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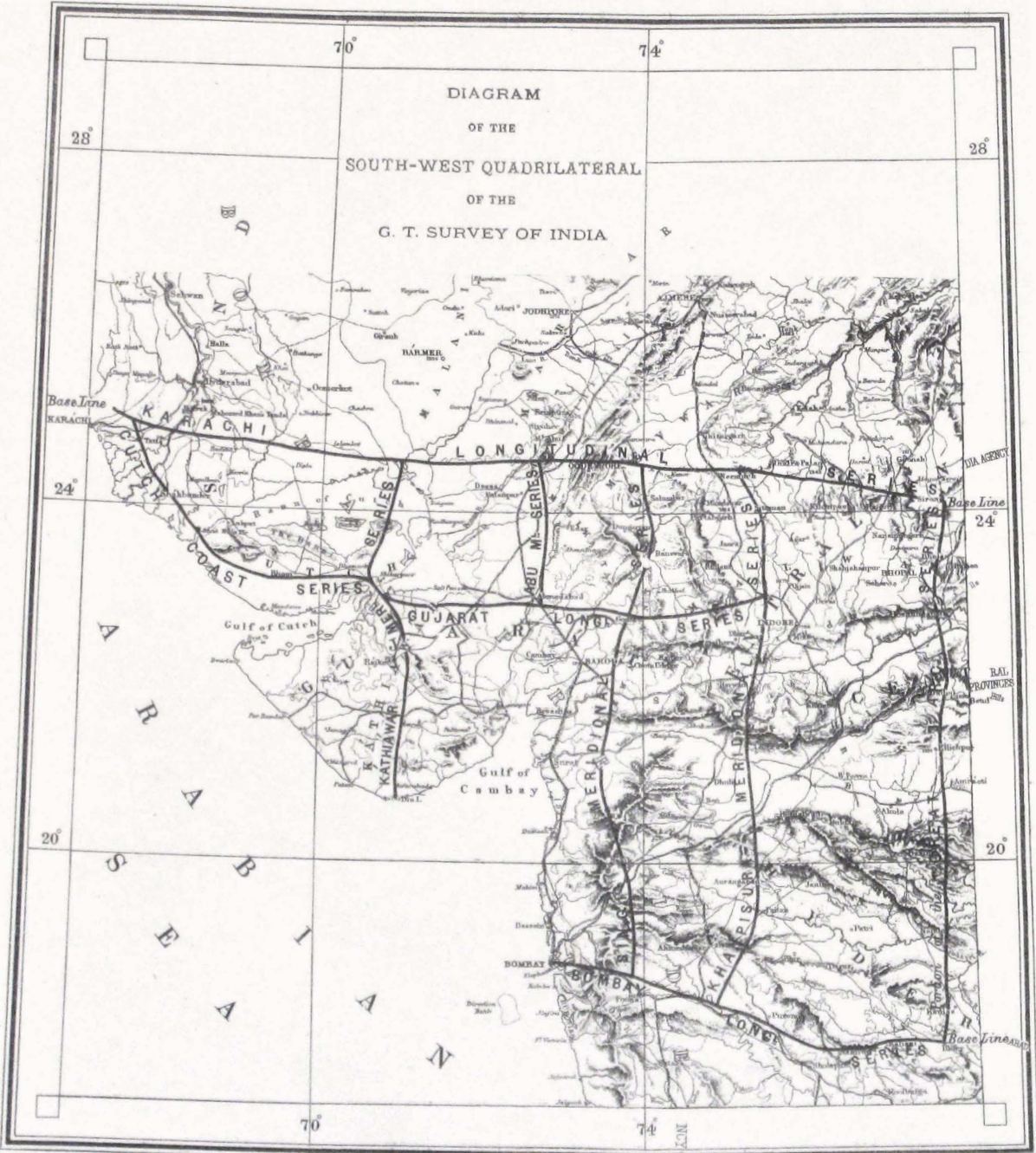
SYNOPTICAL VOLUME XXXIV

G. T. SURVEY OF INDIA.

THE KATHIAWAR MERIDIONAL SERIES

APPERTAINING TO THE
SOUTH-WEST QUADRILATERAL.





Photoinographed at the Office of the Trigonometrical Branch, Survey of India, Dehra Dun, January 1893.

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

VOLUME XXXIV.

DESCRIPTIONS AND CO-ORDINATES

OF THE

PRINCIPAL AND SECONDARY STATIONS AND OTHER FIXED POINTS OF

THE KATHIAWAR MERIDIONAL SERIES

OR SERIES J

OF THE

SOUTH-WEST QUADRILATERAL.

2553

PREPARED IN THE OFFICE OF THE TRIGONOMETRICAL BRANCH, SURVEY OF INDIA,
COLONEL G. STRAHAN, R.E., DEPUTY SURVEYOR GENERAL, IN CHARGE.

PUBLISHED UNDER THE ORDERS OF
COLONEL H. R. THUILLIER, C.I.E., R.E., SURVEYOR GENERAL OF INDIA.



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ERRATA ET CORRIGENDA.



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xix— <i>J.</i>	line 2 from top				
19— <i>J.</i>	in triangle No. 66	<i>for</i>	$\begin{array}{l l} 36^\circ & 35' & 25'' \cdot 1 & 5 \cdot 1049595 \\ 86 & 52 & 11 \cdot 2 & 5 \cdot 3289999 \\ 56 & 32 & 23 \cdot 7 & 5 \cdot 2509551 \end{array}$	<i>read</i>	$\begin{array}{l l} 36^\circ & 35' & 24'' \cdot 8 & 5 \cdot 1049595 \\ 86 & 52 & 12 \cdot 2 & 5 \cdot 3290010 \\ 56 & 32 & 23 \cdot 0 & 5 \cdot 2509551 \end{array}$
21— <i>J.</i>	in triangles 123 to 127	<i>a</i>	Gadhada t.s.	<i>„</i>	Gadhada h.s.

December, 1894.

J. ECCLES,
In charge Computing Office.



REFERENCES.

The abbreviations employed in the text are as follows:—

h.s. denotes hill station (secondary)

s. „ station „

t.s. „ tower station „

These abbreviations are only placed after stations where a theodolite has been set up and observations taken to surrounding points.

The latitudes and longitudes of all points shown on the Charts at the end of the volume will be found in the text. The latter exhibits numerical values of triangles only to points of a superior class, to which alone, if exhibited on the Charts, lines are drawn: the lines are either continuous throughout, or dotted for half the length and continuous for the other half: the dots indicate that the bearing was not observed. For other points difficult to identify or of comparatively less accuracy, numerical values of triangles and azimuths are not given.

December, 1894.

J. ECCLES,

In charge Computing Office.

P R E F A C E .

The Káthiáwár Meridional Series, the details of which are given in this volume, is one of the principal Series of the South-West Quadrilateral, or that section of the triangulation of India which lies between the parallels of 18° and 25° and between the meridian of 78° and the Arabian Sea. The general principles of the simultaneous reduction, and the procedure followed in carrying it out, are explained in Volume II of the *Account of the Operations, &c.*; and full details of the whole of the principal triangulation appertaining to the Quadrilateral will be found in Volume XIV of the *Account of the Operations, &c.*

As however the entire contents of the volumes of the principal triangulation are not needed by geographers and surveyors, and moreover as these volumes give no details of the secondary or minor 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 triangulation, should be published for general use in such a form as to be most suitable for convenience of reference. This has already been done as follows:—

For the several Series forming the North-West Quadrilateral,

- I. Great Indus Series.
- II. Great Arc, Section 24° to 30° .
- III. Karáchi Longitudinal Series.
- IV. Gurhággarh Meridional Series.
- V. Rahún Meridional Series.
- VI. Jogi-Tila and Sutlej Series.
- VII. North-West Himalaya Series.

VII A. Jodhpore and Eastern Sind Meridional Series.

For those forming the South-East Quadrilateral,

- VIII. Great Arc, Section 18° to 24° .
- IX. Jabalpur Meridional Series.
- X. Bider Longitudinal Series.
- XI. Biláspur Meridional Series.
- XII. Calcutta Longitudinal Series.
- XIII. East Coast Series.
- XIII A. South Párasnáth and South Malúncha Series.

} Already published.

For those forming the North-East Quadrilateral,

- XIV. Budhon Meridional Series.
- XV. Rangir Meridional Series.
- XVI. Amua and Karára Meridional Series.
- XVII. Gurwáni and Gora Meridional Series.
- XVIII. Huriláong and Chendwár Meridional Series.
- XIX. North Párasnáth and North Malúncha Meridional Series.
- XX. Calcutta and Brahmaputra Meridional Series.
- XXI. East Calcutta Longitudinal and Eastern Frontier Series, Section 23° to 26°.
- XXII. *Assam Valley Triangulation, E. of Meridian 92°.

} Already published.

For those forming the Southern Trigon,

- XXIII. South Konkan Coast Series.
- XXIV. Mangalore Meridional Series.
- XXV. South-East Coast Series.
- XXVI. Bombay Longitudinal Series.
- XXVII. Madras Longitudinal Series.
- XXVIII. Madras Meridional and Coast Series.
- XXIX. Great Arc, Section 8° to 18°. (*In press*).

And for the following Series of the South-West Quadrilateral, viz.,

- XXX. Abu Meridional and Gujarát Longitudinal Series.
- XXXI. Khánpisura Meridional Series.
- XXXII. Singi Meridional Series.
- XXXIII. Cutch Coast Series.

} Already published.

The present is the 35th Synoptical Volume in order of publication, and the fifth of those appertaining to the South-West Quadrilateral; it gives the results both of the principal triangulation executed exclusively with a theodolite having an azimuthal circle 18 inches in diameter, read by three micrometer microscopes, and of the secondary triangulation in which besides this instrument a 12-inch theodolite read by verniers was used.

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 South-West Quadrilateral. All secondary triangulations emanating from one side of the principal Series and closing on another side thereof, or on a contiguous Series, have also been made consistent throughout.

As regards the general arrangement of this volume, it may be pointed out that the Introduction to the Series was originally prepared for Volume XIV 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 this volume. The Introduction gives a historical and descriptive sketch of the progress of the whole operations in the field—both principal and secondary—from year to year, mentions the Officers by whom they were conducted, the theodolite with which the angles were measured, and indicates the work done by each of the Assistants. The adjustment of the secondary triangulation was taken in hand in the year 1892, and completed in the following year when the printing of the volume was resumed.

The data given in this volume are the following:—

First (page 1—*J*), an alphabetical list of the names of the principal stations, showing the numbers assigned to them.

Second (page 3—*J*), a numerical list giving the names corresponding to the numbers.

* This is an offshoot of the Assam Longitudinal Series, and falls entirely outside of the limits of the North-East Quadrilateral. The volume is issued in a preliminary form, and therefore only a limited number of copies are available to meet any immediate demand for data: the final publication will be hereafter made on the completion of the triangulation in Burma, into the general reduction of which this Series will enter.

Third (page 5—*j*), descriptions of the structure and positions of the principal stations.

Fourth (page 13—*j*), the angles and sides of the principal triangles.

Fifth (page 18—*j*), 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.

Sixth (page 64—*j*), the azimuths of surrounding stations and points at principal, principal-auxiliary and secondary stations, the latter arranged in alphabetical order.

Seventh (page 89—*j*), the co-ordinates and descriptions of all stations and points arranged in alphabetical order.

It has not been considered necessary to publish the whole of the details of the secondary triangulation; the sides and angles of 1038 triangles, which were selected as most likely to be of future use, and the azimuths of all these sides, have been given; but for a number of other points the co-ordinates only have been given. With the aid of Tables Nos. XXVI, XXVII, XXVIII, XXIX and XXX of the *Auxiliary Tables to facilitate the calculations of the Survey of India*, Dehra Dún, 1887, surveyors, working on a system of rectangular co-ordinates, can readily transform the spheroidal co-ordinates here given to suit their requirements.

The heights above mean sea level of the stations depend on the final trigonometrically determined values of Akoria, Bhilgaon and Jhund of the Karachi Longitudinal Series of the North-West Quadrilateral and on the direct determination of sea level at Diu and Miáni, and are further well controlled by lines of spirit-levelling connecting several principal and secondary stations at different parts of the Series. All particulars regarding the heights will be found detailed on page 89—*j*, as well as in the footnotes to the subsequent pages.

The longitudes depend on an astronomically determined value of the longitude of the Madras Observatory, deduced about the year 1815. The longitude of the Madras Observatory has however been re-determined by the Electro-Telegraphic method, from observations made at Greenwich, Mokattam (in Egypt), Suez, Aden, Bombay and at certain stations of the triangulation in India.

This value of the longitude of the Madras Observatory is equivalent to $80^{\circ} 14' 51''$ E.; and as the originally adopted value, on which the longitudes of the whole of the stations of this Survey are based, is $80^{\circ} 17' 21''$ E.—see page 135 of Volume II of the *Account of the Operations*, &c.—the following precept may be accepted with considerable confidence:—

**All the values of longitude in this volume require a constant correction,
probably of $-2' 30''$.**

The orthography of Indian names in the present volume is in accordance with the provincial lists of spellings constructed under the immediate orders of the Government of India. The newly authorised spellings were adopted for all names and other words contained in these lists; but for words for which there was no specific authority, the spellings have been framed in accordance with the methods followed in the preparation of the published lists, reference being made in the present instance to the Gazetted Lists for Bombay and Sind. As a general rule the pronunciations of the vowels are as follows:—*a* has a variable sound as in woman, rural, paltry; *á* as in tartan; *í* as in bit; *é* as in ravine; *u* as in bull; *ú* as in rural; *o* as in note; *e* as *a* in say; *au* as *ou* in cloud; *ai* as *i* in ride. Final vowels and those in well-known terminals are unaccented. When the popular spelling of a name has been accepted by Government, its correct orthography is generally given in parenthesis where the name occurs for the first time.

The charts accompanying this volume show all the principal stations and triangulation, the positions of all secondary points, and those portions of the secondary triangulations of which full details of the angles, sides and azimuths are given. With the aid of the charts it is hoped that little difficulty will be met with in finding out any of the data which may be required. The descriptions of the secondary stations and points are in some cases not as full and clear as might 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 field books, whenever it was found practicable to do so, in order to facilitate the future identification of the stations, and all the information which is forthcoming has now been given.

The general arrangement of the volume is in accordance with that adopted in previous Synoptical Volumes. The data which it contains have been prepared chiefly under the superintendence of Mr. J. Eccles, M.A., Deputy Superintendent, the Officer in charge of the Computing Office. The Introduction to the Series was written by Captain S. G. Burrard, Deputy Superintendent. The volume like its predecessors has been printed at the Trigonometrical Branch Office at Dehra; Mr. Peychers has rendered valuable service in the examination of the press proofs generally, and more particularly in regard to the preparation and final revision of the letter-press and numerical details which require the utmost care, and in this respect from his natural aptitude and experience his assistance has been most valuable.

DEHRA DUN, }
April, 1894. }

G. STRAHAN, COLONEL, R.E.,
Dy. Surveyor General,
In charge Trigonometrical Surveys.

KATTYWAR MERIDIONAL SERIES.

KATTYWAR MERIDIONAL SERIES.

INTRODUCTION.

The Kattywar (Káthiáwár) Meridional Series of the South-West Quadrilateral is the chain of Principal Triangles that follows the meridian of 71° from the parallel of $24^\circ 40'$ to that of $20^\circ 40'$. It originates in the deserts of Sind, crosses the Ran and eastern districts of Cutch (Kachh), and thence runs straight down the centre of the Kattywar peninsula terminating in the island of Diu (Dív). It emanates from the side Bhilgaon-Akoria of the Karáchi Longitudinal Series: it is joined in latitude $23^\circ 30'$ from the west by the Cutch Coast Series at the side Chitror-Wándia, and in latitude 23° from the east by the Guzerat (Gujarát) Longitudinal Series at the side Chalarwa-Sápakra: south of this it has no further connection with any exterior Principal Triangulation. In the simultaneous reduction, therefore, of the South-West Quadrilateral, the portion of the Series under review between Bhilgaon and Wándia entered into the two circuits of triangulation situated one on either side of it, the next portion between Wándia and Sápakra entered into the eastern of these circuits, whilst the southern half from Díngarpur to Dangarwári did not enter into the reduction at all, being only an exterior pendent of the Quadrilateral without any closing check to shew the errors accumulated in length or direction.

The Kattywar Meridional Series consists of three compound figures, one hexagon, one pentagon, three quadrilaterals and seven single triangles, and extends over a distance of 275 miles. The portion south of latitude 23° was designed in 1850 in conjunction with the Abu Meridional and the western section of the Guzerat Longitudinal Series, for the purpose of affording a trigonometrical basis for the Topographical Survey of Kattywar. The northern portion, that lies between the Guzerat and Karáchi Longitudinal Series, was afterwards added with the double object of checking the triangulation of the former, and of enabling the borders of the Ran to be delineated.

During the winter of 1851-52 the Bombay Triangulation Party, under Lieutenant H. Rivers of the Bombay Engineers, was employed on the final work of the Abu Meridional and Guzerat Longitudinal Series; and by the end of that field season the former series

had been finished and all the angles of the latter between the stations of Mirzápur and Ingrori had been observed. In March and April 1852 during the prosecution of the principal work by the main body of the party, Mr. J. W. Rossenrode, the senior assistant, carried the approximate work of the Guzerat Longitudinal Series to its western extremity and also selected the station of Rangpur of the Kattywar Meridional Series and constructed a hexagon round it.

In November, 1852 the same party resumed work on the Guzerat Longitudinal Series at the side Ingrori-Degám, with the purpose of completing it to the westward. On arrival at the station of Ingrori it was found that the heights of the towers would

Season 1852-53.

PERSONNEL.

Lieutenant H. Rivers, Bombay Engineers, 1st Assistant.
 Lieutenant D. J. Nasmyth, Bombay Engineers, 2nd Assistant.
 Mr. T. Sanger, Sub-Assistant.
 „ J. DaCosta, „
 „ J. McGill, „

have to be considerably increased to render the Degám heliotrope visible. While this was being done, Lieutenant Nasmyth of the Bombay Engineers, who was temporarily in charge of the party, decided to make a reconnoissance of the country to the westward with the object of improving Mr. Rossenrode's approximate series. The hexagon of the Kattywar Meridional Series, that had been constructed around the station of Rangpur was, owing to the smallness of its sides, an eyesore he especially wished to remove; and as the part of the country in which it was situated was comparatively open and favorable for triangulation, there seemed no real necessity to limit the sides to five or six miles in length as Mr. Rossenrode had done. The result of the revision was, that the triangles were made more symmetrical and only seven stations were required to span the same extent of country as had under the original arrangement taken ten. By December 1st, Nasmyth, who had in the meantime been rejoined by Rivers, had in addition selected all the stations of the hexagon round Dúngarpur. The party then returned eastwards to Ingrori to take up the final work of the Guzerat Longitudinal Series.

Mr. DaCosta, who had been detached from the main body of the party, commenced early in the same month to carry the approximate work of the Kattywar Meridional Series southwards from the side Wánkáner-Chatrikhera towards the island of Diu, and by the first of January he had selected sites for stations as far south as Mumaiya; four weeks later he was within a short distance of the sea coast. Here his progress was checked by the Portuguese authorities of Diu who were jealous of a British Officer even landing on their island, and greatly objected to a tower being built and observed from. It was, however, considered a matter of importance that a station should be established on the island, and Rivers, to whom DaCosta had referred the matter, explained to the Governor that his work was being carried on purely in the interests of science, and had no military or political aspects: he also offered, if he were allowed to erect and visit a station at Diu, to give the Portuguese the co-ordinates of their town, a gift however that they do not seem to have valued, as his request was refused. He then wrote for assistance to the Political Agent of Kattywar and to the Chief Secretary to the Bombay Government, through whose representations Mr. DaCosta was at length allowed to build the station of Dangarwári.

Early in January 1853 the principal angles of the western section of the Guzerat Longitudinal Series were completed, and those of the Kattywar Meridional Series commenced: the stations of Chalarwa and Dúngarpur had already been visited during the previous month and the angles at them observed. Observations of δ Ursæ Minoris for azimuth had also been taken at Dúngarpur during the last week in December. By the sixth of February the angles at fourteen more stations had been observed, when the operations were suddenly brought to a stand-still at Mumaiya through the towers at Rangpur (south)* and Konkáwáo which Mr. DaCosta had reported to be indispensable not yet having been built. It seemed from the appearance of the country that no towers were required, and while endeavours were being made to dispense with them, operations with the large theodolite were stopped. As, however, the surrounding stations had not a sufficiently commanding view, it was found impossible to make any new arrangements that did not reject many at which final work had already been completed. It was therefore thought best to continue the building of these stations and, until they should be ready, to proceed with the angles south of the difficult ray. Before starting southwards it was found necessary to substitute the station of Jitori for Piplia, although the latter had been observed from Mumaiya and Chitália. In spite of these delays by the 19th of March all the principal angles had been observed as far south as the sea coast; the party then returned to Rangpur (south)* where, under Mr. J. McGill's directions, a tower 35 feet high had been built as well as one 30 feet high at Konkáwáo, but on setting up the instrument it was evident that all chance of observing to the Konkáwáo signal had vanished with the cold weather. A short-lived glimpse of the heliotrope in the early morning and an unsteady glimmer of the lamp in the evening, faintly struggling over the heated table-land, were all that were seen.

In the meantime Mr. DaCosta had been despatched to the neighbourhood of Mumaiya to start the western branch of a minor longitudinal series across Kattywar. The first step that he found necessary was to change the site of Mumaiya, and having done that he selected a quadrilateral on the side Mumaiya—Konkáwáo; but he subsequently found that by means of a station at Trákura he could construct a somewhat symmetrical hexagon round the new station of Mumaiya, and he consequently abandoned the quadrilateral. At the suggestion of Mr. Sanger who had been conducting the approximate work of the eastern section of the Kattywar Longitudinal Series, the stations of Rangpur (south)* and Mujoyásar were then omitted from the principal work; and the large compound figure as it now exists round Mumaiya and Jitori was decided upon: the symmetry of the triangles was thus greatly improved, and no grazing rays had now to be observed. These new arrangements, however, necessitated the revisiting of the stations of Manáwa, Sarkala, Mumaiya, Bháyásar and Chitália, and also final observations at two new stations, Deo-ki-Galol and Trákura, and as the season was well advanced these were serious drawbacks: the observations also to and from Rangpur (south)* and Mujoyásar were rendered useless except for secondary work.

In March, Rivers received intimation that furlough had been granted him, and he handed over charge of the work, and his connection with the Great Trigonometrical Survey,

* Now a Secondary Station.

which had lasted for nine years, now terminated. The field records of the triangulation of the South-West Quadrilateral, the greater portion of which are due to him, bear witness to his conspicuous abilities and his great talents as an observer. He eventually rose under the Bombay Government to high office in the Railway Department: he died in England in 1889.

After Rivers' departure Nasmyth was much delayed by cloudy weather, fogs and storms; and at the end of April he found that he had the observations at the two stations of Itria and Sakpur still to finish, ere the hiatus in the southern section of the principal series would be filled. An interval of fine weather enabled him to observe from both; and by the 10th of May the Kattywar Meridional Series had been completed from its junction with the Guzerat Longitudinal Series in latitude 23° to the island of Diu on the southern coast of the Kattywar peninsula. Nasmyth now took up the work of the eastern branch of the Kattywar Longitudinal Series, and closed the field season at Gogha on May 25th. He was here joined by Mr. J. H. Smith, who had been examined a few weeks previously by Lieutenant Rivers at Bombay and had just been appointed to the Department. The party passed the recess season at Rájkot.

The character of the country traversed by the past season's operations was as follows:—The northern portion was flat and a few of the rays about Rangpur and Chalarwa had only been visible with the aid of considerable refraction. In the neighbourhood of Dúngarpur is an extensive and high table-land, much intersected by streams—perhaps more numerous here for the extent of country than anywhere else in India—and to the south of this table-land were numerous peaks rising to 2,000 or 3,000 feet. The southern and south-western portion of the Kattywar peninsula is known as the Gír; it is a wild mountainous and deserted tract and its soil is poor, unproductive and stony: the water is bad, causing dropsy and disease of the spleen. Prior to 1800 the country had been disturbed for centuries and had never been long enough under one Government to derive the advantages even of a bad one, till at last it became deserted except by robbers and outlaws, to whom it secured but too safe a retreat. In 1850 these latter were removed, but even now in 1889 the Gír can boast of no civilisation or productiveness.

Early in October 1853, the party took the field and marched to Konkáwáo, where

Season 1853-54.

PERSONNEL.

Lieutenant D. J. Nasmyth, Bombay Engineers,
2nd Assistant.
Mr. T. Sanger, Sub-Assistant.
" J. DaCosta, "
" J. McGill, "
" J. H. Smith, "

Lieutenant Nasmyth wished to observe Polaris at both elongations for azimuth. A dense fog prevailed and protracted the work from six days, the normal number, to ten; and though excessive heat by day and heavy dews by night fostered fever and ague, the observations were successful. The party returned to Rájkot on October 19th.

In November Mr. DaCosta left for Cambay (Khambhat), to complete the approximate work of the Sábarmati Minor Series: a few platforms had to be built, a few rays cleared, and in one or two instances the symmetry of the triangles required improvement. Towards the middle of December he crossed the Gulf to Gogha and took up the approximate work of

the Kattywar Coast Minor Series. In the meantime Mr. Sanger had been despatched northwards to the Ran with orders to select stations for a minor longitudinal series through Cutch, to provide for the geography of that province; on completing which he was directed to carry the approximate work of the Kattywar Meridional Series northwards from Rangpur and Kákraji and connect it with a side of the Karáchi Longitudinal Series.

On November 8th, 1853, Nasmyth himself resumed work on the Kattywar Minor Longitudinal Series, and was occupied with it till December 25th. He then took up the final observations of the Sábarmati Minor Series, which employed him till the middle of February. Having completed these he returned to Kattywar, and on February 18th set up his theodolite at Chalarwa, a station of the Kattywar Meridional Series, with the intention of carrying the Principal Triangulation across the Ran into Cutch. He now met with a series of grievous delays: hardly any of the rays were cleared, and on one of them when he had spent much time in cutting down the trees a village appeared in the way and the tower had to be raised. At Kákraji he was overtaken by a violent storm, and after that till the last week of April, when the weather became more suitable, the air was seldom clear. When the storm was over he hurried back to Pangasia and then crossed the Ran to Khánmír. Water had been gradually extending over the Ran, the mud was soft, and quicksands existed in many places, and numerous dead bullocks and carts stuck fast afforded unanswerable proofs of the difficulties of crossing, while camels could only travel with half loads. The water was particularly salt and caused any lacerations on the wayfarers' feet to smart severely. The field season was closed at Chitror in the middle of May, the Kattywar Meridional Series having been completed to Pata-i-Sháh. The party, who had experienced intense heat during April and May, remained in Mándvi on the Cutch Coast till the rains set in: they then moved to Bhúj, where they established their recess quarters; but finding it unhealthy, they returned to Mándvi in September.

During the early part of the field season 1854-55, Lieutenant Nasmyth and Mr. McGill were at Karáchi taking part in the measurement of the Base-line, that was being carried on under Major A. Strange with the Colby apparatus of compensation bars and microscopes, while Mr. Smith had lately quitted the party and joined Lieutenant J. F. Tennant, R.E.; thus Messrs. DaCosta and Sanger were the only two officers available for trigonometrical work in Kattywar.

Mr. Sanger's approximate work of the preceding year had made the Principal Series through Cutch to depend, at its junction with the Kattywar Meridional Series, on one single triangle and one quadrilateral, in the latter of which were two angles of less than 30° ; and this was a flaw that Lieutenant Nasmyth wished to remove. He therefore on leaving for Karáchi placed both his remaining assistants on the duty of improving Mr. Sanger's original design. The district of Wagan in which they were to operate is bounded on the one side by the sea and on the other by the Ran, whilst its breadth is too inconsiderable for symmetrical triangles. The proposed triangles that resulted from their joint labours were approved by Nasmyth though they were still wanting in symmetry. On completion of this work Mr.

Sanger took up the approximate work of the Guzerat Longitudinal Series east of Ahmedabad (Amdávád), and Mr. DaCosta continued his observations of the angles of the Kattywar Coast Minor Series, which he had been unable to finish the previous year.

Towards the end of the measurement of the Karáchi Base-line Lieutenant Nasmyth having fallen ill, was detained on this account for some weeks at Karáchi, and when sufficiently recovered to be moved, was taken to Bombay and thence to Mahábaleshvar. No final observations were in consequence made on the Kattywar Meridional Series during the season 1854-55. Mr. DaCosta completed the angles of the Kattywar Coast Minor Series on January 25th, 1855, and then took up the work of connecting the triangulation with mean sea level*. His first tidal station was selected in Miáni Harbour, 35 miles south-east of

* The tide gauge with an Index 2 feet long was erected about one mile up the Vartho River, where there was a depth of water sufficient to indicate the rise and fall of tides, 576 feet from its left bank, and close N.W. of the town of Miáni, Porbandar State: the position was the most sheltered in the neighbourhood, free from the influence of waves, and protected by a bar at the mouth of the river which is remarkably narrow. The box contrivance of the gauge further protected it from the undulations in the water when there happened to prevail high wind during the observations. The rise and fall of tides were satisfactorily registered to .05 of a foot. The zero of the gauge was tested almost after every registration of the tides, with a 12-inch theodolite duly adjusted for the observations and found constant. A masonry pillar had been built at the distance of 70 feet up the bank in which two stones were imbedded, one at the level of the ground having the numeral 39 engraved thereon and the other 1 foot above it at top having the numeral 40 engraved. This latter was found afterwards by spirit-levelling with Gravatt's level to be 38.0800 feet above the lowest water mark, or 35.6550 feet above mean sea level as shown at the end of this synopsis.

Synopsis of the Tidal Observations taken at Miáni Bandar with a Fixed Scale and Floating Index 2 feet long.

DATE		Mean Time of Observation	Reading on the Fixed Gauge	Range of Tide	Mean Level of Water	Temperature Fahrenheit	REMARKS
Month	Day						
1855		<i>h m</i>	<i>feet</i>	<i>feet</i>	<i>feet</i>	<i>°</i>	
February	8	13 15	5.10	...	...	...	Clear. W. wind.
"	"	19 55	3.30	1.80	4.200	...	" "
"	9	3 25	6.75	3.45	5.025	...	Very cloudy. Calm.
"	"	11 20	3.19	3.56	4.970	...	High S.W. wind.
"	"	15 55	4.85	1.66	4.020	78	S.W. wind.
"	"	21 5	3.55	1.30	4.200	...	Calm.
"	10	3 5	6.40	2.85	4.975	...	"
"	"	12 40	2.98	3.42	4.690	...	High S.W. wind.
"	"	17 50	4.75	1.77	3.865	68	S.W. Wind.
"	"	22 50	3.90	0.85	4.325	...	N. wind.
"	11	3 50	5.85	1.95	4.875	56	Very foggy. Calm.
"	"	13 55	2.70	3.15	4.275	84	Calm.
"	"	19 45	5.05	2.35	3.875	...	"
"	12	0 35	4.48	0.57	4.765	...	"
"	"	4 55	5.70	1.22	5.090	...	Clear. Calm.
"	"	15 35	2.67†	3.03	4.185	82	Sultry. "
"	"	21 0	5.95	3.28	4.310	69	Very calm.

† Reading of lowest water mark.

Dvárka (Dvárka). His tide-gauge, which was self-registering, had been previously prepared at Mándvi under the direction of Lieutenant Nasmyth: it consisted of two boxes in one of which the float rose and fell with the surface of the water, while in the other a counterpoise to the float left cork indices at the highest and lowest points which it had reached. These indices, which were originally of card, slid up and down on a tightly stretched brass wire, and were held by their own friction in the places to which they were carried by the counterpoise: cork had to be substituted for card, as the friction of the latter upon wire was not sufficient to support its own weight. The gauge was supported on a scaffolding of

Synopsis of the Tidal Observations taken at Midni Bandar—(Continued).

DATE		Mean Time of Observation	Reading on the Fixed Gauge	Range of Tide	Mean Level of Water	Temperature Fahrenheit	REMARKS
Month	Day						
1855		h m	feet	feet	feet	°	
February	13	2 10	4'64	1'31	5'295	63	Calm.
"	"	6 0	5'73	1'09	5'185	62	N. breeze.
"	"	16 45	2'73	3'00	4'230	...	S.W. wind.
"	"	22 5	6'74	4'01	4'735	64	Calm.
"	14	4 0	4'46	2'28	5'600	65	N. wind.
"	"	7 5	6'05	1'59	5'255	...	Cloudy. High S. wind.
"	"	17 20	2'85	3'20	4'450	...	" Calm.
"	"	23 10	7'45	4'60	5'150	...	Clear "
"	15	5 20	4'45	3'00	5'950	...	Some clouds about the horizon. Calm.
"	"	8 30	6'67	2'22	5'560	71	Cloudy. Calm. (Perigee 15 ^h 6
"	"	18 20	3'12	3'55	4'895	73	S.W. breeze.
"	"	23 25	7'78	4'66	5'450	70	N. breeze.
"	16	6 35	4'25	3'53	6'015	...	Calm.
"	"	9 50	7'03	2'78	5'640	...	High S. wind. ● Perigee.
"	"	19 0	3'18	3'85	5'105	70	Calm.
"	"	24 0	8'00	4'82	5'590	60	"
"	17	7 15	4'06	3'94	6'030	...	"
"	"	11 5	7'25	3'19	5'655	...	S.W. wind.
"	"	19 35	3'25	4'00	5'250	70	Calm.
"	18	0 30	8'30	5'05	5'775	68	W. breeze. Spring Tide.
"	"	7 15	4'08	4'22	6'190	70	Very calm.
"	"	11 45	7'43	3'35	5'755	...	N.E. wind.
"	"	20 10	3'42	4'01	5'425	...	Calm.
"	19	0 33	8'28	4'86	5'850	...	S. breeze.
"	"	8 50	3'90	4'38	6'090	...	E. breeze.
"	"	12 28	7'15	3'25	5'525	...	W. wind.
"	"	20 35	3'40	3'75	5'275	...	Calm.

KATTYWAR MERIDIONAL SERIES.

piles, which were forced into the ground by the ordinary plan of lashing boats to them at high-water and thus enabling their weight to exert a downward pull as the tide fell. These piles were securely strutted and cross-bars fixed to them, on which cradles rested at intervals of a foot for the support of the gauge. The tidal observations at Miáni extended from February 8th to 23rd inclusive, and exhibited a rise of 3·2050 feet as the extreme height of the tide above mean sea level. The zero of the gauge was referred to a stone masonry pillar which was connected both trigonometrically and by levelling with the adjoining station of Sarsad Mátá of the Longitudinal Series of Kattywar.

Synopsis of the Tidal Observations taken at Miáni Bandar—(Continued).

DATE		Mean Time of Observation	Reading on the Fixed Gauge	Range of Tide	Mean Level of Water	Temperature Fahrenheit	REMARKS
Month	Day						
1855		<i>h m</i>	<i>feet</i>	<i>feet</i>	<i>feet</i>		
February	20	0 53	8·12	4·72	5·760	...	Calm.
"	"	9 45	3·67	4·45	5·895	...	S.W. wind.
"	"	13 5	6·80	3·13	5·235	...	Calm.
"	"	21 13	3·40	3·40	5·100	...	
"	21	1 15	7·86	4·46	5·630	...	"
"	"	10 24	3·45	4·41	5·655	...	Very high W. wind.
"	"	14 28	6·35	2·90	4·900	...	Calm.
"	"	21 13	3·48	2·87	4·915	...	
"	22	1 45	7·47	3·99	5·475	...	"
"	"	11 13	3·16	4·31	5·315	...	W. wind.
"	"	15 40	5·72	2·56	4·440	...	Very high W. wind.
"	"	21 33	3·65	2·07	4·685	...	Calm.
"	23	2 8	6·73	3·08	5·190	...	"
"	"	11 50	2·86	3·87	4·795	...	W. breeze.

By observations during a semi-lunation from 8th to 23rd February, being the mean reading on the Gauge of high and low tides ...	...	...	...	...	...	...	<i>feet</i> 5·0950
Subtract length of Index bar carrying a float at its lower end	...	...	...	...	...	...	1·0000
True height of mean sea level above the zero of the graduated scale of the Gauge ...	...	...	...	...	...	...	3·0950
Subtract for difference of height between zero of the scale and the lowest water mark, as deduced by the Index bar	...	...	...	...	...	...	-0·6700
Height of mean sea level above lowest water mark	...	...	...	...	...	...	2·4250
Height of summit of level datum pillar above lowest water mark	...	...	...	...	...	...	38·0800
Ditto	ditto	above mean sea level	...	...	...	...	35·6550

Similar observations were taken at Diu*, in the creek which separates that island from the mainland; and the means adopted for putting up the gauge and for observing the range of the tide were identical with those followed at Miáni Bandar. As the Portuguese authorities

* The gauge with the floating Index 3 feet long was set up in Diu Creek, 565 feet N.E. of the ruined and smallest tower on the westernmost curtain of Diu fort S. W. of Gogla (Portuguese Settlement) where there was a sufficient depth of water for the purpose of making Tidal Observations. The position was further the most sheltered in the locality and free from the influence of waves. The rise and fall of the tides were satisfactorily registered to .05 of a foot. Upon the tower, on a slab level with the flags, is engraved the numeral 14, that being the height of the tower as obtained by levelling above the mean sea level deduced from the mean of high and low tide observations made uninterruptedly during a semi-lunation from the 3rd to 17th March, 1855.

Synopsis of the Tidal Observations taken at Diu Creek with a Fixed Scale and Floating Index 3 feet long.

DATE		Mean Time of Observation	Reading on the Fixed Gauge	Range of Tide	Mean Level of Water	Temperature Fahrenheit	REMARKS
Month	Day						
1855		<i>h m</i>	<i>feet</i>	<i>feet</i>	<i>feet</i>		
March	3	0 15	8.69	...	6.650	...	Calm.
"	"	6 15	4.61	4.08	6.650	...	"
"	"	11 33	7.02	2.41	5.815	...	"
"	"	18 8	3.15	3.87	5.085	...	"
"	4	0 40	8.88	5.73	6.015	...	" O Apogee.
"	"	6 50	4.10	4.78	6.490	...	"
"	"	12 5	7.52	3.42	5.810	...	"
"	"	18 30	3.50	4.02	5.510	...	Very calm.
"	5	1 13	9.12	5.62	6.310	...	Calm. Spring Tides.
"	"	7 20	4.14	4.98	6.630	...	"
"	"	13 50	8.00	3.86	6.070	...	"
"	"	19 3	3.69	4.31	5.845	...	Very calm.
"	6	1 30	9.03	5.34	6.360	...	Clear. Very calm.
"	"	7 45	3.69	5.34	6.360	...	Cloudy. Calm.
"	"	13 28	8.04	4.35	5.865	...	S.W. wind.
"	"	19 50	4.04	4.00	6.040	...	Calm.
"	7	1 53	8.88	4.84	6.460	...	Cloudy. Very calm.
"	"	8 15	3.24	5.64	6.060	...	Calm.
"	"	14 5	8.03	4.79	5.635	...	S.W. wind.
"	"	20 10	4.51	3.52	6.270	...	Calm.
"	8	1 48	8.59	4.08	6.550	...	"
"	"	8 50	2.78	5.81	5.685	...	Cloudy. W. wind.
"	"	14 36	7.72	4.94	5.250	...	High S. wind.
"	"	20 46	5.04	2.68	6.380	...	Calm. W. wind.
"	9	2 33	8.20	3.16	6.620	...	W. wind.
"	"	9 20	2.72	5.48	5.460	...	"
"	"	17 20	8.15	5.43	5.435	...	High S.W. wind.
"	"	21 53	5.85	2.30	7.000	...	"
"	10	2 15	7.80	1.95	6.825	...	Very rough.
"	"	9 45	3.08	4.72	5.440	...	Very calm.
"	"	18 5	8.13	5.05	5.605	...	"
"	"	22 50	6.68	1.45	7.405	...	"

nected with the principal station Dangarwári of the Kattywar Meridional Series. The observations at Diu extended from the 3rd to the 17th March and exhibited a rise of 3.4777 feet as the extreme height of the tide above mean sea level. Mr. DaCosta next moved the apparatus to Bhávnagar, but his scaffolding had hardly been set up when it was knocked over by the waves. Despairing after repeated failures of ever being able to secure a firm foundation for the piles at this place, with the limited means at his disposal, Mr. DaCosta embarked in April for Sikotar Máta at the head of the gulf of Cambay. This station had been connected with the Abu and Guzerat Principal Series by the Sábarmati Minor Series which had been carried out for that special purpose: its site had been fixed upon by Nasmyth himself, after much trouble and consideration, and though no tidal observations had as yet been taken there, great importance had been for several years attached to it as a tidal station both by Rivers and Nasmyth.* It proved, however, to be most unfortunately situated, for observations had hardly been begun when the bore came up the Sábarmati and swept away the scaffolding and gauge, the observer himself having a narrow escape. After this mishap Mr. DaCosta rejoined Lieutenant Nasmyth at Mahábaleshvar where he passed the hot weather of 1855, moving to Poona (Puna) at the commencement of the rains. The following winter he proceeded again to Cambay to search for a suitable site for a tidal station, but all his endeavours to erect the gauge failed: he therefore stored his appurtenances at Vadgám and proceeded to Cutch on trigonometrical work.

In November, 1855, Lieutenant Nasmyth commenced the final angles of the Cutch

Season 1855-56.

PERSONNEL.

Lieutenant D. J. Nasmyth, Bombay Engineers,
1st Assistant.
Mr. J. DaCosta, Sub-Assistant.
" T. Sanger, "
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" C. McGill, "

Coast Principal Series, and remained employed on them till the end of December. He then took up the work of the northern section of the Kattywar Meridional Series, as he apprehended difficulties later on in the season in observing signals at stations near the Ran. He crossed the Ran into Párker early in January, the distance between the *terra firma* of Vágad and that of Párker being about 40 miles. The party rested for one night at Bela before crossing, and the march was made without difficulty, the road being dry all the way.

The first station visited in Párker was Kálunjhar, situated in a group of granite hills, formerly notorious as the refuge of robbers: the instrument here rested on solid rock, as it did also at both Khársar and Viráwáh. By January 31st, 1856, in spite of unfavorable weather at the desert stations of Jhund, Bhilgaon and Akoria,† the final observation at the six stations north of the Ran had been completed.

On his return to Bela, Nasmyth found the platform had been tampered with, but as the upper station mark seemed undisturbed he set up his instrument and observed the two northern angles. After Iwália, however, had been visited and the quadrilateral Iwália-Bela-

* *Vide* Introduction to the Guzerat Longitudinal Series.

† The Principal angles at Jhund, Bhilgaon, and Akoria which appertain to the Karáchi Longitudinal Series were observed by Captain A. Strange in December, 1861, with Troughton and Simms' 36-inch Theodolite.

Kálunjhar-Viráwáh completed, it became evident that an error had crept into the work; so he revisited Bela, and took observations from the lower station mark, finding differences in both angles between the later and earlier results sufficiently large to prove the necessity of the repetitions. At Pata-i-Sháh a mistake appeared in the approximate work, one of the surrounding stations named Bhújnari, situated to the north-west, not being visible. Ultimately it was found necessary to substitute Dájka for it, a change that entailed the necessity of again visiting Iwália and Bela. In March Nasmyth and many natives of the party were attacked by dysentery, a disease always prevalent on the borders of the Ran, owing to a peculiar property in the water, and an interruption in the work ensued.

From Bela he went to Gángta, which is situated on a small preserve of grass in the midst of the Ran ten miles from the nearest drinking water; and which was formerly a stronghold of marauders by whom the district of Vágad was overrun. The station is at the western angle of the Dájka pentagon, and the angles between Bela and Dájka and Dájka and Kanduka were now observed. This station was, also, afterwards utilized in the principal work of the Cutch Coast Series as one of the stations of the Kakarwa pentagon, and the two angles on either side the Gángta-Kakarwa ray were observed. As the Kattywar Meridional and Cutch Coast Series both consisted of principal triangulation and were of equal value, the employment of Gángta as a principal station in each rendered the figure at their junction one of great complexity. If the figural reduction had been carried out rigorously all the triangles within the periphery Gángta-Bela-Iwália-Pata-i-Sháh-Khánmír-Kesmára-Kákráji Mália-Wándia-Sakpur-Ráhlida-Ran-Gángta would have had to be regarded as belonging to one compound geometrical figure: the fact too that the interior angles of the quadrilateral Gángta-Kanduka-Chitror and Nara had not been observed would if anything rather have increased the complication. The reduction was, however, not carried out rigorously: the Dájka pentagon was first reduced independently of any exterior observations, and then in the following order the Kanduka-Khánmír quadrilateral, the Monába hexagon, and the Nara-Wándia quadrilateral were taken in hand. When therefore it came to the turn of the Kakarwa pentagon, three of its angular points, Gángta, Nara and Sakpur had already been fixed: in addition thus to the seven geometrical conditions that have to be satisfied in the case of every complete simple pentagon, two others entered into this figure; the sum of the two angles at Nara had a fixed value, and the side Sakpur-Nara had to bear a fixed ratio in length to the side Nara-Gángta.

Nasmyth was very anxious to carry the northern section of the Kattywar Meridional Series as far as the parallel of 23° , and to also connect it with its southern section before the close of the field season and thus to complete the circuit of the triangulation formed by the sections of the Karáchi and Guzerat Longitudinal Series that lay between the meridians of 71° and 73° with the northern section of the Series under review and the Abu Meridional Series, and test the accuracy of the triangulation. Towards the end of April the weather was very unfavorable: the dry loam of the Ran was raised by the least breeze, the atmosphere clouded by it and signals obscured. The observations both at Wándia and Monába extended over a

week. Work had eventually to be brought to a close at Kesmára at the beginning of May, and the junction between the northern and southern sections of the Series postponed till the following year. During the summer of 1856 the party recessed at Bhúj.

On August 31st, 1856, the party again took the field and was employed on the Cutch Coast Series till the middle of October. Nasmyth then resumed the final observations of the Kattywar Meridional Series; and as the triangle on the north side of the

Season 1856-57.

PERSONNEL.

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ray Monába-Wándia, which was one of the last completed in the previous season, had exhibited a large error, he observed two of its angles again, on the same parts of the limb as before. The new values, however, came out almost

identical with the former but with smaller weights.

At all the stations in Kattywar the platforms were found destroyed, and the mark-stones carried away. At Wánkáner and Dúngarpur the lower mark-stone had to be dug down to and was found intact, but at Rangpur and Chalarwa great difficulty was experienced in recovering the original positions of the marks. Whilst these platforms were being re-built, Nasmyth returned to Cutch and took up the observations at stations north of the Ran. Throughout November the signals were very bad: different hours during the night were tried but the lamps were at all times unsteady. One triangle exhibited an error of 5", another of 4", and a third of 3"; but as repetitions of observations did not seem to improve the results, Nasmyth decided that he had no alternative but to push on. He afterwards attributed these errors to an earthquake that occurred in November 1856. On December 21st he completed the observations of the Kattywar Meridional Series at Wánkáner, and again took up those of the Cutch Coast.

All the angles of the Kattywar Meridional Series were observed with Troughton and Simms' 18-inch Theodolite No. 2*, and were taken on six pairs of zeros. The method adopted of changing zero was one that had been invented by Lieutenant Rivers and first employed by him on the Abu Meridional Series; by it each change of zero was made to fulfil the following conditions:—(1) In the degrees each zero was 10° in excess of the preceding; (2) At each zero a different 10' graduation in the degree was intersected; (3) Each zero was a different number of minutes from the division to be intersected, being in three cases to the right of that division and in three to the left. The method is fully described in the Introduction to the Guzerat Longitudinal Series.

On the completion of the simultaneous reduction of the South-West Quadrilateral, in which the northern half of the Kattywar Meridional Series was included, it was found that the errors that had actually been dispersed between the side of origin Bhilgaon (LXIV)—

* For a description of this instrument and its performances, see Appendix No. 2 of Volume II of the *Account of the Operations of the Great Trigonometrical Survey of India*.

Akoria (LXI) and the terminus Chalarwa (xviii)-Sápakra (xxi), a distance of 132 miles, were :—

In Latitude of Chalarwa (xviii)	+ 0''·083
,, Longitude of ,,	+ 0·060
,, Azimuth of Chalarwa (xviii)-Sápakra (xxi)	— 3·097
In Side {	Logarithm of feet
{	— 0·000,0114,7
	giving a ratio of about 1·67 inches per mile.

Astronomical observations for azimuth have been taken at two stations of the Kattywar Meridional Series, *viz.*, Dúngarpur and Konkáwáo.

Kattywar Minor Longitudinal Series.

This Series cuts the Kattywar Meridional at right angles in latitude 22°: the figure at the junction is the great compound figure round the stations of Mumaiya and Jitori which appertains to the meridional chain and forms the connecting link between the eastern and western branches of the longitudinal. The eastern branch starts from the principal side Itria-Sakpur and extends to Gogha on the gulf of Cambay, a distance of 53 miles: it consists of two quadrilaterals and one single triangle. The western branch starts from the principal side Trákura-Deo-ki-Galol and extends to Sarsad Máta on the sea coast, a distance of 84 miles: it consists of three quadrilaterals. The angles of the Longitudinal Series were taken, like those of the Meridional Series, with Troughton and Simms' 18-inch Theodolite No. 2, but on only three pairs of zeros instead of six: in consequence of this change from the orthodox method of observing, the Longitudinal Series has had to be regarded as Secondary.

In February, 1853, Mr. Sanger, on return from sick-leave, joined Lieutenants Rivers and Nasmyth at Mumaiya, and was directed to take up the approximate work of the eastern branch of the Kattywar Longitudinal Series. By April 1st, he had selected five stations which brought him to Gogha on the Coast; he then returned to the centre of the peninsula and commenced the approximate work of the western branch, and before the end of the field season he had constructed three quadrilaterals and reached the terminal station of Sarsad Máta.

By May 10th, 1853, Lieutenant Nasmyth having completed at Itria and Sakpur the observations of the final angles on the southern section of the Kattywar Meridional Series, proceeded to Chamárdi to commence the final work of the Longitudinal Series. He was at first so much delayed by bad weather that he decided to take the angles on but three pairs of zeros instead of six, a change that he considered justifiable owing to the shortness of the branch series, but even then his progress was bad. At Pálitána the station had been selected

on a temple, and there was in consequence no isolation for the instrument and the movements of the observer affected the levels. Another spot had to be chosen, but, owing to the lateness of the season and the consequent unfavorableness of the weather, the distant signal of Itria could not be observed. With this exception all the observations on the eastern branch of the Series were completed.

On November 8th, 1853, Lieutenant Nasmyth commenced the final work on the western branch of the Kattywar Longitudinal Series: as this was to be also a short chain he decided to work as before with only three changes of zero. At starting he had much difficulty in procuring bearers for his instrument; there were none to be had in Rájkot; exorbitant wages were demanded by those at Ahmedabad, and he had eventually to send to the Deccan for them. He completed the western branch without meeting with any interruptions, and he then proceeded to Pálitána to observe the one absent ray of the eastern branch, when he found that all the stations near Pálitána had been tampered with and several destroyed. By December 25th, 1853, all the angles of the Kattywar Longitudinal Series from Sarsad Máta to Gogha had been observed.

Kattywar Coast Minor Series.

This Series, which is of great geographical value, starts from Gogha on the Gulf of Cambay in the very east of the peninsula, follows exactly the Coast-line of Kattywar by Diu, Porbandar, Dwárka and Navánagar, and ends at the head of the Gulf of Cutch at its junction with the Ran. It may be compared to a rhombus, one diagonal of which runs north and south, the other east and west, and one side of which—the north-eastern—is missing. At both extremities of its meridional diagonal it is connected with points of the Kattywar Meridional Series, and similarly at both extremities of its longitudinal diagonal with points of the Kattywar Longitudinal Series. Each of its three sections, the south-eastern, the south-western and the north-western, have had their own individual errors dispersed over their respective lengths, and the error accumulated in one has not been carried on into the next.

The Coast Minor Series emanates, at its eastern angle, from the side Gogha—Trimbak of the Kattywar Longitudinal Series, and terminates at its northern corner on the side Mália-Pangasia of the Kattywar Meridional Series. At its southern corner at Diu the two fixed principal stations of the Kattywar Meridional Series, *viz.*, Nántej and Dangarwári, have been utilised also as stations of the Coast Minor Series, and at the western corner the same proceduro has been followed with regard to the three stations Patelka, Sarsad Máta and Sátbagar of the Kattywar Longitudinal Series. The Series for the greater part of its length is a simple chain of single triangles with sides from six to eight miles long; at the western corner however it loses this form for a short space and becomes a network, the change having been made with the object of fixing the island of Ajár and the headlands on the rugged coast of the Dwárka Peninsula.

The Coast Minor Series was begun in December, 1853, by Mr. DaCosta who took up its approximate work at Gogha. By March 27th, 1854, he had selected all the stations on the three sides of the rhombus, built the pillars and cleared the rays. He then began to observe the final angles, which he had been instructed to do with a 12-inch theodolite on one pair of zeros. In April the winds were scorching and the heat overpowering; it was rarely that any thing animate except the surveyors was seen stirring during the day; two of the party died of sunstroke and there were fourteen cases of guinea worm. Mr. DaCosta closed work on June 18th, 1854, having finished the observations of the angles from Dwárka to Diu and from Diu to Gogha. The final angles on the north-western section of the Coast Series, a few of which had to be revised in November, 1859, from Dwárka to the Ran of Cutch, were observed by the same officer during November and December, 1854, and January, 1855, his average triangular error being $15''$.

The triangulation on the Coast of Kattywar to the north-west of the Gulf of Cambay has not been incorporated in the Kattywar Coast Minor Series: the stations of Gogha and Bhávnagar belong to the Kattywar Longitudinal Series, those of Bharbhír and Haibatpur to the Kattywar Minor Meridional Series No. IV, and the triangles thenceforward as far as the head of the gulf to the Sábarmati Minor Series.

The Kattywar Minor Meridional Series.

There are four Minor Meridional Series traversing the peninsula of Kattywar, numerically designated from west to east No. I, No. II, No. III and No. IV. They follow respectively the meridians of 70° , $70\frac{1}{2}^\circ$, $71\frac{1}{2}^\circ$ and 72° , and as the Principal Meridional Series itself runs down the meridian of 71° , they divide the whole of Kattywar into strips half a degree of longitude in breadth. Nos. I and II each start at their southern extremity from a side of the south-western section of the Kattywar Coast Minor Series, and join on to its north-western section each at two sides of the latter: the station Gop Gavar, of the Kattywar Minor Longitudinal Series, has been utilized as a station of No. I Minor Series, and though no stations of the former could be incorporated in No. II Minor Series, yet checks on the work were obtained by signals at Mevása, Osham being intersected from the stations of this series. No. I Minor Series is 60 miles long and contains 12 single triangles and one quadrilateral. No. II Minor Series is 112 miles long and contains 19 single triangles and one quadrilateral.

The Minor Meridional Series No. III starts near Rájula from a side of the south-eastern section of the Kattywar Coast Minor Series and closes on the principal side Nárechána-Charári of the Guzerat Longitudinal Series: two of the stations, Itria and Sakpur of the Kattywar Meridional Series, situated too at the extremities of one ray, were incorporated. It is 125 miles long, and consists of one pentagon, three quadrilaterals and 16 single triangles.

The Minor Meridional Series No. IV starts from the side Bhávnagar-Chamárdi of

the Kattywar Longitudinal Series and closes on the principal side Ingori-Kárigágar of the Guzerat Longitudinal Series. It is 80 miles long, and consists of one compound and 14 single triangles.

The average length of the side in these four minor series is from 10 to 14 miles: all the angles were observed with Troughton and Simms' 18-inch Theodolite No. 2 on two pairs of zeros, the average triangular error being no larger than that on triangulation observed with the full number of zeros.

The approximate work of the Minor Meridional Series No. I was begun in February, 1859, by Mr. DaCosta; the observations of the final angles were made by Lieutenant Nasmyth between April 1st and 28th, 1859. On the completion of this series a check was obtained for the Coast Minor Series executed by Mr. DaCosta five years previously with a 12-inch theodolite: comparisons of the values of common sides shewed an error of 0.60 of an inch per mile generated in the 270 mile circuit by Gop Gavar, Mumaiya, Diu and Bagasra,—an error of 3.04 inches per mile in the 130 mile circuit by Gop Gavar, Bagasra and Sarsad Mátá—of 2.43 inches in the 310 mile circuit Gop Gavar, Mumaiya, Diu and Sarsad Mátá—and of .18 of an inch in the 140 mile circuit Gop Gavar, Gurgat and Navánagar.

Whilst Nasmyth was observing the angles of the Minor Meridional Series No. I, Mr. McGill was following him laying down secondary points, and Mr. DaCosta was engaged on the selection of the stations for the Minor Series No. II.

In September, 1859, Lieutenant C. T. Haig of the Bombay Engineers was appointed a Second Assistant in the Great Trigonometrical Survey, and a few weeks later joined the Bombay Triangulation Party at Rájkot. On arrival he found orders attaching him temporarily to the Okhámandal Field Force with which Captain Nasmyth was also serving, and for the next two months both officers were employed as military engineers at the siege of Dwárka. On the fall of that place in December, 1859, they rejoined the Bombay Survey Party and for the next month were employed in completing some minor triangulation on the south coast of Cutch.

In January, 1860, Captain Nasmyth commenced observing the angles of the Minor Series No. II, followed as before by Mr. McGill on secondary work: he completed it on February 29th and then handed over the party to Lieutenant Haig, and on March 10th he left for Bombay prior to proceeding to England on furlough. Mr. DaCosta had in the meantime selected and built all the stations of the Minor Series III. On taking over charge Lieutenant Haig took up the final work of Minor Series No. III, which he completed on April 29th. The party then retired to Rájkot where they had established their recess quarters.

In November, 1860, Mr. DaCosta was detached by Lieutenant Haig to Bhávnagar with orders to connect the eastern extremity of the Kattywar Longitudinal Series with the southern extremity of the Sábarmati Minor Series by means of a small chain of single triangles. The stations of the Kattywar Minor Meridional Series No. IV had been previously

selected as far north as Haibatpur by Mr. DaCosta, and the pillars both at Haibatpur and Bhabhír had been built. By January 13th, 1861, he had completed the angles of the connecting chain, and had thus carried the final work of the Minor Series No. IV up to the side Haibatpur—Patna.

In April, 1863, an accident happened to the great theodolite on the Mangalore Meridional Series, which put a temporary stop to all Principal Triangulation in the Bombay Presidency: Captain Haig and his assistants were therefore set free the following season to organize the new party, that had been sanctioned and was now to be trained for the purpose of carrying out the topographical survey of Guzerat, Kattywar and Cutch.

Season 1863-64.

PERSONNEL.

Captain C. T. Haig, R.E., 1st Assistant.
Mr. John McGill, Civil 2nd Assistant.
" G. A. Anding, 2nd Class Sub-Assistant.
" J. E. Donohoe, 3rd " "
" A. D. Christie, 3rd " "

The party started from Poona for Kattywar early in November, 1863 and arrived at Gogha on November 14th: Captain Nasmyth who was expected from England in the course of the field season, was to have command of the new topographical party, leaving Captain Haig in independent charge of the trigonometrical work.

The Kattywar Peninsula was now intersected, except on the meridian of 72° , at half degrees of longitude by Minor Meridional Series; it was also traversed by a longitudinal chain running east and west, and the whole was included by a Coast Series. On arrival, therefore, Haig himself took up the Minor Meridional Series No. IV, which was regarded as particularly important as it ran along the boundary between our own territory and that of the Chiefs of Kattywar. Commencing from Mr. DaCosta's side, Haibatpur—Patna, Haig proceeded north, selecting the stations and building the pillars, everywhere meeting with great obstruction from the villagers. Having closed the approximate work on the principal side Kárigágar—Ingrori of the Guzerat Longitudinal Series, he began about the middle of February observing the final angles, working southwards. At the southern extremity of the Series he re-observed Mr. DaCosta's angles, finishing the work on May 2nd, 1864.

A few days after, accompanied by Messrs. Christie and Donohoe and five of the native establishment, he left Bhávnagar in a steamer bound for Surat intending to thence proceed by rail to Poona. Before reaching Surat the party experienced considerable danger from the steamer leaking; in fact so critical was their position that the master of the ship, a Parsee, wanted Captain Haig and Mr. Christie to escape stealthily with him in the boat and leave the others to their fate. Captain Haig refused, and took steps to prevent anybody from loosening the boat, the Parsee Captain giving himself up in tears to despair. To lighten the ship the passengers' kit was then thrown overboard and also some articles of Government property. The steamer ultimately stranded at the mouth of the Tápti and all hands were saved. Mr. Donohoe died of cholera on board the steamer on May 4th.

Secondary Triangulation.

At the upper extremity of the Kattywar Meridional Series north of the Ran one

or two cupolas of temples and a few hill peaks were intersected from principal stations, and the positions of some marks on the borders of the Ran laid down. On crossing the Ran from Viráwáh to Bela, a platform was built on each of the small islands Nara Bet and Karir, and though none of them were visited, yet signals at all were observed from four principal stations.

The eastern end of Cutch when being traversed by the Principal Meridional Series was covered with secondary stations and intersected points: marks in the towns of Fatiagad, Rahpur, Omia, Sántalpur and Shikárpur were accurately laid down: the positions of the small islets in the Ran were determined, and sufficient points were fixed along the actual edge of the Ran so that its border might be definitely delineated. All the principal triangles were broken up into numerous small ones, and it would be difficult throughout the whole area to find a spot that was not within a mile of some known point.

South of the Ran the secondary work on the Principal Meridional Series was very much more scanty, and below the Kattywar Longitudinal Series hardly any exists at all. The palace of Halvad, the fort of Sara and temples in Morvi, Amreli and Chotila were laid down: the church spire of Rájkot and two other points in that city were fixed. For the rest some hundred trees and a few temples and peaks were the only objects, between the parallels of 21° and 23° , whose positions were determined by secondary work from principal stations of the Meridional Series, the island of Diu was fixed by a principal station itself.

From the Longitudinal Series, the positions of Gogha, Bhávnagar, Pálitána, Umrála, Dámnaagar, Jetpur and Miáni were determined. By means of secondary work from the Coast Series the position of every cape, creek and bay was made known and the important seaports of Mángrol, Navibandar and Porbandar, the celebrated town of Dwárka and numerous other villages were fixed. From the four Minor Meridional Series points were intersected in Navánagar, Junágad, Múli, Wadhván (Vadhván) and Chúda, and immense numbers of trees and natural objects, observed.

During the season 1863-64, when Captain Haig was engaged on the Minor Meridional Series No. 4, Messrs. McGill and Anding remained wholly employed on secondary work in the Kattywar peninsula. McGill commenced by breaking up the large triangles of the Bhávnagar-Pálitána, and Pálitána-Itria Quadrilaterals into a network and then covering the space between the meridians of $71^{\circ} 30'$ and 72° with triangulation: having completed this he threw a network over the space between 71° and $71^{\circ} 30'$. In the meantime Anding had done the same to the untriangulated areas between 70° and $70^{\circ} 30'$ and between $70^{\circ} 30'$ and 71° . By means of these networks the whole of the Kattywar peninsula was covered with secondary stations and intersected points, and all the large triangles of the Meridional and Longitudinal Series were broken up.

The heights of the Principal Stations of the Kattywar Meridional Series depend in the first instance on the values of the stations of Jhund, Bhilgaon and Akoria of the Karáchi

Longitudinal Series, which were finally fixed in the reduction of the North-West Quadrilateral; next, on the heights of the stations of Pata-i-Sháh, Khánmír, Monába, Wándia and Mália, of which the values were determined by spirit-levelling operations in 1874-6; thirdly, on the heights of Tarkia and Kakána, also determined by spirit-levelling during 1875-6; and lastly, on a determination of sea-level at Diu made in 1855. The intermediate heights, of which the values were obtained trigonometrically, shewed in the northern portion of the series a cumulative error of $-2\cdot4$ feet and in the middle section an error of $+0\cdot5$ of a foot and in the lowest portion of $-1\cdot6$ feet. These errors were dispersed by simple proportion according to the number of removes from the origin of each section.

A considerable number of secondary stations were connected with in the spirit-levelling referred to above and their values thus finally fixed, and a further determination of sea-level at Miáni Bandar made in 1855, has also been utilized in obtaining the final heights of secondary stations.

S. C. BURRARD.

September, 1889.

KÁTHIÁWÁR MERIDIONAL SERIES.

PRINCIPAL TRIANGULATION. ALPHABETICAL LIST OF STATIONS.

The orthography of the names in columns 1 and 4 is based, as far as practicable, on the pamphlet of names entitled *Bombay Places and Common Official Words* (1879) and on the list of *Spelling of Names in Rajputana* (1877). As some of the names have thus been considerably altered, it has been thought advisable for easy reference and identification to give in columns 2 and 5 the spellings employed in the original angle books. The orthography in columns 1 and 4 is hereafter only employed in this volume.

ORTHOGRAPHY		Number	ORTHOGRAPHY		Number
Adopted	From Original Angle Books		Adopted	From Original Angle Books	
Akoria	Akoria	LXI*	Jákhia	Jákia	XL
Bela	Bela	V	Jhund	Jhund	LXVI*
Bháyásar	Bháyásar	XXVIII	Jithuri	Jitori	XXXIII
Bhilgaon	Bhilgaon	LXIV*	Kákreji	Kákraji	XV
Charádva	Chalarwa	XVIII	Kanduka	Kanduka	IX
Chitalia	Chitália	XXIX	Kánmer	Khánmír	X
Chitrákheda	Chatrikhera	XXIII	Kárunjhar	Kálunjhar	III
Chitrod	Chitror	XI	Kesmári	Kesmára	XIII
Dájka	Dájka	VI	Khakhána	Kakána	XXVI
Dángarvádi	Dangarwári	XLII	Khársar	Khársar	II
Devki Gálol	Deo-ki-Galol	XXXII	Kunkaváv	Konkáváo	XXXIV
Dungarpur	Dúngarpur	XX	Mahídhar	Maidhar	XXVII
Evál	Iwália	IV	Mália	Mália	XVI
Gángta	Gángta	VII	Mánába	Monába	XII
Itria	Itria	XXXV	Manáva	Manáva	XXXVII

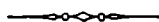
* Of the Karachi Longitudinal Series.

PRINCIPAL TRIANGULATION. ALPHABETICAL LIST OF STATIONS—(Continued).

ORTHOGRAPHY		Number	ORTHOGRAPHY		Number
Adopted	From Original Angle Books		Adopted	From Original Angle Books	
Movaiya	Mumaiya	XXX	Sarkála	Sarkala	XXXVIII
Nándivála	Nandivela	XXXIX	Tarkia	Tarkía	XXV
Nátej	Nántej	XLI	Trákuda	Trákura	XXXI
Pata-i-Sháh	Pata-i-Sháh	VIII	Vándhia	Wándia	XIV
Phagásia	Pangasia	XIX	Vánkáner	Wánkáner	XXIV
Rangpur	Rangpur	XVII	Viráwáh	Viráwáh	I
Sakhpur	Sakpur	XXXVI	Vírpur	Virpur	XXII
Sápakda	Sápakra	XXI			

KÁTHIÁWÁR MERIDIONAL SERIES.

PRINCIPAL TRIANGULATION. NUMERICAL LIST OF STATIONS.



LXI (Of the Karáchi Longitudinal Series).	Akoria.	XIII	Kesmári.
LXIV (Of the Karáchi Longitudinal Series).	Bhilgaon.	XIV	Vándhia.
LXVI (Of the Karáchi Longitudinal Series).	Jhund.	XV	Kákrejji.
I	Viráwáh.	XVI	Mália.
II	Khársar.	XVII	Rangpur.
III	Kárunjhar.	XVIII	Charádva.
IV	Evál.	XIX	Phagásia.
V	Bela.	XX	Dungarpur.
VI	Dájka.	XXI	Sápakda.
VII	Gángta.	XXII	Vírpur.
VIII	Pata-i-Sháh.	XXIII	Chitrákheda.
IX	Kanduka.	XXIV	Vánkáner.
X	Kánmer.	XXV	Tarkia.
XI	Chitrod.	XXVI	Khakhána.
XII	Mánába.	XXVII	Mahídhar.

KÁTHIÁWÁR MERIDIONAL SERIES.

PRINCIPAL TRIANGULATION. NUMERICAL LIST OF STATIONS--(Continued).

XXVIII	Bháyásar.	XXXVI	Sakhpur.
XXIX	Chitalia.	XXXVII	Manáva.
XXX	Movaiya.	XXXVIII	Sarkála.
XXXI	Trákuda.	XXXIX	Nándivála.
XXXII	Devki Gálol.	XL	Jákhia.
XXXIII	Jithuri.	XLI	Nátej.
XXXIV	Kunkaváv.	XLII	Dángarvádi.
XXXV	Itria.		

KÁTHIÁWÁR MERIDIONAL SERIES.

DESCRIPTION OF PRINCIPAL STATIONS.



The stations of this Series, and LXI, LXIV and LXVI of the Karáchi (Kurrachee) Longitudinal Series, with seven exceptions, are all situated on hills or rising ground. These have solid, circular and isolated pillars of masonry 1 to 12 feet in height carrying marks at top and bottom: at stations III and VI, where the rock rises sufficiently above the hill, no pillars were built, and only a mark was engraved on the rock. Around the pillars and level with their surfaces, solid platforms of stones or earth-work were constructed for the observatory tent to rest on. The seven exceptions are the stations XV to XIX, XXI and XXXIV which being situated in the plains, it was found necessary on account of the curvature of the earth to construct towers. These are solid structures of sun-dried bricks or stones set in mud cement, 12 to 36 feet in height, enclosing solid pillars of masonry, which carry marks at top, bottom and intermediately, the upper 5 feet of each being circular and isolated.

The following descriptions have been compiled from those originally supplied by the officers who executed the series and from the records of the Levelling Operations in 1874 to 1876 and 1890-91, supplemented as regards the position of the adjacent villages and places from the Topographical Survey maps of the country traversed. Some information regarding the heights and construction of the stations have been gathered from reports, contingent bills and other records of the series. The information, as to the local sub-divisions in which the several stations are situated, has been derived, where practicable, from the latest annual reports received from the civil authorities to whose charge the stations have been committed.

LXI.—(*Of the Karáchi Longitudinal Series*). Akoria Station, lat. $24^{\circ} 41'$, long. $71^{\circ} 19'$ —observed at in 1851 and 1856—is upon a small mound on the northern border of the Ran of Cutch (Kachh), and derives its name from a village that formerly stood near this site. It is in the lands of the village of Akoria, pargana Sáchor, district Jodhpore (Jodhpur).

The station consists of a platform edged with stakes and filled in with sand, enclosing a solid, circular and isolated pillar of masonry 8 feet in height which has a mark-stone at the level of the foundation, and others at 1, 3, 7 and 8 feet respectively above it: the pillar is isolated by an annular wall of masonry. In the records of 1856, there is no mention of any alteration made in the construction of the station. The large village of Khijriati is distant about 6 miles.

LXIV.—(*Of the Karáchi Longitudinal Series*). Bhilgaon Hill Station, lat. $24^{\circ} 42'$, long. $71^{\circ} 7'$ —observed at in 1851 and 1856—is situated on a sand hill appertaining to the village of Dedrai, in that part of the Thar or Little-desert, which appertains to Bhúj. It is in the lands of the village of Dedrai, thána Viráwáh, táluca Nagar, district Thar and Párkar.

The station consists of a platform enclosing a solid, circular and isolated pillar of masonry 4 feet in height which has a mark-stone at bottom, and others 2, 3 and 4 feet respectively above it. In the records of 1856, there is no mention of any alteration made in the construction of the station. Sammari village, bearing 16° E. of the ray to Jhund Station, is distant about 2 miles.

LXVI.—(*Of the Karáchi Longitudinal Series*). Jhund Hill Station, lat. $24^{\circ} 48'$, long. $71^{\circ} 1'$ —observed at in 1851 and 1856—is situated on a sand hill in that part of the Thar, which appertains to Bhúj. It is in the lands of the village of Jhund, thána Viráwáh, táluca Nagar, district Thar and Párkar.

The station consists of a platform edged with stakes and filled in with sand, enclosing a solid, circular and isolated pillar of masonry 3 feet in height which has a mark-stone at bottom, and others at 2 and 3 feet respectively above it: the pillar is isolated by an annular wall of masonry. In the records of 1856, there is no mention of any alteration made in the construction of the station. The village of Jhund is distant about 2 miles, and the villages of Borli, Chucha and Gundi are nearest to the station.

I. Viráwáh Hill Station, lat. $24^{\circ} 25'$, long. $71^{\circ} 9'$ —observed at in 1856—is situated on the summit of one of a group of high hills, about $2\frac{3}{4}$ miles E. by N. of the village of Churia, and $6\frac{1}{2}$ miles E. of Berána on the road from Pithápúr to Churia. The hills are surrounded on three sides by the Ran which is not fordable to the eastward. It is in the lands of the village of Viráwáh, táluka Nagar, district Thar and Párkar.

The station consists of a platform which is a few inches in height on one side and $1\frac{1}{2}$ feet on the other, enclosing a small, solid, circular and isolated pillar of masonry built upon a granite rock. The directions and distances of the circumjacent villages are:—Viráwáh Wándh N.N.W., mile $\frac{1}{2}$; and Bhodesar W.S.W., miles $4\frac{1}{2}$.

II. Khársar Hill Station, lat. $24^{\circ} 34'$, long. $70^{\circ} 50'$ —observed at in 1856—is situated on the highest point of one of a group of hills composed chiefly of hard granite, the rock being very much broken, that on which the station is, has several deep fissures. It is about 4 miles N.N.E. of the large village of Viráwáh, and a mile E. of the road from Mamchero to Viráwáh. It is in the lands of the village of Khársar, táluka Nagar, district Thar and Párkar.

The station consists of a platform of loose stones enclosing a solid, circular and isolated pillar of masonry about 2 feet in height. The directions and distances of the circumjacent villages are:—Khársar E. by N., mile $\frac{3}{4}$; Papahar E. by S., miles $4\frac{1}{2}$; Pattia N.W. by N., miles $2\frac{1}{2}$; Mithri W.N.W., miles $2\frac{3}{4}$; and Wali S.W. by W., miles $3\frac{1}{2}$.

III. Kárunjhar Hill Station, lat. $24^{\circ} 20'$, long. $70^{\circ} 48'$ —observed at in 1856—is situated on a peak called Godar Takia of the Kárunjhar group of hills composed of granite, about $1\frac{1}{2}$ miles S.S.E., of the village of Nagar Párkar from which there is an ascent to the station, and $1\frac{2}{3}$ miles W. of the village of Ghantiáli on the main road from Bela to Viráwáh. It is in the lands of the village of Nagar, táluka Nagar, district Thar and Párkar.

The station mark is engraved on a solid mass of rock which was so hard that it was found impossible to smooth its surface; hollows were cut for the feet of the theodolite stand: a small quantity of rubble work surrounds the rock as a platform for the observatory tent. The directions and distances of the circumjacent villages are:—Dungri N.E. by N., miles $2\frac{1}{2}$; and Bhodesar N.N.W., miles $4\frac{1}{2}$.

IV. Evál Hill Station, lat. $23^{\circ} 52'$, long. $71^{\circ} 9'$ —observed at in 1856—is situated on the highest part of the hill named after the village so called which lies about $\frac{1}{2}$ a mile to N.E. The Ran is close to the station, distant from 2 to $2\frac{1}{2}$ miles on the W. and N. sides. It is in the lands of the village of Evál, sub-division Sántalpur, Pálanpur Agency.

The station consists of the usual platform enclosing a solid, circular and isolated pillar of masonry about 5 feet in height. The directions and distances of the circumjacent villages are:—Jákhotra S., mile 1; Vahua S. by W., miles $4\frac{1}{2}$; Barála S.S.E., miles $3\frac{1}{2}$; Dhokávada S.E. by E., miles $4\frac{1}{2}$; and Cháruka E. by N., miles $4\frac{1}{2}$.

V. Bela Hill Station, lat. $23^{\circ} 54'$, long. $70^{\circ} 48'$ —observed at in 1856—is situated on a hill locally called Nilva, one of a range running nearly E. and W. and bordering the Ran, about $3\frac{1}{2}$ miles N.W. by W. of the large village of Bela and $5\frac{1}{2}$ miles N.N.E. of that of Játávada. It is in the lands of the village of Bela, pargana Vágad, Cutch State.

The station consists of a platform enclosing a solid, circular and isolated pillar of masonry about 5 feet in height. The directions and distances of the circumjacent villages are:—Gadhada W. by S., miles 4; Bálásur S.W. by W., miles $6\frac{1}{2}$; and Ánanpur or Navágám S. by E., miles 6.

VI. Dájka Hill Station, lat. $23^{\circ} 42'$, long. $70^{\circ} 52'$ —observed at in 1856—is situated on a small isolated hill, about $1\frac{1}{4}$ miles W.S.W. of the large village of Fatehgad, and 1 mile W. of the road between Fatehgad and Hamírpur. It is in the lands of the village of Fatehgad, pargana Vágad, Cutch State.

The station-mark is engraved upon a large stone which on three sides is hewn into the shape of a pillar, on the fourth side, the stone was hewn out as much as its hardness would allow, and the hollow as well as more than 2 feet of the depth on the other three sides was filled with sand. The directions and distances of the circumjacent villages are:—Gedi W.N.W., miles $5\frac{1}{2}$; Sáugad S.W., miles 4; Hamírpur S., miles 6; Khándeek S.E. by S., miles 4; and Mánjuvás E., miles $3\frac{1}{2}$.

VII. Gángta Hill Station, lat. $23^{\circ} 44'$, long. $70^{\circ} 32'$ —observed at in 1856—is situated on the highest part of a hill in the Ran of Cutch. The ruins of a tower and walls are to be seen here, the place having once been the stronghold of freebooters. The road from Rav to Gadhada across the Ran passes by the south-western foot of the hill about $7\frac{1}{4}$ miles N.W. of the village of Rav, and the same distance N. by W. of that of Jesada. It is in the lands of the village of Rav, pargana Vágad, Cutch State.

The station consists of a platform, enclosing a solid, circular and isolated pillar of masonry about 5 feet in height.

VIII. Pata-i-Sháh Hill Station, lat. $23^{\circ} 33'$, long. $70^{\circ} 59'$ —observed at in 1854 and 1856—is situated on a small isolated hill, about $2\frac{1}{4}$ miles W. of the large village of Ádesar, and $4\frac{1}{2}$ miles E.N.E., of that of Bhímásar. The hill, which rises some 150 feet above the level of the surrounding country, has the tomb of a Muhammadan devotee, called Pir Pata-i-Sháh, about 120 links S. of the station. It is in the lands of the village of Ádesar, pargana Vágad, Cutch State.

The station consists of a platform of stones and earth enclosing a solid, circular and isolated pillar of masonry about 5 feet in height which has a mark-stone at top. In the records of 1856, there is no mention of any alteration made in the construction of the station. When again visited in 1875-76 by the Levelling Party, the upper mark-stone was found intact. The directions and distances of the circumjacent villages are:—Lákhágad N.W. by N., miles $1\frac{1}{2}$; Bhaugera S., miles $1\frac{1}{2}$; Mákhel S. by E., miles 4; and Lákhápúr or Lakhpat E.N.E., miles $4\frac{1}{2}$.

IX. Kanduka Hill Station, lat. $23^{\circ} 34'$, long. $70^{\circ} 44'$ —observed at in 1856—is situated on a hill, about $2\frac{3}{4}$ miles E. by S. of the large village of Rápúr, and $\frac{1}{2}$ a mile W. of the Kárásavádi river. It is in the lands of the village of Rápúr, pargana Vágad, Cutch State.

The station consists of a platform of rubble enclosing a solid pillar of masonry about 12 feet in height of which the upper 5 feet is circular and isolated. The directions and distances of the circumjacent villages are:—Káruda N.E., miles $4\frac{1}{2}$; Umáiya E.N.E., miles $4\frac{1}{2}$; Prágpúr E. by S., miles $3\frac{1}{2}$; Tindalva Nána S.E. by S., miles 3; and Dábunda S. by W., miles 2.

X. Kánmer Hill Station, lat. $23^{\circ} 24'$, long. $70^{\circ} 55'$ —observed at in 1854 and 1856—is situated on the highest part of the hill locally called Gur, which rises some 200 feet above the plain in which the village of Kánmer is situated, and is one of a range of low hills running N.W. and S.E. and terminating southwards near the Little Ran. It is in the lands of the village of Kánmer, pargana Vágad, Cutch State.

The station consists of a platform of loose stones enclosing a solid, circular and isolated pillar of masonry 5 feet in height, which has a mark-stone at top. In the records of 1856, there is no mention of any alteration made in the construction of the station. When again visited in 1875-76 by the Levelling Party, the upper mark-stone was found intact. The directions and distances of the circumjacent villages are:—Kánmer N.W. by N., miles $1\frac{1}{2}$; Gágodar W. by N., miles 4; Ghánithal N.W. by N., miles $4\frac{1}{2}$; and Palásva N.E. by N., miles $5\frac{1}{2}$.

XI. Chitrod Hill Station, lat. $23^{\circ} 24'$, long. $70^{\circ} 44'$ —observed at in 1854 and 1856—is situated on the highest point of the hill called Dhia, about $1\frac{1}{4}$ miles S.S.E. of the large village of Chitrod on the road from Lákadiya to Gágodar, and $7\frac{1}{4}$ miles E.N.E. of the former place. It is in the lands of the village of Chitrod, pargana Vágad, Cutch State.

The station consisted of a platform enclosing a solid, circular and isolated pillar of masonry, but as it was not sufficiently large for the stand of the instrument, it had to be enlarged, in effecting which the height of the pillar was increased a little. This addition of about 6 to 7 inches was made after the 30th March 1854. It was visited in 1856, but no statement of any alteration in the construction of the station is forthcoming. The directions and distances of the circumjacent villages are:—Mevása E.N.E., miles $2\frac{1}{2}$; Khápúr S.S.E., mile 1; Kumbhúria S.E. by S., miles 4; Khodásar S.S.W., miles $3\frac{1}{2}$; and Shivilakha W., miles 5.

XII. Mánába Hill Station, lat. $23^{\circ} 17'$, long. $70^{\circ} 51'$ —observed at in 1856—is situated on the highest point of the Dhar Hill, a conspicuous and elevated pasture ground on the verge of the Ran called Bíd Mandad. It is about 4 miles E.S.E. of the village of Mánába. The road from the village of Bhimdevka to that of Venásar, across the Ran, passes close S. of the station. There are a few huts close to the station which are occupied during the cold season by people who graze cattle along the margin of the Ran. It is in the lands of the village of Mánába, pargana Vágad, Cutch State.

The station consists of a mud platform enclosing a solid, circular and isolated pillar of masonry about 5 feet in height. When visited by the Levelling Party in 1875-76, the upper mark-stone had been destroyed, but the upper surface of the pillar could be traced, and one of the three flat stones (generally placed for the feet of the theodolite stand) was found intact. The directions and distances of the circumjacent villages are:—Búbsar W., miles $2\frac{1}{2}$; Bhimdevka N.W., miles $4\frac{1}{2}$; and Thoriáli N.W. by N., miles 6.

XIII. Kesmári Hill Station, lat. $23^{\circ} 17'$, long. $71^{\circ} 4'$ —observed at in 1856—is situated on the highest point of a hill in the island called Kesmári Bet in the Ran between Palásva in Cutch and Ghántila in Káthiúwár. The island is used as a Bíd or pasture land. It is in pargana Vágad, Cutch State.

The station consists of a platform enclosing a solid, circular and isolated pillar of masonry about 5 feet in height. The directions and distances of the circumjacent places are:—Mota Bháugarva Bet E., miles 5; Vára Dúngar Bet N.E., mile 1; and Mardakh Bet (centre of eastern island) N.N.E., miles $8\frac{1}{2}$.

XIV. Vándhia Station, lat. $23^{\circ} 15'$, long. $70^{\circ} 39'$ —observed at in 1856—is situated in the centre of the middle tower or bastion at the re-entering angle on the western face of the town wall, about 5 miles N.N.E. of the dāk station on the postal route from Janghi to Vaványa in Káthiáwár. It is in the lands of the village of Vándhia, pargana Vágad, Cutch State.

The station consists of a mud platform built on the centre of the solid bastion, enclosing a circular, isolated pillar of masonry about 5 feet in height, having a mark-stone in its upper surface. When visited by the Levelling Party in 1874-75, the station was found in good preservation. The directions and distances of the circumjacent villages are:—Janghi S.W. by W., miles $3\frac{1}{2}$; Laliána W.N.W., miles $4\frac{1}{2}$; Katária N. by E., miles $3\frac{1}{2}$; Nárausari N.E. by E., miles $3\frac{1}{2}$; and Shukárpur E.N.E., miles $3\frac{1}{2}$.

XV. Kákreji Tower Station, lat. $23^{\circ} 5'$, long. $70^{\circ} 58'$ —observed at in 1854 and 1856—stands on a mound immediately E. of a tank close S. of the village of this name, and about $5\frac{1}{2}$ miles S. of Venásar on the southern margin of the Little Ran. The station tower is built having its northern face abutting against a temple dedicated to Siva. It is in the lands of the village of Kákreji, táluka Mália, division Hálár, Káthiáwár Agency.

The station consists of a solid tower of sun-dried bricks and mud cement, 36 feet in height, enclosing a solid, circular and isolated pillar of masonry, the upper 5 feet being isolated. Four outer marks were made, and the intersection of the lines joining them indicated the position of the upper mark. When visited in 1856, the upper mark was found displaced 2.44 inches to S.S.E. of the point indicated by the intersection of lines joining the outer marks, the observations were then taken not from the mark but from the point thus indicated. The directions and distances of the circumjacent villages are:—Vejalpur E., miles $2\frac{1}{2}$; Khambaria N.E. by N., miles $3\frac{1}{2}$; Sultánpur W., miles $3\frac{1}{2}$; and Aniali S. by W., miles $3\frac{1}{2}$.

XVI. Mália Tower Station, lat. $23^{\circ} 5'$, long. $70^{\circ} 47'$ —observed at in 1854 and 1856—stands on the embankment of a tank about a mile W.S.W. of the large village of Mália, and $1\frac{1}{2}$ miles N.W. by W. of Captain Mackenzie's tomb near the western bank of the Machhu river. It is in the lands of the village of Mália, táluka Mália, division Hálár, Káthiáwár Agency.

The station consists of a solid tower, 18 feet in height, enclosing a pillar of stone and mortar, the upper 5 feet of which is circular and isolated. Four outer marks were made, and the intersection of the lines joining them indicated the position of the upper mark. When visited in 1856, no statement of any alteration in the construction of the station is forthcoming, but the outer marks having been destroyed, the position of the upper mark could not be verified. When again visited in 1874-75 in the course of the Levelling Operations, the upper mark-stone was found tolerably perfect, but the circle and dot had disappeared. The directions and distances of the circumjacent villages are:—Náni Barál S.W. by W., miles $3\frac{1}{2}$; Moti Barál S. W. by S., miles 4; Virvadar E.S.E., miles $2\frac{1}{2}$; and Kajarda N.E. by E., miles $4\frac{1}{2}$.

XVII. Rangpur Tower Station, lat. $22^{\circ} 55'$, long. $70^{\circ} 56'$ —observed at in 1853, 1854 and 1856—stands on the mound of a tank about $\frac{1}{2}$ a mile S. of the village of Rangpur, $7\frac{3}{4}$ miles N.E. by N. of the town of Morvi on the left bank of the Machhu river, and $1\frac{1}{2}$ miles N.E. by N. of Bela village on the left bank of a branch of the Godadhroi river. It is in the lands of the village of Rangpur, táluka Morvi, division Hálár, Káthiáwár Agency.

The station consists of a solid tower 16 feet in height. There are four outer marks on stones deeply embedded in the ground, and the intersection of lines connecting them diagonally indicated the position of the station-mark. When again visited in 1856, the upper mark was found displaced by 1.57 inches to N.E. The directions and distances of the circumjacent villages are:—Haripur and Kerála N.W., miles 3; Sanála S.E. by S., miles $2\frac{1}{2}$; Jivápur N.N.E., miles 4; and Sháhpur N. by W., miles $4\frac{1}{2}$.

XVIII. Charádva Tower Station, lat. $22^{\circ} 57'$, long. $71^{\circ} 6'$ —observed at in 1852, 1854 and 1856—stands on the bank of a small dry tank near the junction of roads from the villages of Charádva, Kadiána and Susváv. It is in the lands of the village of Kadiána, táluka Dhrángadra, Jhálávád State, Káthiáwár Agency.

The station consists of a tower of stones set in mud cement, 11 feet square and 16 feet in height, enclosing a solid pillar of stone masonry. Four small pillars are built around the tower with marks thereon, and the intersection of lines joining them indicates the position of the upper mark to which the observations refer; the mark at the ground level is 0.65 of an inch to E. of the upper one. When visited in 1856, the upper mark-stone was found displaced by 0.95 of an inch to N.E., but no statement of any alteration in the construction of the station is forthcoming. The directions and distances of the circumjacent villages are:—Charádva S.W., miles $2\frac{1}{2}$; Kadiána S.E. by S., miles $2\frac{1}{2}$; and Susváv (on the left bank of the Bámbhau river) N.E. by N., miles 3.

XIX. Phagásia Tower Station, lat. $22^{\circ} 57'$, long. $70^{\circ} 46'$ —observed at in 1854 and 1856—stands on the embankment at the northern side of a tank called Bora, immediately S. of the road from Náráyanka village to that of Phagásia and about $\frac{3}{4}$ of a mile E.S.E. of the latter and $7\frac{1}{4}$ miles E. by S. of the village of Daisara Mota on the main road from Morvi to Vavánia. It is in the lands of the village of Phagásia, táluka Morvi, division Hálár, Káthiáwár Agency.

The station consists of a solid tower of stone and mud cement, 20 feet in height, enclosing a pillar of stone and mortar, the upper 5 feet of which is isolated. In the records of 1856, there is no mention of any alteration made in the construction of the station. The directions and distances of the circumjacent villages are:—Derála (on the left bank of the Machhu river) N.E., miles $2\frac{1}{2}$; Náráyanka E., miles 2; Khevália S., miles $2\frac{1}{2}$; and Sarvad N.W., miles 3.

XX. Dungarpur Hill Station, lat. $22^{\circ} 48'$, long. $71^{\circ} 2'$ —observed at in 1852 and 1856—is situated on one of the knolls on and towards the eastern extremity of a table-land, about a mile W.S.W. of the village of Dungarpur, and $4\frac{3}{4}$ miles in the same direction of the large village of Máthak. It is in the lands of the village of Dungarpur, táluka Dhrángadra, Jhálávád State, Káthiáwár Agency.

The station consists of a platform of loose stones enclosing a circular and isolated pillar of stone masonry which contains a mark 5 feet above the ground level and another in its upper surface. When visited in 1856, the upper mark had been destroyed and a new one was fixed by reference to the lower mark above mentioned. The directions and distances of the circumjacent villages are:—Gidach S.W. by W., miles 2; Ol S.E. by E., miles $2\frac{3}{4}$; Bhimguda S.E. by S., miles 4; and Rátábhe N., miles 3.

XXI. Sápakda Tower Station, lat. $22^{\circ} 52'$, long. $71^{\circ} 17'$ —observed at in 1853—stands on rising ground, about $1\frac{1}{2}$ miles S. by E. of the village so called, 3 miles E. by N. of Digadia close to the right bank of the Bámblhan river and $5\frac{1}{2}$ miles N.N.E. of the large village of Sara. It is in the lands of the village of Sápakda, táluka Dhrángadra, Jhálávád State, Káthiáwár Agency.

The station consists of a tower of loose stones with a broad base, 26 feet in height, enclosing a solid, circular and isolated pillar of stone masonry. The directions and distances of the circumjacent villages are:—Bhagámda N.W., miles $3\frac{1}{2}$; Chitrodi S. by W., miles $2\frac{1}{2}$; Kodh E. by N., miles $4\frac{1}{2}$; and Ratevália E.S.E., miles $2\frac{1}{2}$.

XXII. Vírpur Station, lat. $22^{\circ} 45'$, long. $70^{\circ} 51'$ —observed at in 1853, 1854 and 1856—is situated on rising ground, about a mile E. of the metalled road from Tankára to Morvi, $4\frac{1}{2}$ miles S.S.W. of the latter town, and $1\frac{1}{2}$ miles N.E. of the village of Vírpur. It is in the lands of the village of Vírpur, táluka Morvi, division Hálár, Káthiáwár Agency.

The station consists of a platform of loose stones, about 5 feet in height, enclosing a solid, circular and isolated pillar of stone and mortar. In the records of 1854 and 1856, there is no mention of any alteration made in the construction of the station. The directions and distances of the circumjacent villages are:—Sanála (on the metalled road) N. by W., miles $2\frac{1}{2}$; Rájpur W.N.W., miles $2\frac{1}{2}$; Hamirpur or Navágám E. by S., miles 3; and Jodhpur (on the right bank of the Machhu river) E. by N., miles $3\frac{1}{2}$.

XXIII. Chitrákheda Hill Station, lat. $22^{\circ} 40'$, long. $71^{\circ} 11'$ —observed at in 1853—is situated on the northern extremity of a small rocky hill, about $1\frac{1}{2}$ miles S.S.E. of the village so called, and $2\frac{3}{4}$ miles E. of that of Lunsar. It is in the lands of the village of Chitrákheda, táluka Vánkáner, Jhálávád State, Káthiáwár Agency.

The station consists of a platform of loose stones enclosing a solid pillar of stone masonry about 8 feet in height of which the upper portion is circular, and isolated: the lower mark is engraved on the rock *in situ*. The directions and distances of the circumjacent villages are:—Undvi N.E. by N., miles $2\frac{1}{2}$; Vijalia S.E., miles $1\frac{1}{2}$; Maudásar S.S.W., miles $1\frac{1}{2}$; and Sarsána S., miles $3\frac{1}{2}$.

XXIV. Vánkáner Hill Station, lat. $22^{\circ} 36'$, long. $70^{\circ} 58'$ —observed at in 1853 and 1856—is situated on a hill, about $\frac{3}{4}$ of a mile S.W. of the town of Vánkáner on the Machhu river. A temple, overhung by a tree, is 300 yards to E. of the station. It is in the lands of the town of Vánkáner, táluka Vánkáner, Jhálávád State, Káthiáwár Agency.

The station consists of a platform of loose stones enclosing a solid, circular and isolated pillar of stone masonry about 5 feet in height, which has a mark-stone at top and another at the surface of the ground. When visited in 1856, the upper mark-stone had been destroyed and a new one was placed by reference to the ground level mark. The directions and distances of the circumjacent villages are:—Devli or Rátidevli N.N.W., miles 2; Rájávadla S.E. by S., miles 2; Páuch Dvarka W.S.W., miles $3\frac{1}{2}$; and Titva W., miles 4.

XXV. Tarkia Hill Station, lat. $22^{\circ} 29'$, long. $71^{\circ} 12'$ —observed at in 1853—is situated on the top of the highest part of a small range of hills, about $1\frac{1}{2}$ miles S.E. by E. of the village of this name, and $4\frac{1}{2}$ miles N.N.W. of the Dāk Bungalow of Chotila town on the high road from Rájkot to Ahmedabad. It is in the lands of the village of Tarkia, táluka Vánkáner, Jhálávád State, Káthiáwár Agency.

The station consists of the usual platform enclosing a solid, circular and isolated pillar of masonry about 5 feet in height. When visited by the Levelling Party in 1875-76, the circular pillar was found surmounted by a rectangular protecting pillar 3 feet in height. The directions and distances of the circumjacent villages are:—Rámparu E. by N., miles $1\frac{1}{2}$; Pájváli S.E. by S., miles 2; Jánivadla S.W. by S., miles 3; Pándal N.W., miles $3\frac{1}{2}$; and Rupávati E.S.E., miles 2.

