

# **CALVARY CHAPEL OF TWIN FALLS, Inc.**

PO Box 391  
4002 N. 3300 E.  
Twin Falls, ID 83303

DECEMBER 2011

Facility ID: 174640  
Station Call Sign: KBJF  
Permit File Number: BMPED-20110808ABC  
Station Location: UT-NEPHI  
Frequency (MHz): 90.5  
Channel: 213  
Class: C

## **Compliance for the following - Special operating conditions or restrictions:**

2. A formal request for program authority is being requested with this FCC Form 302-FM license application.
3. Specified radiofrequency electromagnetic field strength measurements were conducted.
4. Attached is documentation demonstrating complication with special condition #3.
5. Attached is the antenna proof-of-performance results.
6. Attached is an affidavit from a licensed surveyor for the proper azimuth orientation.
7. Attached is an affidavit certifying the installation of the directional antenna system.
8. Section 73.316 (2)(ix)(B) qualifies condition #8: KBJF is a noncommercial educational FM Station that will operate on channel 213, as highlighted below:

Section 73.316 (2)(ix)(B) .....where the relative field values are taken from at least 36 evenly spaced radials for the entire 360 degrees of azimuth. The application for license must also demonstrate that coverage of the community of license by the 70 dBu contour is maintained for stations authorized pursuant to Sec. 73.215 on Channels 221 through 300, as required by Sec. 73.315(a), **while noncommercial educational stations operating on Channels 201 through 220 must show that the 60 dBu contour covers at least a portion of the community of license.**

Attached is a V-Soft InterDLG Map showing that the City of License, Nephi UT, is well within the 60dBu F(50,50) contour.

## **Radio Frequency Field Strength Measurements**

KBJF CH-213 90.5 MHz

NEPHI, UT

Prepared by:  
Dustin Pamplona  
Sr. Field Technician  
Calvary Chapel of Twin Falls, Inc.  
December 12, 2011

This report is the result of an RF field strength survey taken at the transmitter site of KBJF Nephi, UT. This report is being submitted to comply with part 3 of the "Special operating conditions or restrictions" of the construction permit, permit file number: BMPED-20110808ABC, which requires RF field strength measurements to ensure compliance with FCC guidelines (OET Bulletin No. 65, Edition 97-01, August 1997).

KBJF is a class C station operating on channel 213 (90.5 MHz) with an ERP of 75 KW. The antenna consists of a 6 bay, circular polarized array with a center of radiation at 31 meters, and is directional. The transmitter site is located on Mt. Baldy, near Nephi, UT. One other full power FM station (KUDE) is licensed for operation from the same tower, but was not in operation at the time of this survey.

Equipment used for the survey consisted of the following:

Narda model NBM-520A RF field strength meter, SN# D-0065 last calibrated 2-11-11.

Narda model EA-5091 "E field" probe, SN# 01110.

A calibration certificate is included with this report. The meter was set to read and store instantaneous peak values using the FCC standard for "uncontrolled environments".

The survey was conducted along 8 radials beginning from the base of the tower and extending out approximately 100 meters, or to the limit that terrain would allow. The probe of the field strength meter was held upward approximately 7-8 feet off the ground and swept horizontally while walking the radials.

Radial	Peak Value
0 deg.	38% of uncontrolled environment
45 deg.	20% of uncontrolled environment
90 deg.	42% of uncontrolled environment
135 deg.	28% of uncontrolled environment
180 deg.	16% of uncontrolled environment
225 deg.	33% of uncontrolled environment
270 deg.	30% of uncontrolled environment
315 deg.	61% of uncontrolled environment


The variations in level along the 8 radials are due to shielding effects of the tower the antenna is mounted on, as well as terrain. Terrain is relatively flat north of the tower, sloping downward south of the tower, and dropping off rapidly to the east and west of the tower.

In summary, the field strength measurements around the tower of the KBJF transmitter indicate that the highest field strength readings of 61% of maximum for an uncontrolled environment are within the 200 W/cm<sup>2</sup> uncontrolled (public) exposure limit.

I hereby certify that I have been a broadcast technician for over 5 years. I have been involved in or supervised the construction of 10 full power FM stations, and numerous FM translator stations. I presently hold the title of Senior Field Technician for CSN International and Calvary Chapel of Twin Falls, Inc.

I further certify that the preceding is true and correct to the best of my knowledge and ability.

Respectfully,

A handwritten signature in black ink, appearing to read 'Dustin Pamplona', with a long horizontal flourish extending to the right.

Dustin Pamplona  
Sr. Field Technician  
Calvary Chapel of Twin Falls, Inc.





**TRS RenTelco**

1830 West Airfield Drive  
DFW Airport, Texas 75261

## Calibration Certificate Traceability Statement

Asset Number: 1127988  
MFG/Model Number: NAR/NBM-520;A  
Serial Number: D-0065  
Description: RF SURVEY METER  
Customer: CSN INTERNATIONAL  
Address: 4002 NORTH 3300 EAST  
TWIN FALLS ID 83301  
  
Customer P.O. No: 5516  
Rental Agreement Number: 1467470-0  
Certificate Number: 14674700112798811211

This certificate applies to the instrument identified above and shall not be reproduced, except in full, without written approval of TRS-RenTelco.

This certifies that the above instrument was calibrated to manufacturer's specifications using approved procedures and traceable measurement standards.

This calibration was performed by an approved vendor.

The Quality System of TRS-RenTelco is registered by UL DQS Certificate Number 10000112 to the Quality Management System Standard ISO 9001:2008. TRS-RenTelco's Laboratory is in compliance with MIL-STD-45662A, ANSI/NCSL Z540-1-1994, ISO/IEC 17025:2005 and ISO 10012:2003.

Measurement standards are calibrated at planned intervals. Traceability is to the International System of Units (SI) through the National Institute of Standards and Technology (NIST) or other recognized National Metrology Institute (NMI), natural physical constants, consensus standards, or by ratio type measurements using self calibrating techniques. Supporting documentation relative to traceability is available for review by appointment.

This instrument is initially being sent to the above customer calibrated and fully functional.

Although the calibration laboratory is in compliance with ANSI/NCSL Z540-1-1994 and MIL-STD-45662A this calibration certificate is issued only as a Traceability Statement and does not carry the requirement of recalibration at the end of rental and customer notification of Out of Tolerance conditions.

TRS-RenTelco's calibration interval for this instrument is 24 months.

Processed By: DAVID ERNST

Calibration Date: Feb 11, 2011

Calibration Due Date: Feb 11, 2013

Quality Assurance:



Peel Off Sticker Here ---->

**TRS-RenTelco** 800-621-6354  
ID: 1127988 Date: 02/11/11  
AV Due: 02/11/13

Certificate Print Date November 30, 2011

Page 1 of 1

# DIRECTIONAL ANTENNA PROOFS

KBJF NEPHI



# Propagation Systems, Inc.

Quality Broadcast Antenna Systems

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**Directional FM Antenna**  
**KBJF**  
**Calvary Chapel of Twin Falls, Inc.**  
**Nephi, UT**

A PSIFMP panel antenna with custom mounting brackets and feed network was used in conjunction with the customer's self-supporting triangular tower to create the necessary directional radiation pattern. The final antenna consists of 6-bays of 3-panels per bay for a total of 18-panels secured to the tower with custom-mounting brackets. The antenna panels are fed from a power divider network that provides the necessary power and phase to each panel to produce the desired directional radiation pattern.

Pattern testing was performed using a 1/3 scale model antenna and tower. The azimuth plane measurements were taken on a ground reflection test range. This type of test range utilizes the reflected signal and direct signal from the source antenna to form an interference pattern on the antenna under test. The antenna and tower under test was mounted to a turntable that allowed the structure to be rotated 360° in the azimuth plane. The source antenna was located approximately 75 ft. from the antenna under test. The source height above ground was adjusted to peak the first lobe of the interference pattern at the antenna under test.

The test antenna was mounted in the center of rotation of the turntable. The antenna and mounting structure were rotated clockwise while data was recorded in a counter clockwise direction. All feed cables to the antenna were secured and grounded during pattern measurements. A Hewlett Packard 8753E-network analyzer operating at 271.5 MHz was used as both the source and receiver. The level of the received signal was compared with a standard dipole to establish the directivity of the final pattern. The final pattern measured does not exceed the envelope pattern and is 91.4% of the envelope RMS.

The antenna is to be mounted according to the enclosed drawings at the 31-meter (102 ft.) level above ground. At this elevation the antenna will be within the +2m/-4m deviation allowed from the 31-meter elevation specified in the construction permit. No other antenna can be installed within 10 ft of any radiating element.

The antenna mounting brackets have been designed to mount directly to each tower face. No adjustment is possible thus each panel is positioned in the direction of the tower face on which it is mounted. The tower has been surveyed and one leg is positioned 350.6° relative to true north. The result is, the panels are positioned at 50.6°, 170.6° and 290.6° around the tower. Each element, cable, bracket and panel is identified for correct assembly. It is recommended that a broadcast engineer be present to supervise the installation of the antenna and that he or she certifies that the antenna has been installed according to the enclosed drawings.

An input power level of 21.74 kW will be necessary at the antenna input in order to reach the required 75 kW ERP. The transmitter output power requirements are dependent upon the transmission line size and length used to feed the antenna. The final length of transmission line must be determined after installation.

### Antenna Specifications

Antenna Model	PSIFMP-6-DA
Type	6-bay directional FM panel antenna
Configuration	3-around panel configuration
Frequency	90.7 MHz
Polarization	Circular
Envelope RMS	.983
Composite RMS	.899
Gain (h-pol)	3.45 (5.38 dB)
Gain (v-pol)	3.25 (5.12 dB)
ERP	75 kW
Antenna input power	21.74 kW
Input	3-1/8" EIA center fed input
Power rating	32 kW
Length	55.43 ft.
Weight	5288 lbs.
Wind Area	430 sq. ft.

