

Gray Frierson Haertig & Assoc.
Portland, Oregon

CHANNEL PRECLUSION STUDY
Montana State University - Billings
Billings, Montana

REFERENCE 44 03 59. N. Class= D , Pwr=0.062 kW DA, HAAT= 124 M, COR= 1436 M DISPLAY DATES
107 51 50. W. Average Protected F(50-50)= 10.16 km DATA 04-03-13
Standard Directional SEARCH 04-08-13

CH CITY	CALL	TYPE ANT STATE	AZI. <--	DI ST FILE #	LAT. LNG.	Pwr (kW) HAAT (M)	INT (km) COR (M)	PRO (km) LICENSEE	*IN* (Overlap in km)	*OUT*
--- Channel 201										
201D	K201HS	LIC _C_	0.0	0.03	44 04 00.0	0.050	34.2	10.2	-44.2*	-44.1*
World		WY	180.0	BLFT20091124ABN	107 51 50.0	141	1453	Calvary Chapel Of Twin Falls		
203D	K203BI	LIC DHN	141.7	2.36	44 02 59.0	0.052	0.0	1.0	-4.4*	0.8
World		WY	321.7	BLFT19910227TD	107 50 44.0	120	1438	Montana State University -		
O6NT	KSHW-LP	LI _HN	43.6	85.92	44 37 24.0	0.232	9.8	6.2	16.0R	70.4M
Sheridan, Etc.		WY	224.1	BLTTV3690	107 06 59.0	66	1396	Lovcom, Inc.		
O6+T	KSHW-LP	CP _D_N	43.6	85.86	44 37 20.0	3.000	9.8	2.6	12.5R	73.9M
Sheridan		WY	224.2	BPTVL20100317ABJ	107 06 57.0		2357	Lovcom, Inc.		
O6ZT	K06JM	LI _D_N	82.3	174.81	44 15 24.0	3.000	8.5	7.6	16.1R	159.2M
Gillette		WY	263.8	BLTVA20031223ACO	105 41 40.0	150	1525	Duhamel Broadcasting Enter		
--- Channel 202										
201D	K201HS	LIC _C_	0.0	0.03	44 04 00.0	0.050	14.3	10.2	-24.3*	-24.2*
World		WY	180.0	BLFT20091124ABN	107 51 50.0	141	1453	Calvary Chapel Of Twin Falls		
203D	K203BI	LIC DHN	141.7	2.36	44 02 59.0	0.052	1.7	1.0	-6.1*	-8.4
World		WY	321.7	BLFT19910227TD	107 50 44.0	120	1438	Montana State University -		
O6NT	KSHW-LP	LI _HN	43.6	85.92	44 37 24.0	0.232	8.8	6.2	15.0R	71.4M
Sheridan, Etc.		WY	224.1	BLTTV3690	107 06 59.0	66	1396	Lovcom, Inc.		
O6+T	KSHW-LP	CP _D_N	43.6	85.86	44 37 20.0	3.000	8.8	2.6	11.4R	74.9M
Sheridan		WY	224.2	BPTVL20100317ABJ	107 06 57.0		2357	Lovcom, Inc.		
O6ZT	K06JM	LI _D_N	82.3	174.81	44 15 24.0	3.000	7.5	7.6	15.1R	160.2M
Gillette		WY	263.8	BLTVA20031223ACO	105 41 40.0	150	1525	Duhamel Broadcasting Enter		
--- Channel 203										
203A	KNPJ	CP _CX	344.7	39.98	44 24 48.0	0.200	49.4	15.0	-22.2*	-17.5
Greybull		WY	164.6	BNPED20130318ABI	107 59 49.0	151	1404	Hi-Line Radio Fellowship,		
203D	K203BI	LIC DHN	141.7	2.36	44 02 59.0	0.052	5.2	1.0	-9.6*	-21.3
World		WY	321.7	BLFT19910227TD	107 50 44.0	120	1438	Montana State University -		
201D	K201HS	LIC _C_	0.0	0.03	44 04 00.0	0.050	0.5	10.2	-10.5*	-10.7*
World		WY	180.0	BLFT20091124ABN	107 51 50.0	141	1453	Calvary Chapel Of Twin Falls		
204C2	KUDA	CP _CX	188.8	70.70	43 26 15.0	1.900	66.0	43.4	-5.7	12.8
Shoshoni		WY	8.7	BNPED20071022ATC	107 59 52.0	598	2513	Wren Communications, Inc.		
O6NT	KSHW-LP	LI _HN	43.6	85.92	44 37 24.0	0.232	7.8	6.2	14.0R	72.4M
Sheridan, Etc.		WY	224.1	BLTTV3690	107 06 59.0	66	1396	Lovcom, Inc.		
O6+T	KSHW-LP	CP _D_N	43.6	85.86	44 37 20.0	3.000	7.8	2.6	10.4R	75.9M
Sheridan		WY	224.2	BPTVL20100317ABJ	107 06 57.0		2357	Lovcom, Inc.		
O6ZT	K06JM	LI _D_N	82.3	174.81	44 15 24.0	3.000	6.7	7.6	14.3R	161.0M
Gillette		WY	263.8	BLTVA20031223ACO	105 41 40.0	150	1525	Duhamel Broadcasting Enter		
--- Channel 204										
204C2	KUDA	CP _CX	188.8	70.70	43 26 15.0	1.900	111.3	43.4	-50.9*	-7.6
Shoshoni		WY	8.7	BNPED20071022ATC	107 59 52.0	598	2513	Wren Communications, Inc.		
201D	K201HS	LIC _C_	0.0	0.03	44 04 00.0	0.050	0.5	10.2	-10.5*	-10.7*
World		WY	180.0	BLFT20091124ABN	107 51 50.0	141	1453	Calvary Chapel Of Twin Falls		
203D	K203BI	LIC DHN	141.7	2.36	44 02 59.0	0.052	1.7	1.0	-6.1*	-8.4
World		WY	321.7	BLFT19910227TD	107 50 44.0	120	1438	Montana State University -		
O6NT	KSHW-LP	LI _HN	43.6	85.92	44 37 24.0	0.232	6.8	6.2	13.0R	73.4M
Sheridan, Etc.		WY	224.1	BLTTV3690	107 06 59.0	66	1396	Lovcom, Inc.		
O6+T	KSHW-LP	CP _D_N	43.6	85.86	44 37 20.0	3.000	6.8	2.6	9.5R	76.9M
Sheridan		WY	224.2	BPTVL20100317ABJ	107 06 57.0		2357	Lovcom, Inc.		
O6ZT	K06JM	LI _D_N	82.3	174.81	44 15 24.0	3.000	5.9	7.6	13.5R	161.9M
Gillette		WY	263.8	BLTVA20031223ACO	105 41 40.0	150	1525	Duhamel Broadcasting Enter		

