

Petroleum and Geothermal Energy Act 2000
S.115

MEMORANDUM

GEOHERMAL EXPLORATION LICENCES
GELs 128, 206, 213, 244, 245, 246, 247, 248, 282, 283, 284, 366,
367, 368, 369, 370, 371, 372, 373, 374, 375, 376 and 557

1. Notation of discharge of security is hereby entered on the public registers.



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

Date: 23 December 2016

Ref: 27/2/00230
27/2/00335
27/2/00356
27/2/00403 – 27/2/00407
27/2/00448 – 27/2/00450
27/2/00521
F2010/000241

Petroleum and Geothermal Energy Act 2000
S.115

MEMORANDUM

GEOHERMAL EXPLORATION LICENCES
GELs 366 - 376

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



C. D. COCKSHELL
A/Executive Director
Energy Resources Division
Department for Manufacturing, Innovation, Trade, Resources and Energy
Delegate of the Minister for Mineral Resources and Energy

Date: 13 February 2013

Ref: 27/2/521

**Petroleum and Geothermal Energy Act 2000
S25(4)**

**VARIATION OF
GEOTHERMAL EXPLORATION LICENCES
GELS 366 - 376**

I, CYRIL DAVID COCKSHELL, 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 21 March 2012 vary the conditions of the above-mentioned licence, held by -

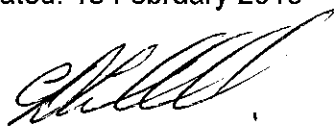
Green Rock Energy Limited
ACN 094 551 336

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

“ During the term of the licence, the Licensee shall carry out or cause to be carried out, exploratory operations on the area comprised in the licence in accordance with such work programs as are approved by the Minister from time to time 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 may be conducted anywhere within the area covered by GELs 366 - 376, and shall include but not necessarily be limited to:-

Year of Term of Licence	Minimum Work Requirements
One	<ul style="list-style-type: none">• Geological and Geophysical studies.
Two	<ul style="list-style-type: none">• Geological and Geophysical studies.
Three	<ul style="list-style-type: none">• Geological and Geophysical studies.
Four	<ul style="list-style-type: none">• Geological and Geophysical studies.
Five	<ul style="list-style-type: none">• Geological and Geophysical studies.

Dated: 13 February 2013



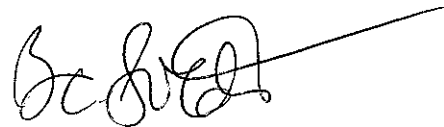
C. D. COCKSHELL
A/Executive Director
Energy Resources Division
Department for Manufacturing, Innovation, Trade, Resources and Energy
Delegate of the Minister for Mineral Resources and Energy

Petroleum Act 2000
S.115

MEMORANDUM

GEOHERMAL EXPLORATION LICENCE
GEL 376

1. An amended description of the licence area of GEL 376 as per the attached schedule and map is hereby entered on the public register.



