

PRODUCTS TECHNICAL DATA

PRODUCT NAME : Seepage Lost Circulation Control, ME-SCL

ME-SCL is a patented blend of specific micro sized cellulose fibers, combined with a blend of organic polymers and lubricity enhancers. **ME-SCL** is compatible with both water and oil base mud systems. For non-critical applications, **ME-SCL** is offered. The product has a certain particle size distribution and it's manufactured by one cellulose fiber.

ME-SCL is designed to aid in the control of fluid losses to the well bore, and promote the anti-friction characteristics of a drilling fluid.

ME-SCL seals of low pressure zones, which in turn reduces rotary torque and drill string drag that is present in these differential pressure environments.

ME-SCL inhibits seepage loss to the formation, as well as restricting flow into depleted sands.

The acid solubility is high (up to over 85%). The application of this plugging agent is used in the oil and gas interval, especially in the shallow hill formation when the oil and gas loss occurs, and then dissolve the plugging by acid when the production is done.

In the case of seepage leakage to moderate crevice loss, the product can plug the leakage while drilling alone, without affecting the drilling operation .In the case of serious leakage, the rigid bridge plug should be used together to plug the leakage.

Oil well location: Guantao town, Dongying, Shandong Province

In the exploratory Wells # Guantao formation, the upper strata are soft and diagenetic was poor, so they are easy to be eroded and destroyed. The hole throat radius of oil and gas channel was larger,so that the reservoir protection was a problem. Client have used the reservoir protection technology : reducing API water loss to less than 5 ml 200 meters before entering into reservoir, add temporary plugging agent; In addition, rapidly increased the viscosity of drilling fluid for 20-30 seconds, and increased the polymer content by 0.3%.Reduced displacement by 5%.

However due to the limestone reservoir has high porosity, strong permeability and the development of fractures in several layers, which results in poor formation bearing capacity the fluids loss were not controlled well.

ME-SCL was ordered by Sinopec Shengli Oilfield finally. Add 15-20%, put the plugging fluids on the upper part of the leaking layer to stop the leakage, gathered at the throat to form a bridge plug, that improved the bearing capacity of the reservoir well.After the recovery of drilling is made then added fine particles plugging agent while drilling , the result was successful , **ME-SCL** has played a great role in reservoir protection.