

**INDEX OF DOCUMENTS HELD ON THE PUBLIC REGISTER FOR
GEOTHERMAL EXPLORATION LICENCE GEL 446**

1. 25 August 2008 Geothermal Exploration Licence GEL 446 granted
 Interests: Geothermal Resources Limited 100%
 Expiry Date: 24 August 2013
2. 25 August 2008 Memorandum entering GEL 446 on the public register.
3. 25 August 2008 Notation of receipt of security.
4. 28 August 2008 Gazettal of grant of licence.
5. 5 January 2010 Memorandum entering notation of revision to security
 arrangements is entered on the public register.
6. 25 May 2010 Surrender of GEL 446 with effect from 9 April 2010.
7. 25 May 2010 Memorandum entering surrender of GEL 446 with effect from
 9 April 2010 on the public register.
8. 3 June 2010 Gazettal of surrender.

PETROLEUM AND GEOTHERMAL ENERGY ACT 2000

Surrender of Geothermal Exploration Licences—GELs 446, 491, 492 and 493

NOTICE is hereby given that I have accepted surrender of the abovementioned Geothermal Exploration Licences with effect from 9 April 2010, under the provisions of the Petroleum and Geothermal Energy Act 2000, pursuant to delegated powers dated 1 October 2009:

No of Licence	Licensee	Date of Surrender	Area in km ²	Reference
GEL 446	Geothermal Resources Ltd	9 April 2010	486	27/2/542
GEL 491	Geothermal Resources Ltd	9 April 2010	482	27/2/557
GEL 492	Geothermal Resources Ltd	9 April 2010	497	27/2/557
GEL 493	Geothermal Resources Ltd	9 April 2010	478	27/2/557

Description of Area—GEL 446

All that part of the State of South Australia, bounded as follows:

Commencing at a point being the intersection of latitude 30°44'00"S GDA94 and longitude 140°30'00"E GDA94, thence east to longitude 140°45'00"E GDA94, south to latitude 30°55'00"S GDA94, west to longitude 140°30'00"E GDA94 and north to the point of commencement.

Area: 486 km² approximately.

Description of Area—GEL 491

All that part of the State of South Australia, bounded as follows:

Commencing at a point being the intersection of latitude 30°13'00"S GDA94 and longitude 140°40'00"E GDA94, thence east to longitude 140°45'00"E GDA94, south to latitude 30°36'00"S GDA94, east to longitude 140°46'00"E GDA94, south to latitude 30°44'00"S GDA94, west to longitude 140°40'00"E GDA94 and north to the point of commencement.

Area: 482 km² approximately.

Description of Area—GEL 492

All that part of the State of South Australia, bounded as follows:

Commencing at a point being the intersection of latitude 30°13'00"S GDA94 and longitude 140°45'00"E GDA94, thence east to longitude 140°57'00"E GDA94, south to latitude 30°27'00"S GDA94, west to longitude 140°45'00"E GDA94 and north to the point of commencement.

Area: 497 km² approximately.

Description of Area—GEL 493

All that part of the State of South Australia, bounded as follows:

Commencing at a point being the intersection of latitude 30°27'00"S GDA94 and longitude 140°45'00"E GDA94, thence east to longitude 140°55'00"E GDA94, south to latitude 30°44'00"S GDA94, west to longitude 140°46'00"E GDA94, north to latitude 30°36'00"S GDA94, west to longitude 140°45'00"E GDA94 and north to the point of commencement.

Area: 478 km² approximately.

Dated 25 May 2010.

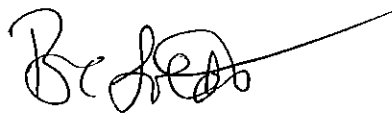
B. A. GOLDSTEIN,
 Director Petroleum and Geothermal
 Minerals and Energy Resources
 Primary Industries and Resources SA
 Delegate of the Minister for Mineral Resources Development

Petroleum and Geothermal Energy Act 2000
S.115

MEMORANDUM

GEOHERMAL EXPLORATION LICENCES
GELs 446, 491, 492 and 493

1. Surrender of the abovementioned Geothermal Exploration Licences, with effect from 9 April 2010 is hereby entered on the public register.



BARRY A. GOLDSTEIN
Director Petroleum and Geothermal
Minerals and Energy Resources
Primary Industries and Resources SA
Delegate of the Minister for Mineral Resources Development

Date: 25 May 2010

Ref: 27/2/542
27/2/557

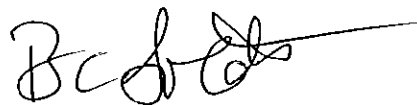
Petroleum and Geothermal Energy Act 2000

**SURRENDER OF
GEOTHERMAL EXPLORATION LICENCES
GELs 446, 491, 492 and 493**

I, BARRY ALAN GOLDSTEIN, Director Petroleum and Geothermal, Minerals and Energy Resources, Department of Primary Industries and Resources, in the State of South Australia, pursuant to the provisions of section 89(2) of the *Petroleum and Geothermal Energy Act 2000* and all other enabling powers, for and on behalf of Paul Holloway, Minister for Mineral Resources Development (Minister), pursuant to delegated powers dated 1 October 2009 –

- a) hereby accept surrender of Geothermal Exploration Licences GELs 446, 491, 492 and 493 in the name of Geothermal Resources Limited with effect from 9 April 2009.

