

**INDEX OF DOCUMENTS HELD ON THE PUBLIC REGISTER FOR
GEOTHERMAL EXPLORATION LICENCE GEL 181**

1. 22 November 2004 Memorandum entering GEL 181 on the public register.
2. 22 November 2004 Geothermal Exploration Licence GEL 181
Interests: Havilah Resources NL 100%
3. 25 November 2004 Gazettal of Grant of GEL 181
4. 10 October 2005 Memorandum entering notation of the following dealing on the public register:
 - Transfer dated 12 August 2005 transferring licence from Havilah Resources NL to Geothermal Resources Limited
Ref: SA 2005-34Interests: Geothermal Resources Limited 100%
5. 12 July 2006 Notation of receipt of security.
6. 1 November 2006 Memorandum entering notation of revision to security arrangements is entered on the public register.
7. 9 December 2008 Variation of licence.
8. 9 December 2008 Memorandum entering variation of licence conditions on the public register.
9. 15 September 2009 Memorandum entering notation of extension of time to 21 November 2009 by which the licensee must apply for renewal of licence.
10. 22 December 2009 Memorandum entering notation of revision to security arrangements is entered on the public register.
11. 11 February 2010 Renewal of licence

Expiry date of GEL 181 is now 21 November 2014

Interest in the licence:
Geothermal Resources Limited 100%

12. 11 February 2010 Memorandum entering renewal of licence, effective from 22 November 2009 on the public register.
13. 17 February 2010 Suspension of licence for the period from and including 23 November 2009 to 22 November 2010.

Expiry date of GEL 181 is now 21 November 2015.
14. 17 February 2010 Memorandum entering suspension of licence on the public register.
15. 25 February 2010 Gazettal of suspension of licence.
16. 16 November 2010 Consolidation of licence area with GEL 208 with effect from 23 November 2010

The total area of GEL 181 is now approximately 1,305 km².
17. 16 November 2010 Memorandum entering consolidation of licence area on the public register.
18. 30 December 2011 Suspension of licence for the period from and including 22 November 2011 to 21 November 2012.

GEL 181 is now due to expire 21 November 2016.
19. 30 December 2011 Memorandum entering suspension of licence on the public register.
20. 5 January 2012 Gazettal of suspension of licence.
21. 6 November 2012 Suspension of licence for the period from and including 22 November 2012 to 21 November 2013.

GEL 181 is now due to expire 21 November 2017.
22. 6 November 2012 Memorandum entering suspension of licence on the public register.
23. 8 November 2012 Gazettal of suspension of licence.
24. 20 October 2016 Certification of Registration on Conversion to a Proprietary Company.

From: Geothermal Resources Limited
To: Geothermal Resources Pty Limited
25. 20 October 2016 Memorandum entering notation of change of company name on the public register.

26. 20 October 2016 Variation of licence.
27. 20 October 2016 Memorandum entering variation of licence conditions on the public register.
28. 20 October 2016 Suspension of licence for the period from and including 1 August 2016 to 31 July 2017.

GEL 181 is now due to expire 21 November 2018.
29. 20 October 2016 Memorandum entering suspension of licence on the public register.
30. 27 October 2016 Gazettal of suspension of licence.
31. 21 June 2017 Memorandum entering notation of revision to security arrangements on the public register.
32. 18 May 2018 Suspension of licence for the period from 8 May 2018 to 7 May 2019 inclusive.

GEL 181 is now due to expire 21 November 2019.
33. 18 May 2018 Memorandum entering suspension of licence on the public register.
34. 24 May 2018 Gazettal of suspension of licence.
35. 9 July 2018 Memorandum entering notation of revision to security arrangements on the public register.
36. 17 May 2019 Suspension of licence for the period from and including 8 May 2019 to 7 May 2020.

GEL 181 is now due to expire on 21 November 2020.
37. 17 May 2019 Memorandum entering suspension of licence on the public register.
38. 23 May 2019 Gazettal of suspension of licence.

And

Telford Scrub Conservation Park, Dingley Dell Conservation Park, Ewens Ponds Conservation Park, Penambol Conservation Park, Lower Glenelg River Conservation Park, Piccaninnie Ponds Conservation Park.

AREA: **1325.20** square kilometres approximately.

Dated: 14 May 2019

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

PETROLEUM AND GEOTHERMAL ENERGY ACT 2000

Suspension of Geothermal Exploration Licence GEL 181

Pursuant to section 90 of the *Petroleum and Geothermal Energy Act 2000*, notice is hereby given that the abovementioned Geothermal Exploration Licence has been suspended for the period 8 May 2019 to 7 May 2020 inclusive, pursuant to delegated powers dated 29 June 2018.

- The expiry date of the licence is now determined to be 21 November 2020.

Dated: 17 May 2019

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

PLANNING, DEVELOPMENT AND INFRASTRUCTURE ACT 2016

SECTION 63

Decision by the Minister

Preamble

1. On 26 February, I approved a State Planning Policy with respect to each special legislative scheme pursuant to section 63 (1) of the *Planning, Development and Infrastructure Act 2016*.
2. In accordance with section 63(3) of the *Planning, Development and Infrastructure Act 2016*, the Minister for Environment and Water, who is responsible for administering the *River Murray Act 2003*, *Adelaide Dolphin Sanctuary Act 2005*, *Marine Parks Act 2007* and *Arkaroola Protection Act 2012*, was consulted.
3. Endorsement of the State Planning Policies for the relevant Special Legislative Schemes was received from the Minister for Environment and Water on 30 January 2019.
4. The Minister for Planning is responsible for the *Character Preservation (Barossa Valley) Act 2012* and *Character Preservation (McLaren Vale) Act 2012*.
5. I am satisfied that the State Planning Policies for Special Legislative Schemes address the character values of each relevant character preservation areas and complies with the requirements of the Act(s) in question as prescribed by section 63 (1) of the *Planning, Development and Infrastructure Act 2016*.
6. The State Planning Policies for Special Legislative Schemes were established on 23 May 2019.