XXVI. Khakhána Hill Station, lat. $22^{\circ} 25'$, long. $70^{\circ} 59'$ —observed at in 1853—is situated on the rocky table-land, about $\frac{3}{4}$ of a mile S.S.W. of the village of this name, and $4\frac{1}{2}$ miles N. of the large village or town of Kuvárva on the metalled road from Rájkot to Ahmedabad. It is in the lands of the village of Súlia, táluka Rájkot, division Hálár, Káthiáwár Agency.

The station consists of a platform of rubble of the usual dimensions, enclosing a solid, circular and isolated pillar of masonry. When visited by the Levelling Party in 1875-76, the circular pillar was found surmounted by a rectangular protecting pillar 3 feet in height. The directions and distances of the circumjacent villages are:—Súlia N.W., mile $\frac{3}{4}$; Jhiána S. by W., miles $1\frac{1}{2}$; Sáthra (on the Machhu river) E.S.E., miles $2\frac{1}{2}$; and Sanosara W., miles $3\frac{1}{2}$.

XXVII. Mahídhar Hill Station, lat. $22^{\circ} 17'$, long. $71^{\circ} 14'$ —observed at in 1853—is situated on a small conical hill on the eastern edge of the high table-land which divides the drainage of the whole peninsula: the eastern face of the plateau is well defined for a considerable distance to N. and S. of the station. The station is about $1\frac{3}{4}$ miles N.N.W. of Chohári on the metalled road from Ánandpur to Chotila. It is in the lands of the village of Bhojpura, táluka Ánandpur, Jhálávád State, Káthiáwár Agency.

The station consists of the usual platform enclosing a solid, circular and isolated pillar of masonry about 5 feet in height. The directions and distances of the circumjacent villages are:—Sanosra E.N.E., miles $2\frac{1}{2}$; Kherána N., miles 2; Bhojpura W. by S., miles $2\frac{1}{2}$; and Rámpura S.E. by E., miles $2\frac{1}{2}$.

XXVIII. Bháyásar Hill Station, lat. $22^{\circ} 10'$, long. $70^{\circ} 56'$ —observed at in 1853—is situated on a small, conical, rocky hill which rises immediately above the old site of the village of Bháyásar, and $6\frac{1}{2}$ miles E. by S. of Páldi village on the metalled road from Gondal to Rájkot. It is in the lands of the village of Bháyásar, táluka Sardhar, division Hálár, Káthiáwár Agency.

The station consists of a platform enclosing a solid, circular and isolated pillar of masonry about 5 feet in height. The directions and distances of the circumjacent villages are:—Kátrota E., mile 1; Piplána W.S.W., miles $2\frac{1}{2}$; Bháyásar S.S.W., mile $\frac{1}{2}$; and Pádásan N.E., miles $2\frac{1}{2}$.

XXIX. Chitalia Hill Station, lat. $22^{\circ} 3'$, long. $71^{\circ} 12'$ —observed at in 1853—is situated on a small isolated hill, about $2\frac{1}{2}$ miles N.N.E. of Átkot town on the metalled road from Rájkot to Gogha, and 3 miles W. of the large village of Jasdan on the right bank of the Bhádar river. A temple was in course of construction close to the S.E. corner of the platform. It is in the lands of the village of Chitalia, táluka Jasdan, division Gohelvád, Káthiáwár Agency.

The station consists of a stone platform enclosing a solid, circular and isolated pillar of stone masonry about 5 feet in height. When visited by the Levelling Party in 1890-91, the station was found in good order, the upper mark being covered over by a rectangular protecting pillar. The directions and distances of the circumjacent villages are:—Chitalia W., mile $\frac{1}{2}$; Lákhhávád N.N.W., miles $1\frac{1}{2}$; Samadiála (on the metalled road) W. by S., miles $3\frac{1}{2}$; and Koti N., miles $2\frac{1}{2}$.

XXX. Movaiya Hill Station, lat. $21^{\circ} 54'$, long. $70^{\circ} 54'$ —observed at in 1853—is situated on low hilly ground, about $1\frac{1}{2}$ miles S. by E. of the village so named, and $5\frac{1}{2}$ miles S.E. by S. of the town of Gondal on the metalled road from Junágad to Rájkot. It is in the lands of the village of Movaiya, táluka Gondal, division Hálár, Káthiáwár Agency.

The station consists of the usual platform enclosing a solid, circular and isolated pillar of masonry about 4 feet in height. The directions and distances of the circumjacent villages are:—Bandhia N.E. by E., miles $4\frac{1}{2}$; Kudla S.S.E., miles $3\frac{1}{2}$; Khokhri S.S.W., miles $4\frac{1}{2}$; Devchari S.W. by W., miles 4; and Kantolia W.N.W., miles $3\frac{1}{2}$.

XXXI. Trákuda Hill Station, lat. $21^{\circ} 58'$, long. $70^{\circ} 39'$ —observed at in 1853—is situated on a hill midway between the villages of Trákuda and Hadmaria lying $2\frac{1}{2}$ miles respectively to E.S.E. and W.N.W., and about $9\frac{1}{2}$ miles N.W. by N. of Virpur on the metalled road from Junágad to Rájkot. It is in the lands of the village of Trákuda, táluka Gondal, division Hálár, Káthiáwár Agency.

The station consists of a platform enclosing a solid, circular and isolated pillar of masonry about 4 feet in height. The directions and distances of the circumjacent villages are:—Umráli S. by W., miles $2\frac{1}{2}$; Mespur W., miles 4; and Garnára N.E. by E., miles $3\frac{1}{2}$.

XXXII. Devki Gálol Hill Station, lat. $21^{\circ} 38'$, long. $70^{\circ} 44'$ —observed at in 1853—is situated on one of the knolls of a ridge running nearly E.S.E. and W.N.W., about $1\frac{1}{2}$ miles W.N.W. of the village of this name on the metalled road from Jetpur to Mánekváda, and 4 miles N.N.E. of the large village of Ránpur. It is in the lands of the village of Devki Gálol, táluka Jetpur, division Sorath, Káthiáwár Agency.

The station consists of a platform enclosing a solid, circular and isolated pillar of masonry 4 feet in height. The directions and distances of the circumjacent villages are:—Khambháliya S., miles $3\frac{1}{2}$; Mándva S.W., miles $2\frac{1}{2}$; Bámangám W., miles $2\frac{1}{2}$; Pipria (on the metalled road) N. by W., miles $1\frac{1}{2}$; and Reshamri Gálol N.N.E., miles 2.

XXXIII. Jithuri Hill Station, lat. $21^{\circ} 41'$, long. $71^{\circ} 9'$ —observed at in 1853—is situated on the eastern extremity and on the highest point of a ridge running E. and W., about $\frac{1}{2}$ a mile N. of the Bhávnagar-Gondal Railway Line, $2\frac{1}{2}$ miles N.E. of Lunidhar Railway Station and $6\frac{1}{2}$ miles W. by S. of that of Chital. It is in the lands of the village of Mota Mahika, táluka Hadmatia, division Hálár, Káthiáwár Agency.

The station consists of the usual platform enclosing a solid, circular and isolated pillar of masonry 5 feet in height. The directions and distances of the circumjacent villages are:—Jithuri S.S.E., mile 1; Pipria N.E. by N., miles 2; Sarangpur N.W., miles 2; Máyápádar W., miles $2\frac{1}{2}$; and Lúni S. by W., miles $2\frac{1}{2}$.

XXXIV. Kunkaváv Tower Station, lat. $21^{\circ} 39'$, long. $70^{\circ} 59'$ —observed at in 1853—is situated on a table-land, about $2\frac{1}{2}$ miles W. of the Railway Station of the same name on the Bhávnagar-Gondal Railway Branch Line, and $3\frac{1}{2}$ miles W.N.W. of the village of Kunkaváv Moti. The station is about $\frac{1}{4}$ of a mile N. of the Railway Line. It is in the lands of the village of Kunkaváv, táluka Bilkha, division Sorath, Káthiáwár Agency.

The station consists of a tower enclosing a solid pillar of masonry 30 feet in height of which the upper 5 feet is circular and isolated: outer marks have been made by which the position of the upper mark can be determined in case it is lost. The directions and distances of the circumjacent villages are:—Anida N. by W., miles 2; Arjansakh W. by S., miles $2\frac{1}{2}$; Nájapur S., miles $2\frac{1}{2}$; and Tori S.W. by W., miles $4\frac{1}{2}$.

XXXV. Itria Hill Station, lat. $21^{\circ} 57'$, long. $71^{\circ} 27'$ —observed at in 1853—is situated on the highest part of a prominent hill, about 2 miles S. by W. of the village of the same name on the right bank of the Ghela river, and 5 miles N.E. of the large village of Kariána on the right bank of the Kálubhar river. It is in the lands of the village of Itria, táluka Itria Gadhála, division Gohelvád, Káthiáwár Agency.

The station consists of a platform enclosing a solid, circular and isolated pillar of masonry 1 foot in height. The directions and distances of the circumjacent villages are:—Khambhála W.N.W., miles $3\frac{1}{2}$; Isvaria S.W., miles $3\frac{1}{2}$; Shirvána S., miles 3; and Gadhála N. by E., miles 3.

XXXVI. Sakhpur Hill Station, lat. $21^{\circ} 33'$, long. $71^{\circ} 33'$ —observed at in 1853—is situated on the centre of the highest of a number of hills extending in a N.N.E. and S.S.W. direction, about $\frac{3}{4}$ of a mile S.W. of the village so called, and 4 miles W.N.W., of the large village of Gáriádhár. It is in the lands of the village of Sakhpur, táluka Bhávnagar, division Gohelvád, Káthiáwár Agency.

The station consists of a platform, 1 foot in height, built on a solid rock. The directions and distances of the circumjacent villages are:—Kalyánpur W. by N., miles $2\frac{1}{2}$; Rájkot N.E. by E., miles 2; Vauri Náni E. by S., miles $1\frac{1}{2}$; and Chharordia Mota S. by W., miles $2\frac{1}{2}$.

XXXVII. Manáva Hill Station, lat. $21^{\circ} 22'$, long. $71^{\circ} 8'$ —observed at in 1853—is situated on hilly ground, about a mile S. of the village of this name, 5 miles E.N.E. of Dhári village on the right bank of the Shetrunji river, and $4\frac{1}{2}$ miles S. of Dhása village. It is in the lands of the village of Manáva, táluka Gondal, division Hálár, Káthiáwár Agency.

The station consists of a stone platform enclosing a solid, circular and isolated pillar of masonry 5 feet in height. The directions and distances of the circumjacent villages are:—Jhar E. by S., miles $1\frac{1}{2}$; Chhatardia S. by E., miles 2; Morjhar N.E. by E., miles $1\frac{1}{2}$; Ámbaldi N.W. by W., miles 3; and Chálála N.E. by E., miles $5\frac{1}{2}$.

XXXVIII. Sarkála Hill Station, lat. $21^{\circ} 12'$, long. $70^{\circ} 53'$ —observed at in 1853—is situated 50 yards S. of the highest part of the lofty and conspicuous point of the hill known as Sarkála lying on the boundary of the wild country called the Gir, about $2\frac{1}{2}$ miles to S.W. by S. of the only village of Chachai, and $1\frac{1}{2}$ miles E. of the Police station of Lilapáni. The ruins of a wall and tower, indicating the site of the fort of Chachai, are about 2 miles to E.N.E. The surrounding country is a waste and the ascent to the station difficult. It is in the lands of the village of Salva, táluka Úna, division Sorath, Káthiáwár Agency.

The station consists of the usual platform enclosing a solid, circular and isolated pillar of masonry 5 feet in height. The directions and distances of the circumjacent hamlets are:—Pania N.E. by E., miles $3\frac{1}{2}$; Ámbliála Nes N.W. by W., miles $3\frac{1}{2}$; and Chapar Nes W.S.W., miles $2\frac{1}{2}$.

XXXIX. Nándivála Hill Station, lat. $21^{\circ} 2'$, long. $71^{\circ} 9'$ —observed at in 1853—is situated on the western extremity and on the highest point of one of the largest, isolated hills in the Gir, about $2\frac{3}{4}$ miles N.E. of Vadli village, and $3\frac{1}{4}$ miles E.N.E. of Chikhhal Koba village on the left bank of the Rával river. It is in the lands of the village of Nándivála, táluka Úna, division Sorath, Káthiáwár Agency.

The station consists of the usual platform enclosing a solid, circular and isolated pillar of masonry 5 feet in height. The directions and distances of the circumjacent villages are :—Barvála Nes S.S.W., mile 1; Kantála E.S.E., miles 3; and Nitli S.S.W., miles $2\frac{3}{4}$.

XL. Jákha Hill Station, lat. $20^{\circ} 58'$, long. $70^{\circ} 56'$ —observed at in 1853—is situated on rising ground, about 200 yards N.W. of a rocky knoll on the same ridge on which there is some object of worship indicated by flags, and $3\frac{3}{4}$ miles W. of Kodiya on the Machundri river. It is in the lands of the village of Jákha, táluka Úna, division Sorath, Káthiáwár Agency.

The station consists of a stone platform enclosing a solid, circular and isolated pillar of masonry about 5 feet in height, which carries a mark at top. The directions and distances of the circumjacent villages are :—Gadhra S.E. by S., miles $3\frac{1}{2}$; Bábria W. by N., miles $1\frac{1}{2}$; Jákha E. by N., mile $\frac{3}{4}$; and Harmaria S.W., miles $4\frac{1}{2}$.

XLI. Nátej Station, lat. $20^{\circ} 51'$, long. $71^{\circ} 8'$ —observed at in 1853—is situated on rising ground, about $\frac{1}{2}$ a mile E.S.E. of the village so called, $3\frac{1}{2}$ miles N.E. by N. of the town of Úna on the right bank of the Machundri river, and 300 yards S. of the road from Nátej to Sámter on the left bank of the Rával stream. It is in the lands of the village of Nátej, táluka Úna, division Sorath, Káthiáwár Agency.

The station consists of a platform enclosing a solid, circular and isolated pillar of masonry 8 feet in height, which contains two mark-stones. The directions and distances of the circumjacent villages are :—Sámter E. by N., miles $1\frac{1}{4}$; Kánakbarda E. by S., miles $1\frac{1}{4}$; Garál S.E., miles $2\frac{1}{4}$; Amodra S., miles $1\frac{3}{4}$; Kasári W., miles $2\frac{1}{2}$; Ájpur W.N.W., mile $\frac{3}{4}$; and Vávarda N.W., miles $1\frac{3}{4}$.

XLII. Dángarvádi Hill Station, lat. $20^{\circ} 43'$, long. $70^{\circ} 59'$ —observed at in 1853—is situated on a rocky hill about the centre of the island of Diu (Div) which belongs to the Portuguese, about $\frac{1}{3}$ of a mile S. of Dángarvádi village, and 3 miles W. of the town of Diu.

The station consists of the usual platform enclosing a solid, circular and isolated pillar of masonry which contains three marks, one at the ground level, another at top and the third intermediately. The directions and distances of the circumjacent places are :—St. Remedio's Church and the Pársi Cemetery E.S.E., miles 2; Bhocharvádi N.W. by W., miles $1\frac{1}{2}$; Nágva S.W. by W., miles 2; Dagási W. by N., miles $1\frac{3}{4}$; and Jolu W. by N., mile 1.

May, 1892.

S. C. BURRARD,
In charge Computing Office.

KÁTHIÁWÁR MERIDIONAL SERIES.

PRINCIPAL TRIANGULATION. TRIANGLES.

No. of Triangle	Station	Spherical Excess	Corrected Plane Angle	Distance		
				Log. feet	Feet	Miles
1	Akoria, LXI*	0° 52	64 34 53·38	5° 0061437	101424·7	19° 209
	Bhilgaon, LXIV*	52	79 45 19·78	5° 0433820	110505·0	20° 929
	Viráwáh, I	51	35 39 46·84	4° 8160425	65470·0	12° 004
2	Bhilgaon, LXIV*	40	74 19 48·47	5° 0144223	103376·6	19° 579
	Jhund, LXVI*	40	77 57 51·93	5° 0212179	105006·9	19° 888
	Khársar, II	39	27 42 19·60	4° 6982550	49917·7	9° 454
3	Bhilgaon, LXIV*	80	71 7 37·63	5° 0795328	120097·2	22° 746
	Viráwáh, I	79	55 49 36·49	5° 0212179	105006·9	19° 888
	Khársar, II	79	53 2 45·88	5° 0061437	101424·7	19° 209
4	Bhilgaon, LXIV*	94	44 56 51·54	5° 0759511	119110·8	22° 559
	Viráwáh, I	95	98 4 13·77	5° 2225407	166932·4	31° 616
	Kárunjhar, III	94	36 58 54·69	5° 0061437	101424·7	19° 209
5	Viráwáh, I	76	42 14 36·68	4° 9355262	86203·8	16° 326
	Khársar, II	76	68 16 0·00	5° 0759511	119110·8	22° 559
	Kárunjhar, III	76	69 29 23·32	5° 0795328	120097·2	22° 746

NOTE.—The value of the side is given in the same line with the opposite angle.

* These stations appertain to the Karáchi Longitudinal Series of the North-West Quadrilateral.

No. of Triangle	Station	Spherical Excess	Corrected Plane Angle	Distance		
				Log. feet	Feet	Miles
6	Viráwáh, I	1'82	76 16 30'01	5'3138727	206002'6	39'016
	Kárunjhar, III	1'81	69 33 8'03	5'2981897	198696'2	37'632
	Evál, IV	1'81	34 10 21'96	5'0759511	119110'8	22'559
7	Kárunjhar, III	1'47	35 3 27'44	5'0750549	118865'3	22'512
	Evál, IV	1'47	49 29 32'32	5'1968363	157339'0	29'799
	Bela, V	1'47	95 27 0'24	5'3138727	206002'6	39'016
8	Viráwáh, I	1'85	32 28 49'71	5'0750549	118865'3	22'512
	Evál, IV	1'86	83 39 55'70	5'3424111	219994'1	41'666
	Bela, V	1'85	63 51 14'59	5'2981897	198696'2	37'632
9	Evál, IV	0'69	40 6 34'12	4'9037410	80120'0	15'174
	Bela, V	'69	66 59 18'81	5'0586757	114465'8	21'679
	Dájka, VI	'69	72 54 7'07	5'0750549	118865'3	22'512
10	Bela, V	'64	71 40 10'06	5'0447461	110852'7	20'995
	Dájka, VI	'64	65 0 33'80	5'0246708	105845'1	20'046
	Gángta, VII	'63	43 19 16'14	4'9037410	80120'0	15'174
11	Evál, IV	'56	29 56 11'73	4'8001218	63113'4	11'953
	Dájka, VI	'57	85 13 42'20	5'1004776	126031'1	23'870
	Pata-i-Sháh, VIII	'57	64 50 6'07	5'0586757	114465'8	21'679
12	Dájka, VI	'47	54 21 26'74	4'9547568	90106'7	17'066
	Gángta, VII	'47	36 51 25'00	4'8228640	66506'5	12'596
	Kanduka, IX	'48	88 47 8'26	5'0447461	110852'7	20'995
13	Dájka, VI	'33	82 30 7'49	4'9319873	85504'2	16'194
	Pata-i-Sháh, VIII	'33	50 27 30'99	4'8228640	66506'5	12'596
	Kanduka, IX	'32	47 2 21'52	4'8001218	63113'4	11'953
14	Pata-i-Sháh, VIII	'40	69 35 42'98	4'9364583	86389'0	16'362
	Kanduka, IX	'39	42 19 57'80	4'7928969	62072'2	11'756
	Kánmer, X	'39	68 4 19'22	4'9319873	85504'2	16'194
15	Pata-i-Sháh, VIII	'41	35 13 49'67	4'7860151	61096'3	11'571
	Kanduka, IX	'42	90 56 3'38	5'0248819	105896'6	20'056
	Chitrod, XI	'41	53 50 6'95	4'9319873	85504'2	16'194
16	Kanduka, IX	'31	48 36 5'30	4'8124064	64924'2	12'296
	Kánmer, X	'31	44 54 8'75	4'7860151	61096'3	11'571
	Chitrod, XI	'32	86 29 45'95	4'9364583	86389'0	16'362
17	Kánmer, X	'22	61 37 47'35	4'7780302	59983'3	11'360
	Chitrod, XI	'22	46 7 27'39	4'6914406	49140'6	9'307
	Mánába, XII	'22	72 14 45'26	4'8124064	64924'2	12'296
18	Kánmer, X	'25	75 21 5'47	4'8526398	71226'2	13'490
	Mánába, XII	'25	62 46 27'28	4'8159955	65462'9	12'398
	Kesmári, XIII	'24	41 52 27'25	4'6914406	49140'6	9'307
19	Chitrod, XI	'26	69 37 36'96	4'8289333	67442'5	12'773
	Mánába, XII	'25	53 53 8'70	4'7643143	58118'5	11'007
	Váudhia, XIV	'26	56 29 14'34	4'7780302	59983'3	11'360
20	Mánába, XII	'41	63 43 48'09	4'9076800	80850'0	15'313
	Kesmári, XIII	'41	64 5 10'93	4'9090029	81096'6	15'359
	Kákreji, XV	'41	52 11 0'98	4'8526398	71226'2	13'490

No. of Triangle	Station	Spherical Excess	Corrected Plane Angle	Distance		
				Log. feet	Feet	Miles
21	Mánába, XII	0'35	61 54 54'33	4'8615404	72701'0	13'769
	Vándhia, XIV	'35	63 9 22'73	4'8664309	73524'3	13'925
	Mália, XVI	'34	54 55 42'94	4'8289333	67442'5	12'773
22	Mánába, XII	'33	45 26 54'53	4'7791380	60136'5	11'389
	Kákreji, XV	'34	60 36 21'99	4'8664309	73524'3	13'925
	Mália, XVI	'34	73 56 43'48	4'9090029	81096'6	15'359
23	Kákreji, XV	'28	85 32 42'06	4'9081678	80940'9	15'330
	Mália, XVI	'28	46 39 42'81	4'7712053	59048'0	11'183
	Rangpur, XVII	'28	47 47 35'13	4'7791380	60136'5	11'389
24	Kákreji, XV	'23	52 5 54'30	4'7289670	53575'6	10'147
	Rangpur, XVII	'23	67 28 54'46	4'7974113	62720'8	11'879
	Charáda, XVIII	'23	60 25 11'24	4'7712053	59048'0	11'183
25	Kákreji, XV	'23	38 48 16'02	4'6980428	49893'4	9'450
	Mália, XVI	'24	92 8 32'41	4'9007042	79561'7	15'069
	Phagásia, XIX	'24	49 3 11'57	4'7791380	60136'5	11'389
26	Kákreji, XV	'27	46 44 25'82	4'7643090	58117'8	11'007
	Rangpur, XVII	'27	85 32 7'45	4'9007042	79561'7	15'069
	Phagásia, XIX	'27	47 43 26'73	4'7712053	59048'0	11'183
27	Rangpur, XVII	'21	67 51 22'46	4'7690546	58756'3	11'128
	Charáda, XVIII	'20	54 31 3'72	4'7131122	51655'0	9'783
	Dungarpur, XX	'20	57 37 33'82	4'7289670	53575'6	10'147
28	Charáda, XVIII	'32	83 11 3'09	4'9329314	85690'3	16'229
	Dungarpur, XX	'32	53 54 24'26	4'8434547	69735'6	13'208
	Sápakda, XXI	'32	42 54 32'65	4'7690546	58756'3	11'128
29	Rangpur, XVII	'30	75 27 49'11	4'8839827	76556'6	14'499
	Phagásia, XIX	'30	57 14 31'66	4'8228902	66510'5	12'597
	Virpur, XXII	'29	47 17 39'23	4'7643090	58117'8	11'007
30	Rangpur, XVII	'24	63 39 45'27	4'8033750	63588'0	12'043
	Dungarpur, XX	'25	69 37 1'72	4'8228902	66510'5	12'597
	Virpur, XXII	'24	46 43 13'01	4'7131122	51655'0	9'783
31	Dungarpur, XX	'42	59 37 7'53	4'8990848	79265'6	15'012
	Sápakda, XXI	'42	51 32 14'10	4'8570041	71945'6	13'626
	Chitrákheda, XXIII	'42	68 50 38'37	4'9329314	85690'3	16'229
32	Dungarpur, XX	'32	57 9 43'78	4'8299945	67607'4	12'804
	Virpur, XXII	'32	70 37 42'27	4'8802973	75909'7	14'377
	Vánkauer, XXIV	'32	52 12 33'95	4'8033750	63588'0	12'043
33	Dungarpur, XX	'38	62 4 7'00	4'8825394	76302'6	14'451
	Chitrákheda, XXIII	'38	61 31 1'63	4'8802973	75909'7	14'377
	Vánkauer, XXIV	'38	56 24 51'37	4'8570041	71945'6	13'626
34	Chitrákheda, XXIII	'40	76 35 11'88	4'9525916	89658'5	16'081
	Vánkauer, XXIV	'39	47 32 16'12	4'8324962	67998'0	12'878
	Tarkia, XXV	'40	55 52 32'00	4'8825394	76302'6	14'451
35	Chitrákheda, XXIII	'37	33 27 54'88	4'8103284	64614'3	12'238
	Vánkauer, XXIV	'38	105 54 14'37	5'0518868	112690'4	21'343
	Khakhána, XXVI	'37	40 37 50'75	4'8825394	76302'6	14'451

No. of Triangle	Station	Spherical Excess	Corrected Plane Angle			Distance		
						Log. feet	Feet	Miles
36	Vánkáner, XXIV	0° 39	58	21	57° 85	4° 8939666	78337° 0	14° 837
	Tarkia, XXV	° 39	44	36	33° 70	4° 8103284	64614° 3	12° 238
	Khakhána, XXVI	° 39	77	1	28° 45	4° 9525916	89658° 5	16° 981
37	Tarkia, XXV	° 44	83	33	48° 72	5° 0002129	100049° 0	18° 949
	Khakhána, XXVI	° 44	45	21	14° 64	4° 8551113	71632° 7	13° 567
	Mahidhar, XXVII	° 44	51	4	56° 64	4° 8939666	78337° 0	14° 837
38	Khakhána, XXVI	° 72	68	30	43° 83	5° 0458550	111136° 1	21° 048
	Mahidhar, XXVII	° 71	54	35	35° 17	4° 9883293	97348° 5	18° 437
	Bháyásar, XXVIII	° 72	56	53	41° 00	5° 0002129	100049° 0	18° 949
39	Mahidhar, XXVII	° 66	57	53	27° 78	4° 9953560	98936° 4	18° 738
	Bháyásar, XXVIII	° 66	50	1	45° 00	4° 9518921	89514° 2	16° 953
	Chitalia, XXIX	° 67	72	4	47° 22	5° 0458550	111136° 1	21° 048
40	Bháyásar, XXVIII	° 73	73	40	10° 37	5° 0701789	117538° 2	22° 261
	Chitalia, XXIX	° 72	52	27	3° 39	4° 9872444	97105° 6	18° 391
	Moraiya, XXX	° 73	53	52	46° 24	4° 9953560	98936° 4	18° 738
41	Bháyásar, XXVIII	° 63	44	8	47° 21	4° 9229934	83751° 7	15° 862
	Movaiya, XXX	° 64	81	59	47° 08	5° 0758245	119076° 1	22° 552
	Trákuda, XXXI	° 64	53	51	25° 71	4° 9872444	97105° 6	18° 391
42	Movaiya, XXX	° 71	77	25	3° 70	5° 0899034	122099° 5	23° 295
	Trákuda, XXXI	° 71	60	56	2° 02	5° 0420017	110154° 4	20° 863
	Derki Gálol, XXXII	° 71	41	38	54° 28	4° 9229934	83751° 7	15° 862
43	Chitalia, XXIX	° 85	54	42	14° 66	5° 0242721	105748° 0	20° 028
	Movaiya, XXX	° 85	60	10	40° 19	5° 0507929	112406° 9	21° 289
	Jithuri, XXXIII	° 85	65	7	5° 15	5° 0701789	117538° 2	22° 261
44	Movaiya, XXX	° 59	47	54	34° 81	4° 9237272	83893° 3	15° 889
	Derki Gálol, XXXII	° 60	55	5	11° 84	4° 9670948	92703° 2	17° 557
	Kunkaváv, XXXIV	° 60	77	0	13° 35	5° 0420017	110154° 4	20° 863
45	Movaiya, XXX	° 48	38	37	3° 98	4° 8245480	66764° 9	12° 645
	Jithuri, XXXIII	° 48	60	3	55° 32	4° 9670948	92703° 2	17° 557
	Kunkaváv, XXXIV	° 49	81	19	0° 70	5° 0242721	105748° 0	20° 028
46	Chitalia, XXIX	° 79	76	54	43° 96	5° 1052779	127431° 8	24° 135
	Jithuri, XXXIII	° 78	43	51	46° 83	4° 9574016	90657° 1	17° 170
	Itria, XXXV	° 78	59	13	29° 21	5° 0507929	112406° 9	21° 289
47	Jithuri, XXXIII	1° 36	63	7	10° 54	5° 1689588	147556° 7	27° 946
	Itria, XXXV	1° 36	66	29	58° 01	5° 1810133	151709° 7	28° 733
	Sakhpur, XXXVI	1° 36	50	22	51° 45	5° 1052779	127431° 8	24° 135
48	Jithuri, XXXIII	0° 62	60	40	17° 35	5° 0721136	118062° 9	22° 360
	Kunkaváv, XXXIV	° 63	89	47	21° 40	5° 1316811	135419° 5	25° 648
	Manáva, XXXVII	° 62	29	32	21° 25	4° 8245480	66764° 9	12° 645
49	Jithuri, XXXIII	1° 50	67	9	39° 22	5° 2024666	159392° 0	30° 188
	Sakhpur, XXXVI	1° 49	51	32	6° 55	5° 1316811	135419° 5	25° 648
	Manáva, XXXVII	1° 49	61	18	14° 23	5° 1810133	151709° 7	28° 733
50	Jithuri, XXXIII	0° 87	22	34	56° 36	5° 0104138	102426° 8	19° 399
	Manáva, XXXVII	° 88	126	54	24° 05	5° 3289515	213280° 7	40° 394
	Sarkála, XXXVIII	° 88	30	30	39° 59	5° 1316811	135419° 5	25° 648

PRINCIPAL TRIANGULATION. TRIANGLES.

No. of Triangle	Station	Spherical Excess	Corrected Plane Angle	Distance		
				Log. feet	Feet	Miles
51	Kunkaván, XXXIV	0° 94	37 44 57.74	5° 0104138	102426.8	19.399
	Manáva, XXXVII	.95	97 22 2.11	5° 2199142	165925.9	31.425
	Sarkála, XXXVIII	.95	44 53 0.15	5° 0721136	118062.9	22.360
52	Manáva, XXXVII	.82	59 35 5.41	5° 0434804	110530.0	20.934
	Sarkála, XXXVIII	.83	67 21 55.89	5° 0729736	118297.0	22.405
	Nándivála, XXXIX	.82	53 2 58.70	5° 0104138	102426.8	19.399
53	Sarkáia, XXXVIII	.56	46 41 9.27	4° 9104559	81368.4	15.411
	Nándivála, XXXIX	.56	52 3 38.93	4° 9454526	88196.8	16.704
	Jákhia, XL	.56	81 15 11.80	5° 0434804	110530.0	20.934
54	Nándivála, XXXIX	.41	65 23 47.31	4° 9153888	82297.9	15.587
	Jákhia, XL	.40	50 35 3.23	4° 8446560	69928.8	13.244
	Nátej, XLI	.41	64 1 9.46	4° 9104559	81368.4	15.411
55	Jákhia, XL	.44	48 48 19.79	4° 8596427	72384.0	13.709
	Nátej, XLI	.45	72 22 30.43	4° 9622687	91678.8	17.363
	Dángarvádi, XLII	.45	58 49 9.78	4° 9153888	82297.9	15.587

April, 1893.

J. ECCLES,
In charge Computing Office.

KĀTHIĀWĀR MERIDIONAL SERIES.

SECONDARY TRIANGULATION. TRIANGLES.

KĀTHIĀWAR MINOR LONGITUDINAL 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
56	Trākuda, XXXI	1.3	55 59 32.9	5.1472583	140365	26.584	61	Oshām	h.s.	0 16 53.2	5.1220508	134450	25.085
	Devki Gāḷol, XXXII	1.4	77 25 17.0	5.2181715	165261	31.300		Gop	"	71 17 21.9	5.2878727	194032	36.748
	Oshām	h.s.	40 35 10.1	5.0899034	123000	23.295		Bardā	"	68 35 44.9	5.2799194	190511	36.082
57	Trākuda, XXXI	1.3	56 16 9.8	5.1481985	140669	26.642	62	Gop	h.s.	58 51 30.8	5.1055646	156879	29.712
	Oshām	h.s.	40 14 4.5	5.0834005	121731	23.055		Bardā	"	74 32 14.9	5.247852	176940	33.511
	Mevāsa No. 1	1.4	77 42 5.7	5.2181715	165261	31.300		Fatelka	"	46 10 14.3	5.1220508	132450	25.085
58	Devki Gāḷol, XXXII	1.6	43 45 5.5	5.1481985	140669	26.642	63	Gop	h.s.	22 46 28.9	4.8990550	79260	15.011
	Oshām	h.s.	92 36 55.6	5.3079333	203204	38.486		Patelka	"	97 26 11.1	5.3075542	203027	38.452
	Mevāsa No. 1	1.5	43 37 58.9	5.1472583	140365	26.584		Sarsad Māta	"	59 47 20.0	5.2478252	176940	33.511
59	Oshām	h.s.	36 39 32.9	5.0583996	114393	21.665	64	Bardā	h.s.	29 56 40.5	4.8990551	79260	15.011
	Mevāsa No. 1	1.3	96 6 5.6	5.2799194	190511	36.082		Patelka	"	51 9 55.5	5.0923284	123688	23.426
	Gop	h.s.	47 14 21.5	5.1481985	140669	26.642		Sarsad Māta	"	98 33 24.0	5.1955646	156879	29.712
60	Oshām	h.s.	76 56 27.1	5.3270932	212371	40.222	65	Itria, XXXV	1.8	61 19 25.0	5.2258689	168217	31.859
	Mevāsa No. 1	2.1	62 52 30.8	5.2878727	194032	36.748		Sakhpur, XXXVI	1.9	68 21 33.3	5.2509551	178220	33.754
	Bardā	h.s.	40 11 2.1	5.1481985	140669	26.642		Chamardi	1.8	50 19 1.7	5.1689588	147557	27.946

NOTES.—1. Names followed by Roman numerals are those of the Principal Stations.
2. The value of the side is given in the same line with the opposite angle.

* The observations were taken with an 18-inch Theodolite to luminous signals.

SECONDARY 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					Log. feet	Feet
66	Iria, XXXV	1.8	36 35 25.1	5.1049595	127339	24.117	Bhojaberi	0.1	50 3 30.6	4.6640002	46132
	Chamardi	1.8	86 52 11.2	5.3289999	213355	40.399	Lalpur	.2	51 48 47.9	4.6747973	47293
	Palitana, Shetrunja No. 1	1.8	56 32 23.7	5.2509551	178220	33.754	Lamdhar	.2	78 7 41.5	4.7099643	58882
67	Sakhpur, XXXVI	1.0	49 0 0.8	5.1049597	127339	24.117	Lalpur	.2	70 39 30.7	4.7354780	54385
	Chamardi	1.0	36 33 9.5	5.0021047	100486	19.031	Lamdhar	.2	56 10 32.7	4.6801776	47883
	Palitana, Shetrunja No. 1	1.0	94 26 49.7	5.2258689	168217	31.859	Changa	.1	53 9 56.6	4.6640002	46132
68	Chamardi	0.8	56 42 8.4	5.0441203	110693	20.965	Lamdhar	.2	40 30 52.3	4.6619548	45915
	Palitana, Shetrunja No. 1	.8	49 14 40.1	5.0013863	100320	19.000	Changa	.2	89 10 42.2	4.8493368	70670
	Trambak	.9	74 3 11.5	5.1049596	127339	24.117	Sirda	.2	50 18 25.5	4.7354780	54385
69	Chamardi	.8	92 38 12.6	5.1865483	153656	29.101	Alech	.2	55 59 34.5	4.7318924	53938
	Palitana, Shetrunja No. 1	.8	31 29 5.1	4.9049048	80335	15.215	Ambardi	.2	67 22 1.2	4.7784981	60048
	Bhavnagar	.8	55 52 42.3	5.1049596	127339	24.117	Alech	.2	56 39 24.3	4.7352451	54356
70	Chamardi	.3	35 56 3.9	4.7699698	88860	11.152	Alech	.3	67 34 11.5	4.8034450	63598
	Trambak	.4	53 11 48.5	4.9049049	80335	15.215	Alech	.2	51 39 3.3	4.7320625	53959
	Bhavnagar	.4	90 52 7.6	5.0013863	100320	19.000	Bora Dabha	.2	60 46 45.2	4.7784981	60048
71	Trambak	.3	52 2 28.7	4.7720509	53340	10.102	Alech	.2	50 43 31.1	4.7023792	50394
	Bhavnagar	.3	67 27 32.4	4.7957608	62483	11.834	Bora Dabha	.2	51 35 57.7	4.7077134	51017
	Gogha	.2	60 29 58.9	4.7699698	88860	11.152	Vadala No. 1	.2	77 40 31.2	4.8034450	63598
72	Mevansa No. 1	0.6	32 4 49.6	4.8311450	67787	12.838	Bora Dabha	.3	76 36 37.2	4.8303872	67669
	Gop	.6	84 14 51.4	5.1037685	126990	24.051	Vadala No. 1	.2	56 57 52.1	4.7057722	58314
	Alech	.6	63 40 19.0	5.0583990	114393	21.665	Segras	.2	46 25 30.7	4.7023792	50394
73	Gop	.2	51 27 14.8	4.7352451	54356	10.295	Bora Dabha	.2	34 47 46.8	4.666322	40423
	Alech	.2	51 17 23.4	4.7342500	54231	10.271	Segras	.2	89 47 41.3	4.8502512	70836
	Ambardi	.3	77 15 21.8	4.8311450	67787	12.838	Pajod	.2	55 24 31.9	4.7657722	58314
74	Gop	.1	48 32 44.4	4.6503355	44703	8.466	Vadala No. 1	.1	35 56 43.6	4.6066322	40423
	Ambardi	.2	66 3 15.6	4.7364866	54511	10.324	Segras	.1	43 22 10.5	4.6742514	47288
	Bhojaberi	.2	65 24 0.0	4.7342500	54231	10.271	Pajod	.2	100 41 5.9	4.8303872	67069
75	Gop	.2	61 36 30.6	4.7606843	58822	11.152	Segras	.1	49 5 12.8	4.5386629	34567
	Bhojaberi	.3	63 51 42.6	4.7787881	60088	11.380	Pajod	.1	68 49 1.8	4.6299286	42651
	Lalpur	.2	54 31 46.8	4.7364866	54511	10.324	Junej	.1	62 5 45.4	4.6066322	40423
							Segras	.1	53 0 59.8	4.5480605	35323
							Junej	.1	52 17 28.9	4.5438655	34984
							Myari	.1	74 41 31.3	4.6299286	42651
							Junej	.1	61 20 0.4	4.5674582	36937
							Myari	.1	61 37 17.4	4.5686148	37038
							Bhavnagar	.1	57 2 42.2	4.5480605	35323

KATHIAWAR
MINOR MERIDIONAL SERIES No. 1.*

* The observations were taken with an 18-inch theodolite to luminous signals.

No. of Triangle	Station	Spherical excess	Corrected Plane Angle	Distance			Station	Spherical excess	Corrected Plane Angle	Distance					
				Log. feet	Feet	Miles				Log. feet	Feet	Miles			
KATHIÁWAR.															
MINOR MERIDIONAL SERIES No. 2.*															
88	Oshám Mevása No. 1 Advál	h.s. " " " "	0 5 5 5	38 11 11 3 28 41 3 0 113 7 45 7	4 9757349 4 8658140 5 1481985	94566 73420 140669	17 910 13 905 26 642	98	Kbhákhria Ameeri Khokhri	s. t.s. "	0 1 2 2	50 15 30 3 60 23 7 8 69 21 21 9	4 6256762 4 6789908 4 7109644	42235 47752 51400	7 999 9 044 9 735
89	Oshám Advál Fareni	h.s. " " " "	3 3 3	37 23 1 5 83 42 26 0 58 54 32 5	4 7164598 4 9305388 4 8658140	52055 82219 73420	9 859 16 140 13 905	99	Ameeri Khokhri Sanosrn	t.s. h.s. "	2 1 1	61 23 16 0 69 24 47 5 49 11 56 5	4 6900251 4 7179306 4 6256762	48981 52231 42235	9 277 9 892 7 999
90	Advál Fareni Bhádra	h.s. " " " "	2 2 2	67 31 36 6 58 51 11 5 53 37 11 9	4 7763091 4 7430047 4 7164598	59746 55336 52055	11 316 10 480 9 859	100	Khokhri Sanosra Soel	t.s. h.s. "	3 3 2	73 43 49 8 67 51 33 7 38 24 36 5	4 8789839 4 8634068 4 6900251	75680 73024 48981	14 333 13 830 9 277
91	Advál Bhádra Padriya	h.s. " " " "	1 2 2	53 12 58 7 54 1 32 9 72 45 28 4	4 6665530 4 6710734 4 7430047	46404 46889 55336	8 789 8 881 10 480	101	Sanosrn Soel Háátoda	h.s. " " "	2 2 3	33 39 12 9 65 2 4 8 81 18 42 3	4 6276395 4 8413944 4 8789839	42427 69406 75680	8 035 13 145 14 333
92	Bhádra Padriya Moridhár	h.s. " " " "	1 2 1	53 33 16 2 63 30 17 6 62 56 26 2	4 6223859 4 6687115 4 6665530	41917 46635 46404	7 939 8 832 8 789	102	Sanosra Háátoda Pítar	h.s. " " t.s.	2 3 3	38 36 44 1 76 37 10 1 64 46 5 8	4 6801592 4 8729901 4 8413944	47881 74643 69406	9 068 14 137 13 145
93	Padriya Moridhár Danidhár	h.s. " " t.s.	2 2 1	61 49 49 7 73 50 33 1 44 13 37 2	4 7240892 4 7615564 4 6223859	52977 57751 41917	10 034 10 938 7 939	103	Oshám Advál Udákia	h.s. " " "	1 1 2	48 55 7 22 26 56 9 108 44 7 4	4 7660184 4 4713663 4 8658140	58347 29605 73420	11 051 5 607 13 905
94	Padriya Danidhár Mevása No. 1	h.s. t.s. h.s.	2 3 2	52 8 31 2 73 12 22 8 54 39 6 0	4 7474237 4 8311243 4 7615564	55902 67784 57751	10 587 12 838 10 938	104	Advál Fareni Udákia	h.s. " " "	2 2 2	61 15 29 2 64 52 9 7 53 52 21 1	4 7521038 4 7660184 4 7164598	56597 58347 52055	10 702 11 051 9 859
95	Moridhár Danidhár Devdhár	h.s. t.s. h.s.	2 2 2	58 2 3 0 67 47 49 7 54 10 7 3	4 7437876 4 7817468 4 7240892	55435 60499 52977	10 499 11 458 10 034	105	Fareni Udákia Girnár	h.s. " " "	3 3 3	64 43 9 7 70 51 50 9 44 24 59 4	4 8633644 4 8824011 4 7521038	73007 76278 50507	13 827 14 447 10 702
96	Danidhár Devdhár Khakhria	h.s. t.s. h.s.	2 2 2	58 2 3 0 67 47 49 7 55 0 27 0	4 7437876 4 7817468 4 7437876	55435 60499 55435	10 499 11 458 10 499	106	Udákia Girnár Roghát	h.s. " " s.	2 2 3	59 34 5 9 57 48 37 5 82 37 16 6	4 6711136 4 7944951 4 8633644	46894 62301 73007	8 881 11 799 13 827
97	Devdhár Khakhria Ameeri	h.s. s. t.s.	2 3 2	49 2 33 4 72 48 0 4 58 9 26 2	4 7109644 4 8130342 4 7620672	51400 65018 57919	9 735 12 314 10 951	107	Girnár Roghát Kosradhár	h.s. s. h.s.	3 3 3	57 29 53 2 87 40 3 6 34 50 3 2	4 8403425 4 9130625 4 6711136	69238 82028 46894	13 113 15 536 8 881
98	Devdhár Khakhria Ameeri	h.s. s. t.s.	2 3 2	49 2 33 4 72 48 0 4 58 9 26 2	4 7109644 4 8130342 4 7620672	51400 65018 57919	9 735 12 314 10 951	108	Girnár Roghát Kosradhár	h.s. s. h.s.	3 3 3	90 8 3 6 63 3 14 3 26 48 42 1	5 0168784 4 6606687 4 6711136	103663 92676 46894	19 690 17 552 8 881
99	Devdhár Khakhria Ameeri	h.s. s. t.s.	2 3 2	49 2 33 4 72 48 0 4 58 9 26 2	4 7109644 4 8130342 4 7620672	51400 65018 57919	9 735 12 314 10 951	109	Girnár Rájárad Kosradhár	h.s. " " "	3 4 3	32 38 10 2 85 26 32 2 61 55 17 6	4 7001766 4 9669687 4 9139625	50139 82676 82028	9 496 17 552 15 530

* The observations were taken with an 18-inch Theodolite to luminous signals.

No. of Triangle	Station	Spherical Excess	Corrected Plane angle	Distance			No. of Triangles	Station	Spherical Excess	Corrected Plane Angle	Distance		
				Log. feet	Feet	Miles					Log. feet	Feet	Miles
110	Rajáwad	h.s.	66 14 22.5	4 6880467	48758	9.234	120	Chitalia, XXXIX	0.3	36 52 37.1	4 7416341	55161	10.447
	Kosradhár	"	43 30 46.4	4 5644276	36680	6.947		Itria, XXXV	.4	62 37 58.1	4 9118628	81632	15.461
	Potlia	"	70 14 51.1	4 7001766	50139	9.496		Modhuka	.4	80 29 24.8	4 9574016	90657	17.170
111	Kosradhár	h.s.	50 35 52.6	4 6610068	45815	8.677	121	Kamakio Mátá	.2	65 40 39.5	4 7735311	59365	11.243
	Potlia	"	74 4 52.6	4 7560077	57017	10.799		Modhuka	.2	39 26 34.8	4 6168830	41389	7.839
	Jendáliya	"	55 19 14.8	4 6880467	49758	9.234		Bhimrád	.2	74 52 45.7	4 7985948	68892	11.911
112	Potlia	h.s.	47 7 18.8	4 5700588	37159	7.038	122	Itria, XXXV	.3	51 41 20.8	4 7735311	59365	11.243
	Jendáliya	"	68 15 14.9	4 6730108	47009	8.920		Modhuka	.3	81 30 1.3	4 8740540	78202	14.172
	Jalandri	"	64 37 26.3	4 6610068	45815	8.677		Bhimrád	.2	46 48 37.9	4 7416341	55161	10.447
113	Jendáliya	h.s.	65 23 4.7	4 7024903	50407	9.547	123	Itria, XXXV	.3	92 36 56.7	4 9212313	83413	15.798
	Jalandri	"	72 32 3.7	4 7233685	52889	10.017		Modhuka	.3	46 2 14.2	4 7788909	60102	11.383
	Bolás	"	42 4 51.6	4 5700588	37159	7.038		Gadhada	.2	41 20 49.1	4 7416341	55161	10.447
KATHIAWÁR													
MINOR MERIDIONAL SERIES No. 3.													
114	Naika	h.s.	52 23 56.0	4 6274668	42410	8.032	124	Itria, XXXV	.2	53 14 9.0	4 7788909	60102	11.383
	Rámpura	s.	76 17 0.1	4 7160233	52002	9.849		Bhimrád	.2	85 50 15.3	4 8740540	78202	14.172
	Bhimtekri	h.s.	51 19 3.9	4 6210312	41786	7.914		Gadhada	.3	50 24 42.6	4 7788909	60102	11.383
115	Rámpura	s.	56 5 58.1	4 7034645	50520	9.568	125	Itria, XXXV	.2	40 55 35.7	4 6915029	49148	9.308
	Bhimtekri	h.s.	79 43 58.0	4 7775721	59892	11.343		Bhimrád	.2	53 14 9.0	4 7788909	60102	11.383
	Sudánda	"	44 10 3.9	4 6274668	42410	8.032		Gadhada	.3	85 50 15.3	4 8740540	78202	14.172
116	Bhimtekri	h.s.	68 54 33.8	4 7849900	60952	11.544	126	Itria, XXXV	.3	46 7 13.7	4 7859758	61091	11.570
	Sudánda	"	60 26 14.0	4 7545298	56824	10.762		Gadhada	.3	88 42 53.7	4 9280525	84733	16.048
	Dhandhalpur	"	50 39 12.2	4 7034645	50520	9.568		Jalálpur	.2	45 9 52.6	4 7788909	60102	11.383
117	Sudánda	h.s.	44 25 13.4	4 7215015	52663	9.974	127	Gadhada	.2	43 44 40.0	4 7317471	53920	10.212
	Dhandhalpur	"	81 28 28.2	4 8716200	74410	14.093		Pánch Tobra	.3	51 34 23.5	4 7859758	61091	11.570
	Gangajál	"	54 6 16.4	4 7849900	60952	11.544		Jalálpur	.3	84 40 50.5	4 8901176	77646	14.706
118	Sudánda	h.s.	39 47 10.7	4 7366016	54526	10.327	128	Pánch Tobra	.2	49 5 21.6	4 6932959	49351	9.347
	Gangajál	"	79 22 14.7	4 9229552	83744	15.861		Jalálpur	.2	75 15 4.5	4 8003749	63150	11.960
	Kamakio Mátá	"	60 50 34.6	4 8716290	74410	14.093		Hajrádhár	.2	55 39 33.9	4 7317471	53920	10.212
119	Gangajál	h.s.	65 39 58.9	4 7985948	62892	11.911	129	Pánch Tobra	.1	46 10 14.6	4 6591027	45614	8.639
	Kamakio Mátá	"	62 9 8.5	4 7855465	61030	11.559		Hajrádhár	.2	46 42 23.8	4 6629657	46022	8.716
	Modhuka	"	52 10 52.6	4 7366016	54526	10.327		Aláda	.2	87 7 21.6	4 8003749	63150	11.960
120	Sudánda	h.s.	39 47 10.7	4 7366016	54526	10.327	130	Hajrádhár	.2	80 27 27.8	4 7434507	55304	10.491
	Gangajál	"	79 22 14.7	4 9229552	83744	15.861		Aláda	.1	45 14 38.0	4 6008366	39887	7.554
	Kamakio Mátá	"	60 50 34.6	4 8716290	74410	14.093		Sakhpur, XXXVI	.1	54 17 54.2	4 6591027	45614	8.639
121	Gangajál	h.s.	65 39 58.9	4 7985948	62892	11.911	131	Aláda	.2	71 40 39.2	4 7531848	56648	10.729
	Kamakio Mátá	"	62 9 8.5	4 7855465	61030	11.559		Sakhpur, XXXVI	.1	40 9 14.6	4 5852536	38480	7.288
	Modhuka	"	52 10 52.6	4 7366016	54526	10.327		Játroda	.2	68 10 6.2	4 7434597	55394	10.491

* This base is taken from the Synoptical Volume of the Gijirásí Longitudinal Series in which the continuation of the triangulation will be found. No. 2.—The observations were taken with an 18-inch theodolite to luminous signals.

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
182	Sakhpur, XXXVI	s. 0.5	71 25 26.4	5.0181029	104256	19.746	188	Detad	h.s. 0.1	48 15 25.4	4.6653088	46271	8.763
	Jatroda	s. 0.5	77 34 31.9	5.0310476	107410	20.343		Dungar	" 0.2	54 16 8.9	4.7019214	50341	9.534
	Bādha	h.s. 0.4	31 0 1.7	4.7531848	56648	10.729		Hindorna	" 0.2	77 28 25.7	4.7820263	60538	11.465
138	Sakhpur, XXXVI	h.s. 0.4	100 34 54.8	5.0620086	115372	21.851	KATHIÁWAR MINOR MERIDIONAL SERIES No. 4.						
	Jatroda	s. 0.4	50 33 33.0	4.9573234	96641	17.167							
	Bhokarra	h.s. 0.4	28 51 32.2	4.7531848	56648	10.729							
134	Sakhpur, XXXVI	h.s. 0.3	29 9 28.0	4.7195592	52428	9.929	KATHIÁWAR MINOR MERIDIONAL SERIES No. 4.						
	Bādha	h.s. 0.4	57 23 15.9	4.9573234	96641	17.167							
	Bhokarra	" 0.4	93 27 16.1	5.0310476	107410	20.343							
135	Bādha	h.s. 0.3	77 30 18.6	4.8312524	67804	12.842	189	Pátna	s. 0.4	71 36 31.2	4.9259709	84328	15.971
	Bhokarra	" 0.2	53 28 37.4	4.7467122	55910	10.570		Bharbhur	t.s. 0.3	70 19 19.8	4.9226065	83677	15.848
	Detad	" 0.2	49 1 4.0	4.7195592	52428	9.929		Chamárdi	h.s. 0.3	38 4 9.0	4.7387518	54796	10.378
136	Bhokarra	h.s. 0.2	57 6 37.4	4.7572510	57181	10.830	140	Bharbhur	t.s. 0.5	54 5 55.7	4.9049049	80335	15.215
	Detad	" 0.2	38 11 44.1	4.6243502	42107	7.975		Chamárdi	h.s. 0.5	67 39 28.9	4.9625137	91730	17.373
	Vadal	" 0.2	84 41 38.5	4.8312524	67804	12.842		Bhavnagar	" 0.5	58 14 35.4	4.9259709	84328	15.971
137	Detad	h.s. 0.2	48 1 9.2	4.6812103	47997	9.090	KATHIÁWAR MINOR MERIDIONAL SERIES No. 4.						
	Vadal	" 0.2	69 39 12.3	4.7820263	60538	11.465							
	Dungar	" 0.2	62 19 38.5	4.7572510	57181	10.830							

* This base is taken from the Spheroidal Volume of the Gujarat Levelling Series in which the continuation of the triangulation will be found.

NOTE.—The observations were taken with an 18-inch Theodolite to luminous signal.

KÁTHIÁWÁR MERIDIONAL SERIES.
SECONDARY TRIANGULATION. TRIANGLES.

PRINCIPAL-AUXILIARY AND SECONDARY STATIONS, AND INTERSECTED POINTS.

Differences between the common sides of two triangles are shown by the small figures in the 5th and 12th columns between the data of the triangles, the first in order having supplied the greater value.

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				
141	Jhund, LXVI*	7 58	11		4° 60' 31.8"	40581	7.686	Inch	146	Khársar, II	27 53	31		4° 79' 14.74"	61869	11.718	Inch
	Khársar, II	12 42	49		4° 80' 59.75"	64413	12.199	"		Kárunjhar, III	12 47	9		4° 46' 04.05"	39269	5.543	"
	Kohyar Hill Mark (helio.)				5° 01' 44.22"	103377	19.579	"		Dhotar Hill Mark (helio.)				4° 93' 55.26"	86204	16.326	"
142	Bhilsaon, LXIV*	48 32	4		4° 90' 54.60"	86623	15.270	"	147	Viráwáh, I	18 30	23		4° 60' 77.09"	40544	7.675	"
	Viráwáh, I	60 57	24		4° 97' 34.10"	94061	17.815	"		Khársar, II	51 39	39		5° 00' 59.99"	100138	18.966	"
	Raghuji-ka-Nesra Hill Mark (helio.)				5° 00' 51.44"	101435	19.209	"		Cháundinwáh Hill Mark (helio.)				5° 07' 53.33"	120097	22.746	"
143	Akoria, LXI*	73 58	12		5° 07' 34.44"	118972	22.533	"	148	Viráwáh, I	23 44	14		4° 688' 11.12"	48765	9.236	"
	Viráwáh, I	42 48	47		4° 92' 49.26"	84125	15.933	"		Kárunjhar, III	55 45	6		5° 00' 59.99"	100138	18.966	"
	Rána-ka-Nesra Pillar (helio.)				5° 04' 33.82"	110505	20.929	"		Cháundinwáh Hill Mark (helio.)				5° 07' 59.51"	119111	22.559	"
144	Khársar, II	16 9	10		4° 82' 39.33"	66670	12.627	"	149	Viráwáh, I	21 12	41		4° 63' 89.01"	43541	8.246	"
	Kárunjhar, III	4 55	46		4° 31' 37.16"	20593	3.900	"		Khársar, II	72 27	3		5° 05' 97.22"	114742	21.731	"
	Viráwáh Temple No. 1 (helio.)				4° 93' 55.26"	86204	16.326	"		Dindsi Hill Mark (helio.)				5° 07' 53.33"	120097	22.746	"
145	Khársar, II	18 56	33		4° 81' 41.36"	65183	12.345	"	150	Viráwáh, I	21 1	56		4° 63' 24.22"	42897	8.124	"
	Kárunjhar, III	6 28	51		4° 35' 53.44"	22664	4.293	"		Kárunjhar, III	73 44	13		5° 05' 97.22"	114742	21.731	"
	Viráwáh Temple No. 2				4° 93' 55.26"	86204	16.326	"		Dindsi Hill Mark (helio.)				5° 07' 59.51"	119111	22.559	"

* These stations appertain to the Kurachi Longitudinal Series.
NOTE.—By a principal-auxiliary station is meant a station auxiliary to a principal station at which observations were taken to fix unvisited 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	
151	Khársar, II Kárunjhar, III Parádra Hill Mark (helio.)	45 34 11 40 14 33	4 790448 4 746936 4 935526	61723 5839 86204	11 690 10 576 16 326	168	Khársar, II Kárunjhar, III Kárunjhar Hill Mark No. 2	10 12 42 80 28 44	4 184230 4 929534 4 935526	15284 85022 86204	2 895 16 103 16 326	Inch 18 "
152	Viráwáh, I Kárunjhar, III Parádra Hill Mark (helio.)	24 48 11 29 14 51	4 790448 4 856654 5 075951	61723 71888 119111	11 690 13 615 22 559	164	Kárunjhar, III Bela, V Kárunjhar Hill Mark No. 3	68 8 24 3 14 41	5 187766 3 972996 5 196836	154087 9397 157339	29 183 1 780 29 799	" " "
153	Khársar, II Kárunjhar, III Sádalwáh Hill Mark (helio.)	7 47 35 9 50 19	4 586477 4 686907 4 935526	38590 48630 86204	7 309 9 210 16 326	165	Khársar, II Kárunjhar, III Kárunjhar Hill Mark No. 3	5 14 43 1 17 45 33	3 972996 4 958857 4 935526	9397 90961 86204	1 780 17 228 16 326	" " "
154	Akoria, LXI* Bhílgaon, LXIV* Churia Hill Peak No. 1	60 2 54 87 40 26	5 026223 5 088123 4 816042	106224 122496 65470	20 118 23 200 12 004	166	Viráwáh, I Kárunjhar, III Kárunjhar Hill Peak No. 1	6 5 28 63 15 20	4 130555 5 055662 5 075951	13507 113674 119111	2 558 21 529 22 559	" " "
155	Bhílgaon, LXIV* Jhunda, LXVI* Churia Hill Peak No. 1	137 32 22 29 12 18	5 167218 5 026223 4 698255	146966 106224 49918	27 835 20 118 9 454	167	Viráwáh, I Bela, V Kárunjhar Hill Peak No. 2 (helio.)	37 4 1 27 55 27	5 1165302 5 055093 5 342411	146320 113682 219994	27 712 21 531 41 666	" " "
156	Viráwáh, I Khársar, II Churia Hill Peak No. 2	49 9 51 6 17 3	5 042667 4 203663 5 079533	110323 159611 120097	20 895 3 023 22 746	168	Viráwáh, I Khársar, II Kárunjhar Hill Peak No. 2 (helio.)	48 58 17 62 3 59	4 987082 5 055693 5 079533	97069 113682 120097	18 384 21 531 22 746	" " "
157	Bhílgaon, LXIV* Viráwáh, I Churia Hill Peak No. 2	8 18 37 104 59 28	4 203063 5 028056 5 006144	159611 106673 101425	3 023 20 203 19 209	169	Kárunjhar, III Bela, V Parbatána Bet Platform	78 36 27 46 12 39	5 273869 5 146082 5 196836	187875 138351 157339	35 582 26 203 29 799	" " "
158	Khársar, II Kárunjhar, III Kámpur Hill Mark (helio.)	23 24 16 64 54 42	4 534744 4 892677 4 935526	34257 78105 86204	6 488 14 793 16 326	170	Kárunjhar, III Erál, IV Farbatána Bet Platform	43 32 58 42 2 12	5 153370 5 140982 5 313873	142354 138351 206003	26 061 26 203 39 016	" " "
159	Viráwáh, I Khársar, II Kámpur Hill Mark (helio.)	40 24 1 44 51 45	4 892677 4 929459 5 079533	78105 85008 120097	14 793 16 100 22 746	171	Bela, V Gángta, VII Khadrí Hill Mark (helio.)†	36 15 50 97 36 57	4 938817 5 163010 5 024671	86859 145549 105845	16 451 27 566 20 046	" " "
160	Khársar, II Kárunjhar, III Kárunjhar Hill Mark No. 1 (helio.)	9 34 45 40 46 1	4 270264 4 863987 4 935526	18632 73112 86204	3 529 13 847 16 326	172	Bela, V Dájka, VI Gadhada Hill Mark (helio.)	118 46 13 5 53 13	4 931349 3 990572 4 903741	85379 9090 80120	16 170 1 892 15 174	" " "
161	Viráwáh, I Khársar, II Kárunjhar Hill Mark No. 1 (helio.)	34 19 5 77 50 46	4 863987 5 103027 5 079533	73112 126773 120097	13 847 24 010 22 746	173	Bela, V Gángta, VII Gadhada Hill Mark (helio.)	47 6 2 4 13 33	4 997013 3 999572 5 024671	99315 9990 105845	18 810 1 892 20 046	" " "
162	Viráwáh, I Khársar, II Kárunjhar Hill Mark No. 2	38 56 8 78 28 43	4 929534 5 122426 5 079533	85022 132564 120097	16 103 25 107 22 746	174	Bela, V Dájka, VI Bela Fort (helio.)	37 31 51 9 41 16	4 822826 4 264104 4 903741	66501 18370 80120	12 595 3 479 15 174	" " "

* These stations appertain to the Kársáli Longitudinal Series. † For another triangle to this point, see the Synoptical Volume of the Cutch Coast Series.

SECONDARY TRIANGULATION. TRIANGLES.

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		
175	Bela, V	55 42 41	4.821201	66252	12.548	187	Dājka, VI	118 18 23	4.875966	75150	14.234	Inch 18	
	Dājka, VI	31 55 37	4.627432	42406	8.032		Kanduka, IX	10 30 57	4.192554	15580	2.951		"
	Mouana Hill Pillar	4.903741	80120	15.174	Mānjunvās Hill Mark No. 2 (helio.)		4.824864	66506	12.596	"	"		
176	Kārunjhar, III	13 28 14	4.627432	42406	8.032	188	Dājka, VI	157 31 18	4.868219	73828	13.983	"	
	Bela, V	106 43 40	5.2411309	174341	33.019		Kanduka, IX	2 19 55	3.895252	7857	1.488		"
	Mouana Hill Pillar	5.196836	157339	29.799	Fatehgad Fort Tower No. 1		4.822864	66506	12.596	"	"		
177	Eval, IV	53 19 18	5.027154	106452	20.161	189	Dājka, VI	75 1 10	4.789244	61532	11.658	"	
	Pata-i-Shāh, VIII	18 23 37	4.620378	41883	7.932		Pata-i-Shāh, VIII	7 4 59	3.895252	7857	1.488		"
	Sāntalpur Temple No. 1	5.100478	126031	23.870	Fatehgad Fort Lower No. 1		4.800122	63113	11.953	"	"		
178	Eval, IV	52 54 55	5.025555	106061	20.087	190	Dājka, VI	150 29 37	4.860148	72468	13.725	"	
	Pata-i-Shāh, VIII	18 31 4	4.625570	42225	7.997		Kanduka, IX	2 38 3	3.830091	6762	1.281		"
	Sāntalpur Temple No. 2	5.100478	126031	23.870	Fatehgad Fort Tower No. 2 (helio.)		4.822864	66506	12.596	"	"		
179	Eval, IV	83 11 0	5.086108	121929	23.093	191	Pata-i-Shāh, VIII	56 22 2	4.860148	72468	13.725	"	
	Bela, V	21 21 19	4.650469	44717	8.469		Kanduka, IX	44 24 19	4.784639	6903	11.535		"
	Modhutra Hill Mark (helio.)	5.075955	118865	22.512	Fatehgad Fort Tower No. 2 (helio.)		4.931987	85504	16.194	"	"		
180	Eval, IV	13 8 13	4.919645	83108	15.740	192	Bela, V	67 37 12	5.022217	105249	19.933	"	
	Pata-i-Shāh, VIII	7 1 27	4.950460	44717	8.469		Gāngta, VII	43 57 29	4.807668	79007	14.964		"
	Modhutra Hill Mark (helio.)	5.100478	126031	23.870	Fatehgad Hill Mark (helio.)		5.024671	105845	20.046	"	"		
181	Eval, IV	28 7 51	4.904719	80301	15.208	193	Eval, IV	38 43 19	4.807668	79007	14.964	"	
	Pata-i-Shāh, VIII	19 36 0	4.756880	57132	10.821		Bela, V	71 2 18	5.077182	119419	22.623		"
	Chadchat Hill Mark (helio.)	5.100478	126031	23.870	Fatehgad Hill Mark (helio.)		5.075955	118865	22.512	"	"		
182	Eval, IV	83 46 35	5.151019	141586	26.815	194	Bela, V	24 33 47	4.530035	33887	6.418	"	
	Bela, V	39 39 5	4.958185	90883	17.213		Dājka, VI	54 48 20	4.823589	66618	12.617		"
	Piprāla Hill Mark (helio.)	5.075955	118865	22.512	Gedi Hill Math		4.903741	80120	15.174	"	"		
183	Eval, IV	13 43 48	4.638226	43474	8.234	195	Bela, V	27 1 34	4.565027	36731	6.957	"	
	Pata-i-Shāh, VIII	29 44 52	4.958185	90883	17.213		Dājka, VI	55 21 16	4.822826	66501	12.595		"
	Piprāla Hill Mark (helio.)	5.100478	126031	23.870	Gedi Hill Mark		4.903741	80120	15.174	"	"		
184	Dājka, VI	118 17 38	4.868166	73819	13.981	196	Dājka, VI	64 0 46	4.780043	60262	11.413	"	
	Kanduka, IX	9 12 38	4.127714	34419	2.541		Kanduka, IX	33 13 20	4.505027	36731	6.957		"
	Mānjunvās Hill Mark No. 1	4.822864	66506	12.596	Gedi Hill Mark		4.822864	66506	12.596	"	"		
185	Pata-i-Shāh, VIII	59 0 14	4.868166	73819	13.981	197	Bela, V	30 32 55	4.618365	41530	7.866	"	
	Kanduka, IX	37 49 44	4.722760	52815	10.003		Dājka, VI	48 7 58	4.784248	60848	11.524		"
	Mānjunvās Hill Mark No. 1	4.931987	85504	16.194	Desalpur Hill Mark (helio.)		4.903741	80120	15.174	"	"		
186	Pata-i-Shāh, VIII	60 41 37	4.875966	75156	14.234	198	Bela, V	41 7 16	4.858093	72126	13.660	"	
	Kanduka, IX	36 31 25	4.710071	51295	9.715		Gāngta, VII	33 41 54	4.784248	60848	11.524		"
	Mānjunvās Hill Mark No. 2 (helio.)	4.931987	85504	16.194	Desalpur Hill Mark (helio.)		5.024671	105845	20.046	"	"		

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	Theodolite used			
199	Gāngta, VII Kanduka, IX Lakra Hill Mark (helio.)	54 51 35 14 54 25	4 895037 4 392774 4 954757	78530 24704 90107	14.873 4.679 17.066	" " 211	Pata-i-Shah, VIII Kāmer, X Adesar Temple	109 53 33 10 1 11	4 828264 4 095500 4 792897	67330 12459 62072	12.754 2.360 11.756	Inch 18 "				
200	Bela, V Gāngta, VII Kākānda Bet Hill (helio.)*	15 22 3 122 26 33	4 620837 5 123872 5 024671	41766 133006 105845	7.910 25.191 20.040	" 212	Kāmer, X Chitrod, XI Lākhāgad Hill Mark	100 58 9 37 22 46	4 981840 4 773102 4 812406	95905 50306 64924	18.164 11.232 12.596	"				
201	Dājka, VI Gāngta, VII Sāngad Temple	51 33 54 12 2 7	4 986513 4 411712 5 044746	96942 25805 110853	18.360 4.887 20.995	" 213	Pata-i-Shah, VIII Kāmer, X Lākhāgad Hill Mark	71 46 14 12 0 20	4 773102 4 113541 4 792897	59306 12998 62072	11.232 2.400 11.756	"				
202	Gāngta, VII Kanduka, IX Sāngad Temple	24 49 18 87 1 4	4 610139 4 986513 4 954757	49751 96942 90107	7.718 18.360 17.066	" 214	Dājka VI Gāngta, VII Kanduka Hill Mark	58 27 58 35 46 48	4 976548 4 812854 5 044746	94743 64991 110853	17.944 12.309 20.995	"				
203	Dājka, VI Kanduka, IX Hamirpur Hill Mark No. 1	28 18 21 11 24 41	4 603395 4 313205 4 822864	49352 20592 66506	9.347 3.960 12.596	" 215	Pata-i-Shah, VIII Chitrod, XI Tindalva	37 37 43 37 19 22 119 2 55	4 686202 4 865958 5 024882	48551 73444 105897	9.195 13.910 20.056	"				
204	Dājka, VI Kanduka, IX Hamirpur Hill Mark No. 2	44 39 57 19 28 51	4 715601 4 391748 4 822864	51952 24046 66506	9.859 4.668 12.596	" 216	Kāmer, X Chitrod, XI Tindalva	43 21 41 69 59 1 66 39 18	4 686202 4 822440 4 812406	48551 66442 64924	9.195 12.584 12.296	"				
205	Dājka, VI Kanduka, IX Khāndek Hill Mark	66 53 49 32 25 6	4 702323 4 557873 4 822864	61990 36130 66506	11.741 6.843 12.596	" 217	Pata-i-Shah, VIII Kanduka, IX Tindalva	11 36 7 47 26 44	4 302142 4 865958 4 931987	20051 73444 85504	3.798 13.910 16.194	"				
206	Pata-i-Shah, VIII Kanduka, IX Khāndek Hill Mark	31 30 49 14 37 16	4 702323 4 476203 4 931987	61990 29937 85504	11.741 5.670 16.194	" 218	Pata-i-Shah, VIII Tindalva Motiyar Hill Mark	14 33 55 5 40 6	4 727580 4 321696 4 865958	53495 20975 73444	10.115 3.973 13.910	"				
207	Gāngta, VII Kanduka, IX Umāya Hill Fort (helio.)	12 38 55 114 54 0	4 395960 5 013202 4 954757	24886 103086 90107	4.713 19.524 17.066	" 219	Pata-i-Shah, VIII Kāmer, X Motiyar Hill Mark	72 33 31 19 43 59	4 772804 4 321696 4 792897	59266 20975 62072	11.225 3.973 11.756	"				
208	Dājka, VI Gāngta, VII Umāya Hill Fort (helio.)	68 17 19 24 12 30	5 013202 4 658601 5 044746	103086 45499 110853	19.524 8.617 20.995	" 220	Pata-i-Shah, VIII Kanduka, IX Kidiānagar Hill Mark	17 8 4 31 52 48	4 523367 4 776863 4 931987	33371 59822 85504	6.320 11.330 16.194	"				
209	Dājka, VI Pata-i-Shah, VIII Moda Hill Platform	4 55 43 7 15 47	4 409530 4 577297 4 800122	25676 37783 63113	4.863 7.156 11.953	" 221	Pata-i-Shah, VIII Tindalva Kidiānagar Hill Mark	5 31 57 22 32 2	4 177527 4 776863 4 865958	15050 59822 73444	2.850 11.330 13.910	"				
210	Pata-i-Shah, VIII Kāmer, X Lākhāgad Hill Fort	123 35 46 4 54 10	4 819969 3 831135 4 792897	66065 6779 62072	12.512 1.284 11.756	" 222	Chitrod, XI Tindalva Sat House	12 36 27 31 6 50	4 185624 4 559901 4 686202	15333 36300 48551	2.904 6.875 9.195	"				

* For another triangle to this point, see the Synoptical Volume of the Cuttack Coast Series, by which the value of the common side was greater by 26 feet.

No of Triangle	Station	Corrected Plane Angle	Distance			Theodolite used		
			Log. feet	Feet	Miles			
223	Kanduka, IX Tindalva Sai Hill Temple	h.s.	47 33 58	4 245468	17598	3 333	Inch 18	
			75 11 41	4 362715	23052	4 366		"
				4 302142	20051	3 798		"
224	Kanduka, IX Chitrod, XI Badargat Hill*	h.s.	45 17 39	4 640060	43658	8 269	"	
			38 45 43	4 584990	38458	7 284		"
225	Chitrod, XI Tindalva Vitrio Hill Temple†	h.s.	45 57 52	4 547633	35289	6 683	"	
			52 30 3	4 590431	38943	7 376		"
226	Chitrod, XI Tindalva Kidiangaru Hill Peak	h.s.	28 44 1	4 373534	23634	4 476	"	
			52 13 48	4 589514	38861	7 360		"
227	Kanner, X Chitrod, XI Kidiangaru Hill Peak	h.s.	35 39 46	4 589514	38861	7 360	"	
			41 15 0	4 642949	43949	8 324		"
228	Chitrod, XI Tindalva Kidiangaru Hill (helio.)	h.s.	27 3 5	4 344106	22000	4 184	"	
			64 30 49	4 642283	43882	8 311		"
229	Kanner, X Chitrod, XI Kidiangaru Hill (helio.)	h.s.	42 20 43	4 642283	43882	8 311	"	
			42 55 56	4 647115	44373	8 404		"
230	Pata-i-Shah, VIII Kanner, X Makel Hill Mark (helio.)	h.s.	38 57 3	4 671387	46923	8 887	"	
			17 18 50	4 346618	22214	4 207		"
231	Pata-i-Shah, VIII Kanner, X Palana Temple	h.s.	10 47 25	4 476167	29934	5 669	"	
			12 3 11	4 523594	33388	6 324		"
232	Kanner, X Chitrod, XI Palana Temple	h.s.	125 1 40	4 932912	85687	16 229	"	
			16 37 22	4 476167	29934	5 669		"
233	Kanner, X Chitrod, XI Varnu Vandh Tomb	h.s.	157 14 7	5 089011	122747	23 248	"	
			10 57 17	4 780188	60282	11 417		"
234	Kanner, X Kesari, XIII Varnu Vandh Tomb	h.s.	65 47 0	4 835212	68425	12 959	"	
			53 27 47	4 780188	60282	11 417		"

* For another triangle to this point, see the Synoptical Volume of the Cutch Coast Series, by which the value of the common side was less by 1 foot.
† For another triangle to this point, see the Synoptical Volume of the Cutch Coast Series, by which the value of the common side was greater by 1 foot.

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			
247	Kánmer, X	11	8	4.181032	13172	2.873	Inch	239	Chitrod, XI	73	44	4.789741	61623	11.671	Inch
	Chitrod, XI	44	36	4.741031	53161	10.447	18		Mánába, XII	37	7	4.588179	38742	7.337	"
	Mevása Hill Mark No. 1			4.812406	64924	12.296	"		Katariya Tree			4.778030	59983	11.360	"
248	Kánmer, X	72	46	4.748075	55985	10.603	"	260	Mánába, XII	16	45	4.293882	16673	3.726	"
	Mánába, XII	50	16	4.653976	45079	8.538	"		Vándhia, XIV	64	36	4.780741	61623	11.671	"
	Mevása Hill Mark No. 2			4.691441	49141	9.307	"		Katariya Tree			4.828933	67442	12.773	"
249	Chitrod, XI	68	56	4.748075	55985	10.603	"	261	Chitrod, XI	27	6	4.517430	32918	6.334	"
	Mánába, XII	21	58	4.351240	22451	4.232	"		Mánába, XII	29	0	4.544596	35043	6.937	"
	Mevása Hill Mark No. 2			4.778030	59983	11.360	"		Rajthali Mark (helio.)			4.778030	59983	11.360	"
250	Kánmer, X	4	35	3.763765	5804	1.099	"	262	Chitrod, XI	42	31	4.602592	40049	7.585	"
	Chitrod, XI	112	3	4.828143	67320	12.750	"		Vándhia, XIV	36	15	4.544596	35043	6.937	"
	Chitrod Hill Fort (helio.)			4.812406	64924	12.296	"		Rajthali Mark (helio.)			4.764314	58118	11.007	"
251	Chitrod, XI	132	11	4.793549	62165	11.774	"	263	Chitrod, XI	55	0	4.685787	48505	9.187	"
	Vándhia, XIV	3	58	3.763765	5804	1.099	"		Vándhia, XIV	43	58	4.629140	42574	8.063	"
	Chitrod Hill Fort (helio.)			4.764314	58118	11.007	"		Mánába Mark (helio.)			4.764314	58118	11.007	"
252	Mánába, XII	48	35	4.751341	56408	10.683	"	264	Chitrod, XI	14	36	4.335284	21641	4.999	"
	Vándhia, XIV	67	40	4.842455	69575	13.177	"		Mánába, XII	29	45	4.629140	42574	8.063	"
	Chitrod Hill Mark (helio.)*			4.828933	67442	12.773	"		Mánába Mark (helio.)			4.778030	59983	11.360	"
253	Chitrod, XI	52	3	4.724264	52099	10.038	"	265	Chitrod, XI	17	24	4.276313	18894	3.578	"
	Mánába, XII	11	8	4.113387	12983	2.459	"		Vándhia, XIV	49	36	4.681942	48077	9.106	"
	Mevása Hill Mark No. 3 (helio.)			4.778030	59983	11.360	"		Shikárpur Fort (helio.)			4.764314	58118	11.007	"
254	Kánmer, X	63	8	4.724264	52999	10.038	"	266	Chitrod, XI	52	12	4.687866	48738	9.231	"
	Mánába, XII	61	6	4.716234	52028	9.854	"		Mánába, XII	51	13	4.681942	48077	9.106	"
	Mevása Hill Mark No. 3 (helio.)			4.691441	49141	9.307	"		Shikárpur Fort (helio.)			4.778030	59983	11.360	"
255	Kánmer, X	57	41	4.725944	53204	10.077	"	267	Mánába, XII	9	13	4.380459	24014	4.548	"
	Mánába, XII	70	59	4.774627	59515	11.272	"		Vándhia, XIV	17	32	4.654449	45128	8.547	"
	Khánpur Hill Math			4.691441	49141	9.307	"		Gubaría Hill Mark (helio.)			4.828933	67442	12.773	"
256	Mánába, XII	55	8	4.757783	57251	10.843	"	268	Vándhia, XIV	49	10	4.748075	55977	10.602	"
	Vándhia, XIV	49	41	4.725944	53204	10.077	"		Málía, XVI	30	11	4.570482	37195	7.044	"
	Khánpur Hill Math			4.828933	67442	12.773	"		Rámra Hill Mark (helio.)			4.861540	72701	13.769	"
257	Kánmer, X	31	34	4.468962	29442	5.576	"	269	Chitrod, XI	39	27	4.626234	42290	8.009	"
	Mánába, XII	29	20	4.401671	27553	5.218	"		Mánába, XII	76	12	4.810403	64625	12.240	"
	Thoráthi Hill Mark (helio.)			4.691441	49141	9.307	"		Surajbári Hill Mark (helio.)			4.778030	59983	11.360	"
258	Chitrod, XI	27	33	4.468962	29442	5.576	"	270	Chitrod, XI	30	10	4.512635	32556	6.166	"
	Mánába, XII	42	54	4.636824	43333	8.207	"		Vándhia, XIV	86	2	4.810403	64625	12.240	"
	Thoráthi Hill Mark (helio.)			4.778030	59983	11.360	"		Surajbári Hill Mark (helio.)			4.764314	58118	11.007	"

* For another triangle to this point, see the Synoptical Volume of the Cutch Coast Series.

SECONDARY TRIANGULATION. TRIANGLES.

No. of Triangle	Station	Corrected Plane Angle	Distance			No. of Triangle	Station	Corrected Plane Angle	Distance			Theodolite
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
271	Kámer, X Mánába, XII Sand Bid Hill (helio.)	16 34 52	4.140608	14113	2.673	288	Mália, XVI Phagásia, XIX Náni Barál Fort (helio.)	50 21 7	4.604132	40191	7.612	Inch 18
		66 58 19	4.058132	45513	8.020			22 33 32	4.301569	20025	3.793	
			4.0691441	49141	9.307				4.698043	49893	9.450	
272	Keesári, XIII Kákrej, XV Vára Dugar Bet Hill (helio.)	154 57 36	4.937072	86511	16.385	284	Kákrej, XV Mália, XVI Pikádi Tower	44 26 51	4.639162	43567	8.251	"
		1 44 22	3.792695	6204	1.175			30 41 43	4.501878	31760	6.015	
			4.907680	80850	15.313				4.779138	60136	11.389	
273	Kánmer, X Keesári, XIII Vára Dugar Bet Hill (helio.)	5 16 6	3.792695	6204	1.175	285	Kákrej, XV Charádvá, XVIII Halvad Palace*	29 18 15	4.668828	46647	8.835	"
		99 4 45	4.824281	66724	12.637			109 32 28	4.951359	89817	17.011	
			4.815996	65463	12.398				4.797411	62721	11.879	
274	Mánába, XII Kákrej, XV Handi Bet Hill (helio.)	24 23 4	4.541336	34780	6.587	286	Mália, XVI Phagásia, XIX Gungun Tomb	14 41 49	4.122315	13253	2.510	"
		49 54 22	4.809192	64445	12.206			58 4 23	4.646749	44335	8.397	
			4.909003	81097	15.359				4.686043	49893	9.450	
275	Mánába, XII Keesári, XIII Handi Bet Hill (helio.)	39 20 45	4.663871	46118	8.735	287	Mália, XVI Rangpur, XVII Gungun Tomb	30 47 1	4.685642	48489	9.184	"
		62 22 8	4.809192	64445	12.206			27 54 6	4.646749	44335	8.397	
			4.852640	71226	13.490				4.908168	80941	15.330	
276	Mánába, XII Kákrej, XV Kájarda Hill Mark (helio.)	16 46 11	4.589890	38895	7.366	288	Rangpur, XVII Phagásia, XIX Khevália Temple	11 48 4	4.075125	11888	2.252	"
		20 12 50	4.668185	46578	8.822			77 1 34	4.753170	56646	10.728	
			4.909003	81097	15.359				4.764309	58118	11.007	
277	Keesári, XIII Kákrej, XV Kájarda Hill Mark (helio.)	28 13 7	4.589890	38895	7.366	289	Charádvá, XVIII Sápakda, XXI Saraubda Hill Temple	44 24 55	4.753633	56706	10.740	"
		72 23 51	4.894352	78460	14.850			14 58 30	4.320914	20937	3.965	
			4.907680	80850	15.313				4.843455	69736	13.208	
278	Keesári, XIII Kákrej, XV Chikili Hill (helio.)	21 18 58	4.468522	29412	5.570	290	Charádvá, XVIII Sápakda, XXI Saraubda Hill Mark	43 25 21	4.741891	55194	10.453	"
		66 28 40	4.870327	74137	14.051			16 51 33	4.367127	23288	4.411	
			4.907680	80850	15.313				4.843455	69736	13.208	
279	Keesári, XIII Kákrej, XV Khambaria Hill Mark (helio.)	4 33 54	4.251379	17839	3.379	291	Dungarpur, XX Chitrákheda, XXIII Máthak Tree	74 6 19	4.844058	69833	13.226	"
		16 34 44	4.808876	63955	12.113			23 38 39	4.464193	29120	5.515	
			4.907680	80850	15.313				4.857004	71946	13.626	
280	Kákrej, XV Mália, XVI Mália Tower No. 1 (helio.)	3 5 3	3.808880	6440	1.220	292	Sápakda, XXI Chitrákheda, XXIII Máthak Tree	58 45 28	4.844058	69833	13.226	"
		27 4 33	4.736247	54481	10.318			45 12 0	4.763097	57950	10.977	
			4.779138	60136	11.389				4.899085	79266	15.012	
281	Mália, XVI Phagásia, XIX Mália Tomb (helio.)	61 10 34	4.669691	46740	8.852	293	Dungarpur, XX Chitrákheda, XXIII Sara Temple	40 28 3	4.693043	49322	9.341	"
		8 5 8	3.873280	7504	1.421			68 19 18	4.848930	70620	13.375	
			4.698043	49893	9.450				4.857004	71946	13.626	
282	Kákrej, XV Phagásia, XIX Mália Tomb (helio.)	34 41 32	4.660691	46740	8.852	294	Dungarpur, XX Sápakda, XXI Sara Temple	19 9 5	4.476381	29949	5.672	"
		40 58 4	4.731113	53841	10.197			50 40 38	4.848930	70620	13.375	
			4.900704	79502	15.069				4.937931	85690	18.229	

* For another triangle to this point, see the Synoptical Volume of the Gujratá Longitudinal Series, by which the value of the common side was less by 1 foot.

No. of Triangle	Station	Corrected Plane Angle			Distance			No. of Triangle	Station	Corrected Plane Angle	Distance			No. of Triangle								
		°	'	"	Log. feet	Foot	Miles				Log. feet	Foot	Miles									
295	Rangpur, XVII Virpur, XXII Morvi Temple No. 1	10	46	54	4	523088	33349	6	316	Inch	h.s.	307	Mahidhar, XXVII Bháyásar, XXVIII Bichri	27	1	45	4	713904	51749	9	801	Inch
		11	7	26	4	536493	34395	6	514	"				75	33	35	5	042482	110276	20	886	"
					4	822890	66511	12	597	"							5	045855	111136	21	048	"
296	Dungarpur, XX Vankaner, XXIV Morvi Temple No. 2	79	33	49	4	922699	83695	15	851	"	h.s.	308	Khakhána, XXVI Bháyásar, XXVIII Pipalia	38	44	12	4	898068	77590	14	695	"
		37	18	49	4	712543	51587	9	770	"				4	45236	27876	5	280	"			
					4	880297	75910	14	377	"				4	988329	97349	18	437	12			
297	Dungarpur, XX Chitrakheda, XXIII Vankaner Minaret	60	57	31	4	860394	72509	13	733	"	h.s.	309	Khakhána, XXVI Bichri Pipalia	19	49	7	4	424747	26592	5	036	18
		58	52	31	4	851245	70998	13	447	"				4	445236	27876	5	280	12			
					4	857004	71946	13	626	"				4	708257	51081	9	674	12			
298	Chitrakheda, XXIII Tarkia, XXV Vankaner Minaret	79	13	43	4	952585	89637	16	981	"	h.s.	310	Khakhána, XXVI Pipalia Khedva Hill Temple	68	15	43	4	452781	28365	5	372	18
		52	36	26	4	860394	72509	13	733	"				4	340509	21903	4	148	12			
					4	832496	67998	12	878	"				4	445236	27876	5	280	12			
299	Chitrakheda, XXIII Tarkia, XXV Vankaner Temple	78	28	29	4	947130	88538	16	769	"	h.s.	311	Khakhána, XXVI Bichri Khedva Hill Temple	88	4	50	4	739575	54900	10	368	18
		52	42	57	4	856693	71894	13	616	"				4	340509	21903	4	148	12			
					4	832496	67998	12	878	"				4	708257	51081	9	674	12			
300	Vankaner, XXIV Tarkia, XXV Navagam Hill Tower	36	50	4	4	748322	56017	10	609	"	h.s.	312	Bichri Pipalia Khorúna Tower	17	30	17	4	375732	23754	4	499	"
		69	31	13	4	942175	87534	16	578	"				4	678764	47277	9	039	"			
					4	952592	89659	16	981	"				4	424747	26592	5	036	"			
301	Chitrakheda, XXIII Tarkia, XXV Navagam Hill Tower	44	15	26	4	748322	56017	10	609	"	h.s.	313	Bichri Pipalia Rajkot Church	92	57	34	4	578610	37899	7	178	"
		13	36	41	4	277370	18935	3	86	"				4	409361	25666	4	861	"			
					4	832496	67998	12	878	"				4	424747	26592	5	036	"			
302	Vankaner, XXIV Tarkia, XXV Tarkia Hill Peak	4	39	43	3	890549	7772	1	472	"	h.s.	314	Bháyásar, XXVIII Bichri Rajkot Temple	20	43	29	4	332195	21488	4	070	18
		64	59	13	4	937813	86659	16	413	"				4	775552	59642	11	296	12			
					4	952592	89659	16	981	"				4	713904	51749	9	801	12			
303	Chitrakheda, XXIII Vankaner, XXIV Tarkia Hill Peak	77	45	19	4	937813	86659	16	413	"	h.s.	315	Bháyásar, XXVIII Bichri Rajkot Palace	20	15	41	4	319803	20883	3	255	18
		42	52	34	4	80581	60337	11	427	"				4	772828	59269	11	225	12			
					4	882539	76352	14	451	"				4	713904	51749	9	801	12			
304	Khakhána, XXVI Mahidhar, XXVII Chotila Hill Temple	28	57	0	4	686117	48542	9	194	"	h.s.	316	Bháyásar, XXVIII Pipalia Rajkot Palace	25	56	3	4	550508	35533	3	728	18
		64	56	11	4	958399	96855	17	209	"				4	722828	59269	11	225	12			
					5	000213	100049	18	949	"				4	889808	77590	14	695	12			
305	Tarkia, XXV Khakhána, XXVI Chotila Hill Temple	108	59	15	4	958399	96855	17	209	"	h.s.	317	Morvaiya, XXX Jithuri, XXXIII Baldhot Hill Temple	69	4	35	5	059029	114559	21	697	18
		16	24	15	4	433578	27138	5	140	"				5	081337	95794	18	143	"			
					4	893967	78337	14	837	"				5	024272	103748	20	028	"			
306	Khakhána, XXVI Mahidhar, XXVII Bichri	87	25	50	5	024282	110276	20	886	"	h.s.	318	Chitaila, XXIX Jithuri, XXXIII Baldhot Hill Temple	87	26	45	5	059029	114559	21	697	"
		27	33	51	4	708257	51081	9	674	"				4	435754	27274	5	166	"			
					5	000213	100049	18	949	"				5	050793	112407	21	289	"			

SECONDARY TRIANGULATION. TRIANGLES.

