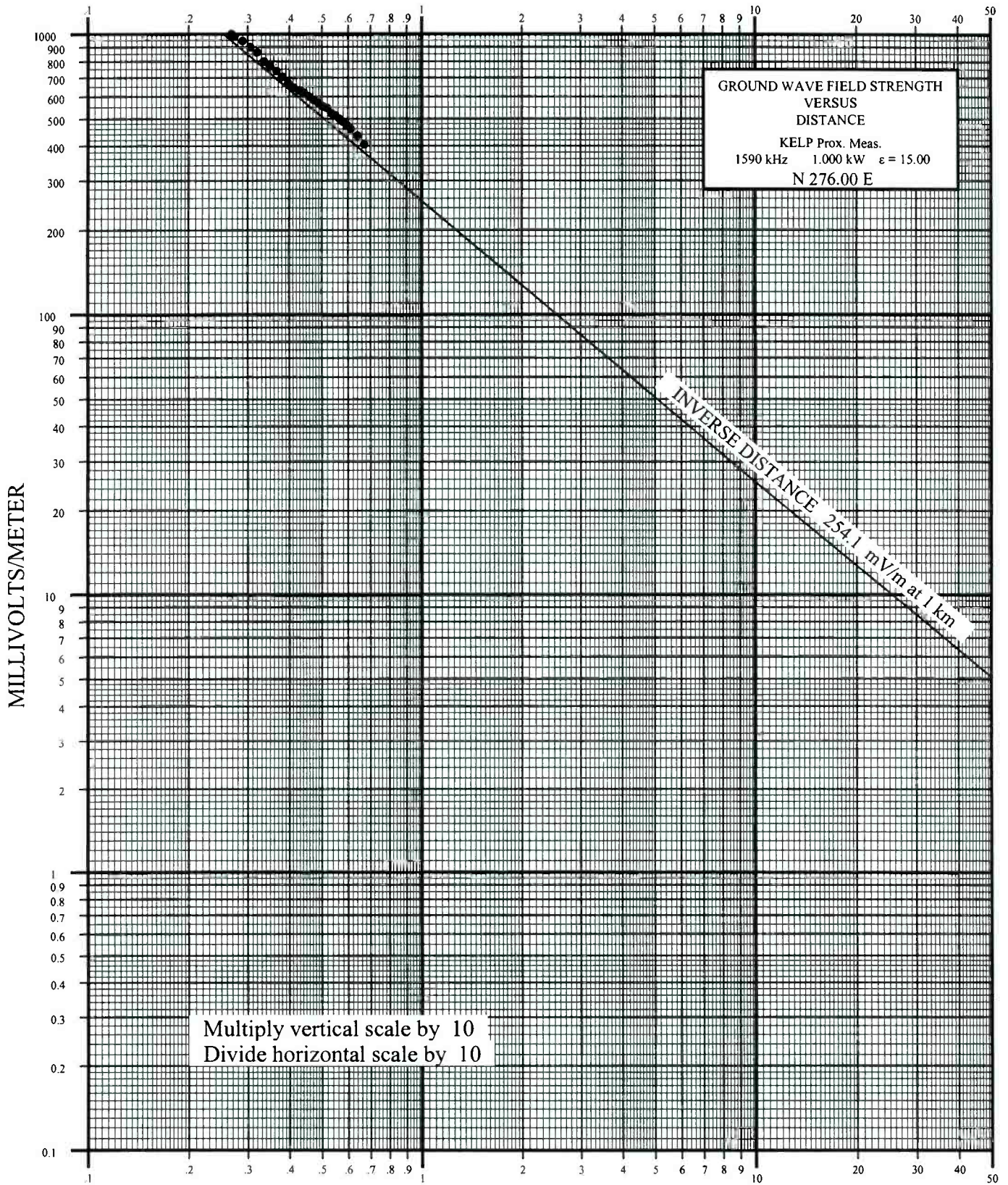


Fig. 14 (k)

KILOMETERS FROM ANTENNA

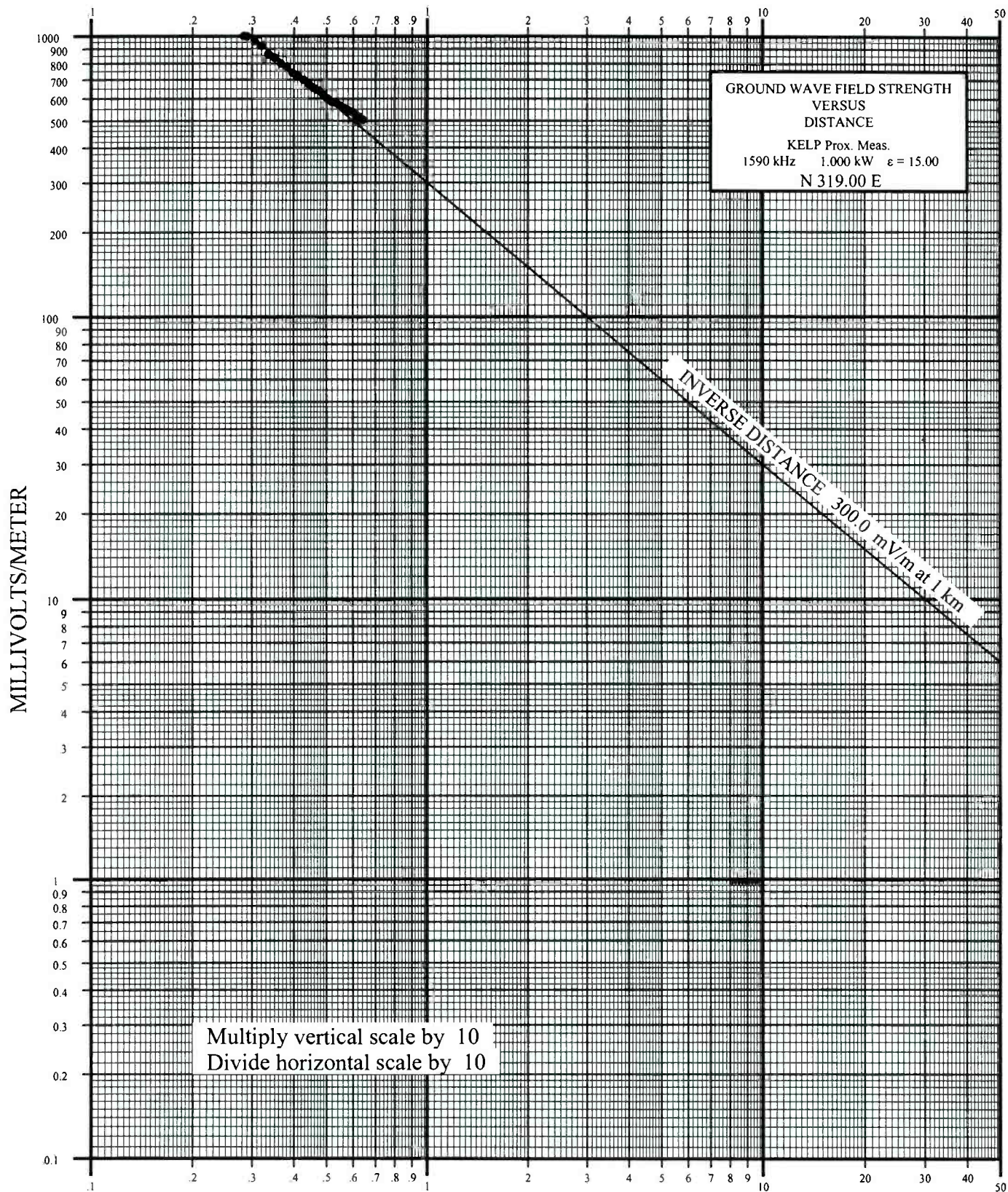


Fig. 14 (1)

FIGURE 15

SUMMARY OF MEASURED INVERSE FIELDS
 KELP, 1590 kHz 0.8/5.0 kW DA-2-U
 El Paso, Texas

Bearing (Deg. T)	Non-Dir. (mV/m @ 1 km)	DA-Day (mV/m @ 1 km)	DA-Night (mV/m @ 1 km)
008.0	353.000	837.80	142.52
022.0 (MP-N)	352.000	-----	90.72
047.0 (MP-N)	331.405	800.90	72.13
072.0 (MP-N)	280.792	-----	97.51
090.0	277.872	776.56	161.58
131.0	276.930	579.38	408.34
165.5 (MP-D)	262.939	158.52	220.44
181.0	248.590	164.14	134.48
220.5 (MP-D)	270.000	467.72	109.91
265.5	270.594	107.99	143.92
276.0 (MP-D)	254.143	129.69	185.66
319.0	300.000	778.42	456.13

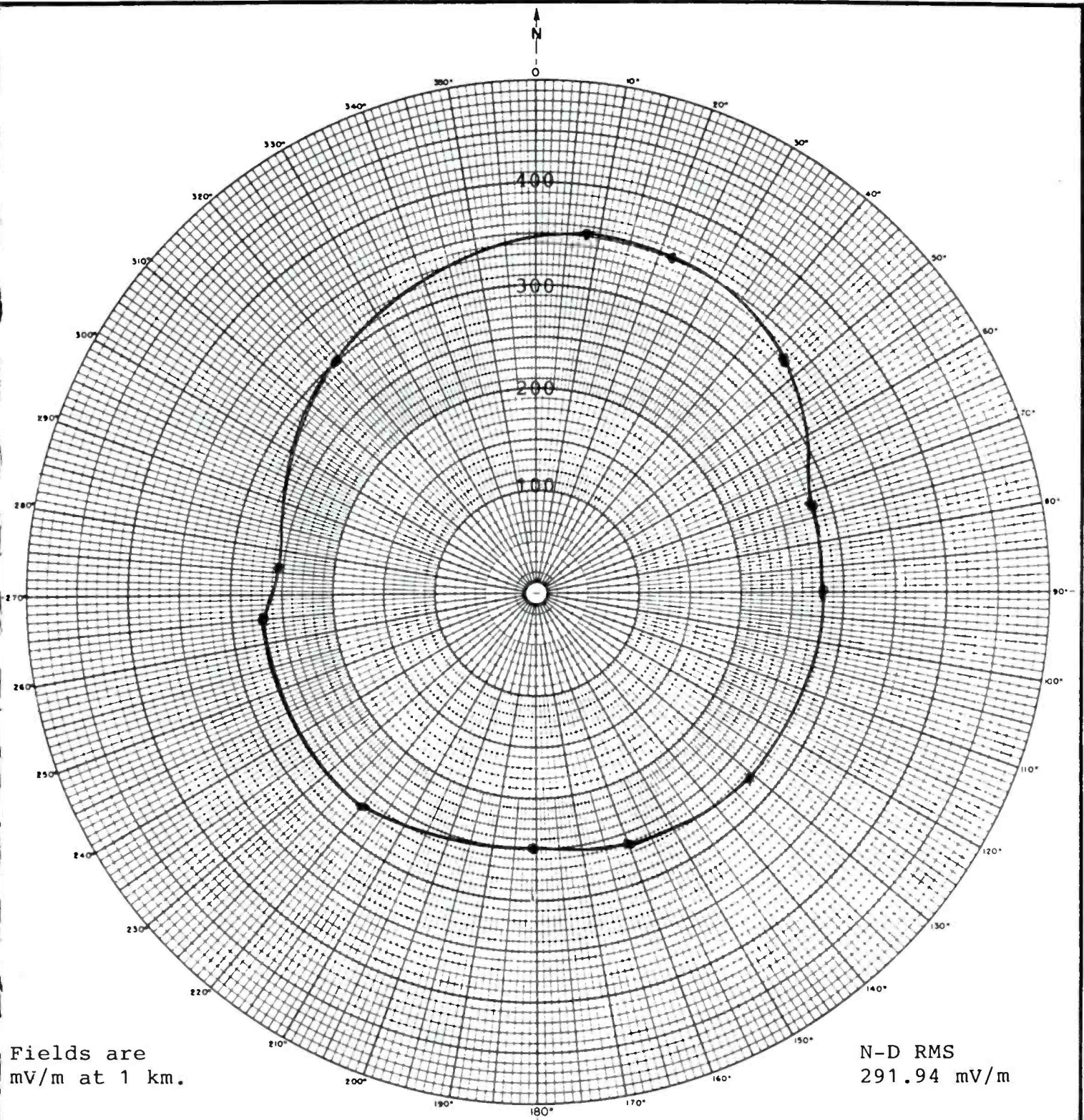


FIGURE 16

NON DIRECTIONAL PATTERN

(1.0 kw)

KELP, EL PASO, TEXAS

July 1996 (amended)

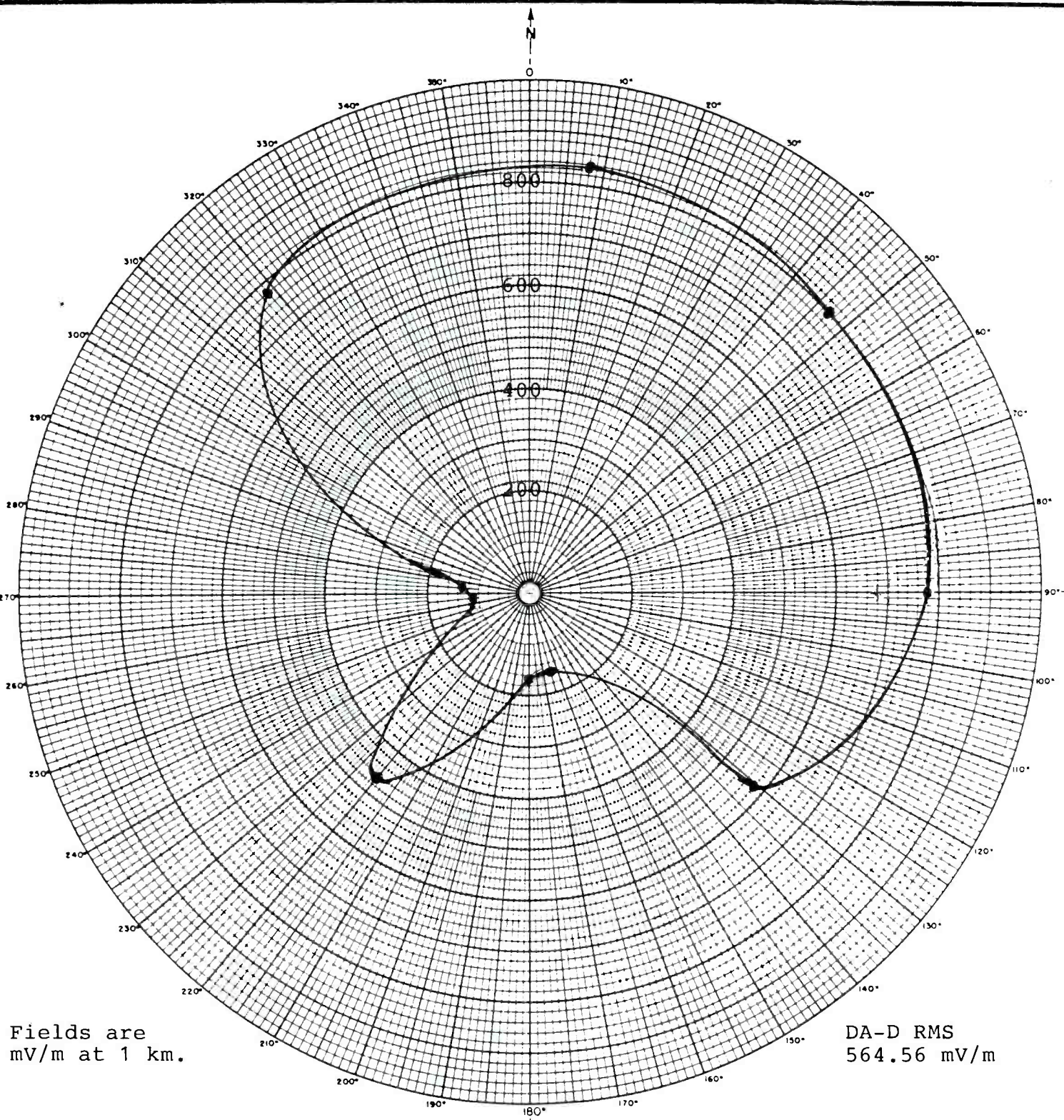


FIGURE 17

MEASURED DAYTIME PATTERN

(5 kw)

KELP, EL PASO, TEXAS

July 1996 (amended)

