

**Engineering Statement
Supporting Minor Modification
for KBLM-LP, Facility ID 38561
File No. BPTTL-20020530ACP**

1. This Statement, prepared by Louis Martinez ("Martinez"), an engineer and licensee of station KBLM-LP, Riverside-Perris, CA, is in response to "Informal Objection" filed by Venture Technologies Group ("VTG") including an attached Engineering Statement prepared by Mr. Lawrence Rogow ("Rogow") dated July 3, 2002. VTG claims that KBLM-LP's proposed power increase will interfere with two of its own stations and a third party station. This Statement demonstrates that VTG has erroneously applied FCC Rules in several instances. To resolve issues raised by VTG that are consistent with the FCC's Rules, As a solution, an amendment is being filed to the KBLM-LP application to reduced ERP in the horizontal plane by increasing antenna down tilt, while leaving maximum ERP unchanged.

Summary

2. VTG claims that KBLM-LP's proposed power increase on Channel 25+ would cause unacceptable interference to VTG's co-channel station KNET-LP, Facility ID 3167, operating on Channel 25z. An error in VTG's analysis is the contention that receiving antenna front/back (F/B) attenuation is applicable only to DTV issues and not to analog-to-analog TV cases. That is incorrect, as discussed later in this Statement. There is no interference to KNET-LP when the F/B ratio is properly applied and KBLM-LP's proposed ERP is reduced, as demonstrated below.

3. VTG claims that KBLM-LP's proposal will cause interference to its adjacent channel Station KSFV-LP, Facility ID 49704, operating on Channel 26. VTG computes and presents interference based on the predicted coverage area of KBLM-LP based on the FCC's F(50,10) curves,¹ but that is incorrect. For adjacent channel interference cases, the FCC F(50,50) must be applied.² When this is done properly, no interference will be caused, as demonstrated below.

4. VTG claims³ that KBLM-LP's proposal will cause interference to 0.1% of the population of KGTV-DT, Channel 25, Facility ID 30876, at its currently licensed facility with an ERP of 809.1 kW. The 809 kW figure does not appear in the FCC's database. Rather, KGTV-DT is shown as licensed for 316 kW ERP, operating under an STA for 316 kW ERP, and holding a construction permit for 1,000 kW ERP. At 316 kW ERP, VTG itself shows interference at 0.3%. Since both 0.1% and 0.3% are below the 0.5% level that is rounded to 0%, KBLM-LP's proposal causes no objectionable interference to KGTV-DT.

¹ VTG Attachment 2, column 21, line 19

² See FCC Rule Section 74.705 (c) (2)

³ VTG Attachment 2, lines 1 and 2

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5. VTG argues out that KBLM-LP is short-spaced to KGET-DT, Facility ID 34459, operating on Channel 25, but its own analysis goes on to show⁴ that KBLM-LP will not cause inference to KGET-DT. That analysis is in fact correct, because intervening large mountains provide terrain shielding, so the KBLM-LP signal cannot reach KGET-DT's service area. To the extent that KBLM-LP is at fault for not explicitly requesting a rule waiver to allow reliance on terrain shielding, that waiver is hereby requested.

Detailed Discussion

6. KBLM-LP Vertical Pattern. Although VTG's technical argument is vague and ambiguous on this point, it appears to suggest that KBLM-LP's vertical pattern for the proposed Bogner antenna, which has a vertical beamwidth of 6 degrees, leads to the conclusion that KBLM-LP proposed down-tilted maximum power of 42.5 kW also exists toward the horizon, even though the KBLM-LP states clearly that (as a result of down-tilt), ERP toward the horizon will be only 26.6 kW, a reduction of 2.2 dB below maximum ERP. The amount of tilt required was computed based on analysis of Bogner data and was found to be 2.5 degrees, a point that VTG has not challenged. To dispel any uncertainty, and to solve other problems, *the KBLM is being amended to reduce its power-to-horizon from 26.6 kW to 17.5 kW and modify its minor modification application accordingly.*

7. VTG's Attachments 3 and 4 Are Inapplicable. Because VTG's assumption of 42.5 kW ERP as a measure of interference potential is in error, its Attachments 3 and 4 must be disregarded, as they are all based on an incorrect ERP assumption.

8. No Interference to KNET-LP. It has already been pointed out that VTG is incorrect in stating that receiving antenna F/B attenuation performance may not be applied in analog TV cases. The engineering exhibit to the KBLM-LP application pointed out that those TV viewer antennas lying between KNET-LP and KBLM-LP point their receiving antennas toward Mt. Wilson in such a manor as to be at least 33 degrees off-axis relative to KBLM-LP. At that point a typical UHF antenna gain falls off about 7.5 dB relative to maximum gain, so the "interfering" power from KBLM-LP would be accordingly less. In this regard, VTG points out that while 6 dB may be used in some cases, "[r]eceiver attenuation 14 dB, as utilized by Martinez to claim non-interference from one NTSC LPTV facility to another is incorrect and not allowed by FCC rules."⁵ Martinez did not use 14 dB attenuation; he used 7.5 dB. However, that assumption is now being reduced to 6 dB, which is the ratio for analog antennas explicitly provided in Bulletin OET-69. These two stations' viewers lie in opposite directions, allowing the 6 dB maximum F/B to apply. The 6 dB figure is applied as follows: for co-channel cases with offset, a 28 dB protection margin applies, but that figure is reduced by the 6 dB F/B figure discussed above. Therefore it is the KBLM-LP 52 dBu F(50,10) contour that must not traverse the KNET-LP 74 dBu F(50,50) contour to avoid objectionable interference. The KBLM-LP

⁴ VTG Attachment 2, lines 6 and 7

⁵ FCC OET Bulletin 69 (Table 6) permits a 6 dB figure for analog cases.

