

Statement A
COMPREHENSIVE ENGINEERING STATEMENT
prepared for
University of North Texas
KNTU(FM) AUXILIARY McKinney, Texas
Facility ID 69003
Ch. 201C1 79 kW 111 m

University of North Texas (“*Texas*”), is the licensee of FM radio station KNTU(FM) (Ch. 201C1, McKinney, Texas). A Construction Permit has been granted to KNTU(FM) (FCC file number 0000193658) to reduce power and to operate as an omni-directional facility. A license to cover application is now pending (LMS file number 0000204739). *Texas* herein proposes to modify the station’s auxiliary antenna, to specify operation at reduced power in accordance with §73.1675 of the Rules. Specifically, *Texas* seeks to locate the auxiliary antenna at 33° 17’ 24.0” N Latitude and 97° 08’ 11.0” W Longitude (NAD 83), with an Effective Radiated Power (“ERP”) of 79 kW and an antenna height above average terrain (“HAAT”) of 111 meters. The coordinates specified represent a minor correction in order to agree with the registered tower (ASR 1053099). As the modification involves a simple power reduction, *Texas* is prepared to commence “construction” as soon as a CP is granted.

Figure 1 demonstrates that the 60 dB μ (1 mV/m) contour of the proposed auxiliary facility will not extend beyond the bounds of the 60 dB μ contour of the authorized main facility (file number 0000193658), in compliance with §73.1675(a)(1). The listing in **Table I** is being provided to demonstrate that the proposed auxiliary operation does not exceed the newly authorized main facility’s 60 dB μ contour in any direction. Because minimum distance spacing and contour protection rules do not apply to auxiliary facilities, the instant proposal is believed to comply with all pertinent FCC allocations requirements.

Based on data extracted from the FCC’s CDBS database, there are no Standard Broadcast AM stations located within 20 km of the proposed site. The closest AM station is KATH(AM) (910 kHz, Frisco, TX) at a distance of 23.6 km. Thus, the proposal will not require further study with respect to nearby AM facilities. The nearest FCC monitoring station is at Kingsville, Texas at a distance of 652.3 km from the proposed site. This exceeds by a great margin the minimum distance specified in §73.1030(c)(3)(iv) that would suggest consideration of the monitoring station.

It is thus believed that the facility proposed herein will satisfy all of the pertinent Commission Rules and Policies now in effect regarding allocation matters for an auxiliary facility.

Environmental Considerations

The proposed antenna is a Jampro model JSCP-6R, which is a 6-bay, full wave spaced antenna, which corresponds to the EPA Type 2: Opposed V Dipole style. It is side-mounted on an existing unregistered

Statement A
COMPREHENSIVE ENGINEERING STATEMENT
(page 2 of 3)

antenna support structure. The proposed effective radiated power (“ERP”) is 79 kilowatts with an antenna height above ground of 116 meters.

The use of existing transmitting locations has been characterized as being environmentally preferable by the Commission, according to Note 1 of §1.1306 of the FCC Rules. No change in structure height is proposed, thus no change in current structure marking and lighting requirements is anticipated. Therefore, it is believed that this application may be categorically excluded from environmental processing pursuant to §1.1306 of the Commission’s rules.

Human Exposure to Radiofrequency Radiation

In keeping with §1.1307(b) of the Commission’s Rules, the proposed operation has been evaluated for human exposure to radiofrequency energy using the procedures outlined by the Federal Communications Commission in FCC OET Bulletin 65 (“OET-65”). OET-65 describes a means of determining whether a proposed facility exceeds the radiofrequency exposure guidelines specified in §1.1310 of the Commission’s Rules. Under present Commission policy, a facility may be presumed to comply with the limits in §1.1310 of the Commission’s Rules if it satisfies the exposure criteria set forth in OET-65. Based upon that methodology, and as demonstrated in the following, the proposed transmitting system will comply with the cited adopted guidelines.