### Statement of Certification

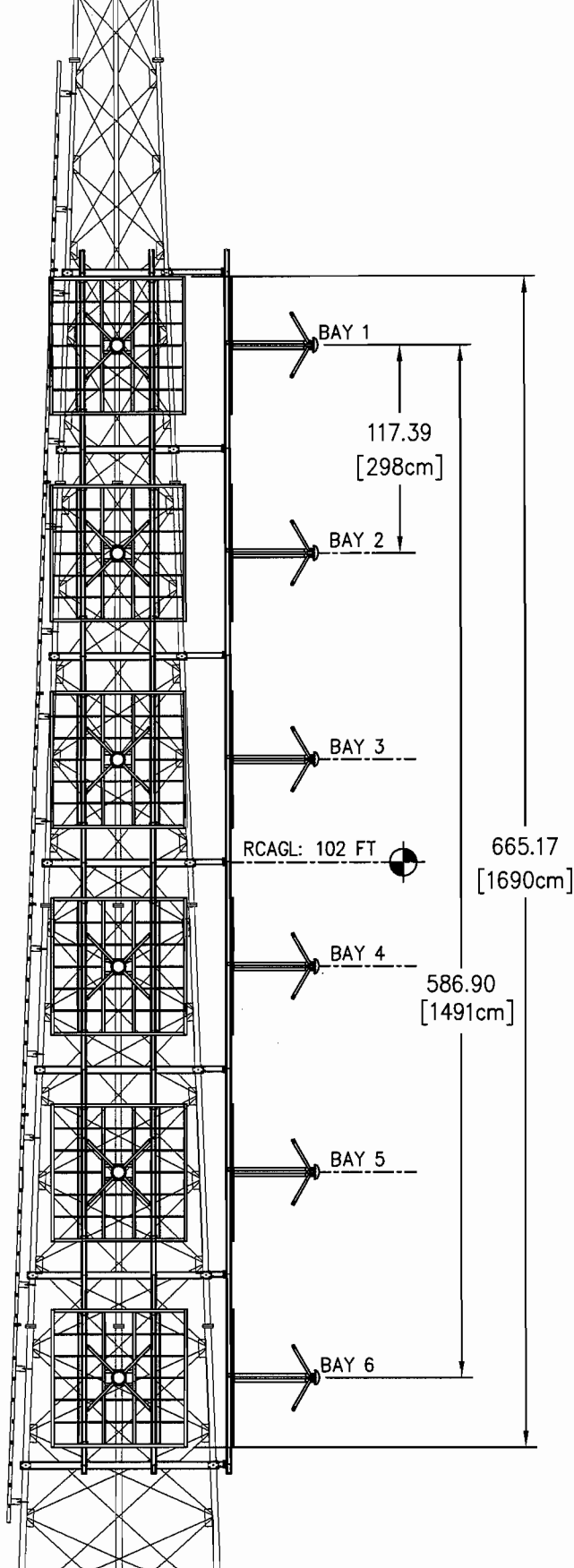
This is to certify the antenna has been designed, fabricated and tested under my supervision and it meets the required envelope pattern limitations set forth in the stations construction permit.



11/14/2011

Douglas A. Ross  
President  
Propagation Systems Inc.





SPECIFICATIONS	
SPACING:	0.9λ
LENGTH:	55.43 FT [16.9m]
APERTURE:	48.91 FT [14.9m]
RATING:	32 kW
GAIN:	3.45 (4.98 dB)
WEIGHT:	5288 LB [2403 Kg]
WINDAREA:	430 FT <sup>2</sup>
TIA-222-F (NO ICE)	
NOTES:	
1. REFERENCE J811FM-1012-035	
FOR BRACKET AND CHANNEL	
IDENTIFICATION AND ELEVATIONS	
2. REFERENCE J811FM-1012-036	
FOR VERTICAL SUPPORT MAST	
LAYOUT.	

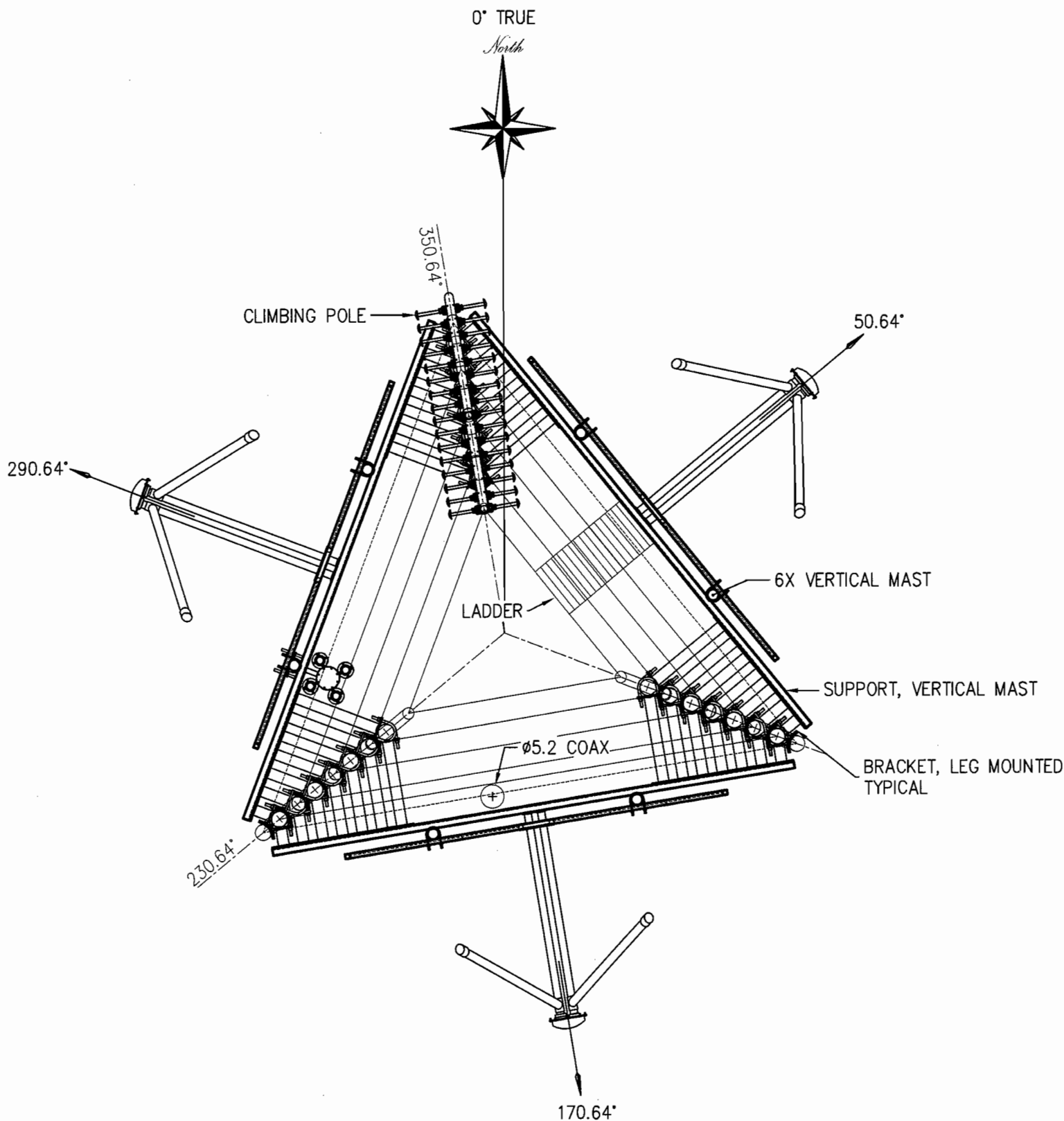
A	D.G. Kellar	11/30/11	RESIZE DRAWING, SHOW NEW CLIMB POLE
REV.	MADE BY CHECKED BY	DATE	CHANGE
<p>This drawing is loaned subject to the express understanding and agreement that the drawing and information therein contained are, and shall remain the property of PSI, and will not be otherwise utilized or disposed of, directly or indirectly, and will not be used in whole or in part or assist in making or finish any reproductions hereof, or for the design or making of any item, parts, object, apparatus or parts thereof, except upon the written permissions of PSI first obtained. The acceptance of this drawing will be construed as an acceptance of the forgoing agreement.</p>			
SIZE			A

# PROPAGATION SYSTEMS, INC.

Ebensburg, Pennsylvania USA 814-472-5540

## ELEVATIONS AND SPECIFICATIONS

MODEL:	PSIFMP-6-DA	DRAWN BY:	D.G. Kellar	DATE:	8/24/11
CHANNEL/ FREQUENCY:	90.5 MHz	APPROVED BY:		DATE:	
SCALE:	1:100	DRAWING NO.:	J811FM-1012-001	REV.	A



A	D.G. Kellar	12/14/11	CORRECT TOWER ORIENTATION PER MW BROWN SURVEY DATED 12/9/2011
REV.	MADE BY CHECKED BY	DATE	CHANGE

This drawing is loaned subject to the express understanding and agreement that the drawing and information therein contained are, and shall remain the property of PSI, and will not be otherwise utilized or disposed of, directly or indirectly, and will not be used in whole or in part or assist in making or finish any information for the making of drawings, prints or other reproductions hereof, or for the design or making of any item, parts, object, apparatus or parts thereof, except upon the written permissions of PSI first obtained. The acceptance of this drawing will be construed as an acceptance of the forgoing agreement.

