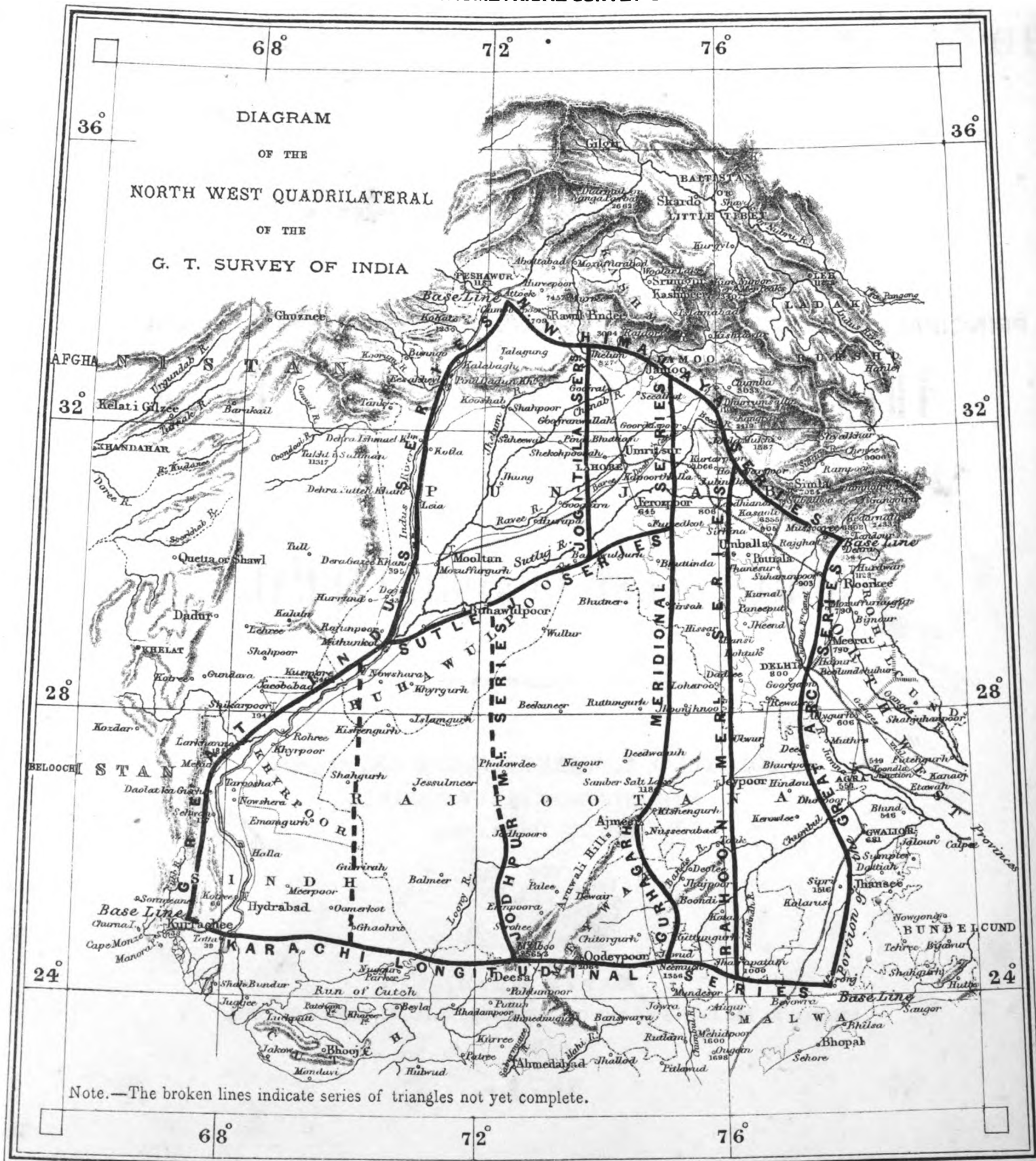


GREAT TRIGONOMETRICAL SURVEY OF INDIA.



C. DYSON, Photo.

Photo:incographed at the Office of the Superintendent Great Trigonometrical Survey, Dehra Doon, April 1874.

C. G. OLLENBACH, Esq.

SYNOPSIS OF THE RESULTS OF THE OPERATIONS OF
THE GREAT TRIGONOMETRICAL SURVEY OF INDIA

VOLUME II.

DESCRIPTIONS AND CO-ORDINATES

OF THE

PRINCIPAL AND SECONDARY STATIONS AND OTHER FIXED POINTS OF

THE GREAT ARC—SECTION 24° TO 30°

OR SERIES A

OF THE

NORTH—WEST QUADRILATERAL.

BY COLONEL J. T. WALKER, R.E., F.R.S., &c., &c.,
SUPERINTENDENT OF THE SURVEY
AND HIS ASSISTANTS.



Dehra Doon:

PRINTED AT THE OFFICE OF THE GREAT TRIGONOMETRICAL SURVEY OF INDIA.

M. J. O'CONNOR.

1874.

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ERRATA ET ADDENDA.

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"	" 22 " top, " 3,	" "	"	5—A.	
(9)*	" 11 of table from top, col. 5,	" Masári	"	Masári	

ADDENDUM TO PAGE 23—A.

Since this volume was printed the following information regarding the connection of the Principal Station of Noh of the Great Arc Meridional Series, by Spirit Leveling operations executed under the superintendence of Lieutenant-Colonel F. C. Anderson, Deputy Superintendent, Revenue Survey, 2nd Division N.W. Provinces, has been received.

STATION.	HEIGHT IN FEET ABOVE MEAN SEA LEVEL DETERMINED BY SPIRIT LEVELING.	SURFACE ON WHICH THE LEVELING STAFF WAS PLACED.
XXXIII	653·14	On mark-stone let into the ground floor of the tower.

REFERENCES.

The Principal Stations of this Survey, when on hills or high mounds, consist of circular masonry pillars from 3 to 4 feet in diameter for the large theodolites to rest on, surrounded by a platform from 10 to 16 feet square on which the observatory tent was pitched. Being invariably placed on the highest accessible points, they rarely required to be raised more than 2 or 3 feet. When in the plains, and mounds were not available, towers had to be built; these were in the majority of instances of a square form with ladders inside for mounting to the top where a slab of sandstone, over an isolated masonry pillar of the usual dimensions resting on stone beams let into the walls, was placed for the instrument to rest on; one or two have been constructed of the modern pattern, consisting of a central masonry pillar, sometimes perforated, sometimes solid, surrounded by a mass of sundried bricks to the level of its surface, for the observatory tent to rest on. When the pillars were perforated no mark-stones were permanently placed at their upper surface.

The abbreviations employed in the text and on the charts at the end of the volume are as follows:—

H.S.	denotes	Hill Station (Principal)
T.S.	"	Tower " "
h. s.	"	hill station (secondary)
t. s.	"	tower " "
s.	"	station " "

The last three abbreviations are only placed after stations where a theodolite has been set up and observations taken to surrounding stations.

The name in italics in the alphabetical list commencing on page 85—A is that of the district in which the point is situated.

The latitudes and longitudes of all points shown on the chart at the end of this volume and included in the list on pages (10)* and (11)* will be found in the text. Where continuous lines are drawn connecting them the distances and reciprocal azimuths will also be found; where no such lines exist these elements are not given. In cases where half the line is dotted, it is to be understood that the point at the extremity of the dotted half was observed to, but that reciprocal observations were not taken. When no observations at all have been taken from a point, the azimuths of the surrounding points are not given.

November 1874.

W. H. COLE.

PREFACE.

The Triangulation, of the results of which the present volume is a synopsis, is a section of the meridional chain of triangles, trending from Cape Comorin to the Himalayan Mountains, which has long been known to geodesists as the Great Arc of India, and has been employed—in combination with meridional arcs measured in other parts of the globe—in all the investigations of the Figure of the Earth which have been made during the present century. Full details of the *principal* triangulation of the Great Arc have been published from time to time, as each section was completed, by Major Lambton in Volumes VII, VIII, X and XII of the *Asiatick Researches*, and by Colonel Everest in his two *Accounts of the Measurement &c.* which were respectively published in 1830 and 1847. In these volumes the Arc has necessarily been treated as a solitary chain of triangles, dependent for its linear elements on base-lines measured at the extremities of the several sections, but independent of any external triangulation, for when they were published it stood alone, and was intended to form “the axis of the Great Trigonometrical Survey of India.” After its completion however longitudinal chains were carried to the east and west, and in course of time were connected together at intervals by meridional chains and at their extremities by chains following the Frontier and the Coast Lines; and this system of triangulation is now nearly complete, for the whole of India proper, or the regions included between the parallels of 8° and 34° and the meridians of 67° and 92° . Thus the Great Arc has ceased to be a solitary chain of triangles and has become merged into the general triangulation of the country; and whereas originally its results were necessarily published without reference to those of the cognate operations in other parts of India, it can now no longer be considered as an independent work, but it must be treated as a part of the general triangulation and be made to harmonize therewith, borrowing from, as well as exerting an influence on, the chains of triangles external to itself.

For reasons which will be found explained at length in Section 7 of Chapter I of Volume II of the *Account of the Operations* of this Survey, the general triangulation of the country has been divided into five great figures or sections for final reduction; each of these figures contains a section of the Great Arc, and the one which has been selected for reduction before all the others is the North-West Quadrilateral.

The northern section of the Great Arc—which is comprised between the parallels of 24° and 30° —constitutes the eastern flank of this figure, which embraces the area included between lines running from Central India westwards to Kurrachee (Karáchi), and northwards to the Himalayas, and the British Frontier-lines on the west and north. With the exception of two comparatively short chains of triangles across the deserts of Sind and Rájputána, the whole of the principal triangulation of this great Quadrilateral was completed by the year 1866; the base-lines at its four corners, namely Sironj, Dehra Dún, Chach and Kurrachee, on which the linear elements are dependent, had been completed several years previously. As it was then known that many years would elapse before the two remaining chains of triangles could be undertaken, and as the base-lines and the four external and all the most important internal chains had been finished, the final reduction of the Quadrilateral was commenced, without waiting for the completion of the entire figure. The general principles of the reduction, and the procedure followed in carrying it out, will be explained in Volume

II of the "*Account of the Operations &c.*" which is now in preparation, and full details of the whole of the principal triangulation, that is at present included in the Quadrilateral, will be found in Volumes III and IV, which have been printed, but await publication until the completion of Volume II.

As however the entire contents of those volumes will not be needed by geographers and surveyors, and moreover as they give no details of the secondary triangulation—which is of considerable value for local requirements—it is obviously desirable that Synopses of the final results of the whole of the operations, including the secondary as well as the principal triangulations, should be prepared for general use, in such a manner as to be most suitable for convenience of reference; and this has been already done for the Great Indus Series, in Synoptical Volume I.

The present is the 2nd of the Synoptical Volumes, and it gives the results of the whole of the triangulation comprised in the northern section of the Great Arc, both the principal—or that executed with great theodolites, having azimuthal circles of 36 inches in diameter which were read by micrometer-microscopes—and the secondary, executed by smaller theodolites, with circles of 6 to 14 inches in diameter which were read by verniers.

By the process of reduction which has been followed the principal triangulation has been rendered perfectly consistent, both internally and externally; internally, so that if in any one of the several polygonal figures of which the chains may be composed, calculations are carried from one station to another in every possible direction, the same results will be inevitably deduced; and externally, so that the values of the co-ordinates of any station, when computed from the given co-ordinates of any other station, with the final linear and angular data, will be the same, whether the calculation is carried directly through the series or circuitously through any of the other chains of triangles comprising the North-West Quadrilateral. All secondary triangulations which emanate from one side of the principal series and close on another side thereof, or on a contiguous series, have also been made consistent throughout.

As regards the general arrangement of this volume it is necessary to point out that the several sections have been prepared and printed at different times, and that the work has extended over several years. The Introduction—by Mr. W. H. Cole, M.A.—and the descriptions of the principal stations, were originally prepared for Volume IV of the "*Account of the Operations &c.*", and when a sufficient number of copies had been printed for that work additional copies were struck off for the present synopsis. The descriptions of the principal stations, pages 1—A to 11—A, were printed first of all. This was done in the year 1865, after a general programme had been drawn up for the reduction of the North-West Quadrilateral, in accordance with which the four polygonal figures round the base-lines at the corners of the Quadrilateral were grouped together, instead of being treated as portions of either of the two chains to which each figure may be considered as belonging, an arrangement which was made with the expectation of simplifying the reduction of the Quadrilateral, which had not then been commenced. Subsequently, when the reduction was actually undertaken, the arrangement was found to be not only unnecessary but inconvenient; the Sironj and Dehra Dún base-line figures were therefore combined with the section of the Great Arc which lies between them, and the Karáchi and the Chach base-line figures with the Great Indus Series. There is thus an absence of uniformity in this portion of the work which is to be regretted, as it may somewhat inconvenience persons searching through the volumes devoted to the triangulation of the North-West Quadrilateral for the data of the stations of the said base-line figures; but in excuse thereof it may be pleaded that the reduction of this vast amount of triangulation was a most formidable geodetic problem, far exceeding in magnitude and intricacy anything of the kind which had ever been undertaken in any part of the world; consequently allowances may well be made for a slight departure from the programme of operation which was marked out in the first instance, and the result of which is merely that the principal stations appertaining to the base-line figures are not numbered in order with the other stations, and that their descriptions must be looked for in a different part of the volume, whereas their co-ordinates and mutual azimuths are given with those of the other stations.

The data given in this volume are the following:—

First (page 1—A), an alphabetical list of the names of the principal stations, showing the numbers assigned to each, which were employed in the reductions as being more convenient to use than names.

Second (page 2—A), a numerical list giving the name corresponding to the numbers.

Third (page 3—A), descriptions of the principal stations—of their structure and positions—as taken from the original records of the observations, and supplemented by an Addendum, page 13*—A, which gives the most recent information of their condition that has been received up to date.

Fourth (page 13—A), the angles and sides of the principal triangles, numbered and arranged in order from south to north.

Fifth (page 18—A), the latitudes, longitudes and heights of the principal stations—including those of the base-line figures at the northern and southern extremities—and the azimuths at each station of the surrounding ones.

Sixth (page 23—A), descriptions of the points of reference at the stations whose heights have been determined by the spirit leveling operations of this Survey, emanating at the mean sea level of the tidal station at Manora, in the Harbour of Karáchi.

Seventh (page 24—A), the elements of and principal triangles to fix the old Dehra Doon Observatory.

Eighth (page 26—A), the angles and sides of certain secondary triangles; the numbering is here made consecutive to that of the principal triangles, in order to facilitate references which are made in other sections to the place where the length of a side is to be found.

Ninth (page 67—A), the azimuths of secondary points at principal, principal-auxiliary† and secondary stations, the latter arranged in alphabetical order.

Tenth (page 84—A), Addendum; data of points fixed at Roorkee (Rurki) in 1873, for the observations of the Transit of Venus in December 1874.

Eleventh (page 85*—A), the elements of the modern observatories attached to the Head Quarters' Offices of the Survey at Dehra Dún and Masúrí.

Twelfth (page 85—A), the co-ordinates and descriptions of all stations and points, arranged in alphabetical order.

Thirteenth (page (1)), an alphabetical list of the principal stations of the four base-line figures of the North-West Quadrilateral.

Fourteenth (page (2)), a numerical list of the principal stations of the base-line figures.

Fifteenth (page (3)), the descriptions of the principal stations of the base-line figures, taken from the original record of the observations, and supplemented by an Addendum giving the latest information of the condition of the stations.

Sixteenth (page (10)*), an alphabetical list of points omitted in the chart of the triangulation, from want of space.

The heights of some of the principal stations were determined by the line of levels which was brought up from the tidal station of Manora, at Karáchi, to Dehra Dún and then down the Great Arc to Sironj, and is described in the introduction to the "*Tables of Heights in Sind, the Punjab &c., Calcutta, 1863.*" All other heights were determined differentially, by the method of vertical angles, with reference to the nearest stations whose heights had been fixed by the spirit-leveling operations. All the heights which were determined by spirit leveling are given to two places of decimals of a foot; the other heights, being in great measure dependent on the triangulation, are given to the nearest foot only.

It has not been considered necessary to publish the whole of the details of the secondary triangulation; the sides and angles of 917 triangles, which were selected as most likely to be of general use, and the

† Note, by a principal-auxiliary station is meant a station auxiliary to a principal station at which observations were taken to fix unvisited points.

azimuths of all these sides, have been given; but for a considerable number of points the co-ordinates only have been given. With the aid of Nos. X, XI, and XII of the "*Auxiliary Tables to facilitate calculations of the Survey Department of India, Dehra Doon, 1868,*" local surveyors, working on a system of rectangular co-ordinates, can readily transform the spheroidal co-ordinates here given to suit their own requirements.

From the commencement of the operations of the Great Trigonometrical Survey up to the present time the whole of the deductions of longitudes have invariably been referred, differentially, to the longitude of the Madras Observatory, taken as $80^{\circ} 17' 21''$. This value has been modified on several occasions by the successive Government Astronomers at Madras; in the year 1869, I was—to the best of my recollection—verbally informed by Mr. Pogson, who was then and still is the Astronomer, that the latest value was $5^{\text{h}} 20^{\text{m}} 57^{\text{s}} \cdot 3 = 80^{\circ} 14' 19'' \cdot 5$ as given in the Nautical Almanacs for 1862 and subsequent years, on the authority of his predecessor Captain Jacob, the values in the Nautical Almanacs for 1861 and previous years being $5^{\text{h}} 21^{\text{m}} 3^{\text{s}} \cdot 77 = 80^{\circ} 15' 56'' \cdot 55$. I have long been expecting an answer to various letters which I have written to Mr. Pogson enquiring whether my recollection of the information which he communicated to me verbally is correct, and whether any later and more accurate determination of the longitude of the observatory has been made, but hitherto no answer has been received. The following precept may however be considered as sufficiently exact for the practical requirements of surveyors and geographers,—

the whole of the longitudes given in this volume require a constant correction, probably of—3'.

As regards the Orthography of Indian names, I am sorry to have to state that it has not been possible to adopt a uniform system of orthography in this volume. Many years ago Colonel Everest endeavored to bring into general use in the Survey Department Sir William Jones's method, which is at once elegant and phonical and is highly approved of by scientific men; but that method gives to all vowels their Italian sounds, and as the differences between the English and the Italian sounds are in almost every instance very considerable, and as it is easier to lay down rules than to find followers for them, the surveyors gradually got into the way of using *ee* for the Italian *i*, and *oo* for the Italian *u*, and of spelling generally in the manner that it is natural to most Englishmen. In 1865, when the preparation of the final results was commenced, the spellings were corrected in accordance with Sir William Jones's system, excepting in the case of well-known names—such as Meerut, Calcutta, Cawnpore—which had become settled and familiar by long use and which it would have been pedantic to alter. But in 1871 the Government of India made arrangements for the introduction of a uniform system of spelling throughout India, and circulated a "*Guide to the Orthography of Indian Proper Names, with a list showing the true spelling of Post-towns in India,*" which was prepared by Dr. W. W. Hunter, L.L.D., Director General of Statistics to the Government of India; the guide was sent to this Department with instructions that the directions it contained should be immediately complied with. Dr. Hunter's rules for spelling unfamiliar names, not given in his list of post-towns, are very similar to the rules which had been adopted in this Department, the chief difference being that the long *a*, *i* and *u* are required to be frequently un-accented, whereas by our rules they are invariably accented. In his list of post-towns Dr. Hunter has not followed a uniform system of spelling but has effected a compromise which—in his own words—"by sacrificing something in scientific precision, obtains a spelling more accurate than at present and yet recognizable as the same name." Thus the hill station at which the Head Quarters of this Survey are located, during the summer months, is spelt ordinarily *Mussoorie* and scientifically *Masúri*, but according to Dr. Hunter it should be spelt *Masauri*. In September 1873 the Government of India issued amended rules for the spelling of all names not well known, which are practically identical with those originally followed in this Department; at the same time it was ordered that the orthography of the well-known names should be retained, and that a list of all note-worthy names should be prepared, in each Province, showing the orthography to be uniformly followed in future

official correspondence and publications. When these lists are published uniformity of spelling will become possible; to what extent uniformity of system will be secured will depend on the latitude taken by the compilers of the lists in defining the number of names which are to be considered as well-known.

Some portions of the present volume having been printed before and others after the orders were received for the employment of Dr. Hunter's system, the attempts to introduce a uniform system of orthography have occasionally led to considerable diversities of spelling; but nevertheless it is believed that the names will be generally recognizable.

The Chart accompanying this volume shows the whole of the principal stations and triangulation, the positions of all the secondary and minor points—with the exception specified on page (10)*—and the portions of the secondary triangulation of which full details of the angles, sides and azimuths are given. With the aid of this Chart it is hoped that little difficulty will be met with in finding out any of the data contained in the volume which may be required. I must acknowledge with regret that the descriptions of the secondary stations are in many cases not as full and clear as is to be desired; this arises from the inadequacy of the information entered on the spot by the surveyors, in their field books; every effort has been made to supplement the information given by the surveyors, whenever it was practicable to do so, in order to facilitate the future identification of the stations, and all the information which is at present forthcoming in this Office has been given.

The general arrangement of this volume and the preparation of the data which it contains are due in great measure to J. B. N. Hennessey, Esq., Deputy Superintendent 1st grade, in charge of the Computing office, who has taken great pains to secure the utmost possible accuracy in preparing the data and passing them through the press.

DEHRA DUN, }
November 1874. }

J. T. WALKER, COLONEL, R.E.,
Supdt. Great Trigonometrical Survey of India.

GREAT ARC MERIDIONAL SERIES.

GREAT ARC MERIDIONAL SERIES.

INTRODUCTION

The Great Arc of the Meridian, the measurement of which had been begun by Lieutenant-Colonel Lambton and extended by him in an unbroken chain from Cape Comorin to latitude $20^{\circ} 30'$, had, by 1825, been brought up by his successor, Captain Everest, as far as Sironj in latitude 24° and closed on a base of verification, measured in the neighbourhood of that place, with the chain that had been used on all prior occasions. On the completion of this work Captain Everest was compelled by ill health to leave the country, and during his absence, which extended over some five years, the establishment of the Great Trigonometrical Survey was considerably reduced; so much so that on his return to India in 1830, he found himself the only Executive officer with but a few of the old hands of the subordinate branch of the department to assist him.

The first duty, therefore, Major Everest found himself called upon to perform on his return was to resuscitate the department, and he set about it with such good will that before the end of 1832 he had 8 military assistants and a subordinate establishment numbering 20 sub-assistants; amongst the latter, the only trained men were Mr. J. Olliver and Mr. W. Rossenrode, both of whom had had long experience in trigonometrical surveying and were very efficient. The task of training so many new hands was of course an arduous one, but was greatly lightened by his being able to confide the instruction of the sub-assistants to Messrs. Olliver and Rossenrode.

After measuring the Calcutta Base-line, the first at which the "compensation apparatus" was employed, and starting some meridional series emanating from the triangulation between Sironj and Calcutta, which had recently been executed by Mr. Olliver, the Surveyor General felt himself at liberty to resume operations on the Great Arc at the point where he had left them in 1825, and to carry the triangulation northwards to the limit of the dominions of the Honble E. I. Company.

Major G. Everest, Arty., Surveyor Genl. and Supdt.
Great Trigonometrical Survey.

Surveyors.

Captain R. Wilcox 59th N. I.
Lieutenant J. Western, Engineers.
" A. Boileau, "
" R. Macdonald 69th N. I.
" P. Bridgman, Arty.
" A. S. Waugh, Engineers.
" T. Renny, "
" E. L. Ommany, "

The country to be traversed is thus described by Major Everest. *
 “What may be termed the elevated plateau of Central India terminates on the northern side with the high lands in the vicinity of Gualior, where the valley of the Chambal and its subsidiaries the Kohari and other streams commences. This valley is bounded on the north by a range of old red sandstone dipping to the north at about 20°, which overhangs the Chambal, and seems to have determined the course of that river, and to have limited its wanderings on the northern side.

“Further northwards than the range in question there are detached ranges and isolated hillocks cropping out, but the average level of the alluvial surface of the country from which they rise seems to be rather below than above that of the valley of the Ganges. The last of these isolated hills commodiously near to the direct line of the meridian of the Great Arc Series is Usira, after which wherever they do occur they recede to the westward of that line, thereby furnishing inconvenient positions for the continuation of the triangulation.”

From Usira to Delhi few hills existed and those only on one flank of the proposed line of triangulation, and beyond Delhi they altogether ceased. The series had then to pass through the flat lands of the Doáb, or country between the two rivers Ganges and Jumna. †
 “This is a wide extended plain remarkable for the richness of its soil, its abundant population, the scorching heats of the winds which blow over it in the season from March till June, the deluging and almost incessant rain which falls in the four succeeding months, the unvarying monotony of its scenery, and the universal deadness of level of its surface. though there are few or no forests in the tract in question yet it is overspread with thick groves of Mango, Mulberry, Jaman, Tamarind, and other fruit trees intermingled with lofty Pipuls and Banians, all either yielding an annual income to their proprietors, or endeared to them as fancy plants destined to perpetuate the name of him who reared them.

“In common with other parts of India, the inhabitants are congregated in villages and towns which vary in extent and character according to the wealth and traffic of the owners, from the veriest hovel composed of straw to the costly four-storied edifice of masonry; but instances of isolated dwellings are rare and hardly ever met with except in the case of Indigo planters, or now and then a temple or mosque, the bare walls of which offer no temptation to the plunderer. The villages however lie so thickly scattered over the surface that it is difficult to trace a line in any direction so as to pass free of all habitations, and quite impossible to calculate on seeing between the breaks which occasionally appear in the dense belt of foliage, for, in the very few instances where such do exist, they stand altogether at random and without any regard to the ray between one mound and another. In fact generally speaking, the trees form to all appearance a continuous dense belt of foliage at the distance of four or five miles from the eye of the observer, and if an interstitial space is any where found, it as often as not leads to low marshy or other land totally ineligible as a principal station.

“The whole tract though coming under the definition of a flat alluvial formation intersected with sluggish streams which overflow their banks annually, and totally devoid of

* Everest's Measurement of the Meridional Arc of India, London, 1847, page XIII.

† Ibid.

“all natural elevations except loose heaps of sand, accumulated by the wind, which over-
 “spread its surface promiscuously, has yet many elevated earthen mounds, the partially
 “occupied or abandoned sites of villages or forts which appear to have been raised by the
 “inhabitants in periods gone by as a protection against inundation or external violence.

* * * * *

“This part of the Doáb is bounded on the north by a range of hills to which whether
 “appropriately or not the name of Sewalik has been assigned. It is an irregular mass run-
 “ning N. W. and S. E. nearly, presenting obvious marks of upheavment, and composed chief-
 “ly of boulders of quartz, limestone, basalt, and other rocks manifestly rounded by attrition
 “and imbedded in most cases in argillaceous earth, which appears to rest and to have been
 “deposited on a basis of soft friable sandstone. Occasionally though the cement which re-
 “tains the boulders together seems to be of a more durable substance than mere clay, yet
 “there is altogether such an appearance of incoherence about the structure that it is incon-
 “ceivable how the whole is held together. In fact the higher parts of the range are visibly
 “undergoing a daily decay; every rainy season, nay each heavy fall of rain brings down large
 “flakes with a tremendous crash, and exposes a new precipitous face to be acted on by the
 “elements, which when in due course of time it has had its day is destined to be hurled down
 “in like manner into the ravine below, and there mingle its ruins with those of its pre-
 “decessors.

“The highest point of this range lying within the area embraced by the Great Arc
 “Series is that called Amsot, the only peak which looks down into and commands a full view
 “of the beautiful valley called Dehra Dún lying to its north. My observations assigned to it
 “a height of 3,252 feet above the sea, which is 2,208 higher than Nojhili my last principal
 “station in the Doáb. There are several other eminences such as that of Doiwala 3,064 feet,
 “of Mohan 3,181, of Lalu 3,119, but in assigning these names I must remark that, with
 “the exception of that of Amsot which is *boná fide* employed by the native inhabitants, all
 “the others are quite arbitrarily imposed and are known only to my own department, for the
 “said eminences have literally no known names and lie in the jungles far out of the haunts
 “of men, unknown and unvisited by any body.

“On the north of this range lies the beautiful valley called Dehra Dún which is there-
 “fore comprised between the so-called Sewalik Hills and the part of the Sub-Himalayan range
 “on which the settlements of Landaor, Masuri, Hatipaon, Bhadraj, &c., so celebrated for
 “their salubrity as to have been selected as Sanataria are situated: the average height of
 “this latter range which bears to the Himalaya Mountains somewhat the same relation
 “that the Jura does to the Alps may be stated at 6,500 feet above the sea. Some of its emi-
 “nences are indeed much higher than this, my principal station of Banog for example being
 “7,433* feet above the sea, and the Landaor Hospital falling short of it by 71 feet, but then
 “there are others considerably lower.

“The height of the Dehra Dún varies considerably, as will naturally be supposed from
 “its being between two such large rivers as the Jumna and Ganges flowing so near to each

* This and the following heights have been corrected to the most recent values.

“other—the highest part of the valley is that were the town and cantonment of Dehra stand, near the latter of which my office is situated at the height of 2,288 feet above the sea. The height of the west end of my base is as low as 1,772 feet, which is still 842 feet higher than Nojhili my last principal station in the Doáb: the east end is at a height again of 1,958 feet; and in general we may fairly assume that the average height of the plateau of the Dún, which skirts the so-called Sewalik range on the north, exceeds that immediately to the south of the same range by about 1,000 feet. From this description and a reference to the map it will be seen that between the last elevation of Central India (the low sandstone height near Dehli) and Amsot, the most southern eminence connected with the Himalaya Mountains, the shortest distance in a straight line is 104 miles, through which a series of principal triangles had to be carried over a tract of the nature which I have been above describing.”

Before commencing a principal triangulation it is necessary to select the most suitable positions for the stations which the country affords, the chief desiderata being that they shall occupy the highest elevations, giving the greatest command of the surrounding country, and yet shall be so situated relatively to one another that the triangles connecting them may be both large and symmetrical, their symmetry conducing very much to the accuracy of the measurements, and the fewer the stations, except when lofty towers have to be erected on the sites chosen, the less being the cost entailed. The selection of stations is usually entrusted to the care of an experienced assistant who at the same time generally executes a preliminary triangulation connecting them which is called *an approximate series*.

In preparing for the extension of the Great Arc, this duty was assigned to the under-mentioned officers as follows:—Mr. Rossenrode was to select stations and carry an approximate series from Sironj to the north to meet Captain Wilcox and Mr. Olliver who were to commence from Futtehpur Sikri and work southwards. Lieutenant Boileau had been previously deputed to start from the latter point and select stations to the north.

Mr. Rossenrode commenced work at Pardho on 1st February 1833, and performed his part very ably. In spite of unfavorable weather by which he was much delayed, he succeeded in bringing up the approximate series to Juktípura and Pagáro, two stations on the south of the Chambal. The rains having by that time set in and his party suffering considerably from sickness he closed work for the season. Lieutenant Wilcox carried out the instructions given him, in so far as selecting stations on the Biana, Usira, Gurja, Máchi and Nindar hills and the rejection of Futtehpur Sikri, but he observed no angles. Also so far as the highlands lasted, viz., to Dehri Station, Lieutenant Boileau made good progress.

Hitherto the principal stations had been on the highest points of mountains or hilly land, and each was visible in broad day from those with which it was connected. The eminence that bade fair to answer best was chosen from a distance and a party was sent in advance to mark and occupy it, a business which, when the features of the spot selected were sufficiently defined was confided to one of the native flagmen or otherwise to one of the sub-assistants.

Amongst the subordinates were men well trained to a duty of this nature, but when the circumstances came to be so thoroughly changed, when instead of having the power to choose in the light of day from a number of distant peaks, the view was limited to five or six miles, without the power of forming a rational conjecture, either as to the direction in which the party in advance was to be detached, the obstacles which would stand in their way or the mode of overcoming them when revealed, all previously acquired experience became inapplicable and of no avail.

Major Everest thus found himself called upon to devise some method by which these difficulties might be overcome, and that which he adopted is best described in his own words.

* “ I designed a mast of seasoned timber 35 feet in length, consisting of two parts which
 “ could be firmly united by iron bands when necessary, or otherwise taken asunder for more
 “ easy transport; of this mast the lower 5 feet were to be buried in the earth, leaving 30 feet
 “ above ground; at the summit was a circular table of 40 inches diameter, to be occupied by
 “ the instrument on its stand; at the height of 20 feet an iron ring was applied with 4 dead
 “ eyes for as many stay ropes, and a like number of antagonizing struts adapted below.

“ Round this mast a square scaffolding was to be erected, having at each corner a strong
 “ upright post of seasoned timber, all of which were to be well supplied with strong stay
 “ ropes, the lower ends being also sunk into the ground and otherwise sustained by earth pil-
 “ ed above their bases; these posts were intended to form the skeleton of a scaffolding for
 “ sustaining an observing tent, the observers, and such attendants as were needed to manage
 “ the tent and lights; and all the rest, consisting of the frame-work, ladders, stage, &c., was
 “ constructed of large Calcutta bamboos tied together with string.

“ It will be understood that, agreeably to the original design, the mast for the instru-
 “ ment was to stand quite isolated with respect to the scaffolding, and sustained solely by the
 “ parts sunk into the earth and the four stay ropes and lower struts above specified, but on the
 “ first occasion of its being put up at the station of Karol this condition was found untenable,
 “ because the slightest agitation of the air caused it to vibrate. The only remedy therefore
 “ was to sacrifice the isolation of the mast, and to connect it with the four corner posts of the
 “ scaffolding, which was done by means of two pairs of diagonal bamboos, the one applied
 “ above the centre of oscillation, and the other below it, care being taken at the same time
 “ that no part of the ladders or stage work should come in contact with them; this arrange-
 “ ment effectually remedied the vibration, but at the same time rendered it necessary that no
 “ person should be allowed to ascend the ladder or stand or move about on the scaffolding whilst
 “ the observations were being made, so that except myself and one person to hold a light, all
 “ the attendants were seated and formed a dead weight affecting alike each observation of a
 “ distant station and the near object to which it was referred.

* Everest's Measurement of the Meridional Arc of India, page XVI.

“With the instrument thus raised above the ground, corresponding arrangements were requisite for elevating the objects at the surrounding stations, for which purpose I contrived to erect masts 70 feet high; the nucleus at the base of each was formed of an upright post of seasoned timber, and the superstructure of bamboos firmly linked together, the protruding ends of those which encased the nucleus forming so many points of connection for others immediately above and contiguous to them; a pulley fixed at the top furnished me the means of raising a bamboo staff in a horizontal position to the height of 70 feet as above specified, which bamboo being supplied with a sway rope at one end, and bearing an ignited blue light at the other, enabled me to have the latter displayed at a further height of 20 or 25 feet above the top of the mast, thus supplying a brilliant light at upwards of 90 feet above the surface of the ground.”

Major Everest's next step was to raise and train an establishment of native subordinates. In September 1833 he sent three men to Meerut to collect recruits and they returned in a few days with an assemblage of 100 men, who had been driven to accept the first employment offered them, by the scarcity which then prevailed, and who on their arrival presented a half starved appearance. Among them were barbers, weavers, smiths, bricklayers, potters, thatchers, tilers, shepherds, gardeners, musicians, and priests, all with their clownish habits fresh upon them and many of them never having had dealings with an European or contemplated one except as a dealer in magic. To adapt such material as this to any useful purpose naturally at first appeared a hopeless task; but the docility of the native character enabled Major Everest to transform many of them, in time, into efficient and valuable servants.

In November he was prepared to take the field again, but prior to recommencing the approximate series of the Great Arc, he spent ten days in examining the Dún or valley of Dehra, which is situated between the Himalayas and the Sewalik ranges, for the purpose of selecting ground for measuring a base-line of verification on which the Great Arc Series was to close. The valley offered many advantages for this purpose. It lay in the line which the triangulation would take and though in parts very rugged and intersected by ravines it presented a strip of land in the neighbourhood of the river Asun which was upwards of 7 miles in length and had few unevennesses and those easy to be overcome. There were neither villages nor cultivation in this tract which was waste, belonging entirely to the state, and therefore no interference with proprietary rights was to be apprehended; it was free from trees and only covered with grass and reeds which could be removed without much labour, and finally it was within a few miles of the Head Quarters of the Survey, which Major Everest had already established at Masúri, on the first range of the Himalayas, with a view to facilitating his progress with the Great Arc triangulation. Leaving one of his sub-assistants, Mr. Kallonas, to examine the course of the line and to report on its various features, and sending another, Mr. Clarkson, to clear the top of Amsot hill, in the Sewaliks, and occupy it as a station, he proceeded himself, after visiting Amsot, to undertake the selection of stations in the plains.

On his journey down country he fixed on the station of Begarazpúr, examined the

PERSONNEL.

Major G. Everest Surveyor Genl. and Supdt. G. T. Survey.
 Captain Wilcox, Surveyor.
 Lieut. Boileau, Do.
 Mr. Olliver, Do.
 „ W. Rossenrode, Principal Sub-Assistant.
 „ C. Murphy, Sub-Assistant 2nd Class.
 „ W. Martin, Do.
 „ M. Kallonas, Sub-Assistant 3rd Class.
 Baboo Radanath Siedar, Do.
 Mr. R. Clarkson, Do.
 „ H. Keelan, Do.
 „ G. Terry, Do.
 „ C. K. Dove, Do.
 „ J. Mulheran, Do.

tract in the vicinity of Hapar, selected the old mosque at Boolandshahar, fixed the site of the Chandaos station and that at Noh and reached Muttra on the 5th December. There he detached Capt. Wilcox with a party to take preliminary measures of the angles at Dholpúr, Gurjápahár and Máchi and afterwards to complete the connection of Noh, Chandaos and Boolandshahar with the triangulation

Leaving Agra on the 13th December, he proceeded in succession to Alípúr, Madhoni, Aríng, Rasía, Chapra, Pat and Meoli stations, determining the most eligible sites and observing the necessary preliminary angles at each. In January he reached Karaol his first station in the plains where he had occasion to erect his scaffolding and mast and rectify any deficiencies in their structure.

This first trial naturally caused him considerable apprehension, for had his invention been found to fail, not only would the remainder of the season have been lost, but much of his previous work might have proved useless. Many of the stations already selected might have had to be rejected, and the substitution of a new plan might have led to the necessity of re-casting the triangulation. Fortunately the success he met with was sufficient to banish all fears of the kind; and, if not without its drawbacks, the invention was sufficiently serviceable to give him the results he required. His men quickly learnt how to erect and dismantle it without superintendence and thus left him at liberty to employ his time on the more important duties connected with his work.

The blue lights which were employed as signals were not without objection, they could not be used except in calm weather and the composition was so inflammable as often to be quite unmanageable; they were liable to burst when burning and the flakes of liquid fire scattered on such occasions endangered every surrounding object.

Another difficulty now presented itself. The principal stations were chosen at such distances apart that the blue light signals were rarely visible to the naked eye, and it became necessary to know in what direction to point the telescope of the theodolite in order to see them. Without this information it could only be by the merest accident that they would be discovered, for although the general direction in which they were likely to appear might be anticipated, the field of view of the telescope was so small that misdirecting it a few degrees one way or the other would preclude the chance of seeing the signal at the time it was exhibited, the burning of the blue lights lasting only a short time and but four being burnt each evening at intervals of 16 minutes.

The necessity which thus arose for laying the telescope correctly, before the time for the appearance of the signal, led to the introduction of what is now well known as *ray tracing*.

A point was chosen at a distance of from 4 to 5 miles from the station where the scaffolding was erected and the line between this point and the principal station being taken as base, a chain of small triangles was carried from it by one of the sub-assistants using a small theodolite, to the station where the signallers were. This could easily be effected by making use of the tops of houses, temples and any small elevations afforded by the country traversed, and as it was not requisite that more than two angles of each triangle should be measured, if the work was carefully executed, many of the stations need not be visited. Assuming the length of the base of this chain of triangles to be unity, and computing accordingly it was very easy to determine the angle between the first station and the last, at the station where the scaffolding was erected, and it only remained for the observer to point his telescope at the first station of the ray-trace triangles, read the horizontal circle, then apply the known angle to this reading and set the telescope so that the circle read accordingly, and clamp it, after which he had nothing further to do than to wait until the time fixed for shewing the signal and then observe the angle between it and the other principal stations with which it was to be connected: should obstacles present themselves in the direction in which the observer wanted to look, such as trees, huts, &c., he knew exactly which to remove. When this connection was accomplished, the ray-trace triangulation could be brought into use as secondary triangulation; for when the distance between the two stations was known, a factor could readily be obtained by which if the base, hitherto considered as unity, were multiplied, its true value would be obtained and hence the lengths of all the sides of this minor triangulation deduced. Another and more speedy way of obtaining the direction of the forward station, when the country admitted of it, was to carry a traverse from one station to the other with a theodolite and perambulator.

The series quitted the last of the southern hills at Delhi and lay through almost level country till it reached the Sewalik range of hills where work closed for the season.

The next cold season 1834-5 was occupied by Major Everest in measuring the base-line in the Dún with the apparatus of compensation bars and microscopes, and connecting it with the principal triangulation through Banog and Amsot. By the time this was accomplished his health, which had previously shewn signs of giving way, completely failed him. In a letter addressed to Government he writes as follows:—

“I was confined to my bed from May till the end of October, with little intermission, during which I was once bled to fainting, had upwards of 1,000 leeches, 30 to 40 cupping glasses, 3 or 4 blisters, a deep issue and fomentations without number, besides daily doses of nauseous medicine administered to me.” Further proof of the natural strength of his constitution is hardly needed.

It was while executing the minor triangulation of the base-line that Major Everest designed the form of signal which he denominated a *sight vane* and which is still in use when small triangles have to be measured with great accuracy. Its description will be found in the chapter on signals in Vol. II.

During this season he was deprived of the services of two of his assistants, Captain Wilcox and Lieutenant Boileau, the latter having been ordered, in September, by the Adjutant General of the Army, to proceed into the field with the force sent to reduce to order the small state of Shekawatti, situated in Rájputána, and inhabited by a semi-barbarous population of free-booters; and the former having in the January following been appointed Astronomer to the King of Oude.

While the measurement of the base was in progress, towers designed by Major Everest were in course of construction at the several principal stations in the plains by the Executive Engineers of the districts in which they were situated, to whom the duty of building them had been assigned by Government.

Parties were also employed in clearing the lines between the stations of obstacles such as trees, huts &c., which obstructed the view. The wholesale way in which this was sometimes done, is exemplified by the clearing of the ray Datairi to Boolandshahar, when the following destruction took place.

5 thatched huts in Rámnnagar crushed by the fall of trees.
 37 flat roofed houses
 52 huts and atáris, walls of mud, } razed to the ground in the town of Bhatona.
 12 thatched huts with mud walls in the village of Daherpur.

It is fair to state that this was considered an exceptional destruction of property; and that the owners were compensated for their loss to their complete satisfaction, is evident from their putting no obstacles in Mr. Rossenrode's way, to whom the duty of clearing the ray was assigned, which as the town of Bhatona contained 2000 fighting men of the Ját caste and Mr. Rossenrode was unarmed would have been no difficult matter for them.

In October 1835 Major Everest again took the field for the purpose of finally measuring the angles of this section of the Great Arc.

PERSONNEL.

Major G. Everest, Surveyor General and Superintendent G. T. Survey.
 Lieutenant A. S. Waugh, Astronomical Assistant.
 " W. Jones, 2nd Do.
 G. Logan, Esquire, " Do.
 Mr. W. Rossenrode, Principal Sub-Assistant.
 " W. N. James, Do.
 " J. H. Scully, Sub-Assistant 2nd Class.
 Bápoo Badanath Siedar, Do.
 Mr. R. Clarkson, Do.
 " H. Keelan, Do.
 " J. Mulheran, Do.
 " W. Martin, Sub-Assistant 3rd Class.
 " G. Terry, Do.
 " C. K. Dove, Do.
 " J. G. Driberg, Do.
 " O. Mulheran, Do.
 " J. Nicolson, Do.

The triangulation was taken up at the line Dof-wála to Amsot. Two instruments being employed on it, the 36-inch theodolite which had been renovated by Mr. Barrow, and Troughton and Simms' 36-inch theodolite. Two parties were formed, one of which appears to have been committed to the charge of Mr. Logan in the first instance, until Lieutenant Waugh joined in January 1836. This Officer had been sent for because Major Everest felt his health to be still in so unsatisfactory a state that he feared he might be compelled to give up active duties; but on his arrival he gave Lieutenant

Waugh the second party and the operations were then conducted by both officers simulta-

neously, Lieutenant Waugh apparently being employed on the west flank of the series while Major Everest followed the east. In the mean time Lieutenant Jones had been despatched to the south of the Chambal to improve the configuration of the triangulation in that part of the Arc.

From the 11th December the final operations were greatly impeded by bad weather, the air being saturated with dust and smoke which prevented the rays from the distant lamps being seen for many nights at a time. This state of the atmosphere lasted for 2½ months and was terminated by a violent storm which lasted three days and nights. This was the first occasion on which the argand lamps, now in common use, were employed in India as signals. They formed excellent objects to observe to, and were visible even at distances of upwards of 40 miles. By the 1st May the final triangulation had been advanced to the southern side of the Chambal to the line Juktípura-Pagáro where further work was precluded by the heated and dusty state of the atmosphere, and the party returned into recess quarters.

Field operations commenced again in October 1836, Major Everest proceeding in the

PERSONNEL.

Major G. Everest, Surveyor General and Supdt.	
G. T. Survey.	
Lieutenant A. S. Waugh, Astronomical Assistant.	
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Mr. W. Rossenrode, Principal Sub-Assistant.	
" W. N. James, Do.	
" W. Martin, Sub-Assistant 1st Class.	
" J. H. Scully, Sub-Assistant 2nd Class.	
Baboo Radanath Siedar, Do.	
Mr. R. Clarkson, Do.	
" H. Keelan, Do.	
" G. Terry, Do.	
" O. Mulhoran, Sub-Assistant 3rd Class.	
" J. Nicolson, Do.	
Mir Mohsin, Do.	

first place to Kaliána near Muzaffarnagar where a small observatory was in process of erection. This point had been selected as the northern extremity of the celestial arc of amplitude for this section of the Great Arc; any nearer approach to the Himalaya Mountains was likely to lead to the observations being burthened with considerable local attraction. Leaving this place on the 11th the march was continued southward and the ground was reached about the middle of November. The establishment was then divided into two parties, one being placed under Lieutenant Waugh, to whom was assigned

Troughton's instrument with instructions to work southward from the side Juktípura-Pagáro, and the other proceeding with the Surveyor General to the base Gugubára-Nímdánt. The junction with the Sironj base measured with the chain in 1824 was effected by the 1st of February, besides which at several stations of the old work the angles were remeasured with the large theodolites. Major Everest then started for Kaliána, leaving Lieutenant Waugh with four parties to observe simultaneous vertical angles, the results previously obtained having been rendered unreliable from the effects of terrestrial refraction, for most of the stations were so situated with reference to one another that they were only mutually visible at the time of maximum refraction or a little before and after that time.

The termination of the triangulation shewed a discrepancy of 3·3 feet between the length of the base as measured with the chain in 1824 at Sironj and as deduced by the triangulation from that at Dehra, which as before said had been recently measured with the "compensation apparatus." The discrepancy being so large it was decided that the base should be remeasured during the next field season with the compensation apparatus.

The triangulation connecting the two base-lines was completed by the 8th June 1837 as to the horizontal angles. But some of the vertical angles remained to be observed, from Aring northward; they were measured by Lieutenant Waugh, Lieutenant Jones, Mr. Logan and Mr. James, and the instruments supplied them for the purpose had vertical circles 12 inches to 18 inches in diameter. The observations were made simultaneously with the expectation that they would be equally affected by refraction, but it was soon found that the laws of terrestrial refraction were as yet far from having been discovered. The subtended angle, which is half the difference of a pair of reciprocal vertical angles, should, if the refraction at both stations were the same, remain a practically constant quantity, however much the amount of the refraction might vary. Far from this being the case however the subtended angles in many instances were frequently found to vary between limits far exceeding those of the errors of observations, thus showing that the reciprocal vertical angles were not equally affected by refraction though observed simultaneously.

In October 1837 Lieutenant Waugh proceeded to measure the Sironj base-line with the compensation apparatus, this duty having been entrusted to him by Major Everest who was prevented by illness from personally superintending the measurement. The base was completed on the morning of the 18th January 1838 and the result shewed a difference from the value deduced by the triangulation from the Dehra Dún base of six inches or about one inch per mile, which considering that the Sironj and Dehra bases are separated by nearly 450 miles is a satisfactory proof of the accuracy with which this section of the Great Arc had been executed, and proves conclusively that the discrepancy with the chained value of the base arose, as had been anticipated, from the errors to which chain measurements are liable.

In the year 1865 steps were taken to strengthen what had up to that time been the weakest portion of the northern section of the Great Arc, viz., the chain of single triangles crossing the difficult belt of plains between Delhi and the Sewalik hills. New stations, Tetaora, Baraodh and Bágpat were added and connected with the original stations, and three stations Chandípahár, Ghandiál and Mehesari, of the Budhon Meridional Series, were also connected with the contiguous stations of the Arc, and the triangulation was thus converted into a compound chain forming a hexagon and double polygon. The observations were taken by Lieutenant Trotter who worked at first under the superintendence of Lieutenant Herschel R.E.

PERSONNEL.

Lieutenant H. Trotter, R.E., 1st Assistant.

Mr. L. H. Clarke, Civil 2nd Assistant.

„ J. W. Macdougall, Sub-Assistant 3rd Class.

Ram Chund, Native Surveyor.

W. H. COLE.

GREAT ARC MERIDIONAL SERIES.

1—4.

ALPHABETICAL LIST OF STATIONS.

Alípúr	XXV.	Hatíápahár	III.
Amsot (of base-line figures).	(XI).	Juktípura	XVI.
Aríng	XXX.	Kalíána	L.
Bágpát	XLII.	Karaol	XXXIV.
Banog (of base-line figures).	(X).	Kesri	XI.
Baraodh	XLIII.	Ládpúr	XXVII.
Barkheri	V.	Máchi	XXI.
Begarazpúr	XLVII.	Madhoni	XXIV.
Bhaorása (of base-line figures).	(V).	Mamoni	IX.
Boolandshahar	XXXVII.	Mánpúr	XXIX.
Bostán	XXXVIII.	Mao	VIII.
Chandaos	XXXVI.	Mehesari	LII.
Chándípahár	LIV.	Meoli	XXXII.
Chapra	XXVIII.	Nímdánt	VI.
Chilwáni	XIV.	Nindar	XIX.
Dahera	LI.	Noh	XXXIII.
Daiádhari	II.	Nojli	LIII.
Datairi	XL.	Pagáro	XVII.
Dehri	XXXV.	Pahárgarh	IV.
Dhaolri	XLI.	Páhera	XXXI.
Dhobái	XII.	Párdho (of base-line figures).	(VI).
Dholpúr	XX.	Pírghaib	XXXIX.
Dimdima	XXIII.	Ráepúr	XV.
Dín	XIII.	Rasía	XXVI.
Doíwála	LV.	Saini	XLV.
Ghandiál	LVI.	Saraoli	XLIV.
Godhna	XLIX.	Sheopúri	XLVIII.
Gugubára	VII.	Shergarh	X.
Gurjápahár	XVIII.	Titaora	XLVI.
Handiapáro	I.	Usira	XXII.

GREAT ARC MERIDIONAL SERIES.

NUMERICAL LIST OF STATIONS.

(V)	.	.	.	.	Bhaorása. (of base-line figures).	XXIX	.	.	.	.	Mánpúr.
(VI)	.	.	.	.	Párdho. (of base-line figures).	XXX	.	.	.	.	Áring.
I	.	.	.	.	Handiapáro.	XXXI	.	.	.	.	Páhera.
II	.	.	.	.	Daiádhari.	XXXII	.	.	.	.	Meoli.
III	.	.	.	.	Hatíápahár.	XXXIII	.	.	.	.	Noh.
IV	.	.	.	.	Pahárgarh.	XXXIV	.	.	.	.	Karaol.
V	.	.	.	.	Barkheri.	XXXV	.	.	.	.	Dehri.
VI	.	.	.	.	Nímdánt.	XXXVI	.	.	.	.	Chandaos.
VII	.	.	.	.	Gugubára.	XXXVII	.	.	.	.	Boolandshahar.
VIII	.	.	.	.	Mao.	XXXVIII	.	.	.	.	Bostán.
IX	.	.	.	.	Mamoni.	XXXIX	.	.	.	.	Pírghaib.
X	.	.	.	.	Shergarh.	XL	.	.	.	.	Datairi.
XI	.	.	.	.	Kesri.	XLI	.	.	.	.	Dhaolri.
XII	.	.	.	.	Dhobái.	XLII	.	.	.	.	Bághpat.
XIII	.	.	.	.	Dín.	XLIII	.	.	.	.	Baraodh.
XIV	.	.	.	.	Chilwáni.	XLIV	.	.	.	.	Saraoli.
XV	.	.	.	.	Ráepúr.	XLV	.	.	.	.	Saini.
XVI	.	.	.	.	Juktípura.	XLVI	.	.	.	.	Titaora.
XVII	.	.	.	.	Pagáro.	XLVII	.	.	.	.	Begarazpúr.
XVIII	.	.	.	.	Gurjápahár.	XLVIII	.	.	.	.	Sheopúri.
XIX	.	.	.	.	Nindar.	XLIX	.	.	.	.	Godhna.
XX	.	.	.	.	Dholpúr.	L	.	.	.	.	Kalíána.
XXI	.	.	.	.	Máchi.	LI	.	.	.	.	Dahera.
XXII	.	.	.	.	Usira.	LII	.	.	.	.	Mehesari.
XXIII	.	.	.	.	Dimdima.	LIII	.	.	.	.	Nojli.
XXIV	.	.	.	.	Madhoni.	LIV	.	.	.	.	Chándípahár.
XXV	.	.	.	.	Alípúr.	LV	.	.	.	.	Doiwála.
XXVI	.	.	.	.	Rasía.	LVI	.	.	.	.	Ghandiál.
XXVII	.	.	.	.	Ládpúr.	(X)	.	.	.	.	Banog. (of base-line figures).
XXVIII.	.	.	.	.	Chapra.	(XI)	.	.	.	.	Amsot. (of base-line figures).

GREAT ARC MERIDIONAL SERIES.

DESCRIPTION OF STATIONS.



(V). Bhaorása Hill Station (*for description see base-line figures*).

(VI). Párdho Hill Station (*for description see base-line figures*).

I. Handiapáro Hill Station, lat. $24^{\circ} 26'$, long. $78^{\circ} 3'$, is built on a long range of table-topped hills, running north and south, and is on lands subject to the village of Jaklon; pargana Magaoli of the Gwalior territory. The circumjacent villages, with their distances and bearings, are—Jaklon and Nandenkhera about 2 miles E.; Harokheri 3 miles S.; Thamasa and Khar about 2 miles W.; and Bhansa Kheri about 3 miles N.N.W.

The pillar is solid, 4 feet in diameter and 7 feet high. It has a mark-stone at top, another at bottom and a third between them, each having a circle and dot \odot engraved on it.

II. Daiádhari Hill Station, lat. $24^{\circ} 38'$, long. $77^{\circ} 42'$, is situated on a low detached hill in the Gwalior territory. On the eastern brow of the hill stands the village of Daiádhari, well known in those parts as being the residence of a Mahant, or high priest, and a horde of Sanyásís. The adjacent places, with their distances and bearings, are—the Mahant's building a few hundred yards S.E.; Sadhora, a town, about 4 miles S.W.; the large village and fort of Puchar about $6\frac{1}{2}$ miles S.E.

The pillar is solid, 4 feet in diameter and 5 feet high. It has a mark-stone at top and another at bottom with a circle and dot \odot engraved on each.

III. Hatiápahár Hill Station, lat. $24^{\circ} 49'$, long. $77^{\circ} 57'$, is built on a commanding eminence which rises above the ridge of flat hills lying about 2 miles S.W. of the large town of Iságarh in pargana Iságarh of the Gwalior territory. The circumjacent places, with their distances and bearings, are—Jamdela village about 3 miles S.E.; Amjera village about 2 miles S.; Dhakoni village about 5 miles S.W.

The pillar is solid, 4 feet in diameter and 4 feet high. It has a mark-stone at top, another at bottom and a third between them with a circle and dot \odot engraved on each.

IV. Pahárganh Hill Station, lat. $24^{\circ} 56'$, long. $77^{\circ} 44'$, is built on the highest point of a flat sandstone ridge, on the S.E. extremity of which stands the ruined village of Pahárganh

in the Gwalior territory. The circumjacent villages, with their distances and bearings, are—Barodia about 1 mile S.E.; Piraot 2 miles N.E.; and Mangrora about 1 mile N.W.

The pillar is solid. It has a mark-stone at top and another at bottom.

V. Barkheri Hill Station, lat. $24^{\circ} 58'$, long. $77^{\circ} 29'$, stands on the highest point of a low mass of hills in the Gwalior territory. The ruined village of Barkheri, from which the station takes its name, is distant about 1 mile to the S.E.; that of Chandona about 3 miles to the N.E., and the fortress of Bijrawan about 4 miles N.

The pillar is solid and 4 feet in diameter. It has a mark-stone at top and another at bottom.

VI. Nímdánt Hill Station, lat. $25^{\circ} 3'$, long $77^{\circ} 55'$, is situated on a hill so called at the eastern extremity of a range of flat topped hills; pargana Ranod, of the Gwalior territory. The circumjacent places, with their distances and bearings, are—the town and fort of Ranod, well known in those parts, about 2 miles N.; Bara Paháro village about $1\frac{1}{2}$ miles E.; Chota Paháro village about $1\frac{1}{2}$ miles S.E.; Karila village about $\frac{1}{2}$ a mile N.N.W.

The pillar is solid, 4 feet in diameter and 5 feet high. It has four mark-stones, one at top, another at bottom and two others between them marked with circles and dots \odot .

VII. Gugubára Hill Station, lat. $25^{\circ} 12'$, long $77^{\circ} 37'$, stands on the ruins of a village of that name situated on the summit of a hill, which is one of a low flat sandstone range; pargana Koláras of the Gwalior territory. The adjacent places, with their distances and bearings, are—the large fortified town of Koláras about $2\frac{1}{2}$ miles N.E.; the hill fort of Akawal about $2\frac{1}{2}$ miles S., and that of Rai about 3 miles W.

The pillar is 4 feet in diameter and 5 feet high, the lower mark being engraved on the rock *in situ*.

VIII. Mao Hill Station, lat. $25^{\circ} 17'$, long. $77^{\circ} 56'$, is situated on a detached flat-topped hill, surrounded on all sides by a low ridge of highlands covered with dense khair jungle; pargana Kenwai of the Gwalior territory. To the westward of the station flow two rivers the Aer and Sind, which unite their waters opposite to the town of Kenwai. The circumjacent places, with their distances and bearings, are—the fort and town of Kenwai about 3 miles N.W.; the small village of Mao about 1 mile W.; the village and fort of Kundulpur situated on the ridge about 2 miles W., and the village of Mach Mor about 3 miles S.

The pillar is solid and 6 feet high. It has two mark-stones, one at top, the other at bottom marked as usual.

IX. Mamoni Hill Station, lat. $25^{\circ} 31'$, long $77^{\circ} 44'$, is situated in the Gwalior territory on an elevated point on the eastern border of an extensive table-land in which the river Parbati takes its rise. The almost ruined village of Mamoni is about 2 miles S., and the cantonment of Seepree, about 7 miles in the same direction.

The pillar is solid and $7\frac{1}{2}$ feet high. It has a mark-stone at top and another at bottom.

X. Shergarh Hill Station, lat. $25^{\circ} 35'$, long $77^{\circ} 58'$, is situated in the Gwalior territory on a lofty isolated sandstone hill, which is an outlier of the Bindráchal range, running a

little to the west. The sides of the hill are steep and rugged, and covered with dense jungle. The ruined fort and village of Shergarh lie 2 miles north in the plains, and the town of Narwar is 4 miles distant in the same direction.

The pillar is solid and $6\frac{1}{2}$ feet high. It has a mark-stone at top and another at bottom.

XI. Kesri Hill Station, lat. $25^{\circ} 47'$, long. $77^{\circ} 43'$, situated in the Gwalior territory, is built on an eminence of the range, which forms the southern boundary of the Parbati valley. The upper road from Gwalior, *via* Seepree, to the Deccan skirts the Kesri hill. The ruined village of Kesri lies about $1\frac{1}{2}$ miles to the south, and the large village of Gopálpur about 4.8 miles S.W.

The pillar is solid and marked in the usual manner.

XII. Dhobái Hill Station, lat. $25^{\circ} 56'$, long. $78^{\circ} 2'$, is situated in the Gwalior territory on the eastern edge of the Bindráchal range of hills, which here commands an extensive view of the plains of Bundelkund. The village of Dhobái stands on the plain at a distance of about $1\frac{1}{2}$ miles to the S.E., and that of Karaia 4.1 miles S.S.E.

The pillar is solid. It has a mark-stone at top and another at bottom.

XIII. Dín Hill Station, lat. $26^{\circ} 1'$, long. $77^{\circ} 51'$ is situated on a lofty detached and densely wooded hill locally called Daatora in pargana Raint of the Gwalior territory. The circumjacent places are as follows :—The village of Dín, $1\frac{1}{2}$ miles N.E. ; the fort of Raint, about $2\frac{1}{2}$ miles S.E. ; and the town of Doa, famous for its iron works, 6.5 miles N.E.

The pillar is solid. It has a mark-stone at top and another at bottom.

XIV. Chilwáni Hill Station, lat. $25^{\circ} 58'$, long. $77^{\circ} 34'$, is situated on the highest point of an extensive flat-topped ridge, in pargana Gaswani of the Gwalior territory. The village, within the lands of which the station is situated and whence the name of the station is derived, is about $\frac{3}{4}$ of a mile to the N., and that of Dongarpur about 1 mile to the S.

The pillar is solid and 6 feet high. It has a mark-stone at top, another at bottom and a third between them.

XV. Ráepúr Hill Station, lat. $26^{\circ} 8'$, long. $78^{\circ} 7'$, is situated on a lofty conical peak of the Bindráchal range surmounted by a Hindoo temple and is in the Gwalior territory. The station commands a good view of the town and fort of Gwalior, which lie about $9\frac{1}{2}$ miles to the N. E. ; the village of Ráepúr is distant $1\frac{1}{2}$ miles S.W.

The pillar is solid and marked in the usual manner.

XVI. Juktípura Hill Station, lat. $26^{\circ} 12'$, long. $77^{\circ} 31'$, is built on the eastern extremity of a ridge of elevated land, known as the Sabalgarh range, situated in pargana Sabalgarh of the Gwalior territory. The circumjacent places, with their distances and bearings, are—the small village of Juktípura about 1 mile N.W. ; the town and fortress of Sabalgarh about 6 miles N.N.W. ; Jelálpur village about 1 mile S.E., and Tailori about the same distance S.W.

The pillar is solid. It has a mark-stone at top and a mark engraved on the rock *in situ*.

XVII. Pagáro Hill Station, lat. $26^{\circ} 16'$, long. $77^{\circ} 54'$, is situated in the Gwalior territory on the highest point of a cluster of bluff peaks in the neighbourhood of the small village from which the name is derived. A high temple, dedicated to a Hindoo deity, is close to the station to the N.N.E. The adjacent villages, with their distances and bearings, are—Dararo about 1 mile N.W., and Basai about 3 miles S.W.

The pillar is solid. It has a mark-stone at top and another at bottom.

XVIII. Gurjápahár Hill Station, lat. $26^{\circ} 29'$, long. $77^{\circ} 36'$, is built on an extensive range of hills running east and west, and overhanging the northern bank of the Chambal river. The station is in the Dholpur district. The circumjacent villages, with their distances and bearings, are—Gurjá, a small village about $\frac{1}{4}$ of a mile N. ; Sewar and Pali about $3\frac{1}{2}$ miles S.E. ; Madanpur, Bejoli and Barwar, to the west, situated in the Keraoli district.

The pillar is solid and $3\frac{1}{2}$ feet high. It has a mark-stone at top and a mark engraved on the rock *in situ*.

XIX. Nindar Hill Station, lat. $26^{\circ} 18'$, long. $77^{\circ} 13'$, situated in the Keraoli district is built on a high isolated hill of sandstone. A lofty range of sandstone, stretching N.E. and S.W., passes about 6 miles to the north of the station. The surrounding country is much intersected by ravines, a feature peculiar to all the land bordering on the Chambal river. The fort of Mandrel, on the banks of the Chambal, bears $3\frac{1}{2}$ miles S.W.

The pillar is solid. It has a mark-stone at top and another at bottom.

XX. Dholpúr Hill Station, lat. $26^{\circ} 39'$, long. $77^{\circ} 52'$, is situated in the Dholpúr district on a conspicuous part of the range of hills known as the Kálápahár range, and on which also stands the station of Gurjápahár. The town of Dholpúr lies about 5 miles to the N.E., and the cantonment of the Rána of that place is about 4 miles directly N. of the station.

The pillar is solid. It has a mark-stone at top and another at bottom.

XXI. Máchi Hill Station, lat. $26^{\circ} 33'$, long. $77^{\circ} 6'$, situated in the Keraoli district, is built on a low sandstone range, forming the northern boundary of the Keraoli valley. The station is approached on the northern face of the hill by an easy ascent. The town of Keraoli, lies about 8 miles to the S.E.

The pillar is solid. It has a mark-stone at top and another at bottom.

XXII. Usira Hill Station, lat. $26^{\circ} 57'$, long. $77^{\circ} 40'$, is situated in the Agra district, on a shelving range of rocky hills, running N.E. and S.W. The circumjacent villages, with their distances and bearings, are—Khand about 2 miles N.N.E. ; Kheri about 1 mile N.N.W., in pargana Rúpás, of the Bhartpúr territory ; Usira, close under the station to the W. ; Nagla about 1 mile S., in pargana Jagner.

The pillar is solid and $4\frac{1}{2}$ feet high. It has a mark-stone at top and a mark engraved on the rock *in situ*.

XXIII. Dimdima Hill Station, lat. $26^{\circ} 54'$, long. $77^{\circ} 18'$, is situated in the Bhartpúr

territory, on a high range of sandstone, and is distant about 2 miles S. of the village after which it is named. The adjacent places, with their distances and bearings, are—the town of Biana, at the foot of the hill, about $2\frac{1}{2}$ miles E.; the hill fort of Indargarh, on an out-lying portion of the range, about 2 miles S.

The pillar is solid. It has a mark-stone at top and a mark engraved on the rock *in situ*.

XXIV. Madhoni Hill Station, lat. $27^{\circ} 14'$, long. $77^{\circ} 28'$, situated in pargana Bhartpúr of the Bhartpúr territory, is built on a sandstone ridge 8 miles N.W. of the celebrated fortress of Bhartpúr, of which it commands as good a view as can be obtained at that distance. The station is named after the nearest village.

The station is denoted by a stone imbedded in the ground and marked in the usual manner.

XXV. Alípúr Hill Station, lat. $27^{\circ} 9'$, long. $77^{\circ} 2'$, is built on a lofty hill, locally known as Kálápahár, and situated in the Bhartpúr territory. On the summit of the hill stands a Hindoo temple, which forms a remarkably conspicuous object. The village of Alípúr is at the foot of the hill.

The pillar is solid. It has a mark-stone at top and another at bottom.

XXVI. Rasía Hill Station, lat. $27^{\circ} 26'$, long. $77^{\circ} 13'$, stands upon a spine of quartz rock which rises to a height of 500 feet above the surrounding plain, which is well cultivated. It is in pargana Nagar of the Bhartpúr territory. On the summit of the hill, a few yards west of the station, stands a Hindoo temple. The circumjacent places, with their distances and bearings, are—Rasía village, at the S.W. foot of the hill; Kumber, 15 miles to the S.E., and the fortress of Deeg about 10 miles E.N.E.

The pillar is solid and marked in the usual manner.

XXVII. Ládópúr Hill Station, lat. $27^{\circ} 30'$, long. $76^{\circ} 51'$, situated in the Alwar district, is built on a peak of remarkable outline, which is an out-lying portion of the great sandstone range on which the station of Meoli stands. The station commands a good view of the plain on which the battle of Láswári was fought. The circumjacent places, with their distances and bearings, are—the village of Ládópúr at the northern foot of the hill; the hill fortress of Alwar 14.7 miles N.W.; Ramgarh fort 5.1 miles N., and the field of Láswári 7.5 miles N.E.

The pillar is solid and marked in the usual manner.

XXVIII. Chapra Hill Station, lat. $27^{\circ} 44'$, long. $77^{\circ} 3'$, situated in pargana Ferozpur Ithir of the Gurgaon district, is built on a range of hills forming the eastern boundary of the village of Ferozpur. The circumjacent places, with their distances and bearings, are—the village of Chapra, about a mile S.E.; Gato village, 1 mile N., and the town and fort of Ferozpur about 4 miles N.W. of the station.

The pillar is solid. It has a mark-stone at top and another at bottom.

XXIX. Mánpúr Hill Station, lat. $27^{\circ} 38'$, long. $77^{\circ} 24'$, is built on a low sandstone range of hills in pargana Chata of the Muttra district. The celebrated temples of Barsana and Nandgaon

are to the N.E. of the station, the former at a distance of 1·3 miles, and the latter at 5·4 miles.

The pillar is solid and 5 feet high. It has a mark-stone at top and another at bottom.

XXX. Aríng Station, lat. $27^{\circ} 29'$, long. $77^{\circ} 34'$, is on the vaulted roof of an old castellated building within a mud redoubt. A well or hollow cylinder of masonry was erected on the upper roof surmounted by a circular slab of sandstone. The building stands on a mound which is about 25 feet higher than the surrounding country, in pargana Aríng of the Muttra district. The circumjacent villages are—Aríng, close to the station to the south; Rai 5·5 miles N. E., and Govardhun about 4 miles W. N. W.

The station is 32 feet high and is marked by a stone sunk endwise into the ground floor of the building, the roof of each storey being pierced above it.

XXXI. Páhera Tower Station, lat. $28^{\circ} 3'$, long. $77^{\circ} 20'$, is built on a very low sandstone rock cropping out of the plains, in pargana Hatín of the Gurgaon district. The adjacent villages, with their distances and bearings, are—Gharab 1·1 miles S. W., and Atín 3 miles W.S.W.

A hollow tower 40 feet high is built over the station mark which is denoted by a mark-stone in the ground floor.

XXXII. Meoli Hill Station, lat. $28^{\circ} 3'$, long. $76^{\circ} 59'$, is situated on the table-land of the great sandstone range on land belonging to the Tijara Rájá, in pargana Noh of the Gurgaon district. About a mile to the north of the station are several domed buildings belonging to the neighbouring village of Indor, and about half a mile N. W. of these is the fort of Indor. The adjacent villages are—Meoli about 2 miles east from the foot of the range, in pargana Noh, and Bai at the very foot of the hill.

The pillar is solid and $13\frac{1}{2}$ feet high. It has a mark-stone at top and another at bottom.

XXXIII. Noh Tower Station, lat. $27^{\circ} 51'$, long. $77^{\circ} 41'$, is built within a mud redoubt bordering on the low lands of the Jumna, and is situated in pargana Mat of the Muttra district. The circumjacent villages, with their distances and bearings, are—Dhanota about 8 miles N.W.; Mitholi 6·9 miles N., and Mubárákpur 1·7 miles N.W.

The tower is hollow and 60 feet high. It has a mark-stone in the ground floor.

XXXIV. Karaol Tower Station, lat. $28^{\circ} 10'$, long. $77^{\circ} 36'$, is built on the mound of a ruined redoubt, situated within the village of that name, in pargana Koorja of the Boolandshahar district. The river Jumna flows within a quarter of a mile to the west of the station. The circumjacent villages, with their distances and bearings, are—Jewar 3·2 miles S.S.W.; Begamabad 0·9 miles N.; Diánatpur 1·4 miles N.E., and Chandat, 6·9 miles S.W.

The tower is hollow and 50 feet high. It has a mark-stone in the ground floor.

XXXV. Dehri Hill Station, lat. $28^{\circ} 25'$, long. $77^{\circ} 15'$, stands on an extensive flat of sandstone in pargana Balabgarh of the Delhi district. The small village after which the station is named is distant about 2 miles N., and a fakir's hut and tank about 1 mile W. The Kutub lies 7·9 miles N.N.W.

The pillar is solid and 6 feet high. It has a mark-stone at top and another at bottom.

XXXVI. Chandaos Tower Station, lat. $28^{\circ} 5'$, long. $77^{\circ} 54'$, is built on a high bank of accumulated sand about 400 yards from the village of that name, in pargana Khyr of the Allygur district. The adjacent villages are—Umri 5·9 miles S.W., and Elampur 2·4 miles N.W.

The tower is hollow and 40 feet high. It has a mark-stone in the ground floor.

XXXVII. Boolandshahar Tower Station, lat. $28^{\circ} 24'$, long. $77^{\circ} 54'$, is situated on the vaulted roof of an old mosque, upon the highest part of an elevated mound within the city of that name, and which gives its name to the district. The height of the building is 14 feet.

The station is denoted by a mark-stone sunk in the ground floor of the building.

XXXVIII. Bostán Tower Station, lat. $28^{\circ} 31'$, long. $77^{\circ} 33'$, is built on the high bank which bounds the bed of the river Jumna to the east in pargana Dadri of the Boolandshahar district. The adjacent villages are—Garabpúr 3·9 miles N.W., and Dadri 3·5 miles N.E.

The tower is hollow and 50 feet high. It has a mark-stone in the ground floor.

XXXIX. Pírghaib Tower Station, lat. $28^{\circ} 41'$, long. $77^{\circ} 15'$, is in the Delhi district, and situated on the dome of a small dargah, or shrine, of a Mahomedan saint, from which it takes its name, and which is situated on a ridge of sandstone running N.E. and S.W., between the cantonment and city of Delhi.

The station is denoted by a mark-stone imbedded in the ground floor of the building 39 feet below the upper mark-stone.

XL. Datairi Tower Station, lat. $28^{\circ} 44'$, long. $77^{\circ} 41'$, is situated about half a mile S.E. of the village of that name in pargana Gazeabad of the Meerut district. The circumjacent villages are—Kalchina 4·6 miles N.W.; Nal 5·8 miles S.W., and Pilkua about 1·5 miles S.S.E.

The tower is hollow and 50 feet high. It has a mark-stone in the ground floor.

XLI. Dhaolri Tower Station, lat. $28^{\circ} 55'$, long. $77^{\circ} 31'$, is situated on slightly elevated ground near the village of that name in the pargana and district of Meerut.

The tower is hollow and 50 feet high. It has a mark-stone in the ground floor.

XLII. Bágpat Platform Station, lat. $28^{\circ} 56'$, long. $77^{\circ} 16'$, stands on an old brick-kiln, situated just outside the N.W. corner of the city of Bagpat, in pargana Bágpat of the Meerut district.

The pillar is solid and 10 feet high. It has a mark-stone at its upper surface.

XLIII. Baraodh Tower Station, lat. $29^{\circ} 4'$, long. $77^{\circ} 22'$, is built on level ground near the village of that name in pargana Baraodh and tahsil Bágpat of the Meerut district.

The pillar is perforated and 26 feet high. It has a mark-stone in the ground floor.

XLIV. Saraoli Tower Station, lat. $29^{\circ} 10'$, long. $77^{\circ} 34'$, is situated in pargana Sirdhana of the Meerut district. The circumjacent places, with their distances and bearings, are—the town of Sirdhana 5·9 miles E.; Chur village 1·5 miles N.N.E.; Gotka village 0·7 miles S.S.W., and Parsi village 1·6 miles W.

The tower is hollow and 50 feet high. It has a mark-stone in the ground floor.

XLV. Saini Tower Station, lat. $29^{\circ} 2'$, long. $77^{\circ} 50'$, situated in the village of that name, is built on a very high mound of mud and broken bricks, said to be the remnants of a ruined redoubt, in the pargana and district of Meerut. The Meerut church is 5.4 miles S.W. of the station.

The tower is hollow and 50 feet high. It has a mark-stone in the ground floor.

XLVI. Titaora Tower Station, lat. $29^{\circ} 14'$, long. $77^{\circ} 47'$, stands about half a mile east of the Grand Trunk Road, and is distant about $\frac{1}{2}$ of a mile N. of the village after which it is named, in pargana Jansuth of the Muzaffarnagar district.

The pillar is perforated and 30 feet high. It has a mark-stone in the ground floor.

XLVII. Begarazpúr Tower Station, lat. $29^{\circ} 23'$, long. $77^{\circ} 44'$, is built on a mound of sand not far from the Grand Trunk Road, in pargana Khataoli of the Muzaffarnagar district. The circumjacent places are—Muzaffarnagar, a town, about 5 miles N.; Begarazpúr village 0.9 miles N.W.; Jaroda village 1.8 miles N.N.W., and Mansurpur village 2.8 miles E.

The tower is hollow and 50.5 feet high. It has a mark-stone in the ground floor.

XLVIII. Sheopúri Tower Station, lat. $29^{\circ} 19'$, long. $78^{\circ} 2'$, is built on an elevated mound, apparently the site of a ruined fort, standing on the high bank which bounds the bed of the Ganges on the west. It is in pargana Bhooma Sumbulhera of the Muzaffarnagar district. The adjacent villages, with their distances and bearings, are—Sheopúri about half a mile W., and Mirapur about 3 miles S.W.

The tower is hollow and 40.5 feet high. It has a mark-stone in the ground floor.