Decision

PURSUANT to section 63(1) of the *Planning, Development and Infrastructure Act 2016*, I establish the following State Planning Policies:

- Statutory SPP 17 Special Legislative Scheme River Murray Act 2003
- Statutory SPP 18 Special Legislative Scheme
Adelaide Dolphin Sanctuary Act 2005
- Statutory SPP 19 Special Legislative Scheme Marine Parks Act 2007
- Statutory SPP 20 Special Legislative Scheme
Arkaroola Protection Act 2012
- Statutory SPP 21 Special Legislative Scheme
Character Preservation (Barossa Valley) Act 2012
- Statutory SPP 22 Special Legislative Scheme
Character Preservation (McLaren Vale) Act 2012

Dated: 15 May 2019

HON STEPHAN KNOLL MP
Minister for Planning

PLANNING, DEVELOPMENT AND INFRASTRUCTURE ACT 2016

SECTION 74

Decision by the Minister

1. On 15 February 2019 I referred the State Planning Policies, approved on 31 January 2019 to the Environment, Resources and Development Committee in accordance with section 74 of the *Planning, Development and Infrastructure Act 2016*.
2. On 4 March 2019, the Environment, Resources and Development Committee considered the State Planning Policies where it resolved to suggest an amendment to the State Planning Policies.
3. On 14 March 2019 the Environment, Resources and Development Committee wrote to me with amendments to the State Planning Policies.

Petroleum and Geothermal Energy Act 2000
S.115

MEMORANDUM

GEOHERMAL EXPLORATION LICENCE
GEL 181

1. Suspension of this licence is hereby entered on the public licence register.



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

Date: 17 May 2019

Ref: MER-2017/0485

Petroleum and Geothermal Energy Act 2000
S.90

**SUSPENSION OF
GEOTHERMAL EXPLORATION LICENCE
GEL 181**

I, BARRY A. GOLDSTEIN, Executive Director Energy Resources Division, Department for Energy and Mining, 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 the Minister for Energy and Mining (Minister), pursuant to delegated powers dated 29 June 2018 hereby -

(a) suspend geothermal exploration licence GEL 181 for the period from 8 May 2019 to 7 May 2020 inclusive.

1. No regulated activities are permitted to be carried out during this period of suspension.
2. The expiry date of the licence is now determined to be 21 November 2020.

Dated: 17 May 2019



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

Petroleum and Geothermal Energy Act 2000
S.115

MEMORANDUM

GEOHERMAL EXPLORATION LICENCE
GEL 181

1. Notation of revision to security arrangements is hereby entered on the public register.



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

Date: 9 July 2018

PETROLEUM AND GEOTHERMAL ENERGY ACT 2000

Suspension of Geothermal Exploration Licence—GEL 181

Pursuant to section 90 of the *Petroleum and Geothermal Energy Act 2000*, notice is hereby given that the abovementioned Geothermal Exploration Licence has been suspended for the period from 8 May 2018 until 7 May 2019 inclusive, pursuant to delegated powers dated 31 March 2017.

The expiry date of GEL 181 is now determined to be 21 November 2019.

Dated: 18 May 2018

BARRY A. GOLDSTEIN
Executive Director
Energy Resources Division
Department of the Premier and Cabinet
Delegate of the Minister for Energy and Mining

Petroleum and Geothermal Energy Act 2000
S.115

MEMORANDUM

GEOHERMAL EXPLORATION LICENCE
GEL 181

1. Suspension of this licence is hereby entered on the public licence register.



BARRY A. GOLDSTEIN
Executive Director
Energy Resources Division
Department of the Premier and Cabinet
Delegate of the Minister for Energy and Mining

Date: 18 May 2018

Ref: MER-2017/0485

Petroleum and Geothermal Energy Act 2000
S.90

**SUSPENSION OF
GEOTHERMAL EXPLORATION LICENCE
GEL 181**

I, BARRY ALAN GOLDSTEIN, Executive Director, Energy Resources Division, Department of the Premier and Cabinet, 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 the Minister for Energy and Mining (Minister), pursuant to delegated powers dated 31 March 2017 hereby -

- (a) suspend geothermal exploration licence GEL 181 for the period from 8 May 2018 to 7 May 2019 inclusive.
1. No regulated activities are permitted to be carried out during the period of the suspension.
 2. The expiry date of GEL 181 is now determined to be 21 November 2019.

Dated: 18 May 2018



BARRY A. GOLDSTEIN
Executive Director
Energy Resources Division
Department of the Premier and Cabinet
Delegate of the Minister for Energy and Mining

Petroleum and Geothermal Energy Act 2000
S.115

MEMORANDUM

GEOHERMAL EXPLORATION LICENCE
GEL 181

1. Notation of revision to security arrangements is hereby entered on the public register.



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

Date: 21 June 2017

PETROLEUM AND GEOTHERMAL ENERGY ACT 2000

Suspension of Geothermal Exploration Licence—GEL 181

PURSUANT to Section 90 of the Petroleum and Geothermal Energy Act 2000, notice is hereby given that the abovementioned Geothermal Exploration Licence has been suspended for the period from and including 1 August 2016 until 31 July 2017, under the provisions of the Petroleum and Geothermal Energy Act 2000, pursuant to delegated powers dated 21 March 2012.

The expiry date of GEL 181 is now determined to be 21 November 2018.

Dated 20 October 2016.

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

Petroleum and Geothermal Energy Act 2000
S.115

MEMORANDUM

GEOHERMAL EXPLORATION LICENCE
GEL 181

1. Variation of licence conditions is hereby entered on the public register.
2. Suspension of licence 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: 20 October 2016

Ref: 27/2/306

Petroleum and Geothermal Energy Act 2000
S.90

**SUSPENSION OF
GEOTHERMAL EXPLORATION LICENCE
GEL 181**

I, BARRY ALAN GOLDSTEIN, Executive Director Energy Resources Division, Department of State Development, 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 hereby -

- (a) suspend geothermal exploration licence GEL 181 for the period from and including 1 August 2016 to 31 July 2017.
1. No regulated activities are permitted to be carried out during the period of the suspension.
 2. The expiry date of GEL 181 is now determined to be 21 November 2018.

Dated: 20 October 2016



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

Petroleum and Geothermal Energy Act 2000
s25(4)

VARIATION OF
GEOHERMAL EXPLORATION LICENCE
GEL 181

I, BARRY ALAN GOLDSTEIN, Executive Director, Energy Resources Division, Department of State Development, 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 licence, held by -

Geothermal Resources Pty Limited
ACN 115 281 144

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	• Geological and geophysical studies.
Two	• Geological and Geophysical Studies.
Three	• Geological and Geophysical Studies.
Four	• Geological and Geophysical Studies.
Five	• Geological and Geophysical Studies.

