

Interoffice

## National Radio Astronomy Observatory

Green Bank, West Virginia

February 7, 1983

To: Jim Coe

From: K. I. Kellermann

Subject: Radio link between VLBA and VLA antennas

We wish to connect the two VLBA antennas nearest to the VLA by a real time radio link. There are several reasons to do this.

1) Either or both of the antennas can be used in place of two VLA antennas as part of an extended VLA to increase the angular resolution by a factor of 2 to 3.

2) Since the VLBA recorders will be at the VLA, these two antennas will normally operate in a completely unattended mode. Personnel will not be required to visit the site for tape changes, but only for scheduled and emergency repair.

We will require a local oscillator link with a stability, if feasible, comparable to the longest waveguide connected VLA antennas, and an i.f. link to carry at least 100 and preferably 200 MHz.

The enclosed sketches prepared by Sid Smith show the location of the VLBA stations, and possible routing for the links. Both relay points are developed and have roads and power, so active as well as passive relays might be considered.

At this time, we would like a budgetary estimate.

KIK/bbs  
Enc.

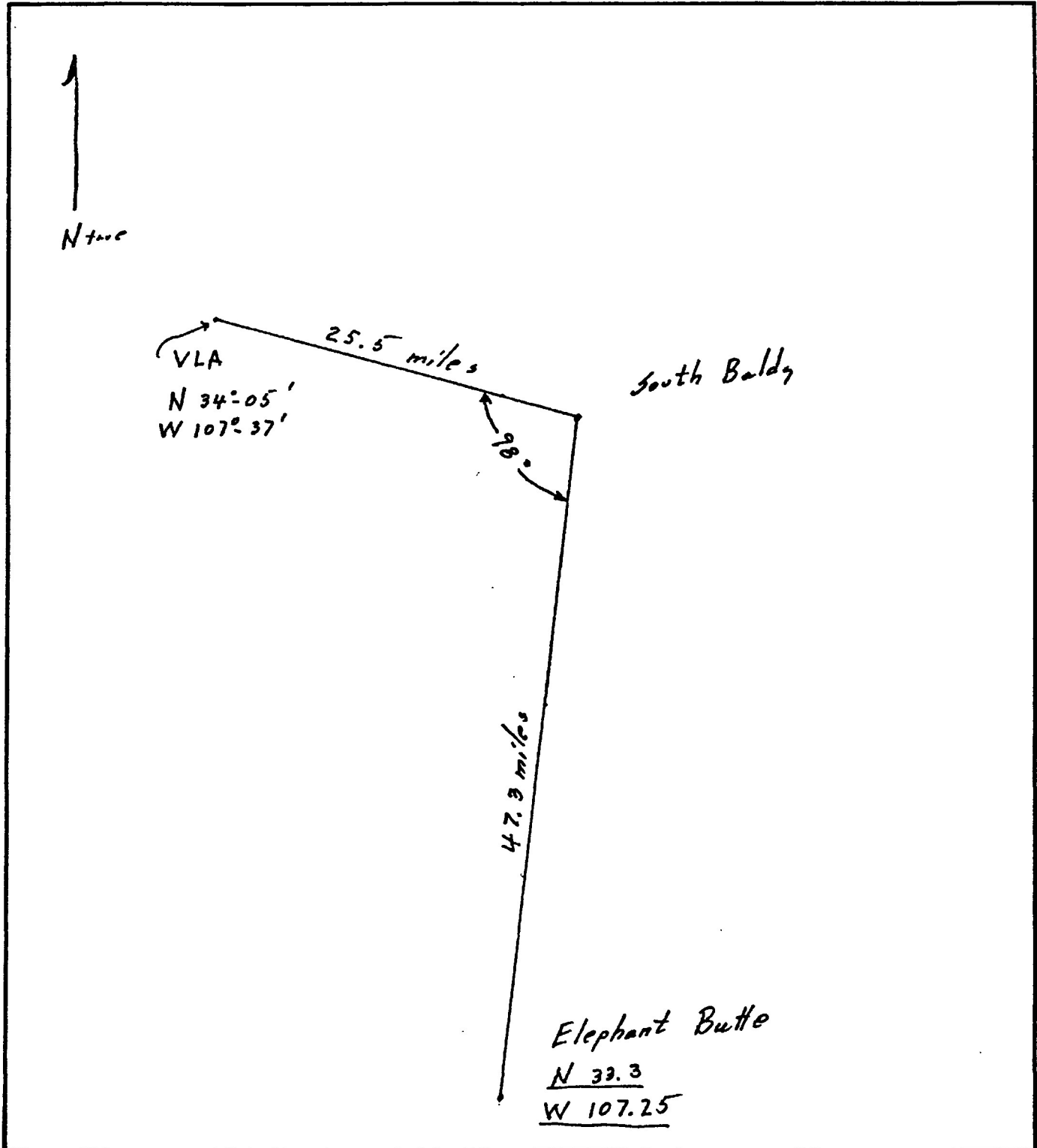
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PAGE 1 OF 2  
DATE 2-3-83

