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B.W. St. Clair

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## **ENGINEERING STATEMENT IN SUPPORT OF AN APPLICATION TO OPERATE KDMD-DT, FL 25221, ANCHORAGE, AK, ON CHANNEL 33**

Ketchikan RV, LLC (Ketchikan) has been authorized by the Commission in MB Docket No. 09-201, RM 11-11583, to substitute channel 33 for channel 32 at Anchorage, Alaska. *See In the Matter of Section 73.622(k), Post-Transition Table of DTV Allotments, Television Broadcast Stations. (Anchorage, Alaska), MB Docket No. 09-210, R-11583, Report and Order, 75 Fed. Reg. 3641 (Jan. 22, 2010).*

The antenna pattern and other engineering parameters, except for the channel, will be unchanged from the original channel 32. *See also* BDSTA20031029AMS as extended.

### **Coverage**

A plot of the 40.6 dBu noise limited contour is included. It differs from the channel 32 contour (40.51 dBu) by less than the width of the contour plot line.

The 48 dBu principal city contour is unchanged. The problem of defining the community of Anchorage, AK is well known to the Commission. The parameters of this proposal provide coverage over the Borough of Anchorage populated area. A plot for the 48 dBu contour is included as part of this statement. There is no change in the covered area or population in the noise limited contour compared with the channel 32 CP.

The grant of this application will result in a population increase from 274,257 (corresponding to the present channel 32) to 327,224.

### **Antenna System**

The antenna pattern is on file as #88082.

The antenna system is an array of Kathrein panels. Eight panels are oriented at 233° and eight at 13°. The interconnecting harness provides 0.5° electrical beam tilt and 5% null fill.

The channel 32 CP allowed a maximum ratio of 30 dB, in excess of the 15 dB ratio specified by § 73.685(e). No change in the antenna pattern is proposed and the same waiver is allowed in the channel 32 construction permit is requested here.

### **Allocation Study**

Outgoing interference to "Post Transition" and "Class A" stations was checked in accordance with OET Bulletin 69 using the Techware-supplied interference analysis program. No interference to any station of either class was found.

### **Power Limitation vs HAAT**

The HAAT is 357 meters and less than the 365 meters that would require a power reduction below 1000 kW under §7 3.522(f)(8). At 17.2 kW the ERP in this application is within the allowed limit.

### **Environmental Assessment**

The station will operate using the existing antenna, tower and building. There will be no construction and no associated environmental impact from site changes.

The non-ionizing radiation attributable to this station at head height above ground level calculated in accordance with OET Bulletin 65 is less than 0.5% of the allowable public limit. This is one tenth of the 5% exclusion limit and non-ionizing radiation is not a matter of environmental concern in connection with this application.

### **Protected Installations**

There are no protected "radio Astronomy" installations listed in § 73.1030 in Alaska, and the only protected FCC Field Office as listed in § 0.121 is at Kenai. The spacing is 120 km compared to a suggested coordination distance of 16 km. This application has no impact on protected installations.

### **Required Coverage of the Principal Community**

The problem of defining the community of Anchorage, Alaska is well known to the Commission. The parameters of this application provide coverage over the Borough of Anchorage populated area virtually duplicating the coverage of KDMD analog within the Borough limits. An exhibit illustrating the "Principal Community" 48 dBu contour is included as part of this Engineering Statement.

### **Preparer's Statement**

This statement has been prepared using the information in the KDMD-DT channel 32

construction permit (as adjusted for channel 33), the antenna manufacturer's data, and the Techware interference analysis program. it is true and correct to the best of knowledge and belief.