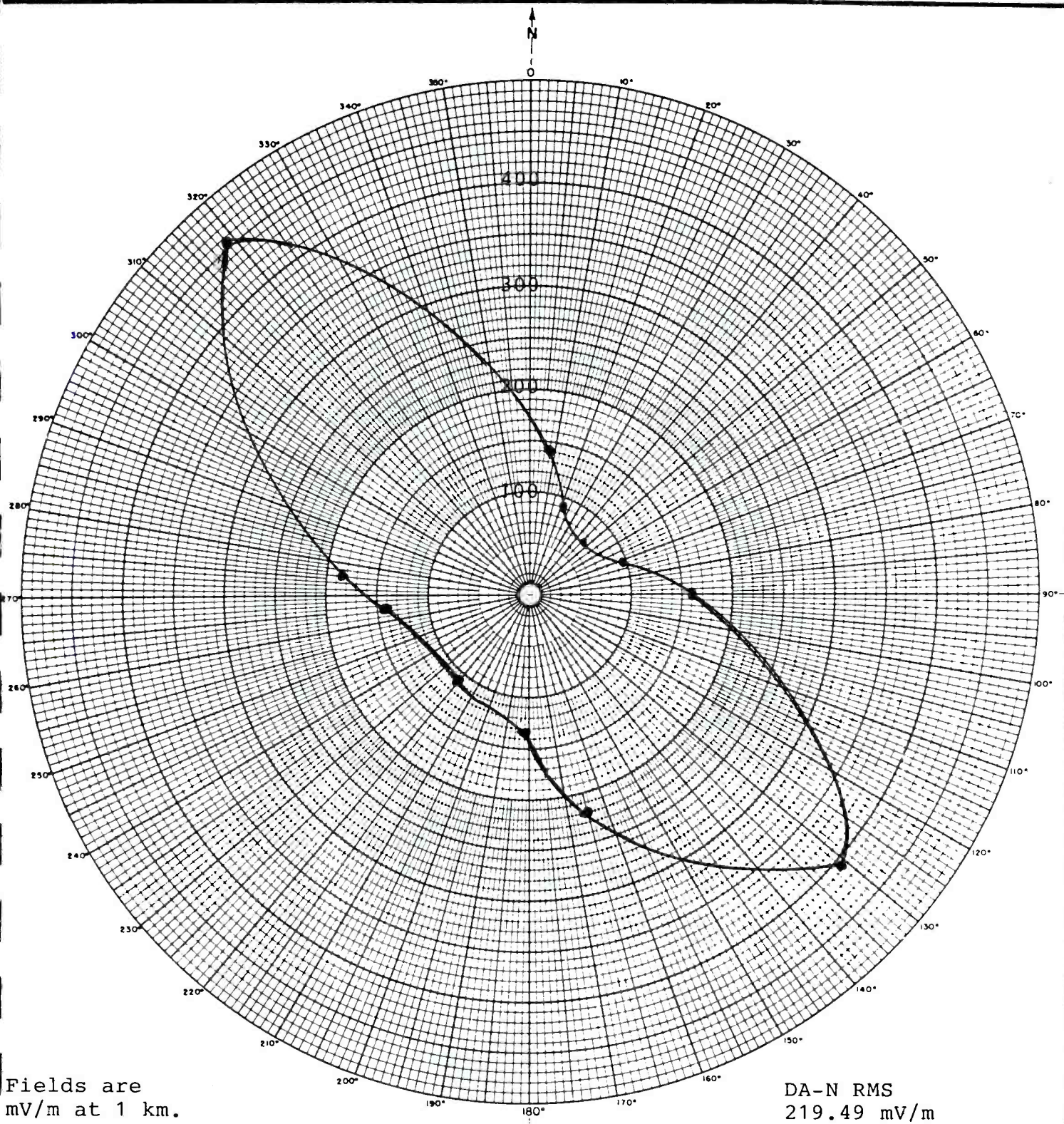
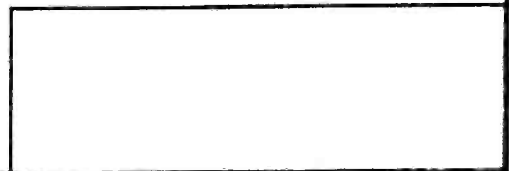
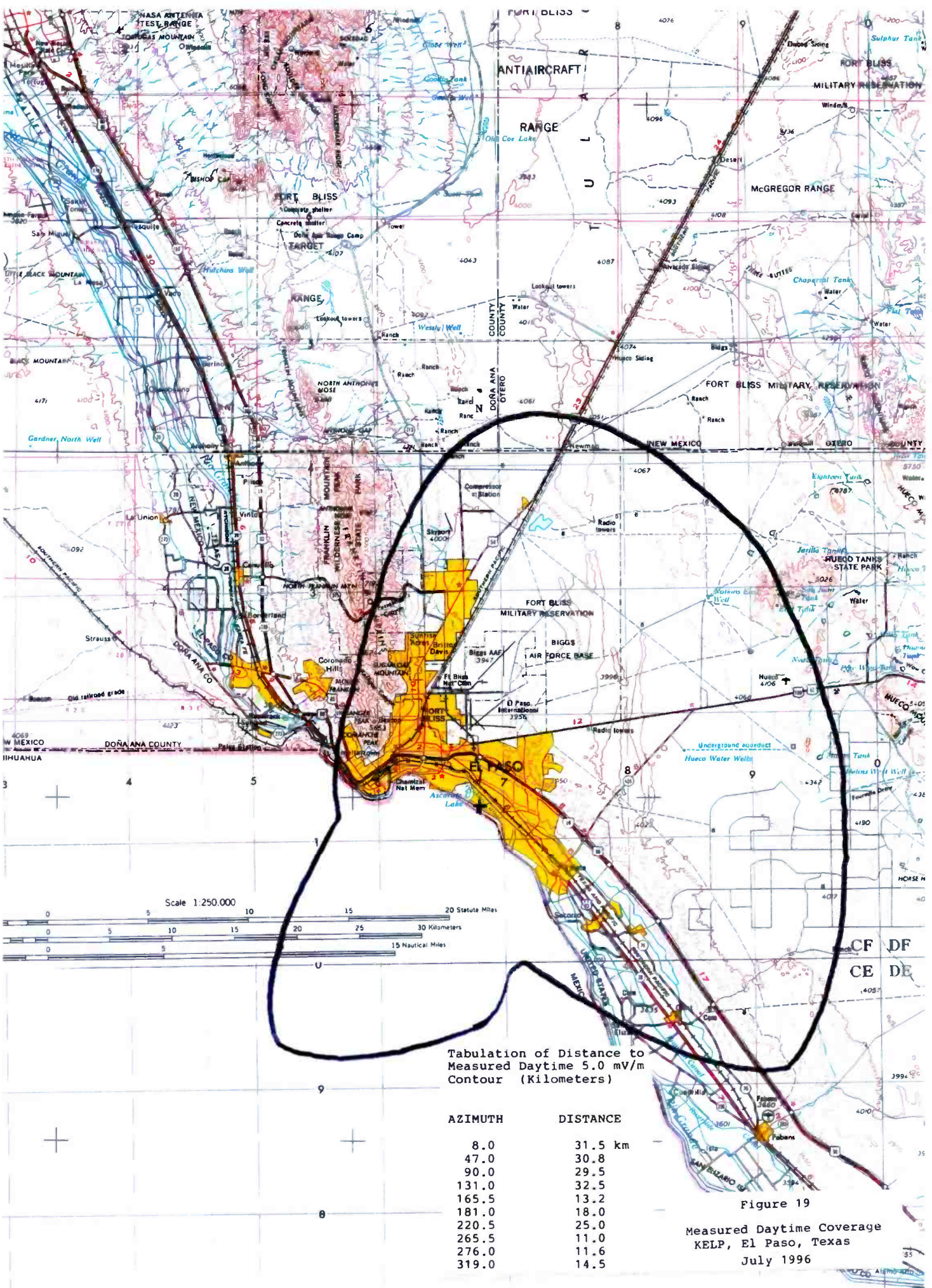


FIGURE 18

MEASURED NIGHTTIME PATTERN
KELP, El Paso, Texas
July 1996 (amended)

(0.8 kw)



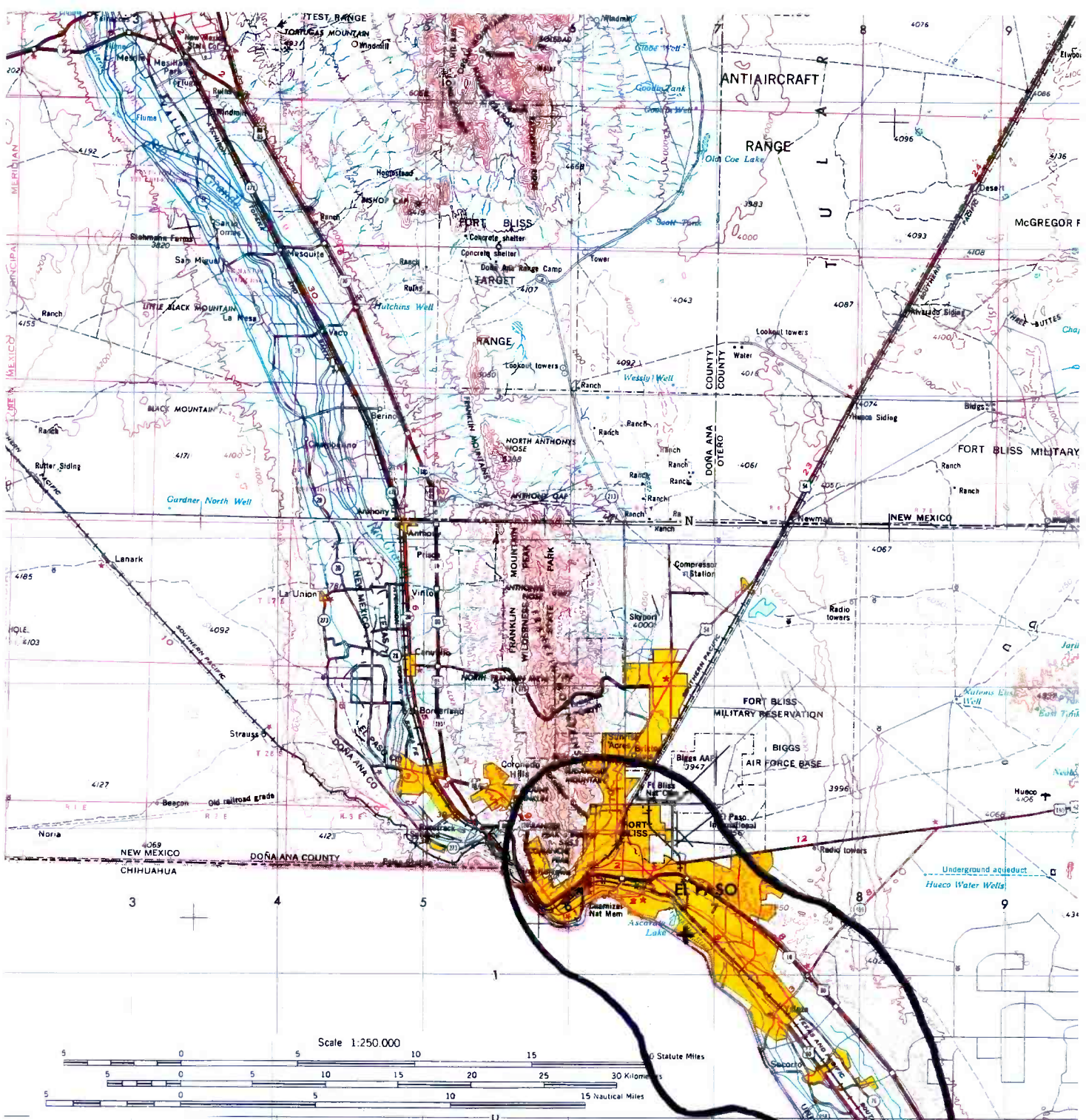


Tabulation of Distance to Measured Daytime 5.0 mV/m Contour (Kilometers)

AZIMUTH	DISTANCE
8.0	31.5 km
47.0	30.8
90.0	29.5
131.0	32.5
165.5	13.2
181.0	18.0
220.5	25.0
265.5	11.0
276.0	11.6
319.0	14.5

Figure 19

Measured Daytime Coverage KELP, El Paso, Texas July 1996



Tabulation of Distance to Measured Nighttime 7.55 mV/m Contour (Kilometers)

AZIMUTH	DISTANCE
8.0	9.5 km
22.0	7.4
47.0	6.2
72.0	8.6
90.0	12.6
131.0	24.0
165.5	12.7
181.0	12.5
220.5	7.0
265.5	10.0
276.0	11.6
319.0	15.0

Figure 20

Measured Nighttime Coverage
KELP, El Paso, Texas
July 1996

Farms
 Police
 Customs
 UAHUA

MEASURED IMPEDANCES

FIGURE 21

KELP

OPERATING FREQUENCY (KHz): 1590

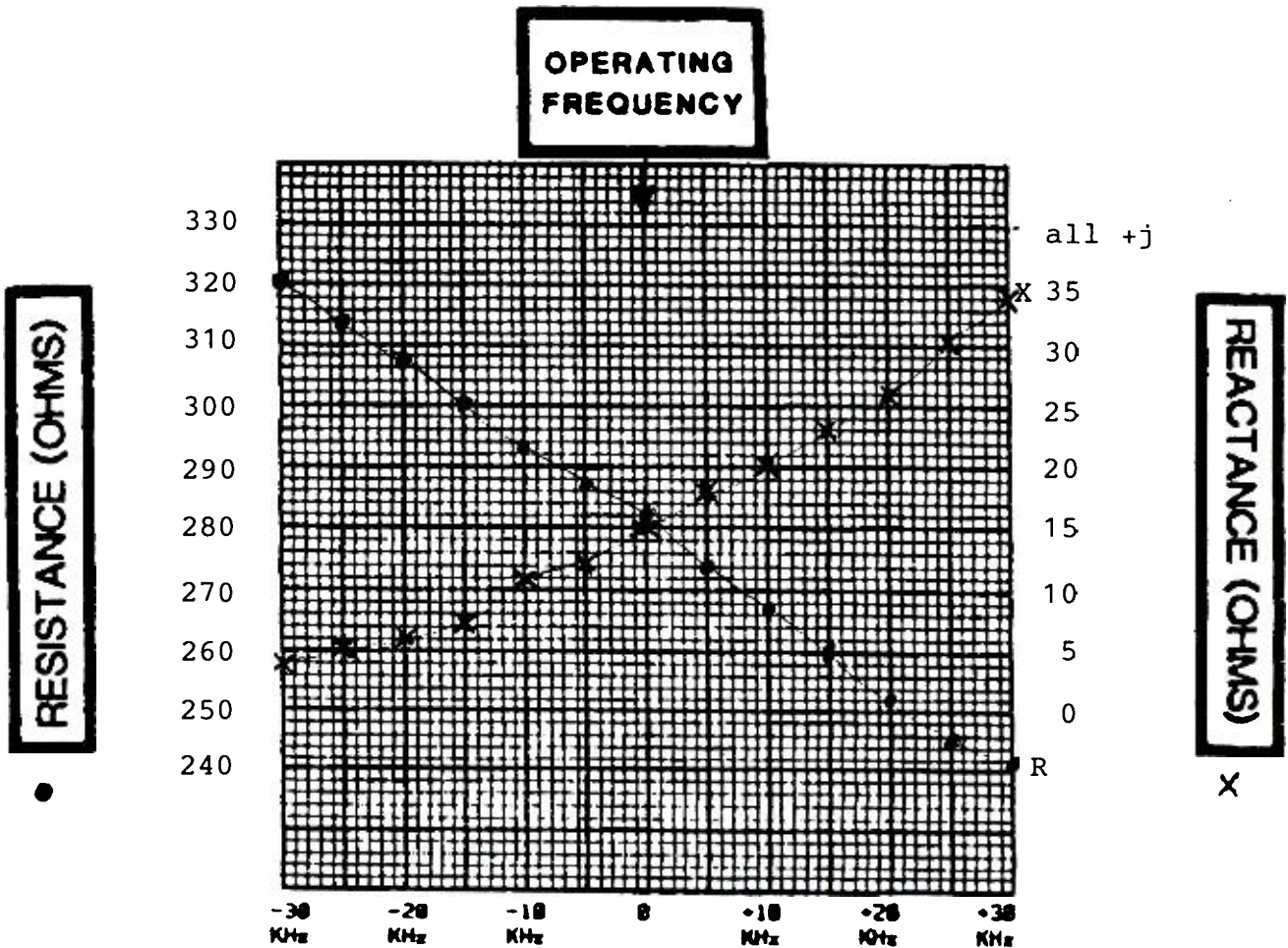


Figure 21: Non Directional Tower 2

Frequency (kHz)	Resistance (ohms)	Reactance (ohms)
1560	321	+j 4.2
1565	314	5.5
1570	307	6.3
1575	300	7.4
1580	293	11.1
1585	287	12.4
** 1590	282	15.1
1595	274	18.3
1600	267	20.5
1605	260	23.3
1610	252	26.6
1615	245	30.7
1620	241	34.0

** - Operating Frequency
Measured 25 January 1996

MEASURED IMPEDANCES

FIGURE 22
KELP

OPERATING FREQUENCY (KHz): 1590

OPERATING
FREQUENCY

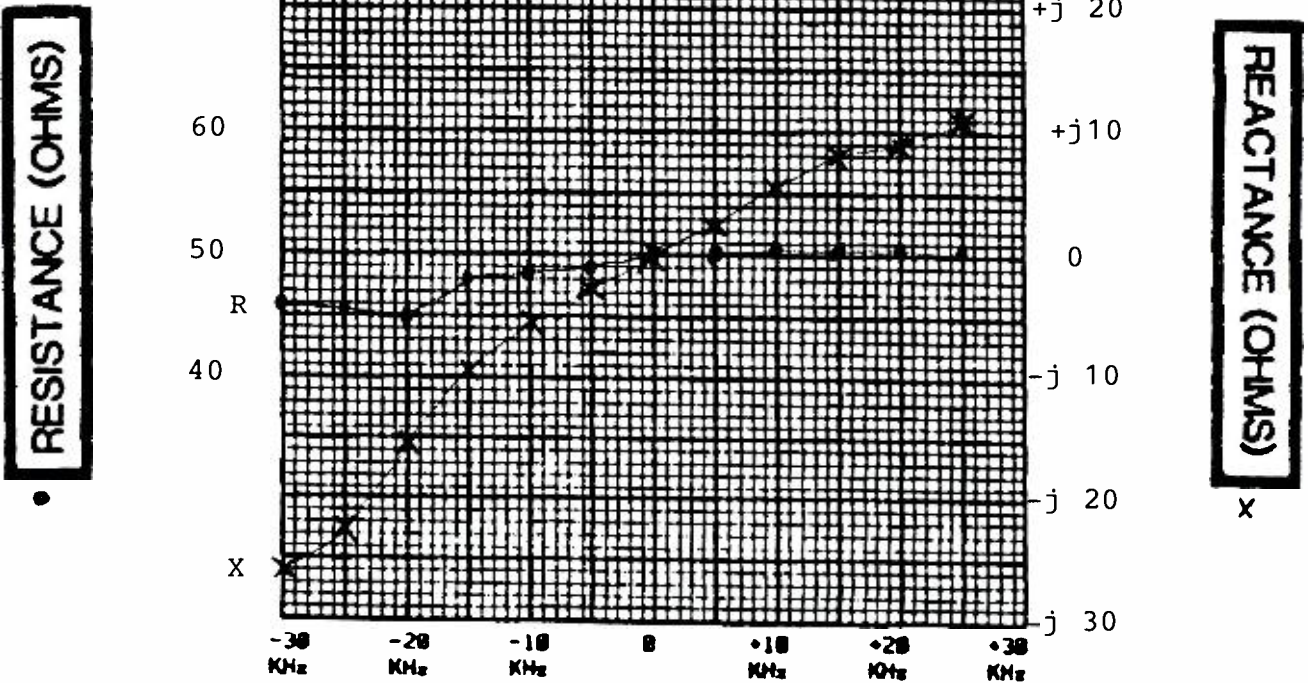


Figure 22: Daytime Common Point Impedance

Frequency (kHz)	Resistance (ohms)	Reactance (ohms)
1560	46.0	-j 25.7
1565	45.5	-j 22.7
1570	45.0	-j 15.7
1575	48.2	-j 9.5
1580	48.5	-j 5.5
1585	49.0	-j 2.4
** 1590	50.0	0.0
1595	50.0	+j 2.4
1600	50.5	+j 5.5
1605	50.6	+j 8.0
1610	50.7	+j 9.2
1615	50.5	+j 11.0