”

Dated: 20 October 2016



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

Petroleum and Geothermal Energy Act 2000
S.115

MEMORANDUM

GEOHERMAL EXPLORATION LICENCE
GEL 181

1. Notation of conversion to a proprietary company:

From: Geothermal Resources Limited
To: Geothermal Resources Pty Limited

is here by 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: 20 October 2016

Refs: 27/2/306

GEOHERMAL RESOURCES LIMITED
63 Conyngham Street
GLENSIDE SA 5065

Remove this top section if desired before framing



Certificate of Registration on Conversion to a Proprietary Company



This is to certify that

GEOHERMAL RESOURCES LIMITED

Australian Company Number 115 281 144

on the eighteenth day of May 2012 converted to a **proprietary** company.

The name of the company is now

GEOHERMAL RESOURCES PTY LIMITED

Australian Company Number 115 281 144

The company is registered under the Corporations Act 2001 and is taken to be registered in South Australia and the date of commencement of registration is the fourteenth day of July, 2005.

Issued by the
Australian Securities and Investments Commission
on this eighteenth day of May, 2012.

A handwritten signature in black ink, appearing to read 'G. Medcraft'.

Greg Medcraft
Chairman

CERTIFICATE

Special Pass



The Special Pass is for passengers eligible for free travel.

Dated 31 October 2012.

E. THOMAS, Deputy Chief Executive, Public Transport Services

PETROLEUM AND GEOTHERMAL ENERGY ACT 2000
SECTION 25 (5) (b)

Variation of Petroleum Exploration Licence—PEL 516

NOTICE is hereby given that under the provisions of the Petroleum and Geothermal Energy Act 2000, pursuant to delegated powers dated 21 March 2012, the conditions of the abovementioned Exploration Licence have been varied as follows:

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. Years one to three exploratory operations are guaranteed and any subsequent licence year 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	Drill two wells.
Two	Drill five wells.
Three	Drill two wells; and 300 km 2D seismic acquisition; and 1 000 km seismic reprocessing.
Four	Drill two wells.
Five	Drill two wells.

The revised work requirements as a result of this variation would not have altered the outcome of the original competitive tender process.

Dated 31 October 2012.

B. 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
*Suspension of Geothermal
Exploration Licence—GEL 214*

PURSUANT to Section 90 of the Petroleum and Geothermal Energy Act 2000, notice is hereby given that the abovementioned Geothermal Exploration Licence has been suspended for the period from and including 2 November 2012 until 1 November 2013, under the provisions of the Petroleum and Geothermal Energy Act 2000, pursuant to delegated powers dated 21 March 2012.

The expiry date of GEL 214 is now determined to be 31 October 2018.

Dated 6 November 2012.

B. 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
*Suspension of Geothermal
Exploration Licence—GEL 181*

PURSUANT to Section 90 of the Petroleum and Geothermal Energy Act 2000, notice is hereby given that the abovementioned Geothermal Exploration Licence has been suspended for the period from and including 22 November 2012 until 21 November 2013, under the provisions of the Petroleum and Geothermal Energy Act 2000, pursuant to delegated powers dated 21 March 2012.

The expiry date of GEL 181 is now determined to be 21 November 2017.

Dated 6 November 2012.

B. 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
*Suspension of Geothermal
Exploration Licence—GEL 498*

PURSUANT to Section 90 of the Petroleum and Geothermal Energy Act 2000, notice is hereby given that the abovementioned Geothermal Exploration Licence has been suspended for the period from and including 1 November 2012 until 31 October 2013, under the provisions of the Petroleum and Geothermal Energy Act 2000, pursuant to delegated powers dated 21 March 2012.

The expiry date of GEL 498 is now determined to be 31 October 2016.

Dated 6 November 2012.

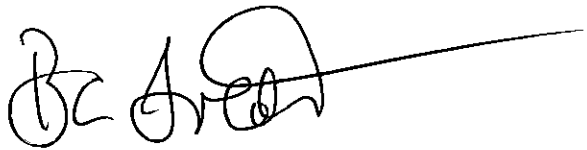
B. A. GOLDSTEIN,
Executive Director,
Energy Resources Division
Department for Manufacturing, Innovation,
Trade, Resources and Energy
Delegate of the Minister for Mineral
Resources and Energy

Petroleum and Geothermal Energy Act 2000
S.115

MEMORANDUM

GEOHERMAL EXPLORATION LICENCES
GELs 181, 214 and 498

1. Suspension of licences 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: 6 November 2012

Ref: 27/2/306
27/2/363
27/2/560

Petroleum and Geothermal Energy Act 2000
S.90

**SUSPENSION OF
GEOTHERMAL EXPLORATION LICENCES
GELs 181, 214 and 498**

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 hereby -

- a) suspend geothermal exploration licence GEL 181 for the period from and including 22 November 2012 to 21 November 2013.
 - b) suspend geothermal exploration licence GEL 214 for the period from and including 2 November 2012 to 1 November 2013.
 - c) suspend geothermal exploration licence GEL 498 for the period from and including 1 November 2012 to 31 October 2013.
1. No regulated activities are permitted to be carried out during the period of the suspension.
 2. The expiry date of these GELs is now determined to be –
 - a) GEL 181 will expire on 21 November 2017.
 - b) GEL 214 will expire on 31 October 2018.
 - c) GEL 498 will expire on 31 October 2016.

Dated: 6 November 2012



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

Suspension of Geothermal Exploration Licence—GEL 181

PURSUANT to Section 90 of the Petroleum and Geothermal Energy Act 2000, notice is hereby given that the abovementioned Geothermal Exploration Licence has been suspended for the period from and including 22 November 2011 until 21 November 2012, under the provisions of the Petroleum and Geothermal Energy Act 2000, pursuant to delegated powers dated 1 October 2009.

The expiry date of GEL 181 is now determined to be 21 November 2016.

Dated 30 December 2011.

E. ALEXANDER,
Acting 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 181

1. Suspension of licence from and including 22 November 2011 to 21 November 2012 is hereby entered on the public register.
2. The expiry date of GEL 181 is now determined to be 21 November 2016.



