

# BROWN BROADCAST SERVICES

INCORPORATED

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Michael D. Brown, President 3740 S.W. Comus St. Portland, Oregon, U.S.A. 97219-7418  
SBE Certified Senior Radio Broadcast Engineer office:503-245-6065 fax:245-5773 e-mail:mike@brownbroadcast.com

## **Statement of Qualifications AM Field Measurement Reports Entercom, Portland Oregon Measurements completed August 1, 2007**

During the period of 6/13/07 and 8/1/07, this firm was engaged in performing extensive AM field strength measurements on KFXX, Portland, OR, and KIRO, Seattle WA, on behalf of Entercom Portland Licensee, Inc. The measurements were performed by Eric J. Strickland, and Betty J. McArdle, under my direct supervision. Both Eric and Betty are experienced field technicians who have been performing such measurements for dozens of stations over the past 7 years.

As to my qualifications, I have been owner of Brown Broadcast Services, Inc., since 1985. I have 33 years experience as a radio engineer, during which time I have performed and/or supervised dozens of partial proofs. I have been certified as a Senior Radio Broadcast Engineer by the Society of Broadcast Engineers since 1990; have held an FCC General Class/First Class Radiotelephone License since 1974. The data presented herein is believed to be a true and accurate representation of the facts as evident at the time of the measurements.

A handwritten signature in black ink, appearing to read "Michael D. Brown", with a long horizontal flourish extending to the right.

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SBE Certified Senior Radio Broadcast Engineer office:503-245-6065 fax:245-5773 e-mail:mike@brownbroadcast.com

## **Statement of Methodology/Limitations AM Field Measurement Reports Entercom, Portland Oregon Measurements completed August 1, 2007**

AM field measurements were taken during the period of 6/13/07 and 8/1/07, on 5 radials each for KFXX, Portland, OR, and KIRO, Seattle WA. KFXX, a DA-2 facility, was operating with its daytime 50kw DA parameters, while KIRO was operating ND-D. The stations' parameters were believed to be stable during the course of the measurements. All measurements were taken during skywave-free daylight hours, during dry weather without standing water. Measurement locations were verified and recorded with the aid of a WAAS-enabled GPS.

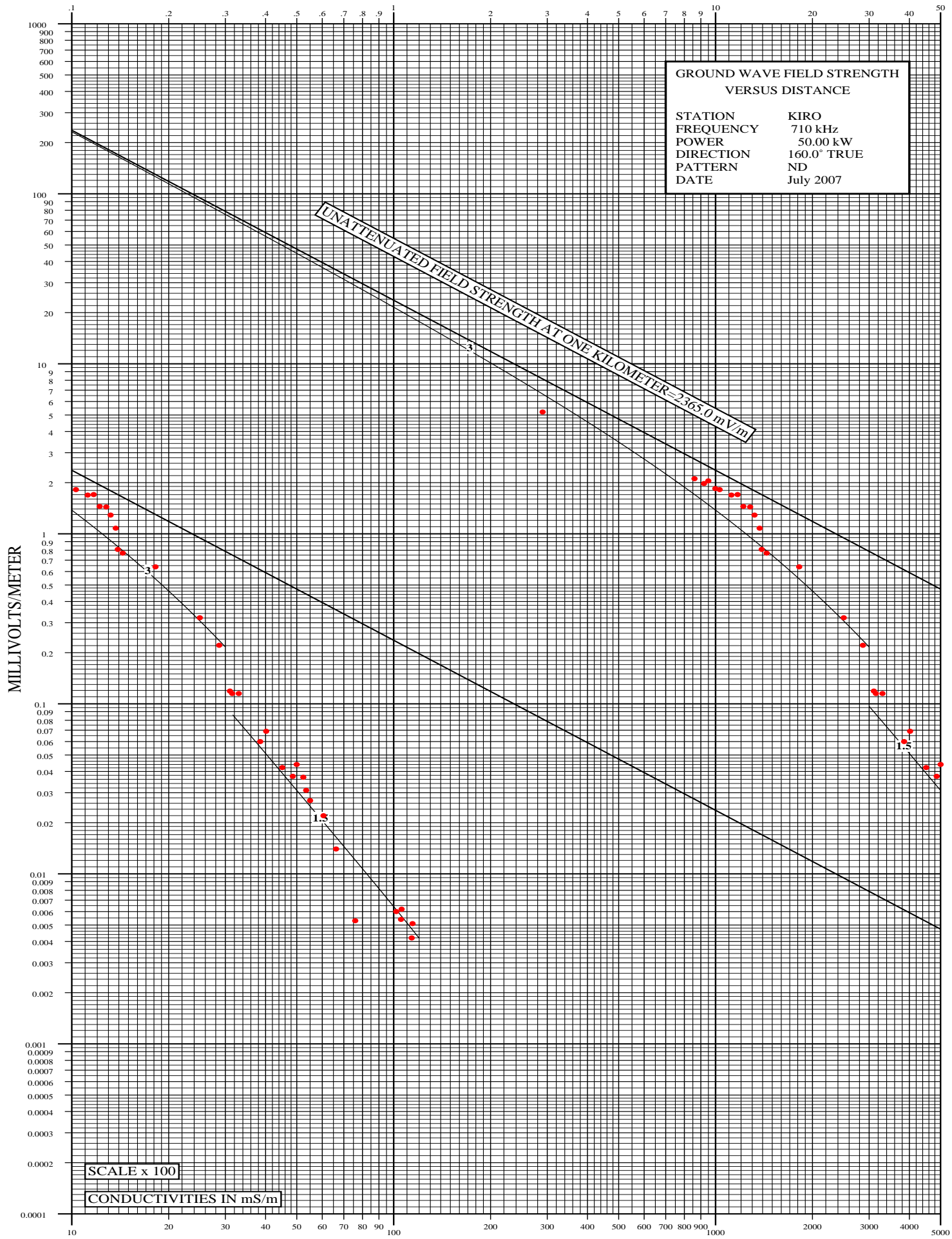
Using land-based transportation, close-in measurements between 1 and 3 km for KFXX) were not possible in this case.. The KFXX array is located approximately 250 meters south of the Columbia River. The opposite (north) shoreline of the river ranges from 3km to 12.6km away, along the radials that were measured. Eight measurements were taken in the first two kilometers on the north shore, for each radial.

A Potomac FIM-41, Serial #1264 in known good condition, was employed for all measurements. It's last calibration was performed on 17 March 2004. It was cross-checked with an FIM-41, Serial #1641, calibrated 10 September 2003, in known good condition. Both instruments consistently agreed within 2%



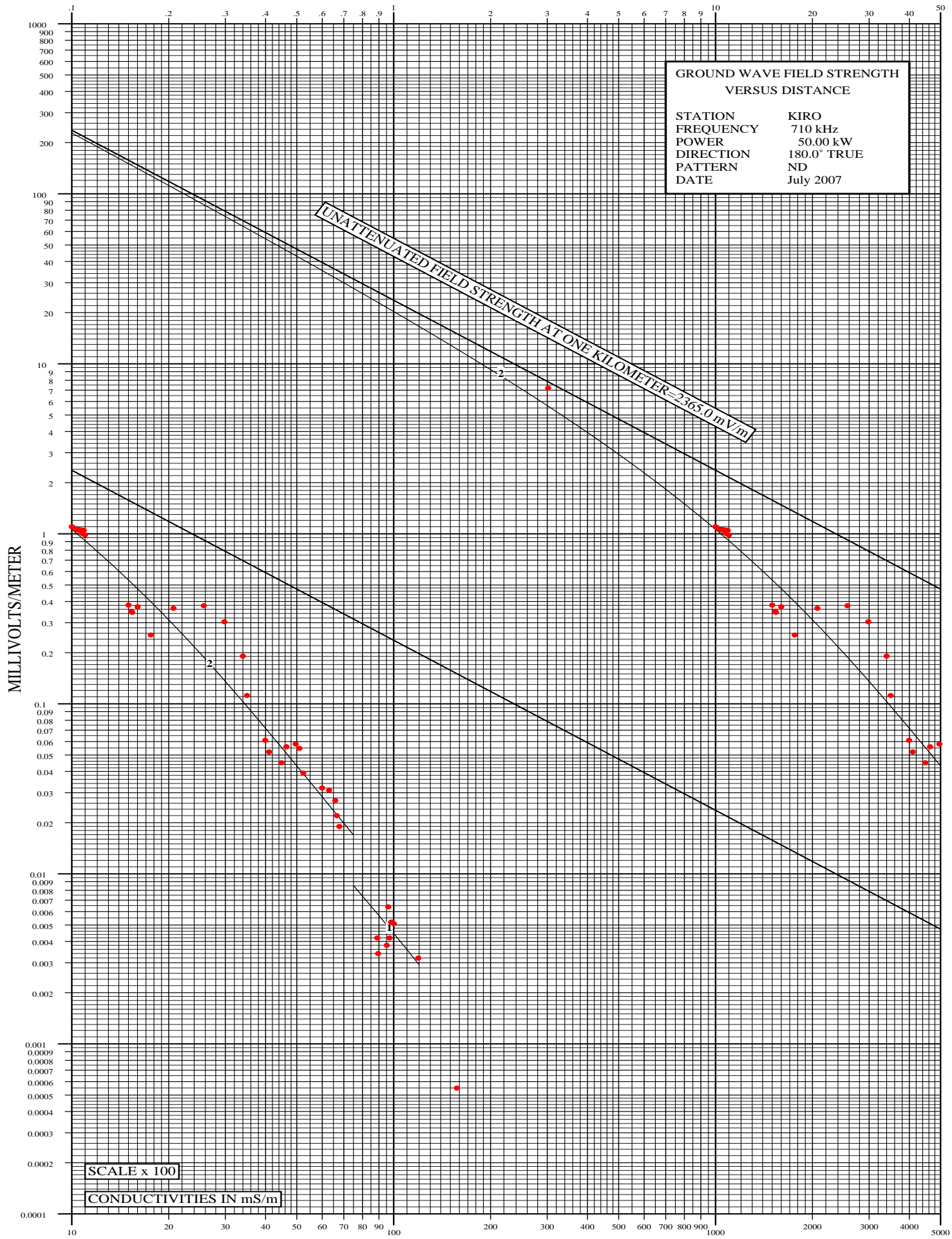
AM FIELD STRENGTH MEASUREMENTS								BEARING:	KIRO 160
MEASURED BY		Betty McArdle						DISTANCE UNITS:	KM
METER SERIAL #		1264							
POWER MODE		DAYTIME ND						Brown Broadcast Services	
		710khz						Portland, Oregon 97219	
ORIG PT#	NEW PT#	DIST	DATE	TIME	LATT	LONG	MV/M	CONDITIONS	DESCRIPTION OF LOCATION / COMMENTS
1364		2.90	70707	1100	472224	1222512	521	dry	
1365		8.60	70807	1104	471932	1222335	211	dry	
1458		9.20	80107	1602	471914	1222326	197.6	dry	underground cable 25'
1366		9.50	70807	1115	471905	1222321	205	dry	
1459		9.98	80107	1617	471850	1222313	184.6	dry	underground cable 25'
1367		10.30	70807	1125	471840	1222307	182	dry	
1455		11.20	72807	1858	471813	1222254	169	dry	
1461		11.70	80107	1647	471756	1222244	170.2	dry	
1454		12.20	72807	1908	471744	1222237	145	dry	
1460		12.80	80107	1629	471723	1222226	144	dry	
1453		13.20	72807	1918	471712	1222221	129	dry	
1452		13.70	72807	1927	471657	1222212	108	dry	
1451		13.90	72807	1945	471649	1222208	81	dry	
1450		14.40	72807	1955	471637	1222159	77	dry	
1449		18.20	72807	2010	471439	1222059	64	dry	1090 = 6.2
1457		25.00	80107	1528	471118	1221913	32.1	dry	power lines 40'
1456		28.70	80107	1506	470922	1221809	22.1	dry	metal light pole 30'
1309		31.00	71007	1453	470812	1221733	11.9	dry	1090 = .96
1310		31.50	71007	1510	470800	1221726	11.5	dry	1090 = .63
1311		33.00	71007	1550	470702	1221656	11.5	dry	1090 = .54
1312		38.50	71007	1615	470423	1221531	6	dry	1090 = .34 street power lines 20' away
1313		40.20	71007	1635	470330	1221502	6.9	dry	1090 = .44 street power lines 20' away
1315		45.10	71007	1703	470059	1221344	4.22	dry	1090 = .33
1317		48.60	71007	1723	465915	1221242	3.75	dry	1090 = .35
1320		50.00	71107	1210	465826	1221221	4.4	dry	1090 = .26
1321		52.40	71107	1248	465719	1221146	3.7	dry	1090 = .35
1322		53.50	71107	1235	465646	1221128	3.1	dry	1090 = .26
1462		55.00	80107	1353	465559	1221104	2.7	dry	
1464		60.50	80107	1414	465311	1220935	2.2	dry	
1465		66.20	80107	1438	465019	1220804	1.4	dry	
1319		76.00	61807	1840	464522	1220528	0.53	dry	1090 = .04
558		101.90	61807	1940	463211	1215838	0.6	dry	1090 = .062 lower elevation, behind hill
556		105.30	61807	1818	463028	1215743	0.54	dry	1090 = .032
557		105.80	61807	1832	463010	1215736	0.62	dry	1090 = .092 higher elevation
554		113.80	61807	1640	462607	1215530	0.42	dry	1090 = .015
555		114.50	61807	1655	462544	1215519	0.51	dry	1090 = .022

