







# **GREEN DRILLING FLUID**

Green drilling fluid proven to biodegrade more rapidly, borehole stability, especially in sensitive shale formations, good lubricity. Drilling fluid stability over a range of temperatures and hole conditions, absence of reaction with formations.

#### **PROBLEM**

- Oil-based fluid provide excellent stability, afford good stability but restricted by environmental regulations which disturb the marine ecosystem & soil pollution and too expensive.
- Water-based fluid were generally poor in terms of rheological and filtration properties. It also cause the propagation crack which decrease shale strength and cause serious well-bore instability in drilling process.
- Well-bore instability has direct impact of drilling fluid properties. The formulation & characterization need various techniques depends on the well-bore.

# **TARGET END USERS**

- 1. Scomi Group Bhd (Malaysia)
- Global Drilling Fluids and Chemical Limited (India)
- 3. Catalyst Middle East (Dubai)
- Schlumberger, Halliburton, Baker Hughes, Newpar, TETRA Technologies Inc., NOV, Weatherford, Q'Max Solutions Inc., Flotek Industries, Inc (US)
- Canadian Energy Services, Secure Energy (Canada)

#### WHAT WE DO

- 1. Drilling fluid formulations
- 2. R&D on base oil products
- 3. Consultations

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#### MARKET VALIDATION ACHIVEMENT

- Meeting with Access Corporate Venture
- 2. Meeting with Petronas Carigali Sdn. Bhd.

### **NEXT MILESTONE**

- Funding for prototype development.
- b. Partnership for pilot testing project.



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