XLIX. Godhna Tower Station, lat. $29^{\circ} 37'$, long. $77^{\circ} 57'$, is built on the high bank which bounds the bed of the Ganges to the west, and is distant about $\frac{1}{2}$ of a mile to the east of the village from which its name is derived, in pargana Poor Chapar of the Muzaffarnagar district. The adjacent villages, with their distances and bearings, are—Kájíkápur about 4 miles W., and Thugalpur about $1\frac{1}{2}$ miles S.

The tower is hollow and 50.5 feet high. It has a mark-stone in the ground floor.

L. Kaliána Observatory Station, lat. $29^{\circ} 31'$, long. $77^{\circ} 42'$, is situated in the thana, tahsil and district of Muzaffarnagar. The village of Kacholi is 0.8 miles to the N.N.E. of the station Kasari 1.8 miles to the N.N.W., and Seid Nagla 0.7 miles to the N.W.

There are two of the usual station marks in this Observatory, with small perforated pillars about $2\frac{1}{2}$ feet high built over them. The marks are 8 feet asunder, and due E. and W. of one another. The eastern station is the point connected with the triangles, and the western station that at which the celestial observations for latitude were taken.

LI. Dahera Tower Station, lat. $29^{\circ} 38'$, long. $77^{\circ} 39'$, stands in the village of that name in pargana Deobund of the Saharanpore district. The adjacent villages, with their distances and bearings, are—Rankanda 1.5 miles N.W.; Kasoli 0.5 miles N.E., and Jakwala 0.9 miles S.S.W.

The tower is hollow and 50 feet high. It has a mark-stone in the ground floor.

LII. Mehesari Tower Station, lat. $29^{\circ} 30'$, long. $78^{\circ} 11'$, is built on a sand ridge, about 20 feet in height, near the S.W. corner of the small village of that name in pargana Mundawar of the Bijnor district.

The pillar is solid and $13\frac{1}{2}$ feet high. It has three mark-stones, one at bottom, a second 7 feet above this and the third $\frac{5}{8}$ feet higher.

LIII. Nojli Tower Station, lat. $29^{\circ} 53'$, long. $77^{\circ} 43'$, is situated 0.4 miles S. of the village of that name in pargana Heroura of the Saharanpore district. The adjacent villages, with their distances and bearings, are—Pander 1 mile N., and Barapur the same distance N.E.

The tower is hollow and 50 feet high. It has a mark-stone in the ground floor.

LIV. Chándípahár Hill Station, lat. $29^{\circ} 55'$, long. $78^{\circ} 14'$, is situated on the highest part of the hill facing the town of Hurdwar, a noted place of Hindoo pilgrimage, in thana Nágál of the Bijnor district. On a peak about half a mile north of the station stands a conspicuous Hindoo temple. The river Ganges flows to the west of the station, at a distance of about a mile.

The platform is solid and 6 feet high. It has a mark-stone at top and another at bottom.

LV. Doiwála Hill Station, lat. $30^{\circ} 7'$, long. $78^{\circ} 4'$, is situated on a peak of the Sewalik range of hills which separate the Dehra Dhoon from the plains of the Doab. The station is in the district of Dehra Dhoon. The nearest habitable place is the village of Doiwála, which lies about 7 miles in a direct distance N.E. of the station.

The station is denoted by a mark-stone imbedded in the ground.

LVI. Ghandiál Hill Station, lat. $30^{\circ} 13'$, long. $78^{\circ} 28'$, is built on a hill of that name which stands in the fork formed by the junction of the Bhagarati and Haiúl rivers, and is in the territory of the Teeree Rájá. The principal road from Teeree to Hurdwar passes about 3 miles from the station. The village of Adwani is about 5 miles distant.

The pillar is solid and 2.6 feet high. It has a mark-stone at top and another at bottom.

(X). Banog Hill Station (*for description, see base-line figures*).

(XI). Amsot Hill Station (*for description, see base-line figures*).

NOTES RELATING TO THE MUTUAL VISIBILITY OF THE STATIONS.

Aríng Station.—The Noh heliotrope was visible only late in the evening and early in the morning.

Páhera Station.—The Mánpúr and Noh heliotropes were visible only in the evening and in the morning.

Noh Tower Station.—The Karaol heliotrope was visible only late in the evening and early in the morning.
The Chandaos heliotrope was visible nearly the whole day.

Karaol Tower Station.—The Boolandshahar and Noh heliotropes were never visible.

Chandaos.—The Boolandshahar heliotrope was only visible morning and evening.

Boolandshahar Tower Station.—The Karaol heliotrope was only once seen, late in the evening.

Bostán Tower Station.—The Boolandshahar heliotrope was only visible late in the afternoon and early in the morning.

Pírghaib Tower Station.—The Dhaolri heliotrope was only visible morning and evening.

Datairi Tower Station.—The Boolandshahar heliotrope was only visible late in the afternoon and early in the morning. The Pírghaib heliotrope was never seen.

Dhaolri Tower Station.—The Saini heliotrope was only visible late in the afternoon and early in the morning. The Pírghaib heliotrope was rarely visible and then only late in the afternoon.

Saini Tower Station.—The Begarazpúr, Sheopúri and Datairi heliotropes were only visible late in the afternoon and early in the morning. The Dhaolri heliotrope was never seen.

Begarazpúr Tower Station.—The Dahera, Kalíána and Godhna heliotropes were only visible morning and afternoon. The Saini heliotrope was never seen.

Sheopúri Tower Station.—The Saini heliotrope was only visible late in the afternoon and early in the morning.

Godhna Tower Station.—The Nojli, Kalíána, Dahera, Begarazpúr and Sheopúri heliotropes were only visible during the morning and afternoon.

Kalíána Observatory.—The Godhna heliotrope was only visible late in the evening and early in the morning.

Dahera Tower Station.—The Nojli heliotrope was only visible in the morning and afternoon.

Nojli Tower Station.—The Godhna and Dahera heliotropes were only visible in the morning and afternoon.

DESCRIPTIONS OF PRINCIPAL STATIONS.

NOTE.—Consequent on modern alterations of district and other boundaries, the sites occupied by the stations are now included in civil divisions of territory which differ frequently from the district, pargana or village, recorded in the preceding descriptions of stations: a suitably modified statement of the subdivisions in question is accordingly given in the following table and is derived chiefly from the annual reports, up to 1873, made by the Civil Officials to whose care the stations have been committed.

As it has not been stated, in the usual place, by whom the observations at each station were taken, the deficiency has been supplied in the column headed "Observer" in which E. stands for Major Everest, W. for Lieut. Waugh and T. for Lieut. Trotter. The instruments used by the several observers were Barrow's 36-inch Theodolite by Major Everest and Lieut. Trotter, and Troughton and Simms' 36-inch by Lieut. Waugh.

It has become customary in modern times to erect a square protecting pillar at Principal Station over the circular pillar on which the large theodolite stood and which carries the true mark-stone; the square pillar bears a sufficiently accurate mark for Topographical and Revenue Survey purposes, so that it is generally unnecessary to refer to the true mark-stone which thus remains concealed and protected. The stations which are not protected in the manner described are indicated by †

Observer	No.	Local name	District	Pargana &c.	Village	Remarks	
E.	(V)	No reports received from the Officials of the Native States in which these Stations lie.				Visited by Lt. C. Strahan R.E. of the Topographical Survey in 1870 and reported by him to be in good order.	
"	(VI)						
"	I						
"	II						
"	III						
"	IV						
"	V						
"	VI						
"	VII						
W.	VIII						
"	IX						
"	X						
"	XI						
"	XII						
"	XIII						
"	XIV						
"	XV						
"	XVI						
"	XVII						
"	XVIII						
"	XIX						
"	XX		Dholpur	Bhartpur State	Dholpur P.	Dholpur	Visited by Mr. L. H. Clarke of the G. T. Survey in 1868 and left by him in good repair.
"	XXI						
"	XXII	Usira hill	Bhartpur State	Rúpbás P.	Between Usira and Kherájat	Damaged by lightning in 1870.	
"	XXIII	Kirkari Menda	"	Biána P.	Dimdima	Visited by Mr. L. H. Clarke of the G. T. Survey in 1868 and left by him in good repair.	
"	XXIV	Madhoni hill	"	Bhartpur P.	Between Márwára and Anipur		
"	XXV	Kálápahár	"	Akbegarh P.	Between Jurki & Muhammadpur		
"	XXVI	Rasía hill	"	Nagar P.	Rasía		
"	XXVII	Ládpur	Alwar State	Rámgarh	Ládpur		
"	XXVIII	Chapra hill	Bhartpur State	Puhari P.	Between Chapra and Chinanda		

P. stands for Pargana and Teh. for Tehsil.

Observer	No.	Local name	District	Pargāna &c.	Village	Remarks
W.	XXIX	...	Mattra	Chata P.	Between Mánpur and Dhowara	
"	XXX	...	"	Aríng P.	Aríng	
"	XXXI	...	"	"	"	
"	XXXII	...	"	"	"	
E.	XXXIII	...	Mattra	Mát P.	Naujhíl	
"	XXXIV	...	Bulandshahr	Khurja P.	Bahibnagar or Karaul	
W.	XXXV	...	Dehli	Police Station Mehroli	Dehra	
E.	XXXVI	Minár Chandaus	Aligarh (Allygurh)	Chandaus P., Khair Teh.	Chandaus	Mark-stone missing.
"	XXXVII	...	Bulandshahr	...	...	Destroyed and a Tehsíl built on the site.
"	XXXVIII	...	"	Dádri P.	Gulistán	
W.	XXXIX†	...	Dehli	Police Station No. 6. (Sabzi-mandi)	Dehli	On visiting this station in 1866 Lieut. Trotter found the lower mark-stone removed, and replaced it by another with a circle and dot engraved on it, the dot being under the centre of the aperture in the large slab of stone on which the Instrument originally rested.
E.	XL	...	Mirat (Meerut)	Jalálabad P.	Doihri	
W.	XLI	...	"	Mirat P.	Dhaulri	
T.	XLII†	...	"	Bághpat	Bághpat	Fallen down.
"	XLIII†	...	"	Baraudh P., Bághpat Teh.	Baraudh	
E.	XLIV	...	"	Sardhana P.	Sarauli	A portion of the copper bolt in the ground floor mark has been removed, a part remains with a mark on it.
"	XLV	...	"	Mirat P.	Saini	
T.	XLVI†	...	Muzaffarnagar	Jánsath Teh.	Titaura	Mark-stone reported missing, Report doubtful.
E.	XLVII	...	"	"	Begarazpur	The copper bolt and half the stone have been removed.
"	XLVIII	...	"	"	Sheopuri	
"	XLIX	...	"	Muzaffarnagar Teh.	Godhna	
"	L†	...	"	"	Kaliána	
"	LI	...	Saháranpur	Deoban P.	Dahera	Mark-stone holes empty.
T.	LII	...	Bijnaur	Mandáwar P.	Mahestra Nagla	
E.	LIII	...	Saháranpur	Harraura P.	Nojli	
T.	LIV†	Chandi	Bijnaur	Najíbabad Teh.	Cháandi	Do. do. Platform considerably damaged by a landslip one side of the pillar has given way.
E.	LV†	Báláwála Forest	Dehra	Eastern Dún	Báláwála Forest	
T.	LVI†	...	Tíri or foreign Garhwál	Sukniána P.	Pujárgón	
E.	(X)	Tibba Banauri	Dehra	Western Dún	Masúri	
"	(XI)†	Timli Forest	"	"	Timli Forest	Platform considerably damaged on the west and south sides.

GREAT ARC MERIDIONAL SERIES.

PRINCIPAL TRIANGULATION.

TRIANGLES.

No. of triangle	Station	Spherical excess	Corrected plane angle ° ' "	Distance			No. of triangle	Station	Spherical excess	Corrected plane angle ° ' "	Distance		
				Log. feet	Feet	Miles					Log. feet	Feet	Miles
1	(I)	.19	73 39 14.93	4.8087860	64385.2	12.194	6	(I)	.12	132 42 27.52	4.9511023	89351.6	16.923
	(II)	.19	71 25 14.05	4.8034597	63600.4	12.046		(III)	.12	15 45 19.74	4.5187408	33017.2	6.253
	(III)	.18	34 55 30.42	4.5844842	38413.5	7.275		(IV)	.12	31 32 12.74	4.8034597	63600.4	12.046
2	(II)	.35	83 35 16.98	4.9511023	89351.6	16.923	7	(II)	.21	40 4 52.74	4.6439262	44048.0	8.342
	(III)	.35	50 40 50.11	4.8423583	69559.8	13.174		(III)	.21	69 40 20.45	4.8071990	64150.3	12.150
	(IV)	.35	45 43 52.91	4.8087860	64385.2	12.194		(VII)	.21	70 14 46.80	4.8087860	64385.2	12.194
	(V)	.10	18 59 30.11	4.6973942	49808.6	9.433		(VII)	.43	67 21 27.58	5.0409071	109877.1	20.810
3	(IV)	.10	16 43 33.26	4.6439262	44048.0	8.342	8	(IV)	.43	87 54 37.46	5.0754513	118973.8	22.533
	(VII)	.10	144 16 56.63	4.9511023	89351.6	16.923		(V)	.43	24 43 54.96	4.6973042	49808.6	9.433
	(III)	.73	62 35 56.31	5.0409071	109877.1	20.810		(II)	.26	122 7 34.11	5.0409071	109877.1	20.810
4	(IV)	.74	71 11 3.79	5.0687372	117148.6	22.187	9	(IV)	.26	25 27 11.01	4.7463230	55760.0	10.561
	(V)	.73	46 12 59.90	4.9511023	89351.6	16.923		(V)	.26	32 25 14.88	4.8423583	69559.8	13.174
	(IV)	.70	52 53 59.19	4.9755350	94522.5	17.902		(VII)	.23	119 51 8.63	5.0073088	101697.1	19.261
5	(V)	.70	59 6 22.77	5.0073088	101697.1	19.261	10	(IV)	.23	35 0 37.77	4.8278389	67272.7	12.741
	(VI)	.70	67 59 38.04	5.0409071	109877.1	20.810		(VI)	.23	25 8 13.60	4.6973042	49808.6	9.433

NOTE.—1. The values of the side are given in the same line with the opposite angle.
2. (I) to (VII) pertain to base-line figures.

GREAT ARC MERIDIONAL SERIES.

No. of triangle	Station	Spherical excess	Corrected plane angle ° ' "	Distance			No. of triangle	Station	Spherical excess	Corrected plane angle ° ' "	Distance		
				Log. feet	Feet	Miles					Log. feet	Feet	Miles
11	(V)	.67	56 22 6.80	4.9853089	96673.8	18.309	23	X	.91	60 52 58.47	5.0726328	118204.2	22.387
	(VI)	.68	69 8 2.79	5.0354039	108493.6	20.548		XI	.91	68 39 29.77	5.1004553	126024.6	23.868
	I	.67	54 29 50.41	4.9755350	94522.5	17.902		XII	.90	50 27 31.76	5.0184554	104341.1	19.762
12	(VI)	.97	67 33 26.04	5.1297203	134809.5	25.532	24	XI	.53	35 7 31.69	4.8327648	68040.1	12.886
	I	.97	70 55 43.99	5.1394096	137850.9	26.108		XII	.53	56 32 57.90	4.9941726	98667.2	18.687
	II	.97	41 30 49.97	4.9853089	96673.8	18.309		XIII	.53	88 19 30.41	5.0726328	118204.2	22.387
13	I	1.04	43 40 16.28	5.0127247	102973.3	19.503	25	XII	.43	81 18 1.19	4.9866705	96977.4	18.367
	II	1.04	71 38 20.90	5.1508572	141532.9	26.805		XIII	.43	54 47 20.57	4.9039366	80156.1	15.181
	III	1.04	64 41 22.82	5.1297203	134809.5	25.532		XV	.42	43 54 38.24	4.8327648	68040.1	12.886
14	II	.63	46 12 37.32	4.9197684	83132.0	15.745	26	XV	.58	59 19 53.48	4.9646717	92187.4	17.460
	III	.64	70 23 11.13	5.0353408	108477.8	20.545		XIII	.58	55 52 7.65	4.9480077	88717.2	16.802
	IV	.64	63 24 11.55	5.0127247	102973.3	19.503		XVII	.59	64 47 58.87	4.9866705	96977.4	18.367
15	III	.42	49 45 16.14	4.8478393	70443.2	13.342	27	XIII	.88	67 20 11.88	5.1058523	127600.5	24.167
	IV	.43	65 59 9.03	4.9225360	84301.6	15.966		XVII	.88	70 51 6.32	5.1160335	130627.2	24.740
	VI	.42	64 15 34.83	4.9197684	83132.0	15.745		XVI	.87	41 48 41.80	4.9646717	92187.4	17.460
16	IV	.57	78 37 39.86	5.0551797	113548.0	21.505	28	XI	.59	63 2 40.70	4.9863100	96896.9	18.352
	VI	.57	63 54 45.42	5.0171276	104022.6	19.701		XIII	.59	51 46 24.65	4.9314423	85396.9	16.174
	VII	.56	37 27 34.72	4.8478393	70443.2	13.342		XIV	.60	65 10 54.65	4.9941726	96977.4	18.687
17	II	.72	37 52 2.79	4.9287193	84863.2	16.073	29	XIII	.66	41 54 21.17	4.9407537	87247.6	16.524
	IV	.73	90 26 40.26	5.1406534	138246.3	26.183		XIV	.67	90 12 39.88	5.1160335	130627.2	24.740
	V	.73	51 41 16.95	5.0353408	108477.8	20.545		XVI	.67	47 52 58.95	4.9863100	96896.9	18.352
18	IV	.61	61 32 16.31	4.9913232	98021.9	18.565	30	XVII	.93	48 38 2.95	5.0148345	103474.8	19.597
	V	.62	68 53 58.32	5.0171276	104022.6	19.701		XVI	.93	63 37 24.75	5.0917376	123320.1	23.394
	VII	.61	49 33 45.37	4.9287193	84863.2	16.073		XVIII	.94	67 44 32.30	5.1058523	127600.5	24.167
19	VI	.69	62 45 58.12	5.0287346	106840.2	20.235	31	XVI	.83	84 11 4.31	5.1380536	137421.1	26.027
	VII	.69	46 19 48.34	4.9399979	86915.6	16.461		XVIII	.82	47 18 10.71	5.0065521	101520.1	19.227
	VIII	.70	70 54 13.54	5.0551797	113548.0	21.505		XIX	.82	48 30 44.98	5.0148345	103474.8	19.597
20	VII	.86	55 42 52.34	5.0373975	108992.7	20.643	32	XIX	1.12	86 15 30.28	5.2206891	166222.2	31.481
	VIII	.87	70 11 49.16	5.0938170	124112.9	23.506		XVIII	1.11	38 9 22.40	5.0124692	102912.8	19.491
	IX	.86	54 5 18.50	5.0287346	106840.2	20.235		XXI	1.11	55 35 7.32	5.1380536	137421.1	26.027
21	VIII	.64	41 28 35.13	4.8952761	78573.5	14.881	33	XXI	1.80	73 2 7.14	5.2670006	184927.1	35.024
	IX	.64	71 47 1.32	5.0518838	112689.6	21.343		XVIII	1.79	47 40 38.62	5.1551817	142949.2	27.074
	X	.64	66 44 23.55	5.0373975	108992.7	20.643		XXIII	1.79	59 17 14.24	5.2206891	166222.2	31.481
22	IX	.55	75 7 38.52	5.0184554	104341.1	19.762	34	XVIII	1.65	40 23 11.01	5.0953329	124546.9	23.588
	X	.55	58 10 8.27	4.9624722	91721.7	17.372		XXIII	1.65	65 26 49.19	5.2426384	174839.0	33.113
	XI	.55	46 42 13.21	4.8952761	78573.5	14.881		XXII	1.65	74 9 59.80	5.2670006	184927.1	35.024

NOTE.—(V) and (VI) pertain to base-line figures.

PRINCIPAL TRIANGULATION—TRIANGLES.

No of triangle	Station	Spherical excess	Corrected plane angle ° ' "	Distance			No of triangle	Station	Spherical excess	Corrected plane angle ° ' "	Distance		
				Log. feet	Feet	Miles					Log. feet	Feet	Miles
35	XXVII XXVIII XX	1'02 1'03 1'03	49 1 10'26 73 3 30'59 57 55 19'15	5'0415956 5'1444188 5'0917376	110051'4 139450'1 123520'1	20'843 26'411 23'394	47	XXXIV XXXV XXXVIII	1'02 1'02 1'03	46 16 41'06 59 24 46'63 74 18 32'32	5'0266551 5'1026266 5'1512019	106329'8 126656'2 141645'2	20'138 23'988 26'827
36	XXVIII XX XXII	1'09 1'09 1'08	45 40 25'95 95 31 58'49 38 47 35'56	5'0991908 5'2426384 5'0415956	125660'8 174839'0 110051'4	23'799 33'113 20'843	48	XXXV XXXVIII XXXIX	.75 .74 .75	66 54 33'36 52 26 42'39 60 38 44'25	5'0500692 4'9854828 5'0266551	112219'7 96712'5 106329'8	21'254 18'317 20'138
37	XXII XXIII XXIV	1'07 1'07 1'07	64 18 52'14 56 31 4'95 59 10 2'91	5'1163219 5'0827042 5'0953329	130713'9 120977'4 124546'9	24'756 22'912 23'588	49	XXXVIII XXXIX XL	.80 .80 .80	87 24 57'89 39 51 23'50 52 43 38'61	5'1488437 4'9560336 5'0500692	140878'2 90376'1 112219'7	26'681 17'117 21'254
38	XXIII XXIV XXV	1'19 1'19 1'19	71 8 8'26 .51 43 41'29 57 8 10'45	5'1680843 5'0869759 5'1163219	147259'8 122173'2 130713'9	27'890 23'139 24'756	50	XXIV XXVI XXX	.80 .79 .80	66 58 33'42 50 51 25'72 62 10 0'86	5'0661617 4'9918366 5'0488183	116456'0 98137'9 111897'0	22'056 18'587 21'192
39	XXIV XXV XXVI	1'06 1'06 1'06	54 43 58'02 47 51 54'25 77 24 7'73	5'0906071 5'0488183 5'1680843	123199'0 111897'0 147259'8	23'333 21'192 27'890	51	XXVI XXX XXIX	.57 .57 .58	41 39 25'53 53 34 43'00 84 45 51'47	4'8905843 4'9735965 5'0661617	77729'2 94101'5 116456'0	14'721 17'822 22'056
40	XXV XXVI XXVII	1'10 1'10 1'10	52 16 31'93 72 31 32'43 55 11 55'64	5'0743472 5'1556722 5'0906071	118671'7 143110'7 123199'0	22'476 27'104 23'333	52	XXX XXIX XXXIII	.73 .74 .73	60 46 28'75 84 54 28'24 34 19 3'01	5'0803439 5'1377584 4'8905843	120321'7 137327'8 77729'2	22'788 26'009 14'721
41	XXVII XXVI XXVIII	.88 .87 .87	64 47 37'82 51 20 42'16 63 51 40'02	5'0777457 5'0138096 5'0743472	119604'0 103230'9 118671'7	22'652 19'551 22'476	53	XXIX XXXIII XXXI	1'22 1'23 1'22	58 50 42'01 71 51 55'11 49 17 22'88	5'1330225 5'1785383 5'0803439	135838'4 150847'6 120321'7	25'727 28'570 22'788
42	XXVI XXVIII XXIX	.81 .81 .82	66 12 41'22 46 31 22'18 67 15 56'60	5'0743104 4'9735965 5'0777457	118661'6 94101'5 119604'0	22'474 17'822 22'652	54	XXXIII XXXI XXXIV	.88 .88 .89	43 8 10'20 60 2 56'71 76 48 53'09	4'9795127 5'0823704 5'1330225	95392'2 120884'4 135838'4	18'067 22'895 25'727
43	XXIX XXVIII XXXI	1'27 1'27 1'27	64 12 57'05 68 40 3'85 47 6 59'10	5'1638160 5'1785383 5'0743104	145819'6 150847'6 118661'6	27'617 28'570 22'474	55	XXXIII XXXIV XXXVI	.84 .85 .85	53 34 32'71 58 0 44'51 68 24 42'78	5'0195592 5'0424352 5'0823704	104606'6 110264'4 120884'4	19'812 20'883 22'895
44	XXVIII XXXI XXXII	1'01 1'02 1'02	47 35 46'01 53 44 41'39 78 39 32'60	5'0406771 5'0789256 5'1638160	109818'9 119929'4 145819'6	20'799 22'714 27'617	56	XXXIV XXXVI XXXVII	.92 .92 .91	57 47 20'62 72 46 43'65 49 25 55'73	5'0663708 5'1190337 5'0195592	116512'0 131532'7 104606'6	22'067 24'911 19'812
45	XXXII XXXI XXXV	1'13 1'14 1'13	59 23 32'19 76 9 8'80 44 27 19'01	5'1301988 5'1825511 5'0406771	134958'1 152247'8 109818'9	25'560 28'835 20'799	57	XXXIV XXXVII XXXVIII	1'07 1'08 1'08	55 0 22'78 60 25 9'20 64 34 28'02	5'0766748 5'1020266 5'1190337	119309'5 126656'2 131532'7	22'596 23'988 24'911
46	XXXI XXXV XXXIV	.98 .97 .97	73 38 44'62 40 15 23'16 66 5 52'22	5'1512019 4'9795127 5'1301988	141045'2 95392'2 134958'1	26'827 18'067 25'560	58	XXXVII XXXVIII XL	.84 .84 .84	40 14 9'56 81 15 14'89 58 30 35'55	4'9560536 5'1407839 5'0766748	90376'1 138287'8 119309'5	17'117 26'191 22'596

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No. of triangle	Station	Spherical excess "	Corrected plane angle ° ' "	Distance			No. of triangle	Station	Spherical excess "	Corrected plane angle ° ' "	Distance		
				Log. feet	Feet	Miles					Log. feet	Feet	Miles
59	XXXIX XL XLI	.83 .83 .83	37 33 43.49 59 51 27.36 82 34 49.15	4'9375551 5'0894010 5'1488437	866074 1228573 1408782	16.403 23.268 26.681	71	XLVII XLIX LI	.65 .65 .65	51 54 52.59 55 52 25.07 72 12 42.34	4'9574610 4'9793619 5'0401600	906695 953591 1090882	17.172 18.060 20.774
60	XL XLI XLV	.71 .71 .71	60 46 18.99 74 49 28.13 44 24 12.88	5'0334948 5'0772233 4'9375551	1080177 1194602 866074	20.458 22.625 16.403	72	LI XLIX LIII	.69 .69 .68	80 25 30.03 52 15 5.93 47 19 24.04	5'0849682 4'9800767 4'9574610	1216097 975162 906695	23.032 18.469 17.172
61	XLI XLV XLIV	.65 .65 .65	57 45 43.93 51 53 25.82 70 20 50.25	4'9868489 4'9554423 5'0334948	970172 902490 1080177	18.374 17.093 20.458	73	XLIX LIII LV	1.35 1.36 1.35	49 24 7.82 89 46 40.53 40 49 11.65	5'1500117 5'2695973 5'0849682	1412576 1860361 1216097	26.753 35.234 23.032
62	XXXIX XLI XLII	.61 .61 .61	41 46 59.83 50 14 10.74 87 58 49.43	4'9133505 4'9754216 5'0894010	819126 944978 1228573	15.514 17.897 23.268	74	LIII LV (XI)	1.56 1.57 1.56	52 22 5.24 76 51 6.44 50 46 48.32	5'1595621 5'2493273 5'1500117	1443983 1775527 1412576	27.348 33.627 26.753
63	XLII XLI XLIII	.33 .33 .34	60 44 11.87 44 21 6.15 74 54 41.98	4'8692933 4'7731017 4'9133505	740105 593064 819126	14.017 11.232 15.514	75	LV (XI) (X)	1.07 1.07 1.08	46 36 48.87 59 42 30.06 73 40 41.07	5'0388051 5'1136743 5'1595621	1093466 1299195 1443983	20.710 24.606 27.348
64	XLI XLIII XLIV	.40 .41 .40	50 14 38.36 76 47 0.01 52 58 21.63	4'8529000 4'9554423 4'8692933	712689 902490 740105	13.498 17.093 14.017	76	XLVII XLIX L	.36 .36 .37	52 33 21.48 28 25 48.75 99 0 49.77	4'9453485 4'7232438 5'0401600	881756 528742 1096882	16.700 10.014 20.774
65	XLIV XLV XLVII	.72 .72 .72	81 46 57.41 48 30 53.30 49 42 9.29	5'1000146 4'9790520 4'9868489	1258968 952910 970172	23.844 18.048 18.374	77	L XLIX LI	.29 .29 .29	79 32 48.28 27 26 36.31 73 0 35.41	4'9574610 4'6283102 4'9453485	906695 424923 881756	17.172 8.048 16.700
66	XLV XLVII XLVIII	.85 .85 .85	45 35 53.72 63 49 23.83 70 34 42.45	4'9794306 5'0784622 5'1000146	953741 1198015 1258968	18.063 22.690 23.844	78	XLVIII XLIX LII	.59 .59 .59	50 25 51.00 46 58 43.04 82 35 25.96	4'9504707 4'9274737 5'0598558	892217 846201 1147773	16.898 16.027 21.738
67	XLIV XLV XLVI	.40 .41 .41	46 43 45.01 48 28 50.13 84 47 24.86	4'8508508 4'8629727 4'9868489	709334 729412 970172	13.434 13.815 18.374	79	LII XLIX LIV	.98 .99 .98	66 5 4.25 79 2 2.69 34 52 53.06	5'1541808 5'1851627 4'9504707	1426201 1531661 892217	27.011 29.009 16.898
68	XLIV XLVI XLVII	.31 .32 .31	35 3 12.40 95 17 17.21 49 39 30.39	4'7400736 4'9790520 4'8629727	549634 952910 729412	10.410 18.048 13.815	80	XLIX LIV LV	.92 .93 .92	26 13 58.91 106 26 1.61 47 19 59.48	4'9331569 5'2695973 5'1541808	857348 1860361 1426201	16.238 35.234 27.011
69	XLV XLVI XLVIII	.48 .48 .48	45 37 57.57 98 31 32.16 35 50 30.27	4'9375159 5'0784622 4'8508508	865996 1198015 709334	16.401 22.690 13.434	81	LIV LV LVI	.83 .84 .83	68 47 8.86 72 54 38.90 38 18 12.24	5'1104124 5'1212764 4'9331569	1289473 1322137 857348	24.422 25.040 16.238
70	XLVIII XLVII XLIX	.76 .77 .76	62 7 5.15 67 39 24.25 50 13 30.59	5'0401600 5'0598558 4'9794306	1096882 1147773 953741	20.774 21.738 18.003	82	LIV LV (X)	.46 .46 .46	19 7 49.10 148 22 48.19 12 29 22.71	5'1136743 5'3177397 4'9331569	1299195 2078451 857348	24.606 39.365 16.238

Nota.—(X) and (XI) appertain to base-line figures.

PRINCIPAL TRIANGULATION—TRIANGLES.

No. of triangle	Station	Spherical excess	Corrected plane angle	Distance			No. of triangle	Station	Spherical excess	Corrected plane angle	Distance		
				Log. feet	Feet	Miles					Log. feet	Feet	Miles
83	LIV	1.65	49 39 18.48	5.1998343	158428.9	30.005	(X)	.21	31 41 33.30	4.5931091	39184.0	7.421	
	LVI	1.65	90 50 49.87	5.3177397	207845.1	39.365	(VIII)	.21	71 41 49.21	4.8501043	70811.6	13.411	
	(X)	1.65	39 29 51.65	5.1212764	132213.7	25.040	(IX)	.22	76 36 37.49	4.8606825	72557.5	13.742	
84	(XI)	.30	37 30 1.06	4.8606825	72557.5	13.742	(XI)	.53	39 34 35.51	4.8501043	70811.6	13.411	
	(X)	.30	29 3 10.24	4.7625255	57879.6	10.962	(X)	.53	60 44 43.52	4.9866350	96969.5	18.365	
	(VIII)	.31	113 26 48.70	5.0388051	109340.6	20.710	(IX)	.54	79 40 40.97	5.0388051	109340.6	20.710	

J. B. N. HENNESSEY.

NOTE.—(VIII) to (XI) appertain to base-line figures.

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PRINCIPAL TRIANGULATION.

LATITUDES, LONGITUDES, AZIMUTHS AND HEIGHTS.

The following table gives, in the first column, the (numerical) names and the co-ordinates of the successive principal stations taken in order from the stations (I) to (VII) of the southern base-line figure and I, II, the initial stations of the series, and thence through the triangulation upwards to the northern base-line figure; in the second column the azimuths at the stations in the first to the surrounding stations are given, and in the third the distinguishing numbers of the triangles—pages 13—A. and following—which contain the distances between the central and the surrounding stations.

NOTE.— λ stands for Latitude North; L for Longitude East of Greenwich; H for Height of station in feet above mean sea level, if determined trigonometrically, and H_s for the Height when found by spirit leveling; h stands for Height of station tower or pillar in feet.

Descriptions of the exact points referred to by spirit leveling will be found in the statement following this form; trigonometrical heights are invariably referred to the upper surface of the pillar. When the pillar is perforated or the tower is hollow, h represents the height of the upper surface above the mark-stone on the ground level; in all other cases h stands for the height of the station above the general ground level.

Station and its co-ordinates	Azimuths of surrounding stations	Reference to triangle containing distance	Station and its co-ordinates	Azimuths of surrounding stations	Reference to triangle containing distance
(I) λ 24 4 45'99 L 77 47 53'39 H_s 1531'36 h 2	° ' " (IV) 23 2 18'29 (III) 155 44 45'93 (II) 229 24 1'05	6 1 1	(III) λ 24 14 20'42 L 77 43 11'09 H_s 1802'19 h †	° ' " (VII) 10 27 40'46 (V) 288 52 13'22 (II) 300 47 19'79 (I) 335 42 50'40 (IV) 351 28 10'25	3 4 1 1 2
(II) λ 24 8 53'57 L 77 53 8'32 H 1481 h 2	° ' " (IV) 37 16 7'23 (I) 49 26 9'72 (VII) 80 46 31'61 (III) 120 51 24'55 (V) 275 8 32'85	2 1 7 1 9	(IV) λ 23 59 44'93 L 77 45 34'03 H 1780 h 10	° ' " (VII) 154 45 35'31 (III) 171 29 8'67 (VI) 189 46 13'31 (I) 203 1 21'53 (II) 217 13 19'93 (V) 242 40 13'20	3 2 5 6 2 4

† Not forthcoming.

NOTE.—The Stations (I), (II), (III), (IV), (V), (VI) and (VII) appertain to the Sironj base-line figure.

PRINCIPAL TRIANGULATION—LATITUDES, LONGITUDES, AZIMUTHS AND HEIGHTS.

Station and its co-ordinates	Azimuths of surrounding stations	Reference to triangle containing distance	Station and its co-ordinates	Azimuths of surrounding stations	Reference to triangle containing distance
	° ' "			° ' "	
(V) λ 24 8 3'73 L 78 3 7'91 H 1387 h 11	(IV) 62 47 22'94 (VII) 87 31 18'33 (II) 95 12 38'08 (III) 109 0 23'57 (VI) 121 53 46'42 I 178 15 53'89	4 8 9 4 5 11	VI λ 25 2 33'52 L 77 54 50'98 H 1673 h 5	IV 56 23 47'22 VII 120 18 33'20 VIII 183 4 32'02 III 352 8 11'97	15 16 19 15
(VI) λ 24 16 17'87 L 77 48 40'56 H 1763 h †	(IV) 9 47 29'56 (VII) 34 55 43'39 II 165 6 20'35 I 232 39 47'35 (V) 301 47 50'83	5 10 12 11 5	VII λ 25 12 0'13 L 77 37 3'58 H 1614 h 5	V 27 12 21'32 IX 198 8 17'83 VIII 253 51 11'03 VI 300 11 0'06 IV 337 38 35'34	18 20 19 16 16
(VII) λ 24 7 11'26 L 77 41 44'75 H 1765 h 2	(III) 190 27 5'1 (VI) 214 52 52'97 (II) 260 41 52'11 (V) 267 22 33'82 (IV) 334 44 1'83	3 10 7 8 3	VIII λ 25 16 53'29 L 77 55 41'79 H 1594 h 6	VI 3 4 53'62 VII 73 59 7'86 IX 144 10 57'80 X 185 39 33'66	19 19 20 21
I λ 24 25 58'13 L 78 2 32'36 H 1663 h 7	(VI) 52 45 30'34 II 123 41 15'31 III 167 21 32'63 (V) 358 15 39'27	11 12 13 11	IX λ 25 31 28'34 L 77 44 5'42 H 1596 h 8	VII 18 11 18'52 XI 177 11 18'14 X 252 18 57'21 VIII 324 5 59'16	20 22 21 20
II λ 24 38 17'57 L 77 42 16'49 H 1867 h 5	V 147 49 46'99 IV 185 41 50'51 III 231 54 28'46 I 303 32 50'41 (VI) 345 3 41'35	17 14 13 12 12	X λ 25 35 24'14 L 77 57 43'18 H 1480 h 7	VIII 5 40 25'80 IX 72 24 49'99 XI 130 34 58'82 XII 191 27 58'20	21 21 22 23
III λ 24 48 46'21 L 77 56 56'17 H 1789 h 4	II 52 0 36'41 IV 122 23 48'17 VI 172 9 4'73 I 347 19 12'55	13 14 15 13	XI λ 25 46 35'81 L 77 43 16'20 H 1487 h †	XIV 143 38 58'87 XIII 206 41 40'17 XII 241 49 12'39 X 310 28 43'07 IX 357 10 56'83	28 24 23 22 22
IV λ 24 56 6'92 L 77 44 13'50 H 1641 h †	II 5 42 39'57 V 96 9 20'55 VII 157 41 37'48 VI 236 19 17'91 III 302 18 27'38	14 17 16 15 14	XII λ 25 55 47'49 L 78 2 17'62 H 1309 h †	X 41 29 57'47 XI 61 57 30'13 XIII 118 30 28'55 XV 199 48 30'17	23 23 24 25
V λ 24 57 36'29 L 77 28 56'56 H 1711 h †	VII 207 8 54'87 IV 276 2 53'79 II 327 44 11'47	18 17 17	XIII λ 26 1 8'74 L 77 51 22'13 H 1420 h †	XI 26 45 12'41 XIV 78 31 37'65 XVI 120 25 59'48 XVII 187 46 12'24 XV 243 38 20'47 XII 298 25 41'47	24 28 27 26 25 24

† Not forthcoming.

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Station and its co-ordinates	Asimuths of surrounding stations	Reference to triangle containing distance	Stations and its co-ordinates	Asimuths of surrounding stations	Reference to triangle containing distance
XIV λ 25 57 56.80 L 77 34 1.53 H 1353 h 6	XVI 168 11 21.05 XIII 258 24 1.60 XI 323 34 56.84	29 28 28	XXII λ 26 57 6.22 L 77 40 19.76 H 810 h 5	XVIII 8 26 31.45 XXIII 82 36 32.91 XXIV 146 55 26.11 XX 329 38 54.81	84 84 87 86
XV λ 26 8 14.39 L 78 7 15.71 H 1217 h †	XII 19 50 41.00 XIII 63 45 19.66 XVII 123 5 13.73	25 25 26	XXIII λ 26 54 25.71 L 77 17 35.24 H 1215 h †	XXI 27 10 21.79 XXV 134 46 59.46 XXIV 205 55 8.91 XXII 262 26 14.93 XVIII 327 53 5.77	83 88 37 34 33
XVI λ 26 12 2.66 L 77 30 45.45 H 1185 h †	XIX 110 39 41.74 XVIII 194 50 46.88 XVII 258 28 12.56 XIII 300 16 55.23 XIV 348 9 54.85	31 30 27 27 29	XXIV λ 27 13 49.65 L 77 28 8.26 H 714 h 0	XXIII 25 59 56.97 XXV 77 43 39.45 XXVI 132 27 38.52 XXX 199 26 12.74 XXII 326 49 52.98	37 88 39 50 37
XVII λ 26 16 13.46 L 77 53 39.07 H 1122 h †	XIII 7 47 12.58 XVI 78 38 19.79 XVIII 127 16 23.67 XX 176 17 34.95 XV 302 59 13.12	26 27 30 35 26	XXV λ 27 8 37.14 L 77 1 35.23 H 1351 h †	XXVII 157 23 3.25 XXVI 209 39 36.28 XXIV 257 31 31.60 XXIII 314 39 43.23	40 39 38 38
XVIII λ 26 28 33.26 L 77 35 37.26 H 1171 h 4	XVI 14 52 56.35 XIX 62 11 7.88 XXI 100 20 31.38 XXIII 148 1 11.80 XXII 188 24 24.46 XX 234 4 51.49 XVII 307 8 23.11	30 31 32 33 34 35 30	XXVI λ 27 26 16.92 L 77 12 51.95 H 1059 h †	XXV 29 44 46.56 XXVII 102 16 20.10 XXVIII 153 37 3.13 XXIX 219 49 45.16 XXX 261 29 11.26 XXIV 312 20 37.77	39 40 41 42 50 39
XIX λ 26 17 56.41 L 77 13 21.57 H 1345 h †	XXI 155 45 42.84 XVIII 242 1 14.24 XVI 290 32 0.05	32 31 31	XXVII λ 27 30 25.07 L 76 51 23.99 H 1349 h †	XXVIII 217 18 47.24 XXVI 282 6 25.93 XXV 337 18 22.67	41 40 40
XX λ 26 39 11.75 L 77 51 59.68 H 939.08 h †	XVIII 54 12 10.85 XXII 149 44 10.43 XVII 356 16 50.66	35 36 35	XXVIII λ 27 43 57.65 L 77 3 0.43 H 1220 h †	XXVII 37 24 10.11 XXXII 170 45 14.08 XXXI 218 21 1.10 XXIX 287 1 6.22 XXVI 333 32 29.22	41 44 43 42 41
XXI λ 26 33 25.66 L 77 5 36.25 H 1297 h †	XXIII 207 4 58.37 XVIII 280 7 7.31 XIX 335 42 15.74	33 32 32	XXIX λ 27 38 12.13 L 77 24 2.17 H 828 h 5	XXVI 39 54 55.02 XXVIII 107 10 52.44 XXXI 171 23 50.76 XXXIII 230 14 33.99 XXX 315 9 2.97	42 42 43 52 51

† Not forthcoming.

Station and its co-ordinates	Azimuths of surrounding stations	Reference to triangle containing distance	Station and its co-ordinates	Azimuths of surrounding stations	Reference to triangle containing distance
XXX λ 27 29 6.02 L 77 34 10.91 H 670 h 32	XXIV 19 28 59.40 XXVI 81 39 1.05 XXIX 135 13 44.62 XXXIII 196 0 14.10	50 50 51 52	XXXVIII λ 28 30 59.64 L 77 33 16.26 H 758 h 50	XXXV 68 48 59.28 XXXIX 121 15 42.42 XL 208 40 41.11 XXXVII 289 55 56.84 XXXIV 354 30 25.94	47 48 49 57 47
XXXI λ 28 2 49.05 L 77 19 50.32 H 750 h 40	XXVIII 38 28 53.50 XXXII 92 13 35.91 XXXV 168 22 45.85 XXXIV 242 1 31.45 XXXIII 302 4 29.03 XXIX 351 21 53.14	43 44 45 46 53 43	XXXIX λ 28 40 35.09 L 77 15 19.21 H 833 h 39	XXXV 1 45 51.90 XLII 181 54 57.85 XLI 223 41 58.29 XL 261 15 42.61 XXXVIII 301 7 6.90	48 62 59 49 48
XXXII λ 28 3 29.78 L 76 59 25.33 H 1347 h 14	XXXV 212 40 26.50 XXXI 272 3 59.82 XXVIII 350 43 33.44	45 44 44	XL λ 28 44 4.49 L 77 41 23.49 H 767 h 50	XXXVIII 28 44 34.54 XXXIX 81 28 13.95 XLI 141 19 42.14 XLV 202 6 1.84 XXXVII 330 13 58.14	49 49 59 60 58
XXXIII λ 27 50 53.08 L 77 41 12.74 H 710 h 60	XXX 16 3 29.98 XXIX 50 22 33.72 XXXI 122 14 30.06 XXXIV 165 22 41.14 XXXVI 218 57 14.70	52 52 53 54 55	XLI λ 28 55 13.61 L 77 31 14.45 H 781 h 50	XXXIX 43 49 38.46 XLII 94 3 49.81 XLIII 138 24 56.29 XLIV 188 39 35.05 XLV 246 25 19.64 XL 321 14 48.47	59 62 63 61 60 59
XXXIV λ 28 10 11.24 L 77 35 31.74 H 734 h 50	XXXI 62 8 54.99 XXXV 128 14 48.18 XXXVIII 174 31 30.26 XXXVII 229 31 54.11 XXXVI 287 19 15.65 XXXIII 345 20 1.01	46 46 47 56 55 54	XLII λ 28 56 10.21 L 77 15 54.77 H * h 10	XXXIX 1 55 14.99 XLIII 213 12 12.75 XLI 273 56 24.95	62 63 62
XXXV λ 28 24 37.93 L 77 14 45.86 H 1051 h 6	XXXII 32 47 41.98 XXXIX 181 45 35.96 XXXVIII 248 40 10.06 XXXIV 308 4 57.71 XXXI 348 20 21.84	45 48 47 46 45	XLIII λ 29 4 21.39 L 77 22 0.81 H * h 26	XLII 33 15 10.23 XLIV 241 33 27.49 XLI 318 20 27.91	63 64 63
XXXVI λ 28 5 1.59 L 77 54 6.78 H 699 h 40	XXXIII 39 3 17.68 XXXIV 107 28 1.31 XXXVII 180 14 45.88	55 55 56	XLIV λ 29 9 56.94 L 77 33 47.74 H 820 h 50	XLI 8 40 49.47 XLIII 61 39 11.50 XLVII 216 33 0.44 XLVI 251 36 13.15 XLV 298 19 58.56	61 64 65 67 61
XXXVII λ 28 24 15.29 L 77 54 12.38 H 727.15 h 14	XXXVI 0 14 48.53 XXXIV 49 40 45.17 XXXVIII 110 5 55.45 XL 150 20 5.85	56 56 57 58	XLV λ 29 2 20.11 L 77 49 49.88 H 832 h 50	XL 22 10 6.46 XLI 66 34 20.06 XLIV 118 27 46.52 XLVI 166 56 37.07 XLVII 166 58 40.54 XLVIII 212 34 35.12	60 60 61 67 65 66

* No vertical angles observed.

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Station and its co-ordinates		Azimuths of surrounding stations		Reference to triangle containing distance	Station and its co-ordinates		Azimuths of surrounding stations		Reference to triangle containing distance
	° ' "	° ' "				° ' "	° ' "		
XLVI	λ 29 13 44'22 L 77 46 49'00 H * h 30	XLIV 71 42 34'27 XLVII 166 59 51'80 XLVIII 248 23 36'37 XLV 346 55 9'01	67 68 69 67	LIV	λ 29 55 29'73 L 78 13 37'13 H 19'13 h 6	LII 4 34 26'63 XLIX 39 27 20'67 LV 145 53 23'21 (X) 165 1 12'77 LVI 214 40 32'90	79 79 80 82 81		
XLVII	λ 29 22 34'41 L 77 44 29'21 H _s 815'44 h 51	XLIV 36 38 14'08 L 162 53 52'52 LI 163 32 21'11 XLIX 215 27 14'35 XLVIII 283 6 39'39 XLV 346 56 4'07 XLVI 346 58 43'38	65 76 71 70 66 65 68	LV	λ 30 7 12'13 L 78 4 29'62 H 2949 h 0	XLIX 13 8 49'67 LIII 53 58 2'67 (XI) 130 49 10'68 (X) 177 26 0'63 LVI 252 54 9'54 LIV 325 48 49'28	73 73 74 75 81 80		
XLVIII	λ 29 18 59'07 L 78 1 58'60 H 871 h 41	XLV 32 40 30'38 XLVI 68 31 1'14 XLVII 103 15 13'68 XLIX 165 22 19'59 LII 215 48 11'18	66 69 66 70 78	LVI	λ 30 13 25'32 L 78 27 54'61 H 7350 h 3	LIV 34 47 42'61 LV 73 5 55'68 (X) 125 38 33'13	81 81 83		
XLIX	λ 29 37 18'46 L 77 56 30'16 H 901 h 51	XLVII 35 33 9'36 L 63 58 58'47 LI 91 25 35'08 LIII 143 40 41'70 LV 193 4 50'87 LIV 219 18 50'70 LII 298 20 54'38 XLVIII 345 19 38'01	70 76 71 72 73 79 78 70	(VIII)	λ 30 19 43'25 L 77 54 8'56 H 1782 h 12	(XI) 108 31 29'02 (X) 221 58 18'02 (IX) 293 40 7'44	84 84 85		
L	λ 29 30 54'70 L 77 41 33'21 H 828 h 14	LI 164 18 47'30 XLIX 243 51 35'86 XLVII 342 52 26'00	77 76 76	(IX)	λ 30 17 7'35 L 78 0 57'92 H _s 1957'65 h 10	(XI) 110 39 30'23 (VIII) 113 43 34'02 (X) 190 20 11'73	86 85 85		
LI	λ 29 37 39'70 L 77 39 23'02 H 893 h 50	LIII 190 51 36'62 XLIX 271 17 7'34 XLVII 343 29 50'33 L 344 17 43'04	72 71 71 77	(X)	λ 30 28 36'91 L 78 3 23'14 H 7433 h 2	(IX) 10 21 25'17 (VIII) 42 2 58'68 (XI) 71 6 9'23 LVI 305 26 10'61 LIV 344 56 5'91 LV 357 25 27'08	85 84 75 83 82 75		
LII	λ 29 30 18'21 L 78 11 18'88 H 821 h 14	XLVIII 35 52 46'32 XLIX 118 28 12'87 LIV 184 33 18'10	78 78 79	(XI)	λ 30 22 44'86 L 77 43 41'95 H 3140 h 0	LIII 1 25 32'02 (X) 250 56 11'01 (VIII) 288 26 12'37 (IX) 290 30 47'05 LV 310 38 42'14	74 75 84 86 74		
LIII	λ 29 53 27'76 L 77 42 51'77 H 929 h 50	LI 10 53 20'24 (XI) 181 25 6'83 LV 233 47 13'63 XLIX 323 33 55'52	72 74 73 72						

* No vertical angles observed.

NOTE.—The Stations (VIII), (IX), (X) and (XI) appertain to the Dehra Doon base-line figure.

DESCRIPTIONS.

When determining the spirit levelled heights, given on the preceding pages, the levelling staff stood on the surfaces hereafter described.

(I) or *Sironj base-line, South-West End Station*; on the mark-stone let into the upper surface of the pillar: this mark is 2 feet above the dot used in the measurement of the base-line.

(III) or *Súrántál Hill Station*; on the mark-stone let into the upper surface of the pillar.

XX or *Dholpúr Hill Station*; on the mark-stone let into the upper surface of the pillar.

XXXVII or *Boolandshahar Tower Station*; on the mark-stone let into the ground floor of the building.

XLVII or *Begarazpúr Tower Station*; on the mark-stone let into the ground floor of the tower.

(IX) or *Dehra Doon base-line, East End Station*; on the upper surface of the stone pyramid which is here sunk into the ground: this surface carries the dot on brass used in the measurement of the base-line.

For further particulars of these stations, see descriptions, pages (3) to (5) and 6—A to 10—A

J. B. N. HENNESSEY

ADDENDUM.

GREAT ARC MERIDIONAL SERIES.

PRINCIPAL TRIANGULATION.—TRIANGLES.

• Geodetic Elements of the Dehra Doon Observatory (old).

No. of triangle	Station	Spherical excess	Corrected plane angle	Distance			No. of triangle	Station	Spherical excess	Corrected plane angle	Distance		
				Log. feet	Feet	Miles					Log. feet	Feet	Miles
87	LV (X) Sirkanda H.S. (old)	0.87 .88 .87	*39 47 23.77 72 6 57.30 68 5 38.93	4.9523836 5.1247116 5.1136743	89615.6 133263.6 129919.5	16.973 25.239 24.606	(X) Sirkanda H.S. Dehra Doon Obsy.	0.33 .33 .34	59 51 21.14 37 0 9.34 83 8 29.52	4.8924006 4.7349916 4.9523836	78055.0 54324.0 89615.6	14.783 10.289 16.973	

LATITUDES, LONGITUDES, AZIMUTHS AND HEIGHTS.

Station and its co-ordinates	Azimuths of surrounding stations	Reference to triangle containing distance	Station and its co-ordinates	Azimuths of surrounding stations	Reference to triangle containing distance

NOTE.—The station (X) appertains to the Dehra Doon base-line figure. * This angle was not observed. † Not forthcoming.

DESCRIPTION OF STATIONS.

SIRKANDA HILL STATION (*OLD*) is situated on a hill of this name, in the pargana of Sukniana of the Tiri State. It is in the lands of the Máfidár of the village of Pujárgáon. A temple dedicated to a Devi stands close to the platform on its eastern side, and is very much frequented by the inhabitants of the surrounding villages: this station has been completely destroyed.

DEHRA DOON OBSERVATORY (*OLD*) is situated immediately on the right bank of the Raspana Naddi in the compound of the house formerly used as the Head Quarter's Office of the G. T. Survey and now called No. 33 and belonging to Mrs. Raynor. It is about 0·4 of a mile S. by E. of the Station Church of Dehra and about 0·6 of a mile N.E. by N. of the new Dehra Doon Observatory: the upper surface of the paka pillar, carrying the mark-stone, is about 1 foot above the ground level.

J. B. N. HENNESSEY.

GREAT ARC MERIDIONAL SERIES.
SECONDARY TRIANGULATION. TRIANGLES.

PRINCIPAL AUXILIARY STATIONS AND INTERSECTED POINTS.

The following symbols are adopted

(D)—to indicate that the common side of two triangles differed before correction by less than 2 feet per mile.

(E)— ditto ditto ditto by more than 2 feet per mile.

(P)—to indicate that one of the triangles is evidently erroneous, and therefore no adjustment has been made.

No. of triangle	Station	Corrected plane angle	Distance			Theodolite used	No. of triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
89	(II)	71 25 4	4'866224	73489	13'918	Inch	93	(VII) Sáklon	19 9 25	4'159457	14436	Inch	
	(III) Sáklon	52 26 17	4'788583	61459	11'640			h.s.	31 29 57	4'361450	22985		
	(D)	56 8 39	4'808786	64385	12'194			Madagan Fort		4'531754	34022		6'443
90	(II)	31 20 11	4'531754	34022	6'443	Inch	94	(VII) Sáklon	28 17 41	4'381874	24092	Inch	
	(VII) Sáklon	69 57 46	4'788583	61459	11'640			h.s.	13 43 25	4'081275	12058		
	(D)	78 42 3	4'807199	64150	12'150			Mimoi Mosque	(D)	4'531754	34022		6'443
91	(II)	5 57 12	3'996666	9924	1'879	Inch	95	(VII) Murtza Ali	62 6 23	4'060142	11485	Inch	
	(VII) Murtza Ali	36 9 4	4'751601	56442	10'690			s.	68 6 28	4'081275	12058		
	(D)	137 53 44	4'807199	64150	12'150			Mimoi Mosque	(D)	3'996666	9924		1'879
92	(II)	25 22 59	4'420966	26361	4'993	Inch	96	(VII) Murtza Ali	116 51 4	4'131886	13548	Inch	
	(III) Sáklon	66 36 32	4'751601	56442	10'690			h.s.	22 20 39	3'761409	5773		
	(D)	88 0 29	4'788583	61459	11'640			Kalánpur N. Merid. Mark s.		3'996666	9924		1'879

NOTE.—1. Stations denoted by Roman Numerals are Principal Stations, excepting when followed by the letters h.s., s., or t.s.
2. The values of the side are given in the same line with the opposite angle.

PRINCIPAL AUXILIARY STATIONS AND INTERSECTED POINTS.

No. of triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used	No. of triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
97	(VII) Murtza Ali s. Kandikheri Hill Building	84 18 19 44 15 54	4'101398 3'947388 3'996666	12630 8859 9924	2'392 1'678 1'879	Inch	109	I Semra h.s. " Kolua "	25 32 0 78 47 0 75 41 0	4'583376 4'940486 4'935161	38316 87194 86131	7'257 16'514 16'313	Inch
98	(VII) Murtza Ali s. Boriál Hill Tomb	82 13 5 82 34 36	4'573886 4'574249 3'996666	37487 37519 9924	7'100 7'106 1'879		110	I Kolua h.s. " Garla "	63 45 0 20 25 0 95 50 0	4'895472 4'485373 4'940486	78609 30575 87194	14'888 5'791 16'514	
99	(VII) Murtza Ali s. Kalánpur s. Merai. Mark s.	63 9 11 36 55 46 79 55 3	3'953896 3'782178 3'996666	8993 6056 9924	1'703 1'147 1'879		111	I Garla h.s. Piprai Turret	33 30 0 73 6 0	4'245751 4'484689 4'485373	17610 30527 30575	3'335 5'782 5'791	
100	Sáklon h.s. Murtza Ali s. Sironj Fort House	1 59 10 21 44 59	3'355972 4'385029 4'420966	2270 24268 26301	0'430 4'596 4'993		112	I III Karkia Hill	45 7 58 73 52 59	5'059594 5'191691 5'150857	114708 155486 141533	21'725 29'448 26'805	
101	Sáklon h.s. Murtza Ali s. Sironj Fort Mosque	3 4 52 58 7 50	3'208637 4'407299 4'420966	1617 25545 26301	0'306 4'838 4'993		113	I III Boyango Hill	38 36 38 70 36 11	4'970949 5'150370 5'150857	93530 141374 141533	17'714 26'775 26'805	
102	Sáklon h.s. Murtza Ali s. Sironj Yúsaf Khán's House	6 52 46 33 53 27	3'684421 4'352367 4'420966	4835 22510 26301	0'916 4'263 4'993		114	II IV Charauli Hill	82 18 0 38 45 0	5'098570 4'899024 5'033341	125479 79255 108478	23'765 15'010 20'545	
103	Sáklon h.s. Murtza Ali s. Sháh Mustafa Hill Dargáh	18 8 59 14 43 41	4'179747 4'091517 4'420966	15127 12346 26301	2'865 2'338 4'993		115	III VI Barauli h.s. (D)	79 9 43 77 18 33	4'928761 4'537781 4'925836	84871 34497 84302	16'074 6'534 15'966	
104	(VI) I Semra h.s.	58 36 52 48 0 55 73 22 13	4'935161 4'875042 4'985309	86131 74997 96674	16'313 14'204 18'309		116	IV VI Barauli h.s. (D)	83 41 4 55 35 5	4'928761 4'745990 4'847839	84871 55717 70443	16'074 10'553 13'342	
105	(VI) Semra h.s. Karla Fort	59 44 0 20 40 0	4'817524 4'428856 4'875042	65694 26845 74997	12'442 5'084 14'204		117	III IV Khurd Megona Hill Mark	43 0 45 64 22 38	4'773971 4'895129 4'919768	59425 78547 83132	11'255 14'876 15'745	
106	(VI) Semra h.s. Dongra Building	15 30 0 5 19 0	4'751249 4'291244 4'875042	56396 19554 74997	10'681 3'703 14'204		118	IV Barauli h.s. (D) Khurd Megona Hill Mark	82 4 33 51 4 51	4'878806 4'773971 4'745990	75649 59425 55717	14'328 11'255 10'553	
107	(VI) Semra h.s. Tumen "	2 41 0 111 1 0 66 18 0	3'583700 4'883410 4'875042	3834 76456 74997	0'726 14'480 14'204		119	III Barauli h.s. Ledpur Hill Building	72 9 13 52 3 38	4'598889 4'517196 4'537781	39709 32900 34497	7'521 6'231 6'534	
108	Semra h.s. Tumen " Tumen Temple	12 35 0 161 10 0	3'884980 4'055760 3'583700	7673 11370 3834	1'453 2'153 0'726		120	III Barauli h.s. Jagtharo "	57 5 27 62 22 27 60 32 6	4'521972 4'545365 4'537781	33264 35105 34497	6'300 6'649 6'534	

No. of triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used	No. of triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
121	III Barauli h. s. Dhakoni Fort	56 33 58 41 59 27	4'464080 4'368076 4'537781	29113 23339 34497	5'514 4'420 6'534	Inch	183	V Kishanpur h. s. Chendoria Fort	71 58 0 41 6 0	4'329095 4'168784 4'314782	21335 14750 20643	4'041 2'794 3'910	Inch
122	III Barauli h. s. Iságarh Fort Palace	46 20 46 15 14 33	4'452970 4'013317 4'537781	28377 10311 34497	5'374 1'953 6'534		184	V Kishanpur h. s. Buda Dongar Fort	63 20 14 97 29 15	4'749474 4'794581 4'314782	56166 62313 20643	10'638 11'802 3'910	
123	III Jagtharo h. s. Amrod Fort	24 30 0 135 38 0	4'631827 4'858731 4'545365	42838 72232 35105	8'113 13'680 6'649		185	V Kishanpur h. s. Singon Fort	45 2 16 81 54 1	4'261851 4'407726 4'314782	18275 25570 20643	3'461 4'843 3'910	
124	IV Barauli h. s. Morwáso Fort	11 56 10 7 14 38	4'545000 4'330097 4'745990	35075 21384 55717	6'643 4'050 10'553		186	V Kishanpur h. s. Bijráwan Fort	35 51 44 79 11 29	4'125473 4'349922 4'314782	13350 22383 20643	2'528 4'239 3'910	
125	IV VI Kundai h. s. (D)	90 18 5 62 1 56	4'901769 4'568594 4'847839	79757 37033 70443	15'105 7'014 13'342		187	VI VII Bíchi h. s. (D)	53 26 18 84 12 44	4'885834 4'962232 5'055180	76884 91671 113548	14'561 17'362 21'505	
126	VI VII Kundai h. s. (D)	43 46 14 99 58 59	4'833583 4'901769 5'055180	68168 79757 113548	12'911 15'105 21'505		188	VI VIII Bíchi h. s. (D)	88 12 10 71 22 49	4'505084 4'962232 4'939098	31995 91671 86916	6'060 17'362 16'461	
127	IV Kundai h. s. Piront Building	105 45 25 11 39 8	4'603674 3'925596 4'568594	40149 8426 37033	7'604 1'596 7'014		189	VI VIII Akájeri Fort	15 35 0 11 19 0	4'712712 4'576311 4'939098	51607 37697 86916	9'774 7'140 16'461	86
128	IV Kundai h. s. Alaudi Building	15 43 55 13 55 10	4'307423 4'255452 4'568594	20297 18007 37033	3'844 3'411 7'014		140	VI VIII Pahro h. s.	105 22 0 4 30 0 70 8 0	4'949935 3'860389 4'939098	89112 7251 86916	16'877 1'373 16'461	
129	V VII Kishanpur h. s. (E)	35 37 44 8 25 11	4'914491 4'314782 4'991323	82128 20643 98022	15'555 3'910 18'565		141	VI Pahro h. s. Ránod Fort	102 2 0 47 27 0	4'145056 4'021989 3'860389	13965 10519 7251	2'645 1'992 1'373	
130	VII Kundai h. s. Kishanpur "	51 40 18 53 18 19	4'824077 4'914491 4'833583	66692 82128 68168	12'631 15'555 12'911		142	VII Bíchi h. s. Shankargarh "	101 34 47 70 3 42	4'903748 4'075148 4'885834	80121 11889 76884	15'174 2'252 14'561	
131	V Kishanpur h. s. Kherwár Hill Mark	111 29 21 42 9 12	4'636138 4'494226 4'314782	43265 31205 20643	8'194 5'910 3'910		143	VII Shankargarh h. s. Kare Fort	159 12 27 17 24 59	4'855315 4'781232 4'075148	71666 60427 11889	13'573 11'445 2'252	
132	V Kishanpur h. s. Badarwás Fort	90 45 56 62 52 17	4'667304 4'616725 4'314782	46484 41374 20643	8'804 7'836 3'910		144	VII Shankargarh h. s. Rai Fort	48 21 30 79 30 19	4'051314 4'170484 4'075148	11254 14808 11889	2'131 2'804 2'252	

No. of triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used	No. of triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
145	VII Shankargarh h.s. Tila Hill Temple	87 7 24 72 17 57	4'528707 4'508192 4'075148	33784 32225 11889	6'398 6'103 2'252	Inch	157	Bichi h.s. Barodia " Shergarh Hill Fort	142 16 52 27 30 3	4'888801 4'766618 4'351141	77411 58428 22446	14'661 11'066 4'251	Inch
146	VII Shankargarh h.s. Koláras Temple s.	94 31 24 46 22 27 39 6 9	4'273964 4'134974 4'075148	18792 15045 11889	3'559 2'584 2'252	Inch	158	Bichi h.s. Barodia " Molangarh Building	5 59 33 4 47 38	4'097649 4'001014 4'351141	12521 10023 22446	2'371 1'898 4'251	Inch
147	VII Shankargarh h.s. Bita "	67 10 47 89 59 8 22 50 5	4'450835 4'485234 4'075148	28238 30636 11889	5'348 5'802 2'252	Inch	159	Barodia h.s. Jagtia s. Barod Fort	21 28 5 59 16 0	3'766593 4'137317 4'197340	5841 13719 15752	1'106 2'598 2'983	Inch
148	Shankargarh h.s. Koláras Temple s. Bita	43 36 41 94 51 11 41 32 8	4'291095 4'450835 4'273964	19348 28238 18792	3'702 5'348 3'559	Inch	160	IX VIII Dongri	30 53 29 141 55 3	4'957723 4'344789 5'037398	90724 22120 108993	17'183 4'189 20'643	Inch
149	VII Shankargarh h.s. Niboda "	51 19 20 110 3 15 18 37 25	4'463351 4'543719 4'075148	29064 34972 11889	5'504 6'623 2'252	Inch	161	IX Barai h.s. Dongri "	102 45 17 27 40 45	4'666933 4'344789 4'559257	46444 22120 36246	8'796 4'189 6'865	Inch
150	VII Bita h.s. Niboda "	15 51 27 107 27 22 56 41 11	4'000749 4'543719 4'486234	10017 34972 30636	1'897 6'623 5'802	Inch	162	IX Dongri h.s. Lakni "	39 20 12 54 1 50	4'238667 4'435912 4'344789	17325 27284 22120	3'281 5'167 4'189	Inch
151	Bita h.s. Niboda " Sisai Fort	51 20 31 91 21 37	4'110895 4'218184 4'000749	12909 16527 10017	2'445 3'130 1'897	Inch	163	IX Dongri h.s. Nohri "	74 24 34 41 38 24 63 57 2	4'375031 4'213772 4'344789	23715 16360 22120	4'492 3'098 4'189	Inch
152	VIII Bichi h.s. Tila Hill Fort	13 28 48 135 11 1	4'156582 4'637118 4'505084	14341 43363 31995	2'716 8'213 6'060	Inch	164	Dongri h.s. Lakni " Nohri "	44 59 34 88 6 36 46 53 50	4'224697 4'375031 4'238667	16776 23715 17325	3'177 4'492 3'281	Inch
153	VIII Bichi h.s. Barodia "	28 55 57 107 28 12 43 35 51	4'351141 4'645985 4'505084	22446 44257 31995	4'251 8'382 6'060	Inch	165	Lakni h.s. Nohri " Sipri s.	60 15 23 77 32 15 42 12 22	4'336105 4'387102 4'224697	21682 24384 16776	4'106 4'618 3'177	Inch
154	VIII Bichi h.s. Khenwai Fort	57 12 14 22 57 27	4'436110 4'102637 4'505084	27297 12666 31995	5'170 2'399 6'060	Inch	166	IX Dongri h.s. Mamoni Fort	37 29 50 21 40 19	4'195375 3'978325 4'344789	15681 9513 22120	2'970 1'802 4'189	Inch
155	VIII Barodia h.s. Jagtia s.	3 55 12 7 9 14 168 55 34	4'197340 4'457805 4'645985	15752 28695 44257	2'983 5'435 8'382	Inch	167	Dongri h.s. Lakni " Mamoni Fort	64 57 39 53 2 47	4'249898 4'195375 4'238667	17779 15681 17325	3'367 2'970 3'281	Inch
156	Bichi h.s. Barodia " Pandora Hill Fort	147 42 55 24 28 24	4'945526 4'835165 4'351141	88212 68417 22446	16'707 12'958 4'251	Inch	168	IX Dongri h.s. Barai Hill Fort	102 19 29 47 11 40	4'629440 4'505064 4'344789	42603 31994 22120	8'069 6'059 4'189	Inch

No. of triangle	Station	Corrected plane angle	Distance			Theodolite used	No. of triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
169	Dongri Lakni Theo Building	146 9 37 9 15 35	4'36'367 3'82'6195 4'23'8667	23194 6702 17325	4'393 1'269 3'281	Inch	XII Ladára Karaia	23 12 6 154 4 43	5'01'2130 4'09'2907 5'05'7286	102832 12385 114100	19'476 2'346 21'610	Inch	
170	Dongri Lakni Satauwára Building	132 42 36 16 42 40	4'39'8351 3'99'0892 4'23'8667	25024 9792 17325	4'739 1'855 3'281	"	Ladára Karaia Bámor Peak	17 41 53 32 23 57	4'61'0133 4'85'6273 5'01'2130	40750 71825 102832	7'718 13'603 19'476	"	
171	Dongri Lakni Kaukar Building	136 7 37 23 37 5	4'54'0114 4'30'2093 4'23'8667	34683 20049 17325	6'569 3'797 3'281	"	XII Karaia Bitarwár Fort	25 5 43 149 9 25	4'71'9752 4'80'2111 4'09'2907	52451 63403 12385	9'934 12'008 2'346	"	
172	IX X Ladára	7 30 48 113 29 57 58 59 15	4'07'8732 4'92'4668 4'89'5276	11988 84075 78574	2'270 15'923 14'881	36 " "	XII XV Bitarwár Fort	123 58 40 24 28 5	5'10'3870 4'80'2377 4'90'3937	127019 63442 80156	24'057 12'016 15'181	"	
173	XI XII Ladára	62 53 10 49 52 34	5'05'7286 4'99'1310 5'07'2033	114100 98019 118204	21'610 18'564 22'387	"	XII Karaia Lachmangarh Hill Fort	27 16 22 146 27 34	4'71'5863 4'79'7137 4'09'2907	51983 62681 12385	9'845 11'871 2'346	"	
174	IX X Jajádeo Hill Temple (D)	27 4 37 104 31 10	4'67'9657 5'00'7372 4'89'5276	47825 101712 78574	9'058 19'264 14'881	"	XII XV Lachmangarh Hill Fort	121 47 58 25 12 17	5'09'7243 4'79'7137 4'90'3937	125006 62681 80156	23'692 11'871 15'181	"	
175	IX Ladára Jajádeo Hill Temple (D)	19 33 49 109 3 24	4'55'6705 5'00'7372 4'92'4668	36033 101712 84075	6'825 19'264 15'923	"	XII Karaia Chinúr Hill Fort	88 7 38 71 58 27	4'56'0740 4'53'9115 4'09'2907	36370 34603 12385	6'888 6'554 2'346	"	
176	IX XI Ladára Hill Tomb (D)	65 3 0 52 46 16	4'97'3271 4'91'6855 4'96'4472	94031 82576 91722	17'809 15'639 17'372	"	XII Karaia Súrajpur Building	131 40 6 29 44 51	4'46'2852 4'28'5166 4'09'2907	29030 19283 12385	5'498 3'652 2'346	"	
177	XI XII Ladára Hill Tomb (D)	62 35 29 48 5 32	5'04'9857 4'97'3271 5'07'2633	112165 94031 118204	21'243 17'809 22'387	"	XII Karaia Himmatgarh Hill Fort Gate	147 36 16 25 49 51	4'76'3735 4'67'3967 4'09'2907	58041 47203 12385	10'993 8'940 2'346	"	
178	X XI Chorpura Hill Mark (D)	3 42 8 10 49 52	4'42'8017 4'89'2841 5'01'8455	26848 78134 104341	5'085 14'798 19'762	"	XII Karaia Himmatgarh Hill Fort Building	147 45 8 25 43 54	4'76'5178 4'67'5624 4'09'2907	58234 47383 12385	11'029 8'974 2'346	"	
179	XI XIII Chorpura Hill Mark (D)	92 57 11 15 0 8	5'01'5279 4'42'8017 4'99'4173	103581 26848 98667	19'618 5'085 18'687	"	XII Karaia Ráipur Peak Temple	149 3 10 26 56 37	4'96'0104 4'90'5138 4'09'2907	91223 80378 12385	17'277 15'223 2'346	"	
180	Ladára X Narwar Fort	145 37 1 16 51 55	4'35'1998 4'06'2744 4'07'8732	22490 11554 11988	4'260 2'188 2'270	"	XII Karaia Himmatgarh Peak	152 24 45 21 28 38	4'73'1469 4'62'9429 4'09'2907	53885 42602 12385	10'206 8'069 2'346	"	

PRINCIPAL AUXILIARY STATIONS AND INTERSECTED POINTS.

No. of triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used	No. of triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
193	XIII XV Jakodi h.s.	34 53 0 14 39 52	4'862642 4'508707 4'986671	72886 32263 96977	13'804 6'110 18'367	Inch	XV XVII Gwalior Hill Temple (D)	100 18 45 22 58 4	5'018731 4'617106 4'948008	104407 41410 88717	19'774 7'843 16'802	Inch 36 "	
194	XII Sikrauli Jakodi h.s.	44 8 22 56 26 8 79 25 30	4'797924 4'875844 4'947621	62795 75135 88638	11'893 14'230 16'788		XVII XX Gwalior Hill Temple (D)	103 43 34 31 41 59	5'285602 5'018731 5'144419	193020 104407 139450	36'557 19'774 26'411	" "	
195	XIII XV Dondrápur h.s. (D)	25 51 0 30 12 48 123 56 12	4'707276 4'769532 4'986671	59965 58821 96977	9'653 11'140 18'367		XV Jakodi Madka h.s. "	45 17 44 41 43 14 92 59 2	4'714945 4'686378 4'862642	51873 48571 72886	9'825 9'199 13'804		
196	XIII Jakodi Dondrápur h.s. (D)	9 2 0 160 19 28 10 38 32	4'438222 4'769532 4'508707	27430 58821 32263	5'195 11'140 6'110		XV Dondrápur Barai Temple s. (D)	33 1 43 24 32 16 122 26 1	4'517369 4'399281 4'707276	32913 25077 59965	6'234 4'749 9'653		
197	XIII XV Pagáro Hill Temple	55 51 26 59 20 59	4'947972 4'964777 4'986671	88710 92210 96977	16'801 17'464 18'367	36 "	XV Madka Barai Temple s. (D)	62 46 31 31 0 33 86 12 56	4'636335 4'399281 4'686378	43285 25077 48571	8'198 4'749 9'199		
198	XIII Jakodi Doa Fort h.s.	38 18 54 76 4 3	4'341660 4'536311 4'508707	21961 34380 32263	4'159 6'511 6'110		XV Barai Temple s. Ráipur Temple	11 59 28 5 29 48	4'238995 3'902744 4'399281	17338 7994 25077	3'284 1'514 4'749		
199	XIII Jakodi Jakodi Tower h.s.	0 55 40 0 59 32	4'192912 4'222074 4'508707	15592 16675 32263	2'953 3'158 6'110		XV Barai Temple s. Mangára Building	33 25 17 49 32 55	4'143547 4'283919 4'399281	13917 19227 25077	2'636 3'642 4'749		
200	XIII Jakodi Kuárpur h.s. (D)	32 23 57 130 19 11 17 16 52	4'764877 4'918071 4'508707	58194 82808 32263	11'022 15'683 6'110		XV Barai Temple s. Rái Building	70 14 46 76 36 1	4'635045 4'649398 4'399281	43156 44607 25077	8'174 8'448 4'749		
201	XIII XVI Kuárpur h.s. (D)	39 9 22 84 55 14	5'035924 4'918071 5'116034	108624 82808 130627	20'573 15'683 24'740		XV Barai Temple s. Paniári Building	9 59 49 28 59 0	3'840133 4'285938 4'399281	6920 19317 25077	1'311 3'659 4'749		
202	XIII Jakodi Aran Fort h.s.	92 47 56 53 28 39	4'763749 4'669320 4'508707	58043 46700 32263	10'993 8'845 6'110		XVI Kuárpur Kailáras h.s. "	29 22 11 30 21 10 120 16 39	4'790204 4'803184 5'035924	61688 63560 108624	11'683 12'038 20'573		
203	XIII Kuárpur Banderia h.s. (D)	34 36 4 37 59 31 107 24 25	4'692671 4'727694 4'918071	49280 53419 82808	9'333 10'117 15'683		XVI XVIII Kailáras h.s. (D)	36 54 36 35 56 26	4'813142 4'803184 5'014835	65034 63560 103475	12'317 12'038 19'597		
204	Jakodi Kuárpur Banderia h.s. " "	53 21 45 55 16 23 71 21 52	4'692671 4'703072 4'764877	49280 50475 58194	9'333 9'560 11'022		Kailáras Kuárpur Badreta h.s. " "	116 4 51 26 38 30 37 16 39	4'961324 4'659637 4'790204	91480 45671 61688	17'326 8'650 11'683		

No. of triangle	Station	Corrected plane angle	Distance			Theodolite used	No. of triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
217	XVI Kailāras Badreta h.s. " (D)	10 30 43 4 11 48 165 17 29	4'659637 4'262909 4'803184	45671 18319 63560	8'650 3'470 12'038	Inch	229 Isāpur Bijapur Fort h.s.	21 54 10 141 30 0	4'573903 4'796306 4'457978	37489 62561 28706	7'100 11'849 5'437	Inch	
218	Badreta Kailāras Sidpur h.s. " "	32 45 7 12 9 20 135 5 33	4'544055 4'134244 4'659637	34999 13622 45671	6'629 2'580 8'650		230 Badreta Birāno Hill Temple h.s.	36 9 34 121 57 22	4'462385 4'620136 4'262909	28999 41700 18319	5'492 7'898 3'470		
219	Badreta Kailāras Sewai Fort h.s. " "	47 48 1 31 6 39	4'537528 4'381057 4'659637	34477 24047 45671	6'530 4'554 8'650		231 Badreta Mandrel Fort h.s.	127 48 29 43 37 20	4'987350 4'928472 4'262909	97129 84815 18319	18'396 16'063 3'470		
220	Badreta Kailāras Chinoni h.s. " s. (D)	37 47 56 97 4 20 45 7 44	4'596562 4'805861 4'659637	39497 63953 45671	7'480 12'112 8'650	7	Kailāras Sidpur Sabalgarh Hill Fort h.s. " "	10 59 14 159 39 45	4'613383 4'874299 4'544055	41057 74868 34999	7'776 14'180 6'629		
221	Kailāras XVIII Chinoni h.s. " s. (D)	14 16 26 19 59 57 145 43 37	4'454446 4'596562 4'813142	28474 39497 65034	5'393 7'480 12'317	"	Badreta Sidpur Sidpur Fort h.s. " "	14 27 20 109 41 38	3'613731 4'190260 4'134244	4109 15497 13622	0'778 2'935 2'580		
222	Badreta Kailāras Kharero h.s. " s.	63 24 32 90 31 25	4'302545 4'611102 4'659637	20070 40842 45671	3'801 7'735 8'650	" "	Kailāras Kharero Nipri h.s. s. " (E)	93 37 30 24 44 33	4'357233 3'979840 4'302545	22763 9546 20070	4'311 1'808 3'801	7 " "	
223	Badreta Kailāras Tilondri h.s. " s. (D)	57 19 5 89 22 12	4'399392 4'584812 4'659637	25084 38442 45671	4'751 7'281 8'650	" "	Kailāras Tilondri Nipri h.s. s. " (E)	87 32 3 21 8 4	4'422463 3'979840 4'399392	26452 9546 25084	5'010 1'808 4'751	" "	
224	Kailāras Kharero Tilondri h.s. s. " (D)	6 5 27 151 21 14	3'744431 4'399392 4'302545	5552 25084 20070	1'051 4'751 3'801	" "	Kailāras Kharero Rijoni Fort h.s. s. (D)	45 24 22 56 41 58	4'164853 4'234415 4'302545	14617 17156 20070	2'768 3'249 3'801	" "	
225	Badreta Kailāras Dongarpur h.s. " s. (E)	125 21 24 51 18 19	3'532397 4'678730 4'659637	3407 47723 45671	0'645 9'039 8'650	" "	Kailāras Tilondri Rijoni Fort h.s. s. (D)	51 29 49 42 59 19	4'294250 4'234415 4'399392	19690 17156 25084	3'729 3'249 4'751	" "	
226	Kailāras Tilondri Dongarpur h.s. s. " (E)	68 2 19 7 33 36	4'380542 3'532397 4'399392	24018 3407 25084	4'549 0'645 4'751	" "	Kailāras Kharero Bahāmpur Bastion h.s. s.	9 47 9 18 25 3	3'858411 4'127653 4'302545	7218 13417 20070	1'367 2'541 3'801	" "	
227	Badreta Kailāras Pahārgarh Fort h.s. " "	56 28 15 57 13 53	4'618870 4'622635 4'659637	41579 41941 45671	7'875 7'943 8'650		Nipri Kailāras Hātipura s. h.s. s.	72 44 45 49 15 58	4'080318 4'028680 3'979840	12031 10683 9546	2'279 2'023 1'808	" "	
228	XVI Kuārpur Isāpur h.s. " "	152 35 25 5 37 40 21 46 55	5'129551 4'457978 5'035924	134757 28706 108624	25'522 5'437 20'573		Nipri Hātipura Madrāni Bastion s. " "	22 8 49 79 52 53	3'614643 4'031513 4'028680	4118 10753 10683	0'780 2'036 2'023	" "	

PRINCIPAL AUXILIARY STATIONS AND INTERSECTED POINTS.

