

*
*
*

2355 Ranch Drive*Westminster, CO 80234
303-465-5742 * FAX 303-465-4067
e-mail: stcl@comcast.net

B. W. St. Clair

ENGINEERING STATEMENT IN SUPPORT OF AN
APPLICATION TO MODIFY BPCDT-19991020ACM
KFNR-DT, FI 21612, CHANNEL 09, RAWLINS, WY

Introduction

This application requests a change from a non-directional antenna to a directional pattern and a height reduction of 13.9 m. With the proposed parameters the interference contours to both analog and digital full service and Class A stations are within the interference contours of the construction permit.

Environmental Assessment

The station will operate using the existing tower KFNR analog equipment building. There is no construction and consequently no associated environmental impact.

There are two contributors to non-ionizing radiation at ground level in the vicinity of this station.¹ The digital station which is the subject of this application contributes 5.1% of the allowable public limit at an angle of 70° below horizontal. KFNR analog, Ch 11 will remain in operation until the transition and contributes 2.4% of the allowable public limit. The total is 7.5% of the allowable level, and no ground level precautions are required. When the analog station ceases operation the non-ionizing radiation at ground level will drop to 5.1%.

The applicant recognizes its responsibility to reduce the transmitter power to a safe limit when any work is done on the tower above ground.

Required Coverage of the Principal Community

The 43 dBμ F50/90 contour extends well beyond the principal community of Rawlins, WY. This is demonstrated in the attached contour plot.

¹ The non-ionizing radiation has been calculated in accordance with OET Bulletin 65. The distance was taken from the radiation center to a head height of 2 meters above ground.

Covered Population

The population within the noise limited contour for the application is 33,847 compared to 33,914 for the parameters in Appendix B and 33,933 for the construction permit. The reduction in population is less than 0.3% in both instances.

Allocation Considerations

The underlying CP is a "check list" facility. The cochannel and adjacent channel interference contours are totally contained within the corresponding contours of the CP. If there were interference to any other digital station it would be reduced. However, an outgoing interference analysis shows that there is no impact to any full service digital station or any Class A station, analog or digital.

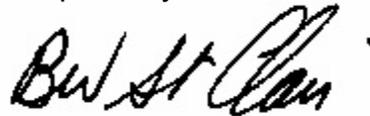
Protected Installations

The nearest FCC monitoring station is at Grand island, NE. The spacing is 715 km and protection based on this distance is automatic. The only radio astronomy facility that needs consideration is "Table Mountain" in Boulder, CO. The nearest edge of this facility is 245 km, substantially exceeding the culling distance for notification of 80 km.

Consultants Declaration

This "Engineering Statement" is based on information supplied by the antenna manufacturer, and the applicant. Interference determinations were made using the Techware supplied version of the FCC's OET Bulletin 69 interference analysis program. The contour plot was prepared using the V-Soft Probe III software. The results and statements presented herein are true and correct to the best of my knowledge and belief.