No. of Triangle	Station	Corrected Plane Angle			Distance			Theodolite used
		°	'	"	Log. feet	Feet	Miles	
319	Bhāyāsar, XXVIII	67 45 13	5° 04' 29.3	110737	30005	5.682	Inch 12	
	Chitalia, XXIX	56 27 42	4° 09' 88.01	99724	63799	12.083	"	
	Movaiya	55 47 5	4° 95' 35.6	98936	60151	11.392	"	
320	Chitalia, XXIX	50 41 38	4° 08' 01.83	95540	53809	10.191	"	
	Jithuri, XXXIII	63 44 53	5° 04' 42.93	110737	74345	14.081	"	
	Movaiya	5° 05' 07.93	112407	60151	11.392	"		
321	Chitalia, XXIX	4 0 38	4° 02' 06.89	10488	20071	3.801	"	
	Movaiya, XXX	47 36 4	5° 04' 42.93	110737	74345	14.081	"	
	Movaiya	5° 07' 01.79	117538	75260	14.254	"		
322	Chitalia, XXIX	17 55 44	4° 06' 64.97	92576	52035	9.151	"	
	Movaiya, XXX	5 4 41	4° 42' 51.83	26618	52035	9.151	"	
	Dadva Hill Tree	5° 07' 01.79	117538	22.261	"	"		
323	Chitalia, XXIX	21 56 22	4° 03' 76.15	86619	16.405	"	"	
	Movaiya	6 35 35	4° 42' 51.83	26618	5.041	"	"	
	Dadva Hill Tree	5° 04' 42.93	110737	20.973	"	"		
324	Movaiya, XXX	27 3 15	4° 58' 09.13	38009	7.216	12	"	
	Trākūda, XXXI	63 57 25	4° 87' 65.62	75260	14.254	18	"	
	Mevāsa No. 2	88 59 20	4° 92' 29.93	83752	15.862	12	"	
325	Movaiya, XXX	61 4 25	4° 84' 52.28	70021	13.262	"	"	
	Mevāsa No. 2	48 45 10	4° 77' 92.43	60151	11.392	"	"	
	Mahika	70 10 25	4° 87' 65.62	75260	14.254	"	"	
326	Bhāyāsar, XXVIII	5 58 27	4° 67' 91.05	47764	9.046	18	"	
	Trākūda, XXXI	4 85 91.43	72301	13.693	"	"		
	Mahika	164 57 41	5° 07' 58.24	119076	22.552	12	"	
327	Trākūda, XXXI	114 44 47	4° 84' 26.61	69608	13.183	18	"	
	Mevāsa No. 2	35 26 50	4° 64' 44.52	8.410	"	"		
	Anagad Hill Fort	4° 58' 09.13	38009	7.216	"	"		
328	Mevāsa No. 2	3 42 52	3° 66' 27.75	4648	0.880	"	"	
	Mahika	73 41 22	4° 83' 79.68	68800	13.042	"	"	
	Umvāda Hill Mark	4° 84' 52.28	70021	13.262	"	"		
329	Movaiya, XXX	61 22 4	4° 83' 79.68	68800	13.042	"	"	
	Mevāsa No. 2	45 2 18	4° 74' 43.90	55512	10.514	"	"	
	Umvāda Hill Mark	4° 87' 65.62	75260	14.254	"	"		
330	Movaiya, XXX	33 15 21	4° 61' 57.37	41280	7.818	"	"	
	Mevāsa No. 2	57 56 38	4° 80' 81.2	63799	12.083	"	"	
	Daiya Hill Temple	4° 87' 65.62	75260	14.254	"	"		
331	Movaiya, XXX	27 49 4	4° 47' 18.6	30005	5.682	"	"	
	Mahika	82 52 5	4° 80' 48.12	63799	12.083	"	"	
	Daiya Hill Temple	4° 77' 92.43	60151	11.392	"	"		
332	Movaiya, XXX	45 40 9	4° 73' 08.51	53809	10.191	"	"	
	Mahika	81 14 9	4° 87' 12.52	74345	14.081	"	"	
	Umrāli Hill Mark	4° 77' 92.43	60151	11.392	"	"		
333	Movaiya, XXX	15 24 16	4° 30' 25.73	20071	3.801	"	"	
	Mevāsa No. 2	79 42 35	4° 81' 52.52	74345	14.081	"	"	
	Umrāli Hill Mark	4° 87' 65.62	75260	14.254	"	"		
334	Movaiya, XXX	94 6 38	4° 43' 92.71	27496	5.208	18	"	
	Movaiya	63 31 40	4° 39' 22.85	24077	4.674	"	"	
	Khokhri Fort	4° 02' 06.89	10488	1.986	"	"		
335	Jithuri, XXXIII	65 51 12	4° 94' 51.58	88137	16.693	"	"	
	Movaiya	32 35 51	4° 71' 62.99	52035	9.855	"	"	
	Isāpur Hill Temple	4° 98' 01.83	93540	18.095	"	"		
336	Chitalia, XXIX	52 30 23	4° 94' 51.58	88137	16.693	"	"	
	Movaiya	32 57 38	4° 78' 13.02	60137	11.446	"	"	
	Isāpur Hill Temple	5° 04' 42.93	110737	20.973	"	"		
337	Chitalia, XXIX	43 13 14	4° 88' 10.20	76194	14.431	"	"	
	Movaiya	41 12 26	4° 86' 59.94	73298	13.882	"	"	
	Rānparda Hill Temple	5° 04' 42.93	110737	20.973	"	"		
338	Chitalia, XXIX	7 28 24	4° 61' 12.88	46859	7.738	"	"	
	Jithuri, XXXIII	13 29 35	4° 86' 59.94	73298	13.882	"	"	
	Rānparda Hill Temple	5° 05' 07.93	112407	21.289	"	"		
339	Iria, XXXV	57 36 15	5° 10' 58.08	127588	24.164	"	"	
	Sakhpur, XXXVI	19 57 20	4° 71' 24.02	51571	9.767	"	"	
	Bābra Fort (helio.)	5° 16' 89.59	147557	27.946	"	"		
340	Chitalia, XXIX	57 47 48	5° 08' 73.33	102031	19.324	"	"	
	Movaiya	55 30 56	4° 99' 35.54	99393	18.824	"	"	
	Pipra Hill Mark (helio.)	5° 04' 42.93	110737	20.973	"	"		
341	Chitalia, XXIX	7 6 10	4° 26' 28.0	18462	3.497	"	"	
	Jithuri, XXXIII	41 44 5	4° 99' 35.54	99393	18.824	"	"	
	Pipra Hill Mark (helio.)	5° 05' 07.93	112407	21.289	"	"		
342	Trākūda, XXXI	7 53 8	4° 68' 59.63	48525	9.190	"	"	
	Devki Gāol, XXXII	12 27 53	4° 88' 27.54	76340	14.458	"	"	
	Jetpur Temple	5° 08' 99.03	123000	23.295	"	"		

No. of Triangle	Station	Corrected Plane Angle		Distance		Theodolite used	No. of Triangle	Station	Corrected Plane Angle		Distance		Theodolite used
		°	'	Log. feet	Feet				Log. feet	Feet	°	'		Log. feet	Feet	Miles
343	Jithuri, XXXIII	16	6 11	4° 56'09.12	36384	6 891	358	Oshām	50	30 14	5° 05'75.13	114160	21 621
	Kunhasāv, XXXIV	14	29 31	4° 51'62.23	32326	6 217		Mevāsa No. 1	57	31 58	5° 09'27.0	124816	23 639
	Jangar Hill Mark			4° 82'45.48	66765	12 645		Blādra Hill Temple			5° 14'81.99	140669	26 642
344	Kunhasāv, XXXIV			4° 00'58.40	80508	15 248							
	Manāva, XXXVII	27	48 31	4° 77'50.2	60048	11 373							
	Mujāsār	113	28 28	5° 07'21.14	118063	22 360							
345	Manāva, XXXVII	69	33 32	5° 02'48.60	105991	20 055							
	Sarkala, XXXVIII	45	25 55	4° 05'58.40	80508	15 248							
	Mujāsār	65	0 33	5° 01'04.14	102427	19 399							
346	Jithuri, XXXIII	15	8 34	4° 92'42.5	85001	16 099							
	Manāva, XXXVII	0	27 1	4° 72'77.61	53427	10 110							
	Rangpur	155	24 25	5° 13'68.1	135419	25 648							
347	Manāva, XXXVII	66	47 54	4° 95'09.23	91185	17 270							
	Mujāsār	58	57 30	4° 92'04.25	85001	16 099							
	Rangpur	54	14 36	4° 00'58.40	80508	15 248							
348	Jithuri, XXXIII	60	45 25	4° 67'05.07	46828	8 869							
	Rangpur	23	48 47	4° 33'58.31	21669	4 104							
	Māndiā Hill Mark			4° 72'77.61	53427	10 119							
349	Jithuri, XXXIII	23	46 44	4° 38'40.91	24215	4 586							
	Rangpur	93	23 49	4° 77'77.08	59951	11 354							
	Amreli Temple No. 1			4° 72'77.61	53427	10 119							
350	Jithuri, XXXIII	21	40 34	4° 34'70.17	22234	4 211							
	Rangpur	95	45 25	4° 77'37.2	59922	11 343							
	Amreli Temple No. 2			4° 72'77.61	53427	10 119							
351	Manāva, XXXVII	33	7 11	4° 77'00.26	58888	11 153							
	Sarkala, XXXVIII	38	45 9	4° 82'06.8	67463	12 777							
	Dundi Hill Peak			5° 01'04.14	102427	19 399							
352	Sarkala, XXXVIII	28	36 48	4° 81'45.39	65244	12 357							
	Nāndivān, XXXIX	25	36 36	4° 77'00.26	58888	11 153							
	Dundi Hill Peak			5° 04'34.80	110330	20 934							

**KATHIAWAR MINOR LONGITUDINAL SERIES.
SECONDARY STATIONS AND INTERSECTED POINTS.**

Station	Corrected Plane Angle		Distance		Theodolite used
	°	'	Log. feet	Feet	
Oshām	50	30 14	5° 05'75.13	114160	18
Mevāsa No. 1	57	31 58	5° 09'27.0	124816	"
Blādra Hill Temple			5° 14'81.99	140669	"
Devki Gālol, XXXII	60	17 3	5° 06'27.0	124816	"
Oshām	42	6 43	4° 98'30.54	96373	"
Blādra Hill Temple			5° 14'72.58	140365	"
Mevāsa No. 1	33	15 53	5° 12'23.37	133506	"
Bardā	28	16 12	5° 05'49.1	114417	"
Gop Hill Temple			5° 32'70.95	212371	"
Bardā	74	50 47	5° 24'77.9	176921	"
Patelka	46	17 45	5° 12'23.37	133506	"
Gop Hill Temple			5° 19'55.65	156879	"
Itria, XXXV	57	24 33	5° 27'64.32	18987	"
Pālitāna, Shetrunja No. 1	14	34 17	4° 75'15.28	56432	"
Gadhada Temple			5° 32'90.00	213305	"
Chamārdi	95	57 5	5° 27'64.32	18987	"
Pālitāna, Shetrunja No. 1	41	58 8	5° 10'40.27	127065	"
Gadhada Temple			5° 10'49.00	127339	"
Sakhpur, XXXVI	11	59 15	4° 06'36.27	91966	"
Chamārdi	10	20 25	4° 00'24.4	79477	"
Hadmatia Hill Mark			5° 22'58.69	168217	"
Sakhpur, XXXVI	57	30 23	5° 15'24.61	142056	"
Chamārdi	29	39 30	4° 02'08.54	83340	"
Pālitāna, Kanjarda Hill Mark			5° 22'58.69	168217	"
Sakhpur, XXXVI	8	30 21	4° 33'98.05	21868	"
Pālitāna, Shetrunja No. 1	34	18 43	4° 02'08.54	83340	"
Pālitāna, Kanjarda Hill Mark			5° 00'21.05	100486	"
Sakhpur, XXXVI	5	53 55	4° 16'03.73	14467	"
Pālitāna, Shetrunja No. 1	39	38 54	4° 05'33.84	69822	"
Pālitāna, Shetrunja Temple No. 1			5° 00'21.05	100486	"

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				
363	Itria, XXXV Sakhpur, XXXVI Pailitana, Shetrunja No. 2 h.s.	23	53	19	4.906444	90185	18.785	Inch	375	Trámbak Bhávnagar Chogot Hill Mark	61	16	16	4.904205	98675	18.688	Inch
		119	3	55	5.330577	214080	40.546	"			87	10	40	5.050726	112300	21.286	"
		37	2	46	5.168959	147557	27.946	"			4	76	9970	58880	11.152	"	
364	Sakhpur, XXXVI Chamárdi Pailitana, Shetrunja No. 2 h.s.	50	42	20	5.115245	130390	24.695	"	376	Chamárdi Trámbak Chamárdi Hill Mark No. 1	110	33	10	5.009498	102211	19.358	"
		36	3	50	4.996444	99185	18.785	"			2	39	49	3.705232	5073	0.961	"
		93	13	50	5.225869	168217	31.859	"			5	001386	100320	19.000	"		
365	Chamárdi Pailitana, Shetrunja No. 1 h.s. Sarod Hill Mark	2	52	9	4.768594	58694	11.116	"	377	Trámbak Bhávnagar Chamárdi Hill Mark No. 1	55	51	38	4.927427	84611	16.025	"
		3	21	55	4.837790	68832	13.036	"			88	58	18	5.009498	102211	19.358	"
		5	10	49	5.104960	127339	24.117	"			4	76	9970	58880	11.152	"	
366	Chamárdi Bhávnagar Sarod Hill Mark	89	46	4	5.023574	103578	19.986	"	378	Trámbak Bhávnagar Chamárdi Hill Mark No. 2	53	34	26	4.924936	84127	15.933	"
		40	41	19	4.837790	68832	13.036	"			92	9	7	5.019037	104181	19.788	"
		4	90	49	5.001386	80335	15.215	"			4	76	9970	58880	11.152	"	
367	Chamárdi Trámbak Málvan Hill Mark	47	9	16	4.866606	73554	13.931	"	379	Chamárdi Bhávnagar Chamárdi Hill Mark No. 2	153	27	21	4.924936	84127	15.933	"
		42	36	40	4.831991	67919	12.863	"			1	16	59	3.624824	4215	0.798	"
		5	001386	100320	19.000	"	4	90			4905	80335	15.215	"			
368	Chamárdi Bhávnagar Málvan Hill Mark	83	5	20	4.994582	98760	18.705	"	380	Trámbak Bhávnagar Sihor Hill Mark	64	36	8	4.788389	61431	11.635	"
		43	3	23	4.831991	67919	12.863	"			55	25	8	4.748102	55989	10.604	"
		4	90	4905	80335	15.215	"	4			76	9970	58880	11.152	"		
369	Chamárdi Bhávnagar Kanád Rock	79	27	18	4.977994	95059	18.004	"	381	Chamárdi Bhávnagar Sihor Hill Mark	49	37	45	4.788389	61431	11.635	"
		44	21	38	4.829974	67604	12.804	"			35	27	0	4.660931	46766	8.857	"
		4	90	4905	80335	15.215	"	4			90	4905	80335	15.215	"		
370	Chamárdi Pailitana, Shetrunja No. 1 h.s. Kanád Rock	13	10	55	4.802212	63418	12.011	"	382	Chamárdi Bhávnagar Bhandar	58	4	3	4.662512	45974	8.707	"
		14	4	10	4.829974	67604	12.804	"			87	4	31	4.904905	80335	15.215	"
		5	10	49	5.104960	127339	24.117	"			8	07	18	4.662512	45974	8.707	"
371	Chamárdi Bhávnagar Kanád Hill Mark	78	55	47	4.977846	95027	17.997	"	383	Trámbak Bhávnagar Bhandar	59	54	17	4.662512	45974	8.707	"
		45	0	22	4.855534	68475	12.969	"			32	48	5	4.506377	32091	6.078	"
		4	90	4905	80335	15.215	"	4			76	9970	58880	11.152	"		
372	Chamárdi Trámbak Kanád Hill Mark	42	59	43	4.836242	68587	12.990	"	384	Trámbak Bhávnagar Bhikda Hill Mark	46	38	49	4.665945	46339	8.776	"
		42	54	30	4.835534	68475	12.969	"			20	51	41	4.355911	22694	4.598	"
		5	001386	100320	19.000	"	4	76			9970	58880	11.152	"			
373	Chamárdi Trámbak Tharsingra Hill Mark (helio.)	31	27	2	4.806458	64041	12.129	"	385	Trámbak Bhávnagar Kluokra Hill Mark	120	55	10	4.842341	69557	13.174	"
		23	22	7	4.687367	48684	9.220	"			9	35	51	4.179578	15121	2.864	"
		5	001386	100320	19.000	"	4	76			9970	58880	11.152	"			
374	Chamárdi Trámbak Chogot Hill Mark	124	45	43	5.050726	112390	21.286	"	386	Trámbak Bhávnagar Sidhsar Hill Mark (helio.)	11	42	19	4.181829	15190	2.879	"
		8	4	27	4.283640	19215	3.639	"			40	6	0	4.683564	48237	9.140	"
		5	001386	100320	19.000	"	4	76			9970	58880	11.152	"			

No. of Triangle	Station	Corrected Plane Angle	Distance			No. of Triangle	Station	Corrected Plane Angle	Distance			No. of Triangle	Theodolite used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles		
387	Chamardi	h.s.	4' 683564	4857	9' 140	397	Lamdhār	h.s.	4' 544668	35048	6' 638	Inch 18	
	Trāmbak	"	4' 855402	71096	13' 579		Change	"	4' 481839	30328	5' 744		
	Sidhar Hill Mark (helio.)	"	5' 001386	100320	19' 000		Dhāndha Hill Mark (helio.)	"	4' 735478	54385	10' 300		
388	Trāmbak	h.s.	3' 985576	9673	1' 832	398	Lamdhār	h.s.	4' 322130	20996	3' 977	"	
	Bhāvnagar	"	4' 731007	53839	10' 197		Change	"	4' 662315	45053	8' 703		
389	Bhāvnagar Hill Temple	"	4' 769970	58880	11' 152	399	Harpur Hill Temple	"	4' 735478	54385	10' 300	"	
	Chamardi	h.s.	3' 654348	4512	0' 855		Lalpur	h.s.	4' 662315	45953	8' 703		
390	Bhāvnagar	"	4' 808508	79177	14' 996	400	Lamdhār	"	4' 430133	20924	5' 099	"	
	Bhāvnagar Clock Tower	"	4' 904995	80335	15' 215		Harpur Hill Temple	"	4' 664000	46132	8' 737		
391	Chamardi	h.s.	4' 800970	63238	11' 977	401	Lalpur	h.s.	4' 368206	23346	4' 422	"	
	Trāmbak	"	4' 808508	79177	14' 996		Lamdhār	"	4' 472701	29096	5' 624		
392	Bhāvnagar	"	5' 001386	100320	19' 000	402	Mehmāna Hill Mark (helio.)	"	4' 680178	47883	9' 069	"	
	Bhāvnagar Clock Tower	"	4' 769970	58880	11' 152		Lalpur	h.s.	4' 368206	23346	4' 422		
393	Trāmbak	h.s.	4' 044832	11088	2' 100	403	Lalpur	h.s.	4' 472701	29096	5' 624	"	
	Bhāvnagar	"	4' 834654	68337	12' 943		Mehmāna Hill Mark (helio.)	"	4' 664000	46132	8' 737		
394	Bhāvnagar Temple No. 1	"	4' 769970	58880	11' 152	404	Lalpur	h.s.	4' 472700	29696	5' 624	"	
	Trāmbak	h.s.	4' 582277	38219	7' 238		Lamdhār	"	4' 315558	20079	3' 917		
395	Bhāvnagar Hill Temple	"	4' 689502	48022	9' 265	405	Mehmāna Tower	"	4' 664000	46132	8' 737	"	
	Bhūteshyar Hill Temple	"	4' 769970	58880	11' 152		Lamdhār	h.s.	4' 548158	35311	6' 692		
396	Trāmbak	h.s.	4' 711675	51484	9' 751	406	Change	"	4' 472700	29096	5' 624	"	
	Bhāvnagar	"	4' 808134	64289	12' 176		Mehmāna Tower	"	4' 735478	54385	10' 300		
397	Gogta Sally-port	"	4' 769970	58880	11' 152	407	Gop	h.s.	4' 658272	45327	8' 623	"	
	Bhāvnagar	h.s.	3' 715127	5100	0' 983		Lalpur	h.s.	4' 776411	59760	11' 318		
398	Gogta Temple	"	4' 706209	50840	9' 629	408	Rajvad Hill Mark (helio.)	"	4' 778788	60088	11' 380	"	
	Bhāvnagar	"	4' 727051	53340	10' 102		Gop	h.s.	4' 581361	38138	7' 223		
399	Chamardi	h.s.	4' 779560	60195	11' 401	409	Lalpur	h.s.	4' 629009	42561	8' 061	"	
	Bhāvnagar	"	4' 571040	37243	7' 054		Lalpur	"	4' 778788	60088	11' 380		
400	Rāvesi Māta Tomb	"	4' 904995	80335	15' 215	410	Gop	h.s.	4' 540268	35422	6' 709	"	
	Bhāvnagar	"	4' 769970	58880	11' 152		Lalpur	h.s.	4' 560917	36385	6' 891		
401	KATHIAWAR MINOR MERIDIONAL SERIES No. 1.					411	Govāna Hill Mark (helio.)	"	4' 778788	60088	11' 380	"	
	INTERSECTED POINTS.						Lalpur	h.s.	4' 335471	21651	4' 101		
402	KATHIAWAR MINOR MERIDIONAL SERIES No. 1.					412	Lamdhār	"	4' 738778	54800	10' 379	"	
	INTERSECTED POINTS.						Potor Hill Mark (helio.)	"	4' 664000	46132	8' 737		
403	Lamdhār	h.s.	59783	59783	11' 323	413	Bhojāberi	h.s.	4' 738778	54800	10' 379	"	
	Change	"	4' 671545	46040	8' 890		Lalpur	"	4' 459235	28790	5' 453		
404	Vāgharia Hill Mark (helio.)	"	4' 735478	54385	10' 300	414	Potor Hill Mark (helio.)	"	4' 769984	58882	11' 152	"	
	Lamdhār	h.s.	71 53 24	4' 776579	59783		Lalpur	h.s.	4' 459235	28790	5' 453		
405	Change	"	4' 671545	46040	8' 890	415	Potor Hill Mark (helio.)	"	4' 769984	58882	11' 152	"	
	Vāgharia Hill Mark (helio.)	"	4' 735478	54385	10' 300		Lalpur	h.s.	4' 459235	28790	5' 453		

SECONDARY TRIANGULATION. TRIANGLES.

No. of Triangle	Station	Corrected Plane Angle			Distance			Theodolite used
		°	'	"	Log. feet	Feet	Miles	
409	Bhojāberi Lāmdhār Rinipur Hill Mark (helio.)	65	59	17	4.641221	43775	8.291	Inch 18
		33	18	8	4.420148	26312	4.683	"
					4.674797	47293	8.957	"
410	Lāipur Lāmdhār Rinipur Hill Mark (helio.)	63	56	58	4.641221	43775	8.291	"
		44	49	34	4.535911	34349	6.305	"
					4.664000	46132	8.737	"
411	Gop Alech Chamārdhār Hill Mark (helio.)	74	10	25	4.828344	67331	12.756	"
		30	17	15	4.749350	35356	6.687	"
					4.831145	67787	12.838	"
412	Alech Āmbardi Chamārdhār Hill Mark (helio.)	21	0	9	4.408222	25599	4.848	"
		109	26	33	4.828344	67331	12.756	"
					4.735245	54356	10.295	"
413	Āmbardi Bhojāberi Āmbardi Hill Mark (helio.)	21	58	54	4.331346	21446	4.062	"
		29	17	59	4.447759	28039	5.310	"
					4.650336	44703	8.466	"
414	Gop Āmbardi Āmbardi Hill Mark (helio.)	27	44	46	4.447759	28039	5.310	"
		88	2	10	4.779333	60101	11.400	"
					4.734250	54231	10.271	"
415	Gop Alech Karba Hill Fort	38	20	9	4.652886	44066	8.516	"
		30	54	8	4.570908	37231	7.051	"
					4.831145	67787	12.838	"
416	Alech Bora Dabha Barda Hill Mark No. 1 (helio.)	97	52	55	4.923156	83793	15.868	"
		42	28	45	4.750789	57120	10.818	"
					4.732063	53959	10.219	"
417	Āmbardi Alech Alech Hill Mark No. 1 (helio.)	45	5	46	4.600961	39899	7.557	"
		61	39	57	4.695327	49582	9.391	"
					4.731892	53958	10.215	"
418	Alech Āmbardi Alech Hill Mark No. 1 (helio.)	65	43	48	4.695327	49582	9.391	"
		22	15	15	4.313028	20598	3.901	"
					4.735245	54356	10.295	"
419	Alech Vadāla No. 1 Alech Hill Mark No. 2 (helio.)	81	45	3	4.722625	52799	10.000	"
		25	15	35	4.357287	22766	4.312	"
					4.707713	51017	9.662	"
420	Bora Dabha Vadāla No. 1 Alech Hill Mark No. 2 (helio.)	66	30	10	4.722625	52799	10.000	"
		52	24	56	4.650192	45624	8.641	"
					4.702379	50394	9.544	"
421	Alech Vadāla No. 1 Dhāuk Hill Temple	36	35	22	4.598985	39718	7.522	Inch 18
		13	22	32	4.187920	15414	2.919	"
					4.707713	51017	9.662	"
422	Alech Vadāla No. 1 Tanasa Hill Mark (helio.)	29	59	31	4.424777	26594	5.037	"
		43	32	12	4.564017	36645	6.040	"
					4.707713	51017	9.662	"
423	Alech Bora Dabha Amrāpur Hill Mark (helio.)	18	14	3	4.522251	33285	6.304	"
		18	28	58	4.827930	33723	6.387	"
					4.863445	93598	12.045	"
424	Bora Dabha Pājod Amrāpur Hill Mark (helio.)	74	55	50	4.845080	69907	13.257	"
		27	20	1	4.522251	33285	6.304	"
					4.850251	70830	13.416	"
425	Bora Dabha Vadāla No. 1 Amrāpur Hill Temple	33	0	11	4.460624	28882	5.470	"
		38	52	23	4.522160	33278	6.303	"
					4.702379	50394	9.544	"
426	Alech Vadāla No. 1 Amrāpur Hill Temple	32	24	31	4.460624	28882	5.470	"
		38	48	8	4.528510	33728	6.306	"
					4.707713	51017	9.662	"
427	Alech Vadāla No. 1 Amrāpur Tower	23	27	13	4.343860	22073	4.180	"
		43	27	32	4.581453	38146	7.225	"
					4.707713	51017	9.662	"
428	Bora Dabha Vadāla No. 1 Dhruvāla Hill Mark No. 1 (helio.)	30	38	4	4.565769	36793	6.968	"
		13	37	33	4.230713	17010	3.222	"
					4.702379	50394	9.544	"
429	Alech Vadāla No. 1 Dhruvāla Hill Mark No. 1 (helio.)	43	27	22	4.565769	36793	6.968	"
		64	2	58	4.682150	48101	9.110	"
					4.707713	51017	9.662	"
430	Bora Dabha Vadāla No. 1 Dhruvāla Hill Mark No. 2 (helio.)	22	24	27	4.518828	33024	6.255	"
		13	9	44	4.205065	19727	3.736	"
					4.702379	50394	9.544	"
431	Bora Dabha Segras Kutiyāna Temple	22	28	30	4.466436	29271	5.544	"
		27	7	45	4.543017	34915	6.613	"
					4.765772	58314	11.044	"
432	Pājod Junej Bāntara Tree	30	12	4	4.291067	19546	3.702	"
		32	37	20	4.321134	20948	3.967	"
					4.538663	34567	6.547	"

No. of Triangle	Station	Corrected Plane Angle	Distance			Theodolite	No. of Triang.	Station	Corrected Plane Angle	Distance			Theodolite
			Log. feet	Foot	Miles					Log. feet	Foot	Miles	
KATHIAWAR MINOR MERIDIONAL SERIES No. 2.													
SECONDARY STATIONS AND INTERSECTED POINTS.													
433	Haliatoda Pitar Latipur Temple	h.s. t.s. h.s.	27 44 53 41 3 50 4 680159	4 378556 4 528057 4 680159	23909 33733 47881	4 528 6 389 9 068	443	Khokhri Vanthli Jain Tower No. 1 (helio.)	t.s. h.s. t.s.	31 23 31 44 12 10 4 495233	4 225852 4 352464 4 495233	16821 22515 31278	3 18 12
434	Soel Haliatoda Vagular	h.s. s. h.s.	95 46 39 40 33 11	4 552812 4 764484 4 627640	35712 58141 42427	6 764 11 012 8 035	444	Amesri Sanosra Pardhari Hill Mark (helio.)	t.s. h.s. t.s.	41 4 0 55 9 55 4 717931	4 538028 4 634744 4 717931	34517 43126 52231	6 537 8 168 9 892
435	Sanosra Haliatoda Vagular	h.s. s. h.s.	14 22 3 14 27 56	4 552812 4 555703 4 841394	35712 35950 69406	6 764 6 809 13 145	445	Amesri Sanosra Kuta Hill Temple	t.s. h.s. t.s.	104 15 11 43 56 58 4 717931	4 982608 4 837561 4 717931	96075 62796 52231	18 196 13 030 9 892
436	Sanosra Pitar Thorali Mark (helio.)	h.s. t.s. h.s.	19 49 49 20 38 13	4 591238 4 607328 4 872990	39016 40535 74643	7 389 7 677 14 137	446	Amesri Khokhri Rojliua Hill Mark (helio.)	t.s. s. t.s.	55 50 3 47 2 25 43 0 52	4 554457 4 501146 4 554457	35847 31706 42235	6 789 6 005 7 999
437	Khokhri Soel Itala Tower (helio.)	t.s. h.s. t.s.	28 41 55 26 59 11	4 627937 4 603357 4 863407	42456 40120 73024	8 041 7 598 13 830	447	Khakhria Khokhri Rojliua Hill Mark (helio.)	s. t.s. h.s.	43 0 52 22 18 57 31 37 48	4 554457 4 306011 4 564246	35847 19953 36665	6 789 3 779 6 944
438	Khokhri Sanosra Itala Tower (helio.)	t.s. h.s. t.s.	45 1 55 53 59 36	4 545163 4 603357 4 690025	35088 40120 48981	6 646 7 598 9 277	448	Devdhar Amesri Vaddia No. 2	h.s. t.s. h.s.	31 37 48 36 48 10 37 44 3	4 564246 4 622030 4 564246	36665 41882 21815	6 944 7 932 4 132
439	Khokhri Soel Vanthli	t.s. h.s. s.	38 52 36 119 9 30	4 720030 4 405233 4 863467	52484 31278 73024	9 940 5 924 13 830	449	Khakhria Amesri Vaddia No. 2	s. t.s. h.s.	37 44 3 21 21 16 16 1 35	4 564246 4 338760 4 560534	36665 21815 36352	6 944 4 132 6 885
440	Khokhri Vanthli Matli	t.s. h.s. s.	43 55 34 97 3 31	4 537409 4 692914 4 495233	34467 49308 31278	6 528 9 339 5 924	450	Devdhar Amesri Nagar-Pipalia	h.s. t.s. h.s.	13 33 47 16 1 35 13 33 47	4 813034 4 813034 4 813034	65018 65018 65018	12 314 12 314 12 314
441	Khakhria Khokhri Matli	s. t.s. h.s.	59 6 4 64 41 50 56 12 6	4 692914 4 715588 4 678991	49308 51950 47752	9 940 5 924 9 044	451	Devdhar Nagar-Pipalia Meghpur Temple	h.s. s. h.s.	37 4 10 80 11 31 9 54 3	4 320965 4 534410 4 320965	20939 34230 30880	3 966 6 483 3 966
442	Soel Vanthli Jain Tower No. 1 (helio.)	h.s. t.s. h.s.	18 39 16 74 57 20	4 225852 4 705746 4 720030	16821 50786 52484	3 186 9 619 9 940	452	Nagar-Pipalia Meghpur Temple	h.s. s. h.s.	4 52 51 4 492352 50 24 34	4 015425 * 4 700282	10362 31071 50151	1 062 5 885 8 200
443	Khokhri Vanthli Jain Tower No. 1 (helio.)	t.s. h.s. t.s.	77 14 8 30 8 53	4 822470 4 534246 4 813034	66446 34217 65018	12 585 6 481 12 314	453	Devdhar Amesri Khirasra Tower (helio.)	h.s. t.s. h.s.	50 24 34 42 4 34 77 14 8	4 639594 4 813034 4 822470	43011 65018 66446	8 200 12 314 12 585
444	Devdhar Amesri Chibada Hill Mark (helio.)	h.s. t.s. h.s.	30 8 53 77 14 8	4 534246 4 813034	34217 65018	6 481 12 314	454	Devdhar Amesri Chibada Hill Mark (helio.)	h.s. t.s. h.s.	30 8 53 77 14 8	4 534246 4 813034	34217 65018	6 481 12 314

* Deduced base.

SECONDARY TRIANGULATION. 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				
455	Dānidhār	t.s.	38	56	14	4° 55' 67.92	36041	6.826	467	Dānidhār	t.s.	41	3	19	4° 60' 72.80	40484	7.667
	Devdhār	h.s.	36	13	44	4° 53' 01.05	33893	6.419		Devdhār	h.s.	23	1	6	4° 38' 26.61	24102	4.505
	Chāpra	"	"	"	"	4° 74' 37.88	55435	10.499		Kharedi Tower (helio.)	"	"	"	"	4° 74' 37.88	55435	10.499
456	Devdhār	h.s.	30	3	54	4° 50' 74.71	32171	6.093	468	Moridhār	h.s.	39	0	33	4° 60' 72.80	40484	7.667
	Khākhrā	s.	34	8	28	4° 56' 07.92	36041	6.826		Devdhār	"	31	9	2	4° 52' 20.55	33270	6.301
	Chāpra	h.s.	"	"	"	4° 76' 20.67	57819	10.951		Kharedi Tower (helio.)	"	"	"	"	4° 78' 17.47	60499	11.458
457	Dānidhār	t.s.	34	56	53	4° 67' 47.44	47287	8.956	469	Pādriya	h.s.	44	49	24	4° 62' 73.19	42395	8.029
	Khākhrā	s.	96	24	49	4° 91' 39.89	82033	15.537		Dānidhār	t.s.	61	23	16	4° 72' 26.12	52797	10.000
	Khandera Hill Mark (helio.)	h.s.	"	"	"	4° 79' 20.97	61958	11.734		Nāgmāndal Hill Mark (helio.)	"	"	"	"	4° 76' 15.56	57751	10.938
458	Dānidhār	t.s.	54	42	34	4° 83' 44.55	68305	12.937	470	Dānidhār	t.s.	50	38	11	4° 63' 81.47	43466	8.332
	Chāpra	h.s.	101	23	56	4° 91' 39.89	82033	15.537		Devdhār	h.s.	48	56	48	4° 27' 31.9	42395	8.029
	Khandera Hill Mark (helio.)	h.s.	"	"	"	4° 53' 01.05	33893	6.419		Nāgmāndal Hill Mark (helio.)	"	"	"	"	4° 74' 37.88	55435	10.499
459	Mevasā No. 1	h.s.	59	43	50	4° 68' 66.84	48605	9.206	471	Mevasā No. 1	h.s.	10	36	54	4° 19' 21.53	15565	2.948
	Dānidhār	t.s.	36	54	2	4° 58' 80.00	33791	6.400		Pādriya	t.s.	42	43	32	4° 75' 83.94	57330	10.858
	Chatar Hill Mark (helio.)	h.s.	"	"	"	4° 74' 74.24	55902	10.587		Charel Hill Mark (helio.)	"	"	"	"	4° 83' 11.24	67784	12.838
460	Dānidhār	t.s.	79	10	12	4° 85' 24.86	71201	13.485	472	Mevasā No. 1	h.s.	44	2	12	4° 62' 80.99	44272	8.044
	Khākhrā	s.	42	6	18	4° 68' 66.84	48605	9.206		Dānidhār	t.s.	69	46	8	4° 75' 83.94	57330	10.858
	Chatar Hill Mark (helio.)	h.s.	"	"	"	4° 79' 20.97	61958	11.734		Charel Hill Mark (helio.)	"	"	"	"	4° 74' 74.24	55902	10.587
461	Dānidhār	t.s.	89	21	14	4° 81' 01.69	64590	12.233	473	Pādriya	h.s.	60	52	32	4° 70' 86.39	51126	9.683
	Khākhrā	s.	17	4	23	4° 27' 79.39	18964	3.592		Dānidhār	t.s.	38	27	28	4° 50' 10.91	36399	6.894
	Pagās Hill Temple	h.s.	"	"	"	4° 79' 20.97	61958	11.734		Khajadia Hill Mark (helio.)	"	"	"	"	4° 76' 15.56	57751	10.938
462	Devdhār	h.s.	58	18	27	4° 81' 01.69	64590	12.233	474	Pādriya	h.s.	61	24	44	4° 57' 16.61	37296	7.064
	Khākhrā	s.	72	4	51	4° 85' 87.05	72228	13.680		Moridhār	"	37	52	52	4° 41' 63.10	26080	4.939
	Pagās Hill Temple	h.s.	"	"	"	4° 76' 20.67	57819	10.951		Kandorna	"	"	"	"	4° 62' 23.86	41917	7.939
463	Moridhār	h.s.	54	22	25	4° 63' 62.27	43274	8.196	475	Advāl	h.s.	32	8	12	4° 41' 63.10	26080	4.939
	Dānidhār	t.s.	41	18	19	4° 54' 58.17	35141	6.656		Pādriya	"	74	51	2	4° 67' 58.66	47325	8.903
	Metia Hill Mark (helio.)	h.s.	"	"	"	4° 72' 40.89	52977	10.034		Kandorna	"	"	"	"	4° 67' 10.73	46889	8.881
464	Dānidhār	t.s.	26	29	31	4° 40' 70.19	25528	4.835	476	Bhadrā	h.s.	56	53	26	4° 59' 35.51	39224	7.429
	Devdhār	h.s.	49	7	36	4° 03' 62.27	43274	8.196		Moridhār	"	27	54	49	4° 34' 08.75	21922	4.152
	Metia Hill Mark (helio.)	h.s.	"	"	"	4° 74' 37.88	55435	10.499		Kandorna Temple	"	"	"	"	4° 66' 87.12	46635	8.832
465	Dānidhār	t.s.	28	20	25	4° 47' 39.99	29785	5.641	477	Advāl	h.s.	22	15	20	4° 34' 08.75	21922	4.152
	Devdhār	h.s.	33	43	45	4° 54' 20.76	34840	6.598		Bhadrā	"	50	41	23	4° 65' 11.23	41724	8.482
	Deri Hill Mark (helio.)	h.s.	"	"	"	4° 74' 37.88	55435	10.499		Kandorna Temple	"	"	"	"	4° 74' 30.05	55336	10.480
466	Moridhār	h.s.	40	19	57	4° 54' 20.76	34840	6.598	478	Advāl	h.s.	23	16	58	4° 28' 24.28	19161	3.629
	Dānidhār	t.s.	39	27	25	4° 53' 13.37	34269	6.479		Pādriya	"	52	0	47	4° 58' 21.44	38207	7.230
	Deri Hill Mark (helio.)	h.s.	"	"	"	4° 72' 40.89	52977	10.034		Khātli	"	"	"	"	4° 67' 10.73	46889	8.881

No of Triangle	Station	Corrected Plane Angle ° ' "	Distance			Theodolite Inch	No. of Triangle	Station	Corrected Plane Angle ° ' "	Distance			Theodolite Inch
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
479	Advāl Bhādra Khatli	h.s. " "	76 29 57 38 40 26 4 774173	59453 38207 55336	11.260 7.236 10.480	18 "	491	Bhādra Khatli Dudivadar Hill Mark (helio.)	h.s. " "	37 7 2 23 59 11 4 774173	49979 27600 59453	7.761 5.228 11.260	18 12
480	Advāl Bhādra Pādiya Hill Mark (helio.)	h.s. " "	42 30 32 46 22 31 4 743005	37398 40064 55336	7.083 7.588 10.480	"	402	Advāl Khatli Dudivadar Hill Mark (helio.)	h.s. " "	74 57 2 40 50 26 4 582144	40979 27550 38207	7.761 5.256 7.336	18 12
481	Advāl Pādiya Pādiya Hill Mark (helio.)	h.s. " "	10 42 27 44 41 43 4 671073	10583 40064 46889	2.004 7.588 8.881	"	498	Monidhār Kandorna Mevasa Hill Mark No. 4 (helio.)	h.s. " "	42 9 36 99 31 48 4 571661	46381 59332 37290	7.648 11.237 7.004	18 12
482	Advāl Bhādra Roghel Hill Mark (helio.)	h.s. " "	45 37 37 22 3 11 4 743005	42757 22459 55336	8.098 4.254 10.480	"	494	Bhādra Monidhār Mevasa Hill Mark No. 4 (helio.)	h.s. " "	120 0 14 17 6 2 4 668712	59332 20146 46635	11.237 3.816 8.832	18 "
483	Bhādra Pādiya Roghel Hill Mark (helio.)	h.s. " "	31 58 22 65 53 23 4 660553	24805 42757 46404	4.698 8.008 8.789	"	495	Advāl Bhādra Umarkot Hill Mark (helio.)	h.s. " "	41 57 17 46 32 24 4 743005	37009 40079 55336	7.009 7.610 10.480	"
484	Bhādra Pādiya Sorvadār Hill Mark (helio.)	h.s. " "	34 47 51 94 20 19 4 775642	34141 59054 46404	6.466 11.298 8.789	"	496	Advāl Fareni Umarkot Hill Mark (helio.)	h.s. " "	25 34 20 47 38 46 4 716460	33469 40179 52055	4.445 7.610 9.859	"
485	Advāl Bhādra Sorvadār Hill Mark (helio.)	h.s. " "	92 53 13 19 13 42 4 743005	59554 19671 55336	11.298 3.726 10.480	"	497	Advāl Bhādra Dhoraji Temple	h.s. " "	80 2 21 28 22 13 4 743005	57441 27712 55336	10.879 5.248 10.480	"
486	Advāl Pādiya Bhavsavadar Hill Mark (helio.)	h.s. " "	86 46 4 53 44 14 4 671073	73607 59445 46889	13.911 11.258 8.881	"	498	Advāl Udakia Upleta Tower (helio.)	h.s. " "	47 6 38 49 39 28 4 766018	43049 44784 58347	8.153 8.482 11.051	"
487	Oshām Advāl Mojira Hill Mark (helio.)	h.s. " "	38 38 29 68 2 42 4 865814	47862 71089 73420	9.065 13.464 13.905	"	499	Oshām Udakia Upleta Tower (helio.)	h.s. " "	78 32 42 59 4 40 4 471366	43049 37681 29605	8.153 7.137 5.607	"
488	Advāl Pādiya Mojira Hill Mark (helio.)	h.s. " "	87 30 16 46 51 44 4 671073	65528 47862 46889	12.111 9.065 8.881	"	500	Fareni Udakia Mārad Temple	h.s. " "	12 20 9 50 18 3 4 752104	13593 48955 56507	2.574 9.272 10.702	"
489	Advāl Pādiya Jhanjmer Hill Mark (helio.)	h.s. " "	89 23 16 10 50 14 3 956307	47658 9043 46889	9.026 1.713 8.881	"	501	Advāl Fareni Mārad Temple	h.s. " "	60 10 29 52 32 1 4 716460	48955 44788 52655	9.272 8.482 9.859	"
490	Bhādra Pādiya Jhanjmer Hill Mark (helio.)	h.s. " "	49 0 20 83 41 43 4 666553	47658 62761 46404	9.026 11.887 8.789	"	502	Advāl Fareni Mārad Hill Mark (helio.)	h.s. " "	70 21 52 52 6 56 4 764315	58119 48702 4716460	11.007 9.224 52055	"

SECONDARY TRIANGULATION. TRIANGLES.

No. of Triangle	Station	Corrected Plane Angle	Distance			No. of Triangle used	Station	Corrected Plane Angle	Distance			No. of Triangle used
			Log. feet	Feet	Miles				Log. feet	Feet	Miles	
503	Fareni	h.s.	4.108284	12832	2.430	515	Fareni	h.s.	4.846469	70221	13.299	
	Udakkia	"	4.704315	58119	11.007		Udakkia	"	4.807210	64152	12.150	
504	Mārad Hill Mark (helio.)	"	4.752104	56507	10.702	516	Girnār Temple No. 1	"	4.752104	56507	10.702	
	Oshām	h.s.	4.034264	10821	2.049		Fareni	h.s.	4.856286	71827	13.604	
505	Udakkia	"	4.334104	21583	4.088	517	Udakkia	"	4.808490	64341	12.186	
	Jalia Tower No. 2	"	4.471366	29605	5.607		Girnār Temple No. 2	"	4.752104	50507	10.702	
506	Girnār	h.s.	4.677051	47539	9.004	518	Udakkia	h.s.	4.852904	71270	13.498	
	Roghāt	s.	4.894693	78468	14.861		Udakkia	"	4.809151	64439	12.204	
507	Kandā	h.s.	4.671114	46894	8.881	519	Girnār Hill Mark (helio.)	"	4.752104	50507	10.702	
	Udakkia	h.s.	4.894693	78468	14.861		Udakkia	h.s.	4.765483	58275	11.037	
508	Girnār	"	4.499908	31616	5.988	520	Roghāt	s.	4.765483	58275	11.037	
	Kandā	"	4.863364	73007	13.827		Roghāt	h.s.	4.822904	71270	13.498	
509	Dbandhusar Tree	h.s.	4.426859	26721	5.061	521	Girnār Hill Mark (helio.)	"	4.794495	62301	11.799	
	Udakkia	h.s.	4.358598	36149	6.846		Roghāt	h.s.	4.581010	38107	7.217	
510	Dbandhusar Tree	h.s.	4.794495	62301	11.799	522	Rājāvād	h.s.	4.60820	43734	8.283	
	Udakkia	h.s.	4.388604	24468	4.634		Khimpādar Hill Mark (helio.)	"	4.840343	69238	13.113	
511	Kandā	h.s.	4.491650	31236	5.916	523	Girnār	h.s.	4.640820	43734	8.283	
	Taruetar Temple	"	4.708134	51066	9.672		Roghāt	s.	4.642670	43921	8.318	
512	Roghāt	s.	4.308720	20357	3.856	524	Khimpādar Hill Mark (helio.)	"	4.671114	46894	8.881	
	Kandā	h.s.	4.491650	31236	5.916		Roghāt	s.	4.605337	49303	7.633	
513	Jūnagad Temple	h.s.	4.573176	37426	7.088	525	Rājāvād	h.s.	4.775437	59626	11.203	
	Udakkia	s.	4.754892	56871	10.771		Potlia	"	4.605337	49303	7.633	
514	Roghāt	h.s.	4.794495	62301	11.799	526	Rājāvād	h.s.	4.248725	17731	3.338	
	Jūnagad Temple	"	4.884201	76278	14.447		Rājāvād	"	4.619419	41631	7.885	
515	Girnār	h.s.	4.573176	37426	7.088	527	Khimpādar Hill Mark (helio.)	"	4.605337	49303	7.633	
	Roghāt	s.	4.219130	16593	3.137		Rājāvād	h.s.	4.248725	17731	3.338	
516	Jūnagad Temple	h.s.	4.671114	46894	8.881	528	Rājāvād	h.s.	4.619419	41631	7.885	
	Udakkia	h.s.	4.573176	37426	7.088		Chitri Hill Mark (helio.)	"	4.605337	49303	7.633	
517	Roghāt	h.s.	4.226615	16851	3.191	529	Rājāvād	s.	4.619419	41631	7.885	
	Girnār	"	4.83196	68806	13.049		Chitri Hill Mark (helio.)	"	4.605337	49303	7.633	
518	Jūnagad Palace	"	4.884201	76278	14.447	530	Rājāvād	h.s.	4.619419	41631	7.885	
	Udakkia	h.s.	4.153907	14253	2.699		Chitri Hill Mark (helio.)	"	4.605337	49303	7.633	
519	Girnār	h.s.	4.840460	70221	13.299	531	Rājāvād	h.s.	4.338070	21781	4.125	
	Jūnagad Temple No. 1	"	4.863364	73007	13.827		Kosradhār	"	4.527656	35702	6.383	

* Deduced base.

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	
527	Rajávard Potlia Kanara Hill Mark (helio.)	h.s. " " "	46 13 11 61 13 41 4 443420 4 537656 4 564428	27760 33702 36680	5 258 6 383 6 947	539	Potlia Jalandri Mália Tower No. 2 (helio.)	h.s. " " "	69 4 38 47 29 58 4 691886 4 589137 4 673011	49191 38837 47009	9 316 7 354 8 920	"	Potlia Rájngpára Seriakhán Hill Mark (helio.)	h.s. " " "	59 34 13 65 13 57 4 796663 4 819122 4 775437	62613 65936 59026	11 858 12 488 11 293	" 12
528	Rajávard Kosradhár Khodiár	h.s. " " "	17 37 5 130 52 8 4 539781 4 3023505 4 700177	34656 20068 50139	6 564 3 801 9 496	540	Potlia Rájngpára Seriakhán Hill Mark (helio.)	h.s. " " "	59 34 13 65 13 57 4 796663 4 819122 4 775437	62613 65936 59026	11 858 12 488 11 293	"	Potlia Jalandri Seriakhán Hill Mark (helio.)	h.s. " " "	67 29 6 70 15 50 4 810977 4 819122 4 673011	64711 65936 47099	12 256 12 488 8 920	" 18
529	Kosradhár Kanara Hill Mark (helio.) Khodiár	h.s. " " "	49 36 19 38 55 21 4 421650 4 539781 4 338070	26403 34056 21781	5 001 6 564 4 125	541	Potlia Jalandri Seriakhán Hill Mark (helio.)	h.s. " " "	67 29 6 70 15 50 4 810977 4 819122 4 673011	64711 65936 47099	12 256 12 488 8 920	"	Potlia Rájngpára Itála	h.s. " " "	30 59 16 109 58 29 4 411640 4 499178 4 673011	25801 31563 47099	4 887 5 978 8 920	" 12
530	Rajávard Potlia Liláva Hill Mark	h.s. " " "	60 54 9 17 41 43 4 514494 4 055803 4 584428	32696 11373 36680	6 192 2 154 6 947	542	Potlia Jalandri Itála	h.s. " " "	30 59 16 109 58 29 4 411640 4 499178 4 673011	25801 31563 47099	4 887 5 978 8 920	"	Potlia Rájngpára Itála	h.s. " " "	26 29 45 57 26 12 4 499178 4 775437	31503 59626	5 978 11 293	" 12
531	Kosradhár Potlia Liláva Hill Mark	h.s. " " "	41 57 6 52 33 8 4 514494 4 589100 4 688047	32696 38829 48758	6 192 7 354 9 234	543	Potlia Rájngpára Itála	h.s. " " "	26 29 45 57 26 12 4 499178 4 775437	31503 59626	5 978 11 293	"	Potlia Rájngpára Itála	h.s. " " "	26 29 45 57 26 12 4 499178 4 775437	31503 59626	5 978 11 293	" 12
532	Kosradhár Jendáliya Dudrecha	h.s. " " "	25 0 18 14 46 30 4 575985 4 356516 4 756008	37667 22726 57017	7 134 4 304 10 799	544	Jalandri Itála Tábardo	h.s. " " "	65 10 8 66 23 47 4 323603 4 407455 4 411640	21067 25554 25801	3 990 4 840 4 887	"	Jalandri Itála Tábardo	h.s. " " "	44 48 21 93 24 50 4 347957 4 499178	22282 31503	4 220 5 978	" 18
533	Kosradhár Kanara Hill Mark (helio.) Dudrecha	h.s. " " "	37 7 7 67 49 19 4 152105 4 338070 4 125	14194 21781	2 688 4 304	545	Potlia Itála Tábardo	h.s. " " "	44 48 21 93 24 50 4 347957 4 499178	22282 31503	4 220 5 978	"	Potlia Itála Tábardo	h.s. " " "	44 48 21 93 24 50 4 347957 4 499178	22282 31503	4 220 5 978	" 18
534	Kosradhár Jendáliya Vásadhól Hill Mark (helio.)	h.s. " " "	53 2 26 27 52 9 4 664077 4 431236 4 756008	46140 26992 57017	8 739 5 112 10 799	546	Jendáliya Jalandri Dhanój Hill Mark (helio.)	h.s. " " "	21 25 40 17 44 1 4 332364 4 253399 4 570059	21496 17923 37159	4 071 3 394 7 038	"	Jendáliya Jalandri Dhanój Hill Mark (helio.)	h.s. " " "	21 25 40 17 44 1 4 332364 4 253399 4 570059	21496 17923 37159	4 071 3 394 7 038	" 18
535	Kosradhár Dudrecha Vásadhól Hill Mark (helio.)	h.s. " " "	78 2 44 57 1 17 4 498017 4 431236 4 356516	31479 26992 22726	5 962 5 112 4 304													
536	Potlia Rájngpára Gáugecha Hill Mark (helio.)	h.s. " " "	34 57 25 52 18 49 4 534054 4 674308 4 775437	34202 47240 59626	6 478 8 947 11 293													
537	Potlia Jalandri Gáugecha Hill Mark (helio.)	h.s. " " "	92 5 54 44 2 0 4 831984 4 674308 4 673011	67918 47240 47099	12 863 8 947 8 920	547	Nalka Bhantekri Máli Temple*	h.s. " " "	6 22 35 2 51 16 4 556341 4 308005 4 716023	36003 16144 52002	6 810 3 058 9 849	"	Nalka Bhantekri Máli Temple*	h.s. " " "	6 22 35 2 51 16 4 556341 4 308005 4 716023	36003 16144 52002	6 810 3 058 9 849	" 18
538	Potlia Rájngpára Mália Tower No. 2 (helio.)	h.s. " " "	57 58 41 40 8 23 4 708127 4 589137 4 775437	51065 38827 59626	9 671 7 354 11 293	548	Rámpura Sudámda Sáyla Palace	s. h.s. "	43 38 4 24 33 10 4 648519 4 428259 4 777372	44516 26806 59892	8 431 5 077 11 343	"	Rámpura Sudámda Sáyla Palace	s. h.s. "	43 38 4 24 33 10 4 648519 4 428259 4 777372	44516 26806 59892	8 431 5 077 11 343	" 12

KATHIÁWAR MINOR MERIDIONAL SERIES No. 3.
INTERSECTED POINTS.

* For another triangle to this point, see the Synoptical Volume of the Gujwát Longitudinal Series, by which the value of the common side was less by 16 feet.

SECONDARY TRIANGULATION. TRIANGLES.

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	
549	Bhimtekri	h.s.				561	Gangajal	h.s.				Inch 18
	Sudámda	"	60 7 3	4.648519	44516		"	Kamakio Máta	"	22 3 10	4.324504		21111	3.998
550	Sáya Palace	"	19 36 54	4.236424	17236		Pályád Building	"	82 4 29	4.745772	55669	10.547
			4 703465	50520	9.568	562	Kamakio Máta	h.s.	31 44 7	4.573357	37442	7.091
551	Bhimtekri	h.s.	23 11 12	4.501004	31762		Modhuka	"	30 20 8	4.555721	35952	6.809
	Sudámda	"	15 35 18	4.336013	21678		Pipardi Hill Mark (helio.)	"	37 44 1	4.798595	62892	11.911
552	Sáya Hill Mark (helio.)	"	4 703405	50520	9.568	563	Kamakio Máta	h.s.	30 45 2	4.473302	54520	10.327
			4 703465	50520	9.568		Pipardi Hill Mark (helio.)	"	37 44 1	4.555721	35952	6.809
553	Bhimtekri	h.s.	25 16 18	4.335419	21648		Kamakio Máta	h.s.	30 45 2	4.473378	29743	5.633
	Sudámda	"	69 40 12	4.077149	47550		Pipardi Hill Mark (helio.)	"	37 44 1	4.555721	35952	6.809
554	Vadhia Hill Mark (helio.)	"	4 703465	50520	9.568	564	Gangajal	h.s.	7 36 57	4.047368	11152	2.112
			4 703465	50520	9.568		Kamakio Máta	"	32 46 20	4.058491	45550	8.627
555	Rámpura	s.	69 6 18	4.077149	47550		Sarva Hill Mark	"	44 38 38	4.697946	49882	9.447
	Bhimtekri	h.s.	54 27 40	4.617168	41416		Kamakio Máta	h.s.	17 43 37	4.334737	21614	4.094
556	Vadhia Hill Mark (helio.)	"	4 703465	50520	9.568	565	Turkha Hill Mark No. 1 (helio.)	"	11 14 42	4.135441	13660	2.587
			4 703465	50520	9.568		Kamakio Máta	h.s.	24 58 24	4.470010	20574	5.601
557	Bhimtekri	h.s.	32 2 48	4.602755	40064		Bhimrád	"	56 36 34	4.768110	58629	11.104
	Dhándhalpur	"	21 46 55	4.447441	28048		Gadhada	h.s.	64 31 43	4.802048	63394	12.006
558	Jasápur Hill Mark (helio.)	"	4 784990	60952	11.544	566	Sándan Hill Mark (helio.)	"	36 0 23	4.573672	37469	7.096
			4 784990	60952	11.544		Modhuka	h.s.	84 3 30	4.802048	63394	12.006
559	Bhimtekri	h.s.	35 5 14	4.583571	38333		Itria, XXXV	h.s.	36 0 23	4.573672	37469	7.096
	Dhándhalpur	"	80 28 17	4.823213	60500		Sándan Hill Mark (helio.)	"	84 3 30	4.7741634	55161	10.447
560	Limbálu Hill Mark (helio.)	"	4 754530	56824	10.762	567	Itria, XXXV	h.s.	82 23 44	4.771454	59082	11.100
			4 754530	56824	10.762		Modhuka	h.s.	12 45 30	4.119367	13163	2.493
561	Bhimtekri	h.s.	36 54 29	4.583571	38333		Chomalpur Hill	"	63 1 47	4.733883	54185	10.262
	Dhándhalpur	"	35 49 5	4.572348	37355		Gadhada	h.s.	35 38 41	4.540375	35430	6.710
562	Limbálu Hill Mark (helio.)	"	4 784990	60952	11.544	568	Sándan Hill Mark (helio.)	"	70 50 46	4.733883	54185	10.262
			4 784990	60952	11.544		Gadhada	h.s.	50 11 35	4.644094	44065	8.346
563	Bhimtekri	h.s.	41 0 37	4.646310	44290		Bhadli Hill Mark (helio.)	"	26 30 37	4.426486	26698	5.057
	Dhándhalpur	"	87 42 28	4.828029	67442		Modhuka	h.s.	70 30 47	4.751184	56388	10.679
564	Sáya Hill Mark (helio.)	"	4 721502	52603	9.974	569	Bhimrád	"	26 30 37	4.426486	26698	5.057
			4 721502	52603	9.974		Gadhada	h.s.	70 30 47	4.751184	56388	10.679
565	Sudámda	h.s.	77 34 35	4.828029	67442		Bhadli Hill Mark (helio.)	"	26 30 37	4.426486	26698	5.057
	Dhándhalpur	"	40 27 52	4.651449	44818		Modhuka	h.s.	70 30 47	4.751184	56388	10.679
566	Sáya Hill Mark (helio.)	"	4 784990	60952	11.544	570	Holáya Hill Mark (helio.)	"	26 30 37	4.426486	26698	5.057
			4 784990	60952	11.544		Bhimrád	h.s.	70 30 47	4.751184	56388	10.679
567	Bhimtekri	h.s.	30 56 44	4.532135	34051		Holáya Hill Mark (helio.)	"	26 30 37	4.426486	26698	5.057
	Dhándhalpur	"	96 22 23	4.818291	65810		Bhimrád	h.s.	70 30 47	4.751184	56388	10.679
568	Gadgharia Hill Mark	"	4 721502	52603	9.974	571	Modhuka	h.s.	26 30 37	4.426486	26698	5.057
			4 721502	52603	9.974		Bhimrád	h.s.	70 30 47	4.751184	56388	10.679
569	Sudámda	h.s.	69 22 39	4.818291	65810		Holáya Hill Mark (helio.)	"	26 30 37	4.426486	26698	5.057
	Dhándhalpur	"	50 31 45	4.734040	54280		Bhimrád	h.s.	70 30 47	4.751184	56388	10.679
570	Gadgharia Hill Mark	"	4 784990	60952	11.544	572	Holáya Hill Mark (helio.)	"	26 30 37	4.426486	26698	5.057
			4 784990	60952	11.544		Bhimrád	h.s.	70 30 47	4.751184	56388	10.679

No. of Triangle	Station	Corrected Plane Angle	Distance			No. of Triangle	Station	Corrected Plane Angle	Distance			No. of Triangle	Station	Corrected Plane Angle	Distance			No. of Triangle
			Log. feet	Feet	Miles				Log. feet	Feet	Miles				Log. feet	Feet	Miles	
578	Itria, XXXV Moolhuka Holiaya Hill Mark (helio.)	63 42 54 54 59 25	4° 7' 51.184 4° 7' 11.897 4° 7' 41.634	56388 51511 55161	10° 6' 79 9° 7' 50 10° 4' 47	585	Sakhpur, XXXVI Akalia Bhangrad Mark (helio.)	12 45 17 69 44 16	4° 0' 91.154 4° 7' 19.456 4° 7' 43.460	13335 52415 55394	2° 3' 36 9° 9' 27 10° 4' 91	585	Sakhpur, XXXVI Akalia Bhangrad Mark (helio.)	12 45 17 69 44 16	4° 0' 91.154 4° 7' 19.456 4° 7' 43.460	13335 52415 55394	2° 3' 36 9° 9' 27 10° 4' 91	
574	Itria, XXXV Moolhuka Limbalia Hill Mark	81 39 21 13 52 20	4° 7' 39.037 4° 12' 33.431 4° 7' 41.034	54832 13287 55161	10° 3' 85 2° 5' 16 10° 4' 47	586	Sakhpur, XXXVI Bhokarva Palitana, Shetrunja Temple No. 2	75 20 57 55 38 6	5° 0' 65.084 4° 9' 06.134 4° 9' 57.323	116167 99114 90641	22° 0' 01 18° 7' 72 17° 1' 67	586	Sakhpur, XXXVI Bhokarva Palitana, Shetrunja Temple No. 2	75 20 57 55 38 6	5° 0' 65.084 4° 9' 06.134 4° 9' 57.323	116167 99114 90641	22° 0' 01 18° 7' 72 17° 1' 67	
575	Moolhuka Bhunarad Limbalia Hill Mark	67 37 42 52 47 40	4° 8' 03.884 4° 7' 39.037 4° 7' 35.531	63662 54832 59365	12° 0' 57 10° 3' 85 11° 2' 43	587	Sakhpur, XXXVI Bhokarva Palitana, Shetrunja Temple No. 3	74 43 19 55 52 18	5° 0' 61.259 4° 9' 94.801 4° 9' 57.323	115149 98810 90641	21° 8' 08 18° 7' 14 17° 1' 67	587	Sakhpur, XXXVI Bhokarva Palitana, Shetrunja Temple No. 3	74 43 19 55 52 18	5° 0' 61.259 4° 9' 94.801 4° 9' 57.323	115149 98810 90641	21° 8' 08 18° 7' 14 17° 1' 67	
576	Panch Tobra Jalalpur Samadhiala Hill Mark (helio.)	60 9 33 56 46 21	4° 7' 19.828 4° 7' 04.270 4° 7' 31.747	52460 50591 53920	9° 9' 36 9° 5' 82 10° 2' 12	588	Badhla Bhokarva Baolia Hill Mark (helio.)	55 26 51 83 0 21	4° 8' 13.615 4° 8' 94.651 4° 7' 19.559	65105 78461 52428	12° 3' 31 14° 8' 60 9° 9' 29	588	Badhla Bhokarva Baolia Hill Mark (helio.)	55 26 51 83 0 21	4° 8' 13.615 4° 8' 94.651 4° 7' 19.559	65105 78461 52428	12° 3' 31 14° 8' 60 9° 9' 29	
577	Itria, XXXV Panch Tobra Samadhiala Hill Mark (helio.)	62 41 28 41 49 34	4° 7' 04.070 4° 57.043 4° 7' 41.298	50591 37969 55119	9° 5' 82 7° 1' 91 10° 4' 39	589	Jatrodia Badhla Baolia Hill Mark (helio.)	48 0 15 32 56 27	4° 8' 94.651 4° 7' 58.967 5° 0' 18.103	78461 57407 104256	14° 8' 60 10° 8' 73 19° 7' 46	589	Jatrodia Badhla Baolia Hill Mark (helio.)	48 0 15 32 56 27	4° 8' 94.651 4° 7' 58.967 5° 0' 18.103	78461 57407 104256	14° 8' 60 10° 8' 73 19° 7' 46	
578	Gadhada Jalalpur Gadhali Hill Fort	18 36 53 16 21 54	4° 5' 31.671 4° 4' 47.476 4° 7' 85.976	34015 37025 61091	6° 44' 2 5° 6' 86 11° 5' 70	590	Sakhpur, XXXVI Bhokarva Boradi Hill Mark	19 26 47 14 40 10	4° 7' 30.809 4° 6' 11.999 4° 9' 57.323	53803 40926 90641	10° 1' 90 7° 7' 51 17° 1' 67	590	Sakhpur, XXXVI Bhokarva Boradi Hill Mark	19 26 47 14 40 10	4° 7' 30.809 4° 6' 11.999 4° 9' 57.323	53803 40926 90641	10° 1' 90 7° 7' 51 17° 1' 67	
579	Panch Tobra Jalalpur Sitapur Hill Mark (helio.)	61 28 24 31 17 27	4° 6' 84.941 4° 4' 48.738 4° 7' 31.747	48411 28102 53920	9° 1' 69 5° 3' 22 10° 2' 12	591	Sakhpur, XXXVI Bhokarva Pipardi Tank (helio.)	32 20 33 33 45 57	4° 7' 24.566 4° 7' 41.147 4° 9' 57.323	53035 55099 90641	10° 0' 45 10° 4' 35 17° 1' 67	591	Sakhpur, XXXVI Bhokarva Pipardi Tank (helio.)	32 20 33 33 45 57	4° 7' 24.566 4° 7' 41.147 4° 9' 57.323	53035 55099 90641	10° 0' 45 10° 4' 35 17° 1' 67	
580	Itria, XXXV Panch Tobra Sitapur Hill Mark (helio.)	27 50 33 38 30 43	4° 4' 48.738 4° 57.3045 4° 7' 41.298	28102 37467 55119	5° 3' 22 7° 0' 60 10° 4' 39	592	Badhla Bhokarva Hathalia Hill Mark (helio.)	50 47 42 53 41 47	4° 6' 49.746 4° 7' 13.037 4° 7' 19.559	44642 51646 52428	8° 4' 55 9° 7' 81 9° 9' 29	592	Badhla Bhokarva Hathalia Hill Mark (helio.)	50 47 42 53 41 47	4° 6' 49.746 4° 7' 13.037 4° 7' 19.559	44642 51646 52428	8° 4' 55 9° 7' 81 9° 9' 29	
581	Panch Tobra Jalalpur Dardi Janbaini Hill Mark	64 29 7 14 28 36	4° 6' 53.292 4° 13' 77.2 4° 7' 31.747	49578 13733 53920	9° 3' 60 2° 6' 01 10° 2' 12	593	Sakhpur, XXXVI Bhokarva Hathalia Hill Mark (helio.)	23 7 30 29 45 30	4° 6' 49.746 4° 7' 51.424 4° 9' 57.323	44642 56419 90641	8° 4' 55 10° 6' 85 17° 1' 67	593	Sakhpur, XXXVI Bhokarva Hathalia Hill Mark (helio.)	23 7 30 29 45 30	4° 6' 49.746 4° 7' 51.424 4° 9' 57.323	44642 56419 90641	8° 4' 55 10° 6' 85 17° 1' 67	
582	Jalalpur Hajradhar Methli Hill Mark (helio.)	43 45 10 52 38 6	4° 5' 35.820 4° 5' 06.247 4° 6' 53.493	34342 39468 49351	6° 5' 04 7° 4' 75 9° 3' 47	594	Badhla Bhokarva Dholidhar Hill Mark (helio.)	53 22 43 47 37 36	4° 6' 32.117 4° 5' 06.129 4° 7' 19.559	42866 39457 52428	8° 1' 19 7° 4' 73 9° 9' 29	594	Badhla Bhokarva Dholidhar Hill Mark (helio.)	53 22 43 47 37 36	4° 6' 32.117 4° 5' 06.129 4° 7' 19.559	42866 39457 52428	8° 1' 19 7° 4' 73 9° 9' 29	
583	Panch Tobra Jalalpur Methli Hill Mark (helio.)	45 29 47 31 29 55	4° 5' 06.247 4° 4' 46.100 4° 7' 31.747	39468 28913 53920	7° 4' 75 5° 4' 76 10° 2' 12	595	Sakhpur, XXXVI Bhokarva Dholidhar Hill Mark (helio.)	26 50 11 45 49 41	4° 6' 32.117 4° 8' 33.195 4° 9' 57.323	42866 68106 90641	8° 1' 19 12° 8' 99 17° 1' 67	595	Sakhpur, XXXVI Bhokarva Dholidhar Hill Mark (helio.)	26 50 11 45 49 41	4° 6' 32.117 4° 8' 33.195 4° 9' 57.323	42866 68106 90641	8° 1' 19 12° 8' 99 17° 1' 67	
584	Panch Tobra Akalia Lathi Tower (helio.)	20 25 52 33 25 45	4° 2' 98.706 4° 4' 96.857 4° 6' 62.966	19893 31395 46022	3° 7' 68 5° 9' 46 8° 7' 16	596	Sakhpur, XXXVI Bhokarva Juijhuda Hill Mark	29 46 41 74 59 12	4° 6' 67.949 4° 9' 56.822 4° 9' 57.323	46553 90536 90641	8° 8' 17 17° 1' 47 17° 1' 67	596	Sakhpur, XXXVI Bhokarva Juijhuda Hill Mark	29 46 41 74 59 12	4° 6' 67.949 4° 9' 56.822 4° 9' 57.323	46553 90536 90641	8° 8' 17 17° 1' 47 17° 1' 67	

No. of Triangle	Station	Corrected Plane Angle	Distance			Theodolite used
			Log. feet	Feet	Miles	
597	Bádha	h.s.		12	8.817	Inch
	Bhokarva	"	4.667949	46553	3.202	18
	Jhijhuda Hill Mark	"	4.228103	16068	9.929	"
598	Bádha	h.s.	4.340609	21008	4.149	"
	Bhokarva	"	4.496343	31322	5.942	"
	Vikhgáditot Hill Mark (helio.)	"	4.719559	52428	9.929	"
599	Bádha	h.s.	4.593016	39176	7.420	"
	Detad	"	4.333881	21572	4.086	"
	Gádhakda Bastion	"	4.746712	55810	10.570	"
600	Bhokarva	h.s.	4.798649	62900	11.913	"
	Detad	"	5.042178	110199	20.871	"
	Lápla Hill Mark (helio.)	"	4.831252	67804	12.842	"
601	Bádha	h.s.	4.798649	62900	11.913	"
	Detad	"	4.811694	64818	12.276	"
	Lápla Hill Mark (helio.)	"	4.746712	55810	10.570	"
602	Bhokarva	h.s.	4.388340	24453	4.631	"
	Detad	"	4.947304	88574	16.776	"
	Ádsang Hill Mark	"	4.831252	67804	12.842	"
603	Vadál	h.s.	4.716882	52105	9.868	"
	Dungar	"	4.754362	50802	10.758	"
	Bhankshi Hill Mark (helio.)	"	4.681210	47997	9.090	"
604	Dungar	h.s.	4.602617	40051	7.585	"
	Hindorna	"	4.716882	52105	9.868	"
	Bhankshi Hill Mark (helio.)	"	4.665309	46271	8.763	"
605	Detad	h.s.	4.419335	26293	4.980	"
	Dungar	"	4.672160	47007	8.903	"
	Bábríadhár Hill Mark No. 1 (helio.)	"	4.782026	60538	11.465	"
606	Detad	h.s.	4.371737	23536	4.458	"
	Vadál	"	4.672160	47007	8.903	"
	Bábríadhár Hill Mark No. 1 (helio.)	"	4.757251	57181	10.330	"
607	Bhokarva	h.s.	4.450031	28244	5.349	"
	Vadál	"	4.806865	64101	12.140	"
	Bábríadhár Hill Mark No. 2 (helio.)	"	4.624350	42107	7.975	"
608	Bádha	h.s.	4.866865	64101	12.140	"
	Bhokarva	"	4.921584	83480	15.811	"
	Bábríadhár Hill Mark No. 2 (helio.)	"	4.719559	52428	9.929	"

No. of Triangle	Station	Corrected Plane Angle	Distance			Theodolite used
			Log. feet	Feet	Miles	
609	Vadál	h.s.	4.559680	36281	6.871	Inch
	Dungar	"	4.659080	45612	8.639	18
	Vávára Hill Mark (helio.)	"	4.681210	47997	9.090	"
610	Dungar	h.s.	4.577489	37800	7.159	"
	Hindorna	"	4.559680	36281	6.871	"
	Vávára Hill Mark (helio.)	"	4.605309	46271	8.763	"
611	Dungar	h.s.	4.158165	14393	2.726	12
	Hindorna	"	4.555542	52937	6.806	"
	Rájula Hill Peak	"	4.665309	46271	8.763	"
612	Detad	h.s.	4.590959	39807	7.539	18
	Dungar	"	4.618945	41586	7.876	"
	Rájula Hill Mark (helio.)	"	4.782026	60538	11.465	"
613	Dungar	h.s.	4.024132	10571	2.002	"
	Hindorna	"	4.599959	39807	7.539	"
	Rájula Hill Mark (helio.)	"	4.665309	46271	8.763	"

KATHIÁWAR COAST MINOR SERIES.

614	Trámباك	h.s.	4.575208	37602	7.122	12
	Goghá	s.	4.555138	45700	8.501	"
	Alápúr	h.s.	4.795761	62483	11.834	"
615	Trámباك	h.s.	4.707464	50987	9.657	"
	Alápúr	"	4.539324	34620	6.557	"
	Tánsa	"	4.655138	45200	8.561	"
616	Alápúr	h.s.	4.630755	42732	8.093	"
	Tánsa	"	4.572916	37406	7.085	"
	Khadarpur	"	4.707404	50987	9.657	"
617	Tánsa	h.s.	4.568344	37012	7.010	"
	Khadarpur	"	4.703335	50528	9.570	"
	Bhárpúr	"	4.630755	42732	8.093	"
618	Tánsa	h.s.	4.668689	46633	8.832	"
	Bhárpúr	"	4.791125	61819	11.708	"
	Talajá	"	4.703555	50528	9.570	"

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	
619	Bhárápúr	h.s.	4 786751	61200	11.591	631	Sálhet	t.s.	4 631942	42849	8.115	Theodolite used
	Talaja	"	4 873240	74686	14.145		Hindorna	h.s.	4 546559	35201	6.667	
	Rájpara	"	4 668689	46633	8.832		Vánd	"	4 682522	48142	9.118	
620	Talaja	h.s.	4 688905	48855	9.253	632	Hindorna	h.s.	4 616407	47344	7.830	Theodolite used
	Rájpara	"	4 694318	49467	9.369		Vánd	"	4 669653	46736	8.852	
	Gadheshvar	"	4 786751	61200	11.591		Bárman	"	4 631942	42849	8.115	
621	Rájpara	h.s.	4 628780	42538	8.056	633	Vánd	h.s.	4 720023	52484	9.940	Theodolite used
	Gadheshvar	"	4 687326	48677	9.219		Bárman	"	4 756879	57132	10.820	
	Kotra	"	4 688905	48855	9.253		Robhsa	"	4 616407	41344	7.830	
622	Gadheshvar	h.s.	4 733727	54166	10.259	634	Bárman	h.s.	4 673393	47140	8.928	Theodolite used
	Kotra	"	4 598216	39375	7.457		Robhsa	"	4 637640	43415	8.223	
	Otha	"	4 628780	42538	8.056		Moti Moli	"	4 720023	52484	9.940	
623	Kotra	h.s.	4 671940	46983	8.898	635	Robhsa	h.s.	4 629782	42637	8.075	Theodolite used
	Otha	"	4 649222	44588	8.445		Moti Moli	"	4 637640	43415	8.223	
	Níkol	"	4 733727	54166	10.259		Nátej, XLI	"	4 673393	47140	8.928	
624	Otha	h.s.	4 620795	41763	7.910	636	Nátej, XLI	h.s.	4 698373	49931	9.457	Theodolite used
	Níkol	"	4 602401	40031	7.582		Robhsa	"	4 550351	35510	6.725	
	Konjli	"	4 671940	46983	8.898		Khara	"	4 767144	58498	11.079	
625	Níkol	h.s.	4 671500	46936	8.889	637	Nátej, XLI	h.s.	4 548225	35337	6.693	Theodolite used
	Konjli	"	4 624889	42159	7.985		Khara	"	4 644565	44113	8.355	
	Gadhada	t.s.	4 620795	41763	7.910		Mándvi	"	4 550351	35510	6.725	
626	Konjli	h.	4 639879	43639	8.265	638	Nátej, XLI	h.s.	4 591898	39075	7.401	Theodolite used
	Gadhada	t.s.	4 502053	36480	6.909		Mándvi	"	4 567647	36953	6.999	
	Lúasádi	h.	4 671500	46936	8.889		Ilampur	"	4 644565	44113	8.355	
627	Gadhada	t.s.	4 701620	50366	9.528	639	Nátej, XLI	h.s.	4 541732	34812	6.593	Theodolite used
	Lúasádi	h.	4 656284	45319	8.583		Mándvi	"	4 859643	72384	13.709	
	Kheda	h.s.	4 639879	43639	8.265		Dúngarvádi, XLII	"	4 644565	44113	8.355	
628	Lúasádi	h.	4 630119	42670	8.081	640	Mándvi	h.s.	4 679222	47777	9.049	Theodolite used
	Kheda	h.s.	4 551093	35645	6.751		Ilampur	"	4 541732	34812	6.593	
	Dungar	"	4 701620	50366	9.528		Dúngarvádi, XLII	"	4 591898	39075	7.401	
629	Kheda	h.s.	4 780907	60382	11.436	641	Dúngarvádi, XLII	h.s.	4 559025	36226	6.861	Theodolite used
	Dungar	"	4 642711	43945	8.319		Ilampur	"	4 592609	39139	7.413	
	Sálhet	t.s.	4 630119	42670	8.081		Simásá	"	4 679222	47777	9.049	
630	Dungar	h.s.	4 685522	48142	9.118	642	Dúngarvádi, XLII	h.s.	4 687989	48752	9.233	Theodolite used
	Sálhet	t.s.	4 665309	46271	8.763		Simásá	"	4 576162	37684	7.137	
	Hindorna	h.s.	4 780907	60382	11.436		Madvva	"	4 592609	39139	7.413	

No. of Triangle	Station	Corrected Plane Angle			Distance			No. of Triangle	Station	Corrected Plane Angle			Distance			Theodolite used	
		o	'	"	Log. feet	Feet	Miles			o	'	"	Log. feet	Feet	Miles		Theodolite used
643	Simsi	h.s.	55	7	46	4 608581	40695	7 690	12	h.s.	63	50	27	4 584991	38458	7 284	Inch
	Madva	"	44	47	26	4 542423	34868	6 004	"	"	41	49	41	4 455981	28575	5 412	"
644	Malgam	"	80	4	48	4 687989	48752	9 233	"	"	74	19	52	4 615475	41255	7 813	"
	Madva	h.s.	44	5	34	4 550197	35497	6 723	"	h.s.	75	47	8	4 683551	48256	9 139	"
645	Malgam	"	83	9	46	4 704600	50652	9 593	"	"	53	37	46	4 602958	40083	7 591	"
	Chara	"	52	44	40	4 608581	40695	7 690	"	"	50	35	6	4 584991	38458	7 284	"
646	Malgam	h.s.	64	56	44	4 564080	36727	6 956	"	h.s.	64	34	18	4 643703	44025	8 338	"
	Chara	"	53	56	23	4 515323	32773	6 207	"	"	33	34	33	4 430713	26060	5 106	"
647	Vadnagar	"	61	6	53	4 550197	35497	6 723	"	"	81	51	9	4 683551	40256	9 139	"
	Dhamlej	h.s.	75	36	48	4 691856	49188	9 316	"	h.s.	33	24	45	4 413983	25941	4 013	"
648	Vasavar	"	58	3	48	4 034413	43094	8 162	"	"	77	25	50	4 662561	45979	8 708	"
	Dhamlej	"	46	19	24	4 564980	36727	6 956	"	s.	69	9	25	4 643703	44025	8 338	"
649	Vadnagar	h.s.	48	43	17	4 568326	37011	7 010	"	h.s.	56	51	14	4 588769	38794	7 347	"
	Dhamlej	"	44	7	23	4 535126	34287	6 494	"	s.	40	14	24	4 476125	29931	5 669	"
650	Vasavar	"	87	9	20	4 691856	49188	9 316	"	h.s.	82	54	22	4 662561	45979	8 708	"
	Kadvad	h.s.	85	5	34	4 750465	56294	10 662	"	s.	41	1	25	4 499582	31502	5 983	"
651	Vasavar	"	53	59	5	4 659933	45702	8 656	"	h.s.	85	16	10	4 682052	47968	9 085	"
	Bolis	"	40	55	21	4 568326	37011	7 010	"	"	53	42	25	4 588769	38794	7 347	"
652	Vasavar	h.s.	40	46	59	4 568626	37036	7 014	"	s.	50	1	26	4 571876	37314	7 067	"
	Kadvad	"	56	4	22	4 672527	47047	8 910	"	h.s.	49	52	42	4 570949	37235	7 052	"
653	Vasavar	"	83	8	39	4 750465	56294	10 662	"	s.	80	5	52	4 680952	47968	9 085	"
	Bolis	h.s.	73	49	18	4 686555	48591	9 203	"	h.s.	47	2	55	4 474173	29797	5 643	"
654	Vasavar	"	59	32	0	4 621264	41868	7 918	"	s.	66	31	9	4 572163	37339	7 072	"
	Bolis	"	47	38	42	4 568626	37036	7 014	"	t.s.	66	25	56	4 571876	37314	7 067	"
655	Vasavar	h.s.	67	25	10	4 740072	54963	10 410	"	h.s.	43	54	6	4 470167	30142	5 709	"
	Bolis	"	57	51	55	4 702490	50407	9 547	"	t.s.	76	53	37	4 626706	42336	8 018	"
656	Vasavar	"	54	42	55	4 686555	48591	9 203	"	h.s.	59	12	17	4 572163	37339	7 072	"
	Bolis	h.s.	73	4	36	4 765116	58226	11 028	"	t.s.	73	48	55	4 609030	40647	7 698	"
657	Vasavar	"	42	21	24	4 612837	41005	7 766	"	h.s.	60	46	27	4 567458	36937	6 996	"
	Bolis	"	64	34	0	4 746072	54963	10 410	"	s.	45	24	38	4 479167	30142	5 709	"
658	Vasavar	h.s.	46	31	12	4 628722	42533	8 055	"	h.s.	57	13	42	4 588416	38763	7 341	"
	Bolis	"	50	5	38	4 652866	44964	8 516	"	s.	60	55	22	4 603200	40290	7 631	"
659	Vasavar	"	83	23	10	4 705116	58226	11 028	"	h.s.	61	50	56	4 609030	40647	7 698	"
	Bolis	h.s.	58	26	17	4 615475	41255	7 813	"	s.	50	52	23	4 483760	30462	5 769	"
660	Vasavar	"	60	6	15	4 622983	41074	7 950	"	h.s.	48	19	34	4 467325	29331	5 555	"
	Bolis	"	61	27	28	4 628722	42533	8 055	"	s.	80	48	3	4 588416	38763	7 341	"

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	Theodolite used			
667	Rátin	h.s.	68	51	56	4° 63' 01.88	42676	8° 083	8° 083	12	63587	12° 043	Inch			
	Bhad	s.	69	23	32	4° 63' 17.10	42826	8° 111	8° 111	"	35500	6° 155	"			
	Tunkra	h.s.	41	44	32	4° 48' 37.60	30462	5° 769	"	"	68227	12° 922	"			
668	Bhad	s.	51	7	49	4° 56' 24.97	36517	6° 916	6° 916	"	50827	9° 626	"			
	Tunkra	h.s.	63	22	44	4° 62' 25.50	41930	7° 941	"	"	80332	16° 028	"			
	Mokal	t.s.	65	29	27	4° 63' 01.88	42676	8° 083	"	"	68227	12° 922	"			
669	Tunkra	h.s.	77	59	57	4° 63' 77.60	43427	8° 225	8° 225	"	64805	12° 374	"			
	Mokal	t.s.	40	39	51	4° 50' 09.7	32292	6° 116	"	"	50827	9° 626	"			
	Adodar	h.s.	55	20	12	4° 56' 24.97	36517	6° 916	"	"	63597	12° 043	"			
670	Mokal	t.s.	72	17	51	4° 76' 36.16	58025	10° 990	10° 990	"	57803	10° 948	"			
	Adodar	h.s.	62	13	29	4° 73' 15.20	53891	10° 207	"	"	53809	10° 191	"			
	Barda	"	45	28	40	4° 63' 77.60	43427	8° 225	"	"	68227	12° 922	"			
671	Adodar	h.s.	53	42	16	4° 69' 46.14	49501	9° 375	9° 375	"	43364	8° 213	"			
	Barda	"	55	25	41	4° 78' 39.12	50572	9° 578	"	"	57803	10° 948	"			
	Dehgám	s.	70	52	3	4° 76' 36.16	58025	10° 990	10° 990	"	50827	9° 626	"			
672	Barda	h.s.	51	43	0	4° 66' 10.67	45821	8° 678	8° 678	"	54729	10° 365	"			
	Dehgám	s.	70	17	21	4° 73' 99.99	54954	10° 468	"	"	53490	10° 131	"			
	Khambhodar	h.s.	57	59	39	4° 69' 46.14	49501	9° 375	9° 375	"	64805	12° 274	"			
673	Dehgám	s.	49	51	12	4° 64' 32.97	43084	8° 330	8° 330	"	39424	7° 467	"			
	Khambhodar	h.s.	77	21	59	4° 74' 93.34	56148	10° 634	"	"	44496	8° 427	"			
	Vadálá No. 3	"	52	46	49	4° 66' 10.67	45821	8° 678	8° 678	"	53490	10° 131	"			
674	Khambhodar	h.s.	66	58	10	4° 68' 93.90	48909	9° 263	9° 263	"	46011	8° 714	"			
	Vadálá No. 3	"	57	10	29	4° 64' 99.11	44959	8° 458	8° 458	"	26222	4° 966	"			
	Gorána	"	55	51	21	4° 64' 32.97	43984	8° 330	8° 330	"	44496	8° 427	"			
675	Vadálá No. 3	h.s.	92	2	57	4° 77' 45.70	59507	11° 270	11° 270	"	40483	7° 667	"			
	Gorána	"	32	43	41	4° 50' 77.66	32193	6° 097	6° 097	"	41490	7° 858	"			
	Sarsad Máta	"	55	13	22	4° 68' 93.90	48909	9° 263	9° 263	"	46011	8° 714	"			
676	Vadálá No. 3	h.s.	35	9	34	4° 77' 27.14	59254	11° 222	11° 222	"	34219	6° 481	"			
	Gorána	"	116	27	37	4° 96' 43.44	92118	17° 447	17° 447	"	48560	9° 197	"			
	Patelka	"	28	22	49	4° 68' 93.90	48909	9° 263	9° 263	"	40483	7° 667	"			
677	Gorána	h.s.	83	43	56	4° 89' 05.55	79260	15° 011	15° 011	"	51851	9° 820	"			
	Sarsad Máta	"	47	59	50	4° 77' 27.14	59254	11° 222	11° 222	"	43717	8° 280	"			
	Patelka	"	48	16	14	4° 77' 45.70	59507	11° 270	11° 270	"	34219	6° 481	"			
678	Sarsad Máta	h.s.	56	45	13	4° 83' 39.57	68227	12° 922	12° 922	"	58628	11° 104	"			
	Patelka	"	46	56	34	4° 75' 53.66	59658	11° 289	11° 289	"	53088	10° 055	"			
	Navádra	"	76	18	13	4° 89' 05.55	79260	15° 011	15° 011	"	51851	9° 820	"			

SECONDARY TRIANGULATION. 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	
691	Kálásvad	h.s.	40 17 52	4 607773	40530	7 676	708	Katumba	h.s.	67 7 44	4 668082	46567	18 820
	Dánta	"	70 22 53	4 771057	59028	11 180		Poshitra	"	70 16 29	4 677380	47375	9 010
	Ambla	"	69 19 15	4 768108	58628	11 104		Ghadechi	"	42 35 47	4 534122	34208	6 479
692	Dánta	h.s.	93 37 52	4 822256	66413	12 578	704	Katumba	h.s.	38 23 52	4 472610	29690	5 623
	Ambla	"	48 50 56	4 699910	50108	9 490		Ghadechi	"	57 10 22	4 603875	40168	7 607
	Jasápur	"	37 31 12	4 607773	40530	7 676		Dhrásanvel	"	84 25 46	4 677380	47575	9 010
693	Ámbla	h.s.	55 34 47	4 772833	59270	11 225	705	Katumba	h.s.	50 38 53	4 493206	31132	5 896
	Jasápur	"	56 51 5	4 779283	60157	11 393		Dhrásanvel	"	35 27 43	4 368426	23358	4 424
	Kháori	"	67 34 8	4 822256	66413	12 578		Thetria	"	93 53 24	4 603875	40168	7 607
694	Jasápur	h.s.	50 24 39	4 797606	62749	11 884	706	Poshitra	h.s.	48 17 13	4 546050	35160	6 659
	Kháori	"	82 52 41	4 907394	80797	15 302		Ghadechi	"	50 20 39	4 559458	36263	6 868
	Changa	"	46 42 40	4 772833	59270	11 225		Bet	t.s.	81 22 8	4 668082	40507	8 820
695	Kháori	h.s.	55 41 28	4 753197	56650	10 729	707	Ghadechi	h.s.	60 52 58	4 503300	32011	6 063
	Changa	"	58 6 40	4 765157	58231	11 029		Bet	t.s.	45 27 56	4 416960	26119	4 947
	Kháriberája	s.	66 11 52	4 797606	62749	11 884		Arámda	h.s.	73 39 6	4 546050	35160	6 659
696	Changa	h.s.	28 3 14	4 425714	26651	5 048	708	Ghadechi	h.s.	85 5 52	4 613814	41097	7 784
	Kháriberája	s.	63 24 1	4 764751	50670	9 597		Arámda	"	55 36 51	4 531093	34040	6 447
	Navánagar	t.s.	88 32 45	4 753197	56650	10 729		Kachhigad	t.s.	39 17 17	4 416960	26119	4 947
697	Changa	h.s.	38 45 11	4 509966	32337	6 128	709	Navánagar	t.s.	52 25 48	4 598650	39687	7 517
	Navánagar	t.s.	62 39 17	4 661955	45915	8 696		Súrda	h.s.	87 18 48	4 699113	50016	9 473
	Súrda	h.s.	78 35 32	4 704751	50670	9 597		Bára	"	40 15 24	4 509966	32337	6 128
698	Kuranga	h.s.	39 29 16	4 545113	35084	6 645	710	Navánagar	t.s.	33 42 7	4 579898	38010	7 199
	Gurgat	t.s.	57 46 15	4 660045	46671	8 839		Bára	h.s.	99 23 59	4 829834	67583	12 800
	Lovaráli	h.s.	82 44 29	4 738221	54729	10 365		Kiri	"	46 53 54	4 699113	50016	9 473
699	Gurgat	t.s.	43 12 0	4 391308	24621	4 663	711	Navánagar	t.s.	97 9 55	4 804455	61746	12 073
	Lovaráli	h.s.	59 31 12	4 491315	30987	5 871		Bára	h.s.	31 42 45	4 528563	33772	6 396
	Thetria	"	77 16 48	4 545113	35084	6 645		Rozi Máta	s.	51 7 20	4 699113	50016	9 473
700	Mevása No. 3	h.s.	77 18 53	4 778693	60075	11 378	712	Bára	h.s.	67 41 14	4 782245	60568	11 471
	Jhákasia	"	60 19 34	4 728374	53502	10 133		Kiri	"	76 49 20	4 804455	63746	12 073
	Ajár	"	42 21 33	4 617941	41490	7 858		Rozi Máta	s.	35 29 26	4 579898	38010	7 199
701	Mevása No. 3	h.s.	72 42 9	4 813382	65070	12 324	713	Navánagar	t.s.	97 22 58	4 805410	63887	12 100
	Ajár	"	55 34 23	4 749855	56215	10 647		Bára	h.s.	31 41 5	4 529387	33837	6 408
	Katumba	"	51 43 28	4 728374	53502	10 133		Rozi Máta	t.s.	50 55 57	4 699113	50016	9 473
702	Ajár	h.s.	31 34 14	4 534122	34208	6 479	714	Bára	h.s.	67 42 54	4 783192	60700	11 496
	Katumba	"	53 14 28	4 718885	52346	9 914		Kiri	"	76 52 31	4 805410	63887	12 100
	Poshitra	"	93 11 18	4 813382	65070	12 324		Rozi Máta	t.s.	35 24 35	4 579898	38010	7 199

No. of Triangle	Station	Corrected Plane Angle	Distance			Theodolite used
			Log. feet	Feet	Miles	
715	Bára	h.s.	48 14 1	37981	7 193	Inch 12
	Kiri	"	4 579570	50593	9 582	"
	Soel	"	4 704094	38010	7 199	"
716	Kiri	h.s.	67 23 29	49311	9 339	"
	Soel	"	4 692948	49275	9 332	"
	Jodiya	s.	4 579570	37981	7 193	"
717	Soel	h.s.	62 8 33	47712	9 036	"
	Jodiya	s.	4 678630	44247	8 035	"
	Hiadátoda	h.s.	4 627040	49311	9 339	"
718	Jodiya	s.	44 49 20	35443	6 713	"
	Hiadátoda	h.s.	4 549527	45023	8 527	"
	Balambha	t.s.	4 653439	47712	9 036	"
719	Hiadátoda	h.s.	72 28 23	50265	9 520	"
	Balambha	t.s.	4 701269	47881	9 068	"
	Pitar	"	4 680159	35443	6 713	"
720	Balambha	t.s.	59 10 18	43510	8 241	"
	Pitar	"	4 638591	31246	5 918	"
	Dudhai	s.	4 494788	50265	9 520	"
721	Pitar	t.s.	59 7 20	45941	8 701	"
	Dudhai	s.	4 662203	49089	9 297	"
	Phatsear	"	4 638594	43510	8 241	"
722	Dudhai	s.	72 22 32	57993	10 083	"
	Phatsear	"	4 763372	51937	9 836	"
	Jhijhoda	h.s.	4 715473	45941	8 701	"
723	Phatsear	s.	66 52 37	66269	12 551	"
	Jhijhoda	h.s.	4 821311	62107	11 763	"
	Phagásia, XIX	"	4 793143	57993	10 083	"
724	Phagásia, XIX	s.	46 49 13	48470	9 180	"
	Jhijhoda	h.s.	4 685470	49101	9 299	"
	Bápur	"	4 691093	66269	12 551	"
725	Phagásia, XIX	h.s.	53 43 53	44741	8 474	"
	Bápur	s.	4 650709	49893	9 450	"
	Madia, XVI	"	4 698043	49101	9 299	"
726	Trámbak	h.s.	62 13 46	39662	7 512	"
	Gogha	s.	4 691093	85186	16 134	"
	Piram Light-house	"	4 691093	62483	11 634	"
727	Trámbak	h.s.	77 47 55	92754	17 567	Inch 18
	Bhávnagar	"	4 967333	85186	16 134	"
	Piram Light-house	"	4 930366	58880	11 152	"
728	Trámbak	h.s.	89 3 57	41609	7 881	"
	Tánsa	"	4 619191	23654	4 480	"
	Nághdhanba Hill Tree	"	4 373904	34620	6 557	"
729	Alápúr	h.s.	53 9 16	41609	7 881	"
	Tánsa	"	4 619191	22423	4 247	"
	Nághdhanba Hill Tree	"	4 350701	50987	9 057	"
730	Tánsa	h.s.	84 54 48	79884	15 129	"
	Talája	"	4 902458	56371	10 676	"
	Guudála	"	4 751055	61819	11 708	"
731	Trámbak	h.s.	69 33 23	56371	10 676	"
	Tánsa	"	4 751055	58194	11 022	"
	Guudála	"	4 764878	34620	6 557	"
732	Trámbak	h.s.	6 34 45	14641	2 773	"
	Guudála	"	4 165564	44776	8 480	"
	Tána Temple	"	4 651049	58194	11 022	"
733	Trámbak	h.s.	6 3 15	22047	4 176	"
	Guudála	"	4 343354	36694	6 950	"
	Bhildár Hill Peak	"	4 564501	58194	11 022	"
734	Tánsa	h.s.	14 22 20	22047	4 176	"
	Guudála	"	4 343354	37569	7 115	"
	Bhildár Hill Peak	"	4 574826	56371	10 676	"
735	Alápúr	h.s.	20 30 26	18014	3 412	"
	Tánsa	"	4 255610	45423	8 603	"
	Bhandaría Hill Temple	"	4 657273	50987	9 057	"
736	Trámbak	h.s.	80 11 4	45423	8 603	"
	Alápúr	"	4 657273	16626	3 149	"
	Bhandaría Hill Temple	"	4 220777	45423	8 603	"
737	Alápúr	h.s.	7 35 31	39662	5 865	"
	Tánsa	"	4 490879	20317	3 848	"
	Sanoár Hill Tree	"	4 307851	50987	9 057	"
738	Tánsa	h.s.	32 12 20	4365393	4 393	"
	Khacharpur	"	08 43 15	4 068034	7 081	"
	Morchand Hill Platform	"	4 030755	42732	8 093	"

SECONDARY TRIANGULATION. TRIANGLES.

