

TECHNICAL EXHIBIT  
APPLICATION FOR DTV CONSTRUCTION PERMIT  
IN SUPPORT OF ITS POST-TRANSITION FACILITY  
STATION KPIF-DT (FACILITY ID 86205)  
POCATELLO, IDAHO

MARCH 3, 2008

CH 15 251 KW (MAX-DA) 327 M

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Table of Contents

Technical Narrative

Figure 1	Antenna and Supporting Structure
Figure 2	Proposed Antenna Patterns
Figure 3	Predicted FCC Coverage Contours
Figure 4	OET-69 Interference Analysis

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Technical Narrative

This Technical Exhibit supports an application to “flash-cut” to digital operation for television station KPIF at Pocatello, Idaho. This application requests a construction permit (CP) for a digital television operation on channel 15, using its existing analog directional antenna. Thus, KPIF-DT is requesting processing under the “5 mile waiver” procedure to allow recovery of its noise-limited service up to the Grade B contour.

Proposed Facilities

Station KPIF-DT proposes to operate DTV channel 15 from its analog transmitter site and antenna, with a maximum directional effective radiated power (ERP) of 251 kilowatts and antenna height above average terrain (HAAT) of 327 meters (same as analog HAAT). The transmitter site coordinates are:

42° 51' 50" North Latitude  
112° 31' 10" West Longitude

A sketch of antenna and pertinent elevations are included as Figure 1. Figure 2 depicts the proposed antenna patterns.

Figure 3 is a map showing the DTV predicted coverage contour and the associated analog Grade B coverage contour. The extent of the contour has been calculated

using the normal FCC prediction method. The Pocatello city limits were derived from information contained in the 2000 U.S. Census of Population and Housing.

### Population Served

The herein proposed KPIF-DT facility is predicted to serve 217,371 persons, post-transition, based upon the 2000 Census. KPIF-DT's associated Appendix B facility is predicted to serve 216,141 persons. Therefore, the herein proposed KPIF-DT facility would serve more than 100% of KPIF-DT's Appendix B population.

### Allocation Considerations

Since the proposed KPIF-DT ERP exceeds the Commission's *Appendix B* allocated maximum effective radiated power in some azimuthal directions<sup>1</sup>, an allocation study was completed to ensure no prohibited interference would occur. The proposed KPIF-DT operation meets the FCC's post-transition interference standards to pertinent Class A and DTV allotments using the procedures outlined in the FCC's OET-69 Bulletin and a 2 kilometer grid cell size. The results of the interference analyses are summarized in Figure 4.

### Radiofrequency Electromagnetic Field Exposure

The proposed KPIF-DT facilities were evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. The radiation center for the proposed DTV antenna is located 80 meters above ground level with a maximum ERP of 251 kW. A conservative relative field value of 0.1 was assumed for the calculation (see Figure 2). The calculated power density at a point 2 meters above ground level will not exceed 0.014 mW/cm<sup>2</sup>. This is less than 5% of the FCC's recommended limit of 0.32 mW/cm<sup>2</sup> for channel 15 for an "uncontrolled" environment.

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<sup>1</sup> See Seventh Report And Order And Eighth Further Notice Of Proposed Rule Making in the Matter of Advanced Television Systems and their Impact Upon the Existing Television Broadcast Service, MB Docket 87-268, Released August 6, 2007; Adopted August 1, 2007.

Access to the transmitting site will be restricted and appropriately marked with warning signs. In the event that workers or other authorized personnel enter restricted areas or climb the tower, appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, wearing "accepted" RFR protective clothing and/or RFR exposure monitors or scheduling work when the station is at reduced power or shut down. The proposed KPIF-DT operation appears to be otherwise categorically excluded from environmental processing.

It is noted that this statement only addresses the potential for radiofrequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be or already have been provided to the FCC by the tower owner.



