Beals page 11, #1: If $E \subset$ is any set, then

$$m^*E \leq m^*(E \cap A) + m^*(E \cap A^c)$$

automatically, regardless of m^*A. On the other hand, since $m^*A = 0$,

$$m^*(E \cap A) + m^*(E \cap A^c) \leq m^*A + m^*E = m^*E.$$

Hence $m^*E = m^*(E \cap A) + m^*(E \cap A^c)$ for all $E \subset$. That is, A is measurable.