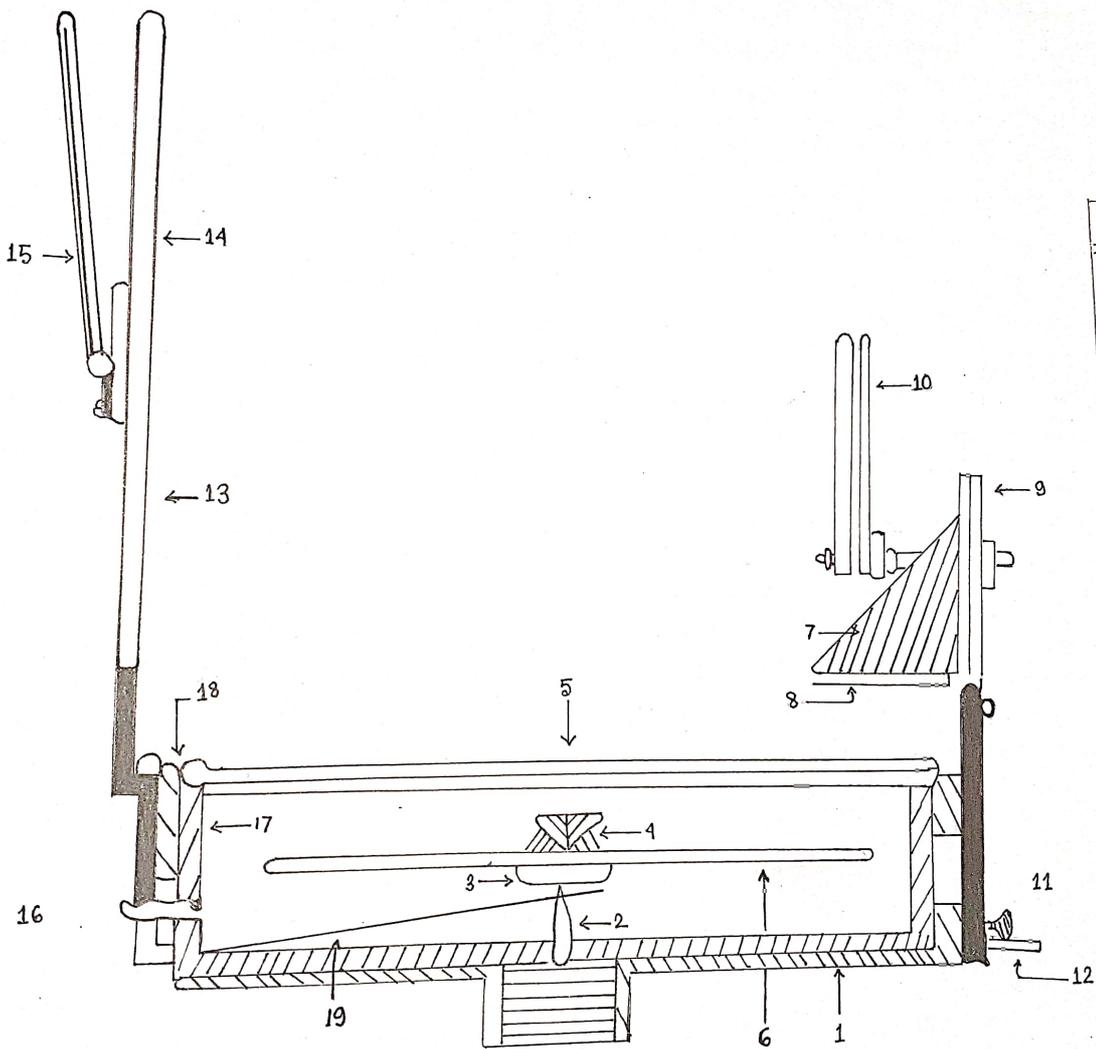


Payel Sarker
(Department of Geo)

Readings obtained from Prismatic compass survey are given below. Prepare a proper field Book, determine bearings and included angles. Plot the traverse with the help of bearings.