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52 dBu contour has been recomputed based on a horizontal ERP of 17.5 kW (see attached as figure 1), and it shows that the KBLM-LP contour will not then traverse the KNET-LP 74 dBu contour. There is also terrain shielding between KNET-LP and KBLM-LP, as demonstrated in Figures 2 through 5 which show terrain profiles covering the area between the KBLM-LP and KNET-LP service area boundaries. The terrain shielding results in even greater reduction in interference potential.

9. No Interference to KSFV-LP. VTG erroneously applied F(50,10) curves to find adjacent channel interference to KSFV-LP. As previously noted, however, the F(50,50) curves should have been used. Martinez has recomputed those figures; results are shown in attached Figure 6. A margin of +15 dB is permitted for protection of adjacent channels; that is, the undesired F(50,50) contour may not exceed the desired 74 dBu F(50,50) contour by more than 15 dB. Figure 6 shows there is no interference from KBLM-LP at 17.5 kW ERP to KSFV-LP. Furthermore, since Channel 26 locally has been assigned to KVCR-DT, Facility ID 58795, San Bernardino, California, and KSFV-LP does not protect KVCR-TV, any interference from KBLM-LP to KSFV-LP will soon become moot, because KSFV-LP will be displaced. Since KBLM-LP is collocated with KVCR-DT, there will be no interference between KBLM-LP and KVCR-DT.

10. Future Interference to KGTV-DT. KGTV-DT, Facility ID 40876, holds a construction permit to increase power to 1,000 kW in the future. While VTG finds no objectionable interference at the present ERP of 316 kW, it computes that KBLM-LP will cause 0.7% interference when KGTV-DT implements its power increase. It has been noted above that KBLM-LP's interference to KGTV-DT, as computed by VRG for 809.1 kW ERP, is only 0.1%. VTG's figures thus show a jump from 0.1% to 0.7% when KGTV-DT increases ERP from 809.1 kW to 1,000 kW (23.6%). Since the KBLM-LP is being amended to reduce horizontal ERP 34.2% (from 26.6 to 17.5 kW), the power reduction will offset interference to KGTV-DT sufficiently to bring it below the 0.5% level that is rounded to zero, thereby eliminating interference even with KGTV-DT at 1,000 kW. It should be noted, however, that Martinez has showed in previous filings for KBLM-LP that the only KBLM-LP signal that can "leak" into KGTV's service area must skim over the tops of a bisecting mountain range lying between these two stations. Consequently KBLM illuminates the north faces of those mountain heights, and KGTV illuminates the south faces, and these areas are generally mutually exclusive. Most computer programs deal with this mountain-type problem in a coarse fashion, since Census population blocks and the topographic blocks may not coincide with each other or with the boundaries of the north facing and south facing mountain surfaces. When dealing with population counts to achieve accuracies in the range of only tenths of percent points, resulting confidence figures are poor. More detailed investigation in the future is required for these mountain applications. The mountain-top issue need not be resolved, however, because as shown above, KBLM-LP will not cause interference to KGTV-DT at any authorized power level. Even if there were more than 0.5% interference with KGTV-DT at 1,000 kW, there is no impediment to a grant of the KBLM-LP application. KBLM-LP is not a Class A station and thus has no rights against KGTV-DT. KGTV-DT may never implement its construction permit for 1,000 kW, and

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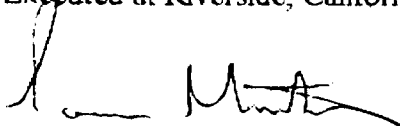
KBLM-LP clearly will cause no objectionable interference in the interim. When and if KGTV-DT increases power, and if any objectionable interference then occurs in actual practice, Martinez recognizes that KBLM-LP will have to adjust its operating parameters to eliminate that interference. Martinez could also negotiate to obtain KGTV-DT's consent to its continued operation with no change in facilities.

11. No Interference to KGET-DT. There is terrain shielding between KGET-DT, Facility ID 34459, and KBLM-LP, as shown in Figures 7 to 9. Also, figures presented by VTG in its Attachment 2 demonstrate there is no interference between these two stations. As indicated above, to the extent that KBLM-LP is at fault for not explicitly requesting a rule waiver to allow reliance on terrain shielding, that waiver is hereby requested.

