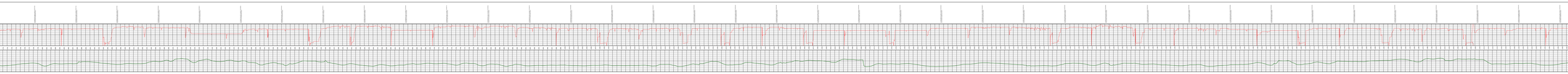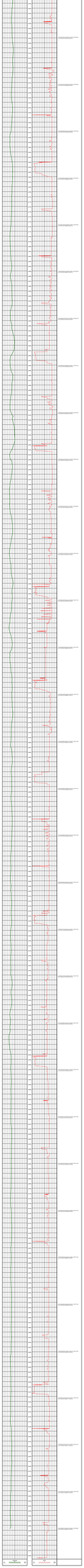COMPOSITE LOG