Dated: 25 May 2010



**BARRY A. GOLDSTEIN
Director Petroleum and Geothermal
Minerals and Energy Resources
Primary Industries and Resources SA
Delegate of the Minister for Mineral Resources
Development**

Petroleum and Geothermal Energy Act 2000
S.115

MEMORANDUM

GEOHERMAL EXPLORATION LICENCES
GELs 446, 491, 492, 493 and 498

1. Notation of receipt of security in the form of a Bank Guarantee dated 25 November 2009 is hereby entered on the public register
2. Security is held to cover any single event occurring in any licence held and operated by Geothermal Resources Ltd in South Australia.
3. Notation of the discharge to Geothermal Resources Limited of Bank Guarantee dated 26 September 2006 and held as security in respect of geothermal exploration licences 446, 491, 492, 493 and 498 is entered on the public register.



J. S. ZABROWARNY
A/Director Petroleum and Geothermal
Minerals and Energy Resources
Primary Industries and Resources SA
Delegate of the Minister for Mineral Resources
Development

Date: 5 January 2010

File: 27/2/542
27/2/557
27/2/560

PETROLEUM ACT 2000

Grant of Geothermal Exploration Licence—GEL 446

NOTICE is hereby given that the undermentioned Geothermal Exploration Licence has been granted under the provisions of the Petroleum Act 2000, pursuant to delegated powers dated 28 March 2002, *Gazetted* 11 April 2002, page 1573.

No. of Licence	Licensee	Locality	Expiry
GEL 446	Geothermal Resources Ltd	Arrowie Basin	24 August 2013

Description of Area—GEL 446

All that part of the State of South Australia, bounded as follows:

Commencing at a point being the intersection of latitude 30°44'00"S GDA94 and longitude 140°30'00"E GDA94, thence east to longitude 140°45'00"E GDA94, south to latitude 30°55'00"S GDA94, west to longitude 140°30'00"E GDA94 and north to the point of commencement.

Area: 486 km² approximately.

Dated 25 August 2008.

B. A. GOLDSTEIN, Director Petroleum and Geothermal
Minerals and Energy Resources
Primary Industries and Resources SA
Delegate of the Minister for Mineral Resources Development

**Petroleum Act 2000
S.115**

MEMORANDUM

**GEOHERMAL EXPLORATION LICENCE
GEL 446**

1. This Licence granted with effect from and including 25 August 2008 is hereby entered on the public register.
2. Interests in the licence are:-

Geothermal Resources Limited 100%
3. Notation of receipt of security is hereby entered on the public register.



**BARRY A. GOLDSTEIN
Director Petroleum and Geothermal
Minerals and Energy Resources
Primary Industries and Resources SA
Delegate of the Minister for Mineral Resources
Development**

Date: 25 August 2008

Ref: 27/2/542

PETROLEUM ACT 2000

GEOTHERMAL EXPLORATION LICENCE

GEL 446

I, BARRY ALAN GOLDSTEIN, Director Petroleum and Geothermal, Minerals and Energy Resources, Primary Industries and Resources, in the State of South Australia pursuant to the provisions of the *Petroleum Act 2000* and all other enabling powers, for and on behalf of Paul Holloway, Minister for Mineral Resources Development (Minister), pursuant to delegation dated 28 March 2002, (refer Government Gazette dated 11 April 2002 page 1573), HEREBY GRANT to:

Geothermal Resources Limited ACN 115 281 144

(hereinafter referred to as the Licensee) an Exploration Licence in relation to a source of geothermal energy in respect of the area set out below, to have effect for a period of five years and to expire on 24 April 2013 but carrying the right of renewal under the *Petroleum Act 2000*

DESCRIPTION OF AREA

The land comprised in this licence is that part of the State of South Australia described in the Schedule hereto:

CONDITIONS

- 1 During the term of the licence, the Licensee shall carry out or cause to be carried out, exploratory operations on the area comprised in the licence in accordance with such work programs as are approved by the Minister from time to time. Year one exploratory operations are guaranteed, and any subsequent licence year work program becomes guaranteed upon entry into any such licence year. These exploratory operations shall include but not necessarily be limited to:-

Year of Term of Licence	Minimum Work Requirements
One	<ul style="list-style-type: none">• Review of open file geophysical and drilling data to obtain accurate cover depth and bedrock lithology information;• 3D modelling to determine subsurface geology and location of possible buried granite bodies; and• Measure temperatures in any accessible water wells and oil wells.
Two	<ul style="list-style-type: none">• Thermal resource modelling and rock fracture studies; and• Interpretation of all data to determine optimum drill site locations.