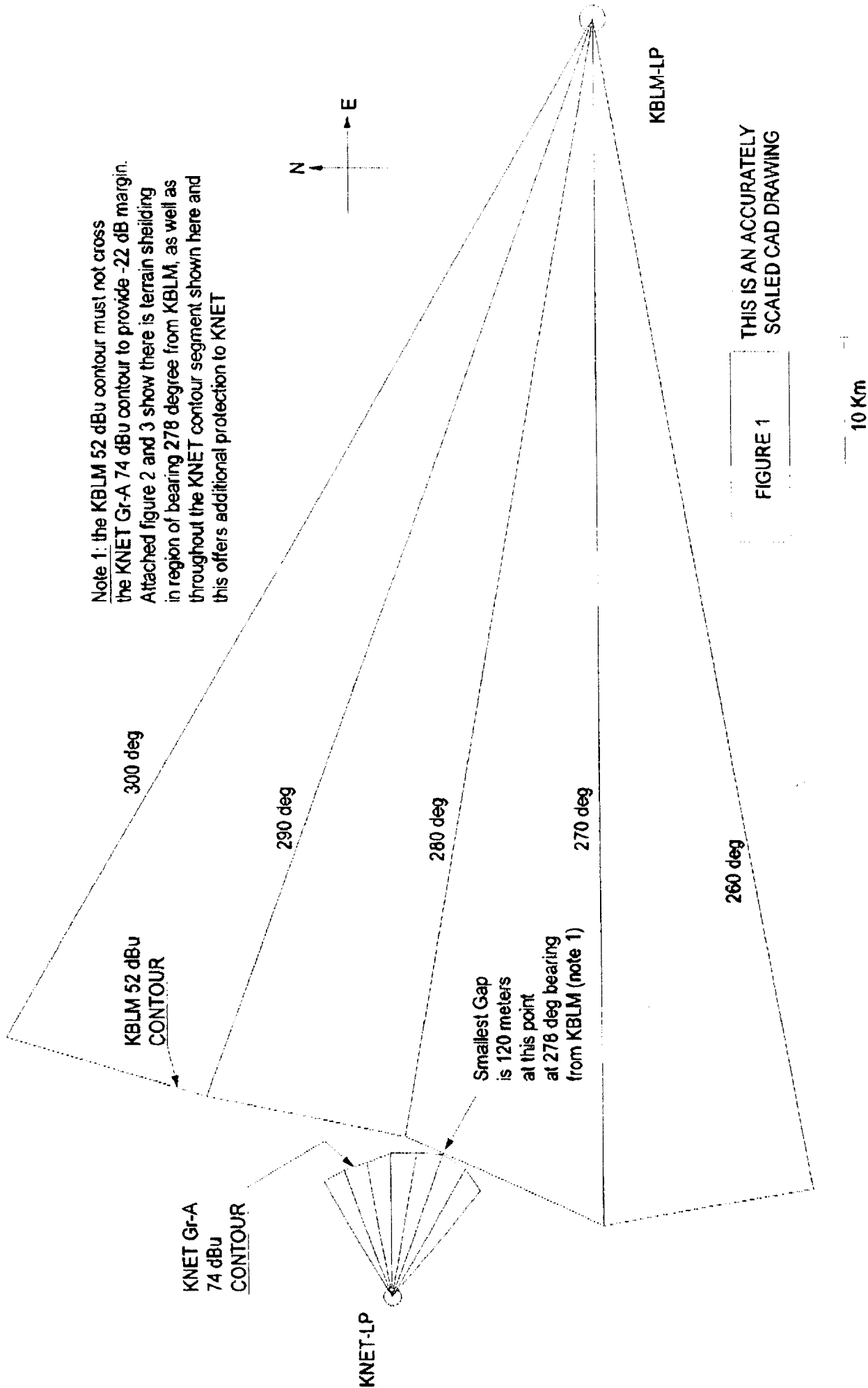
Declaration of Preparer

I hereby declare under penalty of perjury that the foregoing Engineering Statement was personally prepared by me and is true and correct to the best of my knowledge and belief.

Executed at Riverside, California, July 18, 2002.



Louis Martinez
KBLM-LP Licensee and Engineer



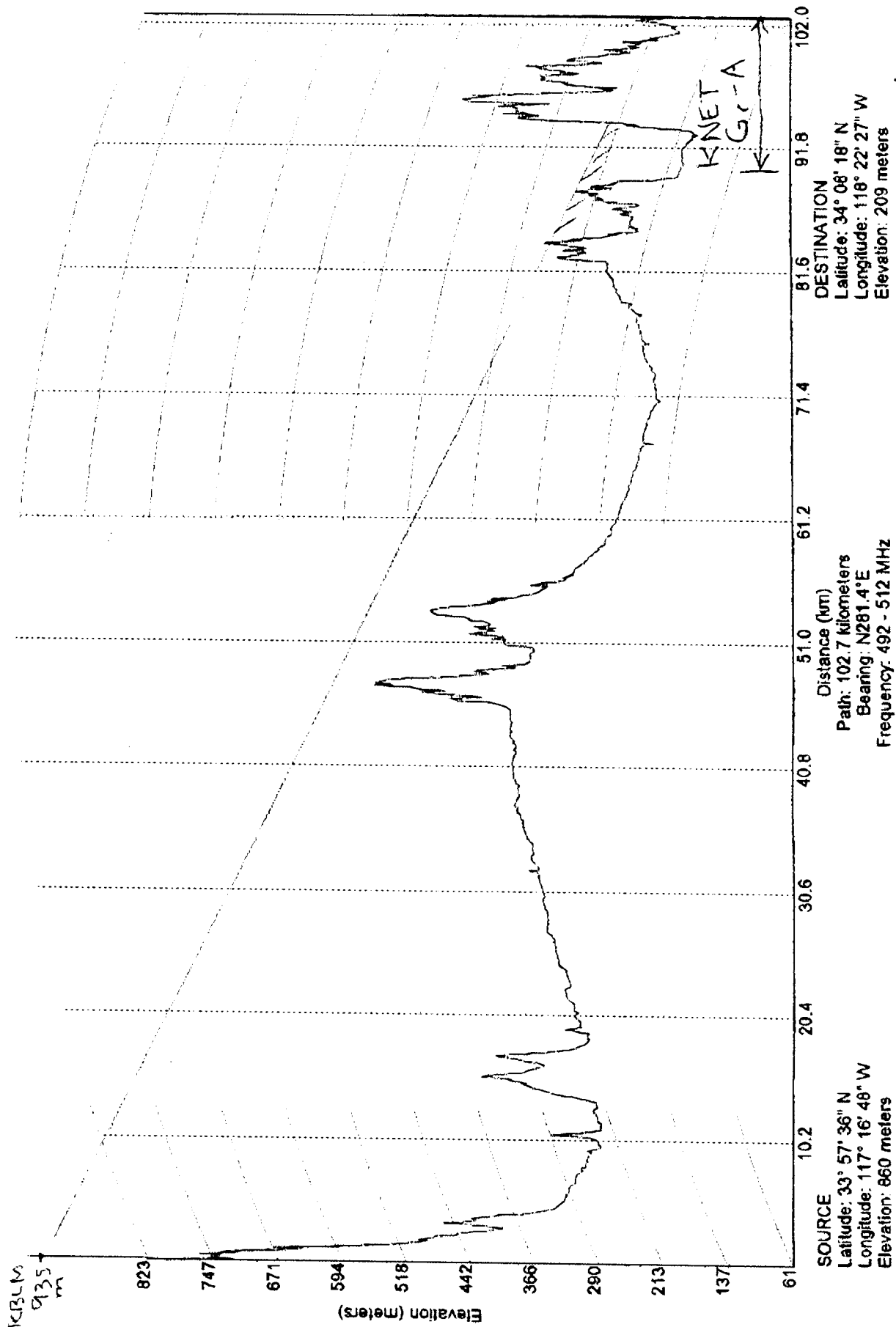


Figure 2. This shows that KNET is terrain shielded in its grade A Area north of the line between KNET and KBLM

