

## INDEX OF DOCUMENTS HELD ON THE PUBLIC REGISTER FOR GEOTHERMAL EXPLORATION LICENCE GEL 227

- |                       |  |
|-----------------------|--|
| 1. 5 July 2006        | Memorandum entering GEL 227 on the public register.  |
| 2. 5 July 2006        | Geothermal Exploration Licence GEL 227<br><br>Interests:    Torrens Energy Limited    100%   |
| 3. 13 July 2006       | Gazettal of Grant of GEL 227   |
| 4. 24 January 2007    | Memorandum entering variation of licence conditions on the public register.  |
| 5. 24 January 2007    | Variation of licence   |
| 6. 24 January 2007    | Memorandum entering suspension of licence on the public register.  |
| 7. 24 January 2007    | Suspension of licence from 6 July 2006 to 24 January 2007.   |
| 8. 1 February 2007    | Gazettal of suspension.  |
| 9. 28 June 2007       | Notation of receipt of security.   |
| 10. 10 September 2008 | Memorandum entering notation of the following registrable dealing on the public register:<br><br>Alliance Agreement dated 8 July 2008 between Torrens Energy Limited and AGL Energy Limited.<br>Ref:    SA 2008-21 |
| 11. 12 February 2010  | Variation of licence conditions.   |
| 12. 12 February 2010  | Memorandum entering variation of licence conditions on the public register.  |
| 13. 26 March 2010     | Consolidation of licence with GELs 228, 229 and 263.<br><br>Licence area of GEL 227 is now approximately 1963km <sup>2</sup> .   |
| 14. 26 March 2010     | Memorandum entering consolidation of licence with GELs 228, 229 and 263 on the public register.  |

|                 |   |
|-----------------|---|
| 15. 3 June 2011 | Memorandum entering surrender of licence on the public register |
| 16. 3 June 2011 | Surrender of licence with effect 20 January 2011                |
| 17. 9 June 2011 | Gazettal of surrender.  |

## PETROLEUM AND GEOTHERMAL ENERGY ACT 2000

*Surrender of Geothermal Exploration Licence—GEL 227*

NOTICE is hereby given that I have accepted surrender of the abovementioned Geothermal Exploration Licence 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 Surrender | Reference |
|----------------|------------------------|--------------------------------|-------------------|-----------|
| GEL 227        | Torrens Energy Limited | Adelaide Area, South Australia | 20 January 2011   | 27/2/384  |

*Description of Area*

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

*Area 1*

Commencing at a point being the intersection of latitude 34°04'15"S GDA94 and longitude 138°46'50"E GDA94, thence east to longitude 139°02'05"E GDA94, south to latitude 34°26'55"S GDA94, west to longitude 138°46'50"E GDA94 and north to the point of commencement.

*Area 2*

Commencing at a point being the intersection of latitude 33°36'50"S GDA94 and longitude 138°46'12"E GDA94, thence east to longitude 138°53'05"E GDA94, south to latitude 33°50'43"S GDA94, east to longitude 138°55'30"E GDA94, south to latitude 34°04'13"S GDA94, west to longitude 138°49'50"E GDA94, north to latitude 33°52'33"S GDA94, west to longitude 138°47'45"E GDA94, north to latitude 33°48'06"S GDA94, west to longitude 138°46'12"E GDA94 and north to the point of commencement.

*Area 3*

Commencing at a point being the intersection of latitude 33°14'00"S GDA94 and longitude 138°34'40"E GDA94, thence east to longitude 138°45'55"E GDA94, south to latitude 33°29'15"S GDA94, west to longitude 138°34'40"E GDA94 and north to the point of commencement.

Area: 1 963 km<sup>2</sup> approximately.

Dated 3 June 2011.

B. 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 227**

1. Surrender of the abovementioned Geothermal Exploration Licence with effect from 20 January 2011 is hereby entered on the public register.