Three	<ul style="list-style-type: none"> • Drill one shallow hole to a depth of at least 250 metres and temperature logging; and • Re-evaluation of theoretical thermal resources and fracture/permeability models based on drilling results.
Four	<ul style="list-style-type: none"> • Drill one shallow hole to a depth of at least 250 metres and temperature logging; and • Re-evaluation of theoretical thermal resources and fracture/permeability models based on drilling results.
Five	<ul style="list-style-type: none"> • Drill one deep hole to at least 1,000 metres deep and temperature logging; and • Evaluation of thermal data and fracture/permeability models.

2. The Licensee must take all reasonable precautions to minimise the risks of its activities resulting in a significant loss of petroleum reserves or a significant reduction in the recovery of petroleum reserves.
3. The Licensee must:
 - (a) upon commencement of regulated activities under this licence, maintain in force during the term of this licence public liability insurance to cover regulated activities under this licence (including sudden and accidental pollution) in the name of the Licensee for a sum not less than twenty million dollars (\$20,000,000.00) or such greater sum as specified by the Minister and make such amendments to the terms and conditions of the insurance as the Minister may from time to time require;
 - (b) maintain in force during the drilling of any well or operation in any well, control of well insurance in the name of the Licensee for a sum not less than ten million dollars (\$10,000,000.00) or such greater sum as specified by the Minister and make such amendments to the terms and conditions of the insurance as the Minister may from time to time require;
 - (c) upon request by the Minister, provide the Minister with a cover note or certificate of currency of each insurance policy referred to in paragraphs (a) and (b)
4. The Minister in specifying the levels of insurance accepts no liability for the completeness of their listing, the adequacy of the sum insured, the limit of liability, the scoped coverage, the conditions or exclusions of these insurances in respect to how they may or may not respond to any loss, damage or liability.
5. The Licensee will ensure, when preparing an Environmental Impact Report under Part 12 of the *Petroleum Act 2000*, that the report also includes an assessment of the potential economic consequences for other licensees under the *Petroleum Act 2000* or *Mining Act 1971* and owners of land, arising out of proposed regulated activities to be carried out in the licence area.
6. The Licensee must keep confidential any measurements made in a well which would enable the estimation of petroleum reserves ("Confidential Information") and must not disclose the Confidential Information without first obtaining the written consent of the licensee of the overlapping compatible licence, unless:

- (a) it is a disclosure required under the Act, this licence or any other law;
- (b) it is a disclosure which is for the purposes of prosecuting or defending any legal proceedings; or
- (c) it is information which is or becomes public knowledge other than by breach of this licence condition.

7 A contract or agreement entered into by the licensee to transfer or accept liability for any well or facility constructed for the purpose of undertaking a regulated activity under the *Petroleum Act 1940* or *2000* cannot transfer, limit or exclude liability under the *Petroleum Act 2000* unless written consent of the Minister is obtained.

8 In the event that the Licensee during any year of the term of this licence (a year being the period of twelve calendar months ending on the anniversary of the date upon which the licence comes into force) fails to comply with the work program requirements of this licence, it is an express term of this licence that the Minister then may use discretion to either cancel this licence or authorise such variation to these requirements as the Minister thinks fit.

9 The Licensee shall during periods determined by the Minister, lodge and maintain with the Minister, for the satisfaction of obligations arising under the Act or this licence, a security of \$50,000 (fifty thousand dollars) or such greater sum as specified by the Minister from time to time

("the Security").

9.1 The Security shall be lodged in the form of either;

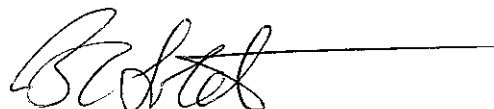
- (a) cash; or
- (b) an unconditional, irrevocable bank guarantee or letter of credit in a form, and from a financial institution, approved by the Minister,

9.2 Interest will not be payable by the Minister to the Licensee on any cash Security.

9.3 All charges incurred by the Licensee in obtaining and maintaining the Security, shall be met by the Licensee

9.4 If upon expiry, this Licence is not renewed and the Minister is satisfied that there are no further obligations under this Licence or the Act, the Minister will return the Security to the Licensee

Date: 25 August 2008



BARRY A. GOLDSTEIN
Director Petroleum and Geothermal
Minerals and Energy Resources
Primary Industries and Resources SA
Delegate of the Minister for Mineral Resources Development

