AMERICAN GILSONITE

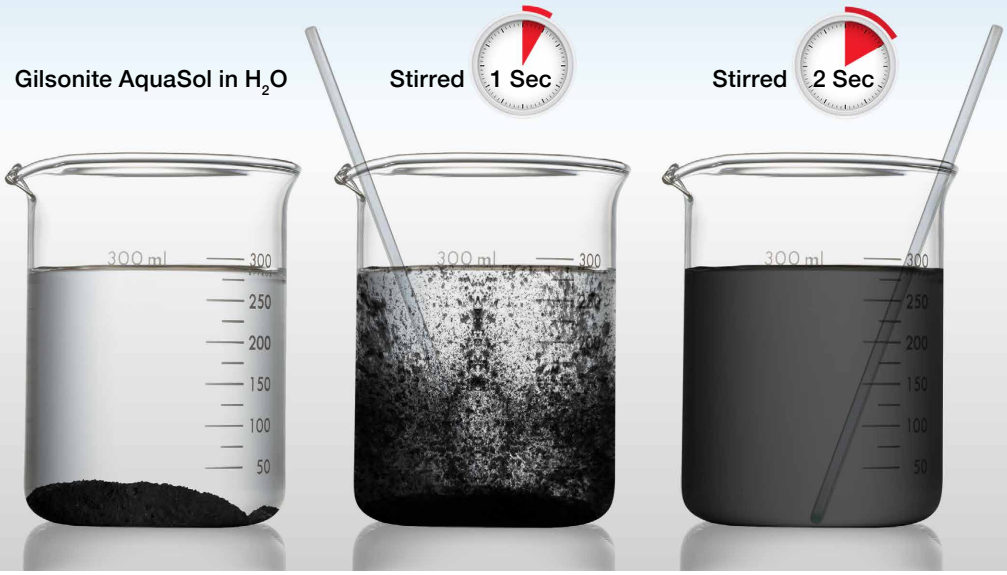
Surfactant-treated Gilsonite AquaSol disperses easily, stabilizes shales, has no HSE impact

Gilsonite AquaSol: Performs in WBM like sulfonated asphalt. Costs 25-50% less.

Gilsonite® AquaSol is a cost-effective, high-performance additive effective in a wide range of water-based systems for both low and high temperature wells. Gilsonite is renowned as an excellent shale stabilizer.

Gilsonite AquaSol disperses quickly and easily in water-based muds

AquaSol is a free-flowing powder that mixes easily through the hopper and disperses with only mild agitation. It is tolerant of contaminants and eliminates the need for additional surfactants or coupling agents.



Properties and features of Gilsonite AquaSol

> Free-flowing powder resists clumping
> Compatible with most water-based systems
> Disperses with mild agitation
> A naturally occurring, mined material
> Effective in both low and high temperature wells

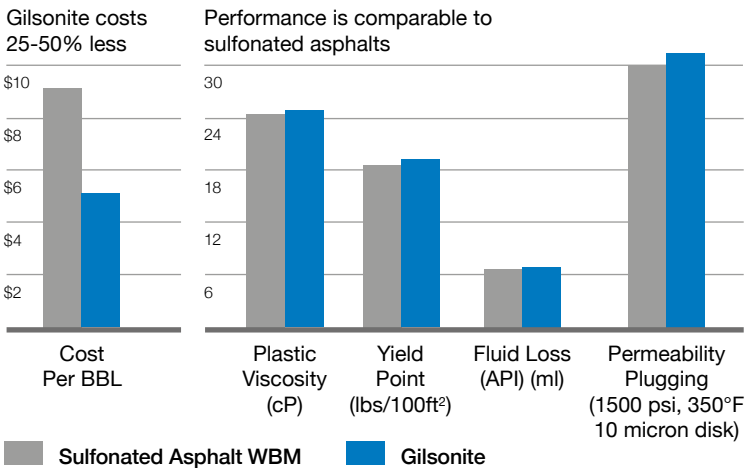
Ease of use, with a wide range of performance benefits

> Mixes easily through the hopper
> Controls fluid loss and seepage
> Stabilizes shales
> Prevents lost circulation
> Strengthens the wellbore
> Minimizes differential sticking
> Maintains lubricity in tight formations
> Is safe and environmentally friendly

Get the performance of sulfonated asphalt and pay 25-50% less

Gilsonite AquaSol performs comparably to sulfonated asphalt at a much lower cost. Plus, AquaSol requires no additional surfactants or coupling agents, so it further lowers costs by allowing you to use fewer additives.