No. of triangle	Station	Corrected plane angle	Distance			Theodolite used	No. of triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
241	Chinoni s. XVIII Sewar s.	17 7 9 138 35 54	4'102904 4'248116 4'454446	12674 17706 28474	2'400 3'353 5'393	Inch 7 "	253 Lachora h.s. (D)	46 4 1 52 39 25 81 16 34	4'945182 4'988135 5'082704	88142 97305 120977	16'694 18'429 22'912	Inch 86 "	
242	Sewar s. XVIII Páli s.	107 8 40 31 26 25 41 24 55	4'262627 3'999712 4'102904	18307 9993 12674	3'467 1'893 2'400	" 86 7	254 Agápur s. Lachora h.s. (D)	61 43 42 87 7 21 31 8 57	4'890564 4'945182 4'659445	77726 88142 45650	14'721 16'694 8'646	" "	
243	Sewar s. XVIII Bairági's Math (D)	122 35 22 29 49 56	4'362956 4'134120 4'102904	23065 13618 12674	4'368 2'579 2'400	" 86 "	255 Fathipur Síkri Dome h.s. (D) Maloni h.s. (D)	127 23 45 35 53 40	4'854603 4'413205 4'722647	71549 25894 52802	13'551 4'904 10'000	" "	
244	Sewar s. Páli " Bairági's Math (D)	15 26 42 130 49 23	3'680571 4'134120 3'999712	4793 13618 9993	0'908 2'579 1'893	7 " "	256 Lachora h.s. Maloni "	36 35 24 11 24 19 132 0 17	4'892402 4'413205 4'988135	78055 25894 97305	14'783 4'904 18'429	" "	
245	Sewar s. Páli " Tendhokar Temple	41 25 54 96 32 21	3'994634 4'171121 3'999712	9877 14829 9993	1'871 2'809 1'893	" " "	257 Agápur s. Bhartpur Residency	22 15 22 10 55 16	4'499625 4'198786 4'659445	31595 15805 45650	5'984 2'993 8'646	" "	
246	XVIII XX Kidárpur h.s.	73 1 52 87 11 21	5'022787 4'571555 5'041596	105387 37287 110051	19'960 7'062 20'843	86 12	258 Agápur s. Bhartpur Fort	38 20 30 26 9 7	4'496617 4'348176 4'659445	31377 22293 45650	5'943 4'222 8'646	" "	
247	XVIII Kidárpur h.s. Thúm s.	82 2 23 48 41 27	4'687803 4'567740 4'571555	48731 36961 37287	9'229 7'000 7'062	86 12	259 Agápur s. Bhartpur Bungalow	39 13 46 28 6 49	4'495335 4'367550 4'659445	31285 23310 45650	5'925 4'415 8'646	" "	
248	XVIII XX Bári s. (D)	34 42 29 112 28 43	4'831327 4'809835 5'041596	67815 64541 110051	12'844 12'224 20'843	86 12	260 XVIII XXII Jagner Hill Mark (E)	2 3 29 8 22 46	4'539810 5'148113 5'242638	34659 146041 174839	6'564 26'637 33'113	" "	
249	XVIII Kidárpur h.s. Bári s. (D)	38 19 23 108 26 37	4'625193 4'809835 4'571555	42188 64541 37287	7'990 12'224 7'062	86 12	261 XXII Maloni h.s. Jagner Hill Mark (E)	47 26 44 84 30 26	4'409662 4'539810 4'413205	25648 34059 25894	4'858 6'564 4'904	" "	
250	XXII XXIV Agápur s.	5 25 2 9 4 17 165 30 41	4'659445 4'882174 5'082704	45650 76238 120977	8'646 14'439 22'912	86 "	262 XXII Maloni h.s. Rúpás Palace	73 28 20 43 14 13	4'443882 4'297909 4'413205	27790 19857 25894	5'263 3'761 4'904	" "	
251	XXII XXIV Fathipur Síkri Dome (E)	44 44 19 24 0 4	4'960810 4'722647 5'082704	91371 52802 120977	17'305 10'000 22'912	" "	263 XXIV XXV Nandbai s.	9 22 34 9 21 3	4'873460 4'872298 5'168084	74724 74524 147260	14'152 14'114 27'890	" "	
252	XXIV Agápur s. Fathipur Síkri Dome (E)	14 55 47 151 5 46	4'687560 4'960810 4'659445	48703 91371 45650	9'224 17'305 8'646	"	264 XXIV XXV Rásia Hill Temple	54 42 13 47 47 48	5'090286 5'048184 5'168084	123108 111734 147260	23'316 21'162 27'890	" "	

No. of triangle	Station	Corrected plane angle	Distance			Theodolite used	No. of triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
265	XXIV Kánkri h.s. (D)	10 18 52 119 41 21	4:417562 5:103470 5:048818	26155 126002 1111897	4:954 24:035 21:193	Inch 86	XXVI Kánkri h.s. (D)	64 11 54 85 57 54	4:675133 4:719665 4:417562	47330 52440 26155	8:964 9:932 4:954	Inch 86	
266	XXVI Kánkri h.s. (D)	90 22 57 12 24 41	5:085256 4:417562 5:074347	121690 26155 118672	23:047 4:954 22:476	" "	XXVI Kánkri h.s. (D)	60 33 7 89 9 7	4:654647 4:714680 4:417562	45149 51842 26155	8:551 9:819 4:954	" "	
267	XXIV Kumbher Building (D)	20 44 55 8 40 34	4:906822 4:536031 5:048818	80690 34358 1111897	15:282 6:507 21:193	" "	XXVI Kánkri h.s. (D)	52 5 45 83 8 52	4:467030 4:56818 4:417562	29311 36882 26155	5:551 6:985 4:954	" "	
268	XXIV Kumbher Building (D)	46 13 39 18 26 56	4:894306 4:536031 4:991837	78398 34358 98138	14:848 6:507 18:587	" "	XXVI Kánkri h.s. (D)	39 58 12 80 57 24	4:952143 5:138914 5:077746	89566 137694 119604	16:963 26:078 22:652	" "	
269	XXV Pát h.s. (D)	15 51 16 139 4 16 25 4 28	4:964988 5:344838 5:155672	92255 221227 143111	17:472 41:899 27:104	" "	XXVII Sareta Hill Chatri (D)	56 12 20 17 5 43	4:952143 4:500813 5:013810	89566 31682 103231	16:963 6:000 19:551	" "	
270	XXVII Pát h.s. (D)	19 4 40 61 59 4 98 56 16	4:533466 4:964688 5:013810	34156 92255 103231	6:469 17:472 19:551	" "	XXVII Mandla h.s. (D)	18 58 38 8 26 29 152 34 53	4:862732 4:517310 5:013810	72901 32909 103231	13:807 6:233 19:551	" "	
271	XXVI Pahári Building (D)	5 39 38 9 29 30	4:651097 4:874299 5:074347	44781 74869 118672	8:481 14:180 22:476	" "	XXVIII Khori h.s. (D)	41 2 27 94 35 12 44 22 21	4:681424 4:862732 4:708802	48020 72901 51145	9:095 13:807 9:687	" "	
272	XXVI Dúli Hill Mark (D)	34 9 5 80 43 7	4:865872 5:110890 5:074347	73430 129089 118672	13:907 24:449 22:476	" "	XXVII Khori h.s. (D)	83 3 54 26 23 4 70 33 2	4:842894 4:493849 4:820565	69646 31178 66155	13:190 5:905 12:529	" "	
273	XXVI Dúli Hill Mark (D)	85 29 48 49 36 52	5:227762 5:110890 5:077746	168951 129089 119604	31:998 24:449 22:652	" "	XXVII Mandla h.s. (D)	39 28 22 65 57 33 74 34 5	4:336517 4:493849 4:517310	21703 31178 32909	4:110 5:905 6:233	" "	
274	XXVI Khori h.s. (D)	32 4 3 40 10 45 107 45 12	4:820565 4:905219 5:074347	66155 80393 118672	12:529 15:226 22:476	" "	XXVII Kho Temple h.s. (D)	32 20 42 102 1 0	4:391407 4:653418 4:517310	24627 45021 32909	4:664 8:527 6:233	" "	
275	XXVII Khori h.s. (D)	24 36 54 32 35 58 122 47 8	4:708802 4:820565 5:013810	51145 66155 103231	9:687 12:529 19:551	" "	XXVII Rámgarh Hill Chatri h.s. (D)	22 34 47 53 3 7	4:115407 4:433757 4:517310	13044 27149 32909	2:470 5:142 6:233	" "	
276	XXVI Kánkri Nagar Bungalow h.s. (D)	116 43 30 30 16 6	4:632312 4:383849 4:417562	42886 24202 26155	8:122 4:584 4:954	" "	XXVII Mandla h.s. (D)	13 47 36 162 30 36	5:085267 5:185825 4:517310	121693 153400 32909	23:048 29:053 6:233	" "	

PRINCIPAL AUXILIARY STATIONS AND INTERSECTED POINTS.

No. of	Station	Corrected plane angle	Distance			No. of triangle	Station	Corrected plane angle	Distance			Theodolite used	Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles		
289	XXVII Mandla Láswári h.s. s. (D)	45 57 6 54 43 20	4'462008 4'597848 4'517310	28974 39614 32909	5'487 7'503 6'233	301	XXX Barsána Hill Temple (D)	55 51 52 34 40 37	5'055657 4'892851 5'137758	113673 78136 137328	21'529 14'798 26'009	Inch 36 "	
290	XXVII Sareta Hill Chatrí Láswári s. (D)	83 10 47 41 15 55	4'678484 4'597848 4'500813	47696 39614 31682	9'033 7'503 6'000	302	XXIX Nandgaón Hill Temple (D)	117 12 20 15 35 25	4'974102 4'454378 4'890584	94211 28469 77729	17'843 5'392 14'721	"	
291	XXVII Sareta Alwar h.s. s.	50 25 21 106 54 13	4'794762 4'888660 4'493849	62339 77386 31178	11'807 14'656 5'905	303	XXX Nandgaón Hill Temple (D)	45 11 4 43 17 52	4'988789 4'974102 5'137758	97452 94211 137328	18'457 17'843 26'009	"	
292	XXVII Sareta Alwar Chatrí h.s.	50 26 42 106 57 34	4'796327 4'889955 4'493849	62564 77617 31178	11'849 14'700 5'905	304	XXX Brindában Temple	47 34 14 24 10 4	5'028322 4'772360 5'137758	106739 59205 137328	20'216 11'213 26'009	"	
293	XXVIII Mandla Sherpur Temple h.s.	6 58 54 8 56 57	4'508988 4'616119 4'862732	32284 41316 72900	6'114 7'825 13'807	305	XXX Brindában Temple Matra s.	18 30 35 101 57 44	4'283591 4'717340 4'772300	19213 52160 59205	3'639 9'879 11'213	" 12	
294	XXVIII Pát Bhagola h.s. s.	89 43 29 62 49 33	4'584255 4'247929 4'533466	38393 17698 34156	7'271 3'352 6'469	306	Brindában Temple Matra s. "	6 55 11 9 6 28	4'525197 4'165042 4'283591	33512 14623 19213	6'347 2'770 3'639	" "	
295	XXVIII Pát Gháto h.s. (D)	69 8 35 100 27 18	4'511303 3'797340 4'533466	32457 6271 34156	6'147 1'188 6'469	307	XXXI Báhin Goraksir s. "	41 0 30 92 1 34	4'350135 4'397004 4'532848	22394 24946 34107	4'241 4'725 6'460	86 12	
296	XXVIII Bhagola Gháto h.s. (D)	20 34 54 10 33 30 148 51 36	4'080305 3'797340 4'247929	12031 6271 17698	2'279 1'188 3'352	308	XXXI Goraksir Gadráno Temple s.	101 36 53 41 8 57	4'606191 4'433416 4'397004	40382 27128 24946	7'648 5'138 4'725	86 12	
297	Bhagola Gháto Ferozpur Palace h.s. s.	76 4 54 70 54 2	4'331047 4'319399 4'080305	21431 20864 12031	4'059 3'952 2'279	309	XXXI Goraksir Hatín s. "	29 22 40 35 16 0 115 21 20	4'131692 4'202459 4'397004	13542 15939 24946	2'565 3'019 4'725	86 12	
298	XXVIII XXXI Báhin s. (D)	7 20 0 25 44 23 146 55 37	4'532848 5'064629 5'163816	34107 116046 145820	6'460 21'978 27'617	310	XXXI Hatín Palwal s. "	115 16 55 46 17 11 18 25 54	4'658806 4'561553 4'204459	45583 30438 15939	8'633 6'901 3'019	86 12	
299	XXVIII XXXII Báhin s. (D)	54 55 47 60 43 18 64 20 55	5'036978 5'064629 5'078926	10887 116046 119929	20'622 21'978 22'714	311	XXXI Palwal Rasúlpur Building s.	49 23 0 69 38 57	4'500159 4'591879 4'561553	31634 39073 30438	5'991 7'400 6'901	86 12	
300	XXIX XXX Barsána Hill Temple (D)	91 1 39 4 54 37	4'892851 3'825372 4'890584	78136 6689 77729	14'798 1'267 14'721	312	Hatín Goraksir Jaisingpur s. "	86 55 25 23 52 51	4'495131 4'523787 4'131692	31270 33403 13542	5'922 6'326 2'565	" "	

No. of triangle	Station	Corrected plane angle ° ' "	Distance			No. of triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used	No. of triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles					Log. feet	Feet	Miles	
313	Gorakpur s. Jaisingpur h.s. Kálinjar h.s.	20 23 42 69 13 27 90 22 51	4'037331 4'465941 4'495131	10898 29238 31270	2'064 5'537 5'922	825	XXXVIII XXXIX Kutab Míнар (D)	29 38 9 68 3 19	4'748147 5'021329 5'050069	55995 105034 112220	10'605 19'893 21'254	Inch 86 "							
314	Jaisingpur s. Kálinjar h.s. Atar Hill Temple	42 24 12 118 15 44	4'346279 4'462268 4'037331	22196 28991 10898	4'204 5'491 2'064	326	XXXV XXXVIII Humáyún's Tomb (D)	55 57 20 39 36 27	4'947051 4'833203 5'026655	88522 68109 106330	16'766 12'899 20'138	"							
315	XXXI XXXIV Tappal s.	29 12 15 71 21 12 79 26 33	4'675279 4'963511 4'979513	47346 91941 95392	8'967 17'413 18'067	327	XXXVIII XXXIX Humáyún's Tomb (D)	12 50 16 37 12 8	4'512288 4'947051 5'050069	32530 88522 112220	6'161 16'766 21'254	"							
316	XXXIV Tappal s. Gori "	86 24 53 35 52 52 57 42 15	4'747417 4'516243 4'675279	55901 32828 47346	10'587 6'217 8'967	328	XXXV XXXVIII Tálkatora h.s. (D)	74 11 12 41 40 51 64 7 57	5'055751 4'895315 5'026655	113698 78581 106330	21'534 14'883 20'138	"							
317	XXXIV Gori s. Jewar "	85 48 59 28 24 15 65 46 46	4'555103 4'233584 4'516243	35901 17123 32828	6'799 3'243 6'217	329	XXXVIII XXXIX Tálkatora h.s. (D)	10 45 52 88 35 22 80 38 46	4'327194 5'055751 5'050069	21242 113698 112220	4'023 21'534 21'254	"							
318	XXXIV Gori s. Díánatpur "	170 31 20 1 47 11	4'606268 3'883451 4'516243	40389 7646 32828	7'650 1'448 6'217	330	XXXV XXXIX Koseri-ka-gummat (D)	19 14 54 24 44 49	4'661819 4'765560 4'985483	45901 58285 96713	8'693 11'039 18'317	"							
319	XXXIV Jewar s. Díánatpur "	103 39 41	4'308246 3'883451 4'233584	20335 7646 17123	3'851 1'448 3'243	331	XXXV Tálkatora h.s. Koseri-ka-gummat (D)	11 58 16 29 16 40	4'393059 4'765560 4'895315	24721 58285 78581	4'682 11'039 14'883	"							
320	XXXV XXXVIII Dehli Dome (D)	62 36 1 49 46 17	5'008962 4'943432 5'026655	102085 87787 106330	19'334 16'626 20'138	332	XXXV XXXIX Adam-ka-gummat. (D)	11 34 16 8 26 46	4'753369 4'618034 4'985483	56672 41499 96713	10'733 7'860 18'317	"							
321	XXXV XXXIX Dehli Dome (D)	4 18 33 35 43 5	4'059031 4'943432 4'985483	11299 87787 96713	2'140 16'626 18'317	333	XXXV Tálkatora h.s. Adam-ka-gummat (D)	4 17 38 4 46 29	4'572034 4'618034 4'895315	37328 41499 78581	7'070 7'860 14'883	"							
322	XXXV XXXVIII Dehli N. Míнар (D)	62 35 0 49 50 34	5'009065 4'944059 5'026655	102109 87914 106330	19'339 16'650 20'138	334	XXXV XXXIX Dehli Church (D)	3 33 17 57 3 26	3'837711 4'909180 4'985483	6882 93149 96713	1'303 17'642 18'317	"							
323	XXXV XXXIX Dehli N. Míнар (D)	4 19 34 36 14 12	4'049944 4'944059 4'985483	11219 87914 96713	2'125 16'650 18'317	335	XXXV Tálkatora h.s. Dehli Church (D)	10 49 55 126 24 22	4'337469 4'909180 4'895315	21750 93149 78581	4'119 17'642 14'883	"							
324	XXXV XXXVIII Kutab Míнар (D)	76 51 16 22 48 34	5'021329 4'621322 5'026655	105034 41814 106330	19'893 7'919 20'138	336	XXXV XXXIX Dehli Cant. Flag-Staff (D)	0 49 3 161 13 7	3'650694 5'004143 4'985483	4474 100959 96713	0'847 19'121 18'317	"							

PRINCIPAL AUXILIARY STATIONS AND INTERSECTED POINTS.

No. of triangle	Station	Corrected plane angle	Distance			Theodolite used	No. of triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
337	XXXX Tālkatora h.s. Dehli Cant. Flag-Staff (D)	8 5 41 146 22 10	4'409396 5'004143 4'893315	25668 100959 78581	4'861 19'121 14'883	Inch 36 "	XL XLI Rāmdwāra s.	59 8 57 37 53 7	5'083071 5'146047 4'937555	121080 139974 86607	22'932 26'510 16'403	Inch 18	
338	XXXX Tālkatora h.s. Mansūr Ali's Tomb (D)	7 22 40 30 35 55	4'214806 4'812938 4'893315	16399 65004 78581	3'106 12'311 14'883	" "	Tālkatora h.s. Rāmdwāra s. Dehli S. Minār	33 12 13 55 39 5	4'103496 4'281800 4'364933	12691 19134 23170	2'404 3'624 4'388	18	
339	XXXIX Tālkatora h.s. Mansūr Ali's Tomb (D)	28 8 59 114 10 48	4'214806 4'501190 4'327194	16399 31710 21242	3'106 6'006 4'023	" "	Tālkatora h.s. Bhāngela s. Toghakabad Palace	32 45 28 39 18 43	4'626238 4'694745 4'871347	42290 49516 74361	8'009 9'378 14'084		
340	XXXVIII Kutab Minār Garabpur s.	30 51 27 142 20 35	4'945372 4'308667 5'021329	88180 20355 105034	16'701 3'855 19'893		Tālkatora h.s. Bhāngela s. Kālkāji Devi Temple (E)	22 27 20 20 4 0	4'623506 4'576918 4'871347	42025 37750 74361	7'959 7'150 14'084		
341	XXXVIII Tālkatora h.s. Soherka s.	10 15 29 5 36 1 164 8 30	4'869795 4'608569 5'055751	74096 40604 113698	14'033 7'690 21'534		Soherka s. Bhāngela s. Kālkāji Devi Temple (E)	60 48 47 103 59 36	4'623506 4'669393 4'100913	42025 46708 12616	7'959 8'846 2'389		
342	XXXVIII Humayūn's Tomb Soherka s.	12 19 53 157 36 13	4'695644 4'608569 4'947052	49619 40604 88522	9'397 7'690 16'766		LIII LV Karaunda Mark	58 15 4 38 4 56	5'079734 4'887196 5'150012	120153 77125 141258	22'756 14'607 26'753	86 "	
343	XXXVIII Tālkatora h.s. Bhāngela s.	7 44 49 4 8 50 168 6 21	4'871347 4'600919 5'055751	74361 39895 113698	14'084 7'556 21'534		LV (XI) Karaunda Mark	43 46 12 55 15 46	5'004940 5'079734 5'159562	101144 120153 144398	19'156 22'756 27'348	" "	
344	XXXVIII Soherka s. Bhāngela s.	18 0 18 77 48 57 84 10 45	4'100913 4'600919 4'608569	12616 39895 40604	2'389 7'556 7'690		LIII (XI) Sahāranpur s.	59 49 26 14 19 49	5'202910 4'659747 5'249327	159555 45682 177553	30'219 8'652 33'627	" "	
345	XXXIX Tālkatora h.s. Dehli Cant. Pillar	107 37 1 8 18 49	4'352416 3'533419 4'327194	22512 3415 21242	4'264 0'647 4'023	36 "	LV (XI) Sahāranpur s.	61 54 38 65 6 39	5'202910 5'215002 5'159562	159555 164060 144398	30'219 31'072 27'348	" "	
346	XXXIX Tālkatora h.s. Dehli Chaplain's House	170 25 54 3 16 39	4'508174 4'044664 4'327194	32224 11083 21242	6'103 2'099 4'023	" "	LIV LV Rurki College	69 11 19 59 13 19	5'009772 4'973146 4'933157	102276 94004 85735	19'370 17'804 16'238	24 "	
347	XXXIX Tālkatora h.s. Dehli Palace	77 16 6 29 45 58	4'335866 4'042562 4'327194	21670 11030 21242	4'104 2'089 4'023	" "	LIV LV Jāmankhāta h.s.	28 46 57 25 26 26 125 46 37	4'706560 4'657014 4'933157	50881 45396 85735	9'637 8'598 16'238	18 7	
348	XXXVIII Tālkatora h.s. Rāmdwāra s.	81 32 8 86 43 31	4'364933 5'051704 5'055751	23170 112643 113698	4'388 21'334 21'534	" 18	LIV Jāmankhāta h.s. Birpur Temple	35 29 33 95 39 10	4'544068 4'778077 4'657014	35000 59990 45396	6'629 11'362 8'598	18 7	

No. of triangle	Station	Corrected plane angle	Distance			Theodolite used	No. of triangle	Station	Corrected plane angle	Distance			Theodolite used	
			Log. feet	Feet	Miles					Log. feet	Feet	Miles		
361	L.V.	12 10 43	4'937722	86641	16'409	Inch	373	(X) Dehra Doon Obsy. S. (old)	121 29 37	4'648066	44470	8'422	Inch	
	(X) Nawáda h.s.	6 15 47	4'651320	44804	8'486	5		Masúri, Vincent's Hill s. (D)	121 29 37	4'195036	15669	2'968		12
		161 33 30	5'113074	129919	24'606					4'734992	54324	10'289		
362	L.V.	49 0 15	5'046584	111323	21'084	36	374	(X) Masúri Camel's Back h.s.	57 31 28	4'667394	46494	8'806	18	
	(XI) Dehra Gurúdwára Temple	29 14 5	4'857542	72035	13'643	"		Dehra, Sur. Gen'l's. old Office	101 25 4	4'732566	54021	10'231		5
			5'159562	144398	27'348					4'296715	19802	3'750		
363	(X) Dehra Gurúdwára Temple	76 38 46	5'046584	111323	21'084	"	375	(X) Dehra, Sur. Gen'l's. old Office	38 18 22	4'527929	33723	6'387	18	
	(XI) Dehra Gurúdwára Temple	30 28 26	4'763621	58026	10'990	"		Rájpur h.s.	44 53 31	4'584298	38397	7'272		5
			5'038805	109347	20'710					4'732566	54021	10'231		"
364	(VIII) Badráj Hill Mark (D)	84 38 21	4'849762	70756	13'401	"	376	Dehra, Sur. Gen'l's. old Office	44 31 26	4'413332	25902	4'906	"	
	(IX) Badráj Hill Mark (D)	61 53 59	4'797195	62690	11'873	"		Rájpur h.s.	21 23 29	4'129465	13473	2'552		"
			4'593109	39184	7'421			Kalanga "	114 5 5	4'527929	33723	6'387		"
365	(VIII) Badráj Hill Mark (D)	12 56 32	4'258253	18124	3'433	"	377	Dehra, Sur. Gen'l's. old Office	26 8 29	4'339176	21836	4'136	"	
	(X) Badráj Hill Mark (D)	50 46 38	4'797195	62690	11'873	"		Rájpur h.s.	110 58 52	4'665350	46275	8'764		"
			4'860683	72558	13'742			Masúri, Church Steeple(E)		4'527929	33723	6'387		"
366	(VIII) Hátipáon Hill Mark (D)	65 2 5	4'809344	64468	12'210	"	378	Rájpur h.s.	132 22 21	4'640527	43705	8'277	"	
	(IX) Hátipáon Hill Mark (D)	81 31 43	4'847181	70337	13'321	"		Kalanga "	21 39 40	4'339176	21836	4'136		"
			4'593109	39184	7'421			Masúri, Church Steeple(E)		4'413332	25902	4'906		"
367	(VIII) Hátipáon Hill Mark (D)	6 39 44	3'934193	8594	1'628	"	379	Rájpur h.s.	29 27 8	4'298656	19891	3'767	"	
	(X) Hátipáon Hill Mark (D)	71 43 4	4'847181	70337	13'321	"		Kalanga "	10 21 39	3'861861	7275	1'378		"
			4'860683	72558	13'742			Rájpur Mosque		4'413332	25902	4'906		"
368	(X) Timli Temple	28 34 39	4'057818	11424	2'164	"	380	Masúri, Camel's Back h.s.	96 5 19	4'688579	11711	2'218	12	
	(XI) Timli Temple	148 16 23	4'997668	99465	18'838	"		Masúri, Vincent's Hill s.	54 49 4	3'983430	9626	1'823		"
			5'038805	109347	20'710			Masúri, Manor House h.s.	29 5 37	3'757885	5726	1'085		"
369	(X) Nawáda h.s.	25 20 36	4'622259	41904	7'936	5	381	Masúri, Camel's Back h.s.	33 35 33	3'594312	3194	0'605	"	
	(XI) Arcadia House s.	36 54 34	4'769324	58793	11'135	7		Masúri, Vincent's Hill s.	63 39 6	3'713728	5173	0'980		"
			4'937722	86641	16'409			Masúri, Convent		3'757885	5726	1'085		"
370	(X) Dehra Doon Obsy. S. (old)	101 55 2	4'668964	46662	8'838	12	382	Masúri, Camel's Back h.s.	16 45 7	3'316894	2074	0'393	"	
	(XI) Dehra Doon Obsy. S. (old)	36 54 34	4'296715	19802	3'750	"		Masúri, Vincent's Hill s.	35 57 57	3'626019	4227	0'801		"
			4'734992	54324	10'289			Masúri, Laureston Obsy. Mark		3'757885	5726	1'085		"
371	(X) Sirkanda H.S. (old)	81 30 28	4'844110	69841	13'227	"	383	Masúri, Camel's Back h.s.	118 23 33	3'843563	6975	1'321	"	
	(XI) Sirkanda H.S. (old)	37 42 49	4'668964	46662	8'838	"		Masúri, Vincent's Hill s.	15 22 14	3'322569	2102	0'398		"
			4'892401	78655	14'783			Masúri, Zephyr Hall		3'757885	5726	1'085		"
372	(X) Masúri, Camel's Back h.s.	37 42 49	3'757885	5726	1'085	"	384	Masúri, Camel's Back h.s.	127 3 5	3'943546	8781	1'663	"	
	(XI) Masúri, Vincent's Hill s.	129 22 5	4'195936	15669	2'968	"		Masúri, Vincent's Hill s.	21 35 6	3'607199	4048	0'767		"
			4'296715	19802	3'750			Masúri, Himalaya Club		3'757885	5726	1'085		"

Note.—Dehra Doon Observatory S. (old) and Sirkanda H.S. are principal stations.

No. of triangle	Station	Corrected plane angle	Distance			Theodolite used	No. of triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
385	Masúri, Camel's Back s. Masúri, Manor House,, Landaaur, Protestant Church	66 51 8 41 38 21	3'970001 3'828906 3'983430	9333 6744 9626	1'768 1'277 1'823	Inch 12 "	395	(VII) Kaliánpur s. Merid. Mark s. Kaliánpur Tree (E)	7 3 50 12 48 45	3'340530 3'596595 3'782178	2190 3950 6056	0'415 0'748 1'147	
386	Masúri, Camel's Back s. Masúri, Manor House,, Landaaur, Hospital (E)	53 47 11 64 29 42	3'945412 3'994106 3'983430	8819 9865 9626	1'670 1'868 1'823	" "	396	(VII) A Dhamankheri Tree (D)	25 34 51 111 0 29	4'087549 4'422410 4'289383	12233 26449 19471	2'317 5'009 3'688	
387	Masúri, Vincent's Hill s. Masúri, Manor House,, Landaaur, Hospital (E)	35 40 9 93 35 19	3'945412 4'178814 4'068579	8819 15094 11711	1'670 2'859 2'218	" "	397	A Deopura Dhamankheri Tree (D)	57 47 43 35 37 45	4'249673 4'087549 4'321449	17769 12233 20963	3'365 2'317 3'970	
KALIANPUR TO SURANTAL SECONDARY SERIES.													
388	Murtza Ali s. A	47 43 9 110 7 41 22 9 10	4'289383 4'392867 3'996666	19471 24710 9924	3'688 4'680 1'879		398	Murtza Ali s. Kaliánpur N. Merid. Mark s. Ali Purus s.	70 4 53 88 4 20	3'702814 4'105342 4'131886	5044 12745 13548	0'955 2'414 2'566	
389	(VII) A Deopura	67 36 25 53 12 46 59 10 49	4'321449 4'259059 4'289383	20963 18158 19471	3'970 3'439 3'688		399	VII IX Lálgarh	32 57 9 32 19 22 114 43 29	4'871128 4'863675 5'093817	74324 73059 124113	14'076 13'837 23'506	
390	(VII) Murtza Ali s. Tharoria Tree (E)	91 5 14 66 26 11	4'414181 4'376446 3'996666	25953 23793 9924	4'915 4'506 1'879		400	IX Lálgarh Barai	139 56 32 12 52 24 27 11 4	5'019937 4'559257 4'871128	104698 36246 74324	19'829 6'865 14'076	
391	(VII) Kaliánpur s. Merid. Mark s. Tharoria Tree (E)	27 56 3 143 19 15	4'270898 4'376446 3'782178	18659 23793 6056	3'534 4'506 1'147		401	Lálgarh Barai Barod	44 55 46 63 29 57 71 34 17	4'891750 4'994588 5'019937	77938 98762 104698	14'761 18'705 19'829	
392	(VII) Murtza Ali s. Tori Tree (D)	124 37 42 37 7 13	4'416186 4'281534 3'996666	26073 19122 9924	4'938 3'622 1'879		402	Barod Barai Dhangaia	20 32 43 31 11 51 128 15 26	4'541990 4'711069 4'891750	34833 51413 77938	6'597 9'737 14'761	
398	(VII) Kaliánpur s. Merid. Mark s. Tori Tree (D)	61 28 31 100 22 26	4'232489 4'281534 3'782178	17080 19122 6056	3'235 3'622 1'147		403	Barai Dhangaia Khaláro	34 42 40 92 43 11 52 34 9	4'397599 4'641632 4'541990	24979 43816 34833	4'731 8'298 6'597	
394	(VII) Murtza Ali s. Kaliánpur Tree (E)	56 5 21 23 0 28	3'923607 3'596595 3'996666	8387 3950 9924	1'588 0'748 1'879		404	Dhangaia Khaláro Barod	35 32 15 119 25 42 25 2 3	4'535418 4'711069 4'397599	34310 51413 24979	6'498 9'737 4'731	

No. of triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used	No. of triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
405	Barod Khaláro Khári	83 53 51 47 0 49 49 5 20	4'654585 4'521277 4'535418	45142 33211 34310	8'550 6'290 6'498	Inch	417	Khári Sílपुरी Hari Fort	23 13 23 26 57 1	4'120497 4'180963 4'410010	13198 15169 25705	2'500 2'873 4'868	Inch
406	Khaláro Khári Sílपुरी	32 55 0 39 42 19 107 22 41	4'410010 4'480267 4'654585	25705 30218 45142	4'868 5'723 8'550	"	418	Sikrauli Tirauli Tirauli	8 58 57 48 36 57 122 24 6	3'930007 4'611744 4'663016	8512 40902 46027	1'612 7'747 8'717	7
407	Sílपुरी Khári Pharáro	72 1 39 79 24 40 28 33 41	4'708765 4'723032 4'410010	51141 52848 25705	9'686 10'009 4'868	"	419	Sikrauli Tirauli Jarendho	79 28 54 36 15 6 64 16 0	4'701016 4'480208 4'663016	50236 30214 46027	9'514 5'722 8'717	"
408	Khári Pharáro XI	57 6 22 68 38 29 54 15 9	4'723536 4'768522 4'708765	52910 58684 51141	10'021 11'114 9'686	"	420	Tirauli Tirauli Sísram Fort	66 32 21 69 4 23	4'047739 4'055576 3'930007	11162 11365 8512	2'114 2'152 1'612	"
409	Pharáro XI Tirauli	108 43 23 18 38 1 52 38 36	4'799625 4'327729 4'723536	63041 21268 52910	11'940 4'028 10'021	"	421	Tirauli Tirauli Doda Fort	77 11 10 21 3 54	3'923573 3'490136 3'930007	8386 3091 8512	1'588 0'585 1'612	"
410	Tirauli XI Sikrauli	81 56 45 38 50 39 59 12 36	4'861302 4'663016 4'799625	72661 46027 63041	13'762 8'717 11'940	"	422	Jarendho Sikrauli Kanár	91 1 17 23 0 58 65 57 45	4'519535 4'111770 4'480208	33078 12935 30214	6'265 2'450 5'722	"
411	Sikrauli XI XII	93 43 14 48 26 34 37 50 12	5'072633 4'947621 4'861302	118204 88638 72661	22'387 16'788 13'762	36	423	XII Sikrauli Rent Hill Fort	7 54 28 14 9 55	4'511230 4'761347 4'947021	32451 57723 88638	6'146 10'932 16'788	"
412	Barai Barod Balaia	73 10 21 52 52 12 53 57 27	4'965020 4'885631 4'891750	92261 76848 77938	17'474 14'554 14'761	7	424	Sikrauli Jakodi Rent Hill Fort	42 16 13 29 22 20	4'648383 4'511230 4'797924	44502 32451 62795	8'428 6'146 11'893	"
413	Barod Balaia Ainto	42 19 52 74 30 14 63 9 54	4'842786 4'998423 4'965020	69628 99638 92261	13'187 18'871 17'474	"	425	Sikrauli Rent Hill Fort Sisári	40 32 12 119 56 3	4'386281 4'097530 4'511230	24338 12518 32451	4'609 2'371 6'146	"
414	Balaia Ainto XIII XIII	88 22 17 49 32 15 42 5 28	5'016334 4'897798 4'842786	103833 79031 69628	19'665 14'968 13'187	"	426	Sikrauli Sisári Tikula Hill Temple	36 29 25 127 12 40	4'423664 4'550514 4'097530	26525 35523 12518	5'024 6'728 2'371	"
415	Ainto XIII XVI	81 6 17 47 8 43 51 45 0	5'116034 4'986441 5'016334	130627 96926 103833	24'740 18'357 19'665	"	427	Sikrauli Sisári Mohána Fort	24 51 42 137 36 35	4'242394 4'447475 4'097530	17474 28020 12518	3'309 5'307 2'371	"
416	Khári Sílपुरी Raipur Building	16 5 30 13 10 19	4'163607 4'078548 4'410010	14575 11983 25705	2'760 2'269 4'868	"	428	Sikrauli Sisári Dabáka Tower	47 21 34 77 7 5	4'048072 4'170319 4'097530	11170 14803 12518	2'116 2'804 2'371	"

No. of triangle	Station	Corrected plane angle	Distance			No. of triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
D H O L P U R												
SECONDARY SERIES.												
429	XX XXII Dholpur Dargáh s.	85 6 41 84 33 55	5'099574 4'354502 5'099200	125769 22620 125661	23'820 4'284 23'799	439	Dholpur Dargáh s. Dholpur Fort Sátre Sarai Building	106 30 28 42 10 43	4'295626 4'140917 4'029678	19753 13833 10707	3'741 2'620 2'028	Inch 12 "
430	XX Dholpur Dargáh s. Dholpur Fort Dholpur Fort	23 49 49 97 34 6 58 36 5	4'029678 4'419466 4'354502	10707 26270 22620	2'028 4'975 4'284	"	"	"	"	"	"	"
431	XX Dholpur Fort s. Dholpur Dargáh Dome	23 53 2 58 51 55	4'030284 4'355403 4'419466	10722 22667 26270	2'031 4'293 4'975	441	XXII Darha s. Fathipur Sikri	77 42 56 69 55 54	4'461392 4'7222873 4'705729	28933 52829 50784	5'480 10'006 9'618	"
432	Dholpur Dargáh s. Dholpur Fort Dholpur House	36 59 8 37 39 12	3'824795 3'831435 4'029078	6680 6783 10707	1'265 1'285 2'028	442	Fathipur Sikri s. Darha Sikandra	57 27 9 107 4 22	4'960984 5'015612 4'461392	91408 103660 28933	17'312 19'633 5'480	"
433	XX Dholpur Dargáh s. Chánpur Building	70 6 42 33 47 15	4'340701 4'112572 4'354502	21913 12959 22620	4'150 2'454 4'284	443	Darha s. Sikandra Barára	11 56 55 146 52 42	4'539501 4'781190 4'960984	34634 60421 91468	6'559 11'443 17'312	"
434	XX Dholpur Dargáh s. Dholpur Rána's Palace	28 46 13 46 26 33	4'051544 4'229277 4'354502	11260 16954 22620	2'133 3'211 4'284	444	Sikandra s. Darha Agra, Tájmahal Dome (D)	111 42 26 16 42 1	5'034939 4'525317 4'960984	108378 33521 91408	20'526 6'349 17'312	"
435	XX Dholpur Dargáh s. Fathipur Chatri	37 45 42 82 30 25	4'205173 4'414428 4'354502	16039 25967 22620	3'038 4'918 4'284	445	Sikandra s. Barára Agra, Tájmahal Dome (D)	90 32 3 43 48 22	4'685054 4'525317 4'539501	48423 33521 34634	9'171 6'349 6'559	"
436	XX Dholpur Dargáh s. Mania Mosque	27 48 45 139 58 55	4'698282 4'837587 4'354502	49921 68800 22620	9'455 13'030 4'284	446	Sikandra s. Barára Agra, Moti Masjid	87 35 11 38 29 34	4'631595 4'426001 4'539501	42815 26672 34634	8'109 5'052 6'559	"
437	Dholpur Dargáh s. Dholpur Fort Kaitheri Fort	35 18 9 127 52 24	4'329974 4'465407 4'029078	21378 29202 10707	4'049 5'531 2'028	447	Sikandra s. Barára Agra, Cantonment Church	68 44 53 47 6 31	4'554727 4'450206 4'539501	35870 28197 34634	6'793 5'340 6'559	"
438	Dholpur Dargáh s. Dholpur Fort Kotra Hill Building	73 44 59 68 15 19	4'222678 4'208327 4'029678	16699 16156 10707	3'163 3'060 2'028							

No. of triangle	Station	Corrected plane angle	Distance			No. of triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
CHATAI SARAI SECONDARY SERIES.												
448	XXX Barsána Hill Temple s. Rál House s.	61 8 48 21 30 48 97 20 24	4.838858 4.400756 4.892851	69001 28891 78136	13.068 5.472 14.798	456	Hodal Kambhi XXXI	51 54 48 97 52 42 30 12 30	4.693594 4.793457 4.499270	49385 62152 31570	9.353 11.771 5.979	Inch
449	XXIX XXX Pilhora s. (D)	54 14 20 57 16 47 68 28 53	4.831230 4.846923 4.890584	67800 70295 77729	12.841 13.313 14.721	457	XXXIII Mitholi Pakodna	71 36 37 61 3 33	4.483354 4.594139 4.558971	30434 39277 36222	5.764 7.439 6.860	"
450	XXX Barsána Hill Temple s. Pilhora s. (D)	52 22 10 55 37 9 72 0 41	4.813322 4.831230 4.892851	65061 67800 78136	12.322 12.841 14.798	458	Pakodna Mitholi Tappal	63 2 14 75 20 32 41 37 14	4.611084 4.646690 4.483354	40840 44329 30434	7.735 8.396 5.764	"
451	XXIX Pilhora s. (D) Chátai Sarai Gateway s.	24 4 18 52 34 22 103 21 20	4.469362 4.758720 4.846923	29469 57375 70295	5.581 10.866 13.313	459	Mitholi Tappal Jatári	41 56 43 41 56 16 96 7 1	4.438613 4.438550 4.611084	27454 27450 40840	5.200 5.199 7.735	"
452	Barsána Hill Temple s. Pilhora s. (D) Chátai Sarai Gateway s.	25 56 35 49 2 34 105 0 51	4.469362 4.706469 4.813322	29469 50871 65061	5.581 9.635 12.322	460	Tappal Jatári Sarol	98 7 55 23 18 22 58 33 43	4.503171 4.104864 4.438613	31855 12731 27454	6.033 2.411 5.200	"
NOH-MANPUR TO PAHERA SECONDARY SERIES.												
453	XXIX XXXIII Dhanauta s.	20 4 0 54 51 2 105 4 58	4.631006 5.008138 5.080344	42757 101891 120322	8.098 19.298 22.788	461	Jatári Sarol Thoro	45 18 13 87 34 53 47 6 54	4.490006 4.637845 4.503171	39903 43436 31855	5.853 8.226 6.033	"
454	XXIX Dhanauta Hodal	28 23 2 64 59 15 86 37 43	4.685928 4.966122 5.008138	48521 92496 101891	9.190 17.518 19.298	462	Sarol Thoro XXXIV	54 51 9 69 46 25 55 22 26	4.487251 4.547029 4.490006	30708 35239 30903	5.816 6.674 5.853	"
NOH TO CHANDAUS SECONDARY SERIES.												
455	Dhanauta s. Hodal Kambhi	38 41 15 67 25 42 73 53 3	4.499270 4.668729 4.685928	31570 46637 48521	5.979 8.833 9.190	463	XXXIII Mitholi Siwáro	48 43 38 82 54 57 48 21 25	4.561451 4.682149 4.558971	36429 48100 36222	6.899 9.110 6.860	"

SECONDARY STATIONS AND INTERSECTED POINTS.

No. of triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used	No. of triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
464	Mitholi Siwáro Rájpur	40 53 30 70 48 0 68 18 30	4'409345 4'568493 4'561451	25665 37025 36429	4'861 7'012 6'899	Inch	Lohi Gorai Bhea	55 58 58 67 32 36 56 28 26	4'501695 4'548960 4'504185	31746 35397 31929	6'013 6'704 6'047	Inch 12 " "	
465	Rájpur Siwáro Umri	98 4 57 32 15 1 49 40 2	4'522884 4'254451 4'409345	33334 17966 25665	6'313 3'403 4'861	12	Gorai Bhea Harautha	51 29 31 37 43 25 90 47 4	4'395232 4'288383 4'501695	24845 19426 31746	4'705 3'679 6'013	" " "	
466	Siwáro Umri Máo	30 26 31 73 8 59 76 24 30	4'239941 4'516162 4'522884	17376 32822 33334	3'291 6'216 6'313	"	Harautha Bhea Kánka	71 28 15 63 29 41 45 2 4	4'522368 4'497257 4'395232	33294 31424 24845	6'306 5'951 4'705	" " "	
467	Umri Máo XXXXV	81 17 51 67 58 23 30 43 46	4'526504 4'498616 4'239941	33613 31522 17376	6'366 5'970 3'291	"	Harautha Kánka Hátras	46 56 3 105 34 43 27 29 14	4'696699 4'816782 4'497257	49739 65582 31424	9'420 12'421 5'951	" " "	
468	Siwáro Umri Bajhera	59 6 43 56 12 1 64 41 16	4'500294 4'486314 4'522884	31644 30642 33334	5'993 5'803 6'313	"	Hátras Kánka Sásni	43 13 55 56 3 44 80 42 21	4'538099 4'621330 4'696699	34522 41815 49739	6'538 7'919 9'420	" " "	
469	Umri XXXXV Kádilpur Kár s.	94 17 6 41 23 34 44 19 20	4'653114 4'474674 4'498616	44990 29831 31522	8'521 5'650 5'970	"	Bhea Kánka Seri	82 28 32 40 10 44 57 20 44	4'593331 4'406765 4'522368	39204 25513 33294	7'425 4'832 6'306	" " "	
HATRAS AND ALIGARH SECONDARY SERIES.													
470	XXXVIII Karháli Surir	46 6 35 58 17 31 75 35 54	4'497530 4'595589 4'623928	31443 37118 42260	5'955 7'030 8'004	"	Esi Sásni Kánka Esi	69 54 35 57 6 23 52 59 2	4'569970 4'579210 4'538099	36389 37950 34522	6'892 7'187 6'538	" " "	
471	Karháli Surir Lohi	46 13 59 50 26 58 83 22 3	4'359079 4'387223 4'497530	22860 24391 31443	4'330 4'619 5'955	"	Kánka Seri Esi	48 29 50 61 1 31 70 28 39	4'493483 4'569970 4'593331	31152 36389 39204	5'900 6'892 7'425	" " "	
472	Surir Lohi Hindol	73 59 12 59 36 41 46 24 7	4'482036 4'435040 4'359079	30341 27230 22860	5'746 5'157 4'330	"	Esi Seri Nándho Chondiana	64 43 37 61 1 17 54 15 6	4'569962 4'515340 4'493483	36641 32760 31152	6'939 6'204 5'900	" " "	
473	Surir Lohi Gorai	68 18 55 49 40 29 62 0 36	4'504185 4'418234 4'482036	31929 26196 30341	6'047 4'961 5'746	"	Nándho Chondiana Bhágú-ka-pala Chondiana Bhágú-ka-pala Udaipur	35 51 55 45 38 55 98 29 10 60 22 55 69 29 57 50 7 8	4'383520 4'470057 4'610929 4'437701 4'470097 4'383520	24184 29516 40825 27397 29519 24184	4'580 5'590 7'732 5'189 5'591 4'580	" " " " " "	

No. of triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used	No. of triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
486	Bhāgu-ka-pala s. Udaipur Somna	43 49 43 91 49 35 44 20 42	4:433660 4:593017 4:437701	27143 39176 27397	5:141 7:420 5:189	Inch 12 " "	498	Sásni s. Esi Koel Mosque (D)	17 6 58 141 5 4	4:478220 4:807496 4:579210	30076 64194 37950	5:696 12:158 7:187	Inch 12 " "
487	Udaipur Somna XXXXVI	61 20 8 70 17 51 48 22 1	4:503318 4:533898 4:433660	31865 34190 27143	6:035 6:475 5:141	" "	499	Esi Nándho Koel Mosque (D)	23 14 6 60 38 47	4:111391 4:478220 4:515340	12924 30076 32760	2:448 5:696 6:204	" "
488	Karháli Lohi Sikandarpur House	50 22 8 37 57 30	4:273993 4:176345 4:387223	18793 15009 24391	3:559 2:843 4:619	" "	500	Seri Esi Maui Bastion	13 27 53 17 13 19	4:152690 4:257021 4:493483	14213 18073 31152	2:692 3:423 5:900	" "
489	Surúr Lohi Jarára Temple	32 33 0 52 5 7	4:091796 4:258022 4:359079	12354 18114 22860	2:340 3:431 4:330	" "	501	Seri Nándho Aligarh Church	8 34 1 151 15 47	4:199470 4:708341 4:563962	15850 51091 36641	2:998 9:676 6:939	" "
490	Surúr Hindol Karhári Factory	25 54 43 58 5 18	4:077896 4:366264 4:435040	11965 23241 27230	2:266 4:402 5:157	" "	502	Nándho Bhāgu-ka-pala Aligarh Fort	75 22 57 35 38 47	4:485699 4:265494 4:470057	30598 18429 29516	5:795 3:490 5:590	" "
491	Gorai Harautha Beswán Building	55 16 7 76 50 50	4:332885 4:406557 4:288383	21522 25501 19426	4:076 4:830 3:679	" "	503	Chondiána Bhāgu-ka-pala Bokrauli Factory	21 21 40 128 56 23	4:249917 4:579396 4:383520	17779 37966 24184	3:367 7:191 4:580	" "
492	Harautha Kánka Hátras Fort (D)	46 57 48 105 42 42	4:699277 4:818871 4:497257	50035 65898 31424	9:476 12:481 5:951	" "	504	Udaipur Somna Birpura House	13 25 43 7 50 53	4:239832 4:009187 4:433660	17371 10214 27143	3:290 1:934 5:141	" "
493	Kánka Sásni Hátras Fort (D)	55 55 45 81 5 54	4:622751 4:699277 4:538099	41952 50035 34522	7:945 9:476 6:538	" "	505	Somna XXXXVI Somna Mosque	23 2 53 3 44 58	4:442032 3:664831 4:503318	27671 4622 31865	5:241 0:875 6:035	" "
494	Kánka Sásni Tochígárh Fort (D)	73 53 57 28 34 6	4:531085 4:228079 4:538099	33969 16907 34522	6:434 3:202 6:538	" "	506	Somna XXXXVI Birpur Garhi	62 26 57 14 47 42	4:461899 3:921326 4:503318	28967 8343 31865	5:486 1:580 6:035	" "
495	Hátras Sásni Tochígárh Fort (D)	51 58 58 52 8 15	4:531085 4:531999 4:621330	33969 34041 41815	6:434 6:447 7:919	" "	CHANDAUS TO BULANDSHAHR SECONDARY SERIES.						
496	Hátras Sásni Luisan Building	18 37 58 41 18 32	4:188528 4:503677 4:621330	15436 31892 41815	2:923 6:040 7:919	" "	CHANDAUS TO BULANDSHAHR SECONDARY SERIES.						
497	Sásni Esi Mandrák Factory	22 17 17 59 16 36	4:162874 4:518252 4:579210	14550 32980 37950	2:756 6:246 7:187	" "	507	XXXXVI Somna Unchágáon	69 7 29 57 48 50 53 3 41	4:571132 4:528154 4:503318	37251 33741 31865	7:055 6:390 6:035	" "

No. of triangle	Station	Corrected plane angle	Distance			Theodolite used	No. of triangle	Station	Corrected plane angle	Distance			Theodolite used					
			Log. feet	Feet	Miles					Log. feet	Feet	Miles						
508	Unchégáon	36 13 11	4:342689	22013	4:169	Inch	Sohi	96 5 45	4:684662	48380	9:163	Inch						
	Somna	54 41 33	4:482910	30403	5:758	"	Lálar	51 16 34	4:579314	37959	7:189	"						
	Jarára	89 5 16	4:571132	37251	7:055	"	Chatári Building		4:418861	26234	4:969	"						
509	Somna	31 2 29	4:297667	19846	3:759	"	Sohi	17 1 36	3:898563	7917	1:499	"						
	Jarára	114 4 12	4:545799	35140	6:655	"	Lálar	86 58 43	4:431393	27000	5:114	"						
	Baroli	34 53 19	4:342689	22013	4:169	"	Anona Fort	(D)	4:418861	26234	4:969	"						
510	Jarára	63 35 26	4:333077	21532	4:078	"	Sohi	38 23 53	4:253780	17938	3:397	"						
	Baroli	60 46 9	4:321789	20979	3:973	"	Karora	69 12 36	4:431363	27000	5:114	"						
	Sohi	55 38 25	4:297667	19846	3:759	"	Anona Fort	(D)	4:439764	27527	5:214	"						
511	Baroli	63 20 20	4:369821	23433	4:438	"	Barhe	9 38 36	4:443764	27782	5:262	"						
	Sohi	61 27 30	4:362367	23034	4:362	"	XXXVII	160 18 20	4:425954	26666	5:050	"						
	Kamona	55 12 10	4:333077	21532	4:078	"	Acheja		4:729537	53646	10:160	6						
512	Kamona	59 1 7	4:418861	26234	4:969	"	Barhe	66 2 4	4:459868	28832	5:461	12						
	Sohi	86 47 25	4:533807	34183	6:474	"	Acheja	56 16 40	4:419009	26243	4:970	6						
	Lálar	43 11 28	4:369821	23433	4:438	"	Khurja House		4:425954	26666	5:050							
513	Sohi	55 25 29	4:398408	25027	4:740	"	BULANDSHAHR TO DATAIRI VIA HAPUR SECONDARY SERIES.											
	Lálar	64 54 37	4:439764	27527	5:214	"												
	Karora	59 39 54	4:418861	26234	4:969	"												
514	Lálar	60 1 38	4:447168	28001	5:303	"												
	Karora	69 14 4	4:480348	30224	5:724	"												
	Shikárpur	50 44 18	4:398408	25027	4:740	"												
515	Karora	50 49 57	4:391214	24616	4:662	"							XXXVII	42 52 20	4:279601	19037	3:606	12
	Shikárpur	67 17 37	4:466707	29289	5:547	"							Chanderu	61 1 49	4:388805	24480	4:636	"
	Barhe	61 52 26	4:447168	28001	5:303	"							Málágarh	76 5 51	4:433947	27161	5:144	"
516	Shikárpur	91 8 53	4:452438	28342	5:368	"							Chanderu	43 14 45	4:294231	19689	3:729	"
	Barhe	28 35 9	4:132384	13564	2:569	"							Málágarh	95 16 6	4:456620	28617	5:420	"
	Genori	60 15 58	4:391214	24616	4:662	"							Kaithala	41 29 9	4:279601	19037	3:606	"
517	Barhe	78 46 32	4:744927	55581	10:527	"	Málágarh	48 46 13	4:256557	18053	3:419	"						
	Genori	71 12 46	4:729537	53646	10:160	"	Kaithala	76 7 20	4:367431	23304	4:414	"						
	XXXVII	30 0 42	4:452438	28342	5:368	"	Lahugla	55 6 27	4:294231	19689	3:729	"						
518	Unchégáon	42 19 17	4:362452	23038	4:363	"	Kaithala	72 31 55	4:470351	29536	5:594	"						
	Pauti Village	38 6 4	4:324572	21114	3:999	"	Lahugla	71 48 11	4:468574	29415	5:571	"						
	(D)	4:528154	33741	6:390		"	Guláothi	35 39 54	4:256557	18053	3:419	"						
519	Somna	21 38 13	4:362452	23038	4:363	"	Lahugla	45 3 43	4:388642	24470	4:635	"						
	Unchégáon	14 57 37	4:207621	16130	3:055	"	Guláothi	76 14 39	4:526049	33578	6:359	"						
	Pauti Village	(D)	4:571132	37251	7:055	"	Gangauli	58 41 38	4:470351	29536	5:594	"						

No. of triangle	Station	Corrected plane angle ° ' "	Distance			No. of triangle	Theodolite used	Station	Corrected plane angle ° ' "	Distance			Theodolite used	
			Log. feet	Feet	Miles					Log. feet	Feet	Miles		
530	Ganganli s. Gulkothi " Mahmudpur "	56 27 20 56 59 11 66 33 29	4'346937 4'349578 4'388642	22230 22365 24470	4'210 4'236 4'635	Inch " " "	BOSTAN TO DATAIRI SECONDARY SERIES.	XXXVIII Garabpur s. Dádri "	98 32 2 38 24 21 43 3 37	4'469559 4'267644 4'308667	29482 18520 20355	5'584 3'508 3'855	Inch	
531	Gulkothi s. Mahmudpur " Bhatiana "	39 26 16 87 55 41 52 38 3	4'249629 4'446407 4'346937	17768 27952 22230	3'365 5'294 4'210	" " " " "		Garabpur s. Dádri " Roja "	80 47 22 34 2 38 65 10 0	4'506060 4'259750 4'469559	32067 18187 29482	6'073 3'444 5'584		
532	Mahmudpur s. Bhatiana " Hápur "	70 33 22 70 37 5 38 49 33	4'426890 4'427055 4'249629	26723 26733 17768	5'061 5'063 3'365	" " " " "		Dádri s. Roja " Bambáwan "	61 47 24 39 20 18 78 52 18	4'459388 4'316323 4'506060	28800 20717 32067	5'454 3'924 6'073		
533	Bhatiana s. Hápur " XL	74 40 28 69 16 11 36 3 21	4'641364 4'628020 4'426890	43789 42464 26723	8'293 8'042 5'061	" " " " "		Dádri s. Roja " Bambáwan "	61 47 24 39 20 18 78 52 18	4'459388 4'316323 4'506060	28800 20717 32067	5'454 3'924 6'073		
534	XXXVII Chanderu s. Tápur Mosque	39 50 13 55 17 5	4'242274 4'350552 4'433947	17469 22416 27161	3'309 4'245 5'144	" " " " "		Roja s. Bambáwan " Dásna "	45 14 17 80 51 41 53 54 2	4'403261 4'546432 4'459388	25308 35191 28800	4'793 6'665 5'454		
535	Chanderu s. Málágarh " Dhakauli Mosque	25 43 51 81 30 57	3'937215 4'294802 4'279601	8654 19715 19037	1'639 3'734 3'606	" " " " "		Bambáwan s. Dásna " Garand "	45 53 41 75 20 47 58 45 32	4'327461 4'456938 4'403261	21255 28638 25308	4'026 5'424 4'793		
536	Málágarh s. Kaithala " Mát Sarai Building	37 26 15 34 20 23	4'100406 4'067932 4'294231	12601 11693 19689	2'387 2'215 3'729	" " " " "		Dásna s. Garand " Náhal "	48 32 2 53 43 10 77 44 48	4'212153 4'243874 4'327461	16299 17534 21255	3'087 3'321 4'026		
537	Lahugla s. Ganganli " Bágwála Fort	9 3 25 4 34 23	4'350829 4'055403 4'526049	22430 11361 33578	4'248 2'152 6'359	" " " " "		Náhal s. Garand " Kalchina "	112 45 14 38 39 38 28 35 8	4'497111 4'327973 4'212153	31413 21280 16299	5'949 4'030 3'087		
538	Gulkothi s. Ganganli " Hápur House	69 25 3 81 10 46	4'668958 4'692438 4'388642	46661 49254 24470	8'837 9'328 4'635	" " " " "		Garand s. Kalchina " XL	48 32 5 55 22 32 76 5 23	4'384727 4'425382 4'497111	24251 26631 31413	4'593 5'044 5'949		
539	Ganganli s. Mahmudpur " Emdanagar Village	26 10 1 11 29 57	4'207921 3'863119 4'349578	16141 7297 22365	3'057 1'382 4'236	" " " " "		DATAIRI TO PIRGHAIB. SECONDARY SERIES.						
540	Gulkothi s. Mahmudpur " Hirdepur Village	4 39 35 2 50 17	4'141125 3'925088 4'346937	13840 8435 22230	2'621 1'598 4'210	" " " " "		Dásna s. Náhal " Sadarpur "	89 29 1 40 46 47 49 44 12	4'361285 4'176318 4'243874	22977 15008 17534	4'352 2'842 3'321		

No.	Station	Corrected plane angle	Distance			No. of triangle	Station	Corrected plane angle	Theodolite used	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
550	Dásna Sadarpur Lál Khán's Sarai s.	° ' " 49 59 42 59 55 48 70 4 30	4°08'347 4°14'0349 4°17'6318	12228 13815 15008	2°316 2°616 2°842	560	Sípur Paholi Sardhana	° ' " 76 55 54 67 10 47 35 53 19	Inch	4°42'9556 4°40'5554 4°20'9006	26888 25442 16181	5°092 4°819 3°065	Inch 12 " "
551	Náhal Sadarpur Badkal	° ' " 77 56 54 34 0 48 68 2 18	4°38'4323 4°14'1714 4°36'1285	24228 13858 22977	4°589 2°625 4°352	561	Paholi Sardhana Mehrmati	° ' " 33 11 52 43 46 50 103 1 18	"	4°17'9279 4°28'0912 4°42'9556	15110 19095 26888	2°862 3°616 5°092	" " "
552	Sadarpur Badkal Sialatpur	° ' " 37 41 23 50 35 15 91 43 22	4°17'0834 4°27'2471 4°38'4323	14820 18727 24228	2°807 3°547 4°589	562	Mehrmati Sardhana XLIV	° ' " 79 5 12 71 34 14 29 20 34	"	4°48'1127 4°46'6188 4°17'9279	30278 29254 15110	5°734 5°541 2°862	" " "
553	Badkal Sialatpur Karampur	° ' " 32 33 10 115 5 3 32 21 47	4°17'3095 4°39'9229 4°17'0834	14897 25074 14820	2°821 4°749 2°807	563	XLV Palhera Mirat R. C. Chapel (D)	° ' " 41 41 13 69 41 40	"	4°32'6175 4°47'5450 4°47'345	21192 29885 29672	4°014 5°660 5°620	" " "
554	Sialatpur Karampur Samser	° ' " 77 50 40 69 18 21 32 50 59	4°42'8898 4°40'9780 4°17'3095	26847 25691 14897	5°085 4°866 2°821	564	XLV Láwar Mirat R. C. Chapel (D)	° ' " 109 47 39 37 41 48	"	4°66'2618 4°47'5450 4°41'9393	45985 29885 26266	8°709 5°660 4°975	" " "
555	Karampur Samser Meola	° ' " 35 46 11 99 32 1 44 41 48	4°34'8530 4°57'5684 4°42'8898	22312 37643 26847	4°226 7°129 5°085	565	XLV Palhera Mirat Church (D)	° ' " 34 57 19 64 45 30	"	4°23'6723 4°43'5933 4°47'345	17247 27229 29672	3°267 5°157 5°620	" " "
556	Sialatpur Karampur Sarna Fort	° ' " 25 4 50 41 22 10	3°8'38118 4°03'1006 4°17'3095	6888 10740 14897	1°305 2°034 2°821	566	XLV Láwar Mirat Church (D)	° ' " 103 3 45 39 17 18	"	4°62'2091 4°43'5933 4°41'9393	41888 27229 26266	7°933 5°157 4°975	" " "
SAINI TO SAROLI VIA MIRAT AND SARDHANA.													
SECONDARY SERIES.													
557	XLV Panwári Palhera	° ' " 40 23 4 70 28 21 69 8 35	4°30'9589 4°47'2345 4°46'8639	20398 29672 29420	3°863 5°620 5°572	567	XLV Palhera Kharanda Tree (D)	° ' " 34 17 36 26 5 16	"	4°28'3999 4°17'363 4°47'345	19231 15009 29672	3°642 2°843 5°620	" " "
558	Panwári Palhera Sípur	° ' " 60 58 21 54 29 58 64 31 41	4°29'5703 4°26'4683 4°30'9589	19756 18394 20398	3°742 3°484 3°863	568	Panwári Palhera Kharanda Tree (D)	° ' " 64 12 8 43 3 19	"	4°28'3999 4°16'3627 4°30'9589	19231 14582 20398	3°642 2°762 3°863	" " "
559	Panwári Palhera Sípur Paholi	° ' " 47 0 14 69 44 36 63 15 10	4°20'9006 4°31'1124 4°29'5703	16181 20755 19756	3°065 3°931 3°742	569	XLV Palhera Mirat Monument (D)	° ' " 32 34 38 64 12 41	"	4°20'6535 4°42'9838 4°47'345	16089 26905 29672	3°047 5°096 5°620	" " "
	Panwári Palhera Sípur Paholi	° ' " 100 41 4 40 13 44	4°61'2116 4°42'9838 4°41'9393	40937 26905 26266	7°753 5°096 4°975	570	XLV Láwar Mirat Monument (D)	° ' " 100 41 4 40 13 44	"	4°61'2116 4°42'9838 4°41'9393	40937 26905 26266	7°753 5°096 4°975	" " "
	Panwári Palhera Sípur Paholi	° ' " 10 30 29 12 17 9	4°14'5128 4°21'2115 4°47'345	13968 16297 29672	2°645 3°087 5°620	571	XLV Palhera Lalsana Tree	° ' " 10 30 29 12 17 9	"	4°14'5128 4°21'2115 4°47'345	13968 16297 29672	2°645 3°087 5°620	" " "

No. of triangle	Station	Corrected plane angle	Distance			No. of triangle	Station	Corrected plane angle	Distance			No. of triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles				Log. feet	Feet	Miles		Theodolite used
572	XLV Láwar Mirat Racket Court	98 50 5 44 20 5	4'636456 4'486023 4'419393	43297 30621 26266	8'200 5'799 4'975	584	Sardhana Mehrmati Alipur Tree	90 2 49 46 8 4	4'338935 4'196851 4'179279	21824 15734 15110	4'133 2'980 2'862	Inch 12						
573	XLV Láwar Mirat Masjid	98 18 39 43 3 18	4'619383 4'458198 4'419393	41628 28721 26266	7'884 5'440 4'975	585	Sípur Sardhana Kalinjan Tree	31 27 47 39 52 2	4'146615 4'235852 4'405554	14016 17213 25442	2'654 3'260 4'819	"						
574	XLV Mirat Church Naurangabad	84 37 42	4'461794 4'104973 4'435033	28960 12734 27229	5'485 2'412 5'157	586	Paholi Sardhana Ikri Saloon	57 0 14 45 53 30	4'364261 4'296790 4'429556	23135 19806 26888	4'382 3'751 5'092	"						
575	XLV Naurangabad Saini Nagla Tree	41 8 33 49 40 32	3'923199 3'987195 4'104973	8379 9709 12734	1'587 1'839 2'412	587	Paholi Mehrmati Ikri Saloon	23 48 22 83 3 10	3'905988 4'296790 4'280912	8054 19806 19095	1'525 3'751 3'616	"						
576	Palhera Sípur Jeori Tree	79 36 20 29 56 22	4'314291 4'019652 4'295793	20620 10463 19756	3'905 1'982 3'742	588	Sardhana XLIV Jalheda Temple	38 3 50 17 22 20	4'355427 4'040524 4'481127	22669 10978 30278	4'293 2'079 5'734	"						
577	Sípur Paholi Jeori Tree	39 48 14 88 31 31	4'120725 4'314291 4'209006	13205 20620 16181	2'501 3'905 3'065													
578	Sípur Paholi Dabhua Temple	4 10 6 166 33 58	3'863609 4'368245 4'209006	7305 23348 16181	1'383 4'422 3'065													
579	Sípur Sardhana Sardhana Country seat	38 38 31 22 22 12	4'259183 4'044138 4'405554	18163 11070 25442	3'440 2'097 4'819	589	XLV Panwári Láwar	27 43 22 63 12 44 89 3 54	4'136331 4'419393 4'468639	13688 26266 29420	2'592 4'975 5'572	"						
580	Sardhana Mehrmati Sardhana Country seat	57 17 57 70 52 55	4'208878 4'259183 4'179279	16176 18163 15110	3'064 3'440 2'862	590	Panwári Láwar Mataur	110 11 31 32 52 15 36 56 14	4'329953 4'092097 4'136331	21377 12362 13688	4'049 2'341 2'592	"						
581	Sípur Sardhana Sardhana Church	3 4 36 37 56 14	3'318239 4'377222 4'405554	2081 23835 25442	0'394 4'514 4'819	591	Láwar Mataur Sapúr	40 26 2 79 7 6 60 26 52	4'202438 4'382601 4'329953	15938 24132 21377	3'019 4'571 4'049	"						
582	Sardhana Mehrmati Sardhana Church	41 43 55 5 50 0	4'134438 3'318239 4'179279	13628 2081 15110	2'581 0'394 2'862	592	Mataur Sapúr Sakauti	39 4 50 80 30 52 60 24 18	4'062774 4'257170 4'202438	11555 18079 15938	2'188 3'424 3'019	"						
583	Sípur Sardhana Alipur Tree	15 52 38 10 22 40	4'196851 4'015376 4'405554	15734 10360 25442	2'980 1'962 4'819	593	Sapúr Sakauti Nagla	54 40 21 81 59 18 43 20 21	4'137866 4'221990 4'062774	13736 10672 11555	2'602 3'158 2'188	"						

SAINI TO BEGARAZPUR VIA KHATAOLI
SECONDARY SERIES.

