“Landslide at sunuapa 401 (hydrocarbon exploration well). Risk reduction by mitigation measures: drainage, piles barrier and anchorages system, shotcrete and reforestation, Chiapas, México”.

Oscar Cuanalo (1), Gabriel Polanco (), and Julio Rivera ()
(1) Universidad Autonoma de Puebla, Facultad de Ingeniería, Puebla, Mexico (osarcuanalo@hotmail.com), (2) Tecnosolum S.A. de C.V. (gpolanco@tecnosolum.com), (3) Petroleos Mexicanos

We report the case of a landslide of hydrocarbon exploration well “Sunuapa 401” located in Chiapas, Mexico. First were identified the determinants and triggers factors (morphology, geology, rain, seismic and volcanic activity, human activity, etc); second we assessed the threat, vulnerability and risk from geotechnical stability analysis (safety factor and critical failure surface); third, by using the methodology of valuation factors, stabilization processes were selected and designed, and finally they were built by Petróleos Mexicanos, in order to avoid a disaster (environmental, ecological and social). These construction processes included drainage elements, flattening and benching of slopes, piles barrier and anchors, shotcrete and reforestation.