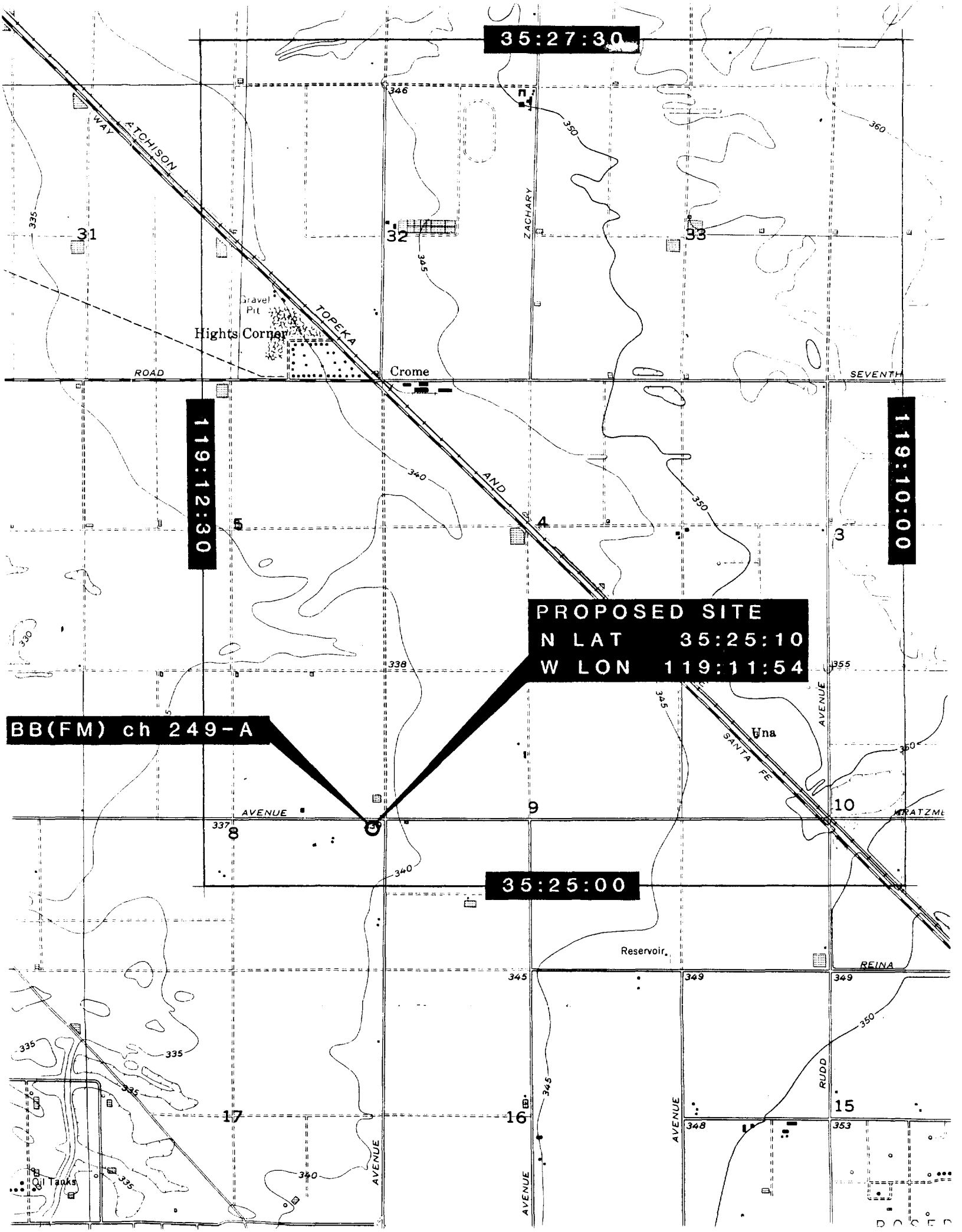
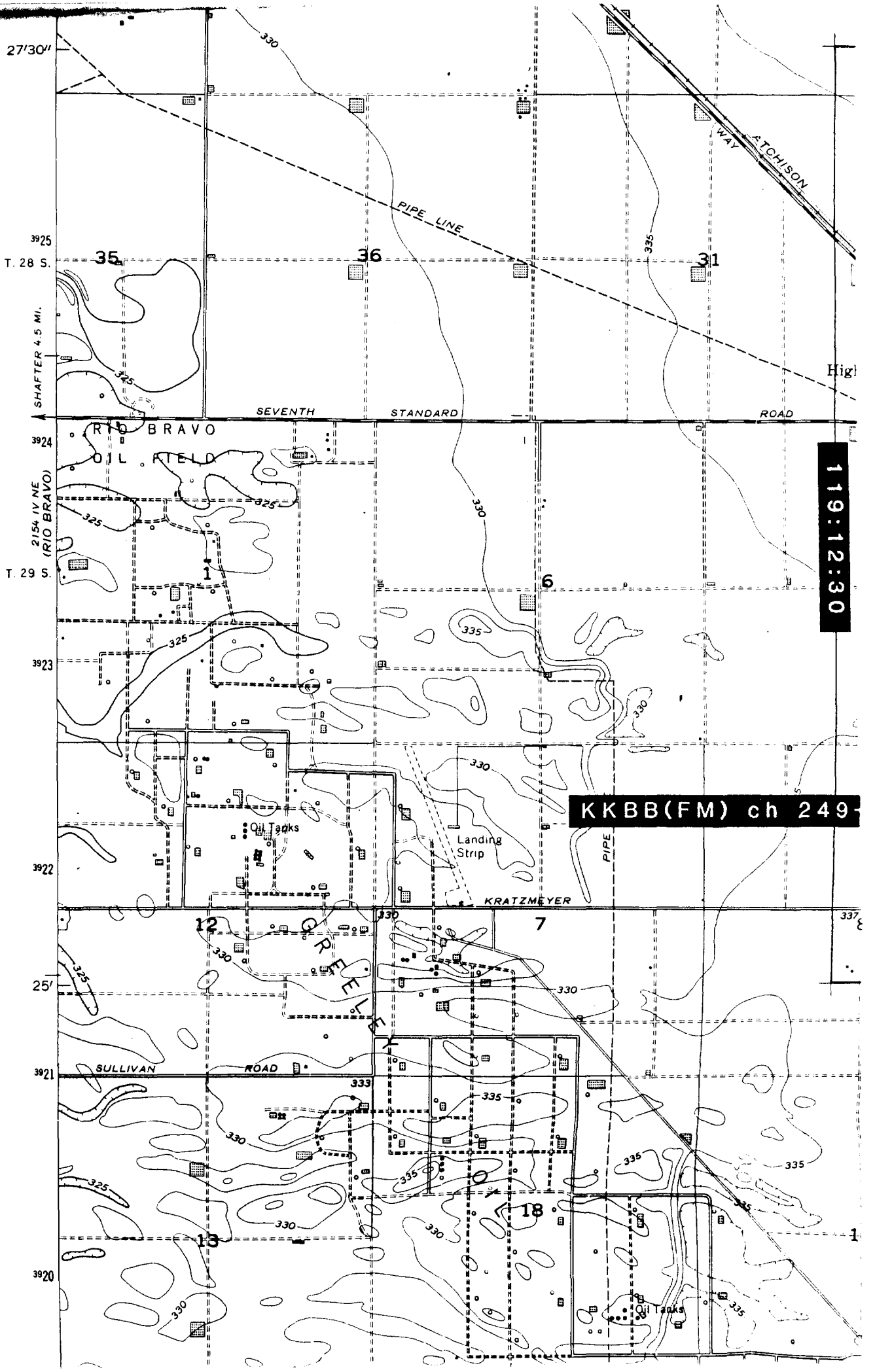

35:27:30
119:12:30
119:10:00
35:25:00
PROPOSED SITE
N LAT 35:25:10
W LON 119:11:54
BB(FM) ch 249-A
ATCHISON
TOPEKA
AND
SANTA FE
WAY
ROAD
SEVENTH
ZACHARY
AVENUE
RUDD
REINA
Hights Corner
Crome
Una
Gravel Pit
Reservoir
Oil Tanks
31
32
33
5
4
3
8
9
10
17
16
15



119:12:30
KKBB(FM) ch 249-

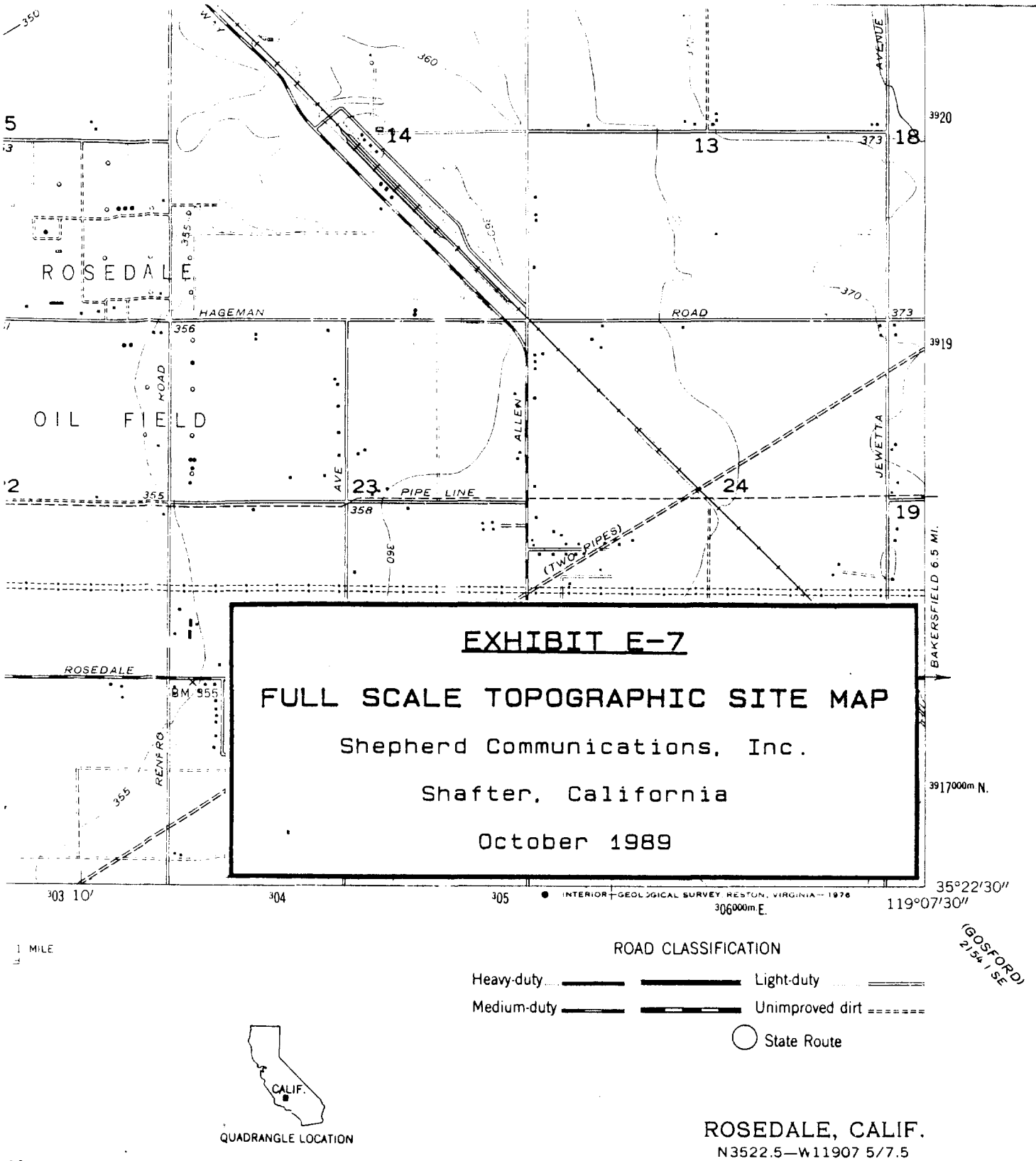


EXHIBIT E-7

FULL SCALE TOPOGRAPHIC SITE MAP

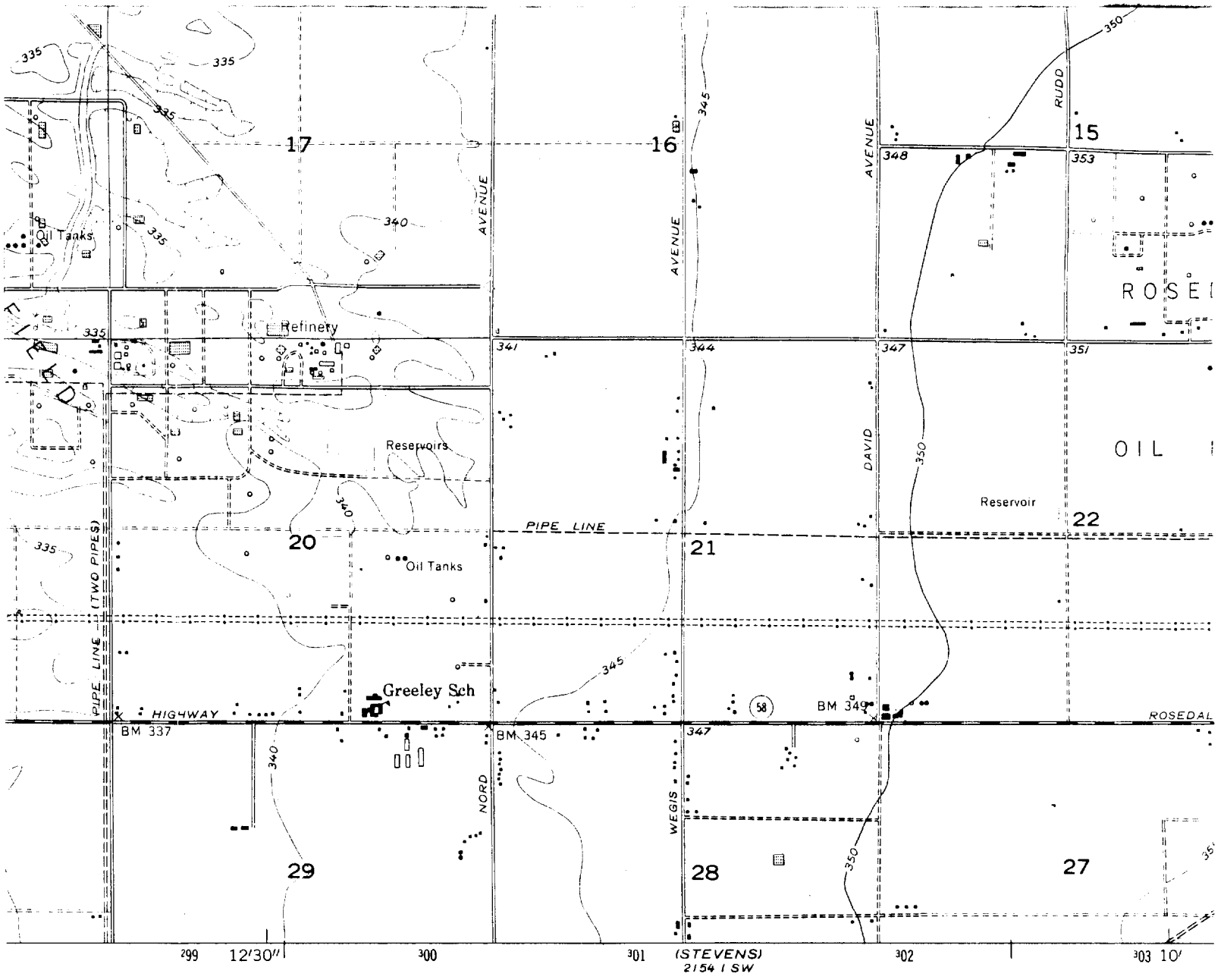
Shepherd Communications, Inc.

