

Response of Petro Pipelines to Longwall Subsidence¹

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Abstract: When transmission pipelines are planned to be undermined by longwall mining, there is considerable concern for the integrity of the pipeline. With longwall mining, there is typically significant associated subsidence movement. As a result, oil/gas transmission lines are exposed to subsidence induced axial tensile or compressive stresses and bending stresses as well as stress concentrations in associated appurtenances. With the use of case histories, this presentation will discuss the nature of longwall ground movements, the role the backfill properties play in the induced stress, and means to monitor and mitigate those stresses. The presentation will also include important aspects of analysis when evaluating subsidence effects.

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