

TECHNICAL REPORT

This technical report has been developed in support of an application for a minor amendment to the application, FCC file no. BNPH-20060310ABI, for the NEW 283C1 facility at Mooreland, OK. A change in tower site is requested.

I. Allocation Analysis:

The data for all terrain in this report was obtained from the V-Soft PROBE 3 computer program, utilizing the NGDC thirty (30) second terrain database. The 60, 70 dBu F(50,50) and 100 dBu F(50-10) contours were plotted accordingly. The HAAT was calculated using CONTOUR with 8 evenly spaced radials with the same database.

The Ch. 283C1 facility meets 73.207 spacing requirements at the proposed transmitter site to all facilities and allocations, with the exception of the vacant allocation for Ch. 285C2 at Arnett, OK, as is demonstrated in exhibit E-1. **Section 73.215 processing is requested relative to this vacant allocation.** Exhibit E-3 shows that the Ch. 283C1 as a full C1 facility does not overlap the Ch. 285C2 vacant allocation as a maximum class facility.

The following exhibits are provided:

- E-1 CH. 283C1 Spacing Study
- E-2 CH. 283C1 HAAT Calculation
- E-3 CH. 283C1 Interference Plot to Ch. 285C2 VAC. ALLO. Max. Class
- E-4 CH. 283C1 70 dBu Contour Plot
- E-5 CH. 283C1 Line of Sight Profile
- E-6 CH. 283C1 New Tower Site Topographic Map

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II. Community 70 dBu Coverage:

The CH. 283C1 facility will place a 70 dBu contour over the entire community of Mooreland, OK in compliance with Section 73.315, and is demonstrated in exhibit E-4.

III. Blanketing:

The 115 dBu blanketing contour is calculated to be 3.94 km. The calculation was made in accordance with the Commission's formula:

$$115 \text{ dBu (km)} = 1.609 [0.245 (P \text{ kw})^{1/2}].$$

The applicant accepts the responsibility for correction of any objectionable interference or blanketing problems in accordance with Commission rules.

IV. Antenna System and Environmental Considerations:

The facility is to be located on a new 275 meter guyed steel tower at coordinates:

(NAD 27) 36-36-10 W 99-25-34 N.

A ten bay, full-wavelength, nondirectional antenna will be mounted on the tower at a COR AGL of 260 meters, with an effective radiated power of 100.0 kW at a HAAT of 299 meters (60 dBu = 72.0 km). To the applicant's knowledge, no adverse impact will result to any applicable 1.1307 category. Consequently, no environmental statement is provided.

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The RF contribution for the proposed facility was calculated utilizing the Commission's FMMODEL program at a height 2 meters above ground level. The maximum radiation was found to be 3.49 microwatts/cm² at 69 meters, which is well below 5% of the maximum 200 microwatts/cm² permissible for general public exposure, and may be excluded from consideration.

V. Conclusion:

It is concluded that the minor modification of the Mooreland, OK CH. 283C1.AP is in full compliance with the Commission rules and policies.



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E-1 Mooreland 283C1 Spacing Study

REFERENCE

36 36 10.0 N.
99 25 34.0 W.

