

**INDEX OF DOCUMENTS HELD ON THE PUBLIC REGISTER FOR
GEOTHERMAL EXPLORATION LICENCE GEL 293**

1. 7 February 2008 Geothermal Exploration Licence GEL 293

Interests: Torrens Energy Limited 100%
Expiry Date: 6 February 2013
2. 7 February 2008 Memorandum entering GEL 293 on the public register and notation of receipt of security.
3. 14 February 2008 Gazettal of Grant of GEL 293
4. 10 September 2008 Memorandum entering notation of the following registrable dealing on the public register:

Alliance Agreement dated 8 July 2008 between Torrens Energy Limited and AGL Energy Limited.
Ref: SA 2008-21
5. 7 January 2010 Variation of licence conditions.
6. 7 January 2010 Memorandum entering variation of licence conditions on the public register.
7. 5 November 2010 Variation of licence conditions.
8. 5 November 2010 Memorandum entering variation of licence conditions on the public register.
9. 18 April 2011 Memorandum entering variation of licence conditions on the public register.
10. 18 April 2011 Variation of licence conditions

**Petroleum and Geothermal Energy Act 2000
S.115**

MEMORANDUM

**GEOHERMAL EXPLORATION LICENCES
GELs 226, 230, 278, 285, 407, 425 and 293**

1. Variation of licence conditions is hereby entered on the public registers.



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

Date: 18 April 2011

Ref: 27/2/383
27/2/387
27/2/442
27/2/451
27/2/460
27/2/535
F2010/688

Petroleum and Geothermal Energy Act 2000

VARIATION OF GEOTHERMAL EXPLORATION LICENCE GEL 293

I, BARRY ALAN GOLDSTEIN, Executive Director Petroleum and Geothermal, Minerals and Energy Resources, Department of Primary Industries and Resources in the State of South Australia, pursuant to section 25 of the *Petroleum and Geothermal Energy Act 2000* and all other enabling powers, for and on behalf of Tom Koutsantonis, Minister for Mineral Resources Development (Minister), pursuant to delegated powers dated 1 October 2009 vary the conditions of the above-mentioned licences, held by -

Torrens Energy Limited
ACN 118 065 704

Condition 1 of the licences is omitted and the following substituted:

“ 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">• Geological and geophysical studies.
Two	<ul style="list-style-type: none">• Geological and geophysical studies
Three	<ul style="list-style-type: none">• Geological and geophysical studies
Four	<ul style="list-style-type: none">• Geological and geophysical studies.
Five	<ul style="list-style-type: none">• Geological and geophysical review.

Dated: 18 April 2011



BARRY A. GOLDSTEIN
Executive 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 LICENCE
GEL 293

1. Variation of licence conditions is hereby entered on the public register.



C. D. COCKSHELL
A/Director Petroleum and Geothermal
Minerals and Energy Resources
Primary Industries and Resources SA
Delegate of the Minister for Mineral Resources Development

Date: 5 November 2010

Ref: 27/2/460

Petroleum and Geothermal Energy Act 2000

VARIATION OF GEOTHERMAL EXPLORATION LICENCE GEL 293

I, CYRIL DAVID COCKSHELL, Acting Director Petroleum and Geothermal, Minerals and Energy Resources, Department of Primary Industries and Resources in the State of South Australia, pursuant to section 25 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 vary the conditions of the above-mentioned licence, held by -

Torrens Energy Limited
ACN 118 065 704

Condition 1 of the licence is omitted and the following substituted:

“ 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. Years one to four 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">• Geological and geophysical studies.
Two	<ul style="list-style-type: none">• Geological and geophysical studies.
Three	<ul style="list-style-type: none">• Geological and geophysical studies.
Four	<ul style="list-style-type: none">• Drill between 1 and 3 fully cored shallow wells; and• Geological and geophysical studies.
Five	<ul style="list-style-type: none">• Geological and geophysical studies.

Dated: 5 November 2010



C. D. COCKSHELL
A/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 LICENCE
GEL 293**

1. Variation of licence conditions is hereby entered on the public register.



**ELINOR ALEXANDER
A/Director Petroleum and Geothermal
Minerals and Energy Resources
Primary Industries and Resources SA
Delegate of the Minister for Mineral Resources
Development**

Date: 7 January 2010

Ref: 27/2/460

Petroleum and Geothermal Energy Act 2000

VARIATION OF GEOTHERMAL EXPLORATION LICENCE GEL 293

I, ELINOR ALEXANDER, Acting Director Petroleum and Geothermal, Minerals and Energy Resources, Department of Primary Industries and Resources in the State of South Australia, pursuant to section 25 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 vary the conditions of the above-mentioned licence, held by -

Torrens Energy Limited
ACN 118 065 704

Condition 1 of the licence is omitted and the following substituted:

- “ 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 licences 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">• Geological and geophysical studies.
Two	<ul style="list-style-type: none">• Geological and geophysical studies
Three	<ul style="list-style-type: none">• Drill 1-3 fully cored 500m narrow diameter holes.
Four	<ul style="list-style-type: none">• Drill 1 well to depth of 1,500 – 3,500m.
Five	<ul style="list-style-type: none">• Flow testing, analysis and feasibility studies.

