

Swann and Jenkins Pty Ltd

ABN: 36 124 993 031

RELIQUISHMENT REPORT SEL 03/2009

Due: 18th FEBRUARY 2013

RELINQUISHED BY SWANN & JENKINS PTY LTD
ON 27TH NOVEMBER 2012

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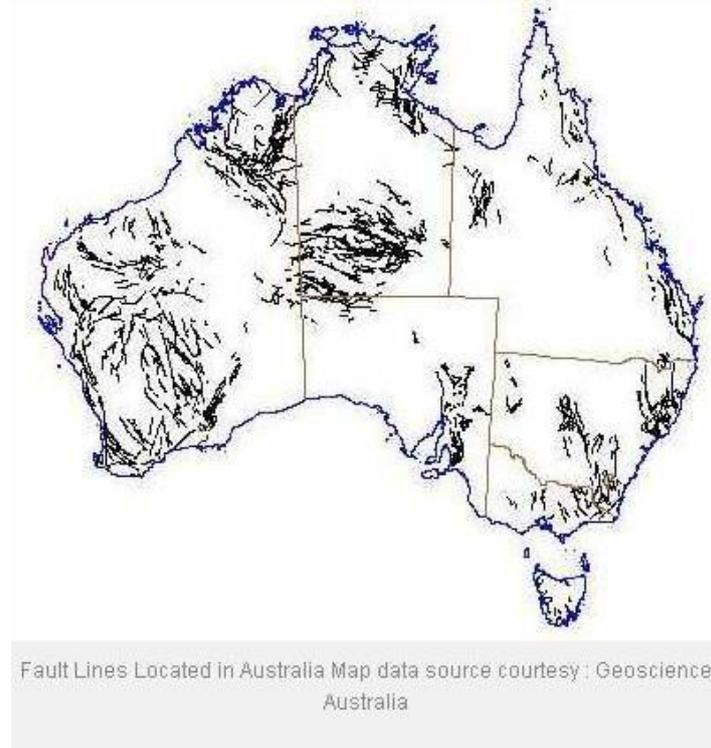
1. Introduction

On 16th December 2009 Special Exploration License SEL 3/2009 relating to an area where geothermal exploration was to take place located on the East Coast of Tasmania was granted to Swann and Jenkins Pty Ltd (Swann and Jenkins) by the Department of Infrastructure, Energy and Resources (DIER) within Mineral Resources Tasmania (MRT). Appendices A to C to this report provide an overview of the location and extent of the licence area granted.

The vision driving the original license application was three fold namely, Geology, Practicality and Investor interest based, as set out below and detailed further within this Relinquishment report:

1. Geology wise, Swann and Jenkins Directors work with the Australian School of Petroleum (ASP) at the University of Adelaide in 3-D deep seated fault modeling in relation to Petroleum Exploration License 423 covering the Gulf Of St Vincent to the West of Adelaide, also held by the Company, lead in an initial geological assessment with a specialist basin geologist working in Tasmania to the faulting systems on the East coast of Tasmania being identified as potentially hosting nearer surface heat flow differentials/systems suitability as geothermal energy generation sources. Potential for the use of this same 3-D modeling (if not already underway) to better understand the geotechnical environment covered by the Licence was identified.

Figure 1: Major faults lines in Australia. Source: Geoscience Australia



This high level potentiality was further investigated through review of more detailed magnetic and gravity survey datasets available at the time for the area covered and surrounding SEL 3/2009. Previously undertaken 3-D major fault modeling was also reviewed.

This lead to a proposed exploration program being developed for the license comprising of further gravity and magnetic surveying (data capture) and interpretation and modeling being proposed as well as a drilling program to obtain detailed heat flux information. With further 3-D modeling also expected to be undertaken.

