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1109

Revenue Department
Minutes of Consultations

3rd Nov 1857

Back nos 1 & 2.

Order No 1109 D/30th Oct 1857

2-
1109

No. 1. Read the following Extract from the Proceedings of the Board of Revenue; dated 1st October 1857, No. 3282.

Read letter from Captain F. J. B. PRIESTLEY, Superintendent Revenue Survey; to the Secretary to the Revenue Board; dated Cuddalore, 1st September 1857, No. 98.

SIR,

Para. 4th. Beyond a small amount of professional accuracy in fixing the village boundary, and in making three or four villages join together, no general scientific precautions are deemed either necessary or expedient, for securing professional accuracy over extended areas, either to ensure a congregated map of a Pergunnah, or of a Zillah, which shall have any pretensions to refinement or even ordinary approximation to truth.

Para. 19th. In the Madras system in fact the attainment of the separate record of the fields, appears to be the one great and only object aimed at, to the exclusion almost of those general principles of professional practice, which are obviously called for, when projecting extensive surveys of immense areas, embracing Zillahs or Districts and even Provinces.

Para. 23d. The first great principle which I look upon as of the most vital importance in subordinate survey operations, is the due and perfect connection and identification of the Topographical features, or stations of the Revenue survey with the points of the Triangulation, whereby alone, the maps of the former operations can be amalgamated, and adjusted in the great Atlas of India, or indeed in any general map, on which lines of Latitude and Longitude are required, with any pretensions to accuracy.

Para. 24th. But if the Madras Revenue village Maps are ever to be put together, so as to form a Pergunnah, or even a talook congregation of the entire number of villages composing such sub-divisions of the country, and from which again a District or Zillah Geographical Map could alone be constructed, then the insertion of the points of the great triangulation will be imperative, and if they still exist on the ground it would be difficult to understand in what way such an observance, could either impede or obstruct Captain Priestley's work.

Para. 26th. Next in importance to a proper and complete identification with the points of the great triangulation and a permanent point of departure or first station for the Survey, is the nature of the meridian on which the operations are based. The Board remark in their 44th para. that the Surveyor has not laid down a true meridian, but was working entirely from a magnetic one, and that the outline of every village being independently and carefully taken by traverse, a set of several villages will ultimately close "near enough for all practical purposes." They thought however with Captain Priestley that it was desirable to have a check of more accurate nature; but again in para. 27 they did not consider it necessary for the surveyor "to lay down his Azimuths with that rigorous accuracy that was required in the N. W. Provinces, where the lines were connected with the G. T. Survey;" and the Board therefore left it to him to use such method as might be adapted to the instruments with which he was furnished. From the 48th para. it further appears that nothing beyond a 3-inch Theodolite forms the present equipment of the surveyor.

Para. 30th. From the above it would seem that the Surveyor is at present obliged to adapt his style of survey to the nature and capability of the instrument with which he is supplied, instead of first determining on a rigorous method, and then providing his instrumental equipment accordingly. In the 48th para. of the Board's Report, the proper and usual system of working from whole to part, and embracing large circuits of a whole talook or Pergunnah in the first instance, the smaller or village circuits being filled in within it afterwards, is hinted at, as having been proposed by Captain Priestley though his other duties would not permit him to carry it out. It is precisely such a course that I would earnestly enjoin, as the first step towards securing faithful Maps of a Pergunnah or talook, and hence of a Zillah as the only way of conducting such a survey, as we have in Bengal. To effect this also, every independent village laid down on a Magnetic me-

I have the honor to submit a few remarks explanatory of some points on which Major Thuillier, Deputy Surveyor General, in a letter* to Mr. Beadon, Secretary to the Government of India, dated 6th May 1857, seems to have had imperfect information regarding the experimental survey carried on under my superintendence, and trust that they may do away with many of the objections which Major Thuillier has raised, and also shew that most of the arrangements on which he insists have already been either made or are in progress.

It would appear that the latest documents relating to the experimental survey which have reached Major Thuillier are dated 8th September 1854, and the Minutes on the proposed survey and assessment dated 14th August 1855, and that the strictures on the mode of survey and "the want of any general scientific precautions for securing professional accuracy over extended areas" (para. 4), are based on the contents of No. IX. of the Selections from the Public Records.

The reason for the absence of such precautions at the commencement was, as surmised by Major Thuillier (para. 30), from the want of any instruments by which to determine a true meridian; but also from the necessity for my devoting all my available time to solving the problem as to the feasibility of plotting from a Khusreh Ameen's field book within a boundary previously laid down.

I was given to understand that the measurement and computation of the content of fields was the principal object to be looked to in a Madras Revenue survey (para. 19), but not "to the exclusion of those general principles of professional practice which are called for in surveys of large areas;" for that primary object ensured, the application of the materials collected to the formation of talook and District maps was the next point considered.

The practicability of connecting the Revenue survey operations with Grand Trigonometrical survey points was never for a moment doubted as in Bengal it had invariably been the rule to do so, but the experiment of plotting the Khusreh work within boundaries had till then not been successfully attempted. So far from despising such aid as that which an accurate survey on a Trigonometrical basis affords (para. 25), the fact is that in 1853, in a letter to the Revenue

செப்பனெடுபவர் பெயர்
செ. வி. ம. ன்
செப்பனெடுவதற்காக எடுத்த
கொள்ளப்பட்ட நாள் - 1-2-57
செப்பனெடு முடிந்த நாள் - 6-2-57
சாபார்க்கும் இராஜாஜி நதவி
மு. ந. ப்த. எ. யாளர்
கையொப்பம் கையொப்பம்

Fort Saint George, Revenue Consultation of 3d November 1857.

will never answer, because although as the Board anticipated, a few village traverses might join well enough together for all practical purposes, yet the accumulation of error in many hundred village circuits would soon become so large, that the Surveyor would be thrown into inextricable difficulties. Not only must the whole work be based on the true meridian, carefully established for the initial Azimuth, as derived from astronomical observations; but such true meridian must again be frequently checked by corresponding astronomical observations, and the Azimuth as conveyed through the angular work from circuit to circuit constantly tested. Without this being done there will be no prospect of the main circuits closing and proving with the necessary accuracy. The whole of this process to which I will only here briefly allude, is described at great length in the "Manual of surveying Chapter XII, Part III," and will no doubt be familiar to the Madras Surveyor.