KNET
 NORTH
 AREA

KBLM

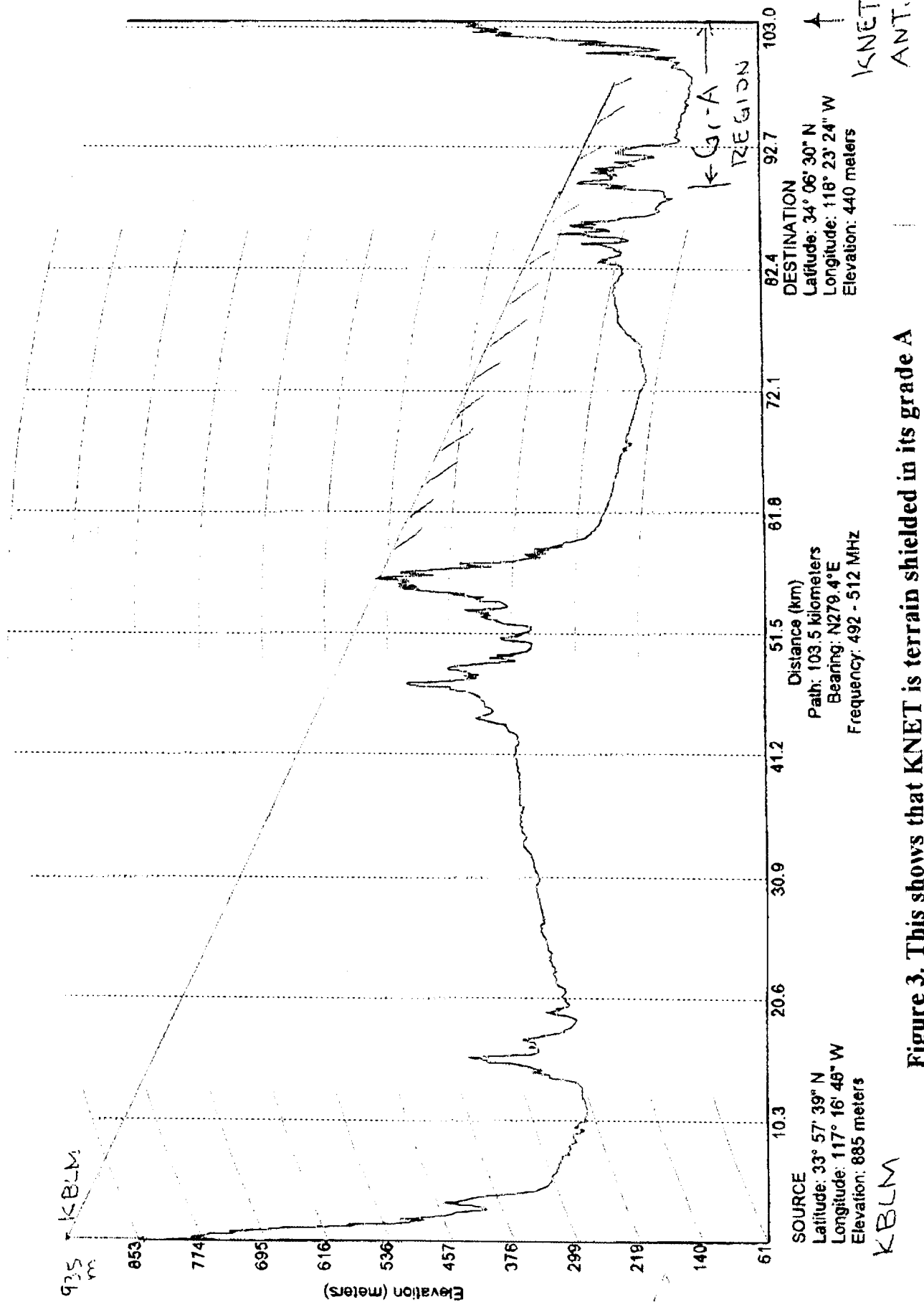


Figure 3. This shows that KNET is terrain shielded in its grade A Area lying along the line between KNET and KBLM