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

Date: 22 December 2008

File: 27/2/521

GEOTHERMAL EXPLORATION LICENCE

GEL 376

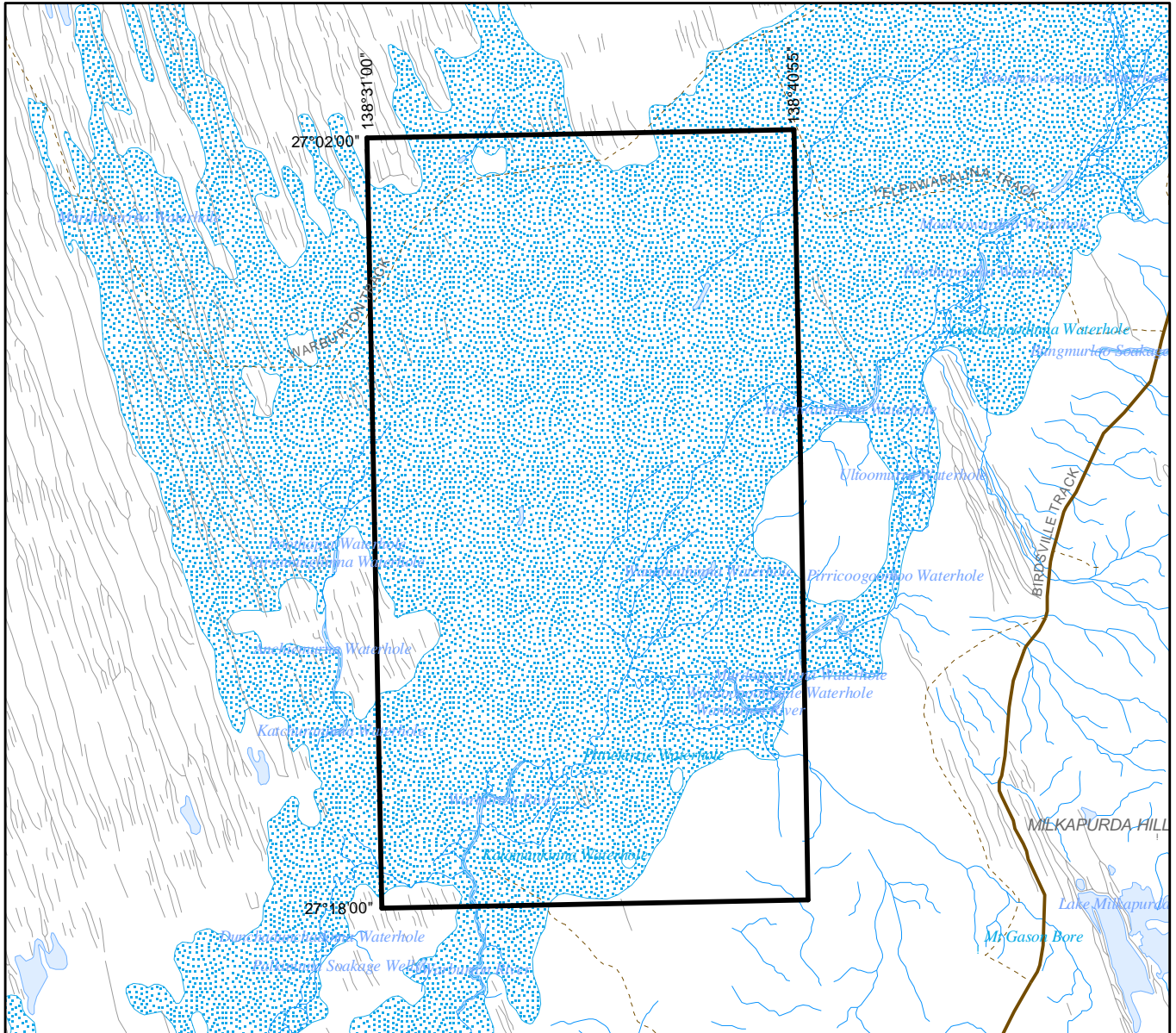
THE SCHEDULE

Description of Area

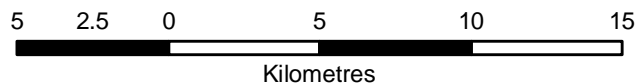
All that part of the State of South Australia, bounded as follows:-

Commencing at a point being the intersection of latitude 27°02'00"S GDA94 and longitude 138°31'00"E GDA94, thence east to longitude 138°40'55"E GDA94, south to latitude 27°18'00"S GDA94, west to longitude 138°31'00"E GDA94, and north to the point of commencement.

AREA: **484** 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: 376



PETROLEUM ACT 2000

Grant of Geothermal Exploration Licences

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	Licensee	Locality	Date of Expiry	Reference
GEL 366 GEL 367 GEL 368 GEL 369 GEL 370 GEL 371 GEL 372 GEL 373 GEL 374 GEL 375 GEL 376	Green Rock Energy Limited	Cooper Basin, South Australia	29 October 2013	27/2/521

Description of Area—GEL 366

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

Commencing at a point being the intersection of latitude 26°30'00"S GDA94 and longitude 138°11'00"E GDA94, thence east to longitude 138°21'00"E GDA94, south to latitude 26°46'00"S GDA94, west to longitude 138°11'00"E GDA94 and north to the point of commencement.

Area: 491 km² approximately.

Description of Area—GEL 367

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

Commencing at a point being the intersection of latitude 26°30'00"S GDA94 and longitude 138°21'00"E GDA94, thence east to longitude 138°31'00"E GDA94, south to latitude 26°46'00"S GDA94, west to longitude 138°21'00"E GDA94 and north to the point of commencement.

Area: 491 km² approximately.

Description of Area—GEL 368

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

Commencing at a point being the intersection of latitude 26°30'00"S GDA94 and longitude 138°31'00"E GDA94, thence east to longitude 138°41'00"E GDA94, south to latitude 26°46'00"S GDA94, west to longitude 138°31'00"E GDA94 and north to the point of commencement.

Area: 491 km² approximately.

Description of Area—GEL 369

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

Commencing at a point being the intersection of latitude 26°26'00"S GDA94 and longitude 138°41'00"E GDA94, thence east to longitude 138°51'00"E GDA94, south to latitude 26°42'00"S GDA94, west to longitude 138°41'00"E GDA94 and north to the point of commencement.