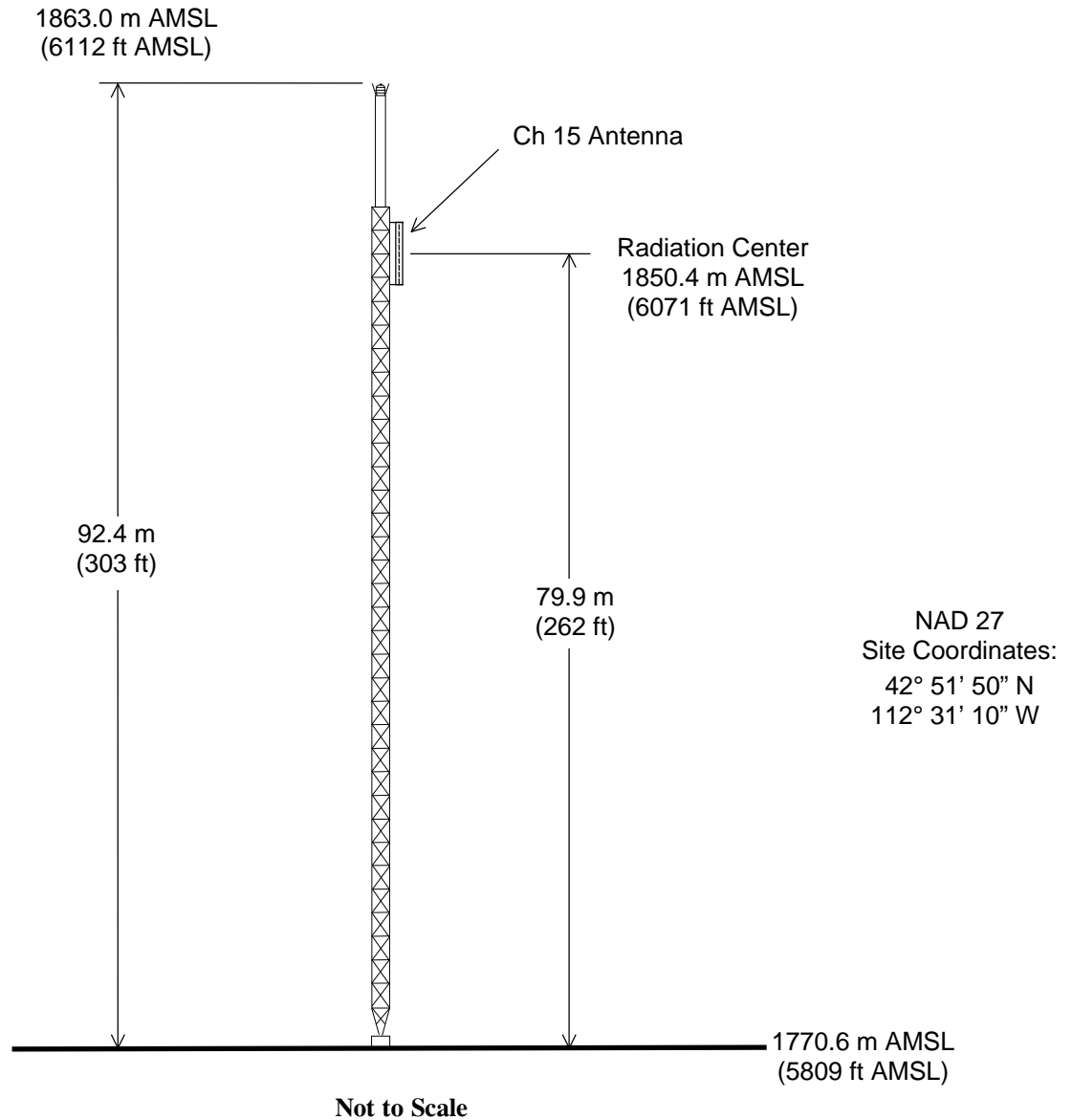
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March 3, 2008



Registration No. 1239956



## ANTENNA AND SUPPORTING STRUCTURE

STATION KPIF-DT

POCATELLO, IDAHO

CH 15 251 KW (MAX-DA) 327 M

du Treil, Lundin &amp; Rackley, Inc. Sarasota, Florida



Proposal Number	1158:6:204506	Revision:	3
Date	4-Sep-03		
Call Letters		Channel	15
Location	Pocatello, ID		
Customer			
Antenna Type	TFU-31JSC-R 3BP285		