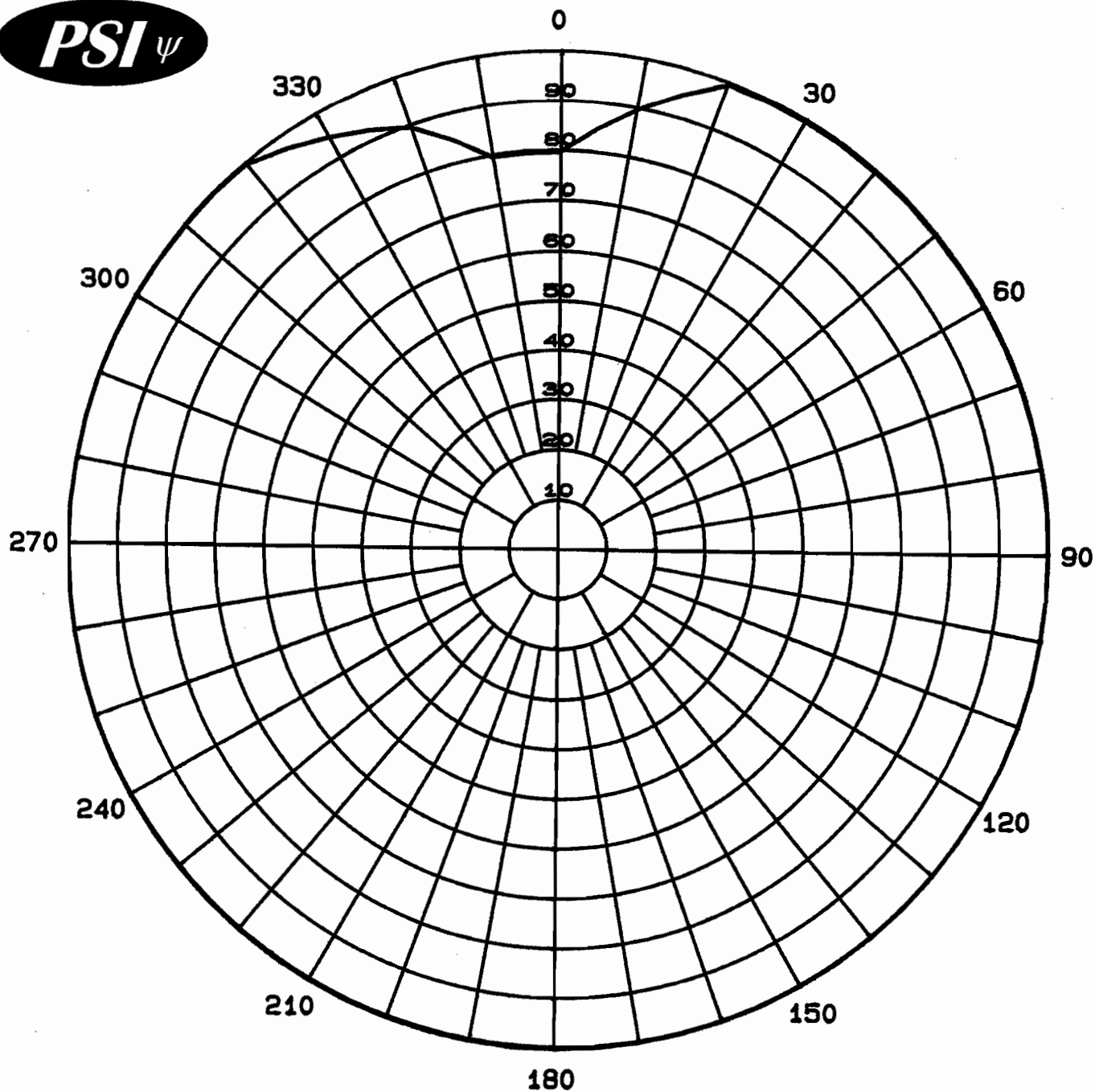
SIZE  
  
A

# PROPAGATION SYSTEMS, INC.

Ebensburg, Pennsylvania USA 814-472-5540

## PLAN VIEW AND ORIENTATION

MODEL:	PSIFMP-6-DA	DRAWN BY:	D.G. Kellar	DATE:	8/25/11
CHANNEL/ FREQUENCY:	90.5 MHz	APPROVED BY:		DATE:	
SCALE:	1:30	DRAWING NO.:	J811FM-1012-002	REV.	A



Maximum Envelope  
Azimuth Plane Pattern  
Antenna: PSIFMP-6-DA  
Type: 6-Bay Directional FM Antenna  
ERP: 75 kW (18.75 dBk)  
RMS Envelope: .983  
Frequency: 90.5 MHz  
KBJF Nephi, UT

**Propagation Systems Inc.**  
**PO Box 113**  
**Ebensburg, PA 15931**

## Maximum Envelope Tabulation

Antenna: PSIFMP-6-DA

Calvary Chapel of Twin Falls, Inc.

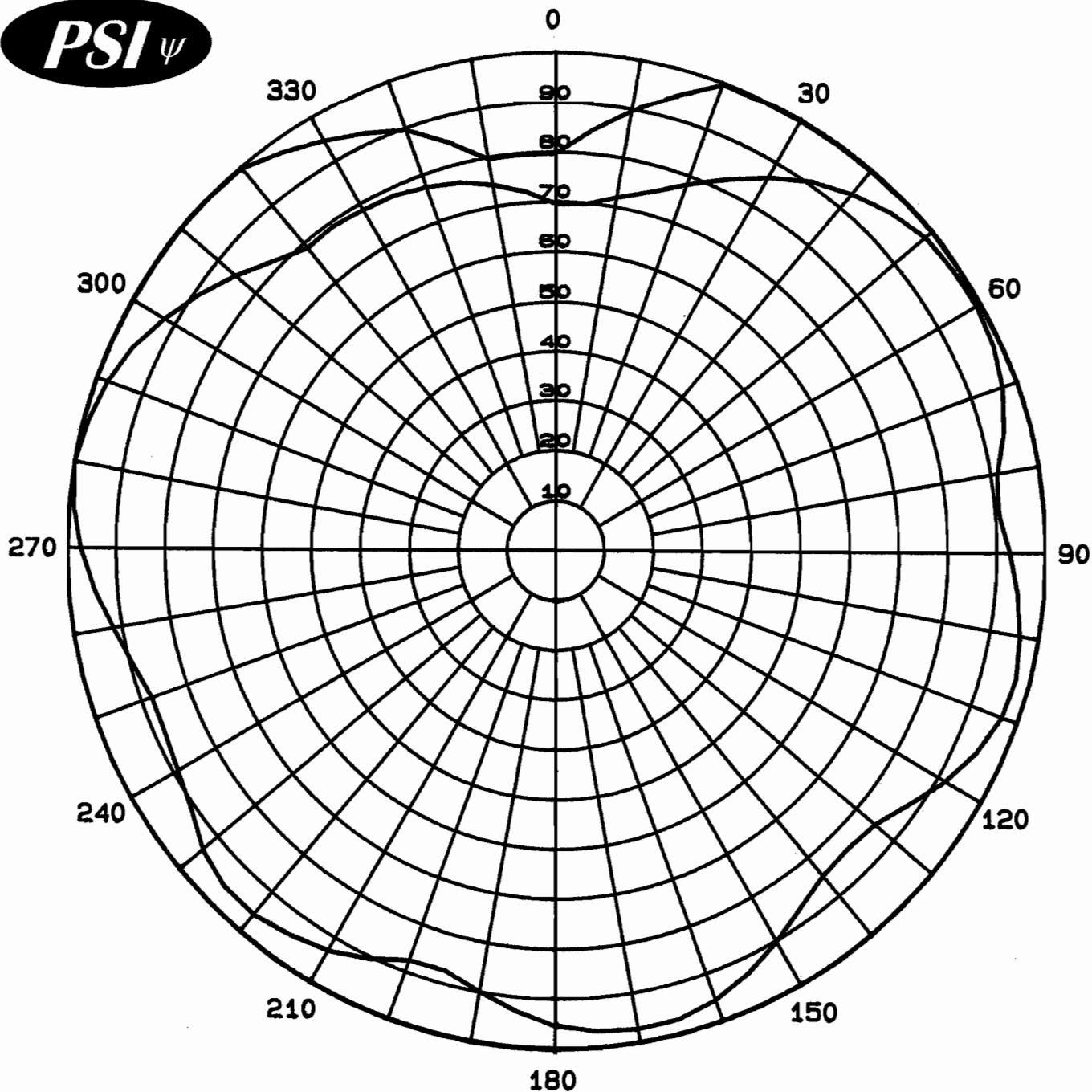
Station: KBJF

Frequency: 90.5 MHz

Location: Nephi, UT

Maximum ERP: 75 kW (18.75 dBk)

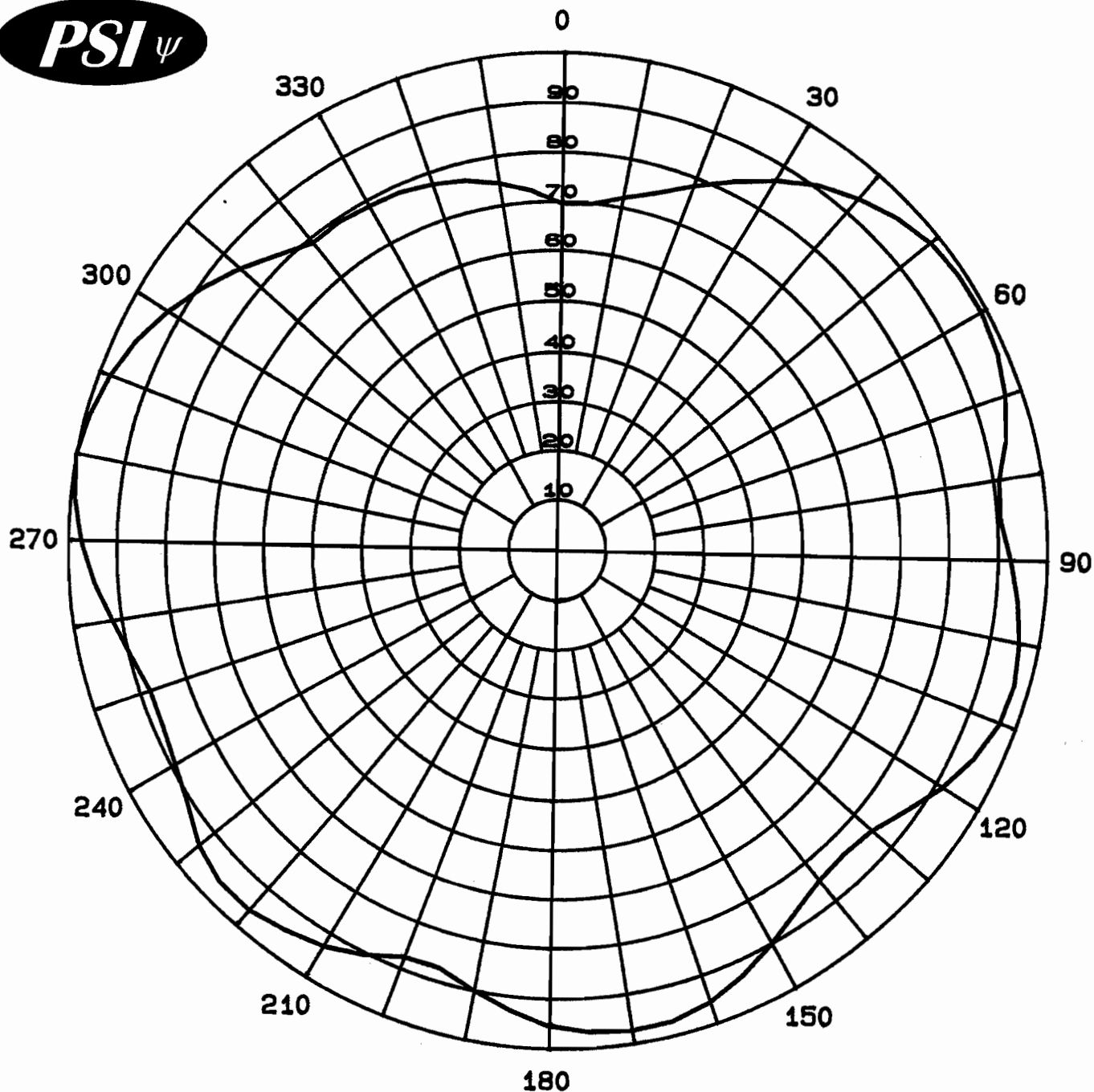
Angle	Relative Field	ERP (kW)	ERP (dBk)
0	0.800	48.00	16.81
10	0.900	60.75	17.84
20	1.000	75.00	18.75
30	1.000	75.00	18.75
40	1.000	75.00	18.75
50	1.000	75.00	18.75
60	1.000	75.00	18.75
70	1.000	75.00	18.75
80	1.000	75.00	18.75
90	1.000	75.00	18.75
100	1.000	75.00	18.75
110	1.000	75.00	18.75
120	1.000	75.00	18.75
130	1.000	75.00	18.75
140	1.000	75.00	18.75
150	1.000	75.00	18.75
160	1.000	75.00	18.75
170	1.000	75.00	18.75
180	1.000	75.00	18.75
190	1.000	75.00	18.75
200	1.000	75.00	18.75
210	1.000	75.00	18.75
220	1.000	75.00	18.75
230	1.000	75.00	18.75
240	1.000	75.00	18.75
250	1.000	75.00	18.75
260	1.000	75.00	18.75
270	1.000	75.00	18.75
280	1.000	75.00	18.75
290	1.000	75.00	18.75
300	1.000	75.00	18.75
310	1.000	75.00	18.75
320	1.000	75.00	18.75
330	0.950	67.69	18.31
340	0.900	60.75	17.84
350	0.800	48.00	16.81



