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EVOLVING CHALLENGES AND COMPREHENSIVE RESPONSES



**ABSTRACT**

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**Security Risks Due to Terrorism Threats for the Oil and Gas Industry**

The energy supply of the industrialized countries is increasingly dependent on oil- and gas imports. The most important oil and gas reserves are frequently located in areas plagued by political instability and low security. Global economy is vitally dependent on the timely delivery of oil and gas. At present, and increasingly so in the future, the oil-, gas- and petrochemical industry are subject to numerous security threats. This is particularly the case for politically fragile environments, such as Algeria, Indonesia, Middle East, Nigeria, Russia, Sudan and Venezuela. These security threats can result from national and international terrorist organisations, organized criminals, disgruntled employees, environmental pressure groups, or cyber hackers. The oil- and gas industry, as an important part of any national critical infrastructure, is largely an open system with a multitude of components. World wide exploration and operation in political and social unstable areas, combined with the need of ultimate security for oil and gas supply for the industrial western world, makes the oil- and gas industries an easy and valuable target for terrorist attacks.

This paper evaluates the system components and the associated security risks due to saboteurs, looters or terrorists, as there are (major security threats in parenthesis): (a) off-shore oil rigs (insider, underwater explosives, suicide boat attack, covert sneak attack); (b) land-based oil exploration (insider, suicide car/truck bomb, covert sneak attack, kidnapping); (c) pipeline system, including compressor stations and communication towers (explosives, theft); (d) transport by sea (insider, piracy, suicide boat attack); (e) land-based transport (carjacking, explosives); (f) refinery (insider, truck bomb attack, aircraft attack, covert sneak attack); (g) distribution centre (explosives, insider, suicide car/truck attack); (h) administrative office (insider, explosives, kidnapping, suicide car/truck bomb attack). Also, cyber attack and interference with first responders approaching the scene are taken into consideration.