**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: 3 June 2011

Ref: 27/2/384

## ***Petroleum and Geothermal Energy Act 2000***

### **SURRENDER OF GEOTHERMAL EXPLORATION LICENCE GEL 227**

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 the provisions of section 89(2) 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 –

- a) hereby accept surrender of Geothermal Exploration Licence – GEL 227 in the name of Torrens Energy Limited with effect from 20 January 2011

Dated: 3 June 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 LICENCES**  
**GELs 227, 228, 229 and 263**

1. Consolidation of the adjacent licence areas of GELs 227, 228, 229 and 263 whereby the consolidated licence area is now designated as GEL 227 is hereby entered on the public register.

The total area of GEL 227 is now 1,963 square kilometres approximately.

2. Revocation of GELs 228, 229 and 263 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: 26 March 2010

Ref: 27/2/384  
27/2/385  
27/2/386  
27/2/422

# **Petroleum and Geothermal Energy Act 2000**

## **Consolidation of licence areas Geothermal Exploration Licences GELs 227, 228, 229 and 263**

## **Revocation of licences Geothermal Exploration Licences GELs 228, 229 and 263**

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 section 82 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;

1. consolidate the adjacent areas of Geothermal Exploration Licences GELs 227, 228, 229 and 263 held by –

### **Torrens Energy Limited**

The consolidated licence area shall hereafter be designated as:

### **Geothermal Exploration Licence GEL 227**

#### **DESCRIPTION OF CONSOLIDATED AREA**

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

#### **AREA 1**

Commencing at a point being the intersection of latitude 34°04'15"S GDA94 and longitude 138°46'50"E GDA94, thence east to longitude 139°02'05"E GDA94, south to latitude 34°26'55"S GDA94, west to longitude 138°46'50"E GDA94, and north to the point of commencement.

#### **AREA 2**

Commencing at a point being the intersection of latitude 33°36'50"S GDA94 and longitude 138°46'12"E GDA94, thence east to longitude 138°53'05"E GDA94, south to latitude 33°50'43"S GDA94, east to longitude 138°55'30"E GDA94, south to latitude 34°04'13"S GDA94, west to longitude 138°49'50"E GDA94, north to latitude 33°52'33"S GDA94, west to longitude 138°47'45"E GDA94, north to latitude 33°48'06"S GDA94, west to longitude 138°46'12"E GDA94, and north to the point of commencement.

#### **AREA 3**

Commencing at a point being the intersection of latitude 33°14'00"S GDA94 and longitude 138°34'40"E GDA94, thence east to longitude 138°45'55"E GDA94, south to latitude 33°29'15"S GDA94, west to longitude 138°34'40"E GDA94, and north to the point of commencement.

AREA: **1,963** square kilometres approximately.

2. consequently revoke Geothermal Exploration Licences GELs 228, 229 and 263.

As a consequence of the consolidation, the work program forming 'condition 1' of the consolidated GEL 227 comprises:

| Year of Term of Licence | Minimum Work Requirements   |
|-------------------------|---|
| One                     | <ul style="list-style-type: none"><li>• Geological and geophysical review.<br/>(to be conducted anywhere in the area covered by GELs 227, 228 and 263)</li></ul>  |
| Two                     | <ul style="list-style-type: none"><li>• Geological and geophysical review.<br/>(to be conducted anywhere in the area covered by GELs 227, 228 and 263)</li></ul>  |
| Three                   | <ul style="list-style-type: none"><li>• Geological and geophysical review.<br/>(to be conducted anywhere in the area covered by GELs 227, 228 and 263)</li></ul>  |
| Four                    | <ul style="list-style-type: none"><li>• Complete and case 3 fully cored heat flow holes to a depth of 400 to 500 metres for a total depth of 1,200 to 1,500 metres.<br/>(to be conducted anywhere in the area covered by GELs 227, 228 and 263)</li></ul> |
| Five                    | <ul style="list-style-type: none"><li>• Drill 1 test well to a depth of 4,000 to 5,000 metres.</li></ul>  |

Dated: 26 March 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**

The following signature evidences the consent of the licensee to the consolidation of GELs 227, 228, 229 and 263 as set out in this document and made pursuant to Section 82 of the *Petroleum and Geothermal Energy Act 2000*.