Maximum Envelope and  
Composite Pattern  
Antenna: PSIFMP-6-DA  
Type: 6-Bay Directional FM Antenna  
ERP: 75 kW (18.75 dBk)  
RMS Envelope: .983  
RMS Composite: .899  
Frequency: 90.5 MHz

**Propagation Systems Inc.**  
**PO Box 113**  
**Ebensburg, PA 15931**

KBJF Nephi, UT



Measured Composite  
Azimuth Plane Pattern  
Antenna: PSIFMP-6-DA  
Type: 6-Bay Directional FM Antenna  
ERP: 75 kW (18.75 dBk)  
RMS Composite: .899  
Frequency: 90.5 MHz  
KBJF Nephi, UT

**Propagation Systems Inc.**  
**PO Box 113**  
**Ebensburg, PA 15931**



## Composite Pattern Tabulation

Antenna: PSIFMP-6-DA

Calvary Chapel of Twin Falls, Inc.

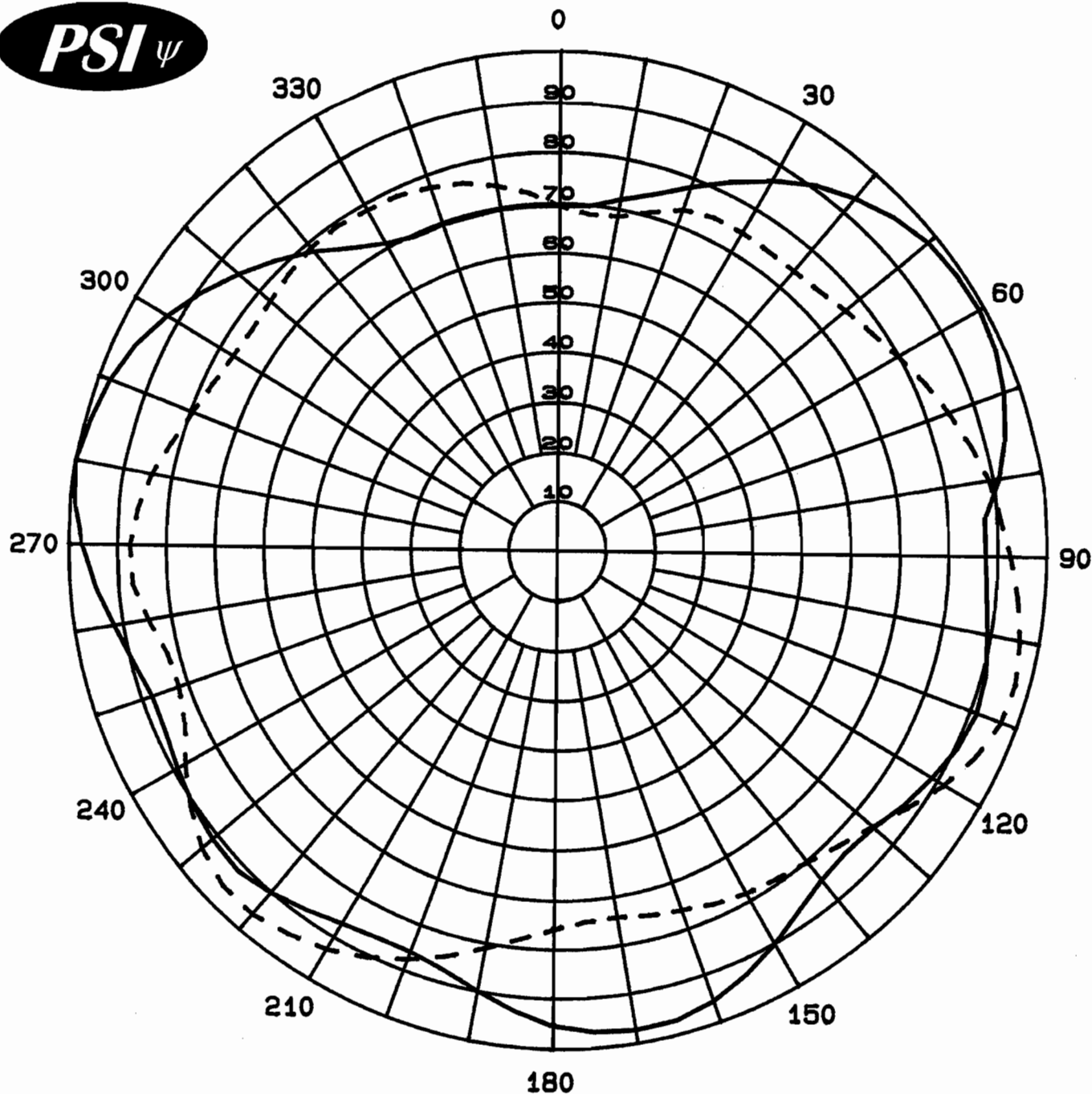
Station: KBJF

Frequency: 90.5 MHz

Location: Nephi, UT

Maximum ERP: 75 kW (18.75 dBk)

Angle	Relative Field	ERP (kW)	ERP (dBk)
0	0.697	36.44	15.62
10	0.722	39.10	15.92
20	0.785	46.22	16.65
30	0.869	56.64	17.53
40	0.939	66.13	18.20
50	0.982	72.32	18.59
60	0.991	73.66	18.67
70	0.968	70.28	18.47
80	0.913	62.52	17.96
90	0.926	64.31	18.08
100	0.961	69.26	18.41
110	0.967	70.13	18.46
120	0.915	62.79	17.98
130	0.848	53.93	17.32
140	0.847	53.81	17.31
150	0.901	60.89	17.85
160	0.956	68.55	18.36
170	0.973	71.00	18.51
180	0.953	68.12	18.33
190	0.897	60.35	17.81
200	0.874	57.29	17.58
210	0.927	64.45	18.09
220	0.957	68.69	18.37
230	0.939	66.13	18.20
240	0.890	59.41	17.74
250	0.877	57.68	17.61
260	0.917	63.07	18.00
270	0.971	70.71	18.49
280	1.000	75.00	18.75
290	0.977	71.59	18.55
300	0.926	64.31	18.08
310	0.856	54.96	17.40
320	0.790	46.81	16.70
330	0.788	46.57	16.68
340	0.777	45.28	16.56
350	0.747	41.85	16.22



Measured Relative Field  
Azimuth Plane Pattern  
Antenna: PSIFMP-6-DA  
Type: 6-Bay Directional FM Antenna  
Gain H-pol (solid): 3.45 (5.38 dB)  
Gain V-pol (dash): 3.25 (5.12 dB)  
Frequency: 90.5 MHz  
KBJF Nephi, UT

**Propagation Systems Inc.**  
**PO Box 113**  
**Ebensburg, PA 15931**

## Measured Relative Field Tabulation

Antenna: PSIFMP-6-DA  
 Calvary Chapel of Twin Falls, Inc.  
 Station: KBJF  
 Frequency: 90.5 MHz  
 Location: Nephi, UT

Horizontal Polarization

Angle	Relative Field	Power Gain	Gain (dB)
0	0.697	1.676	2.24
10	0.722	1.798	2.55
20	0.785	2.126	3.28
30	0.869	2.605	4.16
40	0.939	3.042	4.83
50	0.982	3.327	5.22
60	0.991	3.388	5.30
70	0.968	3.233	5.10
80	0.913	2.876	4.59
90	0.875	2.641	4.22
100	0.893	2.751	4.40
110	0.914	2.882	4.60
120	0.886	2.708	4.33
130	0.848	2.481	3.95
140	0.847	2.475	3.94
150	0.901	2.801	4.47
160	0.956	3.153	4.99
170	0.973	3.266	5.14
180	0.953	3.133	4.96
190	0.897	2.776	4.43
200	0.857	2.534	4.04
210	0.865	2.581	4.12
220	0.899	2.788	4.45
230	0.911	2.863	4.57
240	0.890	2.733	4.37
250	0.877	2.653	4.24
260	0.917	2.901	4.63
270	0.971	3.253	5.12
280	1.000	3.450	5.38
290	0.977	3.293	5.18
300	0.926	2.958	4.71
310	0.856	2.528	4.03
320	0.781	2.104	3.23
330	0.712	1.749	2.43
340	0.698	1.681	2.26
350	0.699	1.686	2.27

Maximum Value

Field 1.00  
 Gain 3.45 (5.38 dB)  
 Azimuth Bearing 280 degrees

Minimum Field

Field 0.697  
 Gain 1.676 (2.24 dB)  
 Azimuth Bearing 0 degrees

Vertical Polarization

Angle	Relative Field	Power Gain	Gain (dB)
0	0.697	1.676	2.24
10	0.687	1.628	2.12
20	0.737	1.874	2.73
30	0.747	1.925	2.84
40	0.746	1.920	2.83
50	0.765	2.019	3.05
60	0.801	2.214	3.45
70	0.849	2.487	3.96
80	0.892	2.745	4.39
90	0.926	2.958	4.71
100	0.961	3.186	5.03
110	0.967	3.226	5.09
120	0.915	2.888	4.61
130	0.845	2.463	3.92
140	0.801	2.214	3.45
150	0.782	2.110	3.24
160	0.759	1.987	2.98
170	0.741	1.894	2.77
180	0.756	1.972	2.95
190	0.808	2.252	3.53
200	0.874	2.635	4.21
210	0.927	2.965	4.72
220	0.957	3.160	5.00
230	0.939	3.042	4.83
240	0.872	2.623	4.19
250	0.819	2.314	3.64
260	0.846	2.469	3.93
270	0.874	2.635	4.21
280	0.842	2.446	3.88
290	0.796	2.186	3.40
300	0.769	2.040	3.10
310	0.771	2.051	3.12
320	0.790	2.153	3.33
330	0.788	2.142	3.31
340	0.777	2.083	3.19
350	0.747	1.925	2.84

Maximum Value

Field 0.971  
 Gain 3.25 (5.12 dB)  
 Azimuth Bearing 105 degrees

Minimum Field

Field 0.684  
 Gain 1.61 (2.09 dB)  
 Azimuth Bearing 5 degrees

## ERP Tabulation

Antenna: PSIFMP-6-DA

Calvary Chapel of Twin Falls, Inc.

