

# Nitrate Leaching TITAN® XL 1000



## Project Summary

### ENVIRONMENTAL CONSIDERATIONS

One of the most frequently asked questions by customers and prospective customers is, "What does your product do environmentally to our property?" Many bulk explosives can react differently when exposed to water or moisture of any kind in the blast hole.

Developing a blasting agent capable of providing the best water resistance possible when exposed to severe water conditions in the field is very difficult. Ammonium Nitrate Prill is hydroscopic by nature, creating a unique set of problems when trying to formulate and provide a potential solution for the customer. Nitrates and nitrogen can be left behind in the borehole depending on hole diameter, confinement of the explosives, and the amount of water exposed to the explosives. This can also be affected by loading practices.

## Technology Applied

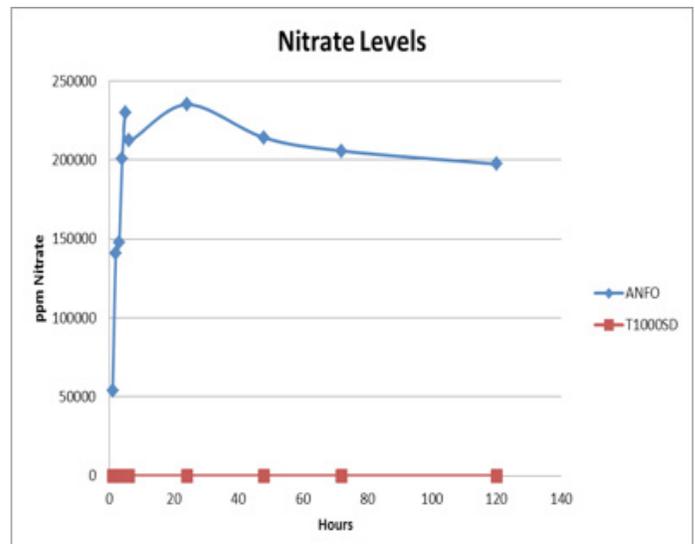
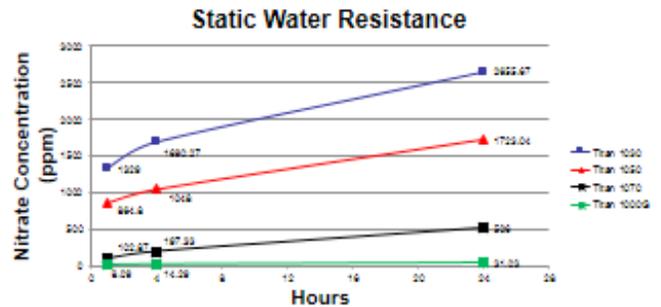
### COMPARATIVE TESTING BETWEEN TITAN EMULSION AND TITAN BLENDS

AN Prill is adversely affected by water so a series of Lab tests were developed to measure static water leaching of different TITAN emulsion blends to show the effects that water can have on bulk explosives.

## Results

### TITAN 100% EMULSION SHOWS BEST RESISTANCE TO NITRATE LEACHING

Four different blends were compared against ANFO in a static water test over time demonstrating just how significantly water can impact bulk explosive blends. The higher the AN Prill content, the more leaching that can occur.



## Next Steps

### EDUCATING CUSTOMERS

This useful information will help customers determine the best solution for their property. In many cases, where dry ground conditions are dominant, blends may work very well and provide a good solution for the customer.

However, when water is present, the TITAN Technology may provide the best alternative for a customer concerned about ground water contamination or NOx.



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