Para. 31st. Having in view therefore a professional survey of the Bengal stamp, as a very necessary ingredient of the Madras proposed operations, I would counsel the strictest observance as to the mode of establishing and laying down the true meridian, and in preserving the true inclination of the Azimuth as conveyed from circuit to circuit. It may be sufficient for all purposes of Revenue, and for the requirements of the Board of Revenue, that a set of a few villages join well together, but generalization and good Topographical Maps cannot be obtained by such a system; and if any thing beyond the isolated village plan is expected, or deemed requisite for the general purposes of Government, a rigorous prosecution of the professional part of the work must be adopted.

sides of grand Trigonometrical survey triangles. When however in the month of October 1856, I at length received the information I had applied for, I (as stated in letter No. 91 to the Secretary Revenue Board) tested my work in several places with the following results,

	Ft. per mile.	
Auditharay to Purwoy.	26.5	error.
Purwoy to Shillagoody.	6.1	error.
Shillagoody to Cullagoody.	91.0	

Early in the year 1855 on the receipt of a 7 inch Theodolite, the system of large circuits with the bearing corrected at intervals by Astronomical observation was adopted and has ever since been continued. In 1855 the circuits were not so large as might have been desired, in consequence of the lapsed Jaghire villages given for survey lying in patches of a few together, or even singly. In 1856 the circuits at a rough estimate averaged about 80 square miles.

In each and all of the villages measured the Topographical details are duly surveyed and laid down by men specially appointed for the purpose; the only part of the village not minutely surveyed is the "nuttum" or village site, of which the principal roads or streets alone are marked. When lately at Madras, I shewed to the Revenue Board specimens of the talook Maps I purposed preparing if deemed advisable. They are on a scale of 2 inches to the mile or 1-8th of that of the village Maps from which they are reduced. This scale appeared to me the one best suited for talook Maps, as it permits not only of all Topographical details being delineated with great exactness, but also the village boundaries and tracts of waste land and cultivation of different kinds being clearly shewn. In fact, in the talook Maps with the exception that every individual field is not defined each village is almost as distinctly laid down as in the Maps on a scale of 16 inch to the mile.

From the talook Maps, District Maps can be with ease compiled on a scale of $\frac{1}{2}$ an inch to the mile, or 1-4th the size of that of the talook Maps.

I fully concur in the course advocated by Major Thuillier in the 13th para. of his letter, that to attain the object of extending the survey establishment, a certain number of Covenanted and Uncovenanted Assistants should be appointed to learn their duties.

One most important difference between the Bengal and Madras Revenue Surveys is mentioned in para. 17, "No separate measurement of fields is included in this estimate (i. e. of the "professional survey). This duty is performed by the civil or settlement establishment and

Fort Saint George, Revenue Consultation of 3d November 1857. 1109

entirely checked by the officer of that Department, and consequently this Department is in no ways responsible for or concerned in the record of the separate fields, or minor estates which "is exclusively managed and paid for by the civil branch." Such an arrangement would, it appears to me, be fatal to a Revenue survey in this Presidency where the settlement is Ryotwar, and consequently the correct measurement of fields is of vital importance. I apprehend that it was to this that the Revenue Board intended to allude in the 15th para. of their Report, as referred to by Major Thuillier.

I need hardly say that it affords me the greatest satisfaction to find that the system I have adopted of simultaneous survey and measurement followed immediately by the test of plotting, meets with the approbation of an officer of the Deputy Surveyor General's extended experience; to him we also owe our best thanks for so forcibly pointing out the ill-effects of over-haste and consequent imperfect work, and for the caution against an error so likely to be fallen into with the best intentions from competition and from over-rating the capabilities of an establishment.

I beg to call particular attention to paras. 41 and 43. The necessity for the previous settlement of disputes and the clear demarcation of field and village boundaries cannot be too strongly urged, of the unsatisfactory results of the neglect of this arrangement I can speak from experience.

I think that information on any subject touched on by Major Thuillier to which I have not referred in this letter will be found in the report and appendices which I did myself the honor to forward in February 1857.

In conclusion, I must make my acknowledgments for the kind offer of assistance and advice made by the Deputy Surveyor General, of whose numerous practical and valuable suggestions for the formation and equipment of a survey party I shall do my best to take advantage.

Resolved that the above letter be submitted for the information of Government, with reference to Extract Minutes Consultation dated 25th July 1857, No. 741, Revenue Department.

(A true Extract.)

(Signed) J. D. SIM, Acting Secretary.

Ordered in consequence that the following letter be despatched.

No. 2. From H. FORBES, Esq., Acting Secretary to the Government of Fort Saint George; to C. BEADON, Esq., Secretary to the Government of India; dated 30th October 1857, No. 1109.

SIR,

With reference to the letter to your address from the Deputy Surveyor General, on the details of the proposed survey of the Madras Presidency, dated 6th May last, and received with Mr. Chapman's communication of the 5th June following, No. 810, I am directed by the Right Honorable the Governor in Council to forward the accompanying copy of a letter addressed by Captain F. J. B. Priestley, the Superintendent of the Survey of this Presidency, to the Board of Revenue, dated 1st September 1857, on certain points connected with the experimental survey carried on under his superintendence, noticed in Major Thuillier's report.

Major Shullier.

I need hardly say that it affords me the greatest satisfaction to find that the system I have adopted of disbanding survey and measurement followed immediately by the test of plotting, meets with the approbation of an officer of the Deputy Surveyor General's extended experience to him we also owe our best thanks for so forcibly pointing out the ill effects of over-haste and consequent imperfect work and for the caution against an error so likely to be fallen into with the best intentions from competition and from over-estimating the capabilities of an establishment.

I beg to call particular attention to Paras 41 & 43. The necessity for the previous settlement of disputes and the clear demarcation of field and village boundaries cannot be too strongly urged of the unsatisfactory results of the neglect of this arrangement I can speak from experience.

I think that information on any subject touched on by Major Shullier to which I have not referred in this letter will be found in the Report and Appendix which I did myself the honor to forward in February 1857.