** - Operating Frequency
Measured 25 January 1996

MEASURED IMPEDANCES

FIGURE 23
KELP

OPERATING FREQUENCY (KHz): 1590

**OPERATING
FREQUENCY**

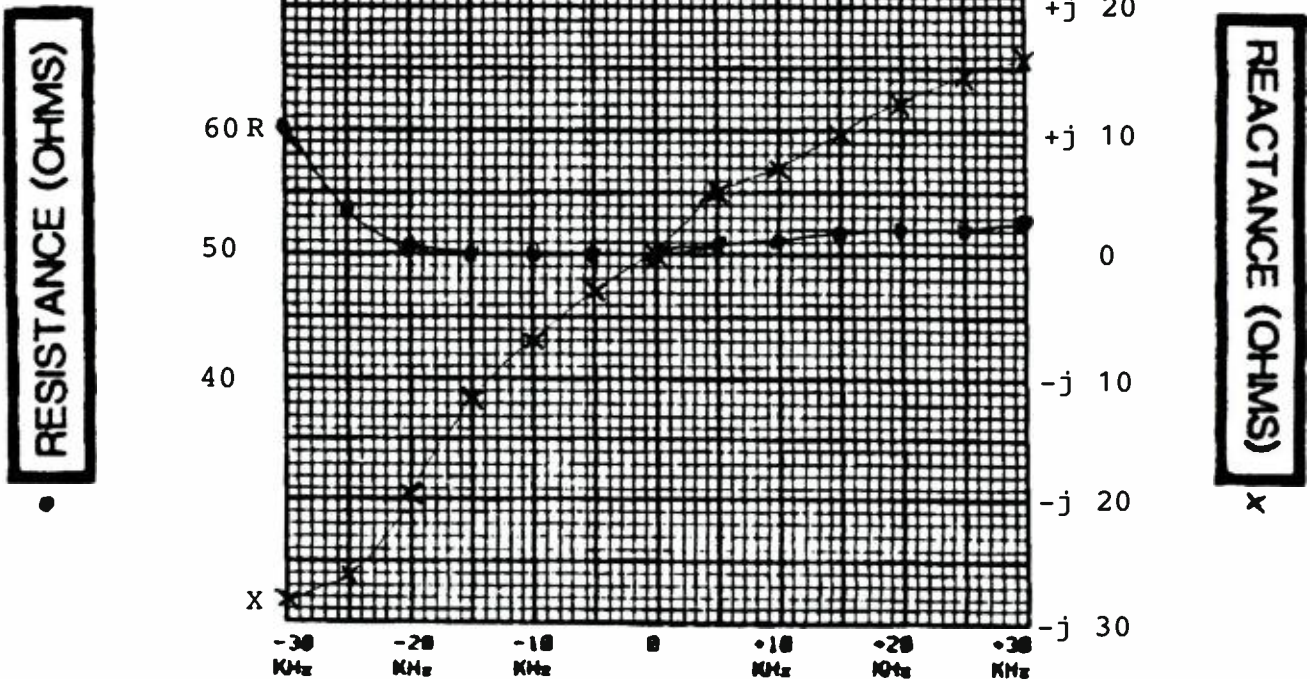


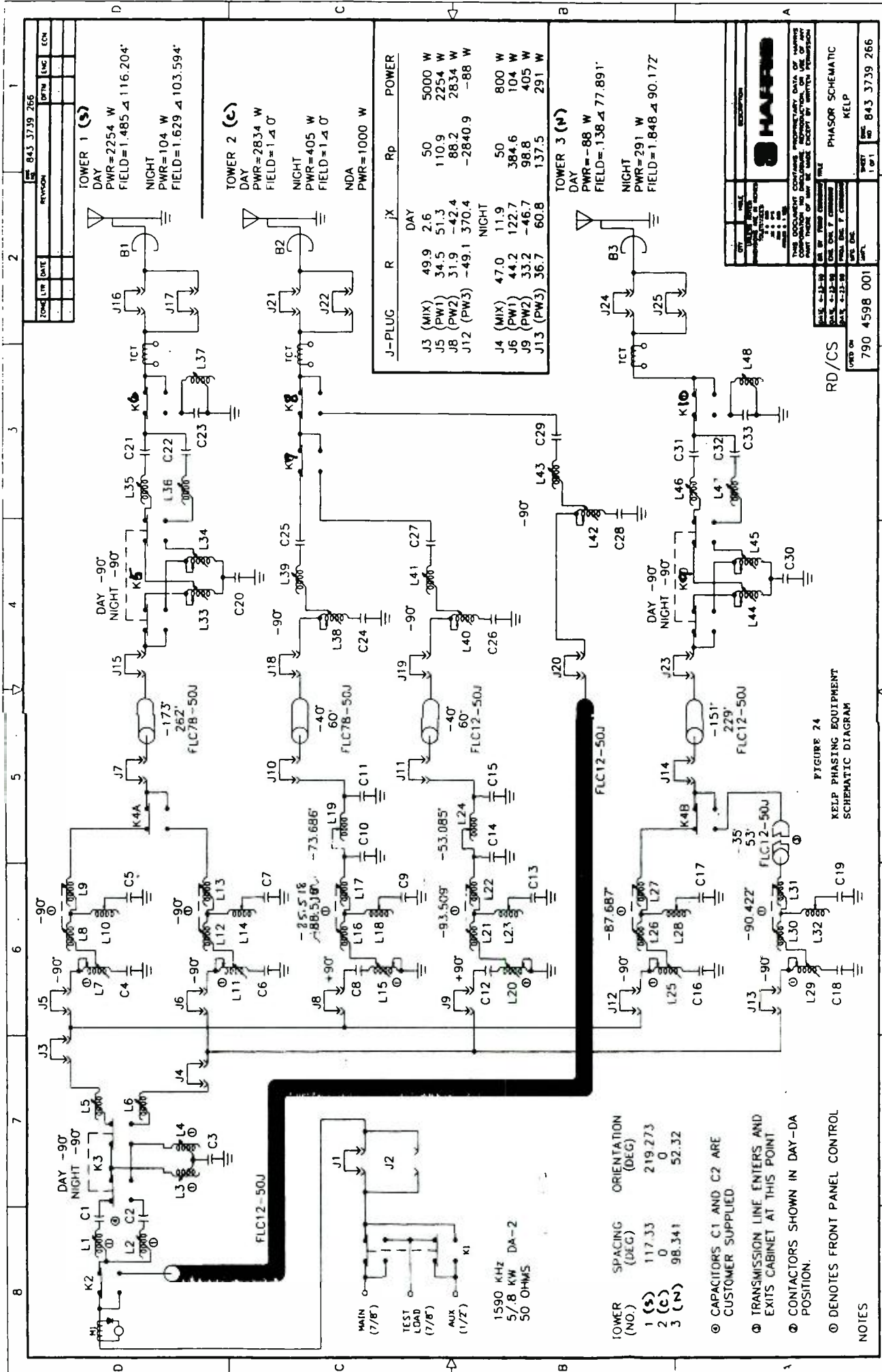
Figure 23: Nighttime Common Point Impedance

Frequency (kHz)	Resistance (ohms)	Reactance (ohms)
1560	60.0	-j 28.1
1565	53.5	-j 26.6
1570	50.5	-j 19.6
1575	50.3	-j 11.8
1580	50.0	-j 7.1
1585	50.0	-j 2.9
** 1590	50.0	0.0
1595	50.7	+j 4.8
1600	51.2	+j 7.0
1605	51.8	+j 9.6
1610	52.0	+j 12.1
1615	52.3	+j 14.5
1620	52.5	+j 15.9

** - Operating Frequency
Measured 25 January 1996

KELP

2 May 1990



REV	DATE	BY	CHK	COM
1	843 3739 266			

TOWER 1 (S)
 DAY
 PWR=2254 W
 FIELD=1.485 Δ 116.204°
 NIGHT
 PWR=104 W
 FIELD=1.629 Δ 103.594°

TOWER 2 (C)
 DAY
 PWR=2834 W
 FIELD=1.4 0°
 NIGHT
 PWR=405 W
 FIELD=1.4 0°
 NDA
 PWR=1000 W

J-PLUG	R	X	Rp	POWER
J3 (MIX)	49.9	2.6	50	5000 W
J5 (PW1)	34.5	51.3	110.9	2254 W
J8 (PW2)	31.9	-42.4	88.2	2834 W
J12 (PW3)	-49.1	370.4	-2840.9	-88 W
J4 (MIX)	47.0	11.9	50	800 W
J6 (PW1)	44.2	122.7	384.6	104 W
J9 (PW2)	33.2	-46.7	98.8	405 W
J13 (PW3)	36.7	60.8	137.5	291 W

TOWER 3 (N)
 DAY
 PWR=88 W
 FIELD=1.38 Δ 77.891°
 NIGHT
 PWR=291 W
 FIELD=1.848 Δ 90.172°

HAFFS

PHASOR SCHEMATIC
 KELP
 SHEET 1 of 1
 843 3739 266

USED ON
 790 4598 001

FIGURE 24
 KELP PHASING EQUIPMENT
 SCHEMATIC DIAGRAM

TOWER (NO.)	SPACING (DEG)	ORIENTATION (DEG)
1 (S)	117.33	219.273
2 (C)	0	0
3 (N)	98.341	52.32

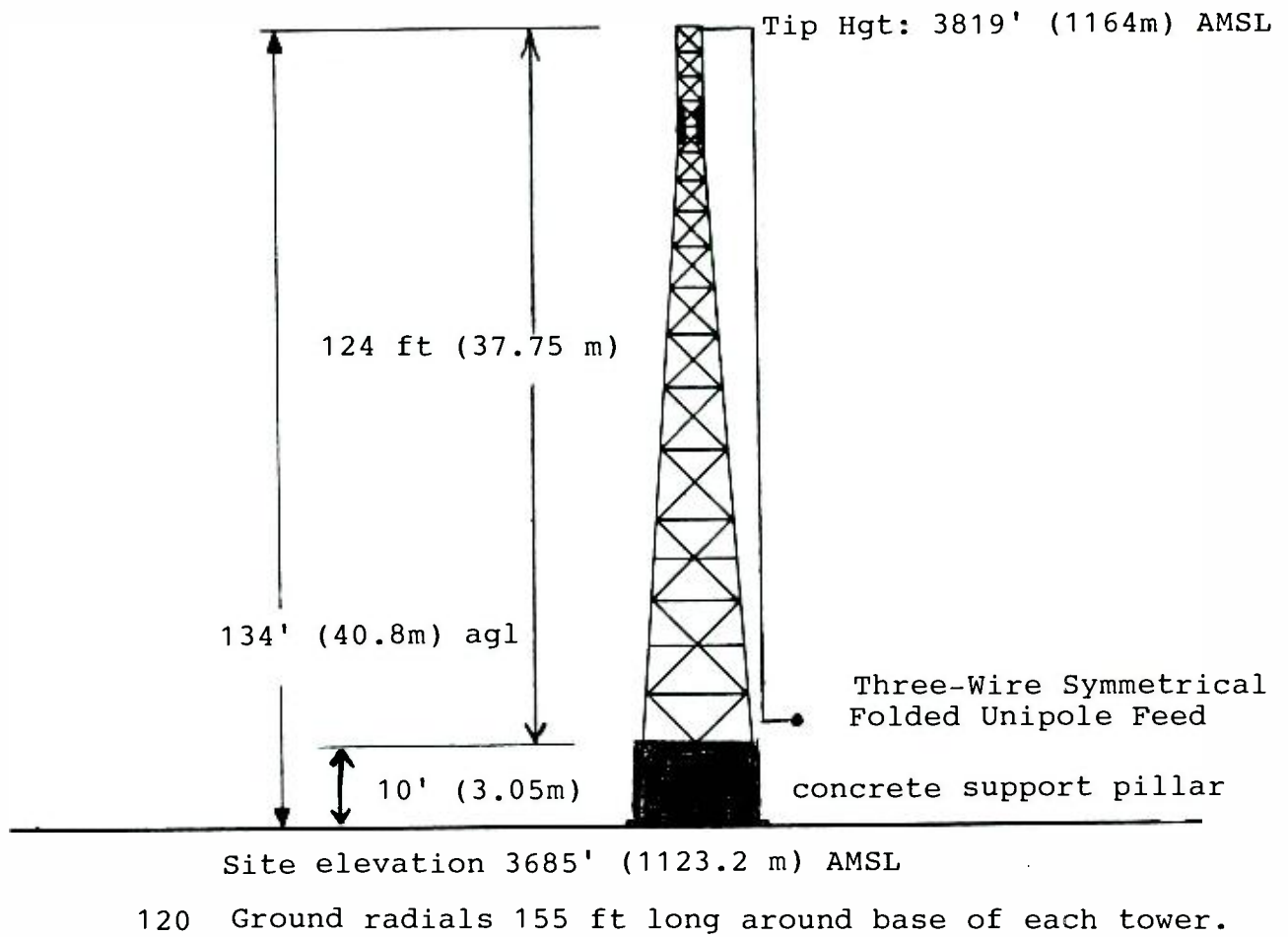
- ⊙ CAPACITORS C1 AND C2 ARE CUSTOMER SUPPLIED
- ⊙ TRANSMISSION LINE ENTERS AND EXITS CABINET AT THIS POINT
- ⊙ CONTACTORS SHOWN IN DAY-DA POSITION.
- ⊙ DENOTES FRONT PANEL CONTROL

NOTES

FIGURE 25

VERTICAL TOWER SKETCH - KELP El Paso, TX

All towers configured as shown



Appendix A

Calibrated Equipment Used for Measurements on KELP

Potomac Instruments FIM-21, SN 445, cal. 9/22/95
Potomac Instruments FIM-41, SN 811, cal. 10/92

Delta Electronics RG-4 Signal Generator (tested 1992)
Delta Electronics OIB-1 Impedance Bridge (cal. 1993)

Garmin GPS-75 Global Positioning Receiver (used by RMB)
Garmin GPS-45 Global Positioning Receiver (used by KELP)

***** NOTICE *****

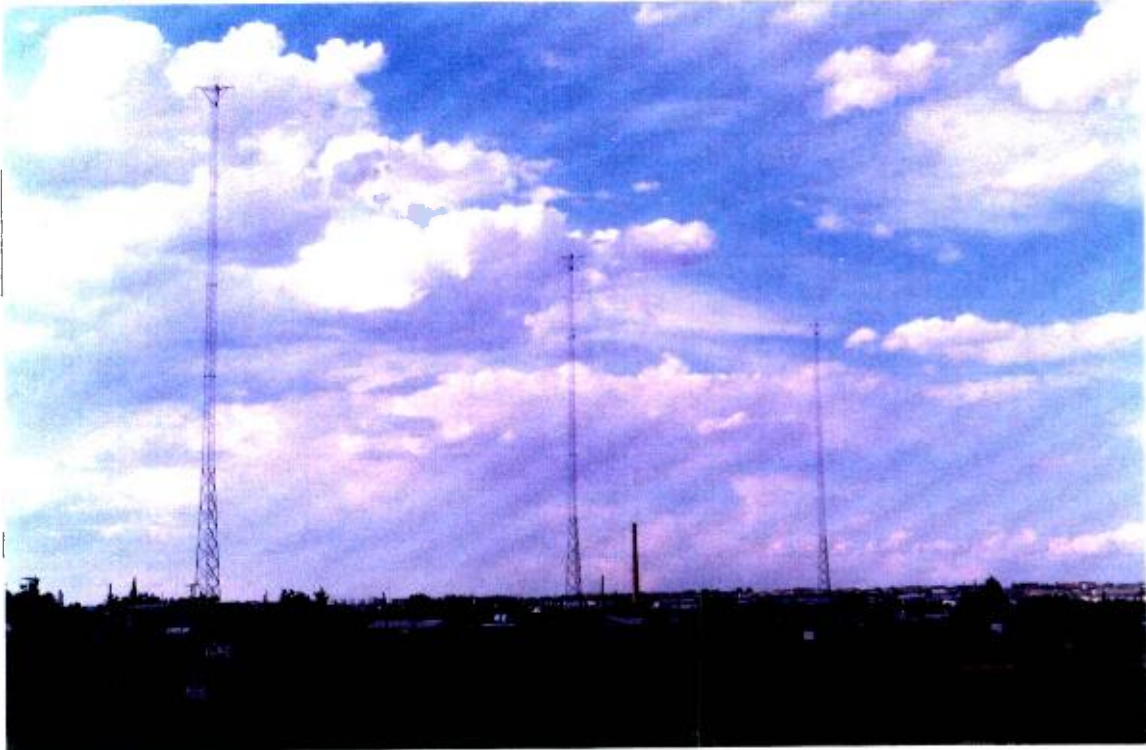
Global Positioning Receiver Coordinates provided in the measurement section of this document are for reference only. Since the GPS measurements are non-DBR, point accuracy is limited to SA and DOP parameters established by the military agencies that have custody of the GPS satellite system. The undersigned demonstrated techniques to Craig Rice and Ed Tomlin of KELP to allow GPS settling time in order to obtain repeat accuracy of 100' or better at measurement locations described herein.

The Garmin 45 displays coordinates in a D,M.MMM - D,M.MMM format where the integer latitude and longitude degrees and minutes are displayed; the fractional minutes are expressed as a decimal. The GPS coordinates shown in this document are expressed in the D,M.MMM - D,M.MMM format.

Example: 32,45.500 - 106.23.400 is equivalent to
32 deg, 45 min, 30 sec N Latitude,
106 deg, 23 min, 24 sec W Longitude.

APPENDIX B:

Photographs of New KELP site

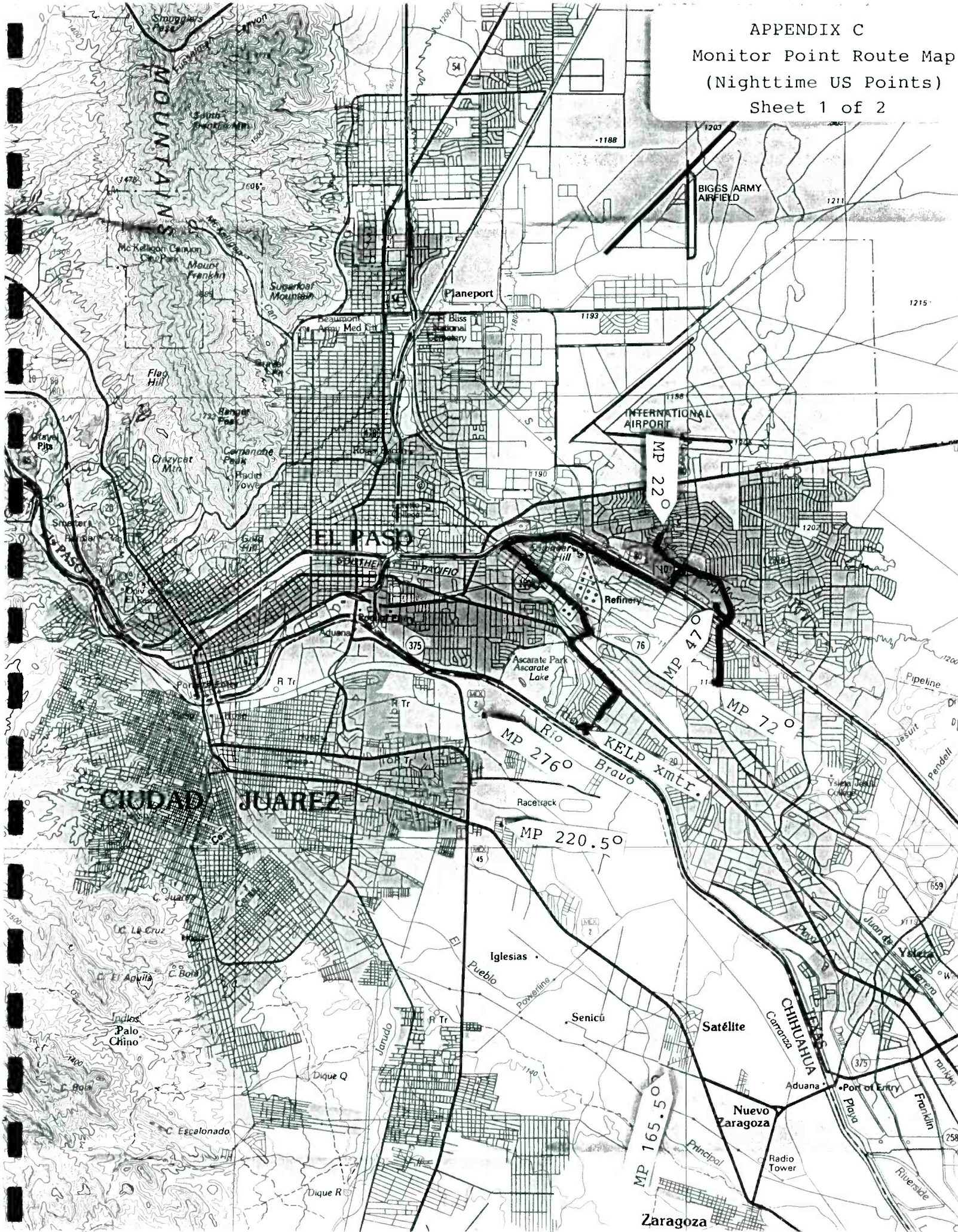


View of KELP transmitter site showing towers and building. Equipment is elevated on piers since area floods during rainfall.



