

FACTS AND THEORIES ABOUT OLD FAITHFUL GEYSER

Information Circular

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- * Old Faithful spouts 21 to 23 times daily.
- * Old Faithful was undoubtedly known to trappers from 1833 on, but was not named or fully described until the Washburn-Langford-Doane expedition of 1870.
- * Old Faithful was one of the twelve geysers that the Washburn party saw in action in 1870. They estimated the height of its eruptions to be 80 to 100 feet.
- * The height of Old Faithful's eruptions has been measured with a transit. Heights ranged from 106 feet to 184 feet. Very few are less than 115 feet; only one was measured at 184 feet. Average height is 130 feet. The stronger the wind, the less high will it erupt; the wind blows the top off the ascending column of water.
- * Old Faithful erupts as regularly and as high now as it did 100 years ago, when first described.
- * The duration of Old Faithful's eruptions varies from 2 to 5 minutes.
- * The amount of water thrown out during an eruption has been carefully estimated, by Dr. Allen and Dr. Day of the Carnegie Institution, to be between 10,000 and 12,000 gallons.
- * Old Faithful is not the biggest nor the most punctual geyser in the park. There are others that follow their "schedules" more strictly than Old Faithful, but they do not erupt as often.
- * In 1967, the average interval between eruptions was 66.2 minutes (averaged from 1,537 timings). Shortest interval was 36 minutes, the longest 91 minutes. Of more than 35,000 observed and recorded eruptions in the past 95 years, Old Faithful's average interval is always between 60 and 67 minutes, with a minimum and maximum of 33 minutes and 98 minutes recorded.
- * Most of the water ejected from Old Faithful flows into the Firehole River.
- * The time lapse between eruptions can be predicted rather closely, mainly on the basis of the length of the previous eruption. For example, if an eruption lasted 4 minutes, this means that a certain amount of water emptied from the geyser's chambers and that a certain length of time will be necessary to recharge the system for the next eruption. But, if the previous eruption lasted only 3 minutes, less time will be needed for recharge, and the next eruption will occur much sooner.

facts and theories
side 2

The word *geyser* comes from the Icelandic *geysir*, which means to gush or rage; Great Geysir (gayzeer) is a famous geyser in southern Iceland.

Old Faithful, like all other geysers in Yellowstone National Park, is absolutely natural. There are no pipes, pumps, or valves on these geysers. There is no human control over the eruption schedules of any of them.

Old Faithful erupts, according to schedule, 24 hours around the clock and 12 months of the year. It does not shut down during the night or in the wintertime.

Old Faithful's eruptions, as described by Allen and Day, in Hot Springs of Yellowstone National Park (copyright 1935):

"They begin with premonitory splashes which rise to a height of several feet, sometimes commencing 10 or 15 minutes before the time, but generally with shorter warning. Finally comes a higher splash, quickly followed by another and another, each rising with a muffled roar to a greater height before the others fall, until within a minute or two the peak is reached; a great column of rushing water, draped with graceful, lacy folds. One or two spurts may shoot up to a still greater height until within three short minutes the column begins to fall in successive stages, reversing its rise."