



## *Case History Series*

### *"Frack Water Containment"*

#### **The Challenge: Poly Liners Not Doing The Job**

The concern over the potential environmental hazards attached to any drilling site has been, and continues to be, well documented in the news. What hasn't been covered with nearly as much press are the efforts by many oil and gas operators to minimize this risk. One such company is Appalachian Basin based Rice Energy.

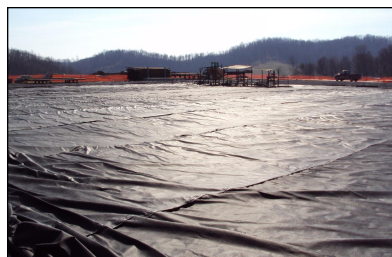
Historically, site operators have used 30-mil poly liners as their primary spill capture and containment system. However, they can be easily torn and are slippery. Not only is this a safety hazard, but it also puts nearby streams, lakes, and wells at a greater risk. Maintenance of the poly liners is expensive and typically costs a company tens of thousands of dollars per site to maintain and repair.

#### **The Solution: SiteSaver™ HDPE, Ribbed, Thermoformed Drill Pad Site Containment System**

After 18 months of product development, refinement and testing, SiteSaver was endorsed by the PA-Department of Environmental Protection as an approved well pad liner for use on the oil and gas drilling sites. SiteSaver is manufactured by Penda Corporation. Best known for the manufacture of truck bed liners, SmartDitch and other water management systems. Penda is the largest heavy gauge thermo-former in North America

SiteSaver is a heavy gauge HDPE ribbed liner that is produced in 8' x 6' sheets for easy stacking and transport. The sheets are joined by an electro-fusion process, made into large rolls and delivered to the site where they are simply unrolled. Once positioned into place, the seams are fused together and attached to corners for a leak resistant containment system.

With the primary purpose of SiteSaver being the containment and control of frack water spills and other fluids, any combination of gravel, Fibergrate and rig mats are placed on top of the SiteSaver to create a drivable, drillable, clean, and dry work surface. For a typical one-acre site, installation times vary and are dependent upon the number of installation crew members. Typically, a crew of eight can install a one-acre sized system in a day.



**For More Information, Call Toll Free: 855.798.7287 / [www.thesitesaver.com](http://www.thesitesaver.com)**



## The Story: Improved Frack Containment System from SiteSaver Saves Money, Improves Safety

Rice Energy has a great track record of safety, environmental compliance, and landowner approval. The company is also open-minded when it comes to using new technology to improve worker safety and site conditions. Rice Energy's, John LaVelle, VP Drilling, was approached by contractor Max Environmental who presented the SiteSaver product line and its superior containment capabilities.

There were several reasons why Rice Energy expressed an interest in the SiteSaver System:

- The thermoformed HDPE system is thicker and more durable than traditional liners
- The ability to electro-fuse the sections together for a seamless containment system
- The raised corners and edges provide both a fluid collection and containment solution
- The SiteSaver system can be used in conjunction with a combination of products already being used on a drilling site, such as Fibergrate, rig mats, and gravel

Rice Energy's initial purchase of the SiteSaver System for three of its sites in the Pennsylvania Marcellus Shale region. "Not only will this system provide a cleaner and safer work site, we saw significant cost savings," said LaVelle. "Since SiteSaver is reusable, we purchased it -- knowing that we were going to use it again on other sites. We also supplied our own rig mats, and then rented enough Fibergrate to provide a drivable surface and walkways. SiteSaver's recyclability also made it appealing. "We will receive a buy back credit for the material when we are done using it," added LaVelle.

Company Man Joe Murray, with Geological Engineering Services, is on site for many of Rice Energy's projects. He now has several SiteSaver installations under his belt. "I've been extremely pleased with the system's performance," said Murray. "It's an extremely durable product and is capable of withstanding the load from heavy traffic and yet still be a very clean, walkable surface."

"Joe Murray was instrumental to the successful implementation and installation of SiteSaver on many Rice Energy sites", said Heidi Bulgrin, VP Penda Green Technologies, and manufacturer of the product. "Joe has over 50 years of experience in the O&G Industry, and has seen a lot of containment systems come and go. Obviously, we are pleased with his assessment of the SiteSaver system."

### SiteSaver Project Details:

**Drilling Sites:** Pennsylvania - Marcellus Shale Region

**Owner:** Rice Energy

**Distributor:** Fairmont Supply

**Installation Contractor:** Max Environmental

**Average Pad Size:** 50,000 Sq. Ft.

**Average Installation Time:** 1 day



*SiteSaver is delivered to the site in large rolls.*



*SiteSaver is unrolled into place and then electro-fused.*



*View of completed 50,000 sq. ft. lined drilling site.*



*Company Man, Joe Murray likes SiteSaver's durability.*