ELINOR ALEXANDER
A/Executive Director
Energy Resources Division
Department for Manufacturing, Innovation, Trade, Resources and Energy
Delegate of the Minister for Mineral Resources and Energy

Date: 30 December 2011

Ref: 27/2/306


Petroleum and Geothermal Energy Act 2000
S.90

**SUSPENSION OF
GEOTHERMAL EXPLORATION LICENCE
GEL 181**

I, ELINOR ALEXANDER, Acting 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 1 October 2009 hereby -

- (a) suspend geothermal exploration licence GEL 181 for the period from and including 22 November 2011 to 21 November 2012.
1. No regulated activities are permitted to be carried out during the period of the suspension.
 2. The expiry date of GEL 181 is now determined to be 21 November 2016.

Dated: 30 December 2011



ELINOR ALEXANDER
A/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 LICENCES
GELs 181 and 208**

1. Consolidation with effect from 23 November 2010, of the adjacent licence areas of GELs 181 and 208, whereby the consolidated licence area is now designated as GEL 181 is hereby entered on the public register.

The total area of GEL 181 is now 1,305 square kilometres approximately.

2. Revocation of GEL 208 with effect from 23 November 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: 16 November 2010

Ref: 27/2/306
27/2/341

Petroleum and Geothermal Energy Act 2000

Consolidation of licence areas Geothermal Exploration Licences GELs 181 and 208

Revocation of licence Geothermal Exploration Licence GEL 208

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 with effect from 23 November 2010, the adjacent areas of Geothermal Exploration Licences GELs 181 and 208 held by –

Geothermal Resources Ltd
ACN 115 281 144

The consolidated licence area shall be designated as:

Geothermal Exploration Licence GEL 181

DESCRIPTION OF CONSOLIDATED AREA

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

Commencing at a point being the intersection of latitude 31°09'00"S GDA94 and longitude 139°41'00"E GDA94,
thence east to longitude 139°48'00"E GDA94,
south to latitude 31°20'00"S GDA94, east to longitude 139°53'00"E GDA94,
south to latitude 31°29'00"S GDA94, west to longitude 139°52'00"E GDA94,
south to latitude 31°44'00"S GDA94, west to longitude 139°38'00"E GDA94,
north to latitude 31°37'00"S GDA94, west to longitude 139°36'00"E GDA94,
north to latitude 31°36'00"S GDA94, west to longitude 139°34'00"E GDA94,
north to latitude 31°26'00"S GDA94, east to longitude 139°41'00"E GDA94,
and north to point of commencement.

AREA: **1305** square kilometres approximately.

2. consequently revoke Geothermal Exploration Licence GEL 208 with effect from 23 November 2010.

As a consequence of the consolidation, the work program forming 'condition 1' of the consolidated GEL 181 comprises:

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 one deep well > 3,000 m depth.
Five	<ul style="list-style-type: none"> • Flow test well; and • Data review

Dated: 16 Nov 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 181 and 208 as set out in this document and made pursuant to Section 82 of the *Petroleum and Geothermal Energy Act 2000*.

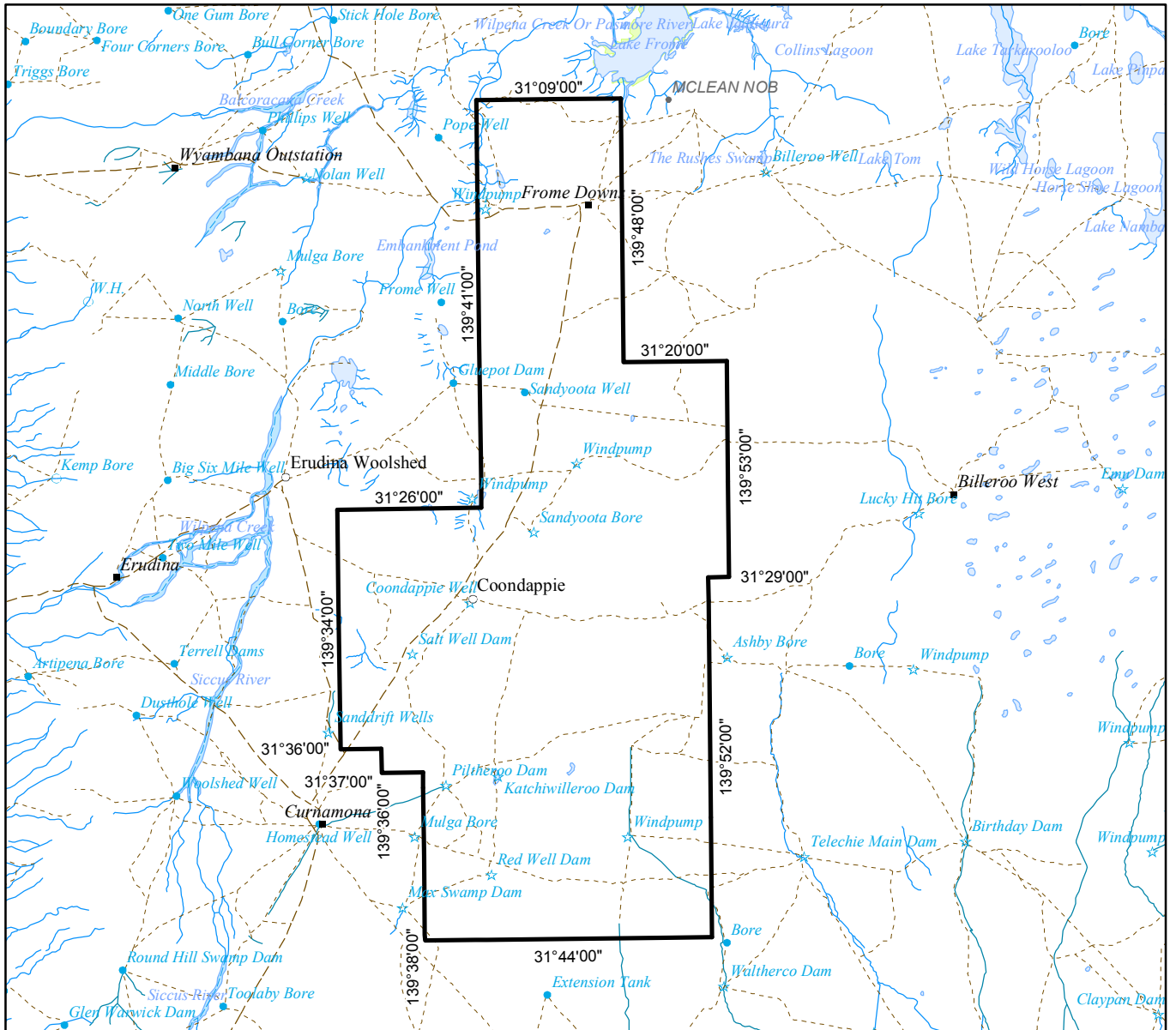
Signed for and on behalf of **Geothermal Resources Ltd** by its authorised representative:

3/11/2010
 Date

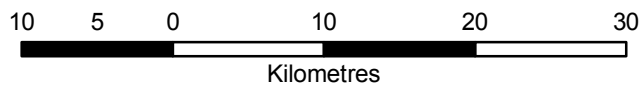
Geoff. Stolz
 Authorised Representative

Geoff Stolz
 Name

Project Manager
 Position



SCALE 1:500 000



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: 181



Use of Firearms within the Reserve

Pursuant to Regulations 8 (4), 20 (1) and 41 of the National Parks and Wildlife (National Parks) Regulations 2001, I, Edward Gregory Leaman, Director of National Parks and Wildlife, an authorised delegate of the co-management board, grant permission to members of the Sporting Shooters Association of Australia Hunting & Conservation Branch (SA) Inc. in possession of both a current Hunting Permit and a firearm to enter and remain in Vulkathunha-Gammon Ranges National Park from 6 a.m. Sunday, 9 May 2010, until 6 p.m. Friday, 14 May 2010 for the purpose of taking feral animals.

This permission is conditional upon the observance by each of those persons of the requirements of the National Parks and Wildlife Act 1972, National Parks and Wildlife (National Parks) Regulations 2001 and the National Parks and Wildlife (Hunting) Regulations 1996, including those requiring compliance with the Director's requests, requirements and orders of a Warden.

Dated 15 of February 2010.

E. G. LEAMAN, Director of National Parks and Wildlife

PETROLEUM AND GEOTHERMAL ENERGY ACT 2000

Suspension of Geothermal Exploration Licence—GEL 181

PURSUANT to section 90 of the Petroleum and Geothermal Energy Act 2000, notice is hereby given that the abovementioned Geothermal Exploration Licence has been suspended under the provisions of the Petroleum and Geothermal Energy Act 2000, from and including 23 November 2009 until 22 November 2010, pursuant to delegated powers dated 1 October 2009.

The expiry date of GEL 181 is now determined to be 21 November 2015.

Dated 17 February 2010.

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

ROAD TRAFFIC ACT 1961

Authorised Officers to Conduct Breath Analysis

I, MALCOLM ARTHUR HYDE, Commissioner of Police, pursuant to section 47K (3) (a) of the Road Traffic Act 1961, do hereby certify that on 12 February 2010, the following police officers were authorised to conduct breath analysis:

PD Number	Officer Name
79934	Bellinger, Corie James
79602	Brancher, Prudence Phillipa
73115	Henshaw, Ian Lee
79698	Houben, Steven Franciscus
73836	Nairn, Robert Coupland
78449	Newall, Jessica Jade

PD Number	Officer Name
72672	Schollar, Nathan Sean
72771	Smith, Peter Emmanuel
72154	Von Ohle, Kylee Louise

Dated 12 February 2010.

MALCOLM ARTHUR HYDE, Commissioner of Police

ROAD TRAFFIC ACT 1961

Authorised Officers to Conduct Breath Analysis

I, MALCOLM ARTHUR HYDE, Commissioner of Police, pursuant to section 47K (3) (a) of the Road Traffic Act 1961, do hereby certify that on 12 February 2010, the following police officers were authorised to conduct breath analysis:

PD Number	Officer Name
25616	Albrecht, Randolph Allan
28242	Baker, Anthony Deane
26145	Campbell, Nigel Patrick
35280	Ferber, Kerry John
29841	Gasiorowski, George Michael
21342	Lloyd, Stephen James
26169	McCartney, Gregory Bruce
84934	Rowe, Sean David
10636	Thomas, Ian Lindsay
50788	Trott, Joanne Gay

Dated 12 February 2010.

MALCOLM ARTHUR HYDE, Commissioner of Police

ROAD TRAFFIC ACT 1961

Authorised Officers to Conduct Breath Analysis

I, MALCOLM ARTHUR HYDE, Commissioner of Police, pursuant to section 47K (3) (a) of the Road Traffic Act 1961, do hereby certify that on 12 February 2010, the following police officers were authorised to conduct breath analysis:

PD Number	Officer Name
77004	Connelly, David John
41939	Eason, Melissa Ann
56135	Fisher, Julie
42545	Hayes, Darren Robert
85278	Pullen, Brett Ronald
94476	Rasch, Timothy James
56647	Santella, Peter Adrian
42987	Sheldon, Tania Narelle
40765	Whittemore, Melanie Esther

Dated 12 February 2010.

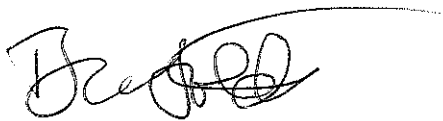
MALCOLM ARTHUR HYDE, Commissioner of Police

Petroleum and Geothermal Energy Act 2000
S.115

MEMORANDUM

GEOHERMAL EXPLORATION LICENCE
GEL 181

1. Suspension of licence from and including 23 November 2009 to 22 November 2010 is hereby entered on the public register.
2. The expiry date of GEL 181 is now 21 November 2015.



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: 17 February 2010

Ref: 27/2/306

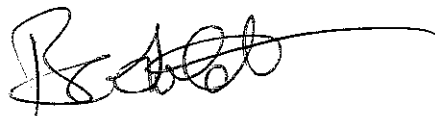
Petroleum and Geothermal Energy Act 2000
S.90

**SUSPENSION OF
GEOTHERMAL EXPLORATION LICENCE
GELs 181**

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 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) suspend geothermal exploration licence GEL 181 for the period from and including 23 November 2009 to 22 November 2010.
1. No regulated activities are permitted to be carried out during the period of the suspension.
 2. The expiry date of GEL 181 is now 21 November 2015.

Dated: 17 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 and Geothermal Energy Act 2000
S.115

MEMORANDUM

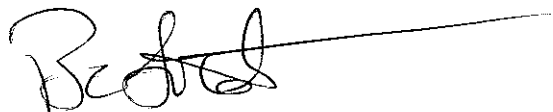
**RENEWAL OF
GEOTHERMAL EXPLORATION LICENCE
GEL 181**

1. Renewal of this licence, effective from 22 November 2009 is hereby entered on the public register.

Expiry date: 21 November 2014

2. Interests in the licence are:

Geothermal Resources 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: 11 February 2010

File: 27/2/306

Petroleum and Geothermal Energy Act 2000

FIRST RENEWAL OF GEOTHERMAL EXPLORATION LICENCE GEL 181

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:

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 from 22 November 2009 and to expire on 21 November 2014.