Water-Based Mud Applications:



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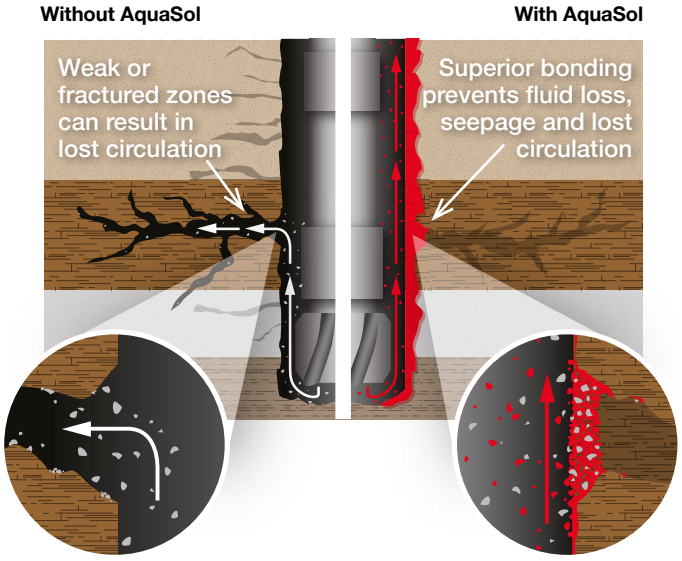
Gilsonite AquaSol has overwhelming performance advantages over alternatives

	Cost-effective	High Temperature	Controls Fluid Loss	Minimizes Differential Sticking	Stabilizes Wellbore	Non-Clumping	Strengthens Wellbore	Smear Effect	Coats & Bonds	Minimal Odor
AQUASOL	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
Lignite	✔	✔	✔	X	X	✔	X	X	X	✔
Oxidized / Sulfonated Asphalts	X	X	✔	X	✔	X	✔	✔	X	X
Bitumen	✔	X	✔	X	X	X	X	✔	X	X
Petroleum Coke	✔	✔	✔	X	X	✔	X	X	X	X
Coal	✔	X	✔	X	X	✔	X	X	X	X
Grahamite	X	✔	✔	✔	X	✔	✔	✔	X	✔
Glance Pitch	✔	X	✔	✔	✔	✔	X	✔	X	X

Unique bonding and plugging properties prevent formation damage



A range of products to meet your water-based needs

Product	Softening Point
Gilsonite AquaSol 325	>325° F
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Gilsonite AquaSol HT 400	>400° F
Gilsonite AquaSol HT 415	>415° F
Gilsonite AquaSol HT 430	>430° F
Gilsonite AquaSol HT 450	>450° F

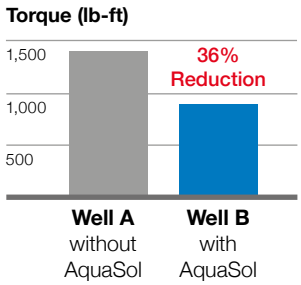
Proven to reduce torque and drag

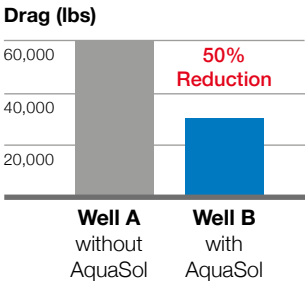
In the South Pass area of offshore Louisiana, the operator wanted to reduce torque and drag. Wells in this area are normally deviated approximately 30° from vertical and are drilled with a conventional lignosulfonate mud.

> **Well A:** Conventional and bead-type lubricants were used for torque and drag reduction.

> **Well B:** 3-4 ppb of Gilsonite AquaSol were added at approximately 10,600 feet.

Upon measurement, the torque on well B was reduced 36% and drag was reduced 50%. Caliper log comparisons from the two wells indicated substantial improvement.





Effective at controlling hole enlargement

Hole enlargement is a problem for wells drilled in the Eugene Island area of offshore Louisiana. On average, hole enlargement was approximately 50% in the 12.25 inch holes. Once 4 ppb of Gilsonite AquaSol were added to the conventional water-based formulation, hole enlargement was reduced to 15% in the same section.

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There's only one source of Gilsonite. **Proven under pressure.®**

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