

TECHNICAL EXHIBIT  
DTV MAXIMIZATION APPLICATION  
STATION KDVR(DT)  
DENVER, COLORADO  
CH 32 1000 KW 317 M

Technical Narrative

This Technical Exhibit supports an application for digital television (DTV) station KDVR(DT) for its "maximized" DTV operation at Denver, Colorado. This application requests a construction permit (CP) for KDVR(DT) digital television operation on channel 32 at Denver with a non-directional effective radiated power of 1000 kilowatts.

Proposed Facilities

Station KDVR(DT) proposes to operate DTV channel 32 from its authorized DTV site. The antenna height above average terrain for the channel 32 DTV operation will be 317 meters. The proposed KDVR(DT) effective radiated power exceeds the Commission's *Appendix B* allocated maximum effective radiated power in some azimuthal directions for KDVR(DT).<sup>1</sup> Therefore, an allocation study was completed to ensure no prohibited interference would occur.

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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.

The proposed DTV transmitter site will be located at the KDVR(DT) site. Therefore, the proposed site location is:

39° 43' 45" North Latitude  
105° 14' 12" West Longitude

A sketch of antenna and pertinent elevations are included as Figure 1.

Figure 2 is a map showing the proposed DTV predicted coverage contour and the associated DTV appendix B Noise-Limited coverage contour. The extent of the contours have been calculated using the normal FCC prediction method.

#### Population Served

The herein proposed KDVR(DT) "maximized" facility is predicted to serve 3,015,301 persons, post-transition based upon the 2000 Census. KDVR(DT)'s associated Appendix B facility is predicted to serve 2,875,000 persons. Therefore, the herein proposed KDVR(DT) facility would serve more than 100% of KDVR(DT)'s Appendix B population. The OET-69 studies were conducted using a cell size of 2.0 km/side and distance increments for Longley-Rice analysis of 0.5 km.

#### Table Mountain

The herein proposed facility is located nearby to the Table Mountain radio quiet zone. If necessary, coordination with Table Mountain is requested.

### Allocation Considerations

The proposed KDVR(DT) Channel 32 facility meets the requirements of Section 73.623 of the FCC Rules concerning predicted interference to other Appendix B DTV allotments. Longley-Rice interference analyses were conducted pursuant to the requirements of the FCC Rules; OET Bulletin No. 69; and published FCC guidelines for preparation of such interference analyses. The Longley-Rice interference analyses were conducted using the software developed by du Treil, Lundin & Rackley, Inc. based on the FCC published software routines.<sup>2</sup> Stations selected for analysis were determined pursuant to the distance requirements outlined in the FCC DTV Processing Guidelines Public Notice. The results of the interference analyses for the proposed KDVR(DT) facility are summarized herein at Figure 3. As indicated therein, the proposed facility will meet the 0.5% criterion outlined in the FCC Rules and published guidelines with respect to all considered stations.<sup>3</sup>

### Radiofrequency Electromagnetic Field Exposure

The proposed KDVR(DT) facilities will be evaluated in terms of potential radiofrequency electromagnetic field exposure at ground level to workers and the general public by RFR measurements.

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<sup>2</sup> The duTreil, Lundin & Rackley, Inc. DTV interference analysis program is based on the program and procedures outlined by the FCC in the Sixth Report and Order; subsequent Memorandum Opinion and Order; and FCC OET Bulletin No. 69. A nominal grid size resolution of 2 km was employed.

<sup>3</sup> Interference analysis results reflect the net change in interference to a given station considering the interference predicted to occur from all other stations (i.e. "masking") including the allotment facility for KDVR(DT). This properly reflects the net interference change for determining compliance with the FCC 0.5% *de minimis* standard.

Access to the transmitting site is 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 stations are at reduced power or shut down. The proposed KDVR(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.