The general population/uncontrolled maximum permitted exposure (“MPE”) limit specified in §1.1310 for the entire FM broadcast band is $200 \mu\text{W}/\text{cm}^2$. For the purpose of this study, “public access” will be considered at the base of the tower at a location two meters above ground. Using the FCC’s FM Model program and an EPA Type 2: Opposed V Dipole antenna, it was determined that the proposed facility would contribute a worst-case RF power density of $45.2 \mu\text{W}/\text{cm}^2$ at two meters above ground level near the antenna support structure, or 22.6 percent of the general population/uncontrolled limit. Thus, based on this analysis, the Commission’s limit regarding general population / uncontrolled exposure to RF electromagnetic field is not exceeded at ground level locations near the KNTU(FM) Auxiliary site location. The only other authorized broadcast facility on the tower is the KNTU Main antenna, which will not operate at the same time, so consideration of the main is not a concern. No other broadcasters are close enough to have a significant additional contribution to exposure levels at this location.

Safety of Tower Workers and the General Public

As demonstrated herein, excessive levels of RF energy attributable to KNTU(FM) will not be caused at publicly accessible areas at ground level near the antenna supporting structure. Consequently, members of the general public will not be exposed to RF levels in excess of the Commission’s guidelines. Nevertheless,

Statement A
COMPREHENSIVE ENGINEERING STATEMENT
(page 3 of 3)

appropriate RF exposure warning signs will be posted and access will be restricted by fencing and other appropriate means.

With respect to worker safety, it is believed that based on the preceding analysis, excessive exposure would not occur in areas at ground level. A site exposure policy is employed protecting maintenance workers from excessive exposure when work must be performed on the tower or in areas where high RF levels may be present. Such protective measures include, but will not be limited to, restriction of access to areas where levels in excess of the guidelines may be expected, power reduction, or the complete shutdown of facilities when work or inspections must be performed in areas where the exposure guidelines would otherwise be exceeded. On-site RF exposure measurements may also be undertaken to establish the bounds of safe working areas.

Conclusion

Based on the preceding, it is believed that the instant proposal may be categorically excluded from environmental processing under § 1.1306 of the Rules; hence preparation of an Environmental Assessment is not required.

**FIGURE 1
COVERAGE CONTOUR COMPARISON**

prepared December 2022 for

**University of North Texas
KNTU(FM) Auxiliary McKinney, TX
Facility ID 69003
Ch. 201C1 79 kW 111 m HAAT**

**Cavell, Mertz & Associates, Inc.
Manassas, Virginia**

KNTU(FM) CP
55 kW 141m Omni
60 dB μ F(50,50)

KNTU(FM) Aux_Mod
79 kW 111 m Dir
60 dB μ F(50,50)