No. of Triangle	Station	Corrected Plane Angle			Distance			Theodolite used		
		°	'	"	Log. feet	Feet	Miles			
739	Alapur	h.s.	39 49 20	4 608034	40554	7 681	3 873206	7468	1 414	Inch
	Tansa	"	13 48 15	4 179255	15110	2 862	4 766708	58440	11 068	"
	Morehand Hill Platform	"	4 707464	50987	9 657	4 7886751	61200	11 591	"	"
740	Alapur	h.s.	4 59 33	3 730475	5376	1 018	4 692799	49295	9 336	"
	Tansa	"	50 37 51	4 679050	47758	9 045	4 766902	58466	11 073	"
	Tansa Hill Tree	"	4 707464	50987	9 657	4 694318	49467	9 369	"	"
741	Trambak	h.s.	76 25 19	4 679050	47758	9 045	3 578127	3786	0 717	"
	Alapur	"	36 39 20	4 673338	29332	5 555	4 766902	58466	11 073	"
	Tansa Hill Tree	"	4 655138	45200	8 561	4 780751	61200	11 591	"	"
742	Tansa	h.s.	17 40 52	4 234923	17176	3 253	4 654909	45176	8 556	"
	Gundala	"	67 43 42	4 718779	52333	9 912	4 674702	47283	8 955	"
	Bakhalaka Hill Mark	"	4 751055	56371	10 676	4 628780	42538	8 056	"	"
743	Tansa	h.s.	42 29 56	4 620908	41774	7 912	4 674702	47283	8 955	"
	Talaja	"	46 13 27	4 649802	44648	8 456	4 797450	62726	11 880	"
	Shevaliya Hill Tree	"	4 791125	61819	11 708	4 694318	49467	9 369	"	"
744	Tansa	h.s.	42 24 52	4 581405	38142	7 224	4 566231	36832	6 976	"
	Gundala	"	52 8 32	4 649802	44648	8 456	4 621482	41829	7 022	"
	Shevaliya Hill Tree	"	4 751055	56371	10 676	4 628780	42538	8 056	"	"
745	Tansa	h.s.	55 5 1	4 573750	37649	7 130	4 621482	41829	7 022	"
	Khadarpur	"	50 22 16	4 582400	38230	7 240	4 674802	11880	2 250	"
	Mahadevparu Tower	"	4 630755	42732	8 093	4 688905	48855	9 253	"	"
746	Tansa	h.s.	38 29 43	4 599847	39797	7 537	4 804688	63780	12 080	"
	Talaja	"	30 43 21	4 582400	38230	7 240	4 865759	73411	13 904	"
	Mahadevparu Tower	"	4 791125	61819	11 708	4 595216	39375	7 457	"	"
747	Tansa	h.s.	27 25 35	4 463713	29222	5 535	4 724278	53000	10 038	"
	Talaja	"	49 35 7	4 683978	48303	9 148	4 918587	82906	15 702	"
	Tinsana Fort	"	4 791125	61819	11 708	4 733727	54166	10 359	"	"
748	Bharapur	h.s.	54 52 45	4 786753	61200	11 591	4 724278	53000	10 038	"
	Rajapura	"	38 34 37	4 668913	46657	8 836	4 613579	41075	7 779	"
	Talaja Hill Temple	"	4 873240	74686	14 145	4 595216	39375	7 457	"	"
749	Rajapura	h.s.	51 55 59	4 694156	49449	9 365	4 699516	50063	9 482	"
	Gadheshvar	"	77 0 17	4 786753	61200	11 591	4 123582	13292	2 517	"
	Talaja Hill Temple	"	4 688905	48855	9 253	4 628780	42538	8 056	"	"
750	Rajapura	h.s.	36 46 17	4 510658	33087	6 266	4 716495	52059	9 860	"
	Gadheshvar	"	25 20 40	4 374008	24660	4 481	4 699516	50063	9 482	"
	Uachari Hill Tree	"	4 688905	48855	9 253	4 733727	54166	10 259	"	"

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	
703	Gadheshvar	h.s.	4° 33' 42"	21815	4° 132	775	Nikol Gadhada	h.s.	4° 41' 40"	20266	4° 975	Inch 12	
	Otha	"	4° 33' 24"	21789	4° 127		Mahuva Temple	t.s.	4° 41' 979"	20301	4° 981		
	Bhaguda Hill Peak	"	4° 59' 52"	39375	7° 457		"	4° 62' 489"	42159	7° 985			
704	Gadheshvar	h.s.	4° 72' 33"	53497	10° 132	776	Konjli Lusadi	s.	4° 73' 114"	53845	10° 108	"	
	Kotra	"	4° 33' 24"	21789	4° 127		Katpur Tree	"	4° 50' 730"	30924	6° 993		
705	Bhaguda Hill Peak	"	4° 68' 8"	42538	8° 056	777	Kotra	h.s.	4° 33' 610"	21682	4° 106	"	
	Kotra	h.s.	4° 40' 297"	31499	5° 966		Nikol Katpur Island	"	4° 81' 0168"	64590	12° 233		
706	Jagthar Hill	"	4° 52' 20"	37754	7° 150	778	Kotra	h.s.	4° 64' 9222"	44588	8° 445	"	
	Rajpura	h.s.	4° 40' 12"	25920	4° 909		Otha Katpur Island	"	4° 80' 7500"	64195	12° 158		
707	Kotra	"	4° 60' 415"	45753	8° 665	779	Konjli Lusadi	s.	4° 56' 37"	18	4° 106	"	
	Datha Temple	"	4° 68' 7326"	48677	9° 219		Thorala Hill Peak	"	4° 31' 4367"	64590	12° 233		
708	Rajpura	h.s.	4° 22' 3937"	16747	3° 172	780	Nikol Konjli	h.s.	4° 51' 4367"	32686	6° 191	"	
	Gadheshvar	"	4° 66' 0415"	45753	8° 665		Thorala Hill Peak	s.	4° 86' 2100"	72795	13° 787		
709	Datha Temple	"	4° 68' 905"	48855	9° 253	781	Nikol Konjli	h.s.	4° 62' 0795"	41783	7° 910	"	
	Otha	h.s.	4° 64' 7094"	44370	8° 403		Otha Konjli	h.s.	3° 79' 3358"	6214	1° 177		
710	Konjli	s.	4° 03' 4394"	10884	2° 050	782	Thorala Hill Peak	s.	4° 65' 0540"	44724	8° 470	"	
	Khuntavada Platform	"	4° 60' 2401"	40031	7° 582		Konjli Tree	h.s.	4° 60' 2401"	40031	7° 582		
711	Nikol	h.s.	4° 64' 7094"	44370	8° 403	783	Otha	h.s.	5° 31' 4"	6214	1° 177	"	
	Konjli	s.	4° 75' 9206"	57439	10° 879		Konjli	s.	136° 12' 20"	4950540	8° 470		
712	Khuntavada Platform	"	4° 62' 0795"	41783	7° 910	784	Otha	h.s.	62° 12' 29"	47415	8° 980	"	
	Otha	h.s.	4° 31' 0370"	20863	3° 951		Nikol	"	56° 33' 29"	44724	8° 470		
713	Bhadrod Tree	s.	4° 49' 3752"	31171	5° 904	785	Konjli Tree	h.s.	4° 67' 1940"	46983	8° 898	"	
	Otha	h.s.	4° 49' 3752"	31171	5° 904		Vadál	h.s.	4° 55' 3704"	35785	6° 778		
714	Bhadrod Tree	"	4° 60' 2401"	40031	7° 582	786	Dungar	h.s.	4° 34' 1021"	21959	4° 159	"	
	Otha	h.s.	4° 36' 5900"	32222	4° 398		Astrana Hill Tree	"	4° 68' 1210"	47997	9° 090		
715	Nikol	h.s.	4° 43' 0771"	26963	5° 107	787	Lásadi	s.	4° 36' 0257"	22922	4° 341	12	
	Bhadrod Tree	"	4° 62' 5332"	42202	7° 993		Kheda	h.s.	4° 53' 0701"	34650	6° 563		
716	Vagnagar Tree	"	4° 60' 2401"	40031	7° 582	788	Dolia Sand Hill	h.s.	4° 70' 1620"	50306	9° 528	"	
	Otha	h.s.	4° 17' 0272"	15110	2° 862		Kheda	h.s.	4° 61' 7603"	41458	7° 852		
717	Nikol	s.	4° 62' 5332"	42202	7° 993	789	Dungar	"	4° 21' 4695"	16394	3° 105	"	
	Vagnagar Tree	"	4° 62' 5332"	42202	7° 993		Chanch Hill Fort	h.s.	4° 63' 0119"	42670	8° 081		
718	Nikol	h.s.	18° 31' 28"	15110	2° 862	790	Dungar	h.s.	4° 73' 2851"	54057	10° 238	"	
	Vagnagar Tree	"	62° 32' 27"	46983	8° 898		Hindorm	"	4° 61' 7603"	41458	7° 852		
719	Nikol	h.s.	31° 21' 35"	23664	4° 482	791	Chanch Hill Fort	h.s.	4° 73' 2851"	54057	10° 238	"	
	Mahuva Temple	s.	35° 20' 18"	20301	4° 981			"	4° 66' 5309"	40271	8° 703		

SECONDARY TRIANGULATION. TRIANGLES.

No. of Triangle	Station	Corrected Plane Angle ° ' "	Distance			Theodolite used
			Log. feet	Feet	Miles	
787	Sálbet	t.s. 85 41 25	4.732399	54001	10.227	Inch 12
	Hindorna	h.s. 31 33 31	4.452507	28347	5.369	"
	Chaneh Tomb	" 4.682522	48142	9.118	"	
788	Kheda	h.s. 14 12 5	4.452507	28347	5.369	"
	Sálbet	t.s. 8 30	4.213883	16364	3.999	"
	Chaneh Tomb	" 4.642711	43925	8.319	"	
789	Kheda	h.s. 6 59 50	4.075193	11800	2.352	"
	Sálbet	t.s. 19 44 54	4.518245	32980	6.246	"
	Bhensia Rock	" 4.642711	43925	8.319	"	
790	Sálbet	t.s. 113 34 49	4.732467	54000	10.229	"
	Hindorna	h.s. 11 38 26	4.075193	11890	2.352	"
	Bhensia Rock	" 4.682522	48142	9.118	"	
791	Dungar	h.s. 56 33 49	4.713844	51742	9.800	"
	Hindorna	" 75 10 8	4.777703	59938	11.352	"
	Saváibet Pir Mosque	" 4.665309	46271	8.763	"	
792	Dungar	h.s. 4 56 37	3.716675	5208	0.986	"
	Sálbet	t.s. 82 38 38	4.777703	59938	11.352	"
	Saváibet Pir Mosque	" 4.780907	60382	11.436	"	
793	Dungar	h.s. 55 44 7	4.711590	51474	9.749	"
	Hindorna	" 76 17 7	4.781813	60508	11.460	"
	Saváibet Pir Rock	" 4.665309	46271	8.763	"	
794	Hindorna	h.s. 36 41 4	4.424441	26573	5.933	"
	Vánd	" 68 52 54	4.617977	41493	7.859	"
	Bhákodar Temple	" 4.631942	42840	8.115	"	
795	Sálbet	t.s. 40 25 27	4.617977	41493	7.859	"
	Hindorna	h.s. 8 22 10	3.969135	9314	1.764	"
	Bhákodar Temple	" 4.682522	48142	9.118	"	
796	Sálbet	t.s. 16 10 17	4.526447	33608	6.365	"
	Hindorna	h.s. 7 20 28	4.688054	15419	2.920	"
	Rámpara Hill Tree	" 4.682522	48142	9.118	"	
797	Hindorna	h.s. 157 59 54	4.925969	83327	15.971	"
	Vánd	" 11 1 40	4.634043	43057	8.155	"
	Brabtaná Hill	" 4.631942	42840	8.115	"	
798	Dungar	h.s. 7 5 26	3.792708	6205	1.175	"
	Hindorna	" 59 55 0	4.638425	43494	8.337	"
	Rájula Rock	" 4.665309	46271	8.763	"	
799	Hindorna	h.s. 120 46 47	4.700662	50195	9.507	"
	Bárman	" 6 5 46	3.792708	6205	1.175	"
	Rájula Rock	" 4.669653	46736	8.852	"	
800	Vánd	h.s. 80 17 10	4.623657	42039	7.962	"
	Bárman	" 23 56 14	4.238172	17395	3.277	"
	Jáfarabad Building	" 4.616407	41344	7.830	"	
801	Hindorna	h.s. 9 2 27	4.290173	19506	3.694	"
	Vánd	" 150 45 58	4.782645	60624	11.482	"
	Jáfarabad Temple	" 4.631942	42849	8.115	"	
802	Vánd	h.s. 70 32 29	4.595389	39390	7.460	"
	Bárman	" 27 42 52	4.288446	19429	3.680	"
	Jáfarabad Fort	" 4.616407	41344	7.830	"	
803	Hindorna	h.s. 12 48 0	4.288446	19429	3.680	"
	Vánd	" 137 57 2	4.768904	58736	11.124	"
	Jáfarabad Fort	" 4.631942	42849	8.115	"	
804	Hindorna	h.s. 42 21 27	4.606649	40425	7.656	"
	Bárman	" 86 28 43	4.777327	59886	11.342	"
	Jáfarabad Palace	" 4.669653	46736	8.852	"	
805	Bárman	h.s. 91 5 27	4.769167	58771	11.131	"
	Rohisa	" 25 40 33	4.406013	25460	4.824	"
	Vángadhra Hill	" 4.720023	52484	9.940	"	
806	Rohisa	h.s. 25 39 11	4.416717	26105	4.944	"
	Moti Moli	" 102 55 23	4.769167	58771	11.131	"
	Vángadhra Hill	" 4.673393	47140	8.928	"	
807	Bárman	h.s. 4 22 28	4.030263	10722	2.031	"
	Moti Moli	" 13 36 57	4.519711	33091	6.267	"
	Váukia Hill	" 4.637640	43415	8.223	"	
808	Bárman	h.s. 55 37 35	4.643639	44019	8.337	"
	Rohisa	" 24 8 22	4.338668	21811	4.131	"
	Mansa Hill	" 4.720023	52484	9.940	"	
809	Rohisa	h.s. 27 11 22	4.335277	21041	4.099	"
	Moti Moli	" 68 20 45	4.643639	44019	8.337	"
	Mánsa Hill	" 4.673393	47140	8.928	"	
810	Vánd	h.s. 29 49 36	4.533662	34171	6.472	"
	Bárman	" 113 10 35	4.800431	63158	11.962	"
	Chelna Hill Tree	" 4.616407	41344	7.830	"	

No. of Triangle	Station	Corrected Plane Angle	Distance			No. of Triangle	Station	Corrected Plane Angle	Distance			No. of Triangle	Station	Corrected Plane Angle	Distance			No. of Triangle
			Log. feet	Feet	Miles				Log. feet	Feet	Miles				Log. feet	Feet	Miles	
811	Bárman Moti Moli Chelha Hill Tree	h.s. 18 44 29 44 48 5	4' 192594 4' 533062 4' 637640	15581 34171 43415	2' 051 6' 472 8' 223	823	Dángarvádi, XLII Iampur Nandan Hill Dargah	h.s. 52 1 16 50 8 15	4' 585732 4' 574201 4' 679222	38524 37515 47777	7' 296 7' 105 9' 049	823	Dángarvádi, XLII Iampur Nandan Hill Dargah	h.s. 52 1 16 50 8 15	4' 585732 4' 574201 4' 679222	38524 37515 47777	7' 296 7' 105 9' 049	
812	Nátej, XLI Moti Moli Sábra Hill	h.s. 30 17 12 91 13 30	4' 401782 4' 698971 4' 629782	52222 50000 43637	4' 777 4' 470 8' 075	824	Dángarvádi, XLII Mándri Nandan Hill Dargah	h.s. 1 42 47 157 20 8	3' 463949 4' 574201 4' 541732	2910 37515 34812	0' 551 7' 105 6' 593	824	Dángarvádi, XLII Mándri Nandan Hill Dargah	h.s. 1 42 47 157 20 8	3' 463949 4' 574201 4' 541732	2910 37515 34812	0' 551 7' 105 6' 593	
813	Nátej, XLI Rohisa Moti Moli Hill	h.s. 43 21 32 40 10 35	4' 606596 4' 579570 4' 767144	40420 37981 58498	7' 655 7' 193 11' 079	825	Khara Mándri Navabandar Tower	h.s. 4 42 7 8 18 40	4' 109376 4' 355721 4' 548225	12864 22684 35337	2' 436 4' 296 6' 693	825	Khara Mándri Navabandar Tower	h.s. 4 42 7 8 18 40	4' 109376 4' 355721 4' 548225	12864 22684 35337	2' 436 4' 296 6' 693	
814	Rohisa Moti Moli Kájaru Fort	h.s. 82 57 21 26 47 9	4' 696409 4' 353546 4' 673393	49706 22571 47140	9' 414 4' 275 8' 928	826	Khara Mándri Navabandar Flag-staff	h.s. 9 1 57 15 5 57	4' 132562 4' 352469 4' 548225	13569 22515 35337	2' 570 4' 264 6' 693	826	Khara Mándri Navabandar Flag-staff	h.s. 9 1 57 15 5 57	4' 132562 4' 352469 4' 548225	13569 22515 35337	2' 570 4' 264 6' 693	
815	Nátej, XLI Moti Moli Kájaru Fort	h.s. 71 17 35 54 22 12	4' 696409 4' 629962 4' 629782	49706 42654 42637	9' 414 8' 078 8' 075	827	Dángarvádi, XLII Mándri Gogla Tree	h.s. 5 56 20 6 21 50	4' 227999 4' 257901 4' 541732	16904 18109 34812	3' 202 6' 430 6' 593	827	Dángarvádi, XLII Mándri Gogla Tree	h.s. 5 56 20 6 21 50	4' 227999 4' 257901 4' 541732	16904 18109 34812	3' 202 6' 430 6' 593	
816	Rohisa Khara Shimar House	h.s. 9 36 45 40 3 50	4' 038863 4' 624833 4' 698373	10936 42153 49931	2' 071 7' 984 9' 457	828	Jákhia, XL Nátej, XLI Diu Flag-staff No. 1	36 48 44 86 44 19	4' 772105 4' 993834 4' 915389	59170 98590 82298	11' 266 18' 672 15' 587	828	Jákhia, XL Nátej, XLI Diu Flag-staff No. 1	36 48 44 86 44 19	4' 772105 4' 993834 4' 915389	59170 98590 82298	11' 266 18' 672 15' 587	
817	Rohisa Khara Bhesla Rock	h.s. 5 39 3 14 26 12	4' 155789 4' 559242 4' 698373	14315 36245 49931	2' 711 6' 865 9' 457	829	Nátej, XLI Dángarvádi, XLII Diu Flag-staff No. 1	14 21 48 44 15 32	4' 322885 4' 772105 4' 859643	21032 59170 72384	3' 983 11' 266 13' 709	829	Nátej, XLI Dángarvádi, XLII Diu Flag-staff No. 1	14 21 48 44 15 32	4' 322885 4' 772105 4' 859643	21032 59170 72384	3' 983 11' 266 13' 709	
818	Mándri Iampur Varsangpur Hill Temple	h.s. 7 38 10 84 30 30	3' 715665 4' 590204 4' 591898	5196 38923 39075	0' 984 7' 372 7' 401	880	Jákhia, XL Dángarvádi, XLII Diu Flag-staff No. 2	9 16 41 105 18 39	4' 210988 4' 987859 4' 962269	16255 97243 91679	3' 079 18' 417 17' 363	880	Jákhia, XL Dángarvádi, XLII Diu Flag-staff No. 2	9 16 41 105 18 39	4' 210988 4' 987859 4' 962269	16255 97243 91679	3' 079 18' 417 17' 363	
819	Nátej, XLI Iampur Una Building	h.s. 22 24 0 23 12 20	4' 294625 4' 309150 4' 567647	19707 20377 36953	3' 732 3' 859 6' 999	881	Dángarvádi, XLII Diu Flag-staff No. 1 Diu Level Datum Tower	7 25 10 149 53 29	3' 733526 4' 208777 4' 322885	5414 16173 21032	1' 025 3' 063 3' 983	881	Dángarvádi, XLII Diu Flag-staff No. 1 Diu Level Datum Tower	7 25 10 149 53 29	3' 733526 4' 208777 4' 322885	5414 16173 21032	1' 025 3' 063 3' 983	
820	Khara Mándri Una Idgah	h.s. 45 38 30 70 37 50	4' 449872 4' 570273 4' 548225	28176 37177 35337	5' 336 7' 041 6' 693	882	Dángarvádi, XLII Diu Flag-staff No. 2 Diu Level Datum Tower	9 39 7 86 54 4	3' 436060 4' 208777 4' 210988	2729 16173 16255	0' 517 3' 063 3' 079	882	Dángarvádi, XLII Diu Flag-staff No. 2 Diu Level Datum Tower	9 39 7 86 54 4	3' 436060 4' 208777 4' 210988	2729 16173 16255	0' 517 3' 063 3' 079	
821	Mándri Iampur Desar Kolinu Tower	h.s. 8 15 40 14 28 20	4' 162223 4' 402598 4' 591898	14529 23270 39075	2' 752 4' 786 7' 401	883	Jákhia, XL Dángarvádi, XLII Diu, St. Thomas's Church	10 52 10 101 45 28	4' 279637 4' 987853 4' 962269	18784 97242 91679	3' 548 18' 417 17' 363	883	Jákhia, XL Dángarvádi, XLII Diu, St. Thomas's Church	10 52 10 101 45 28	4' 279637 4' 987853 4' 962269	18784 97242 91679	3' 548 18' 417 17' 363	
822	Nándarvála, XXXIX Nátej, XLI Delvada Idgah	h.s. 8 19 37 152 51 19	4' 496879 4' 995230 4' 844656	31396 98910 69929	5' 946 18' 733 13' 244	884	Jákhia, XL Nátej, XLI Diu, St. Thomas's Church	37 56 1 84 38 50	4' 778448 4' 987853 4' 915389	60011 97242 82298	11' 371 18' 417 15' 587	884	Jákhia, XL Nátej, XLI Diu, St. Thomas's Church	37 56 1 84 38 50	4' 778448 4' 987853 4' 915389	60011 97242 82298	11' 371 18' 417 15' 587	

No. of Triangle	Station	Corrected Plane Angle		Distance		Theodolite used
		o	'	Log. feet	Feet		Miles
835	Nándivála, XXXIX	14 19 27	4.785047	60060	11.545	18
	Nátej, XLII	149 11 18	5.101089	126809	23.903	
	Diu, St. Francis' Church		4.844056	69929	13.244	
836	Nátej, XLI	12 47 37	4.271781	18697	3.541	"
	Dángarvádi, XLII	46 13 4	4.785047	60060	11.545	
	Diu, St. Francis' Church		4.859643	72384	13.709	
837	Jákhhia, XL	43 46 16	4.827613	67238	12.734	"
	Nátej, XLI	78 22 17	4.978638	95200	18.030	
	Diu, St. Remedio's Church		4.915389	82298	15.587	
838	Nándivála, XXXIX	46 58 28	4.978638	95200	18.030	"
	Jákhhia, XL	94 21 20	5.113435	129848	24.502	
	Diu, St. Remedio's Church		4.910456	81368	15.411	
839	Simási	55 28 8	4.644680	44125	8.357	12
	Madva	58 59 49	4.661900	45009	8.695	
	Diu Tower of Silence		4.687989	48752	9.233	
840	Ílampur	62 56 35	4.661900	45009	8.695	"
	Simási	72 24 39	4.691445	49141	9.307	
	Diu Tower of Silence		4.559025	36226	6.861	
841	Dángarvádi, XLII	84 17 32	4.541609	34802	6.591	"
	Mándvi	11 15 0	3.834003	6823	1.292	
	Diu Guard House		4.541732	34812	6.593	
842	Jákhhia, XL	4 44 9	3.978433	9516	1.802	18
	Dángarvádi, XLII	122 33 58	4.987304	97132	18.396	
	Nágva Point (helio.)		4.962269	91679	17.363	
843	Simási	27 4 23	4.492085	31116	5.893	12
	Madva	18 24 46	4.334348	21595	4.090	
	Kob Tree		4.687989	48752	9.233	
844	Málgám	82 12 9	4.584804	38442	7.281	"
	Kob Tree	33 49 5	4.334348	21595	4.090	
			4.542423	34868	6.604	
845	Madva	80 35 45	4.609023	40731	7.714	"
	Málgám	19 49 18	4.146119	14000	2.652	
	Kotra Tree No. 1		4.608581	40605	7.690	
846	Simási	67 28 57	4.609023	40731	7.714	"
	Málgám	60 15 30	4.583018	38284	7.251	
	Kotra Tree No. 1		4.542423	34868	6.604	
847	Simási	63 58 24	4.594846	39341	7.451	12
	Málgám	63 14 16	4.592079	39091	7.404	
	Kotra Tree No. 2		4.542423	34868	6.604	
848	Madva	75 28 57	4.594846	39341	7.451	"
	Málgám	16 50 32	4.070943	11775	2.230	
	Kotra Tree No. 2		4.608581	40605	7.690	
849	Jákhhia, XL	21 30 32	4.574963	37580	7.117	18
	Dángarvádi, XLII	95 3 15	5.009024	102100	19.337	
	Madva Hill Temple No. 1 (helio.)		4.962269	91679	17.363	
850	Dángarvádi, XLII	78 47 48	4.688198	48775	9.238	12
	Simási	49 17 1	4.576193	37687	7.138	
	Madva Hill Temple No. 2		4.592079	39139	7.413	
851	Simási	55 8 49	4.608871	46632	7.606	"
	Málgám	80 5 18	4.688198	48775	9.238	
	Madva Hill Temple No. 2		4.542423	34868	6.604	
852	Ílampur	69 4 17	4.735439	54380	10.299	"
	Simási	72 27 0	4.744379	55511	10.513	
	Jákhhia Hill Peak		4.559025	36226	6.861	
853	Dángarvádi, XLII	31 6 35	4.744379	55511	10.513	"
	Ílampur	122 29 11	4.957253	96226	17.164	
	Jákhhia Hill Peak		4.679222	47777	9.049	
854	Madva	33 46 14	4.457733	28690	5.434	"
	Chára	45 9 33	4.583428	35596	6.931	
	Pipalva Tree		4.704600	50052	9.593	
855	Madva	10 19 20	3.903687	8011	1.517	"
	Málgám	54 56 20	4.503428	36596	6.931	
	Pipalva Tree		4.608581	40605	7.690	
856	Chára	108 9 2	4.645264	44184	8.368	"
	Vadnagar	19 40 37	4.194694	15656	2.995	
	Chára Hill Platform		4.564980	36727	6.936	
857	Málgám	9 36 3	3.799688	6305	1.104	"
	Chára	60 16 55	4.516293	32832	6.218	
	Chára Hill Temple		4.550197	35497	6.723	
858	Málgám	74 32 47	4.599136	39732	7.585	"
	Vadnagar	52 47 37	4.510293	32832	6.218	
	Chára Hill Temple		4.515223	32773	6.207	

No. of Triangle	Station	Corrected Plane Angle	Distance			No. of Triangle	Station	Corrected Plane Angle	Distance			Theodolite used	
			Leg. feet	Feet	Miles				Leg. feet	Feet	Miles		
859	Mālcaim	h.s.	4° 21' 59.91"	16444	3° 11.4	871	Bolās	h.s.	4° 79' 55.28"	62449	11° 8.28	Inch 12	
	Chāra	"	4° 44' 39.8	27887	5° 28.2		Jalandri	"	4° 54' 20.6	34850	6° 6.60		"
	Kodinar Building	"	4° 55' 01.97	35497	6° 7.23		Pātān Temple No. 1	"	4° 70' 24.90	50407	9° 5.47		
860	Mālgām	h.s.	4° 56' 52.13	36746	6° 9.60	872	Kadvād	h.s.	4° 54' 7.20	35287	6° 6.83	"	
	Chāra	"	4° 51' 58.99	32802	6° 21.3		Bolās	"	4° 55' 12.6	22653	4° 29.0		"
	Vadnagar Hill Temple	"	4° 55' 01.97	35497	6° 7.23		Pātān Tower No. 1	"	4° 50' 8.26	37030	7° 0.14		
861	Chāra	h.s.	4° 69' 17.86	49180	9° 31.4	873	Kadvād	h.s.	4° 56' 02.24	36327	6° 8.80	"	
	Dhāmlej	"	4° 50' 52.13	36746	6° 9.60		Bolās	"	4° 38' 55.24	24295	4° 6.01		"
	Vadnagar Hill Temple	"	4° 63' 44.13	43094	8° 1.62		Pātān Turret	"	4° 56' 8.26	37036	7° 0.14		
862	Chāra	h.s.	4° 44' 13.12	27626	5° 23.2	874	Bolās	h.s.	4° 25' 30.61	17909	3° 3.92	"	
	Dhāmlej	"	4° 33' 7.16	21763	4° 1.22		Verāvāl	"	4° 56' 02.24	36327	6° 8.80		"
	Rākhej Tree	"	4° 63' 44.13	43094	8° 1.62		Pātān Turret	"	4° 68' 6.55	48591	9° 2.03		
863	Chāra	h.s.	4° 40' 31.47	25302	4° 7.92	875	Kadvād	h.s.	4° 26' 7.94	18518	3° 5.07	"	
	Vadnagar	"	4° 33' 7.16	21763	4° 1.22		Verāvāl	"	4° 36' 8.91	23329	4° 4.20		"
	Rākhej Tree	"	4° 50' 49.80	36727	6° 9.50		Pātān Temple No. 2	"	4° 02' 12.04	41868	7° 9.18		
864	Vadnagar	h.s.	4° 50' 20.50	31772	6° 0.17	876	Bolās	h.s.	4° 77' 7.82	59959	11° 3.56	"	
	Dhāmlej	"	4° 55' 30.62	36255	6° 8.66		Jalandri	"	4° 57' 43.29	37526	7° 1.07		"
	Mul Dvārka Building	"	4° 69' 18.56	49188	9° 3.16		Pātān Tower No. 2	"	4° 70' 24.90	50407	9° 5.47		
865	Vadnagar	h.s.	4° 50' 13.53	31721	6° 0.08	877	Bolās	h.s.	4° 76' 9.59	58830	11° 1.42	"	
	Dhāmlej	"	4° 55' 99.37	36302	6° 8.75		Jalandri	"	4° 59' 04.71	38947	7° 3.76		"
	Mul Dvārka Temple	"	4° 69' 18.56	49188	9° 3.16		Pātān Idgah	"	4° 70' 24.90	50407	9° 5.47		
866	Chāra	h.s.	4° 55' 99.37	36302	6° 8.75	878	Bolās	h.s.	4° 15' 36.18	14244	2° 6.98	"	
	Vadnagar	"	4° 05' 68.27	11398	2° 15.9		Verāvāl	"	4° 59' 04.71	38947	7° 3.76		"
	Mul Dvārka Temple	"	4° 50' 49.80	36727	6° 9.50		Pātān Idgah	"	4° 68' 6.55	48591	9° 2.03		
867	Chāra	h.s.	4° 56' 6.5	36878	6° 0.81	879	Bolās	h.s.	4° 76' 3.76	58060	10° 9.96	"	
	Vadnagar	"	4° 52' 56.62	33394	6° 3.25		Jalandri	"	4° 61' 21.57	40941	7° 7.54		"
	Sigsar Tree	"	4° 50' 49.80	36727	6° 9.50		Verāvāl Tomb (helio.)	"	4° 70' 24.90	50407	9° 5.47		
868	Chāra	h.s.	4° 10' 31.81	12682	2° 4.02	880	Verāvāl	h.s.	4° 76' 3.76	58060	10° 9.96	"	
	Dhāmlej	"	4° 52' 56.62	33394	6° 3.25		Jalandri	"	4° 05' 42.37	11330	2° 1.46		"
	Sigsar Tree	"	4° 63' 44.13	43094	8° 1.62		Verāvāl Tomb (helio.)	"	4° 74' 00.72	54963	10° 4.10		
869	Vasāvar	h.s.	4° 59' 02.83	39745	7° 5.27	881	Kadvād	h.s.	4° 61' 23.16	40956	7° 7.57	"	
	Bolās	"	4° 08' 58.11	12185	2° 30.8		Bolās	"	4° 48' 6.36	30646	5° 8.04		"
	Prāchi Kund Tree	"	4° 67' 52.7	47047	8° 9.10		Verāvāl Temple	"	4° 56' 8.26	37036	7° 0.14		
870	Dhāmlej	h.s.	4° 01' 31.21	10307	1° 9.52	882	Bolās	h.s.	4° 76' 32.43	57975	10° 9.80	"	
	Kadvād	"	4° 55' 27.06	35703	6° 7.62		Jalandri	"	4° 61' 23.16	40956	7° 7.57		"
	Sutrāpāda Tower	"	4° 65' 09.33	45702	8° 6.56		Verāvāl Temple	"	4° 70' 24.90	50407	9° 5.47		

SECONDARY TRIANGULATION. TRIANGLES.

No of Triangle	Station	Corrected Plane Angle	Distance			Theodolite	No of Triangle	Station	Corrected Plane Angle	Distance			Theodolite
			Log. feet	Feet	Miles					Log. feet	Feet	Miles	
888	Kadrád	h.s.	4.656549	43347	8.588	Inch	Varodra	h.s.	4.129966	13489	2.555	Inch	
	Bolás	"	4.532725	33705	6.762	12	Bhanduri	"	4.511618	32480	6.152	"	
	Verával Mašjid	"	4.568626	37036	7.014	"	Ghumli Tower	"	4.628722	42533	8.055	"	
884	Bolás	h.s.	3.780927	6165	1.168	"	Varodra	h.s.	4.470590	29552	5.597	"	
	Verával	"	4.650549	43347	8.588	"	Khoráda	"	4.511618	32480	6.152	"	
	Verával Mašjid	"	4.686555	48591	9.203	"	Ghumli Tower	"	4.622983	41974	7.950	"	
885	Bolás	h.s.	3.783969	6073	1.150	"	Bhanduri	h.s.	4.419671	26283	4.978	"	
	Verával	"	4.659188	45023	8.641	"	Lambhora	"	3.675668	4739	0.898	"	
	Verával Building	"	4.686555	48591	9.203	"	Bhanduri Building	"	4.455981	28575	5.412	"	
886	Bolás	h.s.	4.757841	57259	10.844	"	Bhanduri	h.s.	4.573466	37451	7.093	"	
	Jalandri	"	4.677359	47573	9.010	"	Khoráda	"	4.331866	21472	4.007	"	
	Verával Idgah	"	4.702490	50407	9.547	"	Serukhán Hill Temple	"	4.615475	41255	7.813	"	
887	Bolás	h.s.	3.548308	3534	0.669	"	Khoráda	h.s.	3.851882	7110	1.347	"	
	Verával	"	4.677359	47573	9.010	"	Lambhora	"	4.573466	37451	7.093	"	
	Verával Idgah	"	4.686555	48591	9.203	"	Serukhán Hill Temple	"	4.584991	38458	7.284	"	
888	Verával	h.s.	4.078094	11970	2.267	"	Bhanduri	h.s.	4.223348	16724	3.167	"	
	Verával	"	4.683909	29417	5.571	"	Lambhora	"	4.490245	30920	5.856	"	
	Adri Tower	"	4.612837	41005	7.766	"	Sepa Tower	"	4.455981	28575	5.412	"	
889	Verával	h.s.	4.076628	11930	2.250	"	Bhanduri	h.s.	4.341803	21969	4.161	"	
	Verával	"	4.680831	29443	5.576	"	Khoráda	"	4.490245	30920	5.856	"	
	Adri Building	"	4.612837	41005	7.766	"	Sepa Tower	"	4.615475	41255	7.813	"	
890	Bhanduri	h.s.	4.476768	29976	5.677	"	Lambhora	h.s.	4.102359	12658	2.397	"	
	Khoráda	"	4.581078	38113	7.218	"	Maktampur	"	4.585209	36746	6.959	"	
	Chorvád Bandar Tower	"	4.615475	41255	7.813	"	Mángrol Building	"	4.683551	48256	9.159	"	
891	Varodra	h.s.	4.581078	38113	7.218	"	Khoráda	h.s.	4.565209	36746	6.959	"	
	Bhanduri	"	4.079591	12011	2.275	"	Lambhora	"	4.472801	29703	5.626	"	
	Chorvád Bandar Tower	"	4.628722	42533	8.055	"	Mángrol Building	"	4.584991	38458	7.284	"	
892	Bhanduri	h.s.	4.476692	29929	5.668	"	Khoráda	h.s.	4.635854	43237	8.189	"	
	Khoráda	"	4.580498	38663	7.209	"	Lambhora	"	4.468149	29897	5.566	"	
	Chorvád Bandar Building (helio.)	"	4.615475	41255	7.813	"	Mángrol Tower No. 1	"	4.584991	38458	7.284	"	
898	Varodra	h.s.	4.580498	38663	7.209	"	Lambhora	h.s.	4.032300	10772	2.040	"	
	Bhanduri	"	4.081198	12056	2.283	"	Maktampur	"	4.635854	43237	8.189	"	
	Chorvád Bandar Building (helio.)	"	4.628722	42533	8.055	"	Mángrol Tower No. 1	"	4.683551	48256	9.159	"	
894	Varodra	h.s.	4.446038	27986	5.300	"	Khoráda	h.s.	4.638990	43550	8.248	"	
	Bhanduri	"	4.310809	20455	3.874	"	Lambhora	"	4.482028	30341	5.746	"	
	Chorvád Building	"	4.628722	42533	8.055	"	Mángrol Tower No. 2 (helio.)	"	4.584991	38458	7.284	"	

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	
907	Lambhora	h.s.	3° 9' 12.78	980 ⁵	1.856	919	Bhad	s.	56° 55' 34"	4° 53' 77.75	36122	Inch
	Madhampur	h.s.	4° 63' 89.00	43350	8.248		Tunkra	h.s.	41° 10' 43"	4° 43' 30.43	28582	12
	Mangrol Tower No. 2 (helio.)	h.s.	4° 68' 35.51	49256	9.139		Navibandar Temple No. 2	h.s.	4° 63' 01.88	4° 63' 01.88	42676	"
908	Dehvāsa	h.s.	4° 66' 41.64	46149	8.740	920	Rātia	h.s.	65° 49' 57"	4° 45' 30.43	28382	"
	Madhampur	"	4° 17' 06.68	15124	2.864		Bhad	s.	12° 27' 56"	3° 82' 70.37	6715	"
	Lohij Tree	"	4° 49' 58.22	31592	5.983		Navibandar Temple No. 2	h.s.	4° 48' 37.60	4° 48' 37.60	30462	"
909	Makhtampur	h.s.	4° 17' 06.68	15124	2.864	921	Bhad	s.	51° 45' 51"	4° 58' 28.48	33762	"
	Dehvāsa	"	4° 17' 59.8	15052	2.851		Tunkra	h.s.	45° 5' 5"	4° 48' 34.24	30439	"
	Lohij Tree	"	4° 47' 01.25	29931	5.669		Navibandar Tower (helio.)	h.s.	4° 63' 01.88	4° 63' 01.88	42676	"
910	Makhtampur	h.s.	4° 52' 03.51	33140	6.277	922	Rātia	h.s.	81° 2' 36"	4° 48' 34.24	30439	"
	Dehvāsa	s.	4° 36' 86.6	23371	4.426		Bhad	s.	17° 37' 41"	3° 06' 09.61	9332	"
	Sil Fort	"	4° 06' 25.61	45979	8.708		Navibandar Tower (helio.)	h.s.	4° 48' 37.60	4° 48' 37.60	30462	"
911	Makhtampur	h.s.	3° 55' 57.3	9930	1.710	923	Mokal	t.s.	41° 43' 21"	4° 46' 50.33	29176	"
	Dehvāsa	"	4° 36' 86.6	23371	4.426		Adodar	h.s.	56° 8' 48"	4° 56' 19.91	30408	"
	Sil Fort	"	4° 47' 01.25	29931	5.669		Tunkra Hill Temple No. 1	h.s.	4° 63' 77.60	4° 63' 77.60	43427	"
912	Dehvāsa	s.	3° 64' 44.30	4410	0.835	924	Tunkra	h.s.	19° 38' 0"	4° 31' 10.10	20465	18
	Dehvāsa	h.s.	4° 55' 59.60	36221	6.860		Adodar	"	12° 23' 4"	4° 11' 60.39	13063	"
	Dehvāsa Tower	"	4° 58' 87.60	38794	7.347		Tunkra Tree	h.s.	4° 59' 09.7	4° 59' 09.7	32292	"
913	Dehvāsa	h.s.	2° 34' 42.64	221	0.042	925	Tunkra	h.s.	58° 21' 57"	4° 50' 08.14	31682	"
	Madhampur	"	4° 50' 43.83	31724	6.008		Mokal	t.s.	20° 33' 5"	4° 11' 60.39	13063	"
	Madhampur Hill Temple	"	4° 49' 58.2	31592	5.983		Tunkra Tree	h.s.	4° 56' 24.97	4° 56' 24.97	39517	"
914	Dehvāsa	s.	4° 50' 43.83	31724	6.008	926	Mokal	t.s.	63° 0' 9"	4° 72' 74.12	53384	12
	Dehvāsa	h.s.	4° 68' 59.48	48189	9.127		Barde	h.s.	52° 54' 21"	4° 07' 93.31	47789	"
	Madhampur Hill Temple	"	4° 58' 87.60	38794	7.347		Chhaya Hill Temple	h.s.	4° 73' 15.20	4° 73' 15.20	53891	"
915	Bagaera	t.s.	4° 53' 35.15	34160	6.470	927	Mokal	t.s.	9° 17' 42"	3° 93' 33.22	8575	"
	Miyari	s.	58° 58' 15"	4° 54' 50.25	35077		Adodar	h.s.	115° 49' 15"	4° 07' 93.31	47789	"
	Balej Temple	"	4° 56' 74.58	36937	6.996		Chhaya Hill Temple	h.s.	4° 63' 77.60	4° 63' 77.60	43427	"
916	Bagaera	t.s.	4° 03' 86.80	10932	2.070	928	Adodar	h.s.	10° 28' 44"	4° 37' 26.4	23838	"
	Mocha	h.s.	4° 54' 50.25	35077	6.643		Dehgām	s.	12° 13' 3"	4° 44' 30.59	27737	"
	Balej Temple	"	4° 47' 01.67	30142	5.709		Porbandar Temple No. 1	h.s.	4° 70' 39.12	4° 70' 39.12	50572	"
917	Rātia	h.s.	4° 45' 75.96	28681	5.432	929	Adodar	h.s.	10° 47' 34"	4° 37' 81.78	23888	"
	Bhad	s.	3° 80' 26.14	6348	1.202		Dehgām	s.	12° 33' 46"	4° 44' 32.16	27747	"
	Navibandar Temple No. 1	"	4° 48' 37.60	30462	5.769		Porbandar Temple No. 2	h.s.	4° 70' 39.12	4° 70' 39.12	50572	"
918	Bhad	s.	4° 56' 20.51	36480	6.909	930	Adodar	h.s.	68° 32' 46"	4° 73' 64.89	54512	"
	Tunkra	h.s.	4° 45' 75.96	28681	5.432		Barde	"	29° 16' 26"	4° 45' 69.60	28610	"
	Navibandar Temple No. 1	"	4° 63' 01.88	42676	8.083		Porbandar Flag-staff	h.s.	4° 76' 36.16	4° 76' 36.16	58025	"

SECONDARY TRIANGULATION. TRIANGLES.

No. of Triangle	Station	Corrected Plane Angle			Distance			Theodolite used									
		°	'	"	Log. feet	Feet	Miles										
931	Alodar Dehgám Porbandar Flag-staff	h.s. s.	14 50 30 17 46 18 4 703912	4 380842 4 436969 4 703912	24035 28640 50572	4 552 5 424 9 578	12 12 "	Inch									
									943	Vadala No. 3 Sarsad Mátá Miami Temple No. 2	h.s. "	10 52 36 29 50 30	3 969053 4 390176 4 507766	9312 24557 32193	1 764 4 651 6 097	12 "	Inch
945	Sarsad Mátá Patelka Miami Tower	h.s. "	89 23 36 3 44 21	4 899680 3 714048 4 899055	79374 5177 79260	15 033 0 981 15 011	"	"	"								
										946	Sarsad Mátá Patelka Miami Level Datum Pillar	h.s. s.	80 18 56 96 15 46	4 895421 3 677512 4 899055	78600 4759 79260	14 886 0 901 15 011	12
947	Barda Patelka Sarsad Mátá Hill Temple	h.s. "	30 11 43 50 41 8	4 902612 5 089650 5 195505	79912 122028 156879	15 135 23 282 29 712	18 "	"	"								
										948	Gop. Patelka Sarsad Mátá Hill Temple	h.s. "	23 1 42 96 57 24	4 902612 5 307020 5 247825	79912 203778 176940	15 135 38 405 33 511	"
949	Sarsad Mátá Patelka Rátral Building	h.s. "	47 25 26 39 17 36	4 766870 4 701372 4 899055	58461 50277 79260	11 072 9 522 15 011	"	"	"								
										950	Vadala No. 3 Sarsad Mátá Lamba Tower	h.s. "	12 58 39 151 44 53	4 429281 4 757783 4 507766	26871 57251 32193	5 089 10 843 6 097	12
951	Sarsad Mátá Navádra Lamba Hill Temple	h.s. "	4 38 50 5 6 5	4 455178 4 495575 4 775306	28522 31302 59608	5 402 5 988 11 489	"	"	"								
										952	Sarsad Mátá Patelka Lamba Hill Temple	h.s. "	52 6 23 22 21 56	4 812365 4 405375 4 899055	61918 31302 79260	12 295 5 928 15 011	"
953	Vadala No. 3 Gorána Kaliánpur Tower No. 1	h.s. "	37 7 47 105 46 40	4 600097 4 892382 4 689390	48980 78088 48909	9 278 14 789 9 263	"	"	"								
										954	Navádra Kuranga Lol Hill Temple	h.s. "	67 13 48 58 46 32	4 762929 4 730206 4 706094	57933 53729 50827	10 972 10 176 9 626	"

No. of Triangle	Station	Corrected Plane Angle ° ' "	Distance			Theodolite Inch
			Log. feet	Feet	Miles	
955	Navadra	h.s.	4.310832	20457	3.874	12
	Bhātia	"	4.730206	53239	10.176	"
	Lol Hill Temple	"	4.761953	57803	10.948	"
956	Pānor	h.s.	4.100305	12598	2.386	"
	Bhopalka	"	4.251731	17854	3.381	"
	Khākharva Tower	"	4.418663	26222	4.966	"
957	Patelka	h.s.	4.290928	10949	3.778	"
	Pānor	"	4.395547	24863	4.709	"
	Bhopalka Temple	"	4.511885	32500	6.155	"
958	Pānor	h.s.	3.804751	6379	1.208	"
	Bhopalka	"	4.290928	19949	3.778	"
	Bhopalka Temple	"	4.418663	26222	4.966	"
959	Pānor	h.s.	4.553263	33749	6.771	"
	Bhopalka	"	4.133257	13591	2.574	"
	Naudāna Tower	"	4.418663	26222	4.966	"
960	Navadra	h.s.	3.971320	9365	1.774	"
	Bhātia Hill Temple	"	4.733689	54086	10.244	"
	Bhātia Hill Temple	"	4.761953	57803	10.948	"
961	Navadra	h.s.	4.676733	47504	8.907	"
	Kuranga	"	4.733681	54085	10.243	"
	Bhātia Tower	"	4.706094	50827	9.626	"
962	Pānor	h.s.	4.559119	36234	6.863	"
	Gurgat	t.s.	4.359579	22886	4.335	"
	Bhātia Hill Tower	"	4.728273	53490	10.131	"
963	Pānor	h.s.	4.686685	47939	9.079	"
	Bhopalka	"	4.359579	22886	4.335	"
	Bhātia Hill Tower	"	4.418663	26222	4.966	"
964	Kuranga	h.s.	3.931286	8537	1.617	"
	Bhātia	"	4.505104	39364	7.455	"
	Bāmāsar Temple No. 1	"	4.637125	43364	8.213	"
965	Kuranga	h.s.	4.102492	13577	2.950	"
	Bhātia	"	4.453457	28409	5.331	"
	Bāmāsar Temple No. 2	"	4.637125	43364	8.213	"
966	Kuranga	h.s.	4.706914	50923	9.645	"
	Gurgat	t.s.	4.262128	18286	3.463	"
	Madhi Hill Tower	"	4.738221	54729	10.365	"
967	Kuranga	h.s.	4.408491	25615	4.851	"
	Gurgat	t.s.	4.512398	32539	6.163	"
	Gāga Hill Peak	"	4.738221	54729	10.365	"
968	Kuranga	h.s.	4.291751	19577	3.708	"
	Bhātia	"	4.512398	32539	6.163	"
	Gāga Hill Peak	"	4.637125	43364	8.213	"
969	Kuranga	h.s.	4.324355	21104	3.997	"
	Gurgat	t.s.	4.50402	35514	6.726	"
	Gāga House	"	4.738221	54729	10.365	"
970	Pānor	h.s.	4.639450	43596	8.257	"
	Mevāsa No. 3	"	4.669817	46754	8.855	"
	Gurgat Math	"	4.648316	44946	8.427	"
971	Kuranga	h.s.	4.470392	29539	5.595	"
	Gurgat	t.s.	4.667438	40497	7.670	"
	Lovārāli Hill	"	4.738221	54729	10.365	"
972	Gurgat	t.s.	4.030004	10715	2.029	"
	Lovārāli	h.s.	4.630024	42660	8.080	"
	Dhenki Fort	"	4.545113	35084	6.645	"
973	Gurgat	t.s.	4.100937	12616	2.389	"
	Lovārāli	h.s.	4.606096	40373	7.647	"
	Dhenki Building	"	4.545113	35084	6.645	"
974	Lovārāli	h.s.	4.467722	29358	5.560	"
	Theetra	"	4.518836	33025	6.255	"
	Gurgat Fort	"	4.391308	24621	4.663	"
975	Kuranga	h.s.	4.580713	38081	7.212	"
	Bhātia	"	4.731286	53862	10.201	"
	Gurgat Fort	"	4.637125	43364	8.213	"
976	Ghadechi	h.s.	4.485296	39570	5.790	"
	Dhārasavel	"	4.730726	53793	10.188	"
	Dwārka Temple	"	4.472610	29690	5.623	"
977	Ghadechi	h.s.	4.523802	33404	6.327	"
	Kachhigat	t.s.	4.730726	53793	10.188	"
	Dwārka Temple	"	4.531093	34040	6.447	"
978	Kuranga	h.s.	4.262128	18286	3.463	"
	Gurgat	t.s.	4.738221	54729	10.365	"
	Madhi Hill Tower	"	4.738221	54729	10.365	"

SECONDARY TRIANGULATION. TRIANGLES.

No. of Triangle	Station	Corrected Plane Angle	Distance			Theodolite used
			Log. feet	Feet	Miles	
979	Ghadechi Kachhigad Barrāla Tower	h.s. t.s. 99 4 0	4 170301	14801	2.803	Inch 12
			4 593282	30200	7.424	"
			4 531993	34040	6.447	"
980	Ghadechi Dhriamvel Tobar Tower	h.s. " 88 36 25	4 021316	10508	1.990	"
			4 494890	31233	5.919	"
			4 472010	29699	5.623	"
981	Ghadechi Arāmā Borkhtri Building	h.s. " 95 47 14	4 655740	45263	8.573	"
			4 530889	34426	6.520	"
			4 416960	26119	4.947	"
982	Ghadechi Kachhigad Vasāi Building	h.s. t.s. 38 34 10	4 222165	16640	3.152	"
			4 370137	23450	4.441	"
			4 531993	34040	6.447	"
983	Ghadechi Kachhigad Vasāi Temple	h.s. t.s. 26 20 3	4 222542	16693	3.162	"
			4 369953	23391	4.430	"
			4 531993	34040	6.447	"
984	Katumba Ghadechi Kaliapur Tower No. 2	h.s. " 21 9 44	4 241591	17442	3.303	"
			4 616249	41328	7.827	"
			4 677380	47575	9.010	"
985	Ghadechi Arāmā Kachhigad Fort	h.s. " 84 59 44	4 614729	41184	7.800	"
			4 534050	34202	6.478	"
			4 416960	26119	4.947	"
986	Ghadechi Arāmā Pādli Building	h.s. " 12 57 11	4 283621	19224	3.639	"
			3 854557	7154	1.355	"
			4 416960	26119	4.947	"
987	Poshitra Ghadechi Pādli Building	h.s. " 8 27 37	3 854557	7154	1.355	"
			4 682330	48121	9.114	"
			4 668682	46567	8.820	"
988	Poshitra Ghadechi Arāmā Palace	h.s. " 26 33 26	4 353766	22686	4.297	"
			4 704712	50685	9.596	"
			4 668682	40597	8.820	"
989	Poshitra Bet Arāmā Palace	h.s. t.s. 119 56 16	4 333379	21646	4.100	"
			4 704712	50665	9.596	"
			4 559458	36263	6.868	"
990	Ghadechi Arāmā Arāmā Flag-staff	h.s. " 23 58 28	4 031681	10757	2.037	"
			4 344650	22113	4.188	"
			4 416960	26119	4.947	"
991	Ghadechi Bet Arāmā Flag-staff	h.s. t.s. 36 54 30	4 344456	21951	4.157	Inch 12
			4 344650	22113	4.188	"
			4 546050	35160	6.659	"
992	Ghadechi Bet Saiāni Temple	h.s. t.s. 11 25 12	4 139282	13781	2.610	"
			4 666119	46357	8.780	"
			4 546050	35160	6.659	"
993	Bet Saiāni Temple	t.s. h.s. 92 46 20	4 549719	35458	6.716	"
			4 139282	13781	2.610	"
			4 505300	32011	6.063	"
994	Bet Arāmā Arthura Temple	t.s. h.s. 32 26 17	4 383998	24210	4.585	"
			3 997758	9949	1.884	"
			4 505300	32011	6.063	"
995	Ghadechi Bet Arthura Temple	h.s. t.s. 16 23 20	3 997758	9949	1.884	"
			4 537519	34476	6.530	"
			4 546050	35160	6.659	"
996	Ajār Poshitra Bet Temple No. 1	h.s. " 13 49 9	4 557186	36073	6.832	"
			4 027720	84668	16.036	"
			4 718885	52346	9.914	"
997	Poshitra Ghadechi Bet Temple No. 1	h.s. " 48 38 10	4 548485	33350	6.695	"
			4 557186	36073	6.832	"
			4 668682	46567	8.820	"
998	Poshitra Ghadechi Bet Temple No. 2	h.s. " 48 43 48	4 549190	35415	6.707	"
			4 557754	36121	6.841	"
			4 668682	46567	8.820	"
999	Ajār Poshitra Bet Temple No. 2	h.s. " 13 52 4	4 557754	36121	6.841	"
			4 978442	84692	16.040	"
			4 718885	52346	9.914	"
1000	Bet Arāmā Bet Temple No. 3	t.s. h.s. 85 48 7	4 504828	31976	6.056	"
			3 618127	4151	0.786	"
			4 505300	32011	6.063	"
1001	Ajār Poshitra Bet Temple No. 4	h.s. " 14 39 18	4 552605	35695	6.760	"
			4 923645	8377	15.886	"
			4 718885	52346	9.914	"
1002	Poshitra Ghadechi Bet Temple No. 4	h.s. " 50 35 29	4 562275	36498	6.913	"
			4 552605	35695	6.760	"
			4 668682	46567	8.820	"

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	
1003	Poshitra Ghadechi Bet Temple No. 5	h.s. " "	4° 57' 06.46 4° 55' 21.27 4° 60' 50.82	37988 34056 49507	7.195 6.753 8.820	1015	Katumba Poshitra Dubalaba Island	13 32 25 47 43 12	3° 06' 07.0 4° 46' 03.68 4° 53' 41.22	9134 28865 34208	1.730 6.467 5.479	Inch 12 "
1004	Poshitra Ghadechi Bet Temple No. 6	h.s. " "	4° 68' 57.50 4° 50' 48.94 4° 60' 50.82	48705 32247 40567	9.224 6.107 8.820	1016	Mevasia No. 3 Katumba Asota Hill Peak No. 1	122 15 29 12 50 24	4° 8' 28.307 4° 24' 79.15 4° 74' 98.55	67345 17698 56215	12.755 3.352 10.647	" " "
1005	Bet Aramda Bet Tomb	h.s. h.s. h.s.	4° 51' 27.19 3° 53' 10.71 4° 50' 33.00	32563 3397 32011	6.167 0.643 6.063	1017	Mevasia No. 3 Jhalkasia Asota Hill Peak No. 1	27 45 33 17 41 58	4° 43' 31.66 4° 24' 79.15 4° 61' 79.41	27112 17608 41490	5.135 3.352 7.858	" " "
1006	Poshitra Ghadechi Bet Hill Peak	h.s. " "	4° 38' 71.31 4° 52' 24.62 4° 60' 50.82	24385 33301 49567	4.618 6.327 8.820	1018	Mevasia No. 3 Katumba Asota Hill Peak No. 2	101 7 7 24 1 23	4° 82' 00.16 4° 44' 09.50 4° 74' 98.55	67455 27987 56215	12.776 5.300 10.647	" " "
1007	Katumba Poshitra Ghadechi Math	h.s. " "	4° 67' 08.27 4° 64' 38.95 4° 53' 41.22	46863 44045 34208	8.876 8.342 6.479	1019	Mevasia No. 3 Ajär Pindära Building	65 6 13 24 49 58	4° 68' 00.15 4° 35' 15.94 4° 72' 37.74	48531 22470 53502	9.191 4.256 10.133	" " "
1008	Poshitra Ghadechi Samosar Building	h.s. " "	3° 81' 78.34 4° 62' 31.80 4° 66' 50.82	6574 41993 49567	1.245 7.953 8.820	1020	Mevasia No. 3 Katumba Pindära Building	7 35 56 5 0 10	4° 53' 24.10 4° 35' 15.94 4° 74' 98.55	34073 22470 56215	6.453 4.256 10.647	" " "
1009	Katumba Poshitra Karanja Fort	h.s. " "	4° 56' 54.22 4° 56' 24.07 4° 53' 41.22	36762 30510 34208	6.963 6.915 6.479	1021	Mevasia No. 3 Ajär Pindära Temple	64 5 0 25 35 46	4° 68' 23.48 4° 36' 38.89 4° 72' 37.74	48122 23115 53502	9.114 4.378 10.133	" " "
1010	Ghadechi Dhirsonevel Nägäth Dharmshälä	h.s. " "	4° 46' 49.09 4° 15' 00.03 4° 47' 26.10	29478 14421 29690	5.583 2.731 5.623	1022	Mevasia No. 3 Katumba Pindära Temple	8 37 9 5 55 41	4° 52' 55.77 4° 36' 38.89 4° 74' 98.55	33541 23115 56215	6.352 4.378 10.647	" " "
1011	Ghadechi Dhirsonevel Goriäth Building	h.s. " "	4° 42' 38.67 4° 20' 49.19 4° 47' 26.10	29538 16183 29690	5.026 3.065 5.623	1023	Jhalkasia Kälaväd Häbardi Hill	143 17 14 12 21 12	4° 80' 18.29 4° 35' 55.61 4° 64' 06.51	63362 22676 43717	12.000 4.295 8.280	" " "
1012	Katumba Ghadechi Mulvel Tower	h.s. " "	4° 51' 61.92 4° 24' 22.33 4° 67' 33.0	32824 17508 47575	6.217 3.316 9.010	1024	Rhopalka Jhalkasia Dänträna Temple No. 1	2 44 53 4 4 34	4° 21' 31.05 4° 38' 11.26 4° 60' 72.69	16334 24217 40483	3.094 7.587 7.667	" " "
1013	Poshitra Ghadechi Poshitra House	h.s. " "	4° 63' 36.42 3° 43' 00.76 4° 68' 50.82	45044 2878 46567	8.531 0.545 8.820	1025	Jhalkasia Kälaväd Dänträna Temple No. 1	167 7 53 3 29 20	4° 77' 63.54 4° 21' 31.05 4° 64' 06.51	59752 16334 43717	11.317 3.094 8.280	" " "
1014	Ajär Poshitra Poshitra House	h.s. " "	3° 45' 00.76 4° 73' 05.17 4° 71' 88.95	2878 54519 52340	0.545 10.326 9.914	1026	Rhopalka Värthara Sidhsara Tower	10 20 47 2 58 0	4° 57' 97.43 4° 03' 22.10 4° 68' 62.75	37996 10795 48560	7.196 2.044 9.197	" " "

SECONDARY TRIANGULATION. TRIANGLES.

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		
1027	Bhopalka Varthara Bhatel Temple	h.s. 8.	17 55 23 4° 136250 4° 554968 4° 686275	13685 35800 48560	2° 592 6° 797 9° 197	1039	Dánta Goj Salaya Temple	h.s. "	14 6 9 19 8 15	4° 288987 4° 417864 4° 641104	19453 26174 43763	3° 684 4° 957 8° 288	Inch 12 "
1028	Bhopalka Jhakasia Varthara Tower	h.s. "	36 47 16 83 36 20 4° 450285 4° 679530 4° 607269	28202 46831 40483	5° 341 8° 860 7° 667	1040	Kálavád Dánta Salaya Temple	h.s. "	9 27 25 12 8 14	4° 417864 4° 524979 4° 768108	26174 33495 58628	4° 957 6° 344 11° 104	"
1029	Dánta Ambla Goj	h.s. "	72 20 48 56 49 46 50 49 26 4° 697407 4° 641104 4° 607773	49820 43763 40530	9° 436 8° 288 7° 676	1041	Kálavád Ambla Salaya Fort	h.s. "	29 27 10 27 46 33	4° 538051 4° 514744	34518 32715	6° 538 6° 106	"
1030	Dánta Goj Khambháliya Temple	h.s. "	104 40 7 22 57 27 4° 727982 4° 333491 4° 641104	53454 21552 43763	10° 124 4° 082 8° 288	1042	Kálavád Ambla Parodia Temple	h.s. "	13 19 3 30 53 18	4° 290059 4° 638104 4° 771057	19501 43461 59028	3° 693 8° 231 11° 180	"
1031	Kálavád Dánta Khambháliya Palace	h.s. "	17 22 0 108 17 54 4° 333240 4° 835781 4° 768108	21540 68514 58628	4° 080 12° 976 11° 104	1043	Dánta Ambla Ambia Tree	h.s. "	3 31 46 20 32 56	3° 786438 4° 542444 4° 607773	6116 34869 40530	1° 158 6° 604 7° 676	"
1032	Dánta Goj Khambháliya Palace	h.s. "	106 19 59 22 32 1 4° 731895 4° 333240 4° 641104	53938 21540 43763	10° 216 4° 080 8° 288	1044	Dánta Goj Ambia Tree	h.s. "	68 49 2 46 12 54	4° 653560 4° 542444 4° 641104	45036 34869 43763	8° 530 6° 604 8° 288	"
1033	Dánta Goj Khambháliya Building	h.s. "	104 45 23 22 14 37 4° 724190 4° 316874 4° 641104	52990 20743 43763	10° 036 3° 929 8° 288	1045	Dánta Ambla Mándha Tower	h.s. "	4 27 56 3 48 10	4° 341300 4° 271646 4° 607773	21943 18692 40530	4° 156 3° 340 7° 676	"
1034	Kálavád Dánta Khambháliya Hill Tomb	h.s. "	14 24 20 112 17 27 4° 259856 4° 830303 4° 768108	18191 67655 58628	3° 445 12° 813 11° 104	1046	Dánta Ambla Mándha Temple	h.s. "	5 29 13 4 34 1	4° 346337 4° 366836 4° 607773	22199 18486 40530	4° 204 3° 501 7° 676	"
1035	Dánta Goj Khambháliya Hill Tomb	h.s. "	110 19 32 18 48 34 4° 723512 4° 259856 4° 641104	52907 18191 43763	10° 020 3° 445 8° 288	1047	Dánta Ambla Timbri Hill Tree	h.s. "	32 15 10 74 17 35	4° 353401 4° 609612 4° 607773	22563 40702 40530	4° 273 7° 709 7° 676	"
1036	Kálavád Dánta Khambháliya Hill Temple	h.s. "	14 17 22 110 48 48 4° 247671 4° 825982 4° 768108	17688 66986 58628	3° 350 12° 687 11° 104	1048	Jasápur Kháori Jasápur Hill Platform	h.s. "	65 6 54 5 57 48	4° 754640 3° 813541 4° 772833	56838 5509 59270	10° 765 1° 233 11° 225	"
1037	Dánta Goj Khambháliya Hill Temple	h.s. "	108 50 53 18 41 31 4° 717935 4° 247671 4° 641104	52232 17688 43763	9° 892 3° 350 8° 288	1049	Dánta Jasápur Jasápur Hill Platform	h.s. "	4 5 44 29 15 23	3° 813541 4° 648780 4° 699910	6509 44543 50108	1° 233 8° 430 9° 490	"
1038	Dánta Goj Sumor Hill	h.s. "	25 18 56 66 8 15 4° 272287 4° 602437 4° 641104	18719 40025 43763	3° 545 7° 582 8° 288	1050	Kháori Changa Jasápur Hill Temple	h.s. "	82 52 25 46 43 16	4° 907425 4° 772940 4° 797606	80803 59284 67749	15° 304 11° 228 11° 884	"

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	
1051	Ámbla	h.s.	4° 7' 20.40	59284	10	1063	Kiri	0	0	0	Inch 12	
	Khari	"	4° 8' 22.333	66425	11.228		Rozí Mátá	30 58 22	4° 526.446	33608		6.365
	Jasipur Hill Temple	"	4° 7' 79.83	60157	12.581		Navánagar Palace	80 59 7	4° 809.553	64490		12.216
1052	Jasipur	h.s.	4° 7' 53.30	61000	11.553	1064	Navánagar	84 20 52	4° 526.446	33608	6.365	
	Khari	"	3° 50' 28.74	6351	1.203		Rozí Mátá	5 37 39	3° 5200.57	3312	0.627	
	Tungi Hill Peak	"	4° 7' 72.833	59270	11.225		Navánagar Palace	4° 528.563	33772	6.396		
1053	Khari	h.s.	4° 4' 58.700	77092	14.601	1065	Navánagar	30 19 52	4° 237.215	17267	3.270	
	Changa	"	4° 7' 53.30	61000	11.553		Súrda	40 48 39	4° 349.215	22347	4.232	
	Tungi Hill Peak	"	4° 7' 79.833	62749	11.884		Mokhána Well	4° 509.966	32357	6.128		
1054	Lálpur	h.s.	4° 1' 45.34	32486	6.153	1066	Changa	20 36 7	4° 349.215	22347	4.232	
	Changa	"	4° 6' 23.50	41913	7.038		Navánagar	32 19 25	4° 530.939	33958	6.431	
	Lus Hill Mark (helio.)	"	4° 6' 80.178	47883	9.069		Mokhána Well	4° 70.4751	50670	9.597		
1055	Khari	h.s.	26 41 45	4° 51' 16.99	32486	6.153	1067	Súrda	35 10 12	4° 413.806	25930	4.911
	Changa	"	4° 6' 23.50	41913	7.038	Bára		26 39 55	4° 305.412	20203	3.826	
	Lus Hill Mark (helio.)	"	4° 7' 79.833	62749	11.884	Hápa Tower		4° 598.650	39687	7.517		
1056	Khari	h.s.	13 16 58	4° 42' 7.94	26779	5.072	1068	Navánagar	13 47 52	4° 413.806	25930	4.911
	Changa	"	4° 5' 55.490	38503	7.292	Bára		13 35 29	4° 407.384	25550	4.839	
	Dodhia Temple	"	4° 7' 79.833	62749	11.884	Hápa Tower		4° 699.113	50016	9.473		
1057	Kharáberája	s.	39 6 28	4° 23' 6.91	17250	3.267	1069	Navánagar	82 1 88	4° 586.766	38616	7.314
	Navánagar	t.s.	37 56 13	4° 22' 56.41	16815	3.184		Rozí Mátá	37 57 55	4° 370.993	23988	4.543
	Bedi Building	"	4° 42' 57.14	26651	5.048	Dhuváv Temple		4° 528.563	33772	6.396		
1058	Kiri	h.s.	27 33 23	4° 49' 56.22	31306	5.929	1070	Navánagar	15 8 27	4° 440.628	27582	5.224
	Rozí Mátá	s.	4° 30' 32.0	67658	12.814	Bára		13 7 47	4° 379.993	23988	4.543	
	Navánagar Kacheri	"	4° 78.2245	60568	11.471	Dhuváv Temple		4° 699.113	50016	9.473		
1059	Navánagar	t.s.	26 54 23	4° 49' 56.22	31306	5.929	1071	Kiri	98 15 42	4° 773.843	59408	11.252
	Rozí Mátá	s.	2 18 56	3° 44' 6.385	2795	0.529		Soel	42 29 20	4° 607.965	40548	7.680
	Navánagar Kacheri	"	4° 528.563	33772	6.396	Shekhpát Platform (helio.)		4° 579.570	37981	7.193		
1060	Kiri	h.s.	29 5 58	4° 51' 52.87	37356	6.204	1072	Kiri	49 7 14	4° 458.475	28739	5.443
	Rozí Mátá	s.	4° 82' 7.997	67251	12.737	Soel		38 38 10	4° 375.346	23733	4.495	
	Navánagar Building	"	4° 78.2245	60568	11.471	Rámpur Tree		4° 579.570	37981	7.193		
1061	Bára	h.s.	99 25 58	4° 83' 01.02	67624	12.808	1073	Bára	36 1 37	4° 375.346	23733	4.495
	Kiri	"	4° 69' 38.1	50047	9.479	Kiri		34 21 49	4° 557.466	22775	4.313	
	Navánagar Tower	"	4° 579.898	38010	7.199	Rámpur Tree		4° 579.898	38010	7.199		
1062	Bára	h.s.	31 44 44	4° 52' 88.82	33797	6.401	1074	Navánagar	4 56 20	3° 768.296	5865	1.111
	Rozí Mátá	s.	51 10 50	4° 60' 93.81	50047	9.479		Kiri Hill	92 18 56	4° 83.970	68072	12.893
	Navánagar Tower	"	4° 80.4455	63740	12.073	Kiri Hill		4° 829.834	67583	12.800		

SECONDARY TRIANGULATION. TRIANGLES.

No. of Triangle	Station	Corrected Plane Angle ° ' "	Distance		No. of Triangle	Station	Corrected Plane Angle ° ' "	Distance		No. of Triangle	Station	Corrected Plane Angle ° ' "	Distance		No. of Triangle		
			Log. feet	Feet				Log. feet	Feet				Log. feet	Feet		Log. feet	Feet
1075	Bāra	h.s.	7 1 36	3 768206	3	585	1 111	1 111	12	1085	Jodiya	h.s.	43 40 34	4 523286	33519	6 348	
	Kiri	"	45 25 2	4 533383	3149	6 468	h.s.	56 54 0	4 600169		40660	7 701	"	"	4 678630	47712	9 036
	Kiri Hill	"	4 579898	38010	7 199	"	"	"	"		4 678630	47712	9 036	"	"	4 678630	47712	9 036
1076	Kiri	h.s.	79 58 20	4 776104	59718	11 310	"	"	"	1086	Hāiatoda	h.s.	6 40 2	3 648009	4446	0 842	
	Rozi Māta	s.	7 9 30	3 878349	7557	1 431	"	"	"		Bālabmbha	t.s.	61 4 17	4 523286	33519	6 348	
1077	Bālabchari Tower	"	4 782245	60568	11 471	"	"	"	"	Bālabmbha	t.s.	4 549527	35443	6 713			
	Kiri	h.s.	70 25 36	4 761675	57766	10 941	"	"	"	Hāiatoda	h.s.	33 55 33	4 293346	19740	3 739		
1078	Rozi Māta	s.	10 39 24	4 054318	11338	2 147	"	"	"	Bālabmbha	t.s.	65 3 33	4 511791	32493	6 154		
	Bālabchari Mosque	"	4 782245	60568	11 471	"	"	"	"	Tārāna Tree	h.s.	39 2 50	4 484665	30526	5 781		
1079	Kiri	h.s.	70 46 43	4 762144	57829	10 952	"	"	"	Pitar	t.s.	42 6 38	4 511791	32493	6 154		
	Bālabchari House	s.	10 42 33	4 056157	11380	2 155	"	"	"	Tārāna Tree	t.s.	4 680159	47881	9 068			
1080	Bāra	h.s.	7 17 50	4 056157	11380	2 155	"	"	"	Bālabmbha	t.s.	22 48 19	4 101430	12631	2 392		
	Kiri	"	147 36 3	4 081311	48068	9 092	"	"	"	Dudhai	s.	50 41 50	4 401679	25210	4 776		
1081	Bālabchari Hill	"	4 829834	38010	7 199	"	"	"	"	Bhimkata Tree	s.	4 494788	31246	5 918			
	Navanagar	t.s.	9 8 39	4 177353	15044	2 849	"	"	"	Pitar	t.s.	78 2 3	4 691080	49100	9 599		
1082	Soel	h.s.	47 9 8	4 562742	36538	6 020	"	"	"	Dudhai	s.	41 51 52	4 524987	33496	6 344		
	Jodiya	s.	34 31 45	4 450991	28248	5 350	"	"	"	Khanpur Tower	t.s.	77 33 36	4 689556	48928	9 267		
1083	Dhrol Hill Tomb	"	4 692948	49311	9 339	"	"	"	"	Dudhai	s.	42 10 0	4 326783	33634	6 370		
	Kiri	h.s.	66 33 52	4 688142	48769	9 237	"	"	"	Khanpur House	s.	4 638594	43510	8 241			
1084	Soel	h.s.	87 15 57	4 726737	53301	10 095	"	"	"	Phātār	s.	35 39 35	4 596708	39510	7 483		
	Jodiya	s.	25 12 7	4 356447	22722	4 303	"	"	"	Jhjhoda	h.s.	23 10 30	4 426051	26672	5 052		
1088	Jodiya Palace	"	67 49 43	4 692171	49223	9 323	"	"	"	Ambran Temple	h.s.	5 31 43	4 057977	11428	2 164		
	Jodiya	s.	111 36 10	4 695920	49650	9 403	"	"	"	Bāpur	"	18 35 21	4 577649	37814	7 162		
1089	Bālabmbha	t.s.	10 55 35	4 005269	10122	1 917	"	"	"	Vāvānia House	"	4 685470	48470	9 180			
	Jodiya Bandar Dargah	"	4 653439	45023	8 527	"	"	"	"	"	"	"	"	"	"		

J. ECCLES,
In charge of Computing Office.

July, 1893.

KÁTHIÁWÁR MERIDIONAL SERIES.

AZIMUTHS OF SURROUNDING STATIONS AND 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 of surrounding Points have been measured; immediately followed by those azimuths. The second column contains the number of the triangle which gives the distance between the Station and the Point.

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Adodar h.s.		Advál h.s.—(Contd.)	
Porbandar Shrine	125 39 43	Umankot Hill Mark (helio.)	495
Porbandar Flag-staff	130 3 47	Fareni h.s.	89
Porbandar Temple No. 2	134 6 43	Dhoráji Temple	497
Porbandar Temple No. 1	134 25 33		
Dehgám s.	144 54 17		
Chháya Hill Temple	145 0 47	Ajár h.s.	
Barda h.s.	198 36 33	Mevása No. 3 h.s.	700
Mokal t.s.	260 50 2	Pindára Building	1019
Tunkra Tree	303 47 10	Pindára Temple	1021
Tunkra h.s.	316 10 14	Katumba "	701
Tunkra Hill Temple No. 1	316 58 50	Poshitra "	702
		Poshitra House	1014
		Bet Temple No. 1	996
		Bet Temple No. 2	999
		Bet Temple No. 4	1001
		Jhákasia h.s.	700
Advál h.s.			
Márad Temple	12 40 31	Akála s.	
Udakia h.s.	13 45 31.7	Játroda s.	131
Márad Hill Mark (helio.)	22 51 54	Láthi Tower (helio.)	584
Oshám "	36 12 28.6	Páñch Tobra t.s.	129
Upleta Tower (helio.)	60 52 10	Bhángrád Mark (helio.)	585
Jhánjner Hill Mark (helio.)	102 22 11	Hájirádhár h.s.	129
Mojira Hill Mark (helio.)	104 15 11	Sakhpur, XXXVI	130
Bháýávar Hill Mark (helio.)	104 59 23		
Mevása No. 1 h.s.	149 20 14.8		
Sorvadar Hill Mark (helio.)	152 5 13		
Kháthi "	168 28 29		
Pádríya "	191 45 26.7		
Roghel Hill Mark (helio.)	199 20 49		
Pádríya Hill Mark (helio.)	202 27 54		
Kandorna Temple	222 43 6	Akoria, LXI*	
Kandorna "	223 53 39	Viráwáh. I	1
Dudivadar Hill Mark (helio.)	243 25 31	Churia Hill Peak No. 1	154
Bhádra "	244 58 25.5	Bhligon, LXIV*	1
		Rána-ka-Nesra Pillar (helio.)	143

* These stations appertain to the Karáchi Longitudinal Series.

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Alápur h.s.		Amesri t.s.	
Khadarpur h.s. 6 22 57	616	Vadála No. 2 h.s. 33 49 59	448
Morchund Hill Platform 21 50 5	739	Khákhria s. 55 11 15.1	97
Tánsa " 61 39 25	615	Rojhia Hill Mark (helio.) 59 44 20	446
Tánsa Hill Tree " 66 38 58	740	Khokhri t.s. 115 34 23.1	98
Sínodar Hill Tree 69 14 56	737	Sanosra h.s. 176 57 39.3	99
Bhandária Hill Temple " 82 9 51	735	Pardhari Hill Mark (helio.) 218 1 39	444
Trámbak " 103 18 18	614	Raia Hill Temple 281 12 50	445
Nágdhanába Hill Tree 114 48 41	729	Khirasra Tower (helio.) 314 57 15	453
Gogha s. 200 51 52	614	Chibada Hill Mark (helio.) 326 52 56	454
		Nagar-Pipalia " 343 28 2	450
		Devbhár " 357 1 48.7	97
Álech No. 1 h.s.		Arámda h.s.	
Barda Hill Mark No. 1 (helio.) 90 55 44	416	Borkhitri Building 18 56 39	981
Gop h.s. 178 11 39.3	72	Kachhigad t.s. 25 23 0	708
Chamárdhár Hill Mark (helio.) 208 28 54	411	Kachhigad Fort 25 35 29	985
Karba Hill Fort 209 5 47	415	Saiáni Temple 233 16 30	993
Ámbardi " 229 29 2.9	73	Arthara Temple 243 23 3	994
Mevása No. 1 " 241 51 58.9	72	Bet Tomb 250 10 0	1005
Álech No. 2 " 285 28 37.6	79	Bet " 256 7 3	707
Álech Hill Mark No. 1 (helio.) 295 12 51	418	Bet Temple No. 3 263 33 21	1000
Bora Dabha " 353 2 49.4	80	Arámda Flag-staff 273 7 16	990
		Pádhi Building 324 58 54	986
		Ghadechi h.s. 329 46 9	707
Álech No. 2 h.s.		Bádha h.s.	
Vadála No. 1 h.s. 3 9 51.3	81	Lápla Hill Mark (helio.) 46 51 52	601
Amrápur Tower 26 37 4	427	Játroda s. 178 38 25.2	132
Amrápur Hill Temple 35 34 22	426	Jihjuda Hill Mark 206 19 4	597
Amrápur Hill Mark (helio.) 35 39 20	423	Sakhpur, XXXVI 209 38 27.3	132
Dhruvála Hill Mark No. 1 (helio.) 46 37 13	429	Báola Hill Mark (helio.) 211 34 53	588
Bora Dabha h.s. 53 53 22.6	80	Dholidhár Hill Mark (helio.) 213 39 1	594
Álech Hill Mark No. 2 (helio.) 84 54 54	419	Hathila Hill Mark (helio.) 216 14 2	592
Álech Hill Mark No. 1 (helio.) 100 31 54	417	Bhokarva h.s. 267 1 43.6	134
Álech No. 1 " 105 32 26.1	79	Vikligálitot Hill Mark (helio.) 275 35 19	598
Ámbardi " 162 11 50.6	79	Gádhakda Bastion 312 41 16	599
Dhúnk Hill Temple 326 34 29	421	Bábríádhar Hill Mark No. 2 (helio.) 317 10 53	608
Tanaava Hill Mark (helio.) 333 10 20	422	Detad h.s. 344 32 2.5	135
Ámbardi h.s.		Bagasra t.s.	
Álech Hill Mark No. 1 (helio.) 27 16 32	417	Mocha h.s. 76 26 54	663
Álech No. 1 h.s. 49 31 46.7	73	Balej Temple 93 42 2	915
Gop " 126 47 8.8	73	Myári s. 150 15 49.0	87
Chamárdhár Hill Mark (helio.) 158 58 20	412	Junej t.s. 207 18 31.3	87
Bhojáberi " 192 50 24.6	74	Sutrej s. 293 7 21	662
Ámbardi Hill Mark (helio.) 214 49 19	413	Mádhavpur h.s. 359 33 17	662
Álech No. 2 " 342 10 45.3	79		
Ámbha h.s.		Bálambha t.s.	
Mándha Temple 2 31 59	1046	Bálambha Temple 59 36 19	1086
Mándha Tower 3 17 50	1045	Jodiya s. 70 8 40	718
Dánta h.s. 7 6 0	691	Jodiya Bandar Durgah 81 4 15	1084
Ámbha Tree 27 38 56	1013	Bhinkata Tree 211 16 51	1089
Parodia Temple 45 31 57	1042	Dudhai " 234 5 10	720
Saláya Fort 48 38 42	1041	Pitar t.s. 293 15 28	719
Góij " 63 55 46	1029	Tarána Tree 293 28 29	1087
Kálávad " 76 25 15	691	Hádátoda h.s. 358 32 2	718
Kháori " 262 40 17	693		
Timbri Hill Tree 292 48 25	1047		
Jasápur " 318 15 4	692		
Jasápur Hill Temple 318 15 34	1051		

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Bápúr h.s.		Bela, V—(Contd.)	
Vavánia House	o ' "	Kárunjhar Hill Mark No. 3	o ' "
Jhijhoda	h.s. 17 45 28	177 22 33	164
Mália, XVI	36 20 49	180 37 14' 23	7
Phagúsia, XIX	246 45 0	Kárunjhar Hill Peak No. 2 (helio.)	167
	310 47 21	184 17 33	8
		Viráváb, I	212 12 59' 50
		Parvatána Bet Platform	226 49 53
		Evál, IV	276 4 15' 94
		Mouána Hill Pillar	287 20 54
		Modhutra Hill Mark (helio.)	297 25 35
		Bela Fort (helio.)	305 31 44
		Piprála Hill Mark (helio.)	315 43 21
		Dájka, VI	343 3 35' 44
		Fatehgad Hill Mark (helio.)	347 6 34
			192
Bára h.s.		Bet t.s.	
Súrda	h.s. 43 15 17	Ghadechi	h.s. 30 41 13
Hápa Tower	69 55 12	Aránda Flag-staff	67 54 49
Navánagar Tower	83 28 42	Aránda Palace	69 15 21
Navánagar	t.s. 83 30 41	Aránda	76 9 9
Dhuráv Temple	96 38 28	Arthara Temple	108 35 26
Rozi Mátá	115 11 46	Saiáni Temple	168 55 29
Rozi Mátá	s. 115 13 26	Bet Tomb	172 30 32
Báláchari House	175 36 50	Poshitra	309 19 5
Kiri	h.s. 182 54 40	Bet Temple No. 3	350 21 2
Kiri Hill	189 56 16		1000
Rámpur Tree	218 56 17		
Soel	231 8 41		
		Bhad s.	
		Rátia	h.s. 28 13 34
		Navibandar Temple No. 1	40 3 26
		Navibandar Temple No. 2	40 41 32
		Navibandar Tower (helio.)	45 51 15
		Tunkra	97 37 6
		Mokal	t.s. 148 44 55
		Myári	s. 307 25 31
			666
			917
			919
			921
			967
			668
			666
Barda h.s.		Bhádra h.s.	
Adodar	h.s. 18 37 44	Fareni	h.s. 11 24 31' 4
Chháya Hill Temple	26 3 25	Umarkot Hill Mark (helio.)	18 29 20
Porbandar Flag-staff	47 54 10	Dhoráji Temple	36 39 31
Porbandar Shrine	49 43 17	Advál	65 1 43' 5
Dehgám	s. 74 3 25	Dudivadar Hill Mark (helio.)	66 35 8
Sarsad Mátá Hill Temple	107 19 45	Jhánjmer Hill Mark (helio.)	70 2 57
Sarsad Mátá	h.s. 107 34 46' 4	Sorvadar Hill Mark (helio.)	84 15 26
Khámbhodar	125 46 25	Roghel Hill Mark (helio.)	87 4 55
Patelka	137 31 27' 6	Khátli	103 42 10
Barda Hill Mark No. 2	193 16 16	Pádríya Hill Mark (helio.)	111 24 15
Gop Hill Temple	212 22 15	Kandorna Temple	115 43 7
Gop	212 23 44' 1	Pádríya	119 3 16' 6
Mevása No. 1	240 38 26' 7	Moridhár	172 36 32' 9
Oshám	280 49 30' 9	Mevása Hill Mark No. 4 (helio.)	292 36 47
Mokal	t.s. 333 9 4		494
		Bhandar h.s.	
		Chamárdi	h.s. 140 17 49
		Bhávagar	227 22 20
		Trámbak	323 39 58
			382
			382
			383
Bárman h.s.			
Rohisa	h.s. 16 33 57		
Chelna Hill Tree	55 47 28		
Mána Hill	72 11 32		
Moti Moli	74 31 57		
Váukia Hill	78 54 25		
Vángadhra Hill	107 39 24		
Rájula Rock	238 41 15		
Hindorna	244 47 1		
Vánd	302 36 53		
Jáfarabad Building	326 33 7		
Jáfarabad Fort	330 19 45		
Jáfarabad Palace	331 15 44		
Bela, V			
Gedi Hill Math	7 37 22		
Gedi Hill Mark	10 5 9		
Desalpur Hill Mark (helio.)	13 36 30		
Gángta, VII	54 43 46' 14		
Kákinda Bet Hill (helio.)	70 5 49		
Khadir Hill Mark (helio.)	90 59 36		
Gadbada Hill Mark (helio.)	101 49 48		

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Bhanduri h.s.		Bhánvagar h.s.—(Contd.)	
Varodra h.s. 10 24 42	653	Gogha s. 307 8 55·6	71
Chorvád Bandar Tower 26 21 25	890	Piram Light-house 310 45 22	727
Chorvád Bandar Building (helio.) 26 24 27	892	Bhúteshvar Hill Temple 318 52 36	392
Chorvád Building 34 28 15	894		
Ghumli Tower 45 44 58	895	Bháyásar, XXVIII	
Khoráda " 70 30 57	654	Movaiya h.s. 3 23 18	319
Sepa Tower 102 0 37	900	Movaiya, XXX 9 18 16·11	40
Lambhora " 134 21 24	655	Mahika " 47 28 37	326
Seriakhán Hill Temple 135 5 54	898	Trákuda, XXXI 53 27 3·95	41
Bhanduri Building 191 11 1	897	Rájkot Temple 149 19 15	314
Jalandri " 287 1 32	653	Rájkot Palace 149 47 3	315
		Biehri " 170 2 44	307
Bhárápur h.s.		Pipalia " 175 43 7	308
Rájputra h.s. 19 40 21	619	Khakhána, XXVI 188 42 37·63	38
Talája Hill Temple 74 33 6	748	Mahidhar, XXVII 245 36 19·35	38
Talája " 74 33 11	618	Chitalia, XXIX 295 38 5·01	39
Tánsa " 153 28 5	617		
Khadarapur " 209 22 5	617	Bhilgaon, LXIV*	
		Churia Hill Peak No. 1 2 7 53	154
Bharbhir t.s.		Churia Hill Peak No. 2 2 31 25	157
Chamárdi h.s. 37 47 26·4	139	Kárunjhar, III 39 9 40·38	4
Pátua s. 108 6 46·5	139	Khársar, II 65 20 26·32	2
Bhánvagar h.s. 343 41 30·2	140	Jhund, LXVI* 139 40 15·19	2
		Akoría, LXI* 274 27 27·60	1
Bhátia h.s.		Raghuji-ka-Nesra Hill Mark (helio.) 305 40 44	142
Navádra h.s. 5 45 12	682	Viráwáh, I 354 12 47·90	1
Kuranga " 63 59 59	683		
Bámnásar Temple No. 2 77 4 12	965	Bhimrád h.s.	
Gága Hill Peak 108 47 34	969	Holáya Hill Mark (helio.) 22 26 18	572
Bámnásar Temple No. 1 120 57 17	964	Limbála Hill Mark 40 9 25	575
Gurgat Fort 146 31 44	976	Itrin, XXXV 46 8 27·1	122
Patelka " 290 28 59	682	Bhadli Hill Mark (helio.) 63 45 4	571
Lol Hill Temple 297 24 52	955	Chomalpur Hill 80 11 35	569
Bhátia Hill Temple 303 28 19	960	Modhuka h.s. 92 57 5·2	121
		Turkha Hill Mark No. 2 142 51 27	566
Bhánvagar h.s.		Kamakio Mátá " 167 49 51·1	121
Trámbak h.s. 14 36 28·3	70	Gadhada " 352 54 17·9	124
Khokra Hill Mark 24 12 19	385		
Bhikla Hill Mark 35 28 9	384	Bhimtekri h.s.	
Bhandar " 47 24 33	382	Dhándhalpur h.s. 30 0 22·1	116
Pálitána, Shetrunja No. 1 " 49 35 53·2	69	Nauka " 190 2 45·9	114
Sidhsar Hill Mark (helio.) 54 42 28	386	Múli Temple 192 54 2	547
Kanád Hill Mark 60 28 14	371	Rámpura s. 241 21 49·9	114
Kanád Rock 61 6 58	369	Sáyla Palace 260 58 45	549
Málván Hill Mark 62 25 13	368	Vadia Hill Mark (helio.) 295 49 30	551
Sarod Hill Mark 64 47 17	368	Sáyla Hill Mark (helio.) 297 54 36	550
Bhánvagar Hill Temple 69 5 15	388	Sudámda h.s. 321 5 48·1	115
Sihor Hill Mark 70 1 36	380	Jasápur Hill Mark (helio.) 348 20 31	553
Chogat Hill Mark 101 47 8	375	Limbálu Hill Mark (helio.) 354 55 8	555
Chamárdi Hill Mark No. 1 103 34 46	377		
Chamárdi " 105 28 36·3	69	Bhojáberi h.s.	
Chamárdi Hill Mark No. 2 106 45 35	378	Ámbardi h.s. 12 51 4·2	74
Rávesi Mátá Tomb 131 30 41	395	Gop " 78 15 4·4	74
Bharbhir t.s. 163 43 12·2	110	Rinjpur Hill Mark (helio.) 126 11 1	409
Bhánvagar Clock Tower 179 2 23	389	Lálpur " 142 6 47·3	75
Bhánvagar Temple No. 1 228 47 53	391	Lámdhár " 192 10 18·0	76
Gogha Temple 302 8 36	394	Potor Hill Mark (helio.) 209 41 43	408
Gogha Sally-port 303 42 51	393	Ámbardi Hill Mark (helio.) 343 33 5	413

* These stations appertain to the Karachi Longitudinal Series.