Signed for and on behalf of **Torrens Energy Limited** by its authorised representative:

Date:.....15/3/10.....

..........

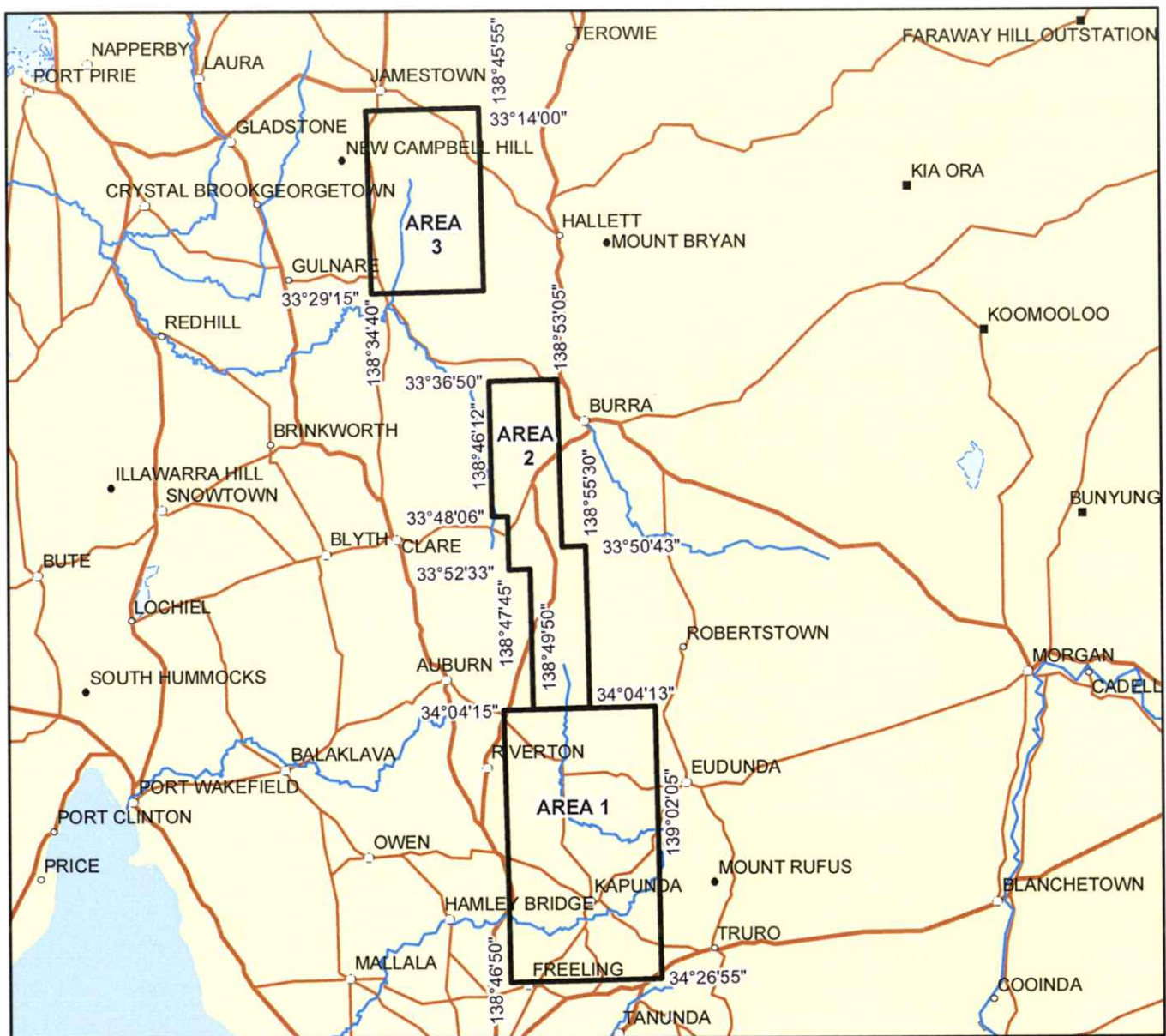
Authorised Representative

.....JEROME RANDABEL.....