CH CITY	CALL	TYPE	ANT STATE	AZI <--	DI ST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LI CENSEE	Page # 2 *IN* (Overlap	*OUT* in km)

---	Channel 205	88.9 MHz.	---								
208C	KWRR	LIC_CX		201.5	72.60	43 27 30.0	85.000	13.1	90.5	48.7	-18.4*
Ethete		WY		21.3	BLED20021007AAE	108 11 39.0	555	2330	Business Council Of The No		
206C1	KNWT	LIC_DCX		295.4	113.40	44 29 46.0	18.500	114.9	78.3	-13.1*	18.0
Cody		WY		114.5	BLED20101013AAK	109 09 09.0	547	2333	Northwest Community Colleg		
204C2	KUDA	CP_CX		188.8	70.70	43 26 15.0	1.900	66.0	43.4	-5.7	12.8
Shoshoni		WY		8.7	BNPED20071022ATC	107 59 52.0	598	2513	Wren Communications, Inc.		
203D	K203BI	LIC_DHN		141.7	2.36	44 02 59.0	0.052	0.0	1.0	-4.4*	0.8
World and		WY		321.7	BLFT19910227TD	107 50 44.0	120	1438	Montana State University -		
06NT	KSHW-LP	LI_HN		43.6	85.92	44 37 24.0	0.232	5.9	6.2	12.1R	74.3M
Sheridan, Etc.		WY		224.1	BLTTV3690	107 06 59.0	66	1396	Lovcom, Inc.		
06+T	KSHW-LP	CP_D_N		43.6	85.86	44 37 20.0	3.000	5.9	2.6	8.6R	77.8M
Sheridan		WY		224.2	BPTVL20100317ABJ	107 06 57.0		2357	Lovcom, Inc.		
06ZT	K06JM	LI_D_N		82.3	174.81	44 15 24.0	3.000	5.1	7.6	12.7R	162.6M
Gillette		WY		263.8	BLTVA20031223ACO	105 41 40.0	150	1525	Duhamel Broadcasting Enter		

---	Channel 206	89.1 MHz.	---								
206C1	KNWT	LIC_DCX		295.4	113.40	44 29 46.0	18.500	168.2	78.3	-66.4*	-3.8
Cody		WY		114.5	BLED20101013AAK	109 09 09.0	547	2333	Northwest Community Colleg		
208C	KWRR	LIC_CX		201.5	72.60	43 27 30.0	85.000	13.1	90.5	48.7	-18.4*
Ethete		WY		21.3	BLED20021007AAE	108 11 39.0	555	2330	Business Council Of The No		
203D	K203BI	LIC_DHN		141.7	2.36	44 02 59.0	0.052	0.0	1.0	-4.4*	0.8
World and		WY		321.7	BLFT19910227TD	107 50 44.0	120	1438	Montana State University -		
06NT	KSHW-LP	LI_HN		43.6	85.92	44 37 24.0	0.232	6.1	6.2	12.3R	74.1M
Sheridan, Etc.		WY		224.1	BLTTV3690	107 06 59.0	66	1396	Lovcom, Inc.		
06+T	KSHW-LP	CP_D_N		43.6	85.86	44 37 20.0	3.000	6.1	2.6	8.7R	77.6M
Sheridan		WY		224.2	BPTVL20100317ABJ	107 06 57.0		2357	Lovcom, Inc.		
06ZT	K06JM	LI_D_N		82.3	174.81	44 15 24.0	3.000	5.3	7.6	12.8R	162.5M
Gillette		WY		263.8	BLTVA20031223ACO	105 41 40.0	150	1525	Duhamel Broadcasting Enter		

Terrain database is NGDC 30 SEC, R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin KM
Contour distances are on direct line to and from reference station. Reference Zone= West Zone
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
"*"affixed to 'IN' or 'OUT' values = site inside protected contour.

All separation margins include rounding