

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of PULLMAN BROADCASTING, INC., permittee of KQUP-DT on Channel 24 in Pullman, Washington, in support of this response to a Commission letter dated June 1, 2004, concerning contour overlap between the KQUP-DT facility specified in BMPCDT-20030903AAQ and three Canadian DTV allotments. The Canadian allotments are on Channel 24 in the following communities: Pincher Creek, Alberta; Cranbrook, British Columbia; and, Kelowna, British Columbia. The Commission letter directs the applicant to conduct Longley-Rice interference studies to determine that the interference from proposed KQUP-DT does not exceed 2.0 percent of the service population of any of the Canadian allotments. We have conducted such studies.

Based on information in the *Letter of Understanding (LOU) between the Commission and Industry Canada, released September 29, 2000*, the Cranbrook and Pincher Creek allotments are designated as Class A facilities (40 watts at 100 meters above average terrain) and the Kelowna allotment is a Class B facility (800 watts at 150 meters above average terrain). Using these parameters, as well as the coordinates for each allotment (also found in the LOU), we developed hypothetical facilities for each of the allotments.

We then conducted Longley-Rice studies with regard to interference from proposed KQUP-DT to these Canadian facilities. We utilized the "Probe II" software from V-Soft Communications, which employs the signal propagation methodology contained in the Commission's *OET Bulletin No. 69*. The only adjustment we made was with regard to the

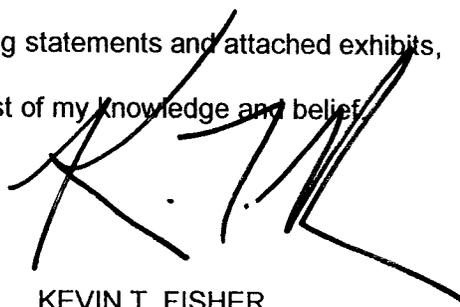
protected contour of the Canadian facility. The LOU specifies that the 39 dBu contour of Canadian facilities shall be protected and that this signal level shall be considered the threshold for usable service. For our studies, we utilized a 2-kilometer cell size and calculated signal strength at 1.0-kilometer increments along each azimuth. The program used the 1996 Canadian Census data to count population within cells.

The results of these studies are provided in Exhibits B, C, and D. In the first part of each exhibit, we present a map upon which the protected contour of the Canadian allotment and the interference from proposed KQUP-DT are plotted. The second part of the exhibit is a tabulation of coverage population of the Canadian allotment as well as the interference population from proposed KQUP-DT.

As shown on the maps, there is little or no interference from proposed KQUP-DT to the service area within each Canadian allotment's protected 39 dBu contour. In those instances where there is a small amount of predicted interference, there are no people residing in those areas, as shown in the tabulations.

Accordingly, it is believed that the KQUP-DT facility proposed in BMPCDT-20030903AAQ will have no effect on the service population of the Channel 24 DTV allotments in Pincher Creek, Alberta, Cranbrook, British Columbia, and Kelowna, British Columbia.

I declare, under penalty of perjury, that the foregoing statements and attached exhibits, which were prepared by me, are true and correct to the best of my knowledge and belief.



Handwritten signature of Kevin T. Fisher in black ink, consisting of stylized, overlapping lines.

KEVIN T. FISHER

June 10, 2004

EXHIBIT B-1

**INTERFERENCE TO PINCHER CREEK
CHANNEL 24 – DTV ALLOTMENT
FROM PROPOSED KQUP-DT**

SMITH AND FISHER

■ INTERFERENCE FROM PROPOSED KQUP-DT

CANADA

PROTECTED 39 DBU

⊕ Pincher Creek DTV

Eureka

U.S.