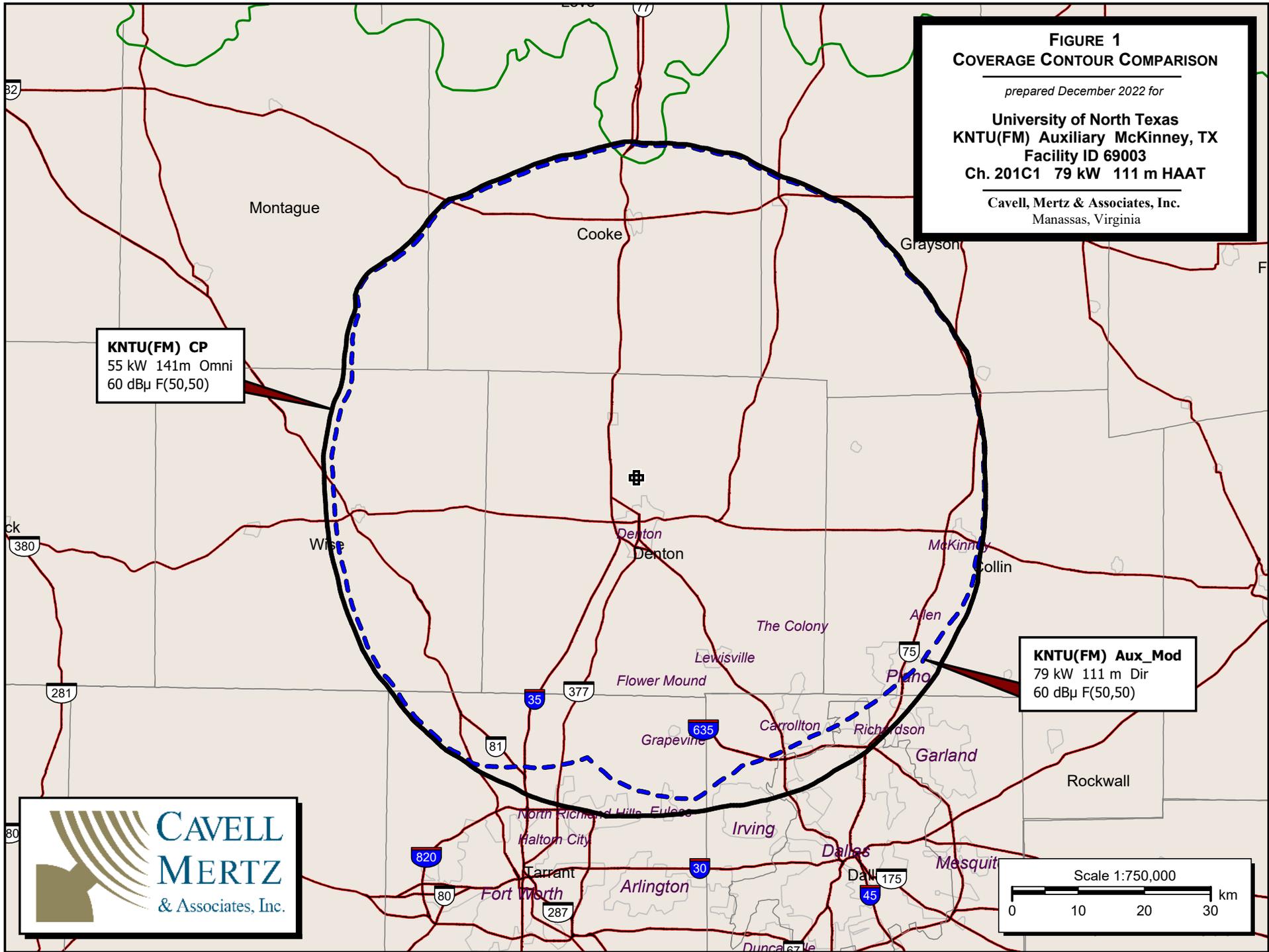
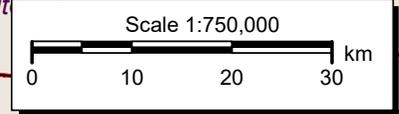


Table I
MAIN / AUX CONTOUR DISTANCE COMPARISON
 prepared November 2022 for
University of North Texas
 KNTU(FM) Auxiliary McKinney, TX
 Facility ID 69003
 Chan 201C1 79 kW 111 m

Azimuth (deg)	Main Dist (km)	Aux Dist (km)	Check
-----	-----	-----	-----
0	50.58	50.30	OK
1	50.41	50.08	OK
2	50.45	50.08	OK
3	50.46	50.09	OK
4	50.53	50.17	OK
5	50.63	50.27	OK
6	50.66	50.33	OK
7	50.64	50.31	OK
8	50.75	50.43	OK
9	50.80	50.51	OK
10	50.73	50.43	OK
11	50.67	50.33	OK
12	50.76	50.44	OK
13	50.70	50.38	OK
14	50.67	50.34	OK
15	50.72	50.38	OK
16	50.93	50.61	OK
17	51.04	50.77	OK
18	51.00	50.75	OK
19	50.90	50.63	OK
20	50.68	50.39	OK
21	50.55	50.22	OK
22	50.47	50.12	OK
23	50.44	50.08	OK
24	50.42	50.04	OK
25	50.37	49.99	OK
26	50.39	49.99	OK
27	50.55	50.18	OK
28	50.72	50.38	OK
29	50.80	50.49	OK
30	50.94	50.64	OK
31	51.02	50.74	OK
32	51.10	50.84	OK