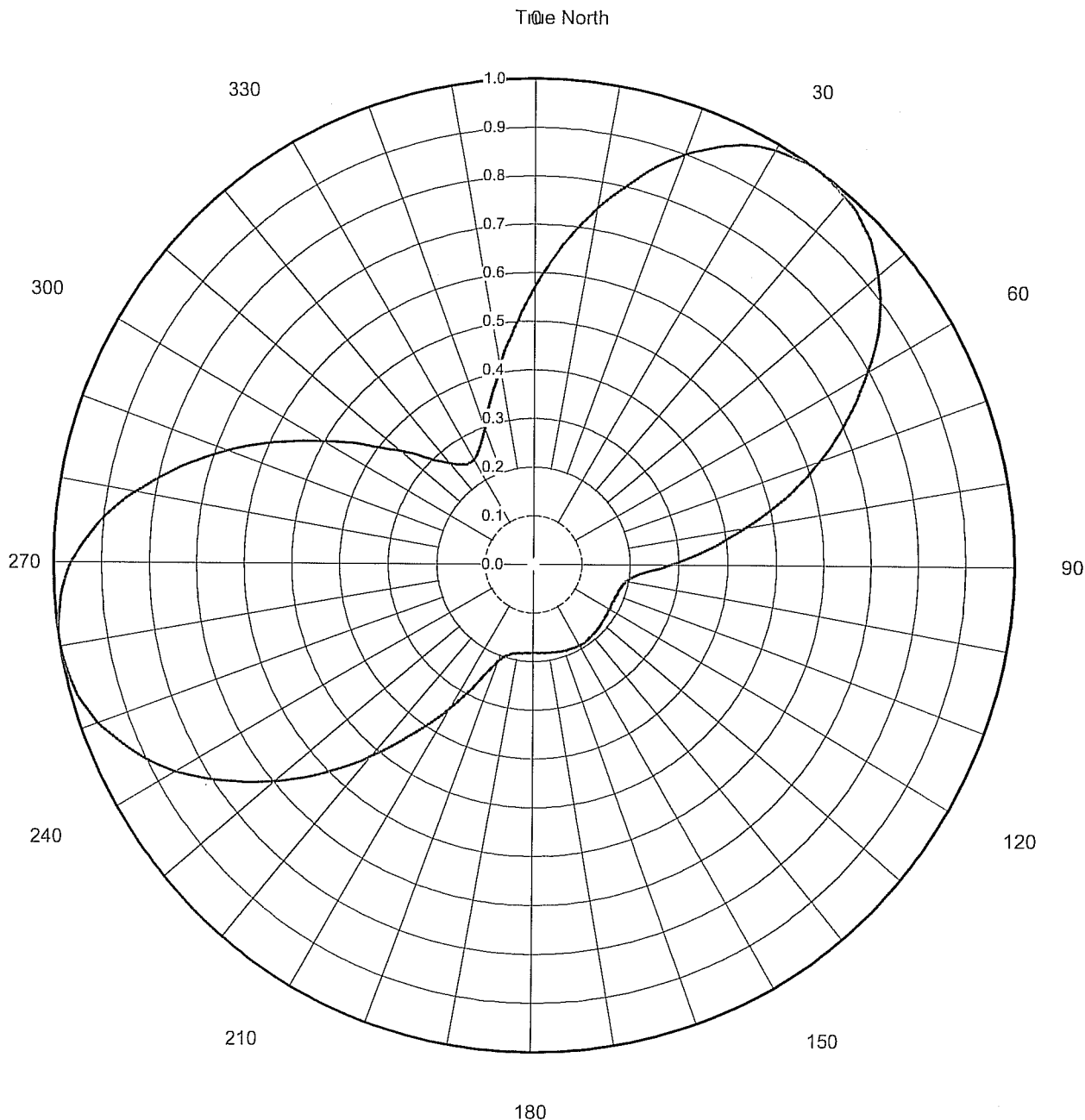
### AZIMUTH PATTERN

Gain **2.85**  
Calculated / Measured

( **4.55 dB** )  
**Calculated**

Frequency  
Drawing #

**479.00 MHz**  
**TFU-3BP285-15**