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1109
laid down on a Magnetic meridian will never answer, because, although as the Board anticipate, a few village traverses might join well enough together for all practical purposes, yet the accumulation of error in many hundred village circuits would soon become so large, that the Surveyor would be thrown into inextricable difficulties. Not only must the whole work be done on the true meridian, carefully established for the Initial Azimuth, as derived from astronomical observations, but such true meridian must again be frequently checked by corresponding astronomical observations, and the Azimuth as conveyed through the angles in work from circuit to circuit constantly settled. Without this is done there will be no prospect of the main circuits closing and

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 is supplied, instead of first draft can be with care compiled on a
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 method, and then providing size of that of the Baloch Maps.
 his instrumental equipment I fully concur in the course
 accordingly. In the 40th para. recommended by Major Sherrin in the 18th
 of the Board's Report that of his letter, that to obtain the object of
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 of working from which to number of Comandants such as Comandants
 part, and embracing large districts should be appointed to trace the
 circuits of a whole Block. One most important difference
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 stance, the smaller in surveys as mentioned in Para 17 "as different
 large circuits being filled with a number of fields of different
 which are separated by a line of the Professional Survey. It
 hinted at as having been proposed by Captain Priestly through his other duties would not permit him to carry it out.
 It is precisely such a course that I would see
 meeting again, as the first step towards securing
 faithful maps of a large tract or Baloch, and hence
 of a Zillah as the only way of conducting such a
 survey, as we have in Bengal. To effect this also
 every independent Village

Early in the year 1855 in the receipt of a 7 inch Thodolite the system of
 large circuits with the bearing circled at intervals by astronomical observation was
 adopted and had been some time in use.
 In 1855 the circuits were not so large as might have been desired, in consequence
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No 98

to obtained by such a
system; and if any thing
beyond the isolated village
plan is expected, or deemed
indispensable for the general
purposes of Government,
a vigorous prosecution
of the Professional part
of the work must be
adopted.

8 1109

Revenue Department.

N^o 3282

Extract from the Proceedings of the Board of Revenue,
dated 1st October 1857. N^o 3282

Read letter from Captain T. L. B.

In Cons^l 1st Octr 1857. Priestley, Superintendent Revenue Survey, dated
1st September 1857.

(Here enter No 98)

Resolved that the above letter be
submitted for the information of Government,
with reference to Extract Minutes Consultation
dated 28th July 1857. N^o 741. Revenue Depart.
ment.

True Extract

Ag Secretary

To
H. Forbes Esq
Ag Secretary to Government.
Revenue Department.

Copy in a letter to
Mr. Forbes 1st Oct 1857

For Mr. Forbes 1st Oct 1857

N^o 3092

The Department

Revenue Survey

1st Oct 1857

1st Oct 1857

In Cons^l 1st Oct 1857.

Submitting journals

regarding the various forms to

be filled up by the Revenue

in the letter to the Government

of the 1st Oct 1857.

Copy to Govt 1 Oct 57

June 28: July 57. N. 2526

Letter to E. J. March 1888. N. 2526

Permanence 1887 Sept 10
Sept 10 1887

Extract from the Proceedings of the Board of Revenue

501

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Dated 1st October 1887.
No 321

1. Encls
S. G. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 841. 842. 843. 844. 845. 846. 847. 848. 849. 850. 851. 852. 853. 854. 855. 856. 857. 858. 859. 860. 861. 862. 863. 864. 865. 866. 867. 868. 869. 870. 871. 872. 873. 874. 875. 876. 877. 878. 879. 880. 881. 882. 883. 884. 885. 886. 887. 888. 889. 890. 891. 892. 893. 894. 895. 896. 897. 898. 899. 900. 901. 902. 903. 904. 905. 906. 907. 908. 909. 910. 911. 912. 913. 914. 915. 916. 917. 918. 919. 920. 921. 922. 923. 924. 925. 926. 927. 928. 929. 930. 931. 932. 933. 934. 935. 936. 937. 938. 939. 940. 941. 942. 943. 944. 945. 946. 947. 948. 949. 950. 951. 952. 953. 954. 955. 956. 957. 958. 959. 960. 961. 962. 963. 964. 965. 966. 967. 968. 969. 970. 971. 972. 973. 974. 975. 976. 977. 978. 979. 980. 981. 982. 983. 984. 985. 986. 987. 988. 989. 990. 991. 992. 993. 994. 995. 996. 997. 998. 999. 1000.

c 147282

Submitting for information a letter from Captain Driscoll containing remarks explanatory of certain points connected with the experimental work of the Survey.

Copy of the letter sent to the Hon. Secy. of the Interior.

to the Hon. Secy. of the Interior.

to the Hon. Secy. of the Interior.

c 147282 c 147282

to the Hon. Secy. of the Interior.

to the Hon. Secy. of the Interior.

to the Hon. Secy. of the Interior.

to Chief Dist. Mag.

N^o 10

1109 29/10/57

To H. L. Esq. No 1109
C. Braden Esq.

Secretary to the Government of
India

Sir,

With reference to
the letter to your address
from the Deputy Surveyor
or General, on the details
of the proposed survey
of the Madras Presidency
dated 6th May last, and
received with Mr. Chapman
communication of the 5th
June following, No 810,
I am directed by the
Right Honorable the
Governor in Council
to forward the accom-
panying copy of a

H

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and reports by Captain
 J. J. B. Priestley, the Sur-
 vey of this Presidency, to
 the Board of Revenue,
 dated 1st September 1857,
 on certain points connected
 with the experimental sur-
 vey carried on under his
 Superintendence, noticed
 in Major Shilliker's Report.

J. J. B.

Fort St. Geo. 30th October, 1857

Sir,
 I am much obliged to you for the
 report of the experimental survey.

Copy of letter to B.
 14th March 1858. 1858

Revenue 1857 Dept. 10
 Dept. 10 3rd Nov.

No. 1109.

To The Secretary to the
 Govt. of India.
 20th October/57.

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 15-11-50
 66-11-50
 10/11

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10/11

Forwarding copy of
 Capt. Priestley's letter
 to the Bd. of Rev. on cer-
 tain points connected with
 the experimental sur-
 vey carried on under
 his Superintendence,
 noticed in Major Shilliker's
 Report.

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1109

Revenue Department
Minutes of Consultations

3rd Nov 1857

Back nos 1 & 2.

Order No 1109 D/30th Oct 1857

2-
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Para. 4th. Beyond a small amount of professional accuracy in fixing the village boundary, and in making three or four villages join together, no general scientific precautions are deemed either necessary or expedient, for securing professional accuracy over extended areas, either to ensure a congregated map of a Pergunnah, or of a Zillah, which shall have any pretensions to refinement or even ordinary approximation to truth.

