*Electrical Exploration of Geothermal Systems in North Central Nevada*

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A program of geological, geochemical, and geophysical exploration of four geothermal areas in north central Nevada has been undertaken by the Lawrence Berkeley Laboratory and the University of California at Berkeley. Of primary importance to this program are electrical methods of exploration, which have demonstrated their usefulness in delineating geothermal reservoirs elsewhere in the world. Collinear telluric profiling and bipole-dipole resistivity have been compared and evaluated with regard to ease of data collection and ability to resolve areas worthy of more concentrated study. Over 65 line km of telluric measurements (with dipole lengths of 250 or 500 m) have been made in one of the areas alone, while the largest bipole-dipole survey has covered an area of 250 sq km with roving dipoles for two transmitter bipole locations. Areas of interest have been detailed with collinear dipole-dipole profiles using dipole lengths between 250 and 1000 m and dipole separations up to ten km. Two-dimensional modeling programs have been used to interpret these data. The telluric profiles appear to be as useful as the bipole-dipole but allow considerable saving of field time.