



First Dopeless® running in Libya cuts drilling time under desert conditions

Operator eliminates sand contamination problems, accelerates running times and reduces environmental footprint by deploying premium connections that don't require the use of storage or thread compounds.

Summary

Dopeless® technology makes Libyan debut

As part of a new exploration campaign conducted by Petro-Canada in Libya, Tenaris is supplying the oil and gas operator with a range of tubular products. The campaign involves the drilling of at least 49 exploration and appraisal wells distributed in several fields, most of them located in the Sirte Basin.

For the first 12 wells, Petro-Canada specified a combination of TenarisHydril Blue® and TenarisHydril Blue® Dopeless® connections for the 9 5/8" and 7" casing sections, as well as for the 4 1/2" and 3 1/2" tubings.

The first four strings were run at the En Naga field. Of these, two were made up with Dopeless® connections exclusively, while the remaining two combined standard and Dopeless® versions of the Blue® connection. This gave Petro-Canada the chance to compare the same premium connection with and without Tenaris's dope-free technology.

Dopeless® connections showed improved operational performance (including faster running times), contributed to minimizing environmental impact and eliminated all corrosion and sand contamination issues.

Challenges

Battling sandstorms

Located in the midst of the Sahara desert, the Sirte Basin is characterized by extremely high temperatures and powerful sandstorms. During pre-running and running operations, the connections are exposed to sand particles that can easily get adhered to the running compound required for conventional tubulars. Sand stuck to the surface of connections will potentially lead to thread galling and leaks.

Contaminated connections must be thoroughly cleaned and running compound re-applied to the connection, which introduces unwanted delays.

PROJECT PROFILE

Operator

Petro-Canada

Location

El-Naga Field
(Sirte Basin, central Libya)

Wells

A1-120/2a, A2-120/2a
and A1-120/4a

Type of wells

Onshore, vertical

Products highlighted

- 9 5/8" casing and 3 1/2" tubing with TenarisHydril Blue® Dopeless®

Services provided

- Onsite training
- Field inspection
- Running assistance
- Accessories supply



▲ TenarisHydril Blue® Dopeless® connections improved operational performance in desert conditions.

Reducing the environmental impact

The pre-running operations of cleaning out the standard connections require the utilization of solvents, rags and water, among other products that have an impact on the environment. Once in the running stage, the use of thread compounds for standard tubulars has the potential to damage the producing formations.

Remote location

Like all heavy equipment needed for the development of wells at the heart of the Sirte Basin, tubular products arrived first at the port of Misurata. The land journey from this Mediterranean coastal city to the drill site takes several days to complete. Such complex logistics operations turn the reliability and versatility of pipes and connections into key considerations, as any unexpected tubular-related problems can potentially bring an entire project to a halt, introducing significant cost overruns.

Solution

A Libyan first

Following a technical forum held by Tenaris in Tripoli, Petro-Canada decided to implement what would end up being the first deployment of Dopeless® technology in Libya.

Local presence

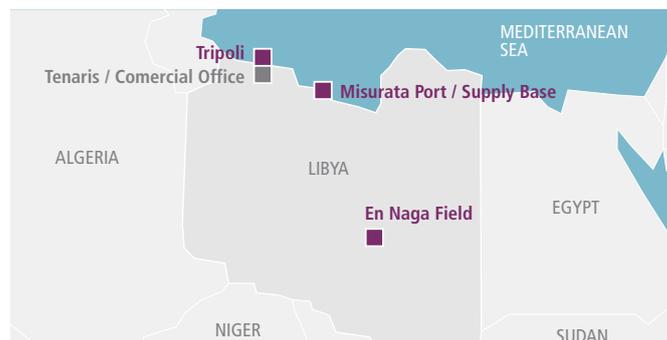
Tenaris's dedicated technical sales and field services teams in Libya were involved in the project from the very early stages. A long-standing presence in the region has provided these engineers with an invaluable understanding of the local culture and operating environment.

Tenaris supplied a comprehensive program of technical services, which included the training of running and inspection crews, visual thread inspection (during pre-running operations) and running assistance. An accessories management service was offered for the supply of Tenaris pup joints and coupling stock, as well as for accessories manufactured by third-party vendors. Coordination with local licensees was also managed by Tenaris.

Results

No sand, no corrosion, no wasted time

In one instance the TenarisHydril Blue® and TenarisHydril Blue® Dopeless® connections were run together in a 3 1/2" workover/ testing string. This string was used in several operations, requiring several make and break sequences. Even in this scenario, Dopeless® technology showed improved performance.



▲ Petro-Canada's exploration campaign took place in the Sahara desert.



▲ Tenaris's local Technical Sales and Field Services teams participated in the project from the beginning.

While a number of standard Blue® connections that had been unintentionally unprotected in the desert conditions suffered from pin corrosion problems, the Dopeless® version was found to be intact in every single joint. There were no make-up rejects and no reported sand contamination issues among Dopeless® connections. Also, considerable time saving was achieved.

Another advantage of using Dopeless® technology is having pipe ready to run. If a well is to be abandoned, operators do not lose time reapplying storage compound and recleaning before running in new location.

Greener practices

Petro-Canada was particularly pleased with the reduced environmental impact by using Dopeless® connections, which eliminate the need of soaps, solvents and storage and running compounds.

The operator has now specified for all future TenarisHydril Blue® connections used throughout the ongoing exploration campaign to be supplied with the multipurpose dry coating technology.



For contact information, please visit our site:
www.tenaris.com