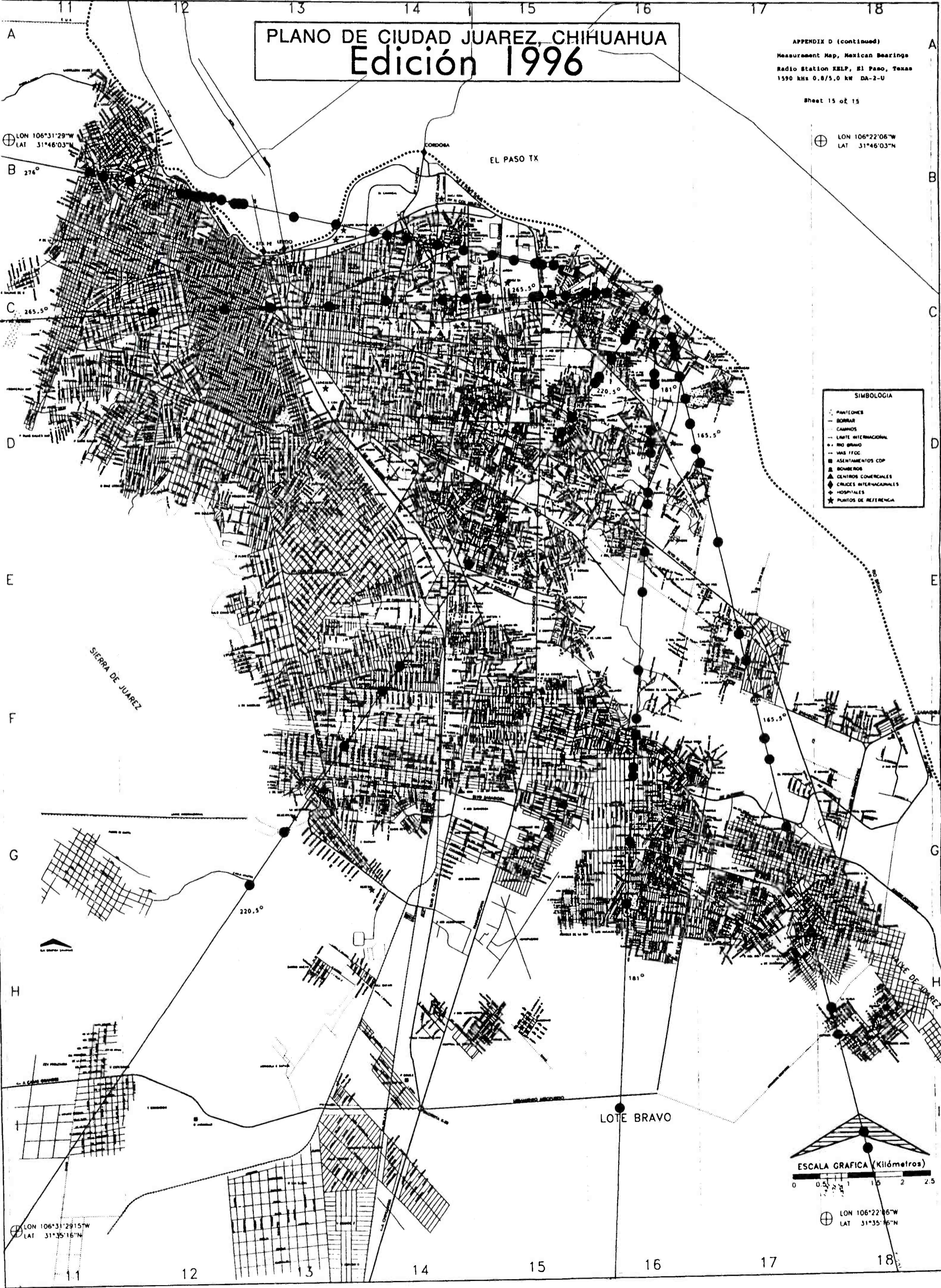
View of KELP site taken from Mexico. Rio Grande River appears as "ditch" in foreground; street lights and security camera are along the Chamizal Border Highway on the U.S. side. The KELP towers are visible as well as a chimney and other structures.

APPENDIX C
Monitor Point Route Map
(Nighttime US Points)
Sheet 1 of 2



PLANO DE CIUDAD JUAREZ, CHIHUAHUA Edición 1996

APPENDIX D (continued)
 Measurement Map, Mexican Bearings
 Radio Station KSLP, El Paso, Texas
 1590 kHz 0.8/5.0 kW DA-2-U
 Sheet 15 of 15



SIMBOLOGIA

- ◻ PANTONES
- BARRAS
- CAMINOS
- - - LIMITE INTERNACIONAL
- RIO GRANO
- VAS FFCO
- ASENTAMIENTOS CDP
- ▲ BOMBEROS
- ▲ CENTROS COMERCIALES
- ◆ CRUCES INTERNACIONALES
- ◆ HOSPITALES
- ★ PUNTOS DE REFERENCIA



⊕ LON 106°31'29"W
LAT 31°46'03"N

⊕ LON 106°22'06"W
LAT 31°46'03"N

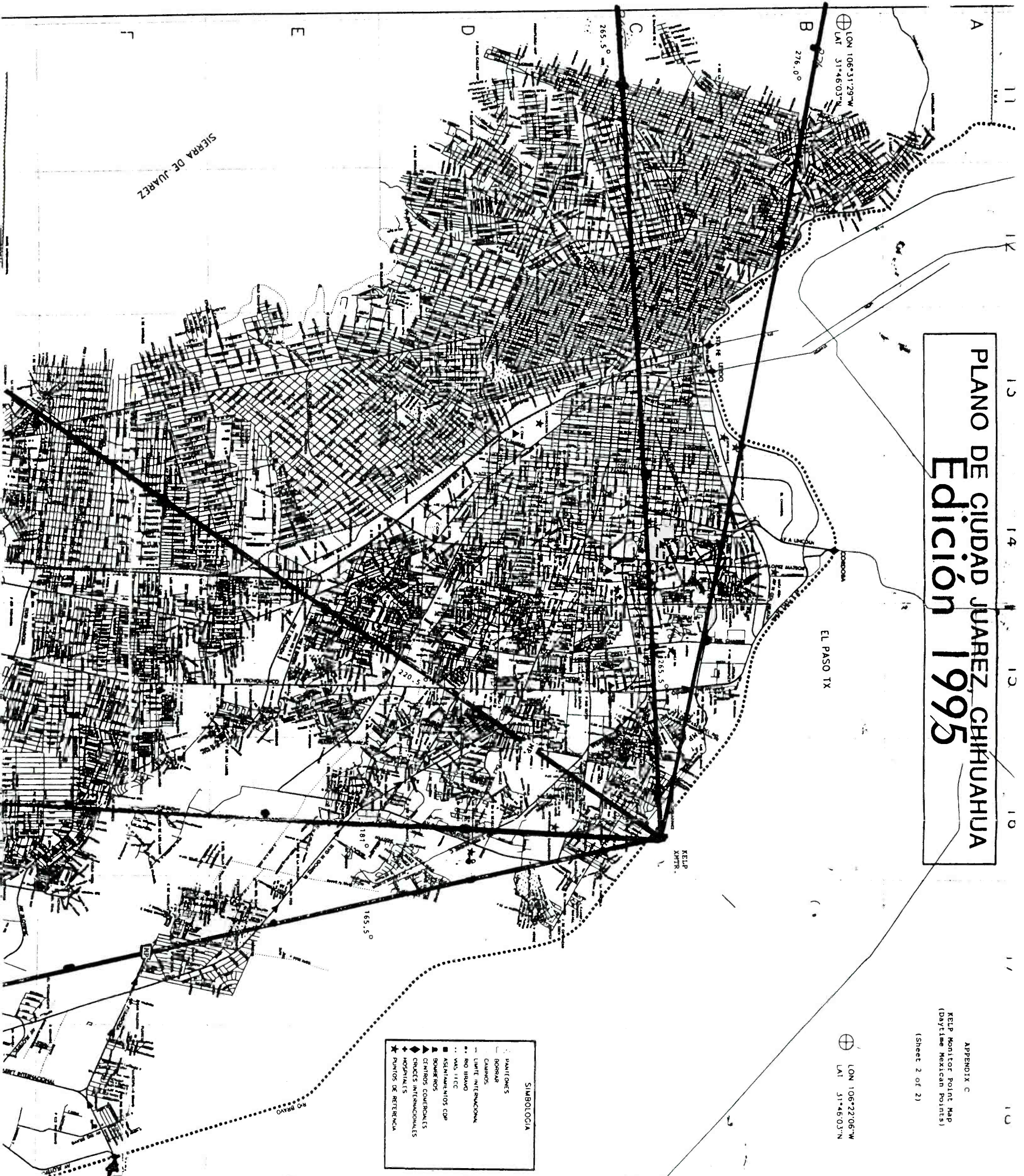
⊕ LON 106°31'29'15"W
LAT 31°35'16"N

⊕ LON 106°22'06"W
LAT 31°35'16"N

PLANO DE CIUDAD JUAREZ, CHIHUAHUA

Edición 1995

APPENDIX C
 KELP Monitor Point Map
 (Daytime Mexican Points)
 (Sheet 2 of 2)



⊕ LON 106°31'29"W
 LAT 31°46'03"N

⊕ LON 106°22'06"W
 LAT 31°46'03"N

- SIMBOLOGIA**
- PUNTOS
 - BOQUES
 - CASINOS
 - LIMITE INTERNACIONAL
 - .. NO BRANCO
 - .. VAS TICC
 - ASENTAMIENTOS COP
 - ▲ SOMBRES
 - ◆ CENTROS GOVERNAMENTALES
 - ◆ CRUCES INTERNACIONALES
 - ◆ HOSPITALES
 - ★ PUNTOS DE REFERENCIA

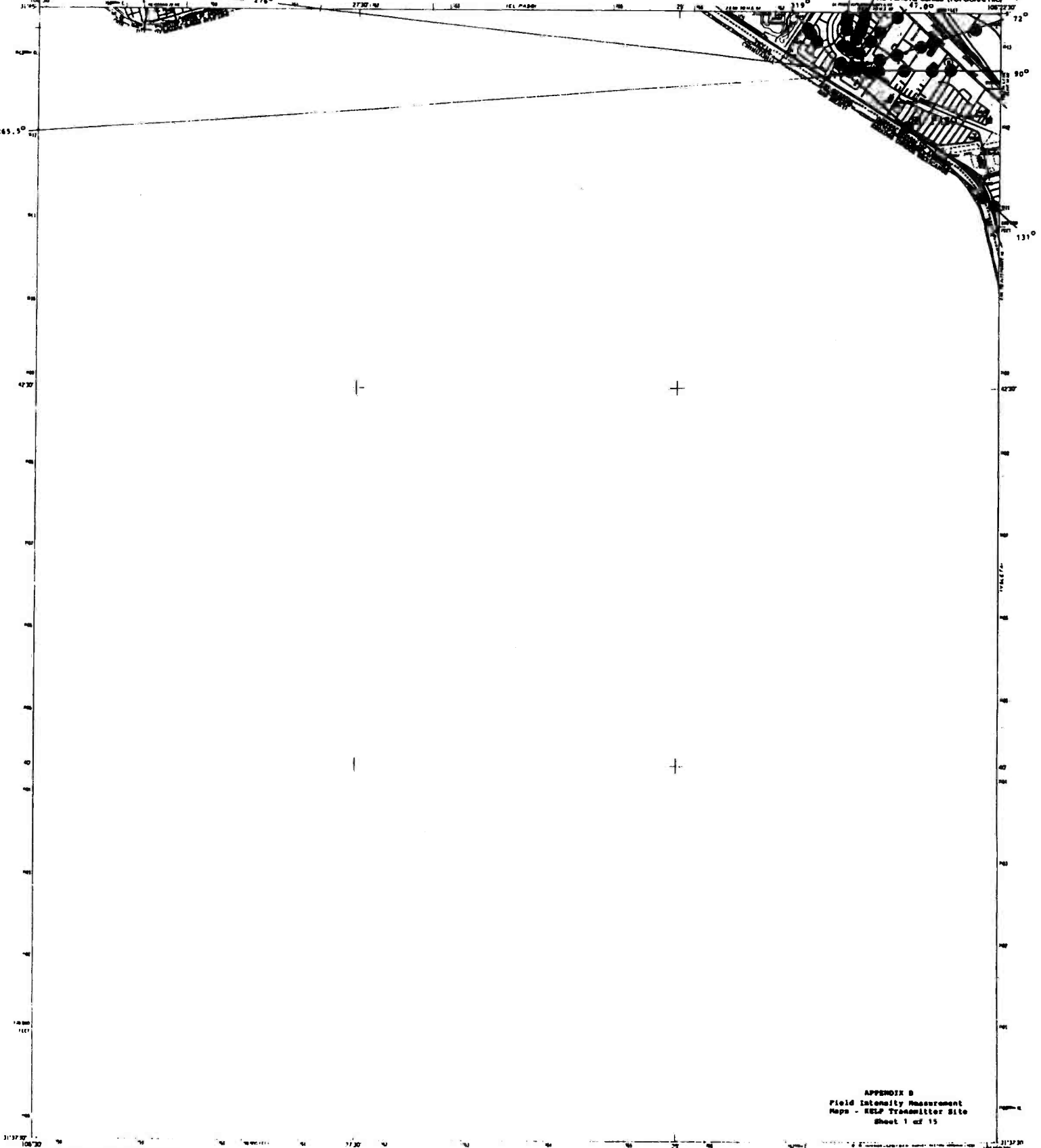
SIERRA DE JUAREZ

EL PASO TX

KELP XMITR.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

YSLETA NW QUADRANGLE
TEXAS-EL PASO CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)



APPENDIX B
Field Intensity Measurement
Maps - WEP Transmitter Site
Sheet 1 of 15

Produced by the United States Geological Survey
Control in USGS and NAD83/NA
Compiled from aerial photographs taken 1974. Based on aerial
photographs taken 1981 and other sources. Last checked 1992
Map dated 1994.
North American Datum of 1983 (NAD 83). Projection and
units: UTM Zone 17N. Spheroid: GRS 80. Datum: NAD 83.
Scale: 1:24,000. Contour Interval: 20 feet.
North American Datum of 1983 (NAD 83) is used by default
unless otherwise noted. The values of the NAD 83 datum
are 7.5 minutes north and west of the National Geodetic
Survey NAD83 datum.
Red ink indicates areas in which only boundary buildings are shown.



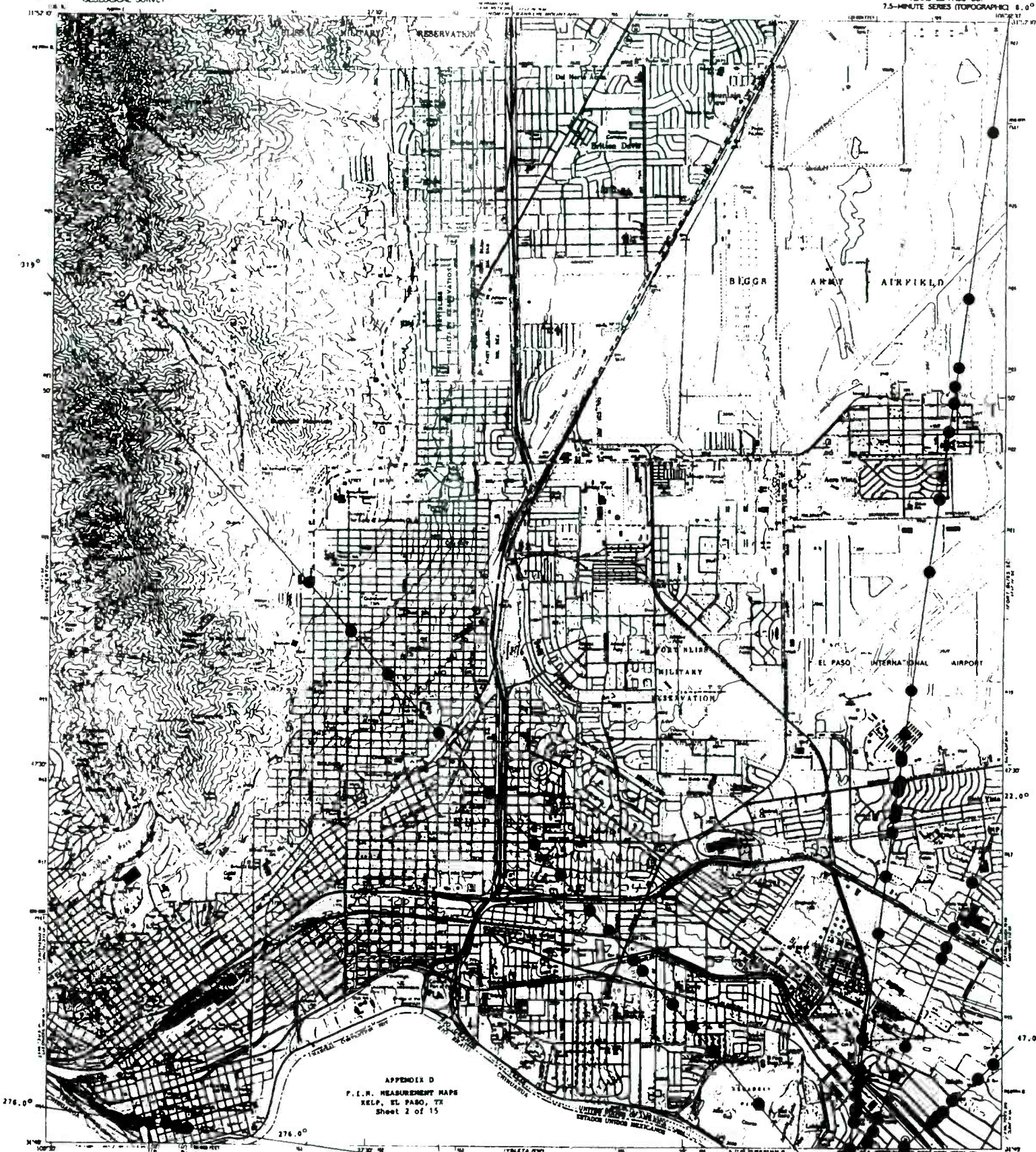
SCALE 1:24 000
CONTOUR INTERVAL 20 FEET
SUPPLEMENTARY CONTOUR INTERVAL 5 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1983

THIS MAP COMPLETES WITH NATIONAL MAP AGENCY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY
DENVER, COLORADO 80260, OR RESTON, VIRGINIA 20192
A POLAR PROJECTION TRANSMISSION MAP AND SYMBOLS IS AVAILABLE BY REQUEST

ROAD CLASSIFICATION
 Heavy Duty Light Duty
 Unimproved dirt Improved dirt
 Intersect Road B-11 Road State Road

3108-423

YSLETA NW, TEX.
3118-44-79-004
1994
FIG. 1471-B 100-50000-1000



APPENDIX D
P.E.N. MEASUREMENT MAPS
K.E.P., EL PASO, TX
Sheet 2 of 15

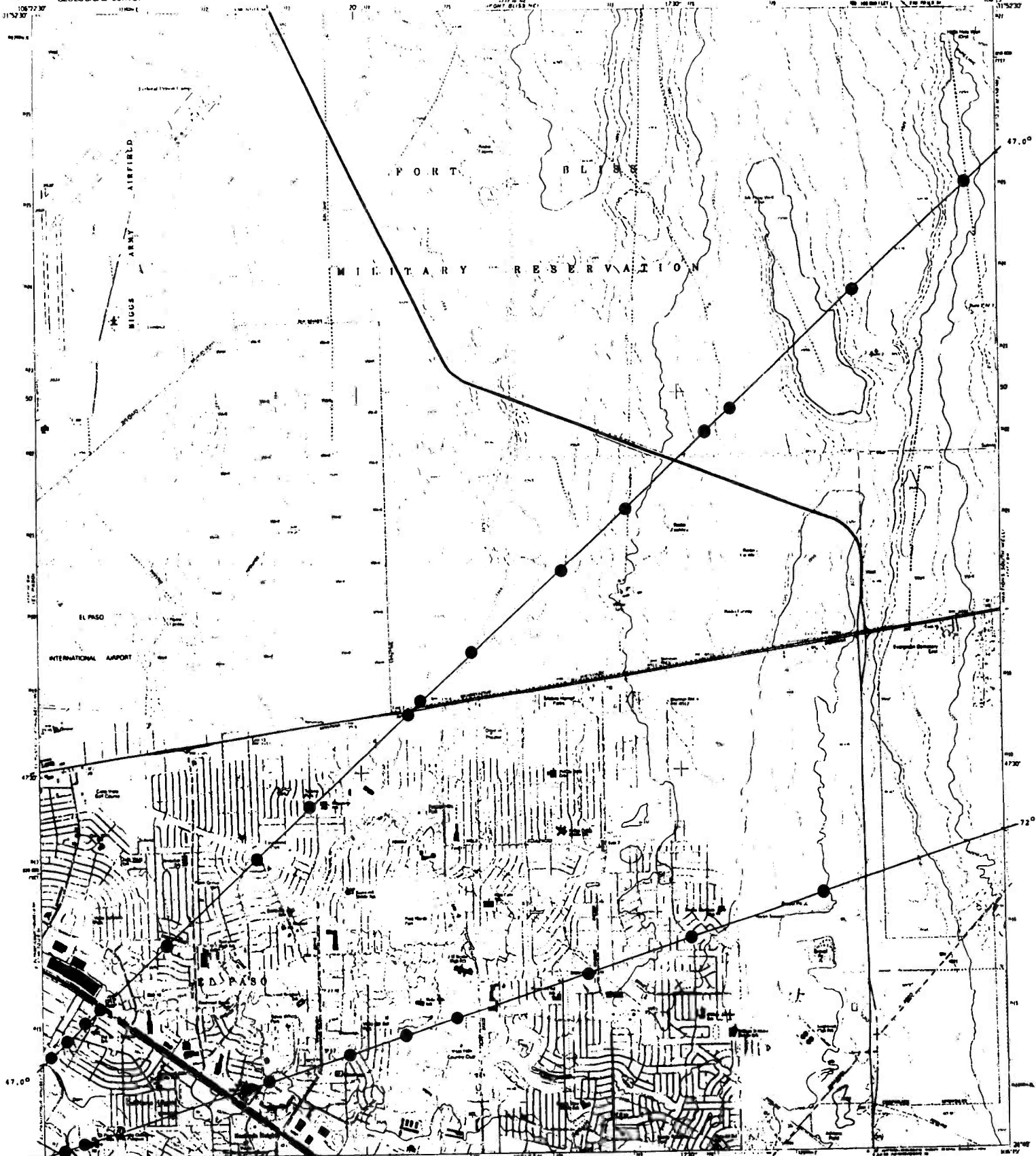
SCALE 1:24,000

CONTOUR INTERVAL 20 FEET
SUPPLEMENTARY CONTOUR INTERVAL 5 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1988

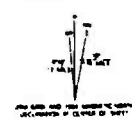
SYMBOLS AND NOTATION
Primary highway Light duty road, hard or improved surface
Secondary highway Unimproved road
Interstate Road U.S. Road State Road