# KILOMETERS FROM ANTENNA



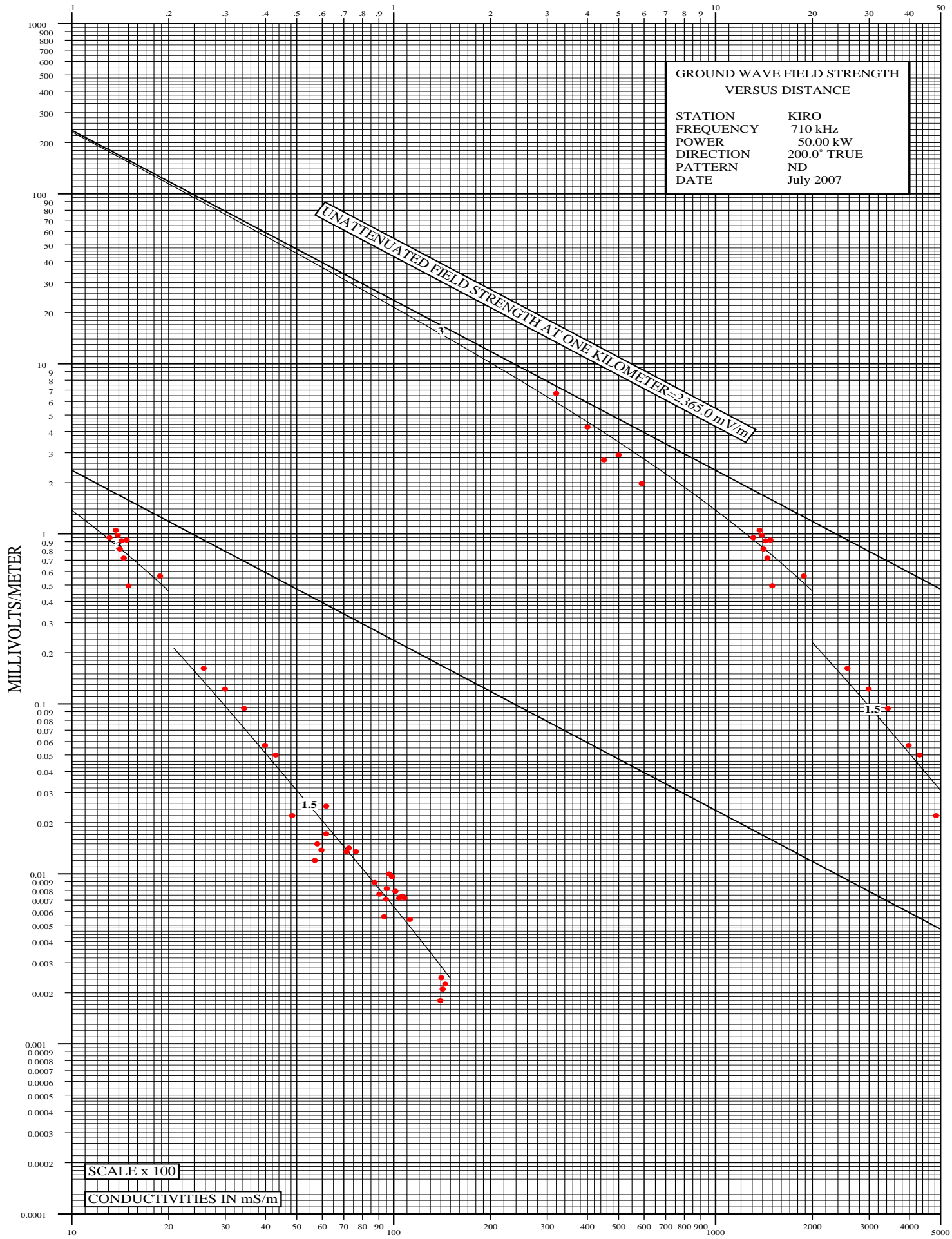
AM FIELD STRENGTH MEASUREMENTS									BEARING:	KIRO 180
MEASURED BY		Betty McArdle & Eric Strickland			DISTANCE UNITS:				KM	
METER SERIAL #		1264								
POWER MODE		DAYTIME ND			Brown Broadcast Services					
		710khz			Portland, Oregon 97219					
ORIG PT#	NEW PT#	DIST	DATE	TIME	LATT	LONG	MV/M	CONDITIONS	DESCRIPTION OF LOCATION / COMMENTS	
379		3.02	70707	1116	472215	1222556	720	dry	cell tower 100' away	
1476		10.00	80107	1728	471828	1222557	110.2	dry		
1372		10.10	70807	1045	471825	1222557	109	dry		
1371		10.30	70807	1032	471818	1222556	106	dry		
1370		10.50	70807	1023	471812	1222556	105	dry		
1475		10.50	80107	1718	471811	1222556	106.2	dry		
1474		10.70	80107	1709	471808	1222555	105.3	dry	underground wires	
1369		10.80	70807	1012	471804	1222556	100.3	dry		
1473		10.90	80107	1701	471802	1222557	105.1	dry	chain link fence 10'	
1368		11.00	70807	1003	471758	1222556	98.5	dry		
1373		15.00	70807	1155	471547	1222556	38.1	dry	terrain drops behind large hill at this point	
1374		15.30	70807	1203	471539	1222556	35.1	dry	terrain drops behind large hill at this point	
1375		15.40	70807	1212	471533	1222556	34.5	dry		
1376		16.00	70807	1223	471515	1222556	37.3	dry		
1377		17.60	70807	1235	471422	1222556	25.4	dry		
1378		20.70	70807	1247	471243	1222556	36.5	dry		
1332		25.70	71007	2045	471001	1222557	37.8	dry	1090 = 7.5	
1331		29.80	71007	2031	470750	1222556	30.4	dry	1090 = 5.4	
1329		34.00	71007	2019	470525	1222556	19.1	dry	1090 = 2.25	
1330		35.00	71007	2002	470458	1222557	11.2	dry	1090 = 1.7	
1328		39.90	71007	1945	470221	1222557	6.1	dry	1090 = .78	
113		41.00	71007	1950	470145	1222556	5.22	dry	1090 = .72	
1327		44.80	71007	1614	465943	1222556	4.5	dry	1090 = .7 power lines 15' away	
1326		46.40	71007	1602	465851	1222555	5.6	dry	1090 = 1.4	
1325		49.60	71007	1538	465706	1222559	5.8	dry	1090 = .86	
1323		50.90	71007	1520	465631	1222556	5.47	dry	1090 = .76	
1471		52.40	80107	1133	465535	1222557	3.92	dry		
1470		59.90	80107	1155	465133	1222556	3.2	dry		
1469		63.00	80107	1213	464952	1222557	3.1	dry		
1468		65.80	80107	1248	464822	1222556	2.7	dry	overhead power lines	
1467		66.60	80107	1254	464758	1222556	2.2	dry		
1466		67.80	80107	1312	464719	1222555	1.9	dry	-	
445		88.90	62207	1750	463554	1222557	0.42	dry	1090 = .045	
446		89.40	62207	1805	463540	1222558	0.34	sprinkles	1090 = .052 behind a hill	
444		95.20	62207	1710	463223	1222553	0.38	dry	1090 = .045	
49		96.20	62707	1459	463154	1222557	0.64	dry	1090 = .062	
48		97.00	62707	1445	463132	1222557	0.42	dry	1090 = .07	
448		98.10	62207	1845	463055	1222556	0.52	sprinkles	1090 = .062	
447		98.70	62207	1832	463038	1222556	0.52	sprinkles	1090 = .067	
449		100.00	62207	1859	462955	1222556	0.51	sprinkles	1090 = .079	
1432		119.20	72307	1330	461933	1222527	0.32	damp	1090 = .042 light mist, ground damp	
509		157.20	61807	1120	455904	1222549	0.055	dry	1090 = .032	