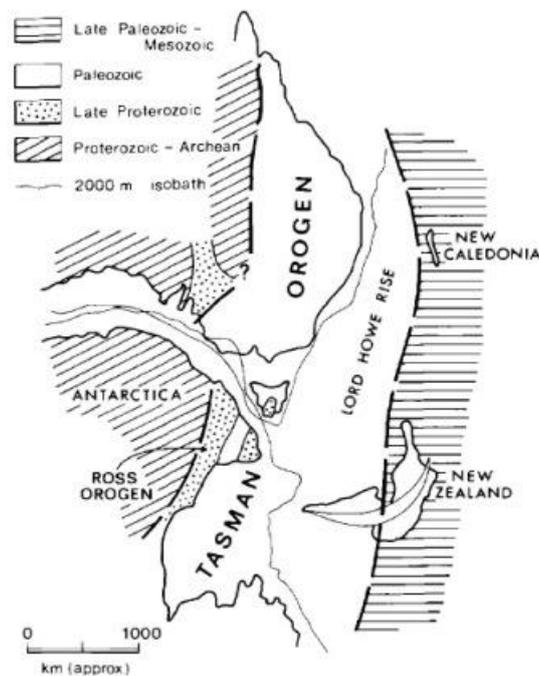
The geological context particularly the geological continuities between Tasmania, New Zealand and Antarctica and the significance of the subsequent tectonic processes during the breaking up of Gondwanaland and subsequent tectonic plate related activity also had a high profile in Swann and Jenkins considerations of the areas potentiality.

Figure 2: Gondwanaland 170 million years ago.



Figure 3: Tasmania as part of Australia and Antarctica on the continental crust, prior to the opening of the Tasman Sea in the Cretaceous (Solomon 1981, Modified after Griffiths 1974)

Source: www.exploringtheearth.com



One of Swann and Jenkins Directors has previously worked in extrusive geology hydrothermal systems in Rotorua, New Zealand. Specifically in the removal trace element (Arsenic complexes) from within such geothermal systems. Not only did this establish the Company's interest in these systems but it provided a basic understanding of geothermal energy generation technologies and processes and there potential.

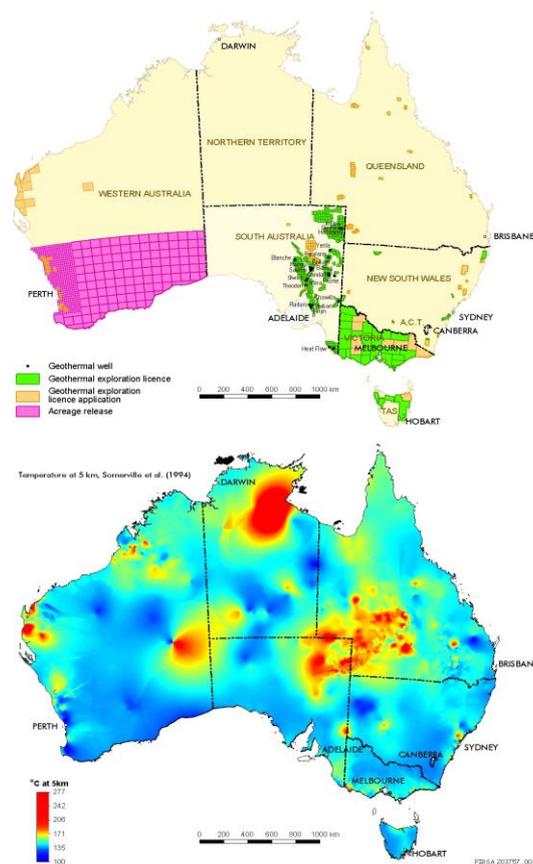
The Tasmanian East coast geology (particularly the Devonian granite intrusions/batholiths evident) and presence/identification of what are understood to be off shore "smokers" or hydrothermal vents, as mapped/recorded by the Institute of Marine and Antarctic studies at the University of Tasmania during sea floor flora and fauna studies, also raised the Company's

interest in terms of the potential for nearer surface hydrogeological systems that could be suitable conditions for geothermal energy generation and more cost effectively tapped.