Name

.....EXPLORATION MANAGER.....

Position



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: 227**

SR 27/2/384

AREA: 1963 sq km (approx)

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

**MEMORANDUM**

**GEOHERMAL EXPLORATION LICENCES  
GELs 227, 228 and 263**

1. Variation of licence conditions 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: 12 February 2010

Ref: 27/2/384  
27/2/385  
27/2/422

# Petroleum and Geothermal Energy Act 2000

## VARIATION OF GEOTHERMAL EXPLORATION LICENCES GELs 227, 228 AND 263

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 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 licences, held by -

### Torrens Energy Limited

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 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"><li>• Geological and geophysical review<br/>(to be conducted anywhere in the area covered by GELs 227, 228 and 263)</li></ul>   |
| Two                     | <ul style="list-style-type: none"><li>• Geological and geophysical review<br/>(to be conducted anywhere in the area covered by GELs 227, 228 and 263)</li></ul>   |
| Three                   | <ul style="list-style-type: none"><li>• Geological and geophysical review<br/>(to be conducted anywhere in the area covered by GELs 227, 228 and 263)</li></ul>   |
| Four                    | <ul style="list-style-type: none"><li>• Complete and case 3 fully cored heat flow holes to a depth of 400 to 500 metres for a total depth of 1200 to 1500 metres.<br/>(to be conducted anywhere in the area covered by GELs 227, 228 and 263)</li></ul> |
| Five                    | <ul style="list-style-type: none"><li>• Drill 1 test well to a depth of 4,000 to 5,000 metres.<br/>(to be conducted anywhere in the area covered by GELs 227, 228 and 263)</li></ul>  |

Dated: 12 February 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 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***  
**S.115**

**MEMORANDUM**

**GEOHERMAL EXPLORATION LICENCES**  
**GELs 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 260, 261,**  
**262, 263, 278 and 285**

1. 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: 28 June 2007

|        |          |          |
|--------|----------|----------|
| Files: | 27/2/383 | 27/2/384 |
|        | 27/2/385 | 27/2/386 |
|        | 27/2/387 | 27/2/388 |
|        | 27/2/389 | 27/2/390 |
|        | 27/2/391 | 27/2/392 |
|        | 27/2/419 | 27/2/420 |
|        | 27/2/421 | 27/2/422 |
|        | 27/2/442 | 27/2/451 |

## PETROLEUM ACT 2000

*Suspension of Geothermal Exploration Licences—GEL 227 and GEL 228*

PURSUANT to section 90 of the Petroleum Act 2000, notice is hereby given that the abovementioned Geothermal Exploration Licences have been suspended under the provisions of the Petroleum Act 2000, from and including 6 July 2006 until 24 January 2007, pursuant to delegated powers dated 28 March 2002, *Gazetted* 11 April 2002, page 1573.

The expiry date of Exploration Licences GEL 227 and GEL 228 is now determined to be 23 January 2012.

Dated 24 January 2007.

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.90**

**SUSPENSION OF  
GEOTHERMAL EXPLORATION LICENCES  
GELS 227 AND 228**

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 the *Petroleum 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 28 March 2002, Gazetted 11 April 2002, page 1573 –

(a) suspend geothermal exploration licences GELs 227 and 228 for the period from and including 6 July 2006 to 24 January 2007.

1. No regulated activities are permitted to be carried out during the period of the suspension.
2. The expiry date of GEL 227 and GEL 228 is now determined to be 23 January 2012.

Dated: 24 January 2007



**BARRY A. GOLDSTEIN**  
**Director Petroleum and Geothermal**  
**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  
GELS 227 AND 228**

1. Suspension of licence from and including 6 July 2006 to 24 January 2007 is hereby entered on the public register.
2. Expiry date of GEL 227 and GEL 228 is now 23 January 2012.