Station: KBJF

Frequency: 90.5 MHz

Location: Nephi, UT

Maximum ERP: 75 kW (18.75 dBk)

### Horizontal Polarization

Angle	Relative Field	ERP (kW)	ERP (dBk)
0	0.697	36.44	15.62
10	0.722	39.10	15.92
20	0.785	46.22	16.65
30	0.869	56.64	17.53
40	0.939	66.13	18.20
50	0.982	72.32	18.59
60	0.991	73.66	18.67
70	0.968	70.28	18.47
80	0.913	62.52	17.96
90	0.875	57.42	17.59
100	0.893	59.81	17.77
110	0.914	62.65	17.97
120	0.886	58.87	17.70
130	0.848	53.93	17.32
140	0.847	53.81	17.31
150	0.901	60.89	17.85
160	0.956	68.55	18.36
170	0.973	71.00	18.51
180	0.953	68.12	18.33
190	0.897	60.35	17.81
200	0.857	55.08	17.41
210	0.865	56.12	17.49
220	0.899	60.62	17.83
230	0.911	62.24	17.94
240	0.890	59.41	17.74
250	0.877	57.68	17.61
260	0.917	63.07	18.00
270	0.971	70.71	18.49
280	1.000	75.00	18.75
290	0.977	71.59	18.55
300	0.926	64.31	18.08
310	0.856	54.96	17.40
320	0.781	45.75	16.60
330	0.712	38.02	15.80
340	0.698	36.54	15.63
350	0.699	36.65	15.64

#### Maximum Value (H-pol)

Field 1.00  
ERP 75 kW (18.75 dBk)

Azimuth Bearing 280 degrees

#### Minimum Field (H-pol)

Field 0.697  
ERP 36.44 kW (15.62 dBk)

Azimuth Bearing 0 degrees

### Vertical Polarization

Angle	Relative Field	ERP (kW)	ERP (dBk)
0	0.697	36.44	15.62
10	0.687	35.40	15.49
20	0.737	40.74	16.10
30	0.747	41.85	16.22
40	0.746	41.74	16.21
50	0.765	43.89	16.42
60	0.801	48.12	16.82
70	0.849	54.06	17.33
80	0.892	59.67	17.76
90	0.926	64.31	18.08
100	0.961	69.26	18.41
110	0.967	70.13	18.46
120	0.915	62.79	17.98
130	0.845	53.55	17.29
140	0.801	48.12	16.82
150	0.782	45.86	16.61
160	0.759	43.21	16.36
170	0.741	41.18	16.15
180	0.756	42.87	16.32
190	0.808	48.96	16.90
200	0.874	57.29	17.58
210	0.927	64.45	18.09
220	0.957	68.69	18.37
230	0.939	66.13	18.20
240	0.872	57.03	17.56
250	0.819	50.31	17.02
260	0.846	53.68	17.30
270	0.874	57.29	17.58
280	0.842	53.17	17.26
290	0.796	47.52	16.77
300	0.769	44.35	16.47
310	0.771	44.58	16.49
320	0.790	46.81	16.70
330	0.788	46.57	16.68
340	0.777	45.28	16.56
350	0.747	41.85	16.22

#### Maximum Value (V-pol)

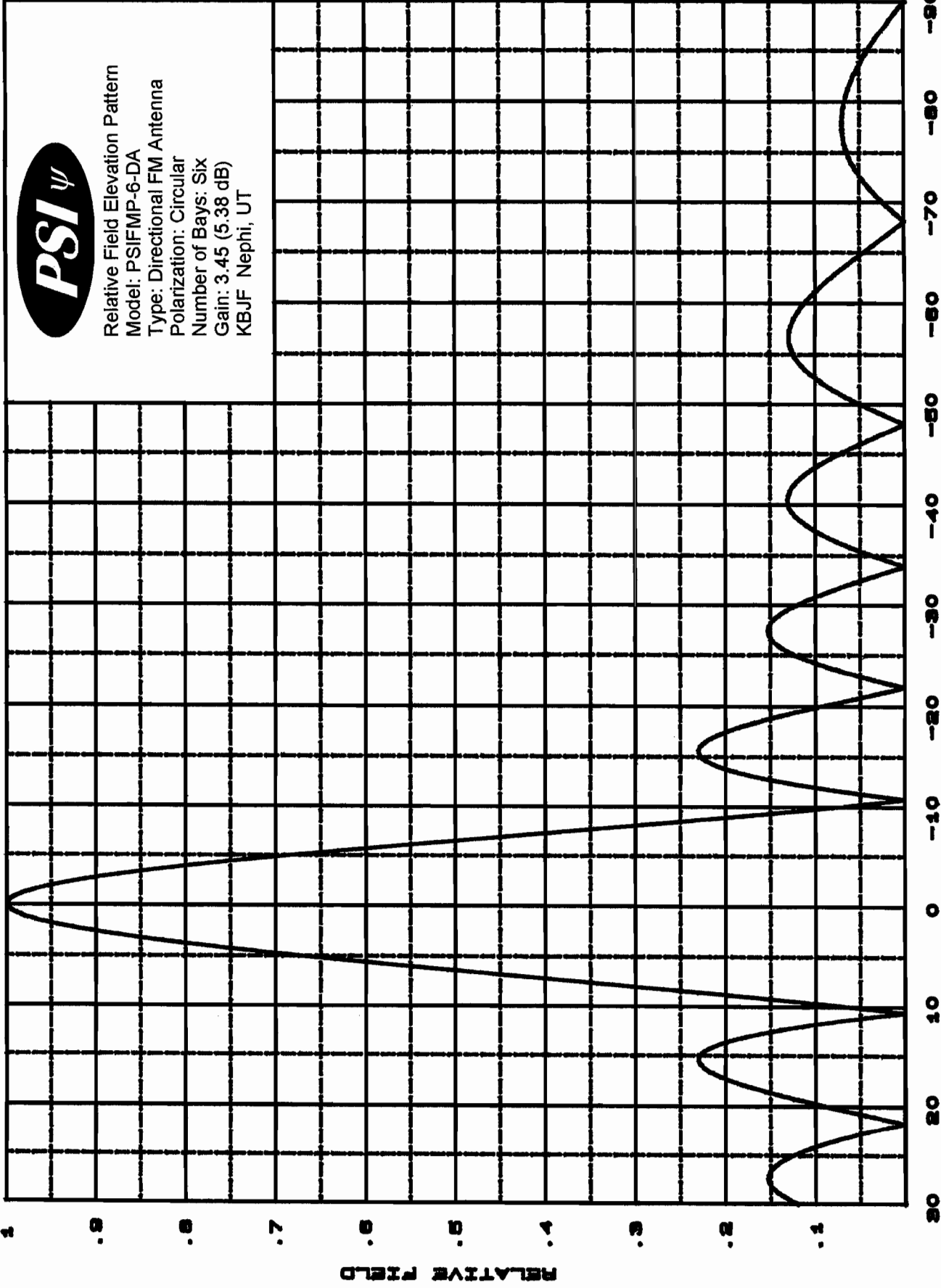
Field 0.971  
ERP 70.71 kW (18.49 dBk)

Azimuth Bearing 105 degrees

#### Minimum Field (V-pol)

Field 0.684  
ERP 35.09 kW (15.45 dBk)

Azimuth Bearing 5 degrees



DEGREES BELOW HORIZONTAL



Relative Field Elevation Pattern  
Model: PSIFMP-6-DA  
Type: Directional FM Antenna  
Polarization: Circular  
Number of Bays: Six  
Gain: 3.45 (5.38 dB)  
KBJF Nephi, UT



**Propagation Systems Inc.**  
Elevation Pattern Tabulation  
Antenna: PSIFMP-6-DA  
KBJF Nephi, UT

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
-90.0	0.001	-60.000	-50.0	0.054	-25.289	-10.0	0.067	-23.463
-89.0	0.009	-40.974	-49.0	0.031	-30.198	-9.0	0.180	-14.909
-88.0	0.018	-35.027	-48.0	0.006	-44.795	-8.0	0.302	-10.392
-87.0	0.026	-31.580	-47.0	0.020	-34.045	-7.0	0.430	-7.331
-86.0	0.035	-29.194	-46.0	0.045	-26.877	-6.0	0.557	-5.083
-85.0	0.042	-27.448	-45.0	0.069	-23.174	-5.0	0.677	-3.383
-84.0	0.050	-26.073	-44.0	0.091	-20.828	-4.0	0.785	-2.099
-83.0	0.056	-25.027	-43.0	0.109	-19.256	-3.0	0.875	-1.155
-82.0	0.062	-24.199	-42.0	0.122	-18.264	-2.0	0.943	-0.507
-81.0	0.066	-23.561	-41.0	0.130	-17.741	-1.0	0.986	-0.126
-80.0	0.070	-23.098	-40.0	0.131	-17.651	0.0	1.000	0.000
-79.0	0.072	-22.802	-39.0	0.126	-18.009	1.0	0.986	-0.126
-78.0	0.074	-22.658	-38.0	0.114	-18.878	2.0	0.943	-0.505
-77.0	0.073	-22.694	-37.0	0.095	-20.432	3.0	0.876	-1.154
-76.0	0.072	-22.894	-36.0	0.071	-23.005	4.0	0.785	-2.098
-75.0	0.068	-23.288	-35.0	0.042	-27.636	5.0	0.678	-3.381
-74.0	0.064	-23.926	-34.0	0.009	-40.974	6.0	0.557	-5.079
-73.0	0.057	-24.841	-33.0	0.025	-31.989	7.0	0.430	-7.325
-72.0	0.049	-26.127	-32.0	0.059	-24.570	8.0	0.303	-10.383
-71.0	0.040	-27.992	-31.0	0.091	-20.842	9.0	0.180	-14.902
-70.0	0.029	-30.770	-30.0	0.118	-18.571	10.0	0.067	-23.443
-69.0	0.017	-35.484	-29.0	0.138	-17.181	11.0	0.031	-30.284
-68.0	0.003	-49.542	-28.0	0.151	-16.443	12.0	0.111	-19.113
-67.0	0.011	-39.244	-27.0	0.153	-16.304	13.0	0.171	-15.345
-66.0	0.026	-31.731	-26.0	0.145	-16.782	14.0	0.210	-13.556
-65.0	0.041	-27.668	-25.0	0.126	-17.988	15.0	0.228	-12.823
-64.0	0.057	-24.910	-24.0	0.097	-20.281	16.0	0.228	-12.852
-63.0	0.072	-22.875	-23.0	0.058	-24.659	17.0	0.210	-13.562
-62.0	0.086	-21.289	-22.0	0.013	-37.600	18.0	0.178	-14.990
-61.0	0.099	-20.066	-21.0	0.037	-28.751	19.0	0.136	-17.325
-60.0	0.111	-19.124	-20.0	0.088	-21.152	20.0	0.088	-21.152
-59.0	0.120	-18.438	-19.0	0.136	-17.335	21.0	0.037	-28.715
-58.0	0.126	-17.978	-18.0	0.178	-14.990	22.0	0.013	-37.701
-57.0	0.130	-17.731	-17.0	0.210	-13.562	23.0	0.058	-24.659
-56.0	0.130	-17.721	-16.0	0.228	-12.852	24.0	0.097	-20.294
-55.0	0.127	-17.957	-15.0	0.228	-12.823	25.0	0.126	-17.999
-54.0	0.119	-18.471	-14.0	0.210	-13.549	26.0	0.145	-16.782
-53.0	0.108	-19.305	-13.0	0.171	-15.345	27.0	0.153	-16.304
-52.0	0.094	-20.571	-12.0	0.111	-19.101	28.0	0.151	-16.443
-51.0	0.075	-22.446	-11.0	0.031	-30.241	29.0	0.138	-17.181





