

PROJECT SHEET

THE PANAMA CANAL, PANAMA

DEEPENING OF THE PACIFIC ENTRANCE OF THE PANAMA CANAL
Drilling & Blasting the pacific entrance channel to Miraflores Locks

INTRODUCTION

In 2004 two contracts, the first ever awarded to external contractors were awarded by the ACP for the deepening of the Atlantic and Pacific entrances to the Panama Canal. Only the Pacific entrance required rock to be pre-treated by blasting.

SCOPE OF WORK

A total of 11,000 cu.m over an area of 58,000 sq.m was drilled & blasted to a depth of 14.2 mCD.

The rock was located in several areas from just outside the Miraflores Locks to the pacific entrance south of the Bridge of the Americas.

The majority of the rock was basalt, located around the supports of the Bridge of the Americas.

Working in the Canal

The Panama Canal is one of the world's busiest channels. During the period of the works there was only a working window of approximately 8 hours per day where the pacific entrance was clear of canal traffic.

However we still had to contend with traffic from both Balboa and Rodman Ports. This was accomplished using both spud legs and a six wire spread assisted by a multicat support vessel.

Very quickly we gained the confidence of the Canal Traffic Control and we were allowed to remain in position in the centre of the canal and blast as the first ship was exiting the Miraflores Locks and have all anchors removed minutes before the ship reached our location.

This operation went very smoothly and at no time did we interfere with canal traffic. On this project it was of vital importance to be able to deploy, blast and re-deploy the drill barge very quickly.

FEATURES

Client	Autoridad del Canal de Panama (ACP)
Location	Pacific Entrance of the Panama Canal
Period	September 2004 – July 2006
Contractor	Coastal & Inland Marine Services Inc



Mobilisation

All Rock Fall equipment was shipped to Colon on the Atlantic Coast where it was installed upon a local barge which was built to ACP Specification to be able to work in the Panama Canal.

Upon completion the drill barge 'Sea Cow 125', which was the 125th drill barge mobilised by Rock Fall, it was transited the length of the canal to Balboa where final modifications were made before commencing work in the canal.



Environmental Control

The location of the works was very close to the residential areas of La Boca and Diablo, where vibration limits were set at 12.7 mm/s ppv - Target achieved 5 mm/s ppv.

Blasting was also carried out very close to the Bridge of the Americas where the vibration limit was 50 mm/s ppv.

When blasting in front of the Miraflores locks in addition to vibration monitoring we also calculated our charges to ensure the underwater peak over pressure would not cause any problems with the lock gates.



Local Labour

On this contract local Panamanian labour was used as much as possible and by the end of the contract a number had reached a competent level as drill rig operators.

