



About the Course

Today's oil rigs are drilling faster and deeper than ever. To be successful, the drilling fluid needs to remain as clean and consistent as possible. Drilled solids, the major contaminant to drilling fluid, can be extremely detrimental to drilling rig operations if not properly managed. This course will provide instruction and best practices for understanding and managing drilled solids. Learners will take a hands-on approach to shaker efficiency, identifying and troubleshooting complications related to equipment performance, and evaluating the overall efficiency of the solids control equipment.

Main Areas of Focus

- Drilled solids sizing and examination.
- Instruction on the design, operation, and application for the following equipment: **Shale Shakers, Shaker Screens.**
- Guidance and theory on drilling fluids interaction with solids, mud report trends, and solids control analysis.

Who Should Attend

The course is designed for drilling engineers, drilling fluid advisors, field superintendents, drilling equipment managers, operators, and drilling contractors who are responsible for the planning and execution of drilling processes.

Course Specifics

Instructor:

Matt Wiggins

Course Length:

2.5 days*

*Includes test tank and lab sessions

Time:

8:30 AM – 4:00 PM*

*Breakfast, snacks, and lunch are provided

Class Limit:

16 students

Required Attire:

- Jeans or Long Pants
- Shirt: No Vulgarity
- Closed-toed shoes

*Safety equipment & tools are provided

**Schedule subject to change
based on enrollment**

Service and Maintenance for Solids Control Equipment - Course Outline

	Course Name	Learning Targets	Solids Control Key Outcomes	Engagement
Tuesday	Drilled Solids	<ul style="list-style-type: none"> ✓ Formations ✓ Cuttings generation ✓ Cutting Carrying Capacity 	<ul style="list-style-type: none"> • Understanding rock & clay • Cuttings examination • Drilled solids sizing 	<ul style="list-style-type: none"> • Identify cutting shapes/sizes – create a picture chart of micron ranges • Calculate specific gravity – dry cuttings and weigh on balance vs in beaker /scale • Corn viscosity demonstration
	Drilling Fluids	<ul style="list-style-type: none"> ✓ Types of drilling fluids ✓ Understanding a mud report ✓ Mud testing 	<ul style="list-style-type: none"> • Basic mud design • Filter cake, fluid loss • Contaminants • How does it all relate to Solids Control 	<ul style="list-style-type: none"> • Mud lab: build and alter the properties of a WBM • Calculate & graph mud properties • Build a filter cake • Analyze a mud report
Wednesday	Shale Shaker Overview	<ul style="list-style-type: none"> ✓ Parts of a shaker ✓ Dynamics & Efficiency ✓ Troubleshooting & Maintenance 	<ul style="list-style-type: none"> • Shaker optimization 	<ul style="list-style-type: none"> • Labeling parts of a shaker game • Measure and calculate shaker dynamics • Hands on test tank demo and operation
	Screen Technology	<ul style="list-style-type: none"> ✓ API RP 13 C ✓ Screen comparisons ✓ Screen performance 	<ul style="list-style-type: none"> • Screen sizing • Cut points • Screen analyzing • Field trends • Care 	<ul style="list-style-type: none"> • Screen change on Derrick & competitive shakers • Screen microscope • Screen animation • Troubleshooting Screen Concerns • Ro-Tap® activity in lab
	Drilled Solids Calculations	<ul style="list-style-type: none"> ✓ Hole volume ✓ Washout/porosity ✓ Low gravity solids evaluation 	<ul style="list-style-type: none"> • Solids removal efficiency KPI's 	<ul style="list-style-type: none"> • Solids Removal Activity • Mud Loss Calculations • Mud Report Troubleshooting activity for Solids Control
	Dilution	<ul style="list-style-type: none"> ✓ What is dilution ✓ Dilution calculations & cost ✓ Effect on pit volumes 	<ul style="list-style-type: none"> • Dilution economics 	<ul style="list-style-type: none"> • Dilution activity worksheet from World Oil Article
Thursday A.M.	Derrick Customer Service	<ul style="list-style-type: none"> ✓ Derrick programs and support for drilling personnel 	<ul style="list-style-type: none"> • Derrick programs for solids removal efficiency 	<ul style="list-style-type: none"> • Service manager presentation • Field Reports • Prodigy overview
	Solids Control Review	<ul style="list-style-type: none"> ✓ Quick quiz ✓ References ✓ Zip drive ✓ Course evaluation 	<ul style="list-style-type: none"> • Assessment for learning 	<ul style="list-style-type: none"> • Recap & discussion