

## **KLQQ(FM) Minor Modification Application**

This technical report is submitted for an amendment to the pending application for KLQQ(FM) 285C0 at Clearmont, WY to the non-adjacent, same class move to channel 272C0, FCC file no. BPH-20110428AAP. Changes to a new tower and antenna are requested.

The following exhibits are provided for the form 301 minor application:

- E-1 KLQQ(FM) Spacing Study
- E-2 Interference Plot to KHOC(FM) 273C
- E-3 Fully Spaced Reference Spacing Study
- E-4 Reference Plot to Clearmont, WY Community of License
- E-5 HAAT Calculation
- E-6 70 dBu Coverage Plot to Clearmont, WY
- E-7 New Tower Site Topographic Map
- E-8 TOWAIR Determination

### **KLQQ(FM) Modification Analysis:**

Exhibit E-1 shows the KLQQ(FM) move to channel 272C0 at a new tower site will be short spaced to KHOC(FM) 273C at Casper, WY, FCC facility I.D. 15925. As a result, it is requested the modification of KLQQ(FM) to channel 272C0 is to be designated as a 73.215 facility.

The plot in exhibit E-2 demonstrates the modification will not cause any interference overlap to KHOC(FM) 273C at its maximum class parameters. Exhibits E-3 and E-4 show a reference point where KLQQ(FM) at channel 272C0 will be fully spaced, and cover the Clearmont, WY community of license.

# Anderson Associates

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## **KLQQ(FM) Facility:**

The KLQQ(FM) modification to channel 272C0 is to be relocated to a new 150 foot, 46 meter, self-supporting tower at coordinates:

**44-37-24N 107-07-02W NAD27.**

The modified KLQQ facility will operate at a COR AGL of 36 meters, HAAT of 366 meters (exhibit E-5) using a Shively 6814 eight bay 0.9 wavelength spaced antenna at 100 kW ERP. KLQQ(FM) will continue to place a 70 dBu contour over the Clearmont, WY community of license (exhibit E-6). A topographic map and TOWAIR determination of the new tower are included in exhibits E-7 and E-8.

## **RF Calculation:**

The RF calculation was determined using the FCC FMModel program. At a COR AGL of 36 meters, 100 kW ERP for the Shively antenna, the resulting RF is 34.76  $\mu\text{W}/\text{cm}^2$  at a distance of 16 meters from the tower, which is well below the maximum 200  $\mu\text{W}/\text{cm}^2$  maximum for general public exposure.

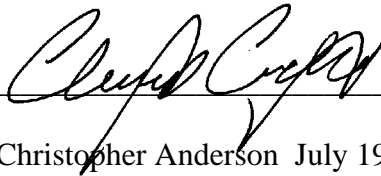
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## **Conclusion:**

It is concluded the amendment to KLQQ(FM) at channel 272C0 is in full compliance with the Commission rules and policies.

A handwritten signature in black ink, appearing to read 'Christopher Anderson', is written over a horizontal line.

Christopher Anderson July 19, 2011  
andersce@bham.rr.com

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# E-1 KLQQ Spacing Study

## REFERENCE

44 37 24.0 N.  
107 07 02.0 W.

CLASS = C0

Current Spacings to 3rd Adj.

## DISPLAY DATES

DATA 07-18-11

SEARCH 07-19-11

----- Channel 272 - 102.3 MHz -----

Call	Channel	Location		Azi	Dist	FCC	Margin
KLQQ	RSV-A 272C0	Clearmont	WY	138.3	0.2	269.5	-269.3
KLQQ	APP 272C0	Clearmont	WY	138.3	0.2	269.5	-269.3
KHOC	LIC 273C	Casper	WY	162.4	218.8	219.5	-0.7(1)
KDNO	LIC-N 269C1	Thermopolis	WY	208.3	149.2	93.5	55.7
KXWY	LIC-D 275C1	Hudson	WY	208.4	149.4	93.5	55.9
KRSQ	LIC 270C1	Laurel	MT	320.9	164.7	93.5	71.2
KCTR-FM	LIC 275C1	Billings	MT	321.0	164.9	93.5	71.4

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(1) KLQQ(FM) at channel 272C0 is to be designated as a 73.215 facility.