Shafter, California

October 1989

ROSEDALE, CALIF.
N3522.5—W11907 5/7.5

1954
PHOTOREVISED 1968
AMS 2154 I NW—SERIES V895
PHOTOINSPECTED 1973



SCALE 1:24 000

1 ½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETRE

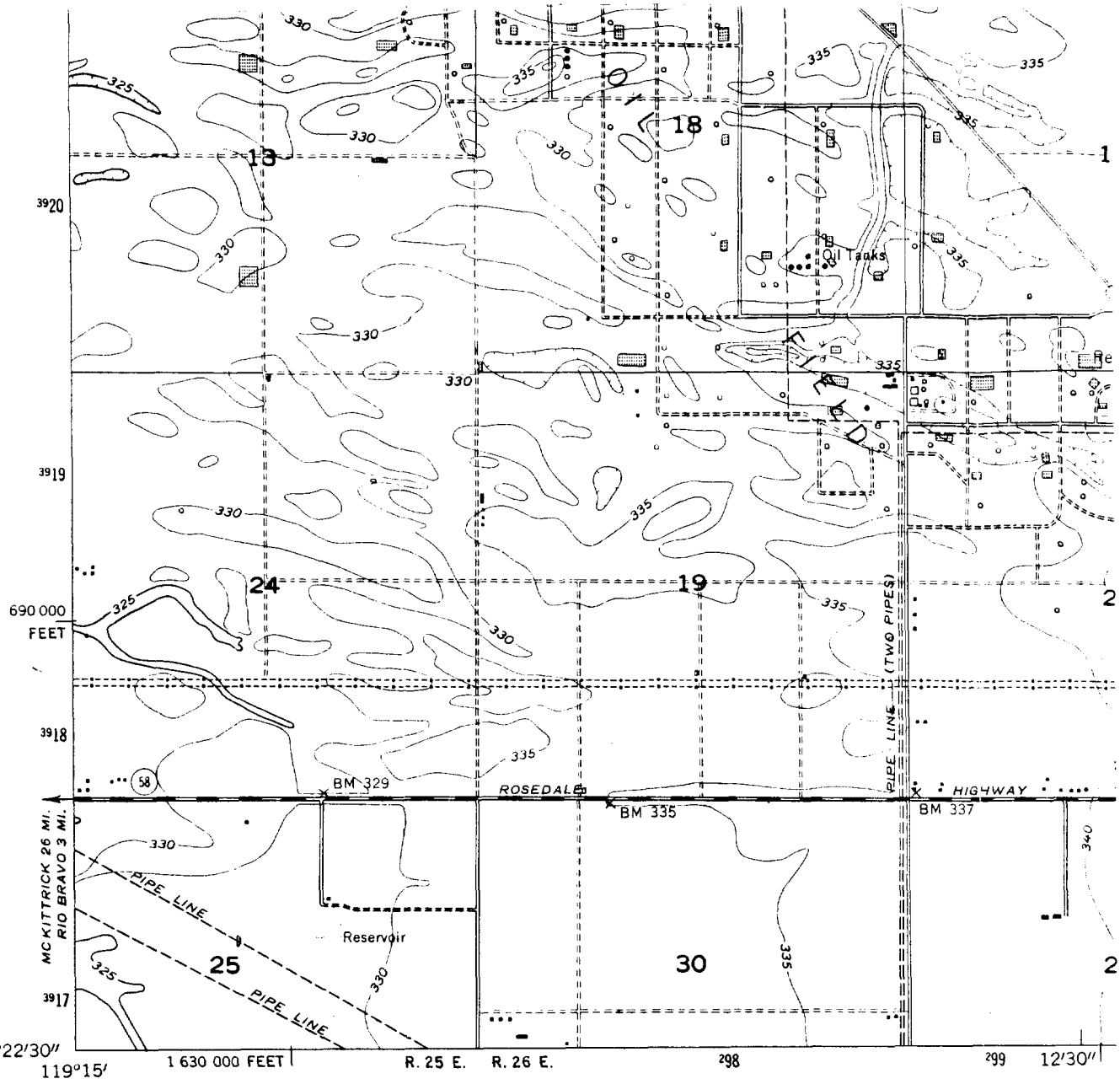
CONTOUR INTERVAL 5 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

GN MN

1°16' / 23 MILS 16° / 284 MILS

RID AND 1968 MAGNETIC NORTH
INATION AT CENTER OF SHEET

FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST



(TUPMAN)
2154 IV SE

Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

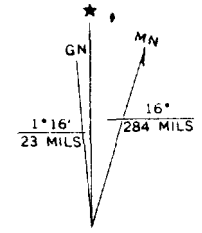
Topography by plane-table surveys 1929–30
Culture and drainage revised from aerial photographs
taken 1952. Field check and partial contour revision 1954

Polyconic projection. 1927 North American datum
10,000-foot grid based on California coordinate system, zone 5
1000-metre Universal Transverse Mercator grid ticks,
zone 11, shown in blue

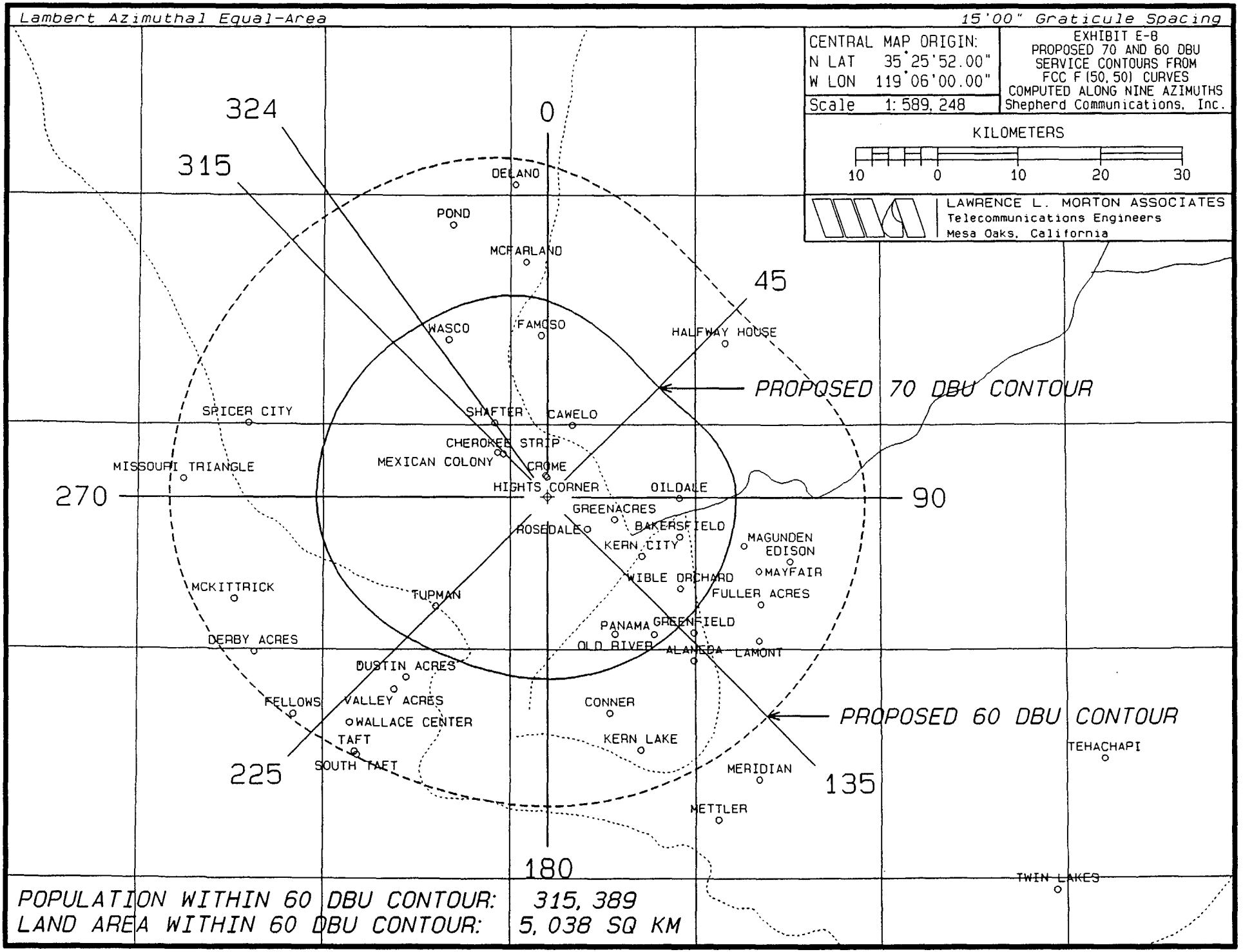
Revisions shown in purple compiled from aerial photographs
taken 1968. This information not field checked

Purple tint indicates extension of urban areas

Map photoinspected 1973
No major culture or drainage changes observed



UTM GRID AND 1968 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET


Lambert Azimuthal Equal-Area
15'00" Graticule Spacing
CENTRAL MAP ORIGIN:
N LAT 35°25'52.00"
W LON 119°06'00.00"
Scale 1:589,248
EXHIBIT E-8
PROPOSED 70 AND 60 DBU
SERVICE CONTOURS FROM
FCC F(50,50) CURVES
COMPUTED ALONG NINE AZIMUTHS
Shepherd Communications, Inc.
KILOMETERS
10 0 10 20 30
LAWRENCE L. MORTON ASSOCIATES
Telecommunications Engineers
Mesa Oaks, California
0
45
90
135
180
225
270
315
324
PROPOSED 70 DBU CONTOUR
PROPOSED 60 DBU CONTOUR
DELANO
POND
MCFARLAND
WASCO
FAMOSO
HALFWAY HOUSE
SPICER CITY
SHAFTER
CAWELO
CHEROKEE STRIP
MEXICAN COLONY
CROME
MISSOURI TRIANGLE
HIGHTS CORNER
OILDALE
GREENACRES
BAKERSFIELD
ROSEDALE
KERN CITY
MAGUNDEN
EDISON
MAYFAIR
WIBLE ORCHARD
FULLER ACRES
MCKITTRICK
TUPMAN
PANAMA
GREENFIELD
DERBY ACRES
OLD RIVER
ALAMEDA
LAMONT
DUSTIN ACRES
FELLOWS
VALLEY ACRES
WALLACE CENTER
TAFT
SOUTH TAFT
CONNER
KERN LAKE
MERIDIAN
METTLER
TEHACHAPI
TWIN LAKES
POPULATION WITHIN 60 DBU CONTOUR: 315,389
LAND AREA WITHIN 60 DBU CONTOUR: 5,038 SQ KM

Average Radial Elevation = 404.8 Feet AMSL
Antenna Radiation Center = 658.0 Feet AMSL

