SOLMAX

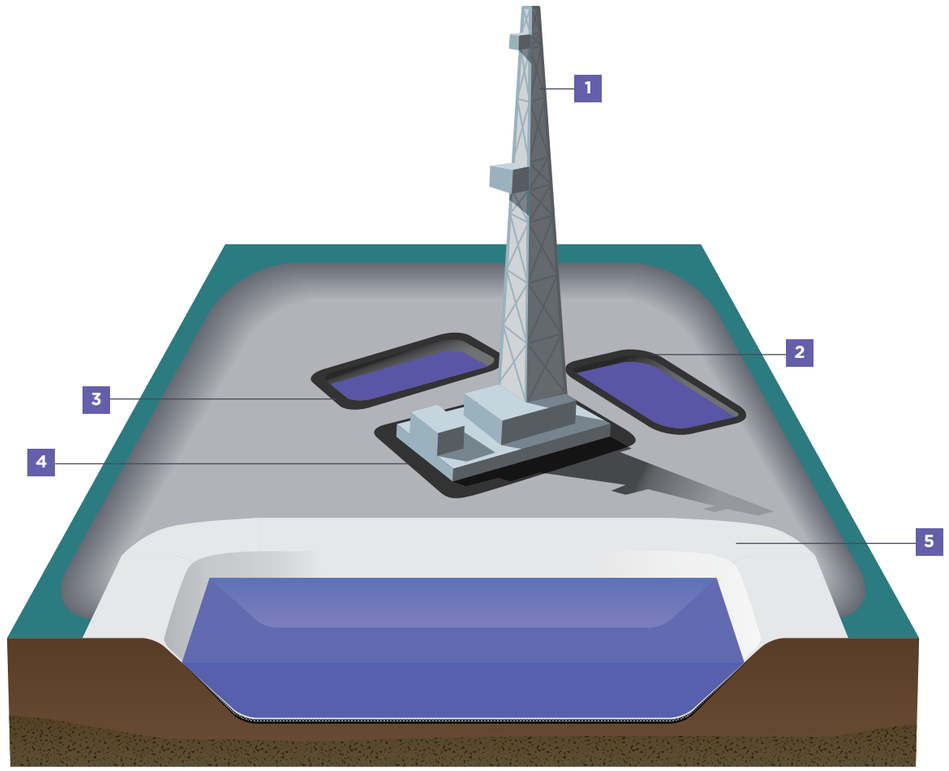
OIL & GAS CONTAINMENT SYSTEMS

FACING THE CHALLENGE

Oil and natural gas production is one of the most complex industries in the world. Everyone wants an abundant supply of energy, leaving the industry to figure out how to provide sustainable and affordable options, while ensuring the health and safety of its workforce, the economic success of the business, and the protection of the surrounding environment.

Solmax can make water and soil contamination one less thing to worry about. We understand the challenges unique to Oil & Gas exploration and production. For over forty years, our geosynthetics have been used to protect soils, ground water and surface water against the harshest contaminants, in the most extreme conditions.

We go to great lengths to guard the interests of those we serve, so our products are designed to meet or exceed the most stringent regulations that governments develop. In addition to offering durable products, we can respond quickly to tight construction and delivery schedules, ensuring your project stays on time and on budget.



1 Drilling rig
2 Flow-back water pond liner
3 Pit liner
4 Well pad liner
5 Fresh water pond liner

CHALLENGES

Despite the many benefits of fracking, energy companies face tough challenges:

- Concerned communities question the potential impact on the environment;
- Governments are implementing increasingly stringent regulations to address environmental concerns;
- Fracking requires large amounts of fresh water;
- Companies must responsibly dispose or store flow-back water;
- Chemicals used in the fracking process must be stored responsibly.

LAYING
THE GROUNDWORK

FRESH WATER HOLDING PONDS

Having a readily available source of fresh water is crucial to maintaining production schedules and ensuring overall project success. When a well is constructed in a region where water is scarce, energy companies can install large holding ponds to capture and store water for future needs.

THE PROCESS OF HYDRAULIC FRACTURING USES UP TO **1 MILLION GALLONS** OF WATER PER WELL.

FLOW-BACK AND PRODUCTION WATER PONDS

These high brine content fluids must be captured and contained in an environmentally responsible manner prior to treatment or re-use.

Our geomembranes with a **Leak Location Finish** are the only liners on the market that allow you to conduct leak surveys on both covered and exposed applications, and are specifically intended for applications where you can't afford a leak.

BentoLiner® Brine-Resistant GCL was engineered to stand up to flow-back waters that contain high brine content. This needle-punched reinforced GCL is comprised of a uniform layer of specially formulated polymer-enhanced granular sodium bentonite between two nonwoven geotextiles, and it provides secure containment of the most chemically laden solutions.

DURING THE FRACKING PROCESS, UP TO **90%** OF THE WATER USED FLOWS BACK TO THE SURFACE.

