

Mud Master Drilling Fluid Services

Tapered Monobore Horizontal

Surge Energy HZ Provost 15-15-39-2 W4



Formations	mSS m	MD m	TVD m	H ₂ S %	HOLE INTERVAL	FLUID PROPERTIES	COMMENTS AND SUGGESTIONS		
Formation Tops and Estimated Depths					SURFACE HOLE0 - ±105 m311 mm				
SURFACE CASING105m105m					Mud System:				
Lea Park160m160m					Density			• Surface Hole has been drilled and Preset.	
BGWP283m283m					Vis (Drilling)				
Colorado422m422m					Vis (Case)				
					PV				
					YP				
					Gels				
KOP483m483m					TOP HOLE105 - ±741 m MD200 mm				
					Mud System:			Floc Water - OP-T-Con CS-3001	
Second White Specks533m533m					Density			1000 - 1010 kg/m³	• Dump all surface mud and clean tanks thoroughly.
Base Fish Scales576m574m					Vis			28 - 29 s/L	• Drill out shoe with water, reducing excess cement ph with Sulphamic acid if needed.
Viking622m614m					Calcium			400 - 600 mg/L	• Maintain Ca ²⁺ ion at >400 mg/L with Envirofloc and Gypsum.
Viking Sandstone629m620m					Inhibition			1.0 L/m³	• Flocculate solids with Hyperdrill AF 204 as required.
Joli Fou650m636m					Sweeps			As Needed	• As necessary, trickle in approximately 1.0 L/m³ of Op-T-Con CS-3001 as offsetting wells show the upper formations can be susceptible to clays and shale.
Colony708m674m					BUILD SECTION±741 - 923 m MD200 mm				
McLaren736m688m					Mud System:			Clay Free Polymer	Mud up at ±750 mMD.
Mud Up +/-741m					Density			1040 - 1120 kg/m³	• Initial mud up will be with Polyxan and UltraPac LV/R as required at a 1:1:1 ratio.
Sparky Coal830m720m0.41					Vis (Drilling)			45 - 60 s/L	• If necessary maintain Op-T-Con CS-3001 concentrations for mud section at 1.0 L/m³ for effective shale mitigation.
Sparky SS834m721m0.41					PV			10 - 20 mPa.s	• Run solids control equipment as req'd.
Sparky B847m724m0.41					YP			3 - 18 Pa	• Control fluid loss at < 6.0 cm³ with additions of .
Sparky C897m731m0.41					Gels			2 - 6 / 4 - 12	• Lignite and UltraPac LV at a 1:1 ratio
Heel923m732m0.41					pH			9.5 (10.5)	• Use Polyxan as required for improved hole cleaning in the build section and to assist in raising Vis/YP to ensure good hole cleaning.
Total Depth HZ1869m732m0.41					Fluid Loss			< 6.0 cm³	• Maintain pH at 8.5 - 9.5 with pHix 14 or Caustic Soda /Caustic Potash and Lignite.
					Inhibition			If Necessary	(If required raise pH to 10.5 if H2S is encountered in Sparky) .
					HORIZONTAL SECTION±923 - 1869m MD (TD)159 mm				
					Mud System:			Clay Free Polymer	• Continue with Clay Free Polymer system.
					Density			1040 - 1120 kg/m³	• Control density as low as possible while drilling the HZ section to help prevent torque and drag.
					Vis (Drilling)			45 - 55 s/L	• Maintain Vis as required with UltraPac LV, Polyxan and UltraPac R as required at a 1:1:1 ratio.
					PV			10 - 20 mPa.s	• Maintain fluid loss at < 5.0 cm³.
					YP			3 - 18 Pa	• Maintain pH at 8.5 - 9.5 with pHix14 or Caustic Soda and Lignite.
					Gels			2 - 6 / 4 - 12	(If required raise pH to 10.5 if H2S is encountered)
					pH			9.5 (10.5)	
					Fluid Loss			< 5.0 cm³	
					Inhibition			If Necessary	
									• Maintain a turbulent flow rate on horizontal section for maximum hole cleaning.
									• If torque and drag become a problem, mix Lubricant Sun Burst DP / M&D Luquid Lube as required. Consult with drilling foreman prior to mixing.