# KILOMETERS FROM ANTENNA



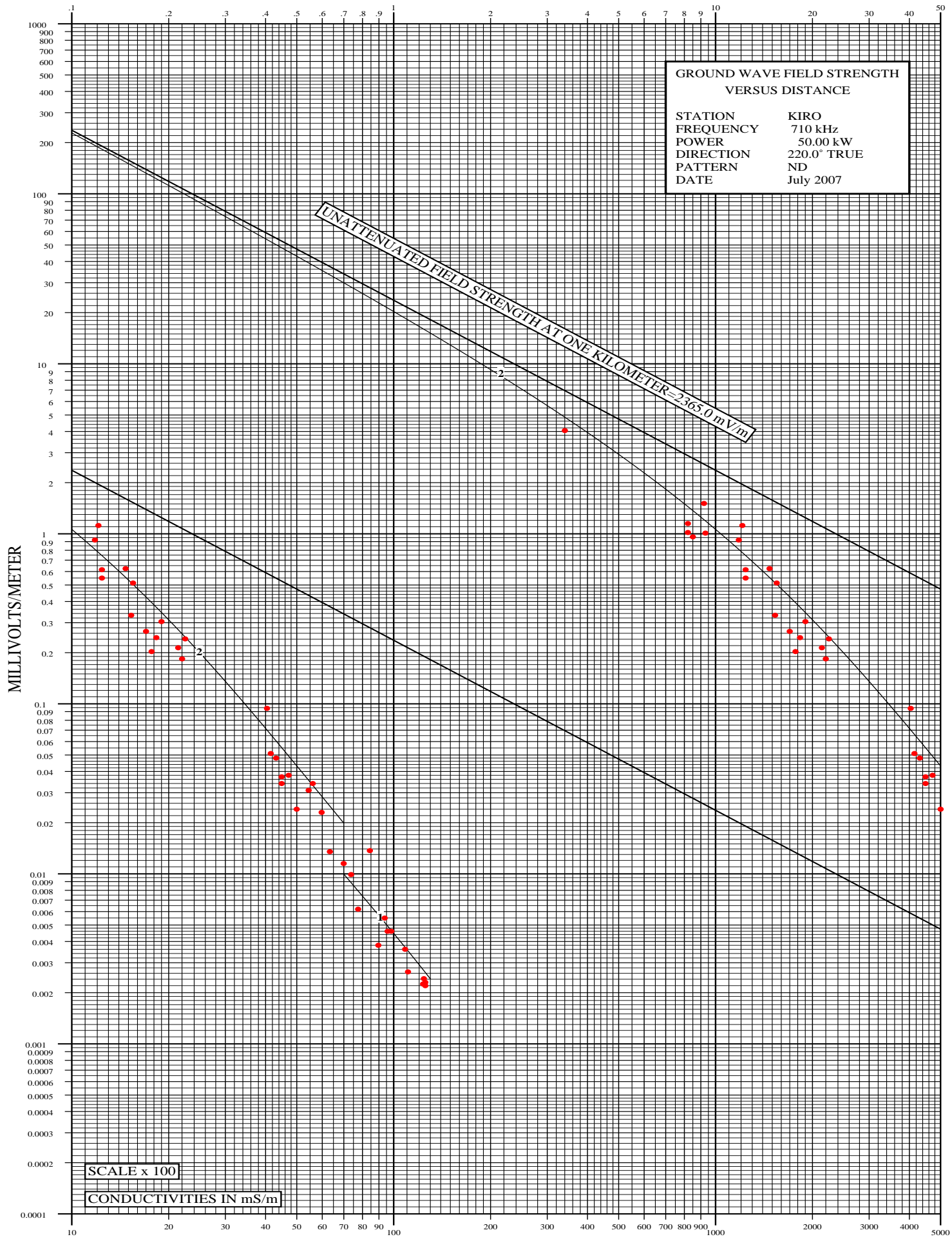
AM FIELD STRENGTH MEASUREMENTS									BEARING:	200 KIRO
MEASURED BY		Betty McArdle & Eric Strickland			DISTANCE UNITS:				KM	
METER SERIAL #		1264								
POWER MODE		DAYTIME ND			Brown Broadcast Services					
		710khz			Portland, Oregon 97219					
ORIG PT#	NEW PT#	DIST	DATE	TIME	LATT	LONG	MV/M	CONDITIONS	DESCRIPTION OF LOCATION / COMMENTS	
26		3.20	70807	1127	472216	1222648	670	dry		
1386		4.00	70807	1138	472150	1222702	425	dry		
1387		4.50	70807	1149	472136	1222710	272	dry		
1388		5.00	70807	1202	472121	1222718	291	dry		
1389		5.90	70807	1213	472054	1222732	198	dry		
1384		13.10	70807	1336	471713	1222930	95	dry		
1383		13.70	70807	1345	471656	1222940	105	dry		
1480		13.90	80107	1817	471651	1222943	98	dry		
1382		14.10	70807	1334	471644	1222946	81.5	dry		
1479		14.30	80107	1802	471636	1222951	91	dry		
1381		14.50	70807	1323	471631	1222953	72	dry		
1477		14.80	80107	1749	471624	1222958	92	dry	underground cable	
1380		15.00	70807	1310	471617	1223001	49.5	dry		
1385		18.80	70807	1420	471421	1223103	56.5	dry		
1448		25.70	72807	1833	471051	1223256	16.2	dry	1090 = 3.55	
1447		29.90	72807	1822	470844	1223402	12.2	dry	1090 = 2.67	
1446		34.30	72807	1753	470628	1223514	9.4	dry	1090 = 2.65	
1445		39.80	72807	1725	470343	1223643	5.7	dry	1090 = 1.01	
1444		43.00	72807	1710	470201	1223736	5	dry	1090 = .96	
1308		48.40	71107	1845	465917	1223903	2.2	dry	1090 = .52	
1307		56.90	71107	1802	465459	1224104	1.2	dry	1090 = .34	
1306		57.90	71107	1755	465432	1224144	1.5	dry	1090 = .32 on border of Ft. Lewis	
1304		59.60	71107	1742	465339	1224204	1.38	dry	1090 = .27	
1302		61.70	71107	1725	465236	1224233	2.5	dry	1090 = .42	
1401		61.70	71607	2030	465236	1224234	1.72	dry	1090 = .84	
1399		71.40	71607	2006	464741	1224511	1.35	dry	1090 = .66	
1400		72.60	71607	1945	464659	1224526	1.42	dry	1090 = .36 a bit off radial due to honkin' big power lines	
1397		76.30	71607	1845	464509	1224630	1.35	dry	1090 = .35	
1396		87.30	71607	1730	463936	1224925	0.89	dry	1090 = .2	
1395		90.30	71607	1712	463804	1225012	0.76	dry	1090 = .145	
1394		93.30	71607	1652	463633	1225059	0.56	dry	1090 = .14 somewhat lower elevation	
1392		94.60	71607	1640	463552	1225120	0.71	dry	1090 = .23	
1391		95.20	71607	1620	463534	1225129	0.82	dry	1090 = .222 lots of power lines across road	
1393		96.80	71607	1630	463446	1225155	1	dry	1090 = .29	
1390		98.90	71607	1600	463343	1225228	0.96	dry	1090 = .177 enormous cell tower 50' away	
454		101.30	62207	1459	463227	1225307	0.79	dry	1090 = .172	
453		104.00	62207	1448	463106	1225349	0.72	dry	1090 = .16	
452		106.10	62207	1435	463005	1225422	0.74	dry	1090 = .17	
455		108.00	62207	1518	462905	1225451	0.72	dry	1090 = .195 higher elevation	
456		112.20	62207	1545	462657	1225557	0.54	dry	1090 = .11	
54		139.70	62007	1304	461256	1230312	0.18	dry	1090 = <.01	
55		140.60	62007	1328	461230	1230325	0.245	dry	1090 = <.01	
56		141.90	62007	1355	461149	1230345	0.21	dry	1090 = <.01	
57		144.70	62007	1417	461024	1230429	0.225	dry	1090 = <.01	

# KILOMETERS FROM ANTENNA



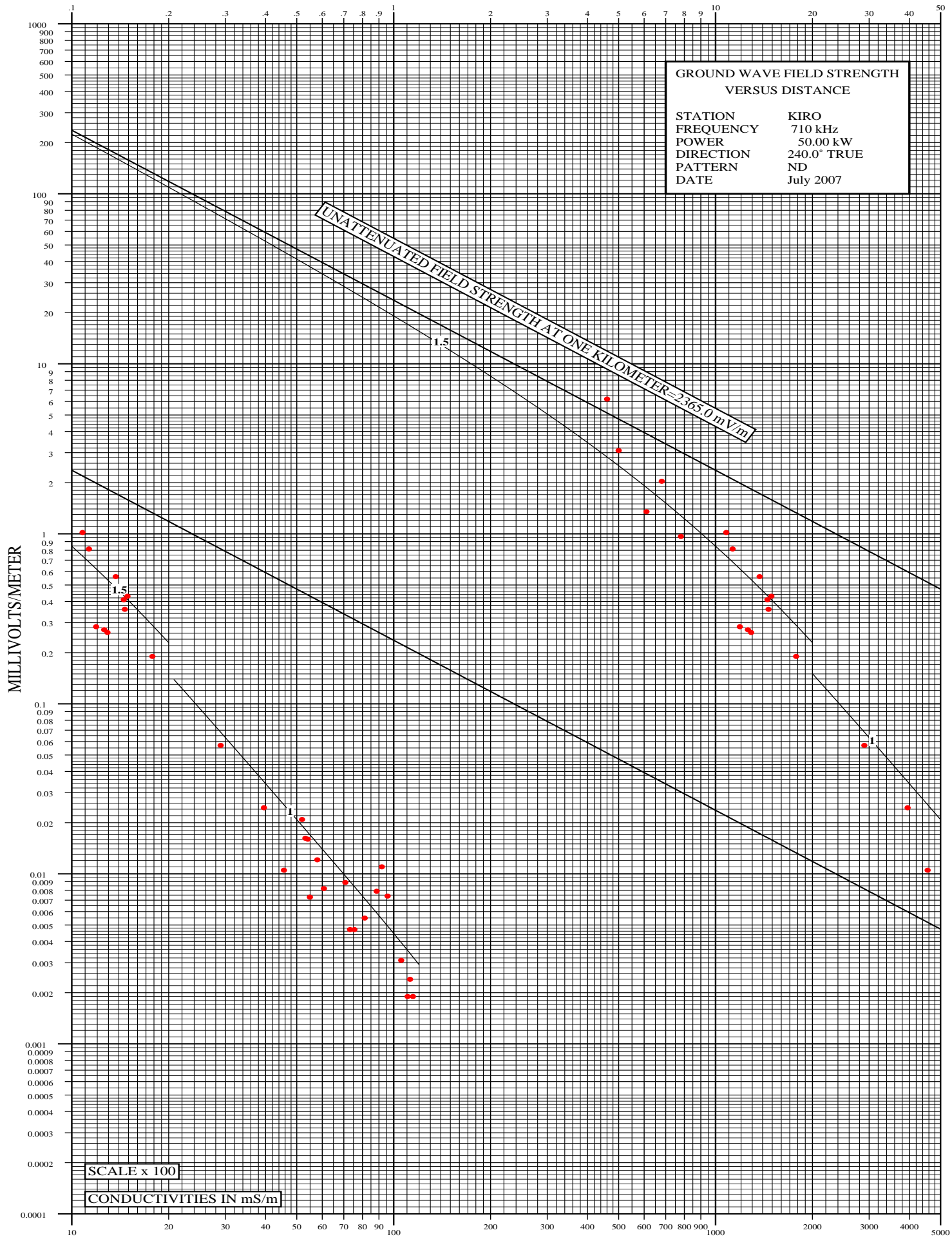
AM FIELD STRENGTH MEASUREMENTS									BEARING:		KIRO 220
MEASURED BY			Betty McArdle & Eric Strickland						DISTANCE UNITS:		KM
METER SERIAL #			1264								
POWER MODE			DAYTIME ND						Brown Broadcast Services		
			710khz						Portland, Oregon 97219		
ORIG PT#	NEW PT#	DIST	DATE	TIME	LATT	LONG	MV/M	CONDITIONS	DESCRIPTION OF LOCATION / COMMENTS		
1354		3.40	70707	1226	472227	1222741	405	dry			
1355		8.20	70707	1320	472030	1223007	115	dry			
1481		8.20	80107	1829	472030	1223008	101.8	dry	power lines 35'		
1357		8.50	70707	1341	472021	1223017	96	dry			
1356		9.20	70707	1331	472005	1223038	151	dry			
1488		9.30	80107	2007	472001	1223043	101	dry			
1358		11.80	70707	1420	471859	1223159	92	dry			
1359		12.10	70707	1433	471855	1223212	112	dry			
1360		12.40	70707	1444	471845	1223217	61.5	dry			
1489		12.40	80107	1910	471844	1223217	54.9	dry			
1361		14.70	70707	1505	471748	1223326	62.5	dry			
1487		15.30	80107	1858	471732	1223347	33.2	dry			
1414		15.50	73007	1955	471728	1223351	51.4	dry			
1486		17.00	80107	1844	471651	1223437	26.7	dry			
1362		17.70	70707	1526	471632	1223459	20.3	dry			
1412		18.30	73007	1850	471619	1223520	24.5	dry	low elevation, power lines across 1lane street		
1413		19.00	73007	1930	471602	1223539	30.5	dry	power lines across road		
1411		21.40	73007	1820	471501	1223652	21.4	dry	power lines across road		
1363		22.00	70707	1550	471446	1223711	18.4	dry			
1410		22.50	73007	1759	471435	1223726	24.1	dry	underground cables 10'		
1409		40.40	73007	1645	470711	1224629	9.4	dry	near shoreline		
1408		41.50	73007	1620	470643	1224703	5.1	dry			
1426		43.10	72707	1552	470603	1224752	4.8	dry	1090 = 1.85 up a small hill		
1425		44.90	72707	1535	470518	1224846	3.4	dry	1090 = 1.67		
1403		44.90	73007	1525	470519	1224850	3.72	dry			
1424		47.20	72707	1523	470421	1224957	3.8	dry	1090 = 1.42		
1423		50.00	72707	1505	470310	1225122	2.4	dry	1090 = .90		
1422		54.40	72707	1442	470122	1225334	3.1	dry	1090 = 1.10		
1421		56.10	72707	1415	470043	1225422	3.4	dry	1090 = 1.22		
1420		59.70	72707	1350	465910	1225615	2.3	dry	1090 = .75		
1431		63.40	72707	2010	465737	1225807	1.35	dry	1090 = .69 power lines across road		
1430		69.90	72707	1955	465457	1230122	1.15	dry	1090 = .52		
1429		73.70	72707	1937	465317	1230315	0.99	dry	1090 = .48		
1427		77.50	72707	1920	465148	1230511	0.62	dry	1090 = .42		
1415		84.30	72707	1035	464855	1230837	1.37	dry	1090 = .76		
1416		89.60	72707	1117	464646	1231113	0.38	dry	1090 = .22		
1417		93.80	72707	1137	464459	1231321	0.55	dry	1090 = .16		
1418		95.80	72707	1150	464410	1231421	0.46	dry	1090 = .24		
1419		98.30	72707	1205	464305	1231536	0.46	dry	1090 = .22		
1484		108.60	80107	1035	463849	1232044	0.36	dry			
1483		110.80	80107	1013	463754	1232150	0.265	dry	up a logging road		
1333		123.40	70107	1410	463237	1232806	0.225	dry	1090 = .13		
1334		124.10	70107	1418	463221	1232826	0.242	dry	1090 = .13		
1336		125.40	70107	1430	463147	1232906	0.22	dry	1090 = .11		
1337		125.40	70107	1459	463239	1232805	0.23	dry	1090 = .13 across the street from point 1336		
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# KILOMETERS FROM ANTENNA