Para. 19th. In the Madras system in fact the attainment of the separate record of the fields, appears to be the one great and only object aimed at, to the exclusion almost of those general principles of professional practice, which are obviously called for, when projecting extensive surveys of immense areas, embracing Zillahs or Districts and even Provinces.

Para. 23d. The first great principle which I look upon as of the most vital importance in subordinate survey operations, is the due and perfect connection and identification of the Topographical features, or stations of the Revenue survey with the points of the Triangulation, whereby alone, the maps of the former operations can be amalgamated, and adjusted in the great Atlas of India, or indeed in any general map, on which lines of Latitude and Longitude are required, with any pretensions to accuracy.

Para. 24th. But if the Madras Revenue village Maps are ever to be put together, so as to form a Pergunnah, or even a talook congregation of the entire number of villages composing such sub-divisions of the country, and from which again a District or Zillah Geographical Map could alone be constructed, then the insertion of the points of the great triangulation will be imperative, and if they still exist on the ground it would be difficult to understand in what way such an observance, could either impede or obstruct Captain Priestley's work.

Para. 26th. Next in importance to a proper and complete identification with the points of the great triangulation and a permanent point of departure or first station for the Survey, is the nature of the meridian on which the operations are based. The Board remark in their 44th para. that the Surveyor has not laid down a true meridian, but was working entirely from a magnetic one, and that the outline of every village being independently and carefully taken by traverse, a set of several villages will ultimately close "near enough for all practical purposes." They thought however with Captain Priestley that it was desirable to have a check of more accurate nature; but again in para. 47 they did not consider it necessary for the surveyor "to lay down his Azimuths with that rigorous accuracy that was required in the N. W. Provinces, where the lines were connected with the G. T. Survey;" and the Board therefore left it to him to use such method as might be adapted to the instruments with which he was furnished. From the 48th para. it further appears that nothing beyond a 3-inch Theodolite forms the present equipment of the surveyor.

Para. 30th. From the above it would seem that the Surveyor is at present obliged to adapt his style of survey to the nature and capability of the instrument with which he is supplied, instead of first determining on a rigorous method, and then providing his instrumental equipment accordingly. In the 48th para. of the Board's Report, the proper and usual system of working from whole to part, and embracing large circuits of a whole talook or Pergunnah in the first instance, the smaller or village circuits being filled in within it afterwards, is hinted at, as having been proposed by Captain Priestley though his other duties would not permit him to carry it out. It is precisely such a course that I would earnestly enjoin, as the first step towards securing faithful Maps of a Pergunnah or talook, and hence of a Zillah as the only way of conducting such a survey, as we have in Bengal. To effect this also, every independent village laid down on a Magnetic me-

I have the honor to submit a few remarks explanatory of some points on which Major Thuillier, Deputy Surveyor General, in a letter* to Mr. Beadon, Secretary to the Government of India, dated 6th May 1857, seems to have had imperfect information regarding the experimental survey carried on under my superintendence, and trust that they may do away with many of the objections which Major Thuillier has raised, and also shew that most of the arrangements on which he insists have already been either made or are in progress.

It would appear that the latest documents relating to the experimental survey which have reached Major Thuillier are dated 8th September 1854, and the Minutes on the proposed survey and assessment dated 14th August 1855, and that the strictures on the mode of survey and "the want of any general scientific precautions for securing professional accuracy over extended areas" (para. 4), are based on the contents of No. IX. of the Selections from the Public Records.

The reason for the absence of such precautions at the commencement was, as surmised by Major Thuillier (para. 30), from the want of any instruments by which to determine a true meridian; but also from the necessity for my devoting all my available time to solving the problem as to the feasibility of plotting from a Khusreh Ameen's field book within a boundary previously laid down.

I was given to understand that the measurement and computation of the content of fields was the principal object to be looked to in a Madras Revenue survey (para. 19), but not "to the exclusion of those general principles of professional practice which are called for in surveys of large areas;" for that primary object ensured, the application of the materials collected to the formation of talook and District maps was the next point considered.

The practicability of connecting the Revenue survey operations with Grand Trigonometrical survey points was never for a moment doubted as in Bengal it had invariably been the rule to do so, but the experiment of plotting the Khusreh work within boundaries had till then not been successfully attempted. So far from despising such aid as that which an accurate survey on a Trigonometrical basis affords (para. 25), the fact is that in 1853, in a letter to the Revenue

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செ. வினா
செப்பனெடுவதற்காக எடுத்த
கொள்ளப்பட்ட நாள் - 1-2-57
செப்பனெடு முடிந்த நாள் - 6-2-57
சாபார்க்கும் இராஜாஜி நதவி
மு. ந. ப்த. எ. யாளர்
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Fort Saint George, Revenue Consultation of 3d November 1857.

will never answer, because although as the Board anticipated, a few village traverses might join well enough together for all practical purposes, yet the accumulation of error in many hundred village circuits would soon become so large, that the Surveyor would be thrown into inextricable difficulties. Not only must the whole work be based on the true meridian, carefully established for the initial Azimuth, as derived from astronomical observations; but such true meridian must again be frequently checked by corresponding astronomical observations, and the Azimuth as conveyed through the angular work from circuit to circuit constantly tested. Without this being done there will be no prospect of the main circuits closing and proving with the necessary accuracy. The whole of this process to which I will only here briefly allude, is described at great length in the "Manual of surveying Chapter XII, Part III," and will no doubt be familiar to the Madras Surveyor.

Para. 31st. Having in view therefore a professional survey of the Bengal stamp, as a very necessary ingredient of the Madras proposed operations, I would counsel the strictest observance as to the mode of establishing and laying down the true meridian, and in preserving the true inclination of the Azimuth as conveyed from circuit to circuit. It may be sufficient for all purposes of Revenue, and for the requirements of the Board of Revenue, that a set of a few villages join well together, but generalization and good Topographical Maps cannot be obtained by such a system; and if any thing beyond the isolated village plan is expected, or deemed requisite for the general purposes of Government, a rigorous prosecution of the professional part of the work must be adopted.

sides of grand Trigonometrical survey triangles. When however in the month of October 1856, I at length received the information I had applied for, I (as stated in letter No. 91 to the Secretary Revenue Board) tested my work in several places with the following results,

	Ft. per mile.	
Auditharay to Purwoy.	26.5	error.
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Early in the year 1855 on the receipt of a 7 inch Theodolite, the system of large circuits with the bearing corrected at intervals by Astronomical observation was adopted and has ever since been continued. In 1855 the circuits were not so large as might have been desired, in consequence of the lapsed Jaghire villages given for survey lying in patches of a few together, or even singly. In 1856 the circuits at a rough estimate averaged about 80 square miles.

