

Amended Daytime & Critical Hours 5 mv/m Contours

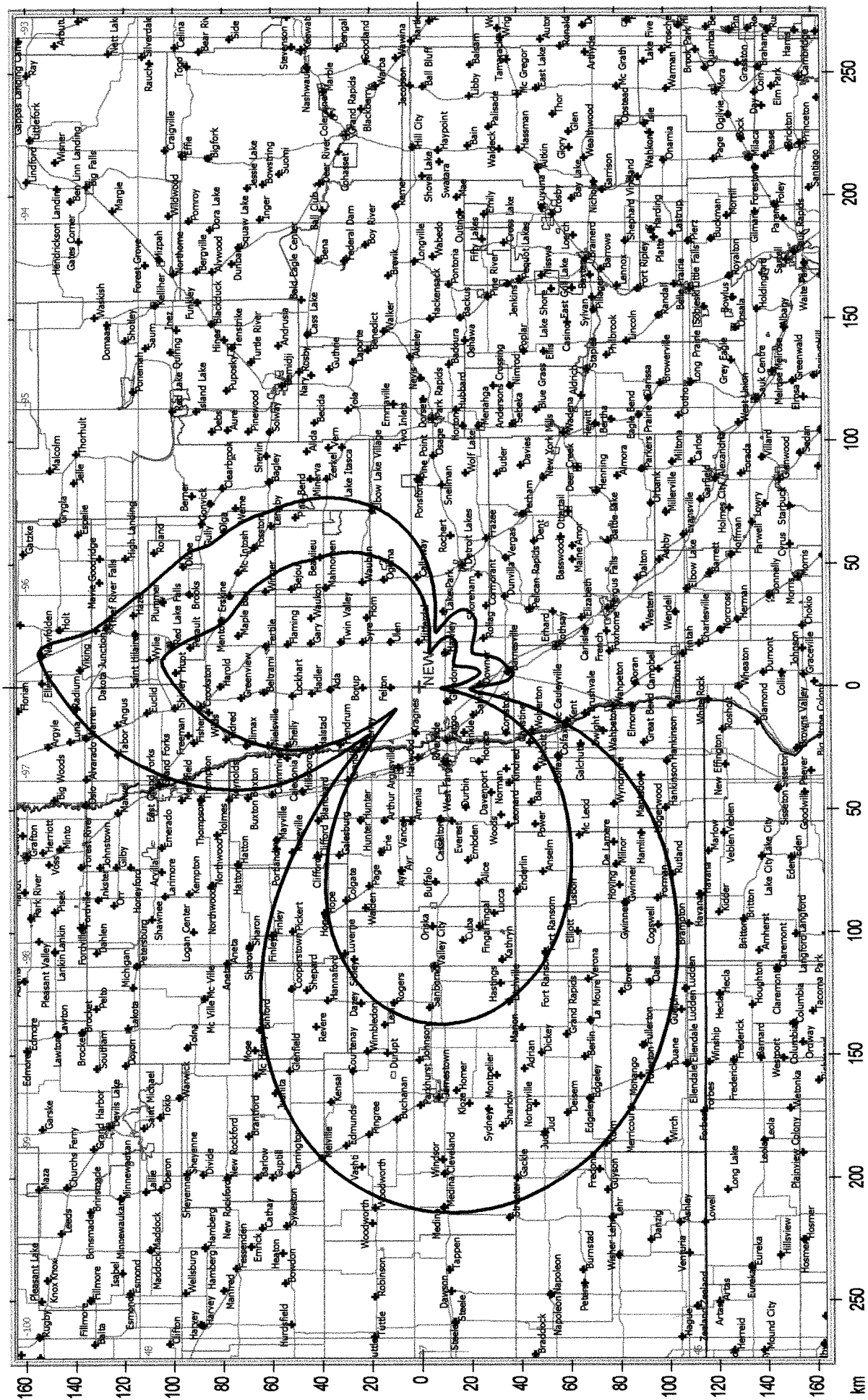
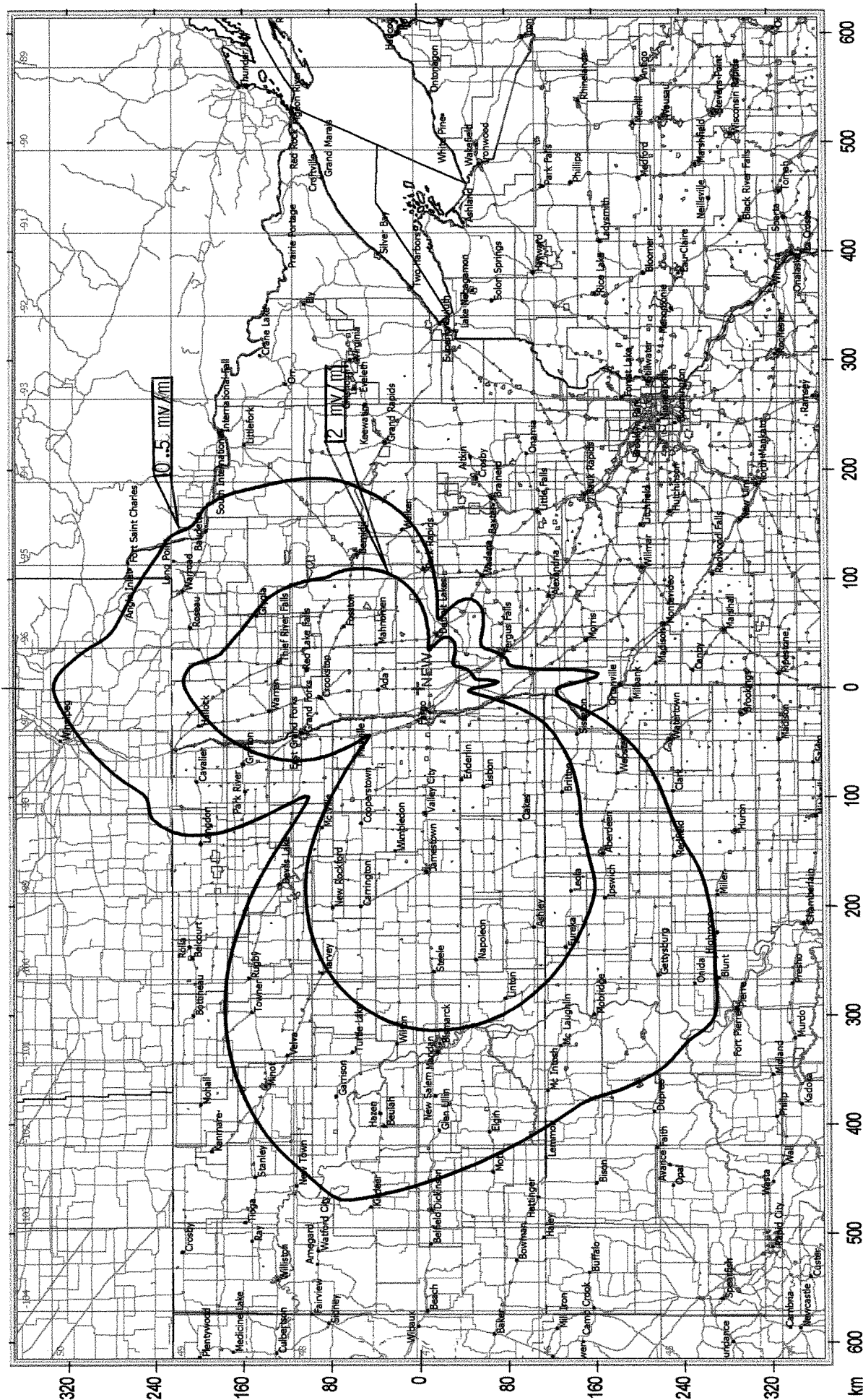


