WHEN THE EARTH MOVED, SO DID THE PIPELINE

Landslide Prompts Massive Pipeline Relocation in Turkey

NIVELLES, Belgium – December 18, 2014 – Every once in a while, the earth reminds us of its immense power and, in consequence, the insignificance of man’s plans and projects. Recently, a landslide in a mountainous area of Turkey provided just such a reminder to the operators of a pipeline running through the region. The landslide caused no immediate damage, but it did provide a warning that remedial action needed to be taken quickly to protect the pipeline and mitigate the potential for environmental damage.

What resulted was the most ambitious rehabilitation operation in the pipeline’s history. Everything about the job was big. Nearly a kilometer of 34-inch 600 Class pipeline was affected by the landslide, which meant that around 2 kilometers of it had to be re-routed. The affected section lies in a remote and hilly part of western Turkey, a region of pristine natural beauty, thus underlining the need to complete the relocation with minimal environmental impact.

“Moving the earth” to ensure a safe, effective relocation

The primary contractor tasked with the relocation needed a safe working environment so their engineers could remove and replace the section of pipe threatened by the landslide. A preliminary requirement was, therefore, a hot tap and plugging isolation intervention to facilitate re-routing. The contractor called upon T.D. Williamson (TDW) to carry out these vital tasks.

TDW provided engineering, design and project management for the hot tap and plugging operation. The remit also included in-service welding supervision, welding inspection, pre-heating and final non-destructive tests. Following significant planning and preparation, TDW transported 141 tons of equipment and fittings, nearly 2900 kilometers (1800 miles), to the worksite in Turkey. The fittings for the job were delivered to the site in April 2014, with welding executed between May 20 and July 13, 2014. A total of 20 taps ranging from 2-inch to 34-inch had to be carried out, many of which were executed simultaneously to speed the process. The hot tapping and isolation phase was performed between September 20 and November 20, 2014.
Using its standard STOPPLE® pipeline pressure intervention method to achieve the isolation, TDW made it possible to cut, plug and safely isolate pressure from the sections without shutting them down. The operation also necessitated use of TDW’s LOCK-O-RING® Plus completion plugs, specially designed for the project.

After the lines were isolated, the contractor and the pipeline operator were able to carry out the relocation without serious disruption or negative impact upon the environment. The smooth handling and entirely safe execution of the hot tapping and plugging phase also meant that the entire operation adhered to the tight schedule imposed by the operator.

The size of the operation and remoteness of the location resulted in unusual challenges for everyone involved. “This was a huge job, which meant that we had to move masses of heavy equipment and specially designed hardware to a very difficult location in Turkey,” said Volkan Simsek, Project Manager for TDW. “Nevertheless, all of the preparation and planning was worth it. Once on-site, the operation proceeded without a hitch, allowing the pipeline replacement and re-routing operation to be completed in a timely, safe manner.”

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About T.D. Williamson
Global pipeline service provider T.D. Williamson delivers a comprehensive portfolio of safe integrity pipeline system solutions for onshore and offshore applications, including hot tapping and plugging, pipeline cleaning, integrity inspection, pigging and non-tethered plugging technology for pressurized piping systems.

Note to editors:
Photos of the operation in Turkey may be obtained by contacting Waylon Summers below.

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