In each and all of the villages measured the Topographical details are duly surveyed and laid down by men specially appointed for the purpose; the only part of the village not minutely surveyed is the "nuttum" or village site, of which the principal roads or streets alone are marked. When lately at Madras, I shewed to the Revenue Board specimens of the talook Maps I purposed preparing if deemed advisable. They are on a scale of 2 inches to the mile or 1-8th of that of the village Maps from which they are reduced. This scale appeared to me the one best suited for talook Maps, as it permits not only of all Topographical details being delineated with great exactness, but also the village boundaries and tracts of waste land and cultivation of different kinds being clearly shewn. In fact, in the talook Maps with the exception that every individual field is not defined each village is almost as distinctly laid down as in the Maps on a scale of 16 inch to the mile.

From the talook Maps, District Maps can be with ease compiled on a scale of $\frac{1}{2}$ an inch to the mile, or 1-4th the size of that of the talook Maps.

I fully concur in the course advocated by Major Thuillier in the 13th para. of his letter, that to attain the object of extending the survey establishment, a certain number of Covenanted and Uncovenanted Assistants should be appointed to learn their duties.

One most important difference between the Bengal and Madras Revenue Surveys is mentioned in para. 17, "No separate measurement of fields is included in this estimate (i. e. of the "professional survey). This duty is performed by the civil or settlement establishment and

Fort Saint George, Revenue Consultation of 3d November 1857. 1109

entirely checked by the officer of that Department, and consequently this Department is in no ways responsible for or concerned in the record of the separate fields, or minor estates which "is exclusively managed and paid for by the civil branch." Such an arrangement would, it appears to me, be fatal to a Revenue survey in this Presidency where the settlement is Ryotwar, and consequently the correct measurement of fields is of vital importance. I apprehend that it was to this that the Revenue Board intended to allude in the 15th para. of their Report, as referred to by Major Thuillier.

I need hardly say that it affords me the greatest satisfaction to find that the system I have adopted of simultaneous survey and measurement followed immediately by the test of plotting, meets with the approbation of an officer of the Deputy Surveyor General's extended experience; to him we also owe our best thanks for so forcibly pointing out the ill-effects of over-haste and consequent imperfect work, and for the caution against an error so likely to be fallen into with the best intentions from competition and from over-rating the capabilities of an establishment.

I beg to call particular attention to paras. 41 and 43. The necessity for the previous settlement of disputes and the clear demarcation of field and village boundaries cannot be too strongly urged, of the unsatisfactory results of the neglect of this arrangement I can speak from experience.

I think that information on any subject touched on by Major Thuillier to which I have not referred in this letter will be found in the report and appendices which I did myself the honor to forward in February 1857.

In conclusion, I must make my acknowledgments for the kind offer of assistance and advice made by the Deputy Surveyor General, of whose numerous practical and valuable suggestions for the formation and equipment of a survey party I shall do my best to take advantage.

Resolved that the above letter be submitted for the information of Government, with reference to Extract Minutes Consultation dated 25th July 1857, No. 741, Revenue Department.

(A true Extract.)

(Signed) J. D. SIM, Acting Secretary.

Ordered in consequence that the following letter be despatched.

No. 2. From H. FORBES, Esq., Acting Secretary to the Government of Fort Saint George; to C. BEADON, Esq., Secretary to the Government of India; dated 30th October 1857, No. 1109.

SIR,

With reference to the letter to your address from the Deputy Surveyor General, on the details of the proposed survey of the Madras Presidency, dated 6th May last, and received with Mr. Chapman's communication of the 5th June following, No. 810, I am directed by the Right Honorable the Governor in Council to forward the accompanying copy of a letter addressed by Captain F. J. B. Priestley, the Superintendent of the Survey of this Presidency, to the Board of Revenue, dated 1st September 1857, on certain points connected with the experimental survey carried on under his superintendence, noticed in Major Thuillier's report.

Major Shullier.

I need hardly say that it affords me the greatest satisfaction to find that the system I have adopted of disbanding survey and measurement followed immediately by the test of plotting, meets with the approbation of an officer of the Deputy Surveyor General's extended experience to him we also owe our best thanks for so forcibly pointing out the ill effects of over-haste and consequent imperfect work and for the caution against an error so likely to be fallen into with the best intentions from competition and from over-estimating the capabilities of an establishment.

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1109
laid down on a Magnetic meridian will never answer, because, although as the Board anticipate, a few village traverses might join well enough together for all practical purposes, yet the accumulation of error in many hundred village circuits would soon become so large, that the Surveyor would be thrown into inextricable difficulties. Not only must the whole work be done on the true meridian, carefully established for the Initial Azimuth, as derived from astronomical observations, but such true meridian must again be frequently checked by corresponding astronomical observations, and the Azimuth as conveyed through the angles in work from circuit to circuit constantly settled. Without this is done there will be no prospect of the main circuits closing and

No 98

10th of Oct

12 September 1854

App

10th of Oct

I have the honor to acknowledge the receipt of your letter of the 4th inst. in relation to the proposed survey of the village of Andia dated 5th May 1854 and in making this acknowledgment I am enabled to inform you that the Board of Revenue have decided in favor of the proposed survey and in making this decision they have taken into consideration the fact that the village of Andia is situated in a very fertile and productive soil and that the survey of the same will be of great benefit to the Government and to the people of the village.

It would appear that the Board of Revenue have decided in favor of the proposed survey of the village of Andia and that they have taken into consideration the fact that the village of Andia is situated in a very fertile and productive soil and that the survey of the same will be of great benefit to the Government and to the people of the village.

my acknowledgments for the kind offer of assistance and advice made by the Deputy Surveyor General of which I will here briefly allude. The whole of this subject to which I will here briefly allude, is described at great length in the "Manual of Surveying" of a Survey party I shall do my best to take advantage of.