FIGURE 6A AMENDED

Amended Daytime 2 mv/m & 0.5 mv/m Contours



Amended Critical Hours 2 mv/m & 0.5 mv/m Contours

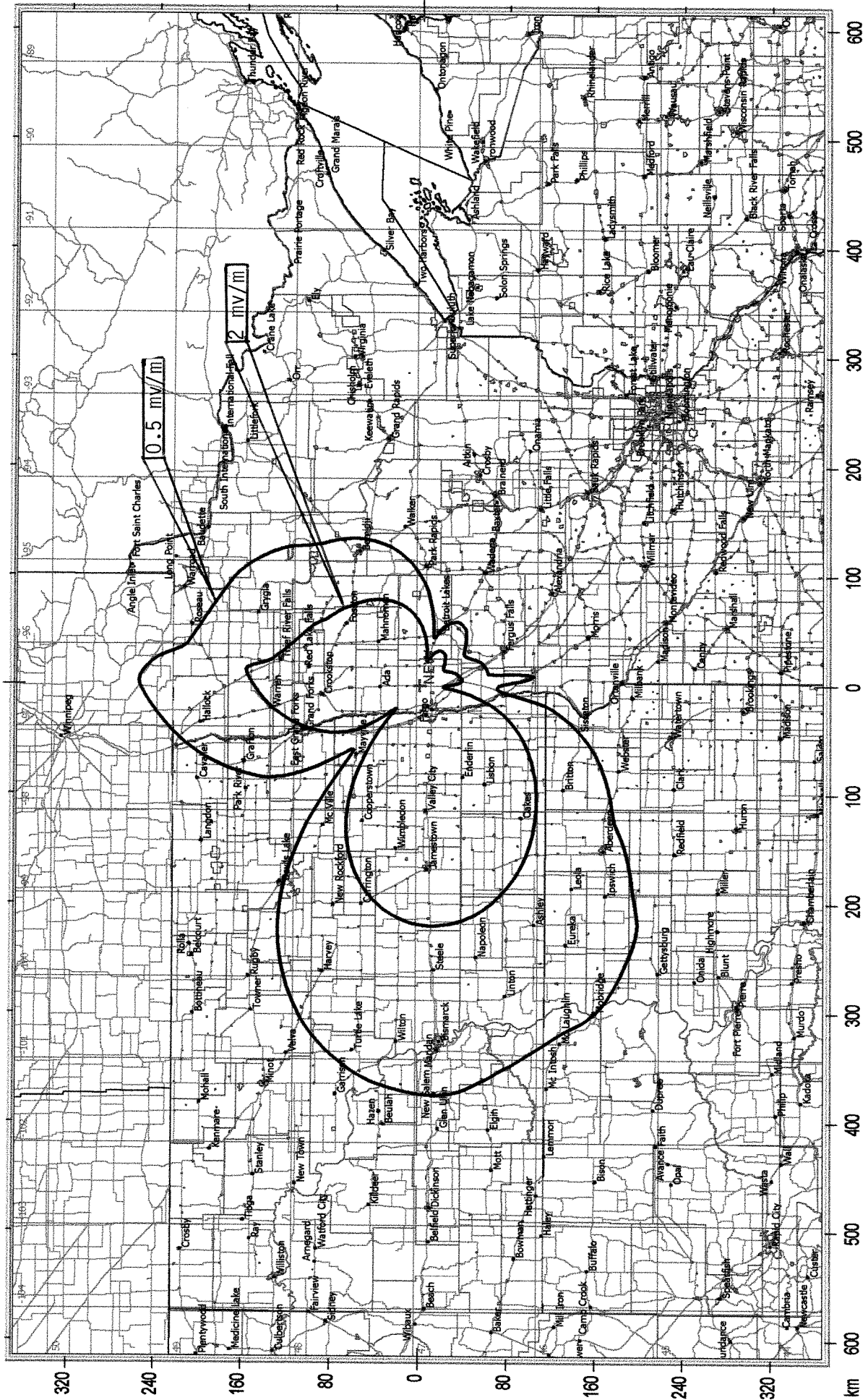
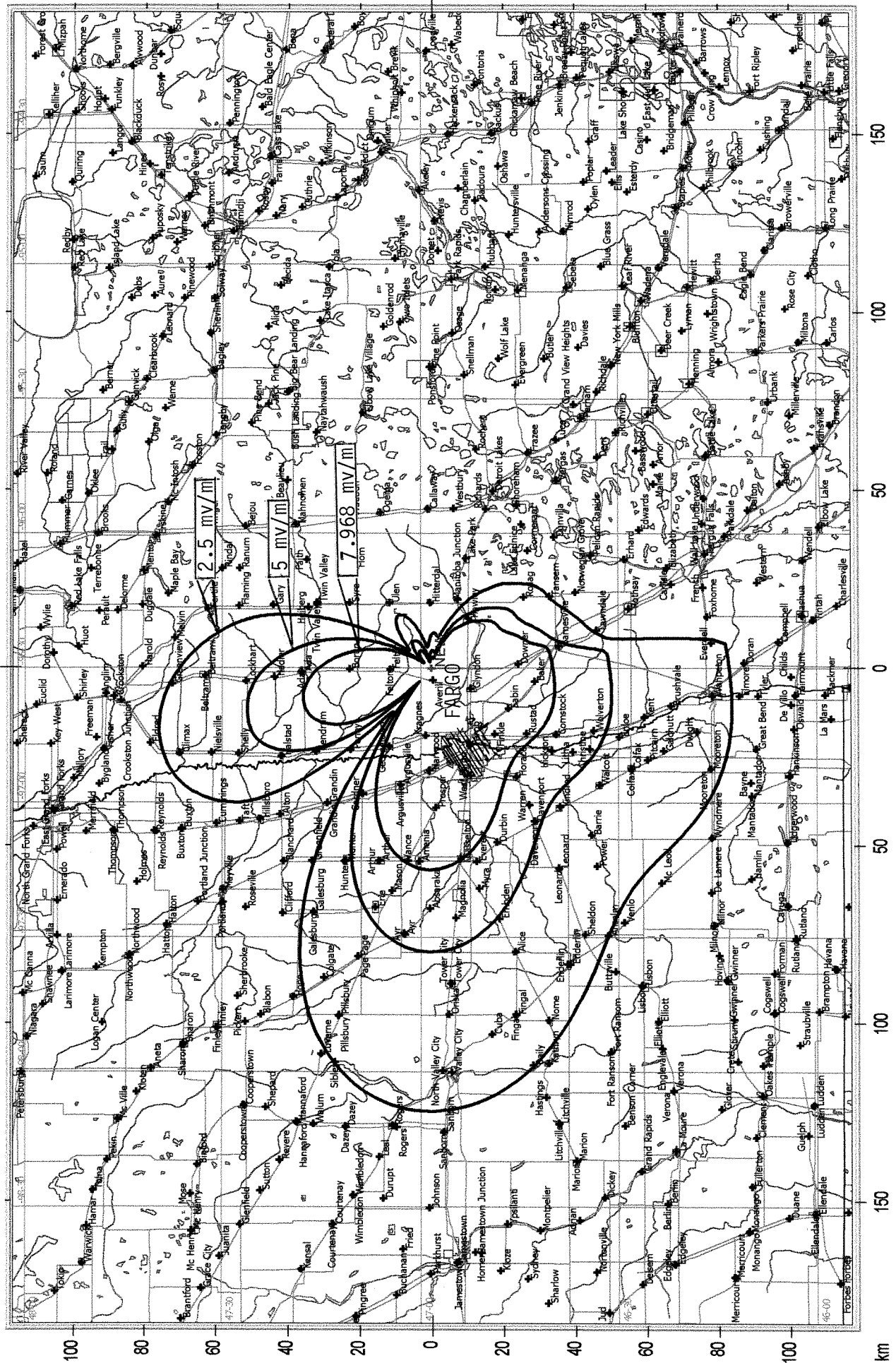


FIGURE 7 AMENDED

Proposed Nighttime 7.968, 5.0 & 2.5 mV/m Service Contours



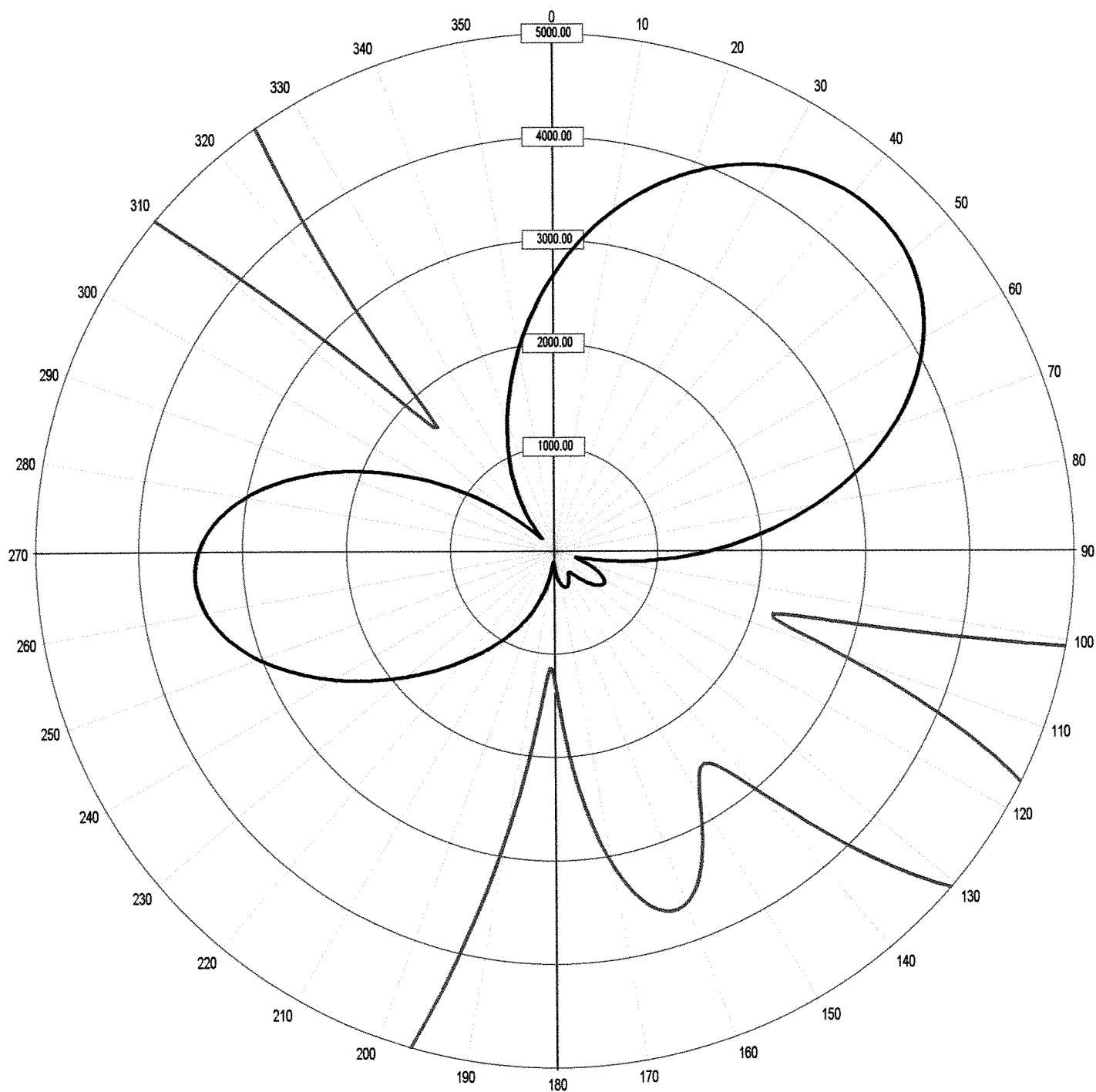
Callsign : NEW
 Coordinates : 46-58-29.0 N, 96-30-12.0 W
 Comments :
 Frequency (KHz) : 740
 Power (w) : 50000.000
 Pattern : AD
 Efficiency : 2239.748 mV/M
 Desc : DA3
 City/State : FARGO, ND
 ARN :
 Licensee :

