

# BOOKING SHEET FOR BOYA RANGE BARCODE STAFF CALIBRATION

- 1) LEVEL BUBBLE CHECKED? ( Circle one ) YES/NO ADJUSTED? YES/NO  
2) STAFF BUBBLE CHECKED? ( Circle one ) YES/NO ADJUSTED? YES/NO  
3) COLLIMATION TEST OF DIGITAL LEVEL

WEATHER: FINE  
LIGHT BREEZE.

See Boya Range plan for location of collimation test spikes 1- 4

Use instrument internal software to calculate and store collimation constants

ST: 25.5°C.

|                                      |                           |             |              |  |
|--------------------------------------|---------------------------|-------------|--------------|--|
| DATE/TIME                            | 10/12/2019.<br>9.00am.    |             |              |  |
| INSTRUMENT<br>MAKE/MODEL<br>SERIAL # | LEICA LS 15<br>SN 702272. |             |              |  |
| STAFF<br>MAKE/MODEL<br>SERIAL#       | INVAR STAFF<br># 26296.   |             |              |  |
| COLLIMATION<br>DIFFERENCE            | <del>18.7"</del> - 3.8"   | OLD: -18.7" |              |  |
| ACCEPT?/STORE?                       | RETICLE<br>1.60768.       | NEW: -22.5" | YES (accept) |  |

## 4) RANGE OBSERVATION DETAILS

See Boya Range plan for location of Pillar MV 83 and Pins 1- 21

Set digital level to record most precise readings with multiple observations, means and standard deviations if possible. Shade instrument unless overcast.

Book field information in these tables to complete documentation for calibration.

Observe a BS on Pin 1, IS on Pins 2-20 and a FS on Pin 21 for 1 complete set for a 4 m staff.  
Observe a BS on Pin 1, IS on Pins 2-14 and a FS on Pin 15 for 1 complete set for a 3 m staff.

If instrument can't mean multiple observations, do at least 3 complete sets for redundancy.

|                                      |                                     |                             |  |  |
|--------------------------------------|-------------------------------------|-----------------------------|--|--|
| DATE/TIME                            | 10/12/2019                          | 10/12/2019                  |  |  |
| TEMPERATURE<br>START/FINISH          | ST: (9.14am) 27.4°C.<br>FIN: 28.5°C | ST: 28.4°C.<br>FIN: 29.3°C. |  |  |
| INSTRUMENT<br>MAKE/MODEL<br>SERIAL # | LEICA LS 15<br>SN 702272.           | LEICA LS 15<br>SN 702272.   |  |  |
| STAFF<br>MAKE/MODEL<br>SERIAL#       | INVAR<br>#26296.                    | INVAR<br>STAFF #26296       |  |  |
| #OBS FOR MEAN<br>(minimum 5)         | 10                                  | 10.                         |  |  |
| NUMBER OF SETS                       | 1                                   | 1                           |  |  |

# 1-15

# 7-21.

I certify that the above observations were made by me at the Boya barcode staff calibration range.

SURVEYOR..... V. UNG.

DATE..... 10/12/2019.

pin 1 100.000  
pin 21 96.19633.  
Δ. 3.80367.