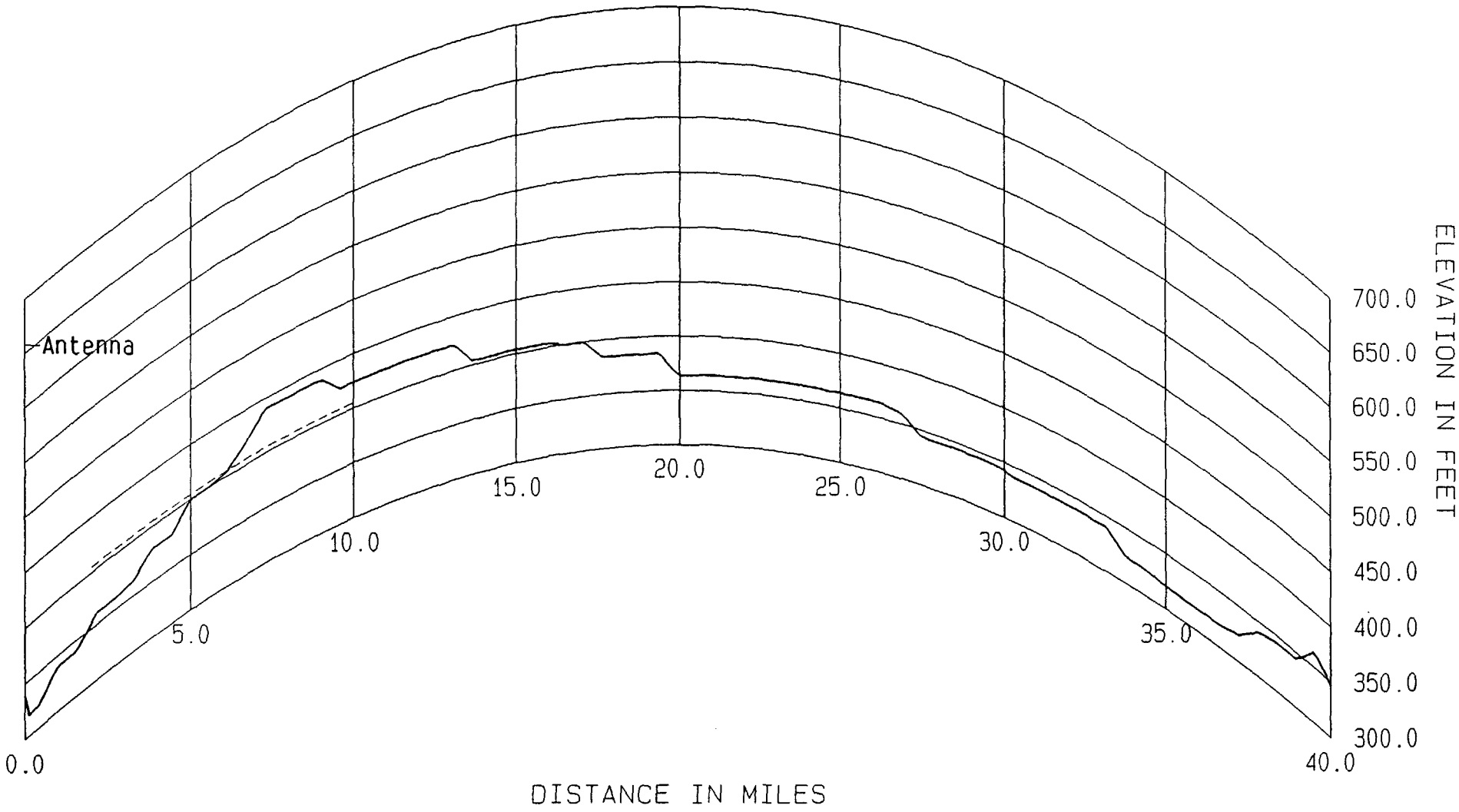


EXHIBIT E-9A

N 0.0° E Radial

SHEPHERD COMMUNICATIONS, INC.

LAWRENCE L. MORTON ASSOCIATES
Telecommunications Engineers
Mesa Oaks, California

Average Radial Elevation =	502.9 Feet AMSL
Antenna Radiation Center =	658.0 Feet AMSL

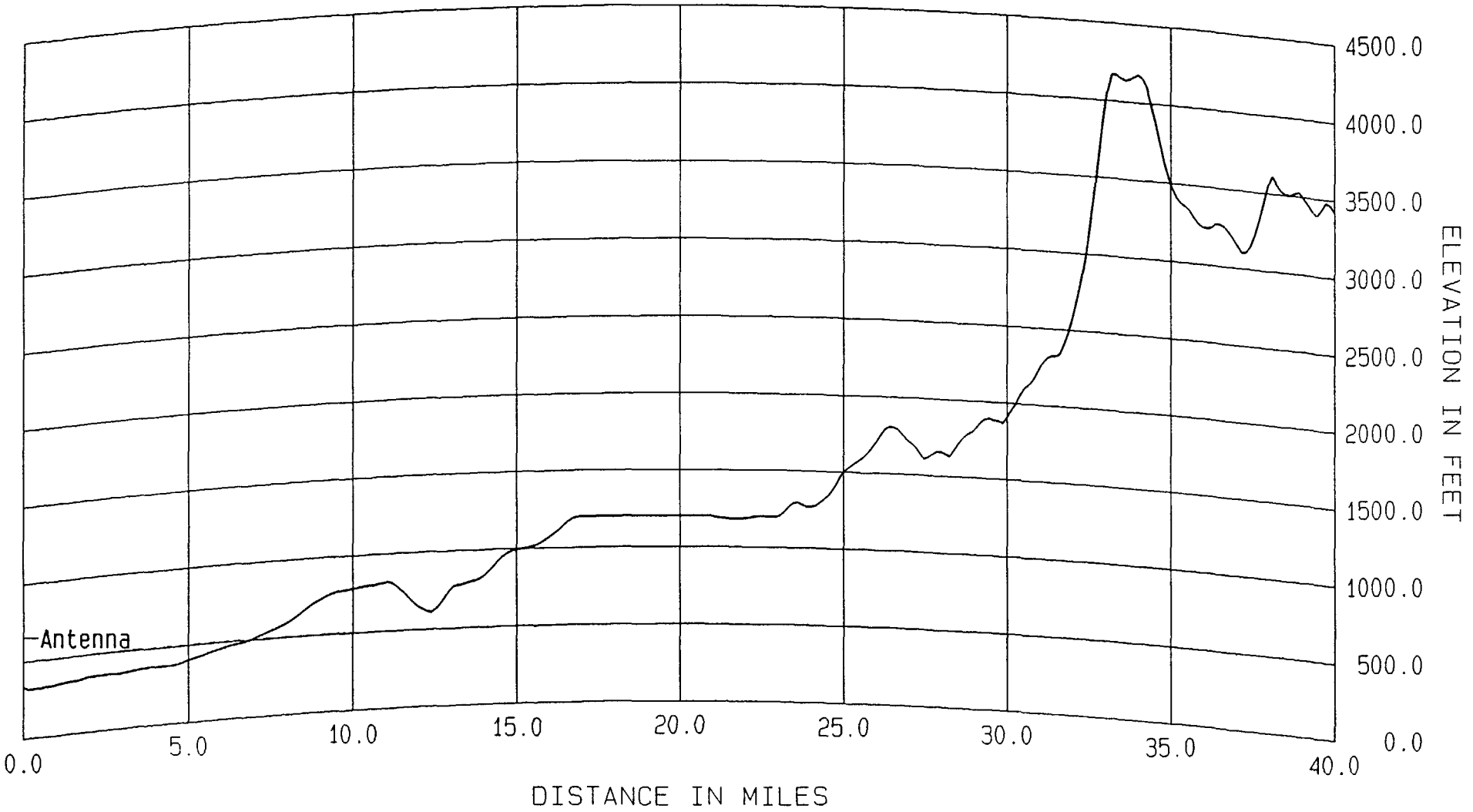


EXHIBIT E-9B

N 45.0° E Radial

SHEPHERD COMMUNICATIONS, INC.

LAWRENCE L. MORTON ASSOCIATES
Telecommunications Engineers
Mesa Oaks, California

Average Radial Elevation =	427.2 Feet AMSL
Antenna Radiation Center =	658.0 Feet AMSL

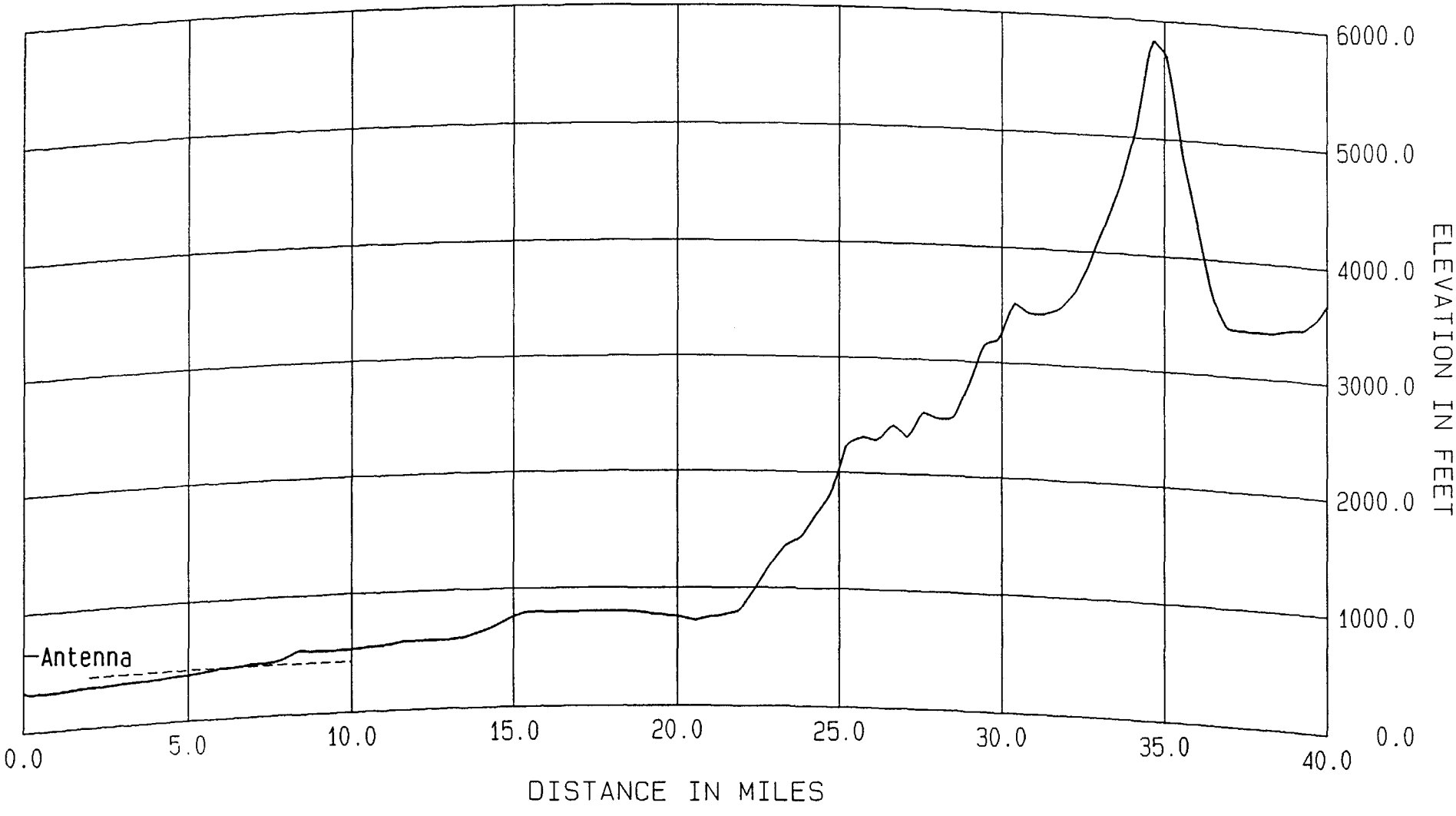


EXHIBIT E-9C

N 90.0° E Radial

SHEPHERD COMMUNICATIONS, INC.

LAWRENCE L. MORTON ASSOCIATES
Telecommunications Engineers
Mesa Oaks, California

Average Radial Elevation =	369.5 Feet AMSL
Antenna Radiation Center =	658.0 Feet AMSL

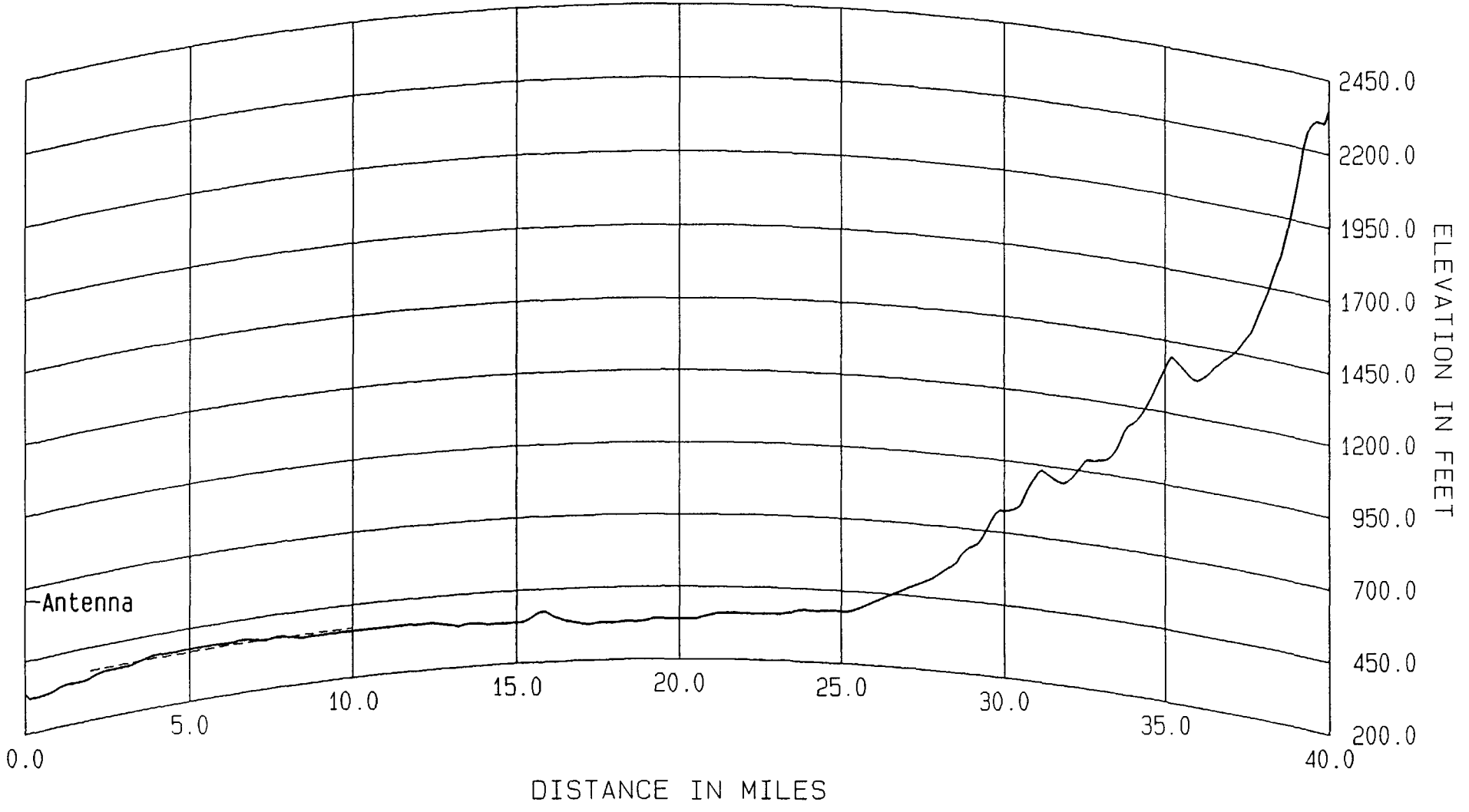


EXHIBIT E-9D

N 135.0° E Radial

SHEPHERD COMMUNICATIONS, INC.

