

TECHNICAL REPORT

This technical report has been developed in support of a long form 301 application for the Auction 62 channel 283 C1 at Mooreland, OK.

Exhibits provided are:

- E-1 NEW 283 C1 Allocation Spacing Study
- E-2 NEW 283 C1 HAAT Calculation
- E-3 NEW 283 C1 70 dBu Coverage Plot of Mooreland, OK
- E-4 NEW 283 C1 Line of Sight Plot to Mooreland, OK

I. Allocation Analysis:

The data for all terrain utilized in this report were obtained from the V-Soft PROBE 3 computer program, utilizing the NGDC thirty (30) second terrain database. The proposed 70 dBu (50,50) contour and the HAAT were calculated utilizing the same program. An allocation study is provided as Exhibit E-1, demonstrating that the NEW 283 C1 facility will be fully spaced at the proposed site.

II. Site:

The proposed facility is to be located on a new tower at coordinates:

(NAD 27) N 36-30-18 W 99-12-55

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:

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

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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:

A ten bay full-wavelength antenna will be mounted on the proposed tower at a COR AGL of 280 meters. To the applicant's knowledge, no adverse impact will result to any applicable 1.1307 category. Consequently, no environmental statement is provided. The RF contribution for the NEW 283C1 facility was evaluated utilizing the Commission's FMMODEL program at a height 2 meters above ground level is calculated to be 4.51 microwatts/cm² at 67 meters, which is which is less than 5% of the maximum 200 microwatts/cm² permissible for general public exposure.

V. Conclusion:

It is concluded that the Mooreland 283 C1 long form 301 application is in full compliance with Commission rules and policies.



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E-1 NEW 283 C1 Spacing Study

REFERENCE

36 30 18 N.

99 12 55 W.

CLASS = C1

Current Spacings

DISPLAY DATES

DATA 03-08-06

SEARCH 03-08-06

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

Call		Channel	Location		Azi	Dist	FCC	Margin
AP283	APP	283C1	Mooreland	OK	172.9	7.45	244.5	-237.05