CLASS = C1
Current Spacings

DISPLAY DATES

DATA 02-21-07
SEARCH 02-21-07

----- Channel 283 - 104.5 MHz -----

Call	Channel	Location		Azi	Dist	FCC	Margin	
AP4958	APP	283C1	Mooreland	OK	119.9	21.77	244.5	-222.73
AP3343	APP	283C1	Mooreland	OK	132.7	26.92	244.5	-217.58
AU7060840VAC		285C2	Arnett	OK	216.7	77.09	78.5	-1.41*
KFXJ	LIC-Z	283C2	Augusta	KS	54.4	233.59	223.5	10.09
AL9619	VAC	283A	Memphis	TX	203.8	231.91	199.5	32.41
KVGB-FM	LIC	282C1	Great Bend	KS	15.6	211.06	176.5	34.56
AL1263	VAC	285A	Ringwood	OK	98.9	115.01	74.5	40.51
NEW	CP	284C1	Ness City	KS	353.8	223.98	176.5	47.48
NEW	CP -N	282C3	Granite	OK	176.4	192.53	143.5	49.03
RDEL	DEL	280C2	Wheeler	TX	206.2	134.68	78.5	56.18
AL3889	VAC	286A	Weatherford	OK	151.8	132.39	74.5	57.89
KQFX	LIC	282C1	Borger	TX	237.0	236.46	176.5	59.96
KHYM	LIC	280C1	Copeland	KS	313.4	142.48	81.5	60.98
KZQD	LIC	286C2	Liberal	KS	291.0	141.26	78.5	62.76
AL9528	VAC	280C2	Wheeler	TX	209.9	143.27	78.5	64.77
DKIXR	LIC-N	284C3	Ponca City	OK	83.7	213.52	143.5	70.02
AL4499	VAC	284C	Channing	TX	256.9	290.31	208.5	81.81
RADD	ADD	283A	Elmore City	OK	141.9	284.29	199.5	84.79
RDEL	DEL	283A	Wynnewood	OK	136.2	298.46	199.5	98.96
VA5404	VAC	283A	Wynnewood	OK	136.2	298.46	199.5	98.96
KMYZ-FM	LIC	283C1	Pryor	OK	99.8	344.66	244.5	100.16
KMGL	CP	281C	Oklahoma City	OK	123.0	209.63	104.5	105.13
KMGL	LIC	281C	Oklahoma City	OK	123.3	210.06	104.5	105.56
KYYI	LIC	284C1	Burkburnett	TX	169.8	282.84	176.5	106.34
KIMY	LIC	230A	Watonga	OK	130.1	130.59	21.5	109.09
KOSB	LIC	286A	Perry	OK	101.8	189.12	74.5	114.62
KKWD	LIC	285A	Bethany	OK	126.6	203.78	74.5	129.28
VA1651	VAC	229A	Cordell	OK	164.8	150.88	21.5	129.38
KZRD	LIC	230C1	Dodge City	KS	332.2	167.38	33.5	133.88

* Section 73.215 Processing is requested relative to the Ch. 285C2 vacant allocation.