I have the honor to be Sir,

Your Most Obedient Servant

Federick. J. B. Priestley Captain
Supt. Rev. Survey

Para 31st Having view therefore a proposal for the survey of the village of Andia, as a very necessary ingredient of the Madras Revenue Survey, I would counsel the Board of Revenue to the mode of establishing and carrying down the true meridian, and in preserving the true inclination of the Azimuth as constant from circuit to circuit. It may be sufficient for all purposes of Revenue and for the convenience of the Board of Revenue, that a set of a few Villages joined together, but generally in good Topographical Maps cannot

To the Secretary
Revenue Board

No 98

to obtained by such a
system; and if any thing
beyond the isolated village
plan is expected, or deemed
indispensable for the general
purposes of Government,
a vigorous prosecution
of the Professional part
of the work must be
adopted.

8 1109

Revenue Department.

N^o 3282

Extract from the Proceedings of the Board of Revenue,
dated 1st October 1857. N^o 3282

Read letter from Captain T. L. B.

In Com^{rs} 1st Octr 1857. Priestley, Superintendent Revenue Survey, dated
1st September 1857.

(Here enter No 98)

Resolved that the above letter be
submitted for the information of Government,
with reference to Extract Minutes Consultation
dated 28th July 1857. N^o 741. Revenue Depart.
ment.

True Extract

Ag Secretary

To
H. Forbes Esq
Ag Secretary to Government.
Revenue Department.

Copy in a letter to
the Com^{rs} of the Revenue

Revenue Department

N^o 3092

Done

The Deputy Secretary

Revenue Department

Done 1st Oct 1857

Done 1st Oct 1857

In Com^{rs} 1 Oct 1857

Submitting journals

regarding the various journals

submitted by the various journals

in the letter to the Com^{rs}

of the various journals to the

Revenue Department

Done 1st Oct 1857

Nov 28, July 57. No 25.26

My dear Letter to E.
of Dec. 1858. A.

Passage 154 Sept 10
24 Nov. 17 1891

206 Bond St. New York

Extract from the Pro-
ceedings of the Board of
Revenue.

1109

16

Dated 1st } October 1887.
 Recd 3rd }

Date of 10/10/10
 Recd 3

1. Enclos.

L. media
N.Y. Bot. Soc. 1876-1877

7282

Submitting for in-
formation a letter from
Capt. Nicotley containing
remarks explanatory of
certain points connected
with the experimental work
Ancot Survey.

10/

Caro Mr. Melo Lindto

Wm. L. L. L.

Wm. L. L. L.

11/10/01

1720. 617. 820. 19. 1221

to Chief Dist. Mag.

N^o 10

1109 29/10/57

To H. L. Esq. No 1109
C. Braden Esq.

Secretary to the Government of
India

Sir,

H
L

With reference to
the letter to your address
from the Deputy Surveyor
or General, on the details
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of the Madras Presidency
dated 6th May last, and
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I am directed by the
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panying copy of a

and respects by Captain
 J. J. B Priestley, the su-
 perintendent of the sur-
 vey of this Presidency, to
 the Board of Revenue,
 dated 1st September 1857,
 on certain points connected
 with the experimental sur-
 vey carried on under his
 Superintendence, noticed
 in Major Shilliker's Report.

J. J. B

Fort St. Geo. 30th October, 1857

Dear Sir,
 I am much obliged to you for the
 trouble you have taken in
 writing to me on the subject of
 the experimental survey.

Copy of letter to B.
 14th March 1858. 1858

Revenue 1857 Dept. 10
 Dept. 10 3rd Nov.

No. 1109.

To The Secretary to the
 Govt. of India.
 29th October/57.

910-194
 15-11-50
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1109

11

10/11

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19th Oct 1857

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1109

Revenue Department
Minutes of Consultations

3rd Nov 1857

Back nos 1 & 2.

Order No 1109 D/30th Oct 1857

2-
1109

No. 1. Read the following Extract from the Proceedings of the Board of Revenue; dated 1st October 1857, No. 3282.

Read letter from Captain F. J. B. PRIESTLEY, Superintendent Revenue Survey; to the Secretary to the Revenue Board; dated Cuddalore, 1st September 1857, No. 98.

SIR,

Para. 4th. Beyond a small amount of professional accuracy in fixing the village boundary, and in making three or four villages join together, no general scientific precautions are deemed either necessary or expedient, for securing professional accuracy over extended areas, either to ensure a congregated map of a Pergunnah, or of a Zillah, which shall have any pretensions to refinement or even ordinary approximation to truth.

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I think that information on any subject touched on by Major Thuillier to which I have not referred in this letter will be found in the report and appendices which I did myself the honor to forward in February 1857.

In conclusion, I must make my acknowledgments for the kind offer of assistance and advice made by the Deputy Surveyor General, of whose numerous practical and valuable suggestions for the formation and equipment of a survey party I shall do my best to take advantage.

Resolved that the above letter be submitted for the information of Government, with reference to Extract Minutes Consultation dated 25th July 1857, No. 741, Revenue Department.

(A true Extract.)

(Signed) J. D. SIM, Acting Secretary.

Ordered in consequence that the following letter be despatched.

No. 2. From H. FORBES, Esq., Acting Secretary to the Government of Fort Saint George; to C. BEADON, Esq., Secretary to the Government of India; dated 30th October 1857, No. 1109.

SIR,

With reference to the letter to your address from the Deputy Surveyor General, on the details of the proposed survey of the Madras Presidency, dated 6th May last, and received with Mr. Chapman's communication of the 5th June following, No. 810, I am directed by the Right Honorable the Governor in Council to forward the accompanying copy of a letter addressed by Captain F. J. B. Priestley, the Superintendent of the Survey of this Presidency, to the Board of Revenue, dated 1st September 1857, on certain points connected with the experimental survey carried on under his superintendence, noticed in Major Thuillier's report.

Major Shullier.

I need hardly say that it affords me the greatest satisfaction to find that the system I have adopted of disbanding survey and measurement followed immediately by the test of plotting, meets with the approbation of an officer of the Deputy Surveyor General's extended experience to him we also owe our best thanks for so forcibly pointing out the ill effects of over-haste and consequent imperfect work and for the caution against an error so likely to be fallen into with the best intentions from competition and from over-estimating the capabilities of an establishment.

I beg to call particular attention to Paras 41 & 43. The necessity for the previous settlement of disputes and the clear demarcation of field and village boundaries cannot be too strongly urged of the unsatisfactory results of the neglect of this arrangement I can speak from experience.

I think that information on any subject touched on by Major Shullier to which I have not referred in this letter will be found in the Report and Appendix which I did myself the honor to forward in February 1857.