**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: 24 January 2007

Ref: 27/2/384  
27/2/385

# Petroleum Act 2000

## VARIATION OF GEOTHERMAL EXPLORATION LICENCES GELS 227 AND 228

I, BARRY ALAN GOLDSTEIN, Director Petroleum and Geothermal, Minerals and Energy Division, Department of Primary Industries and Resources in the State of South Australia, pursuant to section 25 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 delegated powers dated 28 March 2002, Gazetted 11 April 2002, page 1573 vary the conditions of geothermal exploration licences GELs 227 and 228, held by -

Torrens Energy Limited

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 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"><li>Geological and geophysical review.<br/>(to be conducted anywhere in the area covered by GELs 227, 228 and 263)</li></ul>   |
| Two                     | <ul style="list-style-type: none"><li>Geological and geophysical review.<br/>(to be conducted anywhere in the area covered by GELs 227, 228 and 263)</li></ul>   |
| Three                   | <ul style="list-style-type: none"><li>Complete and case 3 fully cored heat flow holes to a depth of 400 to 500 metres for a total depth of 1200 to 1500 metres.</li><li>Geological and geophysical review.<br/>(to be conducted anywhere in the area covered by GELs 227, 228 and 263)</li></ul> |
| Four                    | <ul style="list-style-type: none"><li>Geological and geophysical review.<br/>(to be conducted anywhere in the area covered by GELs 227, 228 and 263)</li></ul>   |
| Five                    | <ul style="list-style-type: none"><li>Drill 1 test well to a depth of 4000 to 5000 metres<br/>(to be conducted anywhere in the area covered by GELs 227, 228 and 263)</li></ul>  |

Dated: 24 January 2007



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 Act 2000  
S.115**

**MEMORANDUM**

**GEOHERMAL EXPLORATION LICENCES  
GELS 227 AND 228**

1. Variation of licence conditions 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: 24 January 2007

Ref: 27/2/384  
27/2/385

## PETROLEUM ACT 2000

*Grant of Geothermal Exploration Licences—GEL 226, GEL 227, GEL 228, GEL 229, GEL 230, GEL 231, GEL 232, GEL 233, GEL 234 and GEL 235*

NOTICE is hereby given that the undermentioned Geothermal Exploration Licences have been granted with effect from and including 5 July 2006, 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 | Licensees          | Locality                           | Date of Expiry | Reference |
|----------------|--------------------|------------------------------------|----------------|-----------|
| GEL 226        | Torrens Energy Ltd | Adelaide area, South Australia     | 4 July 2011    | 27/2/383  |
| GEL 227        | Torrens Energy Ltd | Adelaide area, South Australia     | 4 July 2011    | 27/2/384  |
| GEL 228        | Torrens Energy Ltd | Adelaide area, South Australia     | 4 July 2011    | 27/2/385  |
| GEL 229        | Torrens Energy Ltd | Mid North area, South Australia    | 4 July 2011    | 27/2/386  |
| GEL 230        | Torrens Energy Ltd | Lake Torrens area, South Australia | 4 July 2011    | 27/2/387  |
| GEL 231        | Torrens Energy Ltd | Lake Torrens area, South Australia | 4 July 2011    | 27/2/388  |
| GEL 232        | Torrens Energy Ltd | Lake Torrens area, South Australia | 4 July 2011    | 27/2/389  |
| GEL 233        | Torrens Energy Ltd | Lake Torrens area, South Australia | 4 July 2011    | 27/2/390  |
| GEL 234        | Torrens Energy Ltd | Lake Torrens area, South Australia | 4 July 2011    | 27/2/391  |
| GEL 235        | Torrens Energy Ltd | Lake Torrens area, South Australia | 4 July 2011    | 27/2/392  |

*Description of Area—GEL 226*

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

Commencing at a point being the intersection of latitude 34°17'15"S GDA94 and longitude 138°15'25"E GDA94, thence east to longitude 138°25'35"E GDA94, south to latitude 34°19'30"S GDA94, east to longitude 138°27'55"E GDA94, south to latitude 34°24'35"S GDA94, east to longitude 138°30'25"E GDA94, south to latitude 34°28'30"S GDA94, east to longitude 138°33'05"E GDA94, south to latitude 34°33'50"S GDA94, west to longitude 138°24'10"E GDA94, north to latitude 34°32'30"S GDA94, west to longitude 138°22'35"E GDA94, north to latitude 34°31'15"S GDA94, west to longitude 138°20'35"E GDA94, north to latitude 34°26'55"S GDA94, west to longitude 138°19'00"E GDA94, north to latitude 34°22'15"S GDA94, west to longitude 138°17'25"E GDA94, north to latitude 34°19'40"S GDA94, west to longitude 138°15'25"E GDA94 and north to the point of commencement.