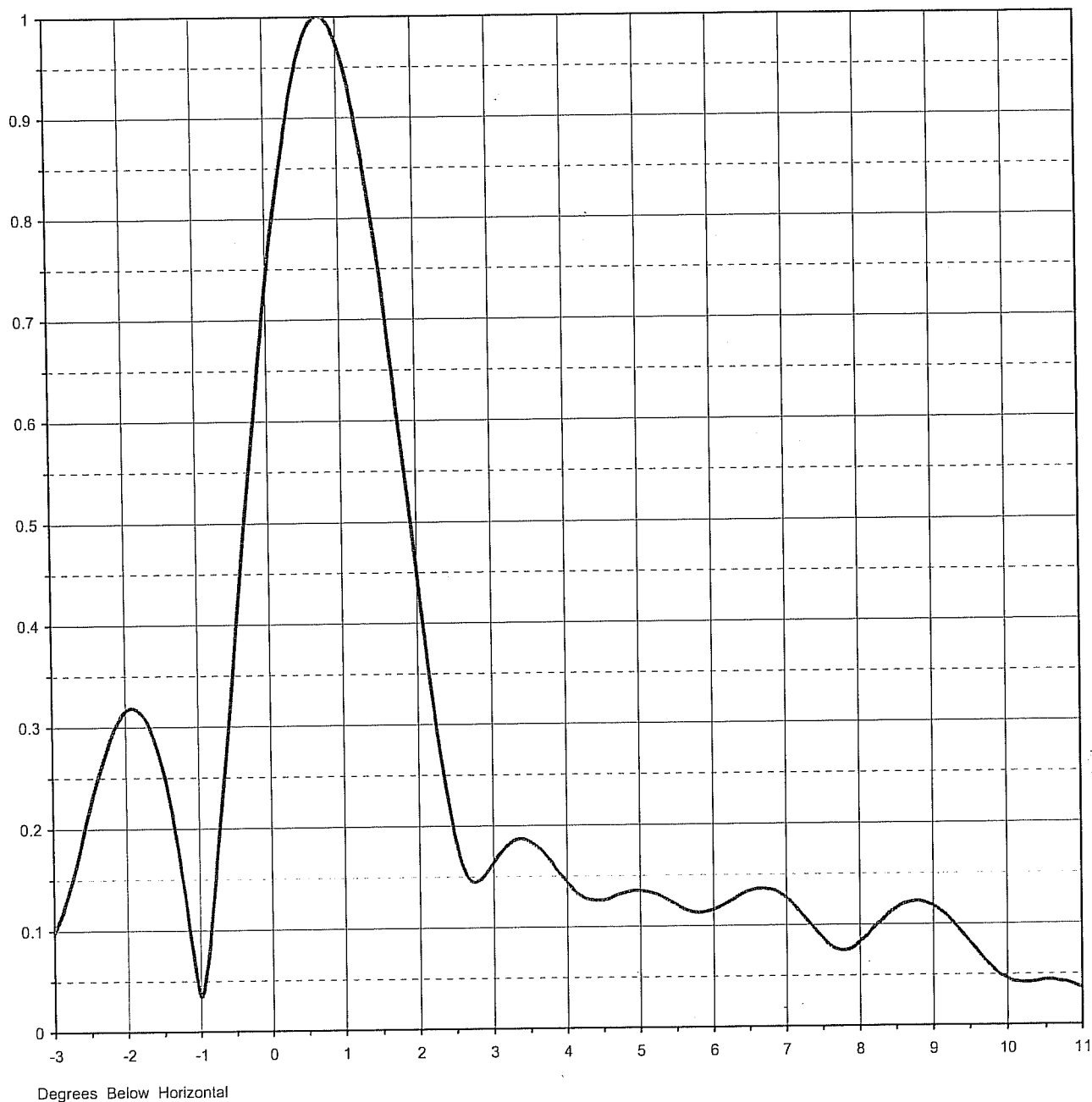




Proposal Number	1158:6:204506	Revision:	3
Date	4-Sep-03		
Call Letters		Channel	15
Location	Pocatello, ID		
Customer			
Antenna Type	TFU-31JSC-R 3BP285		