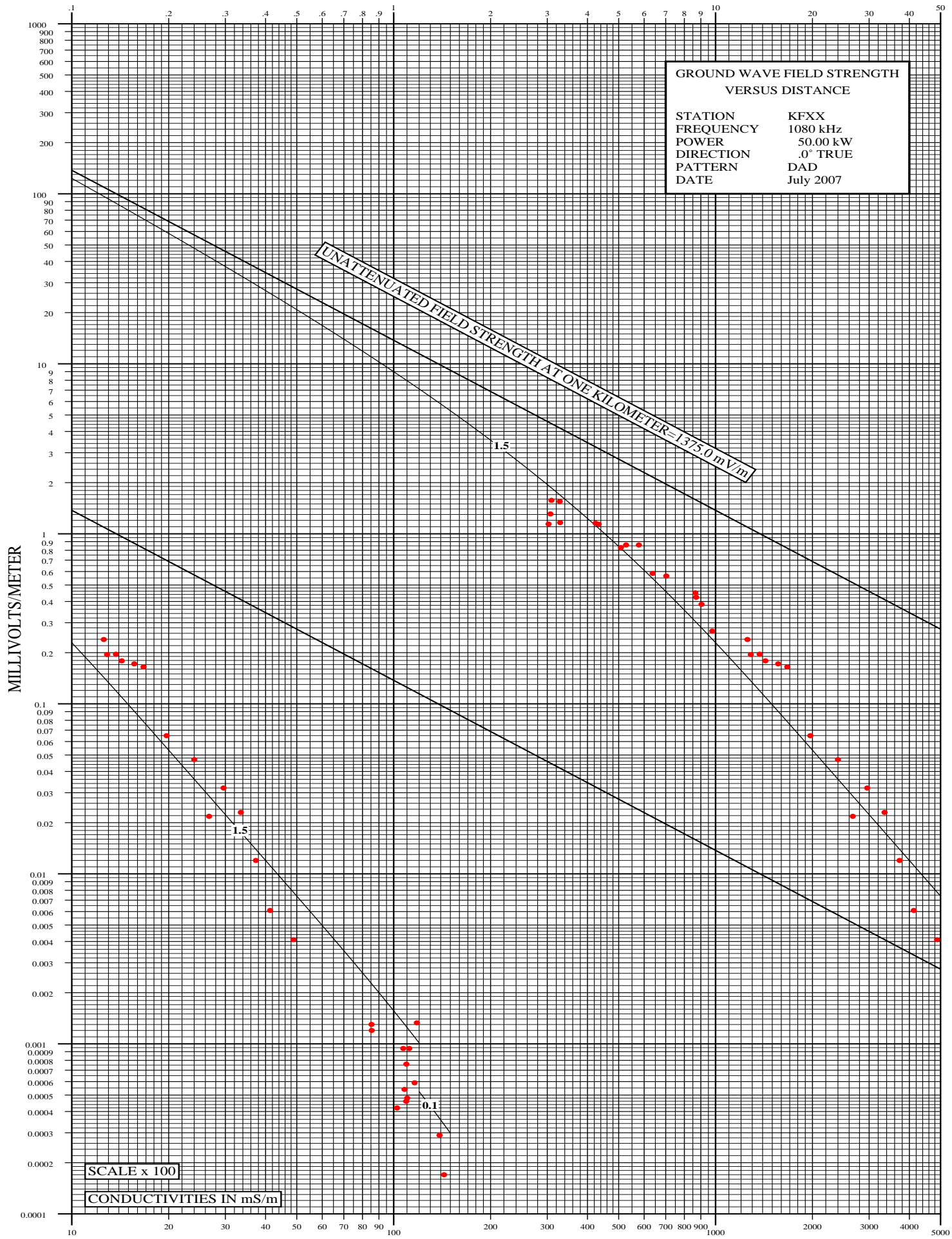
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# KILOMETERS FROM ANTENNA



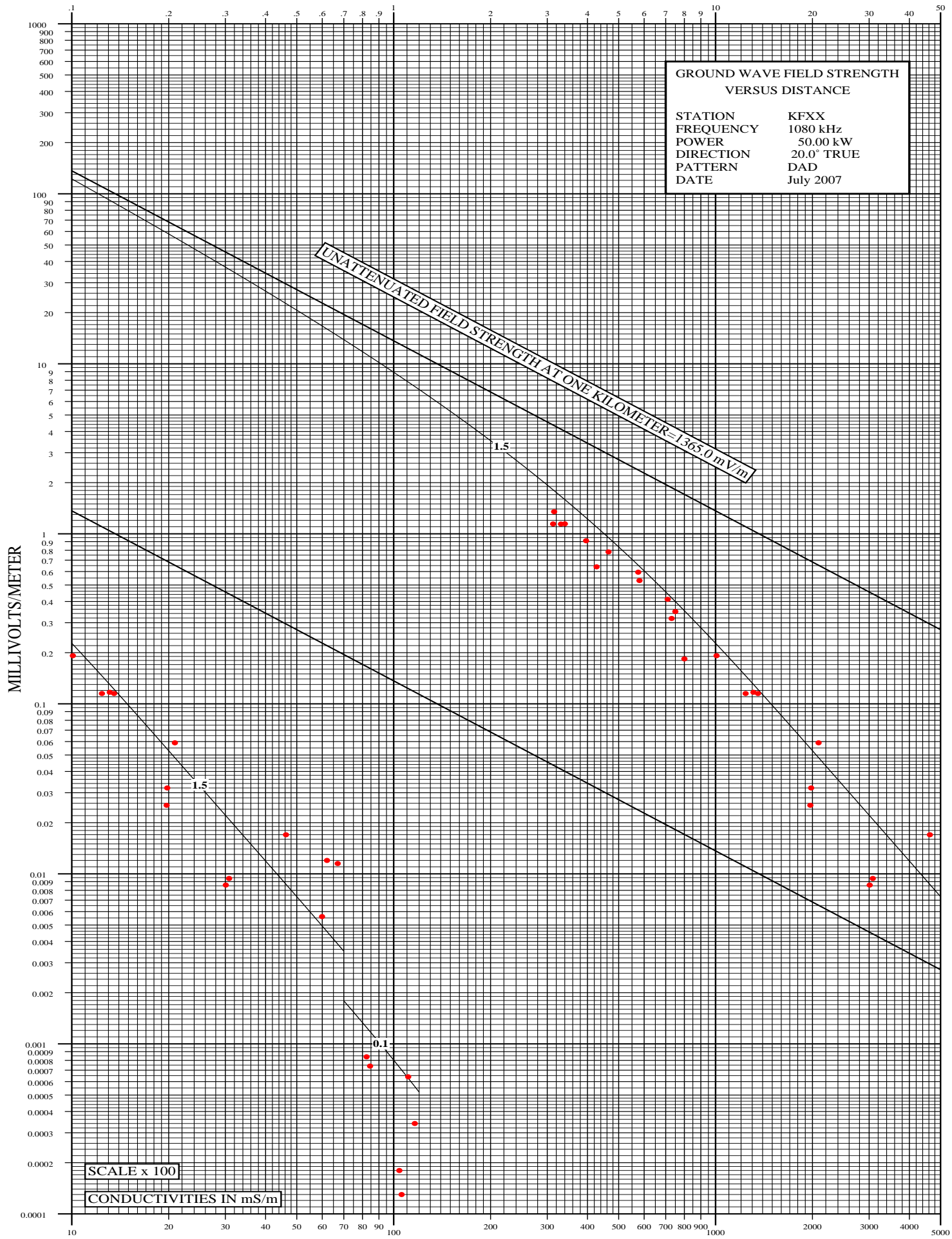
AM FIELD STRENGTH MEASUREMENTS									BEARING:	0 KFX
MEASURED BY		Betty McArdle & Eric Strickland							DISTANCE UNITS:	KM
METER SERIAL #		1264								
POWER MODE		DAYTIME DA							Brown Broadcast Services	
FREQ		1080KHz							Portland, Oregon 97219	
ORIG PT#	NEW PT#	DIST	DATE	TIME	LATT	LONG	MV/M	CONDITIONS	DESCRIPTION OF LOCATION / COMMENTS	
475		3.07	61307	1012	453509	1222908	131	dry		
476		3.09	61307	1005	453510	1222908	157.5	dry		
477		3.28	61307	1021	453516	1222908	155	dry		
478		3.29	61307	1047	453516	1222908	116.5	dry		
37		3.50	70507	2012	453508	1222908	114.2	dry		
479		4.24	61307	1102	453547	1222908	115.5	dry		
480		4.33	61307	1112	453550	1222908	114	dry		
481		5.08	61307	1123	453614	1222907	83	dry		
482		5.27	61307	1135	453620	1222907	86	dry		
483		5.78	61307	1145	453637	1222908	86	dry		
484		6.38	61307	1202	453656	1222906	58.5	dry		
664		7.03	61307	1212	453717	1222908	56.5	dry		
665		8.65	61307	1222	453810	1222908	45	dry		
666		8.70	70207	1923	453811	1222906	42.4	dry		
488		9.04	61307	1238	453822	1222907	38.5	dry		
489		9.76	61307	1245	453846	1222908	26.8	dry		
490		12.57	61307	1257	454016	1222907	23.9	dry		
491		12.87	61307	1306	454026	1222908	19.5	dry		
493		13.71	61307	1316	454053	1222907	19.6	dry		
494		14.29	61307	1325	454112	1222907	17.9	dry		
497		15.64	61307	1335	454154	1222907	17.2	dry		
650		16.70	62507	1352	454231	1222907	16.5	dry		
651		19.70	62507	1402	454409	1222908	6.5	dry		
652		24.00	62507	1414	454627	1222908	4.7	dry		
38		26.70	70507	1723	454755	1222907	2.18	dry		
653		29.60	62507	1437	454930	1222907	3.2	dry		
654		33.50	62507	1455	455135	1222907	2.3	dry		
656		37.30	62507	1512	455336	1222908	1.2	dry		
657		41.30	62507	1539	455547	1222907	0.61	dry		
663		48.80	61807	1055	455949	1222905	0.41	dry		
534		85.40	61507	1450	461936	1222915	1.3	dry		
662		85.50	61507	1440	461939	1222908	1.2	dry		
451		102.50	62207	1915	462836	1222908	0.42	dry	on hill	
450		107.10	62207	1655	463119	1222908	0.94	dry	on hill	
525		108.00	61507	1805	463202	1222906	0.54	dry		
532		109.50	61507	1825	463238	1222909	0.76	dry		
535		110.00	61507	1840	463254	1222909	0.48	dry		
537		111.20	61507	1850	463230	1222906	0.46	dry		
553		111.80	61507	1859	463330	1222908	0.94	dry	higher elevation	
660		116.10	62707	1310	463610	1222907	0.059	dry		
661		118.00	62707	1345	463710	1222907	0.133	dry	high elevation	
1296		138.90	70107	1840	464817	1222908	0.029	dry		
658		143.50	70107	1905	465057	1222910	0.017	dry		

