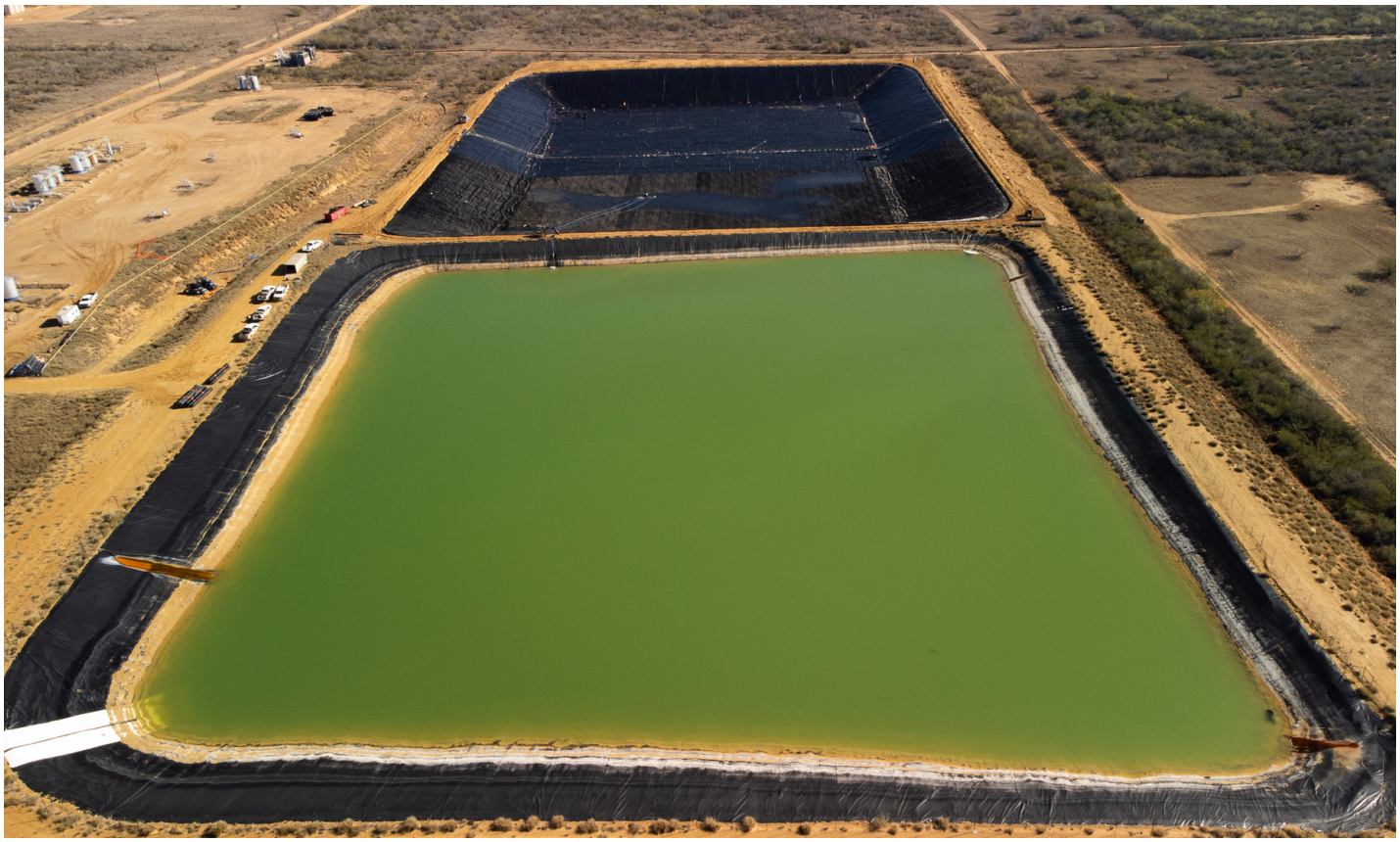
CASE STUDY

SOLMAX

LARADO FRAC POND, TEXAS

Frac pond liner technology for environmental safety



Industry:	Mining
Sub-industry:	Ponds and storage
Location:	Texas
Product:	**GSE**® Leak Location Suite

In Laredo, Texas, a cutting-edge frac pond project recently demonstrated the crucial role of advanced geosynthetic technologies in enhancing hydraulic fracturing operations. This project involved the injection and subsequent containment of large volumes of water mixed with chemicals, necessitating robust solutions to prevent environmental contamination. To achieve this, the project utilized a sophisticated liner system, comprising a primary conductive HDPE liner coupled with a drainage net, specifically designed to secure the chemical-laden water once it resurfaced.

The core challenges of this initiative centered on the rapid deployment of the liner and the imperative of a leak-free installation. Given the liner's vulnerability to damage during setup, a precise and reliable method for assessing and confirming its integrity was paramount. The S-100 spark tester, a component of the **GSE** Leak Location Suite, was selected for this critical task, marking its inaugural field use.

The employment of the **GSE** Leak Location Suite Conductive Liner along with the S-100 spark tester represented a significant advancement in liner technology application. The conductive liners, well-regarded in the containment industry, combined with the innovative S-100 spark tester, streamlined the spark testing survey, making it more efficient. This technology enabled the installation team

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to quickly adapt to using the S-100 and successfully identify and repair a liner puncture within minutes, demonstrating the system's efficacy and ease of use in ensuring environmental safety in fracking operations.

Overview

Fracking involves injecting a substantial volume of water into the ground, which is then contained and stored upon resurfacing. To prevent the chemicals in the water from seeping into the ground, a geosynthetic liner system was employed for a frac pond project in Laredo, Texas. This system consisted of a primary conductive HDPE liner and a drainage net. To ensure the liner's effectiveness, the S-100 spark tester was chosen for the application.

Challenge

The key challenges for this project were to expedite the liner installation process and ensure a leak-free system. The liner was susceptible to damage during installation, necessitating a leak analysis to verify its performance.

Solutions

To address these challenges, the client decided to utilize the **GSE** Leak Location Conductive liner along with the S-100 spark tester, both integral components of the **GSE** Leak Location Suite. This project marked one of the first occasions where the S-100 spark tester was employed in the field.

Conductive liners are commonly employed in the containment industry, and when combined with the S-100 spark tester, the process of conducting a spark testing survey becomes more straightforward. The installation team quickly familiarized themselves with the S-100 spark tester's operation and identified a hole within five minutes of starting the survey. The inclusion of wheels on the spark tester facilitated a swift and effortless process, even on the slopes of the pond. The S-100, in conjunction with the **GSE** Leak Location Conductive liner, effectively detected punctures in the primary liner and proved to be user-friendly for the installer.