# E-2 KLQQ(FM) Interference to KHOC(FM) Max. Class

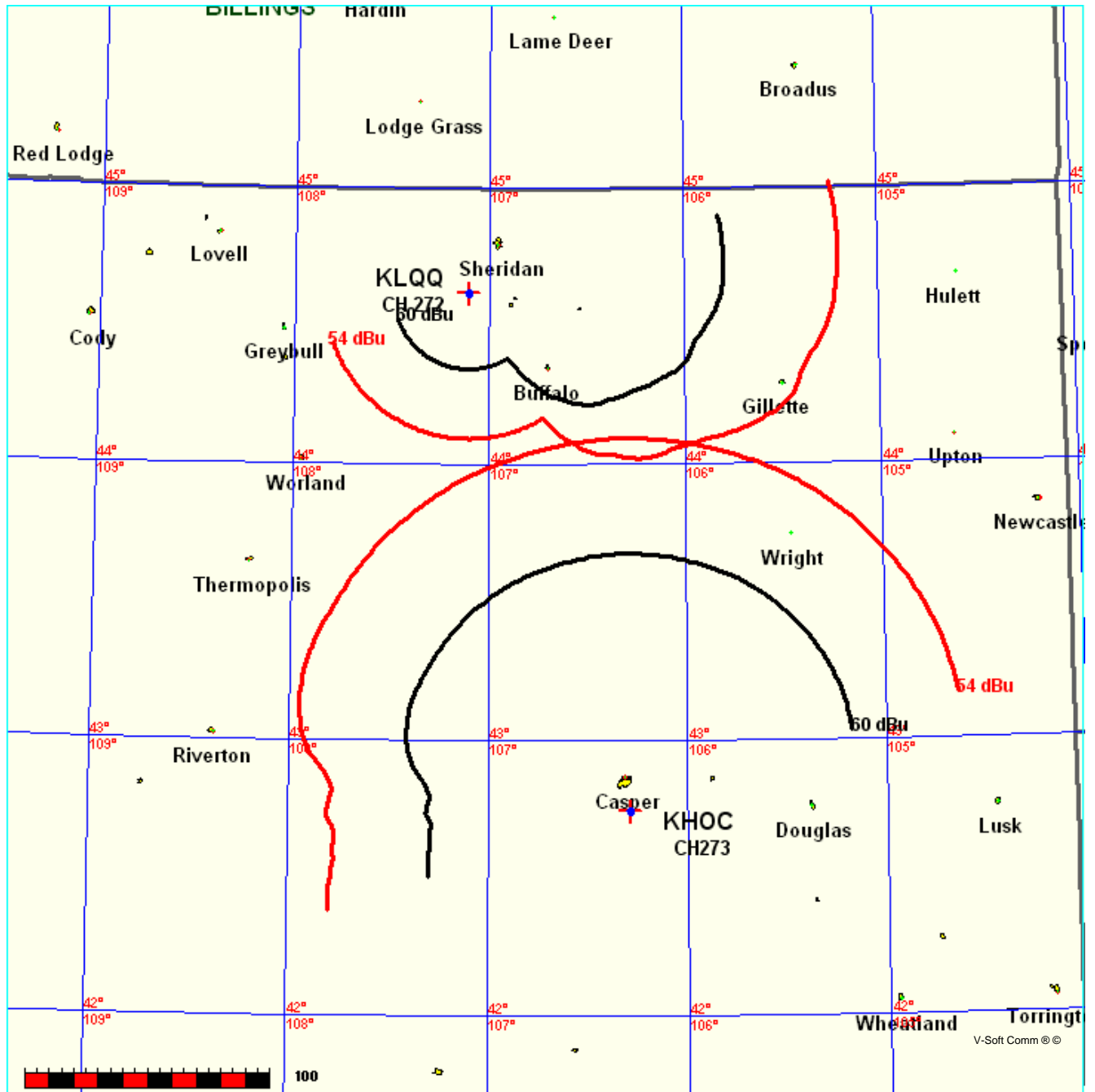
FMCommander Single Allocation Study - 07-19-2011 - FCC NGDC 30 Sec