# KILOMETERS FROM ANTENNA



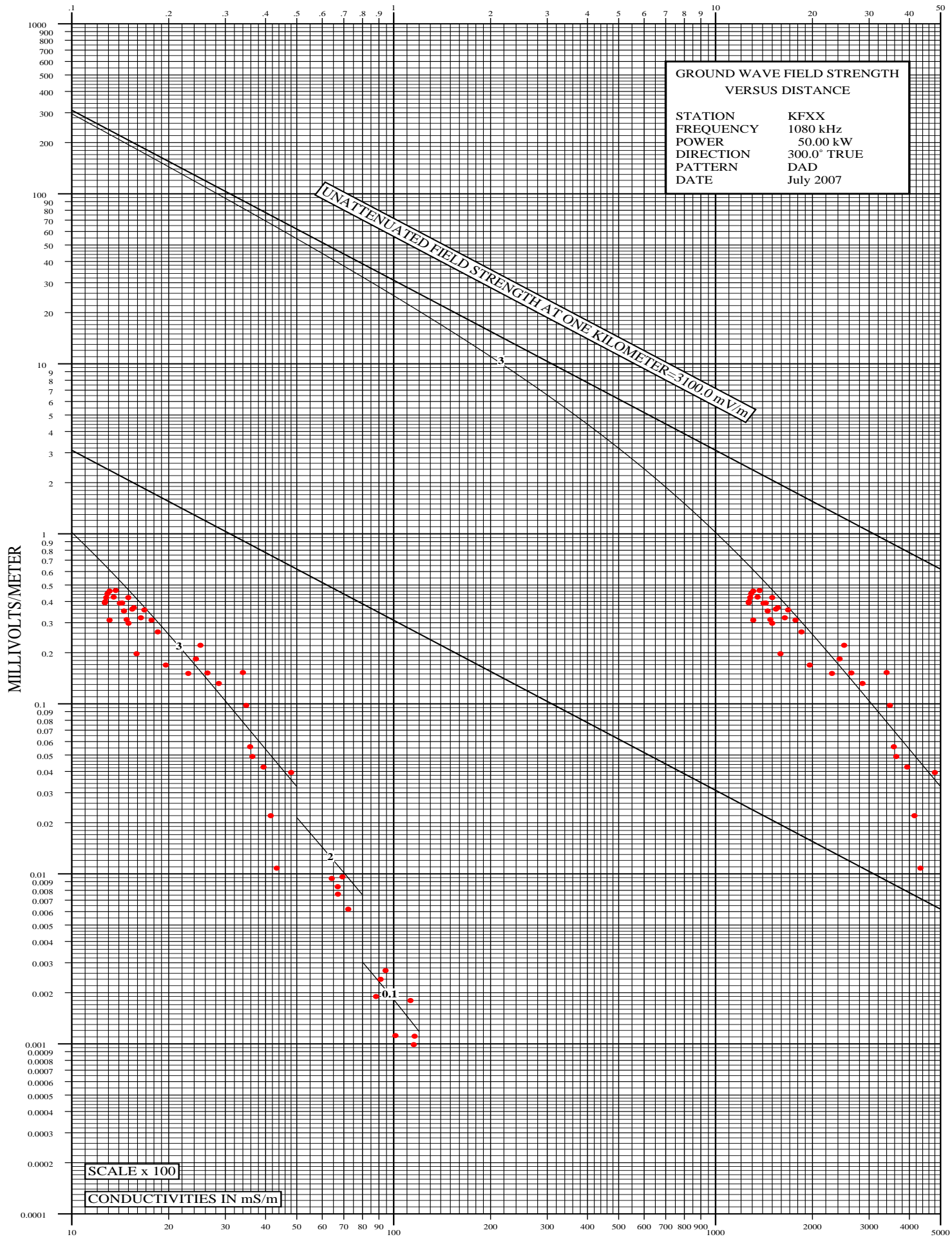
AM FIELD STRENGTH MEASUREMENTS									BEARING:	20 KFXX
MEASURED BY		Betty McArdle & Eric Strickland							DISTANCE UNITS:	KM
METER SERIAL #		1264								
POWER MODE		DAYTIME DA							Brown Broadcast Services	
FREQ		1080kHz							Portland, Oregon 97219	
ORIG PT#	NEW PT#	DIST	DATE	TIME	LATT	LONG	MV/M	CONDITIONS	DESCRIPTION OF LOCATION / COMMENTS	
675		3.13	70207	1830	453505	1222818	114.4	dry		
681		3.15	61307	1027	453506	1222818	135	dry		
673		3.31	70207	1857	453513	1222814	114.2	dry		
674		3.40	70207	1845	453507	1222817	114.5	dry		
499		3.96	61607	1525	453530	1222805	91	dry		
501		4.27	61607	1510	453539	1222759	64	dry		
502		4.65	61607	1458	453549	1222757	78.4	dry		
503		5.75	61607	1445	453625	1222740	59.5	dry		
677		5.80	70207	1800	453626	1222738	53.1	dry		
676		7.10	70207	1812	453705	1222818	41.2	dry		
678		7.30	70207	1740	453718	1222711	31.8	dry	large metal poles 50' away	
508		7.50	61607	1432	453718	1222713	34.9	dry		
679		8.00	70207	1730	453734	1222701	18.4	dry		
504		10.07	61607	1420	453836	1222630	19.2	dry		
505		12.40	61607	1404	453945	1222553	11.5	dry		
506		13.12	61607	1351	454018	1222537	11.7	dry		
507		13.54	61607	1336	454021	1222533	11.5	dry		
680		19.70	70207	1540	454329	1222357	2.53	dry		
39		19.80	70507	1545	454333	1222356	3.2	dry		
669		20.90	61807	1745	454404	1222337	5.9	dry		
667		30.10	61807	1655	454845	1222109	0.86	dry		
668		30.80	61807	1707	454905	1222055	0.94	dry		
68		46.30	61807	1230	455658	1221652	1.7	dry		
544		59.90	61807	1345	460353	1221311	0.56	dry		
543		62.10	61807	1358	460500	1221237	1.2	dry	higher elevation	
542		67.00	61807	1425	460726	1221116	1.15	dry	yet higher elevation	
672		82.40	61807	1838	461514	1220709	0.084	dry	a bit off radial due to impassable road	
670		84.50	61807	1825	461619	1220634	0.074	dry		
541		104.20	61807	1740	462615	1220114	0.018	dry	directly behind Mt. St. Helens	
540		105.90	61807	1758	462707	1220046	0.013	dry	directly behind Mt. St. Helens	
539		110.90	61807	1815	462941	1215922	0.064	dry	coming out of the shadow of St. Helens	
538		116.30	61807	1840	463224	1215755	0.034	dry		

# KILOMETERS FROM ANTENNA



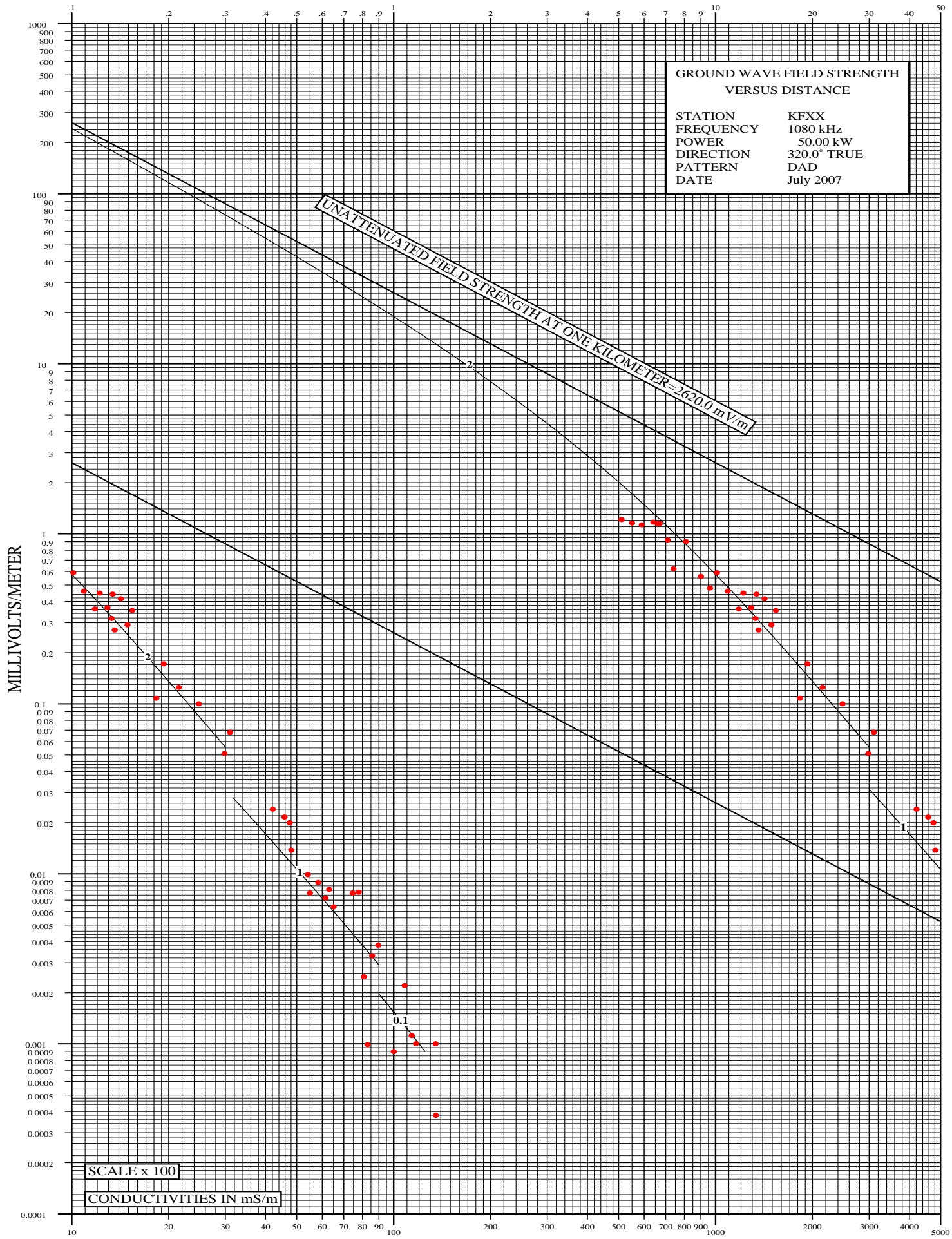
AM FIELD STRENGTH MEASUREMENTS									BEARING:	300 KFX
MEASURED BY		Betty McArdle							DISTANCE UNITS:	KM
METER SERIAL #		1264								
POWER MODE		DAYTIME DA							Brown Broadcast Services	
FREQ		1080kHz							Portland, Oregon 97219	
ORIG PT#	NEW PT#	DIST	DATE	TIME	LATT	LONG	MV/M	CONDITIONS	DESCRIPTION OF LOCATION / COMMENTS	
34		12.67	70507	1937	453654	1223733	39.3	dry	no closer point is available except by boat	
22		12.70	63007	1756	453654	1223734	39.9	dry		
21		12.80	63007	1750	453657	1223742	42.2	dry		
33		12.90	70507	1928	453658	1223743	44.5	dry		
32		13.10	70507	1919	453702	1223749	46.1	dry		
20		13.10	63007	1739	453701	1223750	31.1	dry	big dumpsters 40' away, big warehouses nearby	
595		13.50	63007	1710	453708	1223807	42.5	dry		
594		13.70	63007	1655	453711	1223815	46.5	dry		
593		14.10	63007	1646	453718	1223833	39.1	dry		
27		14.33	70507	1900	453722	1223841	39.2	dry	low elevation	
28		14.52	70507	1907	453724	1223849	35.2	dry	behind concrete block building	
592		14.80	63007	1640	453729	1223901	31.3	dry		
26		14.99	70507	1850	453732	1223908	42.2	dry		
591		15.00	63007	1632	453731	1223906	29.8	dry	city power lines	
25		15.40	70507	1838	453739	1223925	36.1	dry		
24		15.60	70507	1830	453741	1223932	36.8	dry		
590		15.90	63007	1623	453746	1223944	19.7	dry	power lines 10' away, metal fence, big trees	
23		16.40	70507	1817	453756	1224005	32.1	dry		
589		16.80	63007	1610	453800	1224020	35.7	dry		
587		17.70	63007	1600	453815	1224056	31.1	dry	power lines nearly overhead	
586		18.50	63007	1550	453829	1224128	26.5	dry	regular power lines 25' away	
585		19.60	63007	1540	453845	1224214	16.9	dry	big powerlines in vicinity, locked gate	
584		23.00	63007	1530	453939	1224427	15.1	dry		
581		24.30	63007	1510	454001	1224519	18.4	dry		
683		25.10	63007	1520	453927	1224353	22.1	dry		
580		26.40	62907	1820	454036	1224646	15.2	damp	open fields	
579		28.60	62907	1805	454112	1224815	13.2	damp		
577		34.00	62907	1745	454238	1225151	15.3	damp	near Multnomah channel	
576		34.80	62907	1715	454251	1225225	9.8	damp	30 meters from Hwy 30	
575		35.80	62907	1705	454314	1225322	5.6	damp		
573		36.40	62907	1655	454316	1225330	4.9	damp		
572		39.40	62907	1625	454404	1225522	4.25	damp	a bit off radial, locked gate	
566		41.50	62907	1555	454438	1225652	2.2	damp	behind hill	
570		43.30	62907	1610	454511	1225815	1.08	damp	in gully - light rain	
569		48.00	62907	1505	454622	1230114	3.95	damp	a bit off radial, locked gate, high elevation - light rain	
19		64.20	62607	1101	454038	1231204	0.94	dry	low elevation	
10		67.00	62607	1137	455124	1231400	0.84	dry		
9		67.10	62607	1130	455125	1231404	0.76	dry		
11		69.30	62607	1205	455200	1231531	0.96	dry	high elevation	
12		72.20	62607	1233	455247	1231730	0.62	dry		
18		88.10	62607	1422	455659	1232816	0.19	dry		
17		91.00	62607	1445	455744	1233010	0.24	dry		
16		94.30	62607	1510	455836	1233225	0.27	dry	locked gate at original site	
15		101.20	62607	1535	460024	1233703	0.112	dry		
14		112.70	62607	1612	460326	1234453	0.18	dry		
40		115.50	62607	1650	460410	1234647	0.099	dry		
253		116.10	62607	1637	460417	1234710	0.111	dry		