| Tower | Field | Phase | Spcng | Ornt | Hght | TopLd |
|-------|-------|-------|-------|------|------|-------|
| ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| 1 | 0.494 | 287.7 | 0.0 | 0.0 | 81.3 | 0.0 |
| 2 | 0.739 | 169.7 | 119.8 | 26.9 | 81.3 | 0.0 |
| 3 | 1.000 | 0.0 | 235.7 | 19.6 | 81.3 | 0.0 |
| 4 | 0.505 | 185.8 | 289.2 | 31.5 | 81.3 | 0.0 |
| 5 | 0.642 | 17.2 | 178.4 | 43.2 | 81.3 | 0.0 |
| 6 | 0.311 | 48.0 | 84.0 | 76.3 | 81.3 | 0.0 |

| Brng | Span | mV/M |
|------|------|------|
| ---- | ---- | ---- |

| Field | Brng | mV/m | Brng | mV/m | Brng | mV/m | Brng | mV/m | Brng | mV/m |
|-------|----------|------|----------|------|----------|------|----------|------|----------|------|
| ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| 0 | 2662.770 | 75 | 3047.006 | 150 | 276.111 | 225 | 1625.190 | 300 | 1325.133 | |
| 5 | 3005.916 | 80 | 2562.307 | 155 | 329.687 | 230 | 1888.313 | 305 | 879.642 | |
| 10 | 3329.171 | 85 | 2043.374 | 160 | 362.935 | 235 | 2174.416 | 310 | 482.295 | |
| 15 | 3624.972 | 90 | 1515.644 | 165 | 356.311 | 240 | 2472.704 | 315 | 188.621 | |
| 20 | 3887.227 | 95 | 1008.899 | 170 | 306.461 | 245 | 2766.480 | 320 | 266.034 | |
| 25 | 4110.696 | 100 | 559.261 | 175 | 220.607 | 250 | 3034.817 | 325 | 507.142 | |
| 30 | 4290.360 | 105 | 245.778 | 180 | 127.461 | 255 | 3254.773 | 330 | 753.684 | |
| 35 | 4420.921 | 110 | 291.234 | 185 | 146.335 | 260 | 3403.966 | 335 | 1013.869 | |
| 40 | 4496.524 | 115 | 458.581 | 190 | 285.910 | 265 | 3463.273 | 340 | 1300.436 | |
| 45 | 4510.787 | 120 | 555.591 | 195 | 453.149 | 270 | 3419.433 | 345 | 1616.546 | |
| 50 | 4457.177 | 125 | 568.142 | 200 | 627.244 | 275 | 3267.186 | 350 | 1956.391 | |
| 55 | 4329.745 | 130 | 510.481 | 205 | 804.028 | 280 | 3010.610 | 355 | 2309.176 | |
| 60 | 4124.184 | 135 | 409.364 | 210 | 985.614 | 285 | 2663.328 | | | |
| 65 | 3839.101 | 140 | 304.374 | 215 | 1178.080 | 290 | 2247.420 | | | |
| 70 | 3477.322 | 145 | 250.967 | 220 | 1389.147 | 295 | 1791.055 | | | |

| | | | | | |
|-----------|---|----------|-----------|---|----------|
| 0.0 ohm K | : | 2465.942 | 1.0 ohm K | : | 2332.963 |
| RMSS | : | 2350.674 | RMSt | : | 2236.796 |
| RSS | : | 3728.412 | | | |



Callsign : NEW
 Frequency : 740.00 kHz
 Power : 50.00 kw
 ERSS : 3728.41 mV/m/km
 Theoretical Pattern RMS: 2236.80 mV/m/km
 Standard Pattern RMS : 2350.67 mV/m/km
 Modified Pattern RMS :
 Latitude : 46-58-29.0 N
 Longitude : 96-30-12.0 W
 Number Augmentations : 0

| T# | Field | Phase | Spacing | Orientation | Height | Top Load | Tower Ref |
|----|--------|--------|---------|-------------|--------|----------|-----------|
| 1 | 0.4940 | 287.70 | 0.00 | 0.00 | 81.30 | 0.00 | 0 |
| 2 | 0.7390 | 169.70 | 119.80 | 26.90 | 81.30 | 0.00 | 0 |
| 3 | 1.0000 | 0.00 | 235.70 | 19.60 | 81.30 | 0.00 | 0 |
| 4 | 0.5050 | 185.80 | 289.20 | 31.50 | 81.30 | 0.00 | 0 |
| 5 | 0.6420 | 17.20 | 178.40 | 43.20 | 81.30 | 0.00 | 0 |
| 6 | 0.3110 | 48.00 | 84.00 | 76.30 | 81.30 | 0.00 | 0 |

Callsign :
 Coordinates : 46-58-29.0 N, 96-30-12.0 W
 Comments :
 Frequency (KHz): 740
 Power (w): 8800.000
 Pattern : AC
 Efficiency : 939.440 mV/M
 Desc : DA3
 City/State : FARGO, ND
 ARN :
 Licensee : JEFFREY G. DRESS

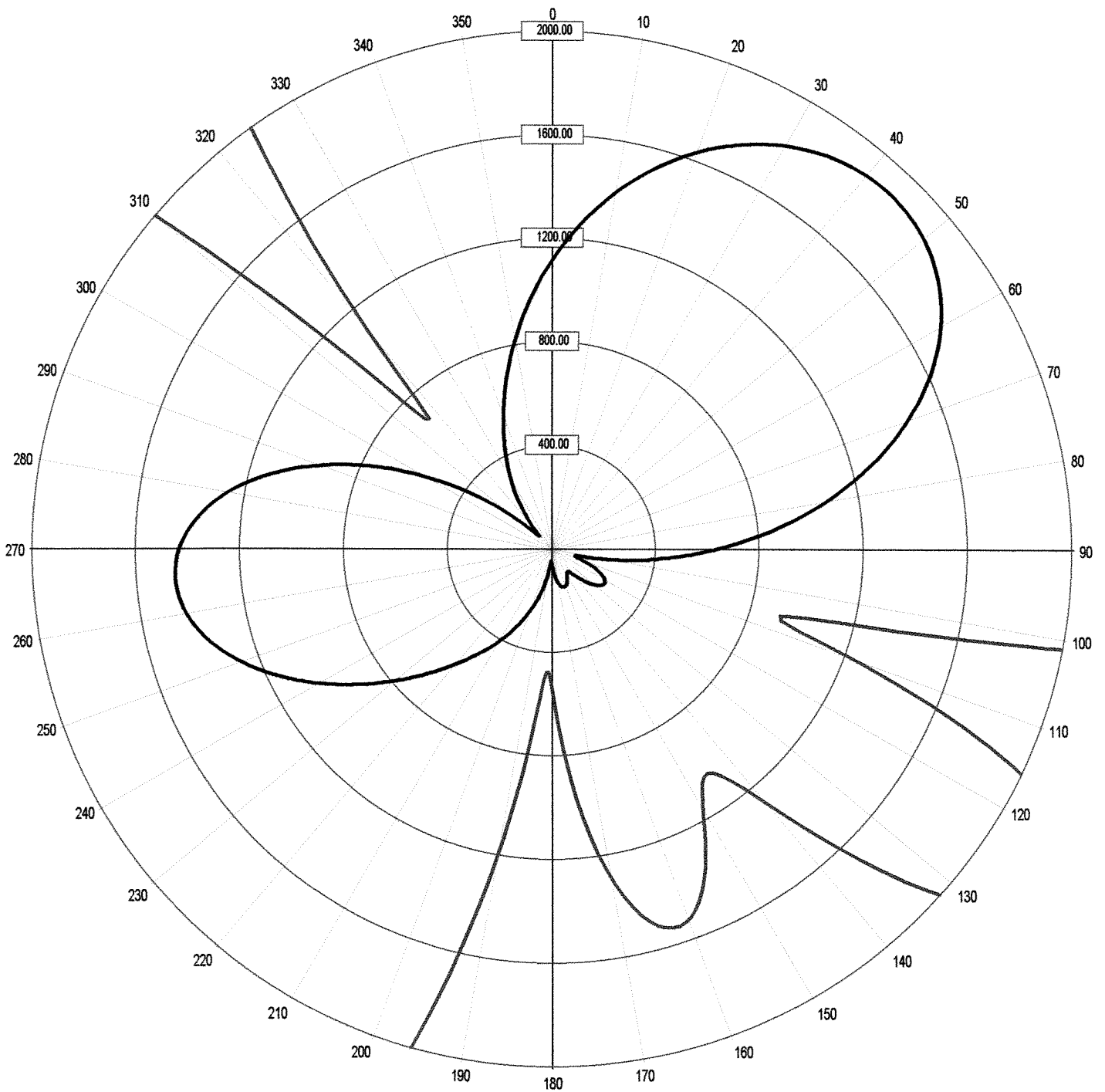
| Tower | Field | Phase | Spcng | Ornt | Hght | TopLd |
|-------|-------|-------|-------|------|------|-------|
| ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| 1 | 0.494 | 287.7 | 0.0 | 0.0 | 81.3 | 0.0 |
| 2 | 0.739 | 169.7 | 119.8 | 26.9 | 81.3 | 0.0 |
| 3 | 1.000 | 0.0 | 235.7 | 19.6 | 81.3 | 0.0 |
| 4 | 0.505 | 185.8 | 289.2 | 31.5 | 81.3 | 0.0 |
| 5 | 0.642 | 17.2 | 178.4 | 43.2 | 81.3 | 0.0 |
| 6 | 0.311 | 48.0 | 84.0 | 76.3 | 81.3 | 0.0 |