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. <i>Year 1 work program to be conducted anywhere within the boundaries of GELs 181 and 208</i>
Two	<ul style="list-style-type: none">• Geological and geophysical studies. <i>Year 2 work program to be conducted anywhere within the boundaries of GELs 181 and 208</i>
Three	<ul style="list-style-type: none">• Geological and geophysical studies. <i>Year 3 work program to be conducted anywhere within the boundaries of GELs 181 and 208.</i>
Four	<ul style="list-style-type: none">• Drill one deep well > 3,000 m depth <i>Year 4 work program to be conducted anywhere within the boundaries of GELs 181 and 208.</i>

Five	<ul style="list-style-type: none"> • Flow test well; and • Data review <p><i>Year 5 work program to be conducted anywhere within the boundaries of GELs 181 and 208</i></p>
------	---

2. 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 this 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 may, at his discretion, either cancel this licence or authorise such variation to these requirements as the Minister thinks fit.
3. The Licensee shall during periods determined by the Minister lodge and maintain with the Minister in the form acceptable to 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.
4. 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).
5. 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.
6. 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 Licensee 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.
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.

Date: 11 Feb 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**

Signed by the said LICENSEE

Date: 6/01/2019

Geoff Stolz
Authorised Representative

Geoff STOLZ
Name

Project Manager
Position

Geothermal Resources
Company

GEOTHERMAL EXPLORATION LICENCE

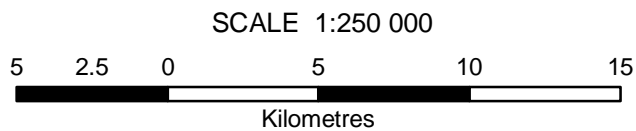
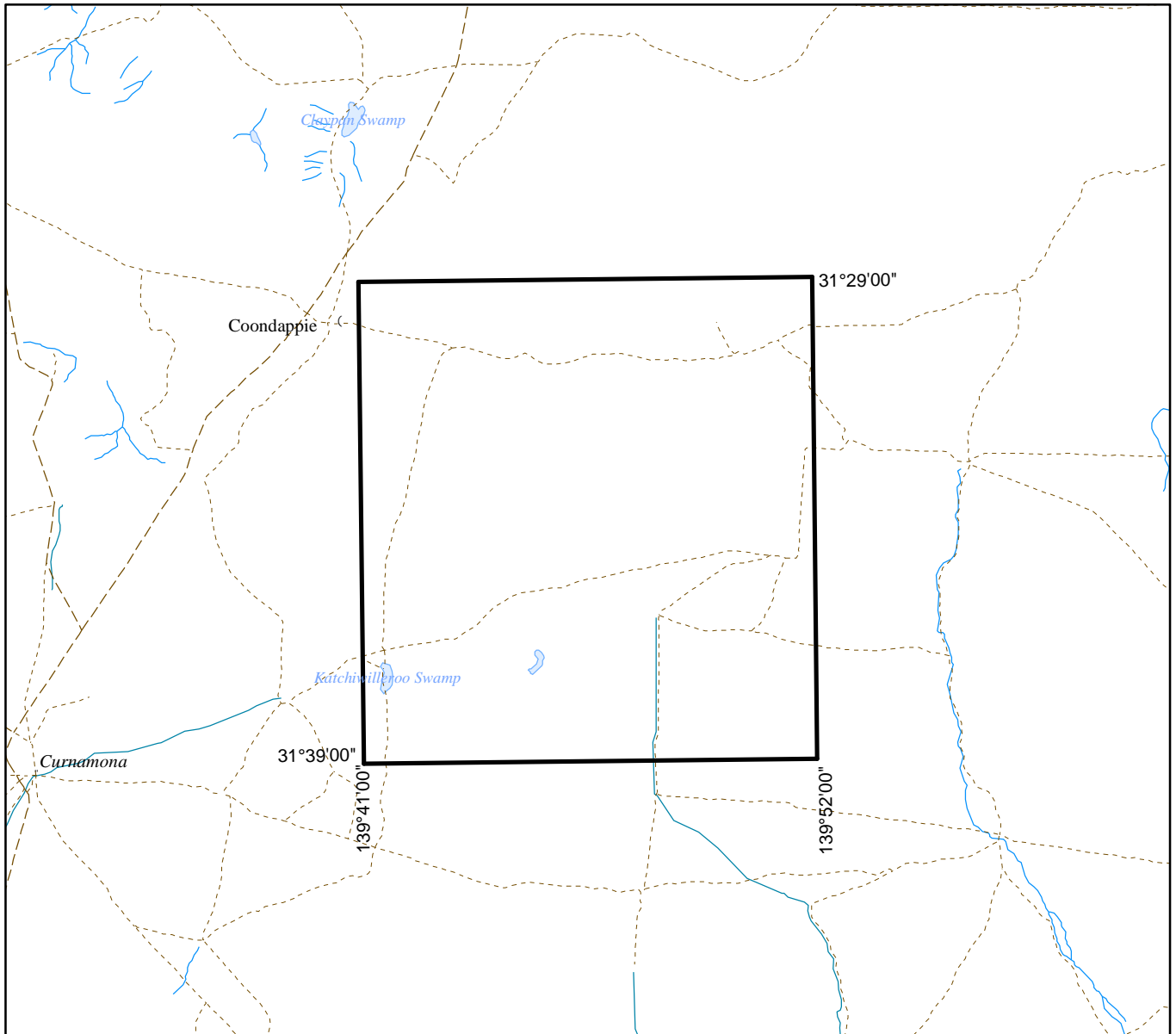
GEL 181

DESCRIPTION OF AREA

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

Commencing at a point being the intersection of latitude $31^{\circ}29'00''\text{S}$ GDA94 and longitude $139^{\circ}41'00''\text{E}$ GDA94, thence east to longitude $139^{\circ}52'00''\text{E}$ GDA94, south to latitude $31^{\circ}39'00''\text{S}$ GDA94, west to longitude $139^{\circ}41'00''\text{E}$ GDA94, and north to the point of commencement.