# KILOMETERS FROM ANTENNA



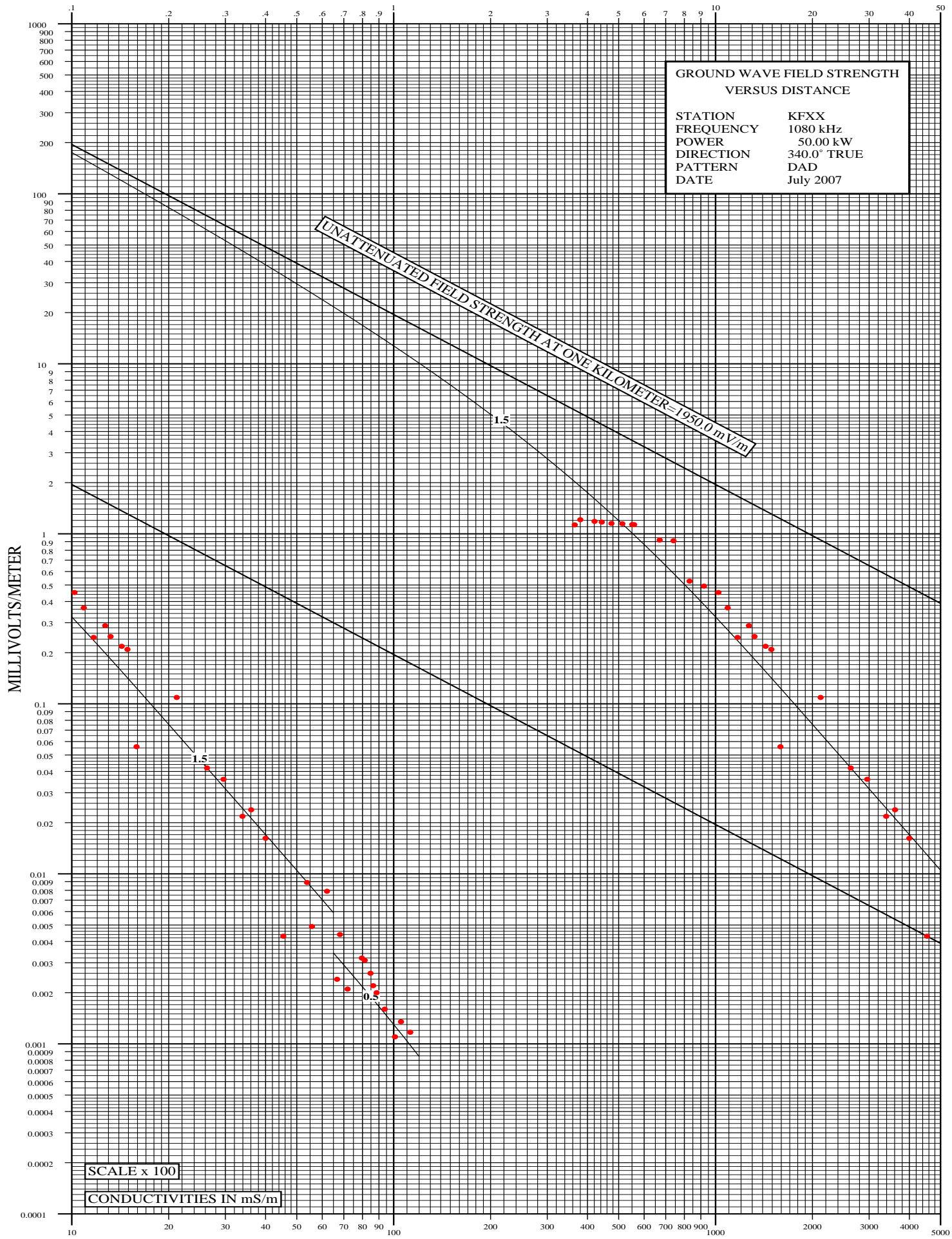
AM FIELD STRENGTH MEASUREMENTS								BEARING:	320 KFXX
MEASURED BY		Betty McArdle & Eric Strickland						DISTANCE UNITS:	KM
METER SERIAL #		1264							
POWER MODE		DAYTIME DA						Brown Broadcast Services	
FREQ		1080kHz						Portland, Oregon 97219	
ORIG PT#	NEW PT#	DIST	DATE	TIME	LATT	LONG	MV/M	CONDITIONS	DESCRIPTION OF LOCATION / COMMENTS
626		5.10	63007	1825	453537	1223140	121.3	dry	
628		5.50	63007	1833	453545	1223150	115.9	dry	
629		5.90	63007	1845	453556	1223202	112.9	dry	
633		6.40	63007	1937	453609	1223218	117	dry	
632		6.60	63007	1930	453614	1223225	115	dry	
631		6.70	63007	1923	453618	1223228	115	dry	
361		7.10	62707	1740	453625	1223237	92	dry	
630		7.40	63007	1910	453633	1223246	62.3	dry	
429		8.10	62707	1720	453651	1223307	90	dry	
510		9.00	61807	1215	453712.7	1223334	56.2	dry	
511		9.60	61807	1235	453727	1223352	48	dry	behind hill
512		10.10	61807	1245	453741	1223408	59	dry	
513		10.90	61807	1259	453801	1223433	46	dry	
514		11.80	61807	1310	453822	1223458	36.2	dry	
515		12.20	61807	1323	453830	1223507	44.8	dry	
516		12.90	61807	1340	453850	1223532	36.8	dry	metal pole 30' away
517		13.30	61807	1405	453857	1223541	31.8	dry	
522		13.40	61807	2048	453903	1223546	44.2	dry	metal pole 50' away, higher elevation
521		13.60	61807	2036	453907	1223553	27.2	dry	
518		14.20	61807	2005	453922	1223610	41.5	dry	
519		14.90	61807	2017	453939	1223631	29.2	dry	
520		15.40	61807	2028	453952	1223646	35.4	dry	
524		18.30	61907	1902	454103	1223812	10.8	dry	
523		19.30	61907	1846	454127	1223841	17.2	dry	
1280		21.50	71307	1200	454221	1223946	12.5	dry	
1281		24.80	71307	1240	454344	1224127	10	dry	
1282		29.80	71307	1302	454548	1224356	5.1	dry	
1283		31.00	71307	1310	454618	1224432	6.8	dry	clear view to transmitter, high elevation
1284		42.10	71307	1457	455052	1225005	2.4	dry	
1285		45.80	71307	1549	455223	1225155	2.16	dry	
1286		47.50	71307	1620	455305	1225244	2	dry	
1287		48.10	71307	1630	455318	1225302	1.38	dry	
1288		54.10	71607	1300	455547	1225605	0.99	dry	
546		54.90	61907	1610	455610	1225627	0.77	dry	dirt road 4WD
1289		58.30	71607	1330	455731	1225811	0.89	dry	
547		61.40	61907	1642	455846	1225943	0.72	dry	
1290		63.10	71607	1353	455930	1230037	0.81	dry	
548		65.10	61907	1702	460020	1230136	0.64	dry	
1293		74.60	71307	1930	460412	1230622	0.77	dry	
1294		77.90	71307	1850	460532	1230801	0.78	dry	high elevation
1295		80.80	71307	1755	460646	1230932	0.248	dry	
559		83.00	62007	1942	460737	1231035	0.099	dry	behind hill
560		85.70	62007	1955	460845	1231157	0.33	dry	
564		89.60	62007	1500	461020	1231357	0.38	dry	
563		100.00	62007	1535	461440	1231911	0.09	dry	slightly off radial due to high energy wires
634		108.20	62607	1820	461757	1232321	0.22	dry	
562		113.80	62007	1635	462015	1232614	0.112	dry	
561		117.30	62007	1721	462143	1232801	0.1	dry	
635		134.90	62007	1555	463935	1235028	0.1	dry	
636		135.20	62007	1618	464106	1235224	0.038	dry	

# KILOMETERS FROM ANTENNA



AM FIELD STRENGTH MEASUREMENTS									BEARING:	340 KFX
MEASURED BY		Betty McArdle							DISTANCE UNITS:	KM
METER SERIAL #		1264								
POWER MODE		DAYTIME DA							Brown Broadcast Services	
FREQ		1080KHz							Portland, Oregon 97219	
ORIG PT#	NEW PT#	DIST	DATE	TIME	LATT	LONG	MV/M	CONDITIONS	DESCRIPTION OF LOCATION / COMMENTS	
624		3.65	62707	1855	453525	1223008	112.9	dry		
348		3.80	62707	1835	453525	1223007	121	dry		
432		4.21	62707	1920	453538	1223013	118.5	dry		
433		4.43	62707	1935	453545	1223017	117.3	dry		
435		4.75	62707	1948	453555	1223022	115.2	dry		
436		5.13	62707	2003	453606	1223029	114.7	dry		
625		5.51	62707	2031	453618	1223034	113.4	dry		
437		5.58	62707	2018	453620	1223036	113.2	dry		
623		6.70	63007	2012	453654	1223054	92	dry		
36		7.40	70507	2014	453716	1223105	91	dry		
649		8.30	62507	1304	453743	1223119	52.7	dry		
647		9.20	62507	1248	453810	1223133	49.3	dry		
646		10.20	62507	1235	453835	1223145	45.2	dry		
643		10.90	62507	1223	453901	1223158	36.7	dry		
642		11.70	62507	1210	453927	1223213	24.6	dry	power lines 20' away	
641		12.70	62507	1159	453959	1223230	28.8	dry		
640		13.20	62507	1146	454010	1223235	24.9	dry		
639		14.30	62507	1137	454043	1223253	21.8	dry		
638		14.90	62507	1125	454102	1223303	20.9	dry		
637		15.90	62507	1112	454133	1223319	5.6	dry		
474		21.20	62107	2005	454413	1223445	10.9	dry		
473		26.30	62107	1950	454649	1223606	4.2	dry	regular power lines overhead	
472		29.60	62107	1935	454832	1223658	3.6	dry		
471		33.90	62107	1909	455041	1223807	2.18	dry	a bit off radial, high power lines 200' away	
470		36.10	62107	1846	455142	1223842	2.38	dry		
469		40.00	62107	1820	455348	1223943	1.62	dry		
549		45.40	61807	958	455629	1224110	0.43	dry		
467		53.80	62107	1640	460041	1224323	0.89	dry		
468		55.70	62107	1715	460144	1224355	0.49	dry		
465		62.10	62107	1559	460458	1224539	0.79	dry	high, clear view	
464		66.70	62107	1525	460718	1224652	0.24	dry	in gully	
463		68.10	62107	1510	460801	1224716	0.44	dry	power lines 25' away	
461		71.96	62107	1413	460958	1224817	0.21	dry		
1300		79.60	71907	1907	461351	1225022	0.32	damp		
46		81.30	71907	1850	461439	1225049	0.31	damp		
1301		84.70	71907	1930	461623	1225144	0.26	damp		
1298		86.30	71907	1830	461714	1225210	0.22	damp		
1297		88.60	71907	1817	461822	1225246	0.2	damp		
457		93.80	62207	1255	462101	1225412	0.16	dry		
458		100.90	62207	1325	462436	1225607	0.11	dry		
459		105.40	62207	1345	462655	1225702	0.135	dry		
460		112.60	62207	1415	463032	1225920	0.117	dry		

