

# COMPLETION OF SURFACE HEAT FLOW PROGRAM 5 July 2009

KUTh Energy has prepared the following statement of exploration results in accordance with our compliance with the Geothermal Reporting Code.

KUTh Energy Ltd is pleased to announce the completion of a two-year, systematic, surface heat flow estimation program across two of its three Tasmanian tenements, SEL 26/2005 and SEL 45/2007. Reliable estimates of surface heat flow, which provide an indication of the heat energy that is emitted from the Earth, are now available from 35 localities on a 20 x 20km grid across the tenement area (Figure 1a). These data provide a detailed picture of the thermal field in Eastern Tasmania.

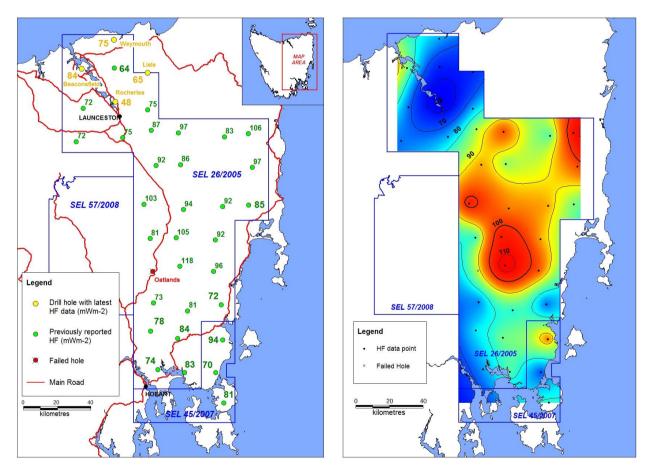


Figure 1: Location maps showing all heat flow estimations determined from KUTh Energy's shallow drilling program (left) and interpolated Surface Heat Flow across Tasmanian tenements (right). Contour interval is 10mWm<sup>-2</sup>. The reliability of predicted HF values will decrease with distance from measured data points.

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## Implications

Surface heat flow data *clearly indicate the existence of a significant thermal anomaly in central Eastern Tasmania*. The size, distribution and location of this anomaly are consistent with the *current geological model of buried high-heat-producing granite batholiths at depth in this location*. In total, an area of ~4170km<sup>2</sup> is estimated to have anomalously high heat flow (>90mWm<sup>-2</sup>). This area, which remains open to the west, is the prime target area for future geothermal development in Tasmania. Within this zone smaller areas of higher heat flow (>100 mWm<sup>-2</sup>) are identified, each of which is a potential Enhanced Geothermal System target. The most significant of these *is an area of ~620km<sup>2</sup> in the south central region where the recorded heat flow is amongst the higher values measured in Australia*. A second area of elevated heat flow is observed at Mt Nicholas in the north-east of the tenement area. A separate, small heat flow anomaly (>90mWm<sup>-2</sup>) is also visible in the south, centred upon the Rheban drill hole on SEL 45/2007.

Integration of the newly completed surface heat flow field with available geological and geophysical data has enabled the development of 3D geothermal models. These models will form the basis for future stored heat geothermal resource estimations in this area.

The completion of this comprehensive two-year heat flow program is a major milestone in the development of KUTh Energy's Tasmanian geothermal project. KUTh Energy has pursued this detailed and systematic approach to geothermal tenement exploration to provide high quality inputs for geothermal resource estimation, and to enable more accurate location targeting for initial production drilling.

KUTh Energy is continuing to develop the Tasmanian project on the basis of these positive results, making further progress toward commercial electricity generation.

The information in this report that relates to geothermal exploration results is compiled by the staff of KUTh Energy Ltd and its respective consultants and supervised by Dr Roger Lewis an employee of Liddington Technology Pty Ltd. Dr Lewis and associates hold a financial interest in KUTh Energy Ltd.

Dr Lewis has sufficient experience in the style of geothermal play under consideration to qualify as a Competent Person under the Australian Code for Reporting of Exploration Results, Geothermal Resources and Geothermal Reserves (2008 Edition) and is an Active Member of the Society of Exploration Geophysicists, a Member of the Australian Institute of Geoscientists and abides by the Codes of Ethics of those organisations.

Dr Lewis has consented in writing to the public release of this report in the form and context in which it appears.

