

Petroleum and Geothermal Energy Act 2000
S.134

MEMORANDUM

**GEOHERMAL EXPLORATION LICENCE
GEL 559**

1. Notation of extension of time to 26 July 2015 by which the licensee must apply for the renewal of Geothermal Exploration Licence GEL 559 is hereby entered on the public register.



BARRY A. GOLDSTEIN
Executive Director
Energy Resources Division
Department of State Development
Delegate of the Minister for Mineral Resources and Energy

Date: 3 July 2015

File: F2010/000352

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

MEMORANDUM

**GEOHERMAL EXPLORATION LICENCES
GELs 559, 571, 572, 573 and 574**

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



**BARRY A. GOLDSTEIN
Executive Director
Energy Resources Division
Department for Manufacturing, Innovation, Trade, Resources and Energy
Delegate of the Minister for Mineral Resources and Energy**

Date: 31 March 2014

Ref: F2010/000352
F2011/000216
F2011/000217
F2011/000218
F2011/000219

Petroleum and Geothermal Energy Act 2000

VARIATION OF GEOTHERMAL EXPLORATION LICENCES GELs 559, 571, 572, 573 and 574

I, BARRY ALAN GOLDSTEIN, Executive Director, Energy Resources Division, Department for Manufacturing, Innovation, Trade, Resources and Energy, in the State of South Australia, pursuant to the provisions of the *Petroleum and Geothermal Energy Act 2000* and all other enabling powers, for and on behalf of Tom Koutsantonis, Minister for Mineral Resources and Energy (Minister), pursuant to delegated powers dated 21 March 2012 vary the conditions of the above-mentioned licences, held by -

Torrens Energy (SA) Pty Ltd
ACN 150 361 265

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

GEL 559

" 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. <i>(Year 4 work program may be conducted anywhere within the boundaries of GELs 559, 571, 572, 573 and 574).</i>
Five	<ul style="list-style-type: none">• Geological and geophysical studies. <i>(Year 5 work program may be conducted anywhere within the boundaries of GELs 559, 571, 572, 573 and 574).</i>

GELs 571, 572, 573 and 574

" 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. <i>(Year 2 work program may be conducted anywhere within the boundaries of GELs 559, 571, 572, 573 and 574).</i>
Three	<ul style="list-style-type: none">• Geological and geophysical studies. <i>(Year 3 work program may be conducted anywhere within the boundaries of GELs 559, 571, 572, 573 and 574).</i>
Four	<ul style="list-style-type: none">• Complete 1 to 3 heat flow wells.• Geological and geophysical studies.
Five	<ul style="list-style-type: none">• Geological and geophysical studies.

Dated: 31 March 2014



BARRY A. GOLDSTEIN
Executive Director
Energy Resources Division
Department for Manufacturing, Innovation, Trade, Resources and Energy
Delegate of the Minister for Mineral Resources and Energy

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

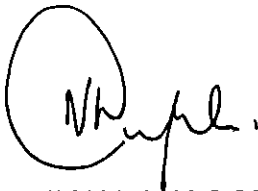
MEMORANDUM

**GEOHERMAL EXPLORATION LICENCE
GEL 559**

SA 2014-28 Notation of registrable dealing as evidenced by Transfer of GEL 559 dated 12 February 2014 between Torrens Energy Limited and Torrens Energy (SA) Pty Ltd is hereby entered on the public register.

Interests in the licence are now:

Torrens Energy (SA) Pty Ltd 100%



**NICK PANAGOPOULOS
A/Executive Director
Energy Resources Division
Department for Manufacturing, Innovation, Trade, Resources and Energy
Delegate of the Minister for Mineral Resources and Energy**

Date: 4 March 2014

Ref: F2010/000352

PETROLEUM AND GEOTHERMAL ENERGY ACT 2000

Grant of Geothermal Exploration Licence—GEL 559

NOTICE is hereby given that the undermentioned Geothermal Exploration Licence has been granted with effect from and including 27 July 2010, under the provisions of the Petroleum and Geothermal Energy Act 2000, pursuant to delegated powers dated 1 October 2009.