AU062	VAC	283C1	Mooreland	OK	172.9	7.45	244.5	-237.05
KFXJ	LIC-Z	283C2	Augusta	KS	49.5	225.35	223.5	1.85
AL285	VAC	285C2	Arnett	OK	232.0	82.64	78.5	4.14
RADD	ADD	281C2	Shattuck	OK	240.7	88.65	78.5	10.15
RADD	ADD	285A	Ringwood	OK	94.3	95.00	74.5	20.50
AU062	VAC	282C3	Granite	OK	184.6	171.90	143.5	28.40
AP282	APP	282C3	Granite	OK	184.6	171.90	143.5	28.40
AL283	VAC	283A	Memphis	TX	209.3	230.67	199.5	31.17
AP282	APP	282C3	Granite	OK	182.2	181.44	143.5	37.94
AL286	VAC	286A	Weatherford	OK	157.6	114.47	74.5	39.97
KVGBFM	LIC	282C1	Great Bend	KS	10.2	217.40	176.5	40.90
RS284	RSV	284C1	Ness City	KS	344.8	224.21	176.5	47.71
KIXR	LIC-N	284C3	Ponca City	OK	80.1	196.34	143.5	52.84
RDEL	DEL	280C2	Wheeler	TX	215.5	135.10	78.5	56.60
NEW .C	CP	284C1	Ness City	KS	349.1	238.72	176.5	62.22
RADD	ADD	283A	Elmore City	OK	143.8	264.22	199.5	64.72
AL280	VAC	280C2	Wheeler	TX	218.6	144.98	78.5	66.48
KQFX	LIC	282C1	Borger	TX	241.6	247.20	176.5	70.70
RDEL	DEL	283A	Wynnewood	OK	137.5	277.61	199.5	78.11
VA283	VAC	283A	Wynnewood	OK	137.5	277.61	199.5	78.11
KIMY	LIC	230A	Watonga	OK	131.6	100.00	21.5	78.50
KMYZFM	LIC	283C1	Pryor	OK	98.5	324.30	244.5	79.80
KHYM	LIC	280C1	Copeland	KS	311.7	163.74	81.5	82.24
KMGL.A	APP	281C	Oklahoma City	OK	123.5	187.90	104.5	83.40
RDEL	DEL	281C	Oklahoma City	OK	123.9	188.33	104.5	83.83
KMGL	LIC	281C	Oklahoma City	OK	123.9	188.33	104.5	83.83
KZQD	LIC	286C2	Liberal	KS	292.3	162.80	78.5	84.30
KIMY.C	CP	230A	Watonga	OK	132.3	109.22	21.5	87.72
KYYI	LIC	284C1	Burkburnett	TX	173.4	269.33	176.5	92.83
KOSB	LIC	286A	Perry	OK	99.6	168.55	74.5	94.05
RADD	ADD	281C0	Oklahoma City	OK	123.9	188.33	93.5	94.83
AL284	VAC	284C	Channing	TX	259.8	306.62	208.5	98.12
WWLSFM	LIC	285A	Bethany	OK	127.5	182.17	74.5	107.67
VA229	VAC	229A	Cordell	OK	171.4	136.33	21.5	114.83
KZRD	LIC	230C1	Dodge City	KS	328.7	186.15	33.5	152.65
KSLE	LIC-N	284A	Wewoka	OK	122.3	288.10	132.5	155.60
KBLP	LIC	286A	Lindsay	OK	139.7	232.36	74.5	157.86
KSPIFM	LIC	229C2	Stillwater	OK	103.1	186.60	26.5	160.10
KDGS	LIC	230C3	Andover	KS	52.9	207.71	23.5	184.21
KREK	LIC	285A	Bristow	OK	107.1	260.50	74.5	186.00
KBVL	LIC	280A	Pawhuska	OK	83.2	262.38	74.5	187.88
AL281	VAC	281C2	Childress	TX	200.8	271.68	78.5	193.18