Glacier

Browning

Scale 1:1,000,000



Whitefish

Smith and Fisher Population Report

Pincher Creek DTV (24) Pincher Creek, AB
 TV Incoming Interference Study
 Signal Resolution: 2 km
 Consider NTSC Taboo: Yes
 KWX error points are considered to
 be interference free coverage.
 # of radials computed for contours: 72
 Contours calculated using 8 radial HAAT.
 LR Profile Spacing Increment: 1.0 km
 Interference considered within the
 reference station's 39 dBu FCC countour.
 Using NTSC lptv/translators D/U rules.
 Threshold for reception: 39

Study Date: 6/9/2004
 TV Database Date: 06-05-04

Population Database: 1996 Canada Census

Percentages calculated using a baseline population of 11,810.

Stations considered which do not cause interference:

PROPOSED KQUP-DT (24)

 Totals for Pincher Creek DTV (24)

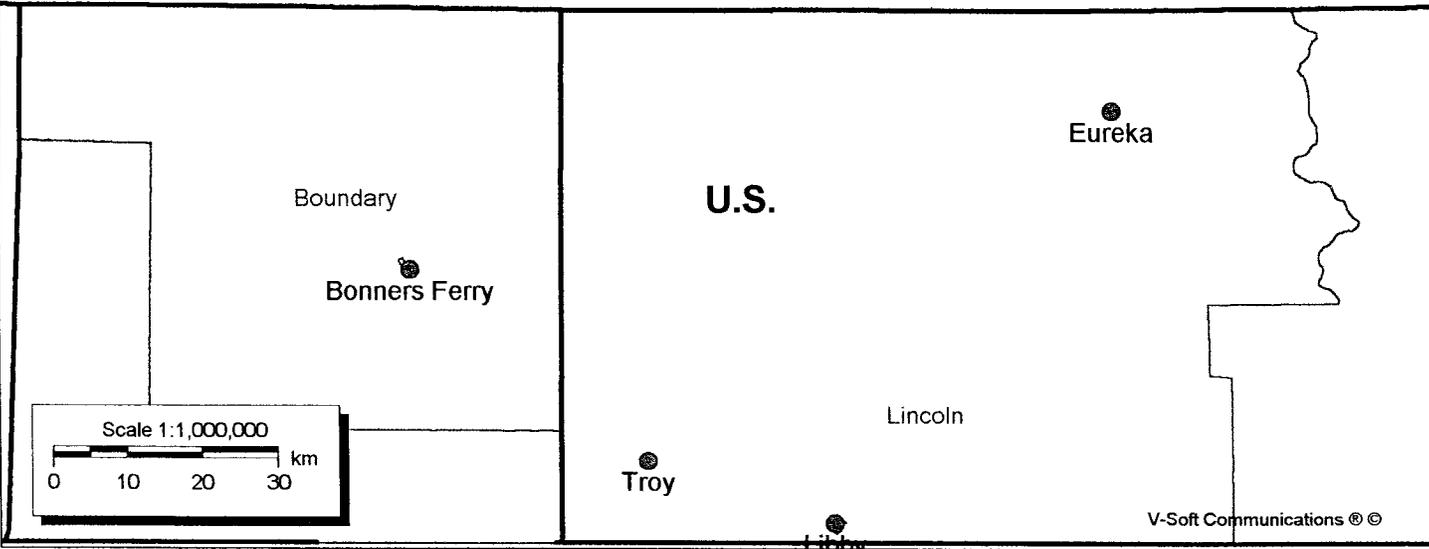
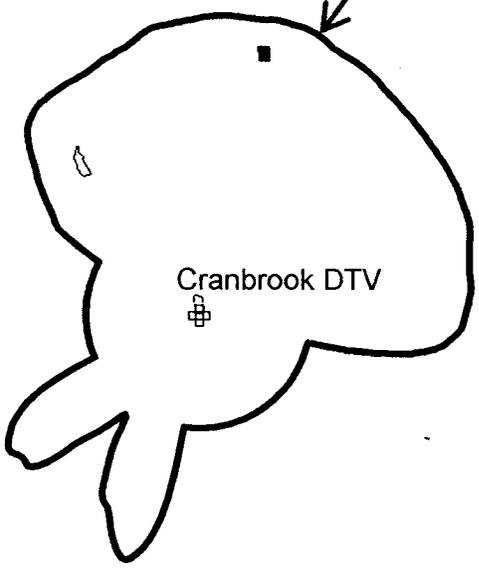
Calculation Area Population:	15,401	(	4470.1 sq. km)
Not Affected by Terrain Loss:	11,810	(	3778.5 sq. km)
Total NTSC Interference:	0	(	0.0 sq. km)
DTV Only Interference:	0	(	0.0 sq. km)
Total DTV Interference:	0	(	0.0 sq. km)
Interfered Population:	0	(	0.0 sq. km)
Interference Free:	11,810	(	3778.5 sq. km)
Percent Interference:	0.00		
Terrain Blocked Population:	3,591	(	691.5 sq. km)
Contour Area Population:	15,835		