LAWRENCE L. MORTON ASSOCIATES
Telecommunications Engineers
Mesa Oaks, California

Average Radial Elevation = 339.8 Feet AMSL
Antenna Radiation Center = 658.0 Feet AMSL

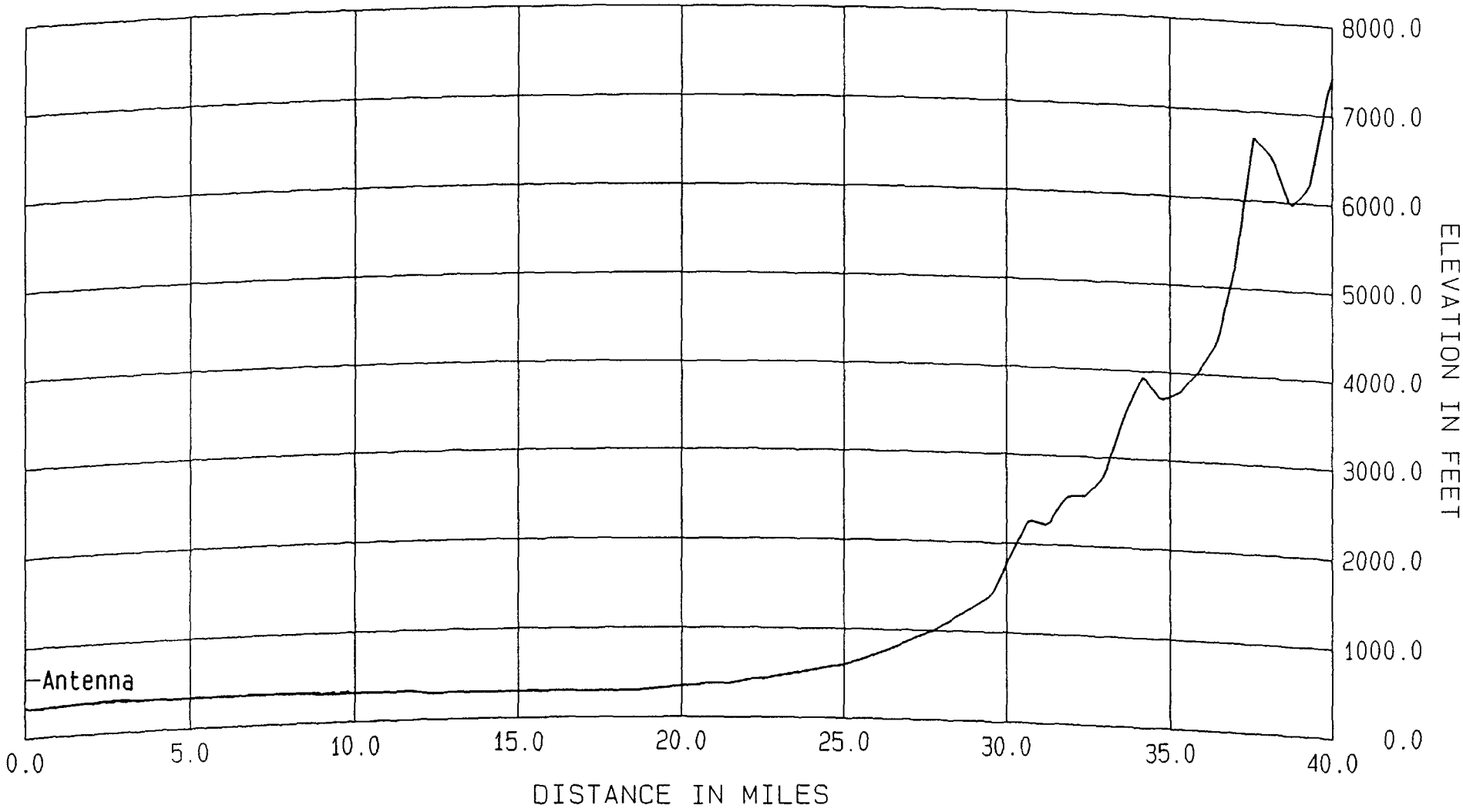


EXHIBIT E-9E

N 180.0° E Radial

SHEPHERD COMMUNICATIONS, INC.

LAWRENCE L. MORTON ASSOCIATES
Telecommunications Engineers
Mesa Oaks, California

Average Radial Elevation =	317.4 Feet AMSL
Antenna Radiation Center =	658.0 Feet AMSL

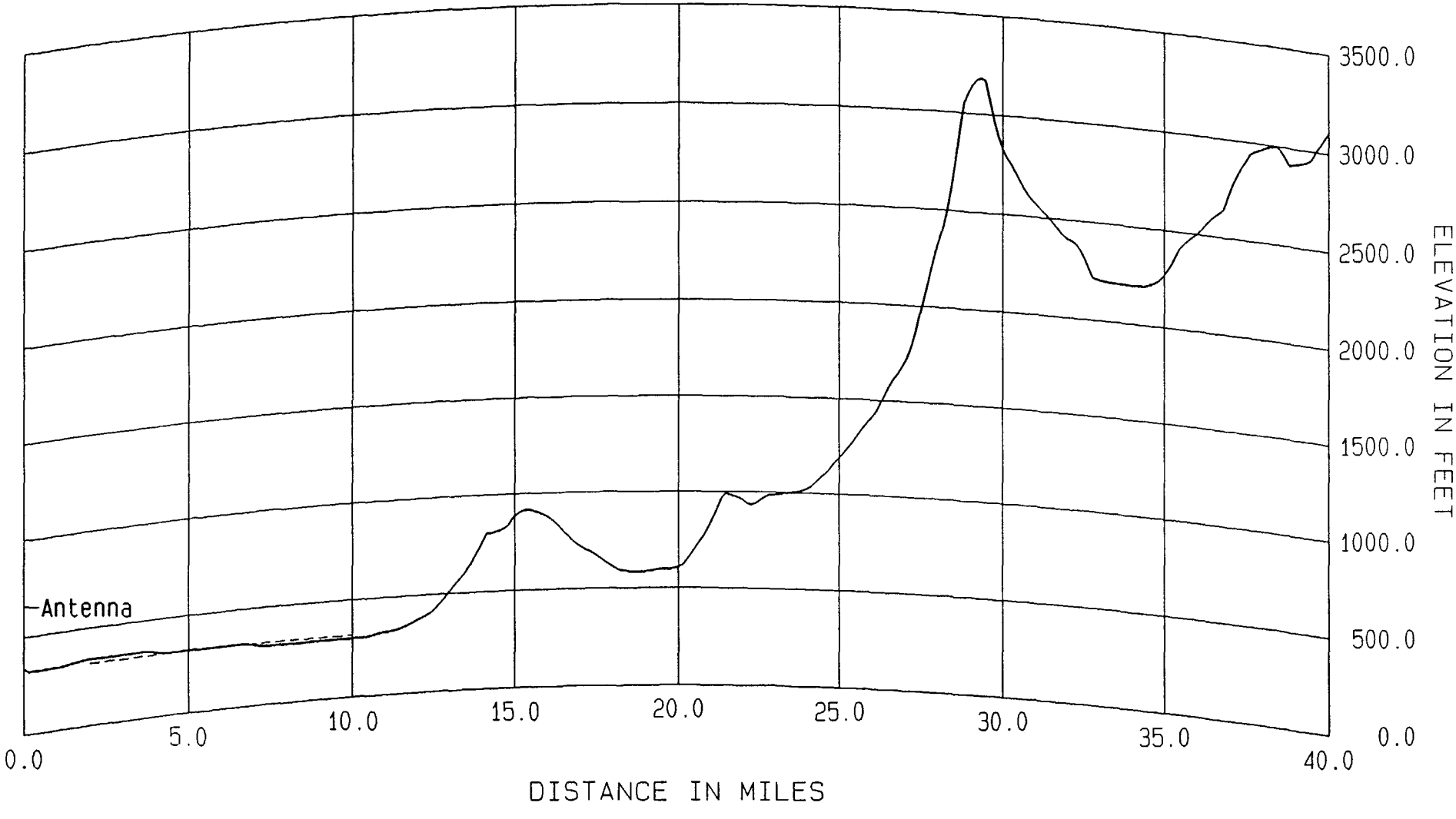


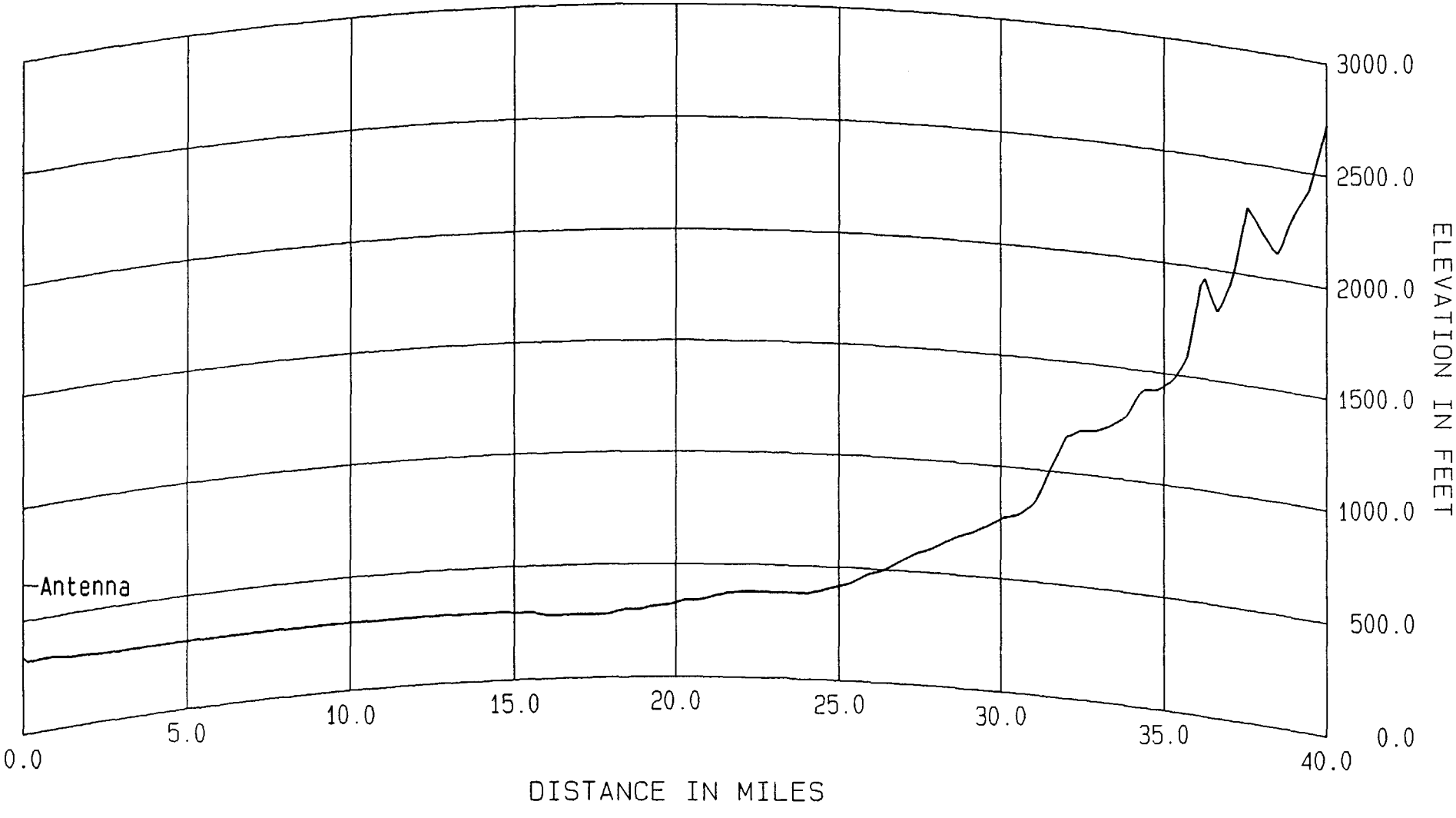
EXHIBIT E-9F

N 225.0° E Radial

SHEPHERD COMMUNICATIONS, INC.