Azimuth (deg)	Main Dist (km)	Aux Dist (km)	Check
33	51.20	50.95	OK
34	51.28	51.03	OK
35	51.47	51.23	OK
36	51.67	51.46	OK
37	51.93	51.75	OK
38	52.08	51.93	OK
39	52.14	51.99	OK
40	52.19	52.05	OK
41	52.23	52.10	OK
42	52.23	52.11	OK
43	52.05	51.94	OK
44	51.89	51.75	OK
45	51.77	51.62	OK
46	51.65	51.48	OK
47	51.63	51.45	OK
48	51.68	51.51	OK
49	51.72	51.55	OK
50	51.72	51.55	OK
51	51.57	51.41	OK
52	51.32	51.11	OK
53	51.31	51.08	OK
54	51.47	51.24	OK
55	51.64	51.45	OK
56	51.83	51.67	OK
57	51.96	51.81	OK
58	52.03	51.89	OK
59	52.05	51.91	OK
60	52.01	51.88	OK
61	51.98	51.84	OK
62	52.13	51.99	OK
63	52.35	52.23	OK
64	52.49	52.38	OK
65	52.57	52.47	OK
66	52.62	52.51	OK
67	52.76	52.66	OK
68	52.97	52.88	OK
69	53.25	53.18	OK
70	53.26	53.21	OK
71	53.05	52.99	OK
72	52.97	52.89	OK
73	52.82	52.75	OK
74	52.68	52.58	OK

Azimuth (deg)	Main Dist (km)	Aux Dist (km)	Check
75	52.57	52.47	OK
76	52.51	52.40	OK
77	52.55	52.45	OK
78	52.58	52.48	OK
79	52.60	52.50	OK
80	52.63	52.53	OK
81	52.63	52.52	OK
82	52.63	52.53	OK
83	52.64	52.53	OK
84	52.69	52.59	OK
85	52.70	52.58	OK
86	52.61	52.50	OK
87	52.50	52.37	OK
88	52.46	52.32	OK
89	52.48	52.33	OK
90	52.51	52.36	OK
91	52.58	52.43	OK
92	52.61	52.45	OK
93	52.65	52.48	OK
94	52.69	52.50	OK
95	52.76	52.57	OK
96	52.82	52.62	OK
97	52.84	52.62	OK
98	52.93	52.69	OK
99	52.95	52.71	OK
100	52.98	52.73	OK
101	52.99	52.66	OK
102	53.00	52.60	OK
103	53.05	52.58	OK
104	53.13	52.60	OK
105	53.31	52.72	OK
106	53.55	52.91	OK
107	53.74	53.03	OK
108	53.78	53.01	OK
109	53.80	52.96	OK
110	53.84	52.92	OK
111	53.85	52.79	OK
112	53.88	52.69	OK
113	53.83	52.50	OK
114	53.72	52.24	OK
115	53.61	51.98	OK
116	53.60	51.81	OK