No of Licence	Licensee	Locality	Date of Expiry	Reference
GEL 559	Torrens Energy Limited	Lake Torrens	26 July 2015	F 2010/000352

Description of Area—GEL 559

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

Commencing at a point being the intersection of latitude 30°05'50"S GDA94 and longitude 137°27'00"E GDA94, thence east to longitude 137°46'00"E GDA94, south to latitude 30°14'00"S GDA94, east to longitude 137°48'00"E GDA94, south to latitude 30°18'00"S GDA94, east to longitude 137°56'00"E GDA94, south to latitude 30°33'00"S GDA94, west to longitude 137°55'00"E GDA94, south to latitude 30°37'32"S GDA94, west to the eastern boundary of the Lake Torrens National Park, then beginning northerly along the boundary of the said National Park to longitude 137°20'05"E GDA94, north to latitude 30°09'00"S GDA94, east to longitude 137°22'00"E GDA94, north to latitude 30°08'00"S GDA94, east to longitude 137°24'00"E GDA94, north to latitude 30°07'00"S GDA94, east to longitude 137°26'00"E GDA94, north to latitude 30°06'00"S GDA94, east to longitude 137°27'00"E GDA94 and north to the point of commencement.

Area: 1 775 km² approximately.

Dated 27 July 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

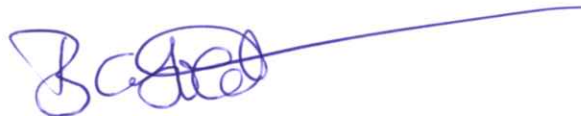
Petroleum and Geothermal Energy Act 2000
S.115

MEMORANDUM

GEOHERMAL EXPLORATION LICENCE
GEL 559

1. This Licence granted to Torrens Energy Limited on 27 July 2010 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: 27 July 2010

Ref: F2010/000352

PETROLEUM AND GEOTHERMAL ENERGY ACT 2000

GEOTHERMAL EXPLORATION LICENCE

GEL 559

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 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, 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 26 July 2015 but carrying the right of two further renewal terms under the *Petroleum and Geothermal Energy 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">• Geological and geophysical studies.
Two	<ul style="list-style-type: none">• Geological and geophysical studies.
Three	<ul style="list-style-type: none">• Complete and case 2 fully cored holes to a depth of approximately 400 metres; and• Geological and geophysical studies.
Four	<ul style="list-style-type: none">• Geological and geophysical studies.
Five	<ul style="list-style-type: none">• Drill test well to full depth (4,000 to 5,000m); and• Geological and geophysical 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 and Geothermal Energy Act 2000*, that the report also includes an assessment of the potential economic consequences for other licensees under the *Petroleum and Geothermal Energy 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 the *Petroleum and Geothermal Energy Act 2000* cannot transfer, limit or exclude liability under the *Petroleum and Geothermal Energy 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: 27 July 2010



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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: 22 July 2010


