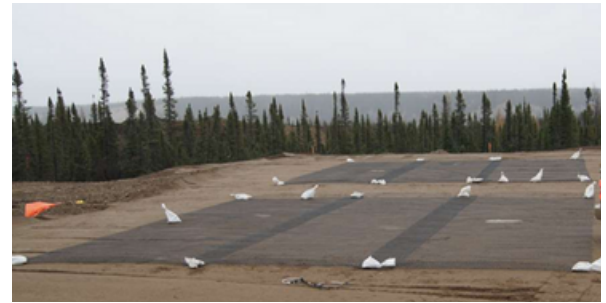# CASE STUDY
Storage Tank Floor - Ground Reinforcement

TITAN

◥ **LOCATION:** Gillam, Manitoba

◥ **PROJECT TYPE:** Supply and installation

◥ **PRODUCT USED:** Titan Earth Grid™ & 8oz Non-Woven Geotextile

◥ **PROBLEM:**

Four temporary prefabricated tanks were to be supported directly by the ground surface. The primary concern involved localized settlements beneath the tank floor. Predicting the occurrence and magnitude of localized settlements can be difficult. It was determined that a concrete footing with steel piles would be too expensive, and too difficult to remove after the function of the temporary facility has passed.

◥ **THE TITAN SOLUTION:**

Titan worked with the project proponents on a geogrid horizontal foundation pre-design solution that included two layers of Titan Earth Grid™ and 8oz non-woven geotextile. The layers of Titan Earth Grid™ were separated by a 200mm layer of the base material. It was determined that the tensile properties, junction strength, flexural stiffness, and aperture stability of Titan Earth Grid™ provided adequate positive interlock with the soil and aggregate. The tensile properties allowed redistribution of stresses, which reduced the risk of localized weak spots by smoothing out uneven settlements.

A gravel berm was contained within a Grade Band to support the weight of the tank walls. The gravel berm contained an 8oz non-woven geotextile TE-8 throughout the surface area of the gravel berm. Water runoff from the tank roof could potentially erode the gravel berm, therefore it was necessary to include the geotextile to help mitigate this risk.

◥ **ACHIEVEMENT:**

Titan's solution was eco-friendly, easily constructed, simple to dismantle after the service life, and economical. Since construction, there has been no indication of shear failure or soil settlement.

Contact us for more information:

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