Studies of the ferromagnetic Kondo lattice system of single crystal CeZnSb\textsubscript{2} HAN-OH LEE, Department of Physics, University of California at Davis, SATORU NAKATSUJI, 3Department of Physics, Kyoto University, YING CHEN, WEI BAO, Los Alamos National Laboratory, ROBIN MACALUSO, JULIA CHAN, Department of Chemistry, Louisiana State University, TUSON PARK, Los Alamos National Laboratory, BRAD CARTER, 2National High Magnetic Field Laboratory, Florida State University, PETER KLAVINS, Department of Physics, University of California at Davis, JOE THOMPSON, Los Alamos National Laboratory, ZACHARY FISK, Department of Physics in University of California at Davis, Los Alamos National Laboratory — We have grown single crystals of the ferromagnetic Kondo lattice system CeZnSb\textsubscript{2}. The ferromagnetic ground state was confirmed by neutron scattering. In addition, a small hysteresis in magnetization data indicates soft ferromagnetism. The large heat capacity coefficient (350 mJ/mol-Ce K$^2$) below the transition temperature, on the other hand, suggests a heavy mass state even below the magnetically ordered state. Thermodynamic, magnetic, and transport properties along with pressure experiments will be presented. The origin of such unusual magnetism will be discussed. This work was supported by NSF DMR-0433560.