### ELEVATION PATTERN

RMS Gain at Main Lobe	27.90 (14.46 dB)	Beam Tilt	0.75 deg
RMS Gain at Horizontal	15.10 (11.79 dB)	Frequency	479.00 MHz
Calculated / Measured	Calculated	Drawing #	31Y279075



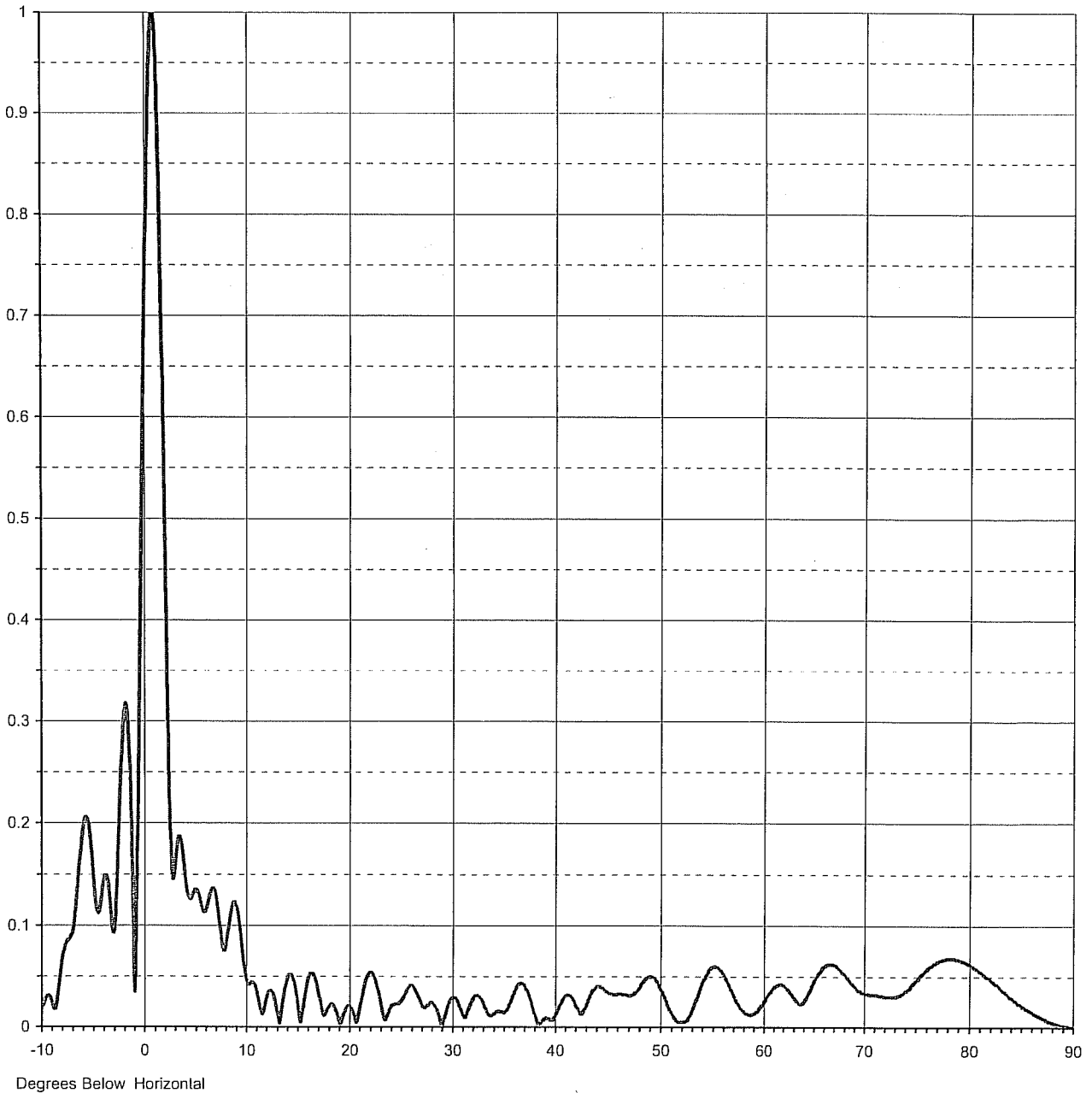




Proposal Number 1158:6:204506 Revision: 3  
Date 4-Sep-03  
Call Letters Channel 15  
Location Pocatello, ID  
Customer  
Antenna Type TFU-31JSC-R 3BP285

