

Wednesday 21st February 2018 at 18:00 hours

Institution of Civil Engineers, One Great George Street, Westminster, London SW1P 3AA

Geotechnical and Geohazard challenges for onshore and offshore pipelines

David Waring

BP Exploration Operating Company Limited
and

David Rushton (East Point Geo)

Abstract

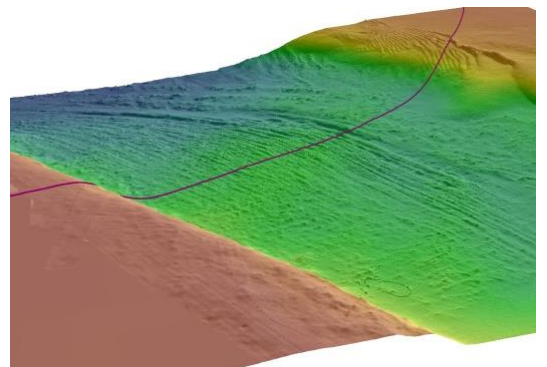


Engineered pipeline fault crossing in construction

Pipelines are critical for the delivery of the Oil and Gas that is required for today's modern world and ensuring their integrity is of paramount importance. Designing, constructing and operating a pipeline is a multi-discipline endeavour, which almost always deals with geotechnical and geohazard challenges, whether it be in an onshore and offshore environment. This often requires a range of ground engineering specialists, which we more commonly group into a Geoteam.

The presentation describes how geotechnical and geohazard challenges are managed through the different project phases, illustrated using recent onshore and offshore project examples. The synergy between the two environments, with respect to the Geoteam contributions, will also be illustrated. The presentation is aligned with four key stages in a pipeline development project, first discussing pipeline routing during the concept select stage and then continuing to cover the threat of:

- landslide impact at a scarp crossing and mitigation during detailed design;
- scour and erosion at wadi crossings during design and construction;
- surface fault rupture during pipeline operations.



Submarine pipeline routing over rough and mobile terrain

Biographies of David Waring and David Rushton overleaf

The event is free but advance online registration is required at

<https://www.ice.org.uk/events/geotechnical-and-geohazard-challenges-for-onshore>

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David Waring

David is an engineering geologist with over 21 years' experience working in the geotechnical industry. David completed his MSc in Engineering Geology in 1999 at Imperial College and subsequently joined Fugro in Hong Kong before returning to the UK and joining Atkins in 2004. During this time David was involved in a wide variety of projects ranging from the Natural Terrain Hazard Assessments in Hong Kong to pipeline landslide audits in Turkey.

In 2012 David joined BP's geotechnical team, where he is currently involved in onshore oil and gas projects, providing geotechnical and geohazard management and technical assurance. David has been involved with onshore pipelines since 2004 and has worked on many pipelines including Baku-Tbilisi-Ceyhan Pipeline (BTC), South Caucasus Pipeline (SCP), SCP Expansion (SCPX), Trans Adriatic Pipeline (TAP), Trans-Anatolian Natural Gas Pipeline (TANAP), Khazzan Gas Gathering, Wellsides and Export System (GWES) and Western Route Export Pipeline (WREP).



David Rushton



David has 10 years' experience in geotechnical engineering, geohazard analysis and geospatial data management. David graduated from Oxford University in 2007 and joined Fugro, where he worked on a wide range of offshore geotechnical projects, specialising in the use of geographical information systems for data visualisation and geohazard analysis.

Last summer David joined East Point Geo and continues to use both traditional and novel approaches to geotechnical and geohazard problems in onshore and offshore development settings. David's pipeline experience has mostly been in offshore settings, including offshore West and East Africa, the Mediterranean, the Black Sea and the Caspian Sea. Work on these projects included site investigation planning, routing assessments, ground modelling and geohazard analysis.

Please join us after the Lecture for drinks sponsored by
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