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Bhokarva h.s.		Bolás h.s.—(Contd.)	
Detad h.s. 33 36 27·2	135	Práchi Kund Tree 283 27 39	869
Ádsang Hill Mark 43 9 39	602	Vasávar h.s. 296 24 48	649
Lápla Hill Mark (helio.) 64 47 23	600		
Viktigálitot Hill Mark (helio.) 74 46 43	598	Bora Dabha h.s.	
Bádha " 87 5 4·8	134	Segras t.s. 2 23 5·9	82
Jhijhuda Hill Mark 105 33 10	596	Barda Hill Mark No. 1 (helio.) 130 34 30	416
Dholidhár Hill Mark (helio.) 134 42 41	594	Álech No. 1 h.s. 173 3 15·1	80
Hathila Hill Mark (helio.) 150 46 52	592	Álech Hill Mark No. 2 (helio.) 138 55 48	420
Játroda s. 151 40 48·7	133	Álech No. 2 " 233 50 0·5	80
Bovádi Hill Mark 165 52 11	590	Amrápur Hill Mark (helio.) 252 18 59	423
Báola Hill Mark (helio.) 170 5 26	588	Amrápur Hill Temple 252 25 47	425
Sakhpur, XXXVI 180 32 21·3	133	Dhruvála Hill Mark No. 1 (helio.) 254 47 54	428
Pipardi Tank (helio.) 214 18 18	591	Vadála No. 1 h.s. 285 25 58·4	81
Pálitána, Shetrunja Temple No. 2 236 10 27	586	Dhruvála Hill Mark No. 2 (helio.) 307 50 25	430
Pálitána, Shotrunja Temple No. 3 236 24 39	587	Pájud t.s. 327 14 48·9	83
Vadál h.s. 336 29 49·6	136	Kutiyána Temple 339 34 6	431
Bábriádhár Hill Mark No. 2 (helio.) 356 8 7	607		
Bhopalka h.s.		Chamárdi h.s.	
Khákharda Tower 33 38 45	956	Kanádh Hill Mark 4 19 18	371
Bhopalka Temple 61 32 1	958	Kanádh Rock 4 50 49	369
Pánor h.s. 70 39 43	686	Málvan Hill Mark 8 28 51	367
Bhátia Hill Tower 82 21 19	963	Sarod Hill Mark 15 9 35	365
Nandána Tower 88 52 40	959	Pálitána, Shetrunja No. 1 h.s. 18 1 44·6	66
Meváea No. 3 " 140 40 29	686	Pálitána, Shetrunja No. 2 " 18 31 5	364
Dántrána Temple No. 1 194 49 30	1024	Pálitána, Kanjarda Hill Mark 24 55 25	360
Jhákasia " 197 34 23	687	Sakhpur, XXXVI 54 34 55·1	65
Sidhsara Tower 231 7 27	1026	Hadinatia Hill Mark 64 55 20	359
Varthara Tower 234 21 39	1028	Chamárdi Hill Mark No. 1 71 52 45	376
Varthara s. 241 37 14	688	Chogat Hill Mark 86 5 18	374
Bhátel Temple 248 43 26	1027	Itria, XXXV 104 53 58·6	65
		Gadhada Temple 113 58 50	358
		Chamárdi Hill Mark No. 2 131 56 10	379
		Pátua s. 179 39 52·5	139
		Bharbhir t.s. 217 44 1·8	139
		Rávesi Máta Tomb 240 12 16	395
		Bhávnagar Clock Tower 282 15 32	389
		Bhávnagar h.s. 285 23 31·2	69
		Sidhsar Hill Mark (helio.) 294 50 37	387
		Bhandar " 320 14 57	382
		Trámbak " 321 19 35·4	68
		Sihor Hill Mark 335 1 16	381
		Tharsingra Hill Mark (helio.) 352 46 37	373
Bichri h.s.		Changa h.s.	
Rájkot Palace 90 39 56	315	Lálpur h.s. 19 37 8·1	77
Rájkot Temple 90 51 15	314	Haripur Hill Temple 22 9 20	398
Rájkot Church 93 50 24	313	Tungi Hill Peak 61 53 59	1053
Khorána Tower 169 17 41	312	Jasápur Hill Temple 65 38 8	1050
Khedva Hill Temple 184 7 10	311	Jasápur " 65 38 44	694
Pipalia h.s. 186 47 58	309	Ius Hill Mark (helio.) 78 51 12	1051
Khakhána, XXVI 207 37 8	306	Khiori " 112 21 24	694
Maháidhar, XXVII 272 37 27	306	Dodhia Temple 131 38 48	1056
Bháyasar, XXVIII 350 2 7	307	Kháráberája s. 170 28 4	695
		Navánagar t.s. 198 31 18	696
		Mokhána Well 219 7 25	1066
		Súrda h.s. 237 16 29·0	78
		Vágharia Hill Mark (helio.) 278 11 3	396
		Dhándha Hill Mark (helio.) 295 24 48	397
		Lámdhár " 326 27 11·4	77
		Mehmána Hill Mark (helio.) 341 39 4	400
		Mehmána Tower 356 34 15	403
Bolás h.s.			
Kadvád h.s. 19 33 27	649		
Pátan Temple No. 1 51 9 10	871		
Pátan Tower No. 1 55 57 44	872		
Pátan Turret 58 13 18	873		
Pátan Tower No. 2 58 52 46	876		
Pátan Idgah 62 15 7	877		
Verával Tomb (helio.) 65 20 20	879		
Verával Temple 65 29 28	881		
Verával Building 69 38 25	885		
Verával Masjid 69 41 19	883		
Verával Idgah 72 3 24	886		
Verával h.s. 76 5 27	650		
Jalandri " 143 30 37·0	113		
Jendáliya " 185 35 28·7	113		

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance		
Chápra h.s.		Chitrod, XI			
Dánidhár	t.s. 22 43 14	455	Shikárpur Fort (helio.)	6 28 14	265
Khandera Hill Mark (helio.)	124 7 10	458	Vándhia, XIV	23 53 6.40	19
Khákhría	s. 162 5 34	456	Katáriya Tree	27 59 43	259
Devdhár	h.s. 277 53 12	455	Bádargad Hill	142 52 32	224
			Vitrio Hill Temple	152 11 9	225
			Chitrod Hill Fort (helio.)	156 4 16	250
Chára h.s.			Kanduka, IX	181 38 15.30	15
Mul Dvárka Temple	108 51 36	866	Sai House	185 32 34	222
Dhámlej	h.s. 112 9 49	646	Tindalva	198 9 1	215
Sigsar Tree	124 31 34	867	Mevása Hill Mark No. 1	223 31 48	247
Rákhej Tree	145 28 29	862	Kidiánagaru Hill (helio.)	225 12 6	228
Vadnagar Hill Temple	187 44 36	860	Kidiánagaru Hill Peak	226 53 2	226
Vadnagar	" 187 46 37	645	Lákhdagad Hill Mark	230 45 16	212
Kodinár Building	" 191 52 13	859	Pata-i-Sháh, VIII	235 28 22.66	15
Málgám	" 241 43 0	644	Mevása Hill Mark No. 2	245 18 50	249
Pipalva Tree	249 18 17	854	Palánsva Temple	251 30 40	232
Madva	" 294 27 40	644	Varnu Vándh Tomb	257 10 45	233
Chára Hill Platform	295 55 39	856	Mevása Hill Mark No. 3 (helio.)	262 12 5	253
Chára Hill Temple	301 59 55	857	Gágodar Hill Tower	262 27 40	244
			Kánmer Fort Point No. 1 (helio.)	263 27 27	237
			Kánmer Fort Point No. 2 (helio.)	263 40 57	238
			Kánmer, X	268 8 1.57	16
			Kánmer Hill Mark No. 3 (helio.)	269 40 41	245
			Thoriáli Hill Mark (helio.)	286 42 19	258
Charádva, XVIII			Mánába, XII	314 15 29.18	17
Dungarpur, XX	19 57 59.53	27	Mánába Mark (helio.)	328 52 21	263
Rangpur, XVII	74 29 3.45	24	Rájthali Mark (helio.)	341 21 29	261
Kákrejji, XV	134 54 14.92	24	Surajbári Hill Mark (helio.)	353 42 54	269
Halvad Palace	244 26 43	285			
Sápakda, XXI	296 46 56.12	28			
Sarambda Hill Mark	340 12 17	290			
Sarambda Hill Temple	341 11 51	280			
			Dadreacha h.s.		
			Kanara Hill Mark (helio.)	151 44 22	533
			Kosradhár	h.s. 219 33 41	532
			Vánsadhil Hill Mark (helio.)	276 34 58	535
			Jendáliya	" 359 46 53	532
Chitalia, XXIX			Dájka, VI		
Pipria Hill Mark (helio.)	1 28 32	340	Hamirpur Hill Mark No. 1	15 24 54	203
Isapur Hill Temple	6 45 57	336	Umáiya Hill Fort (helio.)	29 47 23	208
Jithuri, XXXIII	8 34 42.15	43	Kanduka Hill Mark	39 36 44	214
Ránparda Hill Temple	16 3 6	337	Kanduka, IX	43 43 15.15	12
Moraiya	h.s. 59 16 20	319	Sángad Temple	46 30 48	201
Movaiya, XXX	63 16 57.66	40	Gángta, VII	98 4 42.36	10
Dadva Hill Tree	81 12 42	322	Gedi Hill Mark	107 44 1	195
Baldhoi Hill Temple	96 11 27	318	Gedi Hill Math	108 16 57	194
Bháyasar, XXVIII	115 44 1.77	39	Desalpur Hill Mark (helio.)	114 57 19	197
Mahidhar, XXVII	187 48 49.66	39	Gadhada Hill Mark (helio.)	157 12 4	172
Modhuka	h.s. 254 47 20.0	120	Bela, V	163 5 16.80	9
Itria, XXXV	291 39 57.40	46	Bela Fort (helio.)	172 46 33	174
			Mouána Hill Pillar	195 0 54	175
			Evál, IV	235 59 24.56	9
			Fatehgad Fort Tower No. 1	246 11 57	188
			Fatehgad Fort Tower No. 2 (helio.)	253 13 38	190
			Mánjunvas Hill Mark No. 2 (helio.)	285 24 52	187
			Mánjunvas Hill Mark No. 1	285 25 37	184
			Pata-i-Sháh, VIII	321 13 7.33	11
			Moda Hill Platform	326 8 50	209
			Khándek Hill Mark	336 49 26	205
			Hamirpur Hill Mark No. 2	359 3 18	204
Chitrákheda, XXIII					
Khakhána, XXVI	38 32 46.91	35			
Vánkánér, XXIV	72 0 42.16	33			
Vánkánér Temple	73 53 59	299			
Vánkánér Minaret	74 39 13	297			
Dungarpur, XX	133 31 44.17	31			
Máthak Tree	157 10 23	291			
Sara Temple	201 51 2	293			
Sápakda, XXI	202 22 22.96	31			
Navágám Hill Tower	311 10 4	301			
Tarkia Hill Peak	354 15 23	303			
Tarkia, XXV	355 25 29.88	34			

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Dāngarvādi, XLII	° ' "	Dehgām s.—(Contd.)	° ' "
Nāgva Point (helio.)	47 51 43	Barda	h.s. 254 0 18
Madva Hill Temple No. 2	75 19 57	Adodar	" 324 52 21
Madva Hill Temple No. 1 (helio.)	75 22 26	Porbandar Temple No. 1	" 337 5 24
Madva	h.s. 75 22 28	Porbandar Temple No. 2	" 337 26 7
Simāsi	" 154 7 45	Porbandar Flag-staff	" 342 38 39
Jākhia, XL	170 25 40 91	Porbandar Shrine	" 350 18 9
Jākhia Hill Peak	171 1 33		
Diu Guard House	171 34 39		
Ilampur	" 202 8 8		
Nātej, XLI	229 14 51 14	Dehvāsa h.s.	
Nandan Hill Dargah	254 9 24	Mādhavpur Hill Temple	h.s. 149 53 4
Māndvi	" 255 52 11	Mādhavpur	h.s. 150 12 22
Gogla Tree	" 261 48 31	Dehvāsa Tower	" 183 52 2
Diu Level Datum Tower	s. 266 5 13	Devrāna	s. 235 28 32
Diu, St. Thomas's Church	272 11 9	Sil Fort	" 281 17 34
Diu Flag-staff No. 1	273 30 23	Lohij Tree	" 311 5 39
Diu, St. Francis' Church	275 27 55	Makhtumpur	h.s. 318 22 54
Diu Flag-staff No. 2	275 44 20		
Dānidhār t.s.		Detad h.s.	
Khijadia Hill Mark (helio.)	h.s. 32 7 31	Ādsang Hill Mark	" 70 31 12
Mevāsa No. 1	h.s. 66 52 25 9	Lāpla Hill Mark (helio.)	" 98 40 35
Pagās Hill Temple	" 93 35 26	Bādha	h.s. 164 32 59 4
Chatar Hill Mark (helio.)	" 103 46 28	Gādhakda Bastion	" 181 26 24
Khandera Hill Mark (helio.)	" 147 59 47	Bhokarva	" 213 34 3 6
Khākhria	s. 182 56 40 3	Vadāl	" 251 45 47 9
Chāpra	h.s. 202 42 22	Bābriādhār Hill Mark No. 1 (helio.)	" 275 23 7
Devdhār	" 241 38 35 6	Dungar	h.s. 299 46 57 3
Metia Hill Mark (helio.)	" 268 8 7	Rājula Hill Mark (helio.)	" 340 36 55
Deri Hill Mark (helio.)	" 269 59 1	Hiudorna	" 348 2 22 8
Kharedi Tower (helio.)	" 282 41 55		
Nāgmāndal Hill Mark (helio.)	" 292 16 47		
Moridhār	" 309 26 25 5		
Pādriya	" 353 40 2 8		
Charel Hill Mark (helio.)	" 357 6 18		
		Devdhār h.s.	
		Moridhār	h.s. 7 31 43 5
Dānta h.s.		Metia Hill Mark (helio.)	" 12 34 15
Khambhāliya Hill Tomb	4 25 20	Nāgmāndal Hill Mark (helio.)	" 12 45 3
Khambhāliya Hill Temple	5 53 59	Deri Hill Mark (helio.)	" 27 58 6
Khambhāliya Palace	8 24 53	Kharodi Tower (helio.)	" 38 40 45
Khambhāliya Building	9 59 29	Dānidhār	t.s. 61 41 51 0
Khambhāliya Temple	10 4 45	Pagās Hill Temple	h.s. 97 55 35
Varthara	s. 61 40 32	Chāpra	h.s. 127 59 28 6
Sāmor Hill	89 25 56	Khākhria	s. 127 59 28 6
Gojj	h.s. 114 44 52	Vadāla No. 2	h.s. 145 24 14
Kālāvad	" 116 42 47	Meghpur Temple	" 155 59 27
Salāya Temple	" 128 51 1	Amesri	t.s. 177 2 2 2
Ambla Treo	" 183 33 54	Nagur-Pipalia	h.s. 193 3 37
Ambla	" 187 5 40	Khirasra Tower (helio.)	" 227 26 36
Māndha Tower	" 191 33 36	Chibada Hill Mark (helio.)	" 254 16 10
Māndha Temple	" 192 34 53		
Timbri Hill Tree	" 219 20 50		
Jasāpur Hill Platform	" 276 37 48		
Jasāpur	h.s. 280 43 32		
		Devki Gālol, XXXII	
Dehgām s.		Oshām	h.s. 90 44 32 4
Vadāla No. 3	h.s. 133 51 45	Mevāsa No. 1	" 134 29 39 5
Bhāvāda Hill	" 169 19 22	Bhādra Hill Temple	" 151 1 35
Khāmbhodar	" 183 42 57	Jetpur Temple	" 155 41 58
		Trākuda, XXXI	" 168 9 50 8 1
		Movaiya, XXX	" 209 48 45 8 0
		Kunkavān, XXXIV	" 264 53 58 24

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Devrána s.	o ' "	Dungar h.s.	o ' "
Makhtumpur h.s. 15 16 10	658	Saváibet Pir Mosque 9 0 19	791
Sil Fort 44 14 30	910	Saváibet Pir Rock 9 50 1	793
Dehvása " 55 30 34	659	Sálbet t.s. 13 56 56	629
Dehvása Tower " 60 59 7	912	Hindorna h.s. 65 34 8 0	138
Mádhavpur " 96 31 59	660	Rájula Rock 72 39 34	798
Mádhavpur Hill Temple " 96 31 59	914	Rájula Hill Mark (helio.) 76 45 14	612
Sutrej s. 146 33 25	661	Rájula Hill Peak 79 40 55	611
Simroli h.s. 306 6 45	658	Bhánkshi Hill Mark (helio.) 113 9 44	603
		Vávera Hill Mark (helio.) 118 24 0	609
		Detad h.s. 119 50 17 1	137
		Bábríádhár Hill Mark No. 1 (helio.) 167 26 24	605
		Vadál h.s. 182 9 55 8	137
Dhámlej h.s.		Asrána Hill Tree 207 36 22	783
Kadvád h.s. 116 34 58	648	Lúsádi s. 247 55 5	628
Sutrápáda Tower 120 7 51	870	Kheda h.s. 327 17 57	628
Vasávar " 201 40 32	647	Cháneh Hill Fort 349 42 51	785
Vadnagar Hill Temple 245 45 57	861		
Vadnagar " 245 47 55	646		
Sigsar Tree 257 48 22	868		
Rákhej Tree 266 29 13	862		
Cháva " 292 7 19	646	Dungarpur, XX	
Mul Dvárka Building 293 13 37	864	Vánkáner Minaret 14 25 40	297
Mul Dvárka Temple 293 18 30	865	Vánkáner, XXIV 15 32 16 06	32
		Vírpur, XXII 72 42 0 16	30
		Morvi Temple No. 2 95 6 5	296
		Rangpur, XVI 142 19 2 13	27
		Charádra, XVIII 199 56 36 15	27
Dhándhalpur h.s.		Máthak Tree 239 21 50	291
Bhíntekri h.s. 209 58 26 3	116	Sápakda, XXI 253 51 0 73	28
Jasápur Hill Mark (helio.) 238 50 44	553	Sara Temple 273 0 6	293
Sudánda " 260 37 38 7	116	Chitrákheda, XXIII 313 28 8 68	31
Limbálu Hill Mark (helio.) 296 26 44	555		
Sáida Hill Mark (helio.) 301 5 31	557		
Gadharia Hill Mark 311 9 24	559		
Gangájal " 342 6 7 2	117		
		Evál, IV	
		Piprála Hill Mark (helio.) 12 26 17	182
		Modhutra Hill Mark (helio.) 13 1 52	179
		Pata-i-Sháh, VIII 26 10 4 51	11
		Dájka, VI 56 6 16 80	9
		Fatehgad Hill Mark (helio.) 57 29 33	193
		Bela, V 96 12 51 61	7
		Kárunjhar, III 145 42 25 40	6
		Viráwáb, I 179 52 49 17	6
		Parbatána Bet Platform 187 44 37	170
		Sántalpur Temple No. 1 332 50 47	177
		Sántalpur Temple No. 2 333 15 10	178
		Chádchat Hill Mark (helio.) 358 2 14	181
Dhásanvel h.s.		Fareni h.s.	
Dwárka Temple 54 21 40	977	Girnár h.s. 2 57 13 2	105
Tobar Tower 92 10 21	980	Junágad Palace 14 56 51	513
Ghadechi h.s. 180 46 46	704	Udakia " 67 40 23 2	104
Nágnáth Dharmshála 208 59 26	1010	Oshám " 73 38 0 3	89
Goriáli Building 213 37 36	1011	Márad Temple 80 0 32	500
Katumba " 265 12 32	704	Márad Hill Mark (helio.) 80 25 37	502
Thotria " 300 40 15	705	Advál " 132 32 33 1	89
		Umarkot Hill Mark (helio.) 180 11 19	496
		Bhádra " 191 23 44 8	90
		Girnár Temple No. 2 355 4 3	516
Diu Level Datum Tower s.		Girnár Hill Mark (helio.) 355 48 11	518
Dángarrádi, XLII 86 6 13	831	Girnár Temple No. 1 356 48 58	515
Diu Flag-staff No. 1 296 12 44	831		
Diu Flag-staff No. 2 359 12 9	832		
Dudhai s.			
Bámbha t.s. 54 6 55	720		
Bhímkata Tree 104 48 45	1089		
Jhíjhoda h.s. 192 28 52	722		
Phátsar s. 264 51 24	721		
Khánpur House 289 11 32	1091		
Khánpur Tower 289 29 40	1090		
Pitar t.s. 331 21 32	720		

Name of Station with Azimuths of surrounding Points		No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points		No. of Triangle giving Distance
Gadhada h.s.	° ' "		Ghadechi h.s.—(Contd.)	° ' "	
Pānch Tobra	t.s.	42 6 12' 7	Tobar Tower	20 25 15	980
Itrin, XXXV		87 4 26' 5	Dwārka Temple	27 59 36	977
Bhadli Hill Mark (helio.)		122 43 8	Vasāi Temple	38 21 7	983
Modhuka	h.s.	128 25 15' 8	Vasāi Building	38 25 39	982
Sāndan Hill Mark (helio.)		151 36 10	Barvāla Tower	42 47 36	979
Bhimrād	"	172 54 42' 1	Borkhitri Building	53 59 48	981
Gadhāli Hill Fort		339 44 40	Kachhigad	t.s.	64 41 10
Jalālpur	"	358 21 32' 5	Kachhigad Fort	64 47 18	985
			Arāmda	h.s.	149 47 2
Gadhada t.s.			Pādli Building	162 44 13	986
Kheda	h.s.	65 30 28	Arāmda Flag-staff	173 45 30	990
Lūsādi	s.	134 21 6	Arāmda Palace	174 9 49	988
Konjli	"	181 40 47	Arthara Temple	194 16 40	995
Mahura Temple		200 33 59	Saīni Temple	199 14 48	992
Nikol	h.s.	237 16 27	Bet	t.s.	210 40 0
			Bet Temple No. 2	210 57 48	998
Gadbeshvar h.s.			Bet Temple No. 1	211 1 28	997
Otha	h.s.	75 42 30	Bet Temple No. 4	211 55 51	1002
Bhaguda Hill Peak		101 10 12	Bet Temple No. 5	212 25 23	1003
Kāmda Hill Temple		135 55 31	Bet Hill Peak	217 45 34	1006
Beldā Hill Peak		158 5 45	Sāmosar Building	218 4 54	1008
Talāja Hill Temple		212 4 52	Bet Temple No. 6	221 31 26	1004
Talāja	"	212 5 56	Poshitra House	257 57 20	1013
Bordki Hill Tree		235 37 44	Poshitra	h.s.	261 0 39
Unchari Hill Tree		263 44 29	Nāgnāth Dharmshāla	285 42 8	1010
Gopnāth Hill Tower		284 41 42	Mulvel Tower	289 54 6	1012
Rājpurā	"	289 5 9	Goniāli Building	297 58 18	1011
Rājpurā Hill Tower		292 53 49	Katumba	"	303 36 26
Jhānjmer Hill Fort		301 15 2			
Kotra	"	353 0 46	Girnār h.s.		
Dātha Temple		358 33 11	Rājāvād	h.s.	23 13 27' 0
			Khimpādar Hill Mark (helio.)	s.	23 15 27
Gangājāl h.s.			Roghāt	h.s.	80 43 20' 5
Modhuka	h.s.	1 15 45' 6	Kanāla	h.s.	114 47 23
Dhāndhalpur	"	162 7 12' 7	Junāgad Palace		124 46 31
Sudāmda	"	216 13 31' 4	Junāgad Temple		127 3 9
Saida Hill Mark (helio.)		249 49 41	Udākia	"	138 31 58' 2
Gadharia Hill Mark		258 29 36	Fareni	"	182 56 57' 9
Pāliyād Building		273 32 36	Girnār Temple No. 1		211 42 53
Kamakio Māta	"	295 35 46' 4	Girnār Temple No. 2		218 4 57
Sarva Hill Mark		303 12 43	Kosradhār	"	350 35 16' 5
Pipardi Hill Mark (helio.)		333 19 47			
			Gogha s.		
Gāngta, VII			Alāpur	h.s.	20 52 44
Kākīnda Bet Hill (helio.)		112 10 58	Trāmbak	"	66 41 43' 3
Khadir Hill Mark (helio.)		137 0 34	Bhāyānagar	"	127 11 42' 4
Gadhada Hill Mark (helio.)		230 23 58	Gogha Temple		185 55 53
Bela, V		234 37 30' 51	Piram Light-house		315 39 22
Lakria Hill Mark (helio.)		259 56 38			
Desalpur Hill Mark (helio.)		268 19 25	Goij h.s.		
Dājka, VI		277 56 47' 28	Sāmor Hill		0 50 26
Fatehgad Hill Mark (helio.)		278 35 0	Ambla	h.s.	243 52 45
Sāngad Temple		289 58 55	Ambla Tree		248 29 17
Umāya Hill Fort (helio.)		302 9 18	Sulāya Temple		275 33 56
Kanduka Hill Mark		313 43 35	Dānta	"	294 42 11
Kanduka, IX		314 48 12' 75	Khambhāliya Hill Temple		313 23 42
			Khambhāliya Hill Tomb		313 30 45
Ghadechi h.s.			Khambhāliya Building		316 56 48
Dhrāsānvel	h.s.	0 46 48	Khambhāliya Palace		317 14 12
Kaliānpur Tower No. 2		2 24 46	Khambhāliya Temple		317 39 38

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Gop h.s.	° ' "	Hádátoda h.s.—(Contd.)	° ' "
Barda h.s. 32 28 25.4	61	Latipur Temple 278 45 22	433
Sarsad Mátá Hill Temple 68 18 16	948	Vágudar s. 313 9 43	434
Sarsad Mátá " 68 33 27.8	63	Sanosra h.s. 327 37 39.6	101
Patelka " 91 19 57.8	62		
Rájvad Hill Mark (helio.) 151 55 58	404	Hajirádhar h.s.	
Gována Tower 157 27 3	405	Sakhpur, XXXVI 15 35 10.6	130
Gována Hill Mark (helio.) 163 53 16	406	Akúla s. 96 2 38.6	129
Lálpur h.s. 196 35 0.5	75	Pánch Tobra t.s. 142 45 2.6	128
Bhojáberi " 258 11 31.3	74	Methli Hill Mark (helio.) 145 46 31	582
Mevása No. 1 " 273 56 38.8	59	Jalálpur h.s. 198 24 36.7	128
Ámbardi Hill Mark (helio.) 278 59 30	414		
Chamárdhár Hill Mark (helio.) 284 1 6	411		
Ámbardi h.s. 306 44 15.8	73	Hindorna h.s.	
Karba Hill Fort 319 51 22	415	Vánd h.s. 10 4 6	631
Oshám " 321 11 1.6	59	Jáfarabad Temple 19 6 33	801
Álech No. 1 " 358 11 30.8	72	Jáfarabad Palace 22 28 14	804
		Jáfarabad Fort 22 52 6	803
		Bárman " 64 49 41	632
Gorána h.s.		Detad " 168 3 2.4	138
Vadála No. 3 h.s. 23 53 4	674	Bhánkshi Hill Mark (helio.) 171 39 42	604
Sarsad Mátá " 56 36 45	675	Rájula Rock 185 36 28	798
Kaliánpur Tower No. 1 129 41 44	953	Vávera Hill Mark (helio.) 195 37 53	610
Patelka " 140 20 41	676	Rájula Hill Mark (helio.) 198 36 7	613
Barda Hill Mark No. 2 286 31 51	938	Rájula Hill Peak 208 1 18	611
Barda Hill No. 1 302 44 16	935	Brabtána Hill 212 4 12	797
Khámhodar " 328 1 43	674	Dungar h.s. 245 31 28.3	138
Singra Building 342 17 54	940	Cháneh Tomb 293 27 1	787
		Cháneh Hill Fort 293 34 10	786
		Bhensla Rock 313 22 26	790
Gundála h.s.		Rámpára Hill Tree 317 40 24	796
Tána Temple 230 24 26	732	Saváibet Pir Mosque 320 41 36	791
Trámbak h.s. 250 55 11	731	Saváibet Pir Rock 321 48 35	793
Bhildár Hill Peak 261 1 46	733	Sáibet t.s. 325 0 52	630
Tána " 286 3 6	730	Bhákodar Temple 333 23 2	794
Talája " 336 28 46	730		
Sheváliya Hill Tree 338 11 38	744	Ílampur h.s.	
Bákhalka Hill Mark 353 46 48	742	Diu Tower of Silence 12 37 34	840
		Dángarváli, XLII 22 9 15	640
Gurgat t.s.		Simási h.s. 75 34 9	641
Gága House 2 6 14	970	Jákhia Hill Peak 144 38 26	852
Kuvanga h.s. 21 27 34	684	Varsangpur Hill Temple 251 43 46	818
Madhi Hill Tower 40 57 55	966	Nátej, XLI 265 22 6	638
Madhi Hill Temple 41 10 8	967	Úna Building 288 34 26	819
Lovaráli Hill 67 54 24	972	Nandan Hill Dargah 332 1 0	823
Lovaráli " 79 13 49	698	Mándvi h.s. 336 14 16	638
Dhenki Fort 90 28 15	973	Desar Kolinu Tower 350 42 36	821
Dhenki Building 96 44 9	974		
Thetria " 122 25 49	699	Ítála h.s.	
Mevása No. 3 " 253 10 17	685	Ránigpára h.s. 159 51 24	543
Pánor " 307 53 51	684	Potlia " 217 17 36	542
Bhátia Hill Tower 327 33 36	962	Tábardo " 262 5 57	544
Gága Hill Peak 359 5 3	968	Jalandri " 327 16 5	542
Hádátoda h.s.		Ítria, XXXV	
Soel h.s. 48 56 22.2	101	Bábra Fort (helio.) 43 38 18	339
Jodiya s. 114 58 4	717	Jithuvi, XXXIII 52 32 2.65	46
Bálabmbha Temple 171 52 4	1085	Chítalia, XXIX 111 45 32.64	46
Bálabmbha t.s. 178 32 6	718	Modbuka h.s. 174 23 31.1	120
Távána Tree 211 57 39	1087		
Pítar " 251 0 29.2	102		

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Itria, XXXV—(Contd.)		Jasápur h.s.	
Bhadli Hill Mark (helio.)	o ' "	Dánta	h.s. 100 46 51
Sándan Hill Mark (helio.)	203 58 41	Jasápur Hill Platform	130 2 14
Bhimrád	h.s. 226 4 52' 2	Ámbia	" 138 18 3
Holiya Hill Mark (helio.)	238 6 25	Kháori	" 195 9 8
Limbála Hill Mark	256 2 52	Changa	" 245 33 47
Gadhada Temple	263 53 30	Tungi Hill Peak	298 1 35
Gadhada	" 267 0 28' 1		
Chamárdi	" 284 42 36' 5		
Samádhiala Hill Mark (helio.)	" 288 56 4	Játroda s.	
Jalálpur	" 313 7 42' 1	Akála	s. 212 53 36' 8
Pálitána, Shetrunja No. 1	" 321 18 3' 1	Sakhpur, XXXVI	281 3 43' 2
Pálitána, Shetrunja No. 2	" 322 8 44	Báoln Hill Mark (helio.)	310 38 1
Sitápur Hill Mark (helio.)	323 46 59	Bhokarva	h.s. 331 37 16' 6
Sakhpur, XXXVI	346 2 3' 28	Bádha	" 358 38 15' 6
Páñch Tobra	t.s. 351 37 32' 2		
		Jendáliya h.s.	
Jákbia, XL		Bolás	h.s. 5 35 48' 2
Madva Hill Temple No. 1 (helio.)	11 55 16	Dhanoj Hill Mark (helio.)	49 33 13
Sarkála, XXXVIII	169 46 7' 44	Jalandri	" 70 58 53' 0
Nándivála, XXXIX	251 1 19' 80	Potlia	" 139 14 8' 1
Nátej, XLI	301 36 23' 43	Dadreacha	" 179 46 53
Diu Flag-staff No. 1	338 25 7	Kosradhár	" 194 33 23' 1
Diu, St. Thomas's Church	339 32 25	Vánsadhól Hill Mark (helio.)	222 25 32
Diu Flag-staff No. 2	341 8 11		
Diu, St. Remedio's Church	345 22 40		
Dángarvádi, XLII	350 24 43' 66		
Nágva Point (helio.)	355 8 53	Jhákasia h.s.	
		Bhopalka	h.s. 17 35 12
Jalálpur h.s.		Dántrána Temple No. 1	21 39 46
Hajirádhár	h.s. 18 25 37' 9	Hábarádi Hill	71 14 39
Methli Hill Mark (helio.)	62 10 48	Mevása No. 3	" 85 51 58
Páñch Tobra	t.s. 93 40 42' 6	Ásota Hill Peak No. 1	103 33 56
Derdí Jánbáini Hill Mark	108 9 19	Ajár	" 146 11 32
Sitápur Hill Mark (helio.)	124 58 10	Kálávd	" 214 31 53
Itria, XXXV	133 11 46' 6	Varthara Tower	293 38 52
Samádhiala Hill Mark (helio.)	150 27 4	Varthara	s. 296 58 16
Gadhada	h.s. 178 21 39' 4		
Gadháli Hill Fort	194 43 33		
		Jhijhoda h.s.	
Jalandri h.s.		Dudhai	s. 12 29 38
Pátan Tower No. 2	2 1 22	Bápur	h.s. 216 18 51
Pátan Idgah	4 20 52	Yavánia Houso	221 50 34
Verával Tomb (helio.)	7 7 22	Phagásia, XIX	263 56 10
Verával Temple	7 11 31	Phátsar	s. 323 28 4
Verával Idgah	15 26 57	Ámbran Temple	346 38 34
Verával	h.s. 18 11 39		
Varodra	" 60 33 3	Jhund, LXVI*	
Bhanduri	" 107 4 15	Khársar, II	37 35 40' 76
Seriakhán Hill Mark (helio.)	116 3 17	Kohyár Hill Mark (helio.)	45 33 52
Mália Tower No. 2 (helio.)	138 49 15	Bhilgaon, LXIV*	319 37 48' 43
Gáñgecha Hill Mark (helio.)	142 17 13	Churia Hill Peak No. 1	348 50 6
Itála	h.s. 147 16 58		
Potlia	" 186 19 13' 2	Jithuri, XXXIII	
Tábardo	" 195 43 3	Manáva, XXXVII	2 42 16' 08
Jendáliya	" 250 56 39' 6	Sarkála, XXXVIII	25 17 13' 31
Dhanoj Hill Mark (helio.)	268 40 41	Jangar Hill Mark	47 16 23
Bolás	" 323 28 43' 5	Kunkaváv, XXXIV	63 22 34' 05
Pátan Temple No. 1	357 22 4	Movaiya, XXX	123 26 29' 85
		Movaiya	h.s. 124 48 43
		Baldhól Hill Temple	174 47 56

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Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Jithuri, XXXIII—(Contd.)		Kákrejji, XV—(Contd.)	
Rámparda Hill Temple	175 4 1	Mánúba, XII	153 6 8'09
Chitalia, XXIX	188 33 35'85	Hándi Bet Hill (helio.)	203 0 30
Isápur Hill Temple	190 39 55	Kesmári, XIII	205 17 9'48
Pípria Hill Mark (helio.)	230 17 41	Vára Dungar Bet Hill (helio.)	207 1 31
Itria, XXXV	232 25 23'46	Khambária Hill Mark (helio.)	221 51 53
Rándhia Hill Mark	286 48 17	Hálvad Palace	285 32 54
Sakhpur, XXXVI	295 32 35'36	Charáda, XVIII	314 51 8'89
Amreli Temple No. 1	323 46 58		
Amreli Temple No. 2	325 53 8		
Rangpur	t.s. 347 33 42		
Jodiya s.		Kálavad h.s.	
Háriána Tower	21 16 37	Dántrána Temple No. 1	31 4 7
Kiri	h.s. 32 4 3	Jhákasia	h.s. 34 33 33
Jodiya Bandar Dargah	138 29 37	Hábardí Hill	46 54 45
Bálabmbha	t.s. 250 5 47	Ámbra	256 21 25
Bálabmbha Temple	251 14 33	Parodia Temple	269 40 28
Hádátoda	h.s. 294 55 7	Saláya Fort	285 48 35
Dhrol Hill Tomb	321 32 45	Saláya Temple	287 11 54
Soel	346 44 52	Dánta	296 39 17
		Khambháliya Hill Temple	310 56 39
		Khambháliya Hill Tomb	311 3 37
		Khambháliya Palace	314 1 17
		Varthara	h. 353 41 55
Junej t.s.		Kamakio Mátá h.s.	
Bagasra	t.s. 27 19 37'0	Turkha Hill Mark No. 1 (helio.)	8 51 18
Myári	s. 88 39 37'5	Modhuka	h.s. 53 29 55'8
Segras	t.s. 140 57 6'5	Sarva Hill Mark	82 52 45
Pájod	203 2 52'0	Pipardi Hill Mark (helio.)	85 14 3
Bántra Tree	235 40 12	Gangájál	115 39 4'5
		Sudánda	176 29 39'4
		Páliyád Building	197 43 34
		Bhimrád	347 49 16'1
		Turkha Hill Mark No. 2	359 3 58
Kachhigad t.s.		Kanála h.s.	
Aránda	h.s. 205 21 48	Oshám	h.s. 160 59 55
Ghadechi	244 39 5	Udaktia	226 18 58
Vasáí Temple	283 5 3	Girnár	294 42 46
Vasáí Building	283 13 15	Dhandhusar Tree	305 27 20
Barvála Tower	343 43 5	Tarnetar Temple	324 13 52
Dwárka Temple	350 26 55	Roghát	h. 328 15 21
Kadvád h.s.		Kandorna h.s.	
Verával Masjid	122 26 18	Advál	h.s. 43 55 48
Verával	h.s. 123 43 23	Pádriya	116 56 34
Verával Temple	125 44 54	Moridhár	197 38 58
Pátan Temple No. 2	126 11 38	Mevása Hill Mark No. 4 (helio.)	297 10 46
Pátan Turret	130 27 22		
Pátan Tower No. 1	131 57 9		
Bolis	h.s. 199 32 41		
Vasávar	255 37 3		
Sutrápáda Tower	284 9 40		
Dhámlej	296 32 24		
Kákrejji, XV		Kanduka, IX	
Rangpur, XVII	6 57 3'42	Chitrod, XI	1 38 22'77
Pilúdi Tower	48 2 55	Sai Hill Temple	5 43 1
Phngásia, XIX	53 41 29'51	Bádargad Hill	46 56 2
Máta Tomb (helio.)	88 23 2	Gángta, VII	134 52 48'39
Máta, XVI	92 29 45'76	Lakria Hill Mark (helio.)	149 47 13
Máta Tower No. 1 (helio.)	95 34 49	Gedi Hill Mark	190 26 37
Kájarda Hill Mark (helio.)	132 53 18	Sángad Temple	221 53 52
Chikli Hill (helio.)	138 48 29	Dájka, VI	223 39 57'13
		Fatehgad Fort Tower No. 1	225 59 52
		Fatehgad Fort Tower No. 2 (helio.)	226 18 0

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Kanduka, IX—(Contd.)		Katumba h.s.	
Mánjuvās Hill Mark No. 1	232 52 35	Thetria	h.s. 34 36 22
Mánjuvās Hill Mark No. 2 (helio.)	234 10 54	Dhrásanvel	" 85 15 15
Hamirpur Hill Mark No. 1	235 4 38	Kaliánpur Tower No. 2	" 102 20 23
Hamirpur Hill Mark No. 2	243 8 48	Ghadechi Math	" 118 26 16
Umāya Hill Fort (helio.)	249 46 48	Ghadechi	" 123 39 7
KhándeK Hill Mark	256 5 3	Karanja Fort	" 128 14 11
Pata-i-Sháh, VIII	270 42 18·97	Mulvel Tower	" 150 1 28
Kidiánagaru Hill Mark	302 35 7	Poshitra	" 190 46 51
Kánmer, X	313 2 17·16	Dabdaba Island	" 204 19 16
Tindalva	h.s. 318 9 3	Ajár	" 244 1 19
		Ásota Hill Peak No. 2	" 271 43 24
Kánmer, X		Ásota Hill Peak No. 1	" 282 54 23
Sand Bid Hill (helio.)	9 59 59	Pindára Temple	" 289 49 6
Mánaba, XII	26 34 50·61	Pindára Building	" 290 44 37
Thoriáli Hill Mark (helio.)	58 9 4	Mevása No. 3	" 295 44 47
Kánmer Hill Mark No. 3 (helio.)	79 19 54		
Kháupur Hill Math	84 16 24	Kesmári, XIII	
Chitrod, XI	88 12 38·18	Khambária Hill Mark (helio.)	20 45 41
Mevása Hill Mark No. 3 (helio.)	89 41 19	Kákrejji, XV	25 19 35·27
Chitrod Hill Fort (helio.)	92 47 38	Hándi Bet Hill (helio.)	27 2 39
Mevása Hill Mark No. 1	99 20 47	Chikli Hill (helio.)	46 38 33
Mevása Hill Mark No. 2	99 20 52	Kájarda Hill Mark (helio.)	53 32 42
Gágodar Hill Tower	100 4 50	Mánaba, XII	89 24 46·61
Kánmer Hill Mark No. 2	111 29 21	Kánmer, X	131 17 14·10
Kánmer Hill Mark No. 1	117 38 56	Varnu Vándh Tomb	184 45 1
Kidiánagaru Hill Peak	123 52 24	Mardakh Bet Hill Mark (helio.)	221 31 7
Kidiánagaru Hill (helio.)	130 33 21	Vára Dungar Bet Hill (helio.)	230 21 59
Tindalva	h.s. 131 34 19		
Kánmer Fort Point No. 2 (helio.)	131 49 10	Khadarpur h.s.	
Kanduka, IX	133 6 47·24	Bhárápur	h.s. 29 23 15
Motiyar Hill Mark	181 27 8	Mahádevpáru Tower	" 51 17 28
Lákhágad Hill Mark	189 10 47	Tánasa	" 407 39 44
Lákhágad Hill Fort	196 16 57	Morchand Hill Platform	" 176 22 59
Pata-i-Sháh, VIII	201 11 6·85	Alápur	" 186 22 41
Adesar Temple	211 12 18		
Palánsva Temple	213 14 18	Khakhána, XXVI	
Mákhel Hill Mark (helio.)	218 29 57	Bháyásar, XXVIII	8 43 37·24
Varnu Vándh Tomb	245 26 45	Bichri	h.s. 27 38 43
Mardakh Bet Hill Mark (helio.)	273 23 49	Pipalia	" 47 27 49
Vára Dungar Bet Hill (helio.)	305 57 39	Khedva Hill Temple	" 115 43 32
Kesmári, XIII	311 13 44·89	Vánkáner, XXIV	177 50 8·77
		Chitrákheda, XXIII	218 27 59·89
Kárunjhar, III		Tarkia, XXV	254 51 37·61
Bela, V	0 37 21·76	Chotila Hill Temple	271 15 53
Kárunjhar Hill Mark No. 3	68 45 46	Mahidhar, XXVII	300 12 52·69
Kárunjhar Hill Mark No. 2	106 2 35		
Kárunjhar Hill Mark No. 1 (helio.)	145 45 18	Khákhria s.	
Dhotar Hill Mark (helio.)	173 44 10	Dávidhár	t.s. 2 56 53·1
Viráwáh Temple No. 2	180 2 28	Pagás Hill Temple	" 20 1 16
Viráwáh Temple No. 1 (helio.)	181 35 33	Chatar Hill Mark (helio.)	" 45 3 11
Dindoi Hill Mark (helio.)	182 16 30	Khandera Hill Mark (helio.)	" 99 21 42
Khársar, II	186 31 18·93	Mátli	h.s. 125 46 50
Sádalwáh Hill Mark (helio.)	196 21 38	Khokhri	t.s. 184 52 54·2
Chándinwáh Hill Mark (helio.)	200 15 37	Rojhia Hill Mark (helio.)	" 227 53 46
Bhilgaon, LXIV*	219 1 47·38	Amesri	" 235 8 24·6
Parádra Hill Mark (helio.)	226 45 52	Vadána No. 2	h.s. 272 52 28
Ránpur Hill Mark (helio.)	251 26 1	Devdhár	" 307 56 25·3
Viráwáh, I	256 0 43·01	Chápra	" 342 4 53
Parbatána Bet Platform	282 0 55		
Kárunjhar Hill Peak No. 1	319 16 3		
Evál, IV	325 33 52·85		
Mouána Hill Pillar	347 9 8		

* This station appertains to the Karachi Longitudinal Series.

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Khámbhodar h.s.		Khátli h.s.	
Dehgám s. 3 43 8	672	Pádriya h.s. 243 45 44	478
Bhárváda Hill 15 21 53	934	Bhádra " 283 38 22	479
Vadála No. 3 h.s. 81 5 7	673	Dudivadar Hill Mark (helio.) " 307 37 33	491
Gorána " 148 3 17	674	Advál " 348 27 59	478
Advána Tower 186 46 55	939		
Barda Hill Mark No. 2 255 29 51	937	Kheda h.s.	
Barda Hill No. 1 273 16 47	936	Bhensla Rock 51 55 8	789
Barda " 305 43 29	672	Sálibet t.s. 58 54 58	629
		Cháuch Hill Fort 72 41 28	785
Kháori h.s.		Cháuch Tomb 73 7 3	788
Tungi Hill Peak 9 20 38	1052	Dungar h.s. 147 19 28	628
Jasápur Hill Temple 15 9 55	1050	Lúsádi s. 191 27 54	627
Jasápur h.s. 15 10 11	693	Dolia Sand Hill 227 53 51	784
Jasápur Hill Platform 21 7 59	1048	Gadhada t.s. 245 27 52	627
Aubla " 82 44 19	693		
Kháráberája s. 236 36 2	695	Khodiár h.s.	
Dodhia Temple 279 0 32	1056	Rájárvád h.s. 77 8 23	528
Changa h.s. 292 17 30	694	Kosradhár " 306 16 15	528
Lus Hill Mark (helio.) 318 59 15	1055	Kanara Hill Mark (helio.) 345 11 36	529
Khara h.s.		Khokhri t.s.	
Navábandar Flag-staff 71 14 35	826	Khákhria s. 4 53 10.7	98
Navábandar Tower 75 34 25	825	Mátlí h.s. 69 35 1	410
Mándri h.s. 80 16 32	637	Vánthli " 113 30 35	439
Úna Idgah 125 55 2	820	Jália Tower No. 1 (helio.) 144 54 6	443
Nátej, XLI 157 17 43	636	Soel " 152 23 10.8	100
Shimar House 201 51 31	816	Itála Tower (helio.) 181 5 6	437
Rohisa " 241 55 21	636	Sanosra " 226 7 0.9	99
Bhesla Rock 256 21 33	817	Amesri t.s. 295 31 48.6	98
		Rojhia Hill Mark (helio.) 342 34 14	446
Kháráberája s.		Khoráda h.s.	
Kháori h.s. 56 39 18	695	Múngrol Tower No. 1 130 43 51	904
Bedi Building 247 56 57	1057	Múngrol Tower No. 2 (helio.) 131 5 37	906
Navánagar t.s. 287 3 25	696	Makhtampur h.s. 132 51 40	656
Changa h.s. 350 27 26	695	Múngrol Building 144 54 46	903
		Sepa Tower 203 8 35	901
		Lambhora " 208 38 48	655
		Seriakhán Hill Temple 219 17 17	898
		Bhanduri " 250 28 29	654
		Ghumli Tower 261 29 53	896
		Varodra " 311 55 57	654
		Chorvád Bandar Building (helio.) 312 44 50	892
		Chorvád Bandar Tower 312 49 20	890
Khársar, II		Kiri h.s.	
Kárunjhar Hill Peak No. 2 (helio.) 0 20 1	168	Báta h.s. 2 54 48	710
Kárunjhar, III 6 32 2.84	5	Shekhpát Platform (helio.) 17 41 27	1071
Dindsi Hill Mark (helio.) 10 43 5	149	Navánagar Palaco 48 45 46	1063
Kárunjhar Hill Mark No. 3 11 46 46	165	Navánagar Tower 49 48 21	1061
Kárunjhar Hill Mark No. 1 (helio.) 16 6 48	160	Navánagar t.s. 49 48 42	710
Kárunjhar Hill Mark No. 2 16 44 45	162	Navánagar Building 50 38 10	1060
Viráwáh Temple No. 1 (helio.) 22 41 13	114	Navánagar Kacheri 52 10 45	1058
Viráwáh Temple No. 2 25 28 36	115	Rozí Mátá s. 79 44 8	712
Dhotar Hill Mark (helio.) 34 25 34	146	Rozí Mátá t.s. 79 47 19	714
Kolyár Hill Mark (helio.) 204 48 6	141	Báláchari Mosque 150 9 44	1077
Jhund, LXVI* 217 30 55.42	2	Báláchari House 150 30 51	1078
Bhulgaon, LXIV* 245 13 15.41	2		
Viráwáh, I 298 10 2.08	3		
Churia Hill Peak No. 2 304 33 5	156		
Parádra Hill Mark (helio.) 320 57 52	151		
Ránpur Hill Mark (helio.) 343 7 47	158		
Chándinwáh Hill Mark (helio.) 349 55 41	147		
Sádalwáh Hill Mark (helio.) 358 44 28	153		

* These stations appertain to the Karachi Longitudinal Series.

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Kiri h.s.—(Contd.)	° ' "	Kuranga h.s.	° ' "
Báláchari Tower	159 42 28	Madhi Hill Temple	132 54 24
Báláchari Hill	175 6 44	Madhi Hill Tower	133 1 43
Jodiya	s. 212 2 16	Lovaráli	h.s. 161 57 0
Jodiya Palace	212 51 53	Lovaráli Hill	169 31 31
Soel	h.s. 279 25 45	Gurgat Fort	199 26 55
Kiri Hill	317 29 46	Gurgat	t.s. 201 26 16
Kámpur Tree	328 32 59	Gága House	212 47 46
		Gága Hill Peak	218 52 32
		Bámnásar Temple No. 1	233 28 59
		Bámnásar Temple No. 2	236 50 1
		Bhátia	h.s. 243 57 24
		Bhátia Tower	252 33 51
		Pánor	" 253 46 45
		Lol Hill Temple	260 25 40
		Patelka	" 269 50 29
		Narádra	" 319 12 12
Konjli s.			
Gadhada	t.s. 1 40 50		
Lúsádi	s. 63 16 6		
Konjli Tree	99 0 5		
Thorála Hill Peak	149 40 38		
Khuntávada Platform	221 41 40		
Otha	h.s. 235 12 25		
Bhádrod Tree	285 32 37		
Nikol	" 305 17 8		
Vághnagar Tree	310 29 13		
Katpur Tree	328 54 1		
Mabuva Temple	340 37 26		
Kosradhár h.s.			
Jendáliya	h.s. 14 34 17.8		
Dadreacha	" 39 34 36		
Potlia	" 65 10 10.5		
Kanara Hill Mark (helio.)	76 41 43		
Lákva Hill Mark	107 7 17		
Rájavad	" 108 40 57.0		
Khodhár	" 126 18 2		
Roghát	s. 143 47 32.5		
Girnár	h.s. 170 36 14.9		
Vánsadhól Hill Mark (helio.)	321 31 52		
Kotra h.s.			
Katpur Island	62 7 49		
Nikol	h.s. 71 4 26		
Otha	" 126 52 45		
Bhaguda Hill Peak	150 14 58		
Jághhár Hill	161 27 57		
Belda Hill Peak	165 41 28		
Dátha Temple	169 26 31		
Gadheshvar	" 173 1 6		
Bordki Hill Tree	186 39 15		
Jhinjmer Hill Fort	236 8 42		
Rájpura	" 237 22 30		
Rájpura Hill Tower	238 10 32		
Kunkaváv, XXXIV			
Sarkála, XXXVIII	h.s. 10 51 0.84		
Mujásar	11 49 3		
Devki Gálol, XXXII	84 59 24.99		
Movniya, XXX	161 59 38.94		
Jithuri, XXXIII	243 18 40.13		
Jaugar Hill Mark	257 48 11		
Manáva, XXXVII	333 6 2.16		
		Lálpur h.s.	
		Gop	h.s. 16 36 9.3
		Gována Hill Mark (helio.)	50 18 14
		Gována Tower	61 22 33
		Rájvad Hill Mark (helio.)	83 53 43
		Lus Hill Mark (helio.)	157 50 29
		Haripur Hill Temple	197 37 23
		Changa	h.s. 199 36 3.3
		Mehmána Tower	241 35 0
		Mehmána Hill Mark (helio.)	244 22 27
		Lámdhár	" 270 15 34.2
		Potor Hill Mark (helio.)	293 1 2
		Bhojábéri	" 322 4 22.3
		Rinjpur Hill Mark (helio.)	334 12 32
		Lambhora h.s.	
		Khoráda	h.s. 28 39 58
		Sepa Tower	35 54 13
		Mángrol Tower No. 1	70 19 5
		Mángrol Tower No. 2 (helio.)	71 32 3
		Mángrol Building	75 7 28
		Makhtumpur	h.s. 82 17 44
		Simroli	" 146 52 2
		Bhanduri Building	305 39 18
		Seriakhán Hill Temple	312 5 42
		Bhanduri	" 314 20 6
		Lámdhár h.s.	
		Bhojábéri	h.s. 12 10 58.0
		Rinjpur Hill Mark (helio.)	45 29 6
		Lálpur	" 90 18 39.7
		Mehmána Tower	109 49 55
		Mehmána Hill Mark (helio.)	124 2 40
		Haripur Hill Temple	124 18 40
		Changa	" 146 29 12.6
		Dhándha Hill Mark (helio.)	183 3 48
		Súrda	" 187 0 5.1
		Vágharia Hill Mark (helio.)	218 22 37
		Potor Hill Mark (helio.)	348 34 5.1

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Lovarali h.s.		Makhtumpur h.s.—(Contd.)	
Dhenki Fort	130 5 35	973 Devrana s. 195 15 24	658
Dhenki Building	153 28 0	974 Simroli h.s. 228 40 9	657
Thetria	h.s. 199 40 18	699 Lambhora " 262 14 42	656
Gurgat Fort	258 46 44	975 Mungrol Building " 283 29 32	902
Gurgat	t.s. 259 11 30	698 Khorada " 312 49 48	656
Kuranga	h.s. 341 55 59	698 Mungrol Tower No. 2 (helio.) " 318 18 32	907
		Mungrol Tower No. 1 318 39 0	905
Lusadi s.		Malgam h.s.	
Kheda	h.s. 11 28 29	627 Pipalva Tree 33 31 31	855
Dungar	" 67 57 11	628 Chara Hill Temple 52 8 54	857
Thorala Hill Peak	199 46 49	779 Chara h.s. 61 44 57	614
Konjli	s. 243 14 2	626 Kodinar Building 88 32 11	859
Katpur Tree	286 22 15	776 Vadnagar " 126 41 41	615
Gadhada	t.s. 314 19 5	626 Vadnagar Hill Temple 126 42 24	860
Dolia Sand Hill	348 20 29	784 Simasi " 258 30 23	613
		Kob Tree " 292 19 28	844
Madhavpur h.s.		Kotra Tree No. 1 318 45 53	845
Madhavpur Hill Temple	96 28 15	913 Kotra Tree No. 2 321 44 39	847
Mocha	h.s. 135 39 14	663 Madva " 338 35 11	613
Bagasra	t.s. 179 33 20	662 Madva Hill Temple No. 2 338 35 41	851
Sutrej	s. 226 36 15		
Devrana	" 276 28 57	Malia, XVI	
Lohij Tree	324 1 47	908 Phagasia, XIX 4 34 6'13	25
Dehvasa	h.s. 330 11 22	660 Nani Baral Fort (helio.) 54 55 13	283
		Bapur h.s. 66 47 52	725
Madva h.s.		Vandhia, XIV 143 33 6'38	261
Chira	h.s. 114 30 33	644 Ramra Hill Mark (helio.) 173 44 19	21
Pipalva Tree	148 16 47	851 Manaba, XII 198 28 49'66	21
Malgam	" 158 36 7	643 Malia Tower No. 1 (helio.) 245 21 0	280
Simasi	" 203 23 33	642 Kaktreji, XV 272 25 33'48	22
Kob Tree	221 48 19	843 Piladi Tower 303 7 16	284
Kotra Tree No. 2	234 5 4	848 Malia Tomb (helio.) 303 23 32	281
Kotra Tree No. 1	239 11 52	845 Rangpur, XVII 319 5 16'57	23
Dangarvadi, XLII	255 20 12	642 Guangan Tomb 349 52 17	286
Diu Tower of Silence	262 23 22	839	
		Manaba, XII	
Mahidhar, XXVII		Malia, XVI 18 30 28'07	21
Chitalia, XXIX	7 49 38'56	39 Surajbari Hill Mark (helio.) 58 6 24	269
Bhavasara, XXVIII	65 43 7'00	38 Gubaria Hill Mark (helio.) 71 11 51	267
Bichri	h.s. 92 44 52	306 Vandhia, XIV 80 25 22'75	19
Khakhana, XXVI	120 18 42'88	37 Shikarpur Fort (helio.) 83 5 12	266
Tarkia, XXV	171 23 39'96	37 Katariya Tree 97 11 7	259
Chotila Hill Temple	185 16 54	304 Manaba Mark (helio.) 104 32 58	264
		Rajthali Mark (helio.) 105 17 59	261
Mahika h.s.		Chitrod Hill Mark (helio.) 129 0 49	252
Mevasa No. 2	h.s. 31 26 32	325 Chitrod, XI 134 18 31'70	17
Umrali Hill Mark	42 30 16	325 Khanpur Hill Math 135 34 0	255
Daiya Hill Temple	44 8 12	332 Mevasa Hill Mark No. 3 (helio.) 145 26 53	253
Trakuda, XXXI	62 27 23	331 Mevasa Hill Mark No. 2 156 17 11	248
Bhavasara, XXVIII	227 25 4	326 Thoriadi Hill Mark (helio.) 177 13 1	257
Umvada Hill Mark	317 45 10	326 Gagodar Hill Tower 181 12 25	243
Movaiya, XXX	321 16 7	328 Kanmer Hill Mark No. 3 (helio.) 196 28 13	215
		325 Kanmer Fort Point No. 1 (helio.) 199 5 36	237
Makhtumpur h.s.		Kanmer, X 206 33 17'18	17
Dehvasa	h.s. 138 24 10	325 Kesmari, XIII 269 19 44'71	18
Lohij Tree	145 43 31	909 Sand Bid Hill (helio.) 273 31 36	271
Sil Fort	151 52 34	910 Handi Bet Hill (helio.) 308 40 29	274
		Kakreji, XV 333 3 33'21	20
		Kajarda Hill Mark (helio.) 349 49 44	276

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Manáva, XXXVII	° ' "	Mevása No. 3 h.s.—(Contd.)	° ' "
Dundi Hill Peak	22 40 15	Pindára Temple	124 25 20
Sarkán, XXXVIII	55 47 26·31	Ajár	h.s. 188 30 20
Mujiásar	h.s. 125 20 58	Ásota Hill Peak No. 2	216 55 18
Kunkavár, XXXIV	153 9 29·37	Ásota Hill Peak No. 1	238 3 40
Jithuri, XXXIII	182 41 51·24	Jhákasia	" 265 49 13
Rangpur	t.s. 192 8 52	Bhopalka	" 320 38 33
Sakhpur, XXXVI	244 0 6·96	Pánor	" 354 16 19
Nándivála, XXXIX	356 12 20·08		
Mándvi h.s.		Miáni Level Datum Pillar s.	
Gogla Tree	69 32 27	Sarsad Mátá	h.s. 88 52 52
Dángarvádi, XLII	75 54 17	Patelka	" 185 8 38
Diu Guard House	87 9 17		
Desar Kolinu Tower	147 59 35	Mocha h.s.	
Ilampur	h.s. 156 15 15	Rátia	h.s. 138 24 52
Yarsangpur Hill Temple	163 53 25	Balej Temple	148 31 50
Una Idgah	189 36 32	Myári	s. 195 38 34
Nátej, XLI	208 34 23	Bagasra	t.s. 256 25 1
Nandan Hill Dargah	233 14 25	Mádhavpur	h.s. 315 37 18
Khara	h.s. 260 14 22		
Navábandar Tower	268 33 2	Modhuka h.s.	
Navábandar Flag-staff	275 20 19	Chitalia, XXIX	74 52 34·8
		Gangájul	h.s. 181 15 40·2
Mátli h.s.		Pipardi Hill Mark (helio.)	203 6 25
Vanthli	h.s. 210 30 59	Kanakio Mátá	" 233 26 33·0
Khokhri	t.s. 249 31 54	Turkha Hill Mark No. 1 (helio.)	251 10 10
Khákhuia	s. 305 44 0	Sándan Hill Mark (helio.)	270 19 40
Mevása No. 1 h.s.		Bhimrád	h.s. 272 53 8·0
Barda	h.s. 60 50 39·9	Holáya Hill Mark (helio.)	299 23 45
Alech	No. 1 " 61 59 23·7	Gadhada	" 308 20 55·1
Gop	" 94 4 13·9	Limbála Hill Mark	340 30 50
Gop Hill Temple	" 94 6 33	Itria, XXXV	354 23 9·6
Chatar Hill Mark (helio.)	187 5 11	Chomalpur Hill	355 16 52
Dánidhár	t.s. 246 49 1·2		
Trákuda, XXXI	280 15 59·9	Mokal t.s.	
Charel Hill Mark (helio.)	290 51 13	Tunkra	h.s. 34 12 57
Bhádra Hill Temple	300 26 9	Tunkra Hill Temple No. 1	39 9 27
Pádríya	h.s. 301 28 7·4	Tunkra Tree	54 46 2
Devki Gátol, XXXII	314 20 6·6	Adodar	" 80 52 48
Advál	" 329 17 3·5	Chháya Hill Temple	" 90 10 30
Oshám	" 357 58 7·0	Barda	" 153 10 39
		Bhad	" 328 43 30
Mevása No. 2 h.s.		Moridhár h.s.	
Trákuda, XXXI	171 9 57	Kandorna	h.s. 17 39 43
Umráli Hill Mark	180 26 42	Kandorna Temple	20 30 58
Daiya Hill Temple	202 12 39	Pádríya	" 55 32 35·4
Análgad Hill Fort	206 36 47	Dánidhár	t.s. 129 29 8·7
Mahika	h.s. 211 24 7	Kharedi Tower (helio.)	148 30 39
Umváda Hill Mark	215 6 59	Deri Hill Mark (helio.)	169 49 6
Movaiya, XXX	260 9 17	Metia Hill Mark (helio.)	183 51 34
		Devdhár	h.s. 187 31 11·9
Mevása No. 3 h.s.		Mevása Hill Mark No. 4 (helio.)	335 30 7
Gurgat Math	58 22 24	Bhádra	" 352 36 9·1
Gurgat	t.s. 73 12 49		
Katumba	h.s. 115 48 11		
Pindára Building	123 24 7		

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Moti Moli h.s.		Naika h.s.	
Nátej, XLI	46 20 56	Múli Temple	3 40 48
Sálva Hill	137 34 26	Bhíntekri	h.s. 10 3 23'1
Vángadhra Hill	222 16 12	Rámpura	s. 317 39 27'0
Vánkia Hill	240 52 22		
Bárman	h.s. 254 29 19	Nándivála, XXXIX	
Mánsa Hill	256 50 50	Nátej, XLI	5 42 23'24
Chelna Hill Tree	299 17 24	Delváda Idgah	14 2 0
Rohisa	" 325 11 35	Diu, St. Francis' Church	20 1 50
Rájpáru Fort	351 58 44	Diu, St. Remedio's Church	24 7 43
		Jákhia, XL	71 6 10'96
		Sarkála, XXXVIII	123 9 50'45
		Dundi Hill Peak	148 46 26
		Manáva, XXXVII	176 12 49'97
Movaiya, XXX		Nátej, XLI	
Khokhri Fort	24 52 43	Mándvi	h.s. 28 35 42
Devki Gúol, XXXII	29 52 21'45	Delváda Idgah	32 50 38
Mevás No. 2	h.s. 80 14 11	Diu Flag-staff No. 1	34 56 28
Umráli Hill Mark	95 38 27	Diu, St. Francis' Church	36 30 39
Trákuda, XXXI	107 17 25'86	Diu, St. Thomas's Church	37 1 57
Daiya Hill Temple	113 29 32	Diu, St. Remedio's Church	43 18 30
Mahika	" 141 18 36	Dángarvádi, XLII	49 18 16'29
Umváda Hill Mark	141 36 15	Úna Building	63 0 24
Bháyasar, XXVIII	189 17 13'58	Hampur	h.s. 85 24 24
Baldhoi Hill Temple	234 16 7	Jákhia, XL	121 40 47'17
Dadva Hill Tree	238 5 20	Nándivála, XXXIX	185 41 57'04
Chitalia, XXIX	243 10 0'55	Sálva Hill	196 1 48
Movaiya	h.s. 290 46 5	Moti Moli	" 226 19 0
Jithuri, XXXIII	303 20 41'59	Moti Moli Hill	235 43 56
Kunkaváv, XXXIV	341 57 46'05	Rohisa	" 279 5 28
		Rájpáru Fort	297 36 35
		Khara	" 337 16 52
Movaiya h.s.		Navádra h.s.	
Khokhri Fort	47 15 4	Kuranga	h.s. 139 14 24
Movaiya, XXX	110 46 44	Bhátia	" 185 44 49
Bháyasar, XXXVIII	183 22 57	Bhátia Tower	192 58 40
Dadva Hill Tree	232 34 27	Bhátia Hill Temple	194 33 51
Chitalia, XXIX	239 10 2	Lol Hill Temple	206 28 12
Isápur Hill Temple	272 7 40	Pánor	" 207 11 12
Ránparda Hill Temple	280 22 28	Patelka	" 235 27 15
Pipria Hill Mark (holio.)	294 40 58	Lámba Hill Temple	306 39 23
Jithuri, XXXIII	304 43 31	Sursad Mátá	" 311 45 28
Mujiásar h.s.		Navánagar t.s.	
Sarkála, XXXVIII	10 17 17	Changa	h.s. 18 32 24
Kunkaváv, XXXIV	191 48 16	Kháráberája	s. 107 5 9
Rangpur	t.s. 246 19 14	Navánagar Kachori	139 23 1
Manáva, XXXVII	305 16 44	Bedi Building	145 1 22
		Rozi Mátá	t.s. 166 4 20
		Rozi Mátá	s. 166 17 24
		Báláchari Hill	220 36 32
		Kiri	h.s. 229 45 11
		Kiri Hill	234 41 31
		Dhuváv Temple	248 18 52
		Navánagar Palace	250 38 16
		Bára	" 263 27 18
		Hápa Tower	277 15 10
		Súrda	" 315 53 6
		Mokhána Well	346 12 58
Nagar-Pípalia h.s.			
Devdhár	h.s. 13 4 5		
Meghpur Temple	93 15 36		
Vadála No. 2	" 98 8 27		
Amesri	t.s. 163 28 43		

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Nikol h.s.		Pájud t.s.	
Katpur Island	o ' "	Junej	t.s. 23 3 44·6
Gadhada	t.s. 43 26 27	Segras	" 91 52 46·5
Mahura Temple	93 57 45	Bora Dabha	h.s. 147 17 18·6
Vághnagar Tree	116 0 45	Amrápur Hill Mark (helio.)	174 37 20
Konjli Tree	121 59 43	Vadála No. 1	" 192 33 52·6
Konjli	s. 125 19 20	Bántva Tree	352 51 41
Thorála Hill Peak	136 0 31		
Bhádrod Tree	142 59 17		
Khuntávada Platform	175 27 57		
Otha	h.s. 178 33 12	Pálitána, Shetrunja No. 1 h.s.	
Kotra	" 251 1 46	Pálitána, Shetrunja Temple No. 1	63 53 26
		Pálitána, Kanjarda Hill Mark	69 13 37
		Sakhpur, XXXVI	103 32 19·9
		Itria, XXXV	141 26 45·8
		Gadhada Temple	156 1 3
		Chamárdi	h.s. 197 59 10·6
		Sarod Hill Mark	201 21 6
		Kanáad Rock	212 3 21
		Bhávnagar	" 229 28 16·5
		Trámbak	" 247 13 51·5
Oshám h.s.		Pálitána, Shetrunja No. 2 h.s.	
Barda	h.s. 101 1 57·4	Sakhpur, XXXVI	105 14 30
Gop	" 141 18 52·5	Itria, XXXV	142 17 16
Mojira Hill Mark (helio.)	" 177 31 9	Chamárdi	h.s. 198 28 20
Mevása No. 1	" 177 58 26·6		
Upleta Tower (helio.)	" 186 25 52		
Advál	" 216 9 38·4		
Trákuda, XXXI	" 224 0 12·4		
Bhádra Hill Temple	228 28 41		
Jalia Tower No. 2	248 27 33		
Pareni	" 253 32 40·2		
Ulakia	" 264 58 34·2		
Devki Gálol, XXXII	270 35 23·8		
Tarnetar Temple	330 49 38		
Kanála	" 340 59 27		
Otha h.s.		Pálich Tobra t.s.	
Katpur Island	12 20 29	Akála	s. 8 52 47·1
Vághnagar Tree	17 4 34	Láthi Tower (helio.)	29 18 39
Bhádrod Tree	24 13 45	Itria, XXXV	171 38 3·9
Konjli	s. 55 14 31	Derdí Jánbáini Hill Mark	209 8 4
Konjli Tree	60 45 35	Sitápur Hill Mark (helio.)	210 8 47
Khuntávada Platform	161 56 39	Samádhíála Hill Mark (helio.)	213 27 38
Kámbla Hill Temple	168 16 59	Gadhada	h.s. 222 2 46·8
Belda Hill Peak	205 28 41	Jalápur	" 273 37 10·6
Bhaguda Hill Peak	230 14 19	Methli Hill Mark (helio.)	319 6 58
Bordki Hill Tree	250 38 20	Hajiradhár	" 322 42 32·4
Gadheshvar	h.s. 255 40 4		
Jágdhár Hill	263 57 39		
Kotra	" 306 49 59		
Nikol	" 358 33 6		
Pádriya h.s.		Pánor h.s.	
Roghel Hill Mark (helio.)	4 53 59	Navádra	h.s. 27 13 7
Advál	h.s. 11 46 4·5	Kuranga	" 73 50 52
Jhánjmer Hill Mark (helio.)	22 42 19	Bhátia Hill Tower	95 45 18
Sorradar Hill Mark (helio.)	33 20 55	Gurgat Math	117 15 41
Mojira Hill Mark (helio.)	58 37 49	Nandána Tower	125 56 34
Khátli	" 63 46 52	Gurgat	t.s. 127 56 40
Bháváadar Hill Mark (helio.)	65 30 19	Mevása No. 3	h.s. 174 16 36
Khijadia Hill Mark (helio.)	112 47 56	Bhopalka	" 250 38 4
Mevása No. 1	" 121 31 56·8	Bhopalka Temple	253 32 32
Charal Hill Mark (helio.)	164 15 29	Khákharda Tower	275 46 24
Dáuidhár	t.s. 173 40 28·2	Patelka	" 303 23 37
Nágnáindal Hill Mark (helio.)	218 29 52		
Moridhár	h.s. 235 30 18·1		
Kandorna	" 296 55 2		
Bhádra	" 299 0 35·9		
Pádriya Hill Mark (helio.)	327 4 22		
		Pata-i-Sháh, VIII	
		Palánsva Temple	10 25 18
		Kámmer, X	21 12 42·90
		Kámmer Hill Mark No. 2	32 44 53
		Kámmer Hill Mark No. 1	33 6 33
		Chitrod, XI	55 34 36·20
		Kidánagaru Hill Mark	73 40 22
		Tindalva	h.s. 79 12 19

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance
Pata-i-Sháh, VIII—(Contd.)		Phátsar s.	
Kanduka, IX	13	Pitar	721
Lákhágad Hill Mark	213	Dudhai	721
Motiyar Hill Mark	218	Ambran Temple	1092
Khándeek Hill Mark	206	Jhijhoda	722
Moda Hill Platform	209	Phagásia, XIX	723
Dájka, VI	11		
Lákhágad Hill Fort	210	Pipalia h.s.	
Fatehgad Fort Tower No. 2 (helio.)	191	Bichri	309
Fatehgad Fort Tower No. 1	189	Rájkot Palace	316
Mánjunvás Hill Mark No. 1	185	Rájkot Church	313
Mánjunvás Hill Mark No. 2 (helio.)	186	Khorána Tower	312
Evál, IV	11	Khedva Hill Temple	310
Modhutra Hill Mark (helio.)	180	Khakhána, XXVI	308
Sántalpur Temple No. 1	177	Bháyasár, XXVIII	308
Sántalpur Temple No. 2	178		
Chádechat Hill Mark (helio.)	181	Pitar t.s.	
Piprála Hill Mark (helio.)	183	Sanosra	102
Ádesar Temple	211	Latipur Temple	433
Mardakh Bet Hill Mark (helio.)	236	Hádátoda	102
Mákhel Hill Mark (helio.)	230	Tarána Treo	1088
		Bálabha	719
Patelka h.s.		Dudhai	720
Miáni Tower	945	Phátsar	721
Miáni Temple No. 3	944	Khánpur House	1091
Miáni Level Datum Pillar	946	Khánpur Tower	1090
Sarsad Mátá Hill Temple	947	Thoriáli Mark (helio.)	436
Sarsad Mátá	63		
Lámba Hill Temple	952	Poshitra h.s.	
Navádra	678	Katumba	702
Kuranga	680	Karanja Fort	1009
Bhátia	682	Ghadechi Math	1007
Pánor	679	Ghadechi	703
Bhopalka Temple	957	Sámosar Building	1008
Gop Hill Temple	356	Pádlí Building	987
Gop	62	Arámda Palace	988
Barda	62	Bet Hill Peak	1006
Gorána	676	Bet	706
Rával Building	949	Bet Temple No. 1	996
Vadála No. 3	676	Bet Temple No. 2	998
		Bet Temple No. 4	1001
Pátna s.		Bet Temple No. 5	1003
Bharbhir	139	Poshitra House	1013
Chamárdi	130	Bet Temple No. 6	1004
		Ajár	702
		Dabdaba Island	1015
Phagásia, XIX		Potlia h.s.	
Phátsar	723	Jalandri	112
Jhijhoda	723	Itála	512
Bápur	724	Seriakhán Hill Mark (helio.)	540
Náni Barál Fort (helio.)	283	Mátá Tower No. 2 (helio.)	538
Málin, XVI	25	Gáugecha Hill Mark (helio.)	536
Mátá Tomb (helio.)	281	Ránigpárn	523
Kákrej, XV	25	Rájávnd	110
Gunggan Tomb	286	Liláva Hill Mark	530
Rangpur, XVII	26	Kanara Hill Mark (helio.)	527
Virpur, XXI	29	Kosradhár	110
Khevália Temple	288	Jendátiya	111
		Tábardo	545

Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance	Name of Station with Azimuths of surrounding Points	No. of Triangle giving Distance		
Rájáavad h.s.		Rátia h.s.			
Ránigpára	h.s. 96 17 39	522	Navibandar Tower (helio.)	127 10 2	922
Chitri Hill Mark (helio.)	121 13 18	524	Tunkra	h.s. 139 20 42	667
Roghát	s. 168 21 18·8	107	Navibandar Temple No. 1	140 19 54	917
Khimpádar Hill Mark (helio.)	203 9 5	520	Navibandar Temple No. 2	142 22 41	920
Girnár	h.s. 203 11 22·2	107	Bhad	s. 208 12 38	666
Khodiár	" 257 7 8	528	Myári	" 256 32 12	665
Kosradhár	" 288 37 54·8	109	Mocha	h.s. 318 23 8	665
Liláva Hill Mark	293 58 8	530			
Kanara Hill Mark (helio.)	308 39 7	526			
Potlia	" 354 52 17·4	110			
Rájpura h.s.		Roghát s.			
Kotra	h.s. 57 25 7	621	Ránigpára	h.s. 22 21 3	522
Jhánjmer Hill Fort	61 14 5	757	Chitri Hill Mark (helio.)	25 3 14	525
Dátha Temple	89 5 19	766	Kanála	" 148 16 59	505
Gadheshvar	" 109 8 6	620	Tarnetar Temple	155 54 22	510
Unchari Hill Tree	145 54 23	750	Dhandhusar Tree	169 4 0	507
Talája Hill Temple	161 4 5	748	Udakia	" 178 3 4·1	106
Talája	" 161 5 26	619	Junágad Temple	242 0 11	511
Bhárápúr	" 199 38 42	619	Girnár Hill Mark (helio.)	250 25 50	519
Gopnáth Hill Tower	203 36 39	753	Girnár	" 260 40 21·0	106
Gopnáth Hill Temple	226 6 44	751	Khimpádar Hill Mark (helio.)	318 31 22	520
			Kosradhár	" 323 43 35·6	108
			Rájáavad	" 348 20 24·9	107
Rámpura s.		Rohisa h.s.			
Sudánda	h.s. 5 18 24·0	115	Bhesla Rock	56 19 5	817
Sáyla Palace	48 56 28	548	Khara	h.s. 61 58 8	636
Bhimtekri	" 61 24 22·3	114	Rájpúru Fort	62 15 56	814
Naika	" 137 41 22·6	114	Shimar House	71 34 53	816
Vadia Hill Mark (helio.)	352 18 4	552	Nátej, XLI	99 9 6	635
			Moti Moli Hill	139 19 41	813
Rangpur, XVII			Moti Moli	" 145 13 17	634
Morvi Temple No. 1	15 9 42	295	Vángadhra Hill	170 52 28	805
Virpur, XXII	25 56 36·42	29	Mansa Hill	172 24 39	808
Khevalia Temple	89 36 22	288	Bárman	" 196 33 1	633
Phagnasia, XIX	101 24 25·83	26	Vánd	" 240 36 47	633
Gungan Tomb	111 14 52	287			
Mália, XVI	139 8 58·14	23			
Kákrej, XV	186 56 33·55	23			
Charádvá, XVIII	254 25 28·24	24			
Dungarpur, XX	322 16 50·91	27			
Rangpur t.s.		Rozi Mátá s.			
Manáva, XXXVII	12 10 1	317	Báláchari House	248 57 34	1078
Mujásar	h.s. 66 24 37	317	Báláchari Mosque	249 0 41	1077
Jithuri, XXXIII	167 34 26	316	Báláchari Tower	252 30 35	1076
Rándhia Hill Mark	191 23 13	318	Kiri	h.s. 259 40 5	712
Anreli Temple No. 1	260 58 15	349	Bára	" 295 9 31	711
Anreli Temple No. 2	263 19 51	350	Dhuváv Temple	308 18 56	1069
			Navánagar Palace	340 39 12	1063
			Navánagar	t.s. 346 16 51	711
			Navánagar Tower	346 20 21	1062
			Navánagar Building	346 30 26	1060
			Navánagar Kacheri	348 35 47	1058
Ránigpára h.s.		Rozi Mátá t.s.			
Gángecha Hill Mark (helio.)	5 38 55	536	Kiri	h.s. 259 43 15	714
Seriakhán Hill Mark (helio.)	18 34 3	540	Bára	" 295 7 50	713
Chitri Hill Mark (helio.)	194 31 14	524	Navánagar	t.s. 346 3 47	713
Roghát	s. 202 19 23	522			
Rájáavad	h.s. 276 15 5	522			
Potlia	" 313 20 6	523			
Itála	" 339 49 51	513			
Mália Tower No. 2 (helio.)	353 28 29	538			

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Sakhpur, XXXVI		Sarkála, XXXVIII	
Bhokarva h.s. 0 32 24.6	193	Mujásar h.s. 190 16 6	345
Bovádi Hill Mark 19 59 12	590	Kunkavár, XXXIV 190 49 0.22	51
Hathila Hill Mark (helio.) 23 39 55	593	Jithuri, XXXIII 205 11 20.85	50
Dholidhár Hill Mark (helio.) 27 22 36	595	Manáva, XXXVII 235 42 1.32	50
Bádha " 29 41 52.9	132	Dundi Hill Peak 274 27 10	351
Jhijhuda Hill Mark 30 19 6	596	Nándivála, XXXIX 303 3 58.04	52
Manáva, XXXVII 64 9 22.26	49	Jákhiá, XL 349 45 7.87	53
Játroda s. 101 7 19.8	131		
Jithuri, XXXIII 115 41 30.30	47	Sarsad Mátá h.s.	
Akála " 141 16 34.5	130	Navádra h.s. 131 48 24	678
Bábra Fort (helio.) 146 7 3	339	Lámba Hill Temple 136 27 14	951
Bhingrád Mark (helio.) 154 1 52	585	Lámba Tower 140 21 56	950
Itria, XXXV 166 4 23.11	47	Patelka " 188 33 36.9	63
Hajirádhár h.s. 195 34 28.8	130	Rával Building 235 59 3	949
Hadmatia Hill Mark 222 26 43	350	Gorána " 236 33 27	675
Chamárdi " 234 25 58.3	65	Gop " 248 20 58.0	63
Pálitána, Shetrunja No. 1 " 283 26 0.1	67	Miáni Level Datum Pillar s. 268 52 33	946
Pálitána, Shetrunja No. 2 " 285 8 18	363	Vadála Tower 274 4 59	941
Pálitána, Shetrunja Temple No. 2 285 11 28	586	Miáni Tower 277 57 13	945
Pálitána, Shetrunja Temple No. 3 285 49 6	587	Miáni Temple No. 1 280 24 12	942
Pálitána, Shetrunja Temple No. 1 289 19 55	362	Miáni Temple No. 3 280 25 13	944
Pálitána, Kanjarda Hill Mark 291 56 21	360	Barda h.s. 287 27 1.7	64
Pipardi Tank (helio.) 328 11 52	591	Vadála No. 3 " 291 46 49	675
		Miáni Temple No. 2 321 37 19	943
Sálbet t.s.		Segras t.s.	
Vánd h.s. 85 33 17	631	Myári s. 13 56 22.1	86
Bhákodar Temple 104 37 14	795	Bora Dabha h.s. 182 2 27.8	82
Hindorna " 145 2 41	630	Kutiána Temple 209 10 13	431
Rámpára Hill Tree 161 12 58	796	Vadála No. 1 " 228 27 58.7	82
Dungar " 193 56 5	629	Pájod t.s. 271 50 9.3	83
Cháneh Tomb 230 44 6	787	Junej " 320 55 22.2	85
Kheda " 238 52 36	629		
Bhensla Rock 258 37 30	789	Simási h.s.	
Saváibet Pir Mosque 276 34 43	792	Kotra Tree No. 1 11 3 34	846
		Kotra Tree No. 2 14 34 7	847
Sanosra h.s.		Madva Hill Temple No. 2 23 23 42	850
Khokhri t.s. 46 9 24.6	99	Madva h.s. 23 24 45	642
Itála Tower (helio.) 100 9 1	438	Málgám " 78 32 31	643
Soel h.s. 114 0 58.6	100	Jákhiá Hill Peak 183 4 58	852
Hádátoda " 147 40 11.7	101	Ilampur " 255 31 58	641
Vágudar s. 162 2 15	435	Dju Tower of Silence 327 50 37	839
Pítar t.s. 186 16 56.0	102	Dángarvádi, XLII 334 6 41	641
Thoriáli Mark (helio.) 206 6 45	436	Kob Tree 356 20 22	843
Parlhari Hill Mark (helio.) 301 47 33	444		
Raia Hill Temple 313 0 30	445	Simroli h.s.	
Ancsri " 356 57 28.0	99	Makhtumpur h.s. 49 42 15	657
		Devrána s. 126 8 5	658
		Lambhora h.s. 326 51 6	657
Sápakda, XXI		Soel h.s.	
Chitrákhoda, XXIII 22 24 27.82	31	Bára h.s. 51 11 22	715
Sara Temple 23 16 4	294	Shekhpát Platform (helio.) 56 58 58	1071
Dungarpur, XX 73 56 42.34	28	Rámpur Tree 60 50 8	1072
Máthak Tree 81 9 56	292	Kiri " 99 28 18	715
Sarambda Hill Mark 99 59 42	290	Háriána Tower 119 36 30	1081
Sarambda Hill Temple 101 52 45	289	Jodiya s. 166 45 38	716
Charúvda, XVIII 116 51 15.31	28		

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Soel h.s.—(Contd.)		Tánša h.s.	
Jodiya Palace	o ' " 167 18 1	Talāja	h.s. 21 11 49
Hádátoda	h.s. 228 54 11'0	Timána Fort	48 37 24
Dhrol Hill Tomb	254 1 35	Sheváliya Hill Tree	63 41 45
Vágudar	s. 266 34 21	Báthalka Hill Mark	88 25 45
Sanosra	h.s. 293 56 16'0	Gundála	" 106 6 37
Itála Tower (helio.)	305 21 42	Bhildár Hill Peak	120 28 57
Khokhri	t.s. 332 20 52'7	Bhandária Hill Temple	179 33 31
Jália Tower No. 1 (helio.)	335 39 31	Trámbak	" 181 25 19
Vanthing	h.s. 354 18 47	Tánša Hill Tree	190 58 39
		Nágdhaniba Hill Tree	216 3 39
		Sánodar Hill Tree	236 38 8
		Alápúr	" 241 36 30
Sudámnda h.s.		Morehand Hill Platform	" 255 24 45
Sáida Hill Mark (helio.)	3 7 8	Khadarpur	" 287 37 5
Gadharia Hill Mark	11 19 4	Bhárápúr	" 333 26 36
Gangájal	h.s. 36 16 29'7	Mabádevpáru Tower	342 42 6
Limbálu Hill Mark (helio.)	43 47 14		
Dhándhalpur	" 80 41 43'3		
Jasápúr Hill Mark (helio.)	112 44 31	Tarkia, XXV	
Bhimtekri	" 141 7 57'5	Khakhána, XXVI	74 56 45'59
Sáyla Hill Mark (helio.)	156 43 16	Vánkáner, XXIV	119 33 19'68
Sáyla Palace	160 44 52	Vánkáner Temple	122 42 55
Rámpura	s. 185 18 1'5	Vánkáner Minaret	122 49 26
Vadia Hill Mark (helio.)	210 48 10	Chitrákheda, XXIII	175 25 52'08
Kamakio Mátá	h.s. 356 29 18'8	Tarkia Hill Peak	184 32 33
		Navágám Hill Tower	189 4 33
		Chotila Hill Temple	325 57 31
		Mabidhar, XXVII	351 22 56'43
			37
Súrda h.s.		Thetria h.s.	
Lámhdár	h.s. 7 0 39'9	Lovaráli	h.s. 19 40 52
Changa	" 57 19 5'6	Dhrásanvel	" 120 42 4
Mokhána Well	95 5 59	Katumba	" 214 35 28
Navánagar	t.s. 135 54 38	Gurgat	t.s. 302 24 4
Hápa Tower	188 3 14	Gurgat Fort	304 48 59
Bára	h.s. 223 13 26		
		Tindalva h.s.	
Sutrej s.		Chitrod, XI	18 10 6
Mádhavpur	h.s. 46 37 58	Sai House	49 16 56
Bagnra	t.s. 113 9 7	Sai Hill Temple	62 58 21
Devrána	s. 326 32 6	Vitrio Hill Temple	70 40 9
		Kanduka, IX	138 10 2
Tábardo h.s.		Motiyar Hill Mark	253 27 5
Jalandri	h.s. 15 43 29	Pata-i-Sháh, VIII	259 7 11
Itála	" 82 7 16	Kidiánagaru Hill Mark	281 39 13
Potlia	" 175 32 6	Kámer, X	311 30 48
		Kidiánagaru Hill (helio.)	313 33 17
		Kánmer Hill Mark No. 1	314 47 37
		Kánmer Hill Mark No. 2	316 4 4
		Kidiánagaru Hill Peak	325 56 18
			226
Talája h.s.		Trákuda, XXXI	
Gadheshvar	h.s. 32 7 37	Oshám	h.s. 44 7 45'5
Timána Fort	151 35 16	Mevása No. 1	" 100 23 56'6
Sheváliya Hill Tree	154 56 56	Bháyásar, XXVIII	233 20 42'18
Gundála	" 156 30 51	Analgad Hill Fort	236 24 47
Tánša	" 201 10 23	Mahika	" 242 24 34
Mahádevpáru Tower	237 53 44	Movaiya, XXX	287 12 8'53
Bhárápúr	" 254 30 16	Devki Gálol, XXXII	348 8 11'26
Gopnáth Hill Temple	334 25 3	Mevása No. 2	" 351 9 34
Gopnáth Hill Tower	338 33 41	Jetpur Temple	356 1 19
Rájpura	" 341 4 10		
Rájpura Hill Tower	344 2 45		

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Trámbak h.s.		Vadál h.s.—(Contd.)	
Tánsa h.s. 0 1 "	615	Bábriádhár Hill Mark No. 2 (helio.) 26 13 15	607
Bhandária Hill Temple 3 26 30	736	Vávera Hill Mark (helio.) 47 41 14	609
Khokra Hill Mark 64 40 20	385	Bhánkshi Hill Mark (helio.) 61 5 0	603
Bhildár Hill Peak 64 55 30	733	Detad h.s. 71 49 15 2	136
Pálitána, Shetrunja No. 1 " 67 20 28 8	68	Bhokarva " 156 30 53 9	136
Gundála " 70 58 45	731	Asrána Hill Tree 317 44 15	783
Tána Temple 77 33 30	732		
Kanáá Hill Mark 98 29 11	372		
Málván Hill Mark 98 47 1	367	Vadála No. 1 h.s.	
Tharsingra Hill Mark (helio.) 118 1 34	373	Pájod t.s. 12 34 32 8	84
Sihor Hill Mark 129 59 22	380	Ségras " 48 31 16 5	82
Chogat Hill Mark 133 19 14	374	Dhruvála Hill Mark No. 2 (helio.) 92 19 25	430
Chamárdi Hill Mark No. 1 138 43 52	376	Bora Dabha h.s. 105 29 8 8	81
Chamárdi Hill Mark No. 2 141 1 4	378	Dhruvála Hill Mark No. 1 (helio.) 119 6 42	428
Chamárdi " 141 23 41 2	68	Amrápur Tower 139 42 8	427
Bhaudar " 143 41 13	383	Amrápur Hill Temple 144 21 32	425
Bhikda Hill Mark 147 56 41	384	Álech Hill Mark No. 2 (helio.) 157 54 5	419
Sidhsar Hill Mark (helio.) 182 53 11	386	Álech No. 2 h.s. 183 9 40 2	61
Bhávnagar Hill Temple 186 10 58	388	Dhánk Hill Temple 196 32 12	421
Bhávnagar Clock Tower 193 29 40	390	Tanasva Hill Mark (helio.) 226 41 52	422
Bhávnagar " 194 35 30 1	70		
Bhávnagar Temple No. 1 199 49 23	391	Vadála No. 2 h.s.	
Blúteshtar Hill Temple 234 48 10	392	Khákhria s. 92 53 56	449
Gogha Sally-port 243 46 2	393	Amesri t.s. 213 48 37	448
Gogha s. 246 37 59 0	71	Nagar-Pipalia h.s. 278 6 24	452
Nágdhaniba Hill Tree 272 21 25	728	Meghpur Temple 288 0 27	452
Piram Light-houso 272 23 25	726	Devdhár " 325 22 39	448
Alápur h.s. 283 15 26	614		
Tána Hill Tree 359 40 45	741		
Tunkra h.s.		Vadála No. 3 h.s.	
Adodar h.s. 136 11 41	669	Miáni Temple No. 2 100 56 14	943
Tunkra Tree 155 49 41	924	Sarsad Mátá h.s. 111 48 50	675
Mokal t.s. 214 11 38	668	Miáni Temple No. 1 114 40 32	942
Bhad s. 277 34 22	667	Lámba Tower 124 47 29	950
Navibandar Temple No. 2 318 45 5	919	Káliámpur Tower No. 1 166 44 0	953
Navibandar Temple No. 1 319 8 36	918	Patelka " 168 42 13	676
Rátia h.s. 319 18 54	667	Vadála Tower 175 35 0	911
Navibandar Tower (helio.) 322 39 27	921	Gorána " 203 51 47	674
		Singra Building 225 14 37	940
		Advána Tower 231 12 6	939
		Khámbhodar " 261 2 16	673
		Barda Hill No. 1 266 44 56	935
		Dehgám s. 313 49 5	673
Udokia h.s.		Vadnagar h.s.	
Dbandhusar Tree 4 40 40	507	Chára h.s. 7 46 55	645
Kanála h.s. 46 20 27	506	Mul Dvárka Building 25 39 2	864
Oshám " 85 0 29 6	103	Mul Dvárka Temple 25 43 41	865
Jalia Tower No. 2 119 33 9	504	Rákhej Tree 43 9 21	863
Upleta Tower (helio.) 144 5 9	498	Sigsar Tree 61 44 34	867
Márad Hill Mark (helio.) 156 49 26	503	Dhámlej " 65 50 43	646
Advál " 193 44 37 2	103	Vasávar " 114 34 0	647
Márad Temple 197 18 56	500	Málgám " 306 40 2	645
Fareni " 247 36 58 5	104	Chára Hill Platform 348 6 18	856
Girnár Temple No. 2 306 21 23	516	Chára Hill Temple 359 27 39	858
Girnár Hill Mark (helio.) 306 51 6	518		
Girnár Temple No. 1 307 16 38	514		
Girnár " 318 28 49 7	105		
Junágad Temple 321 48 13	511		
Roghát s. 358 2 55 8	106		
Vadál h.s.		Vágudar s.	
Dungar h.s. 2 10 2 7	137	Soel h.s. 86 38 19	434
Bábriádhár Hill Mark No. 1 (helio.) 18 39 50	606	Hádátoda " 133 11 30	434
		Sanosra " 342 1 29	435

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Vánd h.s.	° ' "	Varthara s.	° ' "
Jáfarabad Temple	39 17 45	Bhátel Temple	42 44 42
Jáfarabad Building	42 22 0	Bhopalka	h.s. 61 40 5
Jáfarabad Fort	52 6 41	Sidhsara Tower	64 38 5
Rohisa	h.s. 60 40 0	Jhákasia	" 117 0 18
Chelna Hill Tree	92 49 34	Kálávad	" 173 42 17
Báрман	" 122 39 10	Dánta	" 241 37 24
Hindorna	" 190 3 43		
Brahtána Hill	201 5 23	Vasávar h.s.	
Bhákodar Temple	258 56 37	Dhámlej	h.s. 21 41 23
Sálsbet	t.s. 265 31 5	Kadvád	" 75 40 28
		Bolás	" 116 27 27
		Práchi Kund Tree	163 26 21
		Vadnagar	" 294 32 3
Vándhia, XIV		Verával h.s.	
Chitrod Hill Mark (helio.)	192 39 54	Varodra	h.s. 125 5 58
Katáriya Tree	195 44 35	Ádri Building	129 56 46
Chitrod Hill Fort (helio.)	199 53 25	Ádri Tower	130 3 0
Chitrod, XI	203 51 26.50	Jalandri	" 198 10 34
Khánpur Hill Math	210 39 9	Bolás	" 256 2 29
Rájthali Mark (helio.)	240 7 0	Pátan Turret	294 32 3
Mánába Mark (helio.)	249 50 13	Pátan Idgah	296 53 16
Shikárpur Fort (helio.)	253 27 36	Verával Tomb (helio.)	298 25 35
Mánába, XII	260 20 41.10	Pátan Temple No. 2	300 34 18
Rámra Hill Mark (helio.)	274 19 26	Kadvád	" 303 41 11
Gubaría Hill Mark (helio.)	277 52 47	Verával Masjid	311 8 50
Surajbári Hill Mark (helio.)	289 53 57	Verával Building	313 36 47
Máha, XVI	323 30 4.18	Verával Idgah	327 17 36
Vánkáner, XXIV		Viráwáh, I	
Virpur, XXII	143 18 18.03	Bela, V	32 21 38.89
Morvi Temple No. 2	158 12 3	Churia Hill Peak No. 2	69 14 6
Dungarpur, XX	195 30 52.30	Kárunjhar Hill Peak No. 2 (helio.)	69 25 40
Chitrákheda, XXIII	251 55 44.05	Kárunjhar Hill Peak No. 1	70 3 51
Navágám Hill Tower	262 37 57	Kárunjhar, III	76 9 19.16
Tarkia Hill Peak	294 48 18	Rámpur Hill Mark (helio.)	77 59 56
Tarkia, XXV	299 28 0.56	Kárunjhar Hill Mark No. 2	79 27 49
Khakhána, XXVI	357 49 58.80	Kárunjhar Hill Mark No. 1 (helio.)	84 4 52
		Dindsi Hill Mark (helio.)	97 11 15
		Chándinwáh Hill Mark (helio.)	99 53 33
		Parádra Hill Mark (helio.)	100 57 30
		Khársar, II	118 23 56.60
		Bhilgaon, LXIV*	174 13 33.88
		Akoria, LXI*	209 53 21.23
		Raghuji-ka-Neera Hill Mark (helio.)	235 10 58
		Rána-ka-Neera Pillar (helio.)	252 42 8
		Evál, IV	359 52 47.33
		Virpur, XXII	
		Phagásia, XIX	158 36 56.25
		Rangpur, XVII	205 54 35.77
		Morvi Temple No. 1	217 2 2
		Dungarpur, XX	252 37 49.02
		Vánkáner, XXIV	323 15 31.61

* These stations appertain to the Karachi Longitudinal Series.

J. ECCLES,

August, 1893.

In charge Computing Office.

KÁTHIÁWÁR MERIDIONAL SERIES.

CO-ORDINATES AND DESCRIPTIONS OF ALL STATIONS AND POINTS.

The following table gives the co-ordinates of all stations and other fixed points, arranged in alphabetical order, also the descriptions of the secondary and intersected (or unvisited) points, and references to the preceding pages where the descriptions of the principal stations are given.

NOTE.—Principal stations are followed by the Roman numerals I, II, &c., and secondary stations by the letters h.s., s. and t.s. Wherever the spelling and designation of stations and points have been altered from the old nomenclature, the latter is given in italics where necessary, immediately below the former. The year in which a station or point was originally fixed is usually given after its description.

For visited stations and points of superior accuracy, the values of latitude and longitude are given to two places of decimals, for well determined objects to one place, and for the remaining points to the nearest second.

The trigonometrical heights are given to the nearest foot, and the spirit-levelled heights to two places of decimals except in three cases where they are given to the nearest foot. Where trigonometrical heights were not forthcoming, but values were found in the Topographical Survey field computations, these values have been reduced to the same terms as the trigonometrical heights and enclosed in brackets, thus [116]. The surfaces to which the heights refer, when forthcoming in the field books, are specified in footnotes, otherwise they may be assumed to refer to the upper surface of the pillar or platform, or to the mark engraved on buildings, &c. The upper numeral gives the height of the station or point above mean sea-level, and the lower that of the structure itself above ground level exclusive of the height of the rectangular protecting pillars wherever such have been subsequently built by the Topographical Survey Party.

The numerals in the last column indicate the triangles given on pages 13—J. to 63—J., by which the station or point has been fixed; when these numerals are omitted it is to be understood that no triangles are given.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Ádesar Temple ... <i>Adesir Temple</i>	Cutch (Kachh) State	Nearly in the middle of the town so called, about 9 miles S.W. of the town of Piprála. 1854.	23 33 21·9	71 1 22·6	<i>feet</i> * [116]	211
Adodar h.s. ... <i>Waroder H.S.</i>	Sorath	On the highest point of a small range of hills running parallel with and at a distance of about $\frac{1}{2}$ a mile from the coast, about a mile N.W. by W. of the large village of Adodar, and 3 miles S.S.E. of that of Chháyá: Porbandar State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, 1 foot in height, having two mark-stones, one at the surface of the ground and the other on the top. When visited in 1876-77, a rectangular protecting pillar $3\frac{1}{2}$ feet high was built over it. 1854.	21 35 14·50	69 42 5·56	† [95] 1	669
Ádri Building ...	"	Highest building in the village so called, about $1\frac{1}{2}$ miles S.E. of Varodra village, 1 mile from the coast, and $6\frac{1}{2}$ miles N.W. of the town and port of Verával: Junágad State. 1854.	20 57 55·0	70 19 46·0	...	889
Ádri Tower ...	"	Flag-staff on the tower along the W. margin of the town, about 21 yards E.N.E. of Ádri Building: Junágad State. 1854.	20 57 55·3	70 19 46·6	...	888

* To ground level.