LAWRENCE L. MORTON ASSOCIATES
Telecommunications Engineers
Mesa Oaks, California

Average Radial Elevation =	300.2 Feet AMSL
Antenna Radiation Center =	658.0 Feet AMSL



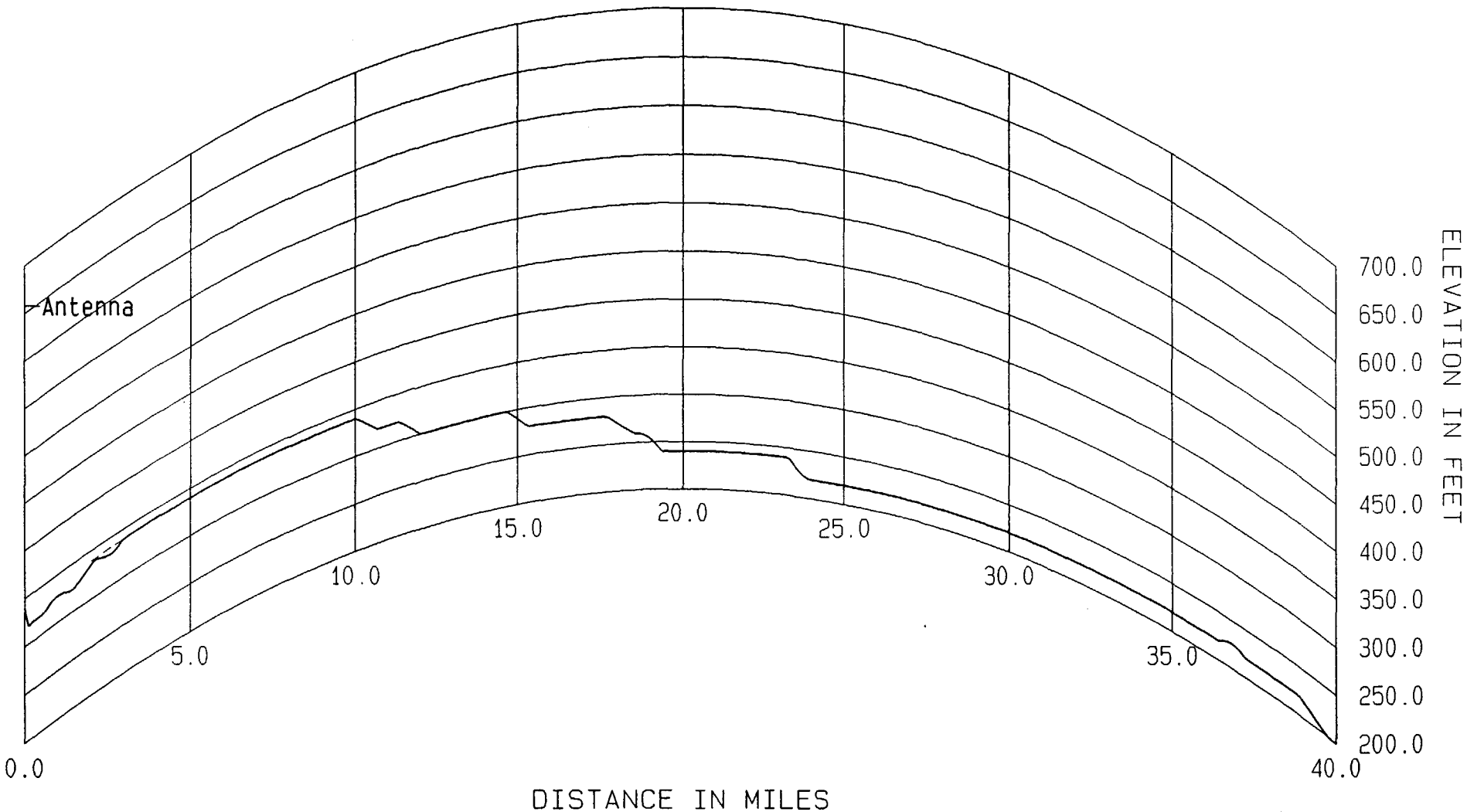
N 270.0° E Radial

EXHIBIT E-9G

SHEPHERD COMMUNICATIONS, INC.

LAWRENCE L. MORTON ASSOCIATES
Telecommunications Engineers
Mesa Oaks, California

Average Radial Elevation =	339.4 Feet AMSL
Antenna Radiation Center =	658.0 Feet AMSL



N 315.0° E Radial

EXHIBIT E-9H

SHEPHERD COMMUNICATIONS, INC.

LAWRENCE L. MORTON ASSOCIATES
Telecommunications Engineers
Mesa Oaks, California

Average Radial Elevation = 353.4 Feet AMSL
Antenna Radiation Center = 658.0 Feet AMSL

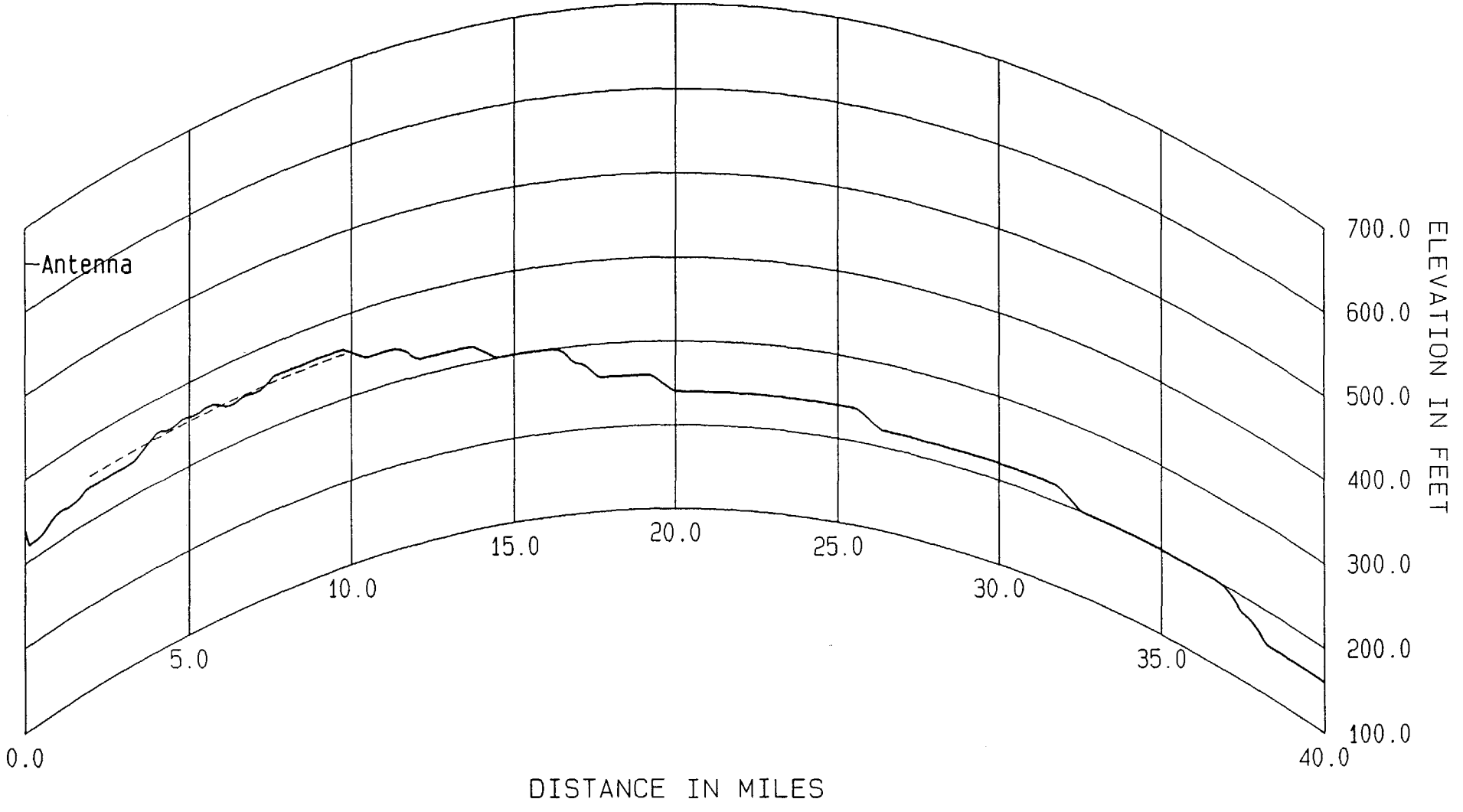


EXHIBIT E-9I

N 324.0° E Radial

SHEPHERD COMMUNICATIONS, INC.

LAWRENCE L. MORTON ASSOCIATES
Telecommunications Engineers
Mesa Oaks, California

PREDICTED FIELD STRENGTH		LONGLEY-RICE PROPAGATION MODEL
FREQUENCY = 90.9 MHz	POLARIZATION = H	MAXIMUM Eo = 1568.5 mV/m at 1 Km
SOIL CONDUCTIVITY = 5.0 mS/m	MEAN SURFACE REFRACTIVITY = 301.0 N-Units	
RCVG ANTENNA = 9.0 m AG	XMTG ANTENNA = 200.6 m AMSL	DIELECTRIC CONS = 15.0
NUMBER OF ELEMENTS = 6	BEAM TILT = 0.00 Deg.	NULL FILL = 0.0 %

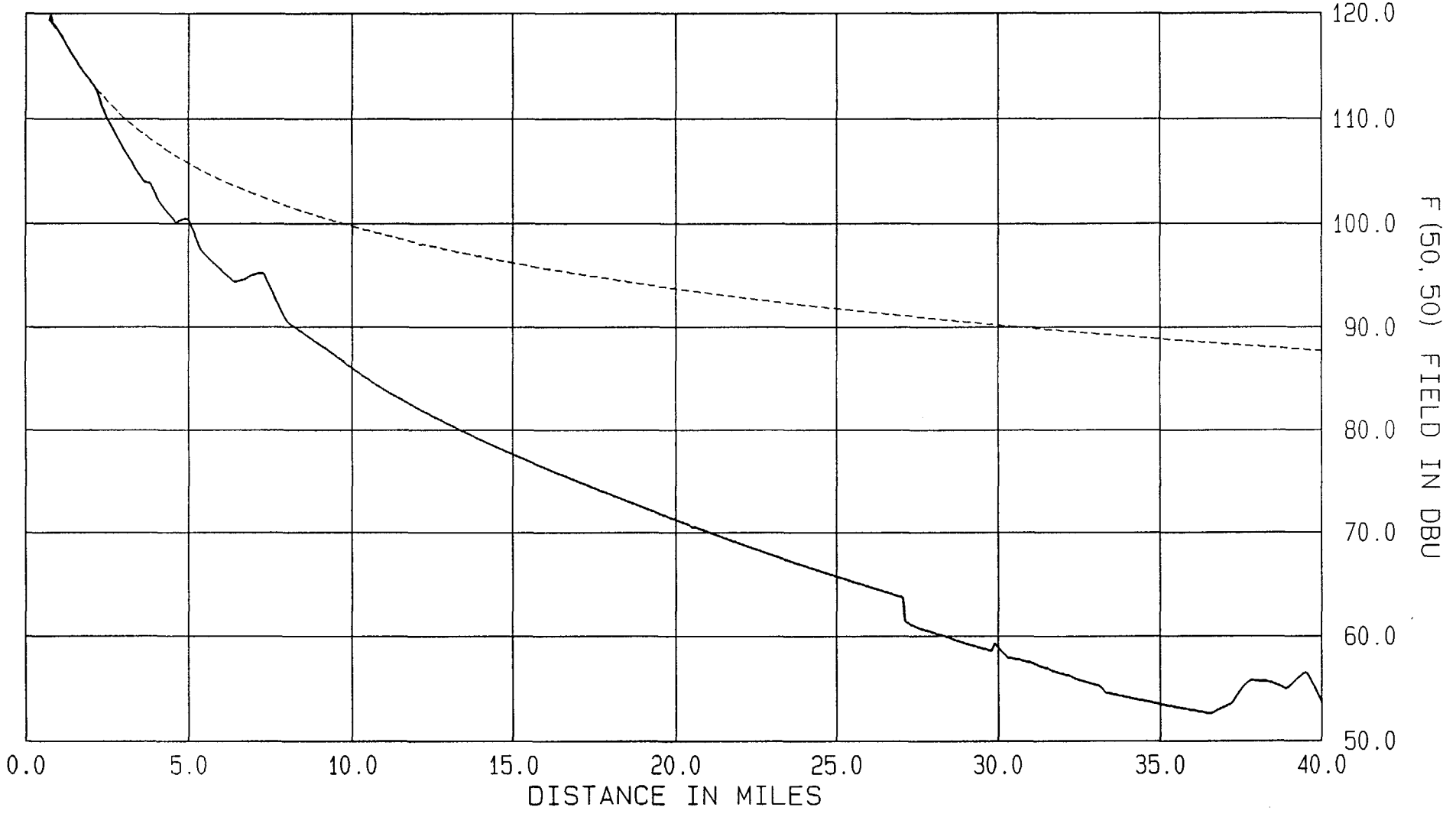


EXHIBIT E-10A

N 0.0° E Radial

SHEPHERD COMMUNICATIONS, INC.