Respectfully submitted,

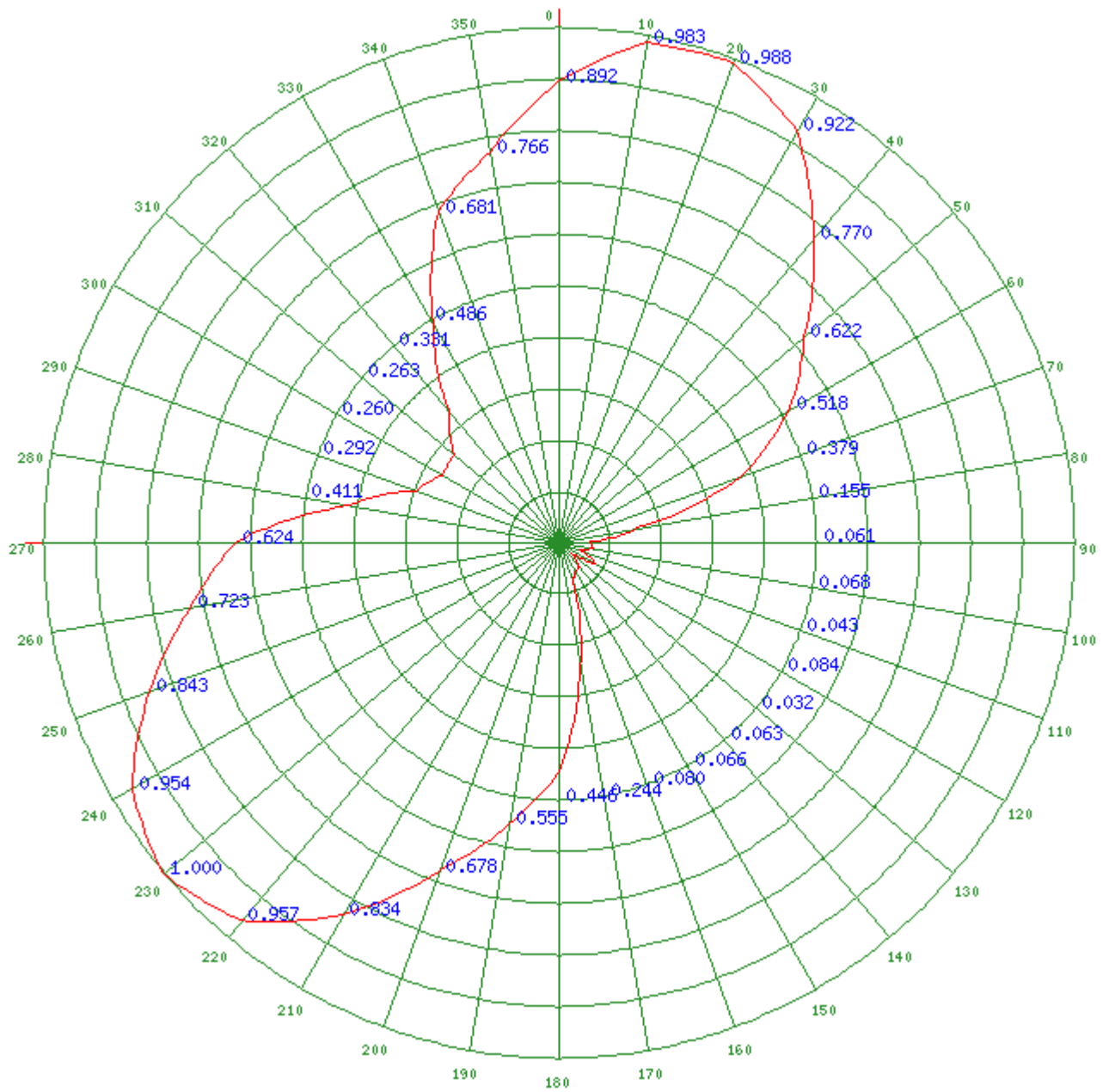
A handwritten signature in black ink, appearing to read "B.W. St. Clair". The signature is written in a cursive, flowing style with a small mark at the end.

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B.W. St. Clair  
Engineering Consultant