E-2 NEW 283 C1 HAAT Calculation

N. Lat. = 36 30 18 W. Lng. = 99 12 55

HAAT and Distance to Contour - FCC Method - 30 Arc Sec.

AP283 , Trissel, Brooke W, BSFH20050812AXB

Azi. AV EL HAAT ERP kW dBk Field 60-F5

000	601.2	288.8	100.0000	20.00	1.000	71.49
045	574.7	315.3	100.0000	20.00	1.000	73.53
090	560.2	329.8	100.0000	20.00	1.000	74.60
135	590.3	299.7	100.0000	20.00	1.000	72.36
180	569.5	320.5	100.0000	20.00	1.000	73.91
225	587.2	302.8	100.0000	20.00	1.000	72.59
270	612.1	277.9	100.0000	20.00	1.000	70.58
315	628.9	261.1	100.0000	20.00	1.000	69.17

Ave El= 590.51 M HAAT= 299.49 M AMSL= 890 M

NEW 283

BSFH20050812AXB

Latitude: 36-30-18 N

Longitude: 099-12-55 W

ERP: 100.00 kW

Channel: 283

Frequency: 104.5 MHz

RCAMSL Height: 890.0 m

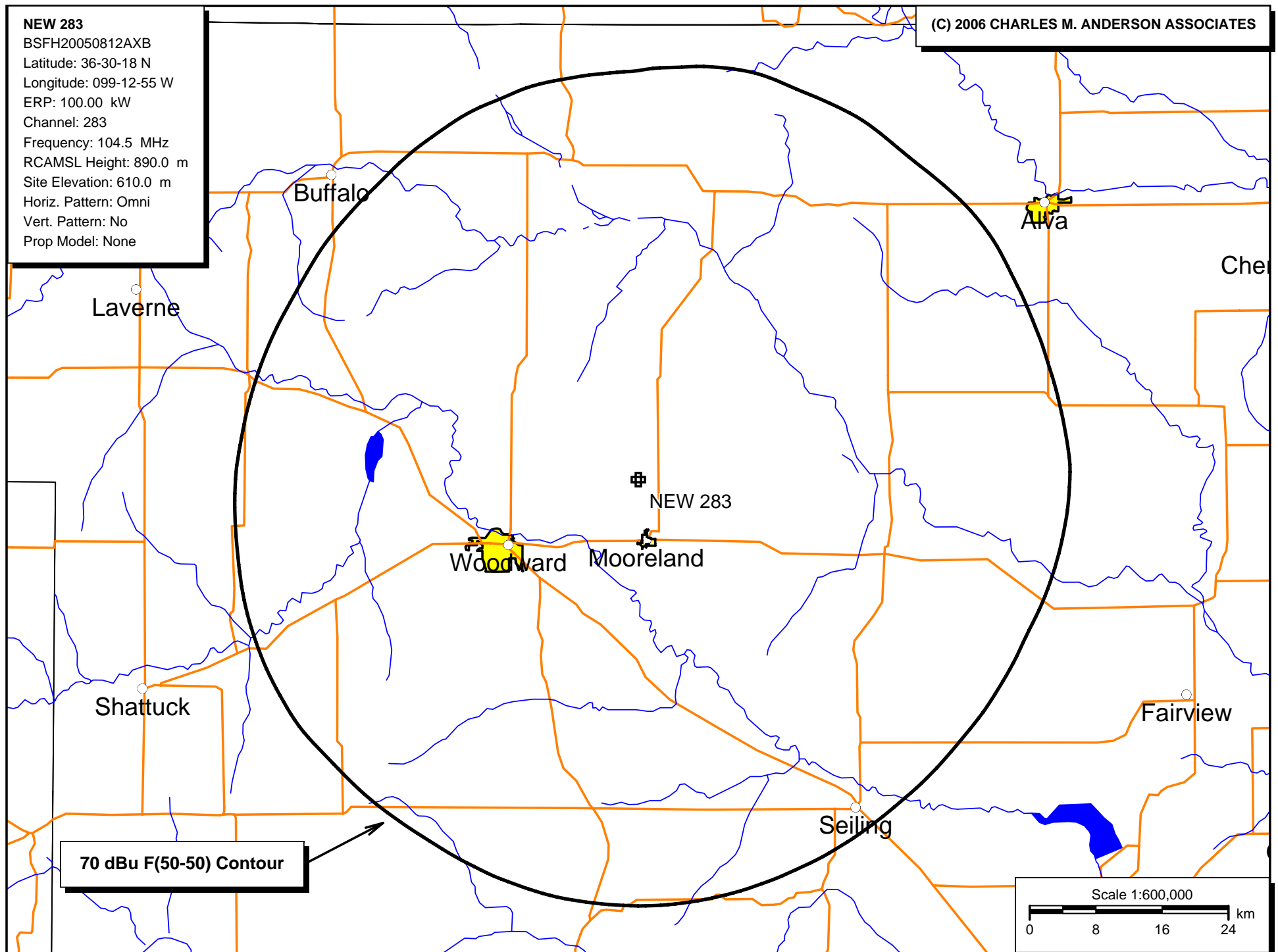
Site Elevation: 610.0 m

Horiz. Pattern: Omni

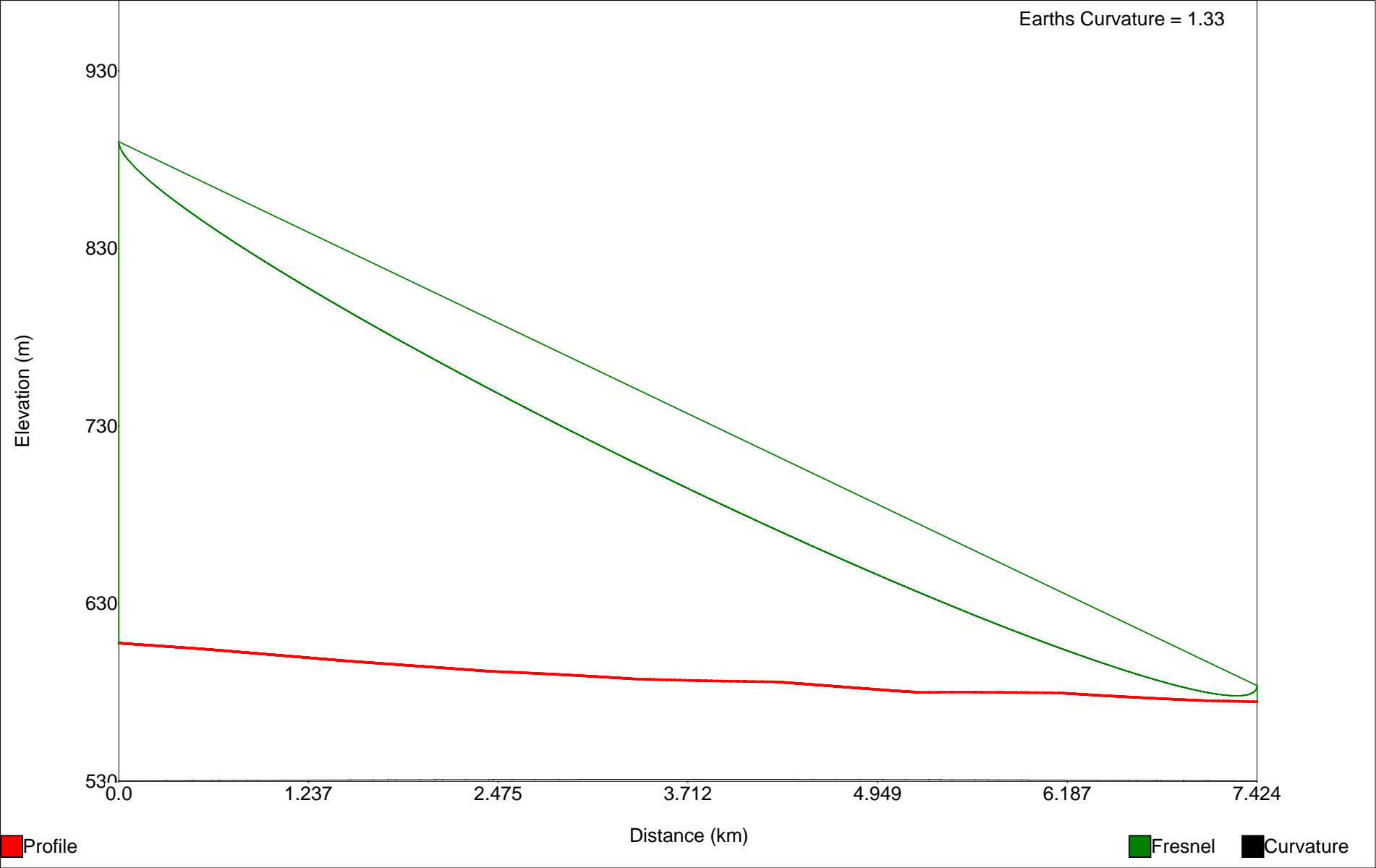
Vert. Pattern: No

Prop Model: None

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E-4 NEW 283 C1 Line of Sight Plot



Starting Latitude: 36-30-18 N
Starting Longitude: 099-12-55 W

End Latitude: 36-26-19 N
End Longitude: 099-12-18 W

Distance: 7.424213817 km
Bearing: 172.870 deg

Transmitter Height (AG) = 280 m
Receiver Height (AG) = 9.1 m

Transmitter Elevation = 610 m
Receiver Elevation = 574.5 m

Frequency = 104.5 MHz
Fresnel Zone: 0.6

[illegible]

$M=6.406$
 $G=-0.128$