

# PRIMARY SOURCE Building the Panama Canal

The Panama Canal took ten years to build and cost almost \$400 million. Consider some of the challenges that had to be overcome in building it as you read this excerpt from an eyewitness account of the canal's construction.

Name \_\_\_\_\_

Date \_\_\_\_\_

From Gatun the train goes through territory which is to be the lake. For twenty-three miles the ships will cross this artificial lake to Culebra Cut. Never before has man dreamed of taking such liberties with nature, of making such sweeping changes in the geographical formation of a country. Here are we Americans dropping down into the heart of a jungle of unequalled denseness, building a young mountain, balancing a lake of 160 odd square miles on the top of the continental divide, gouging out a cañon 10 miles long, 300 feet wide, and in some places over 250 feet deep. Think about that a minute and then be proud that you are an American.

"Look!" my friend cried suddenly. "See that machine—it looks like a steam crane—it is a track-shifter. Invented by one of our engineers. You see, on the dumps, where we throw out the spoil from the cuts, we have to keep shifting the tracks to keep the top of the dump level. Well, it took an awful lot of time to do it by hand. So we developed that machine. It just takes hold of a section of track, rails and ties and all, hoists it up out of its ballast, and swings it over to where we want it. Does in an hour what a gang of twenty men could not do in a week. They're not used much anywhere else in the world. You see, there isn't any other place where they have to shift track on so large a scale."

They seem vastly proud of this track-shifter down here.

"And this is Gorgona," he said, a minute later. "Those shops over there are the largest of their kind in the world—repairing machinery. We can mend anything in there from a locomotive to a watch-spring."

One gets tired of this "largest in the world" talk. But it is only as you accustom yourself to the idea that each integral part of the work is of unequal proportions that you begin to sense the grandeur of the whole undertaking. The largest dam, the highest locks, the greatest artificial lake, the deepest cut, the biggest machine shops, the heaviest consumption of dynamite, the most wonderful sanitary

system—all these and others which I forget are unique—the top point of human achievement. . . . It is between Gorgona and Empire that you get your first look into Culebra Cut. It is as busy a place as an anthill. It seems to be alive with machinery; there are, of course, men in the cut too, but they are insignificant, lost among the mechanical monsters which are jerking work-trains about the maze of tracks, which are boring holes for the blasting, which are tearing at the spine of the continent—steam shovels which fill a car in five moves, steam shovels as accurate and delicate as a watch, as mighty, well, I can think of nothing sufficiently mighty to compare with these steel beasts which eat a thousand cubic yards a day out of the side of the hills.

But it is not till you get beyond the cut and, looking back, see the profile of the ditch against the sunset that you get the real impression—the memory which is to last. The scars on the side of the cut are red, like the rocks of our great Western deserts. The work has stopped, and the great black shovels are silhouetted against the red of the sky. Then there comes a moment, as your train winds round a curve, when the lowering sun falls directly into the notch of the cut and it is all illumined in an utterly unearthly glory. . . .

from Arthur Bullard, *Panama: The Canal, the Country, and the People* (New York, 1914); Reprinted in Richard B. Morris and James Woodress, eds., *Voices From America's Past*, vol. 2, *Backwoods Democracy to World Power* (New York: Dutton, 1963), 295–298.

## Research Options

1. Find out more about the building of the Panama Canal. What obstacles had to be overcome? What dangers did workers face? Prepare a brief oral report and share it with your classmates.
2. Controlling the spread of disease was a key factor in the completion of the Panama Canal. Research how Colonel William C. Gorgas made the Canal Zone safe for workers. Then write a short column about Gorgas's achievement for a health newsletter.