E-2 Ch. 283C1 HAAT Calculation

N. Lat. = 363610 W. Lng. = 992534

HAAT and Distance to Contour - FCC Method - NGDC 30 SEC

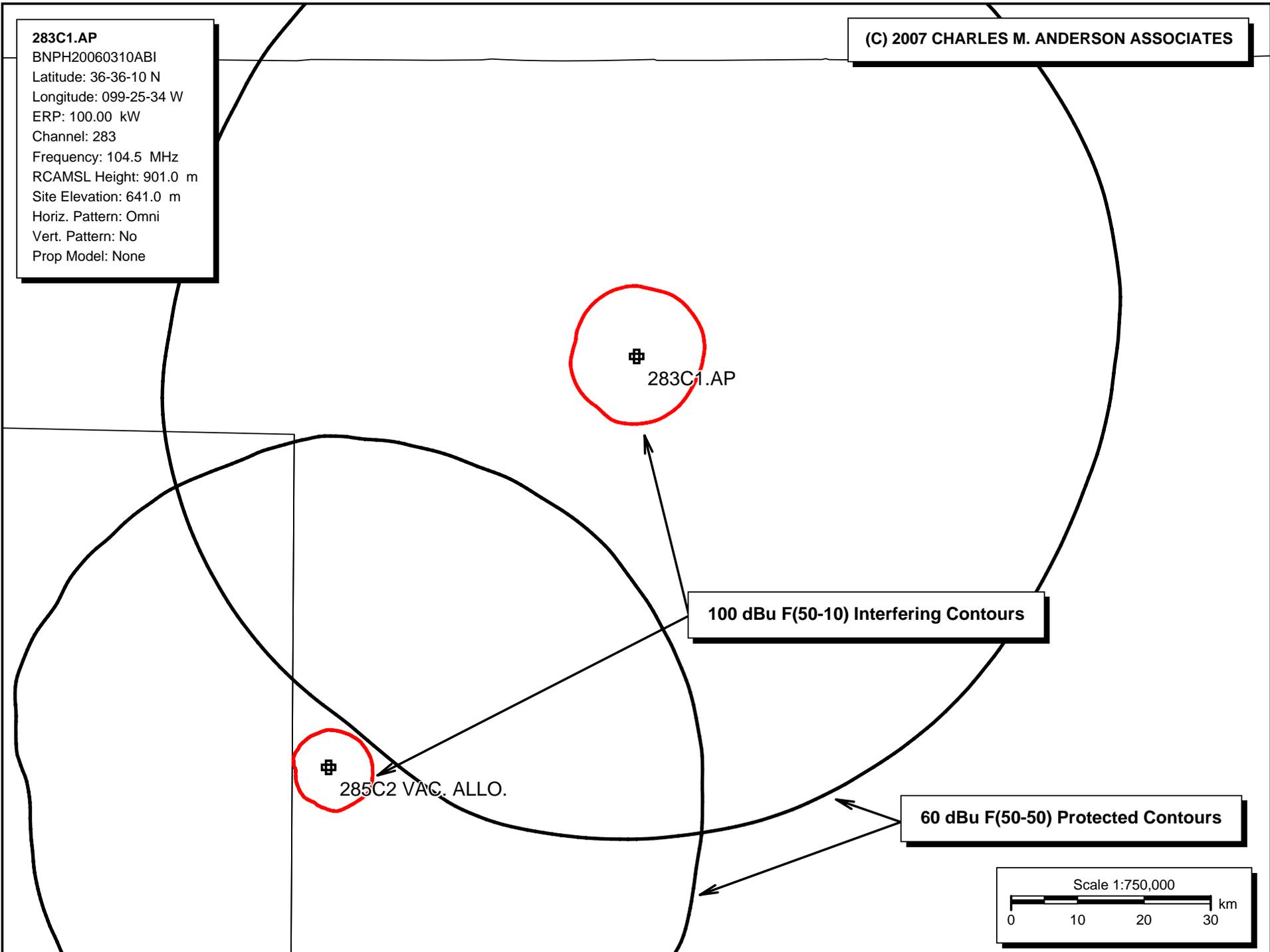
Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5
000	572.9	328.1	100.0000	20.00	1.000	74.47
045	570.3	330.7	100.0000	20.00	1.000	74.67
090	606.0	295.0	100.0000	20.00	1.000	71.99
135	625.2	275.8	100.0000	20.00	1.000	70.41
180	600.0	301.0	100.0000	20.00	1.000	72.46
225	622.1	278.9	100.0000	20.00	1.000	70.67
270	621.1	279.9	100.0000	20.00	1.000	70.75
315	600.2	300.8	100.0000	20.00	1.000	72.44

Ave EI= 602.21 M HAAT= 298.79 M AMSL= 901 M

E-3 Ch. 283C1 Interference Plot to Ch. 285C2 VAC. ALLO.

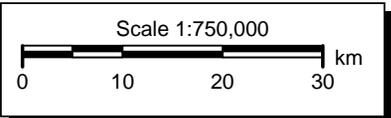
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283C1.AP
BNPH20060310ABI
Latitude: 36-36-10 N
Longitude: 099-25-34 W
ERP: 100.00 kW
Channel: 283
Frequency: 104.5 MHz
RCAMSL Height: 901.0 m
Site Elevation: 641.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None