| Brng | Span | mV/M |
|------|------|------|
| ---- | ---- | ---- |

| Field | Brng | mV/m | Brng | mV/m | Brng | mV/m | Brng | mV/m | Brng | mV/m |
|-------|----------|------|----------|------|---------|------|----------|------|---------|------|
| ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| 0 | 1117.095 | 75 | 1278.291 | 150 | 115.835 | 225 | 681.805 | 300 | 555.925 | |
| 5 | 1261.053 | 80 | 1074.948 | 155 | 138.312 | 230 | 792.192 | 305 | 369.030 | |
| 10 | 1396.665 | 85 | 857.244 | 160 | 152.260 | 235 | 912.219 | 310 | 202.334 | |
| 15 | 1520.761 | 90 | 635.848 | 165 | 149.481 | 240 | 1037.357 | 315 | 79.131 | |
| 20 | 1630.783 | 95 | 423.257 | 170 | 128.568 | 245 | 1160.604 | 320 | 111.608 | |
| 25 | 1724.534 | 100 | 234.623 | 175 | 92.550 | 250 | 1273.177 | 325 | 212.758 | |
| 30 | 1799.907 | 105 | 103.110 | 180 | 53.473 | 255 | 1365.454 | 330 | 316.188 | |
| 35 | 1854.681 | 110 | 122.179 | 185 | 61.391 | 260 | 1428.044 | 335 | 425.342 | |
| 40 | 1886.398 | 115 | 192.386 | 190 | 119.946 | 265 | 1452.925 | 340 | 545.564 | |
| 45 | 1892.381 | 120 | 233.084 | 195 | 190.107 | 270 | 1434.533 | 345 | 678.179 | |
| 50 | 1869.891 | 125 | 238.349 | 200 | 263.144 | 275 | 1370.662 | 350 | 820.752 | |
| 55 | 1816.430 | 130 | 214.159 | 205 | 337.309 | 280 | 1263.022 | 355 | 968.754 | |
| 60 | 1730.192 | 135 | 171.738 | 210 | 413.488 | 285 | 1117.329 | | | |
| 65 | 1610.593 | 140 | 127.692 | 215 | 494.232 | 290 | 942.846 | | | |
| 70 | 1458.818 | 145 | 105.287 | 220 | 582.780 | 295 | 751.390 | | | |

| | | | | | |
|-----------|---|----------|-----------|---|---------|
| 0.0 ohm K | : | 1034.521 | 1.0 ohm K | : | 978.733 |
| RMSS | : | 986.163 | RMSt | : | 938.389 |
| RSS | : | 1564.157 | | | |

FIGURE 8D AMENDED
Horizontal Pattern @ 0.00



| | | | | | | | | | |
|-------------------------|-------------------|----|--------|--------|---------|-------------|--------|----------|-----------|
| Callsign | : | T# | Field | Phase | Spacing | Orientation | Height | Top Load | Tower Ref |
| Frequency | : 740.00 kHz | 1 | 0.4940 | 287.70 | 0.00 | 0.00 | 81.30 | 0.00 | 0 |
| Power | : 8.80 kw | 2 | 0.7390 | 169.70 | 119.80 | 26.90 | 81.30 | 0.00 | 0 |
| ERSS | : 1564.16 mV/m/km | 3 | 1.0000 | 0.00 | 235.70 | 19.60 | 81.30 | 0.00 | 0 |
| Theoretical Pattern RMS | : 938.39 mV/m/km | 4 | 0.5050 | 185.80 | 289.20 | 31.50 | 81.30 | 0.00 | 0 |
| Standard Pattern RMS | : 986.16 mV/m/km | 5 | 0.6420 | 17.20 | 178.40 | 43.20 | 81.30 | 0.00 | 0 |
| Modified Pattern RMS | : | 6 | 0.3110 | 48.00 | 84.00 | 76.30 | 81.30 | 0.00 | 0 |
| Latitude | : 46-58-29.0 N | | | | | | | | |
| Longitude | : 96-30-12.0 W | | | | | | | | |
| Number Augmentations | : 0 | | | | | | | | |

TABLE OF AZIMUTHS, INVERSE FIELDS AND SOIL CONDUCTIVITIES

WMIN - Hudson, WI

740 kHz; 0.85 kW, DA-D

| <u>Azimuth</u> | <u>Inverse Field</u> mv/m/km | <u>Soil Conductivity (mS/m)</u> |
|----------------|---------------------------------|--|
| *185°T | 96.4 | Meas: 1.5 - 33.5 km; M-3: 4 - 40.1 km, 15 - Remainder |
| **192°T | 76.2 | Meas: 1.5 - 20.0 km, 2.5 - 26.1 km; M-3: 4 - 34.3 km, 15 - Remainder |
| 195°T | 66.4 | Meas: 1.5 - 2.4 km, 2 - 23.6 km; M-3: 4 - 34.1 km, 15 - Rem. |
| **204°T | 34.3 | Meas: 1.5 - 2.4 km, 2 - 23.6 km; M-3: 4 - 33.2 km, 15 - Rem. |
| ***210.5°T | 18.8 | Meas: 1 - 2.7 km, 1.5 - 19.3 km, 2 - 30.5 km; M-3: 4 - 32.2 km, 15 - 165.0 km, 30 - 264.6 km, 15 - Rem. |
| **216°T | 33.0 | Meas: 1.5 - 20.0 km, 2 - 28.85 km; M-3: 4 - 31.5 km, 15 - 142.1 km, 30 - 277.3 km, 15 - Remainder |
| 226°T | 81.8 | Meas: 1.5 - 20.0 km, 2 - 28.85 km; M-3: 4 - 31.7 km, 15 - 143.2 km, 30 - 275.2 km, 15 - Remainder |
| **233.5°T | 122.7 | Meas: 1 - 3.0 km, 1.5 - 10.0 km, 2 - 21.75 km; M-3: 4 - 33.5 km, 15 - 108.0 km, 8 - 149.5 km, 30 - 275.2 km, 15 - Remainder |
| 243.5°T | 178.9 | Meas: 1 - 3.0 km, 1.5 - 10.0 km, 2 - 21.75 km; M-3: 4 - 42.0 km, 15 - 103.3 km, 8 - 168.8 km, 30 - 273.9 km, 15 - 340.1 km, 30 - Remainder |
| **248.5°T | 206.9 | Meas: 2 - 10.0 km, 3 - 26.5 km; M-3: 4 - 100.4 km, 15 - 104.9 km, 8 - 182.3 km, 30 - 235.0 km, 15 - 344.6 km, 30 - Remainder |
| 250°T | 215.3 | Meas: 1.5 - 1.6 km, 3 - 6.3 km, 2.5 - 24.5 km; M-3: 4 - 106.2 km, 8 - 187.3 km, 30 - 225.3 km, 15 - 354.5 km, 30 - Remainder |
| **260°T | 269.1 | Meas: 1.5 - 1.6 km, 3 - 6.3 km, 2.5 - 24.5 km; M-3: 4 - 120.4 km, 8 - 197.8 km, 15 - 386.4 km, 30 - Rem. |
| 270°T | 318.7 | Meas: 1.5 - 1.6 km, 3 - 6.3 km, 2.5 - 24.5 km; M-3: 4 - 149.8 km, 8 - 189.4 km, 15 - 417.1 km, 30 - Rem. |
| 275°T | 341.4 | M-3: 4 - 192.0 km, 15 - 409.9 km, 30 - Remainder |
| 276.5°T | 347.9 | Meas: 1 - 3.0 km, 2 - 8.9 km, 3 - 30.7 km; M-3: 4 - 194.7 km, 15 - 408.3 km, 30 - Remainder |
| ***286.5°T | 387.3 | Meas: 1 - 3.0 km, 2 - 8.9 km, 3 - 30.7 km; M-3: 4 - 232.6 km, 15 - 433.4 km, 30 - Remainder |
| 296.5°T | 419.6 | Meas: 1 - 3.0 km, 2 - 8.9 km, 3 - 30.7 km; M-3: 4 - 277.9 km, 30 - Remainder |

TABLE OF AZIMUTHS, INVERSE FIELDS AND SOIL CONDUCTIVITIES

WMIN - Hudson, WI

740 kHz; 0.85 kW, DA-D

| <u>Azimuth</u> | <u>Inverse Field</u> mv/m/km | <u>Soil Conductivity (mS/m)</u> |
|----------------|---------------------------------|--|
| **300°T | 429.1 | Meas: 2 - 3.3 km, 3 - 20.1 km; M-3: 4 - 296.8 km, 30 - Rem. |
| 302°T | 434.2 | Meas: 0.5 - 3.5 km, 2 - 32.1 km; M-3: 4 - 309.3 km, 30 - Remainder |
| *310°T | 451.5 | Meas: 0.5 - 3.5 km, 2 - 32.1 km; M-3: 4 - 350.4 km, 30 - Remainder |
| 311°T | 453.3 | Meas: 0.1 - 1.1 km, 0.5 - 2.8 km, 1.5 - 11.0 km, 3 - 40.0 km, 3.5 - 190.0 km, 2.5 - 258.5 km; M-3: 4 - 351.6 km, 30 - Remainder |
| ****320°T | 466.8 | Meas: 0.1 - 1.1 km, 0.5 - 2.8 km, 1.5 - 11.0 km, 3 - 40.0 km, 3.5 - 190.0 km, 2.5 - 258.5 km; M-3: 4 - 401.2 km, 15 - 427.6 km, 30 - 447.7 km, 15 - Remainder |
| 330°T | 475.4 | Meas: 0.1 - 1.1 km, 0.5 - 2.8 km, 1.5 - 11.0 km, 3 - 40.0 km, 3.5 - 190.0 km, 2.5 - 258.5 km; M-3: 4 - 374.5 km, 8 - Remainder |
| ****340°T | 477.6 | Meas: 0.1 - 1.5 km, 1 - 2.8 km, 2 - 10.0 km, 3 - 22.0 km, 4 - 28.0 km, 5 - 55.0 km, 4 - 80.0 km, 3.5 - 165.0 km, 4 - 205.0 km, 3 - 230.1 km; M-3: 4 - 291.5 km, 8 - Rem. |
| 350°T | 473.4 | Meas: 0.1 - 1.5 km, 1 - 2.8 km, 2 - 10.0 km, 3 - 22.0 km, 4 - 28.0 km, 5 - 55.0 km, 4 - 80.0 km, 3.5 - 165.0 km, 4 - 205.0 km, 3 - 230.1 km; M-3: 8 - Remainder |
| ** 0°T | 462.6 | Meas: 4 - 1.0 km, 1.5 - 1.4 km, 0.1 - 3.7 km, 1 - 28.35 km; M-3: 4 - 120.7 km, 8 - Remainder |
| *** 4°T | 456.4 | Meas: 1 - 2.8 km, 3 - 9.18 km, 4 - 26.9 km, 3 - 32.9 km; M-3: 4 - 120.4 km, 8 - Remainder |
| 14°T | 436.1 | Meas: 1 - 2.8 km, 3 - 9.18 km, 4 - 26.9 km, 3 - 32.9 km; M-3: 4 - 131.8 km, 8 - Remainder |
| ** 20°T | 420.4 | Meas: 2 - 8.0 km, 3 - 27.0 km; M-3: 4 - 145.5 km, 8 - Rem. |
| 25°T | 405.3 | Meas: 1 - 2.84 km, 2 - 18.8 km, 3 - 31.1 km; M-3: 4 - 164.6 km, 8 - Remainder |
| *** 30.5°T | 386.6 | Meas: 1 - 2.84 km, 2 - 18.8 km, 3 - 31.1 km; M-3: 4 - 193.4 km, 8 - Remainder |
| 35°T | 369.7 | Meas: 1 - 3.1 km, 2.5 - 33.1 km; M-3: 4 - 229.7 km, 8 - Rem. |
| * 40°T | 349.2 | Meas: 1 - 3.1 km, 2.5 - 33.1 km; M-3: 4 - 261.7 km, 8 - Rem. |
| 50°T | 303.4 | Meas: 3 - 10.5 km, 1.5 - 21.4 km; M-3: 4 - 347.1 km, 8 - Remainder |