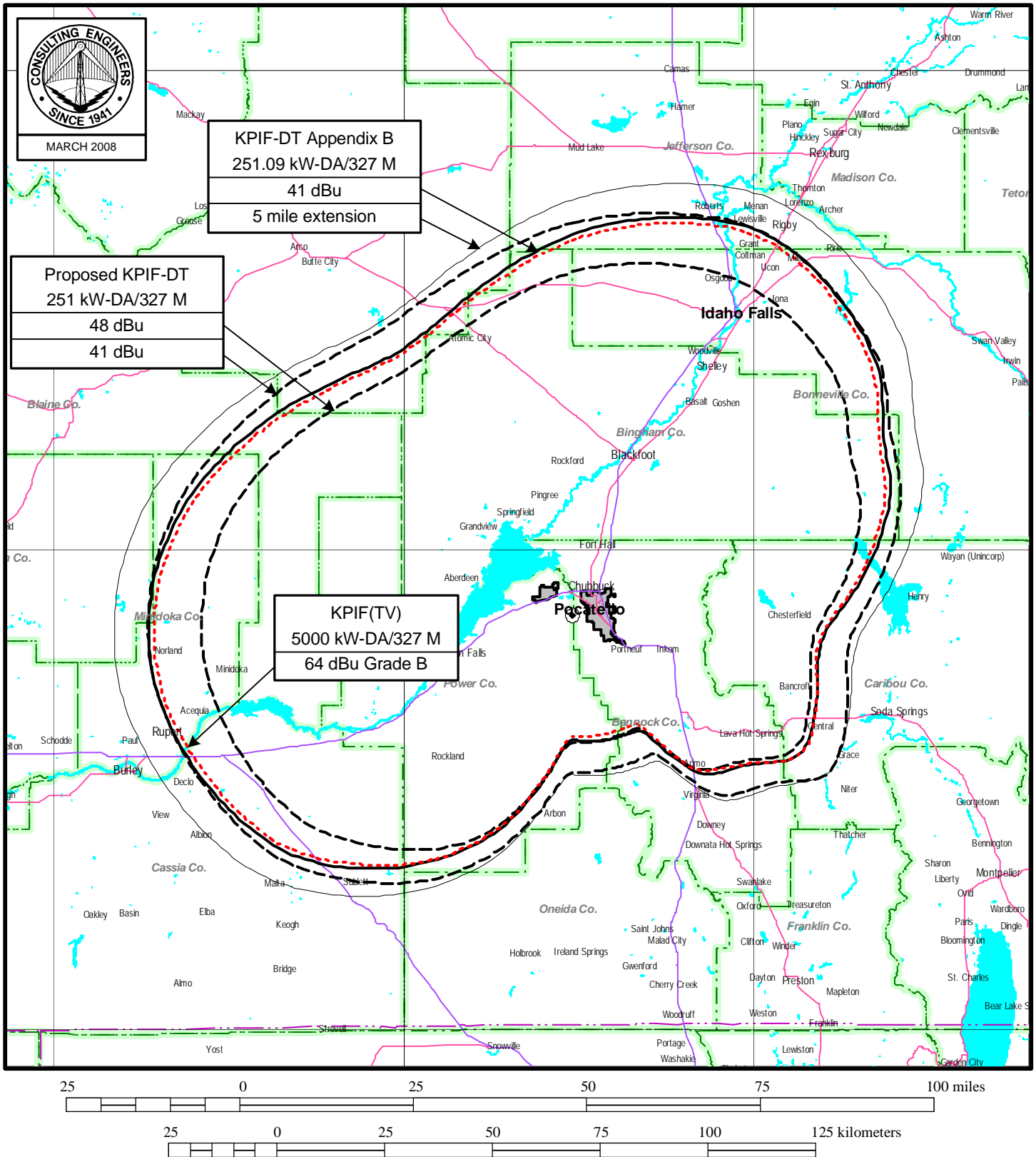
### ELEVATION PATTERN

RMS Gain at Main Lobe	27.90 (14.46 dB)	Beam Tilt	0.75 deg
RMS Gain at Horizontal	15.10 (11.79 dB)	Frequency	479.00 MHz
Calculated / Measured	Calculated	Drawing #	31Y279075-90



Degrees Below Horizontal

**Figure 3**



## **PREDICTED COVERAGE CONTOURS**

**STATION KPIF-DT**

**POCATELLO, IDAHO**

**CH 15 251 kW (MAX-DA) 327**

du Treil, Lundin & Rackley, Inc Sarasota, Florida

```
Percent allowed new interference:    0.500
Percent allowed new interference to Class A:    0.500
Census data selected 2000
```

```
Post Transition Data Base Selected
/export/home/cdbb/tvdb.sff_G
TV INTERFERENCE and SPACING ANALYSIS PROGRAM
```

```
Date: 03-03-2008    Time: 09:49:13
Record Selected for Analysis
```

KPIF	USERRECORD-01	POCATELLO	ID US
Channel 15	ERP 251.	kW HAAT 340. m	RCAMSL 01850 m
Latitude 042-51-50	Longitude 0112-31-10		
Status APP	Zone 2	Border	
Dir Antenna Make CDB	Model 00000000064339	Beam tilt N	Ref Azimuth 0.
Last update	Cutoff date	Docket	

Cell Size for Service Analysis 2.0 km/side  
Distance Increments for Longley-Rice Analysis 1.00 km

Facility meets maximum height/power limits

Azimuth (Deg)	ERP (kW)	HAAT (m)	41.0 dBu F(50,90) (km)
0.0	81.550	488.5	91.0
45.0	231.563	409.1	93.9
90.0	19.961	267.4	67.1
135.0	8.871	195.7	58.3
180.0	8.223	33.0	37.5
225.0	92.481	360.5	83.9
270.0	232.770	477.7	98.8
315.0	24.985	487.6	82.5