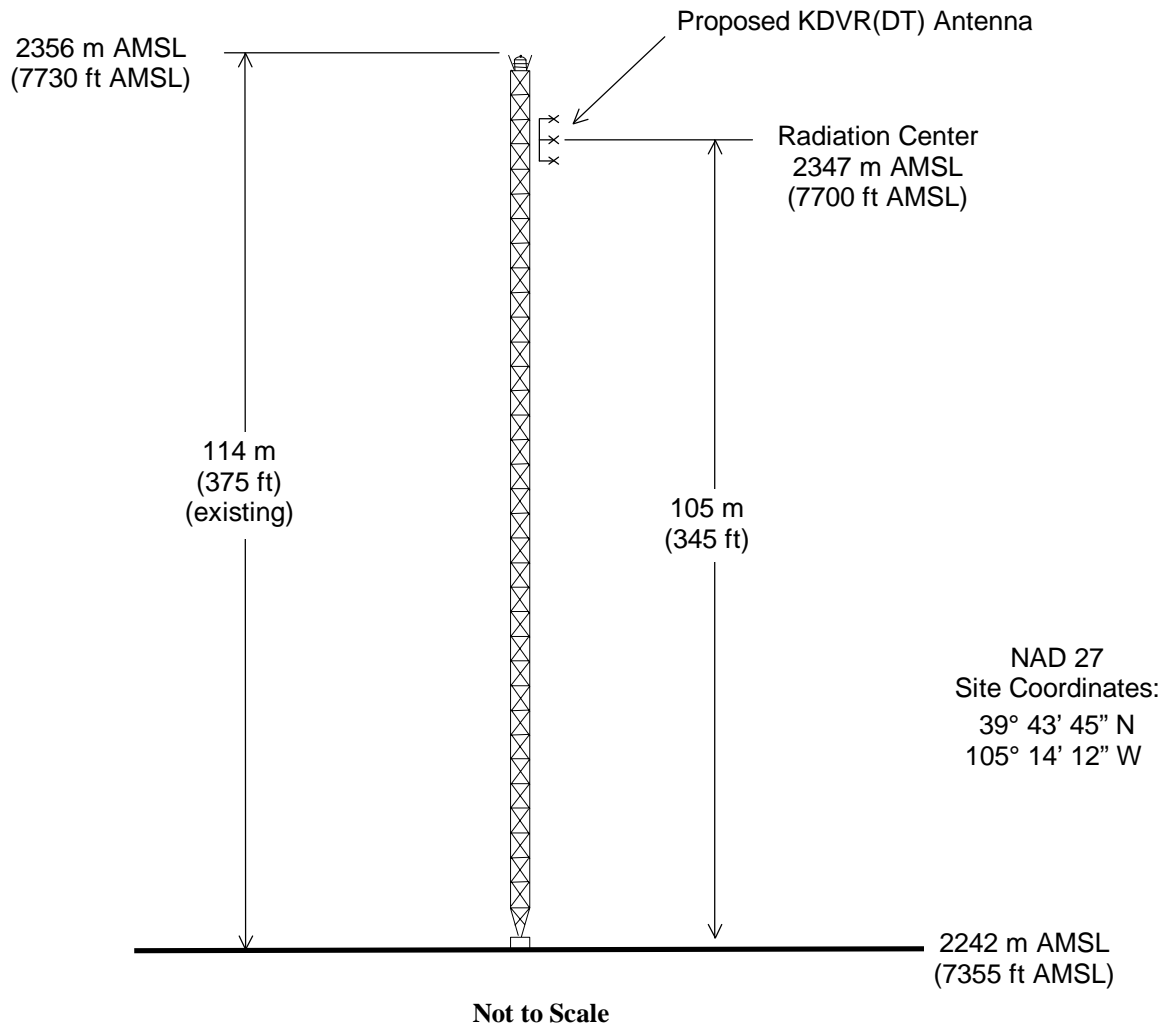
Charles Cooper

du Treil, Lundin & Rackley, Inc.  
201 Fletcher Avenue  
Sarasota, Florida 32437  
941.329.6000