KLQQ CH 272 C0

Lat= 44 37 24.0, Lng= 107 07 02.0  
100.0 kW 366 M HAAT, 2377 M COR  
Prot.= 60 dBu, Intef.= 54 dBu

KHOC^ CH 273 C BLH20000407ADB

Lat= 42 44 37.0, Lng= 106 18 31.0  
Max Cls: 100.0 kW 600 M HAAT, 2558 M COR  
Prot.= 60 dBu, Intef.= 54 dBu



# E-3 KLQQ(FM) Reference Spacing

## REFERENCE

44 41 25.0 N.  
106 53 22.0 W.

CLASS = C0

Current Spacings to 3rd Adj.

## DISPLAY DATES

DATA 07-18-11

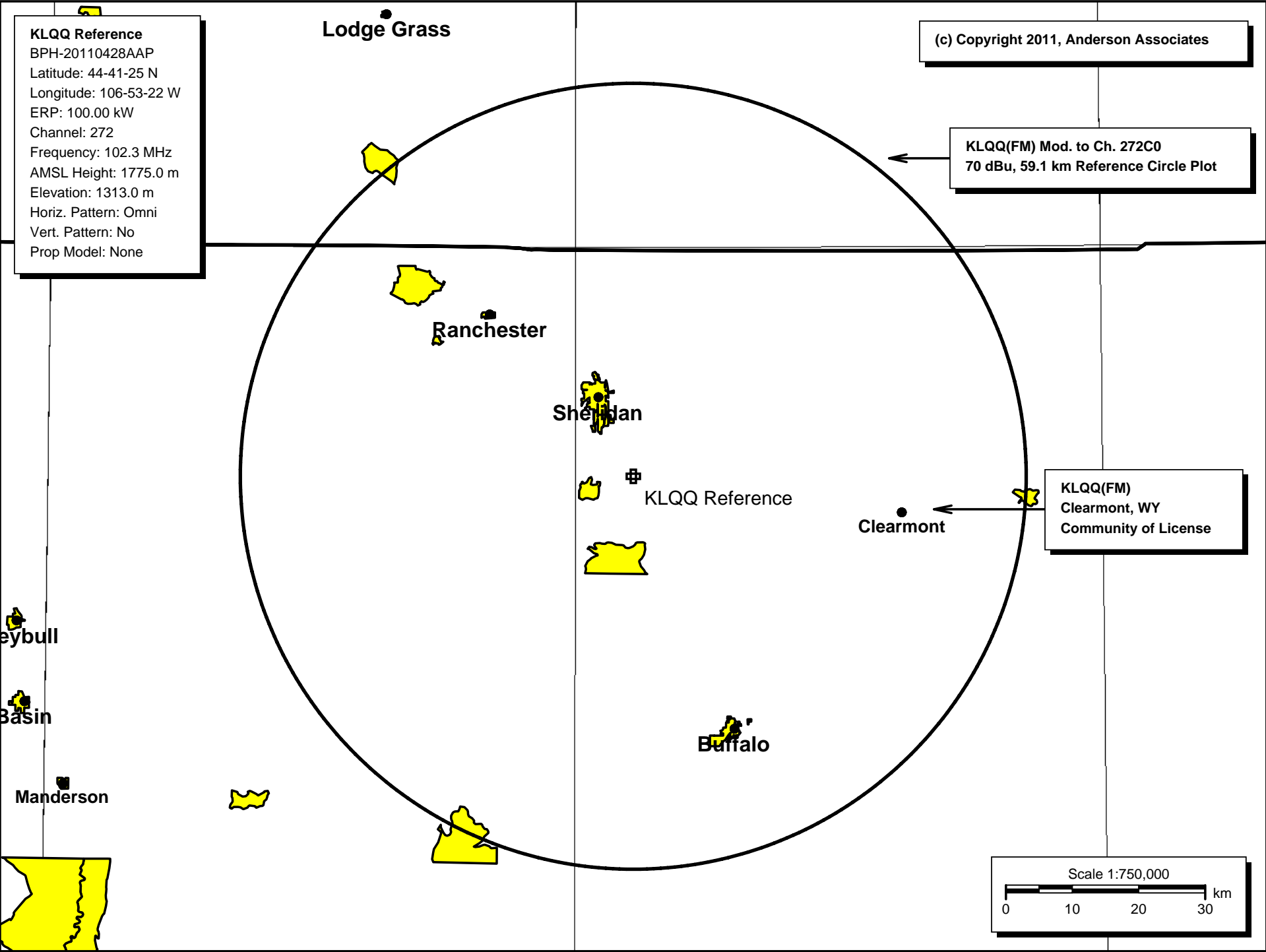
SEARCH 07-19-11

----- Channel 272 - 102.3 MHz -----

Call		Channel	Location		Azi	Dist	FCC	Margin
KLQQ	APP	272C0	Clearmont	WY	247.2	19.5	269.5	-250.0