LAWRENCE L. MORTON ASSOCIATES
Telecommunications Engineers
Mesa Oaks, California

PREDICTED FIELD STRENGTH		LONGLEY-RICE PROPAGATION MODEL
FREQUENCY = 90.9 MHz	POLARIZATION = H	MAXIMUM Eo = 1568.5 mV/m at 1 Km
SOIL CONDUCTIVITY = 5.0 mS/m	MEAN SURFACE REFRACTIVITY = 301.0 N-Units	
RCVG ANTENNA = 9.0 m AG	XMTG ANTENNA = 200.6 m AMSL	DIELECTRIC CONS = 15.0
NUMBER OF ELEMENTS = 6	BEAM TILT = 0.00 Deg.	NULL FILL = 0.0 %

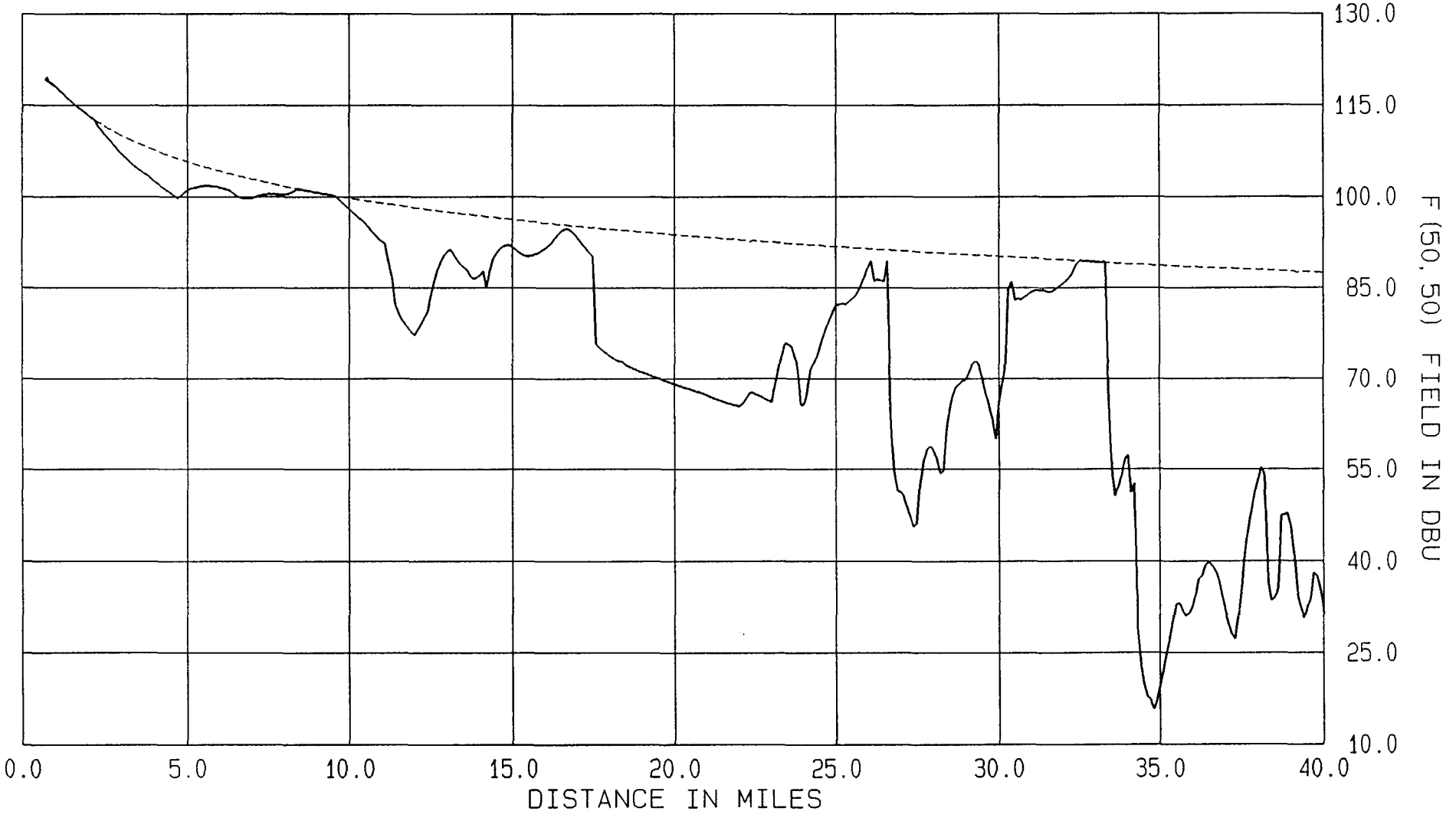


EXHIBIT E-10B

N 45.0° E Radial

SHEPHERD COMMUNICATIONS, INC.

LAWRENCE L. MORTON ASSOCIATES
Telecommunications Engineers
Mesa Oaks, California

PREDICTED FIELD STRENGTH		LONGLEY-RICE PROPAGATION MODEL
FREQUENCY = 90.9 MHz	POLARIZATION = H	MAXIMUM Eo = 1552.1 mV/m at 1 Km
SOIL CONDUCTIVITY = 5.0 mS/m	MEAN SURFACE REFRACTIVITY = 301.0 N-Units	
RCVG ANTENNA = 9.0 m AG	XMTG ANTENNA = 200.6 m AMSL	DIELECTRIC CONS = 15.0
NUMBER OF ELEMENTS = 6	BEAM TILT = 0.00 Deg.	NULL FILL = 0.0 %

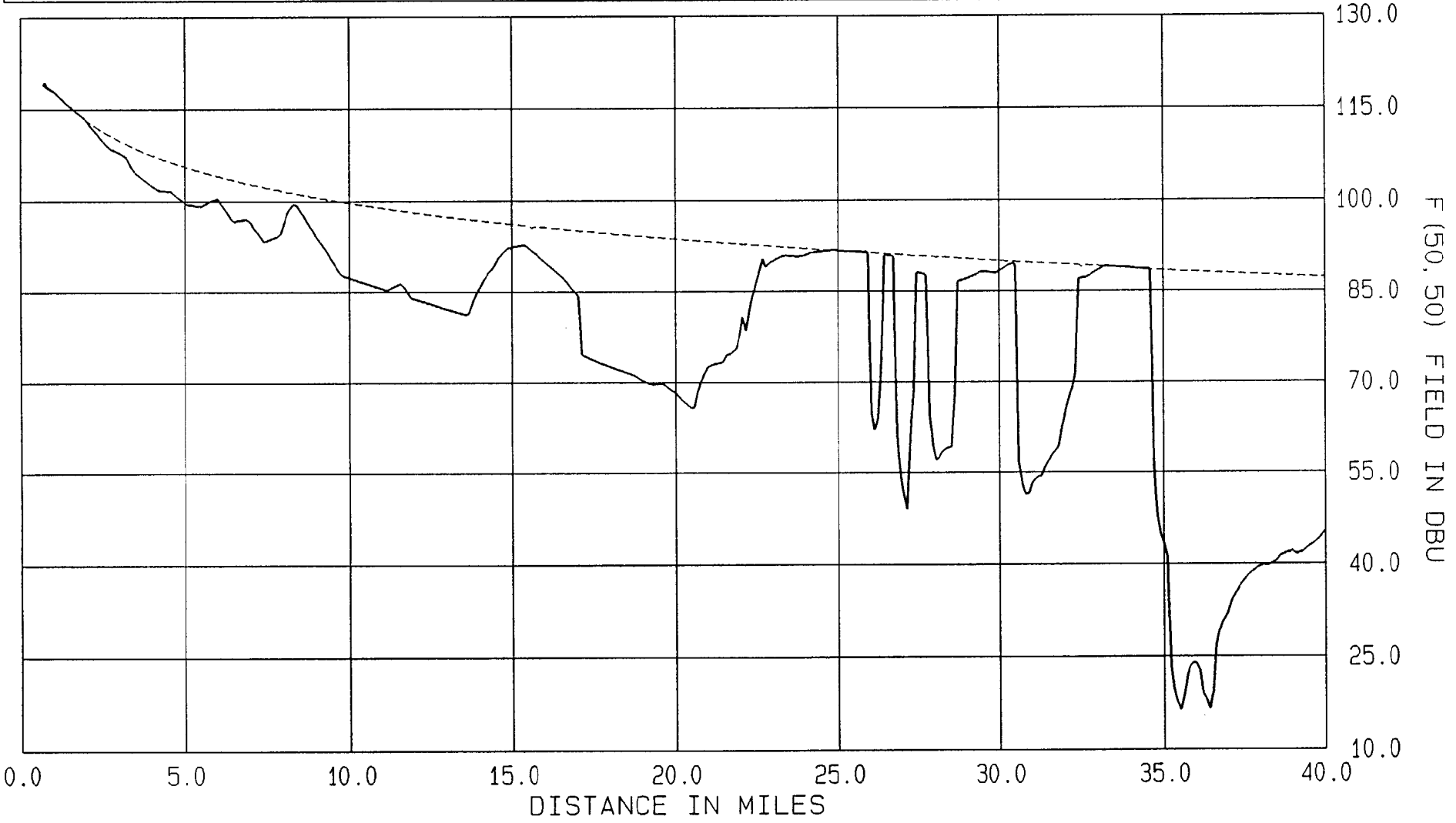


EXHIBIT E-10C

N 90.0° E Radial

SHEPHERD COMMUNICATIONS, INC.

LAWRENCE L. MORTON ASSOCIATES
Telecommunications Engineers
Mesa Oaks, California

PREDICTED FIELD STRENGTH		LONGLEY-RICE PROPAGATION MODEL
FREQUENCY = 90.9 MHz	POLARIZATION = H	MAXIMUM Eo = 1191.9 mV/m at 1 Km
SOIL CONDUCTIVITY = 5.0 mS/m	MEAN SURFACE REFRACTIVITY = 301.0 N-Units	
RCVG ANTENNA = 9.0 m AG	XMTG ANTENNA = 200.6 m AMSL	DIELECTRIC CONS = 15.0
NUMBER OF ELEMENTS = 6	BEAM TILT = 0.00 Deg.	NULL FILL = 0.0 %

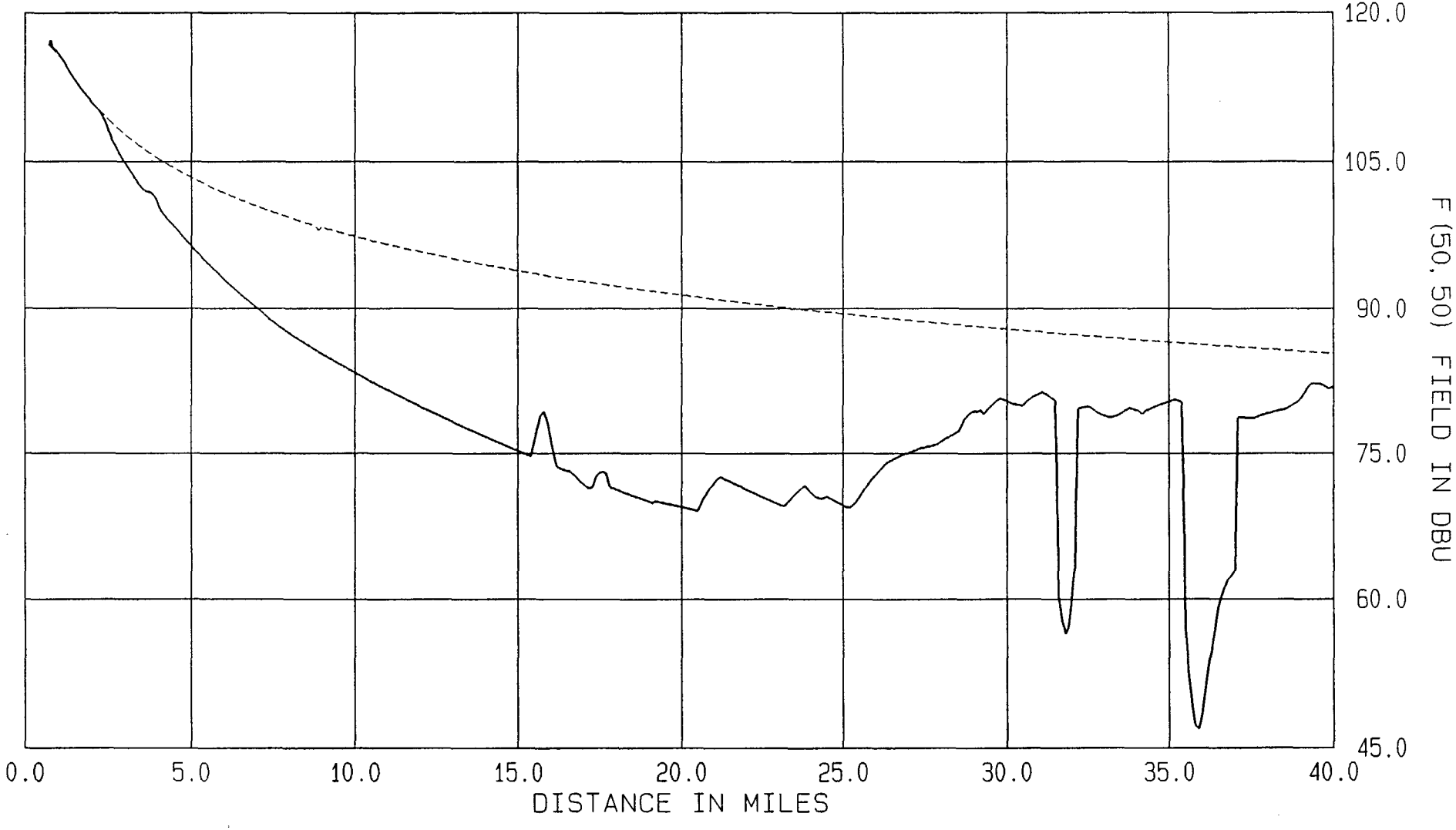


EXHIBIT E-10D

N 135.0° E Radial

SHEPHERD COMMUNICATIONS, INC.

