Predict the major product of the following reaction sequence.

$$\begin{array}{c}
O \\
OH
\end{array}
\begin{array}{c}
SOCl_2 \\
\hline
\text{pyridine}
\end{array}$$

A) OH
$$N(CH_3)_2$$
B) D) O
$$N(CH_3)_2$$
C) E) No Reaction
$$N(CH_3)_2$$