Produced by the United States Geological Survey
Control by USGS and NEBRASKA
Compiled from aerial photographs taken 1984. Revised from other
photographs taken 1978 and other sources. 1 inch equals 1.575
Map datum 1983
North American Datum of 1983 (NAD 83). Projection and
coordinate system: Transverse Mercator, Clarke 1866
Spheroid, Clarke 1866, UTM Zone 16N, UTM
North American Datum of 1983 (NAD 83) is shown by default
and label. The datum of the grid coverage NAD 83 and NAD 83
1. Horizontal measurements are obtained from National Geodetic
Survey (NAD 83) stations.
Map symbols shown in which are buildings are shown
The 100-foot and 200-foot contour lines and less lines where
available are shown by dashed lines. The information is extracted

COMPILED FROM U.S. GEOLOGICAL SURVEY ENGINEERS FOR SPECIAL ACCURACY CLASS 1
FOR SALE BY U.S. GEOLOGICAL SURVEY
DENVER, COLORADO 80262, OR RESTON, VIRGINIA 20192
A POLAR PROJECTION TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST



Produced by the United States Geological Survey
Controlled by USGS and RMC/NOAA
Compiled from aerial photographs taken 1954. Revised from aerial
photographs taken 1959 and other sources. Field checked 1959.
Map dated 1959.
North American Datum of 1983 (NAD 83). Projection and
coordinate system: Texas Coordinate System, central zone,
Lambert Conformal Conic.
One 1:50,000-scale Universal Transverse Mercator (UTM) zone 13
North American Datum of 1983 (NAD 83) is shown by dashed
contour lines. The values of the zone between NAD 83 and NAD 83
for 7 secondary monuments are shown from National Geodetic
Survey (NGS) data.
Red line indicates areas in which only landmark buildings are shown.
For red dashed lines indicate structural forms and field lines where

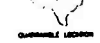


SCALE 1:24,000
CONTOUR INTERVAL 30 FEET
NATIONAL GEODETIC SURVEY
NATIONAL GEODETIC SURVEY
COMPLIES WITH U.S. GEOLOGICAL SURVEY STANDARDS FOR SPATIAL ACCURACY-CLASS 1
FOR SALE BY U.S. GEOLOGICAL SURVEY
DENVER, COLORADO 80219, OR RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND PRODUCTS IS AVAILABLE ON REQUEST

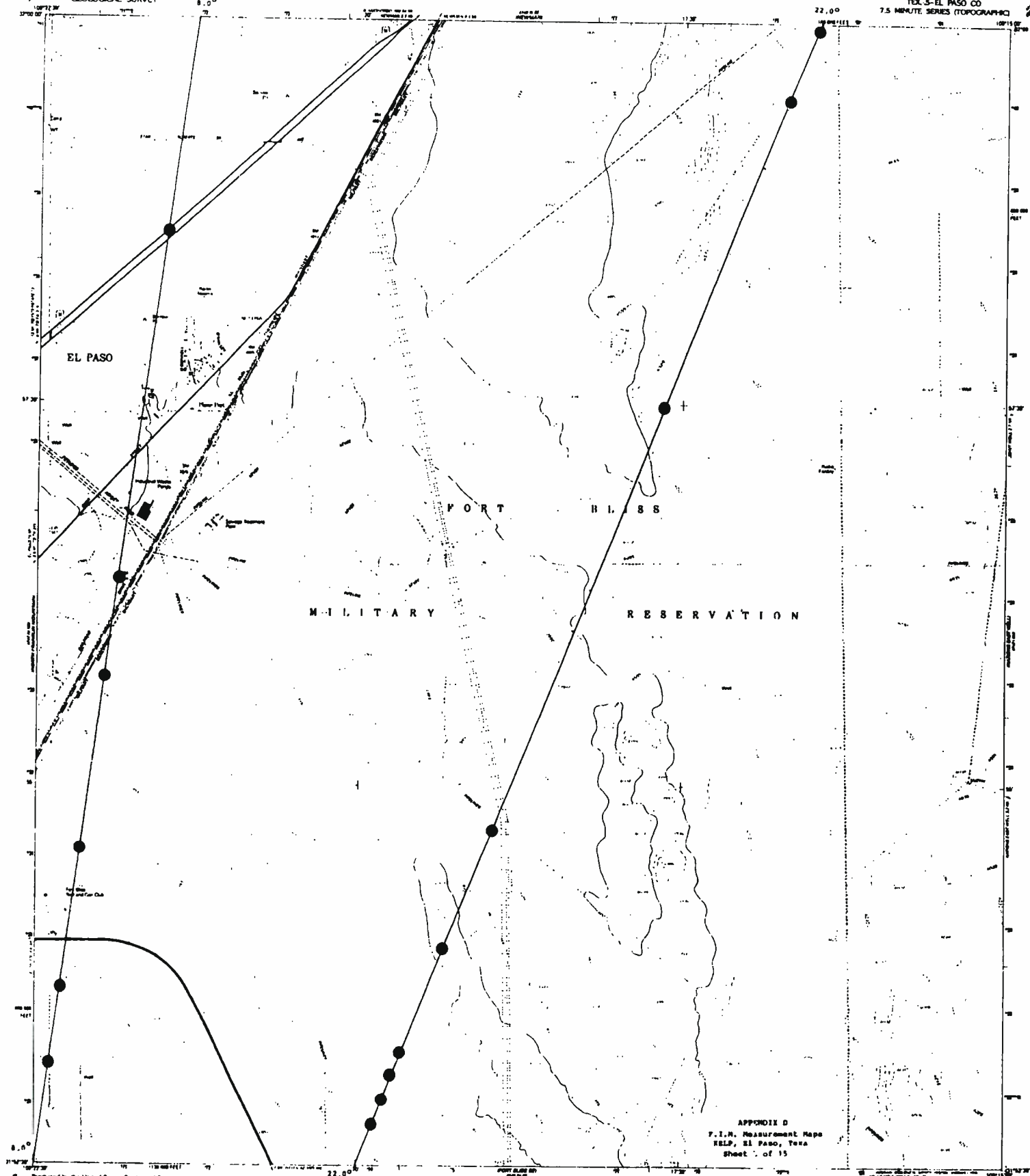
APPENDIX D
F.I.M. Measurement Hope
KELP, El Paso, Texas
Sheet 5 of 15

ROAD CLASSIFICATION

Primary highway	Light duty road, hard or unpaved surface
Hard surface	Unimproved road
Secondary highway	Unimproved road
Hard surface	Unimproved road
Interstate Road	U.S. Route
	State Route



3108-431



FORT BLISS MILITARY RESERVATION

APPENDIX D
F.I.M. Measurement Maps
KELP, EL PASO, TEXAS
Sheet 1 of 15

SCALE 1:24,000

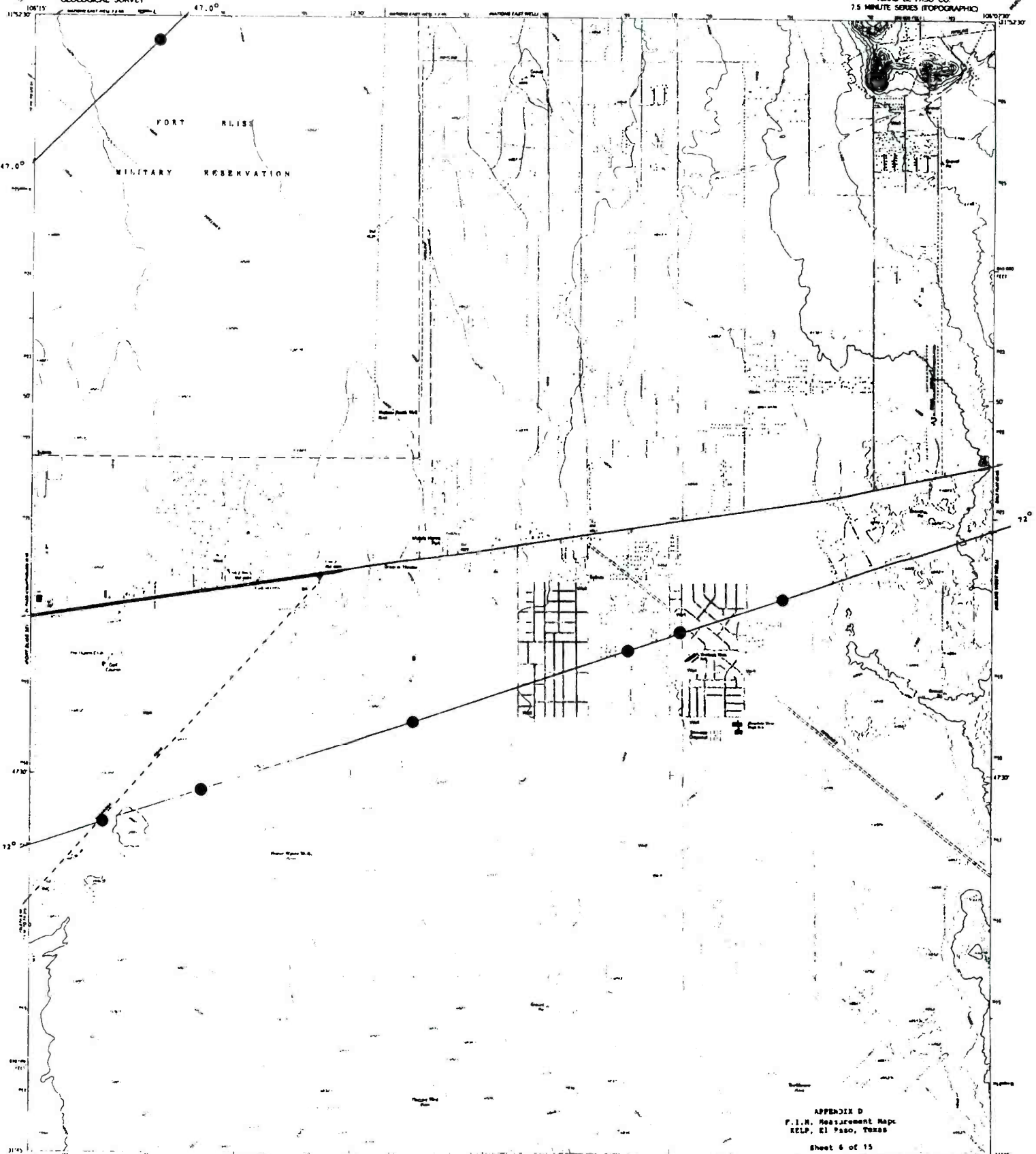
CONTOUR INTERVAL, 20 FEET
SURVEYING CONTOUR INTERVALS ARE 40 FEET
NAD 83 GEODETIC DATUM OF 1983



ROAD CLASSIFICATION
Primary highway, Light-duty road, hard or
hard to top
Secondary highway, Improved surface
Hard surface, Unimproved road
Gravelly Road, U.S. Route, State Road

Produced by the United States Geodetic Survey
Control by USGS and NAD83
Compiled from aerial photography taken 1951-1952, revised from aerial
photography taken 1951 and other sources. 4 x 4 inch grid 1951
Map dated 1951
North American Datum of 1983 (NAD 83). Position and
Elevation Control Points
Blue 1:250,000 (Unimproved) and 1:500,000 (Improved) maps, zone 11
Note: American Datum of 1983 (NAD 83) is shown by dashed
lines. The results of the shift between NAD 83 and NAD 83
to 7.5 minute measurements are shown by the shaded area.
Survey methods
Survey methods used include adjusted level and level lines unless
generally made on aerial photographs.

THIS MAP COMPLETES THE NATIONAL MAP ACQUISITION PROGRAM
FOR SALE BY U.S. GEOLOGICAL SURVEY
DENVER, COLORADO 80260, OR RESTON, VIRGINIA, 20192
A POLAR STEREO TOPOGRAPHIC MAP AND SYMBOLS IS AVAILABLE ON REQUEST



APPENDIX D
P.I.N. Measurement Maps
ELLP, El Paso, Texas
Sheet 6 of 15

Produced by the United States Geological Survey
Control to USGS and NGS/NOAA
Compiled from aerial photography of 1954 (Revised 1-6-66) and other
photographs, maps, and other sources. First published 1971.
Map dated 1971.
North American Datum of 1927 (NAD 27). Projection and
1:25000 scale are Texas Coordinate System (TCS) and
NAD 27. UTM Universal Transverse Mercator (UTM) zone 17
North American Datum of 1983 (NAD 83) is shown by the red
contour lines. The values of the high between NAD 27 and NAD 83
for 7.5-minute increments are 70-800 feet from National Geographic
Service (NAD 27) datum.
There may be ground readings within the boundaries of the
National or State boundaries shown on this map.
This map should be used in conjunction with other maps which
generally include an aerial photograph.

SCALE 1:24000

CONTOUR INTERVAL 20 FEET
SAMPLING CONTOUR INTERVALS 5 AND 10 FEET
NATIONAL GEODESIC DATUM OF 1983

THIS MAP COMPILED WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, BOX 242, COLLEGE STATION, TEXAS 77802
A SOURCE DESCRIPTION SYMBOL AND SYMBOLS IS AVAILABLE ON REQUEST



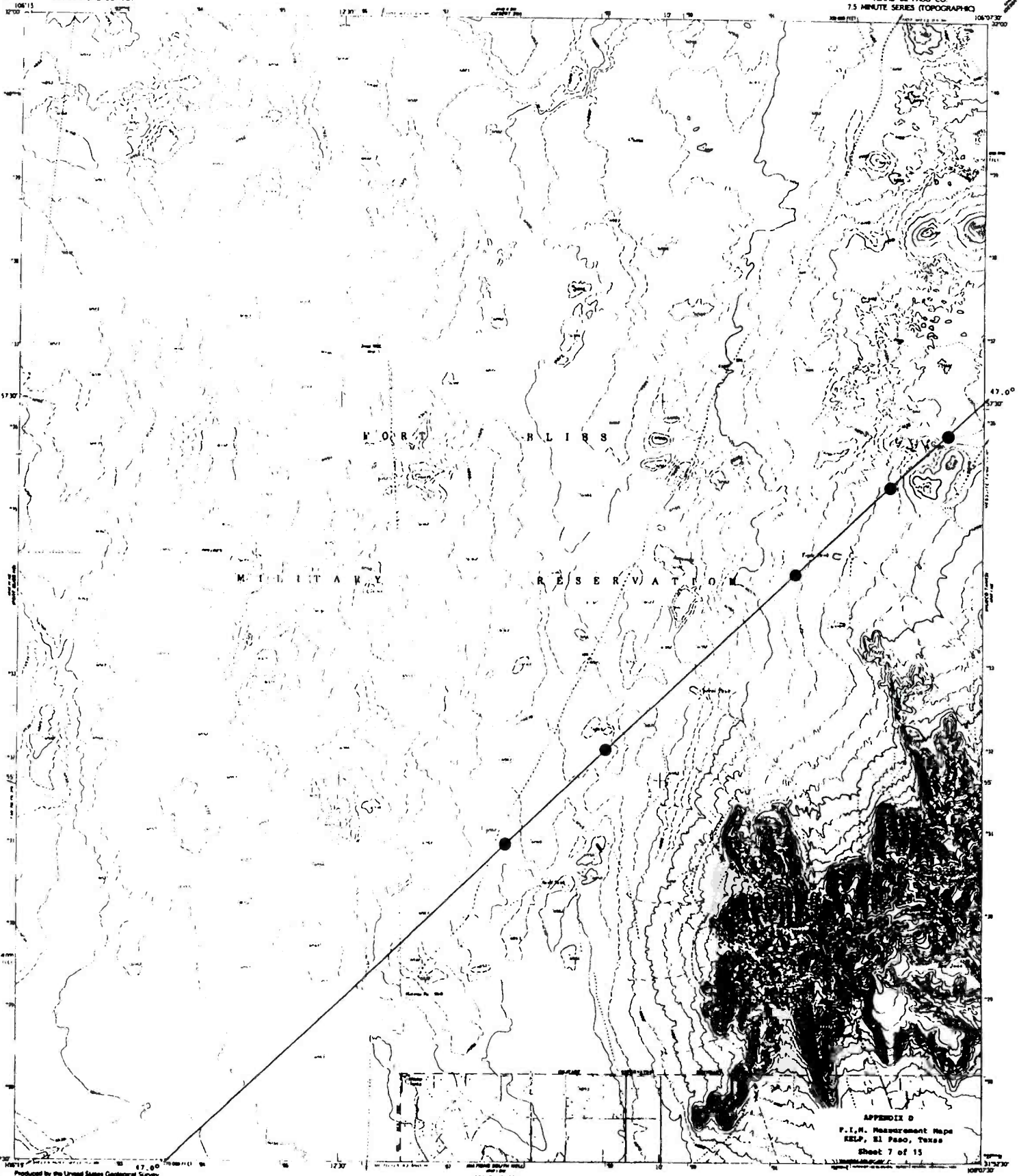
3105-442

ROAD CLASSIFICATION
- 4-way, 6-ft Light duty
- 2-way, 6-ft Unimproved dirt
- 7 U.S. Route () State Route