2. Beyond the theoretical geothermal resource potentiality as set out above, the East coast license location was considered in practical terms favourable for any power generation facility development being proximal to existing infrastructure, that is, high voltage transmission lines and a heat transfer medium (sea water) subject to regulatory approvals. Swann and Jenkins is a shareholder in a renewable energy company which has power generation and thermal energy conversion engineering expertise, of potential use in the early opportunity assessment process.
3. Finally, at the time Swann and Jenkins applied for SEL 3/2009 there had been a general awareness raising of the potential of geothermal energy generation technologies in conjunction with an increased awareness of their attractiveness as a renewable energy investments. Between the granting of the first geothermal exploration licence in Australia in 2001 and June 2009, at total of 48 companies applied for 384 licence application areas covering ~358,906 km² in Australia. Figures 4 (top map) & 5 (bottom map) show Geothermal licences, applications and gazetted areas as at February 2009, prepared by Hot Dry Rocks Pty Ltd – Essentially *investor interest* - and Figure 2 shows Extrapolated temperature at 5km interpolated across Australia as prepared by Prame Chopra at the Australian National University (ANU) – essentially Potential geothermal “hot spots” in the earth’s crust.

(Source: http://www.pir.sa.gov.au/geothermal/ageq/status_of_geothermal_licence_activity)

Figures 4 and 5: 2009 Geothermal investor interest and potential Geothermal “hot spots”



Swann and Jenkins had previously been involved in (has a track record) raising early stage project development funding both on the ASX market and through private equity investors.

Leading up to the time SEL 3/2009 was granted investment in the development of Geothermal energy opportunities/prospects in Australia had received great interest and had received significant investment from the investment community.

Unfortunately, that investment interest and appetite by the end of 2009 had basically reached its peak.

Swann & Jenkins Directors subsequently met with a total of six (6) Geothermal Energy focussed companies as well as numerous private equity investors in Australia and overseas to ascertain their interest in proceeding to work with Swann and Jenkins and progress the program of work for SEL3/2009. However a partner was not successfully secured.

On 27th November 2012, Swann & Jenkins submitted to DIER MRT notification that Special Exploration Licence 3/2009 would be relinquished (refer Appendix D).

This letter set out the basis for relinquishment as being a combination of:

- a) unforeseen funding difficulties experienced as a result of the global financial crisis. The limited availability of funding through capital markets for investments in a joint venture partnership as envisaged by Swann and Jenkins at the time of application to progress SEL 3/200 were compounded by:
 - the relatively high technical risk perceived as being associated with the early stage exploration and project development of the nature of SEL3/2009. *Note: Acknowledgement of the significant installed power generation capacity globally based on near surface geothermal energy globally must be made here,*
 - the relatively long timeframe to cashflow of such projects.
- b) Compounded by the limited success in the delineation of geothermal resources, commercial venture establishment and commercial returns delivery to investors as a result of prior investments in the geothermal energy sector in Australia.

These factors severely diminished the interest in investment into the proposed program of work for SEL 3/2009.

The Directors of Swann and Jenkins were unable to attract a joint venture partner and the funding for the program, as was envisaged.

This led to the actual program of activities for SEL 3/2009 being impacted/curtailed relative to that originally envisaged and intended at the time of licence approval.

As a result this Relinquishment Report for SEL 03/2009 as required, is presented by Swann and Jenkins for the consideration of the Director of Mines, as part of Licence release.

2. Exploration Philosophy

a) Exploration Philosophy and Model

The vision behind the licence application as set out above was based on:

- Geology,
- Practicality, and
- Investor interest.

The exploration philosophy and model which supported the delivery of this vision were as follows:-

(i) *Geology- The Geological environment or context(Heat sources)*

Various published/readily available articles setting out the geology of Tasmania including the Tasmanian Geological Record 2005/03, describe the Devonian granite intrusions (batholiths) off the east coast of Tasmania in detail. Gravity measurements (various) across north east Tasmania at depth support the ongoing geological processes associated with batholith genesis, as a result of ongoing deep seated tectonic activity, independent of the specific/detailed tectonic theory (ies) followed.