† To upper surface of solid, circular pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station Height of Structure	No. of Triangle
Ádsang Hill Mark ... <i>Adang H.S.</i>	Gohelvád	On a high hill immediately W. of and overlooking the village of Ádsang Mota, about 9 miles N.W. of Rájula town, and 6 miles N.E. by N. of Dedán town: Bhávnagar State. The point is denoted by a mark-stone over which a rectangular protecting pillar was built. 1860.	0 1 " 21 7 39'75	0 1 " 71 22 29'99	feet * 863	602
Advál h.s. <i>Langridhar H.S.</i>	Hálár	On one of a low range of hills known as Langridhár, about 1½ miles W. by S. of the village so called, the same distance E. by S. of Jhánjmer village, and 3 miles N.E. by N. of Supedi town on the left bank of the Utávli river: on the boundary between the Navánagar and Gondal States. The station consists of a platform of earth and rubble enclosing an isolated and perforated pillar of masonry, about 2 feet in height, with an aperture for access to the lower mark. A rectangular protecting pillar 3½ feet high was built over it. 1860.	21 48 2'17	70 26 42'05	† 303 2	88
Advána Tower ... <i>Adwana V. Tower</i>	Sorath	Northernmost tower in the large village of this name, about 1½ miles N.N.E. of Sodhána village: Porbandar State. 1854.	21 54 45'1	69 38 7'9	...	939
Ajár h.s. <i>Adjar H.S.</i>	Hálár	On the peaked hill at the southern extremity of the island of that name in the Gulf of Cutch, about 22 feet N.E. of a ruined temple, 4 miles S. by E. of Baida Island, and 8 miles S. of Nora Island: Navánagar State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry. 1854.	22 22 25'58	69 22 24'29	† [68]	700
Akála s. <i>Ankala S.</i>	Sorath	In a field along the road between the villages Akála and Bhingrád, about 1½ miles N.E. of the former, 2½ miles S.W. of the latter, and 3½ miles S.S.E. of Láthi town: Jetpur State. The station consists of a platform of earth enclosing a circular, isolated and perforated pillar of masonry, 10 feet high, having an aperture for access to the ground level mark. A rectangular pillar was built over it. 1860.	21 40 26'94	71 27 11'66	§ 385 10	129
Akoria, LXI||	Jodhpore (Jodhpur)	<i>Fide page 5—J.</i>	24 40 43'31	71 18 58'74	† 56 8	¶
Alápur h.s. <i>Allapoor H.S.</i>	Gohelvád	On the W. brow of a large table-land, about ¼ of a mile S.W. of the village so called, 1½ miles W. by S. of Bharbharia village, and 1½ miles N. by W. of Khádenlia village which is 1½ miles W. of the coast: Bhávnagar State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, over which a rectangular protecting pillar 3½ feet high was built. 1854.	21 34 47'18	72 16 22'13	† [216]	614
Álech Hill Mark No. 1 (helio.) <i>Chek H.</i>	Sorath	On a prominent point of the Álech Hills known as Chek, about 1 mile S. by E. of the small village of Maiki, 3½ miles W.N.W. of the police tower at Pátan village, and 5 miles S.W. by S. of the town of Jodhpur: Junágad State. 1859.	21 50 8'89	70 1 36'92	742	417 418
Álech Hill Mark No. 2 (helio.) <i>Routa H.</i>	"	On a prominent point of the Álech Hills known as Rauta, about ¼ a mile S.E. by S. of the police tower at the village of Pátan, 2½ miles N.W. by N. of that at Vadekhán village, and 6½ miles W.N.W. of the town of Dhánk: Junágad State. 1859.	21 48 36'71	70 4 32'65	916	419 420

* To mark-stone. † To upper surface of perforated pillar. ‡ To upper surface of solid, circular pillar.
 § To upper surface of perforated, circular pillar. || This station appertains to the Karachi Longitudinal Series.
 ¶ For triangle fixing this station, see the Synoptical Volume of the Karachi Longitudinal Series.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Álech <i>Chur H.S.</i>	No. 1 h.s. ... Hálár	Towards the N.W. extremity of the Álech Hills, about $\frac{1}{4}$ a mile S.S.E. of the village of Chur, $2\frac{1}{2}$ miles N.N.E. of the large village of Satápúr, and $2\frac{1}{2}$ miles S.W. of Bádra village: Navánagar State. The station consists of a platform of rubble enclosing an isolated and perforated pillar of masonry, about 2 feet in height, with an aperture for access to the lower mark. When visited in 1875-76, the upper mark-stone was missing, and a rectangular protecting pillar $3\frac{1}{2}$ feet high was built over it. 1859.	0 1 " 21 51 35.88	0 1 " 69 58 19.09	feet * $\frac{568}{2}$	72
Álech <i>Assambli H.S.</i>	No. 2 h.s. ... Sorath	On the highest point close to the eastern edge of the Álech Hills, about $1\frac{1}{2}$ miles E.S.E. of the police tower at the village of Malaura, and $3\frac{1}{2}$ miles N.W. by N. of the town of Dhánk: Junágad State. The station consists of a circular pillar of masonry, about 1 foot high. When visited in 1875-76, a part of the pillar was still standing but the upper mark missing, and a rectangular protecting pillar $3\frac{1}{2}$ feet high was built over it. 1859.	21 48 56.75	70 8 33.33	† $\frac{977}{1}$	79
Ámbardi Hill Mark (helio.) <i>Jerkia H.</i>	... Hálár	About a mile E.S.E. of the village of Ámbardi Bhupatsang, $3\frac{1}{2}$ miles E.N.E. of Nandána, and $1\frac{1}{2}$ miles W.S.W. of the large village of Vadála: táluca Dhrápha. 1859.	22 1 13.77	70 8 28.30	598	413 414
Ámbardi h.s. <i>Amerdi H.S.</i>	... "	On a small rocky swell, about $\frac{1}{2}$ of a mile W. by S. of the small village of Meghpur Ámbardi, $3\frac{1}{2}$ miles W. by S. of the town of Dhrápha on the right bank of the Vinu river, and $4\frac{1}{2}$ miles N.N.E. of the town of Jodhpur: táluca Dhrápha. The station consists of a platform enclosing a circular pillar of masonry, about 1 foot high, over which a rectangular protecting pillar $3\frac{1}{2}$ feet high was built. 1859.	21 57 25.68	70 5 38.12	† $\frac{366}{1}$	73
Ámbla h.s.	... "	On the highest point of rising ground, about $1\frac{1}{2}$ miles N.N.E. of Ámbla Mota village, and 2 miles W. of Bharána: Navánagar State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, about 1 foot high. When visited in 1877-78, the upper mark-stone was missing, and a rectangular protecting pillar about 3 feet high was built over the circular pillar. 1854.	22 22 25.53	69 42 55.69	† [91] 1	691
Ámbla Tree	... "	Highest and conspicuous bar tree a short distance N.N.E. of the village of Ámbla Mota, $2\frac{1}{2}$ miles W.S.W. of Bharána, and nearly the same distance N.E. by E. of Parodia: Navánagar State. 1854.	22 21 32	69 42 25	...	1043 1044
Ámbran Temple <i>Amran Temple Megwar</i>	... "	A famous temple in the large village of that name, about a mile E. of the right bank of the Demi river: Navánagar State. 1854.	22 49 22.2	70 36 11.7	...	1092
Amesti t.s.	... "	On rising ground, about $1\frac{1}{2}$ miles S.E. by S. of Dhunána village, the same distance W.S.W. of Khijuria, and $4\frac{1}{2}$ miles in the same direction of Sarapdar village on the right bank of the Dondi river: Dhrol State. The station consists of a tower of earth and rubble enclosing an isolated and perforated pillar of masonry, 14 feet high, with an aperture for access to the lower mark. When visited in 1872-73, the pillar was found 8 feet in height, and a rectangular protecting pillar $3\frac{1}{2}$ feet high was built over it. 1860.	22 20 10.12	70 35 19.07	* $\frac{384}{\dagger}$	97

* To upper surface of perforated pillar.

† To upper surface of circular pillar.

‡ See description of this station.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No of Triangle
Amrápur Hill Mark (helio.) ... <i>Afa H. M.</i>	Sorath	On the highest point of the hill of this name, about 1½ miles N.N.W. of Amrápur village, and 9 miles N.N.E. of the fortified town of Kutiyána on the right bank of the Bhádar river: táluks Amrápur. 1859.	21 44 25·16	70 5 4·79	<i>feet</i> 772	423 424
Amrápur Hill Temple ... <i>Afa H. Temple</i>	"	About 22 yards S. by E. of Amrápur Hill Mark (helio.): táluks Amrápur. 1859.	21 44 24·5	70 5 4·9	...	425 426
Amrápur Tower ...	"	In the village of this name, about 7½ miles N.E. by N. of the fortified town of Kutiyána: táluks Amrápur. 1859.	21 43 18·7	70 5 32·1	...	427
Amreli Temple No. 1 ... <i>Amreli N. Temple</i>	Baroda (Vadodra) State	Black spire of a temple a little W. of the N.E. extremity of the town: Amreli division. 1853.	21 36 9·4	71 15 24·3	...	349
Amreli Temple No. 2 ... <i>Amreli Temple</i>	"	White spire of a temple in the centre of the town: Amreli division. 1853.	21 35 57·3	71 15 4·9	...	350
Analgad Hill Fort ... <i>Anandgar H. Fort</i>	Hálár	Highest house in the fort on an isolated hill, about ¼ a mile W. by N. of the small village so called, 1½ miles E. of Lusriár village, and 5 miles S.E. by S. of Mengni Mota town: Gondal State. 1853.	22 1 55·3	70 45 55·7	...	327
Arámda Dharmshála ... <i>Aramra Dharamsala</i>	Baroda State	At the bandar head about ¼ a mile N.E. of the large village of that name, 3½ miles N. by E. of Pádli, 4 miles N.E. by N. of Bhimrána, and 4½ miles W.S.W. of the well-known island of Bet in the Gulf of Cutch. 1855.	22 26 10	69 4 59	...	...
Arámda Flag-staff ... <i>Aramra Pir Flag</i>	"	At Panch Pir's place close S. of the large village of that name, about 3 miles N. of Pádli, and 3½ miles N.E. by N. of Bhimrána. 1855.	22 25 42·4	69 4 33·4	...	990 991
Arámda h.s. ... <i>Aramra H.S.</i>	"	On a sand hill on the shore of the Gulf of Cutch, about 2 miles W. of the village so called, 3 miles N. of Bhimrána, 3½ miles N.W. of Pádli, and 1½ miles W. of the high road from Dwírka (Dvárka) to Arámda. The station is denoted by a mark-stone buried in sand. When visited by the Levelling Party in 1874-75, a circular pillar of masonry, about 1 foot high, was found, but the upper mark-stone was missing. When again visited by the Topographical Survey Party in 1878-79, the station was found in a bad state, and a platform 3½ feet high was built. 1855.	22 25 48·21	69 2 38·89	* 52·44 †	707
Arámda Palace ... <i>Aramra Palace Turret</i>	"	Turret of the square palace about 3 miles N. of Pádli, 3½ miles N.E. by N. of Bhimrána, and 4½ miles W.S.W. of Bet Island. 1855.	22 25 48·2	69 4 34·4	...	988 989
Arámda Peak ... <i>Aramra Peak</i>	"	On the shore of the Gulf of Cutch, about 1½ miles N.W. of the large village of that name, 3½ miles N.N.E. of Bhimrána, and 4½ miles N.N.W. of Pádli. 1855.	22 26 36	69 3 17	...	...
Arthara Temple ... <i>Nokta Beraja Temple</i>	"	Spire of a temple about 3 miles N.E. of the large village of Arámda, and 2 miles W. of Bet Island. 1855.	22 27 35·7	69 6 29·8	...	994 995

* To lower mark-stone.

† See description of this station.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Ásota Hill	Hálár	Highest hill about 1½ miles N.W. by N. of Hábardi village, 3½ miles E.N.E. of Merása, and the same distance W. by N. of Berája: Naváנגar State. 1854.	22 14 46	69 23 57	feet [194]	...
Ásota Hill Peak No. 1 <i>Jewaya H. Peak</i>	"	About 1½ miles S.W. of the village of Ásota Mota, and 2½ miles E. of Virpur: Naváנגar State. 1854.	22 15 14	69 23 40	[173]	1016 1017
Ásota Hill Peak No. 2	"	About 1½ miles N.W. by N. of the village of Ásota Mota, and 3½ miles N.E. of Virpur: Naváנגar State. 1854.	22 17 23	69 23 59	...	1018
Asrána Hill Tree ... <i>Ashrana H. Tree</i>	Gohelváđ	Large and conspicuous tree on the hill immediately above and S. of the village of Asrána Mota, and about 4½ miles N. by E. of Dungar town: Bhávnagar State. 1860.	21 9 17	71 38 44	* [368]	783
Bábia Hill Peak ... <i>Object on Hill</i>	Hálár	Heap of stones on the western of two peaks, about 1½ miles W. by N. of the village of Bábia, also called Jálsanar, 2 miles S.W. of Pipia village, and 5½ miles S.W. of the town of Kálárad: Naváנגar State. 1860.	22 9 8	70 21 47	[627]	...
Bábra Fort (helio.) ...	Gohelváđ	On the wall of the fort. The point is denoted by a mark. 1853.	21 50 48.01	71 20 43.98	...	339
Bábriádhár Hill Mark No. 1 (helio.) <i>Babriadhhar H.S.</i>	"	Towards the N.E. end of a range of hills running N.E. and S.W., about a mile S.W. by W. of Bábriádhár village, and 3½ miles S. by W. of Vadál on the main road from Kundal to Mahuva: Bhávnagar State. 1860.	21 8 16.70	71 34 47.97	550	605 606
Bábriádhár Hill Mark No. 2 (helio.) <i>Sonali H.S.</i>	"	On the northern edge of a range of hills running N.E. and S.W., and about midway between its two extremities, about ¼ a mile E. of Kheráto Mota village, 2½ miles S.W. by W. of Bábriádhár village, and 5 miles N.W. of the town of Dungar: Bhávnagar State. 1860.	21 7 46.56	71 33 55.70	477	607 608
Bádanpur Temple ... <i>Badanpoor N. Temple</i>	Hálár	Spire of a temple close N. of the village of that name, about 2 miles E.N.E. of Dhudkot on the right bank of the Demí river, 2½ miles W. by S. of Phátsan, 3½ miles S. of Khárcin, and 3½ miles S.W. by E. of the large village of Ámbran. Naváנגar State. 1854.	22 47 48	70 38 42	...	...
Bádargad Hill† <i>Utwa H. Pile</i>	Cutch Stato	A conical pile of stones on a hill, about 1½ miles N.N.W. of the village of that name, 6 miles S.S.W. of the large village of Rápúr, and 2 miles S.W. by S. of Lilpur. 1856.	23 29 16	70 38 48	[564]	224
Bádhá h.s. <i>Palania H.S.</i>	Gohelváđ	On an isolated hill, about 2½ miles N.E. of the village so called, and 4 miles S.E. of the town of Kundla: Bhávnagar State. The station consists of a platform of earth enclosing an isolated and perforated pillar of masonry, 2 feet high, having an aperture for access to the lower mark. When visited in 1869-70, the station was described as follows:—"A platform 4 feet high was originally built over the station mark, but this has been destroyed, and a pillar 3½ foot high has been now built over the remains of the old one". 1860.	21 17 53.76	71 23 56.28	† 708 §	132

* To base of tree. † For another triangle fixing this point, see the Synoptical Volume of the Cutch Coast Series. ‡ To upper surface of perforated pillar.
§ See description of this station.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Bagnara t.s.	Sorath	On the N.E. tower N. of the gateway leading to the citadel of the town on the Ojhat river, about 2½ miles W.S.W. of the large village of Bháthrot. The upper story of the tower is arched and built of stones: Junágad State. The station consists of a platform enclosing a circular and isolated pillar of masonry, having two mark-stones, one at the surface of the tower and the other on the top. When visited in 1875-76, a perforated pillar of masonry, about 3 feet high, was found, having two marks, one on the top and the other below it on the roof of the tower. When again visited in 1876-77, the pillar was found to be 6 feet high, and a rectangular protecting pillar was built over it. 1859.	21 22 13' 11"	70 0 51' 10"	feet * 54 †	87 662
Bákhalka Hill Mark <i>Bakalko H.</i>	Gohelváð	On a low, solitary hill, about a mile N.W. by N. of the village of the same name, 2 miles S. of Sarkaria village, and 9 miles E. by S. of Pálitána town: Bhávnagar State. The point is denoted by a mark-stone over which a rectangular protecting pillar 3½ feet high was built. 1860.	21 30 32' 61"	71 59 12' 74"	† [311]	742
Báláchari Hill <i>Balacheri Hill</i>	Hálár	Highest point of a small, isolated hill on the southern shore of the Gulf of Cutch, about 1½ miles N. by E. of the village of that name, 1 mile W. of the Salt Pans, and 3 miles W.N.W. of the town of Hariána on the right bank of the Pbuljhar or Kunkávati river: Navánagar State. 1854.	22 37 22	70 15 38	...	1080
Báláchari House <i>Balacheri Highest House</i>	"	Centre of the highest and conspicuous house about ½ a mile N.W. by N. of the village of that name, 3½ miles N.E. by N. of Sachána on the southern shore of the Gulf of Cutch, and the same distance W. of the town of Hariána: Navánagar State. 1854.	22 36 31' 7"	70 14 52' 3"	...	1078 1079
Báláchari Mosque <i>Balacheri Akia Pir Dome</i>	"	Domed mosque known as Akia Pir, about ½ a mile N.W. of the village of Báláchari, 28 yards S.W. by S. of Báláchari House: Navánagar State. 1854.	22 36 31' 0"	70 14 51' 9"	...	1077
Báláchari Tower <i>Balacheri V. Tower</i>	"	Close to the village of that name, about 3 miles N.E. of Sachána, and the same distance W. of the town of Hariána: Navánagar State. 1854.	22 36 3' 8"	70 15 24' 2"	...	1076
Bálambha Temple <i>Balamba W. Temple</i>	"	On the road from Bálambha to Jodiya, about ¼ a mile W.S.W. of the former town: Navánagar State. 1854.	22 43 56' 8"	70 27 22' 6"	...	1085 1086
Bálambha t.s. <i>Balamba T.S.</i>	"	On the terraced roof of a small room built on the top of the S.E. and highest tower, called Gazana Kota, of a small fort: Navánagar State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, about 1 foot high. When visited by the Levelling Party in 1874-75, no mention was made of any alteration in the construction of the station. 1854.	22 44 19' 13"	70 28 3' 59"	* 86' 73 †	718
Baldhoi Hill Temple <i>Baldoi H. Temple</i>	"	Conspicuous temple on an isolated hill, about a mile E. of the village of that name, the same distance S. of the high road between Halenda and Átkot, and 3½ miles N.E. by N. of Dadra town: Táluks Baldhoi. 1853.	22 2 59' 5"	71 7 18' 5"	...	317 318

• To upper surface of circular pillar.

† See description of this station.

‡ To mark-stone.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station Height of Structure	No. of Triangle
Balej Temple	Sorath	Spire of the conspicuous Mahájan temple in the village of this name, about 1½ miles from the coast, and 7½ miles S.E. of the sea-port town of Navibandar: Porbandar State. 1854.	21 22 35' 4	69 54 40' 7	... feet	915 916
Bánnásar Temple No. 1 <i>Bannasa Sati Temp.</i>	Hálár	Sati temple about 2½ miles N.E. of the village of this name, 2½ miles S.E. by E. of Gága, and 3 miles N.W. by W. of the large village of Bhátia: Navánagar State. 1854.	22 7 15' 5	69 16 21' 9	...	964
Bánnásar Temple No. 2 <i>Bannasa V.S. Temple</i>	"	At the N.E. end of a large tank, about ½ a mile N.E. by E. of the village of this name, and 4 miles W. of the large village of Bhátia: Navánagar State. 1854.	22 5 57' 4	69 14 58' 3	* [40]	965
Bándhi Hill <i>Bandia H.M.</i>	Thar and Párkur	E. end of a hill, about 1½ miles E. by S. of the small village of this name, 1 mile N.N.E. of Talwália, and 1½ miles W. by S. of Dhotar. 1856.	24 29 44	70 44 30	...	...
Bántva Tree <i>Batwa Palm Tree</i>	Sorath	Conspicuous palm tree a short distance N.W. of the town: Bántva State. 1859.	21 29 28	70 6 42	...	432
Báola Hill Mark (helio.) <i>Bhowla H.S.</i>	Goholvád	On the highest point of a ridge of hills so called running N. and S., about 2½ miles W. of Velávadar village, and 3 miles N. of Hovára village: Bhávnagar State. The point is denoted by a mark-stone over which a rectangular protecting pillar 3½ feet high was built. 1860.	21 28 56' 06	71 31 11' 41	† 541	588 589
Bápur h.s. <i>Beh H.S.</i>	Hálár	On the conspicuous mound of a tank about 1½ miles W. of the village of Bápur also called Bhe, ½ a mile S. of Bagasra, 2 miles N. by E. of the large village of Varánia, and 3 miles N.W. of Bhela Mota: Morvi State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, 1 foot high, which contains two mark-stones, one at the surface of the ground and the other on the top. A rectangular protecting pillar 3½ feet high was built over it. 1854.	23 2 10' 10	70 39 41' 47	† [44] 1	724
Bára h.s.	"	On the northern of two conspicuous knolls, about a mile N. of the village of that name, and 1½ miles E. of Shekhpát on the right bank of the Ruparel river: Navánagar State. The station is denoted by a mark-stone embedded in mud level with the surface of the ground, and a rectangular protecting pillar 3½ feet high was built over it. 1854.	22 28 37' 38	70 15 31' 52	† 138	709
Barda Hill Mark No. 1 (helio.) <i>Abupura H. Mark</i>	"	On one of the highest points of the Barda Hills known as Ábhpura, overlooking the ruined town of Ghumli, formerly the capital of the Jethváas, to the north, and close N.N.E. of the temple-crowned peaks: Navánagar State. 1853.	21 51 44' 75	69 48 12' 70	1872	416
Barda Hill Mark No. 2 <i>Abupura H. Mk.</i>	"	On a hill known as the Vinu, the highest point of the Barda Hills, about 1½ miles S.W. of the temples at Ghumli: Navánagar State. 1854.	21 51 59' 70	69 47 18' 29	2091	937 938
Barda Hill No. 1 <i>Ranpur Hill</i>	"	The western and highest point of the Barda Hills, about 1½ miles S.E. of the town of Ránpur: Navánagar State. 1854.	21 49 16	69 44 20	[1497]	935 936

* To base of temple.

† To mark-stone.

‡ To upper surface of solid, circular pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Barda Hill No. 2 ... <i>Gumli Hill</i>	Sorath	An out-lying point at the northern foot of the Barda Hills, about a mile W. by S. of Mokhána village, and 1½ miles E. of Dhebar village: Forbandar State. 1854.	21 53 41	69 45 59	feet...	...
Barda h.s. <i>Sathbagar H.S.</i>	"	On a point on the S.W. edge of the mass of the hills known as the Barda Hills. Along the S.W. foot of the hills, at the distance of about a mile from the station, are extensive quarries from which stone of an excellent quality is largely exported to Bombay and elsewhere, and is commercially known as Forbandar stone. The station is about 2½ miles N.E. of the village of Ádatiána, and 4½ miles N.W. by N. of the large village of Ranávár on the metalled road from Kutiyána to the sea-port town of Forbandar: Forbandar State. The station consists of a platform enclosing a circular and isolated pillar of masonry, 5 feet in height, over which a rectangular protecting pillar 3½ feet high was built. 1853.	21 44 19.46	69 45 21.99	* 1076 5	60, 61 670
Bárman h.s. ...	"	On a high, isolated hill, about ¼ of a mile W. of Bárman Nána village on the Raidi river, 1½ miles E.N.E. of Pichri village, and 3½ miles N.W. of Nágneri town: táluca Dedán. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, having a mark at top. A rectangular protecting pillar 3½ feet high was built over it. 1854.	20 57 35.31	71 20 57.32	* [337]	682
Barvála Tower ... <i>Verawala Tower Flag</i>	Baroda State	Flag-staff on the tower of the large village of that name on the high road from Dwárka to Arámda, about 3 miles S.W. of Vasái, the same distance W. of Tobar Mota, and 2½ miles S.S.E. of Kachbigad. 1855.	22 17 19.4	69 0 15.4	...	979
Bedi Building ... <i>Beri Bunder Tiled Bg.</i>	Hálár	Highest, tiled building immediately W. of the village so called, about ¼ of a mile N.E. of the road from Bedi Bandar to Navánagar: Navánagar State. 1854.	22 30 1.2	70 4 56.2	...	1057
Bela, V ...	Cutch State	<i>Fide page 6—J.</i> ...	23 54 11.88	70 47 52.62	* 758 5	7, 8
Bela Fort (helio.) ... <i>Beyla Fort Tower</i>	"	On the tower of the inner fort in the large town of this name. 1856.	23 52 26.09	70 50 33.70	[154] 31	174
Belda Hill Peak ... <i>Rowilgond Peak</i>	Gohelvád	At the E. end of hill, about ¼ a mile N. of the village of the same name, 2½ miles E. by N. of Balgond village, and 1½ miles S. of Talia village: Bhávnagar State. 1854.	21 20 38	71 57 10	[398]	759 760
Bet Hill Peak ... <i>Beyt Kew H. Peak</i>	Baroda State	Also known as Sankholia Point. The southernmost point of the well-known island of that name in the Gulf of Cutch. The island is also called Sankhodhár: it is a large place of Hindu pilgrimage and is noted for its port. 1855.	22 25 16	69 7 38	...	1006
Bet Temple No. 1 ... <i>Beyt Lakshmi Temple</i>	"	Spire of Lakshmi temple. 1855. ...	22 27 4.7	69 8 13.3	...	996 997
Bet Temple No. 2 ... <i>Beyt Banchorja Temple</i>	"	Flag-staff on the chief temple dedicated to Banchorji or Rám, about 4 miles N.E. of the large village of Arámda, and 1½ miles S.E. by S. of the Okha Tidal Station. 1855.	22 27 5.5	69 8 13.3	...	998 999

* To upper surface of circular pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Bet Temple No. 3 ... <i>Beyt Dingeshwar Temple</i>	Daroda State	Flag on the templo dedicated to Dingesbvar. 1855. ...	22 26 23·7	69 8 17·6	feet ...	1000
Bet Temple No. 4 ... <i>Beyt Kasarai Temple</i>	"	Spire of the templo dedicated to Kasurai Devi, between the fort and the town. 1855.	22 27 11·5	69 8 24·8	...	1001 1002
Bet Temple No. 5 ... <i>Beyt Adnarain Temple</i>	"	Also known as Ādnāvāyan templo. 1855. ...	22 27 22·3	69 8 36·2	...	1003
Bet Temple No. 6 ... <i>Beyt Hanoman Temple</i>	"	Also known as Hanumān templo, at the N.E. extremity of the island. 1855.	22 28 5·8	69 10 43·3	...	1004
Bet Tomb ... <i>Beyt Hadji Kirmia Tomb</i>	"	Spire of the dome of the tomb of a Muhammadan Saint known as Hāji Kirmia. 1855.	22 27 37·6	69 8 5·5	...	1005
Bet t.s. ... <i>Beyt T.S.</i>	"	On the S.W. and the highest tower known as Daūd Shāh's Burj, about 4 miles N.E. of the large village of Arāmdn, and 1½ miles S.E. by S. of the Okha Tidal Observatory. The station consists of a small platform on the centre of the tower. When visited in 1878-79, the station platform and the tower was found fallen down. 1855.	22 27 4·23	69 8 10·21	...	706
Bhad s. <i>Bar H.S.</i>	Sorath	On a mound immediately S. of the village of this name, about 1½ miles E. of the western edge of the Mokāl Ran, and 2 miles S.W. of Delodar village: Porbandar State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, 1 foot in height, having mark-stones at top and bottom. A rectangular protecting pillar 3½ feet high was built over it. 1854.	21 30 27·66	69 53 30·50	[27] 1	666
Bhadli Hill Mark (helio.) <i>Lonka H.S.</i>	Gohelvād	On the fort on a flat-topped hill, about 1½ miles N.E. by N. of the large village so called, 3 miles E.S.E. of Chomulpur village, and 2 miles S. of Vanāla village: tāluka Bhadli. 1860.	22 2 18·82	71 29 34·86	758	570 571
Bhādra h.s. ...	Hālar	On an isolated, conical hill immediately E. of and overlooking the village of the same name on the left bank of the P'hophal river, adjoining a templo on the summit, and about 4 miles E.S.E. of the town of Kaudoms: Navānagar State. The station consists of a platform of earth and rubble enclosing an isolated and perforated pillar of masonry, 2 feet high, with an aperture for access to the lower mark. A rectangular protecting pillar 3½ feet high was built over it. 1860.	21 51 53·93	70 35 34·42	† $\frac{502}{2}$	90
Bhādra Hill Temple	"	Mahādev templo about 5 yards N.N.E. of Bhādra h.s.: Navānagar Stato. 1853.	21 51 54·1	70 35 34·5	...	353 354
Bhādrod Tree ... <i>Bhadror Palm Tree</i>	Gohelvād	Palm tree on the right bank of the Bhādrodi river, about 200 yards S. of the S.E. corner of the village so called, and 4 miles N.E. by N. of Mahura town: Bhārnagar Stato. 1854.	21 8 2	71 50 54	...	770 771

* To upper surface of solid, circular pillar.

† To upper surface of perforated pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Bhaguda Hill Peak <i>Bagoora Ht. Pk.</i>	Gohelvád	Centre of the highest peak about $\frac{1}{4}$ a mile N.W. of the village so called, the same distance S.E. by S. of Gúndera village, and 1 mile W. by S. of Bordi village: Bhávnagar State. 1854.	21 15 2	71 56 6	feet [292]	763 764
Bhákodar Temple ... <i>Bakoder Temple</i>	Sorath	Dome of the conspicuous, Mahádev temple at the E. end of the hill on the coast and at the mouth of the Dhátarvari river, about $1\frac{1}{2}$ miles S. by E. of Rámpára village, and the same distance W. of the island of Sálbet: Junágad State. 1854.	20 54 44.8	71 31 39.8	* [41]	794 795
Bhandar h.s. ... <i>Bandar H.S.</i>	Ahmedabad	About $\frac{1}{4}$ of a mile E. by N. of the village so called, 4 miles W. of the large village of Válukad, and 6 miles E.S.E. of Sihor town: Gogha sub-division. 1858.	21 40 46.33	72 5 14.42	...	382 383
Bhandaría Hill Temple <i>Bandaria H. Temp.</i>	"	About $2\frac{1}{2}$ miles S.W. of the village so called, $2\frac{1}{2}$ miles S.E. by S. of Mota Khokara village, and 3 miles W. of Sánodar village: Gogha sub-division. 1854.	21 33 45.6	72 8 25.4	...	735 736
Bhanduri Building <i>Bandoora Ht. Building</i>	Sorath	Highest house in the large village so called, on the main road from Vanthli to Yerával, about a mile W. of the Megal river, and 4 miles S.S.W. of the town of Mális: Junágad State. 1854.	21 6 22.0	70 19 21.0	...	897
Bhanduri h.s. ... <i>Bandoora H.S.</i>	"	On the eastern brow of the flat-topped hill, about a mile S. of the village of that name, and 5 miles N.E. by N. of the town of Chorvád: Junágad State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, having mark-stones at top and bottom. 1854.	21 5 35.90	70 19 11.24	† [202]	653
Bhánkshi Hill Mark (helio.) ... <i>Bhaki H.S.</i>	Gohelvád	On a low hill, about a mile S.W. of the village of the same name on the Dhátarvari river, 6 miles N.N.W. of Rájula town, and 11 miles N.E. of the town of Dedán: Bhávnagar State. 1860.	21 7 25.27	71 27 22.30	387	603 604
Bhárúpur h.s. ... <i>Barapoorá H.S.</i>	"	On a small, isolated ridge, about $\frac{1}{4}$ a mile E.S.E. of the village so called, the same distance W. of the coast, and 9 miles E. by N. of Talája town: Bhávnagar State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry. 1854.	21 23 19.10	72 12 25.89	[101]	617
Bharbhir t.s. ‡ ... <i>Barbir T.S.</i>	"	On the western bank of a tank close to and N.N.E. of the village of that name, and about $\frac{1}{2}$ miles S.E. by E. of Nelárvadar village: Bhávnagar State. The station consists of a perforated pillar of masonry with an archway on the south side for access to the lower mark. 1860.	22 0 27.36	72 6 40.02	§ 44	...
Bhárváda Hill <i>Bhada Hill</i>	Sorath	Highest point at the W. end of a flat, isolated hill nearly $1\frac{1}{2}$ miles S.W. of Bhárváda village, and on the eastern border of the Modhvára Marsh: Forbandar State. 1854.	21 45 30	69 36 16	[82]	034

* To base of temple. † To upper surface of solid, circular pillar.

‡ For triangles fixing this station, see the Synoptical Volume of the Gujarát Longitudinal Series.

§ To upper surface of perforated pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station Height of Structure	No. of Triangle
Bhárváda Tower ... <i>Barwara Tower</i>	Sorath	In the large village of this name, about 2½ miles S.E. by S. of the large village of Kindar Kheda on the border of the Modhvára Marsh: Porbandar State. 1854.	21 46 19	69 37 18	feet...	...
Bhátel Temple ... <i>Bhatail S.E. Temple</i>	Hálár	Close E. of the village of this name, about 3½ miles N. by E. of the large village of Movan, 2½ miles S.S.W. of Varthara, and 2 miles W. by N. of Kajuria: Navánagar Stato. 1854.	22 9 57' 5	69 32 6' 2	...	1027
Bhátia h.s. ...	"	Towards the northern end of a small ridge running N. and S., about 1¼ miles N.W. by W. of the large village of Bhátia: Navánagar Stato. The station consists of a platform enclosing a solid and isolated pillar of masonry, 1 foot in height, having two mark-stones, one at the surface of the ground and the other on the top. When visited in 1878-79, a portion of the old platform and a triangular pillar were found, but the mark-stone was missing. A new mark-stone was placed as nearly as possible in the old site and a rectangular protecting pillar 3½ feet high built over it. 1854.	22 6 31' 97	69 17 39' 78	* [127] †	682 683
Bhátia Hill Temple ...	"	On the western extremity of a small, detached hill, and immediately E. of the large village of Bhátia: Navánagar Stato. 1854.	22 5 40' 8	69 19 2' 9	‡ [135]	960
Bhátia Hill Tower ...	"	At the northern extremity of a small ridge, about 1½ miles N.W. of the village so called, and 2½ miles S.W. by W. of Nandána village: Navánagar Stato. 1854.	22 6 45' 2	69 17 45' 0	...	962 963
Bhátia Tower ...	"	Highest tower in the large village so called: Navánagar Stato. 1854.	22 5 44' 3	69 18 47' 4	...	961
Bhávsnagar Clock Tower ... <i>Bownaggar Clock</i>	Gohelvád	Centre of the clock tower in the middle of the town: Bhávsnagar Stato. 1853.	21 46 39' 5	72 11 12' 5	...	389 390
Bhávsnagar h.s. ... <i>Bownaggar H.S.</i>	"	On the highest part of the hilly and broken ground, about ¼ a mile S. of the town: Bhávsnagar Stato. The station consists of a platform of rubble enclosing a solid, circular and isolated pillar of masonry, 5 feet in height. When visited by the Levelling Party in 1890-91, the station was found in good order. 1853.	21 45 54' 79	72 11 13' 32	§ 176 5	69, 70 140
Bhávsnagar Hill Temple ... <i>Bownaggar Mahadeo Temple</i>	"	Known as Mahádev temple. On a low hill, about a mile S. of Ghadechi Railway Station, and 2 miles S.W. of the town: Bhávsnagar Stato. 1853.	21 45 20' 6	72 9 37' 5	...	388
Bhávsnagar Temple No. 1 ... <i>Rompri Temple</i>	"	Called Ruvápuri Mátá. Kalas of the highest, black spire of the temple on rising ground, about a mile E.N.E. of the town: Bhávsnagar Stato. 1853.	21 47 7' 2	72 12 41' 9	...	391
Bhávsnagar Temple No. 2 ... <i>Bownaggar Temple</i>	"	Spire of the temple on the S. edge of the town: Bhávsnagar Stato. 1853.	21 46 16	72 11 1	...	...

* To upper surface of pillar below rectangular protecting pillar. † See description of this station. ‡ To base of temple.
§ To top of protecting pillar 3 2 feet high, built over solid, circular pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Bhāyāsar, XXVIII ...	Hālār	<i>Vide page 10—<i>J.</i></i> Note.—When visited in 1872-73, no vestige of the old mark was found; and the pillar having been swept away during the severe hurricane, a new mark-stone was approximately placed near the supposed site of the old mark, and a rectangular protecting pillar 3½ feet high built over it.	22 9 35' 34	70 56 18' 48	$\frac{feet}{867}$ 5	38
Bhāyārnadar Hill Mark (helio.) ... <i>Dankia H.S.</i>	"	About a mile S.W. of the town of the same name: Gondal State. 1860.	21 50 34' 23	70 16 32' 46	394	486
Bhegāli Hill ... <i>Bega Meda H.</i>	Gohelvād	At the E. end of a low range, about ¾ of a mile E. of the village so called, and 5 miles N.W. of the town of Talāja on the Shetrunji river: Bhāvnagar State. 1860.	21 24 46	72 1 38	[271]	...
Bhensla Rock ...	...	Centro rock in the Gulf of Cambay at the mouth of the Dhātārvari river, about 2 miles E. of the island of Sālbet, and 2½ miles S.E. by S. of the mouth of the Motāpāt creek. 1854.	20 54 45	71 35 18	...	789 790
Bhesla Rock ... <i>Mahdeo Rock at Sea</i>	Sorath	In the sea, about 1½ miles E. of the Portuguese island of Diu (Div) called Pānikota at the mouth of the Buthrāni creek, 2½ miles S.W. of Rājparū, and 2½ miles S.E. by E. of Shiwar village: Junāgad State. 1854.	20 45 57	71 13 2	...	817
Bhikda Hill Mark ... <i>Bikra H. Mk.</i>	Ahmedabad	About ¼ of a mile S. by E. of the village so called, 2½ miles W. by S. of Vālukad village, and 7½ miles S.E. by E. of Sibor town: Gogha Sub-division. 1853.	21 39 40' 70	72 6 28' 23	...	384
Bhildār Hill Peak ... <i>Thala H. Ph.</i>	Gohelvād	About 2½ miles S.E. by E. of Tāna village, 3 miles N.N.E. of Vnal village, and 2½ miles S.W. of Pāiri village: Bhāvnagar State. 1860.	21 33 56	72 2 44	[667]	733 734
Bhūlgaon, LXIV† ...	Thar and Pārkar	<i>Vide page 5—<i>J.</i></i>	24 41 34' 19	71 7 11' 00	$\frac{*}{100}$ 4	‡
Bhimkata Tree ... <i>Bheemkanta V. Tree</i>	Hālār	Highest and conspicuous tree close N.W. of the village so called, about 3½ miles S.W. of Kotāria, 1 mile S.S.W. of Mānāmora, and 2½ miles W. by N. of Dudhai: Navānagar State. 1853.	22 47 53	70 30 24	...	1089
Bhimrād h.s. ... <i>Bhamar H.S.</i>	Gohelvād	On a hill, about 1½ miles N.W. by N. of the large village so called, 2½ miles E. by N. of Dhrupna village, and 8 miles S.W. of Botād town on the Bhārnagar-Gondal Railway: Bhārnagar State. The station consists of a platform of earth enclosing an isolated and perforated pillar of masonry, 2 feet in height, with an aperture for access to the lower mark. 1860.	22 5 32' 10	71 36 35' 00	$\frac{§}{451}$ 2	121 122
Bhimtekri h.s. ...	Jhālāvād	On a conical hillock so called, about ¼ of a mile S.S.E. of the village of Sudāmda, 3 miles W. by S. of the town of Sāyla, and 4½ miles E.N.E. of Dolja on the high road from Rājkot to Ahmedabad: Sāyla State. The station consists of a platform of earth enclosing an isolated and perforated pillar of masonry, 2 feet high, with an aperture for access to the lower mark. A rectangular protecting pillar 3½ feet high was built over it. 1860.	22 32 31' 08	71 28 29' 33	$\frac{§}{511}$ 2	114

* To upper surface of solid, circular pillar.
† This station appertains to the Karāchi Longitudinal Series.
‡ For triangle fixing this station, see the Synoptical Volume of the Karāchi Longitudinal Series.

§ To upper surface of perforated pillar.

† For triangle fixing this station, see the

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Bhingrád Mark (helio.) <i>Bingrar H.S.</i>	Gohelvád	About $\frac{1}{2}$ of a mile S.E. of the village so called, $4\frac{1}{2}$ miles in the same direction of Lálhi town, and $2\frac{1}{2}$ miles N. of the large village of Ansoar: Bhávnagar State. 1860.	21 41 5'72	71 29 15'71	feet 363	585
Bhojáberi h.s. <i>Babiara H.S.</i>	Hálár	On one of the highest points of a range of hills, about $1\frac{1}{2}$ miles S.E. by S. of the village so called, 2 miles W. of Laloi, and 4 miles N.W. of the large village of Vadúta: táluca Dhrápha. The station consists of a platform of rubble enclosing an isolated and perforated pillar of masonry, 2 feet in height, with an aperture for access to the lower mark. When visited in 1873-74, the upper mark was missing but the lower one was found intact. 1859.	22 4 37'61	70 7 23'76	* $\frac{722}{2}$	74
Bhokarva h.s. <i>Bukurwa H.S.</i>	Gohelvád	On a hill known as Sakhsbarotnátot, forming one of a range, about $1\frac{1}{2}$ miles N. by E. of the village of Bhokarva, $3\frac{1}{2}$ miles S. of Jejad village, and 3 miles S.S.E. of Vánshialí village: Bhávnagar State. The station consists of a platform of earth and rubble enclosing an isolated and perforated pillar of masonry, 2 feet high, with an aperture for access to the mark at the ground level. 1860.	21 18 20'44	71 33 10'06	* $\frac{829}{2}$	133 134
Bhopalka h.s. <i>Bopalka H.S.</i>	Hálár	On the northernmost of three small hills closely situated, about a mile N.E. of the village of this name, $2\frac{1}{2}$ miles N.E. by N. of Khákharda, and $2\frac{1}{2}$ miles N.W. by N. of the large village of Gadlika: Navánagar State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry. When visited in 1877-78, very little of the pillar was found standing, but the lower mark was found intact. A rectangular protecting pillar about 3 feet high was built over it. 1854.	22 7 48'57	69 26 10'35	† [223]	686
Bhopalka Temple <i>Bopalka Charan Temple</i>	"	Cháran temple nearly $\frac{1}{2}$ of a mile N.W. by W. of the village of this name, $1\frac{1}{2}$ miles N. by E. of Khákharda, and 3 miles N.W. by W. of the large village of Gadlika: Navánagar State. 1854.	22 7 18'4	69 25 10'7	...	957 958
Bhúteshrar Hill Temple <i>Butesar Temple</i>	Gohelvád	On the high road to Gogha, about 150 yards N. of the village of Bhúteshrar, and $3\frac{1}{2}$ miles W. of the town of Gogha: Bhávnagar State. 1853.	21 41 9'4	72 15 39'9	...	392
Bichri h.s. <i>Bicri H. Temple S.</i>	Hálár	On a temple about $\frac{1}{2}$ of a mile S.E. of the village so called, and 4 miles E. of the town of Rájkot: táluca Lodlika. 1853.	22 18 0'44	70 54 43'21	...	306 307
Bolás h.s.	Sorath	On a low table-land on the skirts of the Gír, about 2 miles N. of the village of Bolás, the same distance S. by W. of Pandva village, and 7 miles N. of the town of Sutrápáda on the shore of the Arabian Sea: Junágd State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, 2 feet in height. A rectangular protecting pillar $3\frac{1}{2}$ feet high was built over it. 1854.	20 56 43'65	70 32 1'74	† $\frac{183}{2}$	113 649

* To upper surface of perforated pillar.

† To lower mark-stone below rectangular protecting pillar.

‡ To upper surface of solid, circular pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Bora Dabha h.s. ... <i>Bora Daba H.S.</i>	Sorath	On the hill so called, about 2 miles N. of Isvaria village, 5 miles E. of Khirasa, and $6\frac{1}{2}$ miles N.E. of Kandorna, the two latter are large villages on the right bank of the Minsar river: Junágad State. The station consists of a platform enclosing a circular and isolated pillar of masonry, about 2 feet in height. When visited in 1875-76, the pillar was found considerably damaged, and a rectangular protecting pillar $3\frac{1}{4}$ feet high was built over the remains of it. 1859.	21 42 45' 05"	69 59 28' 37"	feet * $\frac{421}{\dagger}$	80
Bordki Hill Tree ... <i>Borki H. Tree</i>	Gohelvád	About a mile N.E. by N. of the village so called, the same distance N.W. by W. of Bhungar village, and 7 miles S.S.W. of Talúja town: Bhávnagar State. 1854.	21 15 35	72 1 48	...	761 762
Borkhitri Building ... <i>Borikettri Building Tower ruined</i>	Baroda State	Ruined tower of the building in the small village of that name, about $\frac{1}{4}$ of a mile W. of the high road from Dwárka to Arámda, $1\frac{1}{2}$ miles S.S.E. of Kachhigad, $1\frac{1}{2}$ miles N.N.W. of the large village of Barvála, and $2\frac{1}{2}$ miles W. by S. of Yasú. 1855.	22 18 43' 9"	69 0 2' 4"	...	981
Borádi Hill Mark ... <i>Bhowri H.S.</i>	Gohelvád	On the most southerly peak of a range of hills stretching N. and S., about $\frac{1}{4}$ a mile N. of the small village so called, $3\frac{1}{2}$ miles S.W. of Veláradar village, and $2\frac{1}{2}$ miles S. of Báola Hill: Bhávnagar State. 1860.	21 26 57' 54"	71 30 51' 00"	...	590
Brabána Hill ... <i>Barpalana S.W. Pt.</i>	"	Highest point towards the S.W. extremity of a long rocky hill, about $1\frac{1}{2}$ miles S.W. of Kheráli Mota village, $2\frac{1}{2}$ miles E. of Vávra village, and $5\frac{1}{2}$ miles N.W. by W. of Dungar town: Bhávnagar State. 1854.	21 6 54	71 32 25	[446]	797
Cháúchat Hill Mark (helio.) ... <i>Katch H. Mark</i>	Pálanpur State	On the hill so called in Chorvar Island in the Great Ran, about a mile W.S.W. of Grámbdi village, and $2\frac{1}{2}$ miles E. of Roju: táluca Cháúchat. 1856.	23 42 40' 13"	71 9 27' 20"	...	181
Chamárdhár Hill Mark (helio.)... <i>Chambradar H.</i>	Hálár	About $1\frac{1}{2}$ miles N. by W. of Vanána village, $2\frac{1}{2}$ miles N.W. of Nandána, and the same distance N.E. by E. of Esuvria: táluca Dhrápha. 1859.	22 1 22' 48"	70 4 0' 48"	621	411 412
Chamárdi Hill Mark No. 1 ... <i>Ijalwa H. Mk.</i>	Gohelvád	About $1\frac{1}{2}$ miles S. by W. of the large village so called, $2\frac{1}{2}$ miles E. by S. of Chogat village, and 5 miles S. by E. of Vala town: táluca Chamárdi. 1853.	21 49 11' 05"	71 56 40' 35"	...	376 377
Chamárdi Hill Mark No. 2 ... <i>Chambardi H. Mark</i>	"	Overlooking and immediately S. of the village of the same name, about 3 miles E. of Chogat village, and $\frac{1}{4}$ a mile E. of the metalled road to the town of Vala which lies 4 miles to N.N.W. on the S. bank of the Ghelo river: táluca Chamárdi. 1853.	21 49 54' 60"	71 56 58' 24"	...	378 379
Chamárdi h.s. ... <i>Chambardi H.S.</i>	"	On the highest of the rocky hills in the neighbourhood of the large village so called, about a mile S.E. of it, $3\frac{1}{2}$ miles E. of Chogat village, and 5 miles S.E. by S. of Vala town: táluca Chamárdi. The station consists of a platform enclosing a circular and isolated pillar of masonry, 5 feet in height. 1853.	21 49 26' 68"	71 57 31' 52"	* $\frac{361}{5}$	65 139

* To upper surface of circular pillar.

† See description of this station.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Chánch Hill Fort ... <i>Chanck H. Fort Tower</i>	Gohelwád	Conspicuous tower of the fort on a rock on the shore of the Arabian Sea, near the N.W. corner of the village of Chánch, about 3 miles E. of the mouth of the Motápát creek, 5 miles N.E. by E. of the island of Sálbet, and 3 miles W.S.W. of Kheda village: Bhávnagar State. 1854.	20 57 18·0	71 37 6·5	... feet	785 786
Chánch Tomb ... <i>Chanck Flag-staff Jugat Pir</i>	"	Flag-staff. Also called Jugat Pir, about 42 yards N. of Chánch Hill Fort: Bhávnagar State. 1854.	20 57 19·3	71 37 6·4	...	787 788
Chándinwáh Hill Mark (helio.)... <i>Chendanwa H. Mark</i>	Thar and Párkar	On the highest point of the northern of two large, isolated hills having the village of this name at its S.E. foot, about 3½ miles E. by N. of Dindsi village which lies a little E. of the main road from Nagar Párkar to Viráwáh, and 2 miles N.E. by N. of Sádulwáh village. 1856.	24 27 43·87	70 51 13·84	...	147 148
Changa h.s. ...	Hálár	On high ground about 1½ miles S.W. by W. of the village of this name on the left bank of the Rangmati river, 1½ miles E. of Abha village, and 9½ miles S.S.W. of the town of Navánagar: Navánagar State. The station consists of a platform of earth enclosing a solid, circular and isolated pillar of masonry, 1 foot high. A rectangular protecting pillar 3½ feet high was built over it. 1854.	22 19 45·03	70 3 50·02	* 175 1	77 694
Cháora Hill ... <i>Chowra S.W. end bush</i>	"	Bush at the S.W. end of the hill, about 2 miles W. of the village of that name, 2½ miles E. of Mora, 3 miles S.W. of Lákháni Mota on the right bank of the Phuljhar river, and 3½ miles W. by N. of Vantli: Navánagar State. 1854.	22 26 28	70 18 50	...	...
Chápra h.s. ... <i>Supra H.S.</i>	"	On a small hill about a mile S. of the hamlet so called, and 5 miles S.E. by E. of the town of Kálávad: Navánagar State. 1860.	22 10 15·78	70 29 35·09	421	455 456
Chára Hill Platfrom ...	Baroda State	On a sand ridge near the coast, about 1½ miles S.E. by E. of the village so called, the same distance S.W. by W. of Sarkharia village, and 10 miles W. of the island of Diu. 1854.	20 43 46·3	70 46 31·0	...	856
Chára h.s. ...	"	On a sand ridge near the coast, but not on the highest point in the neighbourhood, about 1½ miles W. by N. of the village so called, and 4 miles W. of Sarkharia village. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry. 1854.	20 44 54·17	70 44 2·65	* [28]	644
Chára Hill Temple ... <i>Chara Coast Small Temple</i>	"	Conspicuous, small temple on a sand hill near the coast, about ½ a mile S.W. of the village so called, 3 miles W. by S. of Sarkharia village, and 11 miles W. of the island of Diu. 1854.	20 44 21·1	70 44 59·0	...	857 858
Charádvá, XVIII ...	Jhálávád	<i>Fide page 8—J.</i> ...	22 57 20·81	71 5 41·08	† 218 ‡	24

* To upper surface of solid, circular pillar.

† To upper surface of solid pillar which was originally 16 feet high.

‡ See description of this station.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangles
Charakhla Hill Tower <i>Charakla V. Tower</i>	Baroda State	On an isolated hill, about $\frac{1}{4}$ a mile N.E. of the village of this name on the road to Dwárka town, and $8\frac{1}{2}$ miles E. of Bháora Mota village. 1854.	22 12 16	69 9 33	feet...	...
Charel Hill Mark (helio.) <i>Chareyl H.S.</i>	Hálár	About 2 miles N.E. of the village so called, $2\frac{1}{2}$ miles S.W. by W. of the large village of Sátodar, and 2 miles S.E. of Bardia village: Navánagar State. 1860.	21 58 5'58	70 27 38'67	483	471 472
Chatar Hill Mark (helio.) <i>Gadla H.S.</i>	"	About $2\frac{1}{2}$ miles E. by S. of the village so called, $2\frac{1}{2}$ miles N. of Vaudi village, and 9 miles S.W. of Kálávád town: Navánagar State. 1860.	22 7 0'43	70 18 53'77	842	459 460
Chelna Hill Tree ... <i>Tembi H. Tree</i>	Sorath	Conspicuous tree on a small, isolated hill about $\frac{1}{4}$ a mile W. of the village so called, and 2 miles N.E. of the large village of Timbi: Junágad State. 1854.	20 54 25	71 15 59	...	810 811
Chháya Building ... <i>Saya Building in Town</i>	"	Turret of the highest building in the village of this name on the W. bank of the Forbandar creek, about $2\frac{1}{2}$ miles E.S.E. of the well-known sea-port town of Forbandar: Forbandar State. 1854.	21 37 34	69 40 42	...	...
Chháya Hill Temple <i>Madli Temple</i>	"	Spire of the Mahájan temple known as Sadeshtar Math, on a ridge running parallel to and at a distance of about $\frac{2}{3}$ of a mile from the coast, $1\frac{1}{4}$ miles S.S.E. of the village of Chháya, and $3\frac{1}{2}$ miles S.E. by E. of the well-known sea-port town of Forbandar: Forbandar State. 1854.	21 36 24'1	69 41 13'5	...	926 927
Chibada Hill Mark (helio.) <i>Chibra H.S.</i>	Hálár	Close N.E. of the village of this name, about $3\frac{1}{2}$ miles N.N.E. of the large village of Lodhika, and nearly the same distance S. of that of Khiraara: Rájkot State. 1860.	22 10 58'48	70 41 45'39	587	454
Chikli Hill (helio.) ... <i>Chitley H.</i>	"	About $2\frac{1}{2}$ miles N. of the village of that name, 4 miles W.S.W. of Venáar, 5 miles N.W. of Kákrejji, and the same distance N.E. of Kiri: Mália State. 1856.	23 8 18'62	70 54 17'73	[61]	278
Chitalia, XXIX ...	Gohelváád	<i>Vide page 10—J.</i>	22 2 30'38	71 12 6'72	$\frac{836}{5}$	39
Chitrákheda, XXIII	Jhálavád	<i>Vide page 9—J.</i>	22 40 2'79	71 11 24'18	$\frac{481}{8}$	31
Chitri Hill Mark (helio.) <i>Moti Dhar H.S.</i>	Sorath	On the highest part of rising ground known as Moti Dhár, about a mile N.W. of the village so called, $1\frac{1}{4}$ miles E. of Barodar village, and $4\frac{1}{2}$ miles N.E. by E. of the town of Kesod on the metalled road from Vantbli to Verával: Junágad State. 1860.	21 20 45'07	70 20 48'71	180	524 525
Chitrod, XI ...	Cutch State	<i>Vide page 7—J.</i>	23 23 30'84	70 43 30'95	$\frac{490}{8}$	15, 16

* To upper surface of rectangular protecting pillar $3\frac{1}{2}$ feet high, built over circular pillar.
 † To upper surface of solid, circular pillar surmounted by a rectangular protecting pillar $3\frac{1}{2}$ feet high.
 ‡ To upper surface of solid, circular pillar.

† To upper surface of solid, circular pillar surmounted by a

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Chitrod Hill Fort (helio.) <i>Chitrore H. Fort</i>	Cutch State	On the conspicuous and highest tower on the bastion of the fort, about 5 miles S.E. of Bádargad, and 7 miles N.E. of Lákadiya. 1854.	23 24 23' 41"	70 43 5' 67"	feet * [456]	250 251
Chitrod Hill Mark (helio.)† <i>Katta H.</i>	"	On a low, flat hill, about 1½ miles S.W. by W. of the large village so called on the road from Lákadiya to Gágodar, and 3 miles E.N.E. of Shivilakha. 1856.	23 23 49' 54"	70 41 31' 37"	[447]	252
Chogat Hill Mark ... <i>Chowgat H. Mark</i>	Gohelvrád	On a conspicuous hill, about ¼ of a mile S. of the village so called, 3 miles W. by S. of Chamárdi village, and 4½ miles S. by W. of the town of Valu: Bhárnagar State. The point is denoted by a mark-stone. A rectangular protecting pillar 3½ feet high was built over it. 1853.	21 49 13' 67"	71 54 8' 04"	† [278]	374 375
Chomalpur Hill ... <i>Kanjarda H. Mark</i>	"	Highest point of the hill, about a mile N.W. of the village so called, and 4 miles in the same direction of the large village of Bhadli: táluka Bhadli. 1860.	22 3 52	71 26 16	...	569
Chorrád Building ... <i>Chorwar Ht. Building in Town</i>	Sorath	Highest building in the town, about 3½ miles W. of Khareda Police Station, and 6½ miles S.W. by S. of the town of Bhanduri, both on the metalled road from Vantli to the sea-port town of Verával: Junágad State. 1854.	21 1 47' 2"	70 16 24' 0"	...	894
Chorrád Bandar Building (helio.) <i>Chorwar Bunder Mk.</i>	"	On the centre of the godown, about 2 miles S. of the town, ¼ a mile S.W. by S. of a group of temples known as Jhund Mátá, and 4½ miles S.W. by W. of Khareda Police Station: Junágad State. The point is denoted by a broad arrow of the Marine Survey. 1854.	20 59 57' 99"	70 16 12' 56"	* [35]	892 893
Chorrád Bandar Tower ... <i>Chorwar Bunder Tower</i>	"	Conspicuous tower about 20 yards S. by E. of Chorrád Bandar Building: Junágad State. 1854.	20 59 57' 4"	70 16 12' 6"	...	890 891
Chotila Hill Temple ...	Jhálávrád	Known also as Cháund Mátá. On a small, conical and isolated hill about a mile E. by S. of the large village so called on the Rájkot-Ahmedabad high road: thána Chotila. 1853.	22 25 8' 2"	71 15 4' 0"	1162	304 305
Churia Hill Peak No. 1 ... <i>Matha Tekri H. Peak Highest</i>	Thar and Párkar	The highest and centre one of three peaks, about ¼ of a mile S. by E. of the village of this name, and 4 miles E.S.E. of the large village of Berána on the road from Pethápúr to Churia: táluka Nagar. 1856.	24 24 3	71 6 28	[277]	154 155
Churia Hill Peak No. 2 ... <i>Matha Tekri H. Peak Lower</i>	"	The lowest and westernmost of three peaks, about ¼ a mile S. of the village of this name: táluka Nagar. 1856.	24 23 58	71 6 20	...	156 157
Chusra Bot Island ... <i>Chusra Island</i>	Baroda State	Highest point of the northern of two small islands of that name in the Gulf of Cutch, about 3 miles S.W. of Daida island, the same distance N.W. of Ajár island, and 7 miles E.N.E. of Poshitra village. 1855.	22 25 7	69 19 8	...	...

* To ground level.

† For another triangle fixing this point, see the Synoptical Volume of the Cutch Coast Series.

‡ To mark-stone.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Dabdaba Island	Baroda Stato	Highest point at the E. end of the small island of that name in the Gulf of Cutch, about 2 miles S.E. of Poshitra village, 4½ miles N.E. by E. of Malvel, and 5½ miles E. of Itájpura. 1855.	° ' " 22 22 4	° ' " 69 14 8	feet ...	1015
Dadrecha h.s. <i>Dadresa H.S.</i>	Sorath	On the eastern and conspicuous point on the S.W. side of the mass of hills so called, about 1½ miles S.W. by S. of the hamlet of Vániavár, 3½ miles S. of Málanka village, and 4 miles S.E. of Dedikal village: Jetpur State. 1860.	21 11 38'70	70 32 54'66	1073	592 593
Dadva Hill Tree <i>Daruah H. Tree</i>	Hálár	Conspicuous tree on a conical hill at the junction of the boundaries of the three states of Balldhoi, Navánagar and Gondal, about 2½ miles N.E. by E. of Dadva town. 1853.	22 1 50	71 7 27	...	322 323
Daiya Hill Temple <i>Daya H. Temple</i>	"	About ¼ of a mile E. of the village so called, 2 miles S. by W. of Vejágám village, and 7½ miles W. of the town of Gondal: Gondal State. 1853.	21 57 57'3	70 43 10'1	...	330 331
Dájka, VI	Cutch State	<i>Fide page 6—<i>J.</i></i>	23 41 32'43	70 52 3'81	* 126 0	9
Dángarvádi, XLII	Portuguese Territory	<i>Fide page 12—<i>J.</i></i>	20 43 0'53	70 58 32'39	† 96	55
Dánidhár t.s. <i>Dhanidhar H.S.</i>	Hálár	On a small hill immediately W. of the hamlet so called, about 2½ miles N.N.W. of the village of Bámangám, and 9 miles S. by E. of Kákrad town: Navánagar State. The station consists of a tower of earth and stones enclosing an isolated and perforated pillar of masonry, 10 feet high, with an aperture for access to the lower mark. 1860.	22 5 5'95	70 27 15'88	‡ 566 10	93
Dánta h.s.	"	On the peaked hill called Dánta Bhat, about 1½ miles S.W. of the village of this name, 6 miles S.E. of the town of Saláya, and 3½ miles S. by W. of Mándha Nána: Navánagar State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry. When visited by the Levelling Party in 1874-75, only one-fourth of the upper surface of the platform was found, but the upper mark-stone was quite perfect. When again visited by the Topographical Survey Party in 1877-78, a low pillar of about 1 foot in height partly damaged was found but the upper mark-stone was missing. The pillar was repaired and a rectangular protecting pillar about 3 feet high was built over it. 1854.	22 15 46'96	69 42 2'35	† 217'87	690
Dántrána Temple No. 1	"	Spire of the temple in the village so called, about 3½ miles N. of Mánpur, and 2½ miles W. of Sonárdi Mota: Navánagar State. 1854.	22 11 40'6	69 27 16'3	...	1024 1025
Dántrána Temple No. 2 <i>Dantrana Mahdeo Temple</i>	"	Broken top of the Mahádov temple close N.E. of the large village of this name on the road to Dwárka town, and 3½ miles N. of Sidhsara village: Navánagar State. 1854.	22 11 47	69 27 26	§ [132]	...
Dátha Temple <i>Dhatta (Temple in Town)</i>	Gohelváđ	Large Jain temple in the S.W. portion of the town: táluca Dátha. 1854.	21 11 34'6	71 59 56'7	...	766 767

* To mark on stone.

† To upper surface of solid, circular pillar.

‡ To upper surface of perforated pillar.

§ To ground level.

Name of Station or Point	District	Description	Latitude North	Longitudo East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Dehgám s. ... <i>Konchri H.S.</i>	Sorath	On the W. brow of a table-land, about 1½ miles W. of the village of this name, 2¼ miles N.E. of Kunchdi, and 4¼ miles N.N.W. of the well-known sea-port town of Porbandar: Porbandar State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, 2 feet in height, having mark-stones at top and bottom. When visited in 1876-77, the pillar was found about 1 foot high, but the upper mark-stone was missing. The pillar was repaired and a rectangular protecting pillar 3½ feet high was built over it. 1854.	21 42 4' 49"	69 36 57' 20"	$\frac{\text{feet}}{2}$ [67]	671
Dehvása h.s. ... <i>Dewasa H.S.</i>	"	On a sand hill, about a mile S. of the village of this name, ½ of a mile from the coast, and 1½ miles W. by N. of the large village or town of Sil: Junágad State. The station consists of a platform of loose stones enclosing a solid, circular and isolated pillar of masonry, having mark-stones at top and bottom. When visited in 1876-77, the platform was found in a most dilapidated state and the mark-stone lying on a heap of stones. 1854.	21 11 31' 35"	70 3 40' 17"	† [51]	659
Dehvása Tower ... <i>Dewasa V. Tower</i>	"	In the village of this name, about 1½ miles N.W. by W. of the large village of Sil, and the same distance S.E. of that of Atroli: Junágad State. 1854.	21 12 15' 0"	70 3 43' 3"	...	912
Delváda Idgah ... <i>Dilwara (Idga)</i>	"	N. minaret of the Idgah in the S.E. part of the town on the right bank of the Machundri river: Junágad State. 1854.	20 46 27' 1"	71 5 11' 1"	...	822
Derdi Jánbáini Hill Mark ... <i>Dherda H.S.</i>	Gohelvád	On a low hill, about a mile N.N.E. of the village of this name on the metalled road from the town of Bábra to that of Dhasa, and 1½ miles E. of Hirána: thána Bábra. 1860.	21 49 56' 46"	71 29 37' 96"	390	581
Deri Hill Mark (helio.) ... <i>Dehri H.S.</i>	Hálár	About a mile S.W. of the village of the same name, and 2 miles N.E. of the town of Kharedi: táluks Mulina Deri. 1860.	22 5 5' 93"	70 33 26' 36"	510	465 466
Desalpur Hill Mark (helio.) ... <i>Mowaka Tekri H.</i>	Cutch State	About 1½ miles E. by S. of the large village of this name, and 2½ miles N.W. by N. of that of Gedi. The point is denoted by a mark-stone sunk about 1½ feet and is within a foot of a math. 1856.	23 44 25' 90"	70 45 18' 52"	[118]	197 198
Desar Kolinu Tower ... <i>Koli Dasar Highest Tower</i>	Sorath	Highest tower on a low hill about 100 yards W. of the village of that name, and 3½ miles W.S.W. of the town of Una on the right bank of the Machundri river: Junágad State. 1854.	20 47 57' 0"	71 2 6' 9"	...	821
Detad h.s. ... <i>Dater H.S.</i>	Gohelvád	On Duba, the western of two hills, about 1½ miles E.S.E. of the village of Detad, the same distance N.W. of Bhánkhi village on the right bank of the Dhátarvari river, and 8 miles N. by W. of Rájula town: Bhárnagar State. The station consists of a platform of earth enclosing an isolated and perforated pillar of masonry, 2 feet high, with an aperture for access to the lower mark. A rectangular protecting pillar 3½ feet high was built over it. 1860.	21 9 0' 62"	71 26 33' 53"	‡ $\frac{397}{2}$	135

* To upper surface of solid, circular pillar.

† To ground level.

‡ To upper surface of perforated pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Devdhár h.s. ... <i>Devdhar H.S.</i>	Hálár	On a hill, about $\frac{1}{2}$ a mile E. of the old site of the village so called, $2\frac{1}{2}$ miles S.E. by S. of the large village of Nikáva, and $7\frac{1}{2}$ miles N.E. by N. of the town of Khavedi: Navánagar State. The station consists of a platform of earth enclosing an isolated and perforated pillar of masonry, 2 feet high, with an aperture for access to the lower mark. A rectangular protecting pillar $3\frac{1}{2}$ feet high was built over it. 1860.	22 9 26·65	70 35 54·91	feet * $\frac{542}{2}$	95
Devki Gálol, XXXII	Sorath	<i>Vide page 11—J.</i>	21 37 58·70	70 43 50·16	† $\frac{508}{4}$	42
Devli Tree ... <i>Dipti Palm Tree</i>	Baroda State	About $\frac{1}{2}$ a mile S.E. of the village so called, and $1\frac{1}{2}$ miles in the same direction of the town of Kodinár on the left bank of the Singaura river: táluca Amreli. 1854.	20 46 46	70 45 54	...	...
Devrána s. ... <i>Dewrana H.S.</i>	Sorath	In a field, about $\frac{1}{2}$ of a mile S.W. of the village of this name, $1\frac{1}{2}$ miles E. by S. of Kakána, and $2\frac{1}{2}$ miles S.W. by W. of Nunáda: Junágad State. The station consists of a large platform of stones and earth enclosing a solid, circular and isolated pillar of masonry, about 1 foot high, having two mark-stones, one at the surface of the ground and the other on the top. 1854.	21 15 9·17	70 9 18·10	‡ [89] 1	658
Dhádia Hill Tree ... <i>Dadia H. Tree</i>	Gohelvád	On a hill also known as Lákhátimbo, about a mile S.W. of Dhádia village, $1\frac{1}{2}$ miles N.E. of Vanot, and 2 miles S.S.W. of Hádia on the main road from Kundia to Mahuva: Bhávnagar State. 1860.	21 10 31	71 32 0	§ [444]	...
Dhámlej h.s. ... <i>Danlej H.S.</i>	Sorath	On a sand ridge, about $2\frac{1}{2}$ miles W. by N. of the village so called, the same distance S. of the large village of Lohva, and $6\frac{1}{2}$ miles S.E. by E. of the town of Sutrúpáda on the coast: Junágad State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry. 1854.	20 47 35·17	70 37 1·97	|| [72]	646
Dhándha Hill Mark (helio.) ... <i>Badapur Hill</i>	Hálár	About a mile S.W. by S. of the village of this name on the left bank of the Nágmati river, 2 miles E.N.E. of Pipartora, and $2\frac{1}{2}$ miles S. of Léoria: Navánagar State. 1859.	22 17 15·87	70 9 27·14	301	397
Dhándhalpur h.s. ... <i>Dandalpur H.S.</i>	Jhálárád	On a small, isolated hill about $1\frac{1}{2}$ miles N.W. of the town of this name, and 10 miles E. by S. of Chotila on the high road from Rájkot to Ahmedabad: táluca Sudámda. The station consists of a platform of earth, about 10 feet square, enclosing an isolated and perforated pillar of masonry, 2 feet high, with an aperture for access to the lower mark. A rectangular protecting pillar 3 feet high was built over it. 1860.	22 24 23·37	71 23 26·45	* $\frac{777}{2}$	116
Dhandhusar Tree ... <i>Dandusar Palm Tree</i>	Sorath	Palm tree close to a temple at the S.W. extremity of the village so called, a short distance from the W. bank of the Uben river, and $2\frac{1}{2}$ miles E.S.E. of Rauni village: Junágad State. 1860.	21 32 43	70 23 44	...	507 508

* To upper surface of perforated pillar.
† To ground level. § To base of tree.

‡ To upper surface of solid, circular pillar surmounted by a rectangular protecting pillar $3\frac{1}{2}$ feet high.
|| To upper surface of solid, circular pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Dhánk Hill Temple <i>Dank H. Temple</i>	Sorath	Cupola of the temple on a spur at the south-eastern extremity of the Alech Hills, immediately N.W. of and overlooking the large village of Dhánk: Junágad State. 1859.	21 46 49.3	70 10 3.4	feet * [442]	421
Dhanoj Hill Mark (helio.) <i>Bakola Peak</i>	"	On the eastern of two peaks in the Gír, about a mile S. of the village of Dhanoj, 1½ miles W. by N. of Tájpur village on the Hiran river, and 3 miles N. of Bholávat village on the main road from Verával to Visávar: Junágad State. 1860.	21 3 30.11	70 30 32.15	487	546
Dhasa Hill Tree ... <i>Dassa H. Tree</i>	Gohelváđ	About 1½ miles S.S.E. of the village of the same name, 3 miles N.W. by W. of Jalálpur, and 13 miles S. by W. of Gadhada town: Bhávnagar State. 1860.	21 46 53	71 34 7	...	...
Dhenki Building ... <i>Juna Dingi ruined Building</i>	Baroda State	Ruined building on the site of old Dhenki, about ¼ a mile S. of the high road from Dwárka to Gurgat, and 1 mile N.E. by N. of the larger village of Dhenki. 1855.	22 12 35.0	69 7 11.5	...	974
Dhenki Fort ... <i>Juna Dingi Fort Tower S.E. angle</i>	"	S.E. angle of the tower of the fort about 2¼ miles W. of Charakhia village on the road to Dwárka, and the same distance N. by E. of Gorinja village. 1854.	22 11 51.5	69 6 44.3	...	973
Dholidhár Hill Mark (helio.) ... <i>Dhar H.S.</i>	Gohelváđ	On a small hill of that name, about ¼ a mile S.S.W. of the village of Dhár, 2 miles W. by N. of Piára village, and 8 miles E.N.E. of Kundla town: Bhávnagar State. The point is denoted by a mark-stone. A rectangular protecting pillar 3½ feet high was built over it. 1860.	21 23 19.26	71 27 47.67	† 355	594 595
Dhoráji Temple ... <i>Doraji Temple</i>	Hálár	Spire of the black temple in the centre of the town on a small river called the Sáphra, an affluent of the Bhádar river which flows about 2½ miles W. of the town: Gondal State. 1860.	21 44 17.1	70 29 30.6	...	497
Dhotar Hill Mark (helio.) ... <i>Dhotur H.</i>	Thar and Párkar	On a small hill about 2 miles S.W. of the large village of this name: táluKa Nágara. 1856.	24 30 19.95	70 46 57.95	...	146
Dhrásanvel h.s. ... <i>Dhansanveil H.S.</i>	Baroda State	On the S. brow of the spur of a small hill close S.E. of the village of that name at the junction of the roads from Bháora, Mulvásar, Rángásar, Kaliánpur, Vasáí and Barrála. The station is denoted by a circle and dot cut on a large rock. 1855. ●	22 17 10.36	69 4 54.71	‡ [101]	70‡
Dhrásanvel Temple ... <i>Dhansanveil new Temple</i>	"	The new and western of the two temples close E. of the village of that name. 1855.	22 17 15	69 4 54	...	...
Dhrol Hill Tomb ...	Hálár	Tomb of a chief of Dhrol, on the site of the battle field of Bhucher Mori, about 1½ miles N.W. of the town. A metalled road from Dhrol leads to the tomb: Dhrol State. 1854.	22 34 53.7	70 26 25.0	§ [93]	1082

* To base of temple.

† To mark-stone.

‡ To circle and dot cut on rock.

§ To base of tomb.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Dhruenthal Tower ... <i>Dromter V. Tower</i>	Hálár	In the village of this name, about $\frac{1}{2}$ a mile W. of the Sáni river, $1\frac{1}{2}$ miles N.N.E. of Rangpur, and 3 miles S.S.W. of the large village of Movan: Navánagar State. 1854.	0 1 " 22 4 39	0 1 " 69 30 45	<i>feet</i>...	...
Dhruvála Hill Mark No. 1 (helio.) <i>Dudia H.</i>	Sorath	About 2 miles N. of the village of this name, and $3\frac{1}{2}$ miles W. of Amrápur: Junágad State. 1859.	21 43 29' 22	70 2 22' 50	702	428 429
Dhruvála Hill Mark No. 2 (helio.) <i>Modalia H.</i>	"	About a mile S. by W. of the village of this name, $4\frac{1}{2}$ miles S.W. of Amrápur, and $3\frac{1}{2}$ miles N. by E. of the fortified town of Kutiyána on the right bank of the Bhádar river: Junágad State. 1859.	21 40 45' 09	70 2 13' 57	412	430
Dhuváv Temple ... <i>Dumao Temple</i>	Hálár	Spire of Maháján temple in the village of that name on the high road from Navánagar to Dhrol, and about $3\frac{1}{2}$ miles E.N.E. of Navánagar town: Navánagar State. 1854.	22 29 8' 9	70 10 39' 4	...	1069 1070
Dindsi Hill Mark (helio.) <i>Dingsey H. heap</i>	Thar and Pákar	On a small, isolated hill having the village of Dindsi at its southern foot, about $\frac{1}{2}$ of a mile E. of the high road from Nagar Pákar to Virwáh. The point is denoted by a mark on pillar covered over by a pile of stones. 1856.	24 27 15' 31	70 48 29' 48	[346]	149 150
Diu, Bránkávára Tree <i>Diu Wanakbara B. Tree</i>	Portuguese Territory	Conspicuous bar tree about $\frac{1}{2}$ of a mile N.E. of Bránkávára village at the western extremity of the island of Diu. 1854.	20 43 4	70 55 8	...	...
Diu Flag-staff No. 1	"	Castle flag-staff S.W. of the citadel at the E. extremity of the island. 1853.	20 42 47' 7	71 2 13' 6	...	828 829
Diu Flag-staff No. 2	"	Over the gateway at the S.W. corner of the town. 1853.	20 42 44' 4	71 1 22' 8	...	830
Diu Guard House ...	"	Flag-staff on the principal guard house of Forte do Passo Secho, about $1\frac{1}{2}$ miles N. of the village of Dúngravádi, and 4 miles W. by N. of the town. 1854.	20 44 7' 4	70 58 21' 9	...	841
Diu Level Datum Tower s. <i>Diu Datum Pillar Tower</i>	"	At the N.W. corner of the wall which surrounds the town. 1855.	20 43 11' 45	71 1 22' 38	* 14' 28	831 832
Diu, St. Francis' Church	"	Large, white spire of the church in the S.E. portion of the town. 1853.	20 42 42' 8	71 1 48' 5	...	835 836
Diu, St. Remedio's Church	"	Large, white building on a small, isolated hill, about $1\frac{1}{2}$ miles W. of the town, and $\frac{1}{2}$ of a mile N.W. of the village of Podáme. 1853.	20 42 43' 5	71 0 4' 7	...	837 838
Diu, St. Thomas's Church	"	Centre cross of the church E. of the town. 1853.	20 42 53' 4	71 1 49' 6	...	839 834

* To upper surface of slab on which is engraved the numeral 14, which is flush with stone pavement of tower. This was obtained by direct comparison with the adjoining Tide Gauge, vide pages XI—*J.* and XII—*J.* of the Introduction.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Diu Tower of Silence <i>Diu Parsis' Cemetery</i>	Portuguese Territory	Parsi tower on rising ground on the coast, about $\frac{1}{2}$ a mile S.W. by W. of Podáme village, the same distance E. by S. of Málalo village, and $1\frac{1}{2}$ miles W. by S. of the town. 1854.	0 1 " 20 42 23' 9"	0 1 " 70 59 49' 1"	feet ...	830 840
Diu Watch Tower	"	On the southern edge of the town, and about 200 yards W. of St. Francis' Church. 1853.	20 42 40	71 1 38	...	...
Dodhia Temple <i>Chikauri Bg.</i>	Hálár	Spire of the large, white temple about $\frac{1}{2}$ of a mile N.W. of the village so called, and $3\frac{1}{2}$ miles E.S.E. of Chikávi: Navánagar State. 1854.	22 22 41' 3"	70 0 16' 8"	...	1056
Dolása Tree <i>Dolsa Date Tree in Village</i>	Baroda State	Date tree about $\frac{1}{2}$ a mile W.S.W. of the village so called, a short distance S. of the road from Velva village to Dolása, and 1 mile E. by S. of Advi village: táluka Amroli. 1854.	20 49 5	70 53 30	...	...
Dolia Sand Hill <i>Doalia H. Ht. Point</i>	Gohelvád	Highest point of the sand hill on the coast, about a mile W. of the village so called, and 8 miles S.W. of Mahuva town: Bhávnagar State. 1854.	21 0 39	71 42 51	...	784
Dudhai s.	Hálár	On the embankment of a tank close S. of the village of that name, about $4\frac{1}{2}$ miles S.W. of the large village of Ambran, $2\frac{1}{2}$ miles S. of Kotárie, $2\frac{1}{2}$ miles S.E. of Mánámora, and the same distance E. by S. of Bhimkafa: Navánagar State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry. When visited by the Levelling Party in 1874-75, no mention was made of any alteration in the construction of the station. 1854.	22 47 20' 68"	70 32 34' 05"	* 59' 20"	720
Dudhai Temple	"	S.W. temple at the N. extremity of the village so called, about $4\frac{1}{2}$ miles S.W. by W. of Ambran village: Navánagar State. 1854.	22 47 22	70 32 33	...	...
Dudhála Hill <i>Gorus Hill</i>	Gohelvád	Also called Gorus hill, about 200 yards N. of the village of Dudhála which lies at its southern foot and on the main road from Kundla to Mahuva, and $3\frac{1}{2}$ miles S. of the town of Khunfávada: Bhávnagar State. 1854.	21 8 33	71 41 45	[257]	...
Dudivádar Hill Mark (helio.) <i>Dudawader H.S.</i>	Hálár	On rising ground, about 2 miles W. by S. of the village so called on the Pophal river, and 4 miles S. by W. of the town of Kandorna: Gondal State. 1860.	21 50 5' 14"	70 31 5' 51"	290	491 492
Dundi Hill Peak <i>Dondi Peak</i>	Baroda State	One of the most prominent peaks in the Gir, about 2 miles S.E. of Ravana village, 4 miles S.S.E. of Govindpura, and $5\frac{1}{2}$ miles S.W. of Jira village. 1853.	21 11 31	71 3 26	[1581]	351 352
Dungar h.s. <i>Donger H.S.</i>	Gohelvád	On an isolated, conical hill, about $\frac{1}{2}$ a mile W. of the town so called, on and S. of the road from Dungar to Rájpada village: Bhávnagar State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry. 1854.	21 4 2' 34"	71 35 48' 37"	* 151'	137 628
Dungar Hill Tree <i>Donger (H. Ft. Tree)</i>	"	Highest tree on the ruins of an ancient fort on rising ground and adjoining the town on the high road from Mahuva to Pipáváv Bandar: Bhávnagar State. 1854.	21 4 9	71 36 18	...	...

* To upper surface of solid, circular pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Dungarpur, XX	Jhālāvād	<i>Fide</i> page 9— <i>J.</i> Note.—When visited by the Topographical Survey Party in 1872, the station was described as follows:—"A pillar of masonry 8 feet high is built over the station mark and is surrounded by a platform of rubble stone."	22 48 13' 54	71 2 6' 62	<i>feet</i> * 404	27
Dwārka Temple	Raroda State	Spire of the famous Hindu temple in the S.E. part of the sea-port town of Dwārka. 1855.	22 14 13' 8	69 0 30' 2	...	977 978
Evāl, IV	Pālanpur State	<i>Fide</i> page 6— <i>J.</i>	23 52 5' 86	71 9 6' 14	* 287 5	6
Fareni h.s. <i>Gantiawallidhar H.S.</i>	Hālār	On the highest of a group of hillocks lying about a mile S.E. by E. of the village so called, 1½ miles N. of Parbadi Nāni village, and 3 miles N.E. by N. of the village of Thorania: Gondal State. The station consists of a platform of earth enclosing an isolated and perforated pillar of masonry, 2 feet high, with an aperture for access to the lower mark. A rectangular projecting pillar 3½ feet high was built over it. 1860.	21 42 13' 49	70 33 29' 08	† 283 2	89
Fatehgad Fort Tower No. 1 <i>Fatiagad Round Tower</i>	Cutch State	Conspicuous, square-topped, round tower, the highest of four towers in the hill fort so called, about 7 miles E. by S. of the town of Gedi on the left bank of the Kārūsavādi river. 1854.	23 42 3' 8	70 53 21' 2	...	188 189
Fatehgad Fort Tower No. 2 (helio.) <i>Fatiagad Square Tower</i>	"	On the S.W. corner of the square tower of the fort. 1856.	23 41 51' 77	70 53 13' 48	...	190 191
Fatehgad Hill Mark (helio.) <i>Boojnairi H. Platform</i>	"	On an isolated peak about 2½ miles W. by S. of the town so called, and 4½ miles E. by S. of the town of Gedi. The point is denoted by a mark in the centre of a platform. 1856.	23 41 28' 77	70 51 2' 27	‡ 166	192 193
Gadhada Hill Mark (helio.) <i>Gora H.</i>	"	On a knoll on the range of hills locally called Nilva, running nearly E. and W. and bordering the Ran, about 5½ miles N.W. of the large village of Bela. 1856.	23 54 32' 16	70 46 7' 24	[809]	172 173
Gadhada h.s. <i>Gaddra H.S.</i>	Goholvād	On an isolated hill, about a mile S.E. of the town of the same name: Bhāvnagar State. The station consists of a platform of earth enclosing an isolated and perforated pillar of masonry, 2 feet high, with an aperture for access to the mark at the ground level. 1860.	21 57 28' 76	71 37 39' 49	† 343 2	123 124
Gadhada Temple <i>Gaddra Temple</i>	"	Large, white temple in the centre of the town of the same name: Bhāvnagar State. 1853.	21 57 57' 2	71 36 58' 0	...	357 358
Gadhada t.s. <i>Gadra H.S.</i>	"	On a ruined tower in the N.W. corner of the village of the same name, on a ridge on the northern shore of the Gulf of Cambay, and 5 miles S.S.W. of Mahuva town. The tower on which the station is built is not on the highest part of the ridge: Bhāvnagar State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry. 1854.	21 1 12' 78	71 47 6' 85	...	623

* To upper surface of circular pillar.

† To upper surface of perforated pillar.

‡ To mark in centre of platform.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Gádhakda Bastion ... <i>Gadagra Bastion Stn.</i>	Sorath	The most easterly and highest bastion of the fort wall surrounding the large village of the same name, about 8 miles S.E. of Kundla town: Junágad State. 1860.	21 15 28.8	71 26 43.9	581	599
Gadháli Hill Fort ... <i>Gadhála H. Fort Tower</i>	Gohelvád	Tower of the fort at the S.W. end of the large village of the same name, about a mile S.E. of Chirorda village, and 6½ miles S.E. of Gadhada town: taluka Gadháli. 1860.	21 52 49.6	71 39 29.9	...	578
Gadhár Hill ... <i>Garar Gir Hill</i>	Sorath	A conspicuous point among a mass of hills, about 1½ miles N.N.E. of the village of Bábria, 3½ miles W. by S. of Mándri village on the Machundri river, and 6½ miles N.W. by N. of the town of Gadhra: Junágad State. 1864.	20 59 28	70 55 20	...	...
Gadharia Hill Mark <i>Gadharia H.S.</i>	Jhálárovád	About ¼ of a mile E.S.E. of the village of this name close to the right bank of the Bhádar river, 1½ miles S.W. by S. of Saida Mota, and 4½ miles W.N.W. of the town of Páliyád: taluka Páliyád. 1860.	22 17 13.93	71 32 14.11	468	559 560
Gadheshvar h.s. ... <i>Gadesar H.S.</i>	Gohelvád	On a low hill, about a mile S.W. of the village so called, and 3½ miles N. of Dátha town: Bhávnagar State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry. A rectangular protecting pillar 3½ feet high was built over it. 1854.	21 14 20.55	71 59 52.20	[147]	620
Gága Hill Peak ... <i>Goga Peak</i>	Hólár	An isolated hill peak about a mile S. of the village of that name, 2 miles N. of Bámnisar, 5 miles W.S.W. of the large village of Bhátia, and close E. of the road from Gága to Bámnisar: Navánagar State. 1854.	22 7 34	69 14 23	[67]	968 969
Gága House ... <i>Goga Highest House</i>	"	Highest house in the village so called at the junction of the roads from Gurgat and Nandána villages: Navánagar State. 1854.	22 8 19.2	69 14 10.0	...	970
Gágodar Hill Tower <i>Kagoda Tower</i>	Cutch State	Highest tower on a hill close S.E. of the large village of that name, about 3 miles W. of Kámner, and the same distance S.W. by S. of Ghánithal. 1854.	23 24 28.3	70 51 22.5	...	243 244
Gangájal h.s. ...	Ahmedabad	Towards the north-western edge of a hill, about ¼ a mile S. by E. of the village of this name on the right bank of the Bhádar river, 1½ miles N.W. of Samadiála, and 1½ miles E.N.E. of Máthra Mota: Dhandhuka subdivision. The station consists of a platform of rubble stone enclosing an isolated and perforated pillar of masonry, 2 feet high, with an aperture for access to the lower mark. A rectangular protecting pillar 3½ feet high was built over it. 1860.	22 16 6.72	71 26 18.78	$\frac{612}{2}$	117
Gáugecha Hill Mark (helio.) ... <i>Manik Talao H.S.</i>	Sorath	On rising ground, about 100 yards W. of the tank called Manik Talav, 1½ miles W. of the village of Gáugecha, 1½ miles S.E. by S. of Kailána on the metalled road from Vunthli to Veváral, and 3½ miles N.W. by N. of the town of Málna on the right bank of the Megal river: Junágad State. 1860.	21 12 17.61	70 19 26.10	225	536 537

* To upper surface of perforated pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Gángta, VII	Cutch State	<i>vide</i> page 6— <i>J.</i>	23 44 5' 53	70 32 22' 49	<i>feet</i> * 211 5	10
Gángva Hill Peak ... <i>Gangva H. Pk.</i>	Gohelwád	About 2½ miles N.E. of Varal village, 4 miles S.E. of Tána village, and 1 mile W. of Bháukhal village: Bhávnagar State. 1860.	21 32 32	72 3 38	[712]	...
Gangvi Hill Tree	"	On an isolated hill, about 3 miles E. of Varal village, 1½ miles N. of Múmsi village, and 2½ miles W. of Bhárol village: Bhávnagar State. 1854.	21 31 24	72 4 17	...	...
Gedi Hill Mark ... <i>Matha ka Dhar</i>	Cutch State	On a high point of the ridge called Matha-ka-Dhar, about 1½ miles N.W. of the large village of Gedi, and 2½ miles S.E. of that of Desalpur. 1856.	23 43 23' 15	70 45 47' 28	[137]	195 196
Gedi Hill Math ... <i>Matha Kalas II.</i>	"	Kalas of Gosáins' Math about ¾ of a mile N.W. by N. of the large village of Gedi. 1856.	23 43 17' 7	70 46 17' 5	...	194
Ghadechi h.s. <i>Gadechi H.S.</i>	Baroda State	On the N. extremity of a ridge, about a mile N. by W. of the village so called, 1½ miles S.S.W. of Sámsoar, and 4 miles E. of Mojap on the main road from Dwárka to Arámda. The station consists of a platform of loose stones enclosing an isolated pillar of masonry, 5 feet in height. When visited by the Levelling Party in 1874-75, the station was found to consist of the usual rough stone platform about 10 feet square and 3 feet high. Neither the upper mark-stone nor any trace of the pillar was to be found. The centre of the platform was carefully removed right down to the rock and no middle mark-stone or mark on the rock could be found. 1855.	22 22 4' 56	69 4 59' 01	† 89' 18 ‡	703
Ghadechi Math ... <i>Gadachi Vil. Mut</i>	"	Gosáins' Math close S. of the village of Ghadechi, about 2½ miles N. of Kaliánpur, 2½ miles W. by N. of Goráli, 3½ miles N.E. of Vasái, and 4 miles E. by S. of Mojap. 1855.	22 21 11' 2	69 5 8' 3	...	1007
Ghumli Tower ... <i>Gumli Tower</i>	Sorath	About 3 miles N.N.E. of the town of Chorvád, 3½ miles N.W. of the Khareda Police Station, and the same distance S.W. by S. of the town of Bhanduri both on the metalled road from Vanthli to the sea-port town of Verával: Junágad State. 1864.	21 4 2' 6	70 17 29' 2	...	805 806
Girnár Hill Mark (helio.) <i>Girnár Highest Point</i>	"	On the peak called Gorakhnáth, the highest of the five principal peaks of the well-known Girnár hill: Junágad State. 1860.	21 31 36' 55	70 34 19' 04	3664	518 519
Girnár h.s. <i>Datar H.S.</i>	"	On the well-known hill called Dátar which belongs to the Girnár group, and has near its summit a small shrine. The station is about 7 miles N.W. of the large village of Bilkha, and 3 miles S.W. of the town of Junágad: Junágad State. The station consists of a platform of earth and rubble enclosing an isolated and perforated pillar of masonry, 2 feet in height, with an aperture for access to the lower mark. 1860.	21 29 38' 51	70 32 47' 45	§ 2777 2	105

* To upper surface of solid, circular pillar.
perforated pillar.

† To surface of rock at base of pillar.

‡ See description of this station.

§ To upper surface of

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Girnár Temple No. 1 ...	Sorath	Spire of the temple known as Amba Mâta or Amba Devi on the fourth of the five principal peaks of the Girnâr hill, close W. of Gorakhnâth peak: Junâgâd State. 1860.	21 31 38'·7	70 34 6'·8	... <i>feet</i>	514 515
Girnâr Temple No. 2 ... <i>Girnâr 2nd Peak Highest Temple</i>	"	Highest temple on the peak known as Guru Dattâtreyâ, the second of the five principal peaks of the well-known Girnâr hill, immediately E. of Gorakhnâth peak: Junâgâd State. 1860.	21 31 38'·2	70 34 27'·7	...	516 517
Gogha Idgah ... <i>Gogo Idga</i>	Almedabad	Centre of the Idgah between two palm trees about $\frac{1}{4}$ of a mile S.W. of the S.W. end of the town: Gogha sub-division. 1853.	21 40 38	72 18 47	...	...
Gogha Sally-port ... <i>Gogo W. Sally Port</i>	"	The main entrance on the west side of the town: Gogha sub-division. 1853.	21 41 11'·4	72 18 47'·5	...	393
Gogha s. ... <i>Gogo Stn.</i>	"	Close to and S.W. of the Idgah: Gogha sub-division. The station consists of a platform enclosing a circular and isolated pillar of masonry, 6 feet in height. 1853.	21 40 35'·39	72 18 44'·14	$\frac{8}{5}$	71
Gogha Temple ... <i>Gogo Temple</i>	"	White temple in the N.W. part of the town: Gogha sub-division. 1853.	21 41 26'·6	72 18 49'·8	...	394
Gogla Flag-staff ...	Sorath	In the sea-port town so called, about a mile N. of Diu town: Junâgâd State. 1854.	20 43 39	71 1 55	...	...
Gogla Tree ...	"	Conspicuous bar tree in the town: Junâgâd State. 1854.	20 43 26	71 1 41	...	827
Gojj h.s. ... <i>Govinge H.S. Helio.</i>	Hâlâr	On a small low hill about a mile W.N.W. of the village of this name, $1\frac{1}{2}$ miles S. by E. of Churesâr, and 3 miles N.E. by E. of the group of villages called Bûra: Navânagar State. 1854.	22 18 48'·36	69 34 59'·04	[79]	1029
Gomta Hill ... <i>Gomtah Heap</i>	"	Pile of stones about a mile S. by W. of the village so called, and $1\frac{1}{2}$ miles E.N.E. of the town of Virpur: Gondal State. 1853.	21 51 24	70 45 51	...	...
Gop h.s. ... <i>Gope Gowar H.S.</i>	"	On the highest part of the high, isolated hill of this name, about 27 yards S. by E. of the celebrated temple of Gopnâth Mahâdev, $2\frac{1}{2}$ miles E.N.E. of Gop Motâ, and $1\frac{1}{2}$ miles N. by W. of Gop Nâna, both these villages being on the right bank of the Vartu river: Navânagar State. The station consists of a platform enclosing a circular and isolated pillar of masonry, 4 feet in height. When visited in 1877-78, about 2 feet of the pillar was found standing with an aperture in the centre. A rectangular protecting pillar $3\frac{1}{2}$ feet high was built over it. 1853.	22 2 47'·34	69 57 56'·38	$\frac{1189}{\dagger}$	59
Gop Hill Temple ... <i>Gope Gowar Gopinath H. Temple</i>	"	Celebrated temple on the summit of the hill, dedicated to Gopnâth Mahâdev: Navânagar State. 1853.	22 2 48'·1	69 57 56'·2	...	355 356

* To upper surface of circular pillar.

† See description of this station.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station Height of Structure	No. of Triangle
Gopnath Hill Temple <i>Gopinath (Temple Spire)</i> ...	Gohelwad	Spire of the temple on a small hill, close E. of the village of the same name on the coast, about 3½ miles N.E. by E. of Jhánjhmer hill fort, and 10 miles E. by N. of Dátha town: Bhávnagar State. 1854.	21 12 33·3	72 8 57·1	feet ...	751
Gopnath Hill Tower <i>Gopinath Validhar Tower</i> ...	"	Tower on the small hill called Validhar, about ¼ of a mile W.S.W. of the village of the same name on the coast, 2½ miles N.E. by E. of Jhánjhmer hill fort, and 9 miles E. of Dátha town: Bhávnagar State. 1854.	21 12 16·4	72 8 16·2	...	752 753
Gorána h.s. ...	Hálár	On a low ridge, about 1¼ miles N.E. by E. of the town of Rával on the right bank of the Vartu river, and 1½ miles N. by W. of the large village of Gorána: Navánagar State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, 1 foot in height, having two mark-stones, one at the surface of the ground and the other on the top. A rectangular protecting pillar 3½ feet high was built over it. 1854.	21 55 53·16	69 33 17·72	$\frac{[74]}{1}$	674
Goriáli Building ... <i>Goriari Building</i>	Baroda State	Highest building in the village of that name at the junction of the roads from Mulrásar, Dhrúsanvel, Ghadechi, Sámrásar, and Rájputra. 1855.	22 20 49·3	69 7 31·3	...	1011
Goriáli Hill Tower ...	Ahmedabad	Conspicuous tower with a tree on it, immediately E. of and overlooking the village of the same name, about 1¼ miles S.S.E. of Kantála village, and 1¼ miles W.S.W. of Jaspura and Mandva villages: Gogha sub-division. 1854.	21 27 21	72 14 9	...	...
Gosal Tree ...	Jhálávád	Conspicuous bar tree near the old site of the village so called, about a mile N. of the position of the new village, and 2½ miles E. of Dolia on the high road from Rájkot to Ahmedabad: Sáyla State. 1860.	22 31 5	71 26 43	...	...
Gována Hill Mark (helio.) <i>Guna Hill</i> ...	Hálár	On a peak about 1¼ miles S.E. by E. of the village of this name, 2½ miles N.W. by W. of Pipalia, and 3½ miles W.S.W. of Godáváli village: Navánagar State. The point is denoted by a circle and dot. 1859.	22 8 33·75	69 56 8·97	$\frac{\dagger}{[485]}$	406
Gována Tower ... <i>Guna V. Tower</i>	"	Highest tower in the village of this name, about 3½ miles S. by W. of Ráfudur Nána, and the same distance N.W. by W. of Pipalia: Navánagar State. 1859.	22 9 16·9	69 55 2·7	...	405
Gubaría Hill Mark (helio.) <i>Gubaría H.</i> ...	Cutch State	Near the old site of Varmíschora village on the Cutch Coast, about 4½ miles E. by S. of the town of Vánduia. The point is denoted by a mark-stone. 1856.	23 14 11·54	70 43 33·66	...	267
Gundála h.s. ...	Gohelwad	On the eastern of the two small parallel ridges, about ¼ of a mile N.W. of the village so called, 1¼ miles N. of Sarkaria village, and 8 miles E.N.E. of the town of Pálitána: Bhávnagar State. The station is denoted by a circular pillar of masonry, about 8 feet in height. 1860.	21 33 21·84	71 58 53·03	$\frac{\bullet}{[405]}3$	730 731

* To top of circular pillar.