Dated: 7 January 2010



ELINOR ALEXANDER
A/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 LICENCES
GEL 226, GEL 227, GEL 228, GEL 229, GEL 230, GEL 231,
GEL 232, GEL 233, GEL 234, GEL 235, GEL 260, GEL 261,
GEL 262, GEL 263, GEL 278, GEL 285, and GEL 293**

SA 2008-21

Notation of registrable dealing as evidenced by Alliance Agreement dated 8 July 2008 between Torrens Energy Limited and AGL Energy Limited 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: 10 September 2008

27/2/383 - 27/2/392
27/2/419 - 27/2/422
27/2/442
27/2/451
27/2/460

PETROLEUM ACT 2000

Grant of Geothermal Exploration Licence—GEL 293

NOTICE is hereby given that the undermentioned Geothermal Exploration Licence has been granted with effect from and including 11 December 2007, 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	Date of Expiry	Reference
GEL 293	Torrens Energy Ltd	Torrens Island	6 February 2013	27/2/460

Description of Area

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

Commencing at a point being the intersection of latitude 34°45'00"S GDA94 and longitude 138°30'15"E GDA94, thence east to longitude 138°35'15"E GDA94, south to latitude 34°47'05"S GDA94, west to longitude 138°34'55"E GDA94, south to latitude 34°47'45"S GDA94, east to longitude 138°35'45"E GDA94, south to latitude 34°50'55"S GDA94, west to longitude 138°33'35"E GDA94, north to latitude 34°50'25"S GDA94, west to longitude 138°30'30"E GDA94, north to latitude 34°48'10"S GDA94, west to longitude 138°30'20"E GDA94, north to latitude 34°47'35"S GDA94, west to longitude 138°30'15"E GDA94 and north to the point of commencement, but excluding Torrens Island Conservation Park and the area bounded as follows:

Commencing at a point being the intersection of latitude 34°50'05"S GDA94 and longitude 138°35'05"E GDA94, thence east to longitude 138°35'30"E GDA94, south to latitude 34°50'30"S GDA94, west to longitude 138°35'05"E GDA94 and north to the point of commencement.

Area: 80 km² approximately.

Dated 7 February 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 293**

1. This Licence, granted on 7 February 2008 is hereby entered on the public register.
2. Interests in the licence are:-

Torrens Energy Limited	100%
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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: 7 February 2008

Ref 27/2/460

PETROLEUM ACT 2000

GEOTHERMAL EXPLORATION LICENCE

GEL 293

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:

Torrens Energy Limited
ACN 118 065 704

(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 ^{6 Feb} 2013 but carrying the right of renewal under the *Petroleum Act 2000*. _{5/10}

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">• Geological and geophysical studies.
Two	<ul style="list-style-type: none">• Drill 1-3 fully cored 500 metre narrow diameter holes;• Measure geothermal gradients and conductivities; and• Geological and geophysical studies.
Three	<ul style="list-style-type: none">• Geological and geophysical studies

Four	<ul style="list-style-type: none"> • Drill 1 well to depth of 1,500 – 3,500 metres; • Measure detailed temperature gradient; • Measure reservoir temperature; • Analysis of reservoir properties; and • Flow testing of well
Five	<ul style="list-style-type: none"> • Further flow testing, analysis and feasibility studies.

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: 7 February 2008



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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: 19/12 2007