Similarly the east coast granite outcrops on the Freycinet Peninsula and at Maria Island, adjacent to the area covered by SEL 2009/3, as shown in Figure 6 below, support the same conditions being present along the east coast of Tasmania through to the the south eastern area covered by SEL 3/2009. Establishing a theoretical basis for the potential presence of suitable heat sources at depth for geothermal energy generation

Figure 6: Devonian Granites, Taheri & Bottrill Tasmanian Geological Record 2005/03 p. 19

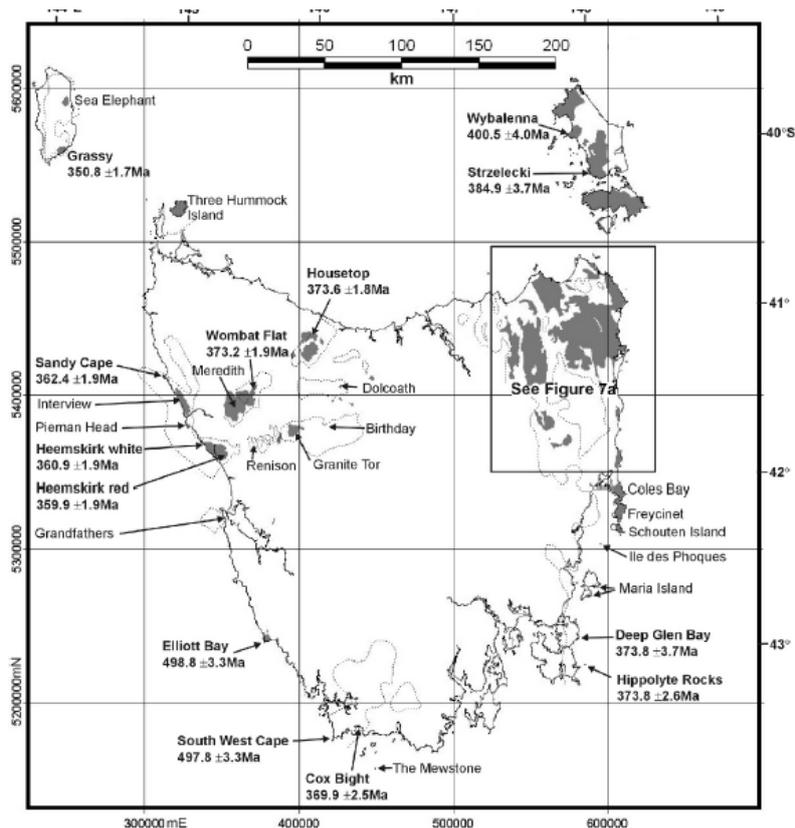


Figure 7

Location map for Tasmanian granites. Details of granites in northeast Tasmania are shown in Figure 7a.

(ii) Geology - Geotechnical environment (Heat flow)

The presence of deep seated faulting in the area was also considered relevant in the exploration model and philosophy, as shown in Figure 7 below. This presents a potential ongoing heat flow link

Figure 7: 3-D Geological model showing major faults on mainland Tasmania

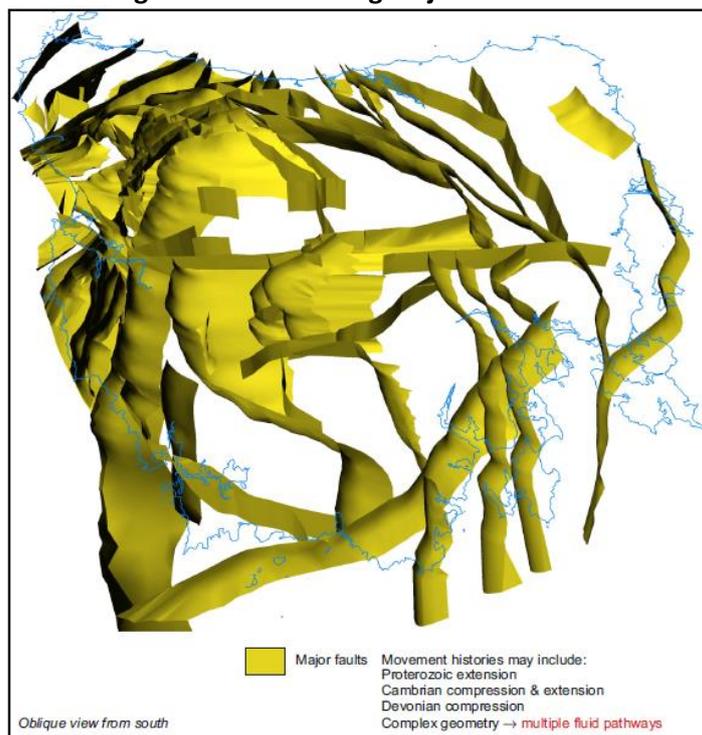


Figure 14

3-D geological model showing major faults on mainland Tasmania.

