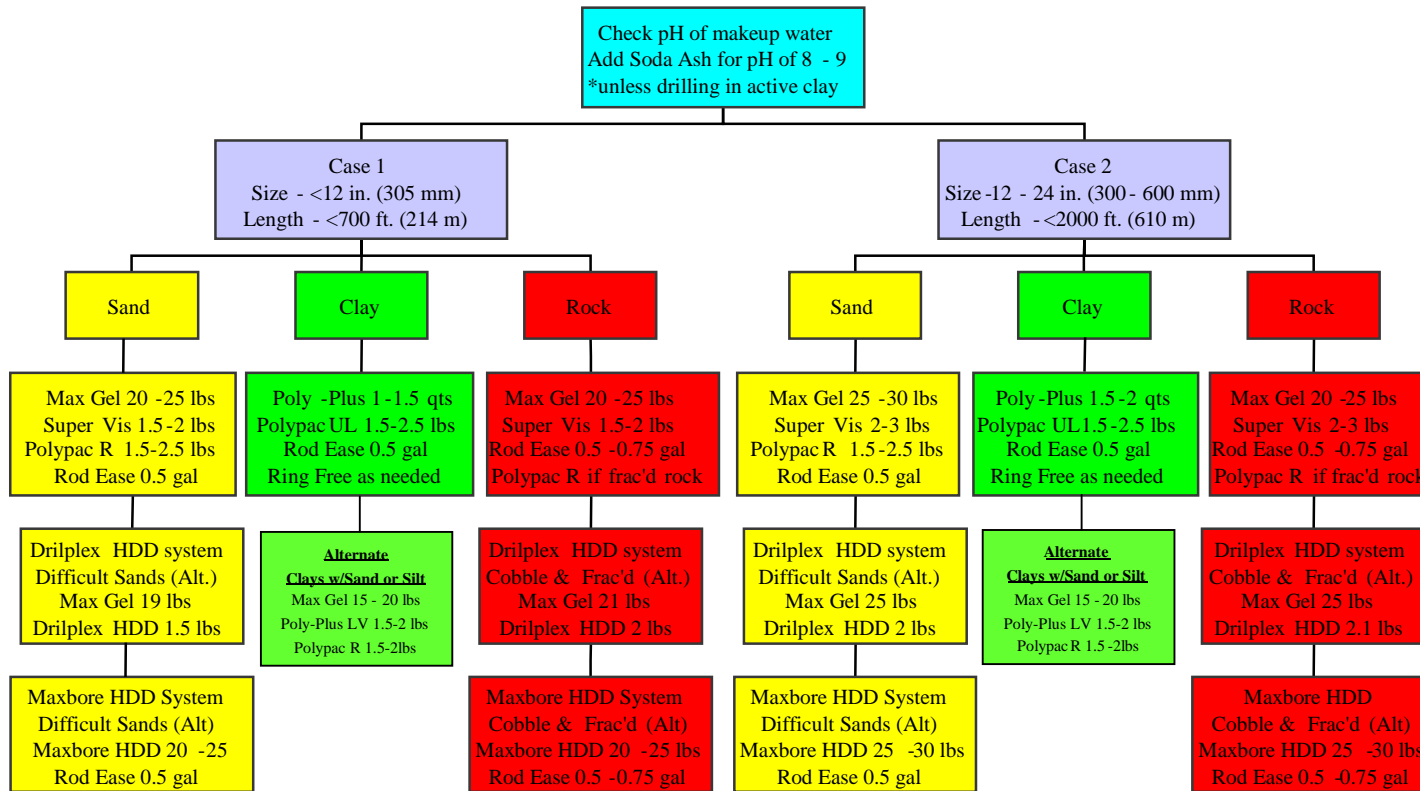


HDD Flow Chart

Based on bore size, length and ground conditions

Additives per 100 gallons



Soda Ash: A dry additive that helps condition make up water to improve bentonite & drilling fluid additive mixing performance.

Max Gel: Premium grade, 220+ bbl yield, Wyoming Sodium Bentonite. Mixes easily and provides high viscosity, multi-purpose drilling fluid.

Maxbore HDD: A one sack, multi-purpose system possessing all the benefits of Hi Yield which is specifically designed for cobble & gravel formations.

Poly-Plus: A liquid PHPA polymer that boosts viscosity, provides clay inhibition and lubricity while decreasing fluid loss. (37 % active)

Poly Plus LV: A readily dispersible dry PHPA that does not increase viscosity but provides inhibition.

Polypac R: A cellulosic polymer that stabilizes the bore-hole and improves mud water loss control and viscosity.

Polypac UL: An “ultra low” cellulosic polymer that stabilizes the bore-hole and improves mud water loss control and viscosity.

Platinum Pac: A readily dispersible cellulosic polymer that stabilizes the bore-hole and improves mud water loss control and viscosity.

Drilplex HDD: An inorganic chemical viscosifier and rheology modifier for water-based bentonite drilling fluids.

Super-Vis: A bio-polymer that improves hole-cleaning & cutting suspension.

Rod Ease: A bio-degradable lubricant that reduces torque and drag and extends equipment life.

Ringfree: A problem solving additive that breaks down clay bonding and sticking tendencies. Also can thin overly viscous fluid.

NOTE:

1. These are initial formulations. Specialty additives and/or dosage amount changes may be needed in difficult conditions.
2. If bores contain mixed ground conditions, use the formulation for the predominate ground condition.
3. Match your bore size to the formulation regardless of machine capabilities.