Chris Matthews
.....
Authorised Representative

Chris Matthews
.....
Name

CEO
.....
Position

Torrens Energy Ltd
.....
Company

GEOTHERMAL EXPLORATION LICENCE

GEL 293

THE SCHEDULE

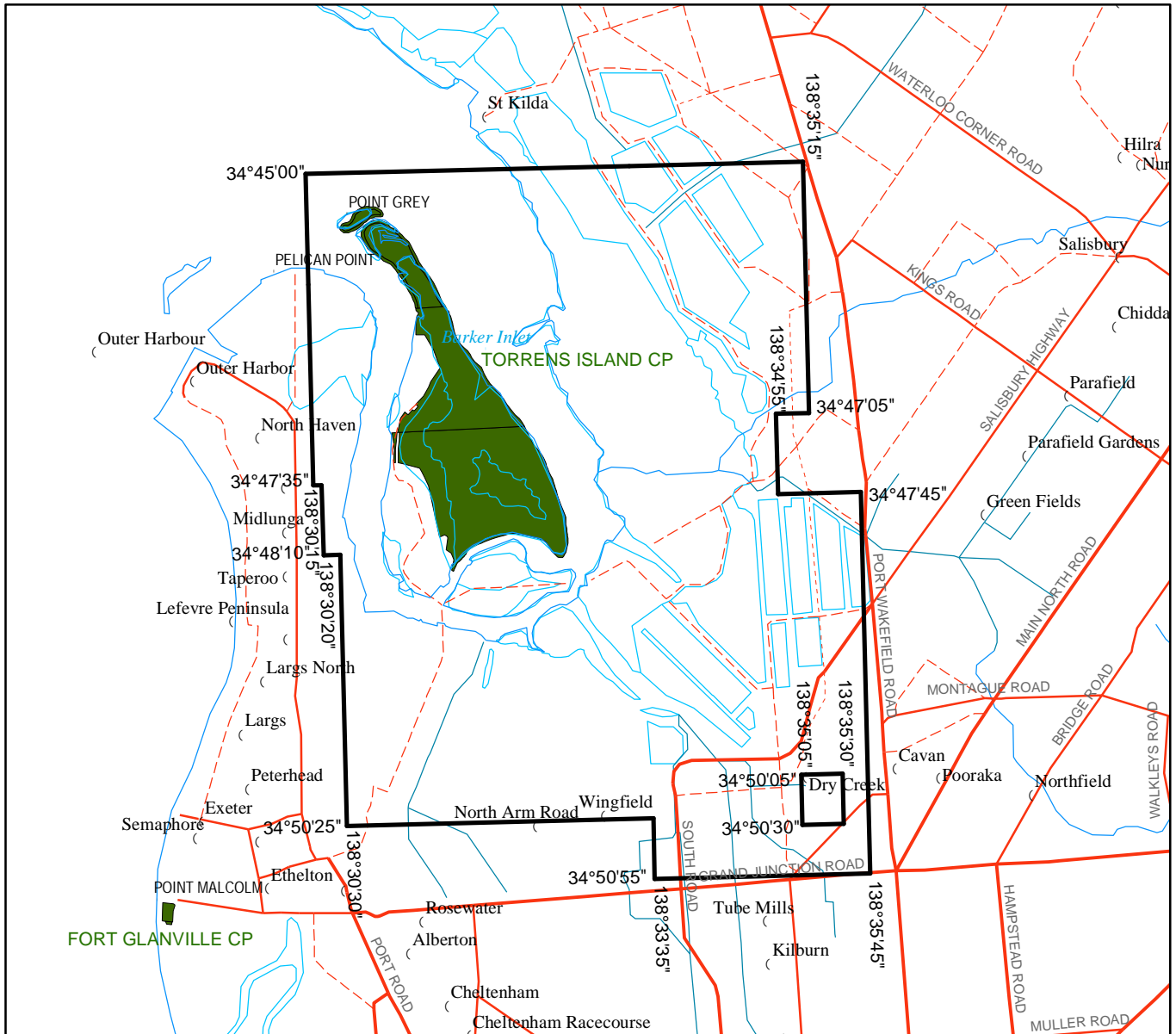
Description of Area

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

Commencing at a point being the intersection of latitude 34°45'00"S GDA94 and longitude 138°30'15"E GDA94, thence east to longitude 138°35'15"E GDA94, south to latitude 34°47'05"S GDA94, west to longitude 138°34'55"E GDA94, south to latitude 34°47'45"S GDA94, east to longitude 138°35'45"E GDA94, south to latitude 34°50'55"S GDA94, west to longitude 138°33'35"E GDA94, north to latitude 34°50'25"S GDA94, west to longitude 138°30'30"E GDA94, north to latitude 34°48'10"S GDA94, west to longitude 138°30'20"E GDA94, north to latitude 34°47'35"S GDA94, west to longitude 138°30'15"E GDA94, and north to the point of commencement, but excluding Torrens Island Conservation Park and the area bounded as follows:-

Commencing at a point being the intersection of latitude 34°50'05"S GDA94 and longitude 138°35'05"E GDA94, thence east to longitude 138°35'30"E GDA94, south to latitude 34°50'30"S GDA94, west to longitude 138°35'05"E GDA94, and north to the point of commencement.

AREA: **80** square kilometres approximately.



SCALE 1:100 000



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 HEREBEFORE REFERRED TO
GEOHERMAL EXPLORATION LICENCE NO: 293