NATIONS SOUTH WELL, TX
24-10000-2-6-004

1988
GSA 4247-1-00-10203 1000





KORRLIERS
MILITARY RESERVATION

APPENDIX D
F.T.M. Measurement Maps
KELP, El Paso, Texas
Sheet 7 of 15

SCALE 1:24000

CONTOUR INTERVAL 30 FEET
DOTTED LINES REPRESENT 5 AND 10 FOOT CONTOURS
NATIONAL GEODESIC SERVICE, IN USE OF 1959



3108-643

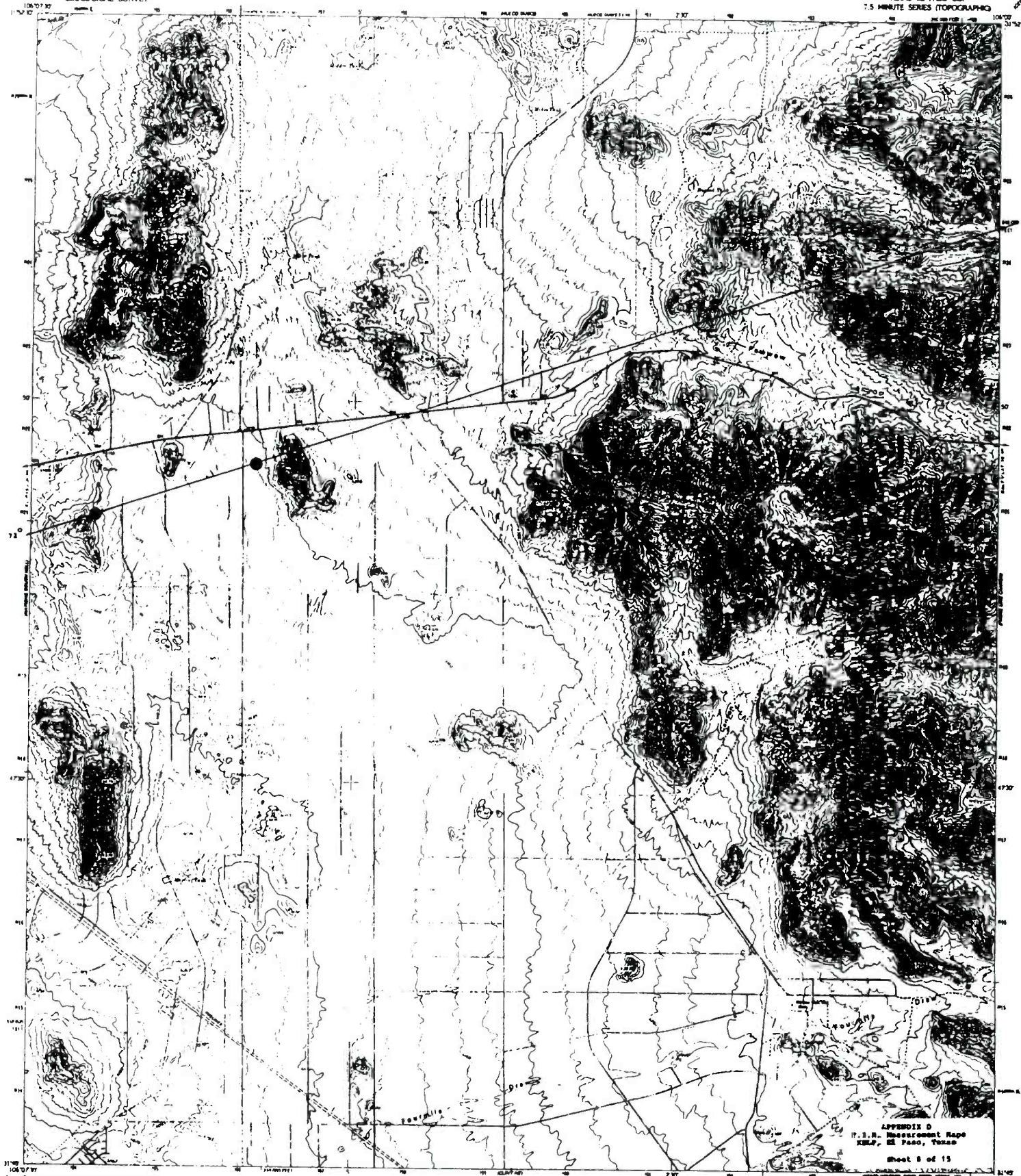
NATIONS EAST WELL, TX
118840-77-024

THIS MAP COPIES FROM NATIONAL MAP SECURITY SERVICE
FOR SALE BY U.S. GEOLOGICAL SURVEY
DENVER, COLORADO 80260 OR RESTON, VIRGINIA 20192
A FOLDER SHOWING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

Produced by the United States Geological Survey
Control by USGS and NGS/NOAA
Compiled from aerial photographs taken 1954. Revised from aerial
photography taken 1961 and other sources. First published 1961
Map revised 1988
North American Datum of 1983 (NAD 83). Plus, UTM and
1000-meter UTM Zone Coordinate System. Control from
Canadian Geomatics Centre
Blue 1000-meter Universal Transverse Mercator (UTM), Zone 12
North American Datum of 1983 (NAD 83) is shown by dotted
lines. The extent of the shift between NAD 83 and NAD 27 is
1.5 meters maximum, and sometimes from National Geodetic
Survey (NGS) software
There may be printing overprints within the boundaries of the
National of State boundaries shown on this map

ROAD CLASSIFICATION
Light duty Unimproved dirt

1:24000



Produced by the United States Geological Survey
Control by UTM and INDOPLAN
Compiled from aerial photographs taken 1954. Revised from aerial
photographs taken 1957 and other sources. First sheet of 1957
topographic map.
North American Datum of 1983 (NAD 83). Projection and
1:25,000 scale. Zone 16 North. UTM. Control points
Controlled by UTM and INDOPLAN
North American Datum of 1983 (NAD 83). Projection and
1:25,000 scale. Zone 16 North. UTM. Control points
Controlled by UTM and INDOPLAN
North American Datum of 1983 (NAD 83). Projection and
1:25,000 scale. Zone 16 North. UTM. Control points
Controlled by UTM and INDOPLAN



CONTOUR INTERVAL: 20 FEET
DASHED LINES REPRESENT 1:25,000 TOPOGRAPHIC
NATIONAL GRID COORDINATE SYSTEM OF 1983

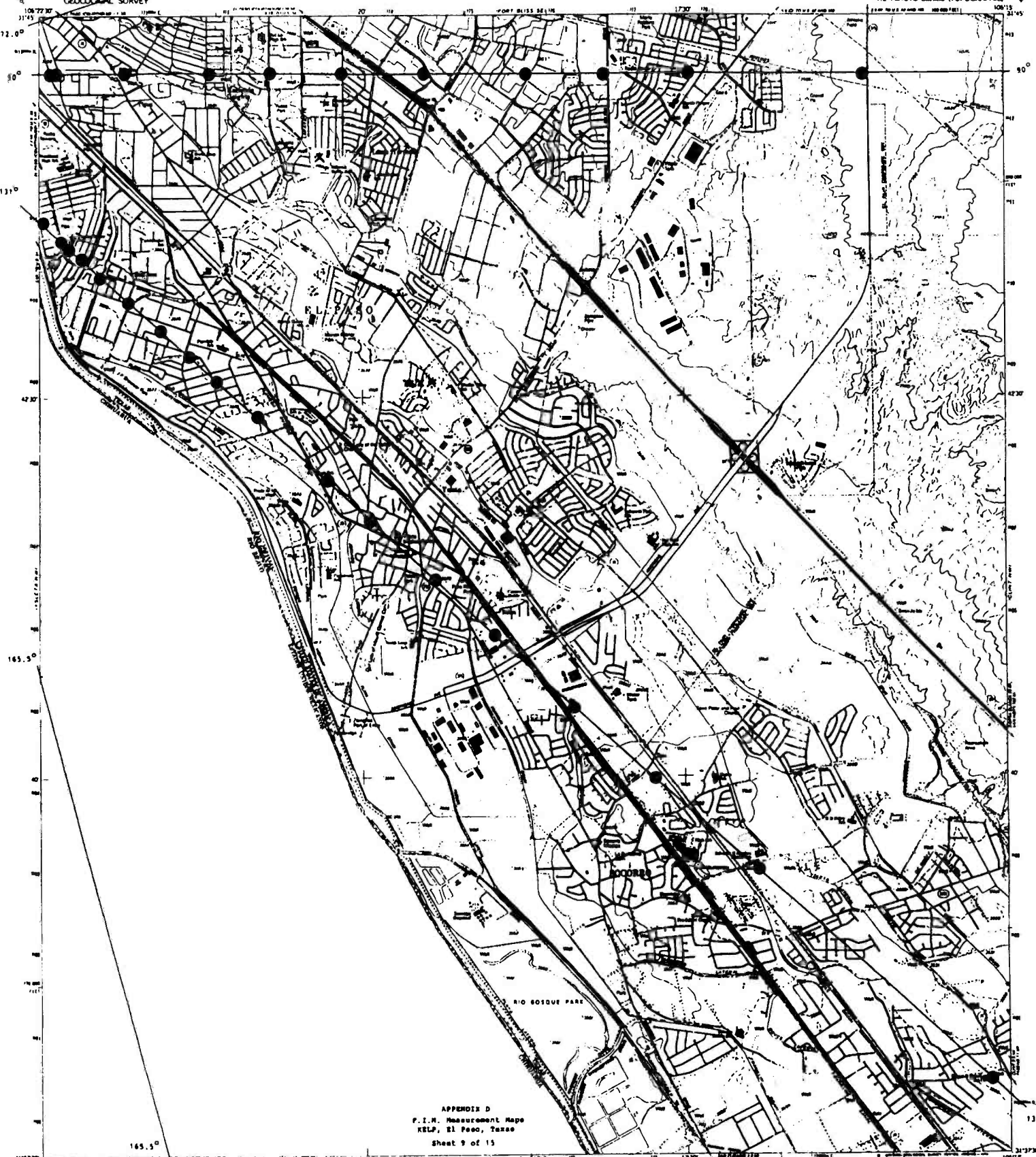
THIS MAP COMPLETES WITH OTHER MAPS AGENCY'S SERIES
FOR SALE BY U.S. GEOLOGICAL SURVEY
DENVER, COLORADO 80261, OR RESTON, VIRGINIA 22092
A POLAR DECLINING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST



APPENDIX D
U.S. GEOLOGICAL SURVEY
HELM WEST WELL QUADRANGLE
TEXAS-EL PASO CO.
Sheet 8 of 15

LINE CLASSIFICATION
Primary highway: Light duty road, hard or
improved surface
Secondary highway: Unimproved road
Interstate Road: U.S. Road: State Road

HELM WEST WELL, TX
21 108-441-201



APPENDIX D
P.L.M. Measurement Maps
KELP, El Paso, Texas
Sheet 9 of 13

SCALE 1:24,000

CONTOUR INTERVAL, 20 FEET
SUPPLEMENTARY CONTOUR SPACING, 5 AND 10 FEET
VERTICAL GEODETIC VERTICAL DATUM OF 1985

ROAD CLASSIFICATION

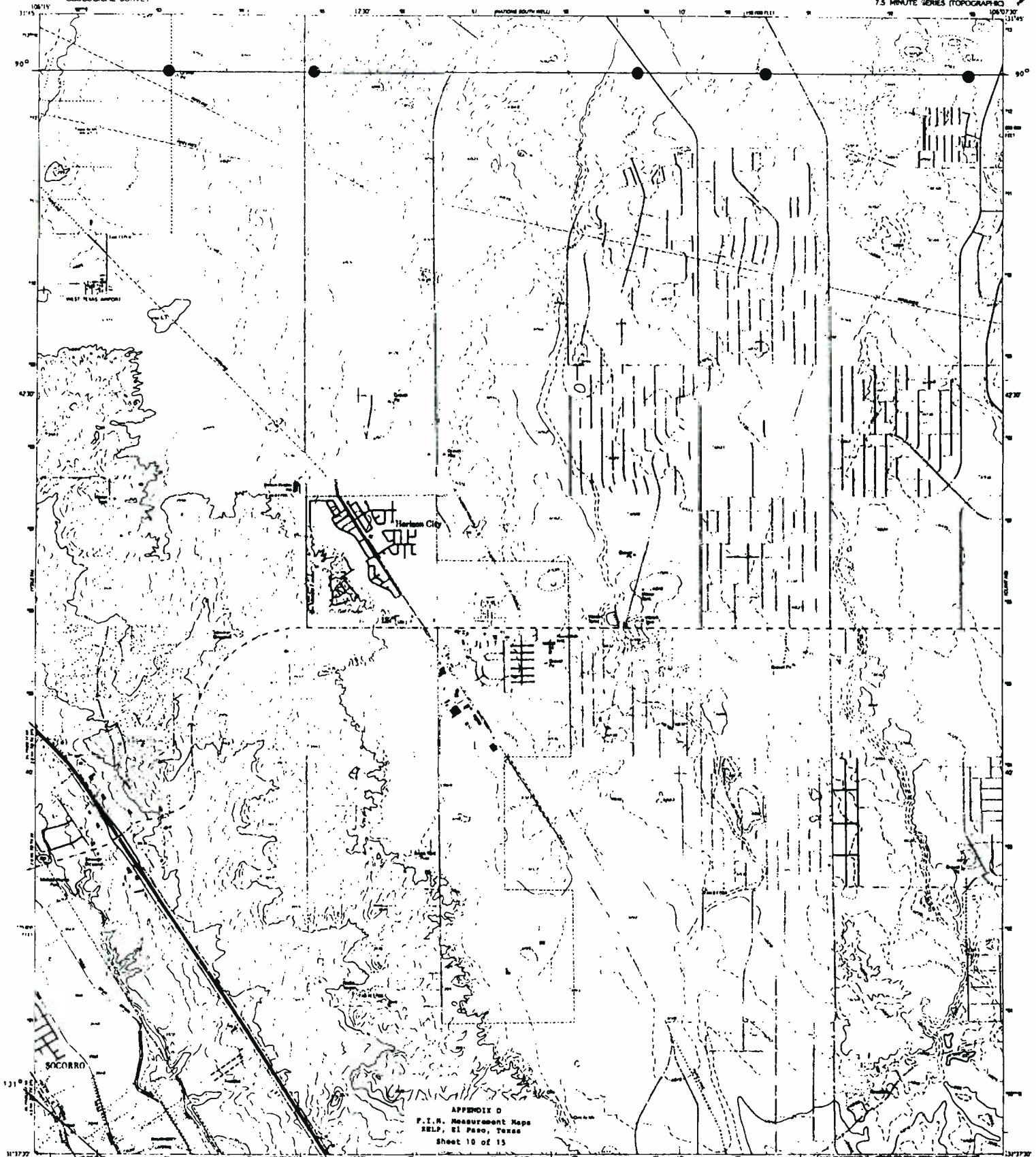
Primary highway	Light-duty road, hard or improved surface
Secondary highway	Unimproved road
Interstate Route	U.S. Route
	State Route



YSLETA, TEX.
31108-424

Produced by the United States Geological Survey
Control by USGS and HCS/CH&H
Compiled from aerial photography taken 1954. Revised from control points established 1951 and other sources. First published 1957. Map revised 1981.
North American Datum of 1983 (NAD 83) Projection and 1983-84 datum Texas Coordinate System, central zone.
Lambert Conformal Conic.
Scale, 1:24,000 (nominal). Horizontal datum: NAD 83, zone 12.
North magnetic declination of 1983 (MAGD 83) is shown by dashed lines. The values of the shift between MAGD 83 and MAGD 55 for 1:24,000 scale are obtained from National Geospatial Service (NGS) software.
Red and white areas in which only landmark buildings are shown.

THIS MAP COMPLETES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY
DENVER, COLORADO 80260 OR WASHINGTON, D.C. 20540
A POLAR ELECTRONIC TOPOGRAPHIC MAP AND SYMBOLS IS AVAILABLE ON REQUEST



APPENDIX D
F.I.R. Measurement Maps
RELP, El Paso, Texas
Sheet 10 of 15

SCALE 1:600

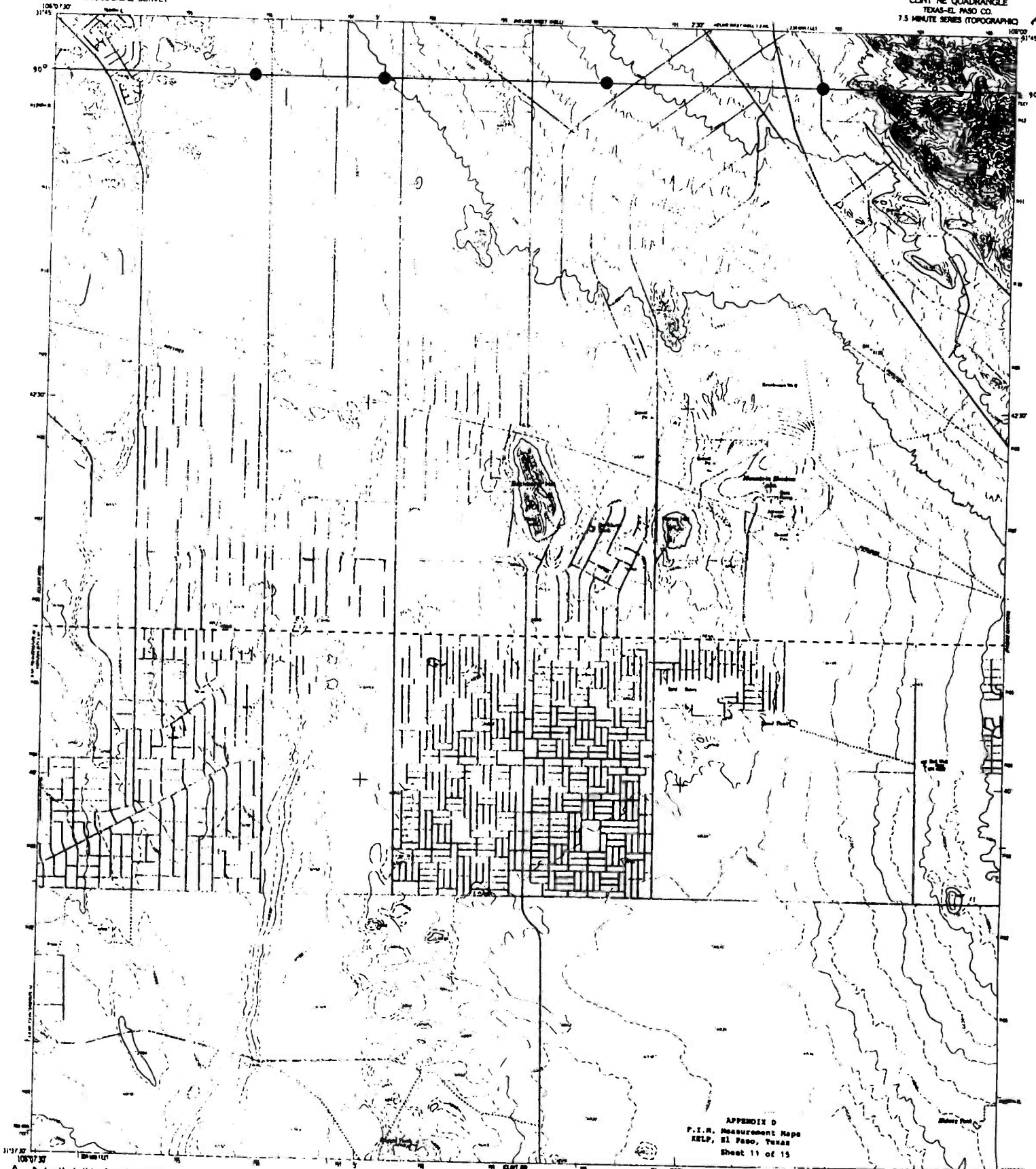
CONTOUR INTERVAL 20 FEET
THICK LINES REPRESENT 5 AND 10-FOOT CONTOURS
NORMAL 2000 FEET VERTICAL SCALE OF 100

ROAD CLASSIFICATION
Primary highway, hard surface
Secondary highway, hard surface
Light-duty road, hard or improved surface
Unimproved road
Federal Route (U.S. Route) State Road

Produced by the United States Geological Survey
Control by USGS and NGS/ANNA 1310
Compiled from aerial photographs taken 1954, corrected from
aerial photographs taken 1958 and other maps
North American Datum of 1983 (NAD 83), the
1983 datum is used. State Plane Coordinate System, Zone 10,
Lambert Conformal Conic
Blue 1:62,500-scale Universal Transverse Mercator datum zone 13
North American Datum of 1983 (NAD 83) is shown by shaded
control points. The extent of the data between sheet 11 and sheet 22
for 7.5-minute impressions are obtained from National Geographic
Survey (NGS) software

THIS MAP COMPLETES WITH NATIONAL MAP AGENCY ORDERS
FOR SALE BY U.S. GEOLOGICAL SURVEY
BENNETT, COLUMBIADALE DRIVE, OR RESTON, VIRGINIA 20192
A POLAR PROJECTION TOPOGRAPHIC MAP AND SYMBOLS IS AVAILABLE ON REQUEST

CLINT NW, TX
21168-77-10-014
1000



APPENDIX D
F. I. N. Measurement Nets
KLP, El Paso, Texas
Sheet 11 of 15

Produced by the United States Geological Survey
Controlled from aerial photographs taken 1954. Revised from same
photography taken 1957 and other sources. Field checked 1957.
Map of American Datum of 1983 and U.S. Projection and
10,000-foot scale. Texas Coordinate System, zone of zone
Lambert Conformal Conic
Base 1983 datum. Universal Transverse Mercator (UTM), zone 13
North American Datum of 1983 (NAD 83) is shown by dashed
lines. The status of the old datum (NAD 27) and UTM 83
for 7.5-minute international and information from National Geospatial
Intelligence Agency.