Area: 495 km<sup>2</sup> approximately.

*Description of Area—GEL 227*

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

Commencing at a point being the intersection of latitude 34°15'35"S GDA94 and longitude 138°46'50"E GDA94, thence east to longitude 139°02'05"E GDA94, south to latitude 34°26'55"S GDA94, west to longitude 138°46'50"E GDA94 and north to the point of commencement.

Area: 490 km<sup>2</sup> approximately.

*Description of Area—GEL 228*

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

Commencing at a point being the intersection of latitude 34°04'15"S GDA94 and longitude 138°46'50"E GDA94, thence east to longitude 139°02'05"E GDA94, south to latitude 34°15'35"S GDA94, west to longitude 138°46'50"E GDA94 and north to the point of commencement.

Area: 491 km<sup>2</sup> approximately.

*Description of Area—GEL 229*

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

Commencing at a point being the intersection of latitude 33°14'00"S GDA94 and longitude 138°34'40"E GDA94, thence east to longitude 138°45'55"E GDA94, south to latitude 33°29'15"S GDA94, west to longitude 138°34'40"E GDA94 and north to the point of commencement.

Area: 492 km<sup>2</sup> approximately.

*Description of Area—GEL 230*

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

Commencing at a point being the intersection of longitude 138°08'20"E GDA94 and latitude 30°57'30"S GDA94, thence south to latitude 31°01'40"S GDA94, east to longitude 138°10'50"E GDA94, south to latitude 31°05'15"S GDA94, east to longitude 138°13'55"E GDA94, south to latitude 31°07'25"S GDA94, east to longitude 138°15'20"E GDA94, south to latitude 31°12'30"S GDA94, east to longitude 138°16'00"E GDA94, south to latitude 31°17'30"S GDA94, west to the eastern boundary of Lake Torrens National Park, thence generally northerly along the boundary of the said Park to latitude 30°57'30"S GDA94 and east to the point of commencement.

Area: 485 km<sup>2</sup> approximately.

*Description of Area—GEL 231*

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

Commencing at a point being the intersection of longitude 138°16'00"E GDA94 and latitude 31°17'30"S GDA94, thence south to latitude 31°32'30"S GDA94, west to the eastern boundary of Lake Torrens National Park, thence generally north-easterly along the boundary of the said National Park to latitude 31°17'30"S GDA94 and east to the point of commencement.

Area: 496 km<sup>2</sup> approximately.

*Description of Area—GEL 232*

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

Commencing at a point being the intersection of longitude 138°14'50"E GDA94 and latitude 31°32'30"S GDA94, thence south to latitude 31°38'00"S GDA94, west to longitude 138°12'20"E GDA94, south to latitude 31°40'55"S GDA94, west to the eastern boundary of Lake Torrens National Park, thence generally north-easterly along the boundary of the said National Park to latitude 31°32'30"S GDA94 and east to the point of commencement.

Area: 492 km<sup>2</sup> approximately.

*Description of Area—GEL 233*

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

Commencing at a point being the intersection of longitude 138°08'20"E GDA94 and latitude 31°40'55"S GDA94, thence south to latitude 31°49'10"S GDA94, west to the eastern boundary of Lake Torrens National Park, thence generally north-easterly along the boundary of the said National Park to latitude 31°40'55"S GDA94 and east to the point of commencement.

Area: 492 km<sup>2</sup> approximately.