#### ENDS

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# Appendix

## Heat Flow Data Acquisition: Process and results

Surface heat flow estimates were recorded in Tasmania using purpose-drilled shallow bore holes (<250m). Heat flow was successfully estimated at 97% of target sites with a single failed site located at Oatlands in central Tasmania. In this instance, temperature log data indicate the presence of water flowing down the outside of the casing and entering a permeable formation at around 200m depth, preventing the measurement of an accurate temperature gradient in the hole.

In all cases, surface heat flow was determined as the product of measured down-hole temperature gradients and corresponding thermal conductivity values recorded from local core samples. The acquisition of all thermal data was undertaken by geothermal consultants Hot Dry Rocks Pty Ltd. Temperature data were recorded using a precision logging instrument (thermistor) in 1m depth increments. Each hole was logged twice over the course of several months after drilling to ensure thermal equilibration. Thermal conductivity data were recorded at room temperature using a divided bar apparatus to measure samples cut from core at several levels within each hole.

Surface heat flow was estimated for each site by Hot Dry Rocks Pty Ltd using one-dimensional (1D) heat flow modelling software. Heat flow for each bore was assumed to be conductive and was estimated by comparison of modelled (predicted) and observed temperature values. Shallow advective influences, related to the movement of ground or meteoric water, are interpreted to affect the temperature field in seven holes. In all cases where shallow water movement was suspected, the regional heat flow was assumed to be that value which was observed below the advective influence.

Surface heat flows determined by this program are typically of high quality with good to excellent model fit and uncertainties <5%. Only two holes, Rocherlea and Tiberias, failed to produce good model fit and are therefore considered to be of lower quality.

Results of the KUTh Energy surface heat flow program are provided in Table 1 (over).

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Locality	Easting	Northing	SEL	Heat Flow (mW/m <sup>2</sup> )
Bangor	508572	5440427	26/2005	64 ± 4.2
Beaconsfield*	489244	5439884	26/2005	86 ± 0.4
Ben Lomond	546613	5402059	26/2005	97 ± 2.3
Bluestone Tier	571901	5300093	26/2005	72 ± 0.6
Cambridge	534378	5261742	26/2005	74 ± 1.2
Charlton	545174	5339821	26/2005	105 ± 1.9
Elizabeth	549501	5356701	26/2005	94 ± 2.4
Epping	533251	5382606	26/2005	92 ± 0.6
Fingal	590381	5381540	26/2005	97 ± 2.9
Frankford	490171	5416602	26/2005	72 ± 2.2
Kingston	547791	5383093	26/2005	86 ± 3.1
Lake Leake	568510	5338586	26/2005	92 ± 2.9
Lemont	547437	5322898	26/2005	118 ± 6.4
Lisle*	528218	5437495	26/2005	65 ± 0.5
Macquarie	526048	5359621	26/2005	103 ± 1
Marion Bay	568645	5260030	45/2007	70 ± 0.5
Mt Nicholas	587962	5401440	26/2005	106 ± 1.3
Murdunna	573413	5242021	45/2007	81 ± 1.1
Native Hut	530061	5284634	26/2005	78 ± 1.8
Numara	528262	5415737	26/2005	75 ± 1.1
Oatlands*	531347	5319896	26/2005	-
Perth	513500	5399080	26/2005	75 ± 1.1
Rheban	572790	5279433	45/2007	94 ± 0.5
Rocherlea*	509171	5420496	26/2005	$48 \pm 0.4$
Runnymede	546175	5280238	26/2005	84 ± 2.5
Snow Hill	572873	5358389	26/2005	92 ± 2.3
Sorell	550181	5260122	26/2005	83 ± 1.1
Swan2	588108	5359271	26/2005	85 ± 1.2
Temple Bar	530426	5403592	26/2005	87 ± 1.9
Tiberias	531690	5301300	26/2005	73 ± 3.9
Tooms	567354	5319894	26/2005	97 ± 2.5
Tower Hill	573964	5399699	26/2005	83 ± 1
Tunbridge	529875	5339428	26/2005	81 ± 1.2
Westbury	485940	5396730	26/2005	72 ± 1.3
Weymouth*	508409	5457196	26/2005	75 ± 1.3
Woodsdale	552007	5296499	26/2005	81 ± 3.2

Table 1: Summary of data from KUTh Energy's Tasmanian surface heat flow program. Coordinates are MGA94 (Zone 55).

\* Value not previously reported.