† To circle and dot.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Gungan Tomb ... <i>Gungan Spicy's Grave</i>	Hálár	Small tomb erected over the grave of Colonel Nasmyth's dog called Spicy, at the N. end of the village of Gungan on the left bank of the Machhu river, about $\frac{1}{2}$ of a mile S.E. of Derála on the opposite bank: Morvi State. 1854.	22 57 52.5	70 48 25.2	... feet	286 287
Gurgat Fort ... <i>Goorgut Tower</i>	"	Tower of the small fort in the village of this name, about $1\frac{1}{2}$ miles E. of the eastern border of the Ran, and $3\frac{1}{2}$ miles N. of Gága village: Navánagar State. 1854.	22 11 46.7	69 13 56.3	...	975 976
Gurgat Math ... <i>Goorgut Bawa Matt</i>	"	Gesáine' Math on the village road between Gága and Pindára, about $1\frac{1}{2}$ miles N. by E. of the former, and 2 miles S. by E. of the village of Gurgat: Navánagar State. 1854.	22 9 54.5	69 14 25.0	...	971
Gurgat Temple ... <i>Goorgut Temple</i>	"	On the E. side of and adjoining the village of this name: Navánagar State. 1855.	22 11 46	69 14 8	...	...
Gurgat t.s. ... <i>Goorgut T.S.</i>	"	On the remains of N.W. tower of the fort of the old village, and about $\frac{1}{4}$ of a mile E. of the present village of this name on the road to the town of Dwárka. The height of the remains of the tower is 7 feet above ground: Navánagar State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, 1 foot high, having two mark-stones, one on the top of the pillar and the other 1 foot below it. 1854.	22 11 48.24	69 14 18.28	$\frac{[103]}{1}$	684
Hábardí Hill ... <i>Haberdi End</i>	"	The conspicuous and eastern point of a small isolated hill, about $\frac{1}{2}$ of a mile S.W. of the village of this name, $3\frac{1}{2}$ miles W.N.W. of Dáutrána on the road to Dwárka town: Navánagar State. 1854.	22 12 59	69 24 32	...	1023
Hádátoda h.s. ... <i>Hadatuda H.S.</i>	"	On the E. brow of a table-land, about $\frac{1}{2}$ a mile S.W. of the village of that name, 3 miles S.E. of Kesio, and 5 miles N. by E. of Dhol town: Navánagar State. The station consists of a platform of earth enclosing an isolated and perforated pillar of masonry, 2 feet in height, with an aperture for access to the lower mark. When visited by the Levelling Party in 1874-75, the circular pillar was found protected by a rectangular pillar $3\frac{1}{2}$ feet high. 1854.	22 38 28.02	70 28 13.27	$\frac{163.79}{2}$	101 717
Hadmátia Hill Mark ... <i>Hermitta H.</i>	Gohelvád	On the highest point of a range of hills, about $1\frac{1}{2}$ miles E. of the village of the same name, 2 miles W. by N. of Pápardí village, and 10 miles E. by N. of Dám-nagar town: Bháranagar State. The point is denoted by a mark-stone on which a rectangular protecting pillar $3\frac{1}{2}$ feet high was built. 1853.	21 42 59.72	71 42 48.02	[359]	359
Hajirádhár h.s. ... <i>Ajira H.S.</i>	Baroda State	On a small hill about $\frac{1}{2}$ a mile W. of the village of Hajirádhár Navágám, 3 miles S.E. of Dám-nagar town, and $1\frac{1}{2}$ miles N.W. of Dhámél village: Dám-nagar sub-division. The station consists of a platform of earth enclosing an isolated and perforated pillar of masonry, 2 feet high, having an aperture for access to the mark at the ground level. 1850.	21 39 39.53	71 35 12.65	$\frac{322}{2}$	128
Halvád Palace† ... <i>Halwad Palace</i>	Jhálávád	Conspicuous tower at the S.W. end of the town: Dhrán-gadra State. 1852.	23 0 40.0	71 13 11.6	...	285

* To upper surface of rectangular protecting pillar. † To upper surface of perforated pillar.
‡ For another triangle fixing this point, see the Synoptical Volume of the Gujráti Longitudinal Series.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Hamírpur Hill ... <i>Goar Dongri H.</i>	Cutch State	A conspicuous, round hill, about $\frac{1}{4}$ of a mile W. of the road between the large village so called and the town of Fatehgud, 2 miles N. by E. of the former and 5 miles S. by W. of the latter, and $2\frac{1}{2}$ miles W. by S. of KhándeK village. 1856.	23 37 57	70 51 58	feet [244]	...
Hamírpur Hill Mark No. 1 ... <i>Cholli H.M.</i>	"	At the N. end of a low hill, about $2\frac{1}{2}$ miles N. of the village of the same name, $1\frac{1}{2}$ miles E. by S. of Sámgud village, and 5 miles S.W. by S. of the town of Fatehgud. 1856.	23 38 15.73	70 51 4.94	[226]	203
Hamírpur Hill Mark No. 2 ... <i>Loar Nar H.M.</i>	"	On a knoll about 2 miles N.N.E. of the large village so called, $2\frac{1}{2}$ miles S.W. by W. of KhándeK village, and 5 miles S. by W. of Fatehgud town. 1856.	23 37 28.26	70 52 8.18	...	204
Hánda Bet Hill (helio.) ... <i>Handy Bet H.</i>	Hálár	On a small hill close to the S. end of the Little Ran, about $2\frac{1}{2}$ miles W.N.W. of Mandharki Temple, 6 miles N. of Vejalpur village, and 5 miles N.W. of the village of Gháutla: Morvi State. 1854.	23 9 56.56	71 0 10.97	[65]	274 275
Hápa Tower ... <i>Charan Sampa V. Tower</i>	"	High tower close N. of the village of that name, about $2\frac{1}{2}$ miles S. by E. of Dhurár on the high road from Navánagar to Dhrol, and 4 miles E. by S. of Navánagar town: Navánagar State. 1854.	22 27 9.1	70 11 11.9	...	1067 1068
Hariána Tower ... <i>Hooriana Town Tower Ht.</i>	"	Highest, white tower in the eastern side of the town of that name: Navánagar State. 1854.	22 36 10.0	70 18 9.8	...	1081
Hariapur Hill Temple ... <i>Hurripur H. Temp.</i>	"	About $\frac{1}{4}$ a mile E. of the right bank of the Sánoi river, the same distance S.W. of the village of Hariapur, and $1\frac{1}{2}$ miles E.N.E. of Bhatia on the left bank of the Dhándar river: Navánagar State. 1859.	22 16 32.3	70 2 25.7	...	398 399
Hathila Hill Mark (helio.) ... <i>Hatila H.S.</i>	Gohelvád	On a small, isolated hill of that name, about 2 miles N.E. of the village of Dhár, $2\frac{1}{2}$ miles N. by W. of Páira village, and 4 miles S. of Kránkach village: Dhávnagar State. The point is denoted by a mark on the rock <i>in situ</i> . 1860.	21 24 46.55	71 29 19.40	* 387	592 593
Hindorna h.s. ... <i>Hindora H.S.</i>	Sorath	On a small, isolated hill about $\frac{1}{4}$ a mile N. of the village so called on the left bank of the Dhávarvari river, and 2 miles S.W. by S. of the town of Rájula: Junágud State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, 4 feet high. A rectangular protecting pillar $3\frac{1}{2}$ feet high was built over it. 1854.	21 0 52.50	71 28 23.66	† $\frac{213}{4}$	138 630
Holíya Hill Mark (helio.) ... <i>Holíyo H.S.</i>	Gohelvád	Overlooking and immediately N.E. of the village of that name, $2\frac{1}{2}$ miles S.W. of Sárngpur village on the right bank of the Keri river, and $2\frac{1}{2}$ miles E. of Ráipur village: Dhávnagar State. 1860.	22 1 27.53	71 34 46.68	453	572 573
Holíya Hill Tree ... <i>Koriar Matha Tree</i>	"	On a small hill about $1\frac{1}{2}$ miles S. of the village so named, $2\frac{1}{2}$ miles S.E. by E. of Ráipur village, and 5 miles W. by S. of Gordka village on the Keri river: Dhávnagar State. 1860.	22 0 19	71 34 30	...	...

* To mark on rock.

† To upper surface of solid, circular pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Ilampur h.s. ... <i>Ailimpoor H.S.</i>	Sorath	On a small, isolated hill known as Mangradhār, close S.W. of a pile of stones placed in memory of a deity called Mangradhār, about $\frac{1}{2}$ of a mile N. of the village of Ilampur, and 4 miles W. by N. of Una town on the right bank of the Machundri river: Junágad State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry. 1854.	20 50 19' 15"	71 14 21' 21"	... feet	638
Isápur Hill Temple <i>Esapoor H. Temple</i>	Gohelvád	On rising ground immediately S.W. of the village of the same name, about $2\frac{1}{2}$ miles W. by N. of Gugrála village, and $6\frac{1}{2}$ miles S.W. by S. of Kotra Pitha town: táluca Kotra Pitha. 1853.	21 52 35' 6"	71 10 51' 1"	...	335 336
Itála h.s. ... <i>Thorala H.S.</i>	Sorath	On a hill known as Thorala, about a mile S.E. of the village of Itála, $4\frac{1}{2}$ miles in the same direction of the town of Mália on the Megal river, and $5\frac{1}{2}$ miles E. by N. of the large village of Bhandura: Junágad State. 1860.	21 7 0' 38"	70 24 17' 9"	[365]	542 543
Itála Tower (helio.)	Hálár	In the village of that name about $4\frac{1}{2}$ miles E. of Khambháliya village on the right bank of the Und river, and 5 miles S.S.E. of the town of Dhrol: Dhrol State. The point is denoted by a mark on the tower. 1860.	22 29 48' 16"	70 28 41' 18"	* 199	437 438
Itria, XXXV	Gohelvád	<i>Vide page 11—J.</i>	21 56 58' 01"	71 27 1' 80"	† $\frac{971}{1}$	46
Jáfarabad Building <i>Jaffrabad (Daria Pir Building)</i>	Sorath	Daria Pir building at the foot of a hill, about $\frac{1}{2}$ of a mile E. of the town so called, and 300 yards in the same direction from a temple: Jáfarabad State. 1854.	20 51 47' 6"	71 25 1' 6"	...	800
Jáfarabad Fort <i>Jaffrabad Flag-Staff</i>	"	Flag-staff in the fort, about 100 yards from the W. wall, and 200 yards W. of a large temple: Jáfarabad State. 1854.	20 51 56' 1"	71 24 22' 9"	...	802 803
Jáfarabad Palace <i>Jaffrabad Palace</i>	"	Highest bungalow at the S.W. end of the town: Jáfarabad State. 1854.	20 51 44' 0"	71 24 22' 3"	...	804
Jáfarabad Temple <i>Jaffrabad Singoter Temple</i>	"	Headland temple about $\frac{1}{2}$ of a mile S.E. by S. of the town, and 200 yards N. of the coast. Known also as Singoter temple: Jáfarabad State. 1854.	20 51 24' 7"	71 24 54' 4"	...	801
Jágdhár Hill	Gohelvád	Highest point of the hill midway between Jágdhár and Vátaliya villages, and about $2\frac{1}{2}$ miles N.W. by N. of Dátha town: táluca Dátha. 1854.	21 13 17	71 58 40	...	765
Jákhia, XL	Sorath	<i>Vide page 12—J.</i>	20 57 56' 54"	70 55 51' 52"	† $\frac{841}{5}$	53
Jákhia Hill Peak <i>Jakia Gir Peak</i>	"	Conspicuous peak so called in the Gir, about $\frac{1}{2}$ of a mile W. by S. of the village of Jákhia, $1\frac{1}{2}$ miles E. by S. of Bábria village, and $3\frac{1}{2}$ miles N.W. by N. of the town of Gadhra: Junágad State. 1854.	20 57 48	70 56 3	...	852 853

* To mark on tower.

† To upper surface of solid, circular pillar surmounted by a rectangular protecting pillar $3\frac{1}{2}$ feet high.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Jalálpur h.s. ...	Gohelvád	At the E. end of a ridge extending E. and W., about 2½ miles N.E. by N. of the village of that name, 1½ miles S.S.E. of Mandva village, and 3 miles W. of Limda village: Bhávnagar State. The station consists of an isolated and perforated pillar of masonry, 2 feet in height, with an aperture for access to the lower mark. 1860.	21 47 23' 57	71 37 58' 05	feet * $\frac{313}{2}$	126 127
Jalandri h.s. ... Jalandri H.S.	Sorath	On a hill of that name in the Gír, about 1½ miles E.S.E. of the village of Chulri, 1 mile W. by N. of Láchari village, and 8½ miles E.S.E. of Bhanduri large village: Junágad State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, 1 foot in height. 1854.	21 3 25' 24	70 26 45' 22	† $\frac{403}{1}$	112 651
Jália Tower No. 1 (helio.) ...	Hálár	In the village of that name on the right bank of the Und river, about 4½ miles E. of Vanthli, 4½ miles S.W. by S. of Itála, and 4 miles N.N.E. of Veratia. The point is denoted by a mark on the tower. 1860.	22 26 13' 2	70 26 15' 1	‡ 166	442 443
Jalia Tower No. 2 ...	"	In the village so called, about 3 miles S.W. by W. of the large village of Mírad Mota, and 6 miles S.S.E. of the town of Upleta: Gondal State. 1860.	21 39 33' 4	70 22 35' 1	...	504
Jangar Hill Mark ... Jangarh Mark	Sorath	On rising ground, about a mile N.W. of the village of the same name, 4 miles N. of Amrápur, and 2½ miles S.E. by S. of Sanála village: Jetpur State. 1853.	21 40 28' 03	71 4 53' 17	[622]	343
Jasápur Hill Mark (helio.) ... Jasapur H.S.	Jhálávád	About ½ of a mile S.E. of the small village of this name, and 2½ miles E. by N. of the town of Sejakpur: táuka Sejakpur. 1860.	22 27 48' 65	71 29 32' 03	417	553 554
Jasápur Hill Platform ... Jasapoor H. Platform	Hálár	On a small hill about ½ of a mile N.W. by N. of the village of this name: Navánagar State. 1864.	22 14 55' 8	69 49 53' 4	[288]	1048 1049
Jasápur h.s. ... Tunga H.S.	"	On a small, isolated hill, about 11 feet N. of the N.E. corner of Jasápur Hill Temple, ½ of a mile E. by S. of the village of this name, and 1 mile N. by E. of Tungí Cháranvála: Navánagar State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry. When visited in 1877-78, no trace of the pillar was found. A small hollow was pointed out as the site of the pillar; in this hollow a mark-stone was placed and a rectangular protecting pillar 3½ feet high was built over it. 1854.	22 14 14' 31	69 50 46' 45	† 361	692
Jasápur Hill Temple ... Tunga H. Temp.	"	Top of the temple: Navánagar State. 1864.	22 14 14' 2	69 50 46' 5	...	1050 1051
Játroda s. ... Jaturda S.	Gohelvád	In a field, about a mile W. by S. of the village so called, on the road between the villages of Jalia Mota and Matirála, 3½ miles N. of the former and the same distance S. of the latter: Bhávnagar State. The station consists of a platform of earth enclosing an isolated and perforated pillar of masonry, 10 feet high, with an aperture for access to the lower mark. When visited in 1869-70, the station was described as follows:—"The site is marked by two masonry pillars, one built on the top of the other, the lower one is circular and measures 5 feet in height, the upper one measures 3½ feet and is rectangular, the lowest mark-stone is on the level of the ground". 1860.	21 35 6' 75	71 23 30' 07	* $\frac{344}{5}$	181

* To upper surface of perforated pillar.

† To upper surface of solid, circular pillar.

‡ To mark on tower.

§ See description of this station.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Jendáliya h.s. ... <i>Jendalia H.S.</i>	Sorath	On an isolated hill of that name in the Gir, about $\frac{1}{2}$ of a mile E. of the hamlet called Jumbori, $2\frac{1}{2}$ miles N. of the village of Dhámásia on the Hiran river, and 3 miles N.W. by N. of the village of Tálála on the main road from Verával to Visávdar: Junágad State. The station consists of a platform of earth enclosing an isolated and perforated pillar of masonry, 2 feet in height, having an aperture for access to the lower mark. 1860.	21 5 25' 37"	70 32 56' 17"	feet * $\frac{511}{2}$	111
Jethásari Vándh Hill Mark (helio.)† <i>Garlora H.</i>	Catch State	About $\frac{1}{2}$ of a mile N.N.W. of the small village of this name, and $1\frac{1}{2}$ miles N. by W. of the village of Chitrod on the road from Lákadliya to Gágodar. 1856.	23 26 1' 81"	70 42 59' 60"	[521]	...
Jetpur Temple ... <i>Jaitpur Temple</i>	Sorath	Spire of the temple near the S.E. end of the town of that name: Jetpur State. 1863.	21 45 17' 0"	70 40 18' 3"	...	342
Jhákasiá h.s. ... <i>Jankasia H.S.</i>	Hálár	On a small hillock about $\frac{1}{2}$ of a mile W. by S. of the village of this name, $1\frac{1}{2}$ miles E.N.E. of Berája, and 3 miles N.N.E. of Dántrána on the road to Dwárka town: Navánagar State. The station consists of a platform enclosing a solid, circular pillar of masonry with marks at top and bottom. When visited by the Levelling Party in 1874-75, the upper mark was missing, but the surface of the pillar was perfect: on removing the pillar, a mark-stone was found at 1'03 feet below its upper surface. In 1877-78, a rectangular protecting pillar, 3 feet high, was built by the Topographical Survey Party over the circular pillar. 1864.	22 14 11' 02"	69 28 20' 46"	† 117' 98"	687
Jhánjmer Hill Fort ... <i>Janjmir H. Fort Flag</i>	Gohelvád	Flag-staff in the fort so called on a small hill immediately S. of the village of the same name, about $\frac{1}{4}$ a mile from the coast, and $6\frac{1}{2}$ miles E. by S. of Dátha town: Bhávnagar State. 1854.	21 10 45' 4"	72 6 10' 1"	...	756 757
Jhánjmer Hill Mark (helio.) ... <i>Janjmir Tower S.</i>	Hálár	On a tower on a small hill immediately E. of the village so called on the left bank of the Utávlí river, and 3 miles N. of the town of Supedi: Gondal State. 1860.	21 48 21' 37"	70 25 8' 30"	283	489 490
Jhijhoda h.s. ... <i>Junjura H.S.</i>	"	On the southern extremity of a low ridge, about 2 miles N.W. of the village of that name, $3\frac{1}{2}$ miles N.N.W. of Phadsar, 3 miles N.N.E. of Shámpar, and 2 miles W. of Bodki: Morvi State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, 1 foot high, having two mark-stones. A rectangular protecting pillar $3\frac{1}{2}$ feet high was built over it. 1854.	22 55 43' 17"	70 34 34' 13"	§ $\frac{43' 90"}{1}$	722
Jhijhuda Hill Mark ... <i>Junjura H. Mk.</i>	Gohelvád	About $\frac{1}{4}$ a mile N.N.E. of the village of Jhijhuda Mota, and 4 miles E. of Kundli town: Bhávnagar State. The point is denoted by a mark-stone over which a rectangular protecting pillar $3\frac{1}{2}$ feet high was built. 1860.	21 20 23' 97"	71 25 15' 59"	|| [571]	596 597
Jhund, LXVI¶ ...	Thar and Párkár	<i>vide</i> page 5—J. ...	24 47 51' 07"	71 1 20' 38"	** $\frac{374}{3}$	...
Jithuri, XXXIII ...	Hálár	<i>vide</i> page 11—J. ...	21 44 8' 82"	71 9 8' 86"	** $\frac{618}{5}$	43

* To upper surface of perforated pillar. † For triangle fixing this point, see the Synoptical Volume of the Cutch Coast Series. ‡ To mark-stone 1'03 feet below upper surface of solid, circular pillar. § To upper surface of rectangular protecting pillar. || To mark-stone. ¶ This station appertains to the Karachi Longitudinal Series: for triangles fixing it see the Synoptical Volume of the same Series. ** To upper surface of solid, circular pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure <i>feet</i>	No. of Triangle
Jodiya Palace ... <i>Juria Palace S.W. angle</i>	Hálár	S.W. angle of the palace in the town; Navánagar State. 1854.	22 41 43' 2	70 20 37' 4	...	1088
Jodiya s. ... <i>Juria T.S.</i>	"	On the roof of a small bungalow on the highest and N.W. tower of the walls of the town; Navánagar State. The station is denoted by a circle and dot made in lead embedded in the roof of the bungalow. When visited in 1873-74, the original mark was missing and a small stone with a circular mark was let into the chunam of the roof of the bungalow. 1854.	22 41 47' 42	70 20 31' 30	70' 08 49	716
Jodiya Bandar Dargah ... <i>Juria Bunder Darga</i>	"	Old and ruined dargah close to the port of that name, and about 2 miles N.W. of Jodiya town; Navánagar State. 1854.	22 43 2' 5	70 19 19' 6	...	1084
Junágad Palace ... <i>Junagar Palace Ht.</i>	Sorath	The highest point of the palace in the town; Junágad State. 1860.	21 31 13' 8	70 30 20' 8	...	513
Junágad Temple ... <i>Junagar Black Temple</i>	"	A black temple between two white ones, E. of the palace and W. of the old fort; Junágad State. 1860.	21 31 17' 4	70 30 27' 4	...	511 512
Junej t.s. ...	"	On the single-storied, square tower of the small village so called, nearly $\frac{1}{2}$ mile W.N.W. of Bhadra, and $\frac{3}{4}$ miles S.W. by W. of the town of Bántya; Junágad State. The station consists of a platform of stones and mud enclosing an isolated and perforated pillar of masonry, 2 feet high. A rectangular protecting pillar $3\frac{1}{2}$ feet high was built over it. 1859.	21 27 39' 25	70 3 51' 02	† 67 2	85
Kachhigad Fort ... <i>Katchigar Square Fort Gateway</i>	Baroda State	The square and highest tower on the gateway at the E. angle of the small fort, about a mile W. of the high road from Dwárka to Aránda, $2\frac{1}{2}$ miles N.N.W. of Barvála town, and 3 miles W.S.W. of Mojap both on the above mentioned road. 1855.	22 19 40' 1	68 59 29' 4	...	985
Kachhigad t.s. ... <i>Katchigar T.S.</i>	"	On the N.W. corner of the N.E. tower of the small fort so called, about a mile W. of the high road from Dwárka to Aránda town, and 3 miles W.S.W. of Mojap on the above mentioned road. The station is denoted by a mark-stone embedded in the wall. 1855.	22 19 40' 23	68 59 31' 22	...	708
Kadvád h.s. ... <i>Kadwar H.S.</i>	Sorath	On a sand ridge near the coast, about $\frac{1}{2}$ mile E. by S. of the village of that name, and 4 miles S.E. of the town of Pátan; Junágad State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry. 1854.	20 50 57' 72	70 29 51' 00	[60]	618
Kájarda Hill Mark (helio.) ... <i>Karara H.M.</i>	Hálár	About 3 miles N.E. of the village of that name, $3\frac{1}{2}$ miles N.W. by N. of Chikli, and 6 miles N. of Vá-dharva; Málía State. 1856.	23 9 1' 57	70 52 39' 90	[55]	276 277
Kákinda Bet Hill (helio.) ‡ ... <i>Kakindia Beyt H.</i>	Cutch State	On a conspicuous, isolated hill in the Ran of Cutch, close S. of the island of Khadir. 1856.	23 46 41' 62	70 25 26' 08	[145]	200
Kákrejji, XV ...	Hálár	††† page 8— <i>y</i> , ...	23 4 39' 35	70 57 45' 28	§ 103 36	20

* To mark-stone on roof of bungalow on tower.

† To upper surface of perforated pillar.

‡ For another triangle fixing this point, see the Synoptical Volume of the Cutch Coast Series.

§ To upper surface of solid, circular pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Kálávád h.s. ... <i>Simani H.S.</i>	Hálár	On the hill called Simani named after the idols thereon, about $\frac{1}{2}$ of a mile N. by E. of the town of Kálávád, $\frac{2}{4}$ miles W. of Churesar, and $\frac{3}{4}$ miles N. of the group of villages called Bára: Navánagar State. The station is denoted by a mark-stone at the level of the ground, close by and on the same platform as the idols. When visited in 1877-78, a pillar was found, about 1 foot high, with a centre mark-stone over which a rectangular protecting pillar 3 feet high was built. 1854.	22 20 7'87	69 32 44'45	<i>feet</i> * [106] †	689
Kaliánpur Tower No. 1 <i>Kaliánpur V. Tower</i>	"	High tower in the village of this name, about $\frac{3}{4}$ miles E.S.E. of Bákuri, and $\frac{3}{4}$ miles S.W. by W. of Khijdar: Navánagar State. 1854.	22 1 3'1	69 26 37'1	...	953
Kaliánpur Tower No. 2 <i>Kaliánpur Tower</i>	Baroda State	In the village of that name at the intersection of the roads from Ghadechi, Vasáí, Dhrásanvel, Mulvásar and Rángásar. 1855.	22 19 11'9	69 4 51'2	‡ [126]	984
Kamakio Mátá h.s. <i>Kamakio H.S.</i>	Gohelvád	On the eastern end of the isolated hill so called, about $\frac{1}{4}$ miles W.N.W. of Bhadrávade village, and 8 miles W. by N. of Botád Station of the Bhávnagar-Gondal Railway. There is a ruined building to W.: Jasdan State. The station consists of a platform of earth enclosing an isolated and perforated pillar of masonry, 2 feet in height, with an aperture for access to the lower mark. 1860.	22 12 13'04	71 35 2'14	§ $\frac{561}{2}$	118
Kámila Hill Temple...	"	Conspicuous temple on a conical hill, about $\frac{2}{4}$ miles S. of Bhandária village, and $\frac{3}{4}$ miles S.E. of the large village and thánn of Chok: tálnka Bhandária. 1854.	21 23 3'0	71 50 51'8	...	758
Kanáđ Hill Mark ...	Ahmedabad	About 2 miles W. by S. of the village so called, the same distance N.N.E. of Torda village, and 7 miles S.W. of Sihor town. This hill is about $\frac{1}{4}$ of a mile S.E. by S. of the conspicuous rock called by the same name: Gogha sub-division. The point is denoted by a pillar having two mark-stones, one on the top of the pillar and the other below it. A rectangular protecting pillar $\frac{3}{4}$ feet high was built over it. 1853.	21 38 9'98	71 56 36'82	[642]	371 372
Kanáđ Rock ...	"	Conspicuous, dome-shaped, black rock about 2 miles W. by S. of the village of that name, the same distance N.N.E. of Torda village, and 7 miles S.W. of Sihor town: Gogha sub-division. 1853.	21 38 19	71 56 31	...	369 370
Kanála h.s. ...	Sorath	Also called Solána. On a low hill, about a mile S.E. of the village of Kanála, $\frac{1}{4}$ miles W. of Rupávati, and 2 miles N.W. by N. of Rauni village: Junágad State. 1860.	21 35 4'12	70 20 12'55	249	505 506
Kanara Hill Mark (helio.) <i>Kanari H.S.</i>	"	On a hill of that name, about $\frac{1}{4}$ miles S.W. by S. of Málanka village on the Madvatí river, and the same distance E. of the village of Dedikál: Jetpur State. 1860.	21 13 42'62	70 31 43'61	1069	526 527
Kandorna h.s. ... <i>Kandorna H.S.</i>	Hálár	On a small hill about $\frac{1}{2}$ of a mile E. by N. of the town of that name: Navánagar State. 1850.	21 53 40'05	70 32 30'50	376	474 475

* To mark-stone. † See description of this station. ‡ To top of tower. § To upper surface of perforated pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station Height of Structure	No. of Triangle
Kandorna Temple ... <i>Kandorua Temple</i>	Hálár	Spire of the temple about the centre of the town: Navá-nagar State. 1860.	0 1 " 21 53 28' 2	0 1 " 70 32 4' 7	feet ...	476 477
Kanduka, IX ...	Cutch State	<i>Vide page 7—J.</i> ...	23 33 35' 97	70 43 49' 72	* 468 12	12, 13
Kanduka Hill Mark <i>Oka Timba H. Peak</i>	"	On the highest point of a mass of low hills, about 2½ miles S.S.W. of the village of Kárua, 3 miles W. by N. of Prágpur village, and 4 miles E.S.E. of the town of Kápur. The point is denoted by a mark on a pillar. 1856.	23 33 16' 17	70 44 38' 41	...	214
Kanjarda ...	"	<i>See Pálitána ...</i>	...	...	...	...
Kánmer, X ...	Cutch State	<i>Vide page 7—J.</i> ...	23 23 51' 36	70 55 7' 60	* 304' 51 5	14
Kánmer Fort Point No. 1 (helio.) <i>Khanmir H. Fort House</i>	"	On the centre of the conspicuous house in the hill fort in the large village of that name, about 3 miles S.S.E. of Ghánithal, and the same distance E of Gágodar. 1854.	23 24 38' 41	70 54 12' 76	...	237
Kánmer Fort Point No. 2 (helio.) <i>Khanmir H. Ft. Bastion</i>	"	On the broken tower towards the N. side of the hill fort. 1854.	23 24 36' 11	70 54 13' 39	...	238
Kánmer Hill Mark No. 1 <i>Allura H. M.</i>	"	About 1½ miles W. of the village of that name, 2½ miles S. of Ghánithal, and 1½ miles E. by N. of Gágodar. The point is denoted by a mark covered over by a pile of stones. 1854.	23 24 50' 45	70 53 5' 34	...	239 240
Kánmer Hill Mark No. 2 <i>Aniali H.</i>	"	On the round-topped, southernmost hill called Aniali, about 1½ miles W. of the village of that name, 2½ miles S. of Ghánithal, and 1½ miles E. of Gágodar. The point is denoted by a mark covered over by a pile of stones. 1854.	23 24 37' 28	70 53 1' 16	[362]	241 242
Kánmer Hill Mark No. 3 (helio.) <i>Banderi H. Mk.</i>	"	About 1½ miles S.W. by S. of the village of that name, 2½ miles S.E. by E. of Gágodar, and 4 miles S. by E. of Ghánithal. 1856.	23 23 33' 62	70 53 25' 57	[174]	245 246
Karanja Fort ...	Baroda State	Tower of the ruined fort about 2 miles E. of Ghadechi village, and 1 mile N.W. of Goriáli. 1855.	22 21 27' 3	69 6 55' 4	...	1009
Karba Hill Fort ...	Hálár	Highest bastion of the fort immediately S. of the village of this name, about 6½ miles W. of the town of Dhrápha on the right bank of the Vinn river, and 5½ miles N.N.W. of the town of Jodhpur: táluka Dhrápha. 1859.	21 58 5' 2	70 2 11' 4	478	415
Kárunjhar, III ...	Thar and Pákar	<i>Vide page 6—J.</i> ...	24 20 10' 65	70 48 11' 05	† 1169	4, 5

* To upper surface of solid, circular pillar.

† To mark on rock.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Kárunjhar Hill Mark No. 1 (helio.) <i>Badesar H. M.</i>	Thar and Párkár	On one of the northern points of the well-known group of the Kárunjhar hills, nearly a mile S. by W. of the large village of Bhodesar, and 2 miles N.W. of the town of Nagar Párkár. The point is denoted by a mark on a pillar. 1856.	24 22 43' 25"	70 46 17' 63"	<i>feet</i> [1094]	160 161
Kárunjhar Hill Mark No. 2 ... <i>Gurtia H. M.</i>	"	On the mass of the Kárunjhar hills, about 2½ miles W. by S. of the town of Nagar Párkár, the same distance E.S.E. of Modra village, and 4½ miles N.E. of the large village of Ádhegám. 1856.	24 20 52' 49"	70 45 32' 19"	[1145]	162 163
Kárunjhar Hill Mark No. 3 ... <i>Khan Gajar H. M.</i>	"	On the highest peak of the Kárunjhar hills, about 2½ miles S.W. by S. of the town of Nagar Párkár, 2½ miles N. by E. of the large village of Khárdia a little N. of the made road from Lodráni to Nagar Párkár, and 6 miles E.N.E. of Ádhegám village. 1856.	24 19 36' 92"	70 46 36' 34"	...	164 165
Kárunjhar Hill Peak No. 1 ... <i>Khera H. Peak Lower</i>	"	The northern and lower one of two peaks on a spur at the S.E. extremity of the Kárunjhar hills. The high road from Nagar Párkár to Lodráni passes to the north. 1856.	24 18 29	70 49 46	...	166
Kárunjhar Hill Peak No. 2 (helio.) <i>Khera H. Peak Highest</i>	"	On the higher of two peaks on a spur at the S.E. extremity of the Kárunjhar hills, about 420 yards S.S.E. of the lower peak, and 1½ miles N. of the large village of Káswáh on the made road from Bela to Nagar Párkár. 1856.	24 18 17' 49"	70 49 51' 01"	[592]	167 168
Katáriya Temple No. 1* <i>Kattaria Village Temple</i>	Catch State	Long-spired, grey temple in the centre of the large village of that name on the road from Bhacháu to Mália and on the right bank of a large stream, about 4½ miles S.E. by S. of the large village of Lákadiya. 1856.	23 17 35' 4"	70 39 46' 3"	...	...
Katáriya Temple No. 2* <i>Kattaria D. Temple</i>	"	Short-spired temple having small dome about ¼ of a mile S.W. of the village of that name, and close S. of the road from Katáriya to Lalána. 1856.	23 17 13' 1"	70 39 5' 9"	...	...
Katáriya Tree ... <i>Kattaria P. Tree</i>	"	Solitary palm tree about ¼ a mile N.E. of the village on the right bank of a stream. 1854.	23 17 52	70 40 16	...	259 260
Katpur Island ... <i>Katpur Island H. Pk.</i>	Gohelwád	Highest point of the rocky island at the northern shore of the Gulf of Cambay on which stands a light-house 99 feet above high water, about 1½ miles S.E. by S. of the village of the same name, and 4 miles in the same direction from Mahuva town: Bhávnagar State. 1854.	21 2 23	71 50 44	...	777 778
Katpur Tree ... <i>Katpur H. Trees No. 2</i>	"	S.E. tree on a sand hill on the northern shore of the Gulf of Cambay, about ¼ of a mile N.E. of the village of the same name, and 2½ miles S.E. of Mahuva town: Bhávnagar State. 1854.	21 3 44	71 50 43	...	776

* For triangles fixing this point, see the Synoptical Volume of the Catch Coast Series.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Katumba h.s. ...	Baroda State	On the eastern brow of the Okha table-land on the shore of the Gulf of Catch, about 1½ miles E.N.E. of the village of Katumba, 3¼ miles S.E. by S. of Malvel, 2½ miles N.E. of Anidli, and 3½ miles E.N.E. of Mulvasar. The station is denoted by a platform of loose stones, 10 feet in height. When visited in 1878-79, the platform was found to be 8 feet high. 1854.	22 17 43·45	69 12 0·98	feet * [131] †	701
Kesmāri, XIII ...	Catch State	<i>vide</i> page 7— <i>J</i> , ...	23 16 43·60	71 3 55·70	‡ 84 5 †	18
Khadarpur h.s. ... <i>Kaderpoor H.S.</i>	Gohelvád	On the N.W. end of a spur of the range of hills on the coast, about ½ of a mile S. by W. of the village so called, 1½ miles N. by E. of Jaspura and Mandva villages, and 2 miles E.S.E. of Pāniali village: Bhāvnagar State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry over which a rectangular protecting pillar 3¼ feet high was built. 1854.	21 28 38·75	72 15 38·10	[151] †	616
Khadarpur Hill Tree <i>Kaderpoor H. Tree</i>	"	About 1½ miles N.E. by N. of the village of the same name, 1½ miles S.S.W. of Lākhanka village, and 3¼ miles S.S.E. of Morchand village: Bhāvnagar State. 1854.	21 30 4	72 16 35	...	...
Khadir Hill Mark (helio.)§ <i>Karir H. Platform</i>	Catch State	On the highest part, known as Hndibhadang, of the range of hills running E. and W. and along the N. side of the island of Khadir in the Ran. The point is denoted by a mark in the centre of a platform. 1856.	23 54 34·68	70 21 44·15	[932]	171
Khakhāna, XXVI ...	Hālār	<i>vide</i> page 10— <i>J</i> , ...	22 25 28·91	70 58 55·63	‡ 545·68	35, 86
Khākhārdn Tower ... <i>Kankarda V. Tower</i>	"	Round tower in the village of this name, about 2½ miles W. of the large village of Gailika, and 6¼ miles E. of that of Bhātia: Navānagar State. 1854.	22 6 4·6	69 24 56·1	...	956
Khākhria s. ... <i>Daria Khetar H.S.</i>	"	In a field called Daria Khetar, about a mile E.N.E. of the village of Khākhria on the right bank of the Manvar river, the same distance E. of Virvāv village, and 1½ miles S.S.E. of Bhimānagām village: Navānagar State. The station consists of a platform of earth enclosing an isolated and perforated pillar of masonry, 5 feet high, with an aperture for access to the lower mark. A rectangular protecting pillar 3¼ feet high was built over it. 1860.	22 15 19·15	70 27 49·77	|| 297 5	96
Khambāria Hill Mark (helio.) ... <i>Waka Donger Mk.</i>	"	On a small hill close to a tank about a mile E.S.E. of the village of Khambāria, 2½ miles N. of Vejalpur, 3¼ miles N.E. of Kākrejī, and 3½ miles S.E. by S. of Venāsar: Mālia State. 1856.	23 6 50·98	70 59 52·83	...	279
Khambhāliya Building <i>Khamballia Sq. Builg. in Town</i>	"	Turret of the square, conspicuous building in the northern portion of the large town of this name, about ¼ of a mile W. of the Dharmabāla: Navānagar State. 1854.	22 12 24·5	69 41 24·1	...	1033
Khambhāliya Hill Temple <i>Khamballia H. Temple</i>	"	On a small hill about ¼ of a mile N. of the Dharmabāla at the eastern side of the town of Khambhāliya: Navānagar State. 1854.	22 12 52·6	69 41 43·0	...	1036 1037

* To base of platform. † See description of this station. ‡ To upper surface of solid, circular pillar.
§ For another triangle fixing this point, see the Synoptical Volume of the Catch Coast Series. || To upper surface of perforated pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Khambhaliya Hill Tomb <i>Khamballia Ajamal Pir</i>	Hálár	On the S.E. point of the same small hill on which Khambhaliya Hill Temple stands. The tomb is known as Ajamal Pir: Navánagar State. 1854.	22 12 47' 2	69 41 47' 4	... feet	1034 1035
Khambhaliya Palace <i>Khamballia Palace</i>	"	In the centre of the town: Navánagar State, 1854. ...	22 12 15' 8	69 41 28' 8	...	1031 1032
Khambhaliya Temple <i>Khamballia Town Temple</i>	"	Conspicuous temple in the centre of the town: Navánagar State. 1854.	22 12 16' 7	69 41 22' 2	...	1030
Khambhodar h.s. ... <i>Kamoder H.S.</i>	Sorath	On a slight swell, about 1½ miles N.N.W. of the large village of Khambhodar, and 2½ miles N.E. of Kindarkheda on the border of the Modhvára Marsh: Porbandar State. The station consists of a platform enclosing a triangular pillar of masonry, about 1 foot high, with a circle and dot on the top. A rectangular protecting pillar 3½ feet high was built over it. 1854.	21 49 37' 65	69 37 28' 72	* 101 †	672
Khándek Hill Mark <i>Tracumba H.M.</i>	Cutch State	On a conspicuous knoll on a plateau, about 3 miles S. of the village of Khándek, ¾ miles E. of Hamirpur village, and 4 miles N. of Bhimásar. The point is denoted by a circle and dot covered over by a pile of stones. 1856.	23 36 3' 32	70 54 36' 70	[376]	205 206
Khandera Hill Mark (helio.) <i>Sahiabat H.S.</i>	Hálár	On an isolated hill, about 1½ miles W. by S. of the village of Khandera on the Moti Phuljhar river, the same distance N. of Golania village, and 2½ miles S.E. by E. of the large village of Khánkotra: Navánagar State. The point is denoted by a mark covered over by a pile of stones. 1860.	22 16 35' 18	70 19 32' 94	† 495	457 458
Khánpur Hill Math <i>Kathradar H. Matha</i>	Cutch State	On the centre of a rock on a hill, about a mile E. of the small village so called, 2½ miles S.E. by S. of the large village of Chitrod on the road from Lákadiya to Gágodar, and 3 miles N.W. by N. of Kumbhária. 1854.	23 22 52' 2	70 44 31' 9	...	255 256
Khánpur House ... <i>Khanpoor Hl. house</i>	Hálár	Highest house in the large village of that name on the right bank of the Demi river, about 2½ miles E. by N. of Koali on the left bank, 2 miles N.W. of Nesara-Khánpur, and 3 miles W. of Cháchápúr: Morvi State. 1854.	22 44 41' 1	70 40 47' 8	...	1091
Khánpur Tower ... <i>Khanpoor S. Tower</i>	"	Close S. of the large village, about 2½ miles E. by N. of Koali: Morvi State. 1854.	22 44 38' 1	70 40 48' 6	...	1090
Kháori h.s. <i>Mungni H.S.</i>	"	On the highest point of rising ground, about 1½ miles N.W. by W. of Kháori Mota village, 1½ miles S.E. of Mungni, and 1½ miles S.W. by S. of Kháori Nána. The road from Kháori Mota to Mungni passes by the station: Navánagar State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry. When visited in 1877-78, only a small portion of the pillar was remaining, but the lower markstone was found intact. A rectangular protecting pillar 3½ feet high was built over it. 1854.	22 23 41' 23	69 53 31' 55	† 105	693

* To upper surface of triangular pillar. † To mark on hill. ‡ To upper surface of solid, circular pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Khara h.s. ... <i>Kurra H.S.</i>	Sorath	On a rocky ridge on the coast, about $\frac{1}{4}$ a mile E.S.E. of the village of the same name, close N.E. of an idol, and 1 mile W. of the Portuguese fort of Pánikota near the mouth of the Buthráni creek: Junágad State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry. 1854.	20 45 23' 93	71 10 35' 11	feet * [47]	636
Kháráberája s. ...	Hálár	On rising ground but not on the highest point of it, about $\frac{1}{4}$ a mile N.N.W. of the village so called, and $4\frac{1}{2}$ miles W. by N. of the town of Navánagar. A Topographical Survey Station is $\frac{1}{4}$ of a mile to the N.: Navánagar State. The station is denoted by a markstone embedded in mud. When visited in 1873-74, a pillar was found 1 foot high, and over this a rectangular protecting pillar $3\frac{1}{4}$ feet high was built. 1854.	22 28 58' 66	70 2 9' 98	...	695
Kharedi Tower (helio.) <i>Karadi Vill. Tower S.</i>	"	On a tower about the middle of the town of the same name: Virpur State. The point is denoted by a mark on the tower. 1860.	22 4 13' 39	70 31 25' 89	† 501	467 468
Khársar, II ...	Thar and Párkar	<i>Vide page 6—J.</i> ...	24 34 19' 16	70 49 57' 12	$\frac{*498}{2}$	2, 3
Khátli h.s. <i>Katla H.</i>	Hálár	On an isolated hill, about $1\frac{1}{4}$ miles S.S.E. of the village of that name, 3 miles W. by N. of Pádriya village, and 10 miles N. of the town of Supedi on the left bank of the Utávli an affluent of the Bhádár river: Navánagar State. 1860.	21 54 13' 18	70 25 20' 98	470	478 479
Kheda h.s. <i>Keyra H.S.</i>	Gohelváđ	On the highest point of a sand ridge on the coast, about 250 yards N.E. of the village so named, $\frac{1}{4}$ miles W.S.W. of Pauráđhár Island, and 3 miles E.N.E. of Chánch village: Bhávánagar State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry. 1854.	20 58 6' 41	71 39 51' 63	* [50]	627
Khedva Hill <i>Khairwa H. Pile</i>	Jhálavád	Pile of stones about $2\frac{1}{4}$ miles S.W. of the village so named, 3 miles N.E. of Khorána village, and 12 miles N.N.E. of the town of Rájkot: Vánkáner State. 1853.	22 27 18	70 55 18	...	...
Khedva Hill Temple <i>Khairwa H. Temple</i>	Hálár	About $2\frac{1}{4}$ miles S.W. of the village, 2 miles N. by W. of Sanova village, and $3\frac{1}{4}$ miles S.E. of Pipalia village: on the boundary between Navánagar and Rájkot States. 1853.	22 27 3' 1	70 55 25' 3	...	310 311
Khevália Temple ... <i>Khecalia Temple</i>	"	Spire of the white temple in the village of that name, about $1\frac{1}{2}$ miles N.E. of Jaryáia, $2\frac{1}{4}$ miles E.S.E. of Lutávár, the same distance N.N.W. of Khákhraia, and 4 miles S.S.W. of Deráia on the left bank of the Machhu river: Morvi State. 1854.	22 54 54' 4	70 46 22' 9	...	288
Khijadia Hill Mark (helio.) <i>Kuarjo H.S.</i>	"	About a mile S. by E. of the hamlet so called, $1\frac{1}{4}$ miles W. by N. of Chitravád village, and 9 miles N.E. by N. of the town of Bháyavádar: Navánagar State. 1860.	21 57 56' 79	70 22 27' 01	442	478

* To upper surface of solid, circular pillar.

† To mark on tower.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Khimpádar Hill Mark (helio.) ... <i>Godma H.S.</i>	Sorath	On the small hill known as Godma, about a mile S. by W. of the village of Khimpádar, and 4½ miles N. by E. of the town of Mendarda: Junágad State. 1860.	21 22 58·56	70 29 43·92	feet 309	520 521
Khirasra Tower (helio.) ... <i>Kerasera Tower S.</i>	Hálár	At the N.E. end of the large village so called, about 7 miles N. by E. of Lodhika town, and 8 miles E.N.E. of Nikáva large village: on the boundary between Dhrol and Gondal States. The point is denoted by a mark on the tower. 1860.	22 14 18·85	70 41 36·89	* 502	453
Khodiár h.s. ... <i>Gohela Dhar H.S.</i>	Sorath	On the S.W. part of the hill known as Gohela Dhár, about a mile N. by W. of the village of Khodiár, 1½ miles S.S.W. of Jhinghuvara village, and 5 miles S. of the large village of Dáurána: Jetpur State. 1860.	21 17 55·61	70 30 32·28	468	528 529
Khokhri Fort ... <i>Kokri Fort</i>	Hálár	Tower of the fort in the large village of the same name, about 3½ miles E.N.E. of the junction of the Gondli and Bhálar rivers, and 8 miles E. of the town of Virpur: Gondal State. 1853.	21 50 3·8	70 51 41·6	...	334
Khokhri t.s. ... <i>Kakra Kokri T.S.</i>	"	In a field, about 1½ miles E. of the village so called on the right bank of the Und river, the same distance N. by W. of Khákhra village, and 2½ miles S.W. by S. of Khengárka village: Navanagar State. The station consists of a platform of earth enclosing an isolated and perforated pillar of masonry, 10 feet high, with an aperture for access to the lower mark. A rectangular protecting pillar 3½ feet high was built over it. 1860.	22 23 10·65	70 28 33·08	† 236 10	98
Khokra Hill Mark ... <i>Kokra H.M.</i>	Ahmedabad	About a mile W. of Motá Khokra village, 3 miles S.S.E. of Kharakri village, and 1 mile N.N.E. of Kálta hill: Gogha sub-division. 1853.	21 35 25·96	72 6 11·09	...	385
Khoráda h.s. ... <i>Korada H.S.</i>	Sorath	On a sand ridge running parallel to and at a distance of about ¼ of a mile from the coast, ¾ of a mile S.W. by W. of the village of Khoráda, and 5½ miles S.E. by S. of the sea-port town of Mingrol: Junágad State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, having mark-stones at top and bottom. 1854.	21 3 19·38	70 12 20·57	‡ [63]	654
Khorána Tower ... <i>Korana T.P.</i>	Hálár	Conspicuous tower in the centre of the village so called, about 4 miles S. of Pipalia village, and 9 miles N. by E. of the town of Rájkot: tálnka Kothária. 1853.	22 25 45·2	70 53 8·7	...	312
Khuntáváda Platform ... <i>Konthoura H. Platform</i>	Gohelváda	On a hill, about ¼ of a mile N.E. of the town so called, 1½ miles E.S.E. of Jámburda village, and 1½ miles W. by S. of Málpara village: Bhávnagar State. 1854.	21 14 26·1	71 52 33·4	...	768 769
Kidiánagaru Hill (helio.) ... <i>Kiriu Nagra H.</i>	Cutch State	Close S. of the large village of that name, and 4½ miles W.N.W. of that of Ghánithal. The point is denoted by a pile of stones. 1854.	23 28 37·11	70 49 5·45	...	228 229

* To mark on tower.

† To upper surface of perforated pillar.

‡ To upper surface of solid, circular pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Kidiánagaru Hill Mark <i>Barberia H.</i>	Cutch State	On the E. end of a solitary, flat-topped, conical hill, about 2 miles N. of the village of Kidiánagaru, 3½ miles S.W. by S. of Bhutakia large village, and 5 miles S. of Umaiya village. The point is denoted by a mark on a pillar covered over by a pile of stoucs. 1854.	23 30 37.81	70 48 51.85	feet * 445	220 221
Kidiánagaru Hill Peak <i>Trakumba H.</i>	"	Highest of three hills, about a mile S.S.W. of the large village of Kidiánagaru, 2 miles E. by N. of Bádarpur, 3½ miles W.N.W. of Jádvás, and close to the road from Kidiánagaru to Mevása. 1854.	23 27 54	70 48 36	466	226 227
Kimrakot Bet Island <i>Kimrakot Island</i>	Hálár	Highest point of a small rocky island of that name in the Gulf of Cutch, about ¼ a mile N.N.W. of Shiárdi Bet, 2½ miles S. of Ajár Island, 5 miles N.W. by N. of Ásota Motá, and 6 miles N. by E. of Vírpur: Navánagar State. 1855.	22 20 9	69 22 7	...	...
Kiri Hill <i>Vade H.</i>	"	Highest point of a hill, about a mile E. of the village of Kiri, 2½ miles S.S.E. of Báláchari, 2 miles N.N.W. of Rámpur, and 3 miles S.W. of the town of Hariána on the right bank of the Phuljhar or Kunkávati river: Navánagar State. 1854.	22 34 11	70 16 34	[122]	1074 1075
Kiri h.s. <i>Keri H.S.</i>	"	On a hill, about a mile N. of the small village of that name, 1½ miles S.S.E. of Báláchari, 2½ miles E.N.E. of Sachána on the southern shore of the Gulf of Cutch, and 3 miles S.W. by W. of Hariána town: Navánagar State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, 1 foot high, over which a rectangular protecting pillar 3½ feet high was built. 1854.	22 34 53.56	70 15 52.12	† 111 1	710
Kiu Hill <i>Rajpur Hill No. 4</i>	Baroda State	The western and the highest rock in the Kin Island, about 1½ miles N.E. of Rájputa Bandar, 2½ miles N. of Námrasar, and the same distance W. by N. of Thorda Bandar. 1855.	22 24 25	69 8 40	[68]	...
Kob Tree <i>Koav B. Tree</i>	Sorath	Conspicuous palm tree close N.E. of the village so called, about 3 miles W. of the village of Tar, and the same distance S. of Sokbra village: Junágul State. 1854.	20 45 16	70 55 47	...	843 844
Kodinár Building <i>Korinar Ht. Building</i>	Baroda State	Highest building on the E. edge of the town of the same name on the left bank of the Singávra river, and about 3 miles from the coast. 1854.	20 47 33.7	70 44 38.3	79	859
Kohyár Hill Mark (helio.) <i>Koya Dora H. M.</i>	Thar and Pákar	On a sand hill in the desert, about 3½ miles N.E. of the village of Mamchero, and 2½ miles S.E. of Digri. 1856.	24 40 24.08	70 53 1.69	...	141
Konjli s. <i>Konjili H.S.</i>	Gohelvád	On slightly rising ground on the boundary between the villages of Konjli and Talgárdá, about a mile E. of the former and 1½ miles N.W. of the latter, and 4½ miles N.W. by N. of Mahuva town: Bhávnagar State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry. 1854.	21 8 57.78	71 47 21.39	† [112]	624
Konjli Tree	"	Conspicuous palm tree close N. of the village of the same name, about 5½ miles S.E. by E. of Khuntávada town, and the same distance N.W. by N. of Mahuva town: Bhávnagar State. 1854.	21 9 7	71 46 17	...	781 782

* To mark on pillar.

† To upper surface of solid, circular pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Kosradhár h.s. ...	Sorath	On the highest point of a hill in the Gir, about $\frac{1}{2}$ of a mile N. by W. of the hamlet called Karamdi, 3 miles E. of Málanka village, and 8 miles N.W. by W. of the Kameshvar temple on the Hiran river: Junágad State. The station consists of a platform of earth enclosing an isolated and perforated pillar of masonry, 2 feet in height, with an aperture for access to the lower mark. 1860.	21 14 32' 33	70 35 27' 68	$\frac{997}{2}$ feet	108 109
Kotra h.s. ...	Gohelvád	On a small open space in the ruined hill fort of Mota Kotra in the village of the same name on a high cliff immediately overlooking the sea, about $4\frac{1}{2}$ miles S. by E. of the town of Dátha: Bhávnagar State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry. 1854.	21 7 22' 07	72 0 46' 86	† 62	621
Kotra Tree No. 1 ... <i>Valun Kotra E. B. Tree</i>	Baroda State	Eastern of the two conspicuous palm trees near the hamlet so called, about $2\frac{1}{2}$ miles E. of Velan village, and 7 miles E.S.E. of Sarkharia village. 1854.	20 42 37	70 54 15	...	845 846
Kotra Tree No. 2 ... <i>Valun Kotra W. B. Tree</i>	"	Western of the two conspicuous palm trees near the hamlet so called, about $1\frac{1}{2}$ miles E. of Velan village, $6\frac{1}{2}$ miles E. by S. of Sarkharia village, and $1\frac{1}{2}$ miles W. of the western edge of the island of Din. 1854.	20 42 35	70 53 49	...	847 848
Kunkaváv, XXXIV	Sorath	<i>File page 11—J.</i>	21 39 11' 96	70 58 36' 07	† $\frac{621}{30}$	44, 45
Kuranga Hill Peak <i>Roja Peak</i>	Baroda State	Lower of the two conspicuous peaks called Rojtembi, about 3 miles W.N.W. of the village of Kuranga, and close S. of Khúra Khetar Lake. 1854.	22 3 55	69 10 23	...	...
Kuranga h.s. ... <i>Koronga H.S.</i>	"	On the highest of the two conspicuous peaks, about 2 miles W.N.W. of the village of Kuranga, and $\frac{1}{2}$ a mile S. of Khúra Khetar Lake. The station consists of a platform enclosing a solid, triangular and isolated pillar of masonry, 1 foot in height, having two marks, one cut on the rock and the other at the surface 1 foot above it. 1854.	22 3 23' 43	69 10 45' 41	† $\frac{[108]}{1}$	680 681
Kutiána Temple <i>Kutiana Temple</i>	Sorath	Conspicuous temple in the southern part of the fortified town of this name on the right bank of the Bhádar river: Junágad State. 1859.	21 37 20' 8	70 1 37' 6	...	431
Lálkhágad Hill Fort <i>Lakagad Tower</i>	Catch State	Eastern and highest tower of the fort towards the N.W. end of the village of the same name, about $2\frac{1}{2}$ miles S.S.W. of Sanva village, and 4 miles N.E. of the town of Bhímásar. 1854.	23 34 19' 7	70 58 26' 7	...	210
Lálkhágad Hill Mark <i>Tino H.P.</i>	"	On the highest point of a conical hill close S. of the road between the villages of Lálkhágad and Bhímásar, about 2 miles S.W. of the former and the same distance N.E. of the latter, and $6\frac{1}{2}$ miles E.S.E. of Hamirpur large village. The point is denoted by a circle and dot covered over by a pile of stones. 1854.	23 33 31' 47	70 56 49' 30	§ $\frac{[381]}{100}$	212 213

* To upper surface of perforated pillar. † To upper surface of solid, circular pillar. ‡ To upper surface of solid, triangular pillar. § To circle and dot.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure feet	No. of Triangle
Lákhanka Hill Platform <i>Lakinka H. Platform</i>	Gohelvád	About 1½ miles S.W. by W. of the village so called, 2½ miles S.S.E. of Morchand village, and 1½ miles W. of the coast of the Gulf of Cambay: Bhávnagar State. 1854.	21 31 3	72 16 16	...	...
Lákhásar Hill <i>Jama H. N. E. end</i>	Hálár	Bush on the N.E. end of the hill, about 1½ miles E. by S. of the village of Lákhásar Ápávála, and 1½ miles N.W. by W. of Lákhásar Pírka: Navánagar State. 1854.	22 10 24	69 49 11	...	...
Lakria Hill Mark (helio.)	Cutch State	On a low ridge running nearly E. and W., about 2 miles from the western edge of the Ran, 6½ miles N.N.W. of the large village of Rav, and 7 miles W. of that of Desalpur. 1856.	23 44 48.21	70 36 44.33	[110]	199
Lálpur h.s.	Hálár	On a low, flat hill, about a mile N.E. by N. of the large village of this name, and ¼ mile E. of the Dhándar river: Navánagar State. The station consists of a platform of rubble enclosing an isolated and perforated pillar of masonry, 2 feet high, over which a rectangular protecting pillar 3½ feet high was built. 1859.	22 12 18.03	70 0 58.91	* 261 2	75
Lámba Hill	"	Isolated hill, about 2 miles N. of the village of this name, 2½ miles S.W. of Sáthápur, and 7½ miles N.W. by N. of the sea-port town of Miáni: Navánagar State. 1854.	21 55 43	69 21 22	[138]	...
Lámba Hill Temple	"	On a small hill on the coast, about 1½ miles W. by S. of the village of this name, and 6½ miles N.W. by W. of the sea-port town of Miáni: Navánagar State. 1854.	21 54 13.2	69 20 41.2	...	951 952
Lámba Tower	"	In the village of this name, nearly 3 miles W. by N. of Virpur village, and 6 miles N.W. of the sea-port town of Miáni: Navánagar State. 1854.	21 53 53.4	69 21 28.2	...	950
Lambhora h.s. <i>Morai H.S.</i>	Sorath	On the N.W. one of the two similar isolated hills, about 1½ miles S.E. of the village of Lambhora, 3½ miles W. of Galodar, and 5 miles N.W. by W. of the town of Bhanduri on the metalled road from Vantli to the sea-port town of Veraval: Innagad State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, having mark-stones at top and bottom. 1854.	21 8 53.86	70 15 35.37	† [209]	655
Lámbháar h.s. <i>Lambdhar H.S.</i>	Hálár	On the highest part of a range of hills, about 1½ miles S.W. by S. of Panchásara Mota, 2½ miles W.N.W. of Kharkhambháliya, and 4 miles E.N.E. of Kharba Mota: Navánagar State. The station consists of a platform of earth enclosing a circular pillar of masonry, about 2 feet high, over which a rectangular protecting pillar 3½ feet high was built. 1859.	22 12 15.75	70 9 9.88	† 613 2	76
Lápla Hill Mark (helio.) <i>Lopala H.S.</i>	Baroda State	On one of the most prominent peaks in the Gir, about 2 miles S. by W. of the village of Bhárd, 1½ miles N.E. of Umria village, and 10 miles N.W. by N. of the town of Dedan. The point is denoted by a mark-stone over which a rectangular protecting pillar 3½ feet high was built. 1860.	21 10 34.31	71 15 36.43	† 1546	600 601
Láthi Tower (helio.) <i>Lathi T.S.</i>	Gohelvád	In the town of the same name, about 12 miles E. of Chital town, 6 miles N.W. of Anodar large village, and 1½ miles S. of the Railway Station of Láthi: Láthi State. The point is denoted by a mark on the tower. 1860.	21 43 26.26	71 25 43.96	...	584

* To upper surface of perforated pillar. † To upper surface of circular pillar. ‡ To mark-stone.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Latipur Temple ... <i>Latipoor V. Temple</i>	Hálár	N.E. bastion of the temple close E. of the large village of that name, about 3½ miles S.E. of Bhendar, 3¼ miles W.N.W. of Khakhra on the right bank of the Áji river, and 4½ miles S.S.W. of Pitar on the same bank; Navánagar State. 1854.	22 37 37.0	70 34 9.2	... feet	433
Liláva Hill Mark ... <i>Kaduka H.</i>	Sorath	About a mile N.N.E. of the village of Liláva, 1½ miles E. by N. of Khijaria village, and 3 miles S. of the town of Mendarda on the Madvati river; Jetpur State. 1860.	21 16 25.51	70 28 55.27	...	530 531
Limbála Hill Mark... <i>Thersingra H. Mk.</i>	Gohelvád	About 2½ miles S. by W. of the village of Limbála, 2½ miles E.S.E. of Itria village, and 7 miles N.E. of Kariána large village on the Kámbhár river; Bhadli sub-division. 1860.	21 57 29.74	71 29 18.80	...	574 575
Limbálu Hill Mark (helio.) <i>Nandala H.S.</i>	Jhálávád	About ¼ a mile S. of the small village of Limbálu, 2½ miles S. of Khatla, and 6 miles E.S.E. of the town of Dhándhalpur; táuka Sadámda. 1860.	22 21 34.08	71 29 32.14	523	555 556
Lohij Tree ... <i>Scal Minsha Pir Brab Tree</i>	Sorath	Conspicuous palm tree at the shrine of Miransháh Pir, about a mile W. of the village of Lohij, 1½ miles E.S.E. of Sil Bandar, and the same distance S. by E. of the large village of Sil; Junágad State. 1854.	21 9 53	70 5 41	...	908 909
Lol Hill Temple ... <i>Loal H. Temp.</i>	Hálár	On the easternmost point of a three-topped hill, about a mile S. by W. of the village of this name, 2½ miles E.S.E. of the large village of Bhátia, and 4½ miles W. by S. of Khakharda; Navánagar State. 1854.	22 4 58.6	69 20 52.9	...	954 955
Lor Hill ... <i>Lohar Hill Ht. Point</i>	Sorath	Highest point at the N. end of a long ridge and about 200 yards S.W. of the village of Lor, 1½ miles N.E. by E. of Mánasa Náma village, and the same distance N.W. of Ebbhalvad village; Junágad State. 1854.	20 57 11	71 17 44	[479]	...
Lovaráli Hill ... <i>Bhoja Chor H. E. End</i>	Baroda State	A prominence on the E. brow of the hill on the western border of the Ran, about 2 miles E.S.E. of the village of Lovaráli, and 2½ miles S. of Charakha village on the road to Dwárka. 1854.	22 9 58	69 9 27	...	972
Lovaráli h.s. <i>Lorari H.S.</i>	"	On the S. brow of the hill, isolated from the extensive table-land in Okhamandal, a short distance E. of the village of Lovaráli, about 1½ miles S.W. by S. of Charakha village. 1854.	22 10 43.16	69 8 11.52	...	698
Lus Hill Mark (helio.) <i>Lus H. Platform</i>	Hálár	On the highest point at the northern end of a small, isolated hill, nearly a mile N.W. by W. of Lus Arabvadi village, and 1½ miles E. of Lus Seta on the E. bank of the Puna river; Navánagar State. The point is denoted by a mark in the centre of a platform. 1854.	22 18 42.69	69 58 10.53	176	1054 1055
Lúsádi s. <i>Loorari H.S.</i>	Gohelvád	On slightly rising ground, about a mile E. of the village so called, 2 miles W.S.W. of Gundarni village, and 6 miles E.N.E. of Dungar town; Bhavnagar State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry. 1854.	21 6 15.05	71 41 37.25	[147]	626

* To mark in centre of platform.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Mádhapur h.s. ... <i>Sawand H.S.</i>	Sorath	On the eastern of a group of three hills, about 1½ miles N.E. of the large and well-known ancient town of Mádhapur on the coast: Porbandar State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, 1 foot high, having mark-stones at top and bottom. A rectangular protecting pillar 3½ feet high was built over it. 1854.	21 16 3'06"	70 0 54'18"	<i>feet</i> [74] 1	660
Mádhapur Hill Temple <i>Sawand Hill Temple</i>	"	On a knoll, about 78 yards W. by N. of Mádhapur h.s.: Porbandar State. 1854.	21 16 3'3"	70 0 51'9"	...	913 914
Mádhapur Tower ... <i>Madapur V. Tower</i>	"	Conspicuous, S.E. tower in the town: Porbandar State. 1854.	21 15 18"	69 59 54"	...	...
Madhi Hill Temple <i>Gorak Madhi Hill Temple</i>	Baroda State	Within the surrounding walls of the small village of Madhi, about ¼ of a mile from the coast, and ¼ miles S.S.E. of Dhrevár Nava village. 1854.	22 5 28'0"	69 8 21'6"	...	967
Madhi Hill Tower ... <i>Gorak Madhi Tower</i>	"	Conspicuous tower about 64 yards S.E. by E. of Madhi Hill Temple. 1854.	22 5 27'1"	69 8 23'3"	...	966
Madva Headland Rock	"	Called Diu Headland Rock by Mariners. A prominent rocky headland jutting out well into the sea, about 1½ miles S.S.E. of Grant's Bungalow close S. of Velan village, and 3 miles W.S.W. of the western extremity of Diu Island. 1854.	20 41 22"	70 52 44"	...	...
Madva h.s. ... <i>Madva H.S.</i>	"	On the highest point of a spur jutting out into the sea, 17 feet N. of the N.W. corner of Madra Hill Temple No. 2, about 2 miles S. of the village of Velan, and 3 miles W. by S. of the western edge of the island of Diu. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry. 1854.	20 41 26'10"	70 52 8'31"	[84]	642
Madva Hill Temple No. 1 (helio.) <i>Madva Temple</i>	"	On a small hill on the coast, about 3½ miles S.W. by W. of Bránkavára village on the island of Diu. 1853.	20 41 26'35"	70 52 9'36"	...	849
Madva Hill Temple No. 2 <i>Madva H. Temple</i>	"	On a small hill on the coast, about 38 yards W.S.W. of Madva Hill Temple No. 1. 1854.	20 41 25'8"	70 52 8'4"	...	850 851
Mahádevpáru Tower <i>Mahdeopur V. Tower</i>	Gohelvád	Highest tower in the village of the same name, about 1½ miles E.S.E. of Trápaj town, and 7 miles N.E. by E. of Talája town: Bhávnagar State. 1854.	21 24 45'3"	72 10 27'1"	...	745 746
Mahidhar, XXVII	Jhálávád	<i>Fide page 10—J.</i>	22 17 9'23"	71 14 16'32"	$\frac{1117}{5}$	37
Mahika h.s. ... <i>Myka H.S.</i>	Hálár	At the N. end of a hill, about a mile S. of the village so called, 14 miles N. of the village of Umaváda, and 6 miles S.E. of the town of Mengni: Gondal State. 1853.	22 1 30'79"	70 46 52'08"	[695]	325 326
Mahura Temple ... <i>Mouva Town Temple</i>	Gohelvád	Spire of the conspicuous Jain temple in the centre of the town: Bhávnagar State. 1854.	21 5 16'5"	71 48 44'3"	...	774 775

* To upper surface of solid, circular pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Makanpur Hill ... <i>Antri Hill</i>	Baroda State	S.E. end of the hill, about $\frac{3}{4}$ of a mile W.N.W. of the small village of Makanpur on the high road from Dwarka to Arunda, $1\frac{1}{4}$ miles N.N.E. of Kachhigad, $1\frac{1}{4}$ miles S.W. by S. of Mojap, and $3\frac{1}{4}$ miles N. of the large village of Barvala. 1855.	22 20 26	69 0 13	feet [45]	...
Makhel Hill Mark (helio.) <i>Makna H.</i>	Cutch State	On an isolated hill, about $\frac{1}{4}$ a mile E.S.E. of the village of Makhel, $1\frac{1}{4}$ miles W.S.W. of Tuga village, and 4 miles S. by W. of the large village of Adesar. 1856.	23 29 55' 14	71 0 21' 44	[145]	230
Makhtumpur h.s. <i>Muktapoor H.S.</i>	Sorath	On a sand hill close to the coast, about a mile W. of the village of Makhtumpur, and $2\frac{1}{4}$ miles W. by N. of the town of Mangrol; Junagad State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, having mark-stones at top and bottom. 1864.	21 7 49' 54	70 7 10' 18	[61]	65G
Malgam h.s. <i>Malgama H.S.</i>	Baroda State	On high ground between the Singavra and Singavada rivers, about 2 miles W. by S. of the village of Malgam. It is on the road from Din to Kodinir town, and 5 miles E. of the latter. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, having mark-stones at top and bottom. 1854.	20 47 40' 80	70 49 32' 15	[90]	643
Malia, XVI ...	Halar	<i>Fide page 8—J.</i> ...	23 5 4' 94	70 47 1' 77	* $\frac{53' 57}{18}$	21, 22
Malia Temple (helio.) ...	"	On the top of the highest temple close S. of the town, about $\frac{1}{4}$ a mile W. of the left bank of the Machhu river; Malia State. 1854.	23 5 18' 3	70 48 3' 1	...	...
Malia Tomb (helio.) <i>Malia Capt. McKenzie's Tomb</i>	"	On Captain McKenzie's tomb on the left bank of the Machhu river, about a mile S. of the town; Malia State. 1854.	23 4 24' 02	70 48 8' 87	...	281 282
Malia Tower No. 1 (helio.) ...	"	On the highest and broken tower in the town, about $\frac{1}{4}$ a mile W. of the left bank of the Machhu river; Malia State. 1854.	23 5 31' 55	70 48 4' 47	...	280
Malia Tower No. 2 (helio.) ...	Sorath	In the town on the right bank of the Megal river, and about 4 miles N.N.E. of the large village of Bhandari on the metalled road from Vantili to Veraval; Junagad State. The point is denoted by a mark on the tower. 1860.	21 9 32' 11	70 21 3' 00	† 197	538 539
Malvan Hill Mark ... <i>Malwan H.</i>	Gohelwad	About $\frac{3}{4}$ of a mile N. of the village of the same name, $1\frac{1}{4}$ miles in the same direction from Torda village, and $6\frac{1}{4}$ miles S.W. of Sihor town; Bhavnagar State. 1863.	21 38 20' 92	71 55 45' 34	...	367 368
Mánaba, XII ...	Cutch State	<i>Fide page 7—J.</i> ...	23 16 35' 86	70 51 11' 75	‡ $\frac{56' 72}{5}$	17

* To upper surface of solid, circular pillar.

† To mark on tower.

‡ To upper surface of one of three flat stones for theodolite stand, which is level with upper surface of solid, circular pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Mánáha Mark (helio.) <i>Monaba V. Mound</i>	Cutch State	On a mound in the village so called, about 2 miles E. by S. of Rájthali village, and 5½ miles E.N.E. of Shikarpur. 1856.	23 17 29.68	70 47 27.04	feet ...	263 264
Manáva, XXXVII	Hálár	<i>vide</i> page 11— <i>J.</i> ... Note.—When visited in 1870-71, a rectangular protecting pillar 3½ feet high was built over the station.	21 21 48.18	71 8 1.25	$\frac{814}{5}$	48, 49
Mandásar Tower ... <i>Malutra Tower</i>	Jhádlávád	On rising ground, about ¼ a mile N. of the village of Mandásar, 2 miles E. by S. of the large village of Lonsar, and 1½ miles W. of Vijalia village. Lakhtar State. 1853.	22 39 9	71 10 54	...	...
Mándha Temple ... <i>Bara Manda Temple</i>	Hálár	Conspicuous temple about 135 yards S.E. of the tower in the village of Mándha Mota close to the left bank of the Sihan river: Navánagar State. 1854.	22 18 45.8	69 42 45.2	...	1046
Mándha Tower ... <i>Bara Manda V. Tower</i>	"	In the village of Mándha Mota, about a mile S. of Mándha Nána, and 4½ miles E. of the town of Saláya: Navánagar State. 1854.	22 18 48.4	69 42 42.3	...	1045
Mándvi h.s. ... <i>Mandvi H.S.</i>	Sorath	On the pointed sand hill on the coast, about a mile S.E. by S. of the village so called, the same distance S.W. of Nandan village, and 3½ miles N.E. of the citadel and port of Din: Junágad State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry. 1854.	20 44 24.66	71 4 28.12	[84]	637
Mándvi Tree ... <i>Mandvi B. Tree No. 1</i>	"	Palm tree about a mile N. of the village so called, close to the village road between Vásoj and Delváda on the right bank of the Marchundri river, and about 1½ miles S.W. by W. of Delváda: Junágad State. 1854.	20 45 49	71 3 52	...	...
Mángrol Building ... <i>Mungrol Ht. Building</i>	"	Turret of the highest building (Nawáb's Palace) in the centre of the town: Junágad State. 1854.	21 7 20.3	70 9 20.2	...	902 903
Mángrol Tower No. 1 ... <i>Mungrol Tower Flag-staff</i>	"	Flag-staff on the tower on the coast, immediately E. of Navápura village, and about a mile W. by S. of the town: Junágad State. The point is denoted by a broad arrow of the Marine Survey. 1854.	21 6 29.4	70 8 25.4	...	904 905
Mángrol Tower No. 2 (helio.) ... <i>Mungrol Mk.</i>	"	On old bandar tower about a furlong N.W. of the light-house, and 1 mile W. by S. of the town: Junágad State. The point is denoted by a broad arrow of the Marine Survey. 1854.	21 6 36.99	70 8 19.04	...	906 907
Mánjunvás Hill Mark No. 1 ... <i>Jallondri H. M.</i>	Cutch State	On a small, detached hill about 1½ miles W. by S. of the village of Mánjunvás, 2½ miles N. of Khándeek village, and 1½ miles S.E. of the town of Fatehgad. The point is denoted by a mark on a pillar. 1856.	23 40 57.05	70 54 22.98	...	184 185
Mánjunvás Hill Mark No. 2 (helio.) ... <i>Jogi Dongri H. M.</i>	"	About a mile S.W. by W. of the village of Mánjunvás, 2½ miles N. by E. of Khándeek village, and 2 miles S.E. by E. of the town of Fatehgad. 1856.	23 40 51.39	70 54 45.40	[174]	186 187

• To upper surface of solid, circular pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station Height of Structure	No. of Triangle
Mánsa Hill	Sorath	Highest of several knolls to N. of the fort so called, about $\frac{1}{2}$ of a mile E. by N. of Mánsa Nána village, 1 mile S.W. by S. of Lor village, and $\frac{1}{4}$ miles W. of Ebhalvad: Junágad State. 1854.	20 56 29	71 17 18	feet [370]	808 809
Mánsa Hill Fort	"	Conspicuous bnsh in the fort on a little hill to the N. of and overlooking the village of Mánsa Mota, about $\frac{1}{4}$ miles N. of Chelna village: Junágad State. 1854.	20 55 57	71 16 40	...	...
Márad Hill Mark (helio.) <i>Mardi H.S.</i>	Hálár	On a small, isolated hill about $\frac{1}{4}$ miles W. of the village of Márad Mota, and 6 miles S.E. by S. of the town of Upieta: Gondal State. 1860.	21 40 37.39	70 23 21.39	314	502 503
Márad Temple <i>Mardi Village Temple</i>	"	Near the centre of the village of Márad Mota, about 7 miles S.E. by E. of the town of Upieta: Gondal State. 1860.	21 40 49.1	70 24 57.8	...	500 501
Mardakh Bet Hill Mark (helio.) <i>Mardak H. Mk.</i>	Cutch State	On a conspicuous hill on the island of the same name in the Ran of Cutch, about 8 miles S.S.E. of Nakhpur village, and 10 miles N.E. of Kesmári Bet. 1854.	23 23 1.84	71 9 58.58	[179]	235 236
Marudi Bet Island <i>Lappa Island</i>	Baroda State	Also known as Lappa. The western of the two small islands, about $2\frac{1}{4}$ miles E. by S. of Poshitra village, 6 miles N.E. by E. of Mulvel, and $6\frac{1}{4}$ miles E. by N. of Rajpura. 1855.	22 22 58	69 15 18	...	...
Masudara Hill <i>Keyrala Hill</i>	Gohelvád	Isolated hill, about $\frac{1}{2}$ of a mile N. of the village of Masudara, the same distance N.E. of Bálapur, and 5 miles N. of Dungar town: Bhavnagar State. 1854.	21 8 19	71 36 43	[462]	...
Máthak Tree <i>Matak P. Tree</i>	Jhálávád	A conspicuous palm tree about a mile E. by N. of the large village of the same name, and 10 miles W.N.W. of the town of Sara: Dhraugadra State. 1852.	22 50 41	71 6 35	...	291 292
Mátli h.s. <i>Panch Tobra H.S.</i>	Hálár	On the highest of a range of hills, about $2\frac{1}{4}$ miles N.E. of the village of Mátli Moti, 3 miles W. by N. of Dhntápur village on the right bank of the Moti Phuljhar river, and 7 miles S. of the large village of Vantli: Navánagar State. 1860.	22 20 19.99	70 20 20.80	360	440 441
Meghpur Temple <i>Megpur V. Temple</i>	"	Spire of the temple in the village of the same name on the left bank of the Und river, about 3 miles N.E. by N. of Sisang village, and 4 miles N. by W. of the large village of Nikava: Navánagar State. 1860.	22 14 36.5	70 33 26.6	...	451 452
Mehmána Hill Mark (helio.) <i>Pipertora Hill</i>	"	About $\frac{1}{4}$ miles E.N.E. of the village of Mehmána close to the right bank of the Násai river, $3\frac{1}{2}$ miles N. of the large village of Kharba Mota, and 4 miles W. by S. of Gala village: Navánagar State. 1859.	22 14 25.24	70 5 43.95	384	400 401
Mehmána Tower <i>Meymana Tower Highest</i>	"	Highest tower in the southern part of the village so called, about 5 miles N.E. by E. of the large village of Lálpur: Navánagar State. 1859.	22 13 55.5	70 4 12.5	...	402 403
Menderda Tree <i>Menderda Palm Tree</i>	Sorath	Palm tree in the S.E. part of the town of this name: Jetpur State. 1860.	21 19 9	70 28 58	...	...

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Mengni Hill Tree ...	Hálár	On one of several small hills, about 1½ miles S.E. by S. of the town so called, and 2¼ miles E. by N. of Pátiáli village: Gondal State. 1853.	22 4 1	70 44 22	feet...	...
Methla Hill ... <i>Methla H. Ht. Point</i>	Gohelvád	Highest point at the N.W. end of a sand hill on the coast, about a mile S. of the village so called, and 4½ miles S.E. of the town of Dátha: Bhávnagar State. 1854.	21 8 55	72 3 1	...	...
Methli Hill Mark (helio.) <i>Methli H.S.</i>	"	On a low range of hills, about a mile N.W. by N. of the village of that name, the same distance N.E. by E. of Bhúrkhia village, and 3 miles N. of Chabhária village: Lathi State. The point is denoted by a mark-stone over which a rectangular protecting pillar 3½ feet high was built. 1860.	21 44 20.90	71 31 47.75	* 405	582 583
Metin Hill Mark (helio.) <i>Metin H.S.</i>	Hálár	On a small, isolated hill immediately S. by W. of the village of the same name, and about 4 miles E.N.E. of the town of Kharedi: Virpur State. 1860.	22 5 19.73	70 34 55.82	524	463 464
Mevása Hill Mark No. 1 <i>Samardar H. Mk.</i>	Cutch State	On the highest, conical peak of a range of hills running north of the village of Mevásá, about 2½ miles E.N.E. of Chitrod, 4½ miles S. by E. of Sai village, and 5½ miles S.W. of Kidánagar. The point is denoted by a mark on the pillar. 1854.	23 25 19.82	70 45 23.15	[438]	247
Mevása Hill Mark No. 2 <i>Badzeria H. Mk.</i>	"	On the highest point of a conical hill, about 1½ miles E.N.E. of the village of Mevásá, 4½ miles S.W. by S. of Kidánagar, and the same distance W. by N. of Gáodar. The point is denoted by a mark on the pillar. 1854.	23 25 3.72	70 47 9.99	[439]	248 249
Mevása Hill Mark No. 3 (helio.) <i>Budia H. Mk.</i>	"	On the highest point of a round hill, about a mile S. by W. of the village of Mevásá, 3 miles E. by S. of Chitrod, and 3½ miles N. of Kumbhária. 1856.	23 23 48.29	70 45 49.05	[331]	253 254
Mevása Hill Mark No. 4 (helio.) <i>Mehwassa H.S.</i>	Hálár	About 2½ miles S. by E. of the large village so called on the right bank of the Cháparvari river, ¼ of a mile in the same direction of Jámbuda village, and 5½ miles W. of the town of Virpur: Navánagar State. 1860.	21 50 37.13	70 38 51.85	437	493 494
Mevása No. 1 h.s. <i>Mehwassa H.S.</i>	"	On a point on the eastern edge of a mass of hills, about ¼ a mile N.N.E. of the village so called, 3 miles E. of Methin village, and 9 miles E. of the large village of Yadála: Navánagar State. The station consists of a platform enclosing a circular and isolated pillar, about 2 feet in height, over which a rectangular protecting pillar 3½ feet high was built. 1853.	22 1 28.11	70 18 9.43	† 888 2	57, 58
Mevása No. 2 h.s. <i>Mehwassa H.S.</i>	"	About 2½ miles E.S.E. of the large village of the same name, 1½ miles N.W. by N. of Thoráia village, and 4 miles W. by N. of the town of Virpur: Navánagar State. 1853.	21 51 38.63	70 40 24.28	[496]	324

* To mark-stone.

† To upper surface of circular pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Mevása No. 3 h.s. ... <i>Mchwassa H.S.</i>	Hálár	On a rocky spur at the S.W. end of a low range of hills, nearly $\frac{1}{2}$ of a mile N. by E. of the village of Melvása, $3\frac{1}{2}$ miles N.N.W. of the large village of Rán, and nearly the same distance E.S.E. of Pindára; Naváingár State. The station consists of a large kacha platform enclosing a solid and circular pillar of masonry, 44 feet in height, with marks at top and bottom. When visited by the Levelling Party in 1874-75, the upper mark and portion of the pillar had entirely disappeared, and it was necessary to pull down a portion of the pillar to get access to the lower mark which was not found on the rock below. When visited by the Topographical Survey Party in 1877-78, no vestige of it could be found. 1854.	22 13 41' 21"	69 20 59' 97"	$\frac{157' 58''}{\dagger}$	685
Miáni Level Datum Pillar s. ... <i>Miani Level Datum Pillar</i>	Sorath	In the Miáni Harbour, about a mile up the Varta river, about 70 feet from its left bank, and immediately N.W. of the town of Miáni; Porbandar State. The station consists of a masonry pillar, 1 foot high, in which two stones were embedded, one at the level of the ground having the numeral 39 engraved thereon, and the other 1 foot above it, having the numeral 40 engraved at top. 1855.	21 50 29' 30"	69 25 20' 77"	$\frac{35' 66''}{\dagger}$	946
Miáni Temple No. 1 ... <i>Miani Town Temple</i>	"	Close E. of the sea-port town; Porbandar State. 1854.	21 50 16' 7"	69 25 38' 5"	...	942
Miáni Temple No. 2 ... <i>Miani Creek Temple</i>	"	Small temple on the creek, about a mile S. by E. of the town, and $\frac{1}{4}$ of a mile from the coast; Porbandar State. 1854.	21 49 16' 0"	69 25 31' 6"	...	943
Miáni Temple No. 3 ... <i>Miani Temple</i>	"	Black temple in the town; Porbandar State. 1853. ...	21 50 19' 3"	69 25 23' 1"	...	944
Miáni Tower ...	"	Easternmost, round tower in the town; Porbandar State. 1853.	21 50 21' 3"	69 25 24' 7"	...	945
Mocha h.s. ... <i>Mosa H.S.</i>	"	On the brow of the highest part of a range of sand hills, about a mile N.W. of the village of this name, $\frac{3}{4}$ of a mile from the coast, and 2 miles S.E. by S. of Balej village; Porbandar State. The station consists of a platform of stones enclosing a solid, circular and isolated pillar of masonry, 1 foot in height. A rectangular protecting pillar $3\frac{1}{2}$ feet high was built over it. 1854.	21 21 3' 03"	69 55 41' 08"	$\frac{\S}{92}$ I	663
Moda Hill Platform ... <i>Patahisha H. Sq. Platform</i>	Catch State	Square platform on a low, flat-topped hill, about 2 miles S.S.W. of the village of Moda, 4 miles W. of the large village of Sauva, and $4\frac{1}{2}$ miles E. of Hamirpur village. 1856.	23 36 21' 5"	70 55 50' 1"	[270]	209
Modhuka h.s. ... <i>Omat H.S.</i>	Gohelvád	On the highest point of the hill known as Omat, about $1\frac{1}{2}$ miles E. of the village of Modhuka, and 12 miles E.N.E. of the town of Jaslan; Jaslan State. The station consists of a platform of earth enclosing an isolated and perforated pillar of masonry, 2 feet high, with an aperture for access to the lower mark. A rectangular protecting pillar $3\frac{1}{2}$ feet high was built over it. 1860.	22 6 2' 05"	71 26 4' 48"	$\frac{\parallel}{962}$ 2	119 120

* To upper surface of rock. † See description of this station. ‡ To upper surface of level datum pillar. This was obtained by direct comparison with the adjoining Tide Gauge, vide pages V111—J, to X—J, of the Introduction, § To upper surface of solid, circular pillar. || To upper surface of perforated pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Modhutra Hill Mark (helio.) ... <i>Madutra H. M.</i>	Pájanpur State	On a conspicuous point near the village so called, about 2½ miles N.N.W. of Roju village, and 3½ miles N.W. of Grámbdi village: Sántalpur sub-division. 1866.	0 1 " 23 44 54' 21"	0 1 " 71 7 17' 60"	feet [84]	179 180
Modhvára Hill ... <i>Modhvára H. (isolated)</i>	Sorath	Isolated hill about 1½ miles N. of the large village of this name, 3½ miles S.W. of that of Patána, and the same distance N.W. of the village of Kindarkheda: Porbandar State. 1854.	21 50 10	69 33 44	[98]	...
Mojira Hill Mark (helio.) ... <i>Gantia H.S.</i>	Hálár	About ¾ of a mile N. by W. of the village of Mojira, and 2 miles S.E. of the town of Bháyavadar: Gondal State. 1860.	21 49 58' 75"	70 18 29' 62"	430	487 488
Mokal t.s. ... <i>Mokal H.S.</i>	Sorath	On the S.W. tower of a small fort in the village of this name on the eastern edge of the Mokal Ran, about 1½ miles W. of Bápodar village, and 5½ miles S.S.E. of the large and well-known village of Bónáván on the metalled road from the town of Kutiyána to the sea-port town of Porbandar. The tower on which the station is built is about 10 feet in height: Porbandar State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, 1 foot in height, having mark-stones at top and bottom. A rectangular protecting pillar 3½ feet high was built over it. 1854.	21 36 22' 88"	69 49 39' 95"	* [42] I	668
Mokhána Well ... <i>Ganga Well Cupola</i>	Hálár	Cupola of the well known as Ganga, on rising ground, about a mile W. by N. of the village of Mokhána, and 4 miles S. of the town of Navánagar: Navánagar State. 1853.	22 24 6' 1"	70 7 38' 4"	...	1065 1066
Morchand Hill ... <i>Morchand H. S. End Bush</i>	Ahmedabad	Conspicuous bush at the S. end of the hill, about 2½ miles W. by S. of the village so called, 3 miles S.E. of Sápodar village, and 2 miles E.N.E. of Vandi village: Gogha sub-division. 1854.	21 32 16	72 13 19	...	...
Morchand Hill Platform ...	"	Platform surrounded by trees and held sacred, about ¼ of a mile S. of the village of the same name, 1½ miles N.E. of Bhavánipur, and 2 miles W. of Thalsar village: Gogha sub-division. 1854.	21 32 28' 2"	72 15 22' 6"	...	738 739
Moridhár h.s. ... <i>Jompdiwallidhar H.S.</i>	Hálár	On the highest of a group of hills, about 1½ miles W.S.W. of the village of Ambarli on the left bank of the Pophal river, 2½ miles N.W. by N. of Mespur, and 7 miles N. by E. of the town of Kandorna: Gondal State. The station consists of a platform of earth and rubble enclosing an isolated and perforated pillar of masonry, 2 feet in height, with an aperture for access to the lower mark. When visited in 1874-75, the pillar was found to be 4 feet in height and 3 feet in diameter. A rectangular protecting pillar 3½ feet high was built over it. 1860.	21 59 32' 26"	70 34 30' 67"	† 533 ‡	92
Morvi Temple No. 1 ... <i>Morvi White Temple</i>	"	About 2 miles E. by N. of the town of Morvi on the left bank of the Machhu river, 1½ miles W.S.W. of Ghotu, and 2½ miles S. by E. of Pipli: Morvi State. 1853.	22 49 29' 6"	70 54 52' 7"	...	295
Morvi Temple No. 2 ... <i>Morvi East Temp.</i>	"	Eastern spire of the conspicuous temple close E. of the town: Morvi State. 1853.	22 48 58' 7"	70 52 57' 3"	...	296

* To upper surface of solid, circular pillar.

† To upper surface of perforated pillar.

‡ See description of this station.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Moti Moli Hill ... <i>Molia Isolated Hill</i>	Sorath	Low, isolated hill in a field, about $\frac{1}{2}$ of a mile E. of the village of Moti Moli, and 1 mile N.W. of the large village of Timbi on the Rupen Nadi: Junágad State. 1854.	20 54 20	71 13 42	... <i>feet</i>	813
Moti Moli h.s. ... <i>Molia H.S.</i>	"	About $1\frac{1}{2}$ miles due N. of the village of Moti Moli, and 2 miles N.W. by N. of the large village of Timbi. It is not on the highest ground in the neighbourhood: Junágad State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry. 1854.	20 55 40·39	71 13 35·88	* [174]	634
Motiyan Hill Mark <i>Moti H.</i>	Cutch State	On the highest point of a conspicuous, flat hill, about $1\frac{1}{2}$ miles N.N.E. of the large village of Bhumisar, 5 miles E. by N. of Bhutakia village, and the same distance S.E. by E. of Hamirpur. The point is denoted by a circle and dot covered over by a pile of stones. 1854.	23 33 38·40	70 55 23·75	[433]	218 219
Mouána Hill Pillar... <i>Mohana H. Pillar</i>	"	On a prominent point of the hill, about $2\frac{1}{2}$ miles N. by E. of the large village of this name, and $4\frac{1}{2}$ miles E. of the town of Bela. 1856.	23 52 6·4	70 55 8·7	[734]	175 176
Movaiya, XXX ...	Hálár	<i>Tide</i> page 10—J. Note.—When visited in 1874-75, a rectangular protecting pillar, 34 feet high was built over the station.	21 53 45·63	70 53 31·75	* $\frac{535}{4}$	40
Movaiya h.s. ... <i>Mumia H.S.</i>	"	On the hilly ground, about $1\frac{1}{2}$ miles S. of the village of that name, and 5 miles S.E. by S. of the town of Gondal: Gondal State. 1853.	21 53 8·77	70 55 15·89	512	319 320 321
Mujiásar h.s. ... <i>Munjasar H.S.</i>	Sorath	On a knoll rising out of a long ridge running nearly E. and W., about a mile N. by E. of the village so called, $3\frac{1}{2}$ miles W. of the town of Bagasra, and $\frac{1}{2}$ miles E.N.E. of that of Mánkviáda: táluca Bagasra. The station consists of a platform enclosing a circular and isolated pillar of masonry 6 feet in height. 1853.	21 29 29·43	70 56 25·84	* $\frac{647}{5}$	314 315
Mul Dvárka Building <i>Muldwarka Highest Building</i>	Baroda State	Highest building on a hillock on the coast between the mouths of the Sumat and the Sigávra rivers, about $3\frac{1}{2}$ miles S.W. of Kodinár town on the left bank of the latter: táluca Amreli. 1854.	20 45 30·9	70 42 9·7	...	864
Mul Dvárka Temple <i>Muldwarka Temple</i>	"	Dome of the temple on a hillock: táluca Amreli. The point is denoted by a broad arrow. 1854.	20 45 30·7	70 42 9·0	...	865 866
Mul Dvárka Tree ... <i>Muldwarka Math B. Tree</i>	"	Conspicuous bar tree in the garden of the chief Brahmin, nearly $\frac{1}{2}$ of a mile W. of Mul Dvárka Math, $\frac{3}{4}$ of a mile N.W. of another temple on the coast, and $3\frac{1}{2}$ miles S.W. of Kodinár town: táluca Amreli. 1854.	20 46 0	70 41 49	...	...
Múli Temple† ...	Jhálávád	Highest spire. At the N.E. end of the town of the same name on the right bank of the Bámbran river: Múli State. 1860.	22 38 18·8	71 29 55·2	...	517
Mulvel Tower ... <i>Morical V. Tower</i>	Baroda State	Close E. of the village of that name, about $2\frac{1}{2}$ miles N.E. of Ráppura, $3\frac{1}{2}$ miles E. by S. of Gováli, and $4\frac{1}{2}$ miles S.W. by S. of Poshitra. 1855.	22 20 13·7	69 10 27·8	...	1012

* To upper surface of circular pillar.