## Evaluation toward Class A Stations

No Spacing violations or contour overlap to Class A stations

Class A Evaluation Complete

Proposed facility OK to FCC Monitoring Stations  
Proposed facility OK toward West Virginia quite zone  
Proposed facility OK toward Table Mountain  
Proposed facility is beyond the Canadian coordination distance  
Proposed facility is beyond the Mexican coordination distance  
Proposed station is OK toward AM broadcast stations

\*\*\*\*\*  
Start of Interference Analysis

Proposed Station			
Channel	Call	City/State	ARN
15	KPIF	POCATELLO ID	USERRECORD01

### Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
------	------	------------	----------	--------	----------------------

*(continued)*

Analysis of Interference to Affected Station 1

Analysis of current record

Channel	Call	City/State	Application Ref. No.
15	KPIF	POCATELLO ID	USERRECORD-01

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
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Total scenarios = 1

Result key: 1  
Scenario 1 Affected station 1  
Before Analysis

Results for: 15A ID POCATELLO USERRECORD01 APP  
HAAT 340.0 m, ATV ERP 251.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	222667	21434.4
not affected by terrain losses	217371	17313.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	0	0.0
lost to ATV IX only	0	0.0
lost to all IX	0	0.0

Potential Interfering Stations Included in above Scenario 1

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