1001-57-379 **Ken Baker*** (`kb@math.uga.edu`), Department of Mathematics, University of Georgia at Athens, Athens, GA 30602-7403. *Closed Essential Surfaces in the Complements of Large Volume Berge Knots.*

The knots that lie as essential simple close curves on the fiber of a genus one fibered knot comprise a family of Berge knots, the known knots with lens space surgeries. The set of volumes of the hyperbolic knots in this family is unbounded. Given such a knot K we exhibit an equation whose solutions correspond to the closed essential surfaces in $S^3 - N(K)$. We then discuss relationships between the volumes of these knots and the closed essential surfaces in their complements. (Received August 31, 2004)