Signed by the said LICENSEE

Date: 12th August 2008


.....
Authorised Representative

Chris Coles
.....
Name

Technical Director
.....
Position

Geothermal Resources Limited
.....
Company

GEOHERMAL EXPLORATION LICENCE

GEL 446

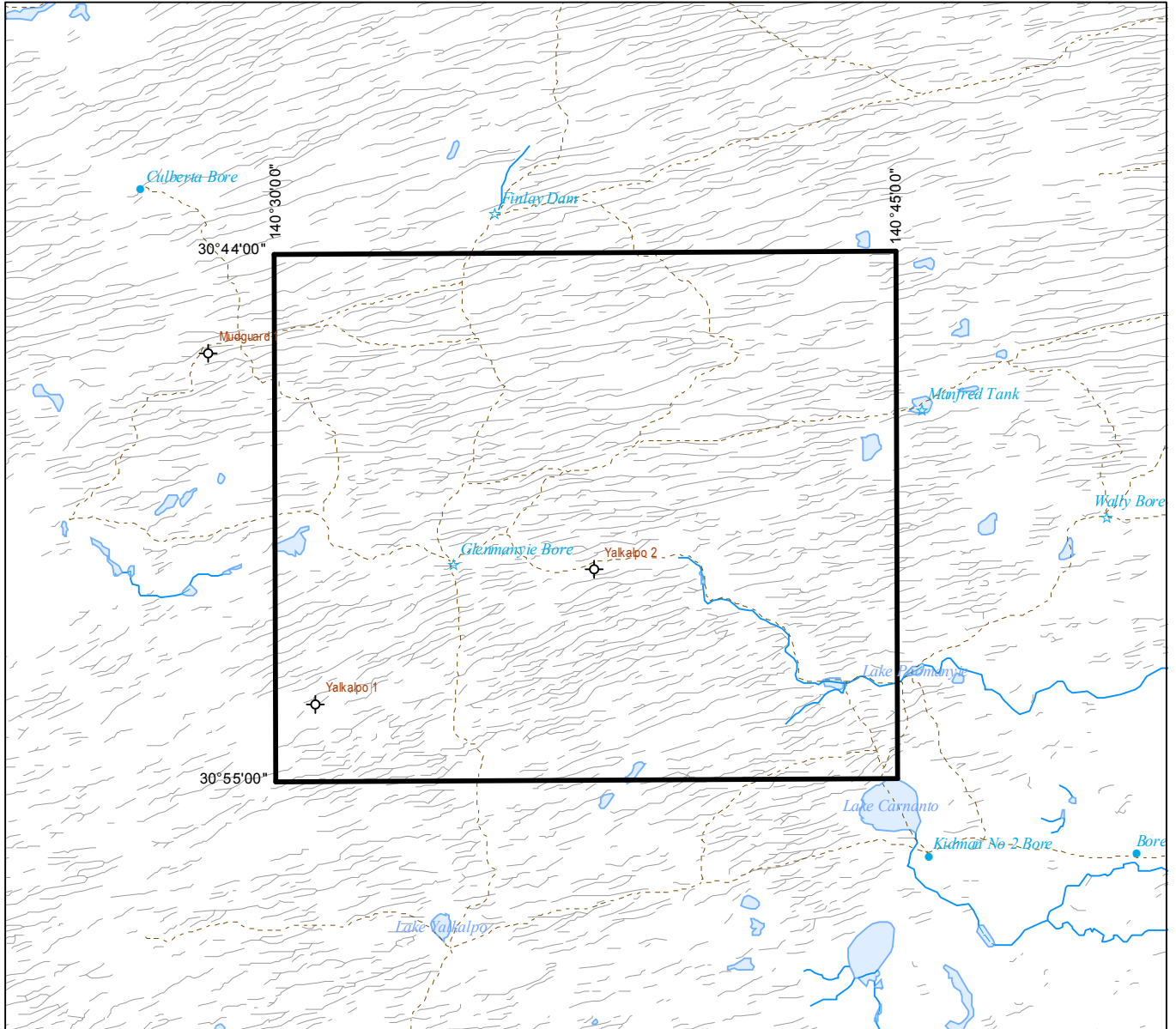
THE SCHEDULE

Description of Area

All that part of the State of South Australia, bounded as follows:-

Commencing at a point being the intersection of latitude 30°44'00"S GDA94 and longitude 140°30'00"E GDA94, thence east to longitude 140°45'00"E GDA94, south to latitude 30°55'00"S GDA94, west to longitude 140°30'00"E GDA94, and north to the point of commencement

AREA: **486** square kilometres approximately



SCALE 1:250 000



Note: There is no warranty that the boundary of this licence is correct in relation to other features of the map. The boundary is to be ascertained by reference to the Geocentric Datum of Australia (GDA94) and the schedule.

THE PLAN HEREINBEFORE REFERRED TO

GEOHERMAL EXPLORATION LICENCE NO: 446