† For another triangle fixing this point, see the Synoptical Volume of the Gujarát Longitudinal Series.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Myári s. ...	Sorath	On a slightly rising ground, about 1½ miles S.W. of the large village of this name, ¼ of a mile E. of a stream, and 3¼ miles E. by S. of Garej village: Junágad State. The station consists of a platform of mud and rubbish enclosing an isolated, circular and perforated pillar of masonry, 2 feet high, over which a rectangular protecting pillar 3¼ feet high was built. 1854.	21 27 30.95	69 57 37.12	$\frac{\text{feet}}{28}$	86 664
Myári Temple ...	"	A small temple about a furlong S.E. of Myári s.: Junágad State. 1854.	21 27 26	69 57 42	...	...
Nagar-Piplia h.s. <i>Nugger Piplia H.S.</i>	Hálár	On a high ridge, about 2¼ miles S.E. of the village so called, 1¼ miles W. of Devla village, and 4¼ miles N.E. by N. of the large village of Nikáva: Navánagar State. 1860.	22 14 24.75	70 37 9.20	439	450
Nágdhaniba Hill Tree <i>Nagdhaniba H. Tree</i>	Gohelvád	On a small hill about ¼ of a mile N. of the village of the same name, 3 miles N.E. by E. of Bhandária village, and 9 miles S.W. of the town of Gogha: Bhávnagar State. 1854.	21 36 20	72 12 46	...	728 729
Nágmándal Hill Mark (helio.) ... <i>Nangmandel Ht. Tower S.</i>	Hálár	On the highest tower on a small detached hill immediately N. of the old site of the village of that name, about 1½ miles W.N.W. of Kálmeghra village, and 3¼ miles S.E. by E. of the town of Kharedi: Navánagar State. 1860.	22 2 26.51	70 34 12.92	548	469 470
Nágnáth Dharmshála ...	Baroda State	Also known as Nágesbvar Dharmshála on the village road between Goriáli and Khokbra, about ¼ a mile E. of Karanja, and ¼ of a mile N. of Goriáli village. 1855.	22 21 25.9	69 7 26.9	...	1010
Nágva Point (helio.) <i>Nagva Point</i>	Portuguese Territory	On a small hill about ¼ a mile S.E. of the village of the same name, and 5 miles W. by S. of the town of Diu. 1853.	20 41 57.25	70 57 18.06	...	842
Naika h.s.† ...	Jhálávád	On rising ground, about ¼ of a mile W. by N. of the village so called, 3¼ miles N. of Muli town a little N. of the metalled road from Rájkot to Wadhván: Muli State. The station consists of a platform of earth enclosing an isolated and perforated pillar of masonry, 2 feet in height, with an aperture for access to the lower mark. A rectangular protecting pillar 3¼ feet high was built over it. 1860.	22 40 58.49	71 30 6.21	$\frac{\ddagger}{409}$	...
Nandan Hill Dargah <i>Nandan H. Darga</i>	Sorath	Close N.W. of the village so called, about a mile E.S.E. of Mándvi, and 3½ miles N.E. by E. of the citadel at Diu: Junágad State. 1854.	20 44 41.9	71 4 52.7	...	823 824
Nandána Tower ... <i>Nandana V. Tree</i>	Hálár	High tower in the village so called, about 2¼ miles N.E. by N. of Bhátia village: Navánagar State. 1854.	22 7 41.5	69 19 50.2	...	959
Nándivála, XXXIX	Sorath	<i>vide page 12—J.</i> ...	21 2 18.28	71 9 23.90	$\frac{\S}{1737}$ 5	52

* To upper surface of perforated, circular pillar. † For triangles fixing this station, see the Synoptical Volume of the Gujarát Longitudinal Series.
 ‡ To upper surface of perforated pillar. § To upper surface of solid, circular pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station Height of Structure	No. of Triangle
Náni Barál Fort (helio.) <i>Gadwalia T.</i>	Hálár	On the conspicuous, tiled tower at the N.E. corner of the old fort in the village of Náni Barál, about 1½ miles N.W. of Moti Barál, 3¼ miles N.N.E. of Bheia Mota, the same distance E.N.E. of Bápúr, and 2¼ miles S.E. of Jajásar: Morvi State. 1854.	23 3 10.87	70 44 6.69	feet ...	288
Nátej, XLI	Sorath	<i>Vide page 12—J.</i>	20 50 48.60	71 8 10.58	$\frac{106}{8}$	54
Navábandar Flag-staff <i>Nowa Bunder Flag-staff</i>	"	On rising ground on the coast, about ¼ of a mile S. by E. of the village so called, and 5 miles E.N.E. of the citadel at Diu: Junágad State. 1854.	20 44 12.1	71 6 50.5	...	826
Navábandar Tower ... <i>Nowa Bunder Highest Tower</i>	"	Highest tower about ¼ a mile from the coast, and 5 miles E.N.E. from the citadel at Diu: Junágad State. 1854.	20 44 27.9	71 6 43.6	...	825
Navádra h.s. <i>Navádra H.S.</i>	Hálár	On the N. brow of a sand-stone ridge running parallel with and at a distance of about ¼ a mile from the coast, 1½ miles W.N.W. of the village of the same name, and 2¼ miles S. of the large village of Bhegát: Navánagar State. The station consists of a platform enclosing a solid, triangular and isolated pillar of masonry, about 1 foot high, having mark-stones at top and bottom. A rectangular protecting pillar 3½ feet high was built over it. 1854.	21 57 2.00	69 16 38.22	$\frac{[85]}{1}$	678
Navágám Hill Tower <i>Vijalia H.</i>	Jhálavád	On one of a mass of hills, about 1½ miles N.E. of the village of Navágám, 2 miles S.E. of Vijalia village, and ¼ miles N. of the town of Thán: Lakhtar State. 1853.	22 37 59.3	71 13 56.4	...	300 301
Navánagar Building <i>Nowanagar Lakota Staff</i>	Hálár	Building on the Lakota tank with double mast: Navánagar State. 1854.	22 27 50.6	70 6 37.7	...	1060
Navánagar Kacheri <i>Nowanagar Lal Bagh</i>	"	Turret of the Kacheri at Lálbágh, about ¼ a mile W. of the town: Navánagar State. 1854.	22 28 2.2	70 6 22.3	...	1058 1059
Navánagar Palace ... <i>Nowanagar Palace Mint. S.</i>	"	South minaret of the palace about the centre of the town: Navánagar State. 1854.	22 27 52.0	70 7 15.0	...	1063 1064
Navánagar Tower ... <i>Nowanagar Kota spire Burj</i>	"	Spire of the highest tower in the western portion of the town, about 14 yards S.W. of Navánagar t.s.: Navánagar State. 1854.	22 27 40.8	70 6 41.4	...	1061 1062
Navánagar t.s. <i>Nowanagar T.S.</i>	"	On the highest tower of the fort: Navánagar State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, 1 foot in height. 1859. Note.—The circle and dot mark of the old station (fixed in 1854) is about 25 feet S.W., all the observations have been referred to the station of 1859.	22 27 41.13	70 6 41.64	$\frac{156.64}{1}$	698

* To upper surface of solid, circular pillar.

† To upper surface of solid, triangular pillar.

‡ See description of this station.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangles
Navibandar Temple No. 1 <i>Navi Old Temple</i>	Sorath	An old, isolated temple on the coast dedicated to Mahádev, about 145 yards S. by E. of Navibandar Temple No. 2: Porbandar State. 1854.	21 26 50.1	69 50 15.1	feet ...	917 918
Navibandar Temple No. 2 <i>Navi New Temple</i>	"	A new, white temple called Bhadra, about $\frac{2}{3}$ of a mile E. by S. of the sea-port town of this name, and $\frac{1}{2}$ a mile from the coast: Porbandar State. 1854.	21 26 54.4	69 50 14.6	...	919 920
Navibandar Tower (helio.) <i>Navi Tower Mk.</i>	"	In the sea-port town: Porbandar State. The point is denoted by a broad arrow of the Marine Survey. 1854.	21 26 57.50	69 49 39.26	...	921 922
Nikol h.s.	Gohelváád	On a sandy ridge on the northern shore of the Gulf of Cambay, about $\frac{2}{3}$ of a mile S.S.E. of the village of that name, and 5 miles E. of Mahuva town. A little marshy ground separates this portion of the ridge from the mainland: Bhávnagar State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry. 1854.	21 4 58.57	71 53 21.42	* [84]	623
Oshám h.s.	Hálár	On the highest point of the isolated rocky hill of this name, crowned with an old fort and some temples, about a mile E.S.E. of the village of <i>Pátanváv</i> at the foot of the hill, and 7 miles in the same direction of the town of Gandol on the right bank of the Bhádar river: Gondal State. The station consists of a platform of rubble enclosing a circular and isolated pillar, 2 feet high. When visited in 1875-76, the upper mark-stone was missing. A rectangular protecting pillar $3\frac{1}{2}$ feet high was built over it. 1853.	21 38 14.87	70 19 2.29	* $\frac{1030}{2}$	56
Otha h.s.	Gohelváád	On a small, isolated hill called Viziadhár, about $1\frac{1}{2}$ miles N. of the village of that name, the same distance E. of Kharsalia, and the same distance W. of Lovinga village: Bhávnagar State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry. 1854.	21 12 44.08	71 53 8.88	* [211]	622
Pádlí Building	Baroda State	Conspicuous building in the village of that name, about $2\frac{1}{2}$ miles N.N.W. of Ghadechi, $3\frac{1}{2}$ miles N. of Kaliánpur, $2\frac{1}{2}$ miles E. by S. of Bhimrána, and $3\frac{1}{2}$ miles S. of the large village of Arámda. 1855.	22 23 12.3	69 4 36.4	...	986 987
Pádríya Hill Mark (helio.) <i>Padria H.S.</i>	Hálár	About $1\frac{1}{2}$ miles E. by N. of the village of that name, $5\frac{1}{2}$ miles S. of Sátodar large village, and 11 miles N.E. by N. of Supedi town on the left bank of the Utávlí river: Navánagar State. 1860.	21 54 9.07	70 29 24.64	472	480 481
Pádríya h.s. <i>Viláhití Khetar H.S.</i>	"	On rocky rising ground, about 2 miles N. by E. of the village of <i>Padriya</i> , the same distance S.E. of Charel village, and 4 miles S.S.W. of Sátodar village: Navánagar State. The station consists of a platform of earth enclosing an isolated and perforated pillar of masonry, 2 feet high, with an aperture for access to the lower mark. A rectangular protecting pillar $3\frac{1}{2}$ feet high was built over it. 1860.	21 55 37.11	70 28 23.54	† $\frac{479}{2}$	91
Pagás Hill Temple ... <i>Pogass H. Temple</i>	"	Spire of the temple about a mile S.E. of the village so called, $3\frac{1}{2}$ miles S.W. of Malia village, and 9 miles S. by W. of Kalávad town: Virpur State. 1860.	22 5 17.7	70 23 54.6	...	461 462

* To upper surface of circular pillar.

† To upper surface of perforated pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Pájod t.s. ... <i>Pajode T.S.</i>	Sorath	On the double-storied, watch tower of the small village so called, about 2½ miles S.W. of Limbhora village, and 7 miles S.E. of the large, fortified town of Kutiyána on the right bank of the Bhádar river: Junágad State. The station consists of a circular and perforated pillar of masonry, 4 feet high, built on the upper floor of the tower, and contains two mark-stones, one on the top of the pillar and the other embedded in the floor of the tower below it. When visited in 1875-76, the upper mark was missing but the lower mark and the pillar were found in good preservation. 1859.	21 32 54.48	70 6 14.39	feet * 98 †	83, 84
Palánsva Temple ... <i>Palanswa Temple</i>	Cutch State	Spire of the highest, grey temple in the large village of that name, about 5½ miles N.E. of Káuner, and 6 miles E. by N. of Ghánithal. 1854.	23 27 59.4	70 58 3.8	...	231 232
Pálitána, Kanjarda Hill Mark ... <i>Politana H. Peak Mark</i>	Gohelváđ	On a low, conical hill known as Rupáret, about ¾ of a mile S. by W. of Kanjarda village, and 2 miles N. by W. of Jália Amráji village: táluca Jália Amráji. 1853.	21 28 9.58	71 46 57.65	...	360 361
Pálitána, Shetrunja No. 1 h.s. <i>Politana H.S.</i>	"	On the northern side of the sacred hill, about 1½ miles E. of the small village of Ádpar, and 2 miles N. by W. of Dungarpur: Pálitána State. The station consists of a platform of mud and stones enclosing a circular and isolated pillar of masonry, 5 feet in height. Marks have been cut on rock around the platform by which the exact position of the station can be recovered should it ever be lost. 1853.	21 29 26.48	71 50 34.15	* 1634 5	66, 67
Pálitána, Shetrunja No. 2 h.s. <i>Politana Old Stn.</i>	"	On the highest tower of the fort which surrounds the Jain temples, about 2½ miles N. of Robisáda village on the left bank of the Shetrunji river, 2½ miles N.E. of Gandhol village, and 3½ miles E. of Kanjarda village: Pálitána State. 1853.	21 29 1.17	71 50 12.99	1971	363 364
Pálitána, Shetrunja Temple No. 1 <i>Politana Lonse H.</i>	"	On a hill, called Bhádrav, crowned with magnificent Jain temples, about ¾ of a mile N. by W. of Gandhol village, and 1½ miles E.S.E. of Kanjarda village: Pálitána State. 1853.	21 28 23.4	71 48 16.6	...	362
Pálitána, Shetrunja Temple No. 2 <i>Politana Temple No. 1</i>	"	On the highest peak, about 3 miles W.N.W. of Garáji village: Pálitána State. 1860.	21 29 0.5	71 50 12.0	...	586
Pálitána, Shetrunja Temple No. 3 <i>Politana Temple No. 2</i>	"	On the second highest peak, about 2½ miles N. of Robisáda village, 2½ miles N.E. of Gandhol village, and 3½ miles E. of Kanjarda village: Pálitána State. 1860.	21 28 51.0	71 50 5.8	...	587
Pálitána, Shetrunja Temple No. 4 <i>Politana Adnath Temple</i>	"	Gilt kalas of the well-known, lofty Jain temple dedicated to Ádináth: Pálitána State. 1853.	21 29 0	71 50 12	...	...
Páliyád Building ... <i>Paliad Roof</i>	Jhálavád	Conspicuous, pointed roof of the building in the town of this name on the right bank of the Gomá river, and 8 miles W. by S. of Kundli Station of the Bhávnagar-Wadhvân Railway. 1860.	22 15 32.3	71 36 10.6	...	561

* To upper surface of circular pillar.

† See description of this station.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Páñch Tobra t.s. ... <i>Panch Tobra H.S.</i>	Gohelvád	At the end of a ridge, about 1½ miles S.W. by S. of Derli Jánbáini village, 1½ miles N.E. by N. of Karkolia village, and 2½ miles E. by S. of Chávand village: tálika Jánbáini Derli, thána Bábra. The station consists of a tower of earth and stones enclosing an isolated and perforated pillar of masonry, 10 feet high, with an aperture for access to the mark at the ground level. 1860.	21 47 57.58	71 28 26.99	feet * 479 10	125
Páñkóta Fort ... <i>Pankota (Flag Staff)</i>	Portuguese Territory	Flag-staff of the Portuguese fort so called, at the N. end of the island which lies about 200 yards off the mouth of the Buthráni creek, about 1½ miles S. by E. of Shimar, and 4 miles S.W. by W. of Rájpáru village. 1864.	20 45 45	71 11 33	...	...
Pánor Hill ... <i>Panor H. Heap</i>	Hálár	Heap of stones at the southern point of a small, detached hill, nearly ¼ a mile S.S.E. of Pánor h.s.: Navánagar State. 1854.	22 6 6	69 21 58	...	...
Pánor h.s. ...	"	On the northern end of a small, detached hill, about a mile S.W. by W. of the site of the deserted village of Pánor, 1½ miles N.E. by E. of Lol, and 3½ miles E. by N. of the large village of Bhútiá: Navánagar State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, about 1 foot high. When visited in 1877-78, the upper mark-stone was missing, and over the circular pillar a rectangular protecting pillar 3 feet high was built. 1854.	22 6 22.46	69 21 47.20	† [252] 1	679
Parádra Hill Mark (helio.) ... <i>Paredra H. M.</i>	Thor and Párkar	On the highest point towards the western extremity of a short, detached range of hills, having the village of Parádra at its western foot, and about 1½ miles S. of Kálki village. 1856.	24 27 9.32	70 56 17.76	[313]	151 152
Parbátána Bet Platform ... <i>Nara Beyt Platform</i>	Mahi Kántha Agency	On the conspicuous point in the island of this name, also known as Nara Bet, about ¼ of a mile N.E. of the road across the Ran from Nagar Párkar to Singám: tálika Singám. 1856.	24 15 23.4	71 12 33.4	101	169 170
Pardhari Hill Mark (helio.) ... <i>Mohia H.S.</i>	Hálár	On rising ground, about 1½ miles E. of Pardhari town on the Áji river, and 6½ miles N. by E. of Sarádar large village: Navánagar State. 1860.	22 25 46.70	70 40 2.39	253	444
Parodia Temple ... <i>Purwaria V. Temple</i>	"	Close S. of the village of Parodia, about 2½ miles N.E. of the town of Saláya, and 2½ miles S.W. by W. of Ámbia Mota: Navánagar State. 1854.	22 20 10.1	69 40 27.4	...	1042
Pata-i-Sháh, VIII ...	Catch State	<i>vide page 7—J.</i>	23 33 24.78	70 59 8.72	† 284.00 5	11
Pátan Idgah ...	Sorath	S. minaret of the conspicuous Idgah on rising ground between the towns of Verával and Pátan, about 1½ miles E.S.E. of the former, and ¼ a mile W.N.W. of the latter: Junágad State. 1854.	20 53 43.8	70 25 58.2	...	877 878
Pátan Temple No. 1 ... <i>Patan E. Temple (old)</i>	"	An old temple, also known as Srajamandar, on rising ground, about ¼ a mile E. of the town: Junágad State. 1854.	20 53 6.9	70 27 15.5	...	871

* To upper surface of perforated pillar.

† To upper surface of solid, circular pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Pátan Temple No. 2 <i>Patan Somnath Temple</i>	Sorath	Dome of the temple known as Somnath, near the S.W. corner of the town; Junágad State. 1854.	20 53 14' 3	70 26 32' 3	... feet	875
Pátan Tower No. 1 <i>Patan N. E. Tower</i>	"	Also called Somnath Pátan, on some rising ground immediately E. of the town; Junágad State. 1854.	20 53 27' 8	70 26 53' 3	...	872
Pátan Tower No. 2 <i>Patan N. W. Tower</i>	"	At the N.W. corner of the town; Junágad State. 1854.	20 53 31' 3	70 26 22' 9	...	876
Pátan Turret <i>Patan Wanhav Kota</i>	"	A conspicuous turret called Vanhar Kota, on the highest building on the N. edge of the town; Junágad State. 1854.	20 53 34' 0	70 26 36' 0	...	873 874
Patelka h.s. <i>Patailka H.S.</i>	Hálár	On the N.E. brow of a large, isolated hill, close S.W. of a small temple, about 1½ miles S. by E. of the village of this name, 2½ miles N. of Kalyánpur, and nearly 3 miles S.S.W. of the large village of Gadhka; Navánagar State. The station consists of a platform of rubble enclosing a circular and isolated pillar, about 5 feet in height. When visited in 1877-78, the upper mark-stone was missing. A rectangular protecting pillar 3½ feet high was built over the pillar. 1853.	22 3 25' 12	69 26 35' 69	* 302 5	62 676 677
Pátidhár Hill <i>Gondal H. Cairn</i>	"	Pile of stones on hill about 1½ miles S. by E. of the village of Pátidhár, 2 miles N.W. by W. of Chordi village on the main road from Gondal to Junágad, and 6 miles W.S.W. of the town of Gondal; Gondal State. 1853.	21 55 41	70 45 33	[517]	...
Pátna s.† <i>Patna T.S.</i>	Gohelvád	On a swell, about a mile N.E. of the large village of the same name, 7 miles S. by E. of Barvála town on the main road from Gogha to Dhandhuka; Bhávnagar State. The station consists of an isolated and perforated pillar of masonry, 12 feet in height, having an archway on the south side for access to the lower mark. 1864.	22 3 15' 93	71 57 26' 31	‡ 54 12	...
Phagásia, XIX	Hálár	<i>Fide page 9—J.</i>	22 56 52' 11	70 46 19' 25	* 117 20	25, 26
Phátsar s. <i>Patsir S.</i>	"	On the embankment of a small tank close S. of the village of Phátsar, about 2 miles E. by N. of Bádánpur, 3 miles S. by W. of Keráin, 2½ miles W. by S. of Vandi Mota and 5 miles E.S.E. of the large village of Ámbran; Navánagar State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, which contains two mark-stones, one at the ground level and the other on the top. 1854.	22 48 1' 29	70 40 43' 12	* [118]	721
Pilúdi Tower <i>Jeytpur Tower</i>	"	Centre of the highest tower in the village of Pilúdi, about 2½ miles N.W. by W. of Jetpur on the E. bank of the Godádhroi river, 3½ miles E.N.E. of Nágravás, and the same distance S.S.E. of Vádhurva; Morvi State. 1854.	23 1 8' 9	70 53 32' 4	...	284

* To upper surface of circular pillar.

† To upper surface of perforated pillar.

‡ For triangle fixing this station, see the Synoptical Volume of the Gujarát Longitudinal Series.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Pindára Building ... <i>Pindara Khoond Tree Building</i>	Hálár	Kund building in trees close to the village of Pindára about 4 miles W. by N. of Virpur, and $\frac{1}{2}$ a mile from the shore of the Gulf of Cutch. The kund is held sacred by the Hindus: Navánagar State. 1854.	22 15 43·8	69 17 40·3	... feet	1019 1020
Pindára Temple ... <i>Pindara Khoond Temple</i>	"	The old and southern of two temples near the kund or holy reservoir: Navánagar State. 1854.	22 15 50·7	69 17 37·0	...	1021 1022
Pipalia h.s. ... <i>Piplia H.S.</i>	"	About a mile S. of the village so called, $1\frac{1}{2}$ miles N. of Dhamalpur, and 7 miles N.E. of the town of Rájkot: táluca Kotháris. 1853.	22 22 22·11	70 55 16·76	[557]	308 309
Pipalva Tree ... <i>Pimpalwaw V. Tree</i>	Baroda State	Conspicuous tree E. of the village of Pipalva, and about $4\frac{1}{2}$ miles E. by S. of the town of Kodinár. 1854.	20 46 35	70 48 46	...	854 855
Pipardi Hill Mark (helio.) <i>Pimperdi H.S.</i>	Gohelvád	On the S.E. point of a hill, about $1\frac{1}{2}$ miles N.N.W. of the village of Pipardi, 3 miles N.E. by E. of Kandevália, and $3\frac{1}{2}$ miles E. by S. of the large village of Vichhia: Jasdan State. 1860.	22 11 43·31	71 28 40·85	572	562 563
Pipardi Tank (helio.) <i>Piperdi Tank S.</i>	"	Adjoining the western side of the village so called, about $1\frac{1}{2}$ miles W. of Ránigám, and the same distance E. of Ghoba: Bhávnagar State. The point is denoted by a mark. 1860.	21 25 34·56	71 38 26·47	...	591
Piprála Hill Mark (helio.) <i>Patahit H.</i>	Pálanpur State	On a small hill in the Ran, about $3\frac{1}{2}$ miles S.W. by W. of the large village of Piprála, and $6\frac{1}{4}$ miles N.E. of the town of Ádesar: Sántalpur sub-division. 1856.	23 37 26·48	71 5 35·63	[51]	182 183
Pipria Hill Mark (helio.) <i>Piplia Platform</i>	Gohelvád	On rising ground, about $1\frac{1}{2}$ miles N.E. by E. of the village of Pipria, the same distance W. by N. of Monpur, and 3 miles E.S.E. of Khijdia village: táluca Kotra Pitha. The point is denoted by a mark-stone in the centre of a platform on which a rectangular protecting pillar $3\frac{1}{2}$ feet high was built. 1853.	21 46 5·70	71 11 39·56	620	340 341
Piram Light-house <i>Perim Light</i>	Ahmedabad	Pole of the white light-house at the entrance to the bandar on the island of the same name in the Gulf of Cambay: Gogha sub-division. 1853.	21 35 54·2	72 23 37·9	...	726 727
Pitar t.s. ... <i>Petar T.S.</i>	Hálár	On the only old tower in the centre of the village of that name on the right bank of the Dhondi river, about $1\frac{1}{2}$ miles N.W. by W. of Rasnál, $4\frac{1}{2}$ miles S.W. of Koali on the left bank of the Demi river, and the same distance N.N.E. of Latipur: Navánagar State. The station consists of a circular, isolated pillar of masonry built in the middle of the tower having its upper surface 1·4 feet below the top of the tower which is 17 feet high. A rectangular protecting pillar $3\frac{1}{2}$ feet high was built over it. 1854.	22 41 2·23	70 36 16·78	† 107 ‡	102 719
Porbandar Flag-staff <i>Porbunder Flagstaff</i>	Sorath	On the coast and at the S.W. end of the well-known town of Porbandar: Porbandar State. 1854.	21 38 17·2	69 38 13·2	...	930 931

* To mark-stone in centre of platform.

† To upper surface of circular pillar.

‡ See description of this station.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Porbandar Shrine ... <i>Porbunder Kharwa Pir Staff</i>	Sorath	Flag-staff at the shrine of a Pir visited by Muhammadan mariners, on the southern point of the rocky spit which shelters the port of Porbandar on the north-west side: Porbandar State. 1854.	21 38 12.9	69 37 39.5	... feet	932 933
Porbandar Temple No. 1 <i>Porbunder Bilnath Temp.</i>	"	Red flag of the temple dedicated to Bilnath in the well-known sea-port town of Porbandar: Porbandar State. 1854.	21 38 26.9	69 38 35.6	...	928
Porbandar Temple No. 2 <i>Porbunder Kedaraj Temp.</i>	"	Spire of the conspicuous temple dedicated to Kedaraj, about 50 yards S.W. of Porbandar Temple No. 1: Porbandar State. 1854.	21 38 25.9	69 38 34.4	...	929
Poshitra h.s. ... <i>Posetra H.S.</i>	Baroda State	On the eastern brow of the Okha Table-land on the coast, about $\frac{1}{4}$ mile S.E. of the village of Poshitra, $\frac{1}{4}$ miles E.N.E. of Rájputra, and $\frac{1}{4}$ miles N.E. of Mulvel. The station is denoted by a platform 10 feet in height. 1855.	22 23 16.46	69 13 9.17	...	702
Poshitra House ... <i>Posetra Thakur's House</i>	"	South gable end of Thakur's new house in the village of that name, about $\frac{1}{4}$ miles E.N.E. of Sámrásar, and the same distance N.N.E. of Mulvel. 1855.	22 23 37.5	69 12 48.5	...	1013 1014
Poshitra Math ... <i>Posetra B. Mutt</i>	"	Gosán's math at the bandar head on the coast, about 2 miles E. by S. of the village of that name, 5 miles N.E. of Mulvel, and $\frac{5}{4}$ miles E.N.E. of Rájputra. 1855.	22 23 17	69 14 16	...	...
Potlia h.s. ... <i>Potlio H.S.</i>	Sorath	On a hill of that name in the Gir, about $\frac{1}{4}$ miles N. by W. of the village of Amrápur, 3 miles E.S.E. of Mátrávanía, and $\frac{7}{4}$ miles E.N.E. of the town of Mália on the right bank of the Megal river: Junágad State. The station consists of an isolated and perforated pillar of masonry 5 feet in height: an aperture gives access to the lower mark. 1860.	21 11 9.22	70 27 40.02	... $\frac{540}{5}$	110
Potor Hill Mark (helio.) <i>Potore H.</i>	Hálár	About 2 $\frac{1}{4}$ miles W. of Banlidhár village, $\frac{1}{4}$ miles S.S.W. of Khatia, and $\frac{3}{4}$ miles N.W. by N. of Sarmána village: Navánagar State. 1859.	22 8 45.44	70 9 55.48	771	407 408
Práchi Kund Tree ... <i>Prachli B. Tree</i>	Sorath	Conspicuous bar tree near the temple on the Sarasvati river, about $\frac{1}{4}$ of a mile S.E. of Gantia village. This place is famous for Hindu pilgrimage: Junágad State. 1854.	20 55 12	70 38 50	...	869
Raghuji-ka-Nesara Hill Mark (helio.) <i>Ragoji ka Nesara Pillar</i>	...	In the Ran. 1856.	24 32 30.06	71 20 58.56	...	142
Raia Hill Temple ... <i>Rahia Temple Spire</i>	Hálár	Spire of the temple immediately W. of the village of that name, and $\frac{3}{4}$ miles in the same direction of the town of Rájkot on the left bank of the Áji River: Pál State. 1860.	22 17 57.1	70 47 17.8	...	445
Rájávád h.s. ... <i>Bholownidhar H.S.</i>	Sorath	On a small hill within the outskirts of the Gir forest, about $\frac{1}{4}$ miles E. by N. of the village of Rájávád, and 3 miles S.W. by S. of the town of Mendarda: Jetpur State. The station consists of a platform of earth enclosing an isolated and perforated pillar of masonry, 2 feet high, having an aperture which gives access to the lower mark. A rectangular protecting pillar $\frac{3}{4}$ feet high was built over it. 1860.	21 17 11.31	70 27 5.37	... $\frac{379}{2}$	107

* To upper surface of perforated pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Rájkot Church ... <i>Rajkote Church Spire</i>	Hálár	Spire. In the civil station so called W. of the town, and close E. of the race course: Rájkot State. 1853.	22 18 17.4	70 50 10.5	feet ...	313
Rájkot Palace ... <i>Rajkote Palace</i>	"	Thákur's palace in the town on the left bank of the Áji river: Rájkot State. 1853.	22 18 2.8	70 51 0.8	...	315 316
Rájkot Temple ... <i>Rajkote W. Temple</i>	"	Large temple at the N.W. corner of the palace in the town: Rájkot State. 1853.	22 18 3.6	70 50 54.4	...	314
Rájpáru Fort ... <i>Rajpoor Highest House in Town</i>	Sorath	Conspicuous and highest house in the fort of the village so called on the coast, about 4 miles E. by N. of Shimar village, and 2 miles S.W. of Dhárábandar: Junágad State. 1854.	20 47 32.5	71 14 49.0	...	814 815
Rájpura h.s. ... <i>Rajpoor H.S.</i>	Gohelvád	On a ridge about $\frac{3}{4}$ of a mile N.E. of the village of the same name on the coast: Bhávnagar State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, over which a rectangular protecting pillar $3\frac{1}{2}$ feet high was built. 1854.	21 11 42.02	72 8 0.16	[110]	619
Rájpura Hill Tower ... <i>Rajpoor H. Tower</i>	"	Close W. of the village so called on the coast, about $1\frac{1}{2}$ miles E. by N. of Jhánjmer village, and 8 miles due E. of Dátha town: Bhávnagar State. 1854.	21 11 18.0	72 7 32.5	...	754 755
Rájthali Mark (helio.) ... <i>Reyta Mound</i>	Cutch State	On a mound in the S.E. portion of the village of Rájthali, about 3 miles S. of Kumbhára, $4\frac{1}{2}$ miles S.W. of Thoriáli, and the same distance N.E. of Shikárpur. 1856.	23 18 1.82	70 45 31.12	[77]	261 262
Rájula Hill Mark (helio.) ... <i>Rajula Hill Fort S.</i>	Gohelvád	On the bastion of the ruined hill fort immediately N. and overlooking the town of the same name, and 11 miles E. of Dedán town: Bhávnagar State. 1860.	21 2 31.80	71 28 59.26	217	612 613
Rájula Hill Peak ...	"	About a mile N.E. of the town, and 12 miles E. of Dedán town: Bhávnagar State. 1854.	21 2 58	71 29 35	...	611
Rájula Rock ... <i>Rajula Bluff Rock</i>	"	Highest bluff rock on a hill W. of the fort, about $\frac{3}{4}$ of a mile S.W. of the town, and 11 miles E. of the town of Dedán: Bhávnagar State. 1854.	21 1 54	71 28 30	..	798 799
Rájvad Hill Mark (helio.) ... <i>Gogra H.</i>	Hálár	On peak about $1\frac{1}{2}$ miles S.E. by E. of the village of Rájvad, 3 miles W.S.W. of Ráfadar Nána, and $3\frac{1}{2}$ miles N.W. of Gována village: Navánagar State. 1859.	22 11 29.85	69 52 57.16	514	404
Rákhej Tree ... <i>Rakej B.T.</i>	Sorath	Conspicuous palm tree on the W. edge of the village of the same name, and about 3 miles W. of the town of Kodiná: Junágad State. 1854.	20 47 52	70 41 53	...	862 863
Rámpára Hill Tree ... <i>Rampar. H. Tree</i>	"	Conspicuous tree at the S.W. end of a sand ridge called Deoladhár, about $1\frac{1}{2}$ miles N.E. of the village of Rámpára, and $1\frac{1}{2}$ miles W. of the mouth of the Motápát creek: Junágad State. 1854.	20 56 46	71 32 22	...	796

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Rámpur Tree ... <i>Rampoer Chor Bur Tree</i>	Hálár	Isolated, large bar tree on rising ground, about 1½ miles S.E. by S. of the village so called, ¼ a mile N. of the main road from Navánagar to Dhrol, and 2¼ miles W. of Phala village on the above named road: Navánagar State. 1854.	22 31 33	70 18 4	feet ...	1072 1073
Rámpura s.* ...	Jhálávád	On a knoll on a tank bund a few yards from an old well called Ratabani Váv, about 1½ miles W. of the village so called, 5 miles N.E. of Sáyala town, and 6 miles E.S.E. of Múli town: Wadhván State. The station consists of a platform of earth enclosing an isolated and perforated pillar of masonry, 5 feet in height, with an aperture giving access to the lower mark. 1860.	22 35 52·35	71 35 6·60	† 361 5	...
Rámra Hill Mark (helio.) <i>Ramban H.S.</i>	Catch State	On a hill on the border of the Little Ran, on the road from Shikárpur to Málía, about 4 miles E.S.E. of Shikárpur, and 7 miles E. of Vándhia town. The point is denoted by a mark-stone. There is another mark-stone about 593 feet to S.E. 1856.	23 14 16·29	70 45 56·30	...	268
Rána-ka-Nesra Pillar (helio.) <i>Rana ka Nesra Mark</i>	Pálanpur Political Superintendency	About 1½ miles N.E. of Tadáv village: táluks Snigám. 1856.	24 30 43·54	71 29 31·68	...	143
Rándhia Hill Mark <i>Randia Mark</i>	Gohelvád	About 2 miles E.N.E. of the village so called, and the same distance S.W. by W. of Chital town: táluks Rándhia. 1853.	21 43 6·69	71 12 48·88	[574]	348
Rangpur, XVII ...	Hálár	<i>Vide page 8—j.</i> ...	22 54 58·53	70 56 28·83	† 179 16	23
Rangpur t.s. ...	Baroda State	On the mound of a tank about 1½ miles N.E. by E. of the village so called, and 4 miles W. by S. of Amreli town: Amreli division. The station consists of a tower 30 feet high enclosing a pillar of masonry. When visited by the Topographical Survey Party in 1869-70, the pillar was pulled down to a height of 20 feet. 1853.	21 35 31·74	71 11 10·81	§ 480 20	346 347
Ránigpára h.s. <i>Ranpur H.S.</i>	Sorath	On a small hill, about 50 yards W. of the shrine of Thranglia Pir, ¼ a mile W. of the village of Ránigpára, 3 miles S. of Barodar village, and the same distance E. of the town of Kesod on the bank of the Tilorí an affluent of the Sábi river: Junágad State. 1860.	21 17 54·95	70 20 1·68	428	522 523
Ránparda Hill Temple <i>Kotra Hill Temple</i>	Hálár	Conspicuous temple about 300 yards E. by N. of the village of Ránparda, and 5 miles E.N.E. of the town of Vasávad on the right bank of the Vasávdi river: Navánagar State. 1853.	21 50 52·3	71 8 31·6	...	337 338
Ránpur Hill Mark (helio.) <i>Ranpur H.M.</i>	Thar and Párkar	On the southern extremity of a large, isolated hill overlooking the village of Ránpur which lies at its eastern foot, and about ¼ of a mile N. of the high road from Nagar Párkar. 1856.	24 21 58·61	70 54 2·28	[427]	158 159
Rápur Temple|| ... <i>Rahpur Temple</i>	Catch State	Spire. In the S.W. portion of the large village of this name, about 4½ miles E.S.E. of Tramán. 1856.	23 34 13·3	70 41 8·6	...	...

* For triangle fixing this station, see the Synoptical Volume of the Gujarát Longitudinal Series.

† To upper surface of tower.

§ To upper surface of pillar 20 feet high.

|| For triangles fixing this point, see the Synoptical Volume of the Catch Coast Series.

† To upper surface of perforated pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Rátia h.s.	Sorath	On a ridge, about 1½ miles N.W. of the small village of this name, ¼ a mile from the coast, and nearly 2 miles S.E. of the sea-port town of Navilhandar: Porbandar State. The station consists of a platform of stone and lime about 9 feet square enclosing a solid, circular and isolated pillar of masonry, 1 foot in height, over this a rectangular protecting pillar 3½ feet high was built. 1854.	21 26 1'64	69 50 57'98	feet * [36] 1	665
Rav Temple† ... Row Temple on tank	Cutch State	Spire of a conspicuous temple known as Devisar on the N.E. bank of a tank, about 1½ miles N.W. of the large village of Rav, and ¼ of a mile S.W. of the road from Gángta Bet to Rav. 1856.	23 39 58'5	70 36 38'1	...	...
Rával Building ... Raval Building	Hálár	Highest building in the village so called on the right bank of the Vartu river: Navánagar State. 1853.	21 55 7'0	69 31 52'9	...	949
Rávesi Mátá Tomb ... Ravisi Matha Tomb	Gohelvád	About 300 yards N.W. of Savánagar village, 2 miles S. of Saváikot village, and 11 miles N.W. of Bhávnagar town: Bhávnagar State. 1860.	21 52 30'0	72 3 14'7	...	395
Rinjpur Hill Mark (helio.) Serbetia H.S.	Hálár	About 1½ miles E.S.E. of the village of Rinjpur, the same distance S. of Bharndiya Nána, and 2 miles W. by N. of Kharba Nána: Navánagar State. 1859.	22 7 11'51	70 3 37'87	604	409 410
Roghát s. ... Rogat T.S.	Sorath	On the eastern bastion of the village of that name, about a mile N. of the Ojhat river, and 2½ miles E. of the town of Vanthli: Junágad State. The station consists of an isolated and perforated pillar of masonry built up from the lower compartment of the bastion to the height of 6·3 feet to bring it on a level with the parapet wall: an aperture gives access to the lower mark. 1860.	21 28 23'38	70 24 37'39	† 169 §	106
Roghel Hill Mark (helio.) Rogail H.S.	Hálár	About ¼ a mile E. of the village of the same name, 2½ miles S. of Pádriya village, and 7 miles N.N.E. of the town of Snpedi on the left bank of the Utávli river: Navánagar State. 1860.	21 51 32'18	70 28 1'05	389	482 483
Rohisa h.s. ... Ronsia H.S.	Sorath	On a low, rocky hill on the coast, about a mile S.E. of the village of Rohisa, 2½ miles E. by N. of Dhárábandar village, and 7 miles W.S.W. of Jifarahad town: Junágad State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, over this a rectangular protecting pillar 3½ feet high was built. 1854.	20 49 16'69	71 18 19'56	[80]	683
Rojhia Hill Mark (helio.) Rojiah H.S.	Hálár	On rising ground, about 1½ miles S.W. by W. of the village so called on the left bank of the Und river, 2½ miles N. of Vahlá Mota village, and the same distance W. by N. of Khijaria village: Navánagar State. 1860.	22 17 31'71	70 30 27'43	289	446 447
Rozi Mátá Flag-staff Roji Matha Flagstaff	..	Close to the temple called Rozi Mátá, about 3 miles N.N.E. of Bedi Bandar, 3½ miles N. of Bedi village, and 6 miles N.N.W. of Navánagar town: Navánagar State. 1854.	22 33 6	70 5 16	...	...

* To upper surface of solid, circular pillar.
† To upper surface of perforated pillar.

‡ For triangles fixing this point, see the Synoptical Volume of the Cutch Coast Series.
§ See description of this station.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Rozi M \acute{a} ta s. ... <i>Roji Temple S.</i>	H \acute{a} l \acute{a} r	On the S.E. corner of the flat roof of a small temple sacred to Rozi M \acute{a} ta, a Ch \acute{a} ran female, on the southern shore of the Gulf of Cutch, about 3 miles N.N.E. of Bedi Bandar, $\frac{3}{4}$ miles N. of Bedi village, and 6 miles N.N.W. of Nav \acute{a} nagar town: Nav \acute{a} nagar State. The station is denoted by a circle and dot made in lead embedded in lime. 1854.	22 33 6.27	70 5 16.25	feet * [41]	711 712
Rozi M \acute{a} ta t.s. ... <i>Roji T.S.</i>	"	On the N.W. and round tower of the enclosure to the temple: Nav \acute{a} nagar State. The station is denoted by a mark made in lead embedded into the terrace floor. 1859.	22 33 6.58	70 5 14.74	† 47	713 714
S \acute{a} d \acute{a} lw \acute{a} h Hill Mark (helio.) ... <i>Sadalwa H.M.</i>	Thar and P \acute{a} rkar	On a small, isolated hill having the village of this name at its S.W. foot, about 2 miles E.S.E. of Dind \acute{s} i a little E. of the main road from Nagar P \acute{a} rkar to Vir \acute{a} w \acute{a} h, and $\frac{1}{4}$ miles S.W. by W. of Ch \acute{a} ndinw \acute{a} h village. The point is denoted by a mark on a pillar. 1856.	24 26 17.49	70 50 8.69	‡ [304]	153
Sai Hill Temple ... <i>Huria Singi Temple</i>	Cutch State	Small, domed temple supported by a pillar on the N. side. On a low, flat-topped hill, about a mile W.N.W. of the large village of Sai, $\frac{2}{4}$ miles S. of D \acute{a} bunda, the same distance S.W. by W. of Tindalva Mota, and $\frac{5}{4}$ miles S.S.E. of the large village of R \acute{a} p \acute{u} r. 1854.	23 29 48.7	70 43 25.0	...	223
Sai House ... <i>Sahi House</i>	"	Highest, grey, tiled house at an angle of a fort in the large village of that name, about 2 miles S.W. of Tindalva Mota, 5 miles E.N.E. of B \acute{a} dargad, and $\frac{5}{4}$ miles W. by N. of the large village of Kid \acute{i} n \acute{a} nagar. 1854.	23 29 28.8	70 44 8.6	...	222
Sai \acute{n} i Temple ... <i>Sumia Island Temple</i>	Baroda State	Spire. On a small island, about 2 miles N. of the well-known island of Bet in the Gulf of Cutch, and 5 miles N.E. by N. of the large village of Ar \acute{a} m \acute{d} a. 1855.	22 29 18.3	69 7 42.0	...	992 999
Saida Hill Mark (helio.) ... <i>Synra H.S.</i>	Jh \acute{a} l \acute{a} v \acute{a} d	About $\frac{1}{4}$ of a mile S.S.E. of Saida N \acute{a} na, and 1 mile E.N.E. of Saida Mota, both these villages being close to the right bank of the Bh \acute{a} d \acute{a} r river, and $\frac{1}{4}$ miles N.W. by N. of the town of P \acute{a} li \acute{y} \acute{a} d: t \acute{a} luka P \acute{a} li \acute{y} \acute{a} d. 1860.	22 18 37.91	71 33 41.58	[407]	557 558
Sajanpur Hill Temple ... <i>Jadesar H. Temp.</i>	"	Conspicuous temple on the highest part of a range of hills, about $\frac{1}{4}$ miles S. by W. of the village of Sajanpur, 2 miles E.S.E. of Koth \acute{a} ria, 3 miles N.N.W. of Tihva, and 6 miles N.W. by W. of the town of V \acute{a} nk \acute{a} ner: V \acute{a} nk \acute{a} ner State. 1852.	22 38 42	70 53 46	...	...
Sakhpur, XXXVI ...	Gohelw \acute{a} d	<i>vide page 11—<i>J</i>.</i>	21 33 18.74	71 33 19.10	§ 632 1	47
Sal \acute{a} ya Fort ... <i>Saraya Br. Ft. Tower.</i>	H \acute{a} l \acute{a} r	N.W. tower of the Bandar fort on the Sal \acute{a} ya creek: Nav \acute{a} nagar State. 1854.	22 18 39.5	69 38 19.7	...	1041
Sal \acute{a} ya Temple ... <i>Saraya Temple in Town</i>	"	In the S.E. part of the town on the Sal \acute{a} ya creek: Nav \acute{a} nagar State. 1854.	22 18 29.6	69 38 25.3	...	1039 1040

* To circle and dot on roof of temple.

† To mark on top of tower.

‡ To mark on pillar.

§ To upper surface of platform.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Sálbet t.s. <i>Bet T.S.</i>	Sorath	On an old sand-stone tower called bungalow on the island of Sálbet. This island is the largest of the three at the mouth of the Dhátarvári river. The smallest of which is known as Bhenlá Pir and the next larger Savá Pir, on the last of which is an ancient masjid. About $\frac{1}{4}$ a mile S. by W. of the village of the same name: Jáfarabad State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry. 1854.	20 54 21' 51"	71 33 14' 81"	feet * [51]	629
Sálva Hill <i>Halwa H.</i>	"	Highest and eastern point of a conspicuous hill, about a mile W.S.W. of the village of Sálva, the same distance N.W. of Rahrárika village on the Mánan river: Júnágad State. 1854.	20 58 45	71 10 36	[668]	812
Samádhíala Hill Mark (helio.) <i>Samadiali H.S.</i>	Gohelváđ	On the highest part of a hill, about $1\frac{1}{2}$ miles W.S.W. of the village of the same name, and 5 miles S.W. of Gadhadá town: táluca Samádhíala. The point is denoted by a mark-stone over which a rectangular protecting pillar $3\frac{1}{4}$ feet high was built. 1860.	21 54 55' 79"	71 33 23' 26"	† 459	576 577
Sámor Hill <i>Visotri Knoll</i>	Hálár	Knoll. About 2 miles W.N.W. of the village of Sámor, 3 miles N.W. by W. of Visotri Kotáváli, and $4\frac{1}{2}$ miles W. by N. of the town of Saláya on the Saláya creek: Navánagar State. 1854.	22 15 43	69 34 56	[167]	1088
Sámosar Building <i>Samosra V. Building</i>	Baroda State	Conspicuous building in the village so called, about $2\frac{1}{2}$ miles N. by E. of the large village of Ghadechi. 1855.	22 22 55' 8"	69 5 42' 2"	...	1008
Sanála Hill Mark <i>Karakdhar H.S.</i>	Gohelváđ	About a mile S.S.W. of the village of Sanálo, and the same distance N.N.E. of Patiáli: Jasdaú State. 1860.	22 7 48' 1"	71 29 14' 5"	...	...
Sándan Hill Mark (helio.) <i>Sandan H.S.</i>	"	On the hill so called, about 2 miles W.N.W. of Dhrupnia village, $1\frac{1}{2}$ miles E.S.E. of Devdharí village, and $3\frac{1}{2}$ miles S.W. by S. of Turkha village: Bhávnagar State. 1860.	22 5 59' 79"	71 32 42' 96"	760	567 568
Sand Bíd Hill (helio.) <i>Sand Bhir H.</i> ... ..	...	On a small island in the S.W. part of the Little Ran, about 2 miles E. of the Mánála coast, and 7 miles S.E. of Bhimdevka village. 1856.	23 16 27' 24"	70 53 42' 84"	...	271
Sángad Temple <i>Doolka Temple</i>	Cutch State	Spire of a small, domed temple on rising ground, about a mile W. of the village of Sàngad, 3 miles N.E. by E. of Selári village on the left bank of the Kárasávadí river, and 5 miles S.S.E. of Gedi town. 1856.	23 38 36' 4"	70 48 42' 4"	‡ [161] 20	201 202
Sánodar Hill Tree <i>Saloder H. Tree</i>	Ahmedabad	One of the two conspicuous trees on a small hill about 2 miles E. by S. of the village of Sánodar, $2\frac{1}{2}$ miles W.N.W. of Murchand village, and the same distance N.E. by N. of Vandí village: Gogla sub-division. 1854.	21 33 36	72 13 1	...	737
Sanosra h.s. <i>Lambdhar H.S.</i>	Hálár	On a low, flat-topped hill immediately N. of the main road from Navánagar to Farúhári on the Áji river, about $4\frac{1}{2}$ miles N.W. of the latter town, and $1\frac{1}{2}$ miles E. by N. of the village of Sanosra: Dhrol State. The station consists of a platform of earth enclosing an isolated and perforated pillar of masonry, 5 feet high, with an aperture for access to the lower mark. A rectangular protecting pillar $3\frac{1}{4}$ feet high was built over it. 1860.	22 28 46' 99"	70 34 49' 55"	§ 275' 22 5	99

* To upper surface of solid, circular pillar. † To mark-stone. ‡ To top of temple. § To upper surface of perforated pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Sántalpur Temple No. 1 ...	Pálanpur State	Spire of the round temple in the town of this name: Sántalpur sub-division. 1856.	23 45 56.6	71 12 31.9	...	177
Sántalpur Temple No. 2 ...	"	Spire of the largest, square temple close to Sántalpur Temple No. 1: Sántalpur sub-division. 1856.	23 45 52.2	71 12 30.7	...	178
Sápakda, XXI ...	Jhálávád	<i>Fide page 9—J,</i> Note.—When visited in 1871-72, a rectangular protecting pillar 3½ feet high was built over the station.	22 52 9.05	71 16 46.83	* 313 26	28
Sara Temple ... <i>Serow Fort W. Temple</i>	"	In the fort about the centre of the town of this name: Sáyla State. 1852.	22 47 36.4	71 14 40.4	...	293 294
Sarambda Hill Mark <i>Botha Dongri H. Pole</i>	"	On the S.E. end of a low range of hills, about 2 miles N.W. by W. of the village of Sarambda, the same distance S. of Kadiána village, and 4 miles N. by E. of the large village of Máthak: Dhrángadra State. 1852.	22 53 43.68	71 7 5.44	[269]	290
Sarambda Hill Temple <i>Botha Dongri H. Cupola</i>	"	Cupola of a little temple on a hill known as Botha Dongri, about 2½ miles N.W. by W. of the village of Sarambda, 1½ miles S. of Kadiána village, and 3½ miles N. of the large village of Máthak: Dhrángadra State. 1852.	22 54 4.4	71 6 53.3	...	289
Sardhár Hill Temple <i>Sirdhar H. Temple</i>	Hálár	About 1½ miles W. of the town so called on the Rájkot-Bhávnagar road: Rájkot State. 1853.	22 8 19	71 0 16	...	...
Sarkála, XXXVIII	Sorath	<i>Fide page 11—J,</i>	21 12 16.78	70 53 5.94	* 2110 5	50, 51
Sarkharia Tree ... <i>Sarkari Palm Tree</i>	Baroda State	Between the villages of Sarkharia and Chára, about ¼ of a mile W. of the former and 2 miles E. of the latter, and 5½ miles W. by S. of Káj village. 1854.	20 44 32	70 47 28	...	...
Sarod Hill Mark ... <i>Harode H. Pole H.S.</i>	Gohelváđ	On the western of two small hills, about 1½ miles E.N.E. of the village of Sarod, 2½ miles E. by N. of Kumbhan village, and 7½ miles S.W. of Sihor town: Bhávnagar State. The point is denoted by a mark-stone over which a rectangular protecting pillar 3½ feet high was built. 1853.	21 38 28.23	71 54 20.70	[585]	365 366
Sarsad Mátá h.s. ... <i>Koyla H.S.</i>	Hálár	On the hill locally known as Koila on the right bank of the Vartu river which here expands and forms the harbour of Miáni, about 315 yards N.W. of Sarsad Mátá Temple which crowns the hill overlooking the creek, and 1 mile N.W. of the town of Miáni on the opposite side of the river: Navánagar State. The station consists of a platform enclosing a circular and isolated pillar of masonry, 4 feet high, over which a rectangular protecting pillar 3½ feet high was built. 1853.	21 50 28.38	69 24 30.26	* 184 4	63.64 675
Sarsad Mátá Hill Temple <i>Koyla Mátá Temple</i>	"	Small temple on the mass of hills locally known as Koila Hills: Navánagar State. 1853.	21 50 21.1	69 24 36.3	...	947 948

* To upper surface of circular pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Sarva Hill Mark ... <i>Panch Tobra H.M.</i>	Jhálávád	About 2½ miles S.E. of the village of Sarva, the same distance N.N.E. of Raugpur: táluca Páliyád. 1860.	22 11 59' 33	71 33 4' 37	... <i>feet</i>	564
Saváibet Pir Mosque <i>Savhai Pir Dome</i>	Sorath	Top of dome of the mosque at the N. edge of a small island at the mouth of the Dhátarvari river, and about ½ a mile E. of Sálbet Island: Jáfárad State. 1854.	20 54 15' 6	71 34 9' 4	...	791 792
Saváibet Pir Rock ... <i>Savhai Pir Rock</i>	"	Conspicuous rock at the S.W. end of the island of the same name, about ¼ of a mile E. of Sálbet Island: Jáfárad State. 1854.	20 54 11	71 33 59	...	793
Sáyla Hill Mark (helio.) <i>Saila H.S.</i>	Jhálávád	On a ridge, about 2½ miles S. by E. of the town of the same name, and 3 miles W. by S. of the village of Madhád Mota: Sáyla State. 1860.	22 30 50' 49	71 31 53' 66	428	550
Sáyla Palace <i>Saila Pole</i>	"	Conspicuous and highest turret of the Rájá's palace in town of the same name, close to the road dividing the town from the fort: Sáyla State. 1860.	22 32 57' 8	71 31 30' 9	...	548 549
Segras t.s. <i>Seygras T.S.</i>	Sorath	On the roof of the double-storied, village watch tower about 30 feet high, about 3 miles N. by E. of Kásábar village, 2½ miles N.E. of Chutráváy and Bhogsar, and 3½ miles E. by S. of Nedhána: Junágad State. The station consists of a pillar ½ feet in height. 1859.	21 33 7' 49	69 59 6' 34	$\frac{75}{34}$	82
Sepa Tower <i>Sempa Tower</i>	"	Polygonal tower in the village of Sepa, about 4½ miles E. by S. of the town of Mángrol, and 5½ miles W. of that of Bhanduri on the metalled road from Vantli to the sea-port town of Verával: Junágad State. 1854.	21 6 39' 6	70 13 51' 8	...	900 901
Seriakhán Hill Mark (helio.) <i>Chotila H.S.</i>	"	About 1½ miles N.W. by N. of the village of Seriakhán, and 3½ miles N.W. by W. of the town of Bhanduri on the metalled road from Vantli to the sea-port town of Verával: Junágad State. 1860.	21 8 6' 65	70 16 31' 05	237	540 541
Seriakhán Hill Temple <i>Chotila H. Temple</i>	"	Temple on a peaked hill, about 7 feet E.S.E. of Seriakhan Hill Mark: Junágad State. 1854.	21 8 6' 6	70 16 31' 1	...	898 899
Shekhpát Platform (helio.) <i>Shaik Pant Helio</i>	Hálár	On a hill close N. of the village of Shekhpát, on the right bank of the Ruparel river, about 1½ miles E. of Khimrána, 3 miles N.N.E. of Thavria Mota, and 2½ miles N.W. of Alia: Navánagar State. 1854.	22 28 30' 74	70 13 40' 73	[156]	1065
Shetrána Hill <i>Balimpur Hill</i>	Gohelvád	Bluff of the N.W. hill, about ½ a mile S.W. of the village of Shetrána, 1½ miles N. by E. of Rájárádar village, and 6 miles N.E. by E. of Khuntáráda town: Bhávngar State. 1854.	21 14 6	71 46 42	[559]	...
Shetrunja	...	See Pálitána. ...	...	...	...	...
Sheváliya Hill Tree <i>Thorás H. Tree</i>	Gohelvád	Isolated tree about 1½ miles N.E. of the village of Sheváliya, 1½ miles W.S.W. of Bhandrával village, and 8 miles N.W. by N. of the town of Talája: Bhávngar State. 1860.	21 27 31	72 1 23	...	748 744

* To upper surface of pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Shikárpur Fort (helio.) ...	Cutch State	On the conspicuous tower, called Zalim Fir Burj, of the fort in the large village of Shikárpur, about 3¼ miles S.E. by E. of Katária, and 3¼ miles E. by N. of Vándhia, 1856.	23 15 37.49	70 42 32.84	feet ...	265 266
Shimar House ... <i>Senmer (Ht. House in Town)</i>	Sorath	Centre of the highest house in the village of Shimar, about ¼ of a mile N.W. of the coast, 6½ miles E. by N. of Delvída town, and 7 miles E.S.E. of Úna town: Junágad State, 1854.	20 47 4.5	71 11 18.0	...	816
Shulidhár Hill Tree <i>Shula H.S.</i>	Gohelvád	About 1¼ miles N.E. by N. of Bhinrád village, 2 miles W. of Rájpura village, and 6½ miles S.W. of Botád town on the Bhávnagar-Gondal Railway: Bhávnagar State, 1860.	22 5 56	71 38 8	...	...
Sidhsar Hill Mark (helio.) <i>Sidar H.M.</i>	"	On an isolated, conical hill, about 1¼ miles N. of the village of Sidhsar, and 2¼ miles E. of Vartej town on the main road to Gogha: Bhávnagar State, 1853.	21 44 27.75	72 9 1.71	[214]	386 387
Sidhsara Tower ... <i>Sidasra V. Tower</i>	Hálár	Highest and conspicuous tower at the S.W. corner of a square enclosure, about 3¼ miles S. of the large village of Dántrána on the road to Dvárka town: Navána-gar State, 1854.	22 8 55.7	69 27 39.8	...	1026
Sigsar Tree ... <i>Singsar B. Tree No. 2</i>	Sorath	Southern of the two conspicuous bar trees about ¼ a mile S. of the village of Sigsar, a short distance W. of the road from Sigsar to Dhámlej, and 1¼ miles N. of the latter village: Junágad State, 1854.	20 48 2	70 39 13	...	867 868
Sihor Hill Mark ... <i>Sehor (H. Mark)</i>	Gohelvád	About a mile E. of the town so called: Bhávnagar State. The point is denoted by a pillar of masonry surrounded by a platform of rubble, 1853.	21 42 26.51	72 1 0.97	[603]	380 381
Sil Fort ... <i>Seal Fort Flag</i>	Sorath	Flag-staff at the S.W. point of the fort, about 1¼ miles N.E. of Sil Bandar, and 6¼ miles N.W. of the town of Mángrol: Junágad State, 1854.	21 11 13.8	70 5 13.8	...	910 911
Sil Bandar Building <i>Seal Bunder Building</i>	"	Turret of the godown on the coast, about 1¼ miles S.W. of the large village or town of Sil, and 6¼ miles N.W. by W. of the Mángrol Light-house: Junágad State, 1854.	21 10 28	70 4 26	...	...
Simási h.s. ...	"	On a gentle swell above the plain, about a mile S.W. of the village so called, the same distance W.N.W. of Revád village, and 8 miles S. by W. of Gadhra town: Junágad State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, 1854.	20 48 49.56	70 55 32.36	* [57]	641
Simroli h.s. ...	"	On a conspicuous swell, about a mile S. by W. of the village of this name, and 5½ miles W. by S. of Koilána on the metalled road from the town of Vanthli to the sea-port town of Verával: Junágad State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, having mark-stones at top and bottom. When visited by the Topographical Survey Party in 1876-77, a hole was found which was pointed out as the site of the station. The Topographical Survey station is 30 feet E. of it, 1854.	21 12 37.60	70 12 59.61	...	657

* To upper surface of solid, circular pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Singra Building ...	Sorath	Square tower of the conspicuous building in the large village of this name on the left bank of the Kamad stream, about 3½ miles N. of the large village of Modhvára, and 3½ miles S.E. of the town of Rával on the right bank of the Vartu river: Porbandar State. 1854.	21 52 44.2	69 34 22.4	feet ...	940
Sitápúr Hill Mark (helio.) <i>Sitapur H.S.</i>	Gohelvád	About ¼ a mile S. by E. of the village of that name on the right bank of the Sitla river, and 1¼ miles N. by E. of Junvadar village on the Kálubbár river: Bhávnagar State. 1860.	21 51 58.40	71 30 56.84	339	579 580
Soel h.s. <i>Sohil H.S.</i>	Hálár	On a small table-land, about 1½ miles W.N.W. of the village of that name on the high road from Navánagar to Dhrol, about 5 miles W. of the latter, 2½ miles E. by N. of Berája, 2½ miles N.N.W. of Dángra, and 3 miles N.E. of Phala on the above mentioned road: Dhrol State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, about 2 feet high, over which a rectangular protecting pillar 3½ feet high was built. 1854.	22 33 51.76	70 22 31.92	* $\frac{131}{2}$	100 715
Songad Hill Tree ... <i>Juna Songar H. Tree</i>	Jhálávád	On the S.E. end of a small isolated hill, about ¼ of a mile W.S.W. of the village of Songad, 2½ miles S.E. by E. of Navágám, and 2 miles N. by E. of the town of Thán: Lakhtar State. 1853.	22 36 7	71 15 12	...	...
Sorvadar Hill Mark (helio.) <i>Sora Wadar H.S.</i>	Hálár	At the E. end of a flat hill, about ¼ a mile E. of the village so called, 3 miles W. by S. of the village of Roghel, and 6 miles N. of the town of Supedi on the left bank of the Utávli river: Navánagar State. 1860.	21 50 54.44	70 25 4.29	367	484 485
Sudámda h.s. <i>Sodamra H.S.</i>	Jhálávád	On a small detached hill about 2½ miles E.S.E. of the large village of this name on the right bank of the Nibhni river, and the same distance S.W. of the village of Korda: taluka Sudámda. The station consists of a platform of earth enclosing an isolated and perforated pillar of masonry, 2 feet in height, with an aperture for access to the lower mark. 1860.	22 26 1.38	71 34 7.55	† $\frac{428}{2}$	115
Surajbári Hill Mark (helio.) <i>Suribari H.M.</i>	Catch State	On a small hill about 3½ miles S.E. of Shikárpur, and 6 miles E.S.E. of Vándhia town. 1856.	23 12 54.33	70 44 46.80	...	269 270
Súrda h.s. <i>Nipania H.S.</i>	Hálár	At the W. end of a small flat-topped, isolated hill close to and N.E. of a large table-land, about a mile W. by N. of the village of Súrda, 2 miles E. of Mokhána village, and 6 miles S.E. by S. of the town of Navánagar: Navánagar State. The station consists of a platform of rubble enclosing a solid, circular and isolated pillar of masonry, about 2 feet high. When visited in 1873-74, the upper mark-stone was missing. A rectangular protecting pillar 3½ feet high was built over it. 1854.	22 23 50.87	70 10 41.69	* $\frac{235}{2}$	78 697
Súrtonk Hill Mark †	Umarkot	...	24 40 26.52	70 59 23.72	...	...
Sutrápáda Tower ... <i>Sutrapara Tower</i>	Sorath	Conspicuous tower on the wall of the town of the same name on the shore of the Arabian Sea: Junágad State. 1854.	20 50 32.7	70 31 36.4	...	870

* To upper surface of solid, circular pillar.
the Karáchi Longitudinal Series.

† To upper surface of perforated pillar.

‡ For triangle fixing this point, see the Synoptical Volume of

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Sutrej s. ... <i>Sootrej H.S.</i>	Sorath	In the plains, about 1½ miles N.W. by N. of the village of this name, 2 miles N.N.E. of Sanda on the Sábli river, 3¼ miles S.W. by W. of the town of Bálágám: Junágad State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, about 1 foot high, having mark-stones at top and bottom. A rectangular protecting pillar 3¼ feet high was built over it. 1854.	21 20 17' 07"	70 5 41' 01"	$\frac{\text{feet}}{[25]}$ 1	661
Tábardo h.s. ...	"	On the hill of that name in the Gir, about 3 miles S. of the village of Amrápur, 1 mile N. by W. of Bára village, and 8 miles E. by S. of the town of Mália: Junágad State. 1860.	21 7 29' 04"	70 27 58' 35"	[493]	544 545
Talája h.s. ...	Gohelvád	At the N.E. angle of the wall enclosing the topmost Shrávak temple, upon the isolated, peaked hill close to and W. of the town of the same name: Bhávnagar State. The station consists of a platform of burnt bricks and mud, enclosing a solid, circular and isolated pillar of masonry 1.5 feet high, over which a rectangular protecting pillar 3¼ feet high was built. 1854.	21 21 15' 81"	72 4 30' 32"	$\frac{[378]}{1.5}$	618
Talája Hill Temple ...	"	Dome of the conspicuous temple in the town: Bhávnagar State. 1854.	21 21 15' 7"	72 4 30' 1"	...	748 749
Talája Tower ...	"	Also known as the Ambliá bastion, at the N.E. corner of the town: Bhávnagar State. 1854.	21 21 18"	72 4 48"	...	...
Tána Temple ...	"	Spire of the temple immediately S. of the village so called, about 3 miles W.S.W. of Agiáli village, and 9 miles S. by E. of Sibor town: Bhávnagar State. 1860.	21 34 54' 3"	72 0 52' 6"	...	732
Tanasva Hill Mark (helio.) <i>Tinsua H.</i>	Hálár	On a small detached hill about a mile N. by E. of the village of Tanasva, 2¼ miles E. of the large village of Mervadar, and 4½ miles N.W. by N. of the large town of Ganed on the right bank of the Bhádar river: Gondal State. 1859.	21 43 32' 64"	70 11 28' 76"	133	422
Tánsa h.s. <i>Tinsia H.S.</i>	Ahmedabad	On one of the highest points of a range of hills, about 1¼ miles due W. of the village of Tánsa, 3¼ miles W.S.W. of Vaudi village, and 2 miles E.S.E. of Bhárol village: Gogha sub-division. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, over which a rectangular protecting pillar 3¼ feet high was built. 1854.	21 30 47' 09"	72 8 26' 82"	[570]	615
Tánsa Hill Tree ... <i>Tinsia H. Tree (Koria)</i>	"	Conspicuous tree at the end of the ridge running N. and S., about 1¼ miles N.W. of the village of Tánsa, 3 miles W. of Vaudi village, and 2¼ miles E. by N. of Bhárol village: Gogha sub-division. 1854.	21 31 39"	72 8 38"	...	740 741
Tápan Island No. 1 <i>Tapen Island N. End</i>	Gohelvád	Highest point at the N.W. extremity of the larger island so called, about 1¼ miles E. by N. of Paarádhár Island off the coast of Bhávnagar: Bhávnagar State. 1854.	20 59 50"	71 44 22"	...	...

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Tápan Island No. 2 <i>Tupen Island Smallest</i>	Gohelváđ	Smallest of a group of rocky islands, about a mile W. by S. of the W. extremity of the largest island, and $\frac{1}{4}$ of a mile E. of Paurádhár Island: Bhávnagar State. 1854.	0 1 " 20 59 31	0 1 " 71 43 21	<i>feet</i>...	...
Tárána Tree ... <i>Turana V. Highest Tree</i>	Hálár	Highest tree close N.E. of the village of that name on the right bank of the Áji river, about $\frac{1}{4}$ a mile N.E. of Morána on the left bank, 2 miles W. of Jirágad, and $1\frac{1}{2}$ miles S.E. of Múdhavpur: Navánagar State. 1854.	22 43 1	70 31 17	...	1087 1088
Tarkia, XXV ...	Jhálávád	<i>Vids</i> page 10—J.	22 28 51 10	71 12 22 02	$\frac{877 \cdot 66}{5}$	34
Tarkia Hill Peak ... <i>Trikia N. Peak</i>	"	The southern peak of the double one about $1\frac{1}{4}$ miles N.E. of the village of Tarkia, the same distance N.W. of Rámparu village, and 6 miles N. by W. of the town of Chotila on the Rájkot-Ahmedabad high road: Thána Chotila. 1853.	22 30 8	71 12 29	[823]	302 303
Tarnetar Temple ... <i>Thirmatur Temple</i>	Sorath	Spire of the temple on the E. bank of the Uben river, about a mile N.E. of Bálót village, $2\frac{1}{4}$ miles S. by W. of Dhandhusar, and 2 miles W. by N. of Koili village: Júnágad State. 1860.	21 30 52 9	70 23 25 9	...	509 510
Teba Hill Tree ... <i>Tuida H. Tree</i>	Hálár	Conspicuous tree on an isolated hill at the foot of which and about $1\frac{1}{4}$ miles S.S.W. is the small village of that name, $1\frac{1}{4}$ miles E. of Khimalia, and $4\frac{1}{4}$ miles S.E. by S. of Navánagar town: Navánagar State. 1854.	22 25 15	70 10 1	...	...
Tharsingra Hill Mark (helio.) ...	Gohelváđ	About a mile E.S.E. of Karkolia village, $1\frac{1}{4}$ miles N.E. by N. of Meghvadar village, and 2 miles S.W. by W. of the town of Sihor: Bhávnagar State. 1853.	21 41 28 02	71 58 36 43	...	373
Thetria h.s. ...	Baroda State	On the table-land in Okhámandal, about a mile W.N.W. of Tapani or Náráyanpur, and 3 miles N. by E. of Chnrakha on the road to Dwárka town. The station consists of a platform enclosing a pillar of masonry, 8 feet in height, having two mark-stones, one at the surface of the ground and the other on the top. When visited in 1878-79, a rectangular protecting pillar $3\frac{1}{2}$ feet high was built over it. 1854.	22 14 32 91	69 9 39 76	$\frac{[144]}{8}$	699 705
Thorála Hill Peak ...	Gohelváđ	High peak of the hill about $1\frac{1}{4}$ miles E. by S. of the village so called, the same distance N. of Borli village, and $\frac{1}{4}$ miles N.E. of Khuntávada town: Bhávnagar State. 1854.	21 13 37	71 44 27	...	779 780
Thoriáli Hill Mark (helio.) ... <i>Thuriary H.</i>	Cutch State	About 3 miles E. by N. of the village of that name, $3\frac{1}{4}$ miles S. of Gágodar, 4 miles N.E. of Dhimdevka, and 5 miles S.W. of Kánmer. 1856.	23 21 27 25	70 50 56 41	[95]	257 258
Thoriáli Mark (helio.) ... <i>Thuriáli S.</i>	Hálár	On a small mound about a mile E.N.E. of the village of that name, 2 miles N.W. of Khora-Pápal, 3 miles S.W. by W. of Otála, and $3\frac{1}{4}$ miles S. by W. of Bángaori: Navánagar State. 1860.	22 34 47 65	70 37 59 94	145	436
Timána Fort ... <i>Timana Tower</i>	Gohelváđ	Centre tower of the fort at the S.W. end of the village of Timána, about $\frac{1}{4}$ a mile N.E. of the Shetranji river, 2 miles W. by N. of Hubakvad village, and $6\frac{1}{4}$ miles N.W. by N. of Talája town: Bhávnagar State. 1860.	21 25 30 5	72 2 3 1	...	747

• To upper surface of solid, circular pillar.

† To base of rectangular protecting pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Timbri Hill Tree ... <i>Teemri H. Tree</i>	Hálár	Conspicuous tree about 2 miles E. of the village of this name, the same distance N.N.E. of Devlia, and 2½ miles S.E. of Bharána; Navánagar State 1854.	22 20 59	69 46 37	... feet	1047
Tindalva h.s. ... <i>Lattaria H.S.</i>	Catch State	On a hill, about 1½ miles N.E. of the village of Tindalva Mota, and the same distance E. of Tindalva Nana, 5 miles S.S.W. of Umaiya village, and the same distance S.W. by W. of Dhutakia village. The station is denoted by a mark in the centre of a platform. 1854.	23 31 7.96	70 46 13.47	513	215 216 217
Tobar Tower ... <i>Wasatobar V. Tower</i>	Baroda State	In the larger village of Tobar, about 2 miles W. of Dhránsanvel, 2½ miles S.S.E. of Vasáí, 3 miles S.W. of Kaliánpur, and the same distance E. of Barvála on the high road from Dwárka to Arámda. 1855.	22 17 14.3	69 3 2.9	...	980
Trákuda, XXXI ...	Hálár	<i>vide page 10—J.</i> ... Note.—When visited in 1874-75, a rectangular protecting pillar 3½ feet high was built over the station.	21 57 51.72	70 39 22.11	† 579 4	41
Trámbak h.s. ... <i>Trimbak H.S.</i>	Ahmedabad	On the summit of a lofty hill, about a mile S.W. of the village so called, 4½ miles S. of Válukad, and 2 miles E. of Nána Khokara village; Gogha sub-division. The station consists of a platform enclosing a circular and isolated pillar 4 feet in height. 1853.	21 36 30.09	72 8 35.93	† 986 4	68
Tungi Hill Peak ... <i>Tunga H. Peak</i>	Hálár	S. end of the peak of a small isolated hill about 1½ miles E.N.E. of Tungi Cháranvála, ½ of a mile S.W. of Tungi Dalváli, and 1½ miles E.S.E. of Jasápur; Navánagar State. 1854.	22 13 45	69 51 46	[355]	1052 1053
Tunkra h.s. ... <i>Toonkra H.S.</i>	Sorath	On a ridge, nearly ¼ a mile S.E. of the village of this name, ¼ a mile from the coast, and 1½ miles N.W. of Gosa village; Porbandar State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, about 1 foot high, having mark-stones at top and bottom. A rectangular protecting pillar 3½ feet high was built over it. 1854.	21 31 23.57	69 46 2.44	† [42] 1	667
Tunkra Hill Temple No. 1 ... <i>Toonkra H. Temple</i>	"	On a ridge running parallel with and at a distance of about ¼ of a mile from the coast, ¼ of a mile N.W. of Tunkra village, and 10½ miles S.E. by E. of the well-known sea-port town of Porbandar; Porbandar State. 1854.	21 31 43.1	69 45 36.4	...	923
Tunkra Hill Temple No. 2 ... <i>Toonkra S. Temple</i>	"	About 350 yards S. by E. of Tunkra h.s. Porbandar State. 1854.	21 31 14	69 46 7	...	...
Tunkra Tree ... <i>Sathala Brab Tree</i>	"	Highest palm tree between the coast and the western edge of the Mokal Ran, about 2½ miles N.N.W. of Tunkra village, and 2½ miles S.E. by E. of the large village of Adodar. Porbandar State. 1854.	21 33 22	69 45 6	...	924 925
Turkha Hill Mark No. 1 (helio.) ... <i>Turka H. Mark</i>	Gohelváá	On a small hill immediately S. of the village of the same name, about 4½ miles N. of Dhrápnia village, and 8 miles W.S.W. of Botád town on the Bhávnagar-Gondal Railway; Bhávnagar State. 1860.	22 8 41.39	71 34 26.74	516	565

* To mark in centre of platform.

† To upper surface of circular pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure <i>feet</i>	No. of Triangle
Turkha Hill Mark No. 2 <i>Naradhar H.S.</i>	Gohelvád	About 2 miles S.S.E. of the village of Turkha, 3½ miles N.W. by N. of Bhimrád village, and 8½ miles W.S.W. of Botád town: Bhávnagar State, 1860.	22 7 20'00	71 35 7'27	...	566
Udakia h.s. <i>Tajpur H.S.</i>	Hálár-Sorath	On rising ground near the site of the deserted village of Tajpur, about a mile W. by S. of the village of Udakia, and 8 miles S.E. by S. of the town of Upleta. This point is on the boundary line between the states of Gondal and Junágad. The station consists of a platform of earth enclosing an isolated and perforated pillar of masonry, 2 feet high, with an aperture for access to the lower mark. A rectangular protecting pillar 3½ feet high was built over it. 1866.	21 38 40'48	70 24 14'94	* 246 2	103 104
Umriya Hill Fort (helio.) <i>Omia H. Fort Bastion</i>	Cutch State	On the conspicuous bastion of the fort at the S.E. end of the large village so called, about 2½ miles S.E. by S. of Selari village on the left bank of the Kárásavadi river, and 3½ miles W.S.W. of Hamirpur. 1856.	23 35 1'14	70 48 0'78	...	207 208
Umarmkot Hill Mark (helio.) <i>Umarmkot H.S.</i>	Hálár	On the highest part of the ridge called Mhaldhar, about 1½ miles S. by E. of the village so called, and 7 miles W. by N. of the town of Jetpur on the Bhádar river: Gondal State. 1860.	21 46 6'08	70 33 29'90	346	495 496
Umrála Hill <i>Umbrela H.</i>	Sorath	Large, isolated hill in the Gir, about 1½ miles S.E. by E. of the village of Umrála, and 1½ miles N.N.E. of Morád village on the high road from Verával to Visavadar: Junágad State. 1854.	21 0 3	70 29 12	...	...
Umráli Hill Mark ... <i>Omrála H.S.</i>	Hálár	On the most eastern of a group of hills, about 2 miles S.E. by E. of the village of Umráli, 3½ miles N.E. by N. of Mevása village on the Cháparvádi river, and 6 miles N.W. of Virpur town: Navánagar State. Denoted by a platform 4 feet in height. 1853.	21 54 57'53	70 40 25'93	† 591 4	332 333
Umváda Hill Mark <i>Ombara H. Mark</i>	"	About a mile N.E. by N. of the village of Umváda, 1½ miles W.N.W. of Nógarka village, and 6½ miles S.E. of Mengni Moti village, taluka Mengni: Gondal State. 1853.	22 0 56'71	70 47 25'29	...	328 329
Umváda Hill Peak ... <i>Ombara Peak</i>	"	About 1½ miles E. by S. of the village of Umváda, and 3 miles N.W. of the town of Gondal: Gondal State. 1853.	21 59 52	70 48 25	...	...
Úna Building <i>Oona Ht. Bg.</i>	Sorath	Highest building about 200 yards W. of the town on the Machundri river: Junágad State. 1854.	20 49 16'9	71 4 59'2	...	819
Úna Idgah <i>Oona Idga old in Town</i>	"	Old Idgah about 100 yards from the S.E. bastion of the town: Junágad State. 1854.	20 49 0'0	71 5 17'7	...	820
Únchari Hill Tree ... <i>Onchari H. Tree</i>	Gohelvád	Conspicuous tree about a mile E. by N. of the village of Únchari, 1½ miles N.W. of Ambála village, and 7 miles N.E. by E. of Dátha town: Bhávnagar State. 1854.	21 14 56	72 5 40	...	750

* To upper surface of perforated pillar.

† To upper surface of platform.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Upleta Temple ... <i>Oplita Temple</i>	Hálár	Conspicuous temple near S.W. corner of the town on the right bank of the Moj river, and 8 miles N.E. by E. of the town of Ganod: Gondal State. 1860.	21 44 16	70 19 41	... feet	...
Upleta Tower (helio.) <i>Oplita Tower S.</i>	"	On the tower at the E. end of the town: Gondal State. The point is denoted by a mark on the tower. 1860.	21 44 25.96	70 19 47.06	188	498 499
Vadál h.s. <i>Wadal H.S.</i>	Gohelvád	On a hill called Phater, the highest of a range, about a mile N.E. of the village of Vadál on the main road from Kundla to Mahuva, and 9 miles N. of Dngar town: Bhávnagar State. The station is denoted by a circle and dot engraved on the rock <i>in situ</i> on the highest part of the hill. 1860.	21 11 57.71	71 36 7.54	557	136
Vadála No. 1 <i>Tintobra H.S.</i>	h.s. ... Sorath	On the highest part of a low range of hills, about 1½ miles W. of the village of Vadála, 1½ miles N.W. by W. of the large village of Várásúra, and 5½ miles W. of the town of Ganod on the right bank of the Bhúdar river: Junágad State. The station consists of a circular pillar 2 feet high, over which a rectangular protecting pillar 3½ feet high was built. 1859.	21 40 31.91	70 8 3.47	† 294 2	81
Vadála No. 2 <i>Waddalah H.S.</i>	h.s. ... Hálár	On rising ground, about 1½ miles E. of the village of Vadála Mota, ¾ miles S. of Rojbia village, and 2½ miles S.W. by S. of Khijaria village: Naváungar State. 1860.	22 15 8.26	70 31 41.73	350	448 449
Vadála No. 3 <i>Inazia H.S.</i>	h.s. ... Sorath	On a small, isolated hill nearly 2 miles S. of the village of Vadála, 2½ miles N. of the large village of Visávara, and 5½ miles E.S.E. of the sea-port town of Míáni: Porbandar State. The station consists of a circular pillar of masonry, about 1 foot high, having two mark-stones, one at the surface of the ground and the other on the top. A rectangular protecting pillar 3½ feet high was built over it. 1854.	21 48 29.92	69 29 47.54	† [131] 1	673
Vadála Tower ... <i>Wadala V. Tower</i>	"	In the village of this name, about 4½ miles N. of the large village of Visávara, and the same distance E. of the sea-port town of Míáni: Porbandar State. 1854.	21 50 7.7	69 29 39.5	...	941
Vadia Hill Mark (helio.) <i>Veria H. Mark</i>	Jhálávád	About 1½ miles E.S.E. of the village of Vadia, the same distance N. by E. of Korda village, and 8 miles W. of the town of Chúda: Wadhván State. 1860.	22 29 5.63	71 36 5.77	[387]	551 552
Vadnagar h.s. ... <i>Warnagar H.S.</i>	Baroda State	On a conspicuous, isolated peak close to the temple dedicated to Jak Charan Bai, about ¼ of a mile N. by E. of the village of Vadnagar, and ¼ miles N. of Kodinár town: táluca Amreli. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry. 1854.	20 50 54.85	70 44 55.05	† [168]	645
Vadnagar Hill Temple <i>Warnagar H. Temple</i>	"	About 10 yards N.W. of Vadnagar h.s.: táluca Amreli. 1854.	20 50 55.1	70 44 54.9	...	860 861

* To mark on tower.

† To circle and dot engraved on rock.

‡ To upper surface of circular pillar.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Vágharia Hill Mark (holio.) ... <i>Balsan Hill</i>	Hálár	On the N.E. point of a small detached hill about 1½ miles E.N.E. of the small village of Vágharia, 2½ miles S.W. by S. of Matva, and 2 miles E.S.E. of Bhalsán Mota on the right bank of the Náni Phuljhar river: Navánagar State. 1859.	22 18 20·35	70 14 20·26	feet 316	396
Vághnagar Tree ... <i>Wagnagar Palm T.</i>	Gohelvád	Highest and conspicuous palm tree on the left bank of the Bhádradi river, about 200 yards W. of the S.W. end of the village of Vághnagar, and 2½ miles E. by N. of Mahava town: Bhávnagar State. 1854.	21 6 4	71 50 58	...	772 773
Vágudar s. ... <i>Wagoder S.</i>	Hálár	On a small table-land, about 1½ miles E.N.E. of the larger village of Vágudar, 1½ miles E. of the smaller, 1½ miles W. of Sagália, and 4 miles N. by E. of Liála on the high road from Navánagar to Rájkot: Dhrol State. 1860.	22 34 25·87	70 32 51·24	195	434 435
Váladungar Hill Peak ... <i>Waladonger Peak</i>	"	About ¼ of a mile N.W. of the village of Váladungar, on the right bank of the Cháparvádi river, 2 miles N.E. of the large village of Mevása, and 8 miles E. of the town of Kandorna: Navánagar State. 1853.	21 53 33	70 39 54	[474]	...
Válinár Hill Tree ... <i>Singaz H. Tree</i>	"	About ¼ of a mile S.W. of the village of Válinár, 1½ miles W. of Singaz, and the same distance N.N.E. of Bharána: Navánagar State. 1854.	22 23 28	69 45 30	...	...
Vánd h.s. ... <i>Vaundh H.S.</i>	Sorath	On the south-eastern end of a ridge running east and west, between the villages of Vánd and Bábarkot, about ¼ a mile S. of the former and 2 miles N. of the latter, and 3½ miles N.E. of Jáfarabad town: Jáfarabad State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, over which a rectangular protecting pillar 3½ feet high was built. 1854.	20 53 54·36	71 27 4·62	[153]	631
Vándhia, XIV ...	Cutch State	<i>vide page 8—J.</i> ...	23 14 44·22	70 39 18·59	$\frac{116 \cdot 37}{\dagger}$	19
Vángadhra Hill ... <i>Vaungdhur H.</i>	Baroda State	Highest point of a range of hills, about 1½ miles S.W. of Nigála village, the same distance E.S.E. of Jhámká village, and 2½ miles N.W. by N. of Lor village. 1854.	20 58 52	71 16 41	[605]	805 806
Vánkáner, XXIV ...	Jhálvád	<i>vide page 9—J.</i> ... Note.—When visited in 1872-73, a rectangular protecting pillar 3½ feet high was built over the station.	22 36 8·76	70 58 29·59	$\frac{601}{5}$	32, 33
Vánkáner Minaret ... <i>Wankanir Minaret</i>	"	In the N.W. portion of the town: Vánkáner State. 1852.	22 36 52·1	70 58 57·8	...	297 298
Vánkáner Temple ... <i>Wankanir West Temple Spiro</i>	"	Spire of the W. temple in the town: Vánkáner State. 1853.	22 36 44·8	70 59 6·9	...	209
Vánkia Hill ... <i>Wankia Isolated Hill</i>	Sorath	Highest point of a small, isolated hill about 1½ miles E. of the village of Vánkia Nána, and 1½ miles W. of Mánsa Nána village: Junágad State. 1854.	20 56 32	71 15 15	...	807

* To upper surface of circular pillar.

† See description of this station.

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Vānsadhō Hill Mark (helio.) ... <i>Wānsadhō H.S.</i>	Sorath	On a conspicuous hill so called, in the northern Gir forest, about a mile N. of the village of Sāsān on the southern bank of the Hiran river. The main road from Verāval to Visāvadar passes about a mile to the E. of the hill: Junāgad State. 1860.	21 11 2' 85"	70 38 25' 13"	1066 <i>feet</i>	534 535
Vānthli h.s. ... <i>Wānthali H.S.</i>	Hālār	On a small hill, about 1½ miles S.E. of the village of that name, 2½ miles N.E. of Varna, 2 miles W.S.W. of Tamūchiron, and 3½ miles N.W. by N. of Veratia on the left bank of the Moti Phuljhar river. The station is on a rock: Navānagar State. 1860.	22 25 14' 21"	70 23 27' 36"	213	430
Vāra Dūngor Bet Hill (helio.) ... <i>Wāra Dūngor H.</i>	Jhālāvād	On conical hill on a small island in the Ran of Cutch, immediately N. of Kesmāri Bet, about 4 miles W. of Bhāngarva Bet: Dhrāngadra State. 1866.	23 17 22' 81"	71 4 46' 96"	[63]	272 273
Varnu Vāndh Tomb <i>Capt. McMurdo's Tomb</i>	Cutch State	Captain McMurdo's tomb about ¼ mile S. of the village so called, 3½ miles S.E. of Sīlāpur, and 3 miles S.W. of Sukhpur. 1854.	23 27 59' 3"	71 4 56' 6"	...	233 234
Varodra h.s. ... <i>Brodra H.S.</i>	Sorath	On a sand hill near the coast, about a mile S.W. by W. of the village of Varodra, 2½ miles W. by N. of Ādri village, and 9 miles N.W. by W. of the town and port of Verāval: Junāgad State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry. 1854.	20 58 41' 27"	70 17 50' 12"	[45]	652
Varsangpur Hill Temple <i>Warsangpur H. Temple</i>	"	On a small hill, about ¼ of a mile N.W. of the village so called, and 3½ miles in the same direction from the town of Ūns: Junāgad State. 1854.	20 50 35' 3"	71 2 34' 2"	...	818
Varthara s. ... <i>Warthara H.S.</i>	Hālār	On high ground, about 1½ miles S.E. of the village of this name, at the junction of the roads from Varthara, Bhātel, Garamāri and Hainthal, and 8 miles W. of the large town of Khambhāliya: Navānagar State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry. When visited in 1877-78, only a few stones and part of the masonry pillar remained, over this a rectangular protecting pillar 3 feet high was built. 1854.	22 11 37' 13"	69 33 45' 02"	...	688
Varthara Temple ... <i>Warthara Temple</i>	"	Close S.W. of the village: Navānagar State. 1854. ...	22 12 9"	69 33 1"	...	...
Varthara Tower ... <i>Warthara V. Tower</i>	"	In the village, about 2½ miles N.N.E. of Bhātel, and 2½ miles W.S.W. of Hainthal: Navānagar State. 1854.	22 12 18' 9"	69 32 55' 4"	...	1028
Varthara Tree ... <i>Warthara Well Tree</i>	"	Highest of four trees at a well on the road from Varthara village to the town of Khambhāliya, about a mile E. by S. of the former, and 3 miles N.E. of Bhātel village: Navānagar State. 1854.	22 12 7"	69 33 48"	...	...
Vasāi Building ... <i>Wasai Building</i>	Baroda State	Highest building in the village of that name, about 3 miles N.E. of the large village of Barvāla, 2 miles N.N.W. of Tobar Mota, 3½ miles N.W. of Dhrāsanyel, and 2½ miles W. of Kālānpur. 1855.	22 19 2' 5"	69 2 23' 8"	...	982

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Vasú Temple ... <i>Wasai V. Temple</i>	Daroda State	Spire of the temple close W. of the village of that name, about 3 miles N.E. of the large village of Barvája, 2 miles N.N.W. of Tobar Mota, 3½ miles N.W. of Dhrásanvel, and 2½ miles W. of Kaliánpur. 1855.	22 19 2'8"	69 2 24'4"	feet ...	963
Vasúvar h.s. ... <i>Wasawar H.S.</i>	Sorath	On an extensive table-land, about ¼ of a mile S. by W. of the village of Vasúvar, 1½ miles N. of Kadasia village, 2 miles S. of the famous Práchi Kund, and 9 miles E.N.E. of the town of Satrápáda on the coast: Junágad State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry. 1854.	20 53 16'05"	70 39 26'15"	[202]	647
Vavánia House ... <i>Wawania Hight. House in Town</i>	Hálár	Highest house in the large village of that name, about 3½ miles E. by S. of the sea-port of Vavánia on the Gulf of Cutch, 3½ miles W. of Bhela Nána, 2½ miles S. by W. of Bagasra, and 3 miles S.W. of Bápúr: Morvi State. 1854.	23 0 22'3"	70 39 4'2"	...	1093
Váverá Hill Mark (helio.) ... <i>Wawera H.S.</i>	Gohelvád	About ¼ of a mile E. of the village so called, 1½ miles S.W. of Kheráli Nána village, and 7½ miles W.N.W. of the town of Dangar: Bhávnagar State. 1860.	21 6 53'28"	71 30 11'25"	239	609 610
Verával Building ... <i>Vairawal Highest Building</i>	Sorath	Highest building in the southern portion of the sea-port town so called, and a short distance N.W. of the light-house: Junágad State. 1854.	20 54 6'2"	70 24 30'6"	...	885
Verával h.s. ... <i>Vairawal H.S.</i>	"	About 100 yards N. of an old tomb on a knoll, about a mile N.W. of the town: Junágad State. The station consists of a platform enclosing a solid, circular and isolated pillar of masonry, 2 feet high, the upper mark-stone being in the surface of the pillar. 1854.	20 54 47'68"	70 23 44'18"	[64] 2	650
Verával Idgah ... <i>Vairawal (Idga Minaret)</i>	"	N. minaret of the Idgah on rising ground, E. of the town: Junágad State. 1854.	20 54 18'2"	70 24 4'3"	...	886 887
Verával Masjid ... <i>Vairawal Masjid</i>	"	Jáma masjid on the S. edge of the town, about 260 yards N.W. of the light-house: Junágad State. 1854.	20 54 7'5"	70 24 33'2"	...	883 884
Verával Temple ... <i>Vairawal Birbandar Temple</i>	"	Conspicuous temple on the coast between the towns of Verával and Pátan, about a mile E.S.E. of the former and the same distance W.N.W. of the latter: Junágad State. 1854.	20 53 55'1"	70 25 28'7"	...	881 882
Verával Tomb (helio.) ... <i>Vairawal Coast Tomb</i>	"	On the terraced platform of the tomb on the coast, about 37 yards S.E. by S. of Verával temple: Junágad State. The point is denoted by a mark thus λ . 1854.	20 53 54'22"	70 25 29'28"	...	879 880
Vijarkhi Hill ... <i>Vinjirki Isolated H.</i>	Hálár	Small, isolated hill about 1½ miles S. by W. of the village so called, the same distance N. by W. of Maistra village, and 8 miles S.E. of the town of Navánagar: Navánagar State. 1854.	22 23 37"	70 13 0"	[258]	...

Name of Station or Point	District	Description	Latitude North	Longitude East of Greenwich	Height of Station — Height of Structure	No. of Triangle
Viklígálitot Hill Mark (helio.) ... <i>Nani Wadali H.S.</i>	Gohelwád	On the highest part of a hill, about 2 miles N. of Likhála village, 4 miles N.E. of Gádhakda large village, and 10 miles E.S.E. of Kunda town: Bhávnagar State. The point is denoted by a mark-stone on which a rectangular protecting pillar 3½ feet high was built. 1860.	21 17 23' 39"	71 29 26' 49"	feet * 813	598
Viráwáh, I ...	Thar and Párkar	<i>Vide page 6—J.</i>	24 24 54' 47"	71 9 1' 65"	† 485 I	1
Viráwáh Rock ... <i>Worawa Rock</i>	"	Detached rock on the edge of the Ran, about 3½ miles E. of the village of Churia: táluka Nagar. 1856.	24 24 4	71 9 53	...	...
Viráwáh Temple No. 1 (helio.) ... <i>Verawow V. Temple</i>	"	In the large village of Viráwáh, at the junction of the roads from Mamchero and Pilo-jo-Tar: táluka Nagar. 1856.	24 31 10' 92"	70 48 31' 11"	...	144
Viráwáh Temple No. 2 ... <i>Verawow Cupola</i>	"	Dome of a small temple built on some land in a lake. The temple is supported on pillars, and is about ¼ of a mile S.W. of the village: táluka Nagar. 1856.	24 30 56' 5	70 48 11' 6	...	145
Vírpur, XXII ...	Hálár	<i>Vide page 9—J.</i>	22 45 5' 79"	70 51 17' 93"	† 248 5	29, 30
Vírpur Hill ... <i>Vírpur H. Bush</i>	"	Bush on a conspicuous hill, about 2½ miles E. of the village of that name on the high road from Tankára on the left bank of the Jbinjhu river, 1½ miles N. of Ghúnda, and 1½ miles W. of Hamirpur or Navágám: Morvi State. 1853.	22 44 27	70 52 49	[315]	...
Vírpur Hill Tree ...	"	About a mile W. by S. of Navágám, and 2½ miles S.E. by E. of the large village of Vírpur on the high road from Junágad to Gondal: Gondal State. 1853.	21 49 49	70 46 18	...	...
Vitrio Hill Temple†	Cutch State	On the highest part of the hill known by that name, about 1½ miles N.N.E. of the large village of Bádargad. 1854.	23 29 12' I	70 40 15' 7	...	225
Voláva Hill Mark§	Pálanpur State	...	24 24 55' 15	71 9 1' 56	...	...

* To mark-stone below protecting pillar. † To upper surface of solid, circular pillar.

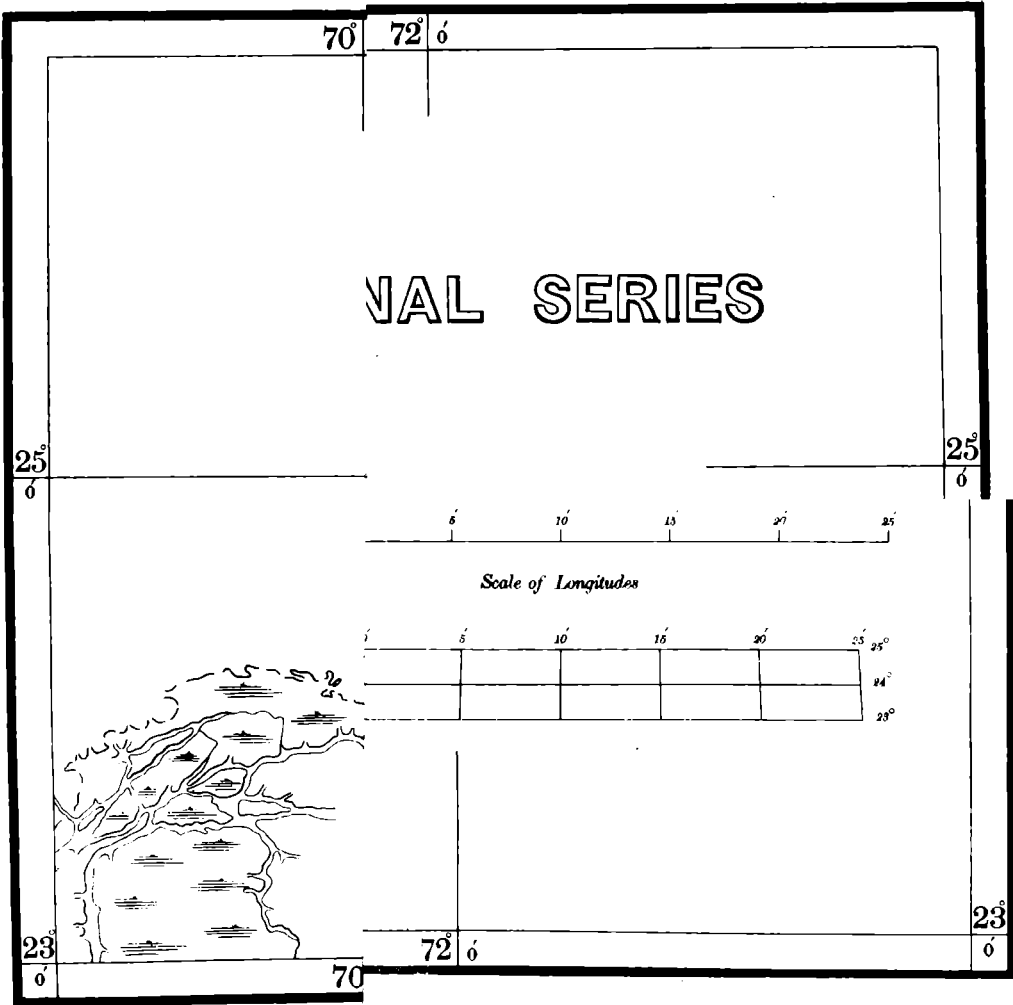
† For another triangle fixing this point, see the Synoptical Volume of the Cutch Const Series.

§ For triangle fixing this point, see the Synoptical Volume of the Karáchi Longitudinal Series.

J. ECCLES,

In charge Computing Office.

April, 1894.



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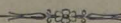
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