*Description of Area—GEL 234*

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

Commencing at a point being the intersection of longitude 138°07'00"E GDA94 and latitude 31°49'10"S GDA94, thence south to latitude 31°52'20"S GDA94, west to longitude 138°03'30"E GDA94, south to latitude 31°54'40"S GDA94, west to longitude 138°01'50"E GDA94, south to latitude 31°57'35"S GDA94, west to longitude 137°58'55"E GDA94, south to latitude 31°59'00"S GDA94, west to longitude 137°46'00"E GDA94, north to the southern boundary of Lake Torrens National Park, thence generally northerly along the boundary of the said National Park to latitude 31°49'10"S GDA94 and east to the point of commencement.

Area: 494 km<sup>2</sup> approximately.

*Description of Area—GEL 235*

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

Commencing at a point being the intersection of latitude 31°59'00"S GDA94 and longitude 137°46'00"E GDA94, thence east to longitude 137°58'55"E GDA94, south to latitude 32°01'20"S GDA94, west to longitude 137°57'50"E GDA94, south to latitude 32°13'05"S GDA94, west to longitude 137°46'00"E GDA94 and north to the point of commencement.

Area: 492 km<sup>2</sup> approximately.

Dated 5 July 2006.

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 LICENCES  
GEL 226, GEL 227, GEL 228, GEL 229, GEL 230  
GEL 231, GEL 232, GEL 233, GEL 234 and GEL 235**

1. These Licences granted on 5 July 2006 are hereby entered on the public register.
2. Interests in the licence are:-

Torrens Energy Limited                      100%



**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: 5 July 2006

Ref: 27/2/383  
27/2/384  
27/2/385  
27/2/386  
27/2/387  
27/2/388  
27/2/389  
27/2/390  
27/2/391  
27/2/390

# **PETROLEUM ACT 2000**

## **GEOHERMAL EXPLORATION LICENCE**

### **GEL 227**

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 4 July 2011 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:-

| <b>Year of Term of Licence</b> | <b>Minimum Work Requirements</b>   |
|--------------------------------|--|
| <b>One</b>                     | <ul style="list-style-type: none"><li>• Geological and geophysical review.<br/>(to be conducted anywhere in the area covered by GELs 227 &amp; 228)</li></ul>  |
| <b>Two</b>                     | <ul style="list-style-type: none"><li>• Geological and geophysical review.<br/>(to be conducted anywhere in the area covered by GELs 227 &amp; 228)</li></ul>  |
| <b>Three</b>                   | <ul style="list-style-type: none"><li>• Complete and case 2 fully cored heat flow holes to a depth of 400 to 500 metres.</li><li>• Geological and geophysical review.<br/>(to be conducted anywhere in the area covered by GELs 227 &amp; 228)</li></ul> |
| <b>Four</b>                    | <ul style="list-style-type: none"><li>• Geological and geophysical review.<br/>(to be conducted anywhere in the area covered by GELs 227 &amp; 228)</li></ul>  |
| <b>Five</b>                    | <ul style="list-style-type: none"><li>• 1 well to a depth of 3 to 4 km.<br/>(to be conducted anywhere in the area covered by GELs 227 &amp; 228)</li></ul>   |

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: 5 July 2006



.....  
**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: 30/6.....2006

Chris Matthews.....

Authorised Representative

Chris Matthews.....

Name

Chief Executive Officer.....

Position

Torrens Energy Ltd.....

Company

[Signature].....

Witness

MICHAEL HAYNES.....

Name

-.....

Position

-.....