TABLE OF AZIMUTHS, INVERSE FIELDS AND SOIL CONDUCTIVITIES

WMIN - Hudson, WI

740 kHz; 0.85 kW, DA-D

| <u>Azimuth</u> | <u>Inverse Field</u> mv/m/km | <u>Soil Conductivity (mS/m)</u> |
|----------------|---------------------------------|--|
| ** 60°T | 252.3 | Meas: 3 - 10.5 km, 1.5 - 21.4 km; M-3: 4 - Remainder |
| ** 68.5°T | 205.8 | Meas: 3 - 3.0 km, 2 - 22.3 km; M-3: 4 - Remainder |

* Measured radial; source is WCTS (formerly WMIN), Maplewood, MN (1030 kHz.)
March 1986 antenna proof-of-performance and June 1986 amendment thereto.
(WMIN, 740 kHz, and WCTS are co-located.)

** Measured radial; source is WCTS (formerly WMIN), Maplewood, MN (1030 kHz.)
April 1988 antenna proof-of-performance and September 1988 supplement thereto,
implementing construction permit BP-870130AG. (WCTS and WMIN are co-located.)

*** Measured radial; source is WMIN (740 kHz.) August 1995 antenna proof-of-
performance to implement construction permit BP-940524AC.

**** Measured radial; measurements and analysis included with this application amendment.

Callsign : NEW
 Coordinates : 46-58-29.0 N, 96-30-12.0 W
 Comments :
 Frequency (KHz): 740
 Power (w): 940.000
 Pattern : AN
 Efficiency : 288.327 mV/M
 Desc :
 City/State : FARGO, ND
 ARN :
 Licensee : Owner unknown

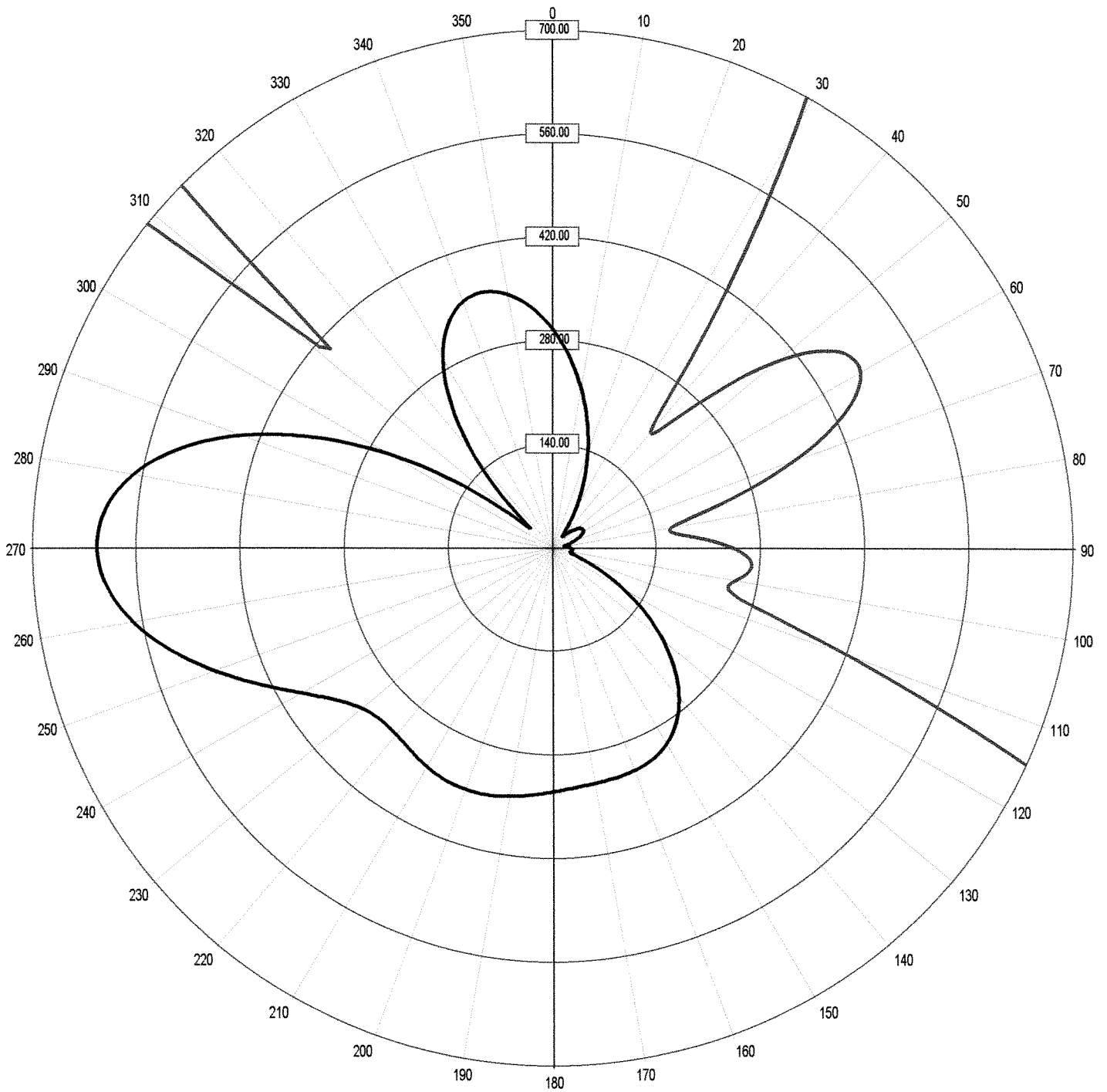
| Tower | Field | Phase | Spcng | Ornt | Hght | TopLd |
|-------|-------|-------|-------|------|------|-------|
| 1 | 1.000 | 0.0 | 0.0 | 0.0 | 81.3 | 0.0 |
| 2 | 0.480 | 274.0 | 119.8 | 26.9 | 81.3 | 0.0 |
| 3 | 1.543 | 70.7 | 235.7 | 19.6 | 81.3 | 0.0 |
| 4 | 1.550 | 178.4 | 289.2 | 31.5 | 81.3 | 0.0 |
| 5 | 0.786 | 4.3 | 178.4 | 43.2 | 81.3 | 0.0 |
| 6 | 0.930 | 126.1 | 84.0 | 76.3 | 81.3 | 0.0 |

| Brng | Span | mV/M |
|------|------|------|
| ---- | ---- | ---- |

| Field | Brng | mV/m | Brng | mV/m | Brng | mV/m | Brng | mV/m | Brng | mV/m |
|-------|---------|------|---------|------|---------|------|---------|------|---------|------|
| 0 | 296.194 | 75 | 23.910 | 150 | 305.143 | 225 | 327.656 | 300 | 251.453 | |
| 5 | 260.329 | 80 | 16.330 | 155 | 314.943 | 230 | 336.335 | 305 | 144.985 | |
| 10 | 220.949 | 85 | 18.425 | 160 | 319.531 | 235 | 357.521 | 310 | 50.314 | |
| 15 | 180.122 | 90 | 24.292 | 165 | 321.265 | 240 | 391.513 | 315 | 80.928 | |
| 20 | 139.629 | 95 | 26.857 | 170 | 322.471 | 245 | 435.455 | 320 | 165.637 | |
| 25 | 101.042 | 100 | 24.988 | 175 | 324.846 | 250 | 484.340 | 325 | 238.932 | |
| 30 | 65.936 | 105 | 25.676 | 180 | 329.042 | 255 | 532.246 | 330 | 295.319 | |
| 35 | 36.633 | 110 | 41.827 | 185 | 334.621 | 260 | 573.186 | 335 | 333.456 | |
| 40 | 20.588 | 115 | 71.943 | 190 | 340.367 | 265 | 601.643 | 340 | 353.722 | |
| 45 | 27.388 | 120 | 109.999 | 195 | 344.786 | 270 | 612.976 | 345 | 357.661 | |
| 50 | 39.134 | 125 | 151.688 | 200 | 346.582 | 275 | 603.799 | 350 | 347.576 | |
| 55 | 46.433 | 130 | 193.269 | 205 | 345.045 | 280 | 572.312 | 355 | 326.160 | |
| 60 | 47.808 | 135 | 231.444 | 210 | 340.357 | 285 | 518.531 | | | |
| 65 | 43.496 | 140 | 263.643 | 215 | 333.871 | 290 | 444.377 | | | |
| 70 | 34.713 | 145 | 288.324 | 220 | 328.308 | 295 | 353.579 | | | |

| | | | |
|-----------|-----------|-----------|-----------|
| 0.0 ohm K | : 157.838 | 1.0 ohm K | : 152.233 |
| RMSS | : 303.302 | RMSt | : 288.671 |
| RSS | : 416.809 | | |