AREA: **321** 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 Geocentric Datum of Australia (GDA94) and the schedule.

THE PLAN HEREINBEFORE REFERRED TO

GEOTHERMAL EXPLORATION LICENCE NO: 181



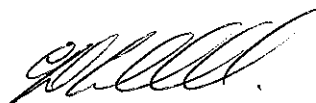
Petroleum and Geothermal Energy Act 2000
S.115

MEMORANDUM

GEOHERMAL EXPLORATION LICENCES
GELs 181, 208, 214, 222 and 280

PETROLEUM EXPLORATION LICENCES
PELs 186 and 187

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 181, 208, 214 and 222 is 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: 22 December 2009

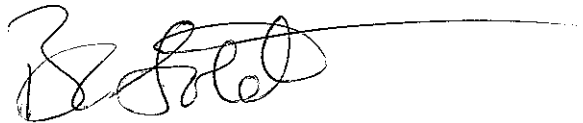
File: 27/2/306
27/2/315
27/2/316
27/2/341
27/2/363
27/2/372
27/2/445

Petroleum Act 2000
S.134

MEMORANDUM

GEOHERMAL EXPLORATION LICENCE
GEL 181

1. Notation of extension of time to 21 November 2009, by which the licensee must apply for the renewal of GEL 181 is entered on the public register of licences.



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: 15 September 2009

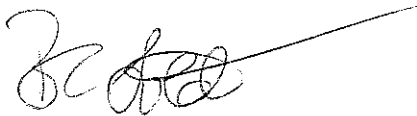
File: 27/2/309

**Petroleum Act 2000
S.115**

MEMORANDUM

**GEOHERMAL EXPLORATION LICENCES
GELs 181, 208, 209 and 210**

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: 9 December 2008

Ref: 27/2/306
27/2/341
27/2/342
27/2/343

Petroleum Act 2000

VARIATION OF GEOTHERMAL EXPLORATION LICENCE GEL 181

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 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 hereby vary the conditions of Geothermal Exploration Licence GEL 181 held by-

Geothermal Resources Limited
ACN 115 281 144

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">• Geological and geophysical studies.
Two	<ul style="list-style-type: none">• Geological and geophysical studies.
Three	<ul style="list-style-type: none">• Drill two shallow holes.
Four	<ul style="list-style-type: none">• Drill one deep pilot hole to 1800m depth
Five	<ul style="list-style-type: none">• Review of pilot hole results and decision on drilling production wells <p><i>Year 5 work program to be conducted anywhere within the boundaries of GELs 181, 208, 209 and 210.</i></p>

Dated: 9 December 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

**Petroleum Act 2000
S.115**

MEMORANDUM

**GEOHERMAL EXPLORATION LICENCES
GELs 181, 208, 209, 210, 214, 215, 216,
217, 222, 249 AND 250**

1. Notation of receipt of security in the form of a Bank Guarantee dated 26 September 2006 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. Bank guarantee dated 5 June 2006 that was held as security to cover geothermal exploration licences 181, 208, 209, 210, 214, 215, 216 and 217 is hereby discharged to Geothermal Resources Limited.



**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: 1 November 2006


File: 27/2/306
27/2/341
27/2/342
27/2/343
27/2/363
27/2/364
27/2/365
27/2/366
27/2/372
27/2/408
27/2/409

Petroleum Act 2000
S.115

MEMORANDUM

**GEOHERMAL EXPLORATION LICENCES
GEL 181, GEL 208, GEL 209, GEL 210, GEL 214, GEL 215,
GEL 216 and GEL 217**

1. Notation of receipt of Security is 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 July 2006

File: 27/2/306
27/2/341
27/2/342
27/2/343
27/2/363
27/2/364
27/2/365
27/2/366

Petroleum Act 2000
S.115

MEMORANDUM

**GEOHERMAL EXPLORATION LICENCE
GEL 181**

1. Notation of approval and registration of the following transfer is entered on the Public Register:

SA 2005-34 Transfer dated 12 August 2005 transferring licence from Havilah Resources NL to Geothermal Resources Limited.

2. Interests in the licence are:

Geothermal Resources Limited 100%



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

Date: 10 October 2005

SR 27/2/306

PETROLEUM ACT 2000

Grant of Geothermal Exploration Licences—GEL 181 and GEL 184

NOTICE is hereby given that the undermentioned Geothermal Exploration Licences have 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	Licensees	Locality	Area in km ²	Reference
GEL 181	Havilah Resources NL	Arrowie Basin of South Australia	497	27/02/306
GEL 184	Scopenegy Limited	Otway Basin of South Australia	499	27/02/310

Description of Area—GEL 181

All that part of the State of South Australia, bounded as follows: Commencing at a point being the intersection of latitude 31°29'00"S GDA94 and longitude 139°41'00"E GDA94, thence east to longitude 139°58'00"E GDA94, south to latitude 31°39'00"S GDA94, west to longitude 139°41'00"E GDA94, and north to the point of commencement.

Area: 497 km² approximately.

Description of Area—GEL 184

All that part of the State of South Australia, bounded as follows: Commencing at a point being the intersection of latitude 37°40'00"S GDA94 and longitude 140°24'00"E GDA94, thence east to longitude 140°29'00"E GDA94, south to latitude 37°43'00"S GDA94, east to longitude 140°32'00"E GDA94, south to latitude 37°44'00"S GDA94, east to longitude 140°33'00"E GDA94, south to latitude 37°46'00"S GDA94, east to longitude 140°38'00"E GDA94, south to latitude 37°49'00"S GDA94, east to longitude 140°43'00"E GDA94, south to latitude 37°52'00"S GDA94, east to the eastern border of the State of South Australia, thence southerly along the border of the said State to latitude 37°56'00"S GDA94, west to longitude 140°50'00"E GDA94, north to latitude 37°55'00"S GDA94, west to longitude 140°46'00"E GDA94, south to latitude 37°59'00"S GDA94, west to longitude 140°41'00"E GDA94, north to latitude 37°53'00"S GDA94, west to longitude 140°36'00"E GDA94, north to latitude 37°52'00"S GDA94, west to longitude 140°34'00"E GDA94, north to latitude 37°51'00"S GDA94, west to longitude 140°33'00"E GDA94, north to latitude 37°50'00"S GDA94, west to longitude 140°31'00"E GDA94, north to latitude 37°49'00"S GDA94, west to longitude 140°30'00"E GDA94, north to latitude 37°48'00"S GDA94, west to longitude 140°27'00"E GDA94, north to latitude 37°46'00"S GDA94, west to longitude 140°25'00"E GDA94, north to latitude 37°44'00"S GDA94, west to longitude 140°24'00"E GDA94, and north to the point of commencement.