June 16, 2008



ASR: 1022259



## ANTENNA AND SUPPORTING STRUCTURE

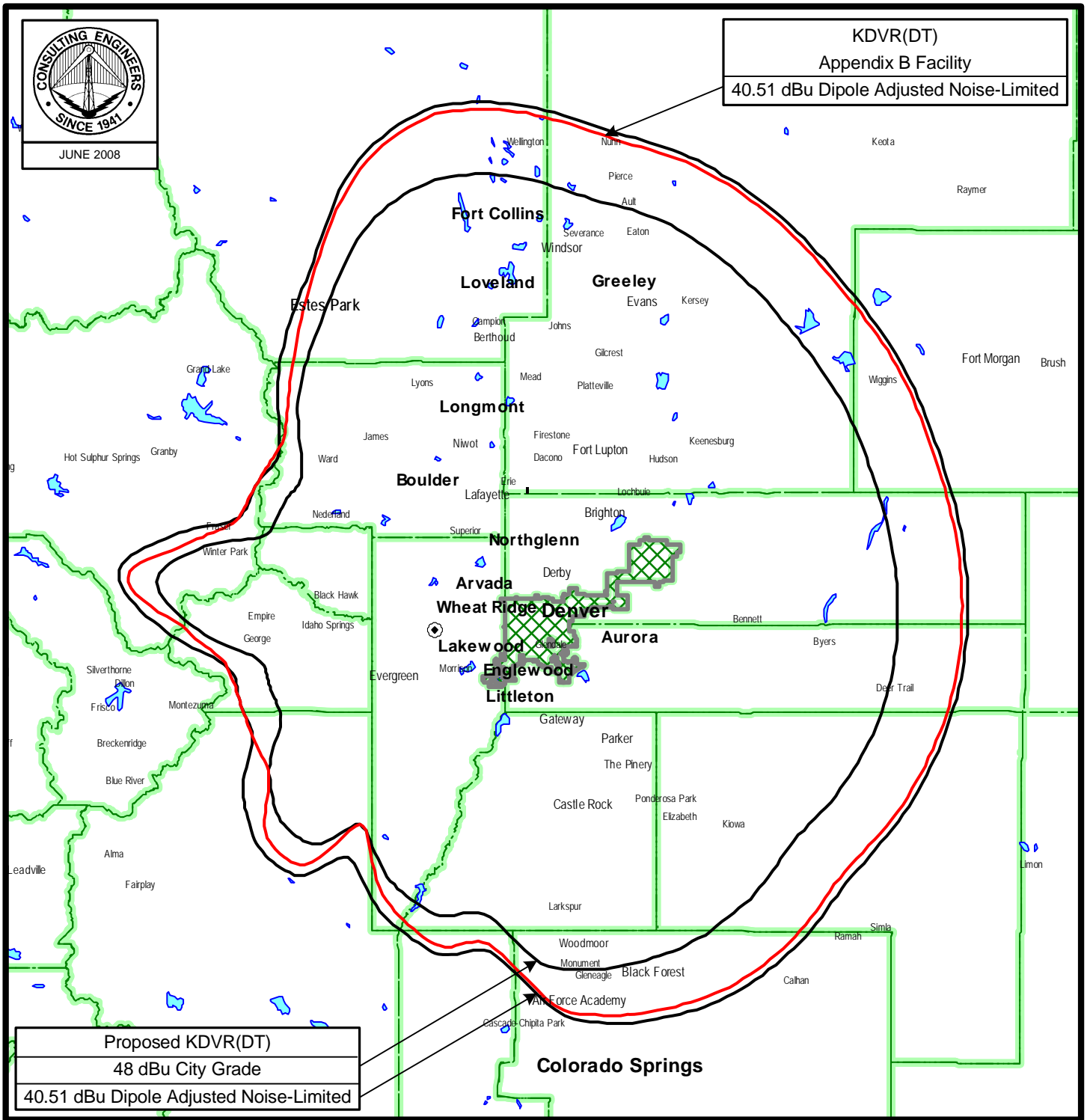
DTV STATION KDVR(DT)

DENVER, COLORADO

CH 32 1000 KW 317 M

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

Figure 2



## PREDICTED COVERAGE CONTOURS

DTV STATION KDVR(DT)

