

CASE STUDY

Application	24" pipeline	Pipeline Owner	DCP Midstream
Location	Big Lake, Texas	Date of Installation	August 1, 2018
Product	Grid-GuardHD Plus, 82" x 72"	Date of Excavation	December 18, 2018

JDR Enterprises of Alpharetta, Georgia manufactures Grid-GuardHD Plus rock shield. Grid-GuardHD Plus is an 11mm extruded polyethylene with a geotextile fabric heat laminated to one side. HD Plus rock shield is designed to provide ultimate protection during backfill operations, and to act as a slip sheet around the line after burial. HD Plus is available for any pipeline diameter.

THE CHALLENGE

DCP Midstream was seeking to add a new rock shield that would provide maximum protection to new and existing pipeline operations. The challenge was to find a new rock shield that would provide ultimate impact protection, but also help to maintain the integrity of tapes and coatings used on the pipeline. Traditional mesh rock shields can have the potential to set into tapes and/or other external wraps, sleeves, etc., thereby contributing to soil stresses on those tapes, etc. DCP was seeking a rock shield that would help to alleviate those concerns.



THE TEST

In order to determine the performance of Grid-GuardHD Plus on a live pipeline, DCP Midstream installed 30' of HD Plus on an in-service, 24" pipeline during scheduled maintenance on a section of line containing two holidays. The line was buried for approximately 4 months at a depth of 12'. The **Grid-GuardHD Plus** was installed over a FBE coating as well as Polyguard 600 liquid adhesive and RD6 tape.

THE PERFORMANCE

After excavation of the line, DCP representative and Corrosion Supervisor, Jim Wynn was on hand to do a thorough examination of the coatings and tapes over which **Grid-GuardHD Plus** was applied. Mr. Wynn stated "the rock shield was removed and the coating underneath looked to be in perfect condition". DCP and Polyguard representatives were looking for wrinkles and/or stresses on the Polyguard tape. None were found. Per Mr. Wynn, "What makes this new rock shield unique is the fact that it incorporates a felt product on the side that goes next to the pipe. This allows the rock shield to slip on the pipe thereby reducing any soil stress that might otherwise cause the rock shield to dig into the tape causing wrinkles or holidays."