In conclusion I must make

1109
laid down on a Magnetic meridian will never answer, because, although as the Board anticipate, a few village traverses might join well enough together for all practical purposes, yet the accumulation of error in many hundred village circuits would soon become so large, that the Surveyor would be thrown into inextricable difficulties. Not only must the whole work be done on the true meridian, carefully established for the Initial Azimuth, as derived from astronomical observations, but such true meridian must again be frequently checked by corresponding astronomical observations, and the Azimuth as conveyed through the angles in work from circuit to circuit constantly settled. Without this is done there will be no prospect of the main circuits closing and

Early in the year 1855 in the receipt of a 7 inch Theodolite the system of large circuits with the bearing circled at intervals by astronomical observation was adopted and had been some time in use. In 1855 the circuits were not so large as might have been desired, in consequence of the supposed expense of carrying a party in patches of a few together or even singly. In 1856 the circuits at a rough estimate averaged about 80 square miles. In each and all of the Villages measured the topographical details are duly surveyed and laid down by me. Specially appointed for the purpose; the only part of the Village not minutely surveyed is the ~~vicinity~~ ^{vicinity} of the ~~place~~ ^{place} where the ~~place~~ ^{place} is situated. In each and all of the Villages measured the topographical details are duly surveyed and laid down by me. Specially appointed for the purpose; the only part of the Village not minutely surveyed is the vicinity of the place where the place is situated. In each and all of the Villages measured the topographical details are duly surveyed and laid down by me. Specially appointed for the purpose; the only part of the Village not minutely surveyed is the vicinity of the place where the place is situated.

independently and care- fully taken by traverse, a set of several Villages will ultimately show "near enough for all practical purposes." They thought however with Captain Priestley that it was desirable to have a check of more accurate nature but again in para. 47 they did not consider it necessary for the Surveyor to lay down his arguments with that rigor and accuracy that was required in the N.W. Provinces where it was more connected with the G.S. Survey; and the Board therefore left it to him to use such method as might be adapted to the instruments with which he was furnished. From the 18th para. it further appears that nothing beyond a 5 inch Theodolite formed the present equipment of the Surveyor. Para 30. From the above it would seem that the Surveyor is at present obliged to adopt

his style of survey to the distance laid down as in the draft and scale of 16 inches to the mile. From the Lalook Maps which is supplied, instead of first determining on a rigorous scale of 1/2 an inch to the mile or 1/4 the scale of that of the Lalook Maps. I fully concur in the course advocated by Major Sherrin in the Board's Report that to attain the object of proper and actual system of the Survey Establishment, a certain number of Comandants such as Comandants should be appointed to train the Circuits of a whole Block. One most important difference between the Bengal and Madras Revenue surveys is mentioned in Para 17 "as different methods are employed in the two Provinces." It is pointed out as having been proposed by Captain Priestley through his other duties would not permit him to carry it out. It is precisely such a course that I would see met by the first step towards securing faithful maps of a large tract or Lalook, and hence of a Zillah as the only way of conducting such a survey, as we have in Bengal. To effect this also every independent Village

No 98

to obtained by such a
system; and if any thing
beyond the isolated village
plan is expected, or deemed
indispensable for the general
purposes of Government,
a vigorous prosecution
of the Professional part
of the work must be
adopted.

8 1109

Revenue Department.

N^o 3282

Extract from the Proceedings of the Board of Revenue,
dated 1st October 1857. N^o 3282

Read letter from Captain T. L. B.

In Cons^l 1st Octr 1857. Priestley, Superintendent Revenue Survey, dated
1st September 1857.

(Here enter No 98)

Resolved that the above letter be
submitted for the information of Government,
with reference to Extract Minutes Consultation
dated 28th July 1857. N^o 741. Revenue Depart.
ment.

True Extract

Ag Secretary

To
H. Forbes Esq
Ag Secretary to Government.
Revenue Department.

Copy in a letter to
1st Octr 1857

Revenue Department

N^o 3092

Revenue

The Department

Revenue

Revenue

Revenue

Revenue

In Cons^l 1 Octr 1857.

Submitting journals

regarding the various

landed now by the

in the letter to the

of the letter to the

Revenue Department

Copy to Govt 1 Octr 57

Nov 28, July 5th No 2526

My dear Letter to E.
of Dec. 1858. A.

Passage 154 Sept 10
24 Nov. 17 1891

206 Bond St. 1/2 City

Extract from the Pro-
ceedings of the Board of
Revenue.