Area: 491 km² approximately.

Description of Area—GEL 370

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

Commencing at a point being the intersection of latitude 26°26'00"S GDA94 and longitude 138°51'00"E GDA94, thence east to longitude 139°01'00"E GDA94, south to latitude 26°42'00"S GDA94, west to longitude 138°51'00"E GDA94 and north to the point of commencement.

Area: 491 km² approximately.

Description of Area—GEL 371

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

Commencing at a point being the intersection of latitude 26°26'00"S GDA94 and longitude 139°01'00"E GDA94, thence east to longitude 139°10'00"E GDA94, south to latitude 26°36'30"S GDA94, east to longitude 139°11'00"E GDA94, south to latitude 26°42'00"S GDA94, west to longitude 139°01'00"E GDA94 and north to the point of commencement.

Area: 458 km² approximately.

Description of Area—GEL 372

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

Commencing at a point being the intersection of latitude 26°36'30"S GDA94 and longitude 139°11'00"E GDA94, thence east to longitude 139°21'00"E GDA94, south to latitude 26°42'00"S GDA94, west to longitude 139°11'00"E GDA94 and north to the point of commencement.

Area: 169 km² approximately.

Description of Area—GEL 373

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

Commencing at a point being the intersection of latitude 26°46'00"S GDA94 and longitude 138°21'00"E GDA94, thence east to longitude 138°31'00"E GDA94, south to latitude 27°02'00"S GDA94, west to longitude 138°21'00"E GDA94 and north to the point of commencement.

Area: 490 km² approximately.

Description of Area—GEL 374

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

Commencing at a point being the intersection of latitude 26°46'00"S GDA94 and longitude 138°31'00"E GDA94, thence east to longitude 138°41'00"E GDA94, south to latitude 27°02'00"S GDA94, west to longitude 138°31'00"E GDA94 and north to the point of commencement.

Area: 490 km² approximately.

Description of Area—GEL 375

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

Commencing at a point being the intersection of latitude 27°02'00"S GDA94 and longitude 138°21'00"E GDA94, thence east to longitude 138°31'00"E GDA94, south to latitude 27°18'00"S GDA94, west to longitude 138°21'00"E GDA94 and north to the point of commencement.

Area: 488 km² approximately.

Description of Area—GEL 376

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

Commencing at a point being the intersection of latitude 27°02'00"S GDA94 and longitude 138°31'00"E GDA94, thence east to longitude 138°41'00"E GDA94, south to latitude 27°18'00"S GDA94, west to longitude 138°31'00"E GDA94 and north to the point of commencement.

Area: 488 km² approximately.

Dated 31 October 2008.

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

Petroleum Act 2000
S.115

MEMORANDUM

GEOHERMAL EXPLORATION LICENCES
GELs 366, 367, 368, 369, 370,
371, 372, 373, 374, 375 and 376

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: 31 October 2008

File: 27/2/521


PETROLEUM ACT 2000

GEOHERMAL EXPLORATION LICENCE

GEL 376

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:

Green Rock Energy Limited
ACN 094 551 336

(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 30 October 2013 but carrying the right of renewal under the *Petroleum Act 2000*. 

DESCRIPTION OF AREA

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

CONDITIONS

1. During the term of the licence, the Licensee shall carry out or cause to be carried out, exploratory operations on the area comprised in the licence in accordance with such work programs as are approved by the Minister from time to time. Year one exploratory operations are guaranteed, and any subsequent licence year work program becomes guaranteed upon entry into any such licence year. These exploratory operations may be conducted anywhere within the area covered by GELs 366 - 376, and 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 review.
Two	<ul style="list-style-type: none">• Geological and geophysical review.

Three	<ul style="list-style-type: none"> • Geophysically log existing drill holes to estimate in-situ rock and water properties and measure temperatures; and • Complete thermal conductivity measurements on existing core samples; and • Estimate ground water temperatures at 1,000 to 5,000m depth using geothermal modelling techniques.
Four	<ul style="list-style-type: none"> • Re-enter existing drill holes to measure water flows and temperatures.
Five	<ul style="list-style-type: none"> • Drill two wells between 2,000 and 3,000m for the purpose of testing the fracturing potential or water flow potential; and • Re-evaluate the economics of geothermal technology and design appropriate pilot programme.