No. of triangle	Station	Corrected plane angle	Distance			No. of triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
594	Nagla Sakauti Dudli	96 6 23 44 5 11 39 48 26	4'329074 4'173994 4'137866	21334 14928 13736	4'041 2'827 2'602	606	XLV Láwar Pabla Tree	19 51 19 9 23 23	4'261515 3'943073 4'419393	18261 8771 26266	3'458 1'661 4'975	Inch 12 "
595	Sakauti Dudli Saláwa B	37 24 11 50 35 50 91 59 59	4'112827 4'217352 4'329074	12967 16495 21334	2'456 3'124 4'041	607	XLV Láwar Khirdoni House	36 17 33 30 52 59	4'227059 4'165166 4'419393	16868 14627 26266	3'195 2'770 4'975	" " "
596	Saláwa B Dudli Saláwa A	43 53 7 64 20 51 71 46 2	3'976067 4'090133 4'112827	9464 12306 12967	1'792 2'331 2'456	608	XLV Láwar Masuri Haveli	54 50 34 39 7 54	4'332967 4'220540 4'419393	21526 16617 26266	4'077 3'147 4'975	" " "
597	Dudli Saláwa A Sateri	72 6 0 61 20 17 46 33 43	4'093511 4'058289 3'976067	12403 11436 9464	2'349 2'166 1'792	609	Panwári Mataur Jhota Well	133 14 20 11 5 37	4'188801 3'610602 4'092097	15445 4079 12362	2'925 0'773 2'341	" " "
598	Saláwa A Sateri Chálsina	52 11 13 79 21 11 48 27 36	4'116959 4'211782 4'093511	13091 16285 12403	2'479 3'084 2'349	610	Láwar Mataur Ikhtiarpur Tree (D)	16 33 21 37 38 5	3'875718 4'206725 4'329953	7511 16096 21377	1'423 3'049 4'049	" " "
599	Sateri Chálsina Bhainsi	81 12 29 50 20 3 48 27 28	4'237653 4'129153 4'116959	17284 13463 13091	3'274 2'550 2'479	611	Mataur Sapur Ikhtiarpur Tree (D)	41 29 1 25 45 34	4'058758 3'875718 4'202438	11449 7511 15938	2'168 1'423 3'019	" " "
600	Chálsina Bhainsi Naula	41 59 6 61 7 49 76 53 5	4'074516 4'191497 4'237653	11872 15542 17284	2'248 2'943 3'274	612	Sapur Sakauti Loía	73 20 55 69 8 30	4'073607 3'876755 4'062774	11847 7529 11555	2'244 1'426 2'188	" " 5
601	Amarpur XLVII Naula	11 44 51 9 1 45 159 13 24	4'231680 4'118631 4'472798	17048 13141 29703	3'229 2'489 5'626	613	Sapur Sakauti Barkali Tree	31 49 54 114 55 30	4'045999 4'281378 4'062774	11117 19115 11555	2'106 3'620 2'188	12 " "
602	Bhainsi Naula Sontha	68 36 28 49 46 0 61 37 32	4'099101 4'012866 4'074516	12563 10301 11872	2'379 1'951 2'248	614	Sapur Sakauti Mandaura Tree (D)	63 45 38 53 44 1	4'067592 4'021305 4'062774	11684 10503 11555	2'213 1'989 2'188	" " "
603	Naula Sontha XLVII	73 32 17 64 41 21 41 46 22	4'257333 4'231680 4'099101	18086 17048 12563	3'425 3'229 2'379	615	Sakauti Nagla Mandaura Tree (D)	28 15 17 58 5 21	3'813972 4'067592 4'137866	6516 11684 13736	1'234 2'213 2'602	" " "
604	XLV Láwar Dedua Tree (D)	25 23 52 50 25 44	4'065175 4'319780 4'419393	11619 26882 26266	2'201 3'955 4'975	616	Sakauti Nagla Dádri Tree	29 7 52 43 33 58	3'845337 3'996317 4'137866	7004 9916 13736	1'326 1'878 2'602	" " "
605	Panwári Láwar Dedua Tree (D)	57 33 24 38 38 10	4'065175 3'934316 4'136331	11619 8596 13688	2'201 1'628 2'592	617	Nagla Dudli Táwita Tree	38 36 34 35 35 11	3'985920 3'955600 4'173994	9681 9028 14928	1'834 1'710 2'827	" " "

No. of triangle	Station	Corrected plane angle			Distance			Theodolite used	No. of triangle	Station	Corrected plane angle			Distance			Theodolite used
		°	'	"	Log. feet	Feet	Miles				Log. feet	Feet	Miles				
618	Nagla Dudli Rukanpur Tree (E)	8 45 44 27 14 31	3 587531 4 065359 4 173994	3868 11624 14928	0 733 2 202 2 827		Inch 12 "	630	Sontha XLVII Bopara Tree (D)	26 4 13 35 1 49	3 958025 4 074011 4 257333	9079 11858 18086	1 719 2 246 3 425	Inch 12 "			
619	Dudli Salawa A Rukanpur Tree (E)	127 30 36 14 33 15	4 086757 3 587531 3 976067	12211 3868 9464	2 313 0 733 1 792		"	631	Naula XLVII Pur Tree (D)	40 42 23 50 15 28	4 046111 4 117628 4 231680	11120 13111 17048	2 106 2 483 3 229	"			
620	Salawa B Salawa A Kheri Tree (near Dudli) (D)	51 45 0 45 35 4	3 988746 3 947571 4 090133	9744 8863 12306	1 845 1 679 2 331		"	632	Sontha XLVII Pur Tree (D)	31 1 18 92 1 50	4 046111 4 333726 4 257333	11120 21564 18086	2 106 4 084 3 425	"			
621	Dudli Salawa A Kheri Tree (near Dudli) (D)	80 30 1 26 10 58	3 988746 3 039414 3 976067	9744 4359 9464	1 845 0 826 1 792		"	633	Sontha XLVII Johra House	40 13 22 35 48 5	4 080456 4 037523 4 257333	12035 10902 18086	2 279 2 065 3 425	"			
622	Dudli Salawa A Dudli Khera Bastion	50 29 10 6 54 34	3 937862 3 130810 3 976067	8667 1351 9464	1 641 0 256 1 792		"	SARAOLI TO BEGARAZPUR SECONDARY SERIES.									"
623	Sateri Salawa A Sikandarpur Tree (D)	35 10 28 77 42 6	3 889561 4 119006 4 093511	7755 13152 12403	1 469 2 491 2 349		"	634	XLIV Sardhana Patlokar No. 1 "	66 15 41 39 22 22 74 21 57	4 459106 4 299838 4 481127	28781 19945 30278	5 451 3 777 5 734	"			
624	Sateri Chalsina Sikandarpur Tree (D)	44 10 43 68 14 36	3 994268 4 119006 4 116959	9869 13152 13091	1 869 2 491 2 479		"	635	Sardhana Patlokar No. 1 Daulatpur "	56 7 2 48 18 34 75 34 24	4 392194 4 346195 4 459106	24671 22192 28781	4 673 4 203 5 451	"			
625	Salawa A Chalsina Kheri Tree (near Naula) (D)	21 3 21 118 9 19	3 952116 4 341994 4 211782	8956 21978 16285	1 696 4 163 3 084		"	636	Patlokar No. 1 Daulatpur Faridpur "	47 53 33 36 3 35 96 2 52	4 264956 4 164459 4 392194	18406 14604 24671	3 486 2 766 4 673	"			
626	Chalsina Naula Kheri Tree (near Naula) (D)	22 37 26 25 20 29	3 905761 3 952116 4 191497	8049 8956 15542	1 524 1 696 2 943		"	637	Daulatpur Faridpur Samholi "	61 2 44 67 42 24 51 14 52	4 314950 4 339200 4 264956	20651 21837 18406	3 911 4 136 3 486	"			
627	Sateri Bhainsi Khatoli Tree	42 0 31 41 48 15	3 957274 3 955547 4 129153	9063 9027 13463	1 716 1 710 2 550		"	638	Faridpur Samholi Gandaur "	40 7 44 91 10 24 48 41 52	4 248401 4 439081 4 314950	17717 27484 20651	3 356 5 205 3 911	"			
628	Bhainsi Sontha Bhainsi Paka Well	112 20 23 13 40 49	4 071135 3 478857 4 012866	11780 3012 10301	2 231 0 570 1 951		"	639	Samholi Gandaur Amarpur "	73 9 27 42 43 18 64 7 15	4 275255 4 125805 4 248401	18848 13360 17717	3 570 2 530 3 356	"			
629	Naula Sontha Bopara Tree (D)	65 58 44 38 37 8	4 074011 3 908632 4 099101	11858 8103 12563	2 246 1 535 2 379		"										

No. of triangle	Station	Corrected plane angle	Distance			No. of triangle	Station	Corrected plane angle	Distance			Theodolite used						
			Log. feet	Feet	Miles				Log. feet	Feet	Miles							
640	Gandaur s.	55 41 14	4'472798	29703	5'626	652	Daulatpur s.	50 7 5	4'150752	14150	2'680	Inch 12						
	Amarpur "	92 42 16	4'555348	35921	6'803		Faridpur "	36 25 17	4'039330	10948	2'073							
	XLVII "	31 36 30	4'275255	18848	3'570		Búbkheri Tree (D)		4'264956	18406	3'486							
641	XLIV Sardhana s.	42 21 28	4'321333	20957	3'969	653	Faridpur s.	31 17 7	4'052330	11281	2'136	"						
	Kalandi Tree (D)	34 24 4	4'244864	17574	3'328		Samholi "	40 38 47	4'150752	14150	2'680							
		4'481127	30278	5'734	Búbkheri Tree (D)			4'314950	20651	3'911								
642	XLIV Patlokar No. 1 s.	23 54 13	3'908953	8109	1'536	654	Faridpur s.	26 42 27	4'045501	11105	2'103	"						
	Kalandi Tree (D)	61 25 22	4'244864	17574	3'328		Samholi "	29 59 40	4'091731	12352	2'339							
		4'299838	19945	3'777	Choli Tree			4'314950	20651	3'911								
643	XLIV Patlokar No. 1 s.	33 14 39	4'099138	10943	2'073	655	Faridpur s.	41 51 57	4'147984	14060	2'663	"						
	Tári Tree	59 4 23	4'233591	17123	3'243		Samholi "	59 32 7	4'259083	18159	3'439							
		4'299838	19945	3'777	Chora Tree (D)			4'314950	20651	3'911								
644	XLIV Patlokar No. 1 s.	25 36 27	4'126172	13371	2'532	656	Samholi s.	31 38 17	3'970811	9350	1'771	"						
	Char Tree	14 32 7	3'890116	7765	1'471		Gandaur "	52 4 21	4'147984	14060	2'663							
		4'299838	19945	3'777	Chora Tree (D)			4'248401	17717	3'356								
645	XLIV Patlokar No. 1 s.	63 38 36	3'344724	2212	0'419	657	Gandaur s.	48 26 51	4'160586	14474	2'741	"						
	Patlokar " 2 "	110 23 26	4'280272	19067	3'611		Amarpur "	28 34 49	3'966264	9253	1'752							
		4'299838	19945	3'777	Khúbápur Tree			4'275255	18848	3'570								
646	XLIV Patlokar No. 2 s.	73 1 29	3'668936	4666	0'884	658	Amarpur s.	46 14 30	4'333333	21544	4'080	"						
	Hindan "	92 49 40	4'261455	18258	3'458		XLVII "	38 29 20	4'268681	18564	3'516							
		4'280272	19067	3'611	Pura Tree (D)			4'472798	29703	5'626								
647	Sardhana s.	55 14 57	4'296047	19772	3'745	659	Amarpur s.	57 59 21	4'206391	16084	3'046	"						
	Daulatpur "	12 0 7	3'699314	5004	0'948		Naula "	78 9 31	4'268681	18564	3'516							
	Sardhana Nagla Tree		4'346195	22192	4'203		Pura Tree (D)		4'118631	13141	2'489							
648	Sardhana s.	43 58 4	4'207891	16140	3'057	BEGARAZPUR TO SHEOPURI VIA JANSATH SECONDARY SERIES.						"						
	Daulatpur "	28 42 6	4'047839	11165	2'114								660	XLVII s.	51 17 26	4'350950	22436	4'249
	Mahádon Tree (D)		4'346195	22192	4'203									Nirána "	57 5 43	4'382732	24140	4'572
	4'207891	16140	3'057	Mogpur "	71 36 51	4'435918	27285	5'168										
649	Patlokar No. 1 s.	40 49 2	4'207891	16140	3'057	661	Nirána s.	76 28 45	4'433303	27121	5'137	"						
	Daulatpur "	46 52 18	4'255765	18020	3'413		Mogpur "	49 58 27	4'329599	21360	4'045							
	Mahádon Tree (D)		4'392194	24671	4'673		Dhakeri "	53 32 48	4'350950	22436	4'249							
650	Patlokar No. 1 s.	33 43 30	3'908938	8108	1'536	660	XLVII s.	51 17 26	4'350950	22436	4'249	"						
	Faridpur "	56 52 33	4'087461	12231	2'316		Nirána "	57 5 43	4'382732	24140	4'572							
	Bhambára Masjid		4'164459	14604	2'766		Mogpur "	71 36 51	4'435918	27285	5'168							
651	Patlokar No. 1 s.	25 50 28	3'825650	6693	1'268	661	Nirána s.	76 28 45	4'433303	27121	5'137	"						
	Faridpur "	46 8 42	4'044279	11073	2'097		Mogpur "	49 58 27	4'329599	21360	4'045							
	Khera Tree		4'164459	14604	2'766		Dhakeri "	53 32 48	4'350950	22436	4'249							

No. of triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used	No. of triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
662	Mogpur Dhakeri Jánsath	67 56 52 55 51 16 56 11 52	4'486727 4'431550 4'433303	30250 27012 27121	5'729 5'116 5'137	Inch 12 "	674	XLVIII Mahmúdpur Sikreda	12 54 5 142 1 1	4'157331 3'878894 4'319234	14366 7567 20856	2'721 1'433 3'950	Inch 12 "
663	Dhakeri Jánsath Khaikhera	56 40 56 57 0 42 66 18 22	4'440989 4'442620 4'486727	27605 27709 30250	5'228 5'248 5'729	" " "	675	Majhera Sikreda Sambalheda Tree	89 30 54 35 8 19	4'229076 3'989180 4'144283	16946 9754 13941	3'210 1'847 2'640	7 12
664	Jánsath Khaikhera Majhera	60 5 13 58 10 39 61 44 8	4'434036 4'423384 4'440989	27167 26631 27605	5'145 5'044 5'228	" " "	676	XLVIII Sikreda Tikola Fort	61 17 48 78 56 23	4'016029 4'064829 3'878894	10376 11610 7567	1'965 2'199 1'433	" "
665	Khaikhera Majhera XLVIII	41 39 27 81 14 36 57 5 57	4'332568 4'594866 4'434036	21506 31979 27167	4'073 6'057 5'145	" " "	677	Mahmúdpur Sikreda Kailápur Tree	32 17 16 101 12 4	4'024370 4'288336 4'157331	10377 19424 14366	2'003 3'679 2'721	" "
666	Nirána Mogpur Mandaur	45 37 2 49 11 52 85 11 6	4'266599 4'231564 4'359950	16092 17044 22436	3'048 3'228 4'249	" " "	SHEOPURI TO GODHNA SECONDARY SERIES.						
667	Nirána Dhakeri Mandaur	30 51 43 52 24 52 96 43 25	4'042689 4'231564 4'329599	11033 17044 21360	2'090 3'228 4'045	" " "	678	XLVIII Khaikhera Dariápur	38 9 49 77 21 20 64 28 51	4'340371 4'538784 4'504866	21896 34577 31979	4'147 6'549 6'057	" " "
668	Mogpur Mandaur Chitora	51 54 54 90 22 2	3'993197 4'102635 4'266599	9845 12666 16092	1'865 2'399 3'048	" " "	679	Khaikhera Dariápur Karera	58 16 35 70 36 48 51 6 37	4'378916 4'423843 4'340371	23929 26536 21896	4'532 5'026 4'147	" " "
669	Dhakeri Khaikhera Pír Pamora	47 7 55 34 41 27 98 10 38	4'312116 4'202284 4'442620	20517 15932 27709	3'886 3'018 5'248	" " "	680	Dariápur Karera Ferozpur	60 13 45 76 4 15 43 42 0	4'478041 4'526549 4'378916	30064 33016 23929	5'694 6'367 4'532	" " "
670	Dhakeri Pír Pamora Theora	70 23 10 58 26 45 51 10 5	4'284792 4'241266 4'202284	19266 17429 15932	3'649 3'301 3'018	" " "	681	Karera Ferozpur Rahmatpur	47 6 8 61 27 9 71 26 43	4'366072 4'444926 4'478041	23231 27856 30064	4'400 5'276 5'694	" " "
671	Dhakeri Theora Jauli Building	48 36 4 36 25 15	4'118041 4'016483 4'241266	13123 10387 17429	2'485 1'967 3'301	" " "	682	Ferozpur Rahmatpur B	39 57 55 47 34 41 92 27 24	4'174225 4'234643 4'366072	14936 17165 23231	2'829 3'251 4'400	" " "
672	Majhera XLVIII Míránpur Building	51 1 19 31 22 8	4'227046 4'052868 4'332568	16867 11295 21506	3'195 2'139 4'073	" " "	683	B Rahmatpur A	59 33 12 71 40 16 48 46 32	4'233488 4'273318 4'174225	17119 18850 14936	3'242 3'570 2'829	" " "
673	Majhera Mahmúdpur Sikreda	74 2 35 68 54 33 37 2 52	4'157331 4'144283 3'954340	14366 13941 9002	2'721 2'640 1'705	" " "							

SECONDARY STATIONS AND INTERSECTED POINTS.

No. of triangle	Station	Corrected plane angle	Distance			Theodolite used	No. of triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
684	Rahmatpur A Nandheri	68 32 54 61 47 11 49 39 55	4'320197 4'296446 4'233488	20902 19790 17119	3'959 3'748 3'242	Inch 12 "	696	Dariapur Karera Thisa Tree	14 20 10 78 23 51	3'773178 4'370444 4'378916	5932 23466 23929	1'123 4'444 4'532	Inch 12 "
685	Nandheri A Tijalheda	60 21 6 66 25 39 53 13 15	4'355651 4'378751 4'320197	22680 23919 20902	4'296 4'530 3'959	" " "	697	Karera Rahmatpur Kakrála	42 4 23 15 9 15 122 46 22	4'346346 3'937555 4'444926	22200 8661 27856	4'204 1'640 5'276	" " "
686	B A XLIX	32 13 32 116 42 43 31 3 45	4'289625 4'513678 4'275318	19482 32635 18850	3'690 6'181 3'570	" " "	698	Ferozpur Rahmatpur Kakrála	59 25 27 56 17 28 64 17 5	4'346346 4'331420 4'366072	22200 21450 23231	4'204 4'062 4'400	" " "
687	A Tijalheda XLIX	66 17 55 50 13 29 63 28 36	4'365679 4'289625 4'355651	23210 19482 22680	4'396 3'690 4'296	" " "	699	Dariapur Ferozpur Morna Mosque	30 8 38 40 0 28	4'254000 4'361285 4'526549	17947 22977 33616	3'399 4'352 6'367	" " "
688	XLVIII Khaikhera Kátia	19 59 44 139 20 44	4'238488 4'224913 4'504866	17318 16785 31979	3'280 3'179 6'057	7 "	700	Karera Kakrála Chauráwála Tree	64 27 9 67 42 4	4'022849 4'033776 3'937555	10540 10809 8661	1'996 2'047 1'640	" " "
689	Khaikhera Dariapur Kátia	57 21 36 73 22 8	4'284281 4'238488 4'340371	19243 17318 21896	3'645 3'280 4'147	" " "	701	Ferozpur Rahmatpur Isápur Tree	40 51 44 82 56 27	4'262233 4'443190 4'366072	18291 27745 23231	3'464 5'255 4'400	" " "
690	XLVIII Kátia Kesopur	37 5 51 94 55 23	4'097452 4'006961 4'224913	12516 10162 16785	2'370 1'925 3'179	" " "	702	Rahmatpur Kakrála Isápur Tree	26 38 59 54 29 59	4'003345 4'262233 4'346347	10077 18291 22200	1'909 3'464 4'204	" " "
691	Dariapur Kátia Hajjarpur	36 42 23 109 38 48	4'053898 4'086824 4'284281	11321 12213 19243	2'144 2'313 3'645	" " "	703	Karera Ferozpur Charauli Tree	17 19 46 20 37 59	4'163083 4'236076 4'478041	14557 17222 30064	2'757 3'262 5'694	" " "
692	Kátia Kesopur Hajjarpur	73 28 54 49 25 10	4'155070 4'053898 4'097452	14291 11321 12516	2'707 2'144 2'370	" " "	704	Ferozpur Kakrála Charauli Tree	18 36 17 31 15 8	3'951920 4'163083 4'331420	8952 14557 21450	1'695 2'757 4'062	" " "
693	Majhera XLVIII Mahmúdpur	73 42 50 81 48 38	4'319234 3'954340 4'332568	20856 9002 21506	3'950 1'705 4'073	12 "	705	Rahmatpur B Bhokáredi Tree	55 0 36 46 33 55	4'096566 4'044180 4'174225	12490 11071 14936	2'366 2'097 2'829	" " "
694	XLVIII Kátia Mahmúdpur	53 16 57 75 31 35 51 11 28	4'237196 4'319234 4'224913	17266 20856 16785	3'270 3'950 3'179	" " "	706	Rahmatpur A Sikri Building	29 19 53 22 41 8	4'026927 3'923075 4'233488	10640 8377 17119	2'015 1'587 3'242	" " "
695	Khaikhera Dariapur Thisa Tree	65 33 50 56 16 38	4'370444 4'331185 4'340371	23466 21438 21896	4'444 4'060 4'147	" " "	707	A Nandheri Nargááni Tree	26 21 59 52 7 53	3'976498 4'226317 4'320197	9473 16839 20902	1'794 3'189 3'959	" " "

No. of triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used	No. of triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used	
			Log. feet	Feet	Miles					Log. feet	Feet	Miles		
708	A. Tijalheda " " " (D) Nargājāni Tree	92 47 38 35 35 24	4:460892 4:226317 4:355651	28900 16839 22680	5:473 3:189 4:296	Inch 12 " "	718	Jaroda Lachera Manjhara	66 35 45 67 13 34 46 10 41	4:236645 4:238682 4:132166	17244 17325 13557	3:266 3:281 2:568	Inch 12 " "	
709	B. XLIX Kanhaiwāla Date Tree	53 2 16 24 27 8	4:426677 4:141044 4:513678	26710 13837 32635	5:059 2:621 6:181	" "	719	Lachera Manjhara Kinauni	27 15 55 63 58 40 88 45 25	3:897718 4:190325 4:236645	7902 15500 17244	1:497 2:936 3:266	" "	
710	B. XLIX Jogīwāla Date Tree	46 59 1 33 24 19	4:383828 4:260620 4:513678	24201 18223 32635	4:583 3:451 6:181	" "	720	Kinauni Manjhara Salempur	84 28 53 62 24 56 33 6 11	4:158391 4:108004 3:897718	14401 12823 7902	2:727 2:429 1:497	" "	
711	A. Tijalheda " " " (D) Khai Kheri Tree	12 43 24 28 47 57	3:877097 4:217007 4:355651	7535 16482 22680	1:427 3:122 4:296	" "	721	Manjhara Salempur Mimlāna No. 1	49 19 45 64 50 53 65 49 22	4:078198 4:154998 4:158391	11973 14289 14401	2:268 2:706 2:727	" "	
712	A. XLIX Khai Kheri Tree (D)	53 34 31 53 49 51	4:215583 4:217007 4:289626	16428 16482 19482	3:111 3:122 3:690	" "	722	Bānnagar L Mimlāna No. 1	53 29 45 64 23 14 62 7 1	4:074111 4:124035 4:115361	11861 13306 13042	2:246 2:520 2:470	" 18 " 12	
713	A. XLIX Tijalheda Tree (D)	77 20 20 49 17 22	4:374478 4:264846 4:289626	23685 18401 19482	4:486 3:485 3:690	" "	723	Salempur Mimlāna No. 1 L	61 8 43 56 42 37 62 8 40	4:074111 4:053840 4:078198	11861 11320 11973	2:246 2:144 2:268	" "	
714	Tijalheda XLIX Tijalheda Tree (D)	87 33 38 14 11 14	4:374478 3:764200 4:365679	23685 5810 23210	4:486 1:100 4:396	" "	724	XLVII Fahampur Bihāri Makbara	6 54 8 151 0 1	3:707988 4:313740 4:203573	5105 20594 15980	0:967 3:900 3:026	" "	
BEGARAZPUR TO KALIANA VIA MUZAFFARNAGAR SECONDARY SERIES.														
715	XLVII Sontha Fahampur	72 57 32 48 44 30 58 17 58	4:308004 4:203573 4:257333	20324 15980 18086	3:849 3:026 3:425	" "	725	XLVII Fahampur Mansurpur	22 26 25 77 22 48	3:791728 4:199362 4:203573	6191 15826 15980	1:172 2:997 3:026	" "	
716	XLVII Fahampur Jaroda	82 41 58 42 34 35 54 43 27	4:288144 4:121994 4:203573	19415 13243 15980	3:677 2:508 3:026	" "	726	XLVII Jaroda Nāra Building	28 24 28 39 55 10	3:831207 3:961173 4:121994	6780 9145 13243	1:284 1:732 2:508	" "	
717	Jaroda XLVII Lachera	90 58 33 45 10 18 43 51 9	4:281320 4:132166 4:121994	19113 13557 13243	3:620 2:568 2:508	" "	727	XLVII Jaroda Nāra Makbara	87 33 31 23 27 32	3:957867 3:911203 4:121994	9075 8151 13243	1:719 1:544 2:508	" "	
	Jaroda XLVII Lachera	87 33 31 23 27 32	4:310825 3:911203 4:281320	20456 8151 19113	3:874 1:544 3:620	" "	728	XLVII Lachera Nāra Makbara	39 57 10 80 18 58	4:152614 4:338740 4:281320	14211 21814 19113	2:691 4:131 3:620	" "	
	Jaroda XLVII Lachera	39 57 10 80 18 58	4:152614 4:338740 4:281320	14211 21814 19113	2:691 4:131 3:620	" "	729	XLVII Lachera Sonjhni Tree						

SECONDARY STATIONS AND INTERSECTED POINTS.

No. of triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used	No. of triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used	
			Log. feet	Feet	Miles					Log. feet	Feet	Miles		
730	XLVII Lachera s. Jaroda Bastion (D)	28 40 35 24 35 5	4°05'86.04 3°99'66.21 4°28'13.20	11445 9922 19113	2'168 1'879 3'620	Inch 12 "	742	Mimlana No. 1 s. Kaliána S. Meridl. Mark s. Khanjarpur Mat (D)	82 7 17 45 38 14	4°02'76.31 3°88'60.12 3°92'97.06	10657 7692 8506	2'018 1'457 1'611	Inch 12 "	
731	Lachera s. Manjhara " Jaroda Bastion (D)	86 29 38 34 37 25	4°30'33.02 4°05'86.04 4°23'66.45	20105 11445 17244	3'808 2'168 3'266	" " "	743	Manjhara s. Mimlana No. 1 " Muzaffarnagar Mat (D)	30 41 52 41 32 3	3°88'42.29 3°99'77.82 4°15'49.98	7660 9949 14289	1'451 1'884 2'706	" " "	
732	Jaroda s. Lachera " Sánjak Mosque (E)	28 30 59 108 29 34	3°97'73.49 4°27'54.32 4°13'21.66	9492 18855 13557	1'798 3'571 2'568	" " "	744	Mimlana No. 1 s. Kaliána S. Meridl. Mark s. Muzaffarnagar Mat (D)	127 49 52 24 37 3	4°16'20.82 3°88'42.29 3°92'97.06	14524 7660 8506	2'751 1'451 1'611	" " "	
733	Lachera s. Manjhara " Sánjak Mosque (E)	41 16 0 31 46 4	4°07'52.26 3°97'73.49 4°23'66.45	11891 9492 17244	2'252 1'798 3'266	" " "	745	Manjhara s. Mimlana No. 1 " Muzaffarnagar Temple (D)	39 0 57 42 51 54	3°95'83.93 3°99'20.57 4°15'49.98	9086 9819 14289	1'721 1'860 2'706	" " "	
734	Lachera s. Manjhara " Tauli Tree (D)	87 49 51 28 3 1	4°28'22.35 3°95'48.72 4°23'66.45	19153 9013 17244	3'627 1'707 3'266	" " "	746	Salempur s. Mimlana No. 1 " Muzaffarnagar Temple (D)	30 2 25 108 41 16	3°95'83.93 4°23'53.73 4°07'81.98	9086 17194 11973	1'721 3'256 2'268	" " "	
735	Lachera s. Kinanni " Tauli Tree (D)	60 33 56 35 20 20	4°13'26.13 3°95'48.72 4°19'03.25	13571 9013 15500	2'570 1'707 2'936	" " "	747	Salempur s. Mimlana No. 1 " Kaliána S. Meridl. Mark s.	36 36 37 20 28 27 122 54 56	3°92'97.06 3°69'79.93 4°07'81.98	8506 4989 11973	1'611 0'945 2'268	" " "	
736	Lachera s. Manjhara " Muzaffarnagar Idgáh	9 1 15 153 1 53	3°94'32.11 4°40'44.63 4°23'66.45	8774 25378 17244	1'662 4'806 3'266	" " "	748	Mimlana No. 1 s. L Kaliána S. Meridl. Mark s.	36 14 10 45 9 28 98 36 22	3°85'06.99 3°92'97.06 4°07'41.11	7091 8506 11861	1'343 1'611 2'246	" " "	
737	Lachera s. Manjhara " Aholna Building (D)	40 12 59 50 34 31	4°04'67.01 4°12'45.62 4°23'66.45	11135 13322 17244	2'109 2'523 3'266	" " "	749	Mimlana No. 1 s. Kaliána S. Meridl. Mark s. Jagáheri Tree (D)	28 26 53 137 5 0	4°20'99.64 4°36'51.32 3°92'97.06	16217 23181 8506	3'071 4'390 1'611	" " "	
738	Lachera s. Kinanni " Aholna Building (D)	67 28 54 49 48 16	4°20'71.14 4°12'45.62 4°19'03.25	16111 13322 15500	3'051 2'523 2'936	" " "	750	Salempur s. Mimlana No. 1 " Jagáheri Tree (D)	163 40 55 7 58 26	4°36'51.32 4°05'86.18 4°07'81.98	23181 11445 11973	4'390 2'168 2'268	" " "	
739	Lachera s. Kinanni " Semri Tree (D)	41 21 1 32 25 48	4°02'79.44 3°93'73.47 4°19'03.25	10665 8657 15500	2'020 1'640 2'936	" " "	751	Salempur s. Mimlana No. 1 " Pinána Tree (D)	108 42 22 25 13 29	4°19'71.89 3°85'03.41 4°07'81.98	15747 7085 11973	2'982 1'342 2'268	" " "	
740	Manjhara s. Kinanni " Semri Tree (D)	77 22 14 56 19 37	4°02'79.44 3°95'88.17 3°89'77.18	10665 9095 7902	2'020 1'723 1'497	" " "	752	Mimlana No. 1 s. Kaliána S. Meridl. Mark s. Pinána Tree (D)	45 41 56 102 28 14	4°06'22.77 4°19'71.89 3°92'97.06	11542 15747 8506	2'186 2'982 1'611	" " "	
741	Manjhara s. Mimlana No. 1 " Khanjarpur Mat (D)	4 50 14 4 10 32	3°88'60.12 3°82'22.62 4°15'49.98	7692 6641 14289	1'457 1'258 2'706	" " "								

No. of triangle	Station	Corrected plane angle	Distance			Theodolite used	No. of triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
G O D H N A T O K A L I A N A S E C O N D A R Y S E R I E S.													
753	Nandheri Tijalheda Simarathi	52 38 33 52 37 45 74 43 47	4'294655 4'294569 4'378751	19709 19705 23919	3'733 3'732 4'530	Inch 12 " "	763	Tijalheda Kathapur Chapár Temple	43 28 13 76 37 36	4'195362 4'345848 4'294893	15681 22174 19719	2'970 4'200 3'735	Inch 12 " "
754	Tijalheda Simarathi Kathapur	65 7 21 57 27 48 57 24 51	4'326748 4'294893 4'294655	21220 19719 19709	4'019 3'735 3'733	" " "	764	Nandheri Simarathi Gadla Mosque	57 32 17 12 8 36	4'248683 3'645429 4'294569	17729 4420 19705	3'358 0'837 3'732	" " "
755	Kathapur Simarathi Bijaipur	45 40 44 54 50 27 79 28 49	4'188680 4'246627 4'326748	15441 17645 21220	2'924 3'342 4'019	" " "	765	Tijalheda Simarathi Baseda Fort	65 34 53 48 41 37	4'294162 4'210609 4'294655	19686 16241 19709	3'728 3'076 3'733	" " "
756	Simarathi Bijaipur Sisona	48 40 24 78 20 41 52 58 55	4'162050 4'277386 4'188680	14523 18940 15441	2'751 3'587 2'924	" " "	766	Tijalheda Simarathi Tájpur Tree	38 43 18 30 31 49	4'120028 4'029633 4'294655	13183 10706 19709	2'497 2'028 3'733	" " "
757	Bijaipur Sisona Bahedi Chauki	67 32 2 54 39 51 57 48 7	4'200292 4'146142 4'162050	15860 14000 14523	3'004 2'652 2'751	" " "	767	Simarathi Bijaipur Dathána	52 3 33 16 20 18 111 36 9	4'117191 3'669492 4'188680	13098 4672 15441	2'481 0'885 2'924	" " "
758	Sisona Bahedi Chauki Bánnagar	53 12 20 61 39 54 65 7 46	4'146079 4'187136 4'200292	13998 15386 15860	2'651 2'914 3'004	" " "	768	Bijaipur Sisona Dathána	62 0 23 54 5 21	4'154704 4'117191 4'162050	14279 13098 14523	2'704 2'481 2'751	" " "
759	Bahedi Chauki Bánnagar Chota Badhai	52 46 1 54 44 38 72 29 21	4'067607 4'078684 4'146079	11687 11986 13998	2'213 2'270 2'651	" " "	769	Simarathi Bijaipur Purai Tree	41 13 13 31 7 53	4'028472 3'923109 4'188680	10678 8377 15441	2'022 1'587 2'924	" " "
760	Chota Badhai	58 51 1 71 4 36 50 4 23	4'115361 4'158849 4'067697	13042 14416 11687	2'470 2'730 2'213	" " 18	770	Bijaipur Sisona Purai Tree	47 12 48 47 8 49	4'028938 4'028472 4'162050	10689 10678 14523	2'024 2'022 2'751	" " "
761	Chota Badhai Bánnagar L	44 13 23 47 58 33	4'222586 4'249979 4'378751	16695 17782 23919	3'162 3'368 4'530	12 " "	771	Bijaipur Sisona Rohána Tree	104 15 14 36 20 51	4'345892 4'132294 4'162050	22176 13561 14523	4'200 2'568 2'751	" " "
762	Nandheri Tijalheda Chapár Temple	49 59 53 74 16 48	4'345848 4'445050 4'378751	22174 27864 23919	4'200 5'277 4'530	" " "	772	Sisona Bánnagar Rohána Tree	71 31 20 68 19 44	4'354740 4'345892 4'187136	22633 22176 15386	4'287 4'200 2'914	" 7 12
	Nandheri Tijalheda Chapár Temple	49 59 53 74 16 48	4'345848 4'445050 4'378751	22174 27864 23919	4'200 5'277 4'530	" " "	773	Sisona Bánnagar Bágowála Tree	72 3 0 24 55 12	4'168687 3'815003 4'187136	14746 6531 15386	2'793 1'237 2'914	12 7 12
	Nandheri Tijalheda Chapár Temple	49 59 53 74 16 48	4'345848 4'445050 4'378751	22174 27864 23919	4'200 5'277 4'530	" " "	774	Bahedi Chauki Bánnagar Bágowála Tree	46 27 53 90 2 58	4'168687 4'308380 4'146079	14746 20341 13998	2'793 3'853 2'651	12 7 12

SECONDARY STATIONS AND INTERSECTED POINTS.

No. of triangle	Station	Corrected plane angle ° ' "	Distance			No. of triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used	
			Log. feet	Feet	Miles				Log. feet	Feet	Miles		
775	Sisona s. Bánnagar Rámpur (D)	7 59 7 11 41 36 116 19 17	3'802597 3'966633 4'187136	6347 9260 15386	1'202 1'754 2'914	787	L Kaliána N. Merdl. Mark s. Kacholi House (D)	29 59 39 30 4 39	3'631563 3'632656 3'870514	4281 4292 7422	0'811 0'813 1'406	Inch 18 12	
776	Bahedi Chauki s. Bánnagar Rámpur (D)	26 12 56 76 49 22 76 57 42	3'802597 4'145834 4'146079	6347 13991 13998	1'202 2'650 2'651	788	L Kaliána N. Merdl. Mark s. Chirtaul Temple	59 48 29 99 43 39	4'263597 4'320620 3'870514	18348 20923 7422	3'475 3'963 1'406	18 12	
777	Sisona s. Bánnagar Sádpur Tree (D)	46 16 18 44 43 23	4'046115 4'034577 4'187136	11120 10829 15386	2'106 2'051 2'914	789	L Kaliána N. Merdl. Mark s. Záhar Pir s.	108 55 41 45 38 15	3'649191 3'992107 3'870514	4459 9820 7422	0'844 1'860 1'406	" "	
778	Bahedi Chauki s. Bánnagar Sádpur Tree (D)	47 18 55 20 24 23	4'046115 3'722194 4'146079	11120 5275 13998	2'106 0'999 2'651	DAHERA TO NOJLI SECONDARY SERIES.							12 7
779	Sisona s. Bánnagar Rai Tree (D)	78 48 7 33 4 30	4'211246 3'956577 4'187136	16265 9049 15386	3'080 1'714 2'914	790	LI Rankandi s. No. 3	65 25 52 73 17 37 41 16 31	4'153939 4'176425 4'014486	14254 15012 10339	2'700 2'843 1'958	12 " "	
780	Bahedi Chauki s. Bánnagar Rai Tree (D)	88 35 3 32 3 16	4'211246 3'936248 4'146079	16265 8635 13998	3'080 1'635 2'651	791	LI No. 3 Barheri	68 18 40 64 58 6 40 43 14	4'282394 4'271446 4'176425	19160 18683 15012	3'629 3'538 2'843	" " "	
781	Mimlána No. 1 s. Kaliána S. Merdl. Mark s. Mimlána No. 2 s. (D)	55 38 39 32 35 28 91 45 53	3'846654 3'661210 3'929706	7025 4584 8506	1'331 0'868 1'611	792	Barheri s. No. 3 Labkari	57 40 45 56 57 17 65 21 58	4'250726 4'247203 4'282394	17813 17669 19160	3'374 3'346 3'629	" " "	
782	L Kaliána S. Merdl. Mark s. Mimlána No. 2 s. (D)	56 34 54 66 0 54 57 24 12	3'846654 3'885919 3'850699	7025 7690 7091	1'331 1'456 1'343	793	No. 3 s. Barheri Laknauti Haveli (D)	49 36 27 29 58 26	4'171354 3'988241 4'282394	14837 9733 19160	2'810 1'843 3'629	" " "	
783	Bánnagar s. L Kaliána N. Merdl. Mark s.	70 27 5 76 1 45	3'870514 4'102617 4'115361	7422 12665 13042	1'406 2'399 2'470	794	Barheri s. Labkari Laknauti Haveli (D)	27 42 19 56 41 35	3'916664 4'171354 4'247203	8254 14837 17669	1'563 2'810 3'346	" " "	
784	L Mimlána No. 2 s. Diddhedi Mosque (D)	41 29 10 78 8 31	3'767918 3'937405 3'885919	5860 8658 7690	1'110 1'640 1'456	795	Barheri s. Laknauti Deoban Haveli (D)	17 35 0 138 45 18	4'047987 4'386917 4'171354	11168 24373 14837	2'115 4'616 2'810	" " "	
785	L Kaliána S. Merdl. Mark s. Diddhedi Mosque (D)	98 4 4 45 54 12	4'076860 3'937405 3'850699	11936 8658 7091	2'261 1'640 1'343	796	Labkari s. Laknauti Deoban Haveli (D)	89 12 7 43 9 12	4'047987 3'883057 3'916664	11168 7639 8254	2'115 1'447 1'563	" " "	
786	L Mimlána No. 2 s. Kacholi House (D)	93 25 14 28 19 58	3'955561 3'632656 3'885919	9027 4292 7690	1'710 0'813 1'456								

No. of triangle	Station	Corrected plane angle	Distance			No. of triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
G O D H N A T O N O J L I												
SECONDARY SERIES.												
797	XLIX No. 10 Dhameit	48 26 53 58 18 4 73 15 3	4:355853 4:411584 4:462919	22691 25798 29035	4:298 4:886 5:499	807	Bachíti Dankowáli No. 5	58 47 50 70 31 35 50 40 35	4:267396 4:309675 4:223762	18510 20402 16740	3:506 3:864 3:171	Inch 12
798	No. 10 Dhameit Nansura	52 22 3 61 45 17 65 52 40	4:294231 4:340478 4:355853	19689 21902 22691	3:729 4:148 4:298	808	Dankowáli No. 5 LIII	54 57 59 60 22 16 64 39 45	4:224508 4:250465 4:267396	16769 17802 18510	3:176 3:372 3:506	" "
799	Dhameit Nansura Nagla	54 19 29 65 10 33 60 29 58	4:264272 4:312431 4:294231	18377 20532 19689	3:480 3:889 3:729	809	Tijalheda XLIX Pur Building (D)	59 21 29 58 54 43	4:355524 4:355502 4:365679	22674 22568 23210	4:294 4:274 4:396	" "
800	Nansura Nagla Nawáda	58 5 11 64 13 31 57 41 18	4:266165 4:291825 4:264272	18457 19581 18377	3:496 3:708 3:480	810	XLIX Dhameit Pur Building (D)	21 10 58 60 23 26	3:974219 4:355524 4:411584	9424 22674 25798	1:785 4:294 4:886	" "
801	Nagla Nawáda No. 9	62 12 30 58 42 10 59 5 20	4:279467 4:264400 4:266165	19031 18382 18457	3:604 3:481 3:496	811	No. 10 Dhameit Abdulpur Mosque	63 4 59 26 28 3	4:306068 4:004900 4:355853	20233 10113 22691	3:832 1:915 4:298	" "
802	No. 9 Nawáda Sítalpur	68 39 59 49 31 21 61 48 40	4:303469 4:215487 4:279467	20113 16424 19031	3:809 3:111 3:604	812	Dhameit Nagla Sikar Temple W.	60 5 51 85 46 7	4:501325 4:562183 4:312431	31719 36491 20532	6:007 6:911 3:889	" "
803	Nawáda Sítalpur No. 7	65 44 22 57 9 44 57 5 54	4:339240 4:303782 4:303469	21839 20127 20113	4:136 3:812 3:809	813	Nagla No. 9 Labreri Haveli	57 36 0 54 8 50	4:222976 4:205231 4:264400	16710 16041 18382	3:165 3:038 3:481	" "
804	No. 7 Sítalpur Bachíti	42 58 6 66 49 48 70 12 6	4:199226 4:329177 4:339240	15821 21339 21839	2:996 4:042 4:136	814	No. 7 Bachíti Jataul	46 29 34 80 57 49	4:195112 4:234321 4:329177	15672 17152 21339	2:968 3:249 4:042	" 7
805	Sítalpur Bachíti Mánakpur	51 12 49 61 37 29 67 9 42	4:126491 4:179093 4:199226	13381 15104 15821	2:534 2:861 2:996	815	Bachíti Mánakpur Jhabrera Temple	48 16 57 77 29 54	4:090323 4:206910 4:126491	12312 16103 13381	2:332 3:050 2:534	12 "
806	Mánakpur Bachíti Dankowáli	72 37 50 57 39 1 49 43 9	4:223762 4:170785 4:126491	16740 14818 13381	3:171 2:806 2:534	816	L LI Chirtau	63 41 23 36 24 7 79 54 30	4:587587 4:408463 4:628310	38689 25613 42492	7:327 4:851 8:048	18 "
K A R N A L												
SECONDARY SERIES.												

SECONDARY STATIONS AND INTERSECTED POINTS.

No. of triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used	No. of triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used					
			Log. feet	Feet	Miles					Log. feet	Feet	Miles						
817	LI	43 4 55	4:422732	26469	5:013	Inch 18	829	Binpur	51 53 32	4:364895	23168	4:388	Inch 18					
	Chirtaul													50 9 47	29756	5:536	24360	4:614
	Dudli													86 45 18	38689	7:327	28048	5:312
818	Chirtaul	53 47 31	4:343399	22050	4:176	"	830	Bálámája	54 10 52	4:347361	22252	4:214	"					
	Dudli													50 36 22	21118	4:000	25483	4:826
	Bhámbála													75 36 7	26469	5:013	23168	4:388
819	Dudli	65 42 48	4:418075	26186	4:960	"	831	Dhák wála	60 36 49	4:411387	25786	4:884	"					
	Bhámbála													64 9 23	25856	4:897	27919	5:288
	Thánah Bhawan													50 7 49	22050	4:176	22252	4:214
820	Bhámbála	60 27 57	4:403257	25308	4:793	"	832	Súbri	69 54 17	4:546421	35190	6:665	"					
	Thánah Bhawan													55 20 31	23926	4:531	34392	6:514
	Herinwára													64 11 32	26186	4:960	25786	4:884
821	Herinwára	63 36 50	4:407645	25565	4:842	"	833	Kanda	42 3 41	4:402271	25251	4:782	"					
	Thánah Bhawan													53 54 38	23062	4:368	35172	6:661
	Naujil													62 28 32	25308	4:793	35190	6:665
822	Thánah Bhawan	59 56 15	4:406660	25507	4:831	"	834	Gehar	69 25 52	4:537510	34475	6:529	"					
	Naujil													59 53 58	25497	4:829	33965	6:433
	Manát													60 9 47	25565	4:842	25251	4:782
823	Naujil	59 13 50	4:461231	28922	5:478	"	835	Laknauti	43 33 8	4:414066	25946	4:914	"					
	Manát													71 30 4	31921	6:046	35423	6:709
	Pindaaur													49 16 6	25507	4:831	34475	6:529
824	Manát	48 35 44	4:347096	22238	4:212	"	836	Kalsaura	65 42 29	4:518474	32997	6:249	"					
	Pindaaur													54 6 40	24020	4:549	33686	6:380
	Títiraun													77 17 36	28922	5:478	25946	4:914
825	Pindaaur	57 5 7	4:338192	21787	4:126	"	837	Duburji	41 52 33	4:357017	22752	4:309	"					
	Títiraun													63 56 52	23316	4:416	30270	5:733
	Kheri													58 58 1	22238	4:212	32997	6:249
826	Títiraun	61 11 58	4:395191	24842	4:705	"	838	Gúmtala	60 39 52	4:420242	26317	4:984	"					
	Kheri													68 34 46	26391	4:998	28444	5:387
	Kálsi													50 13 16	21787	4:126	22752	4:309
827	Kálsi	57 43 30	4:379782	23976	4:541	"	839	Kánsepur	43 42 49	4:360530	22937	4:344	"					
	Kheri													61 6 28	24828	4:702	32998	6:250
	Binpur													61 10 2	24842	4:705	26317	4:984
828	Kheri	69 21 33	4:447900	28048	5:312	"	840	Bágwála	77 31 17	4:525881	33565	6:357	"					
	Binpur													57 30 52	25282	4:788	29957	5:674
	Bálámája													53 7 35	23976	4:541	22937	4:344

No. of triangle	Station	Corrected plane angle ° ' "	Distance			No. of triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used	No. of triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles					Log. feet	Feet	Miles	
841	Palána Pánjúpúr Shujápúr	65 19 0 45 12 13 69 28 47	4'512738 4'405374 4'525881	32564 25432 33565	6'167 4'817 6'357	853	Chirtaul s. Dudli " Kotesra House (D)	49 25 54 72 49 11	4'376110 4'475685 4'422732	23774 29901 26469	4'503 5'663 5'013	Inch " "	854	Chirtaul s. Blámhála " Arnaich "	38 38 40 94 3 23	4'191980 4'121271 4'324660	15559 13221 21118	2'947 2'504 4'000	" " "
842	Pánjúpúr Shujápúr Gadauli	54 35 14 39 54 59 85 29 47	4'425238 4'321392 4'512738	26622 20960 32564	5'042 3'970 6'167	855	Chirtaul s. Arnaich " Ráo-ka-Nagla "	18 32 3 147 29 22	3'773886 3'893179 4'121271	5941 7819 13221	1'125 1'481 2'504	" " "	856	Arnaich s. Ráo-ka-Nagla " Ráo-ka-Nagla Atári "	25 26 10 84 56 58	3'434943 3'800285 3'773886	2722 6314 5941	0'516 1'196 1'125	" " "
843	Gadauli Shujápúr Bhogpur	53 50 57 53 3 41 73 5 22	4'351560 4'347134 4'425238	22468 22240 26622	4'255 4'212 5'042	857	Thánah Bhawan s. Herinwára " Thánah Bhawan City s. (D)	74 57 34 23 57 53 81 4 33	4'393408 4'017260 4'403257	24740 10405 25308	4'686 1'971 4'793	18 " "	858	Thánah Bhawan s. Manát s. Thánah Bhawan City s. (D)	38 53 19 120 31 52	4'269139 4'017260 4'406493	18584 10405 25497	3'520 1'971 4'829	18 7
844	Shujápúr Bhogpur Dúmjhara	60 19 37 61 6 58 58 33 25	4'359482 4'362835 4'351560	22881 23059 22468	4'334 4'367 4'255	859	Thánah Bhawan s. Thánah Bhawan City s. Kutabgarh s. (D)	73 19 43 55 34 9 51 6 8	4'107480 4'042483 4'017260	12808 11028 10405	2'426 2'089 1'971	18 7 " "	860	Herinwára s. Thánah Bhawan City s. Kutabgarh s. (D)	22 42 22 25 30 24	4'107480 4'154978 4'393408	12808 14288 24740	2'426 2'706 4'686	18 7 " "
845	Dúmjhara Bhogpur Alhánpur	68 32 23 56 21 20 55 6 17	4'414359 4'365942 4'359482	25963 23224 22881	4'917 4'399 4'334	861	Thánah Bhawan s. Thánah Bhawan City s. Titársi s. (D)	49 25 43 89 27 38 41 6 39	4'079935 4'199332 4'017260	12021 15825 10405	2'277 2'997 1'971	" " "	862	Thánah Bhawan s. Kutabgarh s. Titársi "	67 6 52 78 59 39	3'861880 4'079935 4'107480	7276 12021 12808	1'378 2'277 2'426	" " "
846	Bhogpur Alhánpur Khádrí	68 11 6 57 24 44 54 24 10	4'471929 4'429804 4'414359	29643 26903 25903	5'614 5'095 4'917	863	Thánah Bhawan s. Thánah Bhawan City s. Gausgarh Mosque (D)	73 41 5 31 40 40	4'015208 3'753337 4'017260	10356 5667 10405	1'961 1'073 1'971	18 7	864	Manát s. Thánah Bhawan City s. Gausgarh Mosque (D)	29 23 56 88 51 12	4'015208 4'324139 4'269139	10356 21093 18584	1'961 3'995 3'520	18 7
847	Khádrí Alhánpur Darwa	58 54 49 49 10 30 71 54 41	4'426613 4'372871 4'471929	26706 23598 29643	5'058 4'469 5'614	864	Thánah Bhawan s. Thánah Bhawan City s. Kutabgarh s. (D)	49 25 43 89 27 38 41 6 39	4'079935 4'199332 4'017260	12021 15825 10405	2'277 2'997 1'971	" " "	865	Thánah Bhawan s. Kutabgarh s. Titársi "	67 6 52 78 59 39	3'861880 4'079935 4'107480	7276 12021 12808	1'378 2'277 2'426	" " "
848	Alhánpur Darwa Rasúlpur	64 49 20 53 40 48 61 29 52	4'439368 4'388909 4'426613	27502 24485 26706	5'209 4'637 5'058	866	Thánah Bhawan s. Thánah Bhawan City s. Gausgarh Mosque (D)	73 41 5 31 40 40	4'015208 3'753337 4'017260	10356 5667 10405	1'961 1'073 1'971	" " "	867	Manát s. Thánah Bhawan City s. Gausgarh Mosque (D)	29 23 56 88 51 12	4'015208 4'324139 4'269139	10356 21093 18584	1'961 3'995 3'520	18 7
849	Darwa Rasúlpur Kotra	66 5 17 47 52 26 66 2 17	4'439368 4'348721 4'439368	27513 22321 27502	5'211 4'228 5'209	868	Thánah Bhawan s. Thánah Bhawan City s. Gausgarh Mosque (D)	73 41 5 31 40 40	4'015208 3'753337 4'017260	10356 5667 10405	1'961 1'073 1'971	" " "	869	Manát s. Thánah Bhawan City s. Gausgarh Mosque (D)	29 23 56 88 51 12	4'015208 4'324139 4'269139	10356 21093 18584	1'961 3'995 3'520	18 7
850	Rasúlpur Kotra Sháhpur	73 21 36 59 37 2 47 1 22	4'556669 4'511091 4'439537	36030 32441 27513	6'824 6'144 5'211	869	Thánah Bhawan s. Thánah Bhawan City s. Gausgarh Mosque (D)	73 41 5 31 40 40	4'015208 3'753337 4'017260	10356 5667 10405	1'961 1'073 1'971	" " "	870	Manát s. Thánah Bhawan City s. Gausgarh Mosque (D)	29 23 56 88 51 12	4'015208 4'324139 4'269139	10356 21093 18584	1'961 3'995 3'520	18 7
851	Kotra Sháhpur (XI)	72 40 48 75 40 5 31 39 7	4'816558 4'822979 4'556669	65548 66524 36030	12'414 12'599 6'824	870	Thánah Bhawan s. Thánah Bhawan City s. Gausgarh Mosque (D)	73 41 5 31 40 40	4'015208 3'753337 4'017260	10356 5667 10405	1'961 1'073 1'971	" " "	871	Manát s. Thánah Bhawan City s. Gausgarh Mosque (D)	29 23 56 88 51 12	4'015208 4'324139 4'269139	10356 21093 18584	1'961 3'995 3'520	18 7
852	LI Dudli Kotesra House (D)	40 35 42 13 56 7	4'376110 3'944425 4'473572	23774 8799 29756	4'503 1'666 5'636	871	Thánah Bhawan s. Thánah Bhawan City s. Gausgarh Mosque (D)	73 41 5 31 40 40	4'015208 3'753337 4'017260	10356 5667 10405	1'961 1'073 1'971	" " "	872	Manát s. Thánah Bhawan City s. Gausgarh Mosque (D)	29 23 56 88 51 12	4'015208 4'324139 4'269139	10356 21093 18584	1'961 3'995 3'520	18 7

No. of triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used	No. of triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
865	Thánah Bhawan s. Thánah Bhawan City s. Jalálabad Mosque	76 42 13 55 15 18	4'134102 4'006615 4'017260	13618 11498 10405	2'579 2'178 1'971	Inch 18 7	Súbri Ráwar Karnál City	39 47 45 70 34 57 69 37 18	4'153483 4'321834 4'319197	14239 20981 20854	2'697 3'974 3'950	Inch 18 " "	
866	Thánah Bhawan s. Thánah Bhawan City s. (E) Lohári Mosque	160 47 42 9 10 33	4'293465 3'979001 4'017260	19655 9528 10405	3'722 1'805 1'971	18 7	Súbri Ráwar Karnál Church (D)	65 23 56 57 46 2	4'355099 4'333739 4'319197	22652 21074 20854	4'290 3'991 3'950	" "	
867	Thánah Bhawan s. Kutubgarh " (E) Lohári Mosque	125 52 35 24 55 38	4'262874 3'979001 4'042483	18318 9528 11028	3'469 1'805 2'089	18 7	Súbri Karnál City Karnál Church (D)	25 36 9 77 45 6	3'969348 4'323739 4'321834	9319 21074 20981	1'765 3'991 3'974	" "	
868	Thánah Bhawan s. Kutubgarh " (D) Harár Bastion	39 25 34 113 30 7	4'187199 4'346759 4'042483	15389 22221 11028	2'915 4'208 2'089	18 7	Ráwar Karnál City Shaikh-pura Fort	102 15 10 20 18 37	4'217751 3'788218 4'153483	16510 5864 14239	3'127 1'111 2'697	" "	
869	Thánah Bhawan City s. Kutubgarh s. (D) Harár Bastion	67 23 38 62 23 59	4'187199 4'169450 4'107480	15389 14772 12808	2'915 2'798 2'426	" "	Súbri Karnál City Kunjpura Mosque	156 53 44 6 21 43	4'456073 3'906909 4'321834	28581 8071 20981	5'413 1'529 3'974	" "	
870	Naujil s. Manát " (E) A	19 43 50 8 56 12 151 19 58	4'254070 3'910961 4'406660	17950 8260 25507	3'400 1'564 4'831	18 7	Kanda Gehar No. 6	26 58 30 17 27 32 135 33 58	4'357945 4'178422 4'540421	22801 15081 35190	4'318 2'856 6'065	" "	
871	Naujil s. Manát " (E) B	21 9 43 149 16 46	3'918621 4'253880 4'406660	8291 18025 25507	1'570 3'414 4'831	18 7	Súbri Gehar Barágaon Bastion	20 11 53 26 20 10	4'213807 4'322680 4'536461	16361 21022 34392	3'099 3'982 6'514	18 " "	
872	Naujil s. A B	10 10 19 161 26 33 8 23 8	4'000101 4'255880 3'910961	10002 18025 8260	1'894 3'414 1'564	" "	Súbri Gehar Sangoa Bastion	38 24 30 66 6 56	4'343841 4'511685 4'536461	22072 32485 34392	4'180 6'153 6'514	" "	
873	A s. B " (E) Naujil Village Temple	115 58 34 29 40 57	4'202476 3'943503 4'000101	15940 8780 10002	3'019 1'663 1'894	" "	Gehar No. 6 Begighát (D)	19 35 17 109 5 43	3'907899 4'274958 4'357945	8089 18835 22801	1'532 3'567 4'318	" 7	
874	Súbri s. Kanda " (E) Bheri "	88 8 5 71 41 49	3'971475 4'433703 4'411387	9364 27146 25786	1'774 5'141 4'884	18 7	Laknauti Gehar Begighát (D)	47 3 34 31 52 59 101 3 27	4'274958 4'133198 4'402271	18835 13589 25251	3'567 2'574 4'782	18 " 7	
875	Kanda s. Bheri " (E) Bheri Mosque	14 10 7 138 58 30	3'705341 4'133732 3'971475	5074 13606 9364	0'961 2'577 1'774	18 7	No. 6 Begighát Tapu Bastion	37 48 37 107 41 55	3'942364 4'133811 3'907899	8757 13609 8089	1'659 2'577 1'532	" "	
876	Dhákála s. Súbri " (E) Ráwar "	44 33 36 65 29 48 69 56 36	4'319197 4'432085 4'445903	20854 27045 27919	3'950 5'122 5'288	18 " "	Laknauti Begighát Daulatpur	51 59 21 31 6 19 96 54 20	4'032828 3'849524 4'133198	10785 7072 13589	2'043 1'339 2'574	18 7 " "	

No. of triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used	No. of triangle	Station	Corrected plane angle ° ' "	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
889	Laknauti Gehar Kamálpur	72 5 9 83 34 33	4'383424 4'020035 4'402271	24178 10472 25251	4'579 1'983 4'782	Inch 18 7	Kalsaura Duburji No. 11	29 47 49 13 41 46	4'272602 3'950640 4'414066	18733 8926 25946	3'548 1'690 4'914	Inch 18 "	
890	Laknauti Daulatpur Kamálpur	67 9 22 40 8 44	4'004672 4'020035 3'849524	10108 10472 7072	1'914 1'983 1'339	18 7	Duburji Bhúr Sanauli	96 12 16 59 6 58	4'248390 3'871640 4'184534	17717 7441 15294	3'355 1'409 2'897	" 7 7	
891	Laknauti Beghát Súrajpur Bastion	108 29 25 16 26 5	4'196417 3'671104 4'133198	15719 4689 13589	2'977 0'888 2'574	18 7	Kalsaura No. 11 Chapra Bastion	19 48 31 131 0 15	3'792563 4'140270 3'950640	6202 13812 8926	1'175 2'616 1'690	18 7	
892	Laknauti Daulatpur Súrajpur Bastion	56 30 4 41 5 35	3'774463 3'671104 3'849524	5949 4689 7072	1'127 0'888 1'339	18 7	Kalsaura No. 11 Chaugáma Bastion	31 29 6 135 32 25	4'317282 4'444733 3'950640	20763 27844 8926	3'932 5'274 1'690	18 7	
893	Daulatpur Beghát Chaura Bastion	101 46 0 41 39 1	4'248367 4'080139 4'032828	17716 12027 10785	3'355 2'278 2'043	" "	Duburji No. 11 Nánúwála Bastion	14 7 19 28 56 15	3'825702 4'123052 4'272602	6694 13276 18733	1'268 2'514 3'548	18 7	
894	Daulatpur Beghát Dabkauli Highest Building	125 30 55 31 4 26	4'344289 4'146456 4'032828	22095 14011 10785	4'185 2'654 2'043	" "	Duburji No. 11 No. 12	54 44 5 58 21 56	4'254412 4'306166 4'272602	17964 20238 18733	3'402 3'833 3'548	18 7	
895	Laknauti Kamálpur Laknauti Mosque	99 51 49 20 11 38	4'076289 3'020825 4'020035	11920 4177 10472	2'258 0'791 1'983	18 7	Duburji Kánsepur No. 12	41 57 19 41 38 11 96 24 30	4'308870 4'306166 4'481014	20364 20238 30270	3'857 3'833 5'733	18 7	
896	Daulatpur Kamálpur Laknauti Mosque	67 53 7 60 20 22	4'076289 4'048482 4'004672	11920 11181 10108	2'258 2'118 1'914	" "	Duburji Sanauli Sainspur Bastion	5 3 44 168 10 25	3'746211 4'112199 3'871640	5575 12948 7441	1'056 2'452 1'409	18 7	
897	Gehar Kalsaura Bhána Fort	18 4 46 26 20 4	4'177861 4'333031 4'531026	15061 21529 33965	2'853 4'077 6'433	18 "	Duburji Sanauli Bádi Bastion	49 22 8 100 12 45	4'047415 4'160285 3'871640	11154 14464 7441	2'112 2'739 1'409	18 7	
898	Gehar Kalsaura Saiyidpura Mosque	22 55 33 89 58 52	4'157252 4'566701 4'531026	14363 36873 33965	2'720 6'983 6'433	" "	Duburji Sanauli Náharjára Bastion	57 15 7 93 10 25	4'103131 4'177639 3'871640	12680 15054 7441	2'402 2'851 1'409	18 7	
899	Laknauti Duburji Bhúr	2 30 42 3 18 49	4'184534 4'304772 4'549280	15294 20173 35423	2'897 3'821 6'709	" "	Kánsepur No. 12 Fathipur Bastion	9 35 4 10 42 5	3'990329 4'037701 4'308870	9780 10907 20364	1'852 2'066 3'857	18 7	
900	Laknauti Kamálpur Bhúr	36 13 50 115 56 32	4'122513 4'304772 4'020036	13259 20173 10472	2'511 3'821 1'983	" 7	Gúmtala Kánsepur Tabor	24 14 15 99 43 55 56 1 50	4'051621 4'431992 4'357017	11262 27039 22752	2'133 5'121 4'309	18 7	

SECONDARY STATIONS AND INTERSECTED POINTS.

No. of triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles	
913	Gúmtala	36 25 37	4'240374	17393	3'294	Inch 18
	Bágwála	67 23 8	4'431992	27039	5'121	" 7
	Tabor	76 11 15	4'453993	28444	5'387	" 7
914	Bágwála	65 21 3	4'347672	22268	4'217	18
	Palána	45 13 41	4'240374	17393	3'294	" 7
	Tabor	69 25 16	4'360530	22937	4'344	" 7
915	Gúmtala	31 28 58	4'256210	18039	3'416	18
	Tabor	96 59 57	4'535090	34284	6'493	7
	Nukar Temple	(D)	4'431992	27039	5'121	" 7
916	Kánsepur	101 16 39	4'256210	18039	3'416	18
	Tabor	40 58 7	4'081346	12060	2'284	7
	Nukar Temple	(D)	4'051621	11262	2'133	" 7
917	Kánsepur	84 2 46	4'261647	18266	3'459	18
	Tabor	37 49 25	4'193032	15597	2'954	7
	No. 13	(D)	4'051621	11262	2'133	" 7
918	Gúmtala	28 35 38	4'193032	15597	2'954	18
	Kánsepur	15 41 9	3'945007	8811	1'669	" 7
	No. 13	(D)	4'357017	22752	4'309	" 7
919	Kánsepur	21 10 8	3'893824	7831	1'483	18
	No. 13	112 50 30	4'300709	19985	3'785	7
	Logarh Bastion	(D)	4'193032	15597	2'954	" 7
920	Kánsepur	105 12 54	4'404572	25385	4'808	18
	Tabor	49 26 15	4'300709	19985	3'785	7
	Logarh Bastion	(D)	4'051621	11262	2'133	" 7
921	Bágwála	178 50 55	4'500897	31688	6'002	18
	Tabor	0 31 10	4'152237	14297	2'708	7
	Jatlána Bastion	(D)	4'240374	17393	3'294	" 7
922	Palána	34 32 14	4'116279	13070	2'475	18
	Tabor	74 59 38	4'337003	21727	4'115	7
	No. 14	(D)	4'347672	22268	4'217	" 7
923	Bágwála	68 30 49	4'337003	21727	4'115	18
	Palána	10 41 27	3'636651	4332	0'820	" 7
	No. 14	(D)	4'360530	22937	4'344	" 7
924	Gúmtala	22 27 10	3'720715	5257	0'996	18
	No. 13	117 44 45	4'085694	12181	2'307	7
	Nagli Bastion	(D)	3'945007	8811	1'669	" 7

No. of triangle	Station	Corrected plane angle ° ' "	Distance			No. of triangle	Theodolite used	Station	Corrected plane angle ° ' "	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
937	Alhánpur s. Gázdípur " Dabera Mosque	145 37 47 7 33 20	4'191409 3'558599 4'093994	15538 3619 12416	2'943 0'685 2'352	949	LIV Jwálápur s. Sunárkoti h.s.	60 13 7 58 34 12 61 12 41	4'292468 4'285076 4'296689	19610 19279 19801	3'714 3'651 3'750	Inch 12 " "	
938	Dúmjhara s. Bhogpur " Dúdgárh Mosque	74 19 34 25 41 2	4'349686 4'003038 4'359482	22371 10070 22881	4'237 1'907 4'334	950	Jwálápur s. Sunárkoti h.s. Hazára "	47 51 57 68 6 58 64 1 5	4'208897 4'306262 4'292468	16177 20242 19610	3'064 3'834 3'714	" "	
939	Bhogpur " Alhánpur " Sultánpur Temple (D)	46 48 2 80 41 0	4'377511 4'599031 4'414359	23851 32287 25963	4'517 6'115 4'917	951	Sunárkoti h.s. Hazára " Sunárgárh "	69 32 34 50 39 14 59 48 12	4'243939 4'160595 4'208897	17536 14474 16177	3'321 2'741 3'064	" "	
940	Dúmjhara s. Alhánpur " Sultánpur Temple (D)	80 34 6 25 34 43	4'377511 4'018653 4'395942	23851 10439 23224	4'517 1'977 4'399	952	Sunárkoti h.s. Hazára " Sunárgárh "	69 32 34 50 39 14 59 48 12	4'243939 4'160595 4'208897	17536 14474 16177	3'321 2'741 3'064	" "	
941	Bhogpur s. Alhánpur " Chilkána Mosque	50 55 34 76 12 26	4'402822 4'500066 4'414359	25283 31628 25963	4'788 5'990 4'917	953	Sunárkoti h.s. Hazára " Sunárgárh "	69 32 34 50 39 14 59 48 12	4'243939 4'160595 4'208897	17536 14474 16177	3'321 2'741 3'064	" "	
942	Bhogpur s. Khádrí " Búria, Goláb Sing's House	57 4 38 31 43 56	4'353869 4'150842 4'429804	22588 14153 26903	4'278 2'680 5'095	954	Sunárkoti h.s. Hazára " Salemipur "	40 45 47 48 21 2 90 53 11	4'058859 4'117442 4'243939	11451 13105 17536	2'169 2'482 3'321	" "	
943	Bhogpur s. Khádrí " Búria, Meg Sing's House	48 47 11 30 44 39	4'313462 4'145690 4'429804	20581 13986 26903	3'898 2'649 5'095	955	Sunárkoti h.s. Hazára " Salemipur "	45 29 4 104 15 25 30 15 31	4'209638 4'342926 4'058859	16205 22025 11451	3'069 4'171 2'169	" "	
944	Bhogpur s. Khádrí " Dádúpur Canal House	5 15 20 89 22 11	3'393107 4'431194 4'429804	2472 26989 26903	0'468 5'112 5'095	956	Salemipur h.s. Garh " Kánsrao "	56 21 39 58 24 10 65 14 11	4'171938 4'181845 4'209638	14857 15200 16205	2'814 2'879 3'069	" "	
945	Bhogpur s. Khádrí " Fathigárh Bastion	7 53 53 9 50 9	4'084100 4'178632 4'429804	12137 15088 26903	2'399 2'858 5'095	957	Salemipur h.s. Garh " Kánsrao "	52 22 53 91 32 23 36 4 44	4'300673 4'401740 4'171938	19984 25220 14857	3'785 4'776 2'814	" "	
946	Darwa s. Kotra " Bhúd Jod Sing's Village	38 38 17 48 51 22	4'144598 4'225966 4'348721	13951 16825 22321	2'642 3'187 4'228	958	Kánsrao h.s. Lachkua " Bahera "	65 45 58 36 29 55 77 44 7	4'270636 4'085073 4'300673	18648 12164 19984	3'532 2'504 3'785	" "	
947	Rasúlpur s. Sháhpur " Játowála "	16 33 34 46 58 28	4'014032 4'423118 4'511091	10328 26492 32441	1'956 5'017 6'144	959	Bahera h.s. Lachkua " LV "	41 17 30 88 39 43 50 2 47	4'295560 4'385969 4'270636	16053 24320 18648	3'040 4'606 3'532	" "	
948	Sháhpur s. Játowála " Behat Building	83 59 2 56 48 56	4'210891 4'135969 4'014032	16251 13676 10328	3'078 2'590 1'956	960	Lachkua h.s. LV " Buláwála "	50 10 16 75 30 52 54 18 52	4'181220 4'281851 4'205560	15178 19136 16053	2'875 3'624 3'040	" "	

SECONDARY STATIONS AND INTERSECTED POINTS.

No. of triangle	Station	Corrected plane angle o ' "	Distance			Theodolite used	No. of triangle	Station	Corrected plane angle o ' "	Distance			Theodolite used	
			Log. feet	Feet	Miles					Log. feet	Feet	Miles		
959	LV Bulawála	73 34 54	4'377070	23827	4'513	Inch 12	Sunárkoti	36 37 56	3'986374	9691	1'835	Inch 12		
	" Tondáwála	68 45 13	4'364581	23152	4'385		" "	" "	26 23 18	3'858461	7219		1'367	" "
	" "	37 39 53	4'181220	15178	2'875		" "	" (E)	" "	4'160595	14474		2'741	" "
960	Bulawála	36 54 18	4'233405	17116	3'242	"	Garh	78 32 37	4'189568	15473	2'930	"		
	" Tondáwála	86 22 55	4'450333	28447	5'388		" "	" "	31 13 17	3'912928	8183		1'550	" "
	" Chilláwála	56 42 47	4'377070	23827	4'513		" "	" "	" "	4'171938	14857		2'814	" "
961	Tondáwála	42 53 52	4'204172	16002	3'031	"	Garh	44 44 40	4'144991	13963	2'645	"		
	" Chilláwála	90 22 33	4'371211	23508	4'452		" "	" "	86 45 4	4'296753	19804		3'751	" "
	" Shorpur	46 43 35	4'233405	17116	3'242		" "	" (D)	" "	4'171938	14857		2'814	" "
962	Chilláwála	74 47 31	4'441894	27663	5'239	"	Garh	97 7 33	4'530754	33943	6'429	"		
	" Shorpur	71 16 34	4'433761	27149	5'142		" "	" "	35 22 33	4'296753	19804		3'751	" "
	" Hatni	33 55 55	4'204172	16002	3'031		" "	" (D)	" "	4'401740	25220		4'776	" "
963	Shorpur	43 17 17	4'318288	20811	3'941	"	Kánrao	128 15 38	4'336950	21725	4'114	"		
	" Hatni	71 0 34	4'457869	28699	5'435		" "	" "	25 39 29	4'078456	11980		2'269	" "
	" Khujnaur	65 42 9	4'441894	27663	5'239		" "	" "	" "	4'085073	12164		2'304	" "
964	Hatni	67 11 45	4'396581	24922	4'720	"	Lachkua	51 17 42	4'202355	15935	3'018	"		
	" Khujnaur	62 28 16	4'379743	23974	4'541		" "	" "	76 52 38	4'298559	19887		3'766	" "
	" Kotri	50 19 59	4'318288	20811	3'941		" "	" "	" "	4'205560	16053		3'040	" "
965	Khujnaur	40 43 40	4'419711	26285	4'978	"	Lachkua	72 0 12	4'223314	16800	3'182	"		
	" Kotri	101 3 23	4'597017	39538	7'488		" "	" "	42 39 32	4'078094	11970		2'267	" "
	" Sahansra	38 12 57	4'396581	24922	4'720		" "	" (D)	" "	4'205560	16053		3'040	" "
966	Kotri	35 14 21	4'349941	21925	4'152	"	LV	32 51 20	3'962679	9177	1'738	"		
	" Sahansra	100 59 36	4'571729	37302	7'065		" "	" "	83 20 0	4'225314	16800		3'182	" "
	" Barkala	43 46 3	4'419711	26285	4'978		" "	" (D)	" "	4'181220	15178		2'875	" "
967	Sahansra	60 55 18	4'483486	30443	5'766	"	LV	30 48 15	4'061706	11527	2'183	"		
	" Barkala	80 4 14	4'535442	34312	6'498		" "	" "	106 47 37	4'333418	21549		4'081	" "
	" (XI)	39 0 28	4'349941	21925	4'152		" "	" (D)	" "	4'181220	15178		2'875	" "
968	LIV	13 33 8	3'714165	5178	0'981	"	LV	42 46 39	4'214050	16370	3'100	"		
	" Sunárkoti	47 11 33	4'209818	16211	3'070		" "	" "	63 22 47	4'333418	21549		4'081	" "
	" Hill θ	" "	4'285076	19279	3'651		" "	" (D)	" "	4'364581	23152		4'385	" "
969	Sunárkoti	113 56 14	4'236476	17238	3'265	"	LV	69 37 9	4'174067	14930	2'828	"		
	" Sunárgarh	15 56 8	3'714165	5178	0'981		" "	" "	38 1 24	3'991711	9811		1'858	" "
	" Hill θ	" "	4'160595	14474	2'741		" "	" (D)	" "	4'181220	15178		2'875	" "
970	LIV	14 17 3	3'859461	7219	1'367	"	Bulawála	67 38 7	4'425298	26626	5'043	"		
	" Sunárkoti	124 29 51	4'382243	24113	4'597		" "	" "	31 14 11	4'174067	14930		2'828	" "
	" Hill δ	" "	4'285076	19279	3'651		" "	" (D)	" "	4'454033	28447		5'388	" "

No. of triangle	Station	Corrected plane angle			Distance			Theodolite used	No. of triangle	Station	Corrected plane angle			Distance			Theodolite used
		°	'	"	Log. feet	Feet	Miles				Log. feet	Feet	Miles				
983	LV Bulwála Hill π (D)	71	35	49	4'492419	31076	5'886	Inch 12	990	Barkala (XI) Hill D (D)	73	49	32	4'493652	31164	5'902	Inch 12
		80	47	35	4'599585	32328	6'123	"			36	25	24	4'284793	19266	3'649	"
					4'181220	15178	2'875	"						4'483486	30443	5'766	"
984	Bulwála Chillwála Hill π (D)	24	51	56	4'116256	13069	2'475	"	991	Sahansra Barkala Hill E	88	7	55	4'501573	31737	6'011	"
		88	53	43	4'492419	31076	5'886	"			48	12	6	4'374249	23673	4'483	"
					4'454033	28447	5'388	"						4'340941	21925	4'152	"
985	Tondwála Shorpur Hill φ	112	49	20	4'571263	37262	7'057	"	992	Sahansra (XI) Hill F	49	16	44	4'433607	27140	5'140	"
		31	37	20	4'326261	21196	4'014	"			57	21	5	4'479308	30151	5'711	"
					4'371211	23508	4'452	"						4'535442	34312	6'498	"
986	Chillwála Shorpur Hill A	71	26	17	4'275879	18875	3'575	"	993	Barkala (XI) Hill H	27	13	40	4'253979	17946	3'399	"
		55	4	39	4'212855	16325	3'092	"			23	40	42	4'197356	15753	2'983	"
					4'204172	16002	3'031	"						4'483486	30443	5'766	"
987	Hatni Khujnaur Bahensia Hill Mark (D)	44	24	19	4'344766	22119	4'189	"	994	Barkala (XI) Hill N	23	11	13	4'090226	12309	2'331	"
		94	25	16	4'498541	31517	5'909	"			79	57	45	4'488326	30784	5'830	"
					4'318288	20811	3'941	"						4'483486	30443	5'766	"
988	Khujnaur Kotri Bahensia Hill Mark (D)	31	57	0	4'121361	13224	2'505	"	995	Barkala (XI) Hill M	16	34	54	3'952830	8971	1'699	"
		62	16	3	4'344766	22119	4'189	"			58	59	24	4'430424	26942	5'103	"
					4'396581	24922	4'720	"						4'483486	30443	5'766	"
989	Kotri Barkala Hill D (D)	30	38	22	4'284793	19266	5'649	"	996	Barkala (XI) Hill K	10	15	30	3'997996	9954	1'885	"
		50	0	45	4'461868	28965	5'486	"			22	44	34	4'334620	21608	4'092	"
					4'571729	37302	7'065	"						4'483486	30443	5'766	"

J. B. N. HENNESSEY.

GREAT ARC MERIDIONAL SERIES.

SECONDARY TRIANGULATION.

AZIMUTHS OF SECONDARY POINTS AT PRINCIPAL, PRINCIPAL-AUXILIARY AND SECONDARY STATIONS.

The following table contains, in the first column, the name of each Principal, Principal-Auxiliary or Secondary Station at which azimuths to Secondary Points have been observed immediately followed by those azimuths. The second column contains the number of the triangle giving the distance between the Station and the Point.