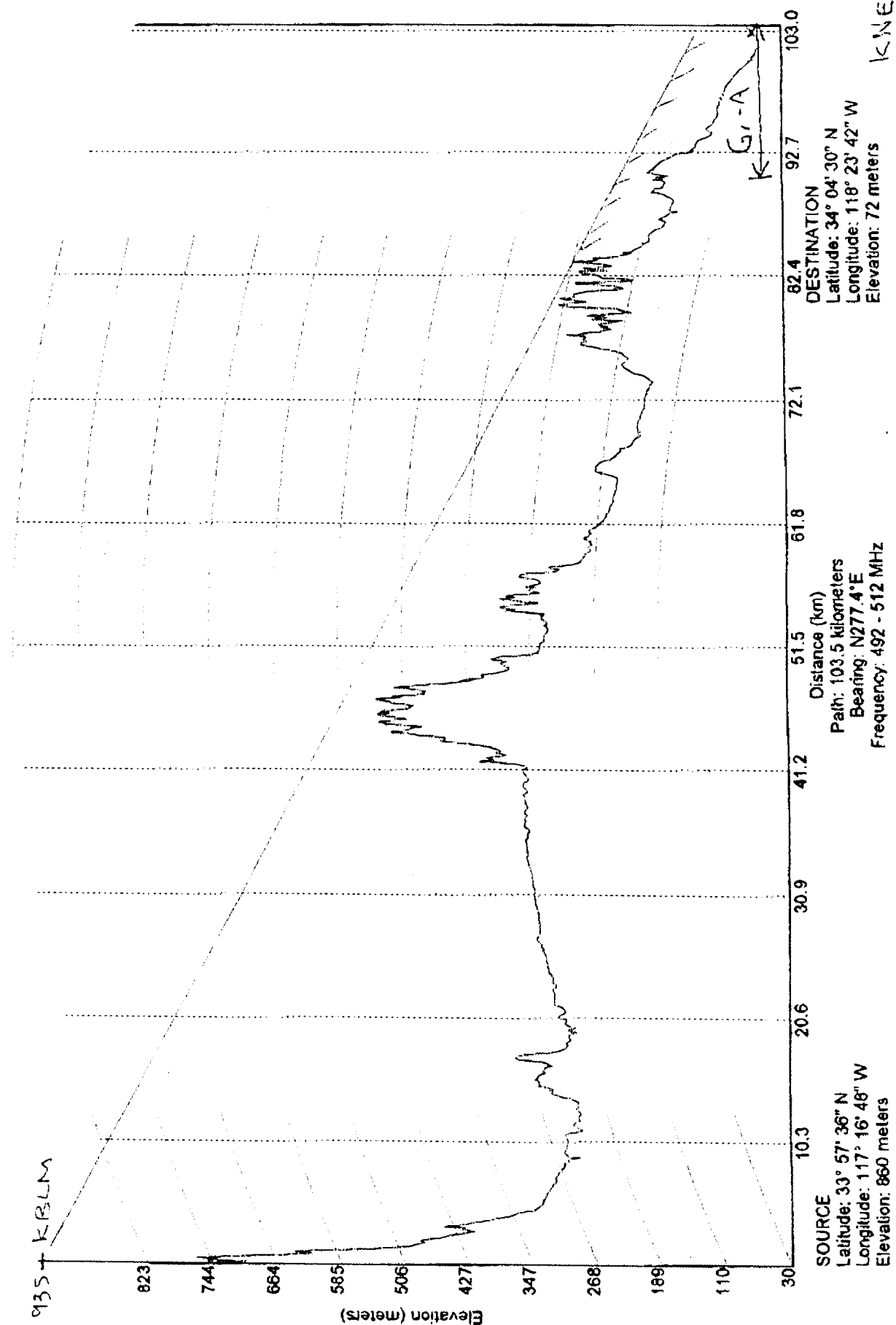
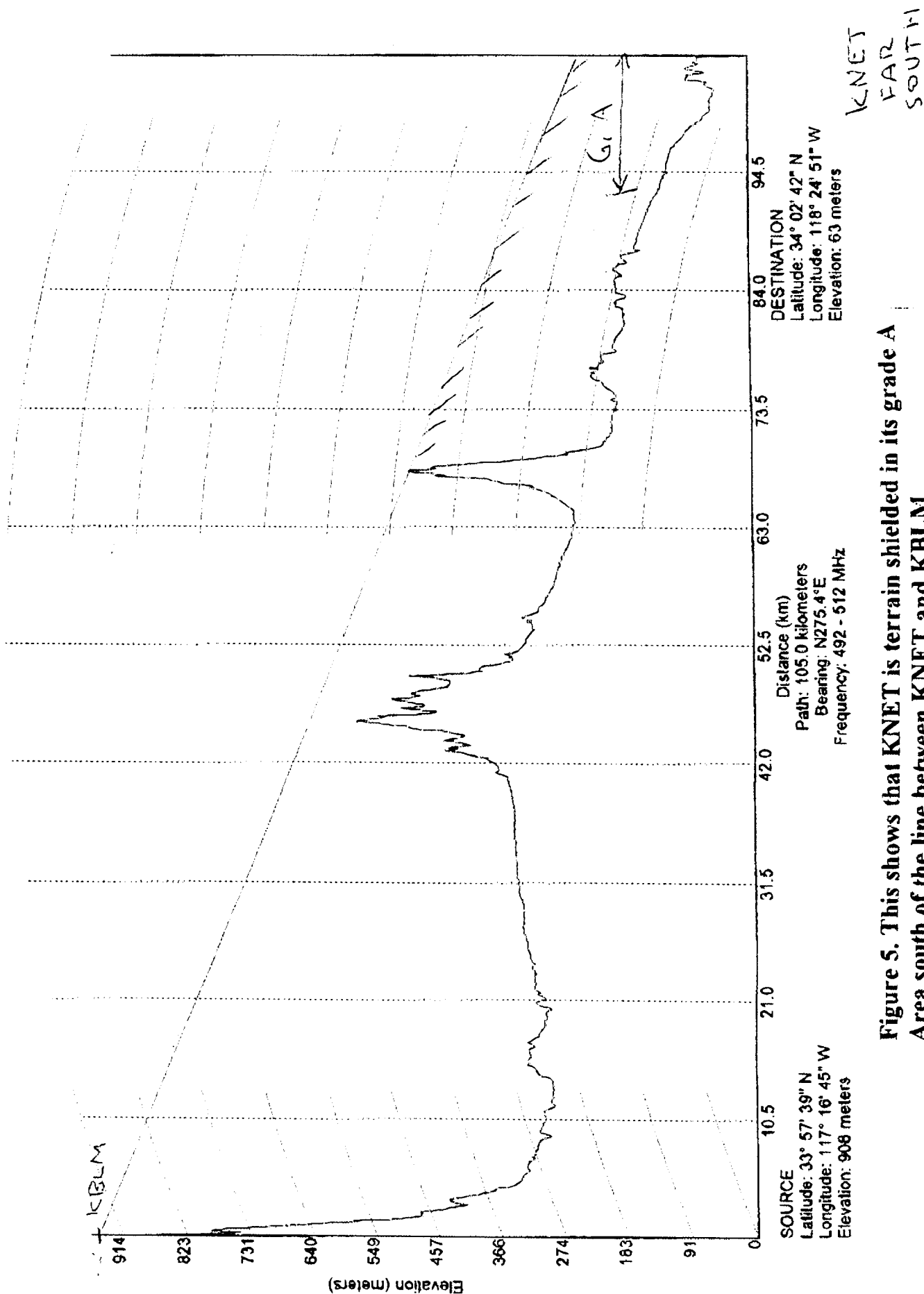


