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B. W. St. Clair, Inc.

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**Engineering Statement**  
in support of a  
**Digital Companion Channel Application for BLTTV-4646**  
**Channel 08, Conrad, MT**  
**Conrad Television District**

**BACKGROUND**

Applicant has an analog translator station operating on channel 08 currently (K08DT) in Conrad, MT. Conrad Television District is applying for a digital companion channel on channel 18 at the same site. The applicant plans to file for STAs so operations on channel 18 can begin immediately. The ERP will be 0.373 kW with a directional panel antenna system. The translator system plan is to combine all four UHF-TV transmitters (Channels 16, 18, 23, and 25) into the two-bay panel antenna.

**INTERFERENCE CONSIDERATIONS**

Interference to the various TV stations was studied using "Population Loss Studies" based on the "Longley-Rice Terrain Dependent Algorithm" in accordance with OET Bulletin 69.<sup>1</sup> Population loss for each station is less than 0.5% for full-service and Class A TV stations and less than 2% for LPTV and translator stations. Cell size for service analysis is 1.0 km/side. The distance increments for Longley-Rice Analysis is 1.0 km. Any discrepancies are noted below.

FULL SERVICE DTV & LPTV STATIONS  
NONE

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<sup>1</sup> The analysis was performed on a Sun "Blade" Computer using the exact replica of the FCC program. Population losses of less than 0.5% are not reported in detail. Only an indication of no interference is shown.