

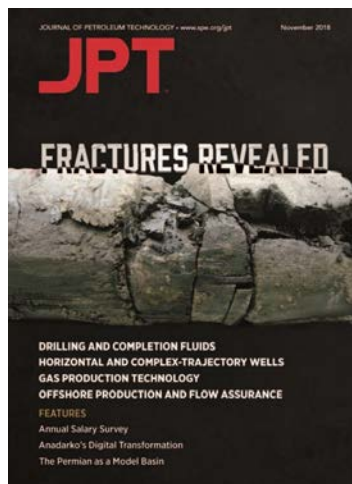
# ULIA Ultra Low Invasion/ Wellbore Strengthening Additive



ULIA is a field proven additive that allows building a low invasion drilling fluid which improves wellbore circumferential stress, prevents hole collapse and effectively controls mud losses. ULIA significantly reduces fluid invasion into matrix permeability and micro-fractures by forming a very low permeability, yet acid soluble, barrier across the exposed formation. This barrier minimizes fracture propagation and actually raises the fracture initiation pressure of the formation. Since ULIA has no polymer component it can be used in temperatures up to 350 deg F.

## Applications

- Micro-fracture formation
- Permeable matrix formation
- Fragmental rock formation
- Shale formation
- Coal formation



ULIA is listed at “TECHNOLOGY APPLICATIONS” of Nov. 2018 JPT issue, the flagship journal of SPE.

## Features

- PSD optimization resulting in less screen out by shale shakers.
- Minimum impact to rheology due to **NO** polymer component.
- Completely compatible with MWD/ LWD tools.
- Compatible with both water based and synthetic based muds.

| World Oil's Fluids 2015 |                   |                                     | Recommended for these systems |           |                 |         |            |                | Product Function |           |           |
|-------------------------|-------------------|-------------------------------------|-------------------------------|-----------|-----------------|---------|------------|----------------|------------------|-----------|-----------|
| Available from:         | Product tradename | Description of material             | Water-based fluids            |           |                 |         |            |                | Primary          | Secondary | Secondary |
|                         |                   |                                     | Non-dispersed                 | Dispersed | Calcium-treated | Polymer | Low solids | Saturated salt |                  |           |           |
| Vertechs                | VCLEAN            | OBM/crude oil residue cleanup agent |                               |           |                 |         |            |                |                  |           |           |
| Vertechs                | ULIA              | Non/low invasion seal agent         | X                             | X         | X               | X       | X          | X              | X                | WBC       | CF SU     |

2015 < World Oil > Guide To Fluids: Recognized oilfield additives