Name of station with azimuths of surrounding points	Reference to triangle containing distance	Name of station with azimuths of surrounding points	Reference to triangle containing distance	Name of station with azimuths of surrounding points	Reference to triangle containing distance
ABDULLAPUR s.	o' "	AGAPUR s.	o' "	ALHANPUR s.	o' "
Pánjúpur s.	27 52 53	Bhartpur Bungalow	165 55 0	Dúmjhara s.	21 33 6
Gadauli "	251 27 14	Fathipur Síkri Dome	288 53 57	Gázdipur "	76 36 49
		Usira, XXII	332 17 30	Bhogpur "	76 39 23
ACHEJA s.				Khádri "	134 4 7
Khurja House	19 58 56	AINTO h.s.		Darwa "	183 14 37
Boolundshahar, XXXVII	163 23 56	Barod h.s.	5 51 26	Rasúlpur "	248 3 57
Barhe s.	323 42 16	Juktúpura, XVI	172 3 0	Dabera Mosque	290 59 2
		Dín, XIII	253 9 17	Sultánpur Temple	355 58 23
AGAPUR s.		Balaia "	302 41 32		
Lachora h.s.	50 40 50			ALIPUR, XXV	
Bhartpur Residency	126 52 55	ALHANPUR s.		Pát h.s.	173 14 19
Madhoni, XXIV	137 48 11	Chilkána Mosque	0 26 57	Rásia Hill Temple	209 43 44
Bhartpur Fort	163 57 18			Nandbai s.	248 10 29

Name of station with azimuths of surrounding points	Reference to triangle containing distance	Name of station with azimuths of surrounding points	Reference to triangle containing distance	Name of station with azimuths of surrounding points	Reference to triangle containing distance
ALI PURUS s.	o' "	A s. No. 3.	o' "	BAJHERA s.	o' "
Kaliánpur N. Meridl. Mark s.	69 7 3	Naujil Village Temple	71 25 18	Umri s.	255 46 58
Murtza Ali s.	341 2 43	Manát s.	177 17 17	Siwáro "	320 28 14
AMARPUR s.		B	187 23 52	BALAJA h.s.	
Samholi s.	42 28 46	BACHITI s.		Barod h.s.	48 16 1
Gandaur "	106 36 1	No. 7 s.	7 18 46	Ainto "	122 46 15
Khúbápur Tree	135 10 50	No. 5 "	119 2 20	Dín, XIII	211 8 32
Pura Tree	153 3 47	Dankowáli "	177 50 10	Barai "	354 18 34
Begarazpur, XLVII	199 18 17	Mánakpur "	235 29 11	BALAMAJRA s.	
Naula "	211 3 8	Jhabrera Temple	283 46 8	Dhákúwála s.	85 16 55
AMSOT, (XI)		Sítalpur "	297 6 40	Kanda "	139 27 47
Karaunda Mark	5 54 28	Jataul "	314 46 9	Binpur "	195 17 15
Hill F	10 3 58	BADKAL s.		Kheri "	248 24 50
Sháhpur s.	15 35 54	Sadarpur s.	42 32 31	BAMBAWAN s.	
Hill H	15 24 3	Siálatpur "	93 7 46	Roja s.	78 48 4
Saháranpur "	15 45 21	Karampur "	125 40 56	Dásna "	159 39 45
Kotra "	45 15 1	Náhal "	334 30 13	Garand "	205 33 26
Hill M	50 42 45	BADRETA h.s.		Dádri "	359 55 46
Hill N	71 41 6	Juktípura, XVI	62 17 25	BANDERIA h.s.	
Timli Temple "	279 30 50	Mandrel Fort	105 54 45	Kuárpur h.s.	214 18 13
Dehra Gurúdwára Temple	281 24 37	Sewai Fort	179 46 53	Jakodi "	285 40 5
Sahansra h.s.	312 42 53	Chinoni s.	189 46 58	Dín, XIII	321 42 38
Hill D	315 17 57	Sidpur h.s.	194 49 47	BANNAGAR s.	
Hill K	328 58 47	Sidpur Fort	209 17 7	Mimlána No. 1 s.	16 58 37
Barkala "	351 43 21	Kailáras "	227 34 54	Kaliána, L	70 28 22
ARCADIA HOUSE s.		Dongarpur s.	230 55 11	Kaliána N. Meridl. Mark s.	103 59 32
Banog, (X)	196 28 40	Kharero "	253 38 57	Chota Badhai s.	141 32 58
Nawáda h.s.	314 13 30	Tilondri "	260 53 37	Rohána Tree	193 5 38
ARING, XXX		Kuárpur h.s.	264 51 33	Bahedi Chauki "	196 17 36
Kumbher Building	37 55 55	Pahárganh Fort	284 3 9	Sádpur Tree	216 41 59
Barsána Hill Temple	140 8 22	Biráno Hill Temple	300 20 3	Rai Tree	228 20 52
Nandgáon do.	150 49 10	BAGWALA s.		Sisona "	261 25 22
Pilhora s.	192 30 32	Gúmtala s.	38 21 29	Rámpur "	273 6 58
Rál House "	201 17 10	Karera Bastion	50 6 52	Bágowála Tree	286 20 34
Brindában Temple	243 34 28	Jatlána do.	149 49 16	BANOG, (X)	
Mattrá "	262 5 3	Pánjúpur "	188 6 1	Arcadia House s.	16 30 16
ARNAICH s.		Palána "	265 37 18	Timli Temple	67 57 11
Bhámhála s.	58 3 52	Tabor "	330 58 21	Badráj Hill Mark	92 49 37
Ráo-ka-Nagla Atári	280 2 16	No. 14 "	334 8 7	Masúri, Camel's Back h.s.	287 58 36
Ráo-ka-Nagla "	305 28 26	Kánsepur "	349 26 59	Masúri, Vincent's Hill s.	300 53 42
Chirtaul "	324 0 29	BAHEDI CHAUKI s.		Rájpur h.s.	307 11 42
A s. No. 1.		Bánnagar s.	16 17 58	Hátipáon Hill Mark	330 19 55
Kaliánpur, (VII)	6 43 25	Chota Badhai "	69 3 59	Dehra, Sur. General's old Office	345 30 4
Deopura s.	59 56 11	Bijaipur "	256 49 57	Nawáda h.s.	351 9 40
Dhamaukheri Tree	117 43 54	Rai Tree	287 42 55	Dehra Gurúdwára Temple	354 27 23
Murtza Ali "	344 34 15	Sisona "	314 38 4	BARAI h.s.	
A s. No. 2.		Sádpur Tree	328 59 3	Mamoni IX	10 27 44
Nargájáni Tree	24 42 42	Bágowála Tree	329 50 5	Lálgarh h.s.	37 38 48
Nandheri s.	51 4 41	Rámpur "	350 5 2	Dhangaia "	69 56 54
Tijalheda Tree	106 27 55	BAHERA h.s.		Barod "	101 8 45
Tijalheda "	117 30 20	Kánserao h.s.	17 28 46	Khaláro "	104 39 34
Khai Kheri Tree	130 13 44	Lachkua "	95 12 53	Balaia "	174 19 6
Godhna, XLIX	183 48 15	Doiwála, LV	136 30 23	Dongri "	342 46 59
B	300 50 58	Hill a	351 49 17	BARAI TEMPLE s.	
Sikri Building	326 36 22	BAHIN s.		Dondrápur h.s.	118 28 38
Rahmatpur "	349 17 30	Chapra, XXVIII	45 48 15	Madka "	154 41 43
A s. No. 3.		Meoli, XXXII	110 9 10	Rái Building	164 18 38
Naujil s.	25 57 19	Goraksir s.	145 45 56	Ráipur Temple	235 24 51
		Páhera, XXXI	192 43 52	Ráepur, XV	240 54 39

Name of station with azimuths of surrounding points	Reference to triangle containing distance	Name of station with azimuths of surrounding points	Reference to triangle containing distance	Name of station with azimuths of surrounding points	Reference to triangle containing distance
BARAI TEMPLE s.	o' "	BAROD h.s.	o' "	BHANGELA s.	o' "
Paniári Building	269 53 39	Barai h.s.	281 2 46	Kálkáji Devi Temple	94 31 12
Mangára Building	290 27 34	Dhangaia	301 35 29	Tálkatora h.s.	114 35 12
		Lálgarh	352 37 3	Soherka s.	108 30 48
				Bostán, XXXVIII	282 41 33
BARARA s.		BARODIA h.s.			
Darha s.	60 56 1	Barod Fort	271 32 44	BHATIANA s.	
Sikandra	207 48 43	Jagtia s.	293 0 49	Datairi, XL	131 25 13
Agra, Moti Masjid	246 18 17	Mao, VIII	300 10 3	Hápur s.	206 5 41
Agra, Tájmahal Dome	251 37 5	Shergarh Hill Fort	316 15 51	Mahmudpur No. 1	276 42 46
Agra, Cantonment Church	254 55 14	Pandora Hill Fort	319 17 30	Guláothi	329 20 49
		Mohangarh Building	338 58 16		
BARAULI h.s.		Bíchi h.s.	343 45 54	BHEA s.	
Morwáso Fort	132 48 29			Harautha s.	5 18 7
Pahárgarh, IV	140 3 7	BAROLI s.		Gorai	43 1 32
Khurd Megona Hill Mark	191 7 58	Somna s.	70 49 11	Lohi	99 29 58
Nímdánt, VI	195 38 12	Jarára	105 42 30	Seri	219 19 54
Iságarh Fort Palace	257 42 12	Sohi	166 28 39	Kánka	301 48 26
Hatíápahár, III	272 56 45	Kamona	229 48 59		
Dhakoni Fort	314 56 12	BEGARAZPUR, XLVII		BHERI s.	
Ledpur Hill Building	325 0 23	Bopára Tree	3 32 54	Súbri No. 1 s.	118 27 41
Jagtharo h.s.	335 19 12	Naula s.	10 17 27	Kanda s.	190 9 30
		Amarpur	19 19 12	Bheri Mosque	329 8 0
BARHE s.		Gandaur	50 55 42		
Khurja House	77 41 36	Pura Tree	57 48 32	BHOGPUR s.	
Acheja s.	143 43 40			Shujápur s.	14 5 16
Boolandshahar, XXXVII	153 46 44	BEGIGHAT s.		Mandi	33 38 33
Genori s.	232 33 16	No. 6 s.	18 46 23	Gadauli	87 10 38
Shikárpur	261 8 25	Tapu Bastion	126 28 18	Búria Goláb Sing's House	131 21 14
Karora	323 0 51	Gehar	127 52 6	Búria Meg Sing's House	139 38 41
		Chaura Bastion	156 10 13	Fathigarh Bastion	180 31 59
BARHERI s.		Dabkauli Highest Building	166 44 48	Dádúpur Canal House	183 10 32
Labkari s.	246 22 14	Daulatpur No. 2 s.	197 49 14	Khádri s.	188 25 52
Deoban Haveli	256 29 33	Súrajpur Bastion	212 29 28	Hánpur	256 36 58
Laknauti Haveli	274 4 33	Laknauti	228 55 33	Gázdipur	256 39 19
No. 3a	304 2 59			Dúdgarh Mosque	287 17 16
Dahera, LI	350 46 13	BHAGOLA s.		Sultánpur Temple	303 25 0
		Chapra, XXVIII	9 6 58	Chilkána Mosque	307 32 32
BARI s.		Ghátó h.s.	19 40 28	Dúmjhara	312 58 18
Gurjápahár, XVIII	19 24 8	Pát	71 56 31	Rájghát	330 33 47
Kidárpur h.s.	52 38 8	Ferozpur Palace	95 45 22		
Dholpur, XX	266 55 25			BICHI h.s.	
		BHAGU-KA-PALA s.		Tíla Hill Fort	46 25 36
BARKALA h.s.		Chondiána s.	59 15 38	Gugubára, VII	66 50 8
Hill H	144 30 6	Udaipur	128 45 35	Shankargarh h.s.	75 11 39
Hill N	148 32 33	Somna	172 35 18	Barodia	163 46 23
Hill M	155 8 52	Aligarh Fort	285 7 41	Mohangarh Building	169 45 56
Amsot, (XI)	171 43 46	Bokrauli Factory	290 19 15	Khenwai Fort	248 17 8
Hill K	181 59 16	Nándho	320 46 28	Mao, VIII	271 14 35
Hill D	245 33 18			Shergarh Hill Fort	306 3 15
Sahansra h.s.	251 48 0	BHAINSI s.		Pandora Hill Fort	311 29 18
Kotri	295 34 3	Sateri s.	24 0 57	Nímdánt, VI	342 37 24
Hill E	300 0 6	Chálsina	72 28 25		
		Bhainsi Paka Well	89 52 19	BIJAIPUR s.	
BARKHERI, V		Naula	133 36 14	Sisona s.	9 19 11
Kherwár Hill Mark	60 1 50	Sontha	202 12 42	Bahedi Chauki	76 51 13
Kishanpur h.s.	171 31 11	Khatáoli Tree	342 12 42	Rohána Tree	113 34 25
Bijráwan Fort	207 22 55			Kathopur	211 29 41
Singon Fort	216 33 27	BHAMBALA s.		Simarathi	290 58 30
Buda Dongar Fort	234 51 25	Herinwára s.	76 27 52	Dathána	307 18 48
Chendoria Fort	243 29 11	Thánah Bhawan	136 55 49	Purai Tree	322 6 23
Badarwás Fort	262 17 7	Dudli No. 2	201 5 12		
		Arnaich	238 2 39	BINPUR s.	
BAROD h.s.		Chirtaul	276 41 19	Bálámájra s.	15 17 57
Ainto h.s.	185 50 42			Kanda	67 11 29
Khári	192 39 35	BHANGELA s.		Kálsi	256 37 3
Balnaia	228 10 34	Toghlakabad Palace	75 16 29	Kheri	317 47 5
Khaláro	276 33 26				

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B:TA h.s.	0 1 "	CHANDAOS, XXXVI	0 1 "	CHONDIANA s.	0 1 "
Koláras Temple s.	13 39 55	Somna s.	287 10 45	Bhágu-ka-pala s.	239 13 49
Gugubára, VII	32 21 58	Bírpur Garhi	301 58 27	Bokrauli Factory	260 35 29
Shankargarh h.s.	55 12 3	Udaipur	335 32 46	Nándho	284 52 44
Niboda	139 49 20			Seri	339 7 50
Sisai Fort	191 9 51				
BO-LANDSHAHAH, XXXVII		CHANDERU s.		CHOTA BADHAI s.	
Chanderu s.	112 9 3	Kaithala s.	187 50 15	Kalfána, L	20 23 18
Tájpur Mosque	151 59 16	Málágarh	231 5 0	Bahedi Chauki s.	249 2 56
Málágarh	155 1 23	Tájpur Mosque	236 49 44	Bánnagar	321 32 17
Genori	303 43 56	Dhakauli Mosque	256 48 51		
Barhe	333 44 38	Boolandshahar, XXXVII	292 6 49		
Acheja	343 23 14			DADRI s.	
		CHANDIPAHAR, LIV		Bostán, XXXVIII	41 2 7
		Rurki College	76 42 4	Garabpur s.	84 5 44
		Jwálápur s.	83 49 38	Roja	118 8 22
		Sunárkoti h.s.	144 2 45	Bambáwan	179 55 46
		Hill θ	157 35 53		
		Hill δ	158 19 48	DAHERA, LI	
		Jámankháta	174 40 20	Chirtaul s.	20 41 50
		Bírpur Temple	210 9 53	Kotesra House	23 11 3
				Dudli	63 46 45
		CHAPRA, XXVIII		Barheri	170 46 30
		Khori h.s.	4 48 12	No. 3a	239 5 10
		Dúli Hill Mark	23 9 21	Rankandi	304 31 2
		Sherpur Temple	38 51 45		
		Mandla	45 50 39	DANKOWALI s.	
		Sareta Hill Chatri	54 29 53	No. 5a s.	68 21 41
		Pát	99 23 14	Nojli, LIII	123 19 40
		Ghátó	168 31 49	Mánakpur	308 6 57
		Bhagola s.	189 6 43	Bachítí	357 50 6
		Báhin	225 41 1		
				DARHA s.	
		CHATAI SARAI GATEWAY s.		Usira, XXII	44 7 22
		Mánpúr, XXIX	56 54 33	Fathipur Sikri Dome	121 45 3
		Barsána H. Temple s.	58 34 4	Fathipur Sikri s.	121 50 18
		Pilhora	313 33 13	Sikandra	228 54 40
				Barára	240 51 35
		CHILLAWALA h.s.		Agra, Tájmahal Dome	245 56 41
		Hatni h.s.	114 27 32		
		Hill A	117 48 46	DARIAPUR s.	
		Shorpur	189 15 3	Kátia s.	3 18 39
		Hill π	247 26 40	Khaikhera	52 34 55
		Tondáwála	279 37 36	Thísra Tree	108 51 33
		Hill ϵ	305 16 12	Karera	123 11 43
		Buláwála	336 20 23	Morna Mosque	153 16 50
				Ferozpur	183 25 28
		CHINONI s.		Hajarpur	329 39 50
		Badreta h.s.	9 47 51	Sheopúri, XLVIII	348 6 4
		Gurjápálár, XVIII	178 56 30		
		Sewar s.	196 3 39	DARWA s.	
		Kailáras h.s.	324 40 7	Allánpur s.	3 14 46
				Khádrí	75 9 27
		CHIRTAUL s.		Bhúd Jod Sing's Village	254 50 24
		Bhámbála s.	96 43 15	Kotra s.	243 28 41
		Arnaich	144 1 12	Rasúlpur	309 33 58
		Dudli No. 2	150 30 46		
		Rao-ka-Nagla	157 59 47	DASNA s.	
		Kotesra House	199 56 40	Roja s.	33 33 0
		Dahera, LI	200 40 33	Lál Khán's Sarai	76 17 26
		Kalfána, L	280 35 3	Sadarpur	126 17 8
				Náhal	215 46 9
		CHITORA s.		Garand	264 18 11
		Mogpur s.	85 28 46	Bambáwan	339 38 58
		Mandaur	175 50 48		
		CHONDIANA s.		DATAIBI, XL	
		Ulaipur s.	178 50 54	Garand s.	45 16 40
				Rámdwára	82 10 45

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DATAIRI, XI		DHAKERI s.		DHOLPUR DARGAH s.	
Kalchina s. 121 22 3	548	Nirāna s. 102 5 48	661	Dholpūr, XX 54 52 24	429
Hāpur " 275 19 0	538	Jauli Building 224 9 29	671	Chāndpur Building 88 39 39	433
Bhatīāna " 311 22 21	533	Theora " 272 45 33	670	Dholpur Rāna's Palace 101 18 57	434
DATHANA s.		Khaikhera " 296 0 48	663	Fathipur Chatri 137 22 49	435
Sisona s. 63 25 31	768	Pīr Pamora " 343 8 43	669	Usira, XXII 139 26 19	429
Bijapur " 127 19 47	767	Jānsath " 352 41 44	662	Mania Mosque 194 51 19	436
Simarthi " 238 55 56	767	DHAKWALA s.		Sānre Sarai Building 210 47 50	439
DAULATPUR No. 1 s.		Rāwar s. 102 28 27	876	Dholpur House 280 19 10	432
Sardhana Nagla Tree 2 12 9	647	Súbri No. 1 " 147 2 3	831	Dholpur Fort s. 317 18 18	430
Sardhana s. 14 12 16	635	Kanda " 207 38 52	830	Kaitheri Fort 352 36 27	437
Mahādon Tree 42 54 22	648	Balāmājra " 205 14 33	830	DHOLPUR FORT s.	
Patlokar No. 1 " 89 46 40	635	DHAMEIT s.		Kaitheri Fort 9 26 29	437
Farīdpur No. 1 " 125 50 15	636	Abdulpur Mosque 14 8 21	811	Kotra Hill Building 69 3 34	438
Búbkheri Tree 175 57 20	652	Pur Building 27 44 47	810	Dholpūr, XX 78 42 48	430
Samholi " 186 52 59	637	No. 10a s. 40 36 24	797	Dholpur Dargáh s. 137 18 53	430
DAULATPUR No. 2 s.		Nansura " 102 21 41	798	Dholpur Dargah Dome 137 34 43	431
Begighát s. 17 49 33	888	Nagla No. 2 " 156 41 10	799	Dholpur House 174 58 5	432
Chaura Bastion 119 35 33	893	Sikar Temple W. 216 47 1	812	Sānre Sarai Building 179 29 36	439
Dabkauli Highest Building 143 20 28	894	Godhna, XLIX 327 21 21	797	DIANATPUR s.	
Kamālpur No. 1 s. 208 13 19	890	DHANAUTA s.		Jewar s. 12 50 5	319
Súrājpur Bastion 239 49 38	892	Mānpur, XXIX 30 14 59	453	Karaol, XXXIV 67 44 33	318
Laknauti Mosque 276 6 26	896	Hodal s. 95 14 14	454	Gori " 75 26 2	318
Laknauti " 280 55 13	888	Kambhi " 133 55 29	455	DIN, XIII	
DEHRA DOON BASE-LINE, EAST-END, (IX)		Noh, XXXIII 285 10 1	453	Chorpura Hill Mark 11 45 4	179
Badrāj Hill Mark 175 37 33	364	DHANGAIA h.s.		Balaia h.s. 31 11 48	414
Hūtipāon Hill Mark 195 15 17	366	Barod h.s. 121 38 56	402	Ainto " 73 17 16	414
[(VIII)]		Khaláro " 157 11 11	403	Banderia " 141 45 19	203
DEHRA DOON BASE-LINE, WEST-END,		Barai " 249 54 22	402	Kuárpur " 176 21 23	200
Badrāj Hill Mark 209 1 46	364	DHAOLRI, XLI		Pagáro Hill Temple 187 46 54	197
Hātipāon Hill Mark 228 38 2	366	Rāmdwāra s. 44 12 44	349	Jakodi " 208 45 20	193
DEHRA DOON OBSY. S. (OLD)		DHOBAI, XII		Jakodi Tower 209 41 0	199
Masúri, Vincent's Hill s. 179 25 27	373	Iadára h.s. 12 4 56	173	Dondrápur " 217 47 20	195
Masúri Camel's Back h.s. 186 4 55	370	Ladára Hill Tomb 13 51 58	177	Doa Fort 247 4 14	198
DEHRA, SUB. GENL.'S OLD OFFICE		Sikrauli " 99 47 42	411	Aran Fort 301 33 16	202
Banog, (X) 165 31 22	374	Rent Hill Fort 107 42 10	423	DOIWALA, LV	
Masúri, Church Steeple 184 16 24	377	Jakodi " 143 56 14	194	Lachkua h.s. 6 31 34	957
Masúri, Camel's Back h.s. 186 34 50	374	Himmatgarh Peak 196 28 5	192	Rurki College 25 2 8	358
Rájpur " 210 24 53	375	Ráipur Peak Temple 199 49 40	191	Hill a 49 11 6	977
Kalanga " 254 56 19	376	Himmatgarh H. F. Building 201 7 42	190	Sahāranpur s. 68 54 33	357
DEHRI, XXXV		Himmatgarh H. F. Gate 201 16 34	189	Buláwála h.s. 82 2 26	958
Koseri-ka-gummat 162 30 42	330	Súrājpur Building 217 12 44	188	Hill b 83 24 12	976
Adam-ka-gummat 170 11 20	332	Chinúr Hill Fort 260 45 12	187	Karaunda Mark 87 2 59	854
Kutab Míнар 171 48 54	324	Lachmangarh Hill Fort 321 36 28	185	Hill λ 112 50 41	979
Tālkatora h.s. 174 28 58	328	Bitarwár Fort 323 47 9	183	Hill ε 151 39 35	981
Mansúr Ali's Tomb 181 51 38	338	Karaia h.s. 348 52 50	181	Hill π 153 38 15	983
Dehli Cant. Flag Staff 182 34 39	336	DHOLPUR, XX		Tondáwála " 155 37 20	959
Dehli Church 185 18 53	334	Kidárpur h.s. 73 58 58	246	Dehra Gurúdwāra Temple 179 49 26	362
Dehli Dome 186 4 9	320	Bári s. 87 0 59	248	Nawáda h.s. 189 36 44	361
Dehli N. Míнар 186 5 10	322	Chāndpur Building 164 44 9	433	Jámankháta " 300 22 23	359
Humáyún's Tomb 192 42 50	326	Fathipur Chatri 197 5 9	435	Bahera " 316 28 47	957
DEOPURA s.		Dholpur Rāna's Palace 206 4 38	434	DONDRAPUR h.s.	
Dhamaukheri Tree 204 17 6	397	Mania Mosque 207 2 6	436	Dín, XIII 37 50 14	195
A No. 1 s. 239 54 51	389	Dholpur Dargáh Dome 234 47 38	431	Jakodi h.s. 48 28 46	196
Kalíánpúr (VII) 299 5 40	389	Dholpur Dargáh s. 234 50 51	429	Ráepúr, XV 273 54 2	195
DHAKERI s.		Dholpur Fort " 258 40 40	430	Barai Temple " 298 26 18	208
Mogpur s. 48 33 0	661	Gwalior Hill Temple 324 34 52	206	DONGARPUR s.	
Mandaur " 49 40 56	667	DHOLPUR DARGAH s.		Badreta h.s. 50 58 6	225
		Kotra Hill Building 31 3 17	438	Kailáras " 102 16 25	225
				Tilondri s. 357 52 20	226

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DONGRI h.s.	o ' "	FARIDPUR No. 1 s.	o ' "	GARH h.s.	o ' "
Lakni h.s.	26 36 8	Patlokar No. 1 s.	41 51 45	Hill β	264 53 49
Nohri "	71 35 42	Bhambára Masjid	98 44 18	Salempur h.s.	278 33 19
Mamoni Fort	91 33 47	Chora Tree	196 14 32	Hazára "	308 48 50
Mamoni, IX	113 14 6	Gandaur "	197 58 45		
Satanwára Building	159 18 44	Choli Tree "	211 24 2	GAZDIPUR s.	
Barai Hill Fort	160 25 46	Samholi "	238 6 29	Bhogpur s.	76 40 35
Kankar Building	162 43 45	Búbkheri Tree "	269 23 36	Alhánpur "	256 35 40
Barai "	162 48 4	Daulatpur No. 1 "	305 48 53	Dabera Mosque	264 9 0
Theo Building	172 45 45	Khera Tree "	355 43 3	Dúmjhara "	349 15 10
Mao, VIII	331 19 3				
DUBURJI s.		FATHIPUR SIKRI s.		GEHAR s.	
Laknauti s.	26 51 16	Usira, XXII	11 44 9	Súbri No. 1 s.	28 22 35
Bhúr "	30 10 5	Sikandra s.	244 21 6	Barágón Bastion	54 42 45
Kalsaura "	93 8 9	Darha "	301 48 15	Sangoa Bastion	94 29 31
No. 11a "	106 49 55			Biána Fort	188 27 5
Nánúwála Bastion	120 57 14	FEROZPUR s.		Kalsaura "	206 31 51
Sanauli "	126 22 21	Dariápur s.	3 25 39	Saiyidpura Mosque	229 27 24
Sainspur Bastion	131 26 5	Morna Mosque	43 26 7	Kamálpur No. 1 "	251 37 25
No. 12a "	161 34 0	Karera s.	47 7 39	Laknauti "	275 57 43
Gúmtala "	161 38 46	Kakrála "	49 9 21	Begighát "	307 50 42
Bádi Bastion	175 44 29	Isápur Tree	67 43 4	No. 6 "	327 25 59
Náharmájra Bastion	183 37 28	Charauli Tree	67 45 38	Kanda "	344 53 31
Kánsepur "	203 31 19	Rahmatpur "	108 34 48		
		B No. 1 "	148 32 43	GENORI s.	
DUDLI No. 1 s.		GADAULI s.		Barhe s.	52 35 16
Kheri Tree (near Dudli)	24 17 6	Pánjúpur s.	46 29 15	Boolandshahar, XXXVII	123 48 2
Saláwa B s.	40 26 16	Abdullápur "	71 28 7	Shikárpur s.	352 19 18
Saláwa A "	104 47 7	Bhogpur "	267 8 31		
Dudli Khera Bastion	155 16 17	Brahmpura Bastion	292 18 37	GHATO h.s.	
Sateri "	176 53 7	Mandi "	318 40 59	Pát h.s.	88 59 0
Táwita Tree	274 26 49	Shujápur "	320 59 28	Ferozpur Palace	128 46 4
Nagla "	310 2 0			Bhagola s.	199 40 6
Rukanpur Tree	337 16 31	GANDAUR s.		Chapra, XXVIII	348 31 42
Sakauti "	349 50 26	Faridpur No. 1 s.	17 59 32		
		Chora Tree	21 22 1	GODHNA, XLIX	
DUDLI No. 2 s.		Begarazpúr, XLVII	230 53 8	A No. 2 s.	3 48 22
Bhámbála s.	21 5 56	Khúbápur Tree	238 7 31	Tijalheda Tree	53 5 44
Thánah Bhawan "	86 48 44	Amarpur "	286 34 22	Khaikheri Tree	57 38 13
Dahera, LI	243 44 16	Samholi "	329 17 40	Tijalheda "	67 16 58
Kotesra House	257 40 23			No. 10a "	98 55 46
Chirtaul "	330 29 34	GANGAULI s.		Pur Building	126 11 41
DUMJHERA s.		Lahugla s.	7 7 55	Dhameit "	147 22 39
Shujápur s.	74 26 29	Bágwála Fort	11 42 18	Jogiwála Date Tree	299 20 18
Bhogpur "	132 59 54	Guláothi "	65 49 33	Kanhaiwála Date Tree	308 17 29
Gázdipur "	169 15 30	Mahmudpur No. 1 "	122 16 53	B No. 1 "	332 44 37
Alhánpur "	201 32 17	Hápur House	147 0 19		
Dúdgárh Mosque	207 19 28	Emdanagar Village	148 26 54	GORAI s.	
Sultánpur Temple	282 6 23			Hindol s.	93 26 28
		GARABPUR s.		Lohi "	155 27 4
ESR s.		Kutab Míнар	84 48 3	Bhea "	222 59 40
Kánka s.	30 33 3	Roja s.	183 15 45	Harautha "	274 29 11
Seri "	101 1 42	Dádrí "	264 3 7	Beswán Building	329 45 18
Maui Bastion	118 15 1	Bostán, XXXVIII	302 27 28		
Nándho "	170 56 17			GORAKSIR s.	
Kool Mosque	194 10 23	GARAND s.		Kálinjar h.s.	91 8 8
Mandrák Factory	275 58 51	Bambáwan s.	25 34 33	Jaisingpur s.	111 31 50
Sásni "	335 15 27	Dásna "	84 20 5	Hatín "	198 27 15
		Náhal "	138 3 15	Páhera, XXXI	233 43 15
FAHIMPUR s.		Kalchina "	176 42 53	Gadráno Temple	274 52 12
Sontha s.	17 17 1	Datairi, XL	225 14 58	Báhin "	325 44 49
Begarazpúr, XLVII	75 34 59			GORI s.	
Jaroda "	118 9 34	GARH h.s.		Diánatpur s.	255 22 36
Bihári Makbara	284 34 58	Hill γ	141 36 32	Karaol, XXXIV	257 9 47
Mansúrpur	358 12 11	Lachkua h.s.	167 46 16	Jewar "	285 34 2
		Kánsrao "	220 9 9	Tappal "	314 52 2

Name of station with azimuths of surrounding points	Reference to triangle containing distance	Name of station with azimuths of surrounding points	Reference to triangle containing distance	Name of station with azimuths of surrounding points	Reference to triangle containing distance
GUGUBARA, VII	o' "	HATIAPAHAR, III	o' "	ISAPUR h.s.	o' "
Kishanpur h.s.	35 37 32 129	Amrod Fort	11 23 55 123	Bijapur Fort	15 11 6 229
Rai Fort	96 48 25 144	Ledpur Hill Building	20 50 9 119	Juktípura, XVI	233 41 6 228
Shankargarh	145 9 55 142	Jagtharo h.s.	35 53 55 120	Kuárpur h.s.	255 28 1 228
Lálgarh	165 11 9 399	Dhakoni Fort	36 25 24 121	JAGTHARO h.s.	
Niboda	196 29 15 149	Boyango Hill	57 55 24 113	Barauli h.s.	155 20 15 120
Bíta	212 20 42 147	Karkia Hill	61 12 12 112	Hatápahár, III	215 52 21 120
Tíla Hill Temple	232 17 19 145	Barauli h.s.	92 59 22 115	Amrod Fort	351 30 21 123
Koláras Temple	239 41 19 146	Iságarh Fort Palace	139 20 8 122	JAGTIA s.	
Bíchi h.s.	246 44 42 137	Khurd Megona Hill Mark	165 24 33 117	Barodia h.s.	113 1 57 155
Kare Fort	304 22 22 143	HATIN s.		Barod Fort	172 17 57 159
Kundai	343 57 14 126	Goraksir s.	18 27 38 309	Mao, VIII	304 6 23 155
GULAOHTI s.		Jaisingpur	87 39 22 312	JAISINGPUR s.	
Bhatiana s.	149 22 6 531	Palwal	216 49 7 310	Kálinjar h.s.	0 42 44 313
Hápur House	176 22 30 538	Páhera, XXXI	263 6 18 309	Hatin s.	267 36 26 312
Hirdepur Village	184 8 47 540	HATIPURA s.		Goraksir	291 29 17 312
Mahmudpur No. 1	188 48 22 530	Nipri s.	5 5 6 239	Atar Hill Temple	318 18 32 314
Gangauli	245 47 33 529	Madráni Bastion	84 57 59 240	JAKODI h.s.	
Lahugla	322 2 12 528	Kailáras h.s.	315 49 8 239	Rent Hill Fort	13 55 50 424
Kaithala	357 42 6 528	HATNI h.s.		Jakodi Tower	27 47 3 199
GUMTALA s.		Kotri h.s.	122 16 56 964	Dín, XIII	28 46 35 193
Kalsaura s.	27 24 41 836	Bahensia Hill Mark	145 4 22 987	Sikrauli h.s.	43 18 10 194
Bágwála	218 19 49 838	Khujnaur	189 28 41 963	Banderia	105 44 1 204
Nagli Bastion	227 56 53 924	Shorpur	260 29 15 962	Kuárpur	159 5 46 200
No. 13	250 24 3 918	Chilláwála	294 25 10 962	Madka	216 36 13 207
Tabor	254 45 26 912	HATBAS s.		Dondrápur	228 27 7 196
Kánsepúr	278 59 41 837	Harautha s.	123 46 54 477	Ráepúr, XV	258 19 27 193
Nukar Temple	286 14 24 915	Tochígarh Fort	142 31 5 495	Doa Fort	312 42 32 198
Duburji	341 37 47 836	Kánka	151 16 8 477	Dhobái, XII	323 52 40 194
GURJAPAHAR, XVIII		Sásni	194 30 3 478	Aran Fort	335 17 56 202
Bairági's Math	4 29 26 243	Lutsan Building	213 8 1 496	JAMANKHATA h.s.	
Páli s.	6 5 55 242	HAZARA h.s.		Doiwála, LV	120 26 33 359
Kidárpur h.s.	161 2 59 246	Garh h.s.	128 50 28 953	Bírpur Temple	259 0 46 360
Jagner Hill Mark	186 20 55 260	Salempur	174 19 32 952	Chándípahár, LIV	354 39 56 359
Bári s.	199 22 22 248	Sunárgarh	222 40 34 951	JANSATH s.	
Thúm	243 5 22 247	Sunárkoti	273 19 48 950	Mogpur s.	116 30 13 662
Sewar	334 39 30 241	Jwálápur s.	337 20 53 950	Dhakeri	172 42 5 662
Kailáras h.s.	338 56 30 215	HERINWARA s.		Khaikhera	229 42 47 663
Chinoni s.	358 56 27 221	Naujil s.	128 37 20 821	Majhera	289 48 0 664
HAIJARPUR s.		Thánah Bhawan City	168 16 17 857	JABARA s.	
Kátia s.	40 1 35 691	Kutabgarh	190 58 39 860	Somna s.	39 45 2 508
Dariápur	149 40 23 691	Thánah Bhawan	192 14 10 820	Unchágáon	128 50 18 508
Kesopur	342 55 39 692	Bhámbála	256 25 42 820	Sohi	222 5 24 510
HANDIAPARO, I		HINDAN s.		Baroli	285 40 50 509
Semra h.s.	100 46 25 104	Saraoli, XLIV	12 17 29 646	JARENDHO h.s.	
Karkia Hill	122 13 35 112	Patlokar No. 2	279 27 49 646	Tirauli h.s.	56 20 20 419
Kolua	126 18 25 109	HINDOL s.		Kaná r s.	63 5 37 422
Boyango Hill	128 44 55 113	Surf s.	158 41 10 472	Sikrauli h.s.	332 4 20 419
Piprai Turret	156 33 25 111	Lohi	205 5 17 472	JARODA s.	
Garla	190 3 25 110	Karhári Factory	216 46 28 490	Lachera s.	83 49 59 717
HAPUR s.		Gorai	273 24 12 478	Sánjak Mosque	112 20 58 732
Bhatiana s.	26 6 44 532	HODAL s.		Manjhera	150 25 44 718
Datáiri, XL	95 22 55 533	Mánpúr, XXIX	1 47 45 454	Fahimpur	298 7 59 716
Mahmudpur No. 1	347 17 11 532	Páhera, XXXI	155 49 32 456	Nára Building	312 56 16 726
HARAUTHA s.		Kambhi s.	207 44 20 455	Nára Makbara	315 35 44 727
Beswán Building	17 40 1 491	Dhanauta	275 10 2 454	Begarazpúr, XLVII	352 51 26 716
Gorai s.	94 30 51 475				
Bhea	185 17 55 475				
Kánka	256 46 10 476				
Hátras	303 42 13 477				
Hátras Fort	303 43 58 492				

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JATARI s.	o ' "	KAKRALA s.	o ' "	KALIANPUR N. MDL. MARK s.	o ' "
Mitholi s.	8 19 39	Karera s.	42 4 24	Ali Purus s.	249 6 42
Tappal "	104 26 40	Isápur Tree	110 20 47	Murtza Ali "	319 11 35
Sarol "	127 45 2	Rahmatpur "	164 50 46	Kaliánpúr, (VII) "	359 59 52
Thoro "	173 3 15	Charauli Tree	197 52 43		
JATAUL s.		Ferozpur "	229 7 51	KALIANPUR S. MDL. MARK s.	
No. 7 s.	53 49 23	Chauráwála Tree	334 22 20	Tharoria Tree	36 40 52
Bachíti "	134 47 12			Tori Tree	79 37 41
JATOWALA s.		KALANGA h.s.		Kaliánpúr, (VII)	180 0 7
Rasúlpur s.	54 18 31	Dehra, Sur. Gen'l's old Office	74 57 34	Kaliánpur Tree	192 48 52
Sháhpur "	297 50 33	Masúri, Church Steeple	167 22 59	Murtza Ali s.	259 55 10
Behat Building	354 39 29	Rájpur Mosque	178 41 0		
JEWAR s.		Rájpur h.s.	189 2 39	KALINJAR h.s.	
Gori s.	105 37 5			Jaisingpur s.	180 42 43
Karaol, XXXIV	171 23 51	KALCHINA s.		Goraksir "	271 5 34
Diánatpur "	192 49 42	Náhal s.	25 17 51	Atar Hill Temple "	298 58 27
JUKTIPURA, XVI		Datairi, XL	301 20 11		
Bjapur Fort	31 48 48	Garand "	356 42 43	KALSAURA s.	
Isápur h.s.	53 42 58			Gehar s.	26 33 17
Mandrel Fort	114 27 37	KALIANA, L		Biána Fort	52 53 21
Kailáras "	231 45 23	Salempur s.	16 59 7	Gúmtala "	207 23 14
Badreta "	242 16 6	Chirtaul "	100 37 24	Chaugáma Bastion "	211 48 48
Kuárpur "	261 7 33	Chirtaul Temple	120 11 39	No. 11a "	243 17 54
Biráno Hill Temple	278 25 40	Záhar Pír "	154 34 4	Chapra Bastion "	263 6 25
Ainto "	352 1 55	Kaliána N. Mdl. Mark "	180 0 8	Duburji "	273 5 43
JWALAPUR s.		Chota Badhai "	200 22 50	Saiyidpura Mosque "	296 34 25
Hazára h.s.	157 21 37	Kacholi House	209 59 47	Laknauti "	343 15 42
Sunárkoti "	205 13 34	Bánnagar "	250 27 13		
Chándipahár, LIV	263 47 46	Didáhedí Mosque	261 55 51	KALSI s.	
KADILPUR KAR s.		Mimlána No. 2 "	303 25 1	Kheri s.	18 55 49
Chandaos, XXXVI	266 32 23	Mimlána No. 1 "	314 50 27	Binpur "	76 39 19
Umri s.	310 51 43	Kaliána S. Mdl. Mark "	359 59 55	Títtraun "	328 42 33
KAILARAS h.s.				KAMALPUR No. 1 s.	
Badreta h.s.	47 37 33	KALIANA N. MDL. MARK s.		Daulatpur No. 2 s.	28 13 46
Juktípura, XVI	51 49 21	Kaliána, L	0 0 8	Gehar "	71 39 35
Sidpur "	59 46 53	Chirtaul Temple	99 43 47	Bhúr "	232 8 30
Sabalgarh Hill Fort	70 46 7	Záhar Pír s.	108 55 49	Laknauti Mosque	327 53 24
Nipri s.	77 50 31	Bánnagar "	283 58 23	Laknauti "	348 5 2
Sewai Fort	78 44 12	Kacholi House	329 55 29		
Hátípura "	135 49 48	KALIANA S. MDL. MARK s.		KAMBHI s.	
Chinoni "	144 41 53	Pinána Tree	21 4 31	Hodal s.	27 45 37
Gurjápahár, XVIII	158 58 19	Salempur s.	41 31 13	Páhera, XXXI	125 38 19
Dongarpur "	282 16 9	Jagáheri Tree	55 41 17	Dhanauta "	313 52 34
Kuárpur h.s.	291 32 42	Kaliána, L	179 59 55		
Rijoni Fort	298 48 39	Didáhedí Mosque	225 54 7	KAMONA s.	
Kharero s.	344 13 1	Mimlána No. 2 "	246 0 49	Baroli s.	49 50 32
Tilondri "	350 18 28	Mimlána No. 1 "	278 36 17	Sohi "	105 2 42
Pahágarh Fort	350 23 40	Muzaffarnagar Mat	303 13 20	Lálar "	155 3 49
Bahrámpur Bastion	354 0 10	Khanjarpur Mat	324 14 31		
KAITHALA s.				KANAR s.	
Chanderu s.	7 50 36	KALIANPUR, (VII)		Jarendho h.s.	243 4 41
Guláothi "	177 42 12	Kaliánpur S. Mdl. Mark s.	0 0 7	Sikrauli "	309 2 26
Lahugla "	250 14 7	Tharoria Tree	27 56 10		
Mát Sarai Building	292 1 4	Tori Tree	61 28 38	KANDA s.	
Málágarh "	326 21 27	Deopura s.	119 6 50	Bheri s.	10 9 39
		Dhamaukheri Tree	161 8 24	Dhákwalá "	27 39 50
		Kaliánpur N. Mdl. Mark, "	179 59 52	Súbri No. 1 "	98 17 44
		A No. 1 "	186 43 15	Gehar "	164 54 23
		Kandikheri Hill Building	212 32 37	No. 6 "	191 52 53
		Boriál Hill Tomb	214 37 51	Laknauti "	206 58 4
		Murtza Ali s.	296 50 56	Binpur "	347 9 23
		Sáklon h.s.	330 39 38	Bálámájra "	319 26 23
		Madagan Fort	349 49 3	Bheri Mosque "	355 59 32
		Kaliánpur Tree	352 56 17		
		Mimoi Mosque	358 57 19		

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KANKA s.		KARAOL, XXXIV		KHADRI s.	
Harautha s. 76 48 49	476	Tappal s. 350 47 43	315	Dádúpur Canal House 97 48 26	944
Bhea " 121 50 53	476	Jewar " 351 23 37	317	Darwa s. 255 7 16	847
Seri " 162 1 37	479			Alhánpur " 314 2 5	846
Esi " 210 31 27	480	KARERA s.			
Sáni " 275 10 22	478	Thisa Tree 21 33 43	696	KHAIKHERA s.	
Hátras Fort 331 6 7	492	Rahmatpur s. 179 59 29	681	Jánsath s. 49 44 44	663
Hátras " 331 14 6	477	Charauli Tree 209 45 51	703	Pír Pamora " 81 21 39	669
Tochigarh Fort 349 4 19	494	Kakrála " 222 3 52	697	Dhakeri " 116 3 6	663
		Ferozpur " 227 5 37	680	Thisa Tree 166 59 28	695
KANKRI h.s.		Chauráwála Tree 286 31 1	700	Karera " 174 16 43	679
Rasia, XXVI 12 39 46	265	Dariápur " 303 9 52	679	Dariápur " 232 33 18	678
Nagar Bungalow 42 55 52	276	Khaikhera " 354 16 29	679	Kátia " 289 54 54	688
Ládpúr, XXVII 89 52 8	266			Sheopúri, XLVIII 309 54 38	665
Dig Temple 283 30 39	278	KARHALI s.		Majhera " 351 34 5	664
Dig Fort 286 41 52	277	Surír s. 34 18 41	470		
Bánda Temple (Harideo) 289 30 54	279	Sikandarpur House 38 26 50	488	KHALARO h.s.	
Madhoni, XXIV 322 39 59	265	Noh, XXXIII 92 36 12	470	Barod h.s. 96 36 4	404
		Lohi " 348 4 42	471	Khári " 143 36 53	405
KANSEPUR s.				Silpuri " 176 31 53	406
Duburji s. 23 32 27	837	KARNAL CITY s.		Barai " 284 36 13	403
Fathipur Bastion 55 35 34	911	Karnál Church 174 31 13	879	Dhangaia " 337 10 22	403
No. 12 a " 65 10 38	907	Kunjpura Mosque 245 54 36	881		
Logarh Bastion 93 32 49	919	Súbri No. 1 s. 252 16 19	877	KHARERO s.	
Gúmtala " 99 1 48	837	Shaikhpura Fort 301 35 0	880	Tilondri s. 12 52 14	224
No. 13 " 114 42 57	917	Ráwar " 321 53 37	877	Badreta h.s. 73 42 3	222
Bágwála " 169 27 26	838			Nipri s. 139 28 55	234
Tabor " 198 45 43	912	KARORA s.		Bahrámpur Bastion 145 48 25	238
Palána " 213 10 15	839	Barhe s. 143 2 26	515	Kailáras h.s. 164 13 28	222
Nukar Temple 300 2 22	916	Shikárpur " 193 52 23	514	Rijoni Fort 220 55 26	236
		Anona Fort 253 33 45	522		
KANSRAO h.s.		Lálar " 263 6 27	513	KHARI h.s.	
Garh h.s. 40 10 4	954	Sohi " 322 46 21	513	Barod h.s. 12 40 10	405
Hill γ 71 23 21	972			Pharáro " 204 27 51	407
Lachkua " 131 42 27	955	KATHOPUR s.		Hari Fort 260 39 8	417
Bahera " 197 28 25	956	Chapár Temple 5 2 34	763	Kesri, XI 261 34 13	408
Hill β 313 25 0	973	Bijápur s. 31 30 33	755	Silpuri " 283 52 31	406
Hill α 325 44 3	975	Tijalheda " 288 24 58	754	Ráipur Building 299 58 1	416
Salempur " 334 55 53	954	Simarathi " 345 49 49	754	Khaláro " 323 34 50	405
KARATA h.s.		KATIA s.		KHERI s.	
Ladára h.s. 14 48 18	181	Mahmudpur No. 2. s. 46 7 15	694	Bálámájra s. 68 27 3	828
Dhobái, XII 168 53 1	181	Khaikhera " 109 56 24	688	Binpur " 137 48 36	827
Himmatgarh Peak 190 21 39	192	Dariápur " 183 18 32	689	Kálsi " 198 55 4	826
Himmatgarh Hill Fort Building 194 36 55	190	Haijarpur " 220 0 55	691	Títiraun " 267 29 50	825
Himmatgarh Hill Fort Gate 194 42 52	189	Kesopur " 293 29 49	690	Pindaaur " 326 27 51	825
Ráipur Peak Temple 195 49 38	191	Sheopúri, XLVIII 330 35 40	688		
Súrampur Building 198 37 52	188			KHORI h.s.	
Chinúr Hill Fort 240 51 28	187	KESOPUR s.		Ládpúr, XXVII 62 0 42	274
Lachmangarh Hill Fort 315 20 35	185	Sheopúri, XLVIII 18 35 30	690	Sareta h.s. 88 23 46	284
Bitarwár Fort 318 2 26	183	Kátia s. 113 30 53	690	Mandla " 90 12 38	288
Bánor Peak 342 24 21	182	Haijarpur " 162 56 3	692	Chapra, XXVIII 184 47 50	275
				Rasia, XXVI 314 15 30	274
KARAMPUR s.		KESRI, XI			
Sarna Fort 19 23 3	556	Khári h.s. 81 38 49	408	KHUJNAUR h.s.	
Samsar s. 47 19 14	554	Pharáro " 135 53 58	408	Hatni h.s. 9 29 1	963
Meola " 83 5 25	555	Tirauli " 154 31 59	409	Kotri " 71 57 17	964
Badkal " 305 39 6	553	Sikrauli " 193 22 38	410	Bahensia Hill Mark 103 54 17	987
Siálatpur " 338 0 53	553	Chorpura Hill Mark 299 38 51	178	Sahansra h.s. 112 40 57	965
		Ladára Hill Tomb 304 24 41	176	Shorpur " 303 46 52	963
KARAOL, XXXIV		Ladára " 304 42 22	173		
Gori s. 77 12 36	316			KIDARPUR h.s.	
Diánatpur " 247 43 56	318	KHADRI s.		Bári s. 232 35 22	249
Thoro " 289 53 34	462	Bhogpur s. 8 26 15	846	Dholpúr, XX 253 50 38	246
Sarol " 345 16 0	462	Fathigarh Bastion 18 16 24	945	Thúm " 292 20 32	247
		Búria, Meg Sing's House 39 10 54	943	Gurjápahár, XVIII 341 1 59	246
		Búria, Goláb Sing's House 40 10 11	942		

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KINAUNI s.	0 1 "	LABKARI s.	0 1 "	LAKNAUTI HAVELI s.	0 1 "
Tauli Tree	24 39 19	Barheri	66 23 45	Barheri	94 5 56
Salempur	176 4 41	Deoban Haveli	280 30 3	Labkari	189 42 2
Manjhera	260 33 34			Deoban Haveli	232 51 14
Aholna Building	299 30 43	LACHERA s.		No. 3a	353 40 49
Semri Tree	316 53 11	Sonjhni Tree	27 58 51		
Lachera	349 18 59	Tauli Tree	108 45 19	LAKNAUTI s.	
		Sánjak Mosque	155 19 10	Kanda	26 59 34
KISHANPUR h.s.		Kinauni	169 19 15	Begighát	48 56 31
Kherwár Hill Mark	33 40 9	Manjhera	196 35 10	Gehar	96 0 5
Gugubára, VII	215 33 52	Muzaffarnagar Idgáh	205 36 25	Daulatpur No. 2	100 55 52
Buda Dongar Fort	254 1 42	Semri Tree	210 40 16	Súrampur Bastion	157 25 56
Kundai	268 52 11	Aholna Building	236 48 9	Kalsaura	103 16 38
Singon Fort	269 36 56	Jaroda	263 48 44	Kamálpur No. 1	168 5 14
Bijráwan do.	272 19 28	Jaroda Bastion	283 4 48	Bhúr	204 19 4
Badarwás do.	288 38 40	Nára Makbara	284 12 21	Duburji	206 49 46
Chendoria do.	310 24 57	Begarazpúr, XLVII	307 39 53	Laknauti Mosque	267 57 3
Barkheri, V	351 30 57				
		LACHKUA h.s.		LAKNI h.s.	
KOLUA h.s.		Hill a	114 31 12	Sípri	58 13 33
Semra	21 54 11	Hill b	135 13 42	Nohri	118 28 56
Garla	285 48 11	Bulwála	136 21 8	Mamoni, IX	152 33 42
Handiapáro, I	306 13 11	Doiwála, LV	186 31 24	Mamoni Fort	153 32 45
		Bahera	275 11 7	Kankar Building	182 58 27
KOTRA s.		Kánsrao	311 41 2	Satanwára Building	189 52 52
Darwa	63 30 36	Hill β	312 23 13	Theo Building	197 19 57
Bhúd Jod Sing's Village	112 21 58	Garh	347 45 46	Dongri	206 35 32
Amsot, (XI)	225 10 29				
Sháhpur	297 51 17	LACHORA h.s.		LALAR s.	
Rasúlpur	357 28 19	Madhoni, XXIV	199 26 50	Sohi	18 14 1
		Agápur	230 35 47	Karora	83 8 38
KOTRI h.s.		Usira, XXII	280 43 24	Anona Fort	105 12 44
Barkala	115 37 17	Maloni	292 7 43	Shikárpur	143 10 16
Hill D	146 15 39			Chatári Building	326 57 27
Sahansra	150 51 38	LADARA h.s.		Kamona	335 2 33
Bahensia Hill Mark	189 38 58	Shergarh, X	5 54 53		
Khujnaur	251 55 1	Mamoni, IX	64 54 8	LALGARH h.s.	
Hatni	302 15 0	Kesri, XI	124 48 42	Barod	172 38 3
		Narwar Fort	151 31 54	Barai	217 33 49
KUARPUR h.s.		Jajádeo Hill Temple	173 57 32	Mamoni, IX	230 26 13
Banderia	34 20 28	Dhobái, XII	192 2 58	Gugubára, VII	345 9 42
Isápur	75 38 31	Karaia	194 46 9		
Juktípura, XVI	81 16 11	Bámor Peak	212 28 2	LAL KHAN'S SARAI s.	
Badreta	84 58 51			Sadarpur	186 11 44
Kailáras	111 37 21	LADPUR, XXVII		Dásna	256 16 14
Jakodi	339 4 5	Dúli Hill Mark	2 49 33		
Dín, XIII	356 20 57	Alwar Chatri	108 25 4	LASWARI s.	
		Alwar	108 26 25	Ládpúr, XXVII	64 20 18
KUNDAI h.s.		Sareta	158 51 47	Sareta Hill Chatri	105 36 12
Kishanpur	88 57 20	Sareta Hill Chatri	161 6 27	Mandla	119 3 39
Gugubára, VII	163 58 43	Kho Temple	165 59 27		
Nimdánt, VI	263 57 42	Rámgarh Hill Chatri	175 45 22	LAWAR s.	
Alaudi Building	312 4 28	Tijára Dome	184 32 33	Mirat R. C. Chapel	30 19 2
Piront Building	314 20 30	Pát	198 14 7	Mirat Church	31 54 32
Pahárgarh, IV	325 59 38	Mandla	198 20 9	Mirat Monument	32 50 58
		Khori	241 55 41	Mirat Masjid	35 40 32
KUTABGARH s.		Láswári	244 17 15	Mirat Racket Court	36 57 10
Herinwára	10 58 54	Kánkri	269 41 45	Dedua Tree	43 2 58
Titársi	75 39 16	Pahári Building	272 36 56	Panwári	81 41 8
Harár Bastion	80 22 9			Mataur	114 33 23
Thánah Bhawan City	142 46 8	LAHUGLA s.		Ikhtiárpur Tree	131 6 44
Thánah Bhawan	193 52 16	Málágarh	15 9 11	Sápúr	154 59 25
Lohári Mosque	218 47 54	Kaithala	70 15 38	Masúri Haveli	313 29 20
		Guláothi	142 3 49	Khirdoni House	321 44 15
LABKARI s.		Bágwála Fort	178 4 7	Pabla Tree	343 13 51
No. 3a	1 1 47	Gangauli	187 7 32	Saini, XLV	352 37 14
Laknauti Haveli	9 42 10				

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LOHI s.		MALONI h.s.		MANJHERA s.	
Hindol s. 25 6 24	472	Jagner Hill Mark 328 44 30	261	Aholna Building 326 1 6	737
Surír " 84 43 5	471			Jaroda s. 330 24 56	718
Sikandarpur House 130 7 38	488	Mamoni, IX		Jaroda Bastion 341 58 12	731
Jarára Temple 136 48 12	489	Nohri h.s. 7 37 4	168		
Karháli " 168 5 8	471	Lálgarh " 50 30 41	399	MANPUR, XXIX	
Bhea " 279 26 57	474	Barai " 190 27 13	400	Hodal s. 181 47 32	454
Gorai " 335 25 55	478	Barai Hill Fort 190 53 1	168	Nandgáon Hill Temple 197 56 43	302
		Jajádeo Hill Temple 225 14 20	174	Dhanauta " 210 10 34	453
LOIA s.		Ladára Hill Tomb 242 14 18	176	Barsána Hill Temple 224 7 24	300
Sakauti s. 153 26 20	612	Ladára " 244 48 9	172	Chátai Sarai Gateway " 236 50 25	451
Sapur " 222 34 50	612	Dongri " 293 12 30	160	Pilhora " 260 54 43	449
		Mamoni Fort 330 42 20	166		
MADHONI, XXIV		Lakni " 332 32 42	162	MAO, VIII	
Lachora h.s. 19 29 18	253			Akájeri Fort 14 23 54	139
Nandbai s. 87 6 13	263	MANAKPUR s.		Tila Hill Fort 77 48 16	152
Rásia Hill Temple 132 25 52	264	Bachíti s. 55 30 13	805	Bichi h.s. 91 17 4	138
Kánkri h.s. 142 46 31	265	Dankowáli " 128 8 3	806	Barodia " 120 13 1	153
Kumbher Building 153 12 34	267	Jhabrera Temple 338 0 19	815	Jagtha s. 124 8 13	155
Bhartpur Bungalow 278 31 50	259	Sítalpur " 348 20 31	805	Khenwai Fort 148 29 18	154
Bhartpur Fort 279 25 6	258			Dongri h.s. 151 22 26	160
Fathipur Síkri Dome 302 49 49	251	MANAT s.		Pahro " 358 34 54	140
Agápur s. 317 45 36	250	Naujil s. 6 13 25	822		
Bhartpur Residency 340 0 58	257	Pindaur " 77 43 29	823	MAO s.	
		Titraun " 126 19 13	824	Siwáro s. 50 5 22	466
MADKA h.s.		Gausgarh Mosque 297 14 31	864	Umri " 126 29 52	466
Jakodi h.s. 36 38 42	207	Thánah Bhawan " 306 3 38	822	Chandaos, XXXVI 194 28 15	467
Ráepúr, XV 303 39 40	207	Thánah Bhawan City " 326 38 27	858		
Barai Temple s. 334 40 13	209	B No. 2 " 345 3 42	871	MASURI, CAMEL'S BACK h.s.	
		A No. 3 " 357 17 13	870	Dehra Doon Obsy. S. (old) 6 5 23	370
MAHMUDPUR No. 1 s.				Dehra, Sur. Genl's. old Office 6 35 21	374
Guláothi s. 8 48 40	530	MANDAUR s.		Masúri, Convent 36 42 3	381
Hirdepur Village 11 38 57	540	Mogpur s. 47 45 38	666	Masúri, Vincent's Hill s. 70 17 36	372
Bhatána " 96 44 21	531	Nirána " 132 56 44	666	Masúri, Laureston Obsy. Mark 87 2 43	382
Hápur " 167 17 43	532	Dhakeri " 229 40 9	667	Banog, (X) 108 0 25	370
Emdanagar Village 290 45 14	539	Chitora " 355 50 44	668	Landaur, Protestant Church 267 21 9	385
Gangauli " 302 15 11	530			Landaur, Hospital 280 25 6	386
		MANDI s.		Sirkanda H.S. (old) 284 34 55	371
MAHMUDPUR No. 2 s.		Gadauli s. 138 42 9	928	Masúri, Himalaya Club 303 14 31	384
Kátia s. 226 6 6	694	Brahmpura Bastion 159 28 14	933	Masúri, Zephyr Hall 311 54 3	383
Kailápur Tree 257 54 23	677	Bhogpur " 213 37 36	928	Masúri, Manor House h.s. 334 12 17	380
Sheopúri, XLVIII 277 17 34	693	Rájghát " 255 37 16	930		
Sikreda " 290 11 39	673	Shujápur " 326 15 49	929	MASURI, MANOR HOUSE h.s.	
Majhera " 359 6 12	693			Masúri, Vincent's Hill s. 125 7 4	380
		MANDLA h.s.		Masúri, Camel's Back h.s. 154 12 41	380
MAJHERA s.		Ládpúr, XXVII 18 21 2	282	Landaur, Protestant Church 195 51 2	385
Jánsath s. 109 50 19	664	Rámgarh Hill Chatrí 71 24 9	287	Landaur, Hospital 218 42 23	386
Sambalheda Tree 163 37 54	675	Sareta h.s. 84 18 35	285		
Khaikhera " 171 34 27	664	Kho Temple 120 22 2	286	MASURI, VINCENT'S HILL s.	
Mahmudpur No. 2 " 179 6 13	693	Tijára Dome 180 51 38	288	Banog, (X) 120 55 0	372
Sheopúri, XLVIII 252 49 3	665	Chapra, XXVIII 225 46 9	282	Masúri, Laureston Obsy. Mark 214 19 8	382
Sikreda " 253 8 48	673	Sherpur Temple 234 43 6	293	Masúri, Camel's Back h.s. 256 17 5	372
Míránpur Building 303 50 22	672	Khori " 270 8 30	283	Masúri, Zephyr Hall 265 39 19	383
		Láswári s. 299 1 25	289	Landaur, Hospital 269 26 0	387
MALAGARH s.				Masúri, Himalaya Club 271 52 11	384
Chanderu s. 51 6 19	525	MANJHERA s.		Masúri, Manor House h.s. 305 6 9	380
Kaithala " 146 22 25	526	Semri Tree 3 12 3	740	Masúri, Convent 313 56 11	381
Mát Sarai Building 183 48 40	536	Lachera s. 16 35 37	718	Dehra Doon Obsy. S. (old) 359 25 23	373
Lahugla " 195 8 38	527	Tauli Tree 44 38 38	734		
Dhakauli Mosque 329 35 22	535	Sánjak Mosque 48 21 41	733	MATAUR s.	
Boolandshahar, XXXVII 335 0 28	525	Kinauni " 80 34 17	719	Sakauti s. 176 19 40	592
		Salempur " 142 59 13	720	Sapur " 215 24 30	591
MALONI h.s.		Khanjarpur Mat 187 28 44	741	Ikhtíarpur Tree 256 53 31	610
Lachora h.s. 112 13 47	256	Mimlána No. 1 " 192 18 58	721	Láwar " 294 31 36	590
Rúpbás Palace 200 59 51	262	Muzaffarnagar Mat 223 0 50	743	Jhota Well 320 22 13	609
Fathipur Síkri Dome 208 20 24	255	Muzaffarnagar Idgáh 223 33 44	736	Panwári " 331 27 50	590
Usira, XXII 244 14 4	255	Muzaffarnagar Temple 231 19 55	745		

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MAT s.	o' "	MURTZA ALI s.	o' "	NAUJIL s.	o' "
Mattra s.	11 2 56	Kaliánpur, (VII)	116 51 35	A No. 3 s.	205 56 59
Brindában Temple	20 9 24	Kaliánpur, N. Mdl. Mark s.	139 12 14	Thánah Bhawan "	246 7 7
		Ali Purus s.	161 3 1	Herinwára "	308 35 39
MATRA s.		Kandikheri Hill Building	161 7 29		
Aring, XXX	82 9 28	A No. 1 s.	164 34 44	NAULA s.	
Brindában Temple	184 7 12	Boriál Hill Tomb	199 26 11	Kheri Tree (near Naula)	5 8 3
Mát s.	191 2 23	Sironj base-line, N.E. End, (II)	254 45 19	Chálsina s.	30 28 32
		Sironj Fort Mosque	284 37 58	Amarpur "	31 3 46
MEHRMATI s.		Sironj Yúsaf Khán's House	308 52 21	Pura Tree "	109 13 17
Ikri Saloon	33 11 58	Sironj Fort House	321 0 49	Pur Tree	149 34 47
Saraoli, XLIV	128 2 18	Sháh Mustafa Hill Dargáh	328 2 7	Begarazpúr, XLVII	190 17 10
Sardhana s.	207 7 30	Sáklon h.s.	342 45 48	Bopára Tree	197 50 43
Sardhana Church	212 57 30			Sontha "	263 49 27
Alipur Tree	253 15 34	NAGLA No. 1 s.		Bhainsi "	313 35 27
Sardhana Country seat	278 0 25	Sakauti s.	33 56 40		
Paholi s.	310 8 48	Dádri Tree	77 30 38	NAURANGABAD s.	
		Rukanpur Tree	121 17 19	Mirat Church	95 31 52
MEOLA s.		Dudli No. 1 "	130 3 3	Saini, XLV	164 56 23
Karampur s.	263 2 3	Táwita Tree	168 39 37	Saini Nagla Tree	214 36 55
Samser "	307 43 51	Mandaura Tree	335 51 19		
		Sapur "	350 36 19	NAWADA h.s.	
MEOLI, XXXII				Doiwála, LV	9 37 27
Báhin s.	290 0 15	NAGLA No. 2 s.		Arcadia House s.	134 16 23
		Nansura s.	37 10 22	Banog, (X)	171 10 57
MIMLANA No. 1 s.		Nawáda "	101 23 53		
Manjhera s.	12 19 15	No. 9a "	163 36 23	NAWADA s.	
Khanjarpur Mat	16 29 47	Labreri Haveli	221 12 23	No. 7 s.	107 24 19
Pinána Tree	52 55 8	Sikar Temple W.	250 54 17	Sitalpur "	173 8 41
Jagáheri Tree	70 10 11	Dhameit "	336 40 24	No. 9a "	222 40 2
Salempur "	78 8 37			Nagla No. 2 "	281 22 12
Kaliána S. Mdl. Mark "	98 37 4	NAHAL s.		Nansura "	339 3 30
Kaliána, L	134 51 14	Dásna s.	55 47 4		
Mimlána No. 2 "	154 15 43	Sadarpur "	76 33 51	NIBODA h.s.	
Bánnagar "	196 58 15	Badkal "	154 30 45	Gugubára, VII	16 30 1
Muzaffarnagar Temple	329 27 21	Kalchina "	205 17 2	Shankargarh h.s.	35 7 26
Muzaffarnagar Mat	330 47 12	Garand "	318 2 16	Sisai Fort	228 27 13
				Bíta "	319 48 50
MIMLANA No. 2 s.		NANDHERI s.			
Kaliána S. Mdl. Mark s.	66 1 25	Gadla Mosque	60 31 14	NIMDANT, VI	
Kaliána, L	123 25 37	Simarathi s.	118 3 31	Barauli h.s.	15 39 56
Kacholi House	151 45 35	Chapár Temple	120 42 11	Kundai "	84 3 46
Didáhedí Mosque	201 34 8	Simarathi Tree	126 28 41	Bíchi "	162 39 31
Mimlána No. 1 "	334 15 32	Tijalheda "	170 42 4	Akájeri Fort	167 29 32
		A No. 2 "	231 3 10	Ránod Fort	186 24 32
MITHOLI s.		Rahmatpur "	280 43 5	Pahro "	288 26 32
Pakodna s.	71 2 3	Nargájáni Tree	283 11 3		
Tappal "	146 22 35			NIPRI s.	
Jatári "	188 19 18	NANDHO s.		Madráni Bastion	162 56 12
Rájpur "	235 36 59	Seri s.	43 54 52	Hátipura s.	185 5 1
Siwáro "	276 30 29	Chondiána "	104 56 9	Kailáras h.s.	257 49 46
Noh, XXXIII	359 25 26	Bhágú-ka-pala "	140 48 4	Kharero s.	319 27 43
		Aligarh Fort	216 11 1	Tilondri "	329 9 39
MOGPUR s.		Aligarh Church	252 39 5		
Begarazpúr, XLVII	106 55 49	Koel Mosque	284 17 3	NIRANA s.	
Nirána s.	178 32 40	Esi "	350 55 50	Begarazpúr, XLVII	55 38 20
Mandaur "	227 44 32			Dhakeri s.	282 3 52
Dhakeri "	228 31 7	NANSURA s.		Mandaur "	312 55 35
Chitora "	265 27 36	Nawáda s.	159 4 9	Mogpur "	358 32 37
Jánsath "	296 27 59	Nagla No. 2 "	217 9 20		
		Dhameit "	282 19 53	Noh, XXXIII	
MURTZA ALI s.		No. 10a "	348 12 33	Barsána Hill Temple	50 44 7
Mimoi Mosque	48 45 7			Nandgáon Hill Temple	59 21 22
Tharoria Tree	50 25 24	NAUJIL s.		Dhanauta s.	105 13 36
Tori Tree	79 44 22	Pindaur s.	126 59 19	Pakodna "	132 5 38
Kaliánpur S. Mdl. Mark s.	79 55 49	Manát "	186 13 9	Mitholi "	179 25 28
Kaliánpur Tree	93 51 7	B No. 2 "	195 46 40	Siwáro "	228 9 6

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NOH, XXXIII Karháli s. 272 32 32 Surír " 318 39 7 Brindában Temple 351 53 26	470 470 304	No. 13 s. Logarh Bastion 47 32 7 Gúmtala s. 70 24 50 Nagli Bastion 188 9 35 Tabor " 256 52 12 Kánsepur " 294 41 37	919 918 924 917 917	PALANA s. No. 16 s. 160 46 18 Shujápur " 211 36 2	926 841
NOHRI h.s. Sipri s. 16 0 1 Mamoni, IX 187 36 54 Dongri h.s. 251 33 56 Lakni " 298 27 46	165 163 163 164	No. 14 s. Karera Bastion 81 40 28 Bágwála s. 154 8 18 Palána " 254 56 2 Tabor " 329 55 40	925 923 922 922	PALHERA s. Jeori Tree 81 13 36 Paholi s. 113 49 42 Sípur " 160 49 56 Panwári " 215 19 54 Kharauda Tree 258 23 13 Saini, XLV 284 28 29 Lalsana Tree 296 45 38 Mirat Monument 348 41 10 Mirat Church 349 13 59 Mirat B. C. Chapel 354 10 9	576 559 558 557 567 557 571 569 565 563
NOJLI, LIII No. 5a s. 7 58 1 Saháranpur " 121 35 41 Karaunda Mark 175 32 10 Dankowáli " 303 18 16	808 356 354 808	No. 16 s. Shujápur s. 245 40 56 Sirsáwa, Tehsildár's Kachabri 295 34 6 Palána s. 340 45 51	926 927 926	PALI s. Gurjápahár, XVIII 186 5 46 Sewar s. 227 30 41 Tendhokar Temple 324 3 2 Bairági's Math 358 20 4	242 242 245 244
No. 3a s. Rankandi s. 17 49 51 Dahera, LI 59 6 22 Barheri " 124 4 28 Laknauti Haveli 173 40 55 Labkari " 181 1 45	790 790 791 793 792	PAGARO, XVII Gwalior Hill Temple 280 1 9	205	PALWAL s. Páhera, XXXI 18 25 37 Hatín s. 36 51 31 Rasúlpur Building 308 46 40	310 310 311
No. 5a s. Nojli, LIII 187 57 48 Dankowáli s. 248 20 4 Bachíti " 299 0 39	808 807 807	PAHARGARH, IV Charauli Hill 44 27 40 Kundai h.s. 146 1 13 Alaudi Building 161 45 8 Khurd Megona Hill Mark 237 55 49 Piront Building 251 46 38 Barauli h.s. 320 0 22 Morwáso Fort 331 56 32	114 125 128 117 127 116 124	PANJUPUR s. Bágwála s. 8 6 25 Abdullápur " 207 52 20 Gadauli " 226 27 49 Shujápur " 281 3 3 Palána " 326 15 16	840 932 842 841 840
No. 6 s. Kanda s. 11 53 10 Gehar " 147 27 8 Tapu Bastion 160 57 31 Begighát " 198 46 8	882 882 887 885	PAHERA, XXXI Báhin s. 12 44 31 Goraksir " 53 45 1 Hatín " 83 7 41 Palwal " 198 24 36 Rasúlpur Building 247 47 36 Tappal " 271 13 46 Kambhi " 305 34 49 Gadráno Temple 312 8 8 Hodal " 335 47 19	298 307 309 310 311 315 456 308 456	PANWARI s. Palhera s. 35 20 58 Sípur " 96 19 19 Mataur " 151 28 22 Láwar " 261 39 53 Jhota Well 284 42 42 Dedua Tree 319 13 17 Saini, XLV 324 52 37 Kharauda Tree 331 8 50	557 558 590 589 609 605 557 568
No. 7 s. Bachíti s. 187 18 31 Sítalpur " 230 16 37 Jataul " 233 48 5 Nawáda " 287 22 31	804 803 814 803	PAHOLI s. Dabhua Temple 37 6 45 Ikri Saloon 106 21 46 Mehrmati s. 130 10 8 Sardhana " 163 22 0 Sípur " 230 32 47 Palhera " 293 47 57 Jeori Tree 319 4 18	578 586 561 560 559 559 577	PARDHO, (VI) Dongra Building 158 32 55 Tumen h.s. 171 21 55 Semra " 174 2 55 Karíla Fort 233 46 55	106 107 104 105
No. 9a s. Nawáda s. 42 41 15 Sítalpur " 111 21 14 Labreri Haveli 289 27 5 Nagla No. 2 " 343 35 55	801 802 813 801	PAHRO h.s. Nímdánt, VI 108 27 4 Ránod Fort 155 54 4 Mao, VIII 178 35 4	140 141 140	PAT h.s. Ládpúr, XXVII 18 16 35 Bhagola s. 251 53 21 Gháto h.s. 268 56 12 Chapra, XXVIII 279 20 19 Alípúr, XXV 353 12 7	269 294 295 270 269
No. 10a s. Nansura s. 168 12 58 Dhameit " 220 35 1 Godhna, XLIX 278 53 5 Abdulpur Mosque 283 40 0	798 797 797 811	PAKODNA s. Tappal s. 187 57 19 Mitholi " 250 59 33 Noh, XXXIII 312 3 6	458 457 457	PATLOKAR No. 1 s. Char Tree 17 52 48 Saraoli, XLIV 32 24 55 Tári Tree 91 29 18 Patlokar No. 2 s. 96 3 31 Bhambára Masjid 188 7 21 Farídpur No. 1 " 221 50 51 Khera No. 1 Tree 247 41 19 Daulatpur No. 1 " 269 44 24 Mahádon Tree 310 33 26	644 634 643 645 650 636 651 635 649
No. 11a s. Kalsaura s. 63 18 39 Chaugáma Bastion 198 51 4 No. 12a " 219 54 15 Nánuwála Bastion 257 51 59 Duburji " 286 48 14 Chapra Bastion 292 18 24	901 904 906 905 901 903	PALANA s. Kánsepur s. 33 11 58 Tabor " 40 25 47 No. 14 " 74 58 1 Bágwála " 85 39 28 Pánjápúr " 146 17 2	839 914 922 839 840		
No. 12a s. No. 11a s. 39 55 20 Kánsepur " 245 8 54 Fathipur Bastion 255 50 59 Duburji " 341 33 24	906 907 911 906				

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PATLOKAR No. 1 s.	o' "	RAHMATPUR s.	o' "	RAWAR s.	o' "
Sardhana s.	318 2 58	Ferozpur s.	288 32 45	Karnál City s.	141 54 26
Kalandi Tree	330 59 33	Bhokáredi Tree	295 58 40	Karnál Church	154 43 21
PATLOKAR No. 2 s.		Kakrála	344 50 13	Súbri No. 1	212 29 23
Saraoli, XLIV	26 26 45	Karera	359 59 28	Shaikhpara Fort	244 9 36
Hindan s.	99 28 14	RAJGHAT s.		Dhákála	282 25 59
Patlokar No. 1	276 3 19	Chauri Bastion	7 54 21	ROJA s.	
PHARARO h.s.		Shujápur s.	46 47 46	Garabpur s.	3 15 50
Khári h.s.	24 29 32	Mandi	75 38 48	Dásna	213 31 15
Tirauli	207 7 40	Bhogpur	150 34 22	Bambáwan	258 45 32
Kesri, XI	315 51 3	RAJPUR h.s.		Dádri	298 5 50
Silpuri	355 55 51	Kalanga h.s.	9 3 3	SADARPUR s.	
PILHORA s.		Dehra Sur. Gen'l's. old Office	30 26 32	Lál Khán's Sarai s.	6 11 51
Aríng, XXX	12 31 48	Rájpur Mosque	38 30 11	Síálatpur	184 49 40
Mánpúr, XXIX	81 0 41	Banog, (X)	127 14 39	Badkal	222 31 3
Barsána Hill Temple s.	84 32 29	Masúri, Church Steeple	141 25 24	Náhal	256 31 51
Chátai Sarai Gateway	133 35 3	RAJPUR s.		Dásna	306 16 3
PINDAUR s.		Mitholi s.	55 39 39	SAHANSRA h.s.	
Kheri s.	146 29 4	Umri	249 16 12	Barkala h.s.	71 50 0
Tíraun	203 34 11	Siwáro	347 21 9	Hill F	83 28 34
Manát	257 40 51	RAL HOUSE s.		Amsot, (XI)	132 45 18
Naujil	306 56 57	Aríng, XXX	21 18 4	Khujnaur	292 37 27
PIRGHAIB, XXXIX		Barsána Hill Temple s.	118 38 28	Kotri	330 50 24
Mansúr Ali's Tomb	1 33 30	RAMDWARA s.		Hill E	343 42 5
Kutab Míнар	9 10 26	Tálkatora h.s.	28 49 10	SAINI, XLV	
Adam-ka-gummat	10 12 38	Dhaolri, XLI	224 5 12	Mirat R. C. Chapel	62 49 53
Koseri-ka-gummat	26 30 41	Datairi, XL	261 58 19	Mirat Church	69 33 47
Tálkatora h.s.	29 42 29	Bostán, XXXVIII	302 5 39	Mirat Monument	71 56 28
Dehli Cant. Pillar	137 19 30	Dehli S. Míнар	333 10 5	Mirat Racket Court	73 47 27
Dehli Chaplain's House	200 8 23	RAMPUR s.		Mirat Masjid	74 18 53
Dehli Cant. Flag Staff	200 32 45	Bánnagar s.	93 7 33	Lalsana Tree	94 0 37
Dehli Church	304 42 26	Bahedi Chauki	170 5 15	Palhera s.	104 31 6
Dehli Palace	312 26 23	Sisona	253 26 50	Kharauda Tree	138 48 42
Dehli N. Míнар	325 31 40	RANKANDI s.		Panwári	144 54 10
Dehli Dome	326 2 47	Dahera, LI	124 31 50	Dedua Tree	147 13 40
Humáyún's Tomb	338 19 15	No. 3a s.	197 49 27	Láwar	172 37 32
PIR PAMORA s.		RAO-KA-NAGLA s.		Pabla Tree	192 28 51
Dhakeri s.	163 9 9	Arnaich s.	125 28 53	Khirdoni House	208 55 5
Theora	221 35 54	Ráo-ka-Nagla Atári	210 25 51	Masúri Haveli	227 28 6
Khaikhera	261 19 47	Chirtaul	337 59 31	Saini Nagla Tree	303 47 32
RAJPUR, XV		RASIA, XXVI		Naurangabad	344 56 5
Mangára Building	27 31 8	Dúli Hill Mark	68 7 15	SAKAUTI s.	
Paniári Building	50 56 36	Nagar Bungalow	75 55 47	Barkali Tree	50 50 46
Barai Temple s.	60 56 25	Pahári Building	107 55 58	Saláwa B s.	132 26 36
Ráipur Temple	72 55 53	Sareta Hill Chatri	113 38 51	Dudli No. 1	169 50 47
Jakodi h.s.	78 25 12	Khori h.s.	134 20 23	Dádri Tree	184 48 6
Dondrápur	93 58 8	Kánkri	192 39 17	Nagla No. 1	213 55 58
Pagáro Hill Temple	123 6 19	Bándra Temple (Harídeo)	244 45 2	Mandaura Tree	242 11 15
Madka	123 42 56	Díg Temple	253 12 24	Sapur	295 55 16
Rái Building	131 11 11	Díg Fort	256 51 11	Loía	333 25 51
Gwalior Hill Temple	223 23 59	Kumbher Building	303 40 4	Mataur	356 19 34
Lachmangarh Hill Fort	354 38 24	RASULPUR s.		SAKLON h.s.	
Bitarwár Fort	355 22 36	Alhánpur s.	68 6 7	Madagan Fort	119 10 54
RAHMATPUR s.		Darwa	129 35 59	Mimoi Mosque	136 57 26
Isápur Tree	11 29 12	Kotra	177 28 25	Kaliánpúr, (VII)	150 40 51
Nandheri s.	100 44 54	Játowála	234 16 27	Murtza Ali s.	162 46 22
A No. 2	169 17 48	Sháhpur	250 50 1	Sironj Fort House	164 45 32
Síkri Building	198 37 41			Sironj Fort Mosque	165 51 14
B No. 1	240 58 4			Sironj, Yúsaf Khán's House	169 39 8
				Súrantál, (III)	173 14 15
				Sháh Mustafa Hill Dargáh	180 55 21

