

REPORT OF THE SUBMARINE

Plan 2. Chart of Baly Strait.

Plan 3. Plan of Pampang Bay, the landing-place of the shore end of the cable.

Method of Examination.

5. Unlike ordinary oceanic routes, where a single continuous line of soundings, taken at regular intervals, satisfies the conditions of examination, the route in question passes along a chain of islands, at some parts almost touching its prominences, at others receding considerable distances from the land. It appeared to me, therefore, that the ordinary system of sounding would not furnish sufficient reliable data from which to deduce the best course for laying a cable, but that it would be necessary so to conduct the sounding as to obtain sections of the dip of the coast at the various points that the cable approached somewhat closely.

Objections to a more extended Examination.

6. The weather being highly favourable, I studied to carry out this object, deviating as little as possible from the route laid down in my instructions. Lest, however, it should be advanced that the examination might with advantage have been of a more elaborate and complete character, it behoves me to say it would not have been expedient, nor did the terms in which my orders were expressed point to any extended examination of the bed of these seas; on the contrary, they rather implied that a limited number of soundings was all that could be expected, and would be deemed satisfactory.

Further, if the western part of the route had proved unsuitable, (and the very deep, though now known to be erroneous, soundings on the chart gave reason to apprehend that it would,) the loss of time would have been both vexatious and unprofitable.

Connection with previous Explorations.

7. As this work was commenced from the East I shall here follow the whole order of description from East to West. Rotti Strait was first examined, also Semaó Strait, leading to Timor Koepang. In both the bottom proved suitable for a cable. I then extended the soundings eastward, within a moderate distance of the western soundings obtained by H.M.S. "Salamander," and imagined there was a satisfactory connection; but a new chart recently published by the Admiralty places a sounding of seventy-five fathoms coral midway between our terminal soundings. This utterly breaks the continuity, and moreover, raises a doubt as to whether the north-western extension of the Sabul Bank be not connected with the coast of Timor.

Before any cable can be laid, I am of opinion that this point should be cleared up; for if it passes over a bank of corall knolls there would be great probability of failure.

Conjecture as to Depth of no Value.

8. The great depth (1,120 fathoms) found near the South coast of Rotti, countenances the presumption that there does exist a deep channel between Timor and the Sahul Bank, and I should incline to that view, had not experience decisively taught that conjecture is always at fault, and an opinion so formed valueless.

Timor to Australia.

9. Referring to the route from Timor to Australia, a careful study of the chart, combined with long experience, leads me to the opinion that the laying of a cable through the Arafura Sea is a precarious undertaking, for the shallow sea-bed appears to be strewn with coral knolls, to avoid which it would be necessary that another vessel should precede the paying-out vessel, keeping her lead continually going, to ascertain the nature of the bottom, and give warning of coral, if encountered.

With this precaution, with a cable better protected than that used West of Timor, and choosing the fine months of the year to lay it, the conditions of success will be raised to a maximum.

Seasons for Laying the Cable.

10. The favourable season in autumn for laying the cable is March and April, at the end of the N.W. monsoon; in spring, October, November, and half December, at the close of the S.E. monsoon. Of the latter season only have I had experience: the weather was then fine, with a light S.E. monsoon, and the swell in the Indian Ocean only slight.

Difficulty of Repair.

11. The extreme difficulty and attendant expense of effecting the repair of a cable at so remote a part of the world would justify, as a measure of prudence, any additional first outlay which would tend to guarantee certainty in result by security against possible injury. The lamentable failure of the Singapore and Batavia and of the Red Sea lines are traceable to the neglect of precautions.

Rotti Strait.

12. The cable may, if considered advisable, to save distance, be carried through Rotti Strait.

The depths are sufficient (seventy to ninety fathoms) to obviate possible injury from the heavy ground swell caused by the S.E. monsoon or trades, and a mud bottom may be in all probability insured, but I should advise the same precaution as mentioned in par. 9.

Intermediate Station at Timor Koepang.

13. If it be resolved to have an intermediate station between Java and Australia, Timor Koepang should be the place selected. The cable would then enter Rotti Strait by the West, and pass up Semaó Strait, the shore end being landed at a suitable place on the eastern (Timor) shore of the latter strait, equally protected from S.E. and N.W. winds, which blow with great violence in their alternate seasons. In Koepang Bay the only practicable place for landing the shore end is the head of the bay, Koepang Roads being exposed to the gales of the N.W. monsoon, which render the anchorage precarious during that season, during which vessels are compelled to anchor over at Boerong, the coal depôt, on the North side of the bay.