Respectfully submitted

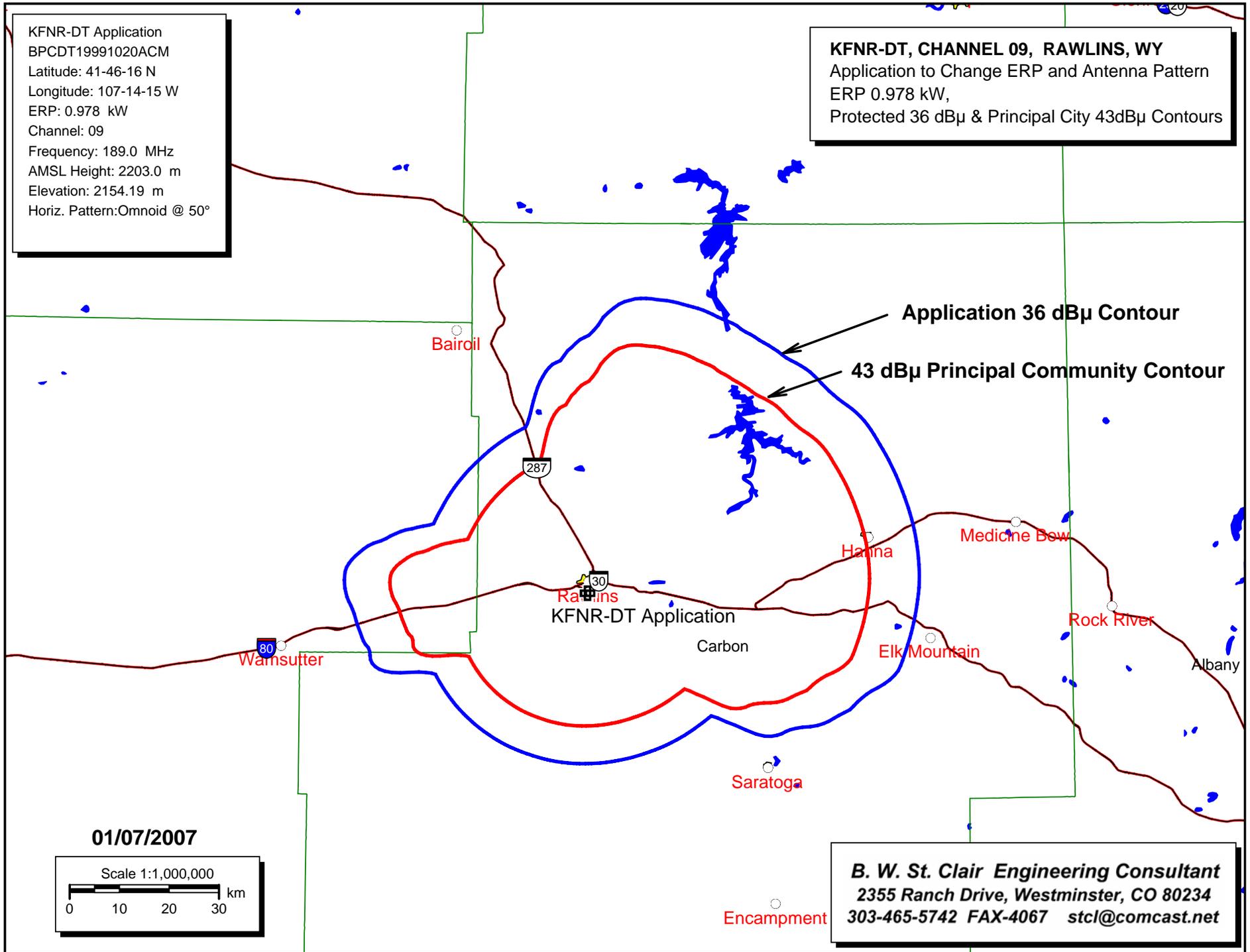


B. W. St. Clair
Engineering Consultant

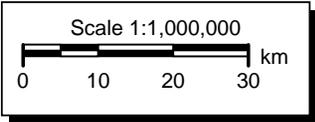
January 09, 2008

KFNR-DT Application
BPCDT19991020ACM
Latitude: 41-46-16 N
Longitude: 107-14-15 W
ERP: 0.978 kW
Channel: 09
Frequency: 189.0 MHz
AMSL Height: 2203.0 m
Elevation: 2154.19 m
Horiz. Pattern: Omnid @ 50°

KFNR-DT, CHANNEL 09, RAWLINS, WY
Application to Change ERP and Antenna Pattern
ERP 0.978 kW,
Protected 36 dB μ & Principal City 43dB μ Contours



