1079-30-328 Roger W. Barnard* (roger.w.barnard@ttu.edu), Department of Mathematics & Statistics, Texas Tech University, Lubbock, TX 79409, Alexander Yu. Solynin (alex.solynin@ttu.edu), Department of Mathematics & Statistics, Texas Tech University, Lubbock, TX 79409, and Matthew Lochman, 10901 Little Patuxent Parkway, Columbia, MD 21044. Iceberg-type Problems: Estimating Hidden Parts of a Continuum from the Visible Parts.

We consider the complex plane \mathbb{C} as a space filled by two different media, separated by the real axis \mathbb{R} . We define $H+ = \{z : z > 0\}$ to be the upper half-plane. For a planar body E in \mathbb{C} , we discuss the problem of estimating characteristics of the "invisible" part, $E- = E \setminus H+$, from characteristics of the whole body E and its "visible" part, $E+ = E \cap H+$. In this talk we determine the maximal draft of E as a function of the logarithmic capacity of E and the area of E+. We then discuss the problem for the more naturally occurring domains that are convex and those with more general type boundaries. (Received January 17, 2012)