# KILOMETERS FROM ANTENNA





STATEMENT OF QUALIFICATIONS  
AM FIELD STRENGTH MEASUREMENTS  
KPTK-AM 1090 kHz 50 kW DA-2  
SEATTLE, WASHINGTON  
OCTOBER, 2007


During the period from September 5, 2007 through September 28, 2007, engineers of KPTK-AM, CBS Radio Seattle were engaged in performing extensive AM field strength measurements on KIRO-AM, Seattle, WA on behalf of CBS Radio Holdings, Inc. The measurements were performed under the direction of Thomas R. McGinley, Director of Engineering and were taken by Arne Skoog, Director of RF Systems, and Tyler Stores, Staff Engineer. Mr. Skoog used a Potomac FIM-41 field meter, serial # 1717 with calibration sticker dated 06/22/01. Mr. Stores used a Potomac FIM-41 field meter, serial # 452 with calibration sticker dated 12/3/06. Both meters were in agreement to within the specified accuracy of the instrument.

Mr. McGinley has been engaged in professional broadcast engineering for over 40 years, having designed, constructed and maintained many AM broadcast antenna systems and performed many proof of performance measurements. His qualifications are a matter of record with the commission. Mr. Skoog and Mr. Stores are both experienced AM broadcast engineers and have performed numerous field proof of performance measurements.

The data presented herein is believed to be true and accurate to the best of our knowledge.

  
Thomas R. McGinley, Director of Engineering & MIS, CBS Radio Seattle  
10-29-07  
Date

  
Arne W. Skoog, Director of RF Systems, CBS Radio Seattle  
10-29-07  
Date

  
Tyler S. Stores, Staff Engineer, CBS Radio Seattle  
10-29-07  
Date



KBKS-FM



KMPS-FM



KJAQ-FM



KZOK-FM



KPTK-AM

# KPTK-AM 1090 kHz 50 kW DA-2 Seattle, WA

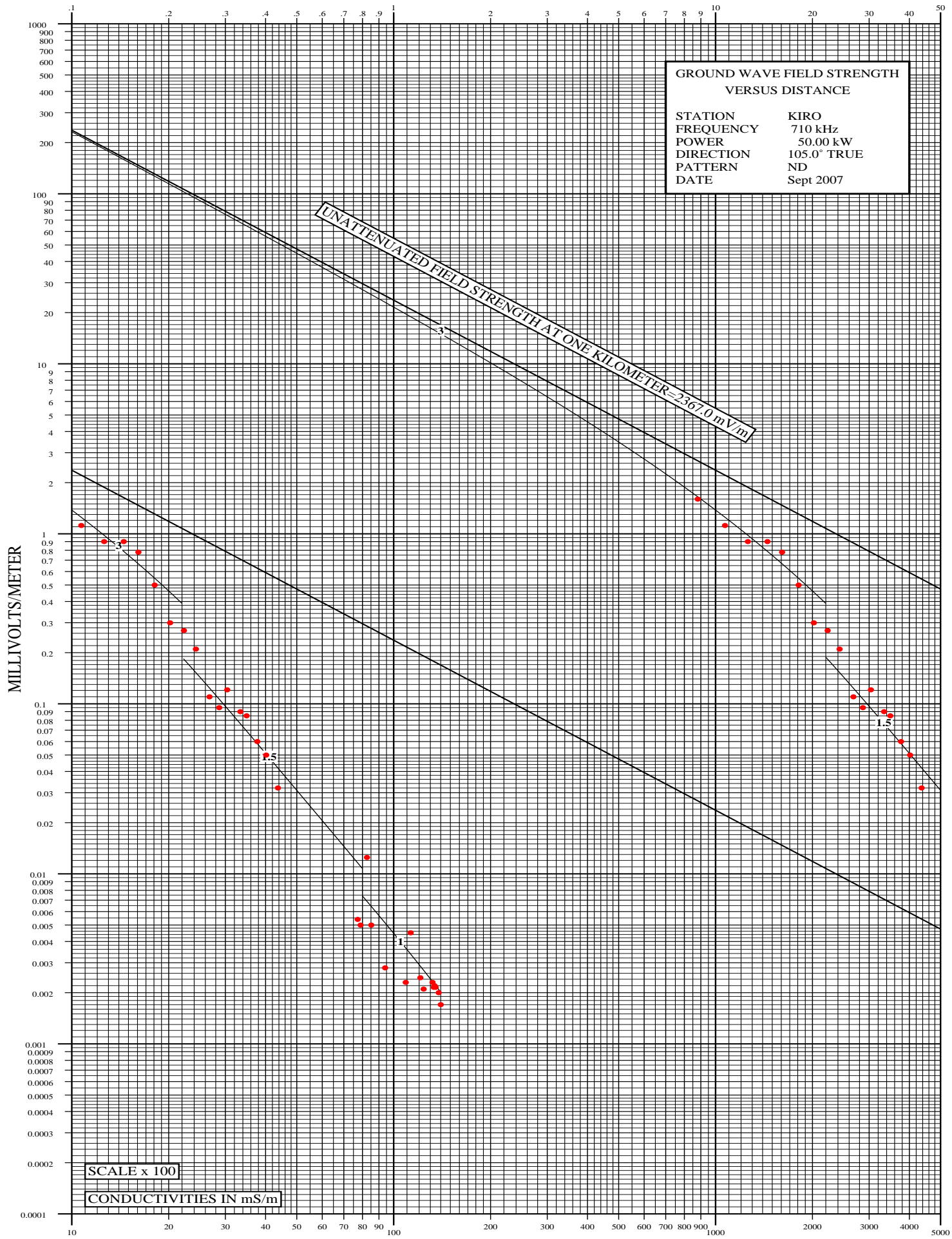
105 degree Radial from KIRO, Vashon Island, WA

AS = Arne Skoog

TS = Tyler Stores

Point	Date	Time	Engr	Dist kM	Latitude			Longitude			KIRO mV/m	Point Description
	2007	PDT			Deg	Min	Sec	Deg	Min	Sec		
A	11-Sep	1813	AS	8.8	47	22	37.8	122	19	20.5	160	9th Ave S & S 251 St. By house away from wires
B		1755		10.7	47	22	24.6	122	17	44.9	112	At 30th Ave S & S 254th St. Near wood fence away from wires
C		1730		12.6	47	22	11.1	122	16	23.6	90	2587 mailbox near bus stop area
D		1713		14.5	47	21	54.3	122	14	57.7	90	SR 181 & 26404 Green-grey house
E		1651		16.1	47	21	39.4	122	13	40.1	78	Entr to KC Trail west of 68th at end of road. 86th AveS. Kent
F		1618		18.1	47	21	26.3	122	12	7.5	50	In front of 27226 104th Ave SE. New neighborhood
G		1550		20.2	47	21	7.3	122	10	32.7	30	Entr to Cantrera 124th SE & SE 238 off main street, east side
H		1515		22.3	47	20	51.2	122	8	59.5	27	28312 144th SE & SE 283rd Pl. At center of fence.
J		1455		24.3	47	20	54.3	122	7	22.4	21	28829 164th St SE. NE corner of big ranch with white fence
K		1407		26.8	47	20	13.9	122	5	28.5	11	196th Ave SE & SE 295th St Mid road.
L	11-Sep	1345	AS	28.7	47	19	55.8	122	4	18	9.5	At end of 301st St SE. 50 feet into woods.
1	27-Sep	1552	AS	30.4	47	19	46.2	122	2	44.2	12.1	Across from 22232 at storm water pond sign
2		1615		33.4	47	19	27.2	122	0	10	9	Just onto SE 310th St. off Diamond Ravendale Rd.
3		1628		34.9	47	19	8.3	121	59	8.5	8.5	On Lawson, right side of road at closed gate.
4		1640		37.7	47	18	41.9	121	57	8	6	SE Green River Gorge Rd. Right side.
5		1655		40.2	47	18	2.2	121	54	35.1	5	On Lumberland Kanaskit Rd at No Tres sign. Gate on left.
6		1710		43.7	47	17	19.4	121	54	3.7	3.2	SE 331st just before power line. No access beyond.
7				55.1								No Access
8				59.6								No Access
9		1155		77.3	47	13	8	121	26	49.2	0.54	0.2 miles past 9 1/2 sign on FS 54 Road from I-90.
9A		1215		78.9	47	12	50.6	121	25	40	0.5	From FS 54, turn left on FS 52. Point on river side of road.
10		1300		82.6	47	12	19.6	121	22	49.1	1.25	Road 410, 156m off point, 0.4 miles off main rd near rock pile.
10B		1335		85.2	47	12	5.6	121	20	43.5	0.5	Road 52 at crossing. QSB
11	27-Sep			90.8								No Access
11A	28-Sep	1658		94	47	11	20.6	121	13	29.7	0.28	At end of Cabin Creek Rd. 1.34 kM from point
11B		1550		109	47	8	56.9	121	3	2.7	0.23	On road to Cabin Creek at logging spar pole point
11C		1400		113	47	7	58.2	120	59	34.5	0.45	On road to Cabin Creek trail 600 m from point
12		1145		121	47	6	49	120	53	23.3	0.25	On paved road by cement blocks. West Tanum Rd entrance
13		1207		124	47	6	22.4	120	51	12.2	0.21	On F.S.paved road at No Camping sign. 6.2 miles w of Pt 14.
14	28-Sep	1228	AS	132	47	5	13.9	120	45	12.4	0.23	Stub Road at gate. Thorpe Prairie cutoff road near cell-site.
14A	10-Sep	11:22	TS	133.3	47	5	2.8	120	44	13.6	0.22	Elk Hieghts road Thorpe Prairie road
15		11:15		134	47	4	55.9	120	43	40	0.22	Near I-90 Thorpe Prairie road
16		11:07		135	47	4	47.2	120	42	53.8	0.22	Gravel road, Bruton road, near party barn
16A		10:59		138	47	4	25.5	120	40	58.8	0.2	Thorp HWY, decrease in RF noted, closer to Cascade range.
17		10:29		140	47	4	5.9	120	39	15.9	0.17	8891 HWY 10, slightly off heading to avoid powerlines.