■ INTERFERENCE FROM PROPOSED KQUP-DT

EXHIBIT C-1
INTERFERENCE TO CRANBROOK
CHANNEL 24 DTV ALLOTMENT
FROM PROPOSED KQUP-DT
SMITH AND FISHER

CANADA

PROTECTED 39 DBU



Smith and Fisher Population Report

Cranbrook DTV (24) Cranbrook, BC
 TV Incoming Interference Study
 Signal Resolution: 2 km
 Consider NTSC Taboo: Yes
 KWX error points are considered to
 be interference free coverage.
 # of radials computed for contours: 72
 Contours calculated using 8 radial HAAT.
 LR Profile Spacing Increment: 1.0 km
 Interference considered within the
 reference station's 39 dBu FCC countour.
 Using NTSC lptv/translators D/U rules.
 Threshold for reception: 39

Study Date: 6/9/2004
 TV Database Date: 06-05-04

Population Database: 1996 Canada Census

Percentages calculated using a baseline population of 28,128.

Stations which cause interference:

Call Letters	H Units	Population	%	Area (sq. km)
PROPOSED KQUP-DT (24)	0	0	0.000	3.16

Totals for Cranbrook DTV (24)

Calculation Area Population:	32,155	(	2388.5 sq. km)
Not Affected by Terrain Loss:	28,128	(	2029.4 sq. km)
Total NTSC Interference:	0	(	0.0 sq. km)
DTV Only Interference:	0	(	3.2 sq. km)
Total DTV Interference:	0	(	3.2 sq. km)
Interfered Population:	0	(	3.2 sq. km)
Interference Free:	28,128	(	2026.3 sq. km)
Percent Interference:	0.00		
Terrain Blocked Population:	4,027	(	359.0 sq. km)
Contour Area Population:	32,155		