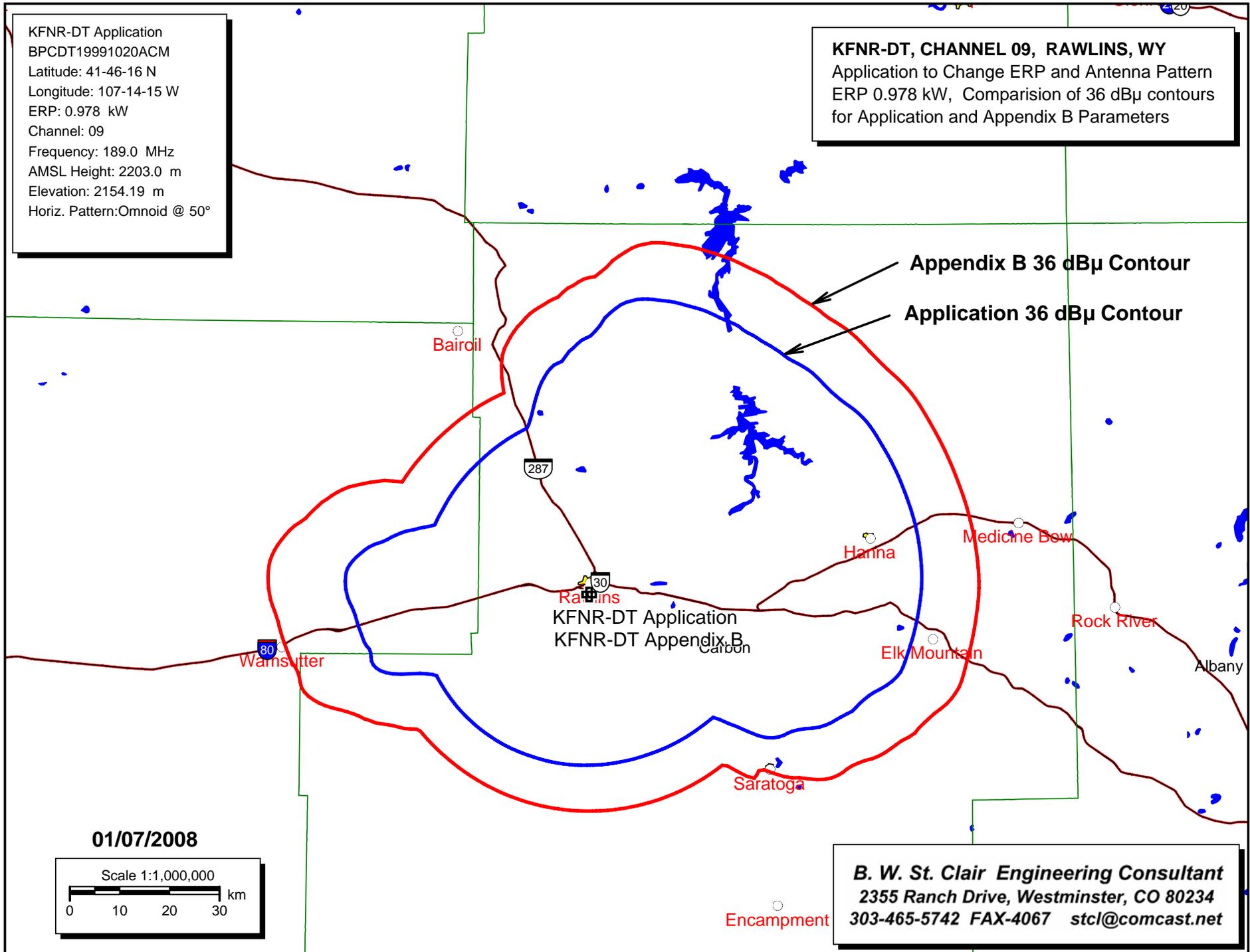
01/07/2007



B. W. St. Clair Engineering Consultant
2355 Ranch Drive, Westminster, CO 80234
303-465-5742 FAX-4067 stcl@comcast.net

KFNR-DT Application
BPCDT19991020ACM
Latitude: 41-46-16 N
Longitude: 107-14-15 W
ERP: 0.978 kW
Channel: 09
Frequency: 189.0 MHz
AMSL Height: 2203.0 m
Elevation: 2154.19 m
Horiz. Pattern: Omnid @ 50°

KFNR-DT, CHANNEL 09, RAWLINS, WY
Application to Change ERP and Antenna Pattern
ERP 0.978 kW, Comparison of 36 dBμ contours
for Application and Appendix B Parameters



Appendix B 36 dBμ Contour

Application 36 dBμ Contour

01/07/2008

Scale 1:1,000,000



B. W. St. Clair Engineering Consultant
2355 Ranch Drive, Westminster, CO 80234
303-465-5742 FAX-4067 stcl@comcast.net