LAWRENCE L. MORTON ASSOCIATES
Telecommunications Engineers
Mesa Oaks, California

PREDICTED FIELD STRENGTH		LONGLEY-RICE PROPAGATION MODEL
FREQUENCY = 90.9 MHz	POLARIZATION = H	MAXIMUM Eo = 1062.0 mV/m at 1 Km
SOIL CONDUCTIVITY = 5.0 mS/m	MEAN SURFACE REFRACTIVITY = 301.0 N-Units	
RCVG ANTENNA = 9.0 m AG	XMTG ANTENNA = 200.6 m AMSL	DIELECTRIC CONS = 15.0
NUMBER OF ELEMENTS = 6	BEAM TILT = 0.00 Deg.	NULL FILL = 0.0 %

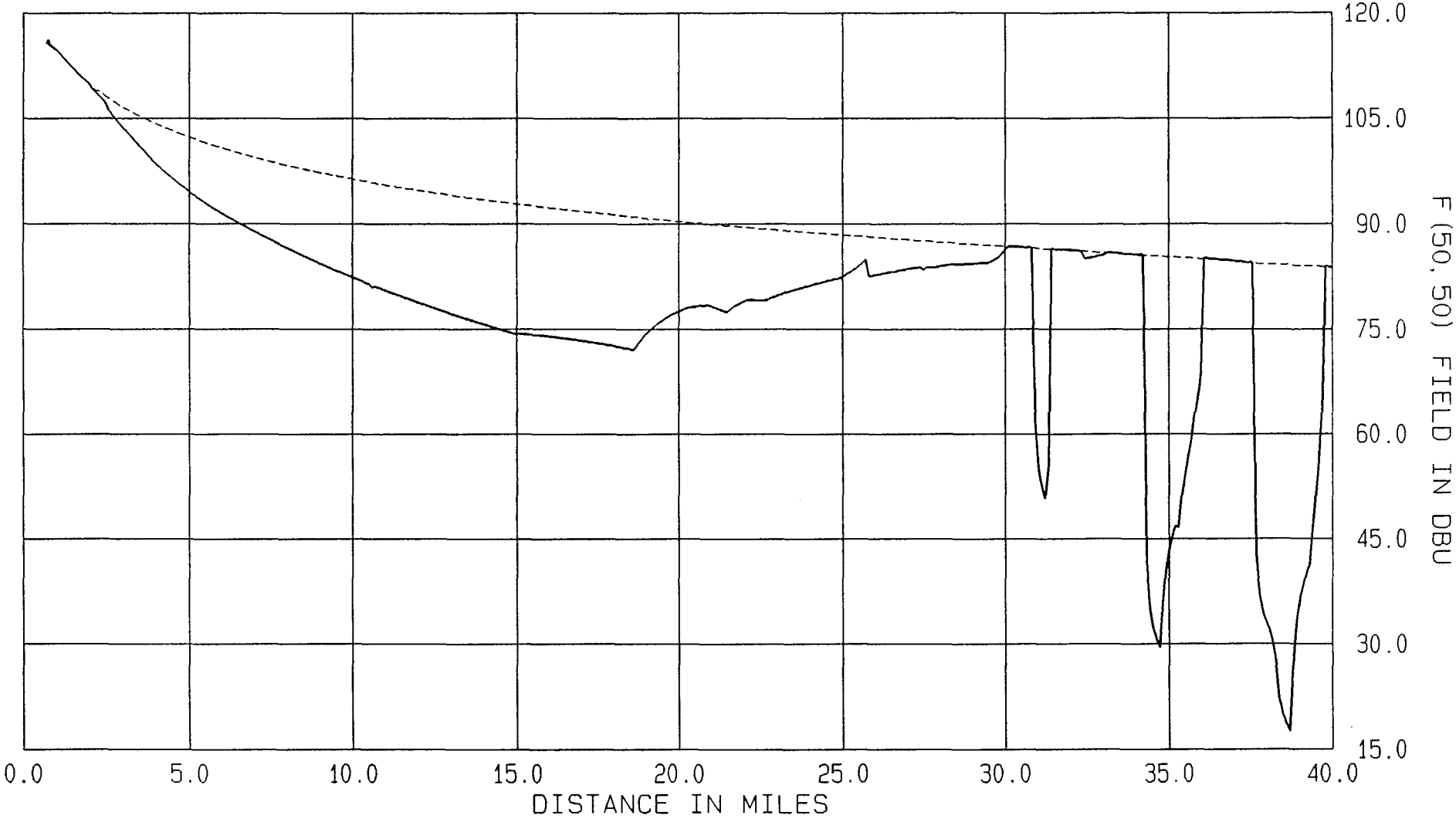


EXHIBIT E-10E

N 180.0° E Radial

SHEPHERD COMMUNICATIONS, INC.

LAWRENCE L. MORTON ASSOCIATES
Telecommunications Engineers
Mesa Oaks, California

PREDICTED FIELD STRENGTH		LONGLEY-RICE PROPAGATION MODEL
FREQUENCY = 90.9 MHz	POLARIZATION = H	MAXIMUM Eo = 1191.9 mV/m at 1 Km
SOIL CONDUCTIVITY = 5.0 mS/m	MEAN SURFACE REFRACTIVITY = 301.0 N-Units	
RCVG ANTENNA = 9.0 m AG	XMTG ANTENNA = 200.6 m AMSL	DIELECTRIC CONS = 15.0
NUMBER OF ELEMENTS = 6	BEAM TILT = 0.00 Deg.	NULL FILL = 0.0 %

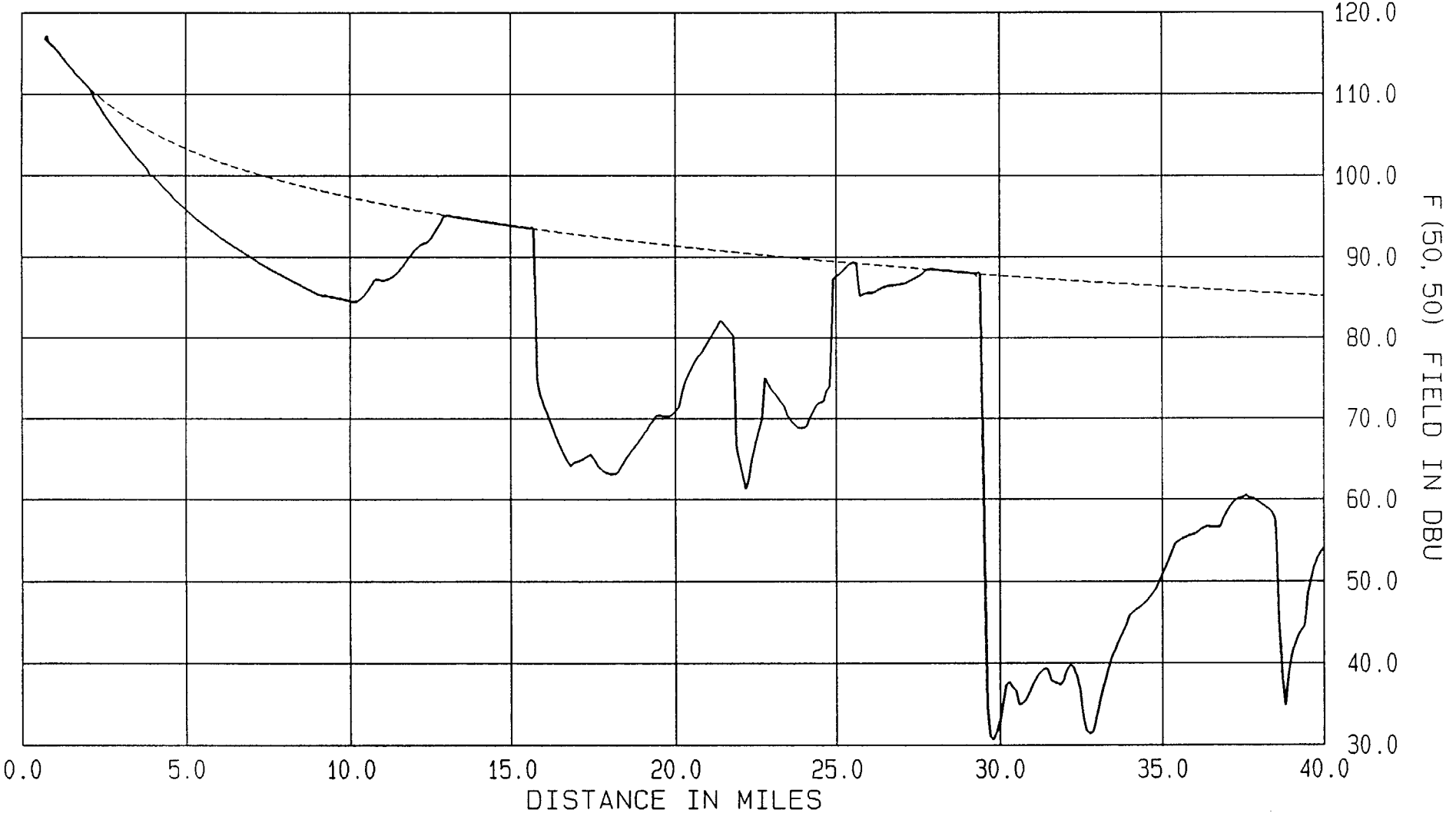


EXHIBIT E-10F

N 225.0° E Radial

SHEPHERD COMMUNICATIONS, INC.

LAWRENCE L. MORTON ASSOCIATES
Telecommunications Engineers
Mesa Oaks, California

PREDICTED FIELD STRENGTH		LONGLEY-RICE PROPAGATION MODEL
FREQUENCY = 90.9 MHz	POLARIZATION = H	MAXIMUM Eo = 1552.1 mV/m at 1 Km
SOIL CONDUCTIVITY = 5.0 mS/m	MEAN SURFACE REFRACTIVITY = 301.0 N-Units	
RCVG ANTENNA = 9.0 m AG	XMTG ANTENNA = 200.6 m AMSL	DIELECTRIC CONS = 15.0
NUMBER OF ELEMENTS = 6	BEAM TILT = 0.00 Deg.	NULL FILL = 0.0 %

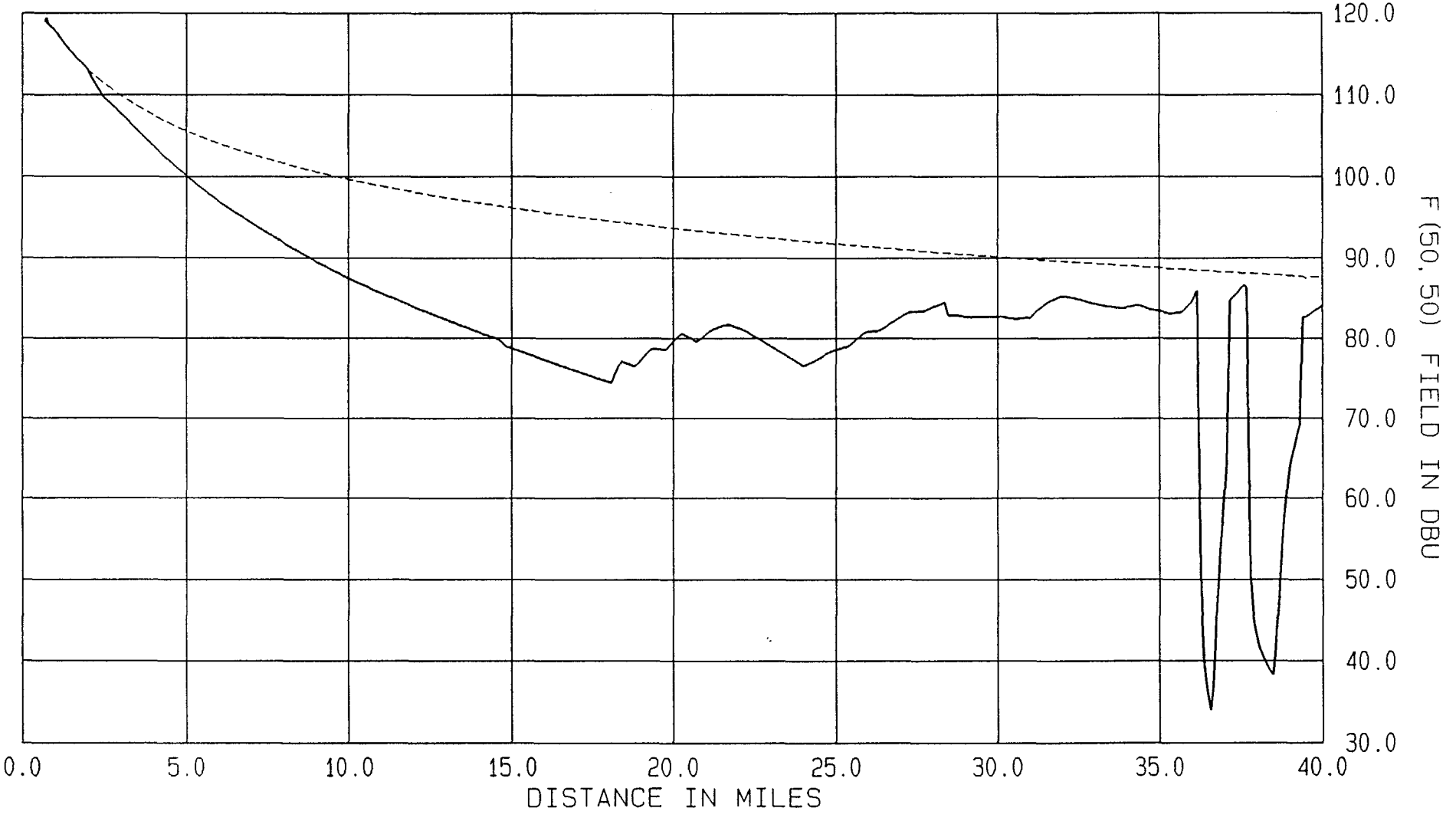


EXHIBIT E-10G

N 270.0° E Radial

SHEPHERD COMMUNICATIONS, INC.