Azimuth (deg)	Main Dist (km)	Aux Dist (km)	Check
117	53.61	51.72	OK
118	53.65	51.61	OK
119	53.67	51.48	OK
120	53.67	51.34	OK
121	53.67	51.18	OK
122	53.82	51.18	OK
123	53.97	51.19	OK
124	53.96	51.00	OK
125	53.90	50.76	OK
126	53.88	50.56	OK
127	53.85	50.35	OK
128	53.83	50.16	OK
129	53.81	49.95	OK
130	53.80	49.77	OK
131	53.81	49.62	OK
132	53.80	49.45	OK
133	53.80	49.29	OK
134	53.78	49.10	OK
135	53.76	48.90	OK
136	53.76	48.74	OK
137	53.78	48.60	OK
138	53.80	48.44	OK
139	53.81	48.30	OK
140	53.83	48.14	OK
141	53.76	47.97	OK
142	53.66	47.79	OK
143	53.57	47.61	OK
144	53.42	47.37	OK
145	53.28	47.16	OK
146	53.21	47.01	OK
147	53.25	46.98	OK
148	53.26	46.91	OK
149	53.21	46.78	OK
150	53.22	46.73	OK
151	53.16	46.73	OK
152	53.06	46.69	OK
153	52.93	46.62	OK
154	52.77	46.52	OK
155	52.65	46.47	OK
156	52.52	46.42	OK
157	52.42	46.40	OK
158	52.31	46.35	OK

Azimuth (deg)	Main Dist (km)	Aux Dist (km)	Check
159	52.11	46.22	OK
160	52.00	46.18	OK
161	51.90	46.53	OK
162	51.82	46.88	OK
163	51.58	47.03	OK
164	51.31	47.17	OK
165	51.20	47.47	OK
166	51.15	47.84	OK
167	51.14	48.23	OK
168	51.14	48.62	OK
169	51.11	48.96	OK
170	51.05	49.27	OK
171	50.90	48.91	OK
172	50.94	48.77	OK
173	51.01	48.61	OK
174	50.98	48.38	OK
175	50.96	48.16	OK
176	50.99	47.98	OK
177	50.96	47.72	OK
178	50.88	47.43	OK
179	50.86	47.21	OK
180	50.91	47.06	OK
181	50.93	46.71	OK
182	50.96	46.35	OK
183	50.98	46.00	OK
184	51.05	45.70	OK
185	51.13	45.36	OK
186	50.95	44.76	OK
187	50.83	44.22	OK
188	50.72	43.72	OK
189	50.67	43.24	OK
190	50.62	42.76	OK
191	50.63	43.20	OK
192	50.63	43.63	OK
193	50.63	44.04	OK
194	50.60	44.41	OK
195	50.62	44.82	OK
196	50.61	45.20	OK
197	50.56	45.52	OK
198	50.54	45.87	OK
199	50.49	46.18	OK
200	50.41	46.43	OK

Azimuth (deg)	Main Dist (km)	Aux Dist (km)	Check
201	50.22	46.61	OK
202	50.12	46.85	OK
203	50.11	47.23	OK
204	50.17	47.67	OK
205	50.17	48.02	OK
206	50.14	48.35	OK
207	50.18	48.76	OK
208	50.20	49.11	OK
209	50.15	49.38	OK
210	50.08	49.60	OK
211	49.95	49.44	OK
212	49.90	49.39	OK
213	49.93	49.42	OK
214	50.03	49.56	OK
215	50.07	49.59	OK
216	50.03	49.54	OK
217	49.92	49.39	OK
218	49.81	49.26	OK
219	49.78	49.21	OK
220	49.71	49.13	OK
221	49.68	49.10	OK
222	49.70	49.11	OK
223	49.66	49.05	OK
224	49.54	48.90	OK
225	49.47	48.81	OK
226	49.39	48.70	OK
227	49.28	48.55	OK
228	49.12	48.33	OK
229	49.06	48.27	OK
230	48.99	48.16	OK
231	48.98	48.15	OK
232	49.06	48.29	OK
233	49.07	48.29	OK
234	49.00	48.19	OK
235	48.91	48.07	OK
236	48.86	48.00	OK
237	48.82	47.94	OK
238	48.76	47.87	OK
239	48.62	47.67	OK
240	48.50	47.52	OK
241	48.38	47.37	OK
242	48.29	47.26	OK