FIGURE 17B AMENDED



Callsign : NEW
 Frequency : 740.00 kHz
 Power : 0.94 kw
 ERSS : 416.81 mV/m/km
 Theoretical Pattern RMS: 288.67 mV/m/km
 Standard Pattern RMS : 303.30 mV/m/km
 Modified Pattern RMS :
 Latitude : 46-58-29.0 N
 Longitude : 96-30-12.0 W
 Number Augmentations : 0

| T# | Field | Phase | Spacing | Orientation | Height | Top Load | Tower Ref |
|----|--------|--------|---------|-------------|--------|----------|-----------|
| 1 | 1.0000 | 0.00 | 0.00 | 0.00 | 81.30 | 0.00 | 0 |
| 2 | 0.4800 | 274.00 | 119.80 | 26.90 | 81.30 | 0.00 | 0 |
| 3 | 1.5430 | 70.70 | 235.70 | 19.60 | 81.30 | 0.00 | 0 |
| 4 | 1.5500 | 178.40 | 289.20 | 31.50 | 81.30 | 0.00 | 0 |
| 5 | 0.7860 | 4.30 | 178.40 | 43.20 | 81.30 | 0.00 | 0 |
| 6 | 0.9300 | 126.10 | 84.00 | 76.30 | 81.30 | 0.00 | 0 |

FIGURE 21A AMENDED

Fargo, ND Night .025 mv/m 10% to CBL(CHWO) 0.5 mv/m 50%

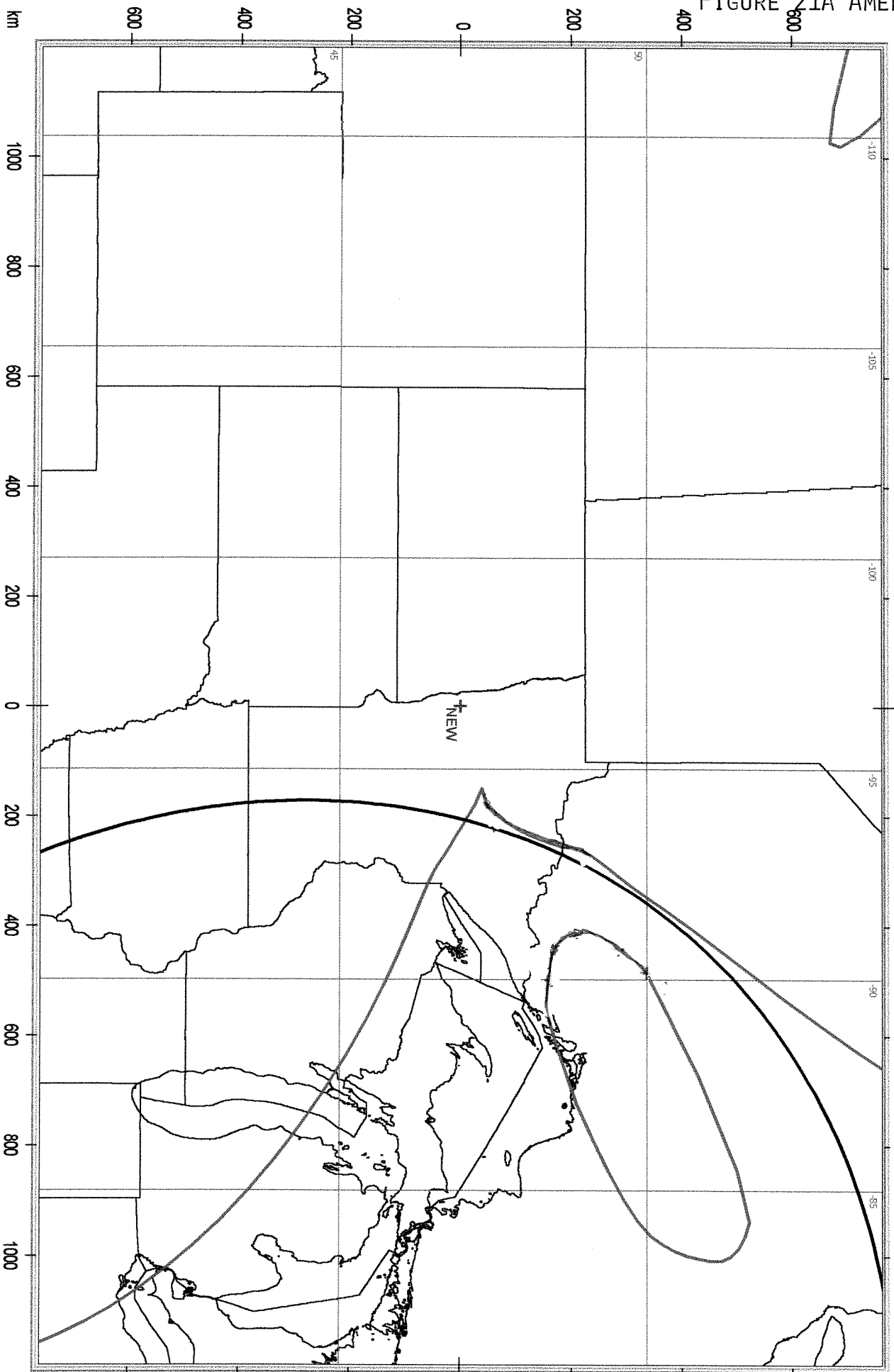


FIGURE 21B AMENDED

Fargo, ND 10% 0.030 mV/m to CBL 50% 0.5 mV/m

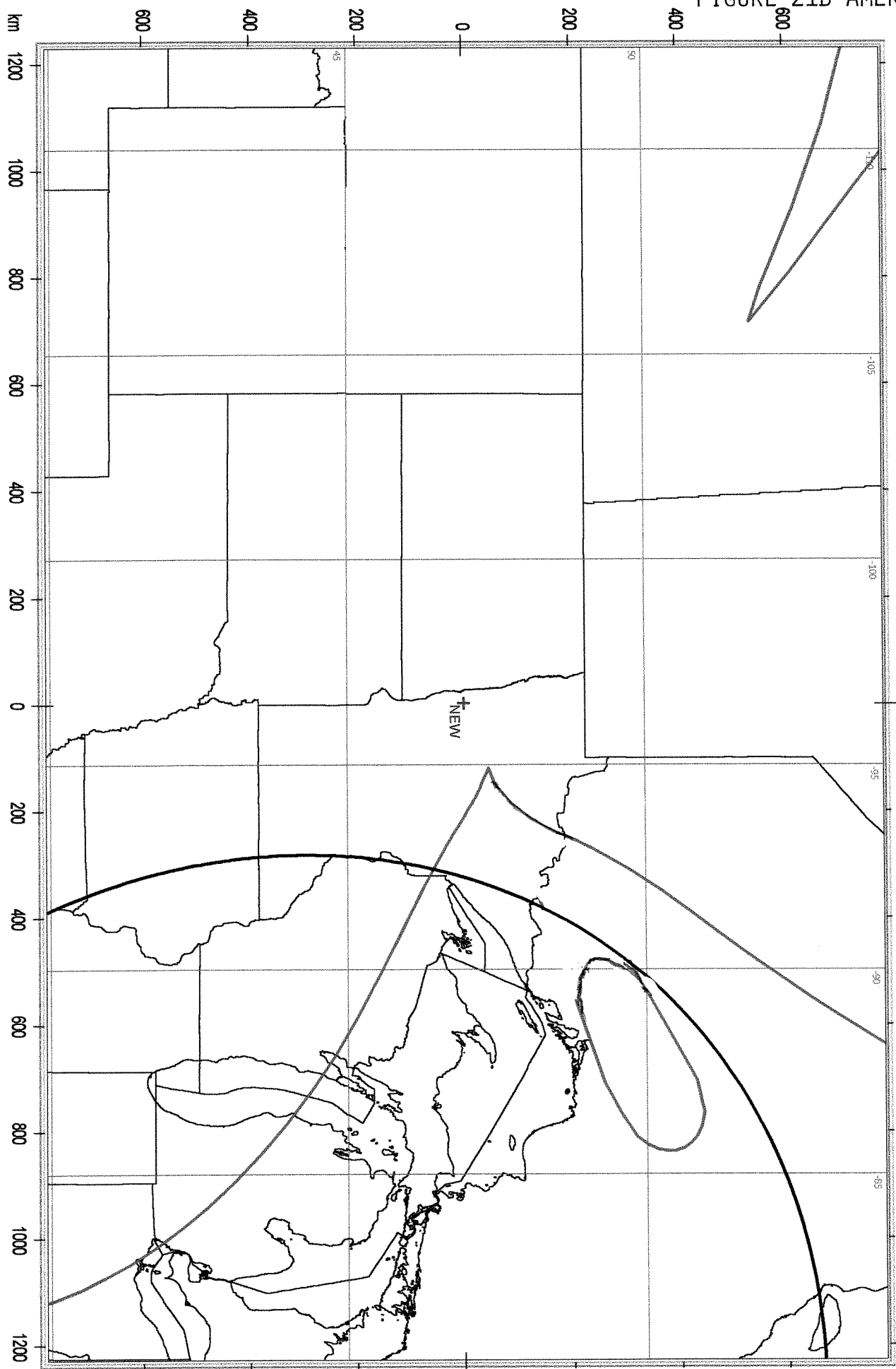
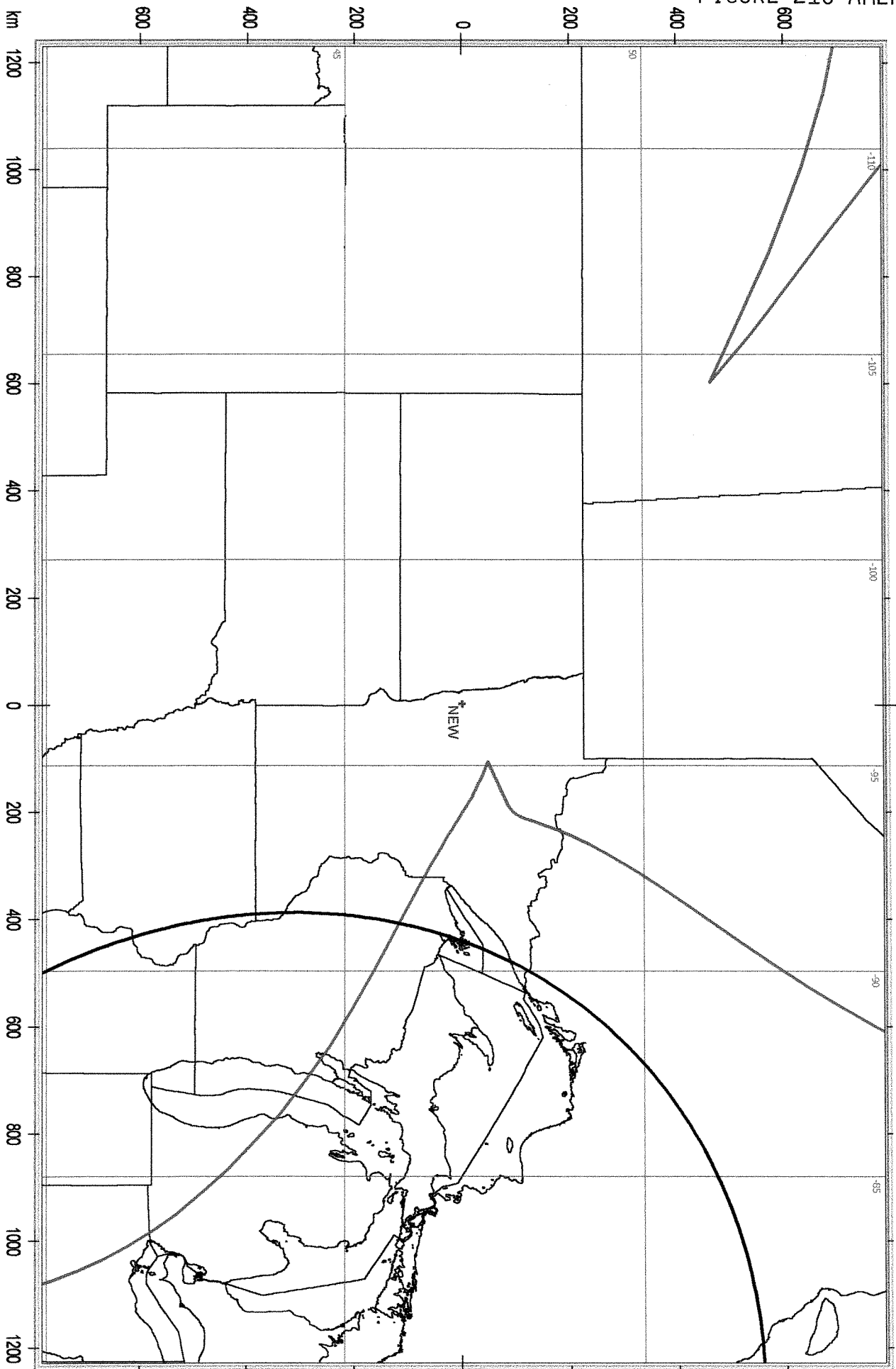


