PHYS 703 - Dipole Moment Density Problem

Consider a large surface with dipole moment density $D(\vec{x})$.

a) Using the expression for the potential due to a dipole, obtain an expression for the potential due to this surface. The result should be the same as the one in Jackson.

b) Obtain the electric field just below the surface, just above the surface, as well as "between the two surfaces" if we think of the surface as composed of two thinly separated surfaces each with charge density $\sigma(\vec{x})$.

To aid understanding you may take the dipole moment to be constant across the surface.