

# CleanDrill HD divalent brine-based reservoir drill-in fluid

Our flexible and minimally damaging CleanDrill™ HD divalent brine-based reservoir drill-in fluid (RDF) delivers high-performance in a wide variety of operations. With easy filter cake clean-up and low drawdown pressures.

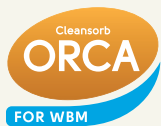
With increased requirement for optimized open-hole drilling and completion, minimally damaging reservoir drill-in fluids are essential.

CleanDrill™ HD divalent brine-based RDF has been carefully designed by our fluids experts to meet your drill-in performance requirements and stringent reservoir integrity targets while minimizing damage to the formation and exceptionally low drawdown pressures.

CleanTrol™ HD, a unique, multi-functional additive providing fluid loss control and viscosity, is used alongside an optimized bridging package to offer a low-solids formulation capable of necessary fluid loss control while maintaining an easily removable filter cake.

**<10 mL fluid loss and 99% flowback @230°F**

Soak time  
7 days



## Engineered for efficient cleanup and filter cake removal using ORCA for WBM technology

For efficient filter cake removal to optimize well productivity, ORCA uniform breaker technology is ideal. ORCA technology is a highly effective, single treatment filter cake cleanup solution available in formulations for oil-based and water-based drill-in fluid filter cakes.

For CleanDrill HD RDF cleanup applications, ORCA for WBM employs an “in-situ” organic acid generating package to dissolve acid soluble materials such as calcium carbonate present in the filter cake. This tailored and optimized acid generating package greatly improves acid placement in order to uniformly dissolve carbonate in the mud cake across the wellbore face. This uniform placement results in excellent zonal coverage across long open hole horizontal or directional sections.

## The main advantages of CleanDrill HD RDF

- Divalent system. (Also available as CleanDrill monovalent brine-based reservoir drill-in fluid)
- Compatible with biopolymers
- Low rheological profile
- Excellent cuttings transport
- Superior fluid loss control
- Thin, impermeable, minimally damaging filter cake
- Efficient cleanup and removal of filter cake
- Additives for shale inhibition, temperature stabilization and lubrication.

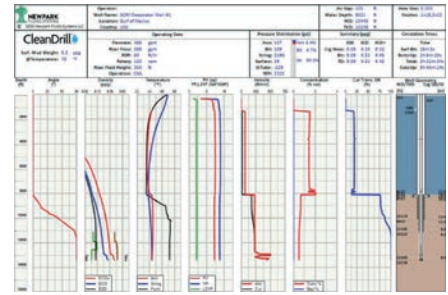
# CLEANDRILL HD DIVALENT BRINE-BASED RESERVOIR DRILL-IN FLUID

## Expert support every step along the way

We understand no two wells are the same. Engineered to your bespoke reservoir specifications, CleanDrill HD RDF is field-proven by major operators to deliver successfully in some of the world's most challenging conditions.

## Keeping you one step ahead with ClearTrack modeling software

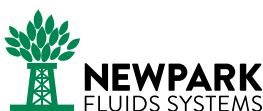
Our experts utilize lab testing specific to the design and development of fit-for-purpose reservoir drill-in fluid. Leveraging our ClearTrack™ fluids hydraulics modeling software along with reservoir information and associated samples to construct a properly blended RDF capable of anticipating and overcoming your unique challenges.



## CleanDrill HD lab data

Formulation			
Density	1.66 sg		
Product	Units	Function	Conc.
1.7 sg CaBr <sub>2</sub> Brine	bbl	Base brine	0.888
Water	bbl	Base fluid	0.054
CleanTrol HD	ppb	Fluid loss	7.0
MgO	ppb	pH Buffer	2.0
TrueCarb 5	ppb	Bridging	15.0
TrueCarb 25	ppb	Bridging	15.0

Hot Roll/Static @ 190° F	BHR		AHR	
Properties	70	120	70	120
600 rpm	91	67	104	74
300 rpm	58	43	67	49
200 rpm	44	34	53	39
100 rpm	29	23	36	27
6 rpm	6	7	10	8
3 rpm	4	5	8	7
PV	33	24	37	25
YP	25	19	30	24
10 sec gel	3	4	6	6
10 min gel	4	5	7	6
<b>Aloxite Disc Size:</b>	<b>3 micron (old)</b>		<b>10 micron</b>	
<b>Temperature (F)</b>	<b>190</b>		<b>190</b>	
Spurt HTHP, ml	1.4		2.0	
30 min HTHP, ml	3.6		4.2	
1 hr HTHP, ml	4.9		5.4	
Total Fluid Loss (16 hr)	17		17.1	
Filter Cake Thickness, mm	2		2	



Contact Newpark fluids specialists for more information  
[nfs@newpark.com](mailto:nfs@newpark.com) or visit [newpark.com/fluids](http://newpark.com/fluids)

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