Name of station with azimuths of surrounding points	Reference to triangle containing distance	Name of station with azimuths of surrounding points	Reference to triangle containing distance	Name of station with azimuths of surrounding points	Reference to triangle containing distance
SAKLON h.s. Sironj base-line, N.E. End, (II) 229 22 54	89	SARAOI, XLIV Tári Tree 179 9 17 Hindan s. 192 17 7 Patlokar No. 2 " 206 25 58 Patlokar No. 1 " 212 23 56 Kalandi Tree 236 18 9 Char Tree 238 0 23 Sardhana " 278 39 37 Jalheda Temple 296 1 57 Mehrmati " 308 0 11	643 646 645 634 641 644 562 588 562	SERI s. Bhea s. 39 21 18 Chondiána " 159 9 3 Nándho " 223 52 40 Aligarh Church " 232 26 41 Maua Bastion 267 31 10 Esi " 280 59 3 Kánka " 342 0 34	479 483 482 501 500 481 479
SALAWA A s. Sikandarpur Tree 145 43 54 Chálsina s. 171 14 47 Kheri Tree (near Naula) 192 18 8 Sateri s. 223 26 0 Dudli Khera Bastion 277 51 43 Dudli No. 1 " 284 46 17 Rukanpur Tree 299 19 32 Kheri Tree (near Dudli) 310 57 15 Saláwa B s. 356 32 19	623 598 625 597 622 596 619 620 596	SARDHANA s. Mehrmati s. 27 8 8 Ikri Saloon 29 14 48 Jalheda Temple 60 38 32 Saraoli, XLIV 98 42 22 Kalandi Tree 133 6 26 Patlokar No. 1 " 138 4 44 Mahádon Tree 150 13 42 Daulatpur No. 1 " 194 11 46 Sardhana Nagla Tree 249 26 43 Kalinjan Tree 267 35 57 Alipur Tree 297 5 19 Sípur " 307 27 59 Sardhana Country Seat 329 50 11 Paholi s. 343 21 18 Sardhana Church 345 24 13	561 586 588 562 641 634 648 635 647 585 583 560 579 560 581	SEWAR s. Tendhokar Temple 6 5 23 Chinoni s. 16 4 3 Bairági's Math 32 4 35 Páli " 47 31 17 Gurjápahár, XVIII 154 39 57	245 241 243 242 241
SALAWA B s. Saláwa A s. 176 32 23 Dudli No. 1 " 220 25 30 Kheri Tree (near Dudli) 228 17 23 Sakauti s. 312 25 29	596 595 620 595	SHAHPUR s. Behat Building 33 52 23 Rasúlpur s. 70 52 57 Játowála " 117 51 25 Kotra " 117 54 19 Amsot, (XI) 193 34 24	641 634 648 635 647 585 560 579 560 581		948 850 947 850 851
SALEMPUR h.s. Garh s. 98 34 51 Kánsrao " 154 56 30 Sunárgarh " 263 26 15 Hazára " 354 19 26	953 954 952 952	SHANKARGARH h.s. Rai Fort 44 39 42 Niboda h.s. 215 6 8 Bíta " 235 10 15 Tíla Hill Temple 252 51 26 Bíchi " 255 5 41 Koláras Temple s. 278 46 56 Kare Fort 307 44 24 Gugubára, VII 325 9 23	560 579 560 581		144 149 147 145 142 146 143 142
SALEMPUR s. Pinána Tree 6 49 54 Jagáheri Tree 61 48 27 Kaliána, L 196 58 49 Kaliána S. Mdl. Marks. 221 30 55 Mimlána No. 1 " 258 7 32 Muzaffarnagar Temple 288 9 57 Manjhera " 322 58 25 Kinauni " 356 4 36	751 750 723 747 721 746 720 720	SHEOPURI, XLVIII Tikola Fort 10 56 47 Míránpur Building 41 28 49 Sikreda s. 72 14 35 Majhera " 72 50 57 Mahmudpur No. 2 " 97 19 29 Khaikhera " 129 56 54 Kátia " 150 36 26 Dariápur " 168 6 43 Kesopur " 198 35 12	560 579 560 581		676 672 674 665 693 665 688 678 690
SAMHOLI s. Daulatpur No. 1 s. 6 53 13 Búbkheri Tree 17 29 18 Farídpur No. 1 " 58 8 5 Choli Tree 88 7 45 Chora Tree 117 40 12 Gandaur " 149 18 29 Amarpur " 222 27 56	637 653 637 654 655 638 639	SAROL s. Tappal s. 6 16 32 Karaol, XXXIV 165 16 47 Thoro " 220 7 56 Jatári " 307 42 49	460 462 461 460	SHERGARH, X Chorpura Hill Mark 134 17 7 Narwar Fort 169 2 52 Jajádeo Hill Temple 176 56 0 Ladára h.s. 185 54 47	178 180 174 172
SAMSER s. Meola s. 127 45 26 Karampur " 227 17 27 Siálatpur " 260 8 26	555 554 554	SASNI s. Hátras Fort 14 7 26 Hátras s. 14 30 59 Tochígarh Fort 66 39 14 Kánka " 95 13 20 Esi " 155 16 49 Koel Mosque 172 23 47 Mandrák Factory 177 34 6 Lutsan Building 333 12 27	493 478 494 478 480 498 497 496	SHIKARPUR s. Karora s. 13 52 58 Barhe " 81 10 35 Genori " 172 19 28 Lálar " 323 8 40	514 515 516 514
SANAULI s. Bhúr s. 5 28 45 Nainspur Bastion 138 11 22 Bádi Bastion 206 9 2 Náharmájra Bastion 213 11 22 Duburji " 306 21 47	902 908 909 910 902	SATARI s. Saláwa A s. 43 26 47 Sikandarpur Tree 78 37 15 Chálsina " 122 47 58 Bhainsi " 204 0 27 Khatáoli Tree 246 0 58 Dudli No. 1 " 356 53 4	597 623 598 599 627 597	SHORPUR h.s. Chilláwála h.s. 9 15 18 Hill A 64 19 57 Hatni " 80 31 52 Khujnaur " 123 49 9 Tondáwála " 322 31 43 Hill φ 354 9 3	961 986 962 963 961 985
SAPUR s. Ikhtíárpur Tree 9 39 47 Mataur s. 35 25 21 Loía " 42 35 18 Barkali Tree 84 6 19 Sakauti " 115 56 13 Nagla No. 1. " 170 36 34 Mandaura Tree 179 41 51 Láwar " 334 58 29	611 591 612 613 592 593 614 591	SEMRA h.s. Tumen h.s. 105 3 20 Tumen Temple 117 38 20 Kolua " 201 53 7 Handiapáro, I 280 40 7 Karíla Fort 333 22 20 Párdho, (VI) 354 2 20 Dongra Building 359 21 20	107 108 109 104 105 104 106	SHUJAPUR s. Palána s. 31 37 18 No. 16 " 65 42 39	841 926

Name of station with azimuths of surrounding points	Reference to triangle containing distance	Name of station with azimuths of surrounding points	Reference to triangle containing distance	Name of station with azimuths of surrounding points	Reference to triangle containing distance
SHUJAPUR s.	o ' "	SIMARTHI s.	o ' "	SOHERKA s.	o ' "
Pánjúpúr s. 101 6 5	841	Tijalheda s. 223 18 6	753	Humáyún's Tomb h.s. 98 18 25	342
Gadauli " 141 1 4	842	Baseda Fort " 271 59 43	765	Tálkatora " 104 50 42	341
Mandi " 146 16 15	929	Nandheri " 298 1 53	753	Bostán, XXXVIII 300 42 12	341
Bhogpur " 194 4 45	843	Gadla Mosque " 310 10 29	764		
Rájhát " 226 46 40	930			SOHI s.	
Dúmjhara " 254 24 22	844	SIPRI s.		Jarára s. 42 6 38	510
Chauri Bastion 268 34 33	934	Nohri h.s. 195 59 33	165	Karora " 142 47 49	513
Sirsáwa Tehsildár's Kachahri 338 41 38	927	Lakni " 238 11 55	165	Anona Fort " 181 11 42	521
				Lálar " 198 13 18	512
				Kamona " 285 0 43	511
SIALATPUR s.		SIPUR s.		Chatári Building " 294 19 3	520
Sadarpur s. 4 49 48	552	Jeori Tree 10 45 42	576	Baroli " 346 28 13	510
Samser " 80 10 43	554	Dabthua Temple 46 23 50	578		
Sarna Fort 132 56 33	556	Paholi s. 50 33 56	559	SOMNA s.	
Karampur " 158 1 23	553	Sardhana Country Seat 88 51 19	579	Udaipur s. 36 55 34	486
Badkal " 273 6 26	552	Sardhana Church 124 25 14	581	Bírpura House 44 46 27	504
		Sardhana s. 127 29 50	560	Bírpur Garhi 44 46 28	506
SIDPUR h.s.		Alipur Tree 143 22 28	583	Chandaos, XXXVI 107 13 25	487
Badreta h.s. 14 50 4	218	Kalinjan Tree 158 57 37	585	Somna Mosque 130 16 18	505
Sabalgarh Hill Fort h.s. 80 4 46	232	Panwári " 276 17 39	558	Pauti Village 143 24 2	519
Kailáras " 239 44 31	218	Palhera " 340 49 20	558	Unchágáon 165 2 15	507
Sidpur Fort 265 8 26	233			Jarára " 219 43 48	508
		SIRKANDA H.S. (old)		Baroli " 250 46 17	509
SIKANDRA s.		Masúri, Camel's Back h.s. 104 41 25	371	Bhágú-ka-pala " 352 34 52	486
Barára s. 27 50 5	443			SONTHA s.	
Darha " 49 0 28	442	SIRONJ BASE-LINE N.E. End, (II)		Bhainsi s. 22 13 4	602
Fathipur Sikri " 64 28 57	442	Sáklon h.s. 49 26 21	89	Bhainsi Paka Well 35 53 53	628
Agra, Tájmahal Dome 297 18 2	444	Murtza Ali s. 74 49 20	91	Naula " 83 50 36	602
Agra, Moti Masjid 300 14 54	446			Pur Tree 117 30 39	632
Agra, Cantonment Church 319 5 12	447	SISARI s.		Bopára Tree 122 27 44	629
		Sikrauli h.s. 126 3 50	425	Begarazpúr, XLVII 148 31 57	603
SIKRAULI h.s.		Dabáka Tower 203 10 55	428	Johra House 188 45 19	633
Kesri, XI 13 23 58	410	Rent Hill Fort 245 59 53	425	Fahimpur " 197 16 27	715
Tirauli s. 63 37 37	418	Mohána Fort 348 27 15	427		
Tirauli h.s. 72 36 34	410	Tikula Hill Temple 358 51 10	426	SUBRI No. 1 s.	
Kanárah s. 129 4 30	422			Ráwar s. 32 30 26	876
Jarendho h.s. 152 5 28	419	SISONA s.		Karnál City " 72 18 11	877
Jakodi " 223 14 36	194	Bágowála Tree 9 23 47	773	Karnál Church " 97 54 22	878
Dabáka Tower 258 41 27	428	Rámpur s. 73 27 40	775	Sangoa Bastion 169 56 34	884
Rent Hill Fort 265 30 49	423	Bánnagar " 81 26 47	758	Barágáon Bastion 188 9 11	883
Dhobái, XII 279 40 44	411	Sádpur Tree 127 43 5	777	Gehar " 208 21 4	832
Sisári s. 306 3 1	425	Bahedi Chauki " 134 39 7	757	Kunjpura Mosque 229 11 55	881
Mohána Fort 330 54 43	427	Rohána Tree 152 58 7	771	Kanda " 278 15 21	831
Tikula Hill Temple 342 32 26	426	Rai Tree 160 14 54	779	Bheri " 298 25 27	874
		Bijaipur " 189 16 58	756	Dhákowála " 327 0 38	831
SIKREDA s.		Purai Tree 236 27 47	770		
Majhera s. 73 10 2	673	Simarathi " 242 17 53	756	SUNARGARH h.s.	
Sambalheda Tree 108 18 21	675	Dathána " 243 24 19	768	Hazára h.s. 42 41 42	951
Mahmudpur No. 2 " 110 12 54	673			Salempur " 83 27 29	952
Kailápur Tree 211 24 58	677	SITALPUR s.		Hill δ 316 30 12	971
Sheopúri, XLVIII 252 13 55	674	No. 7 s. 50 18 12	803	Hill θ 326 57 22	969
Tikola Fort 331 10 18	676	Bachíti " 117 8 0	804	Sunárkoti " 342 53 30	951
		Mánakpur " 168 20 49	805		
SILPURI h.s.		No. 9a " 291 19 48	802	SUNARKOTI h.s.	
Ráipur Building 90 44 11	416	Nawáda " 353 8 28	802	Jwálápur s. 25 14 22	949
Khári h.s. 103 54 30	406			Hazára h.s. 93 21 20	950
Hari Fort 130 51 31	417	SIWARO s.		Sunárgarh " 162 53 54	951
Pharáro " 175 56 9	407	Noh, XXXIII 48 12 13	463	Hill δ 199 31 50	970
Khaláro " 356 31 49	406	Mitholi s. 96 33 38	463	Hill θ 276 50 8	968
		Bajhera " 140 29 56	468	Chándípahár, LIV 324 1 41	949
SIMARTHI s.		Rájpur " 167 21 38	464		
Dathána s. 58 56 18	767	Umri " 199 36 39	465	SURANTAL, (III)	
Sisona " 62 19 27	756	Máo " 230 3 10	466	Sáklon h.s. 353 13 37	89
Purai Tree 69 46 38	769				
Bijaipur " 110 59 51	755	SOHERKA s.			
Kathopur " 165 50 18	754	Bhángela s. 18 31 9	344		
Tájpur No. 1 Tree 192 46 17	766	Káikáji Devi Temple 79 19 56	353		

Name of station with azimuths of surrounding points	Reference to triangle containing distance	Name of station with azimuths of surrounding points	Reference to triangle containing distance	Name of station with azimuths of surrounding points	Reference to triangle containing distance
SURIR s.	o' "	THANAH BHAWAN s.	o' "	TITARSI s.	o' "
Noh, XXXIII	138 41 14	Harár Bastion	53 18 5	Thánah Bhawan City s.	176 38 58
Karháli s.	214 17 8	Naujil	66 9 18	Thánah Bhawan "	217 45 37
Jarará Temple	232 8 6	Thánah Bhawan City "	87 12 14	Kutabgarh "	255 38 37
Lohi "	264 41 6	Manát "	126 5 33	TITRAUN s.	
Karhári Factory	312 45 35	Gausgarh Mosque	160 53 19	Pindaur s.	23 35 0
Hindol "	338 40 18	Jalálabad Mosque	163 54 27	Kheri "	87 31 52
TABOR s.		Lohári Mosque	247 59 56	Kálsi "	148 43 50
Kánsepur s.	18 46 4	Dudli No. 2	266 46 20	Manát "	306 17 24
Logarh Bastion	68 12 19	Bhámbála "	316 54 9	TONDAWALA h.s.	
Gúmtala "	74 47 54	THEORA s.		Buláwála h.s.	13 16 18
No. 13 "	76 53 53	Pír Pamora s.	41 37 5	Hill φ	29 43 45
No. 14 "	149 56 17	Dhakeri "	92 47 10	Hill λ	38 59 12
Jatlána Bastion	150 27 59	Jauli Building	129 12 25	Chilláwála "	99 39 13
Bágwála "	150 59 9	THORO s.		Shorpur "	142 33 5
Palána "	220 24 25	Sarol s.	40 9 41	Doiwála, LV	335 36 25
Nukar Temple "	337 47 57	Karaol, XXXIV	109 56 6	TUMEN h.s.	
TALKATORA h.s.		Jatári "	353 2 47	Tumen Temple	123 53 3
Koseri-ka-gummat	23 44 55	TIJALHEDA s.		Semra h.s.	285 3 3
Dehli Cantenment Pillar	201 22 43	Simarathi Tree	38 40 15	Párdho, (VI)	351 21 3
Dehli Chaplain's House	206 24 53	Simarathi s.	43 19 22	UDAIPUR s.	
Dehli Cant. Flag-Staff	208 6 5	Chapár Temple	64 58 30	Chandaos, XXXVI	155 34 0
Rámdwára s.	208 48 10	Tájpur No. 1 Tree	82 2 40	Bírpura House	203 28 25
Pirghaib, XXXIX	209 41 32	Kathopur "	108 26 43	Somna s.	216 54 8
Dehli Church	228 3 53	Godhna, XLIX	247 14 58	Bhágú-ka-pala "	308 43 43
Dehli Palace	239 27 30	Khai Kheri Tree	268 40 30	Chondiána "	358 50 51
Dehli S. Mínár	242 0 23	A No. 2	297 28 27	UMRI s.	
Soherka "	284 44 17	Nargájáni Tree	333 3 51	Siwáro s.	19 37 38
Bostán, XXXVIII	290 20 18	Tijalheda Tree	334 48 36	Rájpur "	69 17 40
Bhángela "	294 29 8	Baseda Fort	337 44 29	Bajhera "	75 49 39
Kálkáji Devi Temple	316 56 28	Nandheri "	350 41 42	Kádilpur Kár "	130 53 42
Mansúr Ali's Tomb	323 52 20	TILONDRI s.		Chandaos, XXXVI	225 10 48
Toghlakabad Palace	327 14 36	Badreta h.s.	80 56 37	Máo "	306 28 39
Dehri, XXXV	354 28 15	Nipri s.	149 10 45	UNCHAGAON s.	
Adam-ka-gummat	359 14 44	Kailáras h.s.	170 18 49	Chandaos, XXXVI	38 5 6
TAPPAL s.		Dongarpur s.	177 52 25	Jarára s.	308 48 14
Pakodna s.	7 57 50	Kharero "	192 52 8	Somna "	345 1 25
Páhera, XXXI	91 21 50	Rijoni Fort	213 18 8	Pauti Village	359 59 2
Gori "	134 55 31	TIMLI TEMPLE s.		USIRA, XXII	
Karaol, XXXIV	170 48 23	Amsot, (XI)	99 31 55	Jagner Hill Mark	16 49 17
Sarol "	186 16 25	Banog, (X)	247 48 18	Maloni h.s.	64 16 1
Jatári "	284 24 20	TIRAULI h.s.		Lachora "	100 51 25
Mitholi "	326 20 36	Sísram Fort	7 42 22	Rúpás Palace	137 44 21
THANAH BHAWAN CITY s.		Pharáro h.s.	27 8 25	Agápur s.	152 20 28
Harár Bastion	30 9 3	Jarendho "	216 17 58	Fathipur Síkri Dome	191 39 45
Manát s.	146 39 24	Doda Fort	223 58 51	Fathipur Síkri "	191 43 15
Jalálabad Mosque	211 55 58	Sikrauli "	252 33 4	Darha "	224 4 25
Gausgarh Mosque	235 30 36	Tirauli s.	301 10 1	Dholpur Dargáh "	319 19 31
Lohári Mosque	258 0 43	Kesri, XI	334 29 49	ZAHAR PIR s.	
Thánah Bhawan "	267 11 16	TIRAULI s.		Kaliána N. Mdl. Mark	288 55 25
Kutabgarh "	322 45 25	Sísram Fort	52 6 13	Kaliána, L	334 33 40
Herinwára "	348 15 49	Tirauli h.s.	121 10 36		
Titársi "	356 38 54	Doda Fort	142 14 30		
THANAH BHAWAN s.		Sikrauli "	243 34 42		
Herinwára s.	12 14 40				
Kutabgarh "	13 52 31				
Titársi "	37 46 31				

ADDENDUM.

GREAT ARC MERIDIONAL SERIES.

SECONDARY TRIANGULATION—RURKI SERIES—TRIANGLES.

No. of triangle	Station	Corrected plane angle	Distance			Theodolite used	No. of triangle	Station	Corrected plane angle	Distance			Theodolite used
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
997	LIV	71 36 32	5°03'26.77	107815	20.419	Inch	Rurki s.	70 28 2	3.961226	9146	1.732	Inch	
	LV	59 24 5	4°99'03.25	97797	18.522	"	Bagheri	68 50 39	3.956665	9050	1.714	"	
	Rurki s.	48 59 23	4°933'15.7	85735	16.238	"	Rurki Foundry Chimney		3.801182	6327	1.198	"	
998	LIV	71 53 57	5°01'76.46	104147	19.725	"	Rurki s.	62 12 10	3.885916	7690	1.456	"	
	LV	56 36 49	4°96'136.5	91488	17.327	"	Bagheri	71 5 40	3.915084	8224	1.558	"	
	Bagheri s. (D)	51 29 14	4°933'15.7	85735	16.238	"	Rurki Telegraph Office		3.801182	6327	1.198	"	
999	LV	2 47 16	3°80'118.2	6327	1.198	"	Rurki s.	48 33 50	3.694121	4944	0.936	"	
	Rurki s.	53 11 18	5°01'76.46	104147	19.725	"	Bagheri	57 50 37	3.740916	5584	1.058	"	
	Bagheri (D)	124 1 26	5°03'26.77	107815	20.419	"	Rurki College Dome		3.801182	6327	1.198	"	
1000	LIV	45 40 4	4°83'48.21	68363	12.948	"							
	LV	70 33 26	4°95'48.32	90122	17.069	"							
	Ibrahampur (heliotrope)		4°933'15.7	85735	16.238	"							

AZIMUTHS

Name of station with azimuths of surrounding points	Reference to triangle containing distance	Name of station with azimuths of surrounding points			Reference to triangle containing distance	Name of station with azimuths of surrounding points	Reference to triangle containing distance
		0	'	"			
BAGHERI s.	999	CHANDRAHAR, LIV	0	'	"	RURKI s.	1001
Rurki s.	999	Bagheri	73	59	26	Rurki Foundry Chimney	187
Rurki College Dome	1003	Rurki	74	16	51	Rurki Telegraph Office	196
Rurki Foundry Chimney	1001	Ibrahampur (heliotrope)	100	13	19	Doiwala, LV	205
Rurki Telegraph Office	1002					Rurki College Dome	209
Doiwala, LV	998	Doiwala, LV	22	25	39	Chandipahar, LIV	254
Chandipahar, LIV	998	Bagheri	25	12	55	Bagheri s.	258
	998	Rurki	36	22	15		
		Ibrahampur (heliotrope)					

January 1874

J. B. N. HENNESSEY.

ADDENDUM.

GREAT ARC MERIDIONAL SERIES.

PRINCIPAL TRIANGULATION.—TRIANGLES.

Geodetic Elements of the Dehra and Masúri Observatories.

No. of triangle	Station	Spherical excess	Corrected plane angle	Distance			No. of triangle	Station	Spherical excess	Corrected plane angle	Distance		
				Log. feet	Feet	Miles					Log. feet	Feet	Miles
1004	(IX)	0.50	54 45 36.45	4.9523991	89618.8	16.973	1006	(X)	0.07	59 42 7.21	4.6984921	49945.0	9.459
	(X)	0.50	85 2 54.40	5.0386896	109317.5	20.704		Dehra Dome Obsy. (new)	0.07	18 40 38.75	4.2077487	18524.6	3.508
	Sirkanda H.S. (new)	0.49	40 11 29.15	4.8501043	70811.6	13.411		Masúri Dome Obsy.	0.07	101 37 14.04	4.7532792	56660.3	10.731
1005	(X)	0.35	62 16 43.82	4.9070512	80733.0	15.290	1007	(X)	0.10	82 28 17.91	4.8500798	70807.6	13.411
	Sirkanda H.S. (new)	0.35	38 24 32.06	4.7532792	56660.3	10.731		Masúri Dome Obsy.	0.11	82 29 45.78	4.8501043	70811.6	13.411
	Dehra Dome Obsy. (new)	0.36	79 18 44.12	4.9523991	89618.8	16.973		(IX)	0.10	15 1 56.31	4.2077487	18524.6	3.508

LATITUDES, LONGITUDES, AZIMUTHS AND HEIGHTS.

Station and its co-ordinates	Azimuths of surrounding stations	Reference to triangle containing distance	Station and its co-ordinates	Azimuths of surrounding stations	Reference to triangle containing distance
(IX) (Vide page 22—A.)	Masúri Dome Obsy. 205 22 8.14 Sirkanda H.S. (new) 245 5 48.67	1007 1004	Dehra Dome Obsy. (new) λ 30 19 29.13 L 78 5 42.12 H _a 2255.09 h 16	(X) 167 36 24.77 Masúri Dome Obsy. 186 17 3.59 Sirkanda H.S. (new) 246 55 9.24	1005 1006 1005
(X) (Vide page 22—A.)	Sirkanda H.S. (new) 285 18 30.27 Masúri Dome Obsy. 287 53 7.16 Dehra Dome Obsy. (new) 347 35 14.44	1004 1006 1005	Masúri Dome Obsy. λ 30 27 40.55 L 78 6 44.59 H 6937 h 4	Dehra Dome Obsy. (new) 6 17 35.19 (IX) 25 25 3.43 (X) 107 54 49.31	1006 1007 1006
Sirkanda H.S. (new) λ 30 24 41.66 L 78 19 50.39 H 9089 h 2	(IX) 65 15 20.86 Dehra Dome Obsy. (new) 67 2 18.09 (X) 105 26 50.51	1004 1005 1004			

DESCRIPTION OF STATIONS.

SIRKANDA HILL STATION (*NEW*) was made to coincide as nearly with the site of the old station of that name, described on page 25—A, as could be estimated from the remains of the platform found there, the isolated pillar together with the mark-stones having been removed by natives visiting the temple to build a wall round it. The present mark is distant from the N.W. corner of the temple 26 feet 6 inches, from the S.W. corner 18 feet 7 inches, from the S.E. corner 31 feet 2 inches.

The pillar is solid and 2 feet high, having a mark-stone imbedded level with the surface, and is surrounded by a platform from which it is isolated.

MASURI DOME OBSERVATORY H.S. is situated in the station of Masúri on the ridge of the hill called the "Camel's Back" to the west of and considerably below the highest part of the hill. A few yards to E.S.E. is the transit room and the Great Trigonometrical Survey Office is a little below on the northern face of the hill.

The pillar is solid and isolated and has a mark-stone imbedded at its surface, level with the floor of the observatory, which is about 4 feet higher than the ground level.

DEHRA DOME OBSERVATORY T.S. (*NEW*) is situated in the grounds of the Head Quarter's Office of the G. T. Survey in Dehra Doon.

The pillar is solid and 16 feet high above the level of the floor of the observatory and has a mark-stone at its surface.

GREAT ARC MERIDIONAL SERIES.

CO-ORDINATES AND DESCRIPTIONS OF ALL STATIONS AND POINTS.

The following table gives the co-ordinates of all the stations and other fixed points, arranged in alphabetical order, also the descriptions of the secondary stations and intersected (or unvisited) points, and references to the preceding pages where the descriptions of the principal stations are given. In certain instances numbers are added which have reference to the given data of the triangles by which the station or point has been fixed; when these numbers are omitted it is to be understood that no triangles are given.

Note.— λ stands for Latitude North; L for Longitude East of Greenwich; H for Height of station in feet above mean sea level, if determined trigonometrically, H_s for the Height when found by spirit leveling and h for Height of station tower or pillar.

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
Abarpur Village. (<i>Miraf</i>) • ' " λ 28 40 23 L 77 48 22	Acheja s. (<i>Bulandshahr</i>) On N.E. bastion of garhi be- longing to Nasar-Ulla Khán Chaudhari. λ 28 19 51'68 L 77 55 41'27 No. 528	Agra, Cantonment Church, (<i>Agra</i>) Steeple. • ' " λ 27 9 39'7 L 78 2 58'2 No. 447
Abdullápur s. (<i>Ambála</i>) λ 30 7 17'54 L 77 19 52'91 No. 932	Adam-ka-gummat. (<i>Dehli</i>) λ 28 31 22'8 L 77 13 26'6 Nos. 332, 338	Agra, Moti Masjid, (<i>Agra</i>) In fort, centre dome. λ 27 10 48'7 L 78 3 48'9 No. 446
Abdulpur Mosque. (<i>Muzaffarnagar</i>) λ 29 37 39'3 L 77 52 56'5 No. 811	Agápur s. (<i>Bhartpur</i>) On mound of old fort in Bhartpur jungle. λ 27 8 14'83 L 77 33 47'98 No. 250	Agra, Tájmahal Dome. (<i>Agra</i>) λ 27 10 29'4 L 78 5 3'6 Nos. 444, 445

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
Aholna Building (<i>Muzaffarnagar</i>) Flag. " " " λ 29 25 42'3 L 77 43 44'3 Nos. 737, 738	Alipur Tree (<i>Mirat</i>) Flag. " " " λ 29 8 0'7 L 77 42 3'3 Nos. 583, 584	Amsot, (XI). (<i>Vide page (5)</i>) " " " λ 30 22 44'86 L 77 43 41'95 H 31'40 h 0 No. 74
Ainchuli Tree Flag. (<i>Mirat</i>) λ 29 2 55 L 77 51 11	Ali Purus s. (<i>Tonk</i>) On hill tomb. λ 24 8 26'28 L 77 42 35'64 No. 898	Andauli Village, (<i>Mirat</i>) Flag on tree. λ 29 5 0 L 77 49 18
Ainto h.s. (<i>Gwalior</i>) λ 25 56 11'86 L 77 33 12'65 No. 413	Almawala Date Tree. (<i>Muzaffarnagar</i>) In khadar. λ 29 35 1 L 77 59 42	Andra Village. (<i>Aligarh</i>) λ 27 55 32 L 77 57 34
Akajeri Fort, (<i>Gwalior</i>) N. W. angle of high turret. λ 25 8 38'1 L 77 53 22'1 No. 189	Alwar Chatri, (<i>Alwar</i>) On Balá-kila doorway of hill fort. λ 27 34 27'3 L 76 37 45'6 No. 292	Anona Fort, (<i>Bulandshahr</i>) Flag on Dúndia Khán's old fort. λ 28 13 17'4 L 78 5 7'2 Nos. 541, 522
Aklor Tree Flag. (<i>Muzaffarnagar</i>) λ 29 34 38 L 77 42 32	Alwar s. (<i>Alwar</i>) λ 27 34 26'82 L 76 37 48'11 No. 291	A No. 1 s. (<i>Tonk</i>) On table-land near Semalkheri. λ 24 10 22'84 L 77 42 9'36 No. 388
Alampur s. (<i>Muzaffarnagar</i>) λ 29 47 40'75 L 77 15 18'76	Amarpur s. (<i>Muzaffarnagar</i>) On sand ridge 0'17 mile S. S. W. of village and N. N. E. of Chálsina; marked by paka triangular platform of 2½ ft. side, countersunk 3 feet, and carrying a mark- brick at its surface. λ 29 17 56'89 L 77 42 38'21 No. 639	A No. 2 s. (<i>Muzaffarnagar</i>) On sandy plain, about 3 miles N. E. of Baseda village, about 2 miles N. W. of Sikri and 2 miles S. E. of Tugalpur village; marked by circular platform 5 ft. in diameter, having the usual mark-stone. λ 29 34 6'02 L 77 56 15'51 No. 638
Alaudi Building. (<i>Gwalior</i>) λ 24 58 56 L 77 43 13 No. 128	Ambeta Tree Flag. (<i>Saháranpur</i>) λ 29 38 59 L 77 39 54	A No. 3 s. (<i>Saháranpur</i>) λ 29 34 46'26 L 77 25 44'37 No. 870
Alhánpur s. (<i>Saháranpur</i>) On platform 6 ft. high, to E. of villages of Pánjkua and Alhánpur. λ 30 8 58'37 L 77 30 38'28 No. 845	Ambhera s. (<i>Mirat</i>) On house. λ 29 2 6'71 L 77 49 5'96	A No. 4 s. (<i>Saháranpur</i>) λ 29 47 40'19 L 77 38 54'54
Aligarh Church, (<i>Aligarh</i>) Steeple. λ 27 54 3'8 L 78 6 59'5 No. 601	Amilia Tree Flag. (<i>Saháranpur</i>) λ 29 38 54 L 77 41 8	Aran Fort. (<i>Gwalior</i>) In village, highest turret. λ 25 57 6'4 L 77 58 38'1 No. 202
Aligarh Fort, (<i>Aligarh</i>) Bastion flag. λ 27 55 44'4 L 78 6 12'4 No. 502	Amoli Tree Flag. (<i>Saháranpur</i>) λ 29 45 30 L 77 40 8	Arcadia House s. (<i>Dehra Dun</i>) On E. chimney. λ 30 19 18'88 L 78 0 12'54 No. 869
Alípúr, XXV. (<i>Vide page 7—A.</i>) λ 27 8 37'14 L 77 1 35'23 H 1351 h Not forthcoming No. 38	Amrod Fort, (<i>Gwalior</i>) Tower. λ 24 37 4'7 L 77 54 21'4 No. 123	Aring, XXX. (<i>Vide page 8—A.</i>) λ 27 29 6'02 L 77 34 10'91 H 670 h 32 No. 50

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
Arnaich s. (<i>Muzaffarnagar</i>) On Zamindár's house in village. λ 29 33 27'28 L 77 35 20'26 No. 854	Badreta h.s. (<i>Gwalior</i>) λ 26 13 27'06 L 77 33 43'53 Nos. 216, 217	Bahedi Chauki s. (<i>Saharanpur</i>) On roof of chauki E. of main road between Mirat (Meerut) and Saharanpur, and 1 mile E. of Bahedi village. λ 29 33 50'89 L 77 44 36'83 No. 757
Arnakal h.s. (<i>Garhwdl</i>) λ 30 13 41 L 78 28 9	Bagheri s. (<i>Saharanpur</i>) Situated between Burki and Bagheri village, on side of sand hill bordering the Soláni river, and a few yards S. of track from Commissariat slaughter house to village just where it cuts into the side of the hill. Bagheri village bears 125°, and is distant 770 ft. and the College dome bears 313°. Marked by a paka circular pillar 3 ft. in diameter and 4'44 ft. high, having a mark-stone at top and another at bottom. The height given (875'70) refers to the upper mark. λ 29 51 18'89 L 77 56 58'35 H_s 875'70* Nos. 998, 999	Bahera h.s. (<i>Dehra Dun</i>) On spur on N. face of the Sewálík range, about 1½ miles N. E. of the Kánarao pass. λ 30 4 17'51 L 78 7 40'24 H 2141 No. 956
Atar Hill Temple. (<i>Gurgáon</i>) λ 27 58 42'1 L 77 14 16'3 No. 314	Bágowála Tree (<i>Muzaffarnagar</i>) Flag. λ 29 30 56'8 L 77 46 32'5 Nos. 773, 774	Báhin s. (<i>Gurgáon</i>) On bastion of fort. λ 27 57 19'62 L 77 18 26'42 Nos. 298, 299
Bábupur Nagli s. (<i>Saharanpur</i>) λ 29 38 57'13 L 77 45 16'96	Bágot, XLII. (<i>Vide page 9—A.</i>) λ 28 56 10'21 L 77 15 54'77 H Not determined h 10 No. 63	Bahrámpur Bastion, (<i>Gwalior</i>) N. E. turret. λ 26 16 19'9 L 77 40 9'4 No. 238
Bachíti s. (<i>Saharanpur</i>) λ 29 49 5'36 L 77 45 47'94 No. 804	Bágroda Building. (<i>Tonk</i>) In village. λ 24 6 50 L 77 46 48	Baigani Building. (<i>Saharanpur</i>) In village. λ 30 5 21 L 77 27 50
Badarwás Fort, (<i>Gwalior</i>) N. W. angle of mud fort. λ 24 58 31'1 L 77 36 22'2 No. 132	Bágwála Fort, (<i>Bulandshahr</i>) Old. λ 28 33 30 L 77 53 21 No. 537	Bairági's Math. (<i>Gwalior</i>) On S. bank of Chambal river. λ 26 24 45'6 L 77 35 17'4 Nos. 243, 244
Badhedhi Tree Flag. (<i>Muzaffarnagar</i>) λ 29 32 6 L 77 47 35	Bágwála s. (<i>Ambála</i>) S. W. of the village of same name, E. of Jalána village and fort and N. of Dhák-wála; marked by a platform 5 ft. high. λ 30 0 31'56 L 77 17 56'49 No. 838	Bajhera s. (<i>Aligarh</i>) In village. λ 28 0 4'78 L 77 44 14'81 No. 468
Bádi Bastion, (<i>Saharanpur</i>) In village. λ 29 54 3 L 77 16 22 No. 909	Báhdurpur No. 1. (<i>Mirat</i>) Flag on tree. λ 29 5 33 L 77 40 14	Balaia h.s. (<i>Gwalior</i>) λ 25 49 58'91 L 77 43 54'04 No. 412
Badkal h.s. (<i>Dehra Dun</i>) λ 30 17 47 L 77 44 32 H 2734	Bágwála Village. (<i>Ambála</i>) λ 30 0 51 L 77 18 18	Bálámájra s. (<i>Muzaffarnagar</i>) On a platform 12 ft. high, ¼ mile W. of the village so called. λ 29 38 23'20 L 77 13 22'10 No. 828
Badkal s. (<i>Mirat</i>) In fort. λ 28 45 2'77 L 77 34 41'64 No. 551	Bahádurpur No. 2. (<i>Muzaffarnagar</i>) Flag on tree in village. λ 29 24 17 L 77 48 1	Balen Village. (<i>Bulandshahr</i>) λ 28 9 37 L 78 4 33
Bad Káli Tree Flag. (<i>Muzaffarnagar</i>) λ 29 33 6 L 77 43 6	Bambáwan s. (<i>Bulandshahr</i>) On house. λ 28 36 43'11 L 77 35 32'29 No. 543	
Badráj Hill Mark. (<i>Dehra Dun</i>) λ 30 28 45'7 L 77 59 56'3 H 7320 Nos. 364, 465		

* This value of height was received from Lieutenant Gregson, R.E., through Lieut.-Colonel J. F. Tennant, R.E.

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
Bámnikhera Building Flag. (<i>Gurgáon</i>) λ 28 3 37 L 77 23 18	Bará-deo Building. (<i>Gwalior</i>) λ 25 50 29 L 77 37 32	Barauli h.s. (<i>Gwalior</i>) On a low hill about a mile N. W. of Bomanner village, having the ruined village of Barauli at its E. foot. λ 24 49 3'90 L 77 50 42'21 Nos. 115, 116
Bamori Tree Flag. (<i>Tonk</i>) λ 24 4 26 L 77 39 54	Barágáon Bastion. (<i>Ambála</i>) λ 29 45 20 L 77 6 15 No. 683	Bardhai Tree Flag. (<i>Tonk</i>) λ 24 5 11 L 77 40 43
Bámor Peak. (<i>Gwalior</i>) Tree. λ 25 47 22 L 78 4 59 No. 182	Barai Hill Fort, (<i>Gwalior</i>) S. W. angle. λ 25 36 39'5 L 77 45 11'4 No. 168	Barheri s. (<i>Saháranpur</i>) λ 29 40 42'27 L 77 38 49'06 No. 791
Bánda Temple (Harídeo). (<i>Bharápur</i>) λ 27 28 52'6 L 77 19 2'3 No. 279	Barai h.s. (<i>Gwalior</i>) λ 25 37 21'42 L 77 45 17'28 No. 400	Barhe s. (<i>Bulandshahr</i>) On N. W. bastion of Rám Sing Zamíndár's fort. λ 28 16 18'83 L 77 58 37'83 No. 515
Banderia h.s. (<i>Gwalior</i>) λ 26 8 4'18 L 77 45 19'25 Nos. 203, 204	Barai Temple s. (<i>Gwalior</i>) Dome spire of hill temple. λ 26 6 13'69 L 78 3 15'22 Nos. 208, 209	Bari s. (<i>Dholpur</i>) On palace. λ 26 38 36'26 L 77 39 33'23 Nos. 248, 249
Bandhera Tree Flag. (<i>Tonk</i>) λ 24 8 8 L 77 40 38	Bara Kanda Village. (<i>Muzaffarnagar</i>) λ 29 42 22 L 77 11 47	Barkala h.s. (<i>Dehra Dun</i>) On spur on S. face of Sewálik range between the Khairowála-ki and Sarwar-ki Raus. λ 30 17 46'64 L 77 44 31'95 H 2733 No. 966
Banera Village. (<i>Saháranpur</i>) λ 29 37 22 L 77 24 44	Barákhera. (<i>Dholpur</i>) λ 26 41 59 L 77 59 7	Barkali Tree. (<i>Mirat</i>) Flag in village. λ 29 9 55 L 77 43 43 No. 613
Banhera Tree Flag. (<i>Saháranpur</i>) λ 29 45 34 L 77 46 9	Bara Nagla Tree Flag. (<i>Muzaffarnagar</i>) λ 29 22 28 L 77 50 34	Barkhera Village. (<i>Bulandshahr</i>) λ 28 26 44 L 77 49 36
Bánnagar s. (<i>Muzaffarnagar</i>) On N. E. corner of an old building, N. of Bánnagar village; about 1 mile S. W. of bridge on Káli Nadi near Malheda. λ 29 31 37'88 L 77 43 52'35 No. 758	Baraodh, XLIII. (<i>Vide page 9—A.</i>) λ 29 4 21'39 L 77 22 0'81 H Not determined h 26 No. 63	Barkheri, V. (<i>Vide page 4—A.</i>) λ 24 57 36'29 L 77 28 56'56 H 1711 h Not forthcoming No. 17
Banog, (X). (<i>Vide page (5)</i>) λ 30 28 36'91 L 78 3 23'14 H 7433 h 2 Nos. 75, 82, 83	Barára s. (<i>Agra</i>) On Mirza Mughul Beg's house, centre of highest building. λ 27 7 58'49 L 77 56 34'70 No. 443	Barla Gateway Flag. (<i>Muzaffarnagar</i>) λ 29 36 43 L 77 50 4
Bara Báns Tree Flag. (<i>Saháranpur</i>) λ 29 38 19 L 77 36 28	Bara Sákhān s. (<i>Saháranpur</i>) On mound. λ 29 44 32'38 L 77 41 14'60	Barod Fort. (<i>Gwalior</i>) λ 25 20 30 L 77 51 14 No. 159
Bara Chaukara s. (<i>Muzaffarnagar</i>) On mound. λ 29 35 12'00 L 77 37 8'89	Bara Sapala Tree Flag. (<i>Saháranpur</i>) λ 29 39 48 L 77 46 9	

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
Barod h.s. (Gwalior) o ' " λ 25 39 50'01 L 77 31 21'47 Nos. 401, 404	Baura Hill Staff. (Gurhwal) o ' " λ 30 21 39 L 78 20 49	Bhādanwāro Tree in Village. (Mattra) o ' " λ 27 46 9 L 77 46 48
Barodia h.s. (Gwalior) On a range of hills 2 miles W. of the village so called and about 2 miles N. of Mohangarh fort, marked on rock by ⊙ over which a pile of stones was raised to support the stump of tree. λ 25 20 33'77 L 77 48 44'87 No. 153	Bedha Building Flag. (Muzaffarnagar) λ 29 24 22 L 77 58 59	Bhagola s. (Gurgāon) λ 27 46 50'70 L 77 3 31'65 No. 294
Baroli s. (Aligarh) On S. E. corner of Bādām Sing's paka house. λ 28 5 22'74 L 78 5 57'11 No. 509	Bedha Tree Flag. (Muzaffarnagar) λ 29 24 32 L 77 51 14	Bhāgu-ka-pala s. (Aligarh) On Náthu Rām Sing's house. λ 27 57 3'58 L 78 0 43'03 No. 484
Barsāna Hill Temple, (Mattra) Spire λ 27 38 59'7 L 77 24 54'0 Nos. 300, 301	Begamabad Building Flag. (Bulandshahr) λ 28 10 57 L 77 35 32	Bhainsi Paka Well, (Muzaffarnagar) W. of village. λ 29 18 27 L 77 44 58 No. 628
Barsu Tree Flag. (Muzaffarnagar) λ 29 16 16 L 77 42 22	Begarazpur, XLVII. (Vide page 22—A.) λ 29 22 34'41 L 77 44 29'21 H _s 815'44 h 51 Nos. 65, 68	Bhainsi s. (Muzaffarnagar) On S. side of a cart road from Naula to Bhainsi, and N.W. of the latter village; marked by a circular paka platform of 2½ feet diameter, countersunk 3 feet and carrying a mark-brick at its surface. λ 29 18 27'28 L 77 45 31'92 No. 599
Barwāla Tree Flag. (Muzaffarnagar) λ 29 25 48 L 77 39 48	Begarazpur Tree Flag, (Muzaffarnagar) In village. λ 29 22 45 L 77 43 46	Bhainsi Tree Flag, (Muzaffarnagar) In village. λ 29 18 15 L 77 46 19
Basai Building. (Dholpur) λ 26 39 18 L 77 55 46	Begighāt s. (Muzaffarnagar) λ 29 44 59'41 L 77 11 36'11 Nos. 885, 886	Bhala Tree Flag, (Sahāranpur) In village. λ 29 41 39 L 77 39 25
Baseda Fort, (Muzaffarnagar) S. W. bastion. λ 29 33 20'9 L 77 53 37'3 No. 765	Begi Village. (Muzaffarnagar) λ 29 44 22 L 77 11 29	Bhamauri Tree Flag, (Mirat) In village. λ 29 12 19 L 77 39 15
Basera Tree Flag. (Sahāranpur) λ 29 48 35 L 77 40 49	Behat Building, (Sahāranpur) In village. λ 30 10 22 L 77 39 19 No. 948	Bhāmbāla s. (Muzaffarnagar) On the waste lands of Bhām- bāla, and between it and Rauni; marked by a mud platform 5 feet high. λ 29 32 05'78 L 77 32 50'78 No. 818
Bastan Tree Flag. (Sahāranpur) λ 29 44 42 L 77 43 32	Belgarh Hill Mark. (Gwalior) λ 25 46 8 L 77 59 30	Bhambāra Masjid. (Muzaffarnagar) λ 29 14 43'6 L 77 36 7'8 No. 650
Bataul Tree Flag. (Sahāranpur) λ 29 47 58 L 77 46 28	Besāni Tree Flag. (Muzaffarnagar) λ 29 38 20 L 77 50 42	Bhāngela s. (Bulandshahr) On building. λ 28 32 26'63 L 77 25 59'93 Nos. 343, 344
	Beswān Building, (Aligarh) Paka λ 27 38 12 L 77 54 49 No. 491	

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
Bhaorása, (V) <i>(Vide page 19—A.)</i> ° ' '' λ 24 8 3'73 L 78 3 7'91 H 1387 h 11 Nos. 4, 8, 9	Bheri s. <i>(Muzaffarnagar)</i> ° ' '' λ 29 39 46'24 L 77 10 12'63 No. 874	Bijaipur s. <i>(Muzaffarnagar)</i> On a range of sand mounds about 1 mile N.W. of village so called; marked by a circular platform 6 feet broad and 1 foot high. ° ' '' λ 29 34 22'44 L 77 47 11'22 No. 755
Bharála Tree Flag, <i>(Mirat)</i> In village. λ 29 5 53 L 77 46 0	Bhogpur s. <i>(Ambála)</i> S.W. of the village of same name, marked by a platform 6 feet high. λ 30 7 58'96 L 77 25 50'57 No. 843	Bijaipur Tree Flag. <i>(Muzaffarnagar)</i> λ 29 33 48 L 77 47 23
Bhárápur Tree Flag, <i>(Saháranpur)</i> In village. λ 29 50 8 L 77 46 23	Bhogpur Village. <i>(Bulandshahr)</i> λ 28 8 11 L 77 57 12	Bijapur Fort, <i>(Gwalior)</i> Dome. λ 26 3 15'9 L 77 24 43'8 No. 229
Bhartpur Bungalow, <i>(Bhartpur)</i> Apex. λ 27 13 16 L 77 32 23 No. 259	Bhokáredi Tree Flag. <i>(Muzaffarnagar)</i> λ 29 30 31 L 77 58 45 No. 705	Bijráwan Fort, <i>(Gwalior)</i> Highest, circular S.W. turret. λ 25° 0 53'2 L 77 30 48'5 No. 136
Bhartpur Fort, <i>(Bhartpur)</i> S.W. angle of turret of mahal. λ 27 13 13'5 L 77 32 12'0 No. 258	Bhubakpur Tree Flag. <i>(Mirat)</i> λ 29 5 24 L 77 39 33	Bikanpur Flag. <i>(Mirat)</i> λ 26 44 56 L 77 29 58
Bhartpur Residency, <i>(Bhartpur)</i> Paka house. λ 27 11 23 L 77 29 8 No. 257	Bhúd Jod Sing's Village, <i>(Ambála)</i> Flag. λ 30 15 54 L 77 32 16 No. 946	Biláda Tree Flag. <i>(Muzaffarnagar)</i> λ 29 30 39 L 77 55 40
Bhartpur Tree Flag. <i>(Saháranpur)</i> λ 29 47 13 L 77 40 44	Bhúr s. <i>(Muzaffarnagar)</i> λ 29 49 29'77 L 77 15 6'68 Nos. 899, 900	Biláspur Tree Flag. <i>(Saháranpur)</i> λ 29 50 21 L 77 45 24
Bhatiána s. <i>(Mirat)</i> On Umed Sing's house. λ 28 39 26'47 L 77 47 21'23 No. 531	Biána Fort, <i>(Ambála)</i> In village, N.E. bastion. λ 29 50 24'6 L 77 9 23'3 No. 897	Bindu Tree Flag. <i>(Saháranpur)</i> λ 29 51 35 L 77 46 31
Bhatwáro Village. <i>(Bulandshahr)</i> λ 28 17 31 L 77 57 22	Bíchi h.s. <i>(Gwalior)</i> On a range of sandstone hills 2 miles S. of Mohangarh H. Fort and 3 miles N.E. of that of Tilat. Bíchi village lies a mile on the S.W. brow of the hill; marked by a circular platform having a mark-stone with a ⊙ in the centre. λ 25 17 0'28 L 77 49 53'25 Nos. 137, 138	Binjaul Tree Flag. <i>(Saháranpur)</i> λ 29 46 19 L 77 47 8
Bhaunpur Tree Flag. <i>(Saháranpur)</i> λ 29 45 55 L 77 44 9	Biári Building Flag. <i>(Muzaffarnagar)</i> λ 29 23 5 L 77 48 41	Binpur s. <i>(Muzaffarnagar)</i> Between Isápur and Binpur; marked by a platform 7 feet high. λ 29 42 51'04 L 77 14 45'97 No. 827
Bhea s. <i>(Aligarh)</i> On bastion in centre of village. λ 27 45 40'26 L 77 56 27'90 No. 474	Bihári Makbara, <i>(Muzaffarnagar)</i> N.W. corner of wall. λ 29 23 1'1 L 77 48 20'1 No. 724	Biráno Hill Temple. <i>(Gwalior)</i> λ 26 11 2'0 L 77 38 18'3 No. 230
Bheri Mosque. <i>(Muzaffarnagar)</i> λ 29 39 3'1 L 77 10 42'1 No. 875		Birhoni Hill Staff. <i>(Gurhwal)</i> λ 30 10 26 L 78 21 24

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<p>Birpura House, (<i>Aligarh</i>) Zamindár's. ° ' "</p> <p>λ 28 1 26 L 77 57 30 No. 504</p>	<p>Bokrauli Factory, (<i>Aligarh</i>) Bungalow. ° ' "</p> <p>λ 27 56 3 L 78 3 49 No. 503</p>	<p>Buda Khera No. 2 Tree Flag, (<i>Muzaffarnagar</i>) In village. ° ' "</p> <p>λ 29 48 58 L 77 15 55</p>
<p>Birpur Garhi. (<i>Aligarh</i>)</p> <p>λ 28 2 29 L 77 58 41 No. 506</p>	<p>Boolandshahar, XXXVII. (<i>Vide page 21—A.</i>)</p> <p>λ 28 24 15'29 L 77 54 12'38 H_s 727'15 h 14 No. 56</p>	<p>Budina Tree Flag, (<i>Muzaffarnagar</i>) In village.</p> <p>λ 29 29 17 L 77 38 40</p>
<p>Birpur Temple, (<i>Dehra Dun</i>) S. spire of temple on hill.</p> <p>λ 30 4 3'1 L 78 19 20'2 No. 360</p>	<p>Bopara Tree, (<i>Muzaffarnagar</i>) Flag in village.</p> <p>λ 29 21 4'7 L 77 44 22'9 Nos. 629, 630</p>	<p>Bulawala h.s. (<i>Dehra Dun</i>) On spur on S. face of Siwálik range between the Binj and Sakroda Raus.</p> <p>λ 30 6 51'29 L 78 1 38'45 H 2432 No. 958</p>
<p>Birpur Tree Flag. (<i>Saharanpur</i>)</p> <p>λ 29 48 57 L 77 47 46</p>	<p>Boriál Hill Tomb. (<i>Tonk</i>)</p> <p>λ 24 12 17 L 77 45 35 No. 98</p>	<p>Buráheri Tree Flag. (<i>Muzaffarnagar</i>)</p> <p>λ 29 40 20 L 77 53 23</p>
<p>Bita h.s. (<i>Gwalior</i>)</p> <p>λ 25 16 16'50 L 77 40 2'16 Nos. 147, 148</p>	<p>Bostán, XXXVIII. (<i>Vide page 21—A.</i>)</p> <p>λ 28 30 59'64 L 77 33 16'26 H 758 h 50 Nos. 47, 57</p>	<p>Búria, Goláb Sing's House, (<i>Ambála</i>) Flag.</p> <p>λ 30 9 31'6 L 77 23 49'6 No. 942</p>
<p>Bitarwár Fort, (<i>Gwalior</i>) Central white dome.</p> <p>λ 25 47 20 L 78 9 8 Nos. 183, 184</p>	<p>Boyango Hill, (<i>Gwalior</i>) N. tree.</p> <p>λ 24 40 33 L 77 42 37 No. 113</p>	<p>Búria, Meg Sing's House, (<i>Ambála</i>) Flag.</p> <p>λ 30 9 44'5 L 77 24 7'4 No. 943</p>
<p>Blucher's h.s. (<i>Dehra Dun</i>) In Masúri; marked by a ⊙ engraved on stone, and covered with a pile of stones.</p> <p>λ 30 27 32'18 L 78 5 32'76 H 7188</p>	<p>Brahmpura Bastion, (<i>Ambála</i>) In village.</p> <p>λ 30 7 14 L 77 23 12 No. 933</p>	<p>Chachera Tree Flag. (<i>Saharanpur</i>)</p> <p>λ 29 53 25 L 77 45 11</p>
<p>B No. 1 s. (<i>Muzaffarnagar</i>) On a mound 2 miles E. of Sikri and E. of road from Sikri to Ganges swamp; marked by a mud platform 1 foot high and 5 feet in diameter.</p> <p>λ 29 32 31'22 L 77 59 19'38 No. 682</p>	<p>Brindában Temple, (<i>Maitra</i>) Madan Mohan's.</p> <p>λ 27 33 27 L 77 44 0 No. 304</p>	<p>Chálsaina s. (<i>Muzaffarnagar</i>) On N.E. bastion of the mud redoubt that surrounds the paka fort in centre of village; marked by a circular paka platform of 2½ feet diameter, countersunk 3 feet and carrying a mark-brick at its surface.</p> <p>λ 29 17 35'71 L 77 42 25'76 No. 598</p>
<p>B No. 2 s. (<i>Saharanpur</i>)</p> <p>λ 29 36 24'46 L 77 25 58'96 Nos. 871, 872</p>	<p>Búbkheri Tree, (<i>Muzaffarnagar</i>) Flag.</p> <p>λ 29 14 32'8 L 77 40 18'1 Nos. 652, 653</p>	<p>Chandaos, XXXVI. (<i>Vide page 21—A.</i>)</p> <p>λ 28 5 16'9 L 77 54 6'78 H 699 h 40 No. 55</p>
<p>B No. 3 s. (<i>Tonk</i>) In the plain near Dhamokheri.</p> <p>λ 24 12 10'60 L 77 40 7'74</p>	<p>Buda Dongar Fort, (<i>Gwalior</i>) Flag on tower of inner fort.</p> <p>λ 25 3 31'4 L 77 38 10'8 No. 134</p>	<p>Chandaos House, (<i>Aligarh</i>) Highest in village.</p> <p>λ 28 4 50 L 77 53 26</p>
<p>B No. 4 s. (<i>Saharanpur</i>)</p> <p>λ 29 46 26'82 L 77 52 59'05</p>	<p>Buda Khera No. 1 Tree Flag. (<i>Saharanpur</i>)</p> <p>λ 29 37 29 L 77 36 35</p>	<p>Chandat House Flag. (<i>Gurgaon</i>)</p> <p>λ 28 7 39 L 77 29 25</p>

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
Chanderu s. (<i>Bulandshahr</i>) On Abdul Kádír's haveli. λ 28 25 56.61 L 77 49 30.58 No. 525	Char Tree, (<i>Miraf</i>) Flag. λ 29 10 38 L 77 35 2 No. 644	Childer's Lodge in Landaur, (<i>Gurhwal</i>) Lightning conductor. λ 30 28 5.37 L 78 8 10.93
Chándipahár, LIV. (<i>Vide page 22—A.</i>) λ 29 55 29.73 L 78 13 37.13 H 1913 h 6 No. 79	Chátai Sarai Gateway s. (<i>Matira</i>) S.E. dome. λ 27 43 22.62 L 77 32 56.69 Nos. 451, 452	Chilkána Mosque, (<i>Saháranpur</i>) In village. λ 30 4 48.1 L 77 30 36.0 No. 941
Chándipahár White Temple, (<i>Bijnaur</i>) On hill. λ 29 56 1 L 78 13 20	Chatári Building, (<i>Bulandshahr</i>) Highest. λ 28 6 15 L 78 11 27 No. 520	Chilkána White Building, (<i>Saháranpur</i>) In village. λ 30 4 44 L 77 30 42
Chándna Tree Flag. (<i>Miraf</i>) λ 29 8 46 L 77 36 57	Chauban Hill Staff. (<i>Gurhwal</i>) λ 30 14 44 L 78 20 35	Chilláwála h.s. (<i>Dehra Dun</i>) On spur on S. face of Siwálik range between the Chilláwáli and Sukh Raus. λ 30 11 9.24 L 77 59 28.46 H 2872 No. 960
Chándpura Bar Tree, (<i>Bulandshahr</i>) In village, at Bar-ki-Chaunki. λ 28 30 46 L 77 51 11	Chauda Flag. (<i>Bulandshahr</i>) λ 28 35 41 L 77 23 17	Chilwáni, XIV. (<i>Vide page 20—A.</i>) λ 25 57 56.80 L 77 34 1.53 H 1353 h 6 No. 28
Chándpur Building, (<i>Dholpur</i>) Highest. λ 26 41 16 L 77 51 22 No. 433	Chaugáma Bastion, (<i>Ambála</i>) In village. λ 29 55 49 L 77 14 26 No. 904	Chinoni s. (<i>Gwalior</i>) On S.E. bastion. λ 26 23 51.29 L 77 35 43.05 Nos. 220, 221
Chapár Temple, (<i>Muzaffarnagar</i>) Dome at S.W. corner of a large building. λ 29 34 16.8 L 77 48 40.1 Nos. 762, 763	Chaundásheri Tree Flag. (<i>Saháranpur</i>) λ 29 45 45 L 77 48 34	Chinúr Hill Fort, (<i>Gwalior</i>) White circular turret W. end. λ 25 56 42.4 L 78 8 31.8 No. 187
Chapra, XXVIII. (<i>Vide page 20—A.</i>) λ 27 43 57.65 L 77 3 0.43 H 1220 h Not forthcoming No. 41	Chaura Bastion, (<i>Ambála</i>) In village. λ 29 47 40 L 77 10 15 No. 893	Chirtaul s. (<i>Muzaffarnagar</i>) On mound S. of a shallow tank about a mile S.W. of the village so called; marked by a \odot in the centre of a stone let into the ground. λ 29 31 41.37 L 77 36 48.22 No. 816
Chapra Bastion, (<i>Saháranpur</i>) In village. λ 29 52 11 L 77 14 15 No. 903	Chauráwála Tree, (<i>Muzaffarnagar</i>) Flag. λ 29 26 13 L 77 58 49 No. 700	Chirtaul Temple, (<i>Muzaffarnagar</i>) Flag. λ 29 32 38.9 L 77 38 8.4 No. 788
Charauli Hill. (<i>Gwalior</i>) λ 24 41 19 L 77 28 20 No. 114	Chauri Bastion, (<i>Saháranpur</i>) In village. λ 30 4 25 L 77 26 43 No. 934	Chitora s. (<i>Muzaffarnagar</i>) On roof of building W. of village so called and 3 miles N. of Jánasath thánah. λ 29 21 34.79 L 77 51 12.96 No. 668
Charauli Tree, (<i>Muzaffarnagar</i>) Flag. λ 29 29 11.7 L 77 58 28.3 No. 703, 704	Chausana Village Flag. (<i>Muzaffarnagar</i>) λ 29 40 4 L 77 13 14	
	Chendoria Fort, (<i>Gwalior</i>) Flag. λ 24 58 41 L 77 31 20 No. 133	

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
Chola Sarai. (Gwalior) ° ' "	Dábal Tree Flag. (Muzaffarnagar) In village 60 yards N. of Western Káli Naddi. ° ' "	Daiádhari, II. (Vide page 3—A.) ° ' "
λ 26 36 53	λ 29 17 27	λ 24 38 17'57
L 77 59 30	L 77 40 39	L 77 42 16'49
Choli Tree, (Muzaffarnagar) Flag.	Dabera Mosque. (Saháranpur) In village.	H 1867
λ 29 16 15	λ 30 8 45'6	h 5
L 77 38 51	L 77 31 16'8	No. 12
No. 654	No. 987	Daichánd Tree Flag. (Muzaffarnagar)
Chondiána s. (Aligarh) On Mukhrám Zamíndár's house.	Dabkauli Highest Building, (Ambála) S.E. corner.	λ 29 34 52
λ 27 55 1'12	λ 29 48 32'4	L 77 39 25
L 77 56 51'30	L 77 10 38'6	Dái-ki-Madauli Tree Flag. (Saháranpur)
No. 483	No. 894	λ 29 43 43
Chora Tree, (Muzaffarnagar) Flag in village which lies 475 yards W. of Western Káli Naddi.	Dabthua Temple. (Mirat)	L 77 53 40
λ 29 17 24'0	λ 29 3 58'9	Dam Chauki. (Bijnaur) Paka, S. corner.
L 77 38 35'7	L 77 40 2'5	λ 29 58 21'55
Nos. 655, 656	No. 578	L 78 13 38'41
Chorpura Hill Mark (Gwalior)	Dadheru (Chota) Tree Flag. (Muzaffarnagar) In village.	H 960
λ 25 44 24'2	λ 29 29 51	Dankowáli s. (Saháranpur)
L 77 47 31'4	L 77 40 34	λ 29 51 50'96
Nos. 178, 179	Dadheru s. (Muzaffarnagar)	L 77 45 40'76
Chota Badhai s. (Muzaffarnagar)	λ 29 29 23'86	No. 806
λ 29 33 8'48	L 77 39 48'41	Daolaghari h.s. (Garhwal)
L 77 42 30'06	Dádri s. (Bulandshahr)	λ 30 20 21
No. 759	λ 28 33 17'99	L 78 13 11
Chota Bhalsua s. (Saháranpur)	L 77 35 32'58	Darha s. (Agra) On N.W. corner of S.E. turret of Indar Sing Ját's Haveli.
λ 29 54 42'38	No. 541	λ 27 3 7'42
L 77 40 31'34	Dádri Tree, (Muzaffarnagar) Flag in village.	L 77 46 50'51
Chota Chaukara Tree Flag. (Muzaffarnagar)	λ 29 12 42	No. 440
λ 29 35 18	L 77 45 29	Dariápur s. (Muzaffarnagar) On a mound W. of Dariápur and 3 miles N.E. of Kakrauli village.
L 77 37 24	No. 616	λ 29 24 34'05
Cloud End. h.s. (Dehra Dun) In Masúri; marked by a ⊙ en- graved on stone, and covered over with a pile of stones.	Dádúpur Canal House. (Ambála)	L 78 0 38'06
λ 30 27 58'54	λ 30 12 25'7	No. 678
L 78 3 3'31	L 77 26 7'6	Darwa s. (Ambála) ¼ mile N.E. of Darwa village; mark- ed by a platform 6 feet high.
H 7065	No. 944	λ 30 13 28'32
C s. (Tonk) On hill.	Dahera, LI. (Vide page 10—A.)	L 77 30 55'51
λ 24 9 7'32	λ 29 37 39'70	No. 847
L 77 41 22'71	L 77 39 23'02	Darwa Village. (Ambála)
Dabáka Tower. (Gwalior) In village.	H 893	λ 30 13 20
λ 25 58 44'7	h 50	L 77 30 4
L 77 48 59'5	Nos. 71, 77	Dásna s. (Mirat) On fort building staircase.
No. 428	Daher Tree Flag. (Mirat)	λ 28 40 38'07
λ 29 8 49	λ 29 8 49	L 77 33 53'53
L 77 35 2	L 77 35 2	No. 544

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<p>Datairi, XL. (<i>Vide page 9—A.</i>)</p> <p style="text-align: center;">o i "</p> <p>λ 28 44 4'49 L 77 41 23'49 H 767 h 50 Nos. 49, 58</p>	<p>Dehli Cantonment Pillar. (<i>Dehli</i>) On the brick kiln</p> <p style="text-align: center;">o i "</p> <p>λ 28 41 0'0 L 77 14 53'2 No. 845</p>	<p>Dehri, XXXV. (<i>Vide page 8—A.</i>)</p> <p style="text-align: center;">o i "</p> <p>λ 28 24 37'93 L 77 14 45'86 H 1051 h 6 No. 45</p>
<p>Dathána s. (<i>Muzaffarnagar</i>) On a range of sand mounds running as far as Bijaipur and about 1½ miles N. of village so called.</p> <p>λ 29 33 3'82 L 77 49 9'17 Nos. 767, 768</p>	<p>Dehli Chaplain's House. (<i>Dehli</i>) On hill.</p> <p>λ 28 42 18 L 77 16 2 No. 846</p>	<p>Deoban Haveli, (<i>Sahāranpur</i>) Flag.</p> <p>λ 29 41 38'5 L 77 43 17'8 Nos. 795, 796</p>
<p>Dathána Tree Flag. (<i>Muzaffarnagar</i>)</p> <p>λ 29 31 46 L 77 49 11</p>	<p>Dehli Church, (<i>Dehli</i>) St James', in city.</p> <p>λ 28 39 56'3 L 77 16 22'7 Nos. 834, 835</p>	<p>Deopura s. (<i>Tonk</i>) On mound S.W. of village.</p> <p>λ 24 8 38'76 L 77 38 53'47 No. 389</p>
<p>Daulatgarh Village. (<i>Bulandshahr</i>)</p> <p>λ 28 22 36 L 77 55 9</p>	<p>Dehli Dome, (<i>Dehli</i>) Central, of Jāma Masjid.</p> <p>λ 28 39 2'3 L 77 16 30'0 Nos. 820, 821</p>	<p>Deopura Tree Flag. (<i>Tonk</i>)</p> <p>λ 24 9 0 L 77 39 46</p>
<p>Daulatpur No. 1 s. (<i>Muzaffarnagar</i>) On sand ridge 20 feet high, to N.N.W. of Daulatpur village, S.S.W. of Jwālāgarh and to the S.S.E. of Akhipur village; marked by a triangular platform of 2½ feet side, countersunk 3 feet and carrying a mark-brick at its surface.</p> <p>λ 29 12 44'68 L 77 40 26'78 No. 685</p>	<p>Dehli N. Mīnār, (<i>Dehli</i>) of Jāma Masjid.</p> <p>λ 28 39 3'5 L 77 16 30'5 Nos. 822, 823</p>	<p>Dhakauli Mosque. (<i>Bulandshahr</i>)</p> <p>λ 28 26 41'1 L 77 53 5'7 No. 685</p>
<p>Daulatpur No. 2 s. (<i>Muzaffarnagar</i>) On left bank of Jamna River.</p> <p>λ 29 46 41'06 L 77 12 13'56 No. 888</p>	<p>Dehli Palace, (<i>Dehli</i>) N. mīnār of Lahor gateway.</p> <p>λ 28 39 21'4 L 77 16 50'6 No. 847</p>	<p>Dhakeri s. (<i>Muzaffarnagar</i>) 1 mile N.E. of village so called; marked by a platform 5 feet high with the usual mark-stones at top and bottom.</p> <p>λ 29 24 22'68 L 77 52 40'00 No. 661</p>
<p>Daulatpur Tree Flag. (<i>Muzaffarnagar</i>)</p> <p>λ 29 11 56 L 77 41 47</p>	<p>Dehli S. Mīnār, (<i>Dehli</i>) of Jāma masjid.</p> <p>λ 28 39 1'3 L 77 16 30'7 No. 850</p>	<p>Dhakeri Tree Flag. (<i>Muzaffarnagar</i>)</p> <p>λ 29 24 9 L 77 51 46</p>
<p>Daulatpur Village. (<i>Muzaffarnagar</i>)</p> <p>λ 29 46 28 L 77 12 18</p>	<p>Dehra Gurūdwarā Temple, (<i>Dehra Dun</i>) Staff.</p> <p>λ 30 19 5'2 L 78 4 27'1 H 2205 Nos. 862, 863</p>	<p>Dhakoni Fort, (<i>Gwalior</i>) N. staircase of building.</p> <p>λ 24 45 40'1 L 77 54 25'8 No. 121</p>
<p>Daurala Tree Flag. (<i>Mirat</i>) In village.</p> <p>λ 29 6 47 L 77 44 44</p>	<p>Dehra Hopetown Bungalow, (<i>Dehra Dun</i>) E. chimney.</p> <p>λ 30 19 33 L 77 57 48</p>	<p>Dhākwāla s. (<i>Muzaffarnagar</i>) On S.W. side of Dhākwāla village.</p> <p>λ 29 38 2'37 L 77 8 34'28 No. 830</p>
<p>Dedua Tree, (<i>Mirat</i>) Flag in village.</p> <p>λ 29 5 14'0 L 77 47 42'5 Nos. 604, 605</p>	<p>Dehra, Surveyor General's old Office, (<i>Dehra Dun</i>) Centre chimney.</p> <p>λ 30 19 59'16 L 78 5 57'49 H 2324 No. 874</p>	<p>Dhamantuk Tree, (<i>Gwalior</i>) Large, in village.</p> <p>λ 25 1 24 L 77 34 0</p>
<p>Dehli Cantonment Flag Staff. (<i>Dehli</i>)</p> <p>λ 28 41 16'6 L 77 15 36'8 Nos. 836, 837</p>	<p>Dehra Zephyr Hall, (<i>Dehra Dun</i>) House on the hill.</p> <p>λ 30 19 42 L 78 8 2</p>	<p>Dhamaukheri Tree, (<i>Tonk</i>) Flag.</p> <p>λ 24 11 19'2 L 77 40 12'5 No. 396, 397</p>

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
Dhameit s. (Saháranpur)	Dholpur Dargáh s. (Dholpur) On S. gateway of Sháh Abdal's dargáh on hill.	Dín, XIII. (Vide page 5-A.)
λ 29 40 53'54	λ 26 41 20'71	λ 26 1 8'74
L 77 53 52'48	L 77 55 23'62	L 77 51 22'13
No. 797	No. 429	H 1420
Dhameit Tree, (Saháranpur) Flag in village.	Dholpur Fort s. (Dholpur) On E. bastion of Chambal gateway.	h Not forthcoming
λ 29 40 33	λ 26 40 2'76	No. 24
L 77 54 28	L 77 56 43'66	Doa Fort, (Gwalior) S.E. turret, S. of village.
Dhanauta s. (Matra) On building.	No. 430	λ 26 3 21'3
λ 27 52 44'07	Dholpur House, (Dholpur) S.E. pillar of Brahmin's house in city.	L 77 57 9'4
L 77 33 32'97	λ 26 41 8'7	No. 198
No. 453	L 77 56 37'2	Doda Fort, (Gwalior) Flag.
Dhangaia h.s. (Gwalior)	No. 432	λ 25 56 22
λ 25 35 23'00	Dholpur Rána's Palace. (Dholpur) Chauni bastion, N.E. turret.	L 77 38 43
L 77 39 19'86	λ 26 41 42'6	No. 421
No. 402	L 77 53 21'9	Doiwála, LV. (Vide page 11-A.)
Dhanghera Tree Flag. (Saháranpur)	No. 434	λ 30 7 12'13
λ 29 52 7	Díánatpur s. (Bulandshahr) On turret.	L 78 4 29'62
L 77 43 27	λ 28 10 39'93	H 2949
Dhaolri, XLI. (Vide page 9-A.)	L 77 36 50'82	h 0
λ 28 55 13'61	No. 318, 319	No. 73, 80
L 77 31 14'45	Dídáhedi Mosque, (Muzaffarnagar) Flag.	Dondrápur h.s. (Gwalior)
H 781	λ 29 31 6'8	λ 26 8 49'03
h 50	L 77 43 10'3	L 77 57 57'70
No. 59	No. 784, 785	No. 195, 196
Dhárákot s. (Dehra Dun)	Dígasi Village. (Aligarh)	Dongarpur s. (Gwalior) On S.W. bastion of fort.
λ 30 20 45	λ 27 52 43	λ 26 18 24'90
L 77 56 2	L 78 3 13	L 77 40 30'64
Dhasri Tree Flag. (Muzaffarnagar)	Díg Fort, (Bhartpur) Blue Flag on Cavalier in citadel.	No. 225, 226
λ 29 21 43	λ 27 28 15	Dongra Building, (Gwalior) White, in village.
L 77 55 33	L 77 22 19	λ 24 19 18
Dhobái, XII. (Vide page 5-A.)	No. 277	L 77 47 24
λ 25 55 47'49	Díg Temple, (Bhartpur) Kalas, near Kotwáli Chabútra.	No. 106
L 78 2 17'62	λ 27 28 44'9	Dongri h.s. (Gwalior)
H 1309	L 77 22 3'0	λ 25 30 1'94
h Not forthcoming	No. 278	L 77 47 47'34
No. 23	Dígodhi Date Tree. (Gwalior) In village.	No. 160, 161
Dholpur, XX. (Vide page 6-A.)	λ 25 1 54	Dosáni Village Flag. (Ambála)
λ 26 39 11'75	L 77 36 38	λ 30 5 37
L 77 51 59'68	Dimdima, XXIII. (Vide page 6-A.)	L 77 21 46
Hs 939'08	λ 26 54 25'71	Duburji s. (Saháranpur) In lands of Duburji, W. of and close to Thabni village; marked by a platform 12 feet high.
h Not forthcoming	L 77 17 35'24	λ 29 51 40'68
No. 35	H 1215	L 77 16 33'94
Dholpur Dargáh Dome, (Dholpur) Sháh Abdal's.	h Not forthcoming	No. 335
λ 26 41 21'1	No. 33	Duburji Village. (Saháranpur)
L 77 55 23'9		λ 29 52 1
No. 431		L 77 16 11

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<p>Dúgarh Mosque. (Saháranpur) In village. " " "</p> <p>λ 30 6 53.1 L 77 29 53.8 No. 938</p>	<p>Fahímpur s. (Muzaffarnagar) On N.W. bastion of an old mud fort in village; marked by a circular paka platform of 2½ feet diameter countersunk 3 feet and carrying a mark-brick at its surface.</p> <p>λ 29 23 13.83 L 77 47 24.16 No. 715</p>	<p>Fathipur Síkri s. (Agra) Over gateway under the small N.E. dome. " " "</p> <p>λ 27 5 38.51 L 77 42 18.52 No. 441</p>
<p>Dudli Khera Bastion. (Muzaffarnagar) In ruined village.</p> <p>λ 29 14 44 L 77 44 31 No. 622</p>	<p>Fálás Tree flag. (Saháranpur)</p> <p>λ 29 39 53 L 77 47 22</p>	<p>Fathipur Tree Flag. (Saháranpur)</p> <p>λ 29 51 16 L 77 41 15</p>
<p>Dudli No. 1 s. (Muzaffarnagar) On fallow land S.E., by E. of the remains of a mud bastion in Dudli Khera village, and S. of Sirdhan village; marked by a circular paka platform of 2½ feet diameter, countersunk 3 feet and carrying a mark-brick at its surface.</p> <p>λ 29 14 32.46 L 77 44 37.06 No. 594</p>	<p>Farídpur No. 1 s. (Muzaffarnagar) On boundary between 4 fields to E.N.E. of the village so called, and to the S.W. by S. of Akálpura village; marked by a triangular paka platform of 2½ feet side, countersunk 3 feet and carrying a mark-brick at its surface.</p> <p>λ 29 14 31.35 L 77 37 38.33 No. 636</p>	<p>Ferozpur Palace. (Gurgáon)</p> <p>λ 27 47 12 L 76 59 41 No. 297</p>
<p>Dudli No. 2 s. (Saháranpur) In a field about 30 feet N. of a small paka well on the lands of Wali Muhammad Khán, 1 mile S. of Dudli village and ¼ of a mile E. of Kanaheri. The Hindan runs under Niamu which is a mile to E.</p> <p>λ 29 35 29.45 L 77 34 20.64 No. 817</p>	<p>Farídpur No. 2 s. (Muzaffarnagar)</p> <p>λ 29 14 22.71 L 77 37 34.16</p>	<p>Ferozpur s. (Muzaffarnagar) On roof of a building about 25 feet high in village so called, ¼ mile S. of the Ganges, and 2 miles N.E. of Bhokaredi town.</p> <p>λ 29 30 6.27 L 78 1 0.80 No. 680</p>
<p>Dugchari Tree Flag. (Saháranpur)</p> <p>λ 29 42 35 L 77 47 56</p>	<p>Farídpur Tree Flag. (Muzaffarnagar) In village.</p> <p>λ 29 14 49 L 77 36 53</p>	<p>Fulat Tree Flag. (Muzaffarnagar) In village.</p> <p>λ 29 16 59 L 77 44 26</p>
<p>Dúli Hill Mark. (Alwar)</p> <p>λ 27 18 18.8 L 76 50 43.9 Nos. 272, 273</p>	<p>Fathigarh Bastion. (Ambála) In village.</p> <p>λ 30 10 28 L 77 25 53 No. 945</p>	<p>Gádarjúda Tree Flag. (Saháranpur)</p> <p>λ 29 47 46 L 77 52 35</p>
<p>Dúmjhara s. (Saháranpur) E. of village so called; the high road from Búria to Saháranpur viá Rájghát, runs close north of it; marked by a platform 6 feet high.</p> <p>λ 30 5 24.52 L 77 29 1.16 No. 844</p>	<p>Fathipur Bastion. (Saháranpur) In village.</p> <p>λ 29 55 15 L 77 17 9 No. 911</p>	<p>Gadauli s. (Ambála) Between Darwa and Gadauli, on the sand heights W. of Canal; marked by a platform 6 feet high.</p> <p>λ 30 7 48.05 L 77 21 37.59 No. 842</p>
<p>Emdanagar Village. (Bulandshahr)</p> <p>λ 28 38 10 L 77 53 29 No. 539</p>	<p>Fathipur Building. (Gwalior) In village.</p> <p>λ 25 25 7 L 77 41 19</p>	<p>Gadauli Village. (Ambála)</p> <p>λ 30 7 59 L 77 21 21</p>
<p>Esi s. (Aligarh) On an old bastion S. of village.</p> <p>λ 27 47 56.76 L 78 5 8.57 Nos. 480, 481</p>	<p>Fathipur Chatri. (Dholpur)</p> <p>λ 26 43 17.6 L 77 53 23.8 No. 436</p>	<p>Gadla Mosque, (Muzaffarnagar) Centre dome.</p> <p>λ 29 31 34.5 L 77 52 27.8 No. 764</p>
	<p>Fathipur Síkri Dome. (Agra) Centre dome of gateway of highest building.</p> <p>λ 27 5 38.3 L 77 42 17.9 Nos. 251, 252</p>	<p>Gadráno Temple. (Gurgáon)</p> <p>λ 27 59 48.7 L 77 23 34.7 No. 308</p>
		<p>Gandáspur Tree Flag. (Saháranpur)</p> <p>λ 29 43 53 L 77 47 54</p>