Source: Geology and Mineral Deposits of Tasmania: a summary, Bulletin 72, Department of Infrastructure Energy and Resources, Mineral Resources Department

A key factor in geothermal prospect economics is the cost of accessing thermal gradients sufficient to enable heat transfer. Clearly heat dissipation through faulting and fracturing fed by a more consistent deeper crust source would be ideal. This raises the issue of potential transfer medium losses. Directional drilling and modern drill hole casing techniques are likely to prove important along with a whole of system analysis (size and steady state requirements).

The program of work for SEL3/2009 sought to review magnetic and gravity datasets to show that an extensive basement fracture system passes from the Tamar area south east into the Swansea area, as supported by the high level geotechnical setting shown above, which facilitated access to significant heat sources. With the basement fracture system intersecting north and south fracture-controlled spines of the granite bodies potentially leading to a zone containing significant heat gradients that could be accessed with a thermal medium (e.g. water) for heat transfer to take place sufficient to allow thermal heat conversion for power generation.

(iii) Geology - Off shore extensions (Proximity of heat sources to surface – lower cost to access)

More recently work on hydrothermal systems/mineral systems offshore along the coast of Tasmania by the Institute of Marine and Antarctic studies at the University of Tasmania and others supports the presence of geothermal heat flows and provides a basis technically for the potential exploration

and evaluation for exploitation of offshore vents/heat sources or “smokers” as they are commonly referred to. Importantly the charging/recharging of these steams is already underway. The recovery of heat (quality heat) in quantities suitable for cost effective heat conversion to power (scale issue) is important.

Recent/the latest development in off shore geothermal energy exploration techniques could have been applicable in terms of linking the offshore hydrothermal systems and to assess a geothermal resources viability (Atkins & Audunsson 2013).

This did raise a dilemma in where to focus initial program of work/survey efforts.

(iv) Practicality -

- **Location**

Broadly the area covered by the licence is proximal to existing, installed infrastructure i.e. high voltage transmission lines, Offshore areas excluded.

- **Energy transfer medium (Energy Recovery)**

Heat exchange using a geothermal source/gradient in contact with a thermal energy recoverable medium i.e. water, is an important part of the business model. Salt water would be proximal to any project developed in this area (subject to access regulations).

- **Engineering**

Swann and Jenkins is an investor in a renewable energy company with an established engineering base in thermal energy conversion to power (Rankine cycle and Organic Rankine Cycle processes).

b) Model

The model involved identifying a sizable exploitable geothermal resource in terms of heat source and heat quality terms, with a heat flow differential sufficient for thermal energy conversion to power (upgrade) to economically viable take place.

With this source as close to surface, reliable and accessible as possible. Realistically this source must be very large and of a high quality for the capital investment in recovery to be justifiable.

c) Proposed Exploration Program and Budget

In the first two years of the proposed exploration program involved establishing better magnetic and gravity datasets. With these datasets used to model fracture systems, heat loss and ultimately assist in the development of a prioritised drilling program.

The density of data, especially in terms of gravity, is low in the licence area so the first phases of work were intended to include additional surveys, followed by extensive processing and modelling.

Subject to positive outcomes for this modelling a network of shallow, likely less than 300m, holes were planned to be drilled to measure heat fluxes. Realistically this would not have been sufficient. Deeper drilling would likely be necessary even from the outset.

Based on positive results being secured from the initial survey work and drilling, a seismic survey to pinpoint a deep hole targets was intended, probably to depths of around 2 km depth.

Testing the fracture system, heat losses etc.

Table 1 below sets out the proposed budget for the planned activities at the time of Licence granting.

This expenditure took into account the guidelines on expenditure for explorers set out in the Tasmanian Government's Information for Explorers information sheet of July 2008.