100 dBu F(50-10) Interfering Contours

60 dBu F(50-50) Protected Contours

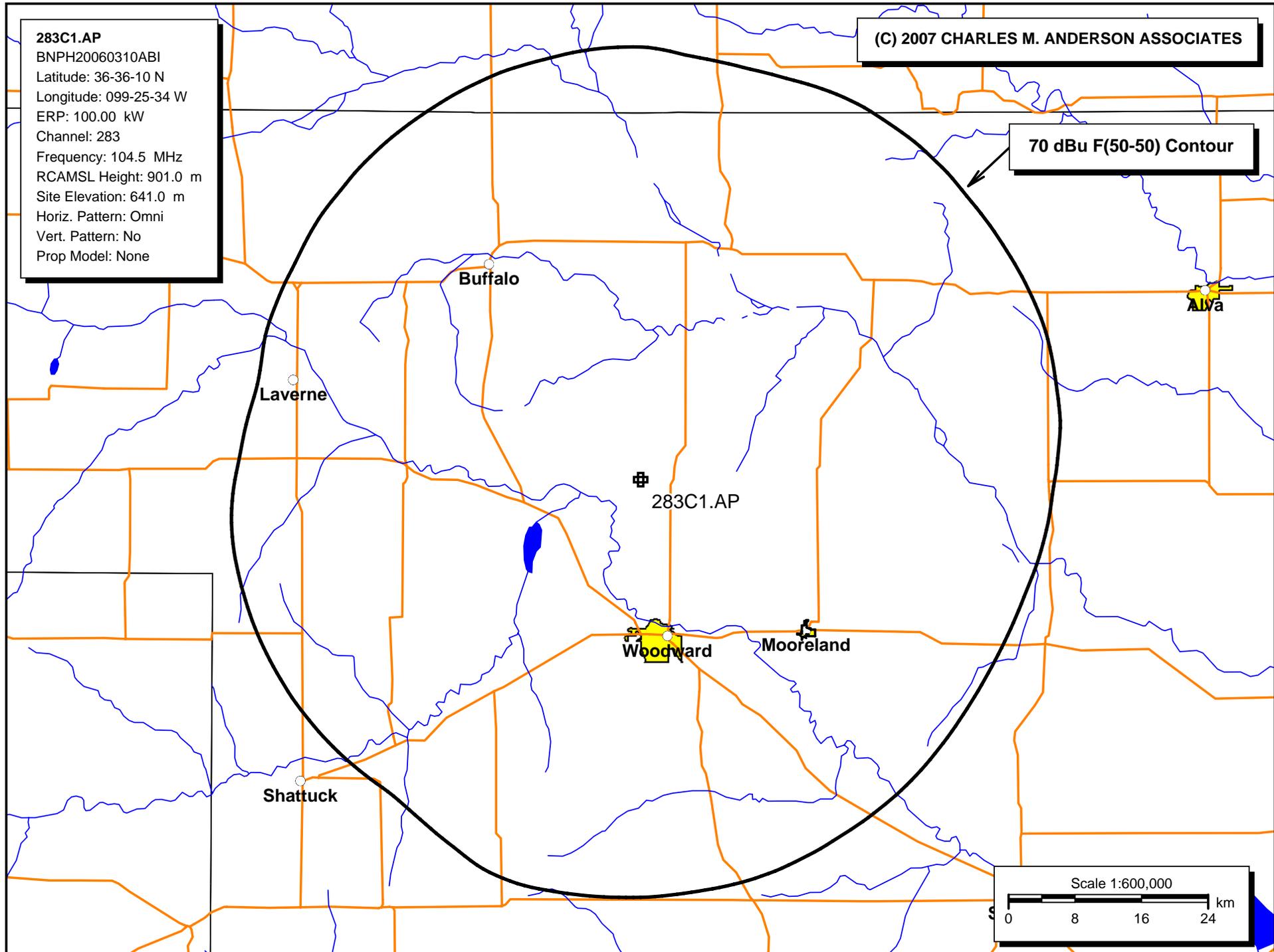


E-4 Ch. 283C1 70 dBu Coverage Plot

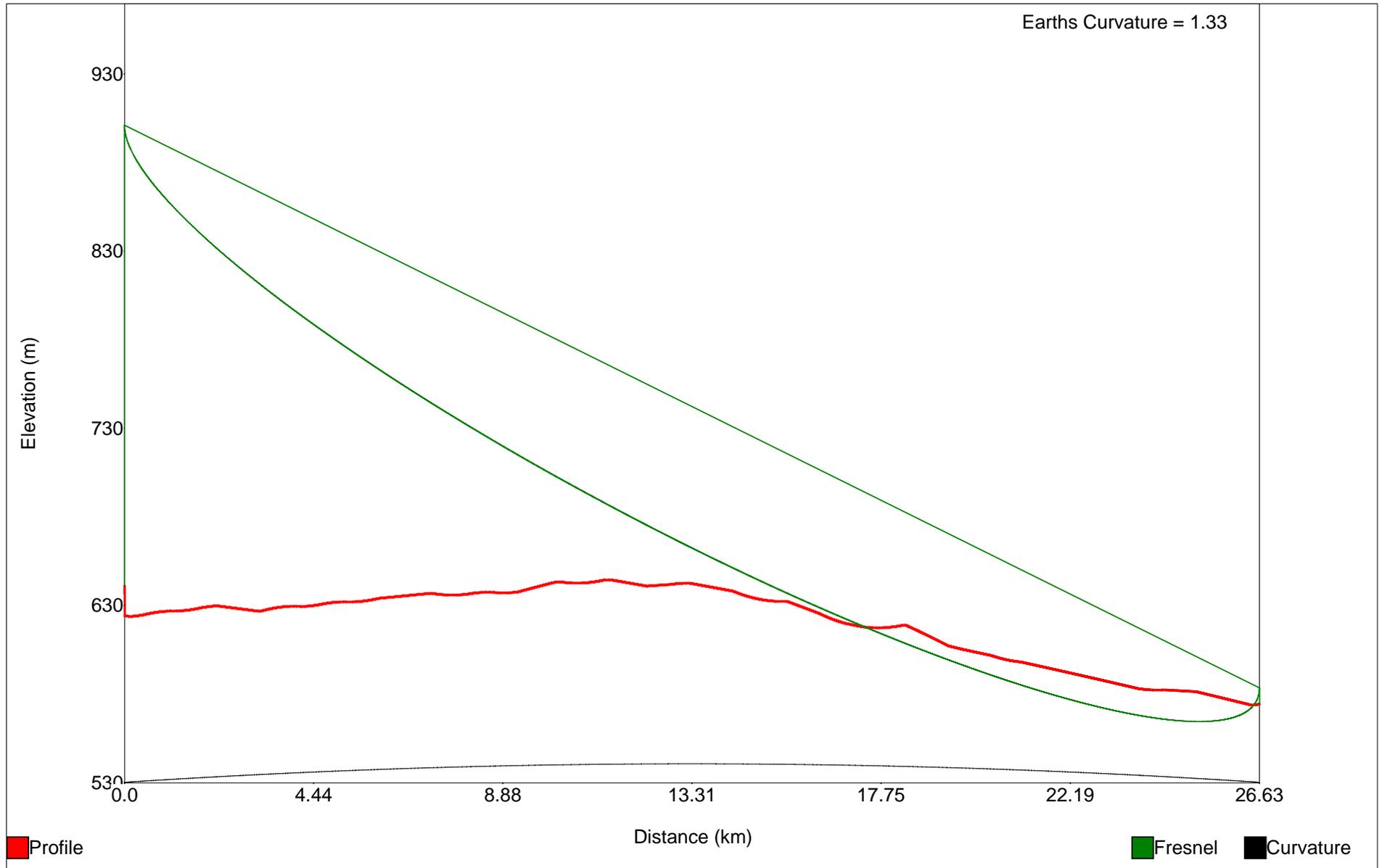
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283C1.AP
BNPH20060310ABI
Latitude: 36-36-10 N
Longitude: 099-25-34 W
ERP: 100.00 kW
Channel: 283
Frequency: 104.5 MHz
RCAMSL Height: 901.0 m
Site Elevation: 641.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