PROJECT: VLBA

SUBJECT: Site close to the VLA line of sight to



PREPARED BY S.L. Smith APPROVED BY \_\_\_\_\_ SUBMITTED BY \_\_\_\_\_

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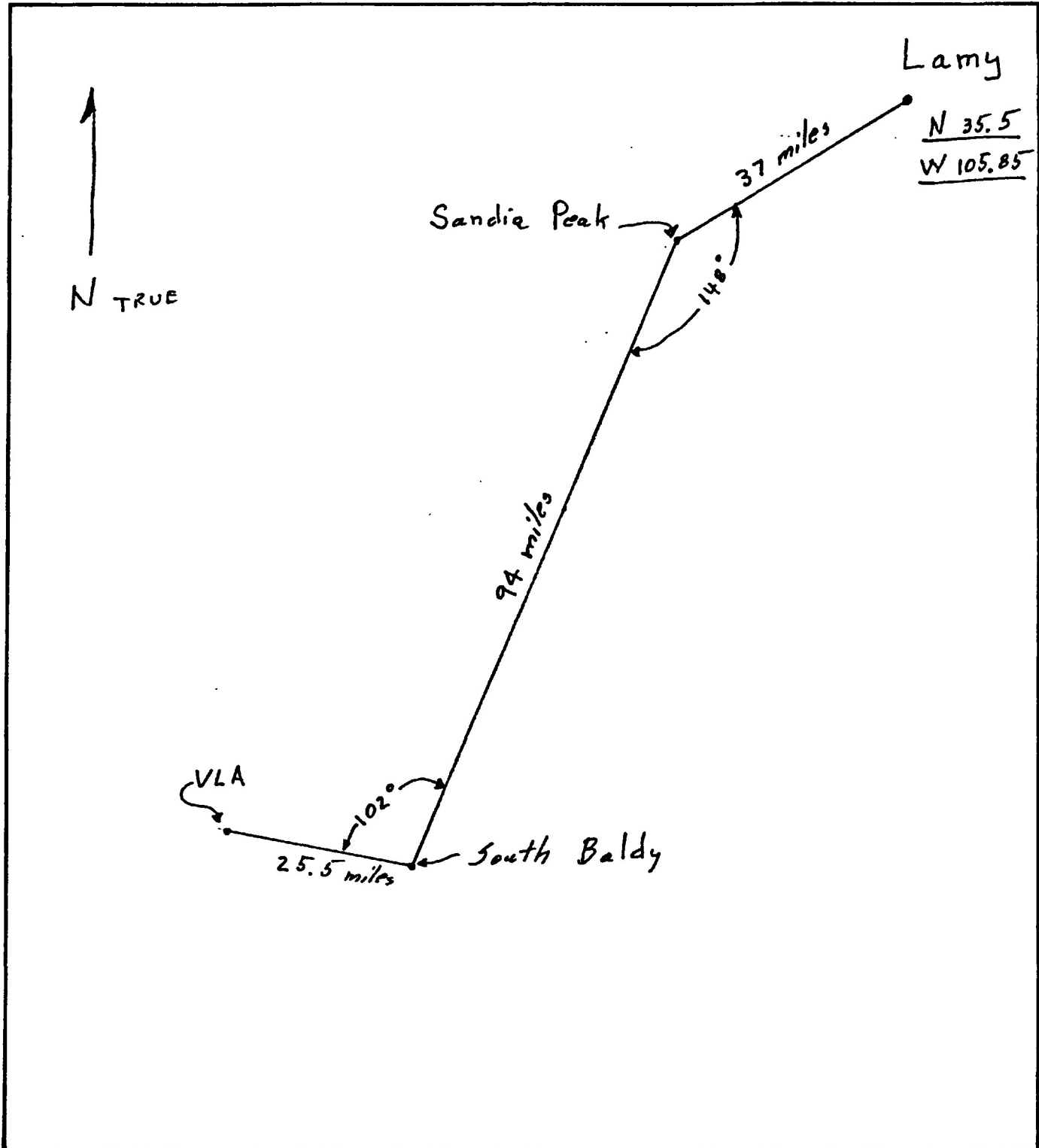
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PAGE 2 OF 2

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