Table 1: Swansea Area Proposed Exploration Program – Years One and Two

Activities	Cost Estimate [€]
Compile all past company exploration data, government survey data and research data.	35,000
Interpret and appraise.	70,000
Generate specific areas for new gravity and magnetic surveys, Ground gravity and air magnetic surveys, Interpretation and modelling,	
<i>Sub - total</i>	105,000
Five holes for heat flux measurements	125,000
Planning for future seismic and deep target drilling,	30,000
<i>Sub- total</i>	155,000
OVERALL TOTAL	260,000

3. Summary of all exploration undertaken

The proposed program of work was not proceeded with. Work relating to this license took place in three areas:

a) Work Program detailing and budgeting

Early on it was established that desktop 3 –D modelling of the main faulting through the licence area would narrow down the likely best locations for further survey and drilling activity. A budget for this was established.

Consideration was also given to the relative merits of doing surveying on land or offshore and practicality thereof.

Overall a far greater understanding of what was actually involved in not only identifying but delineating and developing a prospect was obtained.

b) Fundraising

Swann and Jenkins, after more fully understanding and estimating the resources required to bring a non-extrusive geothermal energy generation development to fruition immediately started work on suitable partner into a joint venture to deliver the program of work for SEL 3/2009.

Discussions were held with a number of parties including:

- Established geothermal exploration company based in Tasmania (one),
- Established geothermal exploration companies in Australia (five),
- Private equity in Australia,

- Private equity investors with a renewable energy charger in Europe (England and Germany) and the USA (New York)

However none sought to proceed to invest. This has led to Swann and Jenkins relinquishment.

4. Full details of all work undertaken

Actual expenditure for SEL 3/2009 was \$32,665 over the period the licence was held as reported in the quarterly reports lodged.

- No 'on the ground' exploration work on the area covered by license SEL 3/2009 took place as such no rehabilitation requirements must be met,
- The excluded areas according to the Licence were not accessed,
- There were no special conditions associated with the licence and as such no special conditions to be met.

The work undertaken as previously described was

- Geological model concept and viability related
- Cost effective engineering/delivery model related

5. Nature and Distribution of any Mineralisation

Not Applicable

6. Bibliography of all reports

Atkins D and Audunsson H, 2013, Exploration Techniques for Locating offshore geothermal energy near Iceland, Proceedings 38th Workshop on Geothermal Reservoir Engineering Stanford University, Stanford, California.

Geology and Mineral Deposits of Tasmania: a summary, Bulletin 72, Department of Infrastructure Energy and Resources, Mineral Resources Department

Taheri J and Bottrill R S, Devonian granites and associated mineralisation in northeast and northwest Tasmania, Tasmanian Geological Record 2005/03.

7. Transparencies of Plans

None.

8. Details of constructed tracks, costeaning, drill sites cleared & rehabilitation

None.

9. Complete digital datasets

No data bases outside of publicly available data were used.

10. Conclusion

The initial vision, philosophy and exploration model behind/driving Swann and Jenkins' application for SEL 3/2009 although well intentioned and conceptually potentially providing a basis to proceed, after further more detailed assessment and review by Swan and Jenkins Directors identified the requirement so as to ensure significantly progress, for a joint venture partner to be secured.

On this basis the Company's resources were invested in securing an appropriate Joint Venture partner to work with Swann and Jenkins to manage the likely greater complexity and investment requirements involved in significantly progressing a geothermal energy project of the nature envisaged for SEL 3/2009.

Unfortunately this realisation probably occurred at the very same time as it did for many Australian geothermal energy companies already in progress/underway with their projects or portfolio of projects.

With this also co-inciding with reduced capital availability on the capital markets for risk and long lead time related investments, as a result of the Global Financial Crisis (GFC).

Many geothermal energy companies established pre-GFC either no longer exist or have diversified into other areas since 2008/2009. Evidence of the challenges these sorts of projects present.

Swann and Jenkins' timing may have been poor and achievement relative to proposed plans limited however the Company seeks consideration by the Minister in closing out licence relinquishment of the Company's willingness to invest in trying to attract interest/funding into this sector to Tasmania.

