



# GageDrill™ Drastically Reduced Downhole Losses Across Shallow Carbonate Formation in Onshore Albania

An engineered solution was used to not only mitigate severe losses, but also to reduce the environmental impact along the surface aquifer.

CHALLENGE	SOLUTION	RESULT
<ul style="list-style-type: none"> <li>Mitigate heavy losses scenario while drilling the top-hole sections across fractured shallow carbonate formation and reduce environmental impact through the surface aquifer</li> </ul>	<ul style="list-style-type: none"> <li>GageDrill™ mixed metal oxide (MMO) drilling fluid system characterized by thixotropic properties</li> </ul>	<ul style="list-style-type: none"> <li>Severe losses successfully mitigated</li> <li>Environmental impact across the surface aquifer reduced</li> <li>Excellent results in terms of hole cleaning efficiency achieved</li> </ul>

## OVERVIEW

Operators historically drilled the top-hole sections of offset wells with gel polymer systems and conventional remedial treatments. The wells were characterized by highly fractured carbonate formation and the presence of surface aquifer.

Unfortunately, they were largely unable to generate acceptable results in solving losses with a negative impact on NPT as well as the overall project cost.

## CHALLENGE

The loss zones exist within a long interval from the surface to around 3,600 m across the carbonate formation, and the loss rate varied greatly from just seepage to total losses.

The lack of field-proven technologies led to the arbitrary use of various LCM and techniques among wells with variable results; in some cases, LCMs partially cured losses, but in other situations, they were completely ineffective.

## SOLUTION

In this particular case, the decision was made to use the environmentally friendly GageDrill mixed-metal oxide (MMO) system for drilling the next wells.

This unique system represents the first line of defense in curing losses as it is an effective lost circulation control system due primarily to its thixotropic properties.



## RESULTS

The operator successfully drilled two wells with GageDrill that together with appropriate lost circulation procedures, highly contributed to reduce losses and minimize environmental impact across the surface aquifer, as the chart below indicates.