DENVER, COLORADO

CH 32 1000 KW 317 M

du Treil, Lundin & Rackley, Inc Sarasota, Florida

Figure 3

TW Census data selected 2000  
Post Transition Data Base Selected /export/home/cdbb/pt\_tvdb.sff

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 06-15-2008 Time: 08:44:52

Record Selected for Analysis

KDVR USERRECORD-01 DENVER CO US  
Channel 32 ERP 1000. kW HAAT 335. m RCAMSL 02347 m  
Latitude 039-43-45 Longitude 0105-14-12  
Status APP Zone 2 Border  
Last update Cutoff date Docket  
Comments  
Applicant

Cell Size for Service Analysis 2.0 km/side

Distance Increments for Longley-Rice Analysis 0.50 km

Facility meets maximum height/power limits

Azimuth (Deg)	ERP (kW)	HAAT (m)	41.0 dBu F(50,90) (km)
0.0	1000.000	506.6	115.0
45.0	1000.000	626.1	122.0
90.0	1000.000	630.6	122.3
135.0	1000.000	562.6	118.5
180.0	1000.000	175.7	81.3
225.0	1000.000	79.0	70.8
270.0	1000.000	67.4	68.5
315.0	1000.000	33.0	58.6

Evaluation toward Class A Stations

Contour overlap to Class A station  
KDEV-LP 39 AURORA CO BLTTA 20040219ABP

Class A Evaluation Complete

SPACING VIOLATION FOUND BETWEEN STATION

KDVR 32 DENVER CO USERRECORD01

and station

SHORT TO: KDEN 25 LONGMONT CO BLCT 19970428KE  
040-05-47 0104-54- 4

Figure 3

Req. separation => 24.1 <= 96.6 Actual separation 49.9 Short 46.7( 25.8) km

SHORT TO: KDEN 25 LONGMONT CO BPCT 20040524AOH  
040-05-57 0104-53-48  
Req. separation => 24.1 <= 96.6 Actual separation 50.3 Short 46.3( 26.2) km

SHORT TO: KDVR 32 DENVER CO BLCDT 19991101ADA  
039-43-45 0105-14-12  
Req. separation 223.7 Actual separation 0.0 Short 223.7 km

SHORT TO: KDVR 32 DENVER CO DTVPLN DTVPL174  
39 -43-45 105 -14-12  
Req. separation 223.7 Actual separation 0.0 Short 223.7 km

SHORT TO: KDVR 32 DENVER CO BPCDT 20080207APA  
039-43-45 0105-14-12  
Req. separation 223.7 Actual separation 0.0 Short 223.7 km

LANDMOBILE SPACING VIOLATIONS FOUND

NONE

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quiet 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 0.10km from AM station  
GOLDEN CO NEW Status: Antenna: DAN

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Start of Interference Analysis

Channel	Proposed Station Call City/State	ARN
32	KDVR DENVER CO	USERRECORD01

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
36	K36DB	AVON CO	111.7	LIC	BLTTA -20050921AIM
39	KDEV-LP	AURORA CO	31.6	LIC	BLTTA -20040219ABP

Figure 3

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### Analysis of Interference to Affected Station 1