# KILOMETERS FROM ANTENNA



# KPTK-AM 1090 kHz 50 kW DA-2 Seattle, WA

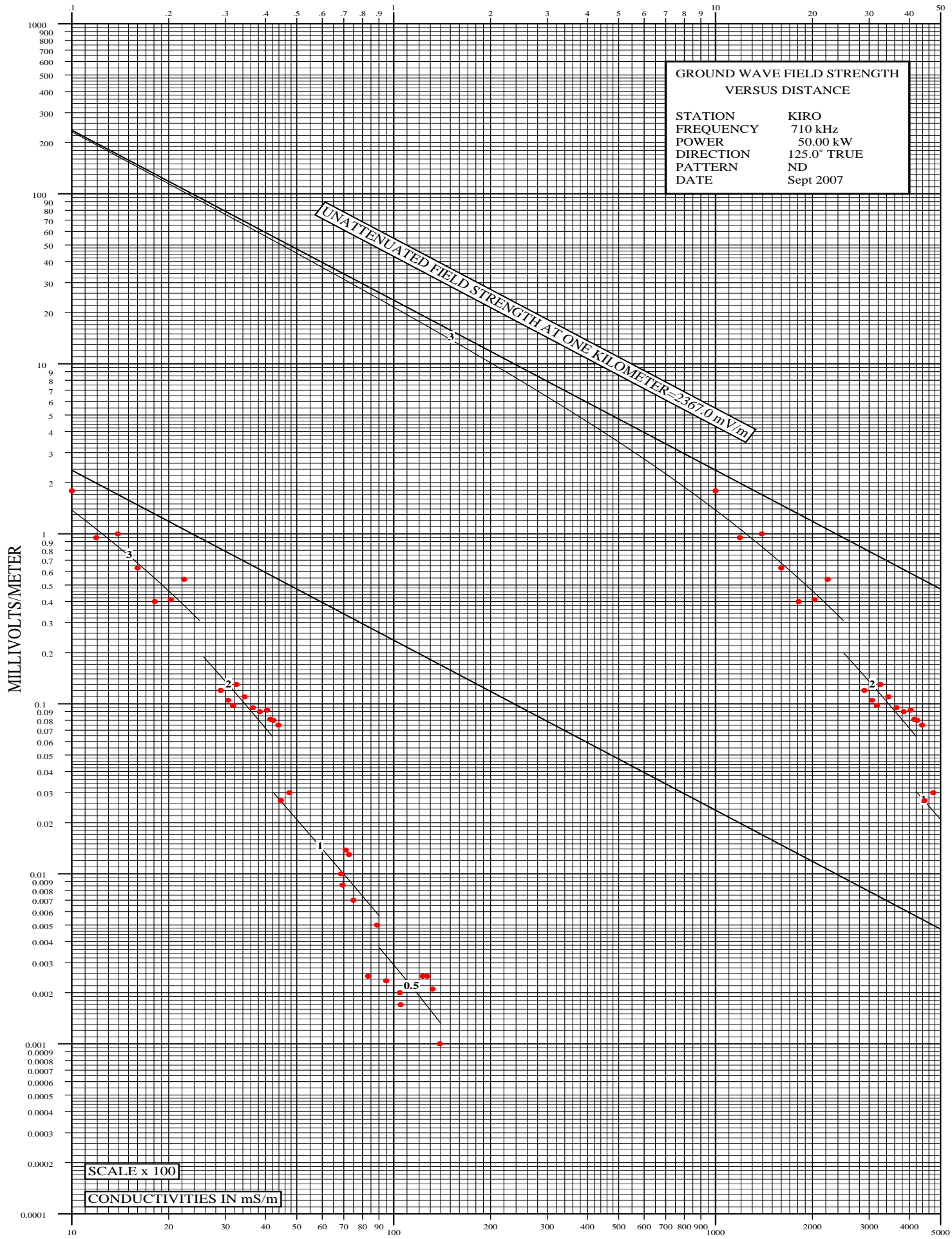
125 degree Radial from KIRO, Vashon Island, WA

AS = Arne Skoog

TS = Tyler Stores

Point	Date	Time		Dist	Latitude			Longitude			KIRO	Point Description
	2007	PDT	Engr	kM	Deg	Min	Sec	Deg	Min	Sec	mV/m	
A	9/12	1135	AS	10	47	20	50.8	122	19	31.7	179	At Redondo BoardWalk just south of boat launch
B		1158		11.9	47	20	15.7	122	18	19	95	In front of 29508 Bldg "P" on 212th Pl Dr.
C		1215		13.9	47	19	39.4	122	16	57	100	In front of 3835 306th Pl
D		1236		16	47	19	0.2	122	15	37.2	63	In front of 932 W St. NW.
E		1755		18.1	47	13	24	122	14	15.4	40	In front of 640 1st SW Auburn TrueSquare Metal Products
F		1815		20.3	47	17	40.2	122	12	47.1	41	Zion Lutheran Church Auburn At driveway to parking lot
G		1836		22.3	47	17	5.2	122	11	29.6	54	Across from 2867 Forest Ridge Dr. Auburn On sidewalk
H												NO ACCESS
J												NO ACCESS
K		1147		29	47	15	0.4	122	7	7.3	12	On SE 392 and Hiway 164 near Indian sign
L		1204		30.6	47	14	30.2	122	6	5.6	10.5	40106 180th at driveway
L1		1218		31.7	47	14	7.7	122	5	7.1	9.8	At entrance to driveway of 18818 SE 408
M		1230		32.5	47	13	55.3	122	4	48.9	13	At firehydrant #7 on 196th
1		1240		34.4	47	13	20.1	122	3	32.3	11	4225 212th Ave SE north of map pt, approx 30m. Powerlines, metal structures.
1A		1252		36.5	47	12	42.8	122	2	15.4	9.5	SE 436th & 228th at gravel pullout, to avoid powerlines & metallic structures.
1B	9/12	1309	AS	38.4	47	12	8	122	0	58.3	9	At VFW Hall, Enumclaw, WA
2	9/5	10:55	AS	40.4	47	11	31.3	121	59	37.4	9.2	Slightly east of Birch road, North side of street across fm mobile home park
2A		11:09		41.4	47	11	15.1	121	59	3.9	8.1	Agricultural area, west side of 268 ave se @46101
2B		11:25		42.3	47	10	52.5	121	58	25.7	8	SE 467PL & 468 ST East side of street
2C		11:42		43.8	47	10	23.7	121	57	28.2	7.5	Side of hill @ SE 477th, thick vegetation, drop off of hillside 20 meters to west.
3		12:02		44.6	47	11	8.3	121	55	39.3	2.7	South side SR 410, trailhead of Griffin/ Russell. gate to point closed.
3A	9/5	12:29	AS	47.4	47	8	40.1	121	55	54.1	3	Mud Mtn road, off SR410, slightly off radial, trail blocked, cement blocks.
4	9/21	13:20	AS	68.6	47	2	53.5	121	41	21.8	1	End of FS 75 Road. 15 miles down 7550, 1/4 mi from gate.
4A		13:40		69.3	47	2	36.3	121	40	59.4	0.86	On FS 75 Road towards Hwy 410 one mile.
4B		13:50		71	47	2	12.4	121	39	43.8	1.38	FS 75 Road in bend of road nearest point on map.
4C		14:20		72.7	47	0	30	121	39	49.3	1.3	Picnic area at end of 4804 Road. At Lonesome Lake.
4D	9/21	16:25	AS	74.9	47	2	28.3	121	35	45.8	0.7	At top of ridge 5236 ft. At Observatory.
5	9/5	14:19	AS	83.2	46	58	11.8	121	32	59.9	0.25	SR410, pullout, noted slight beat, +/- of 3uV.
6		14:34		88.8	46	56	36.6	121	28	23.8	0.5	Crystal MTN BLVD, parking lot "D" BEAT +/- 4uV KPTK. Higher elevation noted.
7		15:29		94.7	46	54	49.9	121	24	25.9	0.235	The downside of Chinook Pass, pullout area on right, BEAT +/- 4uV KPTK only.
8		16:13		105	46	51	25.6	121	18	44.8	0.17	After turnoff for Bumping Lake camp ground, follow gravel road straight 100m.
Z	9/5	16:42	AS	104.5	46	51	46.3	121	18	10.5	0.2	15 Parking lot on side of Bumping Lake, point toward water, off by 500m.
9	9/26	13:50	TS	123	46	47	14.6	121	6	2.9	0.25	Gravel road, road ended 2.6 km from point on map
9A		14:51		127	46	44	54.5	121	4	19.9	0.25	Little Rattlesnake Creek crossing
10	9/26	16:00	TS	132	46	41	16	121	2	22	0.21	Oak Road at side of hill. 2 km from point on map.
10A	9/11	16:23	TS	139	46	41	0.1	120	56	28.5	0.1	HWY 12 near Rimrock getaway, 1360 and 1090 mixing.

# KILOMETERS FROM ANTENNA



# KPTK-AM 1090 kHz 50 kW DA-2 Seattle, WA

145 degree Radial from KIRO, Vashon Island, WA

AS = Arne Skoog

TS = Tyler Stores

Point	Date	Time	Engr	Dist	Latitude			Longitude			KIRO	Point Description
	2007	PDT		kM	Deg	Min	Sec	Deg	Min	Sec	mV/m	
A	12-Sep	1015	AS	8.7	47	19	59.8	122	22	16.4	160	In front of 2845 SW 300th Pl FW
B		1030		10.3	47	19	15.8	122	21	33.5	131	Sacajouia baseball field next to 509 Fed Way Parking Lot
C		1101		11.9	47	18	30.8	122	20	53.8	110	In front of 1064 SW 325th Ct. Fed Way
D		1302		14.5	47	17	22.8	122	19	45.2	61	Logcabin Park 5348 & 4th Ave S. 1st pkg space
E		1406		16.7	47	16	20.8	122	18	48.9	36	Driveway of WildWaves
F		1422		19.5	47	15	6.6	122	17	32.9	47	In front of 10308 mailbox on Jovita Blvd Edgewood
G		1444		22.1	47	13	52.5	122	16	33	36	End of new homes development 42 St E.
H		1504		25.3	47	12	32.7	122	14	59.1	16	Behind 13630 Bldg D115 in 1st space of Pkg lot off of WV Hwy
J		1550		28	47	11	16	122	13	51.3	19	Across from 14807 River Grove Dr.
1	12-Sep	1604	AS	30.5	47	10	8.4	122	12	45.1	15	96th St E. S on McCutcheon Rd E. 200 ft. Near speed sign.
1A	18-Sep	1012	AS	32.9	47	9	4.7	122	11	44.5	11	New driveway across st from 17524 Rhodes Lake Rd.
1B		1104		34.1	47	8	29.9	122	11	19.2	9.5	At end of Fall Water Blvd E.
2		1050		36.8	47	7	19.4	122	10	4.8	7.8	At side of road in construction area
3		1142		39.4	47	6	8.9	122	8	55.9	4.4	Pioneer east of 162 on side of road.
3A		1159		40.1	47	5	52	122	8	38.2	4.5	Next to White River off of 171 Road East on side of road.
4		1214		43.4	47	4	19.8	122	7	10.3	2.5	Just past bridge on Patterson on side of road.
5		1311		51.8	47	1	6.9	122	2	19.3	2.4	At observation pt pullout on Zankey Rd.
5A		1340		54.6	47	0	11.2	122	0	23	1.18	On Zankey Rd, 3.31 kM east of map pt.
5B		1356		55.8	46	59	46.8	121	59	37	1.2	On Zankey Rd across from gate at turnout.
5C		1430		59.3	46	59	7.4	121	59	59.8	0.95	Just south of Park entrance next to Ranger Stn.
6B		1700		61.8	46	56	31.2	121	58	14.7	1.5	On road to Lake Mowich. 1.58 kM from pt.
6C	18-Sep	1600	AS	67.5	46	55	58.5	121	51	47.2	1.23	At Lake Mowich parking lot
12	22-Sep	1644	AS	86.4	46	44	57.4	121	14	44.9	0.3	Longmire parking lot in 1st space next to museum.
15	20-Sep	1412		103	46	37	11.9	121	41	24.8	0.22	500 m. down Craig Rd on left by trail
16		1350		106	46	36	7.6	121	40	25.7	0.16	In Packwood at Riffe Rd in open yard away from wires.
17		1515		108	46	35	33.9	121	38	43.8	0.23	On road to Packwood Lake at 047 road sign.
19	22-Sep	1155		114	46	32	28.7	121	37	15.8	0.18	On left side of road to Lake Walupt at Glacier Creek
20	20-Sep	1611		126	46	30	36	121	35	14.1	0.25	On Road 2140 to Jordan Creek Trail at old road entr bulldozed.
21	20-Sep	1715	AS	130	46	25	16.9	121	30	14.6	0.15	At mile post 3 on road to Walupt Lake at side of road.
22	27-Sep	1615	TS	155	46	15	28.1	121	15	53.5	0.087	On road towards youth camp
23		1551		162	46	12	29.3	121	12	55.3	0.07	gravel road on BIA Indian land
24		1705		164							0.09	poor road off main road. 1 kM from point on map

# KILOMETERS FROM ANTENNA