January 22, 2010

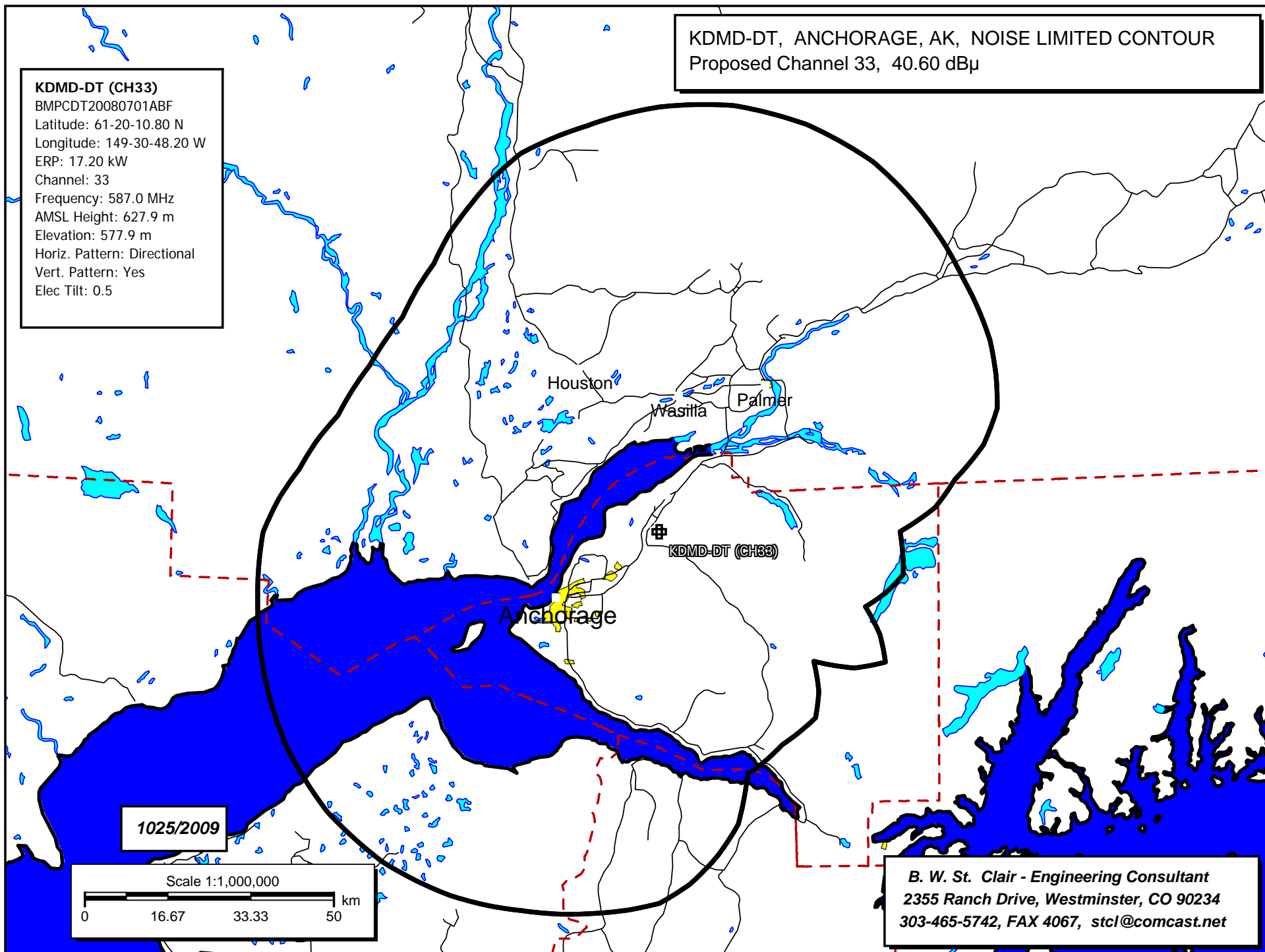
ANTENNA # 88082    KDMD-DT CHANNEL 33, ANCHORAGE, AK



[FM Query](#)   [FCC](#)   [TV Query](#)

**KDMD-DT, ANCHORAGE, AK, NOISE LIMITED CONTOUR**  
Proposed Channel 33, 40.60 dBμ

**KDMD-DT (CH33)**  
BMPCDT20080701ABF  
Latitude: 61-20-10.80 N  
Longitude: 149-30-48.20 W  
ERP: 17.20 kW  
Channel: 33  
Frequency: 587.0 MHz  
AMSL Height: 627.9 m  
Elevation: 577.9 m  
Horiz. Pattern: Directional  
Vert. Pattern: Yes  
Elec Tilt: 0.5



