

distances apart, previously calculated angles were used, whereas to fix the position of previously agreed upon depths, it became necessary to observe independent angles. In this manner all the lines of soundings were run to such a depth as was possible in a boat, the coast line of the reef was sketched in, and the ship afterwards extended the lines to a distance of 2055 fathoms from the reef."

The results of these observations are given in the diagrams and following table (see Sheet 39 and figs. 269-271).

Comparative Table of the Six Sections of the Outer Edge of the Barrier Reef at Tahiti.

Distance from Edge of Reef in Fathoms.	No. 1 Section.		No. 2 Section.		No. 3 Section.		No. 4 Section.		No. 5 Section.		No. 6 Section.	
	Depth in Faths.	Angle of Slope.	Depth in Faths.	Angle of Slope.	Depth in Faths.	Angle of Slope.	Depth in Faths.	Angle of Slope.	Depth in Faths.	Angle of Slope.	Depth in Faths.	Angle of Slope.
0	...	10 12	...	2 17	...	5 2	...	5 15	...	2 17	...	3 26
25	4.5	12 24	1.0	2 45	2.2	11 58	2.3	7 58	1.0	2 45	1.5	4 7
50	10.0	12 51	2.2	21 24	7.5	17 45	5.8	15 0	2.2	23 22	3.3	15 0
75	15.7	16 54	12.0	17 45	15.5	16 42	12.5	26 34	13.0	15 38	10.0	15 38
100	23.0	17 45	20.0	25 38	22.0	27 28	25.0	54 28	20.0	37 14	17.0	13 30
125	31.0	43 14	32.0	68 40	35.0	66 19	60.0	59 14	39.0	69 15	23.0	4 34
150	54.5	66 8	96.0	37 14	92.0	38 39	102.0	15 38	105.0	38 39	25.0	72 39
175	111.0	51 44	115.0	80 58	112.0	35 45	95.0	00 57	125.0	45 0	105.0	38 39
200	142.7	...	130.0	37 14	130.0	41 21	140.0	55 13	150.0	30 58	125.0	50 12
225	149.0	32 37	152.0	6 50	176.0	13 30	165.0	30 58	155.0	45 0
250	165.0	...	155.0	...	170.0	...	180.0	...	180.0	...

An examination of these sections shows that a depth of 25 to 35 fathoms is met with at 100 to 150 fathoms from the edge of the reef. At about this distance from the reef there is a rapid increase of depth to 160 and 180 fathoms, these latter depths being met with at a distance of 225 to 250 fathoms from the edge of the reef. Between the depths of 35 and 100 fathoms the average slope is about 45°. The slope is about 30° to 200 fathoms or thereabouts, and then becomes less and less until a slope of 6° is met with half a mile from the reef. The whole of the space from the edge of the reef to a depth of 35 fathoms was covered with a most luxuriant growth of corals, with the exception of one or two small spaces where there was white coral sand. The depths were most irregular, the sounding lead at one time falling on a coral boss, and showing a depth of 5 or 6 fathoms, and then close alongside it a depth of 16 fathoms. It could be seen with the water glass that many of these bosses and heads of coral were overhanging and in a most luxuriant