CONTOUR INTERVAL, 20 FEET
SUPPLEMENTARY CONTOUR INTERVAL, 5 AND 10 FEET
NATIONAL GEODESIC VERTICAL DATUM OF 1989

ROAD CLASSIFICATION

Primary Highway	Light-duty road, hard or improved surface
Secondary Highway	Monteponal road
Hard Surface	U.S. Route
Interstate Route	State Route



CLINT NE, TX
311841-17-04
1983
DOI 1987 8 PAGES 1000

THIS MAP COMPARES WITH NATIONAL MAP NEAREST BOUNDARIES
FOR SALE BY U.S. GEOLOGICAL SURVEY, DEWEE, COLORADO 80521, OR RESTON, VIRGINIA 22092
A COLOR DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

310C 434



APPENDIX D
P. I. M. Measurement Maps
KELP, El Paso, Texas
Sheet 12 of 15

SCALE 1:24,000

CORNER INTERVAL, 30 FEET
DENSE LINES REPRESENT 1 AND 10 FOOT CONTOURS
INTERNAL MODERN VERTICAL CURVE OF 100'

ROAD CLASSIFICATION
Primary Highway: Light to road, hard or hard surface; Improved surface
Secondary Highway: hard surface; Unimproved road
Interstate Route: U.S. Route; State Route

Produced by the United States Geological Survey
Control by USGS and HOSEA/DA
Compiled from aerial photographs taken 1954. Revised from last photorevision taken 1954 and other sources. First edition 1958.
North American Datum of 1857 used for P.M. and 1983 datum used for U.S. and State Routes. Survey, revised 1983.
Map Information: USGS, Reston, Virginia, 20192
Map Information: USGS, Reston, Virginia, 20192
Map Information: USGS, Reston, Virginia, 20192

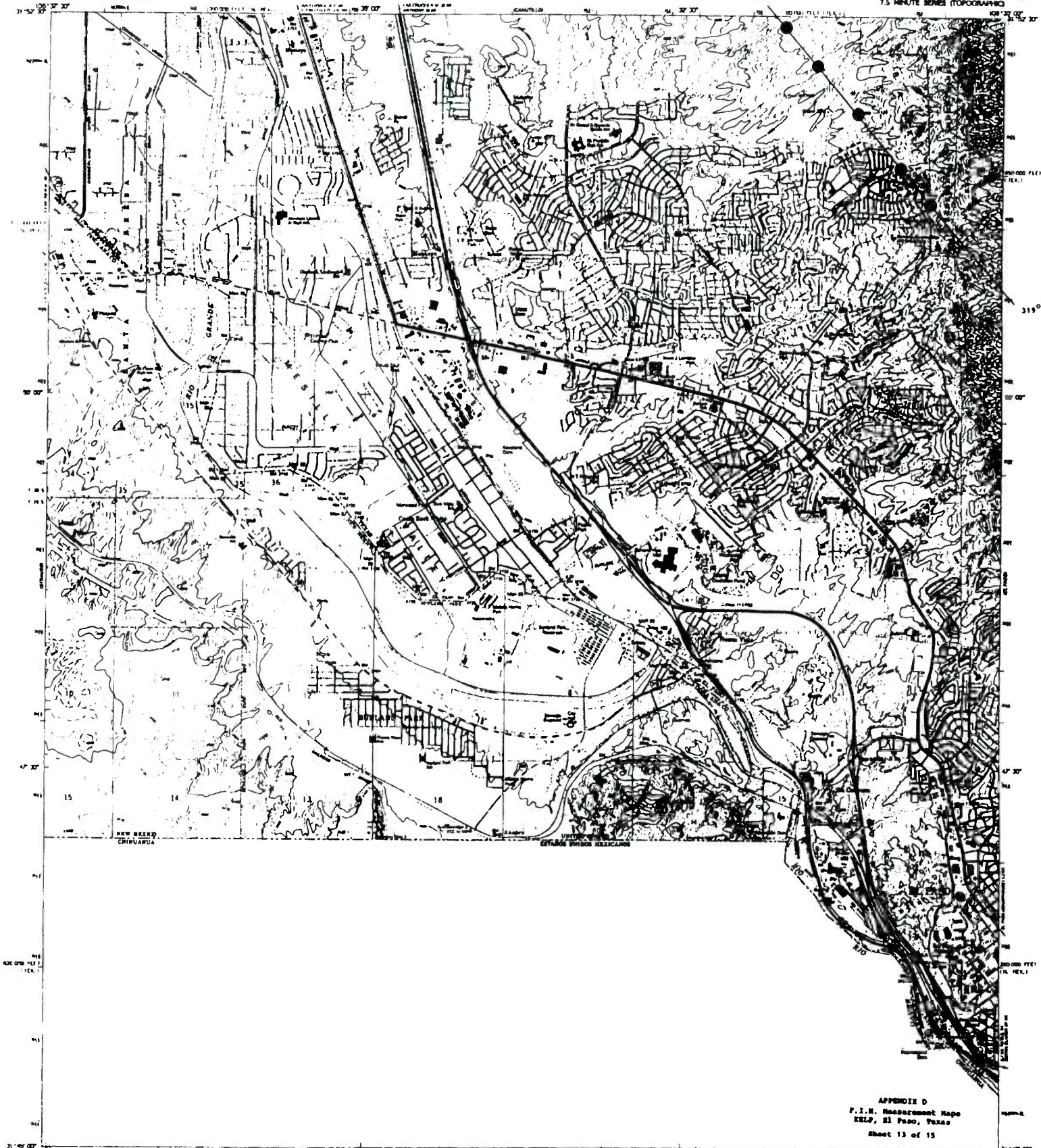


THIS MAP COMPLETES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY
DENVER, COLORADO 80261, OR RESTON, VIRGINIA 20192
A FOLDER CONTAINING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

UNIVERSITY OF TEXAS
CLINT, TX
3108-412

CLINT, TX
3108-412-19-404
1985

500 407 2 50-6075 1000



APPENDIX D
F.I.M. Measurement Maps
HELP, El Paso, Texas
Sheet 13 of 15

Produced by the United States Geological Survey
Control by USGS and NGS/NOAA
Compiled from aerial photographs taken 1954. Derived from aerial
photographs taken 1951 and other sources. Photo checked 1957.
Map dated 1958.

North American Datum of 1983 (NAD 83). Projection:
North Carolina System, central zone (European Central Zone)
1983 datum. Texas Coordinate System, central zone and
New Mexico Coordinate System, central zone.
Blue: Hydrographic features. Supplemental Meander data, June 13,
1978. Supplemental Datum of 1983 (NAD 83) is shown by dashed
lines. The values of the grid between TAD 27 and TAD 22
are based on measurements or data from National Geodetic
Survey (NGS) stations.

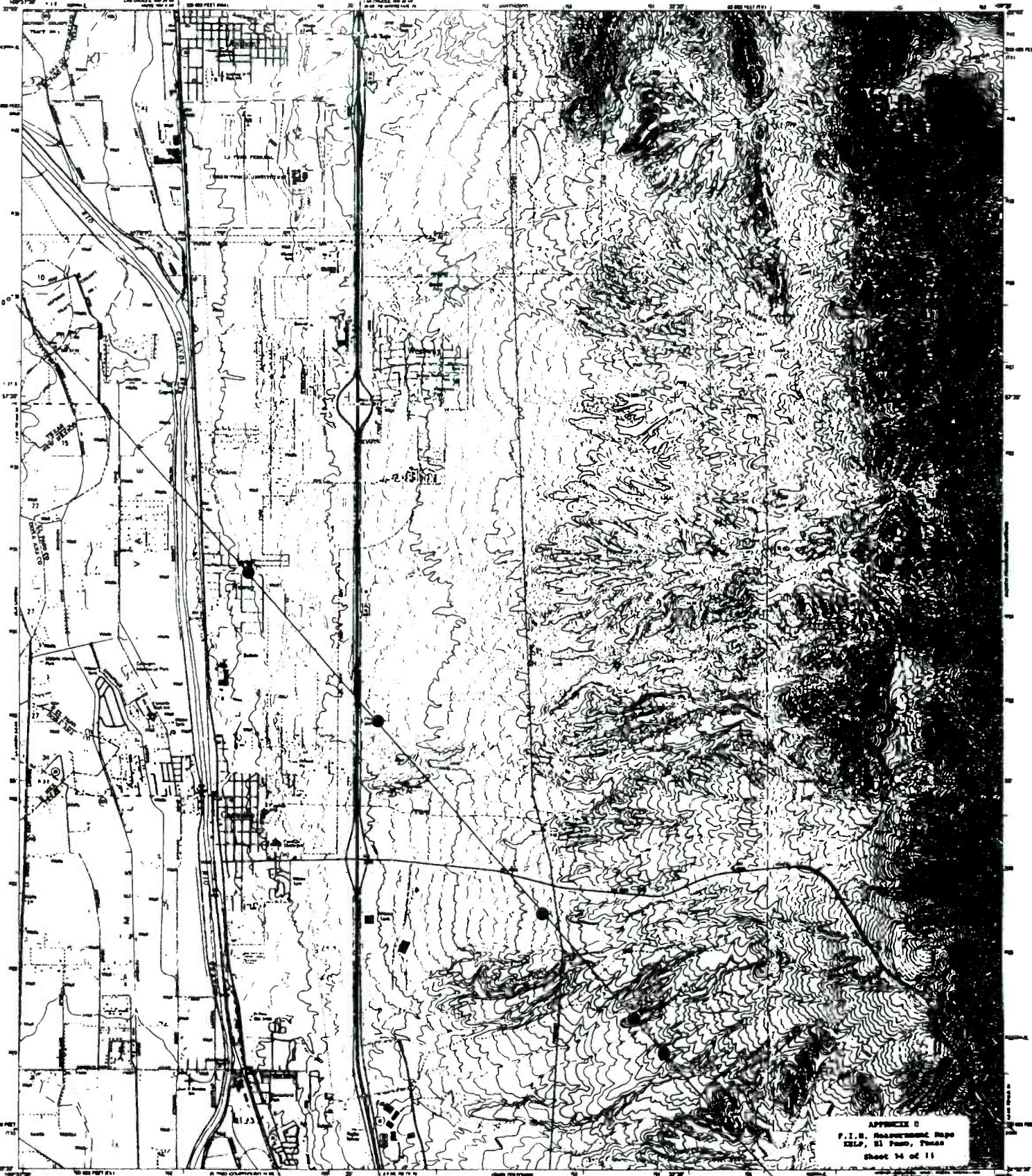
There may be ground subsidence within the boundaries of the
National or State topographic datum in this map.
Red and white shaded areas in which the boundary, buildings and stream

SCALE 1:24,000
CONTROL INTERVAL 20 FEET
SUPPLEMENTARY CONTROL INTERVAL 5 AND 10 FEET
MORNING GEOMETRIC OPTICAL, SURVEY OF 1957

THE MAP COMPLES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY
DENVER, COLORADO 80262, OR RESTON, VIRGINIA 20192
A FOUR-BEARING TOPOGRAPHIC MAPS AND SPREADS IS AVAILABLE ON REQUEST

ROAD CLASSIFICATION
Primary highway: Light-duty road, hard or
hard surface
Secondary highway: Unpaved surface
hard surface
Unpaved road
Interstate Route U.S. Route State Route

SMELTERTOWN, TX-NM
3108-34
1983
DOW 4071 1 85-60000 1/800



APPENDIX C
P. I. B. MEASUREMENT MAPS
KELP, El Paso, Texas
Sheet 14 of 11

Produced by the United States Geological Survey
Compiled from aerial photographs taken 1954. Revised from aerial
photographs from 1951 and other sources. Field checked 1952
and edited 1953.

North American Datum of 1983 (NAD 83). Projection:
Texas Coordinate System, Central zone 8 (Central). Central meridian
106°00' West. Texas Coordinate System, central zone and
New Mexico Coordinate System, central zone
Blue 100-meter Universal Transverse Mercator zone 13
North American Datum of 1983 (NAD 83) is shown by dashed
lines. The extent of the 4th edition NAD 77 and NAD 83
for 7.5-minute quadrangles are indicated from National Geodetic
Survey MDOCCN software.

There may be ground obstructions within the boundaries of the
Reservoir or Dam structures shown on this map.

Red dots indicate areas in which only basement buildings are shown.



SCALE 1:24,000

UNITED STATES GEOLOGICAL SURVEY
GEOGRAPHIC NAME SERVICE
WASHINGTON, D. C. 20508

THIS MAP COMPLETES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY
DENVER, COLORADO 80260, OR RESTON, VIRGINIA 20192
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST



ROAD CLASSIFICATION

Primary highway, hard surface	Light-duty road, hard or improved surface
Secondary highway, hard surface	Unimproved road
Interstate Route	U.S. Route
	State Route

CANUTILLO, TX-NM
3108-344
100
DOI-10-10-2008-1000

AM BROADCAST STATION CONSTRUCTION PERMIT

1. Permittee:
McClatchey Broadcasting Company

2. Station location : El Paso, Texas
3. Transmitter location : Chamizal Border Highway and
Springfield Road, El Paso, Texas

North Latitude : 31 44' 38"
West Longitude : 106 23' 45"

4. Main studio location :
(Listed only if not at transmitter site or not within
boundaries of principal community.)

Remote control location : El Paso County, EL Paso, Texas

Transmitter : Type accepted

(See Section 73.1660, 73.1665 and 73.1670 of the
Commission's Rules.)

7. Antenna and ground system: Attached

8. Obstruction marking and lighting specifications: FCC Form 715, paragraphs: None Required

9. Operating Assignment
Frequency : 1590 kHz
Power-Night : 0.80 kW (Directional)
Day : 5.00 kW (Directional)
Hours of Operation : UNLIMITED
10. Conditions : Attached

Average hours of sunrise and sunset: Standard Time (Non-Advanced)		
January	8:00am	to 6:30pm
February	7:45am	to 6:45pm
March	7:15am	to 7:15pm
April	6:45am	to 7:30pm
May	6:15am	to 8:00pm
June	6:00am	to 8:15pm
July	6:15am	to 8:15pm
August	6:30am	to 7:45pm
September	6:45am	to 7:15pm
October	7:15am	to 6:30pm
November	7:30am	to 6:00pm
December	8:00am	to 6:00pm

APPENDIX E

KELP Construction Permit

3-5-92 --THIS SUPERSEDES AUTHORIZATION OF SAME DATE TO CORRECT NIGHTTIME
MONITOR POINT SPECIFICATIONS. DUE TO PROXIMITY OF MEXICAN BORDER.
(jbs)

11. Deadline for completion of construction and filing FCC Form 302: 18 months from date of grant (shown below)

Subject to the provisions of the Communications Act of 1934, as amended, treaties, and Commission Rules, and further subject to conditions set forth in this permit, authority is hereby granted to
construct an AM broadcast station located and described as above.
Equipment and program tests shall be conducted only pursuant to Sections 73.1610 and 73.1620 of the Commission Rules.
This permit shall be forfeited if the station is not ready for operation within the time specified or within such further time as the Commission may allow unless completion of the station is prevented by
causes not under the control of the permittee. See Section 73.3509 of the Commission's Rules.

This construction permit consists of this page and page(s) 2 & 3. JBS:y1

Dated: MAY 09 1990

FEDERAL
COMMUNICATIONS
COMMISSION



MMB-353

FILE NO. BMP-890215AB
DAY AND NIGHT

CALL LETTERS K E L P

FREQ: 1590 kHz

Nominal Power: 0.8 kW, 5 KW-LS, DA-2, U

1. DESCRIPTION OF DIRECTIONAL ANTENNA SYSTEM

No. and Type of Elements: Three (3), vertical, guyed, folded-unipole, uniform cross section, steel radiators. Standard RMS: 720.08 mV/m/km, Day; 267.29 mV/m/km, Night. Theoretical RMS: 685.42 mV/m/km, Day; 254.36 mV/m/km, Night. Q factor : 22.36, Day; 10.0, Night.

Height above Insulators: 37.75 m (72").

Overall Height: 40.80 m.

Spacing and Orientation: Using tower #2 (C) as reference, tower #1 (S) is spaced 117.33° on a line bearing 219.27° True, Tower #3 (N) is spaced 98.341° on a line bearing 52.322° True.

Non-Directional Antenna: None Authorized

Ground System consists of 120 equally spaced, buried, copper radials about the base of each tower 47.25 meters in length.

2. THEORETICAL SPECIFICATIONS

	Tower	#1 (S)	#2 (C)	#3 (N)
Phasing:	Night	103.594°	0.0°	90.172°
	Day	116.204°	0.0°	77.891°
Field Ratio:	Night	1.629	1.0	1.848
	Day	1.485	1.0	0.138

The inverse distance field strength at a distance of one kilometer from the above antenna in the directions specified shall not exceed the following values: Daytime

Daytime		Nighttime	
<u>Azimuth</u>	<u>Radiation</u>	<u>Azimuth</u>	<u>Radiation</u>
165.5°	161.44 mV/m/km	22°	97.36 mV/m/km
276.0°	149.86 mV/m/km	72°	97.91 mV/m/km
220.5°	537.51 mV/m/km	47.0°	122.82 mV/m/km

A MONITORING POINT IN EACH OF THE ABOVE DIRECTIONS IN WHICH A FIELD INTENSITY IS SPECIFIED SHALL BE DESIGNATED WITH COMPLETE DETAIL INCLUDING A DESCRIPTION OF THE POINT, DIRECTIONS FOR PROCEEDING THERETO AND THE FIELD INTENSITY MEASURED AT THE POINT AFTER FINAL ADJUSTMENT OF THE ANTENNA SYSTEM IN EXACT ACCORDANCE WITH THE TERMS OF THIS AUTHORIZATION AND THE RULES AND REGULATIONS AND STANDARDS OF GOOD ENGINEERING PRACTICE GOVERNING STANDARD BROADCAST STATIONS. THE POINTS SHALL BE IN THE CLEAR SO AS TO PERMIT THE TAKING OF UNOBSTRUCTED FIELD INTENSITY MEASUREMENTS AND SHALL BE LOCATED NOT LESS THAN ONE MILE NOR MORE THAN FOUR MILES FROM THE ANTENNA IN THE DIRECTION SPECIFIED.

NO OPERATION SHALL OCCUR OTHER THAN DURING THE EXPERIMENTAL PERIOD UNTIL DATA HAS BEEN SUBMITTED SHOWING THAT OPERATION IS IN ACCORDANCE WITH THE ABOVE SPECIFICATIONS AND THAT THE FIELD INTENSITY PATTERN IS IN SUBSTANTIAL AGREEMENT WITH THE THEORETICAL PATTERN SPECIFIED IN THE APPLICATION.

THE AUTHORITY GRANTED IS SUBJECT TO THE FOLLOWING CONDITIONS:

CALL SIGN K E L P

File No. BMP-890215AB

A complete nondirectional proof of performance in addition to a complete proof on the day and night directional antenna system, shall be submitted before program tests are authorized. The nondirectional and directional field strength measurements must be made under similar environmental conditions.

Operation by remote control authorized.

Antenna obstruction markings not required.

The proposed antenna shall be excited with a symmetrical folded unipole feed, utilizing a minimum of three folds.

Prior to construction of the tower authorized herein, permittee shall notify AM station KBNA so that, if necessary that AM station: may determine operating power by a method described in Section 73.51(a) 91) or (d), and/or request temporary authority from the Commission in Washington, D.C. to operate with parameters at variance in order to maintain monitoring point field strengths within authorized limits. Permittee shall be responsible for installation and continued maintenance of detuning apparatus necessary to prevent adverse effects upon the radiation pattern of the AM station. Both prior to construction of the tower and subsequent to the installation of all appurtenances thereon, a partial proof of performance, as defined by Section 73.154(a) of the Commission's Rules, shall be conducted to establish that the AM array has not been adversely affected and, prior to or simultaneous with the filing of the application for license to cover this permit, the results submitted to the Commission.

McClatchey Broadcasting Company

K E L P
El Paso, TX

BMP-890215AB

JUSTIFICATION OF NON-ROUTINE GRANT

Section 73.24(j) of the Commission's Rules requires that the nighttime interference-free contour encompass all residential areas in the community to which the station is assigned. The instant proposal will provide nighttime interference-free service to 77.3% of the population of El Paso, Texas and 60% of the area of that city.