STATION	LINE	LENGTH (Metre)	OBSERVED BEARING		REMARKS
			FORE	BACK	
A	AB	5.22	129°30'	307°00'	(i) All stations are locally attracted.
B	BC	12.07	210°30'	33°00'	
C	CD	7.40	314°00'	135°00'	
D	DA	11.41	44°30'	223°00'	

PRISMATIC COMPASS



INDEX

- 1 Compass box
- 2 Pivot
- 3 Needle
- 4 Agate cap
- 5 Glass cover
- 6 Compass ring
- 7 Prism
- 8 Prism cap
- 9 Eye Vane
- 10 Hinged Sunglasses
- 11 Focussing Stud
- 12 Hinged Scap
- 13 Object Vane
- 14 Horse Hair
- 15 Adjustment Mirror
- 16 Spring Brake
- 17 Lifting Pin
- 18 Lifting Pin
- 19 Lifting Lever

FIELD BOOK

FOR CLOSED TRAVERSE SURVEY BY PRISMATIC COMPASS

STATIONS	LINE	DISTANCE		OBSERVED BEARING		DIFFERENCE	ERROR	HALF OF ERROR	CORRECTED BEARING		INCLUDED ANGLES	REMARKS
		IN METRE	IN CHAIN	F.B	B.B				F.B	B.B		
A	AB	12	8	179°00'	359°00'	180°00'	0°00'	0°00'	179°00'	359°00'	90°15'	SURVEYING DONE IN CLOCKWISE DIRECTION ALL CENTRES HAVE LOCAL ATTRACTION
B	BC	15	10	262°00'	77°00'	185°00'	+15°00'	+2°30'	259°30'	79°30'	99°30'	
C	CD	14.5	9.67	10°00'	190°00'	179°00'	-0°30'	-0°15'	10°15'	190°15'	69°15'	
D	DA	11.41	7.606	88°00'	270°00'	181°30'	+1°30'	+0°45'	89°15'	269°15'	10°60'	

1 cm = 1.5 m

INCLUDED ANGLES -

INCLUDED ANGLE OF STATION = B.B OF PRECEDING LINE - F.B OF FORWARD LINE

$$\begin{aligned} \text{INCLUDED ANGLE OF STATION A} &= \text{B.B of DA} - \text{F.B of AB} \\ &= 269^{\circ}15' - 179^{\circ} \\ &= 90^{\circ}15' \end{aligned}$$

$$\begin{aligned} \text{INCLUDED ANGLE OF STATION B} &= \text{B.B of AB} - \text{F.B of B.C} \\ &= 359^{\circ}00' - 259^{\circ}30' \\ &= 99^{\circ}30' \end{aligned}$$

$$\begin{aligned} \text{INCLUDED ANGLE OF STATION C} &= \text{B.B of B.C} - \text{F.B of CD} \\ &= 79^{\circ}30' - 10^{\circ}15' \\ &= 69^{\circ}15' \end{aligned}$$

$$\begin{aligned} \text{INCLUDED ANGLE OF STATION D} &= \text{B.B of CD} - \text{F.B of DA} \\ &= 190^{\circ}15' - 89^{\circ}15' \\ &= 101^{\circ}00' \end{aligned}$$

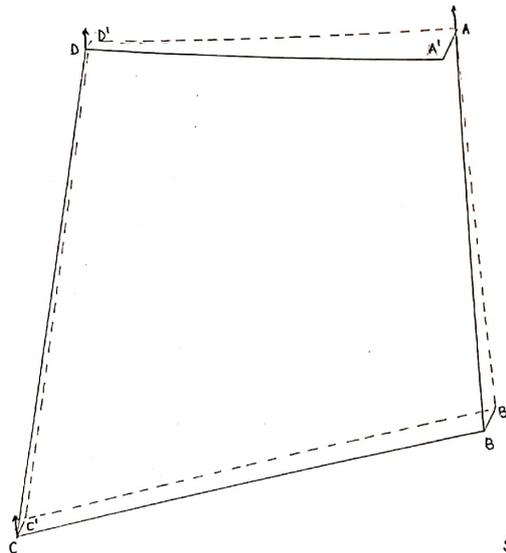
CLOSED TRAVERSE DRAWN BY PRISMATIC COMPASS

PLACE: JATIN DAS PARK

DATE: 29.4.14

INSTRUMENT No: JDC Pc 15

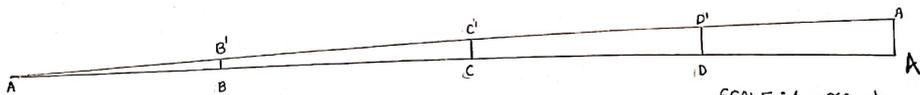
TIME: 8am to 10am



ABCD A'	- ORIGINAL TRAVERSE
ABCD A	- CORRECTED TRAVERSE
↑	NORTH LINE
—	CONNECTING LINE

SCALE: 1 cm \approx 1.5 metre

CLOSING ERROR CORRECTED BY BOWDITCH'S METHOD



SCALE: 1 cm \approx 3 metre