APPENDIX A: LICENCE DOCUMENT FOR SEL 3/2009

Special Exploration Licence 3/2009

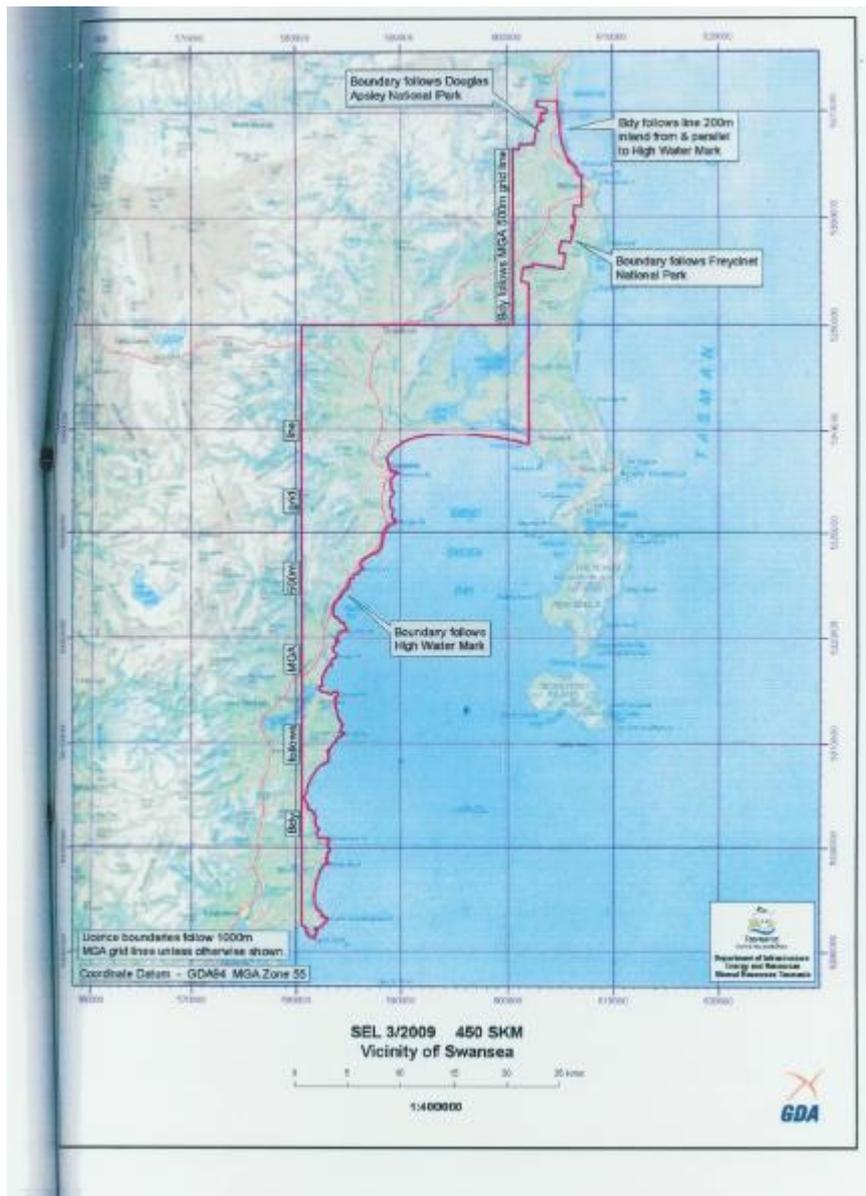
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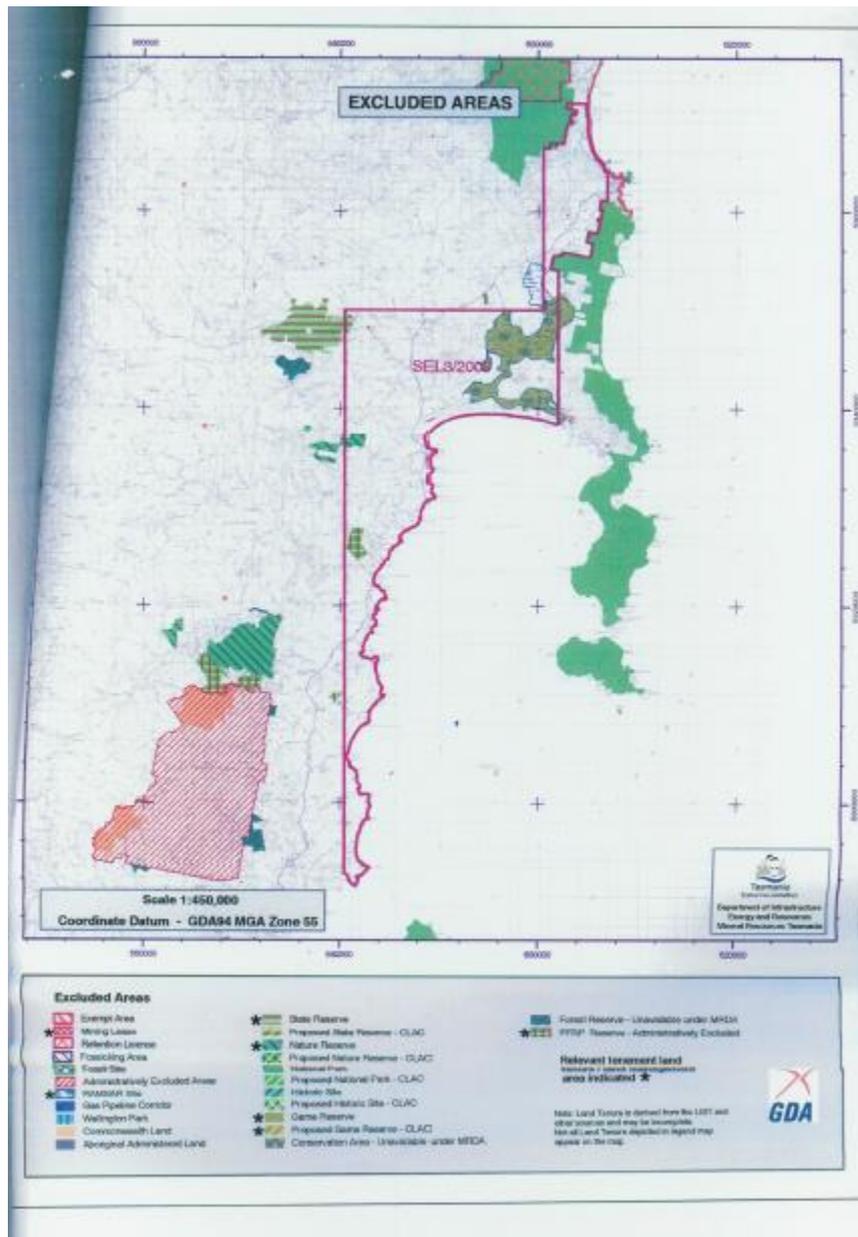
APPENDIX B: MAP OF TENEMENT BOUNDARIES