Azimuth (deg)	Main Dist (km)	Aux Dist (km)	Check
243	48.24	47.18	OK
244	48.17	47.10	OK
245	48.13	47.05	OK
246	48.06	46.95	OK
247	47.97	46.84	OK
248	47.92	46.78	OK
249	47.84	46.67	OK
250	47.72	46.52	OK
251	47.58	46.35	OK
252	47.52	46.28	OK
253	47.47	46.22	OK
254	47.48	46.22	OK
255	47.45	46.20	OK
256	47.45	46.19	OK
257	47.41	46.13	OK
258	47.36	46.07	OK
259	47.32	46.02	OK
260	47.23	45.92	OK
261	47.21	45.89	OK
262	47.17	45.84	OK
263	47.15	45.82	OK
264	47.11	45.76	OK
265	47.08	45.74	OK
266	47.08	45.72	OK
267	47.08	45.72	OK
268	47.10	45.74	OK
269	47.13	45.78	OK
270	47.13	45.78	OK
271	47.14	45.80	OK
272	47.23	45.91	OK
273	47.31	46.02	OK
274	47.36	46.08	OK
275	47.32	46.03	OK
276	47.25	45.94	OK
277	47.20	45.88	OK
278	47.17	45.84	OK
279	47.14	45.81	OK
280	47.14	45.81	OK
281	47.14	45.81	OK
282	47.11	45.77	OK
283	47.10	45.74	OK
284	47.05	45.68	OK

Azimuth (deg)	Main Dist (km)	Aux Dist (km)	Check
285	46.92	45.53	OK
286	46.75	45.31	OK
287	46.68	45.21	OK
288	46.74	45.29	OK
289	46.84	45.41	OK
290	47.03	45.64	OK
291	47.28	45.96	OK
292	47.59	46.35	OK
293	47.83	46.65	OK
294	48.03	46.89	OK
295	48.30	47.23	OK
296	48.65	47.68	OK
297	48.84	47.94	OK
298	49.00	48.17	OK
299	49.18	48.41	OK
300	49.28	48.55	OK
301	49.49	48.82	OK
302	50.02	49.48	OK
303	50.61	50.24	OK
304	50.85	50.55	OK
305	50.95	50.67	OK
306	50.99	50.72	OK
307	50.96	50.70	OK
308	50.81	50.53	OK
309	50.51	50.17	OK
310	50.24	49.82	OK
311	50.05	49.59	OK
312	49.72	49.15	OK
313	49.59	48.98	OK
314	49.45	48.80	OK
315	49.39	48.71	OK
316	49.34	48.63	OK
317	49.38	48.67	OK
318	49.45	48.77	OK
319	49.52	48.86	OK
320	49.71	49.10	OK
321	49.98	49.46	OK
322	50.15	49.68	OK
323	50.29	49.86	OK
324	50.45	50.05	OK
325	50.63	50.26	OK
326	50.62	50.29	OK

Azimuth (deg)	Main Dist (km)	Aux Dist (km)	Check
327	50.31	49.93	OK
328	50.05	49.61	OK
329	49.83	49.31	OK
330	49.77	49.22	OK
331	49.78	49.23	OK
332	49.79	49.25	OK
333	49.75	49.20	OK
334	49.66	49.08	OK
335	49.56	48.96	OK
336	49.52	48.87	OK
337	49.52	48.87	OK
338	49.55	48.92	OK
339	49.55	48.92	OK
340	49.56	48.93	OK
341	49.64	49.03	OK
342	49.71	49.13	OK
343	49.70	49.14	OK
344	49.72	49.14	OK
345	49.76	49.19	OK
346	49.85	49.30	OK
347	49.85	49.34	OK
348	49.74	49.20	OK
349	49.69	49.13	OK
350	49.68	49.11	OK
351	49.75	49.18	OK
352	49.89	49.35	OK
353	50.04	49.54	OK
354	50.14	49.65	OK
355	50.26	49.80	OK
356	50.42	50.00	OK
357	50.57	50.19	OK
358	50.67	50.34	OK
359	50.68	50.39	OK