

## GUARD TOWER<sup>®</sup> MATRIX WIRE ARRAY PERIMETER SECURITY SYSTEM

*Configuration: Post Detection Guard Tower with Electrified Fence option*

### *About the Facility*

A major oil refinery in the Caribbean with a perimeter over 1.5 miles long (2,400 meters). The perimeter consisted of a block wall (4-feet tall) topped by a chain link fence (7-feet tall), embedded into the block wall, for a total height of 11-feet.

### *Perimeter Security Challenges*

- Intruders were cutting through the chain link fence to gain access to facility
- Recurring theft of high value items
- Harsh salt water environment
- Large perimeter to protect with limited staff; need to identify breach location for fast response
- Different segments of the perimeter had different heights

### *The Zareba Security Solution*

The Zareba Security solution provides additional deterrence and detection capabilities along the length of the perimeter. The top 7-feet (14 wires) of the matrix wire array is an electric fence designed to deter intruders from cutting through the existing fence. The bottom 4-feet (8 wires) of the matrix wire array consists of Post

Detection Guard Tower sensor columns. This allows for alarm resolution per post, or every 40-feet in this application, providing an independent and redundant level of detection.

Both the electric fence and Guard Tower components are controlled by the Zareba Security PC-based control system. This provides a graphical user interface with the perimeter, and displays alarm conditions for both the electric fence zones and all Guard Tower sensor columns.



*The Guard Tower system was selected because it could:*

- Deter would-be intruders with the electric fence feature
- Include an independent, redundant detection system in the event the system is compromised
- Identify a breach to within 40 feet. (Future site plans include an upgrade to closed circuit cameras that will provide instant video verification of alarms to the same 40-foot resolution)
- Adapt to a perimeter with changing height
- Energize each of 5 zones and 4 gates independent of other zones and gates
- Provide a cost effective solution



**Zareba Security PC Interface**

*Full perimeter GUI with alarm resolution at both the electric fence zone and Guard Tower points*

*The Guard Tower perimeter security system consists of:*

- 163 post detection Guard Tower sensor columns
- Five different electric fence zones powered by five BIP200 energizers
- Four gates with electric fence gate switches powered by four Zareba single-zone energizers
- Communication cable mounted to the wire array
- The system head-end PC-interface consisting of:
  - Full perimeter GUI with alarm resolution at both the electric fence zone and Guard Tower points
  - Audible and visible alarm notification
  - Ability to energize / de-energize each electrical zone and gate individually
  - Redundant loop communication to the head-end