

AMC RESI DRILLTM

A low invasive fluid solution



AMC RESI DRILLTM is an innovative solution which gives any fluid low invasive properties to address hole instability and formation damage. AMC RESI DRILLTM is ideal for treating normal, depleted or highly pressured formations in the same drilling sequence.

AMC RESI DRILLTM addresses differential sticking and pore throat pressure transference and the resulting formation instability which can result when weighting up specifically to control well bore "break-out". This pressure transference is common when drilling pressured coal intervals, and has also been encountered in shear zones, fractured shales and faults.

AMC RESI DRILLTM is a combination of micronised cellulose, blended with other proprietary ingredients. This non-invasive product combines a bridging agent with a pore pressure sealant. Utilising flexible bridging material from the cellulose family has proven to be effective in sealing without being affected by recirculation and pressure differentials in the wellbore compared to conventional bridging agents such as Calcium Carbonate. Due to the flexible nature of the cellulose AMC RESI DRILLTM produces a flexible cake across permeable zones, which acts like a skin preventing further invasion. This skin is easily lifted when reverse pressure is applied. Breaker fluids are also available.

An AMC RESI DRILLTM fluid system can be created from any commonly used drilling fluid system including dispersed, non-dispersed, KCl-polymer water based fluids as well as synthetic or oil based drilling fluids. Fluid systems displaying damaging filtrate invasion into a reservoir can be easily converted to a AMC RESI DRILLTM system.

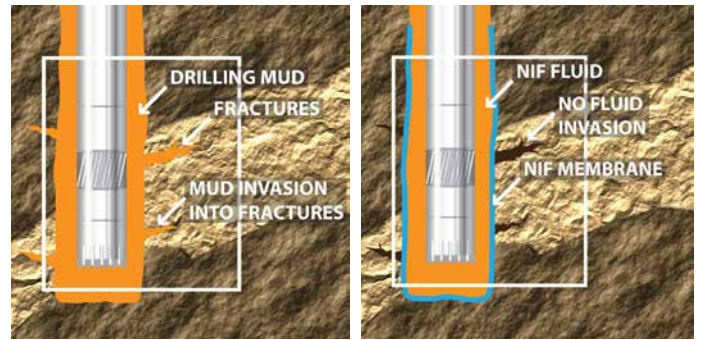
Key Benefits

- Allows production zones to be drilled with conventional mud without fearing pore throat blocking due to dispersed solids
- Can use drilled solids to form the final seal across permeable zones
- Will not allow any previously dispersed LGS contaminants past the skin
- Allows the mud weight to be significantly increased to control over-pressured zones without fearing losses into exposed normally or under-pressured zones. This feature also minimises, if not completely avoids the likelihood of differential sticking
- Works in both water and synthetic based drilling fluids without the need of wetting agents
- Not affected by salts, polymers, oils or contaminants
- Does not appreciably increase mud rheology
- Does not readily degrade due to shear
- Resistant to attack by bio-organisms
- Works in drilling fluids with neutral to basic pHs
- Does not appreciably reduce the ES of synthetic based muds
- Thermal stability of 350°F (177°) when used in conjunction with oxygen scavengers.

AMC RESI DRILL™ address both dynamic and static filtration. The non invasive filter cake that AMC RESI DRILL™ creates reduces pore pressure transfer, making the sandstone more stable. It has also been successfully used where filtrate sensitive production zones have been penetrated and restricted the penetration of mud filtrate to near well-bore. AMC RESI DRILL™ achieves this through effectively sealing any permeable formation.

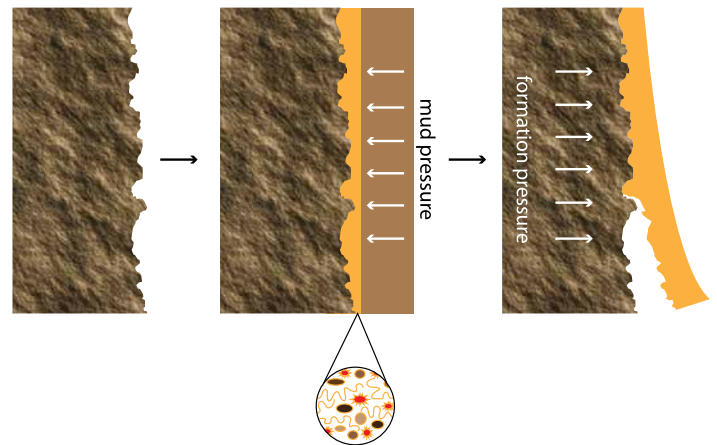
Further information

For more information please go to our website amcmud.com or contact your nearest AMC office.

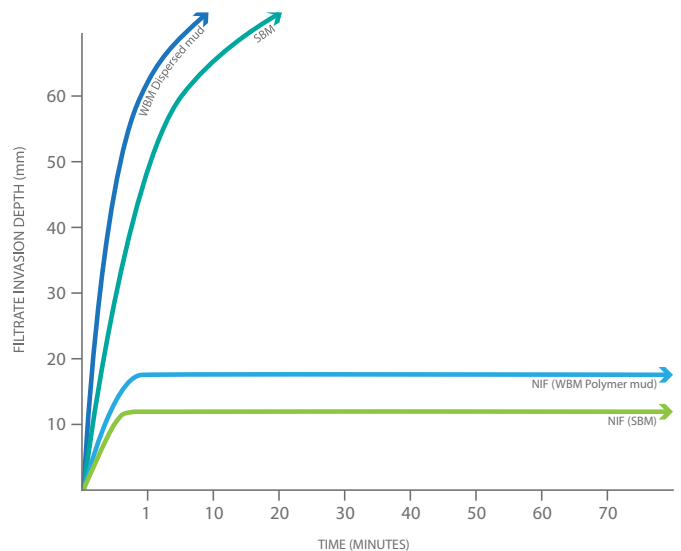


Without AMC RESI DRILL™

Using AMC RESI DRILL™



AMC RESI DRILL™ mechanism of action



Fluid invasion comparison

TYPICAL PROPERTIES OF AMC RESI DRILL™ KCL-POLYMER MUD

	SAMPLE 1	SAMPLE 2
CAUSTIC SODA, lb / bbl (kg / m ³)	0.25 (0.71)	
AMC PAC L™, lb / bbl (kg / m ³)	4 (11.4)	
KCl, lb / bbl (kg / m ³)	20 (57)	
AMC BEN™, lb / bbl (kg / m ³)	5 (14.25)	
AMC XAN BORE™, lb / bbl (kg / m ³)	1.5 (4.28)	
AMC RESI DRILL™, lb / bbl (kg / m ³)	0	6.00 (17.1)
Rheology measured @	49°C	49°C
Mud weight, lb / gal	8.9	8.9
Plastic viscosity, cP	14	17
Yield point, lb / 100ft ²	18	23
6 rpm	5.5	7.6
Gels, 10 sec / 10 min.	5.4/9.1	7.6/12.4
pH	9.4	9.1
API fluid loss, mL	6	5.4
Filtration invasion, mm	No Control	12

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