1070-53-236   **Gideon Maschler*** (`gmaschler@clarku.edu`), Dept.of Mathematics and Computer Science, Clark University, Worcester, MA 01610. *Scalar Curvature and holomorphy potentials.* Preliminary report.

We examine Kähler metrics on compact manifolds which satisfy a generalization of Calabi's extremal metric condition. The requirements considered are that the scalar curvature is a function of a potential for a holomorphic vector field; or, that such a function, when multiplied by a function of the scalar curvature, yields a second holomorphy potential. We give examples, and a non-existence result for a particular family of metrics. (Received February 13, 2011)