70 dBu F(50-50) Contour



E-5 Ch. 283C1 Line of Sight Profile



Starting Latitude: 36-36-10 N

Starting Longitude: 099-25-34 W

End Latitude: 36-26-27.29 N

End Longitude: 099-12-23.62 W

Distance: 26.63 km

Bearing: 132.34 deg

Transmitter Height (AG) = 260.0 m

Receiver Height (AG) = 9.1 m

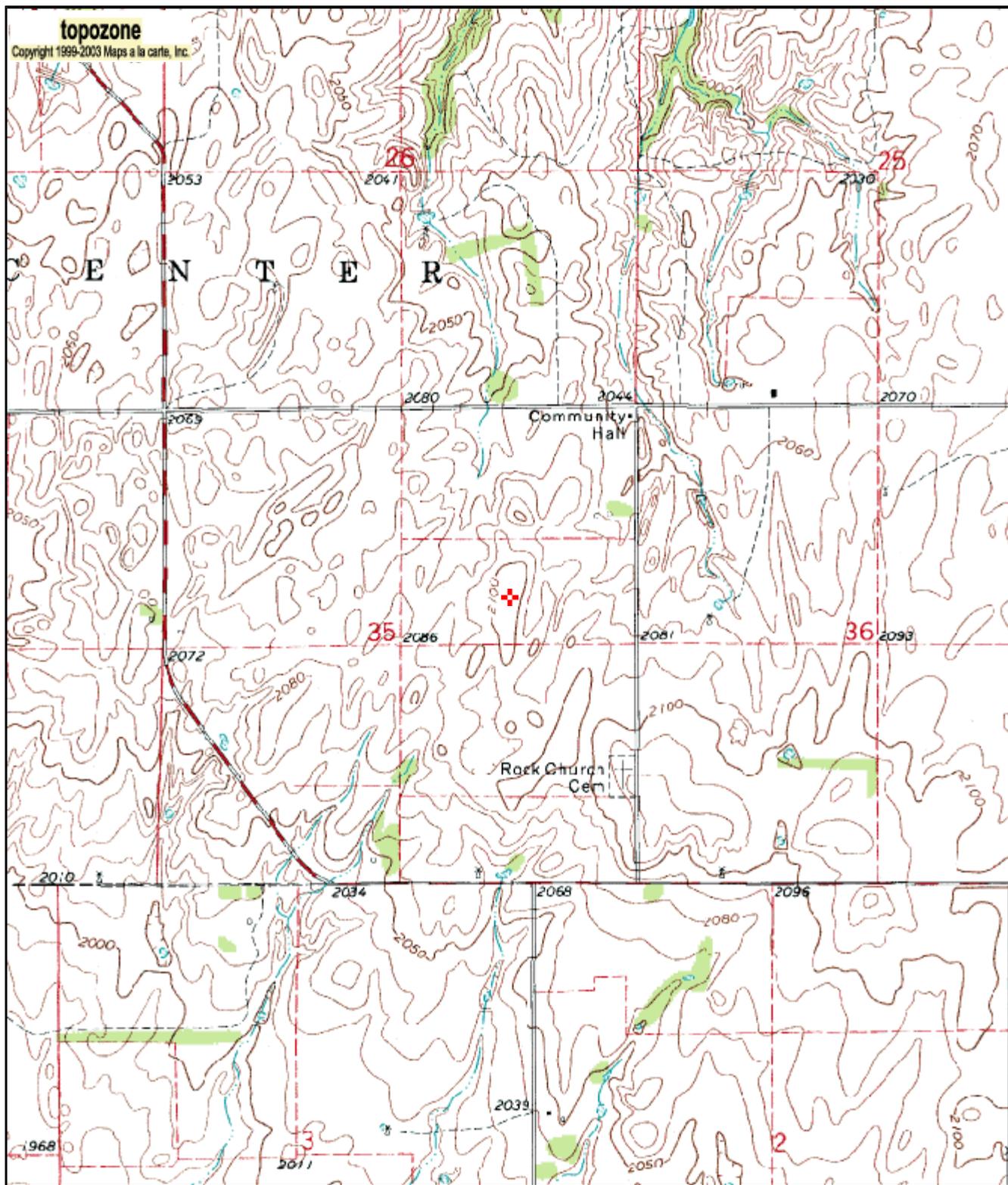
Transmitter Elevation = 641.0 m

Receiver Elevation = 574.1 m

Frequency = 104.5 MHz

Fresnel Zone: 0.6

E-6 Ch. 283C1 Tower Site Topographic Map



0 0.3 0.6 0.9 1.2 1.5 km
0 0.2 0.4 0.6 0.8 1 mi

36° 36' 10"N, 99° 25' 34"W (NAD27)
Elevation 2,102.8 ft / 640.9 m (USGS NED)
USGS Sleeping Bear Creek SW (OK) Quadrangle
Projection is UTM Zone 14 NAD83 Datum

M
G
M=6.541
G=-0.254