

Title (en)
DRILL FLUID AND METHOD FOR TUNNELING

Title (de)
BOHRFLÜSSIGKEIT UND VERFAHREN ZUR TUNNELUNG

Title (fr)
FLUIDE DE FORAGE ET PROCÉDÉ DE TUNNELLISATION

Publication
EP 3642297 A1 20200429 (EN)

Application
EP 18819655 A 20180622

Priority
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• CA 2018050777 W 20180622

Abstract (en)
[origin: WO2018232532A1] A method for drilling a tunnel through a formation must address environmental concerns. One tunneling method comprises the steps of: preparing a mixed metal-viscosified drilling fluid including bentonite, a mixed metal viscosifier and controlling pH to 8.5 to 9.5 to permit a reaction between the bentonite and the mixed metal viscosifier; adding at least one of: (i) calcium sulfate and (ii) a potassium salt; and pumping the drilling fluid while drilling the tunnel with the pH lowered to 7 – 9. The amount of mixed metal viscosifier used can be limited such that the weight ratio of mixed metal viscosifier to MBT reaches up to 1:30. In the event that there is a problematic increase in viscosity, a non-toxic anionic thinner can be added to the drilling fluid. One such anionic thinner is a polyacrylate.

IPC 8 full level
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