KLQQ	RSV-A	272C0	Clearmont	WY	247.2	19.5	269.5	-250.0
KHOC	LIC	273C	Casper	WY	167.6	221.3	219.5	1.8
KDNO	LIC-N	269C1	Thermopolis	WY	212.7	164.9	93.5	71.4
KXWY	LIC-D	275C1	Hudson	WY	212.8	165.0	93.5	71.5
KRSQ	LIC	270C1	Laurel	MT	314.8	171.3	93.5	77.8
KCTR-FM	LIC	275C1	Billings	MT	314.9	171.5	93.5	78.0
KNDH	LIC	272C1	Hettinger	ND	63.8	352.9	258.5	94.4

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E-4 KLQQ(FM) Reference 70 dBu Plot



## E-5 KLQQ(FM) HAAT Calculation

N. Lat. = 443724 W. Lng. = 1070702

HAAT and Distance to Contour,

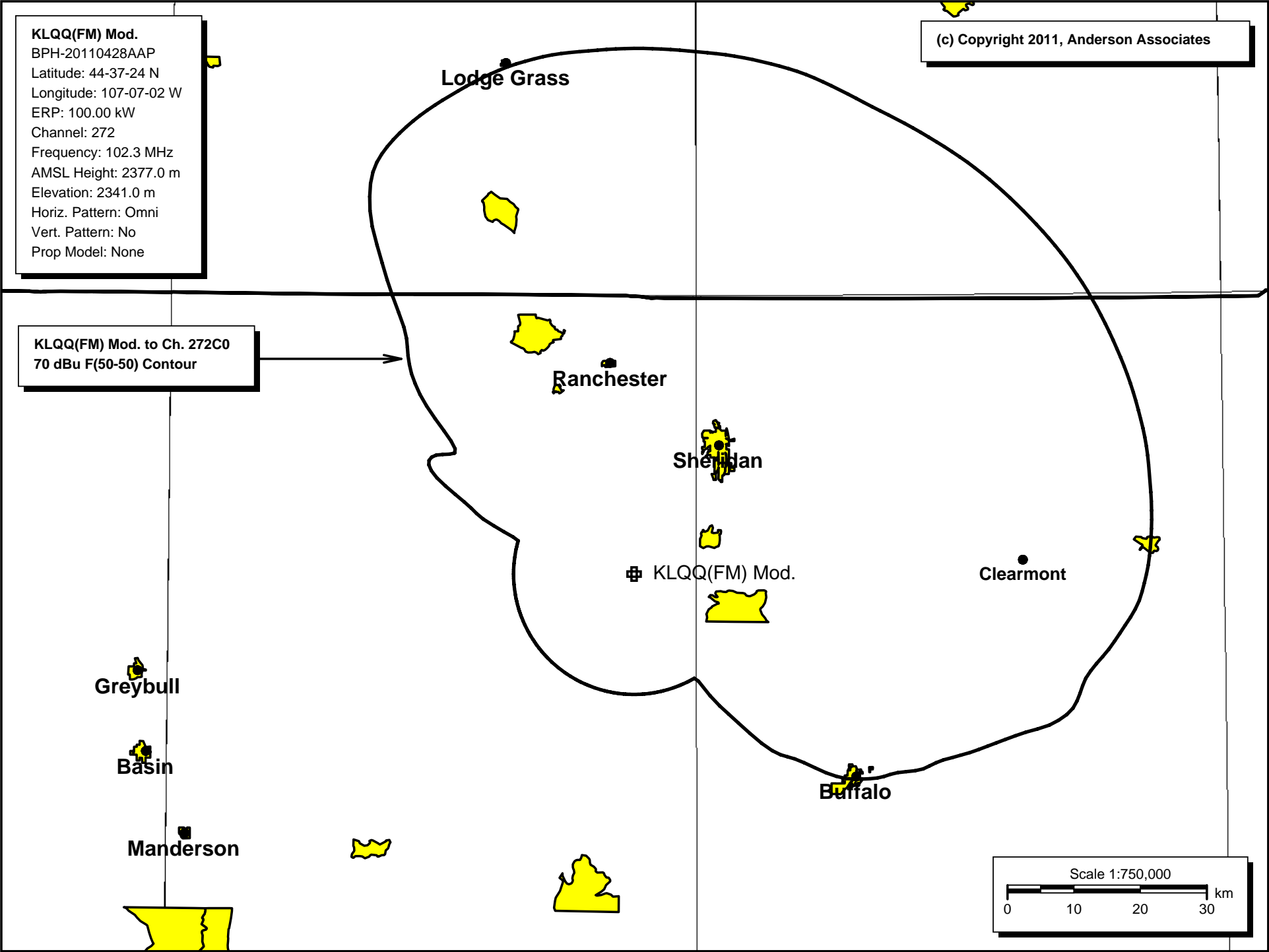
FCC, FM 2-10 Mi, 51 pts Method - FCC 30 SEC