FIGURE 21C AMENDED

Fargo, ND 10% 0.035 mV/m to CBL 50% 0.7 mV/m



Station: WMIN/TI
Frequency: 740kHz

Radial: 320 Degree

FIM: FIM-41

SN: 1770

Calibrated: 1992

Engineers: Al Flom / Steve Brown

| Point No. | 0.80km Date | 10/27 Time | DA MV/M | Distance (MI) | Comments |
|---------------|----------------|---------------|---------|------------------|----------|
| 1 | 0.5 | 10/27/02 | 10:35 | 290 | 0.5 |
| 2 | 0.6 | 0.97 | 10:28 | 225 | 0.6 |
| 3 | 0.7 | 1.13 | 10:22 | 245 | 0.7 |
| 4 | 0.8 | 1.29 | 10:46 | 170 | 0.8 |
| 5 | 0.9 | 1.45 | 10:44 | 170 | 0.9 |
| 6 | 1.0 | 1.61 | 10:51 | 135 | 1.0 |
| 7 | 1.1 | 1.77 | -- | -- | 1.1 Lake |
| 8 | 1.2 | 1.93 | 11:17 | 92 | 1.2 |
| 9 | 1.3 | 2.09 | 11:22 | 87 | 1.3 |
| 10 | 1.4 | 2.25 | 11:27 | 95 | 1.4 |
| 11 | 1.5 | 2.41 | 12:02 | 89 | 1.5 |
| 12 | 1.6 | 2.57 | 11:56 | 84 | 1.6 |
| 13 | 1.7 | 2.74 | 11:52 | 67 | 1.7 |
| 14 | 1.8 | 2.90 | 12:08 | 105 | 1.8 |
| 15 | 1.9 | 3.06 | 12:27 | 76 | 1.9 |
| 16 | 2.0 | 3.22 | 12:33 | 74 | 2.0 |

FIM: FIM-41

SN: 2121

Calibrated: 2/12/02

Engineer: Robert Daly

| Point No. | km Date | 10/26 Time | DA MV/M | Distance (MI) | Comments |
|---------------|------------|---------------|---------|------------------|-----------------------------------|
| 16 | 2.16 | 10/26/02 | 10:05 | 62.0 | 2.16 |
| 17 | 2.65 | 4.26 | 10:12 | 52.0 | 2.65 |
| 18 | 3.30 | 5.31 | 10:25 | 43.0 | 3.30 |
| 19 | ? | — | 10:32 | 39.0 | ? Uncertain of accuracy of point. |
| 20 | 4.15 | 6.68 | 10:38 | 33.0 | 4.15 |
| 21 | 4.65 | 7.48 | 10:42 | 27.0 | 4.65 |
| 22 | 5.05 | 8.13 | 10:48 | 23.0 | 5.05 |
| 23 | 5.60 | 9.01 | 11:02 | 18.0 | 5.60 |
| 24 | 6.00 | 9.66 | 11:06 | 14.0 | 6.00 |
| 25 | 6.36 | 10.24 | 11:11 | 11.5 | 6.36 |
| 26 | 6.70 | 10.8 | 11:20 | 12.0 | 6.70 |
| 27 | 7.00 | 11.3 | 11:29 | 18.5 | 7.00 |
| 28 | 8.05 | 13.0 | 11:39 | 15.5 | 8.05 |
| 29 | 9.00 | 14.5 | 11:55 | 13.5 | 9.00 |
| 30 | 10.00 | 16.1 | 12:12 | 9.5 | 10.00 |
| 31 | 11.00 | 17.7 | 12:15 | 8.9 | 11.00 |
| 32 | 12.00 | 19.3 | 12:30 | 9.0 | 12.00 |
| 33 | 13.10 | 21.1 | 12:37 | 4.6 | 13.10 |
| 34 | 13.90 | 22.4 | 12:45 | 7.8 | 13.90 |
| 35 | 14.80 | 23.8 | 12:55 | 5.4 | 14.80 |
| 36 | 15.60 | 25.1 | 1:02 | 5.7 | 15.60 |
| 37 | 16.55 | 26.6 | 1:18 | 4.4 | 16.55 |
| 38 | 17.85 | 28.7 | 1:40 | 2.4 | 17.85 |
| 39 | 18.70 | 30.1 | 1:55 | 2.5 | 18.70 |
| 40 | -- | -- | -- | -- | Inaccessible points - Arms Plant |
| 41 | 22.00 | 35.4 | 2:50 | 1.1 | 22.00 |

Radial: 320 Degree

FIM: FIM-21

SN: 801

Engineer: Don Brintnall

Calibrated: 10/24/02

kn
↓

| Point No. | Date | Time | DA MV/M | Distance (MI) | Comments |
|-----------|------|----------|---------|---------------|---------------------------|
| 41.0 | 25.5 | 10/27/02 | 15:13 | 2.320 | 25.5 |
| 47.8 | 29.7 | 10/27/02 | 15:29 | 1.750 | 29.7 RR & Pipeline nearby |
| 58.6 | 36.4 | 10/27/02 | 15:48 | 1.130 | 36.4 |
| 66.3 | 41.2 | 10/27/02 | 16:03 | 0.660 | 41.2 |
| 73.9 | 45.9 | 10/28/02 | 9:05 | 0.640 | 45.9 |
| 81.8 | 50.8 | 10/28/02 | 9:18 | 0.660 | 50.8 |
| 91.9 | 57.1 | 10/28/02 | 9:35 | 0.380 | 57.1 |
| 97.2 | 60.4 | 10/28/02 | 9:55 | 0.210 | 60.4 |
| 105.6 | 65.6 | 10/28/02 | 10:07 | 0.200 | 65.6 |
| 114.7 | 71.3 | 10/28/02 | 10:24 | 0.190 | 71.3 |
| 120.7 | 75.0 | 10/28/02 | 10:50 | 0.162 | 75.0 |
| 128.3 | 79.7 | 10/28/02 | 11:10 | 0.170 | 79.7 |
| 136.3 | 84.7 | 10/28/02 | 11:40 | 0.150 | 84.7 |