Source: SEL 2009/3



APPENDIX C: MAP OF TENEMENT EXCLUSIONS AREA

Source: SEL 03/2009 Licence



APPENDIX D: LETTER OF RELIQUISHMENT

Attn: David Geer
Acting Manager – Tenement Administration
Mineral Resources Tasmania
Department of Infrastructure, Energy and Resources (DIER)
Industrial Minerals and Land Management Section
PO Box 56
Rosny Park
TAS 7018

Cc: Carol Bacon – Managing Geologist

Subject: Special Exploration License 3/2009 – Relinquishment

Dear Mr Geer,

Thank you for your letter dated 28 September 2012, advising that Special Exploration License 3/2009 is due for the payment of annual rental fees.

As stated in my February 2011 letter to Managing Geologist, Carol Bacon, the difficult overall capital market conditions compounded by diminished geothermal sector interest, have significantly negatively impacted investment levels/the actual program of activities for SEL 3/2009 relative to the original work program for SEL 3/2009 envisaged at the time of approval.

As a result of the ongoing difficult capital market conditions, it is with regret that Swann and Jenkins Pty Limited seeks to relinquish SEL 3/2009 effective immediately. It is my understanding that receipt of this relinquishment letter from Swann and Jenkins will release the Company and Directors from any further and ongoing commitments in relation to SEL 3/2009.

A letter from you acknowledging your receipt of this relinquishment and confirming its contents is hereby requested.

I personally would like to thank you and your colleagues for your support through the period over which I have held this licence. My initial enthusiasm and intentions in relation to working up the opportunities presented within the area covered by SEL 3/2009 have not waned rather my ability to attract investors to the opportunity/into this space.

Kindest regards,

Merrill Gray
Director
B.Sc, B. Min Tech, MBA, MAusIMM.