.....
Authorised Representative

JEROME RANDABEL
.....
Name

EXPLORATION MANAGER
.....
Position

TORRENS ENERGY LTD
.....
Company

GEOTHERMAL EXPLORATION LICENCE

GEL 559

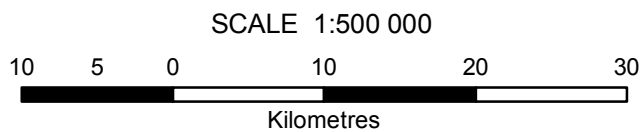
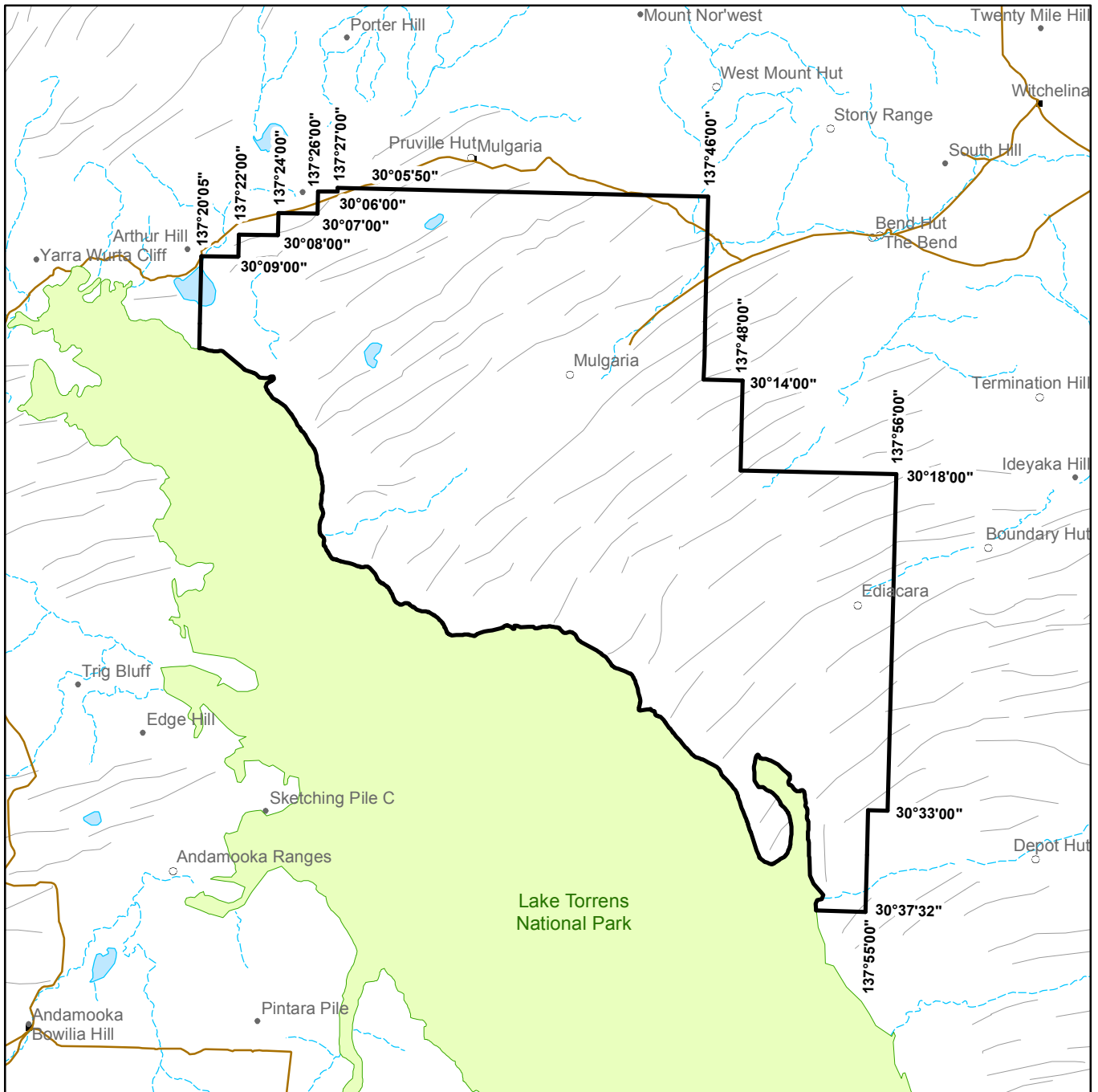
THE SCHEDULE

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°05'50"S GDA94 and longitude 137°27'00"E GDA94, thence east to longitude 137°46'00"E GDA94, south to latitude 30°14'00"S GDA94, east to longitude 137°48'00"E GDA94, south to latitude 30°18'00"S GDA94, east to longitude 137°56'00"E GDA94, south to latitude 30°33'00"S GDA94, west to longitude 137°55'00"E GDA94, south to latitude 30°37'32"S GDA94, west to the eastern boundary of the Lake Torrens National Park, then beginning northerly along the boundary of the said National Park to longitude 137°20'05"E GDA94, north to latitude 30°09'00"S GDA94, east to longitude 137°22'00"E GDA94, north to latitude 30°08'00"S GDA94, east to longitude 137°24'00"E GDA94, north to latitude 30°07'00"S GDA94, east to longitude 137°26'00"E GDA94, north to latitude 30°06'00"S GDA94, east to longitude 137°27'00"E GDA94 and north to the point of commencement.

AREA: **1775** square kilometres approximately.



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 Australian Geodetic Datum (AGD66), the Geocentric Datum of Australia (GDA94) and the schedule.

THE PLAN HEREINBEFORE REFERRED TO
GEOHERMAL EXPLORATION LICENCE NO: 559