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<p>Gandaur s. (<i>Muzaffarnagar</i>) Between three fields, 0·4 mile S.S.W. of village so called, and 1·2 miles N.N.E. of Gora village; marked by a triangular paka platform of 2½ feet side, countersunk 3 feet and carrying a mark-brick at its surface.</p> <p>λ 29 18 50·15 L 77 39 14·16 No. 638</p>	<p>Gehar s. (<i>Ambála</i>) On one of the highest bastions (S.W.) of the irregular octagonal fort of Gehar, and about 40 feet above ground.</p> <p>λ 29 46 53·84 L 77 8 47·36 No. 832</p>	<p>Godhna, XLIX. (<i>Vide page 10—A.</i>)</p> <p>λ 29 37 18·46 L 77 56 30·16 H 901 h 51 No. 70</p>
<p>Gangágarh Village. (<i>Bulandshahr</i>)</p> <p>λ 28 8 11 L 78 8 2</p>	<p>Genori s. (<i>Bulandshahr</i>) On S.W. bastion of fort.</p> <p>λ 28 19 9·39 L 78 2 49·63 No. 516</p>	<p>Gogar Hill Mark. (<i>Gwalior</i>)</p> <p>λ 25 39 10·14 L 77 45 36·69</p>
<p>Gangauli s. (<i>Bulandshahr</i>) On S.E. bastion.</p> <p>λ 28 37 7·64 L 77 54 11·57 No. 529</p>	<p>Genori Tree, (<i>Bulandshahr</i>) In village.</p> <p>λ 28 19 30 L 78 2 48</p>	<p>Gopáli s. (<i>Saháranpur</i>)</p> <p>λ 29 38 24·94 L 77 48 7·67</p>
<p>Gangauli Tree Flag. (<i>Saháranpur</i>)</p> <p>λ 29 51 11 L 77 42 53</p>	<p>Ghairab Building. (<i>Gurgáon</i>)</p> <p>λ 28 2 3 L 77 19 15</p>	<p>Gorai s. (<i>Aligarh</i>) On Kanhai Rám Bohra's house.</p> <p>λ 27 41 50·38 L 77 52 26·89 No. 478</p>
<p>Garabpur s. (<i>Bulandshahr</i>)</p> <p>λ 28 32 47·84 L 77 30 37·1 No. 840</p>	<p>Ghalauli s. (<i>Saháranpur</i>)</p> <p>λ 29 37 3·38 L 77 43 13·77</p>	<p>Gorakhpur N. Dome Spire. (<i>Dehra Dun</i>)</p> <p>λ 30 16 56 L 78 5 51</p>
<p>Garand s. (<i>Mirat</i>) On house.</p> <p>λ 28 40 58·90 L 77 37 51·02 No. 645</p>	<p>Ghandiál, LVI. (<i>Vide page 11—A.</i>)</p> <p>λ 30 13 25·32 L 78 27 54·61 H 7350 h 3 No. 81</p>	<p>Goraksir s. (<i>Gurgáon</i>) On building.</p> <p>λ 28 0 22·93 L 77 16 5·85 No. 307</p>
<p>Garh h.s. (<i>Dehra Dun</i>) On spur on S. face of Siwálik range, between the Harnaul and Gholne Raus.</p> <p>λ 30 0 30·25 L 78 5 9·66 H 1436 No. 953</p>	<p>Ghátó h.s. (<i>Gurgáon</i>)</p> <p>λ 27 44 58·51 L 77 2 46·56 Nos. 295, 296</p>	<p>Gora Tree Flag. (<i>Muzaffarnagar</i>)</p> <p>λ 29 18 18 L 77 38 13</p>
<p>Garla h.s. (<i>Gwalior</i>)</p> <p>λ 24 30 56·39 L 78 3 30·18 No. 110</p>	<p>Gházíwála Tree Flag. (<i>Bijnaur</i>)</p> <p>λ 29 52 49 L 78 12 58</p>	<p>Gori s. (<i>Gurgáon</i>) In village.</p> <p>λ 28 8 59·15 L 77 29 34·07 No. 316</p>
<p>Gaukheri Tree Flag. (<i>Tonk</i>)</p> <p>λ 24 11 38 L 77 39 11</p>	<p>Ghíána Tree Flag. (<i>Saháranpur</i>)</p> <p>λ 29 44 10 L 77 39 39</p>	<p>Gosáin's Mat, Tree Flag. (<i>Saháranpur</i>)</p> <p>λ 29 37 55 L 77 40 51</p>
<p>Gausgarh Mosque, (<i>Saháranpur</i>) Centre dome.</p> <p>λ 29 36 8·1 L 77 29 7·2 Nos. 863, 864</p>	<p>Ghísúkhera s. (<i>Muzaffarnagar</i>)</p> <p>λ 29 34 29·52 L 77 38 42·27</p>	<p>Gotka Tree Flag. (<i>Mirat</i>)</p> <p>λ 29 9 44 L 77 33 25</p>
<p>Gázdipur s. (<i>Ambála</i>) On bank of Jamna River.</p> <p>λ 30 8 29·89 L 77 28 20·70 Nos. 935, 937</p>	<p>Ghoren h.s. (<i>Garhwál</i>)</p> <p>λ 30 17 6 L 78 17 53</p>	<p>Gugubára, VII. (<i>Vide page 4—A.</i>)</p> <p>λ 25 12 0·13 L 77 37 3·58 H 1614 h 5 Nos. 16, 18</p>
	<p>Ghumáti Tree Flag. (<i>Muzaffarnagar</i>)</p> <p>λ 29 35 28 L 77 54 34</p>	

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<p>Guláothi s. (<i>Bulandshahr</i>) On Saiyid Rahmat Ulla's paka house.</p> <p>λ 28 35 28'35 L 77 50 1'11 No. 528</p>	<p>Hápur s. (<i>Mirat</i>) On Shaikh Badar Uddín's house.</p> <p>λ 28 43 24'07 L 77 49 33'25 No. 532</p>	<p>Hátras Fort, (<i>Aligarh</i>) Temple spire.</p> <p>λ 27 35 32'5 L 78 6 11'5 Nos 492, 493</p>
<p>Gúmtala s. (<i>Ambála</i>) $\frac{1}{4}$ mile S. of Gúmtala village; marked by a platform 5 feet high</p> <p>λ 29 56 50'71 L 77 14 35'82 No. 536</p>	<p>Harár Bastion, (<i>Saháranpur</i>) Flag.</p> <p>λ 29 33 3'6 L 77 26 6'5 Nos. 868, 869</p>	<p>Hátras s. (<i>Aligarh</i>) In fort.</p> <p>λ 27 35 34'54 L 78 6 8'81 No. 477</p>
<p>Gúmtala Village. (<i>Ambála</i>)</p> <p>λ 29 57 30 L 77 14 52</p>	<p>Harautha s. (<i>Aligarh</i>) On S.E. bastion of Besma ruined garhi.</p> <p>λ 27 41 35'28 L 77 56 2'36 No. 475</p>	<p>Hátras House, (<i>Aligarh</i>) Highest in town.</p> <p>λ 27 35 31 L 78 5 33</p>
<p>Gunarsa Tree Flag. (<i>Saháranpur</i>)</p> <p>λ 29 38 46 L 77 42 22</p>	<p>Hardwár House, (<i>Saháranpur</i>) Turret of Patiála Rája's house.</p> <p>λ 29 57 36'4 L 78 12 51'2</p>	<p>Hazára h.s. (<i>Dehra Dun</i>) On spur on S. face of Siwálik range, between the Raoli and Ránipúr Raus.</p> <p>λ 29 58 13'54 L 78 8 24'80 H 2476 No. 950</p>
<p>Guricha Building, (<i>Gwalior</i>) High, in village.</p> <p>λ 25 47 20 L 77 37 0</p>	<p>Hardwár Peak h.s. (<i>Saháranpur</i>)</p> <p>λ 29 58 4 L 78 11 28</p>	<p>Herinwára s. (<i>Saháranpur</i>) W. of Herinwára village; marked by a mud platform 8 feet high.</p> <p>λ 29 31 10'26 L 77 28 27'46 No. 820</p>
<p>Gurjápahár, XVIII. (<i>Vide page 6—A.</i>)</p> <p>λ 26 28 33'26 L 77 35 37'26 H 1171 h 4 No. 80</p>	<p>Hari Fort, (<i>Gwalior</i>) Bastion.</p> <p>λ 25 45 36 L 77 35 25 No. 417</p>	<p>Herne Hill h.s. (<i>Dehra Dun</i>) In Masúri; marked by a ⊙ engraved on stone, and covered with a pile of stones.</p> <p>λ 30 28 27'54 L 78 5 25'18 H 6573</p>
<p>Gwalior Hill Temple, (<i>Gwalior</i>) S. end of fort.</p> <p>λ 26 13 12'3 L 78 12 28'2 Nos. 205, 206</p>	<p>Hatiápahár, III. (<i>Vide page 3—A.</i>)</p> <p>λ 24 48 46'21 L 77 56 56'17 H 1789 h 4 No. 13</p>	<p>Hill A. (<i>Dehra Dun</i>) On spur on S. face of Siwálik range between the Mohan and Khujnaur Raus.</p> <p>λ 30 12 24'6 L 77 56 43'9 No. 986</p>
<p>Haijarpur s. (<i>Muzaffarnagar</i>) On N.E. side of the village so called, which is 1 mile E. of Nijámpur. The station lies $\frac{1}{4}$ mile W. of the Ganges swamp.</p> <p>λ 29 22 49'69 L 78 1 47'79 Nos. 691, 692</p>	<p>Hatín s. (<i>Gurgáon</i>) On Kachahri.</p> <p>λ 28 2 30'13 L 77 16 53'70 No. 309</p>	<p>Hill D. (<i>Dehra Dun</i>)</p> <p>λ 30 19 5'5 L 77 47 52'1 Nos. 989, 990</p>
<p>Halár Building. (<i>Ambála</i>) Highest, in village, owned by Fathi Sing.</p> <p>λ 30 5 7 L 77 9 6</p>	<p>Hátipáon Hill Mark. (<i>Dehra Dun</i>)</p> <p>λ 30 27 23'0 L 78 4 11'8 H 7089 Nos. 366, 367</p>	<p>Hill E. (<i>Dehra Dun</i>)</p> <p>λ 30 15 9'5 L 77 49 45'4 No. 991</p>
<p>Handiapáro, I. (<i>Vide page 3—A.</i>)</p> <p>λ 24 25 58'13 L 78 2 32'36 H 1663 h 7 No. 11</p>	<p>Hátipura s. (<i>Gwalior</i>) On bastion in village.</p> <p>λ 26 19 57'54 L 77 38 21'90 No. 239</p>	<p>Hill F. (<i>Dehra Dun</i>)</p> <p>λ 30 18 20'4 L 77 42 47'9 No. 992</p>
<p>Hápur House. (<i>Mirat</i>) Mark on Malla Mal's paka house.</p> <p>λ 28 43 35'06 L 77 49 26'13 No. 538</p>	<p>Hatni h.s. (<i>Dehra Dun</i>) On spur on S. face of the Siwálik range, between the Khujnaur and Bangori Raus.</p> <p>λ 30 13 0'44 L 77 54 46'76 H 3069 No. 962</p>	<p>Hill H. (<i>Dehra Dun</i>)</p> <p>λ 30 19 53'5 L 77 42 47'6 No. 993</p>

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<p>Hill K. (Dehra Dun) On summit of Siwálik range, nearly 2 miles S.E. of Amsot H.S.</p> <p>λ 30 21 20.5 L 77 44 40.6 No. 996</p>	<p>Hill θ. (Dehra Dun)</p> <p>λ 29 57 58.1 L 78 12 26.9 Nos. 968, 969</p>	<p>Hirdepur Village. (Mirat)</p> <p>λ 28 36 51 L 77 50 8 No. 640</p>
<p>Hill M. (Dehra Dun) On spur on S.W. face of Siwálik range, nearly 2 miles S.W. of Amsot H.S.</p> <p>λ 30 21 48.7 L 77 42 22.7 No. 995</p>	<p>Hill λ. (Dehra Dun) Near termination of spur on S. face of Siwálik range, between the Andheri and Gaj Raus.</p> <p>λ 30 8 34.9 L 78 0 43.5 Nos. 979, 980</p>	<p>Hodal s. (Gurgáon) On highest paka building.</p> <p>λ 27 53 27.65 L 77 24 34.42 No. 454</p>
<p>Hill N. (Dehra Dun) On spur on S.W. face of Siwálik range, nearly 2.5 miles W.S.W. of Amsot H.S.</p> <p>λ 30 22 6.6 L 77 41 28.6 No. 994</p>	<p>Hill π. (Dehra Dun) On summit of Siwálik range, 1.8 miles S.E. of the Sukh Rau.</p> <p>λ 30 11 58.8 L 78 1 46.1 Nos. 983, 984</p>	<p>Humáyún's Tomb. (Dehli)</p> <p>λ 28 35 35.8 L 77 17 34.0 Nos. 326, 327</p>
<p>Hill a. (Dehra Dun) Near end of spur on S. face of Siwálik range, between the Malúwáli and Sakroda Raus.</p> <p>λ 30 5 23.4 L 78 2 4.9 Nos. 977, 978</p>	<p>Hill φ. (Dehra Dun) Near termination of spur on S. face of Siwálik range, between the Binj and Gaj Raus.</p> <p>λ 30 7 38.7 L 78 0 41.0 No. 985</p>	<p>Husainpur Tree, (Mattra) In village.</p> <p>λ 27 50 17 L 77 47 42</p>
<p>Hill b. (Dehra Dun) On spur on S. face of Siwálik range, nearly 800 feet west of Buláwála h.s.</p> <p>λ 30 6 53.9 L 78 1 29.3 No. 976</p>	<p>Himmatgarh Hill Fort Gate. (Gwalior) Cupola over E. Gate.</p> <p>λ 26 3 3.2 L 78 5 25.4 No. 189</p>	<p>Husainpur Tree Flag. (Saháranpur)</p> <p>λ 29 55 37 L 77 39 15</p>
<p>Hill a. (Dehra Dun) On Siwálik range nearly 1 mile due N. of Salempur h.s.</p> <p>λ 30 0 44.7 L 78 8 15.4 No. 975</p>	<p>Himmatgarh Hill Fort Building. (Gwalior) S. staircase of a square building.</p> <p>λ 26 3 5.3 L 78 5 24.9 No. 190</p>	<p>Ibráhimpur Heliotrope. (Saháranpur) On rising ground E. of stream running between it and the village so called, near W. edge of an open patch in the midst of bush jungle, about 800 yards and bearing 107° from Ibráhimpur village; marked by a brick with ⊙ thereon and buried flush with the ground.</p> <p>λ 29 58 6.99 L 77 56 48.67 No. 1000</p>
<p>Hill β. (Dehra Dun) On Siwálik range, 1 mile N.E. of Salempur h.s.</p> <p>λ 30 0 47.7 L 78 8 54.1 Nos. 973, 974</p>	<p>Himmatgarh Peak, (Gwalior) W. of fort; pointed stone.</p> <p>λ 26 2 32.2 L 78 4 30.0 No. 192</p>	<p>Ichwára Highest Building, (Gwalior) In village.</p> <p>λ 25 42 57 L 77 34 11</p>
<p>Hill γ. (Dehra Dun) Near termination of spur on S. face of Siwálik range, above eastern edge of the Káns Rau.</p> <p>λ 30 1 33.8 L 78 4 11.9 No. 972</p>	<p>Hindan s. (Muzaffarnagar) On E. bank at junction of Hindan and Káli Naddies.</p> <p>λ 29 12 53.57 L 77 34 31.59 No. 646</p>	<p>Ikhtiárpur Tree, (Mirat) Flag, in village.</p> <p>λ 29 8 22.8 L 77 46 55.1 Nos. 610, 611</p>
<p>Hill δ. (Dehra Dun)</p> <p>λ 29 59 11.6 L 78 11 55.8 Nos. 970, 971</p>	<p>Hindan Flag No. 1. (Muzaffarnagar) On right bank of river so called.</p> <p>λ 29 33 58 L 77 35 45</p>	<p>Ikri Saloon, (Mirat) Spire.</p> <p>λ 29 5 51.8 L 77 37 18.0 Nos. 586, 587</p>
<p>Hill ε. (Dehra Dun) On summit of Siwálik range, about 1 mile N. of the Buláwála Pass.</p> <p>λ 30 8 37.6 L 78 3 36.6 Nos. 981, 982</p>	<p>Hindan Flag No. 2. (Muzaffarnagar) On right bank of river so called.</p> <p>λ 29 32 54 L 77 35 11</p>	<p>Iságarh Fort Palace, (Gwalior) S.E. corner of upper balustrade.</p> <p>λ 24 50 3.7 L 77 55 43.3 No. 122</p>
	<p>Hindol s. (Mattra) On an old mud bastion in centre of village.</p> <p>λ 27 42 5.86 L 77 47 35.95 No. 472</p>	<p>Isápur h.s. (Gwalior)</p> <p>λ 26 9 14.33 L 77 26 31.47 No. 228</p>

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<p>Isápur Tree, (<i>Muzaffarnagar</i>) Flag. " " "</p> <p>λ 29 28 22'1 L 77 56 10'3 Nos. 701, 702</p>	<p>Jalálabad Mosque, (<i>Saháranpur</i>) S. minár. " " "</p> <p>λ 29 37 4'5 L 77 28 52'1 No. 865</p>	<p>Jaroda Tree Flag, (<i>Saháranpur</i>) In village. " " "</p> <p>λ 29 38 16 L 77 44 6</p>
<p>Jagáheri Tree, (<i>Muzaffarnagar</i>) Flag, in village.</p> <p>λ 29 28 14'0 L 77 39 1'7 Nos. 749, 750</p>	<p>Jalálpur Tree Flag, (<i>Mirat</i>) In village.</p> <p>λ 29 4 20 L 77 48 50</p>	<p>Jarwar Tree Flag, (<i>Muzaffarnagar</i>)</p> <p>λ 29 21 14 L 77 59 6</p>
<p>Jagdhai Tree Flag, (<i>Saháranpur</i>)</p> <p>λ 29 47 34 L 77 45 19</p>	<p>Jalheda Temple, (<i>Mirat</i>) In centre of village.</p> <p>λ 29 8 18'4 L 77 37 37'5 No. 588</p>	<p>Jasratpur Tree Flag, (<i>Mirat</i>) In village.</p> <p>λ 29 11 15 L 77 46 13</p>
<p>Jagner Hill Mark, (<i>Agra</i>)</p> <p>λ 26 51 37'6 L 77 38 29'1 Nos. 260, 261</p>	<p>Jamálpur Tree Flag, (<i>Mirat</i>) In village.</p> <p>λ 29 10 25 L 77 46 3</p>	<p>Jatári s. (<i>Aligarh</i>) On house.</p> <p>λ 28 1 20'71 L 77 41 53'02 No. 459</p>
<p>Jagtharo h.s. (<i>Gwalior</i>)</p> <p>λ 24 44 4'44 L 77 53 12'88 No. 120</p>	<p>Jámankhátá h.s. (<i>Dehra Dun</i>)</p> <p>λ 30 2 57'19 L 78 12 49'16 H 1924 No. 359</p>	<p>Jataul s. (<i>Saháranpur</i>) On bastion.</p> <p>λ 29 47 16'08 L 77 47 54'22 No. 814</p>
<p>Jagtia s. (<i>Gwalior</i>) N. turret of fort, N.W. angle.</p> <p>λ 25 19 32'74. L 77 51 22'90 No. 155</p>	<p>Jánsath s. (<i>Muzaffarnagar</i>) Marked on parapet wall of a high gate-way now in centre of town, but formerly its W. entrance.</p> <p>λ 29 19 25'62 L 77 53 23'46 No. 662</p>	<p>Ját-ka Nagla Tree Flag, (<i>Muzaffarnagar</i>)</p> <p>λ 29 32 19 L 77 42 55</p>
<p>Jaisingpur s. (<i>Gurgáon</i>) On building.</p> <p>λ 28 2 16'47 L 77 10 41'20 No. 312</p>	<p>Jarára s. (<i>Bulandshahr</i>) On mound.</p> <p>λ 28 6 15'90 L 78 2 23'76 No. 608</p>	<p>Jatlána Bastion, (<i>Ambála</i>) Highest, in village.</p> <p>λ 30 2 34 L 77 16 34 No. 921</p>
<p>Jajádeo Hill Temple, (<i>Gwalior</i>) Square.</p> <p>λ 25 43 17'3 L 77 57 15'2 Nos. 174, 175</p>	<p>Jarára Temple, (<i>Mattra</i>) Flag.</p> <p>λ 27 48 7'2 L 77 48 25'0 No. 489</p>	<p>Játowála s. (<i>Saháranpur</i>)</p> <p>λ 30 13 1'91 L 77 39 2'22 No. 947</p>
<p>Jajan Kheri Hill, (<i>Gwalior</i>)</p> <p>λ 24 45 39 L 77 49 16</p>	<p>Jarendho h.s. (<i>Gwalior</i>)</p> <p>λ 26 2 40'44 L 77 43 45'35 No. 419</p>	<p>Jaula Tree Flag, (<i>Saháranpur</i>)</p> <p>λ 29 51 10 L 77 41 57</p>
<p>Jakodi h.s. • (<i>Gwalior</i>)</p> <p>λ 26 5 48'88 L 77 54 12'40 Nos. 198, 194</p>	<p>Jaroda Bastion, (<i>Muzaffarnagar</i>) Flag on mud bastion.</p> <p>λ 29 24 4'4 L 77 43 44'2 Nos. 730, 731</p>	<p>Jauli Building, (<i>Muzaffarnagar</i>) N.E. angle.</p> <p>λ 29 25 36'5 L 77 54 1'8 No. 671</p>
<p>Jakodi Tower, (<i>Gwalior</i>) On hill over village.</p> <p>λ 26 3 32'3 L 77 52 52'7 No. 199</p>	<p>Jaroda s. (<i>Muzaffarnagar</i>) On a narrow ridge separating 2 fields of cultivation N.N.E. of Jaroda; marked by a circular puka platform 2½ feet in diameter, counter-sunk 3 feet and carrying a mark-brick at its surface.</p> <p>λ 29 24 44'51 L 77 44 10'60 No. 716</p>	<p>Jeori Tree, (<i>Mirat</i>) Flag.</p> <p>λ 29 3 17'9 L 77 42 29'7 Nos. 576, 577</p>
<p>Jákwála Tree Flag, (<i>Saháranpur</i>)</p> <p>λ 29 38 16 L 77 38 6</p>		<p>Jewar s. (<i>Bulandshahr</i>) In fort.</p> <p>λ 28 7 23'59 L 77 36 0'36 No. 317</p>

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
Jhabiran Tree Flag. (Sahāranpur) ° ' '' λ 29 40 53 L 77 41 0	Kādīlpur Kār s. (Aligarh) On building. ° ' '' λ 28 4 34'96 L 77 45 45'35 No. 469	Kalandi Tree, (Mirat) Flag. λ 29 11 33'5 L 77 36 32'8 Nos. 641, 642
Jhabrera Temple. (Sahāranpur) λ 29 48 27'4 L 77 48 45'5 No. 815	Kailāpur Tree, (Musaffarnagar) Flag. λ 29 20 5 L 78 1 39 No. 677	Kalanga h.s. (Dehra Dun) On Nālāpāni hill. λ 30 20 33'79 L 78 8 25'98 No. 376
Jharipāni h.s. (Dehra Dun) λ 30 25 19 L 78 7 39	Kailāras Building, (Gwalior) Highest, in village. λ 26 18 30 L 77 39 30	Kālāpahār Flag. (Dehli) λ 28 39 31 L 77 13 7
Jharwan Tree Flag. (Musaffarnagar) λ 29 42 56 L 77 19 22	Kailāras h.s. (Gwalior) λ 26 18 32'07 L 77 39 54'05 Nos. 214, 215	Kāla Tibba h.s. (Garhwal) λ 30 15 51 L 78 21 54
Jhota Well, (Mirat) Paka, on sand ridge. λ 29 6 8 L 77 47 24 No. 609	Kail House Flag. (Sahāranpur) λ 29 34 52 L 77 23 14	Kalauli Hill Mark. (Gwalior) λ 26 16 36 L 77 31 14
Jogīwāla Date Tree, (Musaffarnagar) Highest, in Khādar. λ 29 35 21 L 78 0 29 No. 710	Kainki Tree Flag. (Sahāranpur) λ 29 37 33 L 77 46 58	Kalchīna s. (Mirat) On mound. λ 28 46 9'42 L 77 37 30'79 No. 547
Johra House, (Musaffarnagar) Flag. λ 29 21 49 L 77 46 35 No. 633	Kaithala s. (Bulandshahr) On Moti Ahir's house. λ 28 30 37'32 L 77 50 14'33 No. 526	Kalerpur Pīpal Tree Flag. (Musaffarnagar) λ 29 31 19 L 77 42 15
Juktīpura, XVI. (Vide page 5—A.) λ 26 12 2'66 L 77 30 45'45 H 1185 h Not forthcoming Nos. 27, 29	Kaitheri Fort, (Gwalior) N. bastion, on new road. λ 26 36 33'9 L 77 56 5'0 No. 437	Kaliāna, L. (Vide page 10—A.) λ 29 30 54'70 L 77 41 33'21 H 828 h 14 No. 76
Jwālāgarh House Flag, (Musaffarnagar) In village. λ 29 13 7 L 77 41 24	Kākipur Tree Flag. (Mirat) λ 29 6 52 L 77 36 44	Kaliāna N. Meridional Mark s. (Musaffarnagar) E. pillar. λ 29 32 8'18 L 77 41 33'21 No. 783
Jwālāpur s. (Sahāranpur) λ 29 55 8'60 L 78 9 53'40 H 932 No. 949	Kakrāla s. (Musaffarnagar) To the W. of the village so called, which is one mile S.W. of Morna; de- noted by a platform with a mark-stone at its surface. λ 29 27 47'35 L 77 57 57'21 Nos. 697, 698	Kaliāna S. Meridional Mark s. (Musaffarnagar) E. pillar. λ 29 29 44'50 L 77 41 33'20 Nos. 747, 748
Kacholi Hōuse. (Musaffarnagar) Flag on zamīndār's house. λ 29 31 31'5 L 77 41 57'5 Nos. 786, 787	Kakrauli Tree Flag. (Musaffarnagar) λ 29 23 29 L 77 58 0	Kaliānpur N. Meridional Mark s. (Tonk) On pillar. λ 24 8 8'46 L 77 41 44'75 No. 96
	Kālāghāt h.s. (Dehra Dun) λ 30 14 50 L 77 59 29	

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
Kaliánpur S. Meridional Mark s. (Tonk) On pillar. λ 24 6 11'26 L 77 41 44'75 No. 99	Kamálpur s. (Muzaffarnagar) On bank of Jamna River. λ 29 48 9'23 L 77 13 7'82 Nos. 889, 890	Kandikheri Tree Flag. (Tonk) λ 24 8 28 L 77 42 12
Kaliánpur Tree, (Tonk) Flag. λ 24 6 32'5 L 77 41 49'7 Nos. 394, 395	Kamálpur Village. (Muzaffarnagar) λ 29 48 27 L 77 13 3	Kanhaiwála Date Tree, (Muzaffarnagar) In Khédar. λ 29 34 34 L 78 0 27 No. 709
Káli Naddi s. (Saháranpur) On bank of river. λ 29 48 37'02 L 77 43 7'38	Kambhi s. (Gurgáon) On paka building. λ 27 58 4'30 L 77 27 18'31 No. 455	Kánka s. (Aligarh) On Híra Man bania's house on road from Koel to Mattra. λ 27 42 46'39 L 78 1 42'75 No. 476
Káli Naddi Flag, (Muzaffarnagar) On E. bank of river. λ 29 11 47 L 77 32 48	Kamera Building Flag. (Muzaffarnagar) λ 29 22 46 L 77 55 8	Kankar Building, (Gwalior) S.W. corner. λ 25 33 11'5 L 77 46 42'3 No. 171
Káli Naddi Flag No. 1. s. (Muzaffarnagar) λ 29 19 31'29 L 77 43 22'16	Kamona s. (Bulandshahr) In fort. λ 28 7 49'87 L 78 9 13'68 No. 511	Kánkri h.s. (Bhartpur) λ 27 30 29'65 L 77 13 55'59 Nos. 265, 266
Káli Naddi Flag No. 2. s. (Muzaffarnagar) W. of Naula. λ 29 20 22'47 L 77 43 31'42	Kánáheri Tree Flag, (Muzaffarnagar) In village. λ 29 35 11 L 77 33 42	Kánsepur s. (Saháranpur) 0·25 of a mile S.E. of of Kánsepur village and 1·5 miles W. of Nukar; marked by a platform 6 feet high. λ 29 56 15'43 L 77 18 51'26 No. 837
Kalinjan Tree, (Mirat) Flag. λ 29 9 18 L 77 42 3 No. 585	Kanár h.s. (Garhwdál) λ 30 9 48 L 78 20 41	Kánsepur Village. (Saháranpur) λ 29 56 29 L 77 18 39
Kálinjar h.s. (Gurgáon) λ 28 0 28'57 L 77 10 39'69 No. 313	Kanár s. (Gwalior) On bastion between the S.E. and S.W. bastions of fort. λ 26 1 42'44 L 77 41 38'88 No. 422	Kánsrao h.s. (Dehra Dun) On summit of Siwálik range, be- tween the Kánsrao and Salempur passes. λ 30 2 22'66 L 78 6 58'67 H 2431 No. 954
Kálkáji Devi Temple, (Dehli) Dome. λ 28 32 59'2 L 77 18 10'1 Nos. 352, 353	Kanda h.s. (Garhwdál) λ 30 19 34 L 78 17 6	Kapsar Tree Flag, (Mirat) In village. λ 29 11 58 L 77 43 14
Kalsaura s. (Ambála) 0·25 of a mile E. of Kalsaura village and 368 paces W. of Jamna River; marked by a platform 5 feet high. λ 29 51 54'64 L 77 11 39'68 No. 834	Kanda s. (Muzaffarnagar) On the lands of Chausana between Kanda and New Nali, 1·5 miles E. of Jamna River; marked by a paka platform, the site of the station being further denoted by the imbedding of several large masses of vitrified bricks. λ 29 41 17'49 L 77 10 31'36 No. 829	Karaia h.s. (Gwalior) On the W. turret of a well known detached fortified hill on road Gwalior to Sironj. Karaia village lies on the eastern slope; marked by a circular platform with a mark-stone, hav- ing a ⊙ engraved on it. λ 25 53 47'11 L 78 2 43'78 No. 181
Kalsaura Village Flag. (Ambála) λ 29 51 53 L 77 11 8	Kandikheri Hill Building. (Tonk) λ 24 8 25 L 77 42 36 No. 97	Karampur s. (Mirat) In fort. λ 28 47 27'53 L 77 30 52'72 No. 553
Kálsi s. (Saháranpur) Midway S. of Kálsi and N. of Jhárwan; marked by a platform 9 feet high. λ 29 43 47'86 L 77 19 19'95 No. 826		

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<p>Karaol, XXXIV. (<i>Vide page 8—A.</i>)</p> <p>λ 28 10 11'24 L 77 35 31'74 H 734 h 50 Nos. 46, 54</p>	<p>Karnál City s. (<i>Karnál</i>) On the highest house with paka walls and kacha roof, occupied by the Dák Munshi.</p> <p>λ 29 40 51'04 L 77 1 55'38 No. 877</p>	<p>Kesopur No. 1 Tree Flag. (<i>Muzaffarnagar</i>)</p> <p>λ 29 21 14 L 78 1 29</p>
<p>Karaunda Mark. (<i>Saháranpur</i>)</p> <p>λ 30 6 9'0 L 77 41 43'5 H 973 Nos. 354, 355</p>	<p>Karoli Building. (<i>Bulandshahr</i>)</p> <p>λ 28 11 51 L 77 35 1</p>	<p>Kesopur No. 2 Tree Flag. (<i>Muzaffarnagar</i>)</p> <p>λ 29 33 2 L 77 50 38</p>
<p>Kare Fort, (<i>Gwalior</i>) Centre of W. gateway.</p> <p>λ 25 6 22 L 77 46 7 No. 143</p>	<p>Karora s. (<i>Bulandshahr</i>) On Thákur Harnám Sing's Haveli.</p> <p>λ 28 12 27'12 L 78 1 54'80 No. 513</p>	<p>Kesopur s. (<i>Muzaffarnagar</i>) Marked on ravines running along the W. side of the Ganges swamp and 1'25 miles E. of Kesopur village. The station is 2'5 miles W. of the Ganges.</p> <p>λ 29 20 34'43 L 78 2 35'20 No. 690</p>
<p>Karera Bastion, (<i>Ambála</i>) In village.</p> <p>λ 29 59 42 L 77 16 47 No. 925</p>	<p>Kasauli or Naiágáon Tree Flag. (<i>Mirat</i>)</p> <p>λ 29 5 10 L 77 41 47</p>	<p>Kesri, XI. (<i>Vide page 5—A.</i>)</p> <p>λ 25 46 35'81 L 77 43 16'20 H 1487 h Not forthcoming No. 22</p>
<p>Karera s. (<i>Muzaffarnagar</i>) On the S.E. bastion of a fort in the village so called, and 1 mile N. of Thisa village.</p> <p>λ 29 26 43'70 L 77 56 51'56 No. 679</p>	<p>Kasauli Tree Flag, (<i>Muzaffarnagar</i>) Over Mahádeo's Mat.</p> <p>λ 29 36 14 L 77 36 50</p>	<p>Khádri s. (<i>Ambála</i>) N.W. of the village of Khádri; marked by a platform 6 feet high.</p> <p>λ 30 12 22'41 L 77 26 35'52 No. 846</p>
<p>Karháli s. (<i>Mattra</i>) On mound S.W. of and close to village.</p> <p>λ 27 50 34'29 L 77 49 3'09 No. 470</p>	<p>Kasmeri h.s. (<i>Garhwál</i>)</p> <p>λ 30 15 15 L 78 21 56</p>	<p>Khaikhera s. (<i>Muzaffarnagar</i>) S. of the village of Khaikhera, 2 miles S. of Kakrauli and 1 mile N. of Khujhera; marked by a platform 5 feet high and 4 feet in diameter with mark-stones at top and bottom.</p> <p>λ 29 22 22'28 L 77 57 21'48 No. 663</p>
<p>Karhári Factory, (<i>Mattra</i>) Bungalow.</p> <p>λ 27 43 41 L 77 48 56 No. 490</p>	<p>Kathopur s. (<i>Saháranpur</i>) On a mound S. of village so called, and about a mile W. of Barla village.</p> <p>λ 29 36 51'38 L 77 48 55'67 No. 754</p>	<p>Khaikheri Tree, (<i>Muzaffarnagar</i>)</p> <p>λ 29 35 51'4 L 77 53 52'9 Nos. 711, 712</p>
<p>Karíla Fort, (<i>Tonk</i>) Flag.</p> <p>λ 24 18 55 L 77 52 35 No. 105</p>	<p>Kátia s. (<i>Muzaffarnagar</i>) On pasture lands 1'25 miles N.E. of Kátia village and 1 mile W. of Kesopur.</p> <p>λ 29 21 23'85 L 78 0 25'50 Nos. 688, 689</p>	<p>Khaláro h.s. (<i>Gwalior</i>)</p> <p>λ 25 39 11'06 L 77 37 33'98 No. 403</p>
<p>Karkia Hill, (<i>Gwalior</i>) N. Tree.</p> <p>λ 24 39 37 L 77 38 46 No. 112</p>	<p>Kátia Tree Flag. (<i>Muzaffarnagar</i>)</p> <p>λ 29 21 26 L 77 59 11</p>	<p>Khámpur Tree Flag. (<i>Saháranpur</i>)</p> <p>λ 29 34 54 L 77 45 56</p>
<p>Karnál Church, (<i>Karnál</i>) Steeple.</p> <p>λ 29 42 22'9 L 77 1 45'3 Nos. 878, 879</p>	<p>Katka Building, (<i>Gwalior</i>) Highest, in village.</p> <p>λ 25 42 55 L 77 37 51</p>	<p>Khándia s. (<i>Aligarh</i>) On house.</p> <p>λ 28. 2 47'00 L 77 40 7'94</p>
	<p>Kauláheri Tree Flag. (<i>Saháranpur</i>)</p> <p>λ 29 35 42 L 77 45 57</p>	

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
Khanjarpur Mat, (Muzaffarnagar) Of a Sati. , , " λ 29 28 18'9 L 77 42 43'7 Nos. 741, 742	Khera Tree Flag, (Sahāranpur) In village. , , " λ 29 50 29 L 77 44 9	Khori h.s. (Bhartpur) , , " λ 27 35 32'95 L 77 2 12'84 Nos. 274, 275
Khanja Tree Flag. (Sahāranpur) λ 29 43 17 L 77 41 41	Kheri s. (Muzaffarnagar) S. of Nai Nagla and N. of Kheri; marked by a platform 6 feet high. λ 29 39 55'21 L 77 17 48'59 No. 825	Kho Temple. (Alwar) λ 27 37 37'7 L 76 49 22'8 No. 286
Kharād Tree Flag. (Mirat) λ 29 3 56 L 77 42 27	Kheri Tree Flag, (Muzaffarnagar) In village. λ 29 29 4 L 77 39 51	Khúbāpur Tree, (Muzaffarnagar) Flag. λ 29 19 38 L 77 40 43 No. 657
Kharauda Tree, (Mirat) Flag in village. λ 29 4 11'9 L 77 47 58'5 Nos. 567, 568	Kheri Tree (near Dudli). (Muzaffarnagar) In village. λ 29 13 53'2 L 77 44 16'9 Nos. 620, 621	Khujera Tree Flag. (Muzaffarnagar) λ 29 21 40 L 77 56 58
Kharero s. (Gwalior) On fort. λ 26 15 20'77 L 77 40 54'02 No. 222	Kheri Tree (near Lāwar). (Mirat) Flag, in village. λ 29 7 40 L 77 47 26	Khujnaur h.s. (Dehra Dun) On spur on N. face of the Siwālik range, about 1 mile N.W. of the Khujnaur pass. λ 30 16 23'63 L 77 55 25'85 H 2576 No. 963
Khāri Building. (Gwalior) λ 25 40 40 L 77 34 52	Kheri Tree (near Naula). (Muzaffarnagar) Flag, in village. λ 29 18 28'9 L 77 43 46'7 Nos. 625, 626	Khumera Tree Flag. (Muzaffarnagar) λ 29 35 53 L 77 55 51
Khāri h.s. (Gwalior) λ 25 45 10'98 L 77 32 41'08 No. 405	Kherwār Hill Mark. (Gwalior) λ 24 55 1 L 77 24 3 No. 181	Khurd Megona Hill Mark. (Gwalior) λ 25 1 19'2 L 77 53 21'0 Nos. 117, 118
Kharkari Tree Flag. (Sahāranpur) λ 29 49 10 L 77 48 13	Khiāmi h.s. (Garhwāl) λ 30 16 48 L 78 12 32	Khurja House, (Bulandshahr) In village. λ 28 15 24 L 77 53 51 No. 524
Kharkhari Bungalow, (Dehra Dun) Mr. Wilson's, western chimney. λ 29 58 11'68 L 78 12 51'78 H 980	Khindidia Tree Flag. (Muzaffarnagar) λ 29 33 20 L 77 51 39	Kidārpur h.s. (Karauli) Mark-stone sunk into the ground 1 "kos" to the east of Chelachod, and 1 "kos" to the W. of Kidārpur. λ 26 34 22'54 L 77 33 25'88 No. 246
Khatāoli Tree, (Muzaffarnagar) Flag in village. λ 29 17 2 L 77 46 3 No. 627	Khirdoni House, (Mirat) Flag in village. λ 29 4 27 L 77 51 10 No. 607	Kinauni s. (Muzaffarnagar) In the midst of a field, 300 yards E. by S. of village so called; marked by a circular paka platform 2½ feet in diameter, countersunk to a depth of three feet and car- rying a mark-brick at its surface. λ 29 27 0'86 L 77 41 5'70 No. 719
Khenwai Fort, (Jhansi) Building, on E. bank of Sind river. λ 25 18 40 L 77 54 30 No. 154	Khirwa Tree Flag. (Mirat) λ 29 6 6 L 77 41 24	Kisan Thisa Tree Flag. (Muzaffarnagar) λ 29 25 45 L 77 56 40
Khera No. 1 Tree, (Mirat) Flag. λ 29 13 25 L 77 37 44 No. 651	Khoja Nagla Tree Flag. (Muzaffarnagar) λ 29 36 43 L 77 47 42	

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
Kishanpur h.s. (<i>Gwalior</i>) On a hill about 2.5 miles W. of Bijráwan hill fort, about a mile S.W. of the ruined village of Kishanpur and 2 miles S.E. of Dhoab; marked by a stump of a tree supported by a pyramid of stones. λ 25 0 58.56 L 77 28 23.46 Nos. 129, 130	Kotra s. (<i>Saháranpur</i>) 200 yards E. of Kotra Tejuwála village in the Tarái of the Siwálik hills; marked by a platform 12 feet high. λ 30 15 0.95 L 77 34 43.24 No. 849	Kutab Minár (<i>Dehli</i>) λ 28 31 27.7 L 77 13 39.2 Nos. 324, 325
Koel Mosque, (<i>Aligarh</i>) Centre dome. λ 27 52 45.5 L 78 6 30.7 Nos. 498, 499	Kotri h.s. (<i>Dehra Dun</i>) On spur on S. face of the Siwálik range, between the Kálúwála and Kotri Raus. λ 30 15 7.13 L 77 50 55.65 H 2860 No. 964	Labauli Tree flag. (<i>Saháranpur</i>) λ 29 45 0 L 77 51 44
Kokhai Tree Flag. (<i>Saháranpur</i>) λ 29 47 47 L 77 39 17	Kuárpur Building. (<i>Gwalior</i>) λ 25 34 43 L 77 37 42	Labkari s. (<i>Saháranpur</i>) λ 29 41 52.34 L 77 41 52.62 No. 792
Koláras Temple s. (<i>Gwalior</i>) In fort. λ 25 13 8.3 L 77 39 11.9 No. 146	Kuárpur h.s. (<i>Gwalior</i>) λ 26 14 47.30 L 77 50 24.32 Nos. 200, 201	Labreri Haveli, (<i>Saháranpur</i>) Flag. λ 29 45 59 L 77 54 20 No. 813
Kolári Tree. (<i>Muzaffarnagar</i>) λ 29 31 51 L 77 35 22	Kulsat Tree Flag. (<i>Saháranpur</i>) λ 29 39 53 L 77 40 24	Lachera s. (<i>Muzaffarnagar</i>) On a sand mound about 25 feet high to N.W. of village; marked by circular paka platform of 2½ feet diameter, countersunk 3 feet, and carrying a mark-brick at its surface. λ 29 24 30.06 L 77 41 38.19 No. 717
Kolua h.s. (<i>Gwalior</i>) λ 24 34 29.11 L 77 49 51.11 No. 109	Kumbher Building. (<i>Bhartpur</i>) Flag on highest building. λ 27 18 53.4 L 77 25 16.6 Nos. 287, 288	Lachera Tree Flag. (<i>Muzaffarnagar</i>) In village on the W. bank of Káli Naddi. λ 29 24 30 L 77 42 23
Kopuri Tree Flag. (<i>Saháranpur</i>) λ 29 47 5 L 77 46 38	Kundai h.s. (<i>Gwalior</i>) On a range of flat hills about a mile W. of Ajwáro and so called from a small village lying on the S. brow of the hill; marked by a circular platform. λ 25 1 11.10 L 77 40 28.46 Nos. 125, 126	Lachkua h.s. (<i>Dehra Dun</i>) On spur on S. face of Siwálik range at head of Sindli Rau. λ 30 4 34.24 L 78 4 8.85 H 2674 No. 955
Korua Tree Flag. (<i>Saháranpur</i>) λ 29 46 50 L 77 45 9	Kunjpura Mosque, (<i>Ambála</i>) Centre dome. λ 29 42 46.4 L 77 6 51.3 No. 881	Lachmangarh Hill Fort. (<i>Gwalior</i>) Staircase of southernmost building. λ 25 47 40.7 L 78 9 23.6 Nos. 185, 186
Koseri-ka-gummat. (<i>Dehli</i>) λ 28 33 48.3 L 77 11 29.4 Nos. 330, 331	Kuralki Tree Flag. (<i>Saháranpur</i>) λ 29 38 18 L 77 45 53	Lachmanjhula Temple. (<i>Garhwál</i>) λ 30 7 36.71 L 78 22 7.27
Kotesra House. (<i>Saháranpur</i>) Flag on Saiyid's house. λ 29 36 19.6 L 77 38 43.7 Nos. 852, 853	Kúri Tree Flag. (<i>Saháranpur</i>) λ 29 43 26 L 77 39 21	Lachora h.s. (<i>Bhartpur</i>) λ 27 0 6.64 L 77 22 43.13 Nos. 253, 254
Kotra Hill Building. (<i>Dholpur</i>) λ 26 39 4 L 77 53 52 No. 438	Kutabgarh s. (<i>Saháranpur</i>) On Kázi Nijábat Ali Khán's gateway. λ 29 33 29.13 L 77 28 58.27 Nos. 859, 860	Ladára Hill Tomb, (<i>Gwalior</i>) Eastern. λ 25 37 48.7 L 77 57 23.9 Nos. 176, 177

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<p>Ladára h.s. (Gwalior) On N.E. extremity of sandstone hills 2 miles east of Narwar town; denoted by a circular platform which has the usual mark-stone on its surface.</p> <p style="text-align: center;">o ' "</p> <p>λ 25 37 22'25 L 77 57 56'67 Nos. 172, 173</p>	<p>Lálgarh h.s. (Gwalior) Also called Tora h.s.</p> <p style="text-align: center;">o ' "</p> <p>λ 25 23 39'78 L 77 33 39'86 No. 399</p>	<p>Láva Hill Mark. (Gwalior)</p> <p style="text-align: center;">o ' "</p> <p>λ 25 11 18 L 77 29 52</p>
<p>Ládpúr, XXVII. (Vide page 7-A.)</p> <p>λ 27 30 25'07 L 76 51 23'99 H 1349 h Not forthcoming No. 40</p>	<p>Lál Khán's Sarai s. (Mirat) In fort.</p> <p>λ 28 40 5'63 L 77 31 22'85 No. 550</p>	<p>Láwar s. (Mirat) On the highest turret of a house owned by Husain Baksh in the centre of the village; denoted by a mark-brick imbedded in the terrace at 9 feet 10 inch. S. of a mark-stone which had been previously laid on the same roof.</p> <p>λ 29 6 38'01 L 77 49 11'87 No. 589</p>
<p>Lahugla s. (Bulandshahr) On old bastion (S.E.)</p> <p>λ 28 31 37'73 L 77 53 24'82 No. 527</p>	<p>Lalsana Tree, (Mirat) Flag in village.</p> <p>λ 29 2 32 L 77 46 47 No. 571</p>	<p>Ledpur Hill Building. (Gwalior)</p> <p>λ 24 43 41 L 77 54 49 No. 119</p>
<p>Lakarsánda Tree Flag. (Muzaffarnagar)</p> <p>λ 29 29 22 L 77 41 34</p>	<p>Landaur Hospital. (Dehra Dun) Heliotrope on roof.</p> <p>λ 30 27 18'7 L 78 8 49'2 H 7362 Nos. 386, 387</p>	<p>Logarh Bastion. (Ambála) In village.</p> <p>λ 29 56 27'7 L 77 15 4'5 Nos. 919, 920</p>
<p>Lakar Tree. (Ambála) In village.</p> <p>λ 30 11 46 L 77 30 24</p>	<p>Landaur, Lál Tibba Bungalow. (Dehra Dun) N. and highest of two chimneys.</p> <p>λ 30 27 31 L 78 8 32</p>	<p>Lohári Mosque, (Saháranpur) N. Minár.</p> <p>λ 29 35 50'4 L 77 31 8'3 Nos. 866, 867</p>
<p>Laknauti Haveli s. (Saháranpur) Flag on S. turret.</p> <p>λ 29 40 31'79 L 77 41 36'85 Nos. 793, 794</p>	<p>Landaur, Lál Tibba h.s. (Dehra Dun)</p> <p>λ 30 27 30 L 78 8 32 H 7464</p>	<p>Lohári Tree Flag. (Muzaffarnagar)</p> <p>λ 29 31 35 L 77 40 13</p>
<p>Laknauti Mosque, (Muzaffarnagar) S. minaret.</p> <p>λ 29 46 29'3 L 77 14 19'8 Nos. 895, 896</p>	<p>Landaur No. 1 h.s. (Dehra Dun) Marked by a ⊙ engraved on stone and covered with a pile of stones.</p> <p>λ 30 27 48'62 L 78 8 16'97 H 7534</p>	<p>Lohi s. (Mattra) On mound S.W. of village.</p> <p>λ 27 46 37'96 L 77 49 59'19 No. 471</p>
<p>Laknauti s. (Muzaffarnagar) 0.5 of a mile W. of Laknauti on road between Karnal and Saháranpur; marked by a platform of vitrified bricks 12 feet high.</p> <p>λ 29 46 27'79 L 77 13 32'36 No. 833</p>	<p>Landaur, Protestant Church, (Dehra Dun) Angle of ridge over porch.</p> <p>λ 30 27 39'4 L 78 8 15'4 H 7287 No. 385</p>	<p>Loía s. (Mirat) Flag on a height.</p> <p>λ 29 9 19'63 L 77 46 19'30 No. 612</p>
<p>Lakni h.s. (Gwalior)</p> <p>λ 25 27 28'48 L 77 46 22'69 No. 162</p>	<p>Landaur, R. C. Chapel. (Dehra Dun)</p> <p>λ 30 27 50 L 78 8 17 H 7538</p>	<p>Loía Tree Flag. (Mirat) In village.</p> <p>λ 29 9 19 L 77 46 6</p>
<p>Lakwáso Tall Date Tree. (Gwalior) In village.</p> <p>λ 25 6 25 L 77 38 32</p>	<p>Láswári s. (Alwar) On well.</p> <p>λ 27 33 15'12 L 76 58 0'58 Nos. 289, 290</p>	<p>Lutsan Building, (Aligarh) Paka.</p> <p>λ 27 39 59 L 78 9 22 No. 496</p>
<p>Lálar s. (Bulandshahr) On Muhammad Ali Khán's house.</p> <p>λ 28 12 56'78 L 78 6 32'56 No. 512</p>	<p>Laulpur Tree Flag. (Muzaffarnagar)</p> <p>λ 29 33 38 L 77 39 43</p>	<p>Máchi, XXI. (Vide page 6-A.)</p> <p>λ 26 33 25'66 L 77 5 36'25 H 1297 h Not forthcoming (No. 32)</p>

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
Machkanda Highest Building. (<i>Dholpur</i>) λ 26 41 3 L 77 54 38	Mahmudpur No. 2 Tree Flag. (<i>Saharanpur</i>) In village. λ 29 49 20 L 77 46 18	Manát s. (<i>Saharanpur</i>) Midway N. of Manát and S.W. of Sonjni, and 1·5 miles N.E. of Banera; marked by a platform 6 feet high. λ 29 37 43·77 L 77 25 34·74 No. 822
Madagan Fort, (<i>Tonk</i>) N.E. corner. λ 24 3 27·1 L 77 42 28·6 No. 93	Majáhidpur Tree Flag. (<i>Muzaffarnagar</i>) λ 29 14 39 L 77 40 37	Manát Village. (<i>Saharanpur</i>) λ 29 37 7 L 77 25 53
Madári Building. (<i>Gwalior</i>) λ 25 19 41 L 77 39 32	Majhera s. (<i>Muzaffarnagar</i>) 500 yards S.W. of the village so called, which lies 2 miles N.W. of Mirapur town; denoted by a platform 7 feet high and 4 feet in diameter, with mark-stones at top and bottom. λ 29 17 56·23 L 77 58 6·48 No. 664	Mandaura Tree, (<i>Muzaffarnagar</i>) Flag in village. λ 29 11 58·5 L 77 47 16·2 Nos. 614, 615
Madhoni, XXIV. (<i>Vide page 7—A.</i>) λ 27 13 49·65 L 77 28 8·26 H 7·14 h 0 No. 37	Málágarh s. (<i>Bulandshahr</i>) On west central bastion. λ 28 27 55·00 L 77 52 16·55 No. 525	Mandaur s. (<i>Muzaffarnagar</i>) On roof of a building in village so called, which is 0·5 of a mile S. of Dhakeri station and 5 miles N.W. of Jánasath town. λ 29 23 12·00 L 77 51 4·90 Nos. 666, 667
Madka h.s. (<i>Gwalior</i>) λ 26 12 41·24 L 77 59 52·06 No. 207	Málámájra Tree Flag. (<i>Ambála</i>) In village. λ 30 4 26 L 77 18 49	Mandi s. (<i>Ambála</i>) 215 paces from the right bank of Jamna River. λ 30 5 30·31 L 77 23 56·81 Nos. 928, 929
Madráni Bastion, (<i>Gwalior</i>) S. E. λ 26 19 53·9 L 77 37 36·8 No. 240	Malheda House Flag. (<i>Muzaffarnagar</i>) λ 29 32 14 L 77 44 32	Mandla h.s. (<i>Alwar</i>) λ 27 35 34·41 L 76 53 19·07 Nos. 282, 283
Mahádon Tree, (<i>Mirat</i>) Flag. λ 29 10 47·6 L 77 38 22·9 Nos. 648, 649	Málikpur Tree Flag. (<i>Muzaffarnagar</i>) λ 29 34 38 L 77 57 5	Mandra Hill Mark. (<i>Gwalior</i>) λ 25 12 25 L 77 31 24
Mahmudpur Building Flag. (<i>Dholpur</i>) λ 26 42 1 L 77 55 6	Maloni h.s. (<i>Bharatpur</i>) λ 26 55 14·81 L 77 36 2·03 Nos. 255, 256	Mandrák Factory. (<i>Aligarh</i>) Bungalow. λ 27 47 42 L 78 7 50 No. 497
Mahmudpur No. 1 s. (<i>Mirat</i>) On S.W. bastion of Ishri Sing's house or small Garhi. λ 28 39 5·86 L 77 50 39·31 No. 530	Mamoni, IX. (<i>Vide page 4—A.</i>) λ 25 31 28·34 L 77 44 5·42 H 1596 h 8 No. 20	Mandrel Fort, (<i>Karauli</i>) Building. λ 26 17 50 L 77 16 37 No. 231
Mahmudpur No. 1 Tree Flag. (<i>Saharanpur</i>) In village. λ 29 42 10 L 77 53 51	Mamoni Fort. (<i>Gwalior</i>) Near the pass. λ 25 30 6·1 L 77 44 56·2 Nos. 166, 167	Mangára Building, (<i>Gwalior</i>) S.W. corner. λ 26 5 25·5 L 78 5 38·2 No. 211
Mahmudpur No. 2 s. (<i>Muzaffarnagar</i>) On bastion to the E. of village of same name. λ 29 19 25·34 L 77 58 4·89 Nos. 693, 694	Mánakpur s. (<i>Saharanpur</i>) λ 29 50 20·40 L 77 47 53·15 No. 805	Manglaur Tree Flag. (<i>Saharanpur</i>) λ 29 47 18 L 77 54 45

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<p>Mania Mosque, (Dholpur) Dome.</p> <p style="text-align: center;">o ' "</p> <p>λ 26 49 18'6 L 77 57 44'9 No. 436</p>	<p>Masúri, Abbey Spire. (Dehra Dun)</p> <p style="text-align: center;">o ' "</p> <p>λ 30 27 39 L 78 5 8 H 7092</p>	<p>Masúri, Laureston Observatory Mark. (Dehra Dun)</p> <p style="text-align: center;">o ' "</p> <p>λ 30 27 34'2 L 78 6 10'2 H 6653 No. 882</p>
<p>Manjhera s. (Muzaffarnagar) On a low sand ridge in the grounds of the old deserted village so called, and 80 yards W. by N. of a paka tomb under a Bargat tree; marked by a circular paka platform 2½ feet in diameter, countersunk to a depth of 3 feet, having a mark-brick at its surface.</p> <p>λ 29 27 13'68 L 77 42 33'88 No. 718</p>	<p>Masúri, Bachelor's Hall, (Dehra Dun) Chimney.</p> <p>λ 30 27 34 L 78 3 51</p>	<p>Masúri, Laureston. (Dehra Dun) Top of Dial pillar.</p> <p>λ 30 27 34 L 78 6 9 H 6651</p>
<p>Manoharpur Tree Flag. (Saháranpur)</p> <p>λ 29 45 49 L 77 40 52</p>	<p>Masúri, Camel's Back h.s. (Dehra Dun) On the highest knoll E. of and adjoining Ferne Cliff estate; marked by a ⊙ engraved on stone and imbedded in the soil.</p> <p>λ 30 27 36'36 L 78 6 58'38 H 7029 Nos. 370, 371</p>	<p>Masúri Library. (Dehra Dun) Top of S.E. corner.</p> <p>λ 30 27 35 L 78 6 23 H 6599</p>
<p>Mánpúr, XXIX. (Vide page 7 & 8—A.)</p> <p>λ 27 38 12'13 L 77 24 2'17 H 828 h 5 Nos. 42, 51</p>	<p>Masúri Church Steeple. (Dehra Dun)</p> <p>λ 30 27 36'0 L 78 6 36'9 Nos. 377, 378</p>	<p>Masúri, Logarithm Lodge. (Dehra Dun) Centre chimney.</p> <p>λ 30 27 39 L 78 3 32</p>
<p>Mansúr Ali's Tomb, (Dehli) Dome with four minarets.</p> <p>λ 28 35 21'2 L 77 15 9'6 Nos. 338, 339</p>	<p>Masúri, Clover Lodge, (Dehra Dun) W. chimney.</p> <p>λ 30 27 48 L 78 3 57</p>	<p>Masúri, Manor House h.s. (Dehra Dun) Between the Dormitory and Chapel of the R. C. School so called; marked by a ⊙ cut on rock.</p> <p>λ 30 26 10'57 L 78 7 46'23 H 5911 No. 380</p>
<p>Mansúrpur. (Muzaffarnagar) Central and largest of 3 cupolas in village centre.</p> <p>λ 29 22 12'5 L 77 47 26'4 No. 725</p>	<p>Masúri Convent. (Dehra Dun) Top of N. white chimney</p> <p>λ 30 26 55'3 L 78 6 23'1 H 6985 No. 381</p>	<p>Masúri, Park House, (Dehra Dun) E. chimney.</p> <p>λ 30 27 32 L 78 3 55 H 6712</p>
<p>Mao, VIII. (Vide page 4—A.)</p> <p>λ 25 16 53'29 L 77 55 41'79 H 1594 h 6 No. 19</p>	<p>Masúri, Dúdhili or Moltí Tibba. (Dehra Dun) Hill mark.</p> <p>λ 30 27 59 L 78 3 4</p>	<p>Masúri, Priority, (Dehra Dun) W. gable end.</p> <p>λ 30 28 6 L 78 5 59 H 6787</p>
<p>Mao s. (Aligarh) On building.</p> <p>λ 27 59 39'31 L 77 52 32'99 No. 466</p>	<p>Masúri, Eagle's Nest h.s. (Dehra Dun)</p> <p>λ 30 27 31 L 78 5 43</p>	<p>Masúri, Tundelabad. (Dehra Dun) N. chimney.</p> <p>λ 30 27 37 L 78 4 28 H 6424</p>
<p>Maroli Village. (Gwalior)</p> <p>λ 26 36 55 L 77 53 50</p>	<p>Masúri, Gracemount. (Dehra Dun) Top of Dial pillar.</p> <p>λ 30 27 33 L 78 6 20 H 6569</p>	<p>Masúri, Vincent's Hill s. (Dehra Dun) On knoll to S.E. of and adjoining Bellevue house; marked by a ⊙ engraved on stone and imbedded in the soil.</p> <p>λ 30 27 17'24 L 78 5 56'78 H 7006 Nos. 372, 373</p>
<p>Masúdpur Village. (Gwalior) On road to Hingona.</p> <p>λ 26 37 48 L 77 57 38</p>	<p>Masúri, Haveli. (Mirat) S.W. corner of a paka Haveli in village.</p> <p>λ 29 4 11'3 L 77 52 7'9 No. 608</p>	<p>Masúri, Zephyr Hall. (Dehra Dun) Top of old observatory S. end of ridge.</p> <p>λ 30 27 22'5 L 78 7 16'3 H 6725 No. 383</p>
	<p>Masúri, Himalaya Club. (Dehra Dun) Top of westernmost chimney.</p> <p>λ 30 27 14'4 L 78 7 37'1 H 6768 No. 384</p>	

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
Matauli Tree Flag. (<i>Sahdranpur</i>) λ 29 37 35 L 77 45 48	Mehesari, LII. (<i>Vide page 11—A.</i>) λ 29 30 18'21 L 78 11 18'88 H 821 h 14 No. 78	Mirat Masjid. (<i>Mirat</i>) Centre of 3 cupolas on N. W. side of city. λ 29 1 3'1 L 77 44 38'4 No. 573
Mataur s. (<i>Mirat</i>) On a small sand ridge E. of village so called; denoted by a triangular paka platform of 2½ feet side, countersunk to a depth of 3 feet, and having 2 centre marks. λ 29 8 5'92 L 77 45 32'59 No. 590	Mehrmati s. (<i>Mirat</i>) S.E. of Mehrmati and N.N.W. of Nanhu village; marked by a pillar 2½ feet in diameter, with two centre marks, and surrounded by a mud platform 5 feet high. λ 29 6 58'54 L 77 38 7'66 No. 561	Mirat Church. (<i>Mirat</i>) Northernmost and highest steeple. λ 29 0 45'9 L 77 45 2'5 Nos 565, 566
Mataur Tree Flag. (<i>Mirat</i>) In village. λ 29 8 15 L 77 45 13	Mehrmati Tree Flag. (<i>Mirat</i>) λ 29 7 35 L 77 37 57	Mirat Racket Court. (<i>Mirat</i>) E. angle. λ 29 0 55'4 L 77 44 18'7 No. 572
Mát s. (<i>Mattra</i>) On building in fort. λ 27 35 42'56 L 77 44 56'05 No. 806	Meola s. (<i>Mirat</i>) λ 28 46 42'51 L 77 23 52'72 No. 555	Mirat R. C. Chapel. (<i>Mirat</i>) Steeple. λ 29 0 5'0 L 77 44 50'5 Nos. 568, 564
Mathra Tree Flag. (<i>Muzaffarnagar</i>) λ 29 33 52 L 77 37 12	Meoli, XX XII. (<i>Vide page 8—A.</i>) λ 28 3 29'78 L 76 59 25'33 H 1347 h 14 No. 44	Mirpur s. (<i>Sahdranpur</i>) λ 29 49 34'45 L 77 39 32'83
Mát Sarai Building. (<i>Bulandshahr</i>) λ 28 29 51 L 77 52 26 No. 536	Mimlána No. 1 s. (<i>Muzaffarnagar</i>) On fallow land S.E. of village, N.W. of Muzaffarnagar town and N. of western Káli Naddi; denoted by a circular paka platform of 2½ feet diameter, countersunk to a depth of 3 feet, and carrying a mark-brick at its surface. λ 29 29 31'89 L 77 43 8'38 Nos. 721, 722	Mithápur Tree Flag. (<i>Mirat</i>) In village. λ 29 5 57 L 77 48 23
Mattra s. (<i>Mattra</i>) On building in city. λ 27 30 16'83 L 77 43 44'72 No. 305	Mimlána No. 2 s. (<i>Muzaffarnagar</i>) Flag. λ 29 30 12'77 L 77 42 45'85 Nos. 781, 782	Mitholi s. (<i>Mattra</i>) On building. λ 27 56 51'75 L 77 41 8'68 No. 457
Maua Bastion. (<i>Aligarh</i>) λ 27 49 4 L 78 2 50 No. 500	Mimoi Mosque. (<i>Tonk</i>) λ 24 5 11'9 L 77 41 47'1 Nos. 94, 95	Mogpur s. (<i>Muzaffarnagar</i>) On S. side of village so called and 2 miles E. of Mansápur village; marked by a platform 7 feet high with markstones at top and bottom. λ 29 21 24'88 L 77 48 50'26 No. 660
Mauákhera Village. (<i>Bulandshahr</i>) λ 28 26 27 L 77 52 9	Miránpur Building. (<i>Muzaffarnagar</i>) Flag. λ 29 16 54 L 77 59 52 No. 672	Mohábli House Flag. (<i>Muzaffarnagar</i>) λ 29 33 46 L 77 36 12
Mauláheri Tree Flag. (<i>Muzaffarnagar</i>) In village on W. bank of Káli Naddi. λ 29 23 24 L 77 42 36	Mirat Monument. (<i>Mirat</i>) General Gillespie's, highest in Burial ground. λ 29 0 57'5 L 77 45 1'8 Nos. 569, 570	Moháblipur House. (<i>Muzaffarnagar</i>) λ 29 32 36 L 77 36 33
Mawai Tree Flag. (<i>Mirat</i>) λ 29 7 13 L 77 48 30		Mohána Fort. (<i>Gwalior</i>) N.W. Angle. λ 25 54 13'4 L 77 48 49'6 No. 427
Medora Tree. (<i>Mattra</i>) In village. λ 27 44 41 L 77 51 34		

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
Mohangarh Building. (Gwalior) S.E. corner. λ 25 18 38.0 L 77 49 33.9 No. 158	Murtza Ali s. (Tonk) On Dargáh. λ 24 6 26.85 L 77 43 20.32 Nos. 91, 92	Náhar májra Bastion, (Saháranpur) Tree flag. λ 29 54 9.5 L 77 16 44.8 No. 910
Mohan Hill Mark, (Dehra Dun) On Siwálik Range. λ 30 13 0 L 77 54 47 H 3065	Muzaffarnagar Idgáh, (Muzaffarnagar) N. End. λ 29 28 16.6 L 77 43 42.3 No. 736	Náharpur Village. (Ambála) λ 30 3 21 L 77 19 25
Mohan Kírat Temple. (Garhwál) λ 30 7 23.48 L 78 21 12.01	Muzaffarnagar Temple, (Muzaffarnagar) Flag on iron pinnacle. λ 29 28 14.4 L 77 44 0.7 Nos. 745, 746	Naklor Tree Flag. (Saháranpur) λ 29 53 58 L 77 38 12
Mokári s. (Mirat) λ 28 54 28.34 L 77 27 56.69	Muzaffarnagar Mat, (Muzaffarnagar) λ 29 28 25.7 L 77 43 50.7 Nos. 743, 744	Naknauta Tree Flag. (Saháranpur) λ 29 43 48 L 77 50 22
Momin Tree Flag. (Muzaffarnagar) λ 29 15 10 L 77 37 19	Nágal Badheri Tree Flag. (Saháranpur) λ 29 50 8 L 77 40 29	Nandbai s. (Bhartpur) On the house of Mani Rám Ká- núngo. λ 27 13 11.68 L 77 14 23.71 No. 263
Monipur Tree Flag. (Mirat) In village. λ 29 11 10 L 77 45 55	Nagar Bungalow, (Bhartpur) Conoidal. λ 27 25 19 L 77 8 31 No. 276	Nandgáon Hill Temple. (Matra) λ 27 42 40.3 L 77 25 39.8 Nos. 302, 303
Morna Mosque, (Muzaffarnagar) Centre of Dome. λ 29 27 57.3 L 77 58 41.2 No. 699	Nagla No. 1 s. (Muzaffarnagar) On low wall on boundary between Nagla and Mundaora villages; marked by a triangular paka pillar of 2½ feet side, surrounded by a circular platform of earth, and having a centre mark at top and another at bottom. λ 29 12 57.38 L 77 46 46.06 No. 593	Nandhera Tree Flag. (Muzaffarnagar) λ 29 32 10 L 77 52 23
Morwáso Fort, (Gwalior) S.W. Angle. λ 24 52 59.9 L 77 46 2.7 No. 124	Nagla No. 2 s. (Saháranpur) λ 29 44 0.20 L 77 52 20.30 No. 799	Nandheri s. (Muzaffarnagar) On mound about a mile E. of Nandhera and N.E. of Godla villages; marked by a platform 2 feet high and 5 feet in diameter. λ 29 31 55.97 L 77 53 11.40 No. 684
Mowai Flag on Sand Hill. (Mirat) λ 28 38 38.28 L 77 27 57.67	Nagla Tree Flag. (Saháranpur) λ 29 36 2 L 77 48 54	Nándho s. (Aligarh) Or Nandhi; on Dalel Sing Zamíndár's house. λ 27 53 17.11 L 78 4 11.07 No. 482
Mughul Sarai Tree Flag. (Tonk) λ 24 18 7 L 77 41 23	Nagli Bastion, (Ambála) In village. λ 29 58 12 L 77 16 18 No. 924	Nanhera Tree Flag. (Saháranpur) λ 29 43 41 L 77 40 46
Munawarpur Tree Flag. (Muzaffarnagar) λ 29 23 13 L 77 47 9	Náhal s. (Mirat) On Mosque Dome. λ 28 42 58.92 L 77 35 48.65 No. 546	Nanhu Tree Flag. (Mirat) λ 29 6 11 L 77 38 23
Mundiáki Tree Flag. (Saháranpur) λ 29 44 45 L 77 53 16	Nansura s. (Saháranpur) λ 29 41 35.22 L 77 50 14.39 No. 798	

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<p>Nánúwála Bastion, (Saháranpur) In village. , , "</p> <p>λ 29 52 48 L 77 14 24 No. 905</p> <p>Nára Building, (Muzaffarnagar) Ruined.</p> <p>λ 29 23 59 L 77 45 7 No. 726</p> <p>Nára Makbara, (Muzaffarnagar) On range of sand hills.</p> <p>λ 29 23 40.3 L 77 45 22.4 Nos. 727, 728</p> <p>Nársina Hill Tree (Dehli)</p> <p>λ 28 37 1 L 77 10 57</p> <p>Naráinpur Village. (Bulandshahr)</p> <p>λ 28 6 4 L 78 0 49</p> <p>Nargájáni Tree, (Muzaffarnagar) Flag.</p> <p>λ 29 31 34.6 L 77 54 55.8 Nos. 707, 708</p> <p>Narsenkálán Tree Flag. (Saháranpur)</p> <p>λ 29 42 31 L 77 52 25</p> <p>Narwar Fort, (Gwalior) N. Gateway of inner Fort.</p> <p>λ 25 39 2.9 L 77 56 56.5 No. 180</p> <p>Naujil s. (Saháranpur) 1 mile S.E. of Naujil village and 1.25 miles W. of Harar; marked by a mud platform 5 feet high.</p> <p>λ 29 33 32.73 L 77 25 3.43 No. 821</p> <p>Naujil Temple. (Saháranpur) In village.</p> <p>λ 29 34 18.6 L 77 24 10.1 No. 873</p> <p>Naula s. (Muzaffarnagar) On narrow ridge between 3 fields to N.N.W. of village so called; marked by a circular paka platform of 2½ feet side, countersunk 3 feet, and carrying a mark-brick at its surface.</p> <p>λ 29 19 48.34 L 77 43 54.80 Nos. 600, 601</p>	<p>Naula Tree Flag, (Muzaffarnagar) In village. , , "</p> <p>λ 29 19 2 L 77 44 31</p> <p>Naurangabad s. (Mirat) Flag near village.</p> <p>λ 29 0 18.36 L 77 50 27.16 No. 574</p> <p>Nawáda h.s. (Dehra Dun) On summit near N.W. end of the Nágsidh or Nawáda hill.</p> <p>λ 30 14 29.43 L 78 5 54.92 No. 361</p> <p>Nawáda s. (Saháranpur)</p> <p>λ 29 44 36.27 L 77 48 55.03 No. 800</p> <p>Níámu House. (Muzaffarnagar)</p> <p>λ 29 35 30 L 77 35 25</p> <p>Niboda h.s. (Gwalior)</p> <p>λ 25 17 32.31 L 77 38 51.74 Nos. 149, 150</p> <p>Nímdánt, VI. (Vide page 4—A.)</p> <p>λ 25 2 33.52 L 77 54 50.98 H 1673 h 5 No. 15</p> <p>Nindar, XIX. (Vide page 6—A.)</p> <p>λ 26 17 56.41 L 77 13 21.57 H 1345 h Not forthcoming No. 81</p> <p>Nipri s. (Gwalior) On Bastion of Fort, N.E. turret.</p> <p>λ 26 18 12.15 L 77 38 11.49 Nos. 234, 235</p> <p>Nirána s. (Muzaffarnagar) On a range of mounds run- ning N.E. and S.W. about 500 yards W. of village; marked by a mud platform 2 feet high and 5 feet in diameter with markstones at top and bottom.</p> <p>λ 29 25 6.94 L 77 48 43.81 No. 660</p>	<p>Noh, XXXIII. (Vide page 8—A.) , , "</p> <p>λ 27 50 53.08 L 77 41 12.74 H 710 h 60 No. 52</p> <p>Nohri h.s. (Gwalior)</p> <p>λ 25 28 47.71 L 77 43 41.75 Nos. 163, 164</p> <p>Nojli, LIII. (Vide page 11—A.)</p> <p>λ 29 53 27.76 L 77 42 51.77 H 929 h 50 No. 72</p> <p>Nojli Tree Flag. (Saháranpur)</p> <p>λ 29 53 54 L 77 42 46</p> <p>Nukar Temple, (Saháranpur) In village.</p> <p>λ 29 55 15.6 L 77 20 50.0 Nos. 915, 916</p> <p>No. 1 s. (Muzaffarnagar) On bank of Jamna river.</p> <p>λ 29 41 40.32 L 77 8 6.05</p> <p>No. 2 s. (Muzaffarnagar) On bank of Jamna river.</p> <p>λ 29 40 24.13 L 77 7 2.01</p> <p>No. 3 s. (Muzaffarnagar) On bank of Jamna river.</p> <p>λ 29 39 19.79 L 77 6 33.23</p> <p>No. 4 s. (Saháranpur)</p> <p>λ 29 44 3.55 L 77 38 52.16</p> <p>No. 5 s. (Muzaffarnagar) On left bank of Jamna river.</p> <p>λ 29 41 49.64 L 77 10 23.70</p> <p>No. 6 s. (Muzaffarnagar) On left bank of Jamna river, and 0.12 of a mile W. of Chota Kanda.</p> <p>λ 29 43 43.59 L 77 11 6.58 No. 832</p>