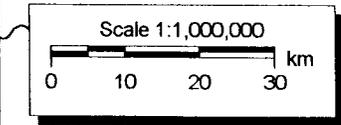
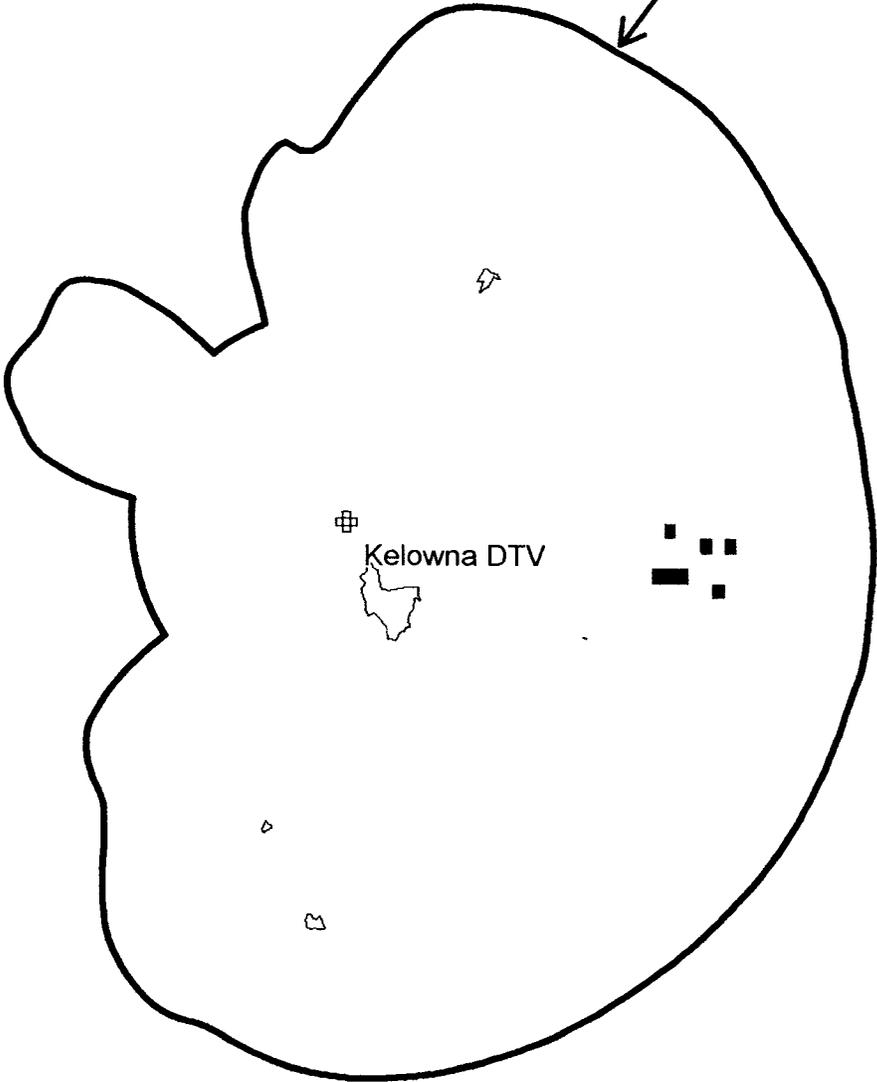
■ INTERFERENCE FROM PROPOSED KQUP-DT

EXHIBIT D-1
**INTERFERENCE TO KELOWNA
CHANNEL 24 DTV ALLOTMENT
FROM PROPOSED KQUP-DT**
SMITH AND FISHER

CANADA



PROTECTED 39 DBU



U.S. Oroville

EXHIBIT D-2

Smith and Fisher Population Report

Kelowna DTV (24) Kelowna, BC
 TV Incoming Interference Study
 Signal Resolution: 2 km
 Consider NTSC Taboo: Yes
 KWX error points are considered to
 be interference free coverage.
 # of radials computed for contours: 72
 Contours calculated using 8 radial HAAT.
 LR Profile Spacing Increment: 1.0 km
 Interference considered within the
 reference station's 39 dBu FCC countour.
 Using NTSC lptv/translators D/U rules.
 Threshold for reception: 39

Study Date: 6/9/2004
 TV Database Date: 06-05-04

Population Database: 1996 Canada Census

Percentages calculated using a baseline population of 157,862.

Stations which cause interference:

Call Letters	H Units	Population	%	Area (sq. km)
PROPOSED KQUP-DT (24)	0	0	0.000	22.09

 Totals for Kelowna DTV (24)

Calculation Area Population:	252,518	(	11303.9 sq. km)
Not Affected by Terrain Loss:	157,862	(	6645.5 sq. km)
Total NTSC Interference:	0	(	0.0 sq. km)
DTV Only Interference:	0	(	22.1 sq. km)
Total DTV Interference:	0	(	22.1 sq. km)
Interfered Population:	0	(	22.1 sq. km)
Interference Free:	157,862	(	6623.5 sq. km)
Percent Interference:	0.00		
Terrain Blocked Population:	94,656	(	4658.3 sq. km)
Contour Area Population:	252,518		