FIM: FIM-41

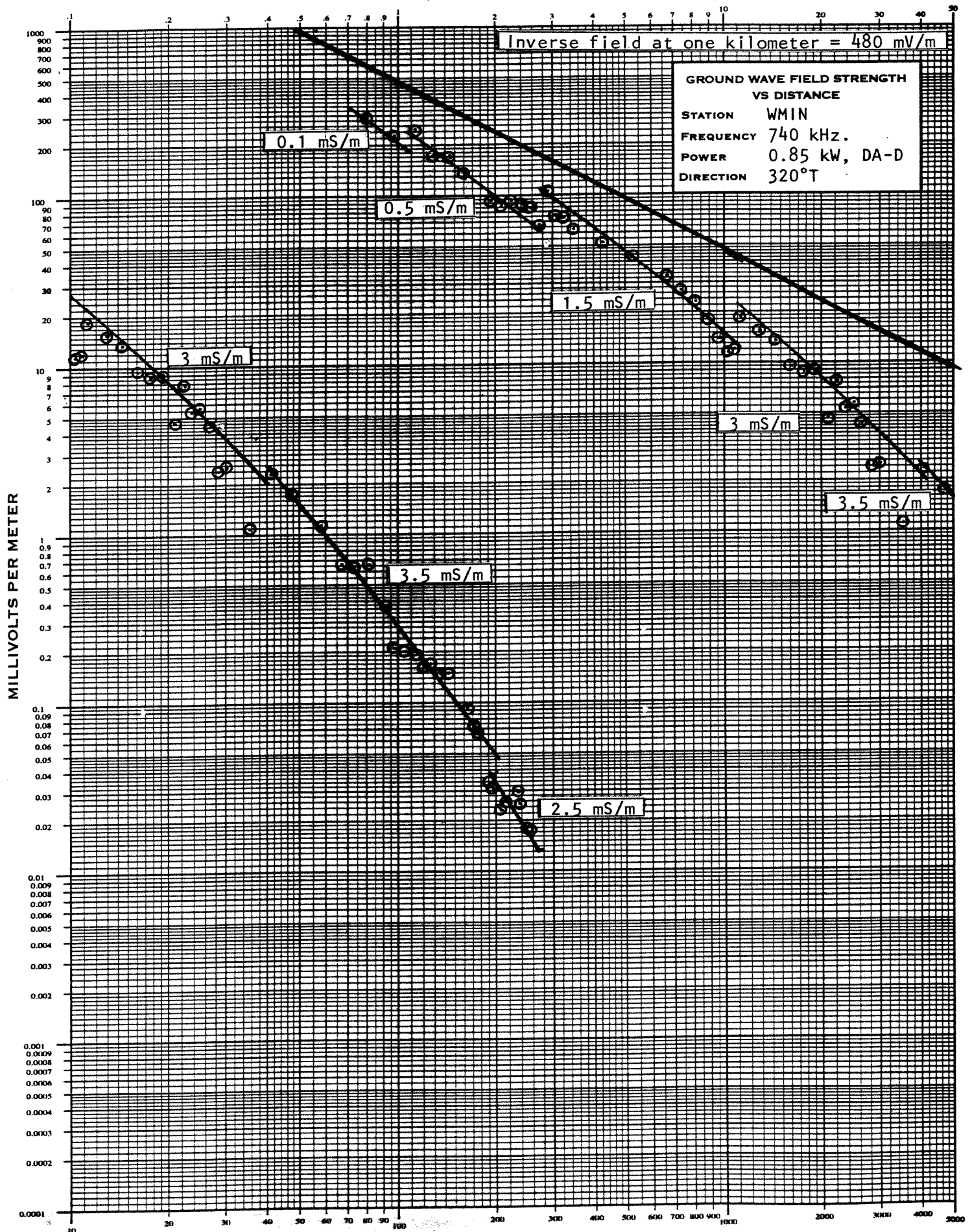
SN: 1476

Engineer: Ken Bartz

Calibrated: 10-20-03

kn

| | | | | | |
|-------|-------|----------|-------|-------|------------------------------|
| 143.6 | 89.2 | 10/27/02 | 16:58 | 0.150 | 89.2 |
| 161.4 | 100.3 | 10/27/02 | 16:40 | 0.092 | 100.3 Power Lines South Side |
| 171.9 | 106.8 | 10/27/02 | 16:27 | 0.072 | 106.8 |
| 177.2 | 110.1 | 10/27/02 | 16:17 | 0.066 | 110.1 |
| 191.0 | 118.7 | 10/27/02 | 15:59 | 0.034 | 118.7 |
| 198.8 | 123.5 | 10/27/02 | 15:48 | 0.031 | 123.5 |
| 208.6 | 129.6 | 10/27/02 | 15:29 | 0.023 | 129.6 |
| 216.5 | 134.5 | 10/27/02 | 15:17 | 0.026 | 134.5 |
| 235.9 | 146.6 | 10/27/02 | 15:01 | 0.030 | 146.6 Power Lines South Side |
| 239.0 | 148.5 | 10/27/02 | 14:49 | 0.025 | 148.5 |
| 249.9 | 155.3 | 10/27/02 | 14:29 | 0.018 | 155.3 Power Lines South Side |
| 258.5 | 160.6 | 10/27/02 | 14:11 | 0.017 | 160.6 Power Lines North Side |



Station: WMIN/TI
Frequency: 740kHz

Radial: 340 Degree

FIM: FiM-41

SN: 406

Calibrated: 1992

Engineer: Al Flom

km

| Point No. | 0.50 Date | 10/26/02 Time | DA MV/M | Distance (MI) | Comments |
|-----------|--------------|------------------|---------|------------------|------------------------------|
| 1 | 0.5 | 10/26/2002 | 11:22 | 228.0 | 0.5 |
| 2 | 0.6 | 0.97 | 11:29 | 188.0 | 0.6 |
| 3 | 0.7 | 1.13 | 11:35 | 160.0 | 0.7 |
| 4 | 0.8 | 1.29 | 11:41 | 130.0 | 0.8 |
| 5 | 0.9 | 1.45 | 11:47 | 87.0 | 0.9 HV Power Lines and Tower |
| 6 | 1.0 | 1.61 | 11:55 | 172.0 | 1.0 |
| 7 | 1.1 | 1.85 | 12:40 | 120.0 | 1.1 |
| 8 | 1.2 | 1.9 | 12:37 | 96.0 | 1.2 |
| 9 | 1.3 | 2.1 | 12:32 | 88.0 | 1.3 |
| 10 | 1.4 | 2.25 | 12:31 | 94.0 | 1.4 |
| 11 | 1.5 | 2.4 | 12:23 | 110.0 | 1.5 |
| 12 | 1.6 | 2.6 | 12:20 | 100.0 | 1.6 |
| 13 | 1.7 | 2.7 | 12:11 | 91.0 | 1.7 |
| 14 | 1.8 | 2.9 | 12:00 | 116.0 | 1.8 |
| 15 | 1.9 | 3.1 | 11:54 | 100.0 | 1.9 |
| 16 | 2.0 | 3.2 | 12:45 | 68.0 | 2.0 |
| 17 | 2.5 | 4.0 | 12:50 | 54.0 | 2.5 |
| 18 | 3.0 | 4.8 | 1:08 | 53.0 | 3.0 |
| 19 | 3.5 | 5.6 | 1:20 | 45.0 | 3.5 |
| 20 | 4.0 | 6.4 | 1:27 | 35.5 | 4.0 |
| 21 | 4.5 | 7.2 | 1:38 | 31.0 | 4.5 |
| 22 | 5.0 | 8.0 | 1:45 | 23.9 | 5.0 |
| 23 | 5.5 | 8.9 | 2:14 | 22.5 | 5.5 |
| 24 | 6.0 | 9.7 | 2:20 | 20.5 | 6.0 |
| 25 | 6.5 | 10.5 | 2:31 | 19.4 | 6.5 |
| 26 | 7.0 | 11.3 | 2:36 | 19.2 | 7.0 |
| 27 | 8.0 | 12.9 | 2:48 | 16.9 | 8.0 |
| 28 | 9.0 | 14.5 | 2:58 | 12.1 | 9.0 |
| 29 | 10.0 | 16.1 | 3:10 | 11.1 | 10.0 |
| 30 | 11.0 | 17.7 | 3:17 | 8.2 | 11.0 |
| 31 | 12.0 | 19.3 | 3:29 | 8.2 | 12.0 |
| 32 | 13.0 | 20.9 | 3:35 | 7.8 | 13.0 |
| 33 | 14.0 | 22.5 | 3:45 | 7.2 | 14.0 |
| 34 | 15.0 | 24.1 | 4:15 | 6.7 | 15.0 |
| 35 | 16.0 | 25.7 | 4:41 | 6.6 | 16.0 |
| 36 | 17.0 | 27.4 | 4:48 | 5.5 | 17.0 |
| 37 | 18.0 | 29.0 | 5:00 | 6.1 | 18.0 |
| 38 | 19.0 | 30.6 | 5:11 | 5.3 | 19.0 |
| 39 | 20.0 | 32.2 | 5:20 | 3.7 | 20.0 |

FIM: FIM-21

SN: 801

Engineer: Don Brintnall

Calibrated: 10/24/2002

km

| Point No. | 38.0 Date | 10/24/02 Time | DA MV/M | Distance (MI) | Comments |
|-----------|--------------|------------------|---------|------------------|-----------------|
| 40 | 24.0 | 10/26/2002 | 10:32 | 3.80 | 24.0 |
| 41 | 25.0 | 40.2 | 10:39 | 3.25 | 25.0 |
| 42 | 30.8 | 49.6 | 11:09 | 2.20 | 30.8 |
| 43 | 32.9 | 52.9 | 11:21 | 1.65 | 32.9 |
| 44 | 36.3 | 58.4 | 11:57 | 1.20 | 36.3 |
| 45 | 39.7 | 63.9 | 12:09 | 0.94 | 39.7 |
| 46 | 45.4 | 73.1 | 12:23 | 0.64 | 45.4 |
| 47 | 55.0 | 88.5 | 13:03 | 0.36 | 55.0 |
| 48 | 60.3 | 97.0 | 13:14 | 0.31 | 60.3 |
| 49 | 66.1 | 106.4 | 13:33 | 0.25 | 66.1 |
| 50 | 70.8 | 113.9 | 13:45 | 0.18 | 70.8 |
| 51 | 75.2 | 121.0 | 13:56 | 0.096 | 75.2 |
| 52 | 84.0 | 135.2 | 14:25 | 0.110 | 84.0 |
| 53 | 91.9 | 147.9 | 14:42 | 0.100 | 91.9 |
| -- | -- | -- | -- | -- | Mille Lacs Lake |
| 54 | 109.0 | 175.4 | 15:22 | 0.084 | 109.0 |
| 55 | 116.0 | 186.7 | 15:39 | 0.060 | 116.0 |
| 56 | 121.0 | 194.7 | 15:55 | 0.070 | 121.0 |
| 57 | 129.0 | 207.6 | 16:37 | 0.060 | 129.0 |
| 58 | 137.0 | 220.5 | 17:00 | 0.030 | 137.0 |
| 59 | 143.0 | 230.1 | 17:26 | 0.022 | 143.0 |