Office: (801) 377-1790 Fax: (801) 377-1789  
578 East 770 North, Orem, UT 84097

December 1, 2011

Kelly Carlson  
CSN International  
4002 North 3300 East  
Twin Falls, Idaho 83301

Re: Mt. Baldy Radio Tower Survey.

Dear Kelly:


On December 7, 2011 Terry Rusby and I went to the Mt. Baldy Tower site in Sanpete County in the company of Dustin Pamplona and Joe Jennings from your office, to perform a survey to verify the as-constructed azimuth orientation of the tower base.

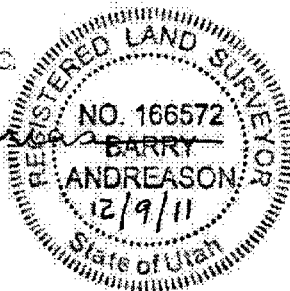
We found several monuments in place in various locations around the tower including the BALD Triangulation Station located approximately 13.00 feet easterly from the tower base next to the fence line that surrounds the site. According to the NGS Data Sheet we downloaded for this monument, the information for the monument is as follows: Latitude  $39^{\circ}45'36.41759(N)$  Longitude  $111^{\circ}34'40.21731(W)$  with an elevation of 9052.00 feet. We occupied this monument with our Trimble 5700 GPS Base and using this data, we began our survey. Using our Trimble 5800 Rover and Trimble TSC2 data collector we located reference monument (BALD RM 2) and the BALD Azimuth Mark monument that were also set in 1938 as accessory monuments to the location of the triangulation monument. The information and orientation of these monuments is provided on the Data Sheet that has been provided. The results of this survey are shown on the attached drawing. We also found and located the Southwest corner of Section 22, T12S, R3E, SLB&M monument, the Sanpete/Juab County monument and a rebar and cap that are shown on the drawing for information. We then located all three base legs of the tower and determined the azimuths as shown on the drawing. We decided that the southerly face of the tower was the most accurately located with an azimuth of  $80^{\circ}38'30''$  in an easterly direction and  $260^{\circ}38'30''$  westerly. All other azimuths of the tower shown on the drawing were adjusted to this line but are very close to field measured data. We also shot a point at the center of the southerly face to determine an azimuth through the tower to the northerly leg with an azimuth of  $350^{\circ}38'30''$  as shown.

The azimuths provided are based upon a GPS geodetic north azimuth and compare very well with the data provided on the NGS Data Sheet.

Respectfully submitted,

MW. BROWN ENGINEERING INC.

  
Barry Andreason, PLS.  
Director of Surveying



166572  
 BARRY  
 ANDREASON  
 REC'D  
 LAND SURVEYOR  
 STATE OF MISSISSIPPI  
 12-9-2011  
 10:41 AM

BASIS OF BEARINGS:  
THE LAT. AND LONG. OF THE BASE STATION WAS USED TO START THE SURVEY.  
AND THE BEARING TO THE AZIMUTH MARK WAS USED AS A BASE LINE.  
VERY IMPORTANT: ALL REQUIRED AZIMUTHS SHOWN ALPHABETICALLY, AZIMUTHS  
PROVIDED ON THE MAPS DATA SHEET.



LOCATED WITHIN THE  
SOUTHWEST QUARTER OF SECTION 22  
TOWNSHIP 12 SOUTH, RANGE 3 EAST  
SALT LAKE BASE AND MERIDIAN

# **SURVEYOR CERTIFICATION**

**KBJF NEPHI**



Office: (801) 377-1790 Fax: (801) 377-1789  
578 East 770 North, Orem, UT 84097

December 1, 2011

Kelly Carlson  
CSN International  
4002 North 3300 East  
Twin Falls, Idaho 83301

Re: Mt. Baldy Radio Tower Survey.

Dear Kelly:

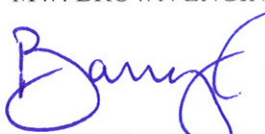
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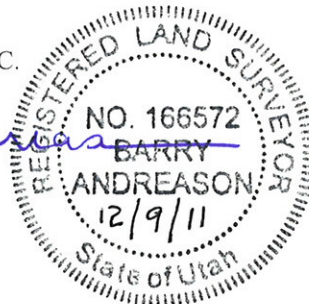
We found several monuments in place in various locations around the tower including the BALD Triangulation Station located approximately 13.00 feet easterly from the tower base next to the fence line that surrounds the site. According to the NGS Data Sheet we downloaded for this monument, the information for the monument is as follows: Latitude  $39^{\circ}45'36.41759(N)$  Longitude  $111^{\circ}34'40.21731(W)$  with an elevation of 9052.00 feet. We occupied this monument with our Trimble 5700 GPS Base and using this data, we began our survey. Using our Trimble 5800 Rover and Trimble TSC2 data collector we located reference monument (BALD RM 2) and the BALD Azimuth Mark monument that were also set in 1938 as accessory monuments to the location of the triangulation monument. The information and orientation of these monuments is provided on the Data Sheet that has been provided. The results of this survey are shown on the attached drawing. We also found and located the Southwest corner of Section 22, T12S, R3E, SLB&M monument, the Sanpete/Juab County monument and a rebar and cap that are shown on the drawing for information. We then located all three base legs of the tower and determined the azimuths as shown on the drawing. We decided that the southerly face of the tower was the most accurately located with an azimuth of  $80^{\circ}38'30''$  in an easterly direction and  $260^{\circ}38'30''$  westerly. All other azimuths of the tower shown on the drawing were adjusted to this line but are very close to field measured data. We also shot a point at the center of the southerly face to determine an azimuth through the tower to the northerly leg with an azimuth of  $350^{\circ}38'30''$  as shown.

The azimuths provided are based upon a GPS geodetic north azimuth and compare very well with the data provided on the NGS Data Sheet.

Respectfully submitted,

MW. BROWN ENGINEERING INC.

  
Barry Andreason, PLS.  
Director of Surveying

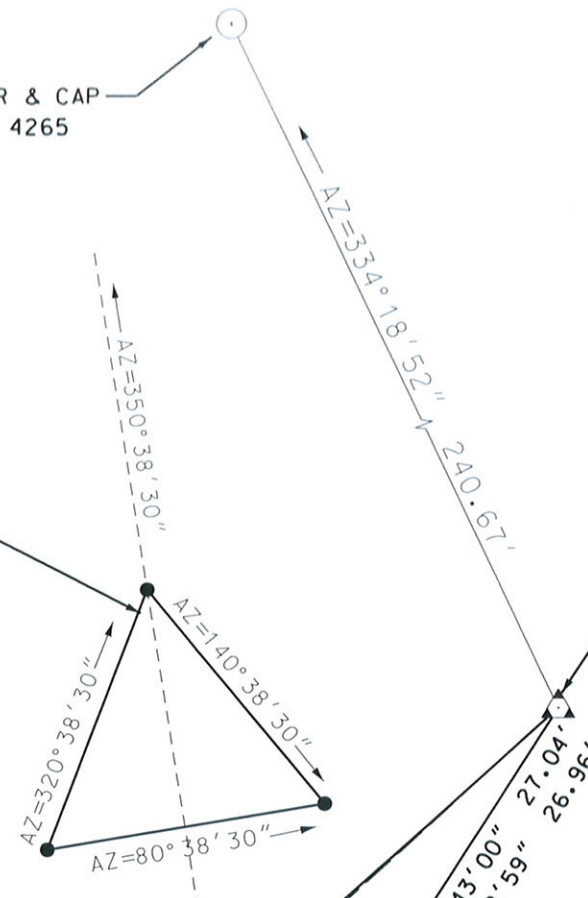




FOUND REBAR & CAP  
STAMPED LS 4265  
R.S. INC.

TOWER LOCATION

BALD TRIANGULATION STATION  
PID #KN0423 (NGS DESIGNATION)  
LAT. 39°45'36.41759"(N)  
LONG. 111°34'40.21731"(W)  
ELEV=9051.82  
(FOUND MONUMENT)



BALD RM 2  
FOUND  
MONUMENT

TO SANPETE/JUAB CO. MONUMENT  
AZ=227°31'59" 2491.60

TO SECTION  
CORNER MONUMENT  
AZ=227°41'20"  
DIST. 2771.23'

BALD RM 3  
AZIMUTH MARK  
(FOUND MONUMENT)

SANPETE/JUAB  
COUNTY MARKER  
(FOUND MONUMENT)

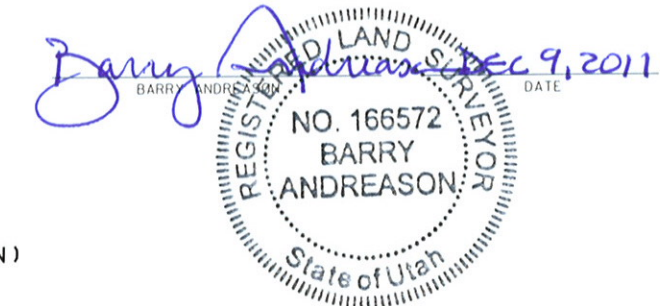
SOUTHWEST CORNER SECTION 22  
TOWNSHIP 12 SOUTH, RANGE 3 EAST  
SALT LAKE BASE AND MERIDIAN  
(FOUND COUNTY MONUMENT)

21 22  
28 27

BALD MT. RADIO TOWER  
LOCATED WITHIN THE  
SOUTHWEST QUARTER OF SECTION 22  
TOWNSHIP 12 SOUTH, RANGE 3 EAST  
SALT LAKE BASE AND MERIDIAN

## SURVEYOR'S CERTIFICATE

I, BARRY ANDREASON, DO HEREBY CERTIFY THAT I AM A REGISTERED LAND SURVEYOR, AND THAT I HOLD CERTIFICATE NO. 166572 AS PRESCRIBED UNDER THE LAWS OF THE STATE OF UTAH. I FURTHER CERTIFY THAT BY THE AUTHORITY OF THE OWNERS, I HAVE MADE A SURVEY OF THE TOWER SHOWN ON THIS PLAT. I HEREBY STATE THAT SURVEY OF THIS RADIO TOWER IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION, BELIEF AND IN MY PROFESSIONAL OPINION.



## NARRATIVE

PURPOSE:  
TO SURVEY THE BASE OF THE RADIO TOWER SHOWN HEREON TO VERIFY THE AZIMUTH OF THE BASE AS CONSTRUCTED.

PROCEDURE:  
ALL RECORDS RELATED TO THE ORIGINAL SURVEY OF THE SITE AND THE NGS DATA SHEET FOR THE BALD TRIANGULATION STATION WERE OBTAINED TO AID IN THE SURVEY OF THE SITE. A FIELD SURVEY WAS CONDUCTED AT THE SITE ORIGINATING FROM THE BALD TRIANGULATION STATION. ALL REFERENCE MONUMENTS, AZIMUTH MARK MONUMENTS AND OTHER MONUMENTS WERE LOCATED IN THE FIELD TO VERIFY THE AZIMUTH.

RESULTS:  
REFERENCE MONUMENT 2 (BALD RM 2) WAS LOCATED AS WELL AS THE BALD AZIMUTH MARK MONUMENT WERE FOUND AND LOCATED. REFERENCE MONUMENT 1 (BALD RM 1) WAS SEARCHED FOR BUT NOT FOUND. THE SANPETE/JUAB COUNTY MONUMENT WAS FOUND AND LOCATED ALONG WITH THE SW CORNER OF SECTION 22 MONUMENT AS SHOWN HEREON. THE BASE OF THE TOWER WAS LOCATED AT ALL THREE BASE LEG LOCATIONS. THE TRIANGULATION STATION AND REFERENCE MONUMENT INFORMATION WAS PROVIDED IN THE NGS DATA SHEET. THE COUNTY MONUMENT WAS REFERRED TO IN THE SHEET AS WELL.

BASIS OF BEARING:  
THE LAT. AND LONG. OF THE BASE STATION WAS USED TO START THE SURVEY, AND THE BEARING TO THE AZIMUTH MARK WAS USED AS A BASE LINE VERIFICATION. ALL RECORD AZIMUTHS SHOWN HEREON ARE GEODETIC AZIMUTHS PROVIDED ON THE NGS DATA SHEET.



SCALE (FEET)



MT. BALDY RADIO TOWER

CSN INTERNATIONAL

TOWER BASE AZIMUTH VERIFICATION

PROJECT NO.  
2011.058  
SHEET NO.

# The NGS Data Sheet

See file [dsdata.txt](#) for more information about the datasheet.

```

DATABASE = NGSIDB , PROGRAM = datasheet95, VERSION = 7.87.4.2
1      National Geodetic Survey,  Retrieval Date = DECEMBER  6, 2011
KN0423 *****
KN0423 DESIGNATION - BALD
KN0423 PID - KN0423
KN0423 STATE/COUNTY- UT/SANPETE
KN0423 USGS QUAD - SPENCER CANYON (1979)
KN0423
KN0423 *CURRENT SURVEY CONTROL
KN0423
KN0423* NAD 83 (1994) - 39 45 36.41759(N) 111 34 40.21731(W) ADJUSTED
KN0423* NAVD 88 - 2759. (meters) 9052. (feet) SCALED
KN0423
KN0423 LAPLACE CORR- 2.11 (seconds) DEFLEC09
KN0423 GEOID HEIGHT- -16.87 (meters) GEOID09
KN0423 HORZ ORDER - SECOND
KN0423
KN0423.The horizontal coordinates were established by classical geodetic methods
KN0423.and adjusted by the National Geodetic Survey in November 1997.
KN0423
KN0423.The orthometric height was scaled from a topographic map.
KN0423
KN0423.The Laplace correction was computed from DEFLEC09 derived deflections.
KN0423
KN0423.The geoid height was determined by GEOID09.
KN0423
KN0423;
KN0423; North East Units Scale Factor Converg.
KN0423;SPC UT C - 2,158,402.033 493,330.570 MT 0.99989967 -0 02 59.5
KN0423;SPC UT C - 7,081,357.34 1,618,535.38 sFT 0.99989967 -0 02 59.5
KN0423;UTM 12 - 4,401,292.628 450,503.591 MT 0.99963016 -0 22 10.5
KN0423
KN0423! - Elev Factor x Scale Factor = Combined Factor
KN0423!SPC UT C - 0.99956995 x 0.99989967 = 0.99946966
KN0423!UTM 12 - 0.99956995 x 0.99963016 = 0.99920027
KN0423
KN0423: Primary Azimuth Mark Grid Az
KN0423:SPC UT C - BALD AZ MK 228 02 36.9
KN0423:UTM 12 - BALD AZ MK 228 21 47.9
KN0423
KN0423|-----|
KN0423| PID Reference Object Distance Geod. Az |
KN0423| | | | dddmmss.s |
KN0423| CM4226 BALD RM 1 6.572 METERS 13404 |
KN0423| CM4227 BALD RM 2 8.242 METERS 21243 |
KN0423| CM4225 BALD AZ MK 2275937.4 |
KN0423|-----|
KN0423
KN0423 SUPERSEDED SURVEY CONTROL
KN0423
KN0423 NAD 83 (1993) - 39 45 36.40623(N) 111 34 40.21383(W) AD( ) 2
KN0423 NAD 83 (1986) - 39 45 36.40485(N) 111 34 40.21159(W) AD( ) 2

```



KN0423 NAD 27 - 39 45 36.54900(N) 111 34 37.49200(W) AD( ) 2

KN0423

KN0423.Superseded values are not recommended for survey control.

KN0423.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

KN0423.See file dsdata.txt to determine how the superseded data were derived.

KN0423

KN0423\_U.S. NATIONAL GRID SPATIAL ADDRESS: 12SVK5050301292(NAD 83)

KN0423\_MARKER: DS = TRIANGULATION STATION DISK

KN0423\_SETTING: 80 = SET IN A BOULDER

KN0423\_SP\_SET: IN A DRILL HOLE IN ROCK LEDGE

KN0423

KN0423	HISTORY	- Date	Condition	Report By
KN0423	HISTORY	- 1938	MONUMENTED	CGS
KN0423	HISTORY	- 1947	GOOD	CGS
KN0423	HISTORY	- 1947	GOOD	USGS

KN0423

KN0423 STATION DESCRIPTION

KN0423

KN0423'DESCRIBED BY COAST AND GEODETIC SURVEY 1938 (FGJ)

KN0423'STATION IS LOCATED ON HIGHEST POINT OF A PROMINENT FOUND

KN0423'TOPPED MOUNTAIN KNOWN AS MT. BALDY. IT IS 14 MILES ENE OF

KN0423'NEPHI, AND ABOUT 9 MILES AIRLINE NNE OF FOUNTAIN GREEN, AND

KN0423'3-1/2 MILES S OF UTAH-SANPETE COUNTY LINE, AND 3/4 MILE E

KN0423'OF JUAB-SANPETE COUNTY LINE. THERE IS A ROCK CAIRN ESE 23

KN0423'FEET FROM STATION.

KN0423'

KN0423'SURFACE AND REFERENCE MARKS ARE STANDARD BRONZE DISKS IN

KN0423'BOULDERS. AZIMUTH MARK

KN0423'(REFERENCE MARK NO. 3) IS A STANDARD BRONZE DISK IN BEDROCK.

KN0423'

KN0423'TO REACH STATION FROM FOUNTAIN GREEN, UTAH, GO NNW ON U.S.

KN0423'HIGHWAY 189 4.4 MILES TO A TRACK ROAD CROSSING HIGHWAY AND

KN0423'RR TRACKS (CATTLE GUARD ON RR). TURN R ON TRACK ROAD AND

KN0423'GO N 0.5 MILE TO HOUSE AND BARN. TURN SHARP R ON TRACK ROAD

KN0423'JUST BEFORE REACHING HOUSE. FOLLOW MAIN TRACK ROAD E AND NE

KN0423'ALONG A FENCED-IN SHEEP DRIVEWAY 3.4 MILES TO A WIDE PLACE IN

KN0423'LANE AND FORK. TAKE R FORK ALONG MAIN LANE 0.4 MILE TO A

KN0423'GATE ON L. TURN L THRU GATE AND FOLLOW TRACK ROAD EASTERLY

KN0423'0.45 MILE TO FORK. TAKE R FORK AND GO 0.40 MILE TO A GATE

KN0423'AND A DIM FORK JUST BEYOND. TAKE L FORK, MAIN TRAVELED

KN0423'ROAD, 1.45 MILES TO TOP OF HILL AND OLD CORRAL ON R. DIM

KN0423'TRACK FORKS AT TOP OF HILL. KEEP L FORK STRAIGHT AHEAD

KN0423'AND DOWN HILL 0.3 MILE ALONG BOTTOM OF DRAW, TO FORK.

KN0423'TAKE L FORK NE 0.1 MILE TO CORNER OF WOVEN WIRE FENCE.

KN0423'TURN L ALONG FENCE 0.25 MILE TO TOP OF HILL (OLD CAMP ON

KN0423'L) AND ENTER AN OPEN SPOT. TURN L ALONG OPEN SPOT AND

KN0423'PICK UP DIM TRACK ROAD, GO 0.2 MILE TO TOP OF RIDGE.

KN0423'HERE TRACK ROAD BENDS L AND DOWN HILL. LEAVE TRACK ROAD

KN0423'AND TURN R (R ANGLE TO ROAD), CROSS OPEN SPOT AND HEAD NE

KN0423'THRU BRUSH 0.2 MILE AND CROSS SMALL WASH ON LEFT. TURN

KN0423'R AFTER CROSSING WASH, THEN BEAR L AND HEAD NE TOWARD L

KN0423'SIDE OF FIRST PROMINENT HILL ON RIDGE RUNNING SW FROM

KN0423'STATION. IT IS A DISTANCE OF 1.0 MILE TO ETT AFTER

KN0423'LEAVING TRACK ROAD.

KN0423'

KN0423'AZIMUTH MARK IS LOCATED ABOUT 3/4 MILE SW OF STATION ON

KN0423'RIDGE RUNNING SW FROM MT. BALDY AND IS ABOUT 200 YARDS TOWARD

KN0423'STATION FROM END OF TRUCK TRAVEL. IT IS ABOUT 24 FEET NE

KN0423'OF A JUAB-SANPETE COUNTY BOUNDARY MARKER.

KN0423

KN0423 STATION RECOVERY (1947)  
KN0423  
KN0423'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1947 (DHK)  
KN0423'STATION RECOVERED AS DESCRIBED AND ALL MARKS FOUND IN GOOD  
KN0423'CONDITION. STATION WAS OBSERVED ON BUT NOT OCCUPIED IN  
KN0423'1947.  
KN0423'  
KN0423'STATION IS LOCATED ON HIGHEST POINT OF A PROMINENT ROUND  
KN0423'TOPPED MOUNTAIN KNOWN AS MT. BALDY. IT IS 14 MILES ENE OF NEPHI,  
KN0423'AND ABOUT 9 MILES AIR LINE NNE OF FOUNTAIN GREEN, AND 3-1/2  
KN0423'MILES S OF UTAH-SANPETE COUNTY LINE, AND 3/4 MILE E OF  
KN0423'JUAB-SANPETE COUNTY LINE. THERE IS A ROCK CAIRN ESE 23 FEET FROM  
KN0423'STATION.  
KN0423'  
KN0423'SURFACE AND REFERENCE MARKS ARE STANDARD BRONZE DISKS IN BOULDERS.  
KN0423'AZIMUTH MARK (REFERENCE MARK  
KN0423'NO. 3) IS A STANDARD BRONZE DISK IN BEDROCK.  
KN0423'  
KN0423'TO REACH STATION FROM FOUNTAIN GREEN, UTAH, GO NNW ON U.S.  
KN0423'HIGHWAY 189 4.4 MILES TO A TRACK ROAD CROSSING HIGHWAY AND  
KN0423'RR TRACKS (CATTLE GUARD ON RR). TURN R ON TRACK ROAD AND  
KN0423'GO N 0.5 MILE TO HOUSE AND BARN. TURN SHARP R ON TRACK ROAD  
KN0423'JUST BEFORE REACHING HOUSE. FOLLOW MAIN TRACK ROAD E AND  
KN0423'NE ALONG A FENCED-IN SHEEP DRIVEWAY 3.4 MILES TO A WIDE  
KN0423'PLACE IN LANE AND FORK. TAKE R FORK ALONG MAIN LANE 0.4 MILE  
KN0423'TO A GATE ON L. TURN L THRU GATE AND FOLLOW TRACK ROAD  
KN0423'EASTERLY 0.45 MILE TO FORK. TAKE R FORK AND GO 0.40 MILE  
KN0423'TO A GATE AND A DIM FORK JUST BEYOND. TAKE L FORK, MAIN  
KN0423'TRAVELED ROAD, 1.45 MILES TO TOP OF HILL AND OLD CORRAL ON  
KN0423'R. DIM TRACK FORKS AT TOP OF HILL--KEEP L FORK STRAIGHT  
KN0423'AHEAD AND DOWN HILL 0.3 MILE ALONG BOTTOM OF DRAW, TO  
KN0423'FORK. TAKE L FORK NE 0.1 MILE TO CORNER OF WOVEN WIRE  
KN0423'FENCE. TURN L ALONG FENCE 0.25 MILE TO TOP OF HILL (OLD  
KN0423'CAMP ON L) AND ENTER AN OPEN SPOT. TURN L ALONG OPEN  
KN0423'SPOT AND PICK UP DIM TRACK ROAD, GO 0.2 MILE TO TOP OF  
KN0423'RIDGE. HERE TRACK ROAD BENDS L AND DOWN HILL. LEAVE  
KN0423'TRACK ROAD AND TURN R (R ANGLE TO ROAD), CROSS OPEN SPOT  
KN0423'AND HEAD NE THRU BRUSH 0.2 MILE AND CROSS SMALL WASH ON  
KN0423'LEFT. TURN R AFTER CROSSING WASH, THEN BEAR L AND HEAD NE  
KN0423'TOWARD L SIDE OF FIRST PROMINENT HILL ON RIDGE RUNNING SW  
KN0423'FROM STATION. IT IS A DISTANCE OF 1.0 MILE TO ETT AFTER  
KN0423'LEAVING TRACK ROAD.  
KN0423'  
KN0423'AZIMUTH MARK IS LOCATED ABOUT 3/4 MILE SW OF STATION ON RIDGE  
KN0423'RUNNING SW FROM MT. BALDY AND IS ABOUT 200 YDS. TOWARD STATION  
KN0423'FROM END OF TRUCK TRAVEL. IT IS ABOUT 24 FEET NE OF A  
KN0423'JUAB-SANPETE COUNTY BOUNDARY MARKER.

KN0423  
KN0423 STATION RECOVERY (1947)  
KN0423  
KN0423'RECOVERY NOTE BY US GEOLOGICAL SURVEY 1947  
KN0423'RECOVERED.

\*\*\* retrieval complete.  
Elapsed Time = 00:00:01

**Affidavit Certification and Qualifications of Supervising Engineer**

KBJF CH-213 90.5 MHz

NEPHI, UT

Prepared by:  
Dustin Pamplona  
Sr. Field Technician  
Calvary Chapel of Twin Falls, Inc.  
December 12, 2011

The proposed facility is constructed as permitted in the current Construction Permit FCC File Number BMPED-20110808ABC. I have supervised all aspects of the KBJF transmission site construction, and the directional antenna assembly and installation. I certify that the directional antenna is constructed and installed to the exact specifications of the antenna manufacturer. The installed antenna is a new PSI, Model PSIFMP-6-DA. This configuration was tested by PSI on a similar tower structure for directional characteristics as specified in the construction permit. The specifications and results are published in a separate document.

The tower structure and orientation are as specified in the configuration used by PSI in tuning and testing of the installed antenna. The orientation of both the tower structure and therefore the antenna mounting was confirmed by a local professional licensed surveyor.

I hereby certify that I have been a broadcast technician for over 5 years. I have been involved in or supervised the construction of 10 full power FM stations, and numerous FM translator stations. I presently hold the title of Senior Field Technician for CSN International and Calvary Chapel of Twin Falls, Inc.

I further certify that the preceding is true and correct to the best of my knowledge and ability.

Respectfully,

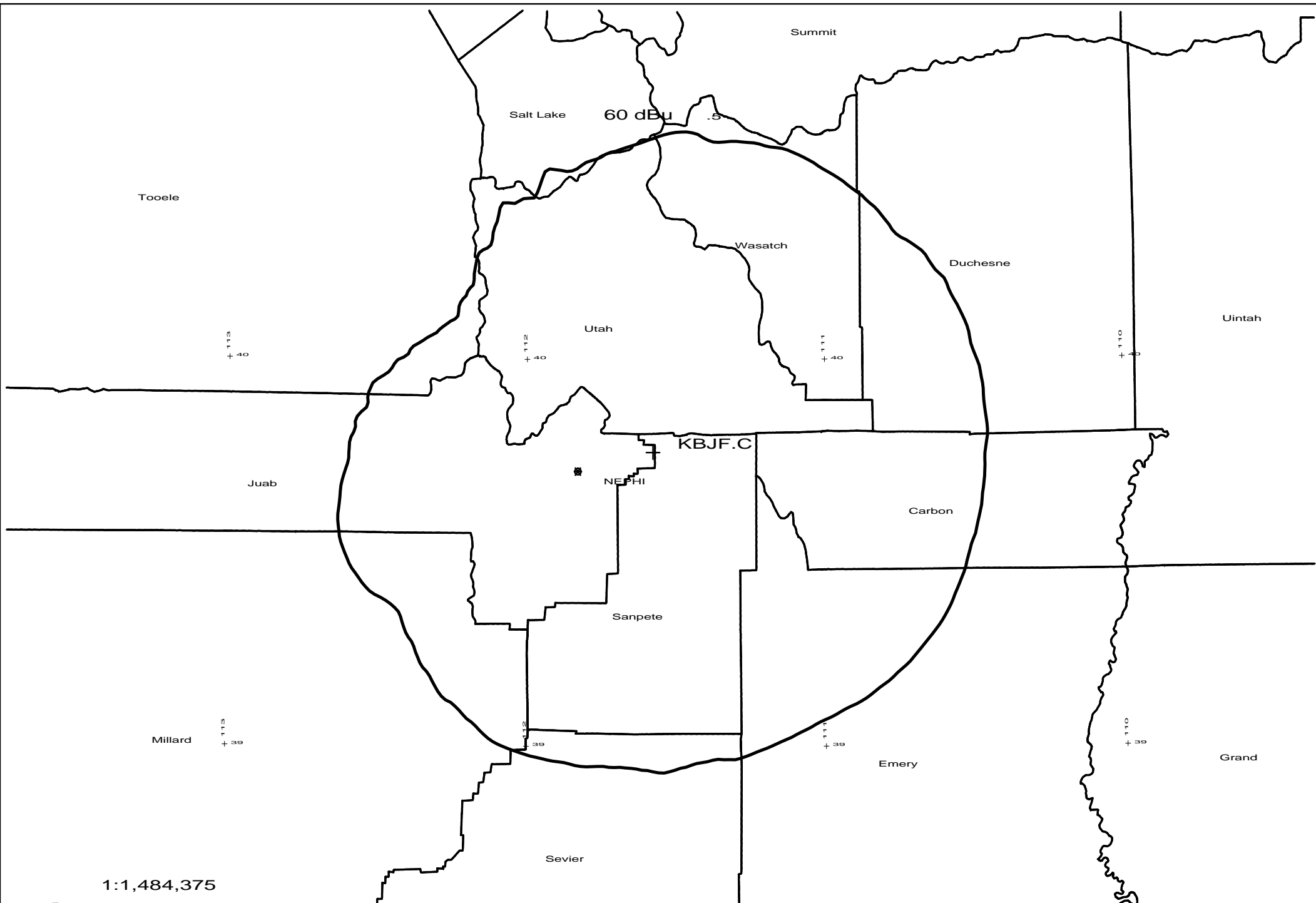
A handwritten signature in black ink, appearing to read 'Dustin Pamplona', with a long horizontal flourish extending to the right.

Dustin Pamplona  
Sr. Field Technician  
Calvary Chapel of Twin Falls, Inc.

COMPLIANCE WITH  
COMMUNITY OF LICENSE

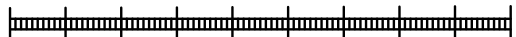
Special Condition # 8

KBJF NEPHI



1:1,484,375

Scale in km



KBJF.C 213C 75kW 2789M AMSL

N. Lat. 39 45 37 W. Lng. 111 34 38

KBJF.C

CCTF - 12/11