KELP is required to provide protection to KEACH and KLLL as well as other facilities on 1590 kHz. A wide-spaced array is required to provide the protection at the high angles to both of these facilities simultaneously. KELP has attempted to find a suitable site for its operation since it is facing eviction from the present daytime-only site. However, due to development, no sites in the city of El Paso zoned as commercial property are large enough to accommodate the facilities. The licensee obtained a lease on city-owned property for the site. In the process of site selection at least three sites were evaluated for suitability. They were all rejected due to protection requirements, insufficient property and/or site orientation to accommodate the proposed facilities. Therefore, a site is not available in El Paso, Texas that would provide the power/antenna gain combination to provide coverage to the entire city limits.

In Broadcasting, Inc., 20 FOC2d 713, 17 RR2d 1117 (1969), the applicant was found to have substantially complied with the Commission's requirements in proposing coverage to only 91.7% of the city population and 38.3% of the area of the city. In the instant case, we find that KELP's proposal to provide nighttime interference-free service to 77.3% of the population and 60% of the area of the city is in substantial compliance with the Commission's Rules. Accordingly, a grant of the requested waiver appears to be in the public interest, and is within the scope of delegated authority.

REPORT REGARDING CONSTRUCTION
OF DELTA STREET CELLULAR TOWER
IN PROXIMITY TO AM
BROADCAST STATION KBNA
EL PASO, TEXAS

PREPARED FOR
Contel Cellular, Inc.
of El Paso, Texas

January 17, 1996

APPENDIX F

Measurements on KBNA

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KBNA
EL PASO, TX
CONTEL CELLULAR

KBNA PROOF OF PERFORMANCE

Contel Cellular, Inc. (GTE Mobilnet Service Corp.) has retained this firm to determine the effect of a new cellular tower site, Delta Street, El Paso, Texas. This 125 foot tower was constructed 0.37 km 85°T from AM Radio Station KBNA, 920 KHz, El Paso, Texas (BL-900117AG). KBNA operates daytime non-directional and nighttime directional antenna. Also this tower is located 2.6 km from KELP, 1590 KHz, but this station is in the process of building a new transmitter plant, when tuned will "grandfather" the cellular site.

The reference complete proof of performance is 1989. The measurements are labeled on the print-out as "Ref" were used as reference or "Before". The "After" construction measurements are labeled on the print-out as "Day" or "Night".

KBNA MEASUREMENT PROCEDURE

The antenna parameters were recorded for both measurements as shown on the following page. Copies of USGS quadrangle maps were taken from the reference proof of performance obtained from station records. These were used to find the field measurement locations. At these locations the field meter was operated according to the manufacturer's specifications; which included meter calibration before each reading. All accessible points between 3 and 16 kilometers from the transmitter were measured, with some closer in where no far field points were available. Some points were blocked due to construction and some were limited as located in Mexico.

ANALYSIS OF DATA

The measurements are reported by radial bearing. The reference and "After" measurements are tabulated on the same page for each of the radials. The "After" measurements are shown ratioed and averaged to determine the radial average change. The Day pattern was ratioed directly to the proof's non-directional field showing only the change in percent. The nighttime data was ratioed and multiplied by the measured IDF and compared to the maximum IDF of the Standard Pattern.

RESULTS OF MEASUREMENT

The summary of data is shown as the cover sheet for each pattern. There was a variation in DAY of 97.2% to 104.1% between the "Before" and "After" measurements. A variation of ±5 percent is expected due to the time difference between measurements. There was a variation in NIGHT of 77% to 106% between the "Before" and "After" measurements based on a direct ratio to previous measurements. When these were compared to the Standard Pattern, it shows that all radiation fields are below the standard pattern and therefore within compliance.

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KBNA
EL PASO, TX
NARRATIVE

CONCLUSION

The cellular tower has no effect on this AM antenna array.

KBNA

Night Licensed parameters:

Common Point 2.8 amps

Tower	Loop	Phase
1	0.50	$\pm 0^\circ$
2	0.96	-149°
3	0.93	-152°

Night operating parameters in "After" measurements:

Common Point 2.8 amps

Tower	Loop	Phase
1	0.500	$\pm 0^\circ$
2	0.974	-149°
3	0.920	-152°

The field intensity readings were made by Patrick Parks, an associate of this firm who is experienced in making these measurements. The field meter used for both measurements was an RCA WX-2D, Serial Number 1361 which was factory calibrated 29 August 1989 and field tested identical readings with other field meters.

AFFIDAVIT

The information in this report is true and correct according to my knowledge and belief. My qualifications are a matter of record with the FCC.

January 17, 1996



John R. Furr

JF&A
COMMUNICATIONS
CONSULTANTS

CONTEL CELLULAR

KBNA
EL PASO, TX
NARRATIVE

KBNA-D
Summary of DAY Proof of Performance

No.	Radial (degree)	Average Ratio	Percent
1.	20.0	1.012	101.2%
2.	35.0	1.024	102.4%
3.	55.0	1.020	102.0%
4.	75.0	0.988	98.8%
5.	105.0	0.976	97.6%
6.	130.0	0.972	97.2%
7.	155.0	1.014	101.4%
8.	194.5	1.000	100.0%
9.	239.0	1.041	104.1%
10.	265.0	0.972	97.2%
11.	305.0	1.042	104.2%

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KBNA
EL PASO, TX
DAY SUMMARY

KBNA-D

YEAR: 1996
Day RADIAL 20.0

POINT	DISTANCE (km)	N-DA (mV/m)	DA-E (mV/m)	TIME (MST)	DATE	RATIO
9	3.32	87	110	1258	1- 7	1.264
10	3.75	61	77	1303	1- 7	1.262
11	4.44	71	67	1307	1- 7	0.944
12	5.02	58	35	1309	1- 7	0.603
13	6.04	46	42	1313	1- 7	0.913
14	7.09	36	39	1317	1- 7	1.083

RADIAL AVERAGE: 1.012

KBNA-D

YEAR: 1996
Day RADIAL 35.0

POINT	DISTANCE (km)	N-DA (mV/m)	DA-E (mV/m)	TIME (MST)	DATE	RATIO
18	3.57	88	88	1526	1- 6	1.000
19	4.20	68	70	1522	1- 6	1.029
20	5.03	56	56	1516	1- 6	1.000
21	5.88	46	48	1511	1- 6	1.043
22	6.31	43	47	1508	1- 6	1.093
23	7.03	40	42	1504	1- 6	1.050
24	7.78	36	34	1501	1- 6	0.944
25	8.64	31	32	1456	1- 6	1.032

RADIAL AVERAGE: 1.024

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CONTEL CELLULAR

KBNA
EL PASO, TX
CELLULAR PROOF DAY

KBNA-D

YEAR: 1996
Day RADIAL 55.0

POINT	DISTANCE (km)	N-DA (mV/m)	DA-E (mV/m)	TIME (MST)	DATE	RATIO
9	3.40	87	88	1440	1- 6	1.011
10	4.03	75	76	1445	1- 6	1.013
11	4.83	58	60	1434	1- 6	1.034
12	5.68	50	56	1430	1- 6	1.120
13	7.94	34	32	1420	1- 6	0.941
14	13.62	17	17	1410	1- 6	1.000

RADIAL AVERAGE: 1.020

KBNA-D

YEAR: 1996
Day RADIAL 75.0

POINT	DISTANCE (km)	N-DA (mV/m)	DA-E (mV/m)	TIME (MST)	DATE	RATIO
19	2.70	99	91	1308	1- 6	0.919
20	3.41	86	86	1313	1- 6	1.000
21	4.58	61	68	1322	1- 6	1.115
22	10.38	24	22	1355	1- 6	0.917

RADIAL AVERAGE: 0.988

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CONSULTANTS

CONTEL CELLULAR

KBNA
EL PASO, TX
CELLULAR PROOF DAY

KBNA-D

YEAR: 1996
Day RADIAL 105.0

POINT	DISTANCE (km)	N-DA (mV/m)	DA-E (mV/m)	TIME (MST)	DATE	RATIO
24	3.23	80	78	1259	1- 6	0.975
25	3.80	76	66	1257	1- 6	0.868
26	5.20	62	49	1248	1- 6	0.790
27	6.42	44	49	1244	1- 6	1.114
28	6.66	37	41	1240	1- 6	1.108
29	9.68	24	24	1233	1- 6	1.000

RADIAL AVERAGE: 0.976

KBNA-D

YEAR: 1996
Day RADIAL 130.0

POINT	DISTANCE (km)	N-DA (mV/m)	DA-E (mV/m)	TIME (MST)	DATE	RATIO
39	4.07	76	57	1139	1- 6	0.750
40	5.27	55	55	1143	1- 6	1.000
41	6.23	52	49	1147	1- 6	0.942
42	8.96	32	28	1156	1- 6	0.875
43	10.32	26	26	1200	1- 6	1.000
44	11.12	26	28	1204	1- 6	1.077
45	11.57	23	22	1207	1- 6	0.957
46	12.02	22	21	1210	1- 6	0.955
47	13.12	20	21	1215	1- 6	1.050
48	14.33	18	20	1222	1- 6	1.111

RADIAL AVERAGE: 0.972

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CONTEL CELLULAR

KBNA
EL PASO, TX
CELLULAR PROOF DAY

KBNA-D

YEAR: 1996
Day RADIAL 155.0

POINT	DISTANCE (km)	N-DA (mV/m)	DA-E (mV/m)	TIME (MST)	DATE	RATIO
20	4.13	73	74	1120	1- 6	1.014

RADIAL AVERAGE: 1.014

KBNA-D

YEAR: 1996
Day RADIAL 194.5

POINT	DISTANCE (km)	N-DA (mV/m)	DA-E (mV/m)	TIME (MST)	DATE	RATIO
11	8.78	29	29	1308	1-12	1.000

RADIAL AVERAGE: 1.000

KBNA-D

YEAR: 1996
Day RADIAL 239.0

POINT	DISTANCE (km)	N-DA (mV/m)	DA-E (mV/m)	TIME (MST)	DATE	RATIO
44	4.65	50	50	1150	1-12	1.000
48	10.81	22	23	1326	1-12	1.045
49	10.95	20	21	1344	1-12	1.050
50	12.19	19	20	1354	1-12	1.053
51	13.08	17	18	1401	1-12	1.059

RADIAL AVERAGE: 1.041

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CONSULTANTS

CONTEL CELLULAR

KBNA
EL PASO, TX
CELLULAR PROOF DAY

KBNA-D

YEAR: 1996
Day RADIAL 265.0

POINT	DISTANCE (km)	N-DA (mV/m)	DA-E (mV/m)	TIME (MST)	DATE	RATIO
50	2.49	100	100	1145	1-12	1.000
51	3.08	95	96	1215	1-12	1.011
52	4.35	68	54	1219	1-12	0.794
53	5.62	46	63	1235	1-12	1.370
54	7.24	34	38	1327	1-12	1.118
55	8.11	39	35	1323	1-12	0.897
56	9.14	27	28	1514	1-12	1.037
57	10.35	23	20	1508	1-12	0.870
58	11.51	21	19	1452	1-12	0.905
59	13.95	17	15	1440	1-12	0.882
60	15.14	16	13	1432	1-12	0.813

RADIAL AVERAGE: 0.972

KBNA-D

YEAR: 1996
Day RADIAL 305.0

POINT	DISTANCE (km)	N-DA (mV/m)	DA-E (mV/m)	TIME (MST)	DATE	RATIO
44	4.72	63	66	1152	1- 7	1.048
45	5.20	54	63	1154	1- 7	1.167
46	5.65	47	45	1157	1- 7	0.957
48	6.78	40	37	1211	1- 7	0.925
49	7.33	35	38	1215	1- 7	1.086
50	7.95	26	25	1220	1- 7	0.962
51	8.45	32	34	1228	1- 7	1.063
52	9.00	32	34	1225	1- 7	1.063
54	10.50	27	30	1236	1- 7	1.111

RADIAL AVERAGE: 1.042

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CONSULTANTS

CONTEL CELLULAR

KBNA
EL PASO, TX
CELLULAR PROOF DAY

KBNA-N

YEAR: 1995
Night RADIAL 20.0

POINT	DISTANCE (km)	Ref (mV/m)	DA-E (mV/m)	TIME (MST)	DATE	RATIO
9	3.32	73	63	1314	11- 4	0.863
10	3.75	40	49	1320	11- 4	1.225
11	4.44	45	44	1337	11- 4	0.978
12	5.02	37	25	1339	11- 4	0.676
13	6.04	31	27	1344	11- 4	0.871
14	7.09	22	25	1347	11- 4	1.136

RADIAL AVERAGE: 0.958

KBNA-N

YEAR: 1995
Night RADIAL 35.0

POINT	DISTANCE (km)	Ref (mV/m)	DA-E (mV/m)	TIME (MST)	DATE	RATIO
18	3.57	88	70	1324	11- 4	0.795
19	4.20	68	52	1327	11- 4	0.765
20	5.03	56	40	1332	11- 4	0.714
21	5.88	46	34	1401	11- 4	0.739
22	6.31	43	32	1358	11- 4	0.744
23	7.03	40	31	1354	11- 4	0.775
24	7.78	40	30	1351	11- 4	0.750
25	8.64	31	27	1407	11- 4	0.871

RADIAL AVERAGE: 0.769

JF&A
COMMUNICATIONS
CONSULTANTS

CONTEL CELLULAR

KBNA
EL PASO, TX
CELLULAR PROOF NIGHT

KBNA-N

YEAR: 1995
Night RADIAL 55.0

POINT	DISTANCE (km)	Ref (mV/m)	DA-E (mV/m)	TIME (MST)	DATE	RATIO
9	3.40	66	58	1502	11- 4	0.879
10	4.03	52	41	1459	11- 4	0.788
11	4.83	42	33	1456	11- 4	0.786
12	5.68	36	32	1450	11- 4	0.889
13	7.94	23	20	1442	11- 4	0.870
14	13.62	12	10	1416	11- 4	0.833

RADIAL AVERAGE: 0.841

KBNA-N

YEAR: 1995
Night RADIAL 75.0

POINT	DISTANCE (km)	Ref (mV/m)	DA-E (mV/m)	TIME (MST)	DATE	RATIO
19	2.70	43	40	1416	11- 5	0.930
20	3.41	38	35	1420	11- 5	0.921
21	4.58	32	30	1554	11- 5	0.938
22	10.38	13	12	1558	11- 5	0.923

RADIAL AVERAGE: 0.928

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COMMUNICATIONS
CONSULTANTS

CONTEL CELLULAR

KBNA
EL PASO, TX
CELLULAR PROOF NIGHT

KBNA-N

YEAR: 1995
Night RADIAL 105.0

POINT	DISTANCE (km)	Ref (mV/m)	DA-E (mV/m)	TIME (MST)	DATE	RATIO
24	3.23	56	49	1437	11- 5	0.875
25	3.80	49	42	1440	11- 5	0.857
26	5.20	45	35	1538	11- 5	0.778
27	6.42	34	32	1455	11- 5	0.941
28	6.66	28	28	1457	11- 5	1.000
29	9.68	18	16	1503	11- 5	0.889

RADIAL AVERAGE: 0.890

KBNA-N

YEAR: 1995
Night RADIAL 130.0

POINT	DISTANCE (km)	Ref (mV/m)	DA-E (mV/m)	TIME (MST)	DATE	RATIO
39	4.07	52	47	1248	11-18	0.904
40	5.27	42	41	1300	11-18	0.976
41	6.23	39	36	1304	11-18	0.923
42	8.96	30	29	1313	11-18	0.967
43	10.32	24	21	1324	11-18	0.875
44	11.12	23	21	1321	11-18	0.913
45	11.57	18	17	1329	11-18	0.944
46	12.02	20	17	1331	11-18	0.850
47	13.12	19	17	1336	11-18	0.895
48	14.33	16	15	1341	11-18	0.938

RADIAL AVERAGE: 0.918

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CONSULTANTS

CONTEL CELLULAR

KBNA
EL PASO, TX
CELLULAR PROOF NIGHT

KBNA-N

YEAR: 1995
Night RADIAL 155.0

POINT	DISTANCE (km)	Ref (mV/m)	DA-E (mV/m)	TIME (MST)	DATE	RATIO
20	4.13	55	50	1404	11-18	0.909

RADIAL AVERAGE: 0.909

KBNA-N

YEAR: 1995
Night RADIAL 194.5

POINT	DISTANCE (km)	Ref (mV/m)	DA-E (mV/m)	TIME (MST)	DATE	RATIO
11	8.78	2.3	2.4	1346	10-28	1.043

RADIAL AVERAGE: 1.043

KBNA-N

YEAR: 1995
Night RADIAL 239.0

POINT	DISTANCE (km)	Ref (mV/m)	DA-E (mV/m)	TIME (MST)	DATE	RATIO
44	4.65	7.4	7.1	0941	10-15	0.959
48	10.81	3.7	3.7	1311	10-15	1.000
49	10.95	3.4	4.3	1259	10-15	1.265
50	12.19	3.3	3.3	1252	10-15	1.000
51	13.08	2.6	2.8	1242	10-15	1.077

RADIAL AVERAGE: 1.060

JF&A
COMMUNICATIONS
CONSULTANTS

CONTEL CELLULAR

KBNA
EL PASO, TX
CELLULAR PROOF NIGHT

KBNA-N

YEAR: 1995
Night RADIAL 265.0

POINT	DISTANCE (km)	Ref (mV/m)	DA-E (mV/m)	TIME (MST)	DATE	RATIO
50	2.49	49	50	0929	10-15	1.020
51	3.08	46	36	0936	10-15	0.783
52	4.35	34	25	1008	10-15	0.735
53	5.62	23	23	0959	10-15	1.000
54	7.24	22	18	1025	10-15	0.818
55	8.11	23	17	1030	10-15	0.739
56	9.14	12	10	1036	10-15	0.833
57	10.35	12	8.8	1042	10-15	0.733
58	11.51	9.4	7.0	1056	10-15	0.745
59	13.95	8.6	6.0	1159	10-15	0.698
60	15.14	7.6	7.0	1141	10-15	0.921

RADIAL AVERAGE: 0.821

KBNA-N

YEAR: 1995
Night RADIAL 285.0

POINT	DISTANCE (km)	Ref (mV/m)	DA-E (mV/m)	TIME (MST)	DATE	RATIO
53	11.90	15	14	0903	10-15	0.933
54	12.86	9.3	8.2	0848	10-15	0.882

RADIAL AVERAGE: 0.908

KBNA-N

YEAR: 1995
Night RADIAL 305.0

POINT	DISTANCE (km)	Ref (mV/m)	DA-E (mV/m)	TIME (MST)	DATE	RATIO
44	4.72	47	45	1549	10-28	0.957
45	5.20	37	43	1544	10-28	1.162
46	5.65	35	40	1541	10-28	1.143
48	6.78	30	33	1524	10-28	1.100
49	7.33	28	25	1518	10-28	0.893
50	7.95	21	19	1513	10-28	0.905
51	8.45	31	29	1507	10-28	0.935
52	9.00	25	24	1459	10-28	0.960
54	10.50	24	24	1450	10-28	1.000

RADIAL AVERAGE: 1.006

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Summary of NIGHT Proof of Performance

No.	Radial (degree)	Average Ratio	Reference Inverse (mV/m)	*DA Inverse (mV/m)	Maximum Permitted Inverse (mV/m)	Percent
1.	20.0	0.958	225.0	215.6	244.2	88.3%
2.	35.0	0.769	259.0	199.2	264.2	75.4%
3.	55.0	0.841	220.0	185.0	222.0	83.3%
4.	75.0	0.928	149.0	138.3	173.2	79.8%
5.	105.0	0.890	247.0	219.8	261.3	84.1%
6.	130.0	0.918	270.0	248.0	301.1	82.4%
7.	155.0	0.909	228.0	207.3	241.2	85.9%
8.	194.5	1.043	21.1	22.0	24.2	91.0%
9.	239.0	1.060	45.2	47.9	51.3	93.4%
10.	265.0	0.821	152.0	124.7	169.6	73.5%
11.	285.0	0.908	242.0	219.6	261.5	84.0%
12.	305.0	1.006	265.0	266.6	294.6	90.5%

* Average Ratio X Reference Inverse = DA Inverse

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NIGHT SUMMARY