$$\log(5x+1) = \log(100) + \log(2x-3)$$

$$\log(5x+1) = \log(100(2x-3))$$

$$5x+1 = 200x - 300$$

$$301 = 195x$$

$$\frac{301}{195} = x$$

Check $5x+1 = 5\left(\frac{301}{195}\right)+1 > 0$

$$2x-3 = 2\left(\frac{301}{195}\right) - 3 = \frac{601}{195} - \frac{585}{195} > 0$$

So $x = \frac{301}{195}$ is a solution