1109

16

Dated 1st } October 1887.
Recd 3rd }

Filed 10/1/01
Recd 3/1/01

1. Enclos.

1. Incubation
2. 1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 11th 12th 13th 14th 15th 16th 17th 18th 19th 20th 21st 22nd 23rd 24th 25th 26th 27th 28th 29th 30th 31st 32nd 33rd 34th 35th 36th 37th 38th 39th 40th 41st 42nd 43rd 44th 45th 46th 47th 48th 49th 50th 51st 52nd 53rd 54th 55th 56th 57th 58th 59th 60th 61st 62nd 63rd 64th 65th 66th 67th 68th 69th 70th 71st 72nd 73rd 74th 75th 76th 77th 78th 79th 80th 81st 82nd 83rd 84th 85th 86th 87th 88th 89th 90th 91st 92nd 93rd 94th 95th 96th 97th 98th 99th 100th 101st 102nd 103rd 104th 105th 106th 107th 108th 109th 110th 111th 112th 113th 114th 115th 116th 117th 118th 119th 120th 121st 122nd 123rd 124th 125th 126th 127th 128th 129th 130th 131st 132nd 133rd 134th 135th 136th 137th 138th 139th 140th 141st 142nd 143rd 144th 145th 146th 147th 148th 149th 150th 151st 152nd 153rd 154th 155th 156th 157th 158th 159th 160th 161st 162nd 163rd 164th 165th 166th 167th 168th 169th 170th 171st 172nd 173rd 174th 175th 176th 177th 178th 179th 180th 181st 182nd 183rd 184th 185th 186th 187th 188th 189th 190th 191st 192nd 193rd 194th 195th 196th 197th 198th 199th 200th 201st 202nd 203rd 204th 205th 206th 207th 208th 209th 210th 211th 212th 213th 214th 215th 216th 217th 218th 219th 220th 221st 222nd 223rd 224th 225th 226th 227th 228th 229th 230th 231st 232nd 233rd 234th 235th 236th 237th 238th 239th 240th 241st 242nd 243rd 244th 245th 246th 247th 248th 249th 250th 251st 252nd 253rd 254th 255th 256th 257th 258th 259th 260th 261st 262nd 263rd 264th 265th 266th 267th 268th 269th 270th 271st 272nd 273rd 274th 275th 276th 277th 278th 279th 280th 281st 282nd 283rd 284th 285th 286th 287th 288th 289th 290th 291st 292nd 293rd 294th 295th 296th 297th 298th 299th 300th 301st 302nd 303rd 304th 305th 306th 307th 308th 309th 310th 311th 312th 313th 314th 315th 316th 317th 318th 319th 320th 321st 322nd 323rd 324th 325th 326th 327th 328th 329th 330th 331st 332nd 333rd 334th 335th 336th 337th 338th 339th 340th 341st 342nd 343rd 344th 345th 346th 347th 348th 349th 350th 351st 352nd 353rd 354th 355th 356th 357th 358th 359th 360th 361st 362nd 363rd 364th 365th 366th 367th 368th 369th 370th 371st 372nd 373rd 374th 375th 376th 377th 378th 379th 380th 381st 382nd 383rd 384th 385th 386th 387th 388th 389th 390th 391st 392nd 393rd 394th 395th 396th 397th 398th 399th 400th 401st 402nd 403rd 404th 405th 406th 407th 408th 409th 410th 411th 412th 413th 414th 415th 416th 417th 418th 419th 420th 421st 422nd 423rd 424th 425th 426th 427th 428th 429th 430th 431st 432nd 433rd 434th 435th 436th 437th 438th 439th 440th 441st 442nd 443rd 444th 445th 446th 447th 448th 449th 450th 451st 452nd 453rd 454th 455th 456th 457th 458th 459th 460th 461st 462nd 463rd 464th 465th 466th 467th 468th 469th 470th 471st 472nd 473rd 474th 475th 476th 477th 478th 479th 480th 481st 482nd 483rd 484th 485th 486th 487th 488th 489th 490th 491st 492nd 493rd 494th 495th 496th 497th 498th 499th 500th 501st 502nd 503rd 504th 505th 506th 507th 508th 509th 510th 511th 512th 513th 514th 515th 516th 517th 518th 519th 520th 521st 522nd 523rd 524th 525th 526th 527th 528th 529th 530th 531st 532nd 533rd 534th 535th 536th 537th 538th 539th 540th 541st 542nd 543rd 544th 545th 546th 547th 548th 549th 550th 551st 552nd 553rd 554th 555th 556th 557th 558th 559th 560th 561st 562nd 563rd 564th 565th 566th 567th 568th 569th 570th 571st 572nd 573rd 574th 575th 576th 577th 578th 579th 580th 581st 582nd 583rd 584th 585th 586th 587th 588th 589th 590th 591st 592nd 593rd 594th 595th 596th 597th 598th 599th 600th 601st 602nd 603rd 604th 605th 606th 607th 608th 609th 610th 611th 612th 613th 614th 615th 616th 617th 618th 619th 620th 621st 622nd 623rd 624th 625th 626th 627th 628th 629th 630th 631st 632nd 633rd 634th 635th 636th 637th 638th 639th 640th 641st 642nd 643rd 644th 645th 646th 647th 648th 649th 650th 651st 652nd 653rd 654th 655th 656th 657th 658th 659th 660th 661st 662nd 663rd 664th 665th 666th 667th 668th 669th 670th 671st 672nd 673rd 674th 675th 676th 677th 678th 679th 680th 681st 682nd 683rd 684th 685th 686th 687th 688th 689th 690th 691st 692nd 693rd 694th 695th 696th 697th 698th 699th 700th 701st 702nd 703rd 704th 705th 706th 707th 708th 709th 710th 711th 712th 713th 714th 715th 716th 717th 718th 719th 720th 721st 722nd 723rd 724th 725th 726th 727th 728th 729th 730th 731st 732nd 733rd 734th 735th 736th 737th 738th 739th 740th 741st 742nd 743rd 744th 745th 746th 747th 748th 749th 750th 751st 752nd 753rd 754th 755th 756th 757th 758th 759th 760th 761st 762nd 763rd 764th 765th 766th 767th 768th 769th 770th 771st 772nd 773rd 774th 775th 776th 777th 778th 779th 780th 781st 782nd 783rd 784th 785th 786th 787th 788th 789th 790th 791st 792nd 793rd 794th 795th 796th 797th 798th 799th 800th 801st 802nd 803rd 804th 805th 806th 807th 808th 809th 810th 811th 812th 813th 814th 815th 816th 817th 818th 819th 820th 821st 822nd 823rd 824th 825th 826th 827th 828th 829th 830th 831st 832nd 833rd 834th 835th 836th 837th 838th 83

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Submitting for in-
formation a letter from
Capt. Nicotley containing
remarks explanatory of
certain points connected
with the experimental work
Ancot Survey.

10/

Caro Mr. Melo Lindto

Wm. L. L. L.

W. L. C. 1870

11/10/01

1720. 617. 820. 19. 1221

to Capt. Phipps. 37th.

N^o 10

1109 29th July 1810

To H. L. Esq. 1109
C. Braden Esq.

Secretary to the Government of
India

Sir,

H
L

With reference to
the letter to your address
from the Deputy Surveyor
or General, on the details
of the proposed survey
of the Madras Presidency
dated 6th May last, and
received with Mr. Chapman
communication of the 5th
June following, No 810,
I am directed by the
Right Honorable the
Governor in Council
to forward the accom-
panying copy of a

and respects by Captain
 F. J. B. Priestley, the su-
 perintendent of the sur-
 vey of this Presidency, to
 the Board of Revenue,
 dated 1st September 1857,
 on certain points connected
 with the experimental sur-
 vey carried on under his
 Superintendence, noticed
 in Major Shilliker's Report.

JK

Fort St. Geo. 30th October, 1857

Sir,
 I am much obliged to you for the
 letter of the 14th inst.

Copy of letter to B.
 14th March 1858. 1858

Revenue 1857 Dept. 10
 Dept. 10 3rd Nov.

N. 1109.

To The Secretary to the
 Govt. of India.
 20th October/57.

910-194
 15-11-50
 66-11-50
 10/11

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Forwarding copy of
 Capt. Priestley's letter
 to the Bd. of Rev. on cer-
 tain points connected with
 the experimental sur-
 vey carried on under
 his Superintendence,
 noticed in Major Shilliker's
 Report.

11

10/11

10/11 122