Figure 4. This shows that KNET is terrain shielded in its grade A Area just south of the line between KNET and KBLM.



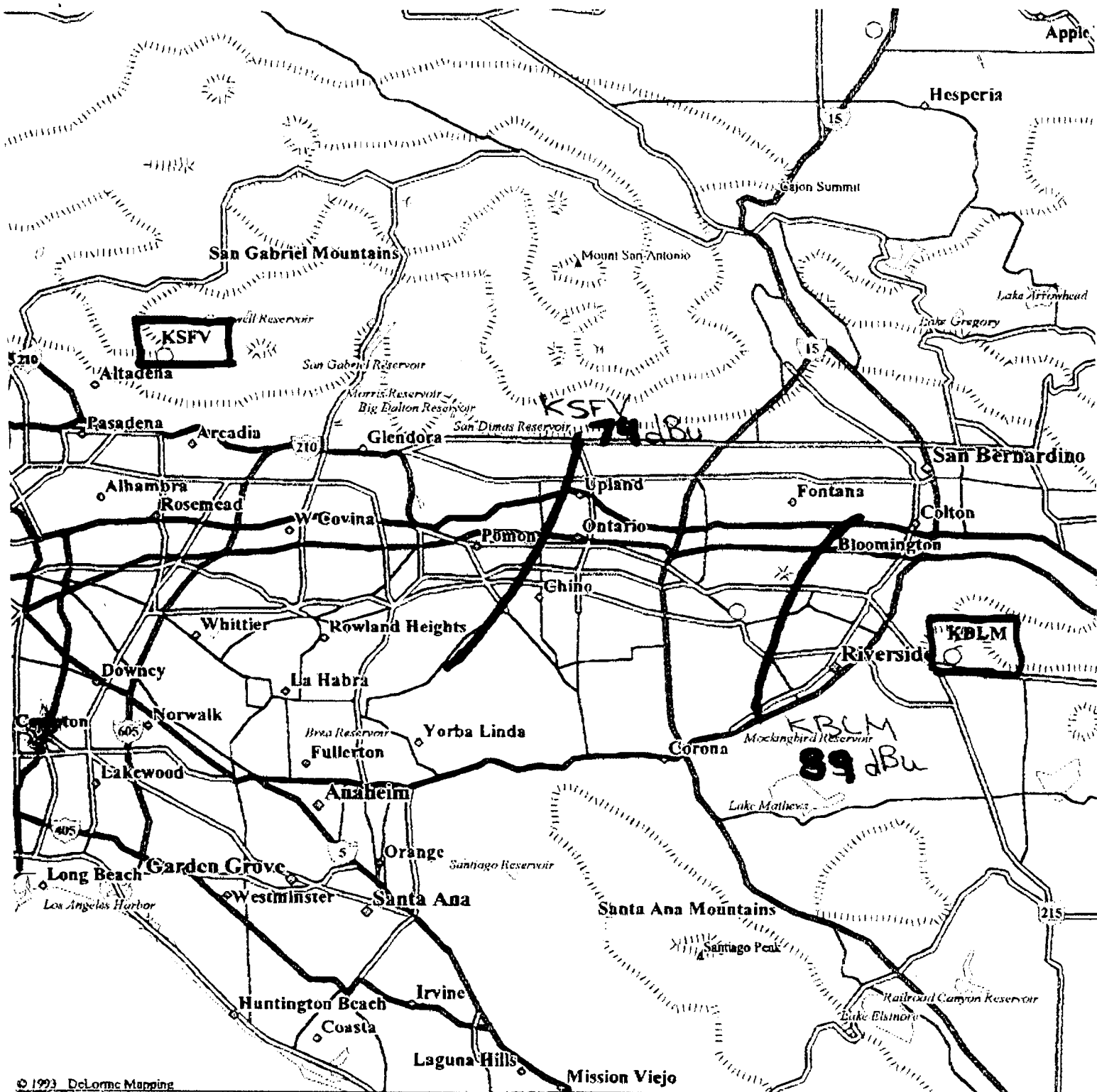


Figure 6. This shows that there is no overlap between KBLM 89 dBu contour and KNET grade A 74 dBu contour, thus no adjacent channel interference.