WELL PAD LINERS

Well pad liners cover the active working surface surrounding the well, protecting the soil from potential spills and providing a safe, slip-resistant surface for workers. Our geomembranes are chemically impervious, highly resistant to UV degradation and can withstand the harsh conditions of a fracking job site.

PIT LINERS

Drill cuttings and spoils extracted from the well hole must be captured and stored in a responsible manner prior to disposal. Our lining systems are used to line the storage pits and protect groundwater against potential impact.

SECONDARY CONTAINMENT

Various chemicals are blended together and used during the fracking process. These substances must be stored responsibly, but if a leak or spill does occur, it must be immediately contained. Our **BentoLiner® GCLs, ContainMat** and geomembranes are used under and around tanks, vessels and other storage units to quickly contain spills and leaks, eliminating the threat of contamination. In addition, drainage geocomposites can be placed directly on top of the geomembranes to facilitate rapid drainage of any leaked materials.

"For jobsites that require a customized approach, the Solmax Fabrication team can build secondary containment products to meet a project's exact specifications."

OIL & GAS SOLUTIONS

Our geosynthetic products have a long history of proven durability and performance in both exposed and covered applications that require resistance to harsh chemicals, UV exposure, and hazardous waste. They are available in white, green, gray or black, and one or both surfaces can be textured for increased foot traffic stability and frictional resistance on slopes.

HIGH-TEMPERATURE SERIES

Our High-Temperature Series is specifically designed to withstand temperatures up to 100°C. At elevated temperatures, standard liners will break down, accelerating stress cracking and oxidation, which leads to leakage.

LEAK LOCATION FINISH

A revolution in leak detection, this is a geomembrane with a fully integrated electrically conductive bottom surface. This allows quality teams to conduct a spark test immediately following installation and a dipole survey after the liner is covered.

WHITE REFLECTIVE FINISH

Our White Reflective reflects solar radiation to keep the liner cooler, resulting in fewer wrinkles, while facilitating damage detection and eases installation.

F3 SERIES

Due to their excellent flexibility, the F3 Series is easy to weld, easy to fold and can be prefabricated, making this a cost-effective and time-efficient choice for easy deployment in tanks.

R3 SERIES

Specifically developed to meet the needs of the Oil & Gas industry, these geomembranes with a textured top layer that provides excellent anti-slip properties and a distinctive safety green color on the lower side, keep workers safe.

BENTOLINER® GCL

We offer several BentoLiner® GCL products designed to accommodate different load and slope requirements, as well as brine-resistant GCLs and other products that address the specific challenges associated with oil and gas recovery.

CONTAINMAT

ContainMat is the first composite liner system designed specifically for Oil & Gas secondary containment solutions. A uniform layer of sodium bentonite is distributed between a woven and a nonwoven geotextile. The bright orange color makes it easily distinguishable from cover soils.

WHY SOLMAX

Our no-compromise approach to quality and reliability makes Solmax the brand of choice. As we have grown, so have our capabilities. Now represented in more regions, we have a clear competitive advantage. It means faster deliveries and better service for our customers, today and tomorrow. And, with some of the smartest minds in the business, Solmax brings products to market which no other company can offer.

Our key objective—to enable progress by protecting the earth—propels us forward. With better support and solutions to protect the ground, our customers can aim higher, achieve more, faster.

Our strategy to build the capacity, capability, reach, expertise, and culture to deliver innovation rapidly and at scale, is well advanced. Our people are motivated, united by a single vision: to set the pace and reshape the industry.

SETTING STANDARDS

Solmax works with governments to draw up industry regulations, collaborates with stakeholders worldwide to raise environmental requirements, and enhances technical designs for projects.

Groundbreaking products brought to market by Solmax and its wholly owned companies include the first HDPE geomembranes, textured liners, geosynthetic clay liners (GCLs), white reflective geomembranes, conductive geomembranes, and high-flow and pressure-resistant drainage solutions.

ISO AND INDUSTRY-RATED

Solmax has achieved ISO 14001 certification for environmental management, and ISO 9001 for quality assurance. Our laboratories are accredited by the GAI-LAP (Geosynthetic Accreditation Institute – Lab Accreditation Program), assuring our customers that we apply the highest standards in product testing. Solmax has also achieved BAM, Asqual, KIWA, CE, and other certifications.

QUALITY ASSURANCE

Extensive manufacturing quality assurance (MQA) testing is performed on our products at our labs. Our MQA program starts with testing and verification of specially formulated quality resins and other raw materials and extends through delivery to the project site.

Our standards are high. All Solmax geomembranes, GCLs, and drainage solutions are tested for strength and durability, and against key criteria. Geomembranes, for example, are 100% spark tested for pinholes during the manufacturing process to ensure every delivered roll is leak free.

OUR LOCATIONS

HEADQUARTER
VARENNES, QC | CANADA

SOLMAX.COM

Solmax is not a design professional and has not performed any design services to determine if Solmax's goods comply with any project plans or specifications, or with the application or use of Solmax's goods to any particular system, project, purpose, installation or specification.

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