Azi.	AV EL	HAAT	dBk	60-F5
000	1399.3	977.7	20.00	105.25
045	1353.0	1024.0	20.00	106.37
090	1492.2	884.8	20.00	102.66
135	2177.2	199.8	20.00	63.78
180	2614.8	-237.8	20.00	30.97
225	2518.6	-141.6	20.00	30.97
270	2425.6	-48.6	20.00	30.97
315	2104.7	272.3	20.00	70.11

Ave El= 2010.68 M HAAT= 366.32 M AMSL= 2377 M



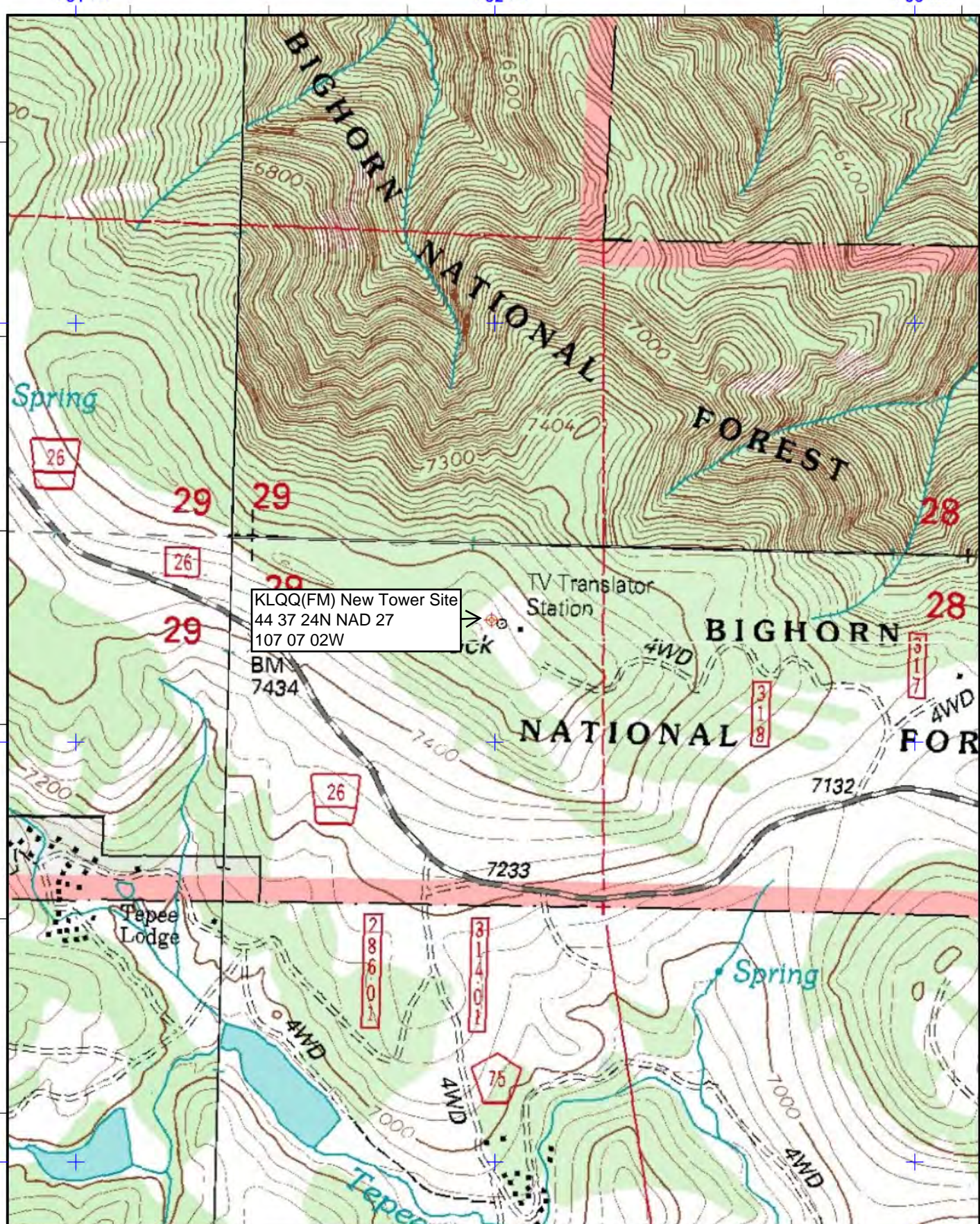
E-6 KLQQ(FM) Mod. 70 dBu Coverage Plot





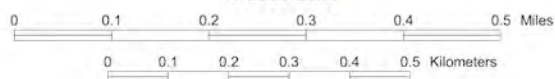
107°7'45" 107°7'30" 107°7'15" 107°7' 107°6'45" 107°6'30" 107°6'15"

3 31 000 3 32 000 3 33 000



Universal Transverse Mercator (UTM) Projection Zone 13  
North American Datum of 1983  
1000 meter UTM / USNG / MGRS  
Grid Zone Designation: 13T  
100,000-m Squares:CK

1:12500 scale



Magnetic declination of 11E at center of map  
on March 17, 2011



TOWAIR Determination Results

\*\*\* NOTICE \*\*\*

TOWAIR's findings are not definitive or binding, and we cannot guarantee that the data in TOWAIR are fully current and accurate. In some instances, TOWAIR may yield results that differ from application of the criteria set out in 47 C.F.R. Section 17.7 and 14 C.F.R. Section 77.13. A positive finding by TOWAIR recommending notification should be given considerable weight. On the other hand, a finding by TOWAIR recommending either for or against notification is not conclusive. It is the responsibility of each ASR participant to exercise due diligence to determine if it must coordinate its structure with the FAA. TOWAIR is only one tool designed to assist ASR participants in exercising this due diligence, and further investigation may be necessary to determine if FAA coordination is appropriate.

DETERMINATION Results

**Structure does not require registration. There are no airports within 8 kilometers (5 miles) of the coordinates you provided.**

Your Specifications

NAD83 Coordinates

Latitude	44-37-24.0 north
Longitude	107-07-04.0 west

Measurements (Meters)

Overall Structure Height (AGL)	46
Support Structure Height (AGL)	0
Site Elevation (AMSL)	2341

Structure Type

TOWER - Free standing or Guyed Structure used for Communications Purposes

[Tower Construction Notifications](#)

Notify Tribes and Historic Preservation Officers of your plans to build a tower.

CLOSE WINDOW