Heusler alloy Mn$_3$Si is antiferromagnetic below the Néel temperature of $T_N = 23$ K with the incommensurate spin structure of a propagation vector $Q = 0.425G_{111}$, $G_{111}$ is the reciprocal lattice vector along the [111] direction [1]. The Mn atoms have two crystallographic sites; Mn(I) with large magnetic moment is surrounded by eight Mn atoms, and other Mn(II) with small magnetic moment is characterized by the nearest neighbor atoms of the same number of Mn and Si. An anomaly has been observed in the specific heat measurement around $T_a = 8$ K. At the temperature region below $T_a$, the 3rd harmonies satellites have been observed at the 3Q positions expected by the propagation wave vector Q of the fundamental satellite [2]. Single crystalline sample of Mn$_3$Si was prepared by Bridgman method. The measurements of the electrical resistivity $\rho$ and thermopower $S$ for the [111] direction were carried out at temperatures from 2 K to 300 K under pressures up to 2.2 GPa. As shown in Fig. 1, $\rho$ and $S$ show the characteristic features around $T_N$. Especially $S(T)$ shows a local minimum at $T_a$. Figure 2 shows the pressure dependence of $T_N$ and $T_a$ obtained from $\rho(T)$ and $S(T)$ curves. $T_N$ increases linearly with increasing $P$. $T_a$ increases with increasing pressure up to 1 GPa and most likely vanishes above 1 GPa, indicating a pressure induced phase transition.