1025/2009

Scale 1:1,000,000

0 16.67 33.33 50 km

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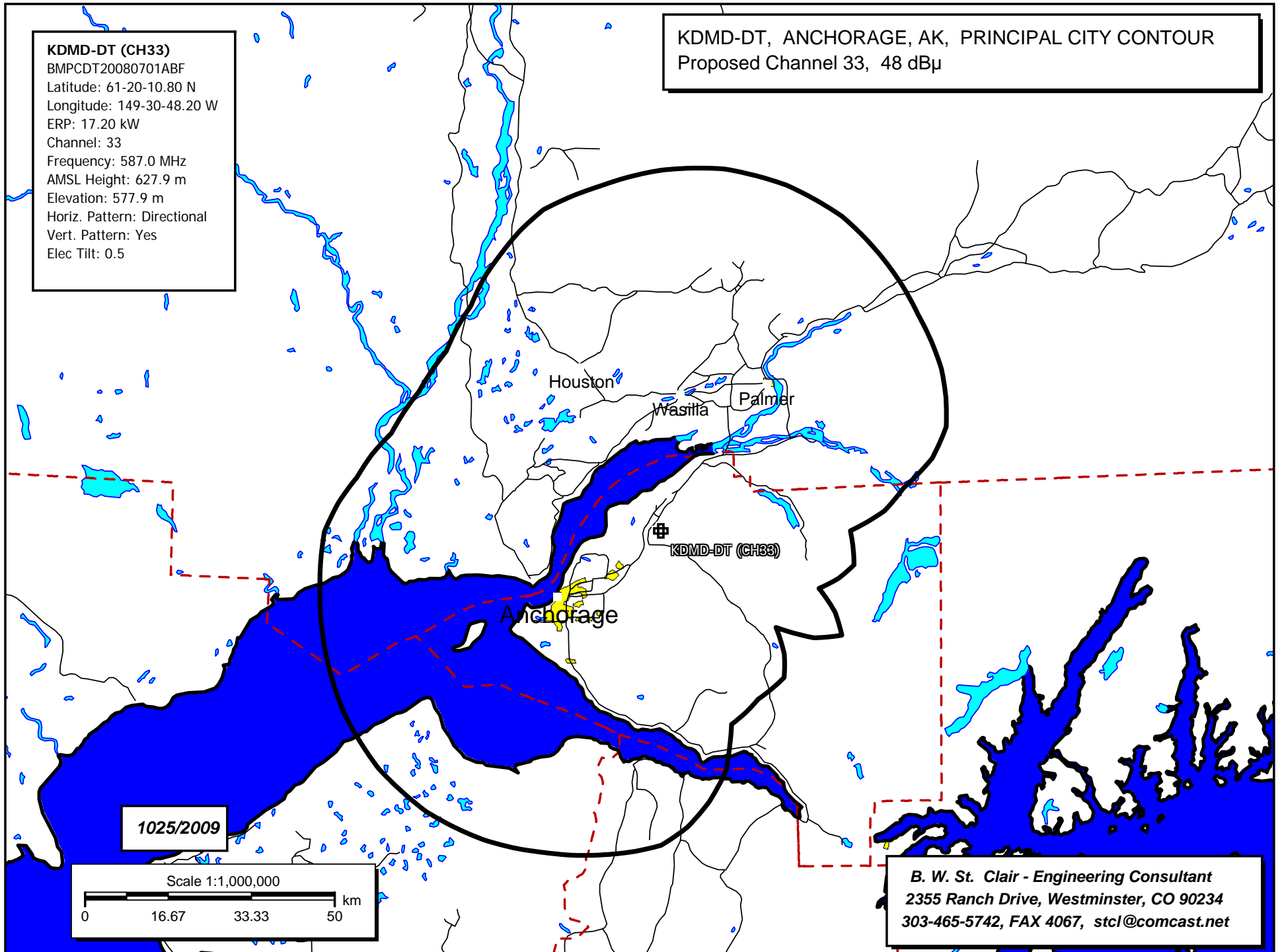
Elevation: 577.9 m

