

## 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

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

Use the adjusted instrument collimation constant derived from collimation test done below.

### 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.

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.

WEDNESDAY

DATE & TIME	8/6/2022 9.48AM.		
<b>INSTRUMENT DETAILS</b>			
MAKE/MODEL	LEICA LS 15.	" "	
SERIAL #	702272.	" "	
<b>STAFF DETAILS</b>			
MAKE/MODEL	LEICA	" "	
SERIAL#	#26296	#26296.	
MATERIAL	FIBREGLASS / WOOD / INVAR	FIBREGLASS / WOOD / INVAR	FIBREGLASS / WOOD / INVAR
LENGTH OF STAFF	3 m / 4 m / 5 m / .....	3 m / 4 m / 5 m / .....	3 m / 4 m / 5 m / .....
COEFFICIENT OF EXPANSION OF STAFF (if known)	RETICLE: 1.71118.		
<b>COLLIMATION TEST</b>			
COLLIMATION DIFFERENCE	0.2" OLD: 0.5" NEW: 0.8"		
ACCEPT/STORE?	<u>YES</u> / NO	YES / NO	YES / NO
<b>RANGE OBSERVATION DETAILS</b>			
# OBSERVATIONS FOR MEAN (Min. of 5 observations)	10	10	
NUMBER OF SETS	1 <del>2</del> #1-15. #7-21.	1 #7-#21.	
START TIME & TEMPERATURE	10:02AM 15.4°C. 15.4°C	10:30AM 15.6°C. 16.2°C	
END TIME & TEMPERATURE	10:25AM 15.2°C. 15.3°C.	10:55AM 16.6°C. 16.5°C.	
	LINE 001	LINE 002.	

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

SURVEYOR..... V. UNG.  
(Name & Signature)

DATE..... 8/6/2022.

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2) STAFF BUBBLE CHECKED? (Circle one)      YES / NO      ADJUSTED? YES / NO

### 3) COLLIMATION TEST OF DIGITAL LEVEL

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

Use the adjusted instrument collimation constant derived from collimation test done below.

### 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.

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	8/6/2022. 11:00AM    8/6/2022. 11:20AM.		
<b>INSTRUMENT DETAILS</b>			
MAKE/MODEL	LEICA LS15.	LEICA LS15.	
SERIAL #	702272.	702272.	
<b>STAFF DETAILS</b>			
MAKE/MODEL	LEICA.	LEICA.	
SERIAL#	# 213.	# 212	
MATERIAL	FIBREGLASS / WOOD / INVAR / .....	FIBREGLASS / WOOD / INVAR / .....	FIBREGLASS / WOOD / INVAR / .....
LENGTH OF STAFF	3 m / 4 m / 5 m / .....	3 m / 4 m / 5 m / .....	3 m / 4 m / 5 m / .....
COEFFICIENT OF EXPANSION OF STAFF (If known)			
<b>COLLIMATION TEST</b>			
COLLIMATION DIFFERENCE			
ACCEPT/STORE?	YES / NO	YES / NO	YES / NO
<b>RANGE OBSERVATION DETAILS</b>			
# OBSERVATIONS FOR MEAN (Min. of 5 observations)	5.	5	
NUMBER OF SETS	1 #1-#21.	1 #1-#21.	
START TIME & TEMPERATURE	11.03AM. 16.2°C. 15.9°C.	11:20AM. 16.2°C. 15.9°C.	
END TIME & TEMPERATURE	11.18AM. 16.6°C. 16.0°C.	11:32AM. 16.2°C. 16.4°C.	
	LINE003.	LINE004.	

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

SURVEYOR..... V.UNG. .....  
(Name & Signature)

DATE..... 8/6/2022. .....