Elevations--WGS84 for Earth Curvature

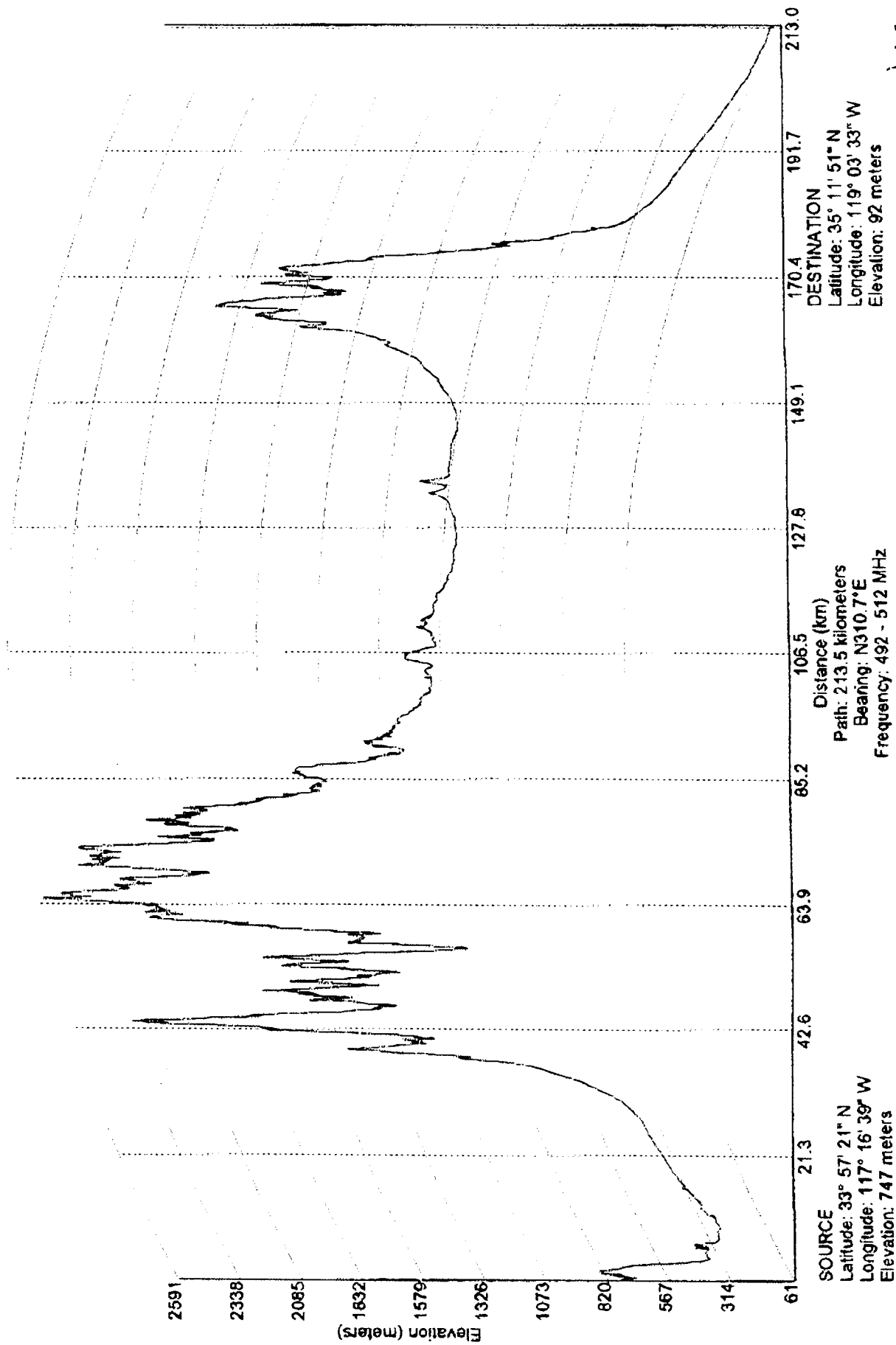


Figure 7. This figure shows the terrain shielding between KBLM and KGET for the service area north on KGET.

