Engineering Statement

INCREASED IBOC POWER STUDY

prepared for

Bonneville International Corporation

KYGO-FM Denver, Colorado

Facility ID 30829

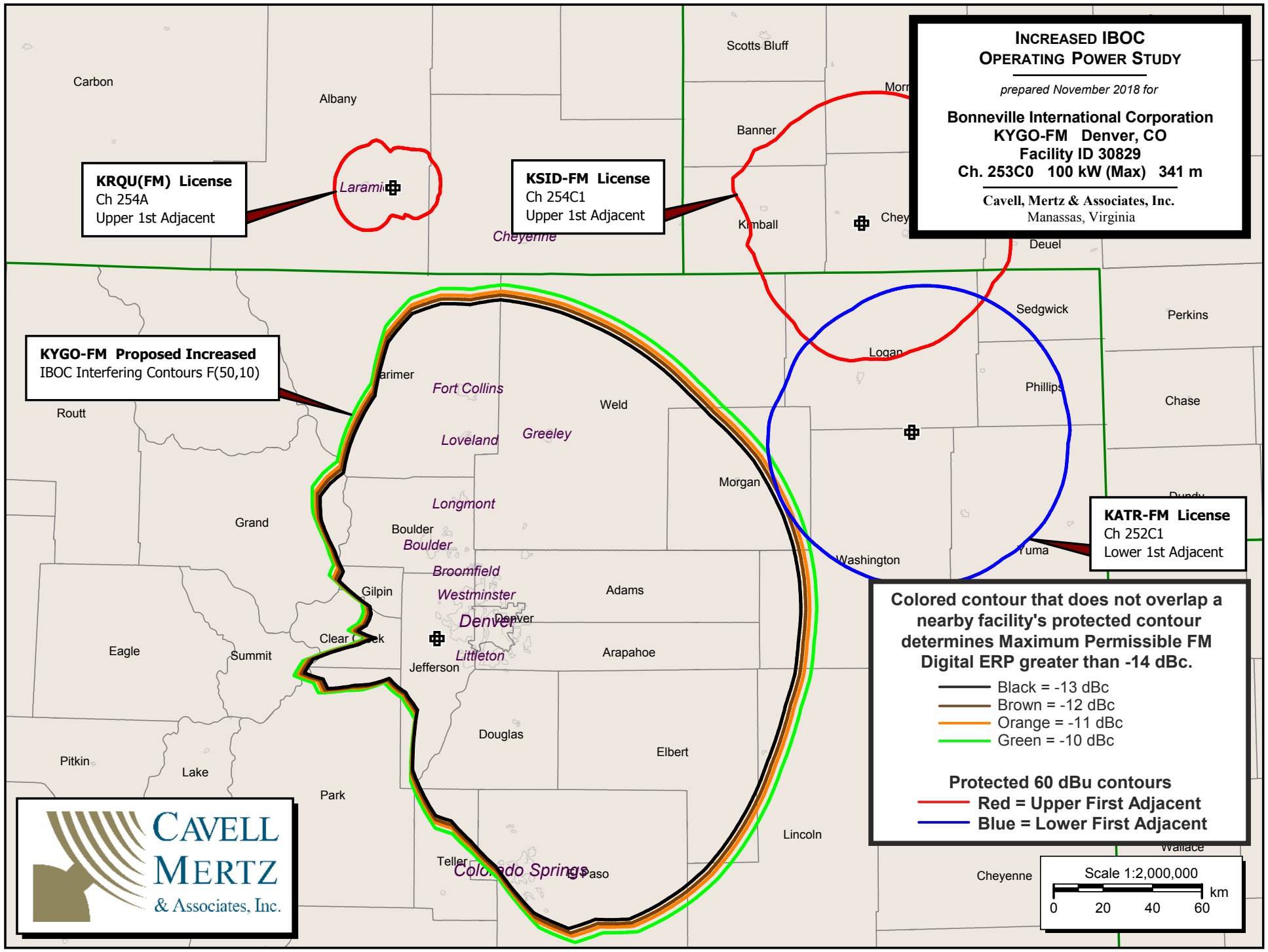
100 kW Ch 253C0 341m

This study has been prepared on behalf of *Bonneville International Corporation*, licensee of FM broadcast station KYGO-FM for the purpose of determining the allowable digital operating power under the guidelines adopted by the Federal Communications Commission on January 27, 2010[1]. The facility under study is that specified in BLH-20180912ABA using the technical parameters retrieved from the FCC's CDBS system. KYGO-FM is not considered a super-powered FM station and therefore may be evaluated using the guidelines established in paragraph 15 of the *Order*.

As shown on the attached exhibit, the following F(50,10) signal strength contours were calculated for KYGO-FM, as the proponent facility: 51.1 dBμ, 50.6 dBμ, 50.2 dBμ, and 49.5 dBμ. The 60 dBμ F(50,50) Protected contour has been calculated to all nearby first adjacent channel licensed, authorized and proposed facilities. The distance to each contour was calculated for 72 radials using a 3-arc second terrain database and an implementation of the FCC's TVFMFS computer program. To enable unequal digital sideband powers, the upper and lower first adjacent channel stations are shown as red and blue contours respectively.

Using this methodology and as demonstrated on the attached map, the Maximum Permissible FM Digital ERP for KYGO-FM is **-13 dBc**.

[1] See the Order on *Digital Audio Broadcasting Systems and Their Impact on the Terrestrial Radio Broadcast Service*, MM Docket No. 99-325, DA 10-208, Released January 29, 2010, "Order".


INCREASED IBOC
OPERATING POWER STUDY
prepared November 2018 for
Bonneville International Corporation
KYGO-FM Denver, CO
Facility ID 30829
Ch. 253C0 100 kW (Max) 341 m
Cavell, Mertz & Associates, Inc.
Manassas, Virginia
KRQU(FM) License
Ch 254A
Upper 1st Adjacent
KSID-FM License
Ch 254C1
Upper 1st Adjacent
KYGO-FM Proposed Increased
IBOC Interfering Contours F(50,10)
KATR-FM License
Ch 252C1
Lower 1st Adjacent
Colored contour that does not overlap a nearby facility's protected contour determines Maximum Permissible FM Digital ERP greater than -14 dBc.
Black = -13 dBc
Brown = -12 dBc
Orange = -11 dBc
Green = -10 dBc
Protected 60 dBu contours
Red = Upper First Adjacent
Blue = Lower First Adjacent
Scale 1:2,000,000
0 20 40 60 km
CAVELL MERTZ & Associates, Inc.
Carbon
Albany
Scotts Bluff
Banner
Kimball
Deuel
Sedgwick
Perkins
Logan
Phillips
Chase
Morgan
Washington
Yuma
Lincoln
Cheyenne
Wallace
Laramie
Cheyenne
Routt
Fort Collins
Weld
Loveland
Greeley
Longmont
Boulder
Grand
Gilpin
Broomfield
Westminster
Adams
Denver
Arapahoe
Littleton
Jefferson
Clear Creek
Eagle
Summit
Douglas
Elbert
Pitkin
Lake
Park
Teller
Colorado Springs
El Paso