$$E[-\frac{\partial^2}{\partial^2 p}\log[f(\mathbf{M}\,|\,p)]] = E[\frac{M}{p^2} + \frac{(N-M)}{(1-p)^2}]$$

$$= \frac{Np}{p^2} + \frac{N(1-p)}{(1-p)^2}$$

$$= \frac{N}{p(1-p)}$$