LAWRENCE L. MORTON ASSOCIATES
Telecommunications Engineers
Mesa Oaks, California

PREDICTED FIELD STRENGTH		LONGLEY-RICE PROPAGATION MODEL
FREQUENCY = 90.9 MHz	POLARIZATION = H	MAXIMUM Eo = 1568.5 mV/m at 1 Km
SOIL CONDUCTIVITY = 5.0 mS/m	MEAN SURFACE REFRACTIVITY = 301.0 N-Units	
RCVG ANTENNA = 9.0 m AG	XMTG ANTENNA = 200.6 m AMSL	DIELECTRIC CONS = 15.0
NUMBER OF ELEMENTS = 6	BEAM TILT = 0.00 Deg.	NULL FILL = 0.0 %

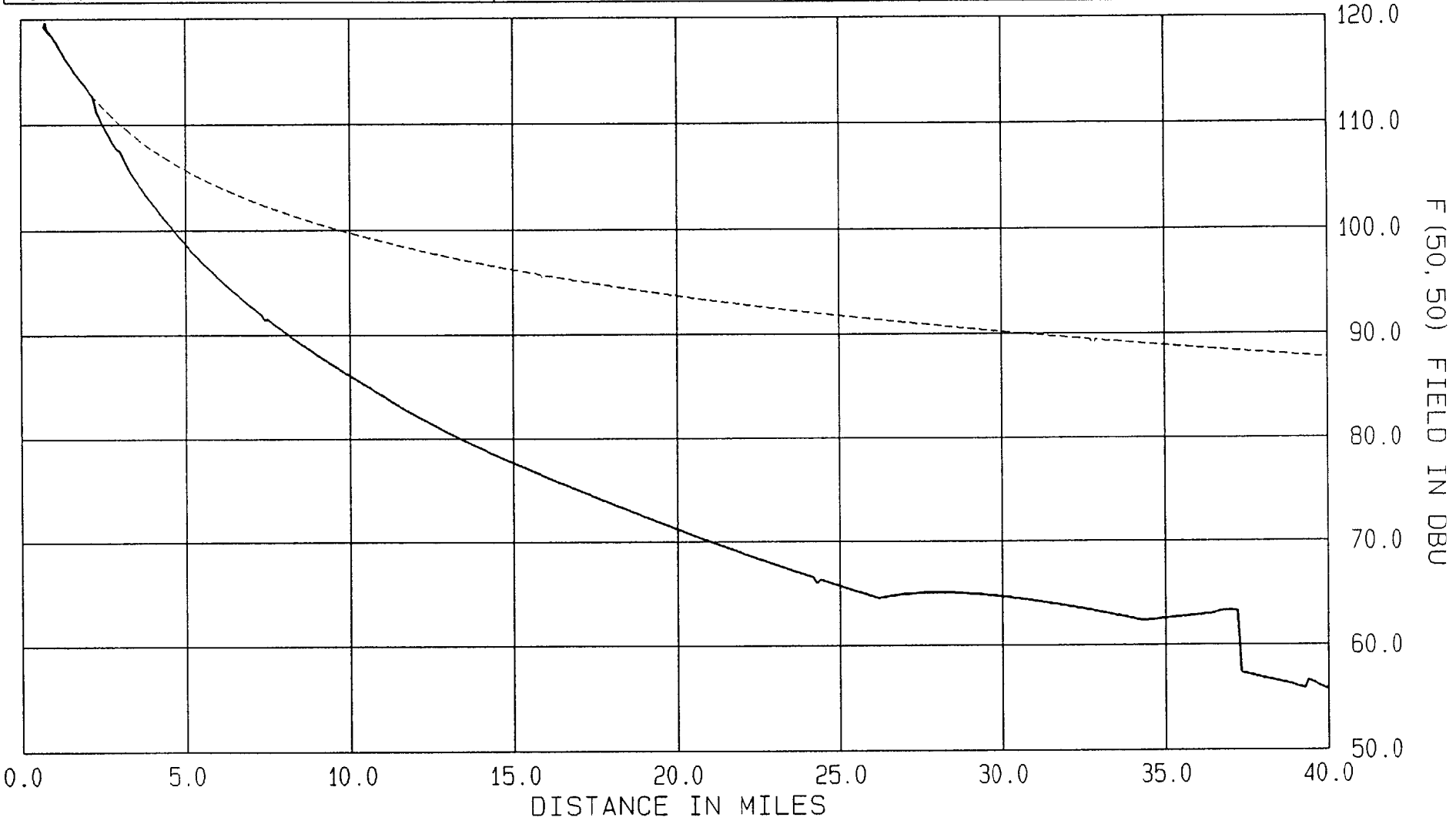


EXHIBIT E-10H

N 315.0° E Radial

SHEPHERD COMMUNICATIONS, INC.

LAWRENCE L. MORTON ASSOCIATES
Telecommunications Engineers
Mesa Oaks, California

PREDICTED FIELD STRENGTH		LONGLEY-RICE PROPAGATION MODEL
FREQUENCY = 90.9 MHz	POLARIZATION = H	MAXIMUM Eo = 1568.5 mV/m at 1 Km
SOIL CONDUCTIVITY = 5.0 mS/m	MEAN SURFACE REFRACTIVITY = 301.0 N-Units	
RCVG ANTENNA = 9.0 m AG	XMTG ANTENNA = 200.6 m AMSL	DIELECTRIC CONS = 15.0
NUMBER OF ELEMENTS = 6	BEAM TILT = 0.00 Deg.	NULL FILL = 0.0 %

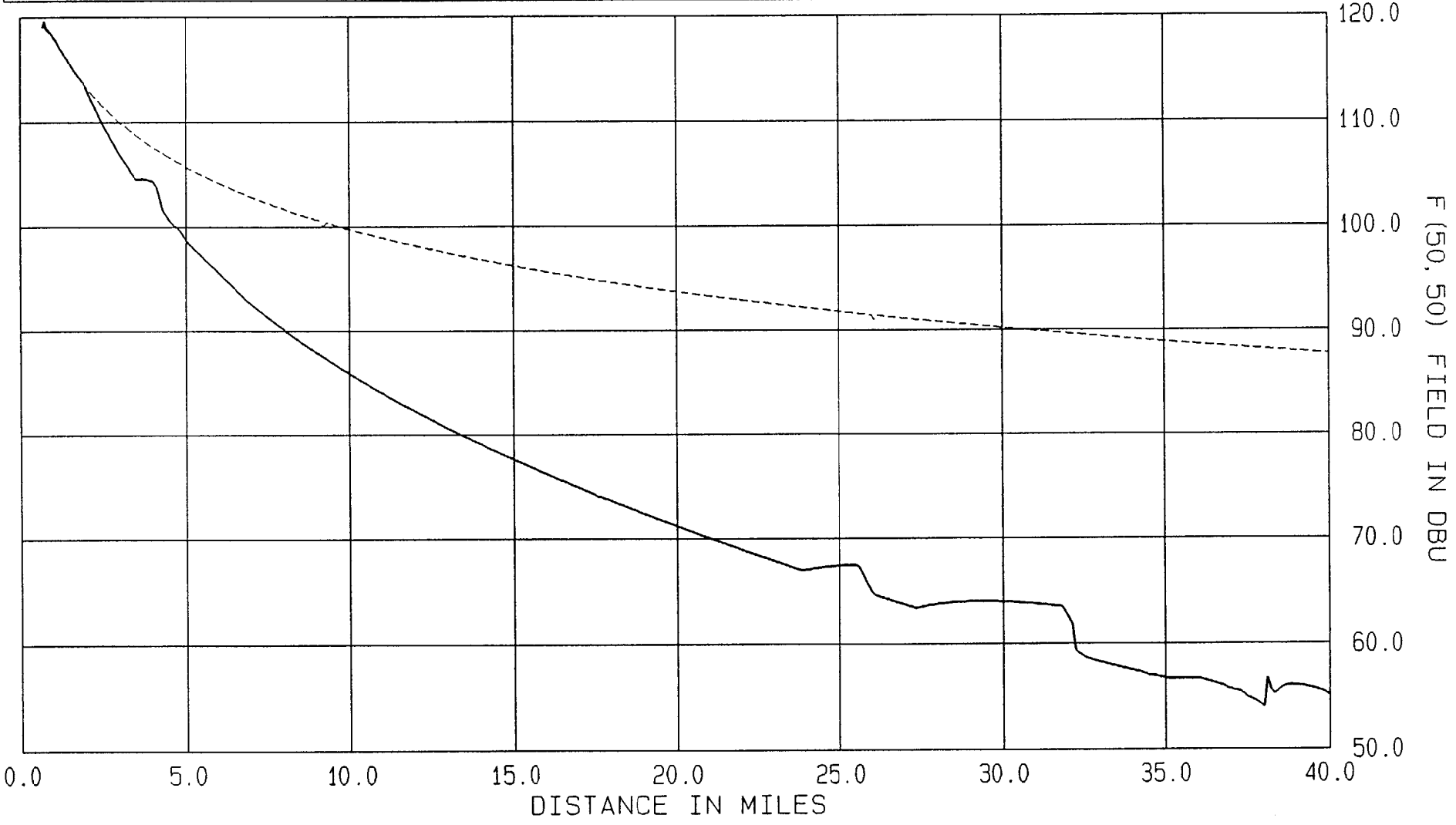
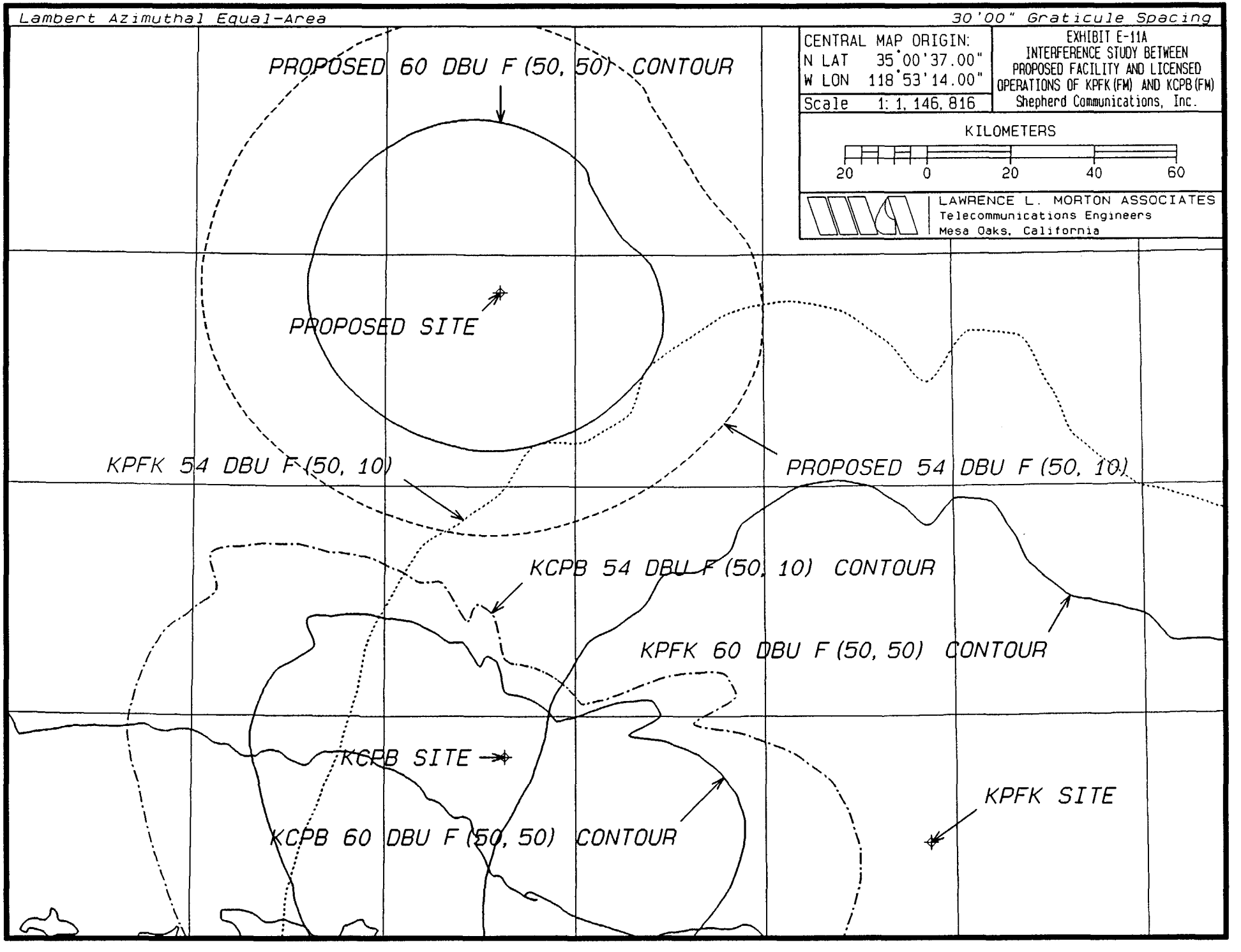


EXHIBIT E-10I

N 324.0° E Radial

SHEPHERD COMMUNICATIONS, INC.

LAWRENCE L. MORTON ASSOCIATES
Telecommunications Engineers
Mesa Oaks, California


Lambert Azimuthal Equal-Area
30'00" Graticule Spacing
CENTRAL MAP ORIGIN:
N LAT 35°00'37.00"
W LON 118°53'14.00"
Scale 1: 1,146,816
EXHIBIT E-11A
INTERFERENCE STUDY BETWEEN
PROPOSED FACILITY AND LICENSED
OPERATIONS OF KPFK(FM) AND KCPB(FM)
Shepherd Communications, Inc.
KILOMETERS
20
0
20
40
60
LAWRENCE L. MORTON ASSOCIATES
Telecommunications Engineers
Mesa Oaks, California
PROPOSED 60 DBU F(50, 50) CONTOUR
PROPOSED SITE
KPFK 54 DBU F(50, 10)
PROPOSED 54 DBU F(50, 10)
KCPB 54 DBU F(50, 10) CONTOUR
KPFK 60 DBU F(50, 50) CONTOUR
KCPB SITE
KPFK SITE
KCPB 60 DBU F(50, 50) CONTOUR