#### Analysis of current record

Channel	Call	City/State	Application Ref. No.
36	K36DB	AVON CO	BLTTA -20050921AIM

#### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
32	KDVR	DENVER CO	111.7	LIC	BLCDDT -19991101ADA
32	KDVR	DENVER CO	111.7	PLN	DTVPLN -DTVPl174
32	KDVR	DENVER CO	111.7	CP	BPCDDT -20080207APA
34	KWGN-TV	DENVER CO	111.8	CP	BPCDDT -19991029AHP
34	KWGN-TV	DENVER CO	111.8	PLN	DTVPLN -DTVPl243
35	KCNC-TV	DENVER CO	112.2	CP MOD	BMPCCDT -20080507ACP
35	KCNC-TV	DENVER CO	112.2	PLN	DTVPLN -DTVPl281
36	K36GX	BASALT CO	57.1	LIC	BLTT -20060426AAQ
36	KDVT-LP	DENVER CO	130.7	CP	BPTTL -20051130AAY
36	K36BR	FRASER, ETC. CO	70.1	LIC	BLTT -19890609IL
36	KXHD-LP	MONTROSE CO	205.1	LIC	BLTTTL -20060918ACF
36	K36AF	NEW CASTLE CO	85.6	LIC	BLTTTL -19880531IL
40	KRMT	DENVER CO	113.7	LIC	BLEDTT -20061221ACX
40	KRMT	DENVER CO	113.7	PLN	DTVPLN -DTVPl429
43	KPXC-TV	DENVER CO	113.0	CP	BPCDDT -19990923AAM
43	KPXC-TV	DENVER CO	113.0	PLN	DTVPLN -DTVPl530
50	KCEC	DENVER CO	111.8	APP	BSTA -20070808AAY
50	KCEC	DENVER CO	111.8	LIC	BLCT -20030102AAY
51	KCEC	DENVER CO	111.8	CP	BPCDDT -19991029ACN
51	KCEC	DENVER CO	111.8	PLN	DTVPLN -DTVPl788
32	KDVR	DENVER CO	111.7	APP	USERRECORD-01

Proposed station is beyond the site to nearest cell evaluation distance

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### Analysis of Interference to Affected Station 2

#### Analysis of current record

Channel	Call	City/State	Application Ref. No.
39	KDEV-LP	AURORA CO	BLTTA -20040219ABP

#### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
32	KDVR	DENVER CO	31.6	LIC	BLCDDT -19991101ADA
32	KDVR	DENVER CO	31.6	PLN	DTVPLN -DTVPl174
32	KDVR	DENVER CO	31.6	CP	BPCDDT -20080207APA
35	KCNC-TV	DENVER CO	31.3	CP MOD	BMPCCDT -20080507ACP
35	KCNC-TV	DENVER CO	31.3	PLN	DTVPLN -DTVPl281
38	KPUR-DT	GREELEY CO	47.2	CP MOD	BMPCCDT -20080428ACO

Figure 3

Channel	Call	City/State	Application Ref. No.
38	KPUR-DT	GREELEY CO	94.3 PLN DTVPLN -DTVPl359
39	K39JT	ESTES PARK CO	94.0 LIC BLTTTL -20070525AEA
39	K39BT	FRASER, ETC. CO	79.6 LIC BLTT -19890609II
39	K39CD	LAKE GEORGE CO	88.6 LIC BLTT -19890808IB
40	KRMT	DENVER CO	30.0 LIC BLEDT -20061221ACX
40	KRMT	DENVER CO	30.0 PLN DTVPLN -DTVPl429
42	KOAA-TV	PUEBLO CO	103.4 CP BPCDDT -19991029AGS
42	KOAA-TV	PUEBLO CO	103.4 PLN DTVPLN -DTVPl493
43	KPXC-TV	DENVER CO	29.4 CP BPCDDT -19990923AAM
43	KPXC-TV	DENVER CO	29.4 PLN DTVPLN -DTVPl530
43	KPXC-TV	DENVER CO	43.0 APP BMPCCDT -20070104ACH
43	KPXC-TV	DENVER CO	47.2 APP BMPCCDT -20080317ABY
46	KWHD	CASTLE ROCK CO	32.8 LIC BLCDDT -20050810AAF
46	KWHD	CASTLE ROCK CO	32.8 PLN DTVPLN -DTVPl639
53	KWHD	CASTLE ROCK CO	32.8 APP BSTA -20050929ANG
53	KWHD	CASTLE ROCK CO	32.8 LIC BLCT -19990922AAX
32	KDVR	DENVER CO	31.6 APP USERRECORD-01

Proposal causes no interference

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### Analysis of Interference to Affected Station 3

#### Analysis of current record

Channel	Call	City/State	Application Ref. No.
32	KDVR	DENVER CO	USERRECORD-01

#### Stations Potentially Affecting This Station

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

Result key: 1  
Scenario 1 Affected station 3  
Before Analysis

Results for: 32A CO DENVER USERRECORD01 APP  
HAAT 335.0 m, ATV ERP 1000.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	3146890	31010.2
not affected by terrain losses	3015301	27648.1
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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