Area: 499 km² approximately.

Dated 22 November 2004.

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

Petroleum Act 2000
S.115

MEMORANDUM

GEOHERMAL EXPLORATION LICENCE
GEL 181

1. This Licence granted on 22 November 2004 is hereby entered on the public register.

2. Interests in the licence are:-

Havilah Resources NL 100%.



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

Date: 22 November 2004

Ref: 27/2/306

PETROLEUM ACT 2000

GEOTHERMAL EXPLORATION LICENCE

GEL 181

I, BARRY ALAN GOLDSTEIN, Director Petroleum, Minerals and Energy Division, 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:

Havilah Resources NL
ABN 39 077 435 520

(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 *21 November* 2009 but carrying the right of renewal under the *Petroleum Act 2000*. *BAG*

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">• Gravity survey
Two	<ul style="list-style-type: none">• Data review
Three	<ul style="list-style-type: none">• Drill one shallow hole
Four	<ul style="list-style-type: none">• Drill one deep pilot hole
Five	<ul style="list-style-type: none">• Drilling of one production well and one injection well

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) where directed by the Minister, 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: 22 Nov.....2004



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

Signed by the said LICENSEE

Date: 12 October.....2004

[Signature]
.....
Authorised Representative

.....
Authorised Representative

Dr. Chris Giles
.....
Name

.....
Name

Director
.....
Position

.....
Position

Hawilah Resources NL
.....
Company

.....
Company

GEOTHERMAL EXPLORATION LICENCE

GEL 181

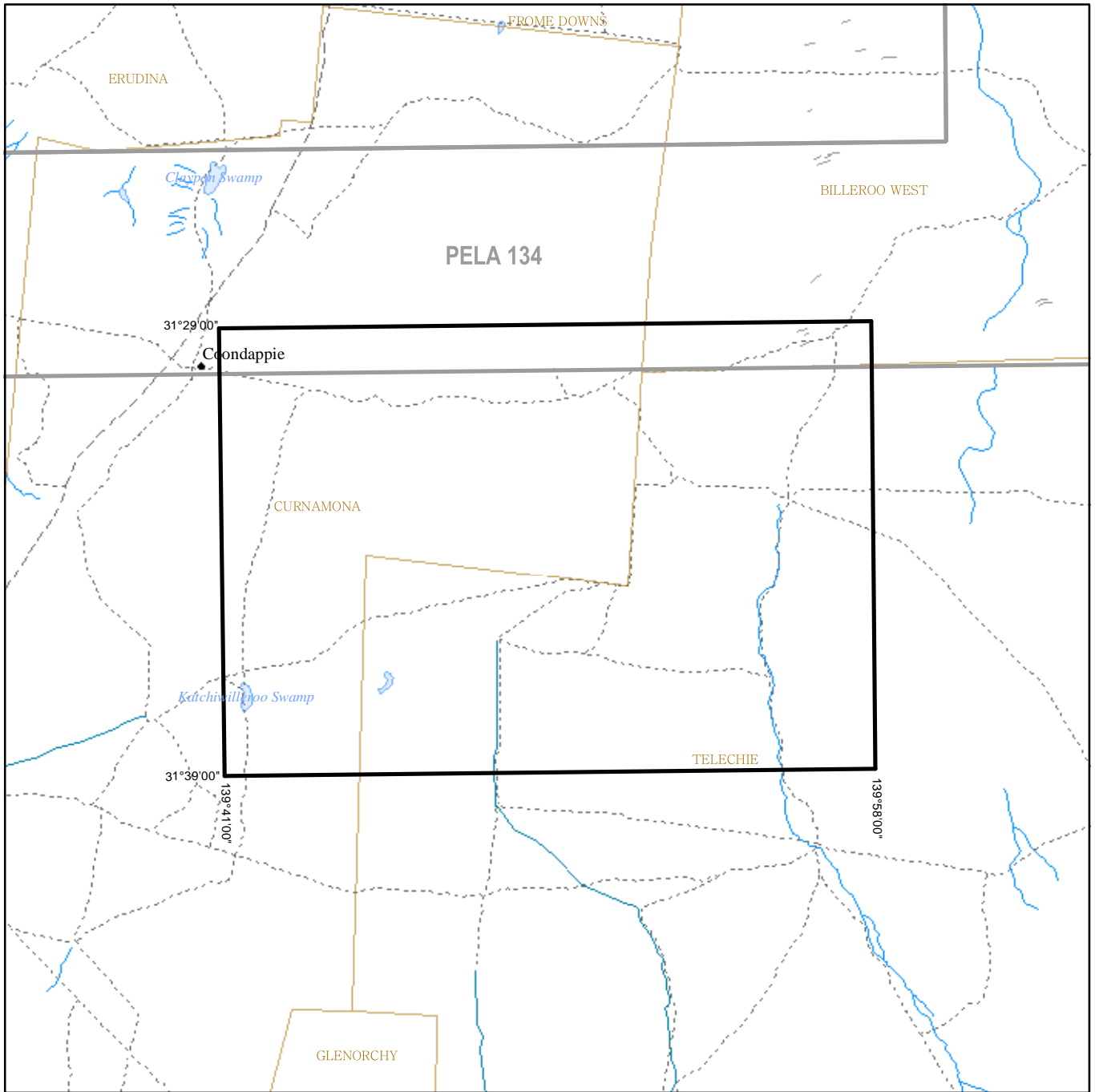
THE SCHEDULE

Description of Area

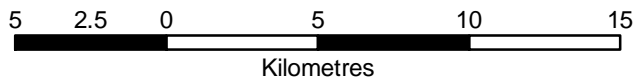
All that part of the State of South Australia, bounded as follows:-

Commencing at a point being the intersection of latitude 31°29'00"S GDA94 and longitude 139°41'00"E GDA94, thence east to longitude 139°58'00"E GDA94, south to latitude 31°39'00"S GDA94, west to longitude 139°41'00"E GDA94, and north to point of commencement.

AREA: **497** 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

GEOTHERMAL EXPLORATION LICENCE NO: 181