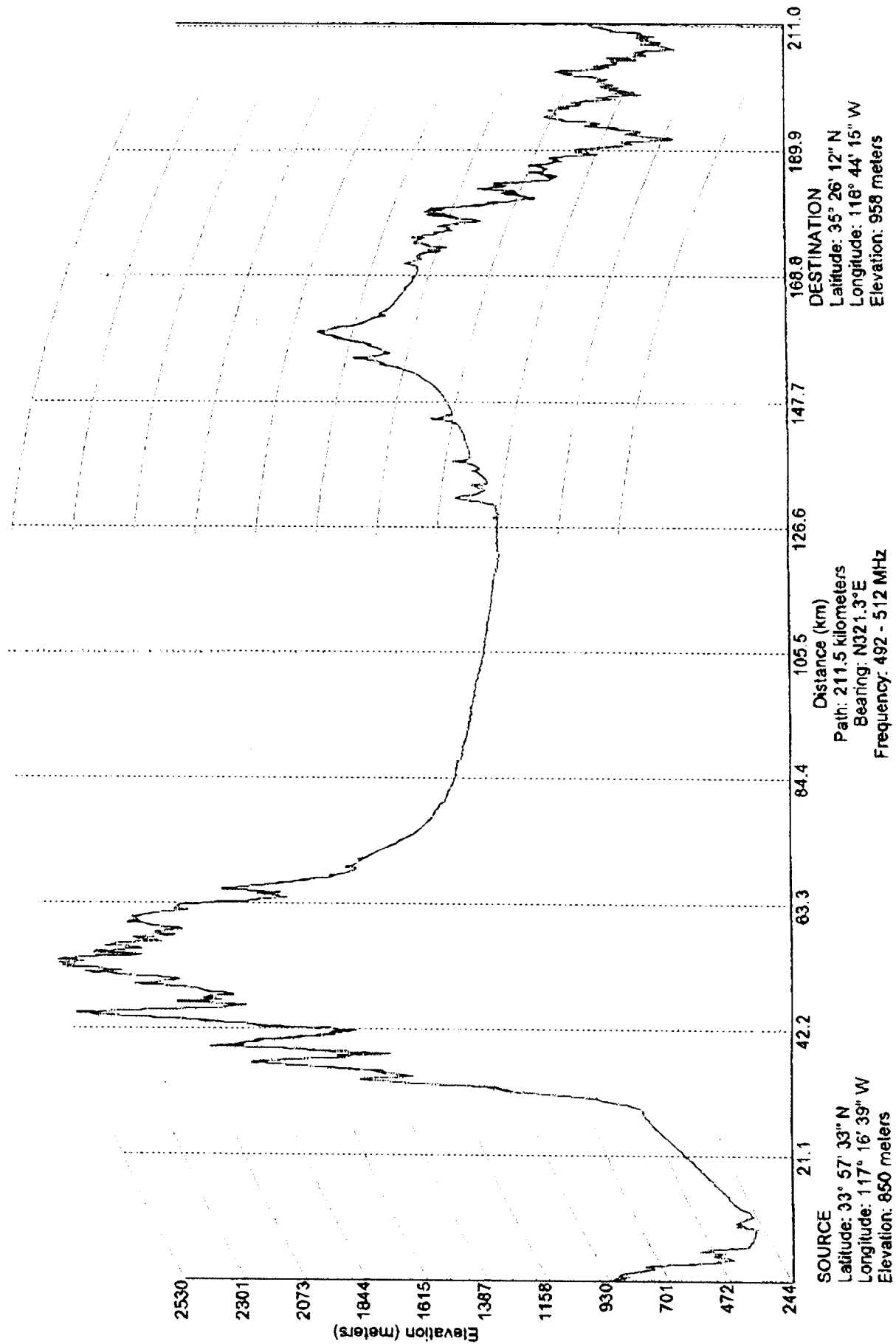


Figure 8. This figure shows the terrain shielding between KBLM and KGET for the service area east on KGET (between both stations).

KGET

KBLM

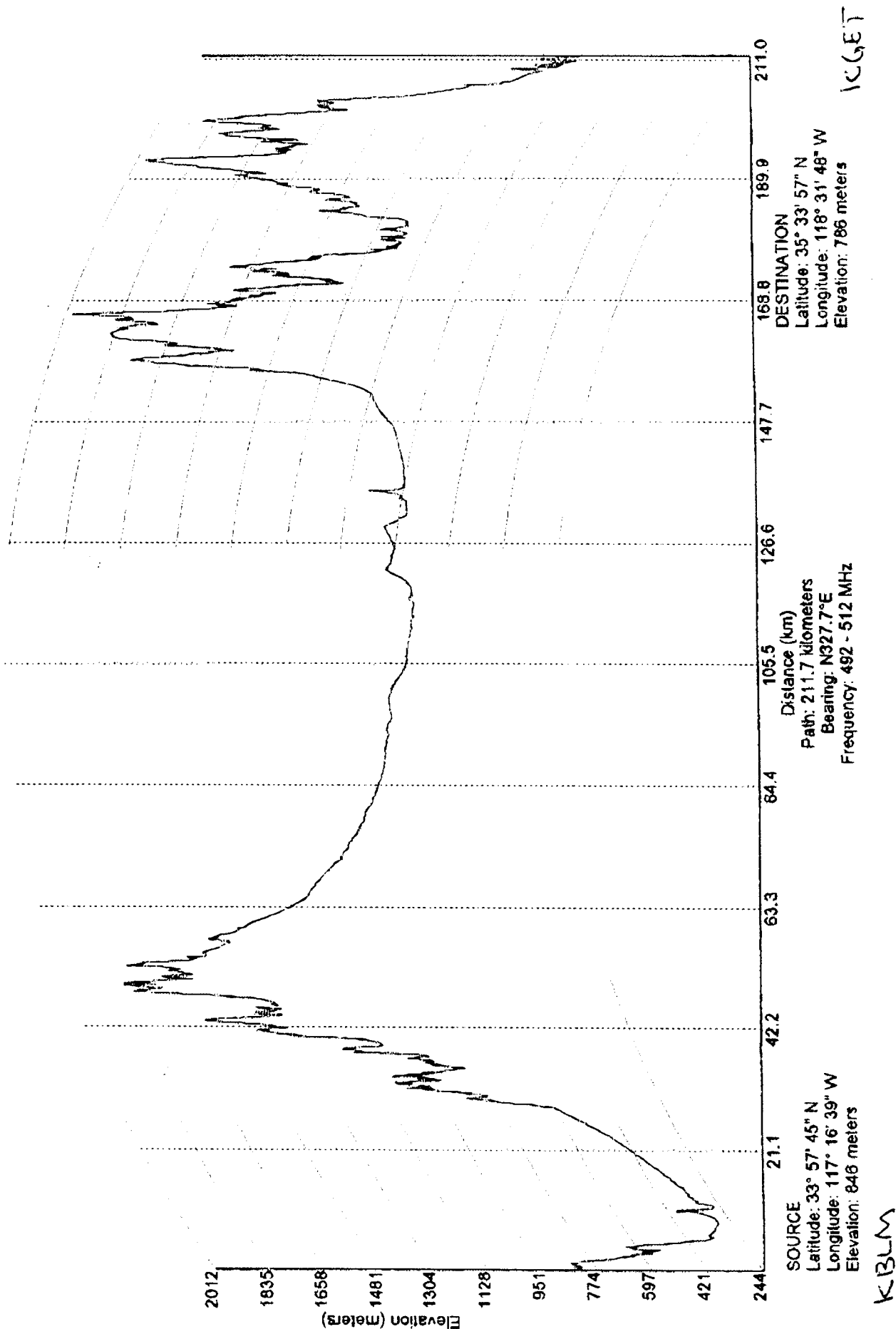


Figure 9. This figure shows the terrain shielding between KBLM and KGET for the service area south on KGET.