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:..... *31 October*2008



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

Signed by the said LICENSEE

Date: 24 October 2008

Adrian Larkin
Authorised Representative

ADRIAN LARKIN
Name

MANAGING DIRECTOR
Position

GREEN ROCK ENERGY LTD
Company

GEOTHERMAL EXPLORATION LICENCE

GEL 376

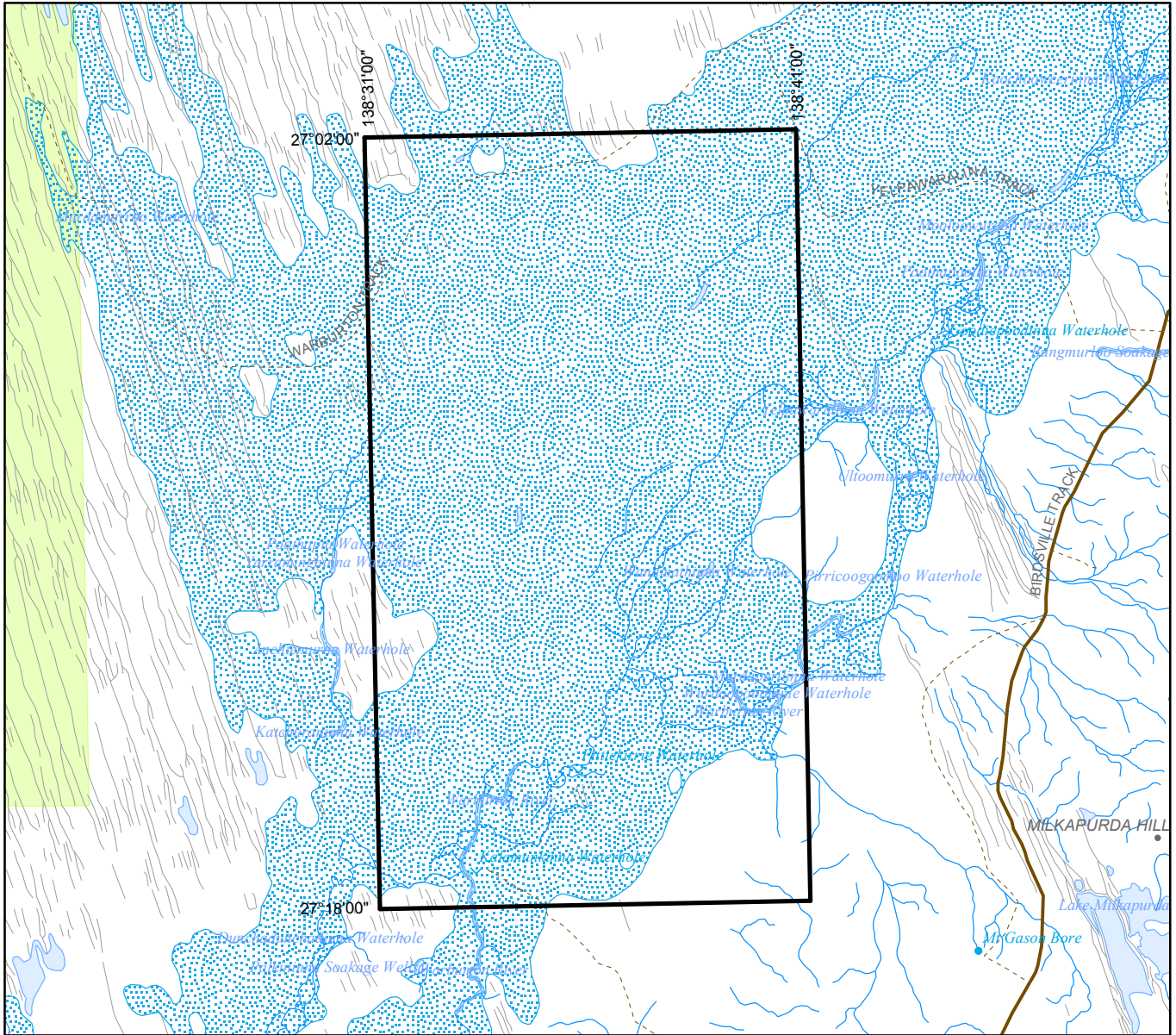
THE SCHEDULE

DESCRIPTION OF AREA

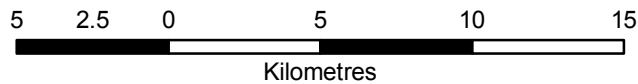
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Commencing at a point being the intersection of latitude 27°02'00"S GDA94 and longitude 138°31'00"E GDA94, thence east to longitude 138°41'00"E GDA94, south to latitude 27°18'00"S GDA94, west to longitude 138°31'00"E GDA94, and north to the point of commencement.

AREA: **488** 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: 376