Company

# **GEOHERMAL EXPLORATION LICENCE**

## **GEL 227**

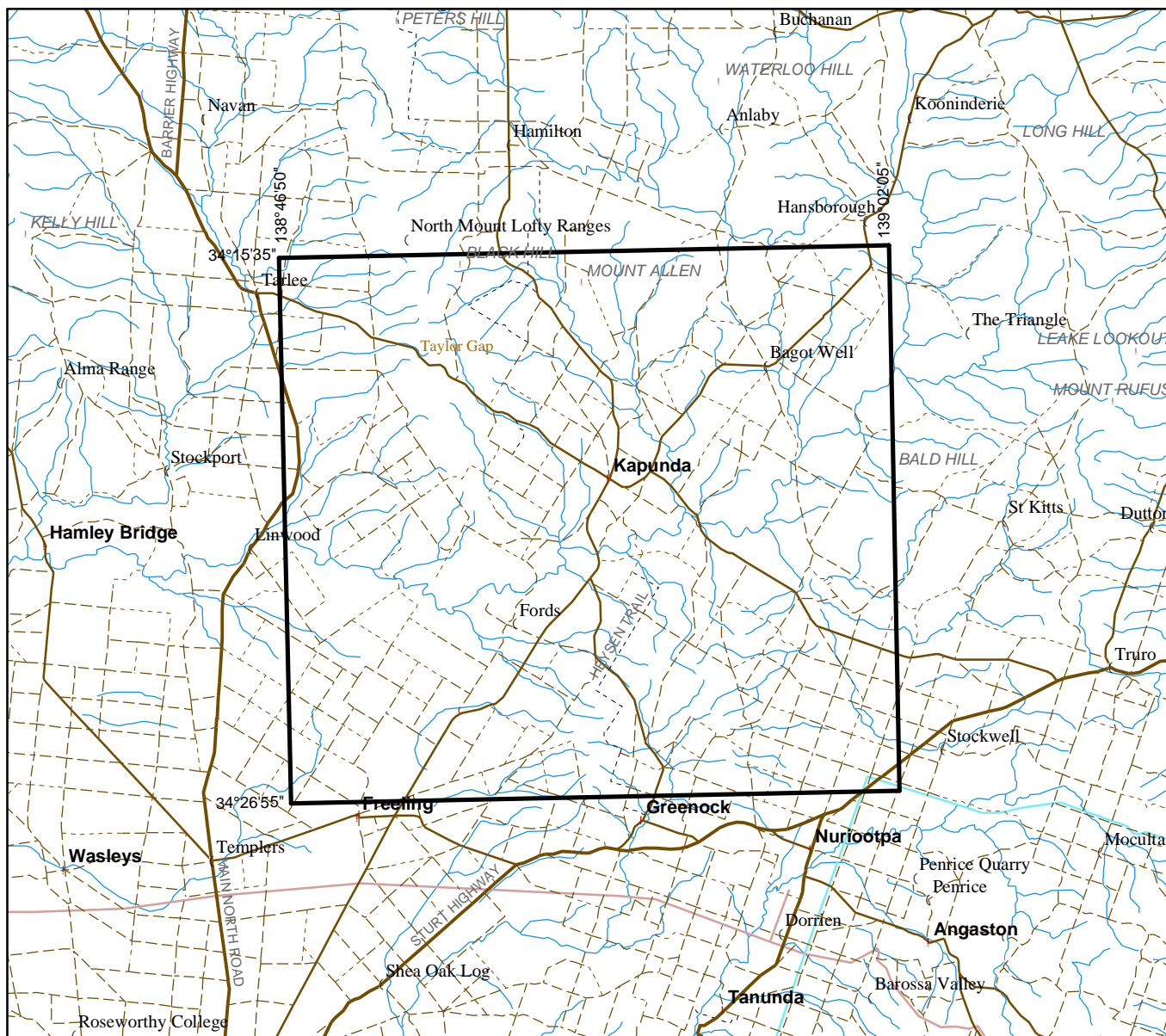
### **THE SCHEDULE**

#### **Description of Area**

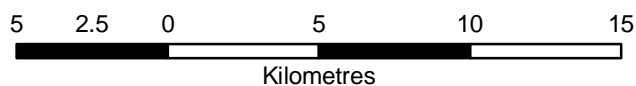
All that part of the State of South Australia, bounded as follows:-

Commencing at a point being the intersection of latitude  $34^{\circ}15'35''\text{S}$  GDA94 and longitude  $138^{\circ}46'50''\text{E}$  GDA94, thence east to longitude  $139^{\circ}02'05''\text{E}$  GDA94, south to latitude  $34^{\circ}26'55''\text{S}$  GDA94, west to longitude  $138^{\circ}46'50''\text{E}$  GDA94, and north to the point of commencement.

AREA: **490** 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: 227**



Government of South Australia  
Primary Industries and Resources SA

SR 27/2/384

AREA: 490 sq km (approx)