Horiz. Pattern: Directional

Vert. Pattern: Yes

Elec Tilt: 0.5

**KDMD-DT, ANCHORAGE, AK, PRINCIPAL CITY CONTOUR**  
Proposed Channel 33, 48 dBμ

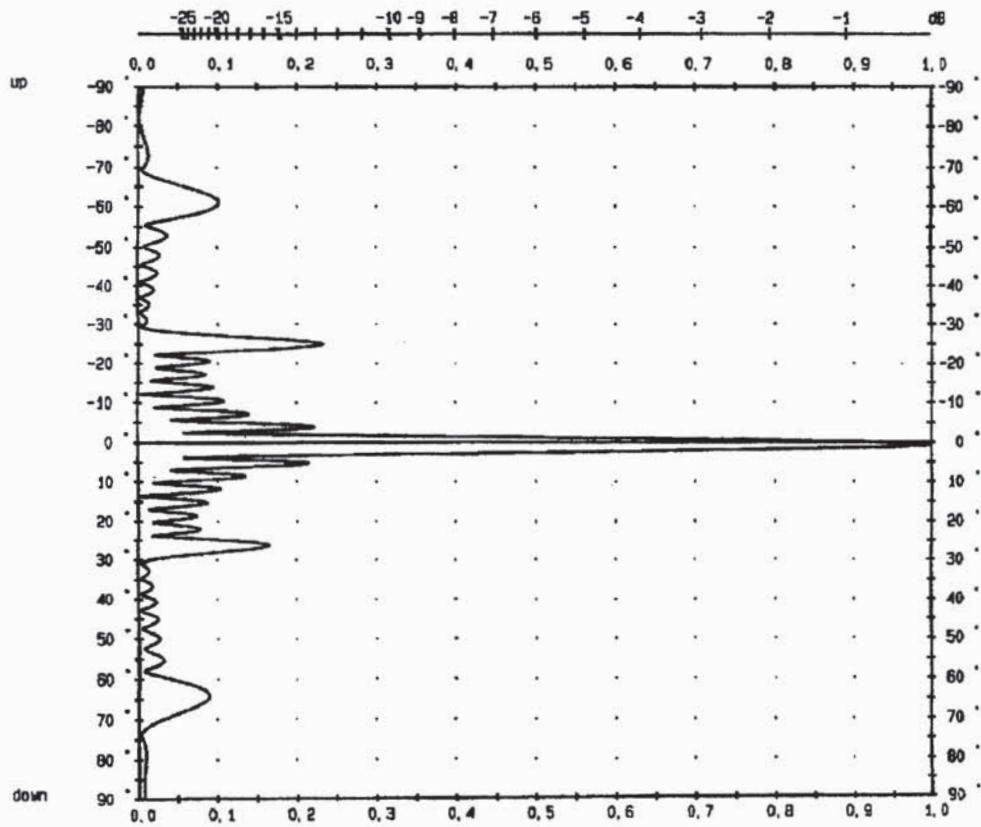


1025/2009

Scale 1:1,000,000

0 16.67 33.33 50 km

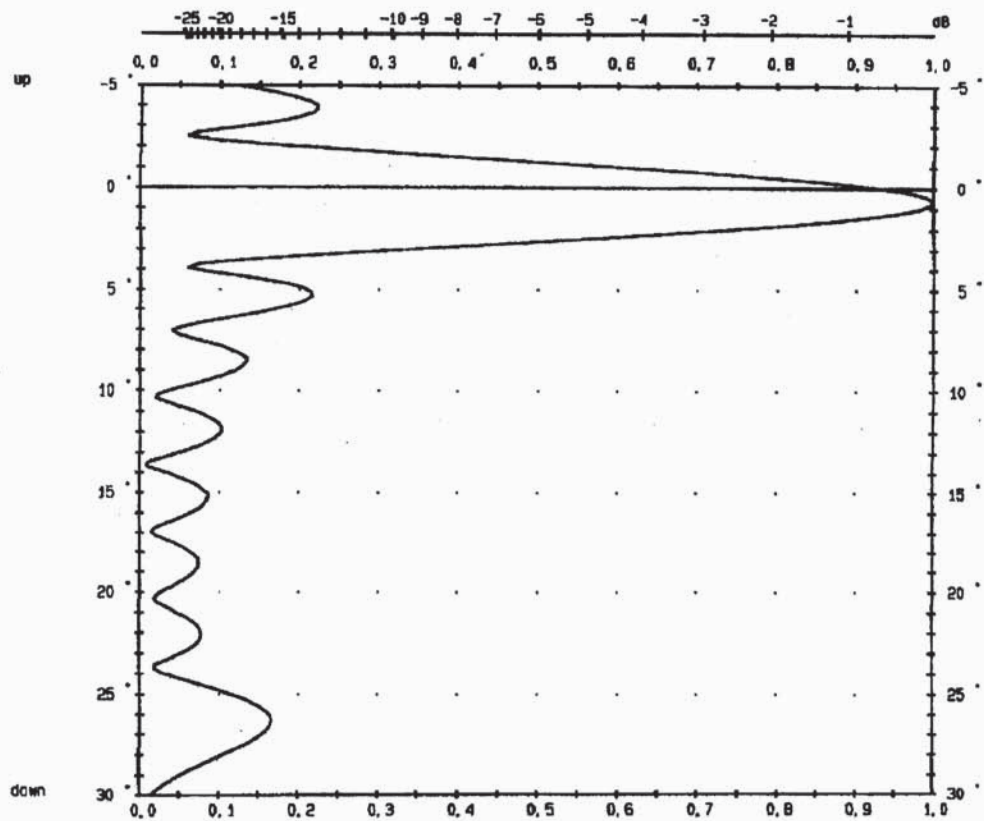
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frequency in MHz 585.250  
 azimut in 15.0  
 omni-dir in dBd 13.00

Maximum signal shown = 18.2dBK

<b>SCALA</b> Medford Oregon	8 x 2 K723147	Typ Nr.
NB 23.6. 3 15:35	Ch: 33.	B1.:



frequency in MHz 585.250  
 azimuth in 15.0  
 omni-dir in dBd

Maximum signal shown = 18.2dBK

S C A L A Medford Oregon	8 x 2 K723147	Typ Nr.
MB 23.6.3 15:37	Ch: 33.	B1.: