BMAL
ANN

Federal Communications Commission
Washington, D. C. 20554

Approved by OMB
3060-0627
Expires 01/31/98

FOR FCC USE ONLY

FCC 302-AM
APPLICATION FOR AM BROADCAST STATION LICENSE

(Please read instructions before filling out form.)

FOR COMMISSION USE ONLY
FILE NO. BMAL-20000329AFW

SECTION I - APPLICANT FEE INFORMATION

1. PAYOR NAME (Last, First, Middle Initial)

KLO Broadcasting Co.

MAILING ADDRESS (Line 1) (Maximum 35 characters)
257 East 200 South

MAILING ADDRESS (Line 2) (Maximum 35 characters)

CITY	STATE OR COUNTRY (if foreign address)	ZIP CODE
Salt Lake City	Ut	84111

TELEPHONE NUMBER (include area code)	CALL LETTERS	OTHER FCC IDENTIFIER (If applicable)
801-364-9836	KLO (AM)	35069

2. A. Is a fee submitted with this application? [X] Yes [ ] No

B. If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1112).

[ ] Governmental Entity [ ] Noncommercial educational licensee [ ] Other (Please explain):

C. If Yes, provide the following information:

Enter in Column (A) the correct Fee Type Code for the service you are applying for. Fee Type Codes may be found in the "Mass Media Services Fee Filing Guide." Column (B) lists the Fee Multiple applicable for this application. Enter fee amount due in Column (C).

(A) FEE TYPE CODE	(B) FEE MULTIPLE	(C) FEE DUE FOR FEE TYPE CODE IN COLUMN (A)	FOR FCC USE ONLY
	0001	$	

To be used only when you are requesting concurrent actions which result in a requirement to list more than one Fee Type Code.

(A)	(B)	(C)	FOR FCC USE ONLY
	0001	$	

	TOTAL AMOUNT REMITTED WITH THIS APPLICATION	FOR FCC USE ONLY
ADD ALL AMOUNTS SHOWN IN COLUMN C, AND ENTER THE TOTAL HERE. THIS AMOUNT SHOULD EQUAL YOUR ENCLOSED REMITTANCE.	$	

SECTION II - APPLICANT INFORMATION		
1. NAME OF APPLICANT KLO Broadcast Co.		
MAILING ADDRESS 257 East 200 South		
CITY Salt Lake City	STATE UT	ZIP CODE 84111

2. This application is for:

☒ Commercial ☐ Noncommercial

☒ AM Directional ☐ AM Non-Directional

Call letters	Community of License	Construction Permit File No.	Modification of Construction Permit File No(s).	Expiration Date of Last Construction Permit
KLO (AM)	Ogden, UT	BP-20061120ATH	BMP-20071121ACX	3/29/2010

3. Is the station now operating pursuant to automatic program test authority in accordance with 47 C.F.R. Section 73.1620?

☐ Yes ☒ No

If No, explain in an Exhibit.

Exhibit No. 1

4. Have all the terms, conditions, and obligations set forth in the above described construction permit been fully met?

☐ Yes ☒ No

If No, state exceptions in an Exhibit.

Exhibit No. 2

5. Apart from the changes already reported, has any cause or circumstance arisen since the grant of the underlying construction which would result in any statement or representation contained in the construction permit application to be now incorrect?

☐ Yes ☒ No

If Yes, explain in an Exhibit.

Exhibit No.

6. Has the permittee filed its Ownership Report (FCC Form 323) or ownership certification in accordance with 47 C.F.R. Section 73.3615(b)?

☐ Yes ☐ No ☒ Does not apply

If No, explain in an Exhibit.

Exhibit No.

7. Has an adverse finding been made or an adverse final action been taken by any court or administrative body with respect to the applicant or parties to the application in a civil or criminal proceeding, brought under the provisions of any law relating to the following: any felony; mass media related antitrust or unfair competition; fraudulent statements to another governmental unit; or discrimination?

☐ Yes ☒ No

If the answer is Yes, attach as an Exhibit a full disclosure of the persons and matters involved, including an identification of the court or administrative body and the proceeding (by dates and file numbers), and the disposition of the litigation. Where the requisite information has been earlier disclosed in connection with another application or as required by 47 U.S.C. Section 1.65(c), the applicant need only provide: (i) an identification of that previous submission by reference to the file number in the case of an application, the call letters of the station regarding which the application or Section 1.65 information was filed, and the date of filing; and (ii) the disposition of the previously reported matter.

Exhibit No.

8. Does the applicant, or any party to the application, have a petition on file to migrate to the expanded band (1605 - 1705 kHz) or a permit or license either in the existing band or expanded band that is held in combination (pursuant to the 5 year holding period allowed) with the AM facility proposed to be modified herein?

☐ Yes ☒ No

If Yes, provide particulars as an Exhibit.

Exhibit No.

The APPLICANT hereby waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because use of the same, whether by license or otherwise, and requests and authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended).

The APPLICANT acknowledges that all the statements made in this application and attached exhibits are considered material representations and that all the exhibits are a material part hereof and are incorporated herein as set out in full in the application.

CERTIFICATION

1. By checking Yes, the applicant certifies, that, in the case of an individual applicant, he or she is not subject to a denial of federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. Section 862, or, in the case of a non-individual applicant (e.g., corporation, partnership or other unincorporated association), no party to the application is subject to a denial of federal benefits that includes FCC benefits pursuant to that section. For the definition of a "party" for these purposes, see 47 C.F.R. Section 1.2002(b).

☒ Yes ☐ No

2. I certify that the statements in this application are true, complete, and correct to the best of my knowledge and belief, and are made in good faith.

Name	Signature	
JOHN C. WEBB	John C Webb	
Title	Date	Telephone Number
President	MARCH 25, 2010	801-364-9836

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503)

FCC NOTICE TO INDIVIDUALS REQUIRED BY THE PRIVACY ACT AND THE PAPERWORK REDUCTION ACT

The solicitation of personal information requested in this application is authorized by the Communications Act of 1934, as amended. The Commission will use the information provided in this form to determine whether grant of the application is in the public interest. In reaching that determination, or for law enforcement purposes, it may become necessary to refer personal information contained in this form to another government agency. In addition, all information provided in this form will be available for public inspection. If information requested on the form is not provided, the application may be returned without action having been taken upon it or its processing may be delayed while a request is made to provide the missing information. Your response is required to obtain the requested authorization.

Public reporting burden for this collection of information is estimated to average 639 hours and 53 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, can be sent to the Federal Communications Commission, Records Management Branch, Paperwork Reduction Project (3060-0627), Washington, D. C. 20554. Do NOT send completed forms to this address.

THE FOREGOING NOTICE IS REQUIRED BY THE PRIVACY ACT OF 1974, P.L. 93-579, DECEMBER 31, 1974, 5 U.S.C. 552a(e)(3), AND THE PAPERWORK REDUCTION ACT OF 1980, P.L. 96-511, DECEMBER 11, 1980, 44 U.S.C. 3507.

SECTION III - LICENSE APPLICATION ENGINEERING DATA

Name of Applicant
KLO Broadcasting Co.

PURPOSE OF AUTHORIZATION APPLIED FOR: (check one)

☑ Station License ☐ Direct Measurement of Power

1. Facilities authorized in construction permit

Call Sign	File No. of Construction Permit (if applicable)	Frequency (kHz)	Hours of Operation	Power in kilowatts	
				Night	Day
KLO	BMP-20071121ACX	1430	Unlimited	5.0	25.0

2. Station location

State	City or Town
Utah	Ogden

3. Transmitter location

State	County	City or Town	Street address (or other identification)
Utah	Davis	Layton	3200 W. St., 0.9 mi S. of Gentile St.

4. Main studio location

State	County	City or Town	Street address (or other identification)
Utah	Salt Lake	Salt Lake City	257 E. 200 S., Suite 400

5. Remote control point location (specify only if authorized directional antenna)

State	County	City or Town	Street address (or other identification)
Utah	Salt Lake	Salt Lake City	257 E. 200 S., Suite 400

6. Has type-approved stereo generating equipment been installed? ☐ Yes ☑ No

7. Does the sampling system meet the requirements of 47 C.F.R. Section 73.68? ☑ Yes ☐ No ☐ Not Applicable

Attach as an Exhibit a detailed description of the sampling system as installed. Exhibit No. Exhibit D

8. Operating constants:

RF common point or antenna current (in amperes) without modulation for night system	RF common point or antenna current (in amperes) without modulation for day system
10.4	22.9

Measured antenna or common point resistance (in ohms) at operating frequency		Measured antenna or common point reactance (in ohms) at operating frequency	
Night	Day	Night	Day
50	50	0	0

Antenna indications for directional operation

Towers	Antenna monitor Phase reading(s) in degrees		Antenna monitor sample current ratio(s)		Antenna base currents	
	Night	Day	Night	Day	Night	Day
#1	0.0	16.8	1.000	0.443	2.00 Amps	3.06 Amps
#2	91.5	0.0	0.665	1.000	0.63 Amps	8.06 Amps
#3	65.3	69.6	0.825	1.271	1.39 Amps	2.30 Amps
#4	23.7	-160.2	0.549	0.739	1.74 Amps	2.08 Amps

Manufacturer and type of antenna monitor: Potomac Instruments Model 1901

SECTION III - Page 2

9. Description of antenna system ((f directional antenna is used, the information requested below should be given for each element of the array. Use separate sheets if necessary.)

Type Radiator	Overall height in meters of radiator above base insulator, or above base, if grounded.	Overall height in meters above ground (without obstruction lighting)	Overall height in meters above ground (include obstruction lighting)	If antenna is either top loaded or sectionalized, describe fully in an Exhibit.
See Exhibit B	See Exhibit B	See Exhibit B	See Exhibit B	Exhibit No. DNA

Excitation ☑ Series ☐ Shunt

Geographic coordinates to nearest second. For directional antenna give coordinates of center of array. For single vertical radiator give tower location.

North Latitude	West Longitude
41 ° 2 ' 48.5 "	112 ° 1 ' 37.2 "

If not fully described above, attach as an Exhibit further details and dimensions including any other antenna mounted on tower and associated isolation circuits. Exhibit No. DNA

Also, if necessary for a complete description, attach as an Exhibit a sketch of the details and dimensions of ground system. Exhibit No. DNA

10. In what respect, if any, does the apparatus constructed differ from that described in the application for construction permit or in the permit?

This application is submitted concurrently with a application for modification of Construction Permit to address discrepancies uncovered during a survey of the site, (See Appendix B).

11. Give reasons for the change in antenna or common point resistance.

DNA

I certify that I represent the applicant in the capacity indicated below and that I have examined the foregoing statement of technical information and that it is true to the best of my knowledge and belief.

Name (Please Print or Type)	Signature (check appropriate box below)
Keith A. Turcot	Keith Turcot
Address (include ZIP Code) D. L. Markley & Associates 2104 West Moss Peoria, IL 61604	Date 3/24/2010 Telephone No. (Include Area Code) 309-673-7511 keith@dlmarkley.com

☐ Technical Director ☐ Registered Professional Engineer

☐ Chief Operator ☐ Technical Consultant

☑ Other (specify) Consulting Engineer

Exhibit 1

KLO Broadcast Co., hereby requests grant of program test authority pursuant to Section 73.1620 to allow KLO(AM) to commence full power operations with the parameters contained in construction permit BMP-20071121ACX (as adjusted by the simultaneously filed minor modification of construction permit) while it awaits Commission action on this covering license application.

Davis Wright Tremaine LLP

ORIGINAL

Suite 200
1919 Pennsylvania Avenue NW
Washington, DC 20006-3402

Brendan Holland
202.973.4244 tel
202.973.4444 fax

brendanholland@dwt.com

March 26, 2010

VIA FEDERAL EXPRESS TO U.S. BANK

Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, S.W., TW-A325
Washington, D.C. 20554

Re: Application for AM Broadcast Station License
FCC Form 302-AM
KLO(AM), Ogden, Utah (FIN-35069)

Dear Ms. Dortch:

Submitted herewith, on behalf of KLO Broadcasting Co., is an application for AM Broadcast Station License on FCC Form 302-AM for KLO(AM), Ogden, Utah. Also enclosed is an FCC Form 159 authorizing payment of the requisite $1,320.00 filing fee by credit card for the above-referenced FCC Form 302-AM license application and directional antenna.

Please date-stamp the Receipt Copy and return in the enclosed self addressed Federal Express Envelope.

If there should be any questions regarding this matter, please contact the undersigned.

Sincerely,

Brendan Holland

Enclosures

Plastic Card Sale Transaction

Thank you.
Your transaction has been successfully completed.

Plastic Card Sale Confirmation

Transaction Information

Agency Application Name:	FMS U.S. Bank Lockbox for Federal Communications Commission (FCC)
Pay.gov Tracking ID:	250JOL2N
Agency Tracking ID:	0007575582
Account Holder Name:	UNKNOWN
Transaction Type:	Plastic Card Sale
Billing Address:	1005 C
Billing Address 2:	
City:	
State/Province:	
ZIP/Postal Code:	
Country:	USA
Email:	
Phone:	
Card Type:	Visa
Plastic Card Number:	**********9891
Payment Amount:	$1,320.00
Current Date and Time:	03/29/2010 12:55 EDT
Order ID:	
Order Tax Amount:	
Level 3 Data:	
Agency Memo:	

Note: Please avoid navigating the site using your browser's Back Button - this may lead to incomplete data being transmitted and pages being loaded incorrectly. Please use the links provided whenever possible.

Exhibit 2

As detailed in the attached Technical Exhibit, simultaneously herewith, KLO Broadcasting Co., is submitting electronically an application to modify slightly the parameters contained in the underlying construction permit – BMP-20071121ACX – in order to address minor discrepancies discovered during a survey of the tower site.

Application for License

Standard Broadcast Station KLO
KLO Broadcasting Co.
1430 KHz - 25 kW DA-D / 5 kW DA-N
Ogden, UT
March, 2010

State of Illinois)

)ss

County of Peoria)

Keith Turcot, being first duly sworn, deposes and says that he is a Consulting Engineer and that he has been retained by KLO Broadcasting Co. to prepare the following engineering exhibits, that he holds a Bachelor of Science Degree in Electrical Engineering, that his qualifications have been accepted by the Federal Communications Commission, and the following exhibits have been prepared by him and that they are true and correct to the best of his knowledge and belief.

Keith Turcot, Affiant

Subscribed and sworn to before me this 25th Day of March 2010.

OFFICIAL SEAL
PAULETTE J HOSKINS
NOTARY PUBLIC - STATE OF ILLINOIS
MY COMMISSION EXPIRES MARCH 26, 2013

Application for License

The following engineering statement and attached exhibits have been prepared for **KLO Broadcasting Co.** ("KLO"), licensee of standard broadcast station KLO at Ogden, Utah, and are in support of their application for license.[1] This application is being submitted to cover changes authorized under construction permit BP-20061130ATH as modified by BMP-20071121ACX, and is submitted concurrently with a second application for modification of construction permit to address discrepancies uncovered during a survey of the site.

This application for license contains antenna proof of performance measurements for both the day and night patterns. Proof of performance measurements contained herein were made pursuant to Section 73.151(c) of the Commission's Rules. Work on the array, including the acquisition of data required for the computer modeled proof of performance occurred between the dates of February 24, 2010 and March16, 2010, inclusive.

Tower Array Impedance Matrix

The Tower array impedance matrix was generated by performing impedance measurements at the base of each of the elements in the array. These measurements were performed with all other elements in the array open circuited at their respective measurement locations. The measurement location for each element in the array is within one electrical degree of the elevation of the actual feed point, which is consistent with the calculated feed point location requirements under the Commission's Rules.

1 The Facility ID for KLO at Ogden, Utah is 35069.

The physical model of the individual elements was calibrated in a moment method computer model to match the measured impedances within the limits permissible under Sections 73.151(c)(1)(i) through 73.151(c)(1)(viii) of the Commission's Rules. The measured impedance values comprising the matrix vary from the moment method modeled values by no more than 2 ohms and 4 percent for both resistance and reactance. Each of the elements in the array was modeled by 20 wire segments.

Vertical wires were used to represent the towers between 87% and 108.1% of the radius of a circle with a circumference equal to the sum of the widths of the tower sides. The height of the modeled vertical wires used for each given tower was between 102.1% and 104.9% of the actual tower height. A lumped series inductance from the feed system between 0.68 and 3.5 microhenrys per element was assumed, while a shunt capacitance of 10 picofarads was assumed in the modeling of the base area. A summary of all measured and modeled parameters is contained within Exhibit A.

Each of the elements in the array is of uniform cross section and has identical physical cross section and structure with respect to each other, height excepted. The orientation, height, and distances among the individual antenna towers in the array was confirmed by a post-construction land survey, file number 3130 dated 28 December 2009. The survey and a summary is attached in Exhibit B. The errors in the locations of the array elements to each other precipitated the application for modification of construction permit previously mentioned.

The tower segment currents were produced using a method of moments computer model. The physical model used was calibrated against measured open circuit tower impedances. The array synthesis for the day and night patterns is detailed in Exhibit C.

Antenna Monitor Parameters

A sample loop method was utilized to establish and maintain station operating parameters. The sampling system was constructed meeting the requirements in 73.151(c)(2)(i) and 73.151(c)(2)(ii). Each tower was individually modeled using the calibrated model based on the measured antenna tower array impedance matrix to identify the location where a current minimum would occur when detuned. Sample loops were located at these locations on each tower while maintaining a consistent orientation with respect to the tower structure and cross members.

The sample lines connecting the tower mounted sensing element to the antenna monitor were measured by open-circuiting the sensing end of the line and measuring the frequency closest to the operating carrier frequency where series resonance occurred. These values were utilized to convert the line length to the length of transmission line at the operating frequency as an appropriate multiple of 90 degree segments. The sample lines were measured to be within one electrical degree in length of each other by this method. Additionally, the lines were measured using a time-domain reflectometery test set, which confirmed they were all 619.5 feet in length[2].

The impedance of each of the sample lines was measured at odd multiples of 1/8 wavelength immediately above and below the open circuit resonant frequency closest to the carrier frequency, while open circuited, to establish the line characteristic impedance. The measured impedance of the four lines ranged from a low of 48.65 ohms to high of 49.21 ohms. The sample system measurement details are contained in Exhibit D.

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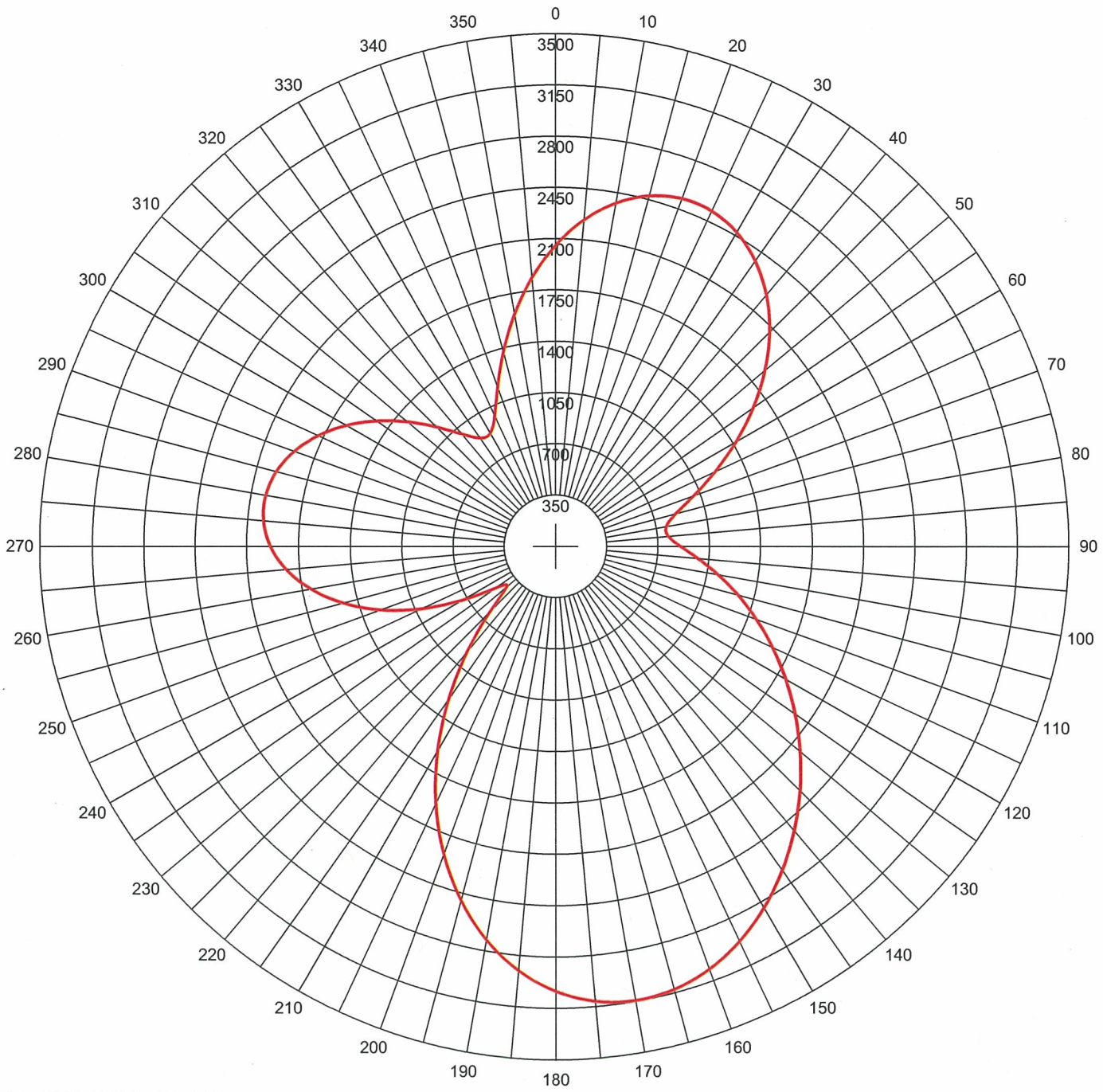
2 Measured lengths by this technique agreed with each other to within 0.1 feet. The velocity factor of the transmission line utilized for the sample lines is 0.86.

The antenna system was adjusted to achieve the desired indicated operating parameters. The parameters on both patterns to which the array was adjusted are within five percent of the calculated field ratio and 3 degrees of the calculated phase. The sample system used to indicate the operating parameters also complies with the provisions of Section 73.68 of the Commission's Rules.

Proposed KLO Day Pattern



Theo RMS: 1824.9 mV/m@1km
Std RMS: 1916.864 mV/m@1km
Q: 50.0 mV/m@1km

Standard Horizontal Plane Pattern

Pattern (mV/m @ 1km)
Pattern X10

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	0.344	18.9	0.0	0.0	146.7	0	0	0.0	0.0	0.0	0.0
2	1.000	0.0	85.1	240.7	183.1	0	0	0.0	0.0	0.0	0.0
3	1.000	70.7	235.7	271.0	151.8	0	0	0.0	0.0	0.0	0.0
4	0.583	200.8	218.3	310.4	152.6	0	0	0.0	0.0	0.0	0.0

Call: KLO.DX
Freq: 1430 kHz
OGDEN, UT, US
Hours: D
Lat: 41-02-48.50 N
Lng: 112-01-37.20 W
Power: 25.0 kW
Theo RMS: 1824.90 mV/m@1km
@ 25.0 kW

AM Radiation Report

Call: KLO.X
Freq: 1430 kHz
OGDEN, UT, US
Hours: D
Lat: 41-02-48.50 N
Lng: 112-01-37.20 W
Power: 25.0 kW
Theo RMS: 1824.90 mV/m @ 1km @ 25.0 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	0.344	18.9	0.0	0.0	146.7	0	0	0.0	0.0	0.0	0.0
2	1.000	0.0	85.1	240.7	183.1	0	0	0.0	0.0	0.0	0.0
3	1.000	70.7	235.7	271.0	151.8	0	0	0.0	0.0	0.0	0.0
4	0.583	200.8	218.3	310.4	152.6	0	0	0.0	0.0	0.0	0.0

Standard Horizontal Plane Pattern

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	2051.97	5.0	2234.48	10.0	2377.58
15.0	2475.24	20.0	2523.99	25.0	2522.72
30.0	2472.52	35.0	2376.40	40.0	2239.05
45.0	2066.69	50.0	1866.93	55.0	1648.84
60.0	1423.15	65.0	1203.02	70.0	1005.42
75.0	852.72	80.0	770.37	85.0	773.06
90.0	849.89	95.0	974.61	100.0	1124.98
105.0	1288.31	110.0	1458.71	115.0	1633.77
120.0	1812.43	125.0	1993.72	130.0	2176.04
135.0	2356.81	140.0	2532.27	145.0	2697.49
150.0	2846.55	155.0	2972.73	160.0	3069.05
165.0	3128.74	170.0	3145.84	175.0	3115.79
180.0	3035.85	185.0	2905.34	190.0	2725.72
195.0	2500.47	200.0	2234.89	205.0	1935.79
210.0	1611.52	215.0	1272.47	220.0	933.55
225.0	624.65	230.0	433.24	235.0	502.70
240.0	742.65	245.0	1015.68	250.0	1275.48
255.0	1504.85	260.0	1695.08	265.0	1841.24
270.0	1940.92	275.0	1993.75	280.0	2001.07
285.0	1965.67	290.0	1891.44	295.0	1783.18
300.0	1646.53	305.0	1488.26	310.0	1317.18
315.0	1146.26	320.0	996.18	325.0	898.55
330.0	888.81	335.0	980.48	340.0	1152.50
345.0	1370.77	350.0	1606.51	355.0	1838.74

Call: KLO.X
Freq: 1430 kHz
OGDEN, UT, US
Hours: D
Lat: 41-02-48.50 N
Lng: 112-01-37.20 W
Power: 25.0 kW
Theo RMS: 1824.90 mV/m @ 1km @ 25.0 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	0.344	18.9	0.0	0.0	146.7	0	0	0.0	0.0	0.0	0.0
2	1.000	0.0	85.1	240.7	183.1	0	0	0.0	0.0	0.0	0.0
3	1.000	70.7	235.7	271.0	151.8	0	0	0.0	0.0	0.0	0.0
4	0.583	200.8	218.3	310.4	152.6	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 5.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	2027.22	5.0	2206.33	10.0	2346.63
15.0	2442.22	20.0	2489.71	25.0	2488.06
30.0	2438.35	35.0	2343.55	40.0	2208.30
45.0	2038.75	50.0	1842.39	55.0	1628.13
60.0	1406.55	65.0	1190.62	70.0	997.01
75.0	847.61	80.0	767.17	85.0	769.87
90.0	845.26	95.0	967.92	100.0	1116.16
105.0	1277.47	110.0	1445.91	115.0	1619.02
120.0	1795.66	125.0	1974.80	130.0	2154.80
135.0	2333.09	140.0	2505.95	145.0	2668.53
150.0	2815.00	155.0	2938.79	160.0	3033.04
165.0	3091.14	170.0	3107.28	175.0	3077.01
180.0	2997.65	185.0	2868.55	190.0	2691.19
195.0	2469.00	200.0	2207.18	205.0	1912.48
210.0	1593.14	215.0	1259.43	220.0	926.12
225.0	622.66	230.0	433.84	235.0	498.15
240.0	731.31	245.0	998.62	250.0	1253.58
255.0	1478.91	260.0	1665.88	265.0	1809.60
270.0	1907.67	275.0	1959.69	280.0	1966.96
285.0	1932.19	290.0	1859.20	295.0	1752.71
300.0	1618.30	305.0	1462.66	310.0	1294.60
315.0	1127.07	320.0	980.67	325.0	886.69
330.0	879.63	335.0	971.88	340.0	1142.30
345.0	1357.53	350.0	1589.51	355.0	1817.79

Call: KLO.X
Freq: 1430 kHz
OGDEN, UT, US
Hours: D
Lat: 41-02-48.50 N
Lng: 112-01-37.20 W
Power: 25.0 kW
Theo RMS: 1824.90 mV/m @ 1km @ 25.0 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	0.344	18.9	0.0	0.0	146.7	0	0	0.0	0.0	0.0	0.0
2	1.000	0.0	85.1	240.7	183.1	0	0	0.0	0.0	0.0	0.0
3	1.000	70.7	235.7	271.0	151.8	0	0	0.0	0.0	0.0	0.0
4	0.583	200.8	218.3	310.4	152.6	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 10.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	1954.35	5.0	2123.64	10.0	2255.85
15.0	2345.49	20.0	2389.41	25.0	2386.70
30.0	2338.44	35.0	2247.54	40.0	2118.47
45.0	1957.09	50.0	1770.59	55.0	1567.48
60.0	1357.86	65.0	1154.10	70.0	972.02
75.0	832.15	80.0	757.23	85.0	760.08
90.0	831.36	95.0	948.08	100.0	1090.09
105.0	1245.37	110.0	1408.00	115.0	1575.30
120.0	1745.93	125.0	1918.68	130.0	2091.85
135.0	2262.86	140.0	2428.12	145.0	2583.00
150.0	2721.96	155.0	2838.81	160.0	2927.11
165.0	2980.68	170.0	2994.10	175.0	2963.24
180.0	2885.64	185.0	2760.77	190.0	2590.06
195.0	2376.82	200.0	2126.05	205.0	1844.21
210.0	1539.26	215.0	1221.13	220.0	904.15
225.0	616.42	230.0	435.18	235.0	485.14
240.0	698.57	245.0	949.17	250.0	1190.00
255.0	1403.49	260.0	1580.95	265.0	1717.55
270.0	1810.88	275.0	1860.51	280.0	1867.58
285.0	1834.62	290.0	1765.23	295.0	1663.89
300.0	1535.97	305.0	1388.03	310.0	1228.80
315.0	1071.15	320.0	935.47	325.0	852.01
330.0	852.47	335.0	946.13	340.0	1111.74
345.0	1318.05	350.0	1539.12	355.0	1755.93

Call: KLO.X
Freq: 1430 kHz
OGDEN, UT, US
Hours: D
Lat: 41-02-48.50 N
Lng: 112-01-37.20 W
Power: 25.0 kW
Theo RMS: 1824.90 mV/m @ 1km @ 25.0 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	0.344	18.9	0.0	0.0	146.7	0	0	0.0	0.0	0.0	0.0
2	1.000	0.0	85.1	240.7	183.1	0	0	0.0	0.0	0.0	0.0
3	1.000	70.7	235.7	271.0	151.8	0	0	0.0	0.0	0.0	0.0
4	0.583	200.8	218.3	310.4	152.6	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 15.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	1837.45	5.0	1991.55	10.0	2111.31
15.0	2191.83	20.0	2230.36	25.0	2226.18
30.0	2180.38	35.0	2095.73	40.0	1976.41
45.0	1827.90	50.0	1656.86	55.0	1471.18
60.0	1280.22	65.0	1095.38	70.0	931.19
75.0	806.06	80.0	739.73	85.0	743.01
90.0	808.16	95.0	915.67	100.0	1047.78
105.0	1193.33	110.0	1346.45	115.0	1504.23
120.0	1665.02	125.0	1827.40	130.0	1989.56
135.0	2148.96	140.0	2302.19	145.0	2444.96
150.0	2572.19	155.0	2678.28	160.0	2757.44
165.0	2804.12	170.0	2813.53	175.0	2782.01
180.0	2707.44	185.0	2589.43	190.0	2429.38
195.0	2230.42	200.0	1997.18	205.0	1735.74
210.0	1453.53	215.0	1159.96	220.0	868.59
225.0	605.28	230.0	436.04	235.0	465.43
240.0	648.13	245.0	872.28	250.0	1090.74
255.0	1285.53	260.0	1447.96	265.0	1573.25
270.0	1659.04	275.0	1704.78	280.0	1711.44
285.0	1681.23	290.0	1617.41	295.0	1524.13
300.0	1406.43	305.0	1270.64	310.0	1125.34
315.0	983.27	320.0	864.35	325.0	797.00
330.0	808.42	335.0	903.43	340.0	1061.00
345.0	1253.18	350.0	1457.17	355.0	1656.13

Call: KLO.X
Freq: 1430 kHz
OGDEN, UT, US
Hours: D
Lat: 41-02-48.50 N
Lng: 112-01-37.20 W
Power: 25.0 kW
Theo RMS: 1824.90 mV/m @ 1km @ 25.0 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	0.344	18.9	0.0	0.0	146.7	0	0	0.0	0.0	0.0	0.0
2	1.000	0.0	85.1	240.7	183.1	0	0	0.0	0.0	0.0	0.0
3	1.000	70.7	235.7	271.0	151.8	0	0	0.0	0.0	0.0	0.0
4	0.583	200.8	218.3	310.4	152.6	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 20.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	1683.10	5.0	1818.19	10.0	1922.46
15.0	1991.76	20.0	2023.81	25.0	2018.12
30.0	1975.77	35.0	1899.35	40.0	1792.66
45.0	1660.66	50.0	1509.36	55.0	1345.84
60.0	1178.51	65.0	1017.56	70.0	875.82
75.0	769.09	80.0	713.55	85.0	717.72
90.0	775.55	95.0	871.52	100.0	990.76
105.0	1123.35	110.0	1263.62	115.0	1408.47
120.0	1555.96	125.0	1704.45	130.0	1852.02
135.0	1996.21	140.0	2133.86	145.0	2261.11
150.0	2373.46	155.0	2466.04	160.0	2533.85
165.0	2572.17	170.0	2576.91	175.0	2545.04
180.0	2474.83	185.0	2366.07	190.0	2220.12
195.0	2039.82	200.0	1829.41	205.0	1594.38
210.0	1341.56	215.0	1079.59	220.0	820.89
225.0	588.27	230.0	434.63	235.0	441.29
240.0	585.46	245.0	775.43	250.0	964.94
255.0	1135.57	260.0	1278.54	265.0	1389.15
270.0	1465.06	275.0	1505.61	280.0	1511.52
285.0	1484.65	290.0	1427.85	295.0	1344.81
300.0	1240.20	305.0	1120.05	310.0	992.69
315.0	870.61	320.0	772.95	325.0	725.35
330.0	749.19	335.0	844.38	340.0	990.80
345.0	1164.67	350.0	1346.89	355.0	1523.27

Call: KLO.X
Freq: 1430 kHz
OGDEN, UT, US
Hours: D
Lat: 41-02-48.50 N
Lng: 112-01-37.20 W
Power: 25.0 kW
Theo RMS: 1824.90 mV/m @ 1km @ 25.0 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	0.344	18.9	0.0	0.0	146.7	0	0	0.0	0.0	0.0	0.0
2	1.000	0.0	85.1	240.7	183.1	0	0	0.0	0.0	0.0	0.0
3	1.000	70.7	235.7	271.0	151.8	0	0	0.0	0.0	0.0	0.0
4	0.583	200.8	218.3	310.4	152.6	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 25.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	1499.99	5.0	1614.05	10.0	1701.32
15.0	1758.48	20.0	1783.77	25.0	1776.89
30.0	1738.93	35.0	1672.21	40.0	1580.13
45.0	1467.02	50.0	1338.14	55.0	1199.67
60.0	1058.91	65.0	924.68	70.0	807.87
75.0	721.38	80.0	677.76	85.0	683.26
90.0	733.39	95.0	816.50	100.0	920.84
105.0	1037.97	110.0	1162.66	115.0	1291.74
120.0	1423.08	125.0	1554.84	130.0	1685.07
135.0	1811.43	140.0	1931.05	145.0	2040.56
150.0	2136.15	155.0	2213.72	160.0	2269.16
165.0	2298.59	170.0	2298.73	175.0	2267.20
180.0	2202.69	185.0	2105.18	190.0	1975.94
195.0	1817.52	200.0	1633.67	205.0	1429.25
210.0	1210.30	215.0	984.53	220.0	762.90
225.0	564.50	230.0	428.99	235.0	414.91
240.0	516.98	245.0	667.63	250.0	823.68
255.0	966.37	260.0	1086.84	265.0	1180.41
270.0	1244.73	275.0	1279.03	280.0	1283.77
285.0	1260.43	290.0	1211.40	295.0	1139.92
300.0	1050.23	305.0	947.97	310.0	841.15
315.0	741.84	320.0	667.95	325.0	641.42
330.0	677.01	335.0	770.24	340.0	902.82
345.0	1055.47	350.0	1213.02	355.0	1364.09

Call: KLO.X
Freq: 1430 kHz
OGDEN, UT, US
Hours: D
Lat: 41-02-48.50 N
Lng: 112-01-37.20 W
Power: 25.0 kW
Theo RMS: 1824.90 mV/m @ 1km @ 25.0 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	0.344	18.9	0.0	0.0	146.7	0	0	0.0	0.0	0.0	0.0
2	1.000	0.0	85.1	240.7	183.1	0	0	0.0	0.0	0.0	0.0
3	1.000	70.7	235.7	271.0	151.8	0	0	0.0	0.0	0.0	0.0
4	0.583	200.8	218.3	310.4	152.6	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 30.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	1298.31	5.0	1391.09	10.0	1461.36
15.0	1506.60	20.0	1525.54	25.0	1518.10
30.0	1485.30	35.0	1429.20	40.0	1352.70
45.0	1259.52	50.0	1154.09	55.0	1041.63
60.0	928.30	65.0	821.44	70.0	729.91
75.0	663.72	80.0	632.03	85.0	639.10
90.0	681.73	95.0	751.65	100.0	840.08
105.0	940.21	110.0	1047.45	115.0	1158.76
120.0	1271.92	125.0	1385.04	130.0	1496.20
135.0	1603.21	140.0	1703.58	145.0	1794.46
150.0	1872.70	155.0	1935.01	160.0	1978.14
165.0	1999.08	170.0	1995.33	175.0	1965.11
180.0	1907.53	185.0	1822.72	190.0	1711.87
195.0	1577.22	200.0	1421.96	205.0	1250.26
210.0	1067.31	215.0	879.73	220.0	696.73
225.0	533.37	230.0	417.40	235.0	387.67
240.0	449.01	245.0	558.32	250.0	678.62
255.0	791.45	260.0	887.83	265.0	963.07
270.0	1014.80	275.0	1042.10	280.0	1045.19
285.0	1025.19	290.0	984.04	295.0	924.52
300.0	850.39	305.0	766.89	310.0	681.63
315.0	606.05	320.0	556.32	325.0	549.87
330.0	594.73	335.0	683.33	340.0	800.03
345.0	930.02	350.0	1061.85	355.0	1186.85

Call: KLO.X
Freq: 1430 kHz
OGDEN, UT, US
Hours: D
Lat: 41-02-48.50 N
Lng: 112-01-37.20 W
Power: 25.0 kW
Theo RMS: 1824.90 mV/m @ 1km @ 25.0 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	0.344	18.9	0.0	0.0	146.7	0	0	0.0	0.0	0.0	0.0
2	1.000	0.0	85.1	240.7	183.1	0	0	0.0	0.0	0.0	0.0
3	1.000	70.7	235.7	271.0	151.8	0	0	0.0	0.0	0.0	0.0
4	0.583	200.8	218.3	310.4	152.6	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 35.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	1089.05	5.0	1161.79	10.0	1216.29
15.0	1250.72	20.0	1264.28	25.0	1257.03
30.0	1229.93	35.0	1184.72	40.0	1123.82
45.0	1050.29	50.0	967.78	55.0	880.56
60.0	793.61	65.0	712.83	70.0	645.07
75.0	597.67	80.0	576.92	85.0	585.48
90.0	621.15	95.0	678.36	100.0	750.87
105.0	833.51	110.0	922.49	115.0	1015.04
120.0	1109.06	125.0	1202.72	130.0	1294.19
135.0	1381.54	140.0	1462.65	145.0	1535.20
150.0	1596.69	155.0	1644.58	160.0	1676.42
165.0	1689.98	170.0	1683.46	175.0	1655.62
180.0	1605.94	185.0	1534.67	190.0	1442.88
195.0	1332.45	200.0	1206.07	205.0	1067.18
210.0	920.05	215.0	770.12	220.0	624.70
225.0	494.90	230.0	398.78	235.0	360.03
240.0	386.64	245.0	456.11	250.0	540.74
255.0	623.55	260.0	695.65	265.0	752.34
270.0	791.16	275.0	811.07	280.0	812.05
285.0	794.88	290.0	761.10	295.0	713.04
300.0	654.00	305.0	588.79	310.0	524.53
315.0	471.86	320.0	444.72	325.0	455.39
330.0	505.91	335.0	587.23	340.0	686.89
345.0	794.17	350.0	900.91	355.0	1000.83

Call: KLO.X
Freq: 1430 kHz
OGDEN, UT, US
Hours: D
Lat: 41-02-48.50 N
Lng: 112-01-37.20 W
Power: 25.0 kW
Theo RMS: 1824.90 mV/m @ 1km @ 25.0 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	0.344	18.9	0.0	0.0	146.7	0	0	0.0	0.0	0.0	0.0
2	1.000	0.0	85.1	240.7	183.1	0	0	0.0	0.0	0.0	0.0
3	1.000	70.7	235.7	271.0	151.8	0	0	0.0	0.0	0.0	0.0
4	0.583	200.8	218.3	310.4	152.6	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 40.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	883.03	5.0	938.07	10.0	978.84
15.0	1004.18	20.0	1013.58	25.0	1007.26
30.0	986.06	35.0	951.40	40.0	905.24
45.0	850.02	50.0	788.62	55.0	724.42
60.0	661.30	65.0	603.78	70.0	556.86
75.0	525.62	80.0	514.05	85.0	523.70
90.0	553.07	95.0	598.57	100.0	656.03
105.0	721.73	110.0	792.72	115.0	866.67
120.0	941.72	125.0	1016.20	130.0	1088.51
135.0	1157.00	140.0	1219.94	145.0	1275.49
150.0	1321.77	155.0	1356.90	160.0	1379.10
165.0	1386.83	170.0	1378.85	175.0	1354.39
180.0	1313.18	185.0	1255.56	190.0	1182.46
195.0	1095.44	200.0	996.64	205.0	888.78
210.0	775.27	215.0	660.28	220.0	549.28
225.0	449.84	230.0	372.87	235.0	331.57
240.0	332.79	245.0	367.68	250.0	419.13
255.0	473.45	260.0	522.33	265.0	561.14
270.0	587.38	275.0	599.85	280.0	598.31
285.0	583.25	290.0	555.82	295.0	517.96
300.0	472.54	305.0	423.93	310.0	378.79
315.0	346.78	320.0	339.14	325.0	362.71
330.0	414.85	335.0	486.71	340.0	569.12
345.0	654.86	350.0	738.45	355.0	815.62

Call: KLO.X
Freq: 1430 kHz
OGDEN, UT, US
Hours: D
Lat: 41-02-48.50 N
Lng: 112-01-37.20 W
Power: 25.0 kW
Theo RMS: 1824.90 mV/m @ 1km @ 25.0 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	0.344	18.9	0.0	0.0	146.7	0	0	0.0	0.0	0.0	0.0
2	1.000	0.0	85.1	240.7	183.1	0	0	0.0	0.0	0.0	0.0
3	1.000	70.7	235.7	271.0	151.8	0	0	0.0	0.0	0.0	0.0
4	0.583	200.8	218.3	310.4	152.6	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 45.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	690.03	5.0	730.27	10.0	759.82
15.0	777.98	20.0	784.51	25.0	779.68
30.0	764.21	35.0	739.22	40.0	706.24
45.0	667.14	50.0	624.12	55.0	579.72
60.0	536.86	65.0	498.78	70.0	468.92
75.0	450.55	80.0	446.00	85.0	456.08
90.0	479.79	95.0	514.94	100.0	558.86
105.0	609.03	110.0	663.30	115.0	719.85
120.0	777.16	125.0	833.82	130.0	888.50
135.0	939.86	140.0	986.56	145.0	1027.22
150.0	1060.47	155.0	1084.97	160.0	1099.52
165.0	1103.09	170.0	1094.92	175.0	1074.54
180.0	1041.90	185.0	997.34	190.0	941.66
195.0	876.08	200.0	802.23	205.0	722.19
210.0	638.48	215.0	554.15	220.0	472.95
225.0	399.65	230.0	340.30	235.0	301.59
240.0	287.79	245.0	296.67	250.0	320.09
255.0	349.06	260.0	376.87	265.0	399.25
270.0	413.72	275.0	418.98	280.0	414.58
285.0	400.75	290.0	378.30	295.0	348.79
300.0	314.73	305.0	280.11	310.0	251.25
315.0	236.81	320.0	244.75	325.0	276.48
330.0	326.47	335.0	387.39	340.0	453.21
345.0	519.46	350.0	582.71	355.0	640.29

Call: KLO.X
Freq: 1430 kHz
OGDEN, UT, US
Hours: D
Lat: 41-02-48.50 N
Lng: 112-01-37.20 W
Power: 25.0 kW
Theo RMS: 1824.90 mV/m @ 1km @ 25.0 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	0.344	18.9	0.0	0.0	146.7	0	0	0.0	0.0	0.0	0.0
2	1.000	0.0	85.1	240.7	183.1	0	0	0.0	0.0	0.0	0.0
3	1.000	70.7	235.7	271.0	151.8	0	0	0.0	0.0	0.0	0.0
4	0.583	200.8	218.3	310.4	152.6	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 50.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	518.00	5.0	546.49	10.0	567.32
15.0	580.14	20.0	584.90	25.0	581.85
30.0	571.59	35.0	554.98	40.0	533.14
45.0	507.45	50.0	479.53	55.0	451.19
60.0	424.48	65.0	401.59	70.0	384.71
75.0	375.75	80.0	375.98	85.0	385.74
90.0	404.41	95.0	430.69	100.0	462.97
105.0	499.64	110.0	539.23	115.0	580.44
120.0	622.09	125.0	663.10	130.0	702.44
135.0	739.10	140.0	772.07	145.0	800.38
150.0	823.07	155.0	839.26	160.0	848.17
165.0	849.16	170.0	841.78	175.0	825.82
180.0	801.32	185.0	768.61	190.0	728.32
195.0	681.35	200.0	628.90	205.0	572.46
210.0	513.76	215.0	454.85	220.0	398.11
225.0	346.27	230.0	302.39	235.0	269.53
240.0	249.77	245.0	242.90	250.0	246.03
255.0	254.75	260.0	264.80	265.0	272.90
270.0	276.87	275.0	275.39	280.0	267.88
285.0	254.30	290.0	235.19	295.0	211.74
300.0	186.15	305.0	162.28	310.0	146.51
315.0	146.59	320.0	166.06	325.0	201.20
330.0	245.85	335.0	295.13	340.0	345.65
345.0	394.95	350.0	441.11	355.0	482.54

Call: KLO.X
Freq: 1430 kHz
OGDEN, UT, US
Hours: D
Lat: 41-02-48.50 N
Lng: 112-01-37.20 W
Power: 25.0 kW
Theo RMS: 1824.90 mV/m @ 1km @ 25.0 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	0.344	18.9	0.0	0.0	146.7	0	0	0.0	0.0	0.0	0.0
2	1.000	0.0	85.1	240.7	183.1	0	0	0.0	0.0	0.0	0.0
3	1.000	70.7	235.7	271.0	151.8	0	0	0.0	0.0	0.0	0.0
4	0.583	200.8	218.3	310.4	152.6	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 55.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	372.47	5.0	392.01	10.0	406.38
15.0	415.42	20.0	419.19	25.0	417.92
30.0	412.06	35.0	402.24	40.0	389.26
45.0	374.07	50.0	357.78	55.0	341.62
60.0	326.91	65.0	315.01	70.0	307.17
75.0	304.42	80.0	307.39	85.0	316.16
90.0	330.37	95.0	349.28	100.0	371.98
105.0	397.51	110.0	424.93	115.0	453.37
120.0	482.00	125.0	510.06	130.0	536.81
135.0	561.53	140.0	583.54	145.0	602.17
150.0	616.81	155.0	626.90	160.0	631.96
165.0	631.64	170.0	625.70	175.0	614.06
180.0	596.82	185.0	574.24	190.0	546.80
195.0	515.11	200.0	480.01	205.0	442.45
210.0	403.56	215.0	364.58	220.0	326.87
225.0	291.85	230.0	260.92	235.0	235.34
240.0	215.89	245.0	202.61	250.0	194.61
255.0	190.25	260.0	187.57	265.0	184.70
270.0	180.16	275.0	172.88	280.0	162.27
285.0	148.09	290.0	130.57	295.0	110.50
300.0	89.76	305.0	72.68	310.0	67.55
315.0	80.59	320.0	107.35	325.0	141.04
330.0	177.74	335.0	215.25	340.0	252.12
345.0	287.18	350.0	319.45	355.0	348.11

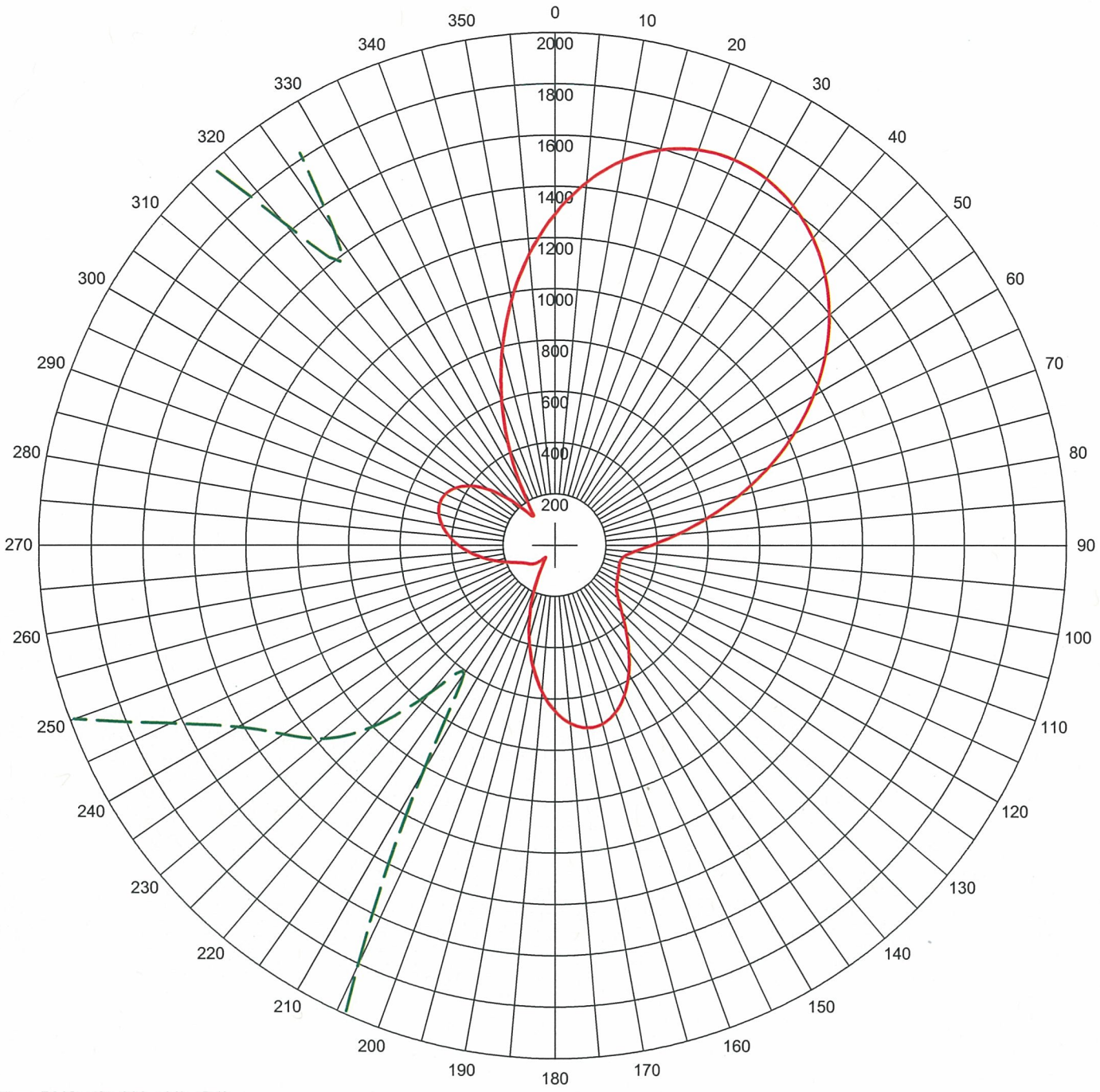
Call: KLO.X
Freq: 1430 kHz
OGDEN, UT, US
Hours: D
Lat: 41-02-48.50 N
Lng: 112-01-37.20 W
Power: 25.0 kW
Theo RMS: 1824.90 mV/m @ 1km @ 25.0 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	0.344	18.9	0.0	0.0	146.7	0	0	0.0	0.0	0.0	0.0
2	1.000	0.0	85.1	240.7	183.1	0	0	0.0	0.0	0.0	0.0
3	1.000	70.7	235.7	271.0	151.8	0	0	0.0	0.0	0.0	0.0
4	0.583	200.8	218.3	310.4	152.6	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 60.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	256.32	5.0	269.25	10.0	278.95
15.0	285.37	20.0	288.60	25.0	288.82
30.0	286.36	35.0	281.64	40.0	275.18
45.0	267.60	50.0	259.61	55.0	251.95
60.0	245.39	65.0	240.68	70.0	238.48
75.0	239.26	80.0	243.29	85.0	250.59
90.0	260.92	95.0	273.92	100.0	289.09
105.0	305.88	110.0	323.77	115.0	342.20
120.0	360.65	125.0	378.64	130.0	395.67
135.0	411.29	140.0	425.05	145.0	436.55
150.0	445.41	155.0	451.31	160.0	453.98
165.0	453.24	170.0	448.98	175.0	441.20
180.0	429.98	185.0	415.52	190.0	398.14
195.0	378.25	200.0	356.33	205.0	332.98
210.0	308.83	215.0	284.57	220.0	260.89
225.0	238.44	230.0	217.83	235.0	199.50
240.0	183.68	245.0	170.34	250.0	159.17
255.0	149.58	260.0	140.85	265.0	132.18
270.0	122.85	275.0	112.26	280.0	99.98
285.0	85.73	290.0	69.42	295.0	51.20
300.0	31.77	305.0	15.72	310.0	24.13
315.0	47.11	320.0	72.75	325.0	99.23
330.0	125.79	335.0	151.83	340.0	176.79
345.0	200.17	350.0	221.48	355.0	240.32

Proposed KLO Night Pattern



Theo RMS: 735.039 mV/m@1km
Std RMS: 772.231 mV/m@1km
Q: 24.832 mV/m@1km

Standard Horizontal Plane Pattern

Pattern (mV/m @ 1km)
Pattern X10

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	146.7	0	0	0.0	0.0	0.0	0.0
2	0.865	91.2	85.1	240.7	183.1	0	0	0.0	0.0	0.0	0.0
3	0.832	65.2	235.7	271.0	151.8	0	0	0.0	0.0	0.0	0.0
4	0.559	23.9	218.3	310.4	149.2	0	0	0.0	0.0	0.0	0.0

Call: KLO.NX
Freq: 1430 kHz
OGDEN, UT, US
Hours: N
Lat: 41-02-48.50 N
Lng: 112-01-37.20 W
Power: 5.0 kW
Theo RMS: 735.04 mV/m@1km
@ 5.0 kW

AM Radiation Report

Call: KLO.NX
Freq: 1430 kHz
OGDEN, UT, US
Hours: N
Lat: 41-02-48.50 N
Lng: 112-01-37.20 W
Power: 5.0 kW
Theo RMS: 735.04 mV/m @ 1km @ 5.0 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	146.7	0	0	0.0	0.0	0.0	0.0
2	0.865	91.2	85.1	240.7	183.1	0	0	0.0	0.0	0.0	0.0
3	0.832	65.2	235.7	271.0	151.8	0	0	0.0	0.0	0.0	0.0
4	0.559	23.9	218.3	310.4	149.2	0	0	0.0	0.0	0.0	0.0

Standard Horizontal Plane Pattern

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	1290.93	5.0	1419.71	10.0	1521.57
15.0	1594.89	20.0	1639.61	25.0	1656.91
30.0	1648.58	35.0	1616.64	40.0	1562.95
45.0	1489.13	50.0	1396.76	55.0	1287.64
60.0	1164.19	65.0	1029.72	70.0	888.58
75.0	746.26	80.0	609.30	85.0	485.34
90.0	383.07	95.0	311.06	100.0	273.26
105.0	263.03	110.0	266.49	115.0	273.18
120.0	281.01	125.0	295.01	130.0	323.03
135.0	369.75	140.0	433.17	145.0	506.23
150.0	579.95	155.0	645.47	160.0	695.11
165.0	722.83	170.0	724.73	175.0	699.33
180.0	647.68	185.0	573.30	190.0	481.79
195.0	380.34	200.0	277.03	205.0	180.54
210.0	101.37	215.0	61.27	220.0	75.54
225.0	100.62	230.0	117.56	235.0	128.71
240.0	142.03	245.0	164.74	250.0	198.62
255.0	240.65	260.0	286.52	265.0	332.46
270.0	375.59	275.0	413.60	280.0	444.29
285.0	465.31	290.0	474.02	295.0	467.59
300.0	443.27	305.0	398.84	310.0	333.47
315.0	249.80	320.0	163.96	325.0	149.15
330.0	258.68	335.0	420.24	340.0	600.40
345.0	786.12	350.0	968.19	355.0	1138.69

Call: KLO.NX
Freq: 1430 kHz
OGDEN, UT, US
Hours: N
Lat: 41-02-48.50 N
Lng: 112-01-37.20 W
Power: 5.0 kW
Theo RMS: 735.04 mV/m @ 1km @ 5.0 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	146.7	0	0	0.0	0.0	0.0	0.0
2	0.865	91.2	85.1	240.7	183.1	0	0	0.0	0.0	0.0	0.0
3	0.832	65.2	235.7	271.0	151.8	0	0	0.0	0.0	0.0	0.0
4	0.559	23.9	218.3	310.4	149.2	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 5.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	1277.98	5.0	1405.09	10.0	1505.78
15.0	1578.40	20.0	1622.88	25.0	1640.31
30.0	1632.44	35.0	1601.23	40.0	1548.50
45.0	1475.86	50.0	1384.88	55.0	1277.37
60.0	1155.74	65.0	1023.23	70.0	884.12
75.0	743.74	80.0	608.43	85.0	485.51
90.0	383.23	95.0	309.76	100.0	269.30
105.0	256.41	110.0	258.27	115.0	264.68
120.0	273.39	125.0	289.09	130.0	318.99
135.0	367.03	140.0	430.87	145.0	503.55
150.0	576.40	155.0	640.90	160.0	689.60
165.0	716.66	170.0	718.30	175.0	693.11
180.0	642.13	185.0	568.80	190.0	478.61
195.0	378.57	200.0	276.55	205.0	180.82
210.0	101.02	215.0	56.78	220.0	68.54
225.0	93.76	230.0	111.17	235.0	122.93
240.0	136.90	245.0	160.11	250.0	194.16
255.0	236.10	260.0	281.68	265.0	327.25
270.0	369.97	275.0	407.55	280.0	437.80
285.0	458.41	290.0	466.80	295.0	460.20
300.0	435.95	305.0	391.97	310.0	327.57
315.0	245.76	320.0	163.61	325.0	153.30
330.0	261.59	335.0	420.38	340.0	597.63
345.0	780.48	350.0	959.82	355.0	1127.85

Call: KLO.NX
Freq: 1430 kHz
OGDEN, UT, US
Hours: N
Lat: 41-02-48.50 N
Lng: 112-01-37.20 W
Power: 5.0 kW
Theo RMS: 735.04 mV/m @ 1km @ 5.0 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	146.7	0	0	0.0	0.0	0.0	0.0
2	0.865	91.2	85.1	240.7	183.1	0	0	0.0	0.0	0.0	0.0
3	0.832	65.2	235.7	271.0	151.8	0	0	0.0	0.0	0.0	0.0
4	0.559	23.9	218.3	310.4	149.2	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 10.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	1240.03	5.0	1362.25	10.0	1459.45
15.0	1529.99	20.0	1573.69	25.0	1591.48
30.0	1584.93	35.0	1555.82	40.0	1505.90
45.0	1436.72	50.0	1349.86	55.0	1247.12
60.0	1130.83	65.0	1004.12	70.0	871.02
75.0	736.46	80.0	606.21	85.0	486.77
90.0	385.22	95.0	308.61	100.0	261.40
105.0	241.07	110.0	238.13	115.0	243.51
120.0	254.63	125.0	274.95	130.0	309.68
135.0	360.80	140.0	425.22	145.0	496.37
150.0	566.46	155.0	627.84	160.0	673.75
165.0	698.88	170.0	699.79	175.0	675.23
180.0	626.22	185.0	556.03	190.0	469.79
195.0	374.03	200.0	276.01	205.0	183.13
210.0	102.98	215.0	48.33	220.0	49.11
225.0	74.16	230.0	92.75	235.0	106.14
240.0	121.93	245.0	146.51	250.0	181.06
255.0	222.65	260.0	267.36	265.0	311.81
270.0	353.31	275.0	389.61	280.0	418.61
285.0	438.07	290.0	445.56	295.0	438.53
300.0	414.62	305.0	372.07	310.0	310.73
315.0	234.64	320.0	163.57	325.0	165.14
330.0	269.78	335.0	420.61	340.0	589.44
345.0	763.92	350.0	935.28	355.0	1096.07

Call: KLO.NX
Freq: 1430 kHz
OGDEN, UT, US
Hours: N
Lat: 41-02-48.50 N
Lng: 112-01-37.20 W
Power: 5.0 kW
Theo RMS: 735.04 mV/m @ 1km @ 5.0 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	146.7	0	0	0.0	0.0	0.0	0.0
2	0.865	91.2	85.1	240.7	183.1	0	0	0.0	0.0	0.0	0.0
3	0.832	65.2	235.7	271.0	151.8	0	0	0.0	0.0	0.0	0.0
4	0.559	23.9	218.3	310.4	149.2	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 15.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	1179.62	5.0	1294.02	10.0	1385.59
15.0	1452.69	20.0	1495.01	25.0	1513.23
30.0	1508.66	35.0	1482.85	40.0	1437.38
45.0	1373.75	50.0	1293.50	55.0	1198.41
60.0	1090.73	65.0	973.39	70.0	850.03
75.0	725.05	80.0	603.44	85.0	490.65
90.0	392.35	95.0	314.04	100.0	259.77
105.0	229.85	110.0	219.58	115.0	222.79
120.0	236.70	125.0	262.58	130.0	302.48
135.0	355.96	140.0	419.36	145.0	486.89
150.0	551.97	155.0	608.08	160.0	649.45
165.0	671.51	170.0	671.31	175.0	647.81
180.0	602.03	185.0	536.92	190.0	457.13
195.0	368.51	200.0	277.53	205.0	190.61
210.0	113.68	215.0	52.78	220.0	26.25
225.0	45.43	230.0	64.65	235.0	80.02
240.0	98.36	245.0	124.94	250.0	160.08
255.0	200.97	260.0	244.20	265.0	286.78
270.0	326.26	275.0	360.53	280.0	387.58
285.0	405.32	290.0	411.58	295.0	404.16
300.0	381.11	305.0	341.28	310.0	285.37
315.0	219.25	320.0	166.11	325.0	182.89
330.0	281.71	335.0	420.37	340.0	576.03
345.0	737.34	350.0	896.12	355.0	1045.48

Call: KLO.NX
Freq: 1430 kHz
OGDEN, UT, US
Hours: N
Lat: 41-02-48.50 N
Lng: 112-01-37.20 W
Power: 5.0 kW
Theo RMS: 735.04 mV/m @ 1km @ 5.0 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	146.7	0	0	0.0	0.0	0.0	0.0
2	0.865	91.2	85.1	240.7	183.1	0	0	0.0	0.0	0.0	0.0
3	0.832	65.2	235.7	271.0	151.8	0	0	0.0	0.0	0.0	0.0
4	0.559	23.9	218.3	310.4	149.2	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 20.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	1100.58	5.0	1204.72	10.0	1288.79
15.0	1351.18	20.0	1391.42	25.0	1409.95
30.0	1407.75	35.0	1386.11	40.0	1346.41
45.0	1290.06	50.0	1218.53	55.0	1133.56
60.0	1037.26	65.0	932.29	70.0	821.90
75.0	709.86	80.0	600.38	85.0	497.87
90.0	406.76	95.0	331.16	100.0	274.34
105.0	237.86	110.0	220.86	115.0	220.79
120.0	235.50	125.0	264.03	130.0	305.46
135.0	357.57	140.0	416.57	145.0	477.55
150.0	535.11	155.0	583.95	160.0	619.28
165.0	637.37	170.0	635.81	175.0	613.81
180.0	572.33	185.0	513.98	190.0	442.80
195.0	363.88	200.0	282.81	205.0	205.17
210.0	135.95	215.0	79.30	220.0	39.13
225.0	23.92	230.0	32.76	235.0	47.74
240.0	68.56	245.0	97.25	250.0	132.72
255.0	172.37	260.0	213.41	265.0	253.37
270.0	290.11	275.0	321.69	280.0	346.28
285.0	362.02	290.0	367.05	295.0	359.61
300.0	338.34	305.0	302.88	310.0	255.21
315.0	203.55	320.0	172.99	325.0	203.65
330.0	294.88	335.0	418.56	340.0	557.55
345.0	702.01	350.0	844.60	355.0	979.18

Call: KLO.NX
Freq: 1430 kHz
OGDEN, UT, US
Hours: N
Lat: 41-02-48.50 N
Lng: 112-01-37.20 W
Power: 5.0 kW
Theo RMS: 735.04 mV/m @ 1km @ 5.0 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	146.7	0	0	0.0	0.0	0.0	0.0
2	0.865	91.2	85.1	240.7	183.1	0	0	0.0	0.0	0.0	0.0
3	0.832	65.2	235.7	271.0	151.8	0	0	0.0	0.0	0.0	0.0
4	0.559	23.9	218.3	310.4	149.2	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 25.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	1007.46	5.0	1099.56	10.0	1174.64
15.0	1231.21	20.0	1268.66	25.0	1287.18
30.0	1287.46	35.0	1270.49	40.0	1237.45
45.0	1189.61	50.0	1128.35	55.0	1055.31
60.0	972.43	65.0	882.08	70.0	787.05
75.0	690.54	80.0	595.99	85.0	506.96
90.0	426.90	95.0	358.98	100.0	305.77
105.0	269.01	110.0	249.32	115.0	246.21
120.0	258.44	125.0	284.30	130.0	321.58
135.0	367.40	140.0	418.14	145.0	469.65
150.0	517.54	155.0	557.51	160.0	585.77
165.0	599.34	170.0	596.33	175.0	576.21
180.0	539.82	185.0	489.39	190.0	428.32
195.0	360.85	200.0	291.64	205.0	225.30
210.0	165.92	215.0	116.43	220.0	78.05
225.0	49.69	230.0	28.95	235.0	20.85
240.0	37.75	245.0	66.98	250.0	101.64
255.0	139.03	260.0	177.00	265.0	213.57
270.0	246.90	275.0	275.31	280.0	297.16
285.0	310.90	290.0	315.04	295.0	308.34
300.0	290.16	305.0	261.11	310.0	224.71
315.0	191.36	320.0	183.77	325.0	223.98
330.0	306.31	335.0	413.63	340.0	533.94
345.0	659.25	350.0	783.32	355.0	900.87

Call: KLO.NX
Freq: 1430 kHz
OGDEN, UT, US
Hours: N
Lat: 41-02-48.50 N
Lng: 112-01-37.20 W
Power: 5.0 kW
Theo RMS: 735.04 mV/m @ 1km @ 5.0 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	146.7	0	0	0.0	0.0	0.0	0.0
2	0.865	91.2	85.1	240.7	183.1	0	0	0.0	0.0	0.0	0.0
3	0.832	65.2	235.7	271.0	151.8	0	0	0.0	0.0	0.0	0.0
4	0.559	23.9	218.3	310.4	149.2	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 30.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	905.04	5.0	984.06	10.0	1049.21
15.0	1099.10	20.0	1133.09	25.0	1151.16
30.0	1153.73	35.0	1141.54	40.0	1115.55
45.0	1076.86	50.0	1026.73	55.0	966.62
60.0	898.28	65.0	823.76	70.0	745.39
75.0	665.81	80.0	587.79	85.0	514.15
90.0	447.58	95.0	390.53	100.0	345.01
105.0	312.48	110.0	293.74	115.0	288.82
120.0	297.00	125.0	316.82	130.0	346.17
135.0	382.37	140.0	422.30	145.0	462.53
150.0	499.52	155.0	529.90	160.0	550.70
165.0	559.62	170.0	555.27	175.0	537.27
180.0	506.35	185.0	464.33	190.0	413.91
195.0	358.42	200.0	301.53	205.0	246.75
210.0	197.04	215.0	154.23	220.0	118.66
225.0	89.07	230.0	63.36	235.0	40.77
240.0	28.87	245.0	43.19	250.0	71.88
255.0	104.67	260.0	138.18	265.0	170.42
270.0	199.72	275.0	224.59	280.0	243.65
285.0	255.65	290.0	259.54	295.0	254.67
300.0	241.15	305.0	220.72	310.0	198.31
315.0	184.74	320.0	195.89	325.0	240.51
330.0	313.12	335.0	403.90	340.0	504.98
345.0	610.30	350.0	714.85	355.0	814.32

Call: KLO.NX
Freq: 1430 kHz
OGDEN, UT, US
Hours: N
Lat: 41-02-48.50 N
Lng: 112-01-37.20 W
Power: 5.0 kW
Theo RMS: 735.04 mV/m @ 1km @ 5.0 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	146.7	0	0	0.0	0.0	0.0	0.0
2	0.865	91.2	85.1	240.7	183.1	0	0	0.0	0.0	0.0	0.0
3	0.832	65.2	235.7	271.0	151.8	0	0	0.0	0.0	0.0	0.0
4	0.559	23.9	218.3	310.4	149.2	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 35.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	797.92	5.0	863.61	10.0	918.43
15.0	961.16	20.0	991.16	25.0	1008.28
30.0	1012.75	35.0	1005.07	40.0	986.00
45.0	956.46	50.0	917.52	55.0	870.46
60.0	816.78	65.0	758.16	70.0	696.52
75.0	633.95	80.0	572.62	85.0	514.68
90.0	462.19	95.0	416.96	100.0	380.50
105.0	353.88	110.0	337.71	115.0	332.06
120.0	336.43	125.0	349.74	130.0	370.38
135.0	396.25	140.0	424.91	145.0	453.69
150.0	479.89	155.0	500.95	160.0	514.65
165.0	519.27	170.0	513.81	175.0	498.03
180.0	472.52	185.0	438.63	190.0	398.38
195.0	354.25	200.0	308.84	205.0	264.63
210.0	223.58	215.0	186.81	220.0	154.45
225.0	125.79	230.0	99.76	235.0	75.83
240.0	55.62	245.0	45.88	250.0	54.53
255.0	76.10	260.0	102.15	265.0	128.52
270.0	152.98	275.0	173.98	280.0	190.30
285.0	201.01	290.0	205.49	295.0	203.67
300.0	196.47	305.0	186.50	310.0	179.19
315.0	183.01	320.0	206.08	325.0	250.64
330.0	313.06	335.0	387.99	340.0	470.50
345.0	556.31	350.0	641.64	355.0	723.14

Call: KLO.NX
Freq: 1430 kHz
OGDEN, UT, US
Hours: N
Lat: 41-02-48.50 N
Lng: 112-01-37.20 W
Power: 5.0 kW
Theo RMS: 735.04 mV/m @ 1km @ 5.0 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	146.7	0	0	0.0	0.0	0.0	0.0
2	0.865	91.2	85.1	240.7	183.1	0	0	0.0	0.0	0.0	0.0
3	0.832	65.2	235.7	271.0	151.8	0	0	0.0	0.0	0.0	0.0
4	0.559	23.9	218.3	310.4	149.2	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 40.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	690.22	5.0	743.08	10.0	787.75
15.0	823.23	20.0	848.94	25.0	864.65
30.0	870.47	35.0	866.72	40.0	853.98
45.0	832.95	50.0	804.53	55.0	769.77
60.0	729.86	65.0	686.16	70.0	640.16
75.0	593.46	80.0	547.66	85.0	504.36
90.0	465.05	95.0	431.01	100.0	403.30
105.0	382.66	110.0	369.49	115.0	363.80
120.0	365.23	125.0	373.02	130.0	385.99
135.0	402.66	140.0	421.27	145.0	439.89
150.0	456.58	155.0	469.51	160.0	477.10
165.0	478.14	170.0	471.94	175.0	458.33
180.0	437.74	185.0	411.13	190.0	379.87
195.0	345.64	200.0	310.18	205.0	275.09
210.0	241.62	215.0	210.48	220.0	181.83
225.0	155.39	230.0	130.72	235.0	107.62
240.0	86.66	245.0	69.92	250.0	61.48
255.0	64.79	260.0	77.69	265.0	95.06
270.0	113.09	275.0	129.55	280.0	143.10
285.0	152.94	290.0	158.81	295.0	161.13
300.0	161.33	305.0	162.20	310.0	168.00
315.0	183.46	320.0	211.68	325.0	252.85
330.0	304.99	335.0	365.28	340.0	430.75
345.0	498.54	350.0	565.96	355.0	630.58

Call: KLO.NX
Freq: 1430 kHz
OGDEN, UT, US
Hours: N
Lat: 41-02-48.50 N
Lng: 112-01-37.20 W
Power: 5.0 kW
Theo RMS: 735.04 mV/m @ 1km @ 5.0 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	146.7	0	0	0.0	0.0	0.0	0.0
2	0.865	91.2	85.1	240.7	183.1	0	0	0.0	0.0	0.0	0.0
3	0.832	65.2	235.7	271.0	151.8	0	0	0.0	0.0	0.0	0.0
4	0.559	23.9	218.3	310.4	149.2	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 45.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	585.51	5.0	626.63	10.0	661.83
15.0	690.35	20.0	711.70	25.0	725.65
30.0	732.21	35.0	731.59	40.0	724.20
45.0	710.56	50.0	691.36	55.0	667.40
60.0	639.60	65.0	608.98	70.0	576.65
75.0	543.74	80.0	511.41	85.0	480.77
90.0	452.84	95.0	428.50	100.0	408.45
105.0	393.16	110.0	382.88	115.0	377.60
120.0	377.05	125.0	380.69	130.0	387.74
135.0	397.17	140.0	407.82	145.0	418.37
150.0	427.53	155.0	434.08	160.0	436.95
165.0	435.36	170.0	428.83	175.0	417.26
180.0	400.92	185.0	380.41	190.0	356.61
195.0	330.56	200.0	303.33	205.0	275.92
210.0	249.09	215.0	223.32	220.0	198.81
225.0	175.55	230.0	153.43	235.0	132.48
240.0	113.00	245.0	95.82	250.0	82.43
255.0	74.79	260.0	74.14	265.0	79.66
270.0	88.92	275.0	99.47	280.0	109.65
285.0	118.56	290.0	126.02	295.0	132.56
300.0	139.46	305.0	148.70	310.0	162.58
315.0	183.08	320.0	211.22	325.0	246.85
330.0	289.00	335.0	336.15	340.0	386.57
345.0	438.45	350.0	490.00	355.0	539.53

Call: KLO.NX
Freq: 1430 kHz
OGDEN, UT, US
Hours: N
Lat: 41-02-48.50 N
Lng: 112-01-37.20 W
Power: 5.0 kW
Theo RMS: 735.04 mV/m @ 1km @ 5.0 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	146.7	0	0	0.0	0.0	0.0	0.0
2	0.865	91.2	85.1	240.7	183.1	0	0	0.0	0.0	0.0	0.0
3	0.832	65.2	235.7	271.0	151.8	0	0	0.0	0.0	0.0	0.0
4	0.559	23.9	218.3	310.4	149.2	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 50.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	486.71	5.0	517.57	10.0	544.36
15.0	566.51	20.0	583.66	25.0	595.61
30.0	602.32	35.0	603.93	40.0	600.68
45.0	592.97	50.0	581.26	55.0	566.14
60.0	548.27	65.0	528.36	70.0	507.16
75.0	485.48	80.0	464.07	85.0	443.68
90.0	424.96	95.0	408.48	100.0	394.68
105.0	383.86	110.0	376.16	115.0	371.56
120.0	369.87	125.0	370.74	130.0	373.65
135.0	377.96	140.0	382.92	145.0	387.71
150.0	391.52	155.0	393.58	160.0	393.24
165.0	390.00	170.0	383.57	175.0	373.88
180.0	361.07	185.0	345.49	190.0	327.64
195.0	308.13	200.0	287.57	205.0	266.55
210.0	245.54	215.0	224.87	220.0	204.75
225.0	185.28	230.0	166.53	235.0	148.63
240.0	131.80	245.0	116.48	250.0	103.32
255.0	93.13	260.0	86.69	265.0	84.37
270.0	85.80	275.0	90.07	280.0	96.13
285.0	103.23	290.0	111.08	295.0	119.88
300.0	130.26	305.0	143.11	310.0	159.37
315.0	179.71	320.0	204.45	325.0	233.45
330.0	266.19	335.0	301.85	340.0	339.42
345.0	377.81	350.0	415.87	355.0	452.51

Call: KLO.NX
Freq: 1430 kHz
OGDEN, UT, US
Hours: N
Lat: 41-02-48.50 N
Lng: 112-01-37.20 W
Power: 5.0 kW
Theo RMS: 735.04 mV/m @ 1km @ 5.0 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	146.7	0	0	0.0	0.0	0.0	0.0
2	0.865	91.2	85.1	240.7	183.1	0	0	0.0	0.0	0.0	0.0
3	0.832	65.2	235.7	271.0	151.8	0	0	0.0	0.0	0.0	0.0
4	0.559	23.9	218.3	310.4	149.2	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 55.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	396.04	5.0	418.33	10.0	437.95
15.0	454.53	20.0	467.82	25.0	477.65
30.0	483.99	35.0	486.90	40.0	486.54
45.0	483.15	50.0	477.04	55.0	468.61
60.0	458.26	65.0	446.49	70.0	433.77
75.0	420.60	80.0	407.48	85.0	394.84
90.0	383.12	95.0	372.64	100.0	363.67
105.0	356.39	110.0	350.87	115.0	347.10
120.0	344.96	125.0	344.22	130.0	344.57
135.0	345.64	140.0	346.97	145.0	348.09
150.0	348.54	155.0	347.85	160.0	345.67
165.0	341.69	170.0	335.75	175.0	327.80
180.0	317.89	185.0	306.22	190.0	293.05
195.0	278.70	200.0	263.50	205.0	247.79
210.0	231.86	215.0	215.93	220.0	200.17
225.0	184.75	230.0	169.77	235.0	155.40
240.0	141.83	245.0	129.32	250.0	118.23
255.0	108.94	260.0	101.87	265.0	97.29
270.0	95.33	275.0	95.88	280.0	98.67
285.0	103.41	290.0	109.92	295.0	118.15
300.0	128.27	305.0	140.51	310.0	155.12
315.0	172.27	320.0	191.99	325.0	214.13
330.0	238.37	335.0	264.24	340.0	291.16
345.0	318.48	350.0	345.52	355.0	371.58

Call: KLO.NX
Freq: 1430 kHz
OGDEN, UT, US
Hours: N
Lat: 41-02-48.50 N
Lng: 112-01-37.20 W
Power: 5.0 kW
Theo RMS: 735.04 mV/m @ 1km @ 5.0 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	146.7	0	0	0.0	0.0	0.0	0.0
2	0.865	91.2	85.1	240.7	183.1	0	0	0.0	0.0	0.0	0.0
3	0.832	65.2	235.7	271.0	151.8	0	0	0.0	0.0	0.0	0.0
4	0.559	23.9	218.3	310.4	149.2	0	0	0.0	0.0	0.0	0.0

Standard Pattern
Calculated at 60.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	314.95	5.0	330.33	10.0	344.09
15.0	355.98	20.0	365.84	25.0	373.56
30.0	379.10	35.0	382.50	40.0	383.82
45.0	383.22	50.0	380.88	55.0	377.03
60.0	371.92	65.0	365.83	70.0	359.05
75.0	351.88	80.0	344.60	85.0	337.46
90.0	330.71	95.0	324.53	100.0	319.08
105.0	314.46	110.0	310.71	115.0	307.81
120.0	305.69	125.0	304.24	130.0	303.28
135.0	302.59	140.0	301.95	145.0	301.09
150.0	299.77	155.0	297.74	160.0	294.81
165.0	290.83	170.0	285.70	175.0	279.37
180.0	271.90	185.0	263.34	190.0	253.85
195.0	243.56	200.0	232.67	205.0	221.35
210.0	209.78	215.0	198.09	220.0	186.45
225.0	174.96	230.0	163.77	235.0	153.00
240.0	142.82	245.0	133.40	250.0	124.95
255.0	117.69	260.0	111.85	265.0	107.60
270.0	105.10	275.0	104.39	280.0	105.49
285.0	108.35	290.0	112.91	295.0	119.13
300.0	127.00	305.0	136.52	310.0	147.69
315.0	160.48	320.0	174.83	325.0	190.57
330.0	207.48	335.0	225.29	340.0	243.66
345.0	262.20	350.0	280.53	355.0	298.23

Exhibit A - Modeled Impedance Matrix

The antenna array open circuit impedance measurements were performed on February 28, 2010. All measurements were taken at the base of the respected array elements with all feed, sample, and tower lighting cables removed. Local stations KSL(AM) and KANN(AM) operated at reduced power in order to minimize interference. The weather was clear and dry with an approximate temperature of 35 degrees Fahrenheit. Measurements were acquired using a Delta Electronics OIB-3 impedance bridge serial number 342. The computer model was developed using Expert MININEC Broadcast Professional; Version 14.5; Copyright 2008 - EM Scientific Inc.

Calibrated Impedance Model

Tower	$Z_{base\ OC}$ (Measured @ base)	Z_{shunt} (10 pf base assumed)	Z_{series} (assumed)	Z_{series} (assumed, µH)	Z_{base} (modeled)
1	834+j28.6	825+j91	+j23	2.6	826+j68
2	115-j375	124-j387	+j31	3.5	124-j418
3	650+j0	648+j38	+j21	2.3	651+j17
4	693-j34	695+j9.8	+j6.1	0.68	695+j3.7

Tower Heights

Tower	Tower Height (degrees)	Model Height (degrees)	Vp assumed	Modeled tower height
1	146.7	153.9	95.3%	104.9%
2	183.1	196.2	93.3%	107.2%
3	151.8	155.0	97.9%	102.1%
4	149.2	156.0	95.6%	104.6%

Tower Diameters

Tower	Tower Face & Size	Model wire diameter	Modeled wire diameter
1	triangle, 18"	0.1900	87.0%
2	triangle, 18"	0.2360	108.1%
3	triangle, 18"	0.2250	103.1%
4	triangle, 18"	0.2220	101.7%

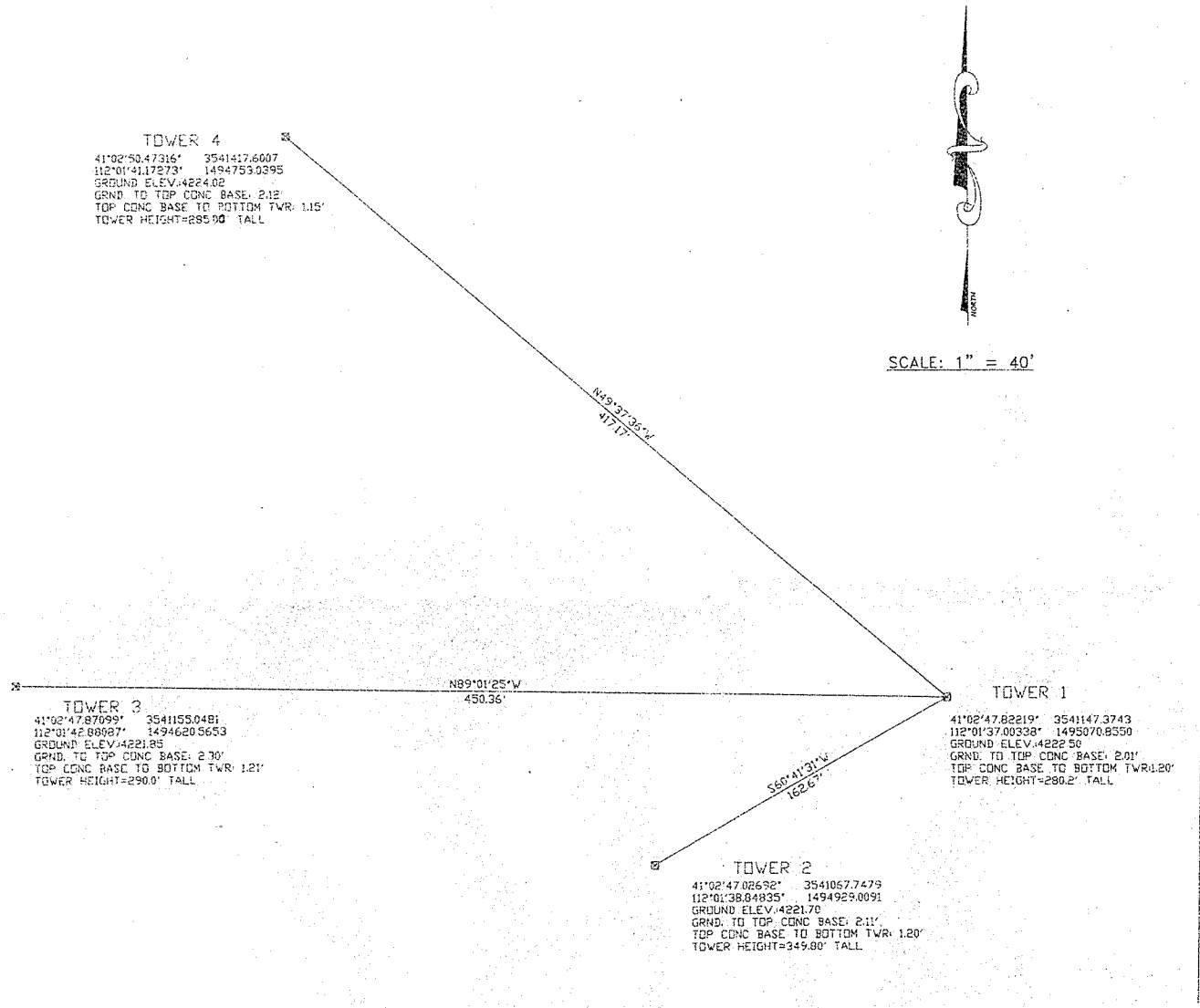
Exhibit B - Towers and Land Survey

Towers are guyed steel structures of uniform cross section. A land survey was completed December 28, 2009 identified variances between the actual tower locations and those specified on both the license and construction permit. The measured dimensions and variances are summarized below. The concurrently filed application for modification of construction permit addresses these variances.

BMP-20071121ACX			
Tower	Spacing	Orientation	Height
1	0.0000	0.0000	148.5
2	78.4000	240.4000	186.4
3	235.5000	270.7000	150.7
4	218.3000	310.1000	152.6

Survey Results 28Dec09			
Tower	Overall height of radiator above base insulator (meters)	Overall height above ground, without lighting (meters)	Overall height above ground, with lighting (meters)
1	85.4	86.4	86.4
2	106.6	107.6	108.5
3	88.4	89.5	89.5
4	86.9	87.9	88.7

Survey Results 28Dec09									
Tower	Spacing (feet)	Spacing (degrees)	Spacing Error (degrees)	Orientation (degrees)	Orientation (degrees)	Orientation Error (degrees)	Height radiator (feet)	Height radiator (degrees)	Height Error (degrees)
1	0.0000	*0.0000*	*0.0000*	0.0000	*0.0000*	*0.00*	280.20	*146.66*	***-1.84***
2	162.67	*85.1420*	***6.7420***	S60d41'31"W	*240.6919*	*0.29*	349.80	*183.09*	***-3.31***
3	450.36	*235.7198*	*0.2198*	N89d01'25"W	*270.9764*	*0.28*	290.00	*151.79*	*1.09*
4	417.17	*218.3481*	*0.0481*	N49d37'36"W	*310.3734*	*0.27*	285.05	*149.20*	***-3.40***



SURVEYOR'S CERTIFICATE

I, DALLAS K. BUTTARS, HOLDING LICENSE NUMBER 167594 IN ACCORDANCE WITH TITLE 58, CHAPTER 22, PROFESSIONAL ENGINEERS AND LAND SURVEYORS LICENSING ACT, HAVE COMPLETED A SURVEY OF THE PROPERTY DESCRIBED ON THE PLAT IN ACCORDANCE WITH SECTION 17-23-17 AND HAVE VERIFIED ALL MEASUREMENTS AND PLACED MONUMENTS AS REPRESENTED ON THE PLAT.

SIGNED THIS 06 DAY OF January 2010.

REGISTERED LAND SURVEYOR DALLAS K. BUTTARS 167594 STATE OF UTAH

Dallas K. Buttars

NOTES

COORDINATES ARE NAD 83
ELEVATIONS ARE NAVD 29
12-21-09: TEMP: 29° F FOG VISIBILITY: 1/2 MILE

NARRATIVE

THE PURPOSE OF THIS SURVEY WAS TO DETERMINE THE NORTH AMERICA DATUM 1983 COORDINATES FOR THE K. L. O RADIO TOWERS LOCATED IN SOUTH WEST LAYTON, UTAH AS SHOWN. THIS IS NOT A BOUNDARY SURVEY AND NO SURVEY MONUMENTS WERE SET.

LANDMARK SURVEYING, INC.
A COMPLETE LAND SURVEYING SERVICE
4646 S. 3500 W. #-3, WEST HAVEN, UTAH 84401
PHONE 801-731-4075

CLIENT: JOHN WEBB

LOCATION: 3200 WEST GENTILE
LAYTON, UTAH

SURVEYED: 12-21-09

REVISIONS:		DRAWN BY: D.B.
AAAA		CHECKED BY: D.B.
		DATE: 12-28-09
		FILE: 3136

Exhibit C - Pattern Array Synthesis

Day Pattern

MEDIUM WAVE ARRAY SYNTHESIS FROM FIELD RATIOS

Frequency = 1430 KHz

tower	field ratio magnitude	phase (deg)
1	.344	18.9
2	1.	0
3	1.	70.7
4	.583	200.8

VOLTAGES AND CURRENTS - rms

source node	voltage magnitude	phase (deg)	current magnitude	phase (deg)
1	800.021	56.7	3.0571	59.2
21	2,904.64	64.5	8.06085	122.4
41	2,903.45	148.6	2.29567	138.4
61	2,024.82	275.5	2.08347	308.1

Sum of square of source currents = 167.868
Total power = 25,000. watts

Day Pattern Array Synthesis

CURRENT rms
Frequency = 1430 KHz
Input power = 25,000. watts
Efficiency = 100. %
coordinates in degrees

current no.	X	Y	Z	mag (amps)	phase (deg)	real (amps)	imaginary (amps)
GND	0	0	0	3.05832	59.2	1.56616	2.62687
2	0	0	7.695	3.07853	47.9	2.06312	2.28493
3	0	0	15.39	3.12784	40.5	2.37808	2.03177
4	0	0	23.085	3.17641	34.5	2.6191	1.7972
5	0	0	30.78	3.21141	29.3	2.79932	1.57382
6	0	0	38.475	3.22469	24.9	2.92387	1.36001
7	0	0	46.17	3.21082	21.1	2.99547	1.15608
8	0	0	53.865	3.16634	17.7	3.0163	.963139
9	0	0	61.56	3.08932	14.7	2.98856	.782542
10	0	0	69.255	2.97909	11.9	2.91476	.615752
11	0	0	76.95	2.836	9.4	2.79775	.464181
12	0	0	84.645	2.66122	7.1	2.64079	.329134
13	0	0	92.34	2.4566	4.9	2.44746	.21176
14	0	0	100.035	2.22453	2.9	2.22166	.113029
15	0	0	107.73	1.96776	1.	1.96747	.0337151
16	0	0	115.425	1.68924	359.1	1.68905	-.0256058
17	0	0	123.12	1.39194	357.3	1.39044	-.0645303
18	0	0	130.815	1.07838	355.6	1.0752	-.0827653

19	0	0	138.51	.749902	353.9	.745627	-.0799554
20	0	0	146.205	.404076	352.2	.400295	-.0551524
END	0	0	153.9	0	0	0	0
GND	-41.679	74.2407	0	8.06185	122.4	-4.31966	6.80691
22	-41.679	74.2407	9.81	5.81888	107.4	-1.74452	5.55122
23	-41.679	74.2407	19.62	4.56917	88.1	.148445	4.56676
24	-41.679	74.2407	29.43	4.06694	62.8	1.86126	3.61604
25	-41.679	74.2407	39.24	4.35595	38.1	3.42993	2.68511
26	-41.679	74.2407	49.05	5.16518	20.2	4.8483	1.78131
27	-41.679	74.2407	58.86	6.16627	8.6	6.09738	.919125
28	-41.679	74.2407	68.67	7.15607	.9	7.15513	.11543
29	-41.679	74.2407	78.48	8.02399	355.6	8.00056	-.612697
30	-41.679	74.2407	88.29	8.70593	351.8	8.61584	-1.24918
31	-41.679	74.2407	98.1	9.16249	348.8	8.98797	-1.77979
32	-41.679	74.2407	107.91	9.36908	346.5	9.10887	-2.19273
33	-41.679	74.2407	117.72	9.31275	344.6	8.97673	-2.47906
34	-41.679	74.2407	127.53	8.98964	343.	8.59541	-2.63298
35	-41.679	74.2407	137.34	8.404	341.6	7.97461	-2.65192
36	-41.679	74.2407	147.15	7.56711	340.4	7.12933	-2.53649
37	-41.679	74.2407	156.96	6.49594	339.4	6.07887	-2.2901
38	-41.679	74.2407	166.77	5.21072	338.4	4.8448	-1.91822
39	-41.679	74.2407	176.58	3.73012	337.5	3.44664	-1.42634
40	-41.679	74.2407	186.39	2.05758	336.7	1.88959	-.814289
END	-41.679	74.2407	196.2	0	0	0	0
GND	4.03169	235.686	0	2.29694	138.4	-1.71826	1.5243
42	4.03169	235.686	7.75	3.55686	97.9	-.488244	3.52319
43	4.03169	235.686	15.5	4.85465	85.9	.346471	4.84227
44	4.03169	235.686	23.25	6.02657	79.9	1.06079	5.93248
45	4.03169	235.686	31.	7.04507	76.2	1.68296	6.8411
46	4.03169	235.686	38.75	7.90032	73.7	2.22051	7.58184
47	4.03169	235.686	46.5	8.58464	71.9	2.6741	8.15753
48	4.03169	235.686	54.25	9.09162	70.5	3.04216	8.56755
49	4.03169	235.686	62.	9.41657	69.3	3.32258	8.81092
50	4.03169	235.686	69.75	9.55686	68.4	3.51368	8.88749
51	4.03169	235.686	77.5	9.51198	67.7	3.61448	8.79848
52	4.03169	235.686	85.25	9.28409	67.	3.62506	8.54712
53	4.03169	235.686	93.	8.87769	66.5	3.54656	8.13851
54	4.03169	235.686	100.75	8.2995	66.	3.38124	7.57951
55	4.03169	235.686	108.5	7.5585	65.5	3.1324	6.87888
56	4.03169	235.686	116.25	6.66522	65.1	2.8042	6.04662
57	4.03169	235.686	124.	5.63097	64.8	2.40127	5.0933
58	4.03169	235.686	131.75	4.46627	64.4	1.92802	4.02868
59	4.03169	235.686	139.5	3.17697	64.1	1.38694	2.85824
60	4.03169	235.686	147.25	1.75312	63.8	.773436	1.57328
END	4.03169	235.686	155.	0	0	0	0
GND	141.43	166.356	0	2.08087	308.1	1.28415	-1.63737
62	141.43	166.356	7.8	1.82092	258.9	-.35105	-1.78676
63	141.43	166.356	15.6	2.37073	232.	-1.4581	-1.86931
64	141.43	166.356	23.4	3.07358	218.7	-2.39981	-1.92037
65	141.43	166.356	31.2	3.75586	211.2	-3.2135	-1.9442
66	141.43	166.356	39.	4.36505	206.4	-3.90892	-1.94269
67	141.43	166.356	46.8	4.87912	203.1	-4.48672	-1.91707
68	141.43	166.356	54.6	5.28592	200.7	-4.94465	-1.86853
69	141.43	166.356	62.4	5.57775	198.8	-5.27988	-1.79838
70	141.43	166.356	70.2	5.74973	197.3	-5.49012	-1.70819
71	141.43	166.356	78.	5.79922	196.	-5.5742	-1.59976

72	141.43	166.356	85.8	5.72566	194.9	-5.53238	-1.47513
73	141.43	166.356	93.6	5.53041	194.	-5.36647	-1.33657
74	141.43	166.356	101.4	5.21663	193.1	-5.07989	-1.18654
75	141.43	166.356	109.2	4.78904	192.4	-4.67749	-1.02762
76	141.43	166.356	117.	4.25371	191.7	-4.16536	-.862447
77	141.43	166.356	124.8	3.61737	191.1	-3.55025	-.693617
78	141.43	166.356	132.6	2.88647	190.4	-2.83859	-.523528
79	141.43	166.356	140.4	2.06453	189.9	-2.03396	-.353989
80	141.43	166.356	148.2	1.14483	189.3	-1.12975	-.185212
END	141.43	166.356	156.	0	0	0	0

Night Pattern

MEDIUM WAVE ARRAY SYNTHESIS FROM FIELD RATIOS

Frequency = 1430 KHz

tower	field ratio magnitude	phase (deg)
1	1.	0
2	.865	91.2
3	.832	65.2
4	.559	23.9

VOLTAGES AND CURRENTS - rms

source node	voltage magnitude	phase (deg)	current magnitude	phase (deg)
1	1,651.26	73.1	1.99822	55.6
21	967.234	182.	.633494	284.1
41	1,201.24	144.6	1.38759	99.3
61	615.656	91.8	1.73942	51.

Sum of square of source currents = 18.6904
Total power = 5,000. watts

Night Pattern Array Synthesis

CURRENT rms
Frequency = 1430 KHz
Input power = 5,000. watts
Efficiency = 100. %
coordinates in degrees

current no.	X	Y	Z	mag (amps)	phase (deg)	real (amps)	imaginary (amps)
GND	0	0	0	1.99811	55.6	1.12829	1.64905
2	0	0	7.695	2.64996	28.8	2.32144	1.27797
3	0	0	15.39	3.28071	17.9	3.12159	1.0093
4	0	0	23.085	3.85899	11.5	3.78208	.766576
5	0	0	30.78	4.36476	7.1	4.33097	.542057
6	0	0	38.475	4.78793	4.	4.77623	.334392
7	0	0	46.17	5.12157	1.6	5.11953	.144377
8	0	0	53.865	5.36067	359.7	5.3606	-.0264195
9	0	0	61.56	5.5018	358.2	5.49898	-.176216
10	0	0	69.255	5.54303	356.9	5.53472	-.303298
11	0	0	76.95	5.4839	355.8	5.46884	-.406171
12	0	0	84.645	5.32546	354.8	5.30345	-.483666
13	0	0	92.34	5.07017	353.9	5.04186	-.534988
14	0	0	100.035	4.72183	353.2	4.68854	-.559755
15	0	0	107.73	4.28544	352.5	4.24895	-.557987
16	0	0	115.425	3.76687	351.9	3.72938	-.530091
17	0	0	123.12	3.17248	351.4	3.13645	-.476775
18	0	0	130.815	2.50821	350.8	2.47629	-.39889
19	0	0	138.51	1.77747	350.4	1.75248	-.297022
20	0	0	146.205	.974983	349.9	.959997	-.170289
END	0	0	153.9	0	0	0	0
GND	-41.679	74.2407	0	.633468	284.1	.154005	-.614462

22	-41.679	74.2407	9.81	.354906	70.5	.118349	.334592
23	-41.679	74.2407	19.62	1.0346	85.2	.0867254	1.03096
24	-41.679	74.2407	29.43	1.66015	88.2	.0533642	1.65929
25	-41.679	74.2407	39.24	2.23225	89.5	.0188419	2.23217
26	-41.679	74.2407	49.05	2.7465	90.3	-.0155224	2.74646
27	-41.679	74.2407	58.86	3.19455	90.9	-.0481925	3.19419
28	-41.679	74.2407	68.67	3.56709	91.2	-.0776773	3.56625
29	-41.679	74.2407	78.48	3.85537	91.5	-.102689	3.854
30	-41.679	74.2407	88.29	4.05193	91.7	-.122245	4.05009
31	-41.679	74.2407	98.1	4.15123	91.9	-.135724	4.14901
32	-41.679	74.2407	107.91	4.14986	92.	-.142881	4.1474
33	-41.679	74.2407	117.72	4.04681	92.	-.143835	4.04426
34	-41.679	74.2407	127.53	3.84348	92.1	-.139013	3.84096
35	-41.679	74.2407	137.34	3.54358	92.1	-.12908	3.54122
36	-41.679	74.2407	147.15	3.15292	92.1	-.114835	3.15083
37	-41.679	74.2407	156.96	2.67895	92.1	-.0971042	2.67719
38	-41.679	74.2407	166.77	2.12995	92.1	-.0766414	2.12857
39	-41.679	74.2407	176.58	1.51309	92.	-.0540072	1.51212
40	-41.679	74.2407	186.39	.829088	92.	-.0293732	.828568
END	-41.679	74.2407	196.2	0	0	0	0
GND	4.03169	235.686	0	1.38757	99.2	-.222965	1.36954
42	4.03169	235.686	7.75	2.18298	81.	.340798	2.15622
43	4.03169	235.686	15.5	2.76309	74.9	.718564	2.66802
44	4.03169	235.686	23.25	3.25298	71.4	1.03687	3.0833
45	4.03169	235.686	31.	3.66282	69.1	1.30885	3.42099
46	4.03169	235.686	38.75	3.99481	67.4	1.53815	3.68682
47	4.03169	235.686	46.5	4.24841	66.	1.72527	3.88232
48	4.03169	235.686	54.25	4.42249	65.	1.86977	4.00779
49	4.03169	235.686	62.	4.51615	64.1	1.97098	4.06335
50	4.03169	235.686	69.75	4.52918	63.4	2.02843	4.04957
51	4.03169	235.686	77.5	4.46224	62.8	2.04205	3.96757
52	4.03169	235.686	85.25	4.31696	62.2	2.01224	3.81929
53	4.03169	235.686	93.	4.09593	61.7	1.93991	3.6074
54	4.03169	235.686	100.75	3.8027	61.3	1.82649	3.33533
55	4.03169	235.686	108.5	3.44165	60.9	1.6739	3.00716
56	4.03169	235.686	116.25	3.01777	60.5	1.48441	2.62744
57	4.03169	235.686	124.	2.53631	60.2	1.26049	2.20092
58	4.03169	235.686	131.75	2.00211	59.9	1.00449	1.73189
59	4.03169	235.686	139.5	1.41781	59.6	.717652	1.22277
60	4.03169	235.686	147.25	.779071	59.3	.39767	.669932
END	4.03169	235.686	155.	0	0	0	0
GND	141.43	166.356	0	1.73965	50.9	1.09665	1.35046
62	141.43	166.356	7.8	2.09251	40.6	1.58946	1.36096
63	141.43	166.356	15.6	2.34097	35.4	1.90818	1.35609
64	141.43	166.356	23.4	2.54497	31.8	2.16392	1.33953
65	141.43	166.356	31.2	2.7077	29.	2.3686	1.31201
66	141.43	166.356	39.	2.82909	26.8	2.52595	1.27409
67	141.43	166.356	46.8	2.90829	24.9	2.63708	1.22637
68	141.43	166.356	54.6	2.94461	23.4	2.70239	1.16954
69	141.43	166.356	62.4	2.93772	22.1	2.72223	1.10439
70	141.43	166.356	70.2	2.88784	20.9	2.69724	1.03175
71	141.43	166.356	78.	2.79579	19.9	2.6285	.952587
72	141.43	166.356	85.8	2.66297	19.	2.51758	.867862
73	141.43	166.356	93.6	2.49134	18.2	2.36654	.778618
74	141.43	166.356	101.4	2.28341	17.5	2.17796	.685902
75	141.43	166.356	109.2	2.0421	16.8	1.95478	.590746

76	141.43	166.356	117.	1.77066	16.2	1.7003	.494155
77	141.43	166.356	124.8	1.47242	15.6	1.41788	.397041
78	141.43	166.356	132.6	1.15045	15.1	1.11061	.300142
79	141.43	166.356	140.4	.80657	14.6	.780393	.203818
80	141.43	166.356	148.2	.43868	14.2	.42532	.107441
END	141.43	166.356	156.	0	0	0	0

Exhibit D - Current Sampling System

The sampling system as constructed is in accordance with the provisions of Section 73.68 of the Commission's Rules.

The detuned current distribution for Tower 1 is minimized with a base load of 0+j277.13 Ohms. This yields a current minimum in the horizontal plane at model segment 8 as shown below. Segment 8 is at a modeled height of 53.865 electrical degrees, which when correct to the actual tower height, is 51.35 electrical degrees, or 98.1 feet. The sample loop for Tower 1 was mounted at 98.1 feet above the base insulator and orientated identically with respect to the tower cross members and the other towers.

CURRENT rms
Frequency = 1.43 MHz
Plane wave zenith (deg) = 90
Plane wave azimuth (deg) = 0
Polarization angle (deg) = 0
coordinates in degrees

current no.	X	Y	Z	mag (amps)	phase (deg)	real (amps)	imaginary (amps)
GND	0	0	0	2.57694	271.	.0445343	-2.57656
2	0	0	7.695	2.02337	271.	.0350898	-2.02306
3	0	0	15.39	1.61912	271.	.0284661	-1.61886
4	0	0	23.085	1.25042	271.	.022683	-1.25021
5	0	0	30.78	.905832	271.1	.0175198	-.905662
6	0	0	38.475	.583426	271.3	.0129119	-.583283
7	0	0	46.17	.284565	271.8	8.84E-03	-.284427
8	0	0	53.865	.0128668	294.4	5.31E-03	-.0117181
9	0	0	61.56	.231784	89.4	2.32E-03	.231773
10	0	0	69.255	.442917	90.	-1.29E-04	.442917
11	0	0	76.95	.618766	90.2	-2.06E-03	.618762
12	0	0	84.645	.756676	90.3	-3.47E-03	.756668
13	0	0	92.34	.854423	90.3	-4.41E-03	.854411
14	0	0	100.035	.910215	90.3	-4.9E-03	.910202
15	0	0	107.73	.92276	90.3	-4.99E-03	.922746
16	0	0	115.425	.891179	90.3	-4.73E-03	.891167
17	0	0	123.12	.814916	90.3	-4.16E-03	.814905
18	0	0	130.815	.693448	90.3	-3.37E-03	.69344
19	0	0	138.51	.525537	90.3	-2.39E-03	.525532
20	0	0	146.205	.306992	90.2	-1.29E-03	.306989
END	0	0	153.9	0	0	0	0

The detuned current distribution for Tower 2 is minimized with a base load of 0+j160.00 Ohms. This yields a current minimum in the horizontal plane at model segment 8 as shown below. Segment 8 is at a modeled height of 65.67 electrical degrees which, when corrected to the actual tower height, is 64.09 electrical degrees, or 122.4 feet. The sample loop for Tower 2 was mounted at 122.4 feet above the base insulator and orientated identically with respect to the tower cross members and the other towers.

```
CURRENT rms
Frequency    = 1.43 MHz
Plane wave zenith (deg)   =  90
Plane wave azimuth (deg) =  0
Polarization angle (deg) =  0
coordinates in degrees
current                                  mag       phase   real       imaginary
no.     X          Y          Z          (amps)    (deg)   (amps)     (amps)
GND     0          0          0          4.40054   271.9   .148902    -4.39802
 2      0          0          9.81       3.68353   272.    .126085    -3.68137
 3      0          0          19.62      3.09972   272.    .110599    -3.09775
 4      0          0          29.43      2.51656   272.2   .0977646   -2.51466
 5      0          0          39.24      1.92808   272.6   .0870632   -1.92611
 6      0          0          49.05      1.34098   273.3   .0782909   -1.3387
 7      0          0          58.86      .766962   275.3   .0713018   -.76364
 8      0          0          68.67      .223868   287.1   .0659319   -.213939
 9      0          0          78.48      .303318   78.2    .0619713   .29692
 10     0          0          88.29      .758103   85.5    .059161    .755791
 11     0          0          98.1       1.15185   87.2    .0571954   1.15043
 12     0          0          107.91     1.47103   87.8    .0557303   1.46997
 13     0          0          117.72     1.70612   88.2    .0543936   1.70525
 14     0          0          127.53     1.84986   88.4    .0527971   1.84911
 15     0          0          137.34     1.89712   88.5    .0505485   1.89645
 16     0          0          147.15     1.84497   88.5    .0472623   1.84436
 17     0          0          156.96     1.69239   88.6    .0425666   1.69185
 18     0          0          166.77     1.43978   88.6    .0360999   1.43932
 19     0          0          176.58     1.0874    88.6    .0274837   1.08705
 20     0          0          186.39     .630836   88.5    .0162087   .630628
END     0          0          196.2      0         0       0          0
```

The detuned current distribution for Tower 3 is minimized with a base load of 0+j263.11 Ohms. This yields a current minimum in the horizontal plane at model segment 8 as shown below. Segment 8 is at a modeled height of 54.25 electrical degrees which, when corrected to the actual tower height, is 53.13 electrical degrees, or 101.5 feet. The sample loop for Tower 3 was mounted

at 101.5 feet above the base insulator and orientated identically with respect to the tower cross members and the other towers.

```
CURRENT rms
Frequency    = 1.43 MHz
Plane wave zenith (deg)   =  90
Plane wave azimuth (deg)  =  0
Polarization angle (deg)  =  0
coordinates in degrees
```

current no.	X	Y	Z	mag (amps)	phase (deg)	real (amps)	imaginary (amps)
GND	0	0	0	2.72265	271.1	.0500955	-2.72219
2	0	0	7.75	2.1301	271.1	.0393335	-2.12974
3	0	0	15.5	1.70491	271.1	.0319263	-1.70461
4	0	0	23.25	1.31747	271.1	.0254736	-1.31722
5	0	0	31.	.955392	271.2	.0197211	-.955188
6	0	0	38.75	.616459	271.4	.0145918	-.616287
7	0	0	46.5	.302063	271.9	.0100662	-.301895
8	0	0	54.25	.0159944	292.6	6.14E-03	-.0147681
9	0	0	62.	.24185	89.3	2.82E-03	.241833
10	0	0	69.75	.46458	90.	9.35E-05	.46458
11	0	0	77.5	.650322	90.2	-2.05E-03	.650318
12	0	0	85.25	.796232	90.3	-3.62E-03	.796223
13	0	0	93.	.899912	90.3	-4.67E-03	.899899
14	0	0	100.75	.959452	90.3	-5.22E-03	.959438
15	0	0	108.5	.973439	90.3	-5.33E-03	.973424
16	0	0	116.25	.940904	90.3	-5.05E-03	.94089
17	0	0	124.	.861232	90.3	-4.45E-03	.861221
18	0	0	131.75	.733802	90.3	-3.59E-03	.733793
19	0	0	139.5	.557233	90.3	-2.54E-03	.557227
20	0	0	147.25	.326954	90.2	-1.37E-03	.326951
END	0	0	155.	0	0	0	0

The detuned current distribution for Tower 4 is minimized with a base load of 0+j261.43 Ohms. This yields a current minimum in the horizontal plane at model segment 8 as shown below. Segment 8 is at a modeled height of 54.60 degrees which, when corrected to the actual tower height, is 52.22 electrical degrees, or 99.8 feet. The sample loop for Tower 4 was mounted at 99.8 feet above the base insulator and orientated identically with respect to the tower cross members and the other towers.

CURRENT rms
Frequency = 1.43 MHz
Plane wave zenith (deg) = 90
Plane wave azimuth (deg) = 0
Polarization angle (deg) = 0
coordinates in degrees

current no.	X	Y	Z	mag (amps)	phase (deg)	real (amps)	imaginary (amps)
GND	0	0	0	2.74715	271.1	.0515793	-2.74666
2	0	0	7.8	2.1532	271.1	.0405761	-2.15282
3	0	0	15.6	1.72523	271.1	.0329801	-1.72492
4	0	0	23.4	1.33456	271.1	.0263585	-1.3343
5	0	0	31.2	.968889	271.2	.0204527	-.968673
6	0	0	39.	.626154	271.4	.0151858	-.62597
7	0	0	46.8	.307894	272.	.0105385	-.307713
8	0	0	54.6	.0180098	291.2	6.51E-03	-.0167924
9	0	0	62.4	.243421	89.3	3.1E-03	.243402
10	0	0	70.2	.469417	90.	3.E-04	.469416
11	0	0	78.	.65799	90.2	-1.9E-03	.657988
12	0	0	85.8	.806208	90.2	-3.52E-03	.806201
13	0	0	93.6	.911585	90.3	-4.59E-03	.911574
14	0	0	101.4	.972158	90.3	-5.16E-03	.972145
15	0	0	109.2	.986463	90.3	-5.27E-03	.986449
16	0	0	117.	.953533	90.3	-5.E-03	.953519
17	0	0	124.8	.872729	90.3	-4.4E-03	.872718
18	0	0	132.6	.743468	90.3	-3.54E-03	.743459
19	0	0	140.4	.564377	90.3	-2.5E-03	.564372
20	0	0	148.2	.330906	90.2	-1.34E-03	.330903
END	0	0	156.	0	0	0	0

Sample Lines

Measurements performed on March 15, 2010 confirmed that the sample lines from each of the sample loops to the antenna monitor matched within one electrical degree of each other and 2 ohms in impedance. Sample lines are direct buried and utilize phase stabilized cable with a solid outer conductor.

Sample Line Length

	Tower 1	Tower 2	Tower 3	Tower 4
Series resonant frequency (MHz)	1.363	1.362	1.362	1.363
Number of multiples of 90 degrees	4	4	4	4
length at carrier frequency (degrees)	377.7	378.0	378.0	377.7
Line phase velocity	86%	86%	86%	86%
Measured length using a TDR (feet)	619.5	619.5	619.5	619.5

Sample Line Impedance

	Tower 1	Tower 2	Tower 3	Tower 4
Impedance + 1/8 λ from series res. Freq.	49.30	49.15	49.26	49.37
Impedance - 1/8 λ from series res. Freq.	48.00	49.06	49.15	48.92
Line impedance (mean of above)	48.65	49.10	49.20	49.14

Operating Parameters Sampling System Summary

Operating parameters were derived from the method of moments analysis and computer model. Current sample loops were positioned at the location on the towers where an analysis of the currents on that tower when detuned would result in a current minimum. This location for each tower was noted and the modeled operating current, at the height of the sample loop, was then normalized against the reference tower to product the following operating parameters.

Sample System Operating Parameters

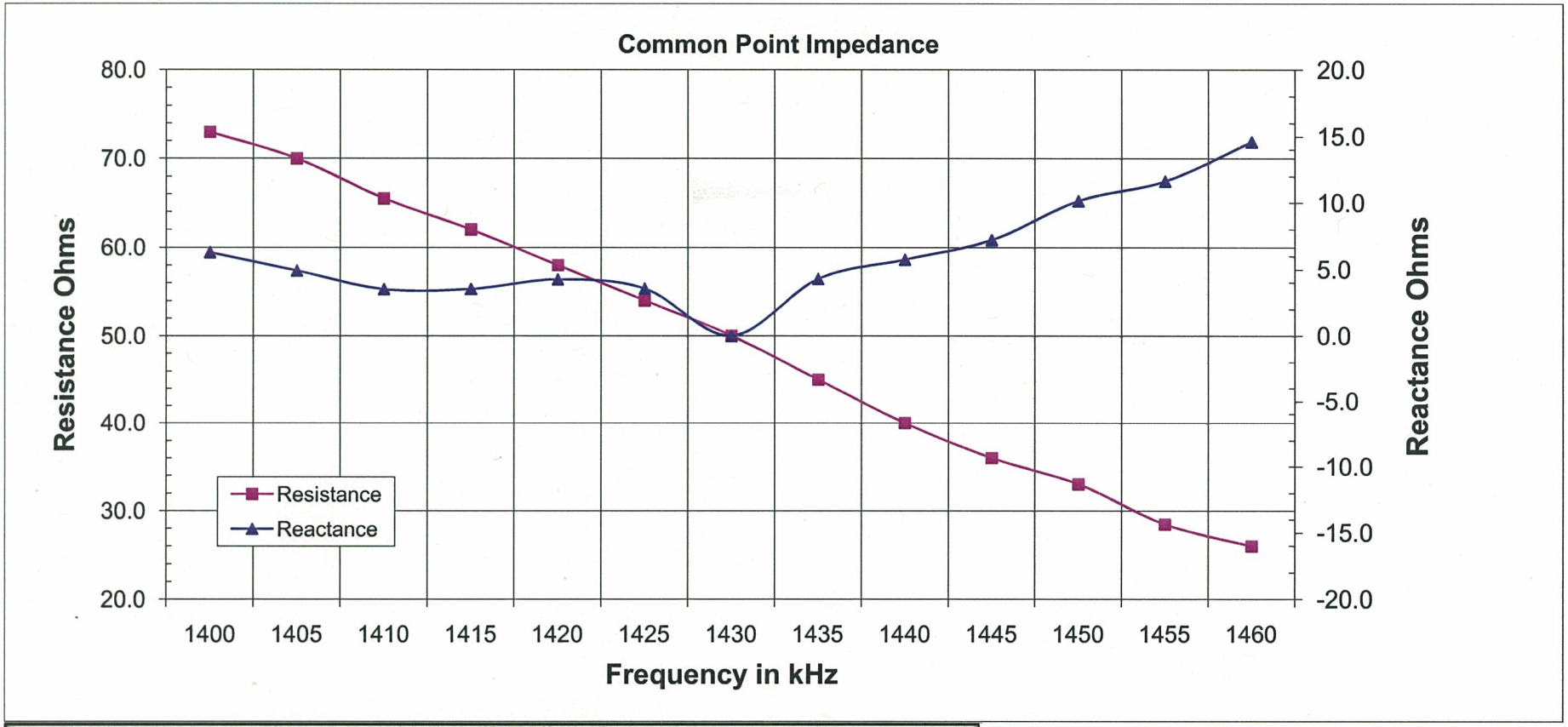
	Tower 1	Tower 2	Tower 3	Tower 4
Daytime	0.4425 ∠ 16.8d	1.0000 ∠ 0.0d	1.2705 ∠ 69.6d	0.7387 ∠ -160.2d
Nighttime	1.0000 ∠ 0.0d	0.665 ∠ 91.5d	0.825 ∠ 65.3d	0.549 ∠ 23.7d

Common Point Power

	Power	Current	Impedance
Nighttime	5 kW	10.4 A	50+j0
Daytime	25 kW	22.9 A	50+j0

Base Currents

	Tower 1	Tower 2	Tower 3	Tower 4
Daytime	3.06 A	8.06 A	2.30 A	2.08 A
Nighttime	2.00 A	0.63 A	1.39 A	1.74 A

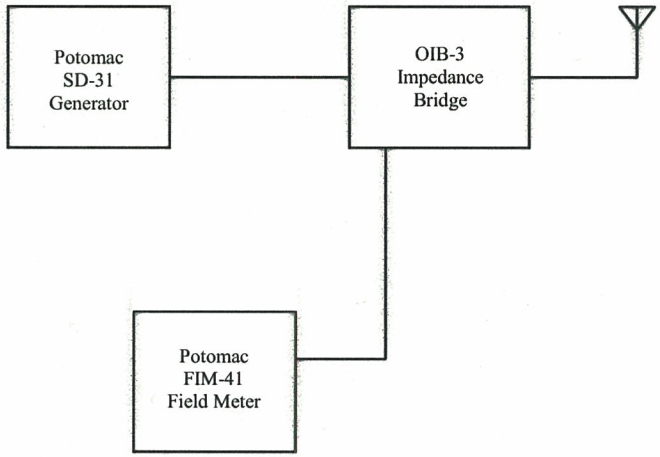


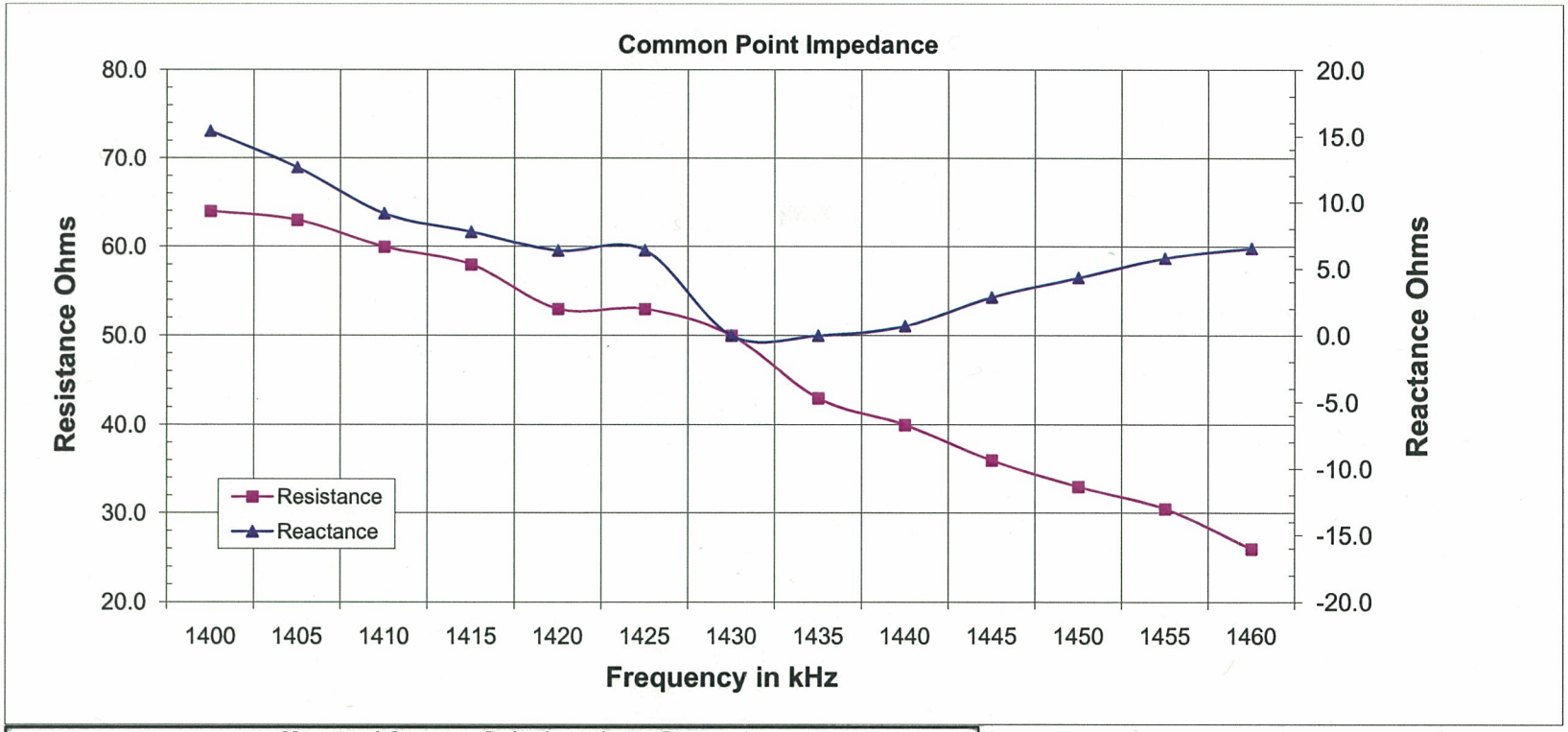
Measured Common Point Impedance Data

Frequency		Reactance	
kHz	Resistance	Corrected	Un-Corrected
1400	73.0	6.3	4.5
1405	70.0	4.9	3.5
1410	65.5	3.5	2.5
1415	62.0	3.5	2.5
1420	58.0	4.3	3.0
1425	54.0	3.6	2.5
1430	**50.0**	**0.0**	**0.0**
1435	45.0	4.3	3.0
1440	40.0	5.8	4.0
1445	36.0	7.2	5.0
1450	33.0	10.2	7.0
1455	28.5	11.6	8.0
1460	26.0	14.6	10.0

Station: KLO
Location: Ogden, Utah
Freq.: 1,430 kHz
Mode: DA-D
Date: March-2010

D.L. Markley & Associates, Inc.
Consulting Engineers
2104 West Moss Avenue
Peoria, IL 61604





Measured Common Point Impedance Data			
Frequency		Reactance	
kHz	Resistance	Corrected	Un-Corrected
1400	64.0	15.4	11.0
1405	63.0	12.6	9.0
1410	60.0	9.2	6.5
1415	58.0	7.8	5.5
1420	53.0	6.4	4.5
1425	53.0	6.4	4.5
1430	**50.0**	**0.0**	**0.0**
1435	43.0	0.0	0.0
1440	40.0	0.7	0.5
1445	36.0	2.9	2.0
1450	33.0	4.4	3.0
1455	30.5	5.8	4.0
1460	26.0	6.6	4.5

Station: KLO
Location: Ogden, Utah
Freq.: 1,430 kHz
Mode: DA-N
Date: March-2010

D.L. Markley & Associates, Inc.
Consulting Engineers
2104 West Moss Avenue
Peoria, IL 61604

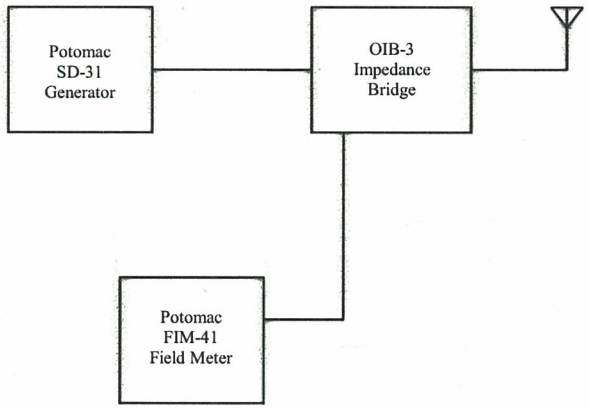


Exhibit E - Reference Field Measurements

Day pattern measurements points summary[3].

Point	Radial	Dist.	Lat. (NAD27)			Long. (NAD27)			Lat. (NAD83)			Long. (NAD83			Field	Local
	Az (°)	(kM)	°N	'	"	°W	'	"	°N	'	"	°W	'	"	(mV/m)	Date/time
101	22.5	0.9	41	3	15.0	112	1	25.2	41	3	14.8	112	1	28.0	2,640	3/14/2010 16:50
102	22.5	1.0	41	3	17.9	112	1	23.6	41	3	17.7	112	1	26.4	2,300	3/14/2010 16:47
103	22.5	1.1	41	3	20.6	112	1	22.0	41	3	20.4	112	1	24.8	1,710	3/14/2010 16:46
*104	22.5	1.7	41	3	37.3	112	1	12.9	41	3	37.1	112	1	15.7	1,420	3/16/2010 18:18
201	83.5	1.0	41	2	51.6	112	0	57.5	41	2	51.4	112	1	0.3	1,180	3/14/2010 13:11
202	83.5	1.1	41	2	52.0	112	0	52.9	41	2	51.8	112	0	55.7	1,050	3/15/2010 10:36
203	83.5	1.2	41	2	52.4	112	0	48.6	41	2	52.2	112	0	51.4	958	3/15/2010 10:39
*204	83.5	4.9	41	3	5.8	111	58	12.4	41	3	5.6	111	58	15.2	212	3/16/2010 18:06
301	169.5	1.0	41	2	16.1	112	1	32.1	41	2	15.9	112	1	34.9	2,220	3/14/2010 14:17
302	169.5	1.1	41	2	13.1	112	1	31.3	41	2	12.9	112	1	34.1	1,940	3/14/2010 14:23
303	169.5	1.2	41	2	10.1	112	1	30.6	41	2	9.9	112	1	33.4	2,230	3/14/2010 14:26
*304	169.5	31.8	40	45	55.5	111	57	32.4	40	45	55.3	111	57	35.2	104	3/16/2010 16:47
401	231	0.9	41	2	29.6	112	2	10.1	41	2	29.4	112	2	12.9	284	3/14/2010 15:07
402	231	1.0	41	2	27.5	112	2	13.5	41	2	27.3	112	2	16.3	228	3/14/2010 15:11
403	231	1.1	41	2	25.6	112	2	16.7	41	2	25.4	112	2	19.5	192	3/14/2010 15:14
*404	231	15.6	40	57	29.9	112	10	21.5	40	57	29.7	112	10	24.3	13	3/16/2010 13:44
501	278	0.9	41	2	52.0	112	2	18.4	41	2	51.8	112	2	21.2	1,800	3/14/2010 15:49
502	278	1.0	41	2	52.6	112	2	22.6	41	2	52.4	112	2	25.4	1,630	3/14/2010 15:53
503	278	1.1	41	2	52.9	112	2	26.8	41	2	52.7	112	2	29.6	1,450	3/14/2010 15:56
*504	278	17.0	41	4	4.1	112	13	41.8	41	4	3.9	112	13	44.6	102	3/16/2010 13:25
601	328	0.9	41	3	12.8	112	2	0.6	41	3	12.6	112	2	3.4	593	3/14/2010 16:26
602	328	1.0	41	3	15.5	112	2	2.7	41	3	15.3	112	2	5.5	571	3/14/2010 16:30
603	328	1.1	41	3	18.2	112	2	5.1	41	3	18.0	112	2	7.9	526	3/14/2010 16:32
*604	328	5.8	41	5	27.5	112	3	52.1	41	5	27.3	112	3	54.9	72	3/16/2010 16:07

Points X01 through X03 are located in the nature preserve and open grazing land in the area surrounding the transmitter facility. Access to these points is by foot and / or all terrain vehicle. No unique landmarks are available for these points. These locations must be identified through the use of a GPS or other global navigational satellite system. Points X04 marked with an asterisk (*) and are easily accessible around the Great Salt Lake These points are documented in more detail to facilitate regular monitoring.

[3] All points were acquired with a Potomac Instruments; model 4100; serial # 141; calibrated 10 Oct 2008.

Night pattern measurements points summary[4].

Point	Radial	Dist.	Lat. (NAD27)			Long. (NAD27)			Lat. (NAD83)			Long. (NAD83			Field	Local
	Az (°)	(kM)	°N	'	"	°W	'	"	°N	'	"	°W	'	"	(mV/m)	Date/time
701	26	0.9	41	3	14.2	112	1	23.1	41	3	14.0	112	1	25.9	1,890	3/15/2010 13:41
702	26	1.0	41	3	17.2	112	1	21.1	41	3	17.0	112	1	23.9	1,730	3/15/2010 13:39
703	26	1.1	41	3	20.0	112	1	19.4	41	3	19.8	112	1	22.2	1,580	3/15/2010 13:37
*704	26	1.7	41	3	37.3	112	1	8.2	41	3	37.1	112	1	11.0	1,030	3/16/2010 18:15
801	106.5	0.4	41	2	44.3	112	1	23.5	41	2	44.1	112	1	26.3	1,570	3/15/2010 14:57
802	106.5	1.0	41	2	38.9	112	0	58.7	41	2	38.7	112	1	1.5	321	3/16/2010 10:46
803	106.5	1.1	41	2	37.9	112	0	54.7	41	2	37.7	112	0	57.5	299	3/16/2010 10:43
*804	106.5	7.2	41	1	41.7	111	56	43.1	41	1	41.5	111	56	45.9	22	3/16/2010 17:51
901	158	0.9	41	2	20.9	112	1	25.5	41	2	20.7	112	1	28.3	715	3/15/2010 16:23
902	158	1.0	41	2	18.0	112	1	24.0	41	2	17.8	112	1	26.8	624	3/15/2010 16:12
903	158	1.1	41	2	15.0	112	1	22.4	41	2	14.8	112	1	25.2	563	3/15/2010 16:10
*904	158	25.5	40	50	1.8	111	54	50.9	40	50	1.6	111	54	53.7	23	3/16/2010 17:22
1001	217	0.9	41	2	24.8	112	2	3.2	41	2	24.6	112	2	6.0	157	3/15/2010 16:46
1002	217	1.0	41	2	22.9	112	2	6.2	41	2	22.7	112	2	9.0	142	3/15/2010 16:51
1003	217	1.1	41	2	19.5	112	2	8.5	41	2	19.3	112	2	11.3	129	3/15/2010 17:00
*1004	217	20.1	40	54	8.3	112	10	19.3	40	54	8.1	112	10	22.1	7	3/16/2010 14:25
1101	290.5	0.9	41	2	58.1	112	2	16.1	41	2	57.9	112	2	18.9	530	3/16/2010 9:49
1102	290.5	1.0	41	2	59.4	112	2	20.4	41	2	59.2	112	2	23.2	470	3/16/2010 9:46
1103	290.5	1.1	41	3	0.5	112	2	24.3	41	3	0.3	112	2	27.1	431	3/16/2010 9:45
*1104	290.5	13.5	41	5	21.6	112	10	44.6	41	5	21.4	112	10	47.4	40	3/16/2010 13:17
1201	323	0.9	41	3	11.3	112	2	3.4	41	3	11.1	112	2	6.2	291	3/15/2010 14:01
1202	323	1.0	41	3	13.8	112	2	5.9	41	3	13.6	112	2	8.7	264	3/15/2010 13:58
1203	323	1.1	41	3	16.5	112	2	8.3	41	3	16.3	112	2	11.1	228	3/15/2010 14:14
*1204	323	6.0	41	5	22.0	112	4	13.8	41	5	21.8	112	4	16.6	41	3/16/2010 15:41

Points X01 through X03 are located in the nature preserve and open grazing land in the area surrounding the transmitter facility. Access to these points is by foot and / or all terrain vehicle. No unique landmarks are available for these points. These locations must be identified through the use of a GPS or other global navigational satellite system. Points X04 marked with an asterisk (*) and are easily accessible around the Great Salt Lake These points are documented in more detail to facilitate regular monitoring.

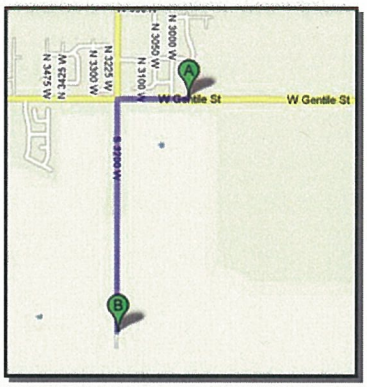
[4] All points were acquired with a Potomac Instruments; model 4100; serial # 141; calibrated 10 Oct 2008.

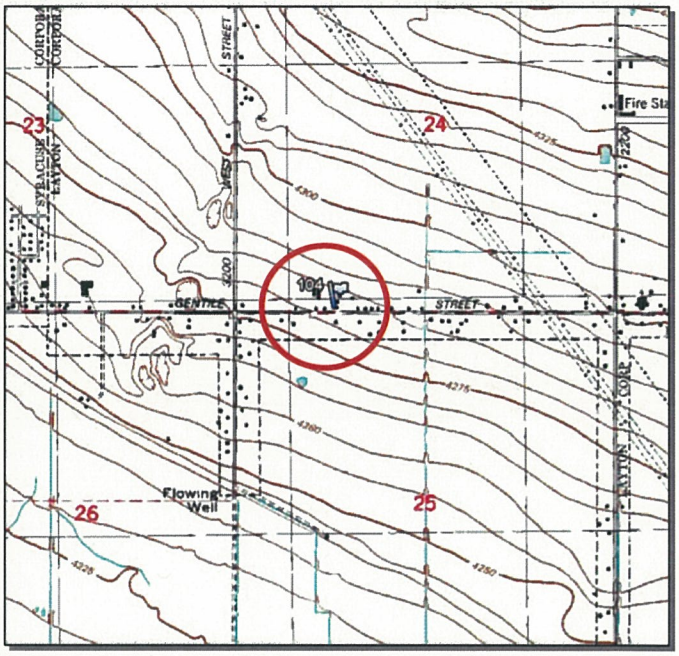
Point 104 is on the 22.5 degree radial recorded as part of the Day pattern. The point is located on the South West corner of the intersection of West Gentile Street and a new Street one block East of N3000W Street as shown in the picture looking West below. It is also shown plotted on the 7.5" Clearfield, UT topographical map dated 1999.

Dist.	Lat. (NAD27)			Long. (NAD27)			Lat. (NAD83)			Long. (NAD83			Field
(kM)	°N	'	"	°W	'	"	°N	'	"	°W	'	"	(mV/m)
1.7	41	3	37.3	112	1	12.9	41	3	37.1	112	1	15.7	1,420

Directions from the KLO transmitter:

1. Head **north** on **S 3200 W** toward **W Gentile St**	0.9 mi
2. Take the 1st **right** onto **W Gentile St**	0.3 mi
3. Take the 3rd **left** Destination will be on the left	46 ft

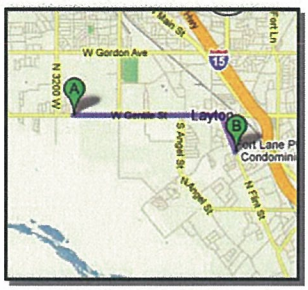




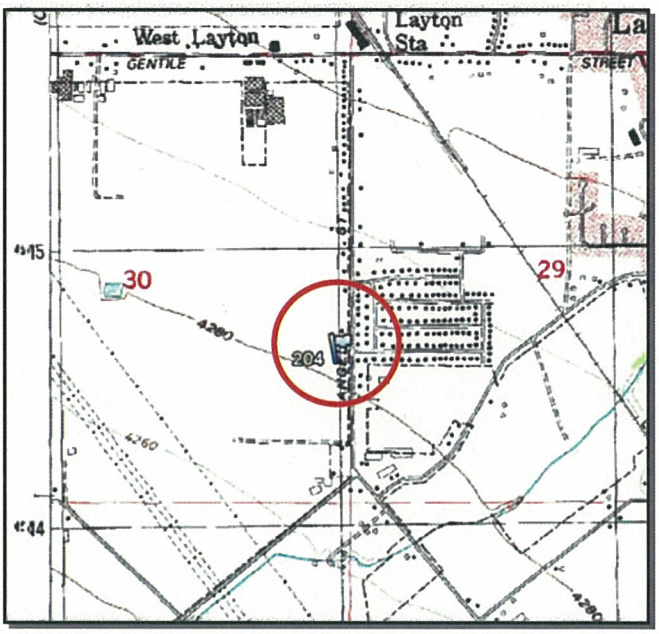
Point 204 is on the 83.5 degree radial recorded as part of the Day pattern. The point is located in front of 604 Flint Street as shown in the picture looking South below. It is also shown plotted on the 7.5" Kaysville, UT topographical map dated 1992.

Dist. (kM)	Lat. (NAD27) °N	'	"	Long. (NAD27) °W	'	"	Lat. (NAD83) °N	'	"	Long. (NAD83 °W	'	"	Field (mV/m)
4.9	41	3	5.8	111	58	12.4	41	3	5.6	111	58	15.2	212

Directions from point 104:



1. Head **south** toward **W Gentile St**	46 ft
2. Turn **left** at **W Gentile St**	2.4 mi
3. Turn **right** at **Flint St** Destination will be on the right	

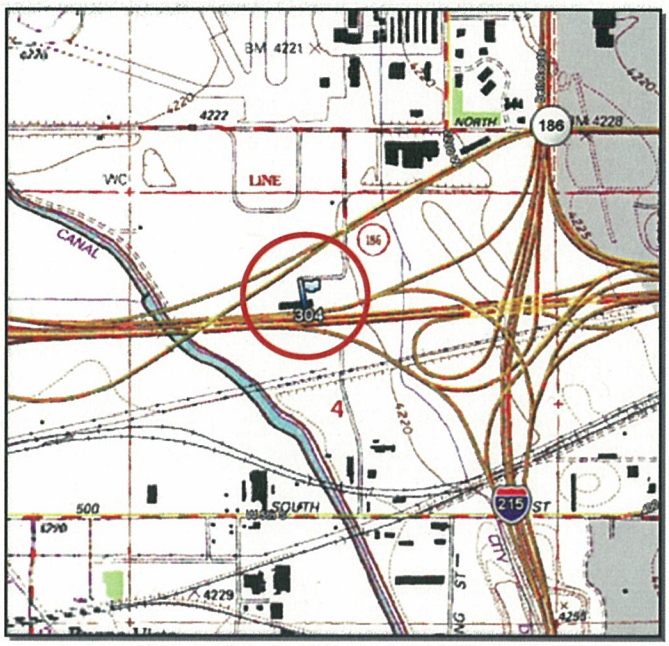


Point 304 is on the 169.5 degree radial recorded as part of the Day pattern. The point is located in on the West bound lane of Interstate 80 immediately West of the Interstate 215 entrance ramp as shown in the picture looking West below. It is also shown plotted on the 7.5" Salt Lake City North, UT topographical map dated 1998.

Dist.	Lat. (NAD27)			Long. (NAD27)			Lat. (NAD83)			Long. (NAD83			Field
(kM)	°N	'	"	°W	'	"	°N	'	"	°W	'	"	(mV/m)
31.8	40	45	55.5	111	57	32.4	40	45	55.3	111	57	35.2	104

Directions from point 204:

1. Head **south** on **Flint St** toward **700 S** — 1.0 mi
2. Turn **left** at **W 200 N** — 0.7 mi
3. Turn **right** to merge onto **I-15 S** — 15.3 mi
4. Slight **right** at **Belt Route / I-215 S** (signs for **I-215 / S.L. Int'l Airport / Belt Route**) — 5.8 mi
5. Take exit **22A** for **I-80 W** toward **Airport Reno**
   Destination will be on the right

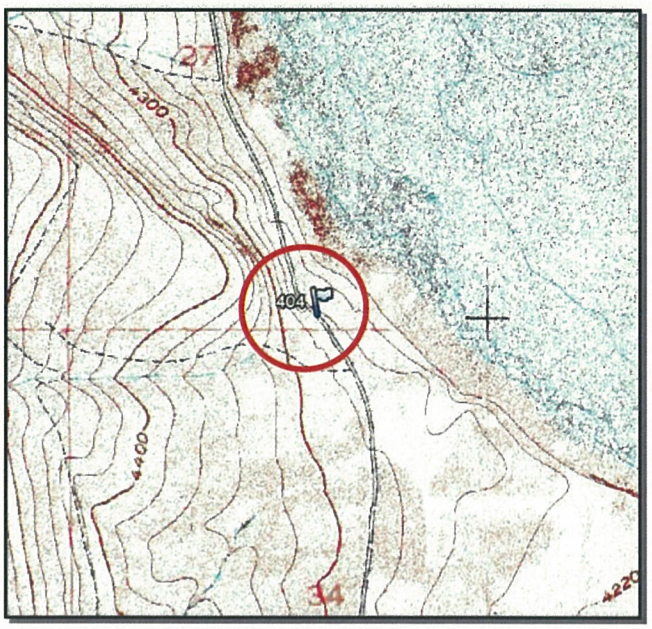


Point 404 is on the 231.0 degree radial recorded as part of the Day pattern. The point is located on Antelope Island Road within the park as shown in the picture looking North below. A GPS is required to properly identify the location. The entry gate will wave access fees by advising them of the business purpose of your visit. It is also shown plotted on the 7.5" Antelope Island, UT topographical map dated 1972.

Dist.	Lat. (NAD27)			Long. (NAD27)			Lat. (NAD83)			Long. (NAD83			Field
(kM)	°N	'	"	°W	'	"	°N	'	"	°W	'	"	(mV/m)
15.6	40	57	29.9	112	10	21.5	40	57	29.7	112	10	24.3	13

Directions from the KLO transmitter:

1. Head **north** on **S 3200 W** toward **W Gentile St**	0.9 mi
2. Take the 1st **left** onto **W Gentile St**	0.8 mi
3. Slight **right** at **S Bluff Rd**	1.6 mi
4. At the traffic circle, take the **3rd** exit and stay on **S Bluff Rd**	1.3 mi
5. Turn **left** at **1700 S**	9.0 mi
6. Slight **left** at **Antelope Island Rd**	0.6 mi
7. Take the 1st **left** to stay on **Antelope Island Rd** Destination will be on the left	8.4 mi

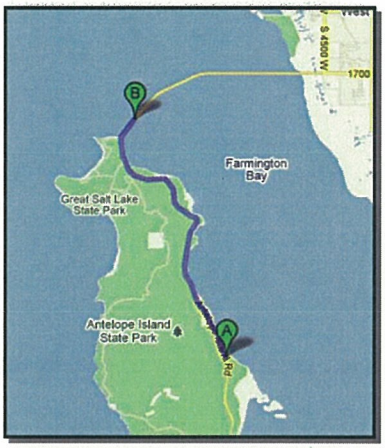


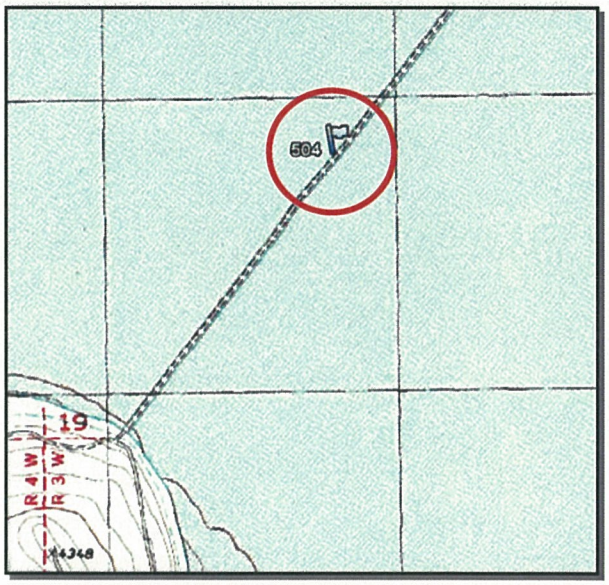
Point 504 is on the 278.0 degree radial recorded as part of the Day pattern. The point is located along South side the causeway on Antelope Island Road, shortly East of the bridge as shown in the picture looking South West below. It is also shown plotted on the 7.5" Antelope Island North, UT topographical map dated 1991.

Dist.	Lat. (NAD27)			Long. (NAD27)			Lat. (NAD83)			Long. (NAD83			Field
(kM)	°N	'	"	°W	'	"	°N	'	"	°W	'	"	(mV/m)
17.0	41	4	4.1	112	13	41.8	41	4	3.9	112	13	44.6	102

Directions from the point 404:

1. Head **northwest** on **Antelope Island Rd**	8.4 mi
2. Turn **right** to stay on **Antelope Island Rd** Destination will be on the right	1.3 mi



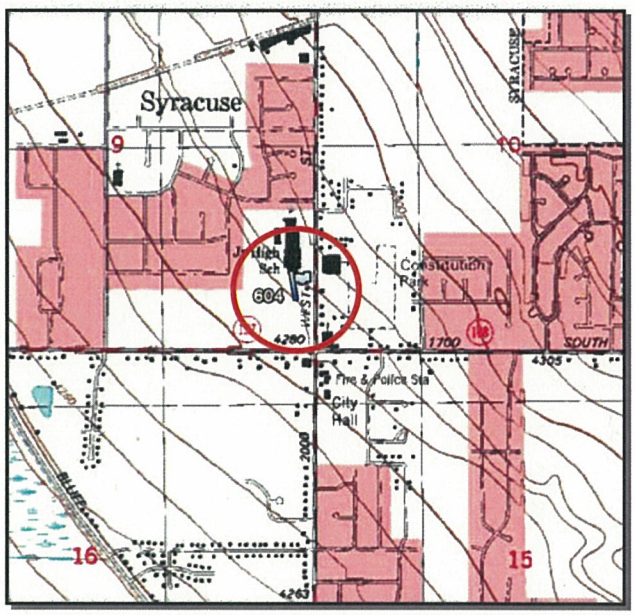


Point 604 is on the 328.0 degree radial recorded as part of the Day pattern. The point is located in the parking lot of a new commercial development North West of the Intersection of 1700S Street and S2000W Street as shown in the picture looking North East below. It is also shown plotted on the 7.5" Clearfield, UT topographical map dated 1999.

Dist.	Lat. (NAD27)			Long. (NAD27)			Lat. (NAD83)			Long. (NAD83			Field
(kM)	°N	'	"	°W	'	"	°N	'	"	°W	'	"	(mV/m)
5.8	41	5	27.5	112	3	52.1	41	5	27.3	112	3	54.9	72

Directions from the point 504:

1. Head **south** on **S 2000 W** toward **1700 S**	0.1 mi
2. Take the 2nd **right** onto **1700 S** Destination will be on the left	9.1 m

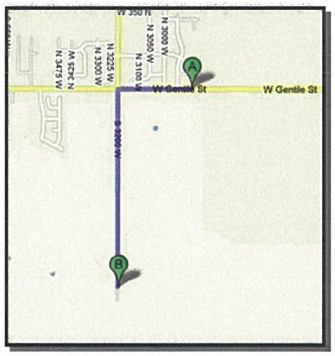


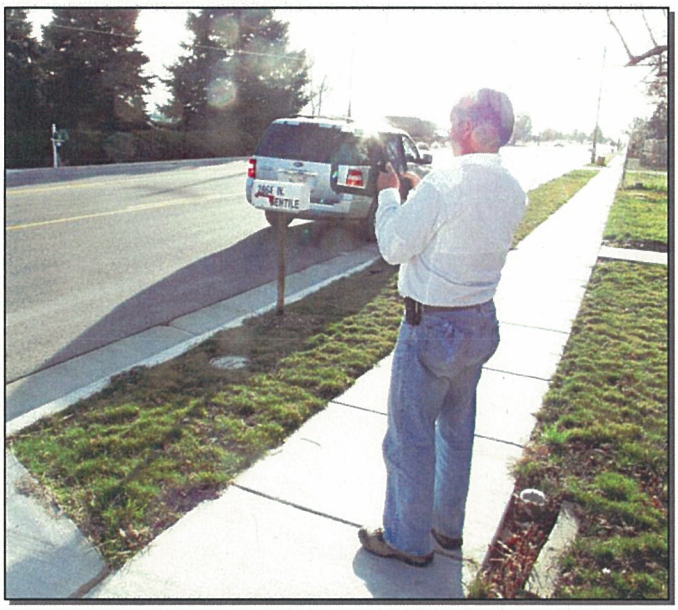
Point 704 is on the 26.0 degree radial recorded as part of the Night pattern. The point is located in the front of 2864 West Gentile Street on the north side of the street as shown in the picture looking West below. It is also shown plotted on the 7.5" Clearfield, UT topographical map dated 1999.

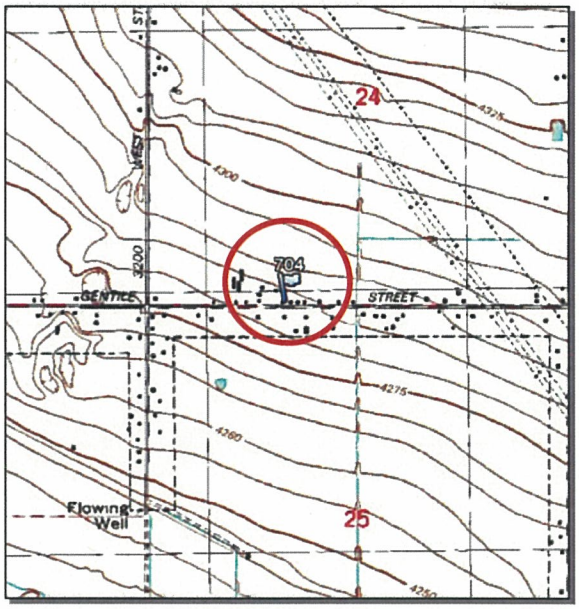
Dist.	Lat. (NAD27)			Long. (NAD27)			Lat. (NAD83)			Long. (NAD83			Field
(kM)	°N	'	"	°W	'	"	°N	'	"	°W	'	"	(mV/m)
1.7	41	3	37.3	112	1	8.2	41	3	37.1	112	1	11.0	1,030

Directions from the KLO transmitter:

1. Head **west** on **W Gentile St** toward **N 3050 W**	0.3 mi
2. Take the 1st **left** onto **S 3200 W**	0.9 mi





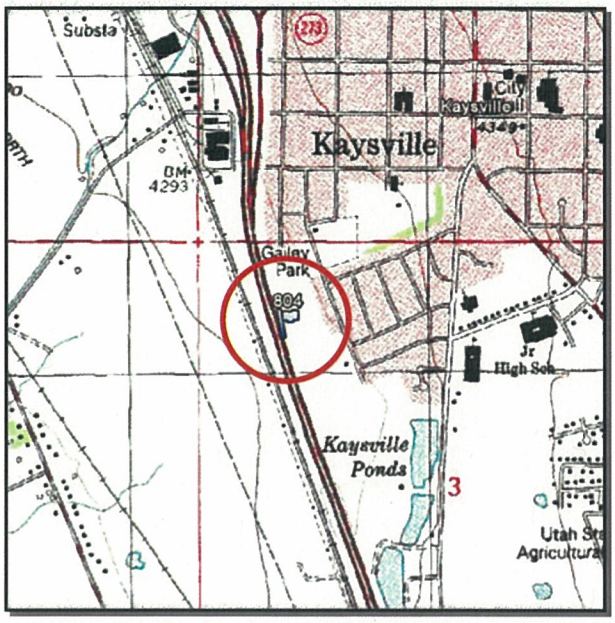


Point 804 is on the 106.5 degree radial recorded as part of the Night pattern. The point is located in the North bound lane of Interstate 15 about 600 meters before Exit 328 as shown in the picture looking North below. It is also shown plotted on the 7.5" Kaysville, UT topographical map dated 1992.

Dist.	Lat. (NAD27)			Long. (NAD27)			Lat. (NAD83)			Long. (NAD83			Field
(kM)	°N	'	"	°W	'	"	°N	'	"	°W	'	"	(mV/m)
7.2	41	1	41.7	111	56	43.1	41	1	41.5	111	56	45.9	22

Directions from point 704:

1. Head **south** on **Flint St** toward **700 S**	1.0 mi
2. Turn **left** at **W 200 N**	0.7 mi
3. Turn **right** to merge onto **I-15 S**	3.8 mi
4. Take exit **325** toward **US-89 N/Lagoon/Fairgrounds**	0.4 mi
5. Turn **left** at **UT-225 E**	472 ft
6. Turn **left** to merge onto **I-15 N** toward **Ogden** Destination will be on the right	3.5 mi

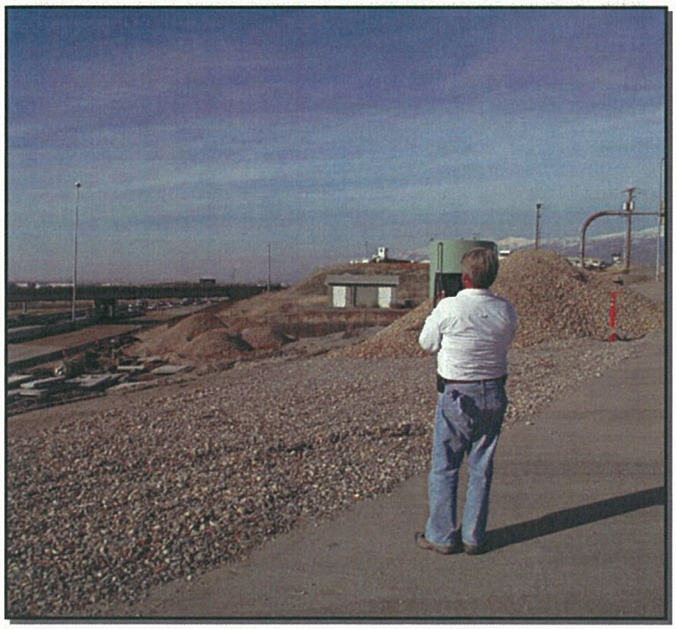


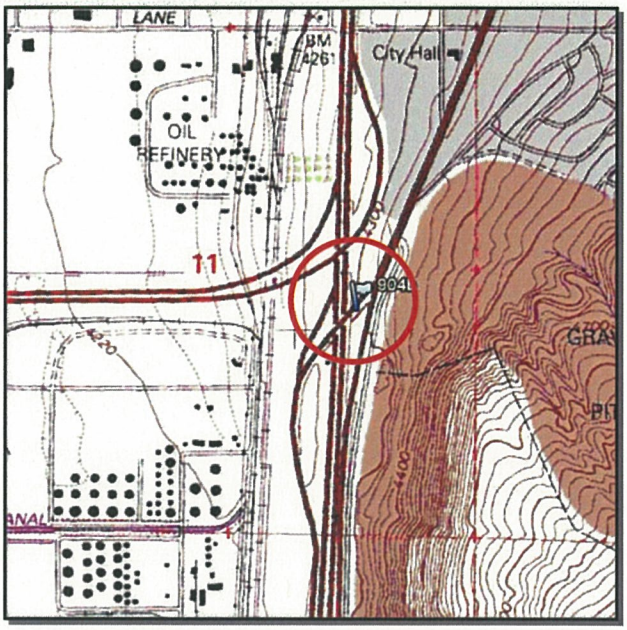
Point 904 is on the 158.0 degree radial recorded as part of the Night pattern. The point is located one exit ramp traveling from South Main Street (State Route 89) continuing to State Route 89 South as shown in the picture looking North West below. It is also shown plotted on the 7.5" Salt Lake City North, UT topographical map dated 1998.

Dist.	Lat. (NAD27)			Long. (NAD27)			Lat. (NAD83)			Long. (NAD83			Field
(kM)	°N	'	"	°W	'	"	°N	'	"	°W	'	"	(mV/m)
25.5	40	50	1.8	111	54	50.9	40	50	1.6	111	54	53.7	23

Directions from point 804:

1. Head **north** on **I-15 N** toward **Exit 328**	0.3 mi
2. Take exit **328** toward **Kaysville/UT-273**	0.4 mi
3. Turn **left** at **W 200 N**	0.1 mi
4. Turn **left** to merge onto **I-15 S**	10.4 mi
5. Take exit **317** on the **left** for **US-89 S/500 W**	0.4 mi
6. Merge onto **N 500 W St/US-89 S** Continue to follow US-89 S	4.6 mi
7. Take the **I-15 S/US-89 S/Beck St** ramp Destination will be on the left	0.2 mi



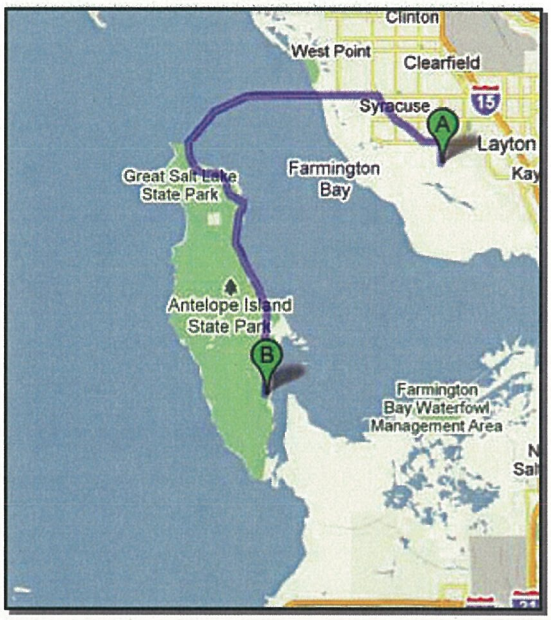


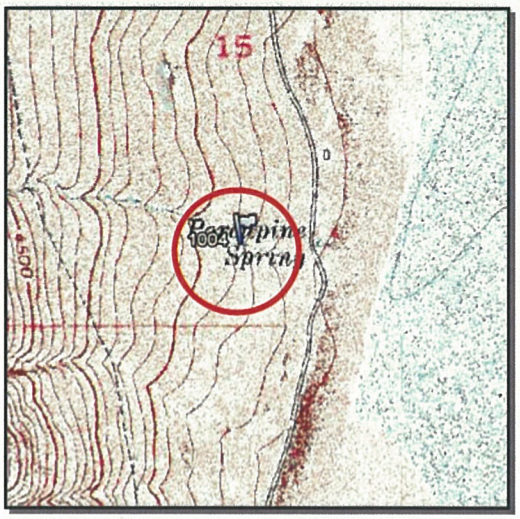
Point 1004 is on the 217.0 degree radial recorded as part of the Night pattern. The point is located on Antelope Island Road as shown in the picture looking North East below. The entry gate will wave access fees to the park by advising them of the business purpose of your visit. You will need to continue on foot 2800 meters to the measurement point from the parking lot. It is also shown plotted on the 7.5" Antelope Island, UT topographical map dated 1972 (the dirt road has been moved West about 190 meters from where shown on this map).

Dist.	Lat. (NAD27)			Long. (NAD27)			Lat. (NAD83)			Long. (NAD83			Field
(kM)	°N	'	"	°W	'	"	°N	'	"	°W	'	"	(mV/m)
20.1	40	54	8.3	112	10	19.3	40	54	8.3	112	10	22.1	7

Directions from the KLO transmitter:

1. Head **north** on **S 3200 W** toward **W Gentile St**	0.9 mi
2. Take the 1st **left** onto **W Gentile St**	0.8 mi
3. Slight **right** at **S Bluff Rd**	1.6 mi
4. At the traffic circle, take the **3rd** exit and stay on **S Bluff Rd**	1.3 mi
5. Turn **left** at **1700 S**	9.0 mi
6. Slight **left** at **Antelope Island Rd**	0.6 mi
7. Take the 1st **left** to stay on **Antelope Island Rd**	11.2 mi



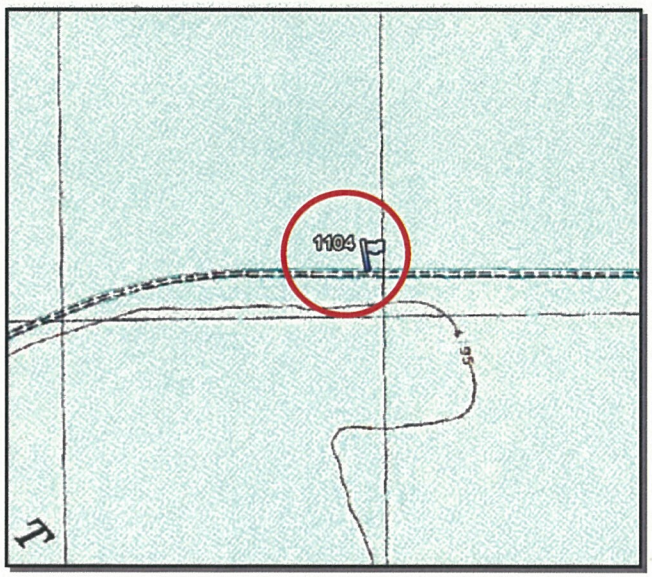


Point 1104 is on the 290.5 degree radial recorded as part of the Night pattern. The point is located along South side the causeway on Antelope Island Road as shown in the picture looking South West below. It is also shown plotted on the 7.5" Antelope Island North, UT topographical map dated 1991.

Dist.	Lat. (NAD27)			Long. (NAD27)			Lat. (NAD83)			Long. (NAD83			Field
(kM)	°N	'	"	°W	'	"	°N	'	"	°W	'	"	(mV/m)
13.5	41	5	21.6	112	10	44.6	41	5	21.4	112	10	47.4	40

Directions from the point 1004:

1. Head **north** on **Antelope Island Rd**	12.4 mi
2. Turn **right** to stay on **Antelope Island Rd**	4.4 mi



Point 1204 is on the 323.0 degree radial recorded as part of the Night pattern. The point is located across the street (on the North side) from 2354 1700S Street as shown in the picture looking South West below. It is also shown plotted on the 7.5" Clearfield, UT topographical map dated 1999.

Dist.	Lat. (NAD27)			Long. (NAD27)			Lat. (NAD83)			Long. (NAD83			Field
(kM)	°N	'	"	°W	'	"	°N	'	"	°W	'	"	(mV/m)
6.0	41	5	22.0	112	4	13.8	41	5	21.8	112	4	16.6	41

Directions from the point 1104:

1. Head **east**	2.8 mi
2. Continue straight onto **1700 S** Destination will be on the left	2.8