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
No. 7 s. (Saháranpur) o ' " λ 29 45 35'82 L 77 45 17'12 No. 808	No. 1a s. (Muzaffarnagar) o ' " λ 29 32 48'02 L 77 40 29'19	Pagáro, XVII. (Vide page 6—A.) o ' " λ 26 16 13'46 L 77 53 39'07 H 1122 h Not forthcoming No. 26
No. 9 s. (Ambála) On right bank of Jamna river. λ 29 48 46'92 L 77 12 25'45	No. 2a s. (Saháranpur) Near Kotesra. λ 29 36 50'70 L 77 38 26'01	Pagáro Hill Temple, (Gwalior) Flag. λ 26 16 13'7 L 77 53 59'3 No. 197
No. 10 s. (Ambála) On bank of Jamna river, near Kal- saura Ghát. λ 29 52 36'83 L 77 12 16'76	No. 8a s. (Saháranpur) λ 29 38 56'03 L 77 41 48'99 No. 790	Pahárganh, IV. (Vide page 8—A.) λ 24 56 6'92 L 77 44 13'50 H 1641 h Not forthcoming No. 14
No. 11 s. (Muzaffarnagar) λ 29 35 17'11 L 77 51 46'64	No. 5a s. (Saháranpur) λ 29 50 43'35 L 77 42 25'37 No. 807	Pahárganh Fort, (Gwalior) Palace, S.W. corner of turret. λ 26 11 46'0 L 77 41 10'3 No. 227
No. 12 s. (Saháranpur) λ 29 39 38'84 L 77 42 38'63	No. 9a s. (Saháranpur) λ 29 46 54'78 L 77 51 21'41 No. 801	Pahár Hill Building. (Gwalior) λ 26 2 32 L 78 4 30
No. 13 s. (Ambála) On right bank of Jamna river. λ 29 57 19'96 L 77 16 10'18 Nos. 917, 918	No. 10a s. (Muzaffarnagar) λ 29 38 2'97 L 77 51 5'11 No. 797	Pahári Building, (Alwar) Domed, on low hill. λ 27 30 4'6 L 76 59 40'8 No. 271
No. 14 s. (Ambála) On right bank of Jamna river. λ 29 59 52'97 L 77 18 17'98 Nos. 922, 923	No. 11a s. (Saháranpur) On bank of Jamna river. λ 29 52 34'34 L 77 13 10'26 No. 901	Pahárpur Tree Flag. (Saháranpur) λ 29 48 37 L 77 39 58
No. 15 s. (Ambála) On right bank of Jamna river. λ 30 2 9'51 L 77 19 23'19	No. 12a s. (Saháranpur) On left bank of Jamna river. λ 29 54 50'75 L 77 15 21'22 Nos. 906, 907	Pahásu Tree, (Bulandshahr) In village. λ 28 12 30 L 78 6 32
No. 16 s. (Saháranpur) In Kamálpur village, on left bank of Jamna river. λ 30 3 2'58 L 77 21 23'01 No. 926	Oak Grove, Masúri, (Dehra Dun) Centre of northernmost chimney of house so called. λ 30 25 11'36 L 78 7 56'56 H 5222	Páhera, XXXI. (Vide page 8—A.) λ 28 2 49'05 L 77 19 50'32 H 750 h 40 Nos. 43, 53
No. 20 s. (Ambála) On right bank of Jamna river. λ 30 11 7'54 L 77 30 46'56	Pabarsa Tree Flag, (Mirat) In village. λ 29 5 21 L 77 43 34	Paholi s. (Mirat) To N.W. of village so called, and N.E. of Dabthua village; denoted by a paka pillar 2½ feet broad, carrying 3 mark-bricks and sur- rounded by a platform of earth. λ 29 4 56'62 L 77 40 52'17 No. 559
No. 21 s. (Saháranpur) On left bank of Jamna river. λ 30 12 10'29 L 77 32 35'75	Pabla Tree, (Mirat) Flag in village. λ 29 3 45 L 77 50 11 No. 606	
No. 22 s. (Ambála) On right bank of Jamna river. λ 30 14 19 L 77 33 8	Pachgáon Building, (Dholpur) Southern. λ 26 43 5 L 77 53 15	

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<p>Paholi Tree Flag. (<i>Mirat</i>)</p> <p>λ 29 4 24 L 77 41 5</p>	<p>Panchli Tree Flag. (<i>Mirat</i>)</p> <p>λ 29 9 21 L 77 32 8</p>	<p>Parsi s. (<i>Mirat</i>)</p> <p>λ 29 10 49'07 L 77 32 41'92</p>
<p>Pahro h.s. (<i>Gwalior</i>)</p> <p>λ 25 2 10'79 L 77 56 5'78 No. 140</p>	<p>Pandora Hill Fort. (<i>Jhansi</i>) Gateway of lower fort.</p> <p>λ 25 9 31 L 77 59 11 No. 156</p>	<p>Pát h.s. (<i>Alwar</i>) On highest point of an eminent sandstone range W. of Ferozpur valley.</p> <p>λ 27 44 52'68 L 76 56 45'33 Nos. 269, 270</p>
<p>Pakodna s. (<i>Aligarh</i>) On building.</p> <p>λ 27 55 13'70 L 77 35 47'80 No. 457</p>	<p>Paniári Building. (<i>Gwalior</i>) Cupola of a square building surmounted by a dome.</p> <p>λ 26 6 13'8 L 78 4 31'1 No. 213</p>	<p>Patlokar No. 1 s. (<i>Mirat</i>) On a triangular platform under ground 2½ feet by 3 feet deep, with a Jháma centre stone, E. by S. of the village of same name.</p> <p>λ 29 12 43'66 L 77 35 48'35 No. 634</p>
<p>Palána s. (<i>Saháranpur</i>) 100 yards W. of Buri Naddi and 0·25 of a mile E. of Palána village; marked by a platform 7 feet high.</p> <p>λ 30 0 48'82 L 77 22 16'64 No. 839</p>	<p>Paniári Village Building. (<i>Gwalior</i>) S. gate.</p> <p>λ 26 5 55 L 78 4 18</p>	<p>Patlokar No. 2 s. (<i>Mirat</i>)</p> <p>λ 29 12 45'97 L 77 35 23'53 No. 645</p>
<p>Palána Village. (<i>Saháranpur</i>)</p> <p>λ 30 0 56 L 77 21 56</p>	<p>Paniári s. (<i>Saháranpur</i>)</p> <p>λ 29 48 8'10 L 77 41 49'92</p>	<p>Patlokar Tree Flag. (<i>Mirat</i>)</p> <p>λ 29 13 12 L 77 34 49</p>
<p>Palhera s. (<i>Mirat</i>) On edge of boundary, S.W. of Palhera and E. of Paoli village; denoted by a triangular paka platform of 2½ feet side, countersunk 3 feet, and having a mark-brick at its upper surface.</p> <p>λ 29 3 33'65 L 77 44 26'18 No. 557</p>	<p>Pánjúpur s. (<i>Ambála</i>) E. of the village of Pánjúpur; marked by a platform 6 feet high.</p> <p>λ 30 5 25'16 L 77 18 44'54 No. 840</p>	<p>Pauhúpur Tree Flag. (<i>Saháranpur</i>)</p> <p>λ 29 48 11 L 77 45 3</p>
<p>Palhera Tree Flag. (<i>Mirat</i>) In village.</p> <p>λ 29 3 37 L 77 45 18</p>	<p>Pánjúpur Village Tree. (<i>Ambála</i>)</p> <p>λ 30 5 21 L 77 18 38</p>	<p>Pauli Tree Flag. (<i>Mirat</i>) In village.</p> <p>λ 29 4 7 L 77 43 32</p>
<p>Páli Ním Tree. (<i>Karauli</i>) In village.</p> <p>λ 26 25 24 L 77 35 10</p>	<p>Panwári s. (<i>Mirat</i>) On sand mound about 15 feet above the surrounding country and to S.E. of the village so called; marked by a triangular paka platform of 2½ feet side, countersunk 3 feet and having a mark-brick at its upper surface.</p> <p>λ 29 6 18'39 L 77 46 39'17 No. 557</p>	<p>Pauti s. (<i>Muzaffarnagar</i>)</p> <p>λ 29 35 12'15 L 77 40 24'85</p>
<p>Páli s. (<i>Karauli</i>) On N. bank of Chambal river.</p> <p>λ 26 25 32'96 L 77 35 15'87 No. 242</p>	<p>Panwári Pipal Tree Flag. (<i>Mirat</i>) In village.</p> <p>λ 29 6 28 L 77 46 38</p>	<p>Pauti Village. (<i>Aligarh</i>)</p> <p>λ 28 5 36'5 L 77 57 59'2 Nos. 518, 519</p>
<p>Páli Tree Flag. (<i>Mirat</i>)</p> <p>λ 29 12 20 L 77 37 28</p>	<p>Párdho, (VI.) (<i>Vide page 3—A.</i>)</p> <p>λ 24 16 17'87 L 77 48 40'56 H 1763 h Not forthcoming Nos. 5, 10</p>	<p>Pharáro h.s. (<i>Gwalior</i>)</p> <p>λ 25 52 52'02 L 77 36 32'99 No. 407</p>
<p>Palwal s. (<i>Gurgáon</i>) On building.</p> <p>λ 28 8 31'39 L 77 21 58'88 No. 310</p>	<p>Paríl Village. (<i>Aligarh</i>)</p> <p>λ 27 44 35 L 78 4 25</p>	<p>Pilhora s. (<i>Matra</i>) On Zamíndár's house.</p> <p>λ 27 40 1'49 L 77 36 54'25 Nos. 449, 450</p>
		<p>Pinána Tree. (<i>Muzaffarnagar</i>) Flag in village.</p> <p>λ 29 27 57'9 L 77 40 46'3 Nos. 751, 752</p>

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
Pindaur s. (Muzaffarnagar) o ' " λ 29 36 42'79 L 77 20 14'54 No. 823	Purai Tree. (Muzaffarnagar) Flag. o ' " λ 29 32 59'0 L 77 48 25'5 Nos. 769, 770	Ráipur Temple. (Gwalior) In village. o ' " λ 26 7 51'2 L 78 5 51'8 No. 210
Piprai Building. (Gwalior) S. gable end. λ 25 32 38'6 L 77 48 57'3	Ráepúr, XV. (Vide page 5—A.) λ 26 8 14'39 L 78 7 15'71 H 1217 h Not forthcoming No. 25	Rájghát s. (Ambála) λ 30 6 11'21 L 77 27 0'50 Nos. 930, 931
Piprai Turret. (Gwalior) λ 24 30 35 L 78 0 21 No. 111	Ráet Village. (Aligarh) λ 27 57 50 L 77 59 45	Ráipur Dák Bungalow. (Dehra Dun) N. W. corner. λ 30 23 57 L 78 8 25
Pirer s. (Saháranpur) λ 29 46 41'90 L 77 39 25'16	Rahmatpur s. (Muzaffarnagar) On mound 0.25 of a mile E. of village and 2 miles W. of Bhokaredi town; marked by platform 1 foot high and 4 feet in diameter, with mark-stones at top and bottom. λ 29 31 19'49 L 77 56 51'53 No. 681	Ráipur Hotel. (Dehra Dun) Heseltine's, skylight of paka house. λ 30 23 22'08 L 78 8 4'65 H 2997
Pirghaib, XXXIX. (Vide page 9—A.) λ 28 40 35'09 L 77 15 19'21 H 833 h 39 No. 48	Rahmatpur Tree Flag. (Muzaffarnagar) λ 29 31 36 L 77 56 24	Ráipur h.s. (Dehra Dun) λ 30 24 47'01 L 78 9 12'48 No. 375
Piront Building. (Gwalior) Circular tower of highest building in village. λ 24 56 33'0 L 77 45 40'5 No. 127	Rái Building. (Gwalior) Ruined, S.W. corner. λ 26 13 5'2 L 78 1 7'0 No. 212	Ráipur Mosque. (Dehra Dun) S. Minaret. λ 30 23 50'7 L 78 8 20'8 No. 379
Pir Pamora s. (Muzaffarnagar) Marked on roof of highest building in village so called, 2 miles N.W. of Jánsath. λ 29 21 51'72 L 77 53 32'21 No. 669	Rái Fort. (Gwalior) S.W. angle. λ 25 12 17'5 L 77 34 23'5 No. 144	Ráipur s. (Aligarh) On mound. λ 28 0 18'69 L 77 46 49'61 No. 464
Pokargarhi Village. (Aligarh) λ 28 5 58 L 78 5 6	Rái Tree. (Muzaffarnagar) Flag. λ 29 33 24'9 L 77 46 9'9 Nos. 779, 780	Rájpura s. (Bulandshahr) λ 28 18 42'21 L 78 0 55'10
Pur Building. (Muzaffarnagar) Flag. λ 29 39 31'0 L 77 53 2'8 Nos. 809, 810	Raina Village. (Aligarh) λ 27 39 16 L 78 4 53	Rájpura Village. (Bulandshahr) Tree flag. λ 28 18 38 L 78 1 7
Pur Tree. (Muzaffarnagar) Flag in village. λ 29 21 40'3 L 77 42 39'7 Nos. 631, 632	Ráipur Building. (Gwalior) Northernmost, in village. λ 25 44 12 L 77 34 35 No. 416	Rakhera h.s. (Gwalior) λ 26 5 9'06 L 77 42 34'60
Pura Tree. (Muzaffarnagar) Flag in village. λ 29 20 40'7 L 77 41 3'2 Nos. 658, 659	Ráipur Peak Temple. (Gwalior) Dome of square temple. λ 26 8 16'4 L 78 7 16'8 No. 191	Rál House s. (Mattra) λ 27 33 32'60 L 77 36 7'45 No. 448
		Ramalpur Tree Flag. (Saháranpur) λ 29 50 4 L 77 42 51

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
Rámdwára s. (Dehli) ° ' "	Rasía, XXVI. (Vide page 7—A.) ° ' "	Rent Hill Fort. (Gwalior) S.E. and highest turret. ° ' "
λ 28 40 53'41	λ 27 26 16'92	λ 25 58 41'0
L 77 15 26'42	L 77 12 51'95	L 77 52 15'0
Nos. 348, 349	H 1059	Nos. 423, 424
Rámgarh Hill Chatri. (Alwar) λ 27 34 53'2	h Not forthcoming No. 39	Rijoni Fort. (Gwalior) Flag. λ 26 17 10
L 76 51 1'7	Rasía Hill Temple. (Bhartpur) λ 27 26 15'5	L 77 42 39
No. 287	L 77 12 52'9	Nos. 236, 237
Rámpur s. (Muzaffarnagar) On S.E. angle of fort. λ 29 31 34'46	Rasúlpur Building. (Gurgáon) Flag. λ 28 5 15	Rikhikesh Temple. (Garhwál) λ 30 6 22'25
L 77 45 4'10	L 77 26 34	L 78 20 39'23
Nos. 775, 776	No. 311	Rohána Tree. (Saháranpur) Flag. λ 29 35 16'1
Rámpur Tree Flag. (Muzaffarnagar) In village. λ 29 16 54	Rasúlpur s. (Saháranpur) 0·5 of a mile N.W. of Rasúlpur and the same distance W. of Lodipur; marked by a platform 6 feet high. λ 30 10 28'84	L 77 44 50'4
L 77 41 40	L 77 34 57'07	Nos. 771, 772
Rámpur Village. (Bulandshahr) λ 28 16 9	No. 848	Roja s. (Bulandshahr) λ 28 35 47'63
L 78 2 51	Rasúlpur Tree Flag. (Saháranpur) λ 29 37 59	L 77 30 15'33
Randauli Tree Flag. (Ambáta) In village. λ 29 50 1	L 77 44 42	No. 542
L 77 10 39	Rasúlpur Village No. 1 (Bulandshahr) λ 28 31 57	Rukanpur Tree No. 1 (Muzaffarnagar) Flag in village. λ 29 13 57'2
Ránípokri Temple. (Dehra Dun) λ 30 11 15'53	L 77 51 57	L 77 44 54'0
L 78 15 32'03	Rasúlpur Village No. 2 (Saháranpur) λ 30 10 16	Nos. 618, 619
Rankandi s. (Saháranpur) λ 29 36 41'68	L 77 35 5	Rukanpur Tree No. 2 (Muzaffarnagar) Flag in village. λ 29 28 32
L 77 40 59'54	Ráta Nagla s. (Saháranpur) λ 29 36 18'17	L 77 42 4
No. 790	L 77 48 50'76	Rúpbás Palace. (Bhartpur) Centre Cupola W. face. λ 26 59 32
Rankandi Tree Flag. (Saháranpur) λ 29 36 54	Rataul s. (Mirat) λ 28 49 56'42	L 77 37 52
L 77 41 22	L 77 23 4'21	No. 262
Ránod Fort. (Gwalior) Flag. λ 25 4 18	Rauri h.s. (Dehra Dun) λ 30 0 7	Rurki College. (Saháranpur) Heliotrope on highest part of roof, 27 feet above ground. N.B.—This College was pulled down in 1852-53 and a new building erected on the site. The position of this station is stated by Major Lang R.E., the Principal, to be approximately the centre of the roof of the Lecture Theatre of the present-College. λ 29 51 54'52
L 77 55 4	L 78 8 12	L 77 56 18'01
No. 141	Ráwar s. (Karnál) About 0·25 of a mile N.W. of village so called; marked by a large mass of vitrified bricks. λ 29 39 0'11	H 88·4
Ráo-ka-Nagla Atári. (Muzaffarnagar) In village. λ 29 33 16	L 77 3 34'98	No. 358
L 77 36 31	No. 876	Rurki College Dome. (Saháranpur) Centre. λ 29 51 54'21
No. 856	Ráo-ka-Nagla s. (Muzaffarnagar) λ 29 32 53'14	L 77 56 19'47
L 77 36 15'05	L 77 36 15'05	No. 1003
No. 855		

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<p>Rurki Foundry Chimney. (Saháranpur) Centre.</p> <p>λ 29 52 34'98 L 77 56 2'05 No. 1001</p> <p>Rurki s. (Saháranpur) On sand ridge running S.E. and N.W. across Mirat road between Hospital and Bazar of European Lines. It is distant 447 feet and bears 286° 20' from N.W. corner of Infantry Bazar, and lies E. of Mirat road and about 24 feet from top of cutting. It is marked by a paka pillar 3 feet in diameter and 3·2 feet high, having a mark-stone at top and another at bottom.</p> <p>λ 29 51 6'23 L 77 55 47'98 H 896'87 * No. 997</p> <p>Rurki Telegraph Office. (Saháranpur) Vane.</p> <p>λ 29 52 24'44 L 77 56 13'93 No. 1002</p> <p>Sabalgarh Hill Fort. (Gwalior) Dome.</p> <p>λ 26 14 27'2 L 77 26 57'6 No. 232</p> <p>Sadarpur s. (Mirat) On fort staircase.</p> <p>λ 28 42 5'99 L 77 31 37'67 No. 549</p> <p>Sádpur Tree. (Saháranpur) Flag.</p> <p>λ 29 33 6'1 L 77 45 7'6 Nos. 777, 778</p> <p>Sahansra h.s. (Dehra Dun) On summit of Siwálik range, at head of Gir-ki-Rau.</p> <p>λ 30 18 54'37 L 77 48 29'61 H 3011 No. 965</p> <p>Saháranpur s. (Saháranpur) Captain Hodgson's station Belville.</p> <p>λ 29 57 24'5 L 77 35 29'4 H 891 Nos. 356, 357</p> <p>Saiyidpur Tree Flag. (Musaffarnagar)</p> <p>λ 29 33 28 L 77 40 41</p> <p>Saiyidpura Mosque. (Saháranpur) In village, S.W. minaret.</p> <p>λ 29 50 51'0 L 77 14 5'6 No. 898</p>	<p>Saini, XLV (Vide page 10—A.)</p> <p>λ 29 2 20'11 L 77 49 49'88 H 832 h 50 No. 60</p> <p>Saini Nagla Tree. (Mirat) Flag in village.</p> <p>λ 29 1 26 L 77 51 21 No. 575</p> <p>Sainspur Bastion. (Saháranpur) In village.</p> <p>λ 29 53 5 L 77 14 44 No. 908</p> <p>Sajru Tree Flag. (Musaffarnagar)</p> <p>λ 29 26 41 L 77 44 10</p> <p>Sakarpur Tree Flag. (Saháranpur)</p> <p>λ 29 41 14 L 77 55 26</p> <p>Sakauti s. (Mirat) On N.E. Bastion of a mud fort in village, and 25 feet above surrounding country; marked by a triangular paka platform of 2½ feet side, countersunk 3 feet, and having a mark-brick at its surface.</p> <p>λ 29 11 4'55 L 77 45 19'52 No. 592</p> <p>Sáklon h.s. (Tonk)</p> <p>λ 24 2 17'39 L 77 44 44'59 Nos. 88, 90</p> <p>Sakpur Tree Flag. (Saháranpur)</p> <p>λ 29 49 51 L 77 42 40</p> <p>Salári Tree Flag. (Tonk)</p> <p>λ 24 16 36 L 77 40 55</p> <p>Saláwa A. s. (Musaffarnagar) On boundary between 4 fields N.N.W. of village; marked by a circular paka platform 2½ feet in diameter, countersunk 3 feet, and having a mark-brick at its surface.</p> <p>λ 29 14 56'36 L 77 42 53'75 No. 596</p>	<p>Saláwa B. s. (Musaffarnagar) On boundary of 2 fields S.E. of village; marked by a triangular paka platform of 2½ feet side, countersunk 3 feet, and having a mark-brick at its surface.</p> <p>λ 29 12 54'74 L 77 43 2'14 No. 595</p> <p>Saláwa Tree Flag. (Musaffarnagar) In village.</p> <p>λ 29 13 52 L 77 42 12</p> <p>Salempur h.s. (Dehra Dun) On spur on S. face of Siwálik range.</p> <p>λ 30 0 6'35 L 78 8 11'92 H 2380 No. 952</p> <p>Salempur s. (Musaffarnagar) Between 2 fields S.S.W. of village so called, N.N.E. of Pinana village, and S.W. of Kaliána S. Meridional mark; marked by a circular paka platform, 2½ feet in diameter, countersunk 3 feet, and having a mark-brick at its surface.</p> <p>λ 29 29 7'52 L 77 40 55'78 No. 720</p> <p>Salempur Tree Flag. (Musaffarnagar) In village.</p> <p>λ 29 28 54 L 77 41 55</p> <p>Samálki s. (Saháranpur)</p> <p>λ 29 36 45'66 L 77 46 1'01</p> <p>Samailpur s. (Saháranpur)</p> <p>λ 29 46 40'85 L 77 44 6'83</p> <p>Sambalheda Tree. (Musaffarnagar) Flag.</p> <p>λ 29 19 29 L 77 57 35 No. 675</p> <p>Samholi s. (Musaffarnagar) On an elevation 8 feet high, to E.S.E. of the village so called, S.E. of Chálsina, W. of Sikandarpur and S.E. by S. of Rámpur village; marked by a triangular paka platform of 2½ feet side, with 3 mark-bricks, surrounded by a mud platform 4½ feet high.</p> <p>λ 29 16 19'33 L 77 40 56'33 No. 637</p> <p>Samholi Tree Flag. (Musaffarnagar) In village.</p> <p>λ 29 16 47 L 77 40 19</p>

* This value of height was received from Lieut. Gregson, R.E., through Lieut.-Colonel Tennant, R.E.

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
Samsar s. (Mirat) In fort. λ 28 44 27'28 L 77 27 10'97 No. 554	Sarai Date Tree. (Muzaffarnagar) λ 29 19 53 L 77 48 2	Sarol s. (Aligarh) On building. λ 28 4 33'76 L 77 37 11'80 No. 460
Sanauli s. (Saharanpur) λ 29 52 24'36 L 77 15 25'88 No. 902	Saraoli, XLIV. (Vide page 9—A.) λ 29 9 56'94 L 77 33 47'74 H 820 h 50 Nos. 61, 64	Sarsina Chauki Tree Flag. (Saharanpur) λ 29 47 1 L 77 41 15
Sanauli Village. (Saharanpur) λ 29 51 13 L 77 15 52	Sardhana Church, (Mirat) Dome. λ 29 8 51'8 L 77 39 31'3 Nos. 581, 582	Sarsua House Flag, (Mirat) In village. λ 29 8 44 L 77 48 18
Sandhault Tree Flag, (Muzaffarnagar) In village. λ 29 25 29 L 77 45 12	Sardhana Country Seat, (Mirat) Of late Begam Sombre, southern chimney. λ 29 6 36'2 L 77 41 8'2 Nos. 579, 580	Sarwako House, (Aligarh) In village. λ 28 1 1 L 77 56 28
Sanghil s. (Gurgaoon) On building. λ 28 0 31'03 L 77 7 19'28	Sardhana Nagla Tree, (Mirat) Flag. λ 29 9 29 L 77 40 18 No. 647	Sarwat Tree Flag. (Muzaffarnagar) λ 29 29 12 L 77 44 52
Sangoa Bastion, (Ambala) In village. λ 29 47 11 L 77 4 37 No. 884	Sardhana s. (Mirat) On top of staircase leading to terrace of S.E. turret of recently built palace of late Begam Sombre to the N.W. of the town so called; marked by a ⊙ engraved in the paka work and having a 4-inch nail driven into it. λ 29 9 11'68 L 77 39 25'36 No. 560	Sasni s. (Aligarh) In fort. λ 27 42 15'42 L 78 8 53'1 No. 478
Sanjak Mosque, (Muzaffarnagar) S.E. corner. λ 29 25 55'5 L 77 40 53'4 Nos. 732, 733	Sardhana s. (Mirat) Highest, in town. λ 27 42 13 L 78 7 32	Satanwara Building, (Gwalior) Square, S.W. angle. λ 25 31 32'6 L 77 47 9'5 No. 170
Sankla s. (Tonk) East of village. λ 24 15 29'79 L 77 39 41'68	Sareta Hill Chatri, (Alwar) In garden N. of village. λ 27 35 21'9 L 76 49 30'0 Nos. 280, 281	Sateri s. (Muzaffarnagar) On boundary of field N.W. of village so called, S.E. of Fulat village, and 60 yards W. of old road from Mirat to Muzaffarnagar; marked by a circular paka platform 2½ feet in diameter, countersunk 3 feet, with a mark-brick at top. λ 29 16 25'52 L 77 44 30'04 No. 597
Sandre Sarai Building, (Dholpur) Highest (old). λ 26 43 18 L 77 56 42 No. 439	Sareta h.s. (Alwar) λ 27 35 13'04 L 76 49 19'03 Nos. 284, 285	Sateri Tree Flag, (Muzaffarnagar) In village. λ 29 15 53 L 77 44 39
Sandre Tree, (Dholpur) In village. λ 26 43 48 L 77 57 9	Sarkari Tree Flag. (Saharanpur) λ 29 50 38 L 77 43 30	Semra h.s. (Gwalior) λ 24 28 36'89 L 77 47 16'38 No. 104
Sapur s. (Mirat) 150 yards W. by N. of village so called; marked by a triangular paka pillar of 2½ feet side and 5 feet high, with mark-bricks at top and bottom and surrounded by a platform of earth. λ 29 10 14'52 L 77 47 16'77 No. 591	Sarna Fort. (Mirat) λ 28 46 24 L 77 30 27 No. 556	Sapuro Tree Flag. (Saharanpur) λ 29 45 34 L 77 42 2
Sapur Tree Flag. (Saharanpur) λ 29 45 34 L 77 42 2	Sarokho Tree Flag. (Tonk) λ 24 14 7 L 77 41 41	

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<p>Semri Tree, (Muzaffarnagar) Flag in village.</p> <p>λ 29 25 43·8 L 77 42 28·1 Nos. 739, 740</p>	<p>Sheopur Tree Flag. (Saharanpur)</p> <p>λ 29 50 48 L 77 46 46</p>	<p>Sidaula Tree Flag. (Saharanpur)</p> <p>λ 29 45 56 L 77 50 46</p>
<p>Seri s. (Aligarh) On Sisram Ját Zamindár's house.</p> <p>λ 27 48 55·65 L 77 59 28·01 No. 479</p>	<p>Shergarh, X. (Vide page 4—A.)</p> <p>λ 25 35 24·14 L 77 57 43·18 H 1480 h 7 No. 21</p>	<p>Sidhanser Tree Flag. (Saharanpur)</p> <p>λ 29 49 30 L 77 40 54</p>
<p>Sewai Fort, (Gwalior) N.W. angle.</p> <p>λ 26 17 25·3 L 77 33 42·5 No. 219</p>	<p>Shergarh Hill Fort, (Jhansi) Gateway.</p> <p>λ 25 11 19 L 77 58 27 No. 157</p>	<p>Sidpur Fort, (Gwalior) S.W. angle.</p> <p>λ 26 15 40·9 L 77 35 6·8 No. 233</p>
<p>Sewar s. (Karauli) On S.E. angle of fort, N. bank of Chambal river.</p> <p>λ 26 26 39·81 L 77 36 36·95 No. 241</p>	<p>Sherpur Temple, (Alwar)</p> <p>λ 27 38 38·9 L 76 58 12·1 No. 293</p>	<p>Sidpur h.s. (Gwalior)</p> <p>λ 26 15 37·49 L 77 34 21·83 No. 218</p>
<p>Sháh Mustafa Hill Dargáh. (Tonk)</p> <p>λ 24 4 19·7 L 77 44 46·7 No. 103</p>	<p>Sherpur No. 1 Tree Flag. (Muzaffarnagar)</p> <p>λ 29 30 21 L 77 43 49</p>	<p>Siháni House, (Mirat) Flat-roofed, in village.</p> <p>λ 28° 41 28·48 L 77 27 36·87</p>
<p>Sháhpur s. (Saharanpur) 0·5 of a mile N. of Sháhpur in the Tarái of the Siwálík hills; marked by a plat- form 6 feet high.</p> <p>λ 30 12 14·15 L 77 40 46·31 No. 850</p>	<p>Sherpur No. 2 Tree Flag. (Saharanpur)</p> <p>λ 29 45 1 L 77 49 28</p>	<p>Sikandarpur Tree, (Muzaffarnagar) Flag in village.</p> <p>λ 29 15 59·8 L 77 42 4·5 Nos. 623, 624</p>
<p>Shankargarh h.s. (Gwalior) On range of hills, 3·5 miles W. of Koláras town, 2 miles E. of Rái, 1 mile S. of Mohra, and 2·25 miles N.W. of Koláras h.s. The ruined village of Shankargarh lies at the E. foot; marked by a platform with a stump of a tree in the centre which is supported by a pyramid of stones.</p> <p>λ 25 13 36·80 L 77 35 49·62 No. 142</p>	<p>Shikárpur s. (Bulandshahr) On Hamíd-ud-Dín Kási's house.</p> <p>λ 28 16 56·29 L 78 3 9·90 No. 514</p>	<p>Sikandarpur House, (Mattrá) Zamindár's.</p> <p>λ 27 48 38 L 77 47 19 No. 488</p>
<p>Shaikhpura Fort, (Karnál) Bastion, in village.</p> <p>λ 29 39 25 L 77 4 35 No. 880</p>	<p>Shorpur h.s. (Dehra Dun) On peak of Siwálík range about 1 mile S. of the Tunnel.</p> <p>λ 30 13 45·59 L 77 59 57·79 H 2916 No. 961</p>	<p>Sikandra s. (Agra) On S.E. (broken) minaret of Gateway of Akbar Sháh's Mausoleum.</p> <p>λ 27 13 1·83 L 77 59 33·71 No. 442</p>
<p>Shaindra h.s. (Garhwál)</p> <p>λ 30 19 41 L 78 20 34</p>	<p>Shujápur s. (Saharanpur) In the old bed of the Jamna, 0·75 of a mile N. of Shujápur village and 0·75 of a mile W. of Haidarpur; the Jamna flows 1 mile to W.; marked by a platform 6 feet high.</p> <p>λ 30 4 23·23 L 77 24 48·32 No. 841</p>	<p>Sikandrápúr Tree Flag. (Muzaffarnagar)</p> <p>λ 29 34 17 L 77 35 40</p>
<p>Sheopúri, XLVIII. (Vide page 10—A.)</p> <p>λ 29 18 59·07 L 78 1 58·60 H 871 h 41 Nos. 66, 69</p>	<p>Siálatpur s. (Mirat) In fort.</p> <p>λ 28 45 10·75 L 77 31 55·38 No. 552</p>	<p>Sikar Temple W. (Saharanpur)</p> <p>λ 29 45 42·8 L 77 58 0·4 No. 812</p>
	<p>Siálpur Tree, (Tonk) In village.</p> <p>λ 24 7 40 L 77 52 25</p>	<p>Sikrauli h.s. (Gwalior) On highest swell of a range of hills 2·5 miles W. of Sisari village, and 0·5 of a mile E. of Sikrauli village; marked by a platform with a markstone having a ⊙ engraved on it.</p> <p>λ 25 58 15·99 L 77 46 20·43 No. 410</p>

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
Sikreda s. (Muzaffarnagar) On N.W. bastion of fort in village so called and 2 miles N. of Mirápur. λ 29 18 36.22 L 78 0 37.20 Nos. 673, 674	Siris Tree Flag, (Saháranpur) In village. " " " λ 29 52 27 L 77 17 43	Sítalkhera Tree Flag. (Saháranpur) " " " λ 29 48 4 L 77 37 46
Síkri Building, (Muzaffarnagar) Flag. λ 29 32 38 L 77 57 22 No. 706	Sirki Tree Flag. (Saháranpur) λ 29 52 38 L 77 40 23	Sítalpur s. (Saháranpur) λ 29 47 53.95 L 77 48 27.79 No. 802
Silárpur Tree Flag. (Mirat) λ 29 1 7 L 77 49 5	Sironj Fort Mosque. (Tonk) λ 24 6 22.9 L 77 43 37.2 No. 101	Sithi Flag. (Mirat) λ 28 45 40 L 77 25 23
Silpuri h.s. (Gwalior) λ 25 44 9.85 L 77 37 14.01 No. 406	Sironj Fort House, (Tonk) Zamindár's. λ 24 6 10 L 77 43 35 No. 100	Siwáro s. (Aligarh) On building. λ 27 56 10.70 L 77 47 52.27 No. 463
Simarathi s. (Muzaffarnagar) On a range of sand mounds running S.W. from Tijalheda, 0.5 of a mile S.W. of village so called and 1.5 miles E. of Chapár vil- lage; marked by a circular platform 4 feet in dia- meter and 1 foot high. λ 29 33 27.69 L 77 49 54.49 No. 753	Sironj Yúsaf Khán's House. (Tonk) λ 24 5 57 L 77 44 1 No. 102	Sohágni or Dagni, (Saháranpur) Tree flag. λ 29 46 22 L 77 39 41
Simarathi Tree, (Muzaffarnagar) Flag. λ 29 33 41 L 77 50 30 No. 761	Sirsáwa Tehsildár's Kachahri. (Saháranpur) λ 30 0 59 L 77 26 20 No. 927	Soherka s. (Bulandshahr) On building. λ 28 34 25.08 L 77 26 44.86 Nos. 341, 342
Singon Fort, (Gwalior) Building S. of date tree. λ 25 1 0 L 77 31 42 No. 135	Sirwána h.s. (Garhwál) λ 30 24 9 L 78 12 16	Sohi s. (Aligarh) On S.W. corner of Bhúm Sing's Haveli. λ 28 8 50.04 L 78 5 08.6 No. 510
Sípri s. (Gwalior) On E. building in fort. λ 25 25 21.24 L 77 42 36.55 No. 165	Sisai Fort, (Gwalior) Gateway. λ 25 18 57 L 77 40 37 No. 151	Somna s. (Aligarh) λ 28 3 28.28 L 77 59 46.62 No. 486
Sípur s. (Mirat) On sand ridge 25 feet above surround- ing country and 0.7 mile to N.W. by W. of the deserted village of Sípur, and N. of Bopawat vil- lage; marked by a paka triangular platform of 2½ feet side, countersunk 3 feet, and having a mark-brick at top. λ 29 6 38.40 L 77 43 13.04 No. 558	Sisári s. (Gwalior) On S. tower with balcony, in fort. λ 25 57 3.01 L 77 48 11.32 No. 425	Somna Mosque, (Aligarh) In Sarai. λ 28 3 57.9 L 77 59 7.2 No. 505
Siri-Samand Date Tree. (Gwalior) λ 25 22 41 L 77 37 32	Sisona s. (Muzaffarnagar) On a patch of ground about 500 yards N.E. of village so called. A mark- stone on a platform 8 feet in diameter and 1½ feet high, denotes the station. λ 29 32 0.56 L 77 46 44.59 No. 756	Sonchara Tree Flag. (Saháranpur) λ 29 46 50 L 77 37 55
	Sísram Fort, (Gwalior) Tree flag. λ 25 54 8 L 77 38 2 No. 420	Soneti Tree Flag. (Saháranpur) λ 29 43 30 L 77 46 44
		Sonjhni Tree, (Muzaffarnagar) Flag in village. λ 29 22 26 L 77 40 23 No. 729

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
Sonta Tree Flag, (Saháranpur) In village. λ 29 32 2 L 77 27 9	Sundarpur Village, (Dholpur) Large. λ 26 42 21 L 77 58 42	Tandera Tree Flag, (Muzaffarnagar) λ 29 22 5 L 77 58 39
Sontha s. (Muzaffarnagar) Or Abdullánagar. On narrow ridge dividing 2 fields to S.W. of village so called; marked by a circular paka platform 2½ feet in diameter, countersunk 3 feet, and having a mark-brick at top. λ 29 20 1'70 L 77 46 15'93 No. 602	Súrajpur Bastion, (Muzaffarnagar) Eastern. λ 29 47 11 L 77 13 12 Nos. 891, 892	Tappal s. (Aligarh) On fort bastion. λ 28 2 28'45 L 77 36 56'27 Nos. 315, 458
Sontha Tree Flag, (Muzaffarnagar) In village. λ 29 20 15 L 77 46 54	Súrajpur Building, (Gwalior) Square, E. end of S. wall. λ 25 58 19'6 L 78 4 25'4 No. 188	Tapu Bastion, (Ambála) In village. λ 29 45 51 L 77 10 16 No. 887
Suakhera h.s. (Garhwál) λ 30 27 5 L 78 11 5	Surjávali Tree, (Bulandshahr) In village. λ 28 11 55 L 78 5 57	Tári Tree, (Muzaffarnagar) Flag. λ 29 12 47 L 77 33 45 No. 643
Súbri No. 1 s. (Ambála) On the lands of the Nawáb of Kunjpura, W. of the Jamna, 25 of a mile N. of Súbri village and 2.25 miles S.W. of Kunjpura; marked by a platform 5 feet high. λ 29 41 54'23 L 77 5 42'01 No. 831	Surír s. (Mattra) On Dálu bania's house. λ 27 46 17'07 L 77 45 45'76 No. 470	Tanli Tree, (Muzaffarnagar) Flag in village. λ 29 24 58'8 L 77 40 1'7 Nos. 734, 735
Súbri No. 2 s. (Saháranpur) λ 29 53 8'00 L 77 39 14'19	Susári Tree Flag, (Saháranpur) λ 29 43 5 L 77 49 32	Táwita Tree, (Muzaffarnagar) Flag in village. λ 29 14 25 L 77 46 26 No. 617
Súbri Tree Flag, (Saháranpur) λ 29 52 43 L 77 39 26	Tabor s. (Saháranpur) λ 29 58 0'99 L 77 19 32'45 Nos. 912, 913, 914	Tendhokar Temple, (Gwalior) On river. λ 26 24 13'8 L 77 36 19'7 No. 245
Súbri Village, (Ambála) λ 29 41 31 L 77 5 48	Tabor Village, (Saháranpur) λ 29 58 20 L 77 18 49	Thai Tree Flag, (Muzaffarnagar) λ 29 29 20 L 77 56 20
Sultánpur Temple, (Saháranpur) In village. λ 30 5 2'8 L 77 30 57'4 Nos. 939, 940	Tájpur Mosque, (Bulandshahr) λ 28 27 31'2 L 77 52 14'4 No. 534	Thánah Bhawan City s. (Saháranpur) On Ganeshi Lal's (or Anda Kána Bráhma'n's) house. λ 29 35 10'08 L 77 27 30'50 Nos. 857, 858
Sunárgarh h.s. (Dehra Dun) On spur on N. face of Siwálik range. λ 30 0 21'15 L 78 10 40'01 H 2387 No. 951	Tájpur No. 1 Tree, (Muzaffarnagar) λ 29 35 35 L 77 50 28 No. 766	Thánah Bhawan s. (Saháranpur) In an open space between Thánah and Khiauri; marked by a mound 8 feet high, with charcoal imbedded in the centre. λ 29 35 15'12 L 77 29 28'22 No. 819
Sunárikoti h.s. (Dehra Dun) λ 29 58 4'20 L 78 11 28'43 H 2092 No. 949	Tájpur No. 2 Tree Flag, (Saháranpur) λ 29 48 56 L 77 42 38	Tharoria Tree, (Tonk) Flag. λ 24 3 43'0 L 77 39 44'5 Nos. 390, 391
	Tálkatora h.s. (Dehli) So called after the nearest village on a low range of sandstone, 4 miles S.W. of Dehli. λ 28 37 32'39 L 77 13 21'07 Nos. 328, 329	

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<p>Theo Building, (Gwalior) Staircase in centre. " "</p> <p>λ 25 31 7.8 L 77 47 38.1 No. 169</p>	<p>Tikaula Tree Flag. (Saharanpur)</p> <p>λ 29 43 10 L 77 50 50</p>	<p>Titarsi s. (Saharanpur) On N. turret of Ganeshi Lal's Kothi.</p> <p>λ 29 33 11.28 L 77 27 38.45 Nos. 861, 862</p>
<p>Theora s. (Musaffarnagar) On building.</p> <p>λ 29 24 14.33 L 77 55 56.84 No. 670</p>	<p>Tikola Fort, (Musaffarnagar) N.E. bastion.</p> <p>λ 29 17 6.2 L 78 1 33.7 No. 676</p>	<p>Titraun s. (Saharanpur) On roof of Raja Ram Bania's paka house in centre of the town; marked by a circle and dot in situ.</p> <p>λ 29 40 4.56 L 77 21 55.34 No. 824</p>
<p>Thisa Tree, (Musaffarnagar) Flag.</p> <p>λ 29 25 49.1 L 77 56 26.9 Nos. 695, 696</p>	<p>Tikula Hill Temple. (Gwalior)</p> <p>λ 25 52 40.3 L 77 48 17.1 No. 426</p>	<p>Tochigarh Fort, (Aligarh) Tree on bastion.</p> <p>λ 27 40 2.0 L 78 2 18.5 Nos. 494, 495</p>
<p>Thitki Tree Flag. (Saharanpur)</p> <p>λ 29 38 38 L 77 47 22</p>	<p>Tila Hill Fort, (Gwalior) N. turret.</p> <p>λ 25 15 22.4 L 77 48 0.1 No. 152</p>	<p>Toghlakabad High Building. (Delhi)</p> <p>λ 28 32 25 L 77 22 16</p>
<p>Thoro s. (Bulandshahr) On building.</p> <p>λ 28 8 27.67 L 77 40 54.33 No. 461</p>	<p>Tila Hill Temple. (Gwalior)</p> <p>λ 25 15 15.3 L 77 41 41.3 No. 145</p>	<p>Toghlakabad Palace, (Delhi) Flag.</p> <p>λ 28 30 40.4 L 77 18 21.4 No. 851</p>
<p>Thum s. (Karauli) On Garhi.</p> <p>λ 26 31 18.82 L 77 41 40.15 No. 247</p>	<p>Tilondri s. (Gwalior) On N. bastion of fort.</p> <p>λ 26 14 27.16 L 77 40 40.44 Nos. 223, 224</p>	<p>Tondawala h.s. (Dehra Dun) On summit of Sewalik range, at head of Andheri Rau.</p> <p>λ 30 10 40.87 L 78 2 40.74 H 2735 No. 959</p>
<p>Tigri Pipal Tree Flag. (Saharanpur)</p> <p>λ 29 39 1 L 77 48 20</p>	<p>Timli h.s. (Dehra Dun)</p> <p>λ 30 21 21 L 78 10 10</p>	<p>Tongra Hill Mark. (Gwalior)</p> <p>λ 25 22 17.79 L 77 34 55.75</p>
<p>Tigri Village. (Ambala)</p> <p>λ 30 4 49 L 77 20 53</p>	<p>Timli Temple s. (Dehra Dun)</p> <p>λ 30 22 26.15 L 77 45 50.58 No. 368</p>	<p>Top Tibba h.s. (Dehra Dun) Beyond Seale's hill; marked by a ⊙ engraved on stone and surmounted by a pile of stones.</p> <p>λ 30 26 58.56 L 78 13 39.86 H 8570</p>
<p>Tijalheda s. (Musaffarnagar) On a range of sand mounds running nearly N.E. and S.W. and 1 mile N.W. of village so called; marked by a circular platform 6 feet in diameter with a circle and dot engraved thereon.</p> <p>λ 29 35 49.66 L 77 52 27.62 No. 685</p>	<p>Tirauli h.s. (Gwalior)</p> <p>λ 25 55 59.51 L 77 38 19.24 No. 409</p>	<p>Tori Tree, (Tonk) Flag.</p> <p>λ 24 5 40.8 L 77 38 43.2 Nos. 892, 893</p>
<p>Tijalheda Tree, (Musaffarnagar) Flag.</p> <p>λ 29 34 57.6 L 77 52 55.6 Nos. 713, 714</p>	<p>Tirauli s. (Gwalior) On hill E. of Doda fort.</p> <p>λ 25 55 15.86 L 77 39 39.02 No. 418</p>	<p>Tumen h.s. (Gwalior)</p> <p>λ 24 28 46.76 L 77 46 36.29 No. 107</p>
<p>Tijara Dome, (Alwar) Bhartari Gummat.</p> <p>λ 27 55 39.5 L 76 53 39.5 No. 288</p>	<p>Titaora, XLVI. (Vide page 10—A.)</p> <p>λ 29 13 44.22 L 77 46 49.00 H Not determined h 30 No. 67</p>	<p>Tumen Temple, (Gwalior) In village.</p> <p>λ 24 29 29.2 L 77 45 27.3 No. 108</p>

Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.	Name of station, district, description, co-ordinates &c.
<p>Udaipur s. (<i>Aligarh</i>) On sand hill about 0.50 of a mile from each of the villages of Udaipur and Kerupur.</p> <p>λ 27 59 53.37 L 77 56 44.68 No. 485</p> <p>Umri s. (<i>Aligarh</i>) On building.</p> <p>λ 28 1 21.63 L 77 49 57.12 No. 465</p> <p>Unchágáon s. (<i>Bulandshahr</i>)</p> <p>λ 28 9 24.62 L 77 57 59.16 No. 507</p>	<p>Uncha Májra Tree Flag. (<i>Saháranpur</i>)</p> <p>λ 29 40 36 L 77 50 59</p> <p>Usira, XXII. (<i>Vide page 6-A.</i>)</p> <p>λ 26 57 6.22 L 77 40 19.76 H 810 h 5 Nos. 34, 36</p> <p>Well s. (<i>Saháranpur</i>) Paka; on Saháranpur road.</p> <p>λ 29 45 1.93 L 77 41 56.07</p>	<p>Wellington h.s. (<i>Dehra Dun</i>) On Pari Tibba; marked by a ⊙ engraved on stone, and surmounted by a pile of stones.</p> <p>λ 30 26 31.35 L 78 8 47.96 H 6749</p> <p>Yárpur House, (<i>Saháranpur</i>) In village.</p> <p>λ 29 35 28 L 77 24 40</p> <p>Záhar Pír s. (<i>Muzaffarnagar</i>) On small white building.</p> <p>λ 29 32 22.50 L 77 40 45.46 No. 789</p>

March, 1874.

J. B. N. HENNESSEY.

BASE-LINE FIGURES.

BASE-LINE FIGURES.
ALPHABETICAL LIST OF STATIONS.

<p>Amsot (XI).</p> <p>Banog (X).</p> <p>Bhaorása (V).</p> <p>Bol-, (XXIII).</p> <p>Bolálio (XXV).</p> <p>Chach base-line, Agzar or North- East End } (XIV).</p> <p style="padding-left: 40px;">Ditto, Kálu or South- West End } (XIII).</p> <p>Dehra Doon base-line, East End (IX).</p> <p style="padding-left: 40px;">Ditto, West End (VIII).</p> <p>Gandgarh (XVI).</p> <p>Kaliánpúr (VII).</p> <p>Kámkherá (IV).</p>	<p>Karáchí base-line, North End . (XXI).</p> <p style="padding-left: 40px;">Ditto, South End . (XX).</p> <p>Khagriáná (XVIII).</p> <p>Loiset (XV).</p> <p>Magar Pir (XXII).</p> <p>Maio (XXIV).</p> <p>Párdho (VI).</p> <p>Pathrijálá (XVII).</p> <p>Sironj base-line, North-East End (II).</p> <p style="padding-left: 40px;">Ditto, South-West End, (I).</p> <p>Súrantál (III).</p> <p>Surlá (XIX).</p>
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BASE-LINE FIGURES.
NUMERICAL LIST OF STATIONS.

(I)	Sironj base-line, South-West End.		(XIV) { Chach base-line, Agzar or North-East End.
(II)	. Ditto, North-East End.		(XV) Loiset.
(III)	. . . . . Súrántál.		(XVI) Gandgarh.
(IV)	. . . . . Kámkherá.		(XVII) Pathrijálá.
(V)	. . . . . Bhaorása.		(XVIII) Khagríáná.
(VI)	. . . . . Párdho.		(XIX) Surlá.
(VII)	. . . . . Kalánpúr.		(XX) . Karáchi base-line, South End.
(VIII)	Dehra Doon base-line, West End.		(XXI) . Ditto, North End.
(IX)	. Ditto, East End.		(XXII) Magar Pir.
(X)	. . . . . Banog.		(XXIII) Bol.
(XI)	. . . . . Amsot.		(XXIV) Maio.
(XIII) {	Chach base-line, Kálu or South-West End.		(XXV) Bolálio.

BASE-LINE FIGURES.

DESCRIPTION OF STATIONS.



(I). Sironj base-line, South-West End Station, lat. $24^{\circ} 5'$, long. $77^{\circ} 48'$, is situated on the lands of the village of Parsora, in pargana Sironj of the territories of the Nawab of Tonk. The circumjacent villages, with their distances and bearings, are as follows:—Parsora, 1·1 miles E.; Rasali, 3·5 miles N.N.W.; Eklaod and Kachpura, 3·0 miles N.E.; Bania Dhana and Ekodia, 1·3 miles S.E.

The station is marked by a prismatic stone, having a circle and dot engraved on the upper surface, sunk endwise to a level with the surface of the ground. Over this stands a pillar of masonry 2 feet high, and 4 feet in diameter, having a mark-stone in its upper surface with the usual circle and dot engraved on it adjusted normally over the lower mark. The whole is enclosed by a square pile of earth. The lowest dot is the one that was used in the measurement of this base-line.

(II). Sironj base-line, North-East End Station, lat. $24^{\circ} 9'$, long. $77^{\circ} 53'$, stands on the lands of the village of Rájpur, in pargana Sironj of the territories of the Nawab of Tonk. The circumjacent villages, with their distances and bearings, are,—Rájpur, 0·7 miles E.; Tal Barodia, 1·5 miles N.E.; Thanarpur Binchakeri, 1·2 miles E.S.E.; and Sialpur, 1·7 miles S.

The station is marked precisely after the method adopted for the South-West End Station.

(III). Súrantal Hill Station, lat. $24^{\circ} 14'$, long. $77^{\circ} 43'$, is situated in pargana Sironj of the territories of the Nawab of Tonk, and stands on the highest swell of an extensive range of flat hills running north and south. The circumjacent villages, with their distances and bearings, are,—Súrantal, about 2 miles N.N.E.; Bemakheri, about $1\frac{1}{2}$ miles S.W.; and Sareko, about 2 miles S.S.W.

The pillar is solid, and has the usual mark-stone at top.

(IV). Kámkherá Hill Station, lat. $24^{\circ} 0'$, long. $77^{\circ} 46'$, stands on the lands of the village of Imlani, in pargana Sironj of the territories of the Nawab of Tonk. The circumjacent villages, with their distances and bearings, are,—Imlani, 2 miles N.W.; Kámkherá, $1\frac{1}{2}$ miles W.; Ladhora, about 2 miles N.; and Kua, about 2 miles S.

The pillar is solid, and 10 feet high. It has a mark-stone at top, another at bottom, and two others at distances of 2 and 6 feet respectively above the latter.

(4)

BASE-LINE FIGURES.

(V). Bhaorása Hill Station, lat. $24^{\circ} 8'$, long. $78^{\circ} 3'$, is built on a low ridge of sandstone, situated in pargana Bhaorása of the Gwalior territories. The circumjacent villages, with their distances and bearings, are,—Bherkheri, about 2 miles N.W.; Kiria, about 2 miles N.E.; Salitra, about 2 miles S.S.W.; and Sarkandi, about 2 miles W.

The pillar is solid, and about 11 feet high. It has a mark-stone at top, another at bottom, and a third between them.

(VI). Párdho Hill Station, lat. $24^{\circ} 16'$, long. $77^{\circ} 49'$, is built on a range of flat hills, distant about 2 miles N. of the village of Párdho, in pargana Sironj of the territories of the Nawab of Tonk. The village of Sungai is distant to the S. about 2 miles.

The pillar is solid. It has a mark-stone at top, and another at bottom.

(VII). Kalíánpúr Hill Station, lat. $24^{\circ} 7'$, long. $77^{\circ} 42'$, is situated on a flat elevated ridge of iron-clay formation, locally called Bhuri Tori, which skirts the Sironj valley to the S.W. and N., and is in the territories of the Nawab of Tonk. The circumjacent villages, with their distances and bearings, are,—Kalíánpúr, about 1 mile S.; Jelálpúr, about 1 mile S.W.; Bandera, about $1\frac{1}{2}$ miles N.W.; and the city of Sironj, about 2 miles S.E.

The station is marked by a solid isolated pillar, 2 feet high, containing mark-stones at top and bottom and enclosed in a platform of solid masonry $14\frac{1}{2}$ feet square.

There are two meridional pillars connected with this station, one to the N. at a distance of 5773.9 feet and the other to the S. at a distance of 6056.8 feet, on both of which the direction of the meridian is accurately laid down.

Kalíánpúr Observatory.—Besides the platform which defines the principal station of Kalíánpúr and its two meridional pillars, another site is fixed due West at the distance of 40.591 feet for the astronomical observations. A pillar 4 feet 5 inches in diameter and 4 feet 4 inches deep was built of solid masonry below the ground as a foundation, having a stone pillar 4 feet 1 inch in length, into which a piece of brass marked with a dot has been let to define the station; above this station a pillar was built 3 feet high and 4 feet in diameter for the astronomical circle to stand on; this pillar is isolated with respect to the floor by means of a groove round it of 12 inches deep and 5 inches broad, and a hollow cylindrical space of 4 inches diameter runs vertically through the pillar in order to allow the instrument to be centered over the dot on the ground below. There are two meridional pillars connected with this station at the same distance as those built for the principal station of observation, on which also the direction of the meridian has been accurately laid down.—*Everest's Measurement of the Meridional Arc of India*, p. 251.

(VIII). Dehra Doon base-line, West End Station, lat. $30^{\circ} 20'$, long. $77^{\circ} 54'$, is situated in the district of Dehra Doon, about 2 miles to the E. of the small village of Sherpúr, and about 1 mile S. from the Asan river.

The following description of the station is taken from the original record by Colonel Everest:—

“A stone 5 feet in length and 1 foot square base was sunk to the surface of the ground and lodged in a pile of masonry 14 feet square with a circular pillar of masonry in the middle of 4 feet diameter, the pillar being built disjointed from the rest of the pile in order that the instrument might remain isolated. Into the exposed surface of the central stone a piece of brass was soldered on which was inserted a fine silver wire to receive the small dot which marked the limit of the base-line. This was covered over by a circular brass plate 2 inches diameter fixed by 3 screws, the female screws of which were cut in pieces of brass soldered into the stone. The upper surface of the brass plate was left even with that of the stone, a circular space being hollowed out to admit it. A parapet wall of 12 inches high was erected round the platform and ultimately when the base was concluded the whole was built up to a level with this parapet, a supplemental stone of 1 foot square and 3 inches thick with a piece of brass and dot soldered into it being accurately placed over the dot in the lower stone by means of the centering telescope of the large theodolite. For protection against cattle and other intruders a thick hedge of prickly pear was planted round the platform.”

The station was constructed in 1834-35, but when visited in 1867, was found with great difficulty; the prickly pear hedge had disappeared, and there was nothing to distinguish the station from the numerous mounds which were scattered around. For its future better protection and to facilitate identification, a tower was built over the masonry platform above described, with sides parallel or perpendicular to the line of the base, and an arched passage 5 feet wide and 6 feet high, to allow of access to the mark-stones, should the base be remeasured at any future time. The tower is about 10 feet square and 8 feet high; it has an external masonry staircase leading to the summit, which is horizontal, to serve as a platform for future observations. A central pillar 4 feet in diameter rests on the vault, and rises to the level of the platform, but is separated therefrom by an annulus; it is perforated for reference to the marks below, the perforation being closed above by a mark-stone containing the usual circle, and a fine hole bored through the stone instead of the usual central dot; the mark on this stone is truly in the normal of those below, and is 10.23 feet above Colonel Everest's upper mark.

As the mark on the top of the new tower will suffice for ordinary use, the entrances to the vault have been bricked up with masonry, for the better protection of the original marks.

(IX). Dehra Doon base-line, East End Station, lat. $30^{\circ} 17'$, long. $78^{\circ} 1'$, is situated on the extremity of one of the spurs of the Gháti or Siwalik range of hills, in the district of Dehra Doon. The nearest village is Mohabawála, about a mile to the South-East. The Asan river winds round the foot of the spur, and one branch of it takes its rise in a ravine about 100 yards to the westward of the station.

This station is described by Colonel Everest as having been "marked in the same manner as the western limit, so that a description of one will answer for the other."

It was visited by Captain Branfill in January 1862, to be connected with the line of spirit levels which had been brought up from Karáchi harbour, as a part of the operations of this department. As no record was forthcoming of the height of Colonel Everest's upper mark above the mark on the stone pyramid, to which the base-line measurement was referred, it was necessary to remove the upper mark-stone; then the level of the summit of the pyramid was determined as 1957.65 feet above the mean sea level of Karáchi harbour; Colonel Everest's upper mark was found to have been 17 inches, or 1.42 feet above the mark on the pyramid; the stone slab containing the said upper mark was replaced in the normal of and at its original height above the mark on the pyramid.

In 1867 a tower was built over the station similar to the one that was constructed in the same year over the west end of the base, the description of which may be referred to for further details. The mark in the stone on the summit of the tower is 8.71 feet above Colonel Everest's upper mark, and consequently 1967.78 feet above the mean sea level of Karáchi harbour, as determined by the spirit levelling operations.

(X). Banog Hill Station, lat. $30^{\circ} 29'$, long. $78^{\circ} 3'$, is situated on a detached peak of the lower range of the Himalaya mountains, being thrown back about a mile to the north of the range whereon stands the sanitarium of Mussoorie. The station is in the district of Dehra Doon.

The pillar is solid, and 2 feet high. It has a mark-stone at top, and another at bottom.

(XI). Amsot Hill Station, lat. $30^{\circ} 23'$, long. $77^{\circ} 44'$, stands on the highest point of the Gháti or Siwalik range of hills, which bounds the Doon to the south. The station is in the district of Dehra Doon. The nearest village is Timli, distant about 3 miles to the N.E.

A stone, 4 feet long, bearing a piece of brass with a dot on it, marks the station. It is surrounded by a platform of brick and mortar.

(XIII). Chach base-line, Kálu or South-West End Station, lat. $33^{\circ} 53'$, long. $72^{\circ} 25'$, is situated on the south end of a mound to the S. of the village of that name, in the Chach valley; thana Hazro, pargana Attok, tappa Haveli, tahsil Hassan Abdal, and district Rawul Pindi.

The pillar is solid, and 4.5 feet high. It contains three mark-stones, one at top, another at bottom, and the third 2 feet below the former. Of these marks, the one uppermost was used in the measurement of this base-line. The dot in question is on a piece of silver let into a slip of brass, which latter is fixed in the stone. The pillar and mark-stones are protected by a hemispherical dome of masonry, on the key stone of which a mark for ordinary reference will be found.

(XIV). Chach base-line, Agzar or North-East End Station, lat. $33^{\circ} 57'$, long. $72^{\circ} 32'$, is situated on the southern end of a mound in the Chach valley; mouza Agzar, thana Hazro, tappa Sirkani, pargana Attok, tahsil Hassan Abdal, and district Rawul Pindi.

The pillar is solid, and 5.2 feet high. It contains three mark-stones, one at top, another at bottom, and a third 2.8 feet below the former. Of these marks the uppermost one was used in the measurement of this base-line. The dot in question, and the means employed for its protection, are similar to those adopted for the West End of this base.

(XV). Loiset Hill Station, lat. $33^{\circ} 47'$, long. $72^{\circ} 38'$, is situated on the range of hills immediately S. of the large and well-known town of Bhurhan; mouza Bhurhan, pargana Attok, tappa Haveli, tahsil and thana Hassan Abdal, and district Rawul Pindi.

The pillar is solid, and 3 feet high. It has a mark-stone at top, and another at bottom.

(XVI). Gandgarh Hill Station, lat. $33^{\circ} 57'$, long. $72^{\circ} 46'$, is situated on the summit of the well-known hill of that name, in pargana Gandgarh, thana Dar Chitti, and district Hazara.

The pillar is solid, and 2 feet high. It has a mark-stone at top, and another at bottom.

(XVII). Pathrijálá Hill Station, lat. $33^{\circ} 39'$, long. $72^{\circ} 21'$, is on the range of low hills connecting Bilandri Chitti and Barra Chitti or Nilab, in mouza Kalidili, pargana Attok, tahsil Pindi Gheb, thana Nari, tappa Tutho, and district Rawul Pindi.

The pillar is solid, and 4 feet high. It has a mark-stone at top, and another at bottom.

(XVIII). Khagríáná Hill Station, lat. $33^{\circ} 44'$, long. $73^{\circ} 0'$, is on the hill of that name, the watershed of which is the boundary between the districts of Hazara and Rawul Pindi. The station is in the latter district. The small village of Kaitla is about a mile S.W. of the station, and on the same hill. The road leading up to the station commences at the large and well-known village of Shadutta, in thana, tahsil and district of Rawul Pindi.

The pillar is solid, and 2 feet high. It has a mark-stone at top, and another at bottom.

(XIX). Surlá Hill Station, lat. $33^{\circ} 23'$, long. $72^{\circ} 39'$, is situated on a range of low hills, in mouza Kundwal, pargana and tahsil Pindi Gheb, thana Jund, and district Rawul Pindi. The large villages nearest to the station are, Dhoornal to the S., and Malal to the N.

The pillar is solid, and 2 feet high. It has a mark-stone at top, and another at bottom.

(XX). Karáchí base-line, South End Station, lat. $24^{\circ} 53'$, long. $67^{\circ} 12'$, is situated in the district of Karáchí, and within a few yards of the road from Karáchí to Tattah. It is about 2 miles from the halting ground called Jemadar-ka-Landi, and some 9 miles E.S.E. from Karáchí.

The station is marked by a tower 22.9 feet high. An arched passage at the level of the ground, and parallel to the base-line, runs through the tower. On this arch and in the centre of the tower is an isolated and perforated pillar rising to the level of the top of the tower. The continuation of this pillar into the basement of the tower, contains the mark-stones. These are three in number, the first being at the level of the passage-floor, the second and third 1.8 feet and 3 feet respectively lower down, and all in the same normal. The uppermost mark consists of a dot on silver let into a brass plug, the latter being imbedded in a slab of stone. This dot was used in the measurement of the base-line. It is protected by a small dome of some 6 inches internal radius, and the entrances to the passage are closed with masonry. The upper orifice of the perforation through the tower is covered with a stone which bears a mark for ordinary reference. The entire structure is built of solid stone and lime masonry.

(XXI). Karáchí base-line, North End, lat. $24^{\circ} 59'$, long. $67^{\circ} 15'$, is situated in the Karáchí district, and stands on an open plain entirely devoid of habitations.

The station is marked and protected similarly to the South End of this base-line, the only difference being that the tower here is 18.4 feet high.

(XXII). Magar Pir Hill Station, lat. $24^{\circ} 59'$, long. $67^{\circ} 4'$, is situated on a peak of the low range of hills which forms the eastern boundary of the valley through which the river Hubb flows, the higher range of the Pubb mountains forming that to the west. It is in the Karáchí district. The station adjoins a conical stone tomb on the S.E. side. The small double-domed masonry Kooba of Magar Pir, in the vicinity of which there are three hot springs, lies in the valley, at a distance of 0.9 miles to the S.E.

The pillar is solid, and 3 feet high. It has a mark-stone at top, another at bottom, and a third 2 feet above the latter.

(XXIII). Bol Hill Station, lat. $24^{\circ} 55'$, long. $67^{\circ} 23'$, stands on the highest of three knobs on a hill 3 miles N.W. of Gagar, on the hill road between Karáchí and Kotree. It is in the Karáchí Collectorate of Scinde.

The pillar is solid, and 3 feet high. It has a mark-stone at top, another at bottom, and a third 2 feet above the latter.

(XXIV). Maio Hill Station, lat. $25^{\circ} 11'$, long. $67^{\circ} 8'$, is on the same range of hills as Magar Pir station, and commands, to the east, an extensive view of the plain in which the Karáchí base-line is situated. The station is in the Karáchí district.

The pillar is solid, and 3 feet high. It has a mark-stone at top, another at bottom, and a third 2 feet above the latter.

(XXV). Bolálio Hill Station, lat. $25^{\circ} 9'$, long. $67^{\circ} 24'$, stands on the highest point of a very extensive irregular shaped hill, in the Karáchí district. The hill commands a view to the south of the plain in which the Karáchí base-line is situated. The river Tudda flows round the western foot of the hill, at a distance of about 3 miles, and the village of Morid-ka-got lies about 8 miles W.

The pillar is solid, and 3 feet high. It has a mark-stone at top, another at bottom, and a third 2 feet above the latter.

NOTE.—Consequent on modern alterations of district and other boundaries, the sites occupied by the stations are now included in civil divisions of territory which differ frequently from the district, pargana or village, recorded in the preceding descriptions of stations: a suitably modified statement of the sub-divisions in question is accordingly given in the following table and is derived chiefly from the annual reports, up to 1873, made by the Civil Officials to whose care the stations have been committed.

As it has not been stated in the usual place by whom the observations at the Sironj and Dehra Dun base-line stations were taken it is desirable to mention here that the observer was Major Everest and the Instrument used Barrow's 36-inch theodolite.

It has become customary in modern times to erect a square protecting pillar at Principal Stations over the circular pillar on which the large theodolite stood and which carries the true mark-stone; the square pillar bears a sufficiently accurate mark for Topographical and Revenue Survey purposes, so that it is generally unnecessary to refer to the true mark-stone which thus remains concealed and protected. The stations which are protected in the manner described are indicated by †

No.	Local name	District	Pargana, &c.	Village	Remarks
(I) †		Sironj	Sironj	Parsora	Visited by Lieutenant C. Strahan, R.E., of the Topographical Survey in 1870, and reported by him to be in good order. Protected by a tower 10 feet square and 8 feet high with a mark-stone at the top.
(II) †		"	"	Rájpur	
(III) †	Súrantál	"	"	Gopálpur	
(IV) †	Khámkhera	"	"	Imláni	
(V) †		Gwalior	Malárgarh	Bhaorása	
(VI) †	Párdho	Sironj	Sironj	Párdho	
(VII) †	Kaliánpur		"	Kaliánpur	
(VIII)	Sahanspur Forest	Dehra Dun	Dehra Western Dun	Sahanspur Forest	
(IX)	Chandrabani Forest	"	" "	Chandrabani Forest	
(X) †	Tibba Binauri	"	" "	Masári	
(XI)	Timli Forest	"	" "	Timli Forest	
(XIII)	Burj	Ráwal Pindi	Atak (Attock)	Kálu Khurd	Protected by a dome of masonry on the keystone of which a mark has been placed in the normal of those below.
(XIV)	"	"	"	Asunsur	
(XV)	Kurri Mar	"	"	Burhán	
(XVI)		Hazára	Gandgarh		
(XVII)	Burj Kampás	Ráwal Pindi	Pindi Ghaib	Káli Dilli	
(XVIII)	Kála Pind	"	Gújar Khán	Bijniál	
(XIX)	Burj Pír Kundia	"	Kahúta	Dhoke Mári	
(XX)	Dighwáro Thul	Karáchi	Táluka Karáchi	Mullir Makán Digh	Protected by a brass-plate surmounted by a small masonry dome.
(XXI)	Thuing Wáro Thul	"	" "	Hubb Makán Thuing and Dugan	
(XXII)	Magar Pír	"	" "	Hubb Makán Magar Pír	
(XXIII)	Bor	"	" "	Mallír Makán Darsáno Chúto	
(XXIV)	Sagio	"	" "	Hubb Makán Maio and Gudap	
(XXV)	Bolári	"	" "	Hubb Makán Thudo	

NOTE.—Stations (I) to (VII) visited by Bábu Narsing Dás, Native Surveyor of the G. T. Survey, during the season of 1867-68, put in thorough repair, protected and transferred by him to the charge of local officials.

NOTE TO CHART.

Alphabetical list of points omitted in the Chart, from want of space on which to project them.

Ainchuli	Tree Flag.	Bírpur	Tree Flag.	Hindan	Flag No. 1.
Aklor	"	Blucher's	h.s.	Do.	" No. 2.
Alampur	s.	Búbkheri	Tree.	Husainpur	Tree Flag.
Almáwála	Date Tree.	Buda Khera No. 1	Tree Flag.	Jagáheri	Tree.
Ambeta	Tree Flag.	Do. No. 2	"	Jagdhai	Tree Flag.
Ambhera	s.	Budína	"	Jákwála	"
Amilia	Tree Flag.	Búráheri	"	Jalálpur	"
Amoli	"	Chachera	"	Jamálpur	"
Andauli	Village.	Chándna	"	Jaroda	"
Bábupur Nagli	s.	Chapra	Bastion.	Jarwar	"
Badhedi	Tree Flag.	Chaundáheri	Tree Flag.	Jasratpur	"
Bad Káli	"	Chausana	Village Flag.	Ját-ka Nagla	"
Bágowála	Tree.	Childer's Lodge in Landaur	"	Jaula	"
Bagroda	Building.	Choli	Tree.	Jhabiran	"
Bahádurpur No. 1		Chota Chaukara	Tree Flag.	Jharwan	"
Do. No. 2		Dábal	"	Jogiwála	Date Tree.
Baigani	Building.	Dadheru (Chota)	"	Johra	House.
Bamori	Tree Flag.	Dadheru	s.	Jwálágarh	House Flag.
Bandhera	"	Dádri	Tree.	Kail	"
Banera	Village.	Daher	Tree Flag.	Kainki	Tree Flag.
Banhera	Tree Flag.	Daichánd	"	Kákipur	"
Bara Báns	"	Dái-ki-Madauli	"	Kakrauli	"
Bara Chaukara	s.	Dathána	"	Kálághát	h.s.
Bara Nagla	Tree Flag.	Daulatpur	"	Kála Tibba	"
Bara Sapala	"	Do.	Village.	Kalerpur	Pípal Tree Flag.
Bardhai	"	Daurala	Tree Flag.	Kaliána N. Meridl. Mark	s.
Barkali	Tree.	Dedua	Tree.	Do. S.	"
Barla	Gateway Flag.	Dehra Dome Obsy. (new)	"	Kaliánpur	Tree.
Barsu	Tree Flag.	Deopura	Tree Flag.	Káli Naddi	Flag.
Barwála	"	Dhakeri	"	Do.	Flag No. 1 s.
Basera	"	Dhamaukheri	"	Do.	" No. 2 "
Bastan	"	Dhameit	Tree.	Kalinjan	Tree.
Bataul	"	Dhanghera	Tree Flag.	Kamálpur	Village.
Bedha	Building Flag.	Dhasri	"	Kamera	Building Flag.
Do.	Tree Flag.	Dídáhedí	Mosque.	Kánáheri	Tree Flag.
Begarazpur	"	Dosáni	Village Flag.	Kanár	s.
Begi	Village.	Duburji	Village.	Kanda	h.s.
Besáni	Tree Flag.	Dugchari	Tree Flag.	Kandikheri	Tree Flag.
Bhainsi	Paka Well.	Fálás	"	Kanhaiwála	Date Tree.
Do.	Tree Flag.	Farídpur No. 2	s.	Kapsar	Tree Flag.
Bhala	"	Farídpur	Tree Flag.	Kasauli or Naiágáon	"
Bhamauri	"	Fathipur	"	Kasauli	"
Bharála	"	Fulat	"	Kasmeri	h.s.
Bhárápur	"	Gádarjúda	"	Kátia	Tree Flag.
Bhartpur	"	Gandáspur	"	Kauláheri	"
Bhatwáro	Village.	Gangauli	"	Kesopur No. 1	"
Bhaunpur	Tree Flag.	Genori	Tree.	Do. No. 2	"
Bhubakpur	"	Ghiána	Tree Flag.	Khaikheri	Tree.
Bihári	Building Flag.	Ghísúkhera	s.	Khámpur	Tree Flag.
Do.	Makbara.	Ghumáti	Tree Flag.	Khanja	"
Bijaipur	Tree Flag.	Gopáli	s.	Kharád	"
Biláda	"	Gora	Tree Flag.	Kharkari	"
Biláspur	"	Gosáin's Mat	"	Kharkhari	Bungalow.
Bindu	"	Gotka	"	Khera No. 1	Tree.
Binjaul	"	Gunarsa	"	Khera	Tree Flag.

List of points omitted in the Chart—(Continued).

Kheri	Tree Flag.	Míthápur	Tree Flag.	Sainspur	Bastion.
Do.	Tree (near Dudli).	Mohábli	House Flag.	Saiyidpur	Tree Flag.
Do.	Tree (near Láwar).	Mohábli-pur	House.	Sajru	"
Khiámi	h.s.	Mohan	Hill Mark.	Sakarpur	"
Khindidia	Tree Flag.	Mohan Kírat	Temple.	Sakpur	"
Khirwa	"	Momin	Tree Flag.	Saláwa	"
Khoja Nagla	"	Monipur	"	Salempur	"
Khúbápur	Tree.	Munawarpur	"	Samálki	s.
Khujera	Tree Flag.	Mundiáki	"	Samholi	Tree Flag.
Khumera	"	Nágal Badheri	"	Sanauli	Village.
Kisan Thísa	"	Nagla	"	Sandhauri	Tree Flag.
Kokhai	"	Náharpur	Village.	Sapur	"
Kolári	Tree.	Naklor	Tree Flag.	Sarai	Date Tree.
Kopuri	Tree Flag.	Naknauta	"	Sardhana Nagla	Tree.
Korua	"	Nandhera	"	Sarkari	Tree Flag.
Kulsat	"	Nanhera	"	Sarsína Chauki	"
Kuralki	"	Nanhu	"	Sarsua	House Flag.
Kúri	"	Nára	Makbara.	Sarwat	Tree Flag.
Labauli	"	Nargájáni	Tree.	Sateri	"
Lachera	"	Narsenkalán	Tree Flag.	Semri	Tree.
Lachmanjhula	Temple.	Naula	"	Shaindra	h.s.
Lakarsánda	Tree Flag.	Niámu	House.	Sheopur No. 1	Tree Flag.
Lakar	Tree.	Nojli	Tree Flag.	Do. No. 2	"
Lalsana	"	No. 5.	s.	Sheopur	"
Landaur, Lál Tibba	h.s.	" 9.	"	Siálpur	Tree.
Do. No. 1	"	" 10.	"	Sidaula	Tree Flag.
Do.	R. C. Chapel.	" 1a	"	Sidhanser	"
Laulpur	Tree Flag.	" 2a	"	Sinkandrápúr	"
Lohári	"	Pabarsa	Tree Flag.	Silárpur	"
Loía	"	Pahár	Hill Building.	Simarathi	Tree.
Mahmudpur No. 1	"	Pahárpur	Tree Flag.	Siris	Tree Flag.
Do. No. 2	"	Paholi	"	Sirkanda	H.S. (new).
Majáhidpur	"	Palhera	"	Sirki	Tree Flag.
Malheda	House Flag.	Páli	"	Sirwána	h.s.
Málikpur	Tree Flag.	Panchli	"	Sítalkhera	Tree Flag.
Manát	Village.	Panwári	Pípal	Sonchara	"
Manoharpur	Tree Flag.	Patlokar No. 2	"	Soneti	"
Masúri,	Abbey Spire.	Patlokar	Tree Flag.	Sonta	"
Do.	Bachelor's Hall.	Pauhúpur	"	Sontha	"
Do.	Church Steeple.	Pauli	"	Suakhera	h.s.
Do.	Clover Lodge.	Pauti	s.	Súbri	Tree Flag.
Do.	Domé Obsy.	Pinána	Tree.	Susári	"
Do.	Dúdhili or Moltí Tibba.	Pirer	s.	Tájpur No. 1	Tree.
Do.	Gracemount.	Purai	Tree.	Do. No. 2	Tree Flag.
Do.	Laureston.	Rahmatpur	Tree Flag.	Tandera	"
Do.	Laureston Obsy. Mark.	Rái	Tree.	Tauli	Tree.
Do.	Logarithm Lodge.	Ramalpur	Tree Flag.	Táwita	"
Do.	Park House.	Rámpur	"	Thai	Tree Flag.
Do.	Priory.	Randauli	"	Thitki	"
Do.	Tundelabad.	Rankandi	"	Tígri	Pípal
Do.	Zephyr Hall.	Ráo-ka-Nagla	Atári.	Do.	Village.
Matauli	Tree Flag.	Rasúlpur	Tree Flag.	Tíjalheda	Tree.
Mataur	"	Ráta Nagla	s.	Tikaula	Tree Flag.
Mathra	"	Rohána	Tree.	Timli	h.s.
Mauláheri	"	Rukanpur	Tree No. 1.	Tori	Tree.
Mawai	"	Rukanpur	" No. 2.	Uncha Májra	Tree Flag.
Medora	Tree.	Sádpur	Tree.	Wellington	h.s.
Mehrmati	Tree Flag.	Saini Nagla	"	Yárpur	House.

